GENERAL NOTES FOR PUBLIC LANDSCAPES

1. All related work shall conform to the City of Riverside Public Works Department Standards and Specifications for Planting and Irrigation Work. (Specifications Section 02441 and 02480).
2. A Public Landscape permit as issued by the Public Works Department is required. Contact the Landscape Maintenance Inspector at (951) 351-6103 to schedule a pre-construction meeting and to obtain the permit.
3. When calling for inspections contact the Landscape Maintenance Inspector a minimum of 48 hours in advance to schedule an inspection. A written approval will be provided on the Public Landscape Permit card for each stage of inspection. A verbal approval will not be acceptable. Inspections are required per the standard specifications, and include but are not necessarily limited to the following.
   a. After completion of final grading and when all utility services have been marked, but prior to initiating any landscape work within the public right of way.
   b. At the time of installation of irrigation sleeves and constant pressure mainlines, but prior to backfill of trenches for same (Note:mainlines must be pressure tested in the presence of the Landscape Maintenance Inspector).
   c. At the time of installation of irrigation valves, laterals, and heads.
   d. For spotting of all trees prior to digging planting pits.
   e. While digging plant pits and planting/relocated trees.
   f. After planting and all other indicated or specified work has been completed, for start of maintenance.
   g. At substantial completion of the project for City'd acceptance to start the required maintenance period.
   h. At the end of the Maintenance period, the Contractor/Developer shall call the Landscape Maintenance Inspector at the number listed above for a final acceptance inspection in order to be released from maintenance. Developers bonds will not be released until after receipt of written notification from the City that the project has passed final inspection and the Public Works Department is assuming maintenance responsibilities.
4. The Developer shall be responsible to acceptably maintain all planting for a period of (1) year.

BACKFLOW STANDARDS AND REQUIREMENTS

REFER TO CITY OF RIVERSIDE PUBLIC UTILITIES DEPT- WATER SUPPLY BACKFLOW PREVENTION STANDARDS & REQUIREMENTS- FOR REGULATIONS REGARDING INSTALLATION, LOCATION AND TESTING OF ALL BACKFLOW DEVICES. CONTACT MAX MENDOZA FOR ALL ISSUES RELATED TO BACKFLOW - (951) 351-6320.

STELLAN RIDGE - PHASE 1

RIVERSIDE, CALIFORNIA
LANDSCAPE PLANS

OWNER: PULTE HOME CORPORATION
ADDRESS: 2 TECHNOLOGY DRIVE
IRVINE, CALIFORNIA 92618

CONTACT: PATRIC LYNAM
PHONE: (949) 623-3759
FAX: (949) 623-3701

LANDSCAPE QUANTITIES

HOMEOWNERS ASSOCIATION\ MAINTAINED LANDSCAPE AREA	227.698
HOMEOWNERS MAINTAINED LANDSCAPE AREA	227,813
TREES	
15 GAL.	5
24"	65
36"	169
60"	25
72"	14

PREPARED BY

CLARK & GREEN
Associates
Landscape Architecture

150 Paularino Avenue, Suite 160
Costa Mesa, California, 92626
(714) 434-9803 Fax (714) 434-9109

CONSULTANTS

CIVIL ENGINEER
ADKAN ENGINEERING
6920 AIRPORT DRIVE
RIVERSIDE, CA 92504
(951) 688-0241
(951) 688-0599 FAX
CHARISSA LEACH, P.E.

UTILITY PLANNER
BJ PALMER & ASSOCIATES
27122A PASEO ESPADA, SUITE 921
SAN JUAN CAPISTRANO, CA 92675
(949) 487-2555
(949) 487-1380 FAX
LESLIE DIETRICH

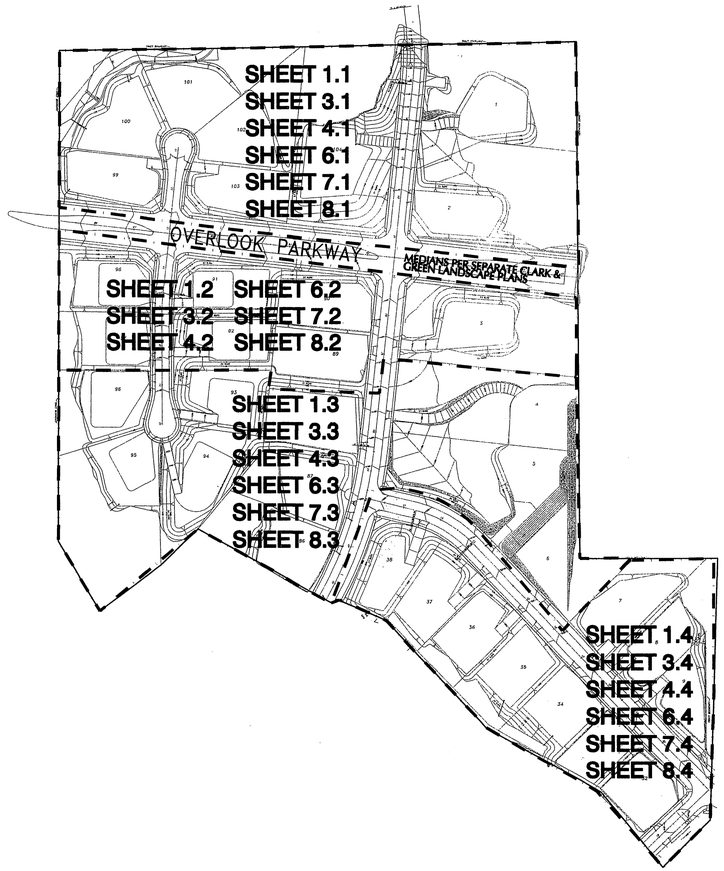
ENVIRONMENTAL SERVICES
MICHAEL BRANDMAN ASSOCIATES
220 COMMERCE, SUITE 200
IRVINE, CALIFORNIA 92602
(714) 508-4100
(714) 508-4110 FAX
ERINN E. JOHNSON

STRUCTURAL ENGINEER
CORREIA CONSULTING
16912 BOLSA CHICA ROAD, SUITE 101
HUNTINGTON BEACH, CA 92649
(714) 840-5582
(714) 840-8691 FAX
WILLIE CORREIA

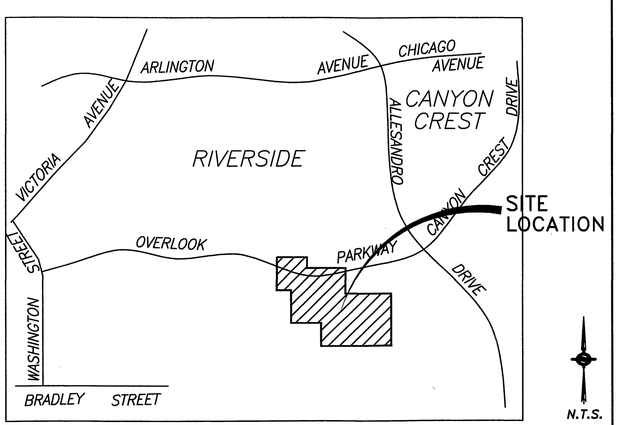
SHEET INDEX

T	TITLE SHEET	5.0	IRRIGATION DETAILS
1.1	CONSTRUCTION PLAN	6.1	TREE PLANTING PLAN
1.2	CONSTRUCTION PLAN	6.2	TREE PLANTING PLAN
1.3	CONSTRUCTION PLAN	6.3	TREE PLANTING PLAN
1.4	CONSTRUCTION PLAN	6.4	TREE PLANTING PLAN
2.0	CONSTRUCTION DETAILS	7.1	SHRUB PLANTING PLAN
2.1	CONSTRUCTION DETAILS	7.2	SHRUB PLANTING PLAN
2.2	CONSTRUCTION DETAILS	7.3	SHRUB PLANTING PLAN
2.3	CONSTRUCTION DETAILS	7.4	SHRUB PLANTING PLAN
3.1	IRRIGATION PLAN	8.1	HYDROZONE PLAN
3.2	IRRIGATION PLAN	8.2	HYDROZONE PLAN
3.3	IRRIGATION PLAN	8.3	HYDROZONE PLAN
3.4	IRRIGATION PLAN	8.4	HYDROZONE PLAN
4.1	IRRIGATION BUBBLER PLAN	9.0	PLANTING DETAILS & NOTES
4.2	IRRIGATION BUBBLER PLAN	10.0	IRRIGATION SPECIFICATIONS
4.3	IRRIGATION BUBBLER PLAN	11.0	PLANTING SPECIFICATIONS
4.4	IRRIGATION BUBBLER PLAN		

INDEX MAP



VICINITY MAP



ABBREVIATIONS

(500)	EXISTING CONTOUR ELEVATION	N	NORTH
+ (500)	EXISTING SPOT ELEVATION	N.I.C.	NOT IN CONTRACT
+ 500	SPOT ELEVATION	N.T.S.	NOT TO SCALE
500	PROPOSED CONTOUR ELEVATION	O.C.	ON CENTER
B.C.R.	BEG. OF CURB RETURN	O.D.	OUTSIDE DIAMETER
B.O.C.	BACK OF CURB	P.A.	PLANTING AREA
B.S.	BOTTOM OF STEPS	P.L.	PROPERTY LINE
B.W.	BOTTOM OF WALL	P.O.C.	POINT OF CONNECTION
C.B.	CATCH BASIN	R	RISER
C.J.	CONTROL JOINT	R.E.	RIM ELEVATION
C.L.	CENTER LINE	R.O.W.	RIGHT OF WAY
C.O.	CLEAN OUT	RAD	RADIUS
CLR.	CLEAR	S	SOUTH
D.G.	DECOMPOSED GRANITE	SCH	SCHEDULE
DIA.	DIAMETER	SHT.	SHEET
E	EAST	S.J.	SCORE JOINT
E.J.	EXPANSION JOINT	SIM	SIMILAR
EQ.	EQUAL	SQ.	SQUARE
F.F.	FINISH FLOOR	T	TREAD
F.G.	FINISH GRADE	T.B.	TOP OF BASE
F.L.	FLOW LINE OR FLOW LEVEL	T&B	TOP AND BOTTOM
F.O.B.	FACE OF BUILDING	T.C.	TOP OF CURB
F.O.C.	FACE OF CURB	T.F.	TOP OF FENCE
F.O.P.	FACE OF PILASTER	T.G.	TOP OF GRADE
F.O.S.	FACE OF STRUCTURE	T&G	TONGUE AND GROOVE
F.O.W.	FACE OF WALL	T.O.C.	TOP OF COPING
F.S.	FINISH SURFACE	T.O.M.	TOP OF MAT
G.B.	GRADE BREAK	T.O.S.	TOP OF SLOPE
H.B.	HOSE BIB	T.P.	TOP OF PILASTER
H.C.	HANDICAP PARKING SPACE	T.S.	TOP OF STEPS
H.P.	HIGH POINT	T.O.S.	TOP OF SAND
HT.	HEIGHT	T.W.	TOP OF WALL
I.D.	INSIDE DIAMETER	TYP.	TYPICAL
INV.	INVERT ELEVATION	W	WEST
L	LENGTH OR LONG	WT.	WEIGHT
		W/	WITH
L.P.	LOW POINT	W/O	WITHOUT
MIN.	MINIMUM		

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City of Riverside
WATER SYSTEM
APPROVED BY MW McLeod DATE 7/6/06

City of Riverside
PUBLIC UTILITY DEPARTMENT
OVERHEAD AND UNDERGROUND
APPROVED BY (illegible) DATE 6-30-06

LANDSCAPE ARCHITECT IN RESPONSIBLE CHARGE
ROBERT B. CLARK
RLA 4233 expires 12/31/06
DATE 6/28/06

REGISTERED LANDSCAPE ARCHITECT ROBERT B. CLARK Signature 12-31-06 Renewal Date 6/28/06 Date STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
1	WALL AND FENCE CHANGES PER OWNERS REQUEST		MARCH 1 2006
2	WALL, FENCE, PLANTING CHANGES PER OWNERS REQUEST		MAY 26 2006

DESIGNED BY KL/BC DRAWN BY JC/EM/KL CHECKED BY KL/BC

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
P.W. PRINCIPAL ENGINEER		7/6/06
P.W. STREET SERVICES		7/10/06
PLANNING DIVISION		

APPROVED BY
CITY ENGINEER
DATE 7/19/06

PH 1 LANDSCAPE PLANS
TR 29515
COVER SHEET
SCALE: 1" = 40'

ACCT. NO.
PWS-PC-03-3001-RF1
R-3892-RL
PW06-0110
SHEET T OF 32

INDEXED 8-14-06 GH

R12

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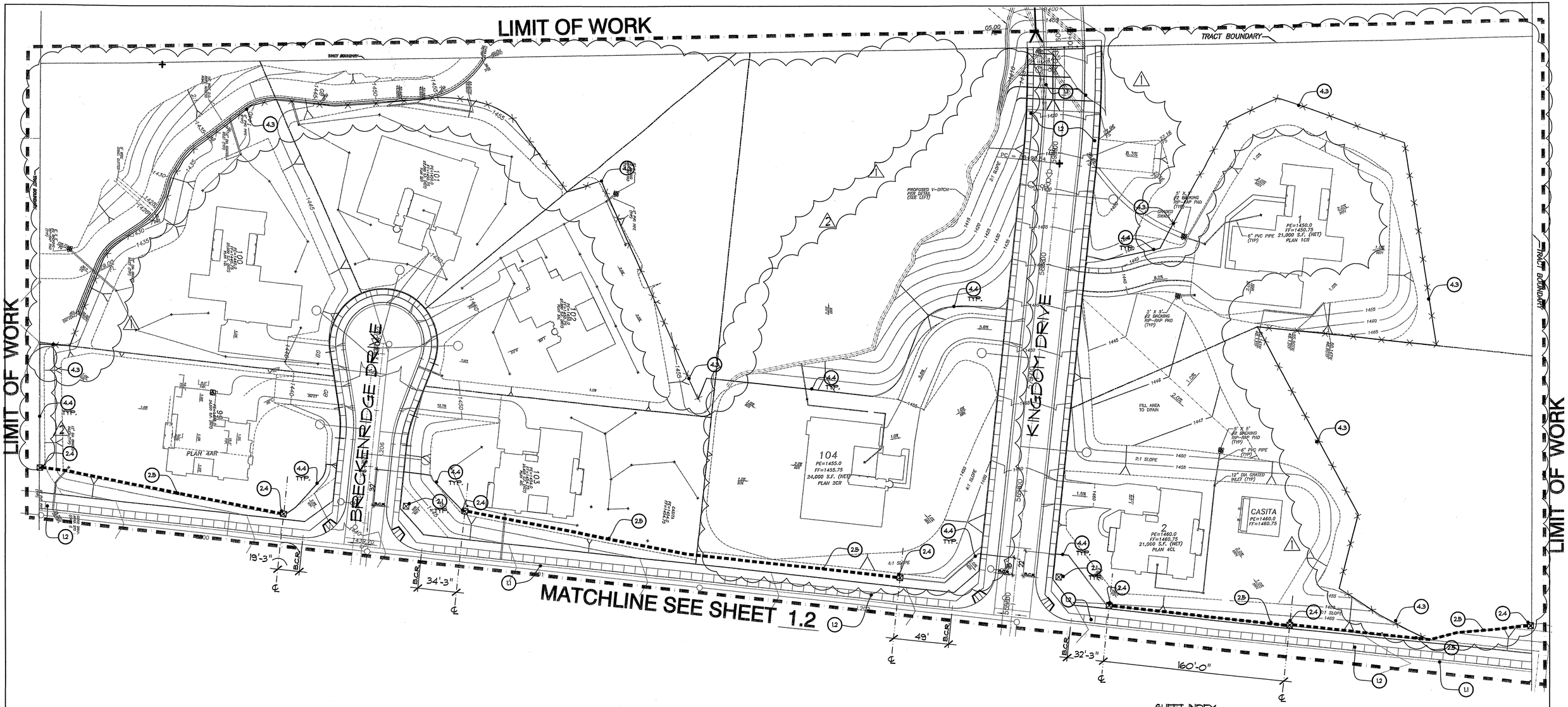
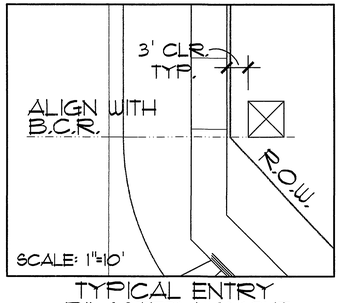
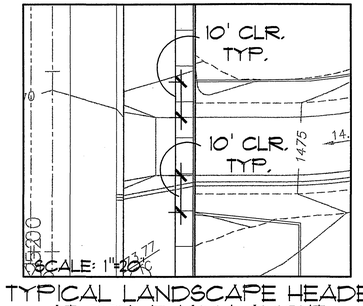




TYPICAL ENTRY PILASTER LAYOUT



TYPICAL LANDSCAPE HEADER AT DRIVEWAY LAYOUT

*SEE NOTE 4.4 IN CONSTRUCTION LEGEND

CONSTRUCTION NOTES

1.0 **SITE WORK**

1.1 CURB AND GUTTER PER ADKAN ENGINEERING CIVIL STREET IMPROVEMENT PLANS - N.I.C.

1.2 CONCRETE WALK PER ADKAN ENGINEERING CIVIL STREET IMPROVEMENT PLANS - N.I.C.

1.3 CONCRETE ADA RAMP PER ADKAN ENGINEERING CIVIL STREET IMPROVEMENT PLANS - N.I.C.

2.0 **MASONRY**

2.1 CONSTRUCT ENTRY PILASTERS WITH SIGN PER DETAIL D SHEET 2.0

2.4 CONSTRUCT PERIMETER PILASTER PER DETAIL E SHEET 2.0

2.5 CONSTRUCT PERIMETER BLOCK WALL PER DETAIL F SHEET 2.0

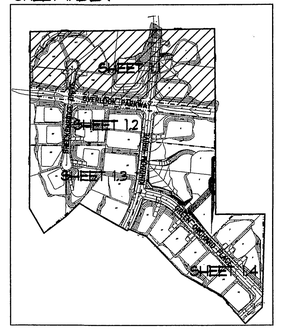
4.0 **MISCELLANEOUS**

4.3 CONSTRUCT RANCH FENCE PER DETAIL C SHEET 2.0

4.4 LANDSCAPE HEADER BOARD. PER DETAIL B SHEET 2.0

NOTES:
REFER TO SHEET 1.4 FOR FINISH SCHEDULE, SHEET 2.2 FOR GENERAL CONSTRUCTION NOTES.

SHEET INDEX



WALL & FENCE SYMBOL LEGEND

- RANCH FENCE
- PERIMETER BLOCK WALL
- LANDSCAPE HEADER
- PERIMETER PILASTER

NORTH

IMPORTANT NOTICE
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CALL TOLL FREE
48 HOURS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT
1-800-227-2600

City of Riverside
WATER SYSTEM
APPROVED BY: MWM — DATE: 7/6/06

City of Riverside
PUBLIC UTILITY DEPARTMENT
OVERHEAD AND UNDERGROUND
APPROVED BY: [signature] — DATE: 6/06

LANDSCAPE ARCHITECT IN RESPONSIBLE CHARGE
ROBERT B. CLARK
RLA 4233 expires 12/31/06
DATE 6/28/06

REGISTERED LANDSCAPE ARCHITECT — ROBERT B. CLARK — 4233 — Signature 12-31-06 — Renewal Date — Date — STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
1	WALL AND FENCE CHANGES PER OWNERS REQUEST		MARCH 1 2006
2	WALL, FENCE, PLANTING CHANGES PER OWNERS REQUEST		MAY 26 2006

DESIGNED BY KL/BC DRAWN BY JC/EM/KL CHECKED BY KL/BC

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
P.W. PRINCIPAL ENGINEER	[signature]	7/10/06
P.W. STREET SERVICES	[signature]	7/10/06
PLANNING DIVISION	[signature]	6/26/06

APPROVED BY: [signature]
CITY ENGINEER
DATE 7/19/06

PH 1 LANDSCAPE PLANS TR 29515

CONSTRUCTION PLAN

SCALE: 1" = 40'

ACCT. NO.
PWS-PC-03-3001-RF1
R-3892-RL
PW06-0110

SHEET 1.1 OF 32

INDEXED 8-14-06 4H

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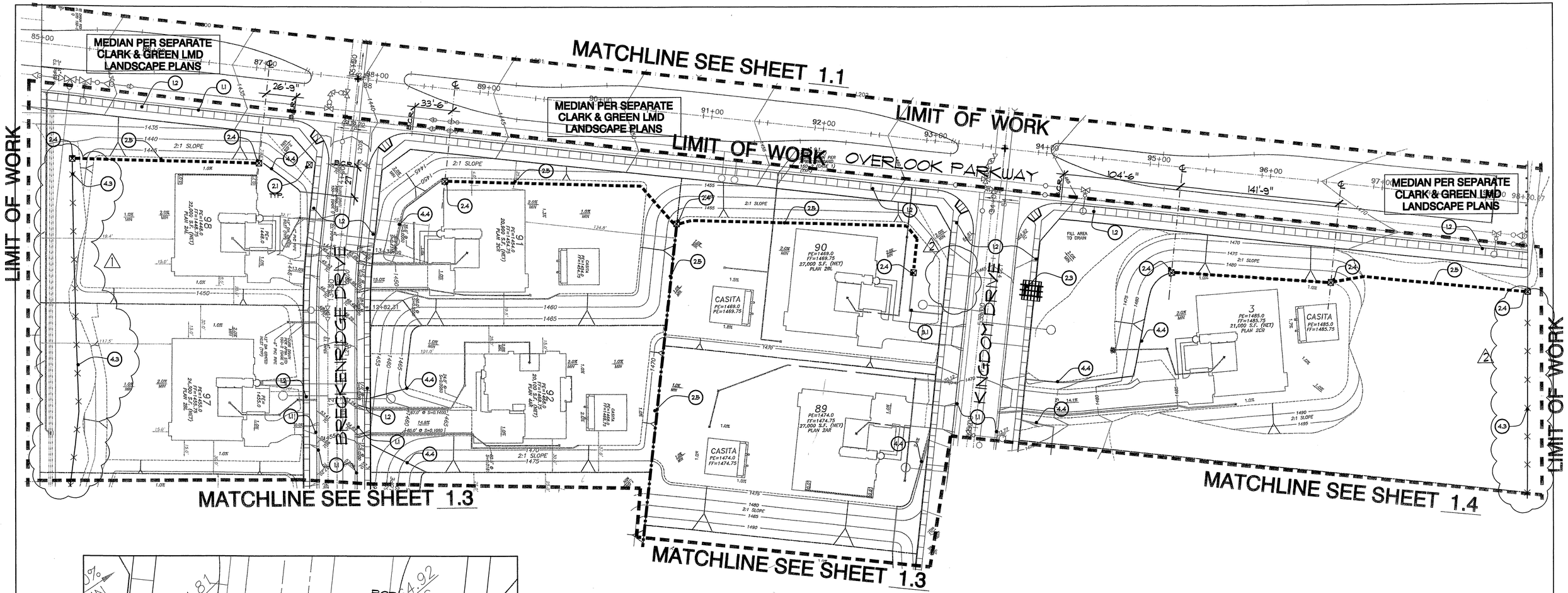

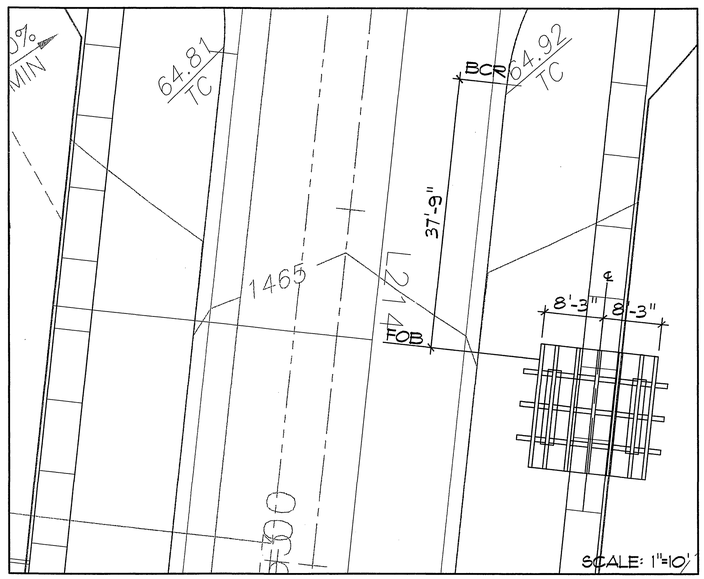

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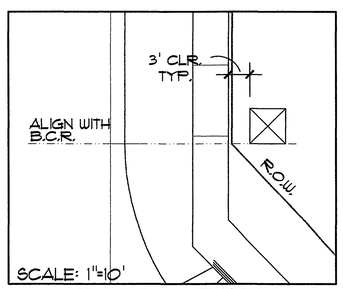
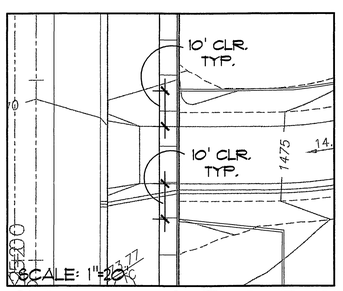


TYPICAL ENTRY PILASTER LAYOUT



TYPICAL LANDSCPAE HEADER AT DRIVEWAY LAYOUT

*SEE NOTE 4.4 WITHIN THE CONSTRUCTION LEGEND

WALL & FENCE SYMBOL LEGEND

- RANCH FENCE
- PERIMETER BLOCK WALL
- LANDSCAPE HEADER BOARD
- PERIMETER PILASTER

CONSTRUCTION LEGEND

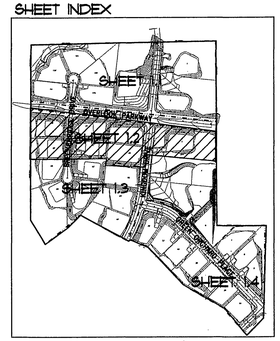
1.0 SITE WORK
- 1.1 CURB AND GUTTER PER ADKAN ENGINEERING CIVIL STREET IMPROVEMENT PLANS - N.I.C.
- 1.2 CONCRETE WALK PER ADKAN ENGINEERING CIVIL STREET IMPROVEMENT PLANS - N.I.C.
- 1.3 CONCRETE ADA RAMP PER ADKAN ENGINEERING CIVIL STREET IMPROVEMENT PLANS - N.I.C.

2.0 MASONRY
- 2.1 CONSTRUCT ENTRY PILASTERS WITH SIGN PER DETAIL D SHEET 20.
- 2.2 CONSTRUCT LOW WALL PER DETAIL G SHEET 20.
- 2.3 CONSTRUCT ENTRY MONUMENT PER DETAILS G, H, J SHEET 21 AND DETAIL I SHEET 22.
- 2.4 CONSTRUCT PERIMETER PILASTER PER DETAIL E SHEET 20.
- 2.5 CONSTRUCT PERIMETER BLOCK WALL PER DETAIL F SHEET 20.

4.0 MISCELLANEOUS
- 4.3 CONSTRUCT RANCH FENCE PER DETAIL C SHEET 20.
- 4.4 LANDSCAPE HEADER BOARD PER DETAIL B SHEET 20.

NOTES:
REFER TO SHEET 14 FOR FINISH SCHEDULE, SHEET 22 FOR GENERAL CONSTRUCTION NOTES.

SHEET INDEX



NORTH

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City of Riverside
WATER SYSTEM
APPROVED BY: MWM DATE: 7/6/06

City of Riverside
PUBLIC UTILITY DEPARTMENT
OVERHEAD AND UNDERGROUND
APPROVED BY: WM DATE: 6/06

LANDSCAPE ARCHITECT IN RESPONSIBLE CHARGE
ROBERT B. CLARK
RLA 4233 expires 12/31/06
DATE 6/28/06

REGISTERED LANDSCAPE ARCHITECT — ROBERT B. CLARK — Signature 12-31-06 Renewal Date 6/28/06 Date — STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
1	WALL AND FENCE CHANGES PER OWNERS REQUEST		MARCH 1 2006
2	WALL, FENCE, PLANTING CHANGES PER OWNERS REQUEST		MAY 26 2006

DESIGNED BY KL/BC DRAWN BY JC/EM/KL CHECKED BY KL/BC

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
P.W. PRINCIPAL ENGINEER	PH	7/18/06
P.W. STREET SERVICES	DB	7/10/06
PLANNING DIVISION		

APPROVED BY
CITY ENGINEER
DATE 7/19/06

PH 1 LANDSCAPE PLANS TR 29515

CONSTRUCTION PLAN

SCALE: 1" = 40'

ACCT. NO.
PWS-PC-03-3001-RF1
R-3892-RL
PW06-0110

SHEET 1.2 OF 32

INDEXED 8-14-06 LH

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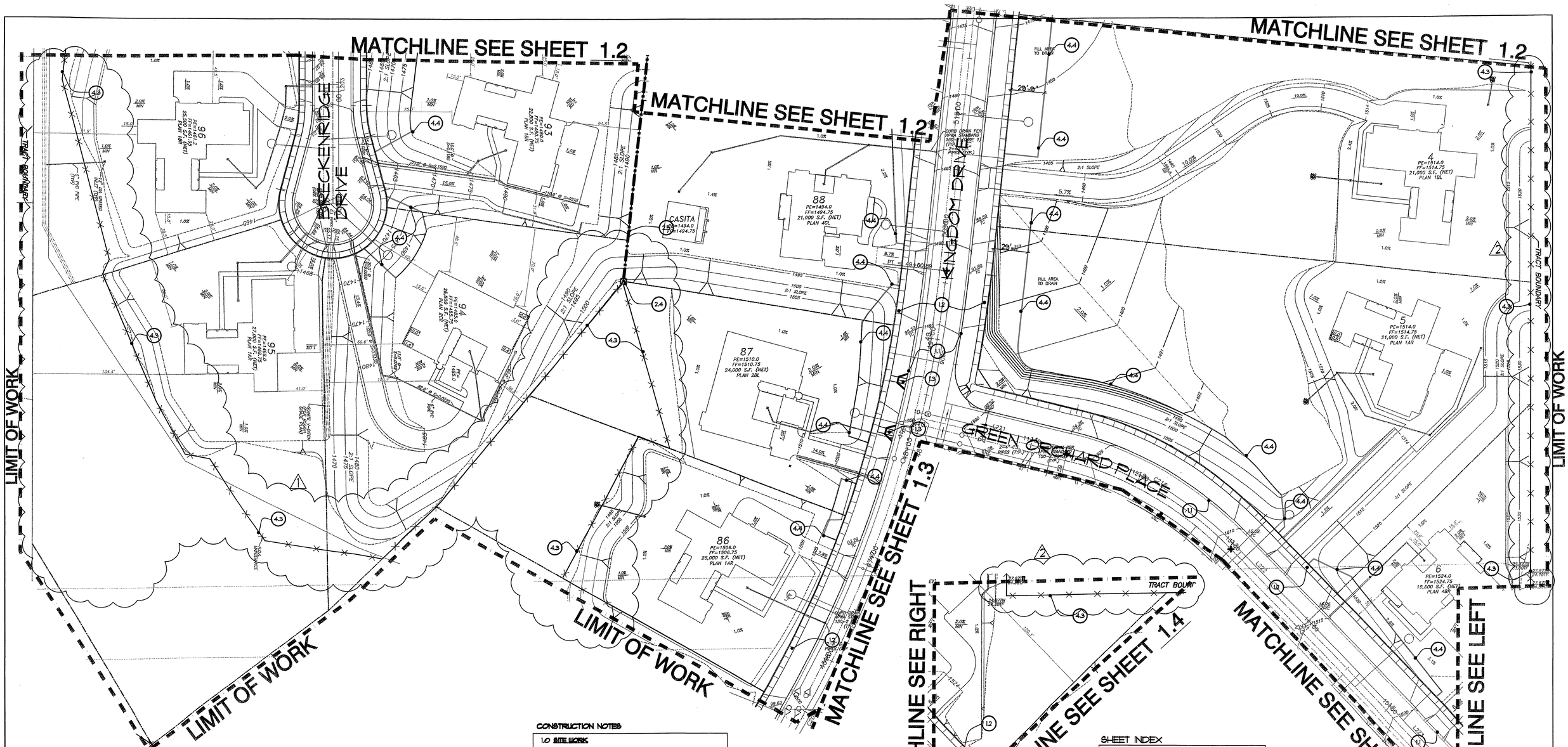
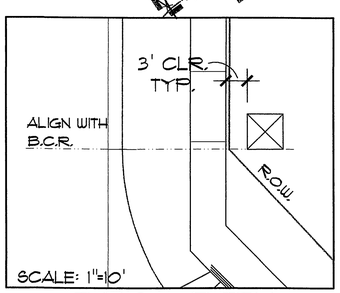
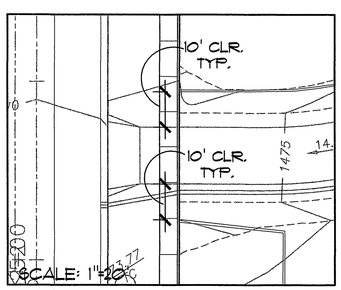




TYPICAL ENTRY PILASTER LAYOUT



TYPICAL LANDSCAPE HEADER AT DRIVEWAY LAYOUT

*SEE NOTE 4.4 WITHIN THE CONSTRUCTION LEGEND

CONSTRUCTION NOTES

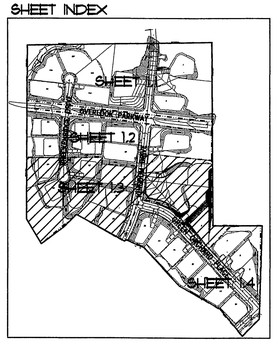
1.0 SITE WORK
1.1 CURB AND GUTTER PER ADKAN ENGINEERING CIVIL STREET IMPROVEMENT PLANS - N.I.C.
1.2 CONCRETE WALK PER ADKAN ENGINEERING CIVIL STREET IMPROVEMENT PLANS - N.I.C.
1.3 CONCRETE ADA RAMP PER ADKAN ENGINEERING CIVIL STREET IMPROVEMENT PLANS - N.I.C.
2.0 MASONRY
2.4 CONSTRUCT PERIMETER PILASTER PER DETAIL E, SHEET 2.0.
2.5 CONSTRUCT PERIMETER BLOCK WALL PER DETAIL F, SHEET 2.0.
3.0 CONCRETE/FLAT WORK
4.0 MISCELLANEOUS
4.3 CONSTRUCT RANCH FENCE PER DETAIL C, SHEET 2.0.
4.4 LANDSCAPE HEADER BOARD PER DETAIL B, SHEET 2.0.

NOTES:
REFER TO SHEET 1.4 FOR FINISH SCHEDULE, SHEET 1.1 FOR GENERAL CONSTRUCTION NOTES.

WALL & FENCE SYMBOL LEGEND

RANCH FENCE
PERIMETER BLOCK WALL
LANDSCAPE HEADER BOARD
PERIMETER PILASTER

SHEET INDEX



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City of Riverside
WATER SYSTEM
APPROVED BY — DATE 7/6/06

City of Riverside
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OVERHEAD AND UNDERGROUND
APPROVED BY — DATE 6/06

LANDSCAPE ARCHITECT IN RESPONSIBLE CHARGE
ROBERT B. CLARK
RLA 4233 expires 12/31/06
DATE 6/28/06

REGISTERED LANDSCAPE ARCHITECT — ROBERT B. CLARK — Signature — 12-31-06 — Renewal Date — 6/28/06 — Date — STATE OF CALIFORNIA

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2	WALL, FENCE, PLANTING CHANGES PER OWNERS REQUEST		MAY 26 2006

DESIGNED BY KL/BC DRAWN BY JC/EM/KL CHECKED BY KL/BC

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
P.W. PRINCIPAL ENGINEER		7/19/06
P.W. STREET SERVICES		7/10/06
PLANNING DIVISION		7/26/06

APPROVED BY
CITY ENGINEER
DATE 7/19/06

PH 1 LANDSCAPE PLANS TR 29515

CONSTRUCTION PLAN

SCALE: 1" = 40'

ACCT. NO.
PWS-PC-03-3001-RF1
R-3892-RL
PW06-0110

SHEET 1.3 OF 32

INDEXED 8-14-06 GH

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CONSTRUCTION NOTES

1.0 SITE WORK

1.1 GURB AND GUTTER PER ADKAN ENGINEERING CIVIL STREET IMPROVEMENT PLANS - N.I.C.

1.2 CONCRETE WALK PER ADKAN ENGINEERING CIVIL STREET IMPROVEMENT PLANS - N.I.C.

1.3 CONCRETE ADA RAMP PER ADKAN ENGINEERING CIVIL STREET IMPROVEMENT PLANS - N.I.C.

2.0 MASONRY

2.1 CONSTRUCT ENTRY PILASTERS WITH SIGN PER DETAIL F, SHEET 2.0.

2.4 CONSTRUCT PERIMETER PILASTER PER DETAIL E, SHEET 2.0.

2.5 CONSTRUCT PERIMETER BLOCK WALL PER DETAILS F, SHEET 2.0.

3.0 CONCRETE/FLAT WORK

4.0 MISCELLANEOUS

4.3 CONSTRUCT RANCH FENCE PER DETAIL C, SHEET 2.0.

4.4 LANDSCAPE HEADER-BOARD PER DETAIL B, SHEET 2.0.

NOTES:

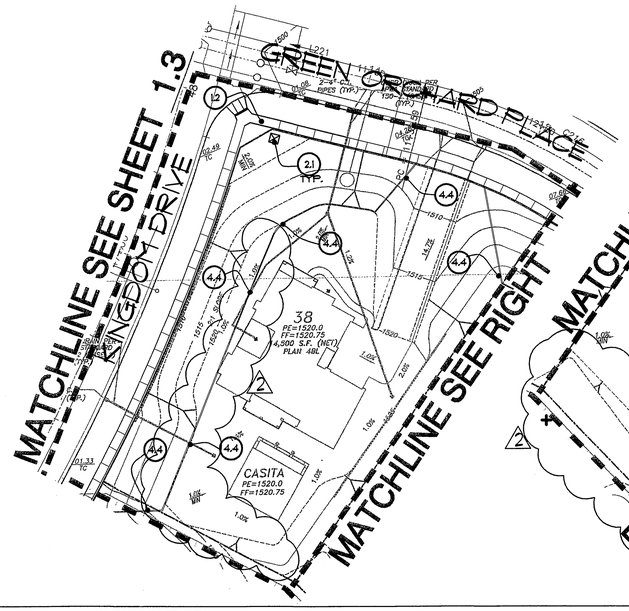
REFER TO SHEET 1.4 FOR FINISH SCHEDULE, SHEET 2.2 FOR GENERAL CONSTRUCTION NOTES.

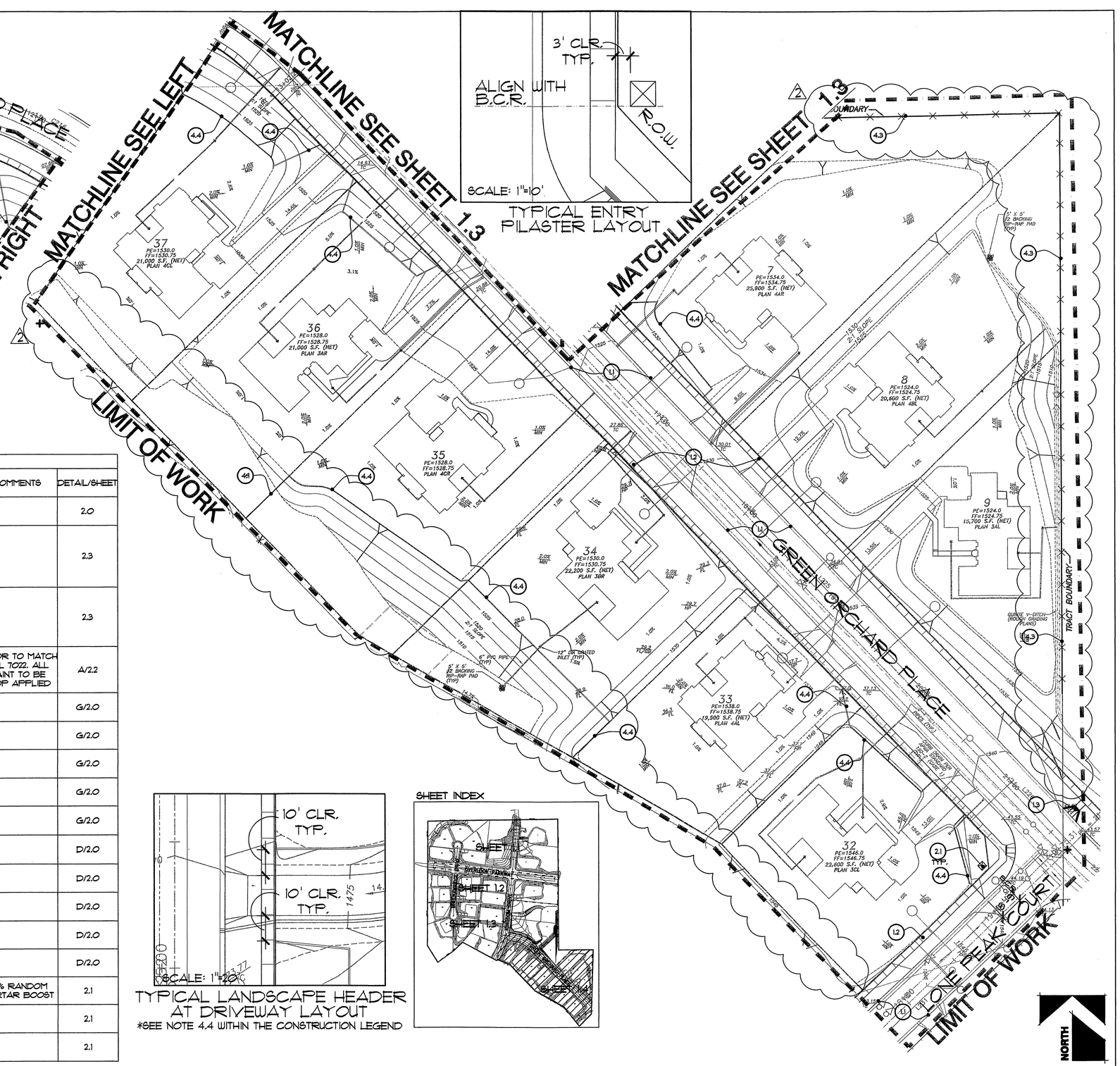
WALL & FENCE SYMBOL LEGEND

RANCH FENCE

LANDSCAPE HEADER BOARD

PERIMETER PILASTER





TYPICAL ENTRY PILASTER LAYOUT

TYPICAL LANDSCAPE HEADER AT DRIVEWAY LAYOUT

*SEE NOTE 4.4 WITHIN THE CONSTRUCTION LEGEND

SHEET INDEX

FINISH SCHEDULE

CONSTRUCTION ITEM	COMPONENT	FINISH	COLOR	VENDOR	CONTACT	COMMENTS	DETAIL/SHEET
LANDSCAPE HEADER			STANDARD BROWN	EPIC PLASTICS	EPICPLASTICS.COM		2.0
PERIMETER WALL	6X6X16 SLUMP BLOCK	SACK FINISH	DUNN-EDWARDS DRYLOCK WATERPROOF 1 COAT DW709 EFFSTOP, 2 COATS DW101 EVERSHIELD COLOR TO MATCH ICI #458 CANVASBACK	PROTO II	GARY OTTO (626) 967-9765		2.3
PERIMETER PILASTER	6X6X16 SLUMP BLOCK	SACK FINISH	DUNN-EDWARDS DRYLOCK WATERPROOF 1 COAT DW709 EFFSTOP, 2 COATS DW101 EVERSHIELD COLOR TO MATCH ICI #458 CANVASBACK	PROTO II	GARY OTTO (626) 967-9765		2.3
TUBULAR STEEL FENCE		ONE (1) COAT 2 PART EPOXY PRIMER, 3 MIL. MIN. THICK, ONE (1) COAT 2 PART POLYURETHANE 3 MIL. MIN. THICK, FINISH COAT SHALL BE AMERCOAT 450 SA POLYURETHANE		AMERON (714) 529-1951		COLOR TO MATCH RAL 7022. ALL PAINT TO BE SHOP APPLIED	A/2.2
LOW WALL WITH SIGN	PRECISION BLOCK	STONE VENEER	AMBERWOOD COBBLE	VALLEY BUILDING MATERIALS	JIM SIME (949) 538-0256		G/2.0
		STONE CAP	AMBERWOOD FLAGSTONE	VALLEY BUILDING MATERIALS	JIM SIME (949) 538-0256		G/2.0
	GROUT		LT. KHAKI	VALLEY BUILDING MATERIALS	JIM SIME (949) 538-0256		G/2.0
	SIGN	SIGN BACKGROUND	TEQUILA GOLD SLATE	VALLEY BUILDING MATERIALS	JIM SIME (949) 538-0256		G/2.0
		DISTRESSED ALUMINUM LETTERS	BRONZE	OUTDOOR DIMENSIONS	PAM ROGERS (949) 578-9555		G/2.0
ENTRY PILASTER W/SIGN	PRECISION BLOCK	STONE VENEER	AMBERWOOD COBBLE	VALLEY BUILDING MATERIALS	JIM SIME (949) 538-0256		D/2.0
		STONE CAP	AMBERWOOD FLAGSTONE	VALLEY BUILDING MATERIALS	JIM SIME (949) 538-0256		D/2.0
	GROUT		LT. KHAKI	VALLEY BUILDING MATERIALS	JIM SIME (949) 538-0256		D/2.0
	SIGN	SIGN BACKGROUND	TEQUILA GOLD SLATE	VALLEY BUILDING MATERIALS	JIM SIME (949) 538-0256		D/2.0
		DISTRESSED ALUMINUM LETTERS	BRONZE	OUTDOOR DIMENSIONS	PAM ROGERS (949) 578-9555		D/2.0
MONUMENT STRUCTURE	ROOF	2-PIECE MISSION TILE SINGLE BARREL	OLD SEDONA BLEND	REDLAND CLAY TILE (ICBO 4300)	(800) 354-5983	35% RANDOM MORTAR BOOST	2.1
	FRAMING	RE-SAWN DOUGLAS FIR	"MADERA" SEMI-TRANSPARENT STAIN #CZ-15-17374	FRAZEE PAINT			2.1
	PRECISION BLOCK	STONE VENEER	AMBERWOOD COBBLE	VALLEY BUILDING MATERIALS	JIM SIME (949) 538-0256		2.1

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CALL TOLL FREE
48 HOURS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT
1-800-227-2600

City of Riverside
WATER SYSTEM
APPROVED BY _____ DATE 7/6/06

City of Riverside
PUBLIC UTILITY DEPARTMENT
OVERHEAD AND UNDERGROUND
APPROVED BY _____ DATE 6/6/06

LANDSCAPE ARCHITECT IN RESPONSIBLE CHARGE
ROBERT B. CLARK
RLA 4233 expires 12/31/06
DATE 6/28/06

REGISTERED LANDSCAPE ARCHITECT ROBERT B. CLARK STATE OF CALIFORNIA
Signature 12-31-08
Renewal Date
6/28/06
Date

MARK	REVISIONS	APPR.	DATE
1	WALL AND FENCE CHANGES PER OWNERS REQUEST		MARCH 1 2006
2	WALL, FENCE, PLANTING CHANGES PER OWNERS REQUEST		MAY 26 2006

DESIGNED BY KL/BC DRAWN BY JC/EM/KL CHECKED BY KL/BC

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
P.W. PRINCIPAL ENGINEER		7/18/06
P.W. STREET SERVICES		7/18/06
PLANNING DIVISION		7/18/06

APPROVED BY _____ CITY ENGINEER
DATE 7/18/06

PH 1 LANDSCAPE PLANS
TR 29515
CONSTRUCTION PLAN

SCALE: 1" = 40'

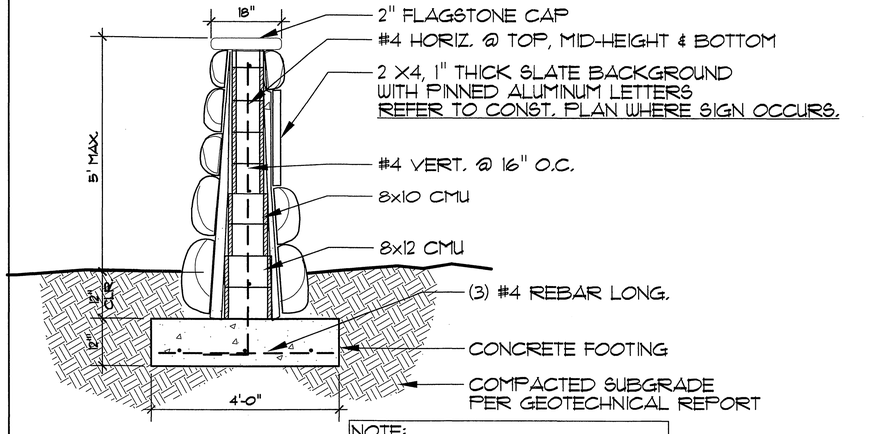
ACCT. NO.
PWS-PC-03-3001-RF1
R-3892-RL
PW06-0110

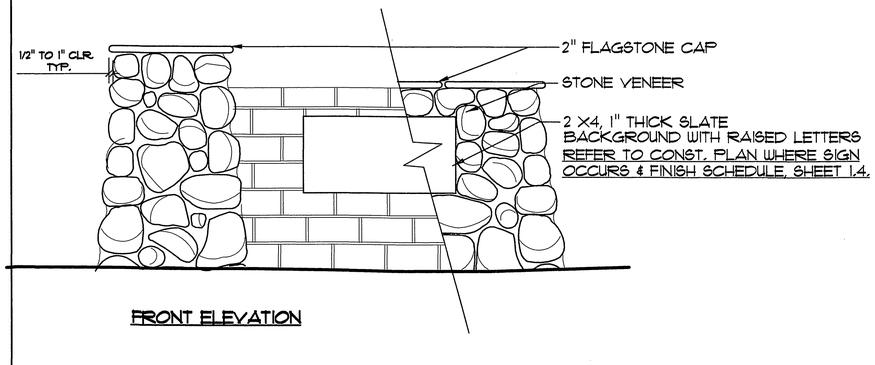
SHEET 1.4 OF 32

INDEXED 8-14-06 GH

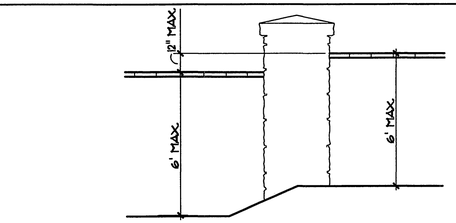
NORTH

J:\P04\04-046 CAGNEY RANCH\WD\CAGNEY RANCH\PHASE ONE\Conbase.dwg, 6/23/2006 4:42:23 PM, Oce 36.pc3

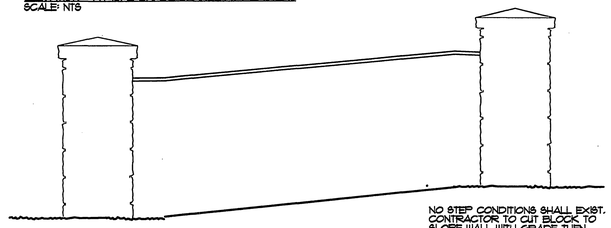




FRONT ELEVATION

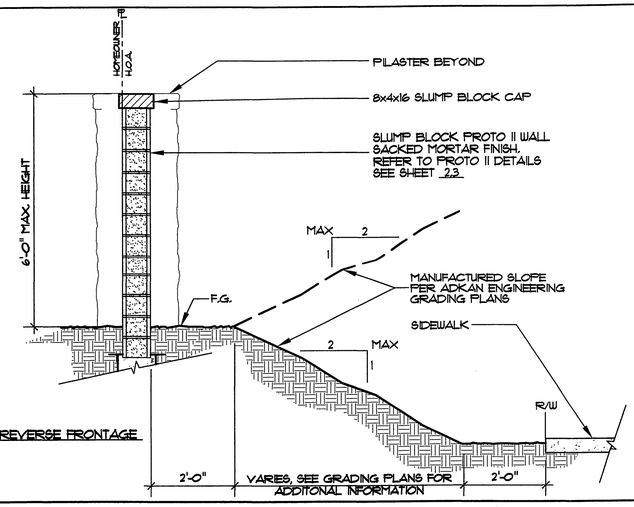


ELEVATION - TYPICAL GRADE CHANGE AT PILASTERS
SCALE: NTS



ELEVATION - TYPICAL WALL PROFILE WITH GRADE CHANGE
SCALE: NTS

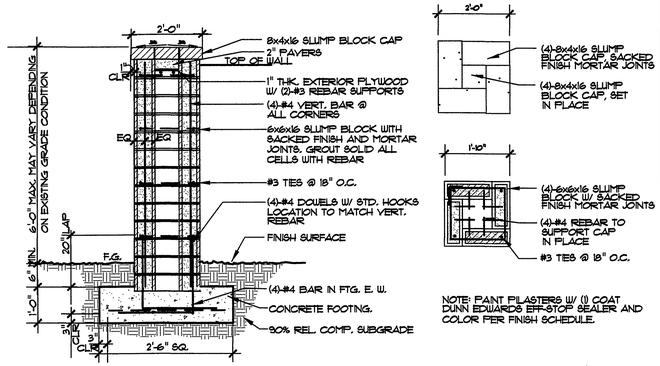
NO STEP CONDITIONS SHALL EXIST. CONTRACTOR TO CUT BLOCK TO SLOPE WALL WITH GRADE THEN ADD CAP.



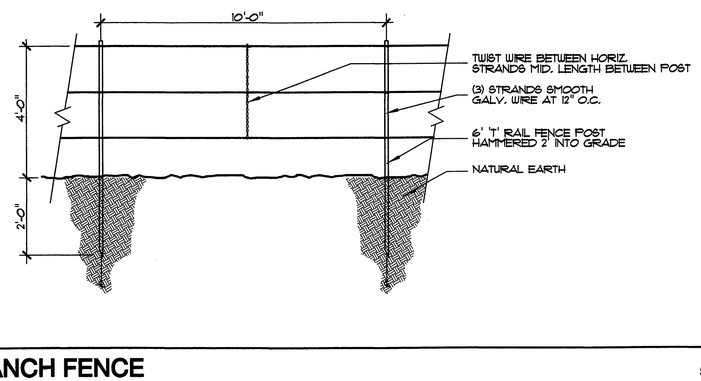
SECTION-REVERSE FRONTAGE
NTS

F PERIMETER BLOCK WALL AT SLOPE CONDITION

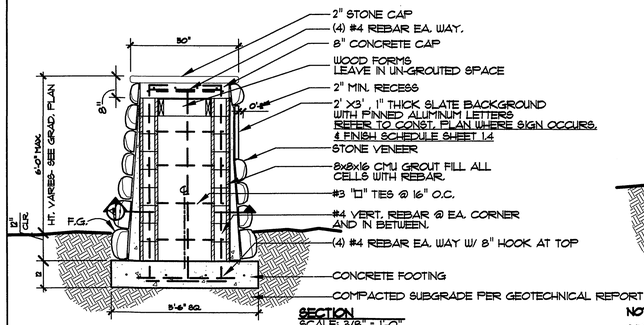
SCALE: N.T.S.



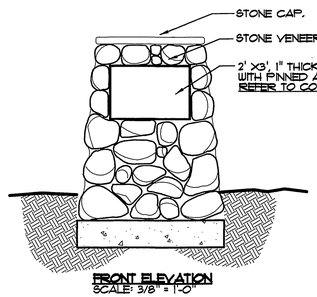
NOTE: PAINT PILASTERS W/ (1) COAT DUNN EDWARDS EFF-STOP SEALER AND COLOR PER FINISH SCHEDULE.



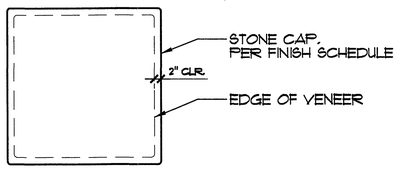
G ENTRY SIGN WALL



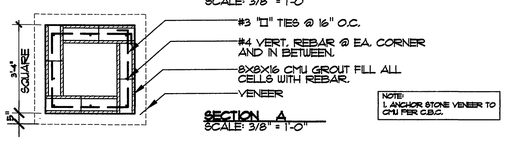
SECTION
SCALE: 3/8" = 1'-0"



FRONT ELEVATION
SCALE: 3/8" = 1'-0"



PLAN VIEW
SCALE: ½" = 1'-0"



SECTION A
SCALE: 3/8" = 1'-0"

NOTE: 1. ANCHOR STONE VENEER TO CMU PER C.B.C.

NOTES:
STONE VENEER, CAPS & SLATE TO BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO INSTALLATION ABSOLUTELY NO SUBSTITUTIONS WILL BE ACCEPTED.

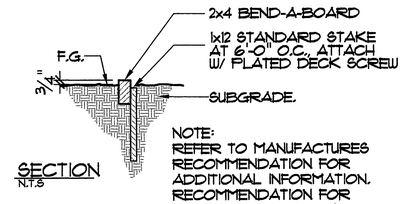
AVAILABLE THROUGH:
VALLEY BUILDING MATERIALS
23071 CHERREY AVE.
LAKE FOREST, CA 92630
(949) 855-9994
(949) 855-2063 FAX
ATTN: JIM SIME

D ENTRY PILASTER WITH SIGN

SCALE: VARIES

E PERIMETER PILASTER

SCALE: 1/2"=1'-0"



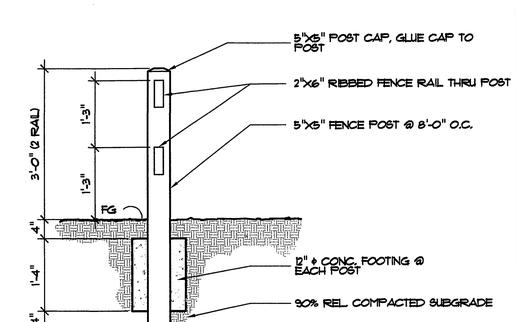
SECTION
N.T.S

C RANCH FENCE

SCALE: N.T.S.

B LANDSCAPE HEADER

SCALE: 1"=1'-0"



SECTION
SCALE: 3/4"=1'-0"

AVAILABLE FROM:
GOLDEN STATE FENCE
(714)238-0091
www.goldenstatefence.com

NOTE: FENCE SHALL BE 100% VIRGIN PVC COLOR TAN

A 2-RAIL PVC FENCE

SCALE: 3/4"=1'-0"

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City of Riverside
WATER SYSTEM
APPROVED BY _____ DATE 7/6/06

City of Riverside
PUBLIC UTILITY DEPARTMENT
OVERHEAD AND UNDERGROUND
APPROVED BY _____ DATE 6/06

LANDSCAPE ARCHITECT IN RESPONSIBLE CHARGE
ROBERT B. CLARK
RLA 4233 expires 12/31/06
DATE 6/28/06

REGISTERED LANDSCAPE ARCHITECT ROBERT B. CLARK No. 4233 STATE OF CALIFORNIA
Signature 12-31-06 Renewal Date 6/28/06 Date

MARK	REVISIONS	APPR.	DATE
1	WALL AND FENCE CHANGES PER OWNERS REQUEST		MARCH 1 2006
2	WALL, FENCE, PLANTING CHANGES PER OWNERS REQUEST		MAY 26 2006

DESIGNED BY KL/BC DRAWN BY JC/EM/KL CHECKED BY KL/BC

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

	BY	DATE
APPROVED BY		
P.W. PRINCIPAL ENGINEER		7/6/06
P.W. STREET SERVICES		7/6/06
PLANNING DIVISION		6/28/06
CITY ENGINEER		
DATE 7/19/06		

PH 1 LANDSCAPE PLANS TR 29515

CONSTRUCTION DETAILS

SCALE: 1" = 10'

ACCT. NO.
PWS-PC-03-3001-RF1
R-3892-RL
PW06-0110

SHEET 2.0 OF 32

INDEXED 8-14-06 KH

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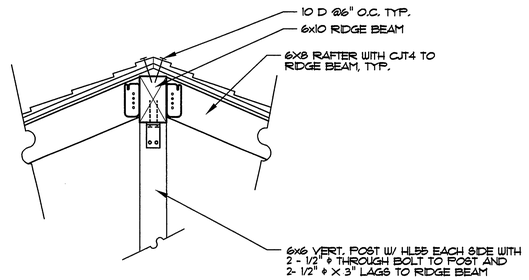
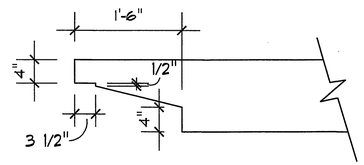


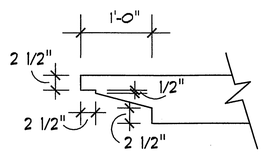
RIDGE BEAM - RAFTER - TRUSS CONNECTIONS

SCALE: 3/4"=1'-0"



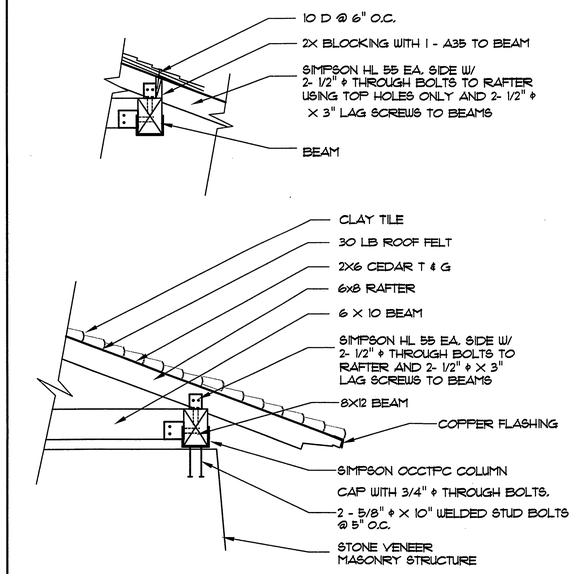
8X12 BEAM END CUT ENLARGEMENT

SCALE: 1"=1'-0"



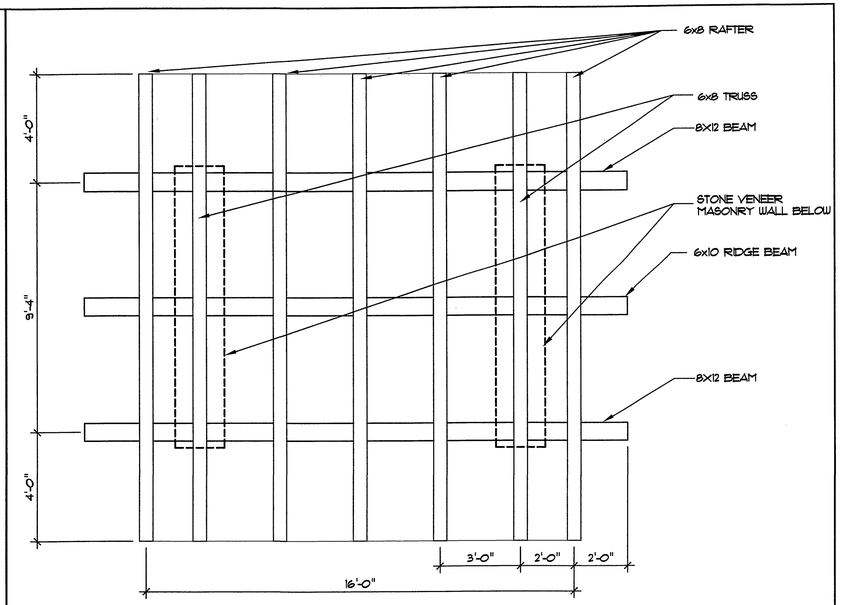
6X8 RAFTER END CUT ENLARGEMENT

SCALE: 1"=1'-0"



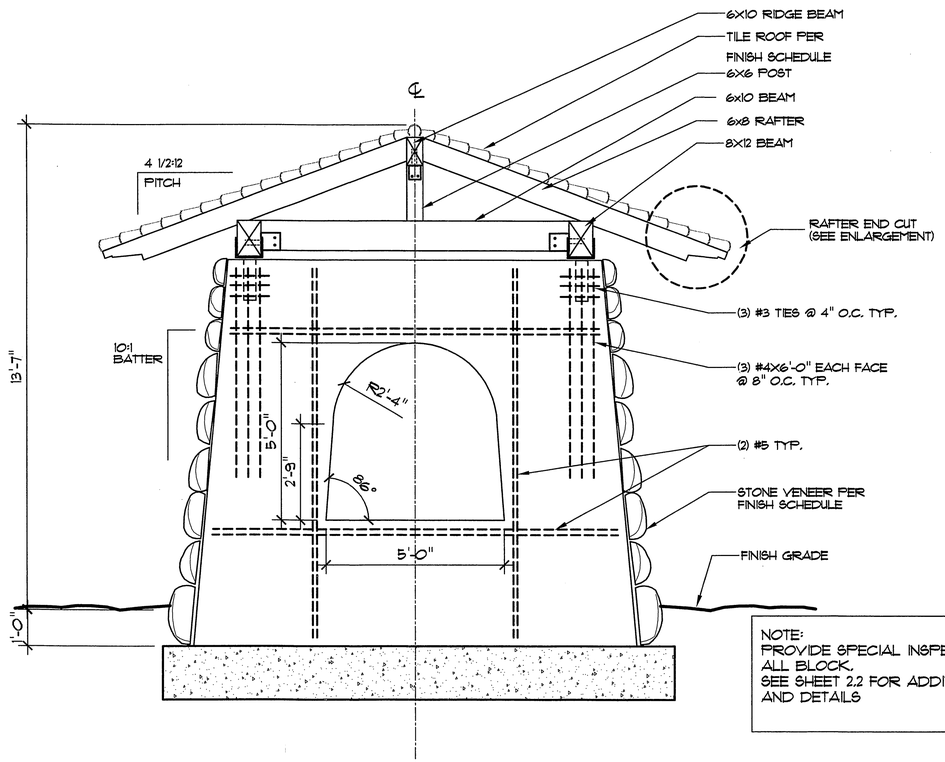
H TRUSS CONNECTION

SCALE: 1/2"=1'-0"

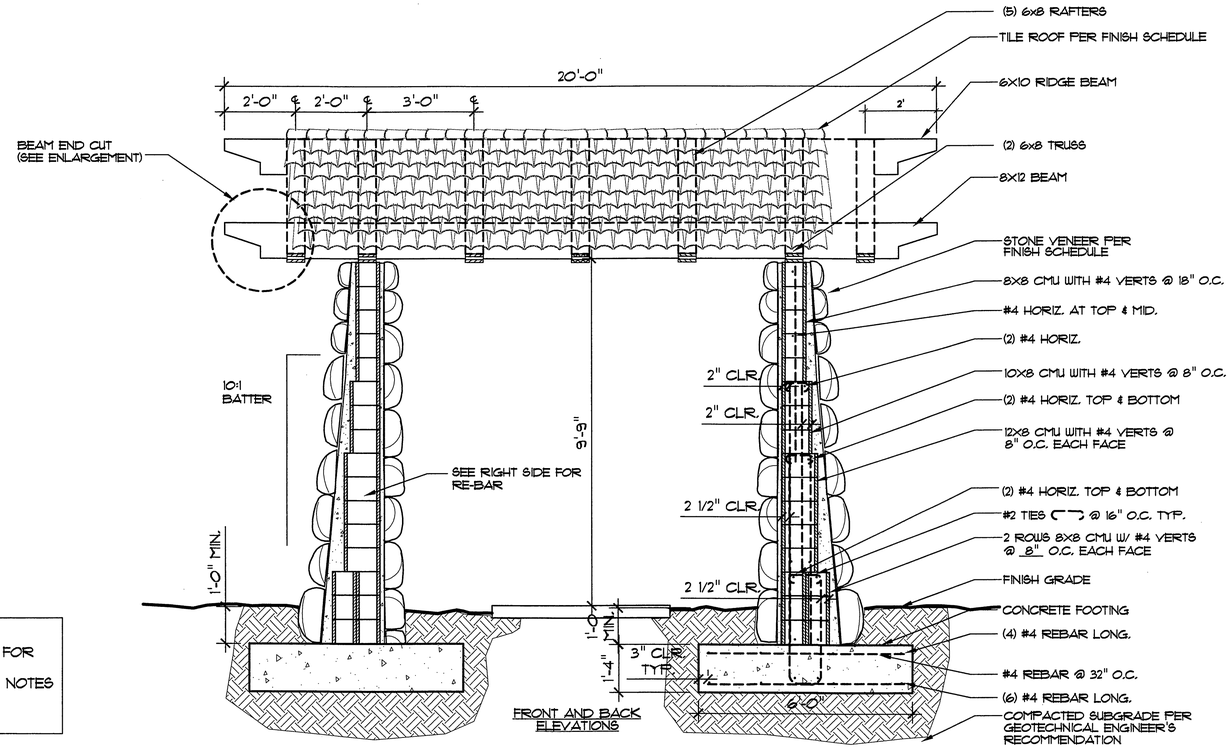


G ROOF FRAMING PLAN

SCALE: 3/8"=1'-0"



NOTE:
PROVIDE SPECIAL INSPECTION FOR ALL BLOCK.
SEE SHEET 2.2 FOR ADDITIONAL NOTES AND DETAILS



FRONT AND BACK ELEVATIONS

I ENTRY MONUMENT

SCALE: 1/2"=1'-0"

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City of Riverside
WATER SYSTEM
APPROVED BY MWM DATE 7/6/06

City of Riverside
PUBLIC UTILITY DEPARTMENT
OVERHEAD AND UNDERGROUND
APPROVED BY DATE 6/06

LANDSCAPE ARCHITECT IN RESPONSIBLE CHARGE
ROBERT B. CLARK
RLA 4233 expires 12/31/06
DATE 6/28/06

REGISTERED LANDSCAPE ARCHITECT ROBERT B. CLARK STATE OF CALIFORNIA
Signature 12-31-06
Renewal Date
Date

MARK	REVISIONS	APPR.	DATE
1	WALL AND FENCE CHANGES PER OWNERS REQUEST		MARCH 1 2006
2	WALL, FENCE, PLANTING CHANGES PER OWNERS REQUEST		MAY 26 2006

DESIGNED BY KL/BC DRAWN BY JC/EM/KL CHECKED BY KL/BC

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
P.W. PRINCIPAL ENGINEER		7/10/06
P.W. STREET SERVICES	DB	7/10/06
PLANNING DIVISION		

APPROVED BY
CITY ENGINEER
DATE 7/19/06

PH 1 LANDSCAPE PLANS
TR 29515

CONSTRUCTION DETAILS

~~SCALE: 1" = 10'~~

ACCT. NO.
PWS-PC-03-3001-RF1
R-3892-RL
PW06-0110

SHEET 2.1 OF 32

INDEXED 8-14-06 GH

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GENERAL CONSTRUCTION NOTES:

GENERAL

1. All construction and workmanship shall conform to the 2001 Uniform Building Code.
2. These notes shall be used in conjunction with the plans and any discrepancies shall be brought to the attention of the Architect/ Engineer.
3. Contractor must check all dimensions, framing conditions and site conditions before starting work. Landscape Architect/ Engineer shall be notified immediately of any discrepancies or possible deficiencies.
4. Conditions not specifically shown shall be constructed similar to the details for the respective material.
5. The drawings and specifications represent the finished structure. all bracing, temporary supports, shoring, etc. is the sole responsibility of the Contractor. Observation visits to the job site by the Architect/Engineer do not include inspection of construction procedures. The contractor is solely responsible for all construction methods and conditions at the worksite. These visits will not be construed as continuous and detailed inspections.
6. Design, materials, equipment and products other than those described below or indicated on the drawings may be considered for use, provided prior approval is obtained from the owner, Architect/Engineer and the applicable governing code authority.

FOUNDATIONS

1. All existing fill soil and disturbed natural soils are to be excavated and replaced with properly compacted fill. All filling, backfilling, recompaction, etc. is to be accomplished only under the supervision of a soils engineer.
2. All excavations are to be inspected and approved by a Soils Engineer prior to the placement of any concrete or reinforcing steel.
3. Footings are to be carried a minimum of 18" into firm undisturbed natural soil or approved compacted fill.
4. Design bearing pressure is 2000 psf with a 33% increase for seismic or wind loading.
5. Relatively non-expansive fill should be used in backfilling behind walls. All walls shall be adequately shored during the backfill operation.
6. All excavations, grading, compaction, etc. shall be accomplished and performed in accordance with the soils report as prepared by: LEIGHTON AND ASSOCIATES, INC. PROJECT NO. 111232-001 DATED: AUGUST 31, 2004.
   The soils report is hereby made a part of these general notes and all recommendations contained therein shall be considered as minimums.
7. The Contractor must verify that the plans have been reviewed by the Soils Engineer prior to start of construction.
8. All soils excavated for grade beams, piers, etc. shall be disposed of offsite in a suitable disposal area.

REINFORCING STEEL

1. Reinforcing steel shall conform to ASTM A615, Grade 40 for sizes #3 & #4 and Grade 60 for sizes #5 and larger. Maximum yield shall not exceed 1.3 times that specified.
2. Welding of reinforcing steel shall conform to AWS D12-1 using proper low hydrogen electrodes. All bars to be welded shall conform to ASTM A706.
3. All bars in masonry shall be lapped a minimum of 48 bar diameters (2'-0" min.) for Grade 40 and 72 bar diameters (2'-6" min.) for Grade 60 at all splice unless noted otherwise.
4. All bars in concrete shall be lapped a minimum of 48 bar diameters (2'-0" min.) for Grade 40 and 72 bar diameters (2'-6" min.) for Grade 60 at all splice unless noted otherwise.
5. Splices of horizontal rebar in walls and footings shall be staggered 4'-0" minimum.
6. Dowels for walls and columns shall be the same size and spacing as the wall/column reinforcing unless noted otherwise.
7. All bending of reinforcing steel shall conform to the latest edition of the California Building Code.

MASONRY

1. All masonry shall be reinforced grouted masonry (fm^1 = 1500 psi psi used half stresses in design, unless noted otherwise on plans and details.) Grout solid all cells which contain rebdr, bolts, etc. Grout solid all cells below grade. See UBC 2105 for quality assurance requirements.
2. Mortar shall be Type "S" mixed in the proportion of 1 part Portland Cement to 1/2 to 1/4 parts lime putty to 2 1/4 to 3 times the sum of the cement plus lime putty parts of sand.
3. Grout shall attain a minimum compressive strength of 2000 psi and shall be mixed in proportions of 1 part Portland Cement to 1/10 part lime putty to 2 to 3 parts sand to a maximum of 2 parts gravel. All grout shall be vibrated.
4. Aggregates for mortar and grout shall be natural sand and rock conforming to ASTM C-144 (mortar) and C-404 (grout).
5. Cement shall be Portland Cement conforming to ASTM C-150, Type I or II, low alkali.
6. All concrete block shall conform to ASTM C90, Grade N-1.
7. All reinforcement, bolts, etc. shall have a minimum grout coverage of 3/4". All brick shall have a minimum of 2 1/2" grout space.
8. See the architectural drawings for type of units, laying pattern and joint details. Unless specifically shown otherwise, all concrete block and brick shall be laid in running bond.
9. All rebar shall be positively held into position prior to pouring grout. All vertical foundation dowels shall be straight and shall be positioned in center of block cells u.n.o. on the details, additional bars shall be epoxied into footings, if needed, where minimum tolerance to cell wall is not maintained or dowel is not maintained or dowel is not positioned correctly.

CONCRETE

1. Unless noted otherwise, all concrete shall attain a minimum compressive strength of 2500 psi at 28 days.
2. Aggregates shall be natural sand and rock conforming to ASTM C33.
3. Cement shall be Portland Cement conforming to ASTM C-150, Type I or II, low alkali.
4. Water shall be potable, clean and free from injurious amounts of oils, acids, alkalis, salts, organic materials, or other substances that may be deleterious to concrete or reinforcement.
5. Admixtures to be used in concrete shall be subject to prior approval by the Engineer.
6. Maximum permissible water-cement ratios for concrete when strength data from trial batches are not available shall conform to Table 4.5 of ACI Standard 318-95. Maximum slump shall be 4 inches for slabs, and 5 inches for footings.
7. Concrete shall be cured while in a moist condition for at least the first 7 days after placement. Methods for accelerated curing shall have prior approval of the Engineer.
8. The following minimum clear distances between reinforcing steel and face of concrete shall be maintained unless noted otherwise:

   Slabs on grade ..... Center of slab
   Concrete below grade, formed ..... 2"
   Concrete below grade,
   unformed (poured against earth).....3"
   Concrete exposed to weather.....1 1/2"

9. Pipes may pass through structural concrete in sleeves, but shall not be embedded therein. Pipes or ducts exceeding one-third the slab or wall thickness shall not be placed in the structural concrete unless specifically detailed.
10. Provide 3/4" chamfers at all exposed corners.
11. Refer to architectural drawings for reveals, areas of textured concrete or special finishes, items required to be cast into concrete, curbs and slab depressions.
12. All concrete shall be vibrated.

WOOD FRAME

1. All structural lumber shall be Douglas Fir of the following grades, conforming to Standard Grading Rules for West Coast Lumber, NO. 16, unless noted otherwise.

   Rafters, --- ----------No.1. 1350F b
   Beams and stringers ---------- No. 1. 1350F b
   Posts and timbers ----------No. 1.. 1200F b
   2x4 joists and rafters ---------- No. 2. 900F b
   Studs, blockin, plates ----------Stud grade or better

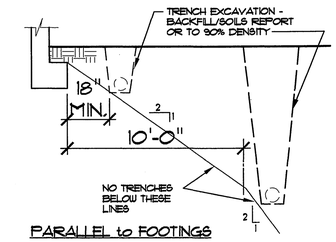
2. All wood bearing on concrete or masonry shall be pressure treated Douglas Fir. All exposed lumber required to be pressure treated shall be treated with water borne salts (except for Glu-Lams).
3. Nails shall be common. Nailing shall be per Chapter 23 Table 23-II-B-1 of the Uniform Building Code unless noted otherwise on the plans or details. Nails exposed to the weather shall be galvanized.
4. All metal connectors shall be Simpson Strong-Tie connectors. The nails for these connectors shall be joist hanger nails as manufactured by the Simpson Co.
5. Bolt holes in wood shall be 1/32" to 1/16" larger than the nominal bolt diameter. All bolts shall have standard cut washer under head and nut unless noted otherwise. Anchor bolts and holdown bolts shall have square cut washers.
6. All bolts shall be retightened prior to the application of sheathing, plaster, etc.
7. Structural members shall not be cut for pipes, etc. unless specifically detailed.
8. Provide 2x solid blocking between joists and rafters at all supports. Blocking shall be one piece and the full depth of the joist or rafter.

TESTS AND INSPECTIONS

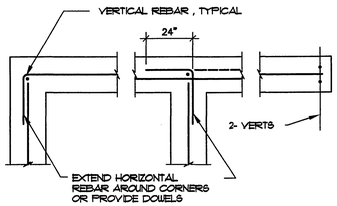
1. Continuous inspection by a registered deputy inspector is required for all field welding, high strength bolting., post-tensioning, concrete with a strength greater than 2500 psi, and masonry where noted on the plans and details. The extent of such inspection shall conform to Chapter 17 of the California Building Code. An affidavit shall be issued to the Architect/Engineer and th eBuilding Department at the completion of each type of work stating whether the work was in conformance with the approved plans and specifications. Concrete inspection may be limited to slump test, compression tests, and inspection of placed rebar.

2. The following items require inspection by a licensed Deputy inpector.

ITEM	YES	NO
CONCRETE		X
MASONRY	AT OVERHEAD STRUCTURE	

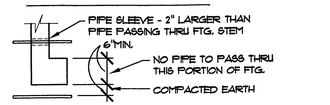


PARALLEL to FOOTINGS



CORNERS INTERSECTIONS ENDS

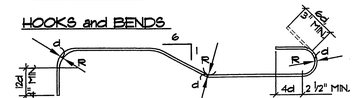
SECTION
SCALE: 1"=1'-0"



PERPENDICULAR to FOOTINGS

SCALE: N.T.S.

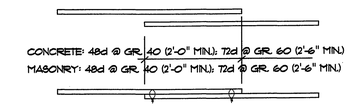
HOOKS and BENDS



90° HOOK BEND OFFSET 180° & 135° HOOKS

d = BAR DIAMETER
R = 3d FOR #2 TO #8 INCLUSIVE
R = 4d FOR #9 AND LARGER

SPLICES



CONCRETE: 48d @ GR. 40 (2'-0" MIN.); 72d @ GR. 60 (2'-6" MIN.)
MASONRY: 48d @ GR. 40 (2'-0" MIN.); 72d @ GR. 60 (2'-6" MIN.)

SCALE: N.T.S.

SECTION
SCALE: 1"=1'-0"

B | REINFORCEMENT DETAILS

SCALE: 3/4"=1'-0"

A | TUBULAR STEEL FENCE

NOT TO SCALE

GENERAL CONSTRUCTION NOTES

IMPORTANT NOTICE
Section 4216/4217 of the Government Code requires a Dig Alert Identification Number to be issued before a "Permit to Excavate" will be valid. For your Dig Alert I.D. Number call
CALL TOLL FREE
48 HOURS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT
1-800-227-2600

City of Riverside
WATER SYSTEM
APPROVED BY _____ DATE 7/6/06

City of Riverside
PUBLIC UTILITY DEPARTMENT
OVERHEAD AND UNDERGROUND
APPROVED BY _____ DATE 6/06

LANDSCAPE ARCHITECT IN RESPONSIBLE CHARGE
ROBERT B. CLARK
RLA 4233 expires 12/31/06
DATE 6/28/06

REGISTERED LANDSCAPE ARCHITECT ROBERT B. CLARK No. 4233 STATE OF CALIFORNIA
Signature 12-31-06
Renewal Date
Date

MARK	REVISIONS	APPR.	DATE
1	WALL AND FENCE CHANGES PER OWNERS REQUEST		MARCH 1 2006
2	WALL, FENCE, PLANTING CHANGES PER OWNERS REQUEST		MAY 26 2006

DESIGNED BY KL/BC DRAWN BY JC/EM/KL CHECKED BY KL/BC

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY		DATE
P.W. PRINCIPAL ENGINEER		7/10/06
P.W. STREET SERVICES		7/10/06
PLANNING DIVISION		

APPROVED BY _____ CITY ENGINEER
DATE 7/11/06

PH 1 LANDSCAPE PLANS
TR 29515
CONSTRUCTION DETAILS

SCALE: 1" = 10'

ACCT. NO.
PWS-PC-03-3001-RF1
R-3892-RL
PW06-0110

SHEET 2.2 OF 32

INDEXED 8-14-06 GH

J:\P04\04-046 CAGNEY RANCH\WD\CAGNEY RANCH\PHASE ONE\ConstDet.dwg, 6/23/2006 4:42:51 PM, Oce 36.pc3

NOTES:
1. POST TENSIONED ROD.
2. END OF WALL.
3. RODS AT 12" EITHER SIDE OF A CONTROL JOINT OR END OF WALL.
4. NOT USED.
5. NOT USED.
6. #4 REINFORCING WITH 6" HOOK INTO FOOTING BELOW. FILL WITH GROUT OR 8" HIGH LIFTS OF MORTAR.
6A. POST TENSIONED ROD SPACING PER SCHEDULE BUT NOT TO EXCEED 4'-8" ON EITHER SIDE OF THE CONTROL JOINT OR END OF WALL.
7. END OR CORNER OF WALL MAY START WITH #4 VERTICAL REBAR, GROUT SOLID THEN SPACE FIRST POST TENSION ROD PER SCHEDULE. REBAR MAY SUBSTITUTE FOR P.T. ROD AT CORNER OR END OF WALL.
8. NOT USED.
9. NOT USED.
10. NOT USED.
11. PROTO II WALL.
12. 16" MASONRY PIER WITH 4 #4 VERTICAL AND 1 #2 TIE AT TOP OF PIER.
13. 12" SQUARE MASONRY PIER WITH 1 #5 VERTICAL.
14. LINE OF FOOTING BELOW. FOOTING AT PROTO II WALL PER PLANS AND SCHEDULES. FOOTING AT PIER SHALL BE 12" THICK AND 4" WIDER ALL AROUND THE PIER.
15. RUN HORIZONTAL JOINT REINFORCING THROUGH PIER STOP AT FACE OF PIER AT CONTRACTOR'S OPTION.
16. ALL VERTICAL MASONRY PIER REINFORCING SHALL HAVE 6" HOOKS AT BOTTOM AND EXTEND A MINIMUM OF 8" INTO FOOTING.

NOTE:
- SEE 8" ROD VARIANCE SPEC AT NOTES NO. 5 AT BOTTOM OF WALL SCHEDULE. 8" VARIANCE APPLIES TO ALL RODS EXCEPT THOSE AT CONTROL JOINTS AND END OF WALL.
- AT CONTRACTORS OPTION, THE WALL EXPANSION JOINT MAY OCCUR AT THE FACE OF THE PIERS AS SPECIFIED IN GENERAL NOTE 14.

1 SPECIAL WALL CONDITIONS AND OPTIONS

NO SCALE

NOTES:
1. FENCE WALL – DETAIL NOT SHOWN FOR CLARITY.
2. FINISHED GRADE.
3. NO SLOPING ADJACENT GRADE ALLOWED.
4. FACE OF FOOTING TO TOP OF SLOPE.
5. BOTTOM OF SETTING PAD.
6. SEE SCHEDULE FOR WALLS UP TO 6'-0" HIGH.
7. SEE SCHEDULE FOR WALLS ABOVE 6'-0" HIGH.

NOTE:
THIS DETAIL DESCRIBES THE MINIMUM DISTANCE REQUIREMENTS FOR THE LOWEST FOOTING EDGE TO FINISHED GRADE.

(6) SCHEDULE FOR WALLS UP TO 6'-0"

FACE OF FOOTING TO TOP OF SLOPE.	MIN. DEPTH OF DIP OR TRENCH FOOTING	OR MINIMUM DEPTH OF 13" DIA PIER
12" OR MORE	2'-4"	3'-6"
6" TO 11"	2'-7"	3'-10"
3" TO 5"	2'-10"	4'-0"

(7) SCHEDULE FOR WALLS ABOVE 6'-0" UP TO 9'-4"

FACE OF FOOTING TO TOP OF SLOPE.	ADDED DEPTH OF DIP OR TRENCH FOOTING	OR ADDED DEPTH OF 13" DIA PIER
36" OR MORE	0"	0"
30"	6"	6"
24"	9"	9"
12"	15"	15"
6"	18"	18"
3"	20"	20"

9 5'-0" TO DAYLIGHT DETAIL FOR FOOTINGS

NO SCALE

NOTES:
1. PROTO II FENCE WALL PER PRODUCT DATA SHEET.
   A. PROTO II TENSION ROD SHALL BE 7/16" DIA STRAIGHT, THREADED BOTH ENDS AND SHALL HAVE MIN. 12" EMBED INTO MASONRY RETAINING WALL WITH PLATE WASHER.
2. SOLID GROUTED RETAINING WALL – DESIGNED BY OTHERS. INSTALLER TO VERIFY RETAINING WALL DESIGNED BY OTHERS WILL SUPPORT THE PROTO II FENCE WALL ABOVE.
3. FINISHED GRADE.
4. 2-#3 MIN. IN BOND BEAM – LAP 20" WHERE OCCURS.
5. BACKFILL SHALL BE NON-EXPANSIVE SOILS. SEE SOILS REPORT.
6. COUPLER IF PARTIAL HEIGHT ROD IS USED IN LIEU OF FULL HEIGHT ROD.
7. 1/4"x1"x2" EMBEDMENT PLATE WITH 1/2" NUT ABOVE PLATE AND 1/2" COUPLER BELOW PLATE (OR (2) 1/2" NUTS).

NOTE:
PROTO II FENCE WALL CAN BE PLACED AT ANY LOCATION ON THE TOP OF THE RETAINING WALL (FLUSH OR CENTERED) BUT THE POST TENSIONED ROD SHALL AT ALL TIMES BE PLACED BETWEEN THE 2 REINFORCING BARS AT THE TOP OF THE RETAINING WALL.

7 PROTO II WALL CONNECTION TO TOP OF CONVENTIONAL MASONRY RETAINING WALL

NO SCALE

NOTES:
1. PROTO II FENCE WALL.
2. 3" MORTAR COVER AROUND COUPLER AND/OR POST TENSIONED ROD FOR CORROSION PROTECTION.
3. 7/16" DIA FULL HEIGHT POST TENSIONED RODS WITH 3" HOOKS. ROLL THREADS AT TOP FOR NUT ATTACHMENT.
4. CONC. FTG. – NO COLD JOINTS PERMITTED.
5. TRENCH MAY BE OVER EXCAVATED AS SHOWN– FILL W/ COMPACTED FILL OR CONCRETE.
6. 13"ø x 3'-6" DEEP CIRCULAR PIER FTG. MAY BE USED IN LIEU OF DIP FTG. SPACING AND SETTING PAD TO REMAIN THE SAME.
7. NO VOIDS OR HONEYCOMBING OF CONC. AT JUNCTION OF POST TENSION ROD AND REINFORCING BARS ALLOWED. PROVIDE CONSOLIDATION OF CONCRETE VIA VIBRATION, RODDING OR OTHER APPROPRIATE MEANS.
8. VERTICAL FOOTING REINFORCING AT WALLS OVER 6'-0" HIGH USE #4 x 6" 24" IN CENTER OF DIP OR PIER. STRAIGHT "J" OR "L" OK
9. THIS DETAIL SHOWS THE POST TENSION ROD CENTERED IN THE DIP FTG. – HOWEVER THE POST TENSION ROD SPACING IS INDEPENDENT OF THE DIP FTG. AND THEY DO NOT NEED TO LINE UP.
10. NOT USED IN WALLS 6'-0" AND UNDER.
11. VERT. REINF. REQ'D WHEN USING CIRCULAR PIER DETAIL IN LIEU OF "DIP". SEE NOTE 6 BELOW WALL SCHEDULE.
12. A CONTRACTOR OPTION IS TO STAB THE #4 VERTICAL REBAR DOWN INTO THE DIP, PIER OR CONTINUOUS TRENCH FOOTING AND EXTEND IT +/-8" INTO THE FIRST COURSE OF BLOCK.

4 DIP FOOTING PROFILE

NO SCALE

NOTES:
1. FILL CAP BLOCK WITH MORTAR. IMMEDIATELY "FLIP" ONTO ROD.
2. CAP BLOCK OF SUFFICIENT SIZE TO COVER PLATE AND ROD.
3. STEEL PLATE SIZES:
   A. 4" PROTO II: 1/4" x 3" x 6"
   B. 6" PROTO II: 1/4" x 4 1/2" x 6"
   C. 6" SLUMP PROTO II: 1/4" x 4" x 6"
   D. 8" PROTO II: 1/4" x 6 1/2" x 8"
   STEEL PLATES TO BE PLACED AT THE EDGE OF THE CELL SO THAT THE PLATE BEARS FULLY ON THREE SIDES EXCEPT AT 8" PROTO II WHERE THE STEEL PLATE SHOULD BEAR ON ALL FOUR SIDES.
4. CONTINUOUS HORIZONTAL JOINT REINFORCING PER NOTE #12.
5. CENTER WEB BELOW.

5 TOP OF FENCE DETAIL

NO SCALE

NOTES:
1. PROTO II WALL.
2. 3" MORTAR COVER AROUND COUPLER AND/OR POST TENSIONED ROD FOR CORROSION PROTECTION.
3. 7/16" DIA FULL HEIGHT POST TENSIONED RODS WITH 3" HOOKS. ROLL THREADS AT TOP FOR NUT ATTACHMENT. NO VOIDS OR JUNCTION OF POST TENSION ROD AND REINF. BARS ALLOWED. PROVIDE CONSOLIDATION OF CONCRETE VIA VIBRATION, RODDING OR OTHER APPROPRIATE MEANS.
4. THICKEN FOOTING TO PROVIDE 3" MIN. COVER AS REQUIRED AROUND ANCHOR BOLT.
5. SEE SCHEDULE AND OTHER DETAILS.

6 FOOTING ELEVATION AT POST TENSIONED ROD

NO SCALE

NOTES:
1. GROUT SOLID ONLY AT POST-TENSION ROD CELLS BELOW GRADE.
2. LOW SOIL.
3. CONCRETE FOOTING.
4. HIGH SOIL.
5. PROTO II FENCE WALL.
6. * 1'-4" MAX. AT 4" PROTO II.
   * 2'-0" MAX. AT 6" PROTO II.
   * 2'-8" MAX AT 8" PROTO II.
7. A MODIFIED 6" THICK PROTO II WALL MAY BEGIN WITH A SOLID 8" HIGH GROUTED COURSE OF 8" BLOCK. THE SOIL RETAINAGE MAY THEN INCREASE TO 2'-8". FOR 8" WIDE WALLS USE A 10" WIDE FLANGE, 6" DEEP AT TOP OF FOOTING.

ROD SPACING AND FOOTING SELECTION NOTES

A. FOR ALL RETAINING CONDITION EXPOSURES B AND C WITH LESS THAN 6'-0" FENCE ABOVE ASSUME A MINIMUM FENCE HEIGHT "F" OF 6'-0" (H MIN = 6'+"R"). (EXAMPLE: FOR 1'-4" RETAINING AND A 6'-0" HIGH FENCE WALL, H=6'-0"+1'-4"= 7'-4" USE 7'-4" SCHEDULE DESIGN.)
B. FOR ALL EXP C CONDITIONS WITH 6'-0" WALL OR GREATER USE SCHEDULE WALL HEIGHT "H".
C. FOR ALL EXPOSURE B CONDITIONS WITH A WALL HEIGHT 6'-0" OR GREATER USE SCHEDULE WALL HEIGHT = "H"+8". (EXAMPLE: FOR 2'-0" RETAINING (R) AND 6'-0" FENCE (F), USE SCHEDULE WALL HEIGHT = "R"+"F"+8" = 8'-8").
D. NO SURCHARGES, PARKING, STRUCTURES, ETC. WITHIN 5'-0" OF RETAINING WALLS.

10 DETAIL AT SOIL RETAINAGE

NO SCALE

NOTES:
1. TOP OF FOOTING.
2. PROTO II WALL – VERTICAL POST TENSIONED ROD NOT SHOWN FOR CLARITY.
3. 8" HIGH COURSES ARE SHOWN IN DETAIL. OTHER BLOCK SIZES MAY BE USED AS REQUIRED BY THE FENCE WALL DESIGN.

HORIZONTAL JOINT REINFORCING (REF. GENERAL NOTE #12).
1. HORIZONTAL JOINT REINFORCING SHALL BE PLACED AT THE MORTAR JOINTS #2 & #3 BELOW THE PLATE WASHER AND 2'-0" O.C. THEREAFTER UNTIL THE TOP OF FOOTING IS REACHED. (e.g. A NOMINAL 6'-0" HIGH WALL WOULD HAVE JOINT REINFORCING IN A TOTAL OF THREE COURSES).

8 HORIZONTAL JOINT REINFORCING

NO SCALE

GENERAL NOTES

1. THE PROTO-II WALL IS DESIGNED FOR WIND AND SEISMIC FORCES AS REQUIRED AND APPROVED BY THE LOCAL JURISDICTION. SEE SCHEDULES FOR EXPOSURE, WIND FORCES, POST TENSIONED ROD SPACING, FOOTING SIZES, ETC. CONTRACTOR IS RESPONSIBLE TO VERIFY REQUIREMENTS WITH BUILDING DEPARTMENT AND OWNER. ALL WORK IS TO BE PERFORMED IN ACCORDANCE WITH THE APPROVED SITE PLAN SOILS REPORT AND/OR APPLICABLE CODE REQUIREMENTS.
2. THESE DESIGNS ARE NOT TO BE USED FOR RETAINING EARTH (LEVEL BACKFILL) ABOVE 1'-4" FOR 4" PROTO-II, 2'-0" FOR 6" PROTO-II, AND 2'-8" FOR 8" PROTO-II AS MEASURED FROM LOW SOIL TO HIGH SOIL. NO SURCHARGES WITHIN 5'-0" OF WALL ARE ALLOWED. SEE DETAIL 10.
3. FOOTINGS TO BE LEVEL. IF GROUND SLOPES THE FOOTING SHALL BE STEPPED. EACH STEP SHOULD PROPER HEIGHT TO FIT BLOCK TYPE USED. ALL EXCAVATIONS SHOULD BE CLEAN AND CONTAIN NO LOOSE EARTH OR FORGEIGN MATTER.
4. SOIL SHALL BE COMPACTED AND HAVE A MINIMUM BEARING CAPACITY OF 1,000 POUNDS PER SQUARE FOOT AND A LATERAL CAPACITY OF 200 POUNDS PER SQUARE FOOT PER FOOT OF DEPTH. CONTRACTOR TO VERIFY SOIL CONDITIONS PER SOILS REPORT.
5. SOIL SHALL BE WELL DRAINED FOR FOOTINGS AND FOUNDATIONS, USE CONCRETE WITH A MIN. STRENGTH OF 2,500 PSI – TYPE II CEMENT (TYPE V WHERE REQUIRED BY OWNER, SOILS ENGINEER OR JURISDICTION). CONCRETE SHALL BE A MIN. OF 48 HOURS OLD PRIOR TO FINAL TENSIONING.
6. LAP HORIZ. FTG. REBAR 40 BAR DIA.; (LAP = 20" FOR #4 REBAR 25" FOR #5 REBAR).
7. CONCRETE MASONRY UNITS SHALL COMPLY WITH ASTM C-90 AND BE 2,000 PSI MIN. (F'M DESIGN CRITERIA FOR BLOCK IS BASED ON 1500 PSI). BLOCK SHALL BE A MIN OF 7 DAYS OLD PRIOR TO ROD TENSIONING. STANDARD HEAD AND BED JOINT BLOCKS WITH MORTAR MAY BE USED OR INTERLOCKING BLOCKS MAY BE USED.
8. MORTAR SHALL BE TYPE S, 2000 PSI MIN. MORTAR MAY BE USED AS GROUT IN 8" HIGH LIFTS. MORTAR MUST BE A MIN. OF 4 HOURS OLD PRIOR TO INITIAL TENSIONING AND 24 HOURS OLD PRIOR TO FINAL TENSIONING.
9. FIRST MASONRY COURSE MAY BE SET IN FRESH CONCRETE FOOTING. HEAD JOINTS MAY BE OMITTED IN FIRST COURSE FOR WEEP HOLES.
10. REINFORCING REBAR SHALL CONFORM TO ASTM A615; Fy = 40,000 PSI.
11. PROTO-II HARDWARE IS DEFINED AS: TENSION RODS, BEARING PLATES, COUPLERS, NUTS, ALL THREADS, DIRECT TENSION INDICATORS (A DIRECT TENSION INDICATOR (DTI) IS A COMPRESSIBLE WASHER) AND PLASTIC SADDLES. ALL OF THIS HARDWARE SHALL BE SUPPLIED BY ONLY AN APPROVED PROTO-II LICENSEE TO THE CERTIFIED INSTALLER. POST TENSION RODS SHALL BE 7/16" DIAMETER WITH 1/2" ROLL THREADS CONFORMING TO ASTM A615 (FY = 60000 PSI) AND HAVE STEEL CHEMISTRY SO THAT BENDING AND THREADING CAN BE ACCOMPLISHED WITHOUT DAMAGE TO THE POST TENSION ROD. AREA OF POST TENSION ROD = .1503 SQUARE INCHES. BEARING PLATES ARE 1/4" THICK (ASTM A36 STEEL) SEE DETAIL 5 FOR WIDTHS. 1/2" COUPLERS PER ASTM A36 AND THE COUPLER MUST FULLY ENGAGE THE UPPER AND LOWER ROD, FULLY ENGAGED AS DEFINED AS 1/2" MIN. INTO COUPLER. 1/2" NUTS ARE TO BE GRADE 8, PER ASTM A325. 1/2" ALL THREADS PER ASTM A307, GRADE 60. DIRECT TENSION INDICATOR (DTI – COMPRESSIBLE WASHER) IS PER ASTM F929 TESTING PROCEDURES. PLASTIC REBAR SADDLES ARE NON-STRUCTURAL.
12. HORIZONTAL JOINT REINFORCING SHALL BE 9 GAGE DIAMETER WIRE AND PLACED PER DETAIL 8 AND CONFORM TO ASTM A82 LADDER TYPE, 9 GAGE DIAMETER. LAP JOINT REINFORCING ONE FULL CROSS SQUARE (6" MINIMUM LAP).
13. IN LIEU OF FULL HEIGHT RODS, CONTRACTOR MAY USE SHORTER RODS, 1/2" COUPLERS AND STRAIGHT RODS THREADED BOTH ENDS FOR ADDITIONAL LIFTS. MIN. OF 3" "L" HOOK, OR "J" HOOK AT END OF TENSION ROD.
14. VERTICAL CONTROL JOINTS TO BE PLACED AT MAX. 36' O.C. IN ALL NON-STUCCOED WALLS AND 20' ON CENTER IN STUCCOED WALLS WITH CLEAN VERTICAL BREAK OF ALL MATERIALS. SEE DETAIL 1 FOR ROD SPACING AT CONTROL JOINTS AND WALL ENDS.
15. ALL STEEL THREADS, PLATES AND NUTS SHALL BE APPROPRIATELY LUBRICATED AND FREE OF RUST TO INSURE PROPER TENSIONING. NO COUPLERS MAY OCCUR DIRECTLY BELOW AND IN CONTACT WITH THE BEARING PLATE.
16. TENSION RODS MAY BE STABBED INTO WET CONCRETE OR TIED IN PLACE AT CONTRACTOR OPTION; SEE DETAIL 6, NOTE NO. 3. AT CONTRACTOR OPTION, VERTICAL REBAR MAY BE STABBED DOWN INTO THE DIP, PIER OR CONTINUOUS TRENCH FOOTING AND EXTENDED +/-8" INTO FIRST COURSE OF BLOCK. SEE DETAILS 3 AND 4.
17. A PROTO-II DTI (COMPRESSIBLE WASHER) SHALL BE INSTALLED AT EVERY TENSION ROD BETWEEN THE BEARING PLATE AND NUT W/ THE DTI "TABS" FACING UP AGAINST THE BOTTOM OF THE NUT. THE SPECIAL DEPUTY INSPECTION REQUIRED AT TIME OF FINAL TENSIONING BY A PROTO-II APPROVED INSPECTOR SHALL VERIFY FINAL TENSIONING TO 6,000 POUNDS BY 1 OF 2 METHODS; METHOD 1; VISUAL INSPECTION OF DIRECT TENSION INDICATOR (DTI), TABS FACING UP AND COLLAPSED AGAINST NUT W/ NO LIGHT LEAKAGE BETWEEN THE PROTO-II DTI AND BOTTOM OF NUT: METHOD 2: USE OF A CALIBRATED TORQUE WRENCH TORQUED TO 55FT/LBS. (DTI MUST STILL BE PLACED WITH METHOD 2. NO VISUAL INSPECTION OF DTI REQUIRED WHEN USING METHOD 2). INSPECTOR SHALL OBSERVE THE USE OF THREAD LUBRICANT, THE POSITION OF PLATE ON BLOCK, AND INTEGRITY OF MORTAR JOINTS. AND PROVIDE A SIGNED REPORT TO ALL APPROPRIATE PARTIES. MASONRY DESIGN IS BASED ON THIS SPECIAL INSPECTION.
18. DESIGNS ILLUSTRATED ON THIS PRODUCT DATA SHEET ARE FOR PROTO-II WALLS AND PROTO-II
* RETAINER WALLS UP TO A COMBINED HEIGHT OF 9'-4". ADDITIONAL SCHEDULES ARE AVAILABLE FOR PROTO-II WALLS UP TO 13'-4" HIGH AND HIGHER "HYBRID" PROTO-II WALLS.

NOTES:
1. POST TENSION ROD.
2. NUT.
3. COMPRESSED DTI INDICATOR – NO LIGHT PASSES BETWEEN BOTTOM OF NUT AND DTI WHEN PROPERLY TENSIONED.
4. TOP PLATE.
5. COLLAPSIBLE TABS.
A. PROTO-II DTI TO BE USED AT EACH TENSION ROD, TABS FACING UP AGAINST BOTTOM OF 1/2" NUT AND TABS COLLAPSED TO ACHIEVE TENSION.
B. DTI IS ONE OF TWO APPROVED METHODS OF TENSIONING. OTHER OPTION OF TENSIONING IS TORQUE TO 55 FT/LBS USING A CALIBRATED TORQUE WRENCH DTI MUST STILL BE PLACED ON ROD IF USING TORQUE WRENCH METHOD. SEE GENERAL NOTE 17.
C. APPROVED SPECIAL DEPUTY INSPECTOR WILL PERFORM A VISUAL INSPECTION WHEN USING THE DTI METHOD TO CONFIRM THE DTI IS COLLAPSED WITH NO LIGHT LEAKS BETWEEN THE TABS AND BOTTOM OF NUT. IF USING TORQUED WRENCH METHOD, DEPUTY INSPECTOR WILL CONFIRM WALL IS TORQUED TO 55 FT/LBS AND VISUAL INSPECTION OF DTI IS NOT REQUIRED.
D. INSTALLER MUST HAVE SPECIAL DEPUTY INSPECTION PERFORMED BY ONE OF THESE TWO METHOD, BY AN APPROVED SPECIAL DEPUTY INSPECTOR. INSPECTOR TO PROVIDE A COMPLETED REPORT TO LISTED PARTIES.

2 DIRECT TENSION INDICATOR (DTI)

NO SCALE

NOTES:
1. 4" NOMINAL (3 5/8" ACTUAL) OR 6" NOMINAL (5 5/8" ACTUAL) OR 8" NOMINAL (7 5/8" ACTUAL) MASONRY.
2. HORIZONTAL JOINT REINF – SEE NOTE #14.
3. #4 CONTINUOUS AT 4" & 6" PROTO II #5 CONTINUOUS AT 8" PROTO II.
4. CONCRETE SETTING PAD. NO VOIDS OR HONEYCOMBING OF CONCRETE AT JUNCTION OF POST TENSION ROD AND REINF. BARS ALLOWED. PROVIDE CONSOLIDATION OF CONCRETE VIA VIBRATION, RODDING OR OTHER APPROPRIATE MEANS.
5. DASHED LINE INDICATES LINE OF DIP FOOTING OR LINE OF CONT TRENCH FOOTING.
6. DEPTH OF CONTINUOUS TRENCH FOOTING.
7. * 8" AT 4" AND 6" PROTO II.
7A. FOR 8" WIDE WALLS USE 10" WIDE FLANGE, 6" DEEP AT TOP OF FOOTING.
8. 3" MORTAR COVER AROUND COUPLER AND/OR POST TENSIONED ROD FOR CORROSION PROTECTION AT FIRST COURSE.
9. VERTICAL REINFORCING AT TRENCH, AND DIP FOOTINGS FOR WALLS OVER 6'-0" HIGH. USE #4 x AT THE 6" CENTER AS REQUIRED OF EACH DIP FOOTING AT DIP FOOTING DESIGN. STRAIGHT "J" OR "L" OK. REBAR SPACING IN TRENCH FOOTING FOR WALLS 6'-8" TO 8'-0" SHALL MATCH SPACING OF DIP FOOTINGS. ABOVE 8'-0" AND WHERE DIP FOOTING SPACING NOT AVAILABLE, SPACE VERTS AT 24" O.C. MAX.
10. A CONTRACTOR OPTION IS TO STAB THE #4 VERTICAL REBAR DOWN INTO THE DIP, PIER OR CONTINUOUS TRENCH FOOTING AND EXTEND IT +/-8" INTO THE FIRST COURSE OF BLOCK.

3 TYPICAL WALL SECTION AT DIP FOOTING AND TRENCH FOOTING

NO SCALE

PROTO II FENCE WALL SCHEDULE – CALIFORNIA

EXPLANATION OF WIND LOAD DESIGNATIONS:

WIND LOADS ARE CALCULATED AS FOLLOWS:
p = Ce x Cq x qs x I
p = WIND FORCE IN POUNDS PER SQUARE FOOT (PSF)
Ce = EXPOSURE FACTOR, SEE U.B.C. TABLE 16G
Cq = PRESSURE COEFFICIENT FOR STRUCTURE – SEE U.B.C./ TABLE 16H (FOR WALL ELEMENTS PRIMARY SYSTEM METHOD 2 Cq = 1.3)
qs = WIND STAGNATION PRESSURE, SEE U.B.C. TABLE 16F
I = IMPORTANCE FACTOR PER U.B.C. TABLE 16k (FOR FENCES I = 1.0)
EXAMPLE: EXP. C @ 70 MPH REFERS TO EXPOSURE C WITH qs AT 70 MPH
p = 1.06 x 1.3 x (.75 x 12.6) x 1.0 = 13.8 PSF
(SEE UBC SECTION 1622)
ABOVE 12'-0" p = 1.06 x 1.3 x 12.6 x 1.0 = 17.4 PSF

WIND VERSUS SEISMIC LOADING:
1. WIND LOADS GOVERN OVER SEISMIC IN ALL SEISMIC ZONE 1,2, AND 3 LOCATIONS.
2. FOR SEISMIC ZONE 4, THE SCHEDULES BELOW HAVE BEEN MODIFIED FOR SEISMIC FORCES

PER 1997 UBC & 2001 CBC

WIND FORCE	WALL HEIGHT		6" PROTO II POST TENSION ROD SPACING ON CENTER		DIP FOOTING ON CENTER SPACING, SEE DETAIL 4 FOR DIP FOOTING PROFILE, SEE DETAIL 3 FOR SECTION	CONTINUOUS 8" WIDE TRENCH FOOTING. SEE DETAIL 3 FOR SECTION.	
13.8 PSF 70 MPH EXP C	3'-4"		8'-0"		16'-0"	8" x 15"	
	4'-0"		8'-0"		14'-8"	8" x 17"	
	4'-8"		8'-0"		10'-8"	8" x 19"	
	5'-4"		8'-0"		8'-4"	8" x 20"	
	6'-0"		6'-0"		6'-6"	8" x 22"	
	6'-8"		4'-8"		4'-4"	8" x 26"	
	7'-4"		4'-0"		3'-6"	8" x 27"	
	8'-0"		3'-4"		3'-0"	8" x 29"	
	8'-8"		2'-8"		–	8" x 30"	
	* 9'-4"		2'-0"		–	8" x 32"	

NOTES:
1. FOOTING DESIGN ALLOWABLES: 1000 PSF BEARING, 200 PSF/FT LATERAL, SEISMIC SOIL PROFILE TYPE SD.
2. MAXIMUM HEIGHT FOR 4" PROTO II = 6'-8": MAX. HEIGHT FOR 6" PROTO II = 10'-0". MAX. HEIGHT FOR 8" PROTO II = 13'-4" COMBINATION WALLS MAY BE USED.
3. MAXIMUM DIP FOOTING SPACING = 16'-0": MINIMUM SPACING = 3'-4". TOLERANCE IS 12"± BUT THE NUMBER OF DIP FOOTINGS MUST REMAIN THE SAME FOR A GIVEN LENGTH OF WALL.
4. POST TENSION ROD IS INDEPENDENT OF DIP OR PIER SPACING.
5. POST TENSION ROD SPACING TOLERANCE IS ±8" BUT THE NUMBER OF RODS FOR A GIVEN LENGTH OF WALL MUST REMAIN THE SAME.
6. 13"ø x 3'-6" DEEP CIRCULAR PIER FOOTING WITH 1 #4 VERT, MAY BE USED IN LIEU OF DIP FOOTING SPACING AND SETTING PAD TO REMAIN THE SAME.

PULTE HOMES
CAGNEY RANCH
TRACT NO. 29515
RIVERSIDE, CA

CARUSO TURLEY SCOTT INC.
consulting structural engineers
2702 North 44th Street
Suite 200
Phoenix, Arizona 85008
(602) 912-9120
FAX# (602) 912-9390

REGISTERED PROFESSIONAL ENGINEER C.D. ATKINSON S 4055 EXP.12/31/05 STRUCTURAL STATE OF CALIFORNIA 2-18-05

PROTO II FENCE WALL
"DIP FOOTING" DESIGN
PRODUCT DATA SHEET (PDS)
SEISMIC ZONE 4 TYPE A FAULT WITHIN 5KM

PROTO-II TM WALL SYSTEMS
WWW.PROTO2.COM
2648 E. WORKMAN AVE. #275
WEST COVINA, CA. 91791
ATTN: GARY OTTO
PH# (626) 967-9765
FAX# (626) 967-4904
4", 6", AND 8" THICKPOST-TENSIONED MASONRY WALLS
(MAY ONLY BE INSTALLED BY APPROVEDAND CERTIFIED INSTALLERS)
U.S.PATENTED 4,726,567
U.S.PATENTED 5,794,921
AND PATENT PENDING

FILE: 99-115-254-NEW.DWG

TRACKING NUMBERS:
99-115-445
00-115-553
01-115-294

JOB NUMBER: 04-115-1702
DRAWN: JRP ENGINEER: NW
CHECKED: SCALE: AS NOTED
DATE: 01/06/04
SHEET: 2.3 OF 28

IMPORTANT NOTICE
Section 4216/4217 of the Government Code requires a Dig Alert Identification Number to be issued before a "Permit to Excavate" will be valid. For your Dig Alert I.D. Number call
CALL TOLL FREE
48 HOURS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT
1-800-227-2600

City of Riverside
WATER SYSTEM
APPROVED BY Mwn DATE 7/6/06

City of Riverside
PUBLIC UTILITY DEPARTMENT
OVERHEAD AND UNDERGROUND
APPROVED BY LAM DATE 6/06

LANDSCAPE ARCHITECT IN RESPONSIBLE CHARGE
ROBERT B. CLARK
RLA 4233 expires 12/31/06
DATE 6/28/06

REGISTERED LANDSCAPE ARCHITECT ROBERT B. CLARK 4233 Signature 12-31-06 Renewal Date 6/28/06 Date STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
1	WALL AND FENCE CHANGES PER OWNERS REQUEST		MARCH 1 2006
2	WALL, FENCE, PLANTING CHANGES PER OWNERS REQUEST		MAY 26 2006

DESIGNED BY KL/BC DRAWN BY JC/EM/KL CHECKED BY KL/BC

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
P.W. PRINCIPAL ENGINEER		7/18/06
P.W. STREET SERVICES	DB	7/10/06
PLANNING DIVISION		6/26/06

APPROVED BY
CITY ENGINEER
DATE 7/19/06

PH 1 LANDSCAPE PLANS
TR 29515
CONSTRUCTION DETAILS

~~SCALE: 1" = 40'~~

ACCT. NO.
PWS-PC-03-3001-RF1
R-3892-RL
PW06-0110
SHEET 2.3 OF 32

BR

INDEXED 8-14-06 GH

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LIMIT OF WORK

TRACT BOUNDARY

PULL BOX WITH CONTROLLER WIRES (P)
CONTRACTOR SHALL PROVIDE AN APPROVED PULL BOX AT THIS LOCATION WITH (1) EXTRA CONTROL WIRES AND ONE COMMON WIRE FROM CONTROLLER "B". THE PULL BOX SHALL HAVE 36" OF CONTINUOUS WIRE IN A LOOP, BE BUNDLED AND LABELED "FOR FUTURE USE" WITH PERMANENT LABEL SYSTEM.

PULL BOX WITH CONTROLLER WIRES (P)
CONTRACTOR SHALL PROVIDE AN APPROVED PULL BOX AT THIS LOCATION WITH (1) EXTRA CONTROL WIRES AND ONE COMMON WIRE FROM CONTROLLER "B". THE PULL BOX SHALL HAVE 36" OF CONTINUOUS WIRE IN A LOOP, BE BUNDLED AND LABELED "FOR FUTURE USE" WITH PERMANENT LABEL SYSTEM.

PULL BOX WITH CONTROLLER WIRES (P)
CONTRACTOR SHALL PROVIDE AN APPROVED PULL BOX AT THIS LOCATION WITH (1) EXTRA CONTROL WIRES AND ONE COMMON WIRE FROM CONTROLLER "A". THE PULL BOX SHALL HAVE 36" OF CONTINUOUS WIRE IN A LOOP, BE BUNDLED AND LABELED "FOR FUTURE USE" WITH PERMANENT LABEL SYSTEM.

HOMEOWNER IRRIGATION CONTROLLER
CONTRACTOR TO SUPPLY IRRIGATION CONTROLLER AT EACH RESIDENCE. CONTROLLER SHALL BE IRRITROL RAIN DIAL SERIES (RD600–INT) 6 STATION. CONTRACTOR SHALL VERIFY TOTAL NUMBER OF VALVES PER BUILDING PARCEL PRIOR TO INSTALLATION OF CONTROLLER. IF TOTAL NUMBER OF VALVES FOR EACH PARCEL EXCEEDS 6, CONTRACTOR SHALL SUPPLY A 9 OR 12 STATION RAIN DIAL (RD900–INT OR RD1200–INT) CONTROLLER. CONTOLLER TO BE LOCATED WITHIN BUILDING GARAGE UNLESS DIRECTED OTHERWISE BY OWNER.

MATCHLINE SEE SHEET 3.2

IRRIGATION LEGEND

SYMBOL LEGEND	MAKER	MODEL NUMBER–DESCRIPTION
	RAINBIRD	EFB–CP–PRS–D PRESSURE REDUCING BRASS REMOTE CONTROL VALVE, SEE PLAN FOR SIZE
	NELSON	7643 + 7641 1" QUICK COUPLING VALVE W/ LOCKING COVER AND KEY.
	RAINBIRD	EFB–CP–PRS–D PRESSURE REDUCING BRASS REMOTE CONTROL BUBBLER VALVE, SEE PLAN FOR SIZE
	FEBCO	825YA 2" SIZE REDUCED PRESSURE BACKFLOW PREVENTER WITH "Y" STRAINER.
	GRISWOLD	2230E SERIES COMBINATION SOLENOID/PRESSURE REDUCING MASTER CONTROL VALVE, EPOXY COATED, LINE SIZE (2" MAX). PLACE IN APPROVED JUMBO 36" SIZE PLASTIC VALVE BOX
	CALSENSE	FM–2B. 2" PVC SCH 80 TEE MOUNTED FLOW METER.
	API	ARV–2. AGRICULTURAL PRODUCTS AIR RELEASE / VACUUM RELIEF AND CONTINUOUS AIR RELEASE VALVE.
	HAMMOND	1B 645 GATE VALVE, LINE SIZE
	UGT	ESP–SAT SERIES CONTROLLER MOUNTED INSIDE ENCLOSURE, SEE PLAN FOR SPECS
	APPROVED	PVC CLASS 315 MAINLINE, SIZE 2" OR GREATER. DOMESTIC WATER. REFER TO PLANS
	APPROVED	PVC SCHEDULE 40 MAINLINE, SIZE LESS THAN 2". DOMESTIC WATER. REFER TO PLANS.
	APPROVED	SCH 40 SLEEVES PER ADKAN CONSULTING STREET IMPROVEMENT PLANS AND/OR UTILITY CONSULTANT
	APPROVED	UVR–PVC SCH 40 UV RADIATION RESISTANT PVC
	APPROVED	PVC CLASS 200 LATERAL LINE, SEE PLAN FOR SIZE. DOMESTIC WATER. REFER TO PLANS.
	PAIGE ELEC.	1½" DIA. PVC SCH 40 CONDUIT WITH PAIGE ELEC. CABLE MODEL P7171–D
P	CARSON	1419–13B INDUSTRY PULL BOX MARKED 'ELECTRIC' W/ 36" EXPANSION LOOPS IN BOX, TYP.
	PROPOSED	ELECTRICAL METER PEDESTAL LOCATION PER CITY OF RIVERSIDE'S APPROVED PUBLIC UTILITY PLANS REFER TO WEST COAST DESIGN GROUPS ELECTRICAL PLANS FOR CONNECTIONS TO IRRIGATION CONTROLLER
WM	PROPOSED	2" DOMESTIC WATER METER PER ADKAN CONSULTING STREET IMPROVEMENT PLANS. CONTACT CITY'S PUBLIC UTILITY INSPECTOR, STUART NOBLE (951)538–6970, TO COORDINATE INSTALLATION OF METER.
		CONTINUATION OF LATERAL OR MAINLINE, REFER TO ADJACENT MATCHLINE SHEET NO.

REFER TO CITY OF RIVERSIDE STANDARD IRRIGATION DETAILS AND SPECIFICATIONS. irrEQUIP 1

CONTROLLER SEQUENCE / VALVE NO. / VALVE SIZE — e.g. A-1 / 1" / 5.0 GPM

IRRIGATION LEGEND

HEAD SYMBOL LEGEND	MAKER	MODEL NUMBER–DESCRIPTION	NOZZLE	PATTERN	GPM	PSI	RADIUS
	RAINBIRD	5012–PL–FC/PC–SAM 12" ROTOR POP–UP	MPR–35–F/H/Q	180° 90°	3.33 1.67	35	34'
	RAINBIRD	5012–PL–FC/PC–SAM 12" ROTOR POP–UP	MPR–30–F/H/Q	180° 90°	2.59 1.23	35	30'
	RAINBIRD	5012–PL–FC/PC–SAM 12" ROTOR POP–UP	MPR–25–F/H/Q	180° 90°	1.73 0.88	35	24'
	RAINBIRD	1812–SAM–R17–24H/R17–24Q 12" POP–UP	ROTARY NOZZLE R17–24 SERIES	180° 90°	1.62 .81	35	22'
	RAINBIRD	1812–SAM–R13–18H/R13–18Q 12" POP–UP	ROTARY NOZZLE R13–18 SERIES	180° 90°	.86 .43	35	16'
	RAINBIRD	5000–S–PL–PC–SAM SHRUB ROTOR	6.0–PC	180°	5.23	35	43'
	RAINBIRD	5000–S–PL–FC/PC–SAM SHRUB ROTOR	MPR–35–F/H/Q	360° 180° 90°	6.62 3.33 1.67	35	34'
	RAINBIRD	5000–S–PL–FC/PC–SAM SHRUB ROTOR	MPR–30–F/H/Q	360° 180° 90°	5.08 2.59 1.23	35	30'
	RAINBIRD	5000–S–PL–FC/PC–SAM SHRUB ROTOR	MPR–25–F/H/Q	360° 180° 90°	3.34 1.73 0.88	35	24'
	RAINBIRD	PA–8S–PRS–N–R17–24F/R17–24H/R17–24Q SHRUB ROTOR	ROTARY NOZZLE R17–24 SERIES	360° 180° 90°	3.24 1.62 .81	35	22'
	RAINBIRD	PA–8S–PRS–N–R13–18F/R13–18H/R13–18Q SHRUB ROTOR	ROTARY NOZZLE R13–18 SERIES	360° 180° 90°	1.73 .86 .43	35	16'
	RAINBIRD	1812 SAM 12" POP–UP SHRUB SPRAY	18–VAN	180° 90°	2.43 1.22	25	17'
	RAINBIRD	1812 SAM 12" POP–UP SHRUB SPRAY	15H,15Q (15–VAN IF NEEDED.)	180° 90°	1.65 .83	25	14'
	RAINBIRD	1812 SAM 12" POP–UP SHRUB SPRAY	12H,12Q (12–VAN IF NEEDED.)	180° 90°	1.20 .60	25	11'
	RAINBIRD	1812 SAM 12" POP–UP SHRUB SPRAY	10H, 10Q (10–VAN)	180° 90°	.72 .36	25	9'
	RAINBIRD	PA–8S SHRUB SPRAY	18–VAN	360° 180° 90°	4.86 2.43 1.22	25	17'
	RAINBIRD	PA–8S SHRUB SPRAY	15F,15H,15Q (15–VAN IF NEEDED.)	360° 180° 90°	3.30 1.65 .83	25	14'
	RAINBIRD	PA–8S SHRUB SPRAY	12F,12H,12Q (12–VAN IF NEEDED.)	360° 180° 90°	2.40 1.20 .60	25	11'
	RAINBIRD	PA–8S SHRUB SPRAY	10F,10H,10Q (10–VAN)	360° 180° 90°	1.44 .72 .36	25	9'

REFER TO THE CITY OF RIVERSIDE PUBLIC LANDSCAPE MANUAL FOR STANDARD IRRIGATION DETAILS AND SPECIFICATIONS. ilgnd

HOMEOWNER IRRIGATION LEGEND

SYMBOL LEGEND	MAKER	MODEL NUMBER–DESCRIPTION
	RAINBIRD	DV SERIES IN–LINE REMOTE CONTROL VALVE, SEE PLAN FOR SIZE
	RAINBIRD	ASVF SERIES ANTI–SIPHON REMOTE CONTROL VALVE, SEE PLAN FOR SIZE
	CHAMPION	262 SERIES ATMOSPHERIC VACUUM BREAKER, LINE SIZE
	APPROVED	UVR–PVC SCH 40 UV RADIATION RESISTANT PVC
	APPROVED	ALERTLINE PVC CLASS 200 LATERAL LINE, SEE PLAN FOR SIZE
	PROPOSED	SIZE PER PLAN PVC SCH 40 MAINLINE @ HOMEOWNER LOTS CONNECT TO HOUSE MAIN AFTER WM
D	PROPOSED	3/4" DOMESTIC WATER METER PER ADKAN STREET IMPROVEMENT PLANS

REFER TO CITY OF RIVERSIDE STANDARD DETAILS AND SPECIFICATIONS.

VALVE NO. / CONTROLLER SEQUENCE / VALVE SIZE — e.g. HO / 1" / 5.0 GPM
HOMEOWNER VALVE

ADDITIONAL IRRIGATION NOTES

CONTRACTOR SHALL ALLOW FOR ON–SITE MODIFICATION OF TREE LOCATIONS AND ALLOW IN THE BID PRICE FOR MINOR ADJUSTMENTS IN THE FINAL LOCATION OF TREE AND SHRUB BUBBLERS.

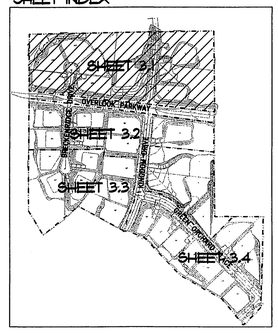
CONTRACTOR SHALL REVIEW VALVE SEQUENCING WITH OWNER AND LANDSCAPE ARCHITECT TO OBTAIN APPROVAL OF SEQUENCING PLAN PRIOR TO INSTALLATION.

NOTES:

1. ALL PIPING SHALL MEET IAPMO AND NSF STANDARDS FOR PVC TYPE 1, GRADE 1 PIPE
2. CONTACT GRISWOLD IRRIGATION (714) 559–6000 PRIOR TO MASTER VALVE INSTALLATION FOR FIELD INSTRUCTION.
3. FOR GENERAL IRRIGATION NOTES REFER TO CIVIL ENGINEER SPECIFICATION MANUAL
4. PIPE ROUTING IS DIAGRAMMATIC, LOCATE ALL PIPING IN PLANTER AREAS WHEREVER POSSIBLE.
5. CONTRACTOR SHALL LOCATE CARSON INDUSTRIAL PULL BOXES AT 200' O.C. MAX. IN SHRUB AREAS ALONG MAINLINE WITH A 36" EXPANSION LOOP OF ALL CONTROL AND COMMON WIRES.

NOTE: USE RAINBIRD 1800 PCS SCREEN AND VAN NOZZLES WHERE REQUIRED TO ACHIEVE PROPER COVERAGE AND AVOID OVER SPRAY ONTO STREET.

SHEET INDEX



NORTH

IMPORTANT NOTICE
Section 4216/4217 of the Government Code requires a Dig Alert Identification Number to be issued before a "Permit to Excavate" will be valid. For your Dig Alert I.D. Number call
CALL TOLL FREE
48 HOURS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT
1–800–227–2600

City of Riverside
WATER SYSTEM
APPROVED BY _____ DATE 7/6/06

City of Riverside
PUBLIC UTILITY DEPARTMENT
OVERHEAD AND UNDERGROUND
APPROVED BY _____ DATE 6/06

LANDSCAPE ARCHITECT IN RESPONSIBLE CHARGE
ROBERT B. CLARK
RLA 4233 expires 12/31/06
DATE 6/29/06

REGISTERED LANDSCAPE ARCHITECT — ROBERT B. CLARK — STATE OF CALIFORNIA
Signature 12–31–06 Renewal Date 6/29/06 Date

MARK	REVISIONS	APPR.	DATE
1	WALL AND FENCE CHANGES PER OWNERS REQUEST		MARCH 1 2006
2	WALL, FENCE, PLANTING CHANGES PER OWNERS REQUEST		MAY 26 2006

DESIGNED BY KL/BC DRAWN BY JC/EM/KL CHECKED BY KL/BC

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
P.W. PRINCIPAL ENGINEER		7/6/06
P.W. STREET SERVICES		7/6/06
PLANNING DIVISION		6/29/06

APPROVED BY _____ CITY ENGINEER
DATE 7/19/06

PH 1 LANDSCAPE PLANS
TR 29515
IRRIGATION PLAN

SCALE: 1" = 40'

ACCT. NO.
PWS–PC–03–3001–RF1
R–3892–RL
PW06–0110
SHEET 3.1 OF 32

INDEXED 8–14–06 GH

R12

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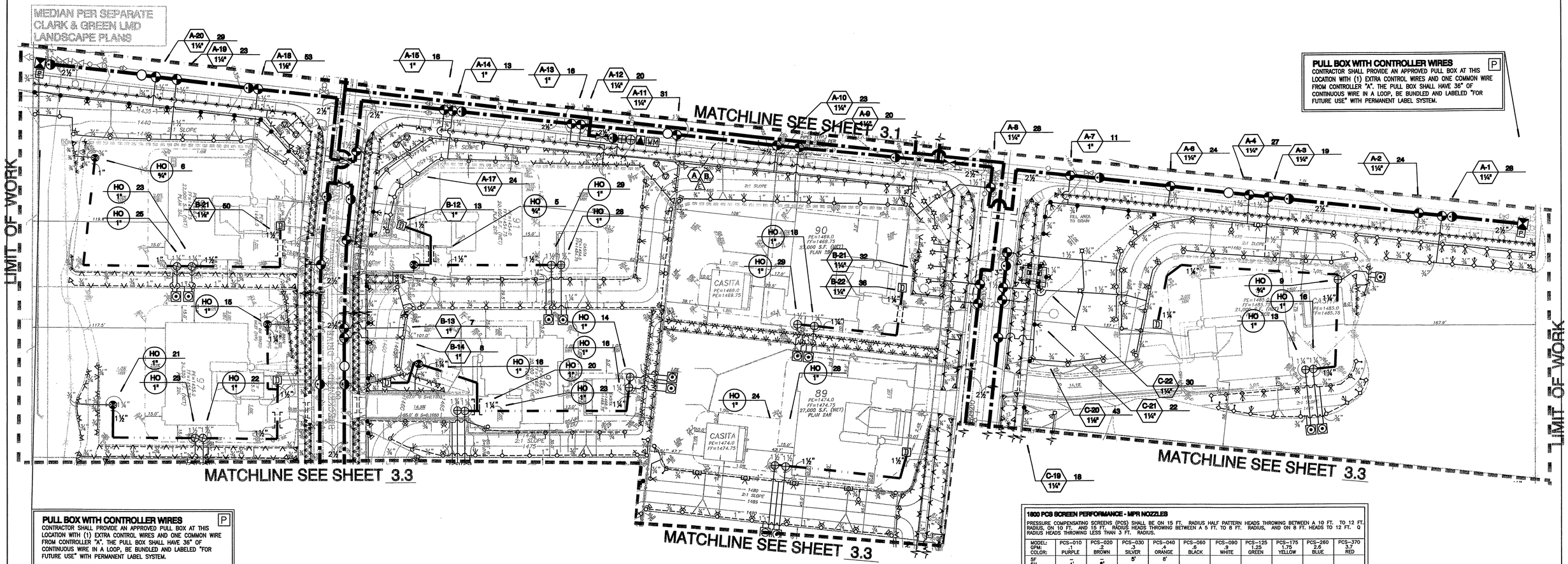

PULL BOX WITH CONTROLLER WIRES (P)
CONTRACTOR SHALL PROVIDE AN APPROVED PULL BOX AT THIS LOCATION WITH (1) EXTRA CONTROL WIRES AND ONE COMMON WIRE FROM CONTROLLER "A". THE PULL BOX SHALL HAVE 36" OF CONTINUOUS WIRE IN A LOOP, BE BUNDLED AND LABELED "FOR FUTURE USE" WITH PERMANENT LABEL SYSTEM.

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1800 PCS SCREEN PERFORMANCE - MPR NOZZLES

PRESSURE COMPENSATING SCREENS (PCS) SHALL BE ON 15 FT. RADIUS HALF PATTERN HEADS THROWING BETWEEN A 10 FT. TO 12 FT. RADIUS, ON 10 FT. AND 15 FT. RADIUS HEADS THROWING BETWEEN A 5 FT. TO 8 FT. RADIUS, AND ON 8 FT. HEADS TO 12 FT. Q RADIUS HEADS THROWING LESS THAN 3 FT. RADIUS.

MODEL: GPM: COLOR:	PCS-010 .1 PURPLE	PCS-020 .2 BROWN	PCS-030 .3 SILVER	PCS-040 .4 ORANGE	PCS-060 .6 BLACK	PCS-090 .9 WHITE	PCS-125 1.25 GREEN	PCS-175 1.75 YELLOW	PCS-260 2.6 BLUE	PCS-370 3.7 RED
5F	–	–	**5'**	8'						
5H	4'	**5'**								
5T	**5'**	6'								
5Q	**5'**	6'								
8F	–	–	4'	**5'**	**8'**	10'	11'			
8H	–	5'	7'	**8'**	10'	11'				
8T	–	**8'**	9'	10'	9'					
8Q	4'									
10F	–	–	6'	8'	1'	4'	8'	**10'**	12'	
10H	–	3'	8'	**10'**	**10'**	**10'**				
10T	–	4'	8'	**10'**	11'	11'				
10Q	2'	6'								
12F	–	–	–	2'	3'	5'	7'	8'	**12'**	
12TQ	–	–	2'	3'	4'	6'	8'	10'	**12'**	13'
12TT	–	–	2'	3'	4'	6'	9'	**12'**	15'	
12H	–	3'	4'	6'	10'	11'	**12'**	14'		
12T	–	3'	6'	10'	11'	**12'**				
12Q	–	3'	8'	11'	**12'**					
15F	–	–	–	–	–	4'	6'	10'	12'	**15'**
15TQ	–	–	–	–	–	6'	8'	11'	**15'**	
15TT	–	–	1'	2'	4'	7'	10'	13'		
15H	–	–	5'	6'	11'	11'	**15'**	17'		
15T	–	3'	5'	9'	12'	12'	14'			
15Q	–					**15'**				
18F-SLA	–	–	–	0.5'	2'	3'	6'	12'	**16'**	19'
18Q-SLA	1'	0.5'	1'	2'	8'	12'	**16'**	20'		
18Q-SLA	2'		8'	11'	**18'**	16'				
18 (90°)-VAN	–	–	0.5'	2'	6'	12'	17'	**18'**	20'	21'
18 (180°)-VAN	–	–	–	1'	3'	5'	9'	16'	**18'**	19'
18 (270°)-VAN	–	–	–	0.5'	1'	3'	5'	11'	15'	**16'**
18 (330°)-VAN	–	–	–	0.5'	1'	3'	4'	9'	12'	15'
22F-SS	–	–	2'	4'	8'	2'	5'	7'	**22'**	18'	**22'**	24'
22H-SS	–	–	7'	12'	20'	14'	**22'**	25'		
22Q-SS	–	2'				3'				
5F-B	–	–	–	1'	2'		5'			
5H-B	–	–	1'	**5'**	**5'**					
5Q-B	–	3'	4'							
5CST-B	–	–	3'	5'	5'	3'	**5'**			
15SQ	–	–	–	–	–	4'X4'	7'X7'	11'X11'	15'X15'	16'X16'
9SS	–	–	–	–	–	**9'X9'**	9'X11'	9'X13'	9'X14'	
15CST	–	–	–	4'X8'	4'X12'	4'X10'	**4'X15'**	4'X17'		
15SST	–	–	–	4'X5'	4'X10'	**4'X15'**	4'X16'			
15EST	–	–	4'X12'	4'X15'	4'X21'					

BOLD TYPE INDICATE RECOMMENDED NOZZLE /SCREEN COMBINATION TO ACHIEVE CATALOG PERFORMANCE AT 30 PSI.

IRRIGATION CONTROLLER

(A) (B) RAINBIRD 40+40 STATION, ESP-SAT CONTROLLER MOUNTED WITHIN A 18" WIDE, FRONT AND REAR ENTRY, UNITED GREEN TECH (UGT), STAINLESS STEEL ENCLOSURE, MODEL NUMBER:
SAC-RB1-40+40 / FS-200 / MVR / MSP / LPP / TRC-2RCAT
WITH FLOW SENSOR, MASTER VALVE RELAY, MAXICOM SURGE PROTECTION, LINE PRIMARY PROTECTION AND ANTENNA ASSEMBLIES.

1. CONTRACTOR SHALL APPLY FOR ELECTRICAL PERMIT AND IS RESPONSIBLE FOR PAYING ALL FEES AND COSTS ASSOCIATED WITH PERMIT, PURCHASE AND SETTING OF ELECTRICAL METER.
2. CONTRACTOR SHALL PROVIDE AND INSTALL ALL NECESSARY CONDUITS, SWEEP, CONDUCTORS ETC. FROM ELECTRICAL STUB TO THE ELECTRICAL METER REGARDLESS OF LENGTH OF RUN. VERIFY LENGTH PRIOR TO BID. NO ADDITIONAL COMPENSATION ALLOWED.
3. CONTRACTOR SHALL PROVIDE AND INSTALL ALL NECESSARY CONDUITS, SWEEP, CONDUCTORS ETC. FROM ELECTRICAL METER TO IRRIGATION CONTROLLERS AND CCU UNIT REGARDLESS OF LENGTH OF RUN. VERIFY LENGTH PRIOR TO BID. NO ADDITIONAL COMPENSATION ALLOWED.
4. CONTRACTOR SHALL INSTALL AND CONNECT THE MAXICOM CABLE AND CONDUIT FROM THE CCU UNIT TO CONTROLLERS AND MAXICOM PULL BOXES REGARDLESS OF LENGTH OF RUN. VERIFY LENGTH PRIOR TO BID. NO ADDITIONAL COMPENSATION ALLOWED.
5. CONTRACTOR SHALL COORDINATE POWER UP OF ALL DEVICES AND SHALL COORDINATE WITH UGT TO CERTIFY THE FLOW SENSING, BOOSTER PUMP, AND COMMUNICATION, PRIOR TO THE START OF THE ESTABLISHMENT & MAINTENANCE PHASE(S).
6. CONTRACTOR SHALL PROVIDE A GROUNDED WATERPROOF OUTLET WITHIN ENCLOSURES.

CONTROLLER "A" MAXIMUM FLOW 53 GPM.
CONTROLLER "B" MAXIMUM FLOW 45 GPM.

INSTALL AUTOMATIC CONTROLLER AND/OR CCU UNIT ENCLOSURE ON A CONCRETE PAD (SEE IRRIGATION DETAILS SHEET). CONTRACTOR SHALL COORDINATE FINAL CONTROLLER(S) LOCATION WITH THE OWNER.

SEE ADDITIONAL IRRIGATION NOTES.

UNITED GREEN TECH
23372 SOUTH POINTE DRIVE, SUITE A
LAGUNA HILLS, CALIFORNIA 92653
(949) 837-4737

ADDITIONAL IRRIGATION NOTES

CONTRACTOR SHALL ALLOW FOR ON-SITE MODIFICATION OF TREE LOCATIONS AND ALLOW IN THE BID PRICE FOR MINOR ADJUSTMENTS IN THE FINAL LOCATION OF TREE AND SHRUB BUBBLERS.

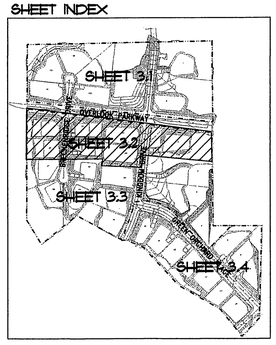
CONTRACTOR SHALL REVIEW VALVE SEQUENCING WITH OWNER AND LANDSCAPE ARCHITECT TO OBTAIN APPROVAL OF SEQUENCING PLAN PRIOR TO INSTALLATION.

NOTES:

1. ALL PIPING SHALL MEET IAPMO AND NSF STANDARDS FOR PVC TYPE 1, GRADE 1 PIPE
2. CONTACT GRISWOLD IRRIGATION (714) 559-6000 PRIOR TO MASTER VALVE INSTALLATION FOR FIELD INSTRUCTION.
3. FOR GENERAL IRRIGATION NOTES REFER TO CIVIL ENGINEER SPECIFICATION MANUAL
4. PIPE ROUTING IS DIAGRAMMATIC, LOCATE ALL PIPING IN PLANTER AREAS WHEREVER POSSIBLE.
5. CONTRACTOR SHALL LOCATE CARSON INDUSTRIAL PULL BOXES AT 200' O.C. MAX. IN SHRUB AREAS ALONG MAINLINE WITH A 36" EXPANSION LOOP OF ALL CONTROL AND COMMON WIRES.

NOTE: USE RAINBIRD 1800 PCS SCREEN AND VAN NOZZLES WHERE REQUIRED TO ACHIEVE PROPER COVERAGE AND AVOID OVER SPRAY ONTO STREET.

SHEET INDEX



* REFER TO SHEET 3.1 FOR ADDITIONAL NOTES AND LEGENDS

HOMEOWNER IRRIGATION CONTROLLER
CONTRACTOR TO SUPPLY IRRIGATION CONTROLLER AT EACH RESIDENCE. CONTROLLER SHALL BE IRRITROL RAIN DIAL SERIES (RD600-INT) 6 STATION. CONTRACTOR SHALL VERIFY TOTAL NUMBER OF VALVES PER BUILDING PARCEL PRIOR TO INSTALLATION OF CONTROLLER. IF TOTAL NUMBER OF VALVES FOR EACH PARCEL EXCEEDS 6, CONTRACTOR SHALL SUPPLY A 9 OR 12 STATION RAIN DIAL (RD900-INT OR RD1200-INT) CONTROLLER. CONTOLLER TO BE LOCATED WITHIN BUILDING GARAGE UNLESS DIRECTED OTHERWISE BY OWNER.

NORTH

IMPORTANT NOTICE
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CALL TOLL FREE
48 HOURS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT
1-800-227-2600

City of Riverside
WATER SYSTEM
APPROVED BY _____ DATE 7/6/06

City of Riverside
PUBLIC UTILITY DEPARTMENT
OVERHEAD AND UNDERGROUND
APPROVED BY _____ DATE 6/06

LANDSCAPE ARCHITECT IN RESPONSIBLE CHARGE
ROBERT B. CLARK
RLA 4233 expires 12/31/06
DATE 6/28/06

REGISTERED LANDSCAPE ARCHITECT ROBERT B. CLARK No. 4233 STATE OF CALIFORNIA
Signature 12-31-06
Renewal Date
Date 6/28/06

MARK	REVISIONS	APPR.	DATE
1	WALL AND FENCE CHANGES PER OWNERS REQUEST		MARCH 1 2005
2	WALL, FENCE, PLANTING CHANGES PER OWNERS REQUEST		MAY 26 2005

DESIGNED BY KL/BC DRAWN BY JC/EM/KL CHECKED BY KL/BC

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
P.W. PRINCIPAL ENGINEER		7/6/06
P.W. STREET SERVICES		7/6/06
PLANNING DIVISION		6/06

APPROVED BY _____
CITY ENGINEER
DATE 7/19/06

PH 1 LANDSCAPE PLANS
TR 29515
IRRIGATION PLAN

SCALE: 1" = 40'

ACCT. NO.
PWS-PC-03-3001-RF1
R-3892-RL
PW06-0110

SHEET 3.2 OF 32

INDEXED 8-14-06 GH

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MATCHLINE SEE SHEET 3.2

MATCHLINE SEE SHEET 3.2

MATCHLINE SEE SHEET 3.2

MATCHLINE SEE SHEET 3.4

MATCHLINE SEE SHEET 3.4

LIMIT OF WORK

LIMIT OF WORK

LIMIT OF WORK

LIMIT OF WORK

HOMEOWNER IRRIGATION CONTROLLER

CONTRACTOR TO SUPPLY IRRIGATION CONTROLLER AT EACH RESIDENCE. CONTROLLER SHALL BE IRRITROL RAIN DIAL SERIES (RD600–INT) 6 STATION. CONTRACTOR SHALL VERIFY TOTAL NUMBER OF VALVES PER BUILDING PARCEL PRIOR TO INSTALLATION OF CONTROLLER. IF TOTAL NUMBER OF VALVES FOR EACH PARCEL EXCEEDS 6, CONTRACTOR SHALL SUPPLY A 9 OR 12 STATION RAIN DIAL (RD900–INT OR RD1200–INT) CONTROLLER. CONTOLLER TO BE LOCATED WITHIN BUILDING GARAGE UNLESS DIRECTED OTHERWISE BY OWNER.

PULL BOX WITH CONTROLLER WIRES (P)

CONTRACTOR SHALL PROVIDE AN APPROVED PULL BOX AT THIS LOCATION WITH (2) EXTRA CONTROL WIRES AND ONE COMMON WIRE FROM CONTROLLER "B". THE PULL BOX SHALL HAVE 36" OF CONTINUOUS WIRE IN A LOOP, BE BUNDLED AND LABELED "FOR FUTURE USE" WITH PERMANENT LABEL SYSTEM.

PULL BOX WITH CONTROLLER WIRES (P)

CONTRACTOR SHALL PROVIDE AN APPROVED PULL BOX AT THIS LOCATION WITH (2) EXTRA CONTROL WIRES AND ONE COMMON WIRE FROM CONTROLLER "B". THE PULL BOX SHALL HAVE 36" OF CONTINUOUS WIRE IN A LOOP, BE BUNDLED AND LABELED "FOR FUTURE USE" WITH PERMANENT LABEL SYSTEM.

PULL BOX WITH CONTROLLER WIRES (P)

CONTRACTOR SHALL PROVIDE AN APPROVED PULL BOX AT THIS LOCATION WITH (1) EXTRA CONTROL WIRES AND ONE COMMON WIRE FROM CONTROLLER "E". THE PULL BOX SHALL HAVE 36" OF CONTINUOUS WIRE IN A LOOP, BE BUNDLED AND LABELED "FOR FUTURE USE" WITH PERMANENT LABEL SYSTEM.

PULL BOX WITH PAIGE CABLE (P)

CONTRACTOR SHALL PROVIDE AN APPROVED PULL BOX AT THIS LOCATION WITH (1) PAIGE ELECTRIC CABLE P7171–D FROM CONTROLLER "C". THE PULL BOX SHALL HAVE 36" OF CONTINUOUS WIRE IN A LOOP, BE BUNDLED AND LABELED "FOR FUTURE USE" WITH PERMANENT LABEL SYSTEM.

REFER TO SHEET 3.4 FOR IRRIGATION EQUIPMENT LEGEND

IRRIGATION CONTROLLER

(C+D) RAINBIRD 24+24 STATION, ESP–SAT CONTROLLER MOUNTED WITHIN A 18" WIDE, FRONT AND REAR ENTRY, UNITED GREEN TECH (UGT), STAINLESS STEEL ENCLOSURE, MODEL NUMBER:
SA2–RB1–24+24 / FS–200 / MVR / MSP / LPP / TRC–RC2AT
WITH FLOW SENSOR, MASTER VALVE RELAY, MAXICOM SURGE PROTECTION, LINE PRIMARY PROTECTION AND ANTENNA ASSEMBLIES. (FOR FUTURE INSTALLATION OF "D" CONTROLLER)

1. CONTRACTOR SHALL APPLY FOR ELECTRICAL PERMIT AND IS RESPONSIBLE FOR PAYING ALL FEES AND COSTS ASSOCIATED WITH PERMIT, PURCHASE AND SETTING OF ELECTRICAL METER.
2. CONTRACTOR SHALL PROVIDE AND INSTALL ALL NECESSARY CONDUITS, SWEEP, CONDUCTORS ETC. FROM ELECTRICAL STUB TO THE ELECTRICAL METER REGARDLESS OF LENGTH OF RUN. VERIFY LENGTH PRIOR TO BID. NO ADDITIONAL COMPENSATION ALLOWED.
3. CONTRACTOR SHALL PROVIDE AND INSTALL ALL NECESSARY CONDUITS, SWEEP, CONDUCTORS ETC. FROM ELECTRICAL METER TO IRRIGATION CONTROLLERS AND CCU UNIT REGARDLESS OF LENGTH OF RUN. VERIFY LENGTH PRIOR TO BID. NO ADDITIONAL COMPENSATION ALLOWED.
4. CONTRACTOR SHALL INSTALL AND CONNECT THE MAXICOM CABLE AND CONDUIT FROM THE CCU UNIT TO CONTROLLERS AND MAXICOM PULL BOXES REGARDLESS OF LENGTH OF RUN. VERIFY LENGTH PRIOR TO BID. NO ADDITIONAL COMPENSATION ALLOWED.
5. CONTRACTOR SHALL COORDINATE POWER UP OF ALL DEVICES AND SHALL COORDINATE WITH JDL TO CERTIFY THE FLOW SENSING, BOOSTER PUMP, AND COMMUNICATION, PRIOR TO THE START OF THE ESTABLISHMENT & MAINTENANCE PHASE(S).
6. CONTRACTOR SHALL PROVIDE A GROUNDED WATERPROOF OUTLET WITHIN ENCLOSURES.

CONTROLLER "C" MAXIMUM FLOW 48 GPM.

CONTROLLER "D" FOR FUTURE USE (PHASE 2).

INSTALL AUTOMATIC CONTROLLER AND/OR CCU UNIT ENCLOSURE ON A CONCRETE (SEE IRRIGATION DETAIL SHEET FOR ADDITIONAL INFORMATION).
CONTRACTOR SHALL COORDINATE FINAL CCU AND CONTROLLER(S) LOCATION WITH THE OWNER.

SEE ADDITIONAL IRRIGATION NOTES SHEET 5.0

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JOHN DEERE LANDSCAPES
23372 SOUTH POINTE DRIVE, SUITE A
LAGUNA HILLS, CALIFORNIA 92653
(949) 837–4737

* REFER TO SHEET 3.1 FOR ADDITIONAL NOTES AND LEGENDS

CLUSTER CONTROL UNITS

(CCU) RAINBIRD_C28 STATION, CLUSTER CONTROL UNIT MOUNTED WITHIN A 16" WIDE, TOP ENTRY, UNITED GREEN TECH (UGT), STAINLESS STEEL ENCLOSURE, MODEL NUMBER:
SA6–RB1–C28 / MSP / LPP
WITH MAXICOM SURGE PROTECTION AND LINE PRIMARY PROTECTION ASSEMBLIES.

1. CONTRACTOR SHALL APPLY FOR ELECTRICAL PERMIT AND IS RESPONSIBLE FOR PAYING ALL FEES AND COSTS ASSOCIATED WITH PERMIT, PURCHASE AND SETTING OF ELECTRICAL METER.
2. CONTRACTOR SHALL PROVIDE AND INSTALL ALL NECESSARY CONDUITS, SWEEP, CONDUCTORS ETC. FROM ELECTRICAL STUB TO THE ELECTRICAL METER REGARDLESS OF LENGTH OF RUN. VERIFY LENGTH PRIOR TO BID. NO ADDITIONAL COMPENSATION ALLOWED.
3. CONTRACTOR SHALL PROVIDE AND INSTALL ALL NECESSARY CONDUITS, SWEEP, CONDUCTORS ETC. FROM ELECTRICAL METER TO IRRIGATION CONTROLLERS AND CCU UNIT REGARDLESS OF LENGTH OF RUN. VERIFY LENGTH PRIOR TO BID. NO ADDITIONAL COMPENSATION ALLOWED.
4. CONTRACTOR SHALL INSTALL AND CONNECT THE MAXICOM CABLE AND CONDUIT FROM THE CCU UNIT TO CONTROLLERS AND MAXICOM PULL BOXES REGARDLESS OF LENGTH OF RUN. VERIFY LENGTH PRIOR TO BID. NO ADDITIONAL COMPENSATION ALLOWED.
5. CONTRACTOR SHALL COORDINATE POWER UP OF ALL DEVICES AND SHALL COORDINATE WITH UGT TO CERTIFY THE FLOW SENSING, BOOSTER PUMP, AND COMMUNICATION, PRIOR TO THE START OF THE ESTABLISHMENT & MAINTENANCE PHASE(S).
6. CONTRACTOR SHALL PROVIDE A GROUNDED WATERPROOF OUTLET WITHIN ENCLOSURES.
INSTALL AUTOMATIC CONTROLLER AND/OR CCU UNIT ENCLOSURE ON A 6" THICK CONCRETE PAD AND ALLOW 4" CLR. ON ALL SIDES.
INSTALL ELECTRICAL METER PER ELECTRICAL ENG. PLAN.
CONTRACTOR SHALL COORDINATE FINAL ELEC. METER, CCU AND CONTROLLER(S) LOCATION WITH THE OWNER.

SEE ADDITIONAL IRRIGATION NOTES SHEET 5.0.

COMPUTER CABLE

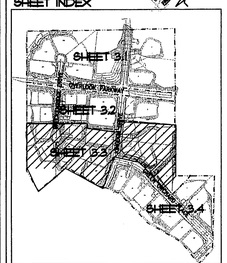
INSTALL MAXICOM WIRE: PAIGE ELECTRIC MODEL NO. P7072 OR APPROVED EQUAL, IN SAME TRENCH AS MAINLINE, INSTALL A CARSON INDUSTRY PULL BOX MODEL 1419–13B, MARKED "ELECTRIC". LEAVE A 36" EXPANSION LOOP INSIDE BOX (TYP.).
NOTE: PULL BOXES SHALL BE LOCATED EVERY 200' AND AT EACH SIDE OF ROAD CROSSING.
CABLE CONTINUES TO A RAINBIRD CCU UNIT AND/OR PULL BOX AS SHOWN ON PLAN.
REFER TO DETAILS.

(T) TELEPHONE HOOKUPS FOR CCU

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE BUSINESS TELEPHONE JACK AND ALL CONNECTION FEES, COORDINATION AND APPLICATION TO THE LOCAL PHONE COMPANY FOR EACH TELEPHONE CONNECTION REQUIRED FOR THE CENTRAL CONTROL SYSTEM FIELD UNITS INDICATED ON IRRIGATION PLANS. THE BILLING PARTY DESIGNATION SHALL BE TRANSFERRED TO THE OWNER DESIGNATED ENTITY AT COMPLETION OF THE PROJECT BY THE OWNER OR THE OWNER DESIGNATED ENTITY.
(2) PHONE LINES REQUIRED. INSTALL PHONE LINES 24" BELOW FINISH GRADE WITH PULL ROPE. CONTRACTOR TO COORDINATE WITH LOCAL PHONE COMPANY.

UNITED GREEN TECH
23372 SOUTH POINTE DRIVE, SUITE A
LAGUNA HILLS, CALIFORNIA 92653
(949) 837–4737

SHEET INDEX



NORTH

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CALL TOLL FREE
48 HOURS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT
1–800–227–2600

City of Riverside
WATER SYSTEM
APPROVED BY _____ DATE 7/6/06

City of Riverside
PUBLIC UTILITY DEPARTMENT
OVERHEAD AND UNDERGROUND
APPROVED BY _____ DATE 6/06

LANDSCAPE ARCHITECT IN RESPONSIBLE CHARGE
ROBERT B. CLARK
RLA 4233 expires 12/31/06
DATE 6/28/06

REGISTERED LANDSCAPE ARCHITECT ROBERT B. CLARK No. 4233 STATE OF CALIFORNIA
Signature 6/28/06
12–31–06
Renewal Date
6/28/06
Date

MARK	REVISIONS	APPR.	DATE
1	WALL AND FENCE CHANGES PER OWNERS REQUEST		MARCH 1 2006
2	WALL, FENCE, PLANTING CHANGES PER OWNERS REQUEST		MAY 30 2006

DESIGNED BY KL/BC DRAWN BY JC/EM/KL CHECKED BY KL/BC

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
P.W. PRINCIPAL ENGINEER		7/19/06
P.W. STREET SERVICES		7/19/06
PLANNING DIVISION		6/29/06

APPROVED BY _____
CITY ENGINEER
DATE 7/19/06

PH 1 LANDSCAPE PLANS
TR 29515
IRRIGATION PLAN

SCALE: 1" = 40'

ACCT. NO.
PWS-PC-03-3001-RFI
R-3892-RL
PW06-0110

SHEET 3.3 OF 32

INDEXED 8-14-06 GH

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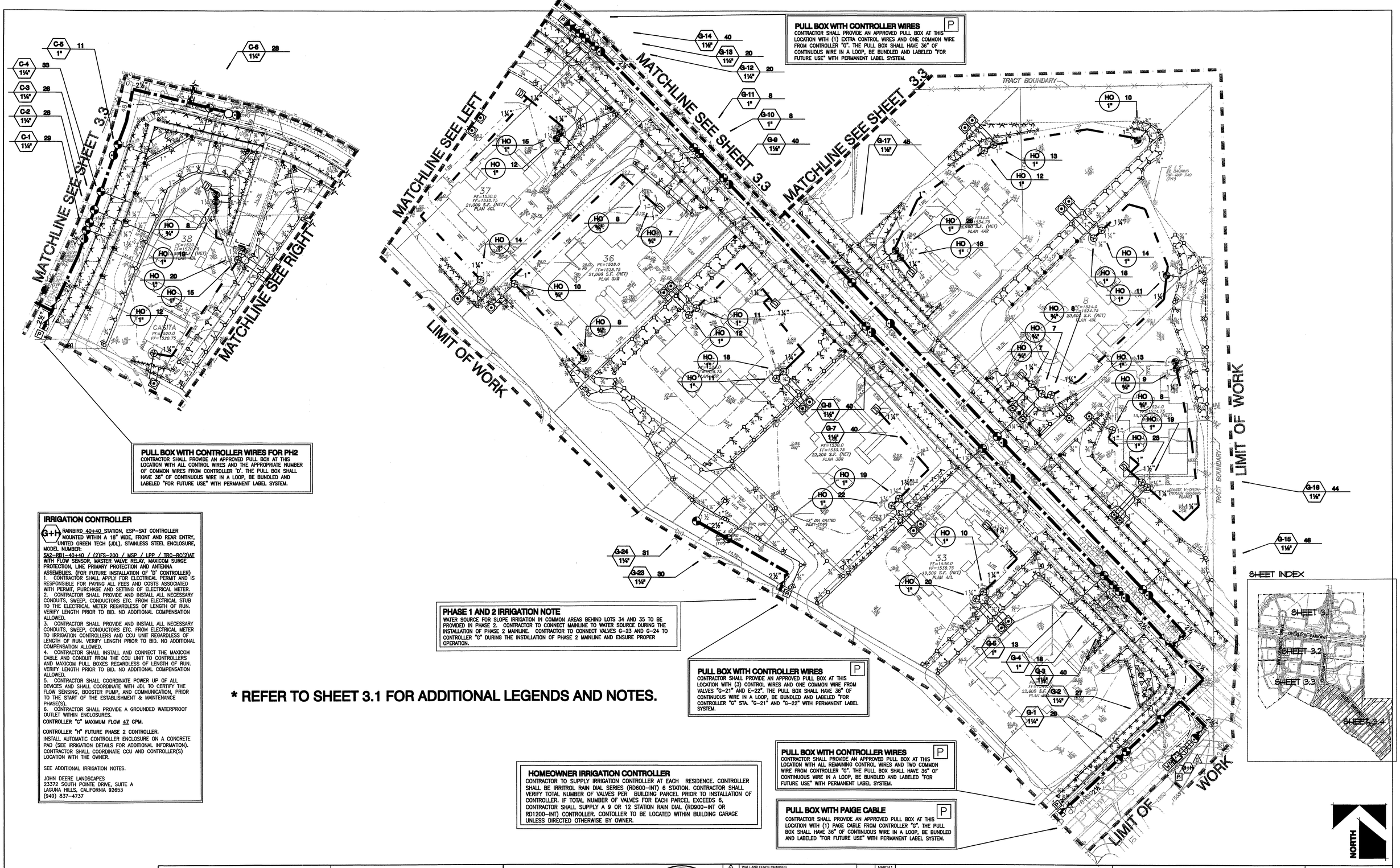

PULL BOX WITH CONTROLLER WIRES FOR PH2
CONTRACTOR SHALL PROVIDE AN APPROVED PULL BOX AT THIS LOCATION WITH ALL CONTROL WIRES AND THE APPROPRIATE NUMBER OF COMMON WIRES FROM CONTROLLER 'D'. THE PULL BOX SHALL HAVE 36" OF CONTINUOUS WIRE IN A LOOP, BE BUNDLED AND LABELED "FOR FUTURE USE" WITH PERMANENT LABEL SYSTEM.

PULL BOX WITH CONTROLLER WIRES P
CONTRACTOR SHALL PROVIDE AN APPROVED PULL BOX AT THIS LOCATION WITH (1) EXTRA CONTROL WIRES AND ONE COMMON WIRE FROM CONTROLLER "G". THE PULL BOX SHALL HAVE 36" OF CONTINUOUS WIRE IN A LOOP, BE BUNDLED AND LABELED "FOR FUTURE USE" WITH PERMANENT LABEL SYSTEM.

IRRIGATION CONTROLLER

G+H RAINBIRD 40+40 STATION, ESP-SAT CONTROLLER MOUNTED WITHIN A 18" WIDE, FRONT AND REAR ENTRY, UNITED GREEN TECH (JDL), STAINLESS STEEL ENCLOSURE, MODEL NUMBER:
SA2-RB1-40+40 / (2)FS-200 / MSP / LPP / TRC-RC(2)AT WITH FLOW SENSOR, MASTER VALVE RELAY, MAXICOM SURGE PROTECTION, LINE PRIMARY PROTECTION AND ANTENNA ASSEMBLIES. (FOR FUTURE INSTALLATION OF 'D' CONTROLLER)

1. CONTRACTOR SHALL APPLY FOR ELECTRICAL PERMIT AND IS RESPONSIBLE FOR PAYING ALL FEES AND COSTS ASSOCIATED WITH PERMIT, PURCHASE AND SETTING OF ELECTRICAL METER.
2. CONTRACTOR SHALL PROVIDE AND INSTALL ALL NECESSARY CONDUITS, SWEEP, CONDUCTORS ETC. FROM ELECTRICAL STUB TO THE ELECTRICAL METER REGARDLESS OF LENGTH OF RUN. VERIFY LENGTH PRIOR TO BID. NO ADDITIONAL COMPENSATION ALLOWED.
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6. CONTRACTOR SHALL PROVIDE A GROUNDED WATERPROOF OUTLET WITHIN ENCLOSURES.

CONTROLLER "G" MAXIMUM FLOW 47 GPM.

CONTROLLER "H" FUTURE PHASE 2 CONTROLLER.

INSTALL AUTOMATIC CONTROLLER ENCLOSURE ON A CONCRETE PAD (SEE IRRIGATION DETAILS FOR ADDITIONAL INFORMATION). CONTRACTOR SHALL COORDINATE CCU AND CONTROLLER(S) LOCATION WITH THE OWNER.

SEE ADDITIONAL IRRIGATION NOTES.

JOHN DEERE LANDSCAPES
23372 SOUTH POINTE DRIVE, SUITE A
LAGUNA HILLS, CALIFORNIA 92653
(949) 837-4737

PHASE 1 AND 2 IRRIGATION NOTE
WATER SOURCE FOR SLOPE IRRIGATION IN COMMON AREAS BEHIND LOTS 34 AND 35 TO BE PROVIDED IN PHASE 2. CONTRACTOR TO CONNECT MAINLINE TO WATER SOURCE DURING THE INSTALLATION OF PHASE 2 MAINLINE. CONTRACTOR TO CONNECT VALVES G-23 AND G-24 TO CONTROLLER "G" DURING THE INSTALLATION OF PHASE 2 MAINLINE AND ENSURE PROPER OPERATION.

PULL BOX WITH CONTROLLER WIRES P
CONTRACTOR SHALL PROVIDE AN APPROVED PULL BOX AT THIS LOCATION WITH (3) CONTROL WIRES AND ONE COMMON WIRE FROM VALVES "G-21" AND E-22". THE PULL BOX SHALL HAVE 36" OF CONTINUOUS WIRE IN A LOOP, BE BUNDLED AND LABELED "FOR CONTROLLER "G" STA. "G-21" AND "G-22" WITH PERMANENT LABEL SYSTEM.

PULL BOX WITH CONTROLLER WIRES P
CONTRACTOR SHALL PROVIDE AN APPROVED PULL BOX AT THIS LOCATION WITH ALL REMAINING CONTROL WIRES AND TWO COMMON WIRE FROM CONTROLLER "G". THE PULL BOX SHALL HAVE 36" OF CONTINUOUS WIRE IN A LOOP, BE BUNDLED AND LABELED "FOR FUTURE USE" WITH PERMANENT LABEL SYSTEM.

PULL BOX WITH PAIGE CABLE P
CONTRACTOR SHALL PROVIDE AN APPROVED PULL BOX AT THIS LOCATION WITH (1) PAGE CABLE FROM CONTROLLER "G". THE PULL BOX SHALL HAVE 36" OF CONTINUOUS WIRE IN A LOOP, BE BUNDLED AND LABELED "FOR FUTURE USE" WITH PERMANENT LABEL SYSTEM.

HOMEOWNER IRRIGATION CONTROLLER
CONTRACTOR TO SUPPLY IRRIGATION CONTROLLER AT EACH RESIDENCE. CONTROLLER SHALL BE IRRITROL RAIN DIAL SERIES (RD600-INT) 6 STATION. CONTRACTOR SHALL VERIFY TOTAL NUMBER OF VALVES PER BUILDING PARCEL PRIOR TO INSTALLATION OF CONTROLLER. IF TOTAL NUMBER OF VALVES FOR EACH PARCEL EXCEEDS 6, CONTRACTOR SHALL SUPPLY A 9 OR 12 STATION RAIN DIAL (RD900-INT OR RD1200-INT) CONTROLLER. CONTOLLER TO BE LOCATED WITHIN BUILDING GARAGE UNLESS DIRECTED OTHERWISE BY OWNER.

*** REFER TO SHEET 3.1 FOR ADDITIONAL LEGENDS AND NOTES.**

NORTH

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48 HOURS BEFORE YOU DIG
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1-800-227-2600

City of Riverside
WATER SYSTEM
MWM — APPROVED BY — 7/14/06 — DATE

City of Riverside
PUBLIC UTILITY DEPARTMENT
OVERHEAD AND UNDERGROUND
APPROVED BY — 6/06 DATE

LANDSCAPE ARCHITECT IN RESPONSIBLE CHARGE
ROBERT B. CLARK
RLA 4233 expires 12/31/06
DATE 6/28/06

REGISTERED LANDSCAPE ARCHITECT — ROBERT B. CLARK — Signature 12-31-06 Renewal Date — STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
1	WALL AND FENCE CHANGES PER OWNERS REQUEST		MARCH 1 2006
2	WALL, FENCE, PLANTING CHANGES PER OWNERS REQUEST		MAY 26 2006

DESIGNED BY KL/BC DRAWN BY JC/EM/KL CHECKED BY KL/BC

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY		DATE
P.W. PRINCIPAL ENGINEER	RBS	7/18/06
P.W. STREET SERVICES	DB	7/25/06
PLANNING DIVISION	[illegible]	[illegible]

APPROVED BY — CITY ENGINEER — DATE 7/19/06

PH 1 LANDSCAPE PLANS
TR 29515
IRRIGATION PLAN

SCALE: 1" = 40'

ACCT. NO.
PWS-PC-03-3001-RF1
R-3892-RL
PW06-0110

SHEET 3.4 OF 32

INDEXED 8-14-06 gtl

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LIMIT OF WORK

LIMIT OF WORK

LIMIT OF WORK

TRACT BOUNDARY

TRACT BOUNDARY

BRUCEVANDRIDGE DRIVE

KINGDOM DRIVE

101
PE=1435.0
FF=1435.75
21,000 S.F. (NET)
PLAN 1CR

102
PE=1435.0
FF=1435.75
21,000 S.F. (NET)
PLAN 1CR

103
PE=1455.0
FF=1455.75
24,000 S.F. (NET)
PLAN 2CR

104
PE=1455.0
FF=1455.75
24,000 S.F. (NET)
PLAN 2CR

1
PE=1450.0
FF=1450.75
21,000 S.F. (NET)
PLAN 1CR

2
PE=1460.0
FF=1460.75
21,000 S.F. (NET)
PLAN 4CL

CASITA
PE=1460.0
FF=1460.75

PLAN 4AR

PC = 68+90.14

PROPOSED V-DITCH PER DETAIL (SEE LEFT)

B-5
W=8"
S=0.5%

FILL AREA TO DRAIN

5' X 5' (2 BACKING 90°-BUF PAD (TYP.)

6" P/C PIPE (TYP.)

13" DIA GRATED INLET (TYP.)

2:1 SLOPE

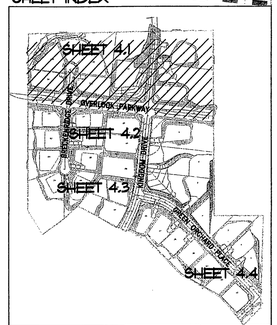
4:1 SLOPE

A-37
¾"
1

A-31
¾"
1

MATCHLINE SEE SHEET 4.2

SHEET INDEX



NORTH

CAGNEY RANCH - TRACT 29515
PRESSURE LOSS DATA — **VALVE C-20**

1.	STATIC PRESSURE @ POINT OF CONNECTION			**82.00** PSI
2.	POINT OF CONNECTION ELEV. sta. 1500.00 FT.			
	PVB 0.00			
3.	REMOTE CONTROL VALVE ELEV. 1510.00 FT.			
	HIGHEST NOZZLE ELEVATION sta. 1521.00 FT.			
4.	STATIC PRESSURE @ RC VALVE			77.67 PSI
5.	MAX. SYSTEM FLOW REQUIRED		48.00 GPM	
6.	PRESSURE LOSS @ VALVE **C-20**			
	2" WATER METER		26.00 GPM	1.00 PSI
	2" MASTER VALVE		26.00 GPM	1.00 PSI
	2" BACKFLOW PREVENTER		26.00 GPM	13.00 PSI
	FLOW SENSOR		26.00 GPM	1.00 PSI
	2" MAIN LINE	0.00' FT.	20 GPM	0.00 PSI
	2.5" MAIN LINE	220.00' FT.	25 GPM	0.51 PSI
	GATE/BALL VALVE		26.00 GPM	1.00 PSI
	AIR VALVE		0.00 GPM	0.00 PSI
	REMOTE CONTROL VALVE		26.00 GPM	2.80 PSI
	LATERAL LINE	140.00 FT.		3.08 PSI
	HEADS PSI REQUIRED			35.00 PSI
	10% PSI LOSS THROUGH ALL FITTINGS			6.84 PSI
	ELEVATION CHANGE (PRESSURE LOSS/GAIN)			0.00 PSI GAIN
				9.09 PSI LOSS
			SUBTOTAL	74.32 PSI
	10% CONTINGENCY			7.43 PSI
			TOTAL FRICTION LOSS	**81.75** PSI
			AVAILABLE PRESSURE	**82.00**
			RESIDUAL PRESSURE	**0.25**

#SEE SHEET 3.4 FOR VALVE LOCATION.

CAGNEY RANCH - TRACT 29515
PRESSURE LOSS DATA 09-07-05 — **VALVE G-20**

1.	STATIC PRESSURE @ POINT OF CONNECTION			**63.00** PSI
2.	POINT OF CONNECTION ELEV. sta. 1545.00 FT.			
	PVB 1547.00			
3.	REMOTE CONTROL VALVE ELEV. 1530.00 FT.			
	HIGHEST NOZZLE ELEVATION sta. 1532.00 FT.			
4.	STATIC PRESSURE @ RC VALVE			69.50 PSI
5.	MAX. SYSTEM FLOW REQUIRED		47.00 GPM	
6.	PRESSURE LOSS @ VALVE **G-20**			
	2" WATER METER		30.00 GPM	1.00 PSI
	2" MASTER VALVE		30.00 GPM	1.00 PSI
	2" BACKFLOW PREVENTER		30.00 GPM	4.00 PSI
	FLOW SENSOR		30.00 GPM	1.00 PSI
	2" MAIN LINE	0.00' FT.	0 GPM	0.00 PSI
	2.5" MAIN LINE	950.00' FT.	30 GPM	2.85 PSI
	GATE/BALL VALVE		30.00 GPM	3.00 PSI
	AIR VALVE		0.00 GPM	0.00 PSI
	REMOTE CONTROL VALVE		30.00 GPM	2.90 PSI
	LATERAL LINE	290.00 FT.		4.50 PSI
	HEADS PSI REQUIRED			35.00 PSI
	10% PSI LOSS THROUGH ALL FITTINGS			6.52 PSI
	ELEVATION CHANGE (PRESSURE LOSS/GAIN)			-5.63 PSI GAIN
				0.00 PSI LOSS
			SUBTOTAL	56.14 PSI
	10% CONTINGENCY			5.61 PSI
			TOTAL FRICTION LOSS	**61.75** PSI
			AVAILABLE PRESSURE	**63.00**
			RESIDUAL PRESSURE	**1.25**

#SEE SHEET 3.3 FOR VALVE LOCATION.

IRRIGATION BUBBLER LEGEND

HEAD SYMBOL LEGEND	MAKER	MODEL NUMBER-DESCRIPTION	NOZZLE	PATTERN	GPH	PSI	RADIUS
□	RAINBIRD	XERI-BUG EMITTER	XBT-20	DRIP	2	25	BUB

SYMBOL LEGEND	MAKER	MODEL NUMBER-DESCRIPTION
⊕	RAINBIRD	PEB-PRS-B SERIES PRESSURE REDUCING REMOTE CONTROL VALVE, SEE PLAN FOR SIZE
—— ——	APPROVED	UVR-PVC SCH 40 BROWNLINE OR APPROVED EQUAL.
——	APPROVED	PVC CLASS 200 LATERAL LINE, SEE PLAN FOR SIZE.
+	PROPOSED	TREE LOCATION PER TREE PLANTING PLAN SHEETS

REFER TO CITY OF RIVERSIDE STANDARD IRRIGATION DETAILS & SPECIFICATIONS.

IMPORTANT NOTICE
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CALL TOLL FREE
48 HOURS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT
1-800-227-2600

City of Riverside
WATER SYSTEM
APPROVED BY _____ DATE 7/6/06

City of Riverside
PUBLIC UTILITY DEPARTMENT
OVERHEAD AND UNDERGROUND
APPROVED BY _____ DATE 6/06

LANDSCAPE ARCHITECT IN RESPONSIBLE CHARGE
ROBERT B. CLARK
RLA 4233 expires 12/31/06
DATE 6/28/06

REGISTERED LANDSCAPE ARCHITECT — ROBERT B. CLARK — Signature 12-31-06 Renewal Date 6/28/06 Date — STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
1	WALL AND FENCE CHANGES PER OWNERS REQUEST		MARCH 1 2006
2	WALL, FENCE, PLANTING CHANGES PER OWNERS REQUEST		MAY 26 2006

DESIGNED BY KL/BC DRAWN BY JC/EM/KL CHECKED BY KL/BC

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
P.W. PRINCIPAL ENGINEER		7/19/06
P.W. STREET SERVICES		7/19/06
PLANNING DIVISION		6/28/06

APPROVED BY _____
CITY ENGINEER
DATE 7/19/06

PH 1 LANDSCAPE PLANS
TR 29515
TREE BUBBLER PLAN

SCALE: 1" = 40'

ACCT. NO.
PWS-PC-03-3001-RF1
R-3892-RL
PW06-0110

SHEET 4.1 OF 32

INDEXED 8-14-06 GH

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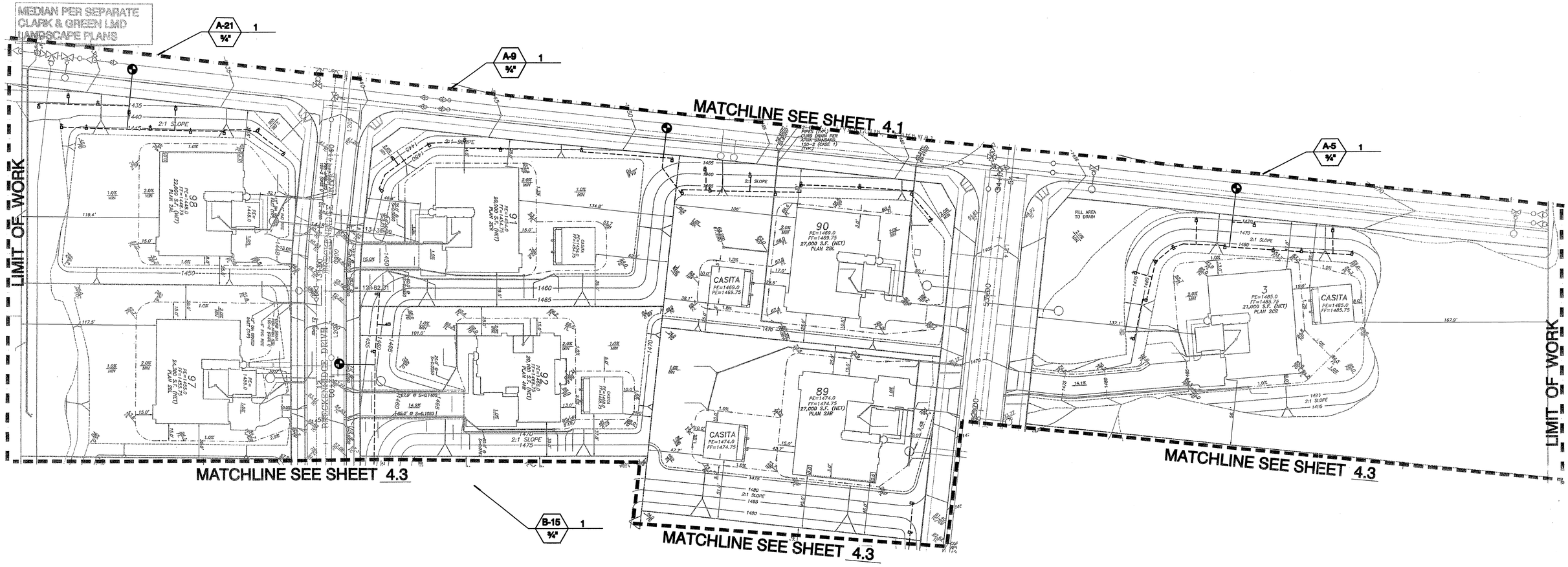
MEDIAN PER SEPARATE CLARK & GREEN LMD LANDSCAPE PLANS



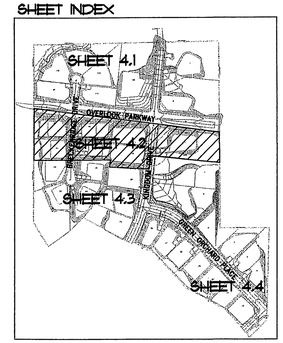
CAGNEY RANCH - TRACT 29515 PRESSURE LOSS DATA 09-07-05		VALVE	A-18
1.	STATIC PRESSURE @ POINT OF CONNECTION		103.00 PSI
2.	POINT OF CONNECTION ELEV. sta.90+75	1455.00 FT.	
	PVB	0.00	
3.	REMOTE CONTROL VALVE ELEV.	1485.00 FT.	
	HIGHEST NOZZLE ELEVATION sta. 98+07	1488.00 FT.	
4.	STATIC PRESSURE @ RC VALVE		90.01 PSI
5.	MAX. SYSTEM FLOW REQUIRED	53.00 GPM	
6.	PRESSURE LOSS @ VALVE A-18		
	2" WATER METER	10.00 GPM	1.00 PSI
	2" MASTER VALVE	10.00 GPM	1.00 PSI
	2" BACKFLOW PREVENTER	10.00 GPM	13.00 PSI
	FLOW SENSOR	10.00 GPM	1.00 PSI
	3" MAIN LINE 0.00' FT.	39 GPM	0.00 PSI
	2.5" MAIN LINE 755.00' FT.	10 GPM	0.30 PSI
	GATE/BALL VALVE	10.00 GPM	1.00 PSI
	AIR VALVE	0.00 GPM	0.00 PSI
	REMOTE CONTROL VALVE	10.00 GPM	3.50 PSI
	LATERAL LINE 140.00 FT.		4.16 PSI
	HEADS PSI REQUIRED		35.00 PSI
	10% PSI LOSS THROUGH ALL FITTINGS		7.00 PSI
	ELEVATION CHANGE (PRESSURE LOSS/GAIN)		0.00 PSI GAIN
			14.29 PSI LOSS
		SUBTOTAL	81.25 PSI
	10% CONTINGENCY		8.12 PSI
		TOTAL FRICTION LOSS	89.37 PSI
		AVAILABLE PRESSURE	103.00
		RESIDUAL PRESSURE	13.63

*SEE SHEET 3.2 FOR VALVE LOCATION.

CAGNEY RANCH - TRACT 29515 PRESSURE LOSS DATA 09-07-05		VALVE	B-30
1.	STATIC PRESSURE @ POINT OF CONNECTION		103.00 PSI
2.	POINT OF CONNECTION ELEV. sta.90+75	1455.00 FT.	
	PVB	0.00	
3.	REMOTE CONTROL VALVE ELEV.	1485.00 FT.	
	HIGHEST NOZZLE ELEVATION sta. 48+60	1511.00 FT.	
4.	STATIC PRESSURE @ RC VALVE		90.01 PSI
5.	MAX. SYSTEM FLOW REQUIRED	45.00 GPM	
6.	PRESSURE LOSS @ VALVE B-30		
	2" WATER METER	15.00 GPM	1.00 PSI
	2" MASTER VALVE	15.00 GPM	1.00 PSI
	2" BACKFLOW PREVENTER	15.00 GPM	13.00 PSI
	FLOW SENSOR	15.00 GPM	1.00 PSI
	2.5" MAIN LINE 0.00' FT.	30 GPM	0.00 PSI
	2.5" MAIN LINE 870.00' FT.	15 GPM	0.78 PSI
	GATE/BALL VALVE	15.00 GPM	2.00 PSI
	AIR VALVE	0.00 GPM	0.00 PSI
	REMOTE CONTROL VALVE	15.00 GPM	4.30 PSI
	LATERAL LINE 130.00 FT.		1.30 PSI
	HEADS PSI REQUIRED		35.00 PSI
	10% PSI LOSS THROUGH ALL FITTINGS		6.94 PSI
	ELEVATION CHANGE (PRESSURE LOSS/GAIN)		0.00 PSI GAIN
			24.25 PSI LOSS
		SUBTOTAL	90.57 PSI
	10% CONTINGENCY		9.06 PSI
		TOTAL FRICTION LOSS	99.63 PSI
		AVAILABLE PRESSURE	103.00
		RESIDUAL PRESSURE	3.37

*SEE SHEET 3.3 FOR VALVE LOCATION.

SHEET INDEX



IRRIGATION BUBBLER LEGEND

HEAD SYMBOL LEGEND	MAKER	MODEL NUMBER-DESCRIPTION	NOZZLE	PATTERN	GPH	PSI	RADIUS
□	RAINBIRD	XERI-BUG EMITTER	XBT-20	DRIP	2	25	BUB

SYMBOL LEGEND	MAKER	MODEL NUMBER-DESCRIPTION
	RAINBIRD	PEB-PRS-B SERIES PRESSURE REDUCING REMOTE CONTROL VALVE, SEE PLAN FOR SIZE
—— ——	APPROVED	UVR-PVC SCH 40 BROWNLINE OR APPROVED EQUAL.
—— ——	APPROVED	PVC CLASS 200 LATERAL LINE, SEE PLAN FOR SIZE.
+	PROPOSED	TREE LOCATION PER TREE PLANTING PLAN SHEETS

REFER TO CITY OF RIVERSIDE STANDARD IRRIGATION DETAILS & SPECIFICATIONS.

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City of Riverside
WATER SYSTEM
APPROVED BY MWM DATE 7/1/06

City of Riverside
PUBLIC UTILITY DEPARTMENT
OVERHEAD AND UNDERGROUND
APPROVED BY WM DATE 6/06

LANDSCAPE ARCHITECT IN RESPONSIBLE CHARGE
ROBERT B. CLARK
RLA 4233 expires 12/31/06
DATE 6/28/06

REGISTERED LANDSCAPE ARCHITECT ROBERT B. CLARK No. 4233 STATE OF CALIFORNIA
Signature 12-31-06 Renewal Date 6/28/06 Date

MARK	REVISIONS	APPR.	DATE
1	WALL AND FENCE CHANGES PER OWNERS REQUEST		MARCH 1 2006
2	WALL, FENCE, PLANTING CHANGES PER OWNERS REQUEST		MAY 26 2006

DESIGNED BY KL/BC DRAWN BY JC/EM/KL CHECKED BY KL/BC

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY		DATE
P.W. PRINCIPAL ENGINEER		7/19/06
P.W. STREET SERVICES		7/19/06
PLANNING DIVISION		

APPROVED BY
CITY ENGINEER
DATE 7/19/06

PH 1 LANDSCAPE PLANS TR 29515

TREE BUBBLER PLAN

SCALE: 1" = 40'

ACCT. NO.
PWS-PC-03-3001-RF1
R-3892-RL
PW06-0110
SHEET 4.2 OF 32

INDEXED 8-14-06 4H

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MATCHLINE SEE SHEET 4.2

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MATCHLINE SEE SHEET 4.4

MATCHLINE SEE SHEET 4.4

LIMIT OF WORK

LIMIT OF WORK

LIMIT OF WORK

LIMIT OF WORK

KINGDOM DRIVE

OVERLOOK PARKWAY

B-27 3/4" 1

C-6 3/4" 1

CASITA PE=1494.0 FF=1494.75

96 PE=1481.0 FF=1481.75 25,500 S.F. (NET) PLAN 1AR

93 PE=1480.0 FF=1480.75 22,600 S.F. (NET) PLAN 1BR

88 PE=1494.0 FF=1494.75 21,000 S.F. (NET) PLAN 4CL

95 PE=1486.0 FF=1486.75 21,000 S.F. (NET) PLAN 1AR

94 PE=1485.0 FF=1485.75 25,500 S.F. (NET) PLAN 1AR

87 PE=1510.0 FF=1510.75 24,000 S.F. (NET) PLAN 2BL

86 PE=1506.0 FF=1506.75 25,000 S.F. (NET) PLAN 1AR

4 PE=1514.0 FF=1514.75 21,000 S.F. (NET) PLAN 1BL

5 PE=1514.0 FF=1514.75 21,000 S.F. (NET) PLAN 1AR

6 PE=1524.0 FF=1524.75 19,600 S.F. (NET) PLAN 4BR

FILL AREA TO DRAIN

FILL AREA TO DRAIN

CURB DRAIN PER APWA STANDARD 150-2 (CASE 1) (TYP.) 2-#4 CL PIPES (TYP.)

IRRIGATION BUBBLER LEGEND

HEAD SYMBOL LEGEND	MAKER	MODEL NUMBER-DESCRIPTION	NOZZLE	PATTERN	GPH	PSI	RADIUS
□	RAINBIRD	XERI-BUG EMITTER	XBT-20	DRIP	2	25	BUB

SYMBOL LEGEND	MAKER	MODEL NUMBER-DESCRIPTION
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—— ——	APPROVED	UVR-PVC SCH 40 BROWNLINE OR APPROVED EQUAL.
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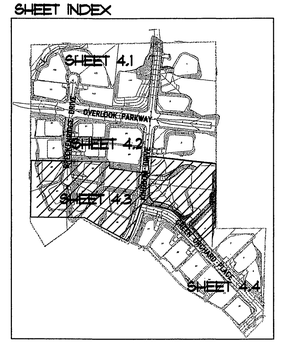
SHEET INDEX



NORTH

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48 HOURS BEFORE YOU DIG
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City of Riverside
WATER SYSTEM
MWM — APPROVED BY — 7/6/06 — DATE

City of Riverside
PUBLIC UTILITY DEPARTMENT
OVERHEAD AND UNDERGROUND
WM — APPROVED BY — 6/06 — DATE

LANDSCAPE ARCHITECT IN RESPONSIBLE CHARGE
ROBERT B. CLARK
RLA 4233 expires 12/31/06
DATE 6/28/06

REGISTERED LANDSCAPE ARCHITECT — ROBERT B. CLARK — No. 4233 — STATE OF CALIFORNIA
Signature
12-31-08
Renewal Date
6/28/06
Date

MARK	REVISIONS	APPR.	DATE
1	WALL AND FENCE CHANGES PER OWNERS REQUEST		MARCH 1 2006
2	WALL, FENCE, PLANTING CHANGES PER OWNERS REQUEST		MAY 26 2006

DESIGNED BY KL/BC DRAWN BY JC/EM/KL CHECKED BY KL/BC

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY		DATE
P.W. PRINCIPAL ENGINEER		7/6/06
P.W. STREET SERVICES		7/6/06
PLANNING DIVISION		6/29/06

APPROVED BY
CITY ENGINEER
DATE 7/19/06

PH 1 LANDSCAPE PLANS
TR 29515
TREE BUBBLER PLAN

SCALE: 1" = 40'

ACCT. NO.
PWS-PC-03-3001-RF1
R-3892-RL
PW06-0110

SHEET 4.3 OF 32

INDEXED 8-14-06 GH

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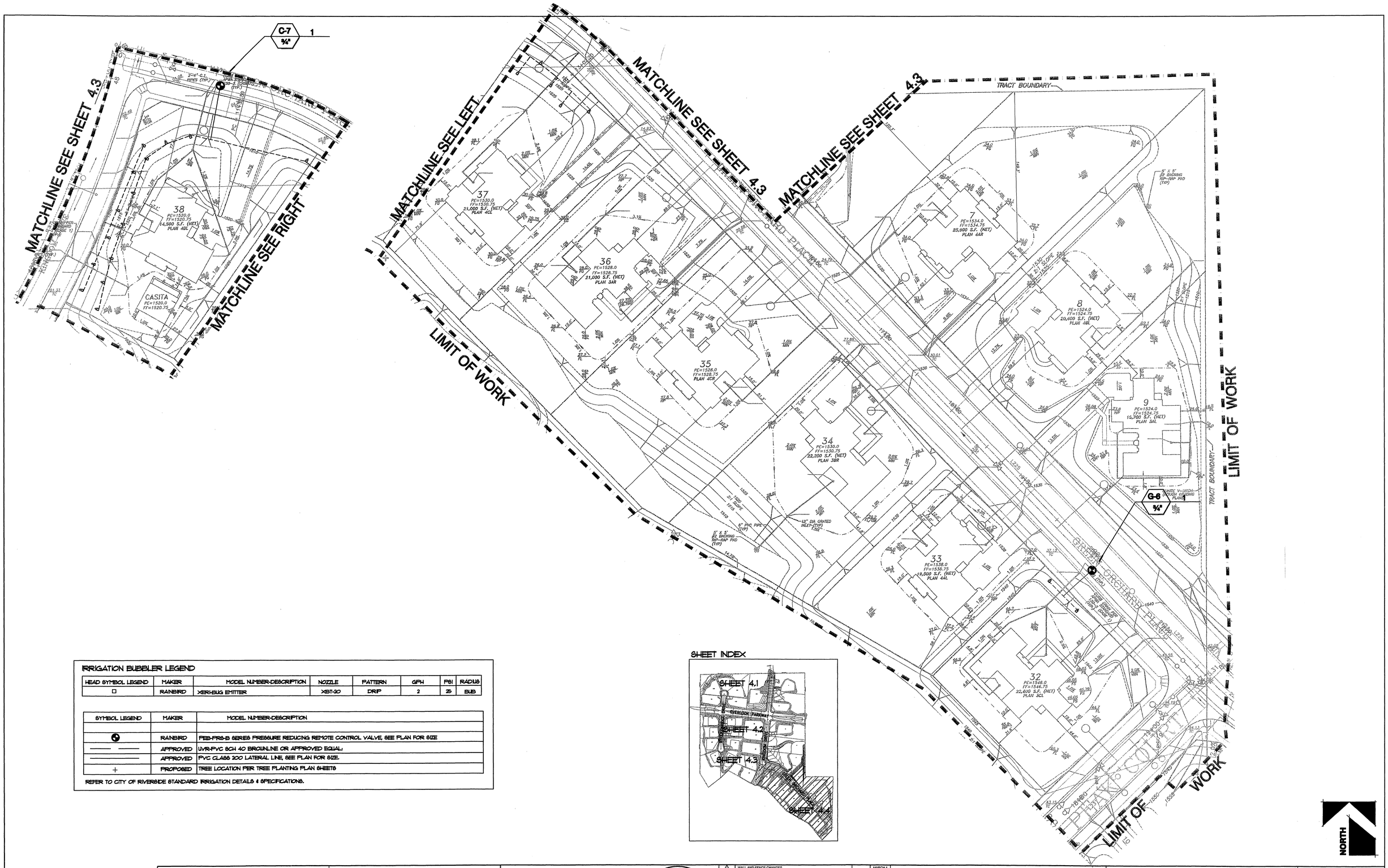

IRRIGATION BUBBLER LEGEND

HEAD SYMBOL LEGEND	MAKER	MODEL NUMBER-DESCRIPTION	NOZZLE	PATTERN	GPH	PSI	RADIUS
□	RAINBIRD	XERI-BUG EMITTER	XBT-20	DRIP	2	25	BUB

SYMBOL LEGEND	MAKER	MODEL NUMBER-DESCRIPTION
⊕	RAINBIRD	PEB-PRS-B SERIES PRESSURE REDUCING REMOTE CONTROL VALVE, SEE PLAN FOR SIZE
—— ——	APPROVED	UVR-PVC SCH 40 BROWNLINE OR APPROVED EQUAL:
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+	PROPOSED	TREE LOCATION PER TREE PLANTING PLAN SHEETS

REFER TO CITY OF RIVERSIDE STANDARD IRRIGATION DETAILS & SPECIFICATIONS.

SHEET INDEX

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City of Riverside
WATER SYSTEM
MWM 7/1/06
APPROVED BY DATE

City of Riverside
PUBLIC UTILITY DEPARTMENT
OVERHEAD AND UNDERGROUND
WM 6/06
APPROVED BY DATE

LANDSCAPE ARCHITECT IN RESPONSIBLE CHARGE
ROBERT B. CLARK
RLA 4233 expires 12/31/06
DATE 6/28/06

REGISTERED LANDSCAPE ARCHITECT
ROBERT B. CLARK
4233
Signature
12-31-06
Renewal Date
6/28/06
Date
STATE OF CALIFORNIA

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1	WALL AND FENCE CHANGES PER OWNERS REQUEST		MARCH 1 2006
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DESIGNED BY KL/BC DRAWN BY JC/EM/KL CHECKED BY KL/BC

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
P.W. PRINCIPAL ENGINEER	[illegible]	7/18/06
P.W. STREET SERVICES	DB	7/10/06
PLANNING DIVISION	[illegible]	6/26/06

APPROVED BY
CITY ENGINEER
DATE 7/18/06

PH 1 LANDSCAPE PLANS
TR 29515
TREE BUBBLER PLAN

SCALE: 1" = 40'

ACCT. NO.
PWS-PC-03-3001-RF1
R-3892-RL
PW06-0110
SHEET 4.4 OF 32

INDEXED 8-14-06 GH

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GENERAL IRRIGATION NOTES

1. ALL MAINLINE PIPING AND CONTROL WIRES UNDER PAVING SHALL BE INSTALLED IN SEPARATE SLEEVES. MAINLINE SLEEVE SIZE SHALL BE A MINIMUM OF TWICE (2X) THE DIAMETER OF THE PIPE TO BE SLEEVED. CONTROL WIRE SLEEVES SHALL BE OF SUFFICIENT SIZE FOR THE REQUIRED NUMBER OF WIRES UNDER PAVING SURFACES.

2. ALL LATERAL LINE PIPING UNDER PAVING SHALL BE PVC SCH 40 PIPE AND SHALL BE INSTALLED PRIOR TO PAVING.

3. PIPE SIZES SHALL CONFORM TO THOSE SHOWN ON THE DRAWINGS. NO SUBSTITUTIONS OF SMALLER PIPE SIZES SHALL BE PERMITTED, BUT SUBSTITUTIONS OF LARGER SIZES MAY BE APPROVED. ALL DAMAGED AND REJECTED PIPE SHALL BE REMOVED FROM THE SITE AT THE TIME OF SAID REJECTION.

4. INSTALL ALL BACKFLOW PREVENTION DEVICES AND ALL PIPING BETWEEN THE POINT OF CONNECTION AND THE BACKFLOW PREVENTER AS PER LOCAL CODES.

5. FINAL LOCATION OF THE BACKFLOW PREVENTER AND AUTOMATIC CONTROLLER,SHALL BE APPROVED BY OWNER'S AUTHORIZED REPRESENTATIVE.

6. 120 VAC ELECTRICAL POWER SOURCE AT CONTROLLER LOCATION SHALL BE PROVIDED BY OTHERS, UNLESS NOTED OTHERWISE. THE IRRIGATION CONTRACTOR SHALL MAKE THE FINAL CONNECTION FROM THE ELECTRICAL SOURCE TO THE CONTROLLER.

7. ALL SPRINKLER HEADS SHALL BE SET PERPENDICULAR TO FINISH GRADE UNLESS OTHERWISE SPECIFIED.

8. THE IRRIGATION CONTRACTOR SHALL FLUSH AND ADJUST ALL SPRINKLER HEADS AND VALVES FOR OPTIMUM COVERAGE WITH MINIMAL OVERSPRAY ONTO WALKS, STREETS, WALLS, CURBS, ETC.

9. THIS DESIGN IS DIAGRAMMATIC. ALL PIPING, VALVES, ETC. SHOWN WITHIN PAVED SURFACES IS FOR DESIGN CLARIFICATION ONLY AND SHALL BE INSTALLED IN PLANTING AREAS WHEREVER POSSIBLE. THE CONTRACTOR SHALL LOCATE ALL VALVES IN SHRUB AREAS.

10. IT IS THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO FAMILIARIZE THEMSELVES WITH ALL GRADE DIFFERENCES, LOCATION OF WALLS, RETAINING WALLS, STRUCTURES, UTILITIES, ETC. THE IRRIGATION CONTRACTOR SHALL REPAIR OR REPLACE ALL ITEMS DAMAGED BY THEIR WORK. THEY SHALL COORDINATE THEIR WORK WITH OTHER CONTRACTORS FOR THE LOCATION AND INSTALLATION OF PIPE SLEEVES AND LATERALS THROUGH WALLS, UNDER ROADWAYS AND PAVING ETC.

11. THE SPRINKLER SYSTEM DESIGN IS BASED ON A MINIMUM OPERATING PRESSURE AND A MAXIMUM FLOW DEMAND INDICATED ON PLANS. THE IRRIGATION CONTRACTOR SHALL VERIFY WATER PRESSURE PRIOR TO CONSTRUCTION. REPORT ANY DIFFERENCE BETWEEN THE WATER PRESSURE INDICATED ON THE DRAWINGS AND THE ACTUAL PRESSURE READING AT THE IRRIGATION POINT OF CONNECTION TO THE OWNER'S AUTHORIZED REPRESENTATIVE.

11. THE SPRINKLER SYSTEM DESIGN IS BASED ON A MINIMUM OPERATING PRESSURE AND A MAXIMUM FLOW DEMAND INDICATED ON PLANS. THE IRRIGATION CONTRACTOR SHALL VERIFY WATER PRESSURE PRIOR TO CONSTRUCTION. REPORT ANY DIFFERENCE BETWEEN THE WATER PRESSURE INDICATED ON THE DRAWINGS AND THE ACTUAL PRESSURE READING AT THE IRRIGATION POINT OF CONNECTION TO THE OWNER'S AUTHORIZED REPRESENTATIVE.

12. DO NOT WILLFULLY INSTALL THE SPRINKLER SYSTEM AS SHOWN ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT UNKNOWN OBSTRUCTION, GRADE DIFFERENCES OR DIFFERENCES IN THE AREA DIMENSIONS EXIST THAT MIGHT NOT HAVE BEEN CONSIDERED IN THE ENGINEERING. SUCH OBSTRUCTIONS OR DIFFERENCES SHOULD BE BROUGHT TO THE ATTENTION OF THE OWNER'S AUTHORIZED REPRESENTATIVE. IN THE EMINENCE SUCH A CONDITION IS NOT CONFIRMED, THE IRRIGATION CONTRACTOR SHALL MAKE ALL THE NECESSARY REVISIONS AT CONTRACTORS OWN EXPENSE.

13. ALL SPRINKLER EQUIPMENT NOT OTHERWISE DETAILED OR SPECIFIED SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS.

14. THE IRRIGATION CONTRACTOR SHALL INSTALL VALCON CHECK VALVE OR APPROVED EQUAL ANTI-DRAIN VALVES ON ALL HEADS IN AREAS WHERE FINISH GRADE EXCEEDS 4:1, WHERE POST VALVE SHUT-OFF DRAINING OF THE IRRIGATION HEAD OCCURS OR AS DIRECTED BY THE OWNER'S AUTHORIZED REPRESENTATIVE.

15. THE CONTRACTOR SHALL PROVIDE REDUCED RADIUS ARC PLATES OR SPRAY RADIUS ADJUSTING STRAINERS OR PRESSURE COMPENSATING SCREENS (PER PCS SCREEN CHART ON IRRIGATION PLAN) AS NEEDED TO REDUCE OR ELIMINATE OVERSPRAY ONTO WALKS, STREETS, WALL, ETC. OR OTHER AREAS AS DIRECTED BY OWNER'S AUTHORIZED REPRESENTATIVE.

16. ALL REMOTE CONTROL VALVES, PRESSURE RELIEF VALVES, GATE VALVES, QUICK COUPLERS, CONTROL WIRE AND COMPUTER CABLE PULL BOXES SHALL BE INSTALLED COMPLETE IN SUITABLE VALVE/PULL BOXES COMPLETE WITH LOCKING COVERS, GRAVEL ROCK, ETC. AS SHOWN ON DETAILS. THEY SHALL BE CARSON, AMETEK, OR APPROVED EQUAL AND SHALL BE MARKED INDICATING CONTROLLER AND STATION NUMBER FOR CONTROL VALVE BOXES AND AS INSTALLED IN THE EQUIMENT LEGEND WITH 1" HEAT BRANDED LETTERS. ALL APPROVED BOXES SHALL MAINTAIN 18" DISTANCE FROM ALL HARD SURFACES AND LOCATED IN INCONSPICUOUS SHRUB AREAS ONLY.

17. WHEN NON-POTABLE OR RECLAIMED WATER IS BEING USED FOR IRRIGATION, ALL PVC PIPING MUST MEET OR EXCEED IAPMO AND NSF STANDARDS FOR PVC TYPE I, GRADE 1 PIPE. ALL BELOW GRADE PVC PIPE SHALL BE ALERTLINE AND ALL ON GRADE PVC PIPE SHALL BE UVR BROWNLINE WITH STENCILED WARNINGS IN WATERPROOF INK STATING "CAUTION RECLAIMED WATER" EVERY FIVE (5) FEET OR PER LOCAL WATER DISTRICT LABELING REQUIREMENTS.

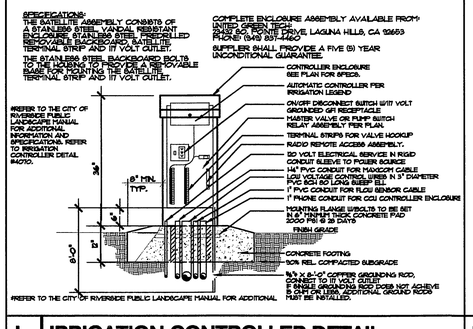
18. ALL CONTROL AND COMMON WIRES SHALL BE MINIMUM 14 GAUGE COMMON WIRE SHALL BE WHITE WITH DIFFERENT COLORED STRIPES FOR EACH CONTROLLER. CONTROL WIRES SHALL BE DIFFERENT COLORS FOR EACH CONTROLLER WHEN MULTIPLE CONTROLLERS ARE UTILIZED.

19. MAXICOM COMMUNICATION CABLE SHALL BE A DOUBLE JACKETED 14-2UF MAXI-CABLE WITH TIN COATED SOFT ANNEALED SOLID COPPER WITH RED AND BLACK INSULATED CONDUCTORS AS MANUFACTURED BY: PAIGE ELECTRIC - MODEL NO. P7072 OR APPROVED EQUAL THE STANDARD SPLICE KIT TO USE ON THE MAXICOM CABLE IS THE 3M DBY OR DBR (FOR TEE SPLICE).

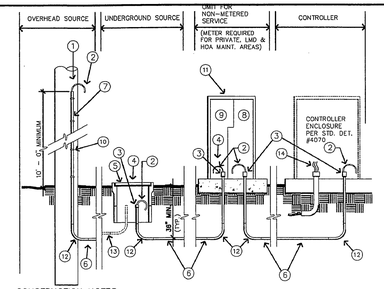
20. FLOW SENSOR CABLE SHALL BE A PVC JACKETED, TWO CONDUCTOR CABLE. THE CONDUCTOR SHALL BE 16 AWG 7 STRAND ANNEALED COPPER, CONFORMING TO ASTM B-3 AND B-" WITH .015 WALL OF HEAT AND MOISTURE RESISTANT PVC, COVERED WITH A .004" WALL OF STABILIZING NYLON CONFORMING TO UL 83 TREATED AT 90 DEGREES CELSIUS. THE CONDUCTORS SHALL BE TWISTED AND ENCASED IN A SINGLE OUTER JACKET OF .050" NOMINAL WALL OF SUNLIGHT AND MOISTURE RESISTANT PVC CONFORMING TO UL ICEA AND NEMA STANDARDS. THE TWO CONDUCTORS SHALL BE A COLOR CODED WITH ONE CONDUCTOR YELLOW AND THE OTHER GRAY AS MANUFACTURED BY: ARIZONA ELECTRICAL FABRICATORS - MODEL NO. 9516-2SP THE FLOW SENSOR CABLE SHALL BE INSTALLED IN A 1" PVC SCH 40 CONDUIT TO PROTECT IT FROM RODENTS AND PHYSICAL ABUSE.

21. REFER TO THE CITY OF RIVERSIDE'S PUBLIC LANDSCAPE MANUAL FOR ADDITIONAL DETAILED INFORMATION AND SPECIFICATIONS.

L | IRRIGATION CONTROLLER DETAIL



H | ELECTRICAL SERVICE DETAIL CITY STD. #4062

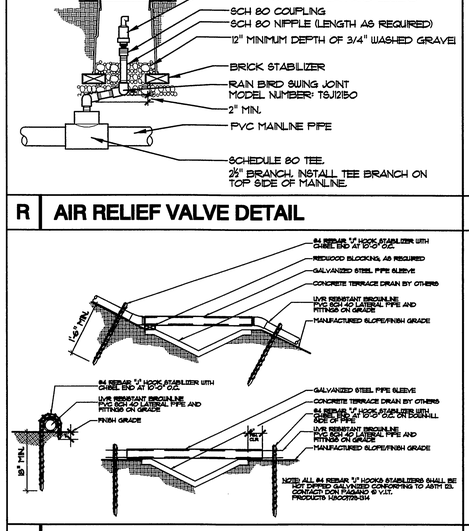


CONSTRUCTION NOTES:

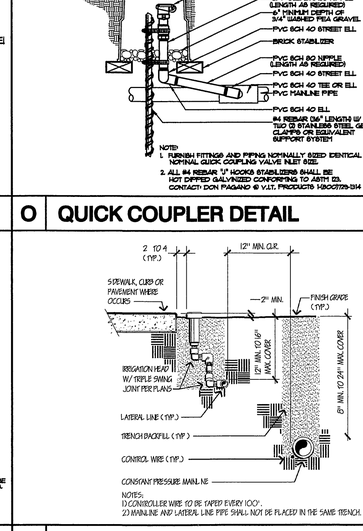
1. COORDINATE W/UTILITIES-ELECTRIC(909/826-5393) FOR RISER LOCATION ON POLE.
2. 3-#8 CU THW WIRES. CONTRACTOR TO PROVIDE SUFFICIENT WIRE LENGTH BEYOND END OF CONDUIT TO REACH OVERHEAD SECONDARY LINES FOR SERVICE HOOKUP BY SERVICE AND TO PROVIDE 2 FEET OF WIRE BEYOND CONDUIT END AT UGS BOX & 4 FEET OF WIRE AT METER AND CONTROLLER. (2 NEUTRALS)
3. PROVIDE INSULATING BUSHING, TERMINATE CONDUIT PER UTILITIES SPEC. UGS-311.
4. P.U. ELECTRIC WILL MAKE SERVICE CONNECTIONS IN UGS BOX FOR NON-METERED SERVICE, AND WILL MAKE CONNECTIONS AT UGS BOX AND SERVICE SIDE OF METER FOR METERED SERVICES.
5. ELECTRIC SERVICE BOX, SIZE PER PUBLIC UTILITIES STANDARDS.
6. MIN. 2" SERVICE CONDUIT PER CITY STDS.; 00 BELOW GRADE, HDG ABOVE GRADE, HDG WRAPPED SWEEPS.
7. LINE SIZE #00 CONDUIT WITH 3-#8 CU THW WIRES, PER UTILITIES STANDARDS. (2 NEUTRAL
8. LOAD SECTION.
9. SERVICE SECTION.
10. MINIMUM 3 PIPE STRAPS.
11. METER PEDESTAL PER E.U.S.E.C. DRAWING #308. SUBMIT CATALOG CUTS TO P.U.-ELECTRIC FOR APPROVAL PRIOR TO INSTALLATION.
12. LINE SIZE WRAPPED HDG SWEEP ELL, MIN. 9" RAD. (TYP.)
13. EXISTING SERVICE CONDUIT.
14. LOW VOLTAGE IRRIGATION CONTROL WIRE & CONDUIT PER PAR STD. SPECS.

D

R | AIR RELIEF VALVE DETAIL

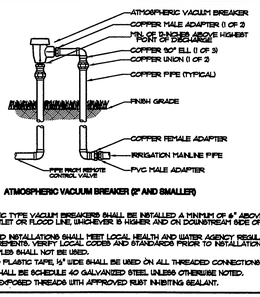


O | QUICK COUPLER DETAIL



NOTES:
1) CONTROLLER WIRE TO BE TAPED EVERY 100'.
2) MAINLINE AND LATERAL LINE PIPE SHALL NOT BE PLACED IN THE SAME TRENCH.

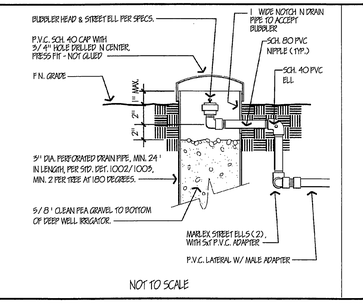
K | BACKFLOW DETAIL CITY STD. #4011



ATMOSPHERIC VACUUM BREAKER (2" AND SMALLER)

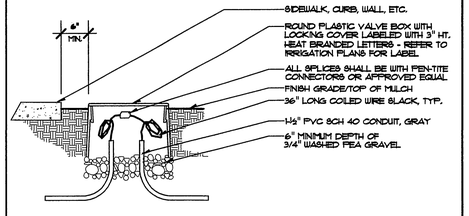
NOTES:
1. ATMOSPHERIC TYPE VACUUM BREAKERS SHALL BE INSTALLED A MINIMUM OF 6" ABOVE THE HIGHEST OUTLET OR FLOOD LINE, WHICHEVER IS HIGHER AND ON DOWNSTREAM SIDE OF VALVE ONLY.
2. DEVICES AND INSTALLATIONS SHALL MEET LOCAL HEALTH AND WATER AGENCY REGULATIONS AND REQUIREMENTS. VERIFY LOCAL CODES AND STANDARDS PRIOR TO INSTALLATION.
3. CLOSE NIPPLES SHALL NOT BE USED.
4. APPROVED PLASTIC TAPE, 1½" WIDE SHALL BE USED ON ALL THREADED CONNECTIONS.
5. ALL PIPE SHALL BE SCHEDULE 40 GALVANIZED STEEL UNLESS OTHERWISE NOTED.
6. COAT ALL EXPOSED THREADS WITH APPROVED RUST INHIBITING SEALANT.

G | REMOTE CONTROL ANTI-SIPHON VALVE



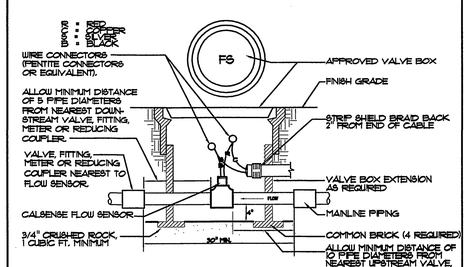
C

Q | V-DITCH CROSSING DETAIL

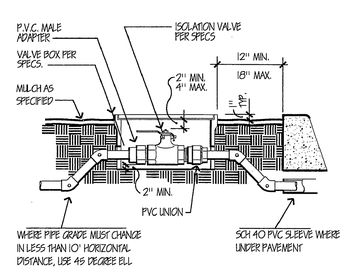


NOTE:
1. PULL BOX INTERVAL SHALL NOT EXCEED 200 L.F. RUN.
2. LABEL WIRE WITH YELLOW TAG AND BLACK LETTERING TIED TO WIRE BLACK.

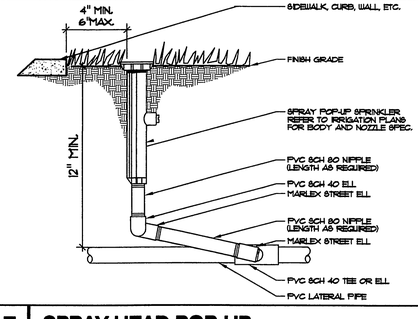
N | TRENCH DETAIL CITY STD. #4010



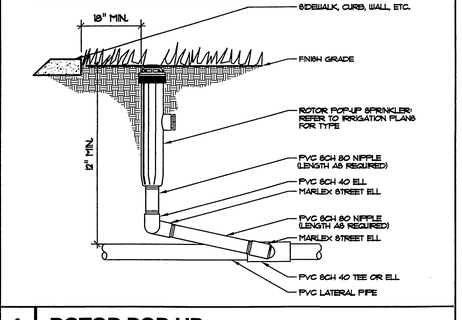
J | ATMOSPHERIC VACUUM BREAKER



F | BUBBLER DETAIL CITY STD. #4034



B | SPRAY/BUBBLER ON RISER



P | PULL BOX DETAIL

M | FLOW SENSOR DETAIL

I | ISOLATION VALVE DETAIL CITY STD. #4052

E | SPRAY HEAD POP-UP

A | ROTOR POP-UP

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City of Riverside
WATER SYSTEM
APPROVED BY _____ DATE 7/6/06

City of Riverside
PUBLIC UTILITY DEPARTMENT
OVERHEAD AND UNDERGROUND
APPROVED BY _____ DATE 6/06

LANDSCAPE ARCHITECT IN RESPONSIBLE CHARGE
ROBERT B. CLARK
RLA 4233 expires 12/31/06
DATE 6/28/06

REGISTERED LANDSCAPE ARCHITECT ROBERT B. CLARK No. 4233 STATE OF CALIFORNIA
Signature 12-31-98
Renewal Date 6/28/06
Date

1	WALL AND FENCE CHANGES PER OWNERS REQUEST		MARCH 1 2005
2	WALL FENCE, PLANTING CHANGES PER OWNERS REQUEST		MAY 25 2006
MARK	REVISIONS	APPR.	DATE

DESIGNED BY KL/BC DRAWN BY JC/EM/KL CHECKED BY KL/BC

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY		BY	DATE
P.W. PRINCIPAL ENGINEER			7/18/06
P.W. STREET SERVICES			7/10/06
PLANNING DIVISION			6/29/06

APPROVED BY _____ CITY ENGINEER
DATE 7/18/06

PH 1 LANDSCAPE PLANS
TR 29515
IRRIGATION DETAILS
SCALE: 1" = 40'

ACCT. NO.
PWS-PC-03-3001-RF1
R-3892-RL
PW06-0110
SHEET 5.0 OF 32

INDEXED 8-14-06 EH

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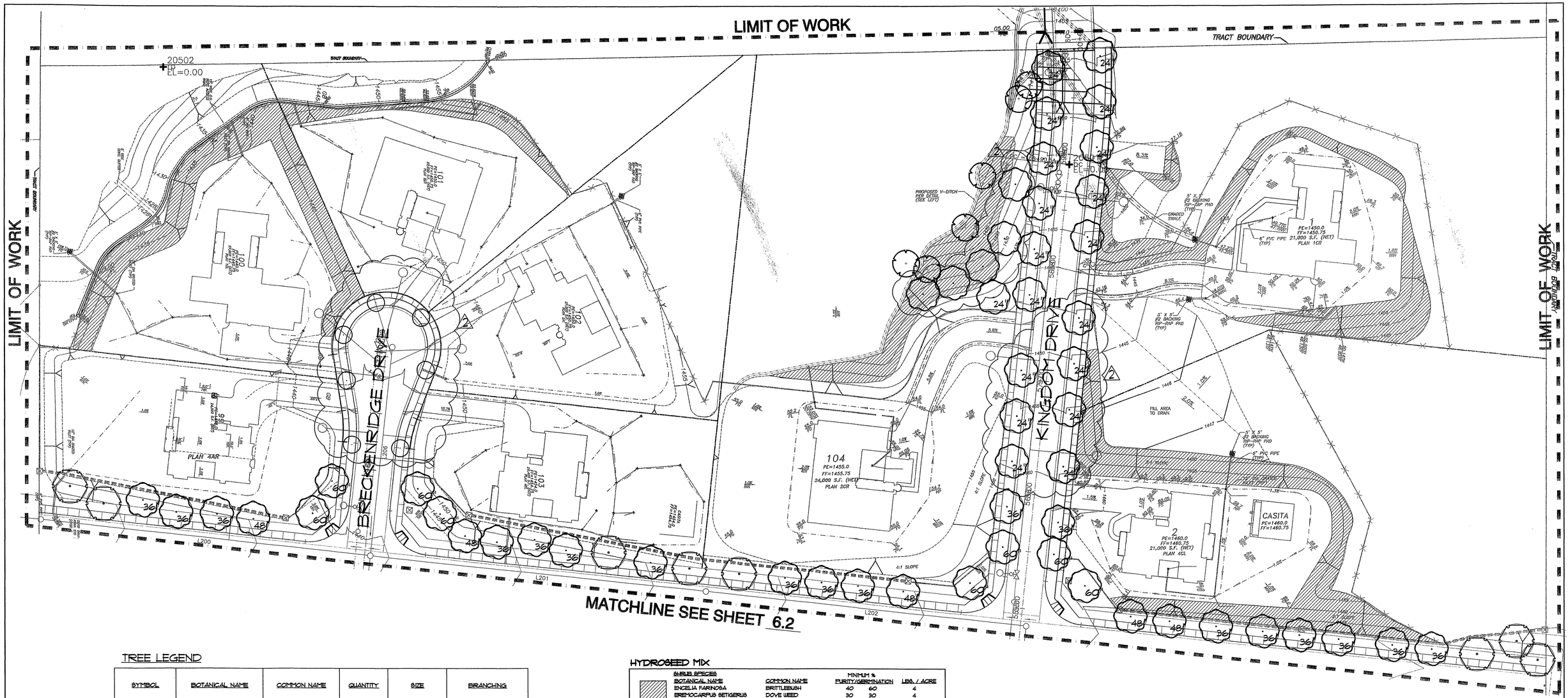


TREE LEGEND

SYMBOL	BOTANICAL NAME	COMMON NAME	QUANTITY	SIZE	BRANCHING
	LAGERSTROEMIA INDICA 'MUSKOGEE'	CRAPE MYRTLE	7	36" BOX	2 STANDARD
	PLATANUS RACEMOSA	CALIFORNIA SYCAMORE	8	36" BOX	LOW BRANCHED/NATIVE
	PROSOPIS JULIFLORA	MESQUITE	6	15 GAL.	LOW BRANCHED/NATIVE
	QUERCUS AGRIFOLIA	COAST LIVE OAK	12 12 18 5 8	15 GAL 24" BOX 36" BOX 48" BOX 60" BOX	2 STANDARD STANDARD STANDARD STANDARD STANDARD

NOTE: REFER TO PLANTING DETAILS AND NOTES SHEET 8.0. CONTRACTOR TO REFER TO CITY'S SPECIFICATIONS AND GENERAL NOTES. CONTRACTOR SHALL FURNISH AND INSTALL FERTILIZER AND AMENDMENTS PER THE SOILS REPORT AS RECOMMENDED.

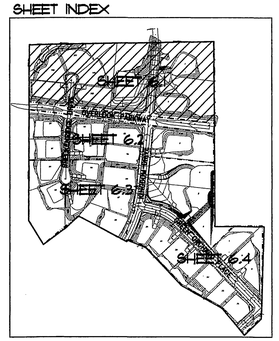
HYDROSEED MIX

SHRUBS SPECIES		MINIMUM %		
BOTANICAL NAME	COMMON NAME	PURITY	GERMINATION	LBS. / ACRE
ENCELIA FARINOSA	BRITTLEBUSH	40	60	4
EREMOCARPUS SETIGERUS	DOVE WEED	30	30	4
ERODIUM CICUTARIUM	RED-STEMMED FILAREE	30	30	4
ERICAMERIA LINEARIFOLIA	LINEAR LEAF GOLDENBUSH	30	30	4
HELIANTHUS ANNUUS	COMMON SUNFLOWER	30	30	4
LESSINGIA FILAGINIFOLIA	CUDWEED ASTER	30	30	4
MIRABILIS CALIFORNICUS	WISHBONE BUSH	15	15	0.2
GRASS & HERBACEOUS SPECIES				
ESCHSCHOLZIA CALIFORNICA	CALIFORNIA POPPY	95	75	0.3
LUPINUS NANUS	SKY LUPINE	95	75	0.5
PLANTAGO INSULARIS	PLANTAIN	95	70	0.2
SISYRINCHIUM BELLUM	BLUE-EYED GRASS	95	70	0.2
DICHELOSTEMMA CAPITATUM	BLUE DICKS	95	70	0.1
NASSELLA PULCHRA	PURPLE NEEDLEGRASS	70	60	4
NASSELLA CERNUA	NODDING NEEDLEGRASS	80	50	3
NASSELLA LEPIDA	FOOTHILL NEEDLEGRASS	80	50	.5
VULPIA MICROSTACHYS	SMALL FESCUE	-	-	4
TOTAL POUNDS PER ACRE				37.0

NOTE: REFER TO HYDROSEEDING AND PLANTING NOTES SHEET 8.0.

HYDROSEED SEED MIXES AVAILABLE FROM S&S SEEDS (805) 684-0436, FAX (805) 684-7788

SHEET INDEX



NORTH

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City of Riverside
WATER SYSTEM
APPROVED BY _____ DATE 7/6/06

City of Riverside
PUBLIC UTILITY DEPARTMENT
OVERHEAD AND UNDERGROUND
APPROVED BY _____ DATE 6/06

LANDSCAPE ARCHITECT IN RESPONSIBLE CHARGE
ROBERT B. CLARK
RLA 4233 expires 12/31/06
DATE 6/28/06

REGISTERED LANDSCAPE ARCHITECT ROBERT B. CLARK No. 4233 STATE OF CALIFORNIA
Signature 12-31-06
Renewal Date
Date 6/28/06

MARK	REVISIONS	APPR.	DATE
1	WALL AND FENCE CHANGES PER OWNERS REQUEST		MARCH 1 2006
2	WALL, FENCE, PLANTING CHANGES PER OWNERS REQUEST		MAY 26 2006

DESIGNED BY KL/BC DRAWN BY JC/EM/KL CHECKED BY KL/BC

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
P.W. PRINCIPAL ENGINEER		
P.W. STREET SERVICES		7/10/06
PLANNING DIVISION		

APPROVED BY _____
CITY ENGINEER
DATE 7/19/06

PH 1 LANDSCAPE PLANS
TR 29515
TREE PLANTING PLAN

SCALE: 1" = 40'

ACCT. NO.
PWS-PC-03-3001-RF1
R-3892-RL
PW06-0110
SHEET 6.1 OF 32

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INDEXED 8-14-06 GH

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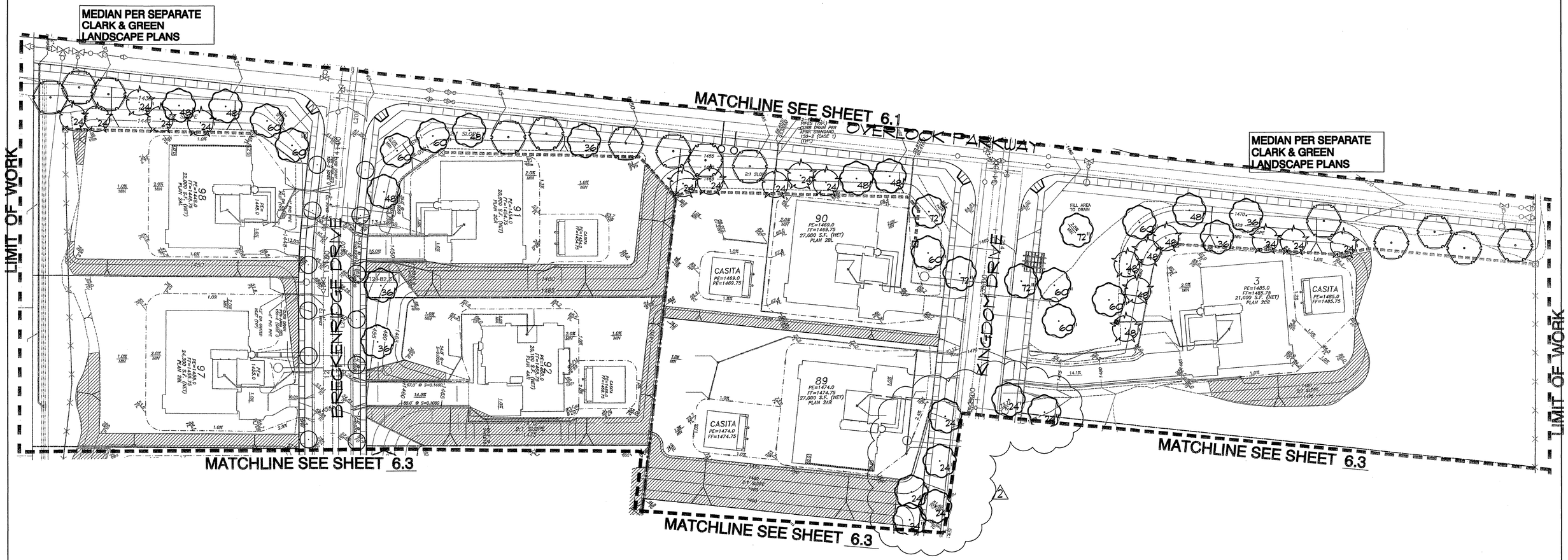


TREE LEGEND

SYMBOL	BOTANICAL NAME	COMMON NAME	QUANTITY	SIZE	BRANCHING
	LAGERSTROEMIA INDICA 'MUSKOGEE'	CRAPE MYRTLE	12	24" BOX	STANDARD
	PINUS BRUTIA	CALABRIAN PINE	12 5	24" BOX 48" BOX	LOW BRANCHED/NATIVE
	PLATANUS RACEMOSA	CALIFORNIA SYCAMORE	13	36" BOX	LOW BRANCHED/NATIVE
	QUERCUS AGRIFOLIA	COAST LIVE OAK	8 7 7 9 4	24" BOX 36" BOX 48" BOX 60" BOX 72" BOX	STANDARD STANDARD STANDARD NATIVE/LOW BRANCH NATIVE/LOW BRANCH

NOTE: REFER TO PLANTING DETAILS AND NOTES SHEET 8.0. CONTRACTOR TO REFER TO CITY'S SPECIFICATIONS AND GENERAL NOTES. CONTRACTOR SHALL FURNISH AND INSTALL FERTILIZER AND AMENDMENTS PER THE SOILS REPORT AS RECOMMENDED.

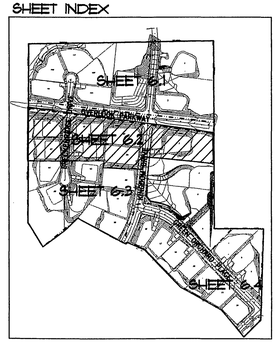
HYDROSEED MIX

SHRUB SPECIES BOTANICAL NAME	COMMON NAME	MINIMUM % PURITY	MINIMUM % GERMINATION	LBS. / ACRE
ENCELIA FARINOSA	BRITTLEBUSH	40	60	4
ERIOPHYLLUM CONFERTIFLORUM	GOLDEN YARROW	30	30	4
ERODIUM CICUTARIUM	RED-STEMMED FILAREE	30	30	4
ERIOPHYLLUM LANATUM	WOOLY SUNFLOWER	30	30	4
HELIANTHUS ANNUUS	COMMON SUNFLOWER	30	30	4
LESSINGIA GLANDULIFERA	CUP-LEAVED ASTER	30	30	4
MIRABILIS CALIFORNICUS	WISHBONE BUSH	15	15	0.2
GRASS & HERBACEOUS SPECIES				
ESCHSCHOLZIA CALIFORNICA	CALIFORNIA POPPY	95	75	0.3
LUPINUS NANUS	SKY LUPINE	95	75	0.5
PLANTAGO INSULARIS	PLANTAIN	95	70	0.2
SISYRINCHIUM BELLUM	BLUE-EYED GRASS	95	70	0.2
DICHELOSTEMMA CAPITATUM	BLUE DICKS	95	70	0.1
NASSELLA PULCHRA	PURPLE NEEDLEGRASS	70	60	4
NASSELLA CERNUA	NODDING NEEDLEGRASS	80	50	3
NASSELLA LEPIDA	FOOTHILL NEEDLEGRASS	80	50	5
VULPIA MICROSTACHYS	SMALL FESCUE	-	-	4
TOTAL POUNDS PER ACRE				37.0

NOTE: REFER TO HYDROSEEDING AND PLANTING NOTES SHEET 8.0.

HYDROSEED SEED MIXES AVAILABLE FROM S&S SEEDS (805) 684-0436, FAX (805) 684-2738

SHEET INDEX



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DESIGNED BY KL/BC DRAWN BY JC/EM/KL CHECKED BY KL/BC

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
P.W. PRINCIPAL ENGINEER		7/10/06
P.W. STREET SERVICES		7/10/06
PLANNING DIVISION		6/28/06

APPROVED BY _____
CITY ENGINEER
DATE 7/18/06

PH 1 LANDSCAPE PLANS
TR 29515
TREE PLANTING PLAN

SCALE: 1" = 40'

ACCT. NO.
PWS-PC-03-3001-RF1
R-3892-RL
PW06-0110

SHEET 6.2 OF 32

INDEXED 8-14-06 GH

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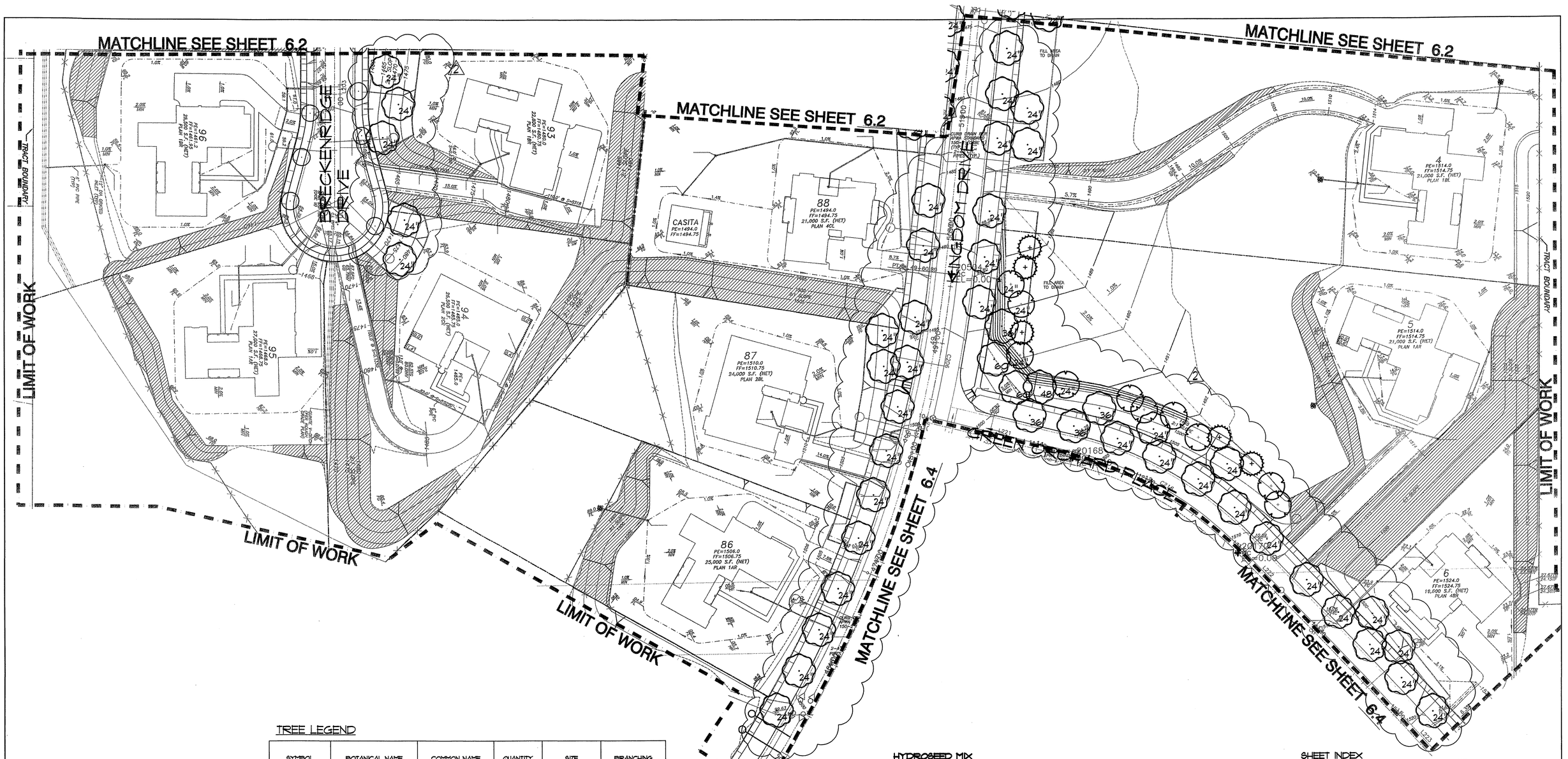

TREE LEGEND

SYMBOL	BOTANICAL NAME	COMMON NAME	QUANTITY	SIZE	BRANCHING
+	CHILOPSIS LINEARIS	DESERT WILLOW	5	15 GAL	MULTI/LOW BRANCHING
·	LAGERSTROEMIA INDICA	CRAPE MYRTLE	6	24" BOX	STANDARD
+	PROSOPIS JULIFLORA	MESQUITE	6 4	15 GAL 24" BOX	LOW BRANCHED/NATIVE
·	QUERCUS AGRIFOLIA	COAST LIVE OAK	41 4 1 2	24" BOX 36" BOX 48" BOX 60" BOX	STANDARD STANDARD STANDARD STANDARD

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EREMOCARPUS SETIGERUS	DOVE WEED	30	30	4
ERODIUM CICUTARIUM	RED-STEMMED FILAREE	30	30	4
ERIOPHYLLUM LINEARIFOLIA	LINEAR LEAF GOLDENBUSH	30	30	4
HELIANTHUS ANNUUS	COMMON SUNFLOWER	30	30	4
LESSINGIA FILAGINIFOLIA	CUDWEED ASTER	30	30	4
MIRABILIS CALIFORNICUS	WISHBONE BUSH	15	15	0.2
GRASS & HERBACEOUS SPECIES				
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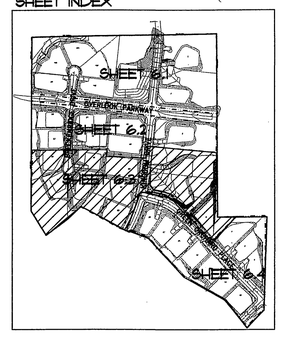
LUPINUS NANUS	SKY LUPINE	95	75	0.5
PLANTAGO INSULARIS	PLANTAIN	95	70	0.2
SISYRINCHIUM BELLUM	BLUE-EYED GRASS	95	70	0.2
DICHELOSTEMMA CAPITATUM	BLUE DICKS	95	70	0.1
NASSELLA PULCHRA	PURPLE NEEDLEGRASS	70	60	4
NASSELLA CERNUA	NODDING NEEDLEGRASS	80	50	3
NASSELLA LEPIDA	FOOTHILL NEEDLEGRASS	80	50	5
VULPIA MICROSTACHYS	SMALL FESCUE	-	-	4
TOTAL POUNDS PER ACRE				37.0

NOTE: REFER TO HYDROSEEDING AND PLANTING NOTES SHEET 8.0.

HYDROSEED SEED MIXES AVAILABLE FROM S&S SEEDS (805) 684-0436, FAX (805) 684-2758

SHEET INDEX



NORTH

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48 HOURS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT
1-800-227-2600

City of Riverside
WATER SYSTEM
APPROVED BY MWM DATE 7/6/06

City of Riverside
PUBLIC UTILITY DEPARTMENT
OVERHEAD AND UNDERGROUND
APPROVED BY WFM DATE 6/06

LANDSCAPE ARCHITECT IN RESPONSIBLE CHARGE
ROBERT B. CLARK
RLA 4233 expires 12/31/06
DATE 6/28/06

REGISTERED LANDSCAPE ARCHITECT ROBERT B. CLARK No. 4233 STATE OF CALIFORNIA
Signature 12-31-06
Renewal Date
Date

MARK	REVISIONS	APPR.	DATE
1	WALL AND FENCE CHANGES PER OWNERS REQUEST		MARCH 1 2006
2	WALL, FENCE, PLANTING CHANGES PER OWNERS REQUEST		MAY 26 2006

DESIGNED BY KL/BC DRAWN BY JC/EM/KL CHECKED BY KL/BC

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
P.W. PRINCIPAL ENGINEER		7/19/06
P.W. STREET SERVICES		7/19/06
PLANNING DIVISION		

APPROVED BY
CITY ENGINEER
DATE 7/19/06

PH 1 LANDSCAPE PLANS
TR 29515
TREE PLANTING PLAN

SCALE: 1" = 40'

ACCT. NO.
PWS-PC-03-3001-RF1
R-3892-RL
PW06-0110

SHEET 6.3 OF 32

INDEXED 8-14-06 GH

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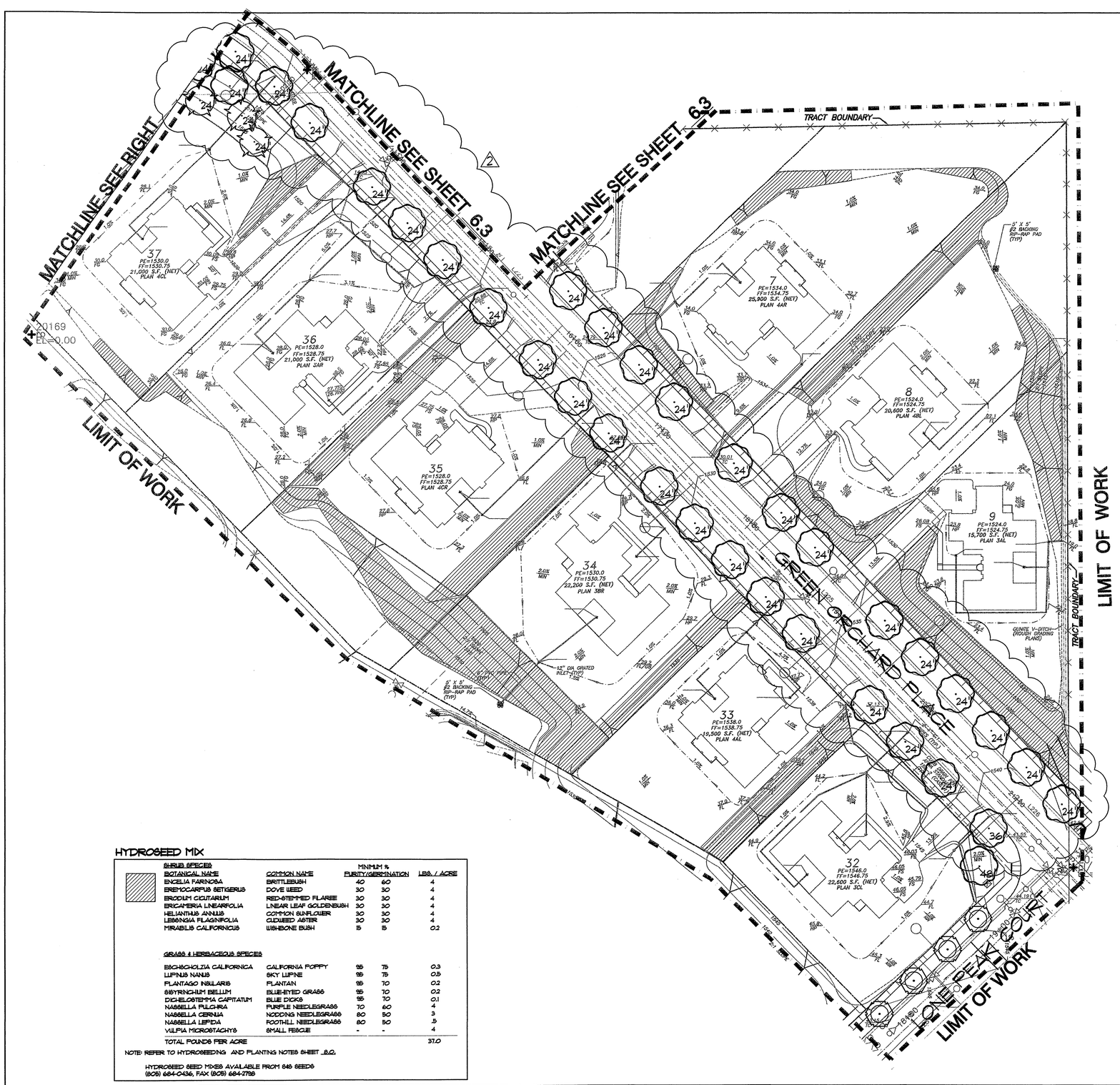
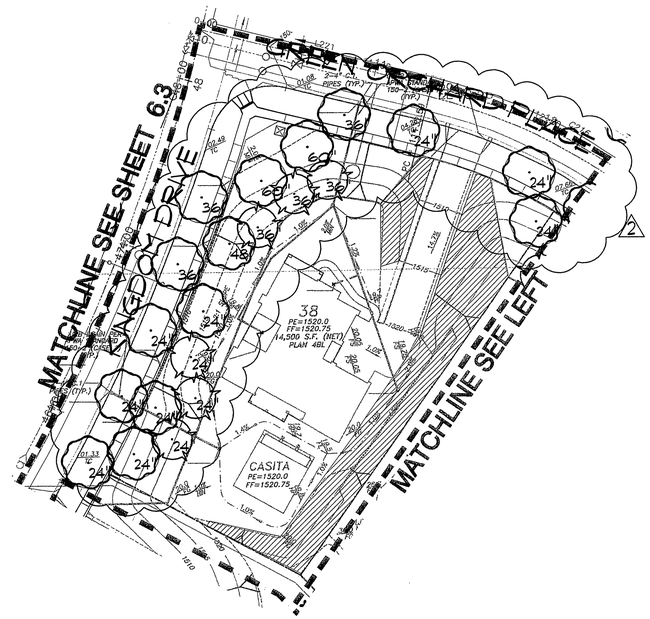




TREE LEGEND

SYMBOL	BOTANICAL NAME	COMMON NAME	QUANTITY	SIZE	BRANCHING
	PINUS BRUTIA	CALABRIAN PINE	6 3	24" BOX 36" BOX	LOW BRANCHED/NATIVE
	QUERCUS AGRIFOLIA	COAST LIVE OAK	41 4 2 2	24" BOX 36" BOX 48" BOX 60" BOX	STANDARD STANDARD STANDARD STANDARD
	RHUS LANCEA	AFRICAN SUMAC	4	24" BOX	STANDARD

NOTE: REFER TO PLANTING DETAILS AND NOTES SHEET 8.0. CONTRACTOR TO REFER TO CITY'S SPECIFICATIONS AND GENERAL NOTES. CONTRACTOR SHALL FURNISH AND INSTALL FERTILIZER AND AMENDMENTS PER THE SOILS REPORT AS RECOMMENDED.

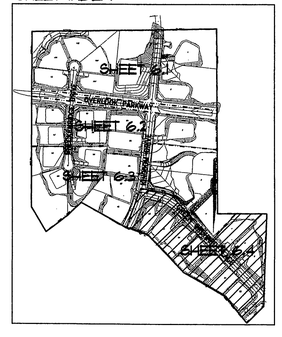
HYDROSEED MIX

	BOTANICAL NAME	COMMON NAME	MINIMUM % PURITY	MINIMUM % GERMINATION	LBS. / ACRE
SHRUB SPECIES					
	ENCELIA FARINOSA	BRITTLEBUSH	40	60	4
	EREMOCARPUS SETIGERUS	DOVE WEED	30	30	4
	ERODIUM CICUTARIUM	RED-STEMMED FILAREE	30	30	4
	ERICAMERIA LINEARIFOLIA	LINEAR LEAF GOLDENBUSH	30	30	4
	HELIANTHUS ANNUUS	COMMON SUNFLOWER	30	30	4
	LEMMANSIA FLAGGINIFOLIA	CALIFUSED ASTERE	30	30	4
	MIRABILIS CALIFORNICUS	WISHBONE BUSH	15	15	0.2
GRASS & HERBACEOUS SPECIES					
	ESCHSCHOLZIA CALIFORNICA	CALIFORNIA POPPY	95	75	0.3
	LUPINUS NANUS	SKY LUPINE	95	75	0.5
	PLANTAGO INSULARIS	PLANTAIN	95	70	0.2
	SISYRINCHIUM BELLUM	BLUE-EYED GRASS	95	70	0.2
	DICHELOSTEMMA CAPITATUM	BLUE DICKS	95	70	0.1
	NASSELLA PULCHRA	PURPLE NEEDLEGRASS	70	60	4
	NASSELLA CERNUA	NODDING NEEDLEGRASS	80	50	3
	NASSELLA LEPIDA	FOOTHILL NEEDLEGRASS	80	50	.5
	VULPIA MICROSTACHYS	SMALL FESCUE	-	-	4
	TOTAL POUNDS PER ACRE				37.0

NOTE: REFER TO HYDROSEEDING AND PLANTING NOTES SHEET 8.0.

HYDROSEED SEED MIXES AVAILABLE FROM S&S SEEDS (805) 684-0436, FAX (805) 684-2798

SHEET INDEX



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City of Riverside
WATER SYSTEM
APPROVED BY MWM DATE 7/6/06

City of Riverside
PUBLIC UTILITY DEPARTMENT
OVERHEAD AND UNDERGROUND
APPROVED BY DATE 6/06

LANDSCAPE ARCHITECT IN RESPONSIBLE CHARGE
ROBERT B. CLARK
RLA 4233 expires 12/31/06
DATE 6/28/06

REGISTERED LANDSCAPE ARCHITECT ROBERT B. CLARK No. 4233 STATE OF CALIFORNIA
Signature
12-31-06
Renewal Date
6/28/06
Date

MARK	REVISIONS	APPR.	DATE
1	WALL AND FENCE CHANGES PER OWNERS REQUEST		MARCH 1 2006
2	WALL, FENCE, PLANTING CHANGES PER OWNERS REQUEST		MAY 26 2006

DESIGNED BY KL/BC DRAWN BY JC/EM/KL CHECKED BY KL/BC

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
P.W. PRINCIPAL ENGINEER	DH	7/11/06
P.W. STREET SERVICES	DJB	7/10/06
PLANNING DIVISION		

APPROVED BY
CITY ENGINEER
DATE 7/19/06

PH 1 LANDSCAPE PLANS
TR 29515
TREE PLANTING PLAN

SCALE: 1" = 40'

ACCT. NO.
PWS-PC-03-3001-RF1
R-3892-RL
PW06-0110
SHEET 6.4 OF 32

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INDEXED 8-14-06 LH

LIMIT OF WORK

TRACT BOUNDARY

MATCHLINE SEE SHEET 7.2

SHRUB LEGEND

QUANTITY — SIZE — ABBREVIATION

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	QUANTITY	SPACING
A	AGAVE AMERICANA	CENTURY PLANT	15 GAL	3	PER PLAN
BAC THO	* BACCHARIS 'THOMPSON'	THOMPSON BROOM	1 GAL	385	3'-6" O.C.
CIS HYB	CISTUS HYBRIDUS	HYBRID ROCKROSE	1 GAL	1295	3'-0" O.C.
ENC FAR	ENCELIA FARINOSA	NCN	1 GAL	45	4'-0" O.C.
HES PAR	HESPERALOE PARVIFLORA	NCN	5 GAL	45	3'-0" O.C.
⊕	HETEROMELES ARBUTIFOLIA	TOYON	15 GAL	49	PER PLAN
MUH REG	* MUHLENBERGIA 'REGAL MIST'	REGAL MIST MUHLY	1 GAL	1125	2'-6" O.C.
PIT VAR	PITTOSPORUM VAREGATA	VARIEGATED MOCK ORANGE	5 GAL	175	4'-6" O.C.
PLU AUR	PLUMBAGO AURICULATA 'ROYAL CAPE'	ROYAL CAPE PLUMBAGO	5 GAL	150	4'-6" O.C.
RAP BAL	RHAPHIOLEPIS 'BALLERINA'	INDIA HAWTHORNE	1 GAL	1045	2'-6" O.C.
RHU INT	RHUS INTEGRIFOLIA	LEMONADEBERRY	5 GAL	100	5'-0" O.C.
TUL V10	TULBAGIA VIOLACEA	SOCIETY GARLIC	1 GAL	465	1'-6" O.C.

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	QUANTITY	SPACING
△	PARTHENOCISSUS TRICUSPIDATA	BOSTON IVY	1 GAL	46	10'-0" O.C. PER PLAN

NOTE: REFER TO PLANTING DETAILS AND NOTES SHEET 8.0. CONTRACTOR TO REFER TO CITY'S SPECIFICATIONS AND GENERAL NOTES. CONTRACTOR SHALL FURNISH AND INSTALL FERTILIZER AND AMENDMENTS PER THE SOILS REPORT AS RECOMMENDED.
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MULCH NOTE:
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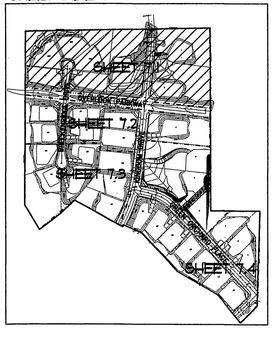
AGUINAGA FERTILIZER CO.
PHONE: (949)-786-9556
FAX: (949)-786-9574

SHEET INDEX



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City of Riverside
WATER SYSTEM
APPROVED BY MWM DATE 7/6/06

City of Riverside
PUBLIC UTILITY DEPARTMENT
OVERHEAD AND UNDERGROUND
APPROVED BY MM DATE 6/06

LANDSCAPE ARCHITECT IN RESPONSIBLE CHARGE
ROBERT B. CLARK
RLA 4233 expires 12/31/06
DATE 6/28/06

REGISTERED LANDSCAPE ARCHITECT — ROBERT B. CLARK — No. 4233 — STATE OF CALIFORNIA
Signature 12-31-06 Renewal Date
7/19/06 (Date)

MARK	REVISIONS	APPR.	DATE
1	WALL AND FENCE CHANGES PER OWNERS REQUEST		MARCH 1 2006
2	WALL FENCE, PLANTING CHANGES PER OWNERS REQUEST		MAY 26 2006

DESIGNED BY KL/BC DRAWN BY JC/EM/KL CHECKED BY KL/BC

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
P.W. PRINCIPAL ENGINEER		7/19/06
P.W. STREET SERVICES		7/19/06
PLANNING DIVISION		

APPROVED BY
CITY ENGINEER
DATE 7/19/06

PH 1 LANDSCAPE PLANS
TR 29515
SHRUB PLANTING PLAN
SCALE: 1" = 40'

ACCT. NO.
PWS-PC-03-3001-RF1
R-3892-RL
PW06-0110
SHEET 7.1 OF 32

INDEXED 8-14-06 GH

R32

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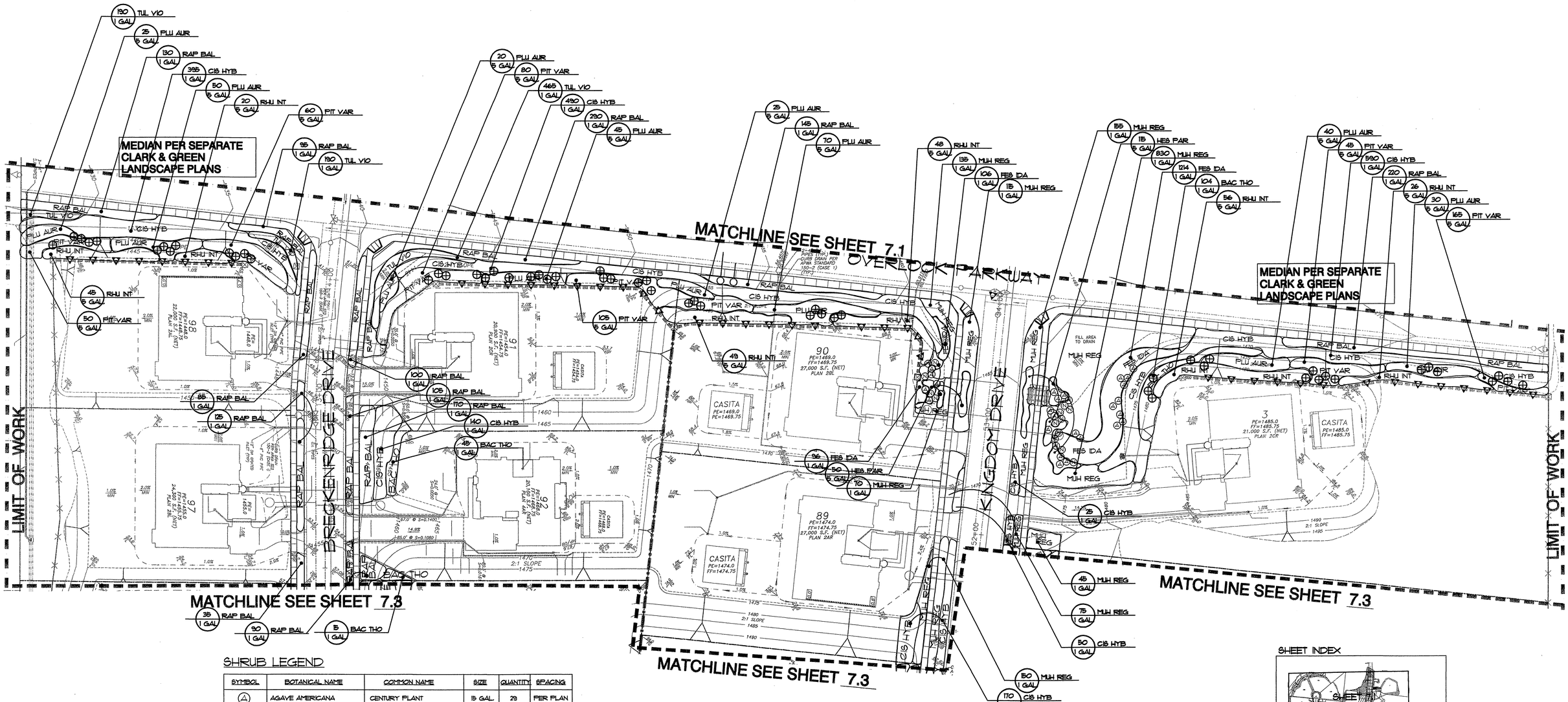

SHRUB LEGEND

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	QUANTITY	SPACING
A	AGAVE AMERICANA	CENTURY PLANT	15 GAL	29	PER PLAN
BAC THO	* BACCHARIS THOMPSON	THOMPSON BROOM	1 GAL	149	3'-6" O.C.
CIS HYB	CISTUS HYBRIDUS	HYBRID ROCKROSE	1 GAL	1860	3'-0" O.C.
FES IDA	FESTUCA IDAHOENSIS	FESCUE	1 GAL	1416	1'-6" O.C.
HES PAR	HESPERALOE PARVIFLORA	NCN	5 GAL	165	3'-0" O.C.
⊕	HETEROMELES ARBUTIFOLIA	TOYON	15 GAL	56	PER PLAN
MUH REG	* MUHLENBERGIA 'REGAL MIST'	REGAL MIST MUHLEY	1 GAL	575	2'-6" O.C.
N	NOLINA BIGELOVII	BIGELOW NOLINA	15 GAL	16	PER PLAN
PIT VAR	PITTOSPORUM VARIEGATA	VARIEGATED MOCK ORANGE	5 GAL	505	4'-6" O.C.
PLU AUR	PLUMBAGO AURICULATA 'ROYAL CAPE'	ROYAL CAPE PLUMBAGO	5 GAL	250	4'-0" O.C.
RAP BAL	RHAPHIOLEPIS 'BALLERINA'	INDIA HAWTHORNE	1 GAL	1590	2'-6" O.C.
RHU INT	RHUS INTEGRIFOLIA	LEMONADEBERRY	5 GAL	244	5'-0" O.C.
TUL VIO	TULBAGIA VIOLACEA	SOCIETY GARLIC	1 GAL	845	1'-6" O.C.

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	QUANTITY	SPACING
△	PARTHENOCISSUS TRICUSPIDATA	BOSTON IVY	1 GAL	43	20'-0" O.C. PER PLAN

NOTE: REFER TO PLANTING DETAILS AND NOTES SHEET &C. CONTRACTOR TO REFER TO CITY'S SPECIFICATIONS AND GENERAL NOTES. CONTRACTOR SHALL FURNISH AND INSTALL FERTILIZER AND AMENDMENTS PER THE SOILS REPORT AS RECOMMENDED.
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City of Riverside WATER SYSTEM
APPROVED BY MWM DATE 7/6/06

City of Riverside PUBLIC UTILITY DEPARTMENT OVERHEAD AND UNDERGROUND
APPROVED BY WM DATE 6/06

LANDSCAPE ARCHITECT IN RESPONSIBLE CHARGE
ROBERT B. CLARK
RLA 4233 expires 12/31/06
DATE 6/28/06

REGISTERED LANDSCAPE ARCHITECT — ROBERT B. CLARK — Signature 12-31-08 Renewal Date 6/28/06 Date — STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
1	WALL AND FENCE CHANGES PER OWNERS REQUEST		MARCH 1 2006
2	WALL, FENCE, PLANTING CHANGES PER OWNERS REQUEST		MAY 25 2006

DESIGNED BY KL/BC DRAWN BY JC/EM/KL CHECKED BY KL/BC

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
P.W. PRINCIPAL ENGINEER		7/18/06
P.W. STREET SERVICES		7/10/06
PLANNING DIVISION		6/29/06

APPROVED BY
CITY ENGINEER
DATE 7/19/06

PH 1 LANDSCAPE PLANS
TR 29515
SHRUB PLANTING PLAN

SCALE: 1" = 40'

ACCT. NO.
PWS-PC-03-3001-RF1
R-3892-RL
PW06-0110
SHEET 7.2 OF 32

INDEXED 8-14-06 KH

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MATCHLINE SEE SHEET 7.2

MATCHLINE SEE SHEET 7.2

MATCHLINE SEE SHEET 7.2

MATCHLINE SEE SHEET 7.4

MATCHLINE SEE SHEET 7.4

LIMIT OF WORK

LIMIT OF WORK

LIMIT OF WORK

TRACT BOUNDARY

TRACT BOUNDARY

BRECKENRIDGE DRIVE

KINGDOM DRIVE

GREEN CANYON PLACE

CASITA
PE=1494.0
FF=1494.75

96
PE=1491.0
FF=1491.75
25,500 S.F. (NET)
PLAN 19L

95
PE=1488.0
FF=1488.75
27,000 S.F. (NET)
PLAN 1AR

94
PE=1485.0
FF=1485.75
25,500 S.F. (NET)
PLAN 1AR

93
PE=1489.0
FF=1489.75
25,500 S.F. (NET)
PLAN 19R

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PLAN 4CL

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PLAN 2BL

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25,000 S.F. (NET)
PLAN 1AR

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FF=1514.75
21,000 S.F. (NET)
PLAN 19L

5
PE=1514.0
FF=1514.75
21,000 S.F. (NET)
PLAN 1AR

6
PE=1524.0
FF=1524.75
19,900 S.F. (NET)
PLAN 19R

SHRUB LEGEND

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	QUANTITY	SPACING
ARC HMM	ARCTOSTAPHYLOS 'HOWARD MCMINN'	MCMINN MANZANITA	5 GAL.	90	4'-0" O.C.
ARC GLA	ARCTOSTAPHYLOS GLAUCA	BIG BERRY MANZANITA	5 GAL.	15	4'-0" O.C.
BAC THO	* BACCHARIS THOMPSON	THOMPSON BROOM	1 GAL.	260	3'-6" O.C.
CIS HYB	CISTUS HYBRIDUS	HYBRID ROCKROSE	1 GAL.	1935	3'-0" O.C.
ERI FAS	ERIOGONUM FASCICULATUM	CALIFORNIA BUCKWHEAT	1 GAL.	160	3'-0" O.C.
FES IDA	FESTUCA IDAHOENSIS	FESCUE	1 GAL.	550	1'-6" O.C.
HES PAR	HESPERALOE PARVIFLORA	NCN	5 GAL.	75	3'-0" O.C.
HET ARB	HETEROMELES ARBUTIFOLIA	TOYON	5 GAL.	20	4'-0" O.C.
MUH REG	* MUHLENBERGIA 'REGAL MIST'	REGAL MIST MUHLEY	1 GAL.	3030	2'-6" O.C.
RAP BAL	RHAPHIOLEPIS 'BALLERINA'	INDIA HAWTHORNE	1 GAL.	580	2'-6" O.C.
RHU INT	RHUS INTEGRIFOLIA	LEMONADEBERRY	5 GAL.	30	5'-0" O.C.
SAL CLE	SALVIA CLEVELANDII	CLEVELAND SAGE	1 GAL.	65	3'-0" O.C.
SAL GRE	SALVIA GREGGII 'FURMAN'S RED'	AUTUMN SAGE 'FURMAN'S RED'	1 GAL.	105	2'-0" O.C.

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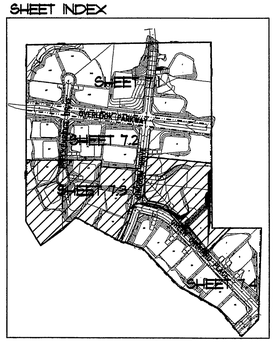

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City of Riverside
WATER SYSTEM
QUANTITY — ABBREVIATION — SIZE — (GO) PLANT (YOU)
MWM 7/6/06
APPROVED BY DATE

City of Riverside
PUBLIC UTILITY DEPARTMENT
OVERHEAD AND UNDERGROUND
WM 6/06
APPROVED BY DATE

LANDSCAPE ARCHITECT IN RESPONSIBLE CHARGE
ROBERT B. CLARK
RLA 4233 expires 12/31/06
DATE 6/28/06

REGISTERED LANDSCAPE ARCHITECT — ROBERT B. CLARK — No. 4233 — STATE OF CALIFORNIA
Signature 6/28/06
12-31-08
Renewal Date
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DESIGNED BY KL/BC DRAWN BY JC/EM/KL CHECKED BY KL/BC

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
P.W. PRINCIPAL ENGINEER		7/6/06
P.W. STREET SERVICES		7/10/06
PLANNING DIVISION		7/14/06

APPROVED BY
CITY ENGINEER
DATE 7/14/06

PH 1 LANDSCAPE PLANS
TR 29515

SHRUB PLANTING PLAN

SCALE: 1" = 40'

ACCT. NO.
PWS-PC-03-3001-RF1
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SHEET 7.3 OF 32

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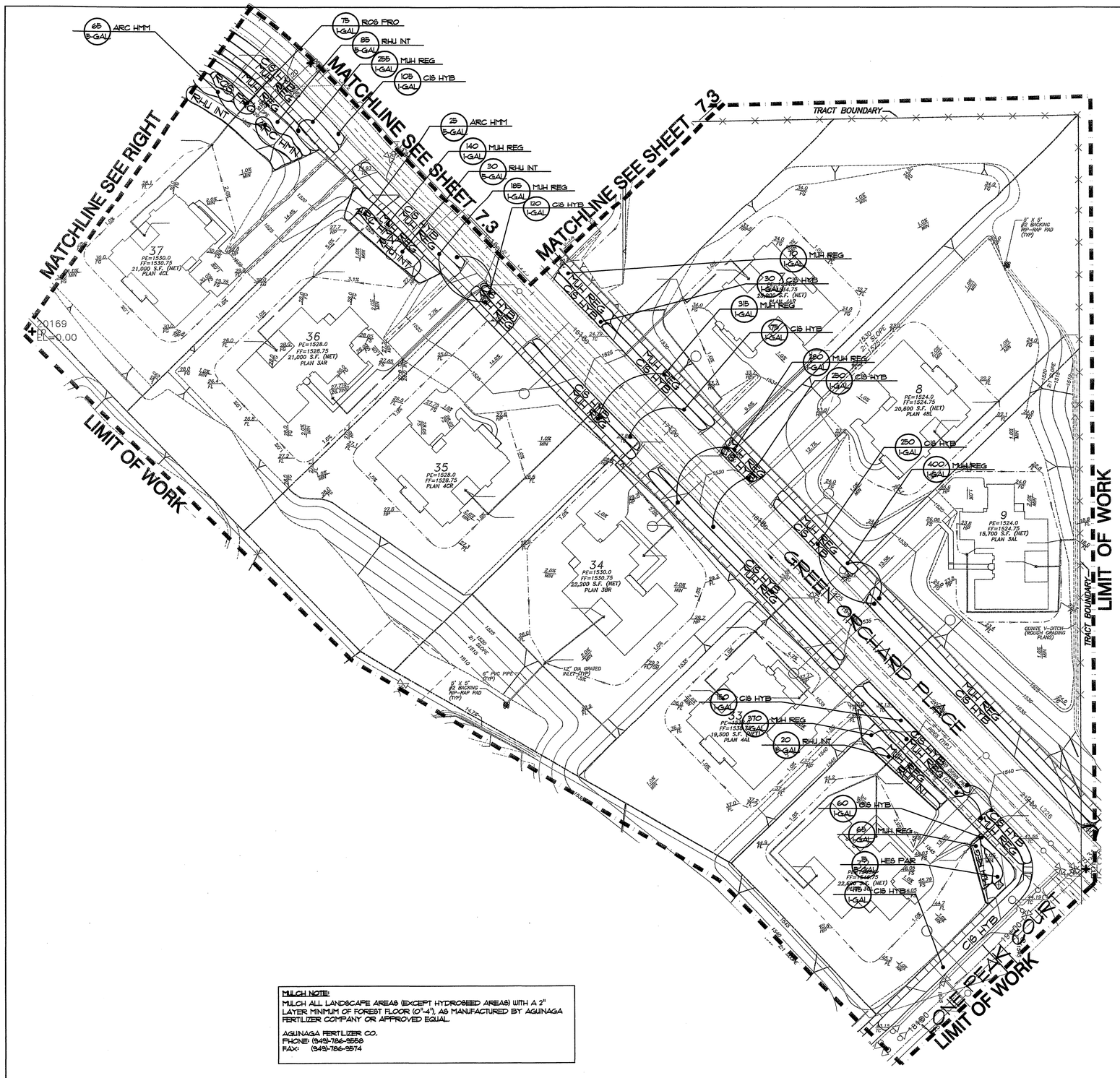
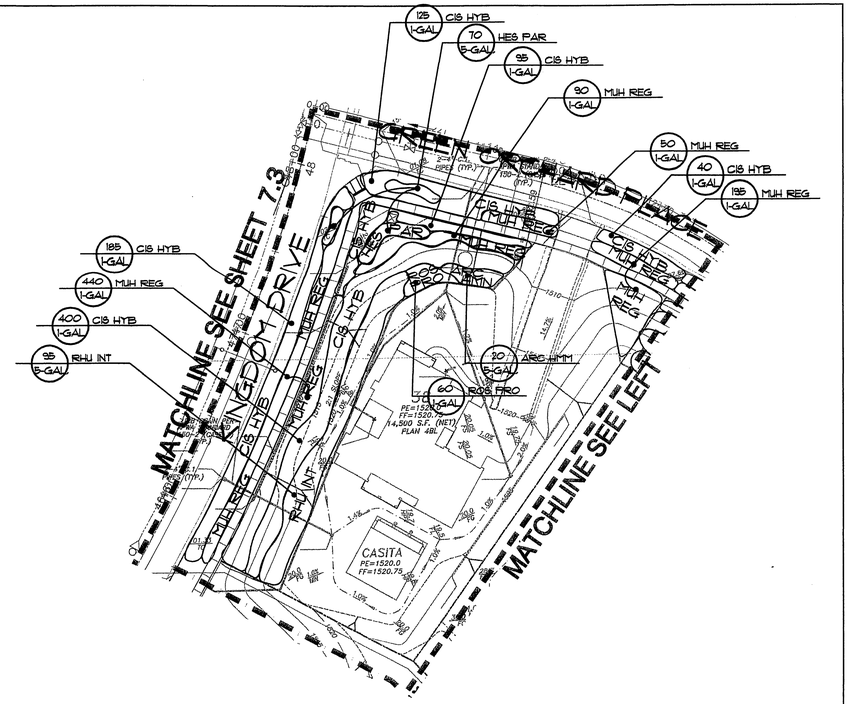




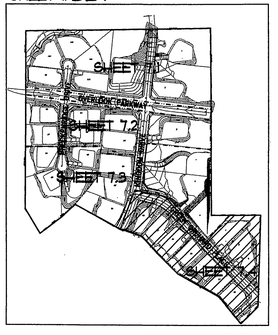
SHRUB LEGEND

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	QUANTITY	SPACING
ARC HMM	ARCTOSTAPHYLOS 'HOWARD MCMINN'	MCMINN MANZANITA	5 GAL.	110	4'-0" O.C.
CIS HYB	CISTUS HYBRIDUS	HYBRID ROCKROSE	1 GAL.	2055	3'-0" O.C.
HES PAR	HESPERALOE PARVIFLORA	NCN	5 GAL.	85	3'-0" O.C.
MUH REG	* MUHLENBERGIA 'REGAL MIST'	REGAL MIST MUHLY	1 GAL.	2685	2'-6" O.C.
RHU INT	RHUS INTEGRIFOLIA	LEMONADEBERRY	5 GAL.	230	5'-0" O.C.
ROS PRO	ROSMARINUS 'PROSTATUS'	PROSTRATE ROSEMARY	1 GAL.	135	2'-6" O.C.

NOTE: REFER TO PLANTING DETAILS AND NOTES SHEET 8.0. CONTRACTOR TO REFER TO CITY'S SPECIFICATIONS AND GENERAL NOTES. CONTRACTOR SHALL FURNISH AND INSTALL FERTILIZER AND AMENDMENTS PER THE SOILS REPORT AS RECOMMENDED.
* AVAILABLE ONLY THROUGH MOUNTAIN STATES WHOLESALE NURSERY (800)840-8509, NO SUBSTITUTIONS ALLOWED

QUANTITY, SIZE, PLANT, ABBREVIATION

SHEET INDEX



NORTH

MULCH NOTE:
MULCH ALL LANDSCAPE AREAS (EXCEPT HYDROSEED AREAS) WITH A 2" LAYER MINIMUM OF FOREST FLOOR (0"-4"), AS MANUFACTURED BY AGUINAGA FERTILIZER COMPANY OR APPROVED EQUAL.

AGUINAGA FERTILIZER CO.
PHONE: (949)-786-9558
FAX: (949)-786-9574

IMPORTANT NOTICE
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CALL TOLL FREE
48 HOURS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT
1-800-227-2600

City of Riverside
WATER SYSTEM
APPROVED BY _____ DATE 7/6/06

City of Riverside
PUBLIC UTILITY DEPARTMENT
OVERHEAD AND UNDERGROUND
APPROVED BY _____ DATE 6/06

LANDSCAPE ARCHITECT IN RESPONSIBLE CHARGE
ROBERT B. CLARK
RLA 4233 expires 12/31/06
DATE 6/28/06

REGISTERED LANDSCAPE ARCHITECT ROBERT B. CLARK STATE OF CALIFORNIA
Signature
12-31-06
Renewal Date
6/28/06
Date

MARK	REVISIONS	APPR.	DATE
1	WALL AND FENCE CHANGES PER OWNERS REQUEST		MARCH 9 2006
2	WALL FENCE, PLANTING CHANGES PER OWNERS REQUEST		MAY 25 2006

DESIGNED BY KL/BC DRAWN BY JC/EM/KL CHECKED BY KL/BC

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
P.W. PRINCIPAL ENGINEER		7/18/06
P.W. STREET SERVICES	DTB	7/20/06
PLANNING DIVISION		6/22/06

APPROVED BY _____ CITY ENGINEER
DATE 7/19/06

PH 1 LANDSCAPE PLANS
TR 29515
SHRUB PLANTING PLAN

SCALE: 1" = 40'

ACCT. NO.
PWS-PC-03-3001-RF1
R-3892-RL
PW06-0110
SHEET 7.4 OF 32

INDEXED 8-14-06 LH

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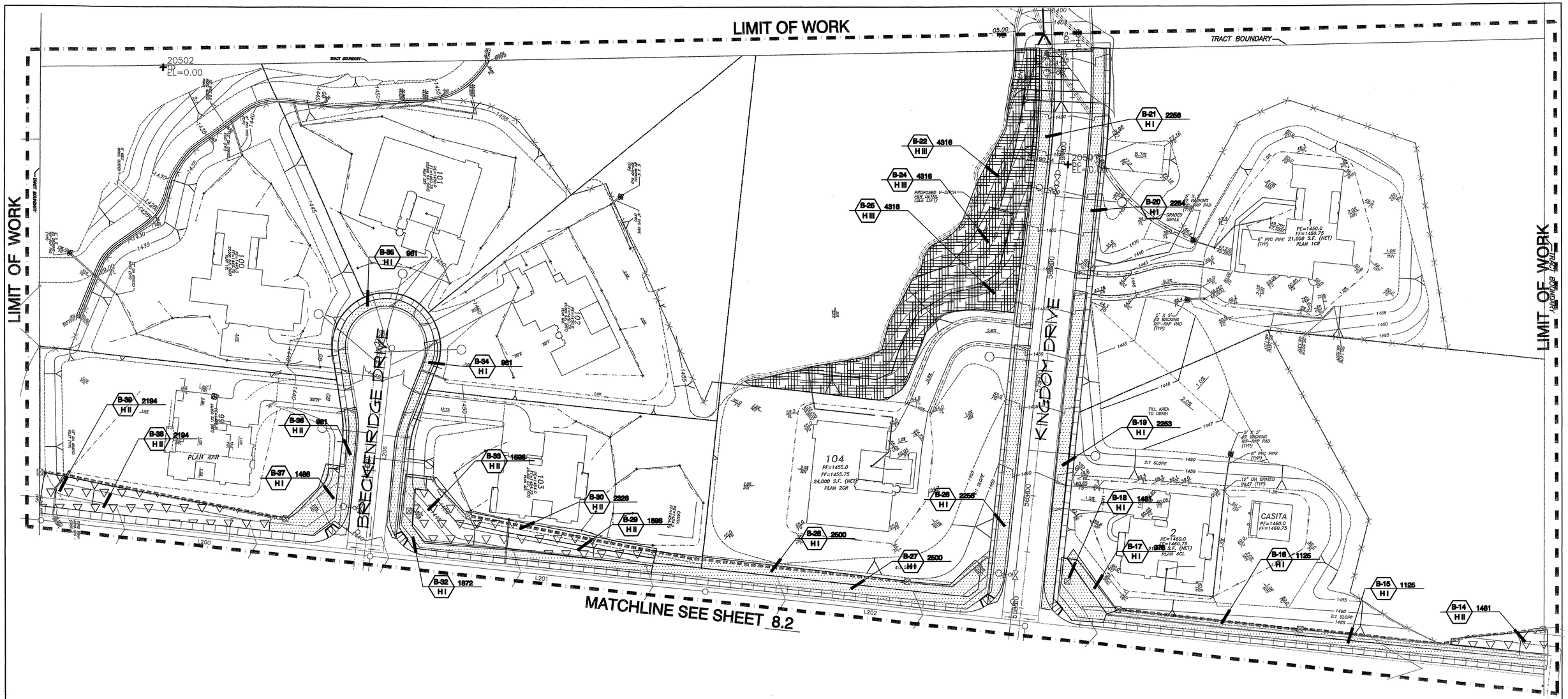
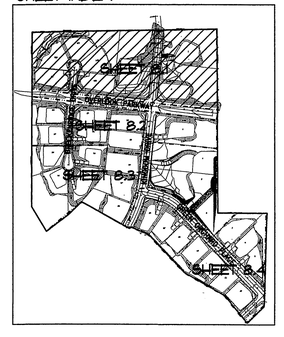


VALVE NO. B-2 2552 SQ. FT.
HYDROZONE NO. H I

HYDROZONE LEGEND

SYMBOL	HYDROZONE	TOPOGRAPHICAL CHARACTERISTICS	PLANT TYPE AND KC CATEGORY	TOTAL AREA
	HYDROZONE I	FLAT	SMALL SHRUBS - KC-1, KC-2, KC-3	60,006 S.F.
	HYDROZONE II	SOUTH FACING, SOUTHWEST FACING SLOPES	MEDIUM SHRUBS - KC-1, KC-2	13,742 S.F.
	HYDROZONE III	NORTH FACING, NORTHEAST FACING SLOPES	MEDIUM SHRUBS - KC-1, KC-2	38,631 S.F.
TOTAL S.F.				112,379 S.F.

SHEET INDEX



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City of Riverside
WATER SYSTEM
MWM 7/6/06
APPROVED BY DATE

City of Riverside
PUBLIC UTILITY DEPARTMENT
OVERHEAD AND UNDERGROUND
6/06
APPROVED BY DATE

LANDSCAPE ARCHITECT IN RESPONSIBLE CHARGE
ROBERT B. CLARK
RLA 4233 expires 12/31/06
DATE 6/28/06

REGISTERED LANDSCAPE ARCHITECT
ROBERT B. CLARK
Signature
12-31-06
Renewal Date
6/28/06
Date
STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
1	WALL AND FENCE CHANGES PER OWNERS REQUEST		MARCH 1 2006
2	WALL, FENCE, PLANTING CHANGES PER OWNERS REQUEST		MAY 28 2006

DESIGNED BY KL/BC DRAWN BY JC/EM/KL CHECKED BY KL/BC

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
P.W. PRINCIPAL ENGINEER	PH	7/18/06
P.W. STREET SERVICES	DB	7/10/06
PLANNING DIVISION		6/26/06

APPROVED BY
CITY ENGINEER
DATE 7/19/06

PH 1 LANDSCAPE PLANS TR 29515

HYDROZONE PLAN

SCALE: 1" = 40'

ACCT. NO.
PWS-PC-03-3001-RF1
R-3892-RL
PW06-0110
SHEET 8.1 OF 32

INDEXED 8-14-06 GH

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MEDIAN PER SEPARATE CLARK & GREEN LANDSCAPE PLANS

LIMIT OF WORK

MATCHLINE SEE SHEET 8.1

OVERLOOK PARKWAY

BRECKENRIDGE DRIVE

KINGDOM DRIVE

MEDIAN PER SEPARATE CLARK & GREEN LANDSCAPE PLANS

LIMIT OF WORK

MATCHLINE SEE SHEET 8.3

MATCHLINE SEE SHEET 8.3

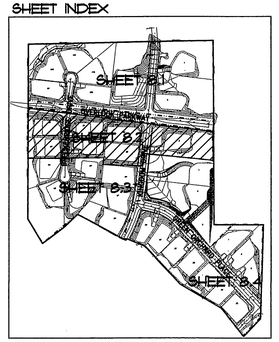
MATCHLINE SEE SHEET 8.3

VALVE NO. B-2 2552 SQ. FT.
HYDROZONE NO. H1

HYDROZONE LEGEND

SYMBOL	HYDROZONE	TOPOGRAPHICAL CHARACTERISTICS	PLANT TYPE AND K.C. CATEGORY	TOTAL AREA
	HYDROZONE I	FLAT	SMALL SHRUBS - KC-1, KC-2, KC-3	60,006 S.F.
	HYDROZONE II	SOUTH FACING, SOUTHWEST FACING SLOPES	MEDIUM SHRUBS - KC-1, KC-2	13,742 S.F.
	HYDROZONE III	NORTH FACING, NORTHEAST FACING SLOPES	MEDIUM SHRUBS - KC-1, KC-2	38,631 S.F.
TOTAL S.F.				112,379 S.F.

SHEET INDEX



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City of Riverside
WATER SYSTEM
APPROVED BY MWM DATE 7/6/06

City of Riverside
PUBLIC UTILITY DEPARTMENT
OVERHEAD AND UNDERGROUND
APPROVED BY WAM DATE 6/06

LANDSCAPE ARCHITECT IN RESPONSIBLE CHARGE
ROBERT B. CLARK
RLA 4233 expires 12/31/06
DATE 6/20/06

REGISTERED LANDSCAPE ARCHITECT ROBERT B. CLARK 4233 STATE OF CALIFORNIA
Signature 12-31-06
Renewal Date 6/20/06
Date

MARK	REVISIONS	APPR.	DATE
1	WALL AND FENCE CHANGES PER OWNERS REQUEST		MARCH 1 2006
2	WALL, FENCE, PLANTING CHANGES PER OWNERS REQUEST		MAY 29 2006

DESIGNED BY KL/BC DRAWN BY JC/EM/KL CHECKED BY KL/BC

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
P.W. PRINCIPAL ENGINEER		7/6/06
P.W. STREET SERVICES		7/6/06
PLANNING DIVISION		6/20/06

APPROVED BY
CITY ENGINEER
DATE 7/19/06

PH 1 LANDSCAPE PLANS
TR 29515
HYDROZONE PLAN

SCALE: 1" = 40'

ACCT. NO.
PWS-PC-03-3001-RF1
R-3892-RL
PW06-0110

SHEET 8.2 OF 32

INDEXED 8-14-06 GH

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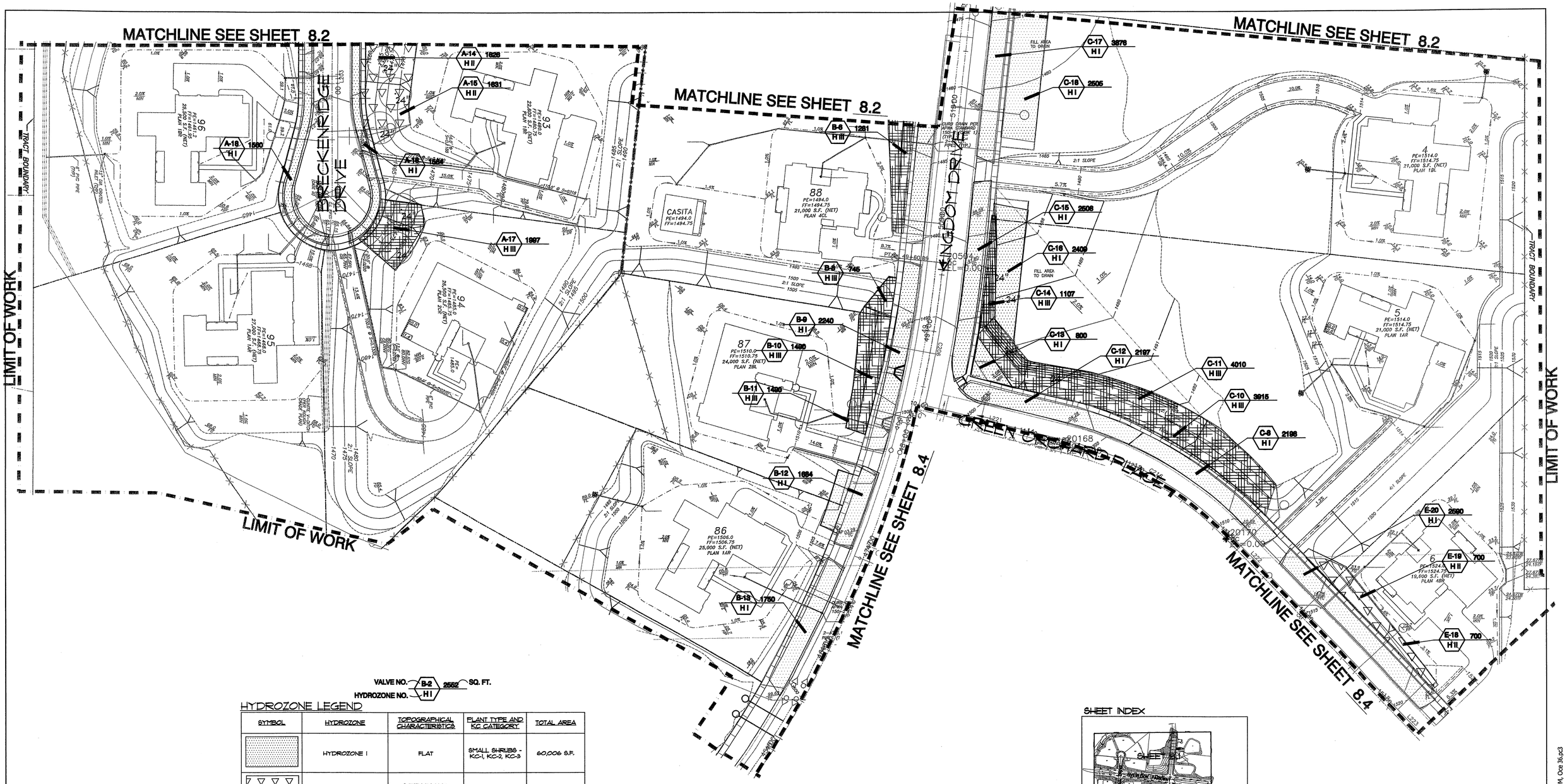
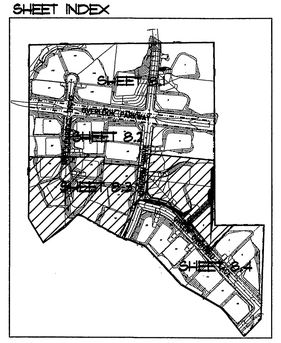


VALVE NO. B-2 2552 SQ. FT.
HYDROZONE NO. H I

HYDROZONE LEGEND

SYMBOL	HYDROZONE	TOPOGRAPHICAL CHARACTERISTICS	PLANT TYPE AND KC CATEGORY	TOTAL AREA
	HYDROZONE I	FLAT	SMALL SHRUBS - KC-1, KC-2, KC-3	60,006 S.F.
	HYDROZONE II	SOUTH FACING, SOUTHWEST FACING SLOPES	MEDIUM SHRUBS - KC-1, KC-2	13,742 S.F.
	HYDROZONE III	NORTH FACING, NORTHEAST FACING SLOPES	MEDIUM SHRUBS - KC-1, KC-2	38,631 S.F.
TOTAL S.F.				112,379 S.F.

SHEET INDEX



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City of Riverside
WATER SYSTEM
MWM 7/6/06
APPROVED BY DATE

City of Riverside
PUBLIC UTILITY DEPARTMENT
OVERHEAD AND UNDERGROUND
WM 6/06
APPROVED BY DATE

LANDSCAPE ARCHITECT IN RESPONSIBLE CHARGE
ROBERT B. CLARK
RLA 4233 expires 12/31/06
DATE 6/28/06

REGISTERED LANDSCAPE ARCHITECT
ROBERT B. CLARK 4233
Signature
12-31-06
Renewal Date
6/28/06
Date
STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
1	WALL AND FENCE CHANGES PER OWNERS REQUEST		MARCH 1 2006
2	WALL, FENCE, PLANTING CHANGES PER OWNERS REQUEST		MAY 26 2006

DESIGNED BY KL/BC DRAWN BY JC/EM/KL CHECKED BY KL/BC

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
P.W. PRINCIPAL ENGINEER	DB	7/18/06
P.W. STREET SERVICES	DB	7/10/06
PLANNING DIVISION		6-26-06

APPROVED BY
CITY ENGINEER
DATE 7/19/06

PH 1 LANDSCAPE PLANS TR 29515

HYDROZONE PLAN

SCALE: 1" = 40'

ACCT. NO.
PWS-PC-03-3001-RF1
R-3892-RL
PW06-0110

SHEET 8.3 OF 32

INDEXED 8-14-06 4H

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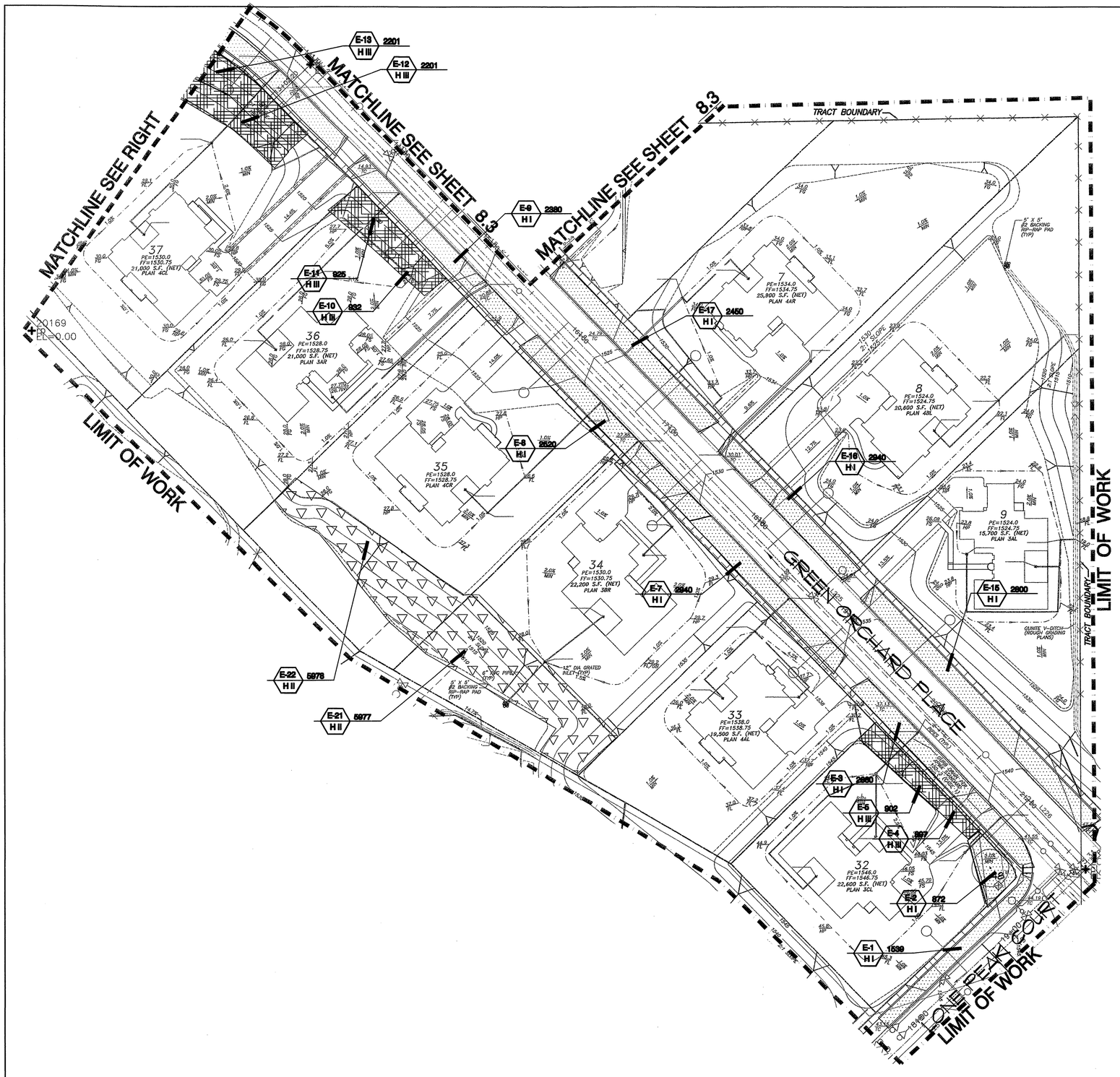
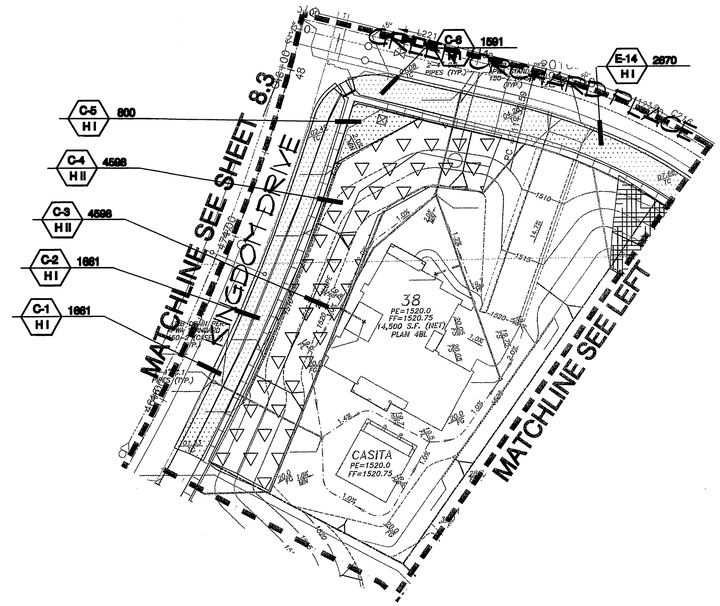


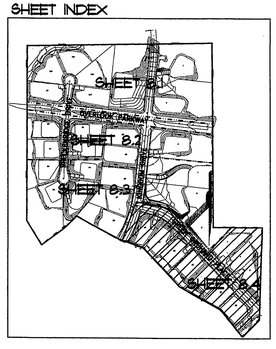


VALVE NO. B-2 2552 SQ. FT.
HYDROZONE NO. H I

HYDROZONE LEGEND

SYMBOL	HYDROZONE	TOPOGRAPHICAL CHARACTERISTICS	PLANT TYPE AND KC CATEGORY	TOTAL AREA
	HYDROZONE I	FLAT	SMALL SHRUBS - KC-1, KC-2, KC-3	23,484 S.F.
	HYDROZONE II	SOUTH FACING, SOUTHWEST FACING SLOPES	MEDIUM SHRUBS - KC-1, KC-2	21,151 S.F.
	HYDROZONE III	NORTH FACING, NORTHEAST FACING SLOPES	MEDIUM SHRUBS - KC-1, KC-2	8,058 S.F.
TOTAL S.F.				58,693 S.F.

SHEET INDEX



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City of Riverside
WATER SYSTEM
APPROVED BY _____ DATE 7/6/06

City of Riverside
PUBLIC UTILITY DEPARTMENT
OVERHEAD AND UNDERGROUND
APPROVED BY _____ DATE 6/06

LANDSCAPE ARCHITECT IN RESPONSIBLE CHARGE
ROBERT B. CLARK
RLA 4233 expires 12/31/06
DATE 6/28/06

REGISTERED LANDSCAPE ARCHITECT ROBERT B. CLARK No. 4233 Signature 12-31-06 Renewal Date 6/22/2006 Date STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
1	WALL AND FENCE CHANGES PER OWNERS REQUEST		MARCH 1 2006
2	WALL FENCE, PLANTING CHANGES PER OWNERS REQUEST		MAY 26 2006

DESIGNED BY KL/BC DRAWN BY JC/EM/KL CHECKED BY KL/BC

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
P.W. PRINCIPAL ENGINEER		7/6/06
P.W. STREET SERVICES		7/10/06
PLANNING DIVISION		

APPROVED BY _____ CITY ENGINEER
DATE 7/18/06

PH 1 LANDSCAPE PLANS
TR 29515
HYDROZONE PLAN

SCALE: 1" = 40'

ACCT. NO.
PWS-PC-03-3001-RF1
R-3892-RL
PW06-0110
SHEET 8.4 OF 32

INDEXED 8-14-06 GH

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SECTION 02441 – IRRIGATION

PART 1 – GENERAL

1.01 STANDARD SPECIFICATIONS: The provisions of the "Standard Specifications for Public Works Construction", current edition, shall apply except as modified herein.

1.02 SCOPE: The Work of this Section shall consist of furnishing all labor, materials, equipment, appliances and services necessary for the execution and completion of all Irrigation Work as shown on the Plans and as described in the Specifications including, but not necessarily limited to, the following:

- Provide complete operating irrigation systems;
- Installation of new and refurbishment of existing irrigation systems as necessary to provide complete operating irrigation systems for all planting areas within the Work Limits;
- 120 volt electrical service for and connection to the controller;
- Irrigation Controller within lockable Controller Enclosure as designated on the Approved Plans;
- Coordination with Work of other Sections and/or City Inspectors;
- Sleeving;
- Testing;
- Clean-up;
- As-Builts by means of Global Positioning System (GPS);
- Replacements, Repairs, Guarantees and Warranty Work.

1.03 RELATED WORK:
Planting 02483

1.04 SUBMITTALS:

A. Materials List: Contractor shall submit a complete materials list for approval by the Public Works Landscape Inspector prior to performing any Work. Catalog data and full descriptive literature must be submitted whenever the use of items different than those specified is requested. Notarized certificate must be submitted by plastic pipe and fitting manufacturer indicating that material complies with the Project Specifications, unless material has been previously approved, and used on other projects by City. Material list shall be submitted using the following format:

Item	Description	Manufacturer	Model No.
1	Pressure Supply Line	Lasco	Sch. 40
2	Lawn Head	Rainbird	2400
etc.	etc.	etc.	etc.

B. "Record" Prints to Reflect 'As-Built' Conditions:
1. Record accurately on one set of blue-line prints all changes in the Work constituting departures from the Plans, including changes in pressure and non-pressure line locations.
2. The changes and dimensions shall be recorded in a legible and workmanlike manner to the satisfaction of the Public Works Landscape Inspector. Prior to final inspection of the Work, submit "record" Mylar prints reflecting the 'As-Builts' condition of the system to the Public Works Landscape Inspector's for approval and records. GPS coordinates for each item listed below, shall be noted on the plans and recorded on Compact Disk (CD) in WR format, on an Excel spread sheet to City for approval.
3. Dimension from two permanent points of reference (buildings, monuments, sidewalks, curbs, pavement, etc.). Data to be shown on "record" prints shall be recorded day-to-day as the project is being installed.
4. Show locations and depths of the following items:
   a) Point of connection, Water Meter and Backflow Device. (GPS)
   b) Routing of irrigation pressure lines (dimension maximum 100 feet along routing).
   c) Gate valves. (GPS)
   d) Irrigation remote control valves, master valves filters, etc. (GPS)
   e) Quick coupling valves. (GPS)
   f) Routing of control wires.
   g) Controllers. (GPS)
   h) Flow Meters. (GPS)
   i) Related equipment (as may be directed).
5. Maintain record prints on site at all times.

1.05 INSPECTIONS:

A. Inspections will be required for:
1. Pressure test of irrigation main line.
2. System layout.
3. Coverage test.
4. Final inspection/start of maintenance.
5. Final acceptance.

B. Inspection Requests: Contractor shall notify the Public Works Landscape Inspector a minimum of 48 hours (two working days) in advance for all inspections including the following:
1. Pressure supply line installation and testing
2. System layout
3. Coverage tests
4. Final Inspection

C. Evidence of Inspection by Others: When inspections have been conducted by other than the Public Works Landscape Inspector, Contractor shall show evidence of when and by whom these inspections were made.

D. Requirements for Inspection: No inspection is to commence without "record" prints available on the site. In the event Contractor calls for an inspection without up to date "record" prints, without completing previously noted corrections, or without preparing the system for inspection, the inspection may be canceled.

E. Closing in Un-inspected Work: Do not allow or cause any of the Work of this Section to be covered up or enclosed until it has been inspected, tested and approved by the Public Works Landscape Inspector.

F. Coverage test: When the irrigation system is completed, Contractor shall perform a coverage test in the presence of the Public Works Landscape Inspector to determine if the water coverage for planting areas is complete and adequate. The Public Works Landscape Inspector must accept this test before planting may commence.

G. Hydrostatic test:
1. Prior to the installation of any valves, all pressure lines shall be tested under a hydrostatic pressure of 150 psi for a period of not less than two hours. Ball valves and pressure gauges shall be installed at all terminating ends of the mainline and the remainder of all points in between shall be capped and the line fully charged with water after all air has been expelled from the line.
2. All hydrostatic tests shall be made in the presence of the Public Works Landscape Inspector or Inspector's designated representative. No pressure line shall be backfilled until it has been inspected, tested, approved in writing, and the mainline and valve locations have been noted on the "record" prints.
3. Contractor shall furnish the necessary force pump and all other test equipment, and shall perform the test.

1.06 TURNOVER ITEMS:

A. Controller Charts:
1. "Record" prints must be approved by the Public Works Landscape Inspector before charts are prepared.
2. Provide one controller chart for each automatic controller. The chart shall show the entire area covered by the controller, preferably in a single sheet. The chart shall be a reduced copy of the approved "record" print. Reduce the print to a size that is the maximum dimensions that will fit within the controller door without folding. If the controller sequence is illegible at this reduction scale, the chart may be provided as a "multi-sheet" chart to provide adequate legibility.
3. Each control station on the Chart shall be marked with a different color to show its area of coverage.
4. When completed and approved, the chart shall be hermetically sealed between two pieces of plastic, each piece being minimum 20 mils in thickness. The chart shall be installed in the controller enclosure using Velcro fasteners, and three different color grease pencils (red, black and blue) shall be provided in the enclosure for maintenance notations on the chart.
5. Controller charts shall be completed prior to the final acceptance inspection.

B. Operation and Maintenance Manuals: Within a minimum of 14 calendar days prior to acceptance of construction, prepare and deliver to the Public Work Landscape Inspector all required descriptive materials, properly prepared in two individually bound copies of the operation and maintenance manual. The manual shall describe the material installed and shall be in sufficient detail to permit operating personnel to identify, operate, and maintain all equipment. Spare parts lists and related manufacturer's information shall be included for each equipment item installed. Each complete, bound manual shall include the following information:
1. Index sheet stating Contractor's address and telephone number, including names and addresses and telephone numbers of local manufacturer's representatives.
2. Complete operating and maintenance instructions on all major equipment.

C. Materials to be furnished: The following items shall be supplied as part of this Contract and shall be turned over to the Public Works Landscape Inspector at the conclusion of the Project at the Final Acceptance Inspection:
1. Two keys for each type of automatic controller.
2. One valve box cover key.
3. "Record" prints, CD's and Mylar "As-Built" Plans at Final Acceptance.
4. Documentation of Water Department's inspection and acceptance of backflow device.

1.07 GUARANTEE:

A. General: The entire irrigation system, including all Work done under this Contract, shall be guaranteed against all defects and fault of material and workmanship for a period of one (1) year following Final Acceptance of the Work as documented by the Notice of Completion filed with the Riverside County Recorder's Office. All materials used shall carry a manufacturer's guarantee of one (1) year. Should any problem with the irrigation system be discovered within the guarantee period, it shall be corrected by Contractor at no additional expense to City within fourteen (14) calendar days of receipt of written notice from City.

B. Form of Guarantee: Guarantee shall be submitted on Contractors own letterhead as follows:

GUARANTEE FOR IRRIGATION SYSTEM

PROJECT:___________________

LOCATION:__________________

We hereby guarantee the irrigation system we have furnished and installed against defects in materials and workmanship, ordinary wear and tear and unusual abuse, or neglect accepted, and that the Work has been completed in accordance with the Plans and Specifications. We agree to repair or replace any or all of the Work, together with any other adjacent Work which may be displaced by so doing, that may prove to be defective in its workmanship or materials within a period of one (1) year after the date the Notice of Completion for the above named Project is filed with the County Recorder by the City of Riverside, California, at no additional cost to City. We shall make such repairs or replacements within 14 calendar days following written notification by City. When the immediate repair or replacement of the Work is necessary to ensure the public safety and welfare, which would be endangered by continued usage of the facility, such circumstance will be deemed an operational emergency. In the event of such an emergency, after City contacts our firm and after authorizing 24 hours to initiate repairs, if we fail to initiate and diligently complete such repairs in a timely manner, the Director may direct City forces to perform such functions as the Director may deem necessary to correct the Work and immediately place the facility back in operational condition. If such procedure is implemented, we shall bear all expenses incurred by City. In all cases, the judgment of the Director shall be final in determining whether an operational emergency exists. In the event of our failure to make such repairs or replacements within the time specified after receipt of written notice from City (other than an operational emergency), we authorize City to proceed to have said repairs or replacements made at our expense and we will pay the costs and charges therefore upon demand.

PRINTED NAME & TITLE:

____

SIGNATURE:

ADDRERSS:

PHONE: (____)____________
(Area Code) Number

C. Operational Instruction: After the system has been completed, Contractor shall instruct the Public Works Landscape Inspector in the operation and maintenance of the system and shall furnish a complete set of operating instructions.

D. Trench Settlement: Any settling of trenches which may occur during the one-year period following acceptance shall be repaired to City's satisfaction by Contractor without any additional expense to City. Repairs shall include the complete restoration of all planting, paving or other improvements of any kind, which are damaged as a result of the Work.

PART 2 – MATERIALS

2.01 GENERAL: All materials shall conform with Section 212 – 2 IRRIGATION SYSTEM MATERIALS of the Standard Specification except as modified herein.

2.02 PIPE AND FITTINGS:

A. General:
1. Pressure supply lines 2 inches in diameter and up to 8 inches in diameter shall be either Class 315 solvent weld PVC or Class 200 rubber gasket type PVC. Solvent weld and ring type pipe shall not be used together on the same pressure supply line.
2. Pressure supply lines 1-1/2 inches in diameter and smaller shall be minimum schedule 40 PVC.
3. Non-pressure lines shall be minimum schedule 40 PVC.

B. Steel Pipe: Amend Standard Specifications Section 212-2.1.2 Steel Pipe to read:
"All steel pipe shall be hot-dipped galvanized", and add: "All fittings for steel pipe shall be 250 pound rated galvanized malleable iron, banded pattern. Pipe sizes indicated on the Plans are nominal inside diameter, unless otherwise noted."

C. Plastic Pipe:
1. Add the following to Standard Specifications Section 212-2.1.3 Plastic Pipe for Use with Solvent Weld Socket or Threaded Fittings:
"All plastic pipe shall bear the following markings: manufacturer's name, nominal pipe size, schedule or class, type of material, pressure rating in PSI, NSF seal of approval, and date of extrusion."
2. Amend Standard Specifications Section 212-2.1.3 Plastic Pipe for Use with Solvent Weld Socket or Threaded Fittings to read:
"All plastic pipe fittings shall be standard weight schedule 40 and shall be injection molded of an improved PVC fitting compound. All threaded plastic fittings shall have injection molded threads. No cut threads will be accepted on PVC pipe and fittings. All tees and ells shall be manufactured in injection molds that are side gated. All threaded nipples shall be standard weight schedule 80 with molded threads.
3. Amend first sentence of Standard Specifications Section 212-2.1.4 Plastic Pipe for Use with Rubber Ring Gaskets to read:
"All rubber gasket PVC pipe, couplings, and fittings shall conform to ASTM D 2241 Type 1, Grade 1, 2000-PSI design stress"; and add the following to the Section: "Couplings, rubber gaskets, and fittings shall be as approved by the pipe manufacturer. Ring-type rubber gasket couplings shall permit a five (5) degree deflection of the pipe at each coupling (2-1/2 degrees each side) without ex-filtration or infiltration, cracking or breaking."

D. Asbestos Cement Pipe (ACP): Is not approved for use on City projects.

2.03 VALVES AND VALVE BOXES:

A. Valves:
1. Ball Valves: All ball valves shall be bronze bodied, capable of withstanding a minimum working pressure of not less than 150 psi.
2. Manual Control Valves: Add the following to Standard Specifications Section 212-2.2.3 Manual Control Valves: Anti-siphon-type valves shall be all bronze with swivel-type replaceable seating members and an approved vacuum breaker as an integral part of assembly.
3. Quick-Coupling Valves: Add the following to Standard Specifications Section 212-2.2.6 Quick Coupling Valves and Assemblies: Quick coupling valves shall have locking vinyl cover and shall be 1" in size.
4. Remote Control Valves: Add the following to Standard Specifications Section 212-2.2.4 Remote Control Valves:
   a) Valves shall be spring-loaded, self-cleaning, packless diaphragm activated, of a normally closed type.
   b) Valve solenoid shall be corrosion-proof and constructed of stainless steel molded in epoxy to form one integral unit, and shall be 24 volt A.C., 2.0 watt maximum (2" and smaller valves).
   c) Valve shall close against flow without chatter and with minimum closing surge pressure (minimum 5 seconds closing time per valve).
   d) Valve shall be completely serviceable in the field without removing valve body from line.

B. Boxes:
1. Concrete Valve Boxes: Add the following to Standard Specifications Section 212-2.2.7 Valve Boxes: Remote control valve boxes shall be rectangular concrete boxes with non-hinged locking cast-iron covers. Valve station numbers shall be welded in two-inch-high (2") numerals on lids. Gate valve boxes shall be round concrete boxes with cast iron covers marked "G. V." with letters cast or tooled in the cover.
2. Plastic Valve Boxes: (For use on Drip Irrigation Systems only)
   a) General: Valve boxes and covers shall be fabricated from a durable plastic material resistant to weather, sunlight and chemical reactions. The covers shall be secured with a hidden latch mechanism or bolts. The cover and box shall be capable of sustaining a load of 1,500 pounds. Valve box extensions shall be by the same manufacturer as the valve box. The box covers shall be factory embossed for the designated use and valve station numbers in 2" high letters. Boxes and covers shall be as manufactured by AMETEK or City approved equal.
   b) Rectangular Plastic Boxes and Covers: Shall be a minimum of 12" wide x 18 long", with depths as necessary to protect the valve and provide the clear dimensions as detailed and/or specified. The covers shall be embossed with words or initials to identify the use for the box (e.g. "Flush Valve" or the letters "F.V.", and Air Relief Valve or the letters "A.R.V.") as noted on the Plan.
   c) Round Plastic Boxes and Covers: Shall be minimum 12" diameter, round boxes with covers embossed with words to identify the use for the box (e.g. "Quick Coupler Valve" or the letters "Q.C.V.") and shall be marked as noted on the Plans

2.04 BACKFLOW PREVENTION DEVICE: Add the following to Standard Specifications Section 212-2.3 Backflow Preventer Assembly: The backflow prevention unit shall be a reduced pressure type vacuum breaker of the size, manufacture, and model number as indicated on the Plans. If not indicated, the device shall be the same size as the water service and the manufacturer and model number shall be as approved by the Public Works Landscape Inspector.

2.05 IRRIGATION HEADS: All irrigation heads shall be as shown on the Plans and shall conform with Section 212-2.4 Sprinkler Equipment of the Standard Specifications. All heads used on the same control valve shall be matched precipitation rate heads. All heads used on turf shall be minimum 6" pop-up types; all heads used in shrub areas shall be minimum 12" pop-up types.

2.06 ELECTRICAL MATERIALS:

A. Conduit: Amend Standard Specifications Section 212-3.2.1 Conduit to read: All conduit below grade shall be schedule 40 PVC of sufficient size to carry all proposed wiring. Conduit above grade shall be galvanized steel per the Standard Specifications. Low Voltage (24 volt) wiring shall be provided with a separate conduit/sleeve from both high voltage wiring (110/120 volt and higher) and the irrigation mainline sleeve.

B. Electrical Service: Materials for electrical service shall comply with the standard specifications, governing utility agency standards, and requirements of all applicable codes. All controllers serving landscape areas that will not being turned over to the City for maintenance, shall be powered through a metered electrical service. Controllers serving landscape areas to be maintained by the City shall be powered through a non-metered electrical service.

C. Wire: Add the following to Standard Specifications Section 212-3.2.2 Conductors: "All low voltage conductors shall be 14 gauge for control and 12 gauge gray for common wires. All low voltage common wire shall be white with a colored stripe. Stripe color shall be different for each controller installed. All low voltage control wire shall be of one color other than white or green. A different color control wire shall be used for each controller installed."

2.07 CONTROLLER UNIT: Add the following to Standard Specifications Section 212-3.3 Controller Unit:

A. Controller: Shall be wall mounted type, as indicated on the Plans, with a heavy duty watertight case and locking hinged cover, installed within a lockable stainless steel enclosure.

B. Controller Enclosure: Shall be Stainless Steel, sized to fit the controller and the other electrical components as required per Standard Detail 4060, irrigation controller electrical pedestal shall be Myers Power Products, Inc. – Catalog # MEUG22X-ENC-RIV Stainless Steel Enclosure, or City approved equal. The equipment shall conform to the requirements of the City of Riverside. Complete pedestal shall be UL Listed under Standard 508, Enclosed Industrial Control Equipment.
Enclosure shall be Rainproof NEMA Type 3R, fabricated from 12 gauge corrosion resistant stainless steel, minimum grade 304. Enclosure shall include vandal resistant hinged door with 3-point latch assembly and folding "T" handle behind lockable cover. Enclosure shall be equipped with stainless steel mounting pans, adjustable from front to back. All interior sheet metal shall be stainless steel. Mounting pans shall have painted exterior grade —" plywood panels. Enclosure shall have interior mounting flanges for attachment to padmount base (Myers part number 519100) encased in 4" minimum concrete.
Pedestal shall be equipped with insulated neutral and ground lug. Pedestal shall be wired for 120V 1Ph 2W with a 15 ampere circuit breaker, 10,000 A/C rated, installed. All factory wiring shall be 600 volt rated copper.

PART 3 – EXECUTION

3.01 GENERAL: All Work shall conform with Section 308 LANDSCAPE AND IRRIGATION INSTALLATION of the Standard Specifications except as modified herein. No Work of this Section other than sleeving under pavement shall commence prior to the completion and acceptance of all Grading Work.

Add the following to Standard Specifications Section 308-5.1 General:

A. Irrigation System Design & Water Supply:
1. The irrigation system design is based upon an available water pressure of _______ p.s.i. at a flow rate of _________ g.p.m. Individual stations are designed to this minimum p.s.i. The system is also designed to withstand a maximum pressure of ______ p.s.i. Contractor shall verify the size of the existing water supply/meter and the existing operating water pressure at the water supply location shown on the Plans prior to starting construction. Contractor shall notify the Public Works Landscape Inspector in writing of any discrepancies noted. Failure to provide such written notification may cause Contractor to provide for modifications to the irrigation system as necessary to provide for a fully operational system providing 100% coverage at the operating pressure available, all at no additional cost to City.
2. Connection to, or the installation of, the water supply shall be at the location shown on the Plans. Minor changes caused by actual site conditions shall be made at no additional cost to City.

B. Electrical Service: Contractor shall provide either a metered (for areas to be maintained by other than the City, such as an HOA) or non-metered electrical service (for areas to be maintained by the City) as required, and shall make the final 120 V connection to the irrigation controller.

C. Code Requirements: Prior to all Work of this Section, Contractor shall carefully inspect the installed Work of all other trades and verify that all such Work is complete to the point where this installation may properly commence. Verify that the irrigation system may be installed in strict accordance with all pertinent codes and regulations, the original design, the referenced standards, and the manufacturer's recommendations.

In the event any equipment or methods indicated on the Plans or in the Specifications is in conflict with local codes, immediately notify the Public Works Landscape Inspector prior to installing the Work. If this notification is not provided, Contractor shall assume full responsibility for the cost of all revisions necessary to comply with all codes.

D. Grades: Contractor is to keep within the specified material depths with respect to finish grade. Failure to obtain specified material depths may subject Contractor to adjusting the grades or depth of lines until acceptable depths of cover are achieved, all as directed by the Public Works Landscape Inspector and at no additional cost to City.

E. Coordination with Work of Other Trades: Make all necessary measurements in the field to ensure precise fit of items in accordance with the original design. Contractor shall coordinate the installation of all irrigation materials with all other Work. Special attention shall be given to coordination of piping locations versus tree and shrub locations and sleeve locations versus pavement installation to avoid conflicts.

F. Maintain Record Prints: Contractor shall maintain "record" prints on site at all times. Upon completion of the Work, transfer all "record" information on changes and dimensions to reproducible sepia Mylar or photo Mylar prints and CD's. The changes and dimensions shall be recorded in a legible and workmanlike manner, to the satisfaction of the Public Works Landscape Inspector.

3.02 TRENCHING AND BACKFILLING:

A. Trenching:
1. Add the following to Standard Specifications Section 308-2.2 Trench Excavation and Backfill: Dig trenches and support pipe continuously on bottom of ditch. Where lines occur under paved areas, depth dimensions shall be considered below subgrade.
2. Amend Standard Specifications Section 308-2.2, Subparagraph 2 Waterlines continuously pressurized) to read: Water lines continuously pressurized – minimum 18 inches, maximum 24 inches. (These measurements are to be from subgrade elevation for piping under pavement.)
3. Amend Standard Specifications Section 308-2.2, Subparagraph 3 Lateral sprinkler lines) to read: Lateral irrigation lines – minimum 12 inches and maximum 16 inches. All main lines and lateral lines running parallel to other such lines shall have a minimum horizontal separation of 12".
4. Add the following to Standard Specifications Section 308-2.2 Trench Excavation and Backfill: Where it is necessary to excavate adjacent to existing trees, Contractor shall avoid injury to trees and tree roots. Excavation in areas where 2-inch and larger roots occur shall be done by hand. All roots 2 inches and larger in diameter shall be tunneled under and shall be heavily wrapped with wet burlap to prevent scarring or drying. Where trenching machine is run close to trees having roots smaller than 2 inches in diameter, the wall of the trench adjacent to the tree shall be hand trimmed, making a clean cut through the roots. Roots 1 inch and larger in diameter shall be painted with two coats of tree seal or approved equal. Trenches adjacent to trees shall be closed within 24 hours.
5. Permanent Resurfacing: Add the following to Standard Specifications Section 308-5.1 General: All surface improvements damaged or removed as a result of Contractor's operations shall be reconstructed by Contractor to the same dimensions, except for pavement thickness, and with the same type materials used in the original Work. Trench resurfacing shall be 1 inch greater in thickness than existing pavement. Concrete pavement shall be removed and replaced in "full panels" with no horizontal dimension less than five (5) feet. Contractor shall review the planned limits and lines of concrete removal and replacement with the Public Works Landscape Inspector prior to sawcutting for Removal Work.

B. Backfill:
1. Amend Standard Specifications Section 308-2.2 Trench Excavation and Backfill to read: " Backfill shall be uniformly tamped in 4-inch layers under and around the pipe for the full width of the trench and the full length of the pipe. Materials shall be sufficiently damp to permit thorough compaction, free of voids. Backfill shall be compacted to dry density equal to adjacent undisturbed soil and shall conform to adjacent grades."
2. Add the following to Standard Specifications Section 308-2.2 Trench Excavation and Backfill:
   a) Flooding in lieu of tamping is not allowed without specific prior written approval of the Public Works Landscape Inspector.
   b) Under no circumstances shall the wheels of any vehicle not designed for the purpose of soils compaction be used to compact backfill.

3.03 PIPE INSTALLATION:

A. General: Add the following to Standard Specifications Section 308-5.2.1 Irrigation Pipeline Installation, General:
1. Piping under existing pavement may be installed by jacking, boring, or hydraulic driving. However, no hydraulic driving is permitted under asphaltic concrete pavement.
2. Cutting or breaking of existing pavement is not permitted except as approved in writing by Public Works Landscape Inspector. When approved, all necessary repairs and replacements will be made at no additional cost to City.
3. Carefully inspect all pipe and fittings before installation, removing all dirt, scale and burrs and reaming; install pipe with all markings up for visual inspection and verification.
4. Contractor shall install concrete thrust blocking per the manufacturer's recommendations at all changes of direction and terminal points of pressure pipe.
5. Parallel lines shall not be installed directly over one another. Provide a minimum of 12" horizontal separation for all parallel lines.
6. For plastic-to-metal connections, work the metal connections first. Use a non-hardening pipe dope on all threaded plastic-to-metal connections, except where noted otherwise.
7. Constant pressure piping under pavement shall be sleeved using class 315 solvent weld PVC and non-pressure lines in schedule 40 PVC sleeves. All wiring shall be sleeved under pavement using gray schedule 40 PVC. Each line shall be separately sleeved.
8. Do not install multiple assemblies ("manifold") on plastic lines. Provide each equipment assembly (e.g. RCV, quick coupler, gate valve, head, backflow device) with its own connection to its service line.

B. Plastic Pipe: Add the following to Standard Specifications Section 308-5.2.3 Plastic Pipeline:
1. Exercise care in handling, loading, unloading and storing plastic pipe and fittings, store plastic pipe and fittings under cover until ready to install; transport plastic pipe on a vehicle with a bed long enough to allow pipe to lay flat, avoid undue bending and any concentrated external load.
2. 360E applicators shall be used to apply primer and solvent on pipe sizes 2-1/2 inches and larger.

3.04 BACKFLOW INSTALLATION: Add the following to Standard Specifications Section 308-5.3 Installation of Valves, Valve Boxes, and Special Equipment: Install backflow assemblies at locations approved in the field by the Public Works Landscape Inspector and at heights required by local codes.

3.05 VALVE AND VALVE BOX INSTALLATION:

A. Valves:
1. Amend Standard Specifications Section 308-5.3 Installation of Valves, Valve Boxes, and Special Equipment to read: Valves shall be the same size as the pipeline in which valves are installed unless otherwise specified on the Plans. Valves shall be installed a minimum of three feet in horizontal distance apart, each with its own connection to the pressure main line.
2. Amend Standard Specifications Section 308-5.3 Installation of Valves, Valve Boxes, and Special Equipment to read: Install quick couplers within valve boxes per the Public Works Department's standards at maximum 75' o.c., and maximum 50' from ends of all planting areas.
3. Add the following to Standard Specifications Section 308-5.3 Installation of Valves, Valve Boxes, and Special Equipment: Valves shall be installed in shrub areas whenever possible. No valves or valve boxes other than quick coupler valves shall be installed within a designated turf area.

B. Valve Boxes:
1. General: Valve boxes shall be installed with a minimum of 2" vertical clearance between the box and all pipelines and valve components and/or special equipment within the box. Valve boxes found resting on either the valve, special equipment or pipelines shall be cause for rejection of the installation.
2. Uses:
   a) Concrete Valve Boxes:
      i) Rectangular: Unless noted otherwise on the Plans, each remote control valve, all wire splices, flow meters and each master control valve shall be installed within a rectangular concrete valve box.
      ii) Round: Unless noted otherwise on the Plans, each quick coupler valve and each gate valve shall be installed within a round concrete valve box.
   c) Plastic Valve Boxes: (for drip irrigation systems only)
      i) Rectangular: Unless noted otherwise on the Plans, each drip irrigation flush valve, and each air relief valve shall be installed within a rectangular plastic valve box.
      ii) Round: Unless noted otherwise on the Plans, ball valves and/or gate valves shall be installed within a round plastic valve box.

3.06 IRRIGATION HEAD INSTALLATION: Amend Standard Specifications Section 308-5.4.1 Sprinkler Head Installation and Adjustment, General to read: Irrigation heads shall be installed as designated on the Plans and per the Public Works Department's standard details. Upon coverage testing of the system if 100% coverage is not afforded by the system as designed, additional heads shall be added as necessary to achieve 100% coverage.

3.07 CONTROLLER INSTALLATION: Add the following to Standard Specifications Section 308-5.5 Automatic Control System Installation:

A. Controller Installation: The controller location, as shown on the Plans, is diagrammatic. The final location of the controller(s) shall be as approved by the Public Works Landscape Inspector before installation. Typical controller location shall be mid-block 3' behind the sidewalk. If replacement of existing controller(s) is a part of the project, Contractor shall remove the existing controller(s) and replace with the replacement unit as specified. Contractor shall install all conduit runs, 120V wire and cable, and 24V control wire, as necessary for a complete and operational system.

B. Controller Enclosure:
Conventional Type: The controller shall be wall mounted within a Myers Power Products, Inc. Catalog # MEUG22X-ENC-RIV, stainless steel vandal resistant enclosure, unless noted otherwise on the Plans. Controller enclosure shall be located in shrub areas and/or adjacent to other hardscape items. Enclosure shall have the service address applied to the upper half of the enclosure in a location visible from the roadway in 3" black vinyl numerals. A 4" thick concrete slab for maintenance access shall be provided, size approximately 15 sq. ft., line, grade and dimensions as directed by the Public Works Landscape Inspector.

C. Coordination of Controller Location with Various Service Connections: Contractor shall coordinate the electrical service with the approved controller location. Contractor shall verify the locations of 120V power prior to installing controller(s) and shall coordinate final assembly mounting locations with the needed utilities. Contractor shall furnish and install grounding rods and ground wires for each controller. Ground rod shall be installed inside base of pedestal.

D. Controller Connections: Contractor shall inspect, test, and certify all low voltage control wire splices and ground rod installations as applicable. Any repairs as necessary to provide properly operating wiring are to be made by Contractor at no additional cost to City. After repairs are satisfactorily completed, Contractor shall connect the ground wires to the ground rods and the controller(s).

E. Controller Programming: Following establishment of the turf, the irrigation system shall be programmed to operate during the periods of minimal use of the Project area (i.e., 11:00 p.m. through 6:00 a.m.).

3.08 WIRING:

A. Wiring: Add the following to Standard Specifications Section 308-5.5 Automatic Control System Installation:
1. All splice connections shall occur in a valve box. All wire runs between the valve and the controller shall be a continuous run with no splices unless noted otherwise on the Plans.
2. All low voltage-wiring splices shall be made-up with Spears DS-100 Dri-Splice wire Connectors filled with DS-300 Sealant or Christy's Electra Seal #RHES-5 Sealant or City approved equal.

3.09 FINISHING AND TESTING: Amend Standard Specifications Section 308-5.6.2 Pipeline Pressure Test to read: Pressure test the mains – minimum 2 hours at 150 PSI. Add the following to Standard Specifications Section 308-5.6.2 Pipeline Pressure Test: Center-load all plastic pipe prior to pressure testing. The entire system shall be operating properly before any planting operations commence.

3.10 COMPLETION CLEANING: Add the following to Standard Specifications Section 308 LANDSCAPE AND IRRIGATION INSTALLATION: Upon completion of the Work, Contractor shall smooth all ground surfaces, remove excess materials, rubbish, debris, etc., sweep adjacent streets, curbs, gutters, walkways and trails, and remove construction equipment from the premises.

END OF SECTION

IMPORTANT NOTICE
Section 4216/4217 of the Government Code requires a Dig Alert Identification Number to be issued before a "Permit to Excavate" will be valid. For your Dig Alert I.D. Number call
CALL TOLL FREE
48 HOURS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT
1-800-227-2600

City of Riverside
WATER SYSTEM
MWM — 7/6/06
APPROVED BY — DATE

City of Riverside
PUBLIC UTILITY DEPARTMENT
OVERHEAD AND UNDERGROUND
WAM — 6/06
APPROVED BY — DATE

LANDSCAPE ARCHITECT IN RESPONSIBLE CHARGE
ROBERT B. CLARK
RLA 4233 expires 12/31/06
DATE 6/28/06

REGISTERED LANDSCAPE ARCHITECT — ROBERT B. CLARK — 4233 — Signature — 12-31-06 — Renewal Date — 6/28/06 — Date — STATE OF CALIFORNIA

MARK	REVISIONS	APPR.	DATE
1	WALL AND FENCE CHANGES PER OWNERS REQUEST		MARCH 1 2006
2	WALL, FENCE, PLANTING CHANGES PER OWNERS REQUEST		MAY 26 2006

DESIGNED BY KL/BC DRAWN BY JC/EM/KL CHECKED BY KL/BC

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
P.W. PRINCIPAL ENGINEER		7/18/06
P.W. STREET SERVICES	DB	7/10/06
PLANNING DIVISION		6/26/06

APPROVED BY
CITY ENGINEER
DATE 7/19/06

PH 1 LANDSCAPE PLANS
TR 29515

IRRIGATION SPECIFICATIONS

~~SCALE: 1" = 40'~~

ACCT. NO.
PWS-PC-03-3001-RF1
R-3892-RL
PW06-0110
SHEET 10.0 OF 32

INDEXED 8-14-06 4H

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SECTION 02480 – PLANTING
PART 1 – GENERAL

1.01 RELATED DOCUMENTS:
A. Standard Specifications: The provisions of the Standard Specifications shall apply except as modified herein.
B. Reference Standards: American Association of Nurserymen Standards.

1.02 SCOPE: The Work of this Section shall consist of furnishing all labor, materials, equipment, appliances and services necessary for the execution and completion of all Planting Work as shown on the Plans and as described in the Specifications including, but not necessarily limited to, the following:

* Soil preparation;
* Fine grading;
* Finish grading, as distinguished from fine grading;
* Planting trees;
* Guying and staking trees;
* Planting shrubs and groundcover;
* Hydroseeding turf;
* Soil erosion control;
* Maintenance;
* Plant establishment;
* Coordination with Work of other Sections;
* Testing;
* Clean–up;
* Replacements, Repairs, Guarantees and Warranty Work.

1.03 RELATED WORK Irrigation 02441

1.04 SOILS TEST: Contractor shall notify the Park Projects Inspector upon completion of fine grading and prior to commencement of soil preparation work. Contractor shall obtain agronomic soils tests for all planting areas after completion of the fine grading and prior to start of soil preparation work. Tests will be performed by an approved agronomic soils testing laboratory and will include a fertility and suitability analysis with written recommendations for soil preparation, planting backfill mix, auger hole requirements, and post plant fertilization program. The soils report recommendations will only take precedence over the minimum amendment and fertilizer application rates specified herein if and when the soils report recommendations exceed the specified minimums. Contractor shall allow a minimum two week period for the soils testing work commencing upon the Park Projects Inspector's acceptance of the fine grading work.

1.05 GUARANTEE: The guarantee requirements of the Standard Specifications are supplemented as follows as such requirements pertain to the tree planting portion of the Work. All trees installed under the Contract shall be guaranteed against any and all poor, inadequate or inferior materials and/or workmanship for a period of one (1) year following the date the Project Notice of Completion is filed with the County Recorder. During the guarantee period, any trees found to be dead, missing, or in poor condition shall be replaced by Contractor within ten (10) days of written notification. Park Projects Inspector shall be the sole judge as to the condition of the trees. Replacement shall be made in accordance with City standards. Material and labor involved in replacing trees shall be provided by Contractor at no additional cost to City.

1.06 INSPECTIONS: Inspections will be required. Contractor shall contact the Park Projects Inspector at least 48 hours (2 working days) in advance of an anticipated inspection. An inspection will be required at each of the steps listed below:
A. Fine Grade Prior to Commencement of Soil Preparation: Upon completion of fine grading and prior to commencement of soil preparation, for acceptance of fine grading work and taking of soils samples.
B. Finish Grade: Inspection of completed finish grading work following soil preparation work.
C. Plant Material: Inspection of plant materials upon delivery to the job site, but prior to planting.
D. Plant Locations: When container plants and/or bare root stock are spotted for planting, but before planting holes are excavated.
E. Completed Planting: When planting and all other indicated or specified work has been completed.
F. Chemical Applications: During application of pre–emergent chemical.
G. Start of Plant Establishment: At the start of the Plant Establishment Period.
H. End of the Plant Establishment: Prior to Final Acceptance of the Project, the project will be inspected for end of the Plant Establishment Period. Acceptance for maintenance, either by the Home Owner's Association or the City, will be confirmed in writing. Contractor shall remain responsible for maintenance until receipt of this written confirmation of acceptance of the Project for maintenance by others.

1.07 SUBMITTALS: The following written certifications are required to be submitted to the Park Projects Inspector upon delivery of the respective materials to the job site:

* Total Quantity of commercial fertilizers, by type
* Total Quantity of soil amendments and conditioners, by type
* Total Quantity of mulch, by type
* Total Quantity of fiber–mulch
* Total Quantity of iron sulphate

1.08 PLANT ESTABLISHMENT PERIOD: The length of the Plant Establishment Period shall be as specified in the "Agreement for Installation of Landscape Improvements" as executed by the Developer for this project, but shall be not less than one year; regarding criteria to start, see also Subsections 3.13 Maintenance and Plant Establishment and 3.14 Start of Plant Establishment Period.

PART 2 – MATERIALS

2.01 GENERAL: All materials shall conform with Section 212 – Landscape and Irrigation Materials of the Standard Specifications except as modified herein.

2.02 FERTILIZER, SOIL AMENDMENTS AND CONDITIONERS: Add the following to Standard Specifications Section 212–1. 2.3 Commercial Fertilizer:
A. Planting Tablets: Tightly compressed long–lasting, slow–release fertilizer tablets weighing 21 grams, with a potential acidity of not more than 5 percent by weight and having an analysis of 20–10–5 derived from the sources listed in the following guaranteed analysis:
GUARANTEED ANALYSIS
Total Nitrogen (N) 20%
Derived from urea formaldehyde
7.0% water soluble nitrogen
Planting
13.0% water insoluble nitrogen
2 5 Available Phosphoric Acid (P 0). 10%
Derived from calcium phosphate
2 Soluble Potash (K 0). 5%
Combined Calcium (Ca). 2.6%
Derived from calcium phosphates
Combined Sulfur (S). 1.6%
Derived from ferrous and potassium sulfates
Iron (expressed as elemental Fe) 35%
Derived from ferrous sulfate
B. Commercial fertilizer: Shall bear the manufacturer' s guaranteed statement of analysis and shall meet the following minimum requirements: 16% nitrogen, 6% phosphoric acid, and 8% potash.
C. Organic Soil Amendment: Shall be type 1 organic soil amendment, wood based product, nitrogen stabilized, and free of foreign matter.
D. Soil Conditioners: Add to Standard Specifications, new Section as follows:
212–1. 2. 6 Inorganic Conditioners. Inorganic conditioners shall be agricultural grade gypsum, soil sulfur and iron sulfate. Iron sulphate shall be ferric sulphate or ferrous sulphate in pelleted or granular form containing not less than 18.5% iron, expressed as metallic iron, and shall be registered as an agricultural mineral with the State Department of Food and Agriculture in compliance with Chapter 5 "Fertilizing Materials", of Division 7 of the Food and Agriculture Code of California, commencing at Section 14501.

2.03 HEADERS, STAKES AND TIES: Add the following to Standard Specifications Section 212–1.5 Headers, Stakes and Ties:
A. Headers: Standard Specifications Section 212–1. 5.2 Headers and Stakes replace with the following to read:
"Headers shall be Concrete Headers/Mow Curbing – Concrete shall be 5 sack mix with a maximum slump test of four inches (4"). Provide sufficient concrete forming and stakes (maximum 3' o. c.) to provide continuous line without waving."
B. Tree Stakes: Shall be straight–grained ladgepole pine, or City approved equal. Stakes shall be free from knots, checks, split, or disfigurements. VIT Twist Braces are NOT ALLOWED.
C. Tree Ties: Shall be made from tire casing, 22" long by 3/4" wide, fastened to tree stake with two galvanized 5d roofing nails each.

2.04 HYDROSEEDING MATERIALS:
A. Binding Agent: Shall be a dry powder organic concentrate, Ecology Controls "M–Binder" as available from Robinson Fertilizer Company, Anaheim, CA 714/632–9715 or City approved equal.
B. Fertilizers:
1. Controlled Release Fertilizer (CRF): Shall be Osmocote, a premium quality resin–coated prill–type, slow release (8–9 month formulation) fertilizer product having an analysis of 18–6–12, as manufactured by The Scotts Company, 14111 Scottslawn Road, Marysville, Ohio 43041, 1–888–270–3714, or City approved equal.
2. Triple Super Phosphate: Shall be a premium quality granulated high phosphorus 'Best' fertilizer product having an analysis of 0–45–0, as manufactured by J. R. Simplot Company, Lathrop, CA (209) 858–2511, or City approved equal.
C. Fiber–Mulch: Shall be produced from cellulose such as wood pulp or similar organic material and shall be of such character that it will disperse into a uniform slurry when mixed with water. The fiber shall be of such character that when used in the applied mixture, an absorptive or porous mat, but not a membrane, will result on the surface of the ground. Materials which inhibit germination or growth shall not be present in the mixture.
D. Seed: Turf seed mix as specified below.
E. Water: All water used for hydroseeding shall be potable domestic water. See General Provisions Section 7–8.5 Temporary Light, Power, and Water regarding availability of water and temporary construction meter and charges for water drawn from City fire hydrants.

2.05 JUTE NETTING: Jute netting shall be new and shall be of uniform, plain–weave, flame–retardant mesh. The mesh shall be dyed green and shall be made from unbleached single jute yarn. The yarn shall be of loosely twisted construction and shall not vary in thickness by more than one–half its normal diameter. Jute netting shall be furnished in rolled strips and shall meet the following requirements:

* Width – 48 inches, with a tolerance of one inch wider or narrower.
* Minimum 78 warp ends per width of roll.
* Minimum 41 weft ends per yard of length.
* Weight shall average 1.22 pounds per linear yard, with a tolerance of 5 percent heavier or lighter.

2.06 PLANTS: Add the following to Standard Specifications Section 212–1.4 Plants:
A. General: Add the following to sub–section 212–1.4.1 General: All plants shall be true to name, with at least one of each bundle or lot tagged with the name and size in accordance with the American Association of Nurserymen Standards. In all cases, botanical names shall take precedence over common names. All plants and planting materials shall meet or exceed the specifications of Federal, State, and County Laws requiring inspection for plant disease and insect control.
B. Quality and Size:
1. Quality: All plant material shall comply with the definition for number one nursery stock per the current edition of "Horticultural Standards" as adopted by the American Association of Nurserymen.
2. Size: Add the following to Standard Specifications Sections 212–1. 4.2 Trees and 212.1.4.3 Shrubs:
a) All container plants supplied by Contractor shall be of the specified standard height and diameter set by the American Standard for Nursery Stock. The height of the trees shall be measured from the root crown to the last division of the terminal leader and the diameter shall be measured six (6) inches above the crown roots.
b) All palm trees shall be of a minimum overall height of 8 to 12 feet as measured from the crown of the rootball to the tips of the fronds, or four feet of brown trunk whichever is greater.
c) All container grown plants shall be the size(s) as noted on the approved plans, but in no case less than a minimum 15 gallon container size, with minimum caliper and height in accordance with the American Association of Nurseryman standards for container plants. Where substitution of bare root stock is approved by the Street Tree Inspector, bare root stock shall conform to the American Nurseryman' s Association standards. Minimum caliper shall be two (2) inch diameter and minimum height shall be twelve (12) feet.
C. Bare Root Stock: Shall conform to the American Nurseryman' s Association standards. Minimum caliper shall be two (2) inch diameter and minimum height shall be twelve (12) feet.
D. Cuttings: Modify Standard Specifications Section 212–1.4.6 Cuttings to read: All cuttings used on the project shall be fully rooted cuttings unless otherwise approved in writing by the Park Projects Inspector.

2.07 MULCH:
A. Nitrolized Shavings: Shall conform with Standard Specifications Section 212–1.2.5 (a) Type I Mulch.
B. Tree Mulch: Shall be a ground wood product as produced through a wood chipper, and shall consist of twigs and branches with pieces of a maximum size of ½" diameter by 4" long, free of seeds, trash and debris and other inert non–organic materials.

2.08 TURF PLANTINGS:
A. SEED: Add the following to Standard Specifications Section 212–1.3 Seed:
1. Seeded Turf: For turf areas being planted solely from seed, use the following seed mix:
Proportion
Turf Seed Mix by weight Purity Ge rmination
Perennial Rye (50% 'Manhattan 3' , 50% ' Elf') 60% 95% 90%
PJ Bluegrass (50% ' Rugby' 50% ' Parade') 10% 98% 80%
Un–Hulled Bermuda (Certified Arizona Common)* 30% 98% 85%
Seeding rate: 436 pounds per acre (10 LBS/1,000 SF)
*Note: For applications in May through September, use Hulled Bermuda.
2. Overseeding for Stolonized Turf Plantings: (for use during non–stolonizing months: November thru March) Where stolonizing of turf plantings is specified, and the installation is scheduled during non–stolenizing months, overseed the stolonized turf area with the following seed mix:
Annual Rye 100% 95% 90%
Seeding rate: 872 pounds per acre (20 LBS/1,000 SF)
B. SOD: Turf sod shall be of the type noted on the Plans. All sod shall be new, fresh, viable sod delivered in full pallets ready for installation.
C. STOLONS:
1. Definitions: The standard unit of measurement for turf stolons shall be a bushel, defined as 1.24 cubic feet, loose packed and having a minimum " dry" weight of eight pounds net. Stolons are defined as fresh living sections of runners and stems of the turf species specified having nodes (joints) which will produce growth when properly planted and maintained.
2. Growing Conditions: Stolons shall be grown from high quality vegetative material in soil treated with appropriate state and federal regulatory agency approved pesticides/herbicides for control of disease, insects and weeds. Stolons shall be produced in fields periodically inspected by the California Department of Food and Agriculture Nursery Section to insure high quality and freedom from diseases, insects and weeds according to the standards in effect in the current publication of State of California Regulations for Nursery Inspection.
3. Product Handling: Stolons shall be cut to between one and four inches in length. Chaff, soil, or other inert materials shall not exceed eight percent (8%) by weight. When delivered to the job site, stolons shall be in corrugated containers, clean burlap bags or suitable plastic mesh bags. Stolons may be held on site for approximately twenty–four (24) hours if kept shaded, piled no more than two container units deep and kept continually saturated with water until planted.
4. Species and Application Rate: Stolons shall be 'Santa Ana' hybrid Bermuda grass, applied at 33 bushels per acre (0.75 BU/1,000 SF)

PART 3 – EXECUTION

3.01 GENERAL: All Work shall conform with Section 308 LANDSCAPE AND IRRIGATION INSTALLATION of the Standard Specification, except as modified herein. At Contractor' s option, subject to the Park Project Inspector' s acceptance of the material available and the appropriateness of the planting season, bare root stock may be substituted for the required 15 gallon and 24" box tree species if commercially available as bare root plantings and provided the corresponding minimum caliper and height requirements of Subsection 2.06 PLANTS, Subparagraph C. Bare Root Stock above are met, all at no change in contract price.

3.02 FINE GRADING: Fine grading, as specified under this Subsection, is a separate operation from finish grading as specified under Subsection 3.05 below. Fine Grading Work is to commence upon completion of all trenching and backfill operations, and prior to soil preparation. Upon completion of Fine Grading Work all areas shall slope to drain without water pockets or irregularities and shall conform to the intent of all Plans and Specifications after settlement and compaction of the soil. Fine grading should allow for Soil Preparation Work as specified, such that finish grades shall meet the elevations indicated on the Plans. Tolerance for fine grading is 1/4 inch, plus or minus. Any corrections to the Grading Work required to obtain proper drainage and to bring it into conformance with the intent of the Plans and Specifications and City codes shall be performed by Contractor at no additional cost to City.

3.03 WEED CONTROL MEASURES: Upon completion of all fine grading work, and prior to soil preparation, perform weed control measures as follows:
1. Irrigate all areas designated to be planted for a minimum of 10 minutes per setting, two settings per day for seven days to germinate all weed seed possible.
2. Apply a contact weed killer and allow sufficient time to obtain complete kill of all weeds germinated.
3. Repeat step two above.
4. Repeat step two above.

3.04 SOIL PREPARATION: Add the following to Standard Specifications Section 308–2.3 Topsoil Preparation and Conditioning:
A. Work Sequence: All fine grading, landscape mounding, and weed control measures shall be completed prior to soil preparation. Soil Preparation Work shall not commence until the agronomic soils test has been completed. Should 30 calendar days elapse between completion of soil preparation and commencement of planting, all areas shall be prepared again.
B. Excluded Areas: Planting areas with slopes 3:1 and steeper shall not be soil prepared. In lieu of soil preparation, such slopes will require fertilizer tablets for all plantings as specified below.
C. Soil Preparation: In all planting areas with gradients less than 3:1, areas to be soil prepared shall first be cross ripped to a minimum depth of 6" with tractor tines spaced at maximum 18" on center. Following cross–rip operations, a layer of soil amendments shall be spread and rototilled into the soil to a minimum depth of 4 inches, or as recommended by the soils report, so that the soil shall be loose, friable, and free from rocks, sticks, and other objects undesirable to planting.
D. Amendment Application Rates: The following soil amendments shall be added per 1,000 square feet to all planting areas with gradients less than 3:1 (agronomic soil test recommendations shall take precedence where these minimum amounts are exceeded):
1. 6 cubic yards Type I organic soil amendment.
2. 15 pounds commercial fertilizer.
3. 100 pounds gypsum.
4. Soil sulfur per soils report.

3.05 FINISH GRADING: Contractor shall finish grade all planting areas, filling as needed or removing surplus dirt, raking to remove all rocks and debris over 1 inch in diameter, and floating to a smooth uniform grade. All areas shall slope to drain. Flow lines shall be established to roads, curbs, drainage swales and inlets, and/or sidewalks as shown on the Plans and as directed. All fill material placed within the top 12" from finish grade elevations in all planting areas shall be topsoil. All landscape areas shall be finish graded (as distinguished from fine grading specified above) to "dress out", maintain, and/or re–establish finish grades and flow lines as approved prior to amending the soil. Contractor shall call for inspection upon completion of finish grading work. Contractor shall not proceed with planting work until finish grades have been inspected and accepted by the Park Projects Inspector.

3.06 EROSION CONTROL: Add new Section to the Standard Specifications: "308–4.9.6 Jute Netting. All slopes areas exceeding 3:1 shall receive jute netting. Netting shall also be provided during the Plant Establishment Period, when and as directed by the Park Projects Inspector, along flow lines and other locations where erosion is evident, Jute netting shall be installed loosely, up and down the slope. The installed netting shall fit the soil surface contour and shall be held in place by 9–inch long, 11–gage (minimum) steel wire staples driven vertically into the soil at approximately 24–inch spacing. Jute netting strips shall overlap along the sides at least 6 inches. Ends of strips shall be buried into the soil at least 6 inches. Lap all ends of rolls a minimum of 24"."

3.07 INSPECTION OF CONTAINER PLANTS: The root condition of plants furnished in containers will be checked by the Park Projects Inspector by removal of earth from the roots of not less than two plants nor more than 2% of the total number of plants of each species or variety from a single source and proposed for use in the Work. When container–grown plants are from several different sources, the roots of not less than two plants of each species or variety from each source may be checked by the Park Projects Inspector at the inspector' s option. The selection of plants to be checked will be made by the Park Projects Inspector. Care shall be exercised to avoid rendering plants unsuitable for planting by virtue of this inspection. However, all plants rendered unsuitable for planting shall be considered as samples, and replacements shall be provided at no additional cost to City. In case the sample plants are found to be defective, the entire lot or lots of plants represented by the defective samples will be rejected.

3.08 PLANTING BACKFILL:
A. Mixing: All backfill materials shall be bulk mixed, not individually mixed at each plant pit.
B. Proportions: Backfill for planting pits shall be enriched using the following blend per cubic yard (agronomic soil test recommendations shall be reviewed prior to soil mixing):
1. Container Plants:
60% top soil 3 lbs. gypsum
40% Type I Organic Amendment 2 lbs. iron sulphate
2 lbs. commercial fertilizer
2. Bare Root Stock:
10% wood shavings 90% top soil
fertilizer and soil conditioners as specified for container plants.

3.09 PLANTING:
A. Tree and Shrub Planting: Add the following to the Standard Specification Section 308–4.5 Tree and Shrub Planting:
1. Soil surrounding planting pit shall be in a friable condition and moist to a depth of 8".
2. Backfill using specified soil mix to within 8" of finish grade. At this depth, place the plant fertilizer tablets Agriform 20–10–5, 21 grams each, or City approved equal. A minimum of 1 tablet for 1 gallon, 3 tablets for 5 gallons, 5 tablets for 15 gallons, and 8 tablets for a 24" box. Complete backfilling to finish grade.
3. Trees (other than relocated palms) shall be planted at such a depth that the crown roots bear the same relative position to finish grade as the crown roots did in the soils where the trees were grown. Backfill after planting shall be compacted carefully into place without injuring the roots of the tree or breaking up the ball of earth surrounding the roots.
B. Groundcover and Vine Planting: Add the following to Standard Specifications Section 308–4.7 Groundcover and Vine Planting:
1. On slopes exceeding 3:1 ratio, apply 5 gram agriform tablets, one per plant in lieu of soil preparation work.
2. Prepare the soil in all planting areas (except where slopes exceed 3:1) by applying 1.5 cubic yards of Nitrolized Shavings and 5 lbs. of the specified commercial fertilizer per 1,000 square feet. Repeat fertilization at 30 day intervals throughout the duration of the Contract up to 4 applications, after which decrease frequency to once every 90 days.
3. All planting areas, areas to receive Tree–Mulch and bare dirt areas shall be treated with a pre–emergent chemical (subject to approval by the Park Projects Inspector prior to application). Chemicals shall be applied by a licensed Pest Control Agent. This treatment shall be applied at the following times during the Contract: a) before planting, b) at beginning of Plant Establishment Period, and c) at end of Plant Establishment Period. The Park Projects Inspector, (909) 715–3469, shall be given a minimum of 48 hours (2 working days) notice prior to each application. No chemicals shall be applied other than in the presence of the Inspector. 4. All areas designated to receive Tree–Mulch shall have mulch applied and spread to provide a uniform thickness of not less than 3" of mulch, and shall be neat and clean, free of trash.

3.10 TREE STAKING: Amend the Standard Specifications Section 308–4. 6.1 Method 'A' Tree Staking and 308. 4. 6.2 Method B Tree Staking to read: Stake trees in accordance with the Park and Recreation Department' s standard detail.

3.11 TURF PLANTING: Add the following to Standard Specifications Section 308–4.8.2. (b) Method "B": Turf Planting shall be performed by either hydroseeding, sodding or stolonizing as indicated on the Plans, or, if not noted, as suitable for the species of turf specified and as acceptable to the City. All turf for the entire project shall be installed using the same species. The installation method, as selected by the Contractor from the above options, shall be as applicable for the species being planted based on the availability of materials in the respective forms (seed, sod, stolons):
A. Pre–maintenance: All areas to be either sodded, stolonized or hydroseeded shall be moistened to a depth of six inches just prior to application.
B. Hydroseeding:
1. Mixing of hydroseed slurry:
a. Mixing shall be performed in a tank, with a built–in continuous agitation and recirculation system of sufficient operating capacity to produce a homogeneous slurry of fiber, M–Binder, seed, fertilizer and water in the following designated unit proportions:
Fiber–Mulch: 1,500 lbs. /acre
Fertilizers:
CRF 875 lbs. /acre (20#/1000 SF)
Triple superphosphate 200 lb. /acre (4 ½#/1000 SF)
Seed: as specified in Subsection 2.08 Turf Seed above
Binding Agent: 100 lbs. /acre (use on all slopes 5:1 and steeper)
Water: 3, 000 gal. /acre (maximum)
Agricultural Grade Gypsum: 500 lb. /acre
b. With agitation system operating at part speed, water shall be added to the tank, good recirculation shall be established. Materials shall be added in such a manner that they are uniformly blended into the mixture in the following sequence (assumes a nominal 1500 gallon tank):
c. When tank is 1/3 filled with water:
Add binding agent – ½ acre requirement.
Add 5 – 50 pound bales of fiber–mulch.
Add seed – ½ acre requirement.
Add fertilizer – ½ acre requirement.
d. Agitate mixture at full speed when the tank is half–filled with water.
e. Add remainder fiber–mulch requirement, 10 bales, before tank is 3/4 full. Add remainder fertilizers, seed and gypsum. Slurry distribution should begin immediately.
2. Application: Hydroseed slurry shall be applied under high pressure evenly and result in a uniform coat on all areas to be treated. Care shall be exercised to assure that plants in place are not subjected to the direct force of the application. Slurry shall be immediately removed from walks, structures, plants, etc. , that are inadvertently sprayed.
3. Clean–up: The slurry shall not be sprayed on non–designated areas. Any slurry spilled or sprayed into areas other than those designated to receive spray shall be cleaned up at Contractor' s expense to the satisfaction of the Park Projects Inspector.

C. Sodding: If all turf to be installed is laid as sod, the provisions of subsection 3. 14, A. 3. regarding " first mowing" will not apply, and the plant establishment period may commence as soon as all plantings, including the sod work, are installed, and are accepted by the Park Projects Inspector for start of maintenance. All areas to receive sod shall be Finish Graded prior to commencement of sodding. Immediately prior to laying sod, all areas shall be irrigated to moisten the soil as specified above. Rooting Agent shall be applied per the written recommendations of the Sod Grower. Contractor shall provide a copy of such recommendations to the Park Projects Inspector prior to installation of the sod. Lay sod in parallel rows with a running bond pattern using uniformly sized strips of sod. Use whole pieces wherever possible. Lay sod smooth, with tight joints, no gaps greater than 1/8" in size. All irrigation heads shall be marked with flags for ease of location. Cut sod neatly trimming it away from around each irrigation head a maximum of 1/8" all around to allow for proper spray pattern and smooth pop–up and retract operation. Immediately following completion of sodding operations, irrigate as necessary.
D. Stolonizing:
1. Pre–fertilization: Immediately prior to planting turf, all areas to receive stolons shall be pre–fertilized, evenly broadcasting 10 pounds per thousand square feet of commercial fertilizer. 10 pounds per thousand square feet of commercial fertilizer.
2. Mechanical Planting: Stolons shall be planted within 24 hours of delivery to the job site. The stolons shall be pressed into the friable, damp soil in such a manner as to bury approximately 75% of the stolons to a depth of ½" to 1½ ". Stolons thus planted shall be rolled immediately thereafter to assure intimate contact between soil particles and the stolons. For planting large areas (in excess of 10,000 SF), mechanical stolon planters such as the Cal–Turf stolon roller shall be employed. In smaller areas, stolons may be scattered on the prepared surface and topdressed with approximately ¼" of Type I organic material, then rolled. It is not necessary to topdress stolons which have been properly planted with suitable mechanical equipment.
3. Hydraulic Installation: As an alternative to mechanical planting, at Contractors' option, stolons may be hydraulically planted using 1800 lbs of wood cellulose fiber, 100 lbs of M–binder, 300 lbs of 21–8–8 (+ iron) fertilizer and 175 bushels of stolons per acre. Mixing shall be in a tank with built in continuous agitation recirculating system of sufficient capacity to produce homogeneous slurry mixture in designated unit proportions, and a discharge system which will apply the slurry mixture at a continuous and uniform rate. Wood fiber shall contain a green fugitive dye as an application indicator.
4. Watering: At no time either during or after planting shall stolons be subject to dry conditions. Freshly planted stolons shall immediately be irrigated to a depth of 8" and shall be kept moist at all times thereafter for a period of minimum ten to twenty days depending upon weather conditions, until the new plantings are sufficiently rooted and well established to withstand less frequent irrigation. Time intervals between beginning of planting operations and commencement of irrigation shall be kept to a minimum and shall not exceed the following:

Ambient Air Temperature	Maximum Allowable Time
100° F	15 minutes
75° F	60 minutes

After the first irrigation, water shall be applied as often and in sufficient amounts as conditions may require, to keep the soil wet above, around and below the stolons.

3.12 WATERING: Add the following to Standard Specifications Section 308–4.9.5 Watering:
A. Responsibility: It shall be Contractor' s responsibility to maintain a balanced watering program to ensure proper growth until Final Acceptance of the Work.
B. Initial Watering: Immediately after planting, apply water to each plant. Apply water in a moderate stream in the planting hole until the material about the roots is completely saturated from the bottom of the hole to the top of the ground.
C. Ongoing Watering: Apply water in sufficient quantities and as often as seasonal conditions require to keep the Planted areas moist at all times, well below the root system of plants.
D. Irrigation:
1. Contractor shall properly and completely maintain the irrigation system. A balanced water program shall be maintained to ensure proper germination and growth until Final Acceptance of the Work. Plants which cannot be watered sufficiently with the irrigation system shall be watered by means of a hose.
2. All controllers are to have each station individually adjusted on a weekly basis. System shall be set considering the application rate each area is capable of receiving. The system shall operate on short intervals, with the cycle repeating at a later time to reduce runoff.

3.13 MAINTENANCE AND PLANT ESTABLISHMENT: Amend the first sentence of Standard Specifications Section 308–6 MAINTENANCE AND PLANT ESTABLISHMENT to read: " Contractor shall maintain all areas within the Work Limits of this Contract on a continuous basis. . .until Final Acceptance".

3.14 START OF PLANT ESTABLISHMENT: Add the following to Standard Specifications Section 308–6 MAINTENANCE AND PLANT ESTABLISHMENT:
A. Criteria for Start of Plant Establishment Period:
1. The Plant Establishment Period shall not start until all elements of the Project that impact the landscape are completed in accordance with the Contract Documents. Projects will not be segmented into phases.
2. Permanent power to remote controllers shall be established.
3. The Plant Establishment Period for the Project shall not begin until after the first mowing of the newly planted turf areas. For Plant Establishment purposes "First Mowing" is defined as the first mowing after the point in time that a minimum of 85% of the turf area has attained a minimum height of 2". Until the above specified percentage of turf area is established and mown, Contractor shall mow as necessary to maintain those portions of turf exceeding 2" at the mowing height of 1 ½ inches. At no time shall any turf exceed 3" in height.
4. Written acceptance of the Park Projects Inspector must be obtained to start the Plant Establishment Period.
5. If the project maintenance fails to continuously meet standards required, the Plant Establishment Period "day count" will be suspended and will not recommence until Contractor has corrected all deficiencies.

3.15 MAINTENANCE TASKS: Add the following to Standard Specifications Section 308–6 MAINTENANCE AND PLANT ESTABLISHMENT:
A. General: During the contract period provide all watering, weeding, mowing, fertilizing and cultivation and spraying necessary to keep the plants and turf in a healthy growing condition and to keep the planted areas neat, edged, and attractive. All shrubs planted by Contractor shall be pinched and pruned as necessary to encourage new growth and to eliminate rank sucker growth. Old wilted flowers and dead foliage shall be immediately pinched or cut off. Do not prune trees without written approval of the Park Projects Inspector.
B. Iron Chlorosis: After planting and during the Plant Establishment Period, in the event that any plantings exhibit iron chlorosis symptoms, apply FE 138 Geigy or equivalent at manufacturer' s recommended rates.
C. Replacement Plantings: During the Plant Establishment Period, should the appearance of any planting installed by Contractor indicate weakness, that plant shall be replaced immediately with a new, healthy plant. At the end of the Plant Establishment Period, all plant materials shall be in a healthy, growing condition and spaced as indicated on the plans.
D. Fertilization: Contractor shall apply commercial fertilizer to all turf areas at a rate of 10 pounds per 1,000 square feet, and all groundcover areas at a rate of 5 pounds per 1, 000 square feet, at 30–day intervals, for 3 applications as a minimum, above and beyond the original soil preparation application.
E. Planting Establishment: All planting areas that do not show a prompt establishment of plant material, and areas where plant material is missing, shall be replanted at 10–day intervals until the plant material is established. For turf sod plantings, sod shall exhibit sufficient root growth knitting into the subgrade such that the sod can no longer be removed by hand. if a good rate of growth has not been demonstrated within 30 days of first planting/hydroseeding, Contractor shall be responsible to determine the appropriate horticultural practices necessary to obtain good growth. Contractor shall obtain agronomic soils testing of all areas not showing good growth and shall provide copies of the test results to the Park Projects Inspector to verify the appropriateness of all maintenance work performed. If additional soil amendments are needed, up to a maximum 25% beyond the application rate specified, such amendments shall be provided by Contractor at no additional cost to City.
F. Grading and Drainage: During the Plant Establishment Period all flow lines shall be maintained to allow for free flow of surface water. Displaced material which interferes with drainage shall be removed and placed as directed. Low spots and pockets shall be graded to drain properly. Jute netting shall be installed at flow lines and other locations where erosion is evident, when directed by the Park Projects Inspector.
1. Damage to planting areas shall be repaired immediately and throughout the Plant Establishment Period. Depressions caused by vehicles, bicycles, or foot traffic shall be filled and leveled. Repair damaged areas.
2. All paved areas shall be washed and maintained in a neat and clean condition at all times.
3. All subsurface drains and inlets shall be periodically cleared of debris, leaves and trash and flushed with clear water to avoid build up of silt and debris.
4. Debris and trash shall be removed from the site daily.
G. Disease and Pest Control: Throughout the Plant Establishment Period, all plants shall be maintained in a disease and pest free condition. A licensed pest control operator shall be retained by Contractor to recommend and apply all pesticides, herbicides, and fungicides. Exterminate gophers, moles, and all other rodents, and repair damage.

3.16 END OF PLANT ESTABLISHMENT PERIOD: Add the following to Standard Specification Section 308–6 MAINTENANCE AND PLANT ESTABLISHMENT:
A. Request for Inspection: When Contractor believes the Plant Establishment Period is complete and the Project is ready for Final Acceptance, Contractor shall request in writing that the Park Projects Inspector will inspect the Project for Final Acceptance. Deficiencies noted during inspection shall extend the Plant Establishment Period until all are corrected.
B. Established Plantings: All planting areas shall show a good rate of growth and shall be well established "filled in" plantings free of voids. Bare areas will be unacceptable. Contractor shall provide sod or plantings from flats as necessary to fill in all bare areas. Such sod or plantings shall be planted a minimum of 10 days prior to the end of the Plant Establishment Period and shall have roots "knit–in" to the native soil.
C. Written Acceptance: Final Acceptance and assumption of maintenance responsibilities by others shall occur only upon the written acceptance of the Project for maintenance by others.

3.17 CLEAN UP: Upon completion of the Work, Contractor shall smooth all ground surfaces; remove excess materials, rubbish, debris, etc. ; sweep adjacent streets, curbs, gutters; wash down all walkways, and trails; and remove construction equipment from the premises.
END OF SECTION

IMPORTANT NOTICE
Section 4216/4217 of the Government Code requires an Underground Service Alert Number to be identified before a "Permit to Excavate" will be valid. For your Dig Alert I.D. Number call
CALL TOLL FREE
48 HOURS BEFORE YOU DIG
UNDERGROUND SERVICE ALERT
1–800–227–2600

City of Riverside
WATER SYSTEM
APPROVED BY _____ DATE 1/7/06

City of Riverside
PUBLIC UTILITY DEPARTMENT
OVERHEAD AND UNDERGROUND
APPROVED BY _____ DATE 6/06

LANDSCAPE ARCHITECT IN RESPONSIBLE CHARGE
ROBERT B. CLARK
RLA 4233 expires 12/31/06
DATE 6/28/06

REGISTERED LANDSCAPE ARCHITECT ROBERT B. CLARK No. 4233 STATE OF CALIFORNIA
Signature
12–31–06
Renewal Date
6/28/06
Date

MARK	REVISIONS	APPR.	DATE
1	WALL AND FENCE CHANGES PER OWNERS REQUEST		MARCH 1 2006
2	WALL FENCE, PLANTING CHANGES PER OWNERS REQUEST		MAY 25 2006

DESIGNED BY KL/BC DRAWN BY JC/EM/KL CHECKED BY KL/BC

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY		DATE
P.W. PRINCIPAL ENGINEER		
P.W. STREET SERVICES		7/10/06
PLANNING DIVISION		

APPROVED BY _____ CITY ENGINEER
DATE 7/19/06

PH 1 LANDSCAPE PLANS
TR 29515
PLANTING SPECIFICATIONS
SCALE: 1" = 40'

ACCT. NO.
PWS–PC–03–3001–RF1
R–3892–RL
PW06–0110
SHEET 11.0 OF 32

INDEXED 8-14-06 KH

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