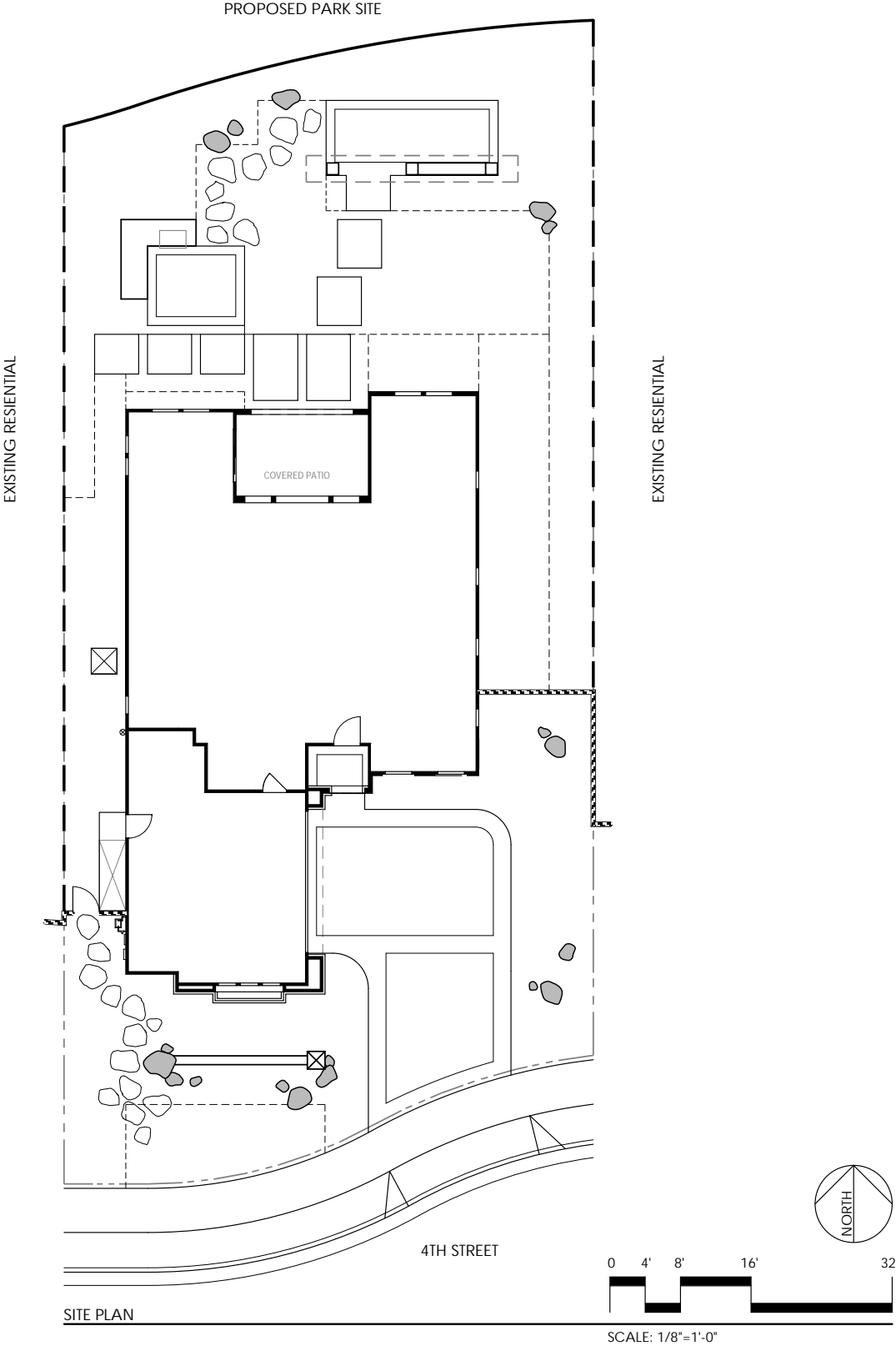


NEW SINGLE-FAMILY RESIDENTIAL LANDSCAPE PLAN FOR:
LAST NAME RESIDENCE
1357 STREET NAME
IN THE CITY OF RIVERSIDE, CALIFORNIA



VICINITY MAP
NTS

OWNER
MR. AND MRS. LAST NAME
1357 STREET NAME
RIVERSIDE, CA
OWNER CONTACT NAME
OWNER CONTACT EMAIL ADDRESS
PHONE NUMBER

APPLICANT
APPLICANT'S COMPANY NAME
COMPANY ADDRESS
CONTACT NAME
CONTACT EMAIL ADDRESS
PHONE NUMBER

LANDSCAPE ARCHITECT
LANDSCAPE ARCHITECT'S COMPANY NAME
COMPANY ADDRESS
CONTACT NAME
CONTACT EMAIL ADDRESS
PHONE NUMBER

SHEET INDEX

- L1 TITLE SHEET
- L2 CONSTRUCTION PLAN
- L3 CONSTRUCTION DETAILS
- L4 CONSTRUCTION DETAILS
- L5 IRRIGATION PLAN
- L6 IRRIGATION DETAILS
- L7 PLANTING PLAN
- L8 PLANTING DETAILS
- L9 SPECIFICATIONS
- L10 SPECIFICATIONS

LICENSED
PROFESSIONAL
LOGO AND
COMPANY
INFORMATION



LAST NAME RESIDENCE
1357 STREET NAME
OWNER CONTACT INFORMATION

TITLE SHEET

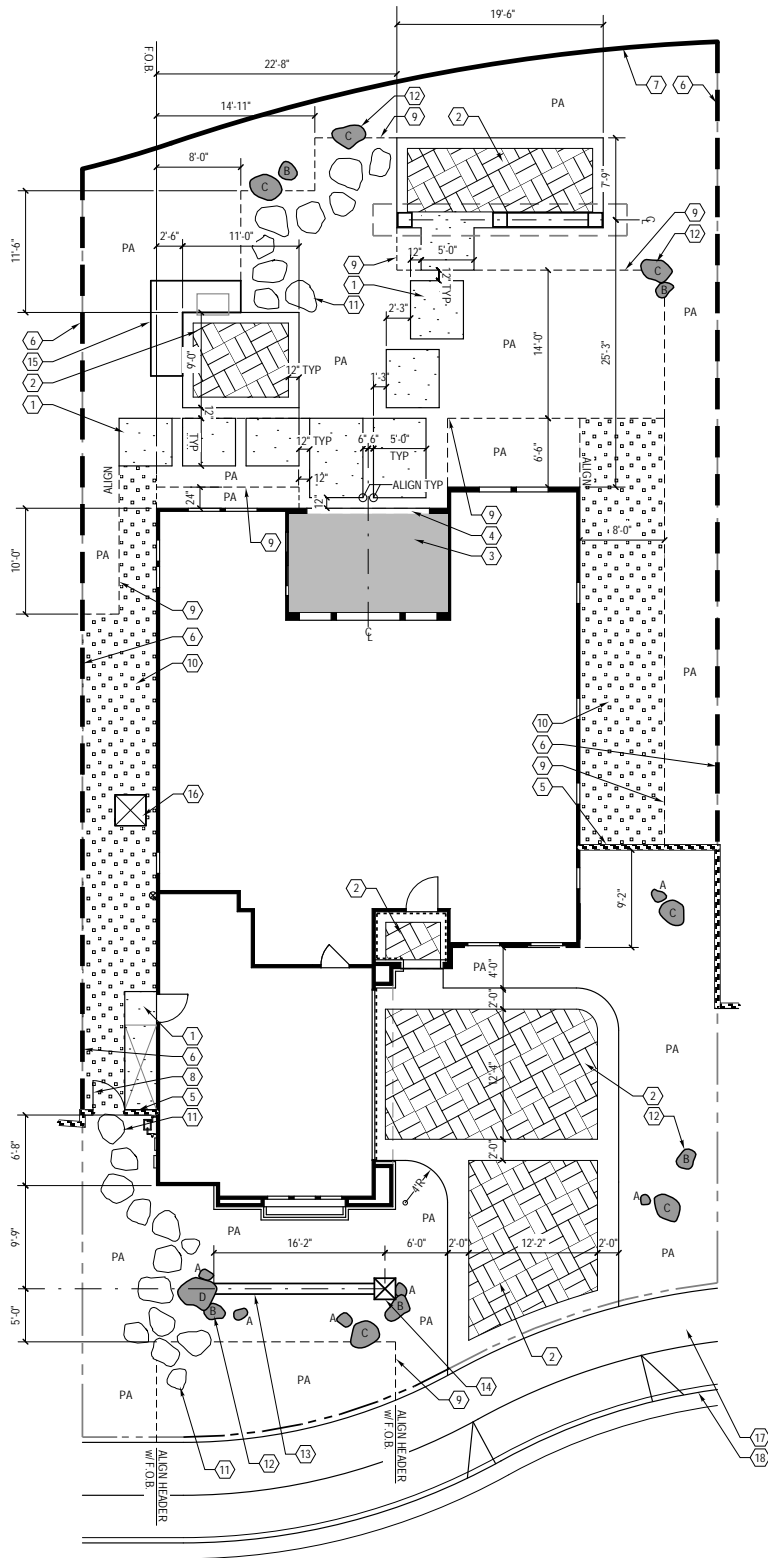
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1 OF 10



Attachment 5 - Planning Case P18-0608
Single-Family Residential Landscape Plan -
Working Drawing Example



CONSTRUCTION NOTES

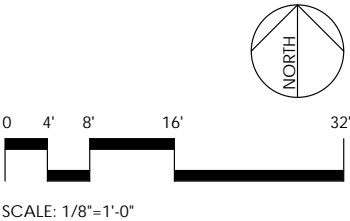
- CONTRACTOR SHALL NOT WILLFULLY PROCEED WITH CONSTRUCTION AS DESIGNED WHEN IT IS OBVIOUS THAT UNKNOWN OBSTRUCTIONS AND/OR GRADE DIFFERENCES EXIST THAT MAY NOT HAVE BEEN KNOWN DURING DESIGN. SUCH CONDITIONS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ALL NECESSARY REVISIONS DUE TO A FAILURE TO GIVE SUCH NOTIFICATION.
- WALL AND FENCE LAYOUT SHALL CONFORM TO PROPERTY LINE AND TOP OF SLOPE CONDITIONS. STAKING FOR LOCATION OF WALLS AND FENCES SHALL BE PROVIDED BY THE CIVIL ENGINEER PRIOR TO EXCAVATION OF FOOTINGS.
- ALL FORMS AND ALIGNMENTS OF PAVING, WALL / FENCE LAYOUT, AND SPECIAL PAVING AREAS SHALL BE REVIEWED AND APPROVED BY THE OWNER'S REPRESENTATIVE PRIOR TO POURING (GIVE A MINIMUM OF 48 HOURS NOTICE).
- FOR SITE GRADING, SEE CIVIL ENGINEER'S GRADING PLAN.
- CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING HIMSELF FAMILIAR WITH ALL UNDERGROUND UTILITIES, PIPES AND STRUCTURES. CONTRACTOR SHALL TAKE SOLE RESPONSIBILITY FOR COST INCURRED DUE TO DAMAGE AND REPLACEMENT OF SAID UTILITIES.
- CONTRACTOR SHALL COORDINATE IRRIGATION SLEEVE LOCATIONS UNDER PAVED AREAS AS REQUIRED. REFER TO IRRIGATION PLANS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ANY COORDINATION WITH OTHER SUBCONTRACTORS AS REQUIRED TO ACCOMPLISH CONSTRUCTION OPERATIONS AS SHOWN.
- PRIOR TO PLACING CONCRETE, THE CONTRACTOR SHALL SUFFICIENTLY COMPACT THE SUB-GRADE AND PROVIDE SUBSURFACE PREPARATION PER SPECIFICATIONS.
- CONCRETE SURFACES SHALL BE FORMED WITH LONG, SMOOTH GRADIENT TO REDUCE DIPS, ABRUPT CHANGES AND SHARP TRANSITIONS.
- ALL CURVILINEAR WALKS, CURBS, HEADER BOARDS, AND WALLS SHALL HAVE A CONTINUOUS SMOOTH CURVE WHERE APPLICABLE. ALL FORMS MUST BE INSPECTED AND APPROVED PRIOR TO BEGINNING THAT PHASE OF WORK.

CONSTRUCTION LEGEND

- 1. CONSTRUCT 4" THICK NATURAL COLOR CONCRETE w/ MEDIUM BROOM FINISH AND CONTROL JOINTS. THICKNESS AT DRIVEWAYS PER CIVIL ENGINEER. SEE DETAIL A, SHEET L3.
- 2. PROVIDE AND INSTALL BELGARD 'MEGA-ARBEL' PATIO SLAB 60 MM INTERLOCKING PAVERS, COLOR 'BELLA' AND NATURAL COLOR PERIMETER BAND w/ MEDIUM BROOM FINISH, WIDTH PER PLAN. INSTALL OVER 6" ROAD BASE AT DRIVEWAY. SEE DETAIL F, SHEET L4.
- 3. EXISTING FLOORING AT CALIFORNIA ROOM.
- 4. CONSTRUCT 8" WIDE NATURAL COLOR SMOOTH TROWELLED PERIMETER CONCRETE BAND.
- 5. CONSTRUCT 6'-0" HIGH SINGLE-SIDED SPLIT FACE BLOCK RETURN WALL w/ PRECISION CAP. BLOCK AND CAP COLORS TO BE SELECTED BY OWNER. SEE DETAIL G, SHEET L3.
- 6. CONSTRUCT 6'-0" HIGH PRECISION BLOCK PROPERTY WALL BETWEEN LOTS w/ PRECISION CAP. BLOCK AND CAP COLORS TO BE SELECTED BY OWNER. SEE DETAIL F, SHEET L3.
- 7. CONSTRUCT 6'-0" HIGH VIEW FENCE, THAT CONSISTS OF 4'-0" HIGH TUBULAR STEEL FENCE ATOP 2'-0" HIGH MASONRY WALL. SEE DETAIL H, SHEET L3.
- 8. CONSTRUCT 3'-0" WIDE TUBULAR STEEL SIDEYARD GATE. SEE DETAIL E, SHEET L3.
- 9. INSTALL 1/8" x 4" ALUMINUM EDGING ALONG PLANTER EDGE. SEE DETAILS B AND C, SHEET L3.
- 10. INSTALL 3" THICK LAYER OF 3/4" CRUSHED GRAVEL. SEE DETAIL B, SHEET L3.
- 11. INSTALL 'SNAKESKIN' FLAGSTONE PAVERS w/ CONCRETE BASE IN PLANTER AREA. AVAILABLE FROM SOUTHWEST BOULDER AND STONE, TEL. 877-792-7625. SEE DETAIL D, SHEET L3.
- 12. PROVIDE AND INSTALL 'HICKORY CREEK' LANDSCAPE BOULDER, AVAILABLE FROM SOUTHWEST BOULDER AND STONE. SEE DETAIL E, SHEET L4. BOULDERS SHALL BE SIZED PER SCHEDULE:
 - A. 18" TO 24"
 - B. 24" TO 30"
 - C. 30" TO 36"
 - D. 36" TO 42"
- 13. CONSTRUCT GARDEN WALL w/ STONE VENEER AND POURED-IN-PLACE CONCRETE CAP. SEE DETAIL A, SHEET L4.
- 14. CONSTRUCT PILASTER w/ STONE VENEER AND POURED-IN-PLACE CONCRETE CAP. SEE DETAIL B, SHEET L4.
- 15. CONSTRUCT OUTDOOR KITCHEN w/ STAINLESS STEEL GRILL AND STONE VENEER BARBEQUE ISLAND. SEE DETAILS C AND D, SHEET L4.
- 16. A/C CONDENSER UNIT PER ARCHITECT'S PLANS.
- 17. CITY SIDEWALK PER CIVIL ENGINEER'S PLANS.
- 18. CURB AND GUTTER PER CIVIL ENGINEER'S PLANS.

PLAN CROSS REFERENCES

FOR CONSTRUCTION NOTES, SEE THIS SHEET
FOR CONSTRUCTION DETAILS, SEE SHEET L3 AND L4
FOR CONSTRUCTION SPECIFICATIONS, SEE SHEET L9
FOR CORRESPONDING IRRIGATION PLAN SEE SHEET L5
FOR CORRESPONDING PLANTING PLAN SEE SHEET L7



LICENSED
PROFESSIONAL
LOGO AND
COMPANY
INFORMATION

LICENSE
STAMP

LAST NAME RESIDENCE
1357 STREET NAME
OWNER CONTACT INFORMATION

CONSTRUCTION
PLAN

REVISIONS

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DATE:
MM/DD/YY

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

SHEET NO.:
L2
2 OF 10



Know what's below.
Call before you dig.

LICENSED
PROFESSIONAL
LOGO AND
COMPANY
INFORMATION

LICENSE
STAMP

LAST NAME RESIDENCE
1357 STREET NAME
OWNER CONTACT INFORMATION

CONSTRUCTION
DETAILS

REVISIONS

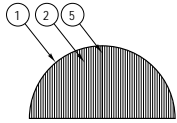
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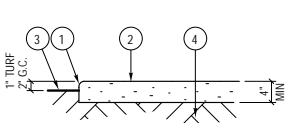
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3 OF 10

LEGEND:

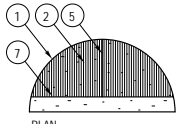
- 1 1/2" RADIUS @ ALL EDGES.
- 2 NATURAL COLOR CONCRETE PAVING w/ MEDIUM BROOM FINISH. RUN BROOM PERPENDICULAR TO EDGE OF PAVING. 4" MIN. THICKNESS.
- 3 ADJACENT FINISH GRADE.
- 4 90% MINIMUM COMPACTED SUBGRADE.



PLAN - MED. BROOM FINISH

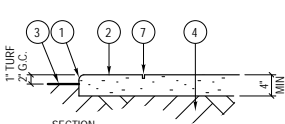


SECTION - MED. BROOM FINISH



PLAN

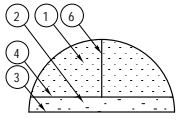
CONC. PAVING w/ BAND - SINGLE POUR



SECTION

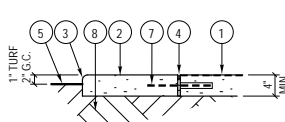
LEGEND:

- 1 CONCRETE PAVING, THICKNESS AND FINISH PER PLAN.
- 2 4" THICK MIN. CONCRETE BAND, COLOR AND FINISH PER PLAN.
- 3 1/2" RADIUS @ ALL EXPOSED EDGES.
- 4 1/2" THICK, FULL DEPTH EXPANSION JOINT w/ WATERPROOF SEALANT.
- 5 ADJACENT FINISH GRADE.



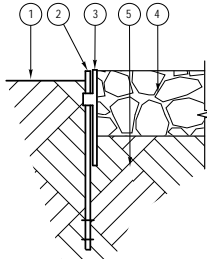
PLAN

CONCRETE PAVING w/ BAND SEPARATE POURS



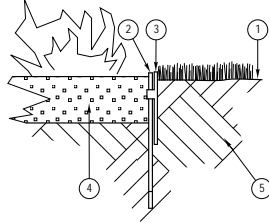
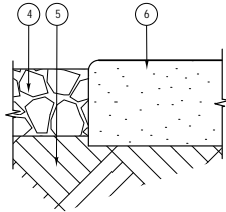
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- 6 CONTROL JOINT PER CONSTRUCTION PLAN, SPACE @ 5'-0" O.C. MAX.
- 7 12" LONG #3 REBAR DOWEL @ 24" O.C. SET @ MID-DEPTH, SLEEVE ONE SIDE.
- 8 90% MINIMUM COMPACTED SUBGRADE.



LEGEND:

- 1 FINISH GRADE / ADJACENT PLANTING OR TURF AREA.
- 2 SPLICING STAKE / LINE STAKE. INSTALL PER MANUFACTURER'S SPECIFICATIONS.
- 3 CURV-RITE 3000 SERIES 1/2" x 4" ML. FINISH ALUMINUM EDGING, ALUMINUM COLOR. INSTALL PER MANUFACTURER'S SPECIFICATIONS.
- 4 3" THICK LAYER OF 3/4" ANGULAR CRUSHED GRAVEL. SEE CONSTRUCTION LEGEND FOR COLOR AND SOURCE. FINISH SURFACE SHALL BE FLUSH w/ ADJACENT CONCRETE.
- 5 COMPACTED NATIVE SUBGRADE.
- 6 ADJACENT CONCRETE PAVING PER PLAN, 1/2" RADIUS @ EXPOSED EDGES.

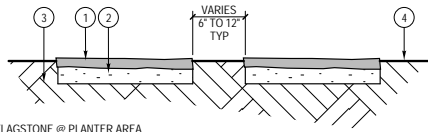


LEGEND:

- 1 FINISH GRADE @ ADJACENT TURF AREA.
- 2 CURV-RITE ALUMINUM STAKE, INSTALL PER MANUFACTURER'S SPECIFICATIONS.
- 3 CURV-RITE 2000 SERIES ALUMINUM EDGING, MILL FINISH (ALUMINUM COLOR). INSTALL PER MANUFACTURER'S SPECIFICATIONS.
- 4 3" THICK MULCH LAYER IN SHRUB AREA.
- 5 COMPACTED NATIVE SUB-GRADE.

A CONCRETE PAVING ANDH FINISH

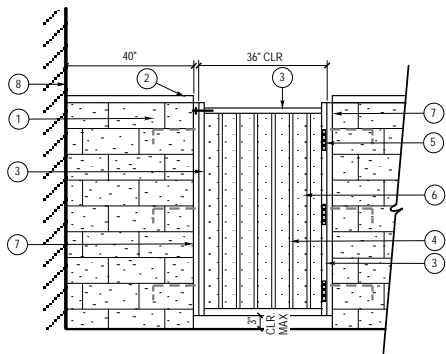
SCALE: NOT TO SCALE



FLAGSTONE @ PLANTER AREA

LEGEND:

- 1 3/4" - 1 1/4" THICK FLAGSTONE PER CONSTRUCTION LEGEND. SIZE RANGE FROM 24" x 42" TO 42" x 42". SET ON MORTAR BED.
- 2 3" MIN. THICK CONCRETE BASE.
- 3 90% COMPACTED SUB-GRADE.
- 4 FINISH GRADE.



LEGEND:

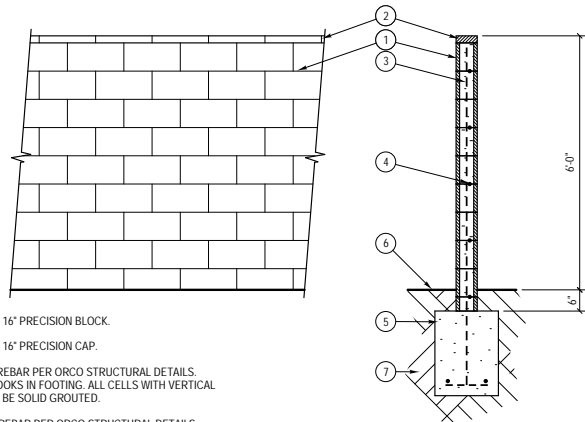
- 1 ADJACENT MASONRY WALL PER CONSTRUCTION PLAN.
- 2 LOCKABLE GATE LATCH. PAINT TO MATCH GATE.
- 3 1 1/2" SQ. x 11 GAUGE TUBULAR STEEL GATE FRAME.
- 4 5/8" SQ. 16 GAUGE TUBULAR STEEL FENCE PICKETS SPACED @ 4 1/2" O.C. MAX.
- 5 2" x 3" SELF-CLOSING BUTT HINGES (3) PLACES. WELD TO MOUNTING POST AND GATE FRAME.
- 6 PERFORATED METAL MESH CONTINUOUS WELDED TO PRIVATE SIDE OF GATE FRAME. MESH TO BE 18 GAUGE 5/64 ROUND x 1/8" STAGGERED. AVAILABLE THROUGH THE MONICHOLES CO., TEL., 800-237-3820.
- 7 1 1/2" SQ. 11 GAUGE TUBULAR STEEL MOUNTING POST. ATTACH TO WALL AT (3) PLACES.
- 8 ADJACENT HOUSE WALL.

TYPICAL METAL CONSTRUCTION NOTES:

- A. ALL CONNECTIONS TO BE CONTINUOUS WELDED.
- B. REMOVE ALL SLAG & SPATTER, AND GRIND ALL WELDS SMOOTH.
- C. ALL TUBING TO BE CAPPED AND WELDED CLOSED.
- D. UNLESS OTHERWISE NOTED, GALVANIZE ALL TUBULAR STEEL AND PAINT w/ (1) COAT PRIMER AND w/ (2) COATS GLOSS ENAMEL PAINT. COLOR: BLACK.

C ALUMINUM EDGING IN PLANTER

SCALE: NOT TO SCALE



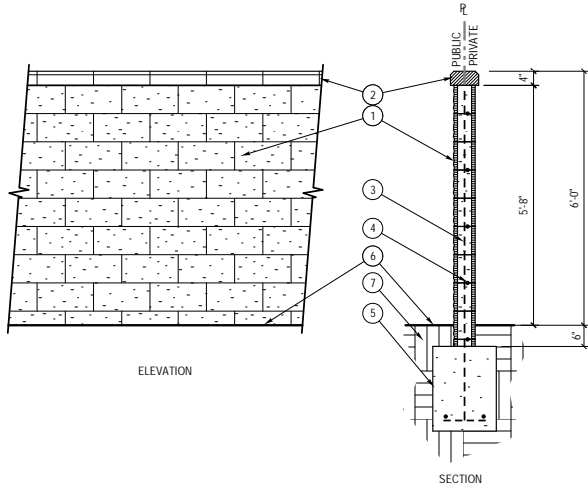
LEGEND:

- 1 ORCO 6" x 8" x 16" PRECISION BLOCK.
- 2 ORCO 6" x 2" x 16" PRECISION CAP.
- 3 #4 VERTICAL REBAR PER ORCO STRUCTURAL DETAILS. STANDARD HOOKS IN FOOTING. ALL CELLS WITH VERTICAL REBAR SHALL BE SOLID GROUTED.
- 4 HORIZONTAL REBAR PER ORCO STRUCTURAL DETAILS.
- 5 CONCRETE FOOTING.
- 6 FINISH GRADE.
- 7 90% MINIMUM COMPACTED SUBGRADE.

NOTE:
FOOTING SIZE AND REINFORCEMENT PER ORCO
STRUCTURAL DETAILS AND CALCULATIONS.

D FLAGSTONE IN PLANTER

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



ELEVATION

SECTION

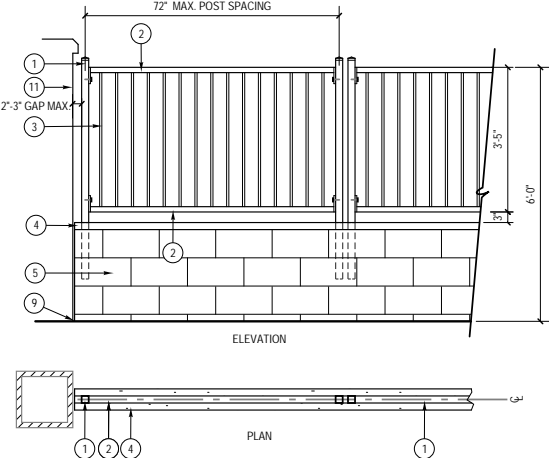
LEGEND:

- 1 ORCO 6" x 8" x 16" SINGLE-SIDED SPLIT-FACE BLOCK. SPLIT-FACE SHALL BE ON PUBLIC VIEWED SIDE OF WALL. ALL CELLS CONTAINING VERTICAL REBAR SHALL BE SOLID GROUTED.
- 2 ORCO 8" x 4" x 16" BEVELLED CAP.
- 3 #4 VERTICAL REBAR PER ORCO STRUCTURAL DETAILS. STANDARD HOOKS IN FOOTING. ALL CELLS WITH VERTICAL REBAR SHALL BE SOLID GROUTED.
- 4 HORIZONTAL REBAR PER ORCO STRUCTURAL DETAILS.
- 5 CONCRETE FOOTING.
- 6 FINISH GRADE.
- 7 90% MINIMUM COMPACTED SUBGRADE.

NOTE:
FOOTING SIZE AND REINFORCEMENT PER ORCO
STRUCTURAL DETAILS AND CALCULATIONS.

E TUBULAR STEEL SIDEYARD GATE

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

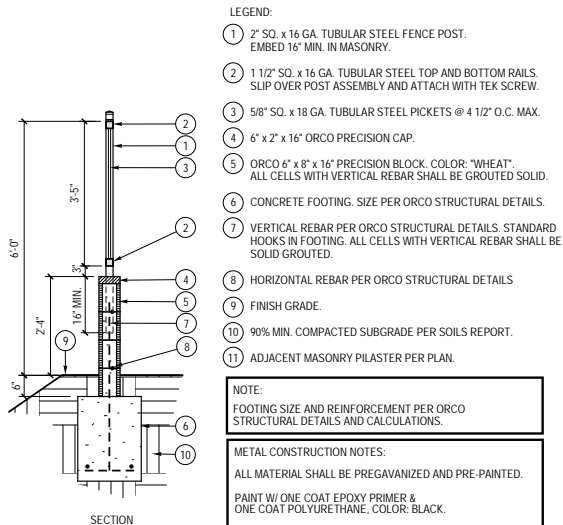


ELEVATION

PLAN

F 6' HIGH PRECISION BLOCK WALL w/ PRECISION CAP

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



LEGEND:

- 1 2" SQ. x 16 GA. TUBULAR STEEL FENCE POST. EMBED 16" MIN. IN MASONRY.
- 2 1 1/2" SQ. x 16 GA. TUBULAR STEEL TOP AND BOTTOM RAILS. SLIP OVER POST ASSEMBLY AND ATTACH WITH TEK SCREW.
- 3 5/8" SQ. x 18 GA. TUBULAR STEEL PICKETS @ 4 1/2" O.C. MAX.
- 4 6" x 2" x 16" ORCO PRECISION CAP.
- 5 ORCO 6" x 8" x 16" PRECISION BLOCK. COLOR: "WHEAT". ALL CELLS WITH VERTICAL REBAR SHALL BE GROUTED SOLID.
- 6 CONCRETE FOOTING. SIZE PER ORCO STRUCTURAL DETAILS.
- 7 VERTICAL REBAR PER ORCO STRUCTURAL DETAILS. STANDARD HOOKS IN FOOTING. ALL CELLS WITH VERTICAL REBAR SHALL BE SOLID GROUTED.
- 8 HORIZONTAL REBAR PER ORCO STRUCTURAL DETAILS.
- 9 FINISH GRADE.
- 10 90% MIN. COMPACTED SUBGRADE PER SOILS REPORT.
- 11 ADJACENT MASONRY PILASTER PER PLAN.

NOTE:
FOOTING SIZE AND REINFORCEMENT PER ORCO
STRUCTURAL DETAILS AND CALCULATIONS.

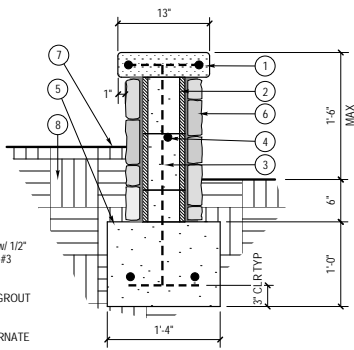
METAL CONSTRUCTION NOTES:
ALL MATERIAL SHALL BE PREGAVANIZED AND PRE-PAINTED.
PAINT W/ ONE COAT EPOXY PRIMER & ONE COAT POLYURETHANE. COLOR: BLACK.
ALL PICKETS SHALL BE CONTINUOUS WELDS AND COLD GALVANIZED.
CONNECT PANELS TO POSTS W/ SLIDER BRACKETS.

G 6' HIGH SINGLE-SIDED SPLIT-FACE WALL w/ BEVELLED CAP

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

H TUBULAR STEEL FENCE ATOP MASONRY WALL

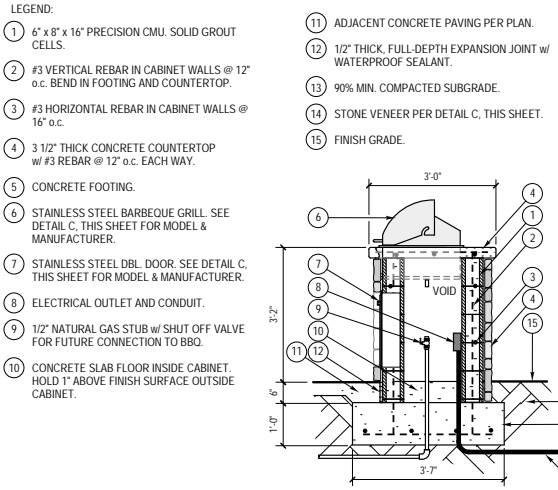
SCALE: 1/2" = 1'-0"



- LEGEND:
- 3 1/2" THICK, NATURAL COLOR POURED-IN-PLACE CONCRETE CAP w/ 1/2" RADIUS @ ALL EXPOSED EDGES. (2) #3 CONTINUOUS REBAR.
 - 6" x 8" x 16" PRECISION CMU. SOLID GROUT CELLS.
 - #4 VERTICAL REBAR @ 16" o.c. ALTERNATE BENDS IN FOOTING AND CAP.
 - #3 HORIZONTAL REBAR CONTINUOUS.
 - CONTINUOUS CONCRETE FOOTING.
 - ELDORADO STONE 'MEZETA FIELD EDGE' VENEER TO MATCH ARCHITECTURE. INSTALL PER MANUFACTURER SPECIFICATIONS.
 - FINISH GRADE.
 - 90% MIN. COMPACTED SUBGRADE.

A GARDEN WALL w/ STONE VENEER

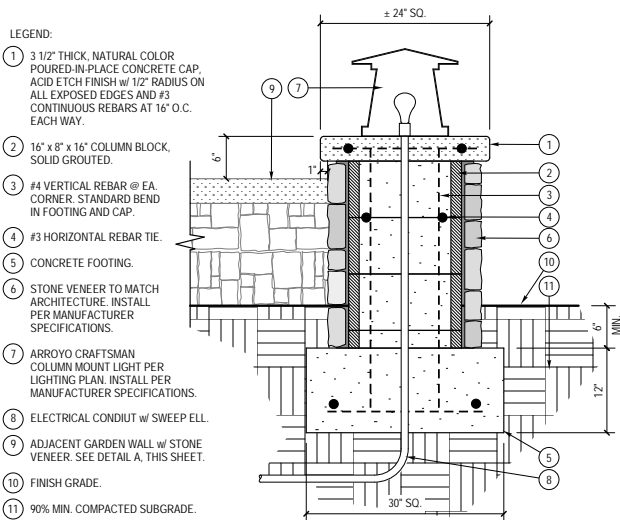
SCALE: 1" = 1'-0"



- LEGEND:
- 6" x 8" x 16" PRECISION CMU. SOLID GROUT CELLS.
 - #3 VERTICAL REBAR IN CABINET WALLS @ 12" o.c. BEND IN FOOTING AND COUNTERTOP.
 - #3 HORIZONTAL REBAR IN CABINET WALLS @ 16" o.c.
 - 3 1/2" THICK CONCRETE COUNTERTOP w/ #3 REBAR @ 12" o.c. EACH WAY.
 - CONCRETE FOOTING.
 - STAINLESS STEEL BARBEQUE GRILL. SEE DETAIL C, THIS SHEET FOR MODEL & MANUFACTURER.
 - STAINLESS STEEL DBL. DOOR. SEE DETAIL C, THIS SHEET FOR MODEL & MANUFACTURER.
 - ELECTRICAL OUTLET AND CONDUIT.
 - 1/2" NATURAL GAS STUB w/ SHUT OFF VALVE FOR FUTURE CONNECTION TO BBQ.
 - CONCRETE SLAB FLOOR INSIDE CABINET. HOLD 1" ABOVE FINISH SURFACE OUTSIDE CABINET.
 - ADJACENT CONCRETE PAVING PER PLAN.
 - 1/2" THICK, FULL-DEPTH EXPANSION JOINT w/ WATERPROOF SEALANT.
 - 90% MIN. COMPACTED SUBGRADE.
 - STONE VENEER PER DETAIL C, THIS SHEET.
 - FINISH GRADE.

D KITCHEN SECTION 'AA'

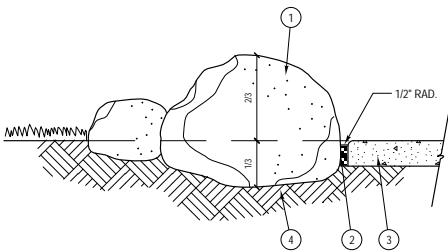
SCALE: 1" = 1'-0"



- LEGEND:
- 3 1/2" THICK, NATURAL COLOR POURED-IN-PLACE CONCRETE CAP. ACID ETCH FINISH w/ 1/2" RADIUS ON ALL EXPOSED EDGES AND #3 CONTINUOUS REBAR AT 16" O.C. EACH WAY.
 - 16" x 8" x 16" COLUMN BLOCK. SOLID GROUTED.
 - #4 VERTICAL REBAR @ EA. CORNER. STANDARD BEND IN FOOTING AND CAP.
 - #3 HORIZONTAL REBAR TIE.
 - CONCRETE FOOTING.
 - STONE VENEER TO MATCH ARCHITECTURE. INSTALL PER MANUFACTURER SPECIFICATIONS.
 - ARROYO CRAFTSMAN COLUMN MOUNT LIGHT PER LIGHTING PLAN. INSTALL PER MANUFACTURER SPECIFICATIONS.
 - ELECTRICAL CONDUIT w/ SWEEP ELL.
 - ADJACENT GARDEN WALL w/ STONE VENEER. SEE DETAIL A, THIS SHEET.
 - FINISH GRADE.
 - 90% MIN. COMPACTED SUBGRADE.

B PILASTER w/ STONE VENEER & LIGHT

SCALE: 1" = 1'-0"

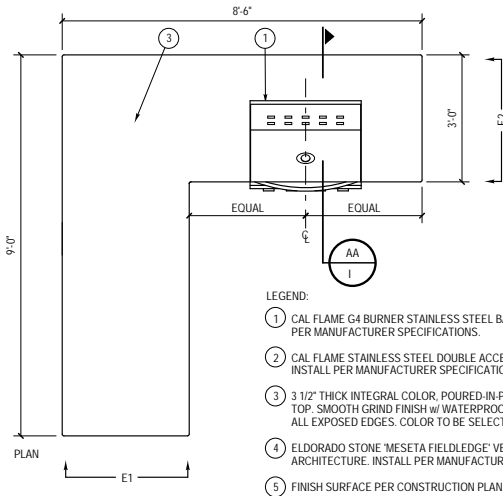


- LEGEND:
- BOULDER PER CONSTRUCTION PLAN. RECESS AT LEAST 1/3 OF BOULDERS DEPTH INTO SUB-GRADE AS SHOWN.
 - 1/2" POLY-FOAM EXPANSION JOINT AT EDGE OF PAVING ABUTTING BOULDERS.
 - ADJACENT CONCRETE PAVING OR MOWSTRIP.
 - 90% COMPACTED SUB-GRADE.

NOTES:
LANDSCAPE ARCHITECT TO APPROVE BOULDERS AND SPOT LOCATIONS PRIOR TO INSTALLATION.

E BOULDER PLACEMENT

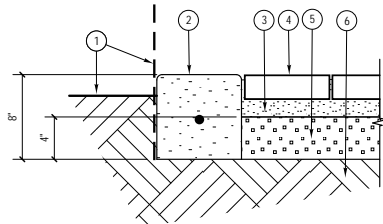
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- LEGEND:
- CAL FLAME G4 BURNER STAINLESS STEEL BARBEQUE GRILL. INSTALL PER MANUFACTURER SPECIFICATIONS.
 - CAL FLAME STAINLESS STEEL DOUBLE ACCESS DOOR #BB010839-30. INSTALL PER MANUFACTURER SPECIFICATIONS.
 - 3 1/2" THICK INTEGRAL COLOR. POURED-IN-PLACE CONCRETE COUNTER TOP. SMOOTH GRIND FINISH w/ WATERPROOF SEALANT. 1/2" RADIUS @ ALL EXPOSED EDGES. COLOR TO BE SELECTED.
 - ELDORADO STONE 'MEZETA FIELD EDGE' VENEER TO MATCH ARCHITECTURE. INSTALL PER MANUFACTURER SPECIFICATIONS.
 - FINISH SURFACE PER CONSTRUCTION PLAN.

C OUTDOOR KITCHEN

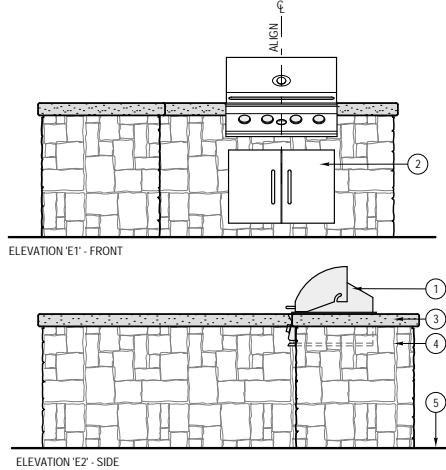
SCALE: 1/2" = 1'-0"



- LEGEND:
- ADJACENT FINISH GRADE, PAVING OR BUILDING WALL PER PLAN.
 - SMOOTH TROWEL BAND. WIDTH AND COLOR PER PLAN.
 - 1" THICK WASHED PLASTER SAND LEVELING BED.
 - CONCRETE PAVER. TYPE, COLOR, SIZE AND PATTERN PER PLAN.
 - 4" MIN. THICK COMPACTED MISC. AGGREGATE BASE MATERIAL. INSTALL PAVERS ON 6" THICK BASE AT DRIVEWAY.
 - COMPACTED SUBGRADE PER SOIL ENGINEER'S REPORT.

F PAVERS w/ CONCRETE BAND

SCALE: NOT TO SCALE



ELEVATION 'E1' - FRONT

ELEVATION 'E2' - SIDE

LICENSED
PROFESSIONAL
LOGO AND
COMPANY
INFORMATION

LICENSE
STAMP

LAST NAME RESIDENCE
1357 STREET NAME
OWNER CONTACT INFORMATION

CONSTRUCTION
DETAILS

REVISIONS

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SUBMITTALS

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DATE:

MM/DD/YY

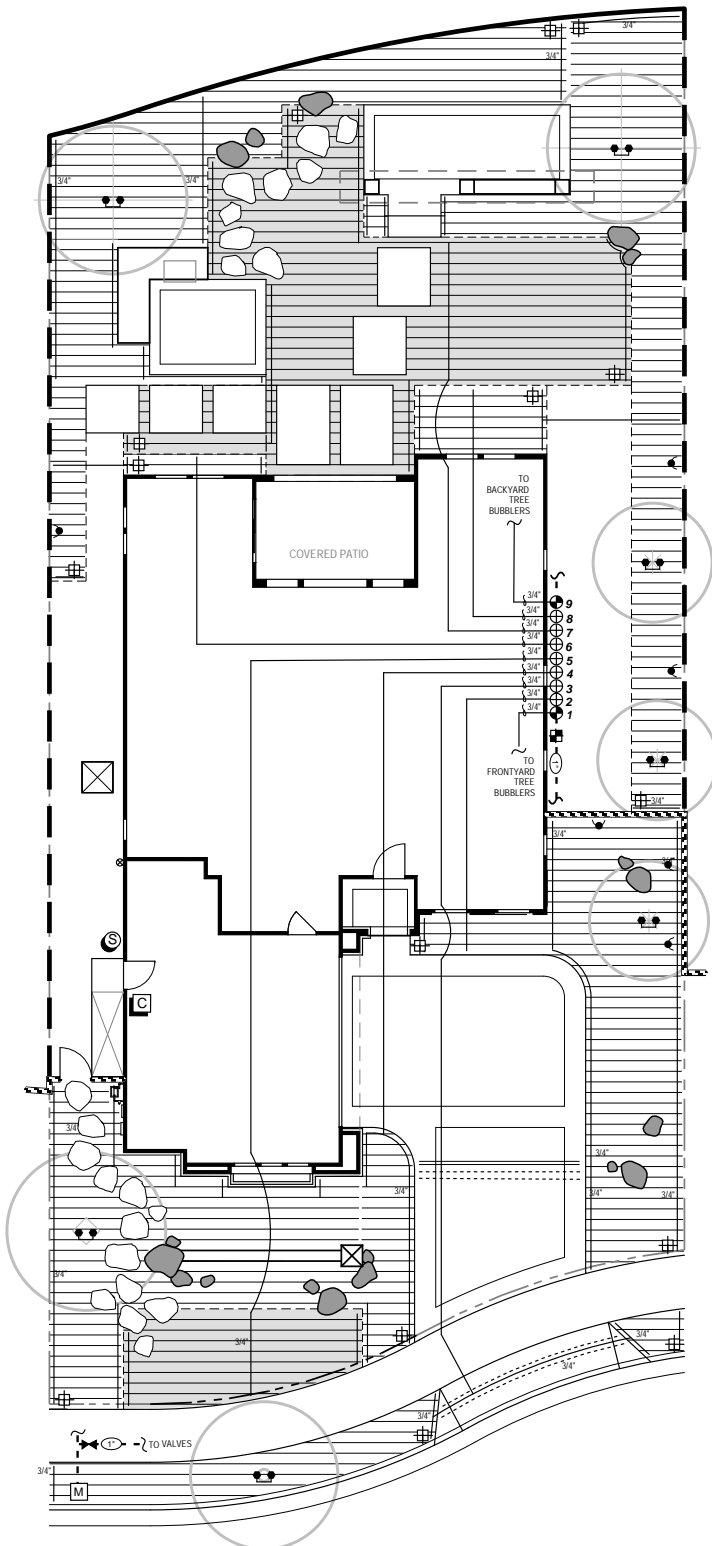
SHEET NO.:

L4

4 OF 10



Know what's below.
Call before you dig.



POINT OF CONNECTION :
MAKE POINT OF CONNECTION IMMEDIATELY DOWNSTREAM OF NEW 1" DOMESTIC WATER METER (TO BE PROVIDED BY OTHERS). REFER TO UTILITY PLANS FOR ADDITIONAL INFORMATION. EXTEND NEW TYPE "K" COPPER PIPE (OR AS PER LOCAL CODE) TO LINE SIZE GATE VALE AND EXTEND TO VALVES AS SHOWN.

STATIC WATER PRESSURE: HIGH: 85 PSI
SYSTEM DESIGN PRESSURE: 56 PSI
MAXIMUM IRRIGATION DEMAND: 6 GPM

AUTOMATIC CONTROLLER NOTE:
INSTALL A HUNTER INTERIOR WALL-MOUNTED ELECTRIC CONTROLLER. SEE IRRIGATION LEGEND FOR MODEL NUMBER. OWNER TO PROVIDE 120 VOLT CONTINUOUS INDEPENDENT POWER CIRCUIT TO THIS LOCATION. PROVIDE CONTROLLER, AND COORDINATE CONTROLLER POWER LOCATION WITH OWNER.

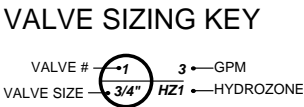
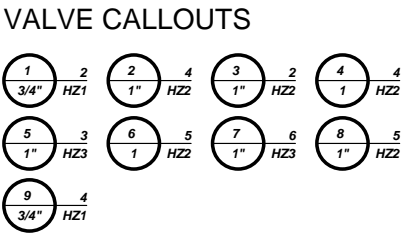
SOLAR SYNC SENSOR:
CONTRACTOR TO INSTALL A WIRELESS SOLAR SYNC SENSOR ON WALL OR FENCE IN AN OPEN AREA TO COLLECT SOLAR AND RAIN WATER.

SLEEVING NOTE:
INSTALL SLEEVES FOR MAINLINES AND LATERALS AT ALL HARDSCAPE CROSSINGS PRIOR TO HARDSCAPE PLACEMENT. PROVIDE SEPARATE SLEEVES FOR CONTROL WIRES WHERE CROSSING PAVING. ALL SLEEVES CROSSING VEHICULAR PAVING SHALL HAVE MINIMUM OF 24" COVER.

HYDROZONE LEGEND:

- HYDROZONE 1 (HZ1):**
TREES - MODERATE WATER USE, RWS BUBBLER IRRIGATION
- HYDROZONE 2 (HZ2):**
PLANTER AREAS - MIXED LOW AND MODERATE WATER USE VINES, SHRUBS AND GROUND COVER WITH ON-SURFACE DRIPLINE IRRIGATION
- HYDROZONE 3 (HZ3):**
TURF - HIGH WATER USE, WITH SUB-SURFACE DRIPLINE IRRIGATION

FOR IRRIGATION DETAILS, CONTROLLER SCHEDULING CHARTS, AND WATER BUDGET CALCULATIONS, SEE SHEET L6



IRRIGATION NOTES

- THIS SYSTEM IS DIAGRAMMATIC. ALL PIPE, VALVES, ETC. SHOWN WITHIN PAVED AREAS ARE FOR DESIGN CLARIFICATION ONLY AND SHALL BE INSTALLED IN PLANTING AREAS WHEREVER POSSIBLE.
- DO NOT WILLFULLY INSTALL THE SPRINKLER SYSTEM AS INDICATED ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT UNKNOWN OBSTRUCTIONS OR GRADE DIFFERENCES EXIST AND SHOULD BE BROUGHT TO THE ATTENTION OF THE OWNER'S AUTHORIZED REPRESENTATIVE. IN THE EVENT THAT THIS NOTIFICATION IS NOT PERFORMED, THE CONTRACTOR MUST ASSUME FULL RESPONSIBILITY FOR REVISIONS NECESSARY.
- SYSTEM DESIGN IS BASED ON MINIMUM OPERATING PRESSURE SHOWN AT EACH POINT OF CONNECTION WITH MAXIMUM GPM DEMAND SPECIFIED. IRRIGATION CONTRACTOR SHALL VERIFY ALL PRESSURES ON SITE PRIOR TO CONSTRUCTION TO OWNER'S CONSTRUCTION REPRESENTATIVE.
- IT IS THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO FAMILIARIZE HIMSELF WITH ALL GRADE DIFFERENCES, LOCATION OF WALLS, RETAINING WALLS, CURBS, ETC. HE SHALL COORDINATE ALL HIS WORK WITH THE GENERAL CONTRACTOR AND OTHER SUB-CONTRACTORS FOR LOCATION OF PIPE SLEEVES THROUGH WALLS, UNDER ROADS, PAVING AND STRUCTURES.
- MAINLINE FEEDER BETWEEN POINT OF CONNECTION, METER, AND BACKFLOW PREVENTER TO BE OF MATERIAL REQUIRED BY CURRENT WATER DISTRICT.
- FINAL LOCATION OF THE AUTOMATIC CONTROLLER ENCLOSURE AND THE BACKFLOW PREVENTION DEVICE SHALL BE APPROVED BY THE CITY'S AND OWNER'S REPRESENTATIVE, AND/OR LANDSCAPE ARCHITECT, WHERE APPLICABLE.
- IN ADDITION TO THE SLEEVES SHOWN ON THE PLAN, THE IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF ADDITIONAL SLEEVES OF SUFFICIENT SIZE UNDER ALL PAVED AREAS PRIOR TO PAVING UPON APPROVAL OF THE OWNER'S REPRESENTATIVE, IF REQUIRED TO OPERATE SYSTEMS.
- IRRIGATION CONTRACTOR SHALL FLUSH ALL LINES AND ADJUST ALL HEADS FOR MAXIMUM PERFORMANCE AND TO PREVENT OVERSPRAY ONTO WALKS, STREETS, AND BUILDINGS AS MUCH AS POSSIBLE. THIS SHALL INCLUDE SELECTING THE BEST NOZZLE RADIUS TO FIT UNUSUAL SITE CONDITIONS FOR APPROVAL PURPOSES AT NO EXTRA CHARGE. CALL LANDSCAPE ARCHITECT 48 HOURS IN ADVANCE FOR ANY COVERAGE TESTS.
- QUALITY CONTROL OBSERVATION SEQUENCES ARE FOUND IN THE SPECIFICATIONS.
- CLEAN-UP ON A DAILY BASIS PER OWNER'S REPRESENTATIVE'S APPROVAL.

IRRIGATION LEGEND

SYMBOL	MANUFACTURER	MODEL NUMBER	DESCRIPTION	RADIUS	G.P.M.	P.S.I.	COMMENTS
	NETAFIM	TLCV6-12	CV TECHLINE DRIPLINE	DRI	0.010	30	INSTALL LINES ON GRADE. 3" MULCH COVER 18" APART WHERE SHRUB O.C. SPACING IS 18" OR MORE 12" APART WHERE SHRUB O.C. SPACING IS LESS THAN 18" SEE DETAIL E, SHEET L6
	NETAFIM	TLCV6-12	CV TECHLINE DRIPLINE	DRIP	0.010	30	INSTALL TURF LINES BELOW GRADE, 3" COVER 12" APART, SEE DETAIL E, SHEET L6
	NETAFIM	XB-10PC	DRIP EMITTER	DRIP	0.02	30	INSTALL (2) EMITTERS PER VINE, CONNECT TO PLANTER DRIPLINE, SEE DETAL H, SHEET L6
	RAINBIRD	RWS-M-B-C-1401	ROOT WATERING SYSTEM	BUB	0.25	30	TWO RWS-BUBLERS PER TREE. SEE DETAIL G, SHEET L6

EQUIPMENT	MANUFACTURER	MODEL NUMBER	DESCRIPTION
	-----	-----	PROPOSED 1" DOMESTIC WATER METER WITH 1" SERVICE LINE BY OTHERS
	NIBCO	T-585	LINE-SIZE BRONZE FULL PORT BALL VALVE IN VALVE BOX, SEE DETAIL A, SHEET L6
	NETAFIM	TLSOV	1/2" MANUAL FLUSH VALVE @ EACH PLANTER IN 6" BOX, SEE DETAIL F, SHEET L6
	RAINBIRD	075-ASVF	3/4" ELECTRIC ANTI-SIPHON CONTROL VALVE, SIZE AS SHOWN, SEE DETAIL B, SHEET L6
	RAINBIRD	XACZ-100-PRF	1" ASV ANTI-SIPHON VALVE w/ DRIP CONTROL ZONE KIT, SEE DETAIL C, SHEET L6
	HUNTER	PC400, WITH (2) PCM-300	10 STATION INTERIOR CONTROLLER W/ (2) ADDED 3-STATION PLUG IN MODULE (PCM-300), INSTALL PER MANUFACTURER'S RECOMMENDATIONS AND STANDARD DETAILS.
	HUNTER	WSS	WIRELESS SOLAR SYNC W/ WIRELESS RECEIVER AND MODULE, INSTALL PER MANUFACTURER'S RECOMMENDATIONS AND STANDARD DETAILS
	APPROVED	SCH. 40 PVC	MAINLINE, SIZE AS SHOWN, MIN. COVER 18". SEE DETAIL D, SHEET L6
	APPROVED	SCH. 40 PVC	LATERAL LINE, SIZE AS SHOWN, MIN. COVER 12". SEE DETAIL D, SHEET L6
	APPROVED	SCH. 40 PVC	SLEEVES, SIZED 2X LARGER THAN PIPE TO BE INSERTED, UNLESS OTHERWISE NOTED SEE DETAIL D, SHEET L6.
	APPROVED	SCH. 40 PVC	WIRE SLEEVE, SIZE AS REQUIRED, UNLESS OTHERWISE NOTED, SEE DETAIL G, SHEET L6.

NETAFIM INSTALLATION NOTES:

- NETAFIM "TECHLINE CV" EMITTERS AND SPACING BETWEEN LINES AS PER IRRIGATION LEGEND.
- LOCATE NETAFIM FLUSH VALVE AT LOWEST POINTS OF SYSTEM. INSTALL IN PLANTER AREA. SEE FLUSH VALVE DETAIL FOR INSTALLATION. LOCATE AIR RELIEF VALVE NEAR SYSTEM HIGH POINT, IF NEEDED.
- CONNECT TECHLINE CV TO PVC WITH PVC TEES AND COMPRESSION FITTINGS. USE COMPRESSION FITTINGS FOR ALL PVC-TO-TECHLINE CV CONNECTIONS. GLUE ALL PVC-TO-PVC CONNECTIONS.

PRESSURE LOSS CALCULATION

PROJECT: LAST NAME RESIDENTIAL	BY: XX
STATIC PRESSURE: HIGH: 85 PSI	LOW: 77 PSI
SOURCE OF INFORMATION: CONTACT NAME	
SUPPLIER: CITY OF RIVERSIDE PUBLIC UTILITIES	
PHONE NUMBER: (XXX) XXX-XXXX	
VALVE STATION/GPM: VALVE 7, 6 GPM	
ITEM:	P.S.I. LOSS:
SERVICE LINE SIZE: 1" @ 6 GPM	0.50
WATER METER SIZE: 1" @ 6 GPM	0.50
GATE VALVE(S): 1 1" @ 6 GPM	0.50
PRESSURE REGULATOR: 1 1" @ 6 GPM	5.00
MAINLINE (SCH. 40): 1" 132 L.F. @ 6 GPM	2.50
AUTOMATIC VALVE SIZE: 1" @ 6 GPM	3.50
LATERAL LINE SIZE: 3/4" 125 L.F. @ 6 GPM	2.50
SYSTEM LOSSES SUBTOTAL:	15.00
FITTING LOSSES (10% OF SUBTOTAL):	1.50
IRRIGATION HEAD PRESSURE:	30.00
ELEVATION LOSSES/GAINS (ELEV. X .433)	0.00
TOTAL SYSTEM PRESSURE REQD:	46.50
AVAILABLE PRESSURE (LOW):	77.00
SET PRESSURE REGULATOR AT:	62.00
(-) DEFICIT OR (+) RESIDUAL PRESSURE:	(+) 15.50
CONTRACTOR TO SET PRESSURE REGULATOR TO 62 PSI AND FIELD ADJUST REGULATOR AS NECESSARY.	

PLAN CROSS REFERENCES

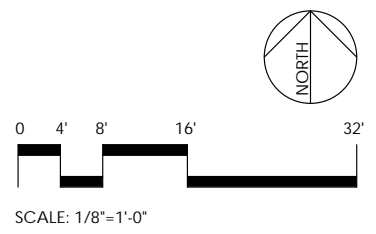
FOR NOTES AND LEGEND SEE THIS SHEET
FOR IRRIGATION DETAILS, SEE SHEET L6
FOR IRRIGATION SPECIFICATIONS, SEE SHEET L10
FOR CORRESPONDING CONSTRUCTION PLAN SEE SHEET L2
FOR CORRESPONDING PLANTING PLAN SEE SHEET L7

ALL IMPROVEMENTS SHALL BE MAINTAINED BY THE HOMEOWNER OWNER.

THIS SYSTEM IS DESIGNED TO USE WATER FROM A POTABLE SOURCE.

PIPE SIZING CHART:

3/4"	0-8 GPM
1"	8-15 GPM
1 1/4"	15-24 GPM
1 1/2"	24-32 GPM
2"	32-50 GPM



LICENSED PROFESSIONAL LOGO AND COMPANY INFORMATION

LICENSE STAMP

LAST NAME RESIDENCE
1357 STREET NAME
OWNER CONTACT INFORMATION

IRRIGATION PLAN

REVISIONS

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△	
△	
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DATE:
MM/DD/YY

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

SHEET NO.:
L5
5 OF 10

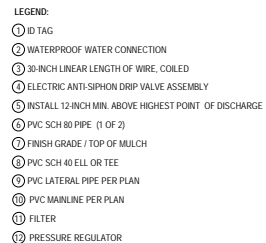


PLAN

NOTE:
CONTRACTOR TO COORDINATE INSTALLATION
OF PIPING UNDER HARDSCAPE w/ GENERAL
CONTRACTOR.



PLAN



LEGEND:

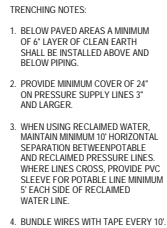
1. 1/2" DIAMETER DRIPLINE.
2. MANUAL FLUSH VALVE
3. 6" DIAMETER PLASTIC VALVE BOX
4. 6" CRUSHED GRAVEL.
5. FINISH GRADE

56.4 Annual Evapotranspiration Rate

NOTE:

1. The water schedules are shown for guideline use only and are to be modified accordingly as the weather changes with the assistance of a programmed smart controller.
2. It is based on the monthly evapotranspiration rates for City of Riverside, CA.

SCALE: NOT TO SCALE



LEGEND:

- ① 4-INCH LOCKING GRATE
- ② BUBBLER: RAINBIRD 0.25 GPM
- ③ ROOT ZONE WATERING ASSEMBLY
RAINBIRD RWS-M-B-C-1401
(INCLUDES 0.5 BUBBLER PER LEGEND
WITH RISER, SWING ASSEMBLY, LOCKING GRATE,
1/2" MALE NPT INLET, AND BASKET CANISTER)
- ④ FINISH GRADE
- ⑤ CHECK VALVE
- ⑥ PEA GRAVEL FILL
- ⑦ 1/2-INCH PVC SCH 80 NIPPLE
- ⑧ 1/2-INCH 90-DEGREE ELBOW
- ⑨ 12-INCH SWING ASSEMBLY
- ⑩ 1/2-INCH MALE NPT INLET
- ⑪ PVC SCH 40 TEE OR ELL
- ⑫ LATERAL PIPE
- ⑬ 4-INCH BASKET WEAVE CANISTER

Reference ETo for the area **ETo=** 56.4**ETAF Calculations:**

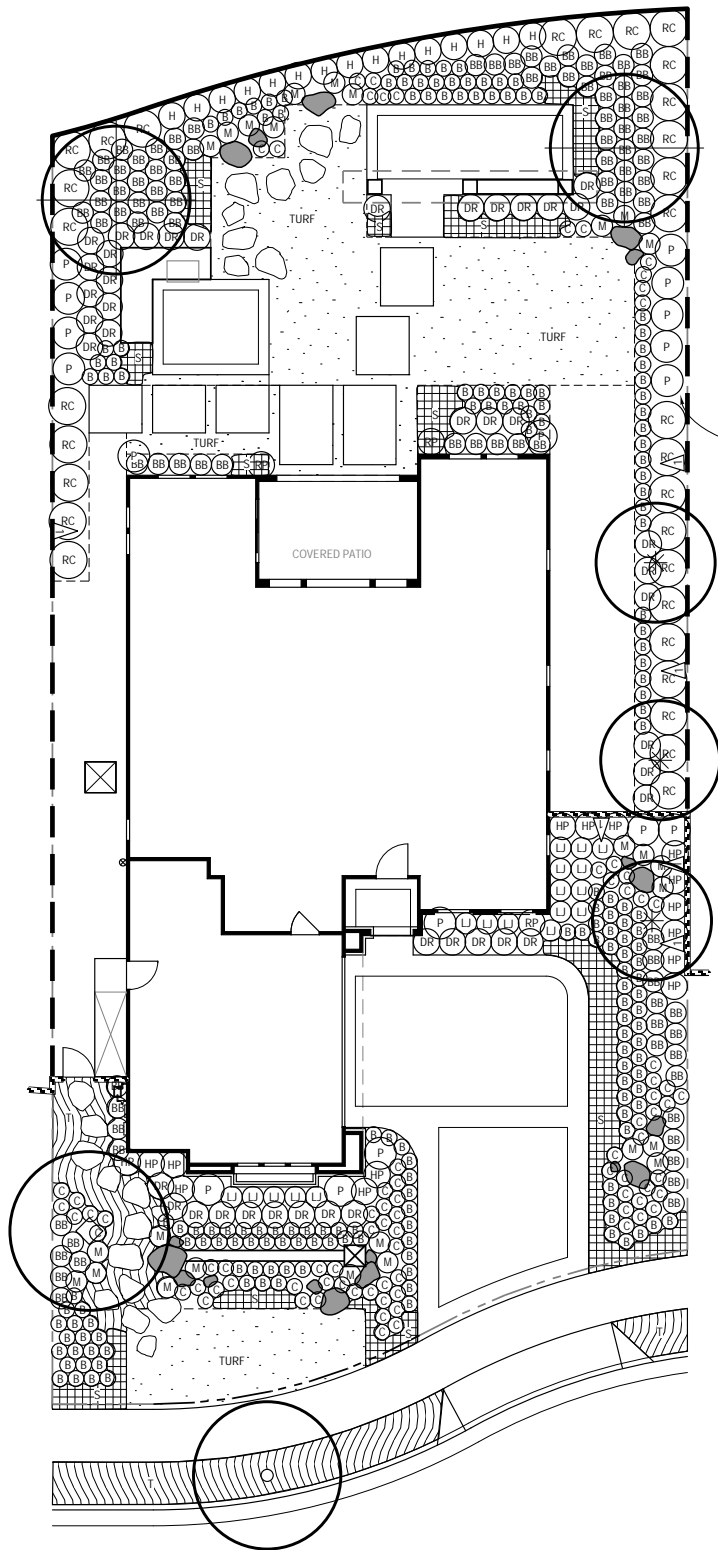
Average ETAF for Regular Landscape Areas must be 0.55 or below for residential areas.

Average ETAF for Regular Landscape Areas must be 0.55 or below for residential areas.

All Landscape Areas	
Total ETAF x Area	1573
Total Landscape Area (LA)	3,450
Sitewide ETAF	0.46



Know what's below.
Call before you dig.



MULCH NOTE:
INSTALL A 3" LAYER OF COVER MULCH IN ALL SHRUB AREAS (1 1/2" IN GROUND COVER AREAS). MULCH AVAILABLE FROM EARTHWORKS, RIVERSIDE, CA. SUBMIT SAMPLE OF ANY ALTERNATIVE MATERIAL PRIOR TO PURCHASE AND/OR PLACEMENT FOR OWNER'S REPRESENTATIVE'S APPROVAL.

HYDROZONE LEGEND:

- **HYDROZONE 1 (HZ1):**
TREES - MODERATE WATER USE, RWS BUBBLER IRRIGATION
- **HYDROZONE 2 (HZ2):**
PLANTER AREAS - LOW USE VINES, SHRUBS AND GROUND COVER WITH ON-SURFACE DRIPLINE IRRIGATION
- **HYDROZONE 3 (HZ3):**
TURF - HIGH WATER USE, WITH SUB-SURFACE DRIPLINE IRRIGATION

FOR IRRIGATION DETAILS, CONTROLLER SCHEDULING CHARTS, AND WATER BUDGET CALCULATIONS, SEE SHEET L6

PLANT SPACING NOTE:
SHRUB LAYOUT AS SHOWN ON PLAN INDICATES "SHRUB MASSES." QUANTITIES ARE AS SHOWN ON PLAN, ON-CENTER SPACING AS SHOWN ON LEGEND. CONTRACTOR TO VERIFY QUANTITIES BASED ON SPACING AND ADD ADDITIONAL PLANT MATERIAL, AT NO ADDITIONAL COST TO THE OWNER, AS REQUIRED TO MAINTAIN DESIGN INTENT DUE TO EXISTING SITE CONDITIONS NOT ANTICIPATED DURING DESIGN. LAYOUT/SPACING WILL EITHER BE TRIANGULAR OR LINEAR AS INDICATED ON PLAN OR LEGEND. LANDSCAPE ARCHITECT TO APPROVE FINAL LAYOUT IN FIELD PRIOR TO INSTALLATION.

PHOTO SUBMITTAL NOTE:
ALL PLANT MATERIAL, INCLUDING TREES, SHRUBS, AND VINES, SHALL BE INSPECTED AND APPROVED BY LANDSCAPE ARCHITECT, VIA PHOTO SUBMITTALS, PRIOR TO DELIVERY TO SITE. PHOTO SUBMITTALS SHALL INCLUDE NURSERY SUPPLIER AND DATE OF PHOTOS. ANY MATERIAL DELIVERED TO SITE WITHOUT APPROVAL IS SUBJECT TO REJECTION. PHOTO SUBMITTALS SHALL BE SENT TO LANDSCAPE ARCHITECT A MINIMUM OF 48 HOURS PRIOR TO SHIPMENT OF MATERIAL. SUBMITTALS SHOULD INCLUDE SOME TYPE OF SCALE REFERENCE IN PHOTO (I.E. PERSON, MEASURING TAPE, ETC.). TREES SHALL BE NOTED WITH HEIGHT FROM FINISH GRADE IN CONTAINER AND CANOPY HEAD SIZE. LANDSCAPE ARCHITECT SHALL BE NOTIFIED OF SCHEDULED NURSERY DELIVERY TIMES A MINIMUM OF 24 HOURS PRIOR TO SHIPMENT. REFER TO PLANTING SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS REGARDING QUALITY OF NURSERY STOCK.

PLANTING NOTES

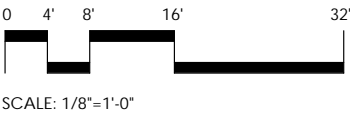
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- CONTRACTORS SHALL NOTIFY THE LANDSCAPE ARCHITECT OF SITE CONDITIONS WHICH PREVENT INSTALLATION PER PLANS AND SPECIFICATIONS.
- CONTRACTOR SHALL BE LIABLE FOR REMOVING AND RE-INSTALLING IRRIGATION EQUIPMENT, AND REPLANTING AREAS WHICH ARE NOT INSTALLED PER PLAN AND SPECIFICATIONS.
- REFER TO PLANTING SPECIFICATIONS FOR INSPECTION/CERTIFICATION SCHEDULE.
- IRRIGATION SYSTEM SHALL BE INSTALLED AND OPERATIONAL PRIOR TO INSTALLATION OF PLANT MATERIALS.
- TREES AND SHRUBS SHALL BE PLANTED AFTER CONCRETE PLACEMENT, BUT NOT BEFORE IRRIGATION COVERAGE TEST NO. 1 HAS BEEN APPROVED. (SEE SPECIFICATIONS)
- PLACE TREES BETWEEN IRRIGATION HEADS WHEREVER POSSIBLE.
- IF ROUGH GRADING IS COMPLETED AFTER LANDSCAPE DOCUMENTS WERE PREPARED, LANDSCAPE CONTRACTOR SHALL TAKE FOUR (2) SOIL SAMPLES FROM THE SITE. THE SAMPLES SHALL BE TAKEN AT A DEPTH OF 12" AND SUBMITTED TO AN APPROVED SOIL AND PLANT LABORATORY FOR AGRICULTURAL SUITABILITY TESTING. THE COST OF TESTING SHALL BE INCLUDED IN THE CONTRACTOR'S BID.
- THE RECOMMENDATIONS OF THE SOIL REPORT SHALL SUPERSEDE THE SOIL PREPARATION AND BACKFILL MIX SPECIFICATIONS (SEE SPECIFICATIONS). THE CONTRACTOR SHALL SUBMIT A COPY OF ALL SOILS REPORTS TO THE LANDSCAPE ARCHITECT PRIOR TO MODIFICATION OF THESE SPECIFICATIONS.
- SHREDDED MULCH INSTALLATION: INSTALL SHREDDED MULCH IN ALL SHRUB AND GROUND COVER AREAS PER SPECIFICATIONS UNLESS OTHERWISE INDICATED ON PLANS.
- CONTRACTOR IS RESPONSIBLE FOR ALL REPAIRS AND/OR REPLACEMENT OF ANY DAMAGED LANDSCAPE AREAS BEYOND THE LIMIT OF WORK, INCLUDING REPAIRING ANY IRRIGATION LINES/SPRINKLER HEADS, THAT IS A DIRECT RESULT OF THE LANDSCAPE CONSTRUCTION AND/OR HIS SUB-CONTRACTOR. REPLACEMENT ITEMS SHALL BE EXACT DUPLICATION OF ORIGINAL WORK OR PLANTS, UNLESS OTHERWISE APPROVED BY THE LANDSCAPE ARCHITECT.
- WHEREVER GROUND COVER AREAS ARE ADJACENT TO TURF INSTALL CONCRETE MOWSTRIP OR HEADERBOARD AS INDICATED ON DRAWINGS.
- CLEAN-UP SHALL TAKE PLACE ON A DAILY BASIS UNLESS OTHERWISE APPROVED BY THE OWNER'S REPRESENTATIVE.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN ALL GRADES AND FLOW LINES AS SHOWN ON THE GRADING PLAN. WHERE SOD IS TO BE INSTALLED ON A SWALE, THE FINISH GRADE MUST BE ADJUSTED SO THE SOD DOES NOT RESTRICT THE FLOW.

PLANTING LEGEND

SYMBOL CALLOUT	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	COMMENTS	WATER USE	QTY
TREES							
	<i>Quercus agrifolia</i>	Coast Live Oak	36" box	Per plan	Matched	L	2
	<i>Arbutus 'Marina'</i>	Strawberry Tree	24" box	Per plan		M	3
	<i>Magnolia g. 'Samuel Sommer'</i>	Samuel Sommer Magnolia	36" box	Per plan		M	1
	<i>Magnolia g. 'St. Mary'</i>	St. Mary Magnolia	24" box	Per plan	Street Tree	M	1
SHRUBS							
	<i>Rhamnus c. 'Mound San Bruno'</i>	Coffeeberry	15 gal.	42" o.c.		L	30
	<i>Podocarpus m. 'Maki'</i>	Shrubby Yew Pine	15 gal.	Per plan		L	17
	<i>Rosmarinus p. 'Blue Spires'</i>	Blue Spires Rosemary	15 gal.	Per plan		L	3
	<i>Hesperaloe parviflora</i>	Red Yucca	15 gal.	30" o.c.		L	15
	<i>Hesperaloe parviflora</i>	Red Yucca	5 gal.	30" o.c.		L	15
	<i>Callistemon 'Little John'</i>	Dwarf Bottlebrush	15 gal.	24" o.c.		L	11
	<i>Callistemon 'Little John'</i>	Dwarf Bottlebrush	5 gal.	24" o.c.		L	88
	<i>Muhlenbergia dubia</i>	Pine Muhly	5 gal.	Per plan		L	26
	<i>Dianella revoluta 'Little Rev'</i>	Little Rev Flax Lily	5 gal.	30" o.c.		L	43
	<i>Coreopsis 'Early Sunrise'</i>	Early Sunrise Coreopsis	1 gal.	18" o.c.		L	72
	<i>Salvia 'Bee's Bliss'</i>	Bee's Bliss Sage	1 gal.	18" o.c.		L	178
GROUNDCOVERS							
	<i>Marathon II</i>	Turf	SOD	Install per manu's rec's		H	923 s.f.
	<i>Senecio mandraliscae</i>	Kleinia	1 gal.	18" o.c.		L	105
	<i>Teucrium cossonii</i>	Marjorcan Germander	1 gal.	12" o.c.		L	115
VINES							
	<i>Macfadyena unguis-cati</i>	Cat's Claw Vine	15 gal.	Per plan	Train to wall	L	6

PLAN CROSS REFERENCES

FOR NOTES AND LEGENDS, SEE THIS SHEET
FOR PLANTING DETAILS, SEE SHEET L8
FOR PLANTING SPECS, SEE SHEET L-10
FOR CORRESPONDING CONSTRUCTION PLAN SEE SHEET L2
FOR CORRESPONDING IRRIGATION PLAN SEE SHEET L5



LICENSED
PROFESSIONAL
LOGO AND
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INFORMATION

LICENSE
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LAST NAME RESIDENCE
1357 STREET NAME
OWNER CONTACT INFORMATION

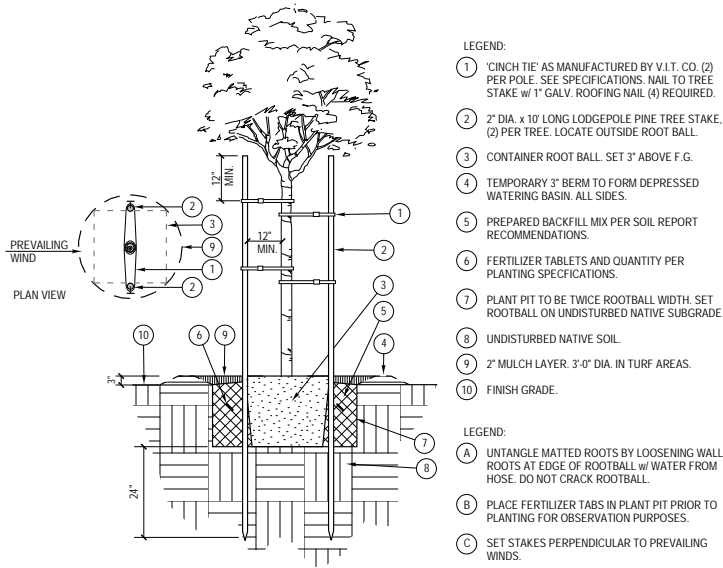
**PLANTING
PLAN**

REVISIONS

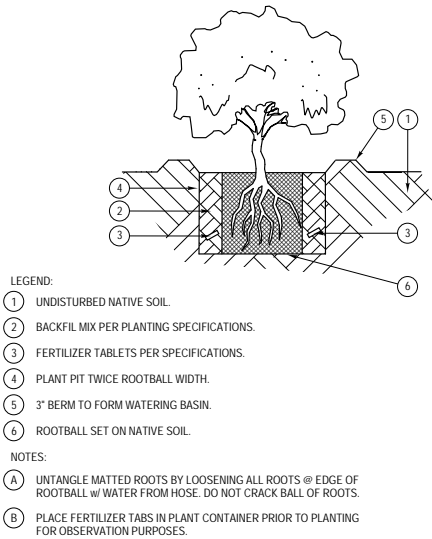
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SUBMITTALS

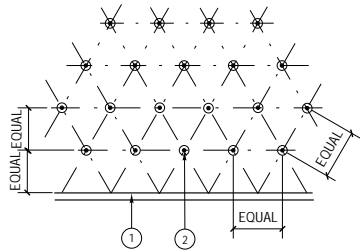
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SHEET SCALE: 1/8" = 1'-0"
SHEET NO.: L7 7 OF 10



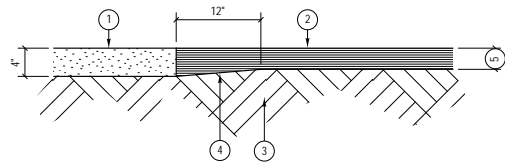
A DOUBLE STAKE TREE PLANTING
SCALE: 1" = 1'-0"



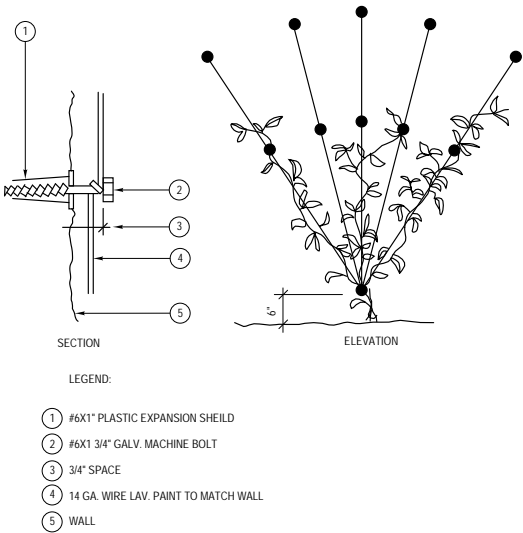
B SHRUB PLANTING DETAIL
SCALE: NOT TO SCALE



C SHRUB & G.C.SPACING
SCALE: NOT TO SCALE



D MULCH
SCALE: NOT TO SCALE



E VINE PLANTING
SCALE: 1" = 1'-0"

SOIL LABORATORIES STREET NUMBER AND NAME CITY, STATE AND ZIP CODE PHONE (XXX) XXX-XXXX (310) 613-9110		SOILS REPORT Location Requester Project Manager, Company Name, Group graphic interpretation: * very low, ** low, *** moderate **** high, ***** very high		Print Date MM/DD/YYYY 14 Project Name Project Manager, Company Name, Group	
ammonium bicarbonate/DTPA extractable - mg/kg soil Interpretation of data low medium high 0 - 7 8-15 over 15 0-60 60-120 121-180 0 - 4 4 - 10 over 10 0- 0.5 0.6- 1 over 1 0 - 1 1 - 1.5 over 1.5 0- 0.2 0.3- 0.5 over 0.5 0- 0.2 0.2- 0.5 over 1		Sample ID Number ##-##-##-16 Sample Description Soil Sample Received MM/DD/YYYY			
		elements		graphic	
		phosphorus		27.04 *****	
		potassium		187.12 *****	
		iron		9.64 ***	
		manganese		13.55 *****	
		zinc		5.21 *****	
		copper		1.55 *****	
		boron		0.14 **	
		calcium		315.78 ***	
		magnesium		174.58 *****	
		sodium		7.31 *	
		sulfur		15.21 *	
		molybdenum		0.07 ***	
		nickel		0.40 *	
		aluminum		n d *	
		arsenic		n d *	
		barium		0.63 *	
		cadmium		0.12 *	
		chromium		0.08 *	
		cobalt		0.20 *	
		lead		0.46 *	
		lithium		0.28 *	
		mercury		n d *	
		selenium		n d *	
		silver		n d *	
		strontium		1.07 *	
		tin		n d *	
		vanadium		0.25 *	
		Saturation Extract			
		pH value		6.69 ***	
		ECe (milli-mho/cm)		0.78 **	
		calcium		108.6 5.4	
		magnesium		29.0 2.4	
		sodium		8.6 0.4	
		potassium		34.0 0.9	
		cation sum		9.1	
		chloride		37 1.0	
		nitrate as N		29 2.1	
		phosphorus as P		5.9 0.2	
		sulfate as S		19.3 1.2	
		anion sum		4.5	
		boron as B		0.11 *	
		SAR		0.2 *	
		est. gypsum requirement-lbs./1000 sq. ft.		1	
		relative infiltration rate		fair	
		estimated soil texture		sandy loam	
		lime (calcium carbonate)		no	
		organic matter		fair/good	
		moisture content of soil		1.8%	
		half saturation percentage		21.5%	

F SOIL ANALYSIS AND RECOMMENDATIONS REPORT
SCALE: NOT TO SCALE

SOIL LABORATORIES
STREET NUMBER AND NAME
CITY, STATE AND ZIP CODE
PHONE (XXX) XXX-XXXX

Dear Allen,

The soil is slightly acidic with a pH of 6.69. Salinity is modest at 0.78 millimho/cm. Nitrogen and iron are modest. Boron and sulfur are low. Phosphorus, potassium, magnesium and the other micronutrients are well supplied. Sodium is low. The soil is hydrophobic. It is difficult to wet. Water beads up on the soil surface initially and then slowly moves into the soil.

Recommendations

Soil Amendment

General soil preparation on a square foot basis. Broadcast the following materials uniformly. The rates are per 1,000 square feet. Incorporate them homogeneously 6 inches deep:

agricultural gypsum - 10 pounds

good quality soil amendment - as needed, sufficient for 3% to 5% soil organic matter on a dry weight basis

Backfill

For preparation on a volume basis, uniformly blend the following materials into clean excavated soil. Rates are per cubic yard:

agricultural gypsum - 1/2 pound

good quality soil amendment - as needed, sufficient for 3% to 5% soil organic matter on a dry weight basis

Organic soil amendment

- Humus material shall have an acid-soluble ash content of no less than 6% and no more than 20%. The organic matter content shall be at least 50% on a dry weight basis.
- The pH of the material shall be between 6 and 7.5.
- The salt content shall be less than 10 millimho/cm @ 25° C. (ECe less than 10) in a saturated paste extract.
- Boron content of the saturated extract shall be less than 1.0 part per million.
- Silicon content (acid-insoluble ash) shall be less than 50%.
- Calcium carbonate shall not be present if to be applied on alkaline soils.

- Types of acceptable products are composts, manures, mushroom composts, straw, alfalfa, peat mosses etc. low in salts, low in heavy metals, free from weed seeds, free of pathogens and other deleterious materials.
- Composted wood products are conditionally acceptable [stable humus must be present]. Wood based products are not acceptable which are based on red wood or cedar.
- Sludge-based materials are not acceptable.
- Carbon:nitrogen ratio is less than 25:1.
- The compost shall be aerobic without malodorous presence of decomposition products.
- The maximum particle size shall be 0.5 inch, 80% or more shall pass a No. 4 screen.

Maximum total permissible pollutant concentrations in amendment in parts per million on a dry weight basis:

arsenic	20	copper	150	selenium	30
cadmium	15	lead	100	silver	10
chromium	100	mercury	10	vanadium	200
cobalt	50	molybdenum	20	zinc	200
		nickel	100		

Irrigate areas which are hydrophobic slowly with multiple start cycles and soaking periods in between the irrigation cycles.

For site maintenance, apply calcium nitrate (15.5-0-0) at 6 pounds per 1,000 square feet about once per quarter. Monitor the site with periodic soil testing. Adjust the maintenance program as needed.

LICENSED PROFESSIONAL
LOGO AND
COMPANY
INFORMATION

LICENSE
STAMP

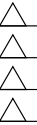
LAST NAME RESIDENCE
1357 STREET NAME
OWNER CONTACT INFORMATION

PLANTING
DETAILS

REVISIONS



SUBMITTALS



DATE:
MM/DD/YY

SHEET NO.:
L8
8 OF 11

CONCRETE

PART 1 - SCOPE OF WORK

1.01 WORK INCLUDED

Work includes, but is not limited to the following: Finish all labor and materials, appliances, both, equipment, facilities, transportation, and services necessary for installing all concrete work complete as indicated on the drawings and specifications including, but not limited to:

- A. Furnish and set all reinforcing steel, bolts and anchors.
- B. Install all items required by other trades which are to be cast into concrete.
- C. Concrete mow curbs, banding, poured in place walls, other flatwork, footings, piers and slabs for: walls, retaining, benches, counters, docks, etc., where applicable.

PART 2 - GENERAL

All requirements of subsection 3.31, standard specifications for Public Works Construction, shall apply except as specified herein.

2.1 INSPECTION OF SITE

Examine related work and surfaces before starting work in this section. Report to the Landscape Architect in writing, site conditions which will prevent the proper provision of this work. Beginning the work in this section without reporting unsuitable conditions to the Landscape Architect constitutes acceptance of site conditions by the Contractor. Any required removal, repair, or replacement of this work caused by unsuitable conditions shall be done at no additional cost to Owner.

2.2 PROTECTION OF EXISTING CONDITIONS

Contractor shall acquaint himself with all site conditions. He shall take necessary precautions to protect existing site conditions. Should damage be incurred, the Contractor shall repair damage to its original condition or furnish and install equal replacement at his own expense, to the satisfaction of the Owner.

2.4 COORDINATION

- A. Cooperation On Site: Coordinate and cooperate with other contractors to enable the work to proceed as rapidly and as efficiently as possible.
- B. Work With Other Trades: Coordinate with General Contractor items of other trades to be furnished and set in place. Such portions of their work as all or part embedded, built-in, attached to, or supported by their work shall be executed by them in ample time that progress of the work is not delayed. Any cutting or patching made necessary to comply with this provision shall be done at the Contractor's expense.

2.5 APPROVAL

Whenever the terms "approve," "approval," or "approved" are used in the Specifications, they mean approval of the Landscape Architect, the Owner's Representative or their field representatives, or in writing.

2.6 SUBMITTALS

At least 10 days after award of contract, Contractor shall submit for approval samples and/or manufacturers' latest catalog cuts and specifications of the following prior to beginning work. Approved samples shall be standards for completing work.

- A. One 2 1/2 x 2 1/2 x 2 in. sample for each type of concrete finish and color at the job site.
- B. Color samples for exposure joint compounds.
- C. All material data shall be forwarded in a single package to the Landscape Architect within 15 days after award of the General Contract unless otherwise approved by the Landscape Architect and/or Owner's Construction Representative.

2.7 SUBSTITUTIONS

- A. Standards: Specific reference to manufacturers' names and products specified in this section are used as standards. This implies except to substitute other material or methods without written approval of the Landscape Architect.
- B. Approval: Installation of any approved substitutions is Contractor's responsibility. Any changes required for installation of any approved substitution must be made to the satisfaction of Landscape Architect and without additional cost to Owner. Approval by Landscape Architect of substituted materials and/or dimensional drawings does not waive these requirements.

PART 3 - MATERIALS

Materials shall be of first quality and of domestic manufacture as noted below:

- A. Portland cement shall conform to ASTM C150, Type I or Type II.
- B. Concrete aggregate shall conform to ASTM C33.
- C. Water shall be clean, free from strong acid, alkali, oil or organic matter.
- D. Admixtures for all formed concrete shall be Sika Chemical Corp.'s "Plastemore", or approved equal, applied in strict accordance with manufacturer's directions.
- E. Reinforcement: reinforcing steel ASTM A15 and ASTM A305 Weldable; ASTM A195.
- F. Forms:
- 1. Lumber shall be "construction grade" Douglas fir.
- 2. Plywood for forming of concrete which is exposed shall be Plyform. All plywood used for forming shall be at least 5/8 inch thick and edge sealed.
- G. Expansion joint filler shall conform with ASTM D1751 (provided).

PART 4 - EXECUTION

4.01 CONCRETE DESIGN MIX

- A. Contractor assumes responsibility for the design mix and guarantees the specified ultimate strength as indicated or specified herein.
- B. Concrete, minimum 28 day ultimate strength shall be 3000 PSI.
- C. Ready-mixed concrete shall conform to ASTM C94.

4.02 CONCRETE PROPORTIONS & CONSISTENCY

- A. The proportions of aggregate to cement shall provide a dense mixture which will readily work into all corners of the forms and around all reinforcements without any segregation of the materials, cause excess free water to collect on the surface or cause excessive bleeding of the forms.
- B. The recommended practices of the American Concrete Institute shall be followed in all applicable procedures. The maximum slump shall not exceed 17 inch for footings, slabs or grade, and 19 inches for foundation walls.

4.03 CONCRETE APPROVAL

The concrete quality, proportions, consistency, etc., is subject to the approval of Owner, and no changes shall be made without prior written approval.

4.04 FORMWORK

- A. Forms for concrete work shall be of steel metal or wood. Forms that are warped or that do not have a smooth straight upper edge shall not be used. Forms shall be set with the upper edge of the board true to line and grade and shall be staked rigidly in place with stakes set not more than five feet (4' apart) to be removed immediately throughout the construction. All forms shall be approved by Owner within a tolerance of one percent (1%). All materials shall be accurately and separately weighed and mixing shall continue until the distribution of material is uniform and the mass of concrete is homogeneous.
- B. Two and one-half (2 1/2) gallons of water per cubic yard, shall be withheld from the mix at the plant, and all or a portion may be added to the mix at the job site as required by the inspector. The concrete shall be mixed at least 15 minutes after such water is added and not less than 3 minutes of the time shall be immediately prior to the discharge of the batch. Total mixing time after adding the required water shall be at least 15 minutes.
- C. Concrete which is not placed within 10 minutes after the introduction of cement and water, and concrete which has stood for 30 minutes after leaving the mixer, shall not be used.

4.05 REBAR

Reinforcing bar shall be supplied with 40 bar diameters minimum overlap.

4.06 CONVEYING AND PLACING

- A. Before pouring, all forms shall be thoroughly cleaned and made tight. The bottom of trenches shall be wet down before pouring footings, earth shall not be muddy at the time of pouring. Concrete shall be placed and finished uniformly, rough finishes, and forms are approved by Owner.
- B. Before discharging new concrete against old concrete, all balance shall be removed, and the surfaces roughened to expose the embedded aggregate. The surfaces shall then be covered with cement grout, using the specified mix with 1/2 of the coarse aggregate omitted, 1-1/2 inches thick.
- C. Conveying and placing of concrete shall be done so as to prevent segregation of ingredients, and in no case shall the free fall exceed 4 feet. Tremies shall be used as required. Surfaces of concrete shall be kept reasonably level, with a minimum amount of concrete being allowed to flow after being placed. Placing shall be performed as a continuous operation until each section is completed.
- D. Concrete shall be spaded and vibrated with mechanical vibrators to a maximum subgrade, without separation of ingredients. The mixing of concrete by vibration will not be permitted.

4.07 COLORED CONCRETE

Integral color and Dust-On color hardener shall be as specified on plans and details.

4.08 GROUTING

- A. Grout shall be composed of one part Portland Cement and two parts of fine aggregate by volume. Materials shall be mixed by jet and water added just sufficient to make the mixture flow under its own weight.
- B. For dry lump cement grout, a minimum of water shall be added to the mix so that when wet sample is squeezed hard in the hand, surface moisture, but no free water, shall appear on the sample. Do not mix more than can be used in 15 minutes.

4.09 CURING AND PROTECTION

- A. All exposed surfaces of concrete shall be protected from damage due to temperature, elements, and construction operations.
- B. Curing shall be as follows:
- 1. All exposed surfaces of concrete shall be protected from premature drying and freshly placed concrete shall be protected against wash by rain. All concrete shall be kept moist for a period of two days after placing. In order that curing water may reach both surfaces of walls, the forms shall be loosened and water shall be poured over the tops of the walls and allowed to run down between the concrete and the forms.
- 2. All liquid curing compounds shall be used in accordance with the manufacturer's recommendations and shall not be used on surfaces including concrete hardener.

4.10 DEFECTIVE CONCRETE

- A. Concrete which is not in accordance with these specifications, out of line, level, or plumb; showing structural cracks, voids, pockets, voids, spalls, honeycombing, exposed reinforcing or other damaged surfaces shall be considered as defective.
- B. All lines and irregularities shall be removed from exposed concrete surfaces while the concrete is still green. Where patching is required, all loose and uniform concrete shall be removed prior to patching.

4.11 CONCRETE FINISHES

Flat surfaces shall be screeded to the required levels and slopes and then any excess water or balance removed. Concrete shall be compacted with a grid tamper and then floated to a true and level surface within the tolerance of 1/8 inch along a 10-inch straight edge. Contractor shall ensure proper drainage on all flatwork. See Plans for concrete finish and landscape areas.

4.12 EXPANSION JOINTS

Placement of expansion joints shall be as directed and determined by layouts of slab markings noted on drawings. Expansion joint material shall be Poly Foam, as approved, or as noted on Plans. Expansion joints shall be recessed one-quarter inch from finish surface and sealed with a bead of grey mastic sealant or equal. Sika Seal to match concrete color shall then be tamped into the bead.

4.13 CONTROL JOINTS

Control joints and other edges shall be formed in fresh concrete using a clean edge-joint panning tool to provide a smooth uniform finish.

4.14 PROTECTION

All finished concrete work shall be barricaded to pedestrian traffic for three (3) days. Barricades shall be placed immediately after concrete finishing. Contractor shall furnish, place and remove all of his own barricades. Contractor shall be responsible for any damage to new construction and replacement or repair of the work shall be made without added cost to Owner.

4.15 PATCHING

If patching is necessary and permissible, a bonding agent such as Weld-Crete, or equal, shall be used.

4.16 CONCRETE CURBS

Construct concrete curbs at locations shown on Plans as detailed, true to line and grade, as approved by the local County or City. Use natural grey Portland cement concrete, 3000 PSI compressive strength. Locate expansion joints as detailed or shown, and as directed, at intervals not to exceed fifteen feet (15'). Finish with steel trowel, then brush with bristle brush parallel to face or edge.

4.17 CLEAN-UP

Upon completion of all concrete work and before final acceptance, Contractor shall remove all tools, surplus materials, apparatus, debris, etc., from the site and the site shall be left in a clean, neat condition acceptable to Owner.

In addition to manufacturer's guarantees or warranties, all work shall be warranted for one year from the date of final acceptance against all defects in materials and workmanship by contractor. Warranty shall also cover repair of damage to any part of the premises resulting from defects in materials and workmanship to the satisfaction of the Owner.

END OF SECTION

CONCRETE UNIT MASONRY AND STUCCO SURFACING

PART 1 - SCOPE OF WORK

1.01 WORK INCLUDED

Furnish all labor, tools, equipment, materials, transportation, and perform all operations necessary and incidental for the proper execution and completion of all concrete unit masonry in accordance with the Drawings and Specifications including, but not limited to, the following work items:

- A. Plasters (Stuccoed where applicable).
- B. Walls (Stuccoed where applicable).
- C. Masonry Barquettes (Stuccoed where applicable).

1.02 RELATED WORK

- A. Furnishing and placing rebar.
- B. Concrete placement.
- C. Stucco application.

PART 2 - GENERAL

2.01 PERMITS & INSPECTIONS

Obtain necessary City Building & Safety Department permits and inspections.

2.02 APPLICABLE STANDARDS

Any references to the "Standard Specifications," "ASTM," or "ACI" manuals shall mean the current or latest editions.

- A. Standard Specifications: Standard Specifications of the State of California, Business and Transportation Agency, Department of Transportation, CALTRANS.
- B. Standards:
- 1. ASTM - American Society of Testing and Materials.
- 2. ACI - American Concrete Institute, Manual of Concrete Practice.

2.03 INSPECTION OF SITE

Examine related work and surfaces before starting work in this section. Report to the Landscape Architect in writing site conditions which will prevent the proper provision of this work. Beginning the work in this section without reporting unsuitable conditions to the Landscape Architect constitutes acceptance of site conditions by the Contractor. Any required removal, repair, or replacement of this work caused by unsuitable conditions shall be done at no additional cost to Owner.

2.04 PROTECTION OF EXISTING CONDITIONS

Contractor shall acquaint himself with all site conditions. He shall take necessary precautions to protect existing site conditions. Should damage be incurred, the Contractor shall repair damage to its original condition or furnish and install equal replacement at his own expense, to the satisfaction of the Owner.

2.05 COORDINATION

- A. Cooperation on-site: Coordinate and cooperate with other contractors to enable the work to proceed as rapidly and as efficiently as possible.
- B. Work With Other Trades: Coordinate with General Contractor items of other trades to be furnished and set in place. Such portions of their work as all or part embedded, built-in, attached to, or supported by the work shall be executed by them in ample time that progress of the work is not delayed. Any cutting or patching made necessary to comply with this provision shall be done at the General Contractor's expense.

2.06 FINAL ACCEPTANCE

- A. Review: Review for Final Acceptance shall be held in conjunction with the final review of Section 4 A & B, Painting and Color Match.
- B. Acceptance: Work under this Section will be accepted by Landscape Architect upon satisfactory completion of all work. Upon Final Acceptance at the end of the maintenance period, including backfilling of walls, Owner will assume responsibility for maintenance of the work. Said assumption does not release Contractor of obligations under Warranty.

PART 3 - MATERIALS

Materials shall be of first quality and of domestic manufacture as noted below:

- A. Concrete masonry units: ASTM C90, Grade N-1, hollow, normal weight laid bearing units.
- 1. Types and sizes: As indicated on drawings.
- 2. Color: As indicated on Color Schedule.
- B. Portland cement: ASTM C150, Type I or Type II.
- C. Aggregates:
- 1. Sand: ASTM C 144, clean, hard, strong, durable, free from injurious amounts of saline, alkalis, organic, or other deleterious substances, and not less than 3 percent by weight passing No. 100 sieve.
- 2. pea gravel: ASTM C 664, washed and graded with no more than 5 percent passing No. 8 sieve and with 100 percent passing 3/8 inch sieve.
- D. Water: Clean, portable, from domestic supply.
- E. Hydrated lime: ASTM C 207, Type S, and containing 85% by weight of calcium oxide.
- F. Admixtures for grout: Material acceptable to the Architect. Obtain acceptance from Project Supervisor prior to use.
- G. Mineral color pigments: Pure ground mineral non-fading oxides, lime and alkali proof. Colors as selected by Landscape Architect where applicable.
- H. Cleaning material: Sure-Done No. 400 detergent, by Process Solvent Co., Inc., or equivalent.
- I. Expansion joint filler: ASTM C 1751.
- J. Sealant materials: As noted on plans.
- K. Substr. Catalogue Cut Cementitious waterproofing material.
- L. Vertical expansion joints: In concrete masonry wall construction shall be a minimum 20" - 47" apart. Use breaking bond whether for exposed or stuccoed masonry wall work.

PART 4 - EXECUTION

Each item of Work shall include excavations for foundations and footings, concrete masonry block, defurred tilted steel bars, Douglas Fir wood joist, slabs finishing and backfilling complete to the satisfaction of the Owner.

4.01 LAYOUT

- A. All walls to be staked in the field for top of footing, top of wall, lengths of walls and all slopes in walls, on the square footage "as shown" in the field. Any changes or deviations which add or delete concrete block walls will be corrected or approved by Project Superintendent and adjusted by drawings submitted and approved by Landscape Architect and Project Superintendent. Any overruns will be per square foot finished wall unit cost.

4.02 INSPECTION OF WORK AREAS

- A. Inspect related Work and adjacent surfaces for completeness.
- B. Current conditions detrimental to a proper and timely completion of the Work.

4.03 OBSERVATION OF MASONRY WORK

Perform all masonry Work under continuous observation by the Landscape Architect and/or Owner's representative.

4.04 PREPARATION

- A. Previously placed concrete or masonry: Clean all encrustations, lallance, oil and coatings which would reduce bond. Wash Work thoroughly with water under pressure: loose surface matter where masonry units connect with earlier placed Work.
- B. Masonry units: Thoroughly clean of dust, grease, oil, or other matter which would reduce bond.
- C. Walling: Do not wet concrete block units before installation.
- D. Reinforcement: Clean off excess mill scale, loose rust, oil and coatings which would reduce bond. Secure anchors in place.

4.05 PLACING REINFORCEMENT

- A. Place reinforcement in accord with ACI 531.

- B. Place all reinforcement and embeds prior to grouting.
- C. Reinforcing steel, except bars in other Material.

- 1. Vertical bars: Continuous from bottom cut to top of wall, centered in cove, except where otherwise indicated. Secure vertical reinforcement in position at top, bottom and at intervals not farther apart than 10 bar diameters. Where necessary, install vertical steel firmly to place by frames or other suitable devices as accepted by Architect.
- 2. Horizontal bars: Where temporarily above exact position and top to indicate correct locations. Use calibrated vertical bars which indicate, which to vertical bars or dowels.
- 3. Accurately splice using lap of bars as indicated on drawings with a minimum of 40 bar diameters.
- 4. Tie at intersections using No. 16 gauge annealed wire.

4.06 MORTAR AND GROUT

- A. Mortar: Type S in accord with UBC Chapter 24.
- 1. Color: As indicated on plans.
- B. Grout: In accord with UBC Chapter 24, with exception that lime shall not be used.
- C. Dispose of mortar and grout not used within 30 minutes after leaving mixer. Retempering of mixture will be allowed in accord with UBC Chapter 24.
- D. Mortar and grout minimum compressive strength:
- 1. Mortar: 28 days: 1,800 psi
- 2. Grout: 28 days: 2,000 psi
- E. After all ingredients are in the batch mixer, mix mechanically for not less than three minutes. Do not use hand mixing unless specifically acceptable to Project Superintendent.

4.07 WORKMANSHIP

- A. Preserve unobstructed vertical continuity of cove to be filled. Fully bed webs and crosswalls forming such cove in mortar to prevent leakage of grout.
- B. Fractional parts of masonry units are prohibited where units which can be used. Chinking of interstices with fragments will not be allowed. Provide special units as necessary to form openings and joints.
- C. Do not construct any part of any masonry wall more than 6 feet higher than adjoining portions.
- D. Where absolutely necessary, for construction purposes to stop off longitudinal runs of masonry, stop off only by racking back one-half wall length in each course. Topping shall not be permitted.
- E. At openings for pipes, ducts and conduit built into masonry walls, cut to form fractional units with abrasive saw.
- F. Align vertical cells to maintain continuous unobstructed cell area.
- G. Set units with joints straight and uniform in width.

4.08 JOINTS AND COURSING - EXPOSED MASONRY

- A. Joints: Raked as exposed masonry and flush with stuccoed, concave beveled with brick.
- B. Bond: Common running bond, unless otherwise indicated.
- C. Joints: 3/8 inch wide.
- D. Keep all areas to be grouted free from mortar so that grout will contact foundation.
- E. Perform bedding or raking when mortar is partially set but still sufficiently plastic to bond. Use a tool which compacts mortar, pressing excess mortar out of joint rather than dragging it out.
- F. Rake out joints which are not tight at time of bedding, point and then test - where applicable.
- G. Buffer vertical head joints with fill thickness equal to face shot of unit and shove these joints tightly so that mortar beads will be both units.
- H. Set linch, capping units and bearing plates in a full bed of mortar.
- I. Control joints shall be as detailed. Apply sealant, where required, in accord with plans and specifications.

4.09 GROUTING

- A. Fill all masonry cells containing reinforcing steel solidly with grout. At finished course, stop grout one-half the course height below top of last course grout.
- B. Keep mortar dripping out of or remove from grout space before grading.
- C. Puddle grout or vibrate in place.
- D. Grout bolts and anchors inserted in wall solidly in place so that there is a minimum of 1 inch of grout between bolt and masonry unit, unless otherwise indicated.
- E. Set bolts, frames and inserts necessary for attachment of subsequent Work must be secured in place prior to grouting.

4.10 POINTING AND CLEANING

- A. Immediately remove from exposed surfaces surplus mortar, grout, foreign material, and stains.
- B. Defective joints: Point holes or defective mortar joints in exposed masonry and cut out and repoint defective joints. Repoint or chip out or broken masonry units.
- C. Staining and excess mortar: Protect exposed masonry against grout staining. Where grout or mortar does contact the faces of masonry, remove it immediately. Should accidental spillage occur, wash and clean surfaces immediately with a 10% muratic acid and water solution, followed by a thorough water rinse. Remove stains where they occur.
- D. Clean efflorescence from masonry with specified cleaner in accord with cleaner manufacturer's instructions.
- E. After wall in constructed, do not saturate with water for curing or any other purpose.

4.11 STUCCO SURFACING

- A. Wood Framed Walls:
- 1. Stucco shall be three coat work not less than 7/8" thick.
- (a) Scratch coat shall be approximately 1/2" thick. Before the scratch coat has set, it shall be well cross-scratched to provide a strong bond and damp cured for at least 48 hours.
- (b) Brown coat shall be 1/4" thick. When brown coat has set sufficiently to be touched with a dry float to form a bond for the finish coat. Brown coat shall be applied no sooner than 48 hours after application of scratch coat. Scratch coat shall be dampened evenly with those to be finished on the site. All work shall match the approved colors and samples. Submit samples to the Landscape Architect 15 days prior to construction for approval.
- (c) Finish color coat shall be approximately 1/8" thick and shall be applied and damp cured daily in accordance with the manufacturer's directions, and city and local governing bodies.
- 2. Stucco shall be Merlex, La Habra or approved equal as per color selection by Landscape Architect.
- 3. Packaged material shall be delivered in the original packages, containers or bundles bearing the name of manufacturer and the brand name.
- 4. Tensile to be rubber floor finish (Scotch coat) as approved by Landscape Architect. 5. All exposed foundations shall receive one application of finish color coat to match building color.
- 6. All stucco shall be water proofed up to three feet above finish grade with Thompson's Water Sealer or equal.
- B. Block Walls:
- 1. Stucco shall be two coat work not less than 7/8" thick.
- (a) Brown coat shall be approximately 3/8" thick. Float with a dry float to form a bond for the finish coat.
- (b) Finish color coat shall be approximately 1/8" thick and shall be applied and damp cured daily in accordance with the manufacturer's directions including city and governing bodies.
- 2. Color and manufacturer shall be selected and approved by Landscape Architect.
- 3. Deliver packaged material in original packages bearing the manufacturer's and brand names.
- 4. Texture as called out on plan or in P. I. field approval.
- 5. All exposed foundation shall receive one application of finish color coat to match building color.

4.12 CLEANUP

All subcontractor's materials and tools of the trade shall be removed from the job site upon completion of work. Subcontractor shall be responsible for damage to the finished surfaces of other work. Subcontractor guarantees all work will be performed in a good and workmanlike manner.

PART 5 - WARRANTIES

In addition to manufacturer's guarantees or warranties, all work shall be warranted for one year from the date of Final Acceptance against defects in materials and workmanship by Contractor. Warranty shall also cover repair of damage to any part of the premises resulting from defects in materials and workmanship to the satisfaction of the Owner.

- 1. Use according to Manufacturer's printed instructions. Secure manufacturer or distributor initial supervision by a qualified field representative to assure proper use of admixture.
- 2. Mineral color pigments: Pure ground mineral non-fading oxides, lime and alkali proof. Colors as selected by Landscape Architect where applicable.
- 3. Cleaning material: Sure-Done No. 400 detergent, by Process Solvent Co., Inc., or equivalent.
- 4. Expansion joint filler: ASTM C 1751.
- 5. Sealant materials: As noted on plans.
- 6. Substr. Catalogue Cut Cementitious waterproofing material.
- 7. Vertical expansion joints: In concrete masonry wall construction shall be a minimum 20" - 47" apart. Use breaking bond whether for exposed or stuccoed masonry wall work.

- 1. Sand: ASTM C 144, clean, hard, strong, durable, free from injurious amounts of saline, alkalis, organic, or other deleterious substances, and not less than 3 percent by weight passing No. 100 sieve.
- 2. pea gravel: ASTM C 664, washed and graded with no more than 5 percent passing No. 8 sieve and with 100 percent passing 3/8 inch sieve.
- 3. Water: Clean, portable, from domestic supply.
- 4. Hydrated lime: ASTM C 207, Type S, and containing 85% by weight of calcium oxide.
- 5. Admixtures for grout: Material acceptable to the Architect. Obtain acceptance from Project Supervisor prior to use.
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- 9. Sealant materials: As noted on plans.

| <div>LANDSCAPE IRRIGATION SYSTEM</div> <div>PART 1 - GENERAL</div> <div>1.01 REFER TO STANDARD CONTRACT DOCUMENTS FOR NON-TECHNICAL CONTRACTUAL REQUIREMENTS AND CONDITIONS.</div> <div>1.02 SCOPE OF WORK:</div> <div>Furnish labor, materials, equipment, appliances and services necessary for the execution and completion of "Landscape Irrigation" as indicated on the drawings and/or herein specified.</div> <div>PART 2 - MATERIALS</div> <div>Materials shall be of first quality and of domestic manufacture unless otherwise noted.</div> <div>2.01 SUBMISSION FOR APPROVAL:</div> <div>Furnish the articles, equipment, materials, or processes specified by name on the drawings and in specifications. No substitutions will be allowed without prior written approval of the Owner's Representative.</div> <div>A. A complete material list shall be submitted to the Owner's Representative prior to performing any work. Catalog data and full descriptive literature must be submitted whenever the use of items differs from those specified or requested. Included certificates must be submitted by plastic pipe and fitting manufacturers indicating that material conforms with specifications, unless materials have been previously approved.</div> <div>B. The material list shall be submitted using the following layout (double space between each item):</div> <table><thead><tr><th>Item No.</th><th>Description</th><th>Manufacturer</th><th>Model#</th></tr></thead><tbody><tr><td>1.</td><td>Pressure Supply Lines</td><td>Schedule 40</td><td></td></tr><tr><td>2.</td><td> Lawn Head</td><td>Backuer</td><td>#104</td></tr><tr><td>3.</td><td> Etc.</td><td>Etc.</td><td>Etc.</td></tr></tbody></table> <div>C. Equipment or materials installed or furnished without the prior approval of the Owner's Representative may be rejected and such material removed from the site at no expense to the Owner.</div> <div>D. Approval of any items, alterations, or substitutes indicates only that product(s) apparently meet the requirements of the drawings and specifications on the basis of the information or samples submitted, not the guarantee. The Owner's Representative may, at his option, require a manufacturer's warranty on any product offered for use.</div> <div>2.02 GENERAL PIPING</div> <div>A. Pressure supply line from point of connection through backflow prevention unit shall be per local code. Pressure supply line downstream of backflow prevention unit shall be per the legend.</div> <div>B. Non-pressure lines shall be Class 200 PVC pipe.</div> <div>2.03 PLASTIC PIPE AND FITTINGS</div> <div>A. All pipe shall be extruded of an improved PVC high pipe compound featuring high tensile strength, high chemical resistance and high impact strength. In terms of the current ASTM Standard D1749 D2241, this compound shall meet the requirements of cell classification 12454B for pipe and 12454B for fittings. This compound must have a 2,000 psi hydrostatic design stress rating.</div> <div>B. All pipe must have the following markings: Manufacturer's name, nominal pipe size, schedule or class, pressure rating in P.S.I., and NSF (National Sanitation Foundation). The manufacturer shall also mark the date of extrusion on the pipe.</div> <div>C. Solvent cement joints for plastic pipe and fittings shall be made as prescribed by the manufacturer. The high chemical resistance of the pipe and fitting compounds specified in the foregoing sections makes it mandatory that an aggressive primer, which is a true solvent for PVC, be used in conjunction with a solvent cement designed for the fit or pipe and the fittings of each size range specified.</div> <div>D. Each pipe installed excepting to make solvent joints shall receive instructions in the proper assembly of such joints from the representative of either pipe, cement, or fitting manufacturer before setting the job, unless it has been previously instructed on recommended solvent cementing procedures by a competent representative of the manufacturer.</div> <div>E. All fittings shall be standard weight schedule 40. At the purchaser's discretion, contract performance may be given those suppliers able to furnish all types of fittings required under this contract from a single manufacturer, in order that responsibility will not be divided in warranty claim situations.</div> <div>F. All fittings shall be injection molded of an improved PVC fittings compound featuring high tensile strength, high chemical resistance, and high impact strength. In terms of the current ASTM Standard 1184-48, the compound must meet the requirements described in cell classification 1345-4B. Where threads are required in plastic fittings, these shall be injection molded also. All sizes and per shall be wide gated.</div> <div>G. Apply primer and solvent on all pipe sizes and fittings. Primer solvent on both female and male ends.</div> <div>H. All threaded joints shall be standard weight Schedule 40, with molded threads.</div> <div>I. All fittings shall bear the company's name or trademark, material designation, size applicable I.P.S. schedule, and NSF seal of approval.</div> <div>2.04 PVC CONDULIT/EEVING</div> <div>Pipe that is used for lines sleeving shall be PVC condult Schedule 40; Type 1220. All wires under paving shall be installed in PVC condult, or sleeves as indicated in details and Legend.</div> <div>2.05 RING-TITE PVC PIPE</div> <div>A. All pipe indicated on the working drawings, shall be Class 160 PSI John-Manville PVC pipe with ring tie joints.</div> <div>B. All ring tie joints shall be sealed with rubber rings as provided by the manufacturer. All pipe joints shall provide for expansion and contraction.</div> <div>C. Thrust blocks shall be provided as required for proper anchorage and durability of the ring tie pipe. (Refer to Details)</div> <div>2.06 BRASS PIPE AND FITTINGS (If required)</div> <div>A. Brass pipe shall be 80% red brass, American National Standard Institute (ANSI), Schedule 40 screwed pipe. Fittings shall be medium brass, screwed 125 pound class.</div> <div>2.07 BACKFLOW PREVENTION UNIT:</div> <div>See plan for type, manufacturer, and size.</div> <div>2.08 QUICK COUPLING VALVES:</div> <div>A. The body of the valve shall be red brass with a wall thickness guaranteed to withstand normal working pressure of 150 pounds per square inch without leakage. Valve shall have a 3/8 inch female threaded opening at base.</div> <div>B. Hinge cover shall be red brass with a rubber vinyl cover bonded to it such a manner that it becomes a permanent type cover, yellow in color. Hinge shall be used in type.</div> <div>C. Quick couplers shall be installed as indicated on Plans and Details.</div> <div>2.09 AUTOMATIC CONTROL VALVES, ELECTRICAL</div> <div>A. Valve shall be per legend.</div> <div>B. Valve shall be capable of being operated in the field without electricity at the controller, by a bleeding valve.</div> <div>C. Valve shall be completely serviceable in the field without removing valve body from the line.</div> <div>D. Valve shall be installed in a shrub area wherever possible and installed according to construction detail.</div> <div>2.10 GATE VALVES</div> <div>Approved gate valves shall be Nibco T-1113 or Hammond 68-32 with bronze turning handles. Size and location shall be as indicated on plan.</div> <div>2.11 VALVE BOXES</div> <div>All remote control valves, gate valves, and pressure relief valves shall be installed in suitable valve boxes as shown in detail, complete with locking covers. All shall be "Chisel", or an approved equal. Install tags.</div> <div>2.12 AUTOMATIC CONTROLLER</div> <div>A. The Automatic Sprinkler Controller shall be as noted in the legend.</div> <div>B. All wiring to and from the controller shall be through cable coded pipes and sockets. The controller shall be locking, weather proof type, constructed of heavy gauge steel with corrosion resistant enamel finish inside and out.</div> <div>2.13 ELECTRICAL, HIGH VOLTAGE</div> <div>A. Power to and connection to the automatic controller shall be provided by the Owner.</div> <div>B. All electrical equipment outside of buildings shall be Nema 3 type, waterproof for such installation.</div> <div>C. All high voltage work shall be installed under this section. Refer to Wiring Low Voltage for additional information.</div> <div>2.14 WIRING, LOW VOLTAGE</div> <div>A. Connections between the controller and remote control valves shall be made with direct burial AWG/UF type wire, installed in accordance with valve manufacturer's specifications. Wire color: black or color coded for control, white for ground.</div> <div>B. Sizing of wire shall be according to manufacturer recommendations, in no case less than #14 in size.</div> <div>2.15 SMALL SHRUBBERY SPRINKLER HEADS</div> <div>See irrigation plan legend for manufacturer and model numbers.</div> <div>PART 3 - EXECUTION</div> <div>3.01 GENERAL</div> <div>A. Materials shall be of first quality and of domestic manufacture unless otherwise noted.</div> <div>B. Coordinate the installation of all sprinkler materials, including pipe, with the landscape drawings, to avoid interfering with the trees, shrubs, or other planting.</div> <div>C. For purposes of legality, sprinkler lines are essentially underground. Although size and location of sprinkler equipment are shown to scale whenever possible, make use of all data in all of the contract documents and verify this information if construction site.</div> <div>D. All work called for on the drawings by notes shall be furnished and installed whether or not specifically mentioned in the specifications.</div> <div>E. Do not willfully install the sprinkler system as indicated on the drawings when it is obvious in the field that unknown obstructions or grade differences exist, that might not have been considered in the engineering or if discrepancies in construction details, legend, or specific notes are discovered. All such obstructions or discrepancies should be brought to the attention of the Owner's Representative.
In the event this is not done, the Contractor must assume full responsibility for revisions necessary. Before any work commences, confer with the Owner's Representative regarding general details of work of this contract.</div> <div>3.02 OBSERVATION SCHEDULE</div> <div>A. Contractor will be responsible for notifying the Landscape Architect and Owner's Representative in advance for the following observations according to the time indicated:</div> <div>-Pre job Conference - 7 days</div> <div>-Pressure supply line installation and testing - 36 hours</div> <div>-System layout - 36 hours</div> <div>-Coverage tests - 36 hours</div> <div>-Final inspection - 48 hours</div> <div>B. When observations have been conducted by other than the regular Owner's Representative, show evidence of when and by whom these observations were made.</div> <div>C. No observation will commence without an audit drawings.</div> <div>3.03 WATER SUPPLY:</div> <div>Connections to the existing points of connection shall be at the approximate locations shown on the drawings. Minor changes caused by actual site conditions shall be made without additional cost to the Owner.</div> <div>3.04 LAYOUT:</div> <div>Layout sprinkler heads and make any minor adjustments required due to differences between site and drawings. Any such deviations in layout shall be the intent of the Owner's Representative and shall be approved by the Owner's Representative before installation.</div> <div>3.05 GRADES:</div> <div>Before starting work on the sprinkler system, carefully check all grades to determine that work may safely proceed, keeping within the specified materials.</div> <div>3.06 DETAILS:</div> <div>A. Install the backflow assembly at the height required by local codes.</div> <div>B. Reading of pressure supply lines as indicated on drawings is diagrammatic. Install lines (and valves assembled) to conform with details on plans.</div> <div>C. Install no multiple assemblies on plastic lines. Provide each assembly with its own relief. When called for, the pressure relief valve shall be the last assembly.</div> <div>D. Brass pipe and fittings shall be assembled using Teflon tape or equivalent, applied to the male threads only. This is also true of plastic pipe and threaded fittings.</div> <div>3.07 LINE CLEARANCE:</div> <div>All lines shall have a minimum clearance of 4 inches from each other, and 6 inches from lines of other trades. Parallel lines shall not be installed directly over one another.</div> <div>3.08 TRENCHING</div> <div>A. Dig trench and support pipe continuously on bottom of ditch. Lay pipe to an even grade. Trenching excavation shall follow layout indicated on drawings and as noted. Where lines occur under paved areas, these dimensions shall be considered below subgrade.</div> <div>B. Provide minimum cover of 18 inches on all pressure supply lines.</div> <div>C. Provide minimum cover of 18 inches for all control wires. Provide minimum cover of 12 inches for non pressure lines.</div> <div>D. Provide minimum cover of 24 inches for all lines under paving.</div> <div>3.09 BACKFILLING</div> <div>A. Initial backfill on all lines shall be of a fine granular material with no foreign matter larger than 1/2 inch in size. Backfill material shall be approved soil.</div> <div>B. Backfill material shall be tamped in 4 inch layers, on the pipe and uniformly on both sides for the full width of the trench and the full length of the pipe. Materials shall be sufficiently damp to permit thorough compaction under and on each side of the pipe, to provide support free of voids. Backfill for trenching shall be compacted to dry density equal to the adjacent undisturbed soil, and shall conform to adjacent grades without dips, surken areas, humps, or other irregularities. Under no circumstances shall back have to be used for compaction soil.</div> <div>C. Provide sand backfill a minimum of 6 inches over and under all piping under paved areas.</div> <div>3.10 PVC PIPE</div> <div>A. PVC pipe shall be stacked in a manner which will provide for expansion and contraction as recommended by the pipe manufacturer.</div> <div>B. All plastic to metal joints shall be made with plastic male adapters, unless otherwise shown in details.</div> <div>C. The joints shall be allowed to set at least twenty-four (24) hours before pressure is applied to the PVC pipe system.</div> <div>D. Main lines shall be tested in place before trenching for a period of not less than four (4) hours and shall show no leakage or loss of pressure. During the test period, minimum test pressure, at the highest end of the section being tested, shall be 150 pounds per square inch. Control fitting of pipe length is allowed.</div> <div>E. After all new sprinkler piping and valves are in place and connected, all necessary work has been completed prior to the installation of sprinkler heads, control valves shall opened and a full head of water used to flush out the system for a minimum of five (5) minutes.</div> <div>F. At the conclusion of a system flushing, the heads shall be installed and tested for operation in accordance with design requirements under normal operating pressure. Contractor shall verify head pressures with pit tube and adjust valve to correspond with design pressure.</div> <div>3.11 INSTALLATION OF RING-TITE PVC PIPE</div> <div>A. Except as may be noted in other parts of the Specification or on the drawings, installation of Ring Tie pipe and connecting fittings shall be installed in accordance with the pipe manufacturer, or as set forth by the John-Manville Company Manual #77-62A. This shall include, but not be limited to, the installation of the pipe to the proper depth and the correct location of concrete thrust blocks or adequate spacers. Contractor shall make available the services of the manufacturer's representative at the start of the installation and during construction.</div> <div>B. Each line shall be tested at a pressure 50 PSI greater than the manufacturer's recommended working pressure for a period of four (4) hours, with the couplings and connections opened and with the control of pipe section sufficiently supported and fixed to hold pipe in place.</div> <div>3.12 SPRINKLERS</div> <div>A. All nozzles on sprinklers shall be tightened after installation. All sprinklers having an adjustment stem shall be adjusted to a lateral line for the proper radius, diameter and gallowage per approval of the Owner's Representative.</div> <div>B. Sprinkler heads and arms shall be installed according to details for final approval.</div> <div>C. Spacing of heads shall not exceed the maximum indicated on the drawings. In no case shall the spacing exceed the maximum recommendation by the manufacturer.</div> <div>3.13 VALVES</div> <div>A. Quick coupling valves shall be set approximately 12" from walks, curbs, header boards, or paved areas where designed. Refer to installation detail. Place quick couplers in valve boxes.</div> <div>B. Remote control valves shall be adjusted in order that a uniform distribution of water is applied by the sprinkler heads to the planting areas for each individual valve system.</div> <div>3.14 VALVE BOXES</div> <div>A. Valve boxes shall be set one inch (1") above the designated finish grade in lawn areas and three inches (3") above finish grade in ground cover areas.</div> <div>B. Valve boxes installed near walks, curbs, header boards, and paving shall not sit above those items. Top surfaces shall be flush with, and perpendicular to, items listed above.</div> <div>C. Valve boxes shall be installed in shrub planters, not in turf areas wherever possible, unless otherwise approved.</div> <div>3.15 AUTOMATIC CONTROLLER LOCATION AND INSTALLATION</div> <div>A. The automatic controller shall be installed at the approximate location shown on the Plan, unless otherwise instructed by the Owner's Representative.</div> <div>B. All local and other applicable codes that take precedence in correcting the 100 volt electrical service to the controller. Owner shall provide power to controller. Irrigation Controller shall complete hook-up to controller.</div> <div>C. There shall be adequate coverage of earth (18" minimum) over the 24-volt control wire. Bundle and tape wires at 15' O.C. and install adjacent to mainline.</div> <div>3.16 CONTROL WIRE</div> <div>A. All electrical equipment and wiring shall comply with local and state codes and be installed by those skilled and bonded in the trade.</div> <div>B. Connecting and splicing of wire at the valves or in the field shall be made using Rated Bird-Pen-Tite connectors.</div> <div>C. Three (3) feet long Pig Tail wire splices shall be allowed only at 1500' R. intervals. The wire splices shall be enclosed in an RCV Box with cover installed 18" in yelow.</div> <div>3.17 BACKFLOW PREVENTION UNITS</div> <div>A. The backflow prevention units shall be installed as shown on Plans and Details. Backflow prevention units shall be installed per local codes including certification.</div> <div>3.18 FLUSHING THE SYSTEM:</div> <div>After all new sprinkler pipe lines and valves are in place and connected, all necessary diversion work has been completed, and prior to installation of sprinkler heads, the control valves shall be opened and a full head of water used to flush out the system for a minimum of 5 minutes. Sprinkler heads shall be installed only after flushing of the system has been accomplished to the complete satisfaction of the Owner's Representative.</div> <div>3.19 ADJUSTING THE SYSTEM</div> <div>A. Adjust the valves and alignment and coverage of all sprinkler heads. If it is determined that adjustments in the irrigation equipment or grade changes will provide proper and more adequate coverage, make all necessary changes or make arrangements with the manufacturer to have adjustments made, prior to any planting. These changes or adjustments shall be made without additional cost to the Owner.</div> <div>B. The entire system shall be operating properly before
any planting operations commence.</div> <div>3.20 COVERAGE TEST:</div> <div>When the sprinkler system is completed, perform a coverage test in the presence of the Owner's Representative to determine if the water coverage for planting areas is complete and adequate. Furnish all materials and perform all work required to correct any inadequacies of coverage due to deviations from plans, or where the system has been willfully installed as indicated on the drawings when it is obviously inadequate, without bringing this to the attention of the Owner's Representative. This test shall be accomplished before planting begins.</div> <div>3.21 HYDROSTATIC TEST:</div> <div>All hydrostatic tests shall be made only in the presence of the Owner's Representative, or other duly authorized representative of the Owner. No pipe shall be backfilled until it has been inspected, tested, and approved in writing. Pressure supply lines shall be tested under a hydrostatic pressure of 150 pounds per square inch for a period of four hours.</div> <div>3.22 COMPLETION</div> <div>A. Upon completion of the work, make ground surface level, remove excess materials, rubbish, debris, etc., and remove construction and installation equipment from the premises.</div> <div>B. Supply as part of this contract the following tools:</div> <div>- Two wrenches for disconnecting and adjusting each type of sprinkler head supplied.</div> <div>- Two keys for each automatic controller.</div> <div>- Four quick coupler keys with attached hose valves.</div> <div>- Four (4) of each of all types of sprinkler heads and nozzles.</div> <div>- Two keys for enclosure lock.</div> <div>- Two cover filling tools for valve boxes.</div> <div>C. The above equipment shall be turned over to the Owner at the conclusion of the project. Before final acceptance can occur, evidence that the Owner has received materials must be shown to the Owner's Representative.</div> <div>PART 4 - RECORD DRAWINGS, CHARTS & MANUALS</div> <div>4.01 RECORD DRAWINGS</div> <div>A. Record accurately on one set of black and white prints of the drawings, all changes in the work consulting departures from the original contract drawings, including changes in both pressure and non-pressure lines.</div> <div>B. Upon completion of each item of work, transfer all such information and dimensions to the prints. The changes and dimensions shall be recorded in a legible and workmanlike manner to the satisfaction of the Owner's Representative. When the drawings are approved, transfer all information to a set of reproducible drawings at cost by the Owner's Representative.</div> <div>C. Dimensions from two permanent points of reference (buildings, monuments, sidewalks, curbs, pavement, etc.). Locations shown on an audit drawings shall be kept day by day as the project is being installed. All dimensions noted on drawings shall be 3/8 inch in size.</div> <div>D. Show locations and details of the following items:</div> <div>-Chart of connection.</div> <div>-Reading of sprinkler pressure lines (dimension maximum 100 feet along reading).</div> <div>-Sprinkler control valves (buried only).</div> <div>-Reading of control valves.</div> <div>-Other related equipment (as may be directed by the Owner's Representative).</div> <div>E. Quick coupling valves.</div> <div>F. Make all audit drawings as set at all times.</div> <div>G. Maintain as changes to reproducible drawings in file. If necessary, use erasable fluid when redning drawings.</div> <div>H. Drawings shall be of the following:</div> <div>1. Quick coupling valves.</div> <div>2. Make all audit drawings as set at all times.</div> <div>3. Maintain as changes to reproducible drawings in file. 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| 2.

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| 3.

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