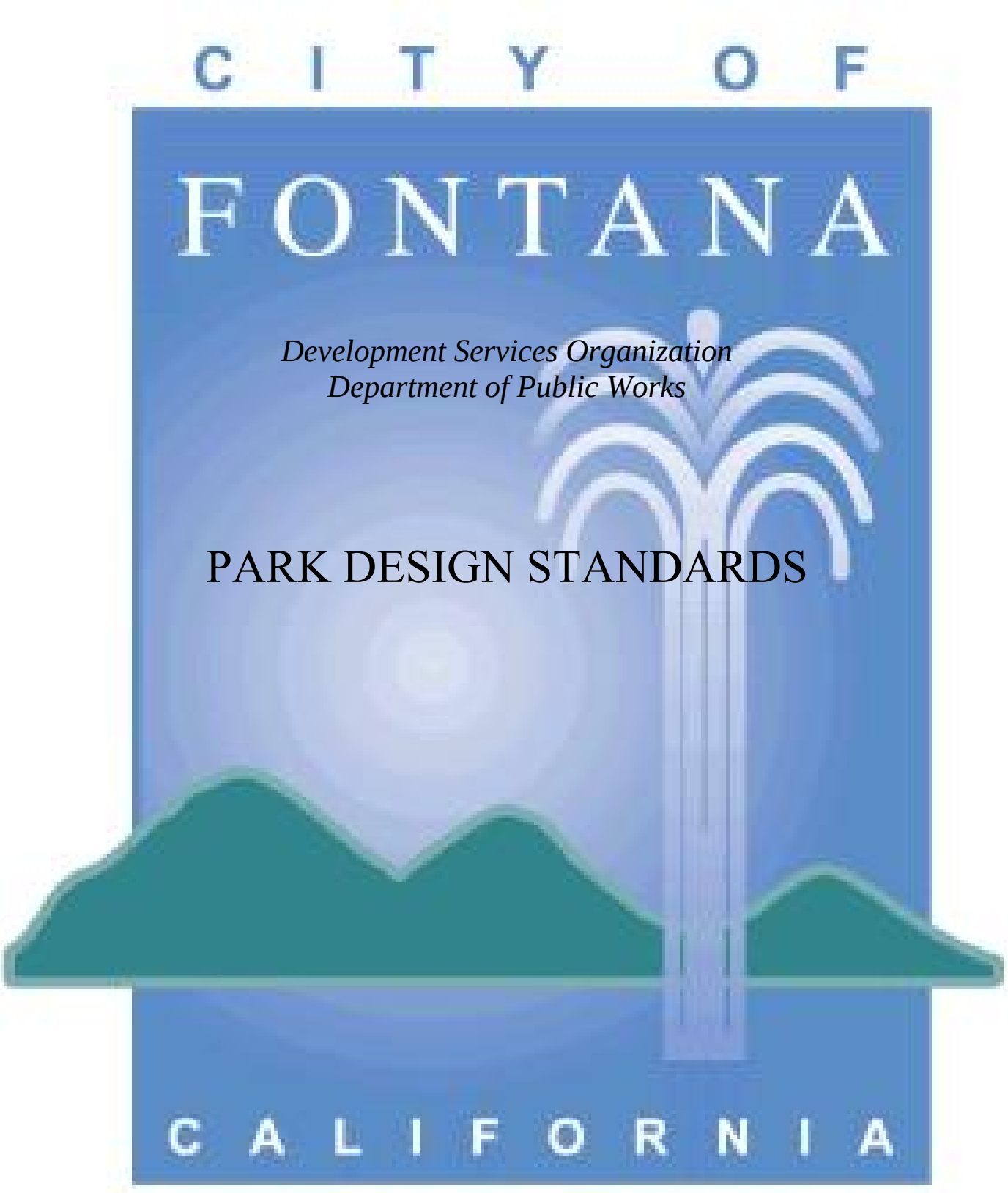


*Development Services Organization*
*Department of Public Works*

# PARK DESIGN STANDARDS

March 2016

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# A. GENERAL PROVISIONS

## 1. INTENT

The City of Fontana believes that the preservation of the unique character or theme of each publicly owned park is important and should be maintained whenever possible. Further, this document is to serve as a guideline; there may be occasions when it is appropriate to depart from these standards. Departure from these standards will require approval from the City, through the Public Works Department.

The specifications and details in this section of the manual are a culmination of years of investigation, experience. Many factors were taken into consideration in arriving at these guidelines, including:

- Applicable state and county laws
- Safety
- Inventory standardization
- Maintainability of equipment
- Product availability
- Initial and replacement costs
- Maintaining aesthetics and service levels
- Environmental concerns

## 2. GENERAL GUIDELINES

a. All landscape shall incorporate plant material that can sustain the weather conditions of the City of Fontana and a highly efficient and effective automatic irrigation system.

b. All proposed park landscape shall:

   i. Integrate, complement, and improve the existing permanent landscape.

   ii. Complement the architecture of any structures or proposed structures onsite.

   iii. Minimize grading change and mitigate erosion.

   iv. Provide screening of unsightly areas, noise, wind, and sun.

   v. Provide for visual interest through use of color and textures.

   vi. Make provisions for wildlife where feasible. (Example: planting trees that sustain bird life)

   vii. Reflect the needs and expectations of those persons affected by the landscape. (Example: common recreation, open space, shady areas and picnic sites)

   viii. Provide for human comfort by use of benches or other hardscape elements where appropriate.

**CITY OF FONTANA**
**DEPARTMENT OF PUBLIC WORKS**
16489 Orange Way, Fontana, CA 92335
(909) 350-6760

# PROJECT CLOSEOUT REQUIREMENTS

PROJECT: _____
ARCHITECT: _____
CONTRACTOR: _____

This checklist is intended for use to prepare for project close-out and approval for occupancy. This is only a general list and is not intended to address all conditions or requirements that may be project specific.

____ 1. Contractor's declaration of completion received and verified by Project Inspector and Project Engineer
____ 2. Other City departments/bureaus/divisions and consultants notified of closeout schedule
____ 3. O&M manuals and instructions submitted and accepted
____ 4. Warranties and guaranties submitted and accepted
____ 5. Training requirements completed
____ 6. All required samples submitted and accepted
____ 7. All required tests completed and results submitted and accepted
____ 8. Final Record Drawings submitted and accepted
____ 9. All keys and key schedules received
____ 10. Elevator acceptance received
____ 11. Fire Marshall's acceptance received
____ 12. Sprinkler insurance inspection completed
____ 13. Occupancy Permit received
____ 14. List of spare parts and maintenance materials received
____ 15. All required shop drawings, product data, diagrams and charts submitted and accepted
____ 16. Architect's completion certified if applicable
____ 17. Contractor's application for final payment received
____ 18. Change orders resolved including unilateral change orders
____ 19. Claims resolved
____ 20. Determination made on final contract price, change orders, liquidated damages, deductions and contingencies
____ 21. Determination made on all adjustments to the contract time of completion

____ 22. All salvage and spare parts turned over per contract
____ 23. Affidavits for payment of debts and claims received
____ 24. Release of Claims form executed if applicable
____ 25. Consent for Surety for final payment received
____ 26. Lien waivers executed
____ 27. Compliance with wage certificates and other labor provisions
____ 28. Completion of Final Inspection Correction List work
____ 29. Release from construction lender
____ 30. Records of facility testing received
____ 31. Records of testing and balancing mechanical systems received
____ 32. Board Report submitted

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# PROJECT CLOSEOUT REQUIREMENTS FOR LMDs/CFDs

PROJECT: _____
ARCHITECT: _____
CONTRACTOR: _____

This checklist is intended for use to prepare for project close-out and approval for occupancy. This is only a general list and is not intended to address all conditions or requirements that may be project specific.

**TURNOVER ITEMS**

____ 1. Photo Mylar "Record Drawings" with valve square footage
____ 2. 11"x17" laminated controller charts (2 sets)
____ 3. Backflow certification
____ 4. Ten Toro Sentinel antennas
____ 5. Controller Keys
____ 6. 1 year Written Irrigation Guarantee – Include Company Name, Contact Person, Telephone Number and Business Address
____ 7. Toro Certification Letter that installation has been properly installed and radio communication is approved
____ 8. Total planting square footage for each irrigation valve on "As Built" title sheet
____ 9. Letter from Public Works Traffic Engineer that certifies the project meets traffic visibility standards
____ 10. Submit digitalized DFX file for entire project, including "Record Drawings" on CD-ROM.
____ 11. Submit "GPS" digital location of valves, controllers, backflow devices and meters.

**FIELD INSPECTION REQUIREMENTS**

The Developer/Contractor shall contact the City's Public Works Department, Inspection Section and/or Parks Department Inspector at least 48 hours in advance to inspect the following:

____ 1. Pre-job conference with City approved plans at the worksite
____ 2. Completion of finished grade
____ 3. Layout of wood or concrete headers prior to installation
____ 4. Irrigation installation at the following points:
    A. Meter and controller pedestal location (to be approved by Public Works Inspector)

B. Trenching (to check depth)

C. Sleeving

D. Mainline installation with pressure test at 150 psi for 3 hours

E. Point of connection to main

F. Backflow prevention device installation prior to backfill

G. Control valve installation

H. Head and swing joint installation

I. Head coverage

____ 5. Toro certification and local radio testing

____ 6. Flood test

____ 7. Weed abatement

____ 8. Plant layout

____ 9. Acceptance of plant quality and quantity at delivery date

____ 10. Plant installation

____ 11. Final inspection

# B. GRADING

## 1. GENERAL GUIDELINES

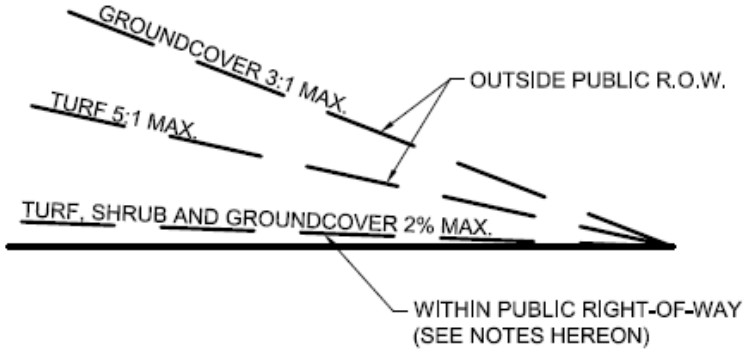
a. Park drainage will not be allowed to drain onto private property. Design must incorporate provisions to minimize drainage over sidewalks and prevent ponding. Concentrated flow shall not be allowed over curbs, sidewalks, and property lines.

b. General turf areas shall have a two percent (2%) minimum slope, and a twenty percent (20%) maximum turf slope, except where specifically approved by the City.

c. All graded slopes in excess of three to one (3:1) shall be stabilized and planted with groundcover, trees, and shrubs.

d. Grading shall not occur within the drip line of an existing tree (with a caliper size greater than ten inches [10"] at chest height) or within ten feet (10') of the bank of a riparian corridor unless such grading is approved by the City.

e. Site grading design shall complement and reinforce the architectural and landscape design character by helping to screen parking, loading and service areas, by helping to reduce the perception of height and mass on large buildings and by providing reasonable transitions between on-site uses.




NOTES:

1. SLOPE IN TURF AREAS:
   a. BETWEEN CURB AND SIDEWALK/ TRAIL - 2%
   b. BEHIND SIDEWALK/ TRAIL - 2% TO 5:1 MAX.
      (1) OCCASIONAL SLOPE VARIATIONS OF UP TO 4:1 WILL BE PERMITTED IN LOCALIZED AREAS WITH CITY ENGINEER'S APPROVAL.

2. SLOPES IN SHRUB/ GROUNDCOVER AREAS:
   a. BETWEEN CURB AND SIDEWALK/ TRAIL - 2%
   b. BEHIND SIDEWALK/ TRAIL - 2% MIN. TO 3:1 MAX.
      (1) OCCASIONAL SLOPE VARIATIONS OF UP TO 2:1 WILL BE PERMITTED IN LOCALIZED AREAS WITH CITY ENGINEER'S APPROVAL, PROVIDED THAT SUCH SLOPES OVER 3:1 DO NOT EXCEED 12' IN VERTICAL HEIGHT.

3. DEVIATIONS FROM THE ABOVE CRITERIA WILL BE CONSIDERED ON A CASE BY CASE BASIS AND WILL REQUIRE APPROVAL OF THE CITY ENGINEER.

## 2. ATHLETIC FIELD/COURT DRAINAGE GUIDELINES

a. The fields will typically be crowned in the center with drainage to the sides. However, if the specific site or field overlay makes this drainage pattern unacceptable, other drainage patterns may be considered. Control boxes and drainage grates shall not be located on playing fields and shall be vandal resistant.

b. Field gradients will range from one (1) to one and twenty five hundredths percent (1.25%) for skinned and turf infields and from one and twenty five hundredths percent (1.25%) to one and fifty hundredths percent (1.50%) for outfield turf.

c. The acceptable gradient range for soccer, football, and rugby fields is one and five tenths to one and seventy five hundredths percent (1.5 to 1.75%).

d. Soccer, football and rugby fields should typically use a corner pitch drainage pattern; however, field overlays and site situations may require the use of other patterns. Permanent, dedicated, full time fields will have approved subsurface drains under the penalty and the goalie areas that will remove the water from the field.

e. The acceptable gradient range for basketball courts is one to one and five tenths percent (1.0 to 1.5 %).

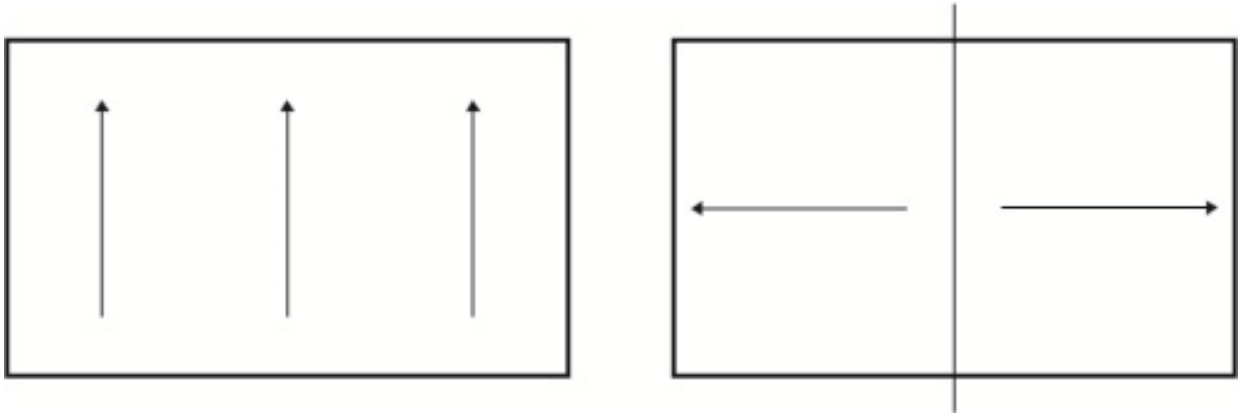
f. The acceptable gradient range for tennis courts is five tenths to one percent (0.5 to 1.0%), with a cross slope.

g. The acceptable gradient range for racquetball/handball courts is from five tenths to one percent (0.5 to 1.0 %).

h. Racquetball/handball courts shall slope to a single floor drain placed near the front wall corner.

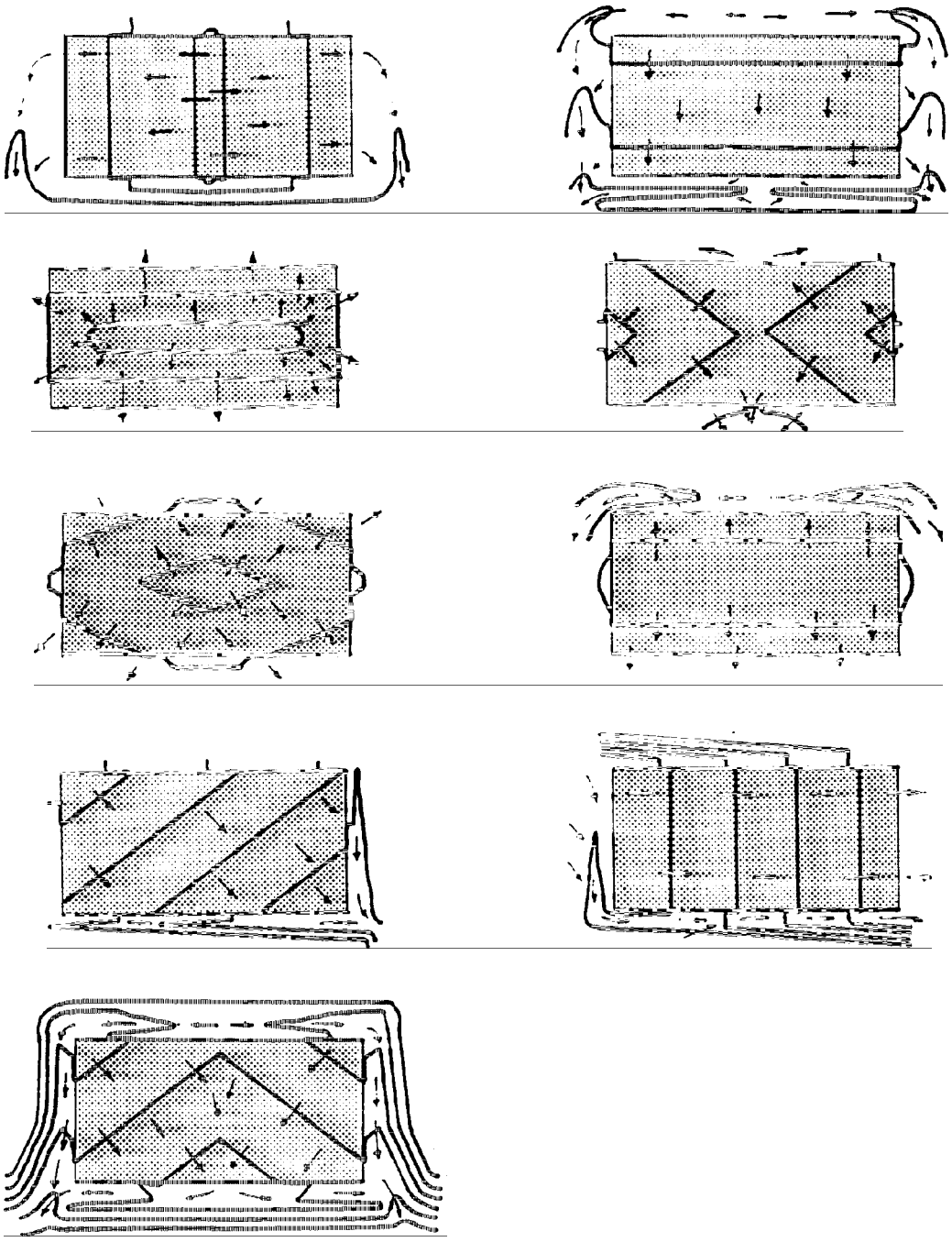
i. The acceptable gradient range for a roller hockey rink is one to one and five tenths percent (1.0 to 1.5%).

## 3. TENNIS COURT DRAINAGE PATTERNS

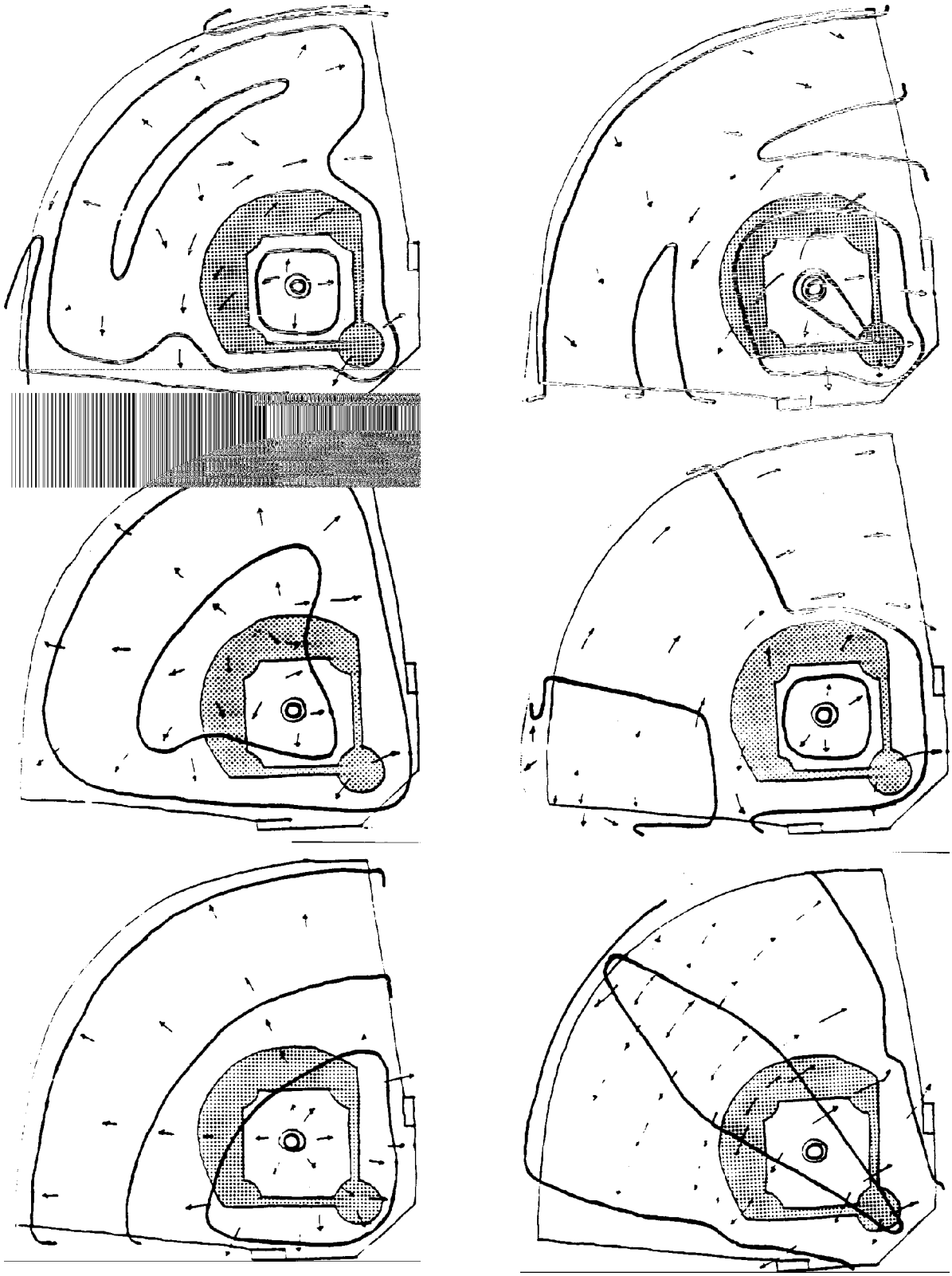


## 4. SOCCER/RUGBY FIELD DRAINAGE PATTERNS*

*Does not include synthetic turf fields. See Section O–Synthetic Turf.



## 5. SOFTBALL / BASEBALL DIAMOND DRAINAGE PATTERNS



# C. PARKING LOTS

## 1. PARKING LOT DESIGN

a. **Acreage:** For every ten (10) acres of developed parkland, there shall be two (2) acres of parking.

b. **Vehicular:** The vehicular circulation system shall be designed to reduce conflicts with pedestrian traffic, minimize impacts on adjacent properties, combine circulation and access areas where possible, and provide adequate maneuvering areas.

c. **Relationship of parking areas to buildings:** Aisles shall be positioned perpendicular to building entries for easy pedestrian access. Pedestrian corridors shall also incorporate landscaping material.

d. **Screening:** Parking areas shall be screened from streets through combinations of mounding, landscaping, low profile walls and grade separations, not to exceed thirty six inches (36") in height.

e. **Perimeter planter:** A landscaped planter at least five feet (5') wide, excluding overhang, curb and walkways, shall be provided wherever a parking facility adjoins a street.

f. **End of aisles:** All parking areas shall provide a landscaped planter of a minimum width of five feet (5') at the ends of all parking aisles. All planting areas shall have round corners instead of ninety degree (90°) corners. 18" concrete curb shall be placed behind any planter adjacent to a parking stall.

g. **Trees required:** One (1) tree shall be provided for each four (4) parking stalls. The trees may be clustered, but a minimum of one (1) cluster shall be provided for each one hundred-twenty feet (120') of parking row. Trees may be of a species that provides visibility to signage and store fronts. A vertical type tree which has open foliage would be most appropriate. One hundred percent (100%) of the trees shall be twenty four inch (24") box or larger in size.

h. **Parking area setbacks:** Parking areas shall be setback from the public right-of-way. The setback area shall be landscaped as required by the landscaping provisions of this article.

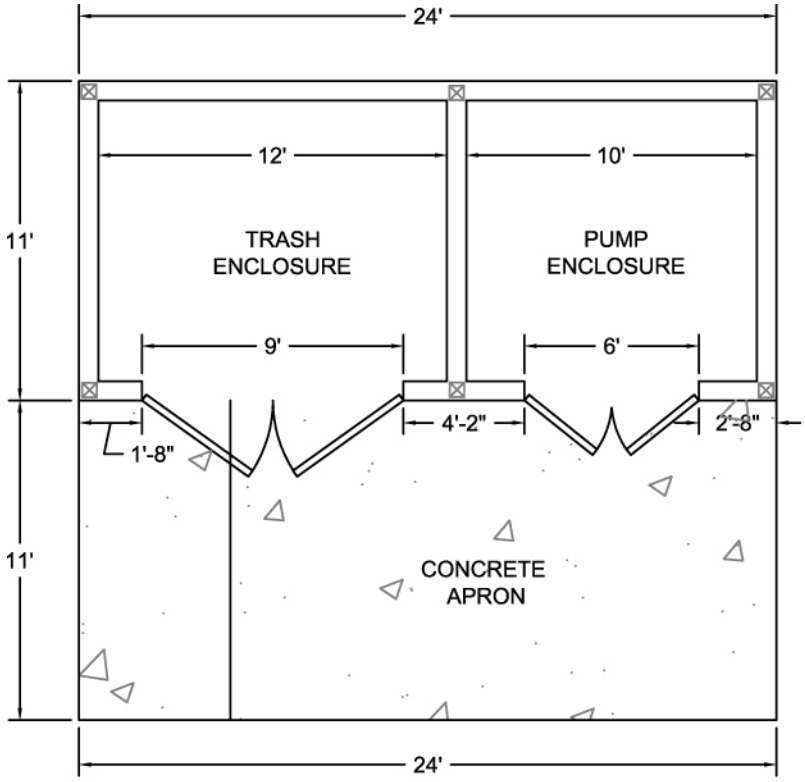
i. **Site accessibility:** Design shall incorporate access for maintenance vehicles and emergency vehicles. A vehicular access map will be required to show the access pattern through parks.

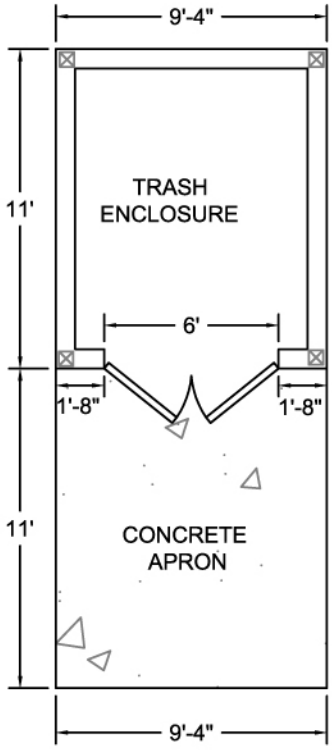
j. **Driveway:** Driveway approaches shall be a minimum of thirty six feet (36') wide. Aisles shall be a minimum of twenty six feet (26') between parking stalls. Gates on driveway approaches shall be installed a minimum of twenty five feet (25') behind sidewalk.

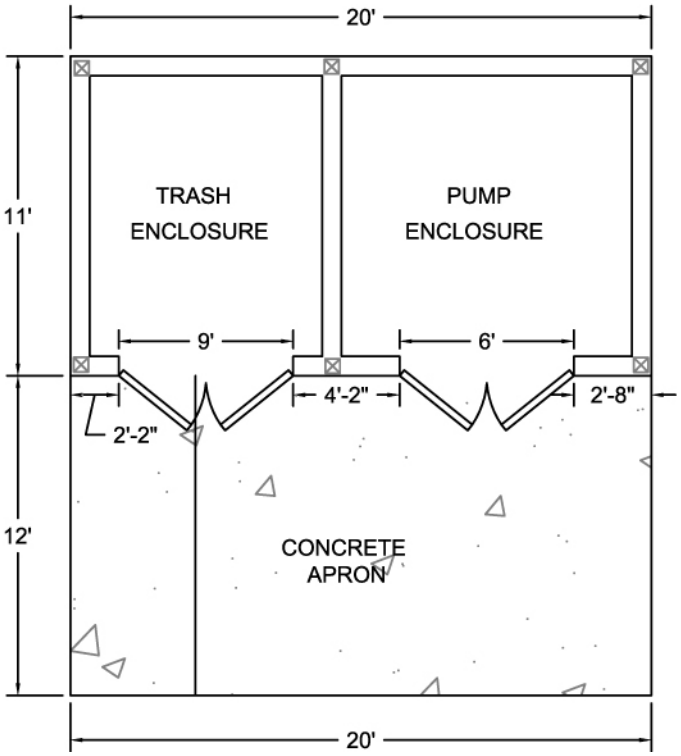
k. **Stripping:** Double lane stripping shall be placed on parking stalls per the City Development Ordinance.

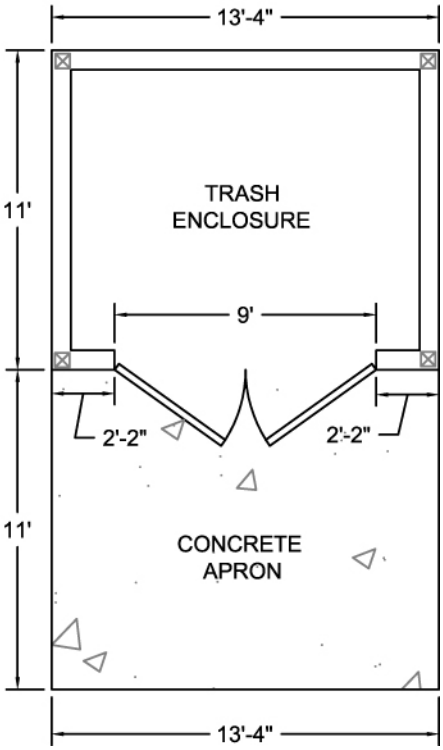
## 2. TRASH ENCLOSURES

All trash enclosures shall be designed per the following drawings.

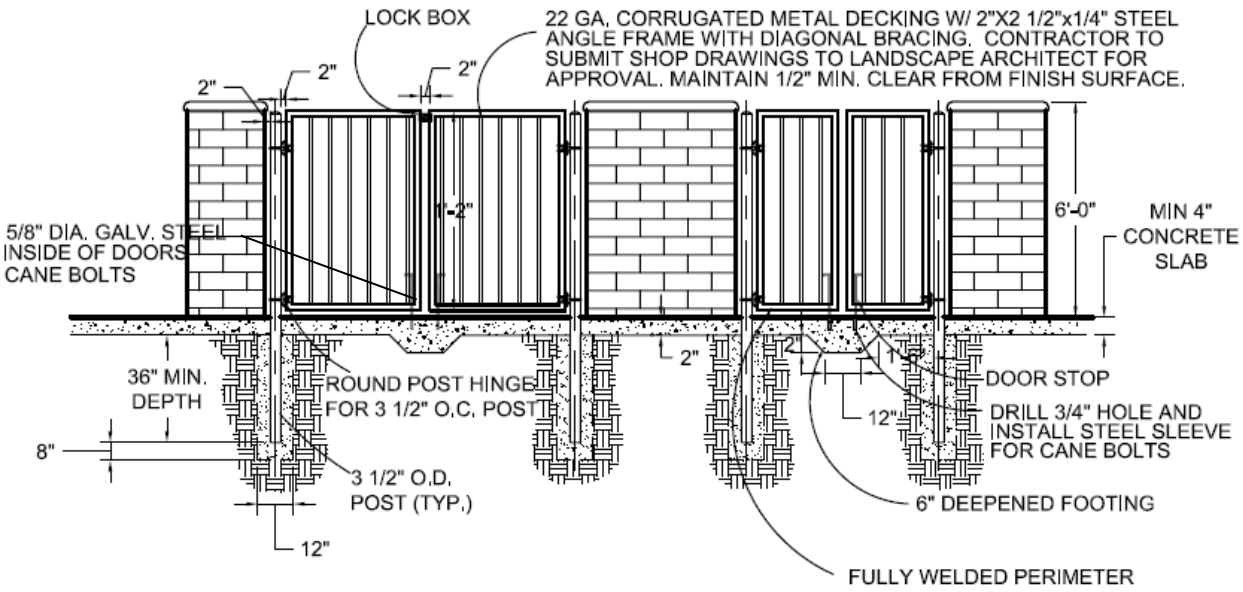


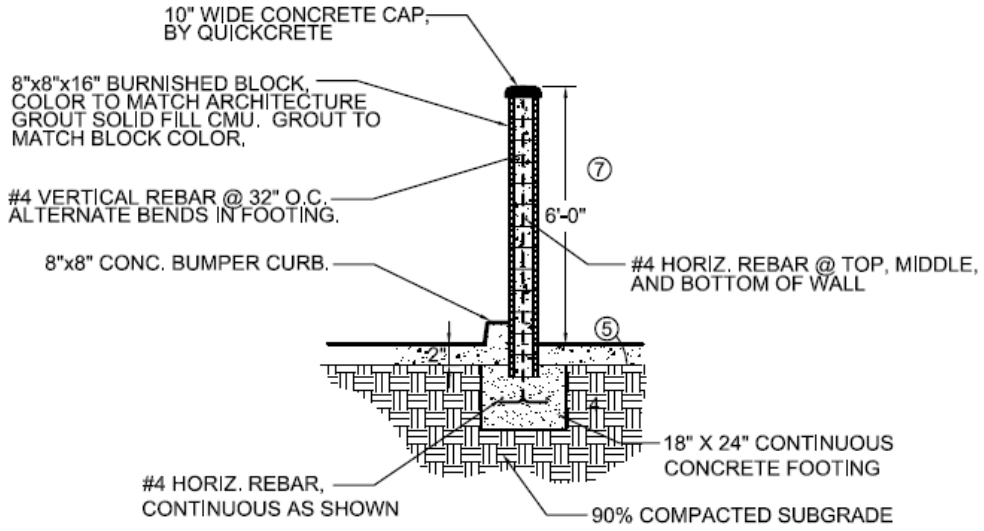



# TRASH ENCLOSURES CON'T



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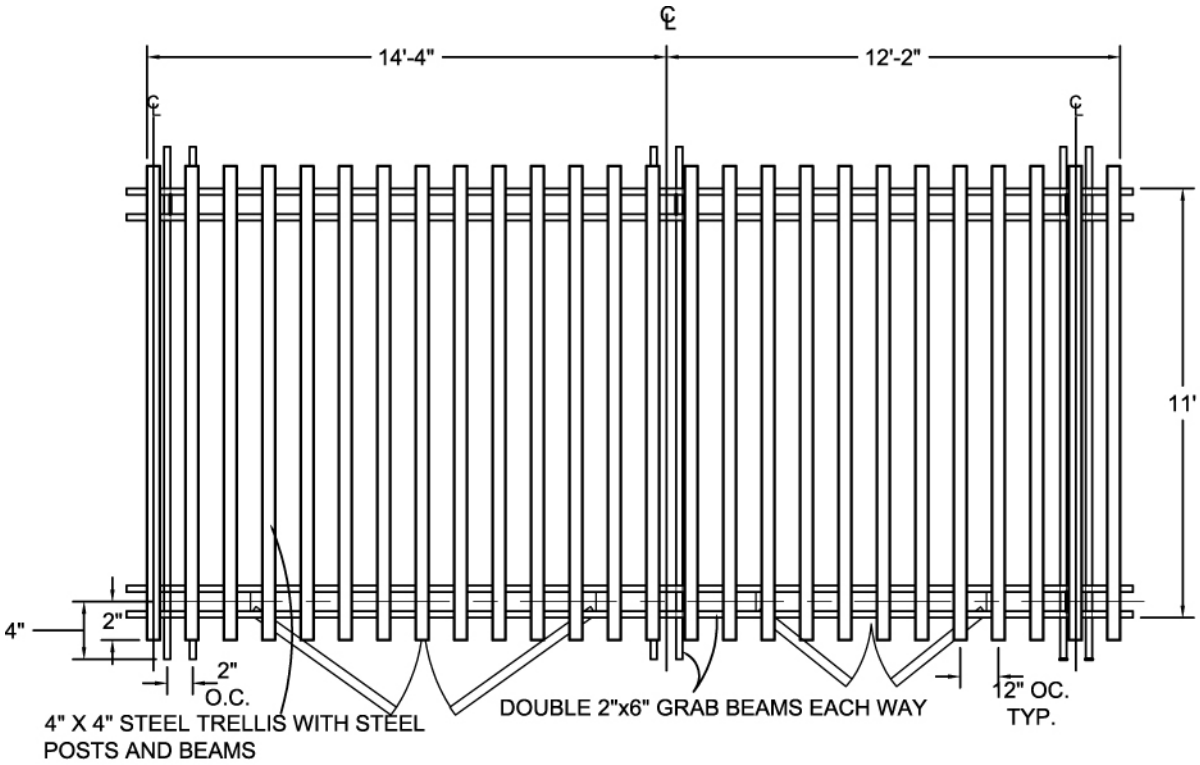
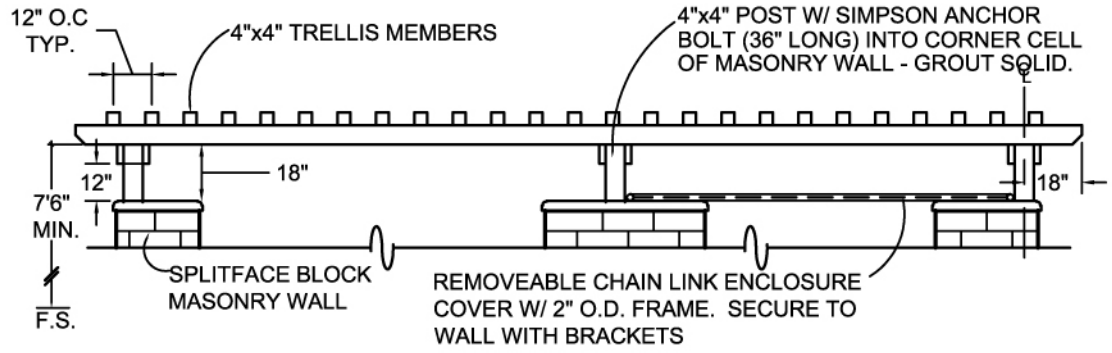



NOTE:

ALL METAL SURFACES SHALL BE POWDER COATED OR TREATED WITH ELECTRIC STATIC PAINT.

# D. ATHLETIC FIELDS AND COURT STANDARDS

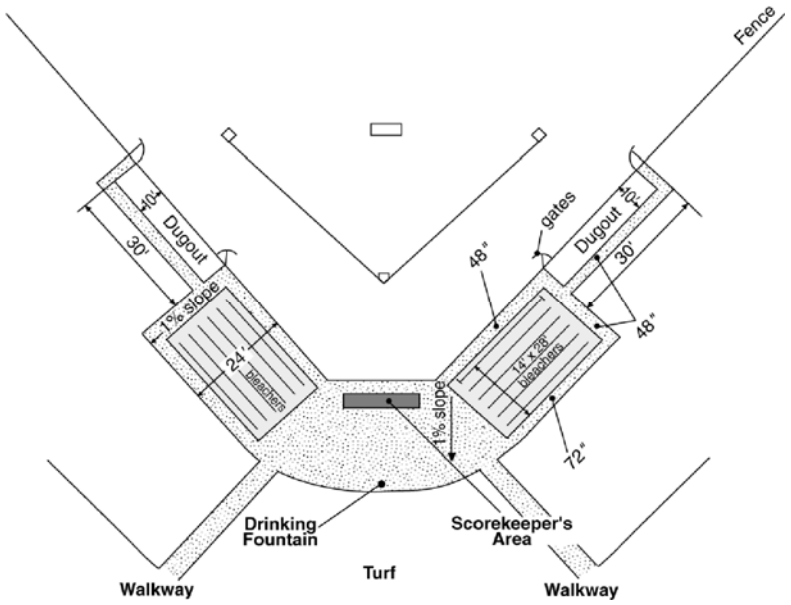
## 1. STANDARDS APPLICABLE TO ALL BASEBALL AND SOFTBALL FIELDS

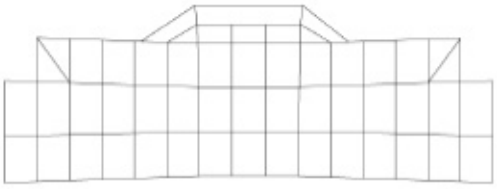
| | |
|---|---|
| **Accessibility:** | All fields, dugouts, and spectator areas shall provide access for disabled individuals by way of walkways, ramps, or other acceptable means. All amenities shall conform to California Title 24 Accessibility Regulations. Any proposed variations shall be subject to approval by the Chief Building Official. |
| **Bases:** | Preferred model: BSN Sports model #BS-BBASEBO or approved equal. |
| **Bat Rack:** | Preferred Models: 10 bat footing mount - Tomark Sports model #10977<br>10 bat surface mount - Tomark Sports model #10979<br>Or approved equal |
| **Batting Cages:** | Batting cages may be required when more than two (2) lighted ball fields are located on one site. Each batting cage shall have a minimum inside dimension of seventy feet (70') by fifteen feet (15') (for Regulation and Pony Baseball Use) or sixty feet (60') by fifteen feet (15') (for youth baseball or softball use). The floor shall be a four inch (4") thick concrete pad with a centered floor drain. The perimeter fencing shall be twelve feet (12') high chain link fence supported by two and seven-eighths inch (2 $^{7}/_{8}$") galvanized steel posts, maximum eight feet (8') on center. The chain link shall be two inch (2") grid, six (6) gauge chain link fabric with knuckled selvage at top and bottom. All chain link shall be covered on the inside with #36 nylon netting, one and three fourth (1 ¾ ) square inch, latex treated, with poly rope border, or approved equals. The chain link shall be fastened with screen rings eighteen inches (18") long on center. Each batting cage shall have two 120V outlets, located at the door end of the cage. Each batting cage shall have its own door with lockable latch. The batting cages shall be equipped with a sports turf home plate mat.<br>• Chain link fencing shall be covered on the inside with #96 treated nylon netting, one and three fourth (1 ¾) square inch, latex treated, with poly rope border, or approved equals.<br>• The batting cages shall be equipped with a bury-in home plate. |
| **Bleacher & Players Benches:** | When other than concrete seating is provided:<br>• Preferred Bleacher Models: L.A. Steelcraft model #BLO-521SA or approved equal |
| **Drinking Fountain:** | A handicapped accessible drinking fountain shall be placed behind the backstop directly behind home plate. Haws Model #3300, or approved equal. |
| **Dugouts:** | Dugouts shall be located along the first and third baselines, behind the backstop wings. They shall consist of concrete pads at field grade that are sloped away from the field, and surrounded by an eight foot (8') high, six (6) gauge chain link with black windscreen fabric on three sides and the top of the dugout. The windscreen fabric on top of the dugout shall be attached at nine foot (9') height to the backstop wing, and at the top of the eight foot (8') high dugout fence, forming a "roof." The dugouts shall be 30 feet long, 10 feet wide, and equipped with a twenty-five foot (25') long aluminum bench, a bat rack, and a latching gate to the infield. |
| **Field Orientation:** | The preferred field orientation places the back of the home plate facing due north to northeast, and the first baseline running west. |

| | |
|---|---|
| **Foul Poles:** | Preferred Model: Tomark #13889, or approved equal |
| **Homeplate:** | Preferred Model: BSN Sports model #BS-BBHPSAFE, or approved equal |
| **Infield Surfaces:** | All infields shall be covered with a six inch (6') deep imported blend of crushed brick dust and clay, pre-mixed prior to delivery, containing not less than 60% material from brick sources and not less than 30% clay of the following gradation:<br><br>Sieve Size — % Passing Min. - Max.<br><br>9.5 mm — 95-100<br>500 micron — 65-95<br>53 Micron — 30-45<br><br>Minimum 0.3% extractable calcium based on dry weight, utilizing 10% sodium acetate extracting solution. |
| **Infield Equipment:** | Home plate, the bases, and the pitching rubber shall be provided at the time of construction, but shall be installed by the City of Fontana. For ball fields with turf infields, a pitchers mound cover and a home plate cover shall be provided.<br>Infield Equipment Specifications:<br>• Infield Spot Cover: 14 ounce Vinyl material with welded seams. Edges to be hemmed and grommetted, with anchor stakes included.<br>• Pitchers Mound Cover: Tomark #11174, or approved equal<br>• Homeplate Cover: Tomark #11164, or approved equal |
| **Infield Watering:** | All infields shall have a manual irrigation watering system that is capable of watering all infield brick dust areas. Sufficient number of valves shall be provided depending on the available pressure and the size of the main line at the site. Sprinklers shall be installed along the perimeter of the infield area, three-quarter inch ($^3/_4$") to one inch (1") above the brick dust surface. The sprinkler heads shall be Hunter I-42-ADS high speed with brown rubber tops. Valves and valve boxes shall be installed at the end of the dugout fence, on the spectator side of the fence. Valves shall be one and one-half inch (1 ½") to two inch (2") ball type, made of bronze with rubber coated handles. Preferred valve model: Rainbird EFB-CP-PRS-D. Provide quick couplers at home base and behind first, and third base. |
| **Outfield Fencing:** | Permanent outfield fencing shall be required where there is no field overlay. All permanent fencing shall be a minimum eight feet (8') high and constructed of six (6) gauge chain link. Outfields adjacent to houses, parking lots and streets shall be a minimum of fifteen feet (15') high. The fences shall have top, center, and bottom rails. For permanent fencing there shall be concrete mow strips and the fence will be covered with windscreen fabric. When field overlay occurs, temporary fencing shall be provided that is five feet (5') high made of flexible mesh with six feet (6') high fiber-glass poles. See Section VIII.A for detailed equipment specifications.<br>• Temporary fencing to be TENAX ALPI Safety Fencing |
| **Outfield Fencing and Foul Line Fencing:** | Foul line fencing/netting shall be twenty feet (20') high and the length of first and third base. Outfields adjacent to houses, parking lots and streets shall have a fence height of fifteen feet (15') with a mid-rail at six feet (6'). Paint mid-rail |

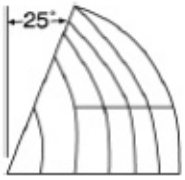
| | |
|---|---|
| | yellow for home run. |
| **Pole Pads:** | All poles within or in the vicinity of the playing area that are not protected by a fence shall have six feet (6') high pole pads. Baseball pole pads are required and shall be:<br>• Six feet (6') high<br>• With grommet strips on both ends and two (2) sets of four (4) interior belt loops one foot (1') from top and bottom<br>• Secured by use of stainless steel bandit through interior belt loops, hog rings and/or laces through grommets<br>• Yellow in color |
| **Scoreboard:** | Preferred model: Varsity Scoreboards model # CSBX-314 LED or approved equal. |
| **Spectator Area:** | A concrete-paved spectator area is required at all community park sites and at all regulation baseball fields. Although the spectator area is desirable in neighborhood parks, each site shall be evaluated for appropriateness, technical feasibility and financial impact. Spectator areas shall consist of either: (a) five (5) rows of aluminum bleachers seating seventy (70) for each side of the field, placed on a concrete pad; or (b) a tiered concrete structure. Companion seating for wheelchair users shall be provided within or immediately adjacent to each bleacher. All concrete shall drain away from the playing field. |
| **Windscreen Fabric:** | Baseball Dugout windscreen fabric shall be Tomark or approved equal:<br>6.2 ounce per square yard, green polypropylene mesh; with eighty nine percent (89%) shade factor, with center tab/tape strip. |
| **Accessibility:** | An unobstructed area minimum four feet (4') wide in front of and on each side of the bleachers, and minimum six feet (6') wide at the rear of the bleachers shall be provided for accessibility. Concrete walkways shall be provided for access to the area. The diagram below shows some possible walkway locations. |
| **Backstops:** | Backstops and wings shall be thirty feet (30') in height. Back of backstop, centered behind the home plate, shall be twenty feet (20') long, with each wing extending ninety feet (90') parallel to each foul line, including front of the dugout. Backstop shall be surrounded by a six inch (6") high concrete curb or block wall on the outside of the backstop to keep water from draining onto the field. All concrete surrounding the backstop shall slope one percent (1%) away from the field. |
| **Backstop Concrete Pad:** | The area behind the backstop and wings, from first base to third base, shall be poured concrete as shown in the diagram below. The minimum width of the concrete pad shall be twenty-four feet (24'), including the bleachers and the access area. |
| **Drinking Fountain:** | A drinking fountain shall be located on the concrete area behind the home plate, providing a fifteen foot (15') radius to allow space for pedestrian traffic. Haws Model #3300, or approved equal. |
| **Seating:** | Spectator seating shall be provided by tiered concrete structures or portable bleachers containing five (5) rows of seating placed in an area approximately twenty-eight feet (28') by fourteen feet (14'). Bleachers are required on each side of the spectator area. All seating facilities shall conform to California Title 24 Accessibility Regulations. |

## Backstop Exhibits



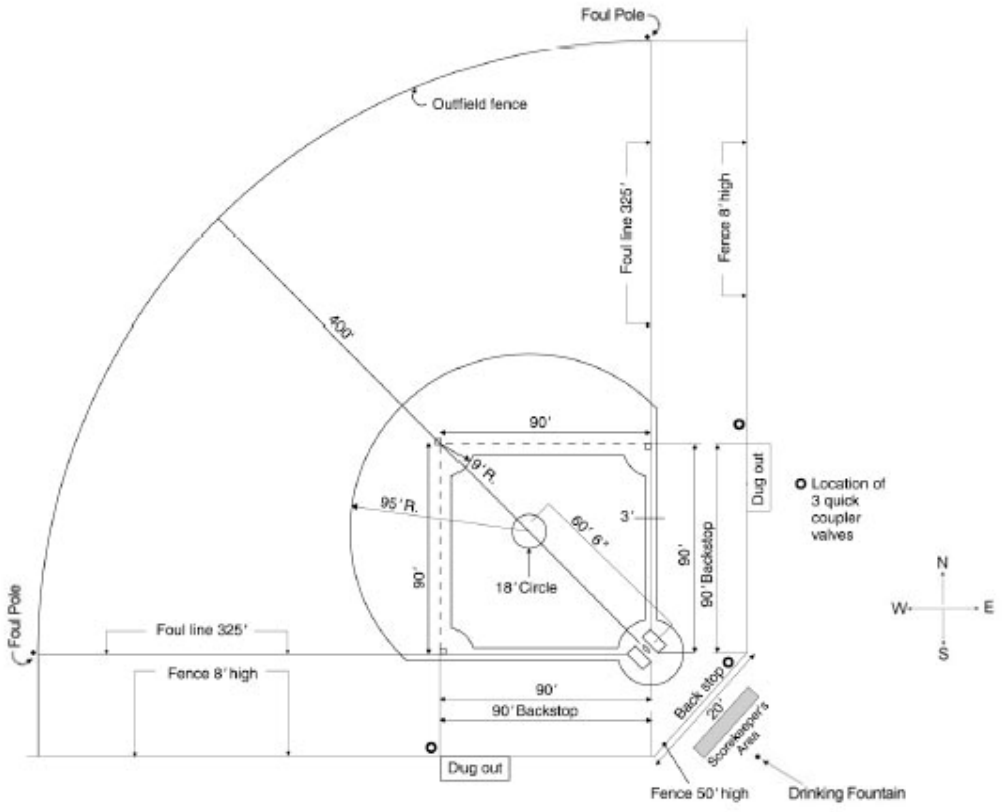
Wing Style




Clam Shell

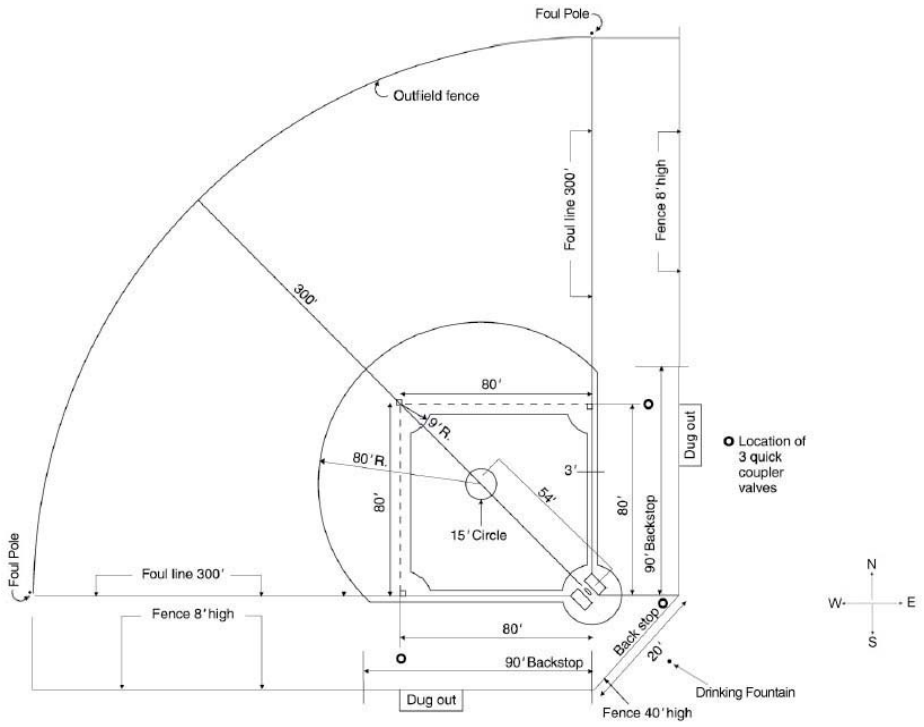
## a. REGULATION BASEBALL FIELD

| | |
|---|---|
| **Base Length:** | Ninety feet (90') |
| **Mound Size:** | Eighteen feet (18') diameter, ten inches (10") high |
| **Infield Radius:** | Ninety-five feet (95') from center of the mound |
| **Pitching Rubber:** | Sixty feet (60') six inches (6") distance from back point of home plate to front of rubber |
| **Foul Line to Home Plate:** | Minimum: 300 feet; Ideal : 310 feet-340 feet |
| **Centerfield to Home Plate:** | Minimum: 380 feet; Ideal: 380 feet-400 feet |
| **Backstop to Home Plate:** | Fifty feet (50') |
| **Minimum Setback:** | 125 feet from Home Plate/Foul lines to street, right of way, sidewalk, or building. |
| **Scorekeeper's Area:** | Required. |
| **Backstop:** | Permanent winged-style backstop required. |
| **Infield Irrigation** | Install quick couplers with gate ball along the fence behind 1st, 3rd base and pitcher's mound. |



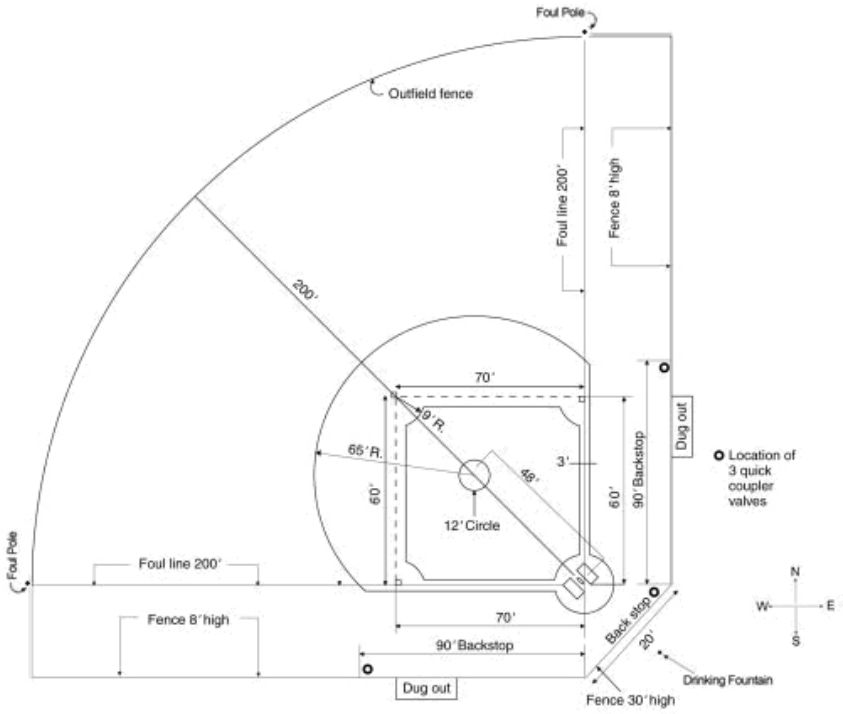
## b. PONY OR SENIOR LEAGUE BASEBALL FIELD

| | |
|---|---|
| **Base Length:** | Eighty feet (80') |
| **Mound Size:** | Fifteen feet (15') diameter, eight inches (8") high (mound constructed by City after facility acceptance) |
| **Infield Radius:** | Eighty feet (80') from center of the mound |
| **Pitching Rubber:** | Fifty-four feet (54') distance from back point of home plate to front of rubber. Preferred model: BSN Sports model #BS-BBPRPRPOY, or approved equal |
| **Foul Line to Home Plate:** | Minimum: 275 feet; Ideal: 300 feet |
| **Centerfield to Home Plate:** | 300 feet |
| **Backstop to Home Plate:** | Forty feet (40') |
| **Minimum Setback:** | 125 feet from Home Plate/Foul lines to street, right of way, sidewalk, or building. |
| **Scorekeeper's Area:** | Required. |
| **Backstop:** | Permanent winged-style backstop required. In situations where space is limited between fields, a clam-shaped backstop may be used. See page VII-8 for backstop design. Preferred Model: Tomark Sports model #13606 |



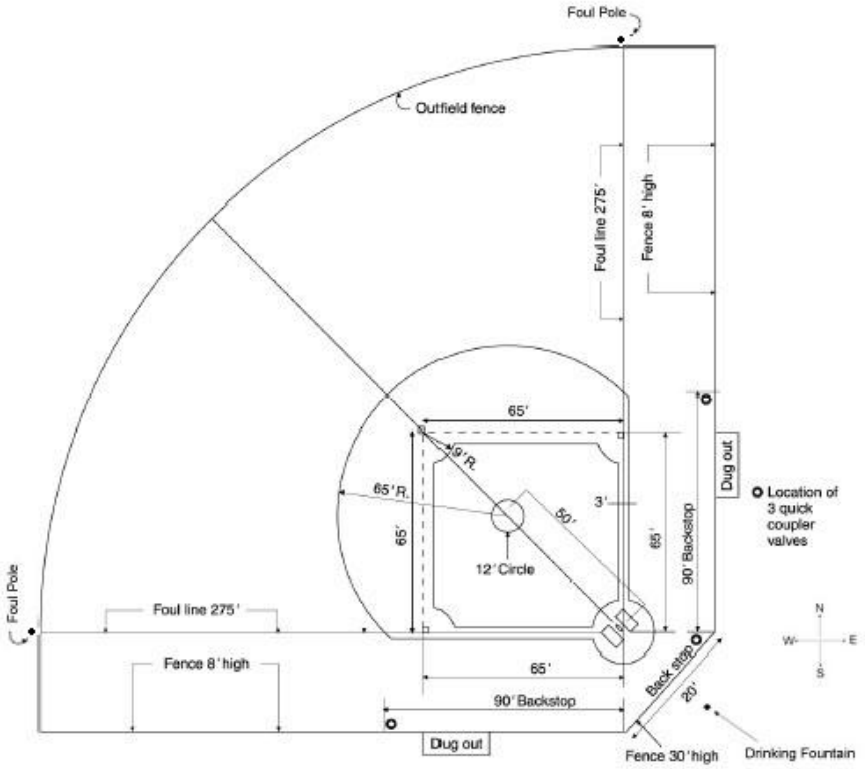
## c. LITTLE LEAGUE BASEBALL OR SOFTBALL FIELD

| | |
|---|---|
| **Base Length:** | Sixty feet (60') |
| **Mound Distance/ Size:** | Softball: twelve feet (12') diameter, four inches (4") high<br>Baseball: 48 feet, 12 feet diameter, six inches (6") high |
| **Infield Radius:** | Sixty five feet (65') from center of the mound |
| **Pitching Rubber to Home Plate:** | Softball: thirty eight feet (38') or forty feet (40') from back point of home plate to front of rubber. Preferred model: BSN Sports model #BS-BBPRROX, or approved equal<br>Baseball: forty four feet (44'), forty six feet (46'), or forty eight feet (48') from back point of home plate to front of rubber. |
| **Foul Line to Home Plate:** | Minimum: 225 feet |
| **Centerfield to Home Plate:** | 225 feet |
| **Backstop to Home Plate:** | Thirty feet (30') |
| **Minimum Setback:** | Seventy five feet (75') from Home Plate/Foul lines to street, right of way, sidewalk, or building. |
| **Backstop:** | Permanent winged-style backstop required. In situations where space is limited between fields, a clam-shaped backstop may be used.<br>Preferred Models: BSN Sports Model #BS-STBS1OF9 |

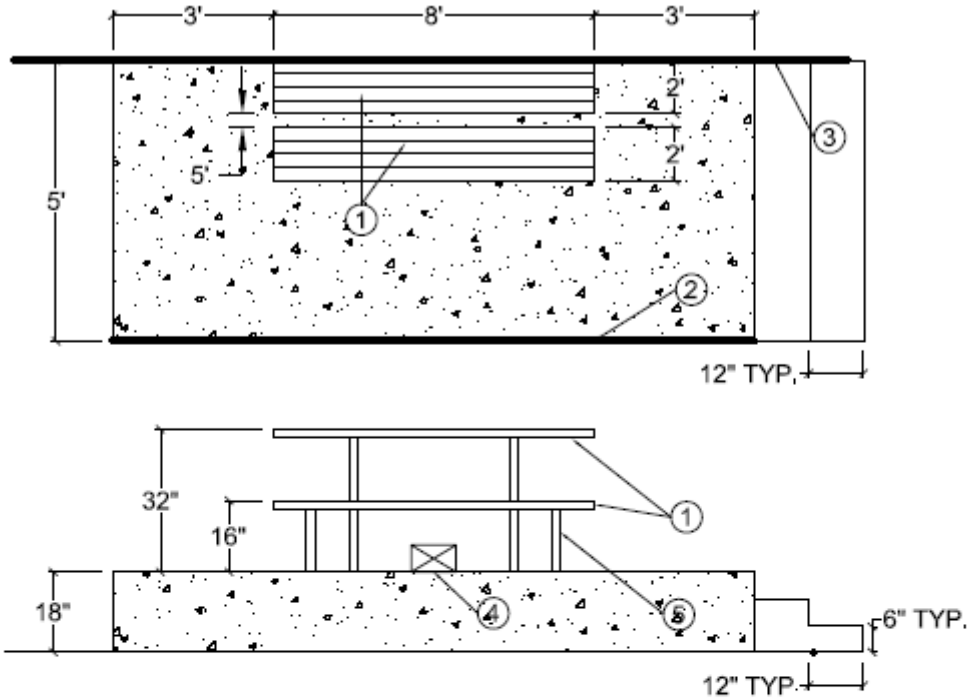


## d. ADULT SOFTBALL FIELD

| | |
|---|---|
| **Base Length:** | Sixty feet (60'), Sixty-five feet (65') |
| **Infield Radius:** | Sixty-five feet (65') from center of rubber |
| **Pitching Rubber:** | Fifty feet (50') from back point of home plate to front of rubber |
| **Foul Line to Home Plate:** | 275 feet minimum |
| **Centerfield to Home Plate:** | 275 feet |
| **Backstop to Home Plate:** | Thirty feet (30') |
| **Minimum Setback:** | 125 feet from Home Plate/Foul lines to street, right of way, sidewalk, or building. |
| **Backstop:** | Permanent winged-style backstop required. In situations where space is limited between fields, a clam-shaped backstop may be used. |



## e. SCOREKEEPER'S AREA




LEGEND

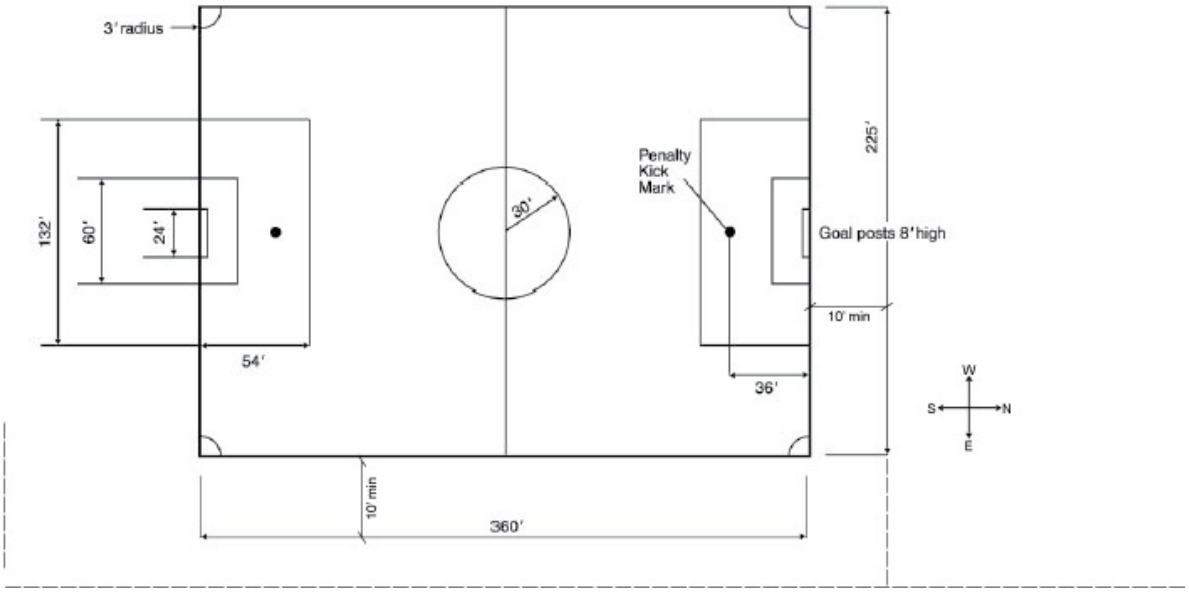
1. MODIFIED PLAYER'S BENCH - MODEL #: PBA-6P-FS
   TABLE LEG HEIGHT: 32" BENCH LEG HEIGHT: 16"
   MATCH PLAYER'S BENCH COLORS
   MANUFACTURER: JIM SPENCE 1800-264-7225
   (BLEACHER BOARDS INSTALLED AS TABLE)
2. 4' HIGH CHAIN LINK FENCE
3. BACKSTOP
4. SCOREBOARD AND P.A. HOOKUPS (SEE ELECTRICAL PLANS)
5. PIPE SUPPORTS IN CONCRETE FOR FOOTING REFER TO DUGOUT DETAIL

## 2. STANDARDS APPLICABLE TO ALL SOCCER, FOOTBALL, AND RUGBY FIELDS

| | |
|---|---|
| **Field Orientation:** | Typically, the long axis of the fields should extend north/south, at right angles to the late afternoon sun's rays. |
| **Field Placement:** | Multiple fields being placed adjacent to one another shall be placed side-by-side. Fields may be "off-set" to facilitate field layout, but may not be end-to-end. The minimum separation between fields shall be nine feet (9'). |
| **Field Obstructions:** | An area, minimum ten feet (10') wide, will be provided around the field where possible, with no trees, berms, planters, or sidewalks within ten feet (10') of the sidelines. If possible, a minimum of 6 feet from each corner of the field will be level grass with no obstructions. |

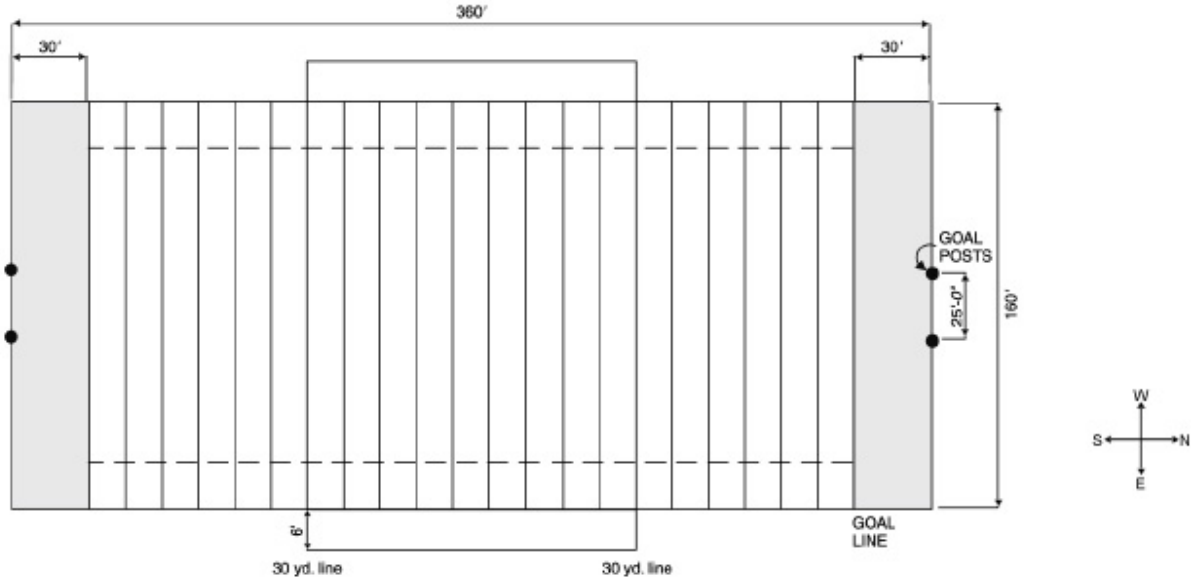
### a. SOCCER FIELD LAYOUT

Field Dimensions: Minimum 180' x 300" ; Ideal: 225' x 360'



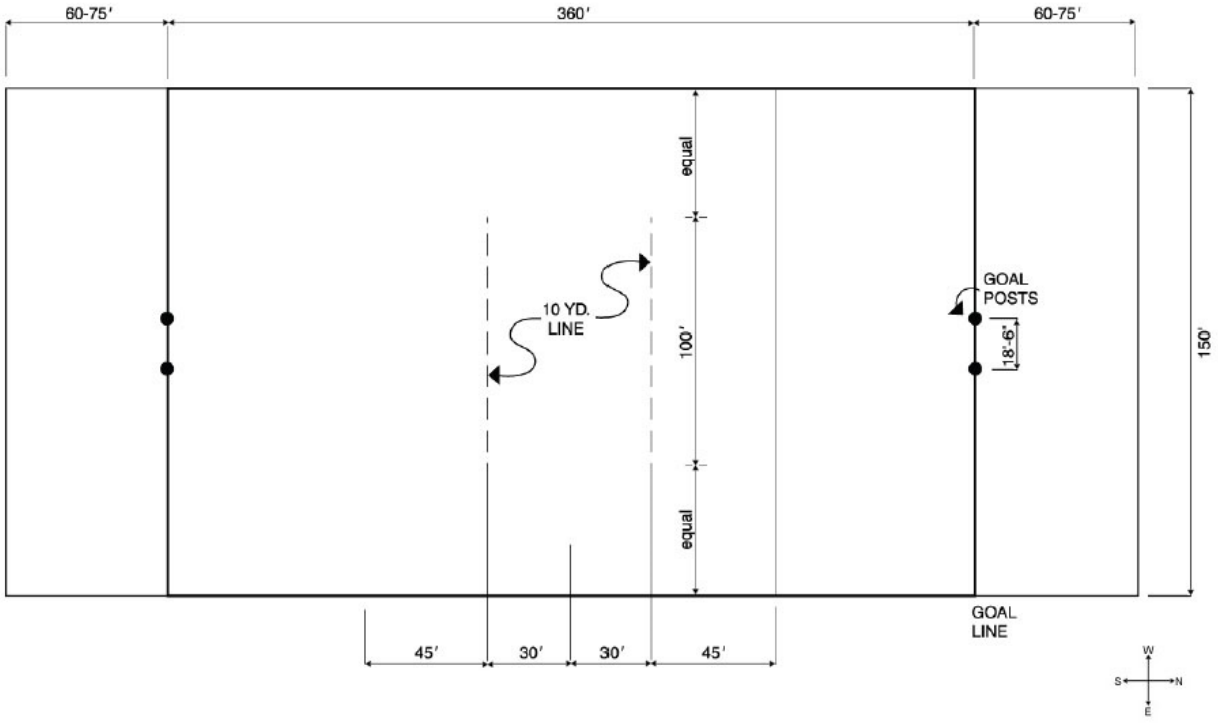
## b. FOOTBALL FIELD LAYOUT

Field Dimensions: 160 feet x 360 feet



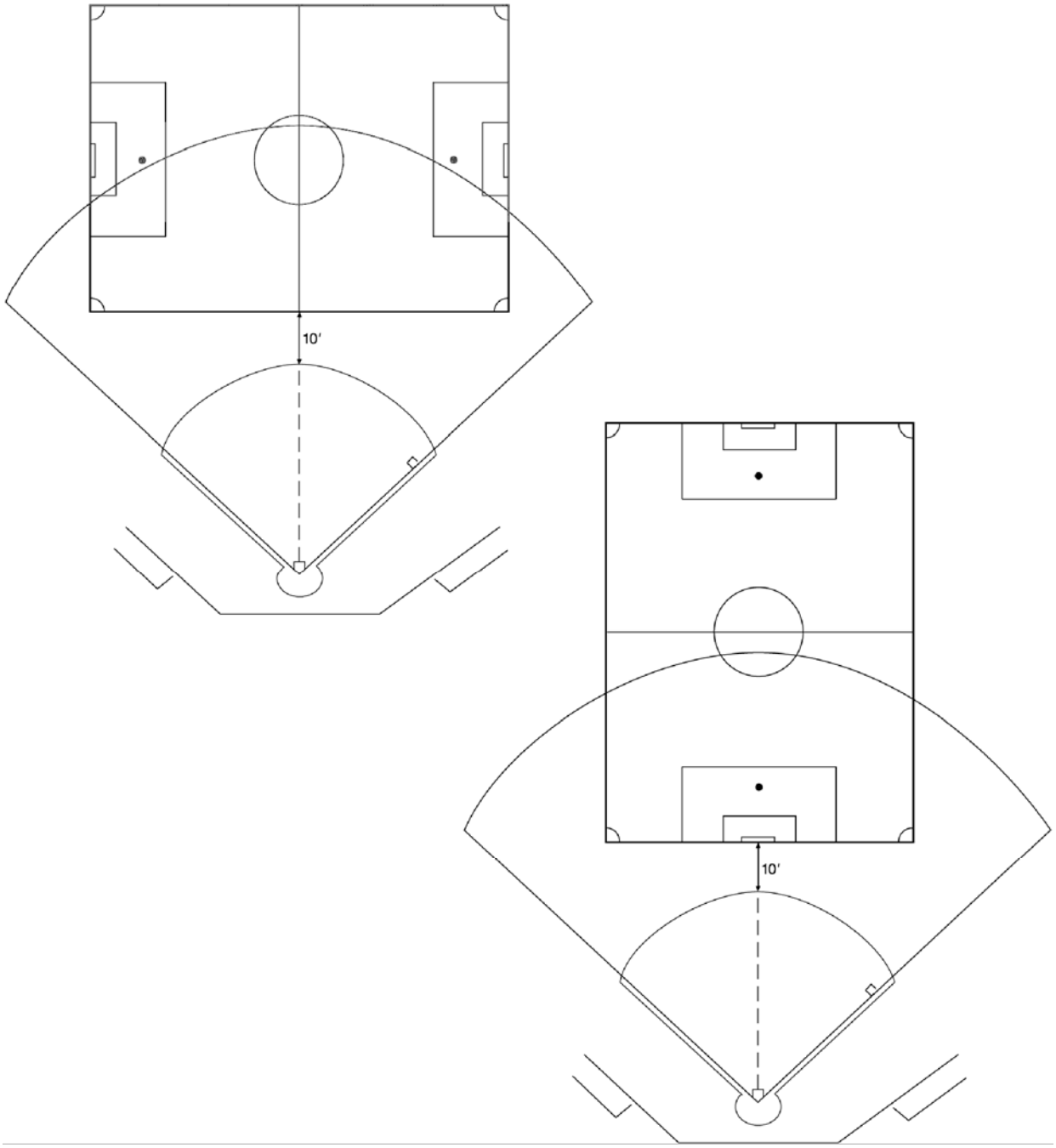

## c. RUGBY FIELD LAYOUT

**Field Dimensions:** 150 feet x 360 feet



## d. FIELD OVERLAY

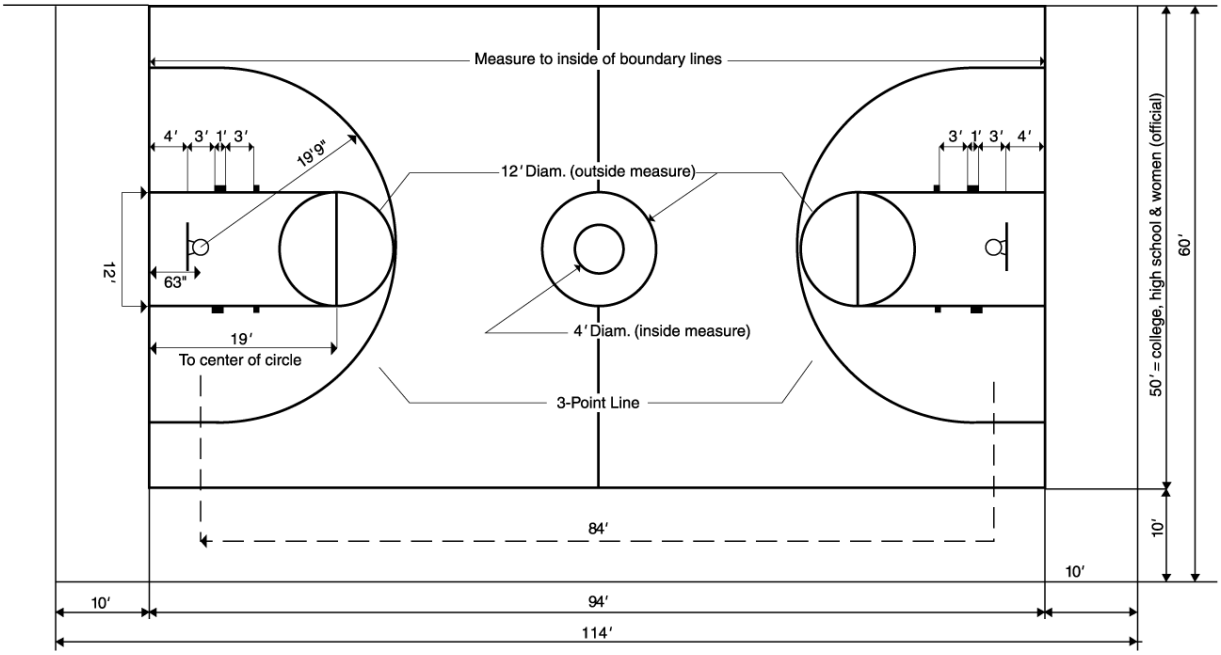
Field overlay situations shall often occur in order to optimize recreational opportunities. In case of an overlay, fields shall be placed in one of the arrangements shown below or in an acceptable alternative arrangement. In any field overlay, the edge of the soccer field shall be a minimum ten feet (10') from the edge of the brickdust on the baseball/softball field.



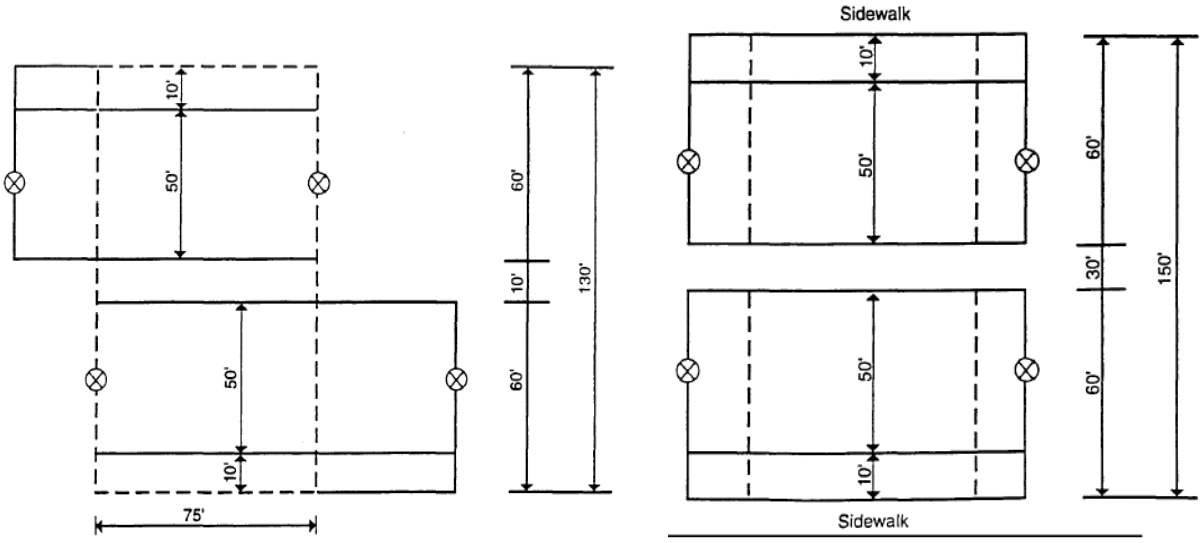
## 3. BASKETBALL COURT

| | |
|---|---|
| **Court:** | Playing field: Eighty four feet (84) by fifty feet (50') for both indoor and outdoor courts. Outdoor Courts shall have a poured concrete surface ninety four feet (94') by sixty feet (60'). |
| **Court Surfacing:** | Court surfacing shall consist of four coats, including: one coat of primer, one filler coat of Plexipave special acrylic resurfacer with #60 silica sand or approved equal and two coats of Clear-glow, or approved equal at basketball keys for longer wear |
| **Court Placement:** | Ten feet (10') minimum distance between courts that are placed side-by-side or end-to-end. Where two or more courts are provided at one site, the courts should be configured for multipurpose use, per Basketball Court Placement Diagram. |
| **Markings:** | All markings on the playing surface shall be applied as shown below, using a wear-resistant, colored substance. All lines shall be minimum two inches (2") wide unless otherwise noted. The color of the markings shall be white. |
| **Goals:** | Preferred Model: L.A. Steelcraft #1254 or #1256 (depending on offset need) with #SD-10 goal with nylon net hooks.<br>• Preferred Models: Rim – Goal Setter System model #R10426<br>Ground Anchor - Goal Setter System model #G2000 |
| **Lighting:** | All basketball courts shall be lit. Refer to Section K - Lighting Standards for Public Facilities. |

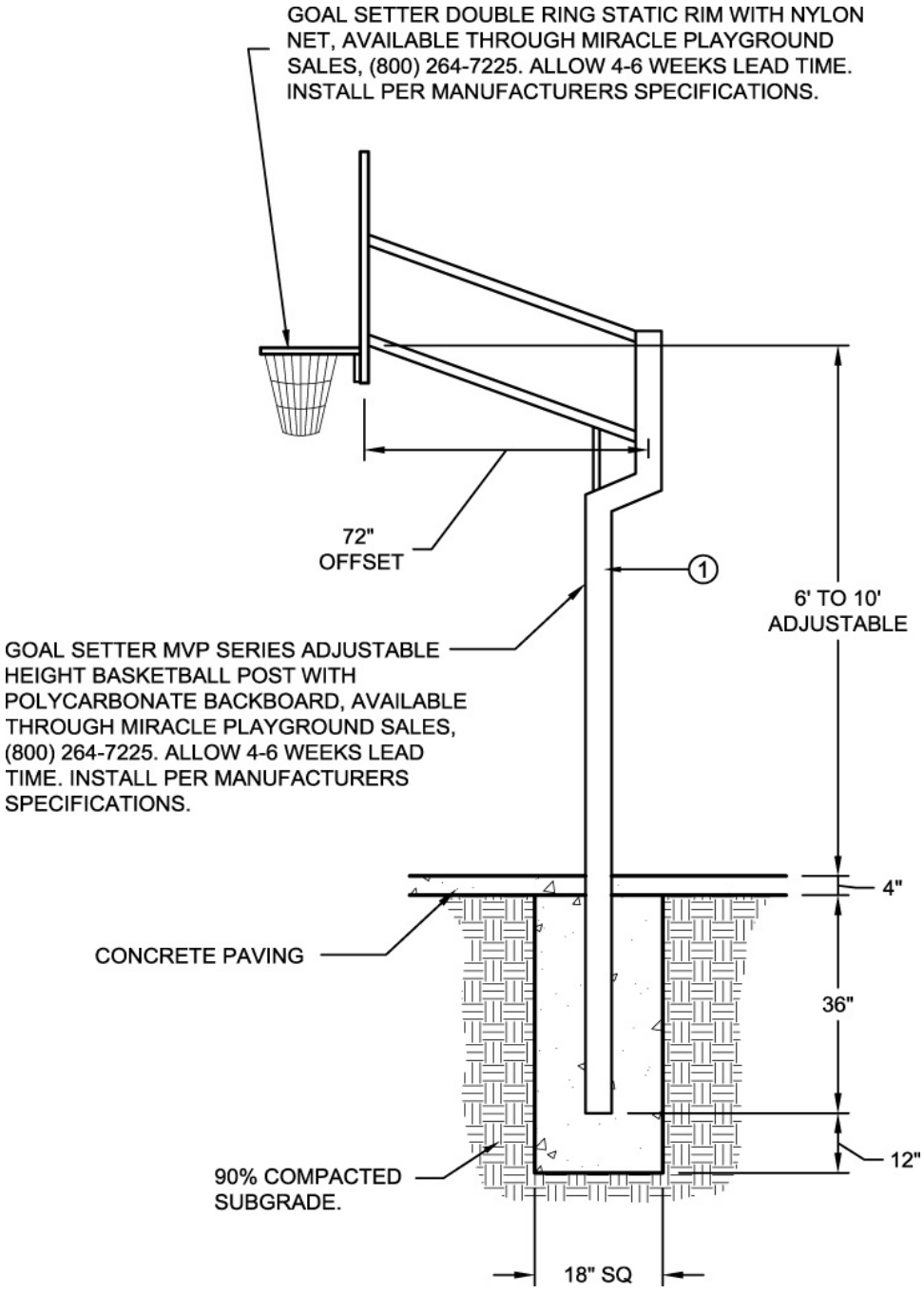
### a. Basketball Court Layout



## b. Basketball Court Placement



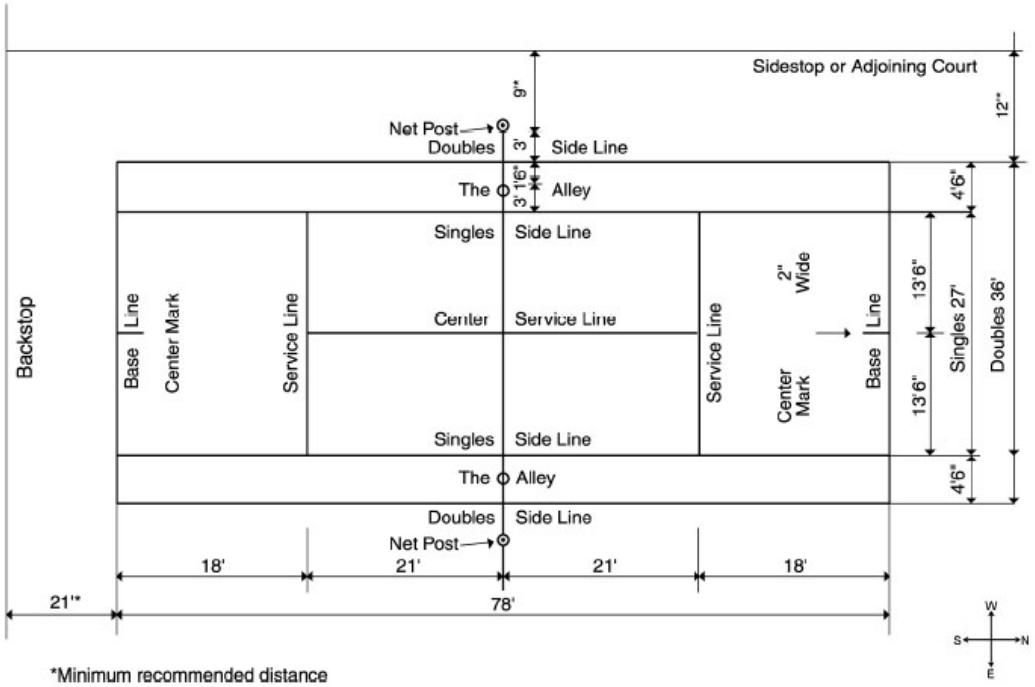
## c. Basketball Post Footing



## 4. TENNIS COURT

| | |
|---|---|
| **Court Dimension:** | Thirty-six feet (36') by seventy-eight feet (78'), with twelve foot (12') side clearance on each side and twenty-one feet (21') between each baseline and the fence. |
| **Orientation:** | Courts should be laid out on a north-south axis line. |
| **Court Placement:** | When two or more courts are placed side-by-side, the minimum distance between adjacent sidelines of the courts shall be twelve feet (12'). A fence, forty-two inches (42") high, shall be placed midway between each two adjacent courts, beginning at a forty six inch (46") gate opening at each end. The minimum distance between the end of each court and the fence shall be twenty-one feet (21'). |
| **Court Surface:** | Concrete, with a coarse, epoxy-bonded, colored surface by Plexipave, or approved equal. Colors shall be determined at final design. |
| **Markings:** | The courts shall have markings for both singles and doubles play.<br>Baseline shall be painted four inches (4") wide. All other lines shall be painted 2 inches wide. Color shall be white. |
| **Fencing:** | Twelve foot (12') high six (6) gauge chain link enclosing the court with a one and five-eighth inch ($1^5/_8$") galvanized bottom rail. The courts shall be shielded with an open mesh windscreen of black seamless polypropylene nine feet (9') high with center tabs. |
| **Net & Posts:** | Preferred Models:<br>▪ Posts: L.A. Steetcraft model #TP42ZT<br>▪ Tennis nets: Edwards Sports Supreme model #2002<br>▪ Tie down straps: Edwards Center Strap model #2041 |
| **Windscreen:** | Windscreen shall be open mesh polypropylene, black, seamless, nine feet (9') high, with center tabs. |

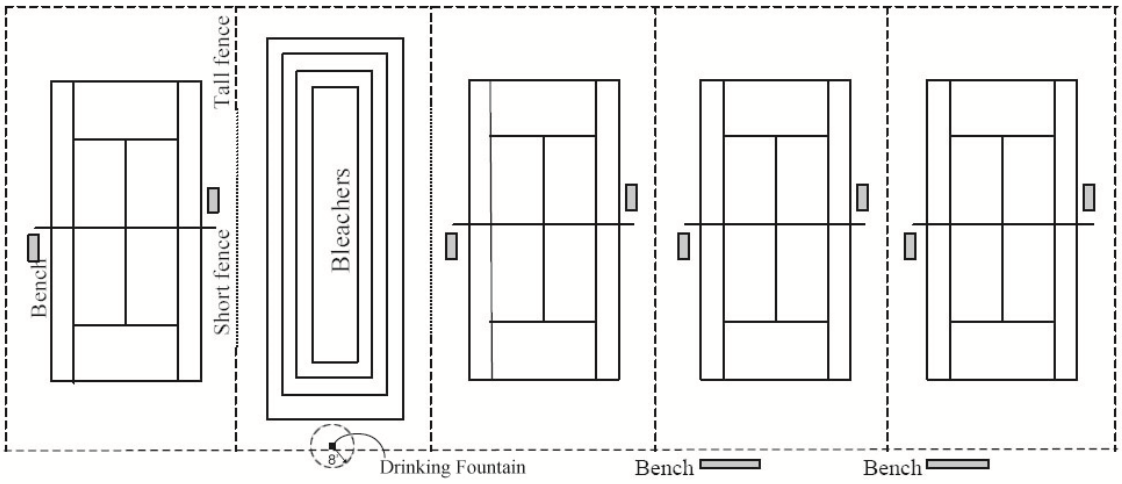
### a. Tennis Court Layout



## 5. TOURNAMENT TENNIS COURTS

| | |
|---|---|
| **Applicability:** | If more than four (4) tennis courts are at the same location, the courts shall conform to the following standards to allow for tournament tennis. |
| **Design:** | Except as noted bellow, the previously stated tennis court standards are applicable to all tennis courts, shall also be used for tournament tennis. |
| **Seating:** | Spectator seating shall be provided by a tiered concrete structure or portable bleachers containing five (5) rows of seating placed in an area approximately twenty-eight feet (28') by fourteen feet (14'). Bleachers are required on each side of the spectator area for viewing at least two (2) courts. All seating facilities shall conform to California Title 24 Accessibility Regulations. |
| **Benches:** | Two (2) benches for players shall be located adjacent to each court. A bench for patrons waiting to use the courts shall be placed adjacent to the perimeter gate. |
| **Drinking Fountain:** | A drinking fountain shall be located on the concrete area in proximity to the bleachers, providing an eight foot (8') radius to allow space for pedestrian traffic. Haws Model #3300, or approved equal. |
| **Markings:** | The courts shall have markings for both singles and doubles play.<br>Baseline shall be painted four inches (4") wide. All other lines shall be painted two inches (2") wide. |

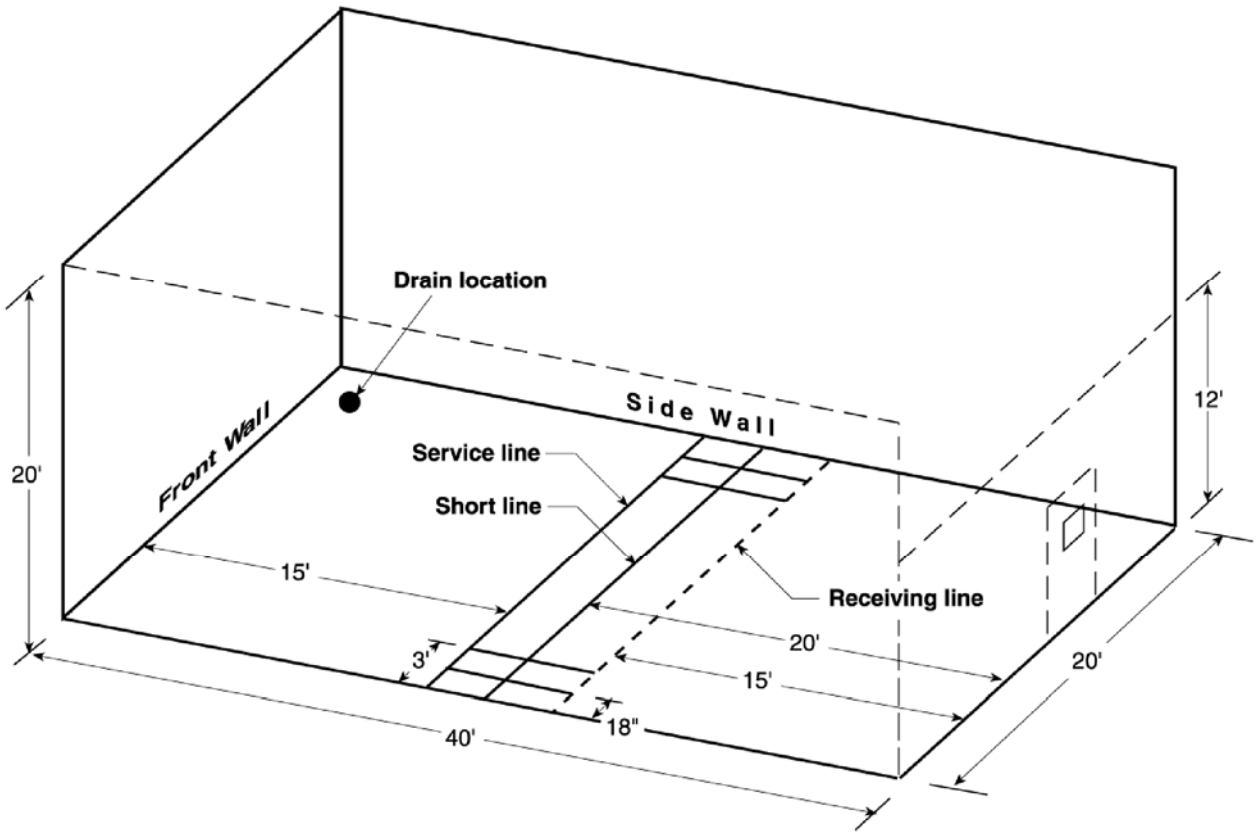
### a. Tournament Tennis Court Layout



## 6. RACQUETBALL/HANDBALL COURT

| | |
|---|---|
| **Court:** | Twenty feet (20') wide, forty feet (40') long, and twenty feet (20') high. |
| **Back Wall:** | Minimum twelve feet (12') high with a door in the center. |
| **Court Surface:** | Concrete, with a medium broom finish. Court markings shall be applied using a wear-resistant substance. |
| **Door:** | Metal door with expanded metal window shall be provided which includes four (4) SOSS Hinges; and a flush and magnetic type ring pull. Door jam shall be filled with grout. All interior items of door must be flush with the interior wall. |

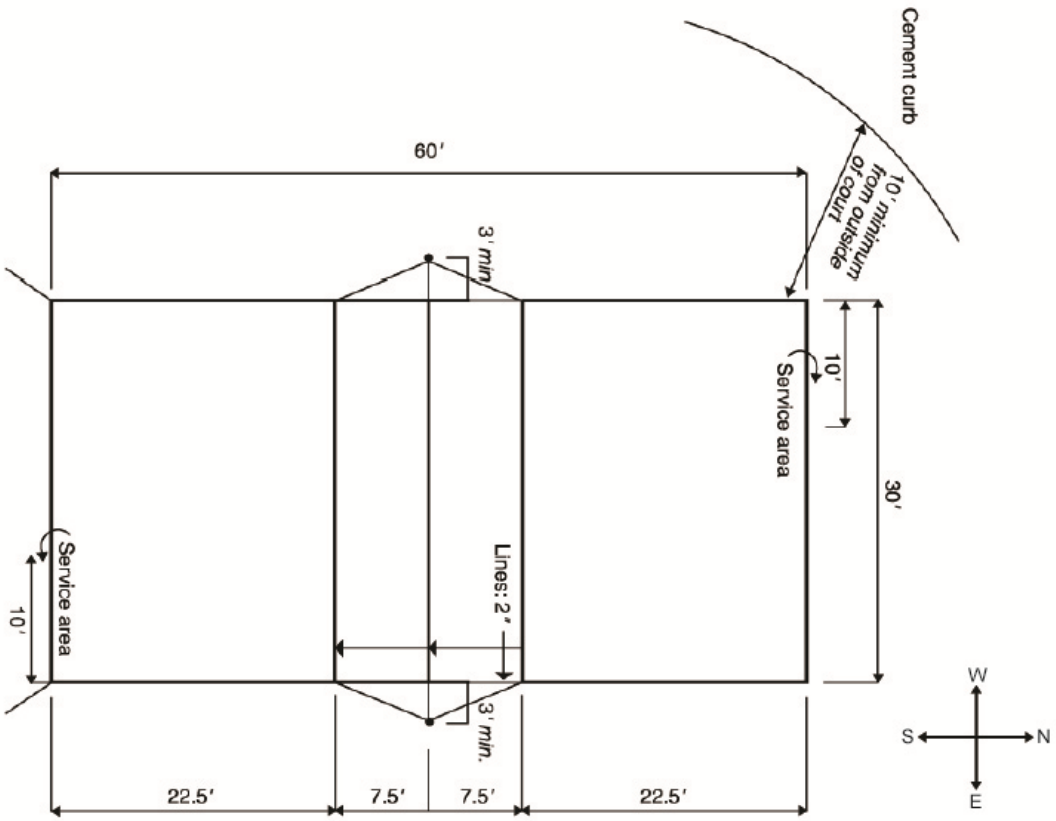
### a. Racquetball Court Layout



## 7. VOLLEYBALL COURT

| | |
|---|---|
| **Court Dimensions:** | Concrete, grass, and sand courts: forty-two feet (42') by eighty feet (80'), with a playing area of thirty feet (30') by sixty feet (60'). |
| **Court Placement:** | Minimum ten feet (10') distance between courts placed side-by-side. Minimum fifteen feet (15') distance between courts placed end-to-end. |
| **Sand Courts:** | A concrete mow strip four feet (4') wide is required surrounding the court. Minimum depth of sand shall be ten inches (10"). Sand shall be single washed plaster type or equivalent. |
| **Markings:** | Markings on concrete courts shall be applied using a wear-resistant substance. |
| **Nets & Posts:** | Preferred Models:<br>▪ Goals: L.A. Steelcraft model #AGP-4<br>▪ Wheel and Ratchet: L.A. Steelcraft model #NRF-4<br>▪ Side Pulley: L.A. Steelcraft #NPA-4<br>▪ Net: West Coast #VNCR-32<br>Parks that are not supervised or where ratchet and pulley is not desired shall use the following preferred models:<br>▪ Posts: L.A. Steelcraft #VPP-4PEL<br>▪ Net: West Coast model #VNRR-32 |

### a. Volleyball Court Layout

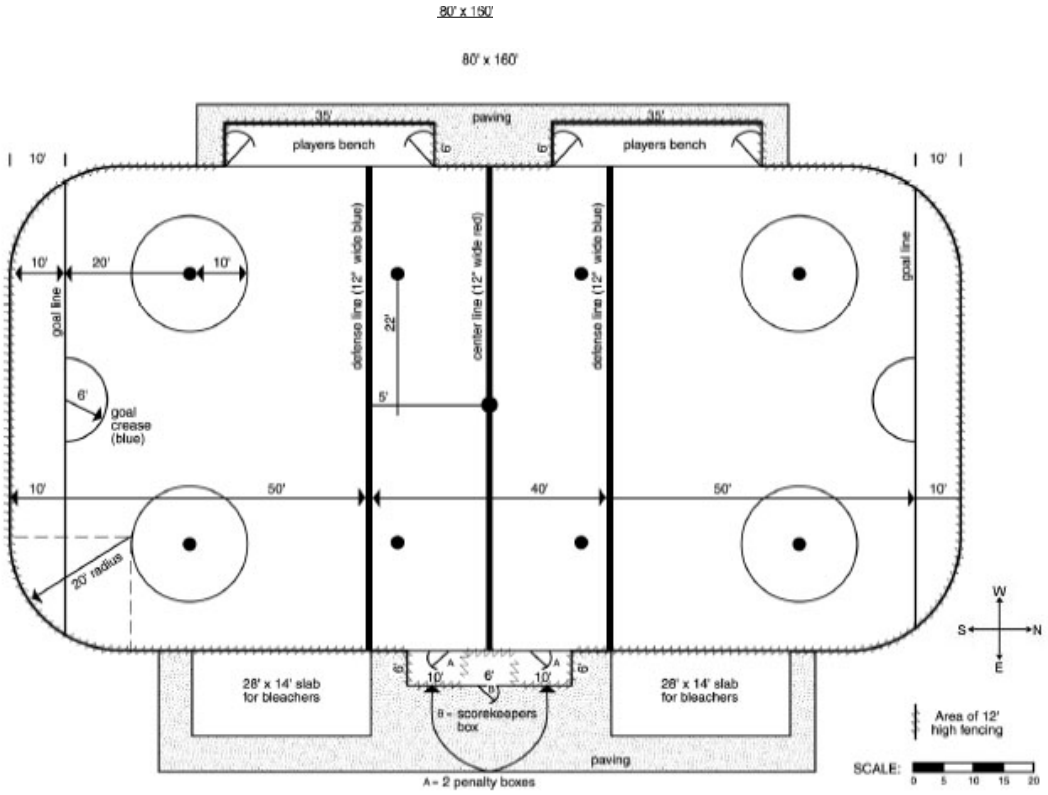


## 8. YOUTH AND ADULT ROLLER HOCKEY RINKS

| | |
|---|---|
| **Dimensions:** | Youth Rink: Ideal: 80 feet x 160 feet; Minimum: 75 feet x 150 feet<br>Adult Rink: Ideal: 85 feet x 180 feet; Minimum: 80 feet x 170 feet |
| **Rink Surface:** | Rink shall be a smooth, poured concrete surface. |
| **Markings:** | All markings on the playing surface shall be applied using a wear-resistant substance that is slip-resistant to rollerblades. Center line shall be twelve inches (12") wide and painted red. Trisecting court lines shall be twelve inches (12") wide and painted blue. Dots and goal crease shall be painted blue. All other lines shall be painted black. |
| **Drainage:** | A drainage system shall be installed on the perimeter of rink as needed. |
| **Spectator Area:** | Spectator areas shall consist of two sets of aluminum bleachers, each with five (5) rows, seating seventy (70), on a concrete pad twenty-eight feet (28') by fourteen feet (14'). A minimum of four feet (4') of concrete must be provided on all sides of the bleachers for accessibility. Concrete walkways shall be provided to the bleachers for accessibility. Adequate space for forward or rear side access to wheelchair seating must be provided. |
| **Bench Areas:** | The penalty box area shall be divided into three portions: two (2) separate penalty boxes six feet (6') deep and ten feet (10') wide, separated by a scorekeeper's box six feet (6') deep and six feet (6') wide, with a total dimension of six feet (6') by twenty-six feet (26'). A ten foot (10') aluminum bench shall be provided in each penalty box. The players' bench areas and penalty boxes shall be paved with concrete and enclosed by four feet (4') high three-quarter inch (¾") plywood walls. The floors in the players' bench areas shall be covered with a raised wood floor, approximately six inches (6") higher than the concrete. The players' benches shall be aluminum, thirty feet (30') long. Each players' bench area shall have one gate to the outside and one gate to the rink. The scorekeeper's area shall be fenced in (facing the rink) on each side and on top for safety. The scorekeeper's box shall have a gate to the outside minimum forty-two inches (42") wide. The players' bench and penalty box areas shall be covered with fencing on all sides and on top, except where there is a gate to the rink. |
| **Fencing/ Walls:** | The bottom four feet (4') of the rink walls shall be three-quarter inch (¾") plywood, coated with a smooth fiberglass finish, with three foot (3') wide gated openings to the two players' benches and two penalty boxes. The top edge of the plywood wall shall have a protective weather strip cap. The bottom eight inches (8") of the plywood wall shall have an eight inch (8") high kickplate made of strips of polyurethane. A four foot (4') high chain link fence is required above the plywood walls on the sidelines. An eight foot (8') high chain link fence is required above the plywood walls at the goal ends, starting at the curve of the corners. Only the plywood walls in front of the players' benches, gates, and penalty boxes shall not have chain-link fencing above. The chain link shall continue behind the players' benches. The chain link shall be 6-gauge, rubber-coated, with horizontal top and bottom rails. Vertical posts shall be placed no less than eight feet (8') on center. See drawing on next page for an illustration of the fencing. |
| **Electrical Outlet:** | Four electrical outlets shall be installed at each court. One outlet shall be on each side of the rink, with one outlet inside the scorekeeper's box. Outlets must be thirty (30) amps. |

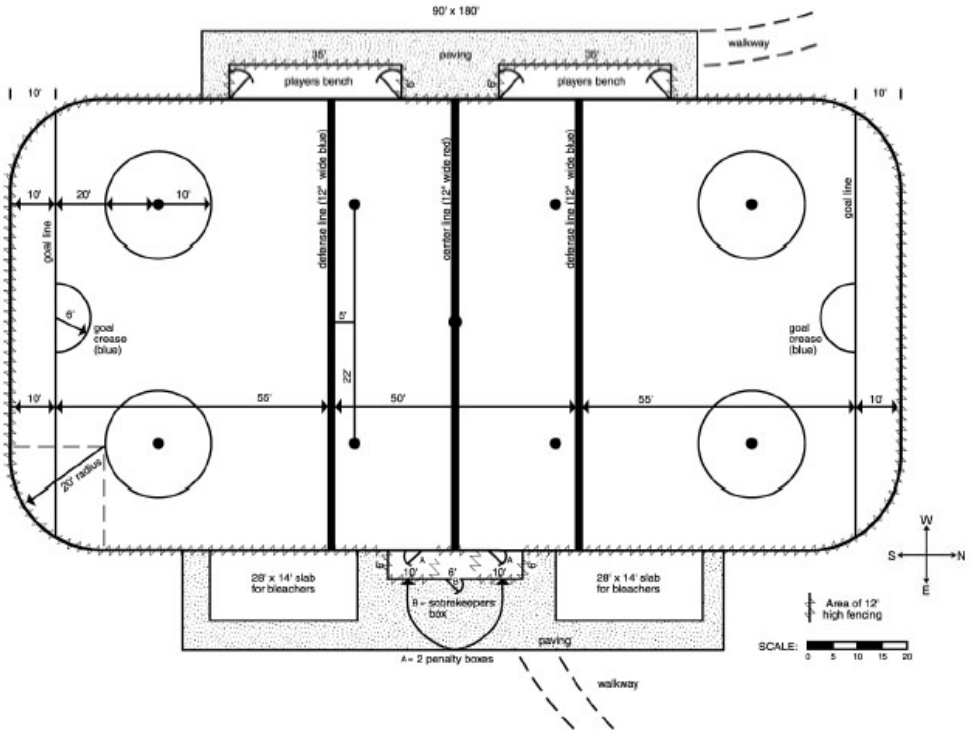
## a. YOUTH HOCKEY RINK LAYOUT

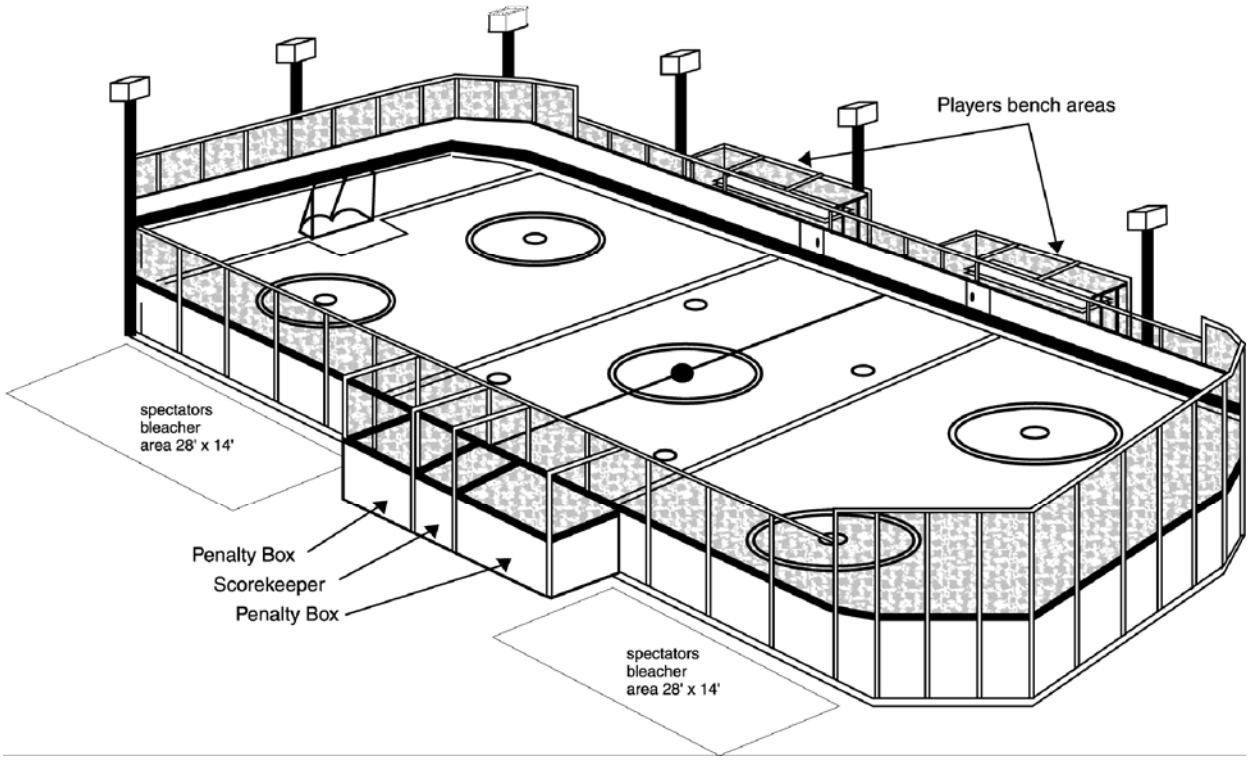
## (80 feet x 160 feet)



## b. ADULT HOCKEY RINK LAYOUT

(85 feet x 180 feet)



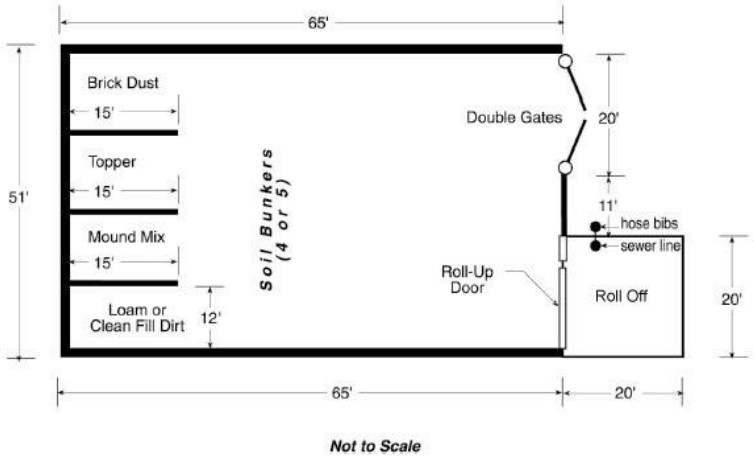



## 9. MAINTENANCE COMPOUND AND SOIL MATERIAL BUNKER

A maintenance compound may be required at community parks where there are four (4) or more fields of any type or combination. A reduced size maintenance compound may be used as an alternative when fewer than four (4) fields are located at one site, or when site conditions prohibit the provision of a full size facility.

### a. REGULAR SIZE MAINTENANCE COMPOUND AND SOIL AND MATERIAL BUNKER

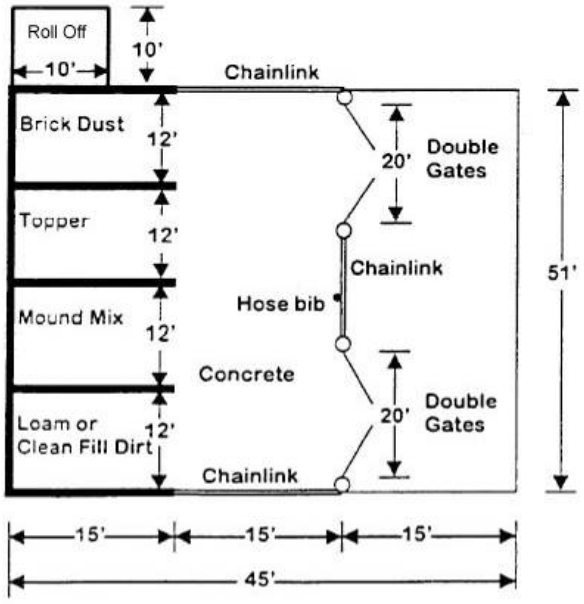
| | |
|---|---|
| **Plan:** | The typical plan for the maintenance compound/bunker is shown below. |
| **Bunker:** | The maintenance compound shall have four (4) bunker areas for storing soil and material. Each soil bunker shall be twelve feet (12') wide, fifteen feet (15') long, and five feet (5') high. The maintenance compound walls shall also function as walls for the soil bunkers. Each soil bunker shall be separated by additional internal concrete walls eight inches (8") to twelve inches (12") thick. |
| **Flooring:** | Concrete. |
| **Shed:** | A twenty foot (20') by twenty foot (20') metal shed (butler type) shall be placed in the corner of the compound. The shed shall have a ten foot (10') wide roll-up door opening to the wide part of the compound, and a three foot (3') wide pedestrian door adjacent to the roll-up door. |
| **Fencing:** | A six foot (6') high fence shall be installed around the soil/material bunkers. The fence shall be constructed of 6-gauge chain link, with a polypropylene fabric windscreen and rails at the top and bottom. |
| **Gate:** | One lockable twenty feet (20') double wide gate, six feet (6') high, shall be provided for each compound. |
| **Water:** | There shall be two bibs for each compound, one exterior and one interior. Both shall provide potable water. |
| **Electricity:** | The shed shall have two (2) eight foot (8') long double fluorescent light fixtures and two (2) double wall plug units (110 volts). The exterior of the shed shall have a security light (HPS) operated by a photo cell. |
| **Truck Access:** | There shall be clear access from the street or parking lot for light and heavy-duty trucks and equipment. The access surfacing in front of the maintenance compound shall be built to accommodate the weight of a ten yard truck (40,000 pounds). |




*Not to Scale*

## b. REDUCED SIZE MAINTENANCE COMPOUND AND SOIL AND MATERIAL BUNKER

| | |
|---|---|
| **Plan:** | A reduced size maintenance compound is shown below. |
| **Bunker:** | The maintenance compound shall have four (4) bunker areas for storing soil and material. Each soil bunker shall be twelve feet (12') wide, fifteen feet (15') long, and five feet (5') high. The maintenance compound walls shall also function as walls for the soil bunkers. Each soil bunker shall be separated by additional internal concrete walls eight inches (8") to twelve inches (12") thick. |
| **Flooring/ Surfacing:** | Concrete |
| **Shed:** | A ten foot (10') by 10 foot (10') metal shed (butler type) shall be placed in the corner outside of the compound. The shed shall have a six foot (6') wide double door. |
| **Fencing:** | A six foot (6') high fence shall be installed around the soil/material bunkers. The fence shall be constructed of six (6) gauge chain link, with a polypropylene fabric windscreen and rails at the top and bottom. |
| **Gate:** | One lockable twenty foot (20') double wide gate, six feet (6') high, shall be provided for each compound. |
| **Water:** | There shall be one bib for each compound providing potable water. |
| **Electricity:** | The shed shall be equipped with one (1) four feet (4') long double fluorescent light fixture and one double wall plug unit (110 volts). |
| **Accessibility:** | There shall be clear access from street or parking lot for light and heavy-duty trucks and equipment. |



# E. PUBLIC BUILDINGS SPECIFICATIONS

***All roofs of public buildings shall be forest green colored roofs.**

## 1. RESTROOMS

| | |
|---|---|
| **General Guidelines:** | Interior Restroom lighting shall be located as high as possible.<br>Restroom stall partitions shall be reinforced block with all cells filled with mortar. |
| **Doors:** | Galvanized steel doors and frames with stainless steel louvers and protectors shall be installed on all restroom entries with dual dead bolt locks located thirty-two inches (32") and sixty inches (60") respectively above the floor. The security door shall have provisions to be locked open during use. |
| **Lighting:** | Security lighting for restrooms to be located on security poles. Lights to be spotlights aimed at the structure at a height of at least twelve feet (12'). |
| **Graffiti Coating:** | All restroom facilities shall have Vitrocem ( www.vitrocem.com ) anti graffiti coating on the inside and outside of the structure. |
| **Preferred Model:** | CXT prefabricated concrete building or approved equal. Restrooms shall be pre-plumbed, pre-wired, have screen doors, stainless steel fixtures, with integral earth tone colored stucco, Napa Valley rock exterior walls, and simulated cedar shake textured roofs. |

## 2. CONSESSION STANDS

| | |
|---|---|
| **Lighting:** | Security lighting for concession to be located on security poles. Lights to be spotlights aimed at the structure at a height of at least twenty feet (20'). |
| **Security Screens and Doors:** | Security screens and doors to be installed on all snack-bar serving windows to protect rollup metal doors. |

## 3. PICNIC SHELTERS

| | |
|---|---|
| **Picnic Shelter:** | • All structures to be by Poligon Park Architecture by Miracle Playgrounds or equal.<br>• Structures shall be hexagonal or octagonal in shape.<br>• Structure diameter to be twenty-four feet (24') to thirty plus feet (30'+).<br>• Concrete pad shall be a minimum of six feet (6') outside of shelter roof line, with a high point located in the middle of the slab and a minimum of two percent (2%) slope toward the edge of the concrete slab. |

# F. FENCING AND GATES

## 1. GENERAL GUIDELINES

a. **Gates:**

All park and snack bar facilities shall have emergency access to locked gates is to be provided through installation of a Knox box key vault which shall contain all keys required to enter the pool area at any time. The box is to be installed within eight feet (8') of the gate and placed between five and six feet (5'-6') above ground level.

b. **Dugouts and Bullpens:**

i. 2 7/8" SS40-Terminal posts
ii. 3 3/8" SS40-Line posts
iii. 1 5/8" SS20-Top and bottom rail
iv. 9 gauge G.A. Weave
v. Ties minimum of 18" on rails and 14" on posts
vi. Terminal posts, line posts, top and bottom rail by Buy American or equal.

c. **Outfield:**

i. 2 7/8" SS40-Terminal posts
ii. 2 3/8" SS40-Line posts
iii. 1 5/8: SS20-Top rail
iv. 9 gauge G.A. Weave
v. 7 gauge coil spring tension wire and 9 gauge hot rings
vi. Ties minimum of 24" on rail and 14" on posts
vii. Terminal posts, line posts, top and bottom rail by Buy American or equal.

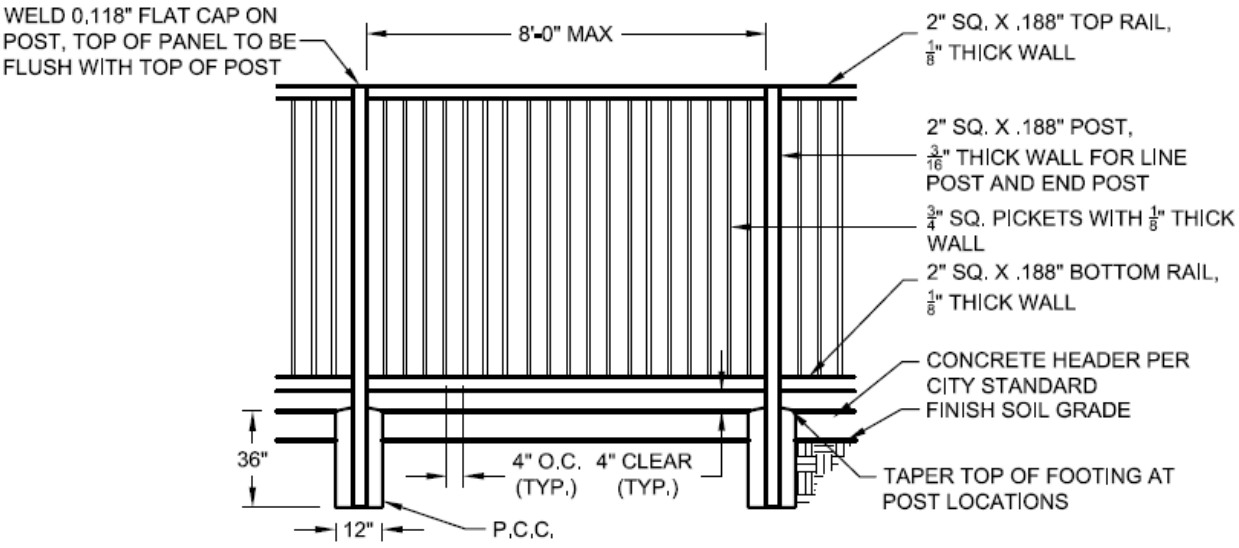
d. **Perimeter Fencing**

i. 42" 2-rail white precast "woodcrete" C8-on center
ii. 5" x 5" posts set in 2' domed concrete footing, 8' – 10' on center
iii. Rails 2 x 6 that slide through posts

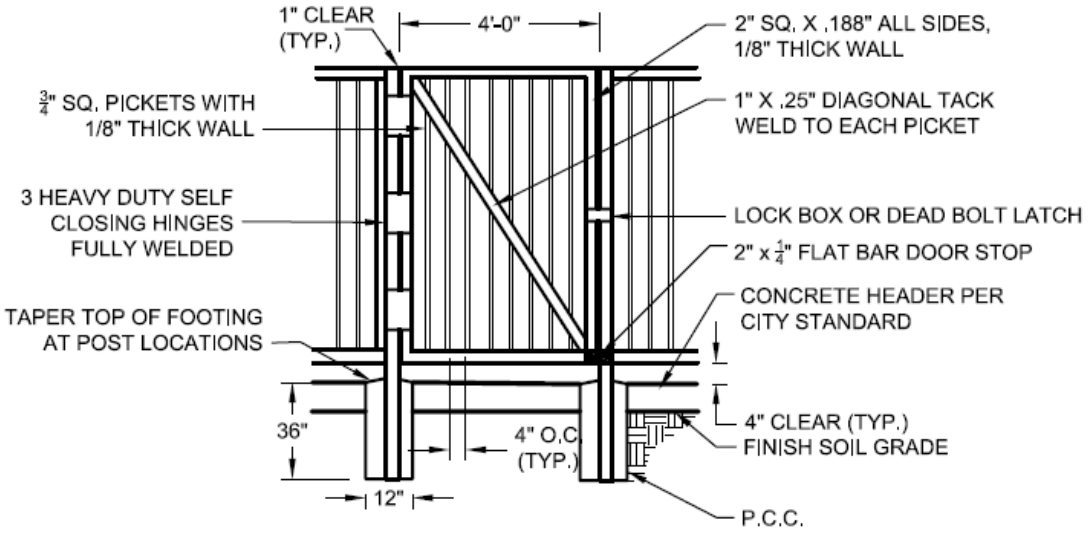
e. **Iron Fencing**

i. End posts use 4" x 3/16" wall
ii. Line posts use 2" x 3/16" wall
iii. Pickets use 1" x 1/8" wall
iv. Fares use 2" x 3/16" wall
v. Triple horizontal rails to be installed on fencing above 8' and spaced evenly.
vi. Provide a 18" x 18" mow curb under chain link, iron fences

# 2. TUBE STEEL FENCE




TYPICAL FENCE ELEVATION



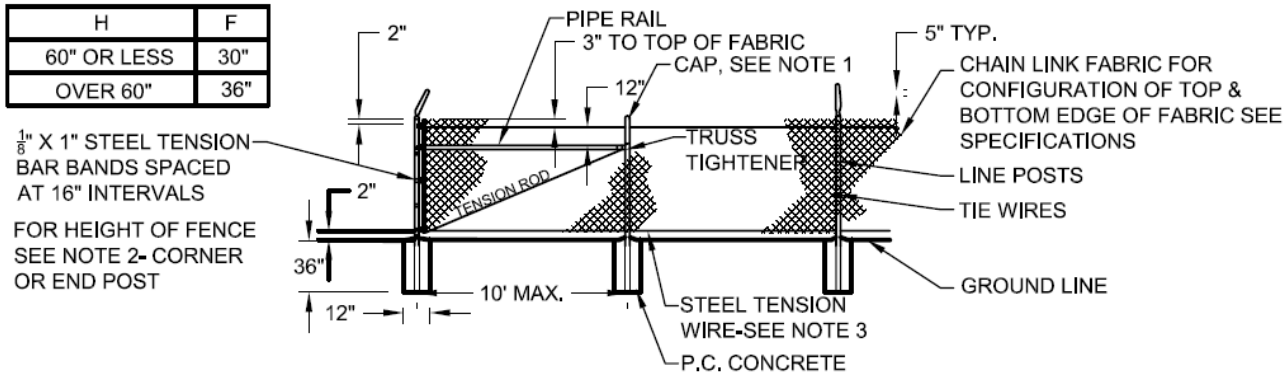

TYPICAL WALK GATE

NOTE:

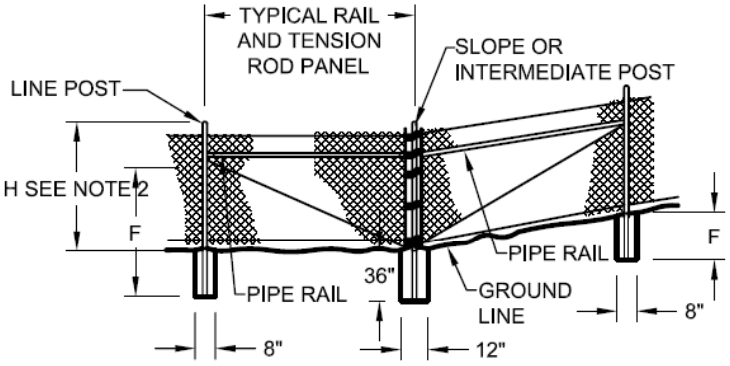
- ALL FENCE MEMBERS SHALL BE TUBULAR OR SOLID STEEL STOCK OR AS NOTED ABOVE.
- FABRICATE PANELS AS A UNIT, WELD AND GRIND SMOOTH ALL JOINTS.
- AFTER WELDING PANELS TO POSTS. CLEAN AND GRIND SMOOTH. DO NOT GRID WELDS OR PIN HOLES
- FENCE TO BE POWDER COATED, COLOR PER PROJECT PLANS

# 3. CHAIN LINK FENCE

| H | F |
|---|---|
| 60" OR LESS | 30" |
| OVER 60" | 36" |

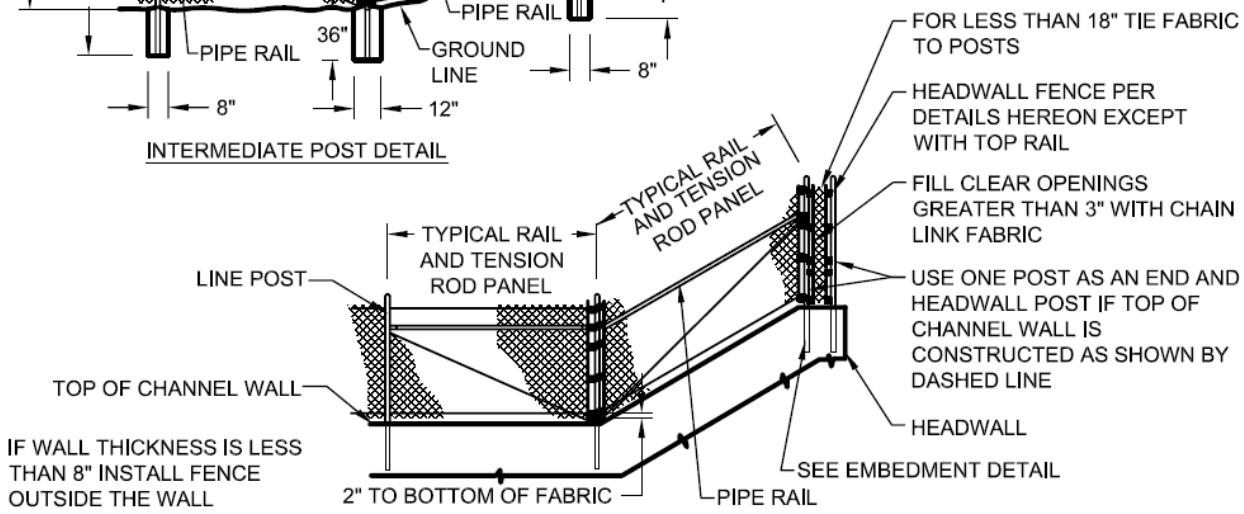



TYPICAL FENCE ELEVATION




INTERMEDIATE POST DETAIL

INTERMEDIATE AND SLOPE POSTS SHALL BE INSTALLED AT NOT MORE THAN 300' INTERVALS ALONG FENCE LINE AND AT GRADE CHANGES EXCEEDING 5%-ALSO APPLICABLE TO CHANNEL FENCE

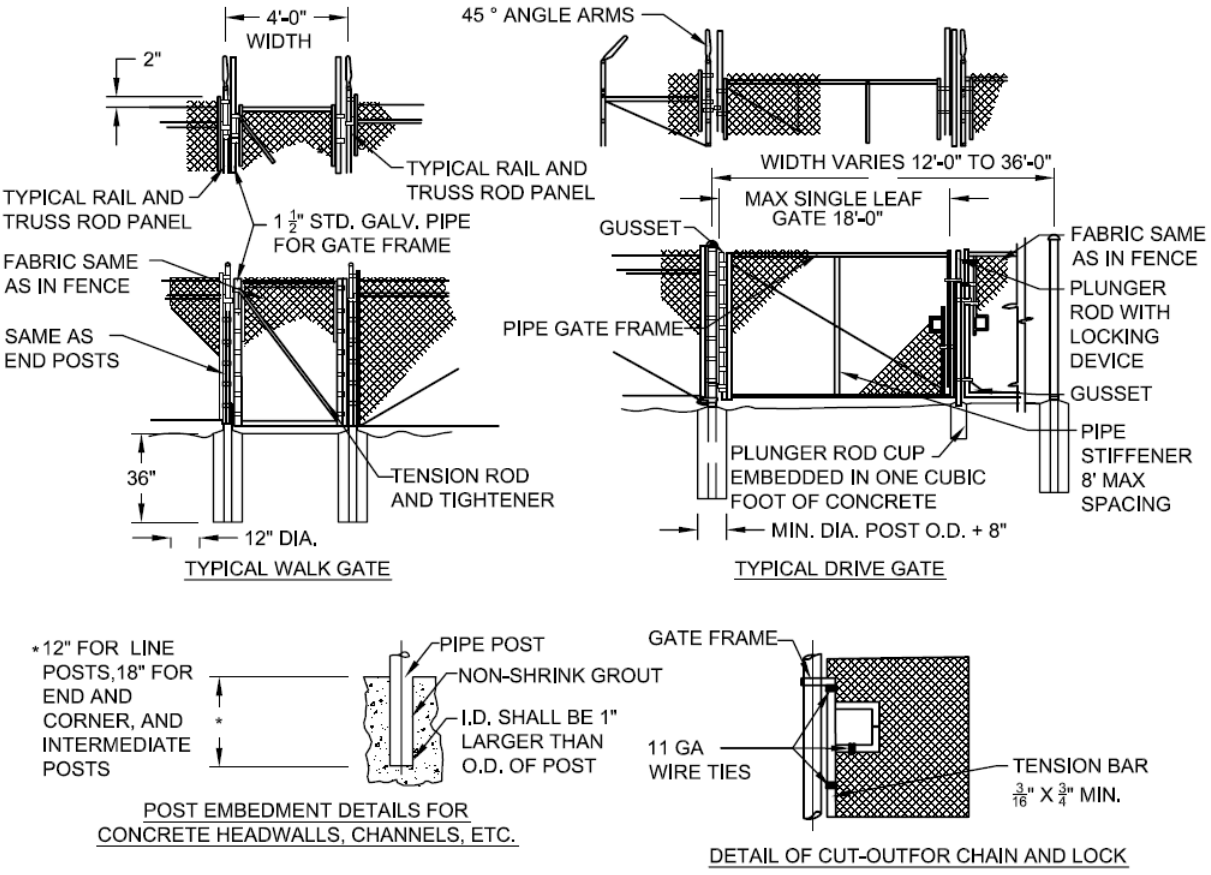


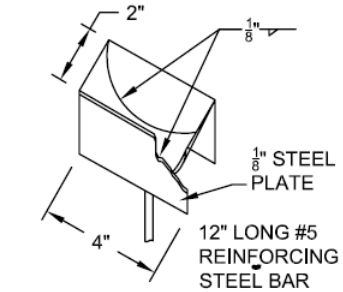

CHANNEL WALL AND WINGWALL DETAIL AT HEADWALL

NOTES:

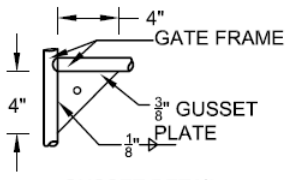
1. SECURE DRIVE FIT GALVANIZED CAP TO POST WITH $\frac{1}{4}$" ROUND HEAD RIVET
2. H DENOTES FABRIC WIDTH AND NOMINAL FENCE HEIGHT. H SHALL BE 5'-0" UNLESS OTHERWISE SPECIFIED
3. ALL DATA SHOWN ON TYPICAL DETAILS SHALL BE APPLICABLE TO OTHER PERTINENT DETAILS.

# 4. CHAIN LINK FENCE GATE




PLUNGER ROD CUP DETAIL

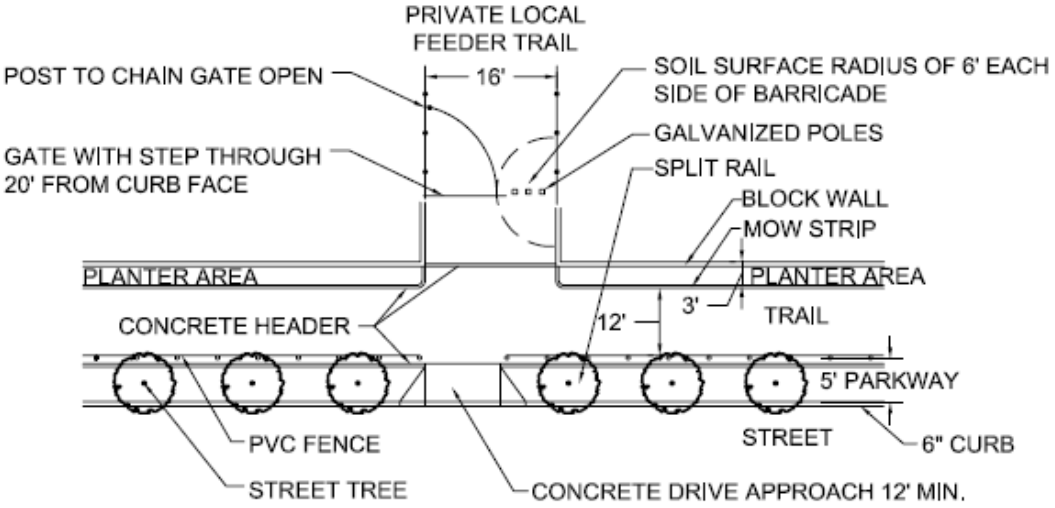


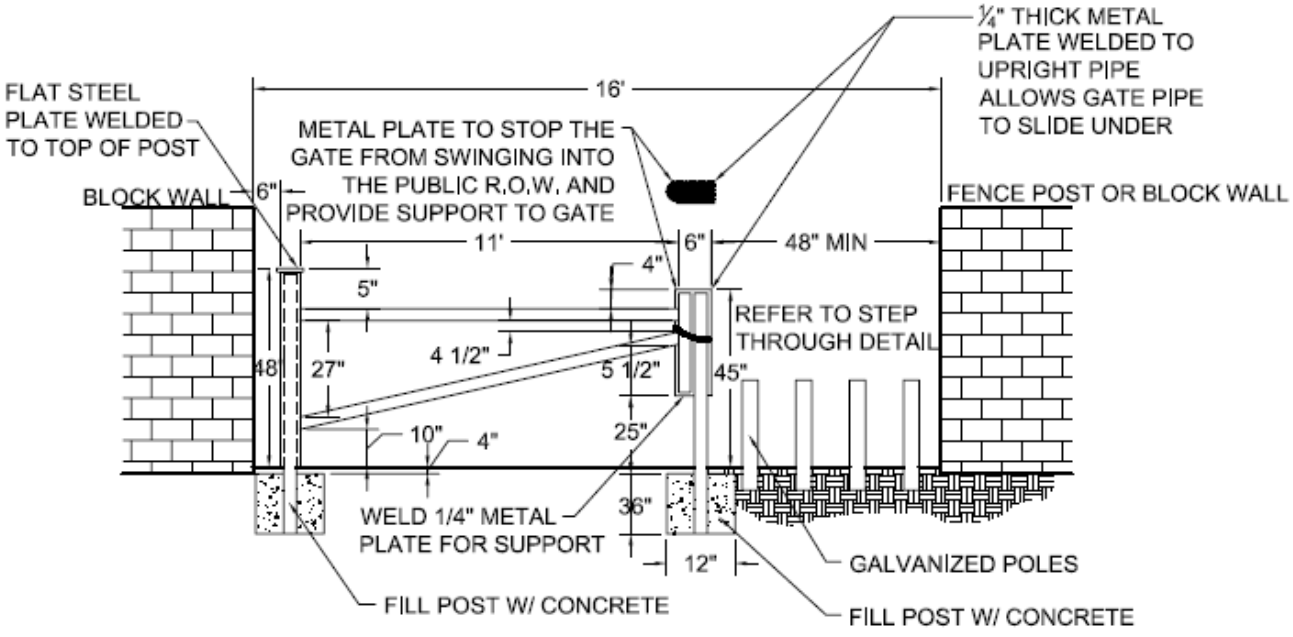

GUSSET DETAIL

NOTE:

- SECURE DRIVE FIT GALVANIZED CAP TO POST WITH ¼" ROUND HEAD RIVET
- H DENOTES FABRIC WIDTH AND NOMINAL FENCE HEIGHT. H SHALL BE 5'-0" UNLESS OTHERWISE SPECIFIED
- ALL DATA SHOWN ON TYPICAL DETAILS SHALL BE APPLICABLE TO OTHER PERTINENT DETAILS.

## 5. 16’ VEHICLE GATE WITH SIDE ACCESS – FEEDER TRAIL

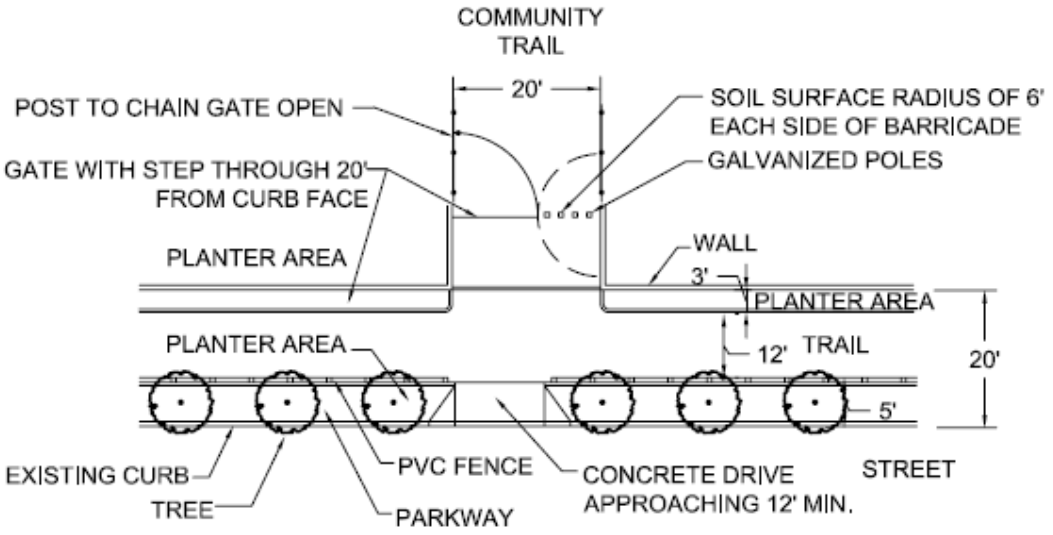


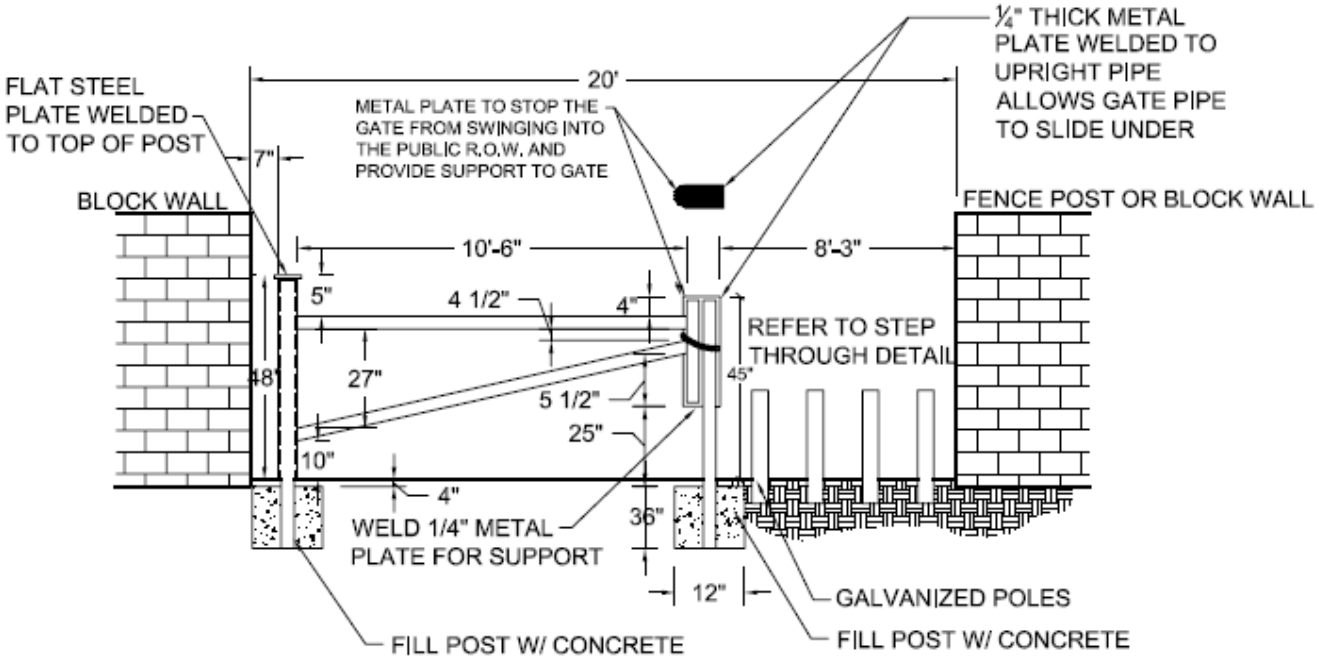




NOTE:

- GATE CONSTRUCTED OF 2 3/8" GALVANIZED STEEL PIPE.
- HINGE CREATED BY WELDING CROSS MEMBERS TO A 2 7/8"
- GALVANIZED STEEL PIPE SLEEVE WITH CAP SLIPPED OVER UPRIGHT GATE POST.
- SINK POSTS 40", GATE SHALL NOT SWING INTO PUBLIC R,O,W.
- CHAIN SHALL BE 3/8" X 1 3/4" X 1 1/4" MILD STEEL AT 18" LONG.
- LOCK SHALL BE PROVIDED BY THE CITY.
- SEE TRAIL NOTES STD. NO. 1001
- GATE SHALL BE PLACED 25' FROM CURB FACE

# 20’ VEHICLE GATE WITH SIDE ACCESS – COMMUNITY TRAIL

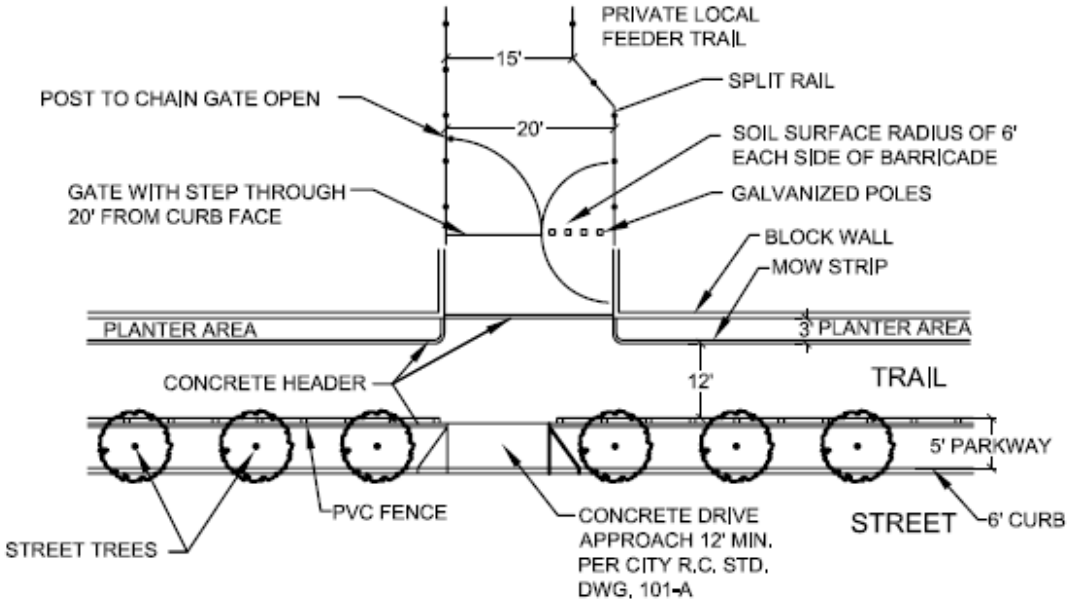


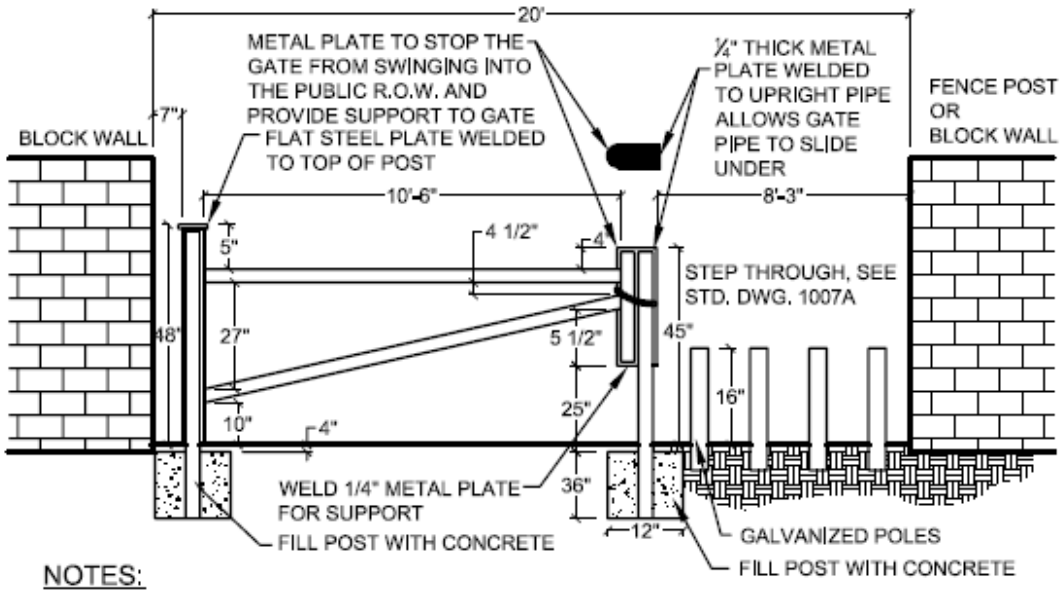




NOTE:

- GATE CONSTRUCTED OF 2 3/8" GALV. STEEL PIPE.
- HINGE CREATED BY WELDING CROSS MEMBERS TO A 2 7/8" GALV. STEEL PIPE SLEEVE WITH CAP SLIPPED OVER UPRIGHT GATE POST.
- SINK POSTS 40" GATE SHALL NOT SWING INTO PUBLIC R.O.W.
- CHAIN SHALL BE 3/8" X 1 3/4" X 1 1/4" MILD STEEL AT 18" LONG
- LOCK SHALL BE PROVIDED BY THE CITY.
- SEE TRAIL NOTES STANDARDS.
- GATE SHALL BE PLACED MINIMUM 25' FROM CURB FACE.

## 7. 20’ VEHICLE GATE WITH SIDE ACCESS – FEEDER TRAIL

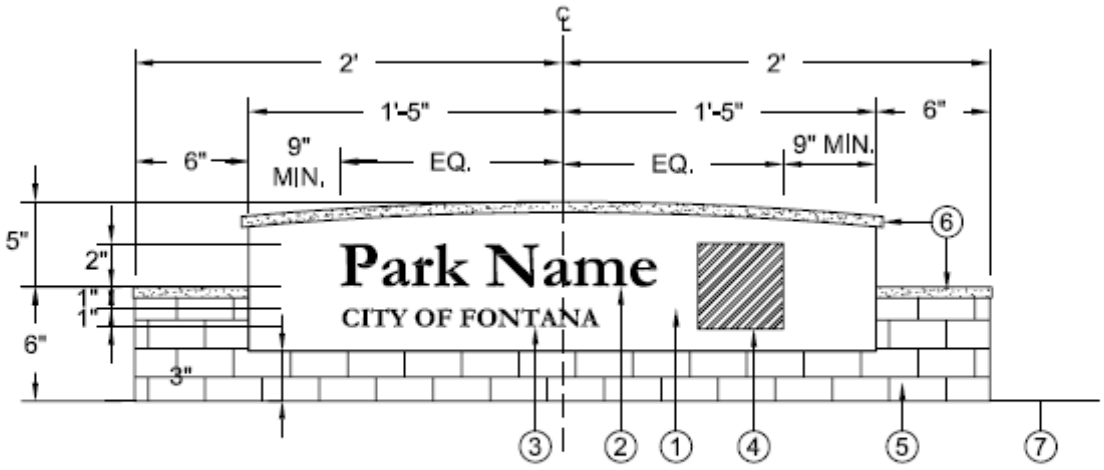



NOTES:

1. GATE CONSTRUCTED OF 2 3/8" GALVANIZED STEEL PIPE.
2. HINGE CREATED BY WELDING CROSS MEMBERS TO A 2 7/8" GALVANIZED STEEL PIPE SLEEVE WITH CAP SLIPPED OVER UPRIGHT GATE POST.
3. SINK POSTS 40". GATE SHALL NOT SWING INTO PUBLIC R.O.W.
4. CHAIN SHALL BE 3/8" X 1 3/4" X 1 1/4" MILD STEEL AT 18" LONG.
5. LOCK SHALL BE PROVIDED BY THE CITY.
6. SEE TRAIL NOTES STD. NO. 1001
7. GATE SHALL BE PLACED MINIMUM 25' FROM CURB FACE

# G. SIGNAGE




LEGEND

① CONCRETE SIGN WALL

② RECESSED LETTERS, 12" HIGH X 1" DEEP, "TIMES" FONT. SIZE, SPACING AND PLACEMENT AS SHOWN. CITY TO PROVIDE PARK NAME.

③ RECESSED LETTERS, 5" HIGH X 1" DEEP, "TIMES" FONT. SIZE, SPACING, AND PLACEMENT AS SHOWN.

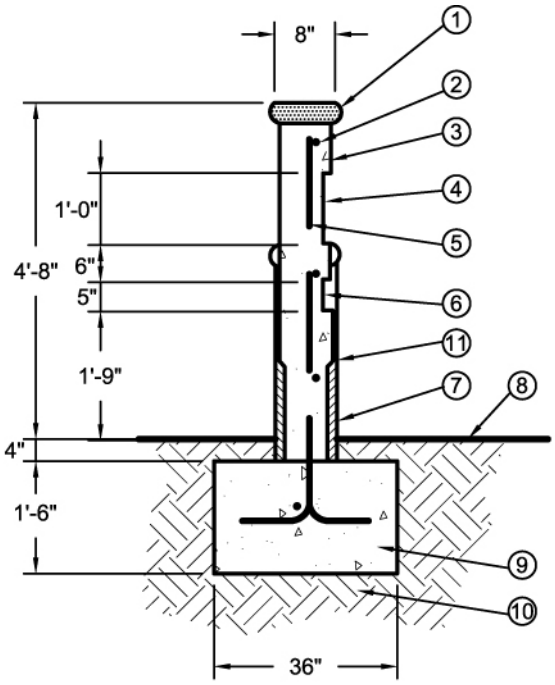
④ 2' X 2' CITY LOGO INSERT. ADDITIONAL LOGO INSERT MUST BE PROVIDED TO CITY

⑤ SPLIT-FACE BLOCK WALL.

⑥ ORCO MUSHROOM CAP.

⑦ FINISH GRADE.

1. CONTRACTOR TO PROVIDE SHOP DRAWINGS OF SIGN, WITH PARK NAME PROVIDED BY CITY OF FONTANA, FOR APPROVAL BY LANDSCAPE ARCHITECT AND PUBLIC WORKS REPRESENTATIVE.
2. CONTRACTOR TO VIBRATE CONCRETE TO ELIMINATE ALL VOIDS AND AIR BUBBLES.
3. CONTRACTOR TO COAT ALL PARTS OF SIGN (FRONT AND BACK) WITH VITROCHEM ANTI-GRAFFITI COATING.




LEGEND

① MUSHROOM CAP, COLOR TO MATCH BLOCK WALL, AS MADE BY ORCO BLOCK

② #4 HORIZONTAL REBAR (CONT.), THREE PLACES IN WALL

③ POURED-IN-PLACE CONCRETE SIGN WALL, 7" THICK MIN.

④ RECESSED LETTERS, 12" HIGH X 1" DEEP

⑤ #4 VERTICAL REBAR @ 24" O.C. ALTERNATE BEND IN FOOTING

⑥ RECESSED LETTERS, 5" HIGH X 1" DEEP

⑦ 10X8X16 SPLIT-FACE BLOCK WALL, ORCO COLOR 200, GROUT ALL CELLS SOLID

⑧ FINISH GRADE

⑨ CONTINUOUS CONCRETE FOOTING

# H. PATH SYSTEMS

## 1. SIDEWALKS

a. Sidewalks shall be constructed with a five foot (5') minimum width. If cars are to overhang a sidewalk when parked, the walkway shall have a ten foot (10') minimum width.

b. Sidewalks shall have a cross slope not to exceed two percent (2%).

c. Handicap access ramps shall be provided, where sidewalks terminate at full height curbs, and shall comply with ADA standards.

d. On-site pedestrian circulation systems shall be provided to meet the movement needs of on-site users. Such systems shall provide safe, all-weather surfaces, and aesthetically pleasing means of on-site foot travel.

e. Where pedestrian and service vehicles are to share the path, the minimum width shall be ten feet (10') or as necessary to provide for safe and serviceable operations.

f. Intersections of paths, walks, and plazas shall be designed to eliminate damage to landscape improvements by vehicle or foot traffic. The use of large, paved transition areas or barriers are encouraged.

g. An access plan through the park site for maintenance and emergency (ambulance) vehicles shall be provided.

h. All pavement shall be designed, specified, and constructed to provide for long-term serviceability with the minimum amount of repair or maintenance.

i. All site furnishings (light fixtures, trash receptacles, drinking fountains, bleachers, etc.) shall not block maintenance vehicle access.

## 2. TRAILS

a. **Vertical grade:** The following grades shall be observed: zero to five percent (0-5%) optimum; ten percent (10%) maximum for distances over five hundred feet (500'); fifteen percent (15%) maximum for distances limited to five hundred feet (500') or less; twenty percent (20%) maximum permitted only in extreme cases and for short distances under one hundred feet (100'), and only in cases where no vehicle access is to be expected.

b. **Cross section:** Two to four percent (2-4%) optimum, six percent (6%) maximum in approved locations only.

c. **Drainage:** Where trail gradient exceeds four percent (4%), water bars, splash curbs, or other diversionary devices may be required. Location of drainage devices to be reviewed and approved by the Trails Advisory Committee. Decomposed granite stabilizer shall be used. Stabilizer shall be from Gail Materials, Inc. or approved equal.

d. **Side slope cuts and fill:** Two to one (2:1) maximum; two percent (2%) maximum between curb and trail. Five to one (5:1) maximum turf and three to one (3:1) maximum shrubs/ground cover behind trail. Occasional slope variations will be considered on a case by case basis and will require approval by the City Engineer.

e. **Surfacing:** Trail surface shall be stabilized decomposed granite with four inch (4") minimum base. Remove rocks and debris and grade surface smooth. Stabilized decomposed granite. is available from Gail Materials (909) 279-1095 or approved equal. Stabilized organic binder shall be incorporated with granite fines by the use of a pug mill to ensure proper ration of binder to granite fines. For each two inch (2") lift, evenly spread the material over the area, grade and smooth. Thoroughly water entire area to ensure that the entire depth is moist. Roll the area with 1000-3000 pounds of weight. Prior to use allow the finished surface sufficient time to dry. On the side to which the water drains, build up the compacted decomposed granite. to a finished surface of one fourth inch to one half inch (1/4"-1/2") above concrete curb, allowing the water to drain over concrete curb into adjacent planting area.

f. **Clearance:** All trees shall maintain a ten foot (10') minimum clearance. Adequate sight distance to be maintained at all intersections and drive approaches. Fence line shall end ten feet (10') back of the B.C.R. or E.C.R. in twenty foot (20') easements. In smaller easements, determination should be made on a case by case basis. Fence line shall end five feet (5') back from the top of the "X" at drive approaches. Adequate access to utilities should be maintained. Fence line shall end two feet (2') to either side of a fire hydrant and one foot (1') to either side of any street light or utility pole.

g. **Flood and drainage channel crossing:** Where trail must cross existing or proposed drainage channels, the continuity of the trail shall be maintained by the construction of an appropriate crossing such as a bridge, ramp way, culvert etc. Wood or transverse "medium broom" finish concrete shall be used to prevent slipping (no metal surfaces permitted). Natural streambed crossings should be left as natural as possible.

h. **Trail entrance:** Trail entrances shall be designed to provide for equestrian, pedestrian, and hiking use and shall discourage motor vehicle and motorcycle access, except Local Feeder Trails which shall provide one or more means of unobstructed vehicular access for service vehicles. Access locations and subject to approval. Refer to standard drawings for barriers and signs.

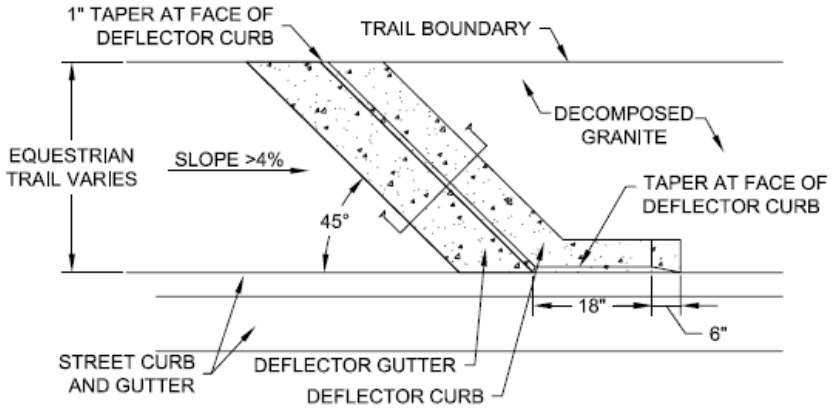
i. **Concrete aprons:** For drive approaches at trail entrances or at drainage crossings, concrete aprons shall be a transverse "medium broom" finish.

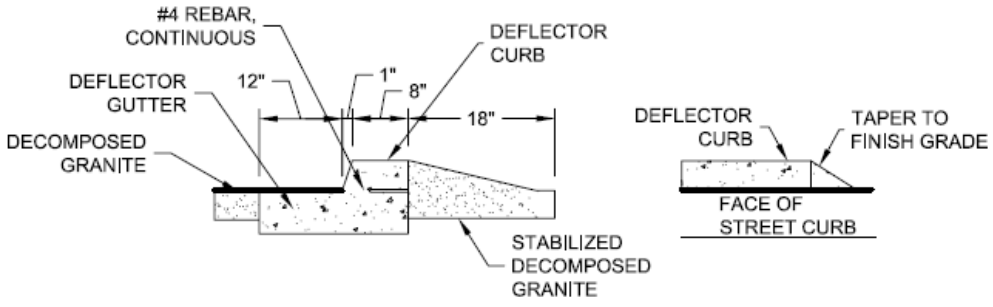
j. **Concrete header:** Concrete header shall be six inches (6”) per City Standard between trail and all other abutments.

k. **Special notes:** Most Regional Trails follow existing or planned flood control facilities constructed by the San Bernardino County Flood Control District and Army Corps of Engineers. Therefore, any construction within their rights-of-way requires review and approval by those agencies and is subject to their standards and policies.

l. Landscape areas which would otherwise drain to trail shall be required to collect and dispose of water through area drains.

### m. Concrete Water Bar

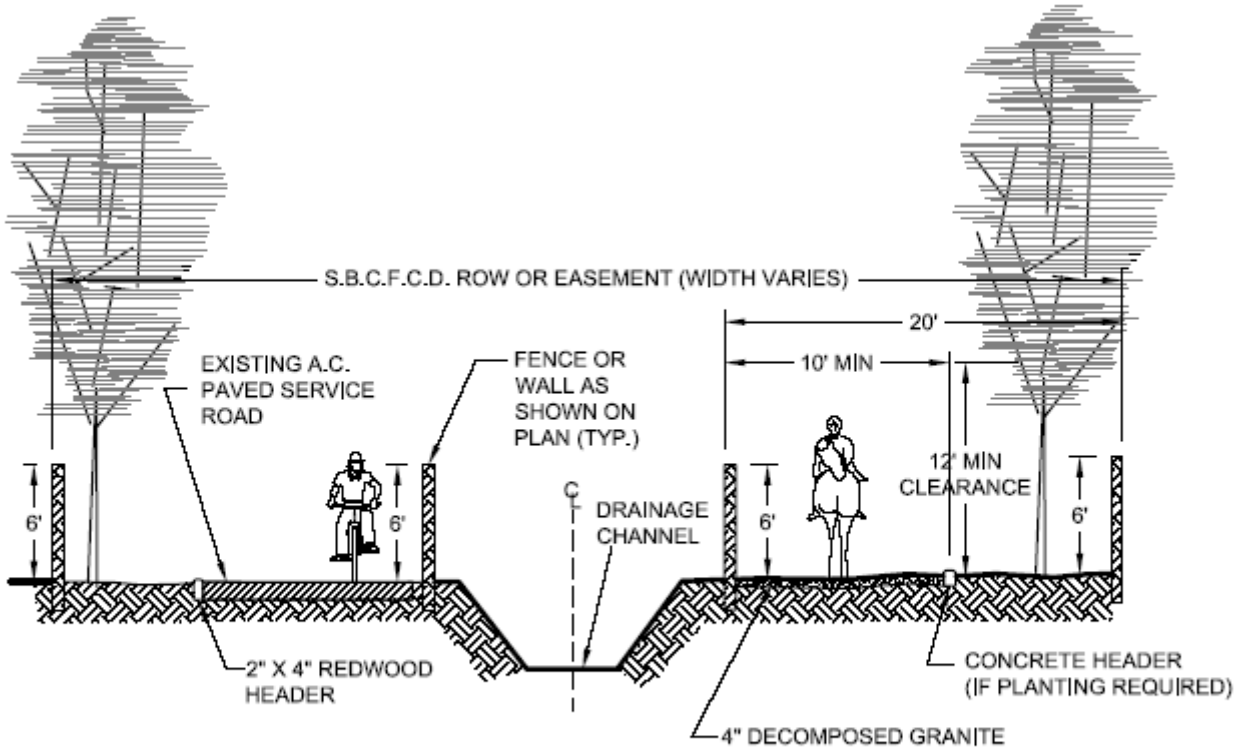



NOTE:

- WATER BARS ARE TO BE LOCATED WHERE NEEDED, REVIEW REQUIREMENT CRITERIA AVAILABLE FROM THE ENGINEERING DEPARTMENT. FINAL QUANTITY AND EXACT LOCATION TO BE DETERMINED BY THE ENGINEERING DEPARTMENT.
- USE 2500 PSI CONCRETE @ 28 DAYS

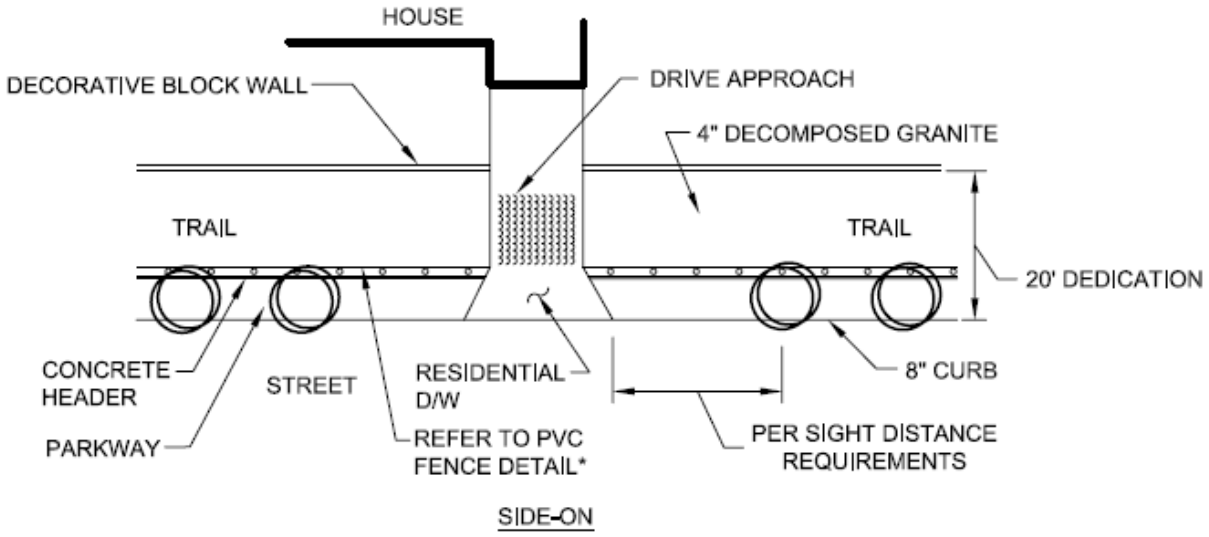
## n. Flood Control District (FCD) Easement – Regular Trail



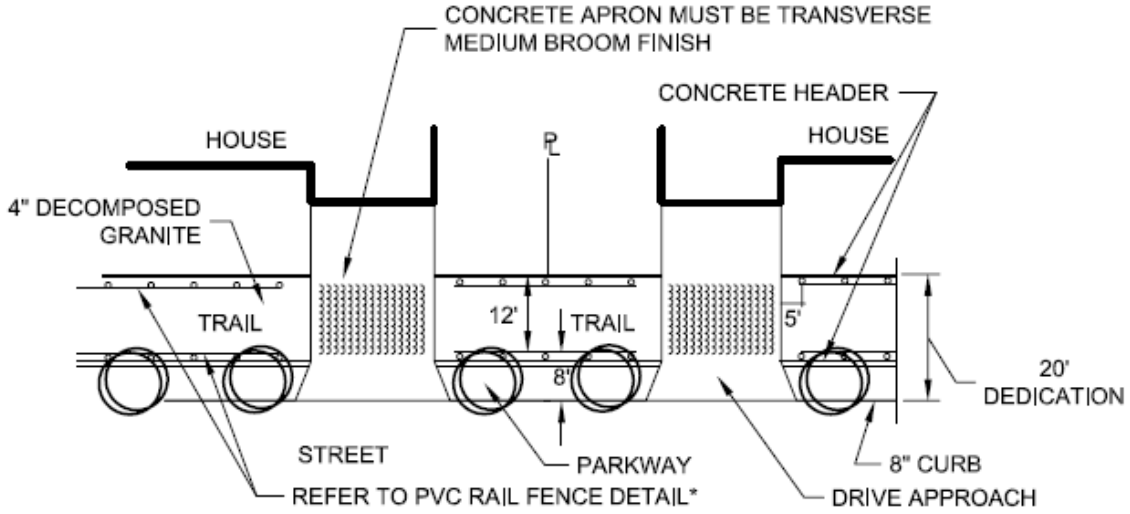

NOTE:

- SEE TRAIL NOTES STANDARDS

## o. Front and Side Area – Community Trail




SIDE-ON

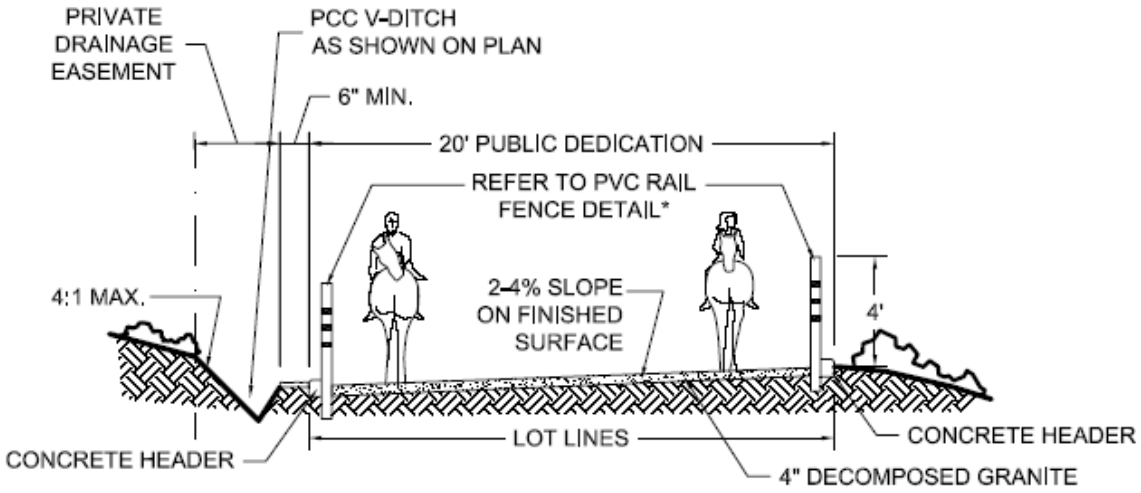



NOTE:

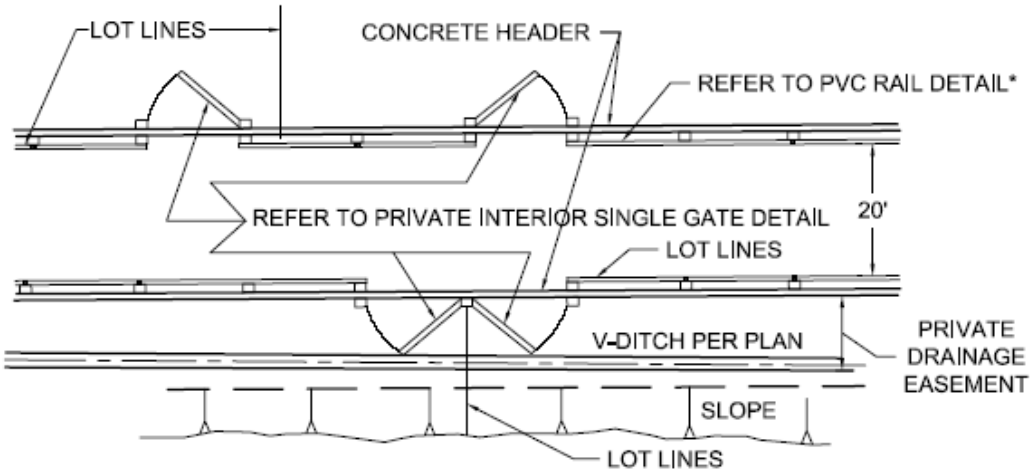
- SEE TRAIL NOTES STANDARDS

*USE OF 3 RAIL FENCE REQUIRES SPECIAL PERMISSION FROM CITY ENGINEER FOR PEDESTRIAN CONTROL ONLY.

## p. Interior Applications – Community Trail




TYPICAL SECTION



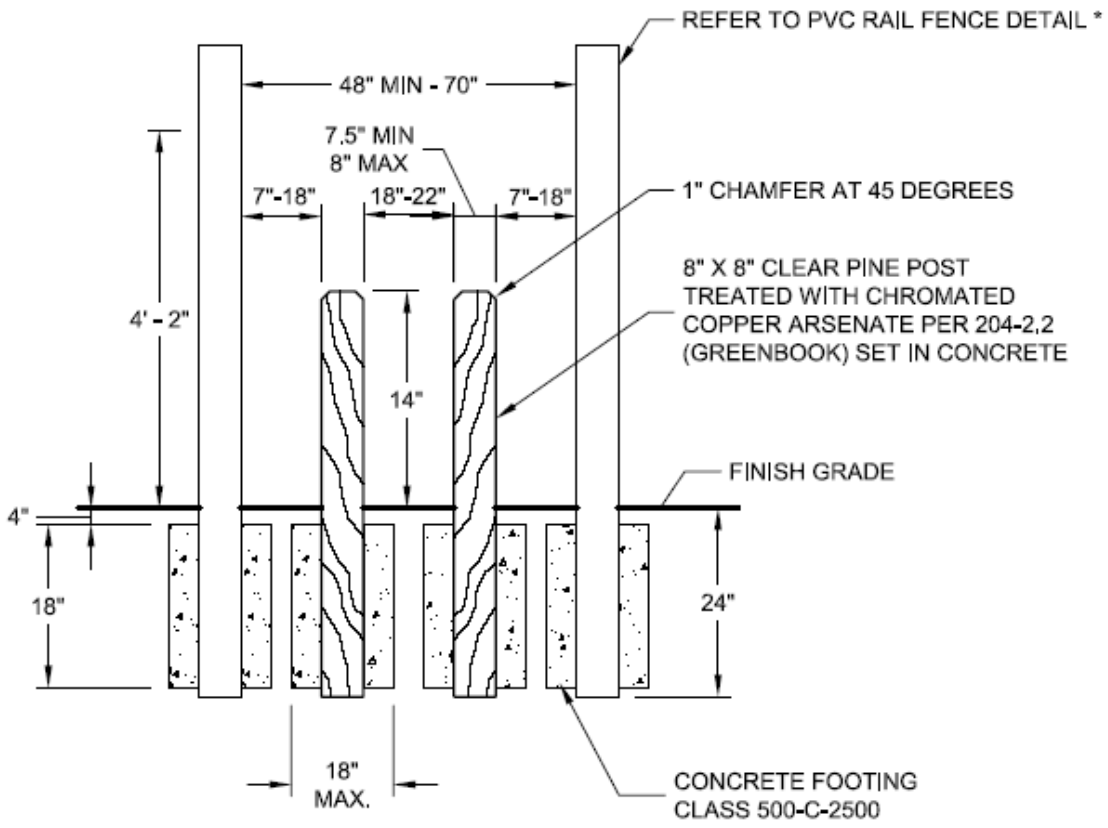

PLAN VIEW

NOTE:

- SEE TRAIL NOTES STANDARDS
- DEVELOPER MAY INSTALL ALTERNATE DECORATIVE WALL TO DEFINE TRAIL EASEMENT

* USE OF PVC 3 RAIL FENCE REQUIRES SPECIAL PERMISSION FROM CITY ENGINEER FOR PEDESTRIAN CONTROL ONLY

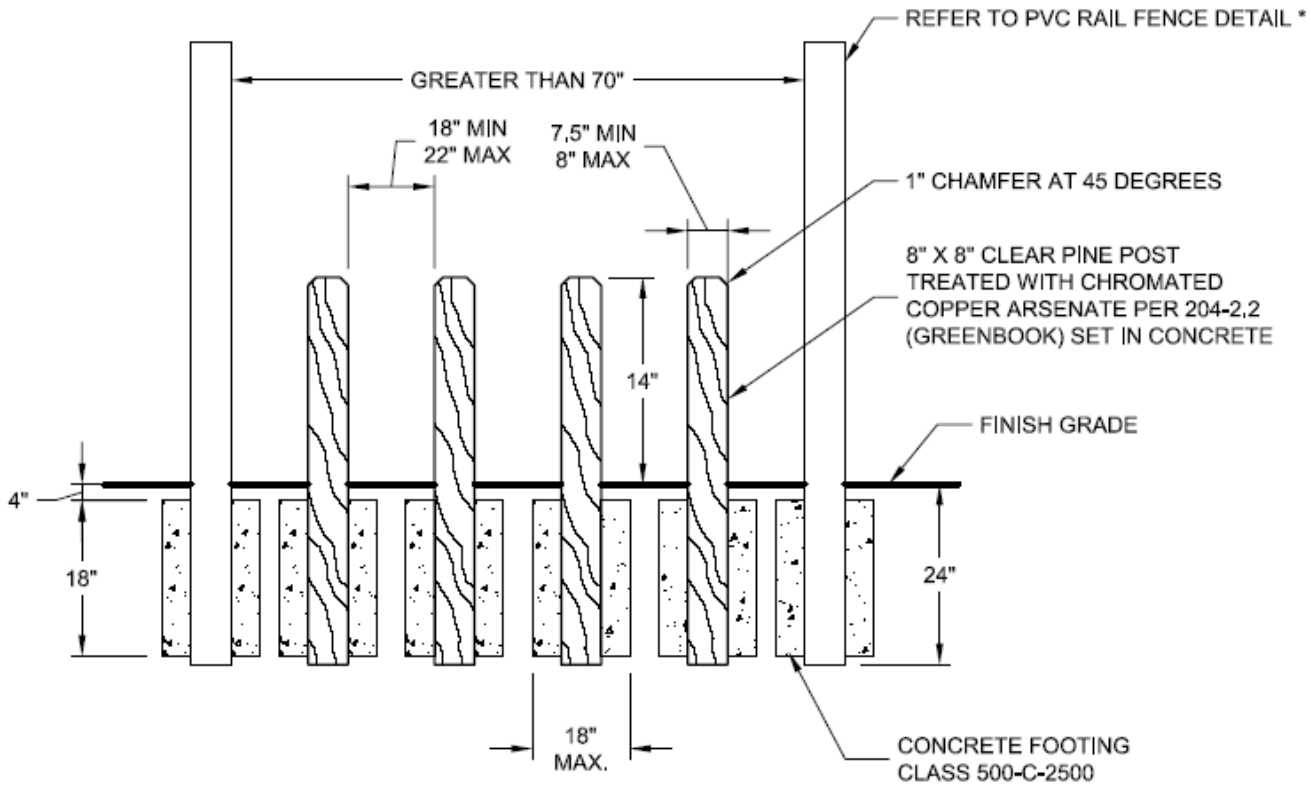
## q. 48” -70” Pass Through Community Trail




NOTE:

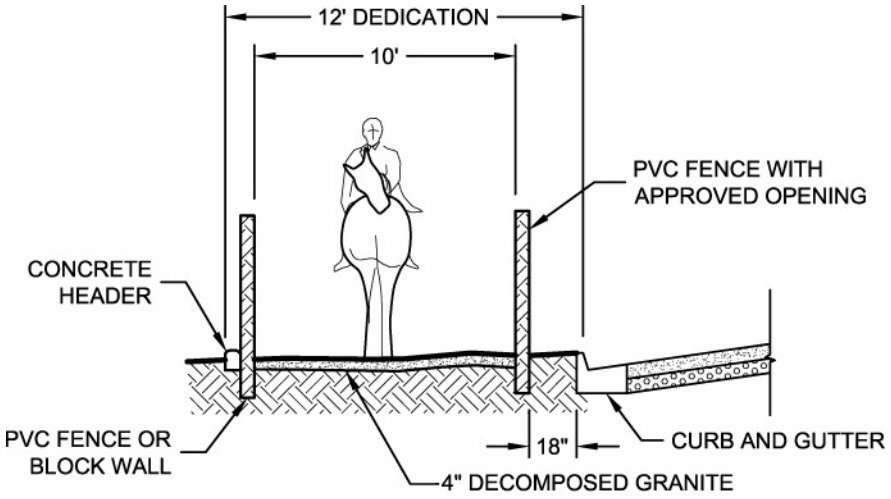
- *USE OF 3 RAIL FENCE REQUIRES SPECIAL PERMISSION FROM CITY ENGINEER FOR PEDESTRIAN CONTROL ONLY.

## r. Greater than 70” Pass Through – Community Trail

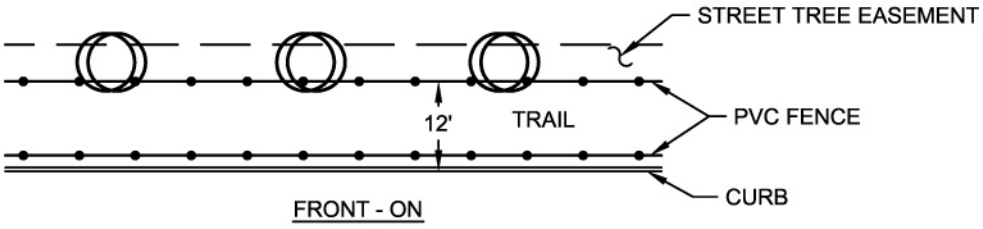



NOTE:
*USE OF 3 RAIL FENCE REQUIRES SPECIAL PERMISSION
FROM CITY ENGINEER FOR PEDESTRIAN CONTROL ONLY.

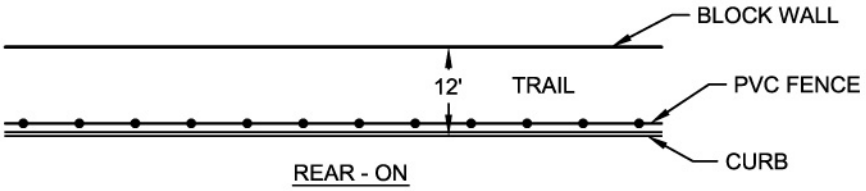
## s. 12’ Parkway – Community Trail




TYPICAL SECTION



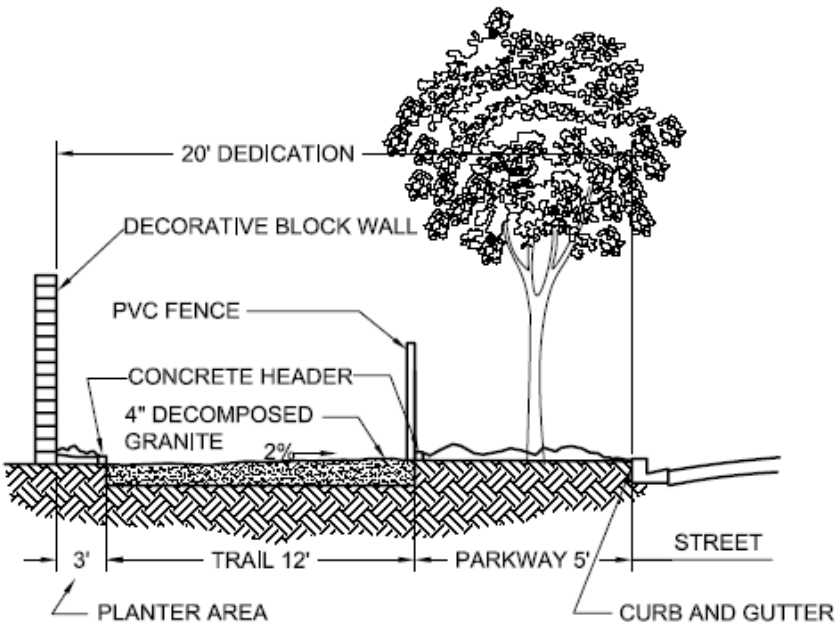

FRONT - ON



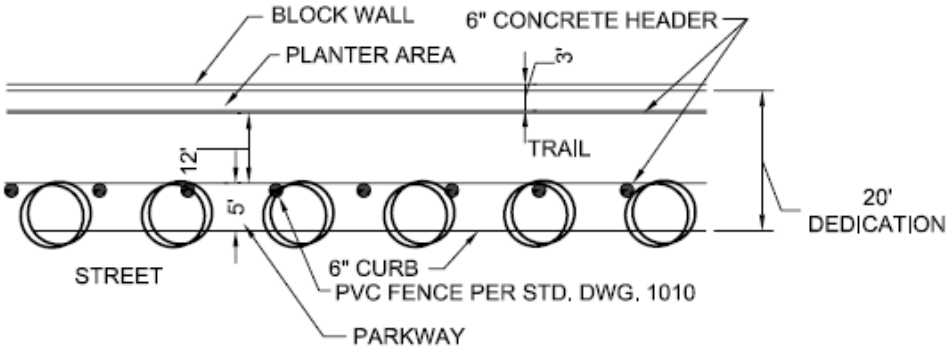

REAR - ON

NOTE:
- SEE TRAIL NOTES STANDARDS

## t. Reverse Frontage Parkway – Community Trail




TYPICAL SECTION




PLAN VIEW (REAR-ON)

NOTE:

- ALL LANDSCAPE AREAS SHALL BE PLANTED AND IRRIGATED WITH MATERIALS APPROVED BY THE CITY
- TOXIC PLANTS ARE PROHIBITED
- TRAIL SURFACE IS COMPOSED OF 4" DECOMPOSED GRANITE, GRADE SMOOTH TO 90 PERCENT COMPACTION AND TREATED WITH A SOIL STABILIZER
- PLAN VIEW TYPICAL OF REAR-ON, FRONT-ON ANDSIDE-ON
- SEE TRAIL NOTES STANDARDS

# I. PARK FURNITURE

## 1. PICNIC TABLES

| | |
|---|---|
| **General:** | Three (3) tables per acre for each of the first three (3) acres, then one (1) table per acre. |
| **Size:** | All tables and seats shall be eight feet (8') long. ADA tables shall be ten feet (10') long. |
| **Pads and Positioning:** | Each table shall be placed in the center of a reinforced concrete pad, twelve feet (12') long, nine feet (9') wide and four inches (4") thick, with the length of the table parallel to the length of the pad. |
| **Fasteners:** | All frames shall be fastened to concrete slabs with a red head SRM 38 stainless steel drop-in anchor, a three-eighths inch ($^3/_8$") by three inch (3") stainless steel hex head bolt and a three-eighths inch ($^3/_8$") flat stainless steel washer. Frame to frame connections shall be made with the appropriate size bolt made of stainless steel. No lag bolts will be accepted. |
| **Labels:** | All packing labels shall be removed prior to installation in a manner that does not damage the surfaces. |
| **Accessibility:** | At least twenty-five percent (25%) of all picnic tables shall be handicap accessible and never less than one. |
| **Preferred Models:** | Picnic tables shall be Brown in color from Diversified Metal Picnic Tables or approved equal.<br>• Picnic Tables – Model-EB-63<br>• ADA Picnic Tables – Model-ET-85 |

## 2. PARK BENCHES

| | |
|---|---|
| **Guidelines:** | Required at tot lots and athletic courts in addition to general locations. |
| **Dimensions:** | All benches shall be six feet (6') long. |
| **Pads and Positioning:** | All park benches shall be placed on a reinforced concrete pad, four feet (4') wide, six and one-half feet (6 ½') long, and four inches (4") thick. All benches shall be centered on the pad with the length of the bench parallel to the length of the pad. If there is a non-flush obstruction at the front of the bench, the bench shall either be placed flush to that obstruction or shall over-hang it, so as not to present a safety hazard. |
| **Mounting:** | All benches shall be mounted in ground. |
| **Labels:** | All packing labels shall be removed prior to installation in a manner that does not damage the surfaces. |
| **Preferred Models:** | Park Benches shall be Brown in color from Diversified Metal Park Benches or approved equal.<br>• Park Benches – Model-EB-63 |

## 3. DRINKING FOUNTAINS

| | |
|---|---|
| **Pads and Positioning:** | Each fountain shall be set on a concrete slab that measures two and one-half feet (2 $^1/_2$') long, two feet (2') wide, four inches (4") and positioned in accordance with manufacturer's specifications and California State Building Code Title 24, Part 5, Section P1507. |
| **Fasteners:** | All anchors and anchoring material (bolts, nuts, washers, etc.) shall be of stainless steel. |
| **Valves:** | The incoming water lines shall have a ball type shut-off valve located off the slab in an approved valve box. The valve body shall be of bronze. The interior parts shall be the same type as the body. |
| **Backflow Devices:** | Febco 825 YA |
| **Location:** | All fountains shall be located at a minimum of thirty feet (30') from sand areas. Drinking fountains are required near athletic court areas and restrooms, but never attached to restroom buildings. |
| **Preferred Models:** | Haws Model #3380 (Green), or approved equal. |
| **Drains:** | Shall connect to sewer line with a wet pit trap. |

## 4. BICYCLE RACKS

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| **General Guidelines:** | Bicycle racks should be located at entrances to major buildings. Other racks may be required for major facilities not in close proximity to buildings. |
| **Preferred Models:** | L.A. Steelcraft - The Wave model #WBR-700 in black, or approved equal. |

## 5. TRASH RECEPTACLES

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|---|---|
| **Preferred Model:** | Quickcrete model #QRCAL2533WA2I or approved equal. |

# 6. BARBECUES

| | |
|---|---|
| **General Guideline:** | One individual barbecue is required per two (2) picnic tables. A group-size barbeque can be shared by four (4) picnic tables. |
| **Barbecues:** | A. Single Barbecues. All single barbecues shall have:<br>• Base, permanent , stationary or comparable and made of the same material as the stove;<br>• Swivel stove, attached to the base, with a replaceable ash pan and fabricated of non-corrosive metal.<br><br>B. Group Barbecues.<br>• All group barbecues shall have:<br>  • Permanent/stationary base;<br>  • Fire box, fabricated from seven (7) gauge steel;<br>  • Cooking grate, fabricated from one-half inch ($^1/_2$") steel bars spaced one and one-eighth inch (1 $^1/_8$") o.c. with a cooking surface of one 1,368 square inches;<br>  • Steel utility shelf, twelve inches by thirty-six inches (12 x 36"), side-mounted;<br>• Overall grill dimensions shall be forty-three inches (43") wide, fifty-one inches (51") long, and thirty-eight inches (38") high. |
| **Pads:** | When a concrete pad is used:<br>• Permanent base shall be anchored per manufacturer's specifications<br>• A fourteen inch (14") square area of slab around the base shall be constructed to be removable for replacement of base, yet solid while in normal operation. |
| **Accessibility:** | All barbecues shall be handicap accessible. |
| **Preferred Models:** | • Single/Small Barbecues: Firebox F/200 from Little Tikes.<br>• Group Barbecues: Miracle Recreation Heavy Duty Park Grill model #1104-8 or approved equal |

# J. PLAY LOTS

| | |
|---|---|
| **Lot Placement:** | Play lot shall be located away from vehicular areas including parking lots and streets. Where space does not permit a safe distance between vehicular areas and the play lot, a buffer shall be provided such as a seat wall, vegetated buffer or low decorative, powder-coated iron fence. |
| **Accessibility:** | Play lot areas shall be ADA accessible in accordance with CALDAG standards. |
| **Seating:** | Adequate seating shall be provided adjacent to all play areas. |
| **Rubberized Surfacing:** | Playground surfacing shall be poured in place rubber surface encompassed by a concrete curb. Rubber surfacing base shall be a four inch (4") thick concrete slab sloped to drain. Rubber surfacing shall be Spectra Turf by Miracle Recreation or approved equal. A minimum of one drain inlet shall be placed under rubberized play surface. |
| **Age Specifications:** | Play equipment must be age appropriate as specified by each manufacturer.<br>a. Tot Lot for 2-5 year olds<br>b. Playground equipment for 6-12 year olds. |
| **Preferred Manufacturers:** | Miracle Recreation, Kompan, or Landscape Structures. |
| **Rules Signage:** | Rules as specified by manufacturer shall be posted at each playground. |
| **Shade Structure:** | Playgrounds shall be cover with a shade structure by Sun Shade or approved equal. Shade structure shall be designed as to not interfere with safety zones of playground. Shade structure supports shall be located outside of rubberized play surface in adjacent concrete, but shall not block or interfere with pedestrian/service vehicle access. |

# K. LIGHTING STANDARDS FOR PUBLIC FACILITIES

## 1. GENERAL GUIDELINES

a. All street, park, trail, and paseo lighting (except sports lighting) shall be vandal-resistant, and have metal-halide lamps in accordance to the city Public Works Department requirements.

b. All exterior lighting shall be adequately controlled and shielded to prevent glare and undesirable illumination to adjacent properties or streets.

c. A burn test for exterior lighting is required as directed by the inspector.

**Sec. 5-9-520. Special Recreational Spaces Provisions**

The provisions of this section shall apply to community buildings, parks, open spaces, trails, community swimming pools, and associated sidewalks and parking lots.

a. Structures shall comply with all provisions of the Uniform Security Code.

b. Exterior Lighting shall conform to the following standards:

    i. All types of exterior doors shall be illuminated during the hours of darkness with a minimum maintained one (1) foot-candle of light at ground level, measured within a five foot (5') radius from the center of the door.

c. Recessed areas of buildings or fences, which have a minimum depth of two feet (2'), a minimum height of five feet (5'), and do not exceed six feet (6') in width and are capable of human concealment, shall be illuminated with a minimum maintained one-half (0.50) foot-candles of light at ground level during the hours of darkness. This requirement applies to defined recessed areas which are within six feet (6') of the edge of a designated walking surface with an unobstructed pathway to it, not hindered by walls or hedge tow landscaping a minimum of two feet (2') in height.

d. Stairways shall be illuminated with a minimum one (1) foot-candle of light on all landings and stair treads.

e. Parking lots and walkways accessing facilities and parking areas shall be illuminated with a minimum maintained one (1) foot-candle of light on the driving or walking surface and two (2) foot-candles of light at gates and entrances.

f. Paved walkways in open space areas, not directly serving buildings or parking areas, shall be illuminated with a minimum maintained twenty-five one-hundredths (0.25) foot-candles of light on the walking surface.

g. Swimming pool decks and other hard surface recreation activity areas shall be illuminated with a minimum maintained one (1) foot-candle of light on the walking surface.

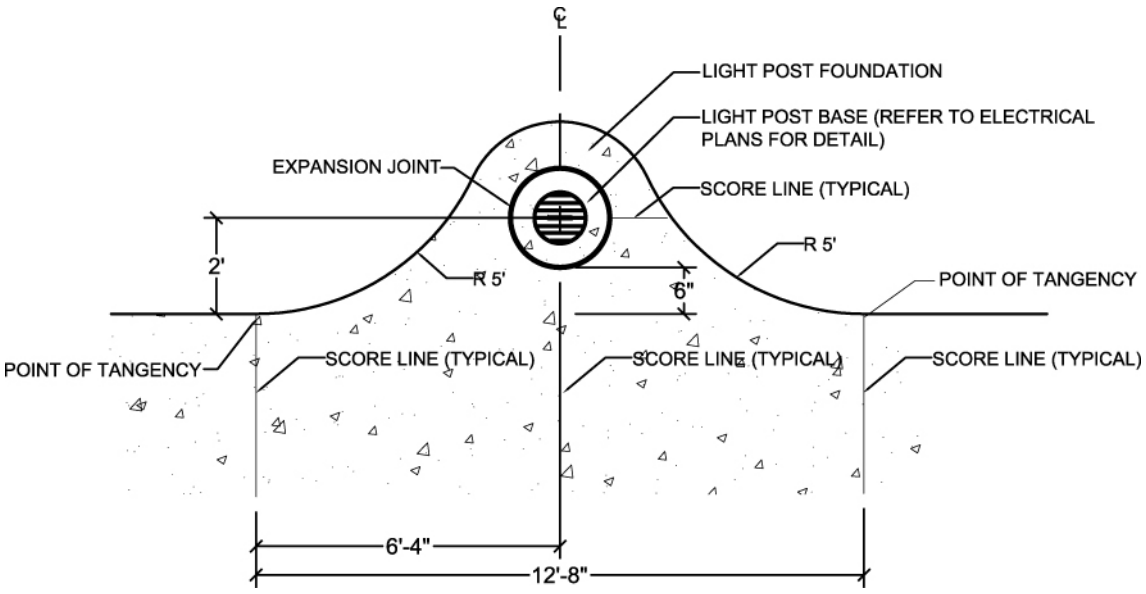
h. The light source utilized to comply with this section to meet parking and drive surface lighting shall have a rated average bulb life of not less than 10,000 hours.

i. Luminaires utilized to meet the requirements of this section shall have vandal resistant light fixtures, if accessible, and not less than sixteen feet (16') in height from ground level.

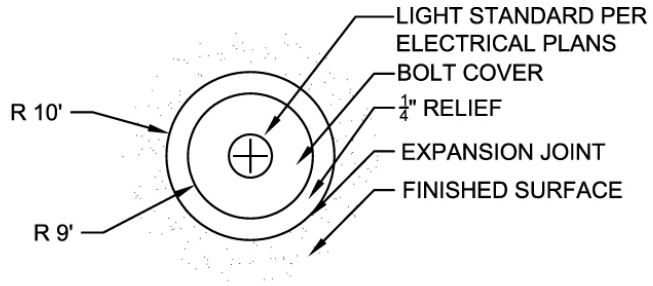
j. Activation of the required exterior lighting shall be either by Musco Link system, Intermatic ET 70115C, or approved equal.

k. A site plan shall be provided showing buildings, parking area, walkways, detailed landscaping and a point-by-point photometric calculation of the required light levels. Foot candles shall be measured on a horizontal plan and conform to a uniformity ratio of four to one (4:1) average or minimum. Landscaping shall not be planted so as to obscure required light levels.

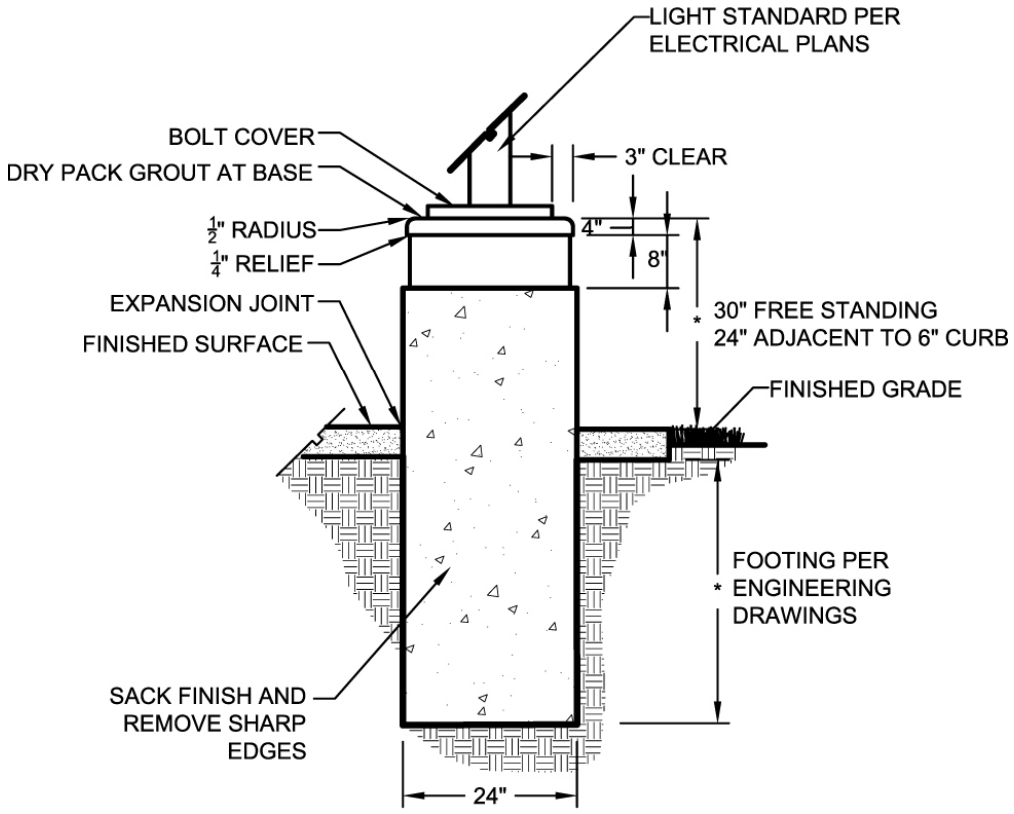
**l. Light Post Base – Plan**



## m. Light Post Base



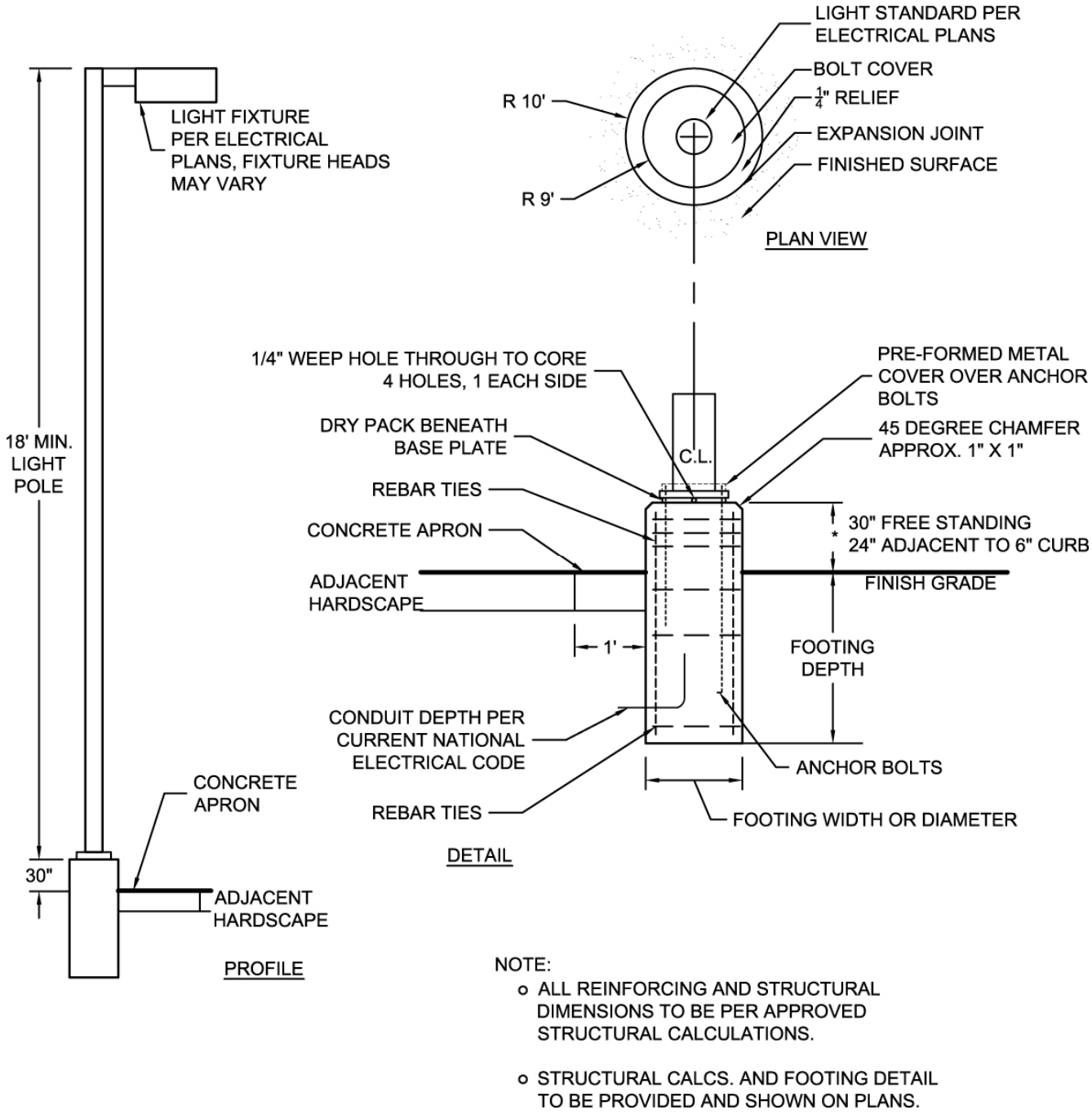

PLAN VIEW




NOTE:

- FOR REBAR INFORMATION REFER TO STRUCTURAL ENGINEERING DETAILS
- INCLUDE CALCULATIONS BY STRUCTURAL ENGINEER

## n. Paseo Light Standard




NOTE:

- ALL REINFORCING AND STRUCTURAL DIMENSIONS TO BE PER APPROVED STRUCTURAL CALCULATIONS.
- STRUCTURAL CALCS. AND FOOTING DETAIL TO BE PROVIDED AND SHOWN ON PLANS.

## 2. ATHLETIC FIELD/COURT LIGHTING

a. The goal is that all fields at community parks are lighted for night-time use and to protect the welfare of participants and spectators; however, each community park site shall be evaluated for appropriateness for lighting.

b. Athletic field lighting will mitigate the environmental impact of recreational athletic field lighting on the community.

c. When lights are provided for athletic fields, lighting levels shall be per City Lighting Standards in effect at the time of City acceptance of the facility.

d. Lighting level requirements vary with each type of field. Security lights shall be located halfway down the poles, not less than twenty two feet (22') and not to exceed thirty feet (30') in height, and illuminate the dugouts when field lights are off. No poles shall be located within playing areas.

e. Light poles shall be located behind the backstop, wings parallel to first and third baselines, and outside the area of play. The number of poles and lamps required shall be determined by the field configuration and the photometric measurements.

f. All lighting shall be Musco products and shall include a Musco Link system.

g. Pole placement shall be such that each field is illuminated from adjacent poles surrounding that field.

h. Lights shall be placed on crossarms at the top of poles, rather than spaced vertically along poles. Multiple crossarms, placed immediately below the top arm may be used where warranted by the number of lights.

i. Park or field boundaries shall have berms and landscaping to minimize the visibility of the illuminated playing field from adjacent streets and residential property lines.

REGULATION BASEBALL

| | |
|---|---|
| **LightingLevels:** | Minimum maintained lighting levels shall be fifty (50) footcandles infield and thirty (30) footcandles outfield. Regulation baseball fields at Community Parks shall be lighted. |

PONY AND SENIOR BASEBALL

| | |
|---|---|
| **Lighting Levels:** | Minimum maintained lighting levels shall be fifty (50) footcandles infield and thirty (30) footcandles outfield. Regulation baseball fields at Community Parks shall be lighted. |

YOUTH BASEBALL OR SOFTBALL

| | |
|---|---|
| **Lighting Levels:** | Minimum maintained lighting levels shall be fifty (50) footcandles infield and thirty (30) footcandles outfield. Regulation baseball fields at Community Parks shall be lighted. |

ADULT SOFTBALL

| | |
|---|---|
| **Lighting Levels:** | Minimum maintained lighting levels shall be fifty (50) footcandles infield, thirty (30) footcandles outfield. |

SOCCER LIGHTING

| | |
|---|---|
| **Lighting Levels:** | The average minimum maintained lighting level shall be thirty (30) foot-candles over the entire field area. The number of poles and lamps required shall be determined by field configuration and photometric measurements. |

BASKETBALL LIGHTING

| | |
|---|---|
| **Electrical Outlets:** | Conduits for two electrical outlets shall be installed at each court on light poles; one outlet on each of the opposite sides of the court. Each outlet must be thirty (30) amps. |
| **Lighting:** | Minimum maintained lighting levels shall be thirty (30) to forty (40) footcandles over the entire court. The number of poles and lamps needed to maintain the required lighting level shall be determined by photometric measurements. Light posts shall be thirteen inches (13") in circumference and located ten feet (10') from the playing area edge. In case of a hardship, a minimum distance of eight feet (8') from the light post to the playing edge may be permitted. |

TENNIS COURT

| | |
|---|---|
| **Electrical Outlets:** | Conduits for two electrical outlets shall be installed at each court; one at each end. Each outlet must be thirty (30) amps. |
| **Lighting:** | All public courts should be lighted for night-time use. Minimum maintained lighting level shall be thirty (30) footcandles at the baseline and fifty (50) footcandles at the net line. The number of poles and lamps needed to maintain the required lighting levels shall be determined by photometric measurements. Lighting shall be controlled by a time clock (preferred brand: Musco or Intermatic ET 70115C) placed at the main power panel for the park or inside the park building, if available. |

TOURNAMENT TENNIS COURT

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|---|---|
| **Lighting:** | All tournament level courts shall be lighted for night-time use. Average maintained lighting level shall be seventy-five (75) to one hundred (100) footcandles over the entire court area. The number of poles and lamps needed to maintain the required lighting levels shall be determined by photometric measurements. Lighting shall be controlled by a time clock (preferred brand: Musco or Intermatic ET 70115C) placed at the main power panel for the park or inside the park building, if available. |

RACQUETBALL COURT

| | |
|---|---|
| **Lighting:** | All courts located at community parks should be lighted for night-time use. The minimum maintained lighting level shall be twenty (20) to thirty (30) footcandles over the entire court area. The number and placement of light fixtures shall be determined by photometric measurements. Lighting shall be controlled by a time clock (preferred brand: Musco or Intermatic ET 70115C) placed at the main power panel for the park or inside the park building, if available. |

VOLLEYBALL COURT

| | |
|---|---|
| **Electrical Outlet:** | If court is lighted, conduits to poles for two electrical outlets shall be provided on a lamp pole, each with thirty (30) amp power. |
| **Lighting:** | Courts located at community parks shall be lighted. Minimum maintained lighting level shall be twenty (20) to thirty (30) footcandles over the entire court area. The number of poles and lamps needed to maintain the required lighting levels shall be determined by photometric measurements. Lighting shall be controlled by a time clock (preferred brand: Musco or Intermatic ET 70115C) placed at the main power panel for the park or inside the park building, if available. |

YOUTH AND ROLLER HOCKEY

| | |
|---|---|
| **Electrical Outlet:** | Four electrical outlets shall be installed at each court. One outlet shall be on each side of the rink, with one outlet inside the scorekeeper's box. Outlets must be thirty (30) amps. |
| **Lighting:** | Minimum maintained lighting levels shall be from forty (40) to fifty (50) footcandles over the entire rink. The number of poles and lamps needed to maintain the required lighting level shall be determined by photometric measurements. Light posts shall be thirteen inches (13") in circumference. |

# L. POOL AND AUXILIARY FACILITIES STANDARDS

**Swimming pools shall be secured as follows.**

a. Restroom doors and pool gates shall be equipped with automatic closure devices, dead latches, and a latch protector consisting of minimum one hundred twenty-five thousandths inch (0.125") thick steel, two inches (2") wide and six inches (6") long.

b. The pool equipment room or enclosure to be secured with either a deadbolt lock or padlock with a minimum five (5) pin tumbler operation, minimum three-eighths inch ($^3/_8$") thick shackle, and heel and toe locking.

c. The on and off switch for the spa is to be keyed.

d. Perimeter fencing, using tubular powder coated steel, is to be installed at a minimum height of six feet (6'). Vertical fence pickets are to be spaced not more than four inches (4") on-center and be designed to discourage climbing. See Section F – Fencing and Gates.

e. Emergency access to locked gates is to be provided through installation of a Knox box key vault which shall contain all keys required to enter the pool area at any time. The box is to be installed within eight feet (8') of the gate and placed between four and five feet (4'-5') above ground level.

f. Selection of landscaping is to consider height of plants regarding providing needed visibility into the pool area from adjacent uses, buildings, and streets.

g. Lighting shall conform to Section 5-9-517.K.7 regarding lighting fixtures.

h. All entrances to non-public pools/spas shall have signage indicating it is private property and no trespassing is allowed. A public telephone allowing for 911 calls is to be installed and maintained within twenty-five feet (25') of the main entry gate.

# M. IRRIGATION

## 1. GENERAL GUIDELINES

a. An underground automatic irrigation system shall be installed unless otherwise approved by the City.

b. Sleeves are required when irrigation goes through a hardscape area. Sleeves shall be a minimum of twice the diameter of the main line.

c. When irrigation main lines, lateral lines, or irrigation wires go through or under a street, backfill shall be gray sand and curb face shall be marked on both sides with "IR".

d. Irrigation systems shall be designed to apply water at a rate which does not exceed the infiltration rate of the soils, and systems shall be programmable to prevent ponding and minimize runoff.

e. Irrigation systems shall be designed to meet the peak moisture demand of all plant materials used within the design area. Individual station run time shall meet peak evapotranspiration (E.T.) rate.

f. Separate remote control valves shall be used for shrub and groundcover areas versus turf areas. Sun and shade areas shall also be segregated.

g. On all slopes or mounded areas requiring irrigation, lateral lines shall be installed parallel, with contours. Provide separate remote control valves for sprinkler lines operating systems at the top, toe, and intermediate areas of slopes greater than fifteen feet (15') in height.

h. Irrigation system shall be designed to minimize overspray onto non-landscaped areas, such as walks, drives, structures, and any other hardscape area.

i. Irrigation systems shall be designed to provide uniform coverage throughout each system.

j. Irrigation systems shall be designed to water between 10:00PM and 5:00AM.

k. Water velocity through pipe shall not exceed five feet (5') per second.

l. The main line for parkway projects shall be extended to the project limits with three control wires minimum and one common wire from irrigation controller. They shall be installed in a round, nine inch (9") valve box, with a minimum of twenty four inches (24") of wire above ground length.

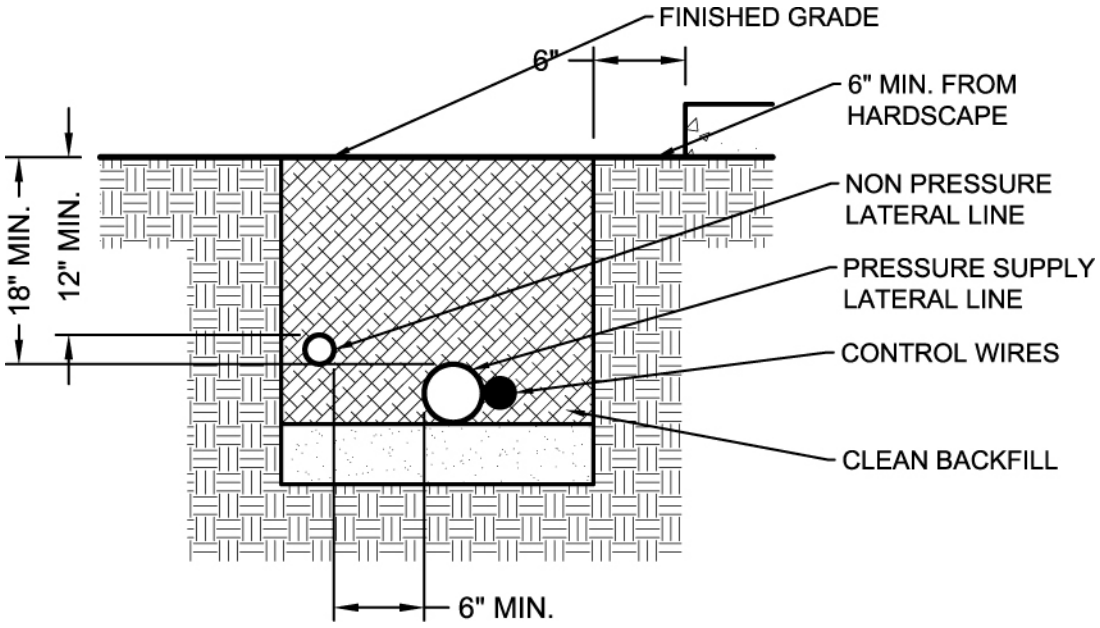
m. Pop-up irrigation heads are required in all planters, turf areas, sidewalks, and driveways. Pop-up heads shall be installed in all areas adjacent to pedestrian traffic or mowing areas. Sprinkler heads shall have matched precipitation with head to head coverage.

n. All slopes greater than three to one (3:1) shall have irrigation systems with application rates which reduce the amount of run-off on slopes and shall be of a type which do not apply water in a fixed steady stream. Check valves will be installed on all low elevation irrigation heads to stop lateral line drainage through the sprinkler nozzle. Top of slopes, middle of slopes, and bottom of slopes shall be irrigated separately.

| | |
|---|---|
| **Irrigation Controller:** | Toro Sentinel, or approved equal. Controller shall include a remote control radio, model # SHHR, TCC remote, UNI-REMOTE or approved equal. |
| **Pressure Main Line Piping and Fittings:** | Pipe sizes two and one half inches (2 ½") or larger shall be P.V.C. Class 315 solvent weld type. Pipe sizes smaller than two and one half inches (2 ½") shall be Schedule 40 P.V.C. |
| **Non-pressure Lines (buried):** | Pipe sizes smaller than two and one half inches (2 ½") shall be Schedule 40 P.V.C. |
| **PVC Pipe:** | Manufactured from virgin polyvinyl chloride compound in accordance with ASTM D 1784 or ASTM D 2241, cell classification 12454B, hydrostatic design stress rating not less than 2,000 p.s.i. |
| **PVC Fittings (solvent weld or thread):** | Standard weight, Schedule 40, side gated, injected molded P.V.C. complying with ASTM D 1784, cell classification 13454B, including threads when required. |
| **PVC Nipples:** | Schedule 80 with molded threads with teflon tape application. |
| **Brass Pipe:** | Eighty-five percent (85%) red brass, American National Standard Institute (ANSI), Schedule 40 screwed pipe. |
| **Brass Fittings:** | Medium brass, screwed 125 pound class. |
| **Meter Enclosure /Electrical (high voltage):** | Meter enclosure shall be V.I.P. Strong Box, model #MPS-A16-10K or approved equal. |
| **Electrical (low voltage):** | Connections between controller and remote control valves shall be made with direct burial AWG-UF, 600 volt wire, insulation thickness three-sixty-fourths inch ($^{3}/_{64}$"), utilizing low density high molecular weight polyethylene insulation. Splices, where permitted, shall be waterproofed using Rain Bird or approved equal, Pen-Tite Connectors or fusible heat shrinking tubing, and housed in a box. Boxes for other irrigation use may be utilized for this purpose. Wire sizing shall be a minimum of #14 "UF" 600 volt underground wiring, unless a shielded cable is used in which case #18 wire may be used. Common wire to be white in color, and all others a different color. The control wire shall be installed at a depth of eighteen inches (18") minimum below finish grade and sidewalk and sleeved twenty-four inches (24") minimum below hard surfaces (i.e. driveways, parking lots, streets). Sleeves shall be a minimum of two (2) times the diameter of the irrigation line. At each electric control valve an expansion coil of twenty-four inches (24") minimum per wire shall be provided. The coil can be achieved by coiling (winding) the wire around a piece of three-fourths(¾) PVC pipe. At the controller pedestal, each control wire shall be twenty-four inches (24") longer than the required connection. The installed wire shall be neatly organized with the excess wire looped and secured to the bottom of the controller cabinet. The control wire shall be sleeved separately in SCH 40 PVC pipe sized to the number of wires to be sleeved (minimum three-fourths inch [3/4"]) under <u>all</u> hard surfaces. |

| | |
|---|---|
| **Valve Boxes:** | Remote control valve and flow sensor boxes shall be rectangular lockable plastic boxes (12" x 18") AMETEK or approved equal, with solid covers. Gate valve boxes shall be ten inch (10”) round lockable plastic boxes with exterior as required to properly protect valve, AMETEK or approved equal. |
| **Pumps:** | Landscape Irrigation Pumps – FloBoy / S – Series ( www.flotronex.net ) or approved equal, Variable Frequency Drive. |

## 2. TRENCHING




FINE GRANULAR MATERIAL WILL BE PLACED ON ALL LINES, NO LARGER THAN $\frac{1}{2}$" INCH IN SIZE. THIS WILL BE PERMITTED IN THE INITIAL BACKFILL MEASURED 6" FROM THE TOP OF PIPE. THE REMAINDER OF TRENCH CAN BE FILLED WITH ROCK SCREENED 1" MINUS.

ALL BACK FILL IS TO BE SATURATED AND COMPACTED TO 90%.

INSTALL ALL PIPE IN TRENCH.

BUNDLE AND TAPE ALL CONTROL WIRES AT 10' O.C. TO PRESSURE SUPPLY LINE AND PROVIDE A SERVICE LOOP AT ALL 90 DEGREE & CHANGES IN DIRECTION.

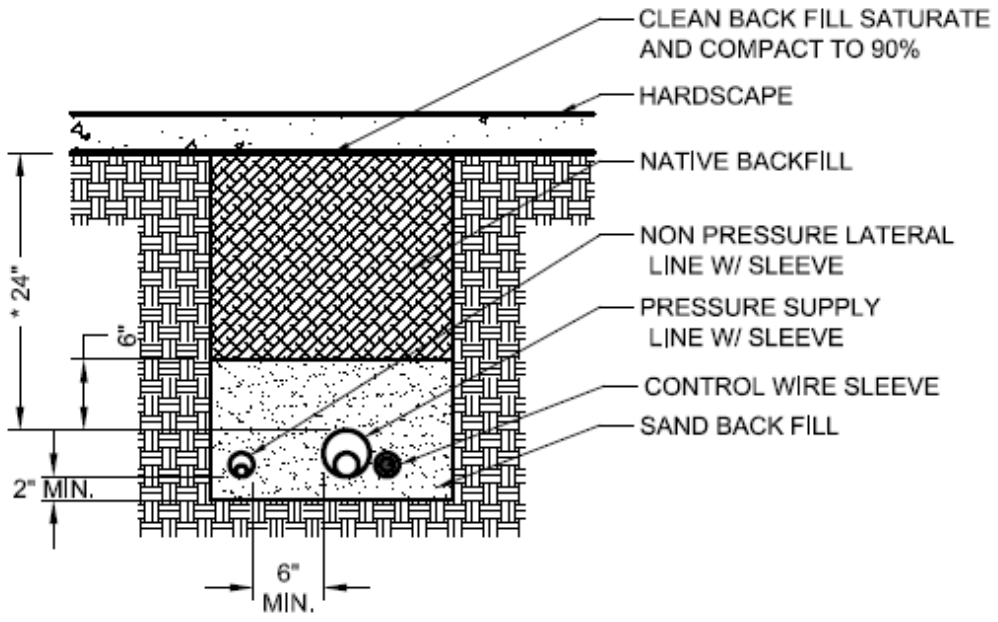
PRESSURE MAIN 2 1/2" AND LARGER SHALL BE P.V.C. CLASS 315, 2" AND SMALLER SHALL BE P.V.C. SCHEDULE 40.

CONTRACTOR SHALL PROVIDE SLEEVES OR CONDUIT LINES WHEN MAINLINE INSTALLATION IS UNDER ASPHALT OR CONCRETE. SLEEVES SHALL BE A MINIMUM OF TWICE THE DIAMETER OF THE IRRIGATION LINE.

CONTRACTOR SHALL PROVIDE 24" INCHES OR COVER OVER PIPE SERVING A DRINKING FOUNTAIN OR PRESSURE MAINLINE 3" AND LARGER.

# 3. SLEEVING

| | |
|---|---|
| **Sleeves or Conduit Line:** | Shall be installed under all paving (asphalt concrete or concrete); shall be P.V.C. Schedule 40; shall be a minimum of two (2) times the diameter of the pipe enclosed; shall be installed under paving a minimum twenty-four inches (24") depth; shall have separate sleeves for control wire, pressure mainline and non-pressure lateral line. Control wire sleeve size shall be as required to allow ample room for any future wire installation. (Twice the diameter of the wires to be sleeved, one inch (1") diameter minimum sized sleeve). |




NOTES:

INSTALL CONTROL WIRE SLEEVE ADJACENT TO THE PRESSURE SUPPLY LINE, SIZE PER SPEC.

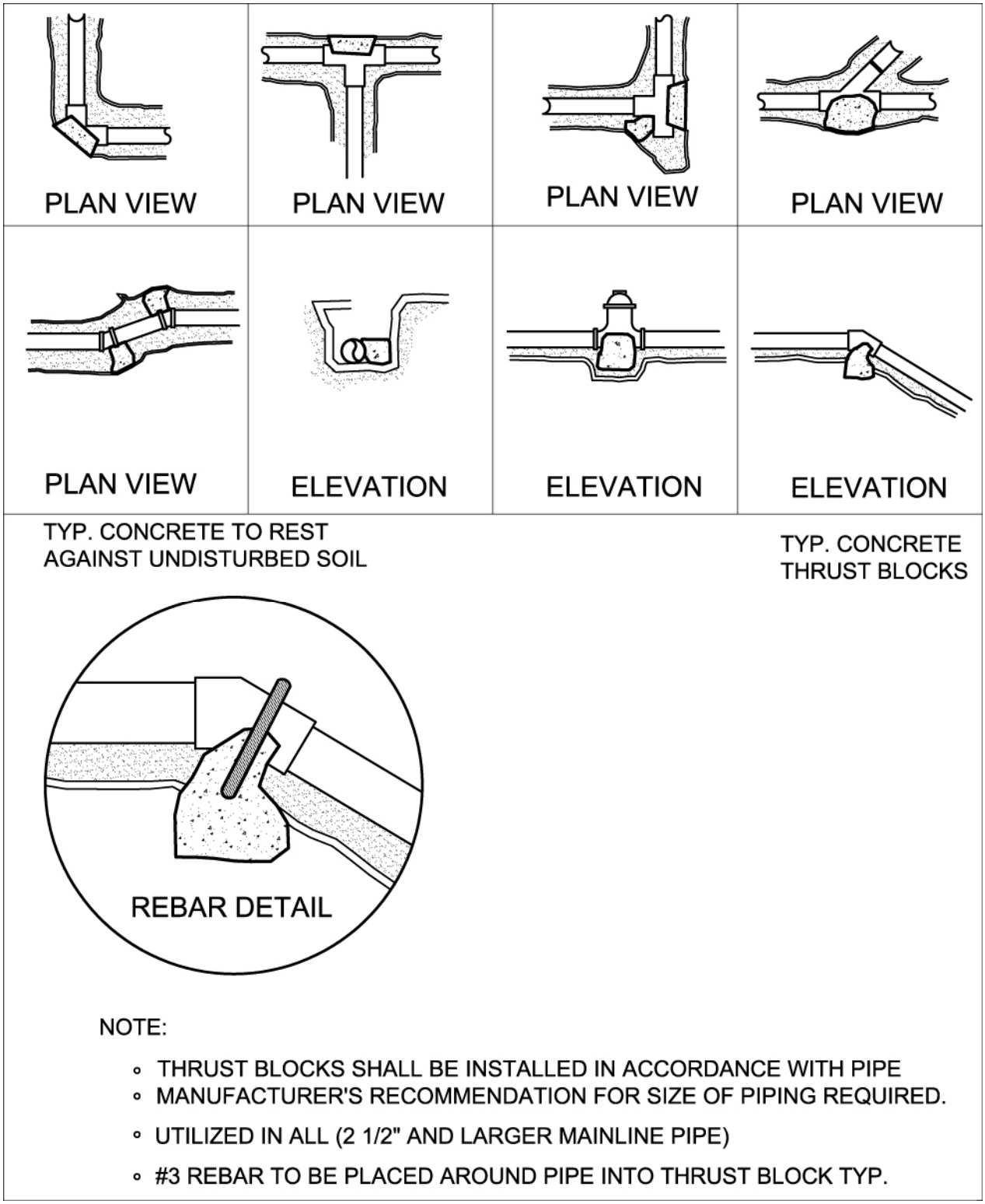
ALL SLEEVES TO BE SCH. 40 PVC AND TO BE A MINIMUM OF 2X THE DIAMETER OF THE LINE TO BE SLEEVED.

* INCREASE THIS DISTANCE TO 36" WHEN SLEEVING UNDER ROADWAYS AND COMMERCIAL TRAFFIC WAYS WHEN INSTRUCTED BY INSPECTOR. SAND BACK FILL AND MARK CURB FACE ON BOTH SIDES OF THE STREET WITH "IRR".

SLEEVES SHALL BE EXTENDED BEYOND HARDSCAPE (MIN. 12") TO POINTS AS REQUESTED BY INSPECTOR.

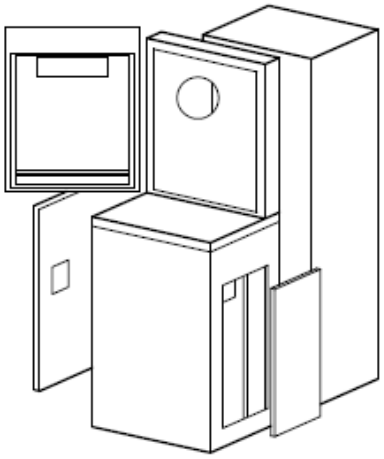
IF SLEEVES ARE TO BE USED AT A LATER DATE, CONTRACTOR SHALL PLACE A CAP ON ENDS (NON-GLUE) AND PROVIDE A VERTICAL MARK AT ENDS OF SLEEVING VISIBLE AT GROUND LEVEL.

## 4. THRUST BLOCK ASSEMBLY

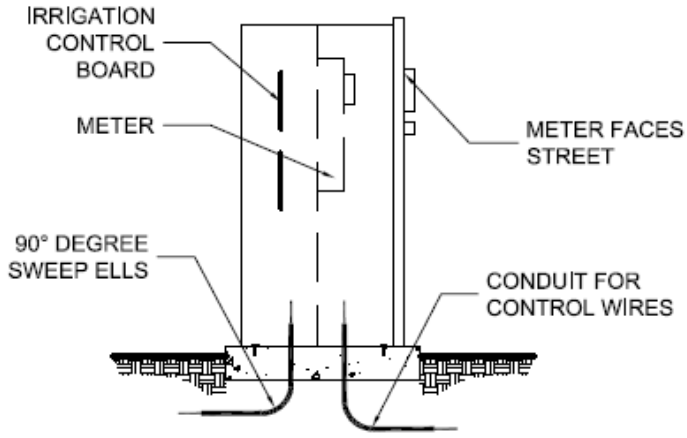


# 5. IRRIGATION CONTROLLER

| | |
|---|---|
| **Automatic Controller:** | Toro Sentinel satellite controller; mounted in strong box, Model #MPS-A16-10K. Provide a permanent connection in controller housing for quick connection of remote hand held radio controls. Manufactured by TORO, Model SHHR. Provide hand held remote radio. |



MODEL NO. MPS - A16 - 10K



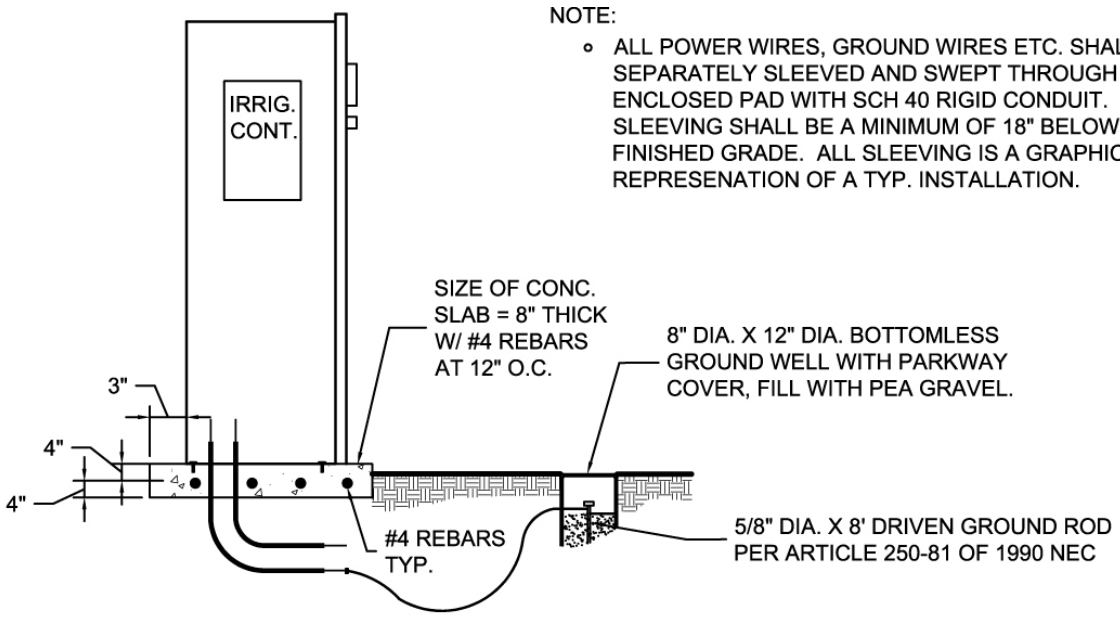

STRONG BOX
MODEL NO. MPS - A16 - 10K

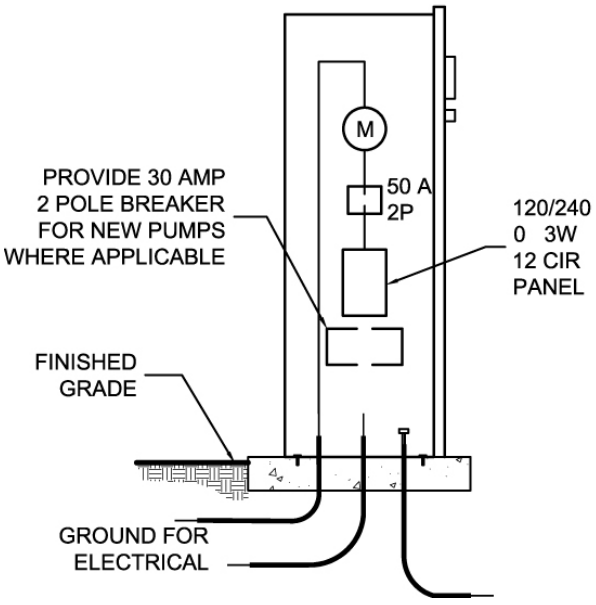
END VIEW

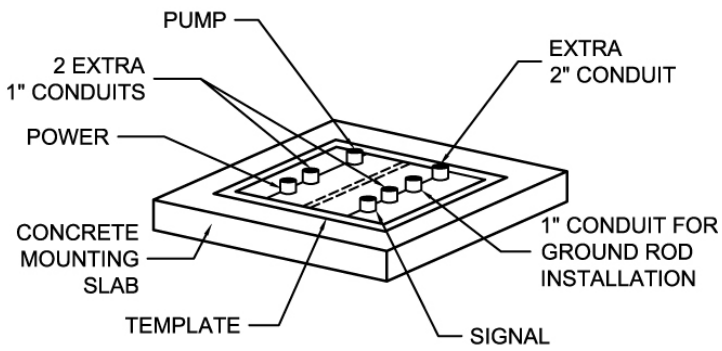
NOTE:

- EXACT LOCATION OF CONTROLLER SHALL BE AGREED UPON BY S,C,E., CITY LANDSCAPE INSPECTOR AND CONTRACTOR PRIOR TO ANY TRENCHING OR WIRE PLACEMENT.
- PROVIDE 100A METER AND 50A/2P MAIN C/B WHERE INDICATED ON DRAWINGS.
- PROVIDE PANELBOARD WHERE INDICATED ON DRAWINGS.
- PROVIDE IRRIGATION CONTROLLER CABINET WHERE INDICATED ON DRAWINGS.
- TERMINATE AT EXISTING HANDHOLE PER S,C,E. COMPANTY REQ. VERIFY EXACT LOCATION AND TERMINATION REQ. WITH S.C.E. CO. PRIOR TO TRENCHING.
- CONDUIT AND CONDUCTOR SIZES ARE BASED ON NONMETALLIC CONDUIT AND COPPER CONDUCTORS WITH TYPE "THHN/THWN" INSULATION.

# IRRIGATION CONTROLLER CON'T

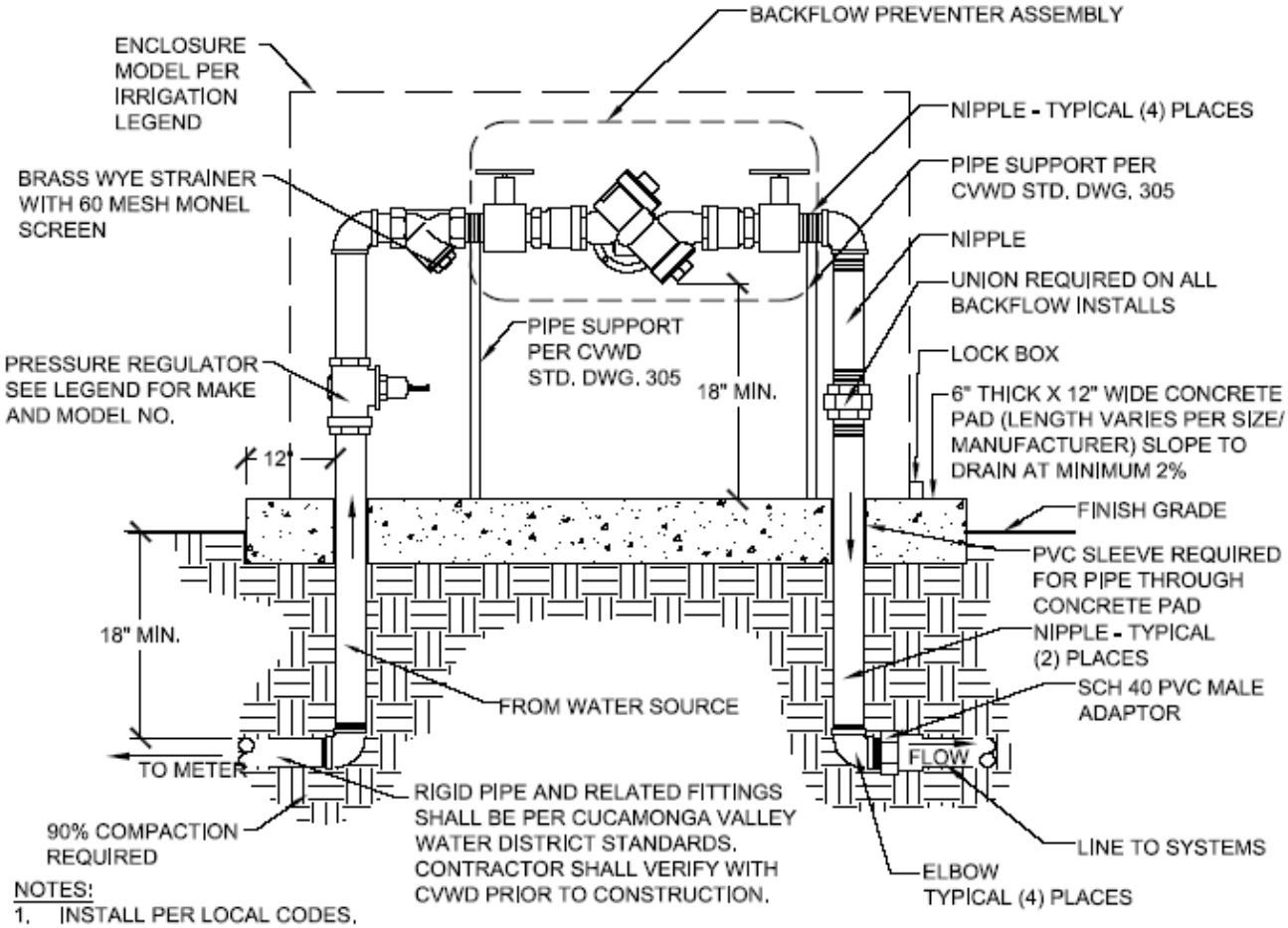


# 6. BACKFLOW PREVENTER

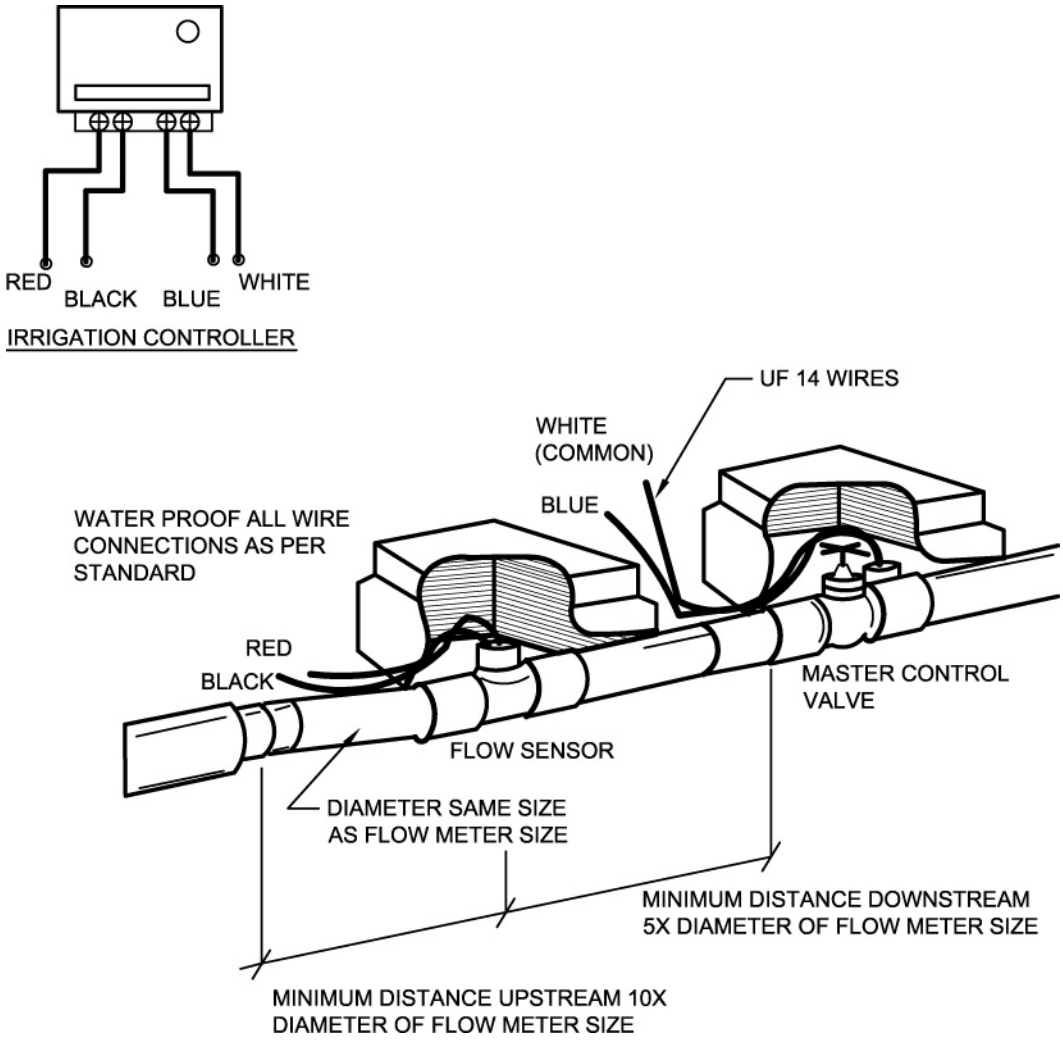
| | |
|---|---|
| **Backflow Preventers:** | Backflow device shall be Febco Model 825 YA or approved equal. |
| **Enclosures:** | Backflow device shall be housed in a Guard Shack vandal resistant steel mesh enclosure or equal as approved by the City. All backflow enclosures shall include a lock box. |




NOTES:

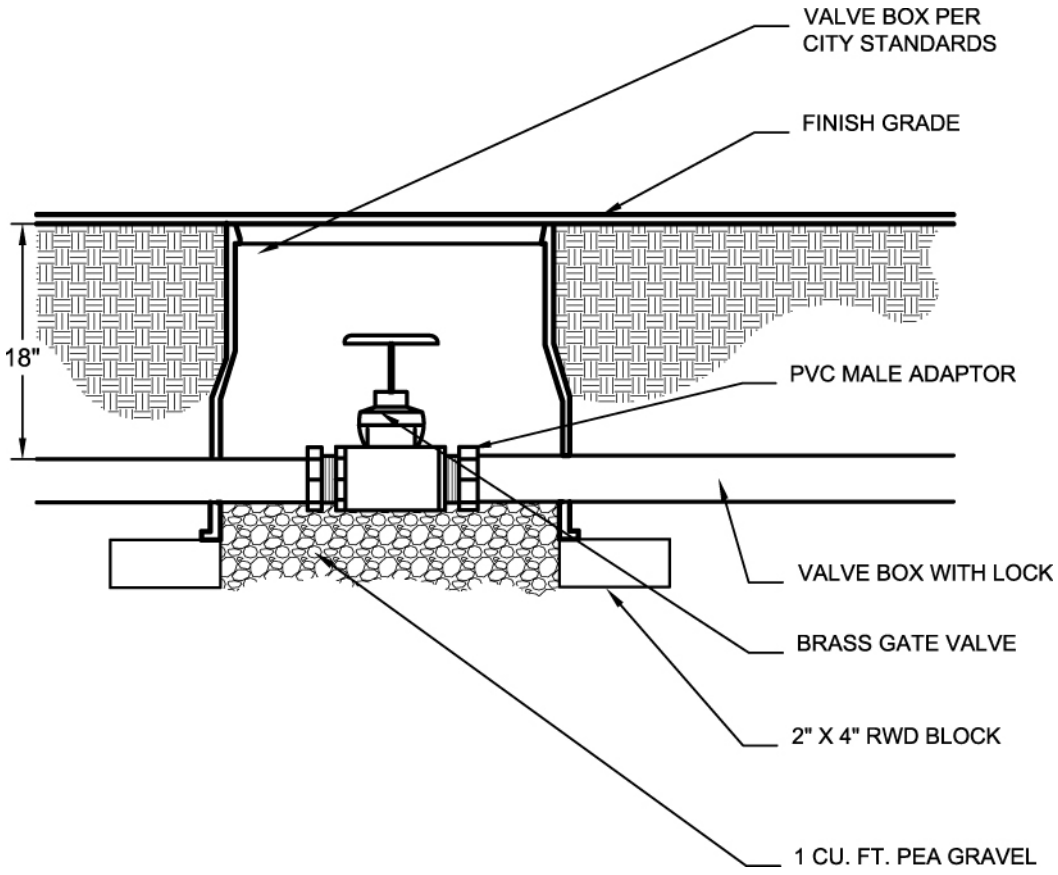
1. INSTALL PER LOCAL CODES.
2. EQUIPMENT TO BE INSTALLED AT A MINIMUM OF 24" FROM ANY STRUCTURES OR HARDSCAPING.
3. WHEN UNIT IS NEXT TO A STRUCTURE (IE. WALL, BUILDING, ETC.) MOUNT TEST COCKS ON OPEN OR NON-STRUCTURE SIDE.
4. ORIENT UNIT PARALLEL TO STREET.
5. SCREEN UNIT WITH SHRUBS WHENEVER POSSIBLE.
6. DIALETIC FITTINGS ARE REQUIRED FOR CONNECTIONS OF DISSIMILAR MATERIALS.
7. VALVE PER STD. 518 REQUIRED BEFORE BACKFLOW PREVENTER WHEN MAINLINE IS 3" OR LARGER.
8. IF A PRESSURE REGULATOR IS REQUIRED, IT SHALL BE INSTALLED ON THE INLET SIDE OF BACKFLOW LOOP.
9. INSTALL PIPE SUPPORT ON BACKFLOW LARGER THAN 2".

# 7. FLOW METER/MASTER VALVE



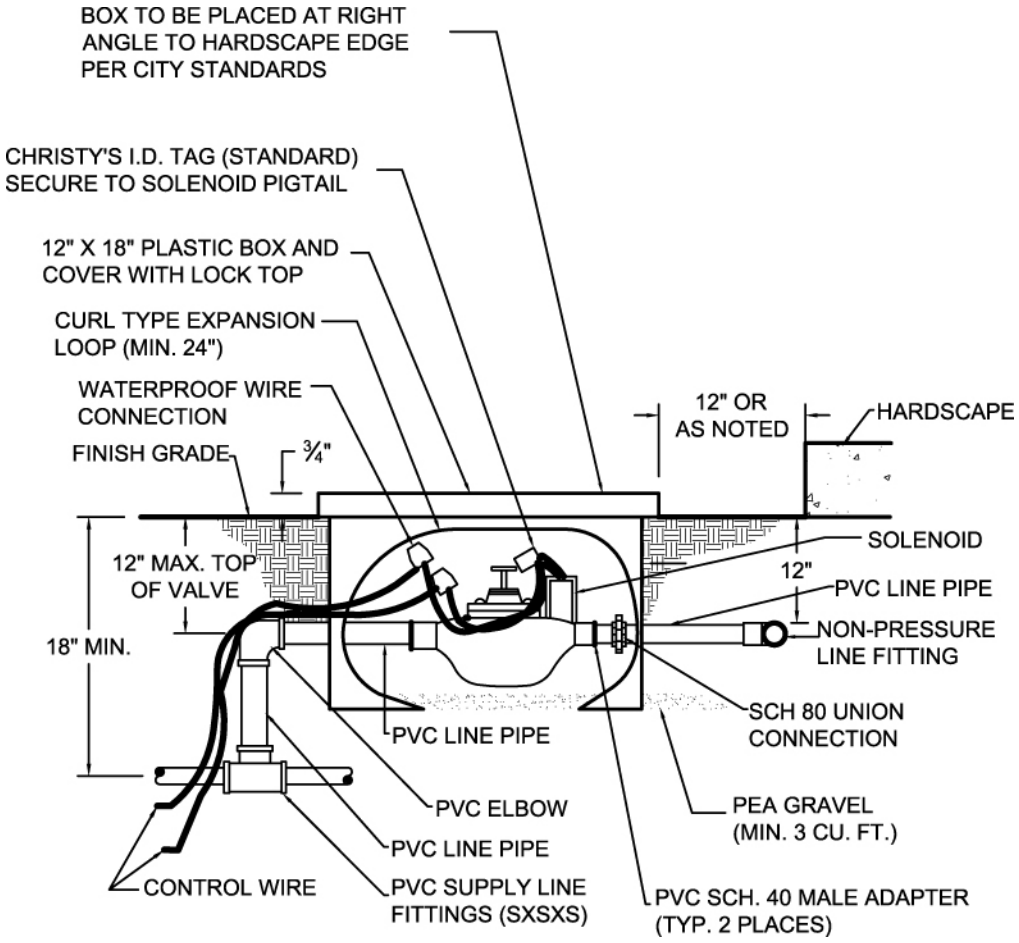
# 8. GATE VALVES

| | |
|---|---|
| **Gate Valves:** | Three inches (3”) and smaller (unless otherwise noted on Drawings): ASTM B-62 brass body, 150 pound saturated steam rated; with screwed joints; non-rising stem; screwed bonnet, solid disc. Provide with handwheel.<br><br>Four inches (4”) and larger (unless otherwise noted on Drawings): ASTM A126 Class B, iron body 150 pound w.o.g. with flanged joints, non-rising stem, bolted bonnet, and double disc. Provide with handwheel.<br><br>Nibco or Hammond brands or approved equal. |



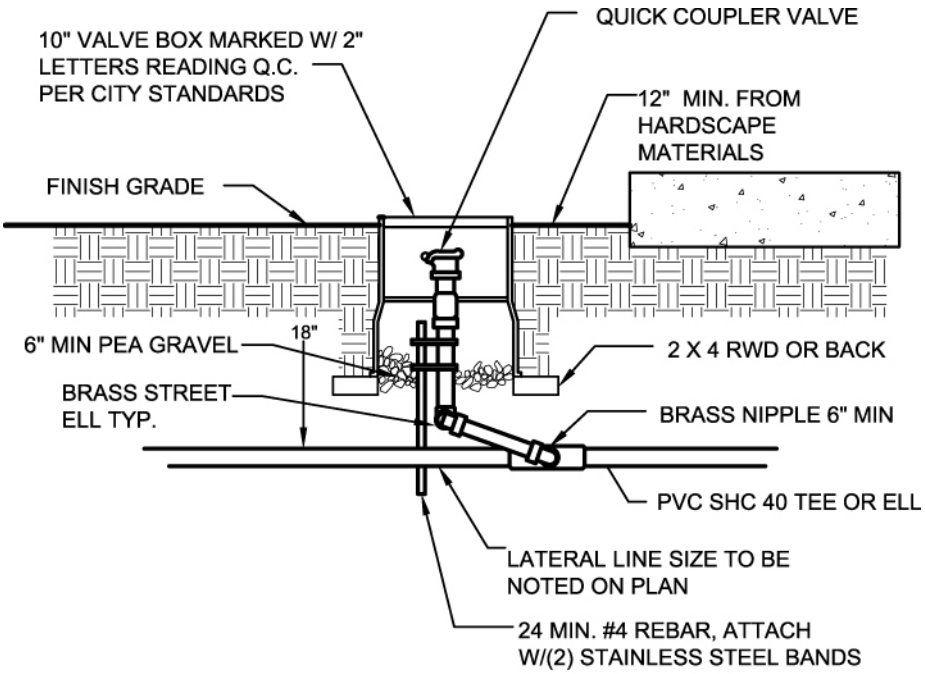
# 9. REMOTE CONTROL VALVES

| | |
|---|---|
| **Remote Control Valves:** | Valve type: spring-loaded, packless diaphragm activated, normally closed type with brass body, equipped with flow control and pressure regulation capabilities when noted on drawing. Electric valves shall be Rain Bird or SHHR approved equal.<br><br>Valve solenoid: 24 volt a.c. 4.5 watt maximum, 500 mili-amp maximum surge, corrosion-proof, stainless steel construction, epoxy encapsulated to form a single integral unit. Provide bleeder valve to permit operation in the field without power at the controller.<br><br>Valves shall be installed a minimum of six feet (6') from all fixed objects and twenty-four inches (24") apart. [One (1) valve per box; valve boxes shall be installed a minimum of twelve inches (12") apart]. |



# 10. QUICK COUPLING VALVES

| | |
|---|---|
| **Quick Coupling Valves:** | Quick coupling valves shall be Rain Bird #33D or approved equal.<br><br>Quick coupler(s) shall be installed within a ten inch (10”) round lockable plastic valve box placed a maximum of 150 linear feet apart.<br><br>Quick coupler(s) shall be supported with a Schedule 40 PVC pipe stake or equal of adequate length. The quick coupler shall be attached to the stake with two (2) hose clamps.<br><br>The quick coupler shall be attached to the main line via a triple swing assembly.<br><br>Athletic Fields: Three quick coupler valves shall be placed as follows: two along the field lines near the fence at the dugouts, and one in the grass area immediately behind the second base. |

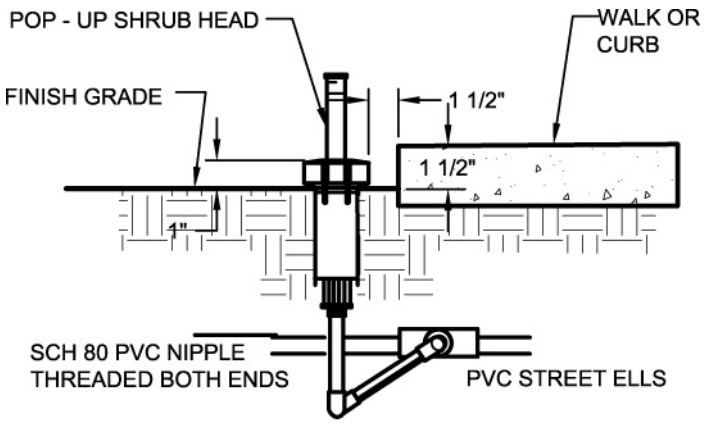



NOTE:
USE TEFLON TAPE ON ALL THREADED FITTINGS

## 11. SPRAY HEADS

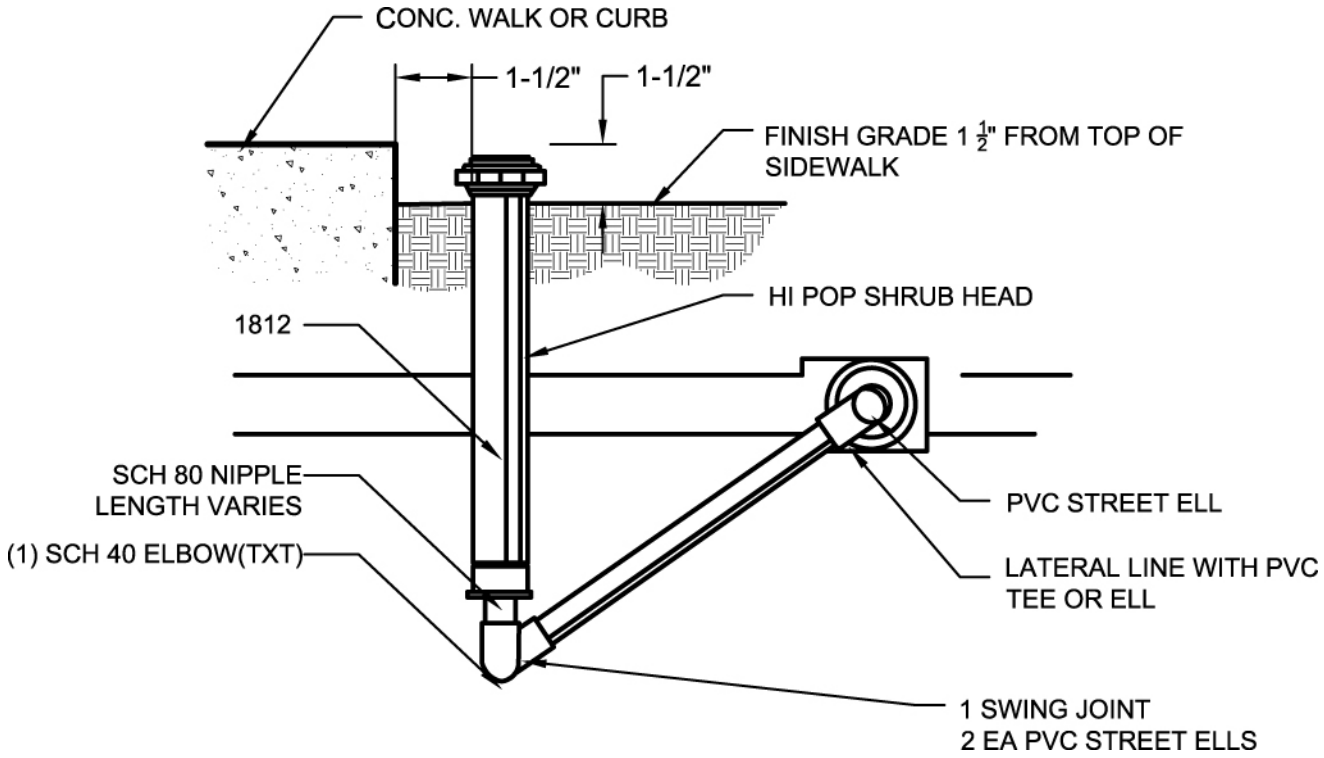
| | |
|---|---|
| **Bubblers:** | Bubblers shall be Rain Bird 1400 Series pressure compensating full-circle bubblers or approved equal. The bubblers shall be installed on a fixed riser and attached to the lateral lines via a triple swing assembly. |
| **Small Lawn Sprinkler Heads:** | Small lawn sprinkler heads shall be Rain Bird 1806 Series or approved equal. The sprinkler heads shall be attached to the lateral lines via a triple swing assembly. |
| **Small Shrubbery Sprinkler Heads:** | Small shrubbery sprinkler heads shall be Rain Bird 1812 Series or approved equal. The sprinkler heads shall be attached to the lateral lines via a triple swing assembly. All spray heads shall be SAMS PRS 1800 Series or approved equal. |
| **Large Diameter Irrigation Head:** | Large diameter irrigation heads shall be TORO 640 Series or approved equal. |
| **Rotary Sprinkler Heads:** | Rotary sprinkler heads shall be Hunter PGP, I20, I40 Series. Rotary sprinkler heads shall be attached to the lateral lines via a triple swing assembly. |

### a. Shrub Pop Up Head

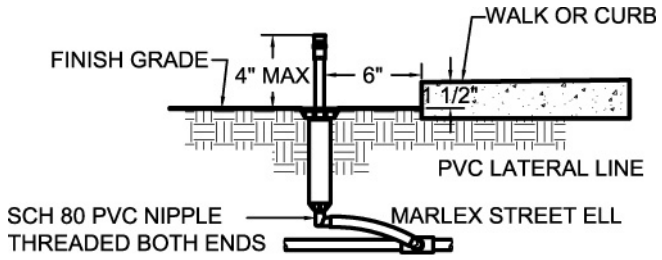



NOTE:
- INSTALL 12" SHRUB POP-UP HEAD 1 1/2" ABOVE F.G.
- F.G. - 1 1/2" BELOW WALK OR CURB
- CHECK VALVE FOR LOW HEAD DRAINAGE

**b. High Pop Shrub Head**

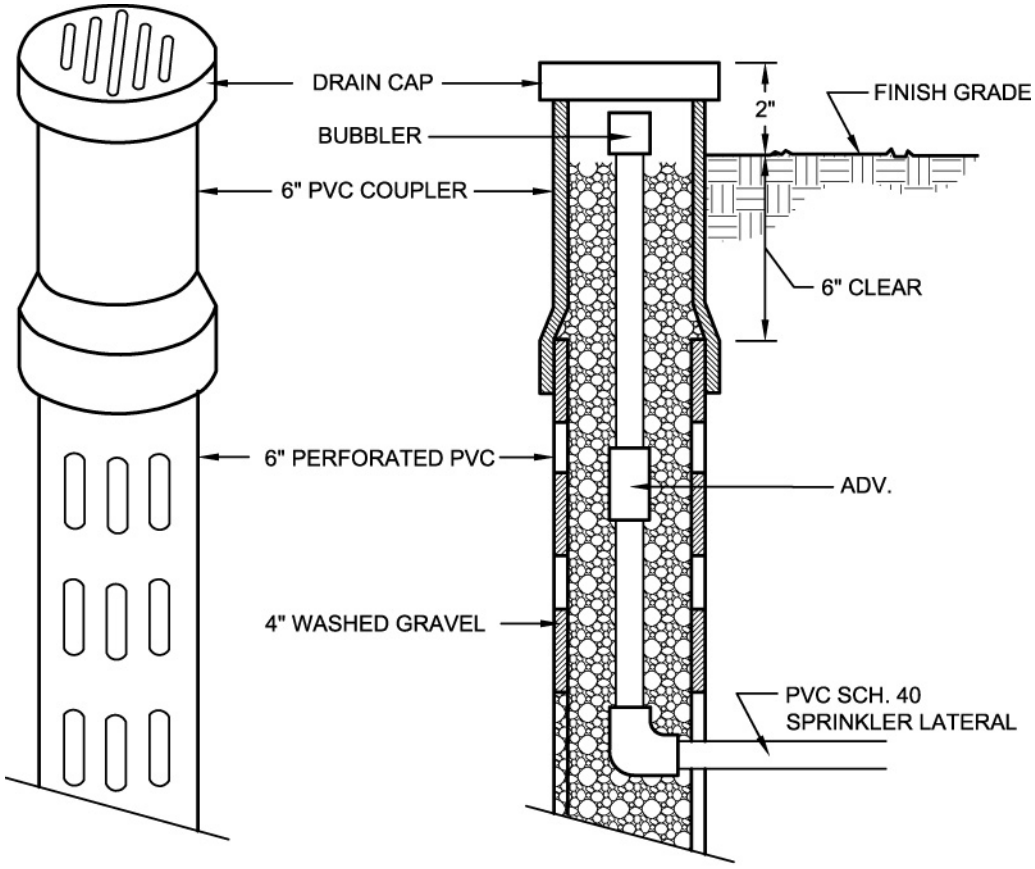



**c. Bubbler Head**




NOTE:
- BUBBLERS TO BE INSTALLED WITH TRIPPLE SWING JOINTS
- F.G. - 1 1/2" BELOW WALK OR CURB

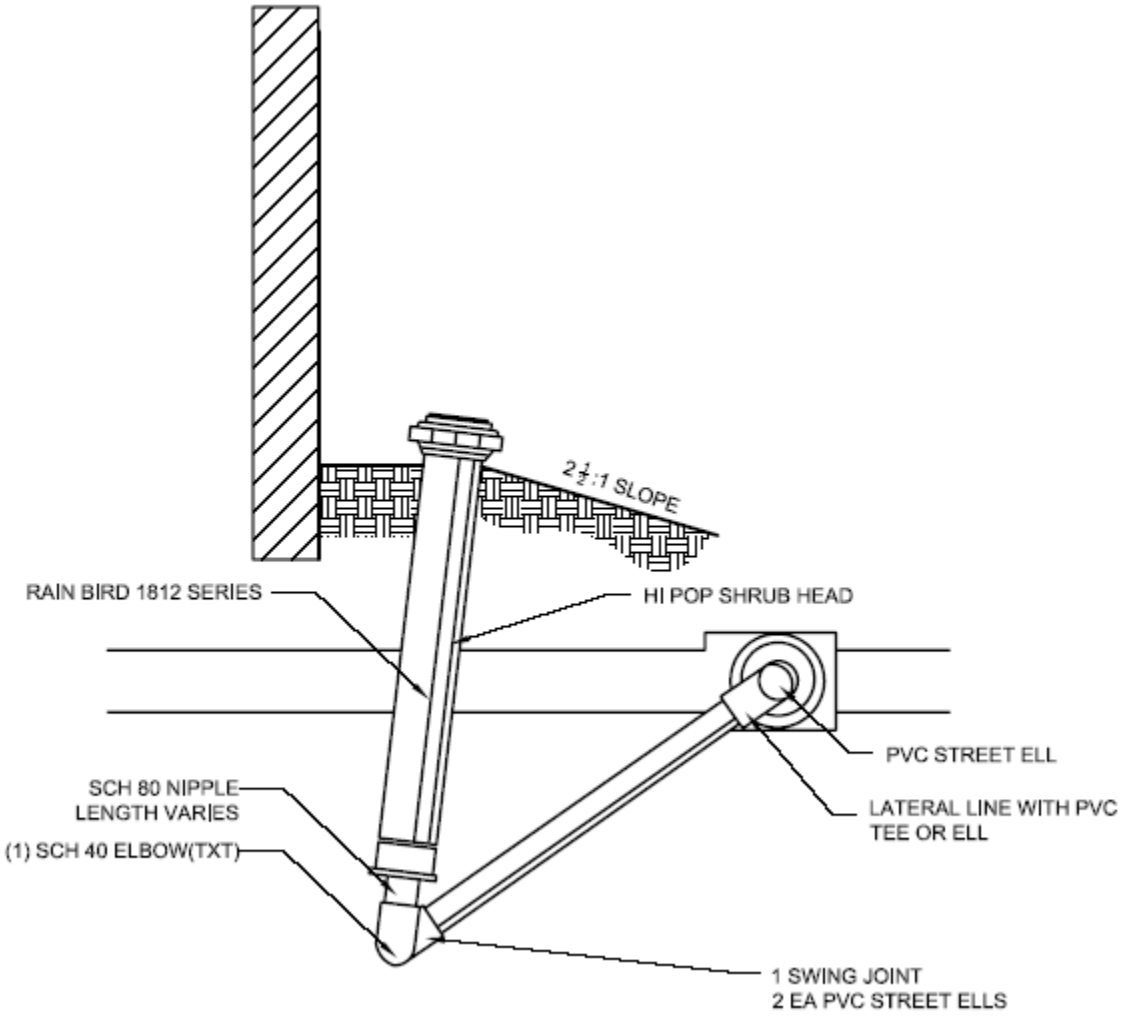
## d. Tree Bubbler Sump



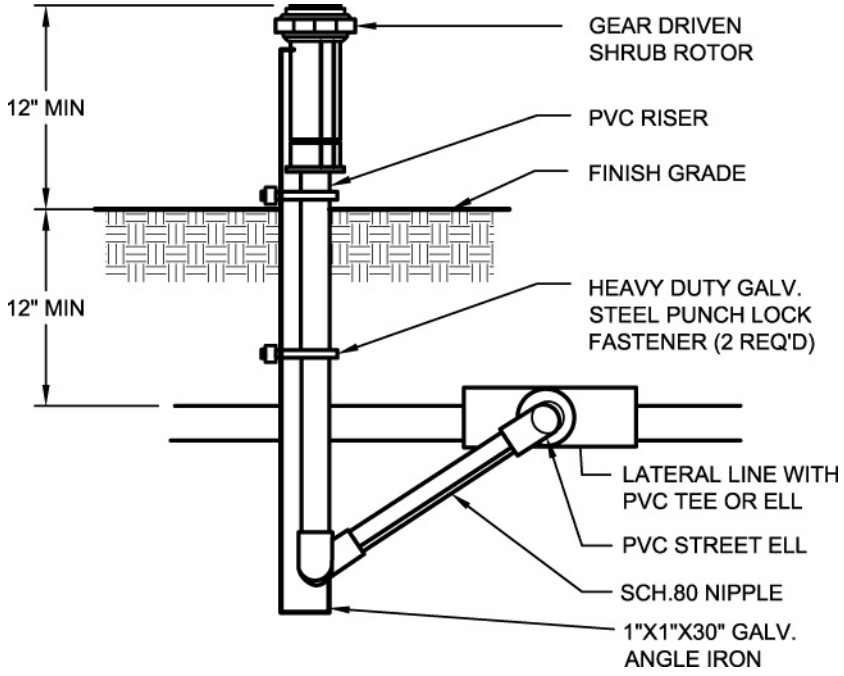

NOTE:

- DEPTH OF SUMP SHALL BE PER SOIL CONDITION OR 3' MIN.

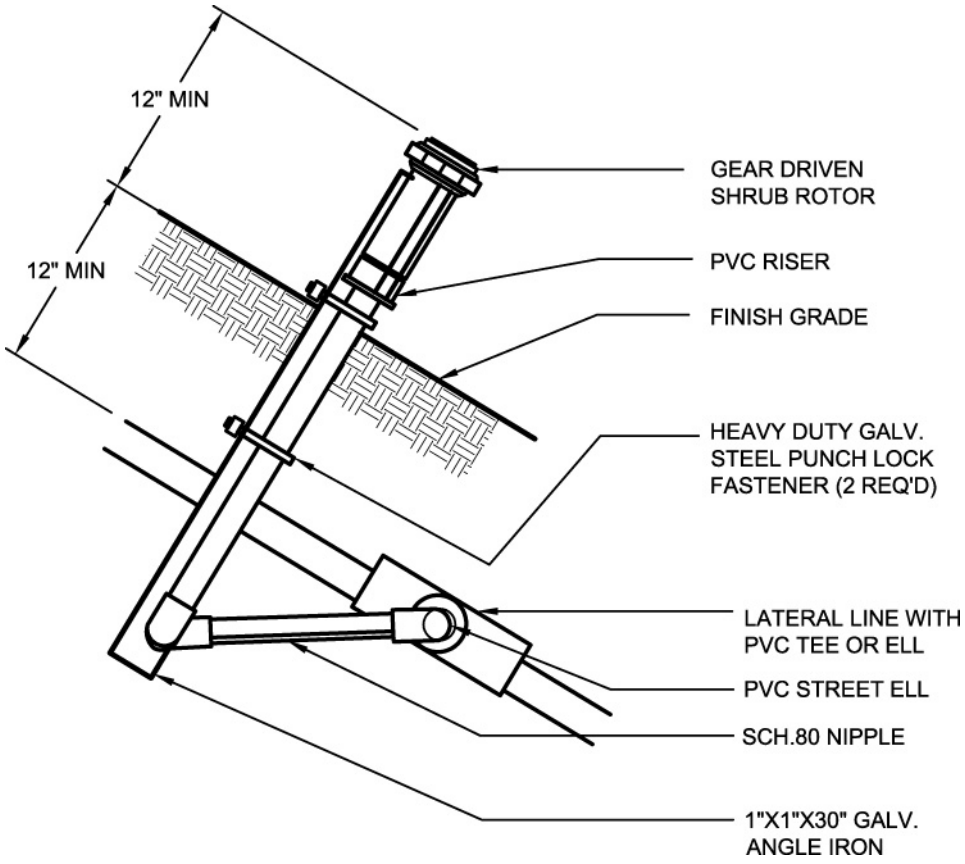
## e. Irrigation At Top of Slope



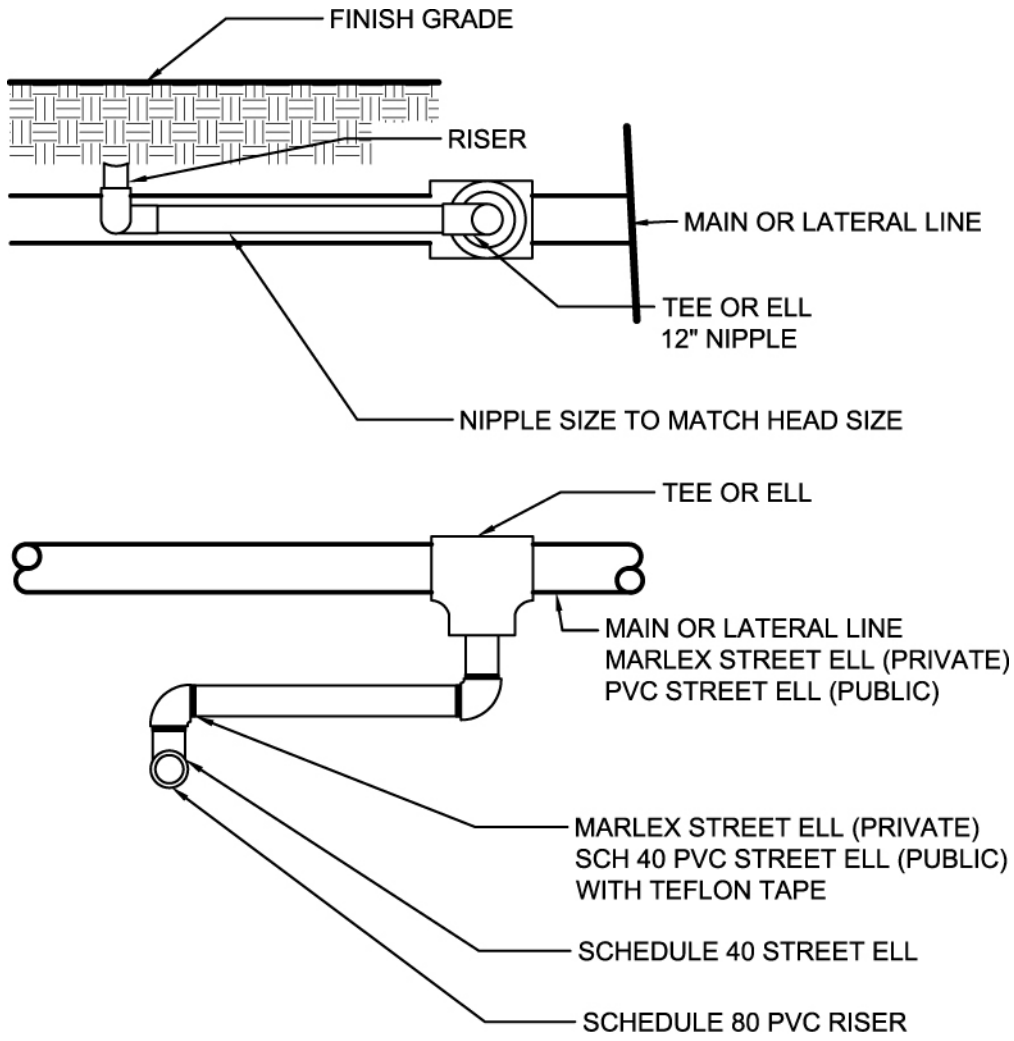
## f. Shrub Rotor




## g. Shrub Rotor on Slope



**h. Swing Joints**

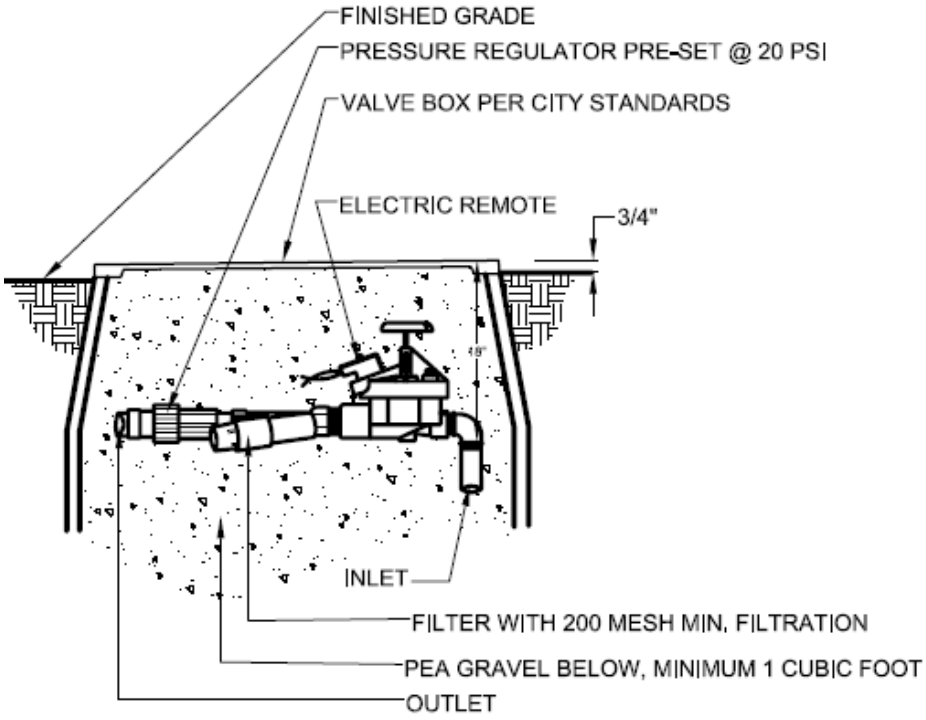



NOTE:

- ALL PIPE AND FITTINGS SHALL BE SCHEDULE 40 PVC UNLESS OTHERWISE SPECIFIED.
- USE PVC STREET ELLS W/TEFLON TAPE FOR ALL PUBLIC JOBS.

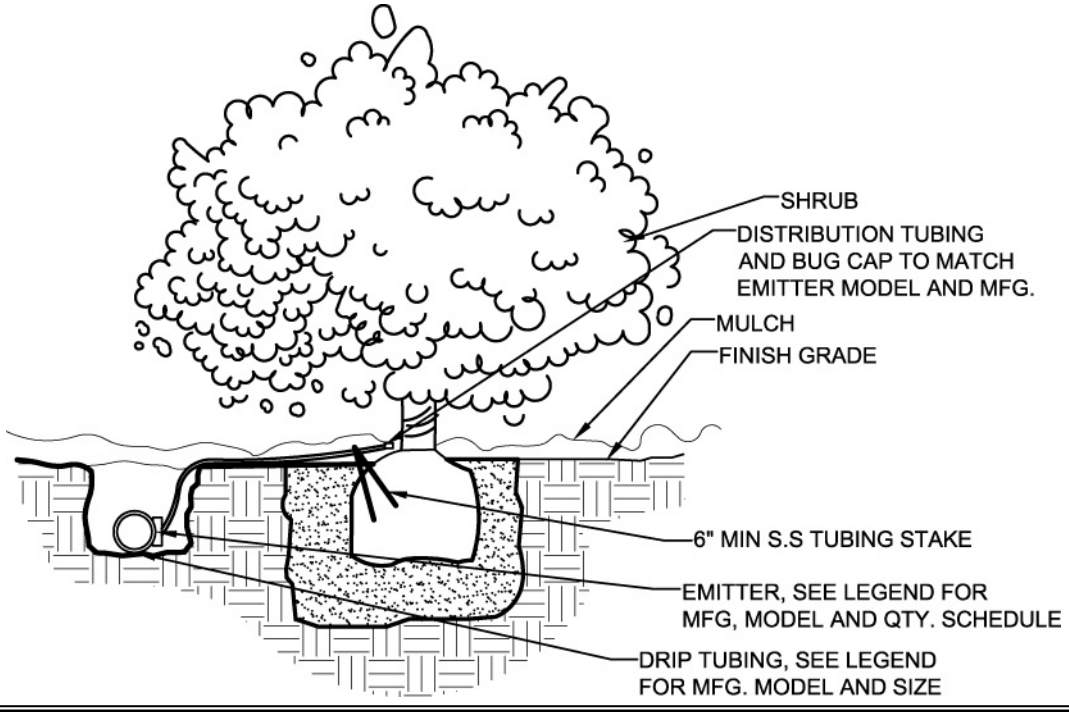
# 12. DRIP IRRIGATION

## a. Automatic Drip Valve




NOTE: INSTALL CONTROL VALVES MINIMUM OF 3 FT. APART IN SHRUB AREAS UNLESS OTHERWISE NOTED.

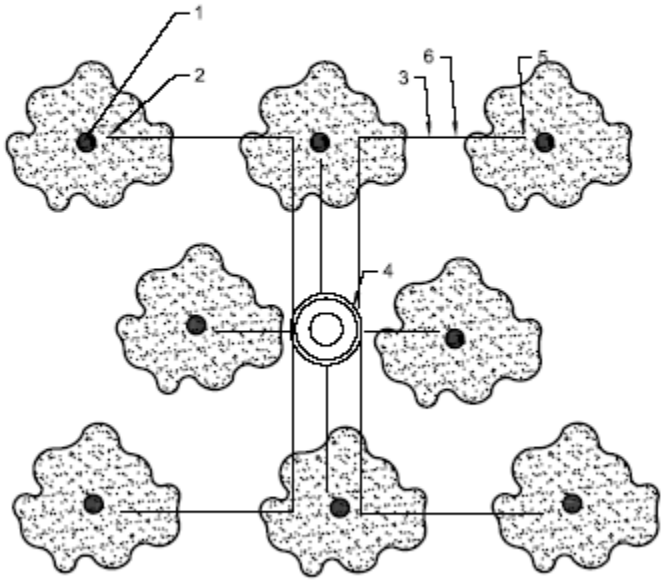
## b. Drip Emitter



## c. Emitter Layout

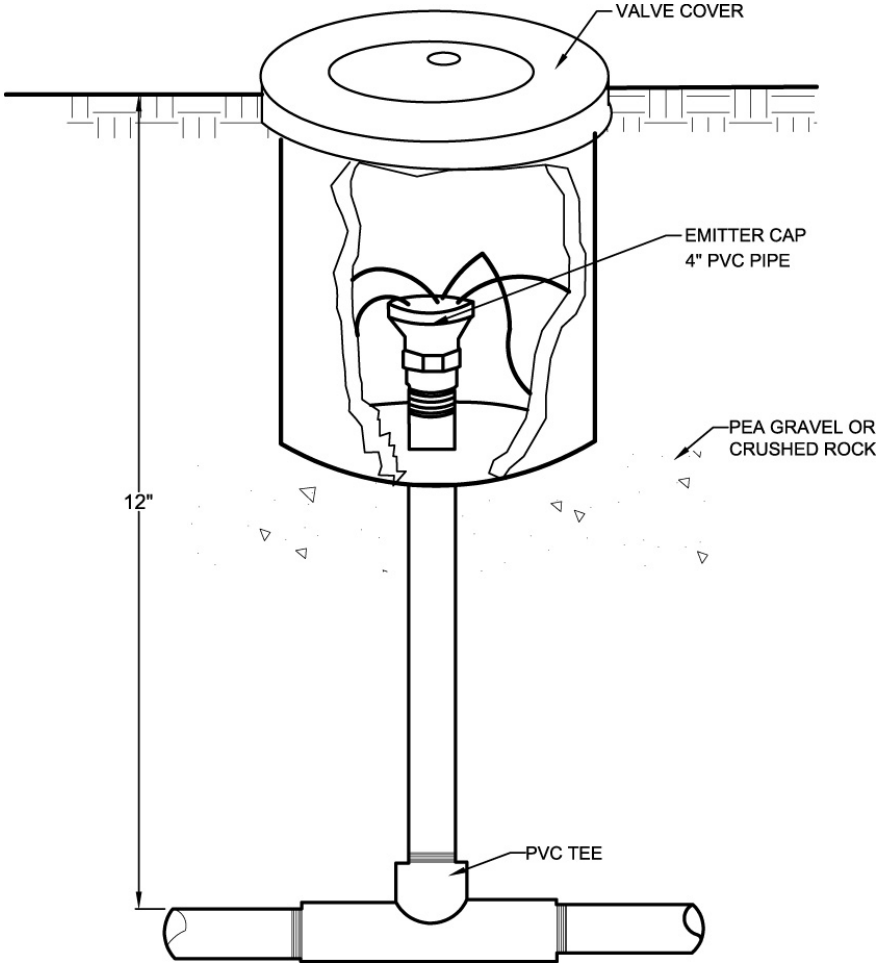
LEGEND:

1. PLANT MATERIAL TYPICAL
2. EMISSION POINT, SEE XERI-DETAILS
3. RAIN BIRD MODEL # DT-025 $\frac{1}{4}$" DISTRIBUTION TUBING MAX LENGTH PER SPECS
4. RAIN BIRD XERI-BIRD 8 UNIT FLOW PER IRRIGATION EQUIPMENT LEGEND
5. RAIN BIRD MODEL # DAC-025 DIFFUSER BUG CAP (TYP.)
6. RAIN BIRD MODEL # TS-025 TURNING STAKE (TYP.)

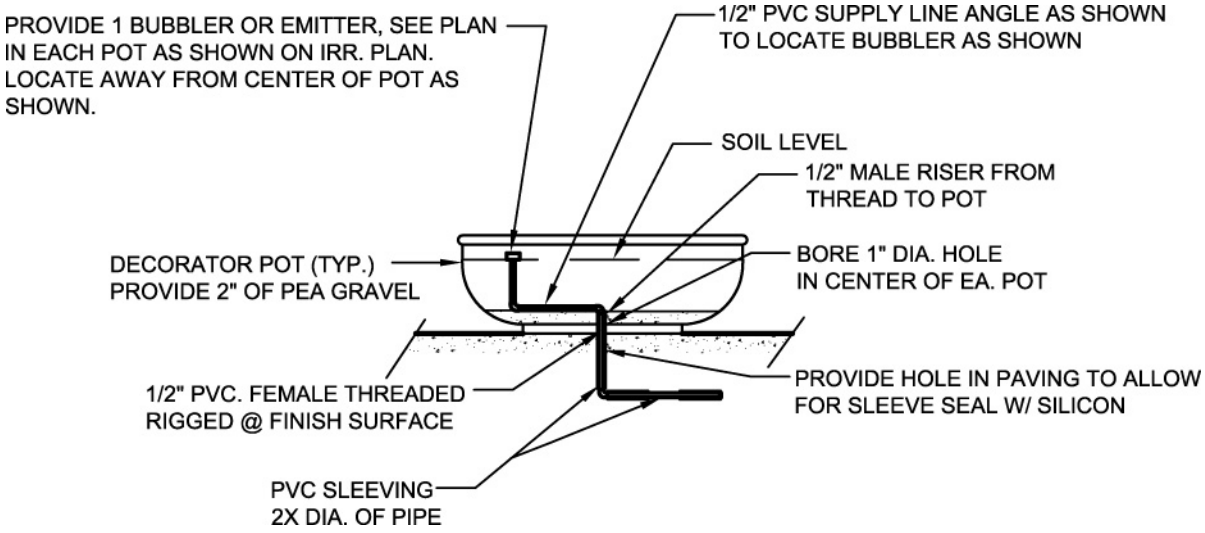



NOTE: THE RAIN BIRD PRODUCTS LISTED ABOVE ARE SUGGESTED ONLY. PRODUCTS OF EQUAL QUALITY CAN BE USED.

**d. Emitter**




## 13. CONTAINER IRRIGATION



# N. PLANTINGS

## 1. GENERAL GUIDELINES

a. The use of plant materials that are particularly compatible with our local environment is essential to promote water conservation and reduce maintenance costs.

b. Use only fertile, friable, well-drained soil, of uniform quality, free of stones over one inch (1") diameter, sticks, oils, chemicals, plaster, concrete, and other deleterious materials, as a planting medium for the project.

c. Applicable standards include latest editions of: "American Standard for Nursery Stock", American Association of Nurseyman, Inc.; and Hortus III, Bailey Horatorium, Cornell University.

d. No planter area shall be less then five feet (5') unless approved by the City.

e. Group plant material with similar water requirements and environmental exposure to sun and wind.

f. Only five gallon shrubs may be planted in public areas, except where approved by the City.

g. Groundcover shall be planted twelve inches (12") on center, per approved plans, or as directed by inspector.

h. Where turf abuts buildings, walls or fences, a twelve inch (12") wide concrete mow curb shall be installed as buffer for maintenance.

i. Provide a ten inch (10") by ten inch (10") mow curb to separate all turf area from groundcover planting.

j. All slopes greater than three to one (3:1) or greater than five feet (5') high shall be planted with groundcover.

k. Provide street trees in accordance with the City's street tree ordinance.

l. Existing healthy major trees shall be preserved and incorporated into any new project landscaping. Structures shall be located outside the drip line of major tree(s), and disturbance to roots or ground elevation at the tree base shall be avoided.

m. Plant materials utilized shall take into consideration the need for users of the space to easily view their surroundings as well as police patrols to monitor the area from adjacent streets.

n. Trees shall be positioned to avoid interfering with required lighting levels and take into consideration the height of canopies from ground level regarding surveillance opportunities by users of the space and police patrols.

o. The spacing in turf areas shall provide for ease of mowing, a twenty foot (20') minimum space shall be maintained.

p. Root barriers shall be Deep Root Corporation or equal. Barriers to deflect tree roots downward shall be installed when the tree is planted within five feet (5') of City improvements (i.e. sidewalks, curb and gutter, storm drain structures, wall structures).

q. Hydroseed Mulch: "Ecology Controls M-binder" as distributed by Stover Company, Los Angeles, CA, or equal approved by Agency's Authorized Representative.

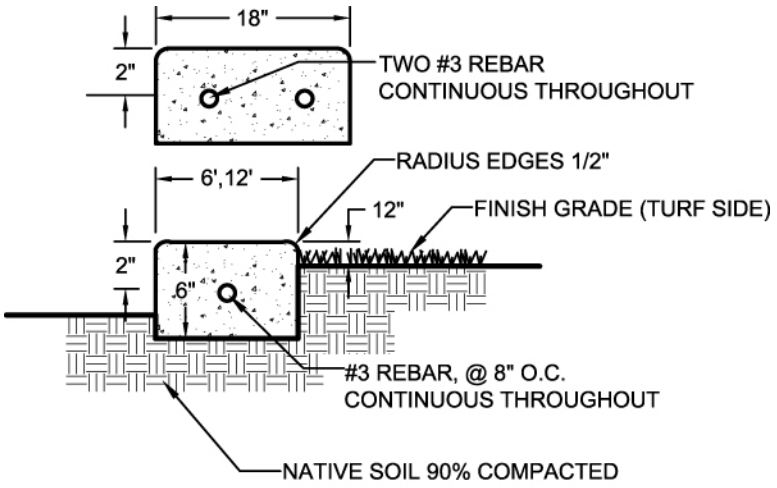
r. Hydroseed Mix: Marathon II, Triple Crown Dwarf or equal.

s. Athletic Field Turf: Turf type shall be a Hybrid Bermuda variety (Santa Ana or Tifway II) and installed by stolonizing, sodding, or another acceptable method.

t. Palm Batten Kit: Arborguy or approved equal.

u. Mulch shall be weed free and a certification must be provided to City inspector.

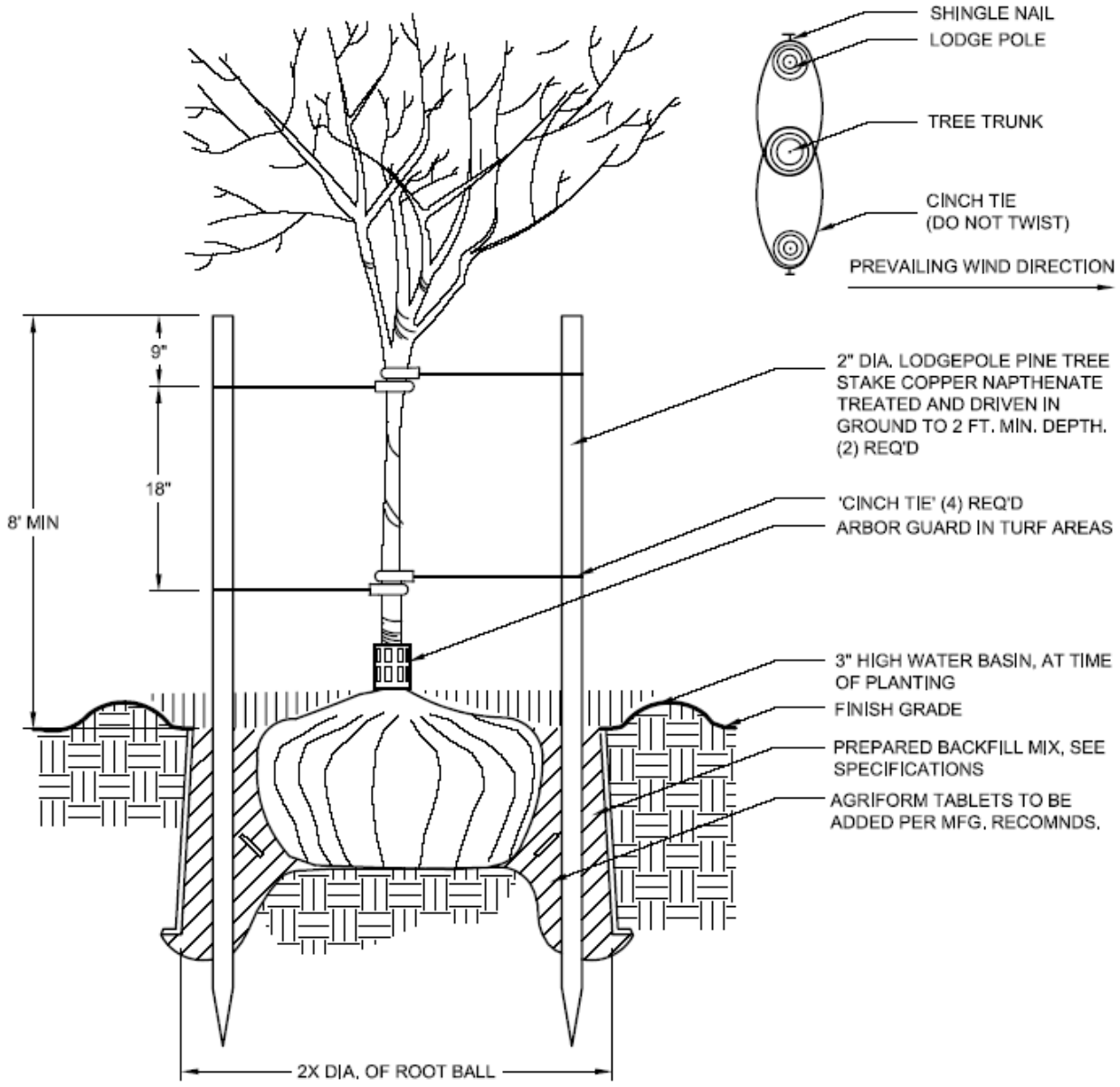
## 2. MOW CURB



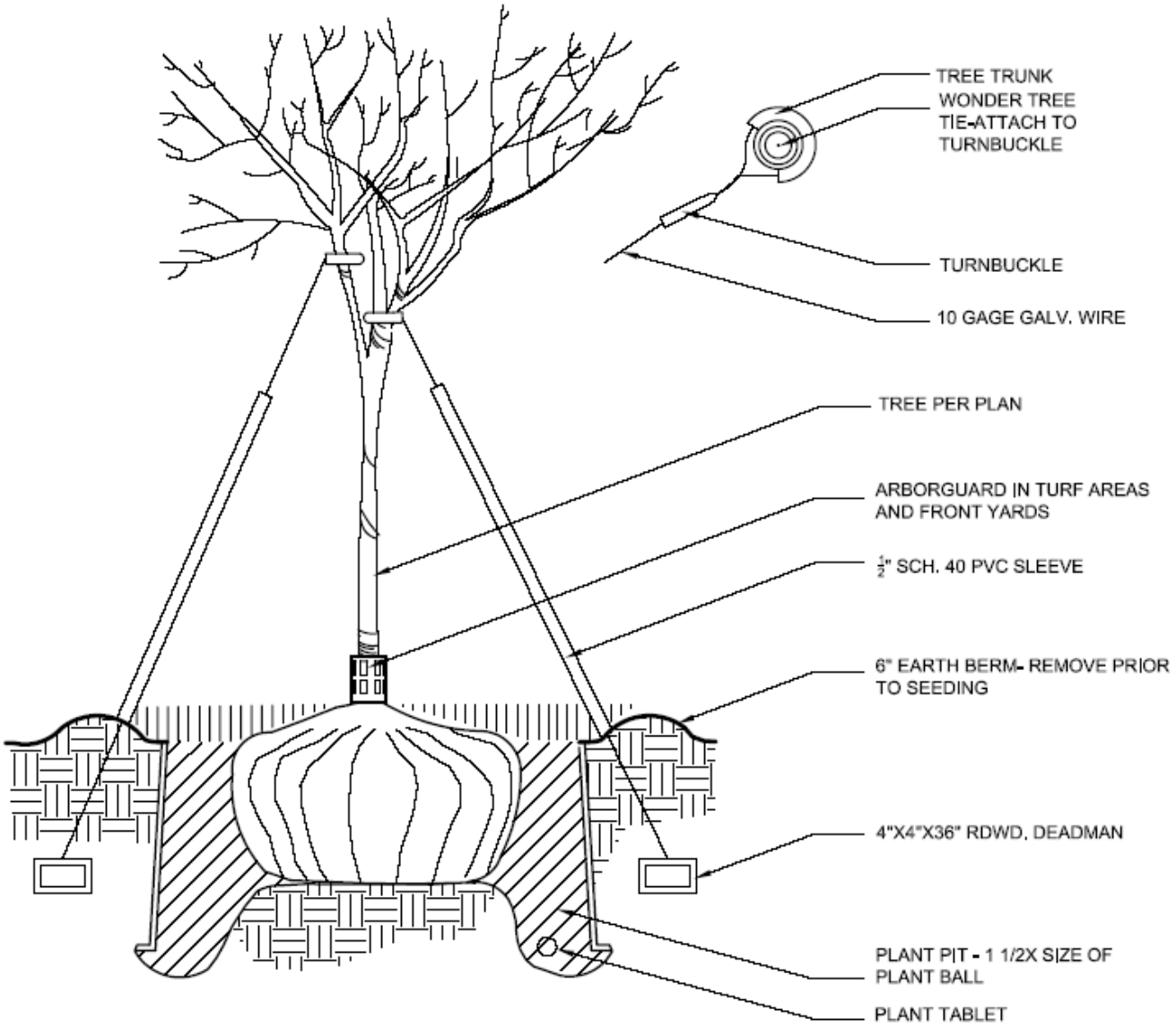

NOTE:
MOW CURB SHALL BE PLACED BETWEEN ALL GRASS AND PLANTER AREAS UNLESS OTHERWISE NOTED.

EXPANSION JOINTS @ 20' O.C.
SCORE JOINTS @ 5' O.C.

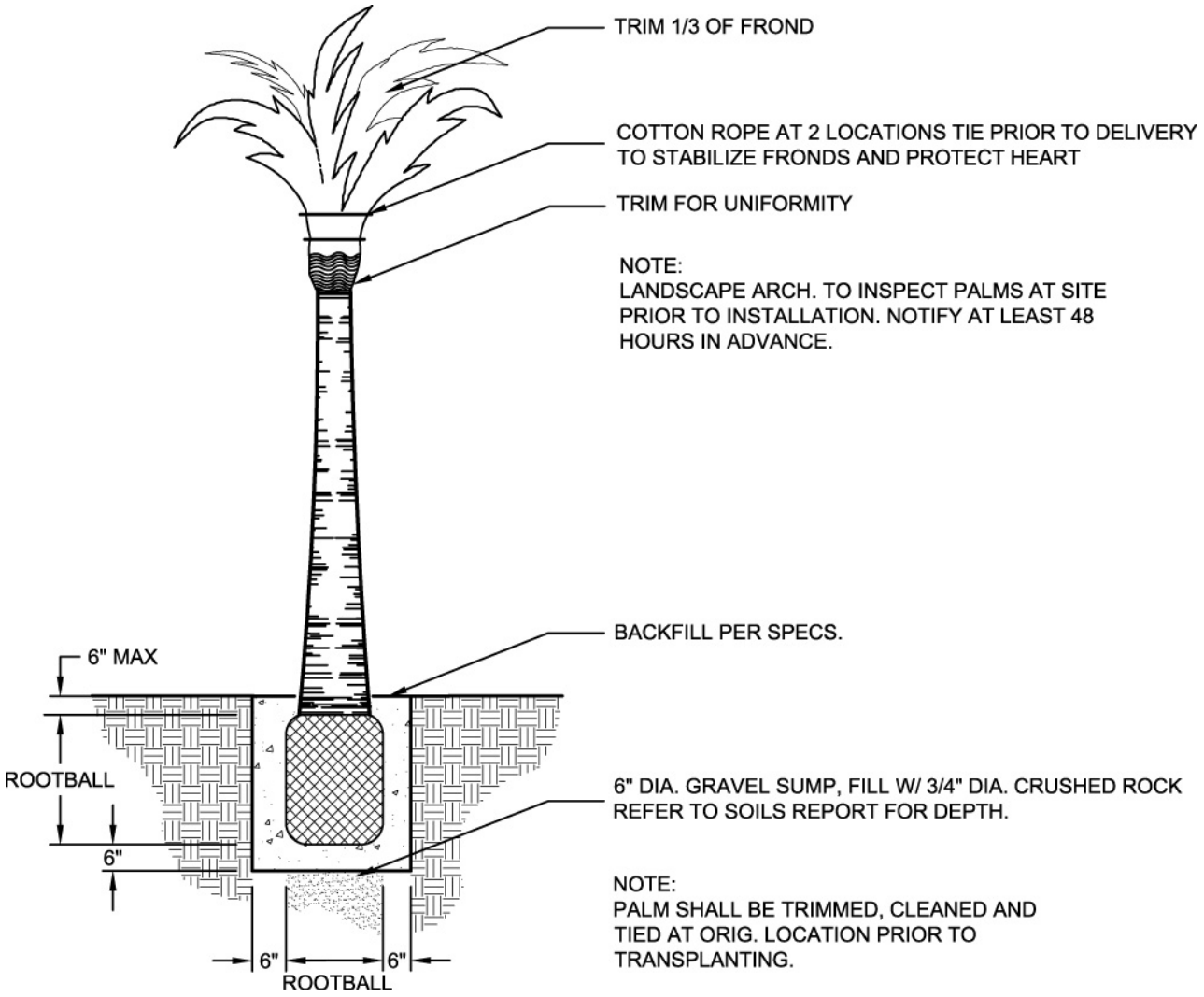
# 3. TREE STAKING



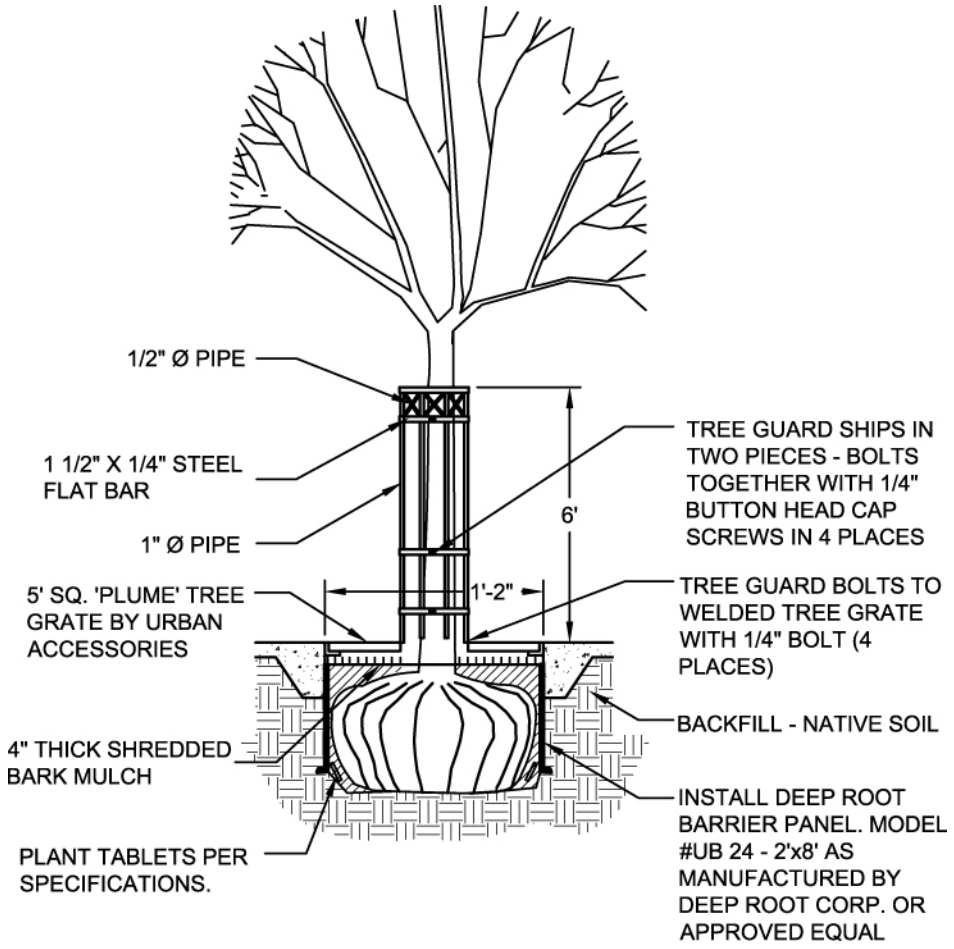
# 4. TREE GUYING



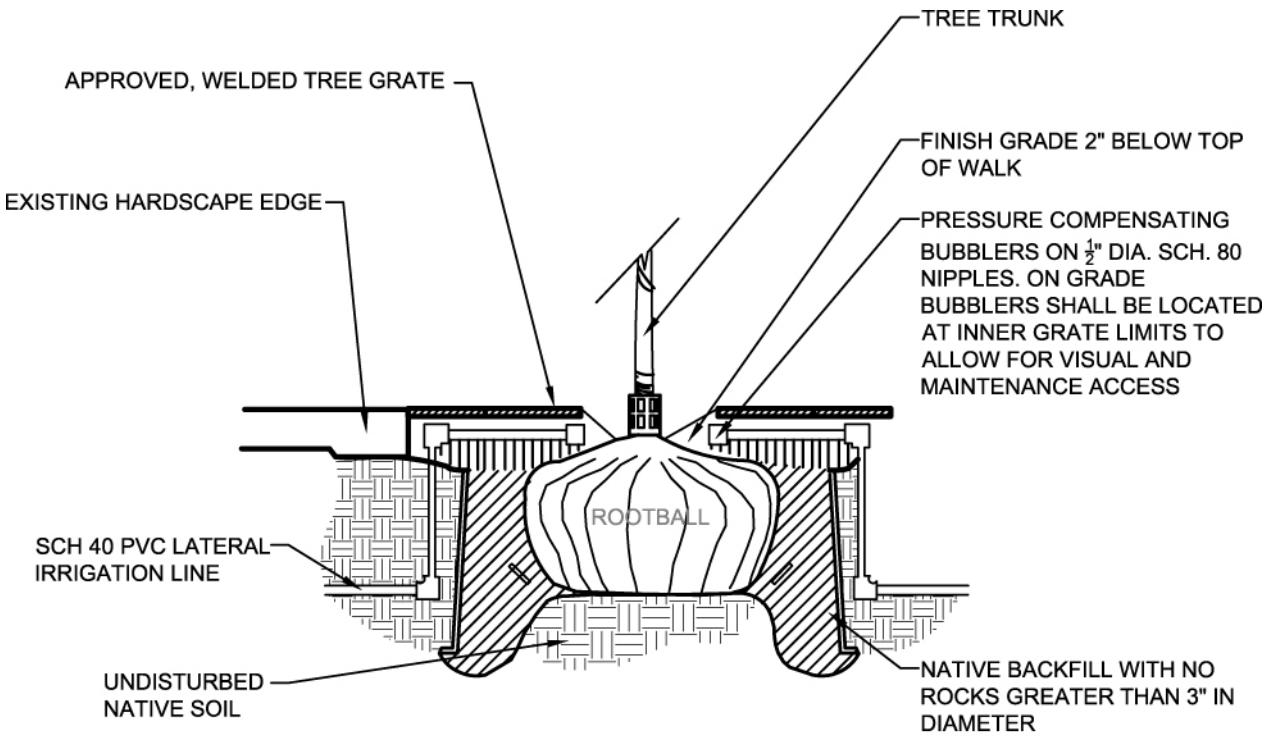
# 5. PALM TREE INSTALLATION



# 6. GRATED TREE INSTALLATION



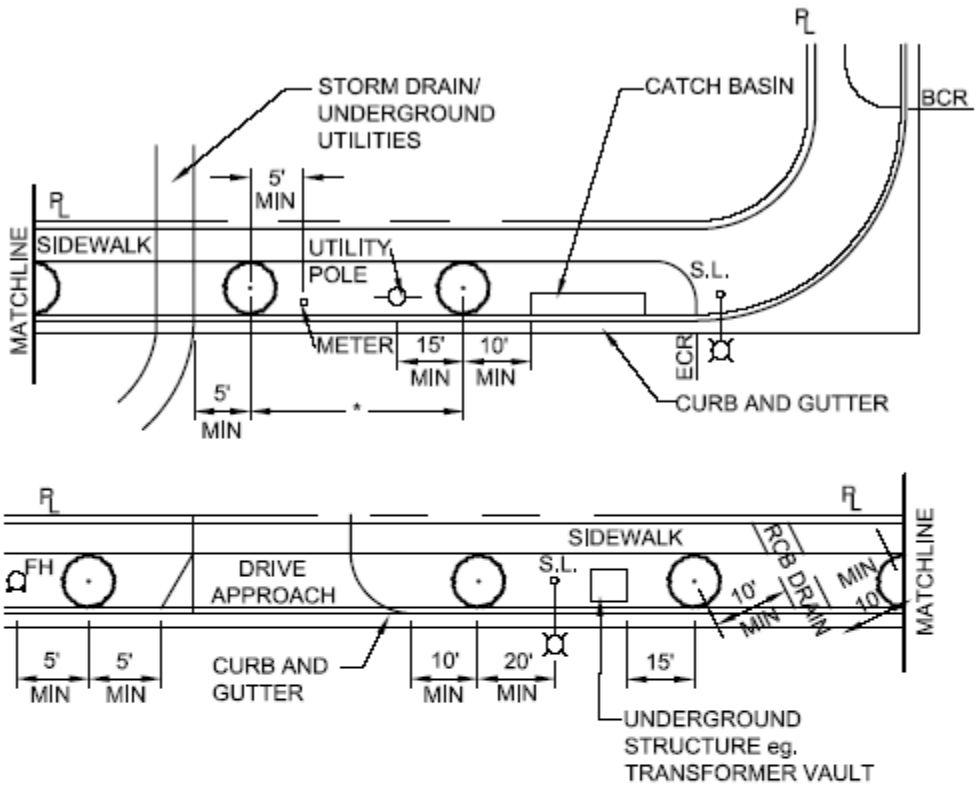
# GRATED TREE INSTALLATION CON'T




NOTE:

- REMOVE NURSERY STAKES AND FILL CAVITY WITHIN ROOTBALL.
- TREE MUST BE VALVED SEPARATELY FROM GROUND COVER AND TURF.
- WHEN SOIL CONDITIONS REQUIRE DEEP WATERING USE TREE BUBBLER SUMP

# 7. STREET TREE PLACEMENT

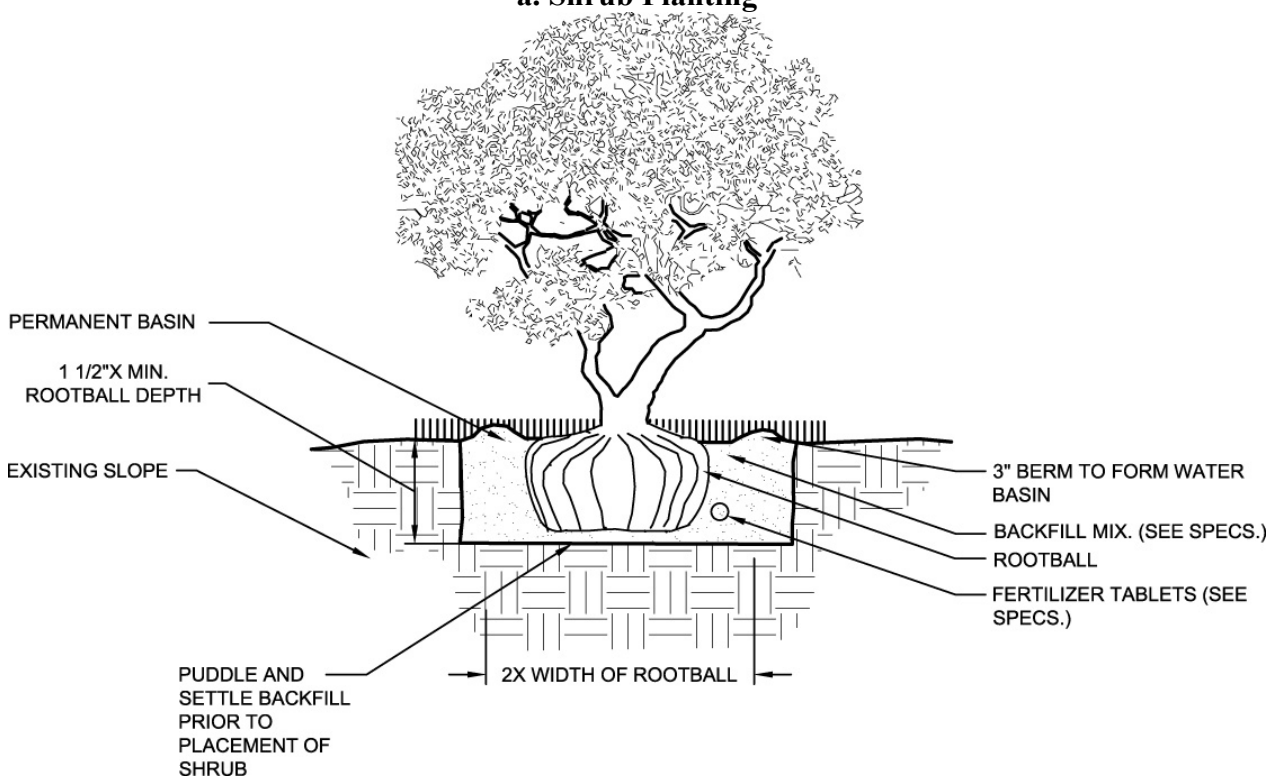



NOTE:

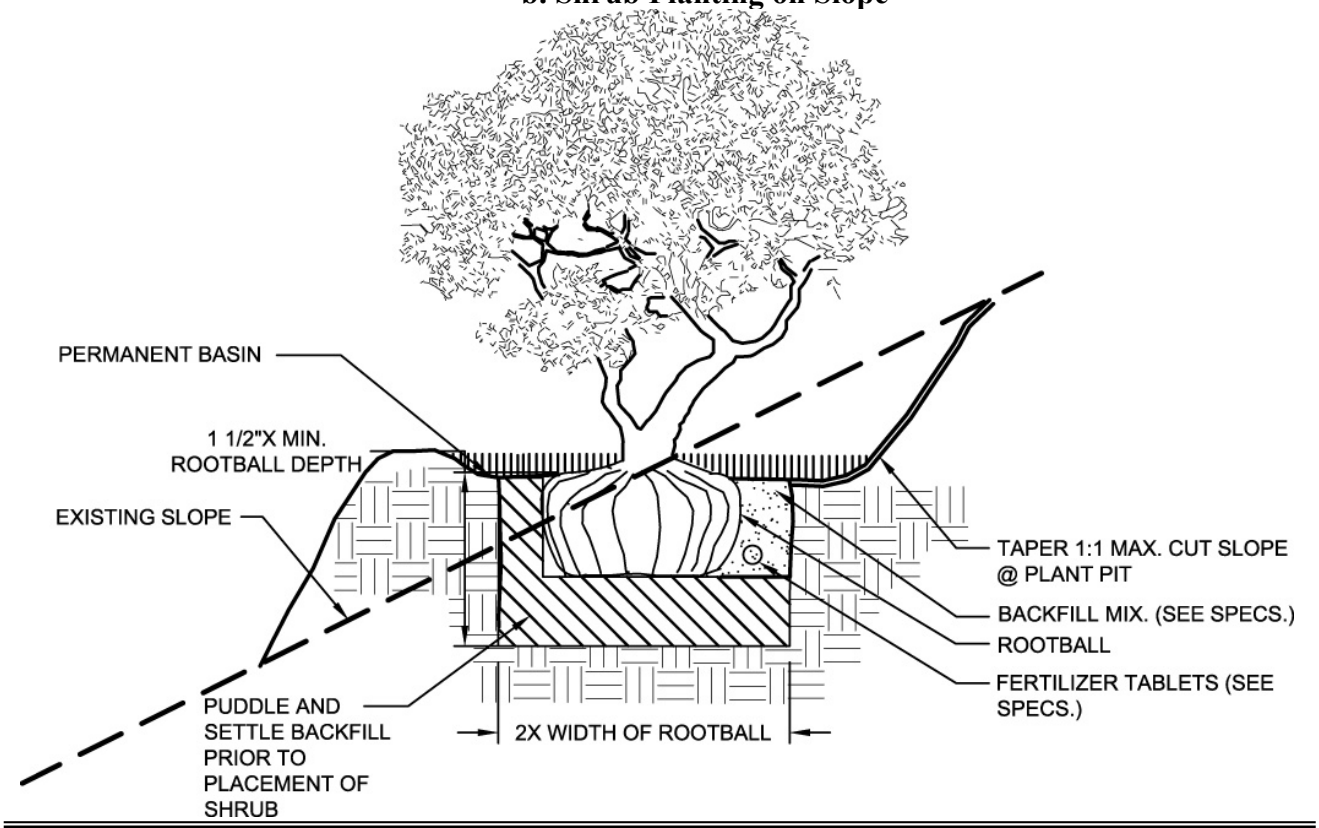
- TREE SPACING SHALL CONFORM TO PLANS APPROVED BY THE DEPARTMENT OF PUBLIC WORKS AND ENGINEERING.
- ALL TREES IN THE R.O.W. ARE SUBJECT TO LINE OF SIGHT CRITERIA AS APPROVED BY THE TRAFFIC ENGINEER.
- MAINTAIN 10' FROM CENTER OF TREE TO EDGE OF ALL UNDERGROUND FACILITIES IN ADDITION MAINTAIN 10' FROM CENTER OF TREE TO ALL UTILITY OWNED WATER AND SEWER LATERAL LINES.
- TREES SHALL NOT BE LOCATED ON PROPERTY LINES MAINTAIN APPROXIMATELY 10' FROM CENTER OF TREE TO EITHER SIDE OF PROPERTY LINE.
- STREET TREES ARE SUBJECT TO INSPECTION AND ACCEPTANCE BY THE CITY OF FONTANA DEPARTMENT OF PUBLIC WORKS AND ENGINEERING.
- STREET TREES SHALL BE PLANTED AND STAKED ACCORDING TO THE CITY STANDARD PLANS.

# 8. PLANTING

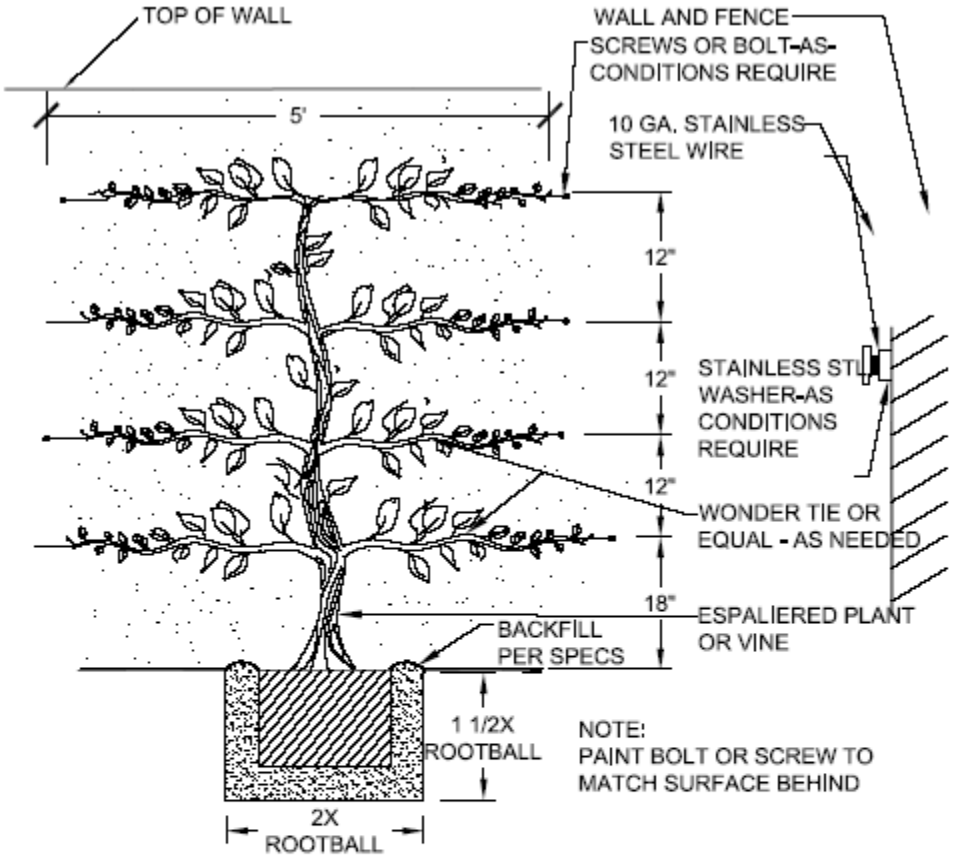
## a. Shrub Planting



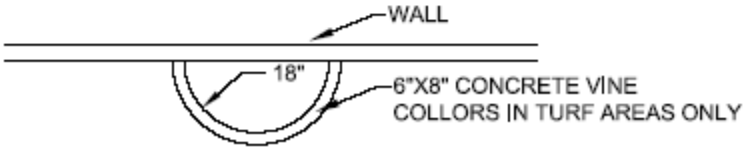

## b. Shrub Planting on Slope



## c. Vine Planting

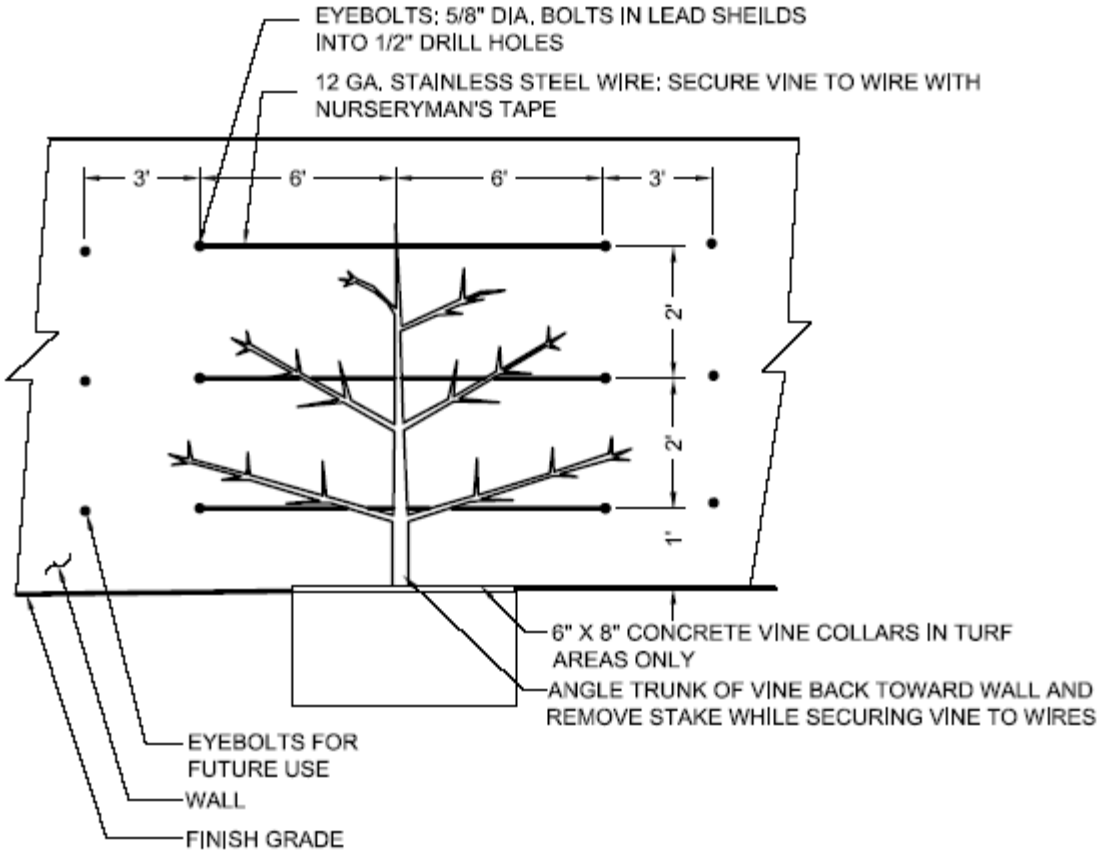



ELEVATION VIEW

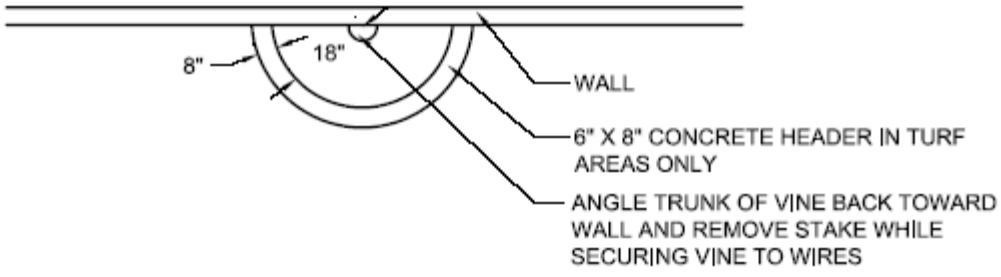



PLAN VIEW

## d. Non Adhering Vine Planting

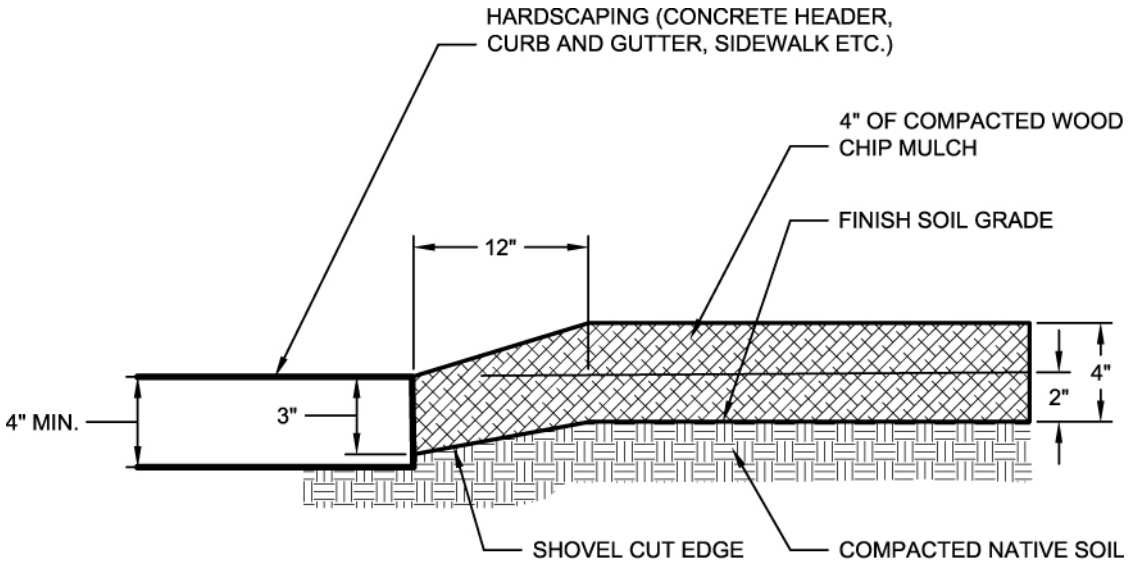



ELEVATION




PLAN VIEW

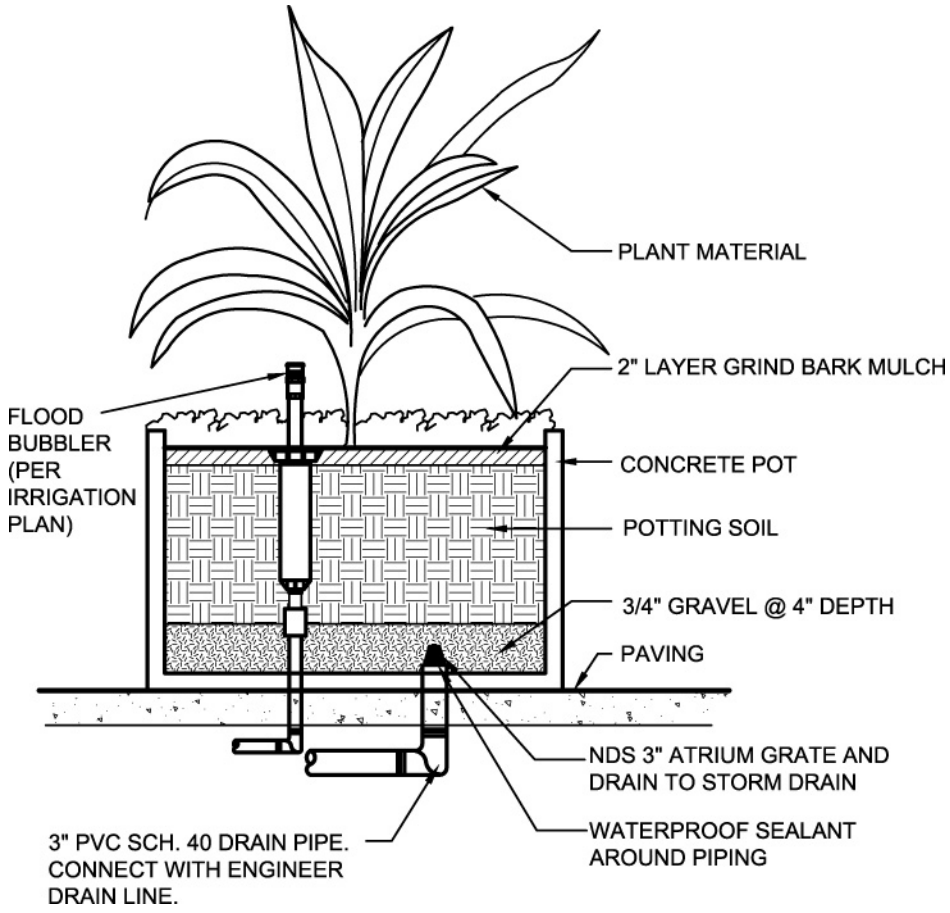
## e. Mulch Installation




NOTE:

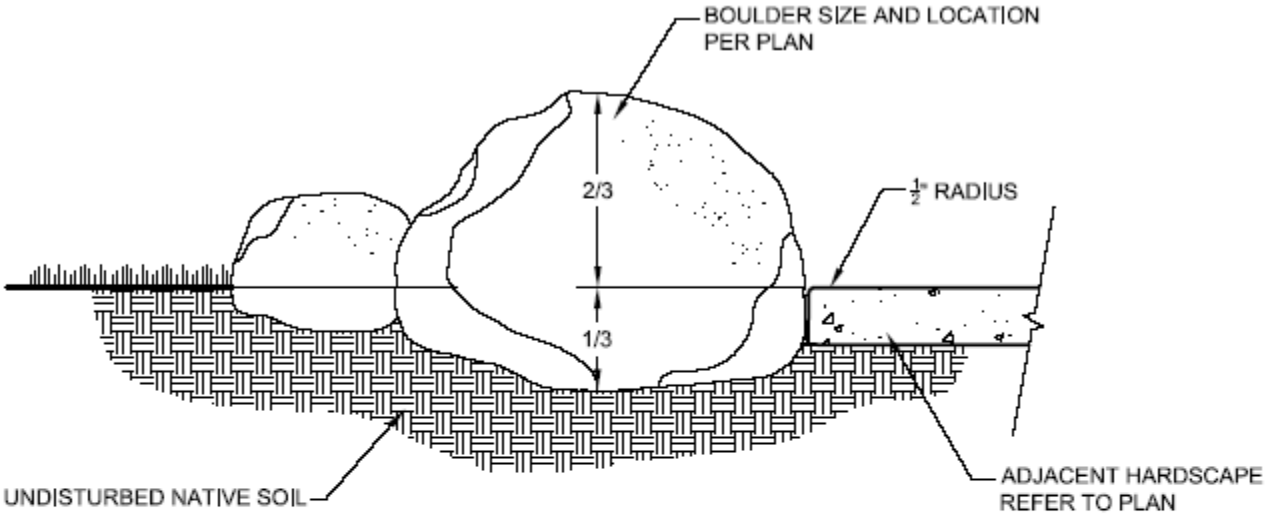
- PRIOR TO PURCHASE /PLACEMENT OF THE MULCH, THE CONTRACTOR SHALL SUBMIT A SAMPLE AND CERTIFICATION OF COMPLIANCE TO THE INSPECTOR FOR APPROVAL.
- MULCH AROUND TREES AND SHRUBS AS PER CITY STANDARD PLANS AND BLEND INTO EDGES AT GROUNDCOVER AREAS.
- MOISTEN MULCH AFTER INSTALLATION TO ASSIST IN COMPACTION.
- NO MULCH SHALL BE PLACED OVER THE ROOTBALL OF A WOODY PLANT OR ALLOWED TO REMAIN THERE.
- ONLY CERTIFIED CLEAN AND STERILE MULCH WILL BE APPROVED FOR USE.

## f. Planted Containers



# 9. ROCK INSTALLATION

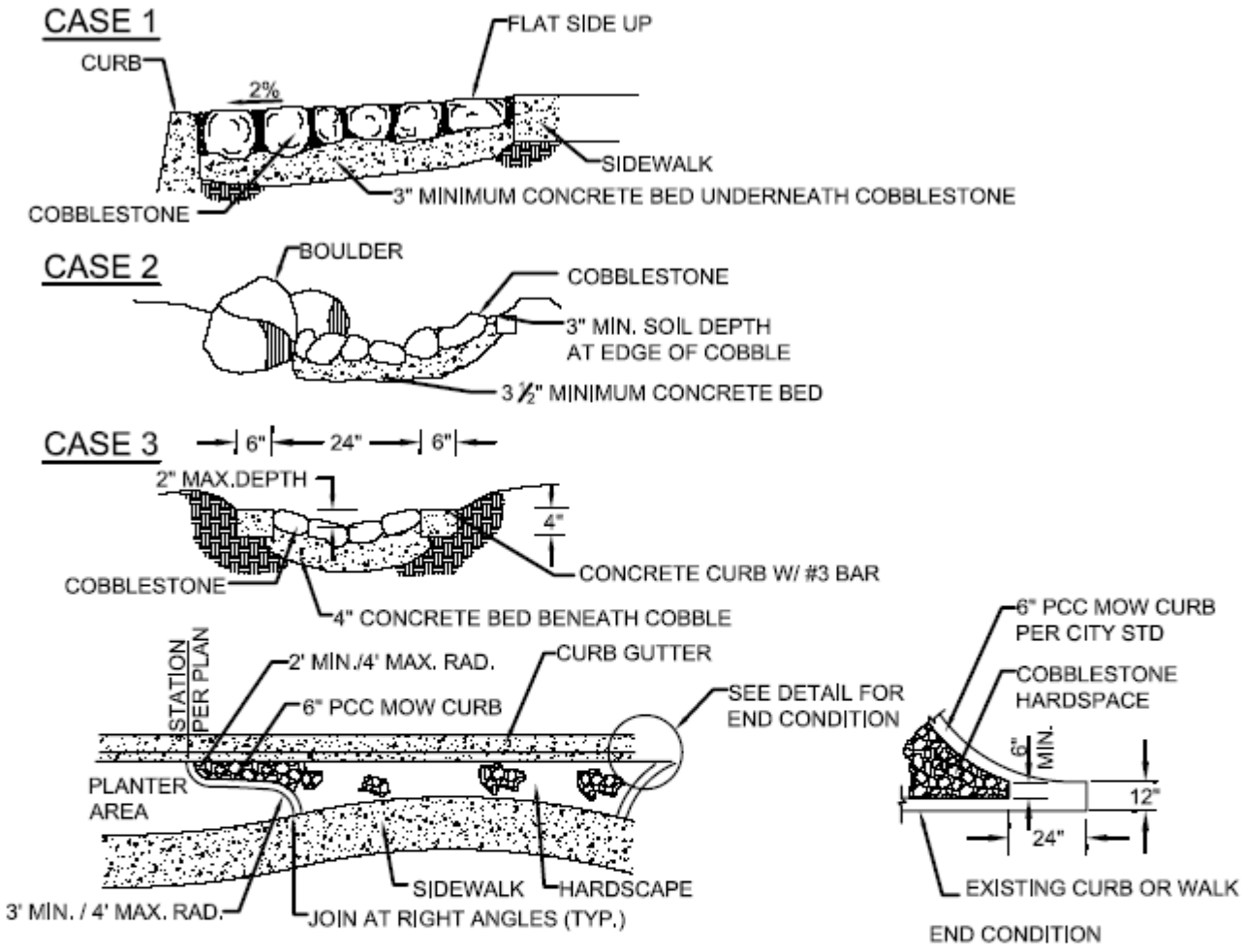
## a. Boulder Installation




NOTE:

- BOULDER PER CONSTRUCTION PLAN. RECESS AT LEAST ⅓ OF THE BOULDER'S DEPTH INTO SUBGRADE AS SHOWN. PLACE BEFORE FORMING CONCRETE PAVING. LANDSCAPE ARCHITECT TO APPROVE BOULDERS AND SPOT LOCATIONS PRIOR TO INSTALLATION.
- ADJACENT CONCRETE PAVING POURED AROUND BOULDER, SEE CONSTRUCTION PLAN,
- 90% COMPACTED SUB-GRADE

## b. River Washed Granite Cobble




NOTES:

1. CONCRETE CLASS 520-D-2500.
2. ROCK SIZES, UNLESS OTHERWISE SPECIFIED, SHALL BE: BOULDERS: MAX. 3'0" - MIN. 1'6" COBBLESTONES: MAX. 18" - MIN. 6" WITH ONE FLAT SIDE.
3. BOULDERS SHALL HAVE ⅓ EMBEDMENT, COBBLES SHALL HAVE ⅔ EMBEDMENT
4. A SAMPLE AREA, MIN. 40 SQ. FT. SHALL BE APPROVED BY THE CITY INSPECTOR, PRIOR TO PROCEEDING WITH REMAINING ROCK WORK.
5. FINAL RESTING POSITION OF ALL ROCKS TO BE APPROVED BY THE CITY INSPECTOR.
6. ROCKS SHALL BE SMOOTH, ROUNDED AND FREE OF OBJECTIONABLE DISFIGURATIONS AND EXCESSIVE IRON CONTENT.
7. ALL COBBLESTONE STONE AREAS SHALL HAVE 6" X 6" CONCRETE HEADER AS AN EDGE AT PLANTING.
8. ROCKSCAPE SHOULD FOLLOW GRADE WHERE SLOPES EXIST AND MAINTAIN A 2% MIN. AT ALL TIMES WITHIN THE R.O.W.

# O. SYNTHETIC TURF

a. Synthetic turf shall be Pro-Series Outdoor Monofilament (FTOM 1S) by Fieldturf or approved equal.

b. Synthetic turf shall have the following properties. All deviations must be approved by the Public Works Department.

| | | |
|---|---|---|
| 1. | Pile Yarn Type: | UV-resistant polyethylene |
| 2. | Yarn Linear Density: | 9000 denier +/- 5% |
| 3. | Yarn Breaking Strength: | 24 nominal |
| 4. | Yarn Maximum Elongation: | 40% nominal |
| 5. | Pile Height: | 2.25-2.5 inches |
| 6. | Pile Weight: | 36 $oz/yd^2$ |
| 7. | Total Weight: | 61 oz/yd |
| 8. | Primary Backing Weight: | >7 $oz/yd^2$ |
| 9. | Secondary Backing Weight: | 16-18 $oz/yd^2$ |
| 10. | Stitch Gauge: | ¾ inch centers |
| 11. | Tuft Withdrawal Force: | > 6 lbs/force |
| 12. | Grab Tear Length: | > 200 lbs/force |
| 13. | Grab Tear Width: | > 200 lbs/force |
| 14. | Pill Burn Test: | Pass |
| 15. | Impact Attenuation: | < 200 G-max |
| 16. | Permeability: | > 40 inch/hour |
| 17. | Total Infill Material Depth: | 1.75 inches |

# P. APPENDIX

## 1. GLOSSARY

| | |
|---|---|
| **Bibs:** | A faucet having a downward bent nozzle. |
| **Bunker:** | A large concrete enclosure consisting of three walls with three internal walls equally dividing the space within the enclosure walls. |
| **Crown:** | The elevation of a field surface at its center above its elevations at its edges to encourage drainage. |
| **Footcandle:** | A unit of illumination equivalent to the illumination produced by a source of one candle at distance of one foot, and equal to one light incident per square foot. |
| **Gradient:** | A slope or degree of inclination. |
| **Hardship:** | A situation in which irregular shape or topography of the site prohibits adherence to the existing standards. |
| **Photometric Measurement:** | A measurement of brightness, luminous flux, light distribution, and/or color. |
| **Stolonizing:** | A process by which prostrate stems are planted just below the surface of an area, using a mechanical apparatus. |

## 3. BIBLIOGRAPHY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