CHANDLER
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January
2025
Edition

Specifications
&
Standard Details
(Supplement to MAG)

December 19, 2024

Subject: Standard Details, Specifications and Engineering & Design Standards Manual

Please be advised, effective January 27, 2025, all new (1st Review) improvement plan submittals will be subject to the January 2025 update to the Standard Details, Specifications and Engineering & Design Standards Manual and the 2025 revisions to MAG Specifications and Details. See the attached change summary for a detailed listing of revisions.

Current manuals are available on the City Unified Development Manual website HERE or purchased in hard copy format from the Development Services front counter at 215 E. Buffalo Street.

If you have further questions, please contact Warren White at (480) 782-3337.

Sincerely,

John Knudson, PE
Public Works & Utilities Director\City Engineer

Attachment: Change Summary January 2025

Engineering Standards Change Summary
January 2025

Design Standards Manual

Document No.	Title	Revision Summary
Chapter 1	Water System Design	Various revisions to clarify and enhance existing requirements including private on site hydrants, dead end public water mains, manifolding multiple meters, multi-family firelines and secondary potable water meter connection for redundancy, commercial firelines, and fire pumps for industrial sites. Three new figures added, 1-A, 1-B and 1-C.
Chapter 1	Water System Design	Revision to Section 1.2.3.1, B - Design Reports, removing conflicting sentence that was carryover from past version "System pressures may range from 50 to 100 psi with velocity less than 5 feet per second for peak hour flow."
Chapter 1	Water System Design	Revision to Section 1.2.3.1. A - Minimum Pressure, removing sentence "... in lieu of fire hydrant flow test results." Fire hydrant flow tests are still required, but covered under Section B. Design Reports. This was causing some confusion.
Chapter 2	Wastewater and Reclaimed System Design	Revision to Section 2.2.9 Manholes, clarification on requirements for new MH connections and connections at existing stub-outs (first paragraph). Reordered this section and moved industrial monitoring vaults to new Section 2.2.11 Pre-Treatment Requirements.
Chapter 2	Wastewater and Reclaimed System Design	Revisions for new MAG Section 632 tracer wire requirements, various locations. Other insertions for missing MAG references for pipe installation, Section 615. etc.
Chapter 3	Storm Drainage System Design	Revisions to drywell registration per changes from ADEQ to EPA. Requiring registration numbers to be delivered at the time of project acceptance.
Chapter 4	Street Design and Access Control	Add language to 4.6 Access Management: "Any gate(s) on a residential driveway on an arterial or collector road are to be located a minimum of 23 feet from back-of-curb (25 feet from roadway asphalt). This is to provide space for a typical vehicle stopped prior to the gate to be out of the roadway." Also, revise Residential Driveway definition on pg 82, "New access from an arterial street is not allowed" and on pg 108, revise paragraph under 4.6.1 Access Control related to single family residences as follows "New single family residences are not allowed direct access to arterial streets."
Chapter 4	Street Design and Access Control	Revisions to Section 4.4.1 Signing & Striping pertaining to typical RR Crossings and Quiet Zone requirements, more guidance provided. Removing Figure 4-H in favor of new City Detail C-625, Railroad Markings for Quiet Zones.
Chapter 4	Street Design and Access Control	Revision to Section 4.6.3 Emergency Access Requirements, clarifying FD placement requirements and additional standard requirements.
Chapter 5	Traffic Signal Design	Revised Figure 5-E to clarify (2) 4"PVC Signal Conduits
Chapter 6	Streetlight Design	Revisions to Photocells for new standards related to LED Control Nodes, revised wattage for luminaires (Section 6.3.2), revised pole painting per APL and added requirement for GPS location for all new and relocated poles.
Chapter 7	Traffic Barricade Design	Revisions for off duty officers in Section 7.6.5.1 Police Officers, "To schedule extra-duty officers for traffic control during construction or maintenance operations visit https://odm.officertrak.com/Chandler-AZ-PD or call 1-877-636-8300. " This replaces the first sentence in the second paragraph.
Chapter 8	Landscape Design of City Owned R.O.W., Medians, and Retention Basins	Revise Section 8.2.11 Irrigation Systems to include current requirements for reclaimed or potable for medians.

Specifications and Standard Details Manual (Supplement to MAG)

Document No.	Title	Revision Summary
TOC	Details C-759-1 and C-759-2	Blooper: Remove reference to these details since never created. Was decided not to add these SRP and APS trench and backfill details but instead require developer to coordinate with appropriate utility company as stated in the Eng Design Manual.
Section 626	Corrosion Protective Coating of Sanitary Sewer Manholes and Structures	Revise 626.3.3 testing voltage from 12,500 to 25,000. The industry standard is 100 volts per mil of coating thickness.
C-103-1	Pull Box No. 7 Typical Installation	Separated notes 3 & 4: Note 3 – Changed to reflect only on the vault Note 4 – Added note to specify the type of lid required Adjusted leaders to reflect new note numbers. Other minor adjustments to drawing.
C-103-2	Pull Box No. 9 Typical Installation	Added note 15. Other minor adjustments to drawing.
C-103-3	Pull Box No. 9 Split Vault Typical Installation	Added note 15. Other minor adjustments to drawing.
C-104-1	Open Trench Fiber Optic Cable Ducts	Changed drawing number. Made minor adjustments to drawing.
C-104-2	Horizontal Directional Drilling Fiber Optic Cable Ducts	New detail for horizontal directional drilling.
C-208	Industrial Collector Street Typical Cross Section	Remove this detail since no longer in use. Current standard is C-210. Removed Industrial Collector definition in Eng Design Standards Manual Ch 4.
C-214	Private Shared Driveway Typical Cross Section & Utilities	Typo in note no. 4, roll curb should be MAG Detail 220-1 (Type C), not 200-1. Revise water main location to 6' off C.L.
C-243	Curb Ramp for Rolled Curb	Blooper: This detail was removed in past update, just needs to be removed from final PDF. Was removed in favor of MAG Detail 238-4, Single Curb Ramp Mid-Block Residential Street W/ 4" Roll Curb.
C-260-2	On-Street Parking Accessible Spaces	Remove detectable warning shown on all ramp details and revise notes 8 and 9 stating "DO NOT INSTALL DETECTABLE WARNING". Final PROWAG states detectable warning is not required for ramps that serve ADA spaces exclusively.

C-260-2	On-Street Parking Accessible Spaces	Added additional ramp and access aisle based on final PROWAG where shared aisle no longer allowed for angled parking.
C-261-1	Passenger Loading Zones for Autonomous Vehicles and Ride Sharing	Revise note 5, "CURB RAMPS SERVING PASSENGER LOADING ZONES DO NOT REQUIRE DETECTABLE WARNING". Final PROWAG states detectable warning is not required for ramps that serve ADA spaces exclusively.
C-301-1	Water Service Installation	Revisions for PEXa pipe allowance and other minor revisions
C-301-2	Multi-Meter Water Service Installation	Revise/move fireline backflow and note 5 to outside of right-of-way.
C-307	Valve Box Installation (Potable Water)	Revision to note regarding 'non-pop' polymer lid requirement. Revised to "VALVE LID PER LIST OF APPROVED PRODUCTS". Non-pop polymer lids no longer acceptable due to ongoing durability issues. Also, corrected spec reference in note 2 for CLSM to MAG Section 728. Removing tracer wire per new MAG Section 632.
C-308	Water Pipe Bedding Detail	Revisions to locator wire and ID tape to reference MAG Detail 399-1.
C-311	Reduced Pressure-Principle Backflow Prevention Assembly Installation - 3" and Under	Revisions to notes adding reference to APL, certified testing, 2' clear space and not painting brass parts or placards.
C-315	Reduced Pressure-Principle Backflow Prevention Assembly Installation - 4" and Larger	Revisions to notes adding reference to APL, certified testing, 2' clear space and not painting brass parts or placards. Also, clarification of 6" max distance.
C-319	2" Combination Air/Vacuum Valve Assembly	Revisions based on current approved product: removed mesh screen and 90 elbow on top. Revised box to polymer concrete and only 1 required.
C-400	Manhole Frame and Cover Types	Revisions to graphics and notes based on current approved MH frame and cover.
C-401	Manhole Concrete Collar and Adjustment Types	Revisions to remove locater wire per new MAG Section 632.
C-402	Sewer Pipe Bedding Detail	Revisions to locator wire and ID tape to reference MAG Detail 399-1.
C-406-1	Valve Box Installation (Reclaimed Water)	Revision to note 2 to correct CLSM spec to MAG Section 728.
C-408	Pipe Locator Wire & I.D. Tape	Remove this in favor of new MAG Detail 399-1. Revised Design Manual for references to C-408 too.
C-506	Catch Basin Grates	Typo in title
C-602	Collector Road Pavement Markings	Renumber to detail to C-624 to keep with other details pertaining to markings.
C-625	Railroad Markings for Quiet Zones	New detail to replace Figure 4-H in Eng Design Standards Manual Ch 4.
C-718	Chandler Pole Foundation QC, RC, JC MOD, KC, & KC MOD	Adding note 6. "See ADOT Std Dwg T-SL 4.28 for additional anchor bolt dimensions.:
C-724	Traffic Signal Pull Box No. 7 Typical Installation	New detail specific to pull box requirements for traffic signals.
C-756	Angle Street Light Pole (SL-17)	Revise 2" MIN. note in plan view to remove MIN.
C-758	Street Light Connection Details	Revise title to include reference to previous SL-15 detail as with other details.
FD102	FIRE LINE INSTALLATION (ON-SITE HYDRANT REQUIRED)	Revisions to add flow detection meter notes.
FD103	FIRE LINE INSTALLATION (NO ON-SITE HYDRANTS REQUIRED)	Revisions to add flow detection meter notes.

Specifications & Standard Details

(Supplement to MAG)

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SECTION 321

ASPHALT CONCRETE PAVEMENT

321.8 PLACEMENT is changed to add:

321.8.11 Preservative Seal An asphalt emulsion surface sealer per Section 718.3 will be required on streets other than arterials and must be applied immediately prior to the end of the construction warranty period.

SECTION 336

PAVEMENT MATCHING AND SURFACING REPLACEMENT

336.1 DESCRIPTION: is changed to read:

Asphalt concrete pavement replacement must be constructed in accordance with "T-Top" Trench Repair per Detail 200, as indicated on the plans, and as required by Sections 321 and 710.

Asphalt concrete must be EVAC mix.

Permanent pavement replacement must include crack and joint sealing per Detail 200 unless otherwise directed by Street Superintendent.

This item will include the installation of pavement marking and reflective pavement markers to restore the surface to the condition prior to construction.

336.5 PAYMENT: is changed to add:

There will be no additional payment for the installation of pavement marking and reflective pavement markers.

SECTION 340

CONCRETE CURB, GUTTER, SIDEWALK, SIDEWALK RAMPS, DRIVEWAY, AND ALLEY ENTRANCE

340.2.1 Detectable Warnings is changed to add:

Refer to the *List of Approved Products* for approved detectable warning systems.

SECTION 345

ADJUSTING FRAMES, COVERS, AND VALVE BOXES

345.5 ADJUSTING MANHOLE AND VALVE COVERS WITH ADJUSTING RINGS first paragraph is changed to read:

Adjusting rings may be used to raise manhole frames and covers in asphalt pavements. The amount of adjustment, thickness of seal or overlay, and cross slope must be considered when using adjusting rings. Each location where an adjusting ring is used must have a sufficient depth of asphalt to assure the proper installation and operation of the ring. For manholes serving public sewer mains 15-inch diameter and larger, rings must be made of a composite material per City's List of Approved Products and installed per the manufacturer's specifications. "One-off" manholes (first manhole up-stream of 15-inch diameter and larger sewer mains) must also use composite rings. Manholes serving sewer mains smaller than 15-inch diameter may use concrete, or composite rings installed per the manufacturer's specifications.

SECTION 355

UTILITY POTHOLES-KEYHOLE METHOD

355.3 BACKFILL AND COMPACTION: is changed to read:

The Contractor must use ½-sack CLSM as backfill in accordance with Section 728.

SECTION 360

TELECOMMUNICATIONS INSTALLATION

360.1 DESCRIPTION:

The first paragraph is changed to read:

This work must consist of the individual installation of underground telecommunications facilities within the boundaries of the municipal agency. This specification is not intended for joint trench installations.

360.3 FACILITY INSTALLATION:

Changed to add third item to minimum conduit depths:

3) Private property: All new conduits must be placed at a minimum depth of 24-inches below the finished grade.

SECTION 401

TRAFFIC CONTROL

401.4 TRAFFIC CONTROL MEASURES is changed to add:

At areas where striping obliteration has occurred, the roadway surface must be sealed with a slurry seal product approved by the City. Refer to the *List of Approved Products*. The product must be thoroughly mixed with #30 mesh sand conforming to Section 701 at a rate of two pounds per gallon prior to application. Application must be made on the area of striping obliteration by means of a squeegee.

Striping obliteration by grinding is not permitted.

SECTION 450

GUIDED BORE CONSTRUCTION

450.1 DESCRIPTION:

This work must consist of installing a conduit by guided bore.

450.2 CONSTRUCTION:

Prior to construction, the contractor must submit for approval a location plan and profile of the work in accordance with COC Detail C-112.

Only approved slurry boring methods will be allowed. Water jetting must not be substituted for slurry boring. All pneumatic boring must be at a minimum depth of 36 inches below pavement surface.

Uncased guided bore holes must be at a depth below finish grade no less than four times the diameter of the hole. Uncased guided bore holes must be limited to a maximum of 12 inches. Bore holes in excess of 12 inches in diameter must be cased, unless otherwise approved by the Engineer. Contractor must stipulate the size of bore on the permit application.

Over drilling or final reaming of uncased guided bores should be limited to no more than one inch over the maximum cross section of the conduit bank, casing, or pipe. Annular spaces exceeding this requirement must be pressure grouted.

Guided bore methods must minimize over-reaming or over-drilling of holes. Fluids must not cause scour of the bore hole beyond the previously noted tolerance. Controlled fluid boring is preferred and should utilize fluids to remove cuttings, stabilize and lubricate bore holes, soften soils for advancing bores, provide directional control of guided bores, and for cooling of drilling equipment. Uncontrolled jetting, where the primary purpose is to use fluid pressure to erode soil for creation of the final bore hole diameter, is prohibited. Methods which vary from these requirements must require demonstration and must have a history of successful use prior to acceptance. Any method utilized must not disturb the soils outside the final bore hole diameter.

SECTION 450

Unless site specific soil information is available indicating otherwise, caving of soils around bore holes should be assumed. Pipe, case, or conduit banks should be advanced during final reaming.

Guided bores through unstable granular soils and granular utility backfill should be stabilized with a pressurized bentonite slurry drilling fluid having a consistency of at least one pound of bentonite to five gallons of water, or an approved equal. The flow rate and applied pressure must be monitored. A sudden loss of pressure indicates that slurry may be intruding excessively into the backfill. Cased bores may be used in lieu of stabilization.

Equipment operators must observe the bore hole and monitor cuttings for excessive soil removal. When evidence of excessive voids are found, bore holes must be pressure grouted after placement of pipe, casing, or conduit banks.

SECTION 601

TRENCH EXCAVATION, BACKFILLING, AND COMPACTION

601.2.9 Shoring and Sheathing: is changed to add:

When vertical side walls are to be excavated and trench boxes are not used, the contractor must do such trench bracing, sheathing, or shoring necessary to perform and protect the excavation as required for safety and conformance to governing laws. Shoring, sheeting, or other protective procedures reviewed by the Engineer or his designee for conformance to standards must be required when the trench depth exceeds five feet. The contractor must provide a shoring and bracing plan designed by his engineer for review for adherence to OSHA requirements. Spacing of shoring braces must not exceed ten feet center to center.

601.2.10 Open Trench: the third paragraph is changed to add:

Steel plates must be installed in accordance with Detail 211. Where the steel plates are restrained by temporary asphalt, they may be required to be spot-welded together for any period of time that the contractor is not present to adjust for their longitudinal movement due to traffic.

601.4.5: Final Backfill: the third paragraph is changed to read:

Backfill under street pavement must be half-sack CLSM per Section 728 and be constructed per Detail 200, ”T-Top” pavement replacement unless otherwise stated on the construction plans or special provisions or as approved by the City Engineer. Pavement matching and surface replacement must be in accordance with Section 336.

SECTION 608

HORIZONTAL DIRECTIONAL DRILLING

608.4.4 Bore Plan/Profile: is changed to add:

As reflected in the modified version of Table 608-2 below, the City of Chandler requires a Bore Plan/Profile to be submitted for all classifications of bore sizes in accordance with the City of Chandler Utility Permit Manual UDM-148. Regardless of the length of a bore the City of Chandler considers any installation of a 12" or greater pipe to be a Large bore classification.

TABLE 608-2

SUBMITTAL REQUIREMENTS

Required Record Document	Bore Size Classification		
	Small	Medium	Large
1. Agency Approved Plans	•	•	•
2. Personnel Qualifications	•	•	•
3. Surface Survey		•	•
4. Bore Plan/Profile	•	•	•
5. Drilling Fluid Management Plan		•	•
6. Equipment & Site Setup			•
7. Drilling Fluid Pressure Calculations			•
8. Pipe Stress and Pullback Calculations			•
9. Bore Data	•	•	•
10. As-built	•	•	•

As reflected in the modified version of Table 608-3 below, the City of Chandler requires 2 feet of vertical separation from the outside diameter of any proposed facility (or the outside of the largest reamer used to install the facility) to the outside of any existing utility, in accordance with City of Chandler Engineered Utility Bore Detail C-112. A concrete encasement around a utility qualifies as the outside of that utility.

TABLE 608-3

MINIMUM SEPARATION FROM EXISTING UNDERGROUND UTILITIES

Minimum Separation	Type of Underground Utility
2 foot vertical	Outside of bore to outside of existing utility
6 foot horizontal	Running line to outside of wet utility

SECTION 610

WATERLINE CONSTRUCTION

610.3 MATERIALS: is changed to read:

Pipe must be ductile iron pipe in accordance with Section 750 or polyvinyl chloride (PVC) in accordance with COC Supplement Section 751 - PVC Pressure Pipe.

610.4 CONSTRUCTION METHODS: is changed to add:

All pipe must be bedded in accordance with COC Detail C-308 and installed in accordance with the latest revision of AWWA C600.

Polyvinyl Chloride pipe must be installed in accordance with the AWWA Manual 23.

For all pipe materials, locator wire and marking tape must be installed in accordance with COC Detail C-408.

City water valves must only be operated by City staff. The City requires a minimum 48-hour notice for water system shutdowns. The Contractor is required to notify affected customers a minimum of 24-hours prior to shutdowns. Businesses may require after hours shutdowns. Shutdown of City system valves does not guarantee stoppage of continuous flow of water. The Contractor must be responsible for dewatering and isolating the system; have all necessary equipment, materials and personnel to perform the work; maybe required to utilize a pump to address any flows in the system; and is responsible to install 2-inch taps to relieve pressure in the system Line stops are only permitted when flows after shutdown cannot be controlled with a pump. Shutdowns may require the use of valves outside the project limits.

A Maintenance of Plant Operations Plan (MOPO) may be required for review and approval by the City. The MOPO is required to be submitted to the City at the project preconstruction meeting. A MOPO requires sufficient detail on the required sequencing to ensure the continuous operation of the existing water system and numerous services that are fed by the system in the project limits. These include individual water services, fire hydrants, pipeline feeds, and fire department connections. The plan is required to include an exhibit identifying the system

valves needed for isolation of water flows. This may include valves outside the project limits.

The MOPO must at a minimum include plan sheets and written descriptions addressing the following:

- The timing and method for each waterline tie-in (sequencing and staging);
- The Contractor must research and account for all City Geographic Information System, as-builts, and pothole information related to the water system in the project area;
- Existing and proposed valve locations;
- The method of keeping existing line functioning prior to connecting water services, fire hydrants, pipeline feeds, and fire department connections to the new waterline. This may include temporary tie-ins, temporary valving, and temporary thrust restraints. Line stops are only permitted when 100% shutdown cannot occur within the project limits;
- The detailed schedule for overall installation of the waterline and abandonment of existing waterline. The schedule must align with the overall project schedule and sequencing plan;
- The timing and method of removal of temporary improvements necessary for providing continuous water service such as temporary tie-ins, temporary valving, and temporary thrust restraint;
- For projects with Federal funding, Buy America (Public Law 112-141, MAP 21; 23 USC 313; and 23 CFR 635.410) applies to all materials used in the project. The Contractor must anticipate and accommodate additional lead times in the project schedule due to Buy America requirements.

610.7 VALVES: is changed to read:

All gate valves must conform to the latest revisions of AWWA C509 or C515 standards.

Gate valves for buried service must be the non-rising stem (NRS) type.

Direction of opening must be counterclockwise (Open Left).

SECTION 610

The body and bonnet of the valves must be constructed of ductile-iron per ASTM A536.

The marking "D.I." or "Ductile Iron" must be cast in raised letters on the valve.

Valve body, bonnet, and stuffing box must be coated and lined with fusion-bonded epoxy conforming to the AWWA C550 standard.

Valve stem diameters and minimum turns to open must conform to Table 7 in AWWA C509-09 and AWWA C515-09.

The NRS-type valve stems must be made of bronze or stainless steels. Bronze stems must use copper alloys that contain less than 6% zinc and 6% aluminum. Stainless steel stems must contain not less than 15% chromium and be from the 300 or 400 alloy series.

NRS stems must have a thrust collar that is integral with the stem in accordance with section 4.4.5.3 of AWWA C515-09. Thrust collars that are non-integral with the stem are not acceptable.

Valve wedge must be completely encapsulated with EPDM rubber, symmetrical in design, and seat equally well with flow in either direction.

Gate valves four inches and larger must be equipped with male-type wedge guides and polymer guide covers. Wedges employing female-type designs are not acceptable.

All gaskets must be pressure-energized type such as O-rings.

The top two stem O-rings must be replaceable while fully open and while subject to full rated working pressure. O-rings set in cartridges are not allowed.

Valves must be equipped with stainless steel bolting that meets the requirements of ASTM F593 Standard Specifications for Stainless Steel bolts, Type 304, Alloy group 1, CW condition, and ASTM F594 Standard Specification for Stainless Steel Nuts, Type 304, Alloy group 1, CW Condition.

SECTION 610

Bolt head and nuts must be hexagonal shaped with dimensions conforming to ANSI B18.2.1. Metric sized and recessed socket head bolts, are not allowed.

Operating nuts must be 2 inches square.

Valves must be NSF Certified to Standard 61.

All valves 2 inches to 48 inches:

Valves may be used in either the horizontal or vertical positions.

Valve gearing must be in accordance with Table 9 of AWWA C515-09 or C509-09 Standard.

610.13 METER SERVICE CONNECTIONS: is changed to add:

(E) Service taps must be installed using an all bronze double-strap tapping saddle or a tapped tee. Any tapping saddle for use on PVC pipe must provide full support around the circumference of the pipe and a bearing area for 2 inches minimum along the axis of the pipe.

SECTION 616

RECLAIMED WATERLINE CONSTRUCTION

616.2 MATERIALS: is changed to read:

Valve boxes must be in accordance with Section 345, this Section, Detail 391 and COC Detail C-406.

616.3 INSTALLATION: is changed to add:

Pipe must be bedded in accordance with COC Detail C-308 and identified in accordance with C-408.

SECTION 625

MANHOLE CONSTRUCTION AND DROP SEWER CONNECTIONS

625.2 MATERIALS is changed to add:

Composite manhole frame and cover per City's *List of Approved Products*.

Composite adjustment rings per City's *List of Approved Products*.

Corrosion protective coating per City's *List of Approved Products*.

Pesticide coating per City's *List of Approved Products*.

625.3.1 Manholes is changed to add:

Manholes must be 5-foot diameter with 30-inch frames and covers. Manholes serving public sewer mains 15-inch diameter and larger must be composite or polymer concrete materials per City's List of Approved Products. "One-off" manholes (first manhole up-stream of 15-inch diameter and larger sewer mains) must also use composite or polymer concrete materials. For sewer mains less than 15-inch, manholes may be installed using standard concrete materials per Detail 420 with cast-in-place bases.

Composite or polymer concrete manholes must include composite frames and covers, composite adjustment rings, composite or polymer concrete cone and riser sections and cast-in-place bases. Refer to City's List of Approved Products. Composite or polymer concrete manholes must be as specified on the plans and/or special provisions.

Manhole adjustment must be constructed with a minimum of 12" and a maximum of 18" high adjusting rings per City Detail C-401.

Manholes serving public sewer lines 15-inch and smaller and not within arterial streets must be coated with a latex insecticide coating applied in accordance with the manufacturer's recommendations. Refer to the City's List of Approved Products for allowable insecticide coating products. The coating must be applied in accordance with US Environmental Protection Agency recommendations starting from the top of the manhole to a depth of 8 feet below. Minimum coating thickness must be 0.25 mil.

***SECTION 626**

CORROSION PROTECTIVE COATING OF SANITARY SEWER MANHOLES AND STRUCTURES

626.2.1 Coating Material subsection(s) are modified as follows:

(A) Approved Materials: per City's List of Approved Products.

(B) Dry film thickness of epoxy/polymer coatings shall be a minimum **1/4-inch** (**250** Mils) thick, or per the manufacturer's recommendation, whichever is greater.

626.3.3 Inspection and Testing subsection(s) are modified as follows:

(F) Holiday testing equipment and procedures shall be performed in strict accordance with latest edition of NACE "Standard Recommended Practice-Discontinuity (Holiday) Testing of Protective Coatings." Areas containing holidays shall be marked repaired or re-coated and re-tested in accordance with coating manufacturer's printed instructions. High voltage pulse-type holiday detectors shall be adjusted to operate at voltage required to cause sparks jump across air gap equal to twice the specified coating thickness. Minimum applied voltage for **250** Mil coating shall be 25,000 volts.

(G) Wet film thickness measurement shall be provided by report submitted by Contractor to the Engineer. The report shall be presented after completion of underlayment, top coating operations, and shall state number of manufacturer's product units used and total square footage of surface area covered. The Engineer shall have option of requiring Contractor to document number of units (coating materials) on hand before and after coating operations to verify actual minimum dry film thickness applied. All film thicknesses not meeting required minimums will be re-coated per manufacturer's recommendations to required minimum **250** Mil thickness.

SECTION 630

TAPPING SLEEVES, VALVES AND VALVE BOXES ON WATERLINES

630.2 GENERAL: is changed to add:

Potable water valve boxes must conform to Detail 391, Type 'C', deep skirted lid type and COC Detail C-307.

Reclaimed water valve boxes must conform to Detail 391, Type 'C', deep skirted lid type with a square surface box and COC Detail C-406.

630.3 GATE VALVES: is changed to add:

The connecting ends of valves may be flange, mechanical joint, push-on, or an appropriate combination. Valves which require transition gaskets to ductile iron pipe sizes may be furnished only in sizes 4 inches through 8 inches.

SECTION 751

POLYVINYL CHLORIDE (PVC) PRESSURE PIPE

751.1 GENERAL:

These specifications apply to Polyvinyl Chloride (PVC) pressure pipe intended for use as potable, wastewater, and reclaimed water distribution pipelines, which carry water under pressure.

751.2 WORKMANSHIP:

Pipe must be homogeneous throughout. It must be free of voids, cracks, inclusions, or other defects. It must be as uniform as commercially practical in color, density, and other physical properties. Pipe surfaces must be free from nicks and scratches. Joining surfaces of spigots and other joints must be free from gouges and imperfections that could cause leakage. The contractor must supply the Engineer with certified third party test data establishing both the long-term compressive strength and the long-term modulus of elasticity of the PVC material.

751.3 MATERIAL:

4 inch through 12 inch PVC pressure pipe must be designed, manufactured and tested in accordance with AWWA C900, latest edition. The barrel of furnished pipe must conform to the outside dimensions of steel pipe (IPS) or cast-iron-pipe-equivalent (CI), and with the wall thickness of dimension-ratio (DR) Series 14. All approved PVC pipe must carry a NSF rating.

The pressure rating for C900 pipe must be 200 psi minimum.

16 inch and larger PVC pressure pipe must be designed, manufactured, and tested in accordance with AWWA C905, latest edition. The barrel of furnished pipe must have an iron-pipe-size-equivalent (IPS) outside diameter and wall thickness equal to the dimension-ratio (DR) Series 18.

The pressure rating for C905 pipe must be 235 psi.

All PVC pipe furnished must be integral bell with elastomeric gaskets. Plain ends with elastomeric gasket couplings will be allowed only for intermediate pipe

lengths. PVC joints using elastomeric gaskets to achieve the pressure seal must be tested as assembled joints and must meet the laboratory performance requirements specified in ASTM D3139.

A Manufacturer's Affidavit for compliance to AWWA C900 and AWWA C905 must be furnished. The manufacturer must provide documentation of the long-term compressive strength of the pipe material, or the long-term hydrostatic design strength, which must be certified by an independent third party.

All required manufacturing quality control inspection and testing must be performed in the United States of America at the pipe manufacturer's plant or at an approved testing laboratory in the United States. The seal of the testing agency that verified the suitability of the pipe material for potable water service must be marked on the pipe. In addition, markings on the pipe must include the following:

Nominal size and OD base

Material code designation

Dimension ratio number

AWWA pressure class

AWWA designation number for this standard

Manufacturer's name or trademark and production record code.

Pipe must be supplied within 270 days of its manufacture. A Manufacturer's written Verification of date of manufacture must be provided.

751.4 APPLIED LOAD CALCULATIONS:

Assumption of soil arching must not be used in calculation embankment loads over PVC pipe. The prism earth load formula must be used to determine earth loads.

$$Wc = HwBc$$

Where:

SECTION 751

Wc = Embankment Load, lbs/ft
H = Depth of soil cover, ft
w = Soil Density, lbs/ft
Bc = Pipe outside diameter, ft

751.5 BEDDING:

Pipe bedding must be in conformance with COC Detail C-308. Bedding must consist of ABC in conformance to Section 702.

751.6 FITTINGS:

Fittings must be ductile iron and conform to AWWA C110 or C153 for 250 psi minimum working pressure rating.

All fittings must be cement lined in accordance with AWWA C104.

Fittings which require transition gaskets to ductile iron pipe sizes may be furnished only in sizes 6 inch through 8 inch.

PVC connections to asbestos cement or ductile iron pipe must be ductile or gray iron adapters.

751.7 STORAGE:

Storage of PVC pipe must be in accordance with the manufacturer's recommendation and guidelines. PVC pipe and fittings must be stored in a dry, ventilated area that protects the pipe form UV radiation and the elements. Pipe stockpiled at the construction site must not remain exposed to the elements and weather in excess of 24 hours, or as approved by the Engineer.

PVC pipe must be delivered to the site and stored and handled in accordance with the manufacturer's instructions. During shipment and storage, the pipe ends must be securely covered. PVC pipe must be stored in a manner such that it is protected from exposure to sunlight and/or extreme heat.

751.8 THRUST BLOCKS:

Thrust blocks must be installed per Section 610.14.

Standard Details

Table of Contents

C-200 SERIES: STREETS

Detail	Title	Revised/Approved
C-200	STANDARD UTILITY LOCATIONS - ARTERIAL STREETS	2021
C-201	STANDARD UTILITY LOCATIONS - COLLECTOR STREETS	2018
C-202	STANDARD UTILITY LOCATIONS - LOCAL STREETS	2018
C-203	MAJOR ARTERIAL STREET - TYPICAL CROSS SECTION	2023
C-204	PHASED MAJOR ARTERIAL STREET - TYPICAL CROSS SECTION	2023
C-205	MINOR ARTERIAL STREET - TYPICAL CROSS SECTION	2023
C-206	COLLECTOR STREET WITH MEDIAN - TYPICAL CROSS SECTION	2023
C-208	INDUSTRIAL COLLECTOR STREET - TYPICAL CROSS SECTION	**REMOVED 2025**
C-209	COLLECTOR BOULEVARD-TYPICAL CROSS SECTION	2023
C-210	COLLECTOR STREET - TYPICAL CROSS SECTION	2023
C-211	LOCAL STREET WITH MEDIAN - TYPICAL CROSS SECTION	2023
C-212	LOCAL BOULEVARD WITH FRONTAGES LESS THAN 65' TYPICAL CROSS SECTION	2023
C-213	LOCAL STREET - TYPICAL CROSS SECTION	2023
C-214	PRIVATE SHARED DRIVEWAY - TYPICAL CROSS SECTION WITH UTILITIES	**2025**
C-215	ON-STREET PARKING - TYPICAL CROSS SECTION	2023
C-221	LOCAL BLVD WITH FRONTAGES OF 65' TO 90'-TYPICAL CROSS SECTION	2023
C-222	LOCAL BLVD - WITH FRONTAGES GREATER THAN 90' – TYPCIAL CROSS SECTION	2023
C-223-1	STANDARD MAJOR ARTERIAL/MAJOR ARTERIAL INTERSECTION RIGHT-OF-WAY, AND STREET DIMENSIONS	2007

C-223-2	ULTIMATE MAJOR ARTERIAL/MAJOR ARTERIAL INTERSECTION RIGHT-OF-WAY, STREET DIMENSIONS	2013
C-224	MAJOR ARTERIAL DECELERATION LANE	2020
C-225-1	GENERAL MEDIAN DESIGN	2018
C-225-2	GENERAL MEDIAN DESIGN	2018
C-226	"LEFT IN ONLY" MEDIAN DESIGNS	2018
C-227	LEFT TURN BAY IN 40' MEDIAN DESIGN < PREVIOUSLY C-250>	2018
C-228	TYPICAL DRIVEWAY ACCESS TO PRIVATE GATED COMMUNITY	2020
C-229	LEFT TURN BAY ON TWO-LANE ROADWAY (TEMP. WIDENING, CROSS STREET ON ONE SIDE ONLY)	2002
C-230	CONCRETE BUS BAYS	2014
C-231	RIGHT TURN/DECELERATION LANE FOR DRIVEWAYS	2015
C-232	CUL-DE-SAC	2018
C-233	8' MID BLOCK VALLEY GUTTER	2015
C-234	SPEED HUMP	2023
C-239	DEPTH OF BASE COURSE - MAJOR & MINOR ARTERIALS	2021
C-240	DEPTH OF BASE COURSE - NON-RESIDENTIAL COLLECTOR AND LOCAL STREETS	2010
C-241	DEPTH OF BASE COURSE - COLLECTOR STREETS	2010
C-242	DEPTH OF BASE COURSE - RESIDENTIAL LOCAL STREETS	2010
C-243	CURB RAMP FOR ROLL CURB	REMOVED 2022
C-245	COMBINED SIDEWALK RAMP AND RESIDENTIAL DRIVEWAY	2014
C-246	SIGHT DISTANCE FOR ARTERIAL AND COLLECTOR STREETS	2011
C-247	SIGHT DISTANCE FOR LOCAL STREETS	2011
C-248	KEY LOT SIGHT DISTANCE	1999

C-249	ACCESSIBLE CURB RAMP ALIGNMENT	2018
C-251	ALLEY PAVEMENT LOT DRAINAGE FROM ALLEY	2023
C-252	ALLEY PAVEMENT LOT DRAINAGE TO ALLEY	2023
C-254	ARTERIAL/COLLECTOR ROADWAY LANDSCAPE DRAINAGE	1999
C-255	TYPICAL ROUNDABOUT	2007
C-256	TYPICAL RAISED CROSSWALK	2021
C-257	IN-LINE RAMP DETAIL FOR RETURN TYPE DRIVEWAY	2020
C-258-1	DIRECTIONAL CURB RAMP ARTERIAL STREETS	2015
C-258-2	DIRECTIONAL CURB RAMP COLLECTOR STREETS	2015
C-258-3	DIRECTIONAL CURB RAMP LOCAL STREETS	2015
C-259	MODIFIED ENTRANCE	REMOVED 2022
C-260-1	ON-STREET PARKING USING BULB-OUTS	2020
C-260-2	ON-STREET PARKING ACCESSIBLE SPACES	**2025**
C-261-1	PASSENGER LOADING ZONES FOR AUTONOMOUS VEHICLES AND RIDE SHARING	**2025**
C-261-2	PASSENGER LOADING ZONES FOR AUTONOMOUS VEHICLES AND RIDE SHARING	2020
C-262	MANHOLE / VALVE BOX CURB REALIGNMENT	REMOVED 2022

C-300 SERIES: WATER

Detail	Title	Revised/Approved
C-300	FLUSHING PIPE ASSEMBLY WITH BALL VALVE	2009
C-301-1	WATER SERVICE INSTALLATION	**2025**
C-301-2	MULTI-METER WATER SERVICE INSTALLATION	**2025**
C-302	RESIDENTIAL BACKFLOW PREVENTION ASSEMBLY INSTALLATION - 1" OR UNDER	1999
C-303-1	FIRE HYDRANT INSTALLATION	2018
C-303-2	FIRE HYDRANT COLOR CODE	2018
C-303-3	FIRE HYDRANT INSTALLATION 'OUT OF SERVICE' SIGNS	2018
C-305	LOCATIONS FOR NEW FIRE HYDRANT	2018
C-307	VALVE BOX INSTALLATION (POTABLE WATER)	**2025**
C-308	WATER PIPE BEDDING DETAIL	2021
C-311	REDUCED PRESSURE - PRINCIPLE BACKFLOW PREVENTION ASSEMBLY INSTALLATION - 3" AND UNDER	**2025**
C-315	REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION ASSEMBLY INSTALLATION - 4" AND LARGE	**2025**
C-316	3" TO 10" METER VAULT	2020
C-317	CONCRETE COLLAR DETAIL WATER VALVE BOX PLACEMENT UNPAVED AREAS	2002
C319	2" COMBINATION AIR/VACUUM VALVE ASSEMBLY	**2025**
C-320	VAULT FOR 24" GATE VALVE	2010
C-321	WATER QUALITY MONITORING STATION	2011
C-322	POTABLE WATER METER SAMPLING STATION CONVERSION	2013

C-400 SERIES: WASTEWATER AND RECLAIMED

Detail	Title	Revised/Approved
C-400	MANHOLE FRAME AND COVER TYPES	**2025**
C-401	MANHOLE CONCRETE COLLAR AND ADJUSTMENT TYPES	**2025**
C-402	SEWER PIPE BEDDING DETAIL	**2025**
C-403	SEWER CONNECTIONS	2020
C-404-1	RECLAIMED WATER SERVICE CONNECTIONS	2016
C-404-2	RECLAIMED WATER SERVICE CONNECTION DATA FORM	2008
C-404-3	2" RECLAIMED WATER IRR SERVICE LINE INLINE PUMP TYPE	2020
C-404-4	3" RECLAIMED WATER IRR SERVICE LINE INLINE PUMP TYPE	2014
C-404-5	4" RECLAIMED WATER IRR SERVICE LINE INLINE PUMP TYPE	2014
C-404-6	4" RECLAIMED WATER IRR SERVICE LINE INLINE PUMP TYPE	2014
C-404-7	6" RECLAIMED WATER IRR SERVICE LINE INLINE PUMP TYPE	2014
C-404-8	6" RECLAIMED WATER IRR SERVICE LINE INLINE PUMP TYPE	2014
C-404-9	4" RECLAIMED WATER IRR SERVICE LINE CAN PUMP TYPE	2014
C-404-10	4" RECLAIMED WATER IRR SERVICE LINE CAN PUMP TYPE	2008
C-404-11	6" RECLAIMED WATER IRR SERVICE LINE CAN PUMP TYPE	2014
C-404-12	6" RECLAIMED WATER IRR SERVICE LINE CAN PUMP TYPE	2008
C-405-1	LARGE WATER USER (WITH LAKE) RECLAIMED WATER TURNOUT	2009
C-405-2	ANTENNA	2009
C-405-3	ROLLING GATE	2009
C-405-4	LEVEL SENSORS	2009
C-405-5	METERPED	2009

C-405-6	TURNOUT COMPOUND	2009
C-405-7	COMPOUND WALL	2009
C-405-8	SCADA CABINET	2009
C-405-9	MATERIALS LIST 1 OF 2	2009
C-405-10	MATERIALS LIST 2 OF 2	2009
C-405-11	SIGNAGE	2009
C-405-12	GENERAL NOTES	2009
C-406-1	VALVE BOX INSTALLATION (RECLAIMED WATER)	**2025**
C-406-2	VALVE BOX INSTALLATION (RECLAIMED WATER)	1999
C-408	PIPE LOCATOR WIRE & I.D. TAPE	**REMOVED 2023**
C-409	PIPE PENETRATION AND MANHOLE FRAME TERMINATION DETAIL	2009
C-410	DEEP CUT SEWER CONNECTION (SEWER LATERAL)	2010
C-411	BUILDING SEWER CONNECTION	2010
C-412	6" SEWER SAMPLING PORT	2018
C-416	3" THROUGH 6" RECLAIMED WATER METER VAULT	2011
C-417-1	INDUSTRIAL MONITORING VAULT DETAILS	2015
C-417-2	INDUSTRIAL MONITORING VAULT SITE PLAN	2014

C-500 SERIES: STORM SEWER & DRAINAGE

Detail	Title	Revised/Approved
C-500	SCUPPER	2020
C-501	DRYWELL SYSTEM DETAIL AND SPECIFICATIONS	2018
C-502	PRETREATMENT DRYWELL SYSTEM	2018
C-503	TRASH RACK/ACCESS BARRIER	2020
C-504	RETENTION BASIN INLET	2002
C-506	CATCH BASIN GRATES	**2025**
C-507-1	BELOW GRADE RETENTION BASIN INLET (BUBBLER BOX)	2009
C-507-2	BELOW GRADE RETENTION BASIN INLET (BUBBLER BOX)	2009
C-507-3	BELOW GRADE RETENTION BASIN INLET (BUBBLER BOX)	2018
C-508	STORM DRAIN INLET MARKER	2009
C-509	BACKFILL DETAIL CMP UNDERGROUND RETENTION STORAGE TANK	REMOVED 2023
C-510	TEMPORARY RETENTION BASIN MULCH DRYWELL	2021

C-600 SERIES: SIGNAGE & STRIPING

Detail	Title	Revised/Approved
C-600	MEDIAN SIGNAGE	2018
C-601-1	STREET NAME SIGNS (FOR PUBLIC STREETS)	2018
C-601-2	STREET NAME SIGNS (FOR PRIVATE STREETS)	2018
C-603	ADVANCED STREET NAME SIGNS	2018
C-604	ADDRESS IDENTIFICATION FOR CLUSTER DEVELOPMENTS	1999

C-605-1	NEARSIDE STREET NAME SIGNS (FOR PUBLIC STREETS)	2018
C-605-2	NEARSIDE STREET NAME SIGNS (FOR PRIVATE STREETS)	2018
C-606	INTERNALLY ILLUMINATED STREET NAME SIGN	2020
C-607	INTERNALLY ILLUMINATED STREET NAME SIGN - BRACKET ASSEMBLY	2020
C-608	INTERNALLY ILLUMINATED STREET NAME SIGN – JC/RC MOD POLE MOUNTING	2022
C-609	INTERNALLY ILLUMINATED STREET NAME SIGN - F POLE MOUNTING	REMOVED 2022
C-610	INTERNALLY ILLUMINATED STREET NAME SIGN - F POLE MOUNTING	REMOVED 2022
C-611	ACCESSIBLE PARKING SPACE SIGN	2018
C-612	ACCESSIBLE PAVEMENT MARKING SYMBOL	2018
C-613	SIGN POST AND BASE	2017
C-614	PAVEMENT MARKING DETAILS	2020
C-615	SIGN POST AND BASE LOCATIONS FOR RESIDENTIAL STREETS	2002
C-616	RIGHT TURN LANE DROP	2013
C-617	MEDIAN NOSE PAINTING	2022
C-618	TYPICAL SIGNS AND MARKINGS ARTERIAL ROAD	2022
C-619	TYPICAL LANE WIDTHS - ARTERIAL ROAD WITH DOUBLE LEFT TURNS	2013
C-620	MAJOR ARTERIAL DECELERATION LANE SIGNING & STRIPING	2009
C-621	ARTERIAL SIGNAGE	2002
C-622	ARTERIAL ROADWAY MARKINGS (W/O MEDIANS)	2018
C-623	INTERSECTION MARKINGS (WITH MEDIANS)	2018
C-624	COLLECTOR ROAD PAVEMENT MARKINGS	**2025**

C-625	RAILROAD MARKINGS FOR QUIET ZONES	**2025**

C-700 SERIES: TRAFFIC SIGNALS & STREET LIGHTS

Detail	Title	Revised/Approved
C-710	TRAFFIC SIGNAL POLE TYPE QC	2022
C-711	TRAFFIC SIGNAL POLE TYPE JC	2022
C-712	TRAFFIC SIGNAL POLE JC MODIFIED	2022
C-713	TRAFFIC SIGNAL POLES QC, JC, & JC MODIFIED	2022
C-714	TRAFFIC SIGNAL POLE TYPE RC	2022
C-715	TRAFFIC SIGNAL POLE TYPE KC	2022
C-716	TRAFFIC SIGNAL POLE TYPE KC MODIFIED	2022
C-717	TRAFFIC SIGNAL POLES RC, KC, & KC MODIFIED	2022
C-718	TRAFFIC SIGNAL POLE FOUNDATION QC, JC, JC MODIFIED, RC, KC & KC MODIFIED	**2025**
C-720	TRAFFIC SIGNAL POLE PLACEMENT FOR PUSH BUTTON ACCESSIBILITY	2022
C-721	TRAFFIC SIGNAL METER PEDESTAL	2022
C-722-1	TRAFFIC SIGNAL I.M.S.A. SIGNAL CABLE INSTALLATION	2022
C-722-2	TRAFFIC SIGNAL TERMINAL BLOCK WIRING DETAILS	2022
C-723	TRAFFIC SIGNAL CABINET FOUNDATION CONDUIT LAYOUT	2022
C-724	TRAFFIC PULL BOX NO. 7 TYPICAL INSTALLATION	**2025**
C-751-1	STREET LIGHT POLE ASSEMBLY (SL-1)	2022
C-751-2	STREET LIGHT DAVIT ARMS (SL-1)	2022
C-751-3	STREET LIGHT DETAILS (SL-1)	2022

C-752-1	STREET LIGHT POLE ASSEMBLY (SL-6 AND SL-8)	2022
C-752-2	STREET LIGHT DAVIT ARMS (SL-6 AND SL-8)	2022
C-753-1	STREET LIGHT POLE DETAILS (SL-6)	2022
C-753-2	STREET LIGHT POLE DETAILS (SL-6)	2022
C-754-1	STREET LIGHT POLE DETAILS (SL-8)	2022
C-754-2	STREET LIGHT POLE DETAILS (SL-8)	2022
C-755	DECORATIVE STREET LIGHT POLE (SL-16)	2022
C-756	ANGLE STREET LIGHT POLE (SL-17)	**2025**
C-757-1	STREET LIGHT JUNCTION BOXES	2022
C-757-2	STREET LIGHT 14" X 24" JUNCTION BOX (APS SERVICE AREA)	2022
C-757-3	STREET LIGHT 10" X 15" JUNCTION BOX (SRP SERVICE AREA)	2022
C-758	STREET LIGHT CONNECTION DETAILS	**2025**
C-760	STREET LIGHT SPREAD FOUNDATION (SL-1, SL-6, SL-8 AND SL-16)	2022

C-800 SERIES: LANDSCAPING

Detail	Title	Revised/Approved
C-801	TREE PLANTING AND STAKING	2012
C-802	TREE PLANTING SLOPE	2012
C-803	PALM PLANTING AND BRACING	2012
C-804	CACTUS AND ACCENT PLANTING	2012
C-805	SHRUB AND GROUND COVER PLANTING	2012
C-806	PLANT PIT SCHEDULE	2012
C-807	MEDIAN	2023

C-808	EMITTER ACCESS BOX AND EMITTER LAYOUT	2012
C-809	REMOTE CONTROL ELECTRIC VALVE TURF	2012
C-810	REMOTE CONTROL ELECTRIC VALVE DRIP	2012
C-811	IRRIGATION TRENCH	2012
C-812	BUBBLER	2012
C-813	GEAR-DRIVEN POP-UP ROTER	2012
C-814	POP-UP SPRAY HEAD	2012
C-815	QUICK COUPLER	2012
C-816	TYPICAL IRRIGATION LEGEND AND INFORMATION	2012
C-817	EMITTER-BUBBLER SCHEDULE	2011

Fire Department Standard Details

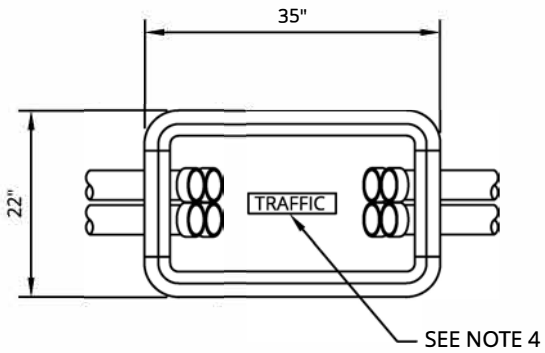
Detail	Title	Revised/Approved
FD102	FIRE LINE INSTALLATION (NO ON-SITE HYDRANTS REQUIRED)	**2025**
FD103	FIRE LINE INSTALLATION (ON-SITE HYDRANT REQUIRED)	**2025**
FD104	FIRE DEPARTMENT VALVE SIGNAGE	2020
FD105	FIRE SPRINKLER SYSTEM RISER COMMERCIAL INSTALLATION	2020
FD106	FIRE RISER ROOM AND FIRE ALARM PANEL SIGNAGE	2020
FD107	TEMPORARY FIRE DEPT ACCESS ROAD SIGNAGE	2020
FD108	FIRE DEPT EMERGENCY ACCESS GATE SIGNAGE	2020
FD109	EMERGENCY ACCESS BARRIER	2020
FD111	FIRE LANE SIGNING AND MARKING	2020
FD115	BLOCKED DOOR SIGNAGE	2020
FD141	FIRE APPARATUS ROADWAYS AND TURNAROUNDS	2020
FD143	FIRE APPARATUS ROADWAYS AND TURNAROUNDS PRIVATE RESIDENTIAL CUL-DE-SAC	2020
FD144	FIRE SPRINKLER RISER W/ BACKFLOW PREVENTION (APPROVED BY FIRE MARSHAL ONLY)	2020
FD151	ADDRESS IDENTIFICATION	2020

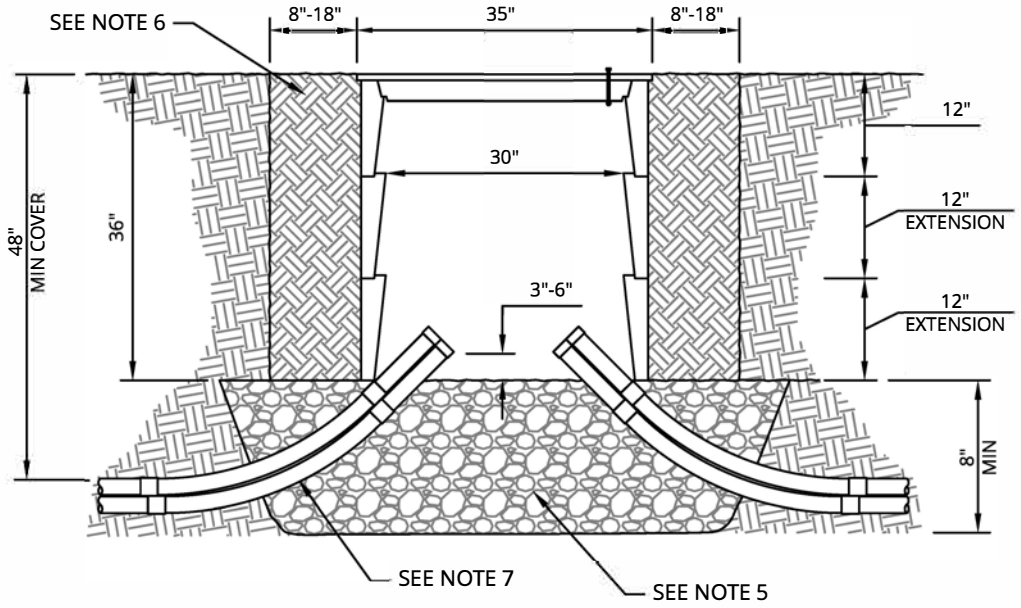
CHANDLER arizona

Standard Details

GENERAL INFORMATION

C-100 TO C-113

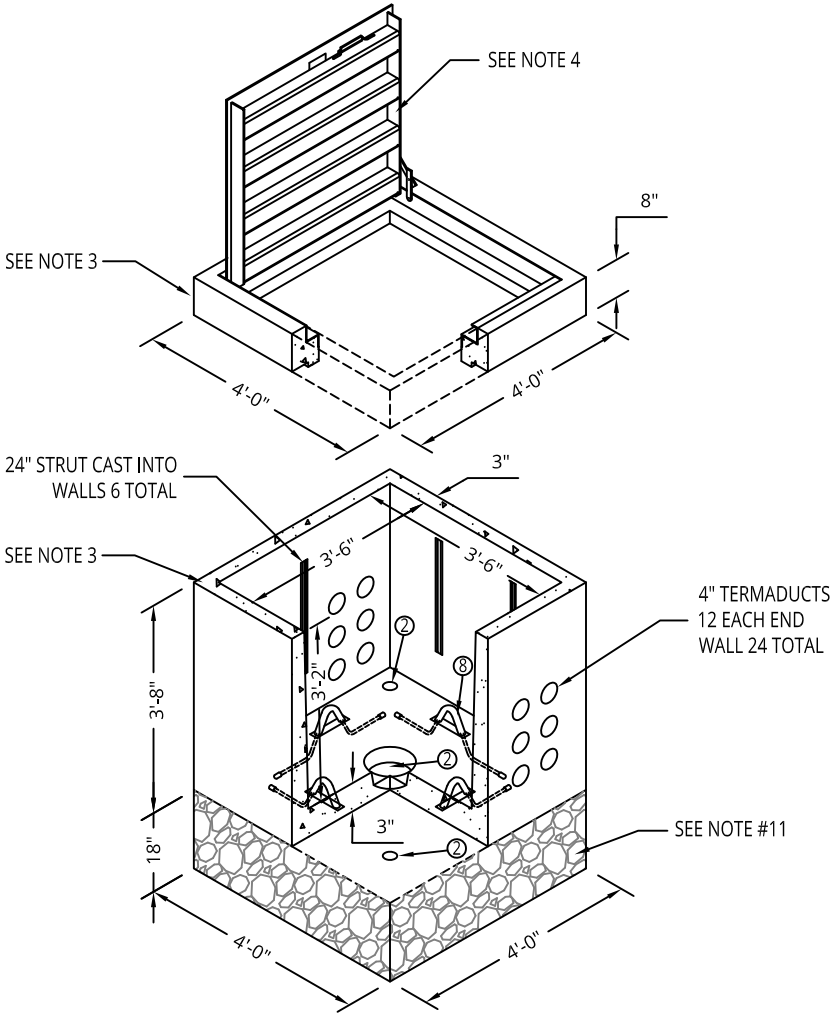




NOTES:

1. PLEASE REFER TO SECTION 5.6 THROUGH 5.7.3 OF THE ENGINEERING & DESIGN STANDARDS MANUAL FOR MORE INFORMATION.
2. HANDHOLE SHALL BE CHRISTY P36 OR APPROVED EQUAL WITH TWO 12-INCH EXTENSIONS FOR TOTAL DEPTH OF 36 INCHES.
3. ALL PULL BOXES SHALL BE AASHTO TIER 22, H-20 RATED OR BETTER WITH POLYMER CONCRETE OR FIBRELYTE COVERS.
4. ALL COVERS WILL HAVE "TRAFFIC" MARKING INTEGRATED INTO THE COVER AND BE ASTMC 857, WUC 3.63 OR AASHTO TIER 15 RATED. TIER 8 LIDS MAY BE USED IN SOME CASES WHEN APPROVED BY CITY OF CHANDLER
5. HAND HOLE BASE MUST BE PLACED ON 8-INCHES MINIMUM OF ABC OR PEA GRAVEL AS REQUIRED BY MAG SECTION 702 AND COMPACTED TO 100% MAXIMUM DENSITY.
6. THE OUTER SIDES OF THE PULL BOX MUST BE BACKFILLED WITH SELECT EXCAVATED MATERIAL AND THOROUGHLY COMPACTED TO 95% TO WITHIN TWO INCHES OF FINISHED GRADE. THE COMPACTION AROUND THE BOX MUST NOT CAUSE THE SIDES TO DEFLECT OR ANY PART OF THE BOX OR LID TO CRACK.
7. HDPE CONDUIT PREFERRED, SCHEDULE 40 MINIMUM, WITH 45-DEGREE SWEEPS WITH A 36-INCH BEND RADIUS.
8. ALL CONDUIT ENDS MUST HAVE A BELL-END TO PROTECT THE CONDUCTOR OR FIBER OPTIC CABLE FROM DAMAGE AND REMOVABLE CAPS MUST BE PLACED ON ALL UNUSED CONDUIT ENDS.

DETAIL NO.			APPROVED:	DETAIL NO.
C-103-1	CHANDLER arizona	**PULL BOX NO. 7 WITH EXTENSIONS TYPICAL INSTALLATION**	01-27-2025	**C-103-1**



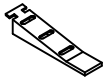
NOTES:

1. PLEASE REFER TO SECTION 5.6 THROUGH 5.7.3 OF THE ENGINEERING & DESIGN STANDARDS MANUAL FOR MORE INFORMATION.
2. VAULT SHALL BE UTILITY VAULT CO. #444-TA OR APPROVED EQUAL AND MUST INCLUDE A 9-INCH DIAMETER SUMP AND 2 HOLES FOR GROUND RODS .
3. PULL BOX AND LID SHALL BE RATED FOR HS20 LOADING
4. 36"X 36" GALVANIZED DIAMOND PLATE, SPRING ASSISTED FRAME AND COVER INSCRIBED "COC TRAFFIC SIGNAL".
5. LID SHALL OPEN 180 DEGREES WITH A TORSION BAR LIFT ASSIST
6. COVER HARDWARE SHALL BE CADMIUM PLATED
7. THE LID MUST HAVE PROVISIONS FOR A RECESSED PADLOCK IN A CAVITY IN THE PULL BOX COVER AND MUST LOCK DOWN WITHOUT THE PADLOCK.
8. FOUR PULLING IRONS SHALL BE PROVIDED.
9. THE PULL BOX MUST BE INSTALLED AT FINISHED GRADE.
10. EXCAVATION, BACKFILL AND COMPACTION PER MAG SECTION 601, UNLESS OTHERWISE SPECIFIED HEREIN.
11. MANHOLE BASE MUST BE PLACED ON 18 INCHES MINIMUM OF ABC AS REQUIRED BY MAG SECTION 702 AND COMPACTED TO 100% MAXIMUM DENSITY.
12. THE OUTER SIDES OF THE PULL BOX MUST BE BACKFILLED WITH SELECT EXCAVATED MATERIAL AND THOROUGHLY COMPACTED TO 95% TO WITHIN TWO INCHES OF FINISHED GRADE. THE COMPACTION AROUND THE BOX MUST NOT CAUSE THE SIDES TO DEFLECT OR ANY PART OF THE BOX OR LID TO CRACK.
13. VOIDS RESULTING FROM ENTRANCE OF CONDUITS INTO PULL BOX MUST BE COMPLETELY FILLED WITH HYDRAULIC CEMENT GROUT OR DUCT SEALANT.
14. ALL CONDUIT ENDS MUST HAVE A BELL-END TO PROTECT THE CONDUCTOR OR FIBER OPTIC CABLE FROM DAMAGE AND REMOVABLE CAPS MUST BE PLACED ON ALL UNUSED CONDUIT ENDS.
15. ALL PROVIDED RACKING SHALL BE INSTALLED IN VAULT UNLESS OTHERWISE DIRECTED BY CITY OF CHANDLER

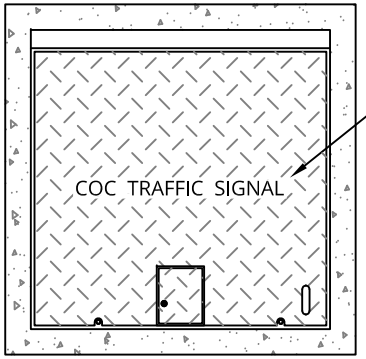
Racking Package

6 - 18 Hole Rack

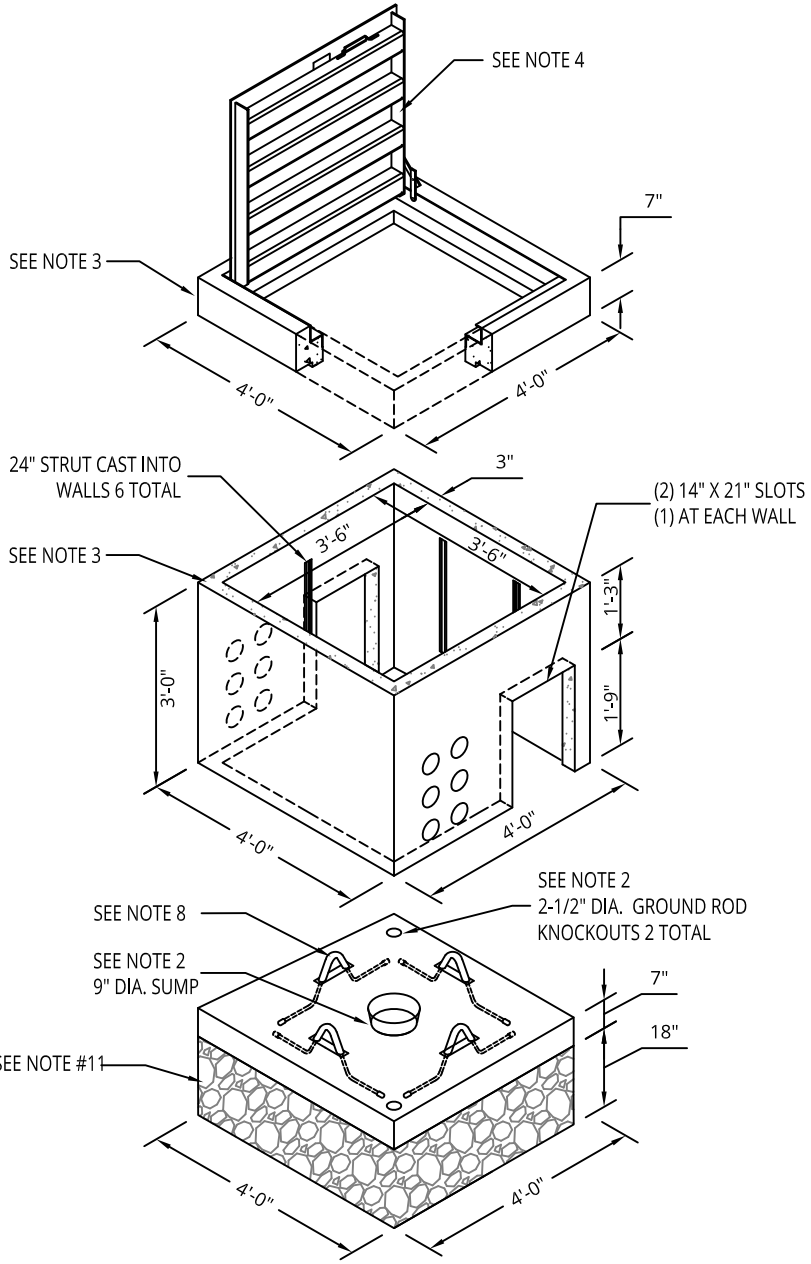
12 - 1/2" Spring Nuts And Bolt



12 - 7 1/2" Hooks

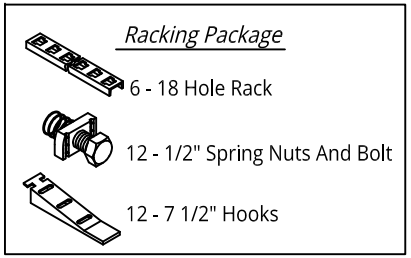


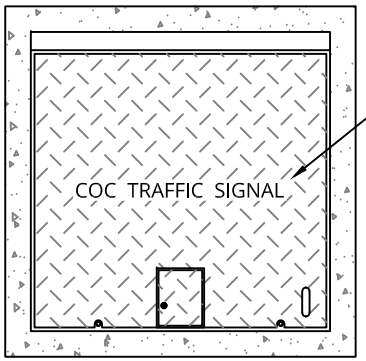
DETAIL NO.			APPROVED:	DETAIL NO.
C-103-2	CHANDLER arizona	**PULL BOX NO. 9 TYPICAL INSTALLATION**	01-27-2025	**C-103-2**



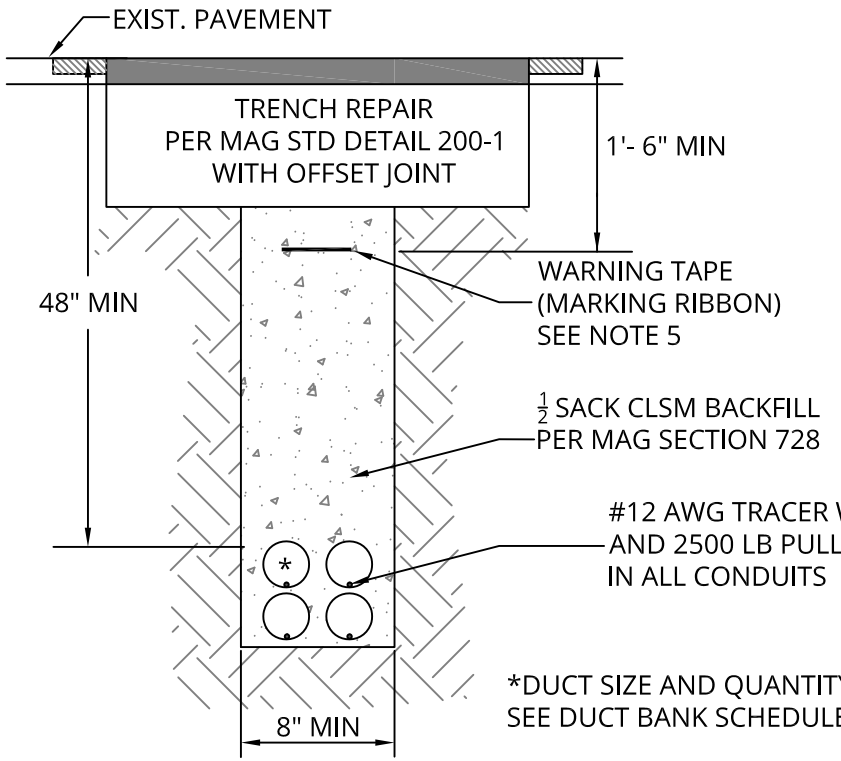
NOTES:

1. PLEASE REFER TO SECTION 5.6 THROUGH 5.7.3 OF THE ENGINEERING & DESIGN STANDARDS MANUAL FOR MORE INFORMATION.
2. VAULT SHALL BE UTILITY VAULT CO. #444-TA OR APPROVED EQUAL AND MUST INCLUDE A 9-INCH DIAMETER SUMP AND 2 HOLES FOR GROUND RODS .
3. PULL BOX AND LID SHALL BE RATED FOR HS20 LOADING
4. 36"X 36" GALVANIZED DIAMOND PLATE, SPRING ASSISTED FRAME AND COVER INSCRIBED "COC TRAFFIC SIGNAL".
5. LID SHALL OPEN 180 DEGREES WITH A TORSION BAR LIFT ASSIST
6. COVER HARDWARE SHALL BE CADMIUM PLATED
7. THE LID MUST HAVE PROVISIONS FOR A RECESSED PADLOCK IN A CAVITY IN THE PULL BOX COVER AND MUST LOCK DOWN WITHOUT THE PADLOCK.
8. FOUR PULLING IRONS SHALL BE PROVIDED.
9. THE PULL BOX MUST BE INSTALLED AT FINISHED GRADE.
10. EXCAVATION, BACKFILL AND COMPACTION PER MAG SECTION 601, UNLESS OTHERWISE SPECIFIED HEREIN.
11. MANHOLE BASE MUST BE PLACED ON 18 INCHES MINIMUM OF ABC AS REQUIRED BY MAG SECTION 702 AND COMPACTED TO 100% MAXIMUM DENSITY.
12. THE OUTER SIDES OF THE PULL BOX MUST BE BACKFILLED WITH SELECT EXCAVATED MATERIAL AND THOROUGHLY COMPACTED TO 95% TO WITHIN TWO INCHES OF FINISHED GRADE. THE COMPACTION AROUND THE BOX MUST NOT CAUSE THE SIDES TO DEFLECT OR ANY PART OF THE BOX OR LID TO CRACK.
13. VOIDS RESULTING FROM ENTRANCE OF CONDUITS INTO PULL BOX MUST BE COMPLETELY FILLED WITH HYDRAULIC CEMENT GROUT OR DUCT SEALANT.
14. ALL CONDUIT ENDS MUST HAVE A BELL-END TO PROTECT THE CONDUCTOR OR FIBER OPTIC CABLE FROM DAMAGE AND REMOVABLE CAPS MUST BE PLACED ON ALL UNUSED CONDUIT ENDS.
15. ALL PROVIDED RACKING SHALL BE INSTALLED IN VAULT UNLESS OTHERWISE DIRECTED BY CITY OF CHANDLER

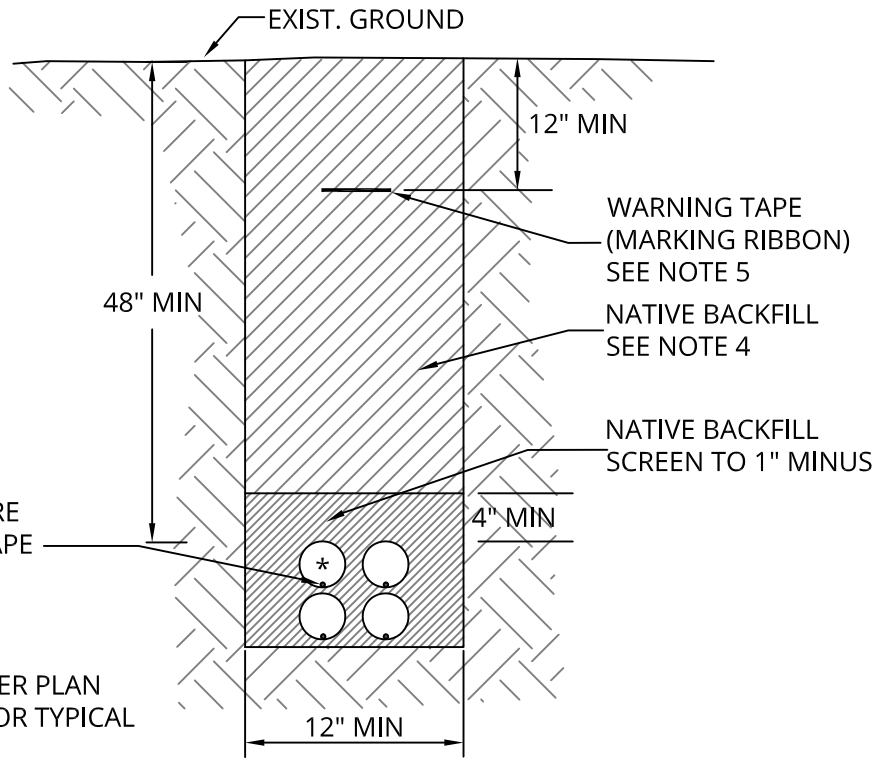




DETAIL NO.			APPROVED:	DETAIL NO.
C-103-3	CHANDLER arizona	**PULL BOX NO. 9 SPLIT VAULT TYPICAL INSTALLATION**	01-27-2025	**C-103-3**



UNDER PAVEMENT AND ACCESS ROADS



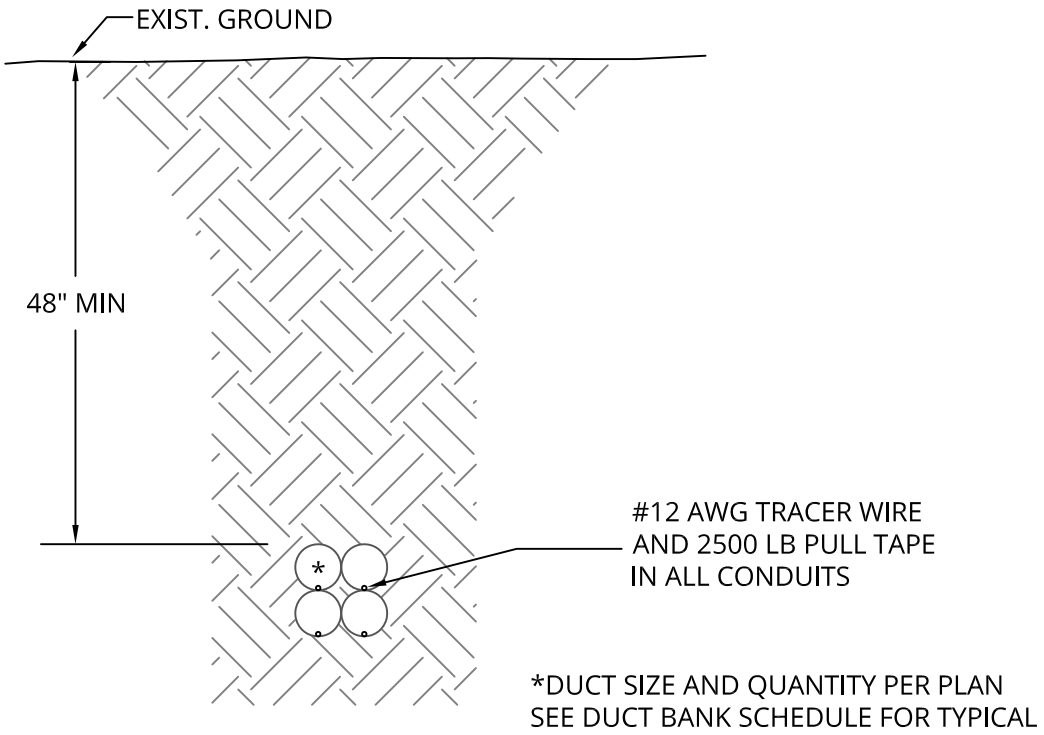
UNDER SIDEWALKS OR LANDSCAPING

NOTES:

1. PAVEMENT MATCHING, BASE COURSES, AND SURFACE REPLACEMENT PER MAG SECTION 336 AND CITY SUPPLEMENTAL SPECIFICATIONS.
2. TRENCH EXCAVATION, BACKFILL AND COMPACTION PER MAG SECTION 601, UNLESS OTHERWISE SPECIFIED HEREIN.
3. INSTALLATION PER MAG SECTION 360, AND CITY SUPPLEMENTAL SPECIFICATIONS.
4. PLACE NATIVE BACKFILL IN 6-INCH LIFTS AND COMPACT TO 95% OF STANDARD PROCTOR WITH COMPACTION TESTS ON EVERY OTHER LIFT AND FOR EACH 500 FEET OF TRENCH.
5. MARKING RIBBON TO BE 3" MINIMUM WIDTH, 5 MIL THICK METALLIC DETECTABLE TAPE WITH THE MESSAGE "CAUTION - FIBER OPTIC CABLE BURIED BELOW" FOR OPEN TRENCH GREATER THAN 100'.
6. HDPE CONDUIT PREFERRED, SCHEDULE 40 MINIMUM, WITH 45-DEGREE SWEEPS WITH A 36-INCH BEND RADIUS.
7. PLEASE REFER TO SECTION 5.7 OF THE ENGINEERING & DESIGN STANDARDS MANUAL FOR MORE INFORMATION.
8. ALL CONDUIT ENDS MUST HAVE A BELL-END TO PROTECT THE CONDUCTOR OR FIBER OPTIC CABLE FROM DAMAGE AND REMOVABLE CAPS MUST BE PLACED ON ALL UNUSED CONDUIT ENDS.

DUCT BANK SCHEDULE				
LOCATION	**DEPTH**	**CONDUIT SIZE**	**CONDUIT QUANTITY**	**CONDUIT COLORS**
IN RIGHT-OF-WAY OR ON CITY PROPERTY (EXCEPT BUILDING ENTRANCE)	48" MINIMUM COVER	2", TYP	4 EA, TYP	(3) GRAY (1) BLACK
BUILDING ENTRANCE	24" MINIMUM COVER	4", TYP	2 EA, TYP	ANY

DETAIL NO.			APPROVED:	DETAIL NO.
C-104-1	CHANDLER arizona	**OPEN TRENCH FIBER OPTIC CABLE DUCTS**	01-27-2025	**C-104-1**

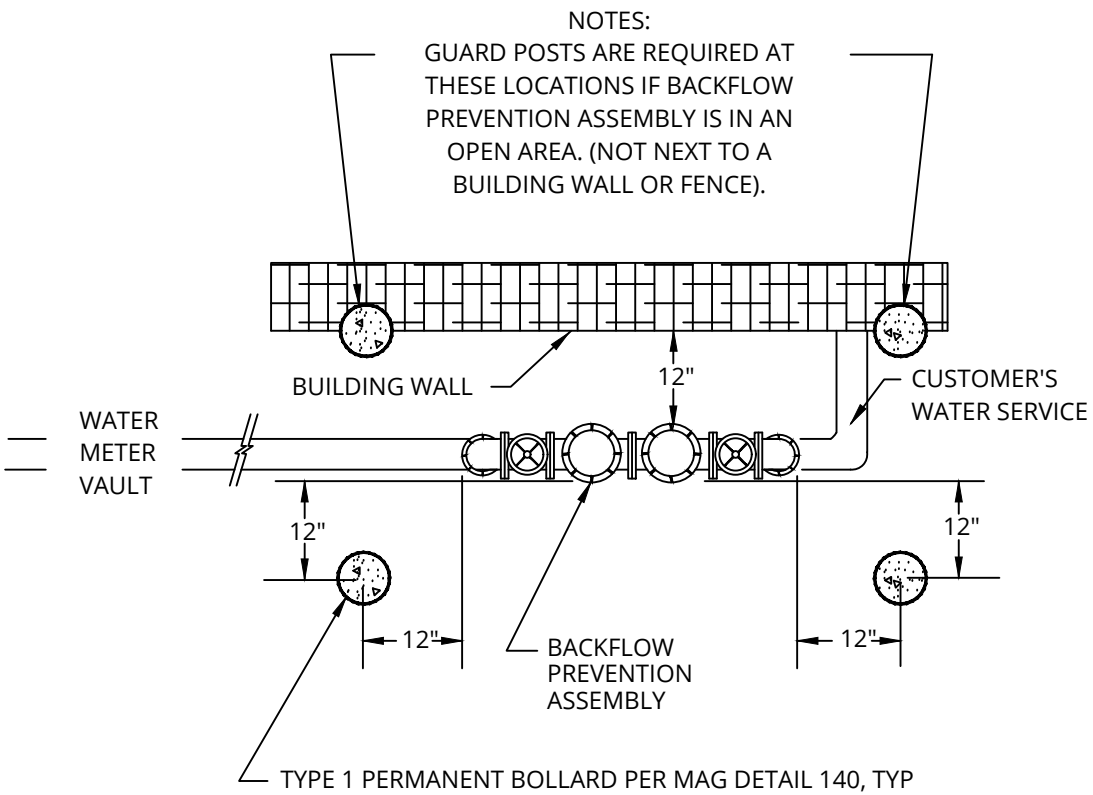


NOTES:

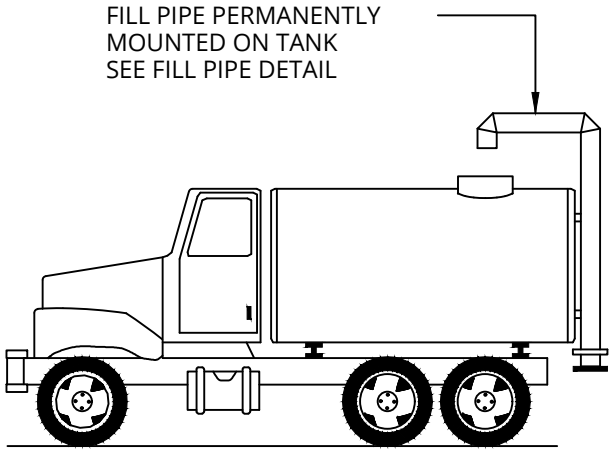
1. PAVEMENT MATCHING, BASE COURSES, AND SURFACE REPLACEMENT PER MAG SECTION 336 AND CITY SUPPLEMENTAL SPECIFICATIONS.
2. HORIZONTAL DIRECTIONAL DRILLING (HDD) PER COC STANDARD DETAIL C-112 AND COC SUPPLEMENT TO MAG SECTION 608.
3. REFER TO CITY OF CHANDLER DETAIL C-111 FOR VACUUM EXCAVATION SPACING REQUIREMENTS. BACKFILL PER SECTION 601.
4. INSTALLATION PER MAG SECTION 360, AND CITY SUPPLEMENTAL SPECIFICATIONS.
5. HDPE CONDUIT PREFERRED, SCHEDULE 40 MINIMUM, WITH 45-DEGREE SWEEPS WITH A 36-INCH BEND RADIUS.
6. PLEASE REFER TO SECTION 5.7 OF THE ENGINEERING & DESIGN STANDARDS MANUAL FOR MORE INFORMATION.
7. ALL CONDUIT ENDS MUST HAVE A BELL-END TO PROTECT THE CONDUCTOR OR FIBER OPTIC CABLE FROM DAMAGE AND REMOVABLE CAPS MUST BE PLACED ON ALL UNUSED CONDUIT ENDS.

DUCT BANK SCHEDULE				
LOCATION	**DEPTH**	**CONDUIT SIZE**	**CONDUIT QUANTITY**	**CONDUIT COLORS**
IN RIGHT-OF-WAY OR ON CITY PROPERTY (EXCEPT BUILDING ENTRANCE)	48" MINIMUM COVER	2", TYP	4 EA, TYP	(3) GRAY (1) BLACK
BUILDING ENTRANCE	24" MINIMUM COVER	4", TYP	2 EA, TYP	ANY

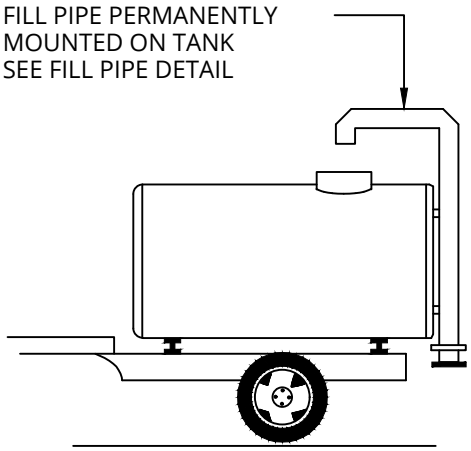
DETAIL NO.			APPROVED:	DETAIL NO.
C-104-2	CHANDLER arizona	**HORIZONTAL DIRECTIONAL DRILLING FIBER OPTIC CABLE DUCTS**	01-27-2025	**C-104-2**



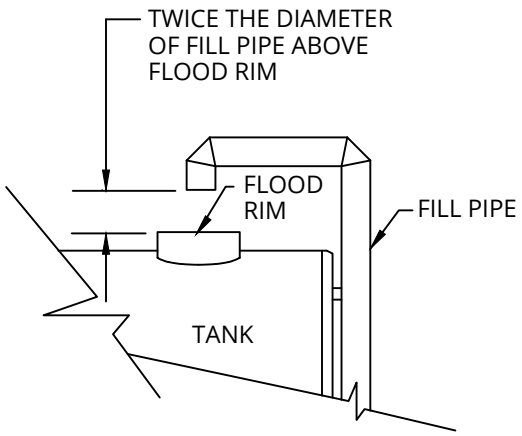
DETAIL NO. C-105	CHANDLER arizona	GUARD POST FOR BACKFLOW PREVENTION ASSEMBLY	APPROVED: 01-08-2009	DETAIL NO. C-105



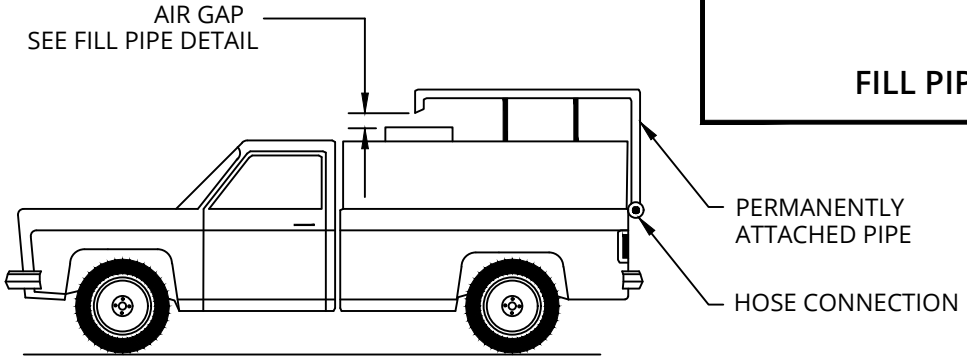
WATER TRUCK



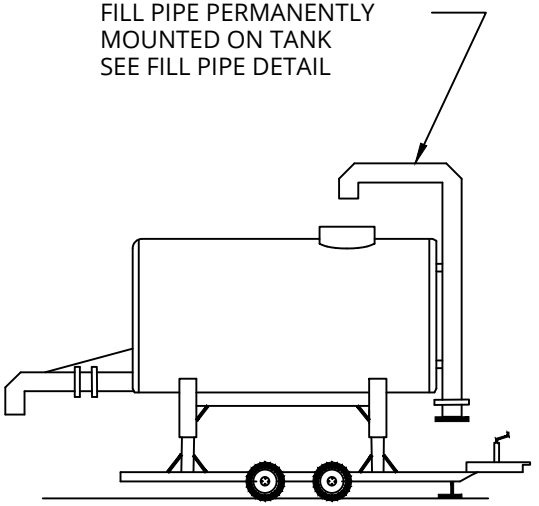
WATER WAGON



FILL PIPE DETAIL

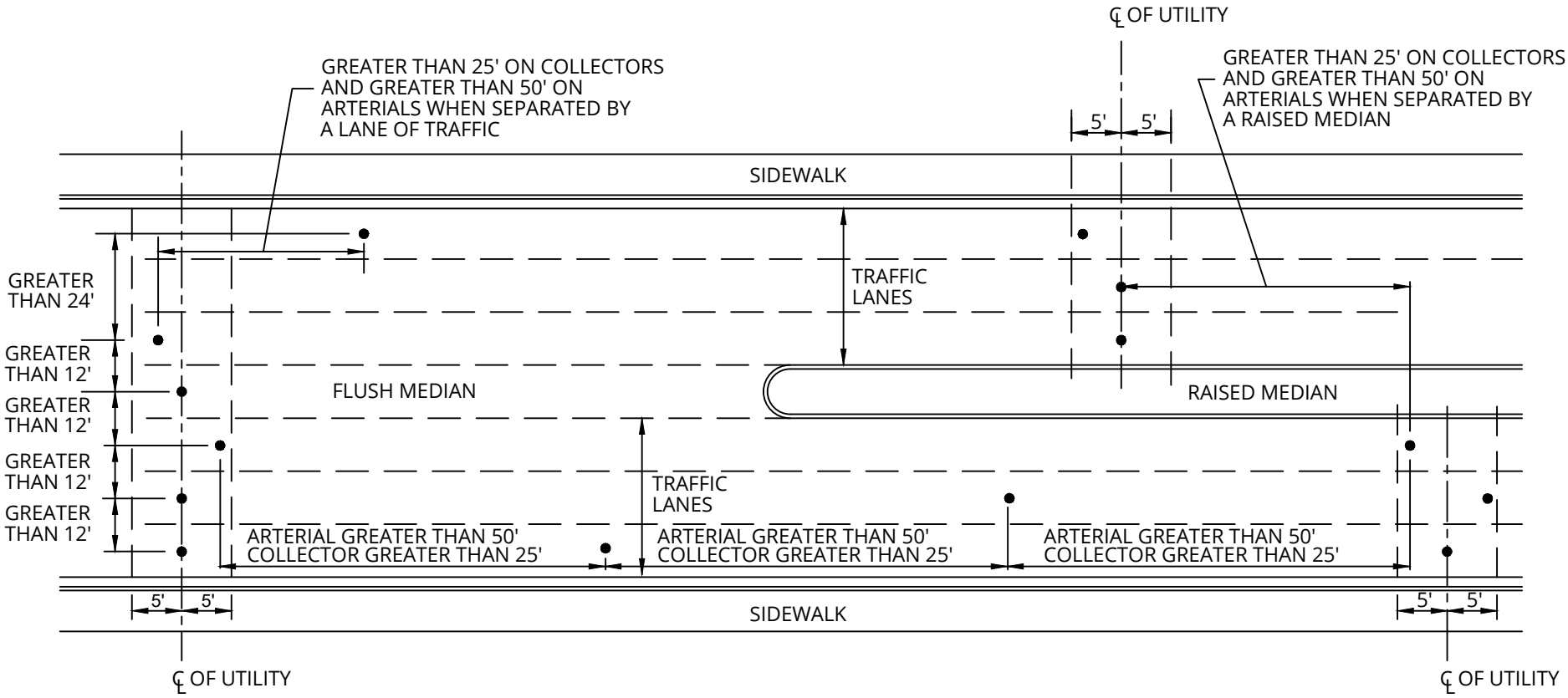


WATER TRUCK



ELEVATED TANK

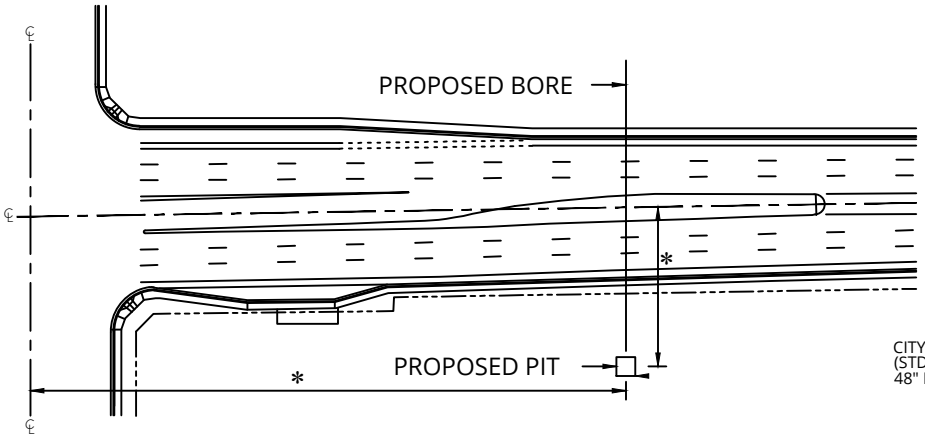
DETAIL NO. C-108	CHANDLER arizona	AIR GAP BACKFLOW PROTECTION FOR WATER TANKS	APPROVED: 11-19-1999	DETAIL NO. C-108



NOTES:

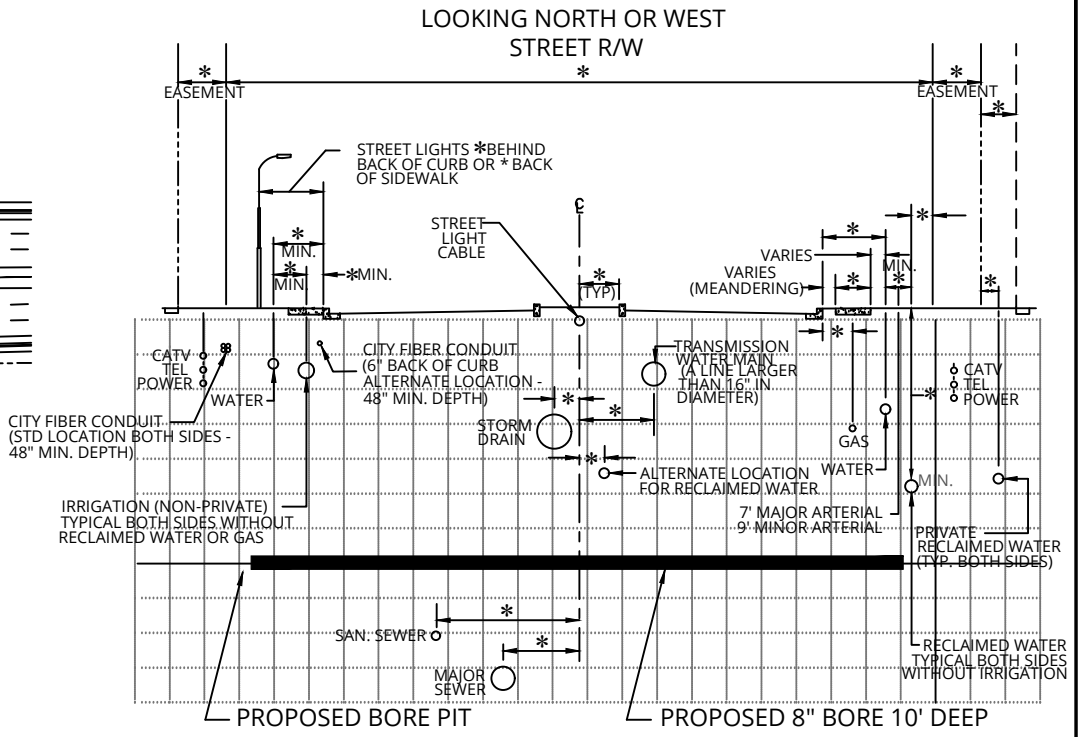
1. REFER TO THE REQUIREMENTS OF ENCROACHMENT PERMITS, STREET CUT PERMITS, AND THE FEE EXEMPTION POLICY.
2. DIMENSIONS FOR POTHOLE SPACING ARE MEASURED TO THE EDGES OF THE POTHOLES.

DETAIL NO.			APPROVED:	DETAIL NO.
C-111	CHANDLER arizona	**MINIMUM POTHOLE SPACING FOR PAVEMENT RESTORATION FEE EXEMPTION**	01-27-2011	**C-111**



PLAN VIEW

NOT TO SCALE

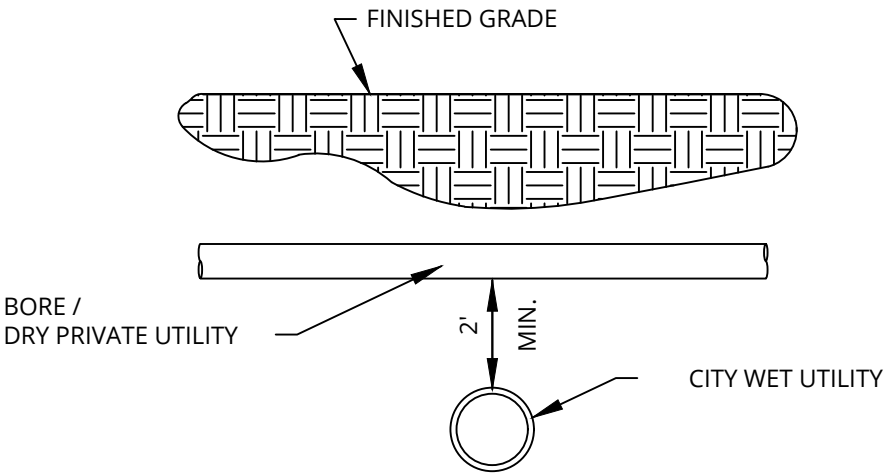


BORE PROFILE TYPICAL SECTION

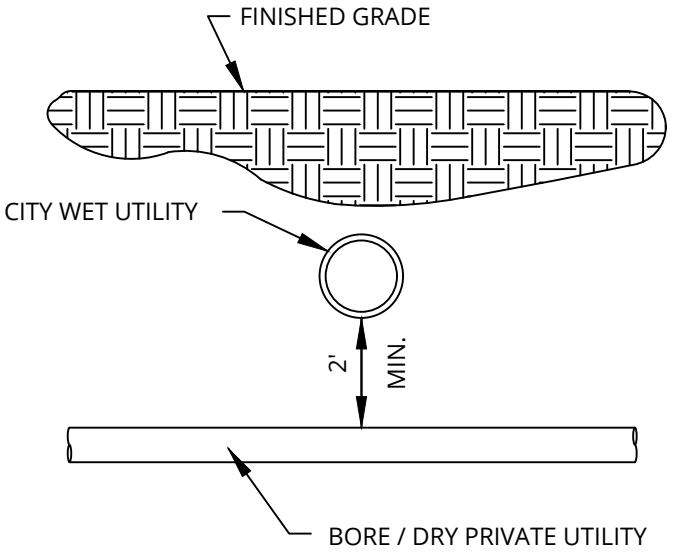
NOTES:

1. *PROVIDE PROPOSED LOCATION OF BORE AND ALL UTILITIES WITH VERTICAL & HORIZONTAL DIMENSIONS, AS WELL AS DIMENSIONS OF FACILITIES TO BE CROSSED.
2. 12" BY 12" MAX. SIZE POTHOLES ALLOWED TO VERIFY UNKNOWN UTILITY LOCATIONS AND TO MONITOR BORES PASSING WITHIN 2' OF EXISTING UTILITIES. CORE DRILLING IS PREFERRED.
3. 1' X 1' AND 2' X 2' POTHOLE PLATES ARE NOT PERMITTED. RESTORE POTHOLES PER MAG DETAIL 212.
4. ALL BORES TO BE SLEEVED IN SCHEDULE 40 PVC OR BETTER.
5. BACKFILL REQUIREMENTS OF PIT MUST BE PER MAG SECTION 601.
6. JURISDICTION MUST BE NOTIFIED IF OBSTRUCTIONS ARE ENCOUNTERED.
7. GUIDED BORE REQUIRED PER MAG SECTION 608 & CITY SUPPLEMENT SPECS.
8. THE CONTRACTOR MUST MAKE ARRANGEMENTS WITH THE OWNER OF ANY DAMAGED FACILITY FOR ITS REPAIR OR REPLACEMENT. COST OF SUCH REPAIRS MUST BE IN COMPLIANCE WITH MAG OR SPECIAL AGREEMENTS.
9. REPLACE OR REPAIR ANY LANDSCAPING/SPRINKLER DAMAGED DURING THE COURSE OF THE WORK PER MAG SECTION 107.9.
10. PERMISSION REQUIRED FROM THE CITY PRIOR TO REMOVING OR TRIMMING AND LANDSCAPING.
11. 24" MIN. CLEARANCE MUST BE PROVIDED BETWEEN BORE AND ALL EXISTING UTILITIES.

DETAIL NO.			APPROVED:	DETAIL NO.
C-112-1	CHANDLER arizona	**ENGINEERED UTILITY BORE**	01-28-2021	**C-112-1**



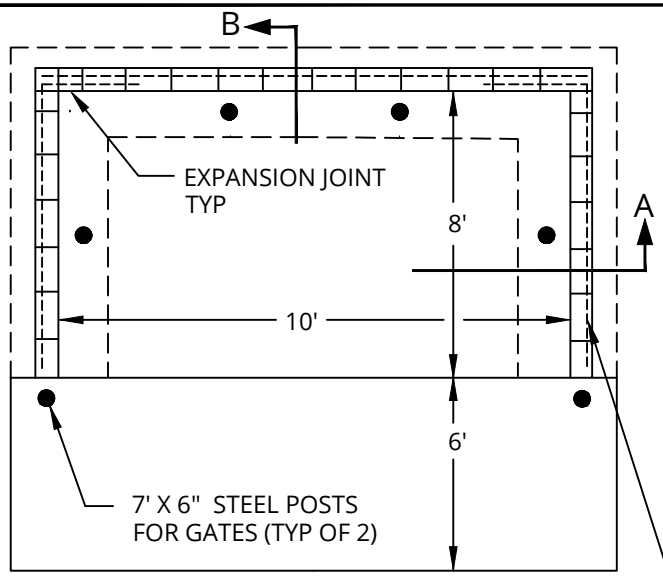
***ABOVE**
CITY WET UTILITY



BELOW
CITY WET UTILITY

*AVAILABLE ONLY IF THE UTILITY CAN ALSO MEET THE MINIMUM DEPTH REQUIREMENTS FOR THEIR RESPECTIVE UTILITY
MINIMUM COVERAGE REQUIREMENTS:
https://www.chandleraz.gov/sites/default/files/TelecommunicationsUtilityFranchise/UDM_MIN_CVR_RQMT.pdf

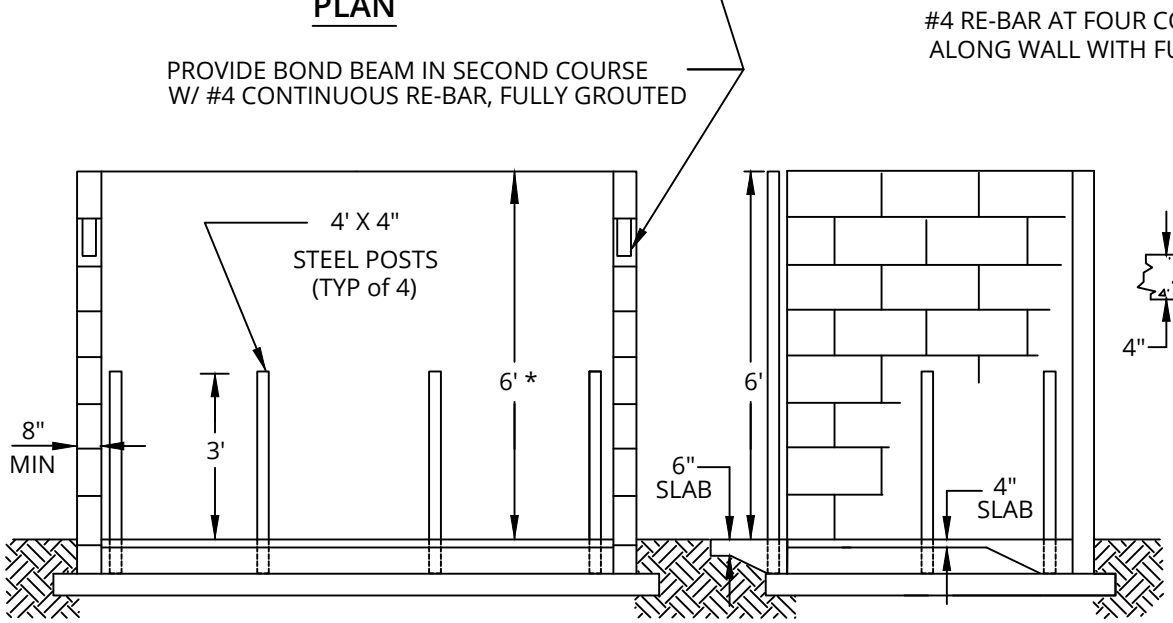
DETAIL NO.			APPROVED:	DETAIL NO.
C-112-2	CHANDLER arizona	**MINIMUM SEPARATION FROM CITY WET UTILITY**	01-28-2021	**C-112-2**



PLAN

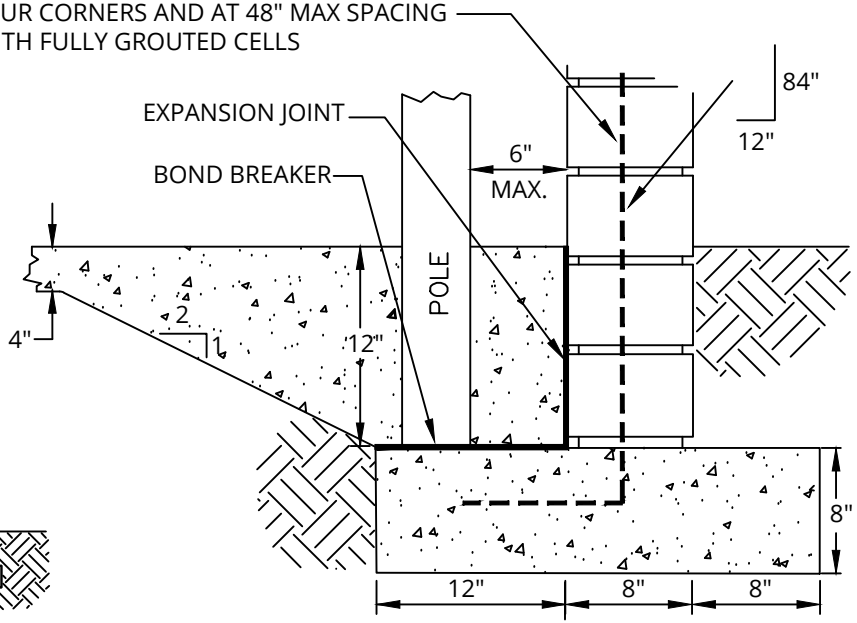
NOTES:

1. INSIDE DIMENSIONS:10' WIDE, 8' DEEP, AND 6'* HIGH. A MIN 5' HIGH WALL / GATE MUST BE PROVIDED FOR RECESSED ENCLOSURES.
2. CONCRETE BASE 4" THICK AT ENCLOSURE AND 6" THICK EXTENDED 6' BEYOND FRONT OF ENCLOSURE, BOTH WITH SUB-BASE OF 4". BASE MUST BE LEVEL WITH GRADE.
3. FOUR 4" X 4' STEEL PIPES SET 1' IN GROUND FILLED WITH CONCRETE, MOUNTED INSIDE ENCLOSURE. SIDE POLES PLACED 1/2 THE DISTANCE FROM FRONT TO BACK. BACK POLES PLACED 1/3 THE DISTANCE OF 6" FROM THE WALL.
4. 9' WIDTH FOR EACH ADDITIONAL CONTAINER. ADD 2 ADDITIONAL PIPES AT REAR OF ENCLOSURE FOR EACH ADDITIONAL CONTAINER.
5. GATES TO BE MOUNTED ON SEPARATE POST NOT CONNECTED TO WALL.
6. GATES TO BE SOLID AND PAINTED TO MATCH ENCLOSURE, CUSTOM DESIGNS WILL BE APPROVED ON A CASE-BY-CASE BASIS.
7. CMU BLOCK MAY BE ANY STD SIZE, 8" MIN WIDTH W/ SMOOTH, SPLIT, SCORED OR FLUTED EXTERIOR FACE OR SPECIALTY BLOCK. TOP TO BE SOLID BLOCK, CAPPED OR ALL CORES FILLED. WALL TO BE FINISHED AND PAINTED TO MATCH BUILDING.



FRONT SECTION A

SIDE SECTION B



FOOTING DETAIL

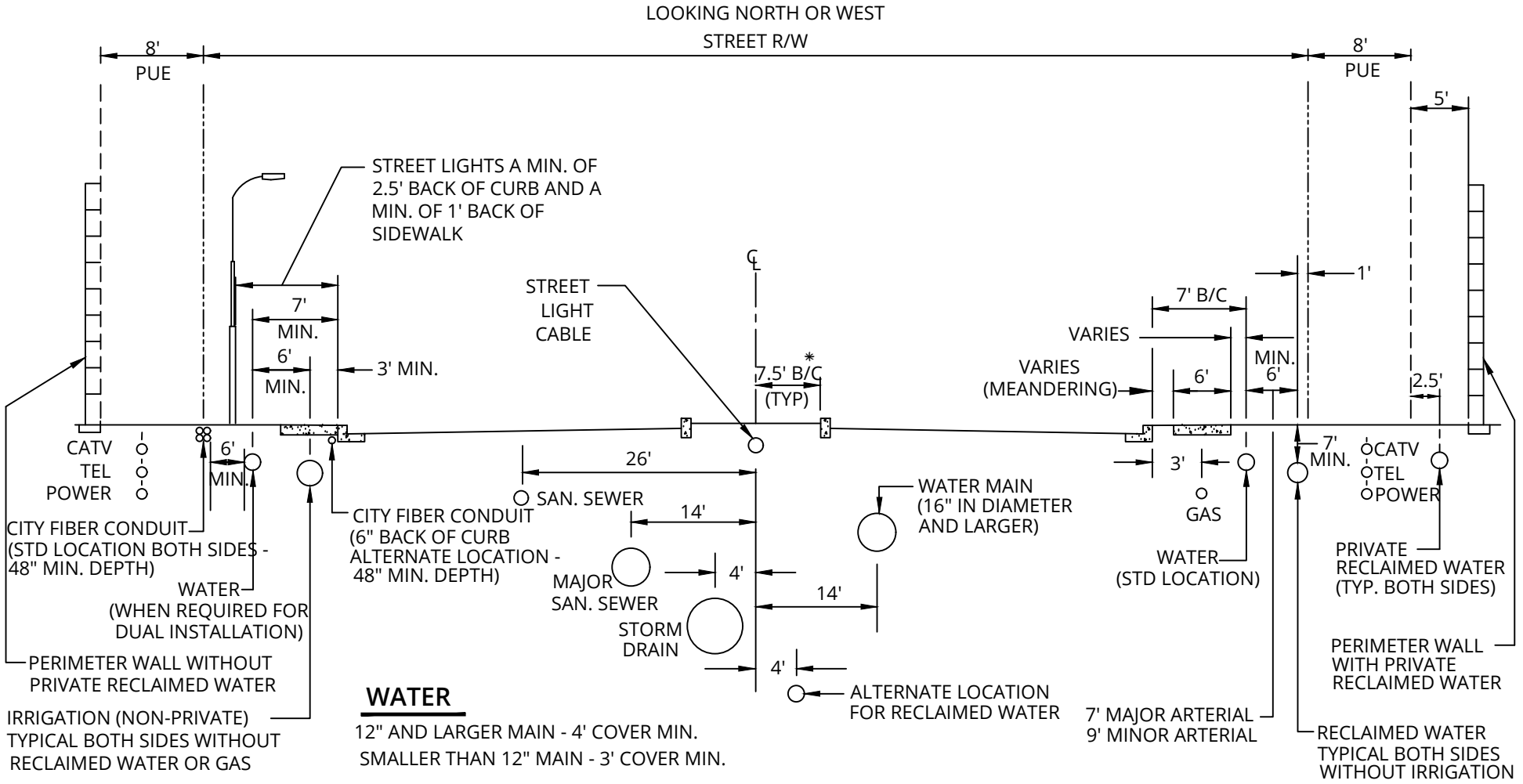
DETAIL NO.			APPROVED:	DETAIL NO.
C-113	CHANDLER arizona	**TRASH RECEPTACLE ENCLOSURE**	01-28-2021	**C-113**

CHANDLER arizona

Standard Details

STREETS

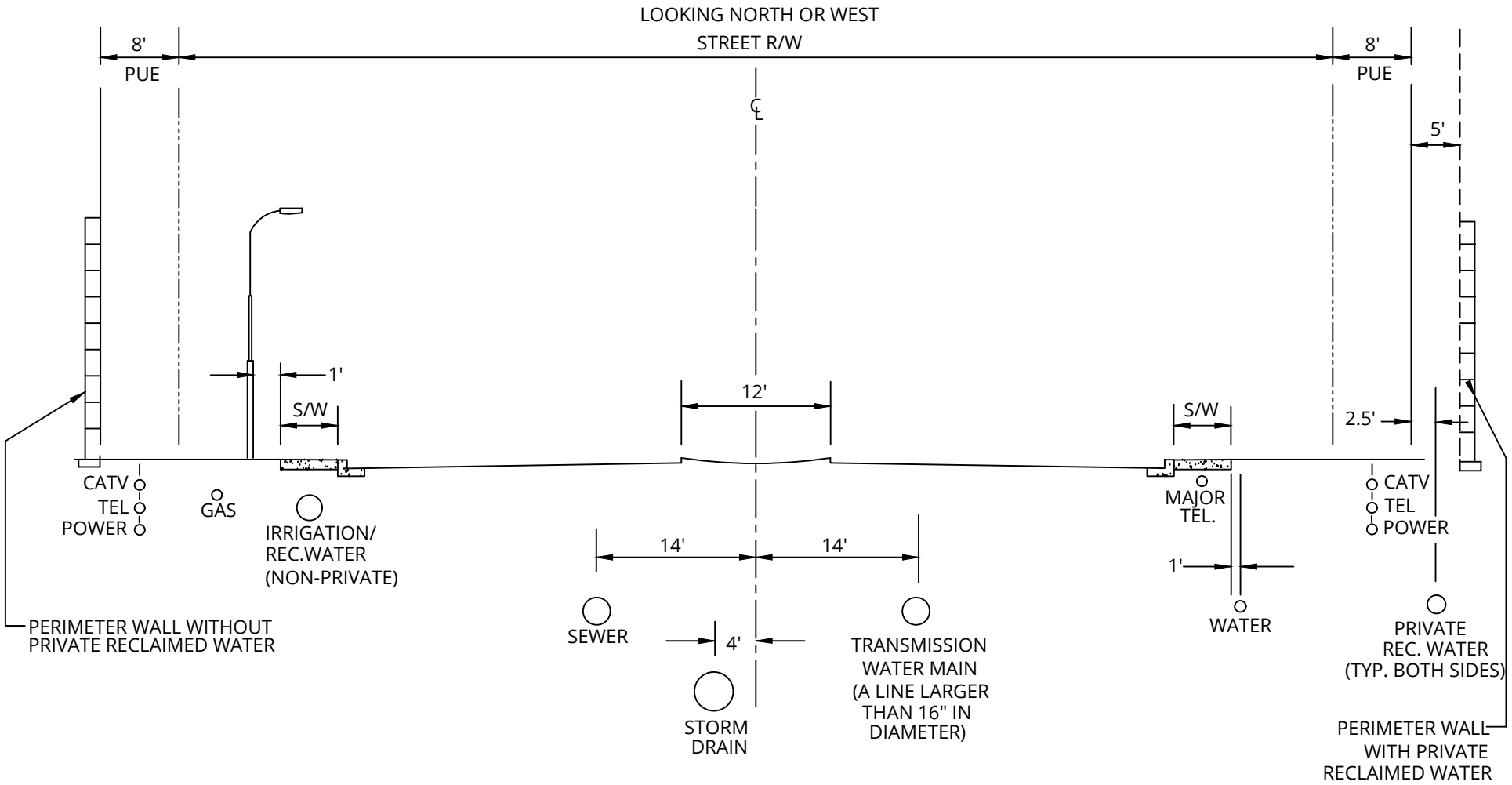
C-200 TO C-262



NOTES:

1. STREET LIGHTS MUST BE LOCATED A MINIMUM OF 1' BACK OF SIDEWALK UNLESS OTHERWISE APPROVED.
2. PRIVATE RECLAIMED WATER LINES MUST BE OUTSIDE OF PUBLIC RIGHT OF WAY.
* 3. 20 FOOT HALF MEDIAN FOR PHASED ARTERIALS. SEE C.O.C. STANDARD DETAIL NO. C-204.
4. PROVIDE IRRIGATION SLEEVE, MEDIAN TO MEDIAN, 2 NOMINAL SIZES LARGER THAN MAIN, CENTERED.

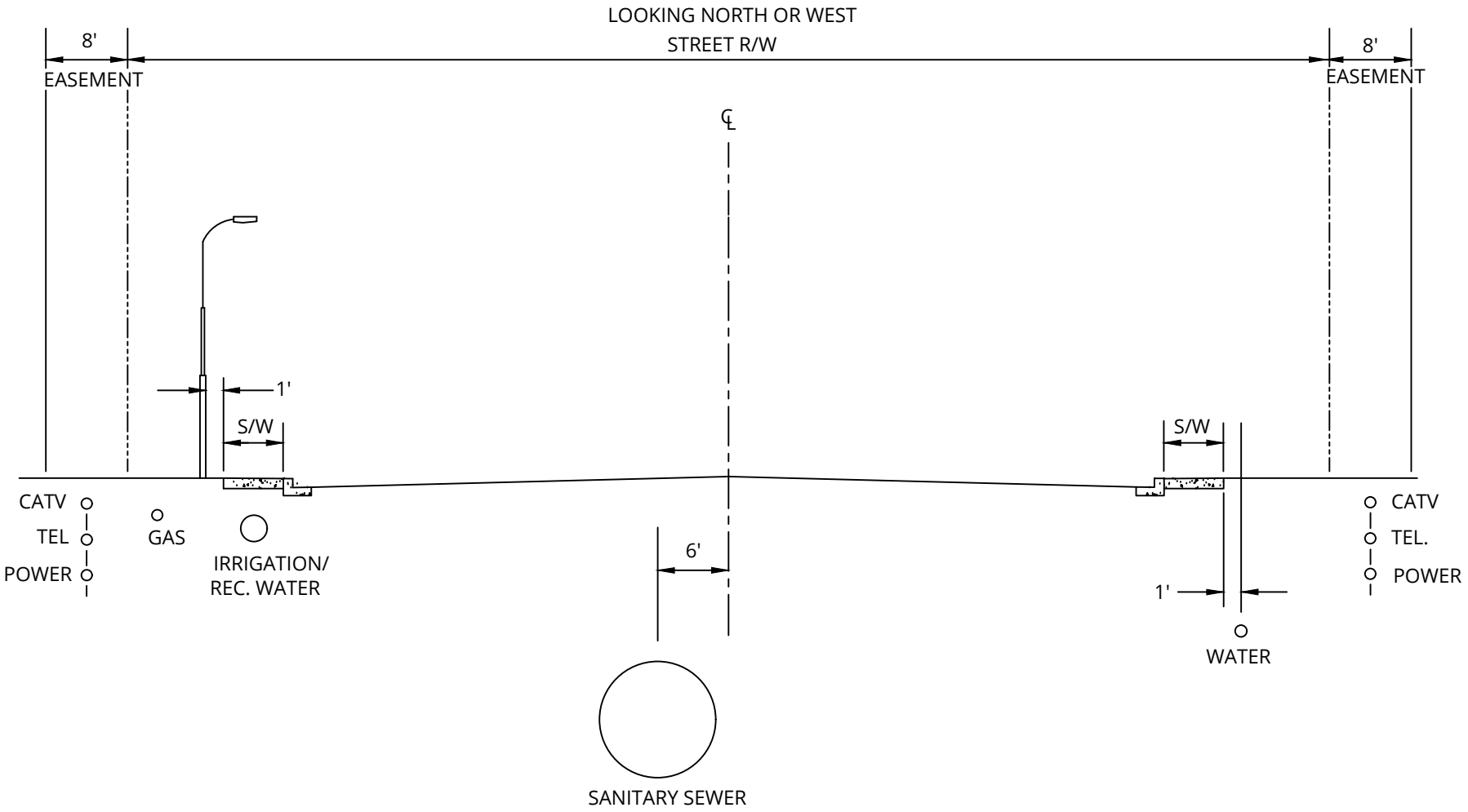
DETAIL NO.			APPROVED:	DETAIL NO.
C-200	CHANDLER arizona	**STANDARD UTILITY LOCATIONS ARTERIAL STREETS**	01-28-2021	**C-200**



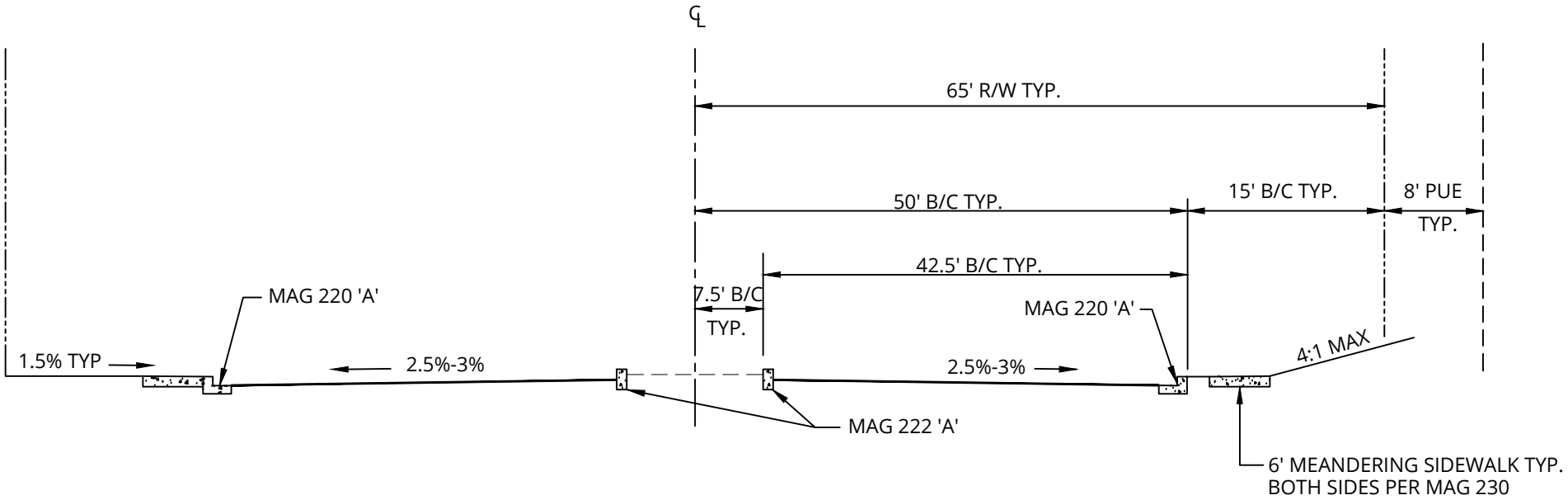
NOTE:

WHEN IN THE BEST INTEREST OF THE CITY, THE PUBLIC WORKS DIRECTOR, OR DESIGNEE, MAY WAIVE SIDEWALK ON ONE SIDE OF ROADWAY IN INDUSTRIAL AREAS.

DETAIL NO. C-201	CHANDLER arizona	STANDARD UTILITY LOCATIONS COLLECTOR STREETS	APPROVED: 05-10-2018	DETAIL NO. C-201



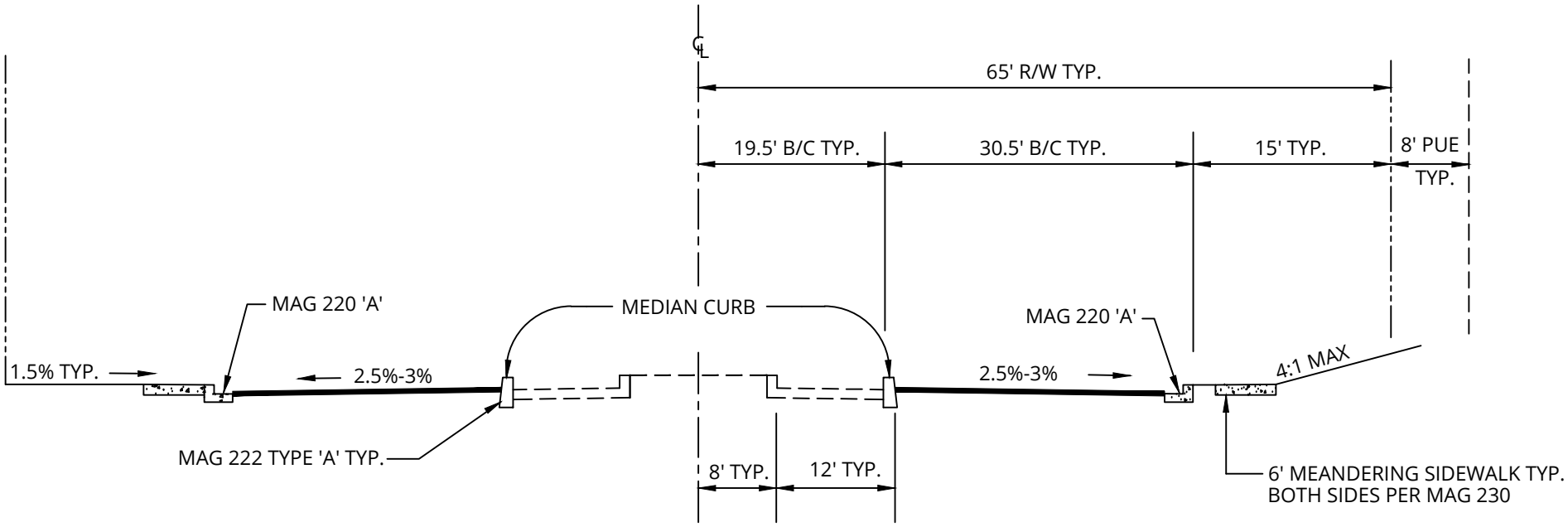
DETAIL NO.			APPROVED:	DETAIL NO.
C-202	CHANDLER arizona	**STANDARD UTILITY LOCATIONS LOCAL STREETS**	05-10-2018	**C-202**



NOTES:

1. THE SUBGRADE MUST BE PREPARED IN ACCORDANCE WITH MAG SECTION 301.
2. BASE COURSE:
   A. THE THICKNESS MUST CONFORM TO COC DETAIL C-239, 12" MINIMUM.
   B. ALL CONSTRUCTION AND MATERIALS MUST CONFORM TO MAG SECTIONS 310 AND 702.
3. ASPHALTIC CONCRETE PAVEMENT:
   A. 3" THICK AC BASE LAYER OF 3/4" EVAC MIX WITH 2" THICK AC SURFACE LAYER OF 1/2" EVAC MIX. SEE APPROVED PRODUCTS LIST FOR APPROVED EVAC MIXES.
   B. ALL CONSTRUCTION AND MATERIALS MUST CONFORM TO EVAC AND MAG SECTIONS 321 AND 710.
4. ADDITIONAL RIGHT-OF-WAY MUST BE PROVIDED WHERE NECESSARY TO ACCOMMODATE DOUBLE LEFT TURN LANES OR RIGHT TURN LANES WARRANTED BY TRAFFIC DEMANDS.
5. MEDIAN END MUST BE RAMP PER COC DETAIL C-225.
6. MEDIAN LANDSCAPE AREA MUST BE PER COC DETAIL C-807.
7. 0.2% MINIMUM LONGITUDINAL GRADE ALLOWED.

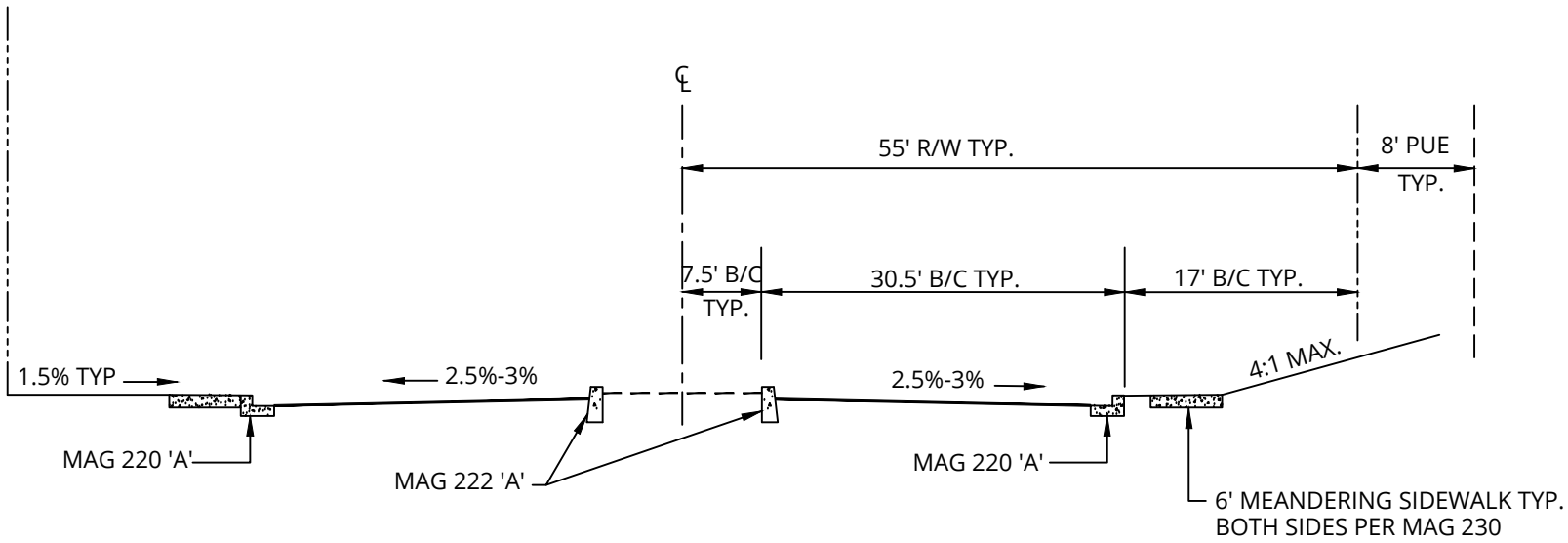
DETAIL NO. C-203	CHANDLER arizona	**MAJOR ARTERIAL STREET TYPICAL CROSS SECTION**	APPROVED: 01-16-2023	DETAIL NO. C-203



NOTES:

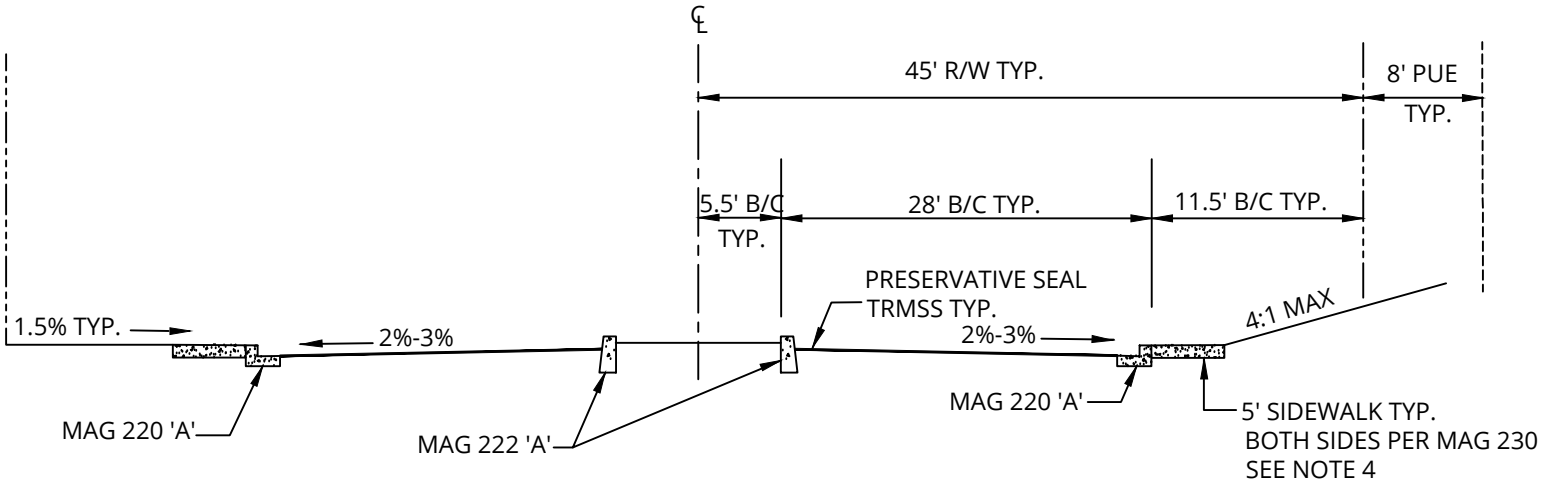
1. THE SUBGRADE MUST BE PREPARED IN ACCORDANCE WITH MAG SECTION 301.
2. BASE COURSE:
   A. THE THICKNESS MUST CONFORM TO COC DETAIL C-239.
   B. ALL CONSTRUCTION AND MATERIALS MUST CONFORM TO MAG SECTIONS 310 AND 702.
3. ASPHALTIC CONCRETE PAVEMENT:
   A. 3" THICK AC BASE LAYER OF 3/4" EVAC MIX WITH 2" THICK AC SURFACE LAYER OF 1/2" EVAC MIX. SEE APPROVED PRODUCTS LIST FOR APPROVED EVAC MIXES.
   B. ALL CONSTRUCTION AND MATERIALS MUST CONFORM TO EVAC AND MAG SECTIONS 321 AND 710.
4. ADDITIONAL RIGHT-OF-WAY MUST BE PROVIDED WHERE NECESSARY TO ACCOMMODATE DOUBLE LEFT TURN LANES OR RIGHT TURN LANES WARRANTED BY TRAFFIC DEMANDS.
5. MEDIAN LANDSCAPE MUST MUST BE PER COC DETAIL C-807.
6. 0.2% MINIMUM LONGITUDINAL GRADE ALLOWED.

DETAIL NO.			APPROVED:	DETAIL NO.
C-204	CHANDLER arizona	**PHASED MAJOR ARTERIAL STREET TYPICAL CROSS SECTION**	01-16-2023	**C-204**



1. THE SUBGRADE MUST BE PREPARED IN ACCORDANCE WITH MAG SECTION 301.
2. BASE COURSE:
   A. THE THICKNESS MUST CONFORM TO COC DETAIL C-239.
   B. ALL CONSTRUCTION AND MATERIALS MUST CONFORM TO MAG SECTIONS 310 AND 702.
3. ASPHALTIC CONCRETE PAVEMENT:
   A. 3" THICK AC BASE LAYER OF 3/4" EVAC MIX WITH 2" THICK AC SURFACE LAYER OF 1/2" EVAC MIX. SEE APPROVED PRODUCTS LIST FOR APPROVED EVAC MIXES.
   B. ALL CONSTRUCTION AND MATERIALS MUST CONFORM TO EVAC AND MAG SECTIONS 321 AND 710.
4. ADDITIONAL RIGHT-OF-WAY MUST BE PROVIDED WHERE NECESSARY TO ACCOMMODATE DOUBLE LEFT TURN LANES OR RIGHT TURN LANES WARRANTED BY TRAFFIC DEMANDS.
5. RAMP END OF MEDIAN PER COC DETAIL C-225.
6. MEDIAN LANDSCAPE AREA MUST BE PER COC DETAIL C-807.
7. 0.2% MINIMUM LONGITUDINAL GRADE ALLOWED.

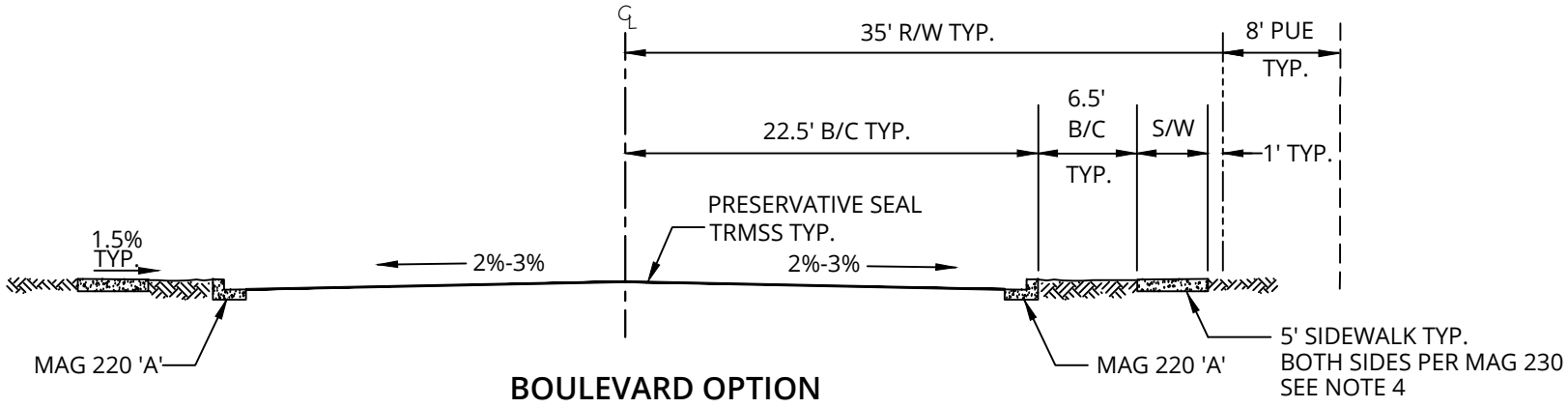
DETAIL NO.			APPROVED:	DETAIL NO.
C-205	CHANDLER arizona	**MINOR ARTERIAL STREET TYPICAL CROSS SECTION**	01-16-2023	**C-205**



NOTES:

1. THE SUBGRADE MUST BE PREPARED IN ACCORDANCE WITH MAG SECTION 301.
2. BASE COURSE:
   A. THE THICKNESS MUST CONFORM TO COC DETAIL C-240.
   B. ALL CONSTRUCTION AND MATERIALS MUST CONFORM TO MAG SECTIONS 310 AND 702.
3. ASPHALTIC CONCRETE PAVEMENT:
   A. 3" THICK 1/2" EVAC MIX AC PAVEMENT. SEE APPROVED PRODUCTS LIST FOR APPROVED EVAC MIXES.
   B. AREAS OF VISIBLE MIXTURE SEGREGATION MUST BE MILLED TO A DEPTH OF 2" AND OVERLAID A MINIMUM OF THE LANE WIDTH.
   C. ALL CONSTRUCTION AND MATERIALS MUST CONFORM TO EVAC AND MAG SECTIONS 321 AND 710.
   D. PRESERVATIVE SEAL COAT CONFORMING TO MAG SEC 334 AND MUST BE TRMSS PER SEC 718. APPLICATION PER PAVING CONSTRUCTION NOTE.
4. SIDEWALK WIDTH MAY BE MODIFIED TO 4' MIN PROVIDED THAT, PER ADA, A 5' BY 5' PASSING AREA IS PROVIDED EVERY 200'.
5. RAMP END OF MEDIAN PER COC DETAIL C-225.
6. MEDIAN LANDSCAPE AREA MUST BE PER COC DETAIL C-807.
7. 0.2% MINIMUM LONGITUDINAL GRADE ALLOWED.

DETAIL NO.			APPROVED:	DETAIL NO.
C-206	CHANDLER arizona	**COLLECTOR STREET WITH MEDIAN TYPICAL CROSS SECTION**	01-16-2023	**C-206**

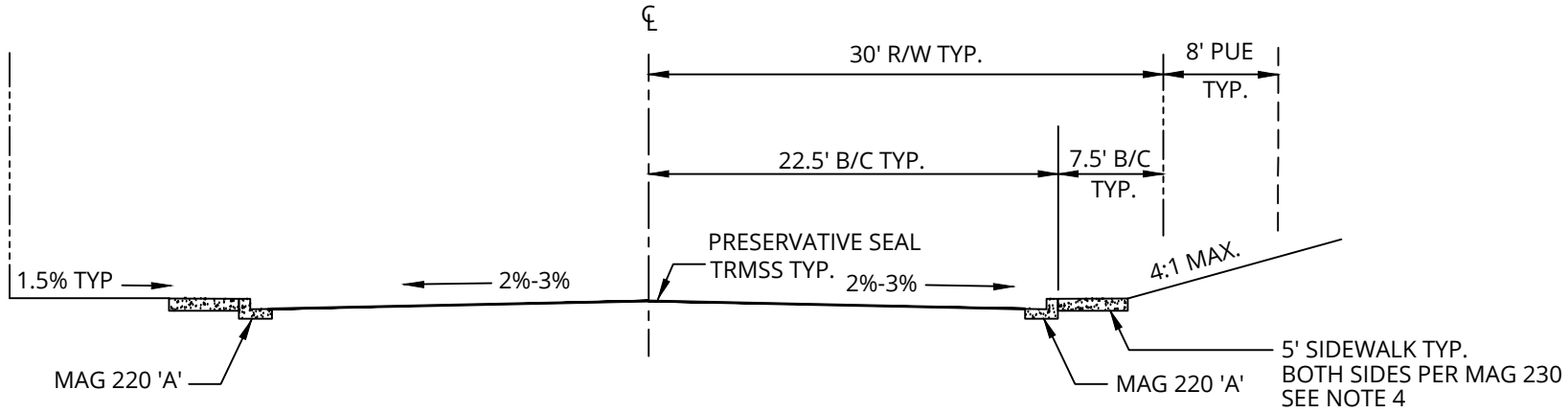


BOULEVARD OPTION

NOTES:

1. THE SUBGRADE MUST BE PREPARED IN ACCORDANCE WITH MAG SECTION 301.
2. BASE COURSE:
   A. THE THICKNESS MUST CONFORM TO COC DETAIL C-241 FOR RESIDENTIAL AREAS AND COC DETAIL C-240 FOR ALL OTHER AREAS.
   B. ALL CONSTRUCTION AND MATERIALS MUST CONFORM TO MAG SECTIONS 310 AND 702.
3. ASPHALTIC CONCRETE PAVEMENT:
   A. 3" THICK 1/2" EVAC MIX AC PAVEMENT. SEE APPROVED PRODUCTS LIST FOR APPROVED EVAC MIXES.
   B. AREAS OF VISIBLE MIXTURE SEGREGATION MUST BE MILLED TO A DEPTH OF 2" AND OVERLAID A MINIMUM OF THE LANE WIDTH.
   C. ALL CONSTRUCTION AND MATERIALS MUST CONFORM TO EVAC AND MAG SECTIONS 321 AND 710.
   D. PRESERVATIVE SEAL COAT CONFORMING TO MAG SECTION 334 AND MUST BE TRMSS PER SECTION 718. APPLICATION PER PAVING CONSTRUCTION NOTE.
4. SIDEWALK WIDTH MAY BE MODIFIED TO 4' MIN PROVIDED THAT, PER ADA, A 5' BY 5' PASSING AREA IS PROVIDED EVERY 200'.
5. 0.2% MINIMUM LONGITUDINAL GRADE ALLOWED.
6. DUCTILE IRON WATER LINE UNDER STREET; METERS BACK OF WALK.

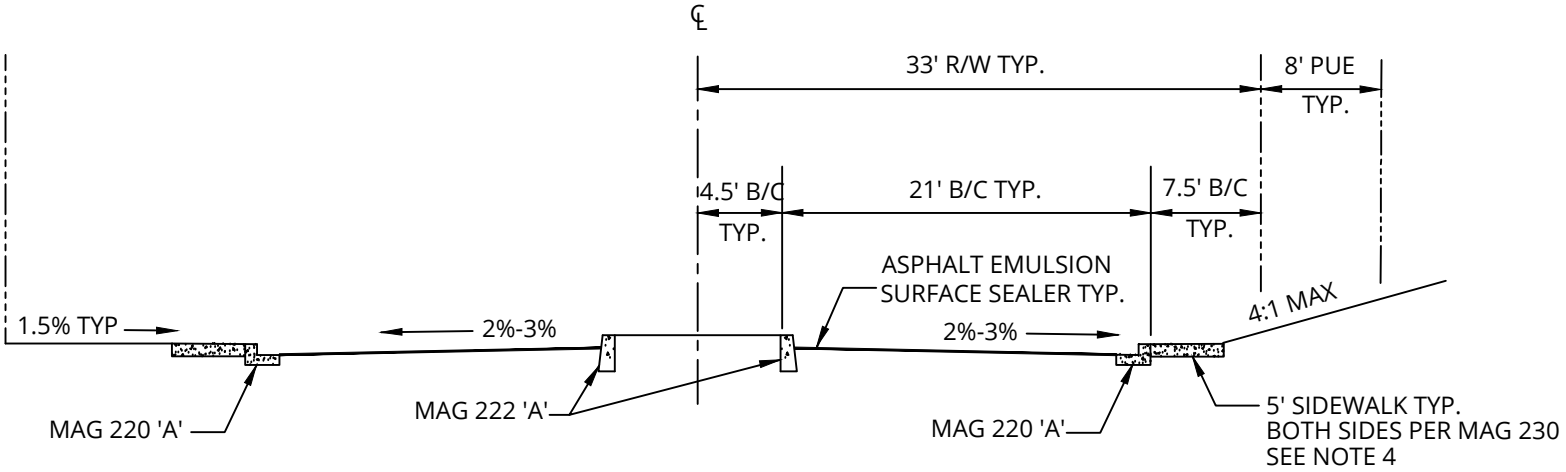
DETAIL NO.			APPROVED:	DETAIL NO.
C-209	CHANDLER arizona	**COLLECTOR BOULEVARD TYPICAL CROSS SECTION**	01-16-2023	**C-209**



NOTES:

1. THE SUBGRADE MUST BE PREPARED IN ACCORDANCE WITH MAG SECTION 301.
2. BASE COURSE:
   A. THE THICKNESS MUST CONFORM TO COC DETAIL C-241 FOR RESIDENTIAL AREAS AND COC DETAIL C-240 FOR ALL OTHER AREAS.
   B. ALL CONSTRUCTION AND MATERIALS MUST CONFORM TO MAG SECTIONS 310 AND 702.
3. ASPHALTIC CONCRETE PAVEMENT:
   A. 3" THICK 1/2" EVAC MIX AC PAVEMENT. SEE APPROVED PRODUCTS LIST FOR APPROVED EVAC MIXES.
   B. AREAS OF VISIBLE MIXTURE SEGREGATION MUST BE MILLED TO A DEPTH OF 2" AND OVERLAID A MINIMUM OF THE LANE WIDTH.
   C. ALL CONSTRUCTION AND MATERIALS MUST CONFORM TO EVAC AND MAG SECTIONS 321 AND 710.
   D. PRESERVATIVE SEAL COAT CONFORMING TO MAG SECTION 334 AND MUST BE TRMSS PER SECTION 718. APPLICATION PER PAVING CONSTRUCTION NOTE.
4. SIDEWALK WIDTH MAY BE MODIFIED TO 4' MIN PROVIDED THAT, PER ADA, A 5' BY 5' PASSING AREA IS PROVIDED EVERY 200'.
5. 0.2% MINIMUM LONGITUDINAL GRADE ALLOWED.

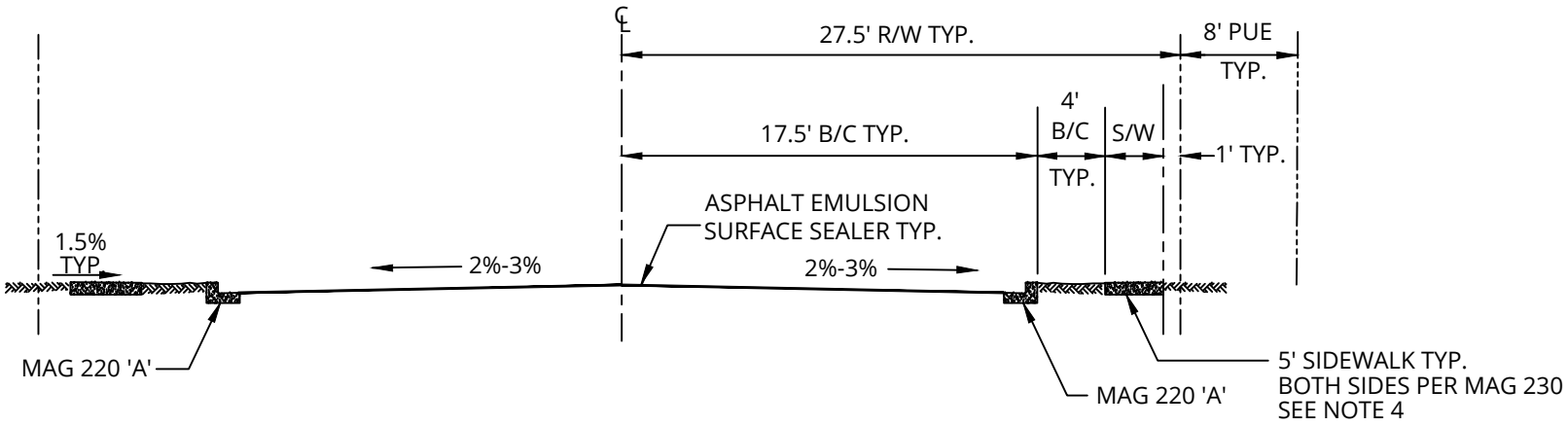
DETAIL NO.			APPROVED:	DETAIL NO.
C-210	CHANDLER arizona	**COLLECTOR STREET TYPICAL CROSS SECTION**	01-16-2023	**C-210**



NOTES:

1. THE SUBGRADE MUST BE PREPARED IN ACCORDANCE WITH MAG SECTION 301.
2. BASE COURSE:
   A. THE THICKNESS MUST CONFORM TO COC DETAIL C-242.
   B. ALL CONSTRUCTION AND MATERIALS MUST CONFORM TO MAG SECTIONS 310 AND 702.
3. ASPHALTIC CONCRETE PAVEMENT:
   A. 3" THICK 1/2" EVAC MIX AC PAVEMENT. SEE APPROVED PRODUCTS LIST FOR APPROVED EVAC MIXES.
   B. ALL CONSTRUCTION AND MATERIALS MUST CONFORM TO MAG SECTIONS 321 AND 710.
   C. PRESERVATIVE SEAL COAT CONFORMING TO MAG SECTION 334 AND MUST BE AN ASPHALT EMULSION SURFACE SEALER PER SECTION 718.3. APPLICATION PER PAVING CONSTRUCTION NOTE.
4. SIDEWALK WIDTH MAY BE MODIFIED TO 4' MIN PROVIDED THAT, PER ADA, A 5' BY 5' PASSING AREA IS PROVIDED EVERY 200'.
5. NO PARKING IS PERMITTED.
6. RAMP END OF MEDIAN PER COC DETAIL C-225.
7. MEDIAN LANDSCAPE AREA MUST BE PER COC DETAIL C-807.
8. 0.2% MINIMUM LONGITUDINAL GRADE ALLOWED.

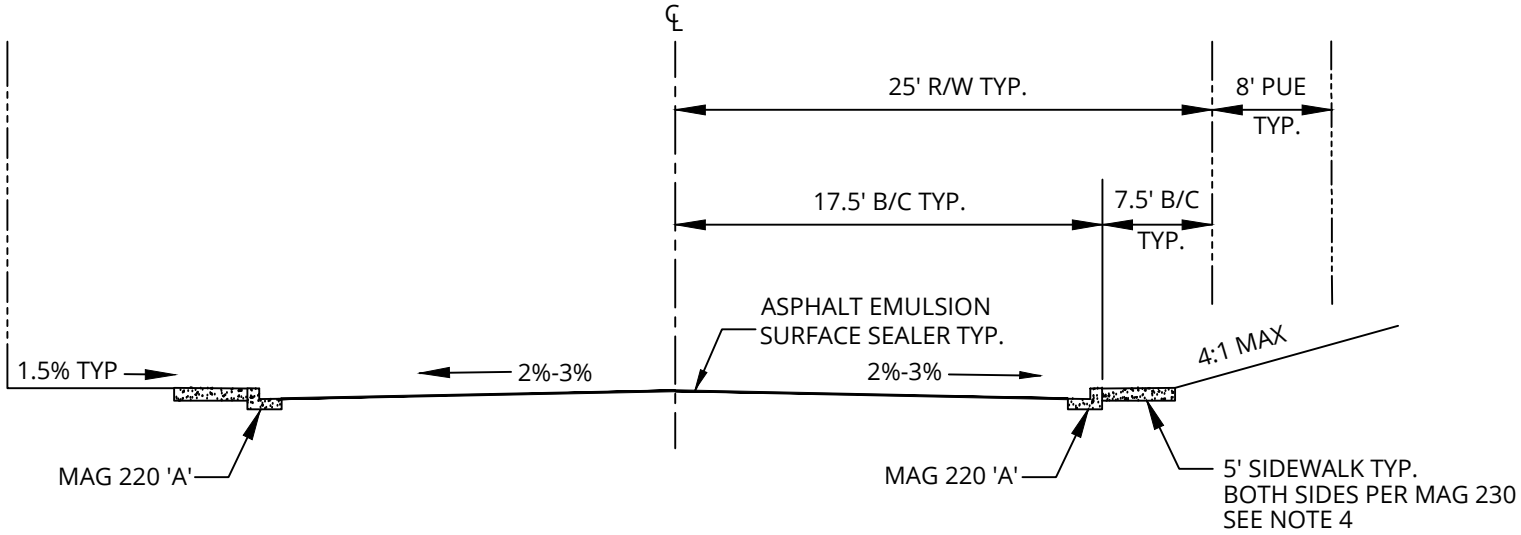
DETAIL NO.			APPROVED:	DETAIL NO.
C-211	CHANDLER arizona	**LOCAL STREET WITH MEDIAN TYPICAL CROSS SECTION**	01-16-2023	**C-211**



NOTES:

1. THE SUBGRADE MUST BE PREPARED IN ACCORDANCE WITH MAG SECTION 301.
2. BASE COURSE:
   A. THE THICKNESS MUST CONFORM TO COC DETAIL C-241 FOR RESIDENTIAL AREAS AND COC DETAIL C-240 FOR ALL OTHER AREAS.
   B. ALL CONSTRUCTION AND MATERIALS MUST CONFORM TO MAG SECTIONS 310 AND 702.
3. ASPHALTIC CONCRETE PAVEMENT:
   A. 3" THICK 1/2" EVAC MIX AC PAVEMENT. SEE APPROVED PRODUCTS LIST FOR APPROVED EVAC MIXES.
   B. ALL CONSTRUCTION AND MATERIALS MUST CONFORM TO MAG SECTIONS 321 AND 710.
   C. PRESERVATIVE SEAL COAT CONFORMING TO MAG SECTION 334 AND MUST BE AN ASPHALT EMULSION SURFACE SEALER PER SECTION 718.3. APPLICATION PER PAVING CONSTRUCTION NOTE.
4. WHEN IN THE BEST INTEREST OF THE CITY, THE PUBLIC WORKS DIRECTOR, OR DESIGNEE, MAY WAIVE SIDEWALK ON ONE OR BOTH SIDES OF ROADWAY IN INDUSTRIAL AREAS. SIDEWALK WIDTH MAY BE MODIFIED TO 4' MIN PROVIDED THAT, PER ADA, A 5' BY 5' PASSING AREA IS PROVIDED EVERY 200'.
5. 0.2% MINIMUM LONGITUDINAL GRADE ALLOWED.
6. ALLOWED FOR MULTI-FAMILY DEVELOPMENTS, OR SINGLE FAMILY RESIDENTIAL DEVELOPMENTS WITH FRONTAGES LESS THAN 65'.
7. DUCTILE IRON WATER LINE UNDER STREET; METERS BACK OF WALK.

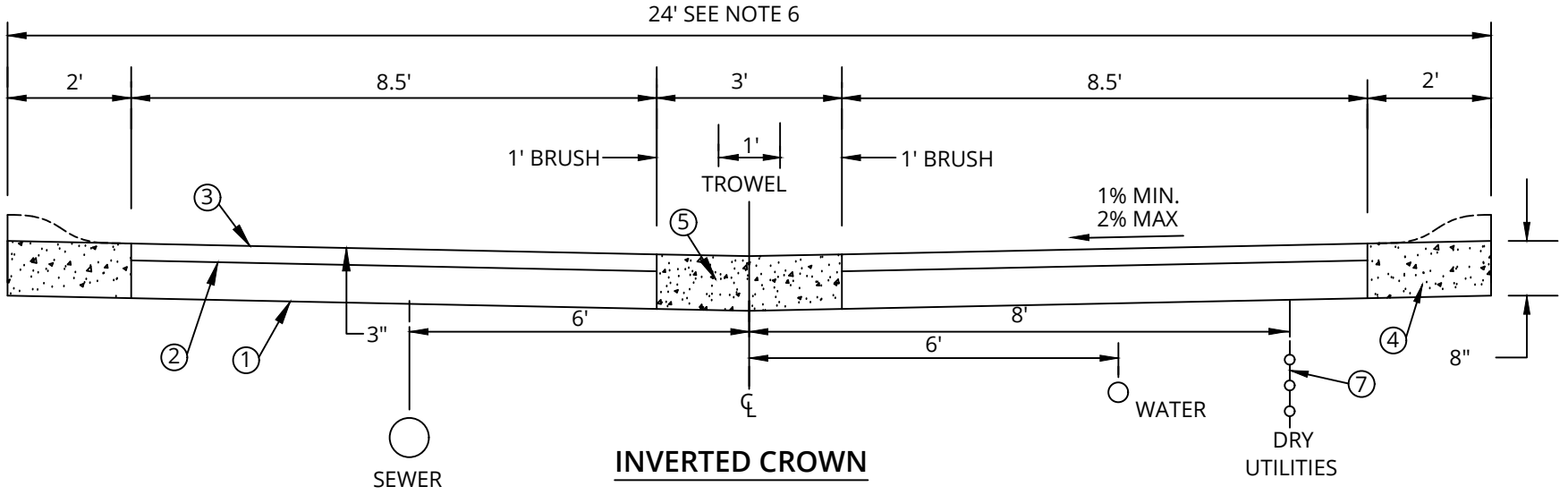
DETAIL NO.			APPROVED:	DETAIL NO.
C-212	CHANDLER arizona	**LOCAL BOULEVARD WITH FRONTAGES LESS THAN 65' TYPICAL CROSS SECTION**	01-16-2023	**C-212**



NOTES:

1. THE SUBGRADE MUST BE PREPARED IN ACCORDANCE WITH MAG STANDARD SPECIFICATIONS, SEC. 301.
2. BASE COURSE:
   A. THE THICKNESS MUST CONFORM TO COC STANDARD DETAIL C-242.
   B. ALL CONSTRUCTION AND MATERIALS MUST CONFORM TO MAG STANDARD SPECIFICATIONS, SECS. 310 AND 702.
3. ASPHALTIC CONCRETE PAVEMENT:
   A. 3" THICK 1/2" EVAC MIX AC PAVEMENT. SEE APPROVED PRODUCTS LIST FOR APPROVED EVAC MIXES.
   B. ALL CONSTRUCTION AND MATERIALS MUST CONFORM TO MAG STANDARD SPECIFICATIONS, SECS. 321 AND 710.
   C. PRESERVATIVE SEAL COAT CONFORMING TO MAG SECTION 334 AND MUST BE AN ASPHALT EMULSION SURFACE SEALER PER SECTION 718.3. APPLICATION PER PAVING CONSTRUCTION NOTE.
4. SIDEWALK WIDTH MAY BE MODIFIED TO 4' MIN PROVIDED THAT, PER ADA, A 5' BY 5' PASSING AREA IS PROVIDED EVERY 200'.
5. 0.2% MINIMUM LONGITUDINAL GRADE ALLOWED.
6. IF ALL ABUTTING LOT FRONTAGES EXCEED 65', STREET WIDTH MAY BE REDUCED TO 32' (B.C.) AND ROW WIDTH MAY BE REDUCED TO 42'.
7. IF ALL ABUTTING LOT FRONTAGES EXCEED 90', STREET WIDTH MAY BE REDUCED TO 29' (B.C.) AND ROW WIDTH MAY BE REDUCED TO 42'.

DETAIL NO.			APPROVED:	DETAIL NO.
C-213	CHANDLER arizona	**LOCAL STREET TYPICAL CROSS SECTION**	01-16-2023	**C-213**

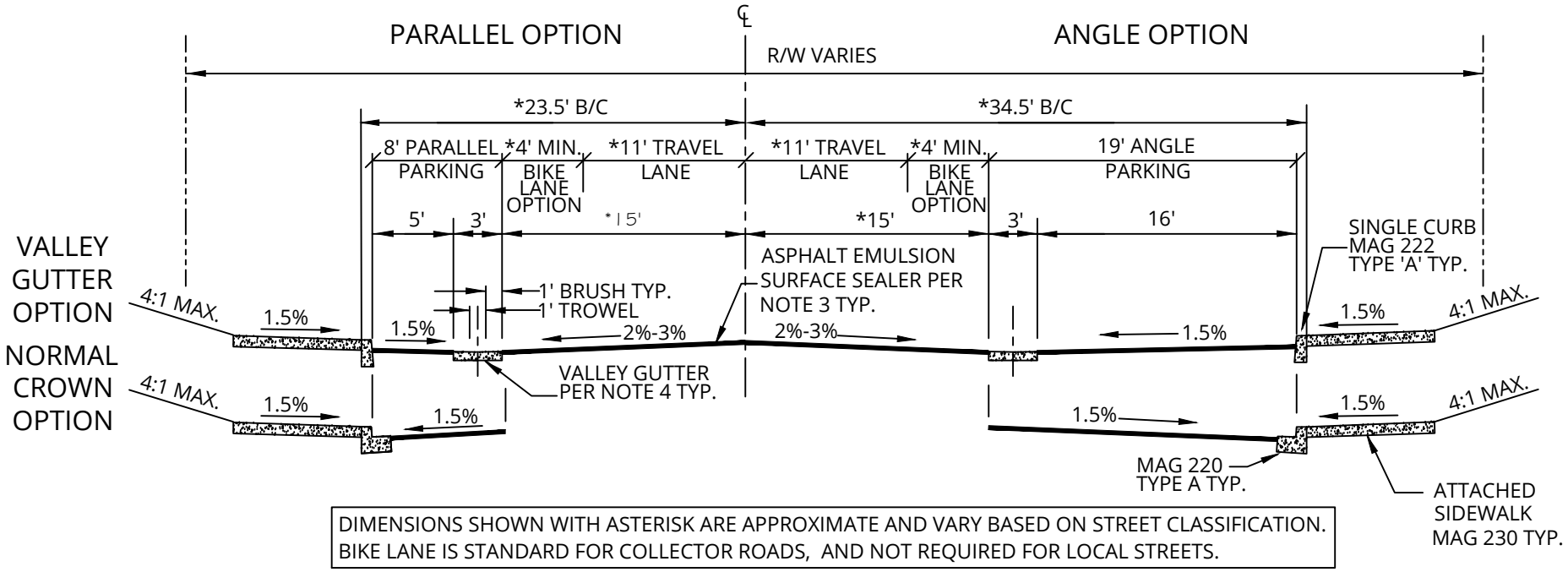


INVERTED CROWN

NOTES:

1. THE SUBGRADE MUST BE PREPARED IN ACCORDANCE WITH MAG SECTION 301.
2. BASE COURSE:
   A. THE THICKNESS MUST CONFORM TO COC STD. DTL. C-242.
   B. ALL CONSTRUCTION AND MATERIALS MUST CONFORM TO MAG SECTIONS 310 AND 702.
3. ASPHALTIC CONCRETE PAVEMENT:
   A. 3" THICK 1/2" EVAC MIX AC PAVEMENT. SEE APPROVED PRODUCTS LIST FOR APPROVED EVAC MIXES.
   B. ALL CONSTRUCTION AND MATERIALS MUST CONFORM TO EVAC AND MAG SECTIONS 321 AND 710.
   C. PRESERVATIVE SEAL COAT CONFORMING TO MAG SECTION 334 AND MUST BE AN ASPHALT EMULSION SURFACE SEALER PER SECTION 718.3. APPLICATION PER PAVING CONSTRUCTION NOTE.
4. CONCRETE RIBBON CURB PER MAG DTL. 220-1 (TYPE B) OR ROLL CURB PER MAG DETAIL 220-1 (TYPE C). CONCRETE MUST BE CLASS"B" PER MAG SECTION 725 AND INSTALLED PER MAG SECTION 505.
5. VALLEY GUTTER MUST BE 9" THICK CLASS "B" PER MAG SECTION 725 AND INSTALLED PER MAG SECTION 505. BRUSH / TROWEL SURFACES AS SHOWN. CROSS SLOPE GRADES NOT TO EXCEED 2%.
6. EASEMENTS REQUIRED OVER PRIVATE DRIVE:
   A. WATER AND SEWER EASEMENT.
   B. PUBLIC UTILITY EASEMENT.
   C. CROSS ACCESS EASEMENT.
   D. DRAINAGE EASEMENT.
7. ALL DRY UTILITIES WILL BE TRENCHED WITHIN THE 24' PUE.

DETAIL NO.			APPROVED:	DETAIL NO.
C-214	CHANDLER arizona	**PRIVATE SHARED DRIVEWAY TYPICAL CROSS SECTION & UTILITIES**	01-27-2025	**C-214**

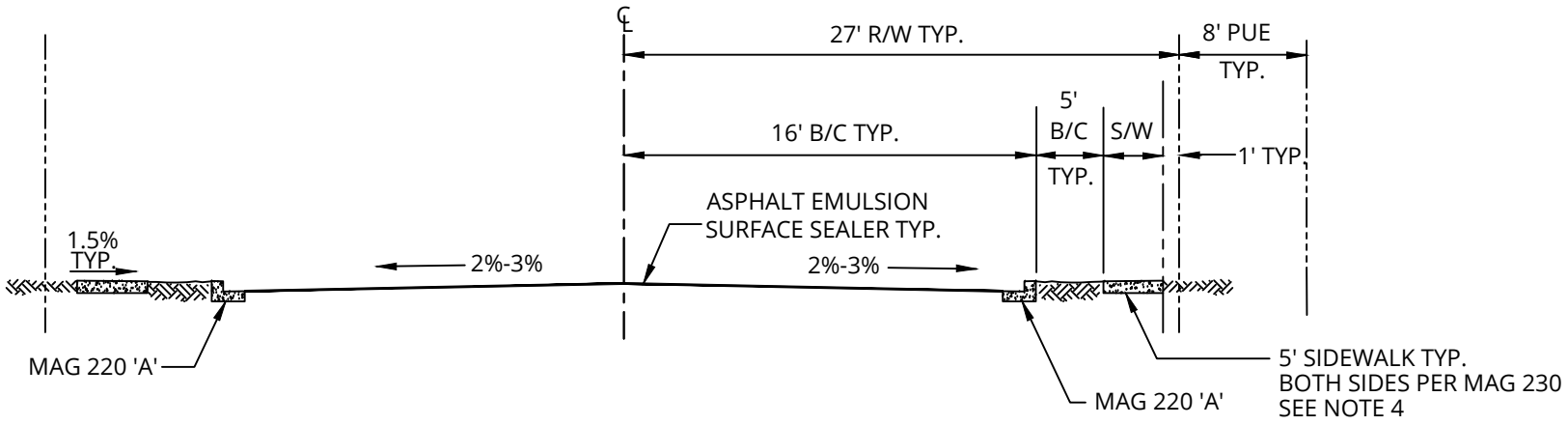


DIMENSIONS SHOWN WITH ASTERISK ARE APPROXIMATE AND VARY BASED ON STREET CLASSIFICATION.
BIKE LANE IS STANDARD FOR COLLECTOR ROADS, AND NOT REQUIRED FOR LOCAL STREETS.

NOTES:

1. THE SUBGRADE MUST BE PREPARED IN ACCORDANCE WITH MAG SECTION 301.
2. BASE COURSE:
   A. THE THICKNESS MUST CONFORM TO COC STANDARD DETAIL C-240.
   B. ALL CONSTRUCTION AND MATERIALS MUST CONFORM TO MAG SECTIONS 310 AND 702.
3. ASPHALTIC CONCRETE PAVEMENT:
   A. 3" THICK 1/2" EVAC MIX AC PAVEMENT. SEE APPROVED PRODUCTS LIST FOR APPROVED EVAC MIXES.
   B. AREAS OF VISIBLE MIXTURE SEGREGATION MUST BE MILLED TO A DEPTH OF 2" AND OVERLAID A MINIMUM OF THE LANE WIDTH.
   C. ALL CONSTRUCTION AND MATERIALS MUST CONFORM TO EVAC AND MAG SECTIONS 321 AND 710.
   D. PRESERVATIVE SEAL COAT CONFORMING TO MAG SECTION 334 AND MUST BE AN ASPHALT EMULSION SURFACE SEALER PER SECTION 718.3. APPLICATION PER PAVING CONSTRUCTION NOTE.
4. VALLEY GUTTER MUST BE 9" THICK CLASS "B" PER MAG SECTION 725 AND INSTALLED PER MAG SECTION 505. BRUSH / TROWEL SURFACES AS SHOWN. CROSS SLOPE GRADES NOT TO EXCEED 2%.
5. MINIMUM LONGITUDINAL GRADE IS 0.2%.
6. ON-STREET PARKING MUST COMPLY WITH THE ENG. & DESIGN STANDARDS MANUAL, CH. 4 STREET DESIGN AND ACCESS CONTROL. SEE ALSO COC DETAIL C-260.

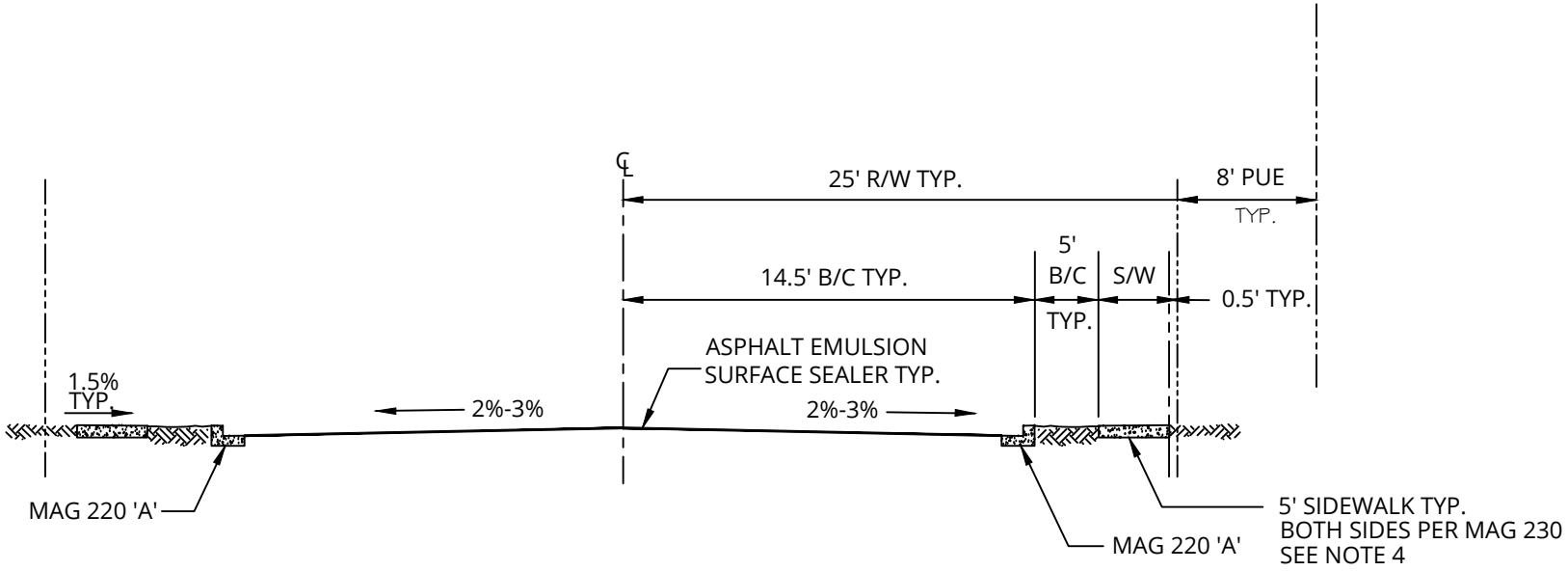
DETAIL NO.			APPROVED:	DETAIL NO.
C-215	CHANDLER arizona	**ON-STREET PARKING TYPICAL CROSS SECTION**	01-16-2023	**C-215**



NOTES:

1. THE SUBGRADE MUST BE PREPARED IN ACCORDANCE WITH MAG SECTION 301.
2. BASE COURSE:
   A. THE THICKNESS MUST CONFORM TO COC DETAIL C-241 FOR RESIDENTIAL AREAS AND COC DETAIL C-240 FOR ALL OTHER AREAS.
   B. ALL CONSTRUCTION AND MATERIALS MUST CONFORM TO MAG SECTIONS 310 AND 702.
3. ASPHALTIC CONCRETE PAVEMENT:
   A. 3" THICK 1/2" EVAC MIX AC PAVEMENT. SEE APPROVED PRODUCTS LIST FOR APPROVED EVAC MIXES.
   B. ALL CONSTRUCTION AND MATERIALS MUST CONFORM TO MAG SECTIONS 321 AND 710.
   C. PRESERVATIVE SEAL COAT CONFORMING TO MAG SECTION 334 AND MUST BE AN ASPHALT EMULSION SURFACE SEALER PER SECTION 718.3. APPLICATION PER PAVING CONSTRUCTION NOTE.
4. WHEN IN THE BEST INTEREST OF THE CITY, THE PUBLIC WORKS DIRECTOR, OR DESIGNEE, MAY WAIVE SIDEWALK ON ONE OR BOTH SIDES OF ROADWAY IN INDUSTRIAL AREAS. SIDEWALK WIDTH MAY BE MODIFIED TO 4' MIN PROVIDED THAT, PER ADA, A 5' BY 5' PASSING AREA IS PROVIDED EVERY 200'.
5. 0.2% MINIMUM LONGITUDINAL GRADE ALLOWED.
6. ALLOWED ONLY FOR SINGLE FAMILY RESIDENTIAL DEVELOPMENTS WITH FRONTAGES OF 65' TO 90'.
7. DUCTILE IRON WATER LINE UNDER STREET; METERS BACK OF WALK.

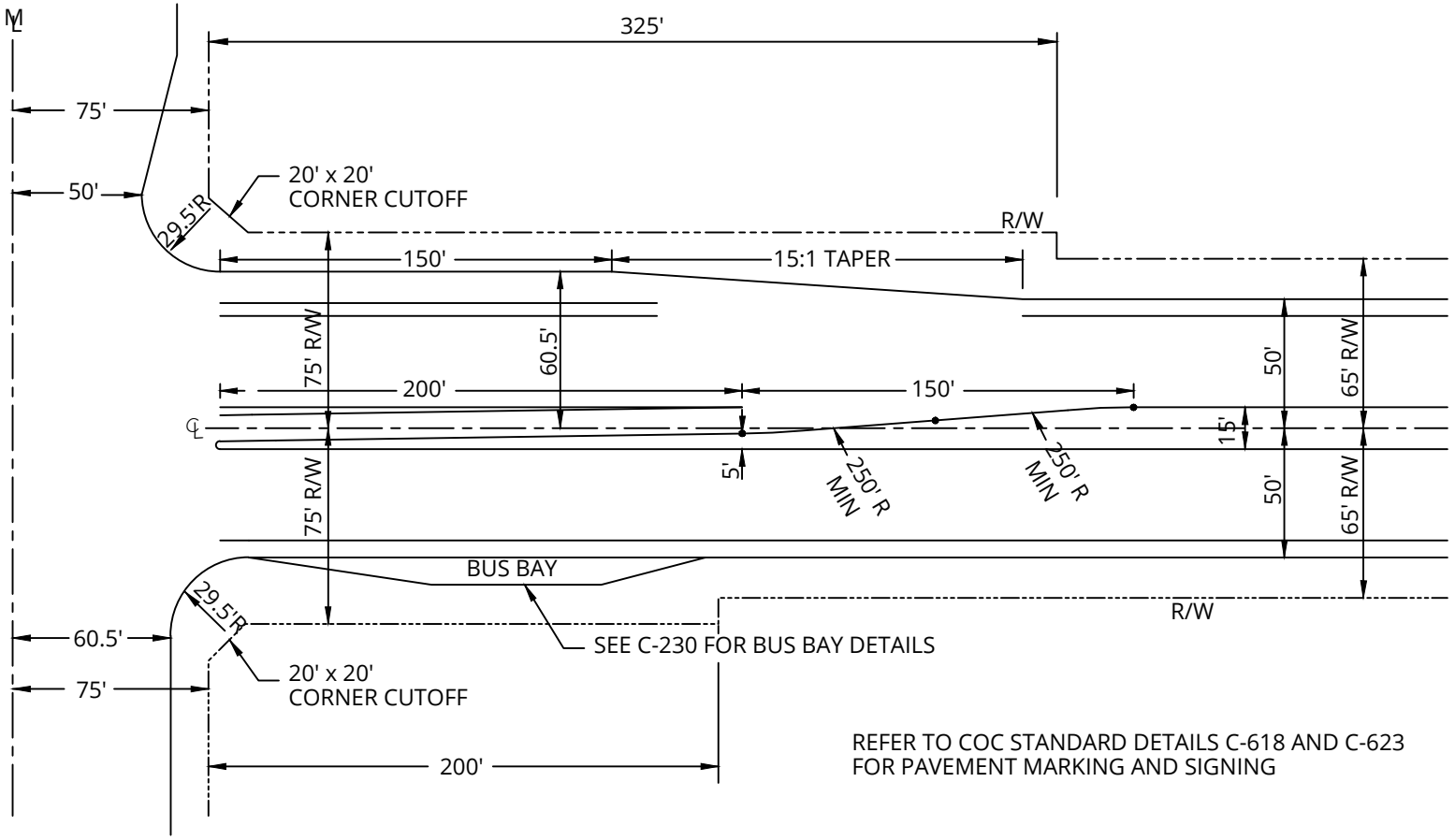
DETAIL NO.			APPROVED:	DETAIL NO.
C-221	CHANDLER arizona	**LOCAL BOULEVARD WITH FRONTAGES OF 65' TO 90' TYPICAL CROSS SECTION**	01-16-2023	**C-221**



NOTES:

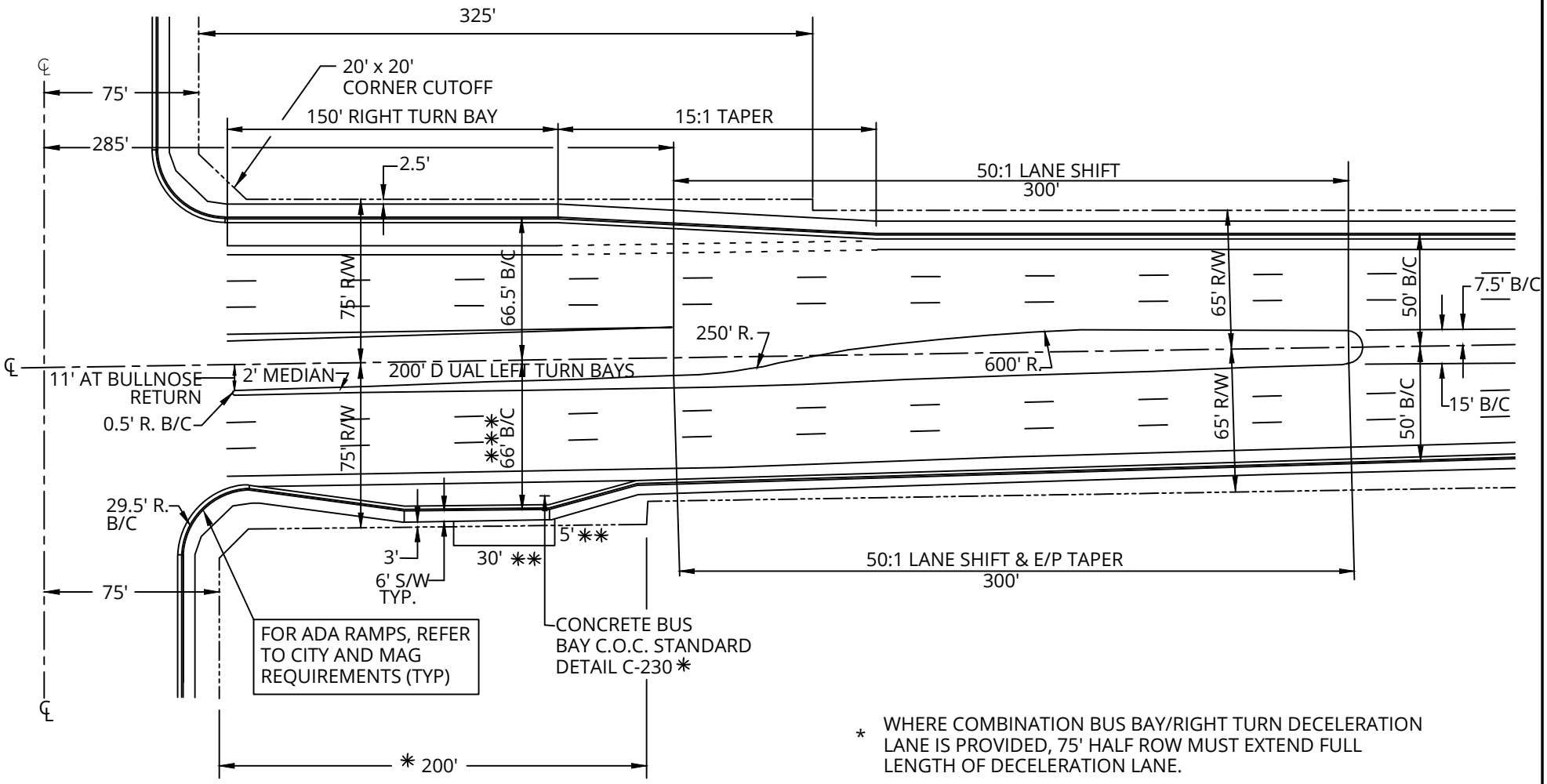
1. THE SUBGRADE MUST BE PREPARED IN ACCORDANCE WITH MAG SECTION 301.
2. BASE COURSE:
   A. THE THICKNESS MUST CONFORM TO COC DETAIL C-241 FOR RESIDENTIAL AREAS AND COC DETAIL C-240
   B. ALL CONSTRUCTION AND MATERIALS MUST CONFORM TO MAG SECTIONS 310 AND 702.
   FOR ALL OTHER AREAS.
3. ASPHALTIC CONCRETE PAVEMENT:
   A. 3" THICK 1/2" EVAC MIX AC PAVEMENT. SEE APPROVED PRODUCTS LIST FOR APPROVED EVAC MIXES.
   B. ALL CONSTRUCTION AND MATERIALS MUST CONFORM TO MAG SECTIONS 321 AND 710.
   C. PRESERVATIVE SEAL COAT CONFORMING TO MAG SECTION 334 AND MUST BE AN ASPHALT EMULSION SURFACE SEALER PER SECTION 718.3. APPLICATION PER PAVING CONSTRUCTION NOTE.
4. WHEN IN THE BEST INTEREST OF THE CITY, THE PUBLIC WORKS DIRECTOR, OR DESIGNEE, MAY WAIVE SIDEWALK ON ONE OR BOTH SIDES OF ROADWAY IN INDUSTRIAL AREAS. SIDEWALK WIDTH MAY BE MODIFIED TO 4' MIN PROVIDED THAT, PER ADA, A 5' BY 5' PASSING AREA IS PROVIDED EVERY 200'.
5. 0.2% MINIMUM LONGITUDINAL GRADE ALLOWED.
6. ALLOWED ONLY FOR SINGLE FAMILY RESIDENTIAL DEVELOPMENTS WITH FRONTAGES GREATER THAN 90'.
7. DUCTILE IRON WATER LINE UNDER STREET; METERS BACK OF WALK.

DETAIL NO.			APPROVED:	DETAIL NO.
C-222	CHANDLER arizona	**LOCAL BOULEVARD WITH FRONTAGES GREATER THAN 90' TYPICAL CROSS SECTION**	01-16-2023	**C-222**



REFER TO COC STANDARD DETAILS C-618 AND C-623
FOR PAVEMENT MARKING AND SIGNING

DETAIL NO.			APPROVED:	DETAIL NO.
C-223-1	CHANDLER arizona	**STANDARD MAJOR ARTERIAL/MAJOR ARTERIAL INTERSECTION RIGHT-OF-WAY, AND STREET DIMENSIONS**	02-26-2007	**C-223-1**



NOTES:

50 : 1 TAPERS FOR REDIRECTION OF THROUGH LANES

15 : 1 TAPERS FOR RIGHT TURN BAY APPROACHES

* WHERE COMBINATION BUS BAY/RIGHT TURN DECELERATION LANE IS PROVIDED, 75' HALF ROW MUST EXTEND FULL LENGTH OF DECELERATION LANE.

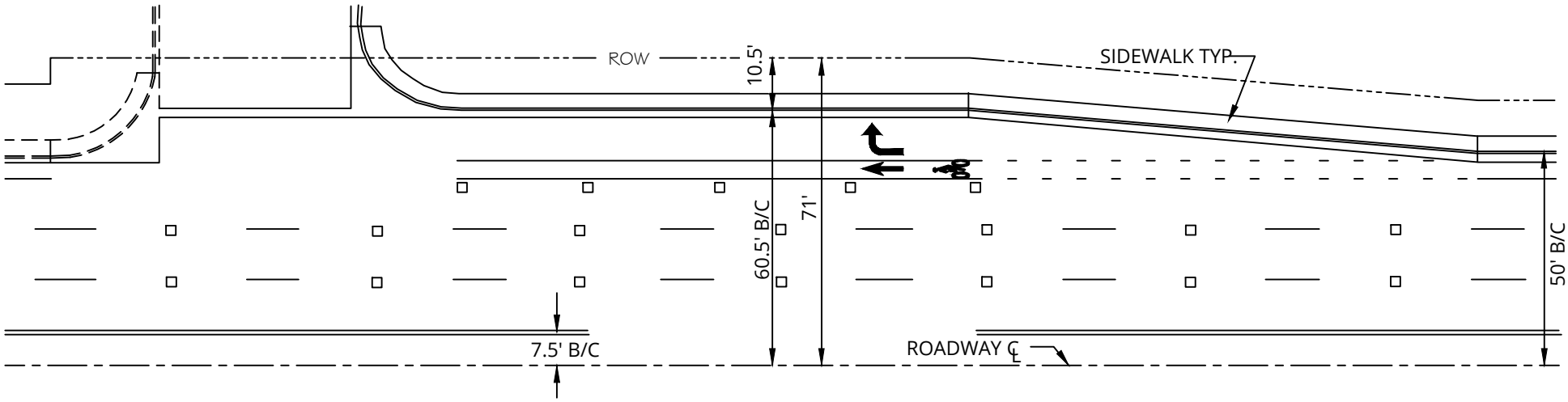
* * ADDITIONAL 5' X 30' EASEMENT MUST BE REQUIRED OF DEVELOPER FOR BUS SHELTER PAD.

* * * 66.5' B/C AND 2.5' FOR INTEGRAL BUS BAY/DECELERATION LANE, SEE COC DETAIL C-231.

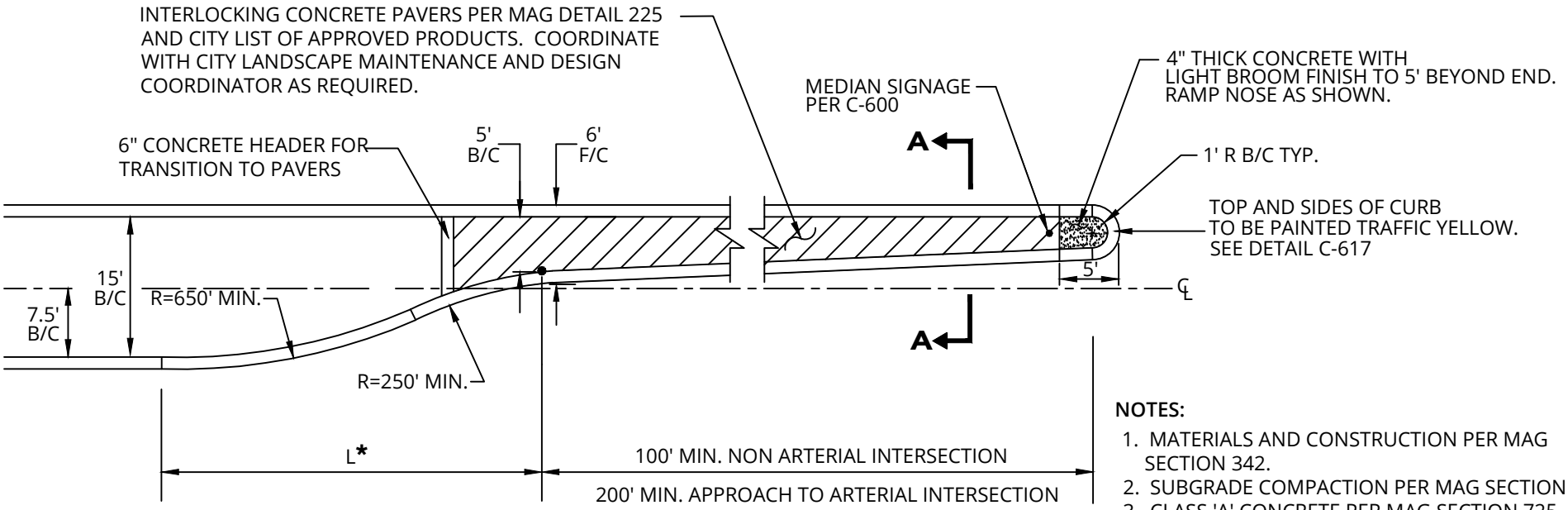
* * * * REFER TO COC DETAIL C-619 AND C-623 FOR PAVEMENT MARKING AND SIGNING.

DETAIL NO.			APPROVED:	DETAIL NO.
C-223-2	CHANDLER arizona	**ULTIMATE MAJOR ARTERIAL/MAJOR ARTERIAL INTERSECTION RIGHT-OF-WAY, AND STREET DIMENSIONS**	03-14-2013	**C-223-2**

* REFER TO COC DETAIL C-620 FOR PAVEMENT MARKING AND SIGNING



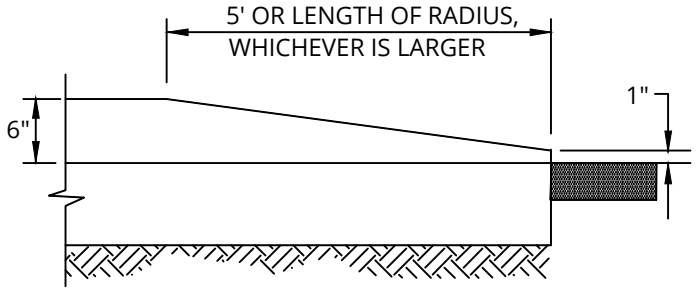
DETAIL NO.			APPROVED:	DETAIL NO.
C-224	CHANDLER arizona	**MAJOR ARTERIAL DECELERATION LANE**	01-09-2020	**C-224**



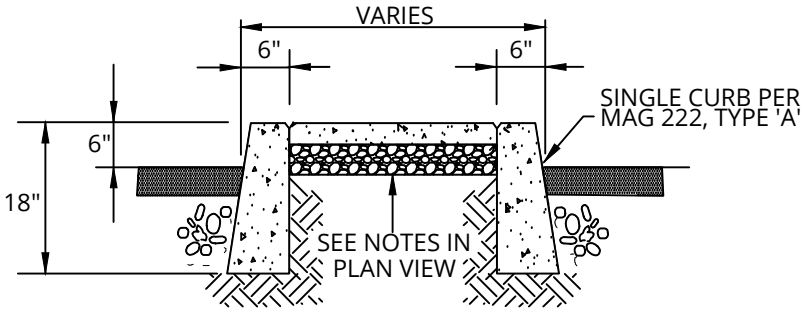
*TAPER LENGTH 'L' = $\frac{WS}{3}$, WHERE 'W' IS TURN LANE WIDTH IN FEET AND 'S' IS DESIGN SPEED IN MPH. MINIMUM 'L' = 100'

NOTES:

1. MATERIALS AND CONSTRUCTION PER MAG SECTION 342.
2. SUBGRADE COMPACTION PER MAG SECTION 301
3. CLASS 'A' CONCRETE PER MAG SECTION 725.
4. FOR MEDIAN WIDTHS LESS THAN 18", INSTALL 4" THICK CONCRETE WITH LIGHT BROOM FINISH OR AS SPECIFIED ON PLANS.

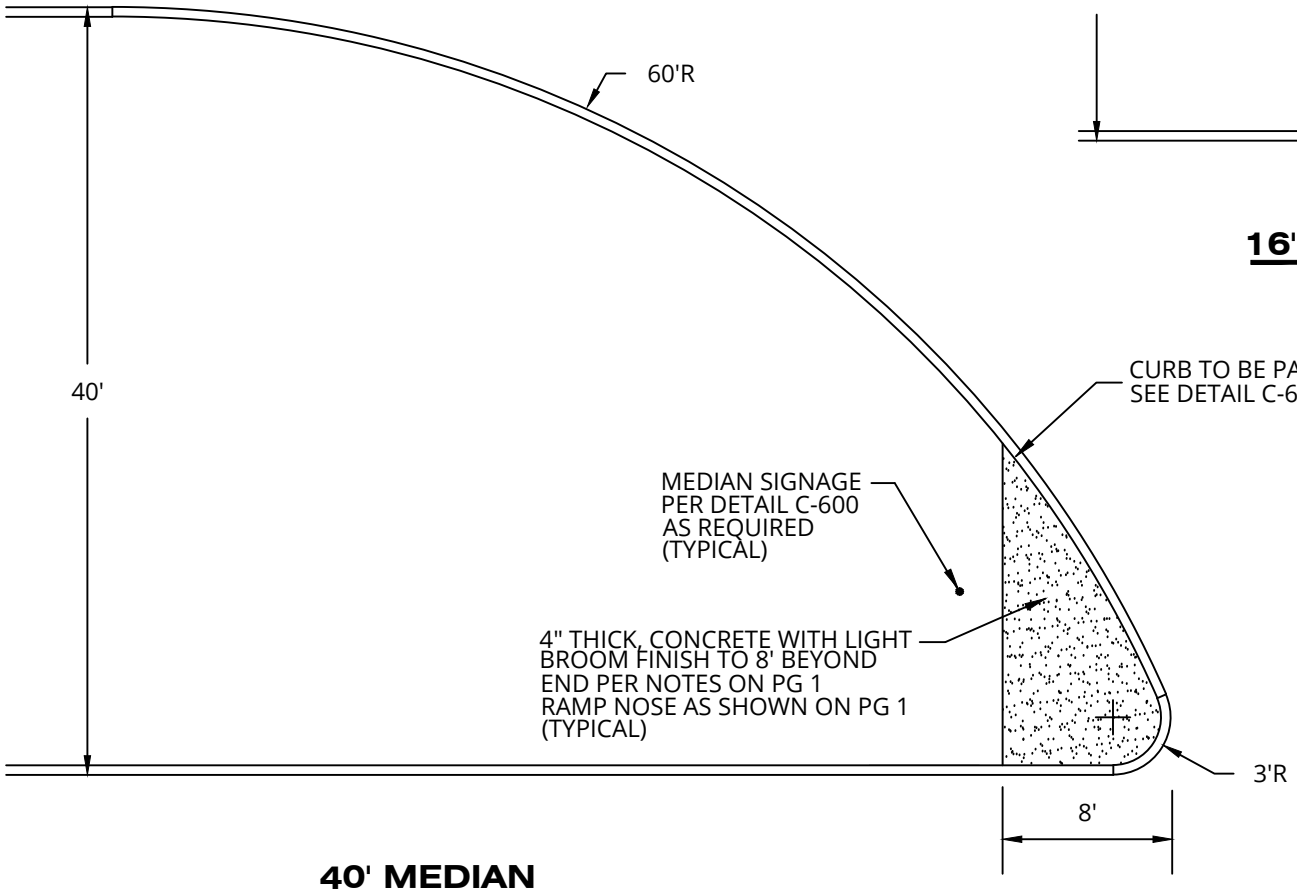


END OF MEDIAN RAMP

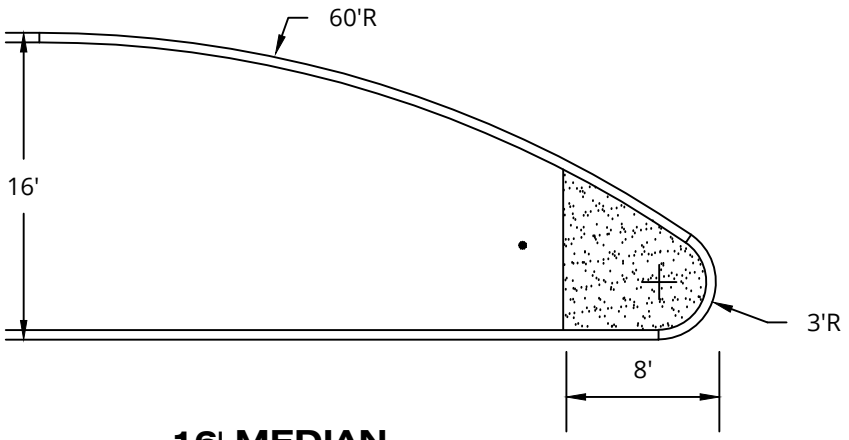


SECTION A - A

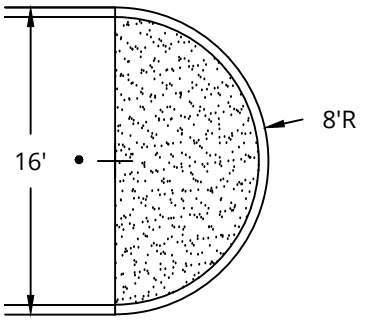
DETAIL NO.			APPROVED:	DETAIL NO.
C-225-1	CHANDLER arizona	**GENERAL MEDIAN DESIGN**	05-10-2018	**C-225-1**



40' MEDIAN



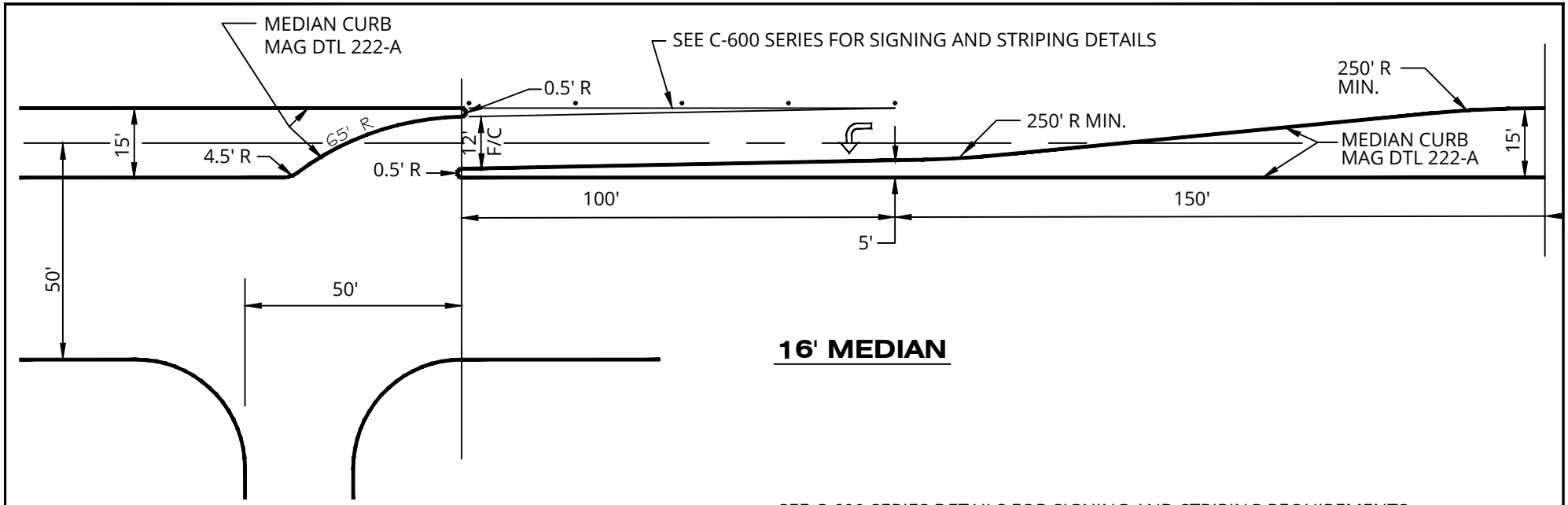
16' MEDIAN



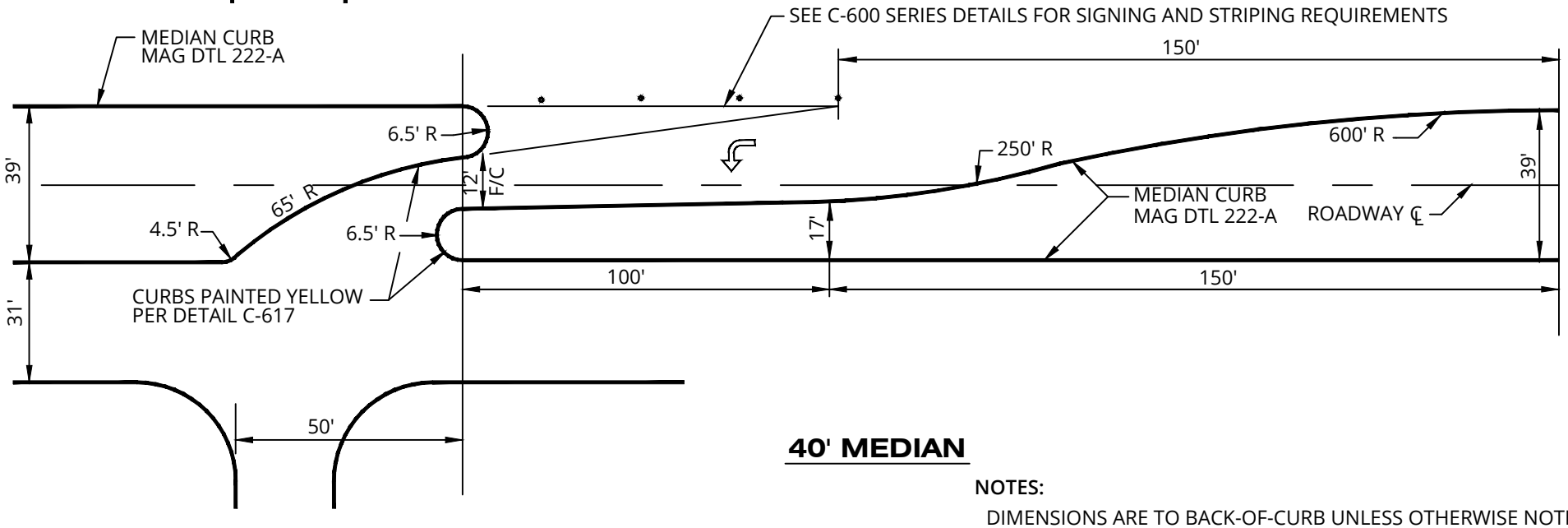
16' MEDIAN

(WITHOUT LEFT TURNS FROM CROSS-STREET)

DETAIL NO.			APPROVED:	DETAIL NO.
C-225-2	CHANDLER arizona	**GENERAL MEDIAN DESIGN**	05-10-2018	**C-225-2**



16' MEDIAN

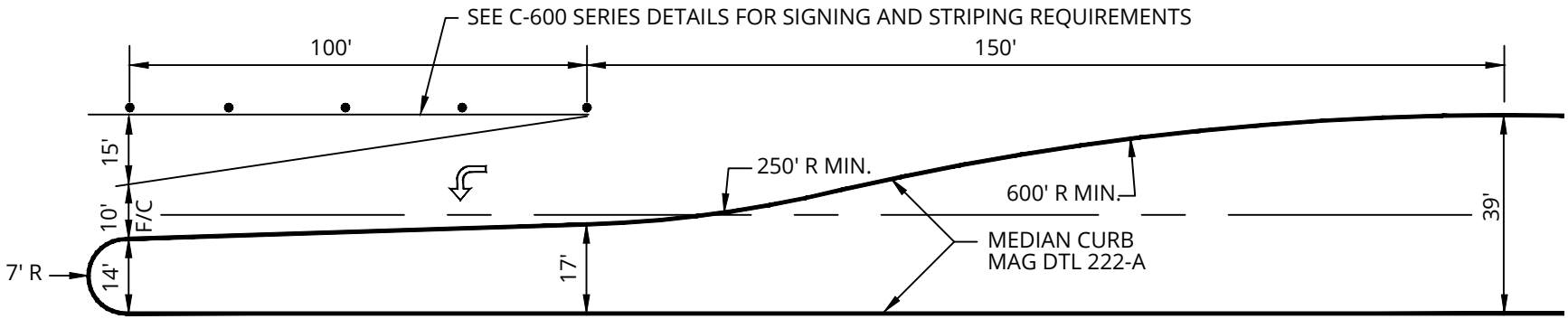


40' MEDIAN

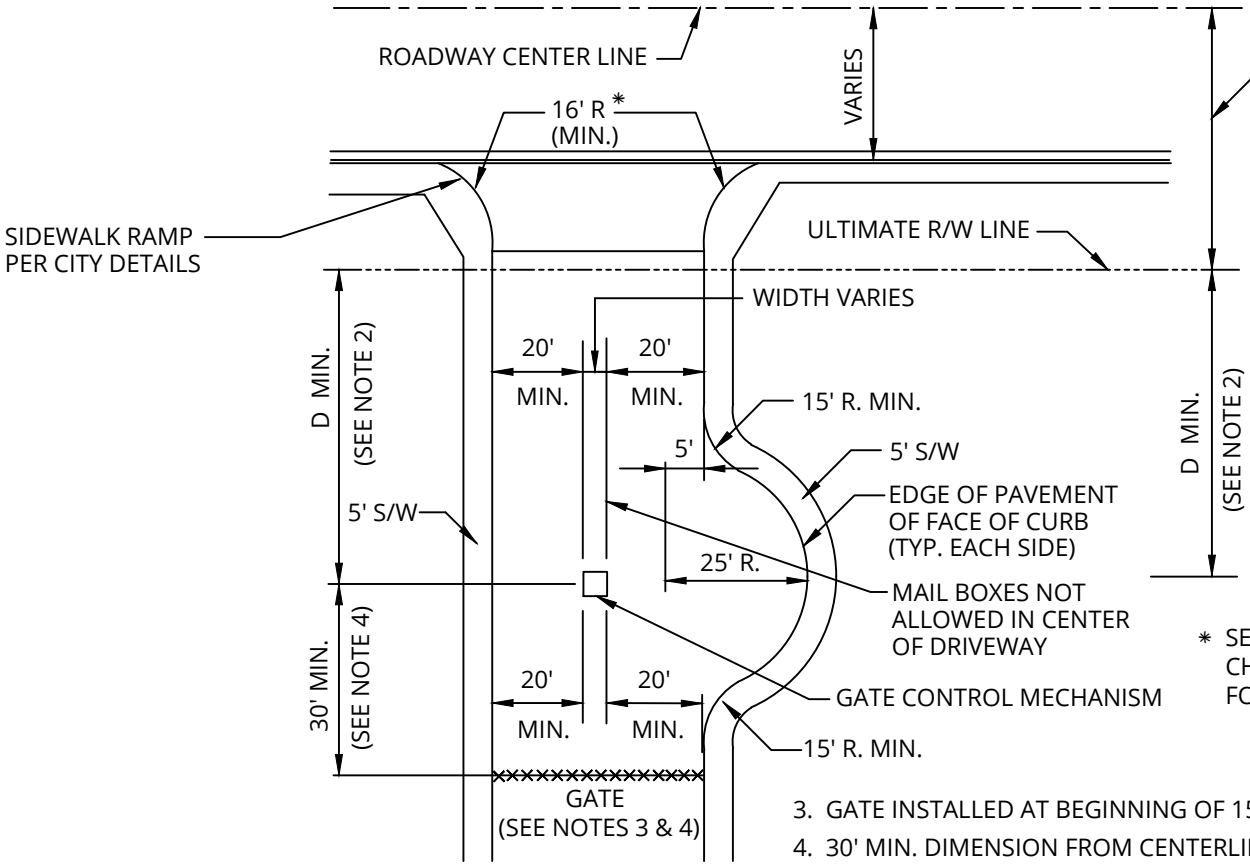
NOTES:

DIMENSIONS ARE TO BACK-OF-CURB UNLESS OTHERWISE NOTED.

DETAIL NO.			APPROVED:	DETAIL NO.
C-226	CHANDLER arizona	**"LEFT IN ONLY" MEDIAN DESIGNS**	05-10-2018	**C-226**



DETAIL NO. C-227	CHANDLER arizona	LEFT TURN BAY IN 40' MEDIAN DESIGN	APPROVED: 05-10-2018	DETAIL NO. C-227



* SEE THE ENG. & DESIGN STANDARDS MANUAL, CH. 4 STREET DESIGN AND ACCESS CONTROL, FOR OTHER RADII OPTIONS

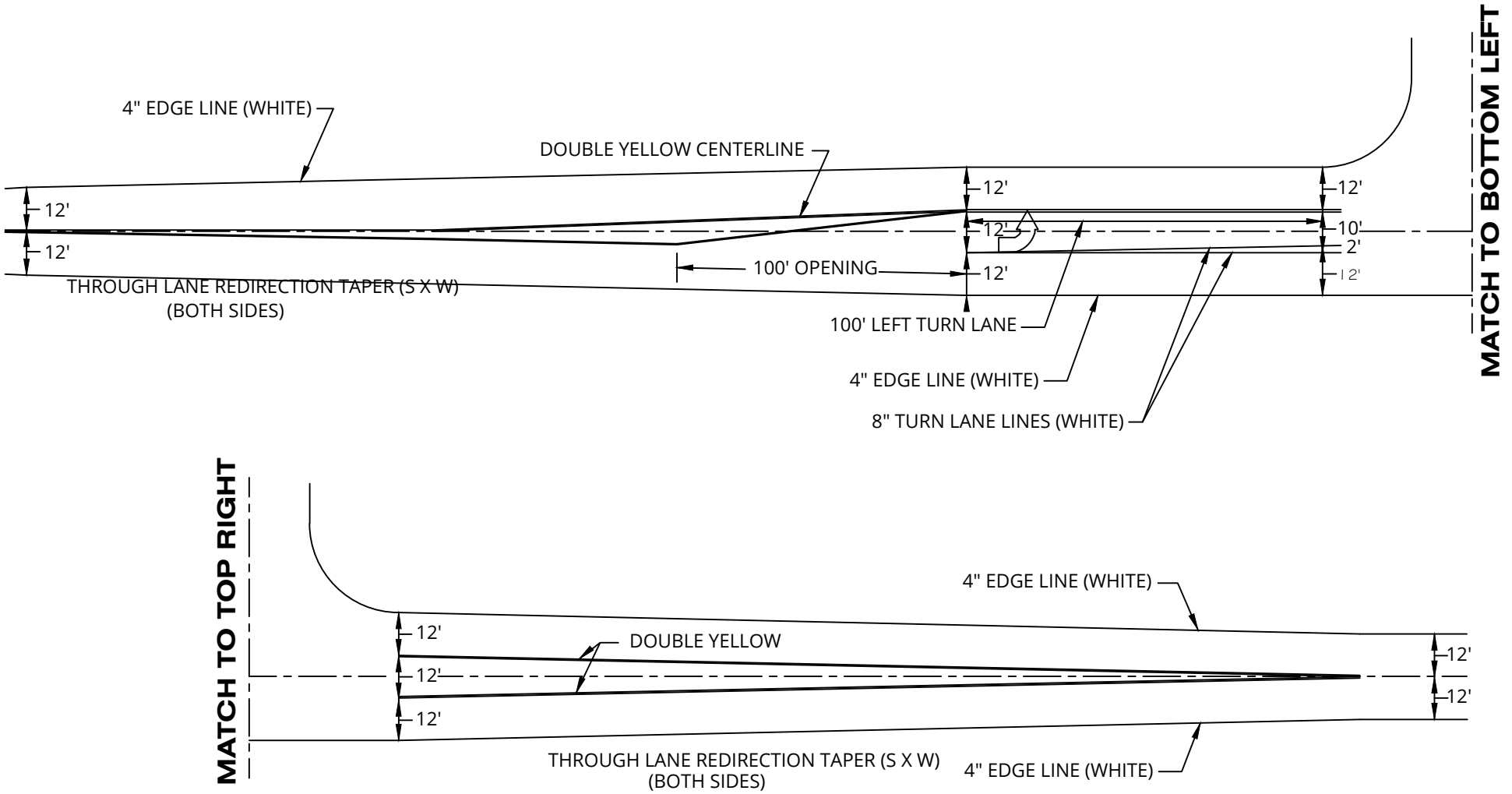
NOTES:

1. DRIVEWAY MAX. WIDTH = 45 FEET IN STREET R/W.
2. SETBACK REQUIREMENT BY NUMBER OF RESIDENTIAL UNITS:

NUMBER OF UNITS	D MIN.
LESS THAN 100	40'
101 TO 150	60'
151 TO 200	80'
GREATER THAN 200	100'

3. GATE INSTALLED AT BEGINNING OF 15' RADIUS.
4. 30' MIN. DIMENSION FROM CENTERLINE OF GATE CONTROL MECHANISM TO FACE OF GATE.
5. WHERE MORE THAN ONE ENTRY IS PROVIDED, "D MIN" MAY BE REDUCED WITH APPROVAL OF CITY ENGINEER.
6. ELECTRICAL CONTROLLED GATES MUST BE EQUIPPED WITH AN AUTOMATIC OPENING PRE-EMPTION DEVICE, TIMED TO REMAIN OPEN FOR 30 MINUTES, AND A KNOX KEY SWITCH OVERRIDE LOCATED AT THE GATE CONTROL MECHANISM. ELECTRIC GATE OPERATORS MUST BE LISTED IN ACCORDANCE WITH UL 325. GATES MUST BE DESIGNED AND CONSTRUCTED TO COMPLY WITH THE REQUIREMENTS OF ASTM F 2200.

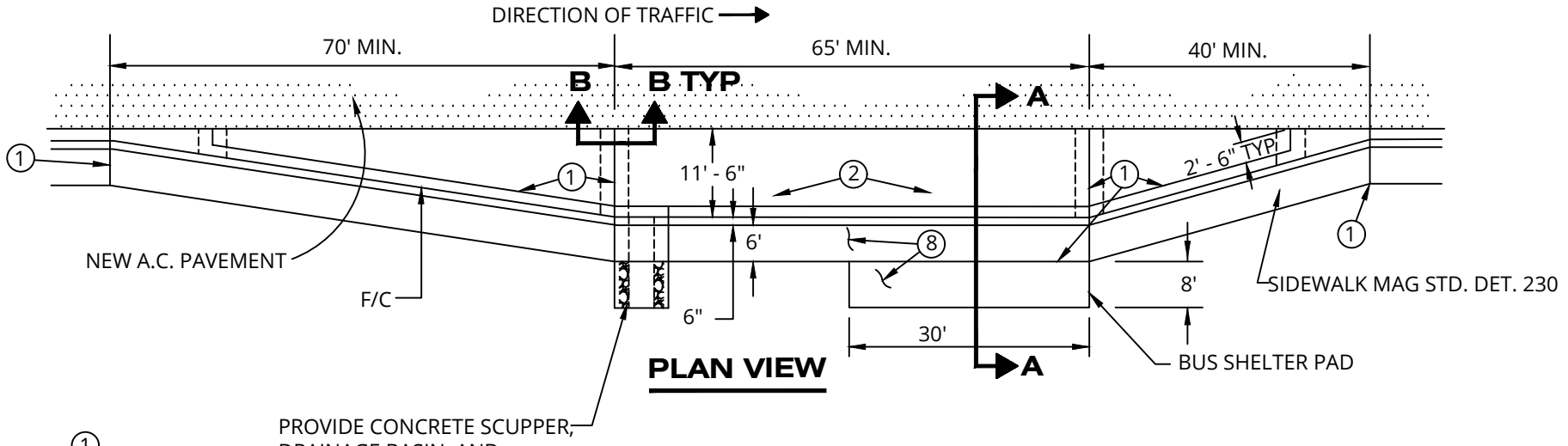
DETAIL NO.			APPROVED:	DETAIL NO.
C-228	CHANDLER arizona	**TYPICAL DRIVEWAY ACCESS TO PRIVATE GATED COMMUNITY**	01-09-2020	**C-228**



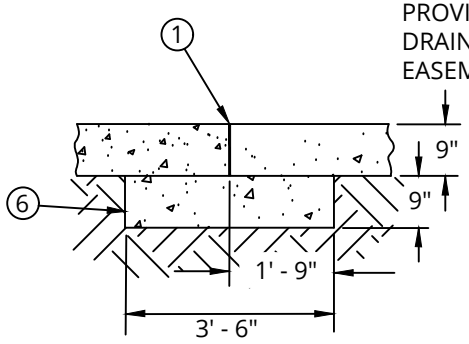
NOTES:

FOR SPEED LIMIT LESS THAN 40 M.P.H. USE 100' TURN LANE ENTRY

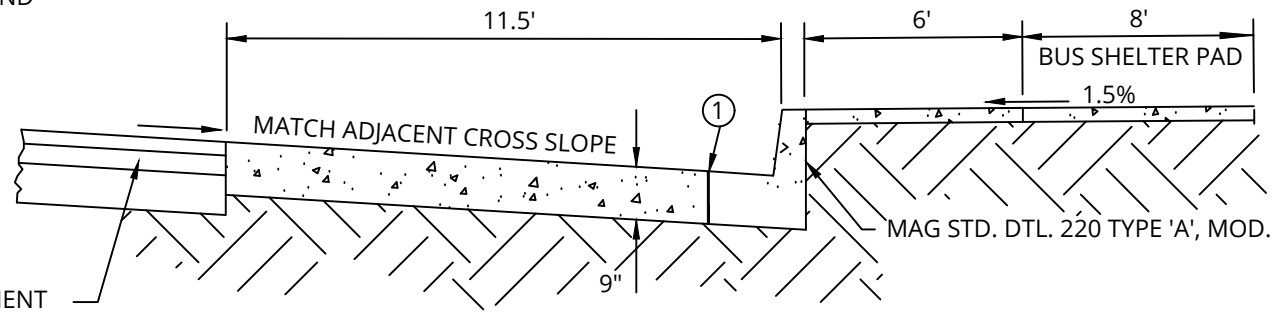
DETAIL NO.			APPROVED:	DETAIL NO.
C-229	CHANDLER arizona	**LEFT TURN BAY ON TWO-LANE ROADWAY (TEMPORARY WIDENING, CROSS STREET ON ONE SIDE ONLY)**	01-11-2002	**C-229**



PLAN VIEW



SECTION B-B

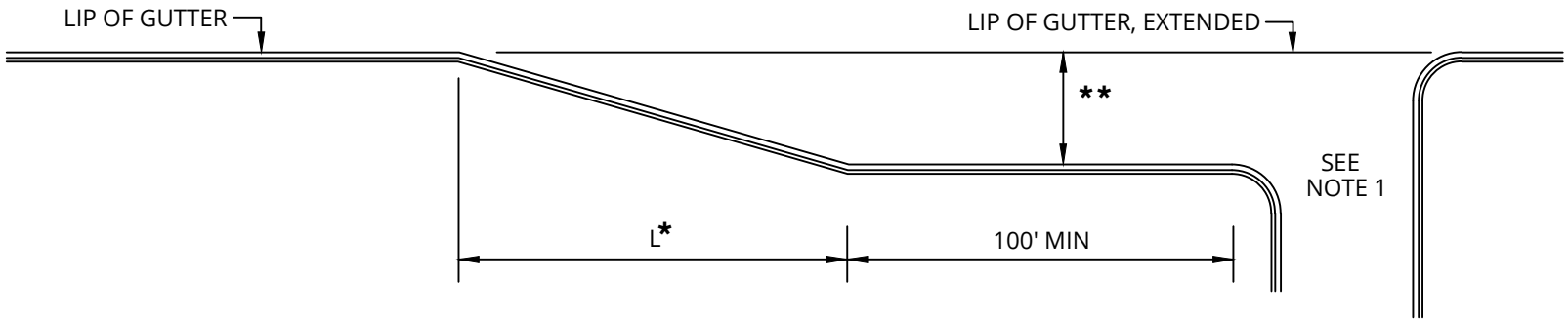


SECTION A-A

NOTES:

1. EXPANSION JOINT FILLER MUST BE 1/2" BITUMINOUS PREFORMED EXPANSION JOINT FILLER ASTM D-1751. (FULL 8" DEPTH.)
2. CONCRETE BUS BAY MUST BE BROOM FINISHED.
3. ALL CONCRETE MUST CONFORM TO MAG SECTION 725. (CLASS 'A' FOR PAVEMENT.)
4. PLACE A COMBINATION CLEAR CURING COMPOUND AND WEATHER SEALER ON FINISHED SURFACE.
5. THE SUBGRADE MUST BE PREPARED IN ACCORDANCE WITH MAG SECTION 301.
6. CONCRETE PAD MUST BE POURED SEPARATELY FROM THE BUS BAY PAVEMENT.
7. CONTRACTION JOINTS IN THE BUS BAY MUST MATCH THE SPACING OF THOSE IN THE CURB AND GUTTER.
8. MUST KEEP 8'x8' LANDING AREA (FROM BACK-OF-CURB) CLEAR OF OBSTRUCTIONS.

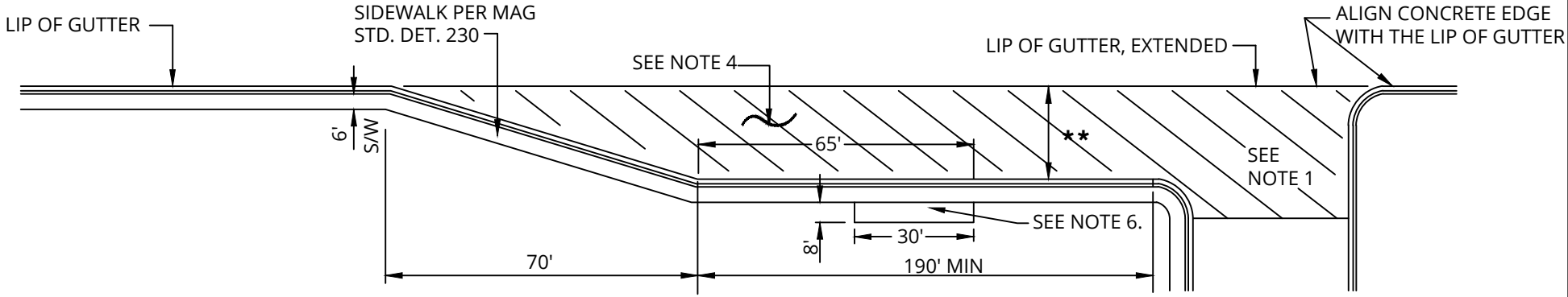
DETAIL NO.			APPROVED:	DETAIL NO.
C-230	CHANDLER arizona	**CONCRETE BUS BAYS**	07-09-2014	**C-230**



RIGHT TURN/DECELERATION LANE FOR DRIVEWAYS

* TAPER LENGTH $L = \frac{WS}{3}$, WHERE W IS TURN LANE WIDTH IN FEET AND S IS POSTED SPEED IN MPH. MINIMUM L = 100'

** 10.5' LIP TO LIP FOR ARTERIAL WITH BIKE LANE. SEE C-620 FOR STRIPING.



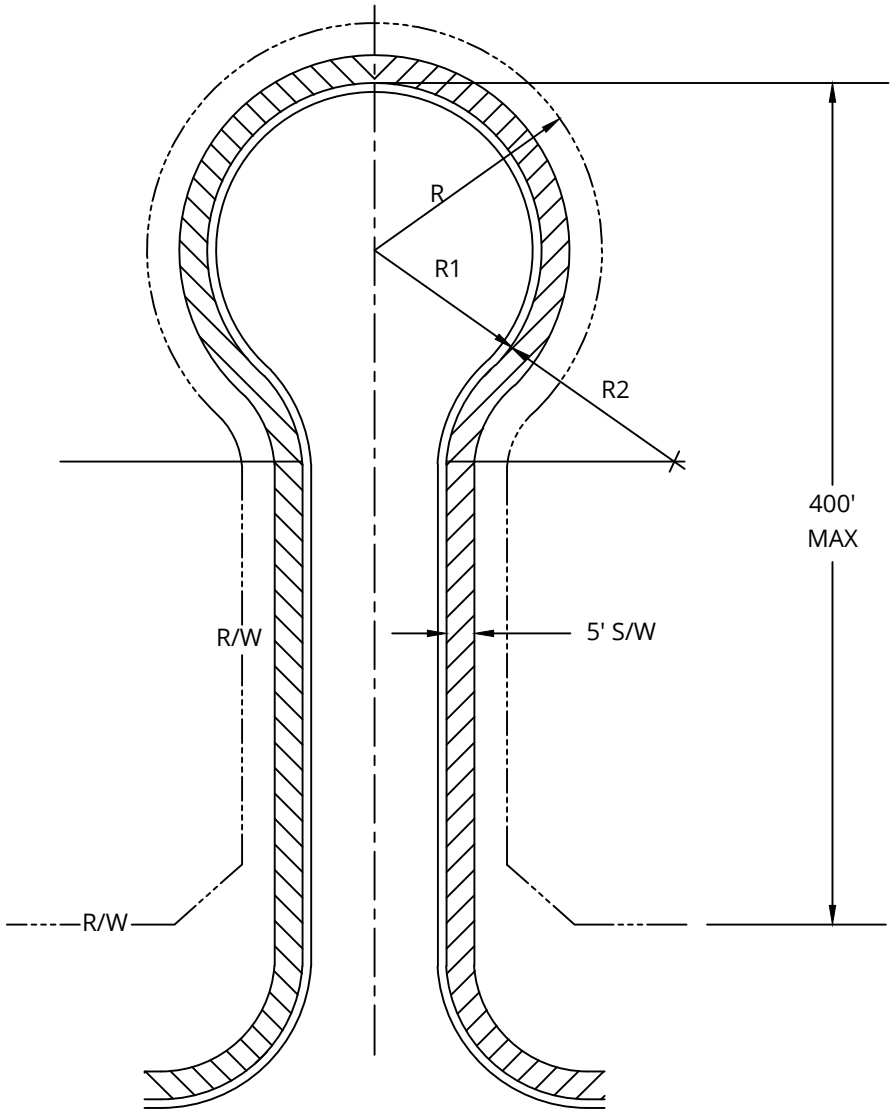
INTEGRAL BUS BAY/DECELERATION LANE

NOTES:

1. USE MAG DETAIL 250 OR 251 FOR ENTRANCE, CURB AND SIDEWALK CONFIGURATION. RECOMMENDED DRIVEWAY DIMENSIONS ARE SPECIFIED IN THE ENG. & DESIGN STANDARDS MANUAL, CH. 4 STREET DESIGN AND ACCESS CONTROL.
2. MAINTAIN NORMAL CROWN THROUGHOUT ENTIRE CROSS-SECTION. A VALLEY GUTTER IS NOT ALLOWED BETWEEN THE THROUGH LANE AND THE RIGHT TURN/DECELERATION LANE, OR IN THE BUS BAY/DECELERATION LANE.
3. THE SIDEWALK IS TO BE CONSTRUCTED ADJACENT TO THE BACK OF CURB FOR THE ENTIRE LANE LENGTH, BUS BAY/DECELERATION LANE ONLY.
4. BUS BAY / DECELERATION LANE MUST BE CONSTRUCTED OF 9" MINIMUM CLASS 'A' CONCRETE.
5. REFER TO COC DETAIL C-620 FOR SIGNING AND STRIPING.
6. MUST KEEP 8'x8' LANDING AREA (FROM BACK-OF-CURB) CLEAR OF OBSTRUCTIONS.

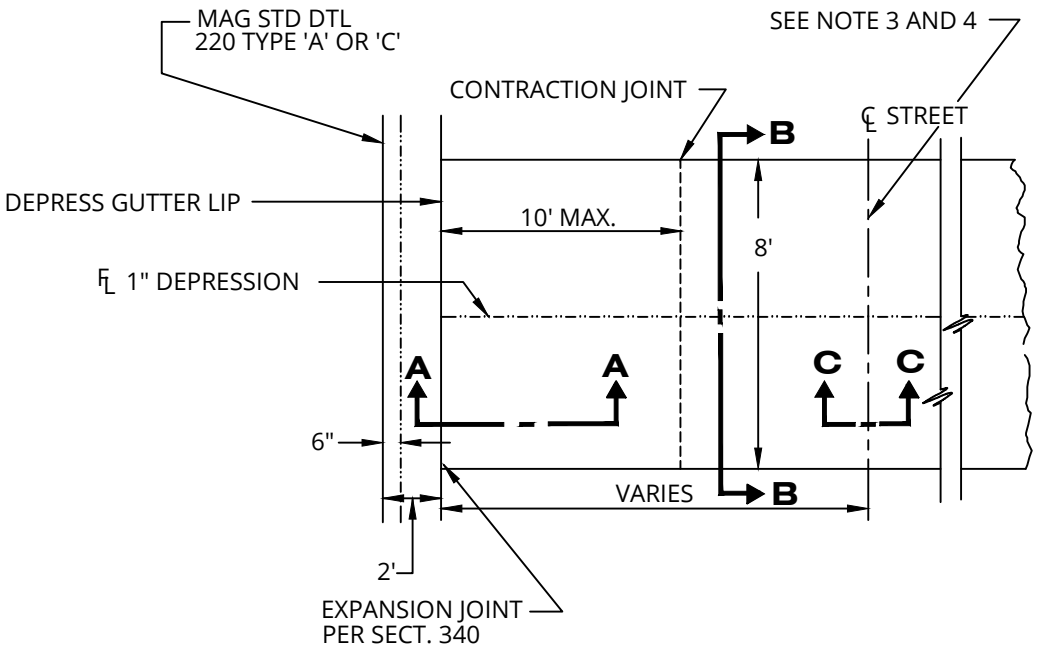
DETAIL NO.			APPROVED:	DETAIL NO.
C-231	CHANDLER arizona	**RIGHT TURN/DECELERATION LANE FOR DRIVEWAYS**	07-09-2015	**C-231**

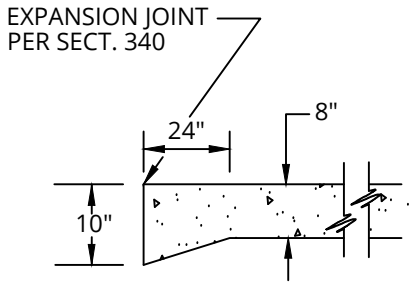
R- 52' RIGHT-OF-WAY
R1 - 44' RADIUS (BACK-OF-CURB)
R2 - 26' MINIMUM RADIUS (BACK-OF-CURB)



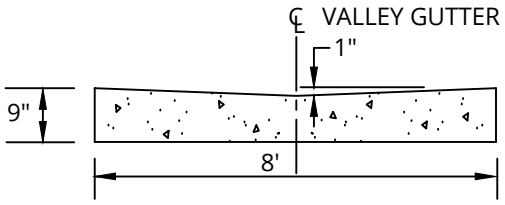
NOTES:
SEE CITY OF CHANDLER STANDARD DETAIL C-213 FOR LOCAL ROAD REQUIREMENTS.

DETAIL NO.			APPROVED:	DETAIL NO.
C-232	CHANDLER arizona	**CUL-DE-SAC**	05-10-2018	**C-232**

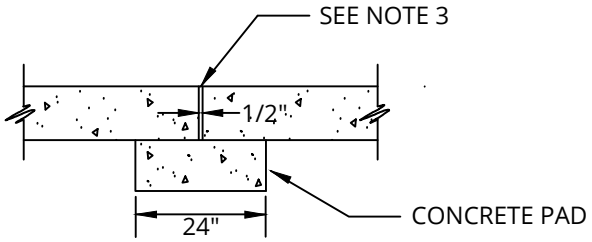




SECTION A-A



SECTION B-B

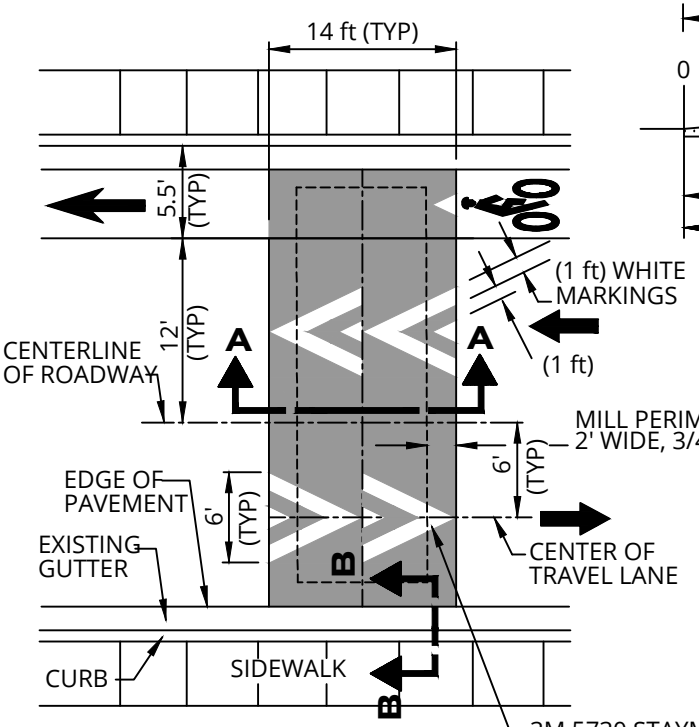


SECTION C-C

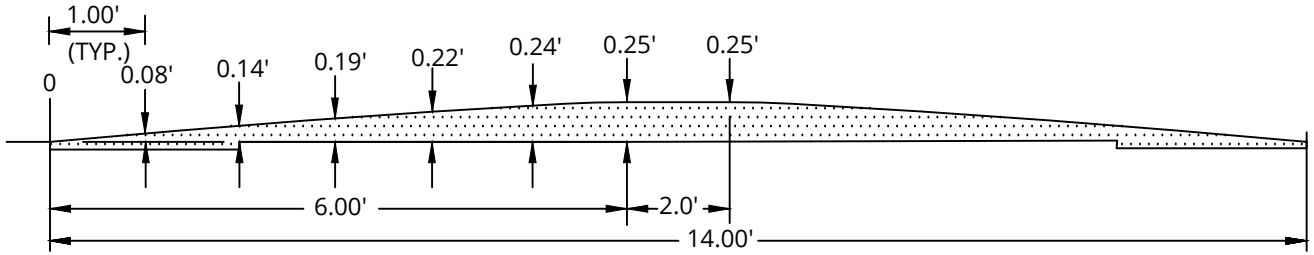
NOTES:

1. 8' MID-BLOCK VALLEY GUTTER IS TO BE USED ON LOCAL AND COLLECTOR STREETS ONLY.
2. ALL CONCRETE TO BE CLASS 'B' UNLESS OTHERWISE APPROVED. (SECTION 725)
3. EITHER CONSTRUCTION JOINT OR CONTRACTION JOINT IS REQUIRED AT CENTER LINE OF STREET.
4. A SEPARATE CONCRETE PAD IS REQUIRED AT CONSTRUCTION JOINTS PER MAG DETAIL 240, MODIFIED AS SHOWN.

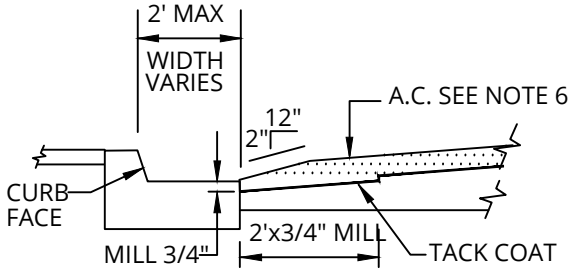
DETAIL NO.			APPROVED:	DETAIL NO.
C-233	CHANDLER arizona	**8' MID-BLOCK VALLEY GUTTER**	07-09-2015	**C-233**



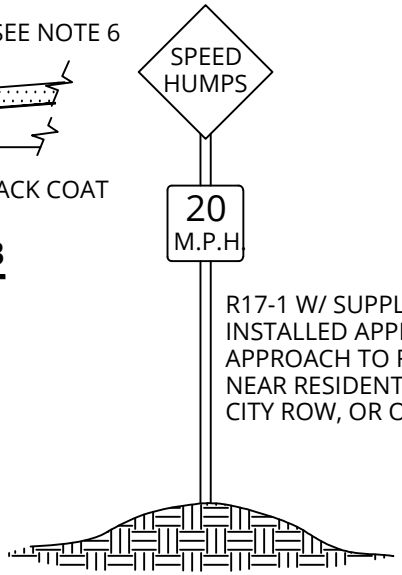
PLAN VIEW



CROSS SECTION A-A



CROSS SECTION B-B



R17-1 W/ SUPPLEMENTAL PLATE TO BE INSTALLED APPROX. 150' IN ADVANCE OF APPROACH TO FIRST HUMP (TYP.), AT OR NEAR RESIDENTIAL PROPERTY LINE, WHEN CITY ROW, OR ON STREET LIGHT POLE.

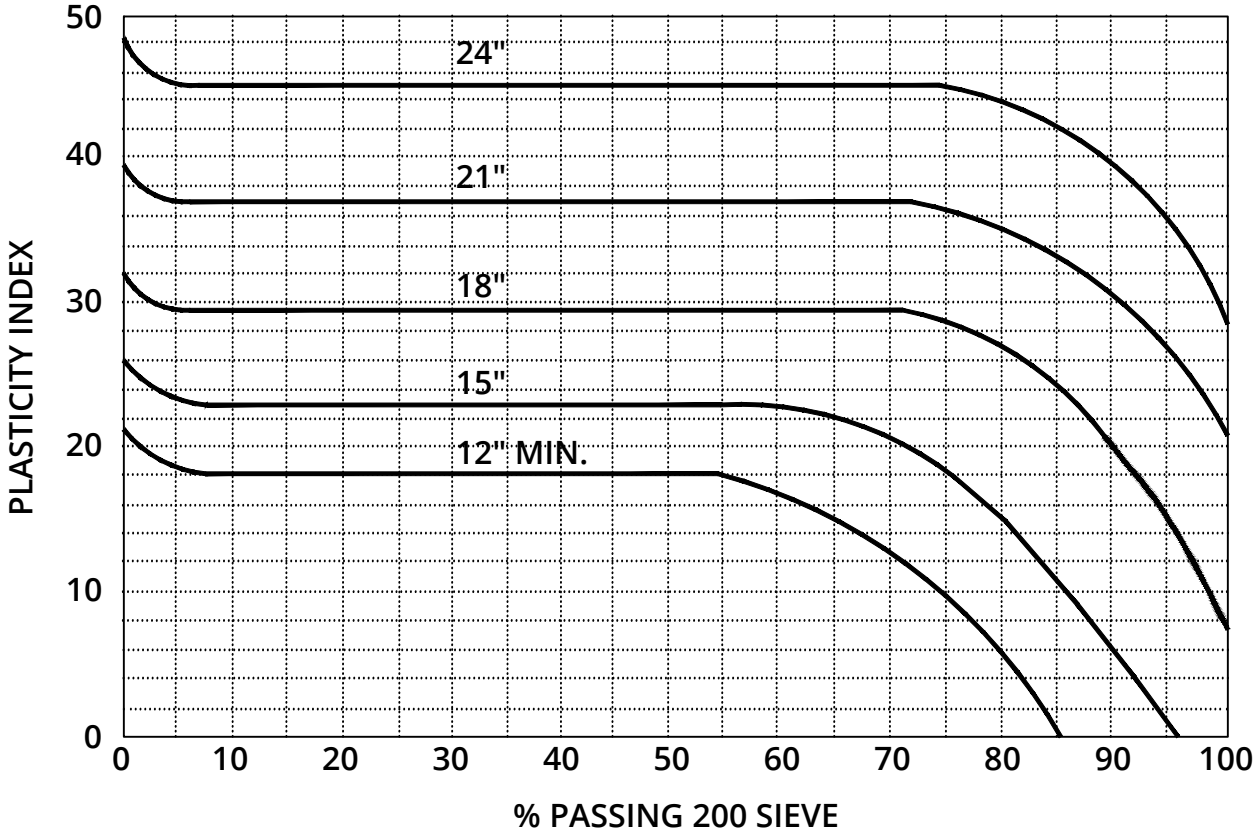
3M 5730 STAYMARK WHITE REFLECTORIZED TAPE OR BRITE-LINE 2000 WHITE INTERSECTION PAVEMENT MARKING TAPE OR EQUAL IF APPROVED BY THE TRANSPORTATION STUDIES MANAGER.

NOTES:

1. HUMPS MUST BE THE FULL 0.25' FOR MAXIMUM EFFECT BUT MUST NOT EXCEED 0.27'.
2. HUMPS CONSTRUCTED OVER 0.27' MUST BE CORRECTED AT THE CONTRACTORS EXPENSE.
3. CROSS-SECTION ELEVATIONS MUST HAVE A MAXIMUM TOLERANCE OF ± 0.02'.
4. SPEED HUMPS MUST NOT BE PLACED OVER MANHOLES, WATER VALVES, JUNCTION STRUCTURES, ETC.
5. THE EXISTING ROADWAY MUST BE MILLED TO A DEPTH OF 3/4", AROUND THE PERIMETER AS SHOWN. CROSS SECTION DIMENSIONS DO NOT INCLUDE THE 3/4" MILLING.
6. HUMP MUST BE CONSTRUCTED WITH 1/2" EVAC MIX AC PAVEMENT. SEE APPROVED PRODUCTS LIST FOR APPROVED EVAC MIXES. A TACK COAT MUST BE APPLIED PRIOR TO APPLICATION OF PAVEMENT.
7. SPEED HUMPS MUST BE PLACED AT LOCATIONS APPROVED BY TRAFFIC ENGINEERING.
8. CONTACT TRAFFIC ENGINEERING (782-3454) ONE WEEK PRIOR TO INSTALLATION TO COORDINATE PAVEMENT MARKINGS AND SIGNING.

DETAIL NO.			APPROVED:	DETAIL NO.
C-234	CHANDLER arizona	**14' SPEED HUMP**	01-16-2023	**C-234**

BASE THICKNESS CHART

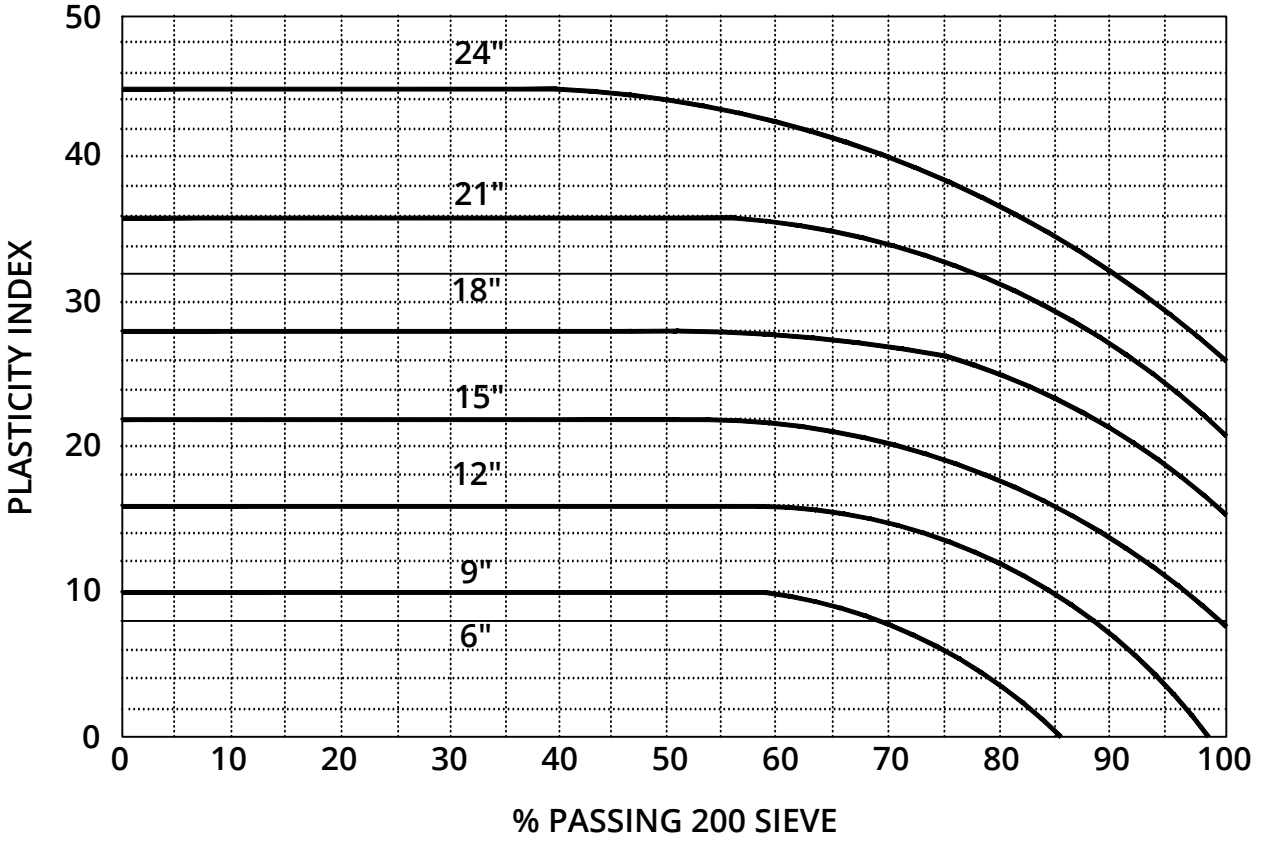


NOTES:

1. TOP 6" OF BASE MUST BE ABC, BALANCE MAY BE ABC OR SELECT MATERIAL.
2. MINIMUM DEPTH OF FLEXIBLE BASE COURSE REQUIRED UNDER 5" (MIN) ASPHALT CONCRETE SURFACE COURSE.

DETAIL NO.			APPROVED:	DETAIL NO.
C-239	CHANDLER arizona	**DEPTH OF BASE COURSE MAJOR & MINOR ARTERIALS**	01-28-2021	**C-239**

BASE THICKNESS CHART

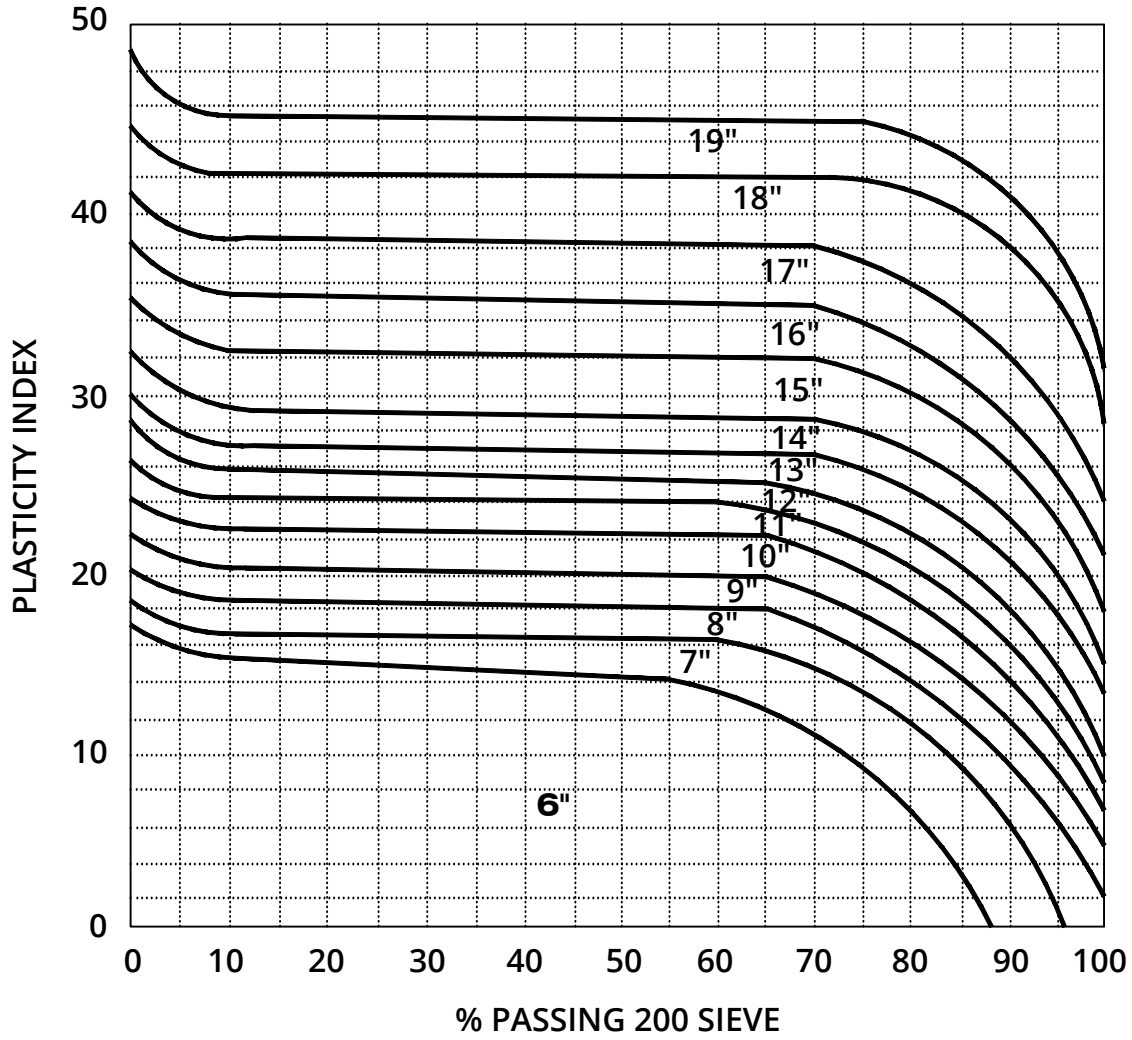


NOTES:

1. TOP 6" OF BASE MUST BE ABC, BALANCE MAY BE ABC OR SELECT MATERIAL.
2. MINIMUM DEPTH OF FLEXIBLE BASE COURSE REQUIRED UNDER 3" (MIN) BIT. SURFACE.

DETAIL NO.			APPROVED:	DETAIL NO.
C-240	CHANDLER arizona	**DEPTH OF BASE COURSE NON RESIDENTIAL COLLECTOR & LOCAL STREETS**	01-14-2010	**C-240**

BASE THICKNESS CHART

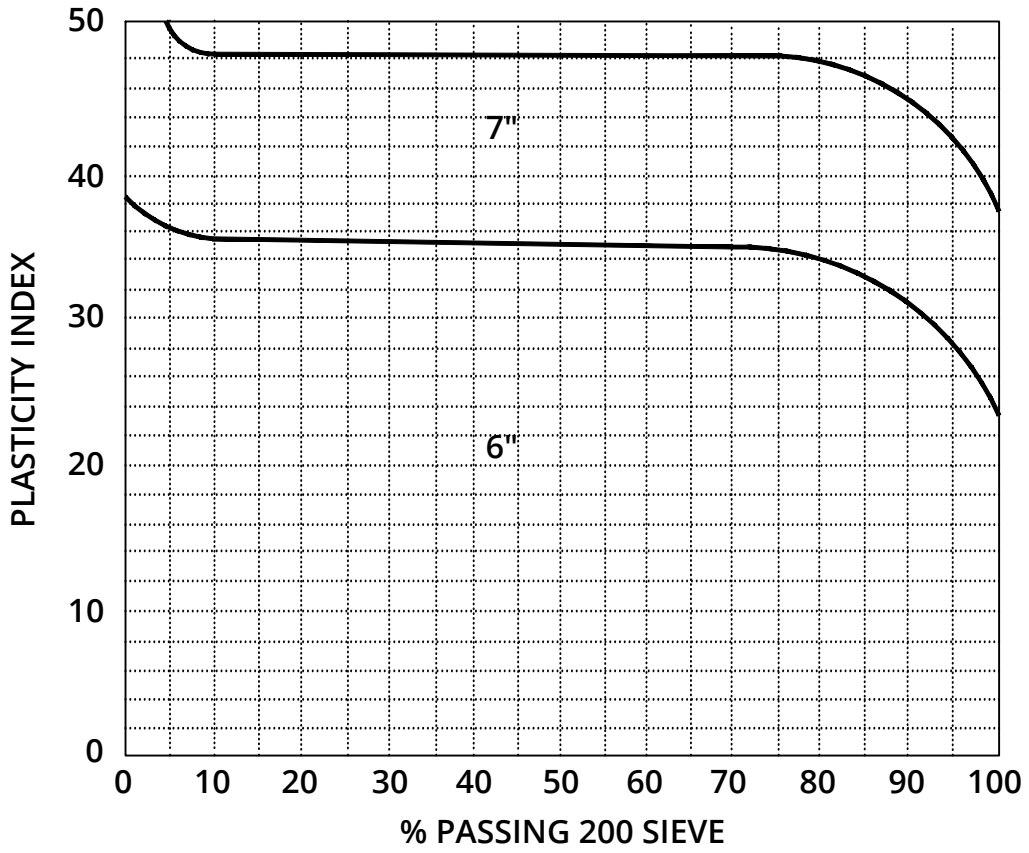


NOTES:

1. TOP 6" OF BASE MUST BE ABC, BALANCE MAY BE ABC OR SELECT MATERIAL.
2. MINIMUM DEPTH OF FLEXIBLE BASE COURSE REQUIRED UNDER 3" (MIN) BIT. SURFACE.

DETAIL NO.			APPROVED:	DETAIL NO.
C-241	CHANDLER arizona	**DEPTH OF BASE COURSE COLLECTOR STREET**	01-14-2010	**C-241**

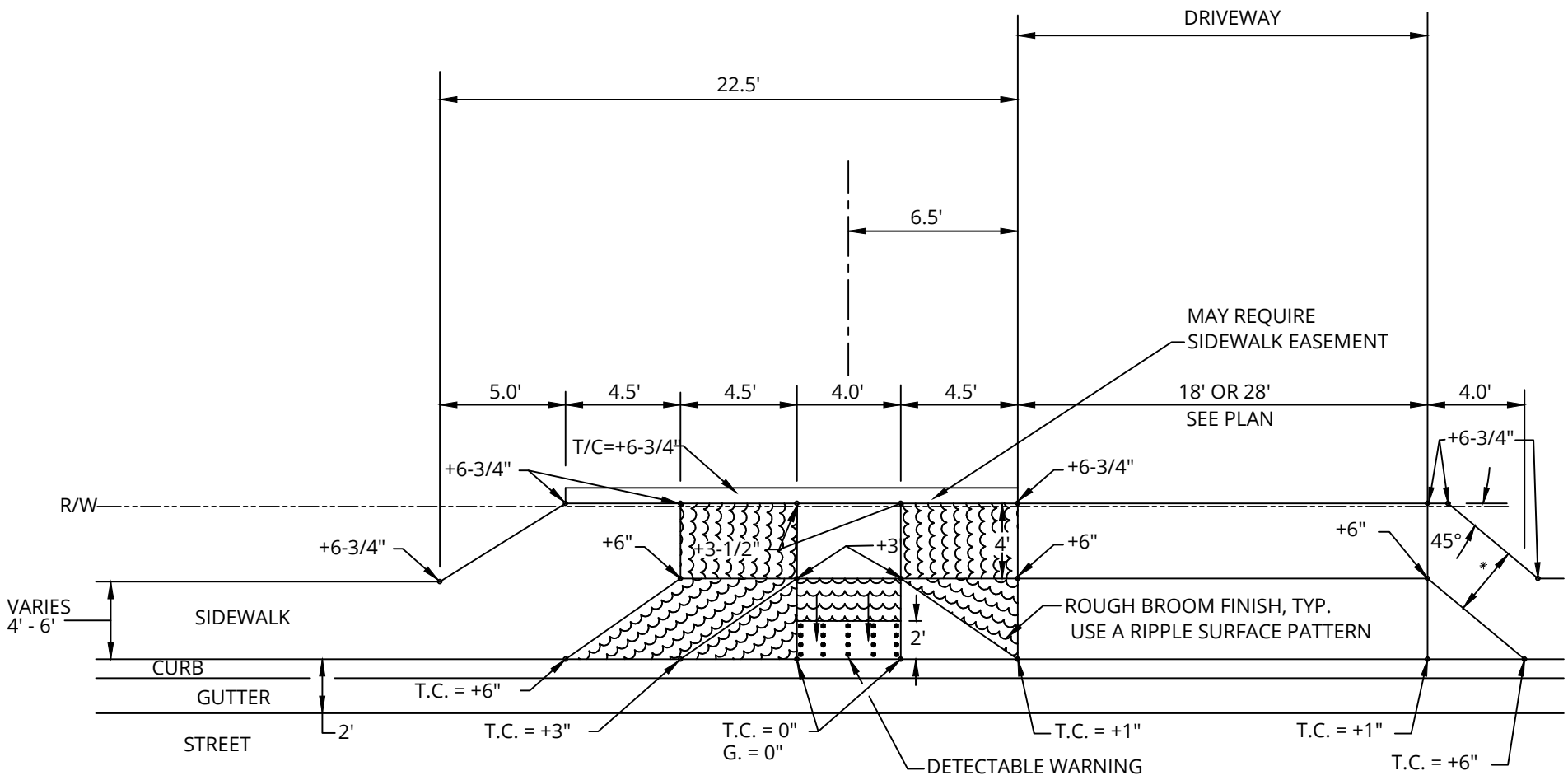
BASE THICKNESS CHART



NOTE:

MINIMUM DEPTH OF FLEXIBLE BASE COURSE REQUIRED UNDER 3" (MIN) BIT. SURFACE.

DETAIL NO. C-242	CHANDLER arizona	DEPTH OF BASE COURSE RESIDENTIAL LOCAL STREETS	APPROVED: 01-14-2010	DETAIL NO. C-242



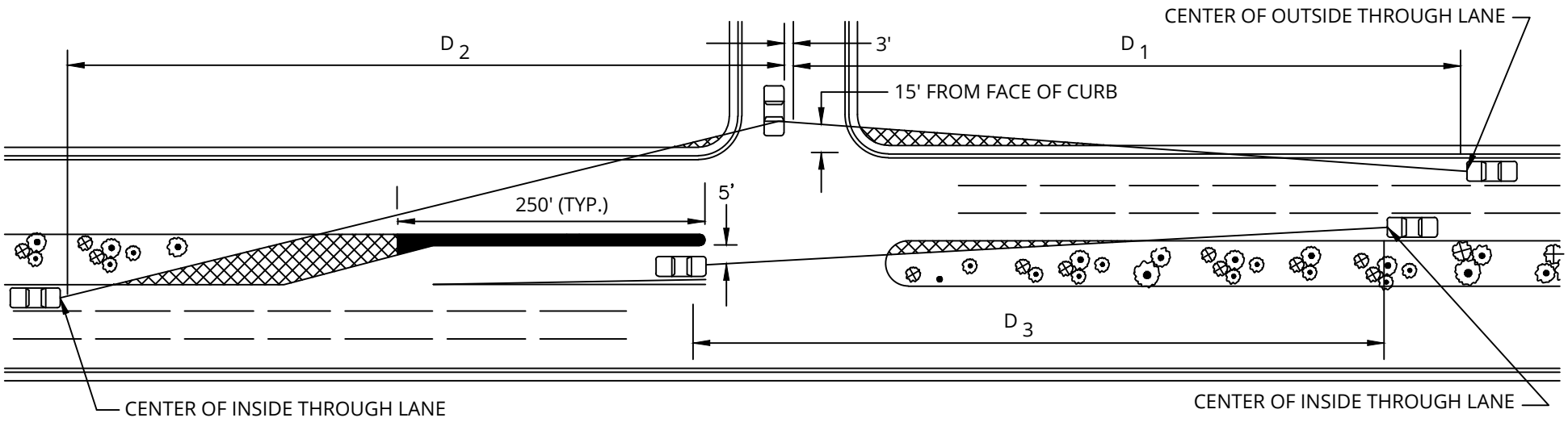
NOTE:

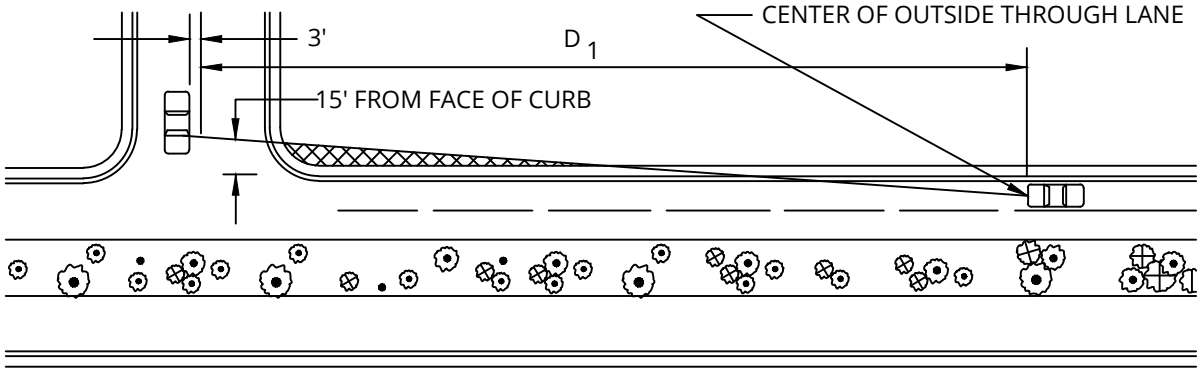
MINIMUM DEPTH OF FLEXIBLE BASE COURSE REQUIRED UNDER 3" (MIN) BIT. SURFACE.

* 4' CONSTANT WIDTH FOR 4' SIDEWALK
VARIABLE WIDTH FOR SIDEWALK GREATER THAN 4'

GUTTER ELEVATION = 0
CURB HEIGHT = 6"

DETAIL NO. C-245	CHANDLER arizona	COMBINED SIDEWALK RAMP AND RESIDENTIAL DRIVEWAY	APPROVED: 01-09-2014	DETAIL NO. C-245



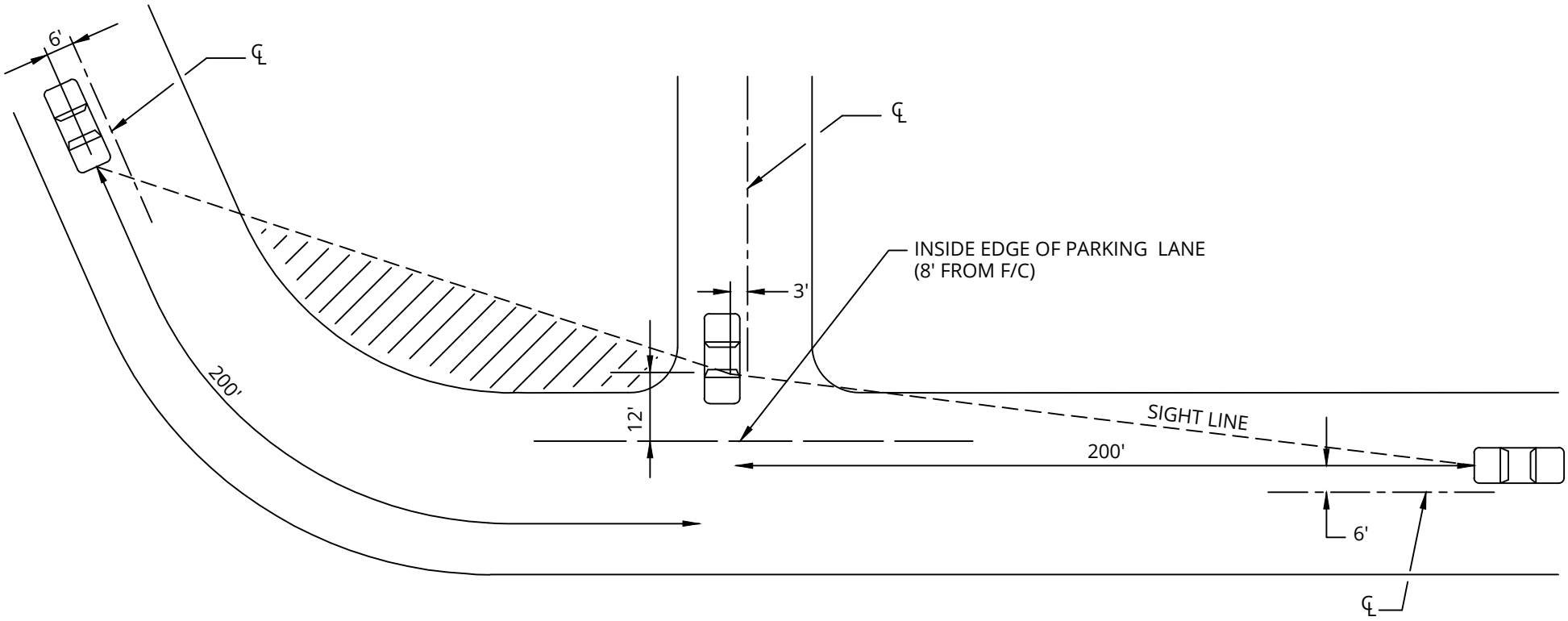


GROUND COVER, BUSHES, AND BOULDERS LESS THAN 24" (MATURE) IN HEIGHT, OR TREES TRIMMED TO 6' CLEARANCE ABOVE FINISHED GRADE ALLOWED IN THIS AREA. NO OTHER OBSTRUCTION ALLOWED UNLESS APPROVED BY THE CITY TRANSPORTATION ENGINEER,

FLUSH DECORATIVE PAVING, DECOMPOSED GRANITE, AND GROUND COVER LESS THAN 12" IN HEIGHT. ALL LANDSCAPE AND HARDSCAPE MATERIAL, AND OTHER DECORATIONS MUST BE SUBMITTED FOR APPROVAL TO THE CITY TRANSPORTATION ENGINEER.

POSTED SPEED	RIGHT TURN ONTO THRU D_1	LEFT TURN ONTO THRU D_2	LEFT TURN FROM THRU D_3
30	310	400	290
35	360	470	340
40	410	530	380
45	460	600	430

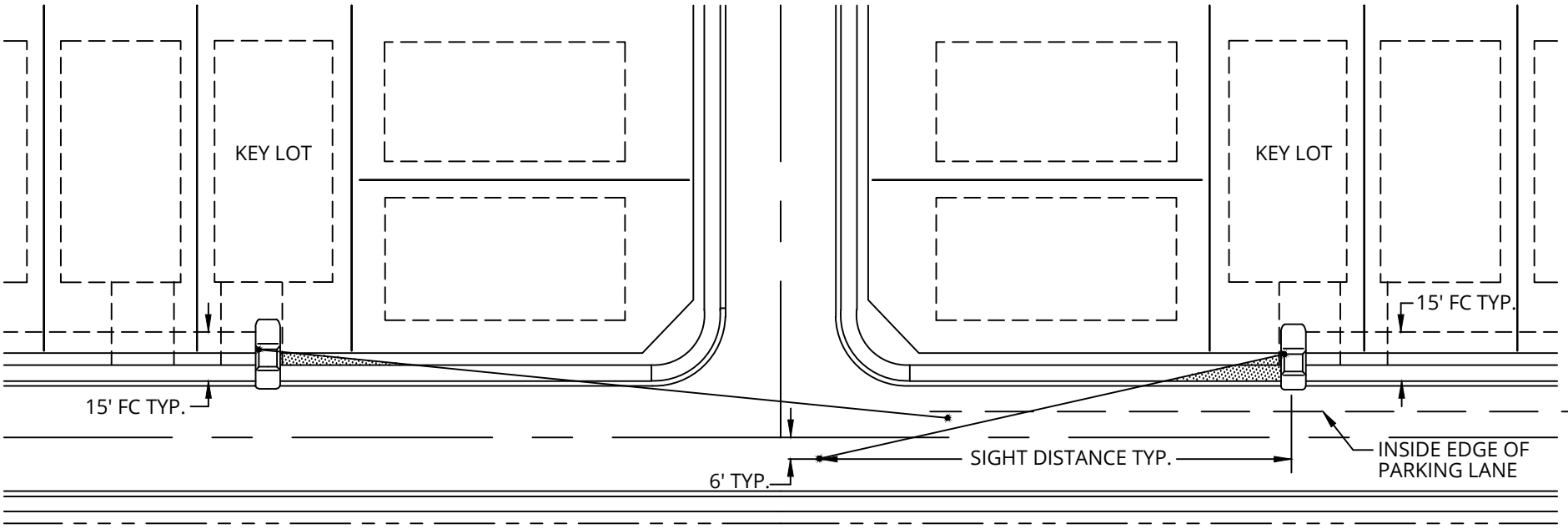
DETAIL NO.			APPROVED:	DETAIL NO.
C-246	CHANDLER arizona	**SIGHT DISTANCE FOR ARTERIAL AND COLLECTOR STREETS**	01-27-2011	**C-246**



NOTE:

THIS STANDARD APPLIES ONLY TO DRIVEWAY AND CROSS-STREET ENTRIES ONTO STREETS WITH A 25 MPH SPEED LIMIT AND ON-STREET PARKING. ONCOMING VEHICLE MUST BE VISIBLE TO DRIVER OF ENTERING VEHICLE FOR AT LEAST 200 FEET FROM INTERSECTION, MEASURED ALONG PATH OF ONCOMING VEHICLE. NO GROUND COVER, SHRUBS, FLOWERS, MOUNDS, WALLS OR STRUCTURES OVER 24 INCHES IN HEIGHT ALLOWED ON STREET SIDE OF SIGHT LINE. TREES MUST BE TRIMMED TO 6 FEET ABOVE GROUND ON STREET SIDE OF SIGHT LINE.

DETAIL NO.			APPROVED:	DETAIL NO.
C-247	CHANDLER arizona	**SIGHT DISTANCE FOR LOCAL STREETS**	01-27-2011	**C-247**

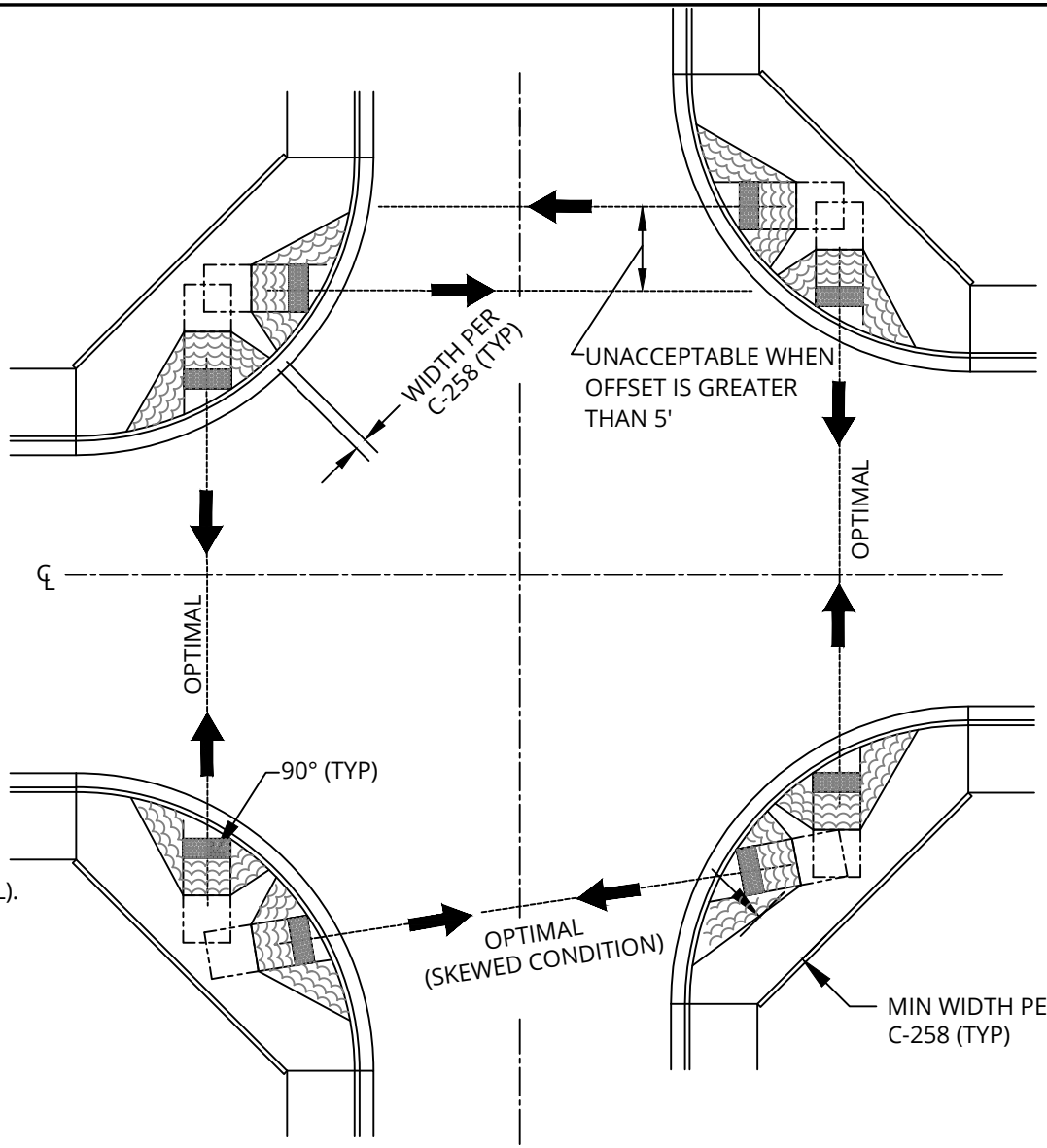


NO STRUCTURES OR LANDSCAPING ABOVE 24" IN HEIGHT ALLOWED IN THIS AREA EXCEPT TREES WITH BRANCHES NOT LESS THAN 6' ABOVE THE GROUND.

NOTE:
DRIVEWAY ON KEY LOTS NEED TO BE PLACED ON FAR SIDE OF LOT FROM REAR FENCE OF CORNER LOT.

DESIGN SPEED	SIGHT DISTANCE
25 MPH	200 FEET

DETAIL NO.			APPROVED:	DETAIL NO.
C-248	CHANDLER arizona	**KEY LOT SIGHT DISTANCE**	11-19-1999	**C-248**

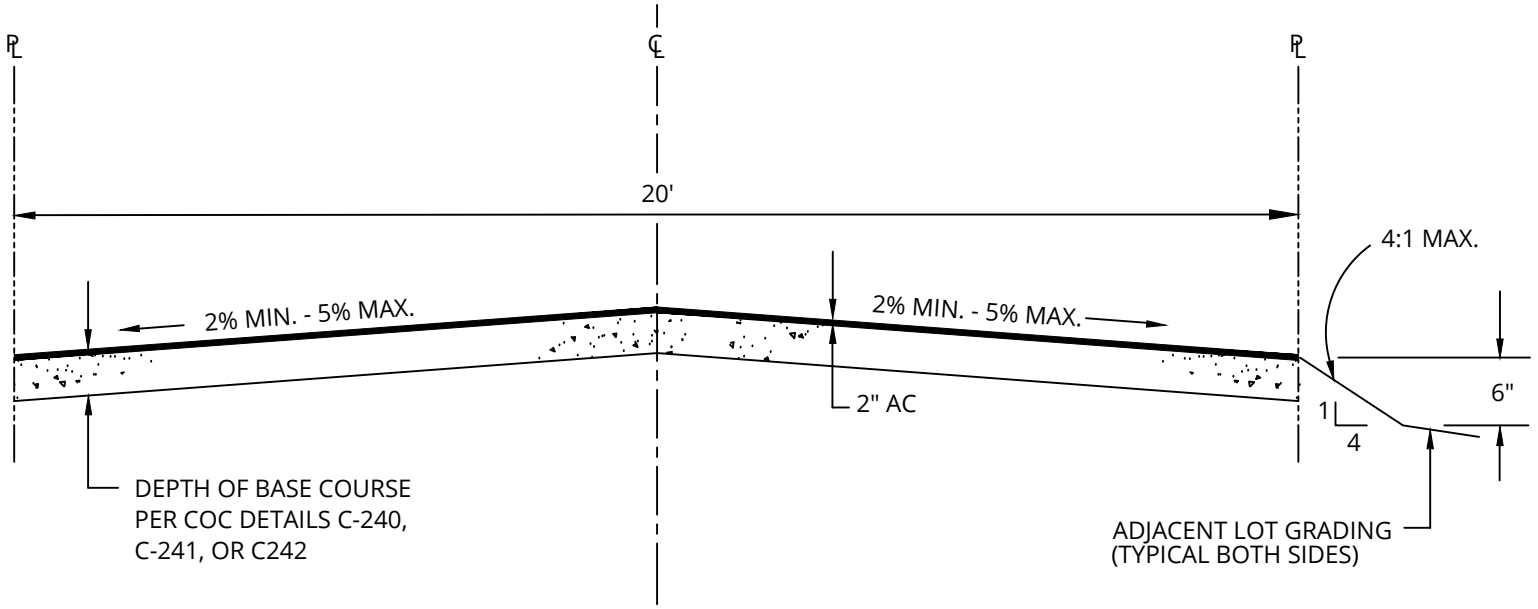


NOTES:

1. ALL RAMPS AND TRUNCATED DOMES MUST BE ALIGNED SUCH THAT A LINE DRAWN PERPENDICULAR TO THE DOMES ALIGNS WITH THE CENTER OF THE OPPOSING RAMP (OPTIMAL). IN NO CASE SHALL SAID LINE BE GREATER THAN 5' FROM THE CENTER OF OPPOSING RAMP (UNACCEPTABLE).
2. PEDESTRIAN AND TRAFFIC CONTROL INCLUDING PAVEMENT MARKINGS AND SIGNAGE MUST CONFORM TO CITY AND MUTCD REQUIREMENTS.
3. REFER TO THIS PROJECTS APPROVED PEDESTRIAN ROUTING PLAN FOR RAMP LOCATION.
4. ALL PEDESTRIAN CROSSINGS MUST MAINTAIN A MINIMUM 4' WIDTH AND NOT EXCEED A 2% CROSS SLOPE.

DETAIL NO.			APPROVED:	DETAIL NO.
C-249	CHANDLER arizona	**ACCESSIBLE CURB RAMP ALIGNMENT**	05-10-2018	**C-249**

CENTER CROWN

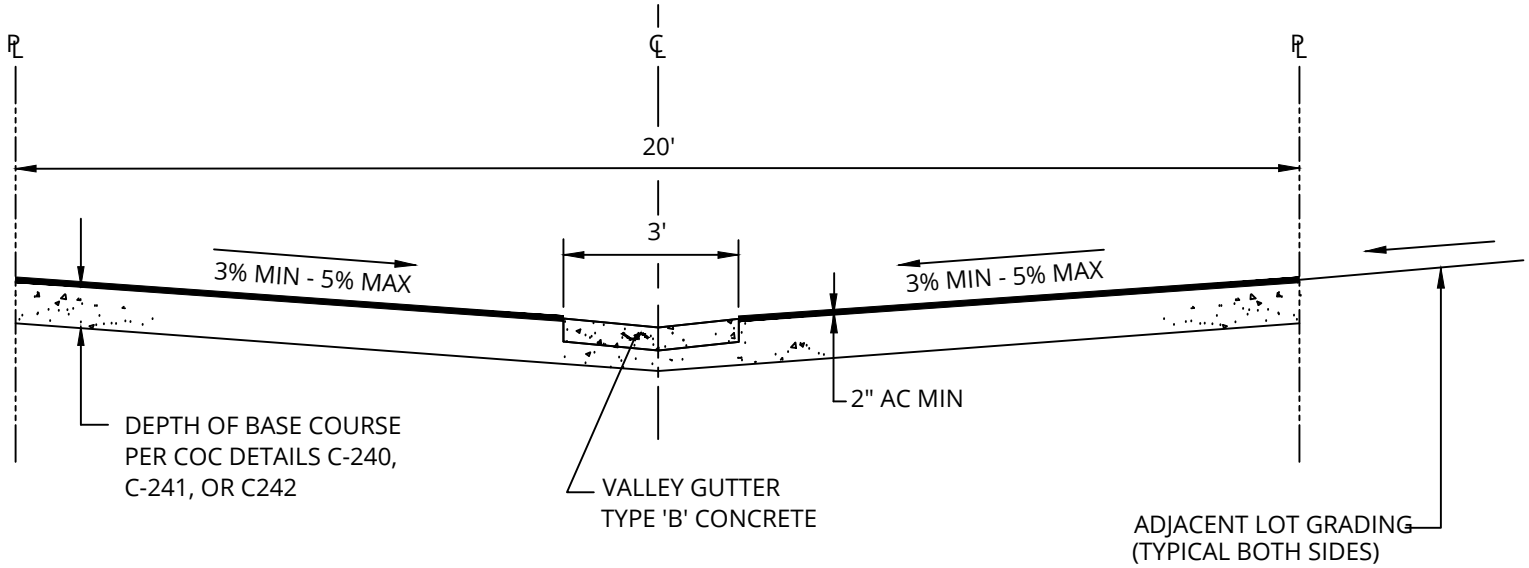


NOTES:

1. ASPHALTIC CONCRETE:
   A. MATERIAL: 3/4" EVAC MIX. SEE APPROVED PRODUCTS LIST FOR APPROVED EVAC MIXES.
   B. COMPACTION TO BE TESTED IN ACCORDANCE WITH AASHTO T-99 METHOD A, AND T-191 OR ASTM D-2922 AND D-3017.
2. AGGREGATE BASE COURSE: CONFORMING TO MAG SECTION 702.2.
3. SUBGRADE PREPARATION: CONFORMING TO MAG SECTION 301.

DETAIL NO.			APPROVED:	DETAIL NO.
C-251	CHANDLER arizona	**ALLEY PAVEMENT LOT DRAINAGE FROM ALLEY**	01-16-2023	**C-251**

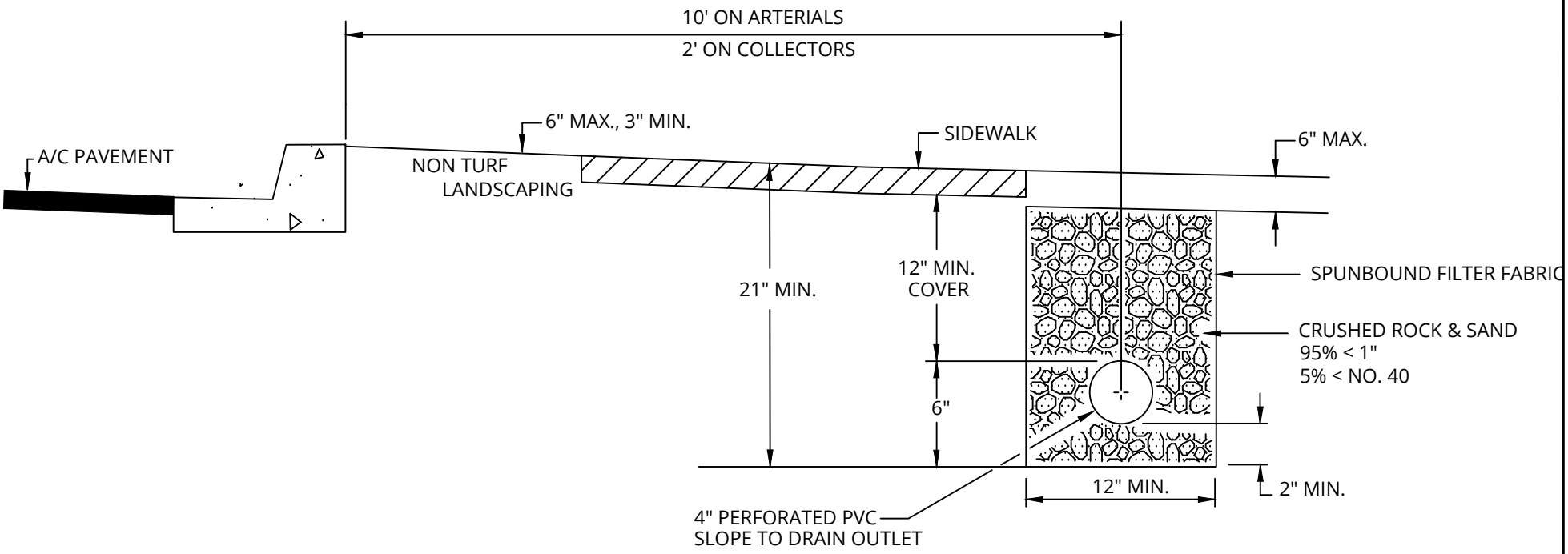
INVERTED CROWN



NOTES:

1. ASPHALTIC CONCRETE:
   A. MATERIAL: 3/4" EVAC MIX. SEE APPROVED PRODUCTS LIST FOR APPROVED EVAC MIXES.
   B. COMPACTION TO BE TESTED IN ACCORDANCE WITH AASHTO T-99 METHOD A, AND T-191 OR ASTM D-2922 AND D-3017.
2. AGGREGATE BASE COURSE: CONFORMING TO MAG SECTION 702.2.
3. SUBGRADE PREPARATION: CONFORMING TO MAG SECTION 301.

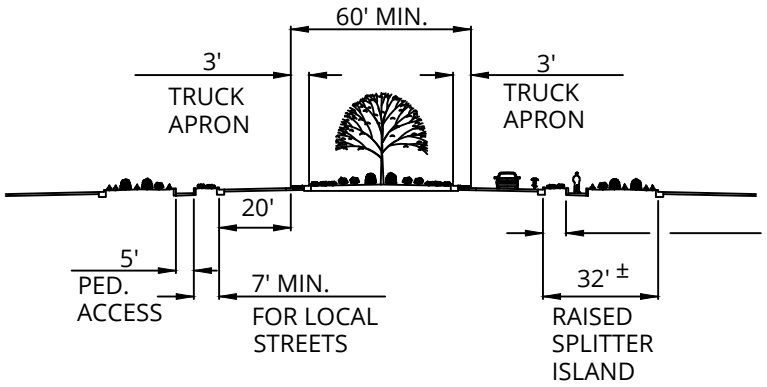
DETAIL NO.			APPROVED:	DETAIL NO.
C-252	CHANDLER arizona	**ALLEY PAVEMENT LOT DRAINAGE TO ALLEY**	01-16-2023	**C-252**



NOTES:

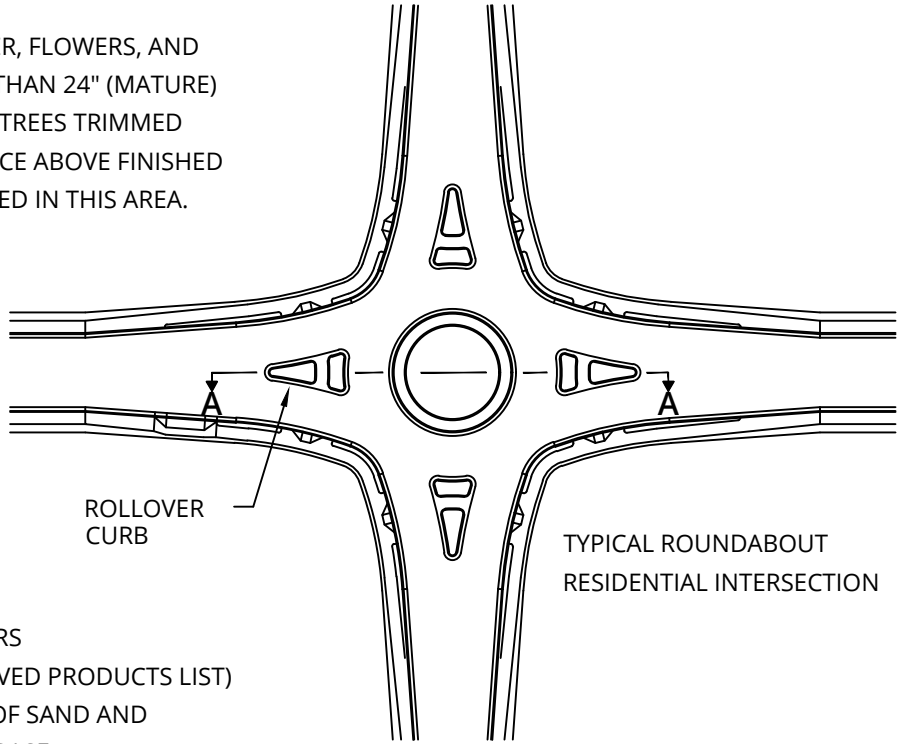
1. THIS DETAIL APPLIES ONLY TO AREAS THAT ARE TURF LANDSCAPED.
2. DRAIN MUST BE DESIGNED TO DISCHARGE TO RETENTION BASIN, STORM DRAIN OR DRYWELL.
3. MINIMUM SLOPE MUST BE 0.2%.

DETAIL NO.			APPROVED:	DETAIL NO.
C-254	CHANDLER arizona	**ARTERIAL/COLLECTOR ROADWAY LANDSCAPE DRAINAGE**	11-19-1999	**C-254**

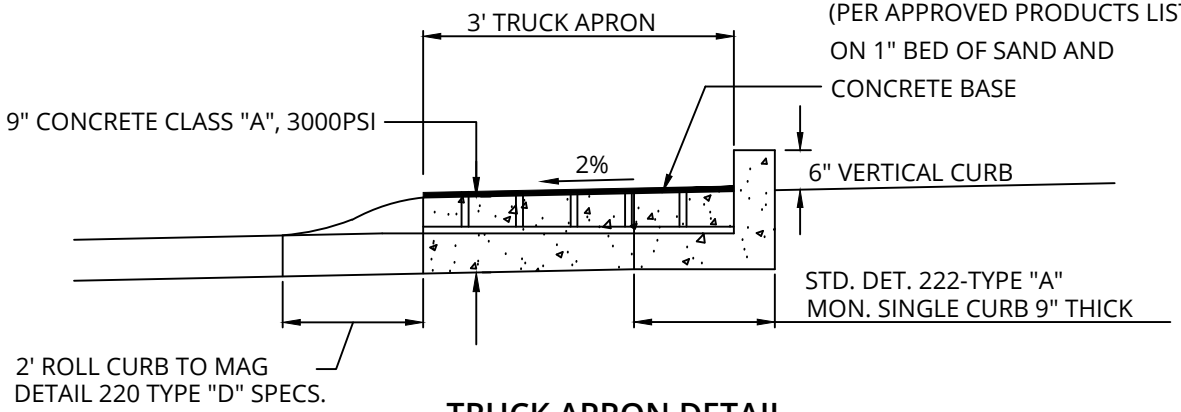


GROUND COVER, FLOWERS, AND GRANITE LESS THAN 24" (MATURE) IN HEIGHT, OR TREES TRIMMED TO 6' CLEARANCE ABOVE FINISHED GRADE ALLOWED IN THIS AREA.

SECTION A-A
THROUGH SPLITTER/CENTER ISLAND



TYPICAL ROUNDABOUT
RESIDENTIAL INTERSECTION



BRICK PAVERS
(PER APPROVED PRODUCTS LIST)
ON 1" BED OF SAND AND
CONCRETE BASE

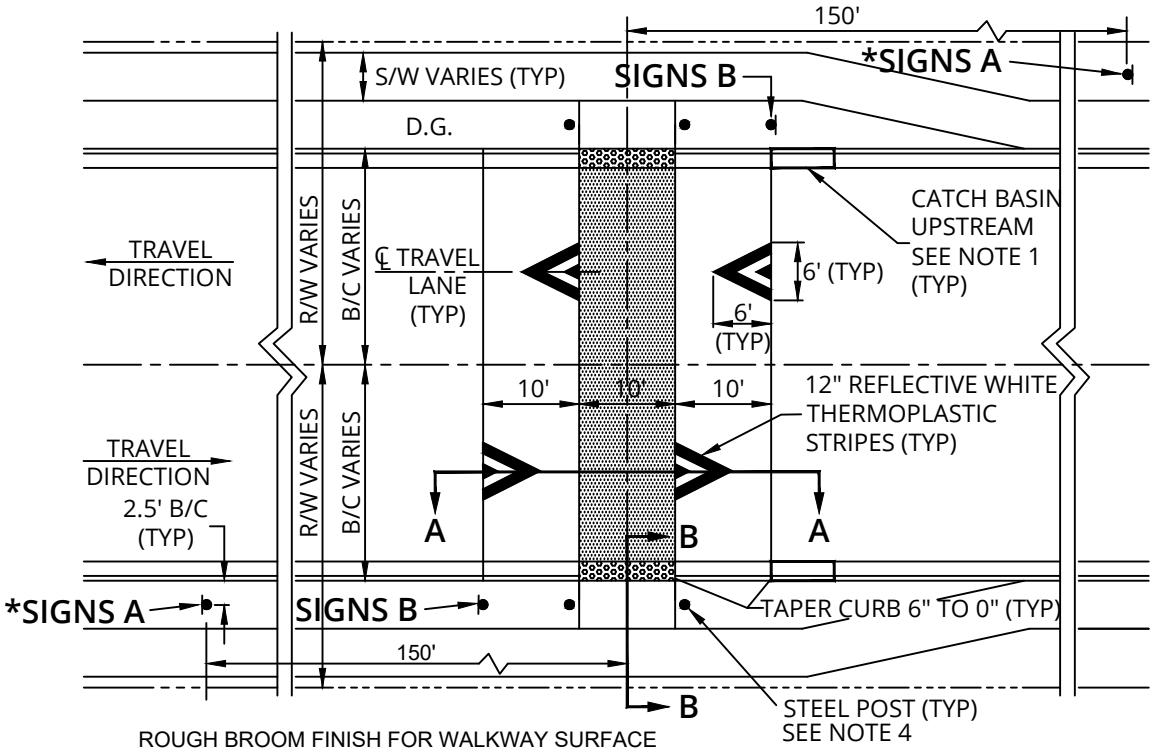
6" VERTICAL CURB

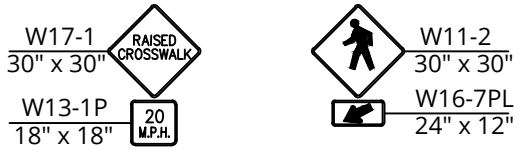
STD. DET. 222-TYPE "A"
MON. SINGLE CURB 9" THICK

TRUCK APRON DETAIL

RESIDENTIAL COLLECTOR
RESIDENTIAL LOCAL
TYPICAL ROUNDABOUT
CENTER/SPLITTER ISLAND DETAIL
TRUCK APRON DETAIL

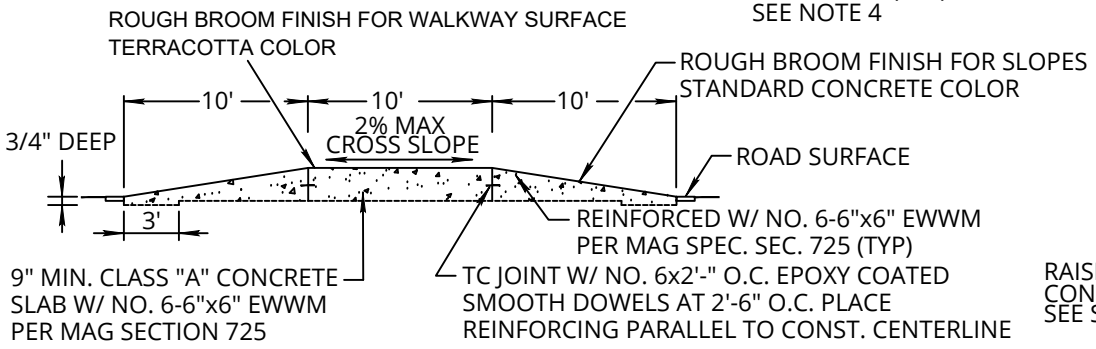
DETAIL NO.			APPROVED:	DETAIL NO.
C-255	CHANDLER arizona	**TYPICAL ROUNDABOUT**	02-26-2007	**C-255**





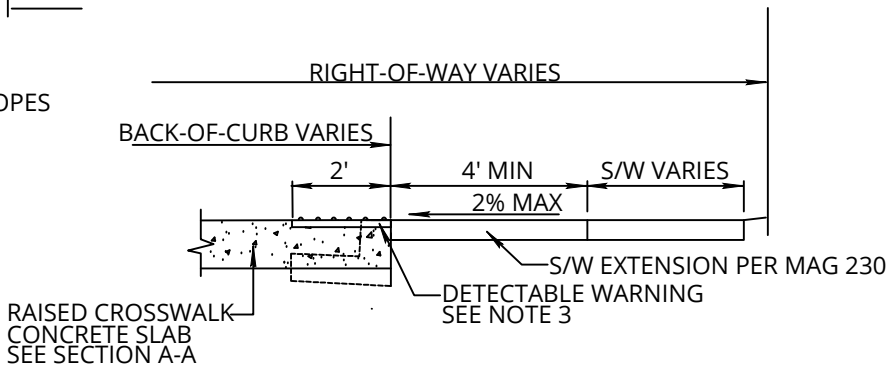
SIGNS A **SIGNS B**

***SEE NOTE 2**



SECTION A-A

NTS



SECTION B-B

NTS

NOTES:

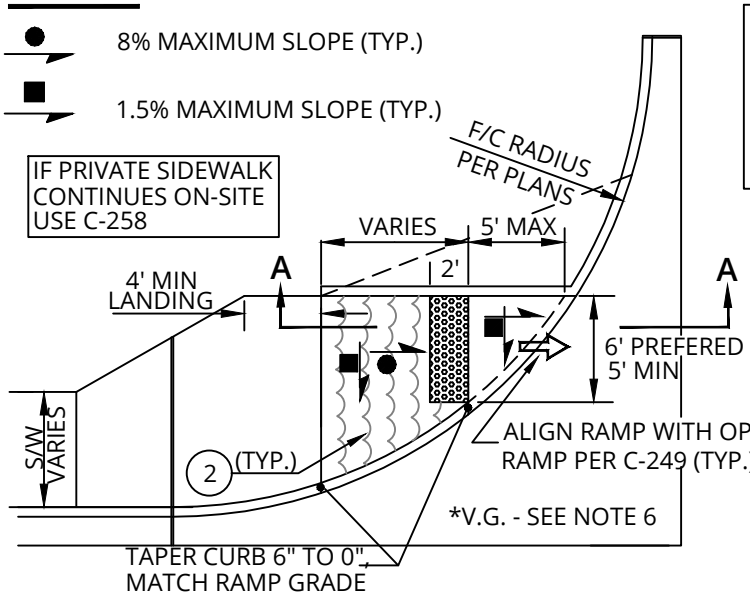
1. TYPICAL INSTALLATION SHOWN WITH DETACHED SIDEWALK, STANDARD ROAD WIDTH, AND CATCH BASINS. OTHER DESIGNS MAY BE APPROVED BY CITY ENGINEER.
2. ADVANCE WARNING SIGNS A REQUIRED WHEN POSTED SPEED LIMIT IS GREATER THAN 30 MPH OR AS REQUIRED BY CITY TRANSPORTATION ENGINEER.
3. DETECTABLE WARNING PER PER APPROVED PRODUCTS LIST.
4. STEEL BOLLARD BRONZE POWDERCOAT FINISH, ANNAPOLIS 6", NO LIGHT EMBEDDED, 33" HIGH OR APPROVED EQUAL.

DETAIL NO.			APPROVED:	DETAIL NO.
C-256	CHANDLER arizona	**TYPICAL MID-BLOCK RAISED CROSSWALK**	01-28-2021	**C-256**

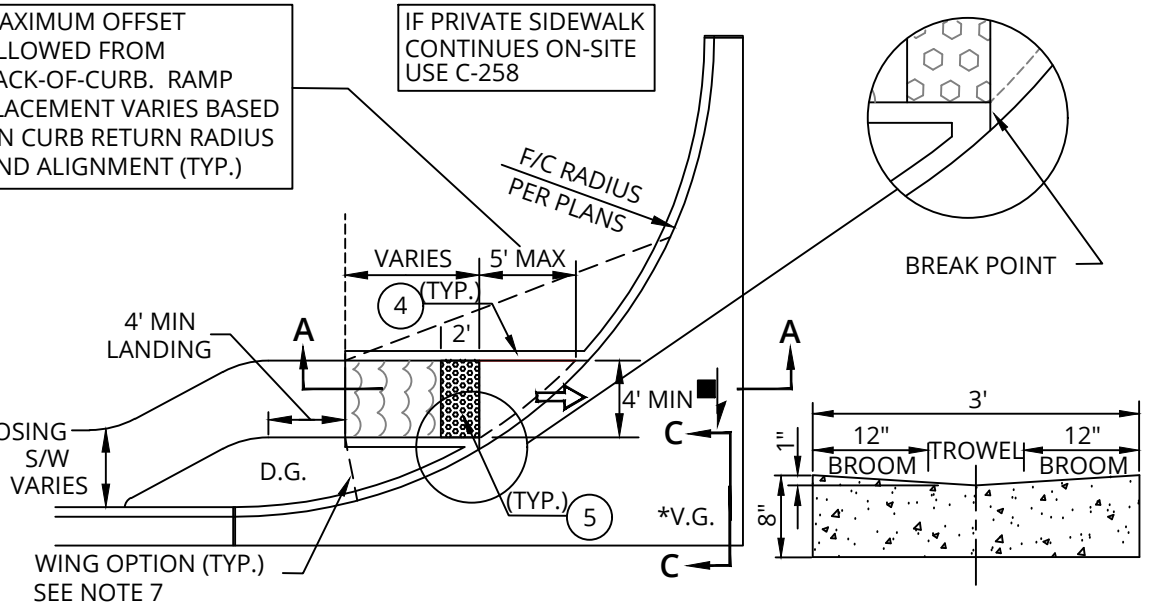
LEGEND:

8% MAXIMUM SLOPE (TYP.)

1.5% MAXIMUM SLOPE (TYP.)



TYPICAL ARTERIAL
W/CURB TAPER OPTION SHOWN

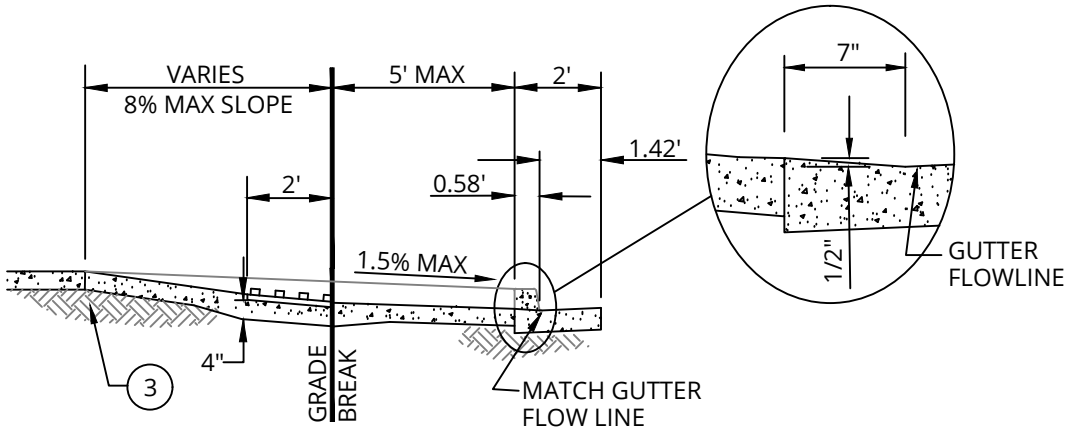


TYPICAL LOCAL/COLLECTOR
W/DETACHED SIDEWALK OPTION SHOWN

SECTION C-C
MODIFIED MAG DETAIL 240

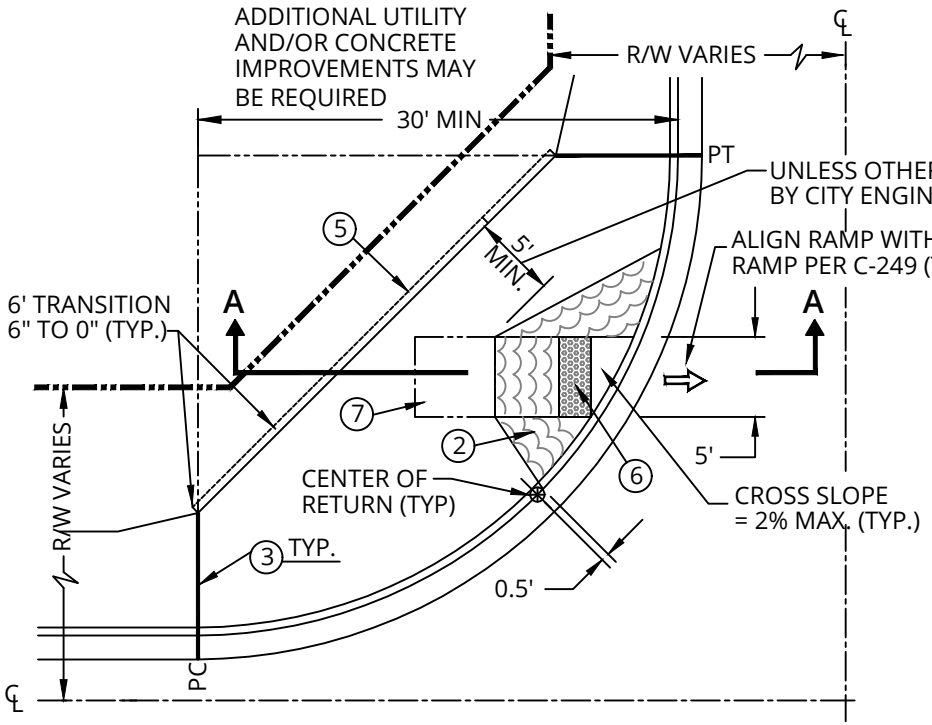
NOTES:

1. CLASS "B" CONCRETE PER MAG SECTION 725.
2. LIMITS OF HEAVY ROUGH BROOM FINISH
3. SUBGRADE PREPARATION PER MAG SECTION 301.
4. 6" SINGLE CURB PER MAG DETAIL 222.
5. DETECTABLE WARNING PER APPROVED PRODUCTS LIST
6. PEDESTRIAN CROSSING MUST NOT OVERLAP VALLEY GUTTER (V.G.) 6' V.G. IS STANDARD, 3' V.G. IS PERMITED AT STOP CONTROLLED DRIVEWAYS - SEE SECTION C-C.
7. WING, CURB TAPER OR SINGLE CURB MAY BE USED.

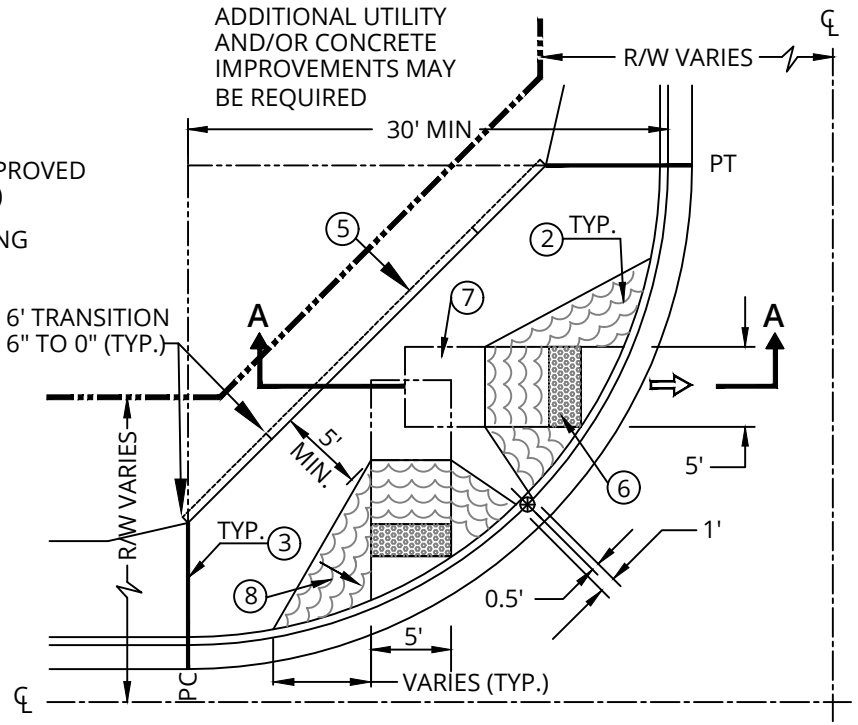


SECTION A-A

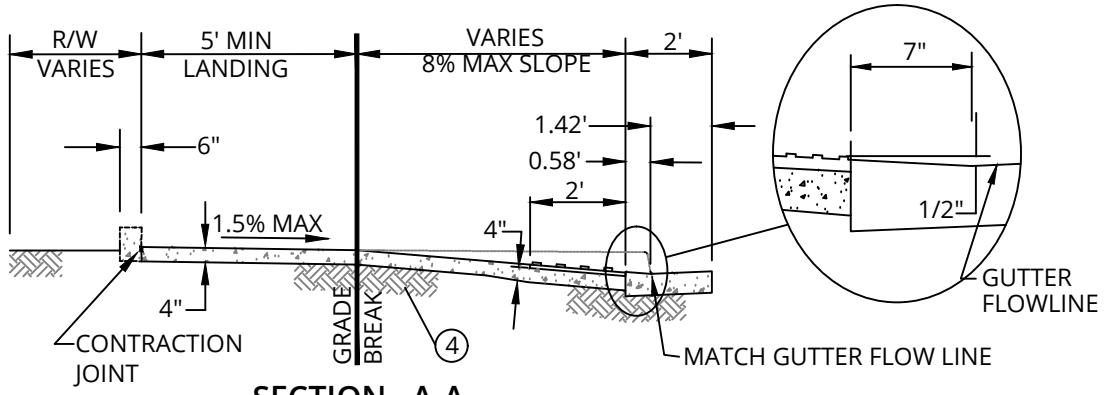
DETAIL NO.			APPROVED:	DETAIL NO.
C-257	CHANDLER arizona	**IN-LINE RAMP DETAIL FOR RETURN TYPE DRIVEWAY**	01-09-2020	**C-257**



SINGLE RAMP



DUAL RAMP

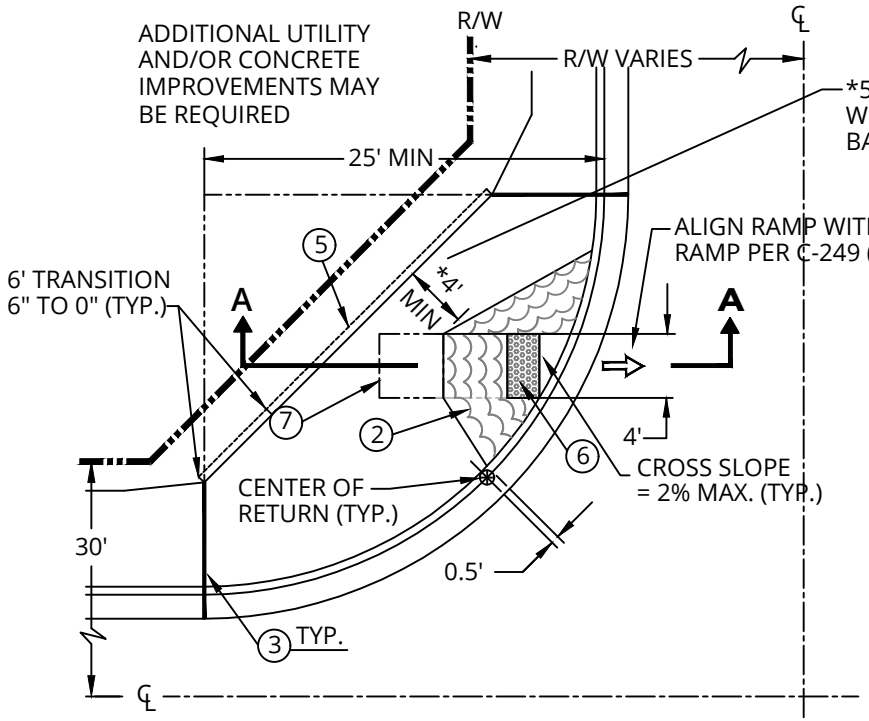


SECTION A-A

NOTES:

1. CLASS "B" CONCRETE PER MAG SECTION 725.
2. LIMITS OF HEAVY ROUGH BROOM FINISH
3. EXPANSION JOINTS PER MAG SECTION 340.
4. SUBGRADE PREPERARATION PER MAG SECTION 301.
5. OPTIONAL 6" CURB WITH 3" MIN. TRANSITION AS SHOWN, UNLESS OTHERWISE DIRECTED.
6. 2' x 5' DETECTABLE WARNING PER APPROVED PRODUCTS LIST.
7. MUST MAINTAIN A 5' x 5' LANDING PAD (TYP).
8. 10% MAXIMUM WING SLOPE, ADJUST WING LENGTH AS NECESSARY (TYP).

DETAIL NO.			APPROVED:	DETAIL NO.
C-258-1	CHANDLER arizona	**DIRECTIONAL CURB RAMP ARTERIAL STREETS**	07-09-2015	**C-258-1**



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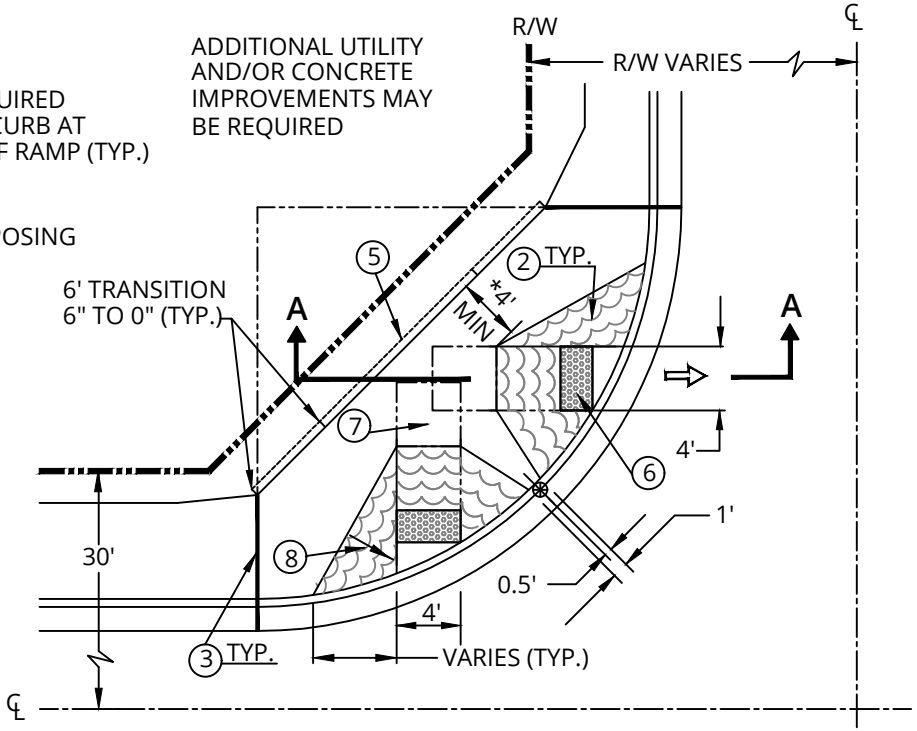
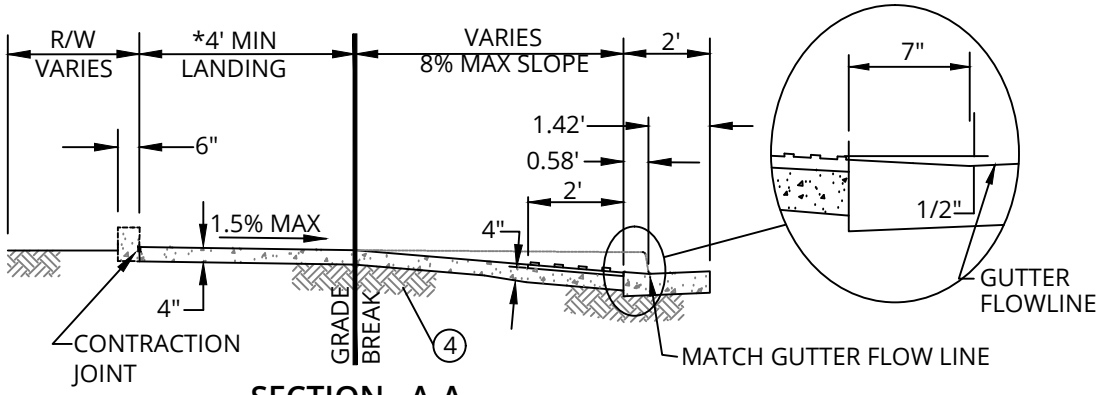


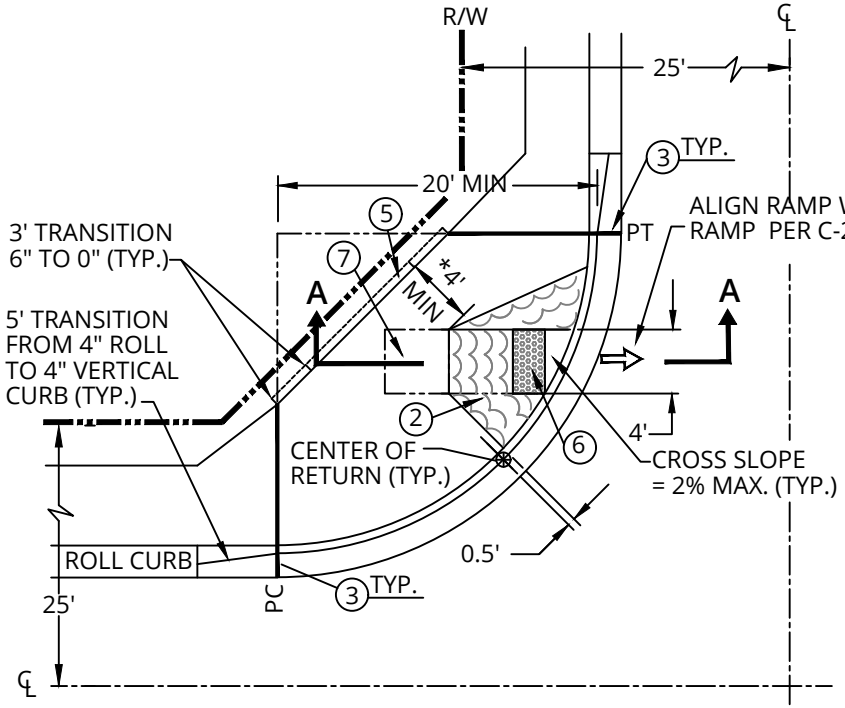
DUAL RAMP



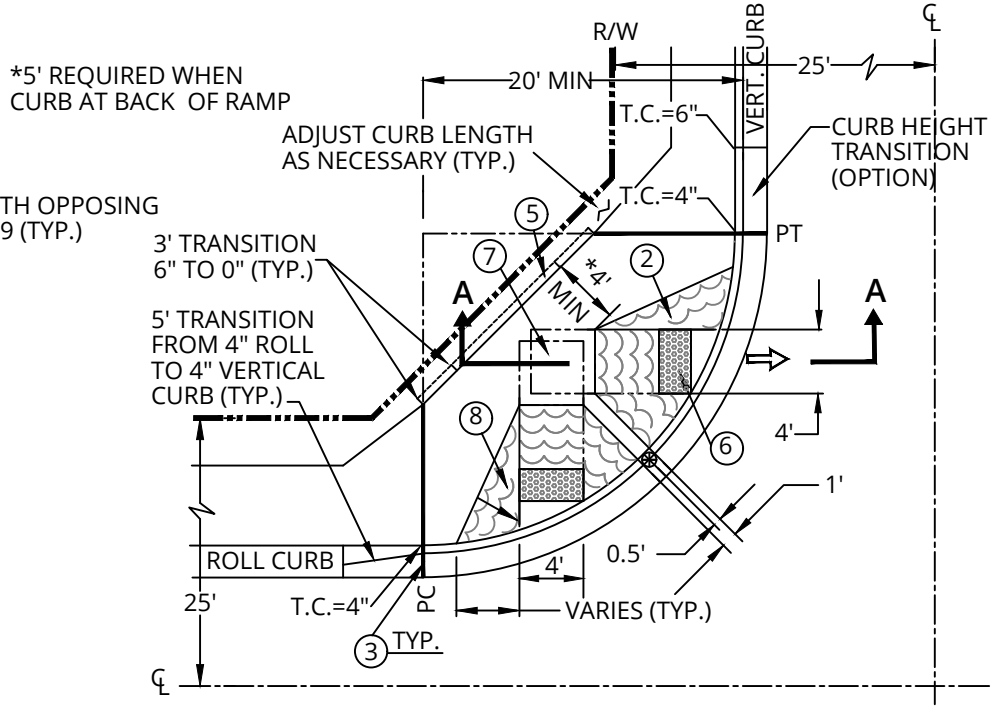
SECTION A-A

1. CLASS "B" CONCRETE PER MAG SECTION 725.
2. LIMITS OF HEAVY ROUGH BROOM FINISH
3. EXPANSION JOINTS PER MAG SECTION 340.
4. SUBGRADE PREPERARATION PER MAG SECTION 301.
5. OPTIONAL 6" CURB WITH 3" MIN. TRANSITION AS SHOWN, UNLESS OTHERWISE DIRECTED.
6. 2' x 4' DETECTABLE WARNING PER APPROVED PRODUCTS LIST.
7. MUST MAINTAIN A 4' x 4' LANDING PAD (TYP).
8. 10% MAXIMUM WING SLOPE, ADJUST WING LENGTH AS NECESSARY (TYP).

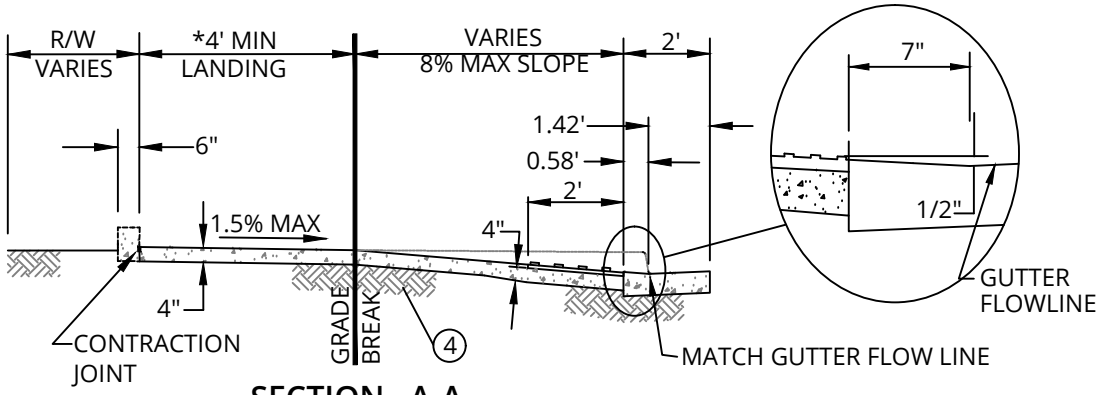
DETAIL NO.			APPROVED:	DETAIL NO.
C-258-2	CHANDLER arizona	**DIRECTIONAL CURB RAMP COLLECTOR STREETS**	07-09-2015	**C-258-2**



SINGLE RAMP



DUAL RAMP

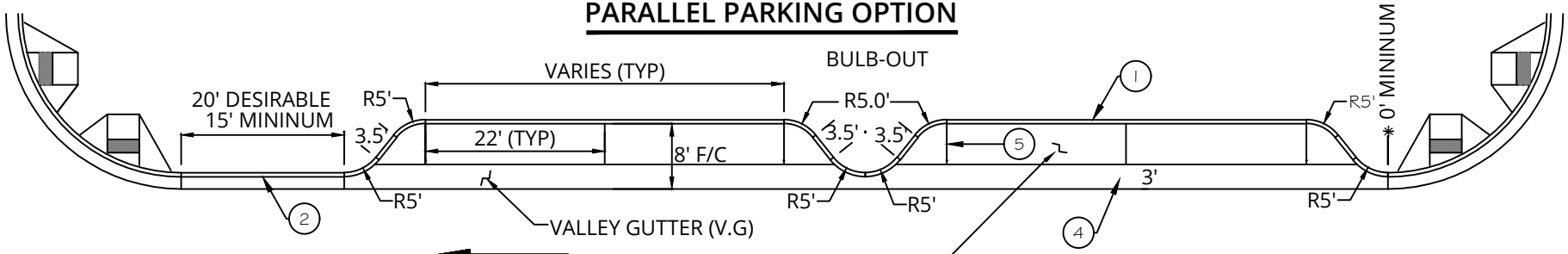


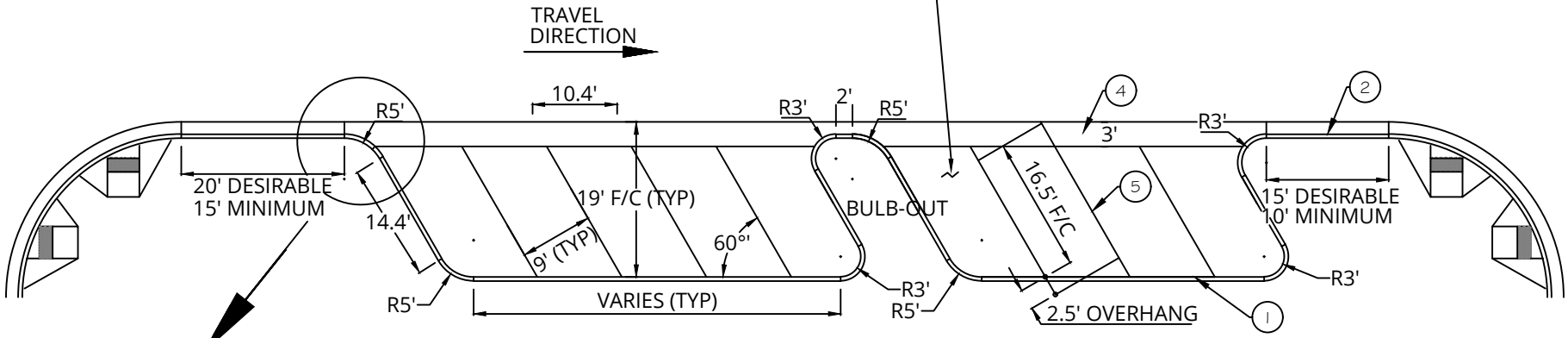
SECTION A-A

1. CLASS "B" CONCRETE PER MAG SECTION 725.
2. LIMITS OF HEAVY ROUGH BROOM FINISH
3. EXPANSION JOINTS PER MAG SECTION 340.
4. SUBGRADE PREPERARATION PER MAG SECTION 301.
5. OPTIONAL 6" CURB WITH 3" MIN. TRANSITION AS SHOWN, UNLESS OTHERWISE DIRECTED.
6. 2' x 4' DETECTABLE WARNING PER APPROVED PRODUCTS LIST.
7. MUST MAINTAIN A 4' x 4' LANDING PAD (TYP).
8. 10% MAXIMUM WING SLOPE, ADJUST WING LENGTH AS NECESSARY (TYP).

DETAIL NO.			APPROVED:	DETAIL NO.
C-258-3	CHANDLER arizona	**DIRECTIONAL CURB RAMP LOCAL STREETS**	07-09-2015	**C-258-3**

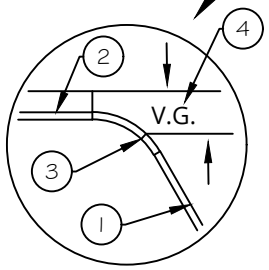
PARALLEL PARKING OPTION





ANGLE PARKING OPTION

ALL DIMENSIONS SHOW ARE TO BACK-OF-CURB, UNLESS OTHERWISE NOTED



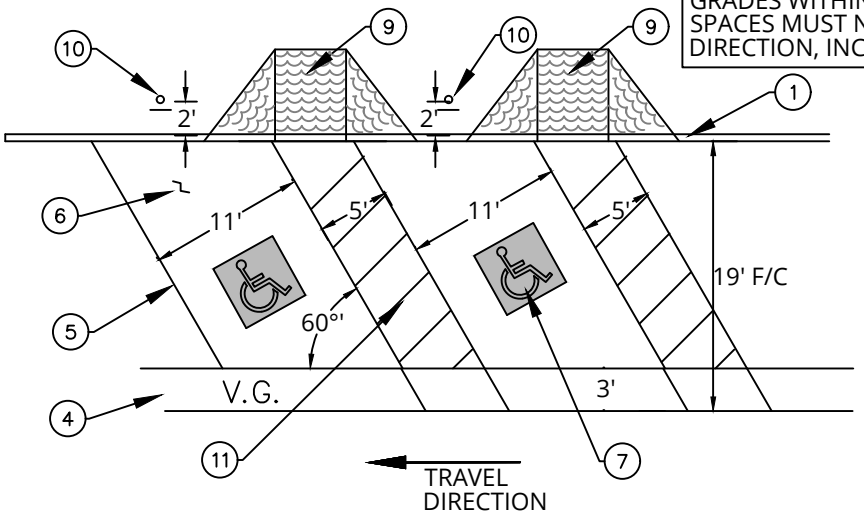
TYPICAL

NOTES:

1. 6" SINGLE CURB PER MAG STD DTL 222, TYPE 'A'.
2. 6" VERTICAL CURB AND GUTTER PER MAG STD DTL 220-1, TYPE A.
3. TRANSITION POINT FROM SINGLE CURB TO VERTICAL CURB AND GUTTER.
4. VALLEY GUTTER MUST BE CLASS "B" PER MAG SEC 725 AND INSTALLED PER MAG SEC 505. BRUSH AND TROWEL PER C-215.
5. 4" SOLID WHITE LINE. MARKING IN CONCRETE VALLEY GUTTER NOT NECESSARY.
6. SEE ON-STREET PARKING TYPICAL CROSS SECTION, C-215, FOR FURTHER REQUIREMENTS.
7. SEE THE ENG. & DESIGN STANDARDS MANUAL, CH. 4 STREET DESIGN AND ACCESS CONTROL, FOR FURTHER REQUIREMENTS.

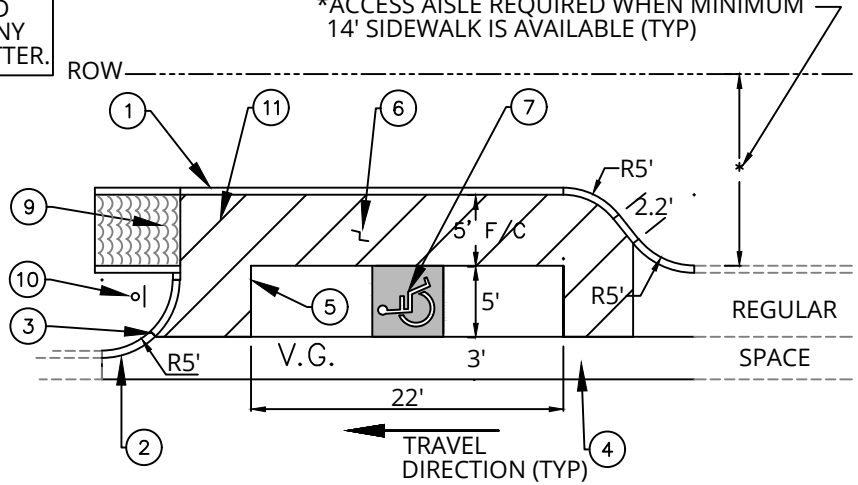
DETAIL NO.			APPROVED:	DETAIL NO.
C-260-1	CHANDLER arizona	**ON-STREET PARKING USING BULB-OUTS**	01-09-2020	**C-260-1**

GRADES WITHIN PARKING AISLE AND SPACES MUST NOT EXCEED 2% IN ANY DIRECTION, INCLUDING VALLEY GUTTER.



ACCESSIBLE ANGLE PARKING

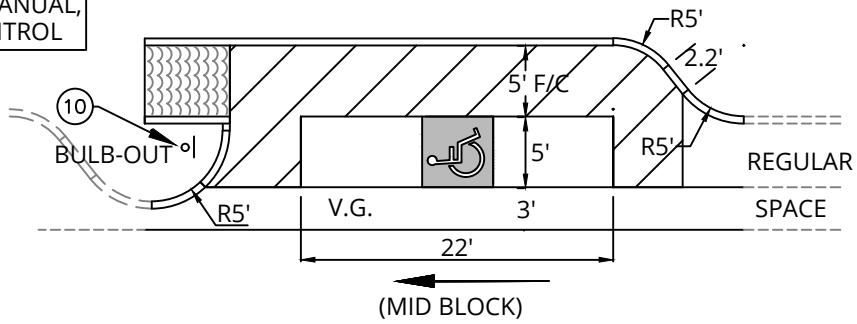
*ACCESS AISLE REQUIRED WHEN MINIMUM 14' SIDEWALK IS AVAILABLE (TYP)



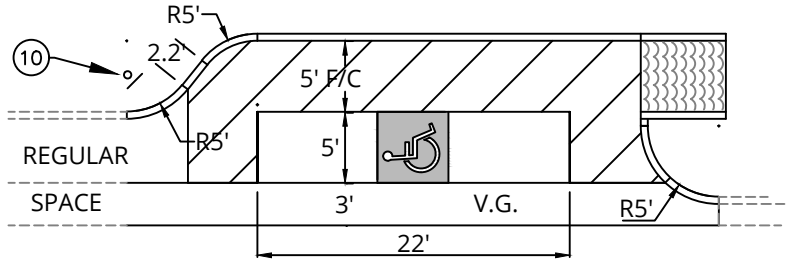
ACCESSIBLE PARALLEL PARKING

REQUIRED ONLY IN SPECIFIC SITUATIONS. SEE THE ENG. & DESIGN STANDARDS MANUAL, CH. 4 STREET DESIGN AND ACCESS CONTROL

(END OF BLOCK)



(MID BLOCK)

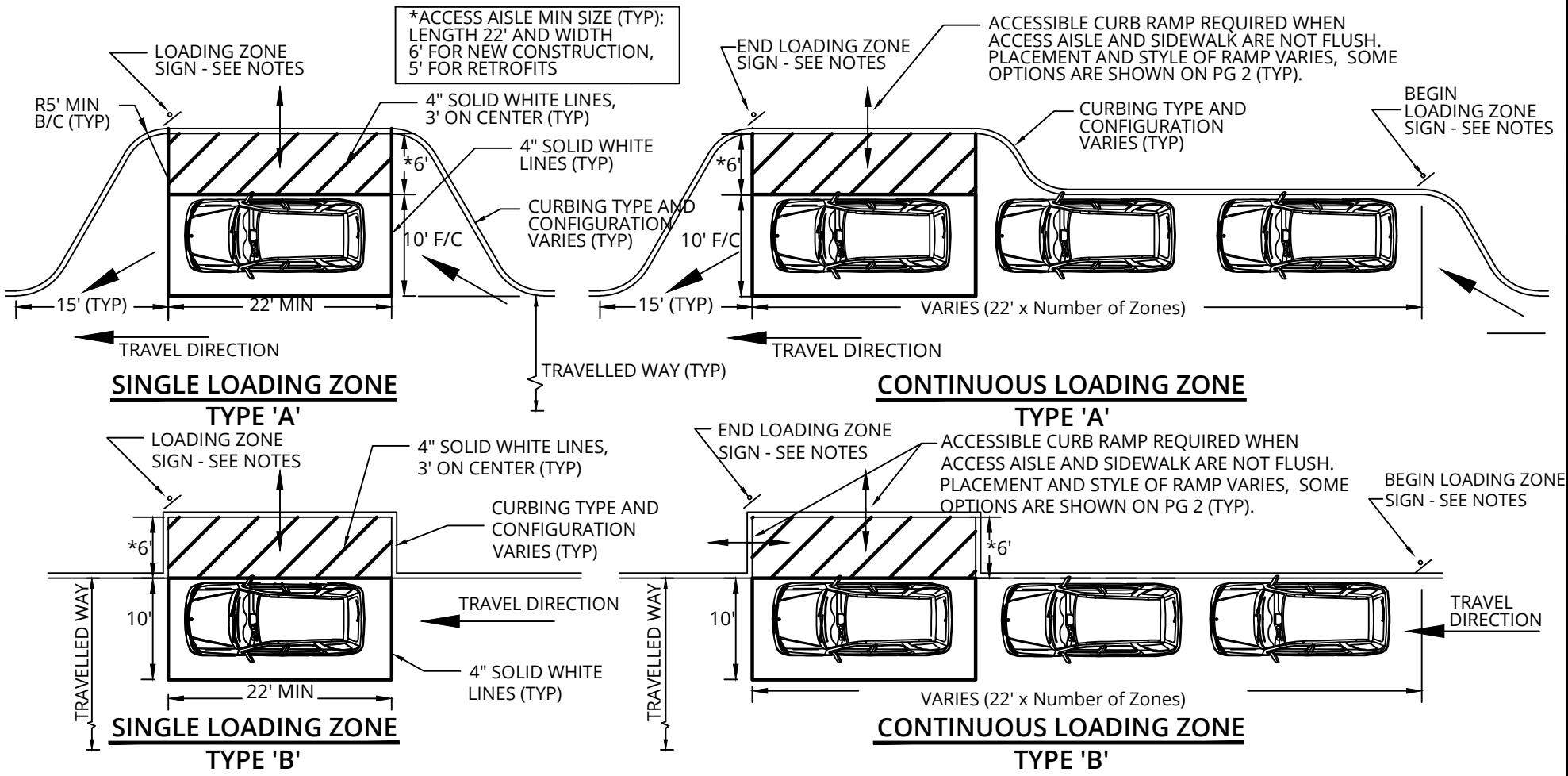


(START OF BLOCK)

NOTES:

1. 6" SINGLE CURB PER MAG STD DTL 222, TYPE 'A'.
2. 6" VERTICAL CURB AND GUTTER PER MAG STD DTL 220-1, TYPE A.
3. TRANSITION POINT FROM SINGLE CURB TO VERTICAL CURB AND GUTTER.
4. VALLEY GUTTER MUST BE CLASS "B" PER MAG SEC 725 AND INSTALLED PER MAG SEC 505. BRUSH AND TROWEL PER C-215.
5. 4" SOLID WHITE LINE. MARKING IN CONCRETE GUTTER NOT NECESSARY.
6. SEE ON-STREET PARKING TYPICAL CROSS SECTION, C-215, FOR FURTHER REQUIREMENTS.
7. ACCESSIBLE PARKING SYMBOL PER C-612. DO NOT MARK IN CONCRETE VALLEY GUTTER.
8. IN-LINE RAMP PER C-257. COMPLY WITH RAMP GRADES AND LANDING REQUIREMENTS. DETECTIBLE WARNING SYSTEM NOT REQUIRED.
9. PERPENDICULAR RAMP PER C-258, PG 1. COMPLY WITH RAMP GRADES AND LANDING REQUIREMENTS. DETECTIBLE WARNING SYSTEM NOT REQUIRED.
10. ACCESSIBLE PARKING SIGN PER C-611.
11. 5' WIDE ACCESS AISLE MARKED WITH 4" SOLID WHITE LINES, 3' ON CENTER.

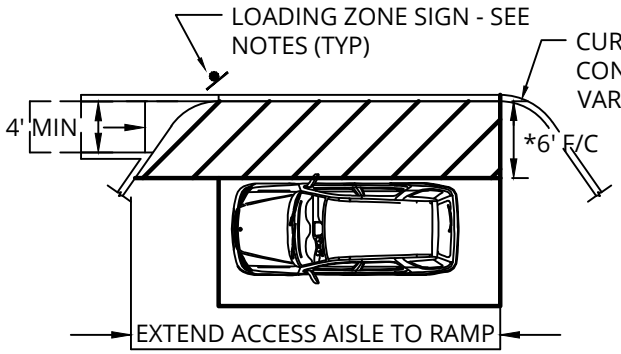
DETAIL NO.			APPROVED:	DETAIL NO.
C-260-2	CHANDLER arizona	**ON-STREET PARKING ACCESSIBLE SPACES**	01-27-2020	**C-260-2**



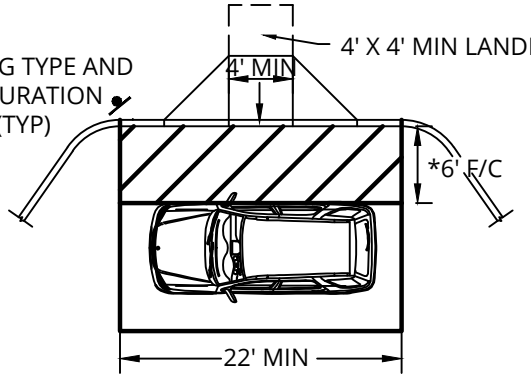
NOTES:

1. SEE THE ENG. & DESIGN STANDARDS MANUAL, CH. 4 STREET DESIGN AND ACCESS CONTROL, FOR GUIDELINES ON USE OF THIS DETAIL.
2. ACCESS AISLE MUST ADJOIN AN ACCESSIBLE ROUTE AND MUST NOT OVERLAP TRAVELLED WAY.
3. FOR MULTIPLE AND CONTINUOUS LOADING ZONES, ONE ACCESSIBLE LOADING ZONE MUST BE PROVIDED EVERY 100 FT.
4. LOADING ZONE SIGN MUST BE PER DETAIL A ON PAGE 2. FOR MULTIPLE LOADING ZONES, SIGN MUST BE PROVIDED AT BEGINNING AND ENDING WITH ADDITIONAL ARROW SIGN. BOTTOM OF SIGN MUST BE MOUNTED 7' ABOVE FINISH GRADE.
5. CURB RAMPS SERVING PASSENGER LOADING ZONES DO NOT REQUIRE DETECTABLE WARNING SYSTEM.

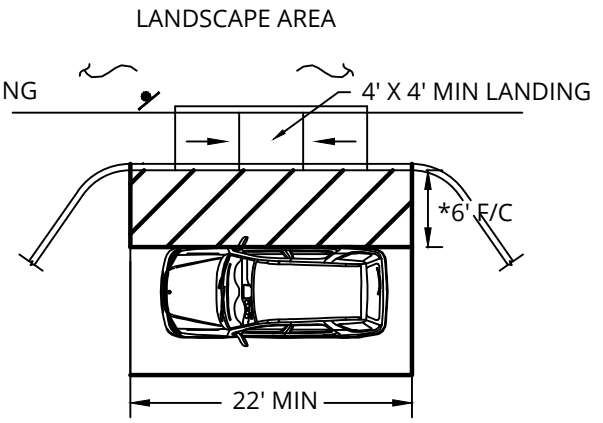
DETAIL NO.			APPROVED:	DETAIL NO.
C-261-1	CHANDLER arizona	**PASSENGER LOADING ZONES FOR AUTONOMOUS VEHICLES AND RIDE SHARING**	01-27-2025	**C-261-1**



OPTION A:
PERPENDICULAR RAMP
(LEFT OR RIGHT SIDE)



OPTION B:
PERPENDICULAR RAMP



OPTION C:
PARALLEL RAMP

NOTE - SIGNS ARE TYPICALLY MOUNTED AT 45 DEGREES.

DETAIL A

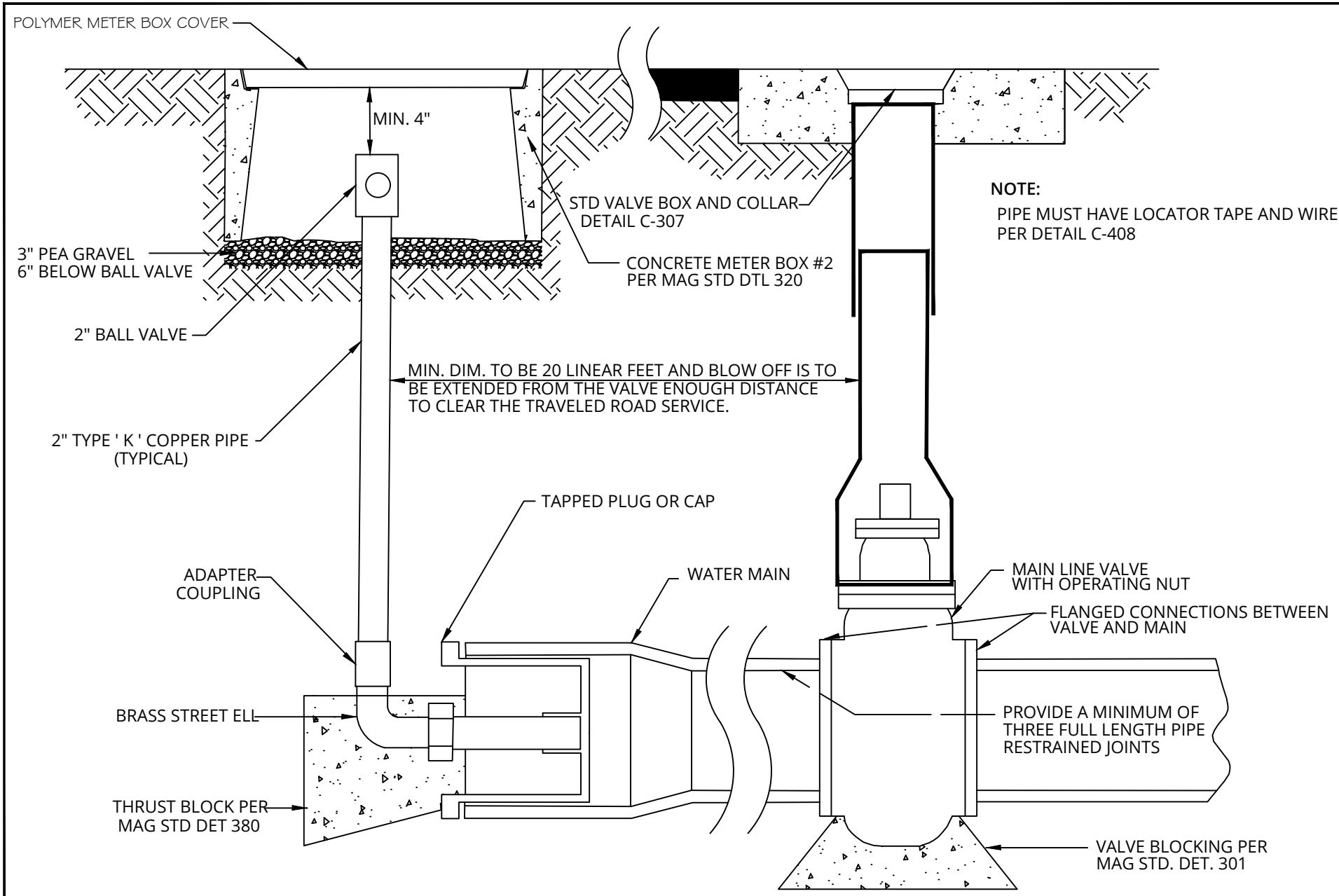
DETAIL NO.			APPROVED:	DETAIL NO.
C-261-2	CHANDLER arizona	**PASSENGER LOADING ZONES FOR AUTONOMOUS VEHICLES AND RIDE SHARING**	01-09-2020	**C-261-2**

CHANDLER arizona

Standard Details

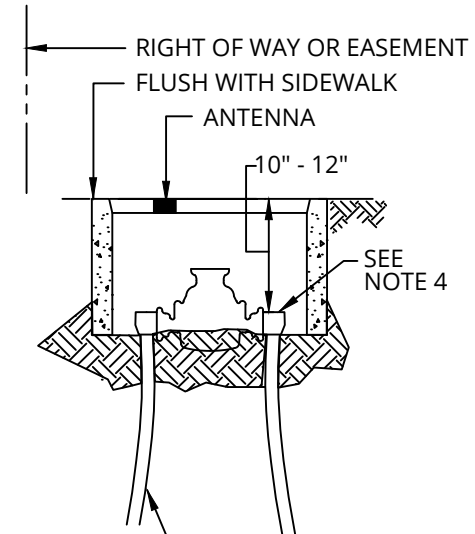
WATER

C-300 TO C-322



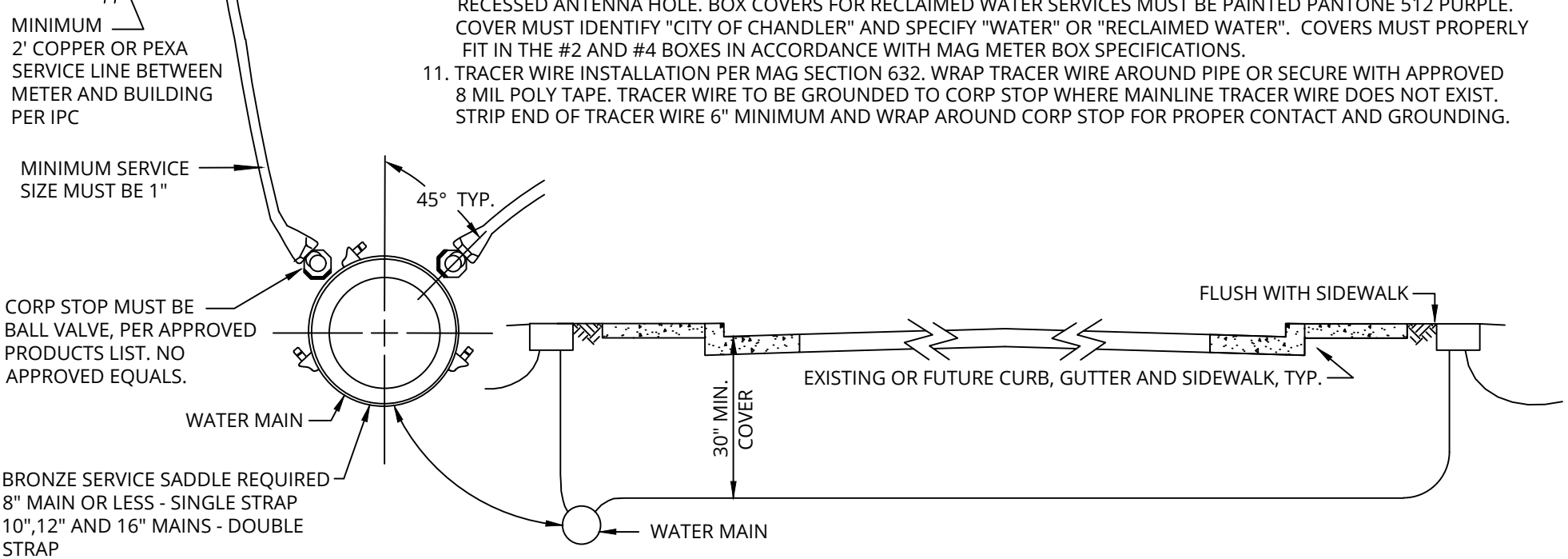
DETAIL NO.			APPROVED:	DETAIL NO.
C-300	CHANDLER arizona	**FLUSHING PIPE ASSEMBLY WITH BALL VALVE**	01-08-2009	**C-300**

CAUTION:BEFORE SERVICES ARE INSTALLED, DRIVEWAY LOCATIONS SHOULD BE VERIFIED AND THE SERVICES CONSTRUCTED TO AVOID CONFLICTS.

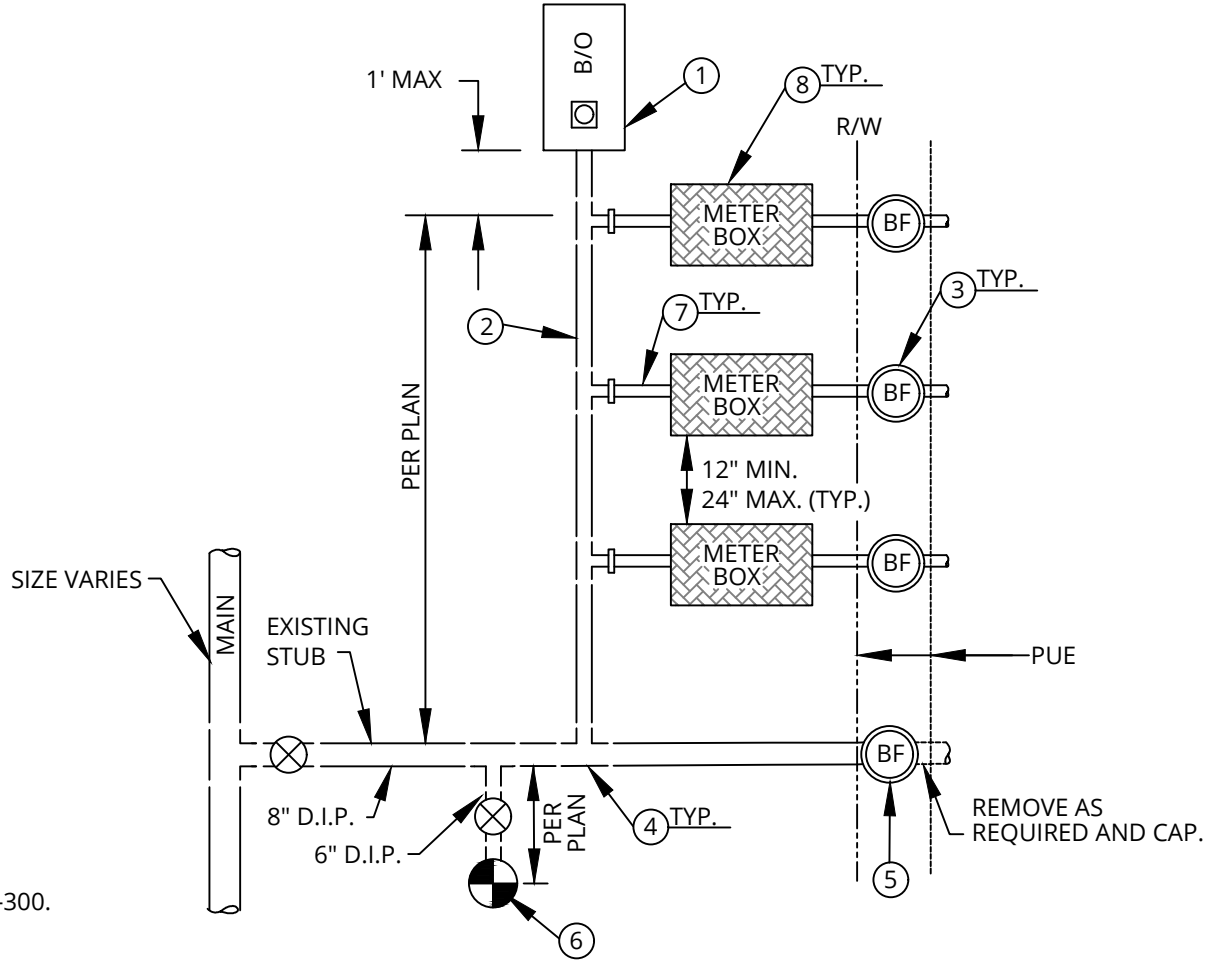


NOTES:

1. SERVICE LINE MATERIAL AND JOINT/FITTING ALLOWANCES PER CITY LIST OF APPROVED PRODUCTS. MINIMUM SERVICE SIZE 1".
2. CONTRACTOR MUST BACKFILL AND COMPACT THE TRENCHES PER MAG STD. SPECIFICATION TABLE 601-2.
3. CITY OF CHANDLER TO SET WATER METERS WHEN ORDERED BY OWNER/DEVELOPER. THE CITY DOES NOT PROVIDE ANY PARTS NEEDED PRIOR TO, OR AFTER, METER INSTALLATION. CONTRACTOR MUST PROVIDE BRASS BOLTS FOR LARGER THAN 1" METERS AND USE ONLY FORD A46/A47 METER FLANGE ADAPTER FOR REDUCING THE SERVICE LINE.
4. ANGLE BALL METER VALVE MUST BE PER APPROVED PRODUCTS LIST. NO APPROVED EQUALS. SET 11" BELOW TOP OF THE METER BOX.
5. METER BOX MUST BE SET WITHIN CITY RIGHT OF WAY, OR DEDICATED WATERLINE EASEMENT. TOP OF BOX MUST BE FLUSH WITH TOP OF SIDEWALK, OR IN CASES OF SLOPING YARDS, FLUSH WITH DRIVE PERPENDICULAR TO STREET.
6. LONG DIMENSION OF METER AND BOX MUST BE PERPENDICULAR TO STREET.
7. NO METER TO BE SET IN ANY CONCRETE OR PERMANENT STRUCTURE.
8. METER BOX PER MAG STD. DET. 320, #2 and #4 POLYMER CONCRETE BOXES ONLY.
9. METERS BOXES IN PARALLEL INSTALLATION MUST HAVE A MINIMUM 4" CLEAR ON THE SIDES. WHERE BACKFLOW ASSEMBLIES ARE SPECIFIED, EACH METER MUST HAVE ITS OWN BACKFLOW ASSEMBLY.
10. BOX COVER (LID) MUST BE POLYMER CONCRETE OR MODIFIED POLYETHYLENE PER MAG DET. 315 WITH METER READER RECESSED ANTENNA HOLE. BOX COVERS FOR RECLAIMED WATER SERVICES MUST BE PAINTED PANTONE 512 PURPLE. COVER MUST IDENTIFY "CITY OF CHANDLER" AND SPECIFY "WATER" OR "RECLAIMED WATER". COVERS MUST PROPERLY FIT IN THE #2 AND #4 BOXES IN ACCORDANCE WITH MAG METER BOX SPECIFICATIONS.
11. TRACER WIRE INSTALLATION PER MAG SECTION 632. WRAP TRACER WIRE AROUND PIPE OR SECURE WITH APPROVED 8 MIL POLY TAPE. TRACER WIRE TO BE GROUNDED TO CORP STOP WHERE MAINLINE TRACER WIRE DOES NOT EXIST. STRIP END OF TRACER WIRE 6" MINIMUM AND WRAP AROUND CORP STOP FOR PROPER CONTACT AND GROUNDING.



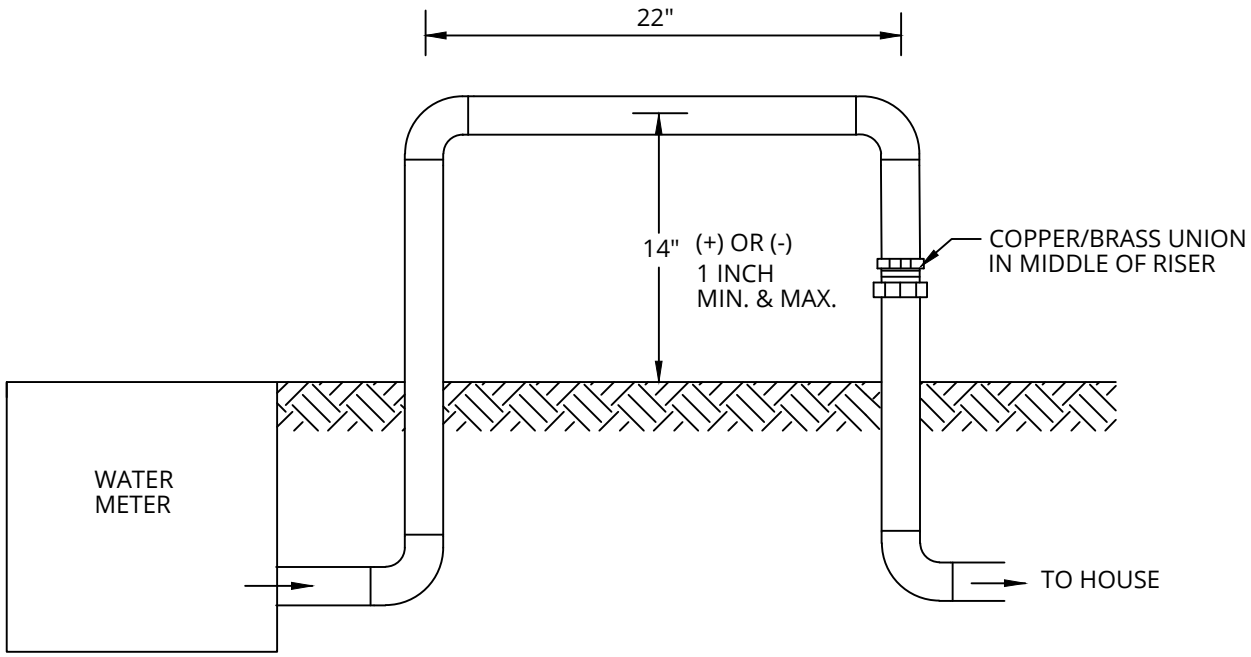
DETAIL NO.			APPROVED:	DETAIL NO.
C-301-1	CHANDLER arizona	**WATER SERVICE INSTALLATION**	01-27-2025	**C-301-1**

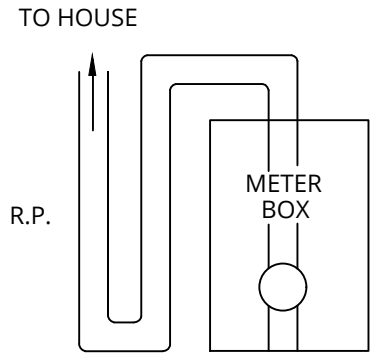


NOTES:

1. FLUSHING PIPE ASSEMBLY WITH BALL PER C-300.
2. MIN. 6" D.I.P.
3. BACKFLOW PREVENTION PER PLAN, INSTALLED INLINE AND WITHIN 6" OF METER BOX, IMMEDIATELY DOWNSTREAM OF THE LINESETTER.
4. FITTINGS PER PLAN. FLANGED FITTINGS ONLY.
5. FD DOUBLE CHECK DETECTOR AS NEEDED PER PLAN.
6. FIRE HYDRANT AS NEEDED PER PLAN.
7. TAPPING: USE C-301 FOR 2" AND SMALLER OR C-316 FOR LARGER THAN 2"
8. ALL C-301-1 NOTES APPLY.

DETAIL NO.			APPROVED:	DETAIL NO.
C-301-2	CHANDLER arizona	**MULTI-METER WATER SERVICE INSTALLATION**	01-27-2025	**C-301-2**





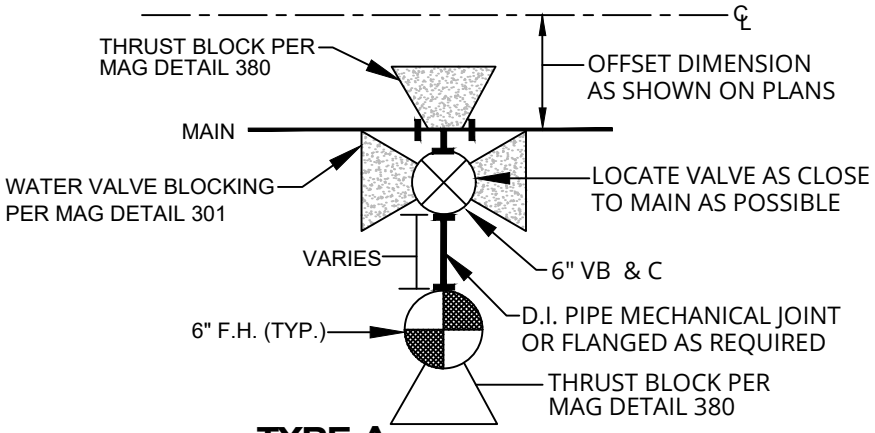
ALTERNATE INSTALLATION

SEE NOTE 8

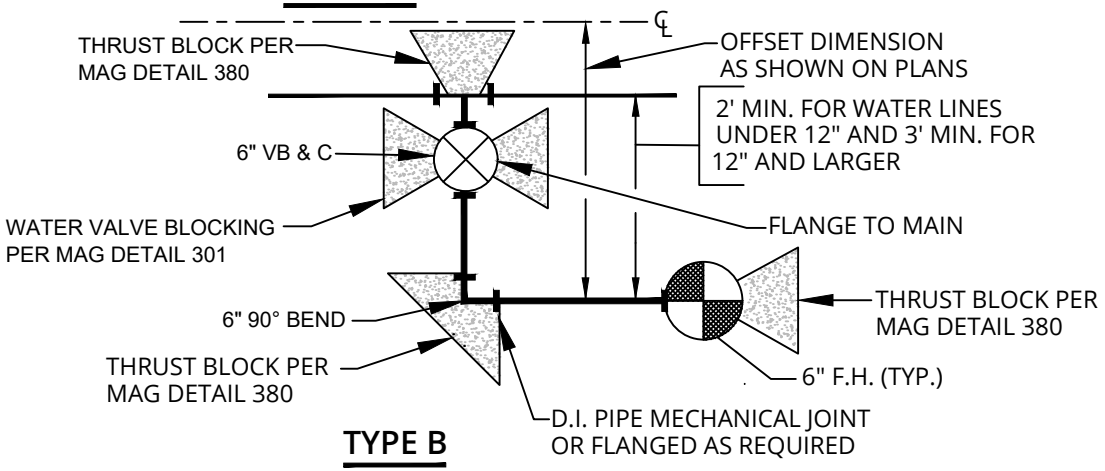
NOTES:

1. ALL PIPE/FITTINGS TO BE TYPE 'K' RIGID COPPER.
2. INSTALL COPPER PIPE LOOP DIRECTLY BEHIND, DOWNSTREAM OF WATER METER/WATER METER BOX.
3. COPPER LOOP TO BE 14 INCHES ABOVE GRADE PLUS OR MINUS ONE INCH.
4. COPPER LOOP TO BE LEVEL MEASURED WITH CONTRACTOR'S BUBBLE LEVEL.
5. TOP OF LOOP TO BE ONE SOLID PIECE OF PIPE. NO COUPLINGS OR JOINTED PIPE.
6. COMPRESSION TYPE FITTINGS ARE NOT ALLOWED.
7. A COPPER/BRASS UNION TO BE INSTALLED IN MIDDLE OF DOWNSTREAM RISER.
8. COPPER LOOP MAY BE INSTALLED ADJACENT TO METER BOX ON A CASE BY CASE BASIS WITH A MAXIMUM OF 24 INCHES OF PIPE EXTENDED UPSTREAM OF COPPER LOOP TO ALLOW COPPER LOOP TO SIT ADJACENT TO METER/WATER BOX.
9. COPPER LOOP LENGTH TO BE 22 INCHES IN LENGTH MEASURED FROM CENTER TO CENTER OF EACH RISER PIPE.
10. THIS DETAIL IS TO BE USED IN CONJUNCTION WITH A RECLAIMED WATER SYSTEM.

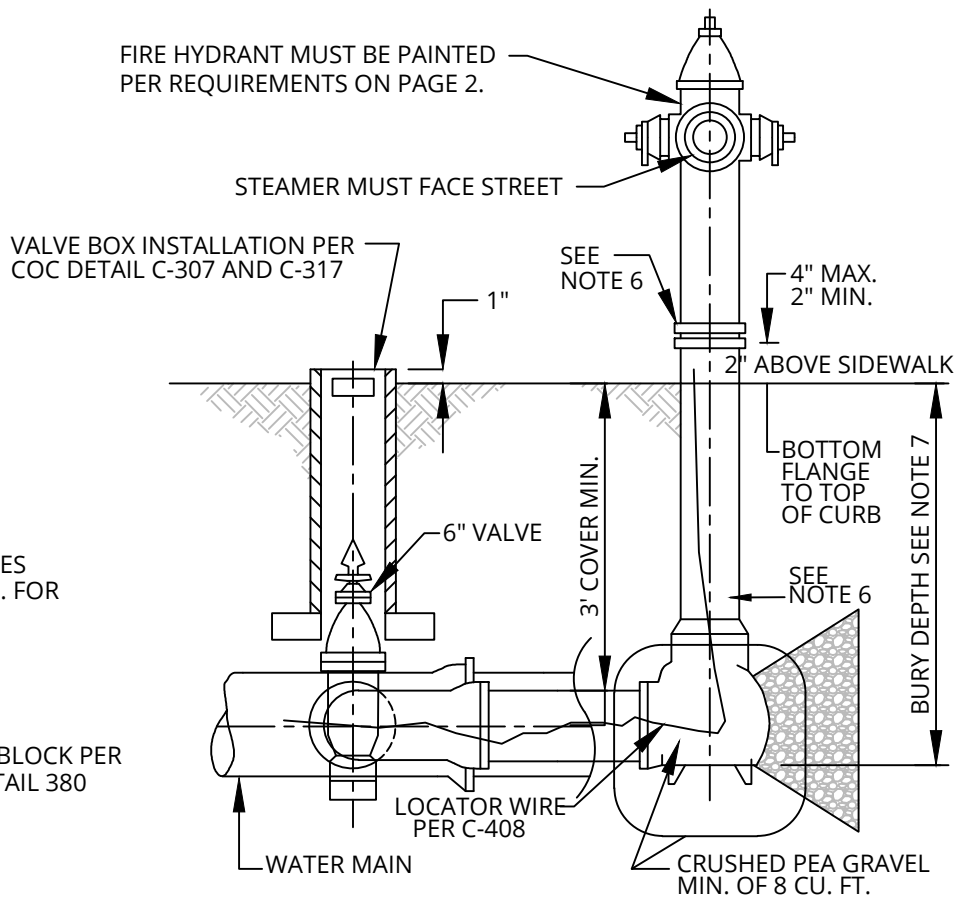
DETAIL NO.			APPROVED:	DETAIL NO.
C-302	CHANDLER arizona	**RESIDENTIAL BACKFLOW PREVENTION ASSEMBLY INSTALLATION - 1" OR UNDER**	11-09-1999	**C-302**



TYPE A



TYPE B



TYPICAL INSTALLATION

NOTES:

1. FIRE HYDRANT VALVES INCLUDING ALL FITTINGS & 45° BENDS MUST BE RESTRAINED TO MAIN LINE TEE BY FLANGES.
2. FIRE HYDRANT MUST BE PER CITY LIST OF APPROVED PRODUCTS.
3. CONNECTIONS MUST BE 2-1/2" & 4-1/2" N.S. THREADS.
4. FIRE HYDRANT MUST BE LOCATED PER DETAIL C-305 A MIN. OF 6' BEHIND FACE OF CURB, AND 12 INCHES BEHIND SIDEWALK, RIGHT OF WAY PERMITTING, AND INSTALLED SIX FEET BEYOND CURB RETURNS FOR HYDRANTS LOCATED AT INTERSECTIONS.
5. CAP CHAINS MUST BE REMOVED AND THREADS GREASED WITH MANUFACTURER APPROVED HYDRANT GREASE.
6. EXTENSIONS ARE NOT ALLOWED.
7. STANDARD BURY DEPTHS ARE 36", 48", AND 54". ALL FITTINGS BETWEEN FH VALVE AND 6" HYDRANT RUNOUT MUST BE RESTRAINED BY FLANGES.

DETAIL NO.			APPROVED:	DETAIL NO.
C-303-1	CHANDLER arizona	**FIRE HYDRANT INSTALLATION**	05-10-2018	**C-303-1**

COLOR CODE

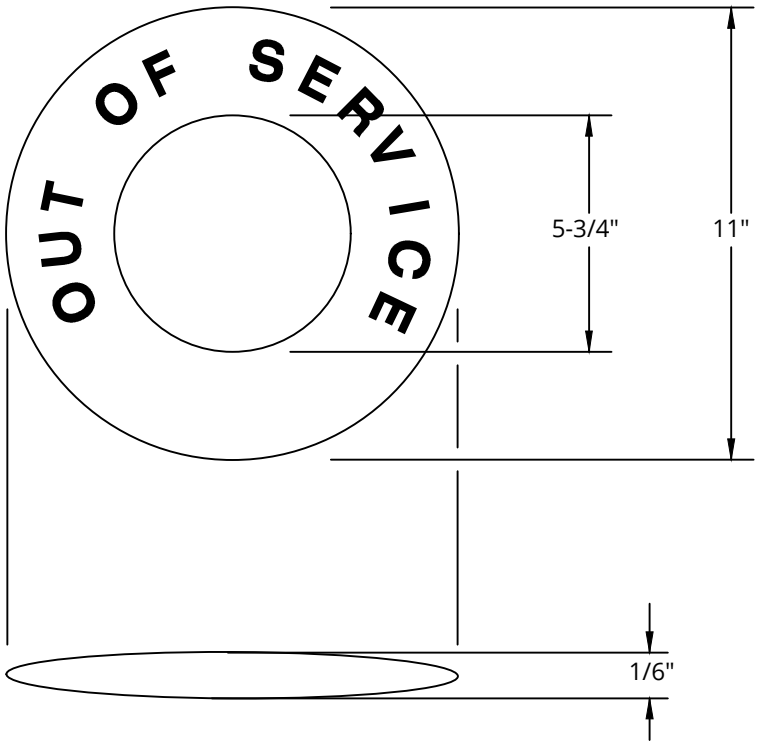
THE CITY OF CHANDLER WATER DIVISION AND FIRE DEPARTMENT UTILIZE THE FOLLOWING COLOR CODE IN DISTINGUISHING THE VARIOUS TYPES OF FIRE HYDRANTS:

TYPE 1. CAT YELLOW: THE BARREL AND BONNET OF ALL FIRE HYDRANTS INSTALLED ON PUBLIC WATER MAINS IN RIGHTS-OF-WAY AND IN PUBLIC UTILITY EASEMENTS (PUE'S) MUST BE PAINTED CAT YELLOW.

TYPE 2. GLOSS BLACK/CAT YELLOW: THE BONNET OR 3" DOWN OF ALL FIRE HYDRANTS INSTALLED ON PRIVATELY OWNED AND MAINTAINED WATER MAINS MUST BE PAINTED GLOSS BLACK. THE BARREL MUST BE PAINTED CAT YELLOW.

TYPE 3. BRILLIANT RED: THE BARREL AND BONNET MUST BE PAINTED BRILLIANT RED AFTER THE FIRE DEPARTMENT CONNECTIONS (FDC'S). SPECIAL APPROVAL IS REQUIRED FOR ALL RED HYDRANTS BY THE FIRE MARSHAL. FIRE DEPARTMENT SIAMESE CONNECTIONS (FDC'S). ALL SUCH FIRE HYDRANTS MUST BE ISOLATED FROM THE MUNICIPAL WATER SYSTEM BY DOUBLE DETECTOR CHECK VALVES. ALL RED HYDRANTS MUST BE APPROVED BY THE FIRE MARSHAL.

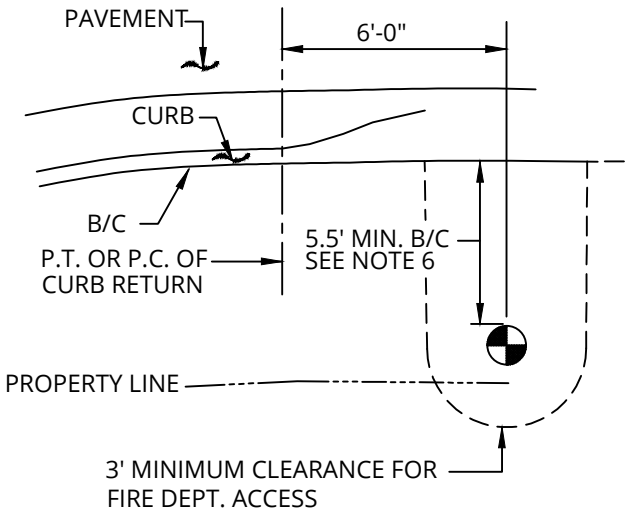
DETAIL NO.			APPROVED:	DETAIL NO.
C-303-2	CHANDLER arizona	**FIRE HYDRANT INSTALLATION COLOR CODE**	05-10-2018	**C-303-2**



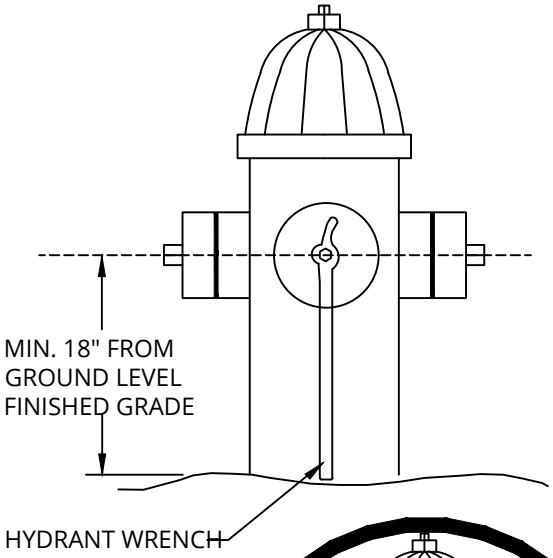
NOTE:

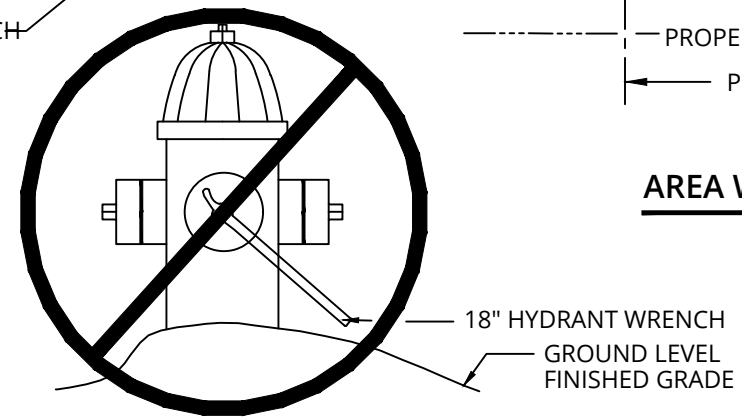
ALL FIRE HYDRANTS INSTALLED ON PRIVATE AND PUBLIC WATER LINES MUST BE PROVIDED WITH "OUT OF SERVICE" SIGNS AT TIME OF INSTALLATION. UPON COMPLETION OF REQUIRED INSPECTIONS, TESTS, ACCEPTANCE, AND APPROVAL OF THE WATER SYSTEM BY A C.O.C. INSPECTOR AND THE SYSTEM IS VERIFIED TO BE IN SERVICE, THE "OUT OF SERVICE" SIGNS MUST BE REMOVED. A HYDRANT REMOVED FROM SERVICE MUST BE PROVIDED AN "OUT OF SERVICE" SIGN WITHIN THE INITIAL 2 HOURS OF THE SERVICE INTERRUPTION. SIGNS MUST BE IN ACCORDANCE WITH THIS DETAIL. SIGNS MUST BE PERMANENTLY MARKED AND CONSTRUCTED OF WEATHERPROOF METAL OR RIGID PLASTIC MATERIAL. THE COLOR OF LETTERING ON SIGNS MUST BE IN HIGH CONTRAST WITH THEIR BACKGROUND. SIGNS MUST HAVE THE WORDS "OUT OF SERVICE" ON THE SIGN IN BLOCK CAPITAL LETTERS NOT LESS THAN 1-1/2" IN HEIGHT WITH A STROKE OF NOT LESS THAN 1/4".

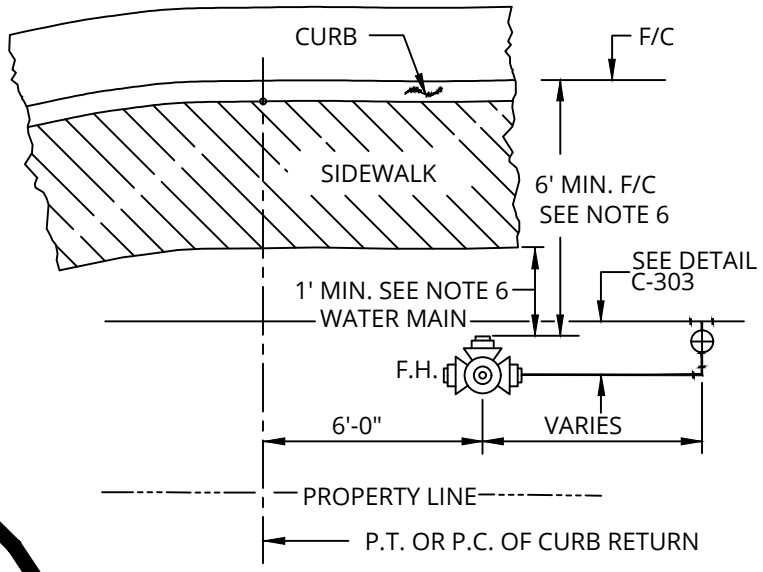
DETAIL NO.			APPROVED:	DETAIL NO.
C-303-3	CHANDLER arizona	**FIRE HYDRANT INSTALLATION "OUT OF SERVICE" SIGNS**	05-10-2018	**C-303-3**



PARKWAY AREA, NO SIDEWALK





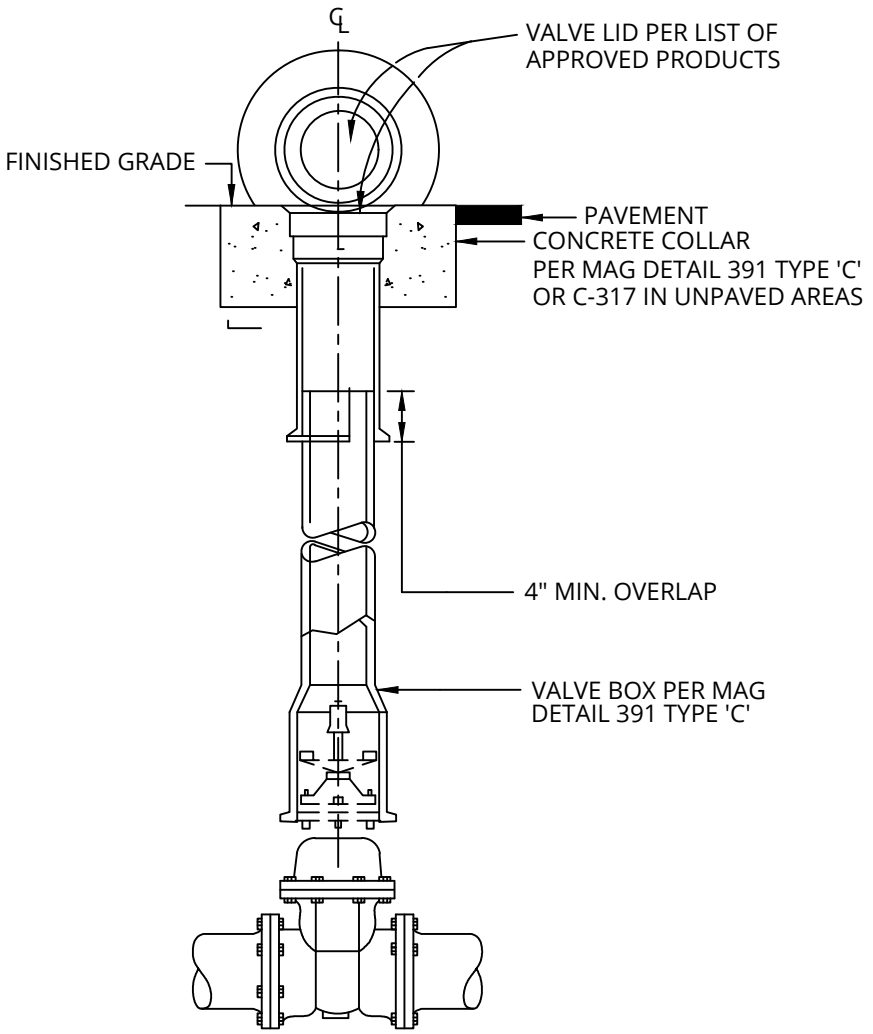


AREA WITH SIDEWALK

NOTES:

1. INSTALLATION MUST BE PER COC DETAIL C-303.
2. DIMENSIONS SHOWN ON APPROVED CONSTRUCTION DRAWINGS MAY SUPERSEDE LOCATIONS SHOWN HERE.
3. OBSTRUCTIONS SUCH AS UTILITY POLES, STREET SIGNS, IRRIGATION BOXES, FENCES, ETC., MUST NOT BE PLACED BETWEEN CURB AND HYDRANT.
4. ON LOCATIONS IN MIDBLOCK, THE FIRE HYDRANT WILL BE ALIGNED WITH A PROPERTY LINE AND 6' MINIMUM FROM DRIVEWAYS.
5. ALL FIRE HYDRANTS INSTALLED PER COC DETAIL C-303 MUST BE LOCATED IN ACCORDANCE WITH THIS DETAIL.
6. MINIMUM DIMENSION MUST BE SIDEWALK WIDTH PLUS ONE (1) FOOT OR SIX (6) FEET FROM FACE OF CURB, WHICHEVER IS GREATER.
7. IN INDUSTRIAL/COMMERCIAL ZONES A MINIMUM OF 6' FROM DRIVEWAYS MUST BE MAINTAINED WITH VALVE INSTALLED AWAY FROM DRIVEWAY.
8. 3 FOOT UNOBSTRUCTED CLEARANCE AROUND FIRE HYDRANT AND HYDRANT VALVE. NO TREES, BUSHES, FENCES, WALLS, OR RIVER ROCK. NO CACTUS WITHIN 10 FEET OF A HYDRANT OR HYDRANT VALVE.

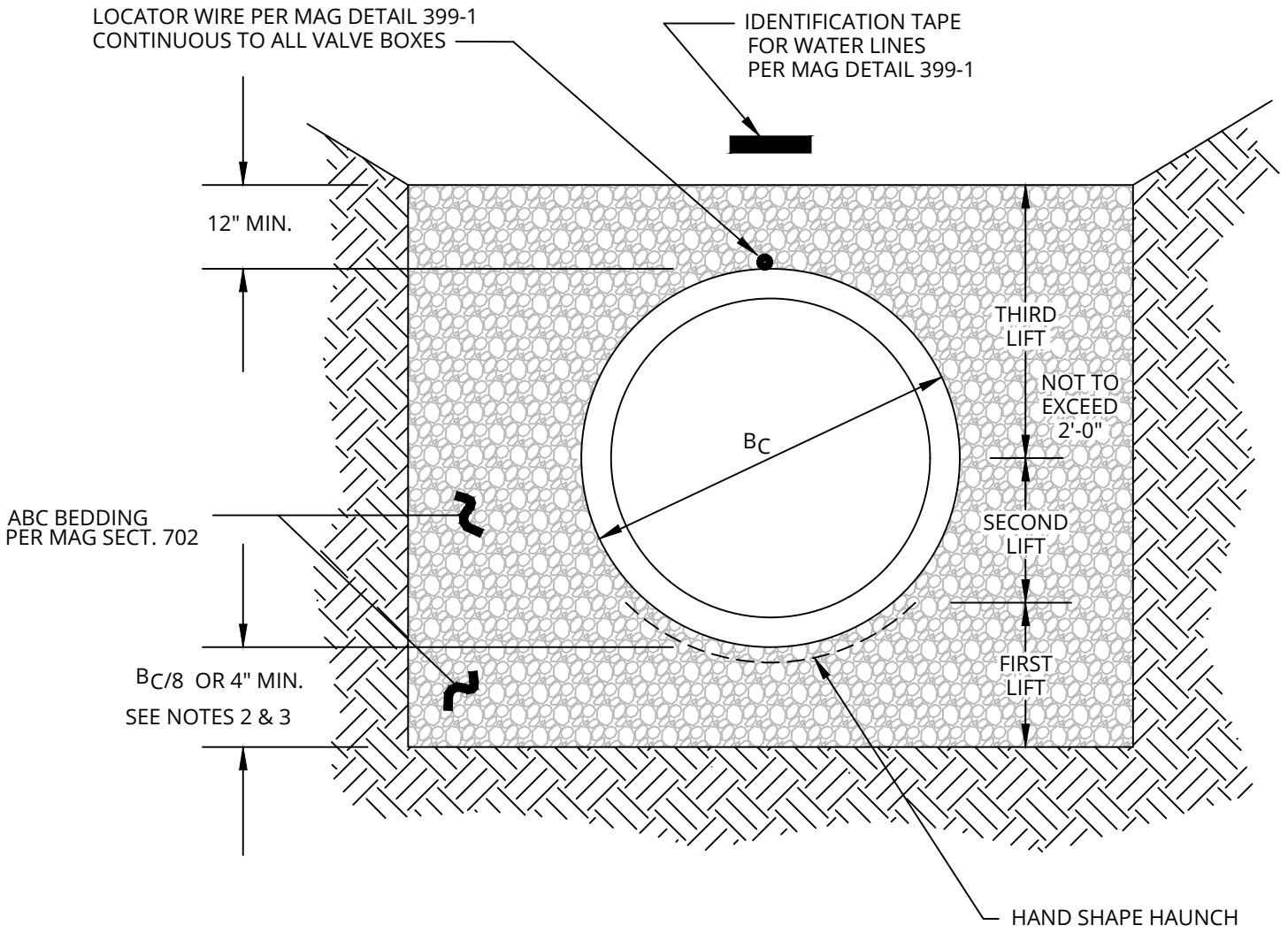
DETAIL NO.			APPROVED:	DETAIL NO.
C-305	CHANDLER arizona	**LOCATIONS FOR NEW FIRE HYDRANT**	05-10-2018	**C-305**



NOTES:

1. IN UNPAVED AREAS, CONCRETE COLLAR MUST CONFORM TO COC DETAIL C-317.
2. BACKFILL MUST BE 1/2 SACK CLSM. PER MAG. SPECIFICATION 728.
3. VALVE BOXES MUST NOT BE INSTALLED WITHIN CONCRETE GUTTER, SIDEWALK, RAMPS OR VALLEY GUTTER.

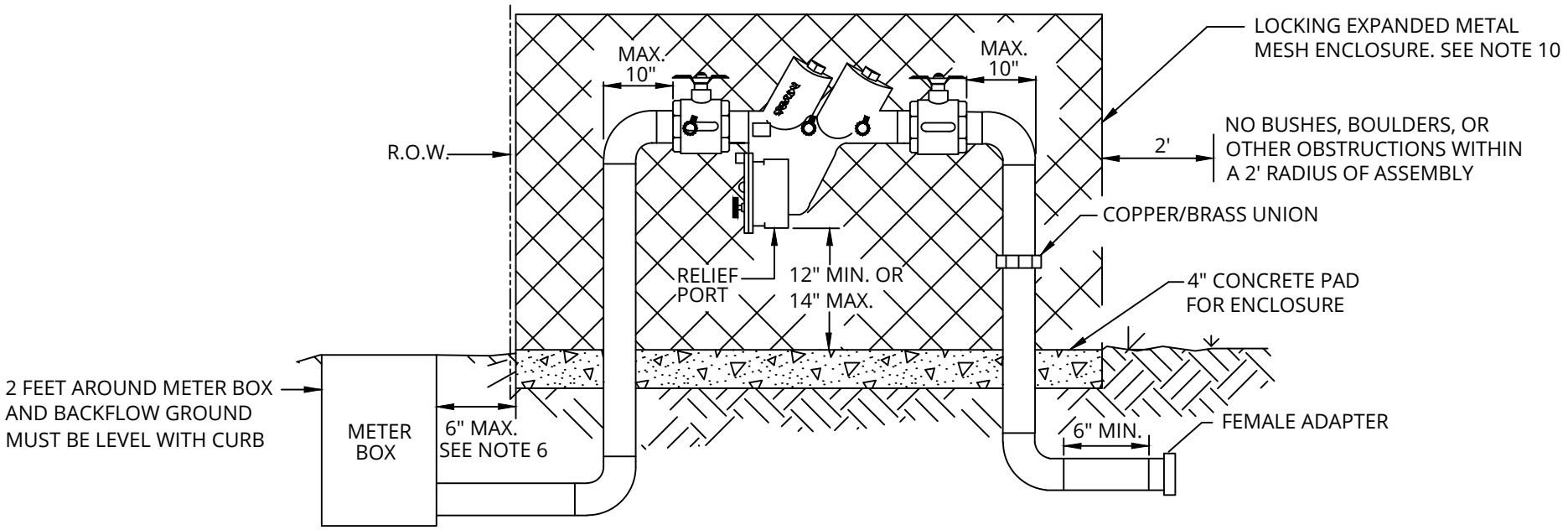
DETAIL NO.			APPROVED:	DETAIL NO.
C-307	CHANDLER arizona	**VALVE BOX INSTALLATION (POTABLE WATER)**	01-27-2025	**C-307**



NOTES:

1. TRENCH EXCAVATION, BACKFILL AND COMPACTION MUST BE IN ACCORDANCE WITH MAG SECT. 601.
2. MINIMUM 4" FOR PIPES 12" OR SMALLER.
3. MINIMUM 6" FOR PIPES LARGER THAN 12".
4. WATER PIPE MATERIAL MUST BE IN ACCORDANCE WITH CITY LIST OF APPROVED PRODUCTS.

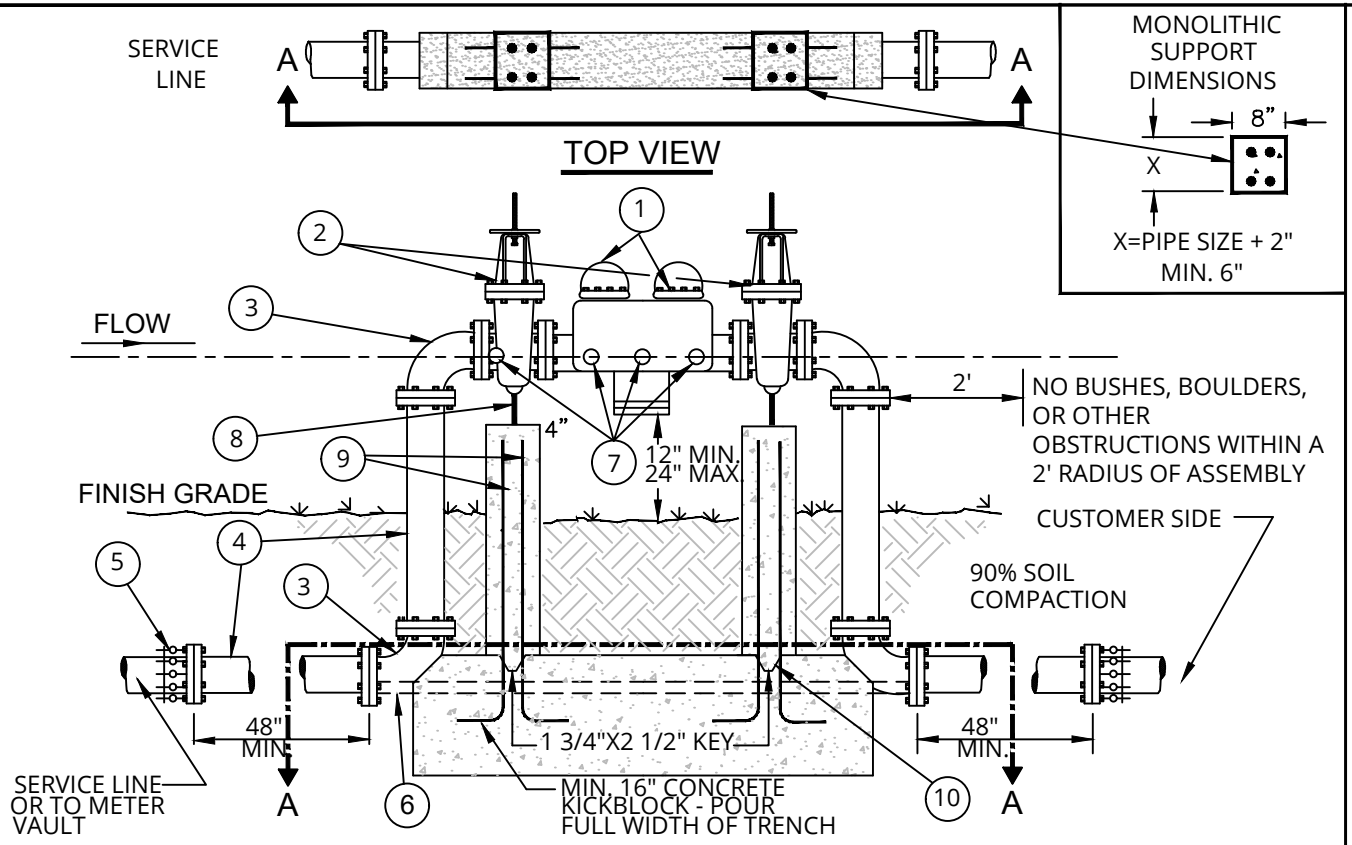
DETAIL NO.			APPROVED:	DETAIL NO.
C-308	CHANDLER arizona	**WATER PIPE BEDDING DETAIL**	01-27-2025	**C-308**



NOTES:

1. BACKFLOW PREVENTION ASSEMBLY MUST BE PER CITY LIST OF APPROVED PRODUCTS.
2. ALL BACKFLOW ASSEMBLIES MUST BE TESTED BY A CERTIFIED TESTER APPROVED BY THE CITY OF CHANDLER.
3. SHUTOFF VALVES MUST BE RESILIENT BALL TYPE WITH REMOVABLE HANDLES.
4. ALL PIPE AND FITTINGS MUST BE TYPE 'K' RIGID COPPER.
5. TEST COCKS MUST BE FITTED WITH BRASS PLUGS INSTALLED WITH TEFLON TAPE.
6. NO TAPS ALLOWED BETWEEN THE METER AND THE BACKFLOW PREVENTION ASSEMBLY.
7. INSTALL BACKFLOW PREVENTION ASSEMBLY INLINE AND IMMEDIATELY DOWNSTREAM OF THE CITY WATER METER.
8. THE COPPER/BRASS UNION MAY NOT BE REQUIRED IF THE ASSEMBLY INCORPORATES THE UNION.
9. INSTALL BACKFLOW PREVENTION ASSEMBLY WITH RELIEF PORT FACING TOWARD THE GROUND.
10. BACKFLOW PREVENTION INSTALLATION MUST BE LEVEL, AND INSTALLED A MINIMUM OF 12 INCHES AND A MAXIMUM OF 14 INCHES FROM RELIEF PORT TO FINAL GRADE.
11. LOCKING ENCLOSURE MUST BE GUARD SHACK OR EQUIVALENT, PAINTED 'DESERT TAN' WITH TNEMEC EDUROSHIELD PER MFG'S INSTRUCTIONS. MINIMUM 12 MILS DFT. DO NOT PAINT OVER ANY IDENTIFYING MARKERS OR PLACARDS.
12. BACKFLOW PREVENTION ASSEMBLY MUST HAVE AT LEAST THE SAME CROSS-SECTIONAL AREA AS THE WATER METER BUT NO MORE THAN ONE SIZE LARGER THAN THE METER.

DETAIL NO.			APPROVED:	DETAIL NO.
C-311	CHANDLER arizona	**REDUCED PRESSURE-PRINCIPLE BACKFLOW PREVENTION ASSEMBLY INSTALLATION - 3" AND UNDER**	01-27-2025	**C-311**



LIST OF MATERIALS

1. APPROVED REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION ASSEMBLY.
2. O.S.&Y. GATE VALVE, N.R.S. GATE VALVE, IF PREFERRED.
3. 90° ELL. (FLANGED D.I.P.)
4. PIPE SPOOL (FLANGED D.I.P.)
5. FLANGED ADAPTER (WHEN REQUIRED).
6. 3/4" ZINC COATED THREADED ROD, BOLTED TO FLANGES AS SHOWN, BOTH SIDES TYPICAL EQUAL TENSION.
7. TEST COCKS (4 REQUIRED WITH BRASS PLUGS USING ONLY TEFLON TAPE.)
8. ADJUSTABLE PIPE SUPPORT MUST BE PERMANENTLY ATTACHED TO BASE, 6" MAXIMUM HEIGHT.
9. #6 REINFORCING STEEL, DEFORMED BAR, 4" APART, EVENLY SPACED.
10. CONSTRUCTION JOINT KEY TO BE 1 3/4" X 2 1/2".

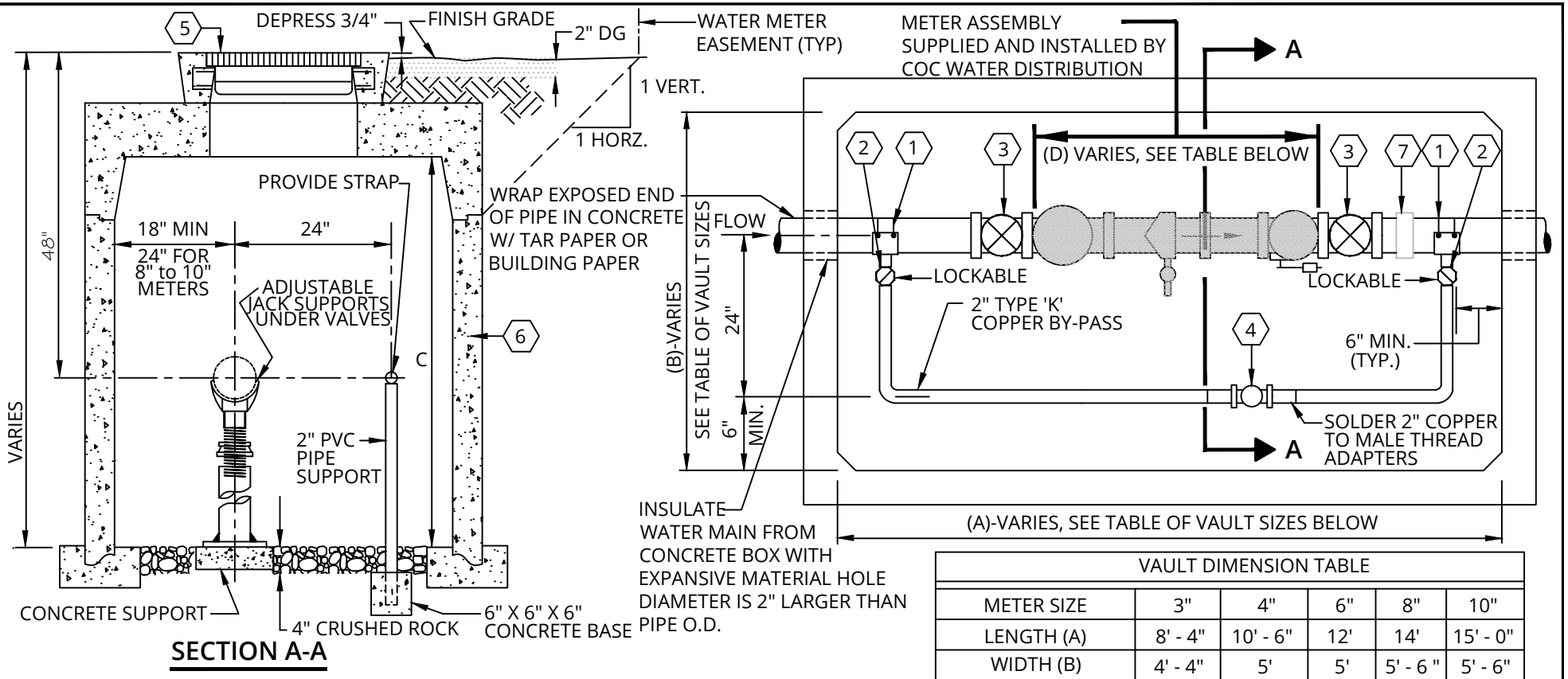
NOTES:

1. BACKFLOW PREVENTION ASSEMBLY MUST BE PER CITY LIST OF APPROVED PRODUCTS.
2. ALL BACKFLOW ASSEMBLIES MUST BE TESTED BY A CERTIFIED TESTER APPROVED BY THE CITY OF CHANDLER.
3. ASSEMBLY MUST BE AS APPROVED BY UNIVERSITY OF SOUTHERN CALIFORNIA (USC) FOUNDATION FOR CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH.
4. ABOVE GROUND PORTION OF ASSEMBLY TO BE PAINTED LIGHT TAN OR EQUIVALENT BACKGROUND COLOR. DO NOT PAINT THE NAME PLATE OR ANY BRASS OR STAINLESS STEEL PARTS ON THE ASSEMBLY.
5. WHEN UTILIZED FOR RECLAIMED WATER, THE WORDS 'RECLAIMED WATER' MUST BE STENCILED ON THE ASSEMBLY USING THE COLOR 'SAFETY PURPLE'.
6. BACKFLOW PREVENTION ASSEMBLY MUST BE LOCATED ON PRIVATE PROPERTY AND AS CLOSE AS PRACTICABLE TO THE POTABLE WATER METER.
7. BACKFLOW PREVENTION ASSEMBLY MUST HAVE AT LEAST THE SAME CROSS-SECTIONAL AREA AS THE METER BUT NO MORE THAN ONE SIZE LARGER THAN THE METER.

SCREENING METHOD

1. SCREEN WALLS, PLANT MATERIAL, BERMING AND/OR BUILDING ORIENTATION MUST BE SUBMITTED TO DEVELOPMENT SERVICES FOR REVIEW AND APPROVAL PRIOR TO START OF CONSTRUCTION.

DETAIL NO.			APPROVED:	DETAIL NO.
C-315	CHANDLER arizona	**REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION ASSEMBLY INSTALLATION - 4" AND LARGER**	01-27-2025	**C-315**



SECTION A-A

VAULT DIMENSION TABLE					
METER SIZE	3"	4"	6"	8"	10"
LENGTH (A)	8' - 4"	10' - 6"	12'	14'	15' - 0"
WIDTH (B)	4' - 4"	5'	5'	5' - 6 "	5' - 6"
INSIDE HEIGHT (C)	4' - 6"	5' - 0"	5' - 6"	6' - 0"	6' - 6"
METER ASSEMBLY (D) BLOCK OUT					
COMPOUND METER	3' - 8"	4' - 5"	6' - 8"	8' - 1"	10' - 0"
TURBINE METER	3' - 3"	3' - 11"	6' - 7"	7' -11"	9' - 0"

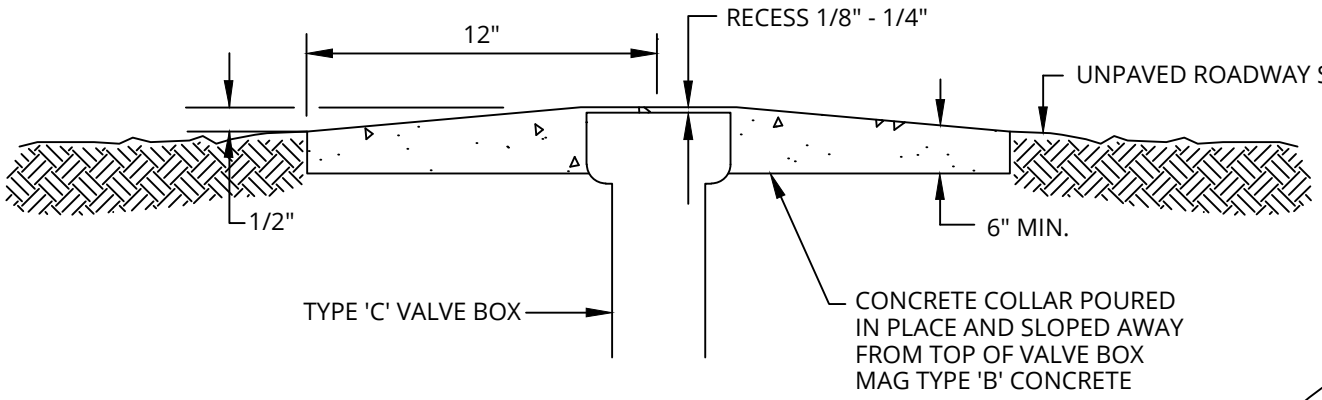
NOTES:

1. METER VAULTS MAY BE EITHER CAST-IN-PLACE OR PRE-CAST CONCRETE. SEE MAG DETAIL 321 FOR VAULT CONSTRUCTION, 3" TO 6" METERS.
2. FOR LARGER THAN 6" METERS SPECIAL VAULT DESIGN IS REQUIRED. SUBMIT FOR APPROVAL.
3. STAINLESS BOLTS AND NUTS REQUIRED FOR ENTIRE ASSEMBLY.
4. PIPE MAIN MATERIAL MUST BE D.I.P. THROUGHOUT VAULT AND 1' MIN. BEYOND INLET AND OUTLET.
5. PIPE MAIN MUST BE FULLY RESTRAINED BEYOND INLET AND OUTLET OF VAULT.
6. CONTRACTOR MUST PROVIDE FLANGED SPOOL IN METER ASSEMBLY BLOCK-OUT TO PROVE CORRECT ALIGNMENT. SPOOL MAY BE SALVAGED AFTER METER INSTALLATION.
7. VAULT LID MUST NOT BE INSTALLED UNTIL AFTER METER IS INSTALLED BY CITY. CALL (480) 782-3700.

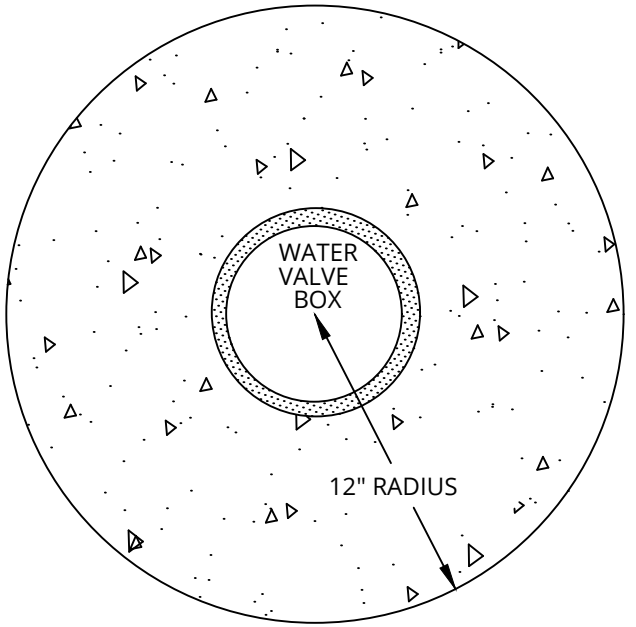
LEGEND:

1. DOUBLE STRAP ALL BRONZE SERVICE SADDLES.
2. 2" CORP STOP WITH BRONZE OR BRASS BODY, LOCKABLE, TO NORMALLY BE CLOSED.
3. O.S. & Y. GATE VALVE, FLANGED WITH HAND WHEEL OPEN LEFT, AND RISING STEM.
4. 2" BRONZE CHECK VALVE. (LOW ZINC)
5. METER HATCH PER EJ GROUP, INC. CLS2 STYLE PEDESTRIAN RATED ALUMINUM WITH SLAM LOCK OR APPROVED EQUAL. 3" & 4", 42" X 42", 6" THROUGH 10", 36" X 60". UPON APPROVAL FROM CITY, DRILL 1-¾" HOLE(S) IN HATCH FOR METER TRANSMITTER(S).
6. METER VAULT PER OLD CASTLE PRECAST COC STANDARD DRAWINGS OR APPROVED EQUAL.
7. PROVIDE 1" TO 1-1/2" OF PLAY IN THE FLEX COUPLING - CAULDER OR EQUAL.

DETAIL NO.			APPROVED:	DETAIL NO.
C-316	CHANDLER arizona	**3" TO 10" METER VAULT**	01-09-2020	**C-316**

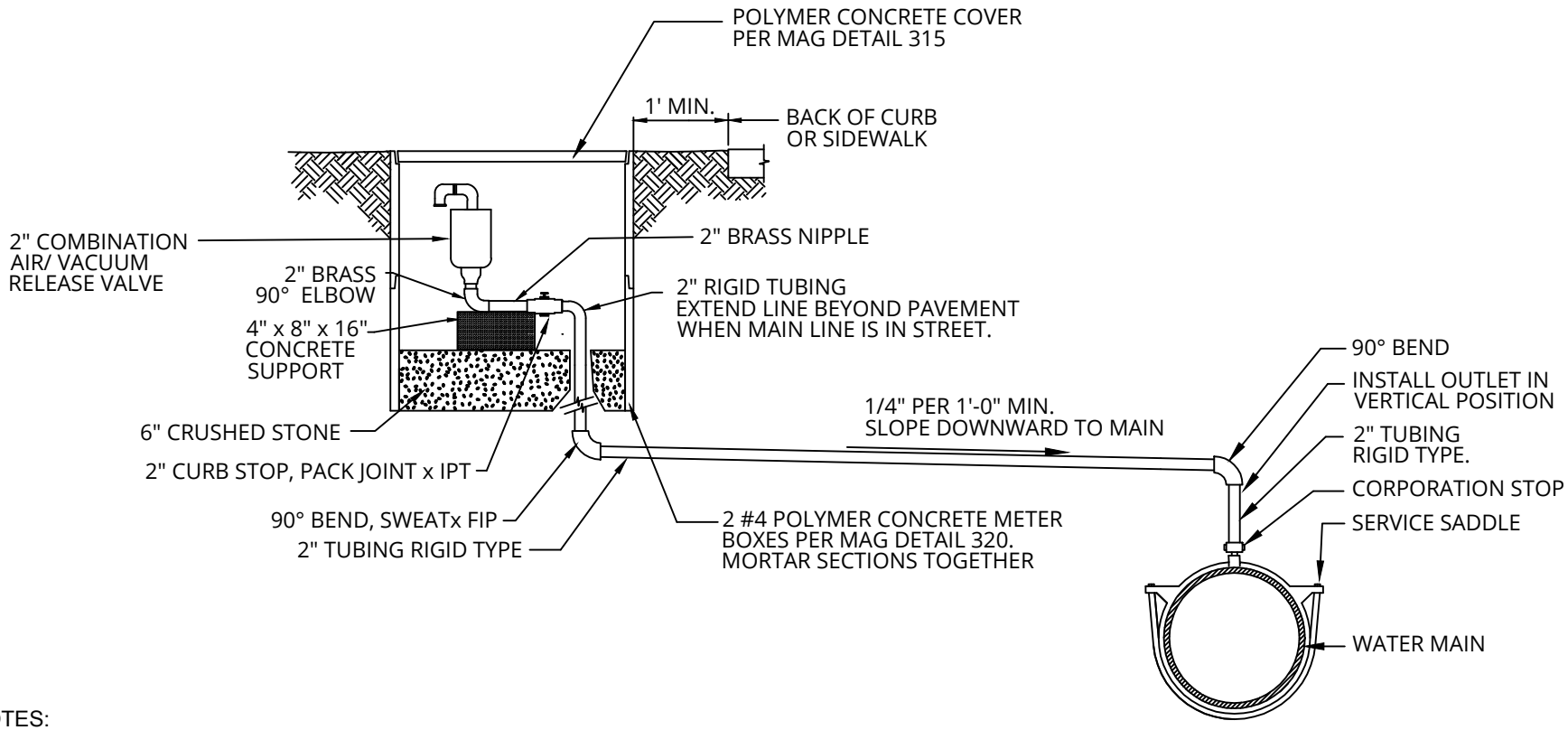


SIDE VIEW



TOP VIEW

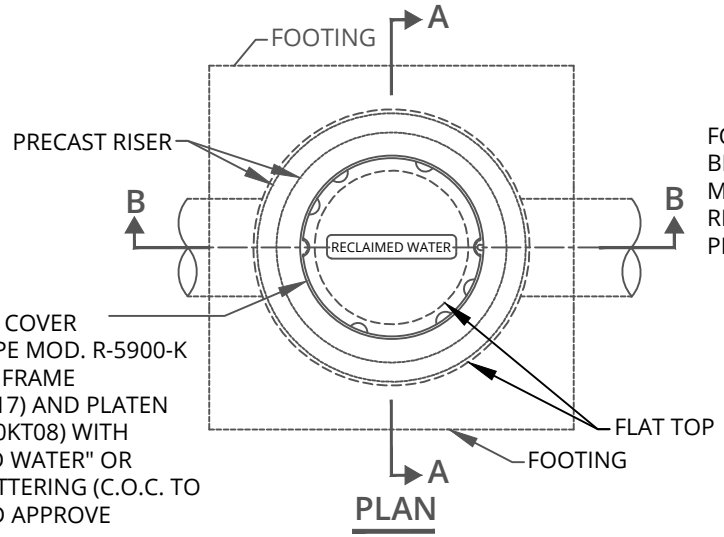
DETAIL NO.			APPROVED:	DETAIL NO.
C-317	CHANDLER arizona	**CONCRETE COLLAR DETAIL WATER VALVE BOX PLACEMENT UNPAVED AREAS**	01-11-2002	**C-317**



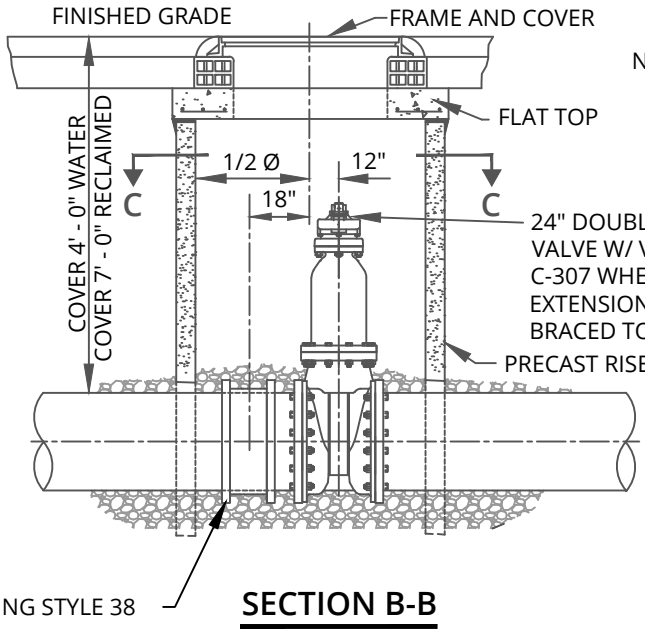
NOTES:

1. 2' RIGID SERVICE LINE. SEE CITY LIST OF APPROVED PRODUCTS FOR MATERIAL AND JOINT/FITTING ALLOWANCES.
2. THE ARV VAULT MUST BE LOCATED AS NEAR TO THE MAIN AS POSSIBLE. IN UNIMPROVED AREAS, PLACEMENT OF THE ARV VAULT MUST BE 10' FROM THE EDGE OF PAVEMENT.
3. FOR RECLAIMED WATER APPLICATIONS, THE PIPE MUST BE PAINTED PURPLE (PANTONE 512). POTABLE WATER MUST BE PAINTED BLUE.
4. AIR RELEASE/VACUUM VALVE MUST BE PER CITY LIST OF APPROVED PRODUCTS.
5. TO BE USED ONLY ON 16" AND SMALLER WATER MAINS.
6. MUST NOT BE PLACED IN LOW AREAS WHERE WATER MAY COLLECT.

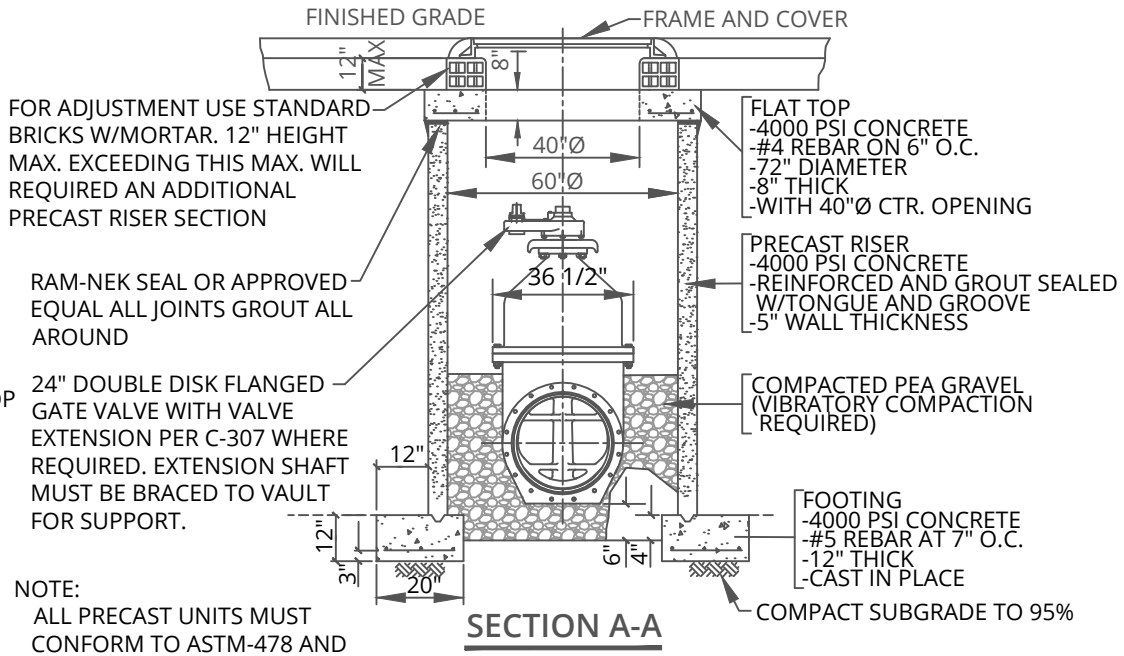
DETAIL NO.			APPROVED:	DETAIL NO.
C-319	CHANDLER arizona	**2" COMBINATION AIR/VACUUM VALVE ASSEMBLY**	01-27-2025	**C-319**



PLAN

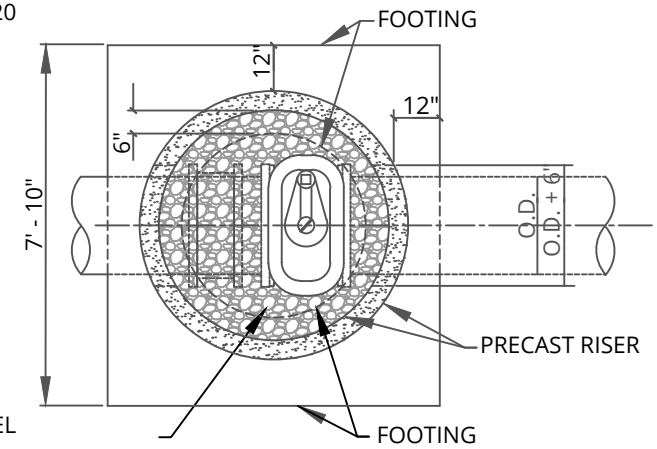


SECTION B-B



SECTION A-A

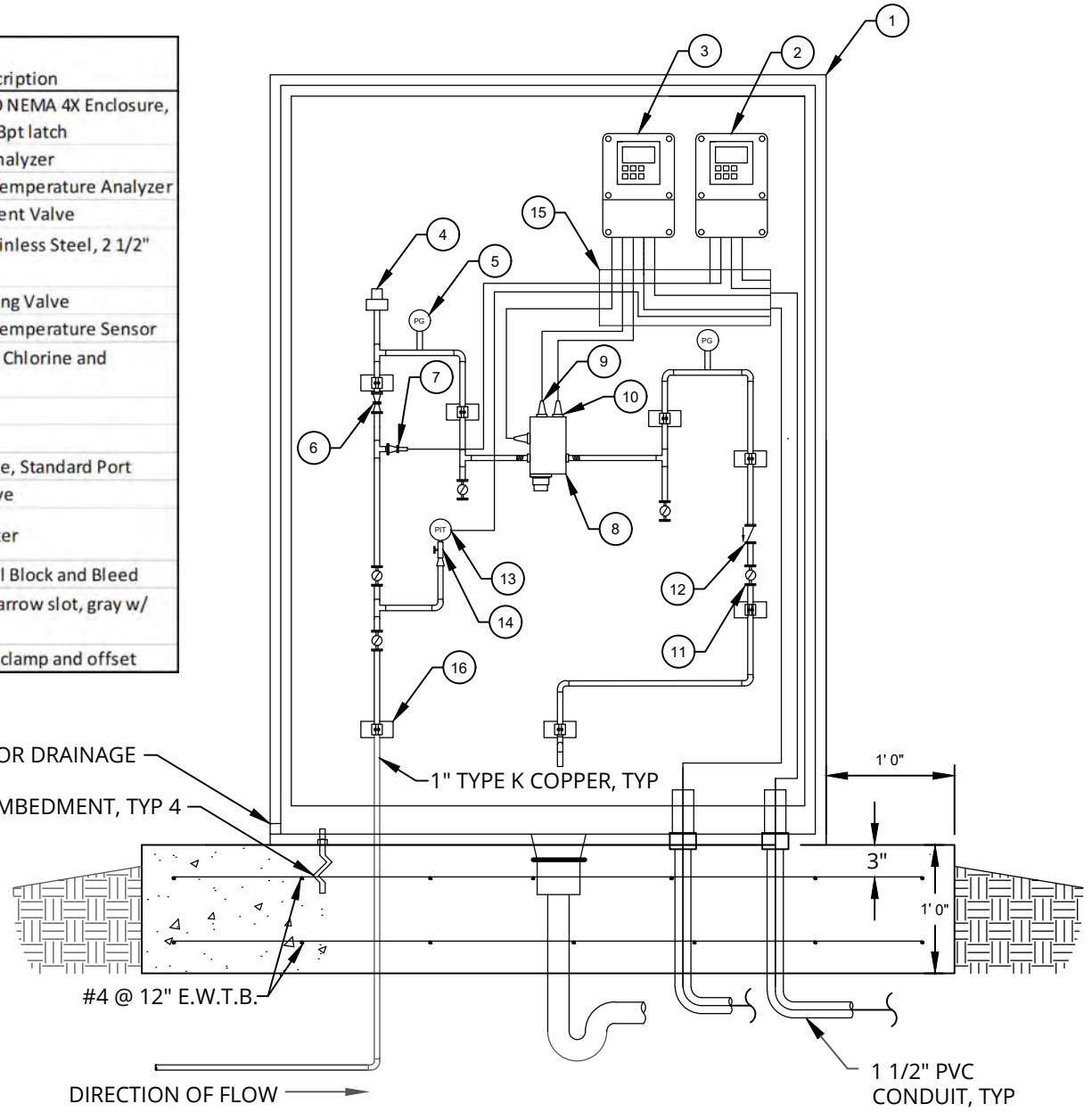
NOTE:
ALL PRECAST UNITS MUST
CONFORM TO ASTM-478 AND
MAG SPECIFICATIONS 420



SECTION C-C

DETAIL NO.			APPROVED:	DETAIL NO.
C-320	CHANDLER arizona	**VAULT FOR 24" GATE VALVE**	01-19-2010	**C-320**

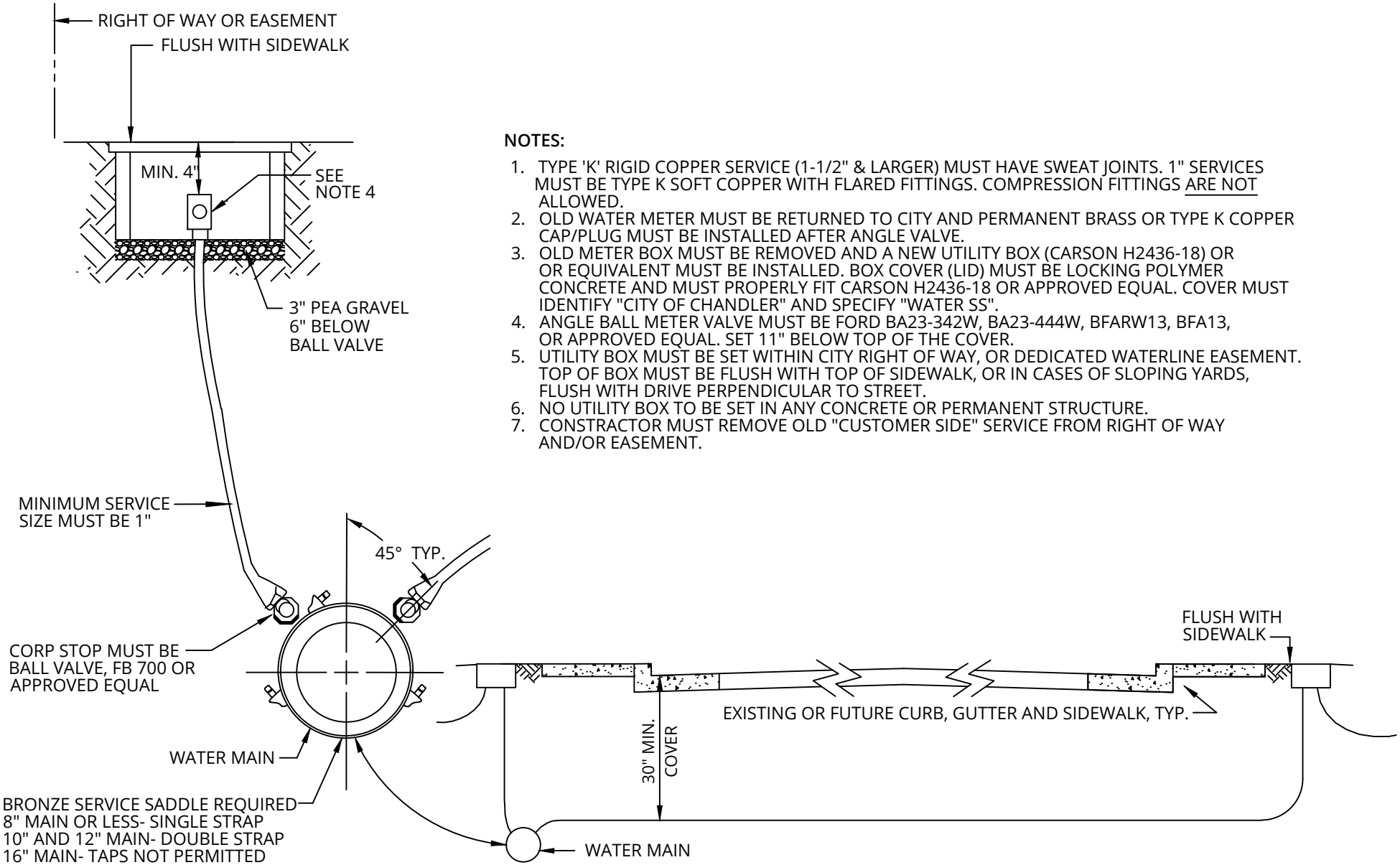
Item Number	Manufacturer	Model Number	Description
1	Hoffman	A724818SSFSDN4	60"H x 36"W x 24"D NEMA 4X Enclosure, Stainless Steel w/ 3pt latch
2	Endress + Hauser	CCM253	pH and Chlorine Analyzer
3	Endress + Hauser	CLM253	Conductivity and Temperature Analyzer
4	Watts	FV-4M1	1" Automatic Air Vent Valve
5	Ashcroft	25-1009SW02L 100#	Pressure Gage, Stainless Steel, 2 1/2" dial, 100 psi
6	Watts	123LP	1" Pressure Reducing Valve
7	Endress + Hauser	CLS21-C3B2A	Conductivity and Temperature Sensor
8	Endress + Hauser	CCA250-A1	Flow Assembly for Chlorine and pH/ORP Sensors
9	Endress + Hauser	CPS11-2BA2ESA	pH Sensor
10	Endress + Hauser	CCS140-N	Chlorine Sensor
11	Apollo	7010501	1" Bronze Ball Valve, Standard Port
12	Campbell	CV-4T	1" Brass Check Valve
13	Endress + Hauser	PMC71-AAC1S6RDAAA1	Pressure Transmitter
14	Endress + Hauser	2VM-SS-8-RM	1/2" Stainless Steel Block and Bleed
15	Panduit	F2x2LG6C2LG6	2" x 2" Wireway, narrow slot, gray w/ cover
16	N/A	N/A	Non-metallic pipe clamp and offset



NOTES:

1. INFLUENT SERVICE MUST BE WATER TAP PER C-301.
2. EFFLUENT MUST DISCHARGE VIA 4" AIR GAP TO 2" FLOOR DRAIN CONNECTED TO SEWER PER C-411.
3. FLOOR DRAIN MUST BE INSTALLED WITH TRAP SEAL. BOTTOM OF CABINET MUST BE CUT OUT TO EXPOSE.

DETAIL NO.			APPROVED:	DETAIL NO.
C-321	CHANDLER arizona	**WATER QUALITY MONITORING STATION**	01-27-2011	**C-321**



NOTES:

1. TYPE 'K' RIGID COPPER SERVICE (1-1/2" & LARGER) MUST HAVE SWEAT JOINTS. 1" SERVICES MUST BE TYPE K SOFT COPPER WITH FLARED FITTINGS. COMPRESSION FITTINGS ARE NOT ALLOWED.
2. OLD WATER METER MUST BE RETURNED TO CITY AND PERMANENT BRASS OR TYPE K COPPER CAP/PLUG MUST BE INSTALLED AFTER ANGLE VALVE.
3. OLD METER BOX MUST BE REMOVED AND A NEW UTILITY BOX (CARSON H2436-18) OR OR EQUIVALENT MUST BE INSTALLED. BOX COVER (LID) MUST BE LOCKING POLYMER CONCRETE AND MUST PROPERLY FIT CARSON H2436-18 OR APPROVED EQUAL. COVER MUST IDENTIFY "CITY OF CHANDLER" AND SPECIFY "WATER SS".
4. ANGLE BALL METER VALVE MUST BE FORD BA23-342W, BA23-444W, BFARW13, BFA13, OR APPROVED EQUAL. SET 11" BELOW TOP OF THE COVER.
5. UTILITY BOX MUST BE SET WITHIN CITY RIGHT OF WAY, OR DEDICATED WATERLINE EASEMENT. TOP OF BOX MUST BE FLUSH WITH TOP OF SIDEWALK, OR IN CASES OF SLOPING YARDS, FLUSH WITH DRIVE PERPENDICULAR TO STREET.
6. NO UTILITY BOX TO BE SET IN ANY CONCRETE OR PERMANENT STRUCTURE.
7. CONSTRACTOR MUST REMOVE OLD "CUSTOMER SIDE" SERVICE FROM RIGHT OF WAY AND/OR EASEMENT.

DETAIL NO.			APPROVED:	DETAIL NO.
C-322	CHANDLER arizona	**POTABLE WATER METER SAMPLING STATION CONVERSION**	03-14-2013	**C-322**

CHANDLER arizona

Standard Details

WASTEWATER AND RECLAIMED

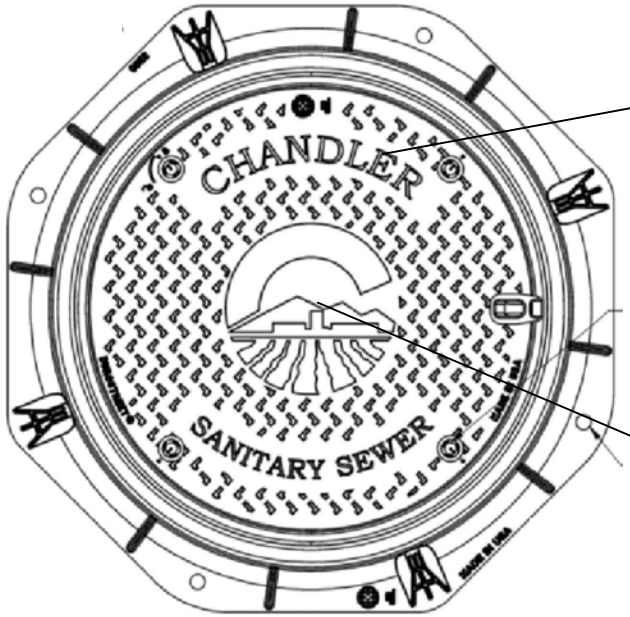
C-400 TO C-417

TYPE "A"

CAST-IRON

TYPE "B"

CORROSION-PROTECTIVE COMPOSITE

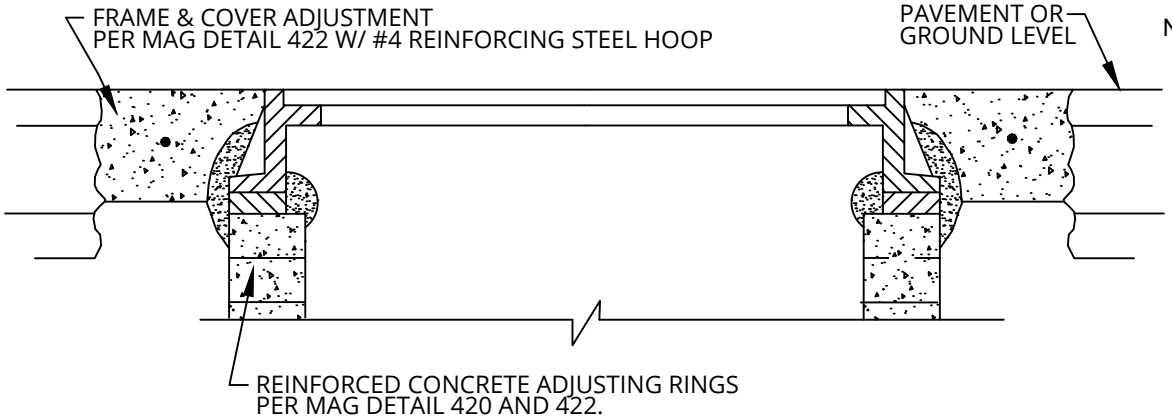


COVER SHOWN IS FOR ILLUSTRATION PURPOSES ONLY. LAYOUT AND FEATURES VARY PER APPROVED PRODUCT.

NOTES:

1. FRAME AND COVER MUST CONFORM TO MAG DETAIL 423 & 424 FOR TYPE 'A' OR CITY LIST OF APPROVED PRODUCTS FOR TYPE 'B' .
2. DELETE BEADS ON MAG DETAIL WHICH CONFLICT WITH LOGO SHOWN.
3. LETTERING ON MANHOLE COVER MUST CONTAIN UTILITY FOR WHICH MANHOLE IS NEEDED, ("CHANDLER SANITARY SEWER" OR, "CHANDLER STORM SEWER"), OR AS DIRECTED.
4. THE TOTAL WIDTH OF INDIVIDUAL LETTERS MUST BE SUCH THAT LETTERS AND WORDS ARE EQUALLY SPACED AND MUST BE BALANCED TO FORM A COMPLETE CIRCLE WITH SPACES BEFORE AND AFTER THE WORD.
5. LETTERS MUST BE 1 1/2" MIN IN HEIGHT AND RAISED 1/8" ABOVE LEVEL OF COVER.
6. TYPE OF LETTERS MUST BE SUBMITTED FOR APPROVAL.

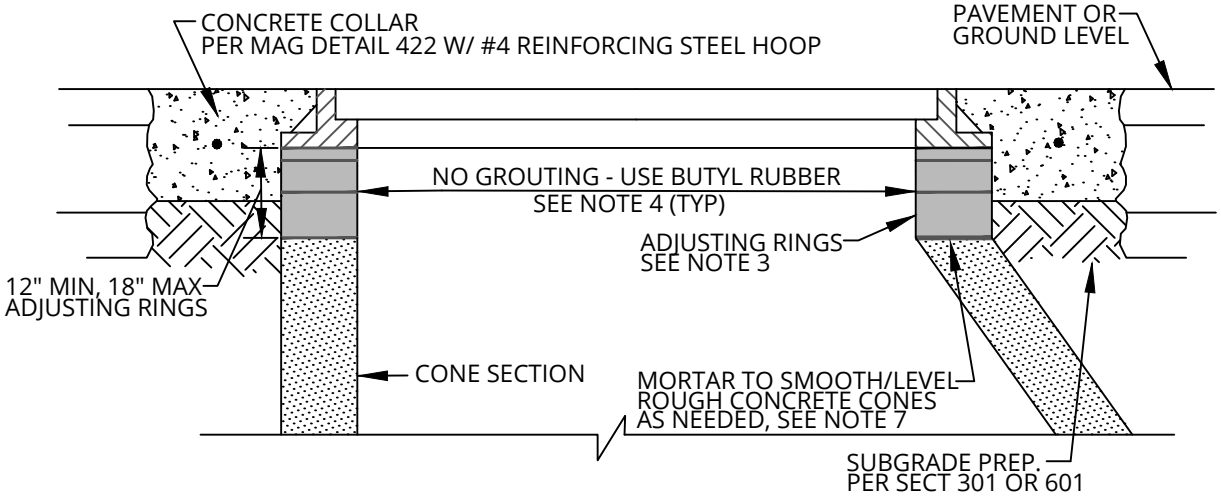
DETAIL NO.			APPROVED:	DETAIL NO.
C-400	CHANDLER arizona	**MANHOLE FRAME AND COVER TYPES**	01-27-2025	**C-400**



TYPE 'A'
CONCRETE RINGS

NOTES (TYPE 'A'):

1. CONTRACTOR MUST ADJUST ALL MANHOLE FRAME AND COVERS, INCLUDING MANHOLES OUTSIDE OF PAVEMENT.
2. ADJUSTMENT MUST BE IN ACCORDANCE WITH MAG SECTION 345 AND DETAILS 420 AND 422.

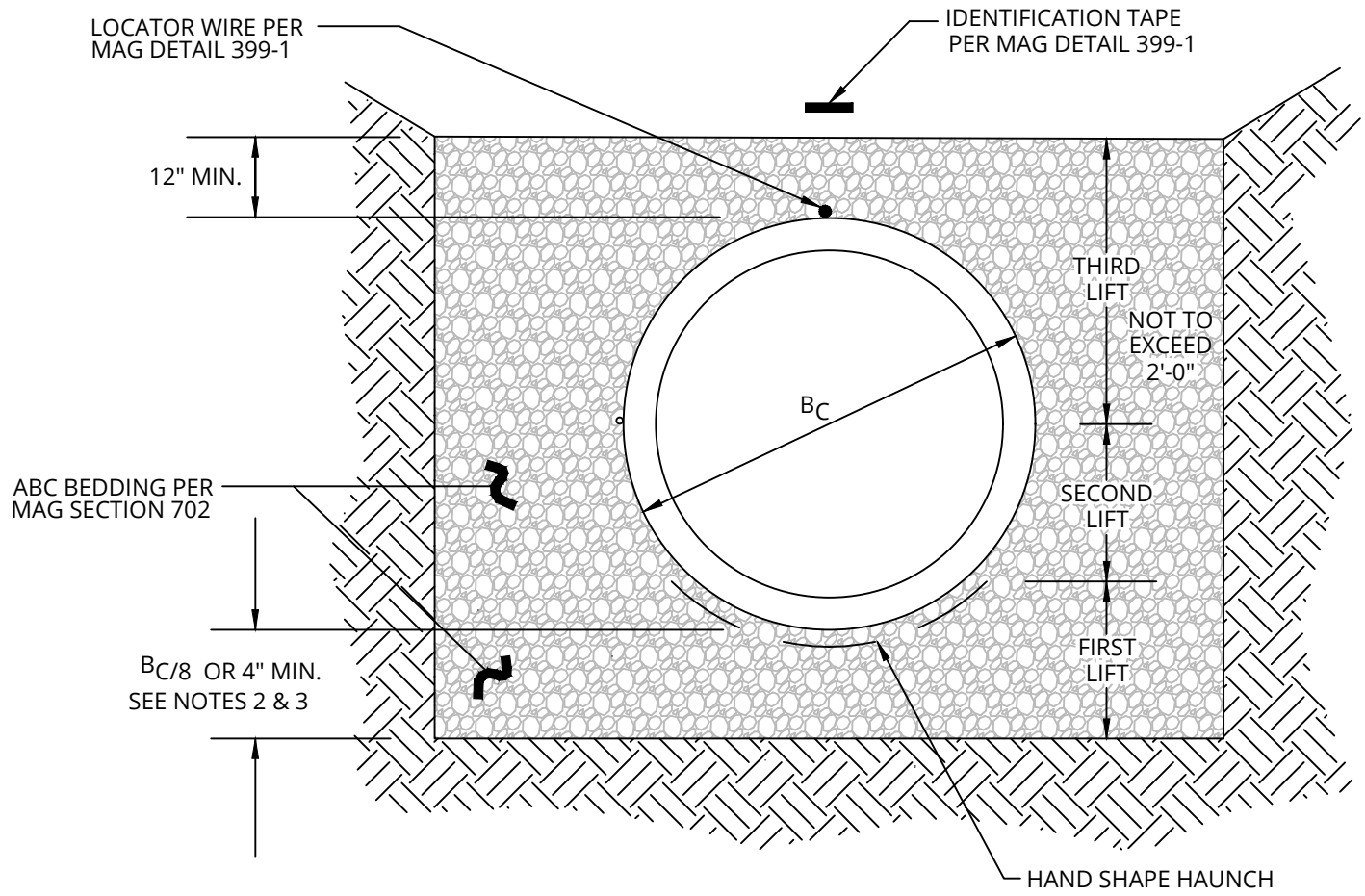


TYPE 'B'
CORROSION-PROTECTIVE RINGS

NOTES (TYPE 'B'):

1. CONTRACTOR MUST ADJUST ALL MANHOLE FRAME AND COVERS, INCLUDING MANHOLES OUTSIDE OF PAVEMENT.
2. ADJUSTMENT MUST BE IN ACCORDANCE WITH MAG SECTION 345 AND CITY SUPPLEMENTS.
3. ADJUSTMENT RINGS PER CITY LIST OF APPROVED PRODUCTS. USE ONLY APPROVED FLAT OR SLOPED SPACER RINGS AS REQUIRED. NO OTHER SPACERS OF ANY KIND ALLOWED INCLUDING GROUT, ROCKS, STICKS, WOOD SHIMS, BRICK ETC.
4. INSTALLATION MUST BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION WITH A $\frac{3}{8}$" DIAM. (OR $\frac{1}{2}$" SQ) BUTYL RUBBER MASTIC ROPE (OR APPROVED EQUAL) INSTALLED BETWEEN EACH OF THE RINGS, THE CONE AND THE BOTTOM RING, AND FRAME & COVER AND TOP RING.
5. ADJUSTMENT RING PRODUCTS MUST NOT BE MIXED IN SAME MH.
6. CARE MUST BE TAKEN TO ENSURE NO SHIFTING OF RINGS, AND FRAME & COVER OCCURS WITH BACKFILLING AND CONCRETE COLLAR INSTALLATION.
7. CORROSION PROTECTIVE COATING PER CITY LIST OF APPROVED PRODUCTS MUST BE APPLIED TO ALL EXPOSED MORTAR AS REQUIRED IN THE ENG. & DESIGN STANDARDS MANUAL, CH. 2 WASTEWATER AND RECLAIMED SYSTEM DESIGN.
8. FIBERGLASS MANHOLES WITH NECKS REQUIRE 32" TRANSITION AND SPACER RINGS TO ENSURE NO WEIGHT IS ON NECK. 12" MIN, 18" MAX ADJUSTING RINGS MEASURED ABOVE MANHOLE NECK.

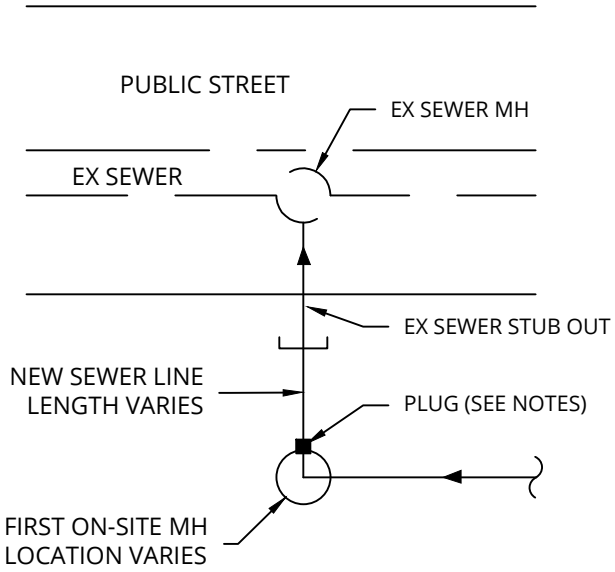
DETAIL NO.			APPROVED:	DETAIL NO.
C-401	CHANDLER arizona	**MANHOLE CONCRETE COLLAR AND ADJUSTMENT TYPES**	01-27-2025	**C-401**



NOTES:

1. TRENCH EXCAVATION, BACKFILL AND COMPACTION MUST BE IN ACCORDANCE WITH MAG SECTION 601.
2. MINIMUM 4" FOR PIPES 12" OR SMALLER.
3. MINIMUM 6" FOR PIPES LARGER THAN 12".
4. SEWER PIPE MATERIAL MUST BE IN ACCORDANCE WITH CITY LIST OF APPROVED PRODUCTS.

DETAIL NO.			APPROVED:	DETAIL NO.
C-402	CHANDLER arizona	**SEWER PIPE BEDDING DETAIL**	01-27-2025	**C-402**



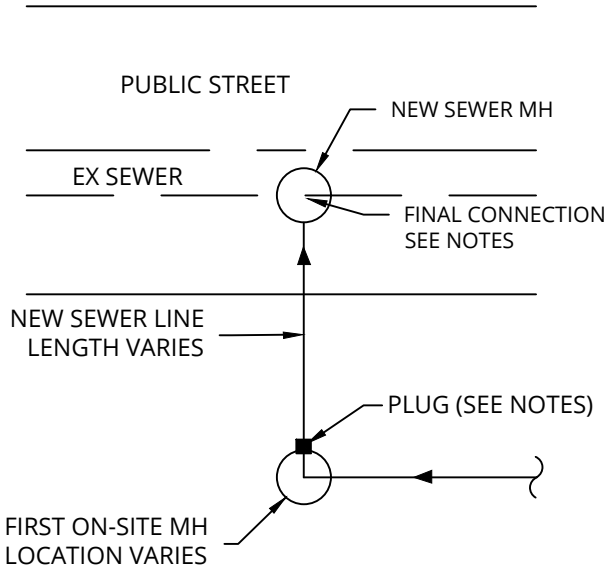
STUB OUT (OR PHASED) CONNECTION

1. NEW SEWER AND STUB OUT LINE TO THE EXISTING MANHOLE MUST BE VACTORED AFTER CONNECTIONS ARE COMPLETE AND PLUG MUST BE IMMEDIATELY INSTALLED.

2. PLUG MAY ONLY BE REMOVED AFTER PASSING ALL REQUIRED TESTING (PRESSURE, MANDREL AND CCTV), AND WITH APPROVAL OF THE CITY INSPECTOR.

3. LINES MUST BE VACTORED PRIOR TO REQUESTING CCTV INSPECTION, AND WITH CITY INSPECTOR PRESENT, A SUFFICIENT VOLUME OF WATER MUST BE ADDED TO THE SYSTEM FOR CCTV INSPECTION.

4. PLUG MUST BE IMMEDIATELY REINSTALLED AFTER COMPLETION OF CCTV INSPECTION OR DAILY IF INSPECTION SPANS MULTIPLE DAYS.

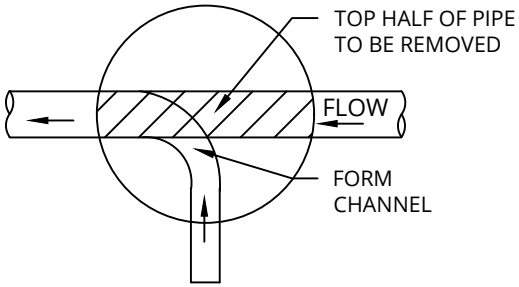


NEW MH (IN PUBLIC STREET) CONNECTION

1. NEW SEWER LINE TO THE NEW MANHOLE MUST BE VACTORED AFTER CONNECTIONS ARE COMPLETE AND PLUG MUST BE IMMEDIATELY INSTALLED.

< SAME NOTES (2-4) APPLY

5. FINAL CONNECTION IN NEW MANHOLE MUST OCCUR NEAR PROJECT COMPLETION AND EXISTING SEWER LINE WITHIN MANHOLE REMAINS FULLY INTACT. WHEN ALL TESTING HAS BEEN COMPLETED AND ACCEPTED BY THE CITY, TOP HALF OF PIPE IS REMOVED AND CHANNEL(S) ARE TO BE FORMED. SEE DETAIL A.



DETAIL A

NOTES:

1. PLUGS MUST BE INSTALLED AS SHOWN TO PROTECT THE CITY SANITARY SYSTEM.

2. PLUGS MUST REMAIN IN PLACE UNTIL ALL TESTING HAS BEEN COMPLETED AND ACCEPTED BY THE CITY.

3. MECHANICAL OR PNEUMATIC PLUGS MAY BE USED AND INSTALLED TO ACHIEVE A WATER TIGHT SEAL.

4. CCTV TESTING MUST BE IN ACCORDANCE WITH MAG SECTION 611 AND CITY PROCESS.

5. ALL OTHER CONSTRUCTION AND TESTING TO BE IN ACCORDANCE WITH MAG AND CITY SUPPLEMENTS.

6. THE CONTRACTOR MUST UNCOVER ALL EXISTING CITY UTILITY LINES BEING TIED INTO TO VERIFY THEIR TYPE, CONDITION, LOCATION, INVERT, SLOPE, AND ANY OTHER INFORMATION NEEDED TO DETERMINE THAT THE UTILITY CONNECTION WILL FUNCTION AS DESIGNED. THE CONTRACTOR IS RESPONSIBLE FOR MAKING ANY REPAIRS NECESSARY TO THE LATERAL OR MAIN LINES OF THE CITY SYSTEM NECESSARY FOR THE CONNECTION TO FUNCTION AS DESIGNED. THE CONTRACTOR MUST LOCATE OR HAVE LOCATED ALL EXISTING UNDERGROUND PRIVATE UTILITIES (ELECTRIC, TELEPHONE, PIPELINES, ETC.) AND STRUCTURES IN ADVANCE OF CONSTRUCTION AND MUST ELIMINATE ALL CONFLICTS PRIOR TO START OF CONSTRUCTION. BLUE STAKE TELEPHONE (602) 263-1100.

DETAIL NO.			APPROVED:	DETAIL NO.
C-403	CHANDLER arizona	**SEWER CONNECTIONS**	01-09-2020	**C-403**

RECLAIMED WATER SERVICE CONNECTIONS SIZING TABLE

SERVICE CONNECTION FLOW RATE (GPM)	IRRIGATION SERVICE LINE SIZE (AFTER PUMP)	RECLAIMED WATER SERVICE CONNECTION LINE SIZE (FROM MAIN TO PUMP)	WET WELL PUMP SEE PAGES:	CAN PUMP SEE PAGES:
UP TO 80	2"	4"	PAGE 3	-
80 TO 70	3"	4"	PAGE 4	-
170 TO 300	4"	6"	PAGES 5 & 6	PAGES 9 & 10
300 TO 700	6"	8"	PAGES 7 & 8	PAGES 11 & 12

NOTES:

1. THE DATA FORM ON DETAIL C-404 PAGE 2 MUST BE COMPLETED AND SUBMITTED WITH THE BUILDING PERMIT APPLICATION FOR THE INLINE PUMP AND CAN PUMP SERVICE CONNECTIONS.
2. THESE RECLAIMED WATER SERVICE CONNECTION DETAILS PRESENT THE MINIMUM REQUIREMENTS TO ENSURE THE INTEGRITY OF THE CITY OF CHANDLER'S RECLAIMED WATER DISTRIBUTION SYSTEM. ALL RECLAIMED WATER SERVICE CONNECTIONS MUST BE DESIGNED IN ACCORDANCE WITH THESE DETAILS AND THE SITE-SPECIFIC REQUIREMENTS INCLUDING: THE GROUND ELEVATION, IRRIGATION SYSTEM FLOW REQUIREMENTS, AND IRRIGATION SYSTEM PRESSURE REQUIREMENTS.
3. ALL RECLAIMED WATER SERVICE CONNECTIONS MUST BE DESIGNED IN ACCORDANCE WITH MARICOPA COUNTY ENVIRONMENTAL SERVICES DEPARTMENT (MCESD) AND ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY (ADEQ) REQUIREMENTS.
4. AN APPROVAL TO CONSTRUCT PERMIT FROM MCESD IS REQUIRED FOR ALL RECLAIMED WATER SERVICE CONNECTIONS PRIOR TO CONSTRUCTION. A COPY OF THE APPROVAL OF CONSTRUCTION FROM MCDES MUST BE SUBMITTED TO THE CITY OF CHANDLER PRIOR TO PLACING THE RECLAIMED WATER SERVICE CONNECTION IN SERVICE.
5. ALL ABOVE GROUND PIPING MUST BE PAINTED PURPLE OR STENCILED IN ACCORDANCE WITH MAG SECTION 616.4.2. SECTION 616.4.2.

DEVELOPER: _____

TURNOUT ADDRESS: _____

FLOW RATE CRITERIA

ANNUAL AVERAGE _____ ACRE FT/YEAR

MAXIMUM MONTH _____ ACRE FT

INSTANTANEOUS _____ GPM

SUCTION HEAD CALCULATIONS

(1) LENGTH AND DIAMETER OF PIPING FROM NEAREST RECLAIMED WATER TRANSMISSION MAIN (RWTM) TO TURNOUT _____

(2) FRICTION LOSSES IN PIPING FROM RWTM TO TURNOUT AT INSTANTANEOUS FLOW RATE _____ FEET

(3) HGL IN RWTM 1330 TO 1345 FEET

(4) HGL AT TURNOUT (HGL OF RWTM LESS FRICTION LOSSES CALCULATED ABOVE) _____ TO _____ FEET

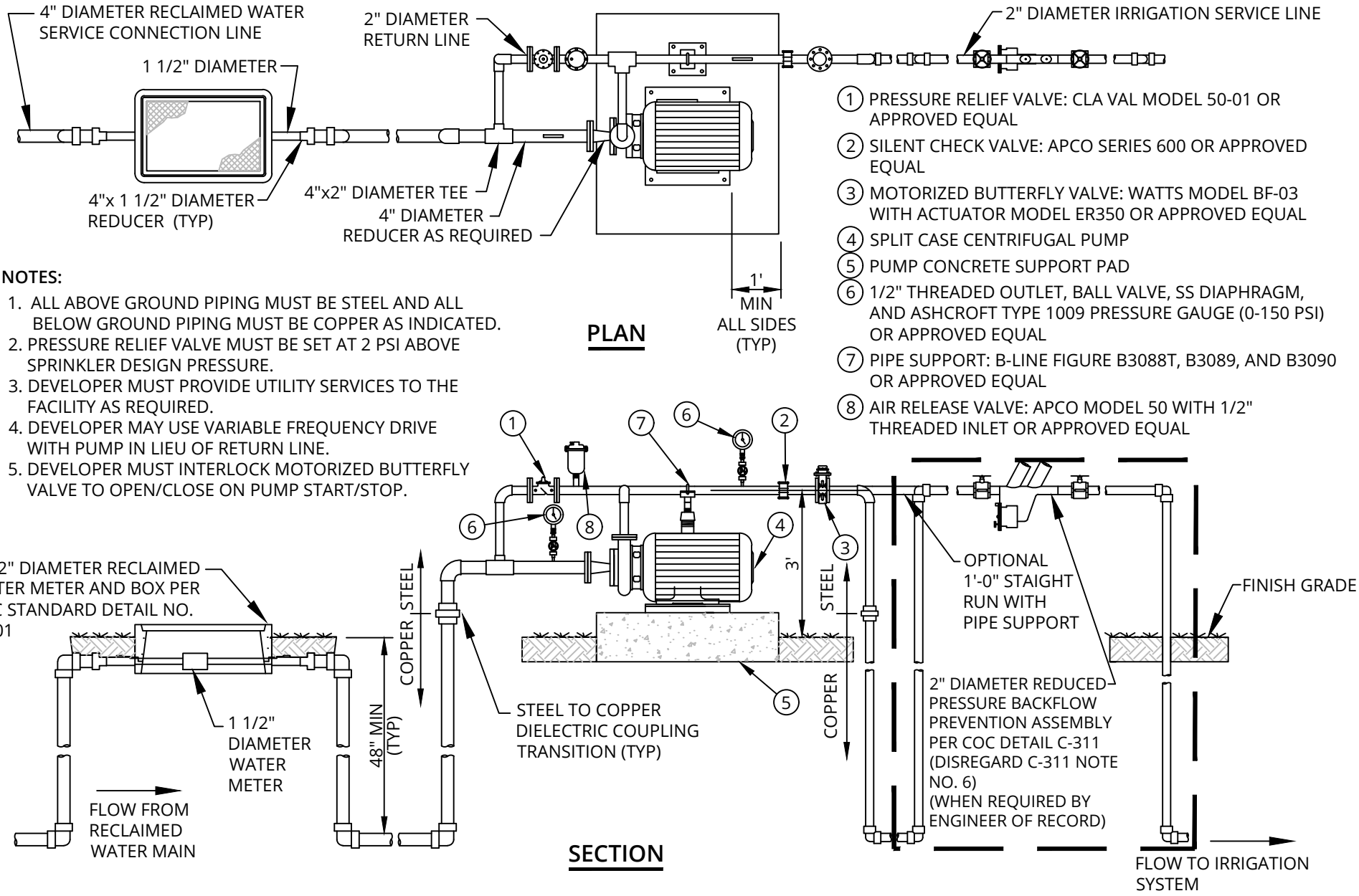
(5) ELEVATION AT TURNOUT _____ FEET

(6) SUCTION PRESSURE AT TURNOUT _____ TO _____ PSI

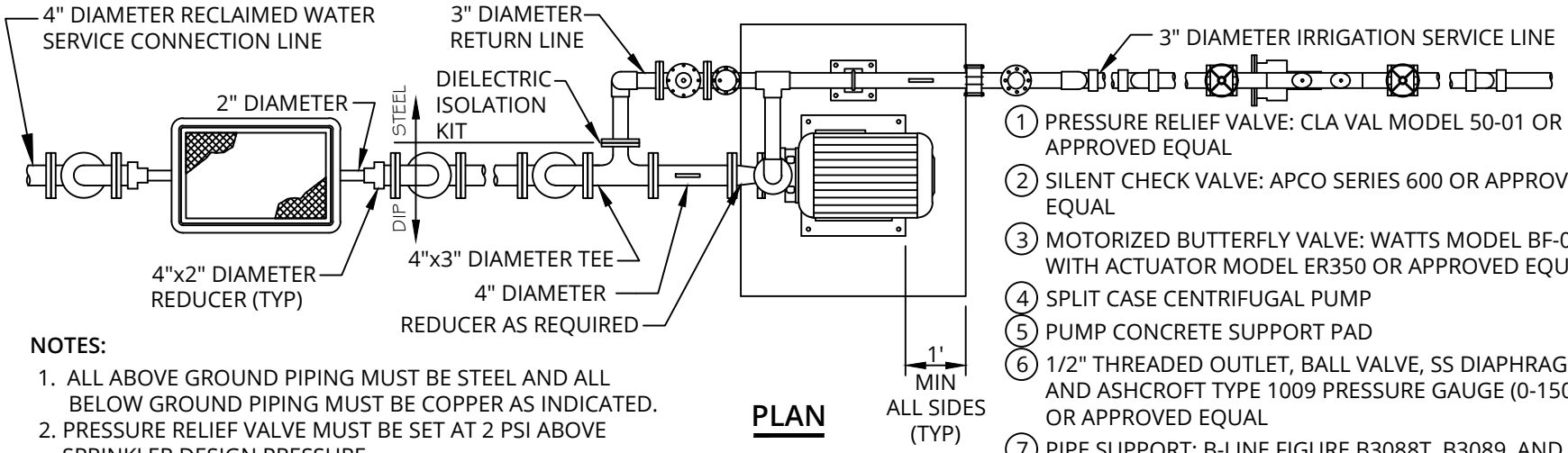
(7) PUMP TDH _____ FEET

(8) DISCHARGE PRESSURE _____ PSI

DETAIL NO. C-404-2	CHANDLER arizona	RECLAIMED WATER SERVICE CONNECTION DATA FORM	APPROVED: 06-12-2008	DETAIL NO. C-404-2



DETAIL NO.			APPROVED:	DETAIL NO.
C-404-3	CHANDLER arizona	**2" RECLAIMED WATER IRRIGATION SERVICE LINE INLINE PUMP TYPE**	01-09-2020	**C-404-3**

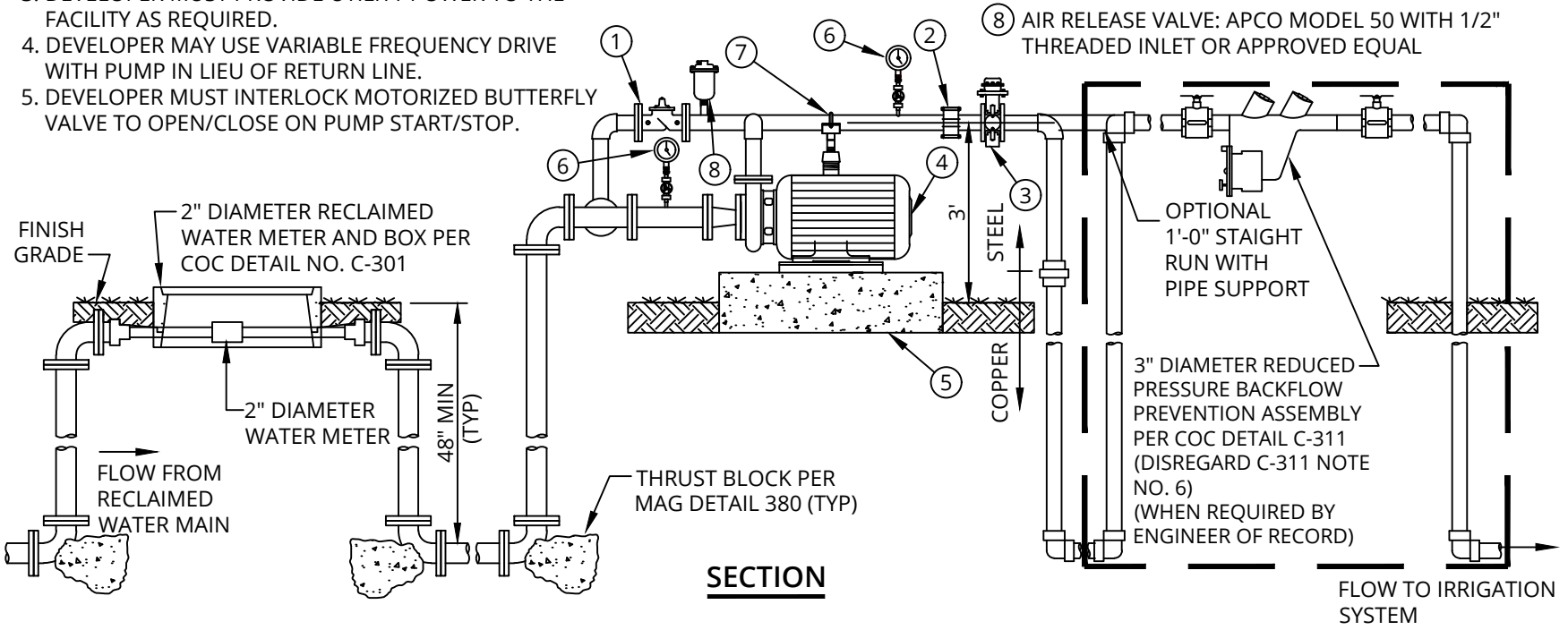


PLAN

NOTES:

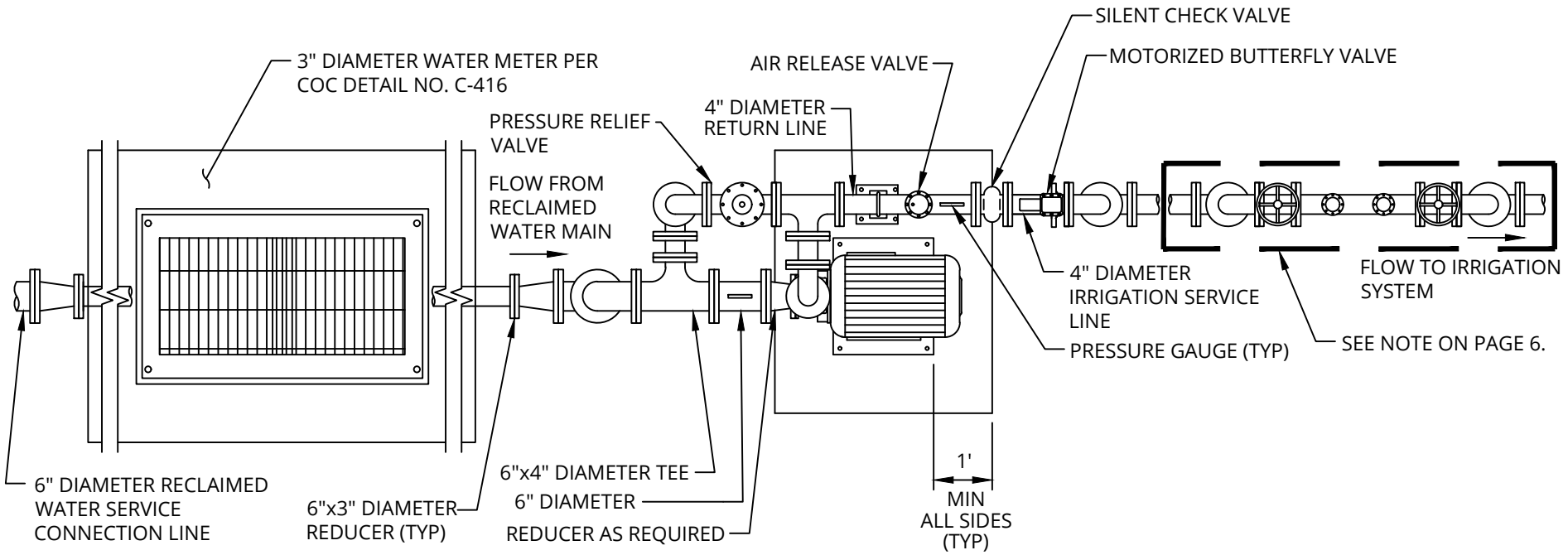
1. ALL ABOVE GROUND PIPING MUST BE STEEL AND ALL BELOW GROUND PIPING MUST BE COPPER AS INDICATED.
2. PRESSURE RELIEF VALVE MUST BE SET AT 2 PSI ABOVE SPRINKLER DESIGN PRESSURE.
3. DEVELOPER MUST PROVIDE UTILITY POWER TO THE FACILITY AS REQUIRED.
4. DEVELOPER MAY USE VARIABLE FREQUENCY DRIVE WITH PUMP IN LIEU OF RETURN LINE.
5. DEVELOPER MUST INTERLOCK MOTORIZED BUTTERFLY VALVE TO OPEN/CLOSE ON PUMP START/STOP.

1. PRESSURE RELIEF VALVE: CLA VAL MODEL 50-01 OR APPROVED EQUAL
2. SILENT CHECK VALVE: APCO SERIES 600 OR APPROVED EQUAL
3. MOTORIZED BUTTERFLY VALVE: WATTS MODEL BF-03 WITH ACTUATOR MODEL ER350 OR APPROVED EQUAL
4. SPLIT CASE CENTRIFUGAL PUMP
5. PUMP CONCRETE SUPPORT PAD
6. 1/2" THREADED OUTLET, BALL VALVE, SS DIAPHRAGM, AND ASHCROFT TYPE 1009 PRESSURE GAUGE (0-150 PSI) OR APPROVED EQUAL
7. PIPE SUPPORT: B-LINE FIGURE B3088T, B3089, AND B3090 OR APPROVED EQUAL
8. AIR RELEASE VALVE: APCO MODEL 50 WITH 1/2" THREADED INLET OR APPROVED EQUAL



SECTION

DETAIL NO.			APPROVED:	DETAIL NO.
C-404-4	CHANDLER arizona	**3" RECLAIMED WATER IRRIGATION SERVICE LINE INLINE PUMP TYPE**	01-09-2014	**C-404-4**



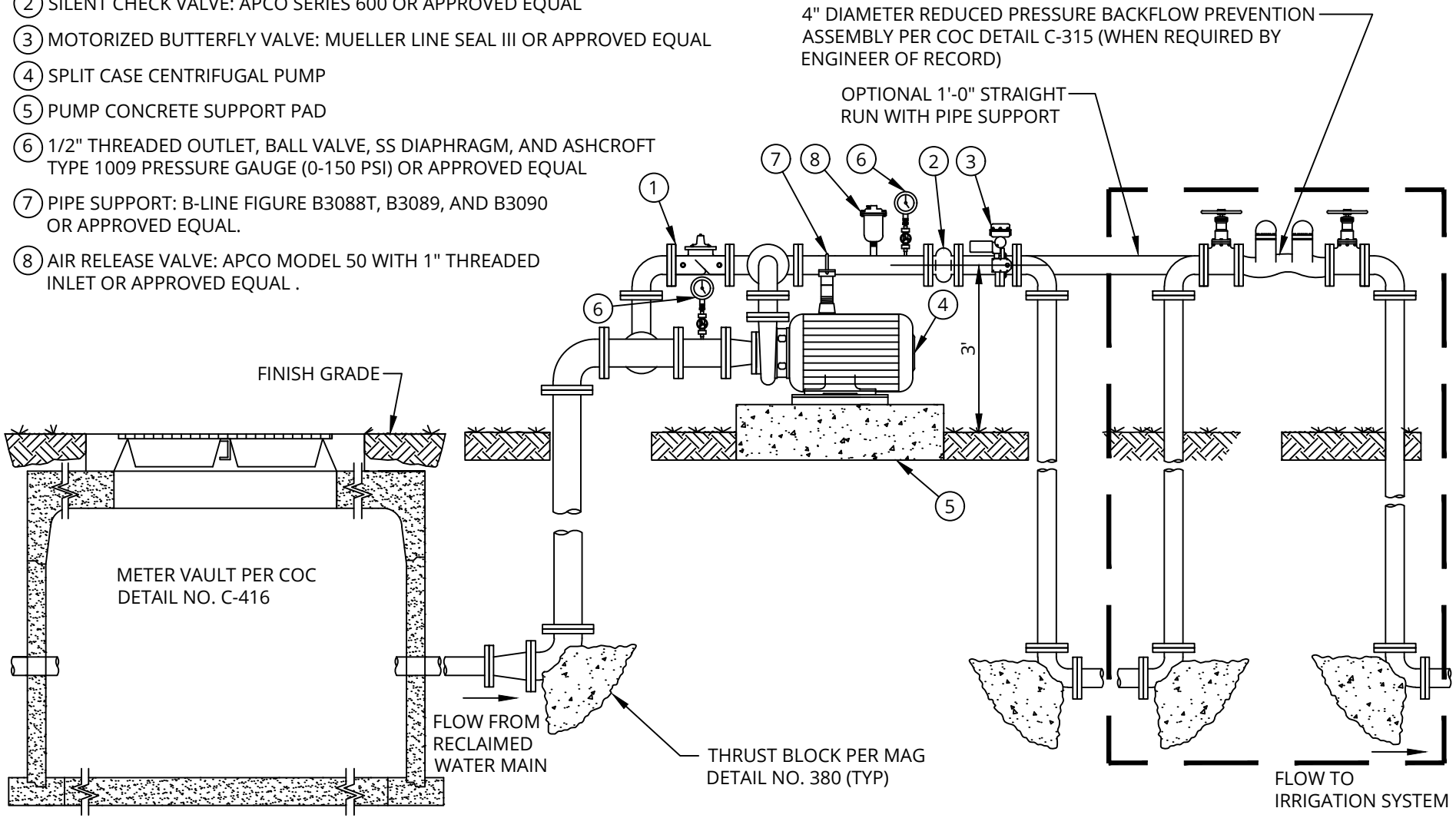
PLAN

NOTES:

1. ALL PIPING MUST BE DUCTILE IRON (DIP) AS SHOWN.
2. PRESSURE RELIEF VALVE MUST BE SET AT 2 PSI ABOVE SPRINKLER DESIGN PRESSURE.
3. DEVELOPER MUST PROVIDE UTILITY SERVICES TO THE FACILITY AS REQUIRED.
4. DEVELOPER MAY USE VARIABLE FREQUENCY DRIVE WITH PUMP IN LIEU OF RETURN LINE.
5. DEVELOPER MUST INTERLOCK MOTORIZED BUTTERFLY VALVE TO OPEN/CLOSE ON PUMP START/STOP.

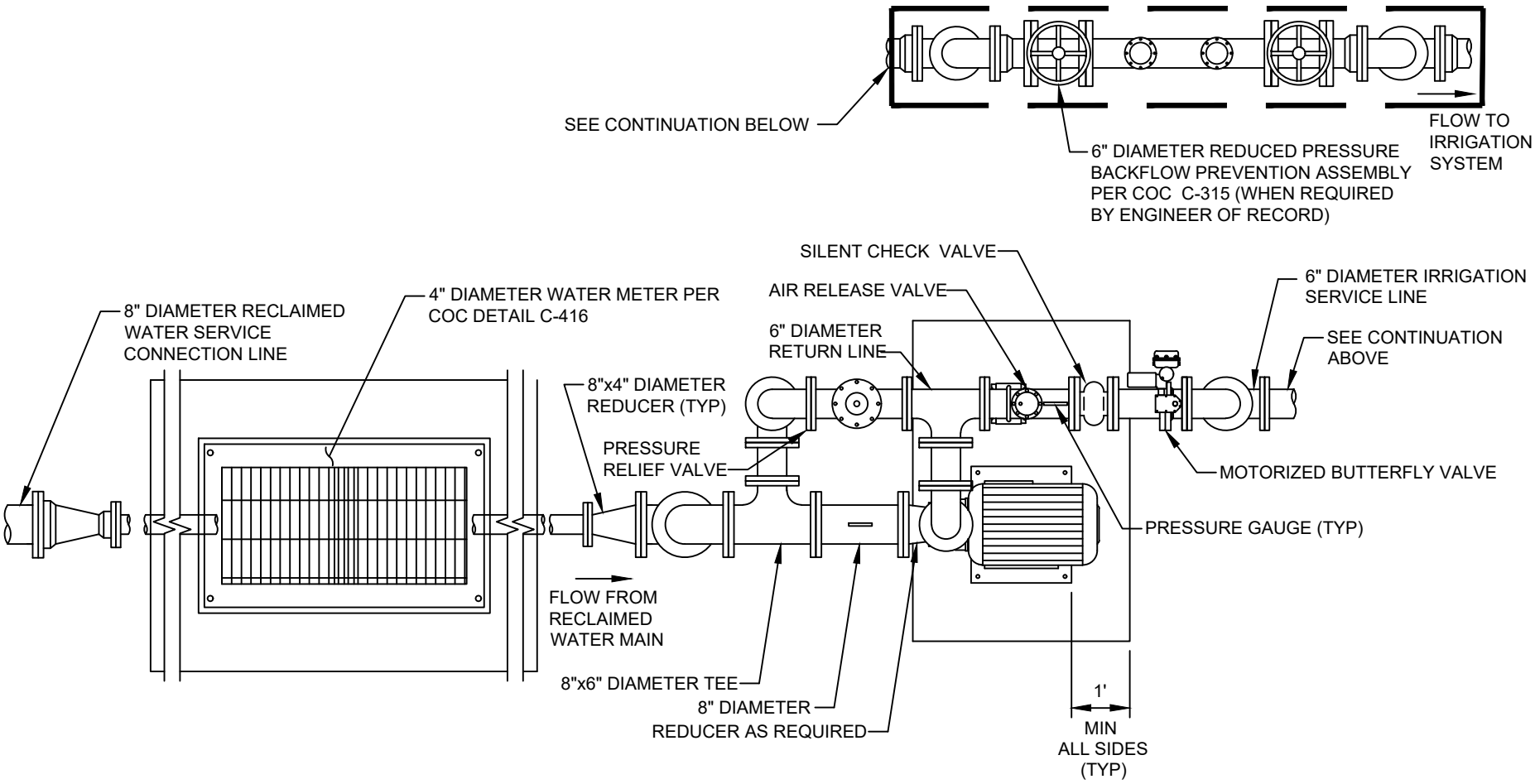
DETAIL NO. C-404-5	CHANDLER arizona	4" RECLAIMED WATER IRRIGATION SERVICE LINE INLINE PUMP TYPE	APPROVED: 01-09-2014	DETAIL NO. C-404-5

1. PRESSURE RELIEF VALVE: CLA VAL MODEL 50-01 OR APPROVED EQUAL
2. SILENT CHECK VALVE: APCO SERIES 600 OR APPROVED EQUAL
3. MOTORIZED BUTTERFLY VALVE: MUELLER LINE SEAL III OR APPROVED EQUAL
4. SPLIT CASE CENTRIFUGAL PUMP
5. PUMP CONCRETE SUPPORT PAD
6. 1/2" THREADED OUTLET, BALL VALVE, SS DIAPHRAGM, AND ASHCROFT TYPE 1009 PRESSURE GAUGE (0-150 PSI) OR APPROVED EQUAL
7. PIPE SUPPORT: B-LINE FIGURE B3088T, B3089, AND B3090 OR APPROVED EQUAL.
8. AIR RELEASE VALVE: APCO MODEL 50 WITH 1" THREADED INLET OR APPROVED EQUAL .



SECTION

DETAIL NO.			APPROVED:	DETAIL NO.
C-404-6	CHANDLER arizona	**4" RECLAIMED WATER IRRIGATION SERVICE LINE INLINE PUMP TYPE**	01-09-2014	**C-404-6**



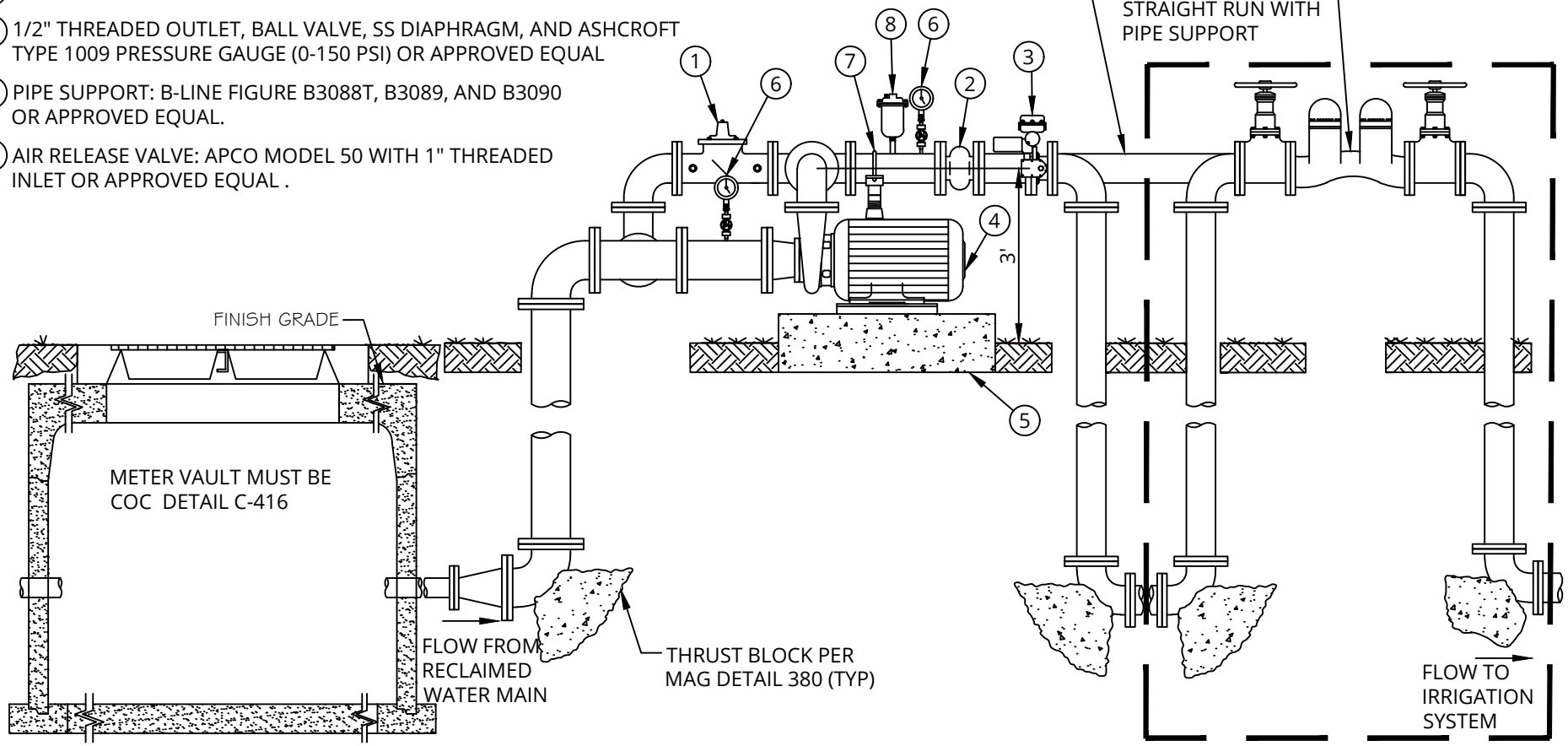
PLAN

NOTES:

1. ALL PIPING MUST BE DUCTILE IRON (DIP) AS SHOWN.
2. PRESSURE RELIEF VALVE MUST BE SET AT 2 PSI ABOVE SPRINKLER DESIGN PRESSURE.
3. DEVELOPER MUST PROVIDE UTILITY SERVICES TO THE FACILITY AS REQUIRED.
4. DEVELOPER MAY USE VARIABLE FREQUENCY DRIVE WITH PUMP IN LIEU OF RETURN LINE.
5. DEVELOPER MUST INTERLOCK MOTORIZED BUTTERFLY VALVE TO OPEN/CLOSE ON PUMP START/STOP.

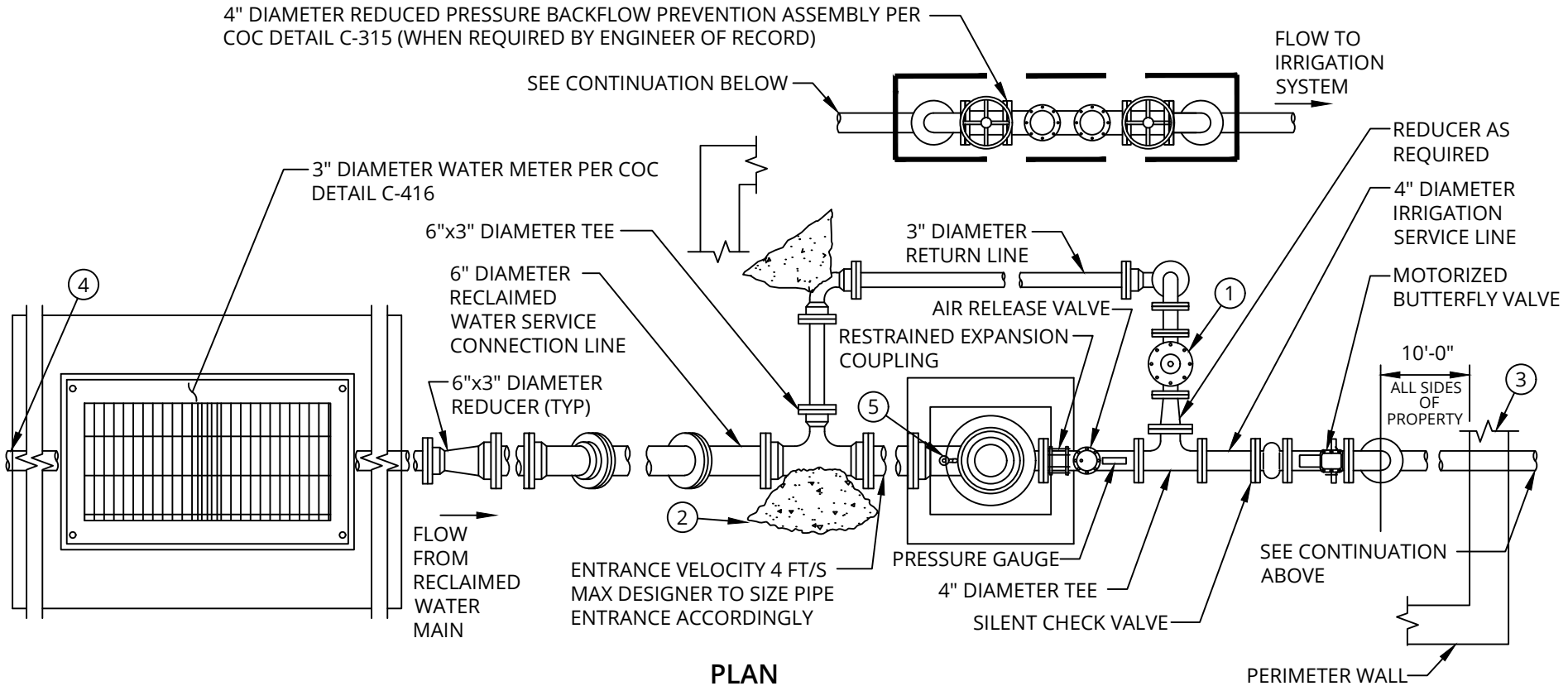
DETAIL NO.			APPROVED:	DETAIL NO.
C-404-7	CHANDLER arizona	**6" RECLAIMED WATER IRRIGATION SERVICE LINE INLINE PUMP TYPE**	01-09-2014	**C-404-7**

1. PRESSURE RELIEF VALVE: CLA VAL MODEL 50-01 OR APPROVED EQUAL
2. SILENT CHECK VALVE: APCO SERIES 600 OR APPROVED EQUAL
3. MOTORIZED BUTTERFLY VALVE: MUELLER LINE SEAL III OR APPROVED EQUAL
4. SPLIT CASE CENTRIFUGAL PUMP
5. PUMP CONCRETE SUPPORT PAD
6. 1/2" THREADED OUTLET, BALL VALVE, SS DIAPHRAGM, AND ASHCROFT TYPE 1009 PRESSURE GAUGE (0-150 PSI) OR APPROVED EQUAL
7. PIPE SUPPORT: B-LINE FIGURE B3088T, B3089, AND B3090 OR APPROVED EQUAL.
8. AIR RELEASE VALVE: APCO MODEL 50 WITH 1" THREADED INLET OR APPROVED EQUAL .



SECTION

DETAIL NO.			APPROVED:	DETAIL NO.
C-404-8	CHANDLER arizona	**6" RECLAIMED WATER IRRIGATION SERVICE LINE INLINE PUMP TYPE**	01-09-2014	**C-404-8**



PLAN

NOTES:

1. PRESSURE RELIEF VALVE MUST BE SET AT 2 PSI ABOVE SPRINKLER DESIGN PRESSURE.
2. DEVELOPER MUST PROVIDE UTILITY SERVICES TO THE FACILITY AS REQUIRED.
3. DEVELOPER MAY USE VARIABLE FREQUENCY DRIVE WITH PUMP IN LIEU OF RETURN LINE.
4. DEVELOPER MUST INTERLOCK MOTORIZED BUTTERFLY VALVE TO OPEN/CLOSE ON PUMP START/STOP.

(1.) PRESSURE RELIEF VALVE: CLA VAL MODEL 6506-01B OR APPROVED EQUAL

(2.) THRUST BLOCK PER MAG DETAIL 380 (TYP)

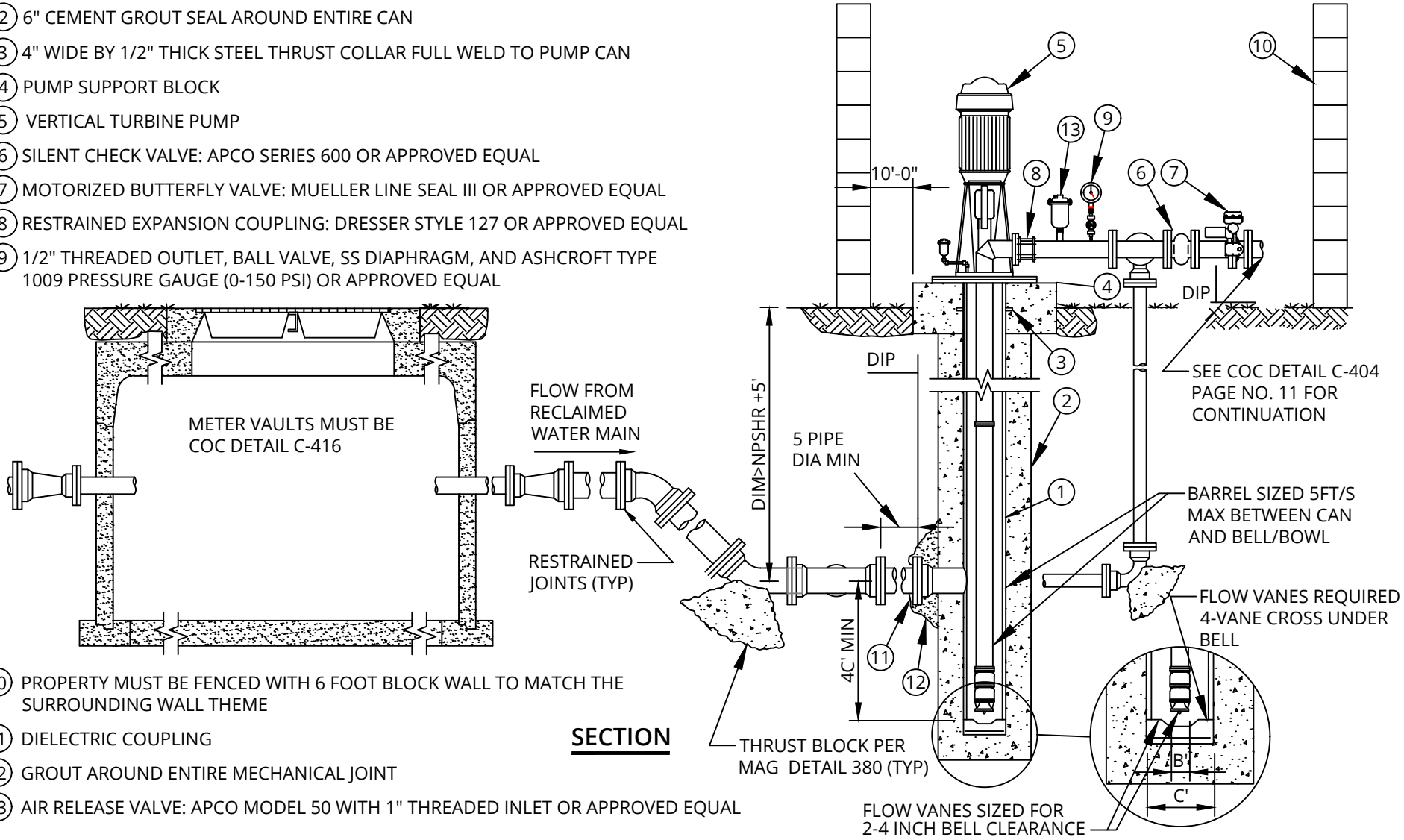
(3.) PROPERTY MUST BE FENCED WITH 6' BLOCK WALL TO MATCH THE SURROUNDING WALL THEME

(4.) PROVIDE 6"x3" REDUCER FOR CONTINUATION OF INSTALLATION OF 6" DIAMETER WATER SERVICE CONNECTION LINE, REDUCER MUST BE LOCATED 2'-0" MAX FROM METER VAULT

(5.) AIR RELEASE VALVE: APCO MODEL 50 WITH 1/2" THREADED INLET OR APPROVED EQUAL

DETAIL NO.			APPROVED:	DETAIL NO.
C-404-9	CHANDLER arizona	**4" RECLAIMED WATER IRRIGATION SERVICE LINE CAN PUMP TYPE**	01-09-2014	**C-404-9**

1. EPOXY LINED STEEL PUMP CAN, THICKNESS PER PUMP MANUFACTURER
2. 6" CEMENT GROUT SEAL AROUND ENTIRE CAN
3. 4" WIDE BY 1/2" THICK STEEL THRUST COLLAR FULL WELD TO PUMP CAN
4. PUMP SUPPORT BLOCK
5. VERTICAL TURBINE PUMP
6. SILENT CHECK VALVE: APCO SERIES 600 OR APPROVED EQUAL
7. MOTORIZED BUTTERFLY VALVE: MUELLER LINE SEAL III OR APPROVED EQUAL
8. RESTRAINED EXPANSION COUPLING: DRESSER STYLE 127 OR APPROVED EQUAL
9. 1/2" THREADED OUTLET, BALL VALVE, SS DIAPHRAGM, AND ASHCROFT TYPE 1009 PRESSURE GAUGE (0-150 PSI) OR APPROVED EQUAL



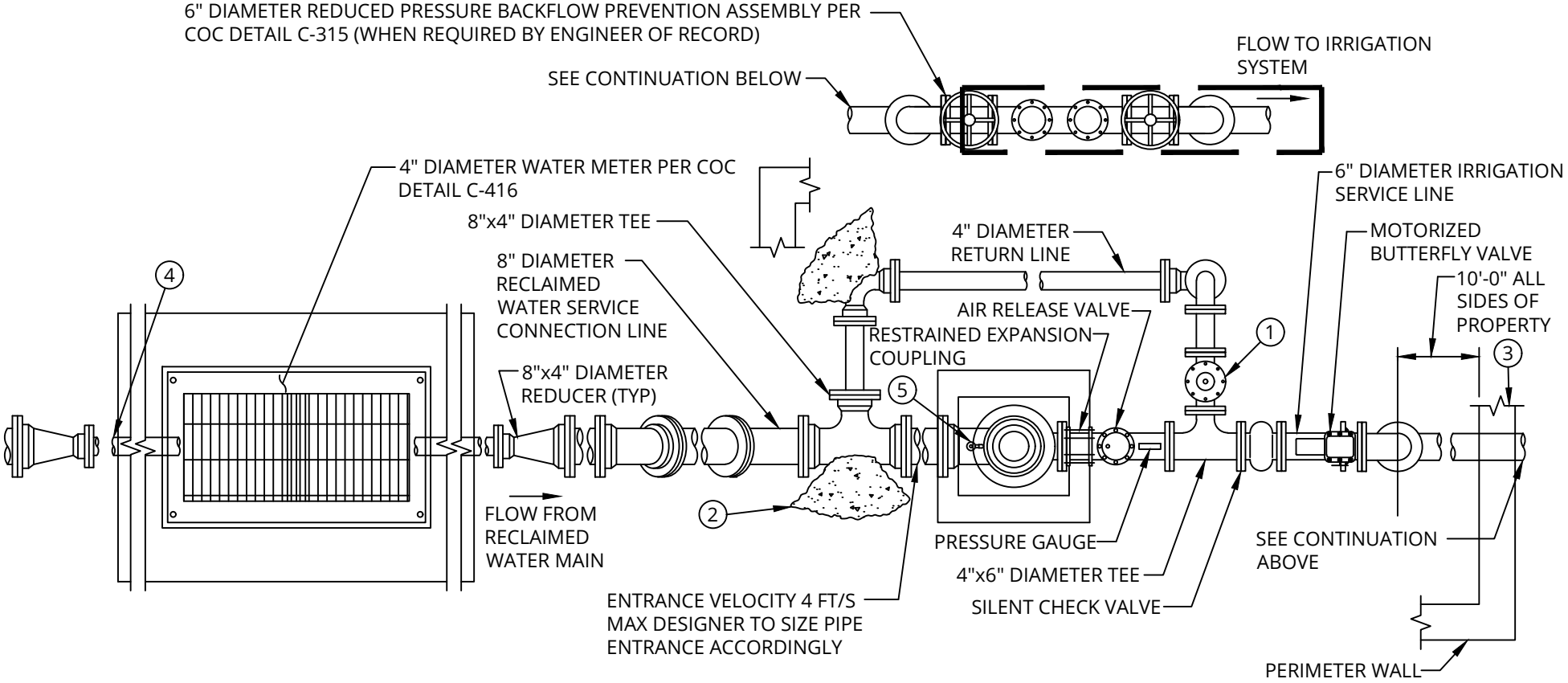
10. PROPERTY MUST BE FENCED WITH 6 FOOT BLOCK WALL TO MATCH THE SURROUNDING WALL THEME
11. DIELECTRIC COUPLING
12. GROUT AROUND ENTIRE MECHANICAL JOINT
13. AIR RELEASE VALVE: APCO MODEL 50 WITH 1" THREADED INLET OR APPROVED EQUAL

SECTION

NOTE:
ALL PIPING MUST BE DUCTILE IRON (DIP) AS SHOWN.

NPSHR = PUMP NET POSITIVE SUCTION HEAD REQUIRED
B' = PUMP SUCTION BELL DIA
C' = CAN OUTSIDE DIA

DETAIL NO.			APPROVED:	DETAIL NO.
C-404-10	CHANDLER arizona	**4" RECLAIMED WATER IRRIGATION SERVICE LINE CAN PUMP TYPE**	06-12-2008	**C-404-10**



NOTES:

1. PRESSURE RELIEF VALVE MUST BE SET AT 2 PSI ABOVE SPRINKLER DESIGN PRESSURE.
2. DEVELOPER MUST PROVIDE UTILITY SERVICES TO THE FACILITY AS REQUIRED.
3. DEVELOPER MAY USE VARIABLE FREQUENCY DRIVE WITH PUMP IN LIEU OF RETURN LINE.
4. DEVELOPER MUST INTERLOCK MOTORIZED BUTTERFLY VALVE TO OPEN/CLOSE ON PUMP START/STOP.

(1.) PRESSURE RELIEF VALVE: CLA VAL MODEL 6506-01B OR APPROVED EQUAL

(2.) THRUST BLOCK PER MAG DETAIL 380 (TYP)

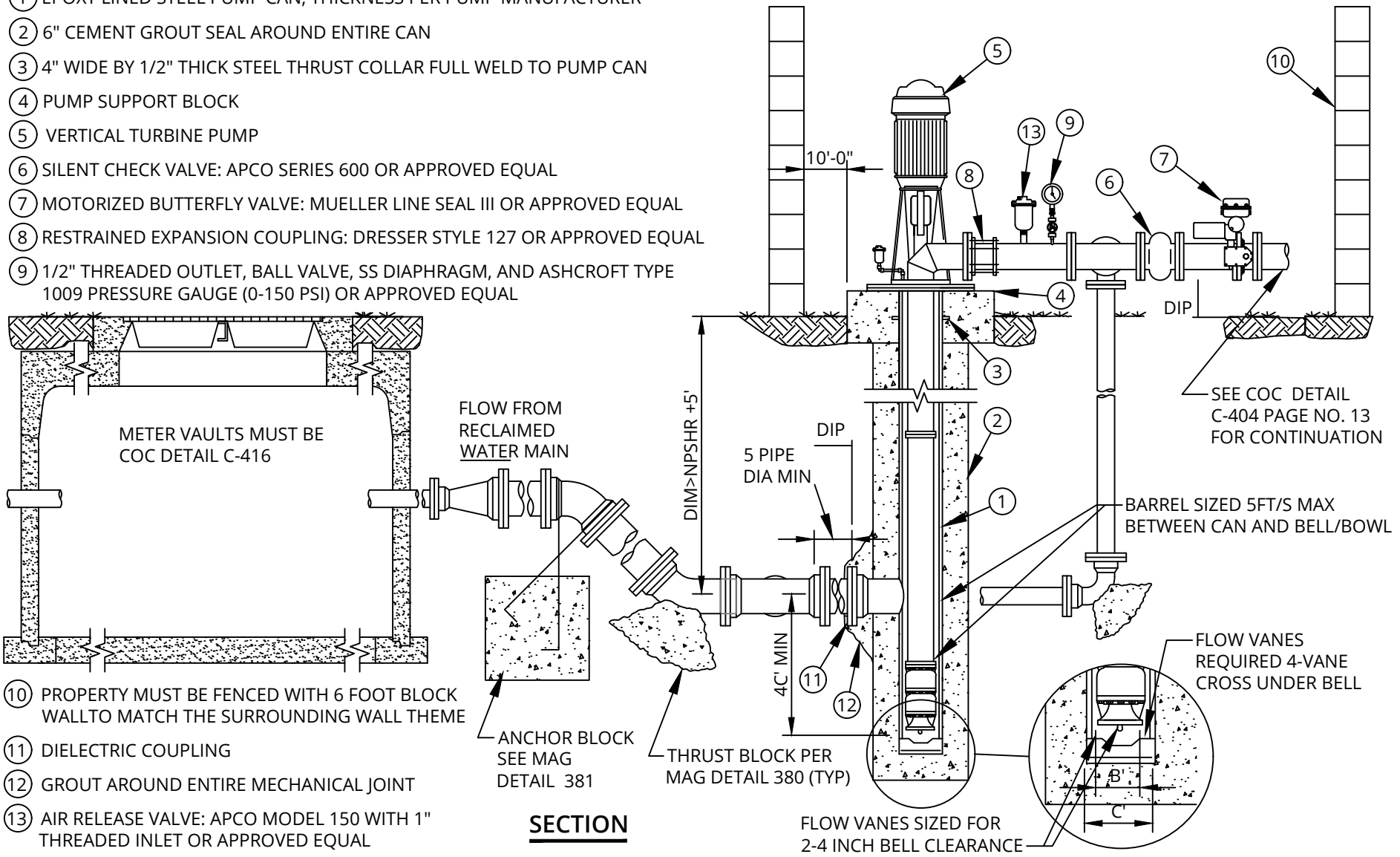
(3.) PROPERTY MUST BE FENCED WITH 6' BLOCK WALL TO MATCH THE SURROUNDING WALL THEME

(4.) PROVIDE 8"x4" REDUCER FOR CONTINUATION OF INSTALLATION OF 8" DIAMETER WATER SERVICE CONNECTION LINE, REDUCER MUST BE LOCATED 2'-0" MAX FROM METER VAULT

(5.) AIR RELEASE VALVE: APCO MODEL 50 WITH 1/2" THREADED INLET OR APPROVED EQUAL

DETAIL NO.			APPROVED:	DETAIL NO.
C-404-11	CHANDLER arizona	**6" RECLAIMED WATER IRRIGATION SERVICE LINE CAN PUMP TYPE**	01-09-2014	**C-404-11**

1. EPOXY LINED STEEL PUMP CAN, THICKNESS PER PUMP MANUFACTURER
2. 6" CEMENT GROUT SEAL AROUND ENTIRE CAN
3. 4" WIDE BY 1/2" THICK STEEL THRUST COLLAR FULL WELD TO PUMP CAN
4. PUMP SUPPORT BLOCK
5. VERTICAL TURBINE PUMP
6. SILENT CHECK VALVE: APCO SERIES 600 OR APPROVED EQUAL
7. MOTORIZED BUTTERFLY VALVE: MUELLER LINE SEAL III OR APPROVED EQUAL
8. RESTRAINED EXPANSION COUPLING: DRESSER STYLE 127 OR APPROVED EQUAL
9. 1/2" THREADED OUTLET, BALL VALVE, SS DIAPHRAGM, AND ASHCROFT TYPE 1009 PRESSURE GAUGE (0-150 PSI) OR APPROVED EQUAL
10. PROPERTY MUST BE FENCED WITH 6 FOOT BLOCK WALLTO MATCH THE SURROUNDING WALL THEME
11. DIELECTRIC COUPLING
12. GROUT AROUND ENTIRE MECHANICAL JOINT
13. AIR RELEASE VALVE: APCO MODEL 150 WITH 1" THREADED INLET OR APPROVED EQUAL

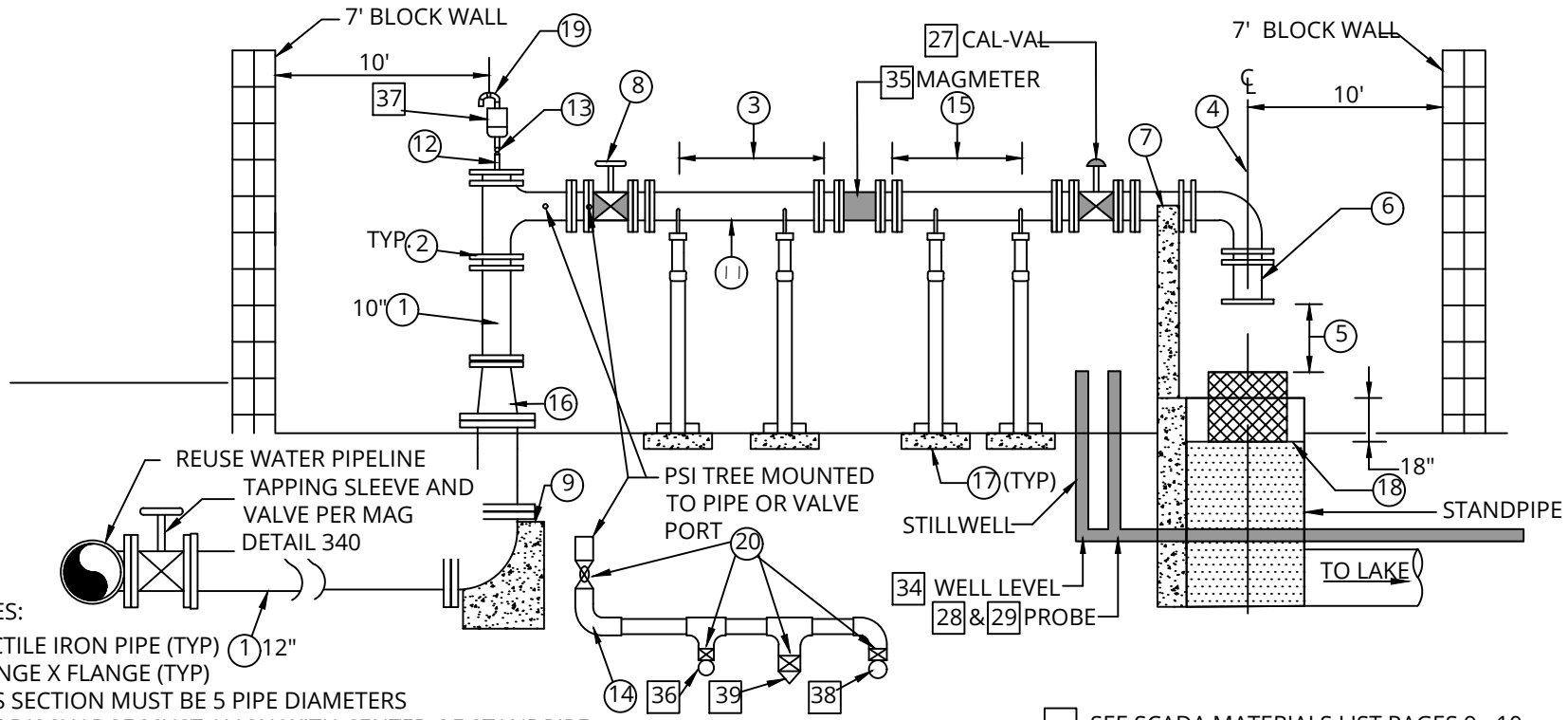


SECTION

NPSHR = PUMP NET POSITIVE SUCTION HEAD REQUIRED
B' = PUMP SUCTION BELL DIA
C' = CAN OUTSIDE DIA

NOTE:
ALL PIPING MUST BE DUCTILE IRON (DIP) AS SHOWN.

DETAIL NO.			APPROVED:	DETAIL NO.
C-404-12	CHANDLER arizona	**6" RECLAIMED WATER IRRIGATION SERVICE LINE CAN PUMP TYPE**	06-12-2008	**C-404-12**



NOTES:

1. DUCTILE IRON PIPE (TYP)
2. FLANGE X FLANGE (TYP)
3. THIS SECTION MUST BE 5 PIPE DIAMETERS
4. PIPE DISCHARGE MUST ALIGN WITH CENTER OF STANDPIPE
5. THIS SPACING MUST BE GREATER THAN 2 PIPE DIAMETERS FOR AIR GAP
6. 1' SPOOL PIECE
7. PROVIDE CONCRETE SUPPORTS AS SHOWN
8. PROVIDE RESILIENT SEAT GATE VALVE
9. PROVIDE THRUST BLOCK PER MAG STD DTL 380
10. (NOT USED)
11. 10" D.I.P., TYP.
12. ALL 2" & 1" PIPE SHOULD BE BRASS
13. 2" BALL-CORP VALVE BRASS MALE IN/OUT
14. 1" PSI TREE-SEE DETAIL-BRASS
15. THIS SECTION MUST BE 3 PIPE DIAMETERS
16. REDUCER MAY BE INSTALLED 12" X 10"
17. PIPE SUPPORTS BOLTED TO 6" CONCRETE FOOTING (TYP)
18. METAL GRATE BOX OVER TOP OF STANDPIPE
19. ALL BRASS FITTINGS
20. 1" BALL-CORP VALVE BRASS

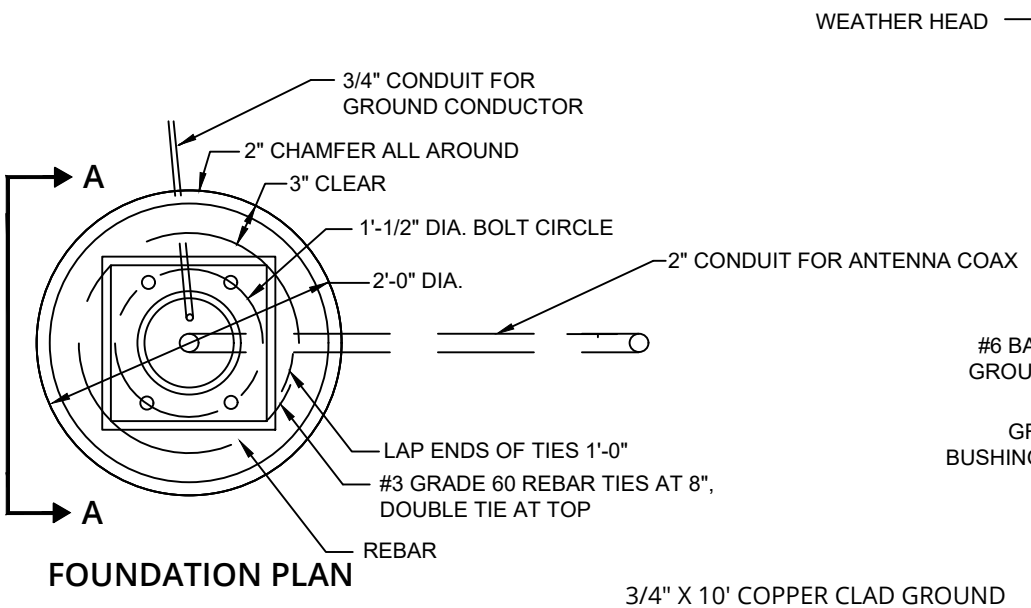
SEE SCADA MATERIALS LIST PAGES 9 - 10

27. ELECTRONIC CONTROL VALVE AND CONTROLLER CLA-VAL #131G-37BY
28. LEVEL PROBE WIRE #3WI
29. PROBE FITTING 3E-3B
34. WELL LEVEL TRANSDUCER CWLTY
35. MAG METER CADILLAC #CMAGxRCF150SSFM
36. GAUGE #AX9831741-4
37. AIR RELIEF/VACUUM CHECK 2" #144DAT.1-F2-16/57
38. PRESSURE TRANSMITTER #CPLVY-0303-2013-Z-RNG
39. CALIBRATION PORT: BRASS

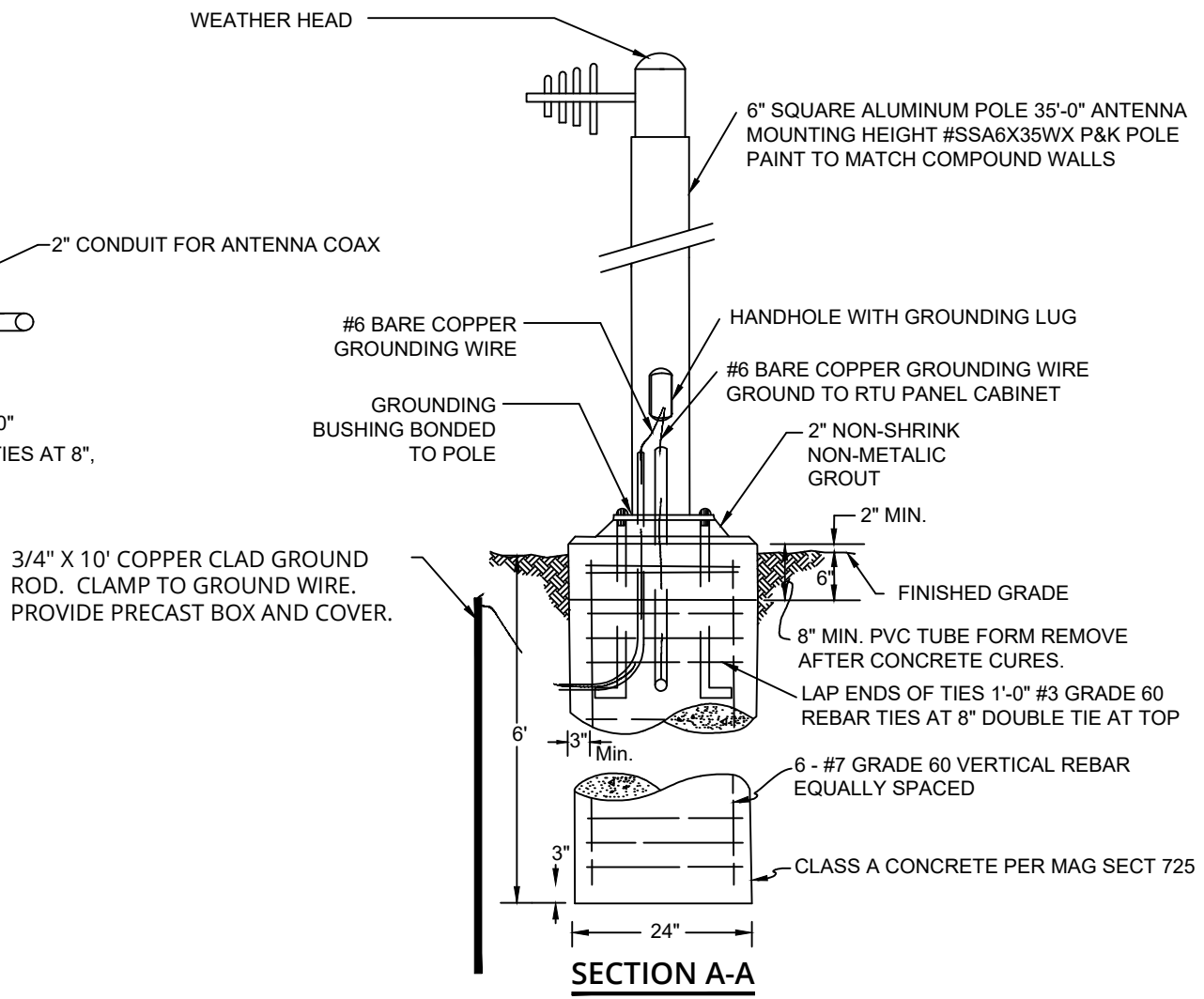
NOTES:

1. PROPERTY MUST BE DEDICATED TO CITY AND KEYED TO CITY LOCK SYSTEM.
2. PROPERTY MUST BE FENCED WITH 7' BLOCK WALL TO MATCH THE SURROUNDING WALL THEME.
3. THE TURNOUT STRUCTURE MUST HAVE THE CAPACITY TO CONVEY 2,000 GPM WITHOUT OVERFLOWING.
4. WIRING TRENCH AND JUNCTION BOXES MUST BE LOCATED ON FAR SIDE OF PIPE AWAY FROM GATE.

DETAIL NO.			APPROVED:	DETAIL NO.
C-405-1	CHANDLER arizona	**LARGE WATER USER (WITH LAKE) RECLAIMED WATER TURNOUT**	01-08-2009	**C-405-1**



FOUNDATION PLAN

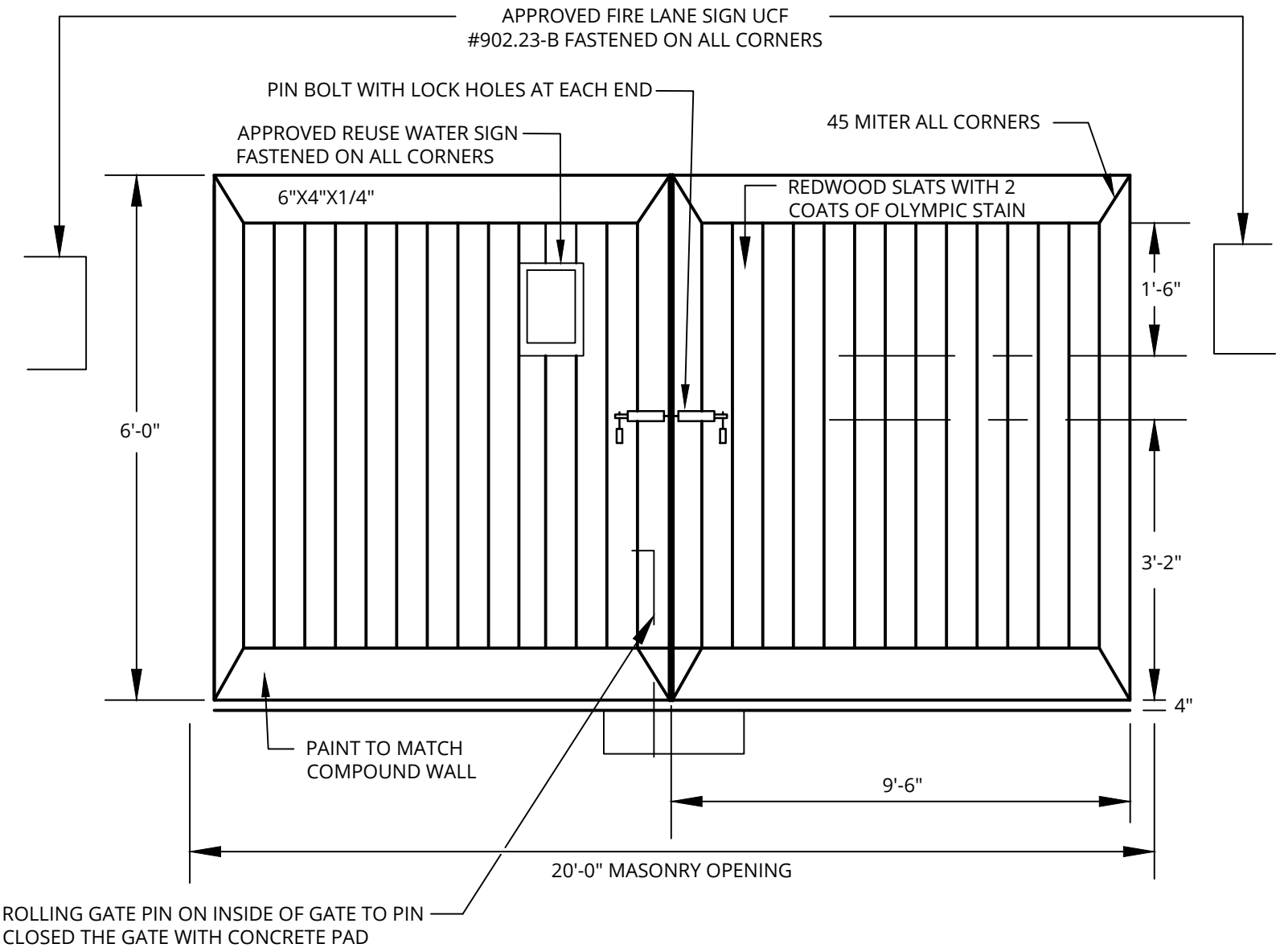


SECTION A-A

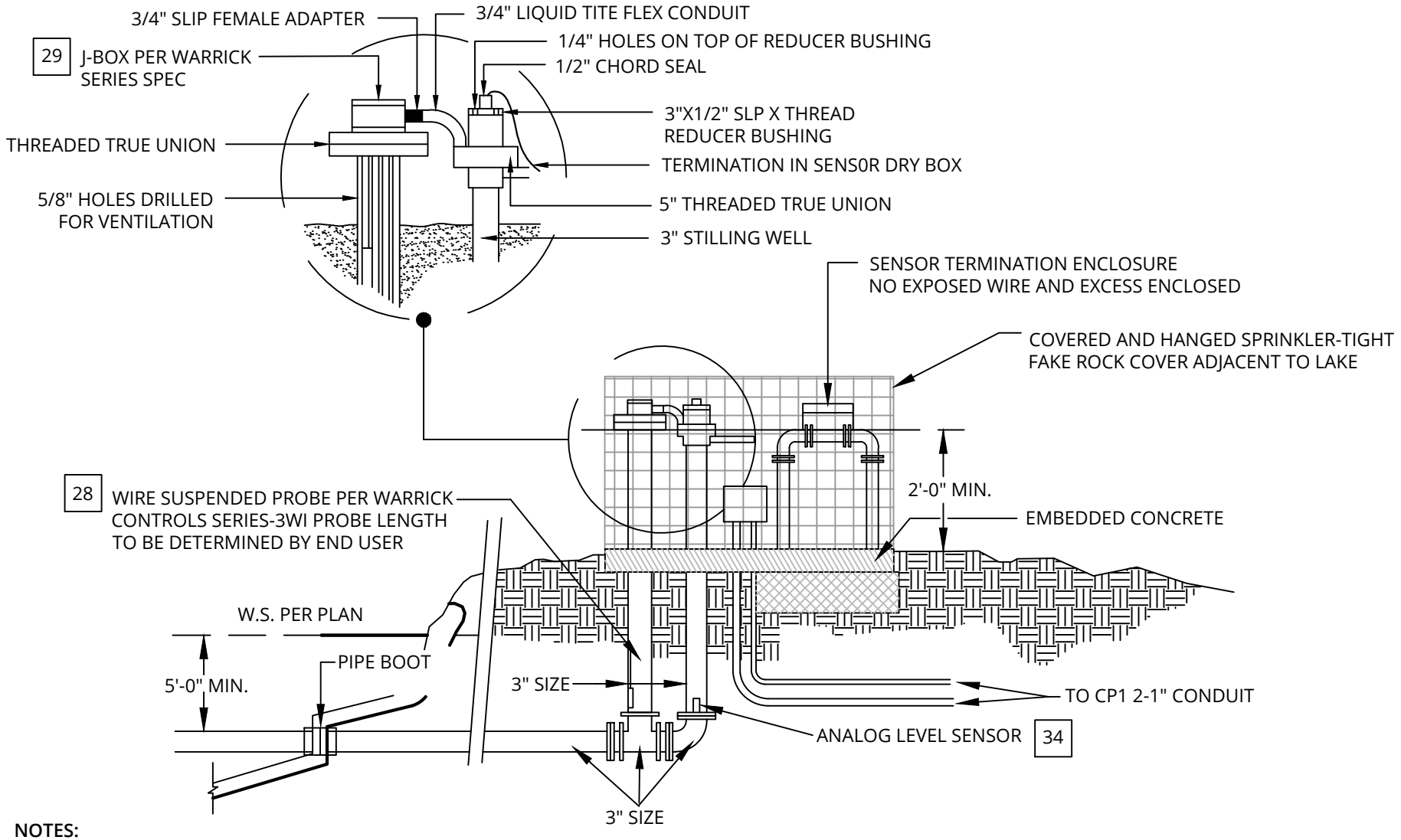
NOTES:

1. THE COMPLETE INSTALLATION MUST WITHSTAND 110 MHP WINDS.
2. ANCHOR BOLTS, LEVELING NUTS, AND POLE BASE MUST BE FABRICATED BY POLE MANUFACTURER.

DETAIL NO.			APPROVED:	DETAIL NO.
C-405-2	CHANDLER arizona	**ANTENNA**	01-08-2009	**C-405-2**



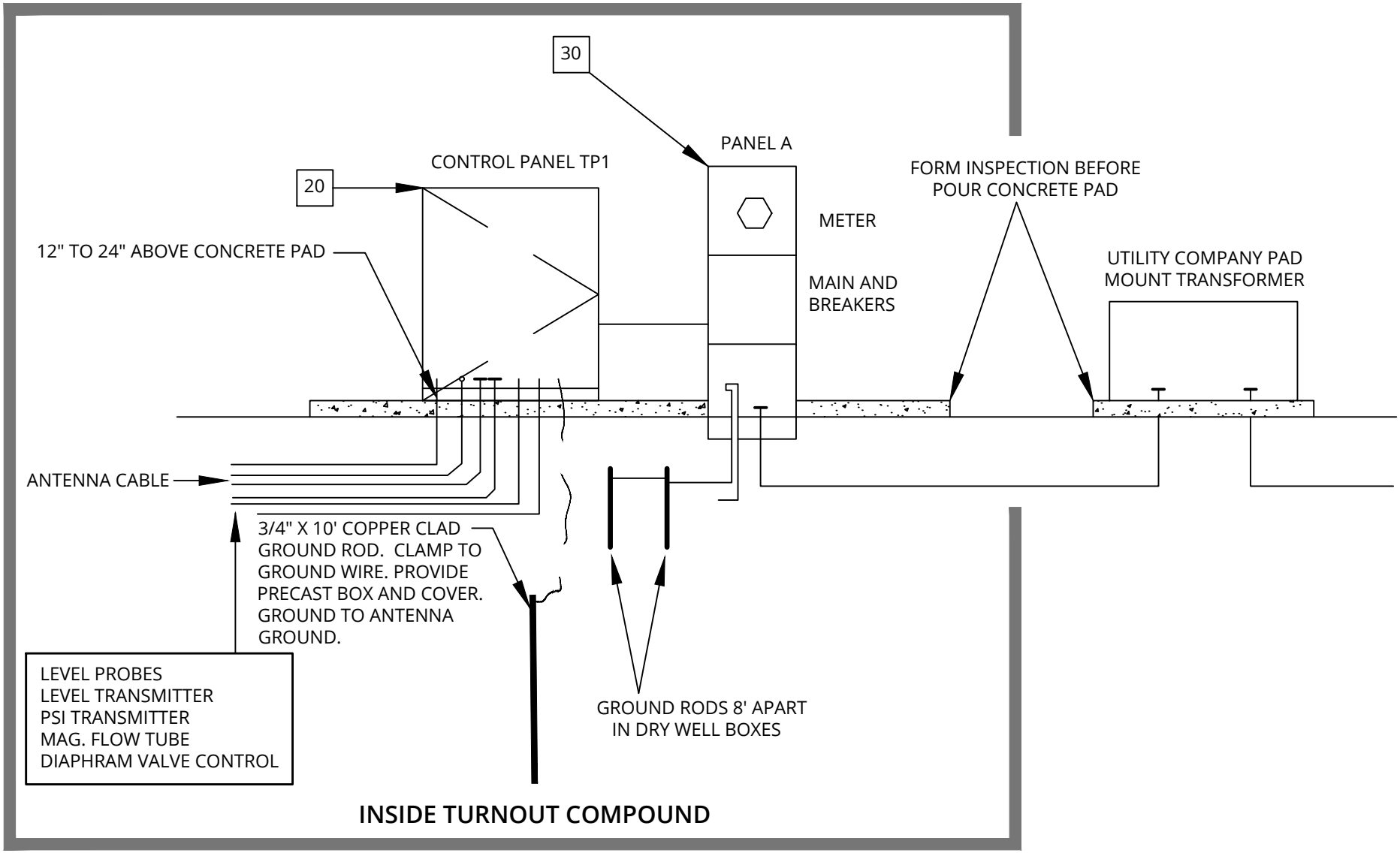
DETAIL NO.			APPROVED:	DETAIL NO.
C-405-3	CHANDLER arizona	**ROLLING GATE**	01-08-2009	**C-405-3**



NOTES:

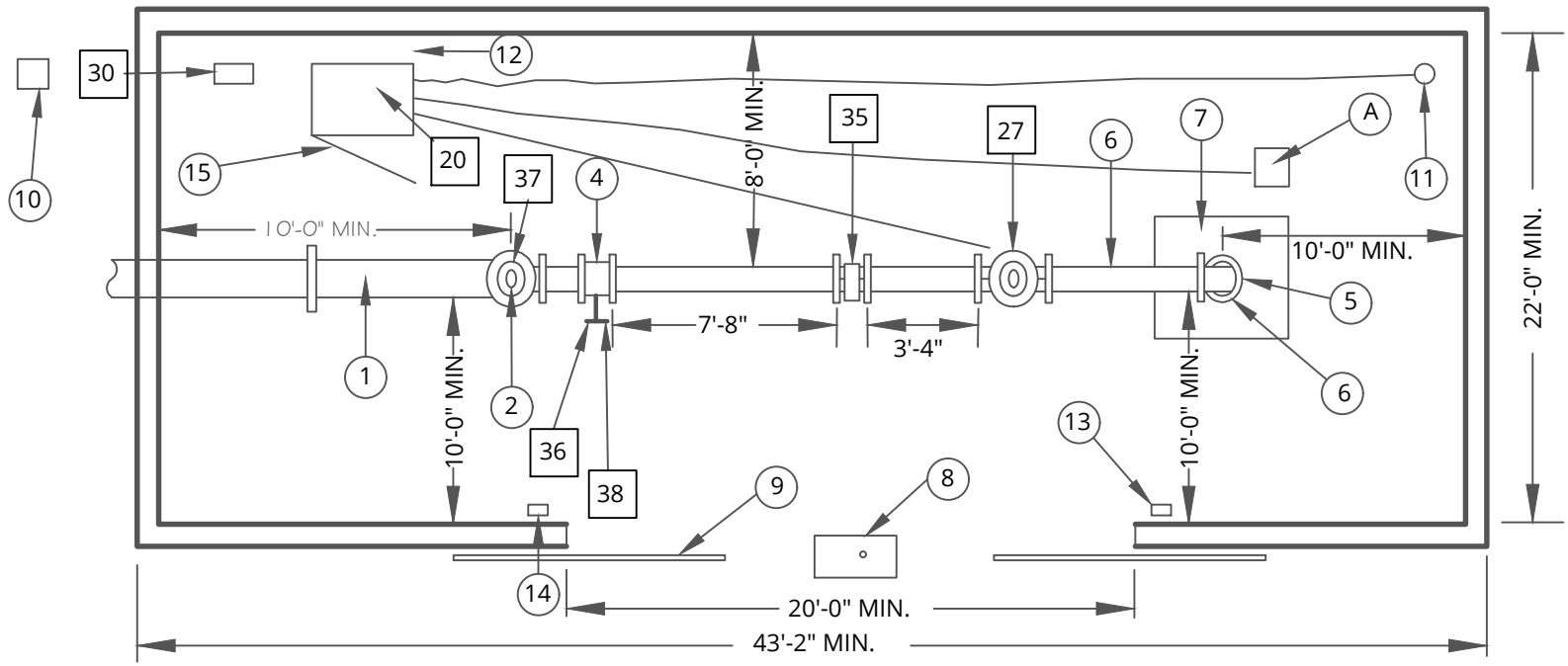
1. LEVEL SENSORS MAY BE LOCATED WITHIN WALLED TURNOUT COMPOUND OR ADJACENT TO LAKE.
2. WHERE ADJACENT TO LAKE, LEVEL SENSORS MUST BE PROTECTED BY A SCREENED ENCLOSURE COVER BY SIMULATED ROCK.
3. SIMULATED ROCK MUST BE KRUP.COM INC #AE-CROWN, ORBIT IRRIGATION PRODUCTS INC #35016 GRANITE ROCK BOX, OR
4. ARMORCAST PRODUCTS #P218
5. LEVEL CONTROL LOCATION MUST BE FIELD LOCATED IN CONSULTATION WITH MR. DAVID CLARK (480) 783-3720

DETAIL NO.			APPROVED:	DETAIL NO.
C-405-4	CHANDLER arizona	**LEVEL SENSORS**	01-08-2009	**C-405-4**



INSIDE TURNOUT COMPOUND

DETAIL NO.			APPROVED:	DETAIL NO.
C-405-5	CHANDLER arizona	**METERPED**	01-08-2009	**C-405-5**



NOTES:

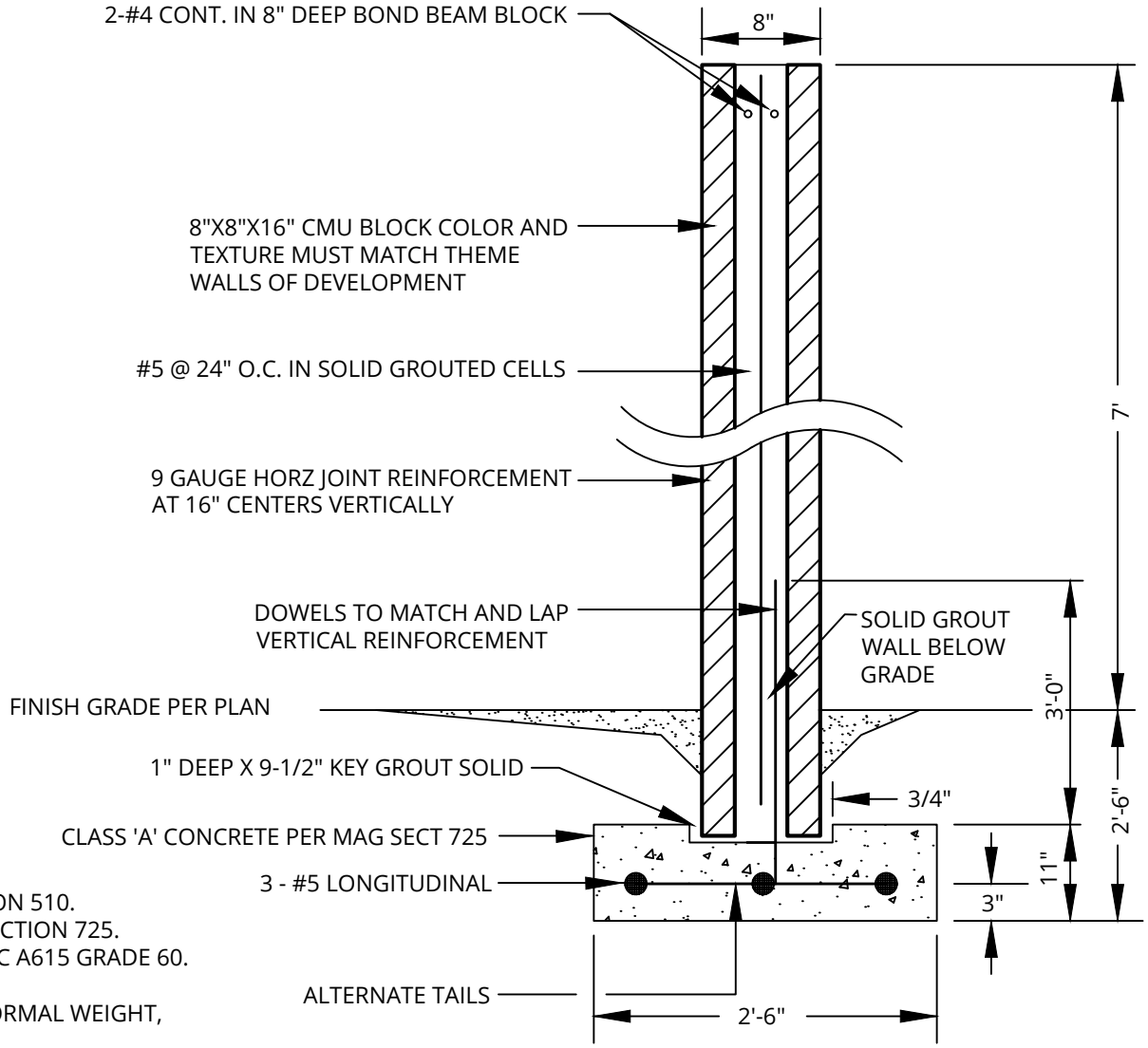
1 12" DUCTILE IRON PIPE
2 2" BALL-CORP. STOP-MALE BRASS PIPE IN/OUT
3 12"X10" CONCENTRIC REDUCER (NOT SHOWN)
4 10" VALVE PER "KENNEDY VALVE" KENSEAL II WITH FLANGED ENDS
5 10" DUCTILE IRON 90 DEGREE ELBOW
6 10" DUCTILE IRON SPOOL PIECE
7 SAFETY SCREEN
8 ROLLING GATE PIN PAD
9 ROLLING GATE PIN ON INSIDE
10 UTILITY COMPANY PAD MOUNT TRANSFORMER
11 ANTENNA
12 MAINTAIN 2' CLEARANCE
13 LIGHT & AC OUTLET
14 LIGHT AC OUTLET & SWITCH
15 DOOR OPENING AS SHOWN
A LEVEL SENSORS

BOXED NOTES: SEE SCADA MATERIAL LISTS PAGES 9 & 10

20 CONTROL PANEL
27 CLA-VAL ELECTRIC VALVE
30 SRP METER PAD
35 10" MAG. METER
36 4" PRESSURE GAUGE
37 2" AIR RELEASE VALVE/VACUUM CHECK
38 PRESSURE TRANSMITTER

ALL CONDUIT RUNS MUST BE LOCATED ON CONTROL PANEL SIDE OF COMPOUND.

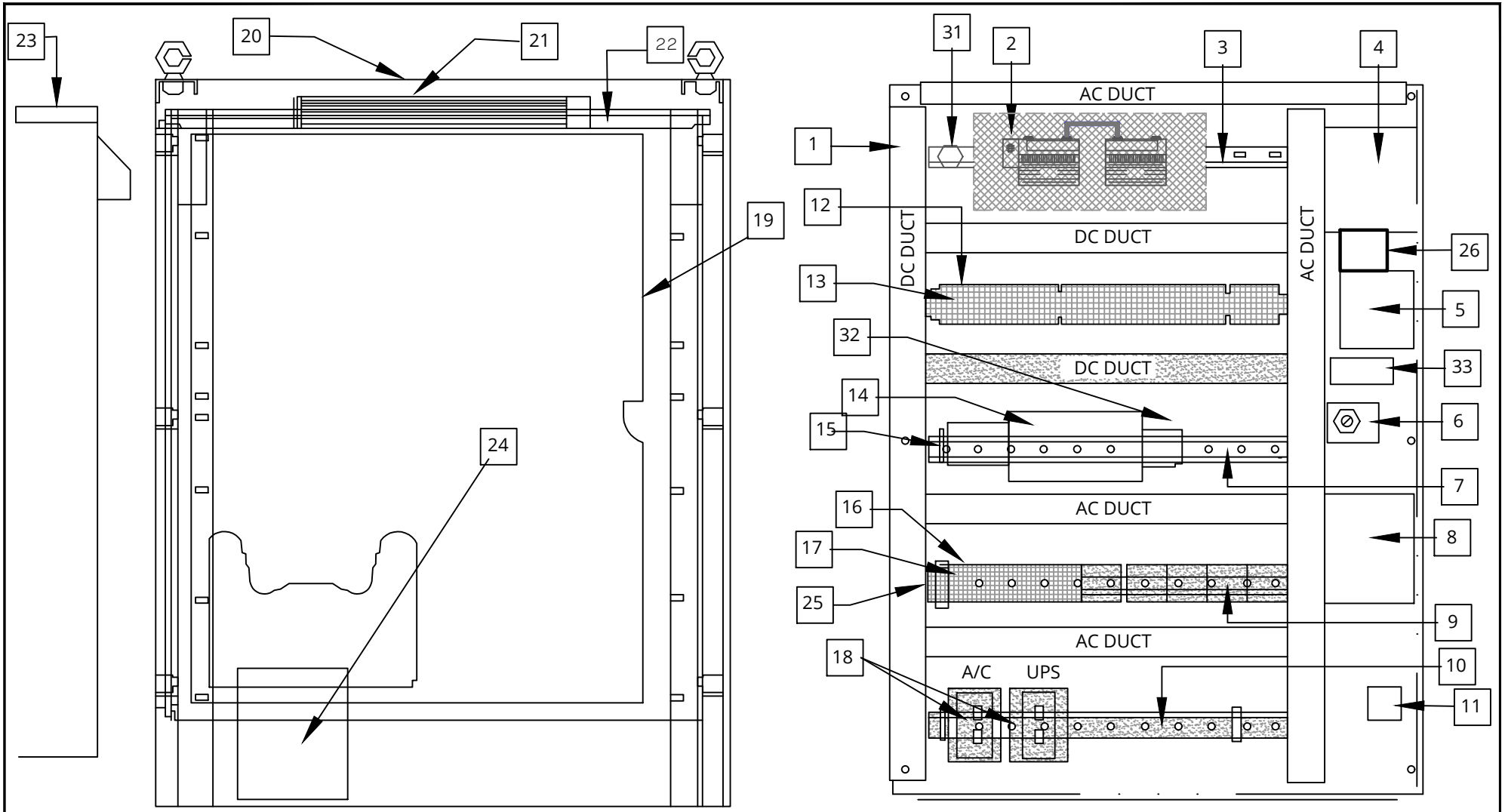
DETAIL NO.			APPROVED:	DETAIL NO.
C-405-6	CHANDLER arizona	**TURNOUT COMPOUND**	01-08-2009	**C-405-6**



NOTES:

1. CONSTRUCTION IN ACCORDANCE WITH MAG SECTION 510.
2. CONCRETE MUST BE IN ACCORDANCE WITH MAG SECTION 725.
3. REINFORCING STEEL MUST CONFORM TO ASTM SPEC A615 GRADE 60.
4. CONTROL JOINTS AT 24' INTERVALS.
5. MASONRY: f'm=1500 psi, ASTM C90, MEDIUM OR NORMAL WEIGHT, RUNNING BOND, SLUMP BLOCK.
6. MORTAR: ASTM C270, TYPE S.
7. GROUT: ASTM C476, TYPE COARSE.
8. JOINT REINFORCEMENT: 9 GAUGE LADDER OR TRUSS TYPE, STANDARD WEIGHT, fy=33,000psi, WIRE PER ASTM A82.

DETAIL NO.			APPROVED:	DETAIL NO.
C-405-7	CHANDLER arizona	**COMPOUND WALL**	01-08-2009	**C-405-7**



SEE SCADA MATERIAL LIST PAGES 9-10

AC WIRING - RED COLORING HOT
AC WIRING - GREEN COLORING EARTH GROUND
DC WIRING - BLUE COLORING +
ANALOG WIRING - CABLE SHIELDED

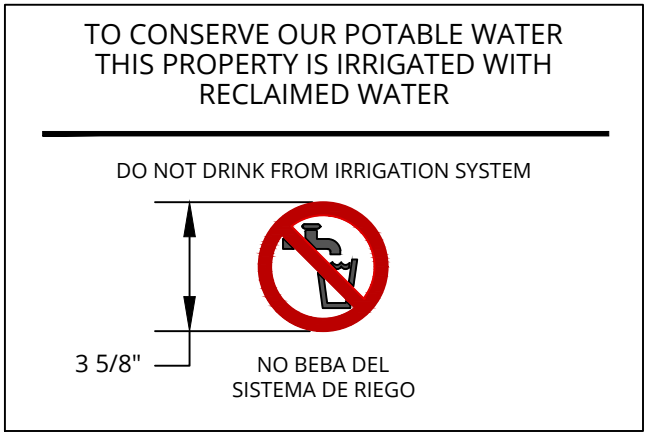
AC WIRING - WHITE COLORING COMMON

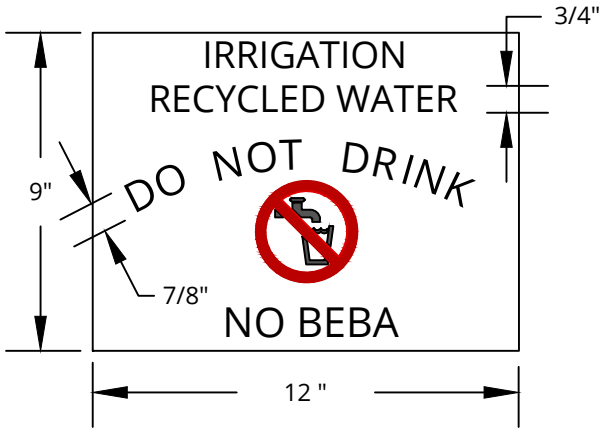
DC WIRING - WHITE/BLUE COLORING -
AC & DC NOT IN SAME RACEWAY

DETAIL NO.			APPROVED:	DETAIL NO.
C-405-8	CHANDLER arizona	**SCADA CABINET**	01-08-2009	**C-405-8**

ITEM	DESCRIPTION	MFG	CATALOG	QTY
1	PLASTIC WIRE DUCT	PANDUIT		
2	DIGITAL 16 INPUT/16OUTPUT BASE	MODICON SUMMIT 602-267-1000	MODEL 170 ADM35010	1
2	I/O BUS ADAPTER	MODICON	MODEL 170 INT11000	1
2	ANALOG INPUT BASE	MODICON	MODEL 170 AAI1400	1
2	PROCESOR WITH INTERBUS PORT	MODICON	MODEL 171 CCS76000	1
2	PROCESSOR OPTION ADATOR (REDUNDANT MB+)CLOCK	MODICON	MODEL 172 PNN26022	1
2	I/O BUS ADAPTER CABLE	MODICON		1
3	STANDARD DIN RAIL 35 MM X 7.5 MM	ALLEN BRADLEY	199-DR1	1
4	MAG FLOWMETER CONVERTER PANEL MOUNT 120 VAC, 4-20 MA, HART, LCD DISPLAY FOR <16 INCH DETECTORMAG FLOW TUBE SEPARATE ELECTRONICS	CADILLAC-AXIOM SOUTHWEST 480-814-7706	CMCRUXXFTFM 2AS LENGTH IN FEET 3AE LENGTH IN FEET	1
5	PROTOCOL CONVERTER HART TO MODBUS RTU W/CONFIGURATION SOFTWARE	ARCOM 1-913-549-1000	HT-DS-1	1
6	SELECTOR SW--3 POS MAINT, NEMA 4/13 30.5 MM, KNOB 1NO-1NC SCREW TERMINALS	SQUARE D	9001KS43BH13	1
7, 10, 12 & 25	RAISED DIN RAIL 35 MM X 7.5 MM	ALLEN BRADLEY BORDER 602-244-0331	1492-DR6	4
8	RADIO TRANSCIEVER LICENSED 800 TO 960 MHZ, 5 WATTS, -30 DEG C TO + 60 DEG.C	MDS RADIO BORDER STATES ELECTRIC 602-244-0331	9710A	1
9	LEVEL RELAY PLUG-IN DRDT, 10KOHM, 120 VAC, 10 SEC W/ BASE	WARRICK	16DMB1A0-X-10-10	2
9	RELAY--ICE CUBE ICE CUBE 24 VDC COIL DPDT, 10 A CONTACTS W/NR51 BASE	SQUARE D	8591KP12V14	2
9	RELAY--ICE CUBE ICE CUBE 120 VAC COIL DPDT, 10 A CONTACTS W/NR51 BASE	SQUARE D	8501KP12V20	1
11	LIGHTNING PROTECTOR FLANGE MOUNT 1225-1000MHZ, F/F 220 ? J	POLYPHASER	IS-50NX-C2	1
13 & 16	TERMINAL BLOCK DOUBLE FEED--THROUGH BLUE, 24-12 AWG 32 A .25 INCH	PHOENIX CONTACT	UDK 4 BU	74
14	POWER SUPPLY TRACK MOUNTED 24VDC, 240W, 10A W/INTERNAL FUSING	IDEC	PSR5-G24	1
15	POWER SUPPLY TRACK MOUNTED 12VDC, 30W, 2.5A W/INTERNAL FUSING	IDEC	PSR5-C12	1
17	TERMINAL BLOCK DOUBLE FEED--THROUGH GRAY, 24-12 AWG 32 A .25 INCH	PHOENIX CONTACT	UDK 4	26
18	DUPLEX RECEPTACLE TRACK MOUNTED 120V, 15A	PHOENIX CONTACT	EM-DUO/120/15	2
19	BACKPANEL, PAINTED STEEL FOR FS ENCLOSURE	HOFFMAN BROWN WHOLESALE 602-275-8521	A60P36F1	1
20	ENCLOSURE, FREE STANDING, NEMA 12, PAINTED STEEL	HOFFMAN	A603624FS	1
21	LIGHTING PACKAGE, FLUORESCENT, 115 VAC .63 AMPS PROVIDE BULBS (NOT IN PACKAGE)	HOFFMAN	A-LFM16D18	1
22	DRIP SHIELD FOR NEMA 12, 4 NEMA 3R, 36 IN WIDE	HOFFMAN	ADK36A	1
23	AIR CONDITIONER SIDE PANEL MOUNT 115 VAC, 4000 BTU	HOFFMAN	M33-0416-G010	1
24	UPS PRO LINE 850 VA FOR 9 MINUTES 26 MINUTES AT HALF POWER	TRIPPLITE	BCPRO850	1
26	ELECTRONIC VALVE CONTROLLER AND SIGNAL RETRANSMISSION MODULES	CLA-VAL ESCO 602-264-7946	131VC-1	1
27	10" PIPE DIAMETER WITH HEAVIER SPRING ELECTRIC VALVE	CLA-VAL ESCO 602-264-7946	131G-37BY	1
28	LEVEL PROBE WIRE SUSPENDED STAINLESS STEEL W/PVC COATED WIRE	WARRICK	3W1	3

ITEM	DESCRIPTION	MFG	CATALOG	QTY
29	PROBE FITTING, PIPE MOUNT, 2 IN , 3 PROBE, BRASS	WARRICK	3E-3B	1
30	LOW PROFILE PEDESTALS	TESCO #(916) 395-8800	26-000 typeIIIAF	1
31	TYPE T THERMOCOUPLE XMTR MINATURE SCALED 0 - 250 DEG F	AXIOM	AXT251-T-0-250F	1
32	1 POLE CIRCUIT BREAKER MINIATURE TRACK MOUNTED 16 A, B (FAST) CURVE MERLIN GERIN	SQUARE D	MG24118	1
33	LCD DISPLAY SCALEABLE FOR ENG UNITS INCHES AND FEET	AXIOM SOUTHWEST 480-814-7706	AX685	
34	WELL LEVEL TRANSDUCER .1% ACCURACY, HART DIGITAL PROTOCOL, RANGE 16.7 ' SPAN,CABLE LENGTH 20' WITH REMOTE DISPLAY	AXIOM SOUTHWEST 480-814-7706	CWLTY-0303-26-26W-05-RNG16.7ft-02-1907-LEN20ft/CWDSO-0325-2603	1
35	MAGMETER CADILLAC MAG FLOW TUBE 10", ANSI 150LB, 316SS, RUBBER	CADILLAC-AXIOM SOUTHWEST 480-814-7706	MODEL CMAGIRCF150SDSFM	1
36	GAUGE MODEL 30 INWC/0/+100PSI	AXIOM SOUTHWEST 480-814-7706	Ax9831741-4	1
37	AIR RELIEF/VACUUM CHECK 2"	GOBLE SAMPSON 480-969-3667	MODEL 144DAT.1-F2-16/57	1
38	PRESSURE TRANSMITTER WITH LOCAL DISPLAY TX -15 TO +285 PSI, CONFIGURATION, HART COMPATIBLE, 1/2" CONNECTION, LOOP POWERED 4 - 20 MA OUTPUT.	AXIOM SOUTHWEST 480-814-7706	CPLVY-0303-0213-Z-RNG(-15to+285psig)-02-1916-1326-22	1
39	BRASS CALIBRATION PORT¼ WITH CHECK AND CAP	RALSTON INDUSTRIES (800) 347-6575	#QTFT 2MBI	1
	COAXIAL CABLE --HELIAX 7/8 INCH W/CONNECTORS	ANDREW	LDF5-50	2
	MULTI-CONDUCTOR CABLE--BRAID SHIELDED CONTROL CABLE--18AWG--2 CONDUCTOR (19 X 30) 600V. -65 TO 200 DEG C	BELDEN	83321	9
	CABLE ASSEMBLY--CUSTOM--22AWG	GENERIC	RS323C	1
	RESISTOR 250 OHM, 1 WATT	GENERIC	RES-250	1
	PLUG NEMA 5-15P, 15A, 125 VAC	HUBBEL	HBL5266C	2
	BARE THERMOCOUPLE TYPE T 20 GA. 12" LONG PLUS 3" LEADS	OMEGA	BARE-20-T-12	1
	ANTENNA YAGI 890-960 MHZ W/ MOUNTING HARDWARE	SCALA	TY-900	1
	PANEL SUPPORT, STEEL	HOFFMAN	A60FSHDPS	1
	END BRACKET UNIVERSAL FOR 2 OR 3 LEVEL GRAY	PHOENIX CONTACT	E/UK 1	8
	FUSE TERMINAL BLOCK WITH SCREW CAP TRACK MOUNTED 250 VAC, 20 A FOR BUSSMAN GMC GLASS FUSES	PHOENIX CONTACT	UK 10-DREHSLA 250 (5 X 20)	4
	FUSE, GLASS 5 MM X 20 MM 250 VAC 3.15 AMP MEDIUM TIME DELAY	BUSSMAN	GMC 3.15A	
	END COVER UNIVERSAL GRAY	PHOENIX CONTACT	D-UDK 4	6
	TERMINAL BLOCK DOUBLE FEED--THROUGH GRN-YLW, 24-12 AWG, 32A GROUND TO RAIL .25 INCH	PHOENIX CONTACT	UDK 4-PE	8
	NAMEPLATE ENGRAVED PLASTIC BLACK W/ WHITE LETTERING 1 X 0.25 INCH, TEXT .1 IN TALL	GENERIC	NPGN1X.250LT	24
	NAMEPLATE ENGRAVED PLASTIC BLACK W/ WHITE LETTERING 3 X 1 INCH, TEXT .1 & .2 IN TALL	GENERIC	NPGN312LT	2
	NAMEPLATE ENGRAVED PLASTIC BLACK W/ WHITE LETTERING 3 X 1 INCH, TEXT .1, .2 , & .15 IN TALL	GENERIC	NPGN312L3PT	1
	NAMEPLATE ENGRAVED PLASTIC BLACK W/ WHITE LETTERING 3 X 1 INCH, TEXT .5 IN TALL	GENERIC	NPGN311L	1
	CUSTOM BRACKET PAINTED STEEL 18 GA DIMENSIONS AS SHOWN	GENERIC	BRKT-1	1
	METAL LEGS TO RAISE PANEL A MINIMUM OF 12" --MAXIMUM 24" ABOVE THE PAD	HOFFMAN	SEE OPTION	1 set





NOTES:

COLOR: COPY: WHITE
BACKGROUND: PURPLE (PANTONE 512)
SIGN PANEL: 1/8" ALUMINUM ALLOY 5052-H38 PER ASTM B 209
PROVIDE 3/8" BORDER BETWEEN PANEL AND BACKGROUND

DETAIL NO.			APPROVED:	DETAIL NO.
C-405-11	CHANDLER arizona	**SIGNAGE**	11-30-2009	**C-405-11**

ALL EQUIPMENT FURNISHED MUST BE NEW AND OF CURRENT DESIGN. LIKE EQUIPMENT MUST BE OF SAME MANUFACTURER.

THE CONTRACTOR MUST PURCHASE LABOR, MATERIALS,, APPARATUS, APPLIANCES, AND INSTRUMENTATION FROM LOCAL ARIZONA-BASED, AUTHORIZED, FACTORY-TRAINED ENGINEERING REPRESENTATIVES, NOT JUST A STOCKING DISTRIBUTOR. THEY MUST BE LOCATED WITHIN A 100-MILE RADIUS OF THE PROJECT AND HAVE BEEN IN THE VICINITY FOR A MINIMUM OF 5 YEARS.

DESCRIPTIVE DATA: SUBMIT COPIES OF COMPLETE DESCRIPTIVE LITERATURE, PERFORMANCE DATA, PHYSICAL DIMENSIONS, POWER AND SIGNAL CONNECTIONS FOR EACH COMPONENT AND EQUIPMENT TO BE FURNISHED. PROVIDE NAME OF MANUFACTURER, STYLE, AND COMPLETE MODEL NUMBER. LISTING ITEMS "AS SPECIFIED" WITHOUT BOTH MAKE AND MODEL OR TYPE DESIGNATION IS NOT ACCEPTABLE. SUBSTITUTIONS WILL NOT BE ALLOWED WITHOUT PRIOR APPROVAL.

COMPONENT DATA SHEETS: SUBMIT A COMPONENT DATA SHEET FOR EACH PIECE OF INSTRUMENTATION EQUIPMENT SIMILAR TO AN ISA S20 FORM. INCLUDE EQUIPMENT TAG NUMBER, MANUFACTURER'S MODEL NUMBER, LOCATION OF SERVICE, MATERIALS OF CONSTRUCTION, SIZE AND SCALE RANGE, CALIBRATED RANGE, SET POINTS, OPTIONAL ACCESSORIES AND ANY OTHER USEFUL INFORMATION.

CONTROL SYSTEM DRAWINGS: SUBMIT 11" X 17" DETAILED SHOP DRAWINGS INDICATING DIMENSIONS, COMPONENT LAYOUT, MOUNTING DETAILS, WIRING DIAGRAMS, NAMEPLATE LEGENDS AND BILL OF MATERIALS FOR EACH CONTROL PANEL.

WIRING DIAGRAMS MUST INCLUDE ALL INTERCONNECTIONS, INTER-WIRING AND TERMINALS BETWEEN ALL ELECTRICAL AND/OR INSTRUMENTATION UNITS. WIRE NUMBERS MUST BE CONTINUOUS FROM START TO FINISH. WIRE NUMBERS MUST NOT CHANGE WHEN GOING FROM ONE UNIT, CABINET, ENCLOSURE, TERMINAL OR ANY DEVICE TO ANOTHER.

THE SPECIFICATIONS REFERENCE KNOWN STANDARDS AND CODES. EACH SUCH STANDARD REFERENCED MUST BE CONSIDERED A PART OF THE SPECIFICATIONS TO THE SAME EXTENT AS IF REPRODUCED THEREIN IN FULL. THE FOLLOWING IS A REPRESENTATIVE LIST OF SUCH ASSOCIATIONS, INSTITUTES AND SOCIETIES, TOGETHER WITH THE ACRONYM BY WHICH EACH IS IDENTIFIED:

AIEE	AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS	NEC	NATIONAL ELECTRICAL CODE
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	NETA	NATIONAL ELECTRICAL TESTING ASSOCIATION
ICEA	INSULATED CABLE ENGINEERS ASSOCIATION	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
IEEE	INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS	UL	UNDERWRITER'S LABORATORIES, INC.

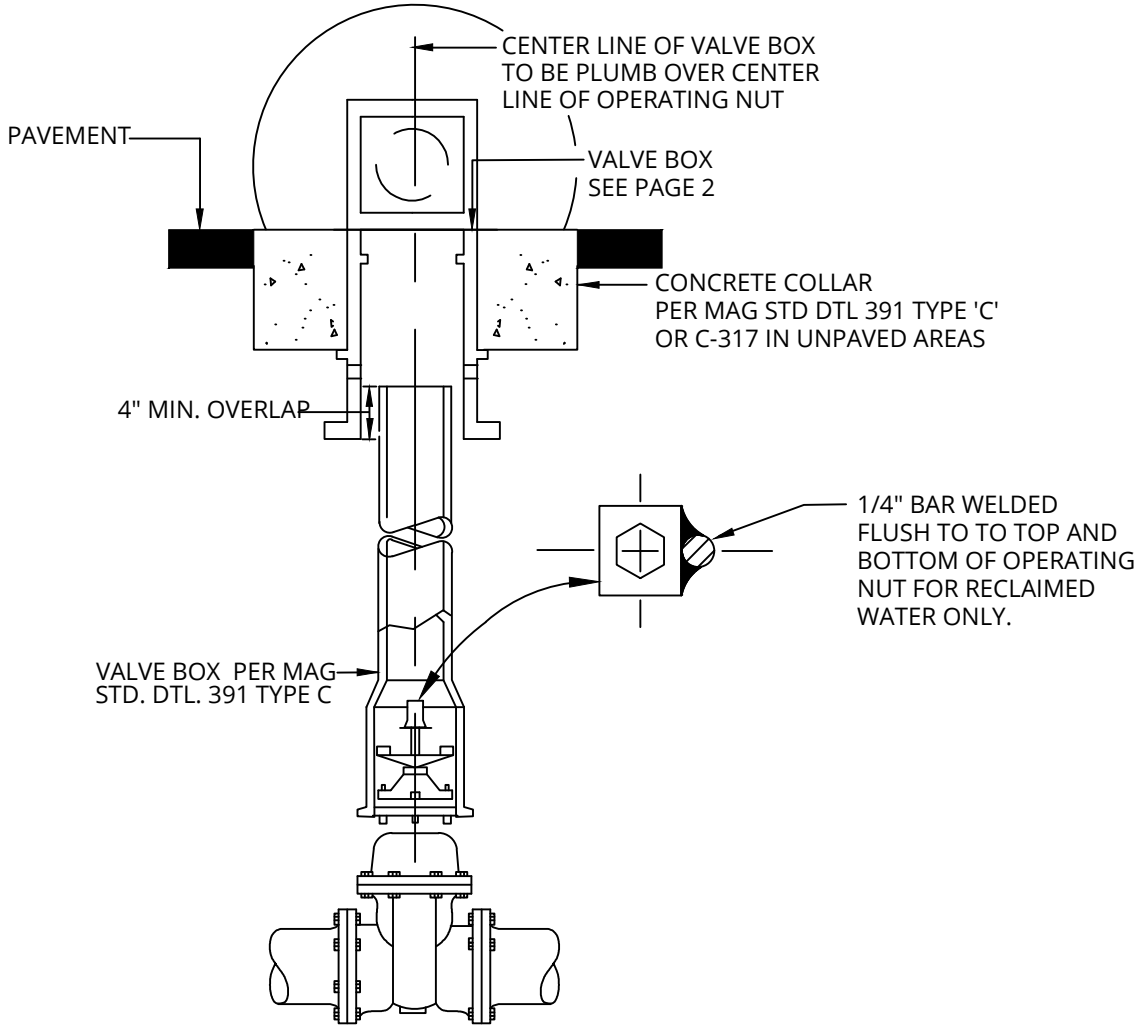
EVERY REFERENCE IN THE SPECIFICATIONS MUST MEAN THE LATEST PRINTED EDITION OF EACH IN EFFECT AT THE CONTRACT DATE OR LATEST EDITION AS ADOPTED BY THE LOCAL GOVERNING AUTHORITY.

SYSTEM RESPONSIBILITY INCLUDES BUT IS NOT NECESSARILY LIMITED TO FURNISHING SYSTEM COMPONENTS, SYSTEM INTEGRATION AND DESIGN, WIRING DIAGRAMS, INSTALLATION SUPERVISION, FIELD INSTRUMENT CALIBRATION, STARTUP, TESTING AND OPERATOR TRAINING. THE I&C CONTRACTOR MUST COORDINATE WITH THE CITY AND THE PROGRAMMER FOR IMPLEMENTING AND TESTING THE PLC PROGRAMS PRIOR TO THE RTU DELIVERY TO THE SITE.

THE I&C CONTRACTOR MUST BE A REPUTABLE SYSTEM INTEGRATOR AND BE AN UNDERWRITERS LABORATORY (UL) 508A RECOGNIZED PANEL FABRICATOR. THE I & C CONTRACTOR AND PROGRAMMER MUST BE SEPARATE SUBCONTRACTORS TO THE ELECTRICAL CONTRACTOR. THE I&C CONTRACTOR AND THE ELECTRICAL CONTRACTOR MUST BE LOCATED WITHIN A 100-MILE RADIUS OF THE PROJECT AND HAVE BEEN IN THAT VICINITY FOR A MINIMUM OF FIVE (5) YEARS. THE I&C CONTRACTOR AND THE ELECTRICAL CONTRACTOR CANNOT BE ONE AND THE SAME.

PROGRAMMER MUST PROVIDE FULL DOCUMENTATION--BOTH PAPER DOCUMENT OF PROCESS DESCRIPTIONS WITH PAGE NUMBERS AND INDEX AND IN-SOFTWARE NETWORKS, CONTACTS, COILS, AND REGISTERS WITH DESCRIPTIONS AT ALL POINTS. THE PROGRAMMING LANGUAGE MUST BE PROWORX NXT.

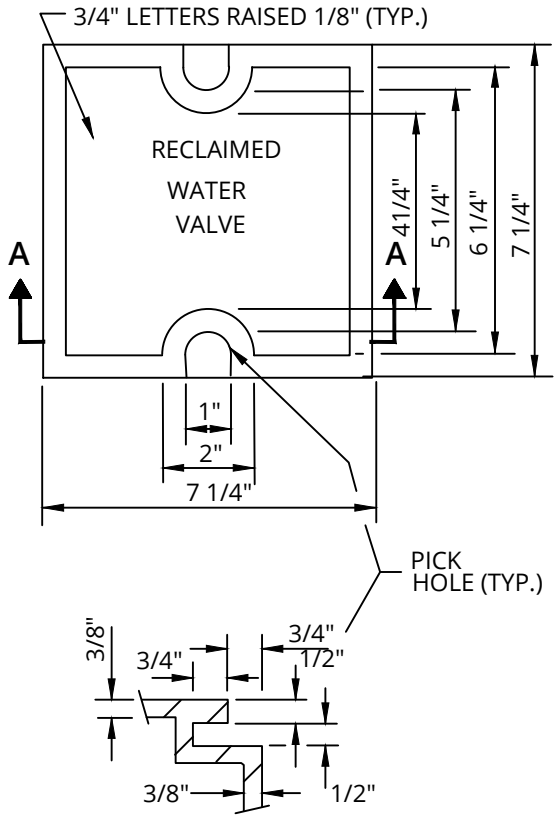
THE TURNOUT STRUCTURE MUST BE CAPABLE OF RECEIVING A MINIMUM OF 2,000 GPM THROUGH THE RECEIVING BOX BELOW THE AIR GAP WITHOUT OVERFLOWING.



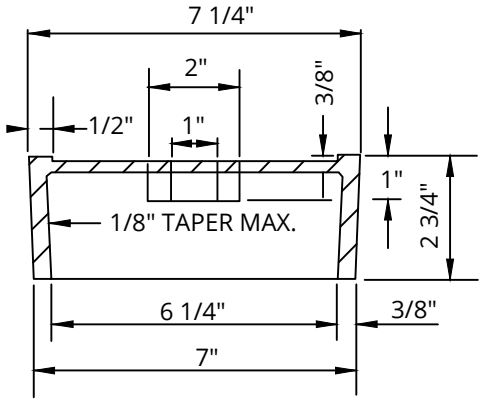
NOTES:

1. IN UNPAVED AREAS, CONCRETE COLLAR MUST CONFORM TO COC DETAIL C-317.
2. BACKFILL MUST BE 1/2 SACK CLSM. PER MAG SPECIFICATION 728.
3. VALVE BOXES MUST NOT BE INSTALLED WITHIN CONCRETE GUTTER, SIDEWALK, RAMPS OR VALLEY GUTTER.

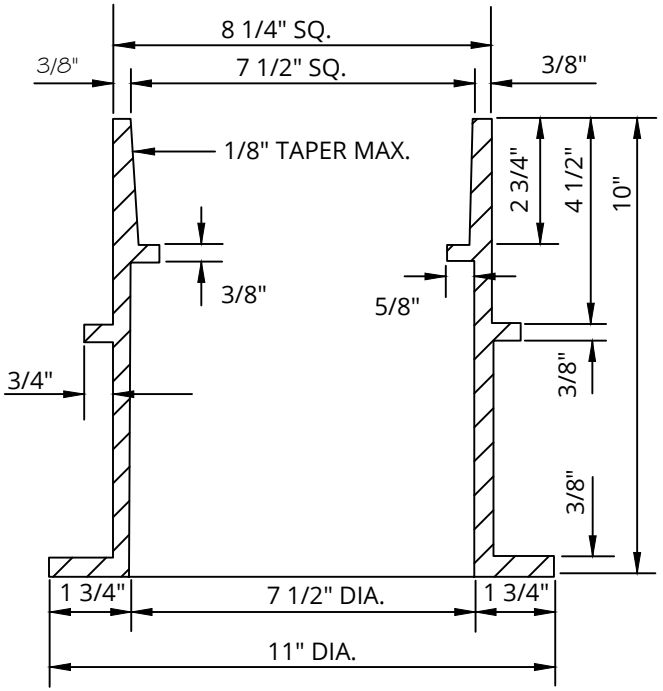
DETAIL NO.			APPROVED:	DETAIL NO.
C-406-1	CHANDLER arizona	**VALVE BOX INSTALLATION (RECLAIMED WATER)**	01-27-2025	**C-406-1**



SECTION



SECTION A-A
COVER

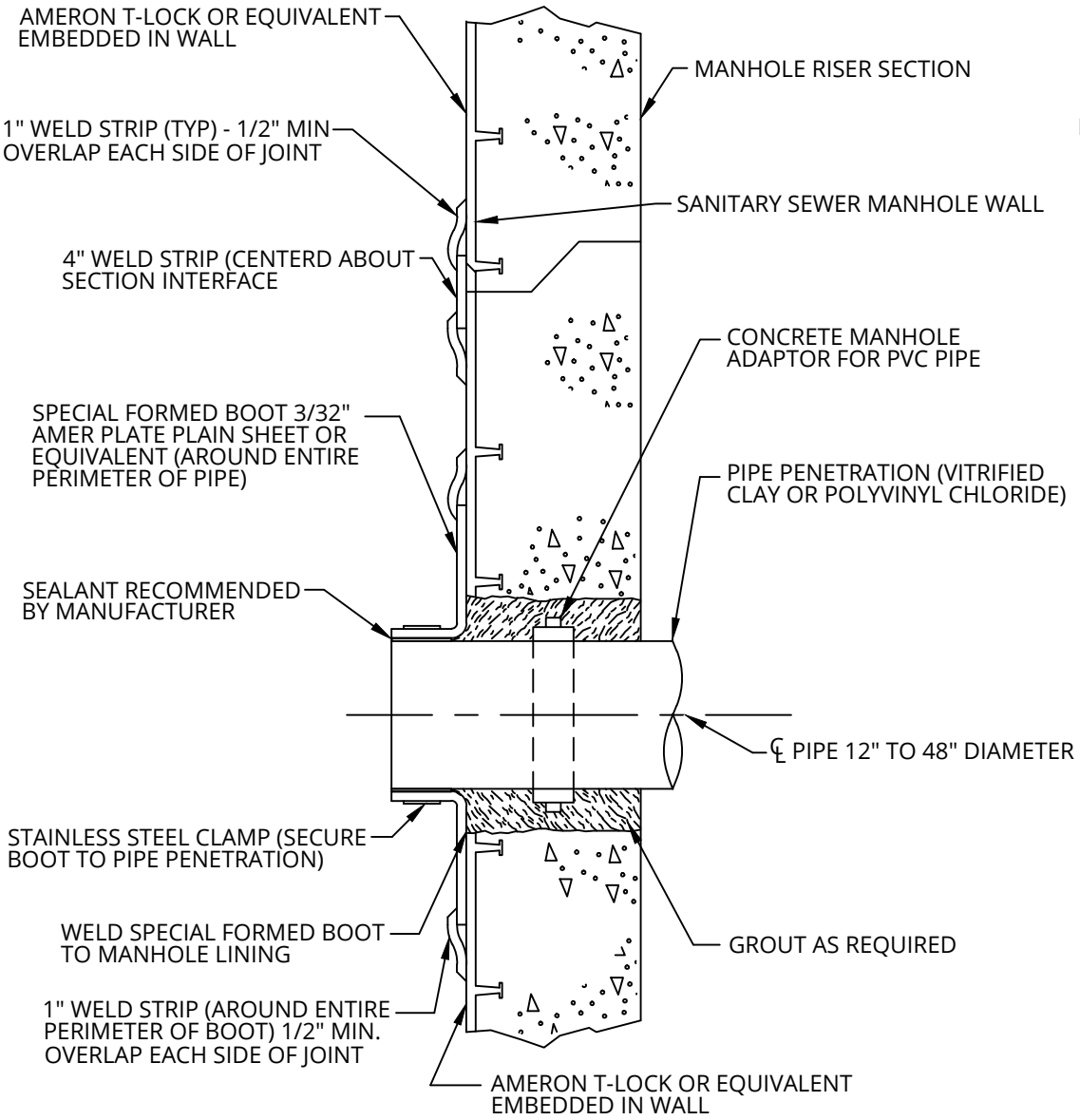


SECTION
VALVE BOX

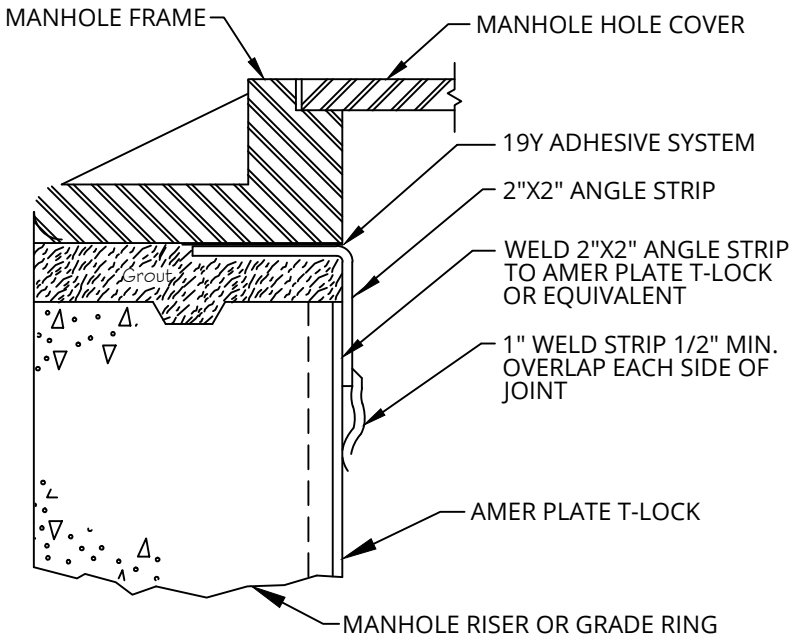
NOTES:

1. ALL MATERIAL MUST BE CAST IRON PER ASTM. A-48, CLASS 30 B.
2. THE SURFACES OF THE COVER AND BOX WHICH COME IN CONTACT WITH EACH OTHER MUST BE SMOOTH AND FREE OF ALL CASTING RIDGES AND BURRS TO PROVIDE A SNUG FIT.
3. THE VALVE BOX MUST HAVE A ROUND BOTTOM TO ACCOMMODATE RISER PIPE. THE TOP OF THE VALVE BOX MUST BE SQUARE.
4. THE LID AND INSIDE AND OUTSIDE OF THE RISER PIPE MUST BE COLORED PURPLE. COLOR MAY BE INCORPORATED INTO PIPE DURING MANUFACTURE OR PAINTED ONTO PIPE SURFACE. WHEN PAINTED THE PAINT MUST BE SEYMOUR SAFETY PURPLE.
5. LETTERING MUST BE RESTRICTED TO THAT SHOWN ON THE VALVE BOX COVER.

DETAIL NO. C-406-2	CHANDLER arizona	VALVE BOX INSTALLATION (RECLAIMED WATER)	APPROVED: 11-19-1999	DETAIL NO. C-406-2



PIPE PENETRATION DETAIL



NOTE:

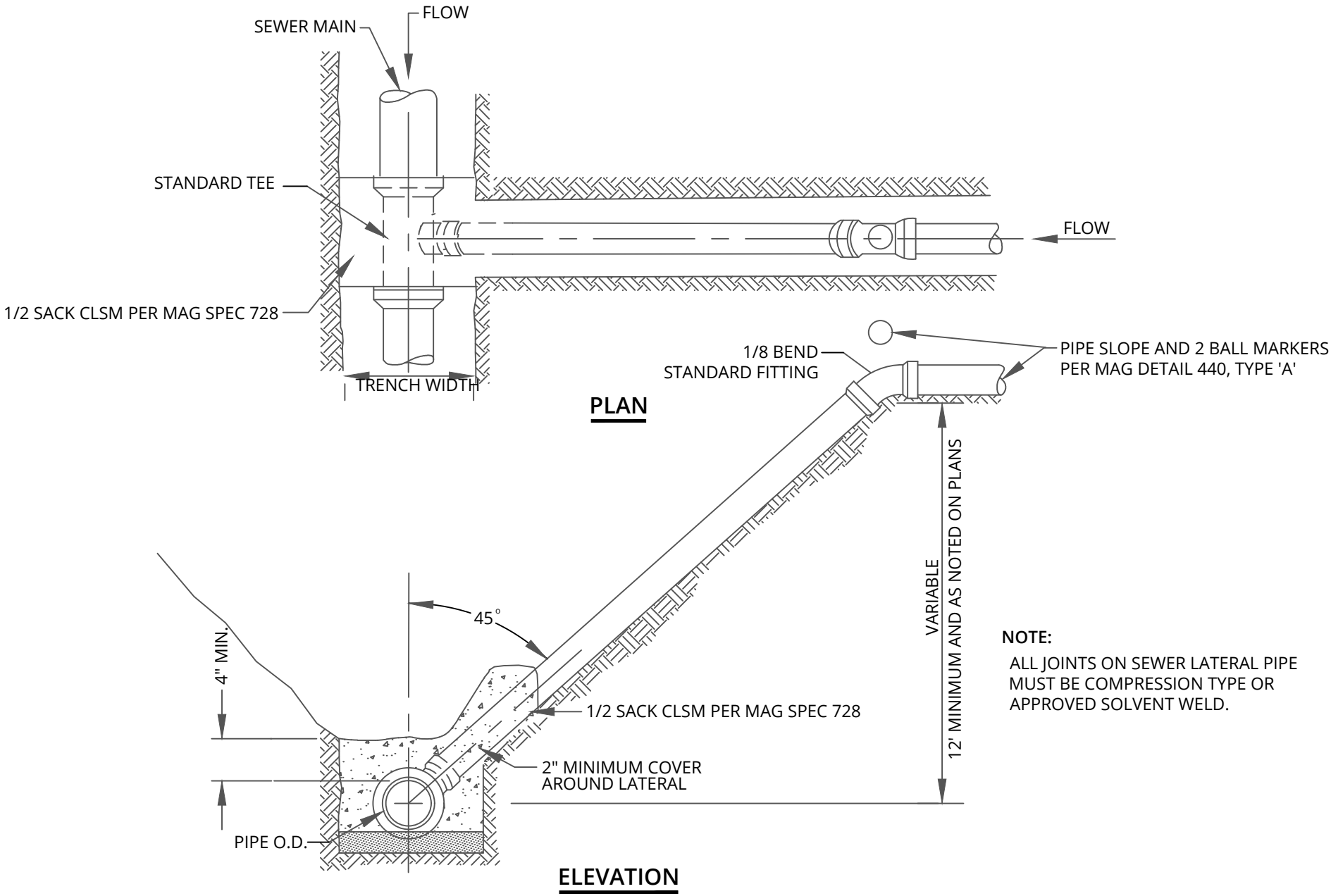
2" X 2" ANGLE STRIP TO BE ATTACHED TO MANHOLE FRAME USING 19Y ADHESIVE PRIOR TO SETTING FRAME.

MANHOLE FRAME TERMINATION DETAIL

NOTE:

ALL FIELD JOINTS FOR T-LOCK LINED MANHOLE SECTIONS MUST BE TYPE P-1 JOINTS WITH 4" WELD STRIP WITH 2-1" WELD STRIPS SECURING THE JOINT STRIP IN PLACE.

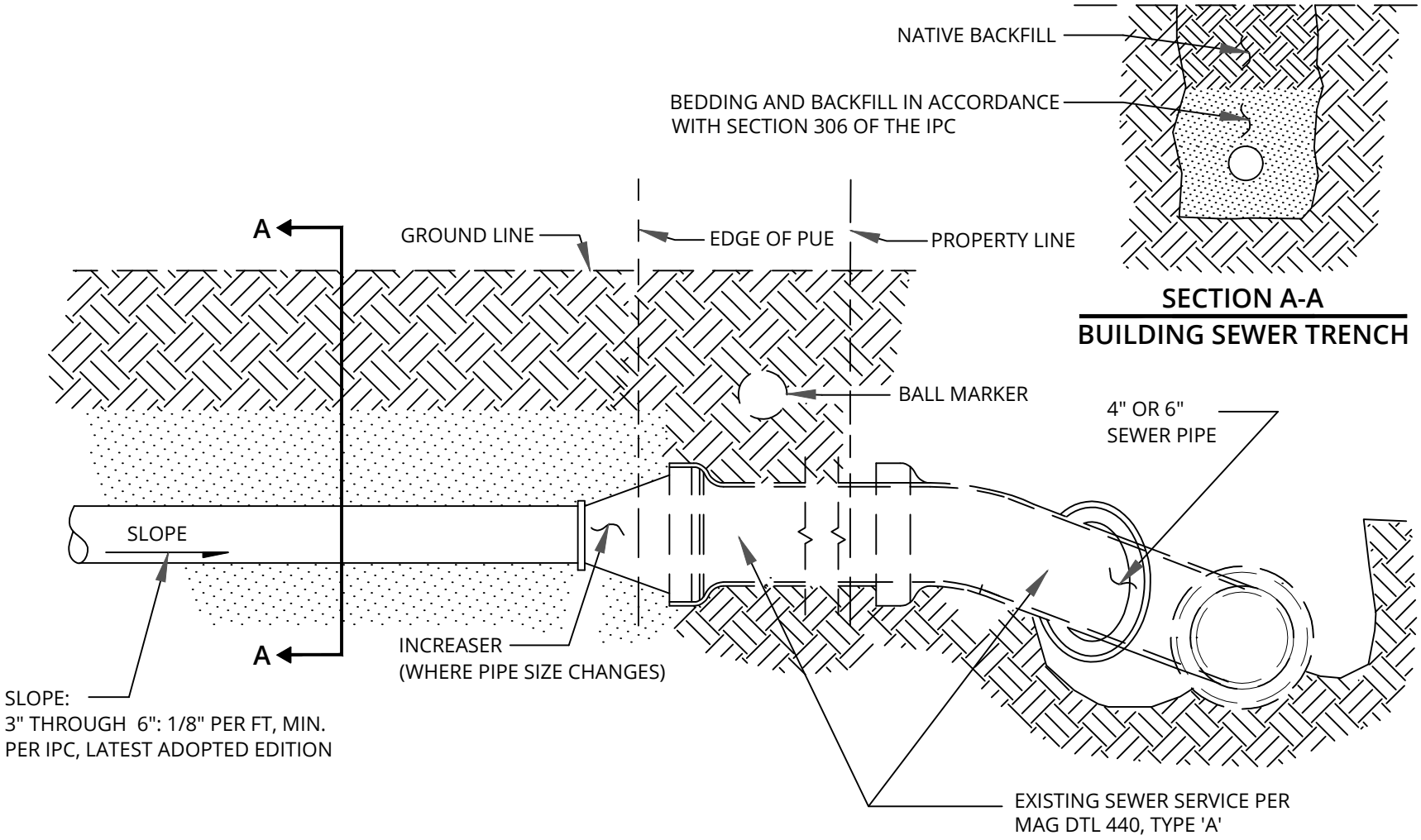
DETAIL NO.			APPROVED:	DETAIL NO.
C-409	CHANDLER arizona	**PIPE PENETRATION AND MANHOLE FRAME TERMINATION DETAIL**	01-08-2009	**C-409**



NOTE:

ALL JOINTS ON SEWER LATERAL PIPE MUST BE COMPRESSION TYPE OR APPROVED SOLVENT WELD.

DETAIL NO.			APPROVED:	DETAIL NO.
C-410	CHANDLER arizona	**DEEP CUT SEWER CONNECTION (SEWER LATERAL)**	01-14-2010	**C-410**



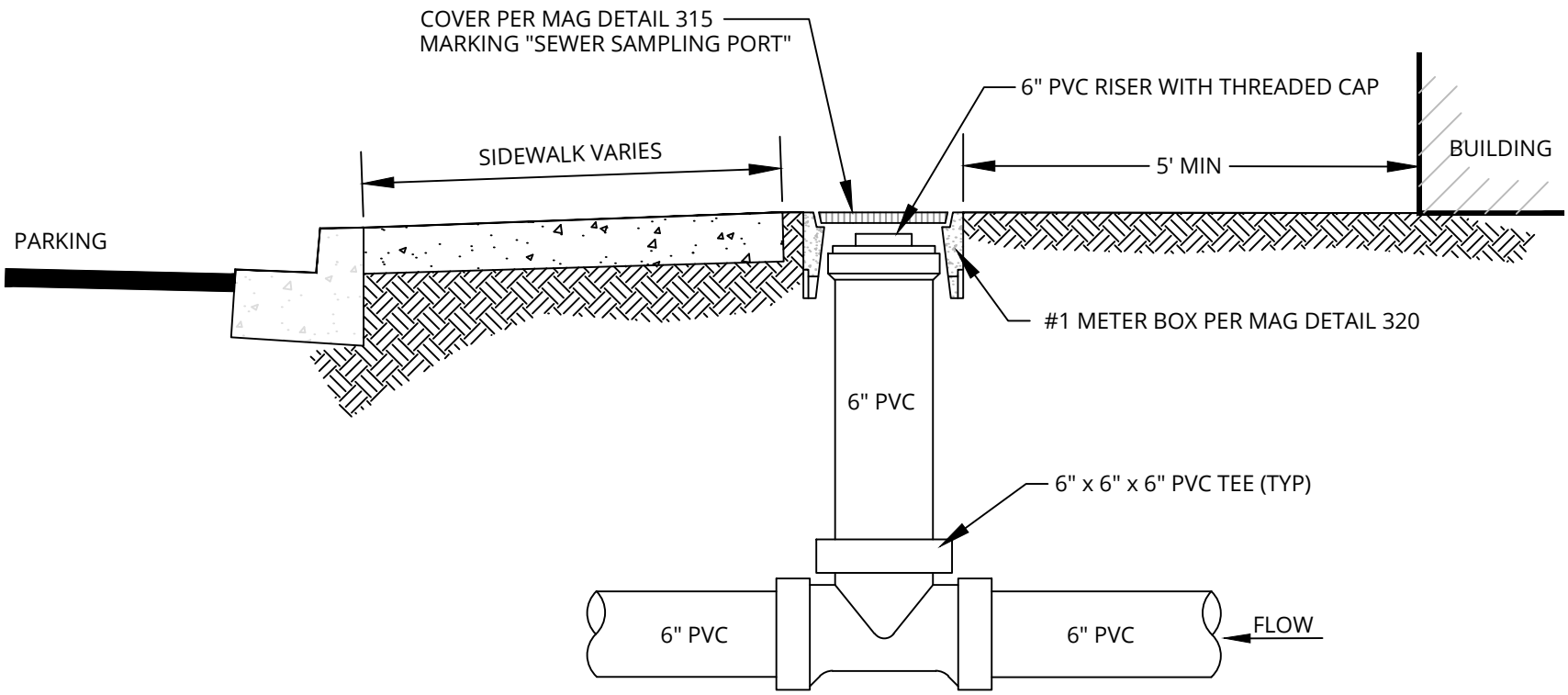
SECTION A-A

BUILDING SEWER TRENCH

NOTES:

1. ALL CONSTRUCTION MUST BE IN ACCORDANCE WITH THE INTERNATIONAL PLUMBING CODE (IPC), LATEST ADOPTED EDITION.
2. NO PIPE MUST BE BACKFILLED UNTIL THE LINE HAS BEEN INSPECTED AND APPROVED BY THE DEVELOPMENT INSPECTOR.

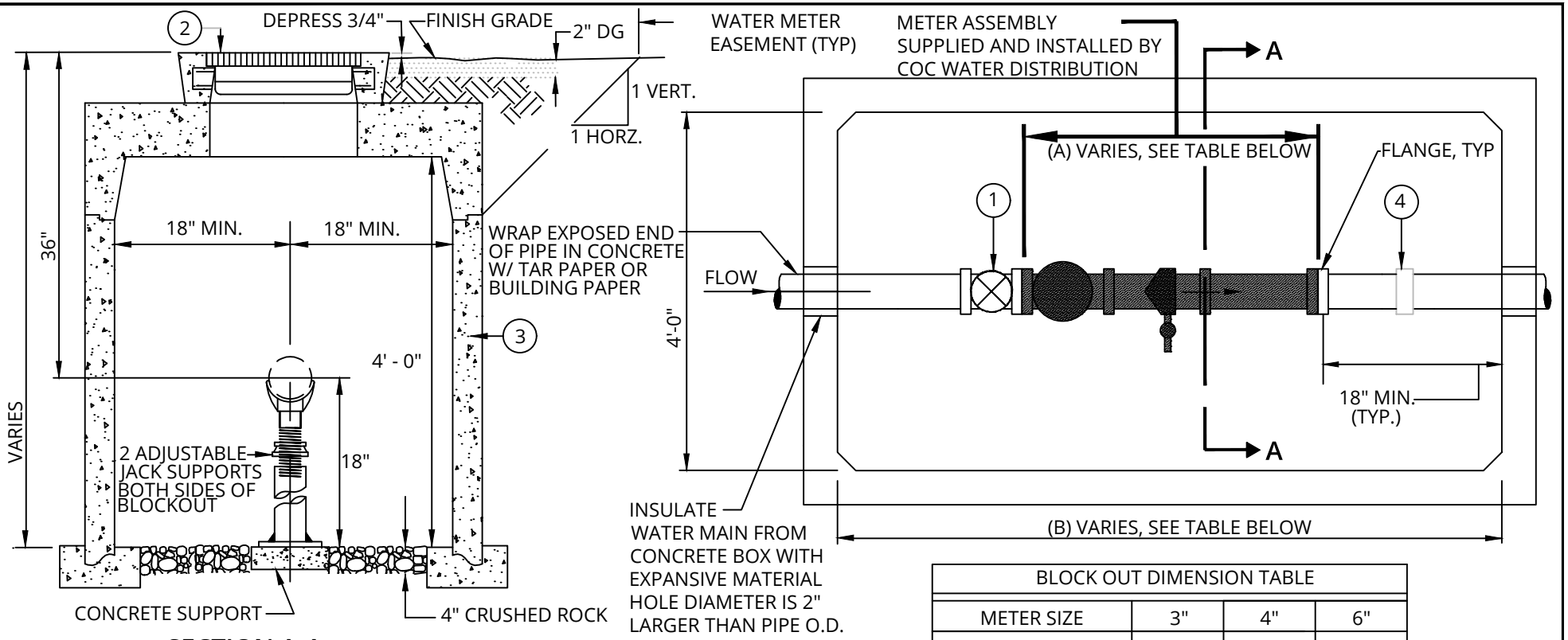
DETAIL NO.			APPROVED:	DETAIL NO.
C-411	CHANDLER arizona	**BUILDING SEWER CONNECTION**	01-14-2010	**C-411**



NOTE:

1. CONSTRUCTION MUST MEET INTERNATIONAL PLUMBING CODE REQUIREMENTS.

DETAIL NO.			APPROVED:	DETAIL NO.
C-412	CHANDLER arizona	**6" SEWER SAMPLING PORT**	05-10-2018	**C-412**



BLOCK OUT DIMENSION TABLE			
METER SIZE	3"	4"	6"
METER ASSEMBLY (A) BLOCK OUT	1'-6-3/4"	1'-10-1/4"	2'-3-3/4"
VAULT LENGTH (B)	4' - 8"	5' - 0"	5' - 6"

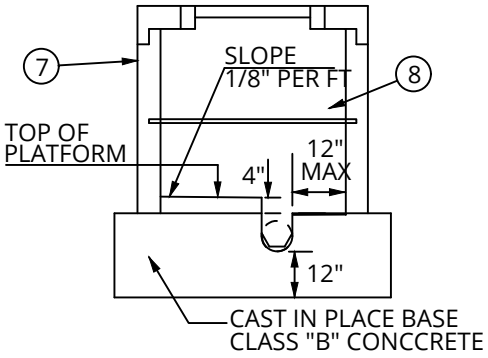
NOTES:

1. METER VAULTS MAY BE EITHER CAST-IN-PLACE OR PRE-CAST CONCRETE. SEE MAG DETAIL 321 FOR VAULT CONSTRUCTION.
2. STAINLESS BOLTS AND NUTS REQUIRED FOR ENTIRE ASSEMBLY.
3. PIPE MAIN MUST BE FULLY RESTRAINED BEYOND INLET AND OUTLET OF VAULT.
4. CONTRACTOR MUST PROVIDE FLANGED SPOOL IN METER ASSEMBLY BLOCK-OUT TO PROVE CORRECT ALIGNMENT. SPOOL MAY BE SALVAGED AFTER METER INSTALLATION.
5. VAULT LID MUST NOT BE INSTALLED UNTIL AFTER METER IS INSTALLED BY CITY. CALL (480) 782-3700.
6. CONTRACTOR MUST DRILL 1-3/4" DIAMETER HOLE IN CENTER OF HATCH.

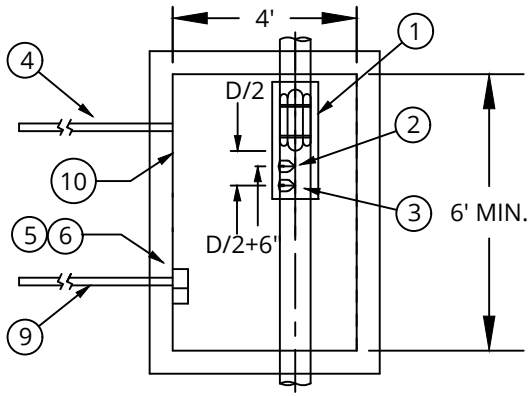
LEGEND:

1. O.S. & Y. GATE VALVE, FLANGED WITH HAND WHEEL OPEN LEFT, AND RISING STEM.
2. METER HATCH PER SYRACUSE CASTINGS "CH-AL" STYLE PEDESTRIAN RATED ALUMINUM WITH SLAM LOCK OR APPROVED EQUAL. CH-5AL 42" X 42"
3. METER VAULT PER UTILITY VAULT COC STANDARD DETAIL OR APPROVED EQUAL.
4. PROVIDE 1" TO 1-1/2" OF PLAY IN THE FLEX COUPLING - CAULDER OR EQUAL.

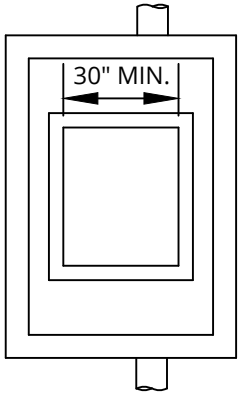
DETAIL NO.			APPROVED:	DETAIL NO.
C-416	CHANDLER arizona	**3" THROUGH 6" RECLAIMED WATER METER VAULT**	01-27-2011	**C-416**



SECTION



PLAN VIEW WITH COVER REMOVED



TOP VIEW

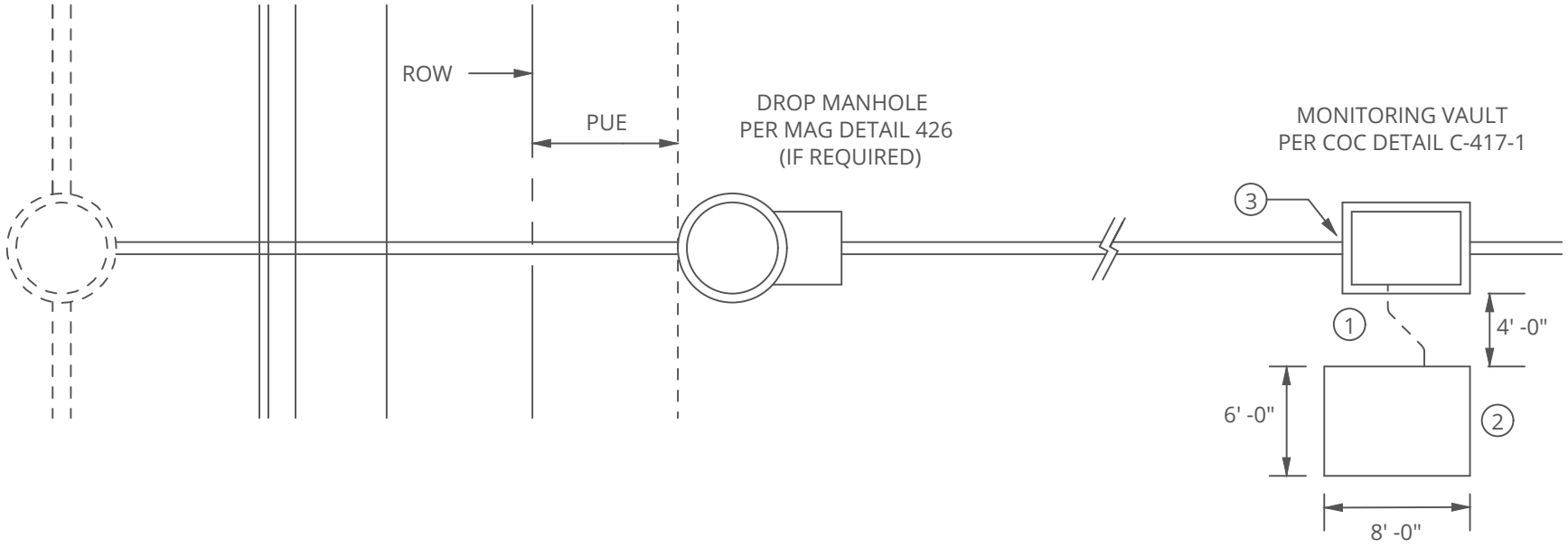
NOTES:

1. MINIMUM INSIDE DIMENSIONS OF VAULT MUST BE 48 INCHES WIDE BY 72 INCHES LONG WITH A MINIMUM HEIGHT OF 42" FROM THE TOP OF THE PLATFORM. ANY MODIFICATIONS TO THESE REQUIREMENTS WILL NEED TO BE REVIEWED AND APPROVED BY COC.
2. ACCESS TO THE VAULT MUST BE BY A BILCO-STYLE DOOR WITH AN INSIDE OPENING OF AT LEAST 30 INCHES. LOAD SPECIFICATION WILL DEPEND ON INSTALLATION.
3. THE SEWER UPSTREAM OF THE VAULT MUST BE STRAIGHT FOR LENGTH UPSTREAM OF THE VAULT EQUAL TO AT LEAST 25 PIPE DIAMETERS AND SLOPE OF UPSTREAM SEWER MUST NOT EXCEED 1%.
4. THE TOP OF THE VAULT MUST BE BETWEEN 3 AND 12 INCHES ABOVE FINISHED GRADE.
5. THE HEIGHT OF THE VAULT MUST NOT EXCEED 18 FEET.
6. THE ELECTRICAL JUNCTION BOX REQUIRES A CITY PERMIT BEFORE CONSTRUCTION BEGINS.

CONSTRUCTION NOTES:

1. FLUME INSERT (IF REQUIRED).
2. 1/4" 316 SST BUBBLE PIPE IN RECESS.
3. 3/8" 316 SST SAMPLE PIPE IN RECESS.
4. 2" SCH 40 PVC CONDUIT (FOR SAMPLE AND BUBBLE TUBING) WITH THREADED FITTING AND CAP - SEE DETAIL C-417 (PAGE 2) FOR CONTINUATION.
5. 120 VAC JUNCTION BOX (EXPLOSION PROOF)-TO BE INSTALLED WITH FLUME.
6. JUNCTION BOX WITH APHENOL CONNECTOR FOR 4-20 MA OUTPUT OR PULSE OUTPUT - TO BE INSTALLED WITH FLUME.
7. PRECAST CONCRETE VAULT AND COVER. ALL VAULTS EXCEEDING HEIGHT OF 5 FEET MUST BE DESIGNED BY THE APPROPRIATE DESIGN PROFESSIONAL(S).
8. INSTALL 3/4" DIA. 316 SST BAR 24" ABOVE TOP OF PLATFORM AT LOCATION RECOMMENDED BY MANUFACTURER - TO BE WITH FLUME.
9. PROVIDE CONDUIT AND PULL WIRE FOR FUTURE 120 VAC - 30 AMP SERVICE (SEE DETAIL C-417 (PAGE 2) FOR CONTINUATION.
10. INSIDE OF VAULT AND CONCRETE BASE MUST BE SPRAYED WITH A CITY APPROVED RESIN.

DETAIL NO.			APPROVED:	DETAIL NO.
C-417-1	CHANDLER arizona	**INDUSTRIAL MONTITORING VAULT DETAILS**	01-28-2021	**C-417-1**



NOTES:

1. PROVIDE CONDUIT AND PULL WIRES TO CONCRETE PAD FOR FUTURE 120 VAC 30 AMP SERVICE.
2. DISTANCE FROM TOP OF VAULT TO TOP OF CONCRETE PLATFORM MUST BE 5 FT. OR LESS UNLESS OTHERWISE APPROVED BY COC STAFF.
3. COORDINATE SITE PLAN WITH COC PRETREATMENT MONITORING STAFF.
4. TERMINATE ALL CONDUIT WITH AIR TIGHT SERVICE CAPS ABOVE FINISHED GRADE.

CONSTRUCTION NOTES:

1. PROVIDE CONDUIT WITH PULL WIRES FOR FUTURE 120 VAC 30 AMP SERVICE FROM VAULT TO SLAB.
2. PROVIDE 4" THICK CONCRETE PAD.
3. PROVIDE MINIMUM 1" DROP AT THE DOWNSTREAM END OF THE VAULT.

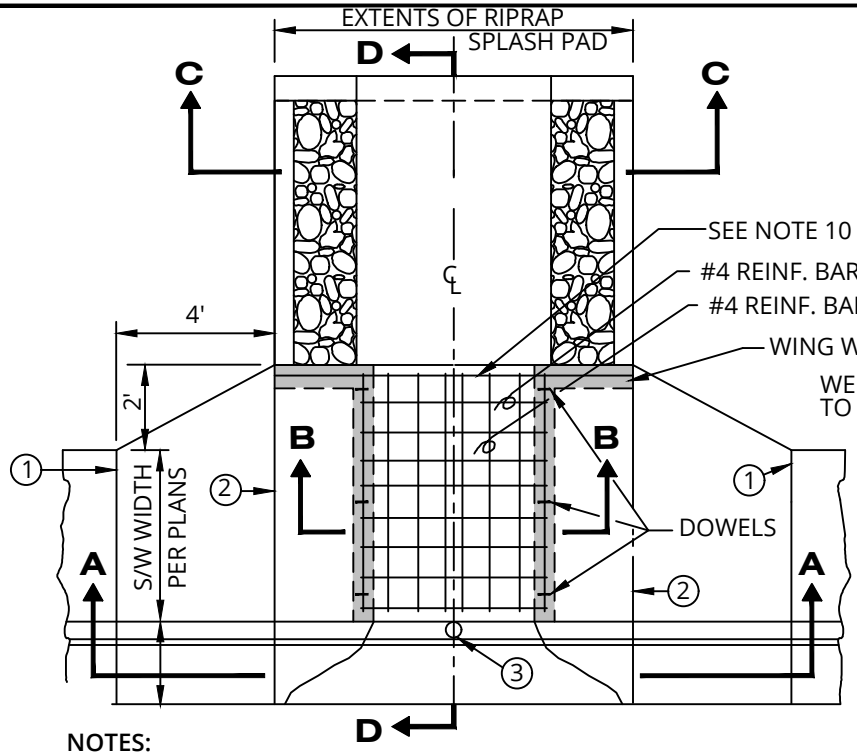
DETAIL NO.			APPROVED:	DETAIL NO.
C-417-2	CHANDLER arizona	**INDUSTRIAL MONITORING VAULT SITE PLAN**	01-09-2014	**C-417-2**

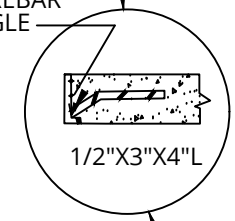
CHANDLER arizona

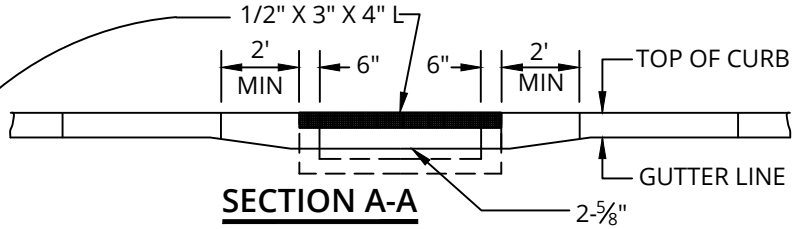
Standard Details

STORM SEWER & DRAINAGE

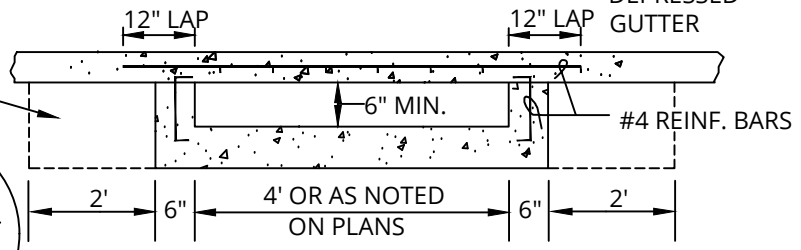
C-500 TO C-510



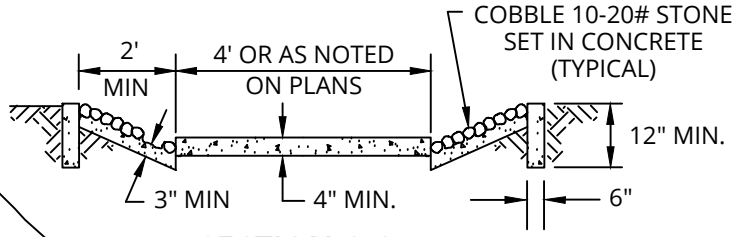




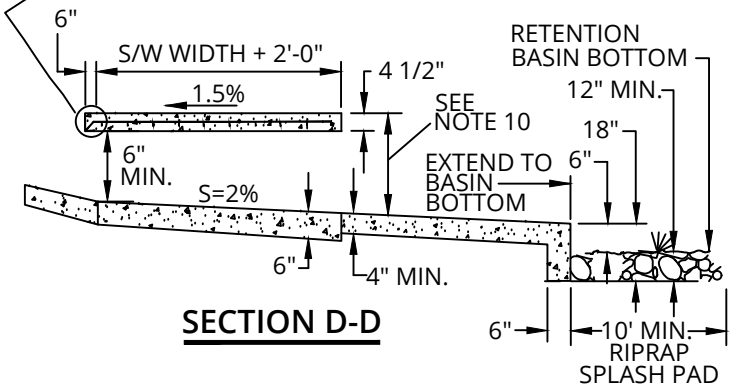
SECTION A-A



SECTION B-B



SECTION C-C



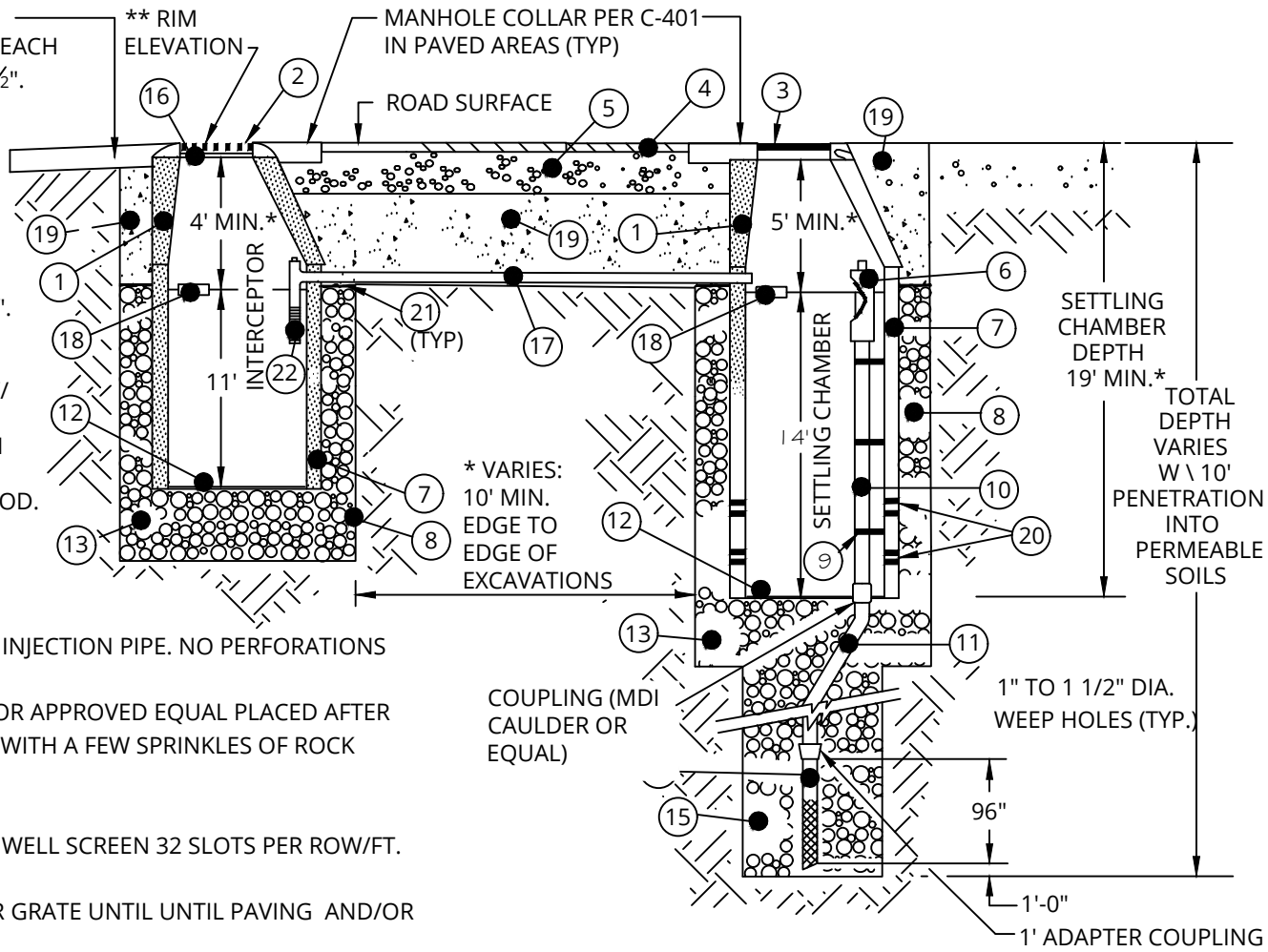
SECTION D-D

NOTES:

1. FULL DEPTH EXPANSION JOINT EXTENDED THROUGH CURB AND GUTTER (TYP.). EXPANSION JOINT FILLER MUST BE 1/2" BITUMINOUS PRE FORMED EXPANSION JOINT FILLER ASTM D-1751. (FULL DEPTH).
2. CONTRACTION JOINT.
3. STORM DRAIN INLET MARKER PER C-508.
4. FOR OPENINGS GREATER THAN 4 FT., SEPARATE CHAMBERS WILL BE CONSTRUCTED IN 4 FT. INCREMENTS WITH A CONTRACTION JOINT OVER EACH INTERIOR SUPPORT.
5. STEEL MAT TO BE SUPPORTED ON CHAIRS PRIOR TO CONCRETE PLACEMENT. MINIMUM CONCRETE COVER TO BE 11/2" OVER REINFORCING BAR.
6. EXPOSED ANGLE IRON TO BE PAINTED WITH ONE SHOP COAT OF NO. 1-D PAINT AND TWO FIELD COATS OF NO. 10 PAINT AS PER MAG SECT. 790.
7. 6" - 12" COBBLE TO BE USED FOR SPLASH PAD.
8. TOP MUST BE MONOLITHIC INCLUDING 4' WINGS.
9. CONCRETE MUST BE CLASS 'A' PER MAG SECTION 725.
10. A SAFETY RAIL PER MAG DETAIL 145 IS REQUIRED WHEN DROP EXCEEDS 30".

DETAIL NO.			APPROVED:	DETAIL NO.
C-500	CHANDLER arizona	**SCUPPER**	01-27-2022	**C-500**

8'x8'x6" MAG CLASS B CONCRETE PAD REQUIRED IN DG-LANDSCAPED AREAS. SEVEN #3 BARS 12" C TO C EACH WAY. SLOPE DOWN FROM GRATE TO DG SURFACE 1½".



NOTES:

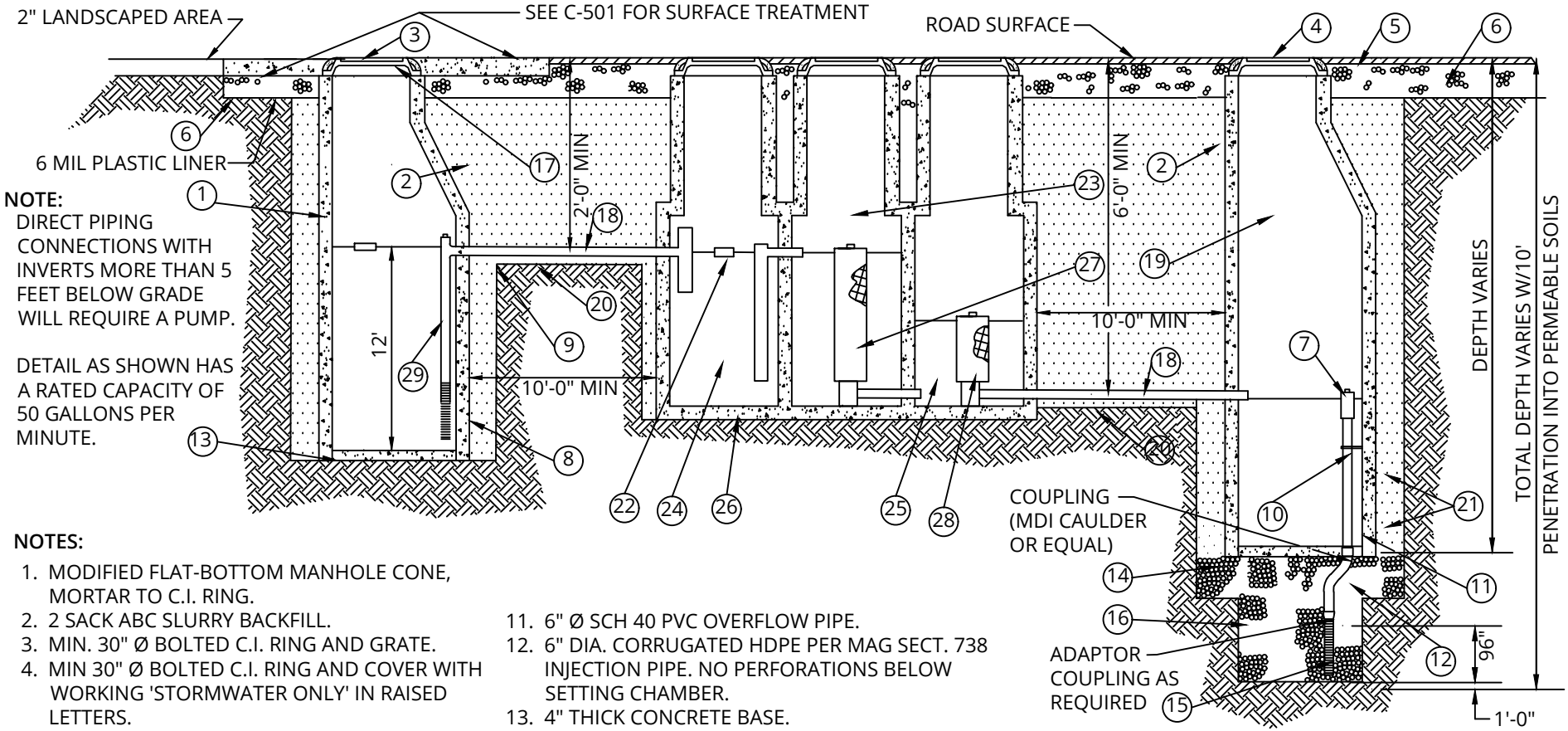
1. MODIFIED FLAT-BOTTOM MANHOLE CONE. MORTAR TO C.I. RING.
2. MIN. 30" DIA. BOLTED C.I. RING AND GRATE.
3. MIN. 30" DIA. BOLTED C.I. RING AND COVERM WITH THE RAISED LETTERS 'STORMWATER ONLY'.
4. GRADED PARKWAY, OR A.C. PAVING.
5. COMPACTED ABC IN PAVED AREAS.
6. DEBRIS SHIELD: ROLLED 16 GA. x 24" LENGTH W/ VENTED ANTI-SIPHON AND INTERNAL 0.265" MAX SWO FLATTENED EXPANDED STEEL SCREEN x 12" LENGTH, FUSION-BONDED EPOXY.
7. PRECAST CONCRETE LINER, 4000 PSI 48" ID, 54" OD.
8. MIN. 6' DIA. DRILLED SHAFT.
9. SUPPORT BRACKET (TYP), FORMED 12 GA. STEEL FUSION BONDED EPOXY COATED.
10. 6" DIA. SCHEDULE 40 PVC OVERFLOW PIPE.
11. 6" DIA. CORRUGATED HDPE PER MAG SECT. 738 INJECTION PIPE. NO PERFORATIONS BELOW SETTLING CHAMBER.
12. NONWOVEN GEOTEXTILE FABRIC MIRIFI 140NL OR APPROVED EQUAL PLACED AFTER OVERFLOW PIPE HAS BEEN INSTALLED. RETAIN WITH A FEW SPRINKLES OF ROCK AROUND PERIMETER.
13. 3/8" TO 1-1/2" WASHED ROCK.
14. DRAINAGE SCREEN: SCH. 40 PVC 0.12" SLOTTED WELL SCREEN 32 SLOTS PER ROW/FT.
15. MIN. 4' DRILLED SHAFT.
16. FABRIC SEAL, UV RESISTANT GEOTEXTILE. COVER GRATE UNTIL UNTIL PAVING AND/OR LANDSCAPING IS COMPLETE.
17. 4" DIA. SCH. 40 PVC CONNECTOR PIPE W/ VENTED ANTI-SIPHON INTAKE & FLOW REGULATOR.
18. MIN. 4 QUART CAPACITY ABSORBENT.
19. 1 SACK ABC SLURRY EXCEPT IN LANDSCAPED INSTALLATIONS WITH NO PIPE CONNECTIONS.
20. 8 PERFORATIONS PER LINEAR FOOT FOR BOTTOM 3 FEET OF INJECTION CHAMBER.
21. 6 MIL PLASTIC LINER WATER STOP.
22. INTAKE SCREEN, SCH 40 PVC 0.12" MODIFIED SLOTTED WELL SCREEN WITH 32 SLOTS PER ROW/FT. 48" OVERALL LENGTH WITH TRI-C END CAP.

* NOTE - OVERFLOW DEPTHS AND INVERT OF CONNECTOR PIPE MUST BE BELOW THE INVERTS OF ALL UPSTREAM STORM DRAIN PIPE.

** NOTE - RIM ELEVATION MUST BE FLUSH TO ROAD SURFACE OR TURF. RIM ELEVATION MUST BE 1 ½" ABOVE DECOMPOSED GRANITE (DG) LANDSCAPED AREAS.

BASED UPON 'MAXWELL PLUS' BY TORRENT RESOURCES

DETAIL NO.			APPROVED:	DETAIL NO.
C-501	CHANDLER arizona	**DRYWELL SYSTEM DETAIL AND SPECIFICATIONS**	05-10-2018	**C-501**



NOTE:
DIRECT PIPING CONNECTIONS WITH INVERTS MORE THAN 5 FEET BELOW GRADE WILL REQUIRE A PUMP.

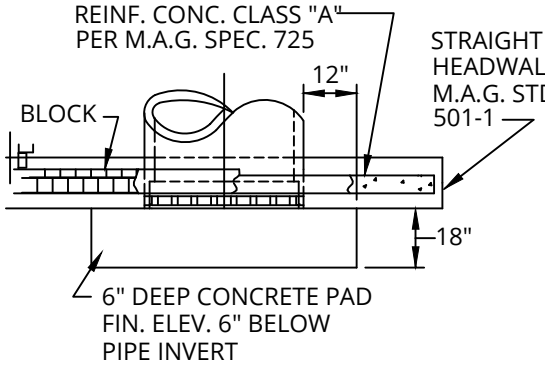
DETAIL AS SHOWN HAS A RATED CAPACITY OF 50 GALLONS PER MINUTE.

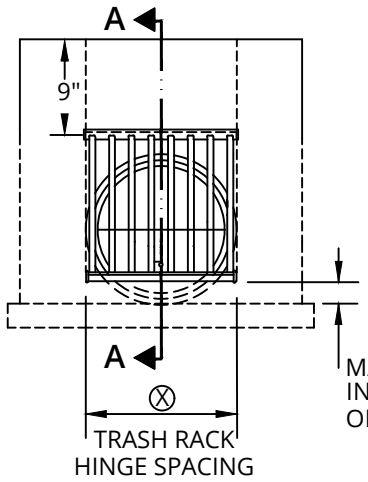
NOTES:

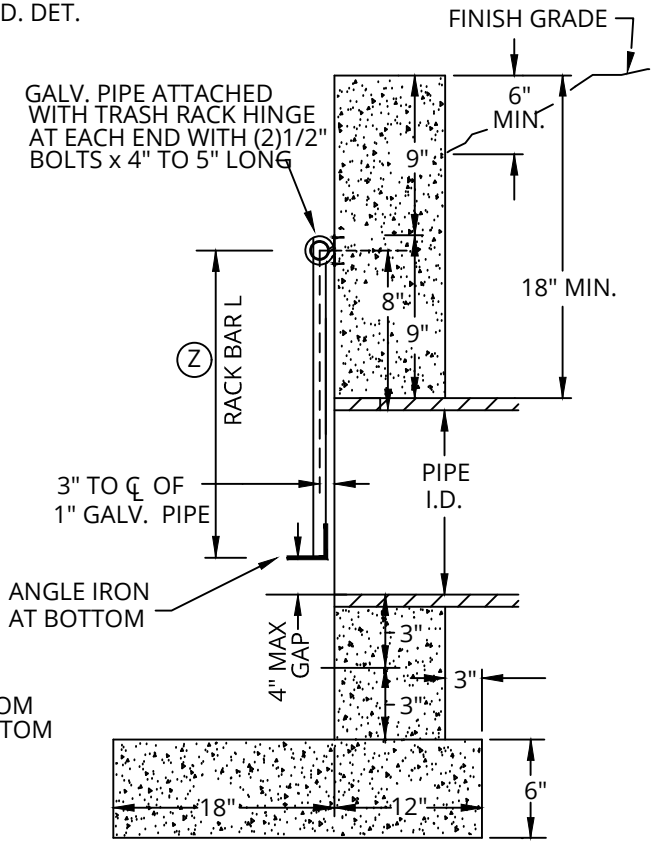
1. MODIFIED FLAT-BOTTOM MANHOLE CONE, MORTAR TO C.I. RING.
2. 2 SACK ABC SLURRY BACKFILL.
3. MIN. 30" Ø BOLTED C.I. RING AND GRATE.
4. MIN 30" Ø BOLTED C.I. RING AND COVER WITH WORKING 'STORMWATER ONLY' IN RAISED LETTERS.
5. GRADED BASIN OR PAVING.
6. COMPACTED ABC IN PAVED AREAS
7. DEBRIS SHIELD: ROLLED 16 GA. x 24" LENGTH W/ VENTED ANTI-SIPHON AND INTERNAL 0.265" MAX. SWO FLATTENED EXPANDED STEEL SCREEN x 12" LENGTH, FUSION-BONDED EPOXY.
8. PRECAST CONCRETE LINER, 4000 PSI 48" ID. 54" OD.
9. MIN 6" DRILLED SHAFT.
10. SUPPORT BRACKET, FORMED 12 GA. STEEL. FUSION BONDED EPOXY COATED STEEL.
11. 6" Ø SCH 40 PVC OVERFLOW PIPE.
12. 6" DIA. CORRUGATED HDPE PER MAG SECT. 738 INJECTION PIPE. NO PERFORATIONS BELOW SETTING CHAMBER.
13. 4" THICK CONCRETE BASE.
14. 3/8" TO 1 1/2" WASHED ROCK.
15. DRAINAGE SCREEN: SCH. 40 PVC 0.12" SLOTTED WELL SCREEN 32 SLOTS PER ROW/FT.
16. MIN 4' Ø DRILLED SHAFT.
17. FABRIC SEAL, UV RESISTANT GEOTEXTILE. COVER GRATE UNTIL PAVING AND/OR LANDSCAPING IS COMPLETE.
18. 4" Ø SCH. 40 PVC CONNECTOR PIPE.
19. (NOT USED)
20. SLURRY BACKFILL
21. (NOT USED)
22. ABSORBENT - HYDROPHOBIC IMBIBER PILLOW, MIN. 128 OZ. CAPACITY.
23. FILTRATION CHAMBER - MIN 833 GAL. CAPACITY
24. PRIMARY SEPARATOR CHAMBER - MIN 833 GAL. CAPACITY.
25. IMBIBATION CHAMBER - MIN 833 GAL. CAPACITY
26. TREATMENT INTERCEPTOR - MIN 2500 GAL TOTAL CAPACITY.
27. SILT FILTER (2 EACH) - MIN 3600 S.I. POLYPROPYLENE FABRIC MESH.
28. FASTFLO ASSEMBLY (2 EACH) - HYDROPHOBIC IMBIBER BEAD DRAIN FIELD.
29. OVERFLOW PIPE - 4" Ø SCH 40 PVC WITH ANTI-SIPHON VENT, FLOW REGULATOR AND SCREEN.

BASED UPON 'ENVIBRO 20' BY TORRENT RESOURCES

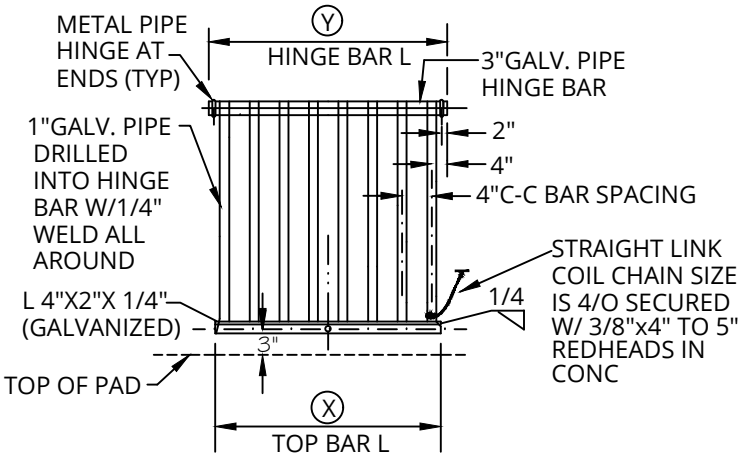
DETAIL NO.			APPROVED:	DETAIL NO.
C-502	CHANDLER arizona	**PRETREATMENT DRYWELL SYSTEM**	05-10-2018	**C-502**

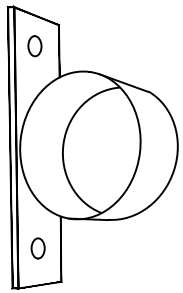






SECTION A-A





TRASH RACK HINGE

NOTES:

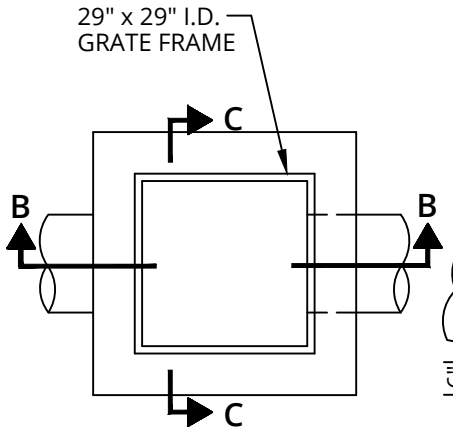
1. THIS DETAIL IS APPLICABLE AT ALL OPEN ENDS OF PIPE 12" OR MORE IN DIAMETER.
2. COAT ALL WELD AREAS WITH ZINC RICH PAINT.
3. DESIGN ENGINEER TO PROVIDE DETAILS FOR PIPE I.D.'S GREATER THAN 4' IN DIAMETER.

TYPICAL DIMENSIONS					
TYPE	PIPE DIA.	NO. OF BARS (I.D./4 ± 1")	DIMENSIONS X	Y	Z
A	15"	5	21"	25"	PIPE DIA + 4" (TYP)
	18"	6	25"	29"	PIPE DIA + 4" (TYP)

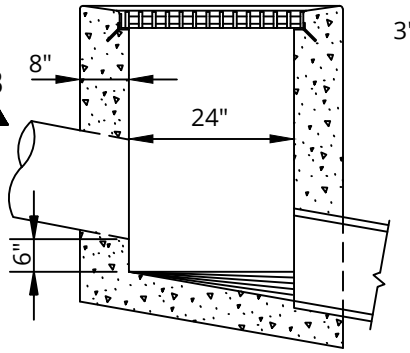
* ROUND UP TO NEXT FULL NUMBER

	OTHER BAR SIZES	
DIMENSIONS	X =	(# BARS X 4") + 1"
	Y =	X + 4"
	Z =	I.D.+ 3"+ 8" (UP TO 4' 0)

DETAIL NO.			APPROVED:	DETAIL NO.
C-503	CHANDLER arizona	**TRASH RACK/ACCESS BARRIER**	01-09-2020	**C-503**

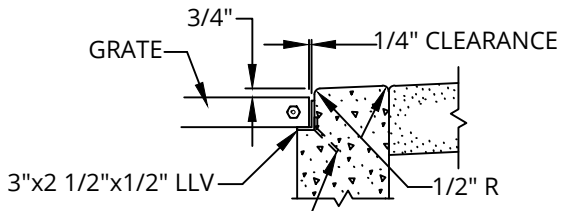


PLAN



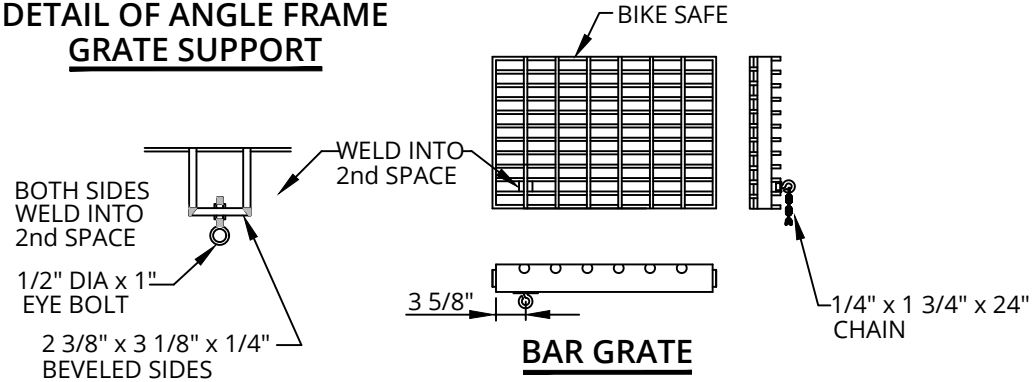
SECTION B-B

SINGLE GRATE

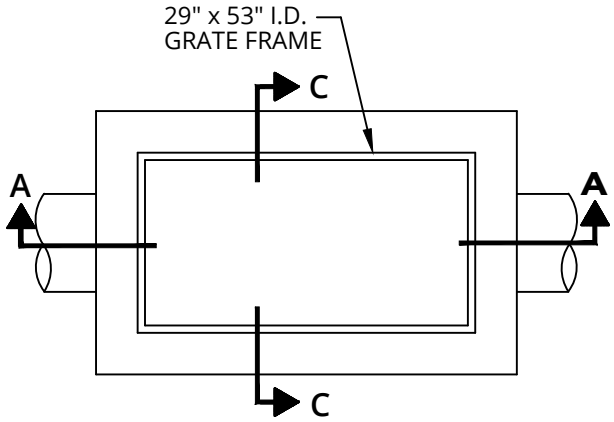


DETAIL OF ANGLE FRAME GRATE SUPPORT

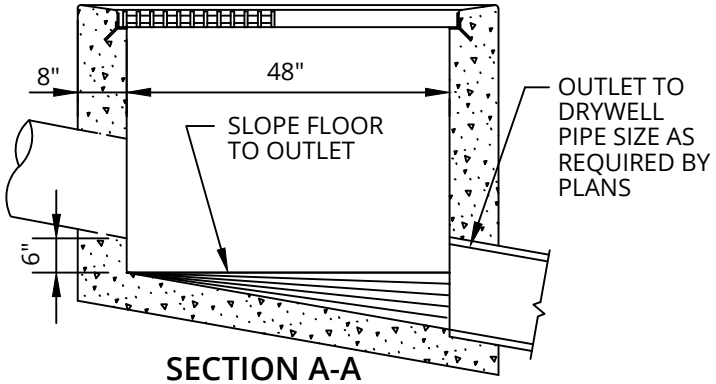
ALL CONCRETE MUST BE CLASS 'A' PER MAG SECT. 725. EXPOSED EDGES MUST BE FINISHED WITH A 1/2" RADIUS. REINFORCE WITH #4 AT 8" EACH WAY, CENTERED.



BAR GRATE

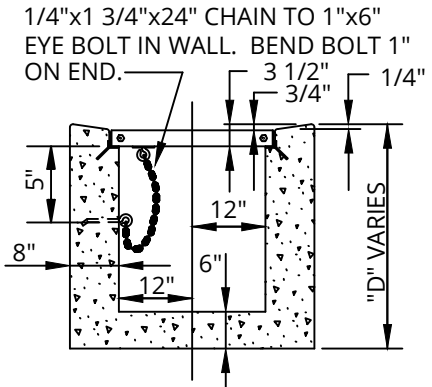


PLAN



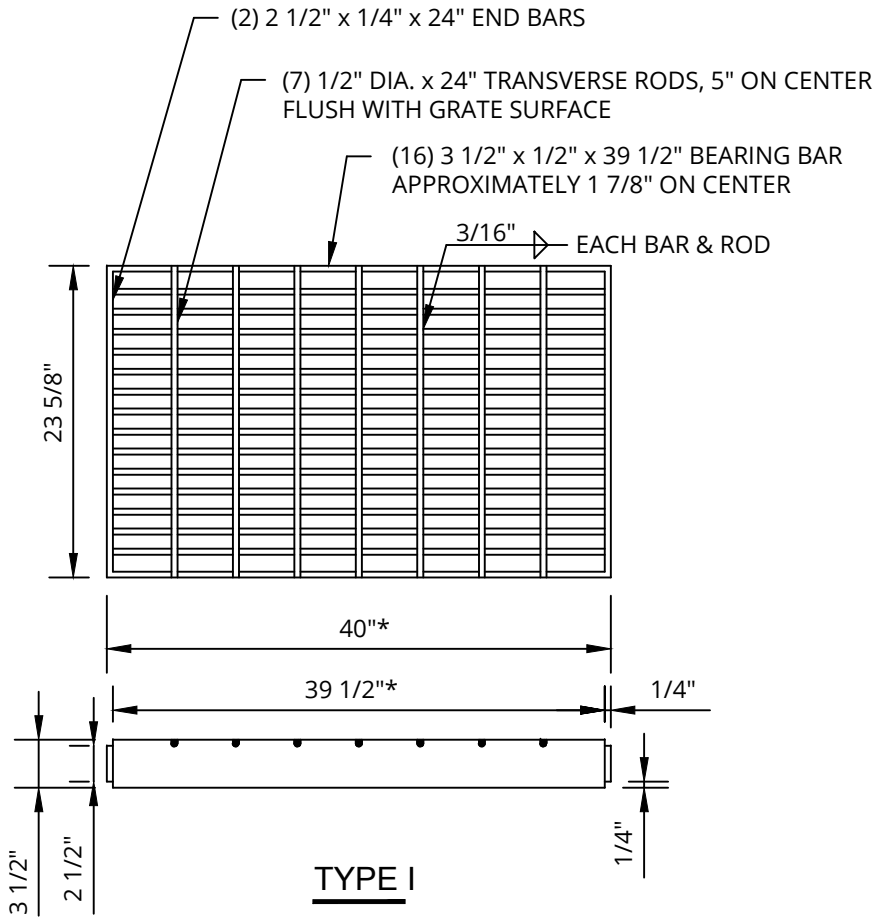
SECTION A-A

DOUBLE GRATE



SECTION C-C

DETAIL NO. C-504	CHANDLER arizona	RETENTION BASIN INLET	APPROVED: 01-11-2002	DETAIL NO. C-504

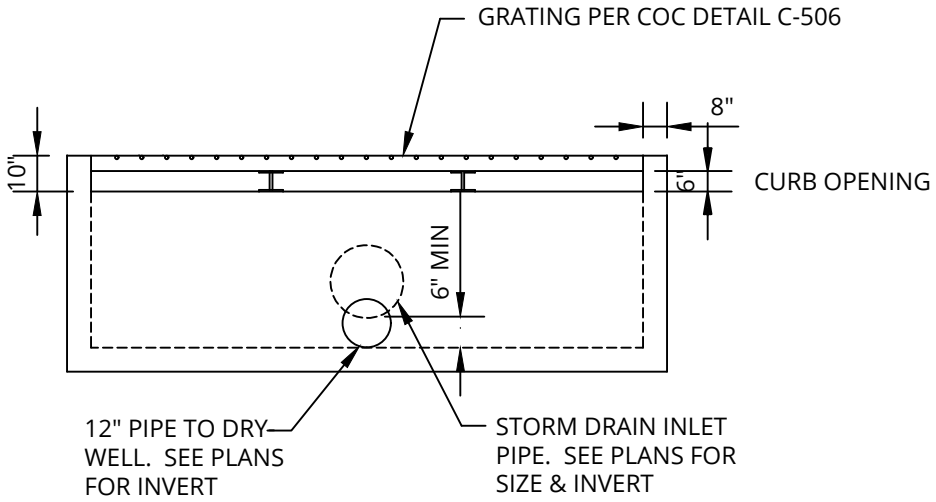


NOTES:

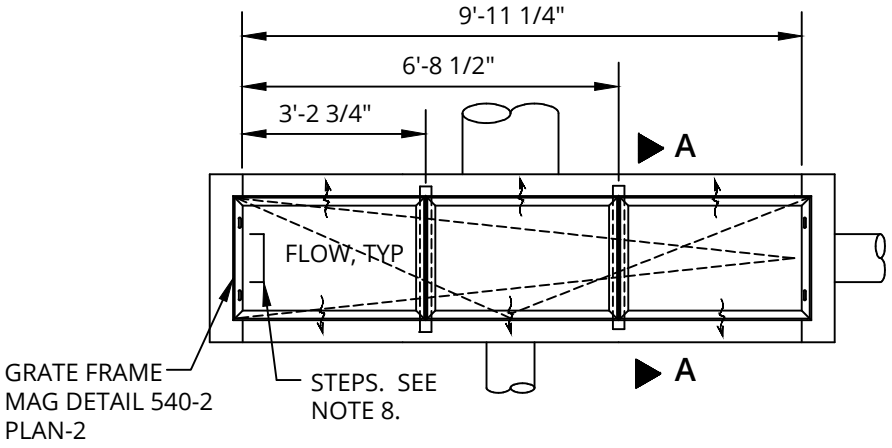
1. ALL STEEL MUST BE IN ACCORDANCE WITH ASTM A-36.
2. WELDING MUST BE IN ACCORDANCE WITH AWS SPECIFICATIONS.
3. FRAME AND GRATE MUST BE TESTED FOR ACCURACY OF FIT AND MUST BE MARKED IN SETS BEFORE DELIVERY.
4. THE COMPLETED ASSEMBLY MUST BE GIVEN ONE SHOP COAT OF NO.1 PAINT AND TWO FIELD COATS OF NO. 10 PAINT AS PER MAG SECTION 790.
5. THE GRATE MUST BE FABRICATED TO WITHIN 1/8" OF SPECIFIED DIMENSIONS.

* DIMENSION WILL VARY DEPENDING UPON CATCH BASIN PIPE SIZE.

DETAIL NO.			APPROVED:	DETAIL NO.
C-506	CHANDLER arizona	**CATCH BASIN GRATES**	01-27-2025	**C-506**



FRONT ELEVATION

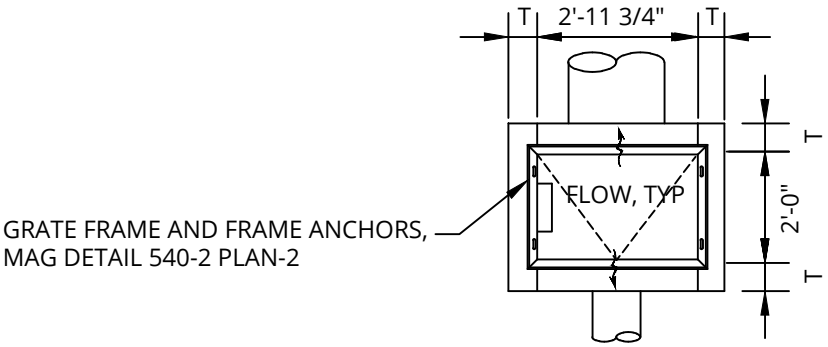


TRIPLE CATCH BASIN

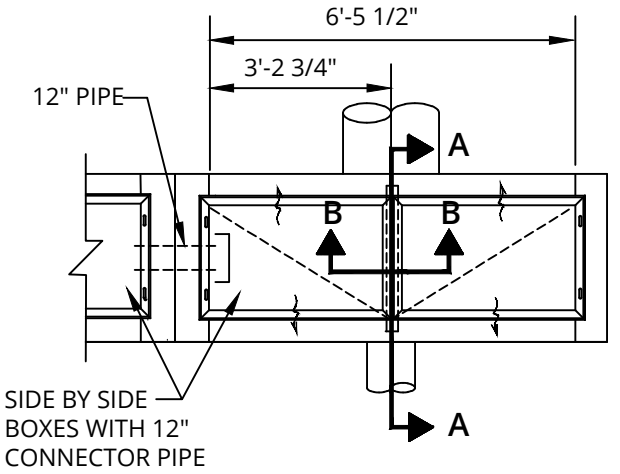
NOTES:

1. ALL CONCRETE MUST BE MAG CLASS 'A'.
2. CONNECTOR PIPES MAY BE PLACED IN ANY WALL AS PER PLAN.
3. FLOOR BASIN MUST BE TROWELLED TO A HARD, SMOOTH SURFACE AND MUST SLOPE FROM ALL DIRECTIONS TO OUTLET.
4. CONNECTOR PIPE MUST BE TRIMMED TO THE FINAL SHAPE AND LENGTH BEFORE CONCRETE IS POURED.
5. PLANS SHOULD SPECIFY GRATE ELEVATION AND INVERT ELEVATION.
6. RETENTION BASIN INLET MAY BE PREFABRICATED PROVIDING A SHOP DRAWING IS APPROVED BY THE ENGINEER PRIOR TO FABRICATION.
7. THE FRAME MUST BE MAG DETAIL 540-2, PLAN II, GRATE PER CHANDLER DETAIL C-506.

DETAIL NO. C-507-1	CHANDLER arizona	**BELOW GRADE RETENTION BASIN INLET (BUBBLER BOX)**	APPROVED: 01-08-2009	DETAIL NO. C-507-1



SINGLE CATCH BASIN

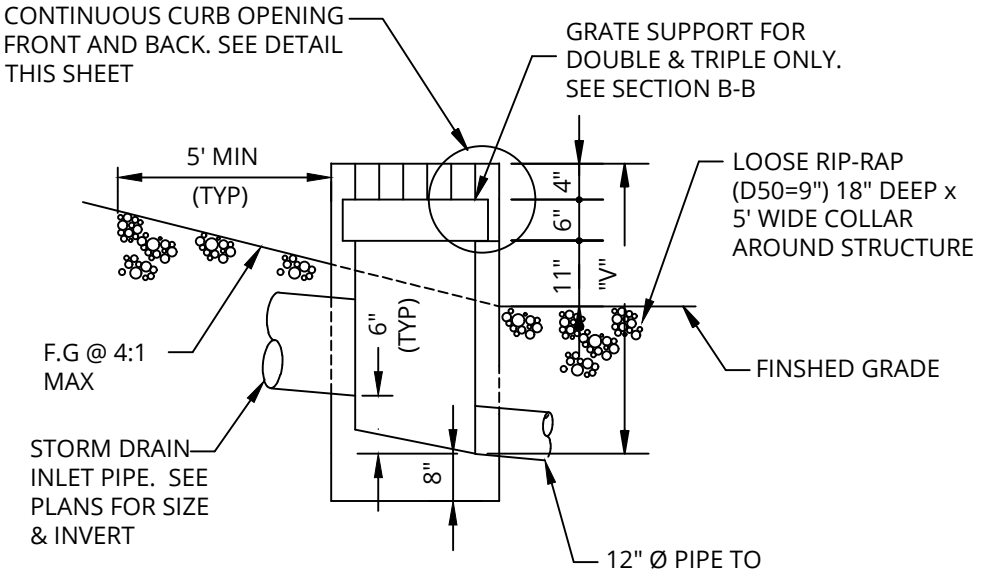


DOUBLE CATCH BASIN

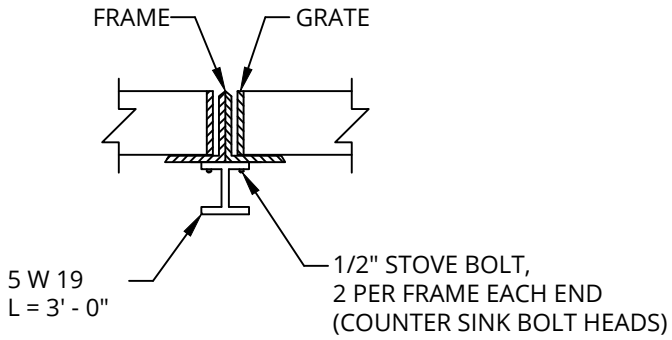
NOTES: (CON'T)

8. STEPS (MAG DETAIL 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 OF THE GRATE.
9. ALL EXPOSED METAL HARDWARE MUST BE GIVEN ONE SHOP COAT OF NO. 1 PAINT AND 2 FIELD COATS OF NO. 10 PAINT AS PER MAG SECTION 790.
10. ALL METAL UNITS MUST BE FABRICATED FROM STRUCTURAL STEEL EXCETP AS NOTE. STRUCTURAL STEEL MUST BE IN ACCORDANCE WITH ASTM A-36.
11. WELDING MUST BE IN ACCORDANCE WITH MAG WELDING SPECIFICATIONS.

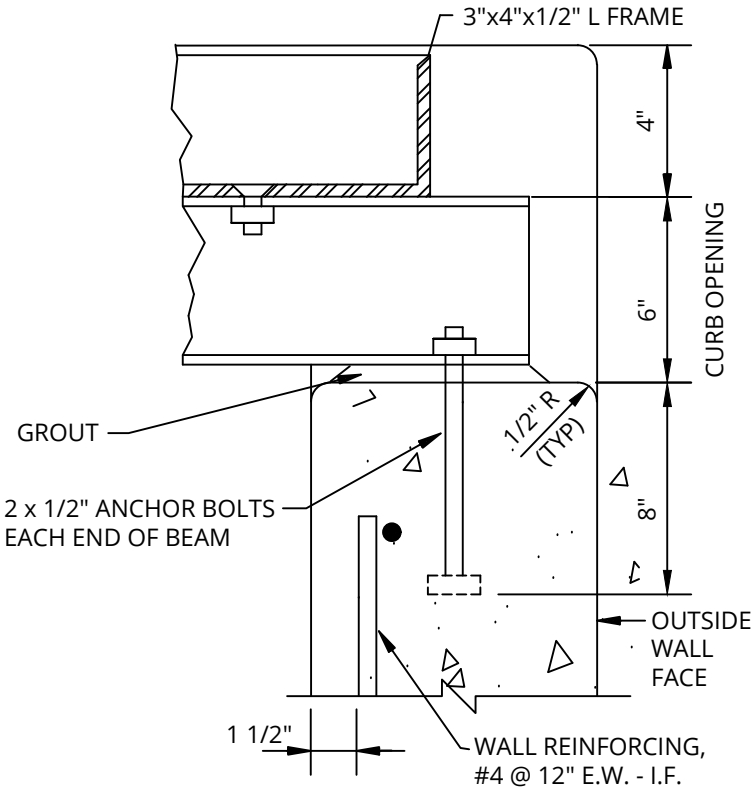
DETAIL NO.			APPROVED:	DETAIL NO.
C-507-2	CHANDLER arizona	**BELOW GRADE RETENTION BASIN INLET (BUBBLER BOX)**	01-08-2009	**C-507-2**



SECTION A-A



SECTION B-B



INLET CURB OPENING

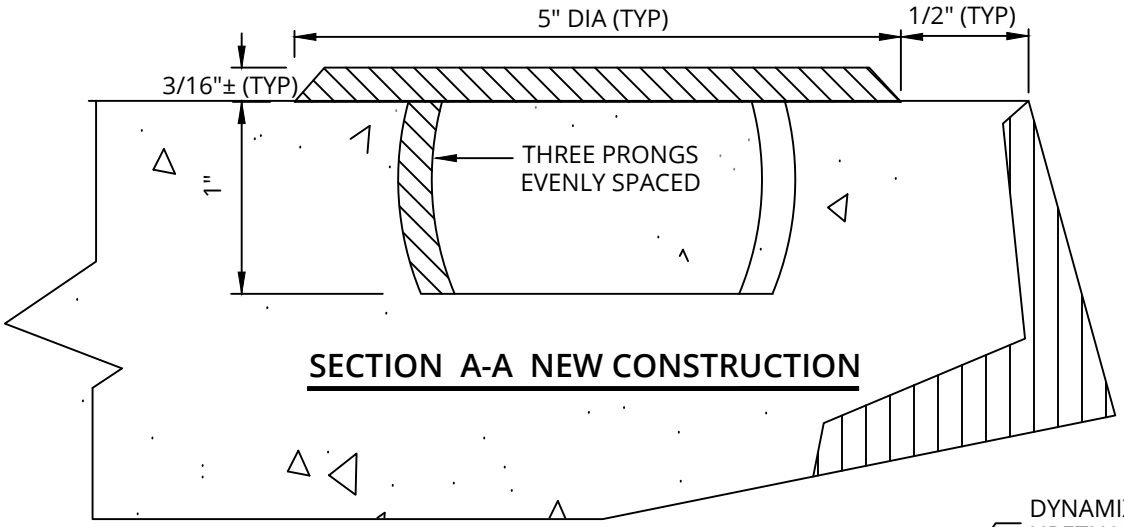
CATCH BASIN WALL THICKNESS

T = 8" IF V IS UP TO 8'

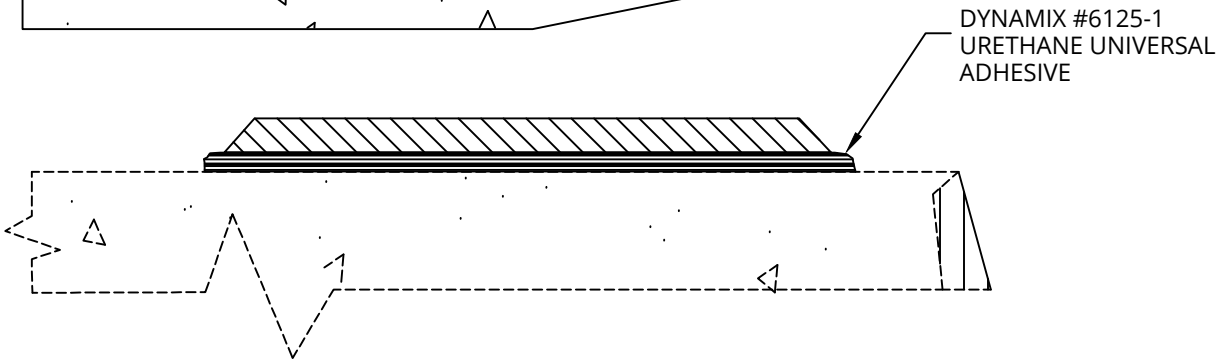
(IF V EXCEEDS 8', SPECIAL DESIGN IS REQUIRED)

V = 3'-0" UNLESS OTHERWISE NOTED

DETAIL NO. C-507-3	CHANDLER arizona	BELOW GRADE RETENTION BASIN INLET (BUBBLER BOX)	APPROVED: 05-10-2018	DETAIL NO. C-507-3



SECTION A-A NEW CONSTRUCTION

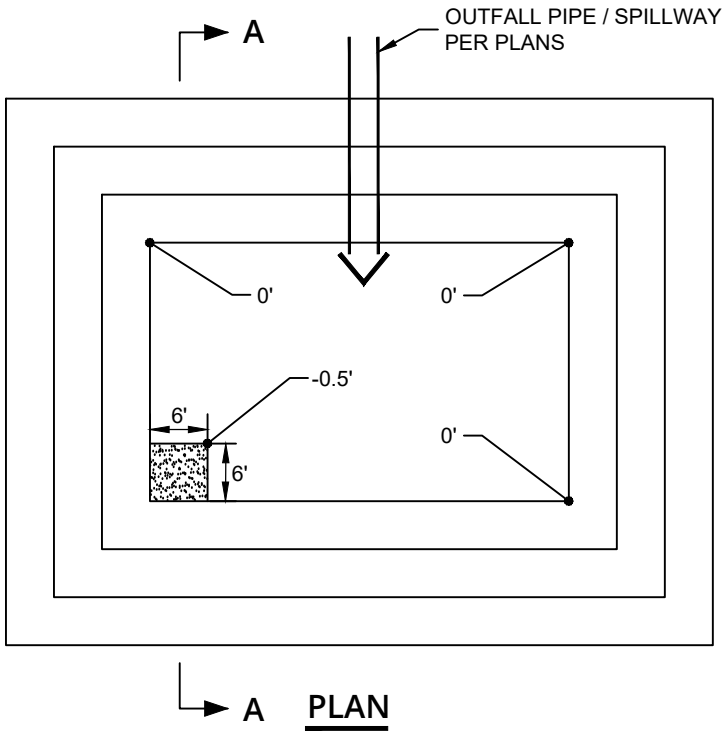


SECTION A-A EXISTING STRUCTURES

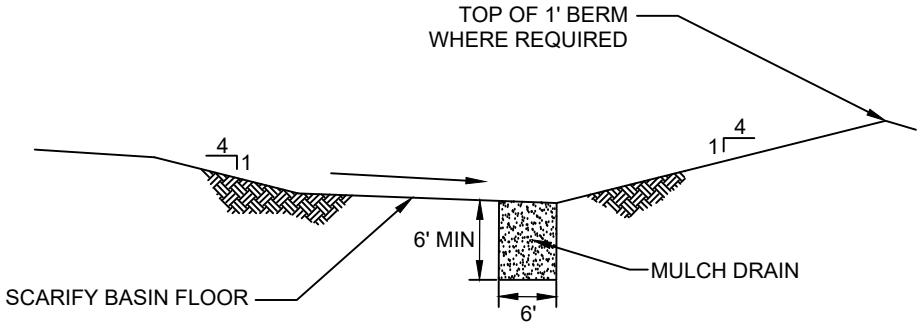
NOTES:

1. MATERIAL: CAST ALUMINUM
2. THE WIDTH OF INDIVIDUAL LETTERS MUST BE SELECTED SO THAT LETTERS AND WORDS ARE EQUALLY SPACED AND BALANCED.
3. LETTERS MUST BE 1/2" IN HEIGHT. MARKER LAYOUT MUST BE SUBMITTED FOR APPROVAL PRIOR TO FABRICATION.
4. MARKERS MUST BE ALIGNED WITH THE CENTER OF DRAINAGE INLETS AT THE TOP OF CURB.

DETAIL NO.			APPROVED:	DETAIL NO.
C-508	CHANDLER arizona	**STORM DRAIN INLET MARKER**	01-08-2009	**C-508**



PLAN



SECTION A-A

NOTES:

1. GRADE BASIN FLOOR TO FLOW FROM THE OUTFALL PIPE/SPILLWAY TOWARDS A 6' X 6' MULCH CAVITY DRAIN AT OPPOSITE CORNER OF BASIN. DRAIN TO EXTEND TO A DEPTH THAT REACHES A PERMEABLE LAYER, 6' MIN. FILL DRAIN CAVITY WITH MULCH BY COMPACT IN 6" LIFTS AND MECHANICALLY COMPACTED IN NUMEROUS LIFTS WITH BACKHOE BUCKET UNTIL HEIGHT OF MULCH IS ABOVE SURROUNDING GRADE.
2. SCARIFY BASIN FLOOR 6" DEEP IN TWO DIRECTIONS (NORTH TO SOUTH AND EAST TO WEST) AND INCORPORATE LOOSE MULCH INTO THE SOIL.
3. NO DECOMPOSED GRANITE TO BE INSTALLED UNLESS DIRECTED BY CITY ENGINEER.
4. ENTIRE AREA OF RETENTION BASIN TO BE SPRAYED WITH PRE-EMERGENT AND DUST PREVENTATIVE SOIL STABILIZER, GORILLA-SNOT OR APPROVED EQUAL.

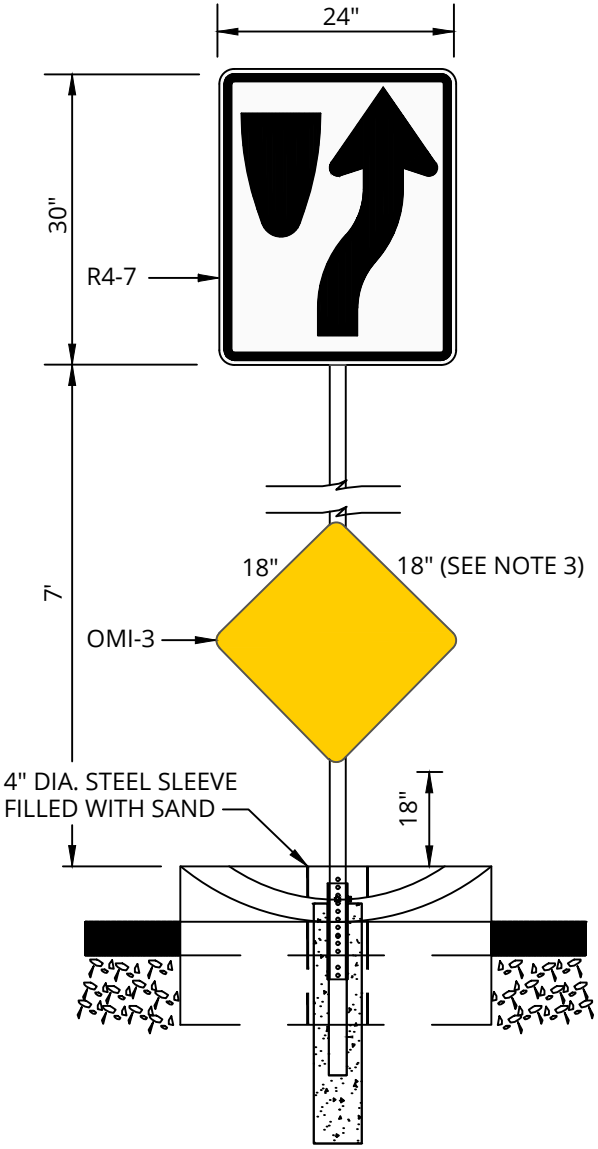
DETAIL NO.			APPROVED:	DETAIL NO.
C-510	CHANDLER arizona	**TEMPORARY RETENTION BASIN MULCH DRYWELL**	01-16-2021	**C-510**

CHANDLER arizona

Standard Details

SIGNAGE & STRIPING

C-600 TO C-623

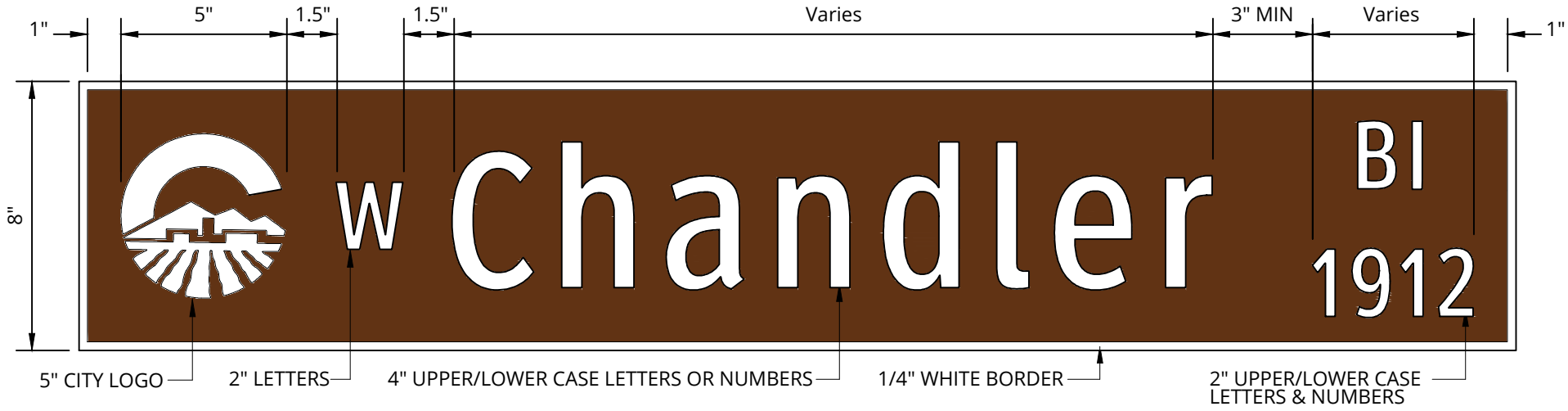


ARTERIAL INTERSECTIONS

NOTES:

1. SIGNS MUST BE INSTALLED 6' BACK OF FACE OF BULLNOSE ON MEDIANS 4' IN WIDTH OR LESS AND 10' BACK ON MEDIAN WIDTHS GREATER THAN 4'.
2. MUTCD R4-7 AND OBJECT MARKER SIGNS MUST BE INSTALLED AT ALL ARTERIAL / ARTERIAL INTERSECTIONS.
3. FOR MEDIANS LESS THAN 3' IN WIDTH, USE 12" X 12" OBJECT MARKER.
4. USE SAME POST SECTION, SIGN MOUNTING AND ANCHOR ASSEMBLY AS SHOWN ON COC DETAIL C-613.
5. SEE COC DETAIL C-225 FOR BULLNOSE REQUIREMENTS.

DETAIL NO.			APPROVED:	DETAIL NO.
C-600	CHANDLER arizona	**MEDIAN SIGNAGE**	05-10-2018	**C-600**



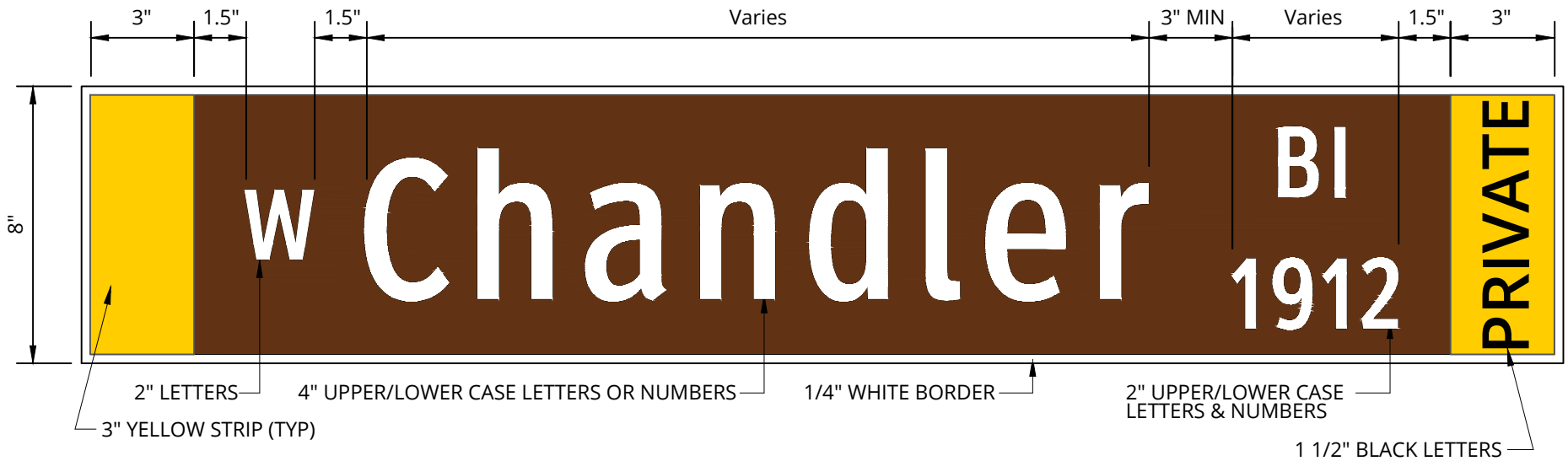
BLANKS - 8" FLAT 0.125" THICK ALUMINUM BLADES
8" x 27" to 8" x 48" AS REQUIRED.
CUT LENGTH TO FIT.

BACKGROUND - 3M WHITE HIGH INTENSITY PRISMATIC SHEETING SERIES 3930 COVERED WITH 3M BROWN ELECTRO CUT FILM SERIES 1179C

4" LETTERS - ClearviewHwy® 2-W Font*
2" LETTERS - ClearviewHwy® 2-W Font*

* WHERE LENGTH EXCEEDS 48", USE 1-W FONT. WHERE LENGTH STILL EXCEEDS 48", CONTACT CITY FOR PROPER ABBREVIATIONS.

DETAIL NO.			APPROVED:	DETAIL NO.
C-601-1	CHANDLER arizona	**STREET NAME SIGNS (FOR PUBLIC STREETS)**	05-10-2018	**C-601-1**



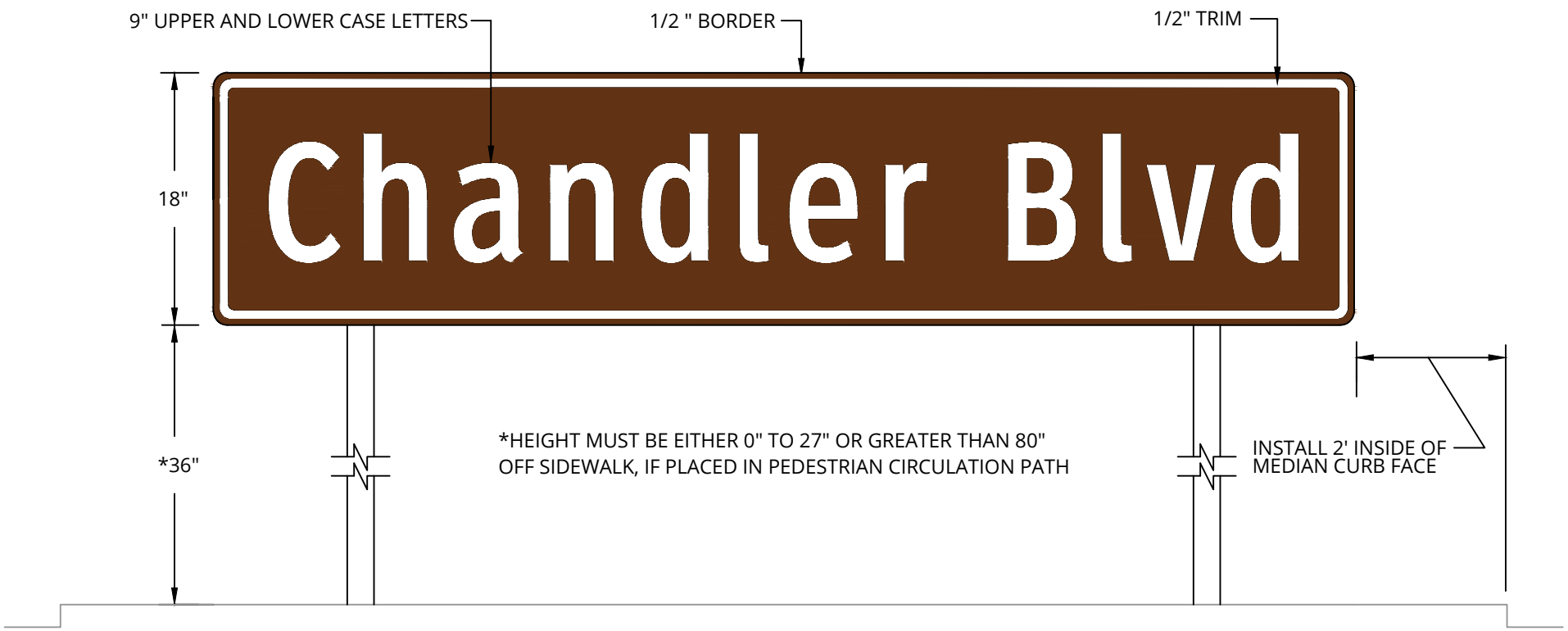
BLANKS - 8" FLAT 0.125" THICK ALUMINUM BLADES
8" x 27" to 8" x 48" AS REQUIRED.
CUT LENGTH TO FIT.

BACKGROUND - 3M WHITE HIGH INTENSITY PRISMATIC SHEETING SERIES 3930 COVERED WITH 3M BROWN ELECTRO CUT FILM SERIES 1179C

4" LETTERS - ClearviewHwy® 2-W Font*
2" LETTERS - ClearviewHwy® 2-W Font*
1 1/2" LETTERS - ClearviewHwy® 2-W Font

* WHERE LENGTH EXCEEDS 48", USE 1-W FONT. WHERE LENGTH STILL EXCEEDS 48", CONTACT CITY FOR PROPER ABBREVIATIONS.

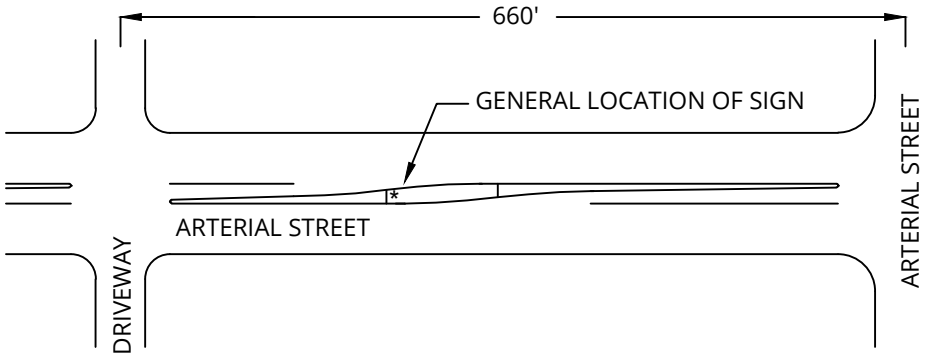
DETAIL NO.			APPROVED:	DETAIL NO.
C-601-2	CHANDLER arizona	**STREET NAME SIGNS (FOR PRIVATE STREETS)**	05-10-2018	**C-601-2**



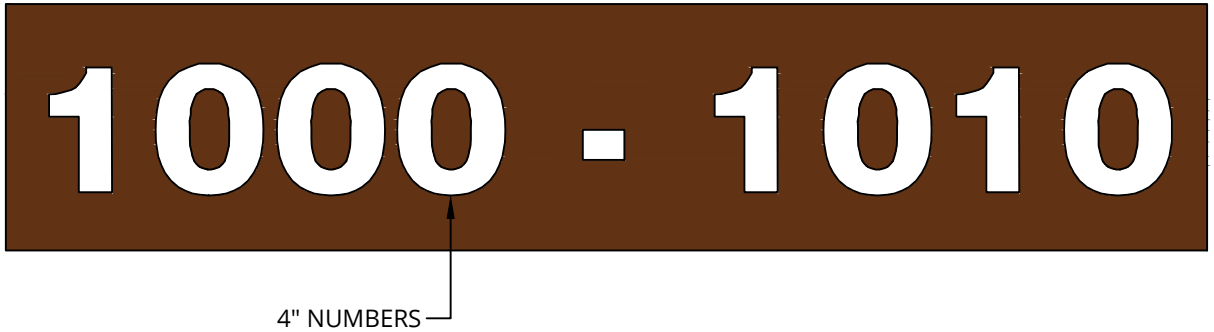
BLANKS - 18" ALUMINUM BLADES
18" x 48" to 18" x 120" AS REQUIRED

9" LETTERS/NUMBERS - ClearviewHwy® 2-W Font

BACKGROUND - 3M WHITE HIGH INTENSITY PRISMATIC SHEETING SERIES 3930 COVERED WITH 3M BROWN ELECTRO CUT FILM SERIES 1179C



DETAIL NO. C-603	CHANDLER arizona	ADVANCED STREET NAME SIGNS	APPROVED: 05-10-2018	DETAIL NO. C-603

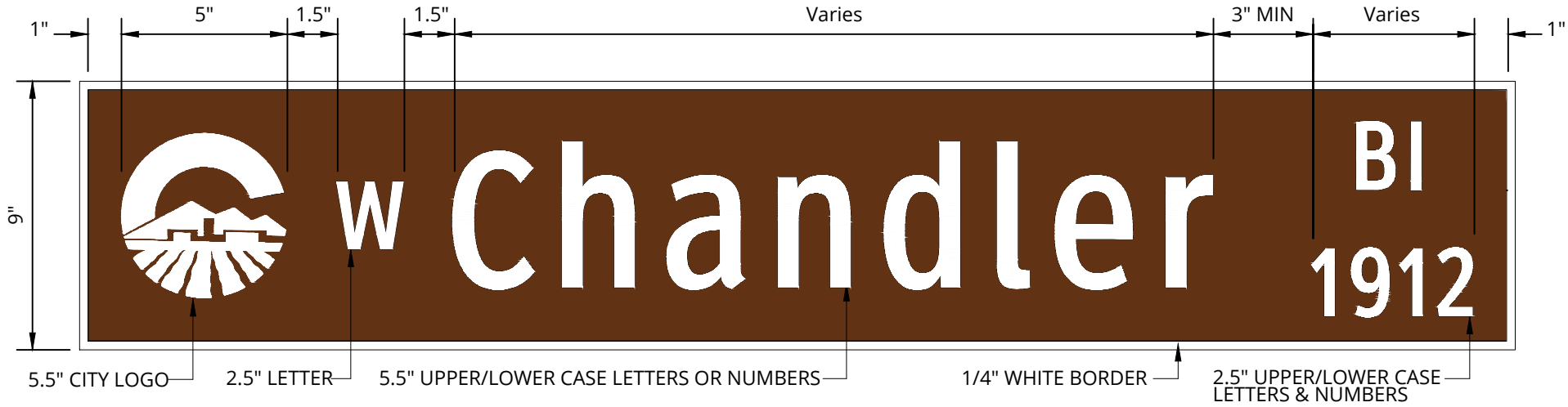


BLANKS - EXTRUDED ALUMINUM BLADES
MIN. 6" x 18" MAX. 6" x 48" AS REQUIRED
HS-1 OR VSS-1 EXTRUSION

BACKGROUND - 3M BROWN REFLECTIVE SHEETING,
HIGH INTENSITY GRADE, CODE NO. 2279 S/L

4" NUMBERS - 3M (PARKWAY WHITE)
SERIES "C" HIGH INTENSITY GRADE

DETAIL NO. C-604	CHANDLER arizona	ADDRESS IDENTIFICATION FOR CLUSTER DEVELOPMENTS	APPROVED: 11-19-1999	DETAIL NO. C-604

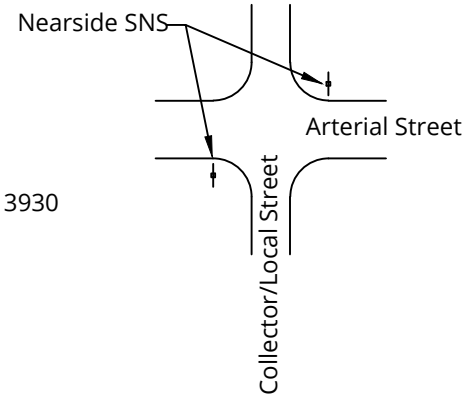


BLANKS - 9" ALUMINUM BLADES
9" x 36" to 9" x 78" AS REQUIRED

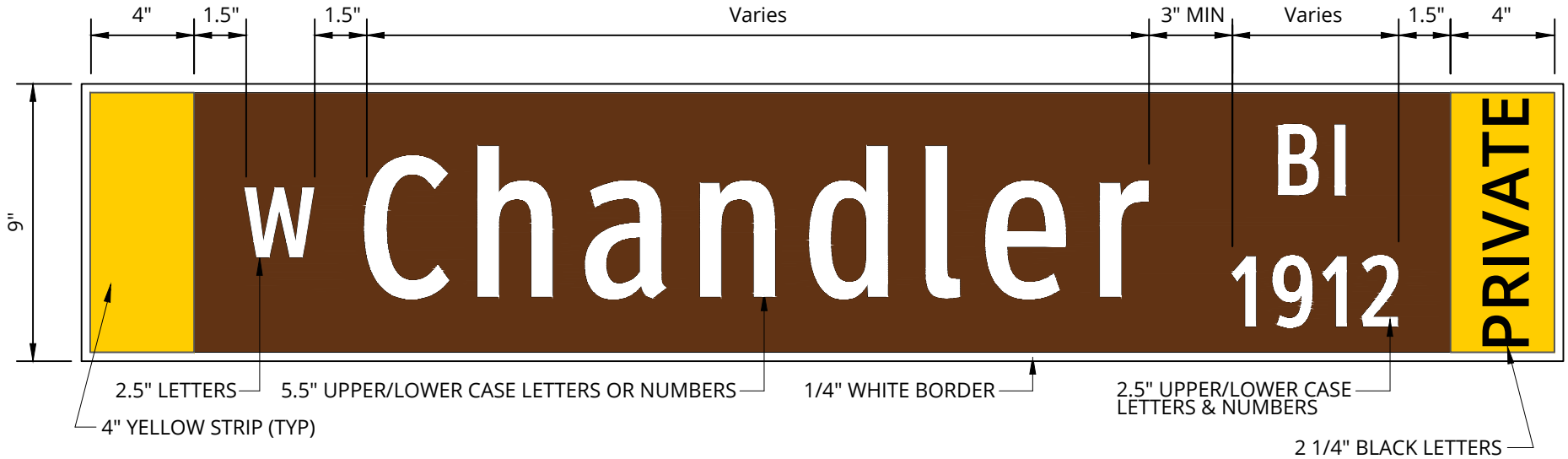
BACKGROUND - 3M WHITE HIGH INTENSITY PRISMATIC SHEETING SERIES 3930 COVERED WITH 3M BROWN ELECTRO CUT FILM SERIES 1179C

5 1/2" LETTERS - ClearviewHwy® 2-W Font
2 1/2" LETTERS - ClearviewHwy® 2-W Font

CITY LOGO - 5.5" WHITE, PRESSURE SENSITIVE,
3M HIGH INTENSITY PRISMATIC SHEETING SERIES 3930



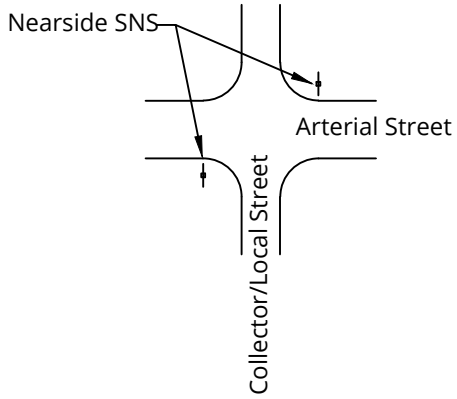
DETAIL NO.			APPROVED:	DETAIL NO.
C-605-1	CHANDLER arizona	**NEARSIDE STREET NAME SIGNS (FOR PUBLIC STREETS)**	05-10-2018	**C-605-1**



BLANKS - 9" ALUMINUM BLADES
9" x 36" to 9" x 78" AS REQUIRED

BACKGROUND - 3M WHITE HIGH INTENSITY PRISMATIC SHEETING SERIES 3930 COVERED WITH 3M BROWN ELECTRO CUT FILM SERIES 1179C

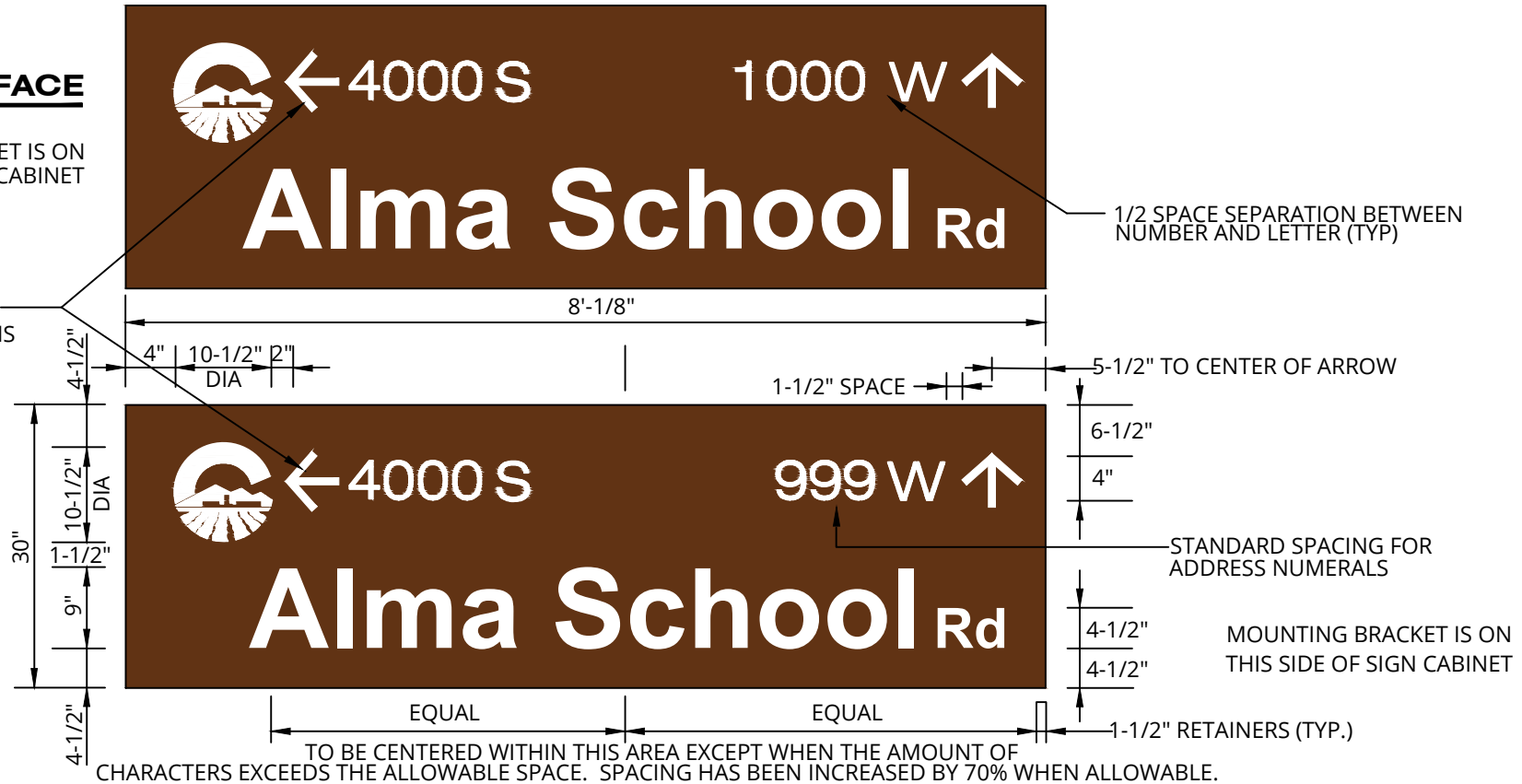
5 1/2" LETTERS - ClearviewHwy® 2-W Font
2 1/2" LETTERS - ClearviewHwy® 2-W Font
1 1/2" LETTERS - ClearviewHwy® 2-W Font



DETAIL NO.			APPROVED:	DETAIL NO.
C-605-2	CHANDLER arizona	**NEARSIDE STREET NAME SIGNS (FOR PRIVATE STREETS)**	05-10-2018	**C-605-2**

OPPOSITE FACE

MOUNTING BRACKET IS ON THIS SIDE OF SIGN CABINET



CABINET: EXTRUDED ALUMINUM 12" DEEP PRIMED AND PAINTED M.A.P. #41-342 BRUSHED ALUMINUM, SATIN FINISH. INCLUDE HINGED FACE WITH PROP ROD FOR SERVICE. RETAINERS PRIMED AND PAINTED SIMILARLY.

FACES: 3/16" THICK FLAT WHITE POLYCARBONATE SHEET WITH 1ST SURFACE APPLIED VINYL AS FOLLOWS:

ENTIRE BACKGROUND: #230-59 DARK BROWN

SKY SEMI-CIRCLE SHAPE: #230-35 DARK BLUE

MOUNTAINS: #230-61 SLATE GREY

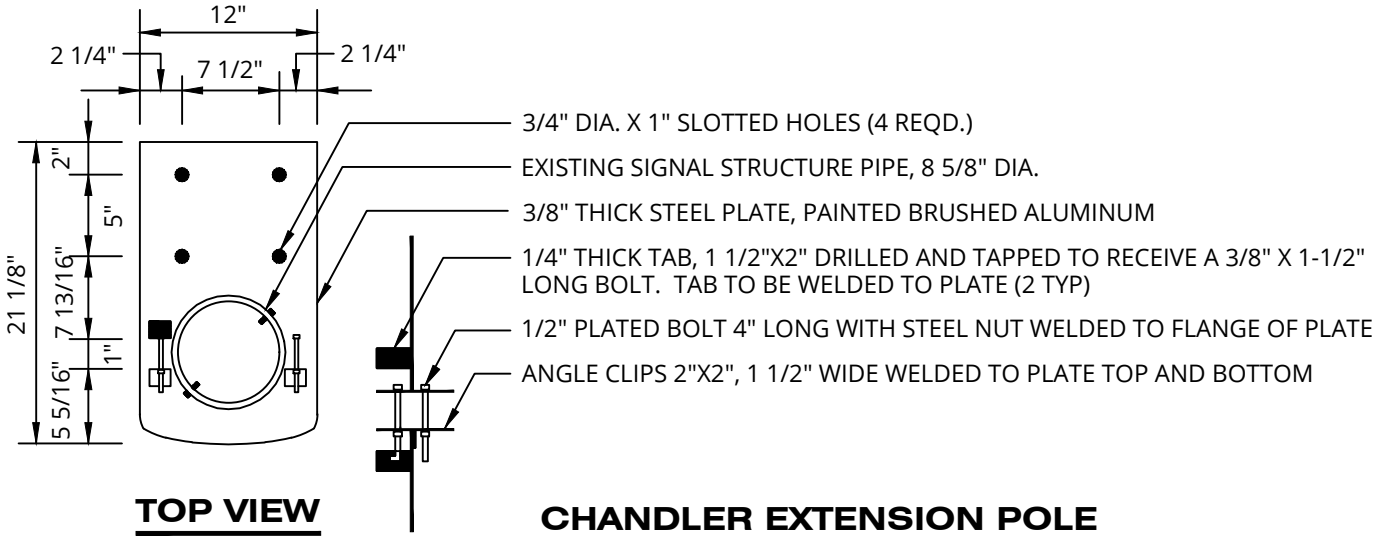
FURROWS: #230-49 BURGUNDY

ALL TEXT AND CIRCULAR BACKGROUND FOR THE LOGO ARE WHITE POLYCARBONATE FACES SHOWING THROUGH.

TYPESTYLE: HELVETICA FONT & LOWERCASE STD. SPACING FOR THE ADDRESS NUMERALS AND OPENED-UP SPACING FOR THE ST. NAMES IF ALLOWABLE

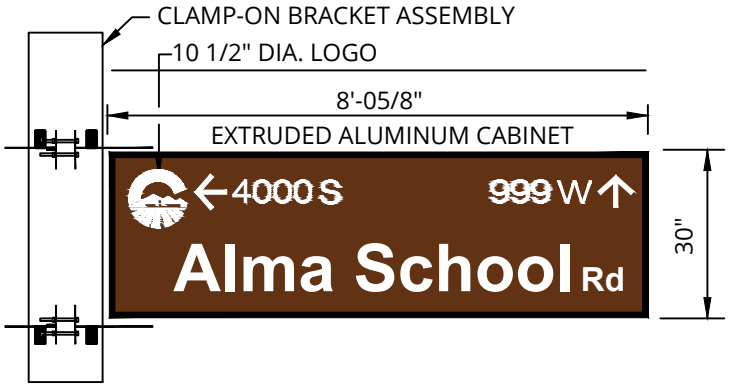
ILLUMINATION: SEE APPROVED PRODUCTS LIST FOR LIGHT MATERIALS. BI-PIN LAMP SOCKETS OPERATED BY PHOTOCELL ON POWER METER PEDESTAL; SAME CIRCUIT AS STREETLIGHTS ON SIGNAL POLES

DETAIL NO.			APPROVED:	DETAIL NO.
C-606	CHANDLER arizona	**INTERNALLY ILLUMINATED STREET NAME SIGN**	01-27-2022	**C-606**

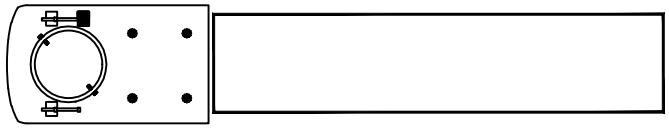


TOP VIEW

CHANDLER EXTENSION POLE

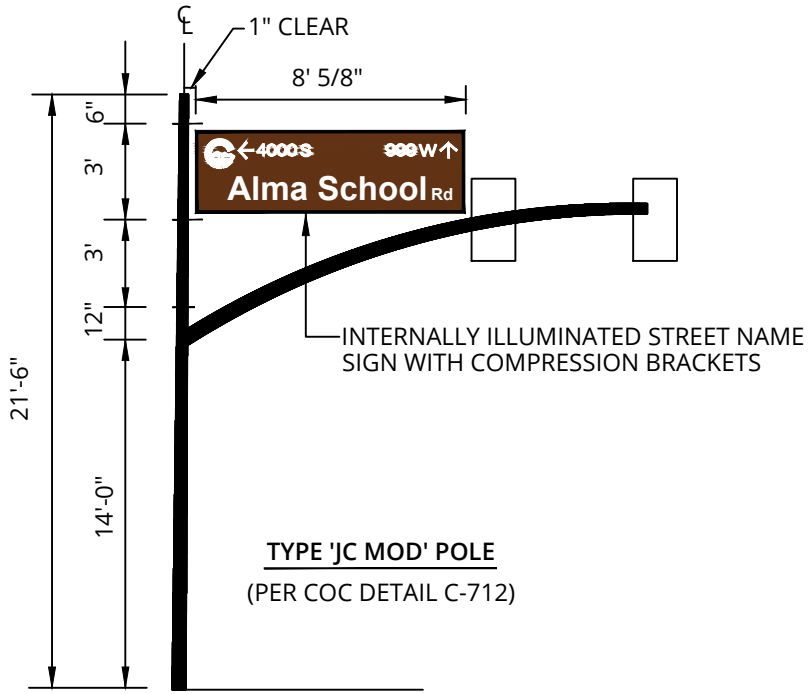


FRONT AND FACE DETAIL

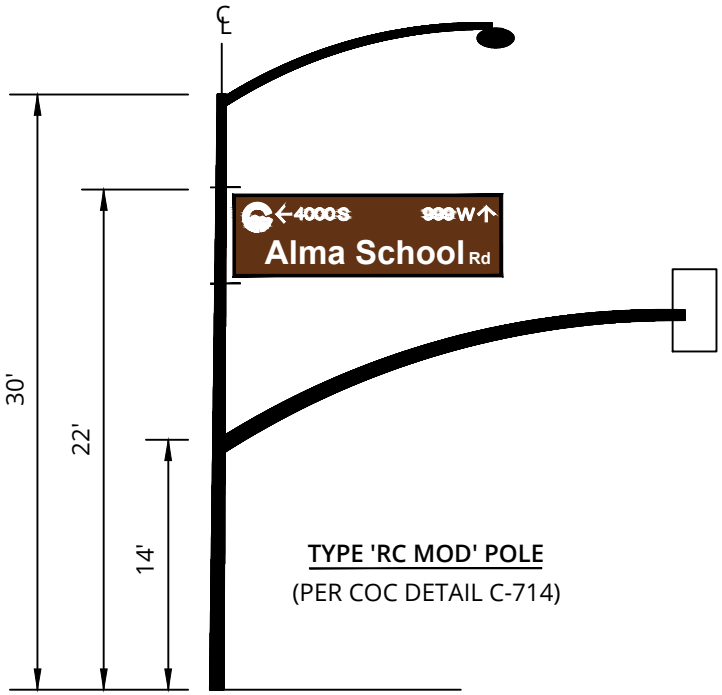


TOP VIEW

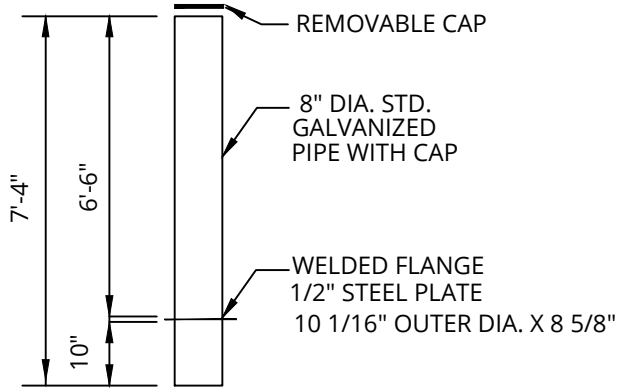
DETAIL NO. C-607	CHANDLER arizona	INTERNALLY ILLUMINATED STREET NAME SIGN - BRACKET ASSEMBLY	APPROVED: 01-09-2020	DETAIL NO. C-607



ELEVATION



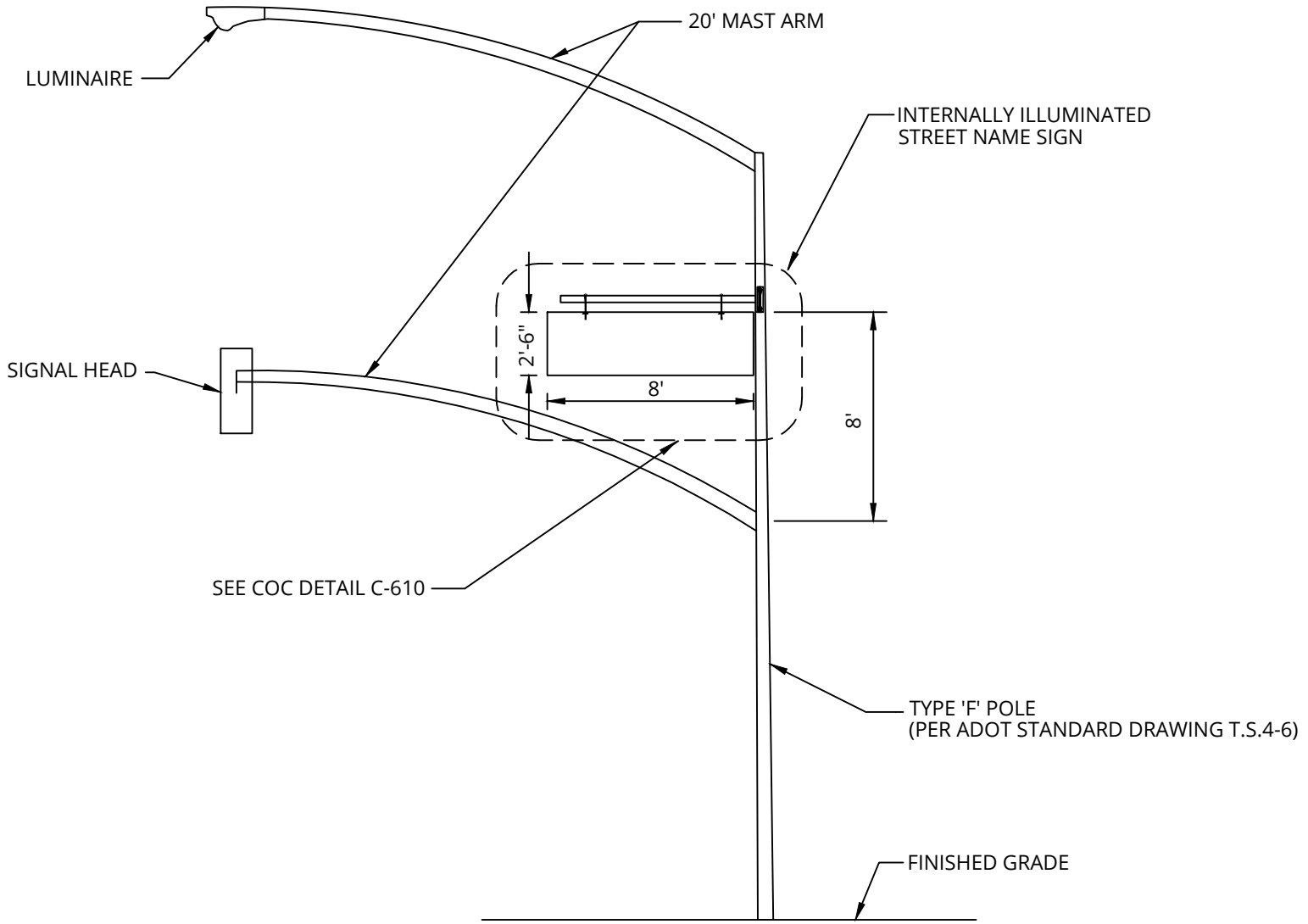
ELEVATION



EXTENSION BRACKET DETAIL

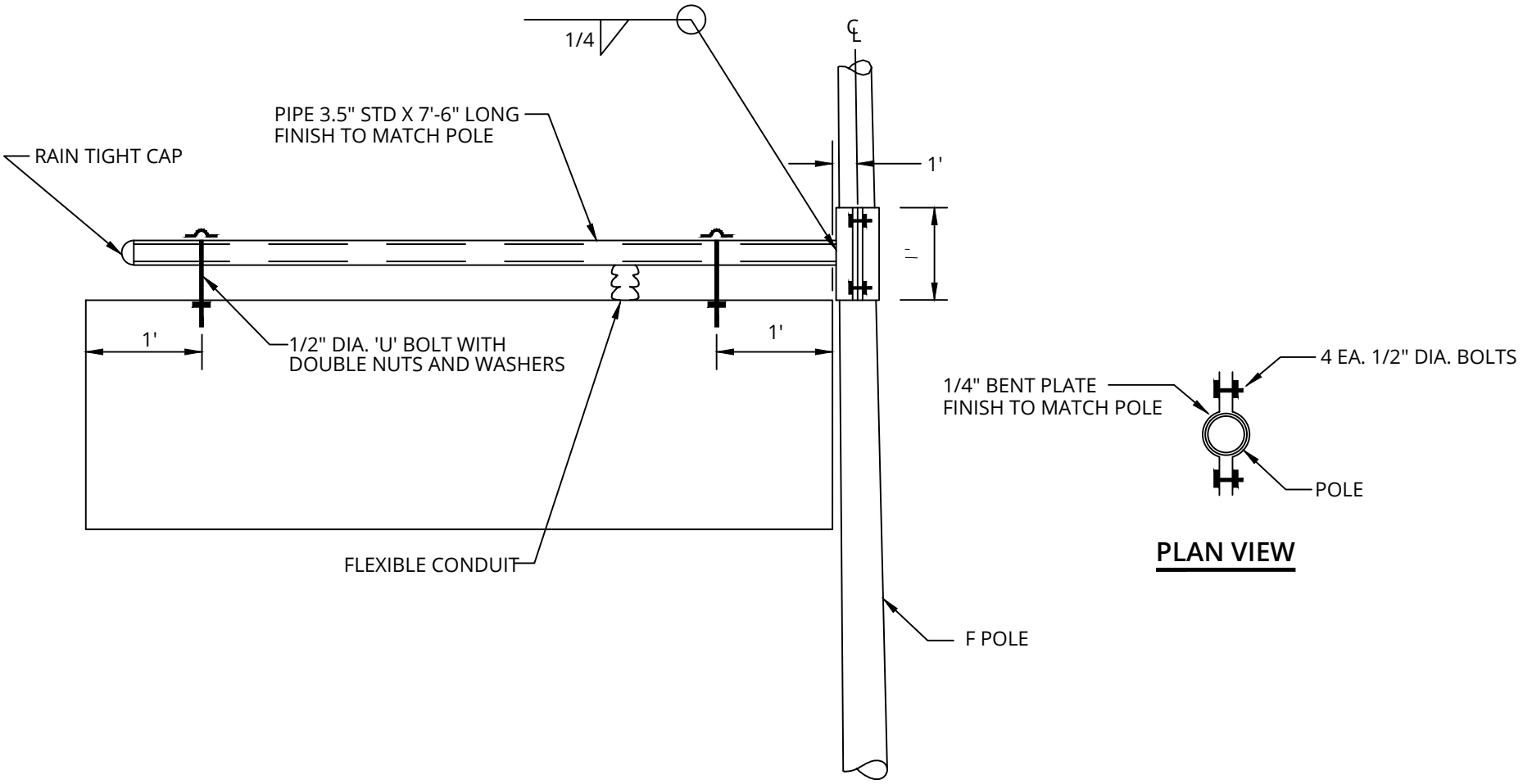
DETAIL NO.			APPROVED:	DETAIL NO.
C-608	CHANDLER arizona	**INTERNALLY ILLUMINATED STREET NAME SIGN - JC/RC MOD POLE MOUNTING**	01-27-2022	**C-608**

REMOVED 2022



DETAIL NO.			APPROVED:	DETAIL NO.
C-609	CHANDLER arizona	**INTERNALLY ILLUMINATED STREET NAME SIGN - F POLE MOUNTING**	11-19-1999	**C-609**

REMOVED 2022



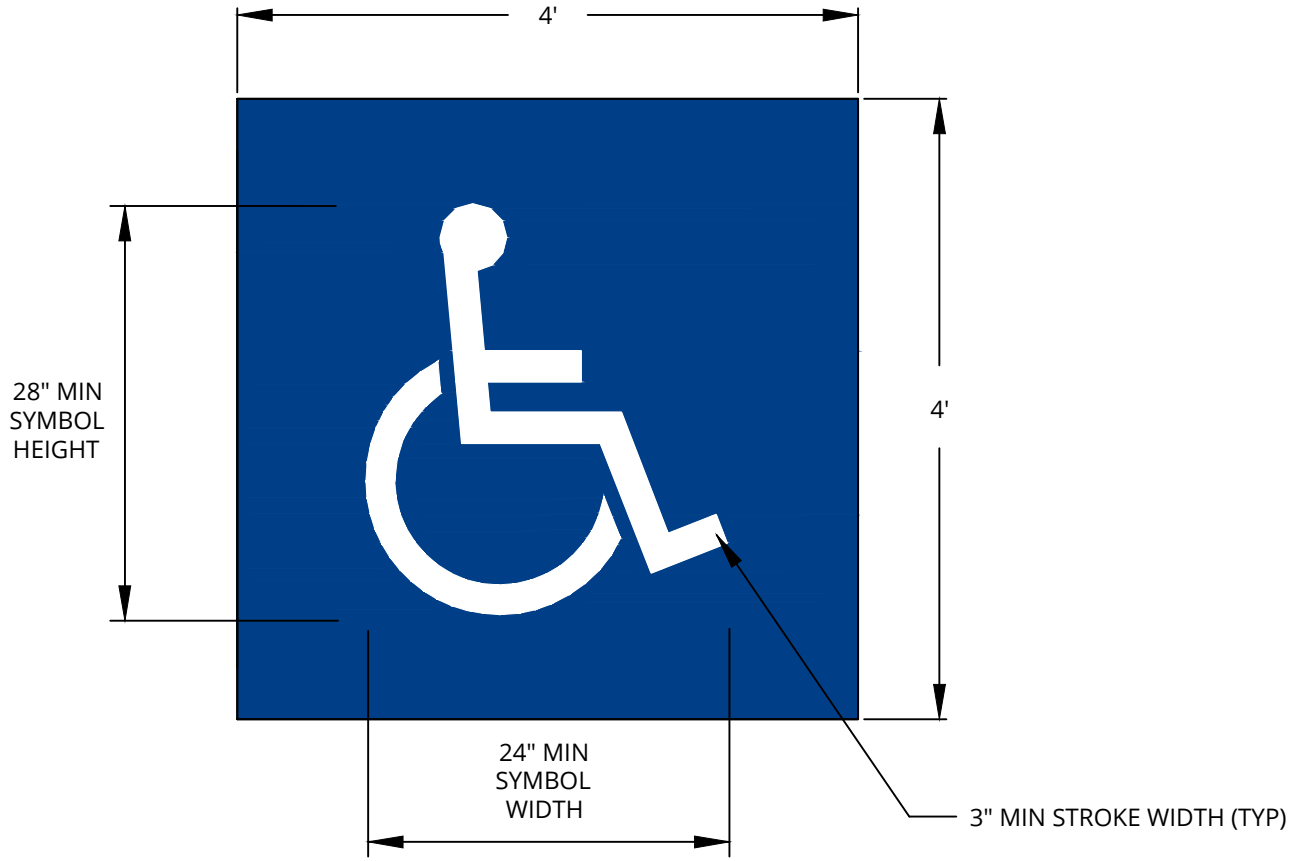
NOTE:
FINISHED SIGN MUST BE ABLE TO SWING ABOUT MAST.

DETAIL NO.			APPROVED:	DETAIL NO.
C-610	CHANDLER arizona	**INTERNALLY ILLUMINATED STREET NAME SIGN - F POLE MOUNTING**	11-19-1999	**C-610**

NOTES:

1. THE BOTTOM OF THE SIGN MUST BE 5'-4" ABOVE FINISHED GRADE OR 7'-0" WHEN PLACED IN PEDESTRIAN CIRCULATION PATH.
2. SIGN MUST BE CENTERED ON THE PARKING SPACE AND PLACED 2.5 FEET FROM FACE OF CURB. IN PARKING LOT SITUATIONS WITHOUT CURBING, SIGN MAY BE PLACED AT THE END OF THE STALL. 7
3. VAN ACCESSIBLE TAB TO BE USED, AS REQUIRED.

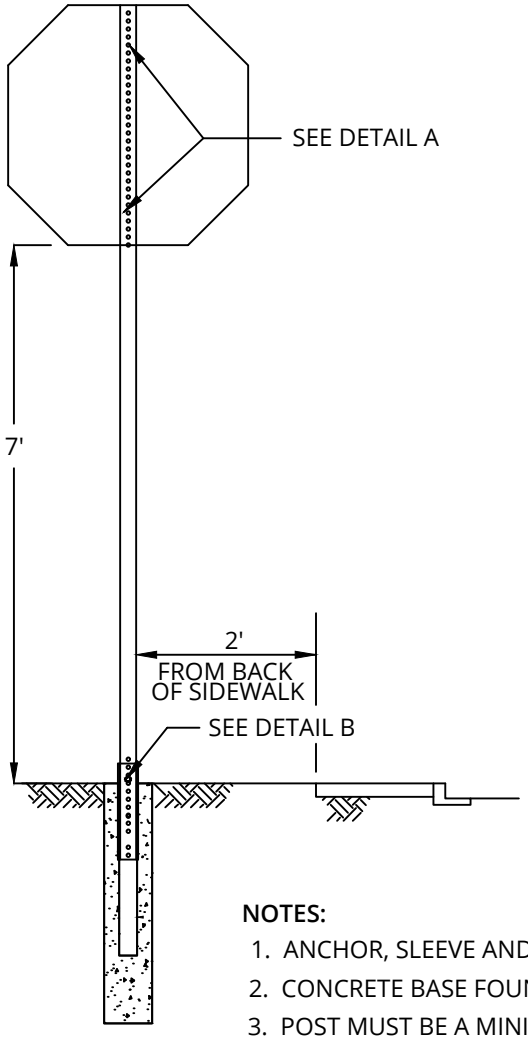
DETAIL NO.			APPROVED:	DETAIL NO.
C-611	CHANDLER arizona	**ACCESSIBLE PARKING SIGN**	05-10-2018	**C-611**

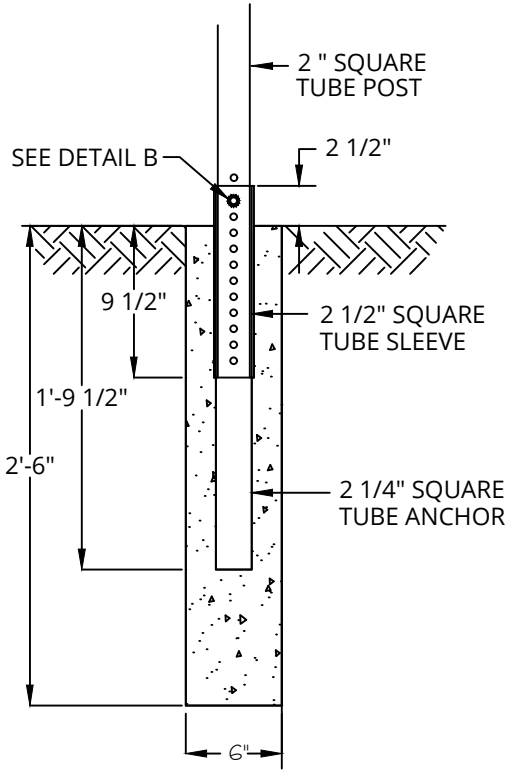


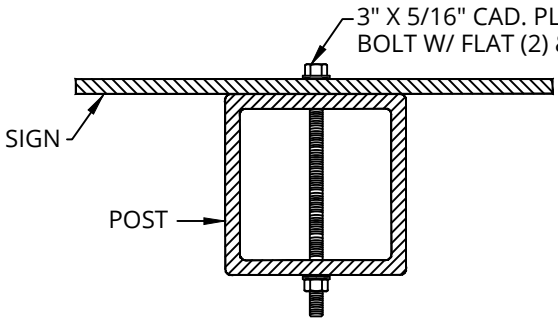
NOTES:

1. THERMOPLASTIC PAVEMENT MARKINGS MUST BE WHITE SYMBOL ON 4' X 4' BLUE SQUARE.
2. SYMBOL MEASUREMENTS AND STROKE WIDTH MUST MEET CURRENT MUTCD REQUIREMENTS.

DETAIL NO.			APPROVED:	DETAIL NO.
C-612	CHANDLER arizona	**ACCESSIBLE PARKING PAVEMENT MARKING SYMBOL**	05-10-2018	**C-612**

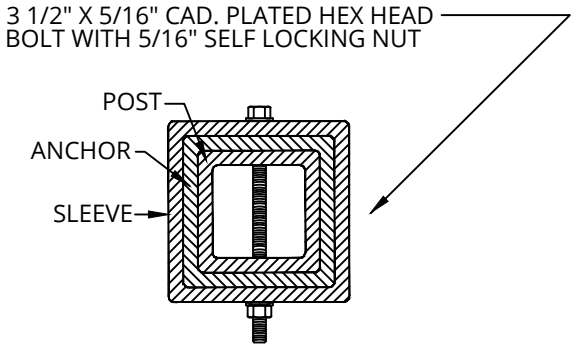






SIGN MOUNTING

DETAIL A



ANCHOR ASSEMBLY

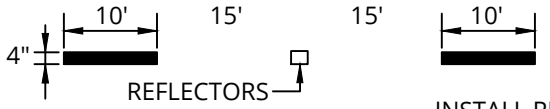
DETAIL B

NOTES:

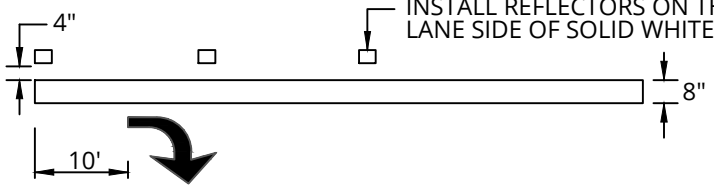
1. ANCHOR, SLEEVE AND POST ALL TO BE 12 GAUGE, .105 INCH GALVANIZED STEEL.
2. CONCRETE BASE FOUNDATION MUST BE CLASS 'C' CONCRETE AS PER MAG STANDARD SPECIFICATIONS SEC. 505 + 725.
3. POST MUST BE A MINIMUM LENGTH OF 11' AND MUST BE INSERTED NOT LESS THAN 12" INTO THE ANCHOR. POST WILL NEED TO BE 12' IN LENGTH FOR ALL 'WARNING' SIGN INSTALLATIONS.
4. THE FRONT AND BACK SIDES OF POST MUST HAVE 7/16" HOLES PUNCHED ON 1" CENTERS.
5. ANCHOR MUST HAVE HOLES PUNCHED FOR THE TOP 3" ONLY AND BOTTOM TAPED TO PREVENT CONCRETE FROM SEEPING IN DURING INSTALLATION.

DETAIL NO.			APPROVED:	DETAIL NO.
C-613	CHANDLER arizona	**SIGN POST AND BASE**	05-10-2018	**C-613**

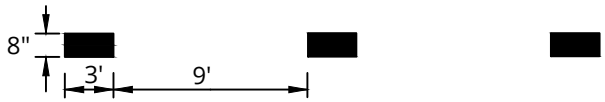
LANE LINE



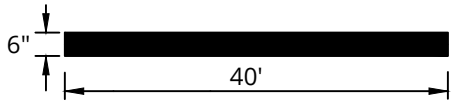
TURN LANE



LANE DROP



EDGE LINES

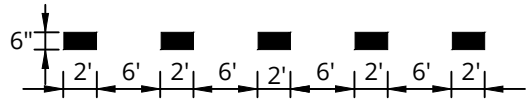


*REFLECTORS AT 40' SPACING IN TRANSITION AREAS ONLY

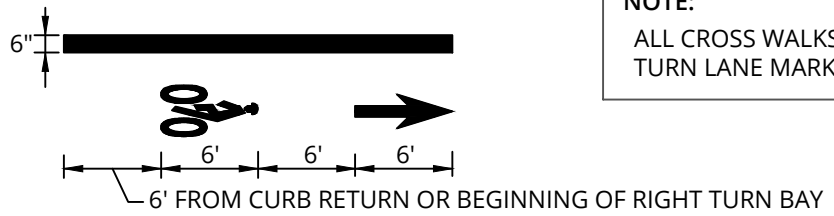
DOUBLE YELLOW

GUIDE LINES

THRU INTERSECTIONS

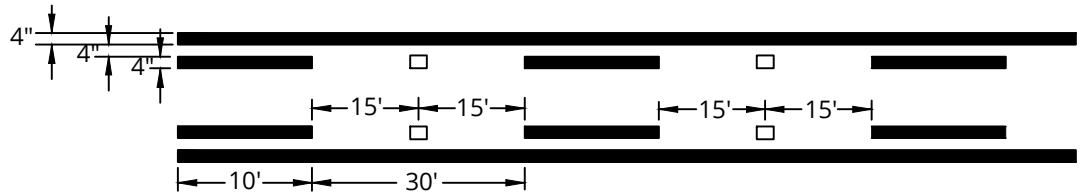


BIKE LANE

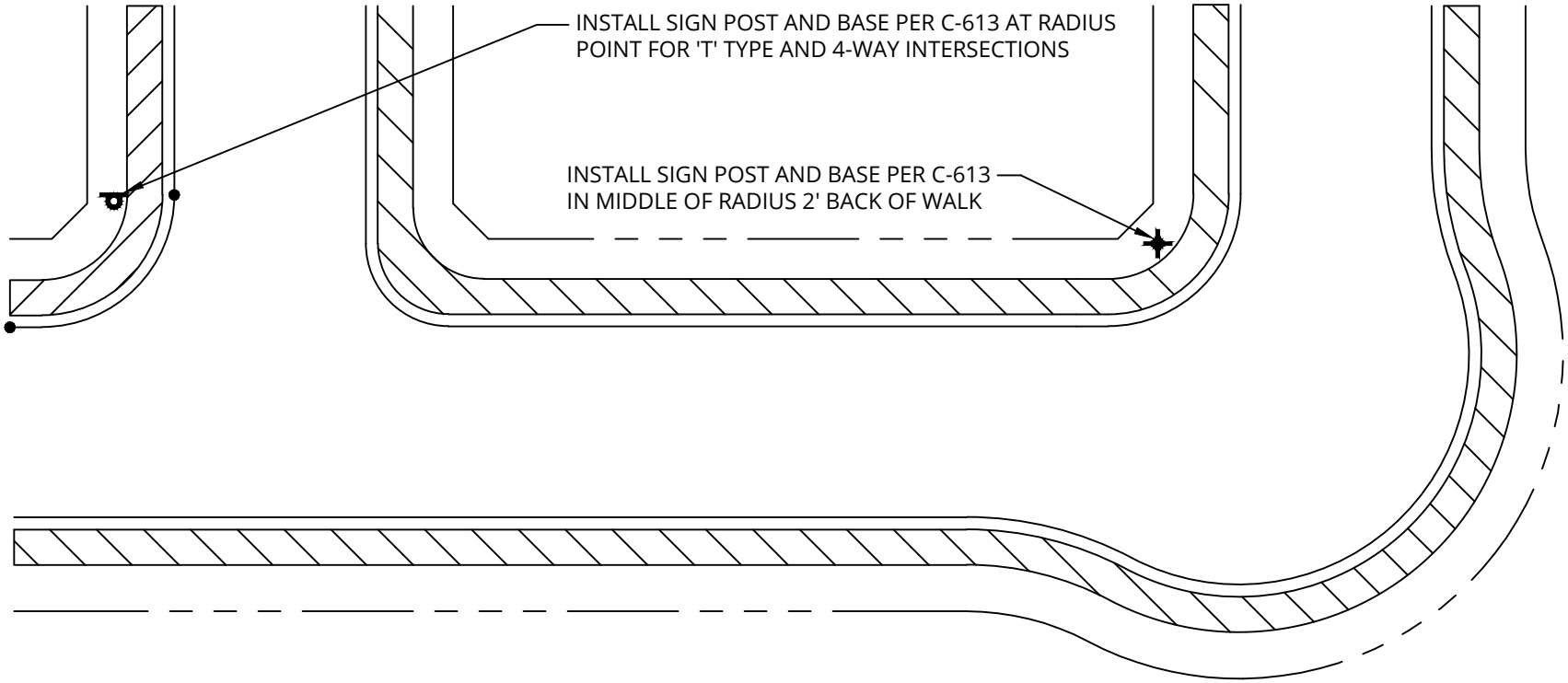


NOTE:
ALL CROSS WALKS, STOP BARS, MINI-SKIPS, AND TURN LANE MARKINGS MUST BE THERMOPLASTIC.

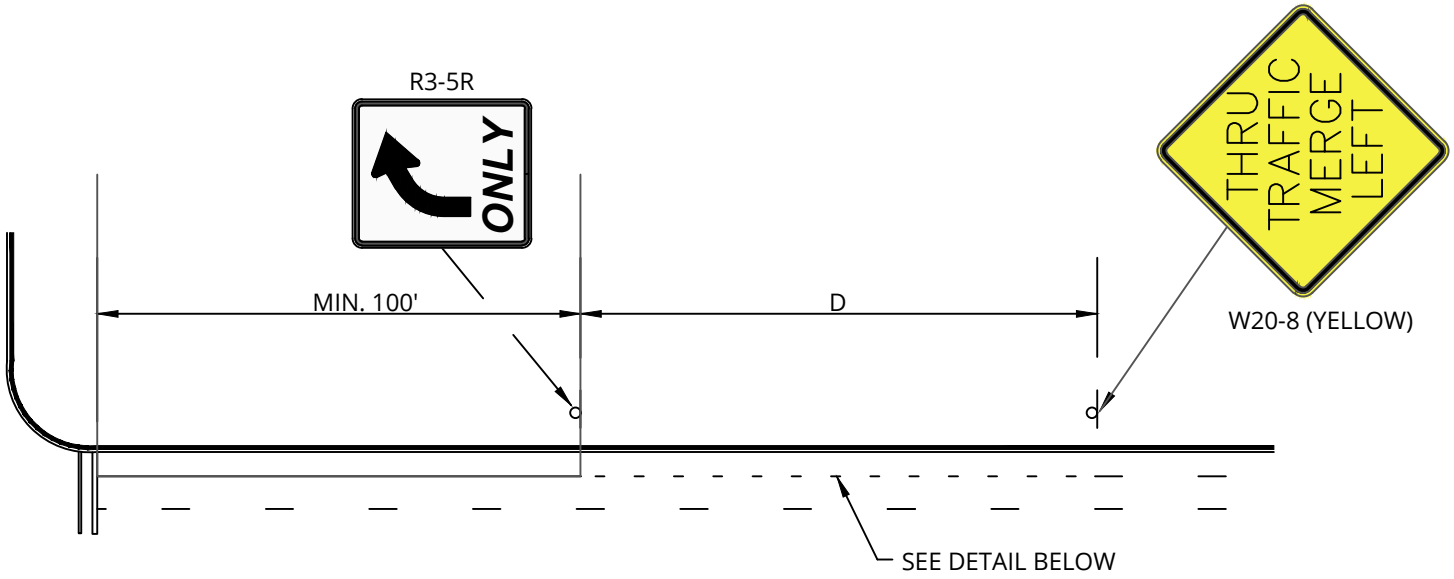
TWO-WAY LEFT TURN LANE



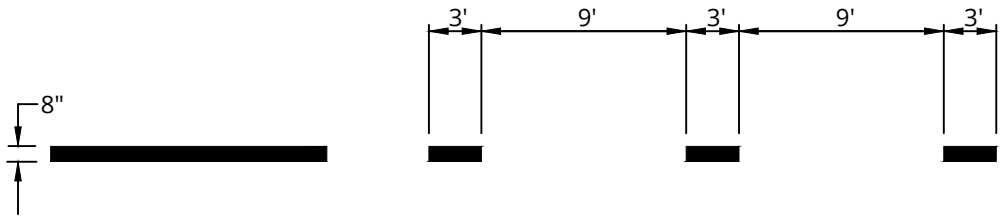
DETAIL NO.			APPROVED:	DETAIL NO.
C-614	CHANDLER arizona	**PAVEMENT MARKING DETAILS**	01-09-2020	**C-614**



DETAIL NO. C-615	CHANDLER arizona	SIGN POST AND BASE LOCATIONS FOR RESIDENTIAL STREETS	APPROVED: 01-11-2002	DETAIL NO. C-615



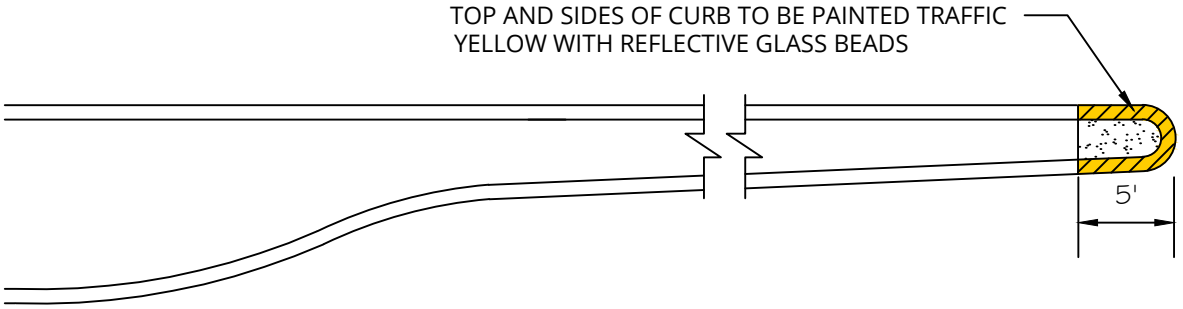
SPEED LIMIT	D* (FT)
20	175
25	250
30	325
35	400
40	475
45	550
50	625
55	700
60	775



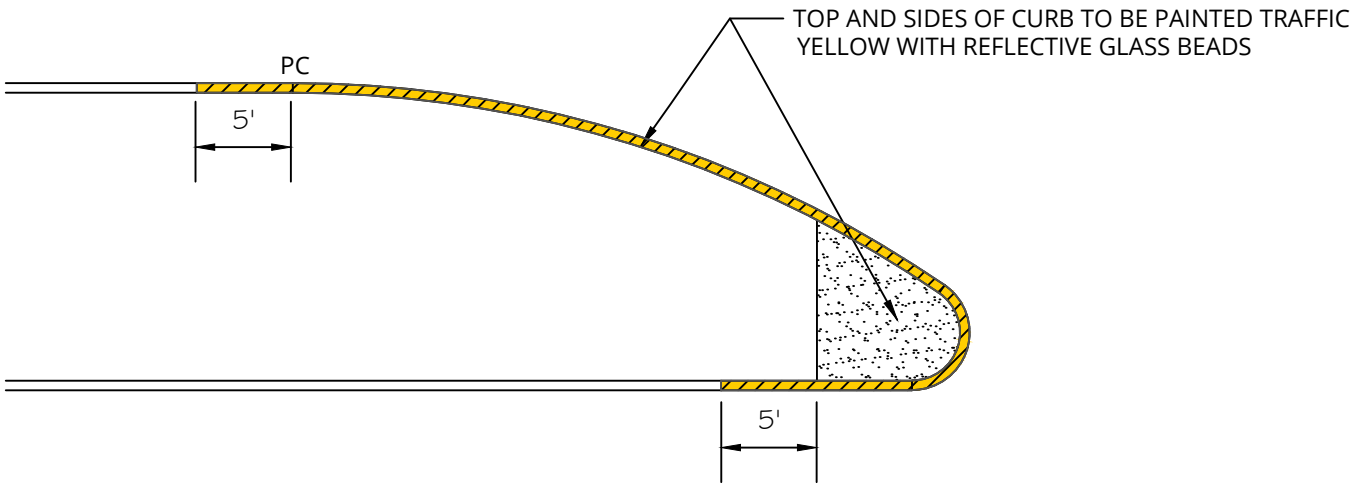
DETAIL A: FROM MUTCD FIGURE 3B-10

*FROM MUTCD TABLE 2C-4

DETAIL NO. C-616	CHANDLER arizona	RIGHT TURN LANE DROP	APPROVED: 03-14-2013	DETAIL NO. C-616

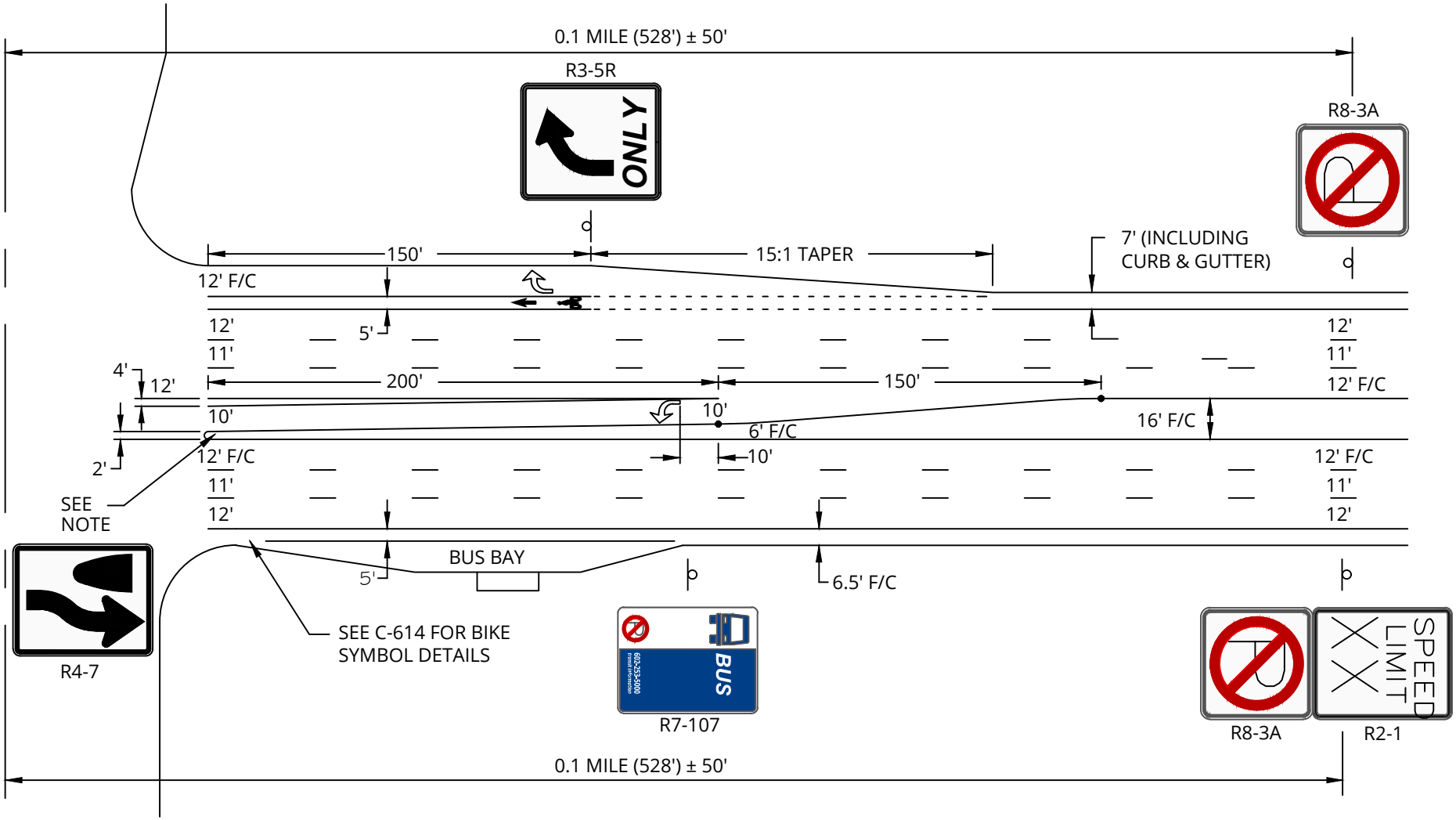


3' TYPICAL MEDIAN NOSE



16' RAISED MEDIAN OR GREATER

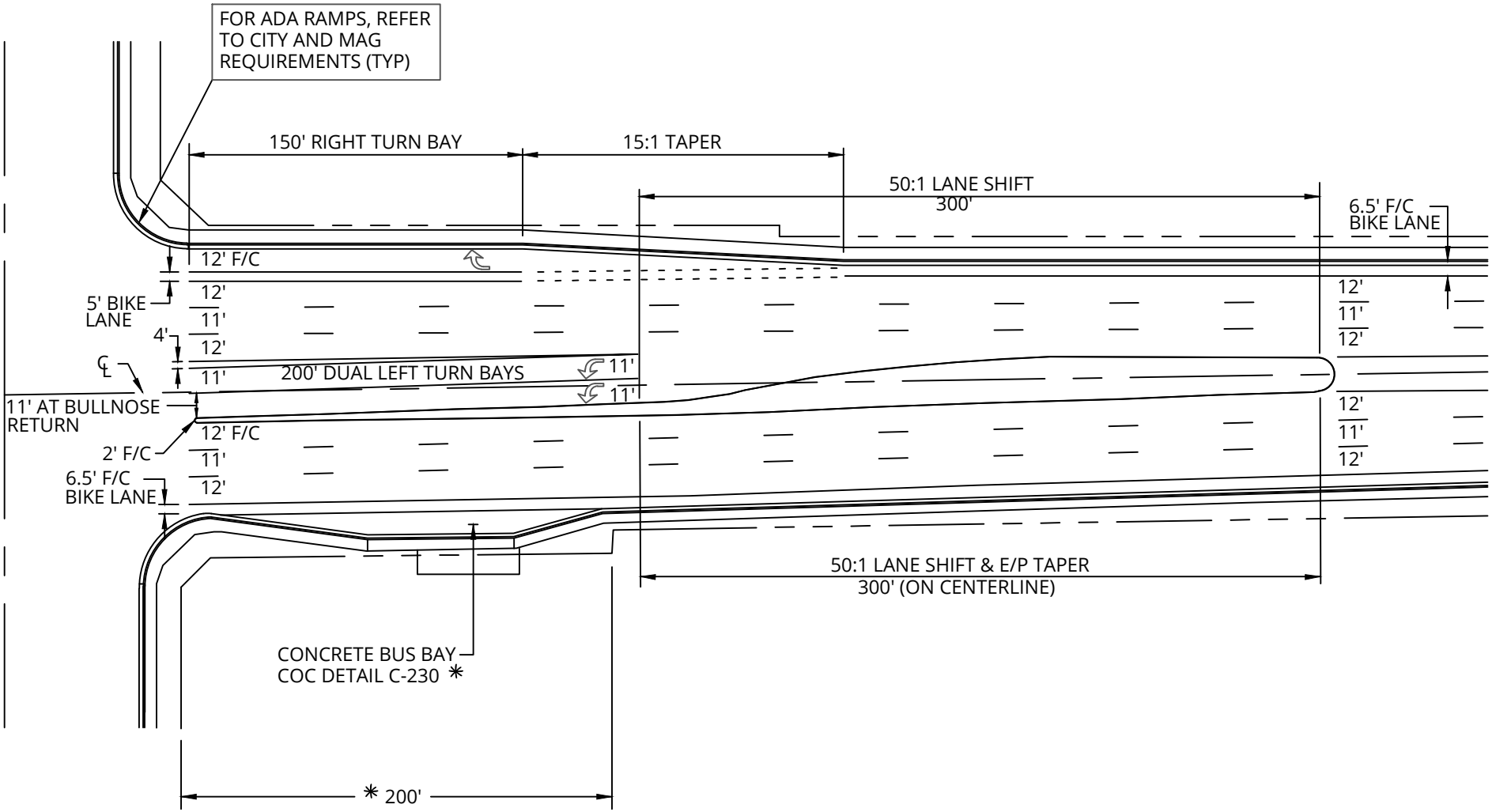
DETAIL NO.			APPROVED:	DETAIL NO.
C-617	CHANDLER arizona	**MEDIAN NOSE PAINTING**	01-27-2022	**C-617**



NOTE:

INSTALL KEEP RIGHT (R4-7) ONLY IF MEDIAN IS BEING INTRODUCED AT THIS POINT ALONG THE ARTERIAL ROAD OR AT A SIGNALIZED INTERSECTION.

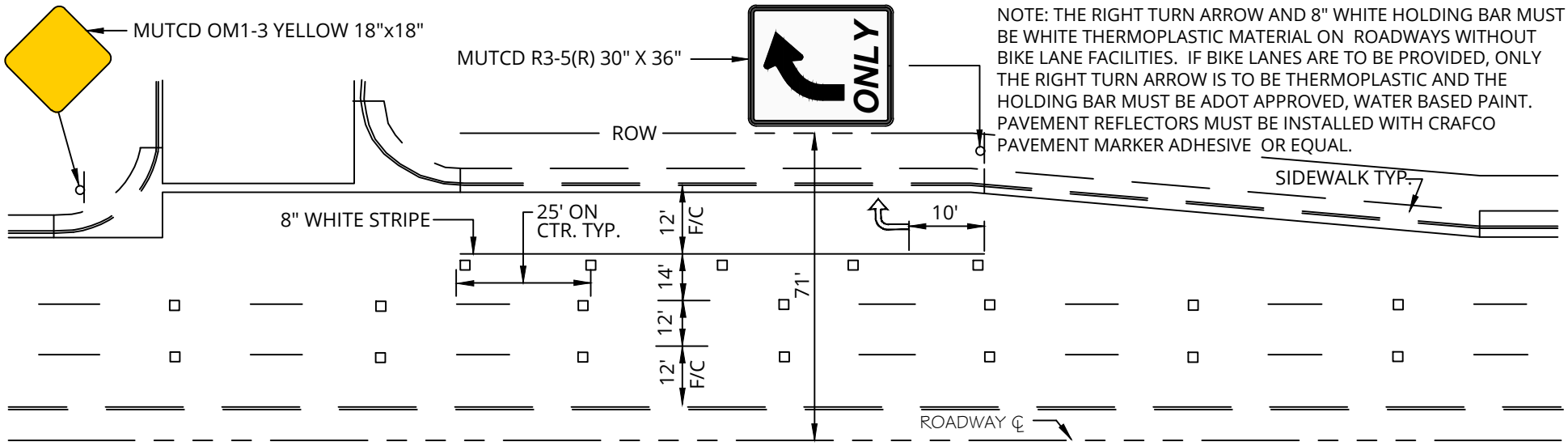
DETAIL NO. **C-618**	CHANDLER arizona	**TYPICAL SIGNS AND MARKINGS ARTERIAL ROAD**	APPROVED: 01-27-2022	DETAIL NO. **C-618**



NOTES:

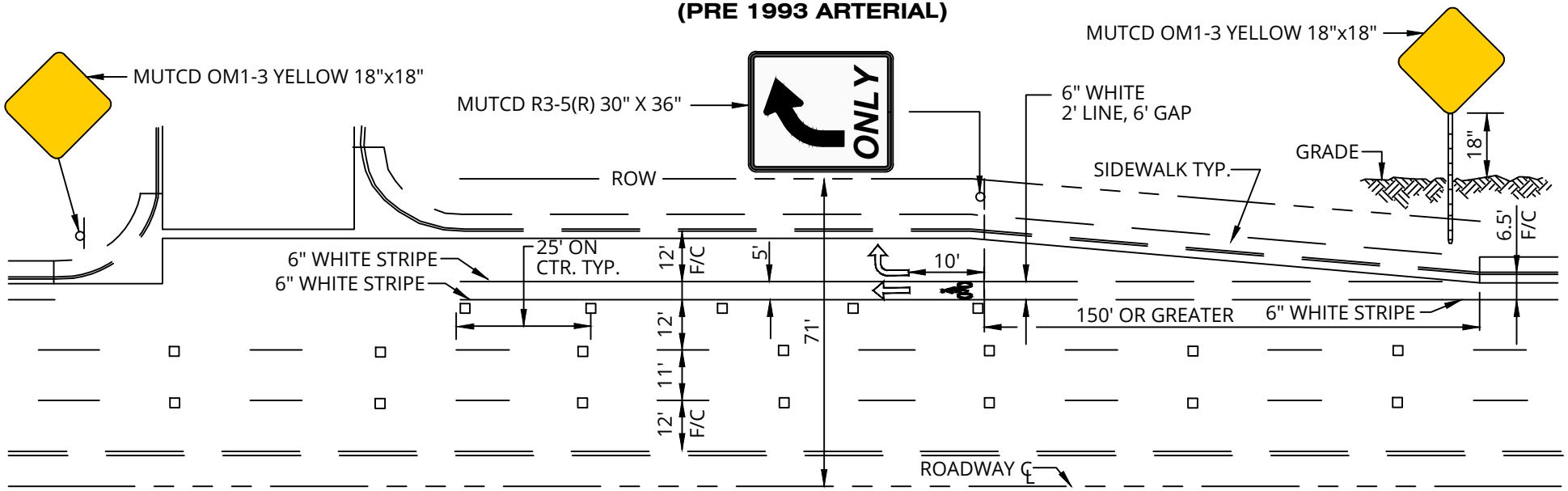
1. 50 : 1 TAPERS FOR REDIRECTION OF THROUGH LANES.
2. 15 : 1 TAPERS FOR RIGHT TURN BAY APPROACHES.
3. ALL DIMENSIONS TO CENTER OF LANE LINE UNLESS OTHERWISE NOTED.

DETAIL NO.			APPROVED:	DETAIL NO.
C-619	CHANDLER arizona	**TYPICAL LANE WIDTHS - ARTERIAL ROAD WITH DOUBLE LEFT TURNS**	03-14-2013	**C-619**



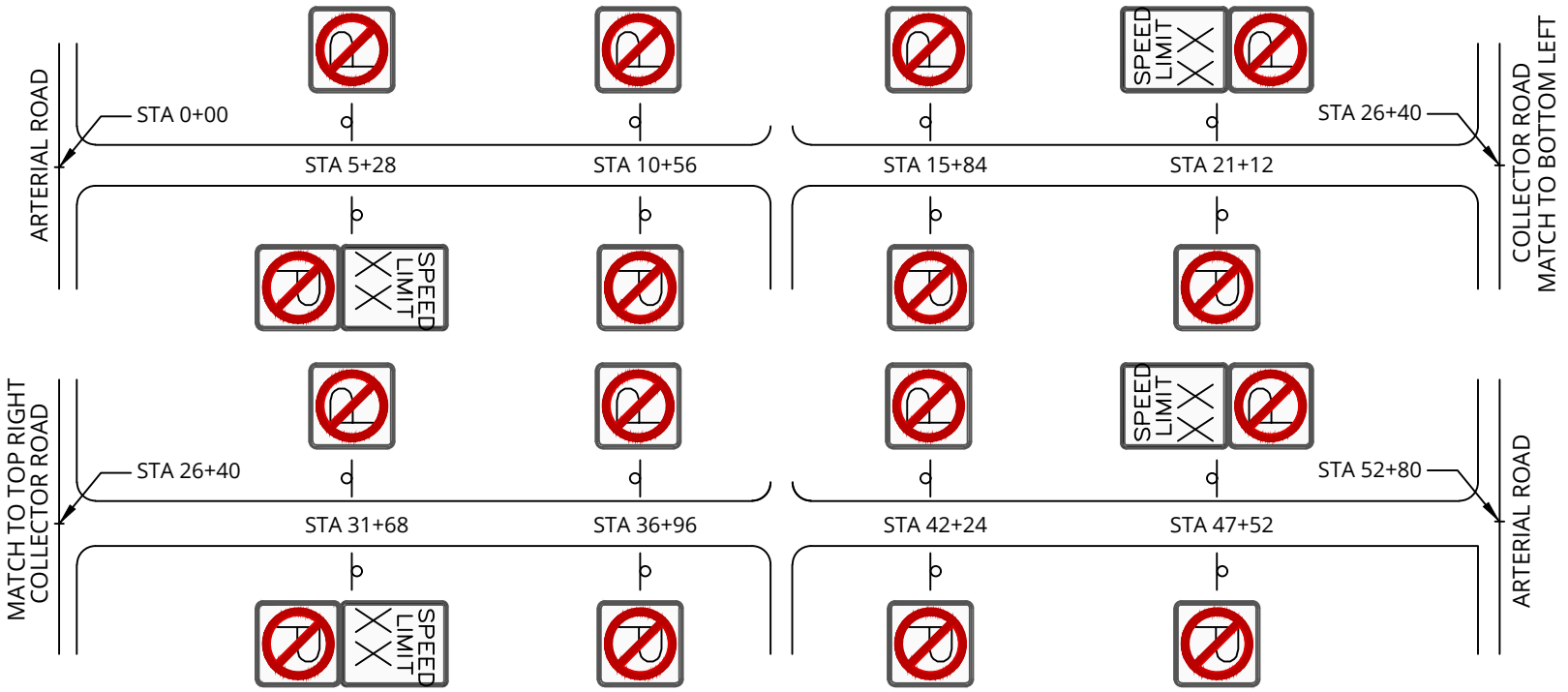
NOTE: THE RIGHT TURN ARROW AND 8" WHITE HOLDING BAR MUST BE WHITE THERMOPLASTIC MATERIAL ON ROADWAYS WITHOUT BIKE LANE FACILITIES. IF BIKE LANES ARE TO BE PROVIDED, ONLY THE RIGHT TURN ARROW IS TO BE THERMOPLASTIC AND THE HOLDING BAR MUST BE ADOT APPROVED, WATER BASED PAINT. PAVEMENT REFLECTORS MUST BE INSTALLED WITH CRAFCO PAVEMENT MARKER ADHESIVE OR EQUAL.

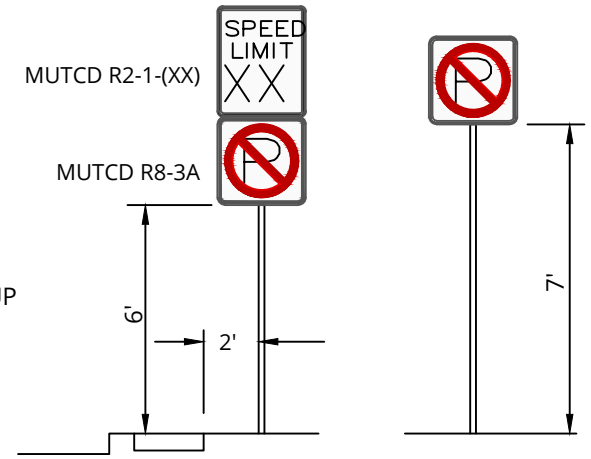
WITHOUT BIKE LANES
(PRE 1993 ARTERIAL)



WITH BIKE LANES

DETAIL NO.			APPROVED:	DETAIL NO.
C-620	CHANDLER arizona	**MAJOR ARTERIAL DECELERATION SIGNING AND STRIPING**	01-08-2009	**C-620**



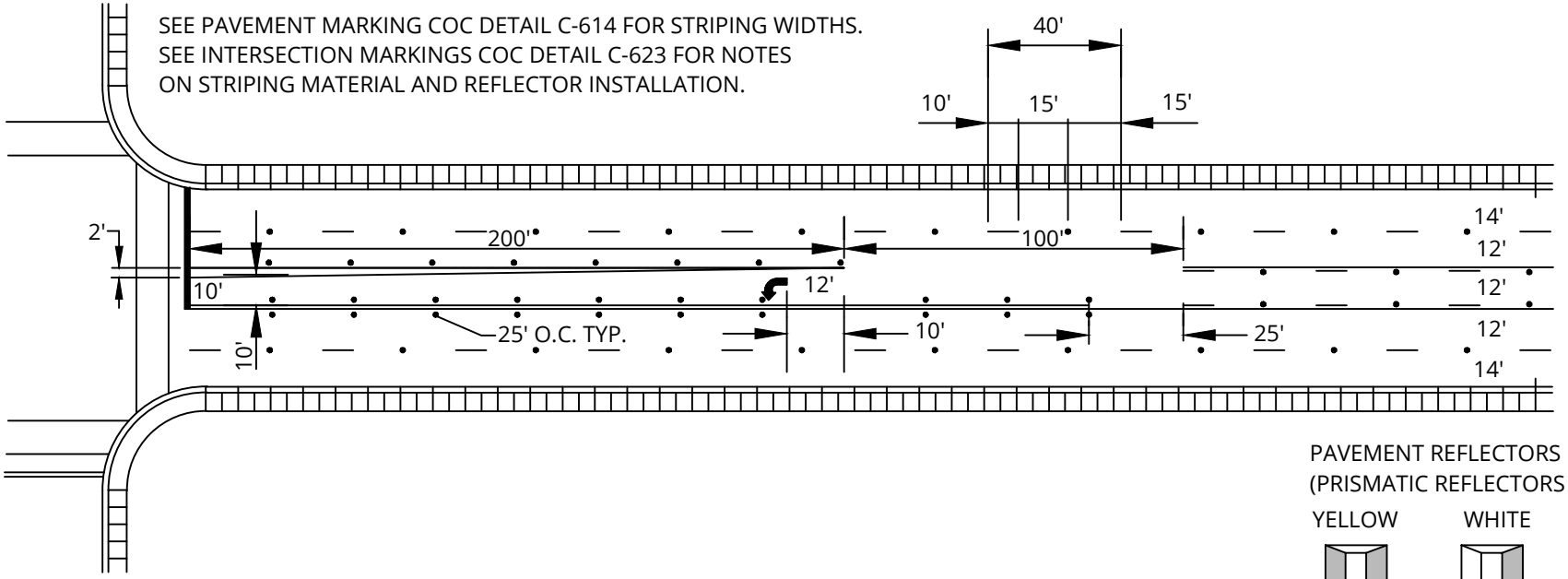


NOTES:

1. SIGNING SHOWN ONLY REPRESENTS THE PLACEMENT OF THE NO-PARKING AND SPEED LIMIT SIGNS. ADDITIONAL SIGNING MAY BE REQUIRED DEPENDING ON EACH INDIVIDUAL SITUATION.
2. THE SPACING OF THE NO-PARKING SIGNS SHOULD BE 528' (1/10 MILE) APART, BUT MAY VARY UP TO 50' IF SIGN CAN BE MOUNTED ONTO A EXISTING POLE OR A STREET LIGHT POLE.
3. NO-PARKING SIGNS MUST BE 24"x24" UNLESS OTHERWISE NOTED.
4. SPEED LIMIT MUST BE DETERMINED BY THE CITY ENGINEER AND THE SIGN MUST BE 24"x30" IN SIZE. THERE MUST BE 4 SPEED LIMIT SIGNS PER MILE AS SHOWN ABOVE.

DETAIL NO.			APPROVED:	DETAIL NO.
C-621	CHANDLER arizona	**ATRERIAL SIGNAGE**	01-11-2002	**C-621**

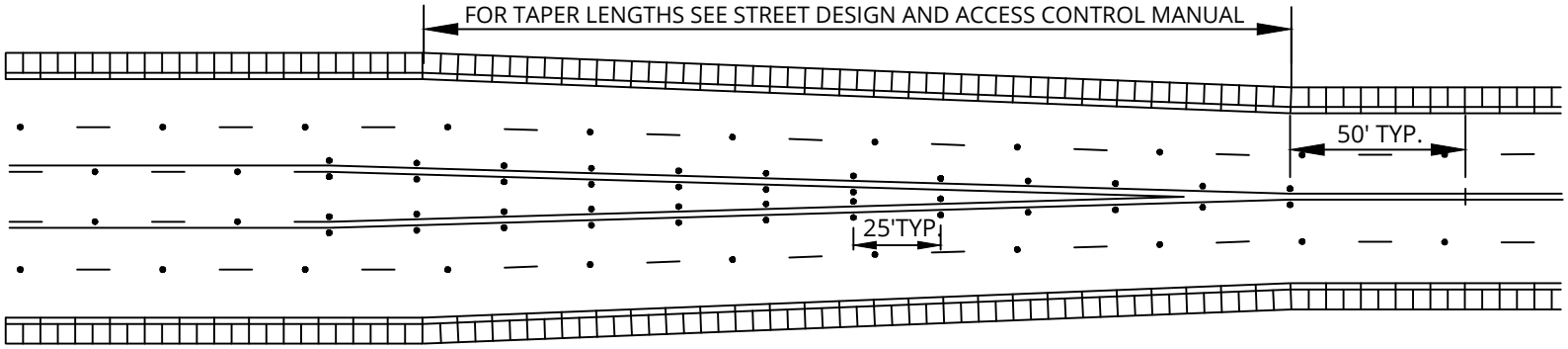
SEE PAVEMENT MARKING COC DETAIL C-614 FOR STRIPING WIDTHS.
SEE INTERSECTION MARKINGS COC DETAIL C-623 FOR NOTES
ON STRIPING MATERIAL AND REFLECTOR INSTALLATION.



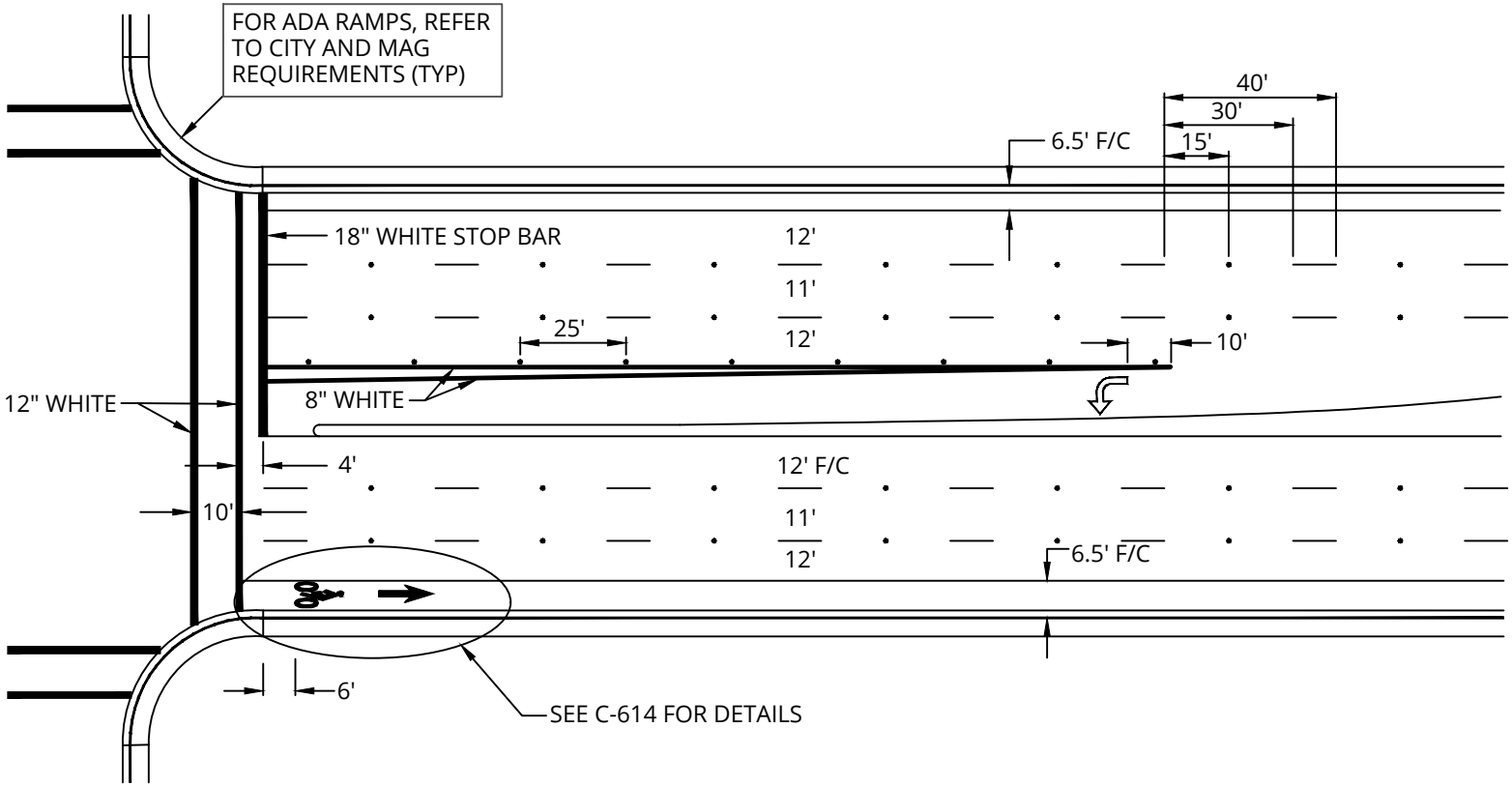
PAVEMENT REFLECTORS
(PRISMATIC REFLECTORS ONLY)

YELLOW WHITE

INSTALL WITH
CRAFCO BITUMINOUS
MATERIAL OR EQUAL



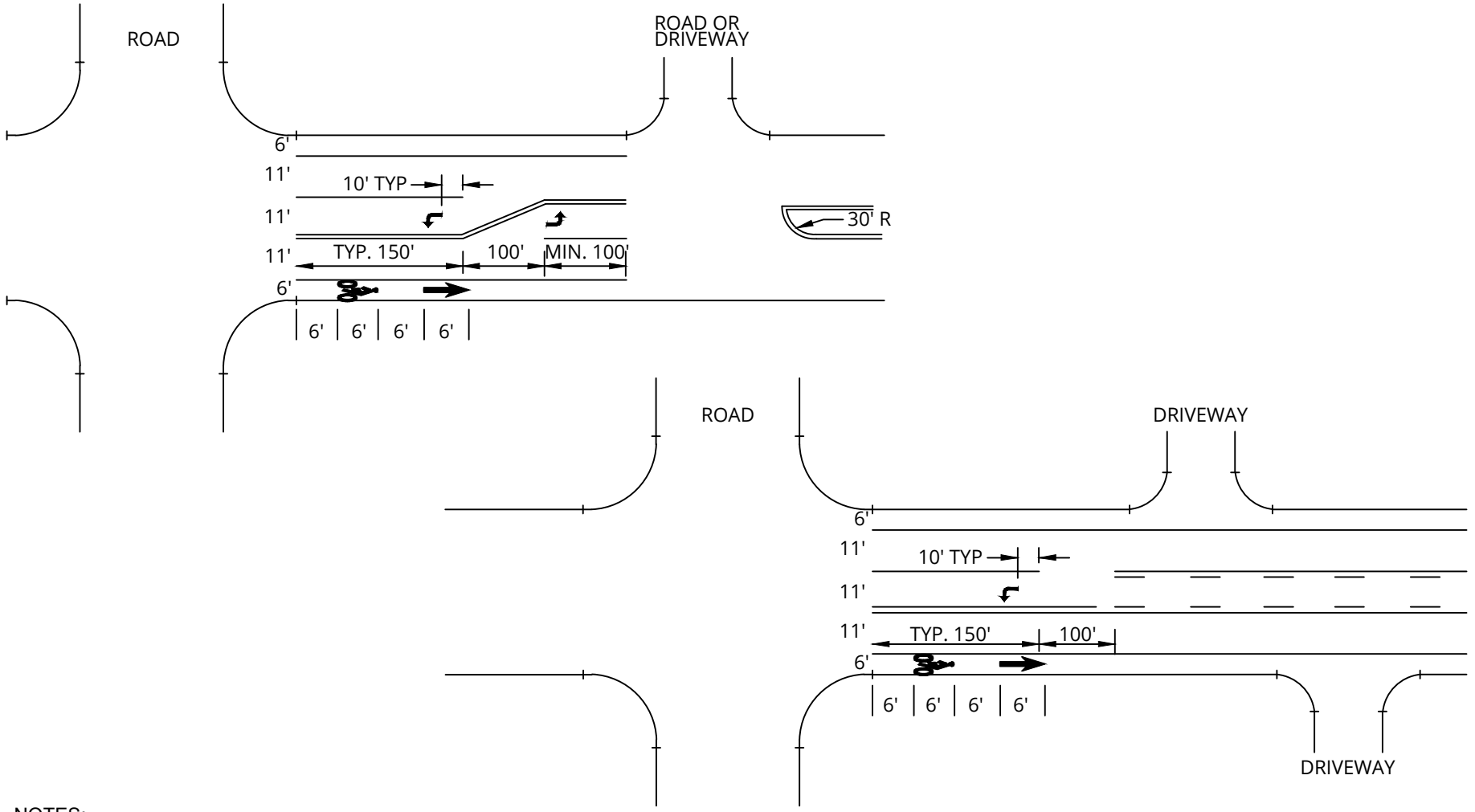
DETAIL NO. C-622	CHANDLER arizona	ARTERIAL ROADWAY MARKINGS (W/O MEDIAN)	APPROVED: 05-10-2018	DETAIL NO. C-622



NOTES:

1. CROSSWALK AND STOP BAR STRIPING MUST ONLY BE STRIPED AT SIGNALIZED OR MULTI-WAY STOP CONTROLLED INTERSECTIONS, UNLESS OTHERWISE NOTED BY THE TRAFFIC ENGINEERING OFFICE.
2. ROADWAYS WITHOUT BIKE LANES WILL HAVE DIFFERENT CROSS-SECTION. THE LANE WIDTHS WILL BE THE SAME WITH THE EXCEPTION OF THE OUTER LANES WHICH ARE 15' ± MEASURED FROM BACK OF CURB.
3. THERMOPLASTIC MATERIAL MUST BE APPLIED AT A MIN. THICKNESS OF 60 MIL. WITH THE EXCEPTION OF BIKE LANES AND SYMBOLS. BIKE LANE AND SYMBOL STRIPING MUST BE WATER BASED PAINT MEETING OR EXCEEDING ARIZONA DEPARTMENT OF TRANSPORTATION STANDARD DRAWINGS AND SPECIFICATIONS, UNLESS OTHERWISE NOTED.
4. PAVEMENT REFLECTORS MUST MEET OR EXCEED ARIZONA DEPARTMENT OF TRANSPORTATION STANDARD DRAWINGS AND SPECIFICATIONS, UNLESS OTHERWISE NOTED. PAVEMENT REFLECTORS MUST BE INSTALLED WITH CRAFCO PAVEMENT MARKER ADHESIVE, OR EQUAL. ALL PAVEMENT REFLECTORS MUST HAVE THE PRISMATIC REFLECTIVE SURFACE FACING ONCOMING TRAFFIC.

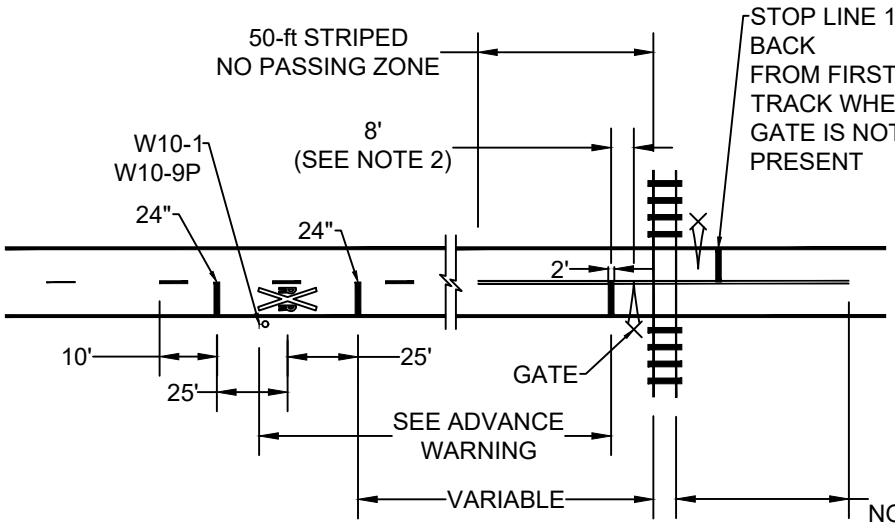
DETAIL NO.			APPROVED:	DETAIL NO.
C-623	CHANDLER arizona	**INTERSECTION MARKINGS (WITH MEDIANS)**	05-10-2018	**C-623**

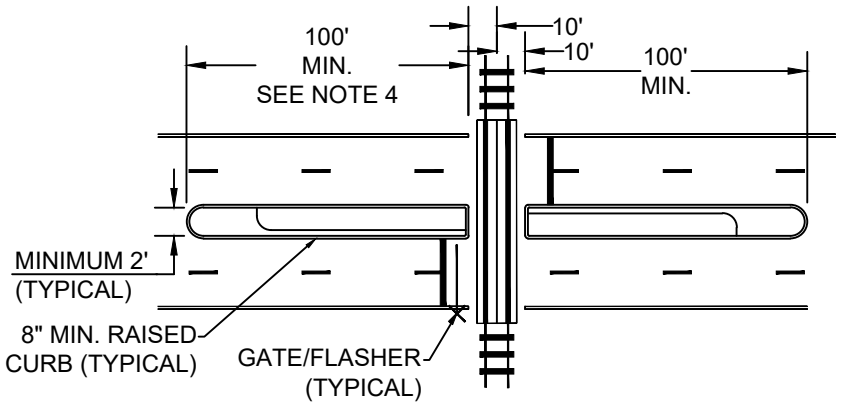


NOTES:

1. ALL DIMENSIONS TO BACK OF CURB.
2. DO NOT INSTALL REFLECTORS ON COLLECTOR ROADS.
3. INSTALL BIKE SYMBOL AND ARROW DOWNSTREAM FROM ALL INTERSECTIONS.
4. BREAK TW0-WAY LEFT TURN PAVEMENT MARKINGS FOR INTERSECTIONS. DO NOT BREAK FOR DRIVEWAYS.

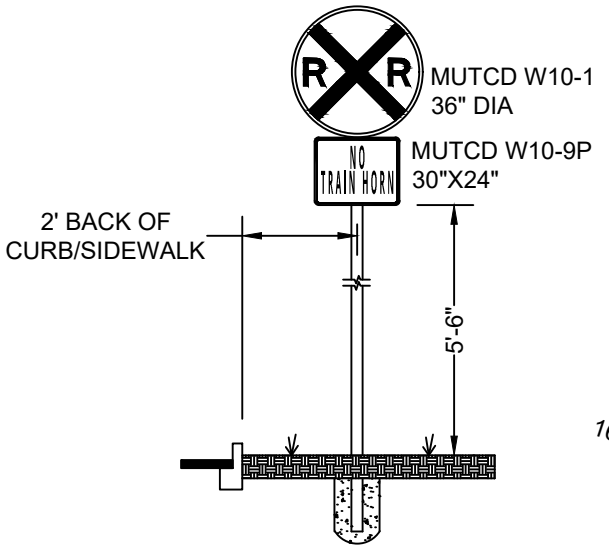
DETAIL NO.			APPROVED:	DETAIL NO.
C-624	CHANDLER arizona	**COLLECTOR ROAD PAVEMENT MARKINGS**	01-27-2025	**C-624**

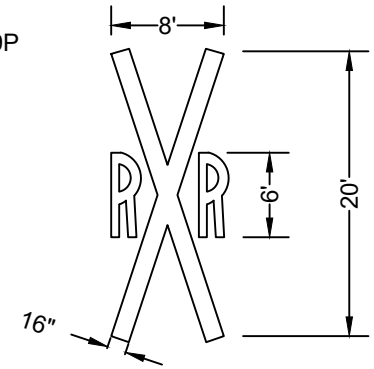




NOTES:

1. ALL RAILROAD PAVEMENT MARKINGS MUST BE ALKYD THERMOPLASTIC OR PAVEMENT MARKING TAPE UNLESS OTHERWISE SPECIFIED BY THE CITY ENGINEER.
2. A STOP LINE MUST BE PLACED 8 FEET IN ADVANCE OF THE FLASHING-LIGHT SIGNALS OR AUTOMATIC GATE, WHICHEVER IS FURTHER FROM THE TRACKS.
3. ENTIRE INSTALLATION TO CONFORM WITH THE GUIDELINES PRESENTED IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES 11th EDITION UNLESS OTHERWISE NOTED.
4. WHEN PRESENT, RAISED MEDIANS SHALL EXTEND 100' FROM GATE ARM.





ADVANCE WARNING

POSTED SPEED	MIN. DISTANCE *
25 MPH	100'
30 MPH	100'
35 MPH	100'
40 MPH	125'
45 MPH	175'

* MINIMUM DISTANCES PER THE LATEST ADOT APPROVED EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVISES

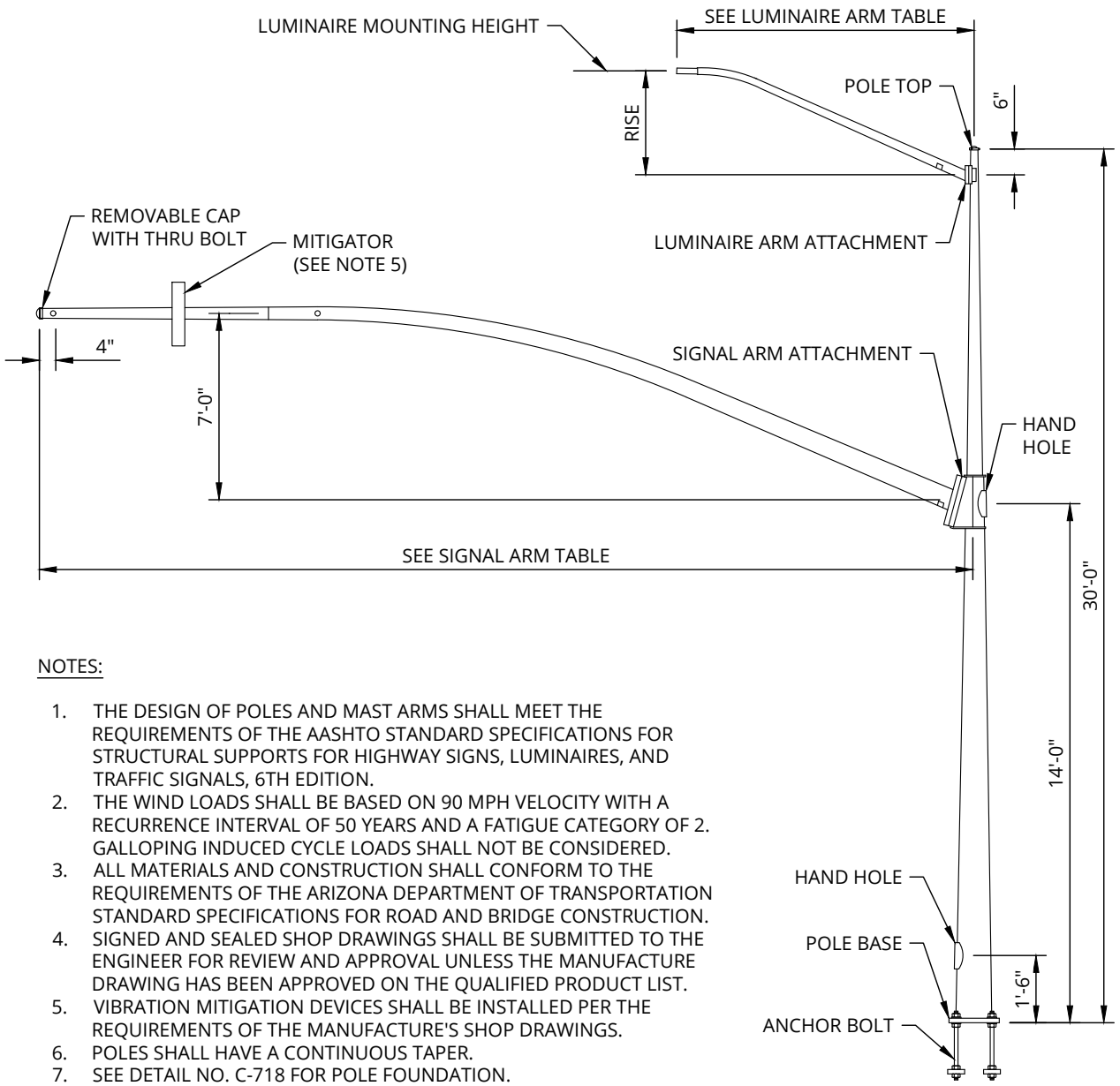
DETAIL NO.			APPROVED:	DETAIL NO.
C-625	CHANDLER arizona	**RAILROAD MARKINGS FOR QUIET ZONE**	01-27-2025	**C-625**

CHANDLER arizona

Standard Details

TRAFFIC SIGNALS & STREET LIGHTS

C-700 TO C-760



NOTES:

1. THE DESIGN OF POLES AND MAST ARMS SHALL MEET THE REQUIREMENTS OF THE AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS, 6TH EDITION.
2. THE WIND LOADS SHALL BE BASED ON 90 MPH VELOCITY WITH A RECURRENCE INTERVAL OF 50 YEARS AND A FATIGUE CATEGORY OF 2. GALLOPING INDUCED CYCLE LOADS SHALL NOT BE CONSIDERED.
3. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE ARIZONA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
4. SIGNED AND SEALED SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL UNLESS THE MANUFACTURE DRAWING HAS BEEN APPROVED ON THE QUALIFIED PRODUCT LIST.
5. VIBRATION MITIGATION DEVICES SHALL BE INSTALLED PER THE REQUIREMENTS OF THE MANUFACTURE'S SHOP DRAWINGS.
6. POLES SHALL HAVE A CONTINUOUS TAPER.
7. SEE DETAIL NO. C-718 FOR POLE FOUNDATION.

LUMINAIRE ARM TABLE

LENGTH (FT)	FIXED END DIA. (IN)	FREE END DIA. (IN)	GAUGE	RISE (FT)	LUMINAIRE MOUNTING HEIGHT (FT)
10.00	3.93	2.40	11	3.33	32.83
15.00	4.65	2.40	11	4.75	34.25
20.00	5.90	3.00	7	5.75	35.25

SIGNAL ARM TABLE

ARM SPAN (FT)	FIXED END DIA. (IN)	SMALL END DIA. (IN)	GAUGE	SIGNAL ARM PLATE CENTER HOLE (IN)
25.00	9.00	5.43	7	7.00
30.00	10.00	5.74	7	7.00
35.00	11.00	6.03	7	5.75
40.00	11.00	5.33	7	5.75

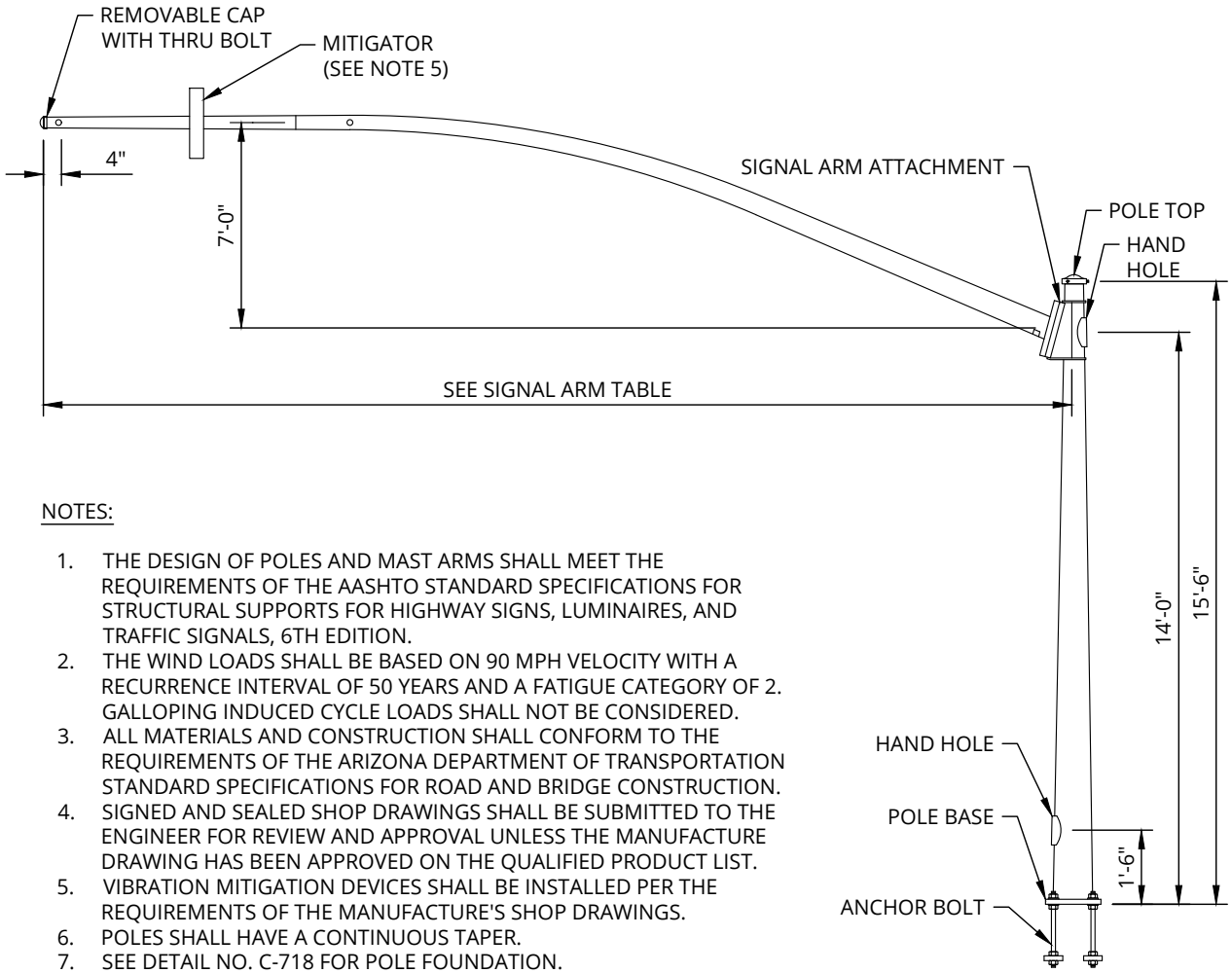
POLE TABLE

BASE DIA. (IN)	TOP DIA. (IN)	WALL GAUGE/THICKNESS
12.50	8.30	3 GA.

MATERIAL DATA

COMPONENT	ASTM DESIGNATION	MIN. YIELD (KSI)
TAPERED TUBES	A595 GR. A OR A572	55
BASE PLATE	A36	36
ARM SIMPLEX PLATES	A36	36
ANCHOR BOLTS	F1554 GR.55	55
ANCHOR BOLT NUTS	A563 GR. DH	
ANCHOR BOLT WASHERS	F436	
GALVANIZING HARDWARE	F2329	
HEX HEAD BOLTS	A325	120
HEX CAP SCREWS	ASME B18.2.6	

DETAIL NO.			APPROVED:	DETAIL NO.
C-710	CHANDLER arizona	**CHANDLER TRAFFIC SIGNAL POLE TYPE QC**	01-27-2022	**C-710**



NOTES:

1. THE DESIGN OF POLES AND MAST ARMS SHALL MEET THE REQUIREMENTS OF THE AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS, 6TH EDITION.
2. THE WIND LOADS SHALL BE BASED ON 90 MPH VELOCITY WITH A RECURRENCE INTERVAL OF 50 YEARS AND A FATIGUE CATEGORY OF 2. GALLOPING INDUCED CYCLE LOADS SHALL NOT BE CONSIDERED.
3. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE ARIZONA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
4. SIGNED AND SEALED SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL UNLESS THE MANUFACTURE DRAWING HAS BEEN APPROVED ON THE QUALIFIED PRODUCT LIST.
5. VIBRATION MITIGATION DEVICES SHALL BE INSTALLED PER THE REQUIREMENTS OF THE MANUFACTURE'S SHOP DRAWINGS.
6. POLES SHALL HAVE A CONTINUOUS TAPER.
7. SEE DETAIL NO. C-718 FOR POLE FOUNDATION.

SIGNAL ARM TABLE

ARM SPAN (FT)	FIXED END DIA. (IN)	SMALL END DIA. (IN)	GAUGE	SIGNAL ARM PLATE CENTER HOLE (IN)
25.00	9.00	5.43	7	7.00
30.00	10.00	5.74	7	7.00
35.00	11.00	6.03	7	5.75
40.00	11.00	5.33	7	5.75

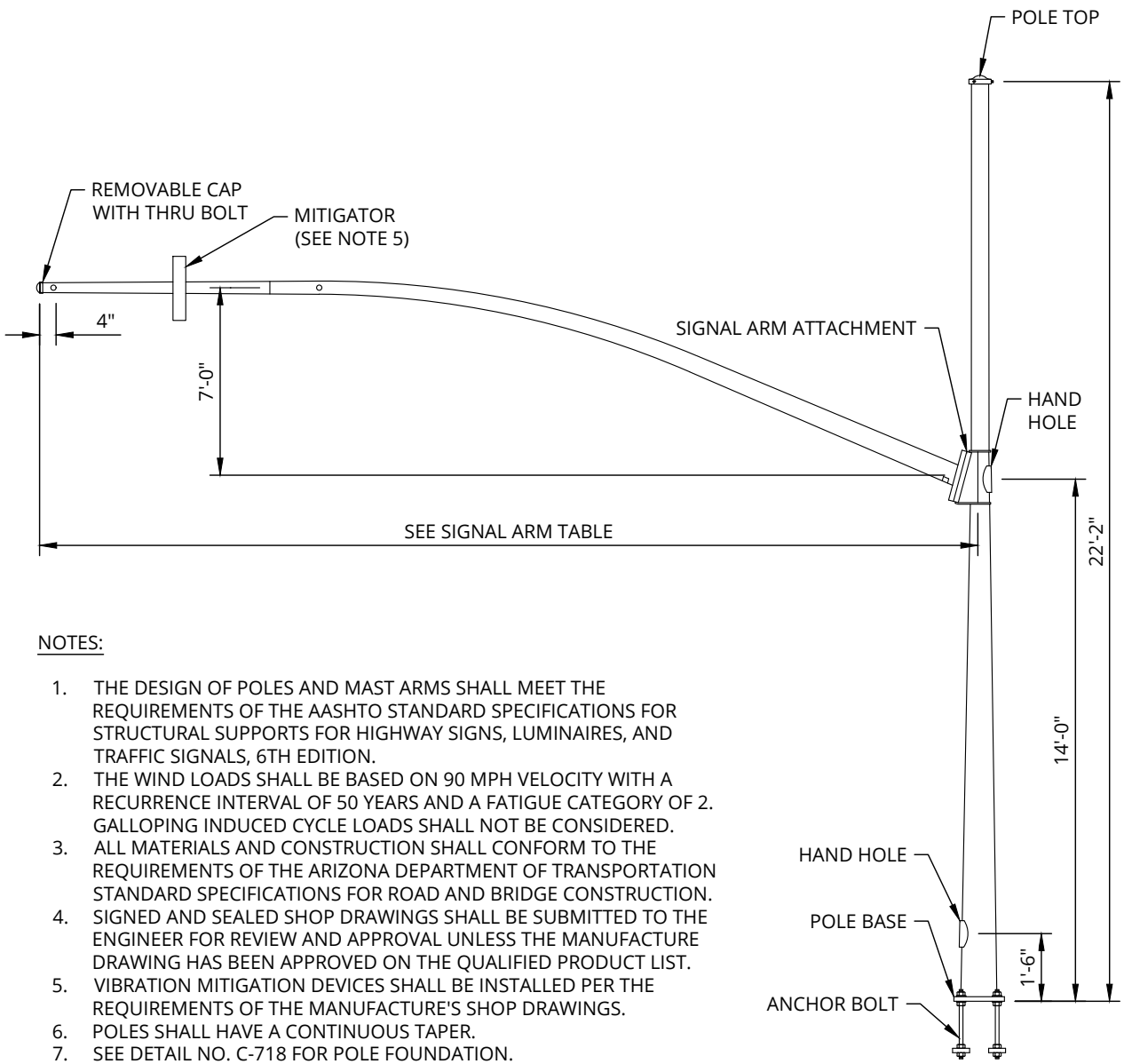
POLE TABLE

BASE DIA. (IN)	TOP DIA. (IN)	WALL GAUGE/THICKNESS
12.50	10.33	3 GA.

MATERIAL DATA

COMPONENT	ASTM DESIGNATION	MIN. YIELD (KSI)
TAPERED TUBES	A595 GR. A OR A572	55
BASE PLATE	A36	36
ARM SIMPLEX PLATES	A36	36
ANCHOR BOLTS	F1554 GR.55	55
ANCHOR BOLT NUTS	A563 GR. DH	
ANCHOR BOLT WASHERS	F436	
GALVANIZING HARDWARE	F2329	
HEX HEAD BOLTS	A325	120

DETAIL NO.			APPROVED:	DETAIL NO.
C-711	CHANDLER arizona	**CHANDLER TRAFFIC SIGNAL POLE TYPE JC**	01-27-2022	**C-711**



NOTES:

1. THE DESIGN OF POLES AND MAST ARMS SHALL MEET THE REQUIREMENTS OF THE AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS, 6TH EDITION.
2. THE WIND LOADS SHALL BE BASED ON 90 MPH VELOCITY WITH A RECURRENCE INTERVAL OF 50 YEARS AND A FATIGUE CATEGORY OF 2. GALLOPING INDUCED CYCLE LOADS SHALL NOT BE CONSIDERED.
3. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE ARIZONA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
4. SIGNED AND SEALED SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL UNLESS THE MANUFACTURE DRAWING HAS BEEN APPROVED ON THE QUALIFIED PRODUCT LIST.
5. VIBRATION MITIGATION DEVICES SHALL BE INSTALLED PER THE REQUIREMENTS OF THE MANUFACTURE'S SHOP DRAWINGS.
6. POLES SHALL HAVE A CONTINUOUS TAPER.
7. SEE DETAIL NO. C-718 FOR POLE FOUNDATION.

SIGNAL ARM TABLE

ARM SPAN (FT)	FIXED END DIA. (IN)	SMALL END DIA. (IN)	GAUGE	SIGNAL ARM PLATE CENTER HOLE (IN)
25.00	9.00	5.43	7	7.00
30.00	10.00	5.74	7	7.00
35.00	11.00	6.03	7	5.75
40.00	11.00	5.33	7	5.75

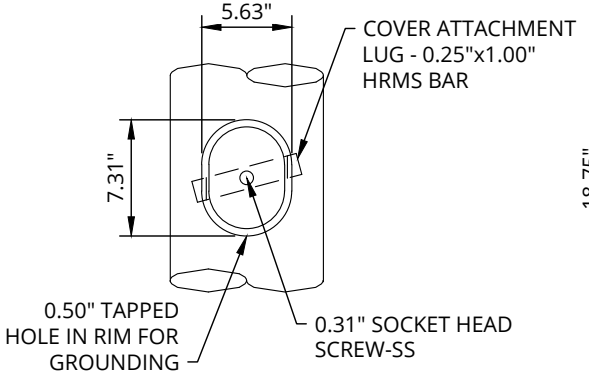
POLE TABLE

BASE DIA. (IN)	TOP DIA. (IN)	WALL GAUGE/THICKNESS
12.50	9.40	3 GA.

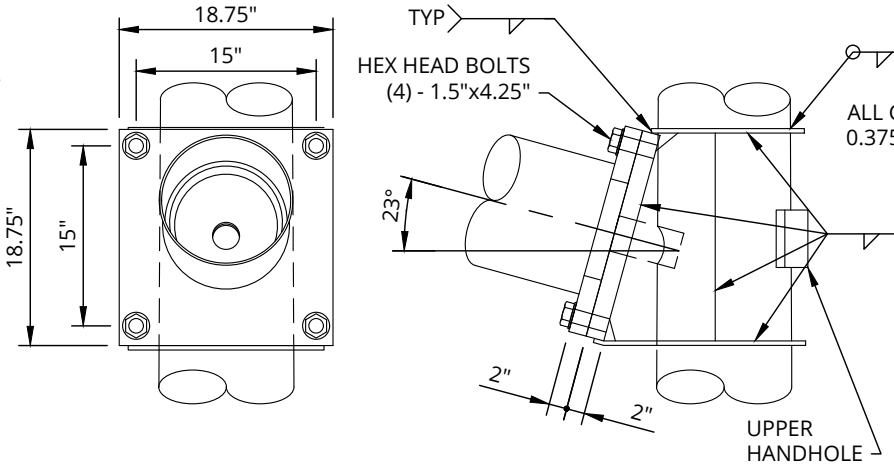
MATERIAL DATA

COMPONENT	ASTM DESIGNATION	MIN. YIELD (KSI)
TAPERED TUBES	A595 GR. A OR A572	55
BASE PLATE	A36	36
ARM SIMPLEX PLATES	A36	36
ANCHOR BOLTS	F1554 GR.55	55
ANCHOR BOLT NUTS	A563 GR. DH	
ANCHOR BOLT WASHERS	F436	
GALVANIZING HARDWARE	F2329	
HEX HEAD BOLTS	A325	120

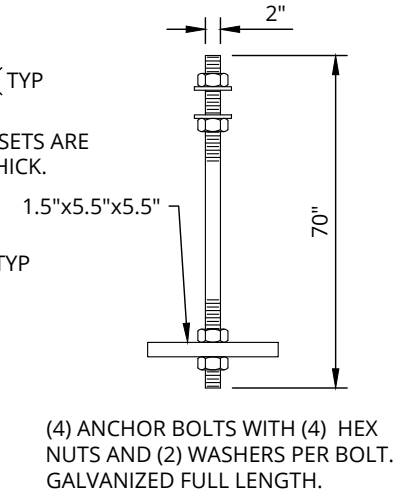
DETAIL NO.			APPROVED:	DETAIL NO.
C-712	CHANDLER arizona	**CHANDLER TRAFFIC SIGNAL POLE TYPE JC MOD**	01-27-2022	**C-712**



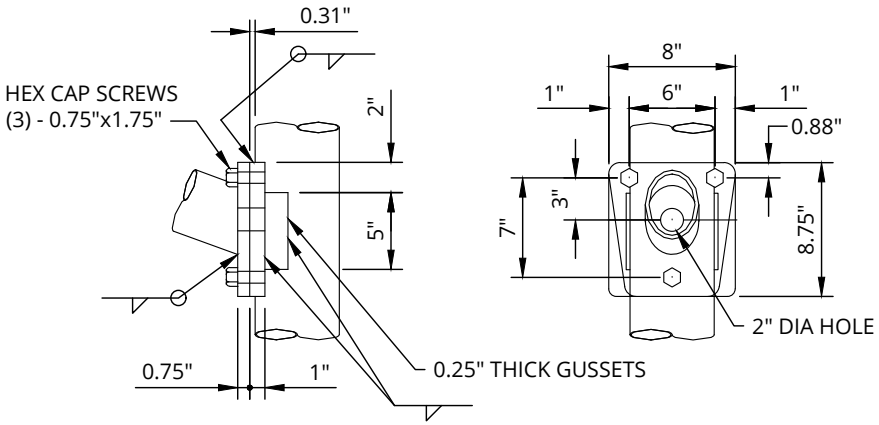
HANDHOLE



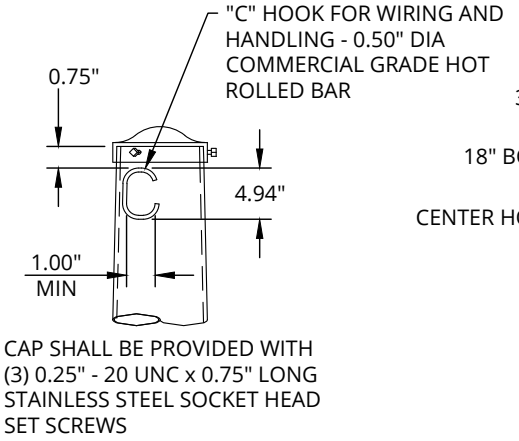
SIGNAL ARM ATTACHMENT



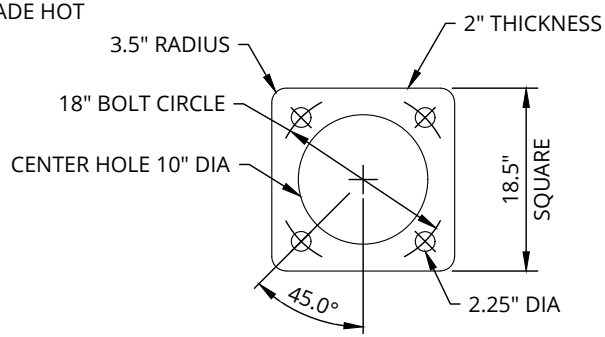
ANCHOR BOLT



LUMINAIRE ARM ATTACHMENT

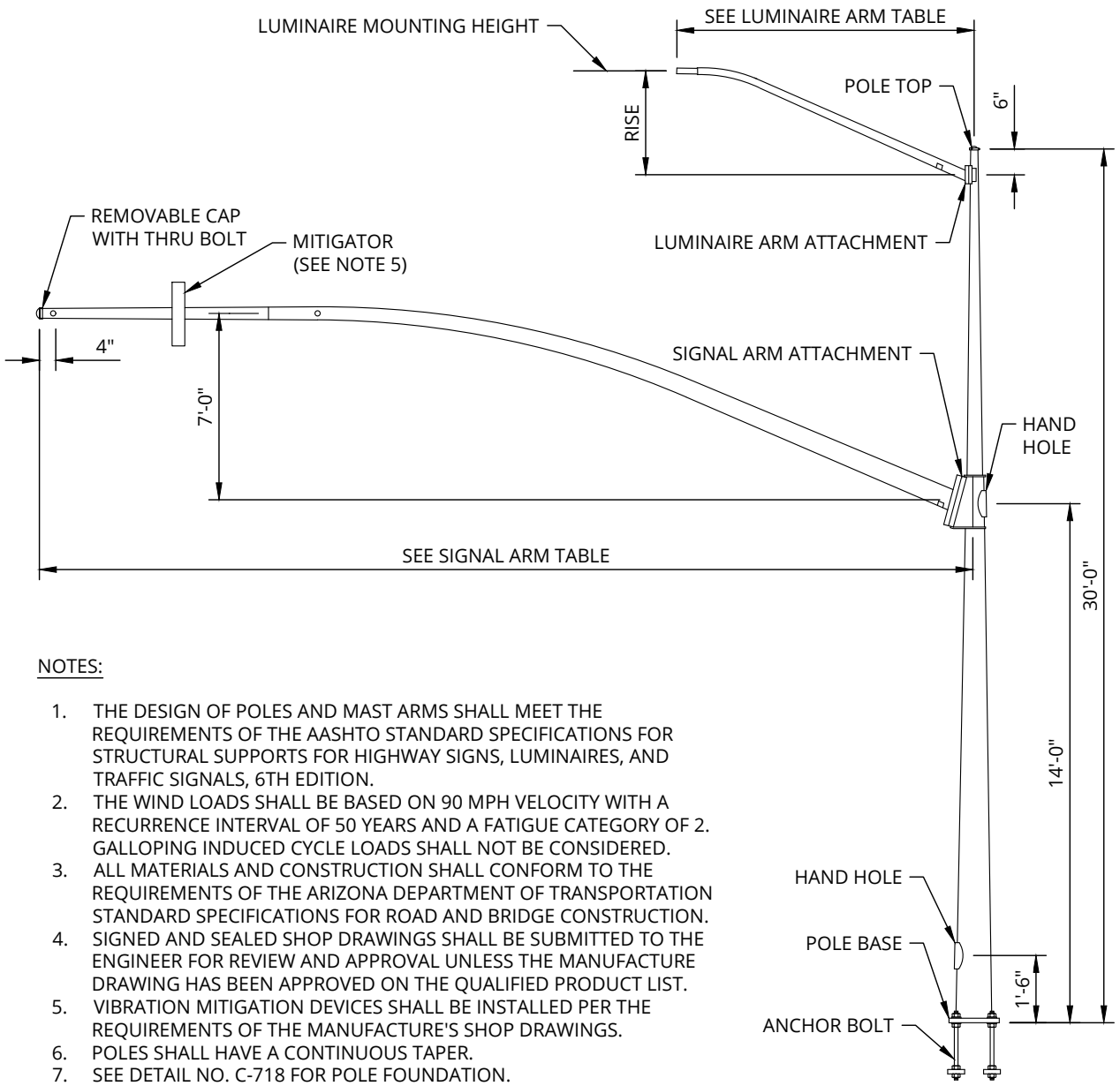


POLE TOP



POLE BASE

DETAIL NO.			APPROVED:	DETAIL NO.
C-713	CHANDLER arizona	**CHANDLER TRAFFIC SIGNAL POLE TYPE QC, JC, & JC MOD DETAILS**	01-27-2022	**C-713**



NOTES:

1. THE DESIGN OF POLES AND MAST ARMS SHALL MEET THE REQUIREMENTS OF THE AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS, 6TH EDITION.
2. THE WIND LOADS SHALL BE BASED ON 90 MPH VELOCITY WITH A RECURRENCE INTERVAL OF 50 YEARS AND A FATIGUE CATEGORY OF 2. GALLOPING INDUCED CYCLE LOADS SHALL NOT BE CONSIDERED.
3. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE ARIZONA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
4. SIGNED AND SEALED SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL UNLESS THE MANUFACTURE DRAWING HAS BEEN APPROVED ON THE QUALIFIED PRODUCT LIST.
5. VIBRATION MITIGATION DEVICES SHALL BE INSTALLED PER THE REQUIREMENTS OF THE MANUFACTURE'S SHOP DRAWINGS.
6. POLES SHALL HAVE A CONTINUOUS TAPER.
7. SEE DETAIL NO. C-718 FOR POLE FOUNDATION.

LUMINAIRE ARM TABLE

LENGTH (FT)	FIXED END DIA. (IN)	FREE END DIA. (IN)	GAUGE	RISE (FT)	LUMINAIRE MOUNTING HEIGHT (FT)
10.00	3.93	2.40	11	3.33	32.83
15.00	4.65	2.40	11	4.75	34.25
20.00	5.90	3.00	7	5.75	35.25

SIGNAL ARM TABLE

ARM SPAN (FT)	FIXED END DIA. (IN)	SMALL END DIA. (IN)	GAUGE	SECTION LENGTH (FT)	ARM PLATE CENTER HOLE (IN)
45.00	12.00	5.70	7	N/A	6.50
50.00	13.00	6.00	5	N/A	6.25
55.00	13.00	7.40	5	40.00	6.50
	7.34	4.57	7	15.79	

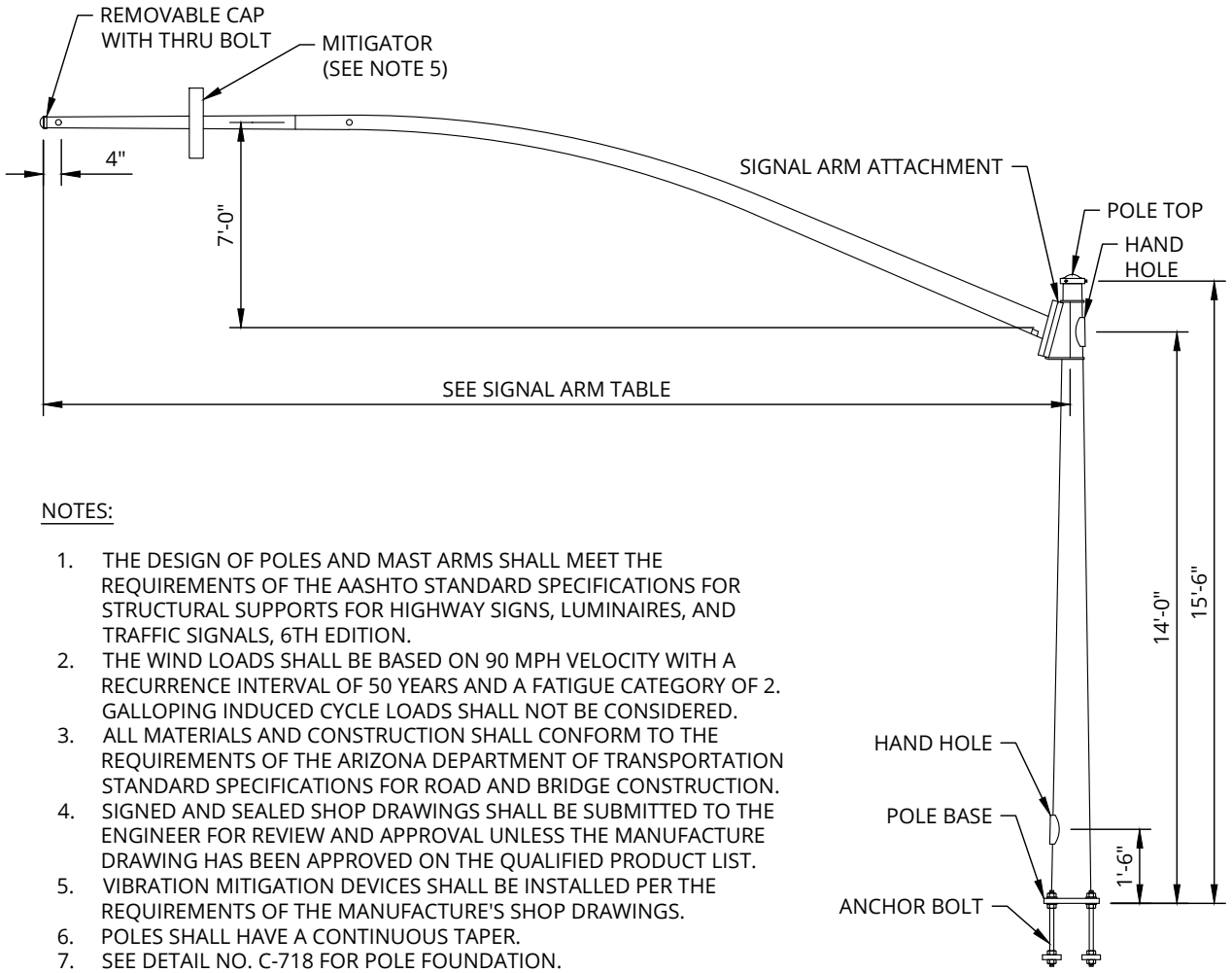
POLE TABLE

BASE DIA. (IN)	TOP DIA. (IN)	WALL GAUGE/THICKNESS
13.50	9.30	0.3125"

MATERIAL DATA

COMPONENT	ASTM DESIGNATION	MIN. YIELD (KSI)
TAPERED TUBES	A595 GR. A OR A572	55
BASE PLATE	A36	36
ARM SIMPLEX PLATES	A36	36
ANCHOR BOLTS	F1554 GR.55	55
ANCHOR BOLT NUTS	A563 GR. DH	
ANCHOR BOLT WASHERS	F436	
GALVANIZING HARDWARE	F2329	
HEX HEAD BOLTS	A325	120
HEX CAP SCREWS	ASME B18.2.6	

DETAIL NO.			APPROVED:	DETAIL NO.
C-714	CHANDLER arizona	**CHANDLER TRAFFIC SIGNAL POLE TYPE RC**	01-27-2022	**C-714**



NOTES:

1. THE DESIGN OF POLES AND MAST ARMS SHALL MEET THE REQUIREMENTS OF THE AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS, 6TH EDITION.
2. THE WIND LOADS SHALL BE BASED ON 90 MPH VELOCITY WITH A RECURRENCE INTERVAL OF 50 YEARS AND A FATIGUE CATEGORY OF 2. GALLOPING INDUCED CYCLE LOADS SHALL NOT BE CONSIDERED.
3. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE ARIZONA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
4. SIGNED AND SEALED SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL UNLESS THE MANUFACTURE DRAWING HAS BEEN APPROVED ON THE QUALIFIED PRODUCT LIST.
5. VIBRATION MITIGATION DEVICES SHALL BE INSTALLED PER THE REQUIREMENTS OF THE MANUFACTURE'S SHOP DRAWINGS.
6. POLES SHALL HAVE A CONTINUOUS TAPER.
7. SEE DETAIL NO. C-718 FOR POLE FOUNDATION.

SIGNAL ARM TABLE

ARM SPAN (FT)	FIXED END DIA. (IN)	SMALL END DIA. (IN)	GAUGE	SECTION LENGTH (FT)	ARM PLATE CENTER HOLE (IN)
45.00	12.00	5.70	7	N/A	6.50
50.00	13.00	6.00	5	N/A	6.25
55.00	13.00	7.40	5	40.00	6.50
	7.34	4.57	7	15.79	

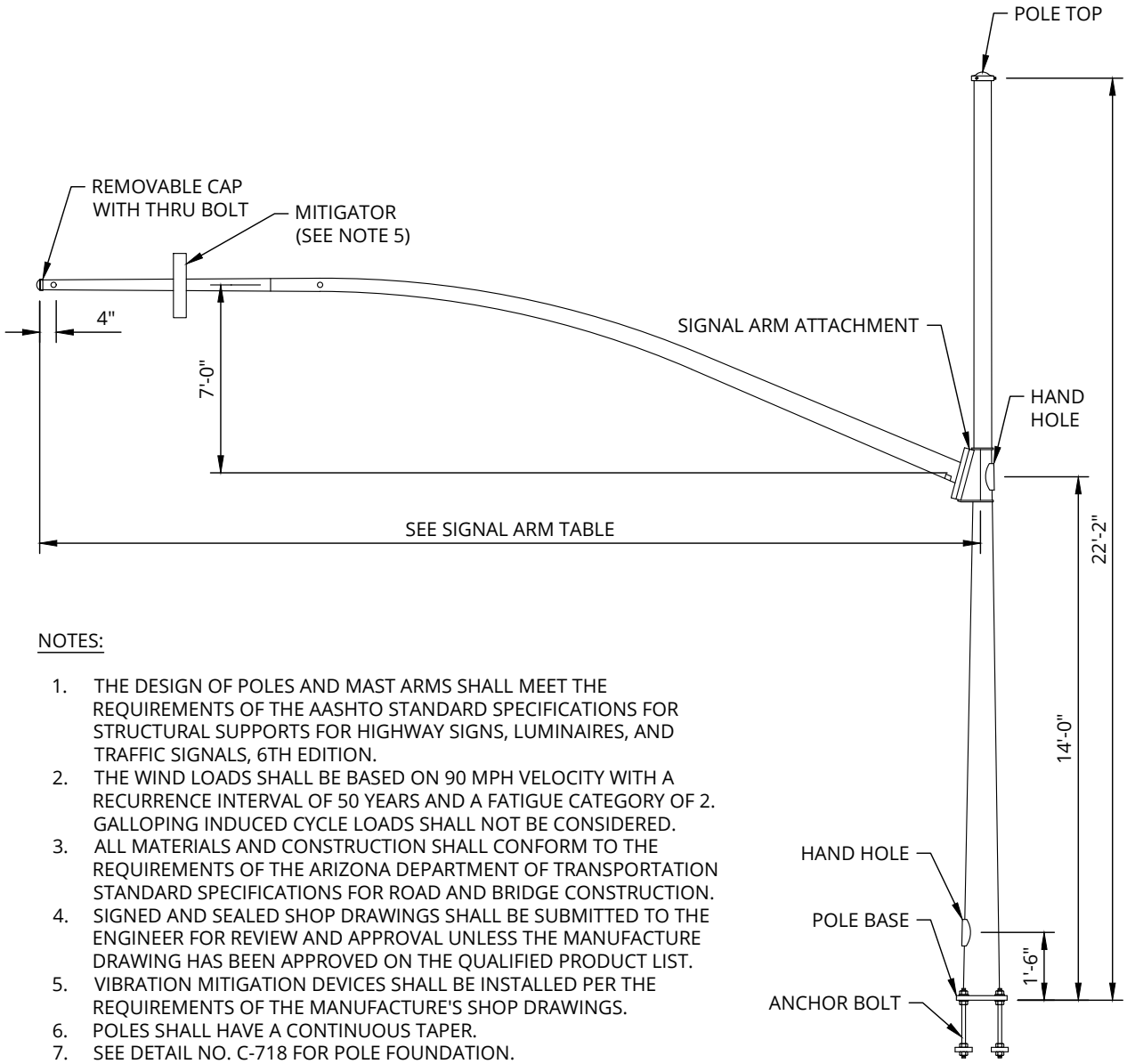
POLE TABLE

BASE DIA. (IN)	TOP DIA. (IN)	WALL GAUGE/THICKNESS
13.50	11.33	0.3125"

MATERIAL DATA

COMPONENT	ASTM DESIGNATION	MIN. YIELD (KSI)
TAPERED TUBES	A595 GR. A OR A572	55
BASE PLATE	A36	36
ARM SIMPLEX PLATES	A36	36
ANCHOR BOLTS	F1554 GR.55	55
ANCHOR BOLT NUTS	A563 GR. DH	
ANCHOR BOLT WASHERS	F436	
GALVANIZING HARDWARE	F2329	
HEX HEAD BOLTS	A325	120

DETAIL NO.			APPROVED:	DETAIL NO.
C-715	CHANDLER arizona	**CHANDLER TRAFFIC SIGNAL POLE TYPE KC**	01-27-2022	**C-715**



NOTES:

1. THE DESIGN OF POLES AND MAST ARMS SHALL MEET THE REQUIREMENTS OF THE AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS, 6TH EDITION.
2. THE WIND LOADS SHALL BE BASED ON 90 MPH VELOCITY WITH A RECURRENCE INTERVAL OF 50 YEARS AND A FATIGUE CATEGORY OF 2. GALLOPING INDUCED CYCLE LOADS SHALL NOT BE CONSIDERED.
3. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE ARIZONA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
4. SIGNED AND SEALED SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL UNLESS THE MANUFACTURE DRAWING HAS BEEN APPROVED ON THE QUALIFIED PRODUCT LIST.
5. VIBRATION MITIGATION DEVICES SHALL BE INSTALLED PER THE REQUIREMENTS OF THE MANUFACTURE'S SHOP DRAWINGS.
6. POLES SHALL HAVE A CONTINUOUS TAPER.
7. SEE DETAIL NO. C-718 FOR POLE FOUNDATION.

SIGNAL ARM TABLE

ARM SPAN (FT)	FIXED END DIA. (IN)	SMALL END DIA. (IN)	GAUGE	SECTION LENGTH (FT)	ARM PLATE CENTER HOLE (IN)
45.00	12.00	5.70	7	N/A	6.50
50.00	13.00	6.00	5	N/A	6.25
55.00	13.00	7.40	5	40.00	6.50
	7.34	4.57	7	15.79	

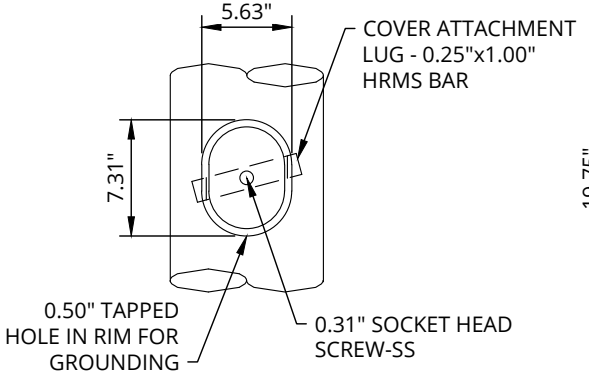
POLE TABLE

BASE DIA. (IN)	TOP DIA. (IN)	WALL GAUGE/THICKNESS
13.50	10.40	0.3125"

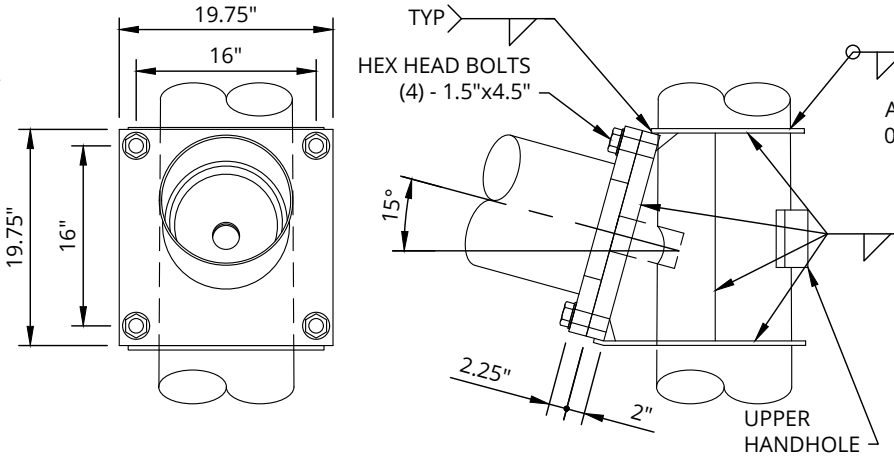
MATERIAL DATA

COMPONENT	ASTM DESIGNATION	MIN. YIELD (KSI)
TAPERED TUBES	A595 GR. A OR A572	55
BASE PLATE	A36	36
ARM SIMPLEX PLATES	A36	36
ANCHOR BOLTS	F1554 GR.55	55
ANCHOR BOLT NUTS	A563 GR. DH	
ANCHOR BOLT WASHERS	F436	
GALVANIZING HARDWARE	F2329	
HEX HEAD BOLTS	A325	120

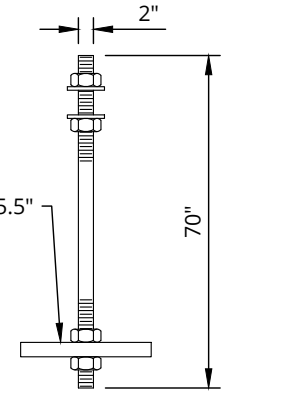
DETAIL NO.			APPROVED:	DETAIL NO.
C-716	CHANDLER arizona	**CHANDLER TRAFFIC SIGNAL POLE TYPE KC MOD**	01-27-2022	**C-716**



HANDHOLE

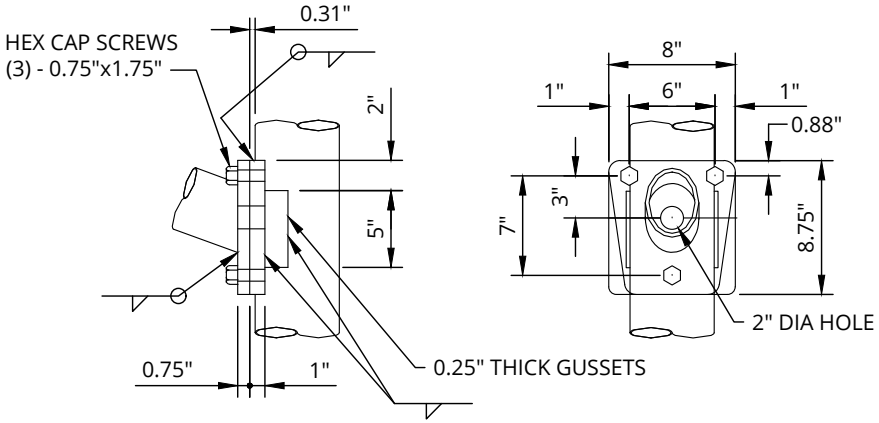


SIGNAL ARM ATTACHMENT

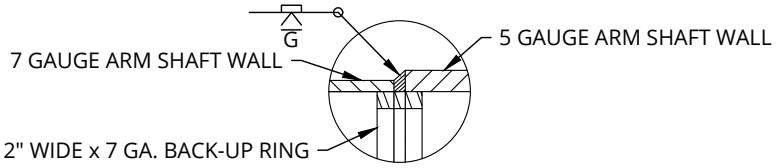


(4) ANCHOR BOLTS WITH (4) HEX NUTS AND (2) WASHERS PER BOLT. GALVANIZED FULL LENGTH.

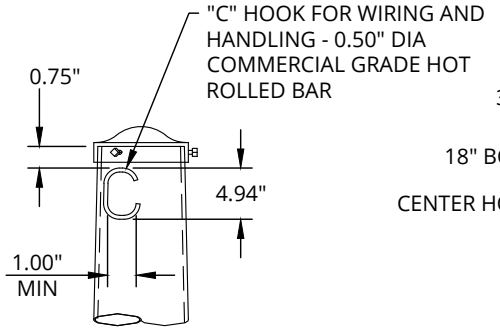
ANCHOR BOLT



LUMINAIRE ARM ATTACHMENT

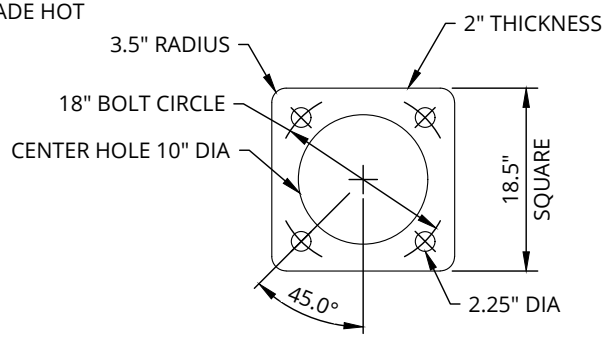


55' SIGNAL ARM SPLICE



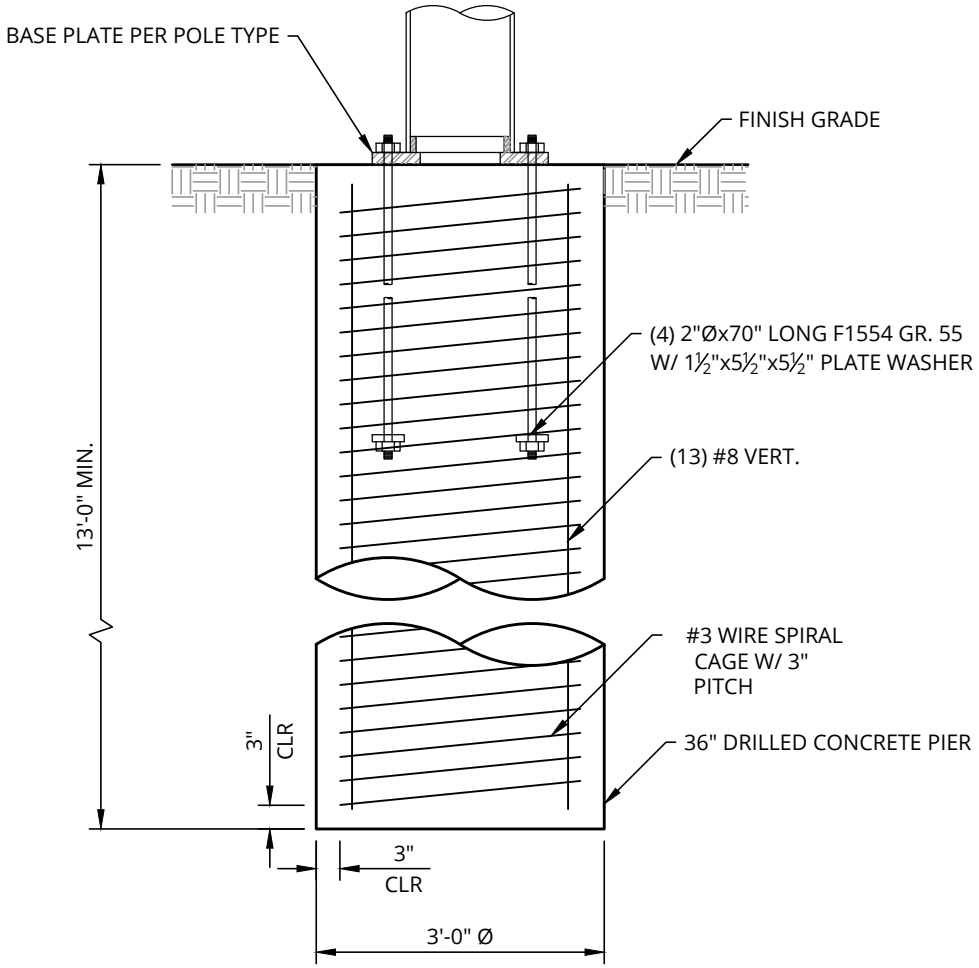
CAP SHALL BE PROVIDED WITH (3) 0.25" - 20 UNC x 0.75" LONG STAINLESS STEEL SOCKET HEAD SET SCREWS

POLE TOP



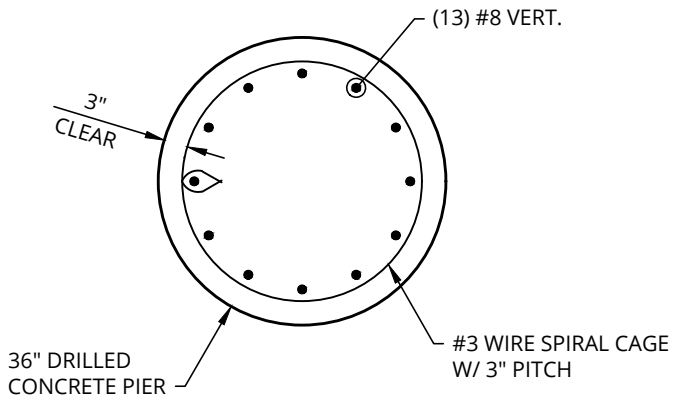
POLE BASE

DETAIL NO. C-717	CHANDLER arizona	CHANDLER TRAFFIC SIGNAL POLE TYPE RC, KC, & KC MOD DETAILS	APPROVED: 01-27-2022	DETAIL NO. C-717

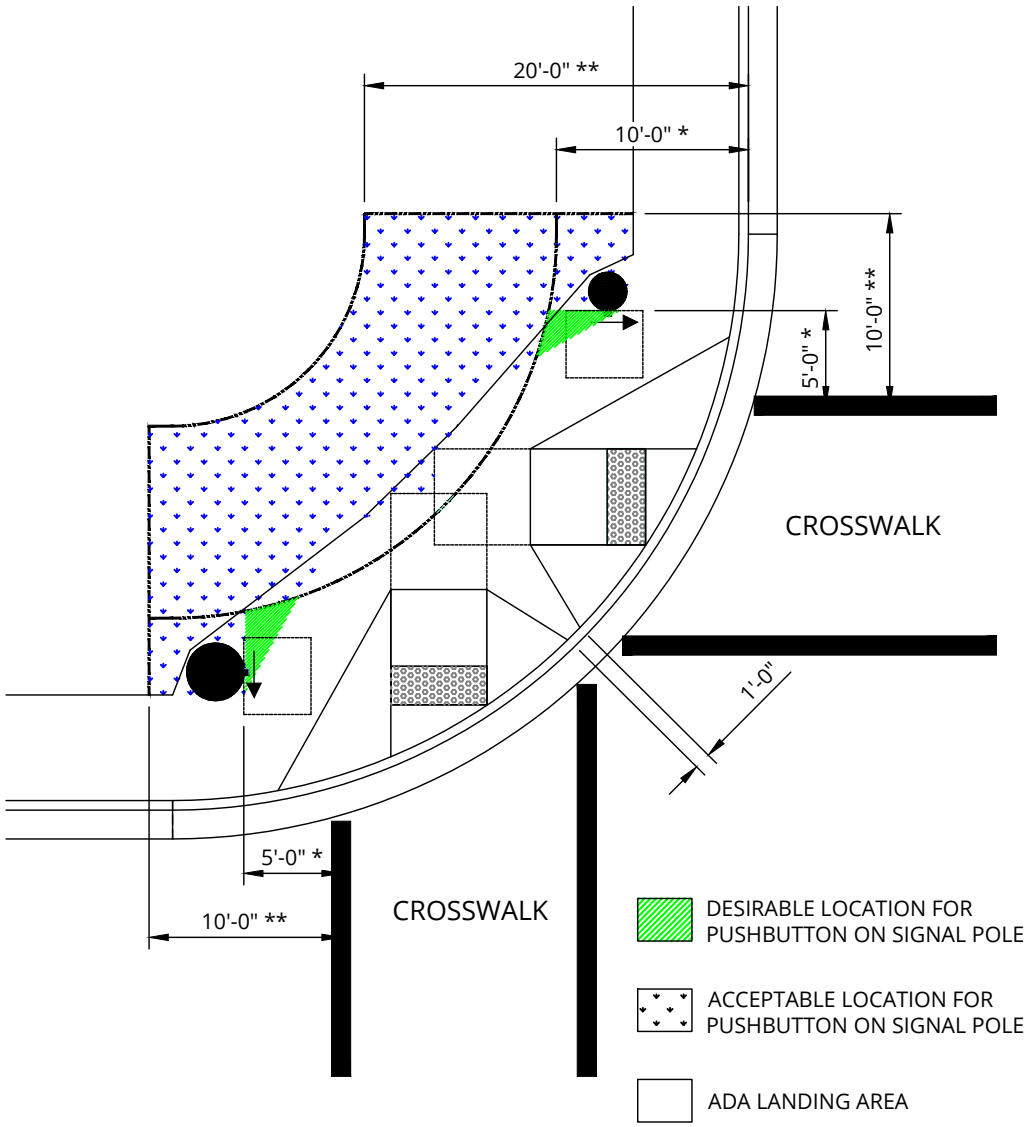


NOTES:

1. THE FOUNDATION HOLE SHALL BE AUGURED AND 3,500 PSI CONCRETE SHALL BE POURED AGAINST UNDISTURBED COMPACTED EARTH.
2. UNSTABLE SOIL AND/OR STEEP SLOPE MAY REQUIRE A DEEPER FOUNDATION.
3. IF POLE FOUNDATION IS WITHIN OR ADJACENT TO A SIDEWALK, TOP OF THE POLE FOUNDATION SHALL BE FLUSH WITH THE ABUTTING SIDEWALK.
4. ONCE THE POLE INSTALLATION IS COMPLETE, THE OPEN SPACE BETWEEN THE BASE PLATE AND TOP OF FOUNDATIONS SHALL BE GROUTED.
5. A 25 FOOT COIL OF #4 BARE COPPER CONDUCTOR OR A 14 INCH SQUARE COPPER GROUND PLATE SHALL BE INSTALLED BEFORE CONCRETE IS POURED. THE COIL OR THE GROUND PLATE SHALL BE CONNECTED TO THE POLE GROUNDING LUG IN THE HAND HOLE. THE COIL OR GROUND PLATE SHALL BE COVERED WITH 6 INCHES OF FILL.
6. SEE ADOT STD DWG T.SL. 4-28 FOR ADDITIONAL ANCHOR BOLT DIMENSIONS



DETAIL NO. C-718	CHANDLER arizona	CHANDLER POLE FOUNDATION QC, RC, JC, JC MOD, KC, & KC MOD	APPROVED: 01-27-2025	DETAIL NO. C-718

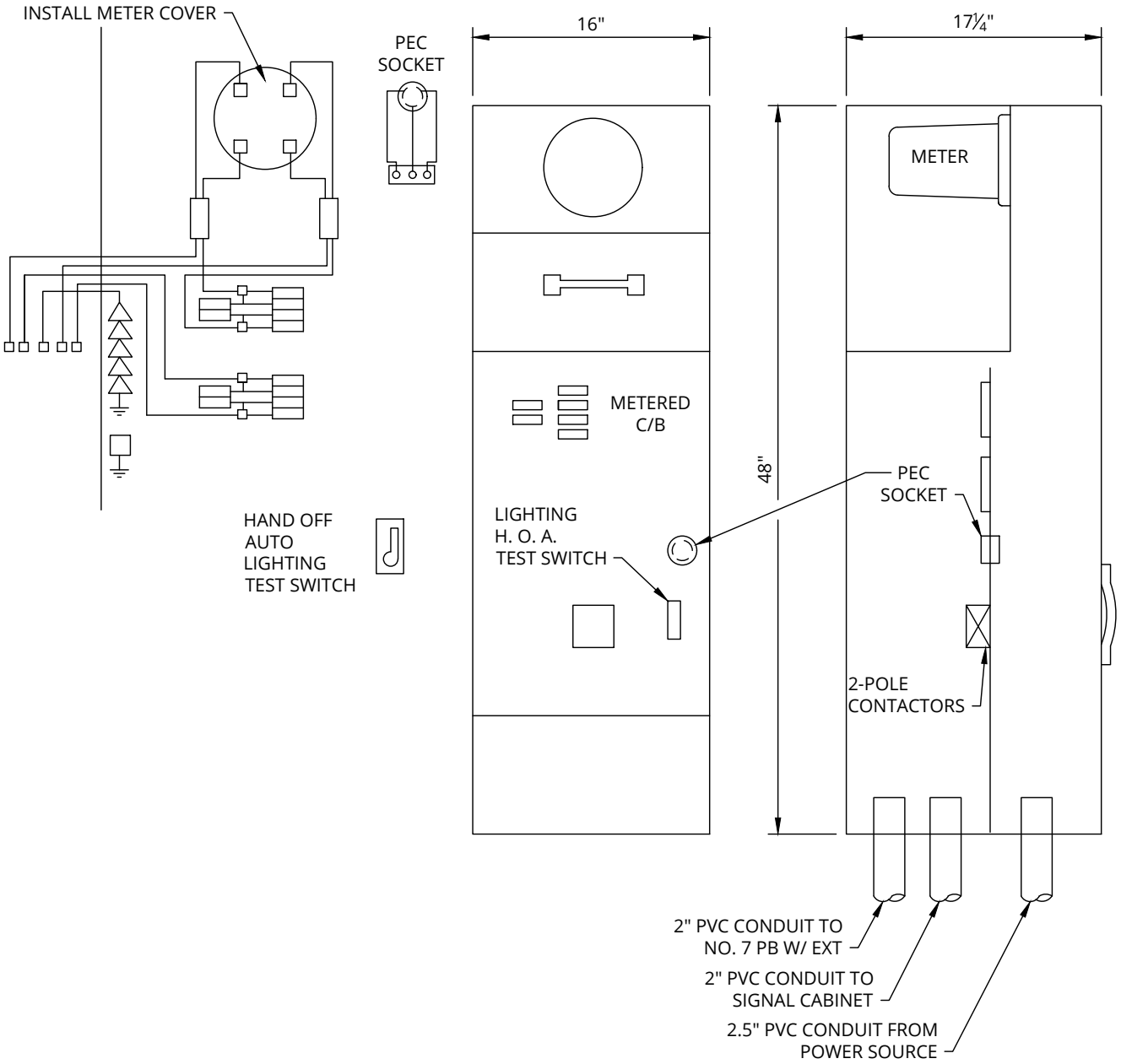


NOTES:

1. * DESIRABLE LOCATION IS WITHIN 5 FOOT OFFSET FROM CROSSWALK LINE AND 10 FOOT OFFSET FROM FACE-OF-CURB.
2. ** MAXIMUM OFFSET IS WITHIN 10 FOOT OFFSET FROM CROSSWALK LINE AND 20 FOOT OFFSET FROM FACE-OF-CURB WITH CITY ENGINEER APPROVED DESIGN EXCEPTION.
3. SIDEWALK EXTENSION REQUIREMENTS APPLIES TO ALL POLE LOCATIONS. MUST MEET ADA FOR CLEAR FLOOR SPACE, SLOPE, HEIGHT, AND REACH REQUIREMENTS.

N.T.S.

DETAIL NO.			APPROVED:	DETAIL NO.
C-720	CHANDLER arizona	**TRAFFIC SIGNAL POLE PLACEMENT FOR PUSH BUTTON ACCESIBILITY**	01-27-2022	**C-720**



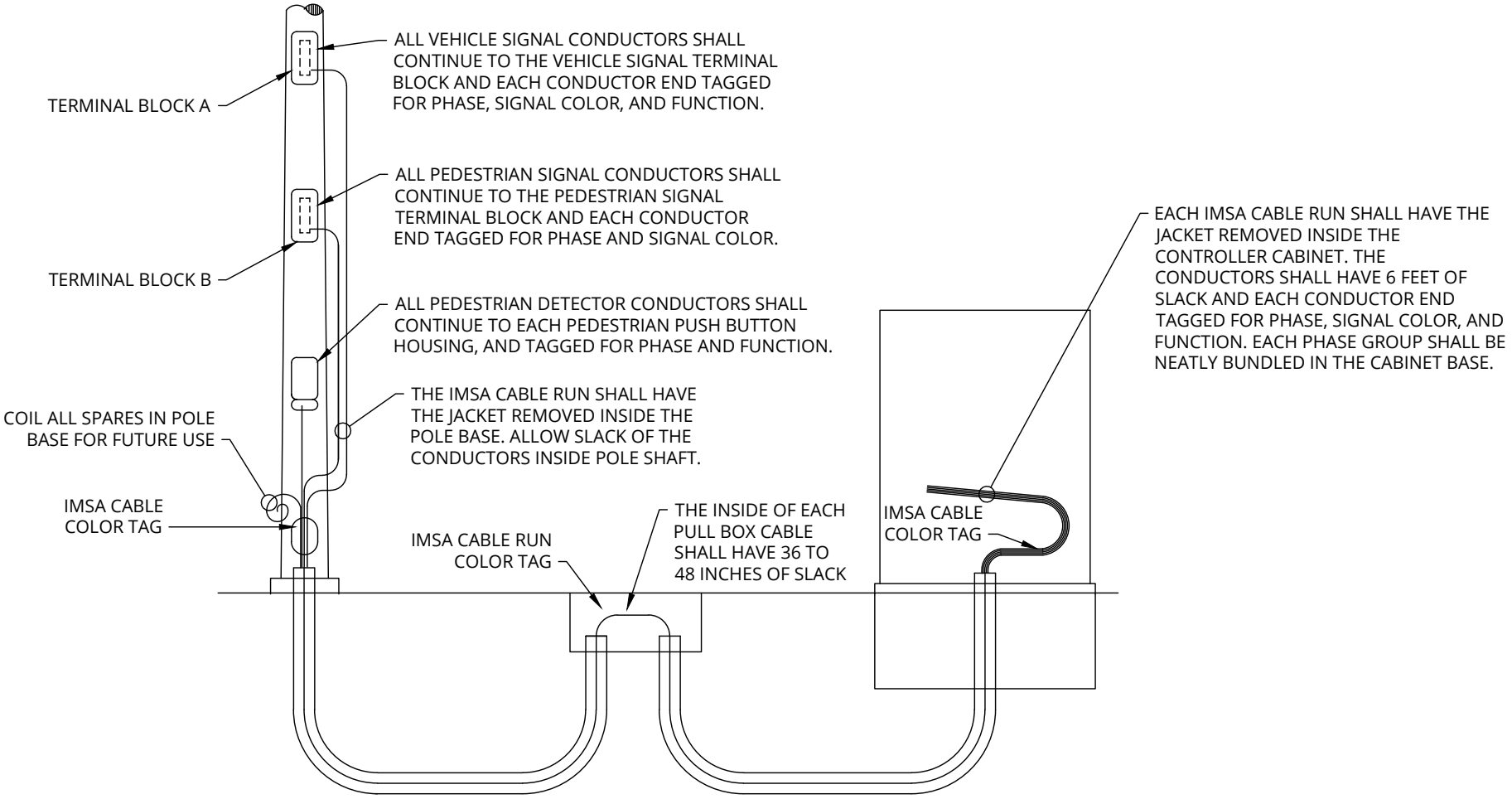
TYPICAL PEDESTAL LAYOUT

SEE DETAILS IN ADOT STANDARD DRAWING T.S.3-5. LIGHTING CONTROL CONTRACTOR (DOUBLE PULL 120V 60HZ) SHALL BE INSTALLED FOR SIGNAL WITH STREET LIGHT LUMINARIES. PROVIDE 50 AMP BREAKER FOR SIGNAL SERVICE. PROVIDE DOUBLE PULL 20 AMP BREAKER FOR STREET LIGHTS.

METER PEDESTAL FOUNDATION AND BASE SHALL BE PER ADOT STANDARD DETAIL T.S. 2-6. INSTALL 3'-0"x3'-0" 4-INCH DEEP CONCRETE PAD.

N.T.S.

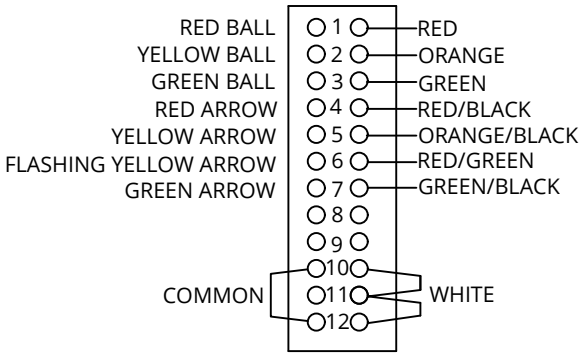
DETAIL NO.			APPROVED:	DETAIL NO.
C-721	CHANDLER arizona	**TRAFFIC SIGNAL METER PEDESTAL**	01-27-2022	**C-721**



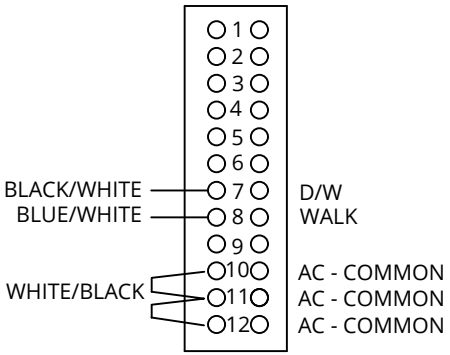
EACH IMSA 20-1 CABLE RUN SHALL BE CONTINUOUS FROM THE SPECIFIC TRAFFIC SIGNAL POLE TO THE TRAFFIC SIGNAL CABINET, WITHOUT THE USE OF ANY SPLICES.

N.T.S.

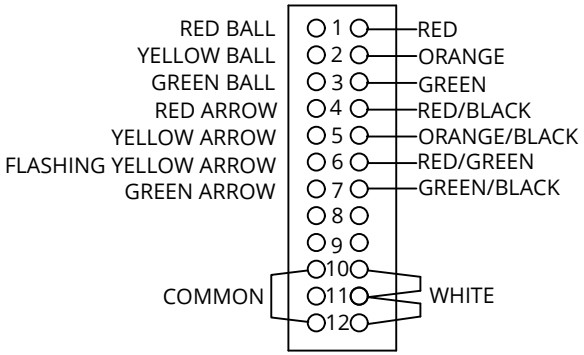
DETAIL NO.			APPROVED:	DETAIL NO.
C-722-1	CHANDLER arizona	**TRAFFIC SIGNAL IMSA SIGNAL CABLE INSTALLATION**	01-27-2022	**C-722-1**



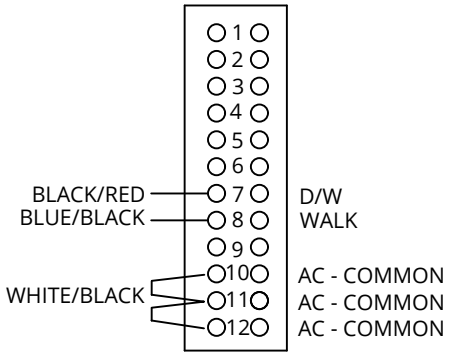
MAST ARM HEAD



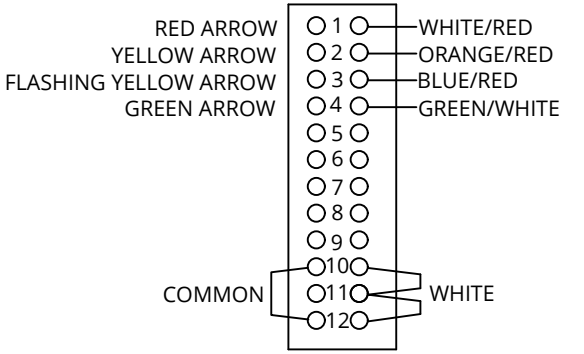
PEDESTRIAN NB/SB



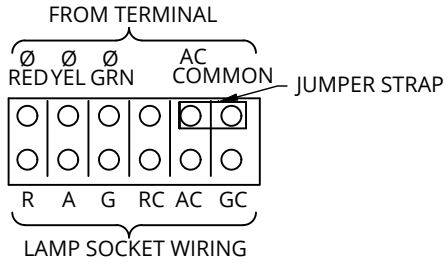
NEAR RIGHT SIDE MOUNTED HEAD
(FRONT & BACK)



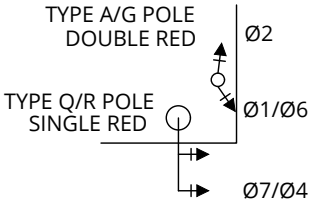
PEDESTRIAN EB/WB

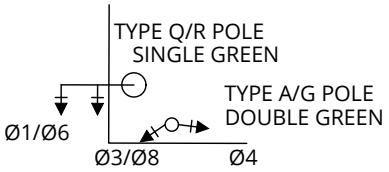


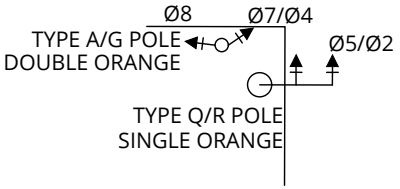
FAR LEFT SIDE MOUNTED HEAD

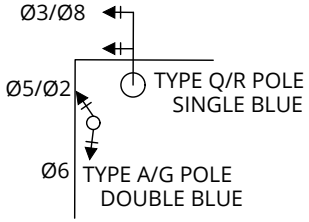


TERMINAL BLOCK IN SIGNAL HEAD



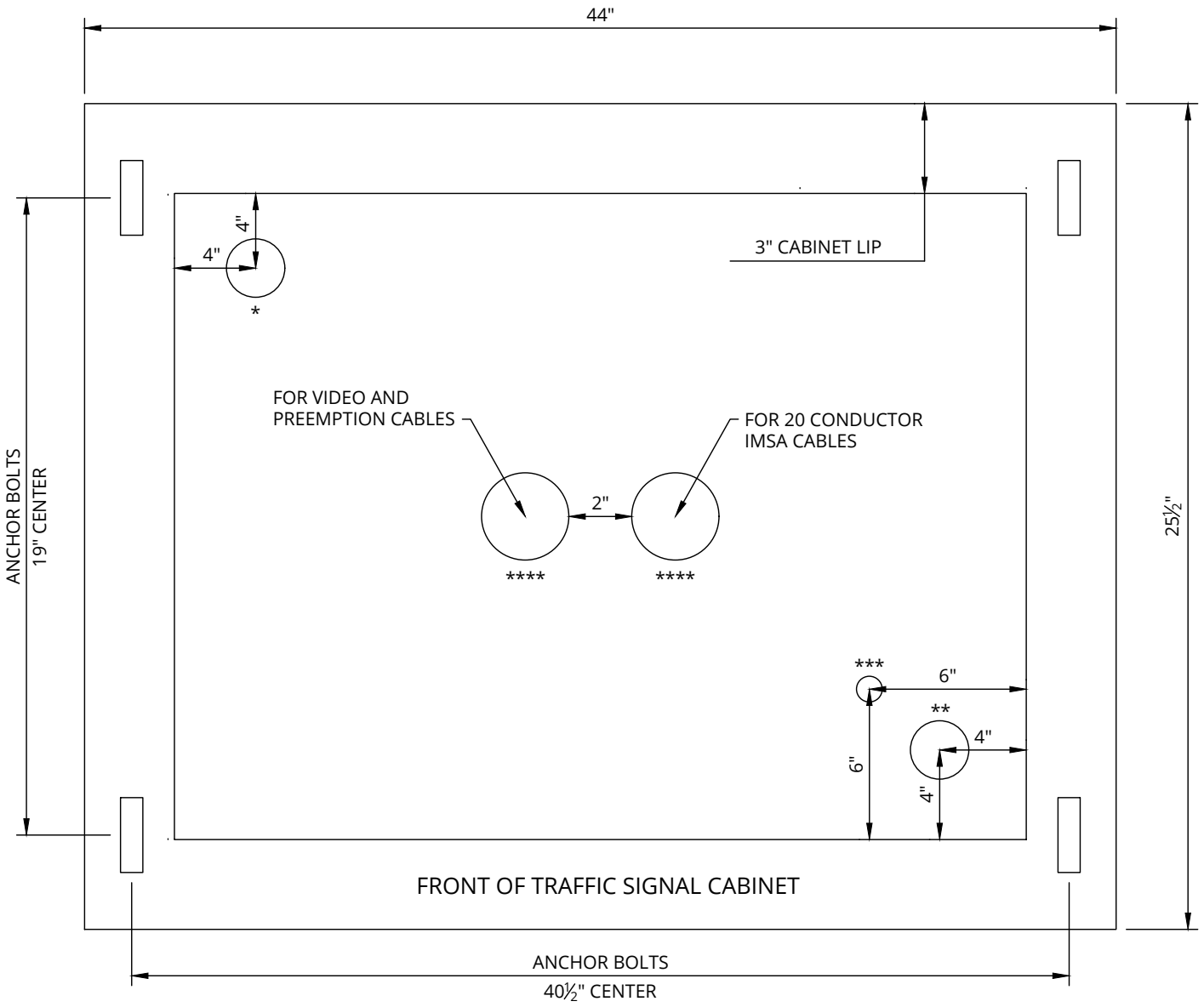






N.T.S.

DETAIL NO.			APPROVED:	DETAIL NO.
C-722-2	CHANDLER arizona	**TRAFFIC SIGNAL TERMINAL BLOCK WIRING DETAILS**	01-27-2022	**C-722-2**

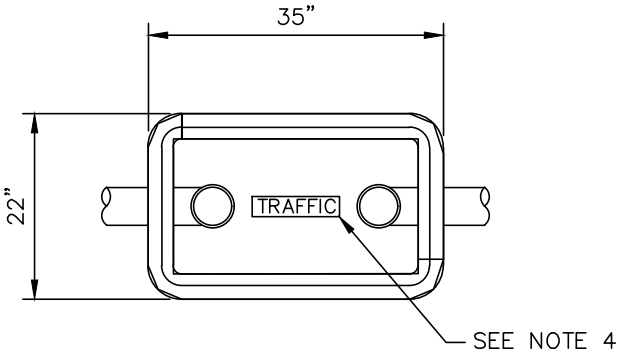


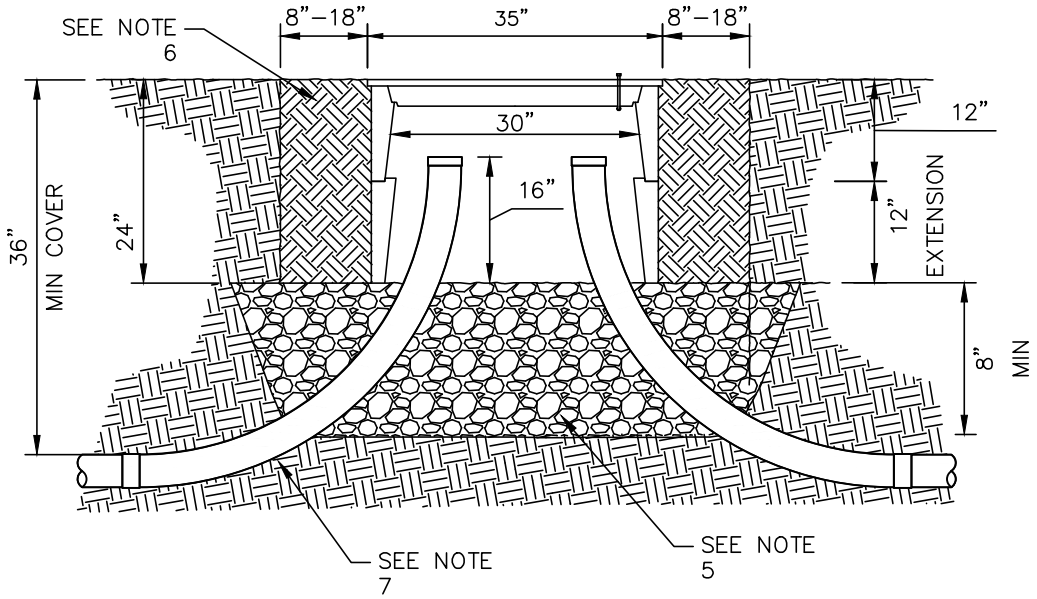
A RAISED PCC PAD 48"x48"x4" SHALL BE PLACED AT THE FRONT OF THE CABINET. PAD SHALL BE SET 2" BELOW THE FOUNDATION ELEVATION AND SLOPED AWAY FROM THE CABINET FOR DRAINAGE (2%).

* 2.0" COMMUNICATIONS CONDUIT
** 2.0" SERVICE CONDUIT
*** 1.5" CONDUIT FOR GROUND ROD
**** 4.0" SIGNAL CONDUIT

N.T.S.

DETAIL NO.			APPROVED:	DETAIL NO.
C-723	CHANDLER arizona	**TRAFFIC SIGNAL CABINET FOUNDATION CONDUIT LAYOUT**	01-27-2022	**C-723**





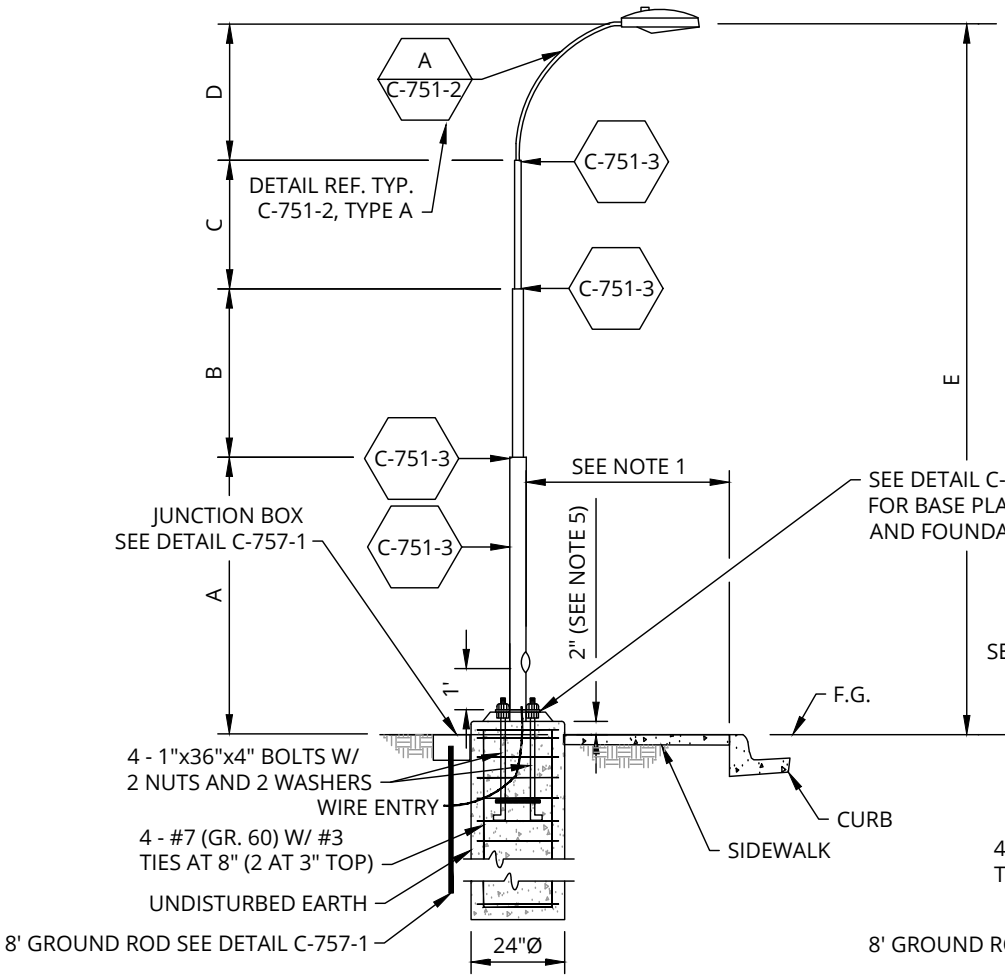
NOTES:

1. PLEASE REFER TO SECTION 5.6 THROUGH 5.7.3 OF THE ENGINEERING & DESIGN STANDARDS MANUAL FOR MORE INFORMATION.
2. HANDHOLE SHALL BE CHRISTY P36 OR APPROVED EQUAL WITH 12-INCH EXTENSION FOR TOTAL DEPTH OF 24 INCHES.
3. ALL PULL BOXES SHALL BE AASHTO TIER 22, H-20 RATED OR BETTER WITH POLYMER CONCRETE OR FIBRELYTE COVERS.
4. ALL COVERS WILL HAVE "TRAFFIC" MARKING INTEGRATED INTO THE COVER AND BE ASTMC 857, WUC 3.63 OR AASHTO TIER 15 RATED. TIER 8 LIDS MAY BE USED IN SOME CASES WHEN APPROVED BY CITY OF CHANDLER
5. HAND HOLE BASE MUST BE PLACED ON 8-INCHES MINIMUM OF ABC OR PEA GRAVEL AS REQUIRED BY MAG SECTION 702 AND COMPACTED TO 100% MAXIMUM DENSITY.
6. THE OUTER SIDES OF THE PULL BOX MUST BE BACKFILLED WITH SELECT EXCAVATED MATERIAL AND THOROUGHLY COMPACTED TO 95% TO WITHIN TWO INCHES OF FINISHED GRADE. THE COMPACTION AROUND THE BOX MUST NOT CAUSE THE SIDES TO DEFLECT OR ANY PART OF THE BOX OR LID TO CRACK.
7. PVC SCHEDULE 40 MINIMUM, 90-DEGREE SWEEPS WITH A 36-INCH BEND RADIUS.
8. ALL CONDUIT ENDS MUST HAVE A BELL-END TO PROTECT THE CONDUCTOR OR FIBER OPTIC CABLE FROM DAMAGE AND REMOVABLE CAPS MUST BE PLACED ON ALL UNUSED CONDUIT ENDS.

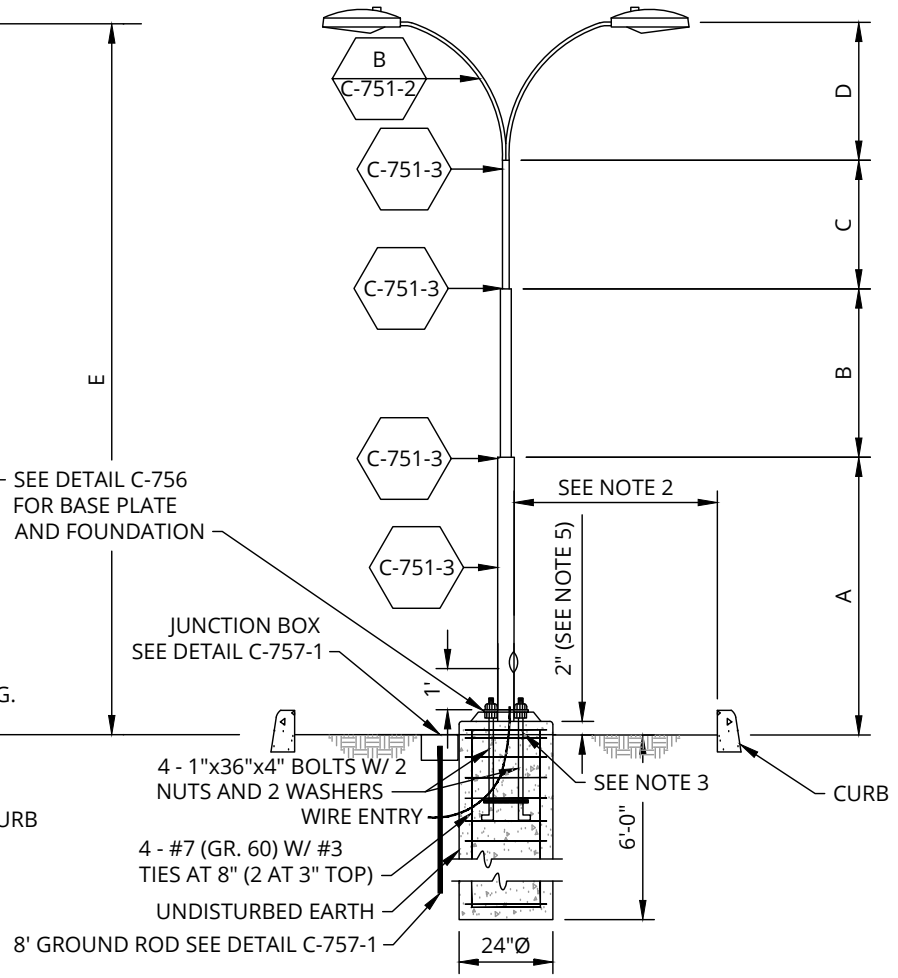
N.T.S.

DETAIL NO.			APPROVED:	DETAIL NO.
C-724	CHANDLER arizona	**TRAFFIC PULL BOX NO.7 WITH EXTENSION TYPICAL INSTALLATION**	01-27-2025	**C-724**

SINGLE DAVIT ARM



DOUBLE DAVIT ARM



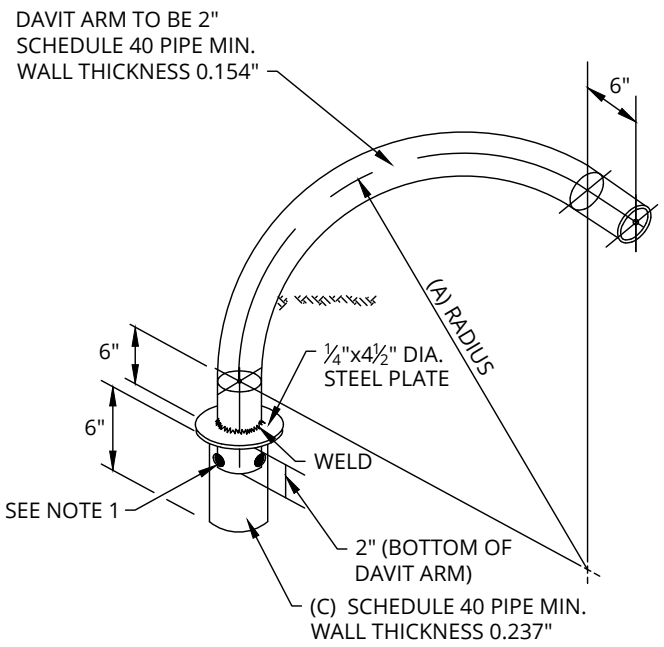
STREET TYPE	POLE	A	B	C	D	E
LOCAL	SINGLE	11'-6"	8'-0"	6'-0"	4'-6"	30'-0"
LOCAL WITH MEDIAN	DOUBLE	11'-6"	8'-0"	6'-0"	4'-6"	30'-0"
MINOR COLLECTOR WITHOUT MEDIAN	SINGLE	13'-6"	9'-6"	5'-6"	7'-0"	35'-6"
MINOR COLLECTOR WITH MEDIAN	DOUBLE	13'-6"	9'-6"	5'-6"	7'-0"	35'-6"
ARTERIAL/MAJOR COLLECTOR WITHOUT MEDIAN	SINGLE	13'-6"	9'-6"	5'-6"	7'-0"	35'-6"
ARTERIAL/MAJOR COLLECTOR WITH MEDIAN	DOUBLE	13'-6"	9'-6"	5'-6"	7'-0"	35'-6"

NOTES:

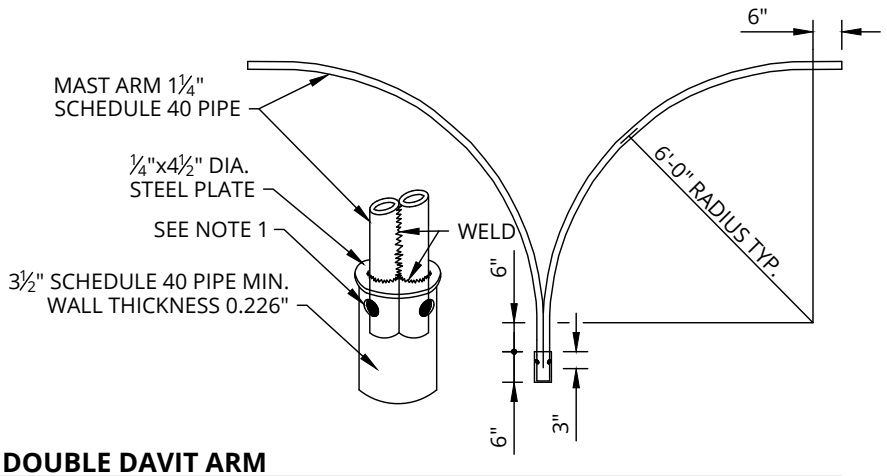
1. POLE SHALL BE MINIMUM 1'-0" BEHIND SIDEWALK UNLESS OTHERWISE DIRECTED. IN NO CASE WILL THE FACE OF POLE BE LOCATED LESS THAN 2'-6" BEHIND THE BACK OF CURB.
2. POLE SHALL BE MIDWAY BETWEEN CURBS OF THE MEDIAN.
3. DIMENSION 'A' MAY NEED TO BE INCREASED IF GRADE DROPS BELOW CURB LINE.
4. A 2 SECTION TELESCOPIC POLE OF SIMILAR STRENGTH AND HEIGHT WILL ALSO BE ACCEPTED.
5. IF IN SIDEWALK, THEN POUR FLUSH.

N.T.S.

DETAIL NO.			APPROVED:	DETAIL NO.
C-751-1	CHANDLER arizona	**STREET LIGHT POLE ASSEMBLY (SL-1)**	01-27-2022	**C-751-1**



A **DAVIT ARM**



B **DOUBLE DAVIT ARM**

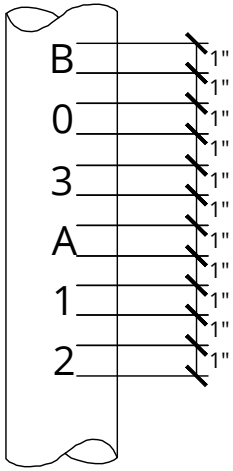
STREET TYPE	RADIUS A	PLATE DIA. B	O.D. PIPE C
LOCAL	4'-0"	4 ½"	4"
MINOR COLLECTOR	4'-0"		
ARTERIAL/MAJOR COLLECTOR	6'-6"		

NOTES:

1. THREE HOLES, DRILLED AND TAPPED TO ACCOMMODATE ½" ALLEN SET SCREWS, SPACED 120° APART HORIZONTALLY AND 1½" BELOW STEEL PLATE. (SEE DETAIL C-751-3)
2. FINISH TO MATCH THAT SPECIFIED FOR THE POLE.

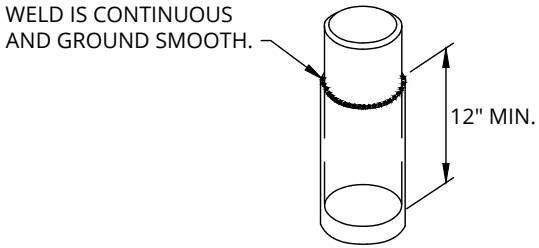
N.T.S.

DETAIL NO.			APPROVED:	DETAIL NO.
C-751-2	CHANDLER arizona	**STREET LIGHT DAVIT ARMS (SL-1)**	01-27-2022	**C-751-2**

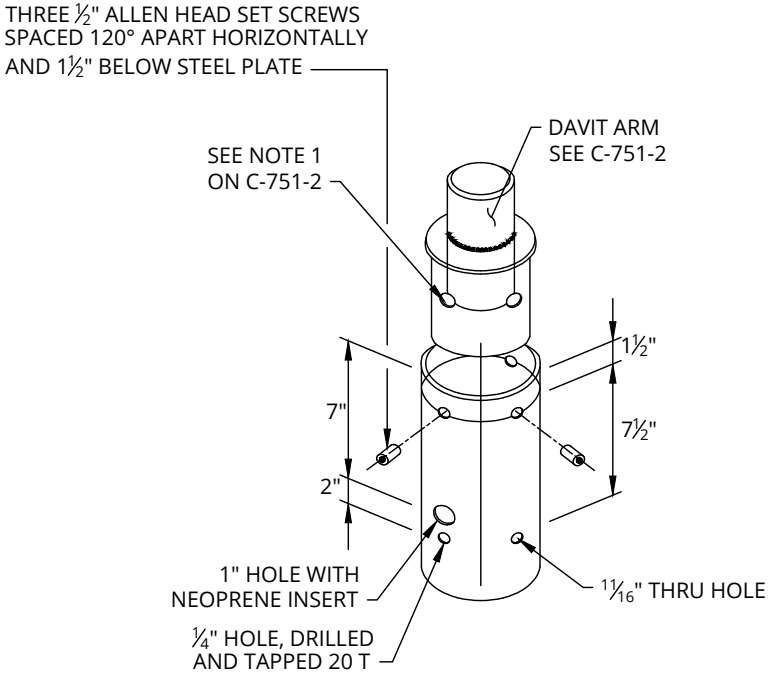


NOTE:
REFER TO ENGINEERING & DESIGN STANDARDS MANUAL SECTION 6.4.2 FOR POLE IDENTIFICATION.

POLE NUMBER LOCATIONS



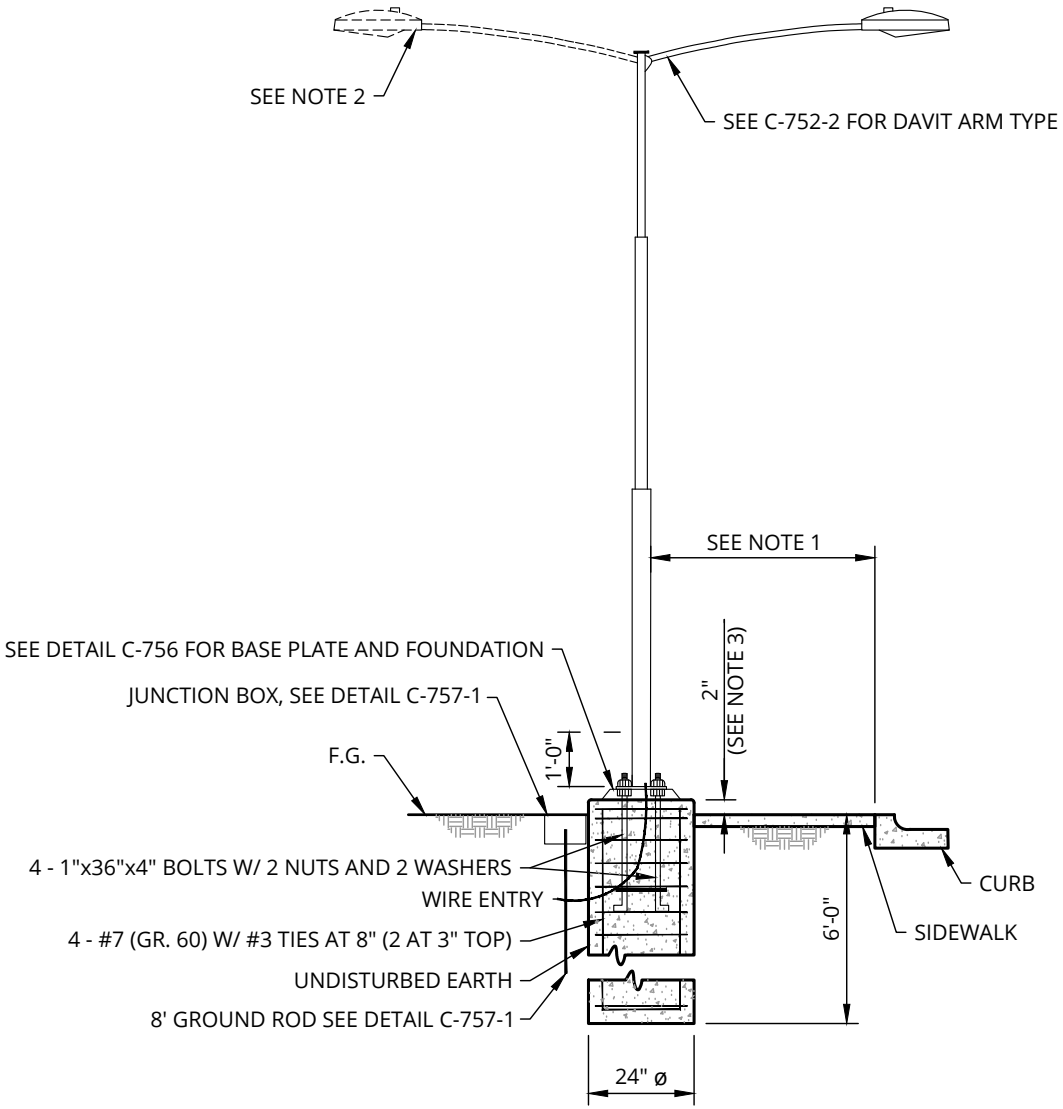
POLE JOINTS



DAVIT ARM CONNECTION

N.T.S.

DETAIL NO.			APPROVED:	DETAIL NO.
C-751-3	CHANDLER arizona	STREET LIGHT DETAILS (SL-1)	01-27-2022	**C-751-3**



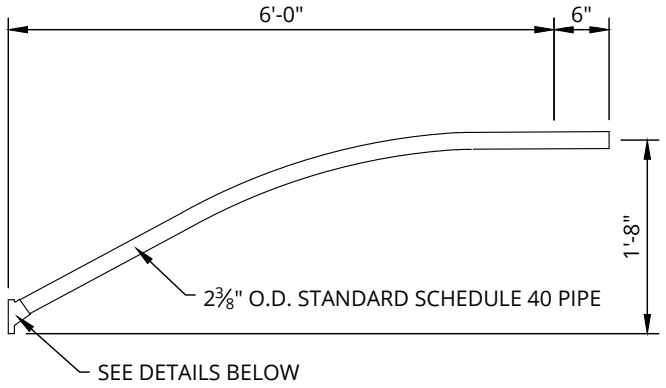
NOTES:

1. POLE SHALL BE MINIMUM 1'-0" BEHIND SIDEWALK UNLESS OTHERWISE DIRECTED. IN NO CASE SHALL THE FACE OF POLE BE LOCATED LESS THAN 2'-6" BEHIND THE BACK OF CURB.
2. POLE SHALL BE MIDWAY BETWEEN CURBS OF THE MEDIAN WHEN USING DOUBLE DAVIT ARMS.
3. IF IN SIDEWALK, THEN POUR FLUSH.

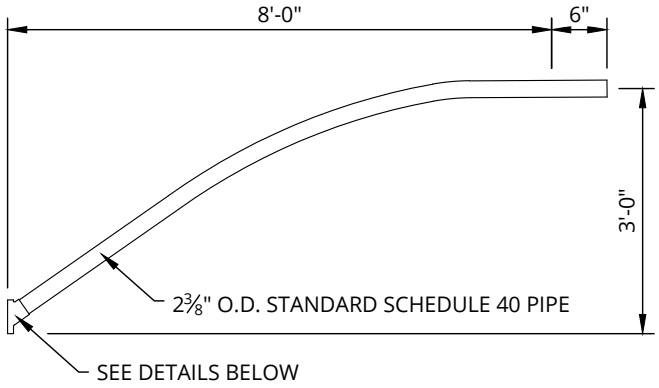
STREET TYPE	POLE TYPE / DTL. NO.	MAST ARM DTL. NO.
LOCAL	SL-6 / C-753	C-752-2 DTL. 1
MINOR COLLECTOR	SL-6 / C-753	C-752-2 DTL. 2
LOCAL WITH MEDIAN	SL-8 / C-754	C-752-2 DTL. 1
MINOR COLLECTOR WITH MEDIAN	SL-8 / C-754	C-752-2 DTL. 2
MAJOR COLLECTOR WITH MEDIAN	SL-8 / C-754	C-752-2 DTL. 2
MAJOR COLLECTOR WITHOUT MEDIAN	SL-8 / C-754	C-752-2 DTL. 2

N.T.S.

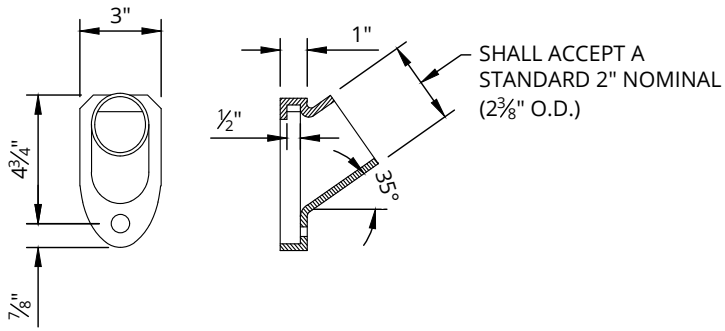
DETAIL NO.			APPROVED:	DETAIL NO.
C-752-1	CHANDLER arizona	**STREET LIGHT POLE ASSEMBLY (SL-6 AND SL-8)**	01-27-2022	**C-752-1**



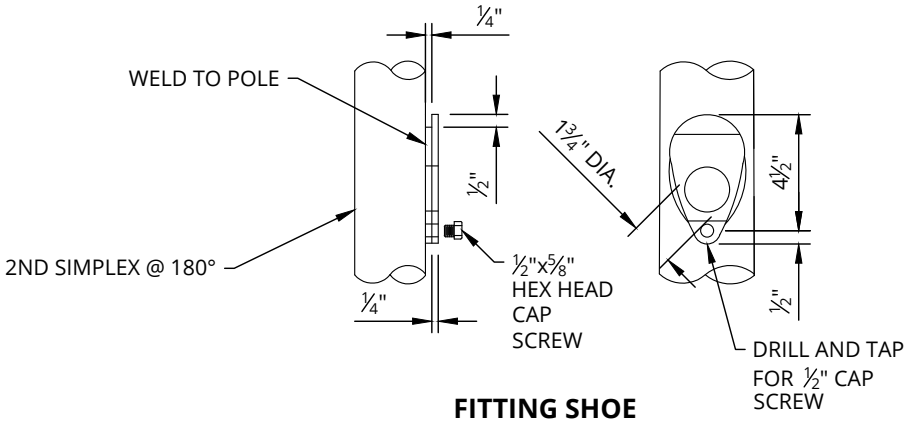
DTL 1 - LOCAL STREETS



DTL 2 - COLLECTOR STREETS



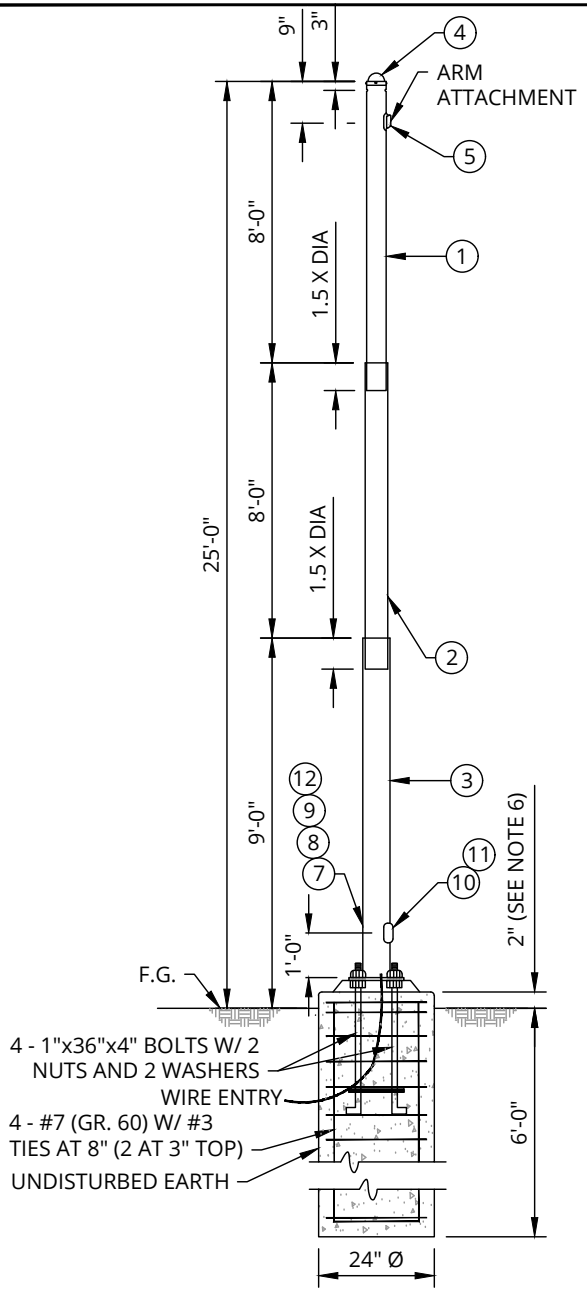
FITTING FOOT

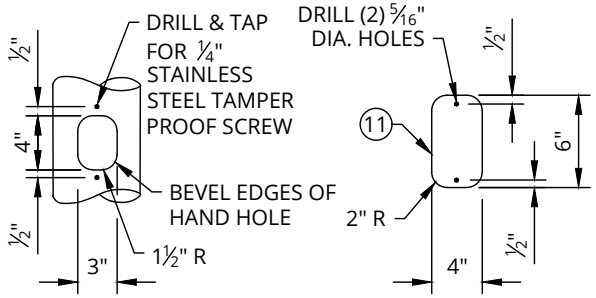


FITTING SHOE

N.T.S.

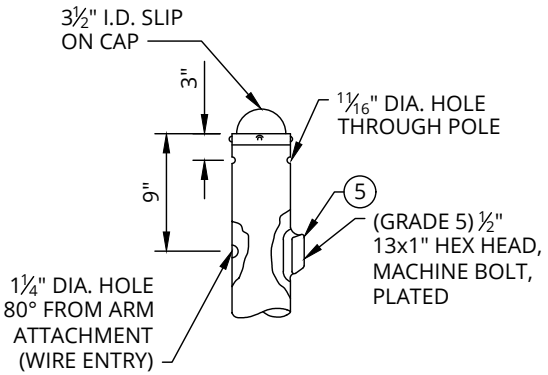
DETAIL NO.			APPROVED:	DETAIL NO.
C-752-2	CHANDLER arizona	**STREET LIGHT DAVIT ARM (SL-6 AND SL-8)**	01-27-2022	**C-752-2**



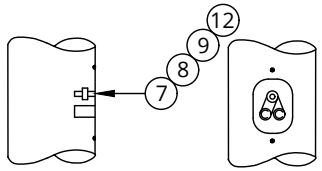


BEND COVER TO SLIGHTLY SMALLER RADIUS THAN POLE

HANDHOLE



POLE TOP



GROUNDING

NOTES:

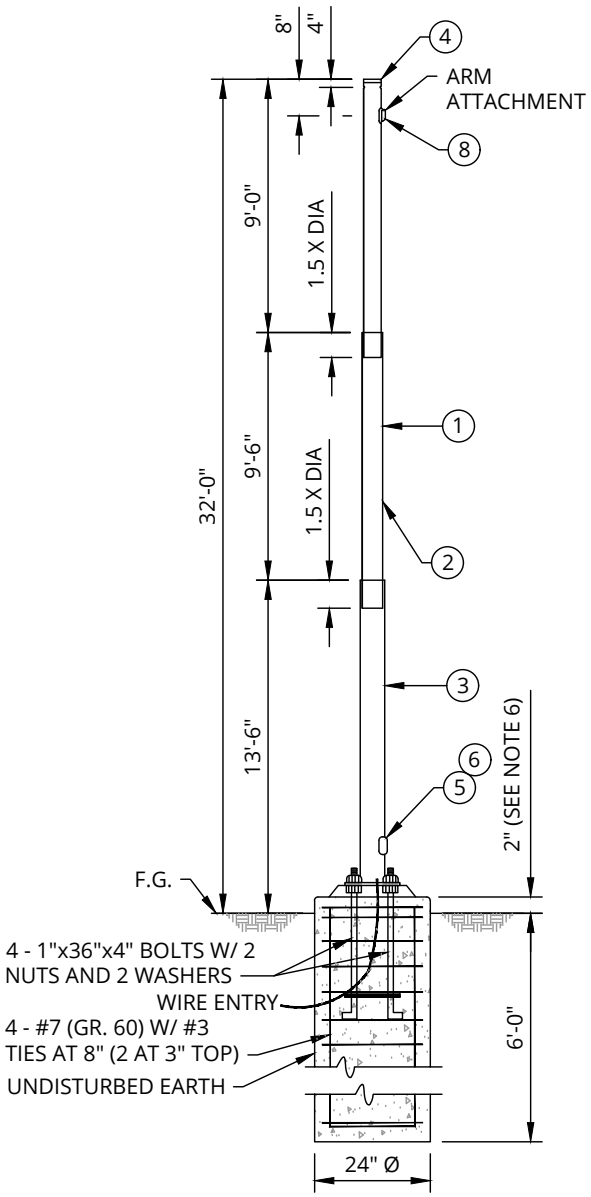
1. THE HAND HOLE TO BE 4"x3" WITH 1½" RADII. THE HAND HOLE COVER TO BE 4"x6"x16 GAUGE WITH 2" RADII AND BEND TO SLIGHTLY SMALLER RADIUS THAN THE POLE. THE COVER IS TO BE SECURED WITH (2) ¼" STAINLESS STEEL TAMPER PROOF SCREWS, SUPPLIED BY THE MANUFACTURER.
2. AFTER FABRICATION, THE POLE SHALL BE SANDBLASTED TO REMOVE ALL LOOSE SCALE, RUST, CORROSION PRODUCTS, GREASE, DIRT, AND OTHER FOREIGN PRODUCTS.
3. AFTER SANDBLASTING, THE POLE SHALL BE GALVANIZED. THE GALVANIZING SHALL CONFORM WITH ASTM A123, LATEST EDITION. ZINC (HOT GALVANIZED) COATING ON PRODUCTS FABRICATED FROM ROLLED, PRESSED AND FORGED STEELS, PLATES, BARS AND STRIP.
4. POLE SHALL BE DESIGNED AT THE TOP TO SUPPORT 200 LBS. TENSION PULLING DIRECTLY UNDER THE STREET LIGHT AND SHALL SUPPORT A 50 LB LUMINARE ON A 6'-0" ARM 2'-0" ABOVE THE TOP OF THE POLE WITH A 3 SQ FOOT AREA. POLE SHALL ALSO WITHSTAND AN 80 MPH WIND.
5. SEE DETAIL C-756 FOR BASE PLATE & FOUNDATION.
6. IF IN SIDEWALK, THEN POUR FLUSH.

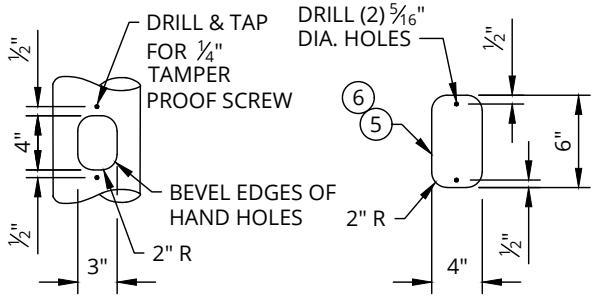
REFER TO C-753-2 FOR PART NUMBER DESCRIPTIONS (1) THROUGH (12)

N.T.S.

DETAIL NO.			APPROVED:	DETAIL NO.
C-753-1	CHANDLER arizona	**STREET LIGHT POLE DETAILS (SL-6)**	01-27-2022	**C-753-1**

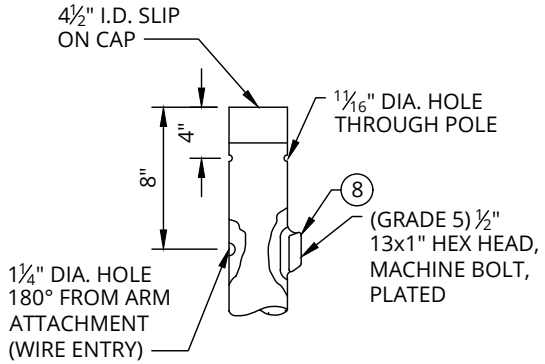
ITEM	QUANTITY	DESCRIPTION
1	1	PIPE, 3½" O.D. 0.109" WALL 8'-6" LONG
2	1	PIPE, 4½" O.D. 0.125" WALL 8'-6" LONG
3	1	PIPE, 5 9/16" O.D. 0.188" WALL 14'-0" LONG
4	1	CAP, 3½" I.D. STANDARD SLIP ON
5	1	SIMPLEX, UNIVERSAL CT-2 PER EM-912
6	1	PIPE, 1½" MIN. I.D. STEEL 3½" LONG
7	2	LUG, TERMINAL (BLACKBURN L70 OR EQUIVALENT)
8	1	BOLT, ¼" X ¾" ROUND HEAD - RIBBED SHANKED WITH NUT
9	1	WASHER, ¼" ROUND
10	2	SCREW, ¼" STAINLESS STEEL TAMPER PROOF
11	1	PLATE, COVER, 16 GA. STEEL
12	1	WASHER, SINGLE COIL LOCK



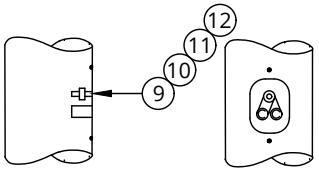


HANDHOLE

BEND COVER TO SLIGHTLY SMALLER RADIUS THAN POLE



POLE TOP



GROUNDING

NOTES:

1. THE HAND HOLE TO BE 4"x3" WITH 1½" RADII. THE HAND HOLE COVER TO BE 4"x6"x16 GAUGE WITH 2" RADII AND BEND TO SLIGHTLY SMALLER RADIUS THAN THE POLE. THE COVER IS TO BE SECURED WITH (2) ¼" STAINLESS STEEL TAMPER PROOF SCREWS, SUPPLIED BY THE MANUFACTURER.
2. AFTER FABRICATION, THE POLE SHALL BE SANDBLASTED TO REMOVE ALL LOOSE SCALE, RUST, CORROSION PRODUCTS, GREASE, DIRT, AND OTHER FOREIGN PRODUCTS.
3. AFTER SANDBLASTING, THE POLE SHALL BE GALVANIZED. THE GALVANIZING SHALL CONFORM WITH ASTM A123, LATEST EDITION. ZINC (HOT GALVANIZED) COATING ON PRODUCTS FABRICATED FROM ROLLED, PRESSED AND FORGED STEELS, PLATES, BARS AND STRIP.
4. POLE SHALL BE DESIGNED AT THE TOP TO SUPPORT 200 LBS. TENSION PULLING DIRECTLY UNDER THE STREET LIGHT AND SHALL SUPPORT A 50 LB LUMINARE ON A 6'-0" ARM 2'-0" ABOVE THE TOP OF THE POLE WITH A 3 SQ FOOT AREA. POLE SHALL ALSO WITHSTAND AN 80 MPH WIND.
5. SEE DETAIL C-756 FOR BASE PLATE & FOUNDATION.
6. IF IN SIDEWALK, THEN POUR FLUSH.

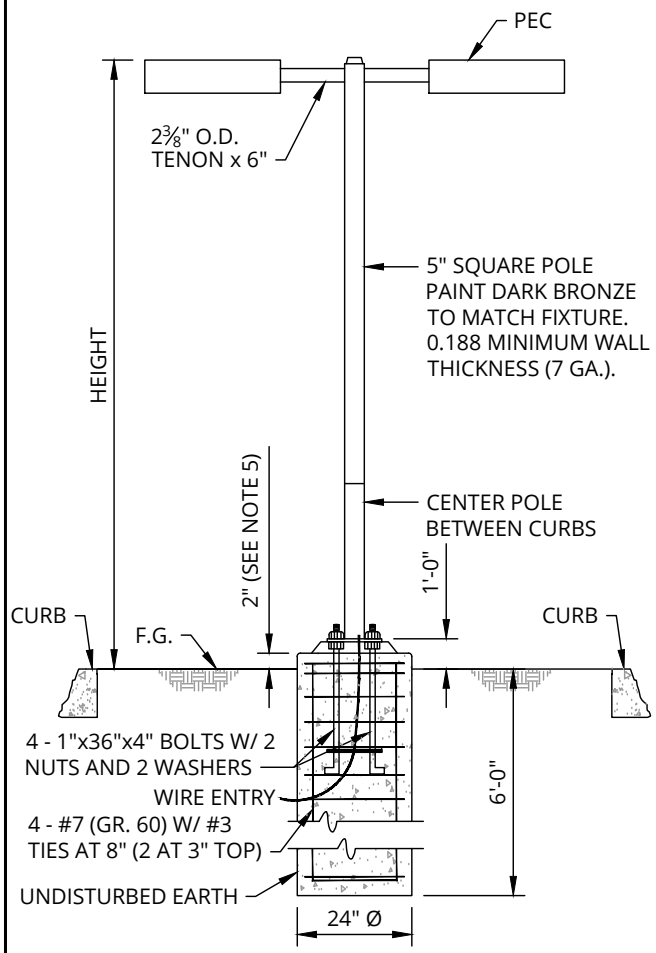
REFER TO C-754-2 FOR PART NUMBER DESCRIPTIONS (1) THROUGH (13)

N.T.S.

DETAIL NO.			APPROVED:	DETAIL NO.
C-754-1	CHANDLER arizona	**STREET LIGHT POLE DETAILS (SL-8)**	01-27-2022	**C-754-1**

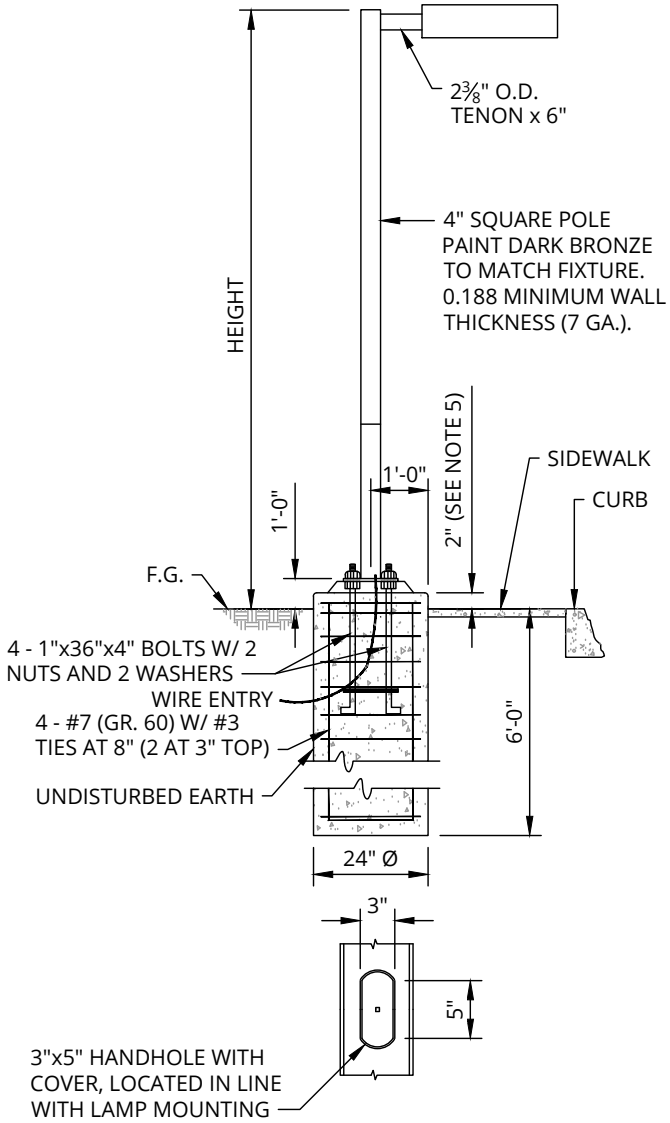
ITEM	QUANTITY	DESCRIPTION
1	1	PIPE, 4½" O.D. 0.125" WALL 9'-6" LONG
2	1	PIPE, 5⁹⁄₁₆" O.D. 0.134" WALL 10'-0" LONG
3	1	PIPE, 6⅝" O.D. 0.188" WALL 20'-0" LONG
4	1	CAP, 4½" I.D. STANDARD SLIP ON
5	1	PLATE, COVER, 16 GA. STEEL
6	1	SCREW, ¼" STAINLESS STEEL TAMPER PROOF
7	2	PIPE, 1½" MIN. I.D. STEEL 3½"
8	1	SIMPLEX, UNIVERSAL CT-2 PER EM-912
9	1	LUG, TERMINAL (BLACKBURN L70 OR EQUIVALENT)
10	2	BOLT, ¼" X ¾" ROUND HEAD - RIBBED SHANKED WITH NUT
11	1	WASHER, ¼" ROUND
12	1	WASHER, SINGLE COIL LOCK

DOUBLE DAVIT ARM IN MEDIAN



STREET TYPE	HEIGHT
LOCAL	30'-0"
COLLECTOR	35'-0"
ARTERIAL	35'-0"

SINGLE DAVIT ARM

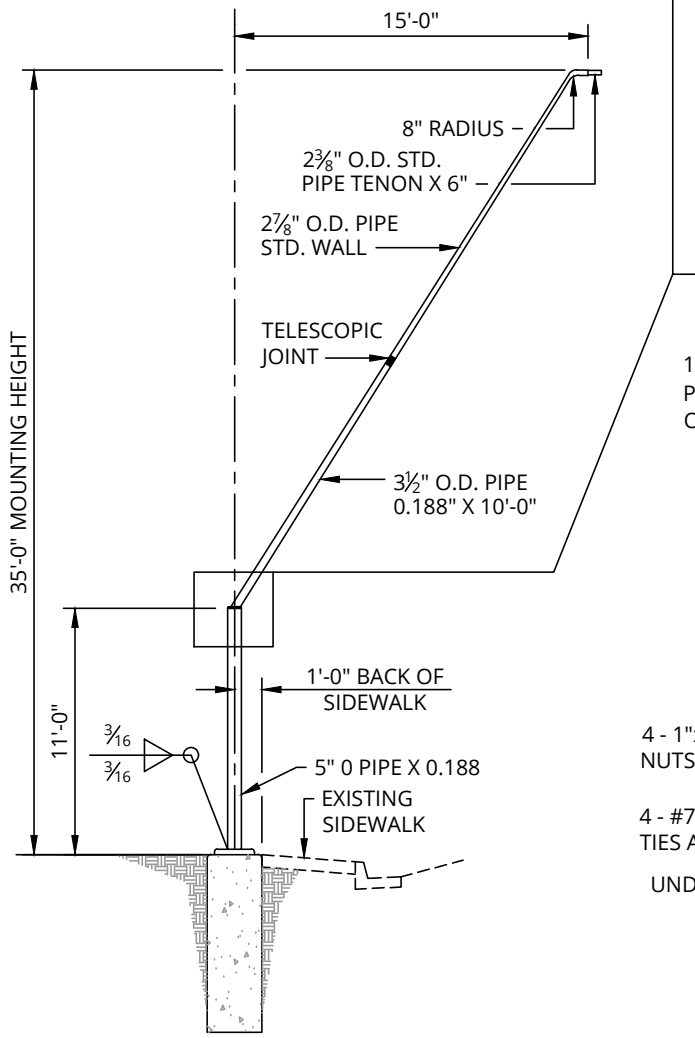


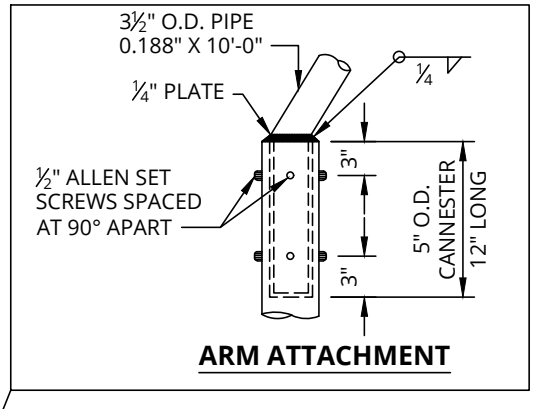
NOTES:

1. ALL REQUIREMENTS OF STANDARD POLES APPLY TO THE DECORATIVE POLE SHOWN HERE.
2. THE SHOWN STREET LIGHT TYPE MAY BE USED IN SELECTED AREAS OF THE CITY WITH THE APPROVAL OF THE CITY TRANSPORTATION ENGINEER.
3. POLE SHALL BE MINIMUM 1'-0" BEHIND SIDEWALK UNLESS OTHERWISE DIRECTED. IN NO CASE SHALL THE FACE OF POLE BE LOCATED LESS THAN 2'-6" BEHIND THE BACK OF CURB.
4. POLE SHALL BE MIDWAY BETWEEN CURBS OF THE MEDIAN.
5. IF IN SIDEWALK, THEN POUR FLUSH.

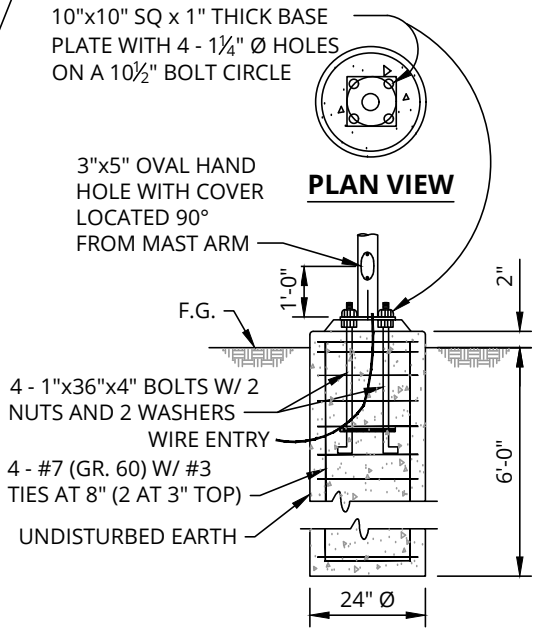
N.T.S.

DETAIL NO.			APPROVED:	DETAIL NO.
C-755	CHANDLER arizona	**DECORATIVE STREET LIGHT POLE (SL-16)**	01-27-2022	**C-755**





ARM ATTACHMENT



PLAN VIEW

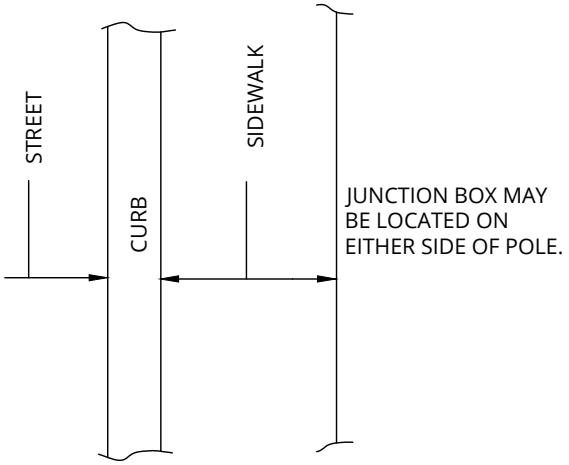
BASE PLATE &
FOUNDATION DETAIL

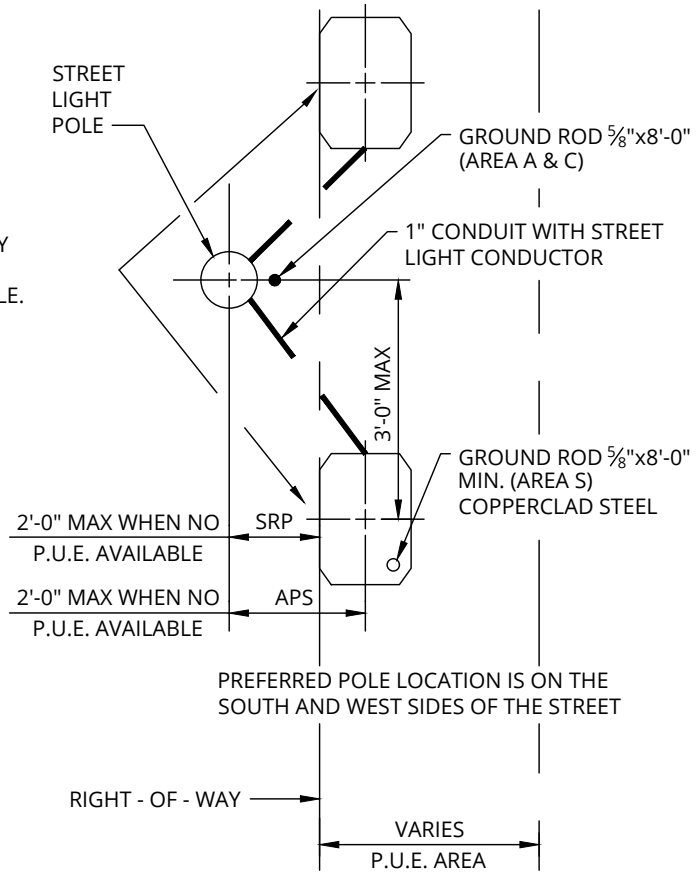
NOTES:

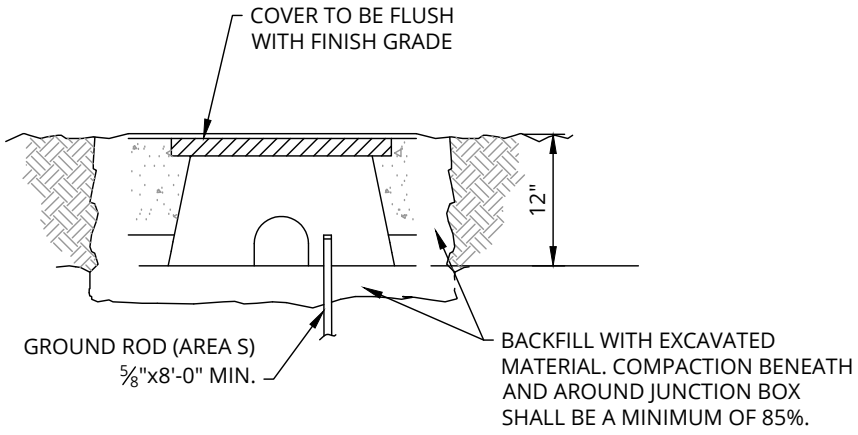
1. POLE BASE PLATE AND ANCHOR BOLTS DESIGNED PER AASHTO 80.
2. PIPE STEEL (ASTM A-53 GRADE B) ANCHOR BOLTS, BASE PLATE AND MISC. STEEL PER ASTM 36.
3. THE HAND HOLE TO BE 3"x5". THE COVER PLATE TO BE 16 GAUGE. THE COVER IS TO BE SECURED BY MFG.
4. AFTER FABRICATION THE POLE SHALL BE SANDBLASTED TO REMOVE ALL LOOSE SCALE RUST, CORROSION PRODUCTS, GREASE, DIRT AND OTHER FOREIGN PRODUCTS.
5. AFTER SANDBLASTING, THE POLE SHALL BE FINISHED PAINTED PER C.O.C. STANDARDS.

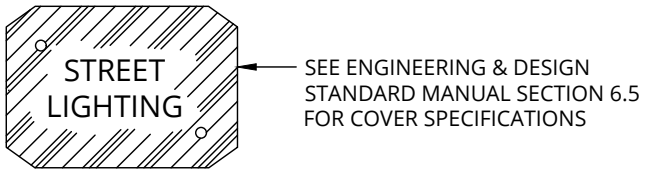
N.T.S.

DETAIL NO. C-756	CHANDLER arizona	ANGLE STREET LIGHT POLE (SL-17)	APPROVED: 01-27-2025	DETAIL NO. C-756





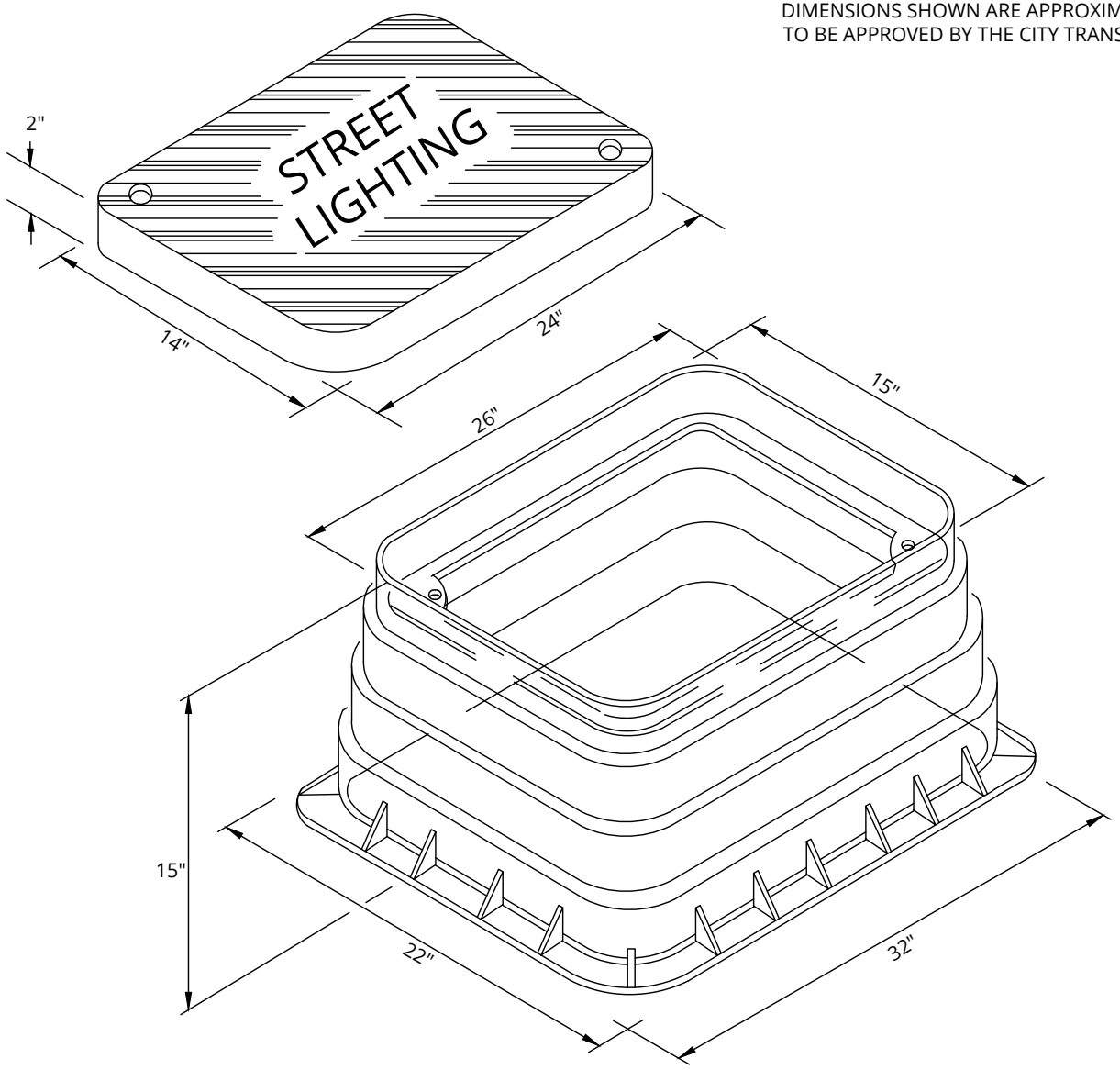




N.T.S.

DETAIL NO.			APPROVED:	DETAIL NO.
C-757-1	CHANDLER arizona	**STREET LIGHT JUNCTION BOXES**	01-27-2022	**C-757-1**

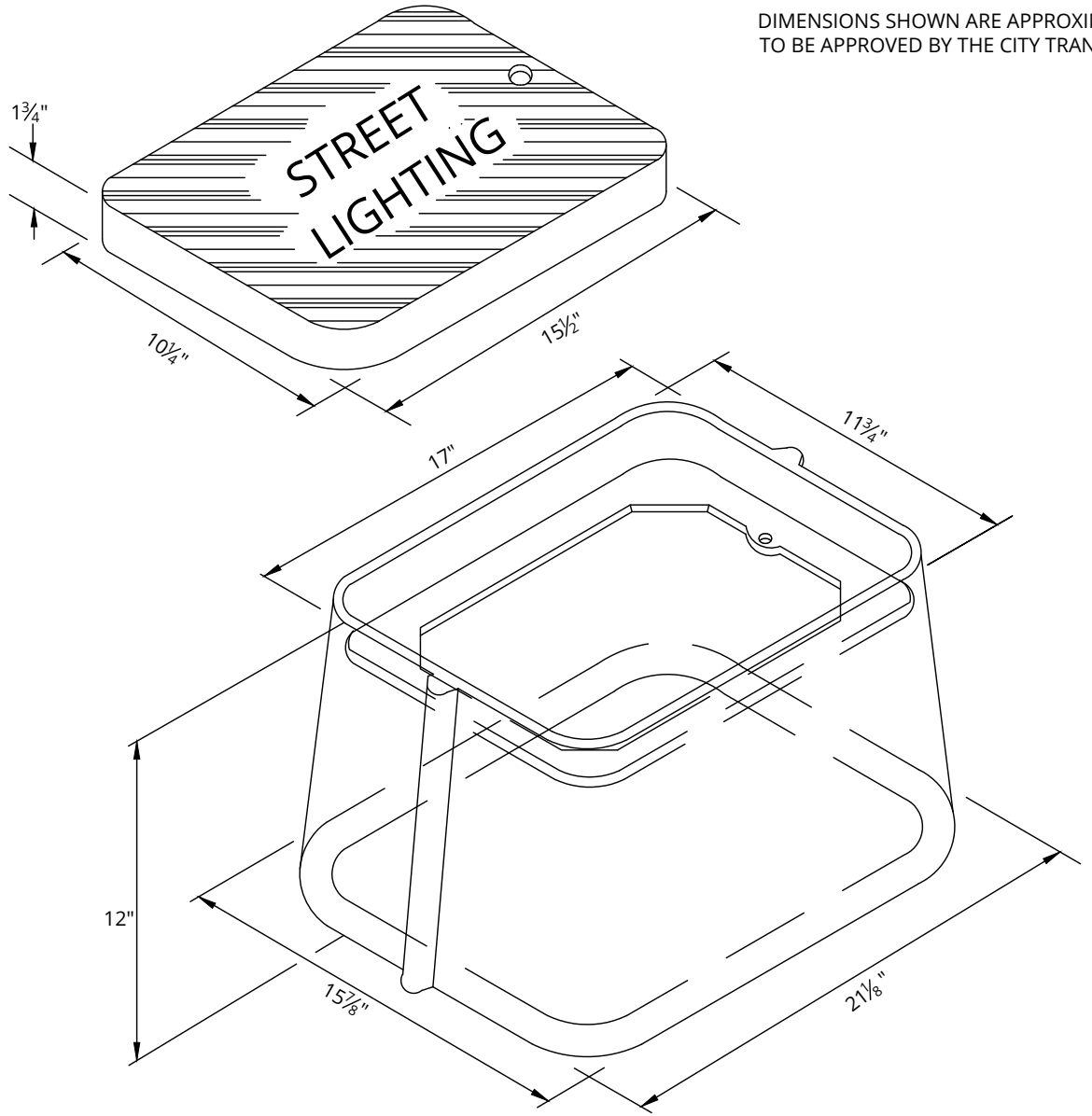
DIMENSIONS SHOWN ARE APPROXIMATE. ACTUAL DIMENSIONS TO BE APPROVED BY THE CITY TRANSPORTATION ENGINEER.



N.T.S.

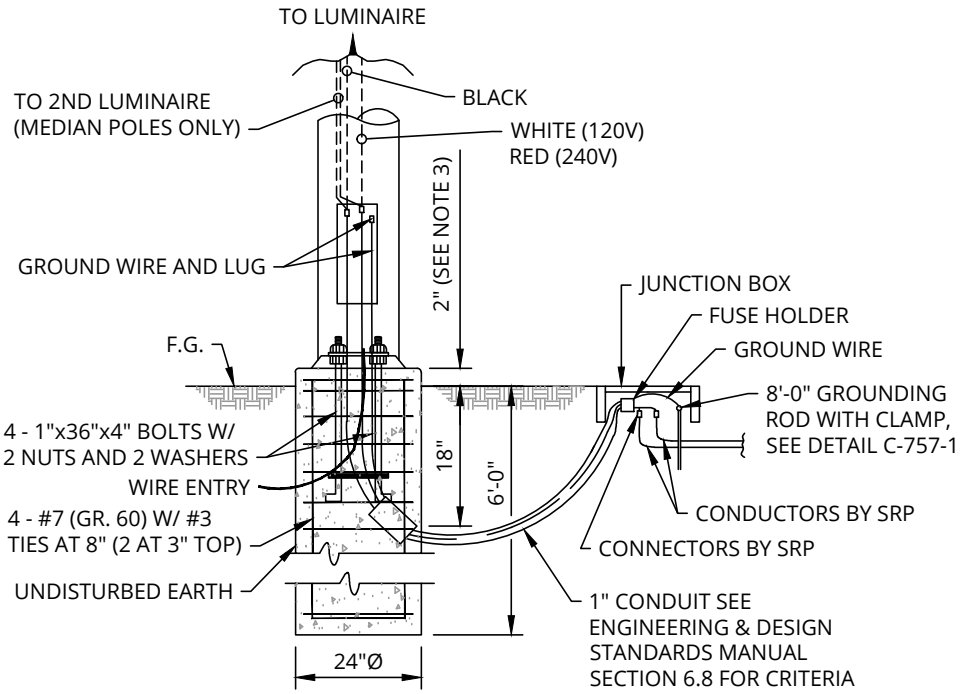
DETAIL NO.			APPROVED:	DETAIL NO.
C-757-2	CHANDLER arizona	**STREET LIGHT 14" X 24" JUNCTION BOX (APS SERVICE AREA)**	01-27-2022	**C-757-2**

DIMENSIONS SHOWN ARE APPROXIMATE. ACTUAL DIMENSIONS TO BE APPROVED BY THE CITY TRANSPORTATION ENGINEER.

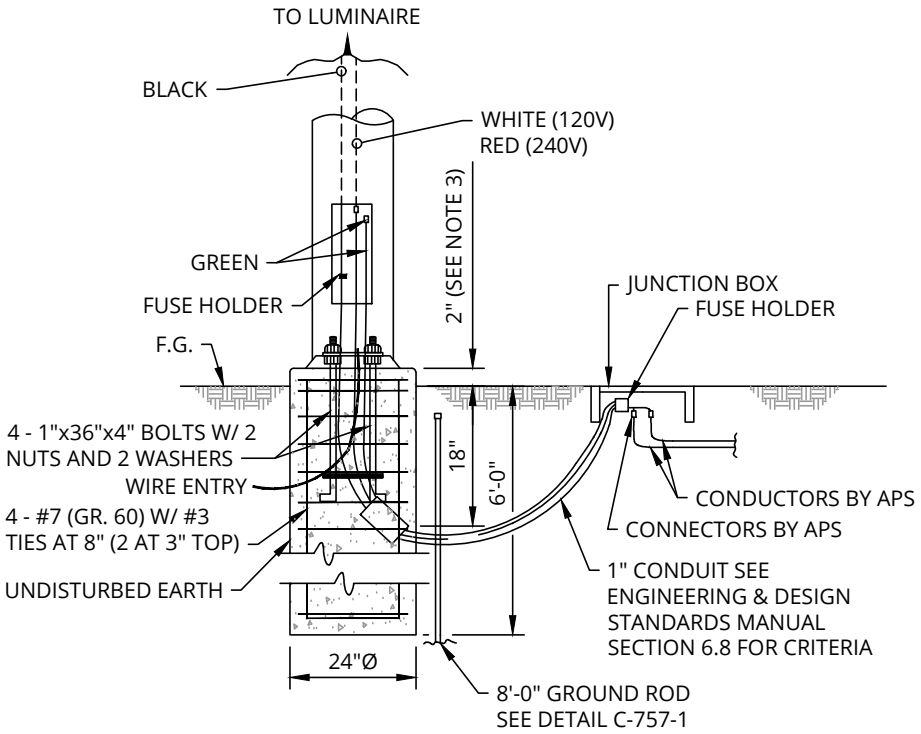


N.T.S.

DETAIL NO.			APPROVED:	DETAIL NO.
C-757-3	CHANDLER arizona	**STREET LIGHT 10" X 15" JUNCTION BOX (APS AND SRP SERVICE AREA)**	01-27-2022	**C-757-3**



SRP AREA



APS AREA

NOTES:

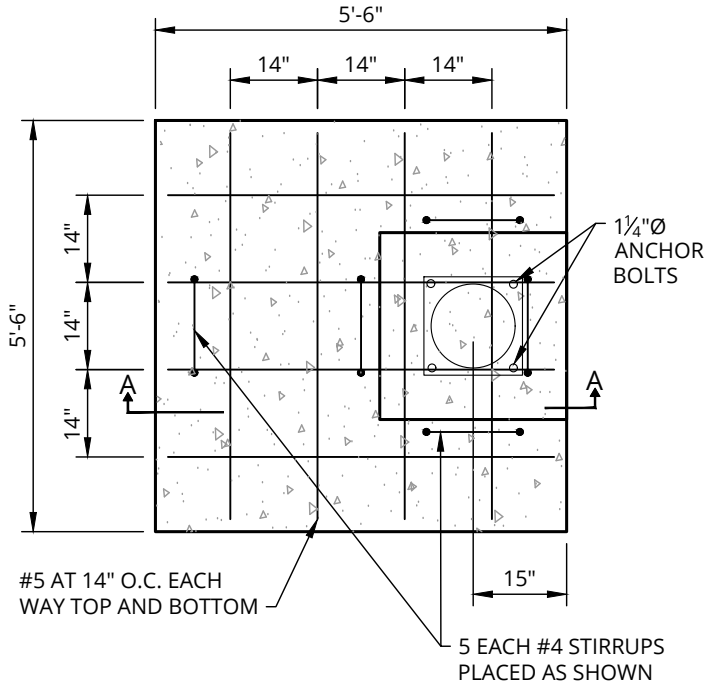
1. FOR CITY OR DEVELOPER INSTALLED AND CITY MAINTAINED FUSING IN APS AREAS, APS TO PROVIDE AND INSTALL 15 AMP FUSES IN JUNCTION BOX. CUSTOMER FUSING IN THE HANDHOLE NOT TO EXCEED 10 AMPS. FOR APS REQUIREMENTS CONTACT APS ENGINEERING.

2. FOR CITY OR DEVELOPER INSTALLED AND CITY MAINTAINED FUSING IN SRP AREAS CONTACT SRP ENGINEERING FOR REQUIREMENTS.

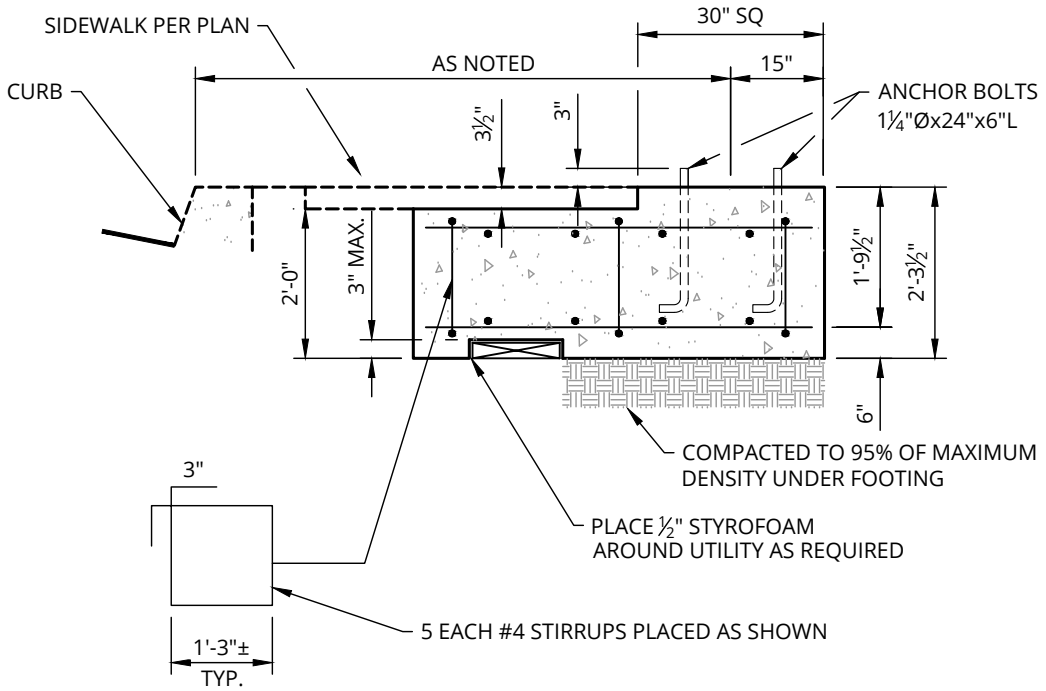
3. IF IN SIDEWALK, THEN POUR FLUSH.

N.T.S.

DETAIL NO. C-758	CHANDLER arizona	STREET LIGHT CONNECTION DETAILS (SL-15)	APPROVED: 01-27-2025	DETAIL NO. C-758



PLAN



SECTION A-A

NOTES:

1. NOT TO BE USED WITH STREET LIGHT MASTARMS LONGER THAN 20'-0".
2. A 20'-0" COIL OF #4 AWG BARE COPPER GROUND WIRE SHALL BE INSTALLED BEFORE THE CONCRETE IS POURED AND CONNECTED TO POLE GROUNDING SCREW IN THE HANDHOLD.
3. NOT TO BE USED WITH C-756 ANGLE STREET LIGHT POLE (SL-17).

N.T.S.

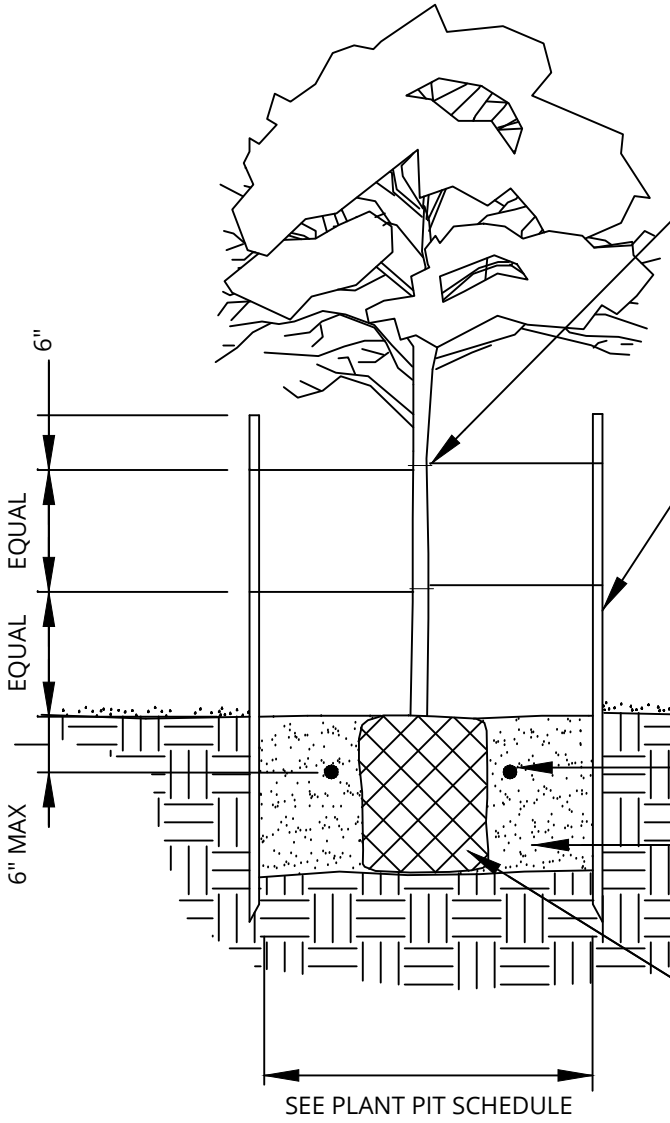
DETAIL NO.			APPROVED:	DETAIL NO.
C-760	CHANDLER arizona	**STREET LIGHT SPREAD FOUNDATION (SL-1, SL-6, SL-8 AND SL-16)**	01-27-2022	**C-760**

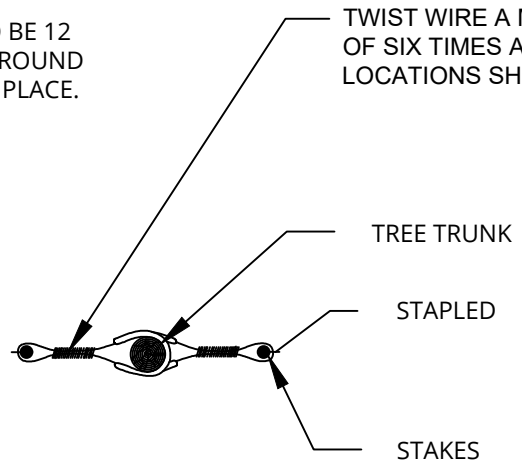
CHANDLER arizona

Standard Details

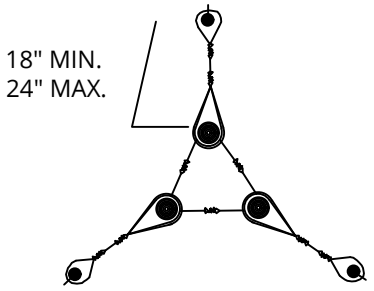
LANDSCAPING

C-801 TO C-811





SINGLE-TRUNK



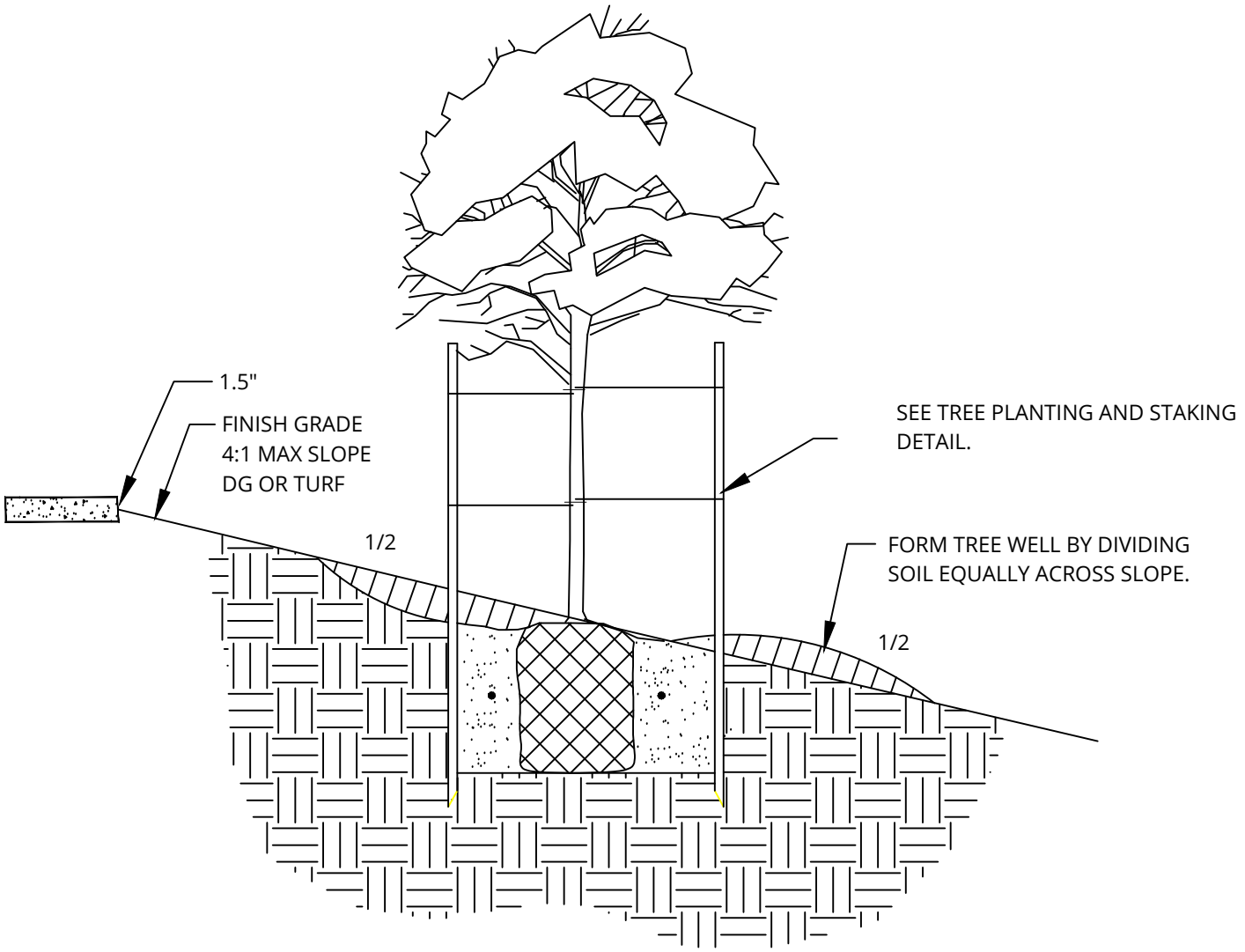
MULTI-TRUNK

PLAN VIEW

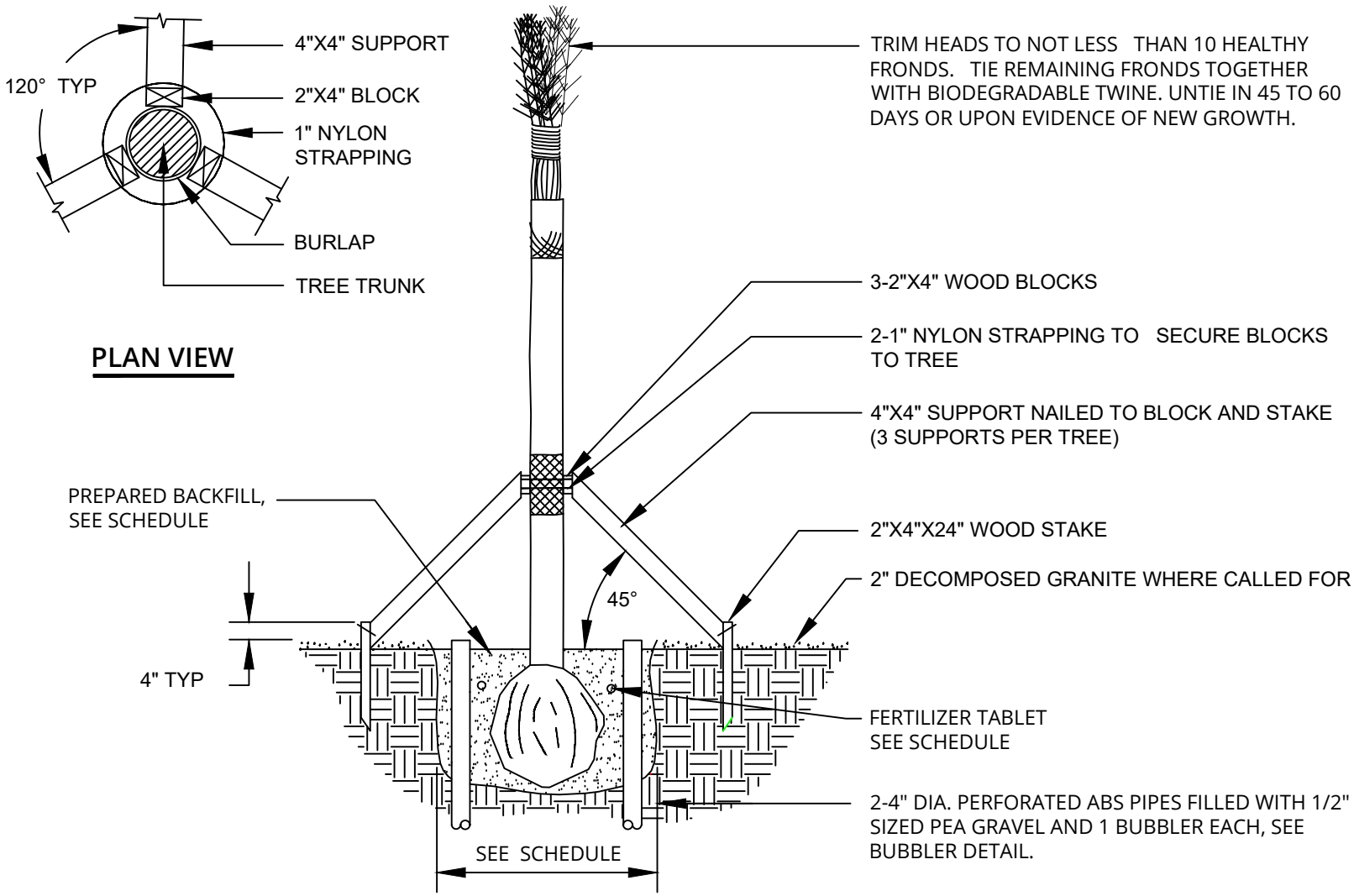
TREE STAKING NOTES-

1. STAKE TREES ONLY IF REQUIRED.
2. SET STAKES 6" MINIMUM IN UNDISTURBED SOIL.

DETAIL NO.			APPROVED:	DETAIL NO.
C-801	CHANDLER arizona	**TREE PLANTING AND STAKING**	02-09-2012	**C-801**



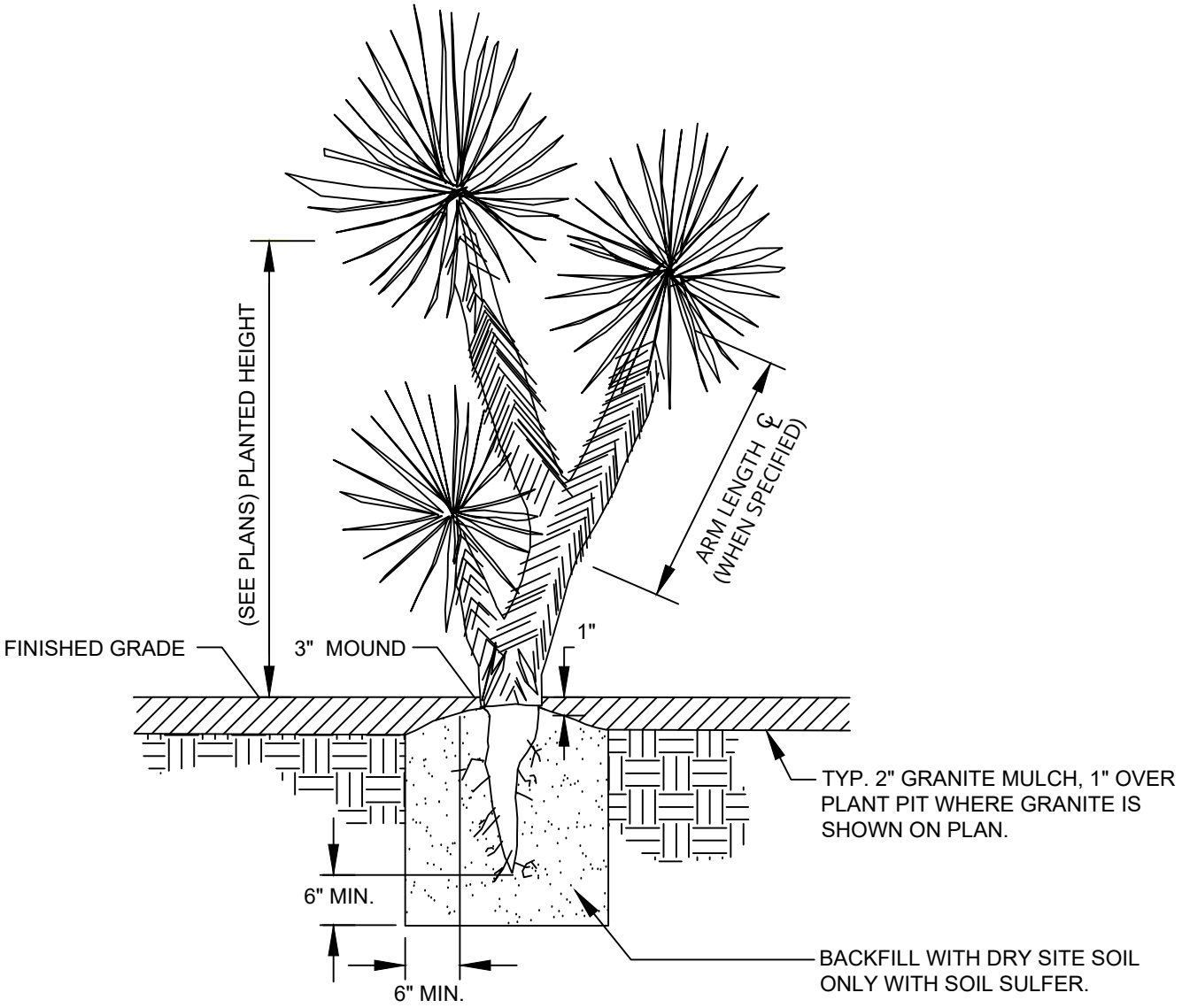
DETAIL NO.			APPROVED:	DETAIL NO.
C-802	CHANDLER arizona	**TREE PLANTING SLOPE**	02-09-2012	**C-802**



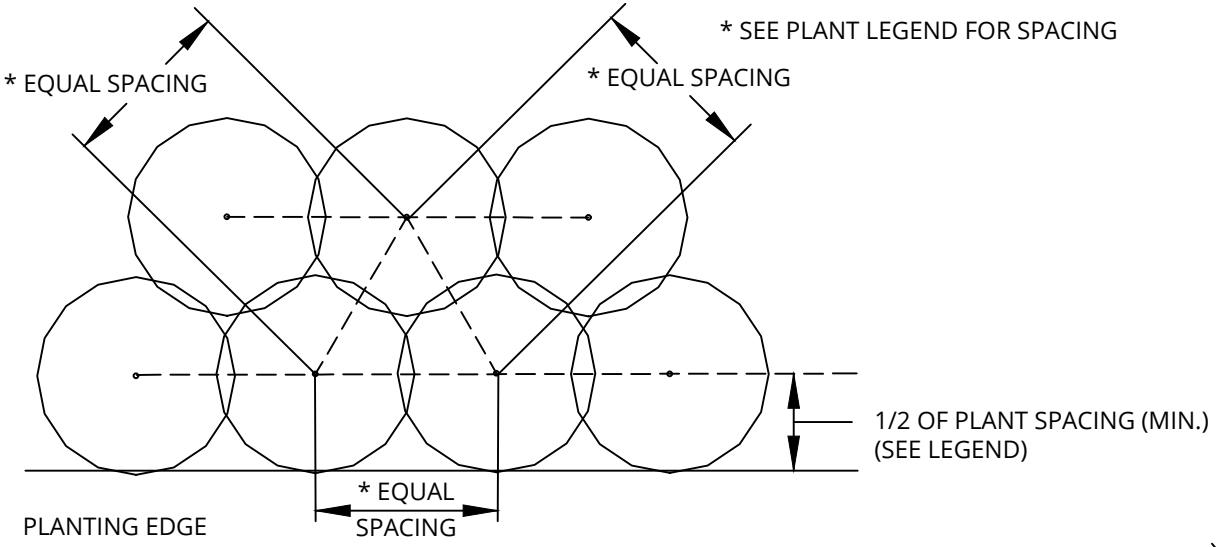
NOTE:

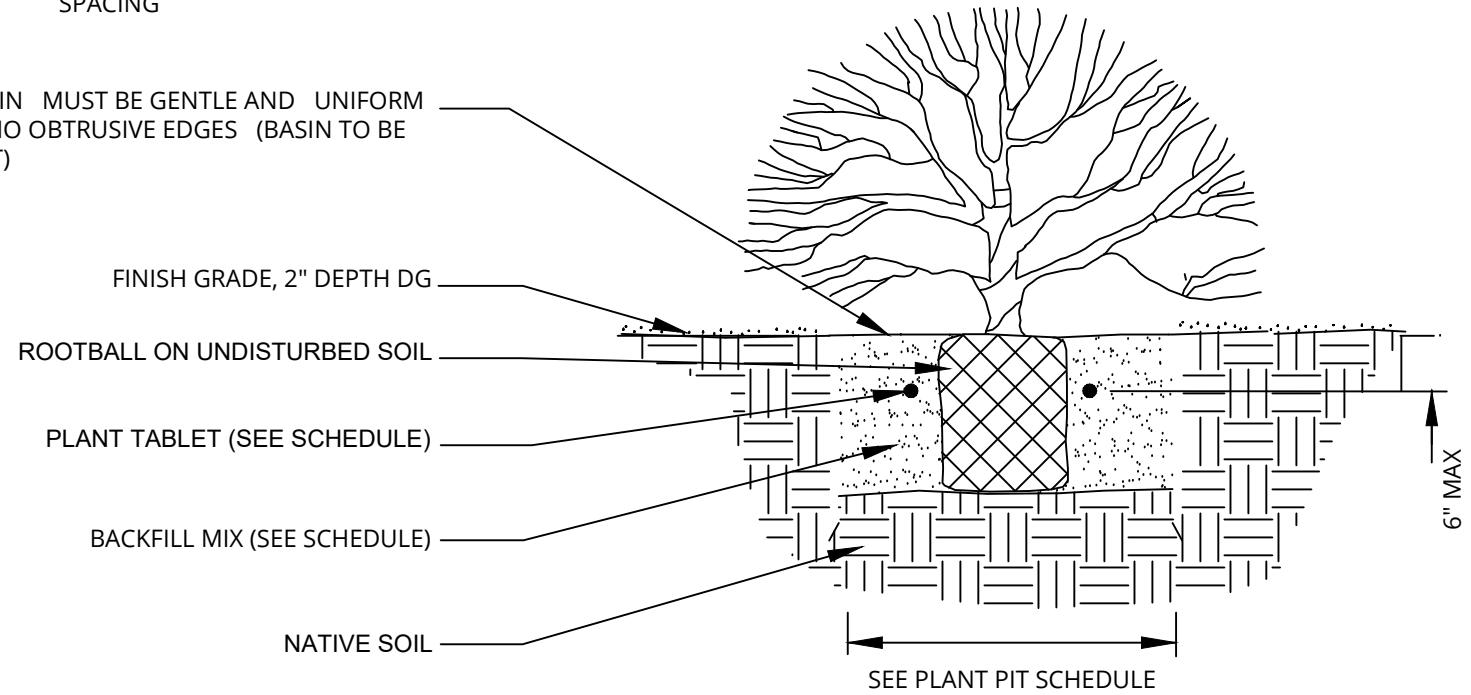
1. DO NOT BURY TRUNK - MAX 6" DEPTH LOWER THAN ORIGINAL PLANT DEPTH.

DETAIL NO.			APPROVED:	DETAIL NO.
C-803	CHANDLER arizona	**PALM PLANTING AND BRACING**	02-09-2012	**C-803**



DETAIL NO.			APPROVED:	DETAIL NO.
C-804	CHANDLER arizona	**CACTUS AND ACCENT PLANTING**	02-09-2012	**C-804**





DETAIL NO.			APPROVED:	DETAIL NO.
C-805	CHANDLER arizona	**SHRUB AND GROUND COVER PLANTING**	02-09-2012	**C-805**

A - PLANTING PIT DIMENSIONS FOR TREES, SHRUBS, GROUNDCOVERS, CACTUS AND ACCENTS

PLANT SIZE	WIDTH	DEPTH
1 GALLON	2X's the width of the Root Ball	Same Depth as Root Ball
5 GALLON	2X's the width of the Root Ball	Same Depth as Root Ball
15 GALLON	3X's the width of the Root Ball	Same Depth as Root Ball
24" BOX	3X's the width of the Root Ball	Same Depth as Root Ball
30" BOX	3X's the width of the Root Ball	Same Depth as Root Ball
36" BOX	3X's the width of the Root Ball	Same Depth as Root Ball
48" BOX	3X's the width of the Root Ball	Same Depth as Root Ball

B - PLANT PIT DIMENSIONS FOR PALMS

TRUNK DIAMETER AT GRADE	MINIMUM DIAMETER PLANTING PIT	MINIMUM DEPTH PLANTING PIT
12 - 24"	48"	42"
25 - 32"	56"	44"
33 - 36"	60"	48"

C - PLANT TABLET SCHEDULE FOR TREES, SHRUBS, CACTUS, ACCENTS AND PALMS

TREES, SHRUBS, CACTUS AND ACCENTS

1 GALLON	1 TABLET
5 GALLON	2 TABLETS
15 GALLON	4 TABLETS
24" BOX	6 TABLETS
36" BOX	8 TABLETS
48" BOX	10 TABLETS

PALMS

1 TABLET PER 2 FEET OF TRUNK HEIGHT

D - BACKFILL MIX

TREES AND SHRUBS

3 PARTS EXCAVATED TOPSOIL
1 PART SAND
PLANT TABLETS PER SCHEDULE C

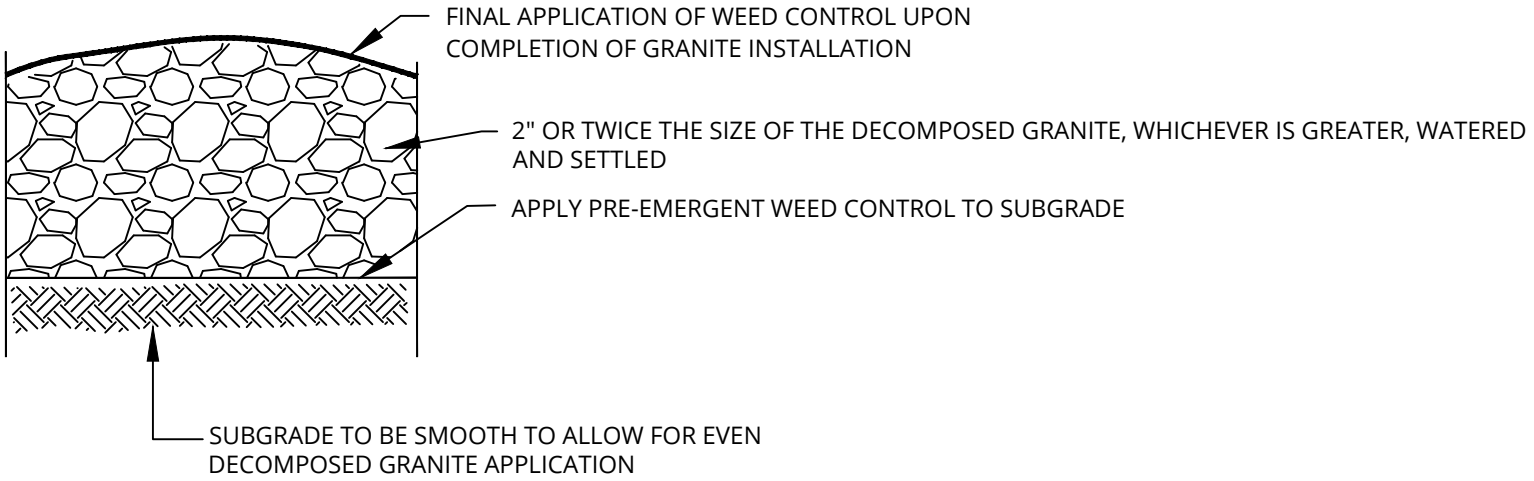
CACTUS AND ACCENTS

1 PART EXCAVATED TOPSOIL
1 PART SAND
PLANT TABLETS PER SCHEDULE C

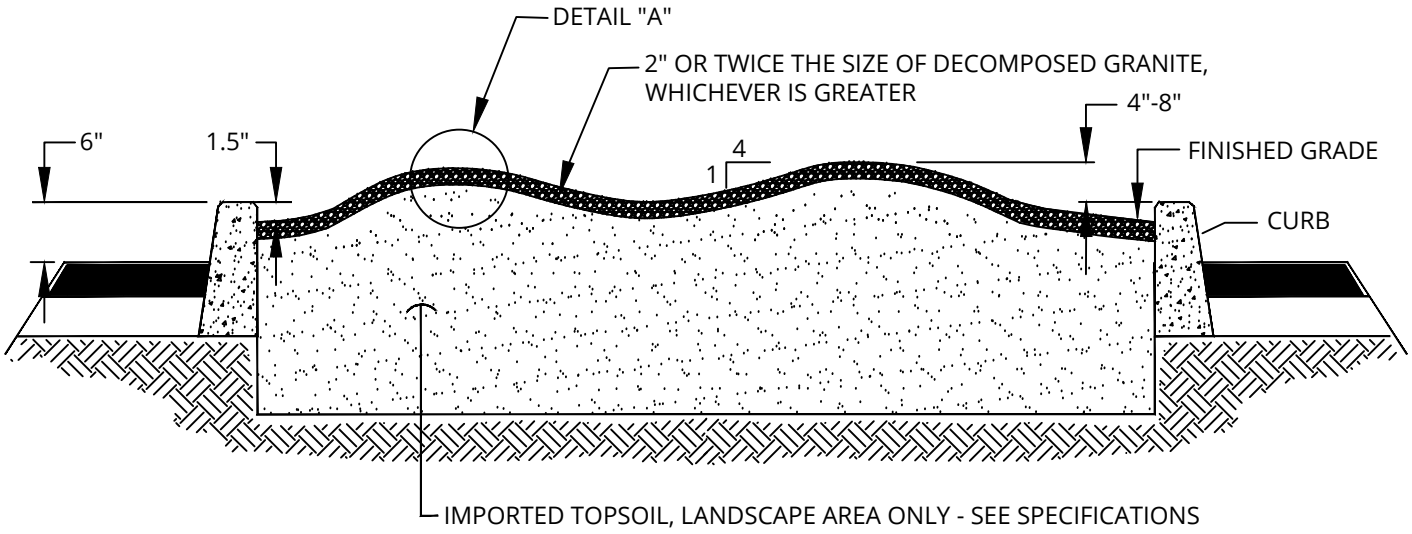
PALMS

PALM TREE BACKFILL MUST BE 100% SAND.
PLANT TABLETS PER SCHEDULE C

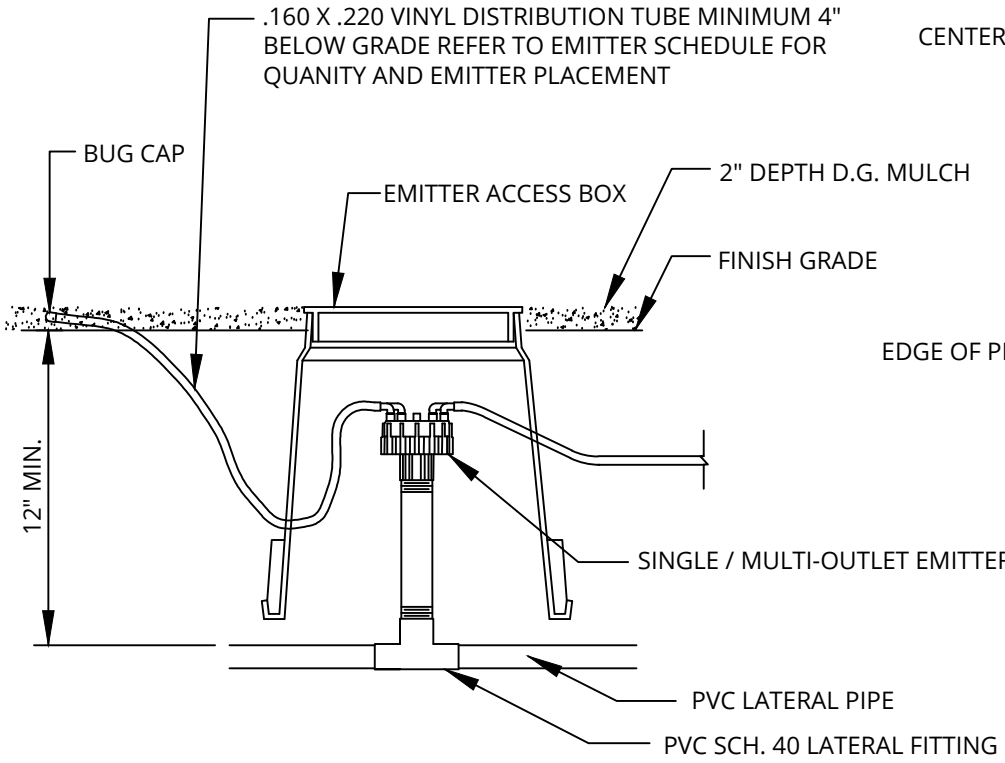
DETAIL NO.			APPROVED:	DETAIL NO.
C-806	CHANDLER arizona	**PLANT PIT SCHEDULE**	02-09-2012	**C-806**

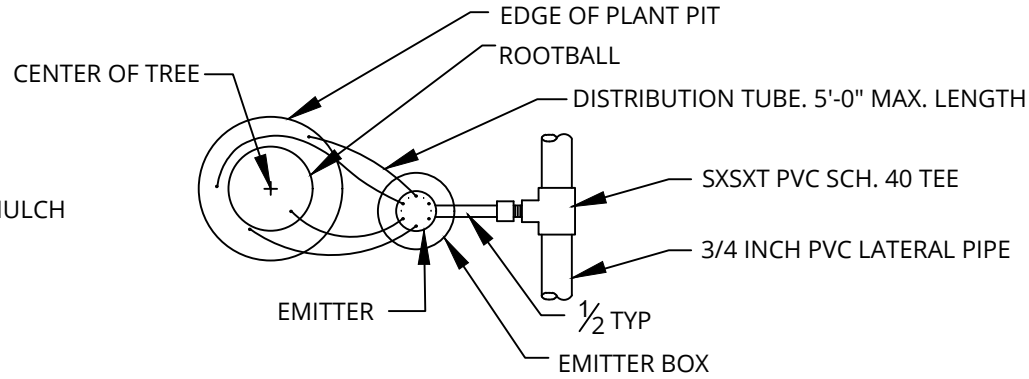


(A) GRANITE DETAIL

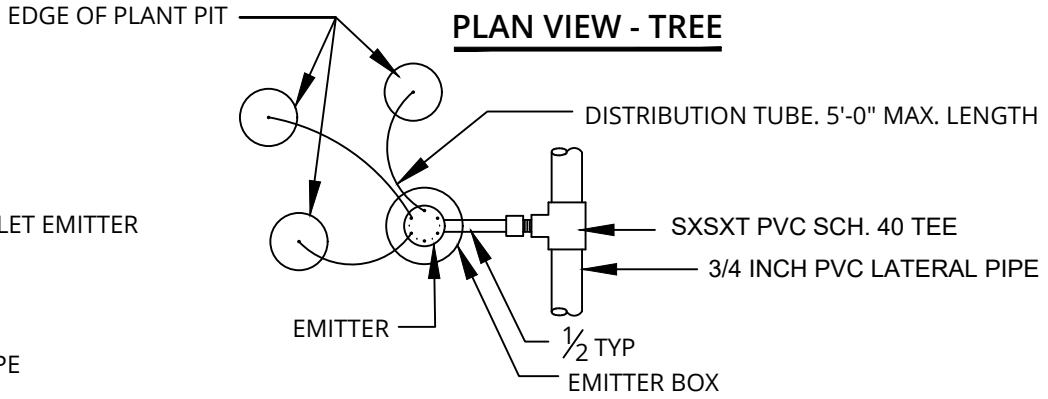


DETAIL NO.			APPROVED:	DETAIL NO.
C-807	CHANDLER arizona	**MEDIAN**	01-16-2023	**C-807**

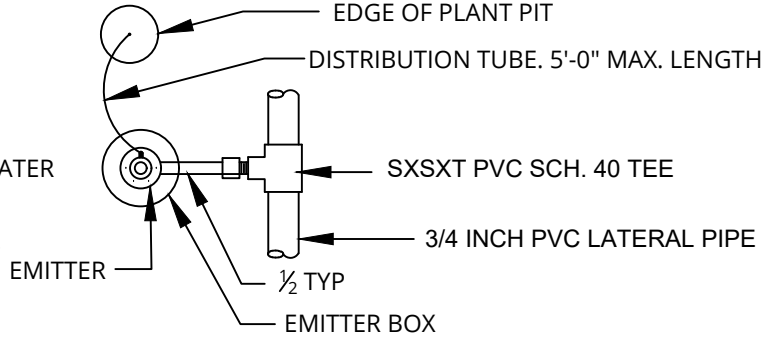




PLAN VIEW - TREE



PLAN VIEW - SHRUB

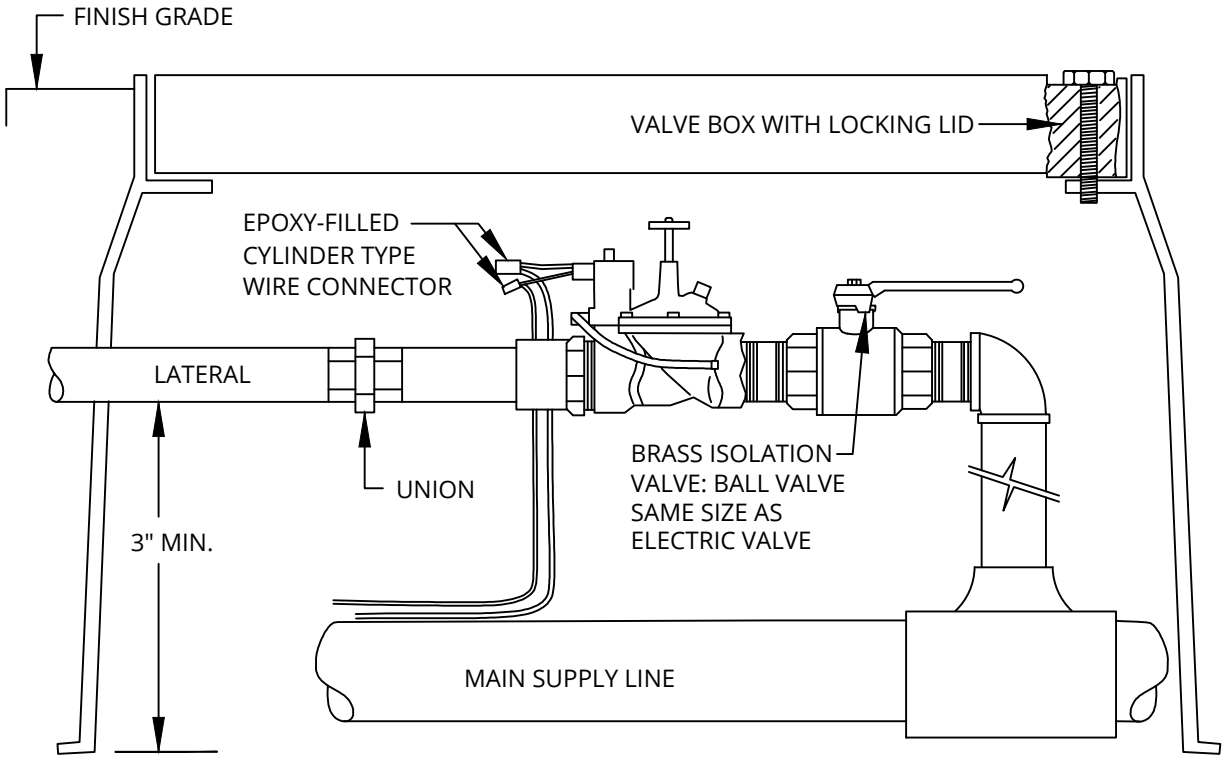


PLAN VIEW - SINGLE OUTLET

NOTES:

1. EMISSION POINTS MUST BE LOCATED UPHILL OF PLANT CENTERLINE AND MUST DELIVER WATER DIRECTLY TO ROOT BALL (TYP.)
2. AT LEAST ONE EMITTER TUBE OUTLET MUST BE LOCATED WITHIN 4" OF PLANT CENTERLINE.
3. ALL BASINS 2" DEEP. BASINS TO BE SAME LEVEL AS PLANT PIT.
4. PLACE EMITTER SO THAT TOP EDGE OF EMITTER IS VISIBLE ABOVE FINISHED GRADE
5. NUMBER OF OPENINGS AND EMITTER TUBES REQUIRED PER PLANT IS BASED ON PLANT SIZE. SEE EMITTER SCHEDULE.

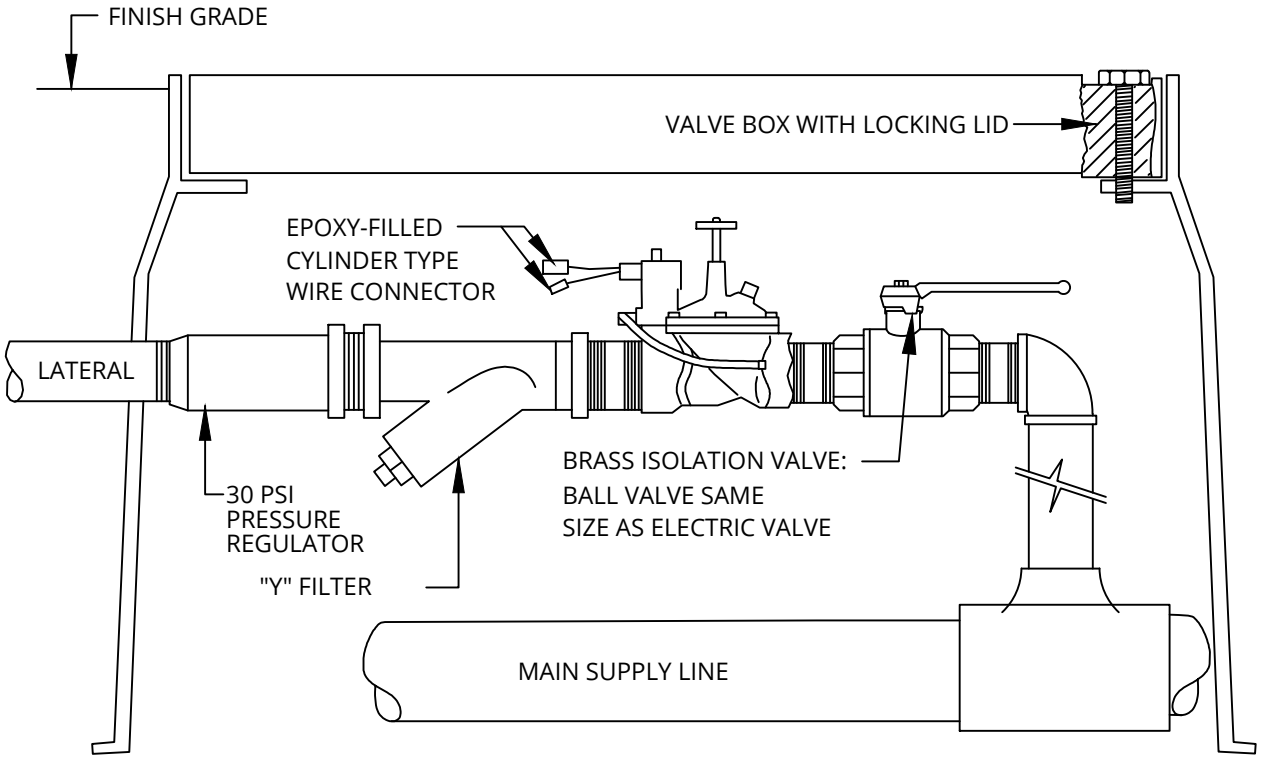
DETAIL NO.			APPROVED:	DETAIL NO.
C-808	CHANDLER arizona	**EMITTER ACCESS BOX AND EMITTER LAYOUT**	02-09-2012	**C-808**



NOTES:

1. PROVIDE EXPANSION COILS AT EACH WIRE CONNECTION.
2. QUICK COUPLERS MUST BE IN SEPARATE VALVE BOXES.
3. PEA GRAVEL MUST BE 4" TO 6" IN DEPTH UNDER VALVE BOX.
4. ALL PVC THREADED FITTINGS MUST BE SCHEDULE 80.

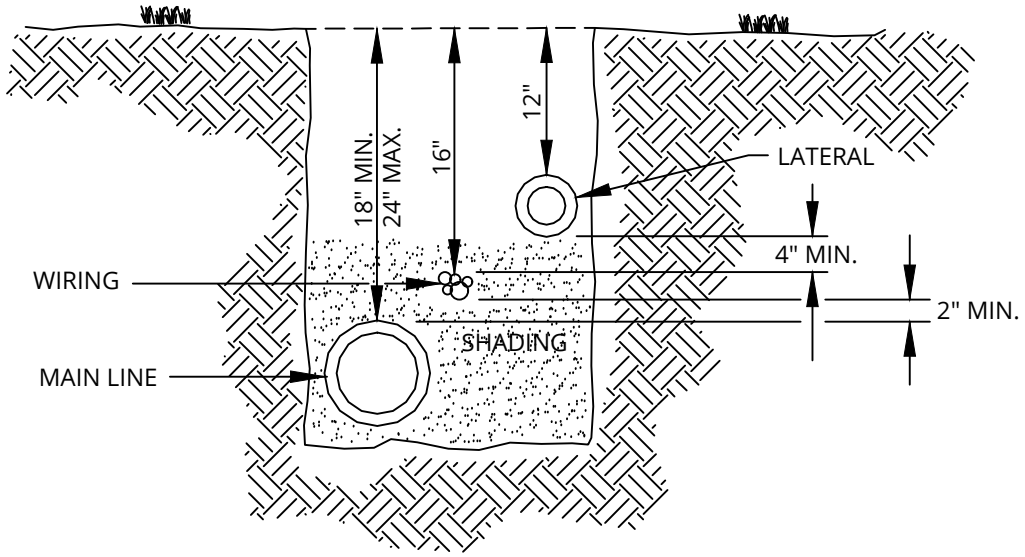
DETAIL NO.			APPROVED:	DETAIL NO.
C-809	CHANDLER arizona	**REMOTE CONTROL ELECTRIC VALVE TURF**	02-09-2012	**C-809**



NOTES:

1. PROVIDE EXPANSION COILS AT EACH WIRE CONNECTION.
2. QUICK COUPLERS MUST BE IN SEPARATE VALVE BOXES.
3. PEA GRAVEL MUST BE 4" TO 6" IN DEPTH UNDER VALVE BOX.

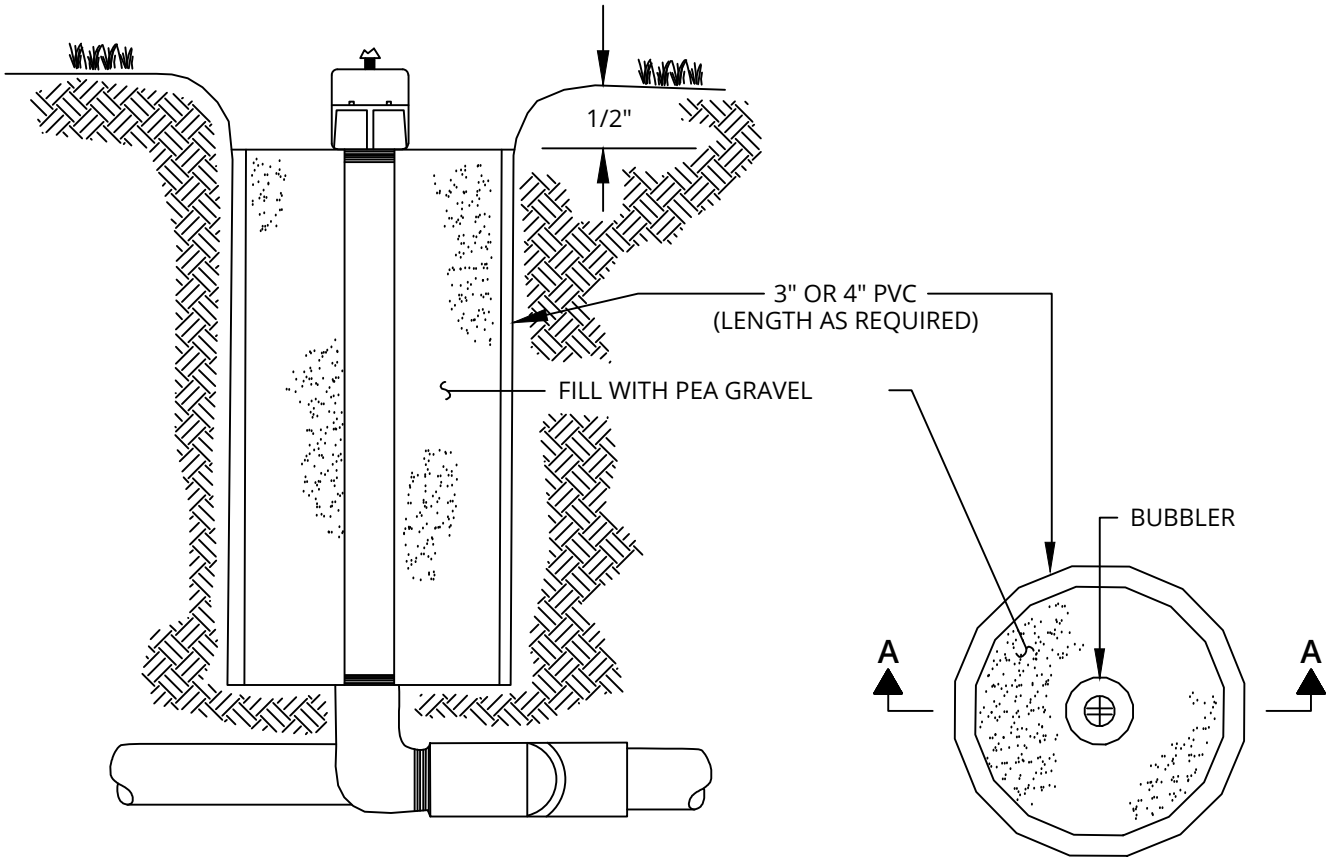
DETAIL NO.			APPROVED:	DETAIL NO.
C-810	CHANDLER arizona	**REMOTE CONTROL ELECTRIC VALVE DRIP**	02-09-2012	**C-810**



NOTES:

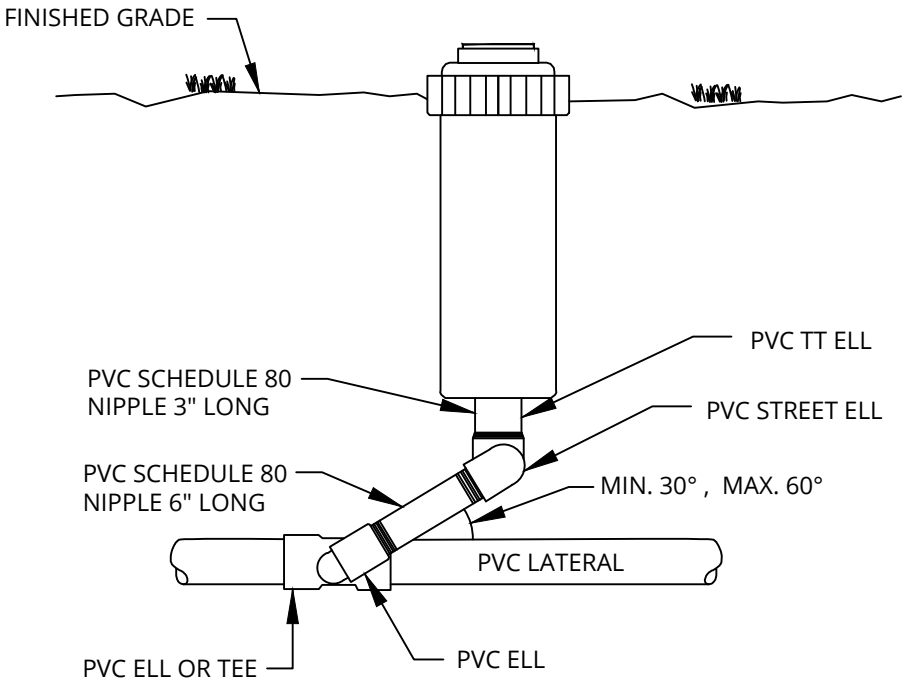
1. ALL PIPE INSTALLATION, TRENCH EXCAVATION, BACKFILLING AND COMPACTION MUST CONFORM WITH MAG SEC. 440 AND 601.
2. TAPE AND BUNDLE WIRING AT 10 FEET INTERVALS.
3. SHADING MUST BE DONE WITH NATIVE SOIL.
4. DEPTH DIMENSION MAY VARY WHERE INDICATED ON IRRIGATION PLAN.
5. ALL PIPE INSTALLED UNDER PAVED SURFACES MUST BE PLACED IN PVC SLEEVING, 2 TIMES THE NOMINAL SIZE OF THE PIPE*.
   *ALL IRRIGATION WORK WITHIN THE PUBLIC R.O.W. REQUIRES A SEPARATE PERMIT.

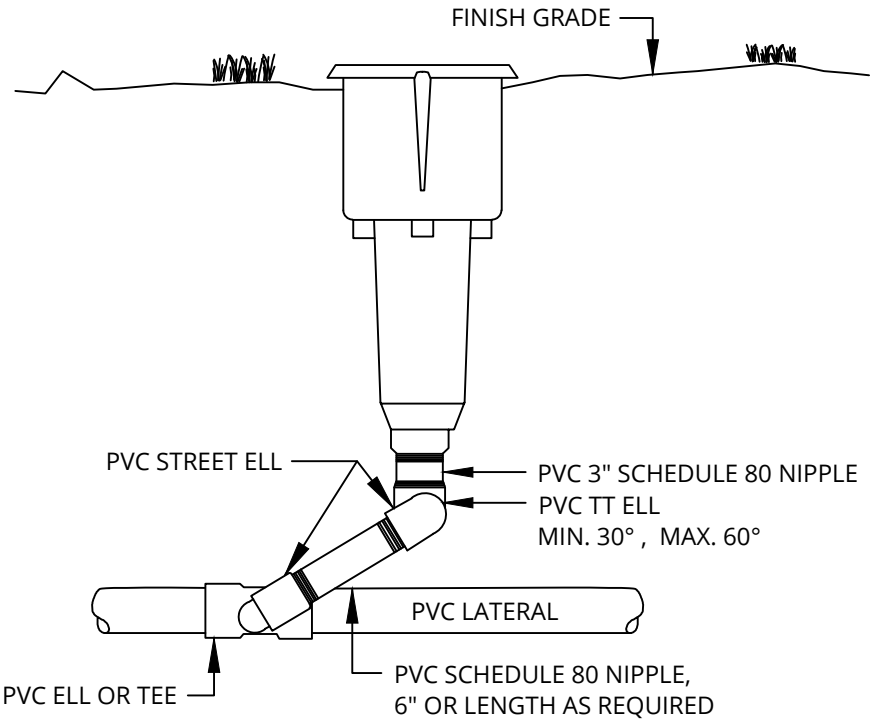
DETAIL NO.			APPROVED:	DETAIL NO.
C-811	CHANDLER arizona	**IRRIGATION TRENCH**	02-09-2012	**C-811**



SECTION A-A **PLAN**

DETAIL NO.			APPROVED:	DETAIL NO.
C-812	CHANDLER arizona	**BUBBLER**	02-09-2012	**C-812**

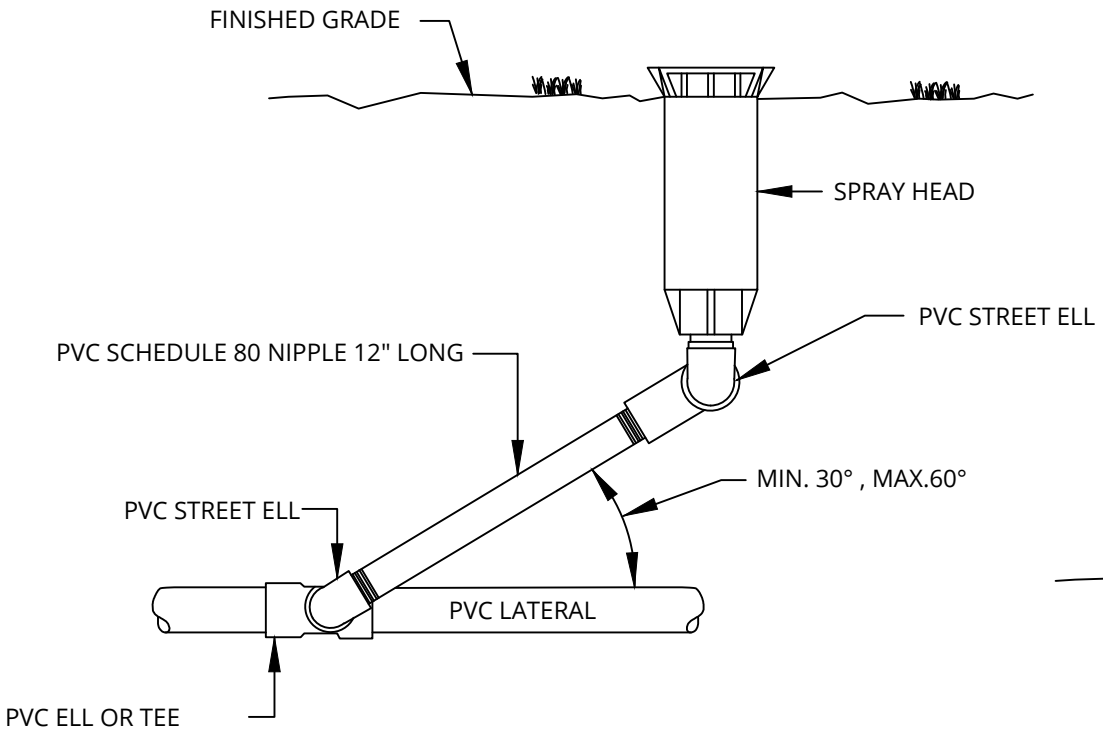


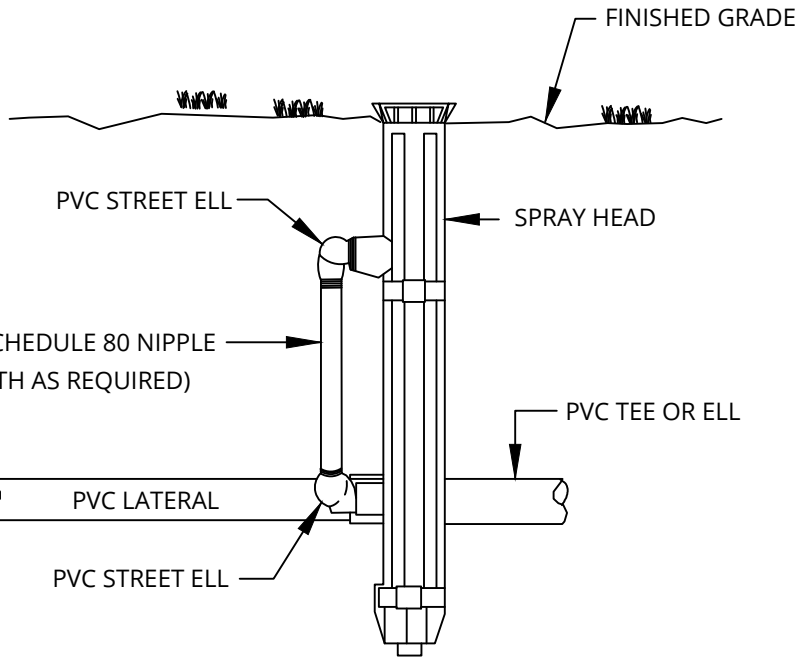


NOTES:

1. INSTALL SPRINKLER 1" ABOVE GRADE UNTIL TURF IS ESTABLISHED THEN ADJUST FLUSH TO GRADE.
2. ALL FITTINGS TO BE SCHEDULE 80.

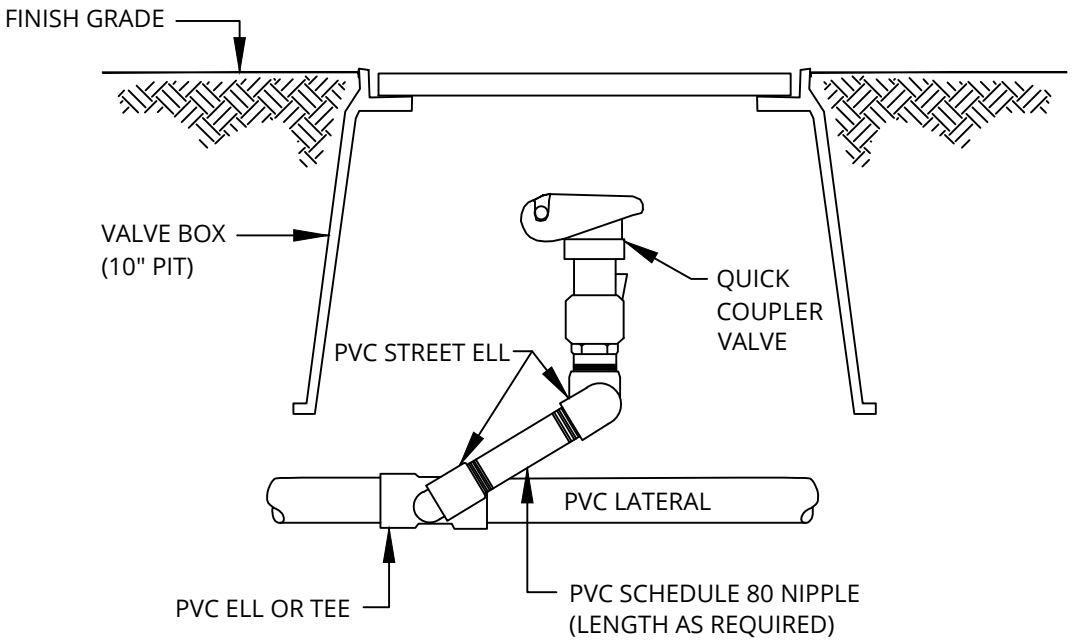
DETAIL NO.			APPROVED:	DETAIL NO.
C-813	CHANDLER arizona	**GEAR-DRIVEN POP-UP ROTOR**	02-09-2012	**C-813**





NOTE:
ALL FITTINGS TO BE SCHEDULE 80.

DETAIL NO.			APPROVED:	DETAIL NO.
C-814	CHANDLER arizona	**POP-UP SPRAY HEAD**	02-09-2012	**C-814**



NOTES:

1. EACH QUICK COUPLER MUST BE IN A SEPERATE VALVE BOX.
2. PROVIDE ONE (1) QUICK COUPLER KEY FOR EACH QUICK COUPLER VALVE.
3. PLACE 4" TO 6" DEPTH PEA GRAVEL UNDER VALVE BOX.
4. QUICK COUPLER MUST HAVE LOCKING RUBBER COVER.

DETAIL NO.			APPROVED:	DETAIL NO.
C-815	CHANDLER arizona	**QUICK COUPLER**	02-09-2012	**C-815**

IRRIGATION LEGEND

SYMBOL	MFG. AND DESCRIPTION	QUANTITY

FRICTION LOSS

PRESSURE AT SOURCE _____ P.S.I.

PRESSURE VERIFIED WITH CITY _____ P.S.I.

FRICTION LOSS THROUGH: (TO FARTHEST HEAD)

WATER METER _____ P.S.I.

VACUUM BREAKER _____ P.S.I.

MAIN LINE PIPE _____ P.S.I.

VALVE _____ P.S.I.

LATERAL LINE PIPE _____ P.S.I.

TOTAL FRICTION LOSS _____ P.S.I.

REQUIRED PRESSURE AT HEAD _____ P.S.I.

(TOTAL FRICTION LOSS)+(REQUIRED P.S.I. AT HEAD) = PRESSURE REQUIRED AT SOURCE _____ P.S.I.

CALCULATIONS PERFORMED BY _____ _____
SIGNED DATE

DETAIL NO. C-816	CHANDLER arizona	TYPICAL IRRIGATION LEGEND AND INFORMATION	APPROVED: 02-09-2012	DETAIL NO. C-816

A - EMITTER SCHEDULE FOR TREES, SHRUBS, GROUNDCOVERS AND ACCENTS

PLANT SIZE	TYPE OF EMITTER	NUMBER OF EMITTERS	GALLONS PER HOUR PER PLANT
1 GALLON	SINGLE OR MULTI	1	.6 or 1
5 GALLON	SINGLE OR MULTI	1	.6 or 1
15 GALLON	MULTI	4	4
24" BOX	MULTI	4	4
30" BOX	MULTI	6	6
36" BOX	MULTI	6	6
48" BOX	MULTI	6	6

B - BUBBLER SCHEDULE FOR PALMS

TRUNK DIAMETER AT GRADE	NUMBER OF BUBBLERS
12 - 24"	2
25 - 32"	2
33 - 36"	2

C - CACTUS

DO NOT PROVIDE IRRIGATION TO CACTUS

NOTES:

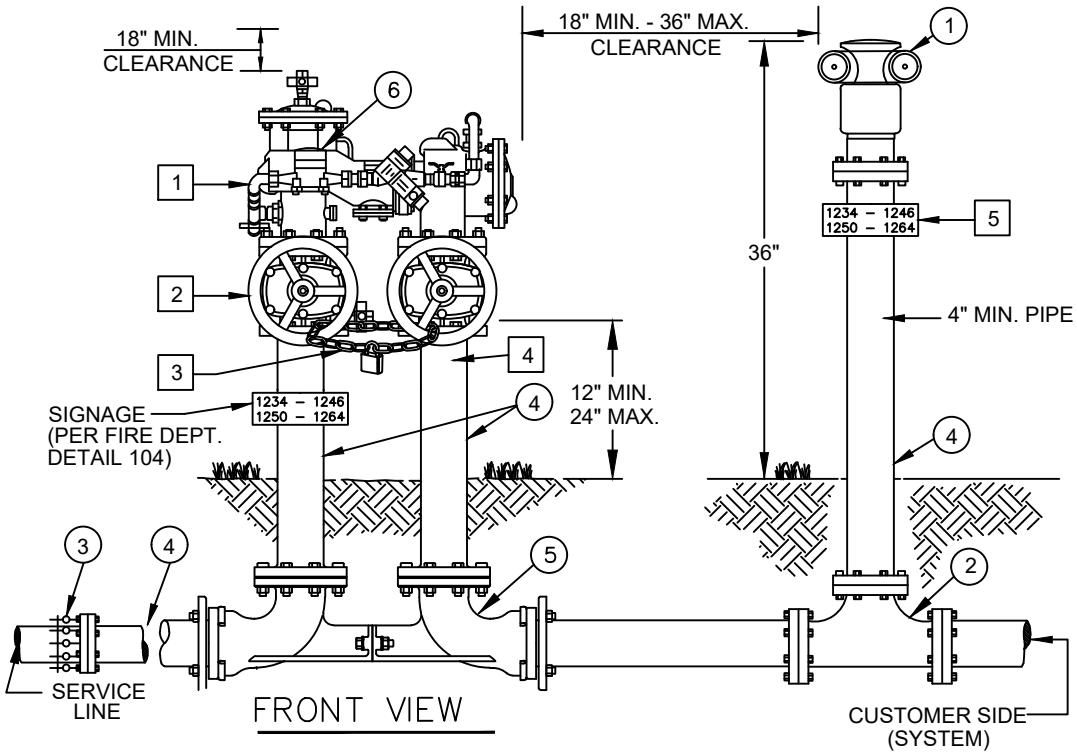
1. REFER TO EMITTER AND BUBBLEER DETAILS FOR SPECIFICATIONS AND LAYOUT INFORMATION.
2. ADJUST IRRIGATION OPERATING TIMES TO ACCOMMODATE PLANT MATURITY, SOIL TYPE, PLANT EXPOSURE AND SEASONAL REQUIREMENTS.

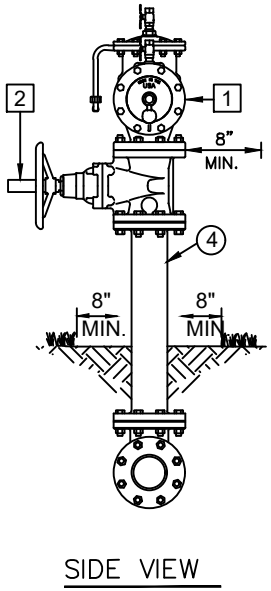
CHANDLER arizona

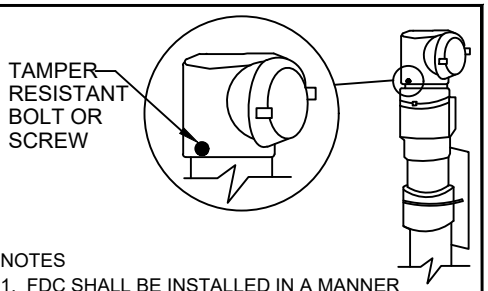
Standard Details

FIRE DEPARTMENT STANDARD DETAILS

FD101 TO FD151







NOTES
1. FDC SHALL BE INSTALLED IN A MANNER TO PREVENT TAMPERING AND/OR THEFT.
2. PRIOR TO INSTALLING THE FDC ON THE CHECK CHECK VALVE, THREADLOCKER, OR EQUIVALENT, SHALL BE PLACED ON THE THREADS.
3. TAMPER RESISTANT BOLT OR SCREW SHALL BE INSTALLED IN THE BASE OF THE FDC BY DRILLING A 3/8 INCH HOLE THROUGH THE MANIFOLD CASE AND INNER THREADS.

LIST OF MATERIALS

1. FIRE DEPT. SIAMESE CONNECTION (FDC) (RED).
2. FLANGED TEE.
3. FLANGED ADAPTER, (WHEN REQUIRED).
4. PIPE SPOOL. (FLANGED D.I.P.)
5. 90° ELBOW. (FLANGED D.I.P.)
6. FLOW DETECTION METER PER CITY LIST OF APPROVED PRODUCTS.

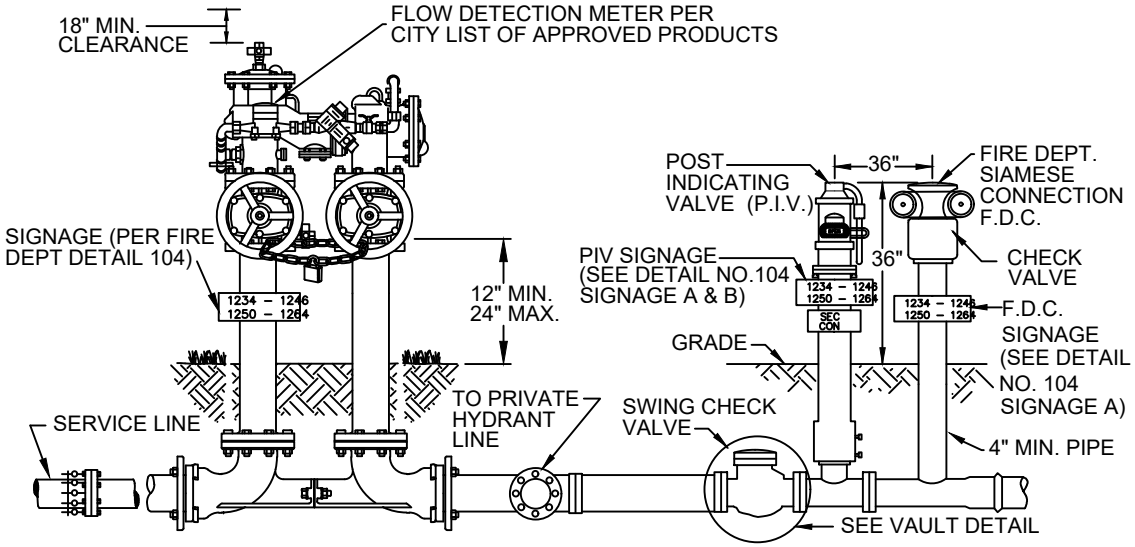
NOTES:

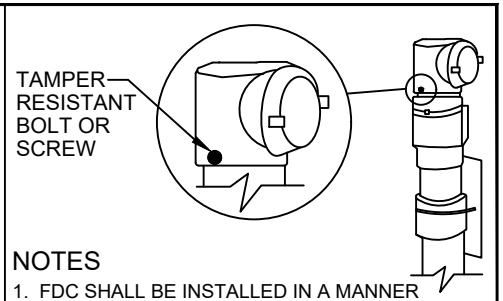
1. DOUBLE CHECK DETECTOR ASSEMBLY WITH BYPASS METER SHALL BE UL LISTED OR FM APPROVED FOR FIRE PROTECTION USE AND SHALL BE AS APPROVED BY U.S.C. FOUNDATION FOR CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH. THIS ASSEMBLY IS TO BE USED FOR POLLUTION HAZARDS ONLY AS RECOMMENDED IN THE AWWA-M14 MANUAL.
2. ALL PIPING, VALVES, FITTINGS AND APPURTENANCES DOWNSTREAM OF THE SERVICE LINE SIDE O.S.& Y. VALVE SHALL BE APPROVED FOR FIRE PROTECTION USE AND INSTALLED PER N.F.P.A. #24.
3. THE ENTIRE ASSEMBLY SHALL BE SECURED WITH CHAIN AND LOCK.
4. BACKFLOW DEVICES SHALL BE PAINTED TO MATCH THE LANDSCAPE (DESERT BROWN).
5. FDC'S AND PIV'S SHALL BE PAINTED RED AND SIGNED PER FIRE DEPT. DETAIL NO. FD104 SIGNAGE.
6. FIRE SPRINKLER RISER SHALL BE DESIGNED PER FIRE DEPT. DETAIL NO. FD105.

GENERAL NOTES:

1. FDC'S SHALL BE LOCATED WITHIN 150 FEET OF A PUBLIC (YELLOW) FIRE HYDRANT ON THE SAME SIDE OF DRIVEWAY, AT THE ENTRANCE TO THE SITE.
2. A REGISTERED STRUCTURAL ENGINEER SHALL SEAL THE DESIGN OF THE THRUST BLOCKS, SUPPORTS AND TIE ROD ASSEMBLIES.
3. MAINTAIN 3 FEET CLEARANCE AROUND PIV AND FDC (NO TREES, BUSHES, FENCES, CACTUS OR RIVER ROCK).
4. MAX DISTANCE BETWEEN FDC AND BACKFLOW MAY BE MODIFIED ONLY AS APPROVED BY THE FIRE MARSHAL.

DETAIL NO. FD102 NTS	CHANDLER arizona	FIRE LINE INSTALLATION (ON-SITE HYDRANTS REQUIRED)	APPROVED: Aaron Huckstep FIRE MARSHAL DATE: 01-27-2025	DETAIL NO. FD102 NTS



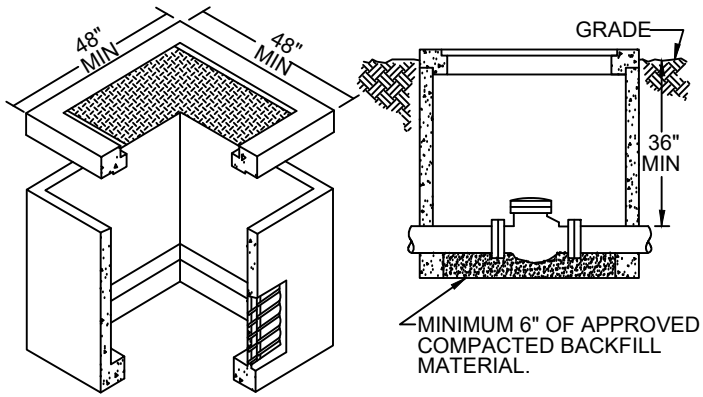


NOTES

1. FDC SHALL BE INSTALLED IN A MANNER TO PREVENT TAMPERING AND/OR THEFT.
2. PRIOR TO INSTALLING THE FDC ON THE CHECK VALVE, THREADLOCKER, OR EQUIVALENT, SHALL BE PLACED ON THE THREADS.
3. TAMPER RESISTANT BOLT OR SCREW SHALL BE INSTALLED IN THE BASE OF THE FDC BY DRILLING A 3/8 INCH HOLE THROUGH THE MANIFOLD CASE AND INNER THREADS.

NOTES:

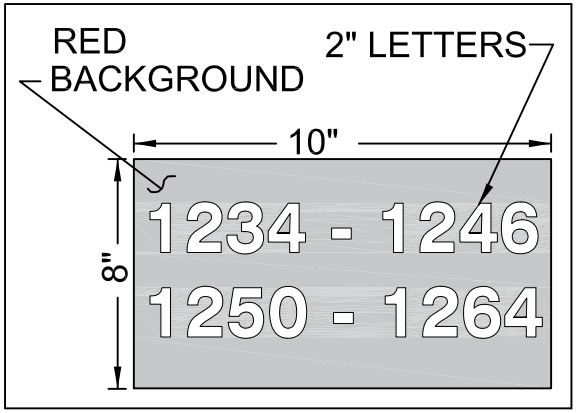
1. ALL FD102 NOTES, GENERAL NOTE AND LIST OF MATERIALS SHALL APPLY TO FD103 DESIGN. (EXCEPT GENERAL NOTE #4).
2. FDC'S SHALL BE LOCATED WITHIN 150 FEET OF A PUBLIC (YELLOW) FIRE HYDRANT ON THE SAME SIDE OF DRIVEWAY AT THE ENTRANCE TO THE SITE.
3. SWING CHECK VALVES USED ON UNDERGROUND FIRE LINES SHALL BE INSTALLED WITHIN A VAULT IN ACCORDANCE WITH THIS DETAIL. THE CHECK VALVE AND VAULT ASSEMBLY SHALL BE INSTALLED AFTER THE PRIVATE HYDRANT LINE (PRIVATE HYDRANTS SHALL BE PAINTED YELLOW WITH A BLACK BONNET).
4. FIRE SPRINKLER LINES SHALL HAVE A SECTIONAL CONTROL PIV INSTALLED BETWEEN THE SWING CHECK VALVE AND THE FDC. A SECTIONAL CONTROL PIV SHALL BE INSTALLED AT MID POINT ON THE LOOPED FIRE LINE TO PROVIDE FOR ISOLATION OF THE FIRE LINE.
5. FIRE SPRINKLER RISER SHALL BE DESIGNED PER FIRE DEPT. DETAIL NO. FD105. FIRE SPRINKLER (FS) SYSTEM RISER (FD105) SHALL BE SHOWN ON CIVIL AND FS BUILDING PLANS. PROVIDE A KEY BOX FOR FIRE DEPARTMENT ACCESS.
6. ALL STUB OUT AND FUTURE DEVELOPMENT PADS (PHASED PROJECTS) SHALL END WITH A PIV PAINTED FOREST GREEN.



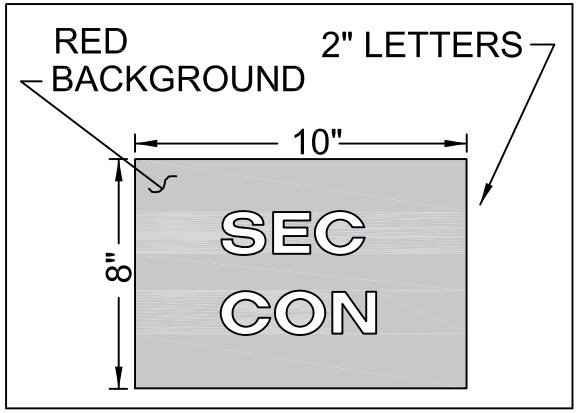
VAULT DETAIL

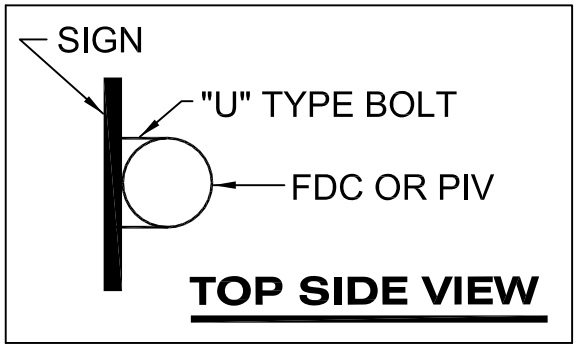
DETAIL NO. FD103 NTS	CHANDLER arizona	FIRE LINE INSTALLATION (ON-SITE HYDRANT REQUIRED)	APPROVED: Aaron Huckstep FIRE MARSHAL DATE: 01-27-2025	DETAIL NO. FD103 NTS

SIGNAGE A



SIGNAGE B

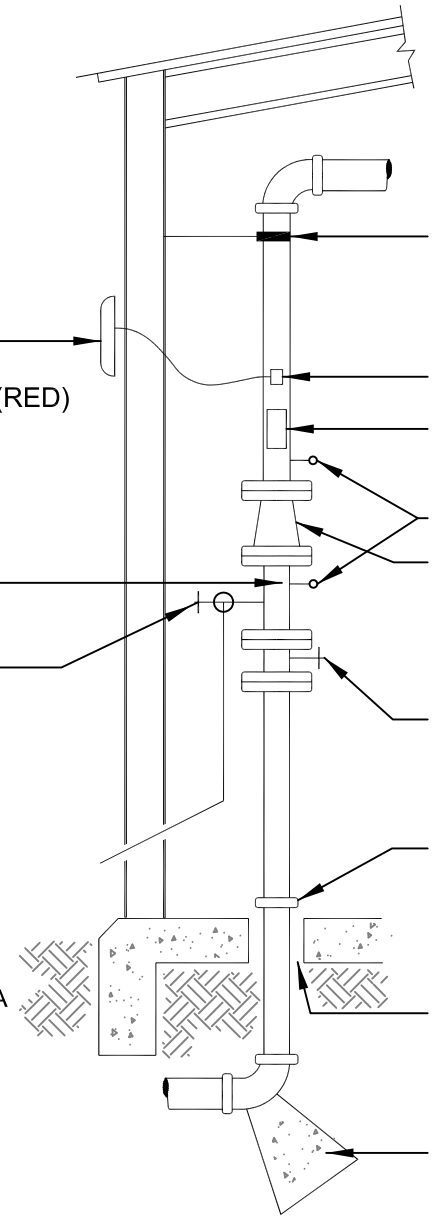




NOTES:

1. THE SIGNS SHALL INCLUDE THE ADDRESS(S) OF THE PREMISE(S) SERVING THE FDC OR PIV.
2. THE SIGNS SHALL BE RED IN COLOR WITH WHITE REFLECTIVE LETTERING AND SHALL BE 0.08 GAUGE ALUMINUM AND SHALL BE SECURELY ATTACHED TO THE FDC OR PIV WITH "U" TYPE BOLTS.

DETAIL NO. FD104 NTS	CHANDLER arizona	FIRE DEPARTMENT VALVE SIGNAGE	APPROVED: FIRE MARSHAL DATE: 01-09-2020	DETAIL NO. FD104 NTS



4-WAY BRACING SECURED TO STRUCTURE

EXTERIOR LOCAL ALARM,
10" ELECTRIC BELL OR
APPROVED AUDIBLE DEVICE (RED)

WATER FLOW SWITCH WIRED TO EXTERIOR LOCAL ALARM

HYDRAULIC DESIGN CALCULATIONS PLACARD

300 LB PRESSURE GAUGES ABOVE AND BELOW RISER CHECK VALVE

PRESSURE RELIEF VALVE

RISER ALARM CHECK VALVE OR APPROVED VERTICAL CHECK VALVE SHALL BE PROVIDED ON ALL RISERS.

2" SYSTEM MAIN DRAIN
PIPED TO EXTERIOR

RISER CONTROL VALVE.

FLANGE 6" MINIMUM ABOVE FINISHED FLOOR. UNI-FLANGES (MEGA-LUGS) SHALL NOT BE USED ABOVE GRADE.

SLEEVE THROUGH FINISHED FLOOR. CLEARANCE ON ALL SIDES SHALL NOT BE LESS THAN ONE INCH FOR PIPE SIZES 1" THROUGH 3-1/2", AND TWO INCHES FOR PIPE SIZES 4" AND LARGER.

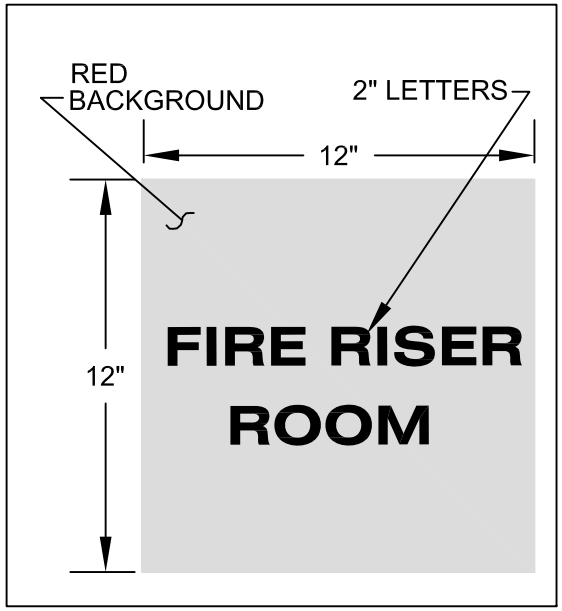
THRUST BLOCK PER NFPA #24

NOTE:

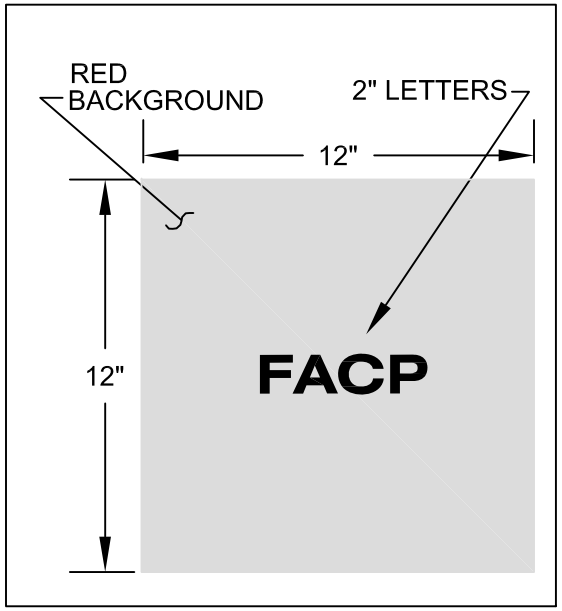
1. WHEN RISER CONTROLS ARE LOCATED INSIDE THE BUILDING A KEY BOX (WITH A MASTER KEY FOR THE BUILDING) SHALL BE PLACED AT THE FRONT ENTRANCE.
2. CHECK VALVE SHALL NOT BE REMOVED FROM THE RISER WHEN A BACKFLOW IS INSTALLED ON A WATER LINE.
3. TAMPER SWITCH OR CHAIN AND LOCK REQUIRED FOR RISER CONTROL VALVE.

DETAIL NO.				DETAIL NO.
FD105 NTS	CHANDLER arizona	**FIRE SPRINKLER SYSTEM RISER COMMERCIAL INSTALLATION**	APPROVED: FIRE MARSHAL DATE: 01-09-2020	**FD105** NTS

SIGNAGE A



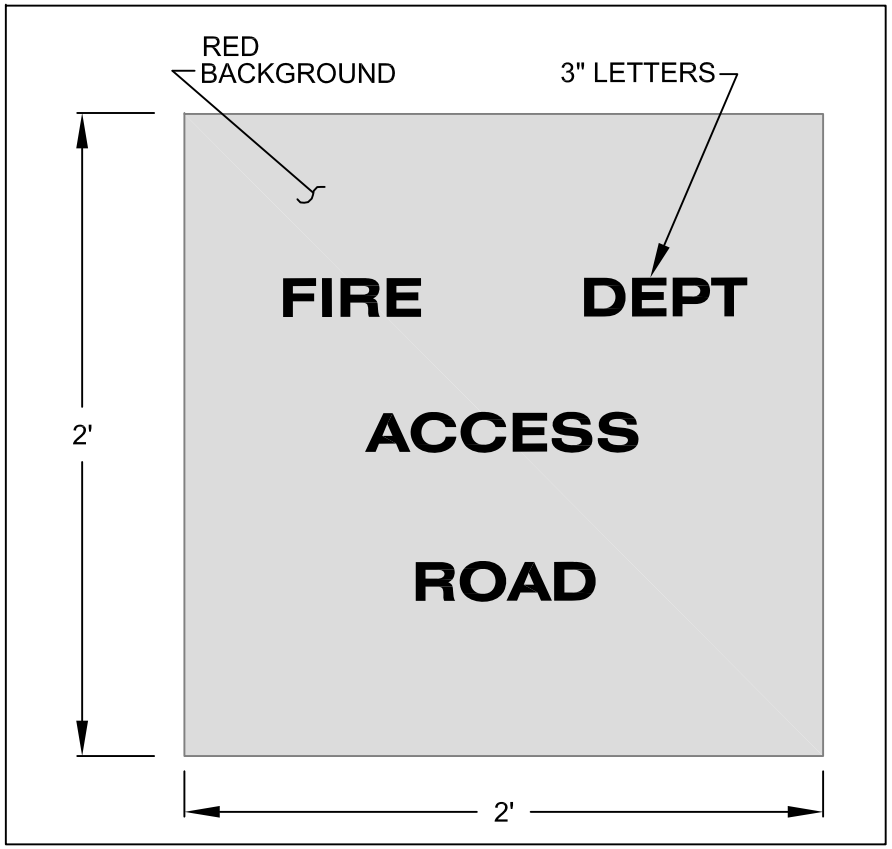
SIGNAGE B



NOTES:

1. ALL SIGNS SHALL RED IN COLOR WITH WHITE REFLECTIVE LETTERING.
2. OUTSIDE SIGNS SHALL BE 0.08 GAUGE ALUMINUM OR EQUIVILANT, SECURED TO THE DOOR, OR THE SIGN MAY BE STENCILED ON THE DOOR. STENCILING SHALL BE RED BACKGROUND WITH WHITE REFLECTIVE LETTERING.
3. INSIDE SIGNS SHALL BE OF DURABLE MATERIAL.

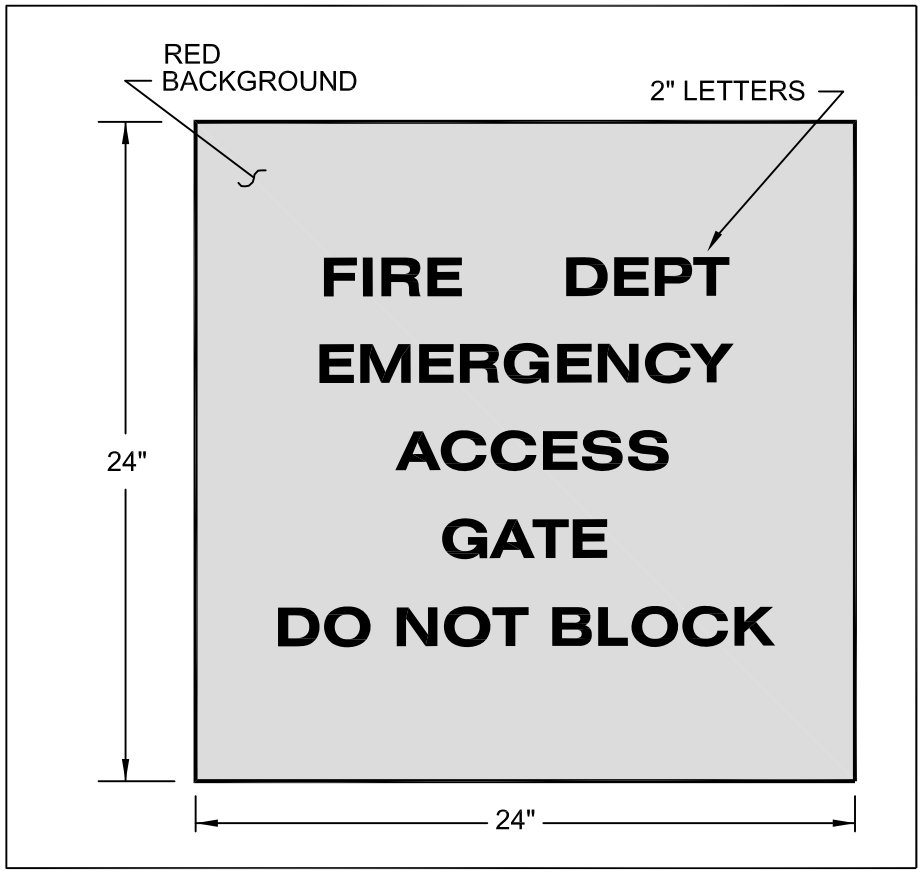
DETAIL NO. FD106 NTS	CHANDLER arizona	FIRE RISER ROOM AND FIRE ALARM PANEL SIGNAGE	APPROVED: FIRE MARSHAL DATE: 01-09-2020	DETAIL NO. FD106 NTS



NOTES:

1. ALL SIGNS SHALL RED IN COLOR WITH WHITE REFLECTIVE LETTERING.
2. SIGNS SHALL BE POSTED AT ALL FIRE DEPT ACCESS POINTS TO THE SITE.
3. SIGNS SHALL BE MADE OF DURABLE OR ALL WEATHER MATERIALS.
4. TOP OF SIGN SHALL BE 6-8 FEET FROM FINISH GRADE.
5. SIGNS SHALL BE POSTED WHEN TEMPORARY FIRE DEPARTMENT ACCESS ROADS ARE INSTALLED.
6. SIGNS SHALL BE REMOVED WHEN PERMANENT ROADS ARE COMPLETED.

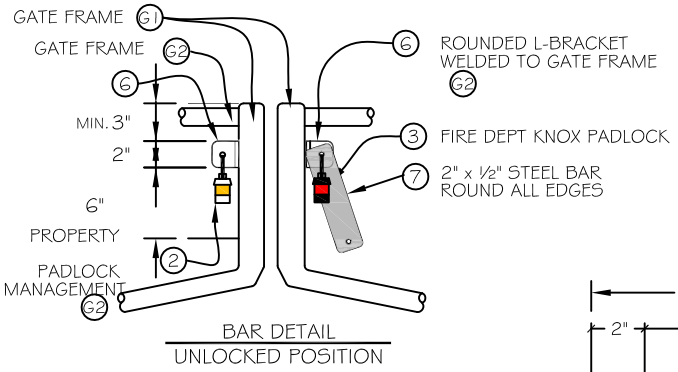
DETAIL NO. FD107 NTS	CHANDLER arizona	TEMPORARY FIRE DEPT ACCESS ROAD SIGNAGE	APPROVED: FIRE MARSHAL DATE: 01-09-2020	DETAIL NO. FD107 NTS

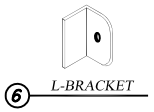


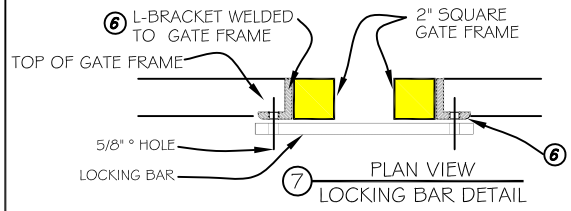
NOTES:

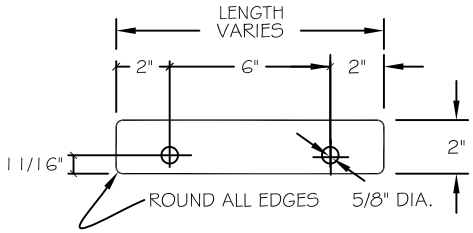
1. ALL SIGNS SHALL USE 3M RED HIGH INTENSITY PRISMATIC SHEETING WITH WHITE REFLECTIVE LETTERING.
2. SIGNS SHALL BE POSTED AT ALL FIRE DEPT EMERGENCY GATE ACCESSES.
3. SIGNS SHALL BE MADE OF DURABLE OR ALL WEATHER MATERIALS.
4. SIGNS SHALL BE MOUNTED ON BOTH SIDES OF THE GATE.

DETAIL NO. FD108 NTS	CHANDLER arizona	FIRE DEPT EMERGENCY ACCESS GATE SIGNAGE	APPROVED: FIRE MARSHAL DATE: 01-09-2020	DETAIL NO. FD108 NTS



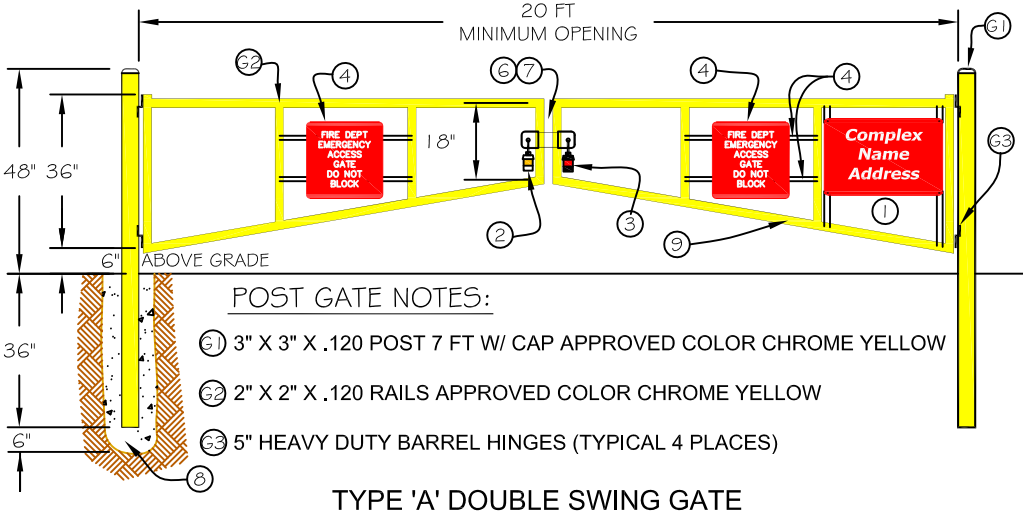






GENERAL NOTES:

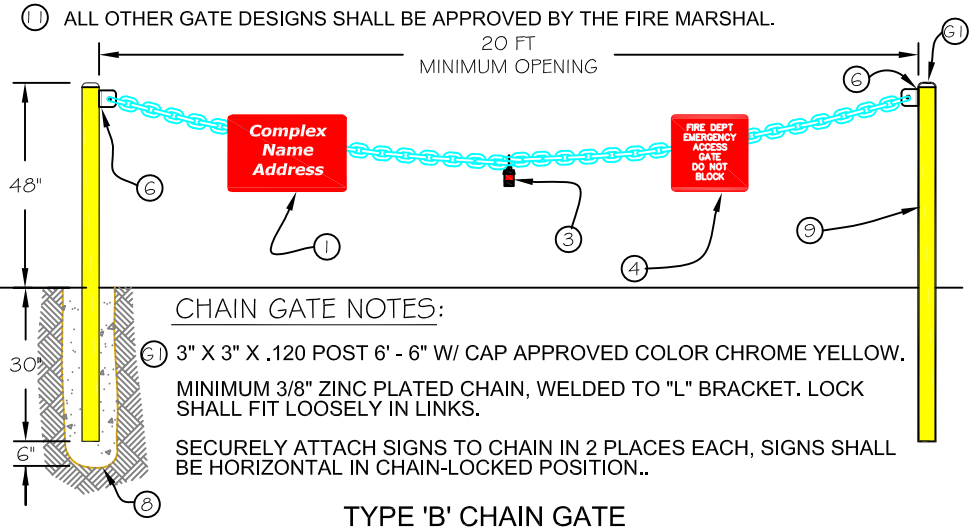
1. APPROVED SIGN, (2" LETTERS HELVETICA MEDIUM, 36" x 24"), SHALL USE 3M RED HIGH INTENSITY PRISMATIC SHEETING WITH WHITE REFLECTIVE LETTERING, TO IDENTIFY THE NAME OF THE COMPLEX AND THE LOCATION (ADDRESS). ¼" X 1½" MOUNTING STRAPS.
2. PROPERTY OWNER/MANAGEMENT PADLOCK (ONLY LONG HASP LOCKS ARE ALLOWED).
3. KNOX PADLOCK SHALL BE ACCESSIBLE FROM BOTH SIDES OF GATE. (KNOX PADLOCK CAN BE PURCHASED AT www.knoxbox.com, enter "chandler" for the City.)
4. "FD EMERGENCY ACCESS DO NOT BLOCK" FD108 SIGNS (2" LETTERS, 24" x 24"), SHALL USE 3M RED HIGH INTENSITY PRISMATIC SHEETING WITH WHITE REFLECTIVE LETTERING, PLACED BACK TO BACK AND FASTENED ON ALL 4 CORNERS. ¼" X 1½" MOUNTING STRAPS.
5. THE MINIMUM OVERALL WIDTH OF THE GATE OPENING SHALL BE 20 FT.
6. WELD MODIFIED L-BRACKET TO GATE FRAME OR POST. ROUND ALL EDGES. (TYPICAL 2 PLACES)
7. LOCKING BAR LENGTH IS DETERMINED BY THE FRAME WIDTH AND THE GAP WIDTH BETWEEN THE 2 GATES. REMOVE ALL SHARP EDGES / ROUND ALL CORNERS.
8. 24" DIAMETER CONCRETE POST FOOTINGS. (TYPICAL)
9. POSTS AND GATES SHALL BE PAINTED CHROME YELLOW.
10. GATES / BARRIERS SHALL BE SET OFF THE ROADWAY FIFTY-FIVE (55') TO ALLOW SAFE DISTANCE TO PULL OFF THE ROADWAY.
11. ALL OTHER GATE DESIGNS SHALL BE APPROVED BY THE FIRE MARSHAL.



POST GATE NOTES:

- G1 3" X 3" X .120 POST 7 FT W/ CAP APPROVED COLOR CHROME YELLOW
- G2 2" X 2" X .120 RAILS APPROVED COLOR CHROME YELLOW
- G3 5" HEAVY DUTY BARREL HINGES (TYPICAL 4 PLACES)

TYPE 'A' DOUBLE SWING GATE



CHAIN GATE NOTES:

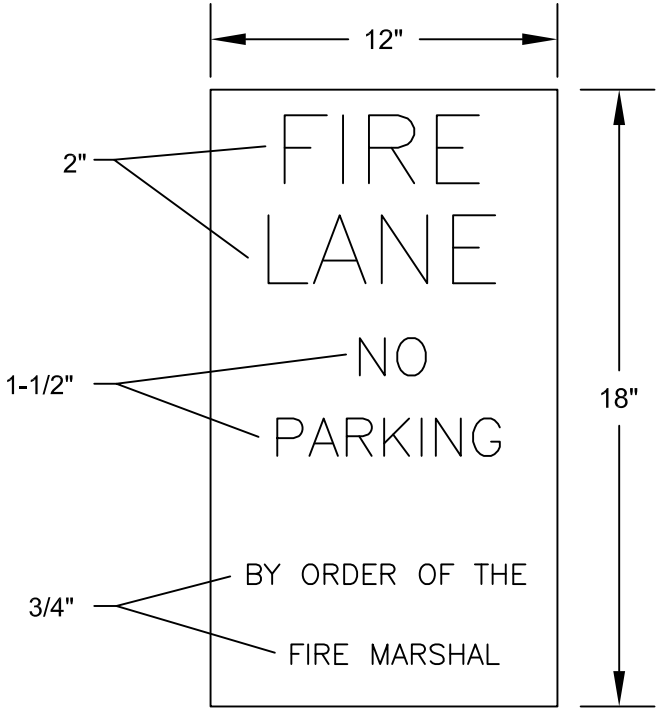
- G1 3" X 3" X .120 POST 6' - 6" W/ CAP APPROVED COLOR CHROME YELLOW.
- MINIMUM 3/8" ZINC PLATED CHAIN, WELDED TO "L" BRACKET. LOCK SHALL FIT LOOSELY IN LINKS.
- SECURELY ATTACH SIGNS TO CHAIN IN 2 PLACES EACH, SIGNS SHALL BE HORIZONTAL IN CHAIN-LOCKED POSITION..

TYPE 'B' CHAIN GATE

DETAIL NO. FD109 NTS	CHANDLER arizona	EMERGENCY ACCESS BARRIER	APPROVED: FIRE MARSHAL DATE: 01-09-2020	DETAIL NO. FD109 NTS

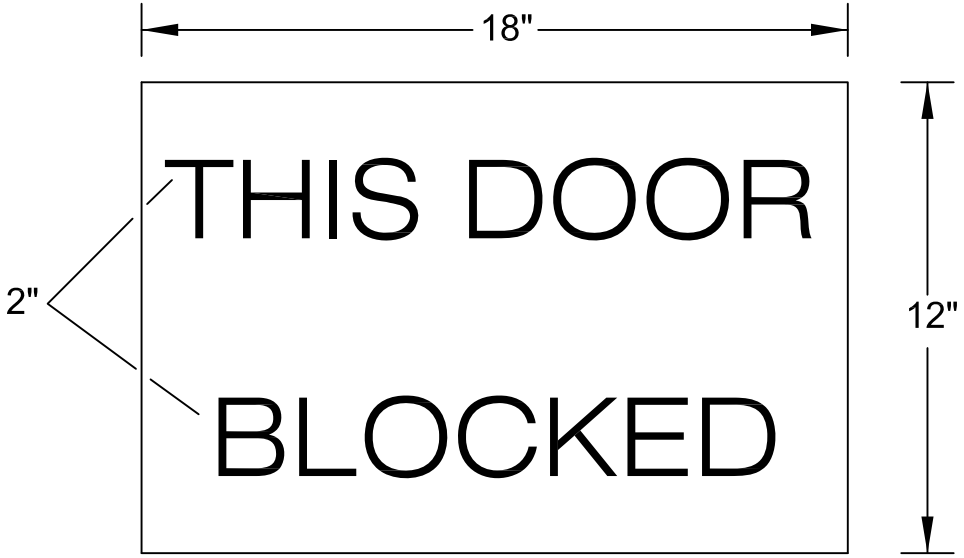
NOTES:

1. 2" LETTERS ARE 5/8" WIDE.
2. 1-1/2" LETTERS ARE 1/2" WIDE.
3. 3/4" LETTERS ARE 1/8" WIDE.
4. ALL LETTERS ARE RED WITH A WHITE REFLECTIVE BACKGROUND.
5. THE SIGNS ARE TO BE MOUNTED ON A POST AS PER MAG STD. DTL. 131.
6. THE BOTTOM OF THE SIGN IS TO BE 7' ABOVE GRADE AND SPACED NO MORE THAN 75' APART.
7. CURBING SHALL BE PAINTED BRILLIANT RED WITH WHITE 2" LETTERING "NO PARKING-FIRE LANE".
8. THESE SIGNS ARE NOT SUPPLIED BY THE CITY OF CHANDLER.
9. FOR APPLICATION OF THIS DETAIL REFER TO TABLE 2 IN STREET DESIGN AND ACCESS CONTROL (TDM# 4) OR AS OTHERWISE DIRECTED BY THE FIRE MARSHAL.



DETAIL NO. FD111 NTS	CHANDLER arizona	FIRE LANE SIGNING AND MARKING	APPROVED: FIRE MARSHAL DATE: 01-09-2020	DETAIL NO. FD111 NTS

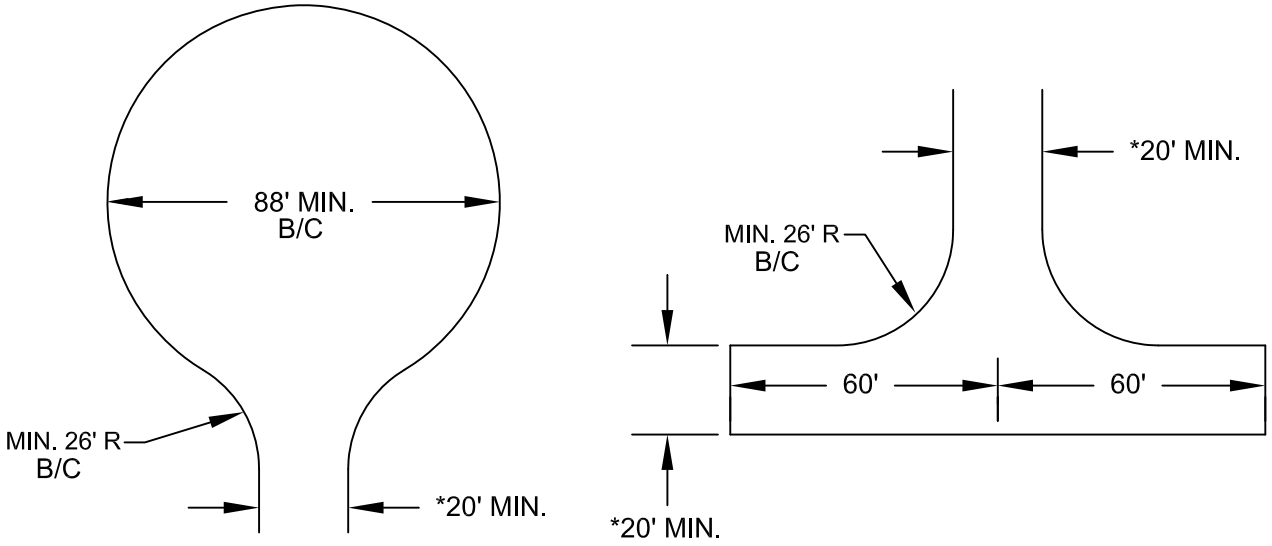
EXTERIOR DOORS AND OPENINGS



NOTES:

1. LETTERS SHALL HAVE A PRINCIPAL STROKE OF NOT LESS THAN 3/4 INCH (19.1mm) .
2. LETTERING SHALL BE WHITE REFLECTIVE WITH A RED BACKGROUND.
3. SIGNS SHALL BE 0.08 GAUGE ALUMINUM.
4. SIGNS SHALL BE SECURED TO THE DOOR IN A PERMANENT FASHION. NO GLUE. SIGN MAY BE STENCILED ON DOOR.
5. TOP OF SIGN SHALL BE 6' ABOVE FINISHED GRADE.

DETAIL NO. FD115 NTS	CHANDLER arizona	BLOCKED DOOR SIGNAGE	APPROVED: FIRE MARSHAL DATE: 01-09-2020	DETAIL NO. FD115 NTS



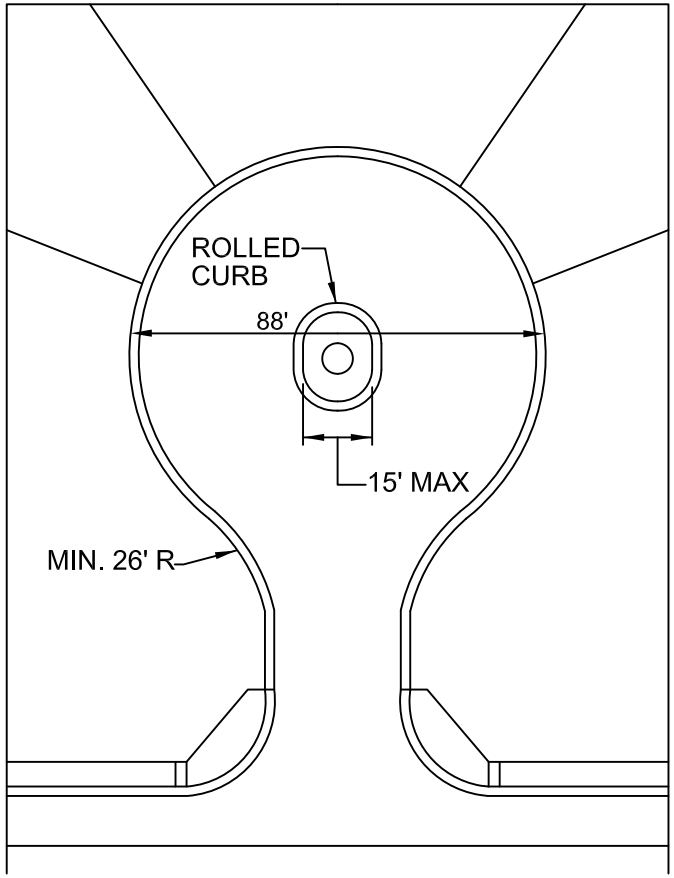
TURNAROUNDS: ALL DEAD-END FIRE APPARATUS ACCESS ROADS IN EXCESS OF 150 FEET IN LENGTH SHALL BE PROVIDED WITH APPROVED APPARATUS TURNAROUNDS.

SURFACE: FIRE APPARATUS ACCESS ROADS SHALL BE DESIGNED AND MAINTAINED TO SUPPORT THE IMPOSED LOADS OF FIRE APPARATUS (80,000 LBS. MIN) AND SHALL BE PROVIDED WITH A SURFACE SO AS TO PROVIDE ALL-WEATHER DRIVING CAPABILITIES.

HEIGHT: UNOBSTRUCTED VERTICAL CLEARANCE SHALL BE NOT LESS THAN 15 FEET.

WIDTH*: UNOBSTRUCTED ROADWAY WIDTH SHALL NOT BE LESS THAN 20 FEET.

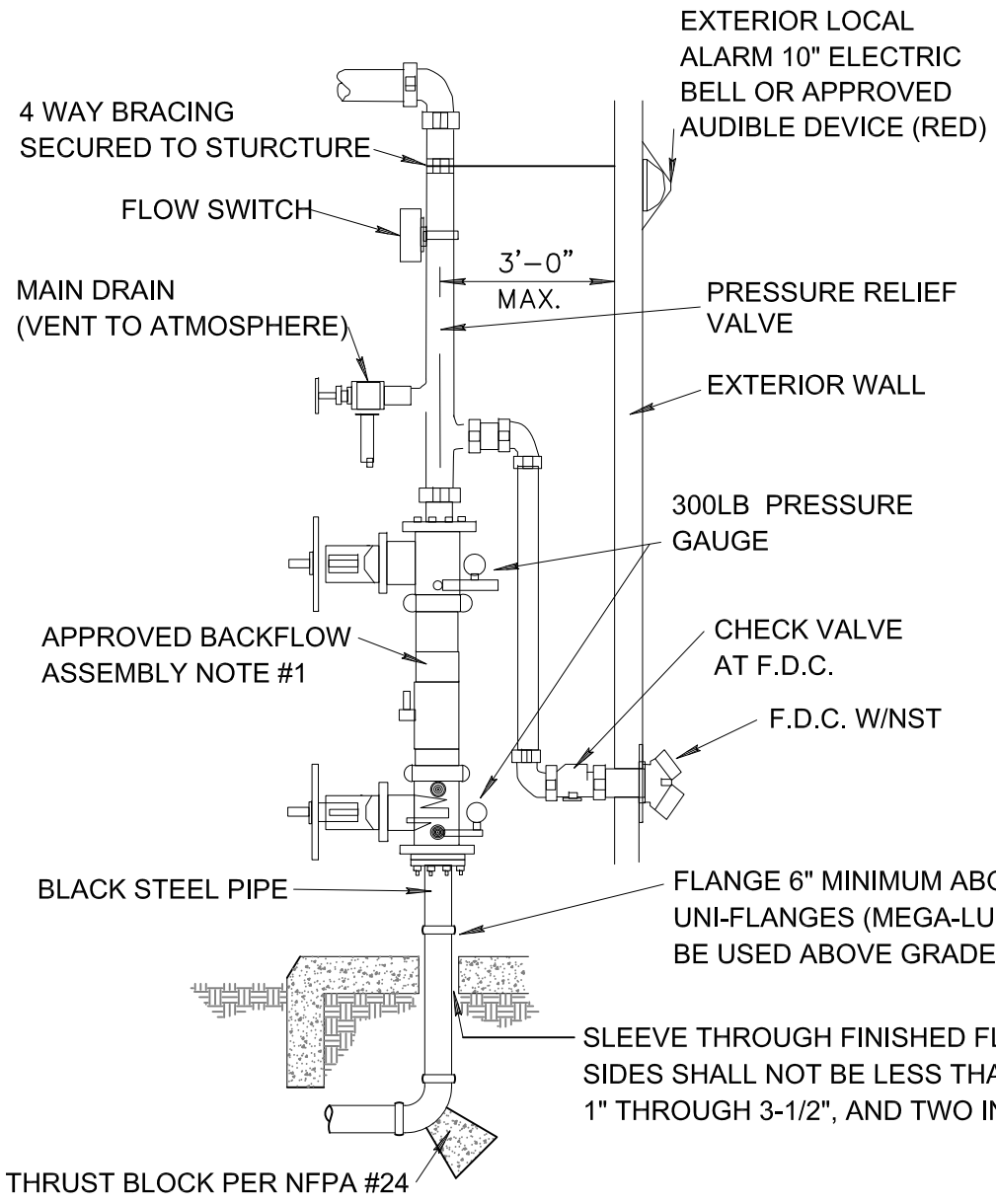
DETAIL NO. FD141 NTS	CHANDLER arizona	**FIRE APPARATUS ROADWAYS AND TURNAROUNDS**	APPROVED: FIRE MARSHAL DATE: 01-09-2020	DETAIL NO. FD141 NTS



LANDSCAPE IN CUL-DE-SAC

NOTE:
SEE ALSO FD141 FOR MORE DETAILS

DETAIL NO. FD143 NTS	CHANDLER arizona	FIRE APPARATUS ROADWAYS AND TURNAROUNDS PRIVATE RESIDENTIAL CUL-DE-SAC	APPROVED: FIRE MARSHAL DATE: 01-09-2020	DETAIL NO. FD143 NTS



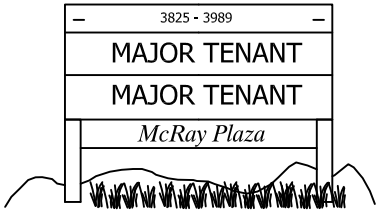
NOTES

1. DOUBLE CHECK DETECTOR ASSEMBLY WITH BYPASS METER SHALL BE UL LISTED OR FM APPROVED FOR FIRE PROTECTION USE AND SHALL BE AS APPROVED BY U.S.C. FOUNDATION FOR CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH. THIS ASSEMBLY IS TO BE USED FOR POLLUTION HAZARDS ONLY AS RECOMMENDED IN THE AWWA-M14 MANUAL.

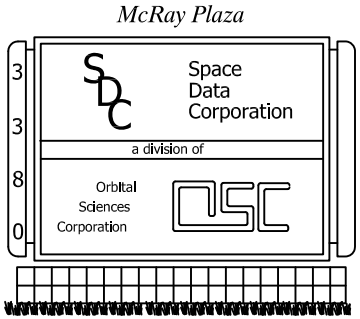
2. ADEQUATE CLEARANCE SHALL BE PROVIDED AROUND FIRE RISER. DIMENSIONS FROM FACE-OF-PIPE SHALL MEASURE A MINIMUM OF 12" OFF THE BACK WALL, 18" ON EACH SIDE, AND 36" CLEAR IN FRONT WITH A FULL HEIGHT DOOR. THE FIRE LINE SHALL EXTEND A MAXIMUM OF 36" INTO THE BUILDING FROM INSIDE FACE-OF-WALL TO CENTER OF PIPE.

3. TAMPER SWITCH OR CHAIN & LOCK REQUIRED FOR CONTROL VALVES.

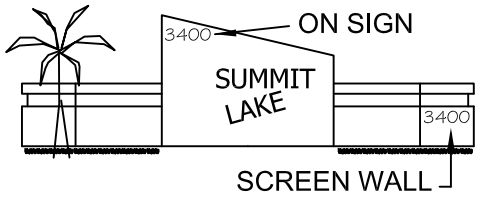
DETAIL NO. FD144 NTS	CHANDLER arizona	**FIRE SPRINKLER RISER W/ BACKFLOW PREVENTION (APPROVED BY FIRE MARSHAL ONLY)**	APPROVED: FIRE MARSHAL DATE: 01-09-2020	DETAIL NO. FD144 NTS



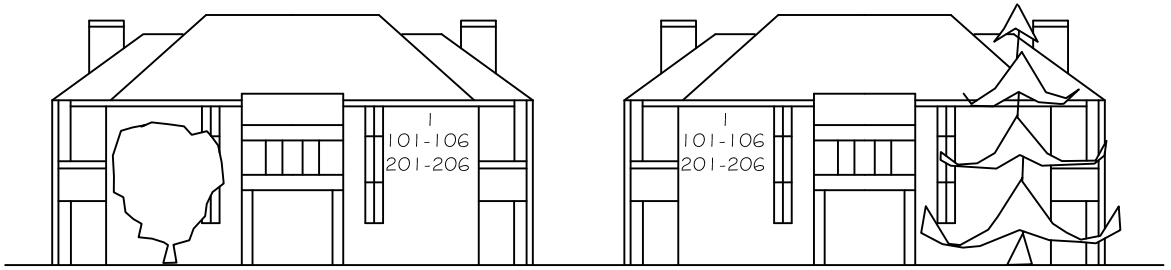
THE ADDRESS NUMBERS SHALL BE POSTED ON THE TOP CENTER IDENTIFICATION SIGN AT MAIN ENTRANCE OF COMMERCIAL MALL, CENTER, VILLAGE, OR SQUARE, SO AS TO BE VISIBLE FROM A NORTH-SOUTH OR EAST-WEST DIRECTION.



PERMANENT FIXTURE WITH THE SITUS ADDRESS SHALL BE PLACED IN A CONSPICUOUS LOCATION IF NOT VIEWABLE FROM THOROUGHFARE FRONTAGE SO AS TO BE VISIBLE FROM A NORTH-SOUTH OR EAST-WEST DIRECTION.



ADDRESS SHALL BE DISPLAYED ON THE TOP PORTION OF THE COMPLEX IDENTIFICATION SIGN OR ON THE TOP PORTION OF THE SCREEN WALL AT THE MAIN ENTRANCE SO AS TO BE VISIBLE FROM A NORTH-SOUTH OR EAST-WEST DIRECTION



- IDENTIFICATION NUMBERS AND SUFFIXES ASSIGNED TO BUILDINGS SHALL BE DISPLAYED IN THE UPPER, RIGHT HAND CORNER AT THE END OF EACH BUILDING SO AS TO BE PLAINLY VISIBLE FROM THE ACCESS THOROUGHFARE.
- MULTI-FAMILY DEVELOPMENTS WITH INTERNAL DRIVES, BUILDING NUMBER AND RANGE OF SUFFIXES SHALL BE POSTED ON EACH SIDE OF BUILDING SO AS TO BE CLEARLY VISIBLE FROM ALL ACCESS DRIVES AND THOROUGHFARES.
- COLOR OF NUMBERS AND BACKGROUND SHALL CONTRAST AND CONFORM TO REQUIREMENTS FOR HELVETICA MEDIUM NUMBERING. DISTANCE AT WHICH NUMBERS SHALL BE LEGIBLE FROM CENTER OF THOROUGHFARE:

  APPLIES TO SINGLE FAMILY RESIDENTIAL, MULTI-FAMILY, AND ALL COMMERCIAL BUILDINGS. DISTANCE TO BE MEASURED FROM CENTER OF ACCESS DRIVE TO STRUCTURE(S):

  Minimum:
  0-50' - 4"
  50-200' - 12"
  201-300' - 14"
  301-400' - 16"

NOTES:
1. THERE SHALL BE NO LANDSCAPING OR SCREEN WALL THAT COVERS OR HINDERS THE VIEW OF THE MONUMENT SIGN FROM THE ROADWAY.
2. ALL SUITES SHALL HAVE THE ADDRESS AND SUITE NUMBER ON BOTH THE FRONT AND BACK DOOR(S).

DETAIL NO. FD151 NTS	CHANDLER arizona	ADDRESS IDENTIFICATION	APPROVED: FIRE MARSHAL DATE: 01-09-2020	DETAIL NO. FD151 NTS