



City of Brentwood

Standard Plans and Specifications

TABLE OF CONTENTS

STANDARD DETAILS

LANDSCAPE (L)

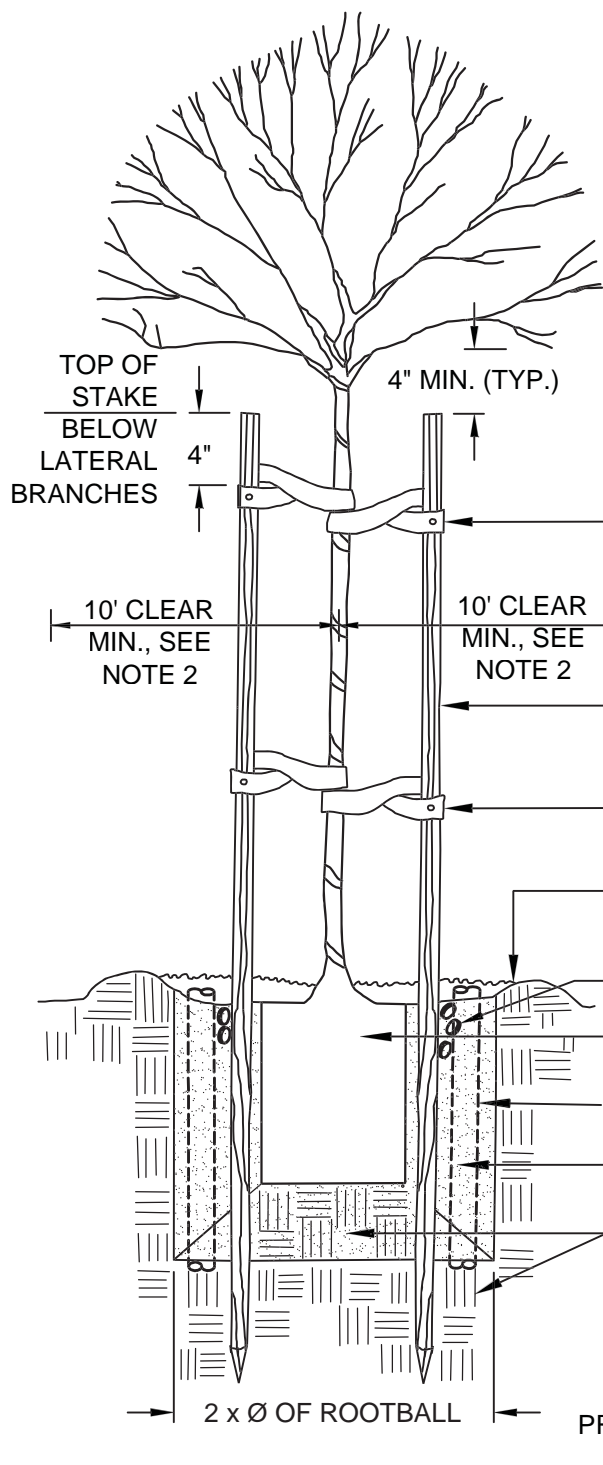
TREE PLANTING	L-1
SHRUB/GROUND COVER SPACING	L-2
ROOT BARRIER DETAIL	L-3
SHRUB PLANTING DETAILS	L-4
HEADERBOARD ON PLANTING AREAS	L-5
COBBLE STONE PAVING	L-6
ASPHALTIC CONCRETE WALK DETAIL	L-7
BIKE TRAIL PAVING DETAIL	L-8
CONCRETE MOWING STRIP	L-9
TYPICAL TREE GUYING FOR 24" BOX	L-10
BLANK	L-11
REMOVABLE METAL BOLLARD	L-12
COLLAPSIBLE METAL BOLLARD DETAILS (1)	L-12a
COLLAPSIBLE METAL BOLLARD DETAILS (2)	L-12b
HANDICAP & PET ACCESSIBLE STAINLESS STEEL DRINKING FOUNTAIN	L-13
DRAIN SUMP	L-14
TURF CELL	L-15
ENHANCED WOOD FENCE	L-16
PARK DISPENSER	L-17
BLANK	L-18
PARK IDENTIFICATION SIGN - I	L-19
PARK IDENTIFICATION SIGN - II	L-20
CHAIN LINK FENCE	L-21a
CHAIN LINK FENCE NOTES	L-21b
TWO RAIL CONCRETE FENCE	L-22a
STANDARD BIKE RACK	L-23
POURED IN PLACE SAFETY SURFACING	L-24
LANDSCAPE BERM DETAIL	L-25



City of Brentwood

Standard Plans and Specifications

PEDESTRIAN TRAFFIC LOADING BICYCLE-PROOF	
DROP INLET DETAILS	L-26a
DROP INLET TABLE	L-26b
GRATE LOCKING DETAILS FOR INLETS GRATE	L-26c
BOLT DETAILS	L-26d
FRAME & GRATE DETAILS	L-26e
FRAME TABLE	L-26f
GRATE TABLE	L-26g
DRAIN BOX 10-3/8" I.D. X 12"	L-27
PARK BENCH DETAIL	L-28a
PARK BENCH DETAIL NOTES	L-28b
LANDSCAPE PICNIC TABLE	L-29
HANDICAP ACCESSIBLE LANDSCAPE PICNIC TABLE	L-30



NOTES:

1. SEE L-3 FOR ROOT BARRIER DETAIL.
2. TREES SHALL BE PLANTED AT 10' MIN. CLEAR FROM WALLS, FENCES, TABLES, BENCHES, SIDEWALKS, MOWBANDS, ETC.
3. NO TREES SHALL BE PLANTED WITHIN 5' OF EXISTING OR DESIGNED JOINT TRENCH UTILITY, 35' FROM STREET INTERSECTION AND 20' FROM STREET LIGHT.

1" x 8" RECYCLED BLACK RUBBER TREE TIE 6" MIN. BELOW PRIMARY BRANCHES, LOOP IN A FIGURE 8 AND NAIL TO ACK OF STAKE WITH GALVANIZED THREADED NAILS

2" X 10' LODGEPOLE PINE STAKE ON OUTSIDE OF ROOTBALL

SECOND SET OF TREE TIES

4" DEEP X 4' DIA. WATERING BASIN WITH 2" LAYER OF SHREDDED REDWOOD BARK MULCH

5 PLANTING TABLETS PER 15 GALLONS TREE (TYP.)

ROOTBALL: SET 3" ABOVE GRADE; SCARIFY ROOT WALLS AND BOTTOM OF HOLE; SQUARE OFF HOLE

4" I.D. PVC PIPE WITH SECURED GRATE, 2 EACH (SEE I-17 FOR TREE BUBBLER)

BACKFILL (COMPOSED OF NATIVE SOIL)

NATIVE SOIL @ 85% RELATIVE COMPACTION BENEATH THE PLANTING HOLE

TREE

NAIL TREE TIE TO THE BACK OF THE STAKE

LIMIT OF ROOTBALL

(Not To Scale)



ENGINEERING DEPARTMENT

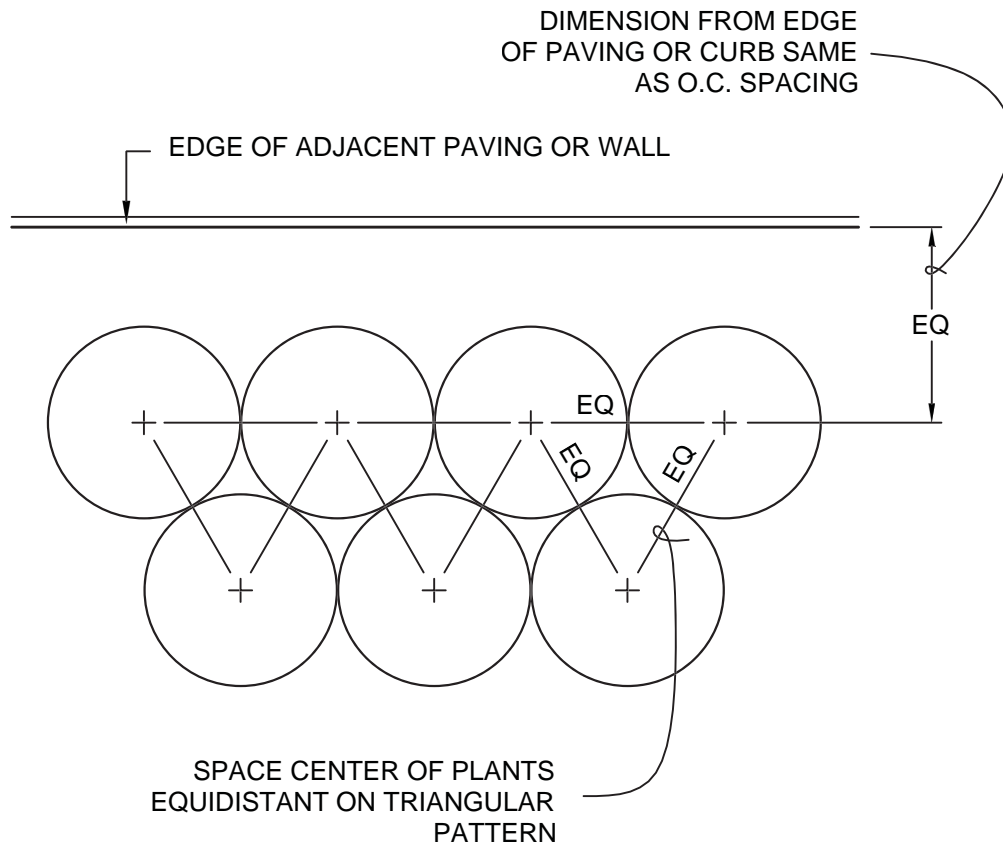


TREE PLANTING

B. Grewal
 BALWINDER S. GREWAL CITY ENGINEER

DATE: APRIL 16, 2008
 REVISED: DEC. 31, 2013

SHEET No.
L-1



(Not To Scale)



**ENGINEERING
DEPARTMENT**



SHRUB/GROUND COVER SPACING

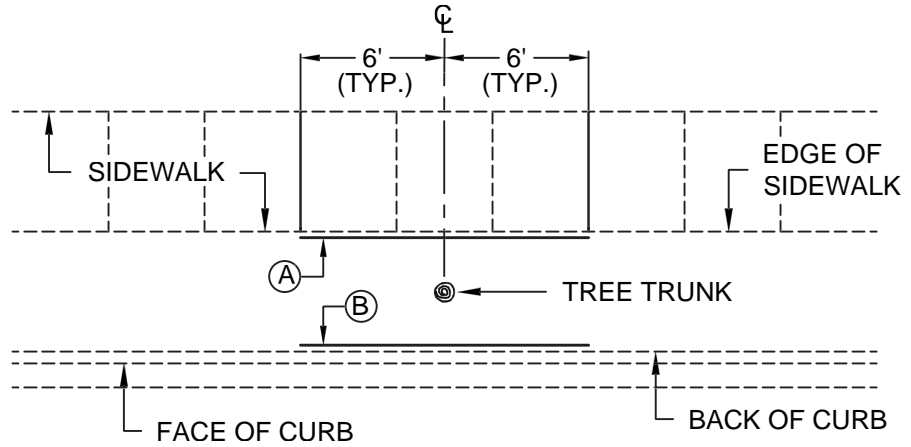
B. Grewal
BALWINDER S. GREWAL CITY ENGINEER

DATE: MAY 28, 1999
REVISED: DEC. 31, 2013

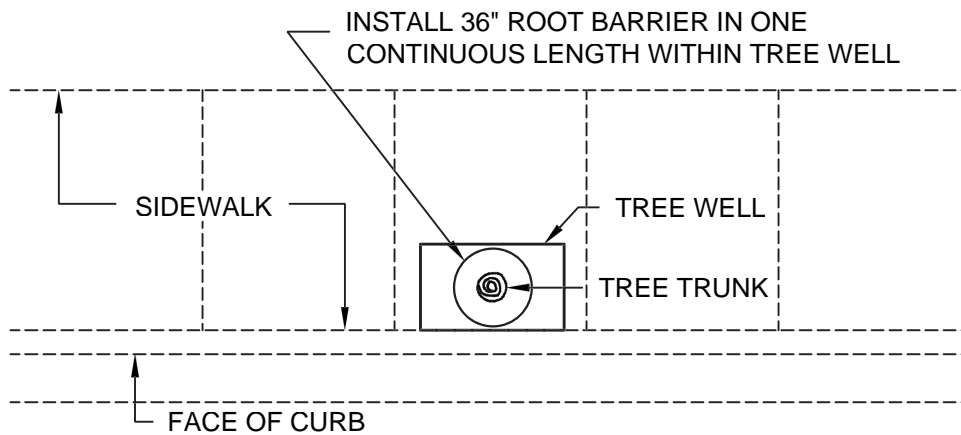
SHEET No.
L-2

LEGEND:

- (A) - INSTALL 24" DEEP ROOT BARRIER AT EDGE OF SIDEWALK
- (B) - INSTALL 36" DEEP ROOT BARRIER AT BACK OF CURB



DETACHED SIDEWALK



MONOLITHIC CURB AND SIDEWALK

NOTES:

1. ROOT BARRIERS SHALL BE REQUIRED FOR ALL TREES PLANTED WITHIN 5' OF HARDSCAPE.
2. 24" AND 36" ROOT BARRIER SHALL BE HIGH DENSITY AND HIGH IMPACT PLASTIC AS AVAILABLE FROM "DEEP ROOT," VESPRO, INC. OR EQUIVALENT AS APPROVED BY PARKS AND RECREATION DEPARTMENT.
3. TOP OF ROOT BARRIER SHALL BE SET $\frac{1}{2}$ " \pm ABOVE FINISHED GRADE OF SOIL. HOWEVER, UNDER NO CIRCUMSTANCES SHALL THE TOP OF ROOT BARRIER EXTEND ABOVE ADJACENT CURB, SIDEWALK OR OTHER HARD SURFACING, AND SHALL NE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
4. REFER TO THE URBAN AND FOREST GUIDELINE FOR MIN. PLANTER SIZE REQUIREMENTS AVAILABLE AT http://www.ci.brentwood.ca.us/departement/parks/urban_trees/index.cfm.

(Not To Scale)



**ENGINEERING
DEPARTMENT**



ROOT BARRIER DETAIL

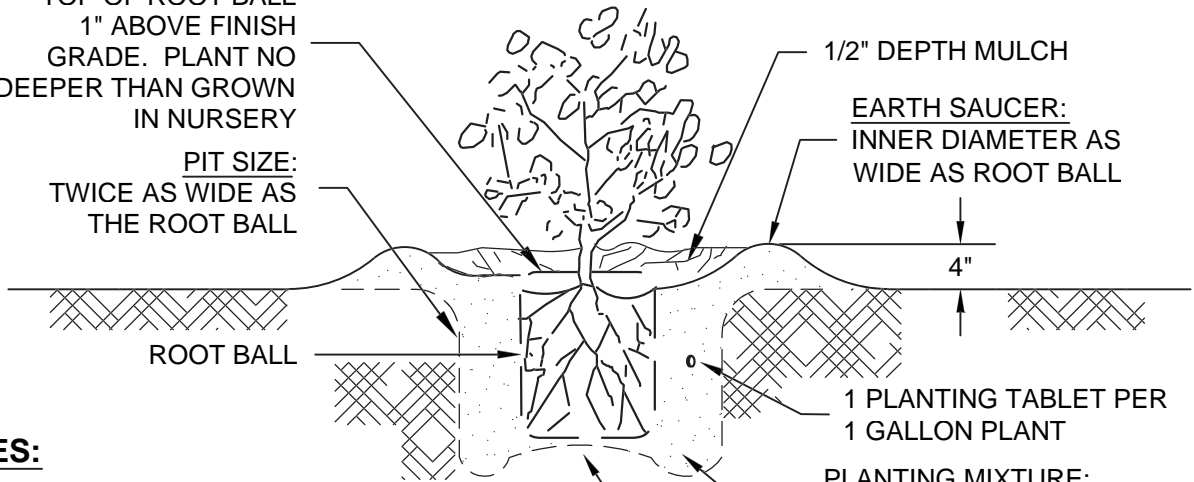
BALWINDER S. GREWAL CITY ENGINEER

DATE: AUG. 29, 2005
REVISED: DEC. 31, 2013

SHEET No.
L-3

PLANTING DEPTH:
TOP OF ROOT BALL
1" ABOVE FINISH
GRADE. PLANT NO
DEEPER THAN GROWN
IN NURSERY

PIT SIZE:
TWICE AS WIDE AS
THE ROOT BALL



NOTES:

1. PROVIDE CITY WITH PLANTING MIXTURE SPECIFICATIONS.
2. PLANTER AREA SHALL HAVE PRE-EMERGENT HERBICIDE APPLIED BEFORE PLANTING TO PREVENT GERMINATION WEED SEEDS.

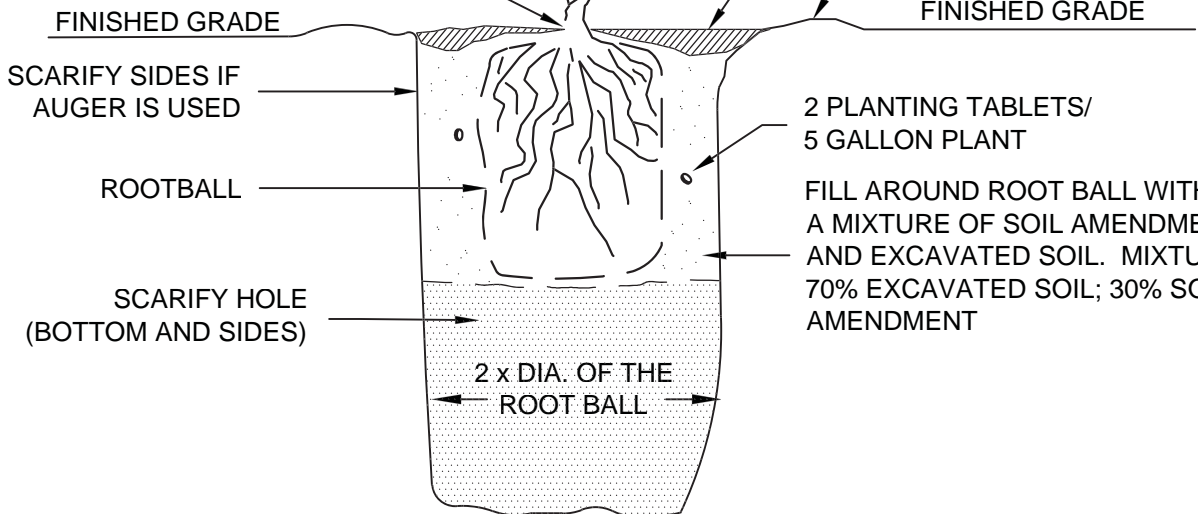
PLANT CROWN 2" ABOVE GRADE FOR SETTLEMENT

PLANTING MIXTURE:
PROVIDE SPECIFICATIONS FOR BACKFILL; CROWN, THEN FILL TO REDUCE SETTLING

PIT BOTTOM:
RAISE SLIGHTLY FOR PROPER DRAINAGE

MULCH TOP 3" WITH SOIL AMENDMENT

4" BERM



(Not To Scale)



**ENGINEERING
DEPARTMENT**

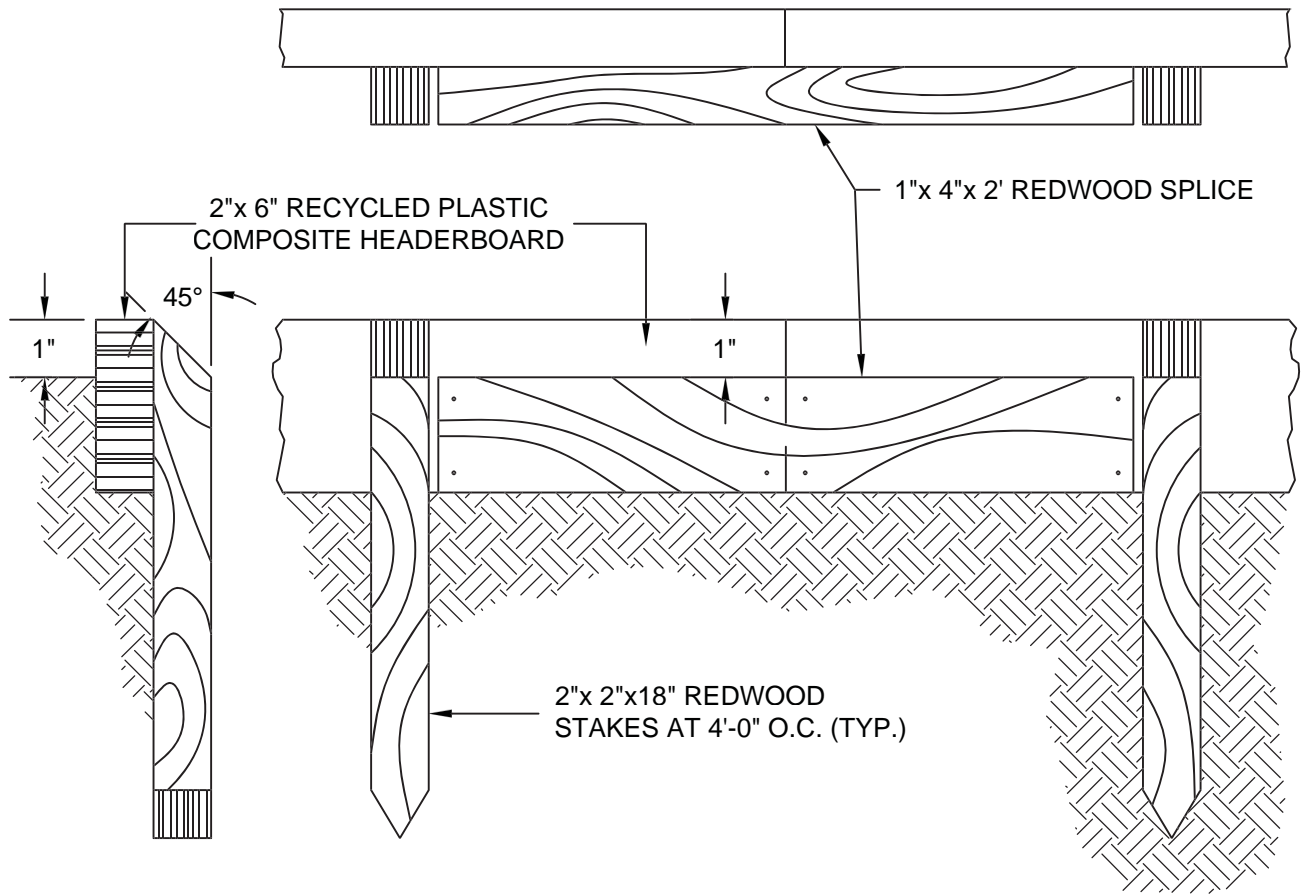


SHRUB PLANTING DETAILS

BALWINDER S. GREWAL CITY ENGINEER

DATE: JULY 17, 2007
REVISED: DEC. 31, 2013

SHEET No.
L-4



NOTES:

1. INSTALL ALL STAKES AND SPLICES ON PLANTING SIDE OF HEADERBOARD.
2. FASTEN HEADERBOARD WITH GALVANIZED DECK SCREWS.

(Not To Scale)



**ENGINEERING
DEPARTMENT**

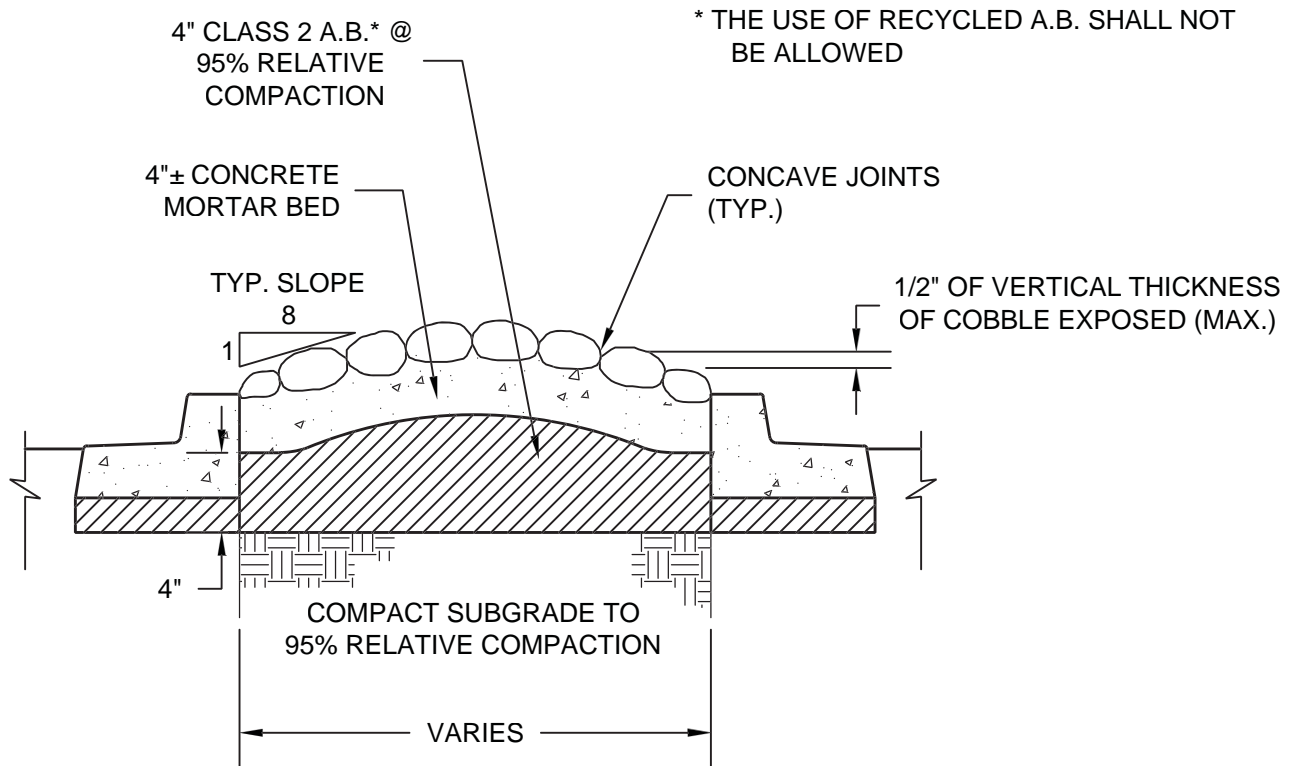


HEADERBOARD ON PLANTING AREAS

Balwinder S. Grewal
BALWINDER S. GREWAL CITY ENGINEER

DATE: AUG. 15, 2003
REVISED: DEC. 31, 2013

SHEET No.
L-5



INSTALLATION NOTES:

1. COBBLES SHALL BE 2" TO 4" Ø NOIYO OR APPROVED EQUAL (SUBMIT SAMPLE FOR REVIEW), SMOOTH AND ROUNDED WITH NO SHARP OR BROKEN EDGES.
2. CLEAN COBBLES OF MUD AND DUST PRIOR TO PLACEMENT.
3. SET COBBLES RANDOMLY BUT WITH SMALLER COBBLES NEAR EDGES OF PAVING.
4. AFTER COBBLES ARE SET, WASH ALL CONCRETE OFF; LET DRY AND APPLY 2 COATS OF UNDILUTED GLAZE AND SEAL CONCRETE AND MASONRY LACQUER OR EQUIVALENT AS APPROVED BY PARKS AND RECREATION DEPARTMENT.
5. MOISTURE CONTENT SHALL BE 3% ABOVE OPTIMUM.

(Not To Scale)



**ENGINEERING
DEPARTMENT**

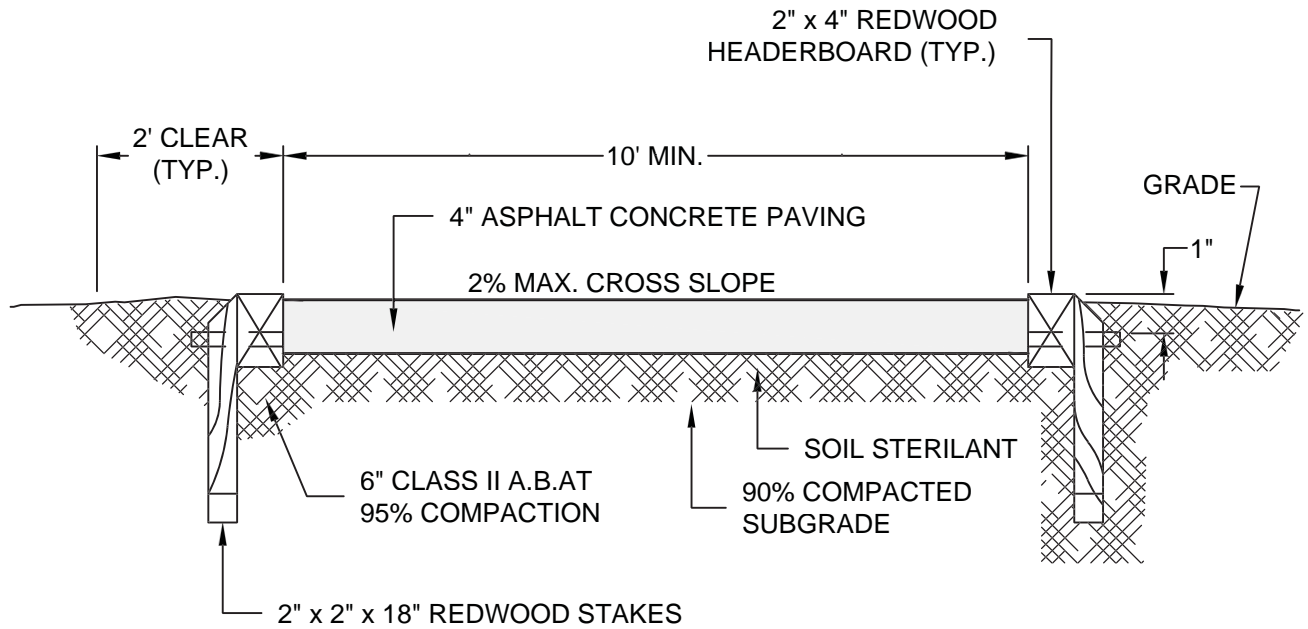


COBBLE STONE PAVING

BALWINDER S. GREWAL CITY ENGINEER

DATE: JUNE 20, 2003
REVISED: DEC. 31, 2013

SHEET No.
L-6



NOTES:

1. HEADERBOARD SHALL BE REDWOOD, ROUGH, CONTRUCTION HEART GRADE, IN ACCORDANCE TO CALIFORNIA ASSOCIATION GRADING RULES.
2. ALL NAILS SHALL BE GALVANIZED.
3. THE USE OF RECYCLED A.B. SHALL NOT BE ALLOWED.
4. FOR ADDITIONAL REQUIREMENTS, SEE THE CURRENT "CREEK TRAILS AND REVEGETATION MASTER PLAN."

(Not To Scale)



**ENGINEERING
DEPARTMENT**

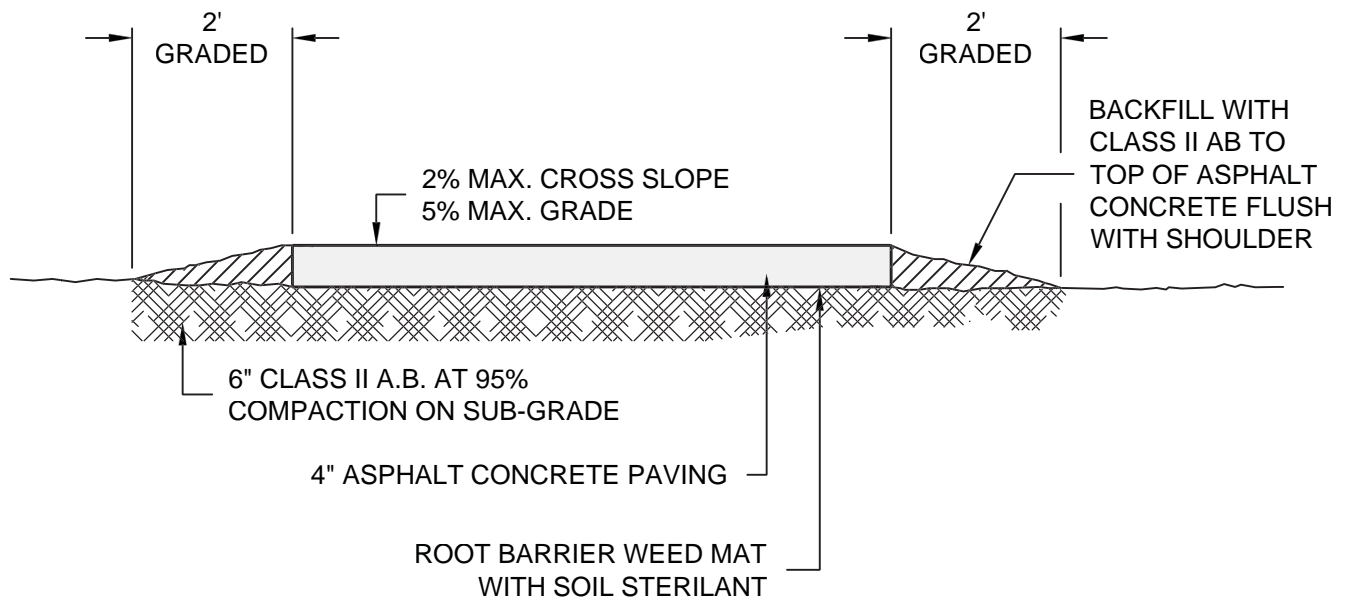


ASPHALTIC CONCRETE WALK DETAIL

BALWINDER S. GREWAL CITY ENGINEER

DATE: JULY 12, 2007
REVISED: DEC. 31, 2013

SHEET No.
L-7



NOTES:

1. BIKE TRAIL SHALL BE CLASS 1 BIKEWAY.
2. BIKE PATHS CLOSER THAN 5' FROM THE EDGE OF THE TRAVEL WAY SHALL INCLUDE AN APPROVED PHYSICAL BARRIER (I.E. CHAINLINK FENCES OF DENSE SHRUBS) TO PREVENT BICYCLISTS FROM ENCROACHING INTO THE TRAVEL WAY.
3. THE USE OF RECYCLED A.B. SHALL NOT BE ALLOWED.

(Not To Scale)



**ENGINEERING
DEPARTMENT**

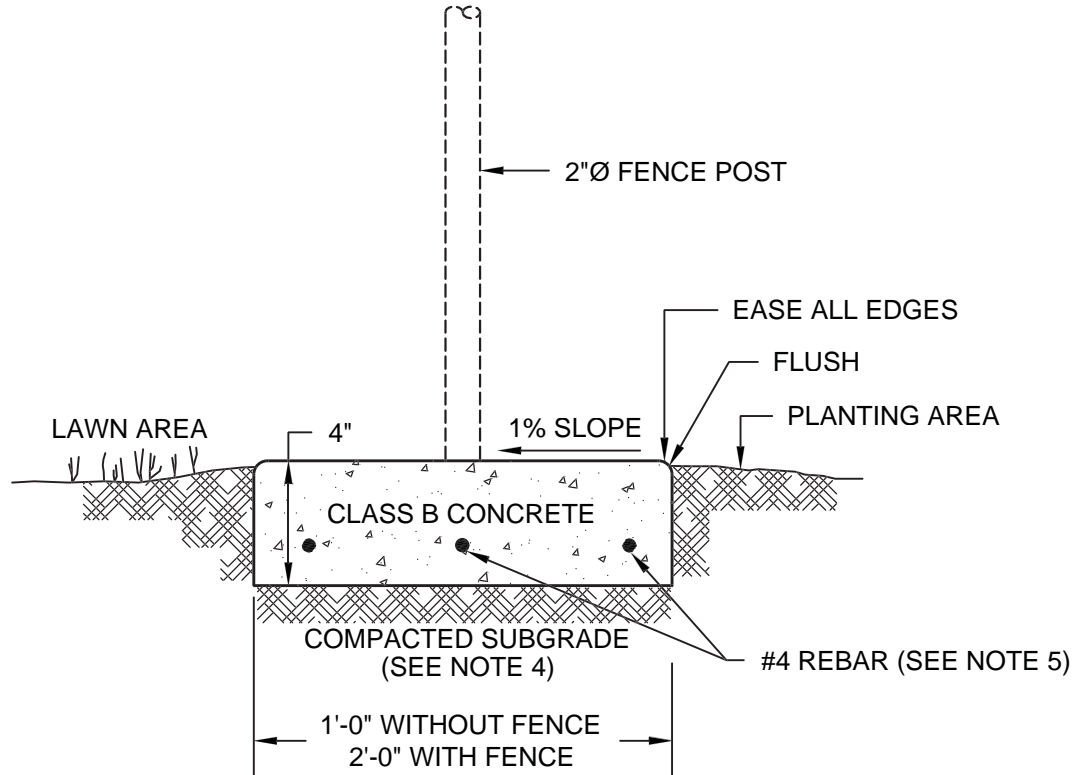


BIKE TRAIL PAVING DETAIL

Balwinder S. Grewal
BALWINDER S. GREWAL CITY ENGINEER

DATE: JUNE 20, 2003
REVISED: DEC. 31, 2013

SHEET No.
L-8



NOTES:

1. PROVIDE WEAKENED PLANE JOINTS 1" DEEP AT 5'-0" ON CENTER.
2. PROVIDE EXPANSION JOINTS AT 10'-0" INTERVALS AND WHERE CONCRETE WALK JOINS ANOTHER.
3. BROOM FINISH UNLESS OTHERWISE SPECIFIED.
4. COMPACT SUBGRADE TO 90% OF RELATIVE COMPACTION AND WITHIN 3% OF OPTIMUM MOISTURE.
5. PROVIDE 1-#4 REBAR FOR 1'-0" AND 2-#4 REBAR ON 2'-0" MOWBAND.

(Not To Scale)



**ENGINEERING
DEPARTMENT**



CONCRETE MOWING STRIP

BALWINDER S. GREWAL CITY ENGINEER

DATE: MAR. 30, 2001

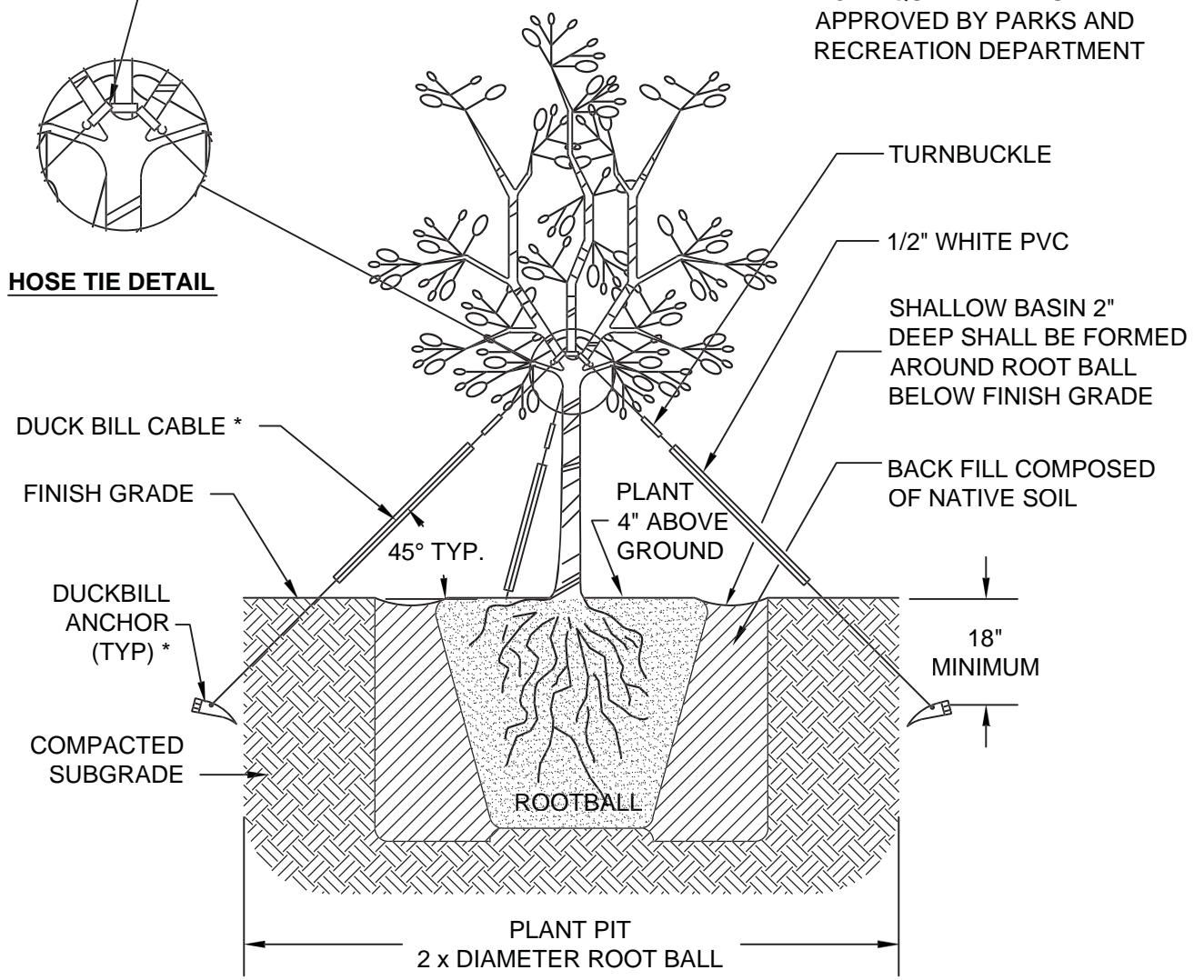
REVISED: DEC. 31, 2013

SHEET No.

L-9

COVER WIRE: 1/2"-3/4" DIAMETER 2-PLY REINFORCED RUBBER OR PLASTIC GARDEN HOSE

* OR EQUIVALENT AS APPROVED BY PARKS AND RECREATION DEPARTMENT



HOSE TIE DETAIL

DUCK BILL CABLE *

FINISH GRADE

DUCKBILL ANCHOR (TYP) *

COMPACTED SUBGRADE

45° TYP.

PLANT 4" ABOVE GROUND

TURNBUCKLE

1/2" WHITE PVC

SHALLOW BASIN 2" DEEP SHALL BE FORMED AROUND ROOT BALL BELOW FINISH GRADE

BACK FILL COMPOSED OF NATIVE SOIL

18" MINIMUM

ROOTBALL

PLANT PIT 2 x DIAMETER ROOT BALL

NOTE:

ALL 30" BOX TREES OR LARGER, INCLUDING MULTI-TRUNK SPECIMENS, SHALL BE GUYED AS SHOWN.

(Not To Scale)



ENGINEERING DEPARTMENT



TYPICAL TREE GUYING FOR 24" BOX

Balwinder S. Grewal
BALWINDER S. GREWAL CITY ENGINEER

DATE: JUNE 16, 2003
REVISED: DEC. 31, 2013

SHEET No.
L-10

This page left intentionally blank



(Not To Scale)



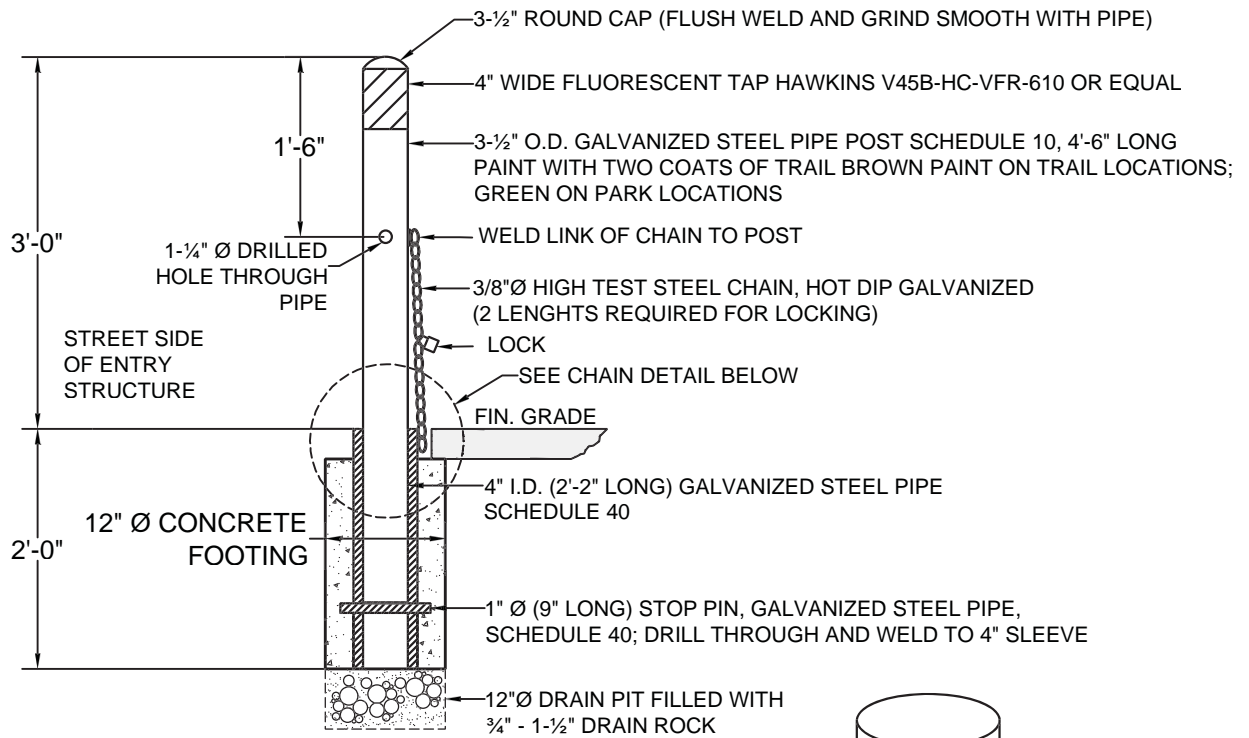
**ENGINEERING
DEPARTMENT**




BALWINDER S. GREWAL CITY ENGINEER

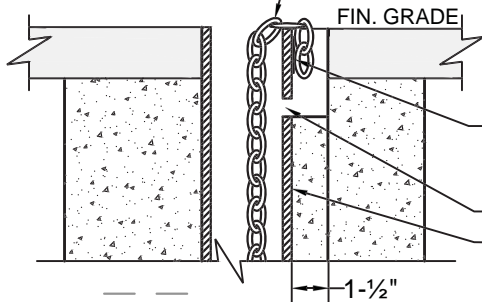
DATE: _____
REVISED: _____

SHEET No.
L-11

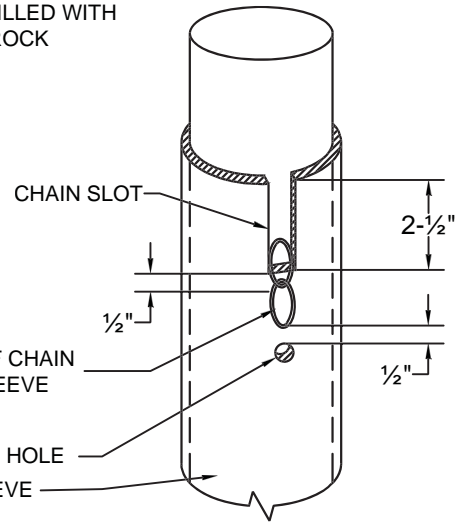


SECTION

DROP CHAIN THROUGH SLOT WHEN PIPE POST IS REMOVED



CHAIN DETAIL



SLOT DETAIL

NOTES:

1. CHAIN LINK CHAIN AND SLOT SHALL BE INSTALLED PARALLEL TO CENTERLINE OF TRAIL.
2. FOR BOLLARD LIGHTS, SEE SL-8.

(Not To Scale)



**ENGINEERING
DEPARTMENT**

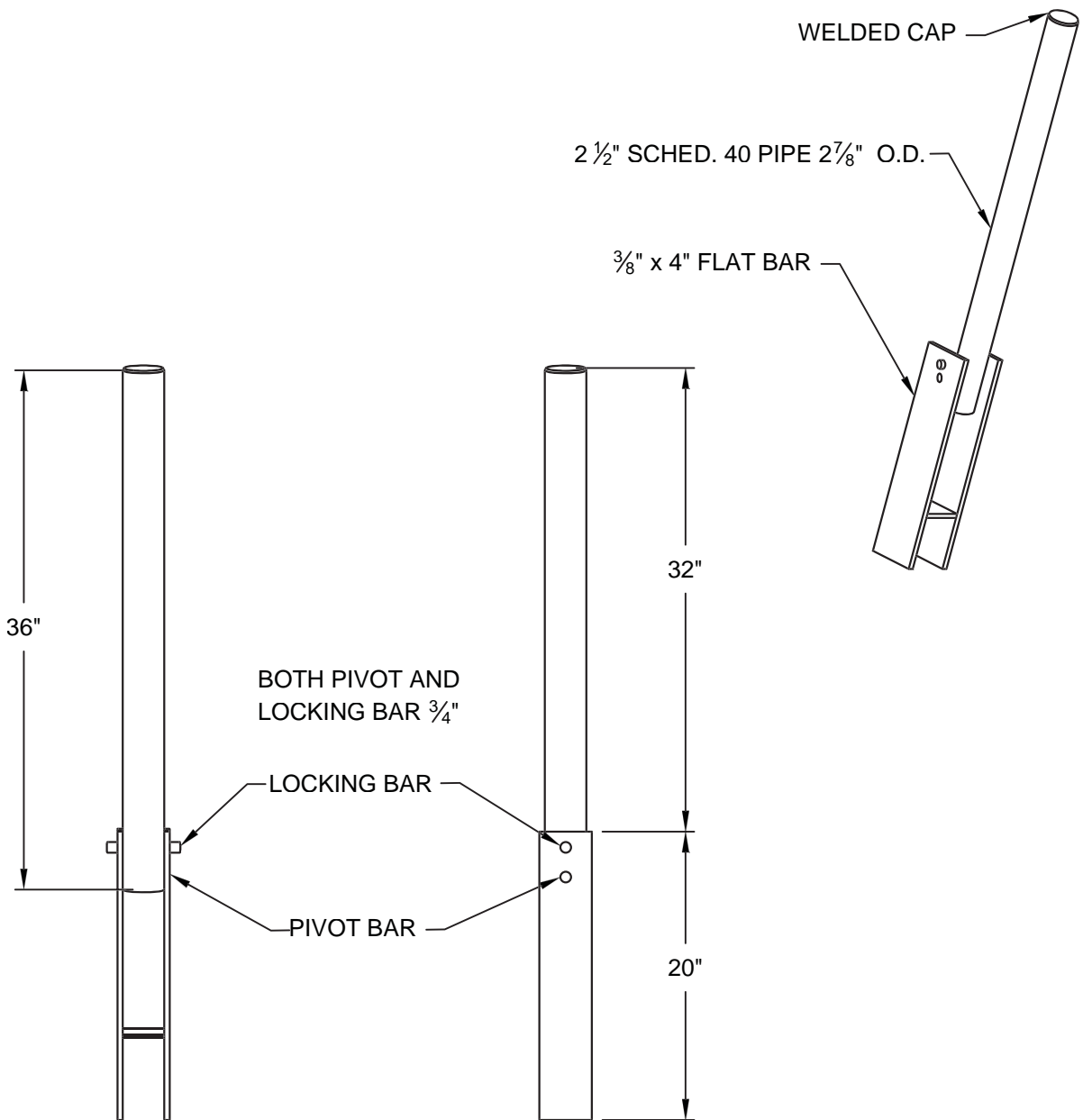


REMOVABLE METAL BOLLARD

BALWINDER S. GREWAL CITY ENGINEER

APR. 29, 2005
DEC. 31, 2013

SHEET No.
L-12



COLLAPSIBLE BOLLARD
CAT # PW/CGP

NOTES:

1. BOLLARDS CAN BE OBTAINED THROUGH PLACER WATERWORKS INC. OR APPROVED EQUAL.
2. SEALED WITH PITTSBURG PAINT PRODUCT 95-912 (YELLOW) 68% WEIGHT SOLIDS.

(Not To Scale)



**ENGINEERING
DEPARTMENT**



COLLAPSIBLE METAL BOLLARD DETAILS (1)

B. Grewal
BALWINDER S. GREWAL CITY ENGINEER

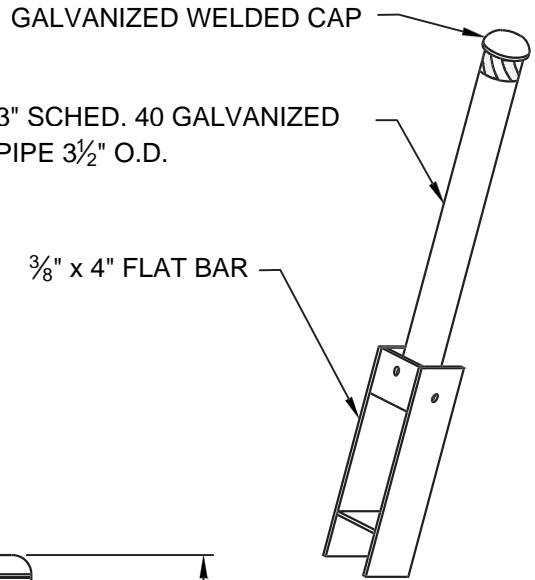
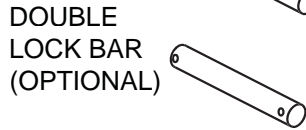
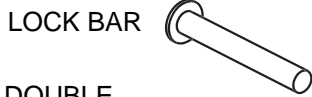
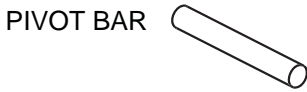
DATE: DEC. 31, 2013

REVISED:

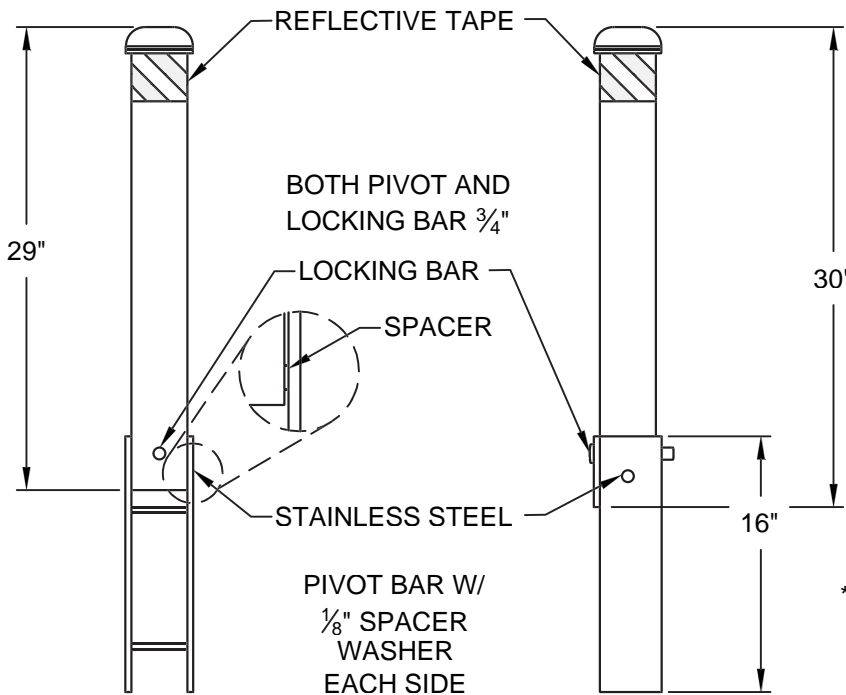
SHEET No.

L-12a

ALL BARS 3/4" STAINLESS STEEL



WEIGHT 40 LBS.



* WHEN COLLAPSED OVERALL HEIGHT IS LESS THAN 4"

* WHEN LOCKED UPRIGHT HEIGHT IS 30"

**COLLAPSIBLE METAL BOLLARD
CAT # PW/CGP-3**

NOTES:

1. BOLLARDS CAN BE OBTAINED THROUGH PLACER WATERWORKS INC. OR APPROVED EQUAL.
2. IF PAINTED GALVANIZED PIPE IS ETCHED THEN COATED W/ URETHANE COATING. STANDARD COLOR YELLOW.

(Not To Scale)



**ENGINEERING
DEPARTMENT**



COLLAPSIBLE METAL BOLLARD DETAILS (2)

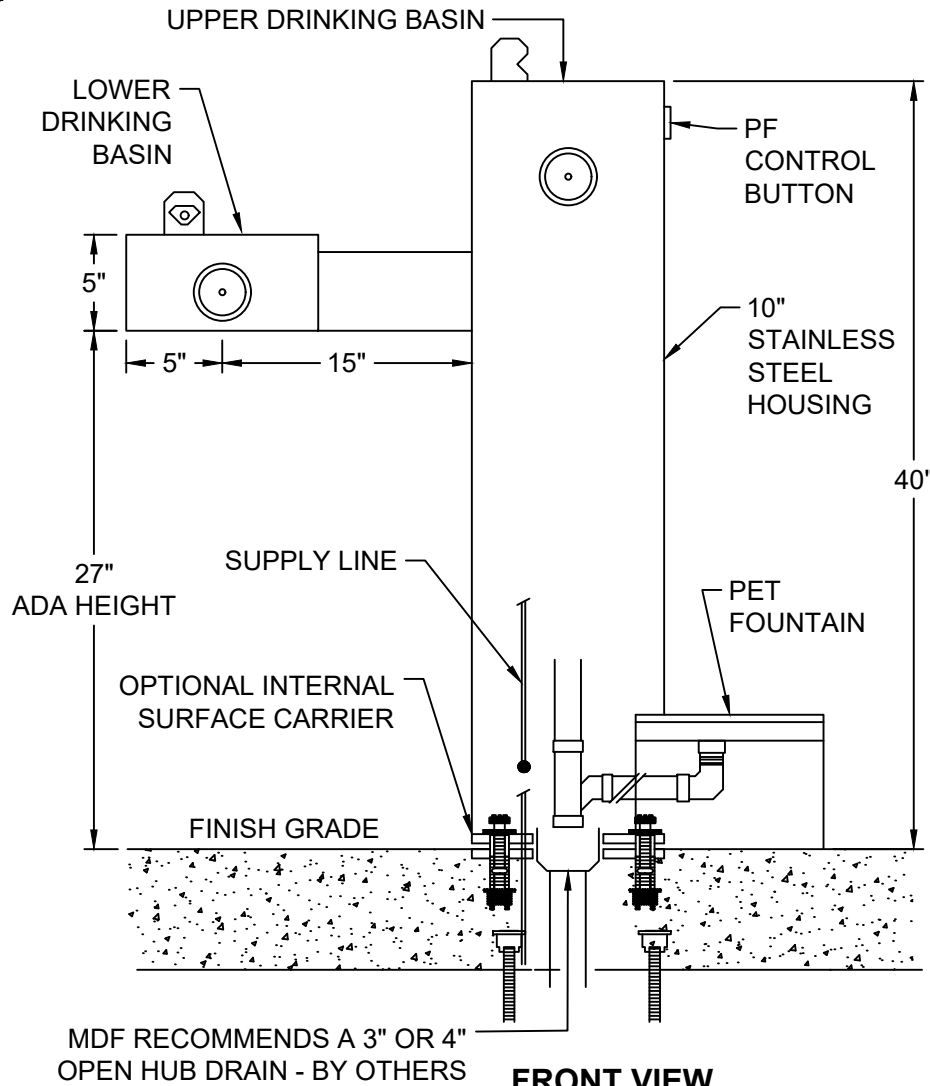
BALWINDER S. GREWAL CITY ENGINEER

DATE: DEC. 31, 2013

REVISED:

SHEET No.

L-12b

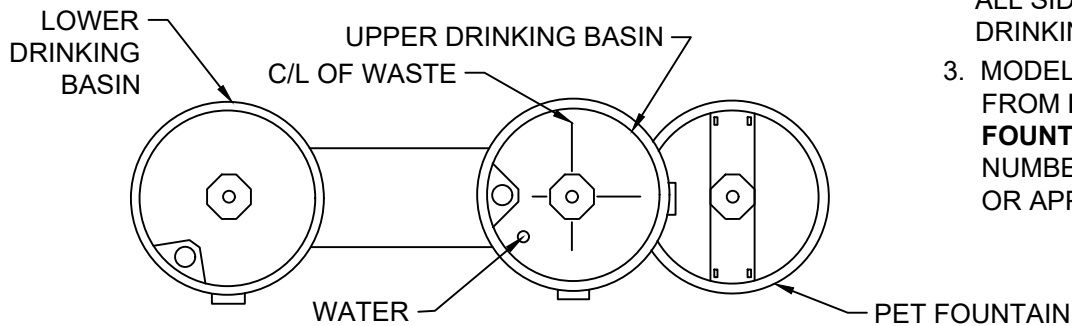


NOTES:

1. PLACEMENT OF DRINKING FOUNTAIN SHALL BE APPROVED BY THE PARKS AND RECREATION DEPARTMENT PRIOR TO INSTALLATION.
2. PROVIDE A MINIMUM CLEARANCE OF 3' ON ALL SIDES OF THE DRINKING FOUNTAIN.
3. MODEL #MDF 440 SMSS FROM **MOST DEPENDABLE FOUNTAINS** AT PHONE NUMBER (800) 552-6331 OR APPROVED EQUAL.

MDF RECOMMENDS A 3" OR 4" OPEN HUB DRAIN - BY OTHERS

FRONT VIEW



TOP VIEW

(Not To Scale)



ENGINEERING DEPARTMENT



HANDICAP AND PET ACCESSIBLE STAINLESS STEEL DRINKING FOUNTAIN

Allen S. Baquilar
ALLEN S. BAQUILAR

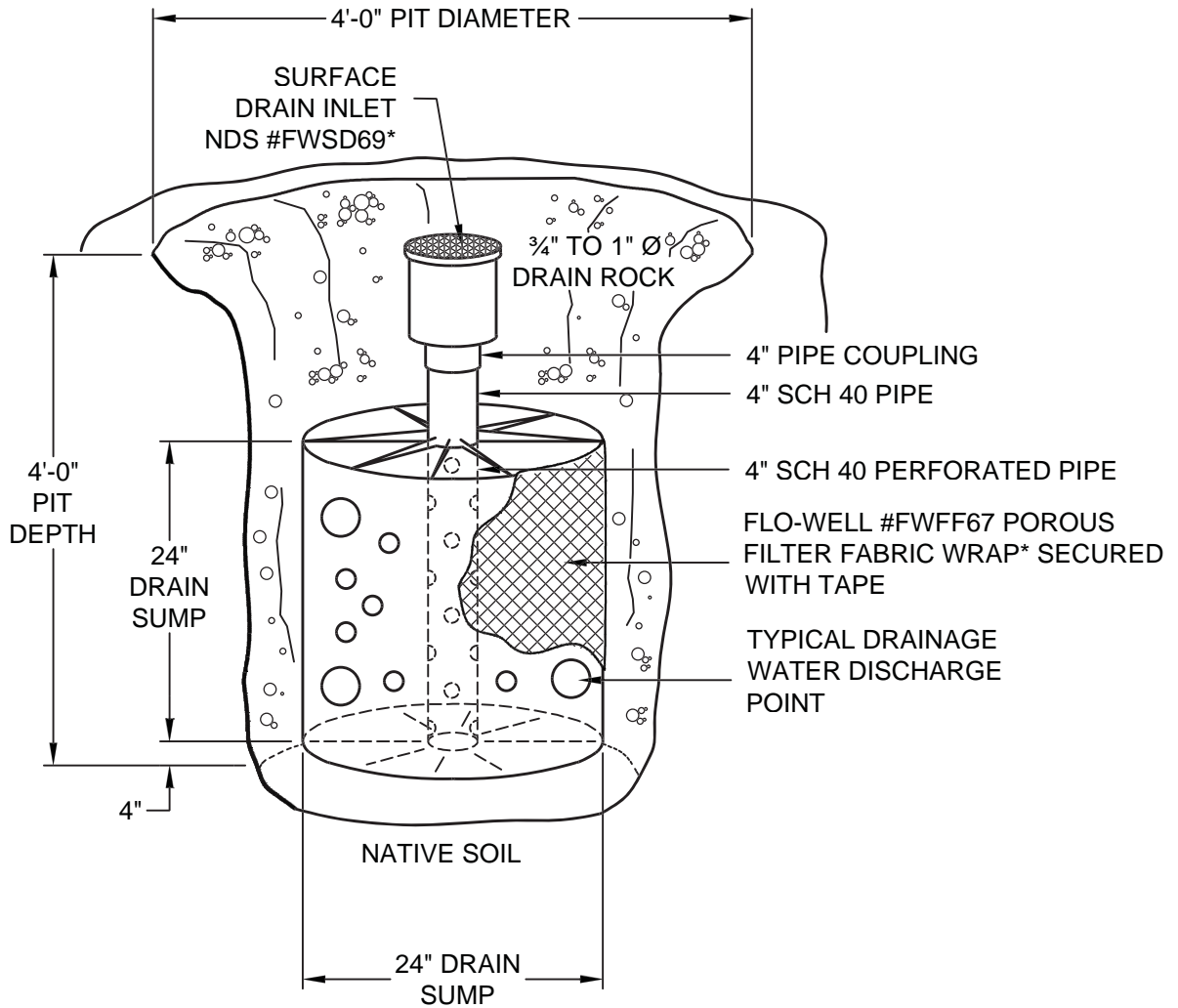
CITY ENGINEER

DATE: JUNE 20, 2003

REVISED: JAN. 22, 2024

SHEET No.

L-13



* OR AS APPROVED BY THE PARKS AND RECREATION DEPARTMENT.

(Not To Scale)



ENGINEERING DEPARTMENT

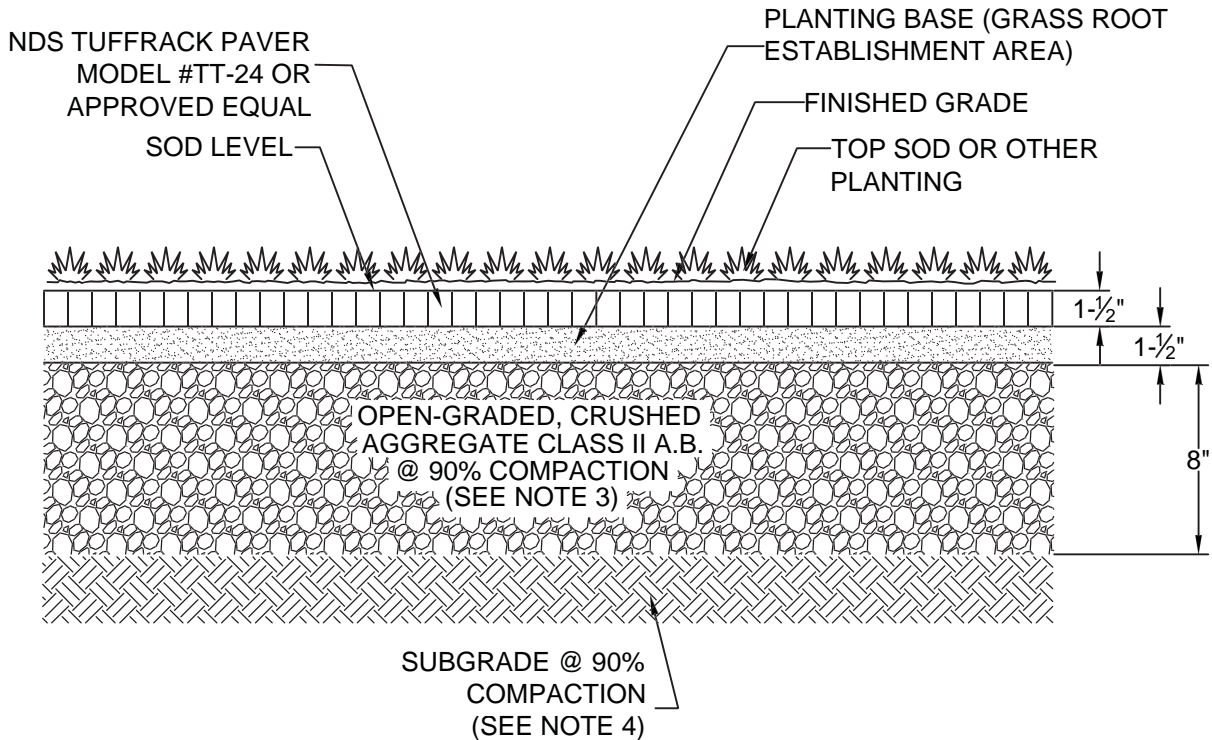


DRAIN SUMP

Balwinder S. Grewal
 BALWINDER S. GREWAL CITY ENGINEER

DATE: JULY 31, 2003
 REVISED: DEC. 31, 2013

SHEET No.
L-14



NOTES:

1. TURF CELLS SHALL BE USED WHERE TURF AREAS ARE USED WITH VEHICULAR ACCESS AND INFREQUENT PARKING SUCH AS RESIDENTIAL DRIVEWAYS, OVERFLOW PARKING AREAS, THE OUTER $\frac{1}{3}$ OF COMMERCIAL AND RETAIL DEVELOPMENTS WHERE PARKING SPACE IS USED LESS OFTEN AND FOR SHORTER PERIODS OF TIME, FIRE/ EMERGENCY ACCESS ROADS, UTILITY ROADS, STREET SHOULDERS.
2. SLOPE SHALL BE EQUAL TO OR LESS THAN 5%.
3. BASE COURSE SHALL BE OPEN-GRADED AND COMPOSED OF CRUSHED ROCK (NOT ROUNDED).
4. SUBGRADE SHALL BE DESIGNED FOR ANTICIPATED LOADS.
5. WHERE THERE ARE NO DEEP PERMEABLE SOILS, UNDERDRAIN SYSTEM SHALL BE PROVIDED.
6. IRRIGATION SHALL BE REQUIRED TO MAINTAIN TURF.

(Not To Scale)



**ENGINEERING
DEPARTMENT**



TURF CELL

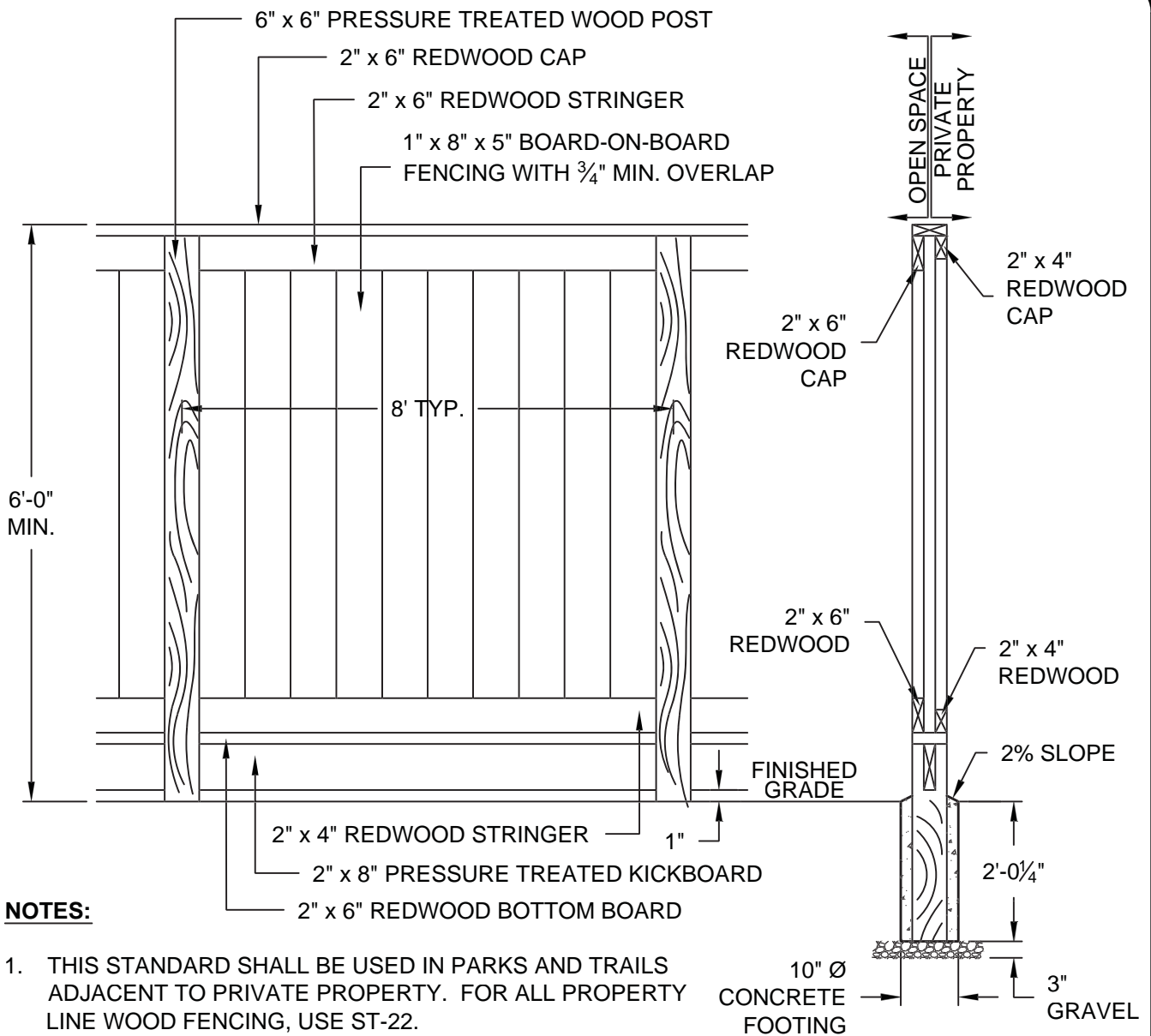
BALWINDER S. GREWAL CITY ENGINEER

DATE: JULY 31, 2003

REVISED: DEC. 31, 2013

SHEET No.

L-15



NOTES:

1. THIS STANDARD SHALL BE USED IN PARKS AND TRAILS ADJACENT TO PRIVATE PROPERTY. FOR ALL PROPERTY LINE WOOD FENCING, USE ST-22.
2. POST AND KICKBOARD SHALL BE PRESSURE TREATED HEM-FIR, LP-22, NO. 2 AND BETTER WITH CEDAR TONE COLOR.
3. RAILS, INFILL AND TRIM SHALL BE CONSTRUCTION COMMON REDWOOD.
4. ALL HARDWARE SHALL BE HOT-DIPPED GALVANIZED STEEL.

(Not To Scale)



**ENGINEERING
DEPARTMENT**

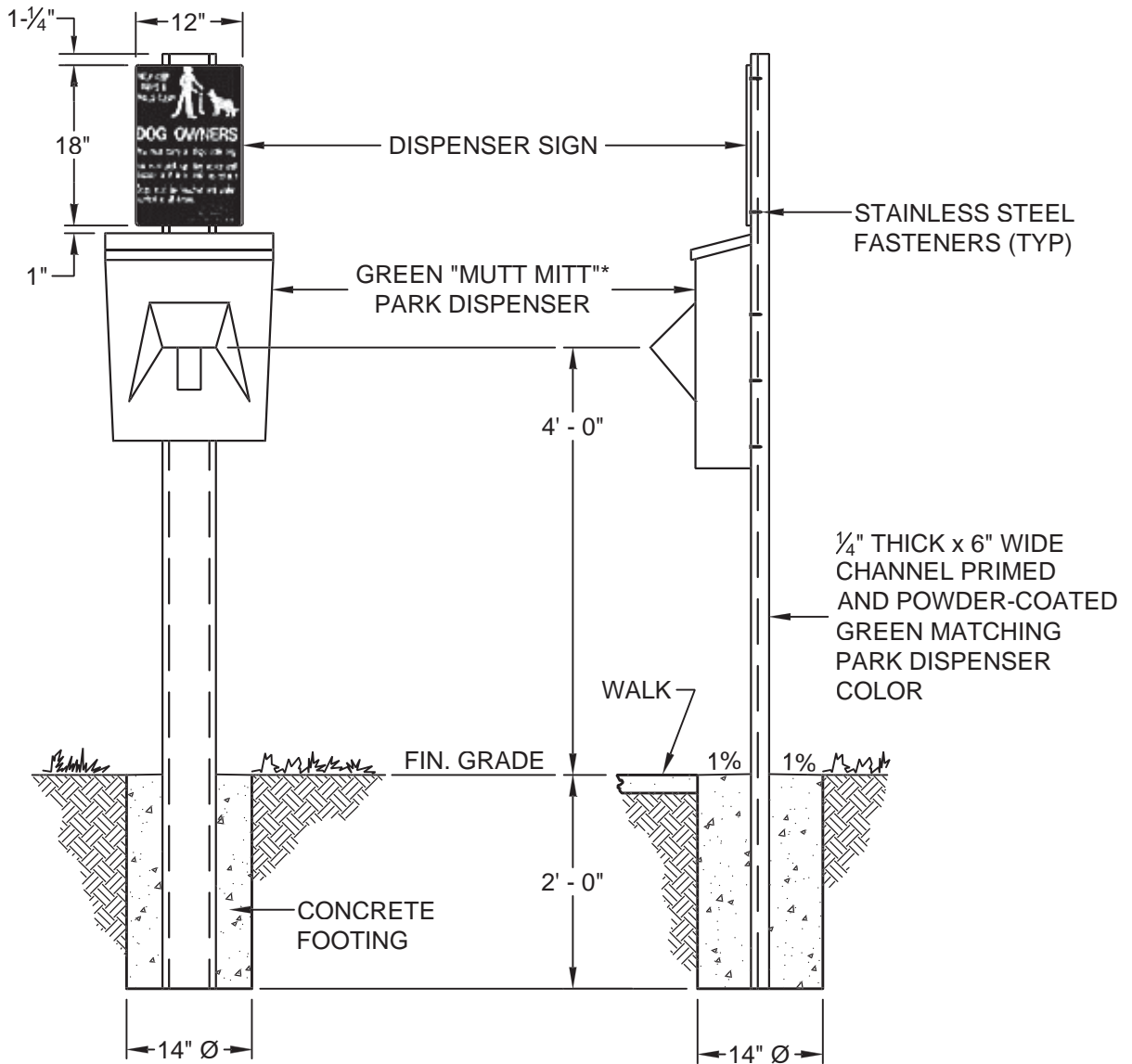


ENHANCED WOOD FENCE

BALWINDER S. GREWAL CITY ENGINEER

DATE: JUNE 16, 2003
REVISED: DEC. 31, 2013

SHEET No.
L-16



FRONT ELEVATION

SIDE ELEVATION

* OR EQUIVALENT AS APPROVED BY THE PARKS AND RECREATION DEPARTMENT.

(Not To Scale)



**ENGINEERING
DEPARTMENT**



PARK DISPENSER

BALWINDER S. GREWAL CITY ENGINEER

DATE: AUG. 1, 2003
REVISED: DEC. 31, 2013

SHEET No.
L-17

This page is left intentionally blank



(Not To Scale)



**ENGINEERING
DEPARTMENT**



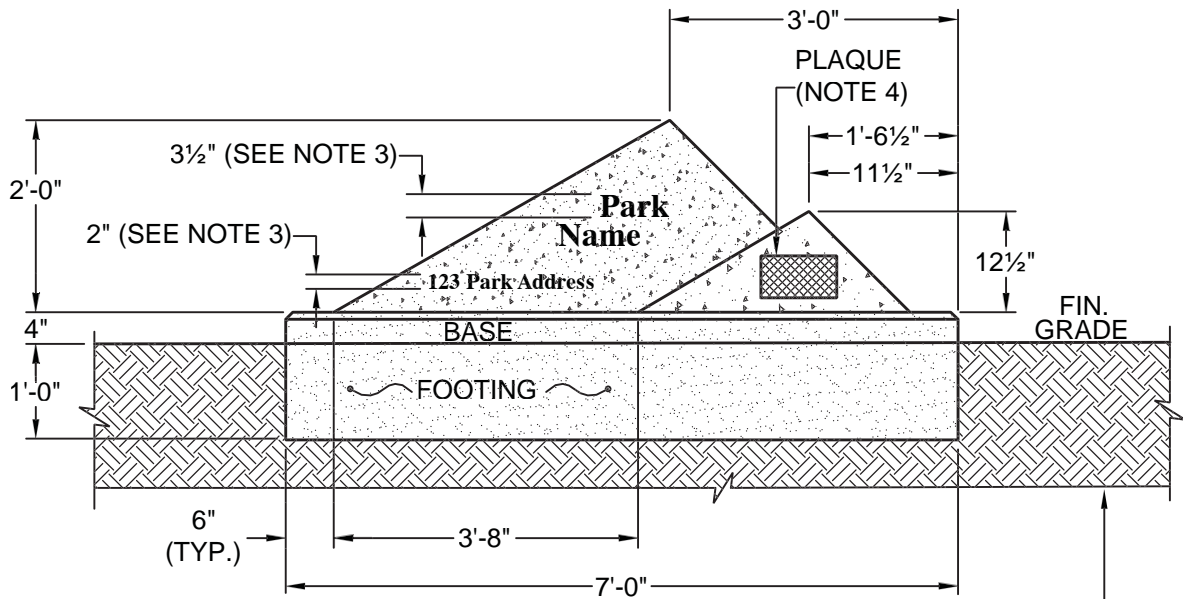

BALWINDER S. GREWAL CITY ENGINEER

DATE:

REVISED:

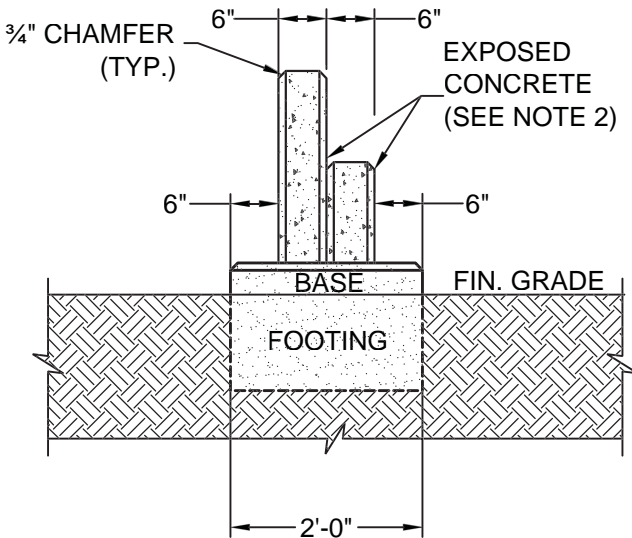
SHEET No.

L-18



FRONT VIEW

4" A.B. SUBGRADE @
90% COMPACTION;
NO RECYCLED A.B.
SHALL BE USED



SIDE VIEW

NOTES:

1. CONCRETE COLOR FOR PARK SIGN, BASE AND FOOTING SHALL BE INTEGRAL "PALMS SPRING TAN" OR APPROVED EQUAL.
2. ALL EXPOSED CONCRETE SHALL BE MEDIUM SANDBLAST FINISH.
3. PARK NAME LETTERS SHALL BE 3- $\frac{1}{2}$ " HIGH, $\frac{1}{2}$ " DEPTH IMPRESSED "GARAMOND BOLD" FONT. PARK ADDRESS SHALL BE 2 INCH HIGH "HELVETICA" FONT. ALL LETTERS SHALL BE PAINTED FLAT BLACK.
4. 5- $\frac{1}{4}$ " H x 9- $\frac{1}{4}$ " W x $\frac{1}{2}$ " D RECESSED AREA. PLAQUE TO BE PROVIDED BY THE PARKS AND RECREATION DEPARTMENT.

(Not To Scale)



**ENGINEERING
DEPARTMENT**

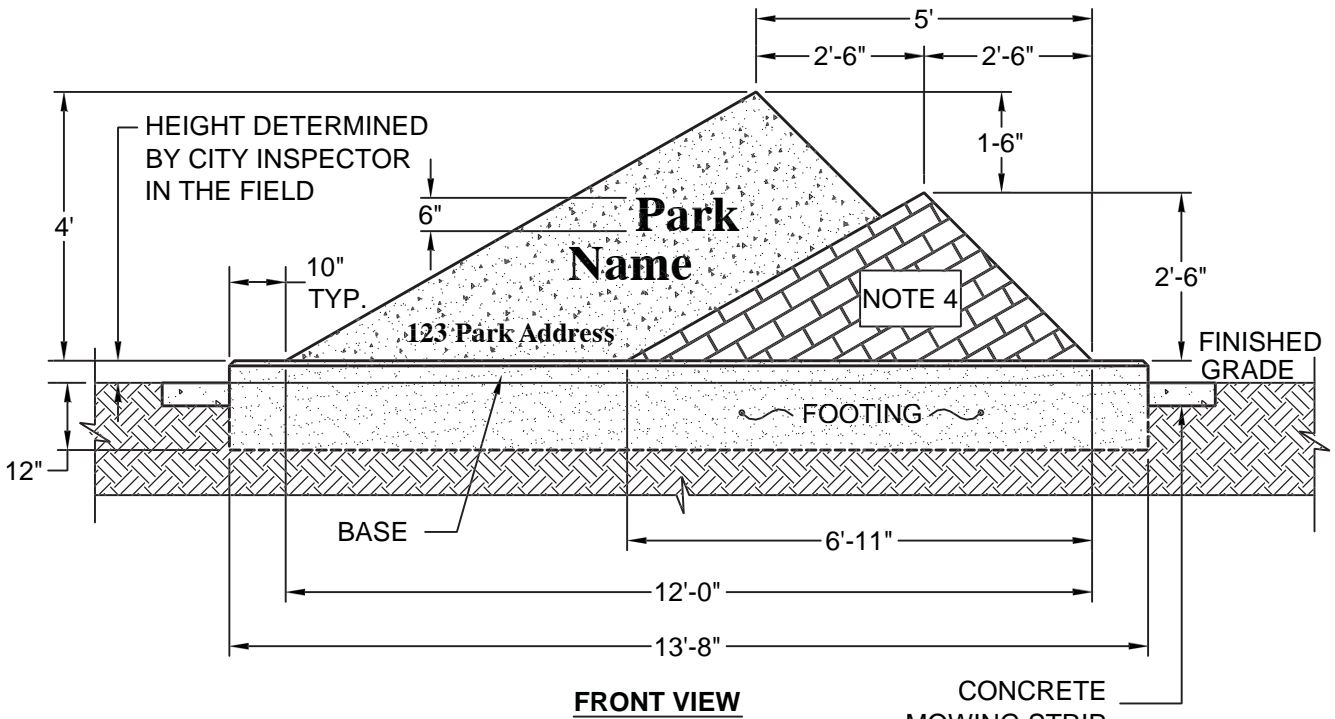


PARK IDENTIFICATION SIGN - I

BALWINDER S. GREWAL CITY ENGINEER

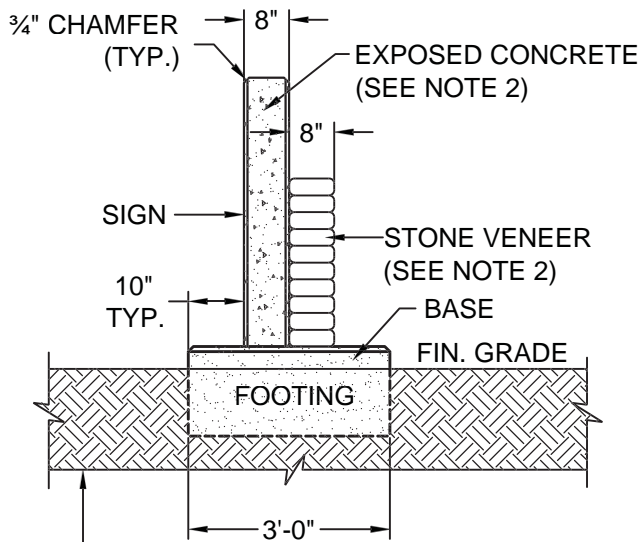
DATE: APR. 29, 2005
REVISED: DEC. 31, 2013

SHEET No.
L-19



FRONT VIEW

CONCRETE
MOWING STRIP
PER STD PLAN L-9



SIDE VIEW

4" A.B. SUBGRADE @ 90% COMPACTION;
NO RECYCLED A.B. SHALL BE USED

NOTES:

1. CONCRETE COLOR FOR PARK SIGN, BASE AND FOOTING SHALL BE INTEGRAL "PALMS SPRING TAN" OR APPROVED EQUAL.
2. ALL EXPOSED CONCRETE SHALL BE MEDIUM SANDBLAST FINISH; STONE VENEER SHALL BE "EL DORADO STACKED STONE DESERT SHADOWS" OR APPROVED EQUAL.
3. PARK NAME LETTERS SHALL BE 6-INCH HIGH, 1/2-INCH DEPTH IMPRESSED "TIMES NEW ROMAN BOLD" FONT. PARK ADDRESS LETTERS SHALL BE 3-INCH HIGH "HELVETICA BOLD" FONT. ALL LETTERS SHALL BE PAINTED FLAT BLACK.
4. 10 1/4" H x 18 1/4" W AREA FOR PLAQUE TO BE PROVIDED BY THE PARKS AND RECREATION DEPARTMENT.

(Not To Scale)



**ENGINEERING
DEPARTMENT**

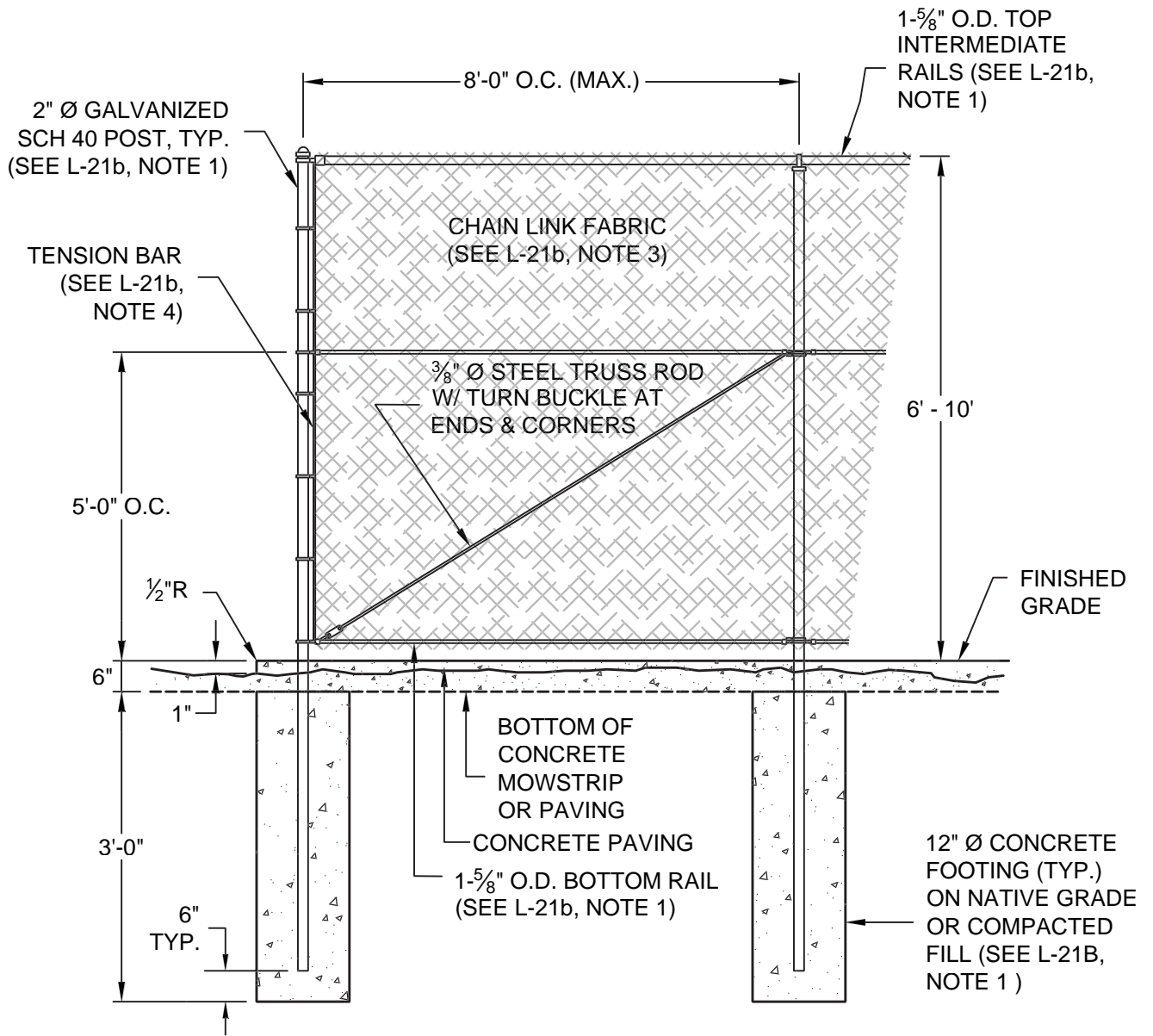


PARK IDENTIFICATION SIGN - II

BALWINDER S. GREWAL CITY ENGINEER

DATE: JULY 12, 2007
REVISED: DEC. 31, 2013

SHEET No.
L-20



(Not To Scale)



**ENGINEERING
DEPARTMENT**



CHAIN LINK FENCE

BALWINDER S. GREWAL CITY ENGINEER

DATE: JAN. 23, 2006
REVISED: DEC. 31, 2013

SHEET No.
L-21a

NOTES:

1. INTERMEDIATE & BOTTOM RAILS SHALL BE CUT AND INSTALLED WITH 180° 2-WAY BRACE BANDS AND RAIL ENDS AT THE LINE POSTS; STANDARD BRACE BANDS AND RAIL ENDS AT THE TERMINAL POSTS.
2. ALL METAL MATERIALS SHALL BE BLACK VINYL COATED. ANY MATERIALS WITH DAMAGE TO THE VINYL COATING SHALL EITHER BE REMOVED & REPLACED OR RECOATED IN THE FIELD TO THE SATISFACTION OF THE CITY ENGINEER.
3. CHAIN LINK FABRIC SHALL BE 9 GAUGE CORE, 2" MESH WITH KNUCKLED FINISH TOP & BOTTOM EDGES. IT SHALL BE FASTENED TO END AND CORNER POSTS WITH $\frac{3}{16}$ " x $\frac{3}{4}$ " HIGH CARBON STEEL.
4. TENSION BAR SHALL HAVE 9 GAUGE CORE BANDS AT 16" INTERVAL.
5. FOOTING SHALL BE 5'-0" DEEP AND 18" IN DIAMETER WHEN THE CHAIN LINK IS 10'-0" IN HEIGHT, IS SLATTED OR HAS A WINDSCREEN APPLIED AND/OR IS RECOMMENDED BY GEOTECHNICAL CONDITIONS.

(Not To Scale)



**ENGINEERING
DEPARTMENT**



CHAIN LINK FENCE NOTES

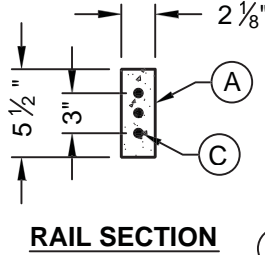

BALWINDER S. GREWAL CITY ENGINEER

DATE: JAN. 23, 2006

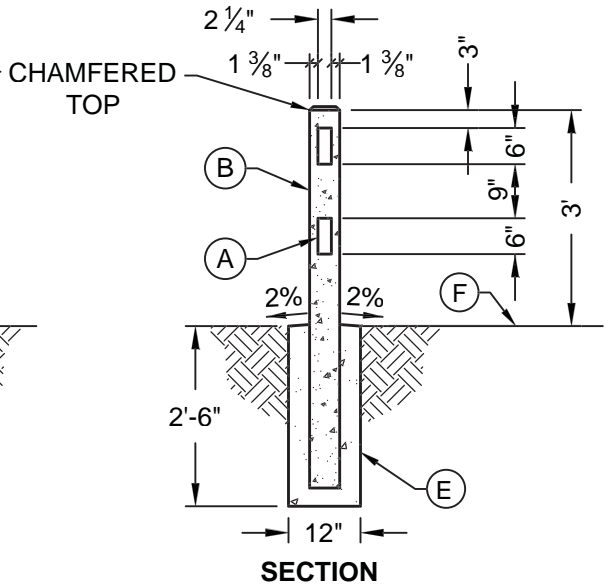
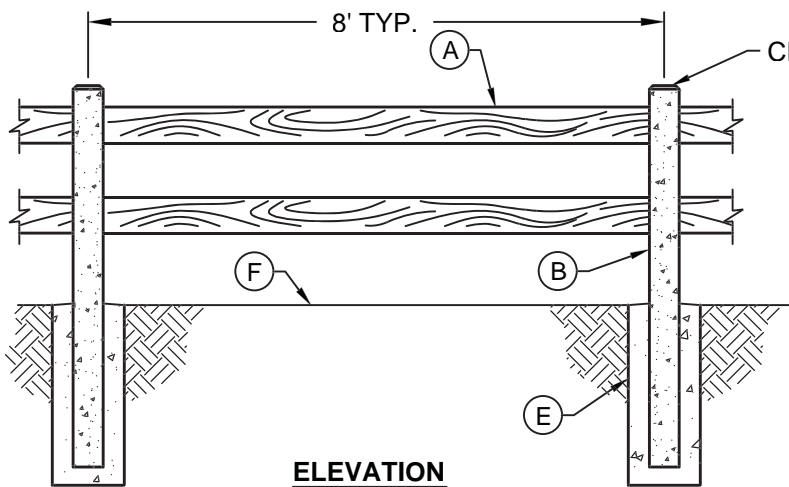
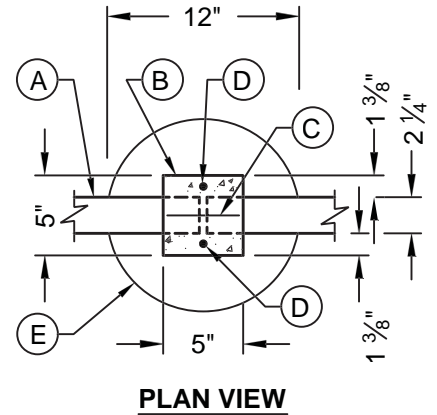
REVISED: DEC. 31, 2013

SHEET No.

L-21b



ALL CONSTRUCTION TO CONFORM TO THE LOCAL BUILDING CODES AND/OR U.B.C.
 FACTORY CONCRETE SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS.
 POURED IN PLACE CONCRETE SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI AT 28 DAYS.
 ALL REINFORCING STEEL SHALL CONFORM TO A.S.T.M. A615, GRADE 60.
 THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AT THE JOB SITE WITH APPROVED PLANS.



ITEM DESCRIPTION

- (A) PRECAST CONC. RAIL
- (B) PRECAST CONC. POST AT 8" O.C. MAX. WITH 3/4" CHAMFER AT TOP
- (C) (3) #2 BARS
- (D) (2) #4 BARS
- (E) 12"Ø x 30" DEEP CONCRETE FOOTING
- (F) FINISH GRADE

NOTES:

1. FENCE SYSTEM SHALL BE "WOODCRETE RAIL" OR EQUIVALENT AS APPROVED BY THE PARKS AND RECREATION DEPARTMENT. COLOR SHALL BE SANDLEWOOD.
2. POSTS AND RAILS SHALL HAVE EQUAL TEXTURE ON ALL SIDES.
3. EXPOSED ENDS OF RAILS SHALL BE SMOOTH/BEVELED.
4. SECURE END AND CORNER RAILS WITH CITY-APPROVED INDUSTRIAL ADHESIVE ON INTERIOR OF RAIL AT POST.
5. USE THE MOWBAND DETAIL OF CITY STANDARD PLAN L-9 WHEN ADJACENT TO TURF.

(Not To Scale)



ENGINEERING DEPARTMENT

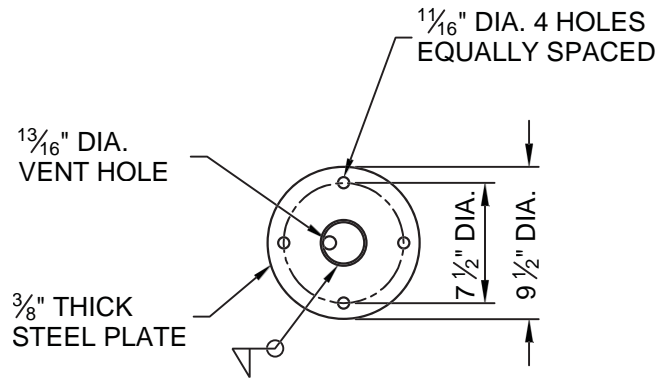
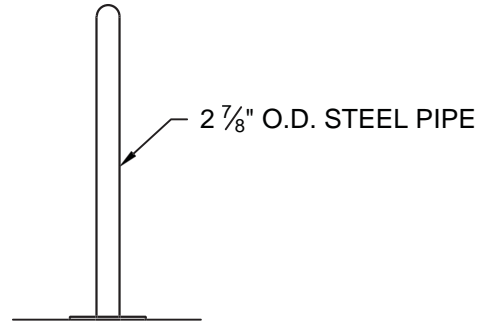
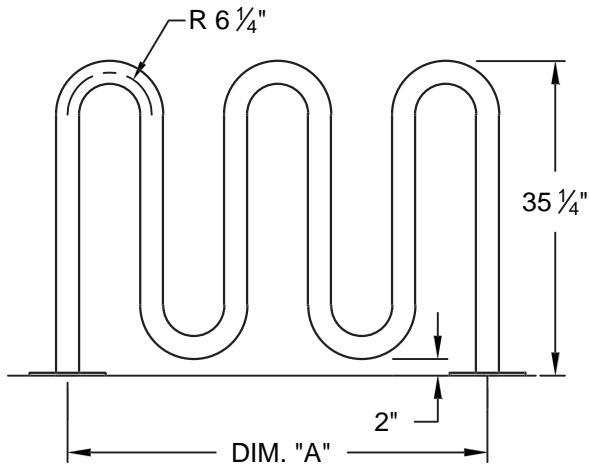


TWO RAIL CONCRETE FENCE

BALWINDER S. GREWAL CITY ENGINEER

DATE: DEC. 31, 2013
 REVISED:

SHEET No.
L-22a



S-2 SURFACE MOUNT

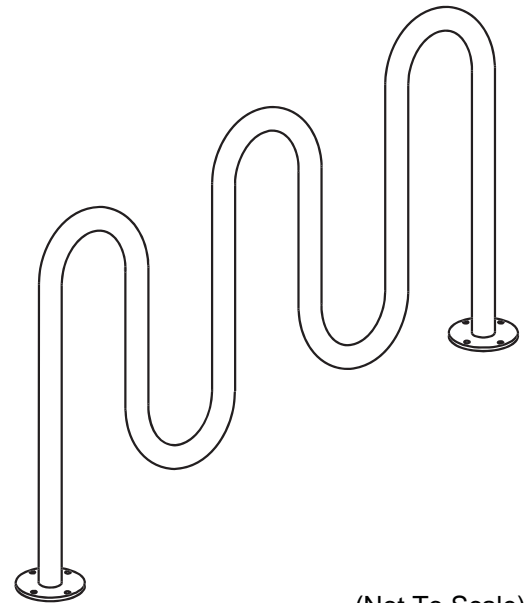
MODEL NO.	PEAKS	DIM "A"
125-20	2	37 1/2" LG.
125-30	3	62 1/2" LG.
125-40	4	87 1/2" LG.
125-50	5	112 1/2" LG.

FINISH OPTIONS:

- HOT DIPPED GALVANIZED
- COATED W/ ZINC RICH EPOXY THEN FINISH W/ POLYESTER POWDER COATING

NOTE:

1. 1/2" x 3 3/4" PLATED EXPANSION ANCHOR BOLTS PROVIDED FOR OPTION S-2.
2. FINISH MATERIAL IS STAINLESS STEEL.
3. SINGLE INVERTED "U" RACK MAY BE USED IN APPROPRIATE SITUATIONS.
4. MATERIALS CAN BE OBTAINED THROUGH DUMOF INC. P.O. BOX 142, MIFFLINTOWN, PA 17059-0142, 125 SERIES OR APPROVED EQUAL.
5. AN ALTERNATIVE SOURCE AND OPTIONS IS BIKE PARKING.COM. TEL. (888) 764-2453, PALMER GROUP LLC, 1728 OCEAN AVE., #132, SAN FRANCISCO, CA 94112.



(Not To Scale)



**ENGINEERING
DEPARTMENT**



STANDARD BIKE RACK

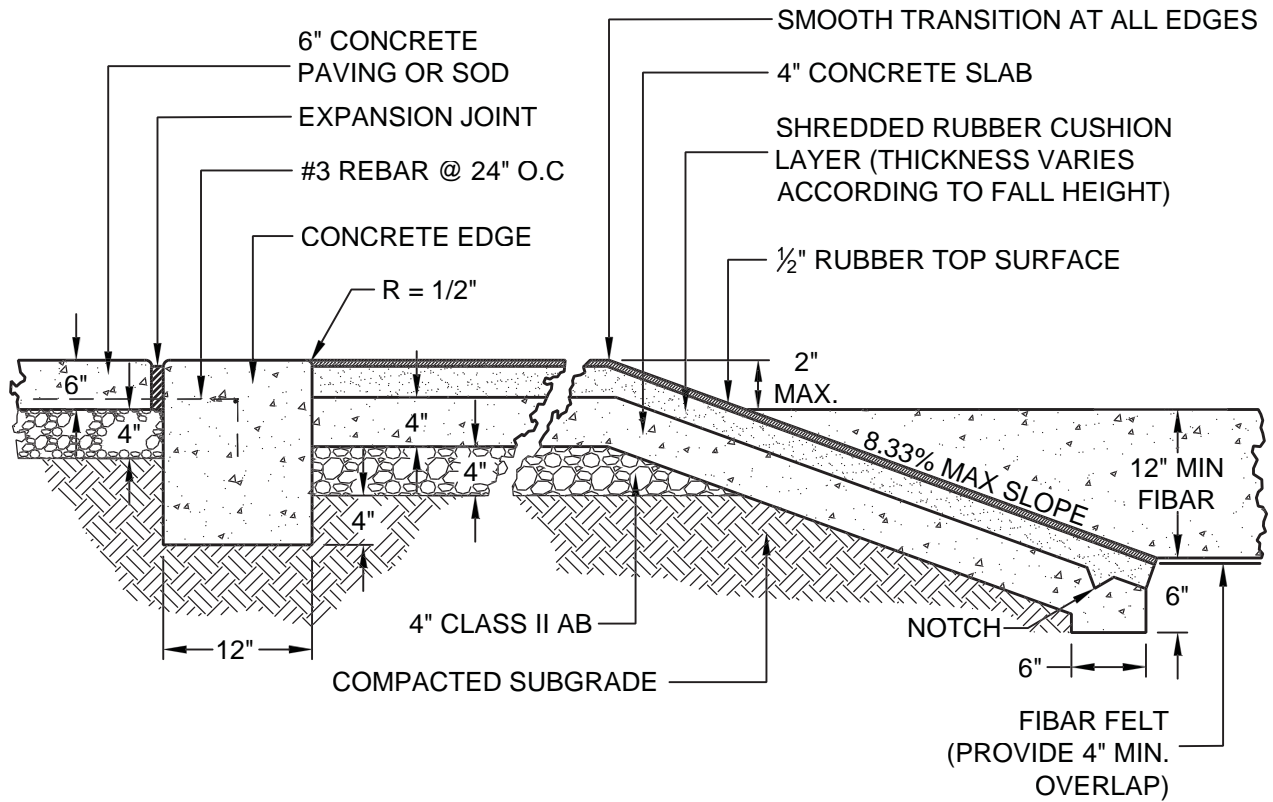
BALWINDER S. GREWAL CITY ENGINEER

DATE: DEC. 31, 2013

REVISED:

SHEET No.

L-23



NOTE:

THIS STANDARD SHALL BE USED ON ALL PLAY AREAS AND PARK PLAYGROUND.

(Not To Scale)



**ENGINEERING
DEPARTMENT**

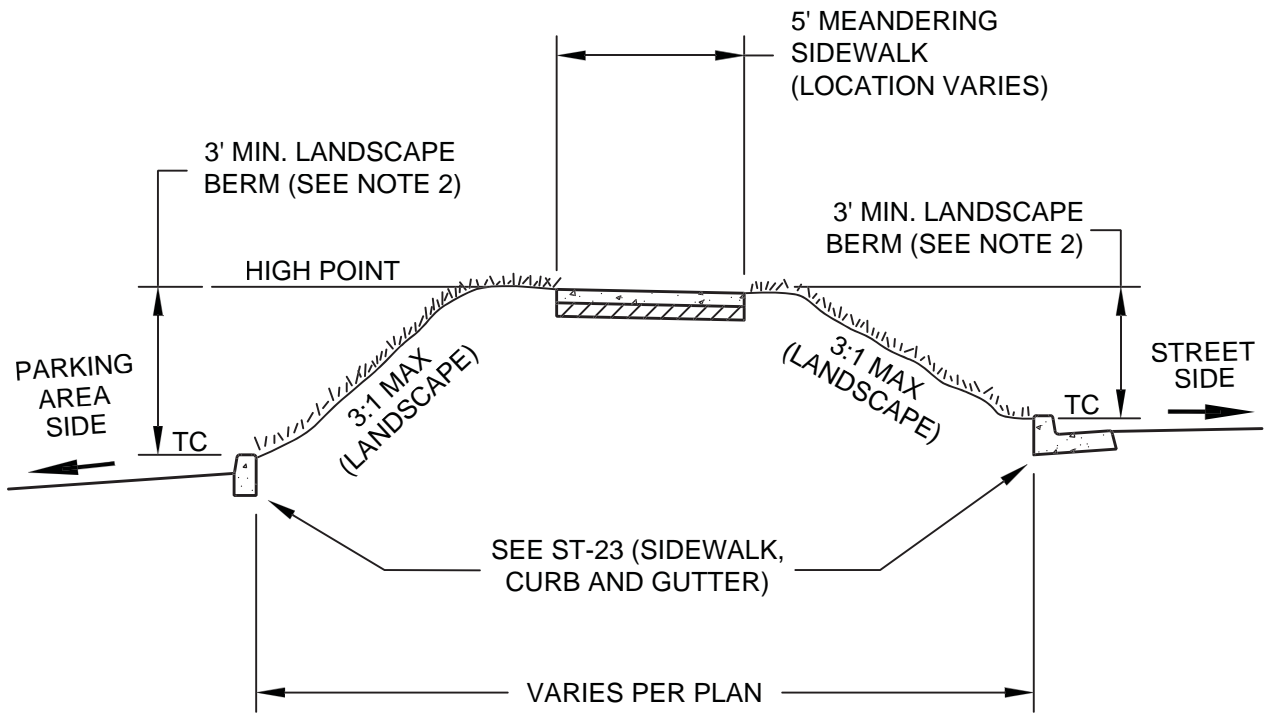


POURED IN PLACE SAFETY SURFACING

BALWINDER S. GREWAL CITY ENGINEER

DATE: JULY 25, 2007
REVISED: DEC. 31, 2013

SHEET No.
L-24



NOTES:

1. A LANDSCAPE BERM INSTALLATION SHALL BE REQUIRED BETWEEN THE STREET AND PARKING AREAS PER THIS STANDARD.
2. HEIGHT OF LANDSCAPE BERM SHALL BE 3' MINIMUM FROM THE TOP OF CURB (TC) TO THE HIGH POINT ON EITHER THE PARKING AREA SIDE OR STREET SIDE, WHICHEVER SIDE IS HIGHER IN ELEVATION.

(Not To Scale)



**ENGINEERING
DEPARTMENT**

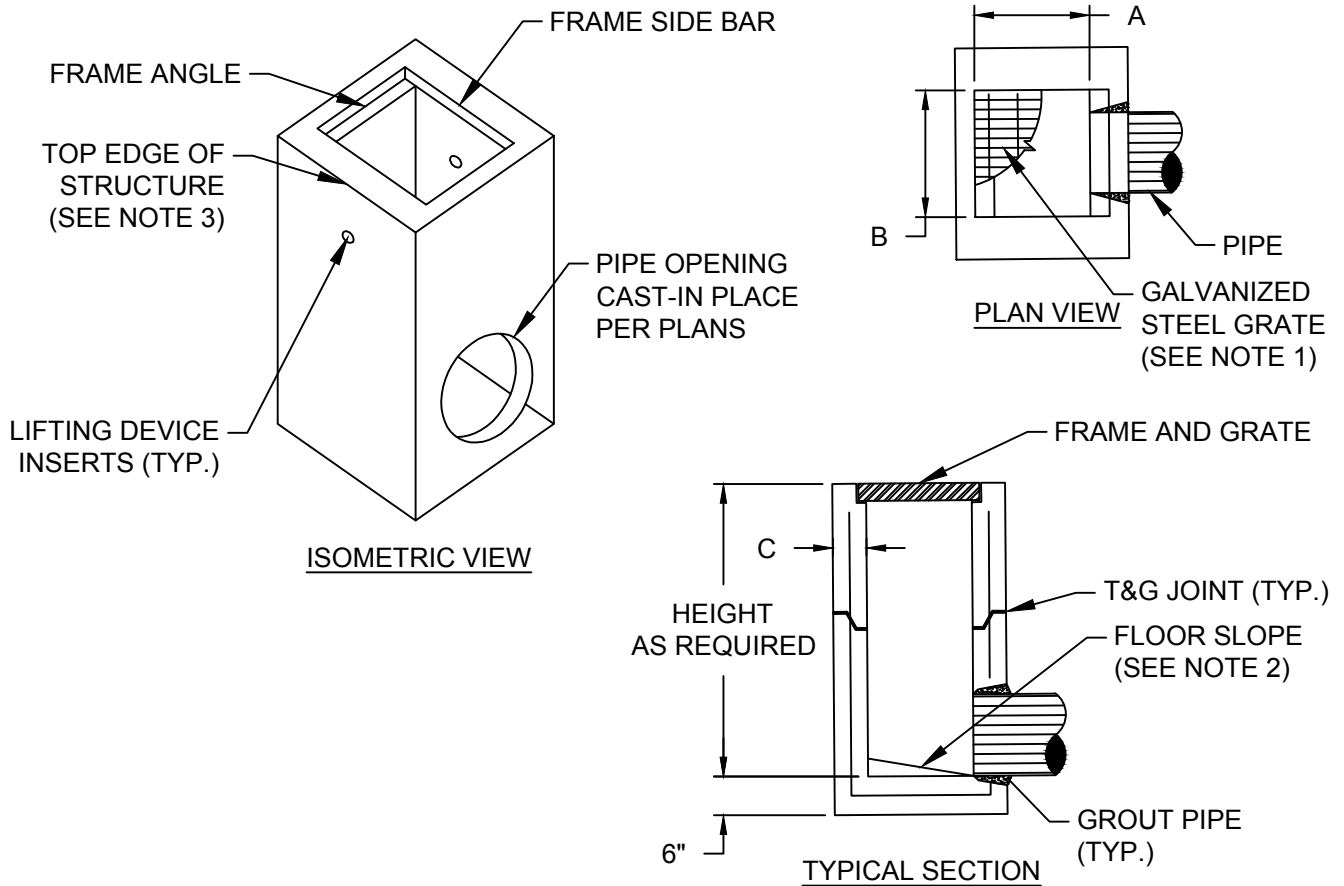


LANDSCAPE BERM DETAIL

BALWINDER S. GREWAL CITY ENGINEER

DATE: JUNE 8, 2007
REVISED: DEC. 31, 2013

SHEET No.
L-25



NOTES:

1. FRAMES AND GRATES TO BE SPECIFIED FOR PEDESTRIAN OR TRAFFIC LOADING. ALL GRATES TO BE BICYCLE PROOF. GRATE LOCKING DEVICE, CLOSED-MESH GRATES, OR CAST IRON FRAME AND GRATES AVAILABLE PER APPROVAL FROM CITY ENGINEER (SEE L-26c).
2. FLOOR SLOPE TO BE DETERMINED IN THE FIELD BY CITY OF BRENTWOOD INSPECTOR.
3. TOP EDGE OF STRUCTURE TO BE STRAIGHT OR CHAMFERED PER APPROVAL OF THE CITY ENGINEER.
4. FOR ALL TURF AREAS THAT WOULD REQUIRE LARGER HEAVIER MAINTENANCE EQUIPMENT SUCH AS MOWERS, FERTILIZER AND HERBICIDE APPLICATIONS ETC.
5. SOURCE IS OLDCASTLE PRECAST INC. OR APPROVED EQUAL

FOR DROP INLET TABLE, SEE L-26b.

(Not To Scale)



**ENGINEERING
DEPARTMENT**



**PEDESTRIAN TRAFFIC LOADING
BICYCLE-PROOF DROP INLET DETAILS**

Jagtar Dhaliwal

JAGTAR SINGH DHALIWAL, INTERIM CITY ENGINEER

DATE: FEB. 5, 2016

REVISED:

SHEET No.

L-26a

DROP INLET TABLE
 OLDCASTLE PRECAST INC. - MODEL REF: CP1212 OR APPROVED EQUAL

USCPG MODEL NO.	SANTA ROSA REF.	A	B	C
		INCH	INCH	INCH
CB1212	EK	12	12	4
CB1818	CK	18	18	5
CB1824	1K	18	24	5
CB2424	2K	24	24	6
CB2430	3K	24	30	5
CB3030	5K	30	30	6
CB2436	1L	24	36	6
CB3636	1M	36	36	6
CB2448	3L	24	48	6
CB3648	3M	36	48	6
CB4848	1R	48	48	6

FOR DROP INLET DETAILS, SEE L-26a.

(Not To Scale)



**ENGINEERING
DEPARTMENT**



**PEDESTRIAN TRAFFIC LOADING
BICYCLE-PROOF DROP INLET TABLE**

Jagtar Dhaliwal

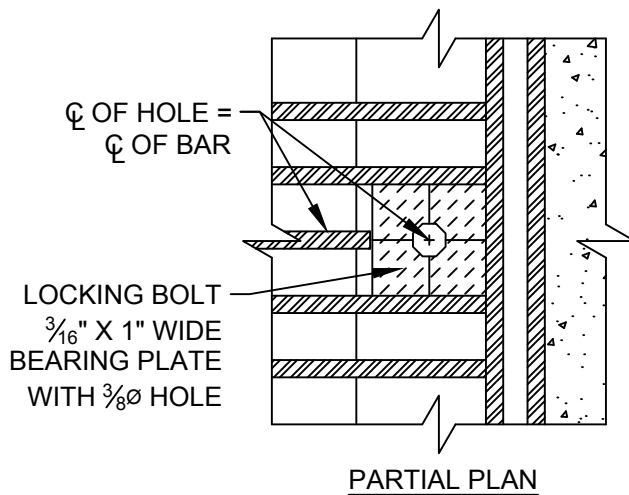
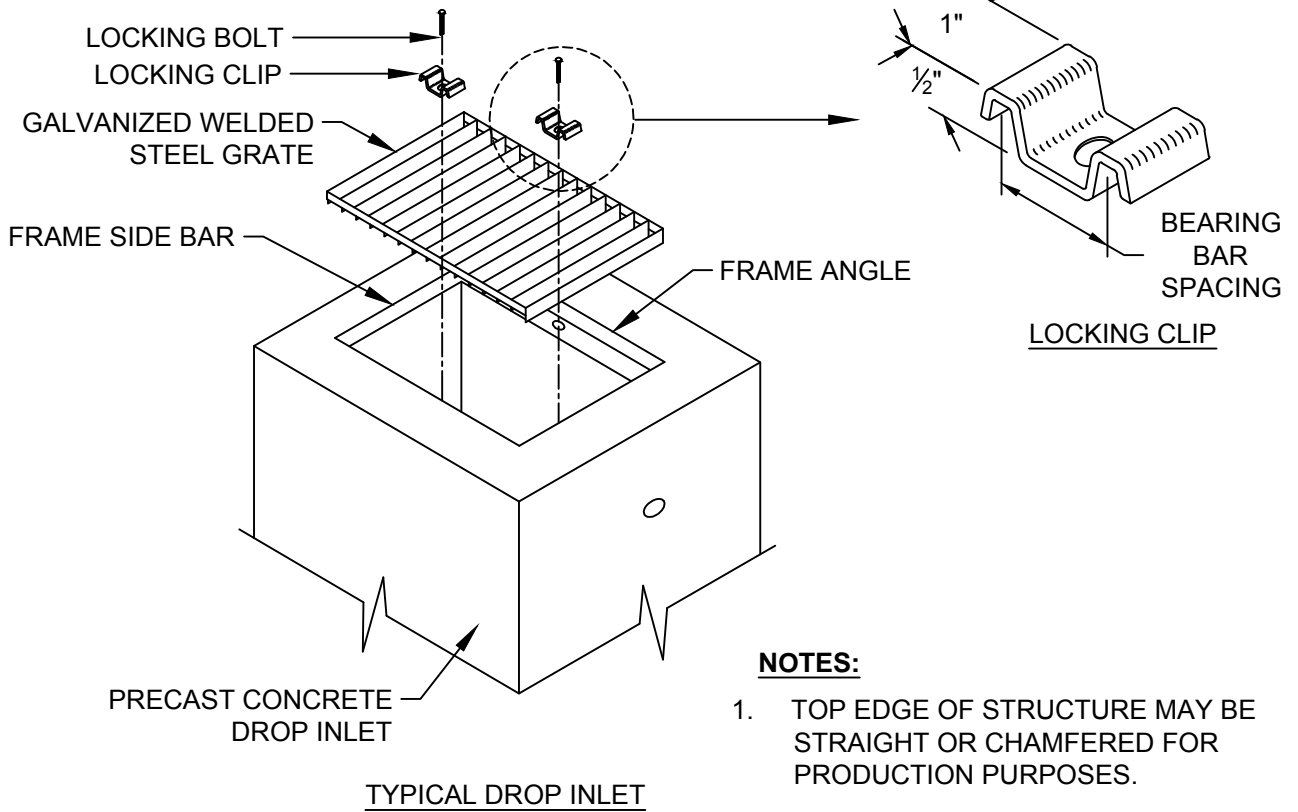
JAGTAR SINGH DHALIWAL, INTERIM CITY ENGINEER

DATE: FEB. 5, 2016

REVISED:

SHEET No.

L-26b



(Not To Scale)



ENGINEERING DEPARTMENT



PEDESTRIAN TRAFFIC LOADING BICYCLE-PROOF GRATE LOCKING DETAILS FOR INLETS

Jagtar Dhalwal

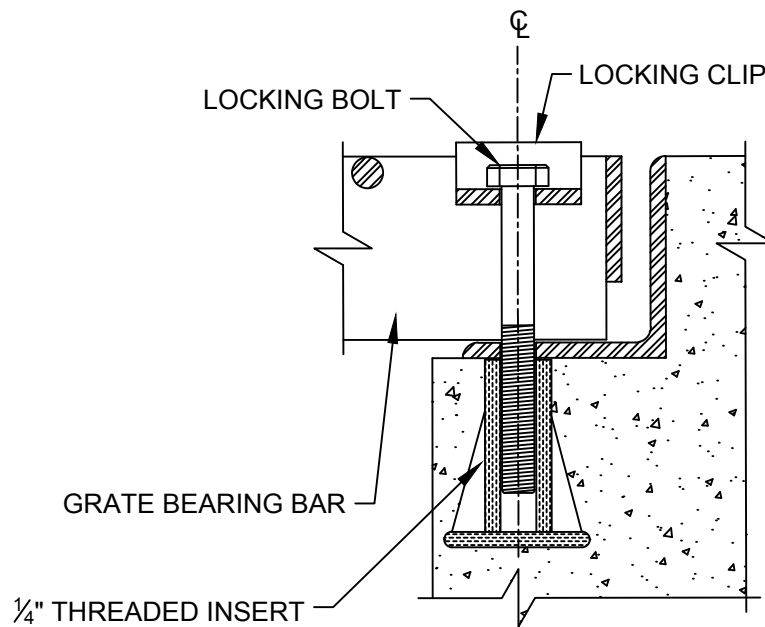
JAGTAR SINGH DHALIWAL, INTERIM CITY ENGINEER

DATE: FEB. 5, 2016

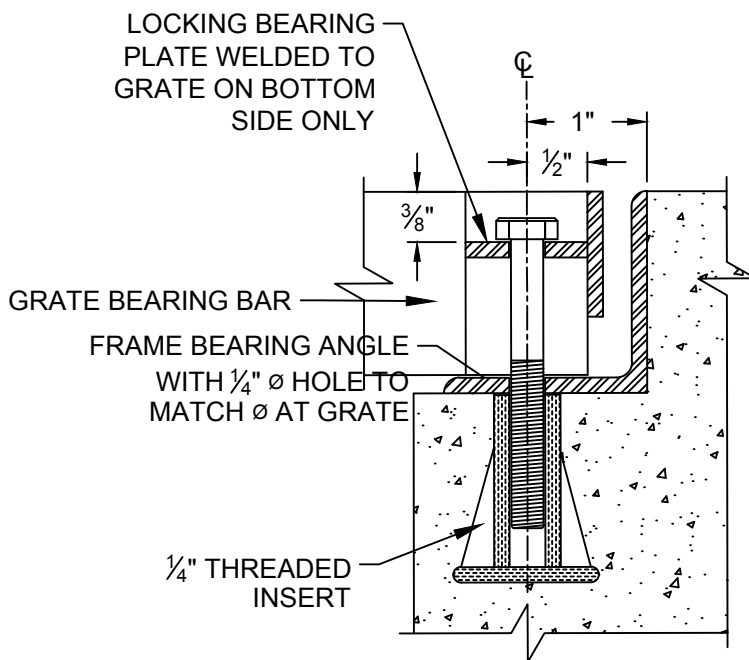
REVISED:

SHEET No.

L-26c



TYPICAL SECTION
AT LOCKING DEVICE



OPTIONAL SECTION
AT LOCKING DEVICE

(Not To Scale)



**ENGINEERING
DEPARTMENT**



**PEDESTRIAN TRAFFIC LOADING
BICYCLE-PROOF GRATE BOLT DETAILS**

Jagtar Dhalwal

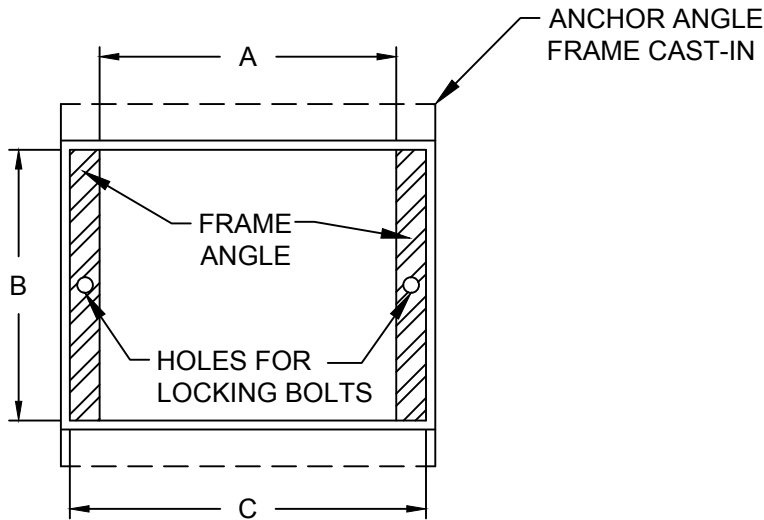
JAGTAR SINGH DHALIWAL, INTERIM CITY ENGINEER

DATE: FEB. 5, 2016

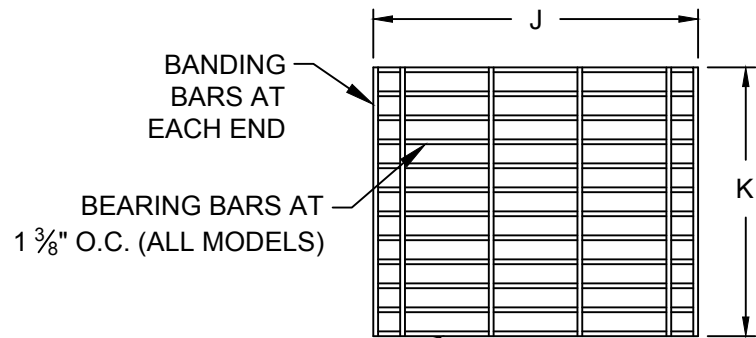
REVISED:

SHEET No.

L-26d



FRAME PLAN



CROSS BARS 3/16" \varnothing FOR USCPG 12X12
3/8" \varnothing USCPG 18X18 - 48X48
BARS AT 4" O.C. (TYP.)

GRATE PLAN

NOTES:

1. FRAMES AND GRATES ARE HOT-DIPPED GALVANIZED AFTER FABRICATION PER ASTM SPEC A-123.
2. FOR GRATE LOCKING DEVICE DETAILS, SEE STANDARD L-26d.
3. FOR FRAME DETAILS TABLE, SEE STANDARD L-26f
4. FOR GRATE DETAILS TABLE, SEE STANDARD L-26g
5. FRAME AND GRATES ARE F&G TRAFFIC MODELS PER OLDCASTLE PRECAST INC. OR APPROVED EQUAL

(Not To Scale)



**ENGINEERING
DEPARTMENT**



**PEDESTRIAN TRAFFIC LOADING BICYCLE-
PROOF FRAME & GRATE DETAILS**

Jagtar Dhaliwal

JAGTAR SINGH DHALIWAL, INTERIM CITY ENGINEER

DATE: FEB. 5, 2016

REVISED:

SHEET No.

L-26e

FRAME TABLE

USCPG MODEL NO.	SANTA ROSA REF.	A	B	C	BEARING ANGLE SEAT	SIDE ANGLE ANCHOR	WEIGHT
		IN	IN	IN	IN	IN	LBS
CB1212TF	EK	12 ³ / ₈	12 ³ / ₈	15	2 x 1 ¹ / ₂ x ³ / ₁₆	2 x 1 ¹ / ₂ x ³ / ₁₆	10
CB1818TF	CK	18 ³ / ₈	18 ³ / ₈	21 ¹ / ₄	2 ¹ / ₂ x 1 ¹ / ₂ x ³ / ₁₆	2 ¹ / ₂ x 1 ¹ / ₂ x ³ / ₁₆	16
CB1824TF	1K	18 ³ / ₈	24 ³ / ₈	21	2 ¹ / ₂ x 1 ¹ / ₂ x ³ / ₁₆	2 ¹ / ₂ x 1 ¹ / ₂ x ³ / ₁₆	19
CB2424TF	2K	24 ³ / ₈	24 ³ / ₈	27	2 ¹ / ₂ x 1 ¹ / ₂ x ³ / ₁₆	2 ¹ / ₂ x 1 ¹ / ₂ x ³ / ₁₆	21
CB2430TF	3K	24 ³ / ₈	30 ³ / ₈	27	2 ¹ / ₂ x 1 ¹ / ₂ x ³ / ₁₆	2 ¹ / ₂ x 1 ¹ / ₂ x ³ / ₁₆	24
CB2436TF	1L	24 ³ / ₈	36 ³ / ₈	27	2 ¹ / ₂ x 1 ¹ / ₂ x ³ / ₁₆	2 ¹ / ₂ x 1 ¹ / ₂ x ³ / ₁₆	26
CB2448TF	3L	24 ³ / ₈	48 ³ / ₈	27	2 ¹ / ₂ x 1 ¹ / ₂ x ³ / ₁₆	2 ¹ / ₂ x 1 ¹ / ₂ x ³ / ₁₆	31
CB3030TF	5K	30 ³ / ₈	30 ³ / ₄	34 ³ / ₈	3 ¹ / ₄ x 2 ¹ / ₄ x ¹ / ₄	3 x 2 x ¹ / ₄	43
CB3636TF	1M	36 ³ / ₈	36 ³ / ₈	40 ¹ / ₂	3 ³ / ₄ x 2 ¹ / ₂ x ¹ / ₄	3 ¹ / ₂ x 2 ¹ / ₂ x ¹ / ₄	62
CB3648TF	3M	36 ³ / ₈	48 ³ / ₈	40 ¹ / ₂	3 ³ / ₄ x 2 ¹ / ₂ x ¹ / ₄	3 ¹ / ₂ x 2 ¹ / ₂ x ¹ / ₄	84
CB4848TF	1R	48 ³ / ₈	48 ³ / ₈	52 ¹ / ₂	C4 x 5.4 w/FB 2 ¹ / ₂ x ¹ / ₄	4 x 3 x ¹ / ₄	93

FOR FRAME DETAILS, SEE L-26e.

(Not To Scale)



**ENGINEERING
DEPARTMENT**



**PEDESTRIAN TRAFFIC LOADING
BICYCLE-PROOF FRAME TABLE**

Jagtar Dhaliwal

JAGTAR SINGH DHALIWAL, INTERIM CITY ENGINEER

DATE: FEB. 5, 2016

REVISED:

SHEET No.

L-26f

GRATES TABLE

USCPG MODEL NO.	SANTA ROSA REF.	J	K	BEARING BARS	BANDING BARS	WEIGHT
		IN	IN	IN	IN	LBS
CB1212TG	EK	14 ³ / ₄	12	1 ³ / ₄ x ³ / ₁₆	1 ¹ / ₂ x ³ / ₁₆	15
CB1818TG	CK	20 ⁵ / ₈	18	2 ¹ / ₄ x ³ / ₁₆	2 x ³ / ₁₆	28
CB1824TG	1K	20 ⁵ / ₈	24	2 ¹ / ₄ x ³ / ₁₆	2 x ³ / ₁₆	28
CB2424TG	2K	26 ⁵ / ₈	24	2 ¹ / ₄ x ³ / ₁₆	2 x ³ / ₁₆	72
CB2430TG	3K	26 ¹ / ₂	30	2 ¹ / ₄ x ³ / ₁₆	2 x ³ / ₁₆	98
CB2436TG	1L	26 ¹ / ₂	36	2 ¹ / ₄ x ³ / ₁₆	2 x ³ / ₁₆	137
CB2448TG	3L	26 ¹ / ₂	48	2 ¹ / ₄ x ³ / ₁₆	2 x ³ / ₁₆	144
CB3030TG	5K	34 ¹ / ₁₆	30 ¹ / ₁₆	3 x ¹ / ₄	2 ¹ / ₂ x ¹ / ₄	139
CB3636TG	1M	40	36 ¹ / ₄	3 ¹ / ₂ x ¹ / ₄	2 ¹ / ₂ x ¹ / ₄	219
CB3648TG (2 PC)	3M	40	23 ⁵ / ₈	3 ¹ / ₂ x ¹ / ₄	2 ¹ / ₂ x ¹ / ₄	282
CB4848TG (2 PC)	1R	52	23 ¹⁵ / ₁₆	4 x ⁵ / ₁₆	3 x ¹ / ₄	248

FOR GRATE DETAILS, SEE L-26e.

(Not To Scale)



**ENGINEERING
DEPARTMENT**



**PEDESTRIAN TRAFFIC LOADING
BICYCLE-PROOF GRATE TABLE**

Jagtar Dhaliwal

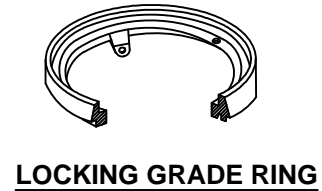
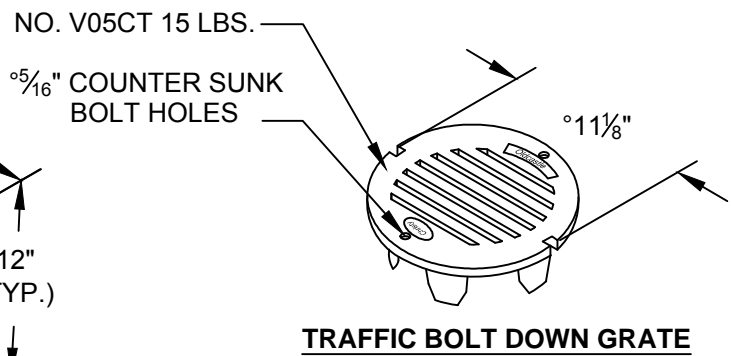
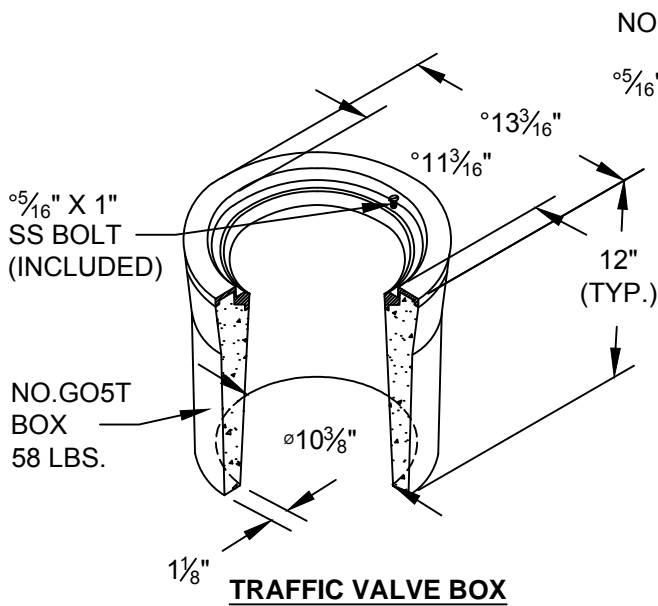
JAGTAR SINGH DHALIWAL, INTERIM CITY ENGINEER

DATE: FEB. 5, 2016

REVISED:

SHEET No.

L-26g



OLDCASTLE ORDERING CODE	ITEM	APPROXIMATE SHIPPING WEIGHT	DESCRIPTION
G05TBOX	BOX	58 LBS.	DG05T TRAFFIC VALVE BOX (10 ³ / ₈ " I.D. X 12" HIGH) - 36 PER PALLET - (INCLUDES 1/4" -20 X 1", BOLTS)
V05-71CT	LID	15 LBS.	CAST IRON GRATE (INCLUDES HOLES FOR BOLT DOWN FEATURE) ADA COMPLIANT
G05X12	EXTENSION	38 LBS.	12" REINFORCED CONCRETE FOR G05 & G08 BOXES - 36 PER PALLET
G05TGR10	GRADE RING	10 LBS.	1" HIGH CAST IRON
G05TGR15	GRADE RING	14 LBS.	1 1/2" HIGH CAST IRON
G05TGR20	GRADE RING	18 LBS.	2" HIGH CAST IRON

NOTES:

- FOR ALL TRUF AREAS THAT ARE DESIGNED FOR PLAY AND RECREATION PURPOSES
- SOURCE IS OLDCASTLE OR APPROVED EQUAL

(Not To Scale)



ENGINEERING DEPARTMENT

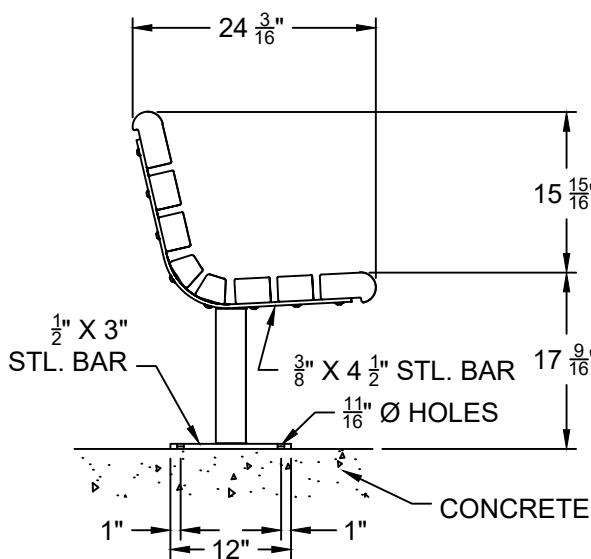


DRAIN BOX 10-3/8" I.D. X 12"

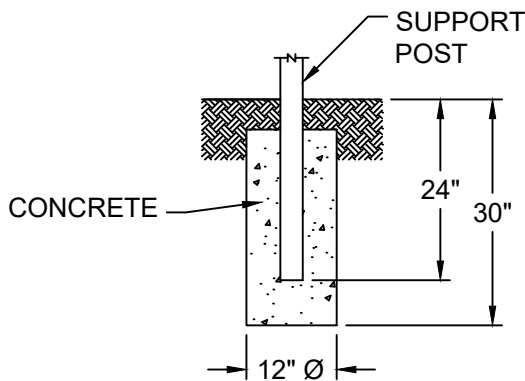
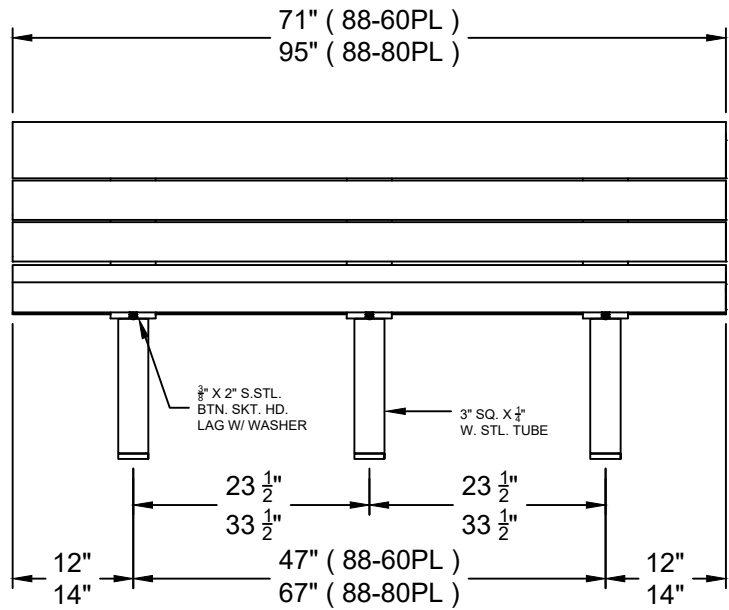
Jagtar Dhalwal
 JAGTAR SINGH DHALIWAL, INTERIM CITY ENGINEER

DATE: FEB. 5, 2016
 REVISED:

SHEET No.
L-27

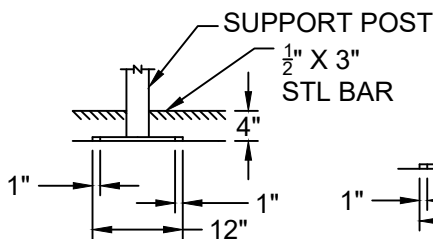
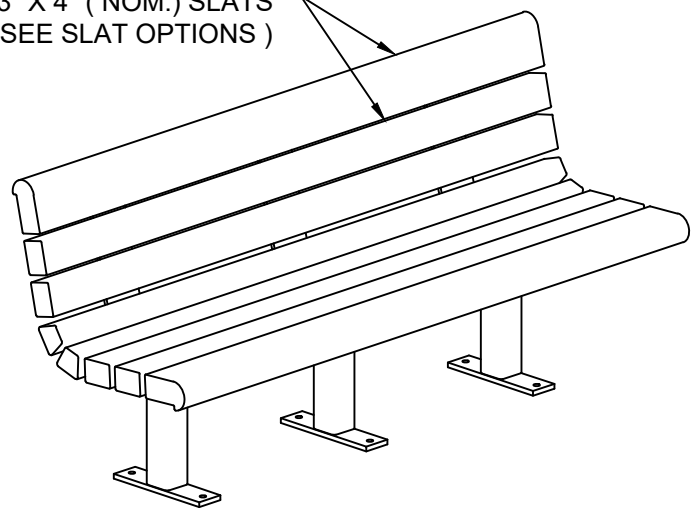


S-2 SURFACE
(SEE NOTE 3: L-28b)

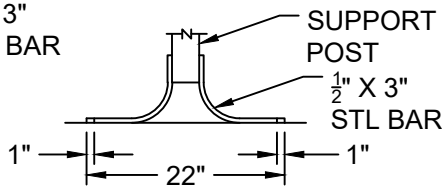


S-1 EMBEDMENT
(SEE NOTE 3: L-28b)

3" X 4" (NOM.) SLATS
(SEE SLAT OPTIONS)



S-4 SUB FLOOR
(SEE NOTE 3: L-28b)

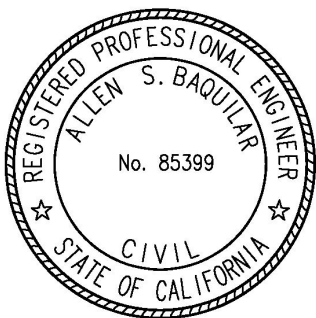


S-3 GULL WING
(SEE NOTE 3: L-28b)

NOTE:

SEE L-28b FOR GENERAL NOTES,
BENCH LENGTH OPTIONS,
AND BENCH SLAT OPTIONS.

(Not To Scale)



**ENGINEERING
DEPARTMENT**



PARK BENCH DETAIL

Allen S. Baquilar
ALLEN S. BAQUILAR

CITY ENGINEER

DATE: JAN. 22, 2024

REVISED:

SHEET No.

L-28a

NOTES:

- 1.) ALL STL. MEMBERS COATED W/ ZINC RICH EPOXY THEN FINISHED W/ POLYESTER POWDER COATING.
- 2.) 1/2" X 3 3/4" EXPANSION ANCHOR BOLT PROVIDED FOR S-2, S-3 & S-4 CONCRETE SURFACE TYPES.
- 3.) TYPES OF SULPHATE EXPOSURE TO CONCRETE SURFACE:
S-1 = SUPPORT POST EMBEDDED IN CONCRETE BELOW SURFACE.
S-2 = CONCRETE SUBJECTED TO SEVERE SULPHATE EXPOSURE.
S-3 = CONCRETE SUBJECTED TO MODERATE SULPHATE EXPOSURE.
S-4 = CONCRETE SUBJECTED TO MINIMUM SULPHATE EXPOSURE.

BENCH LENGTH OPTIONS:

- 6' BENCH
- 8' BENCH

BENCH SLAT OPTIONS:

- "CEDAR" RECYCLED PLASTIC
- "GREY" RECYCLED PLASTIC
- "REDWOOD" RECYCLED PLASTIC
- "WALNUT" RECYCLED PLASTIC
- OTHER _____

(Not To Scale)



**ENGINEERING
DEPARTMENT**



PARK BENCH DETAIL NOTES

Allen S. Baquilar
ALLEN S. BAQUILAR

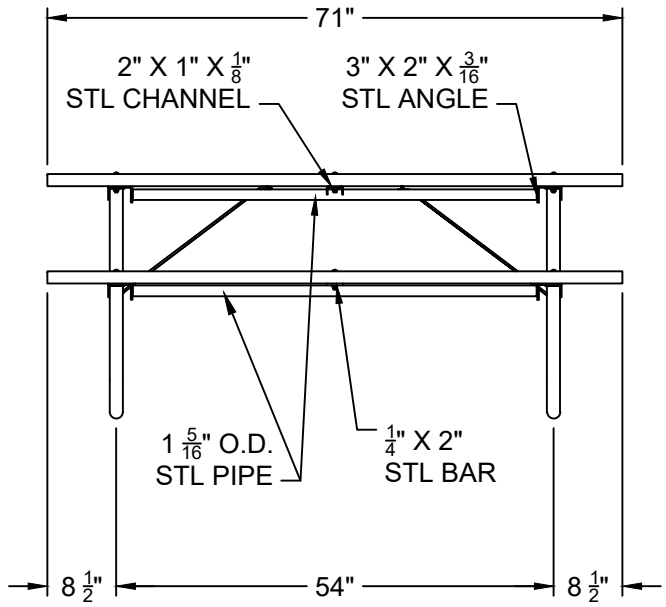
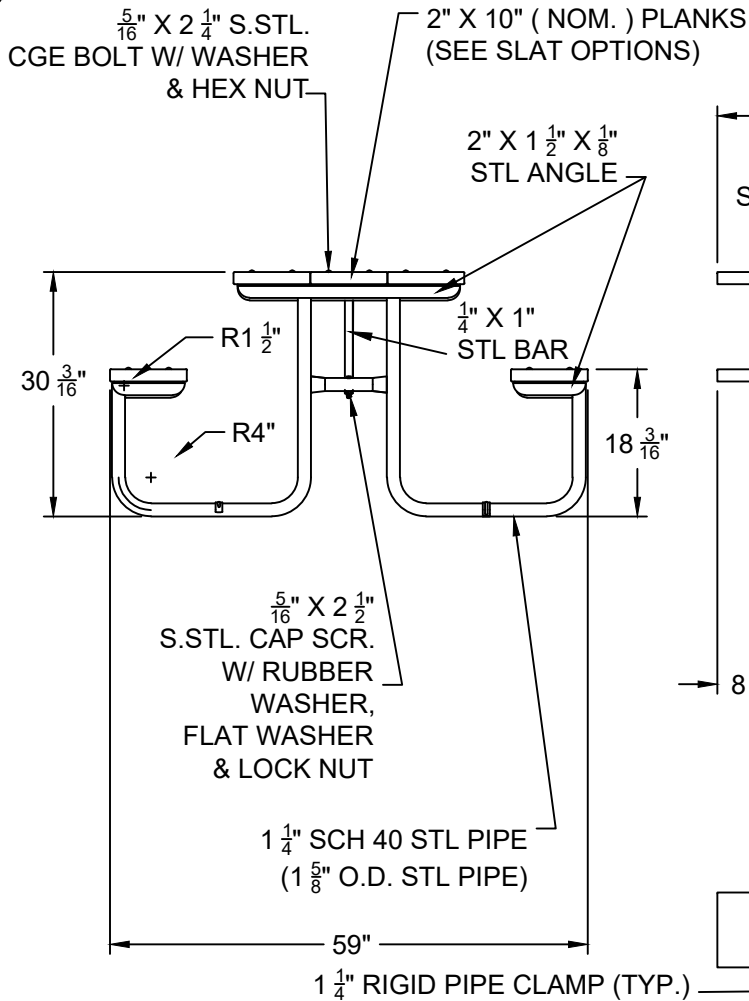
CITY ENGINEER

DATE: JAN. 22, 2024

REVISED:

SHEET No.

L-28b



LENGTH OPTIONS

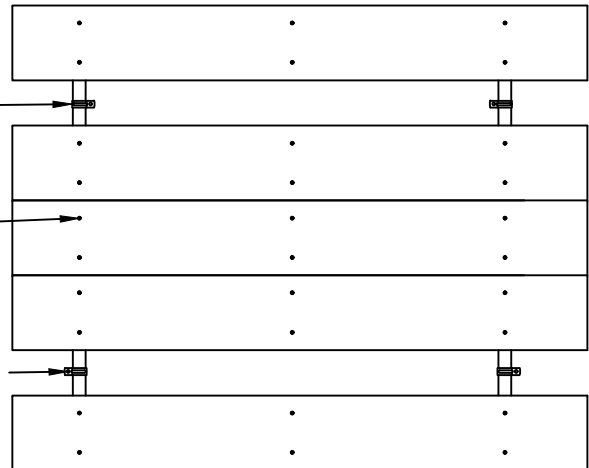
- 6' TABLE
- 8' TABLE

5/16" X 2 1/4" S.STL.
CGE BOLT W/ WASHER
& HEX NUT (TYP.)

SLAT OPTIONS:

- "CEDAR" RECYCLED PLASTIC
- "GREY" RECYCLED PLASTIC
- "REDWOOD" RECYCLED PLASTIC
- "WALNUT" RECYCLED PLASTIC
- OTHER _____

1/4" X 1 1/2"
HAMMER SET
ANCHOR
(TYP.)



FINISH OPTIONS:

- ALL STL. MEMBERS COATED W/ ZINC RICH EPOXY THEN FINISHED W/ POLYESTER POWDER COATING.
- HOT DIP GALV. AFTER FABRICATION.

(Not To Scale)



**ENGINEERING
DEPARTMENT**

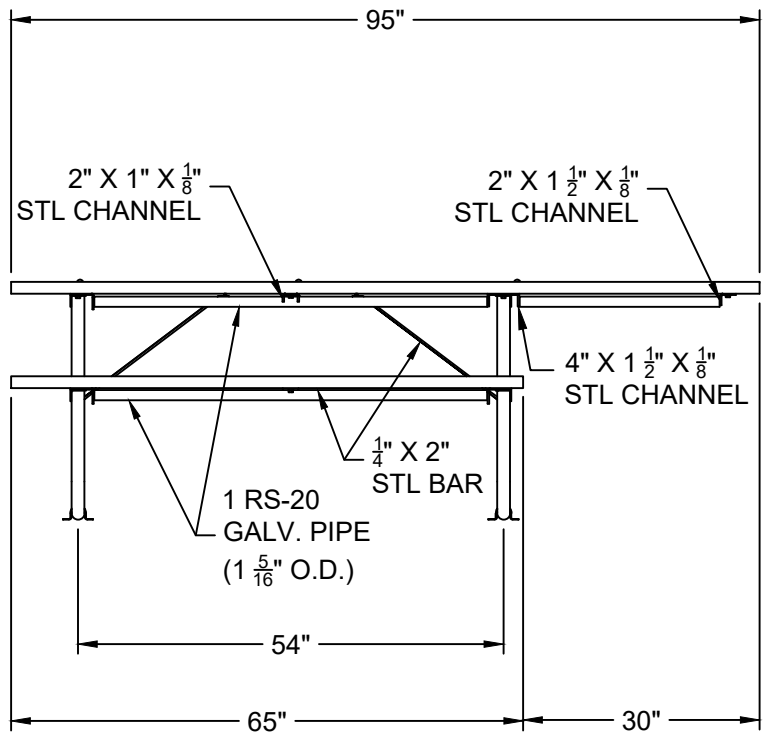
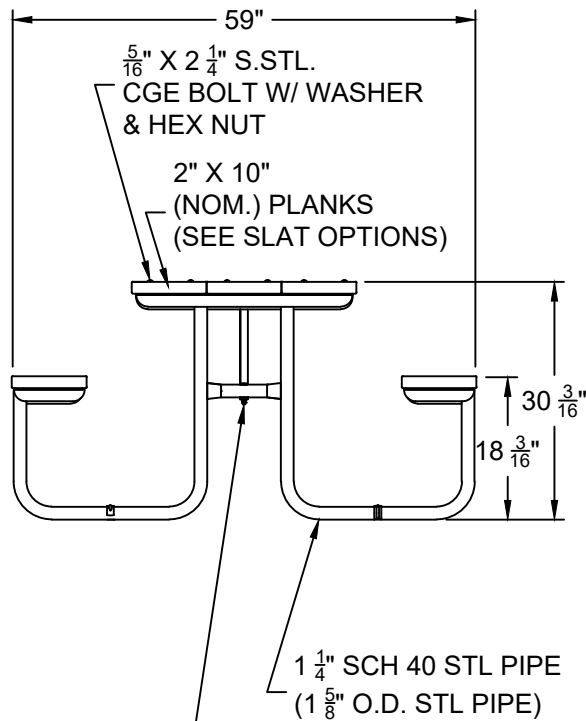


LANDSCAPE PICNIC TABLE

Allen S. Baquilar
ALLEN S. BAQUILAR CITY ENGINEER

DATE: JAN. 22, 2024
REVISED:

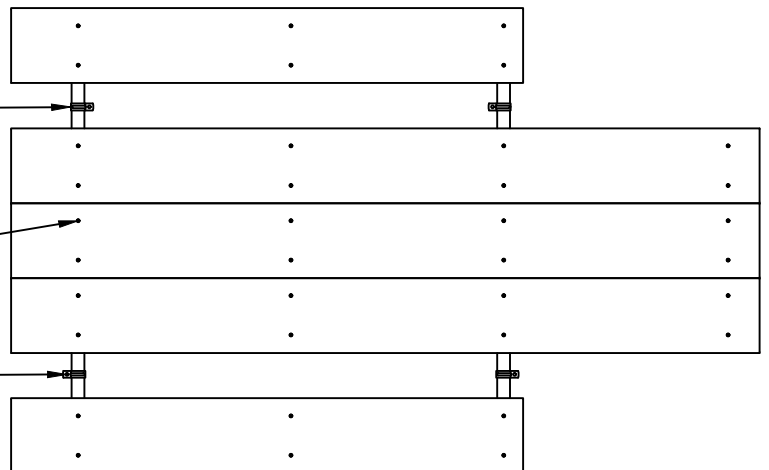
SHEET No.
L-29



- 5/16" X 2 1/2" S.S.T.L. CAP SCR.
W/ RUBBER WASHER,
FLAT WASHER
& LOCK NUT
- 1 1/4" RIGID PIPE CLAMP (TYP.)

5/16" X 2 1/4" S.S.T.L.
CGE BOLT W/ WASHER
& HEX NUT (TYP.)

1/4" X 1 1/2" HAMMER SET
ANCHOR (TYP.)



SLAT OPTIONS:

- "CEDAR" RECYCLED PLASTIC
- "GREY" RECYCLED PLASTIC
- "REDWOOD" RECYCLED PLASTIC
- "WALNUT" RECYCLED PLASTIC
- OTHER _____

(Not To Scale)



**ENGINEERING
DEPARTMENT**



**HANDICAP ACCESSIBLE
LANDSCAPE PICNIC TABLE**

Allen S. Baquilar
ALLEN S. BAQUILAR

CITY ENGINEER

DATE: JAN. 22, 2024

REVISED:

SHEET No.

L-30