

GENERAL NOTES

- Any discrepancy discovered by Contractor in these plans or any field conditions discovered by the Contractor that may delay or obstruct the proper completion of the work per these plans shall be brought to the attention of the Engineer immediately upon discovery. Said notification shall be in writing.
- These Plans do not represent a Property Line Survey. Property lines shown hereon are based on record data and may not represent the true positions of the lines.
- Existing features and topographic information have been taken from Survey performed by BKF Engineering received on May 9, 2017 provided by City of Santa Rosa. GSM landscape architects, inc. assumes no liability, real or alleged, regarding the accuracy of the existing features or topographic information shown.
- All material, workmanship and construction shall conform to the current edition of California Building Codes, and to The City of Santa Rosa's, Public Works Standard Specifications and Plans.
International Building Code (I.B.C.) as amended by 2022 California Building Code (C.B.C.)
Uniform Mechanical Code (U.M.C.) as amended by 2022 California Mechanical Code (C.M.C.)
Uniform Plumbing Code (U.P.C.) as amended by 2022 California Plumbing Code (C.P.C.)
National Electrical Code (N.E.C.) as amended by 2022 California Electrical Code (C.E.C.)
California Energy Code (C.E.C.) (2022 Building Energy Efficiency Standards)
California Green Building Standards Code (CGBSC)
- Contractor shall obtain all required permits and pay all fees prior to commencement of any work. Any and all licenses and permits required for project construction shall be possessed by Contractor. Contractor shall abide by all Federal, State, and Local laws and rules affecting the work and shall maintain all required protection and insurance for the property, employees and public.
- Existing utilities shall be kept in service at all times. Utilities that interfere with the work to be performed shall be protected by Contractor to the satisfaction of the City.
- Contractor shall be responsible for protecting existing facilities and improvements from damage resulting from Contractor's work. Any damage caused by Contractor shall be repaired at Contractor's expense.
- Contractor shall provide and maintain sufficient barricades to provide for safety of the general public to the satisfaction of the City.
- Contractor shall assume sole and complete responsibility for job site conditions during the course of construction of this project, including safety of all persons and property. This requirement shall apply continually and not be limited to normal working hours. Contractor shall defend, indemnify and hold the City of Santa Rosa and GSM landscape architects, inc. harmless from all liability, real or alleged, in connection with the performance of work on the project.
- Prior to bid, Contractor shall visit the site to adequately determine all pre-existing conditions. By the act of submitting a bid, Contractor will be deemed to have complied with the foregoing, to have accepted such conditions, and to have made allowances therefore in preparing the bid.

CONCRETE NOTES

- Subgrade preparation shall be done in accordance with the recommendations per City of Santa Rosa Standards and City Engineering requirements.
- Tooled control joints shall run continuously and extend through integral curbs and thickened edges. Tooled control joint layout shall be as shown on the Layout Plan, and coincide with the corners of objects, structures and the beginning and ends of curves. Joints should have a minimum depth of 25% of the slab thickness, unless otherwise noted on plans.
- Concrete shall receive expansion joints between different concrete pours and adjacent to existing concrete pavement. Expansion joints shall be laid out as shown on the Layout Plans on Sheets L2.0 and L2.1.
- Contractor shall place 3/8" asphalt impregnated fiber board where new concrete meets existing concrete, building or vertical curbs, new curb and gutter, concrete band, etc.
- The base rock layer, prior to placement of concrete, shall be sprinkled with clean water several times to restore any moisture that may have been lost after completion of compaction.
- Surface texture of concrete pavement shall be slip resistant as described in Material Legend on this sheet. Concrete pavement with slopes less than 6% shall receive a medium broom finish and slopes greater than 6% shall receive a heavy broom finish. Finish shall be in the direction shown on this sheet.
- Cure concrete with curing compound or keep continuously moist for a minimum of seven (7) days. Curing compound shall be W. R. Meadows 1100-Clear - Resin-Based, Water-Based Concrete curing compound and sealant or Engineer-approved equal.
- Contractor shall prepare a 4"x4" sample and mock ups of all concrete types and applications, in the field, for review and approval by the City, prior to construction. Mockups shall contain 1 expansion joint, 1 tooled control joint, color and finish.
- Concrete mix shall be as follows:
Maximum aggregate size _____ 3/4"
Minimum sacks of Portland cement per cubic yard _____ 6
Slump _____ 4" max.
Minimum 28 day strength @ Flatwork _____ 3,000 psi
Minimum 28 day strength @ other concrete _____ 3,000 psi
Maximum water to cement ratio _____ 0.5
- See Civil Drawings for concrete curbs, gutters, ramps.
- See Irrigation plans for conduit, sleeving and wire runs that are beneath, adjacent to, and through hardscape and pavement work.

SHEET NOTES

- Driveway with parking spaces. See Civil Drawings.
- Truncated domes. See Civil Drawings.
- ADA Van parking space. See Civil Drawings.
- Concrete loading zone with access apron. See Civil Drawings.
- Existing electrical utilities to remain
- New crosswalk. See Civil Drawings.
- New Irrigation water meter, water line, and backflow prevention device. See Civil and Irrigation Drawings.
- Compost in Garden plot area. See Planting Plan on Sheet L4.0, and Detail I on Sheet L4.2.
- Garden storage area
- Seating area
- Sidewalk. See Civil Drawings.
- Portable restroom. City furnished and installed.
- Bioretention area. See Civil Drawings.
- Creek setback line (Hydraulic Maintenance & Access Easement). See Civil Drawings.

CITY OF SANTA ROSA
APPROVED
Permit No. 822-6973
Date: 05/13/2025
Review and approval of these documents is based upon compliance with the 2022 California Code of Regulations, Title 24, and all applicable City of Santa Rosa ordinances and State of California laws.
City Engineer Signature
Building Division Authority Signature

MATERIAL LEGEND

- Asphalt pavement with concrete curb, gutter and curb cuts. See Civil Drawings.
- Vehicular Concrete Pavement. Concrete color shall be natural, tinted with Lampblack: 1 lb. per cubic yard of concrete; adjust as needed to reduce glare to satisfaction of City. See Civil Drawings for more information.
- Pedestrian Concrete Pavement. Concrete color shall be natural, tinted with Lampblack: 1 lb. per cubic yard of concrete; adjust as needed to reduce glare to satisfaction of City. Concrete shall have a slip resistant, broom finish in the direction shown on this sheet. See Concrete Notes on this sheet and Civil Drawings for more information.
- Pedestrian Colored Concrete Pavement. Concrete shall be integrally colored with Davis Sandstone: .15 lbs of #525T per 44 lbs (1 cu. ft.) of Type I-II Cement. Concrete shall have a slip resistant, broom finish in the direction shown on this sheet. See Concrete Notes on this sheet and Civil Drawings for more information.
- Mulch path
- Fence, Type I 6' height
- Fence, Type II 8' height
- Pedestrian Gate
- Service Gate
- Maintenance gate
- Raised planter ADA compliant
- Picnic table ADA compliant
- Picnic table standard
- Bench
- Shade structure
- Garden shed, Type I
- Garden shed, Type II
- Portable restroom ADA compliant on concrete pavement
- Light Pole
- Expansion Joint
- Control Joint
- Direction of Broom Finish
- Planting Area
- Garden Plot Area
- Cheek Wall
- Litter/Recycling Receptacle

REVIEWED FOR CODE COMPLIANCE

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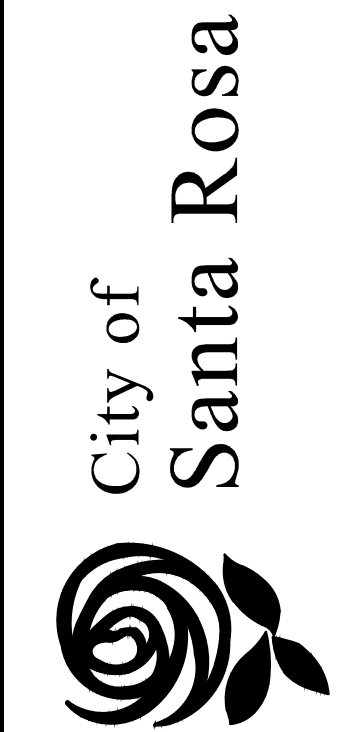
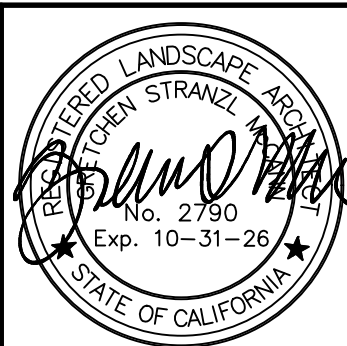
BUREAU VERITAS NORTH AMERICA, INC.

SIGNATURE: BV

DATE: 1/21/2025

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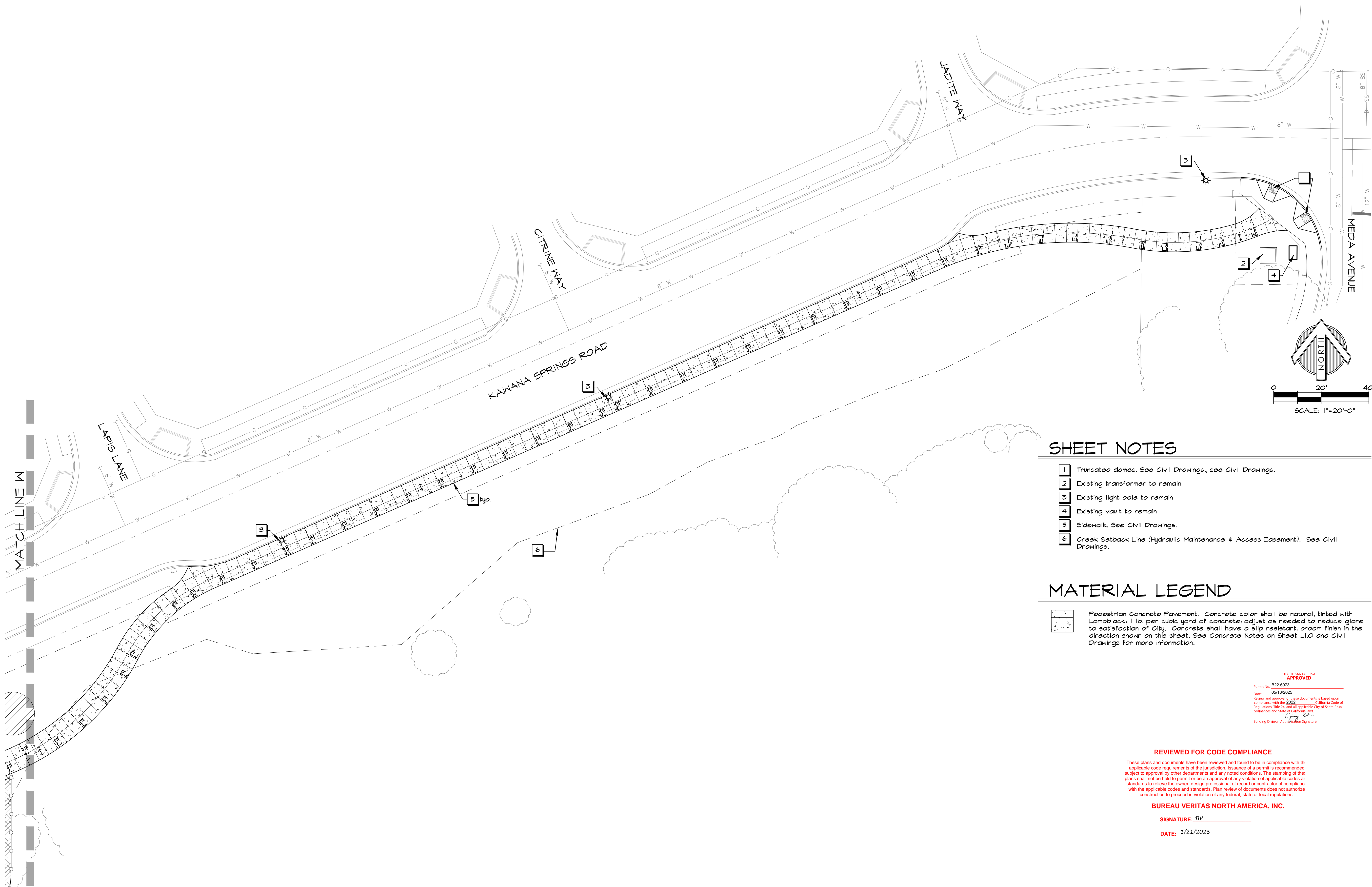


NO.	DATE	REVISION	BY

DWN BY: ECD	CHK BY: GSM	DATE: 12/2024	SCALE: 1" = 20'
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City of Santa Rosa	KAWANA SPRINGS COMMUNITY PARK COMMUNITY GARDEN MATERIAL AND DETAIL REFERENCE PLAN
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
L1.0
CONTRACT NO. C02393
SHEET 2 OF 27
FILE NO. 2022-0028



SHEET NOTES

- 1 Truncated domes. See Civil Drawings., see Civil Drawings.
- 2 Existing transformer to remain
- 3 Existing light pole to remain
- 4 Existing vault to remain
- 5 Sidewalk. See Civil Drawings.
- 6 Creek Setback Line (Hydraulic Maintenance & Access Easement). See Civil Drawings.

MATERIAL LEGEND

 Pedestrian Concrete Pavement. Concrete color shall be natural, tinted with Lampblack: 1 lb. per cubic yard of concrete; adjust as needed to reduce glare to satisfaction of City. Concrete shall have a slip resistant, broom finish in the direction shown on this sheet. See Concrete Notes on Sheet L1.0 and Civil Drawings for more information.

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BUREAU VERITAS NORTH AMERICA, INC.

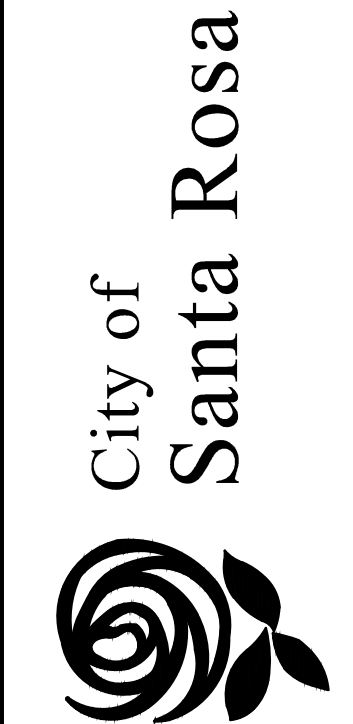
SIGNATURE: BV

DATE: 1/21/2025

CITY OF SANTA ROSA
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Permit No. B22-6973
Date: 05/13/2025
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City Seal
Building Division Auditor/Manager Signature

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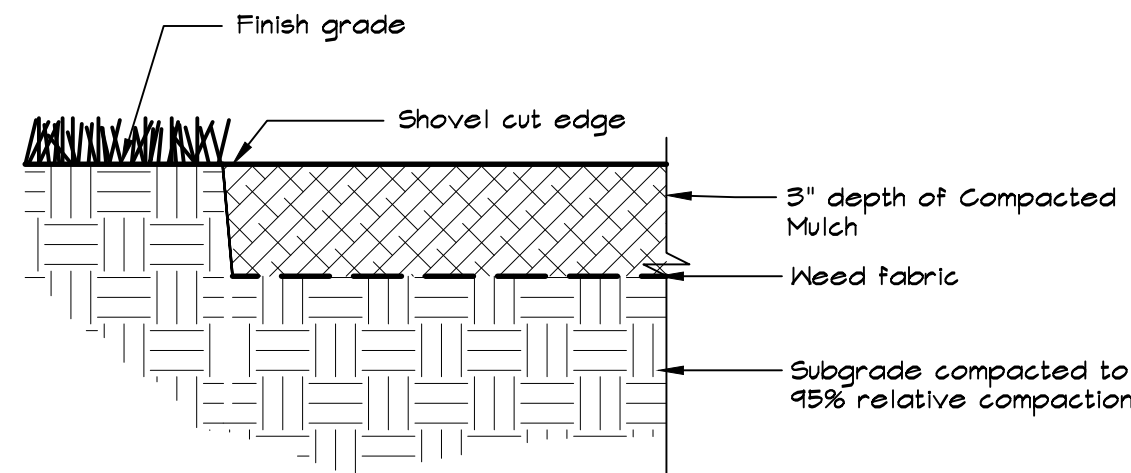


NO.	DATE	REVISION	BY

DWN BY: ECD	CHK BY: GSM	DATE: 12/2024	SCALE: 1" = 20'
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CITY OF SANTA ROSA KAWANA SPRINGS COMMUNITY PARK COMMUNITY GARDEN MATERIAL AND DETAIL REFERENCE PLAN
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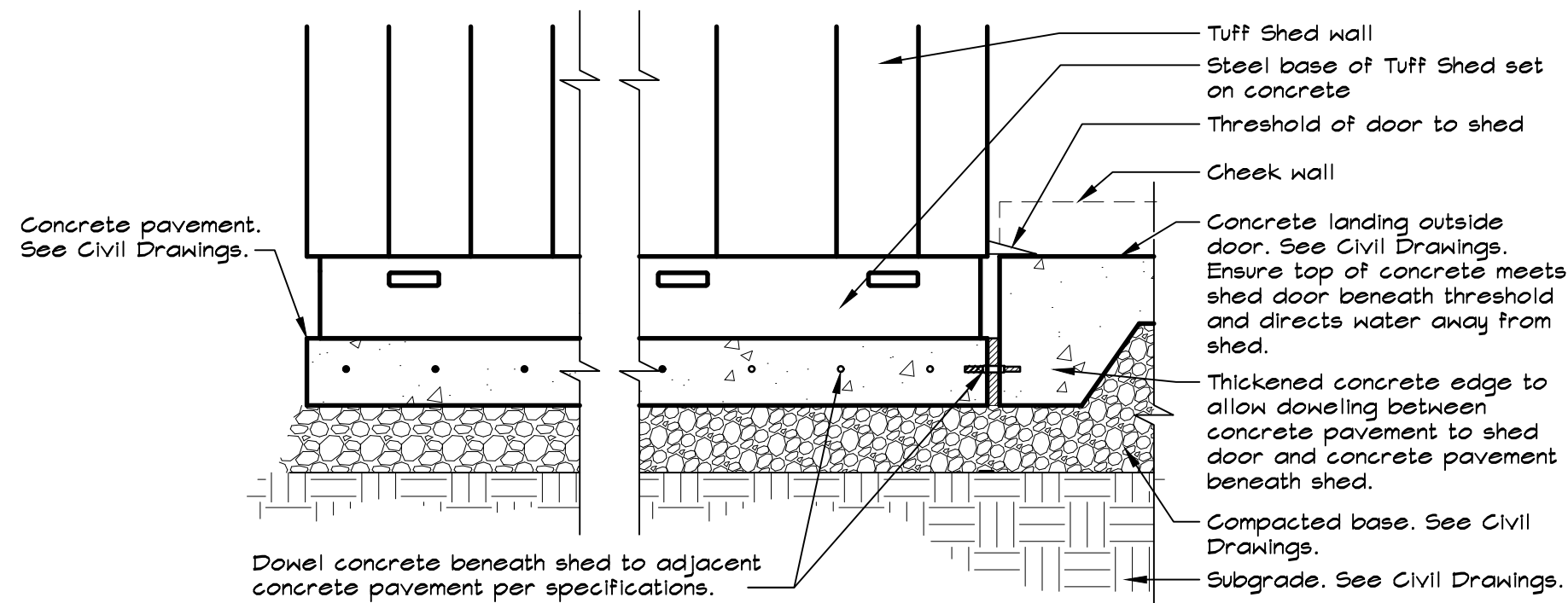
L1.1
CONTRACT NO. C02393
SHEET 3 OF 27
FILE NO. 2022-0028



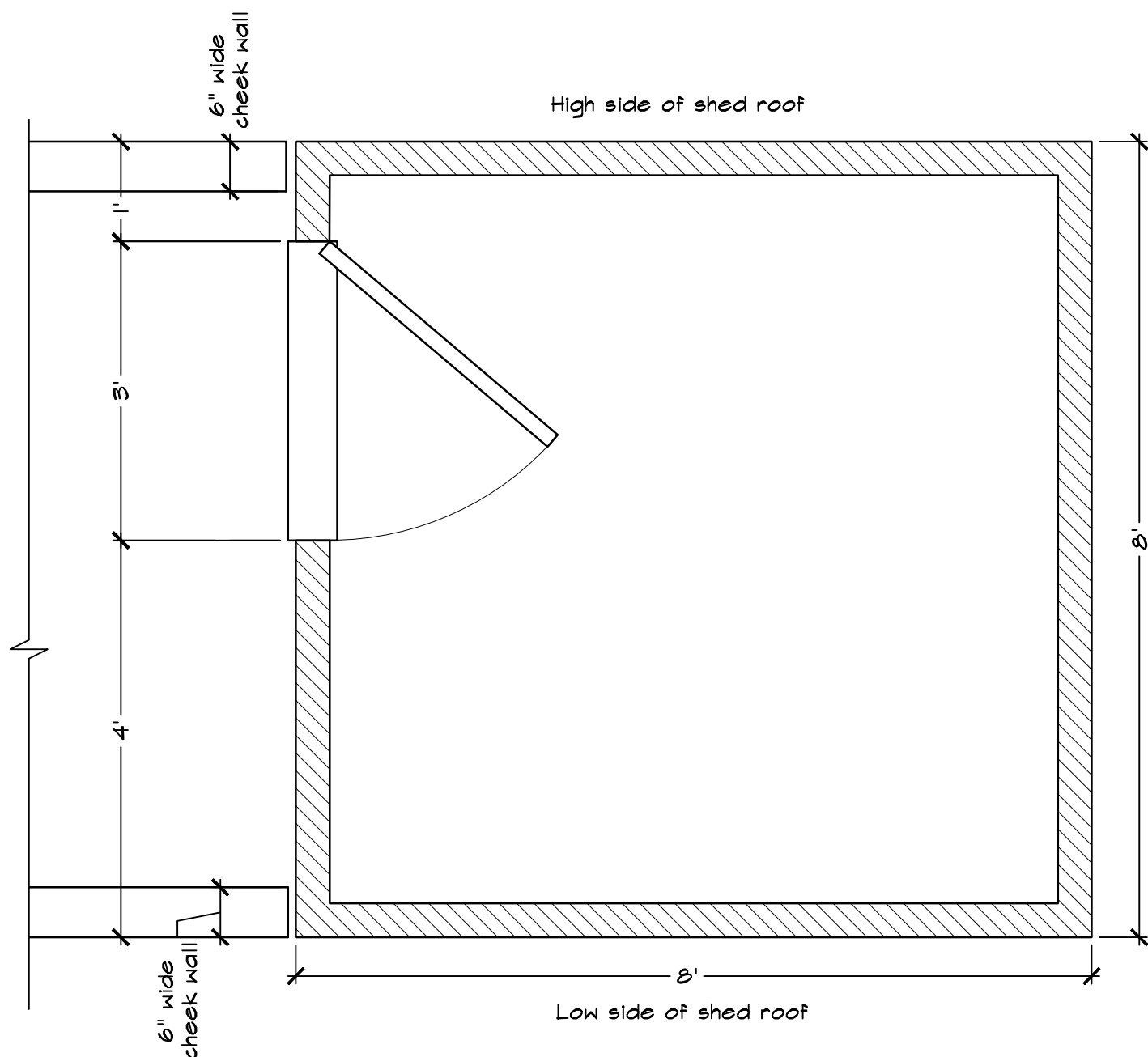
NOTES:

- Grading shall provide for natural runoff of water without low spots or pockets.
- Mulch shall be Walk-on-bark as available from Wheeler Zamaroni, 3500 Petaluma Hill Road, Santa Rosa, CA (707) 543-8400, or approved equal.
- Contractor shall supply sample for review and approval by the City prior to ordering.
- See Detail 1 on Sheet L4.1 for compost in garden plot areas.

1 MULCH PATH
NOT TO SCALE



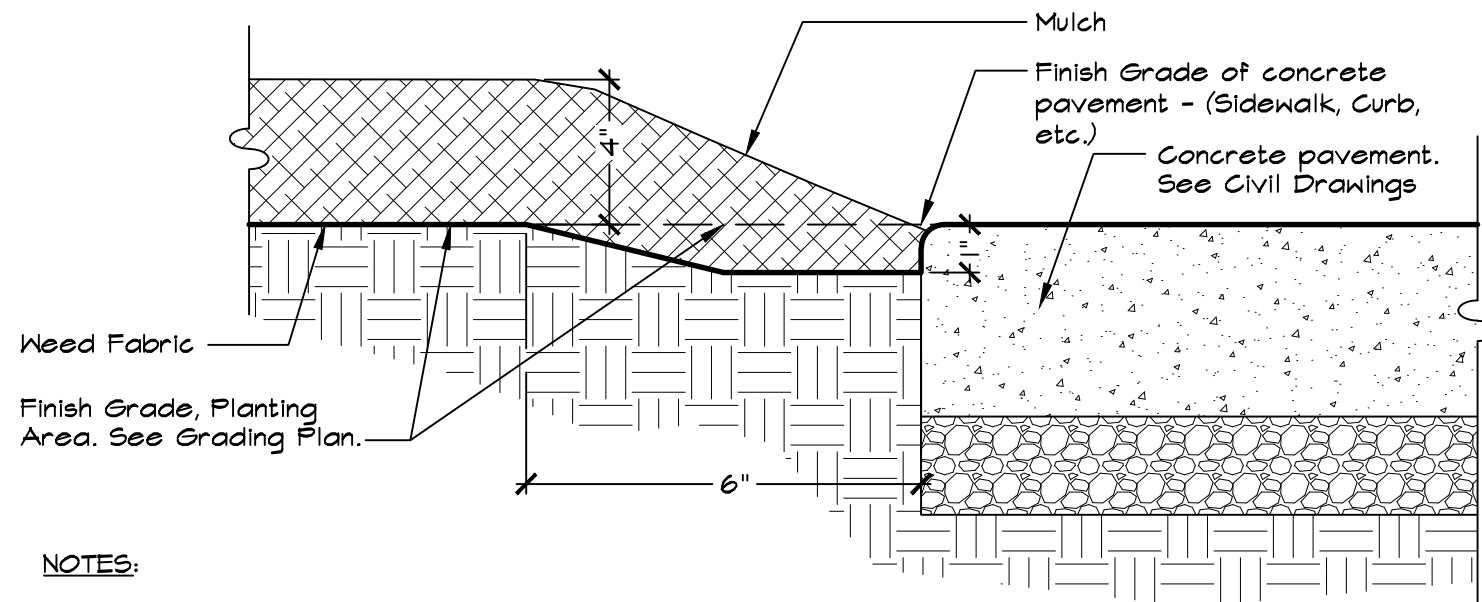
3 PAVEMENT TRANSITION AT GARDEN SHED, TYPE I
NOT TO SCALE



NOTES:

- Garden Shed shall be Premium Lean-To 8' wide x 8' long by Tuff Shed model #Q1351817. Contact Richard Koch, (707) 205-6603, rkoch@tuffshed.com.
- Paint Selection for Base and Trim shall be Hat Box Brown, PPG Voice of color number PPG1085-6.
- Roof Selection shall be Autumn Brown 3 tab.
- Drip edge shall be installed above door and shall be match color of Base and Trim.
- Door shall have left hinge and Security Package with carriage bolts and hasp for owner-supplied padlock.
- Contractor shall submit shop drawings for review and approval by the City prior to ordering.
- See Detail 3 on this sheet for shed's ground surface condition.
- See Sheet L1.0 for location and orientation.

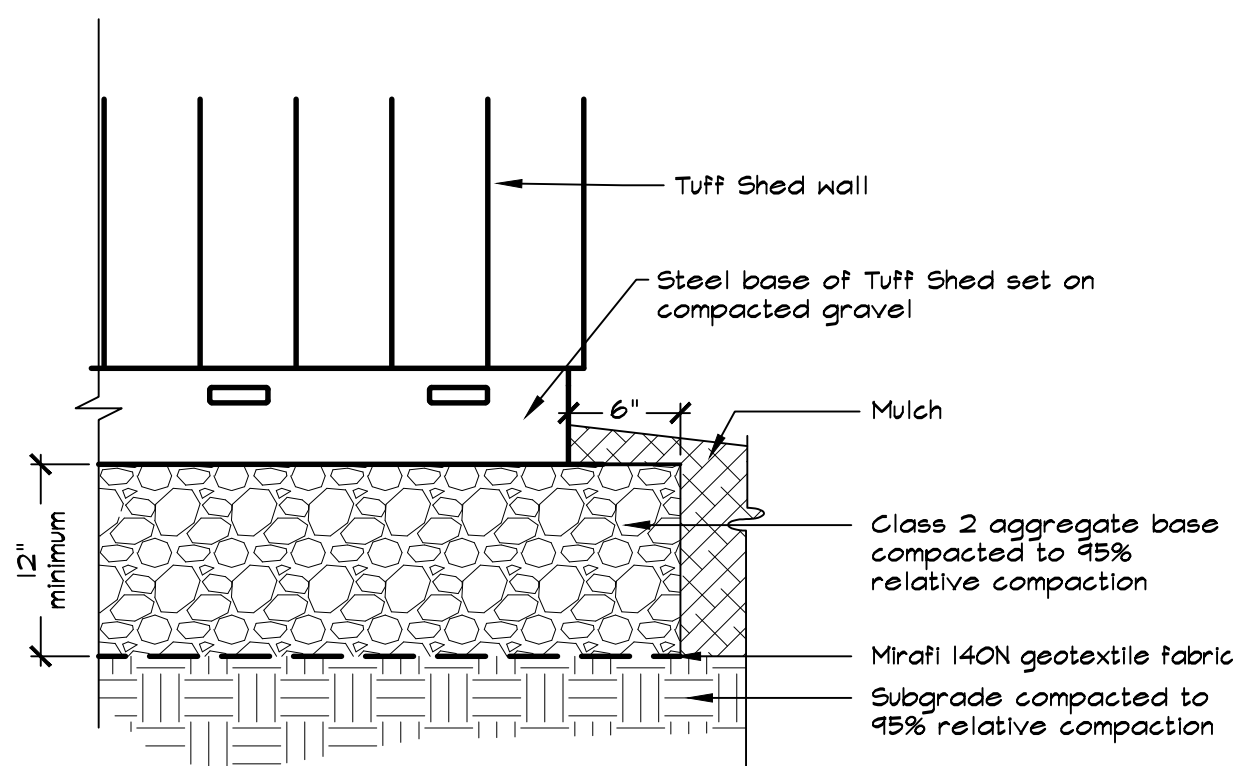
6 GARDEN SHED, TYPE I
NOT TO SCALE



NOTES:

- Grading shall provide for natural runoff of water without low spots or pockets.
- Mulch shall be Walk-on-bark as available from Wheeler Zamaroni, 3500 Petaluma Hill Road, Santa Rosa, CA (707) 543-8400, or approved equal.
- Contractor shall supply sample for review and approval by the City prior to ordering.
- See Planting Notes on Sheet L4.0 for more information.
- See Detail 1 on Sheet L4.1 for compost in garden plot areas.

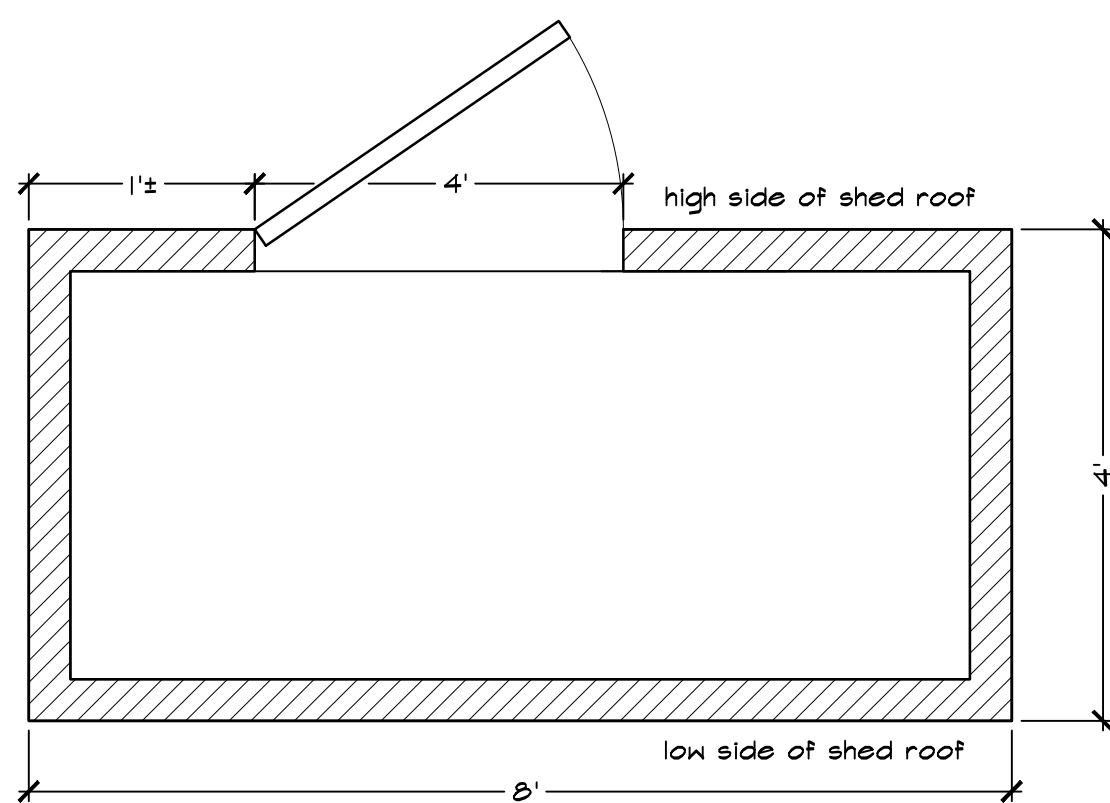
2 MULCH IN PLANTING AREA
NOT TO SCALE



NOTE:

- Contractor shall provide gravel pavement under shed extending 6\"/>
- Contractor shall supply sample for review and approval by the City prior to ordering.

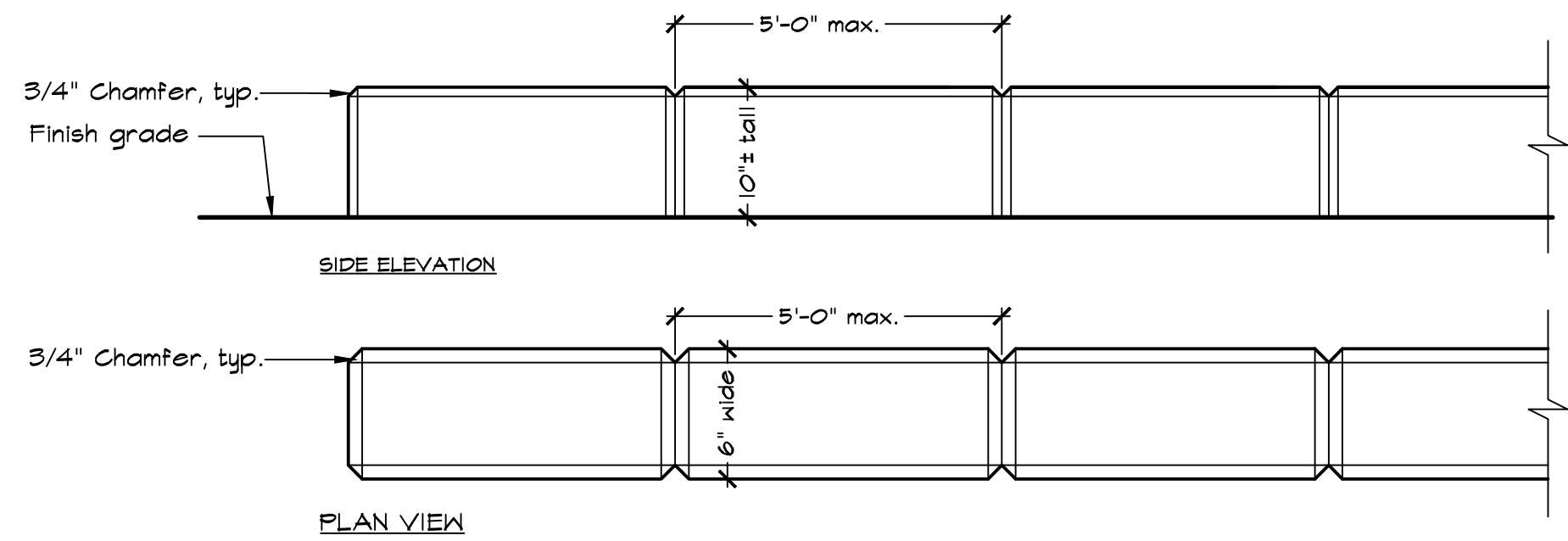
4 COMPACTED GRAVEL AT GARDEN SHED, TYPE II
NOT TO SCALE



NOTES:

- Garden Shed shall be Premium Lean-To 4' wide x 8' long by Tuff Shed model #Q452607. Contact Richard Koch, (707) 205-6603, rkoch@tuffshed.com.
- Paint Selection for Base and Trim shall be Hat Box Brown PPG Voice of color number PPG1085-6.
- Roof Selection shall be Autumn Brown 3 tab.
- Drip shall be installed above door and shall be match color of Base and Trim.
- Door shall have right hinge and Security Package with carriage bolts and hasp for owner-supplied padlock.
- Contractor shall submit shop drawings for review and approval by the City prior to ordering.
- See Detail 4 on this sheet for shed's ground surface condition.
- See Sheet L1.0 for location and orientation.

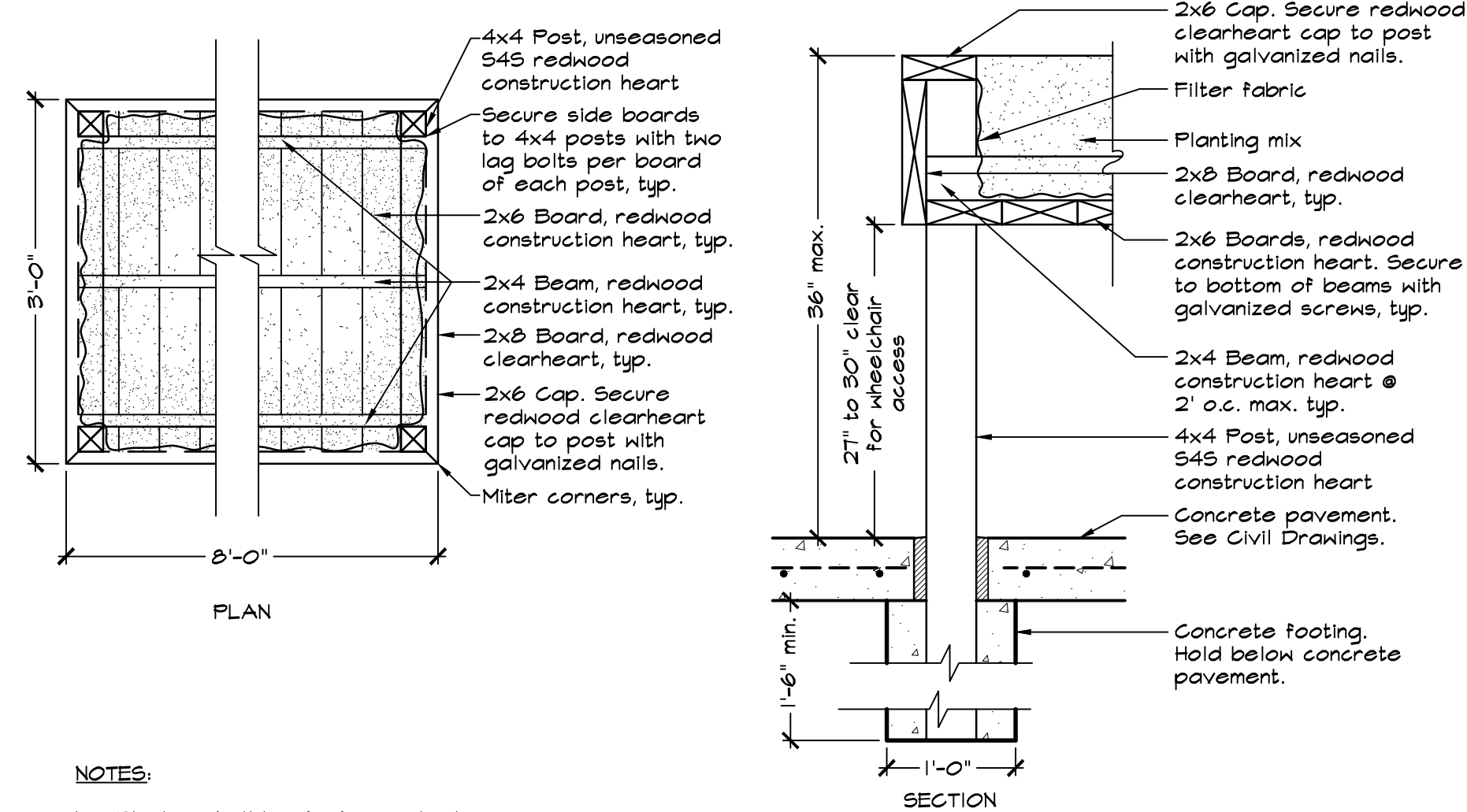
7 GARDEN SHED, TYPE II
NOT TO SCALE



NOTES:

- See Concrete Notes on Sheet L1.0 in addition to requirements in the Specifications.
- Concrete shall be uncolored.
- Contractor shall install tooled control joints at 5' OC maximum spacing with expansion joints every 20' OC maximum spacing.
- Joints shall align with concrete pavement control joints and expansion joints as shown on Sheet L1.0.
- Finish shall be smooth sack finish on all exposed faces of cheek wall.
- Wall embedment shall be 1'-6\"/>

5 CHEEK WALL
NOT TO SCALE



NOTES:

- Planter shall be ADA-compliant.
- Contractor shall provide shop drawings for review and approval by the City.
- Posts shall be plumb and true. Cap shall be level.
- Each planter shall have a 2\"/>
- Contractor shall install Filter fabric and planting mix into planters.
- See Sheet Notes on Planting Plan for planting mix specifications.

8 ADA RAISED PLANTER
NOT TO SCALE

REVIEWED FOR CODE COMPLIANCE

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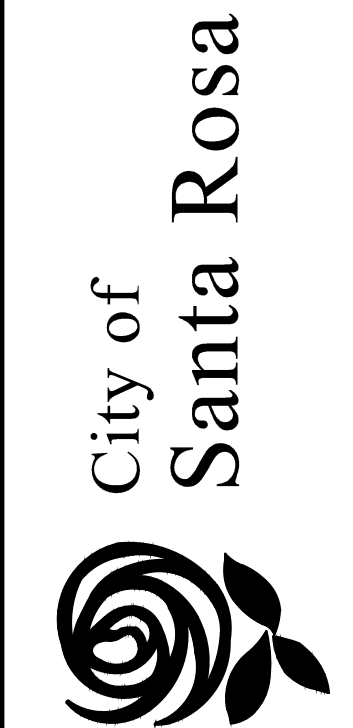
SIGNATURE: BV

DATE: 1/21/2025

CITY OF SANTA ROSA
APPROVED
Permit No. B22-6973
Date: 05/13/2025
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Building Division Administrator Signature

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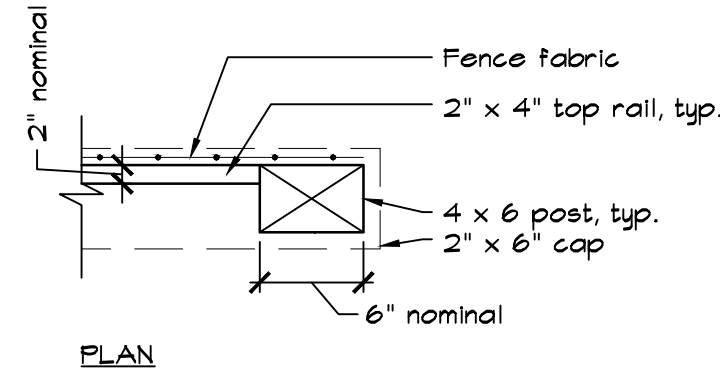
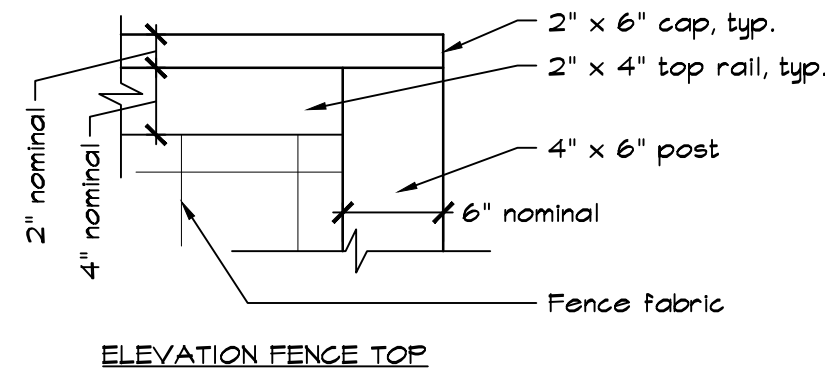
NO.	DATE	REVISION	BY

DWN BY:	ECD
CHK BY:	GSM
DATE:	12/2024
SCALE:	AS NOTED

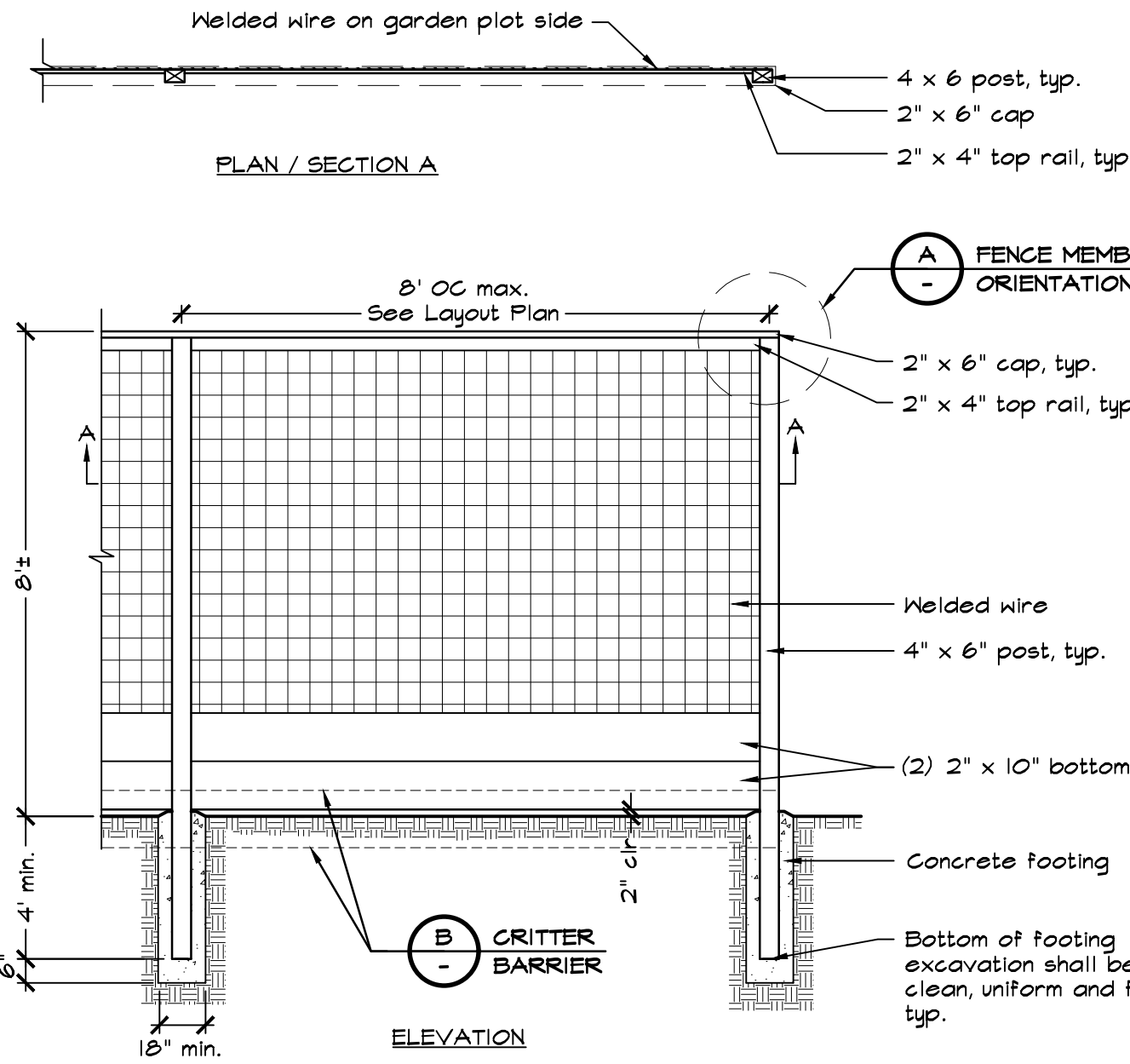
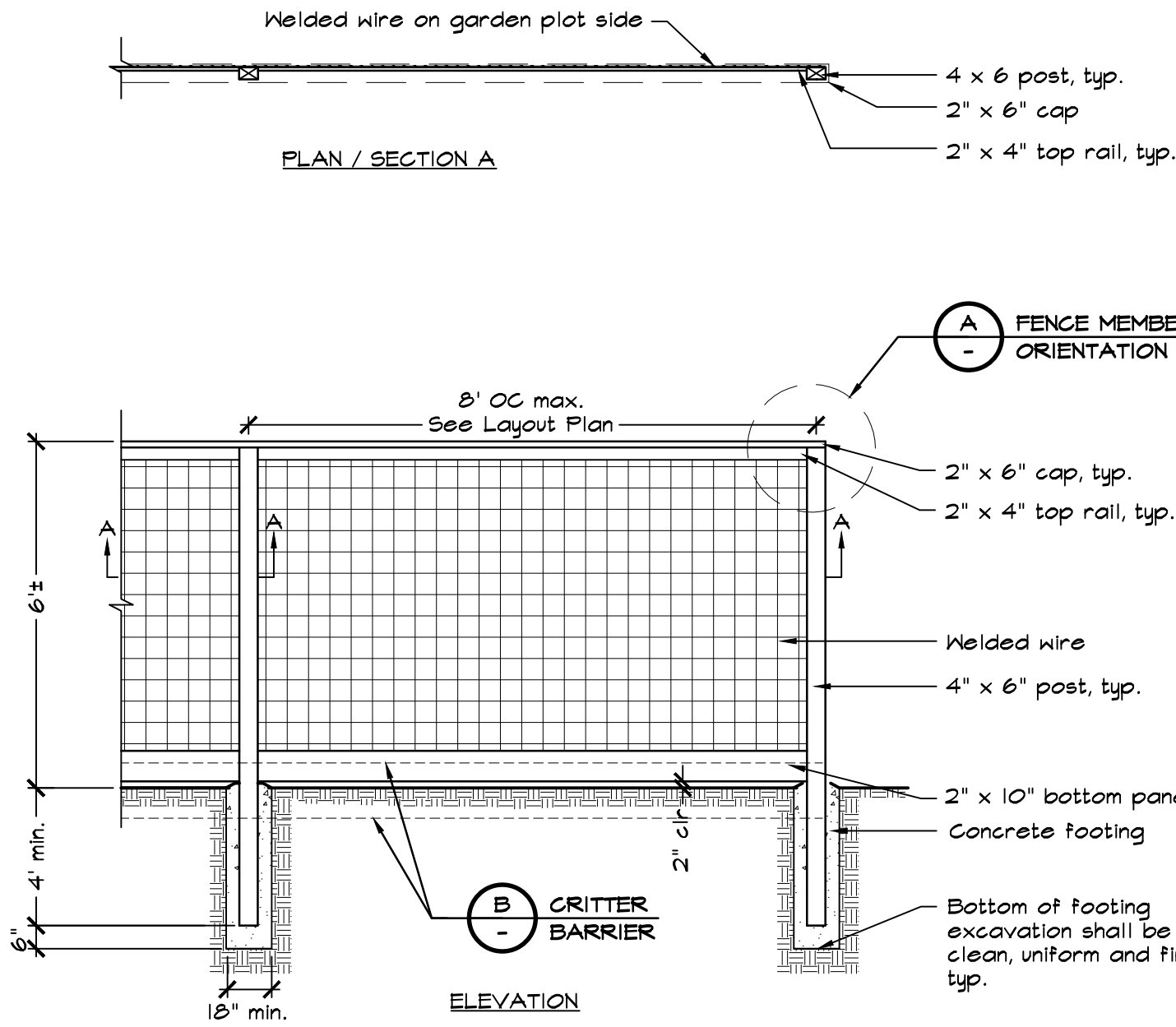
City of Santa Rosa	KAWANA SPRINGS COMMUNITY PARK COMMUNITY GARDEN
CONSTRUCTION DETAILS	

L1.2
CONTRACT NO. C02393
SHEET 4 OF 27
FILE NO. 2022-0028

L1.3		
CONTRACT NO. C02393		
SHEET 5 OF 27		
FILE NO. 2022-0028		



A FENCE MEMBER ORIENTATION

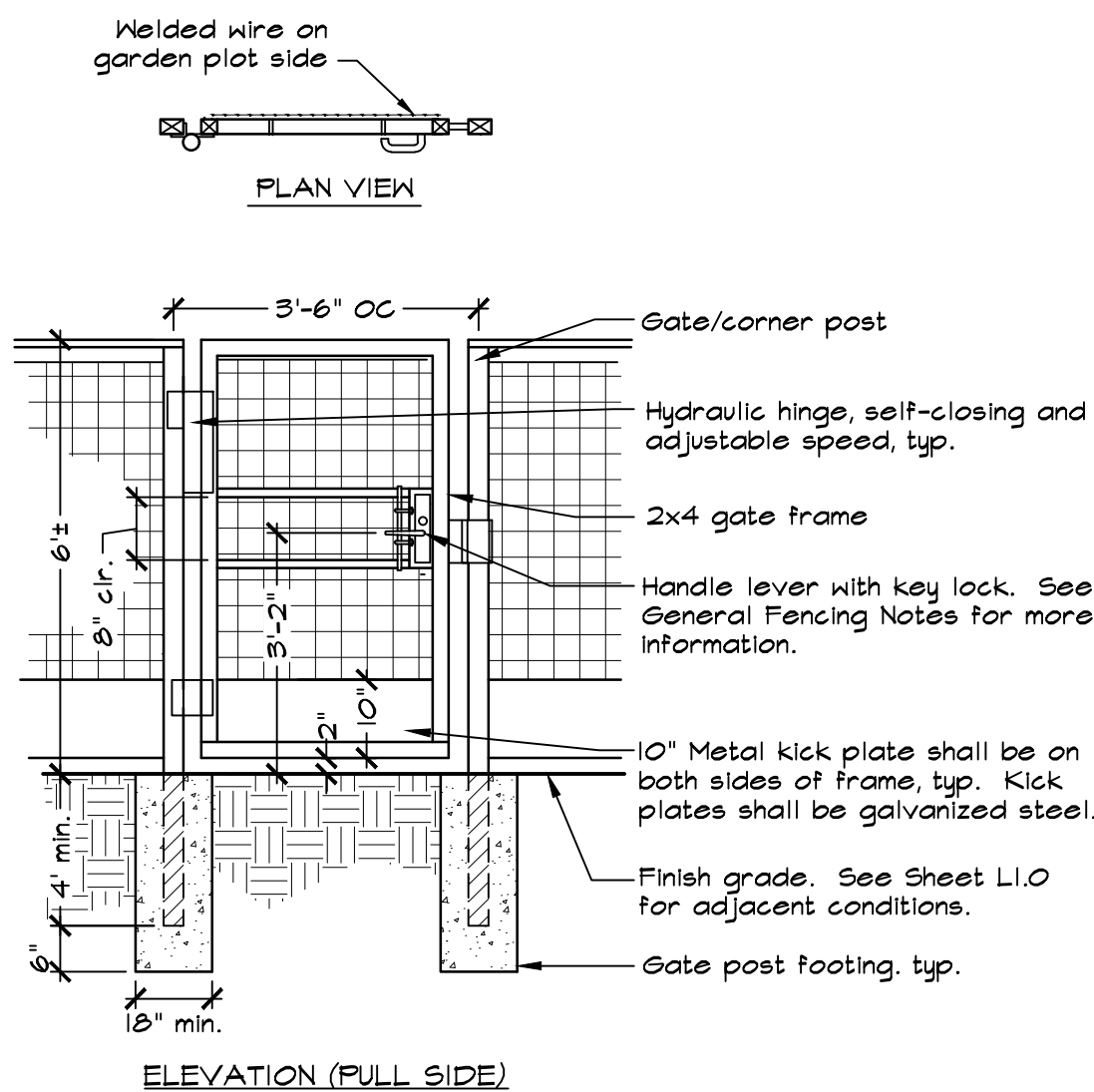


- NOTES:
- Contractor shall design-build all connections, fasteners and footings.
 - See General Fencing and Gate Notes on this sheet.
 - See Sheets L1.0 and L2.0 for post locations.
 - See General Fencing and Gate Notes on this sheet.
 - Contractor shall construct a 16' long mockup for review and approval by City.

- NOTES:
- Contractor shall design-build all connections, fasteners and footings.
 - See General Fencing and Gate Notes on this sheet.
 - See Sheets L1.0 and L2.0 for post locations.
 - See General Fencing and Gate Notes on this sheet.
 - Contractor shall construct a 16' long mockup for review and approval by City.

1 FENCE, TYPE I

NOT TO SCALE



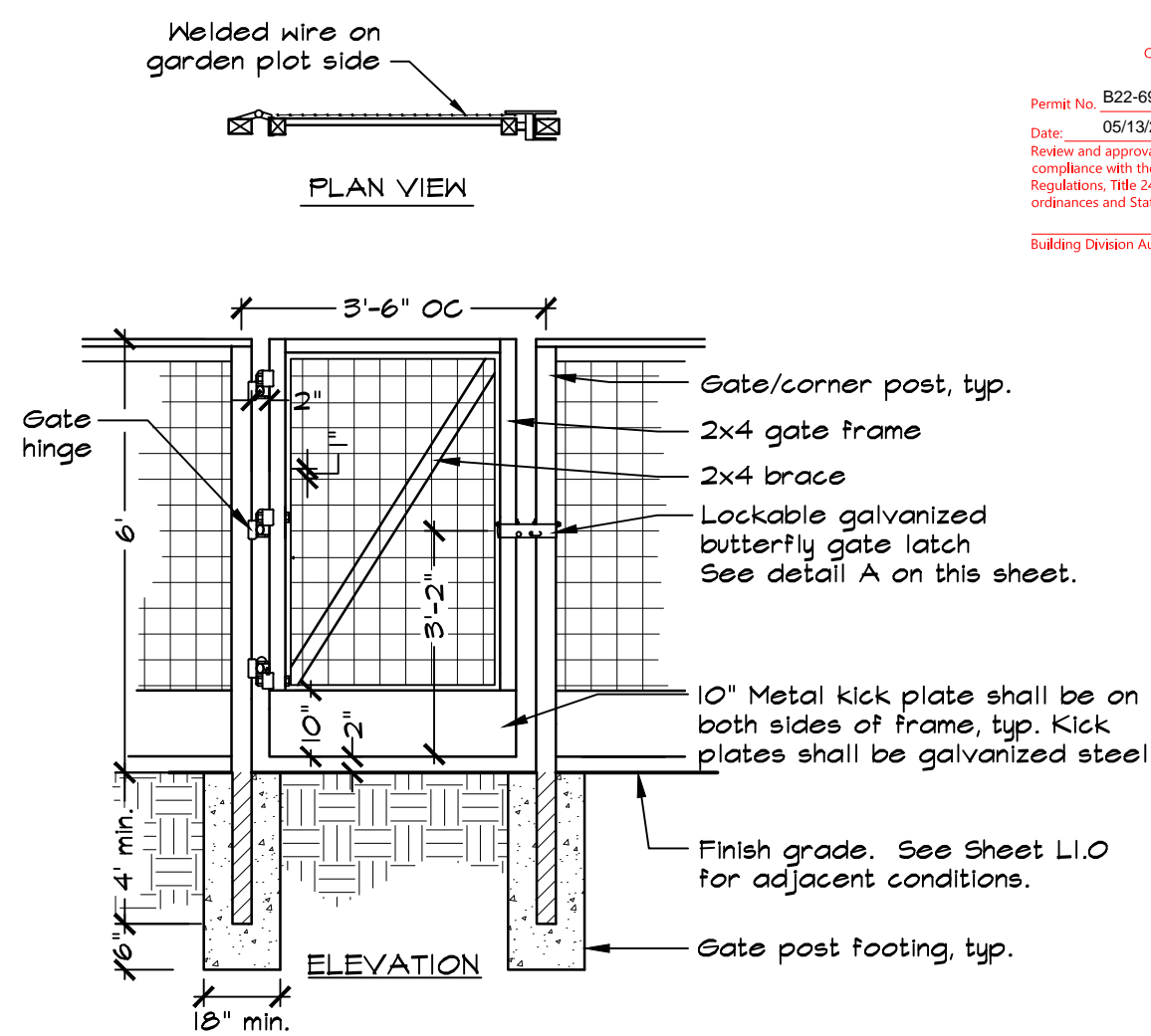
- NOTES:
- Contractor shall design-build all connections, fasteners and footings.
 - See General Fencing and Gate Notes on this sheet.
 - See Sheets L1.0 and L2.0 for post locations.
 - See General Fencing and Gate Notes on this sheet.

5 ENTRY GATE

NOT TO SCALE

2 FENCE, TYPE II

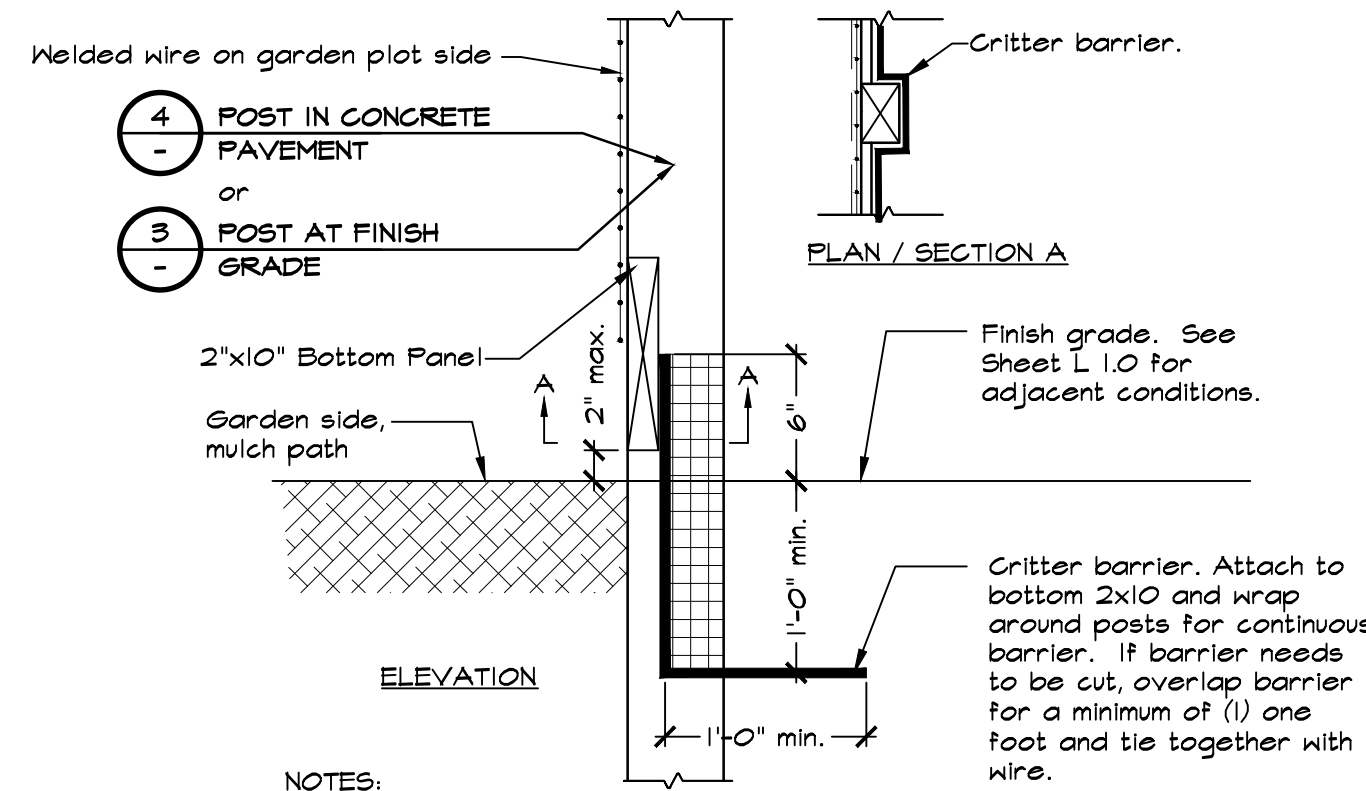
NOT TO SCALE



- NOTES:
- Contractor shall design-build all connections, fasteners and footings.
 - See General Fencing and Gate Notes on this sheet.
 - See Sheets L1.0 and L2.0 for post locations.
 - See General Fencing and Gate Notes on this sheet.

6 SERVICE GATE

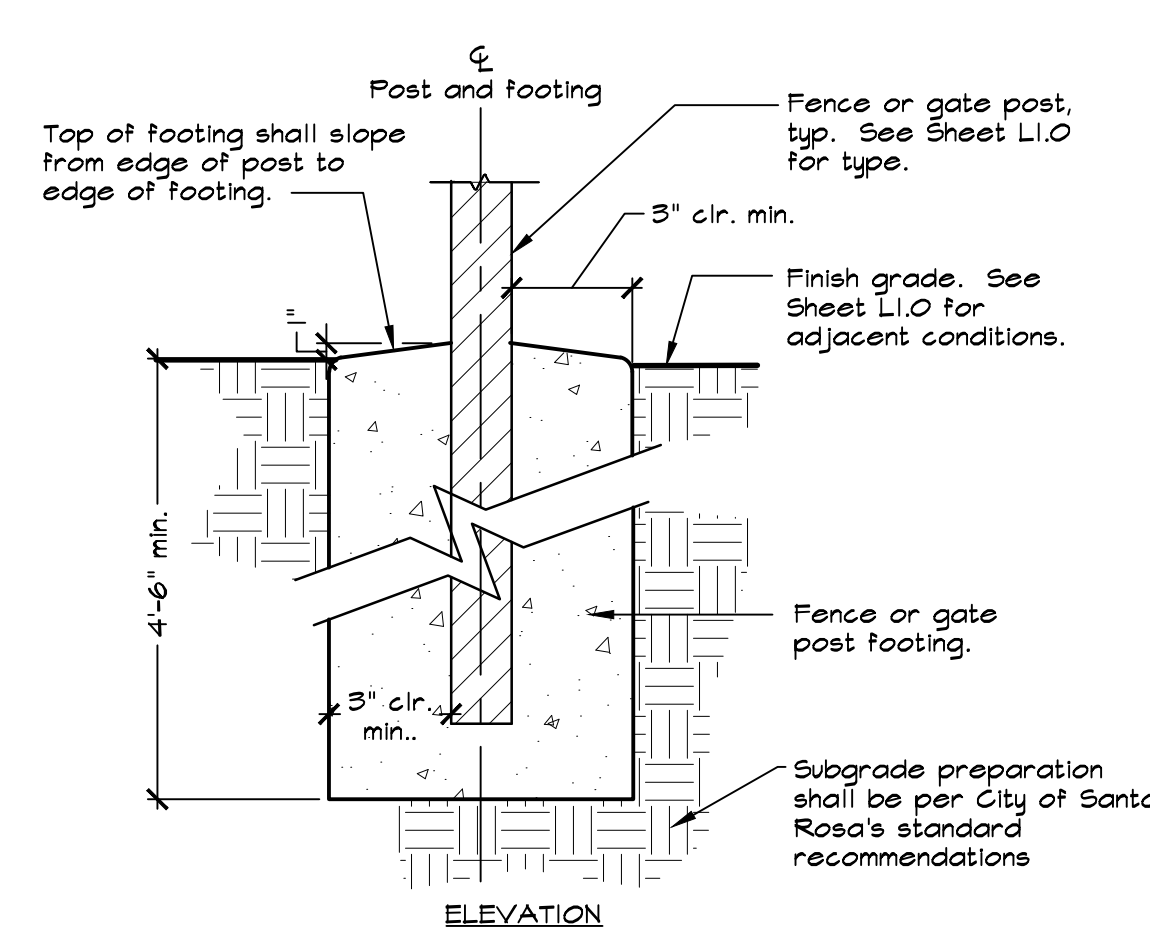
NOT TO SCALE



- NOTES:
- See Sheets L1.0 and L2.0 for post locations.
 - See General Fencing and Gate Notes on this sheet.

B CRITTER BARRIER - ADD ALTERNATE

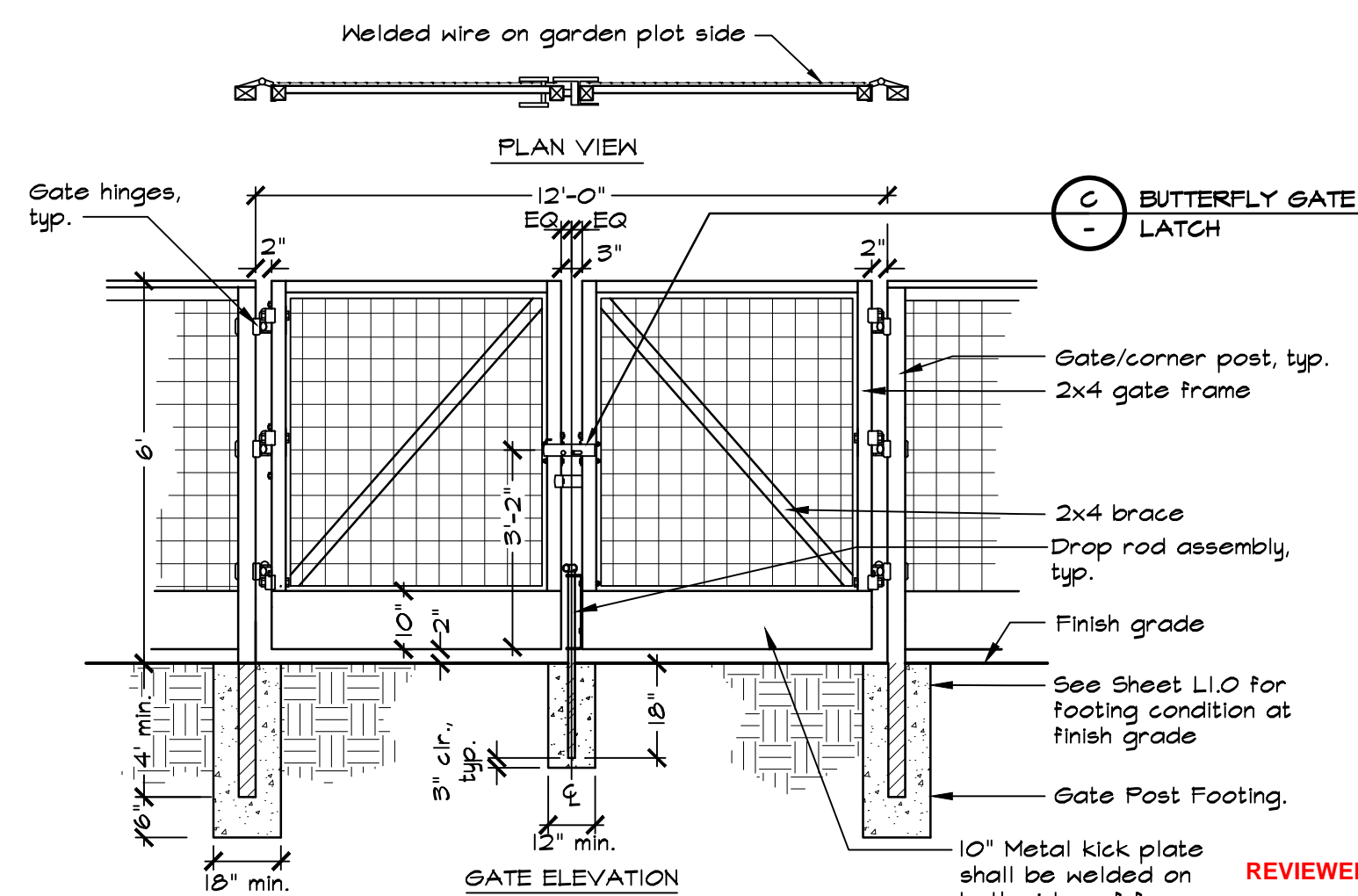
NOT TO SCALE



- NOTES:
- See Concrete Notes on Sheet L1.0 in addition to requirements in the Specifications.
 - See Sheets L1.0 and L2.0 for post locations.
 - See General Fencing and Gate Notes on this sheet.

3 POST AT FINISH GRADE

NOT TO SCALE



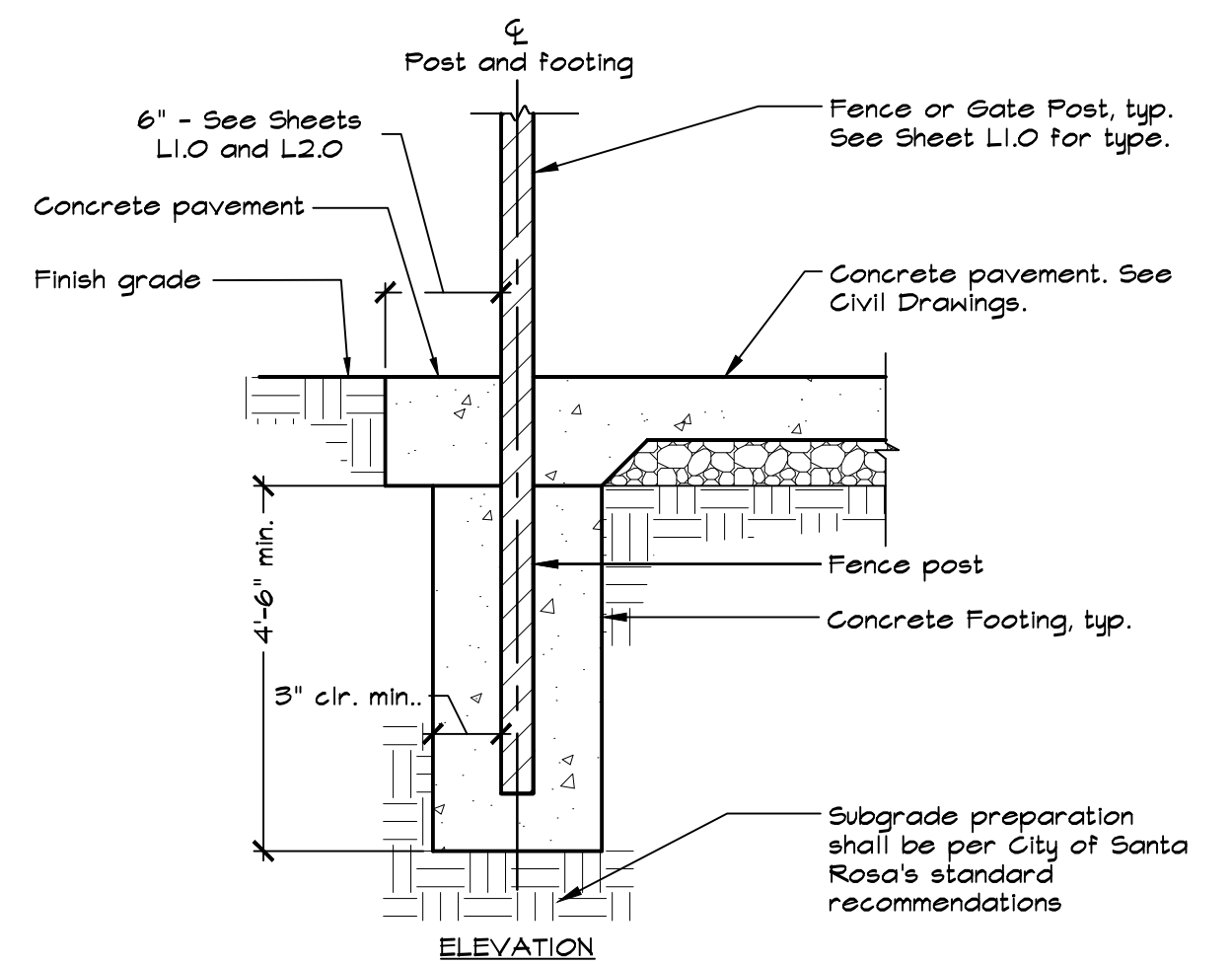
- NOTES:
- See General Fencing and Gate Notes on this sheet.
 - See Sheets L1.0 and L2.0 for post locations.
 - Door opening shall provide clear width of 32 inches minimum, CBC 11B-404.2.3.

7 MAINTENANCE GATE

NOT TO SCALE

GENERAL FENCING AND GATE NOTES

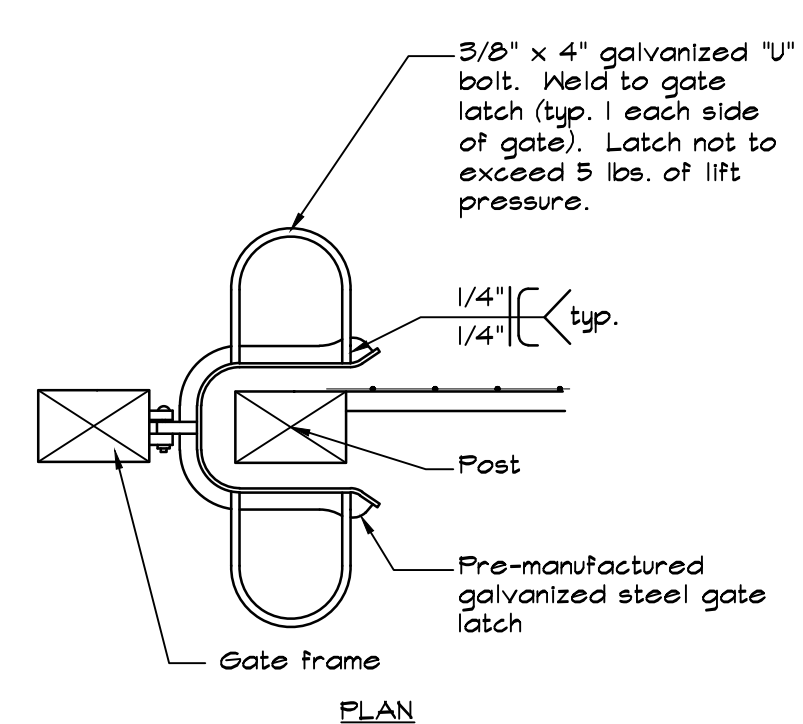
- Details are for general reference. Contractor shall provide shop drawings prior to construction for approval by the City. Contractor shall include all hardware types and manufacturers' information within shop drawings.
- All gate hinge hardware shall be commercial/industrial quality.
- All wood shall be select seasoned western red cedar, S4S.
- All fasteners shall be hot-dipped galvanized steel.
- Posts shall be plumb and true. Cap and rails shall be level.
- Fabric for fencing and gates shall be 12 gauge, galvanized, welded wire with 2" x 4" openings.
- See Concrete Notes on Sheet L1.0, in addition to requirements in the Specifications.
- See City fence standards and details for fence posts and footings along with these details. Contractor shall follow more stringent requirements of the two.
- Subgrade preparation shall be per City of Santa Rosa's standard recommendations.
- Critter barrier shall be 19 gauge, 1/2" x 1/2" hardware cloth as available from SC Barns, Building, and Fence, 3224 Dutton Avenue, Santa Rosa, CA 95407, 707-523-3513 or approved equal.



- NOTES:
- See Concrete Notes on Sheet L1.0 in addition to requirements in the Specifications.
 - See Sheets L1.0 and L2.0 for post locations.
 - See General Fencing and Gate Notes on this sheet.

4 POST IN CONCRETE PAVEMENT

NOT TO SCALE



- NOTES:
- Butterfly Gate Latch shall be lockable.

C BUTTERFLY GATE LATCH

NOT TO SCALE

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BUREAU VERITAS NORTH AMERICA, INC.

SIGNATURE: BV

DATE: 1/17/2025

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City of
Santa Rosa



ZGS
architects, inc.
www.zgsllc.com

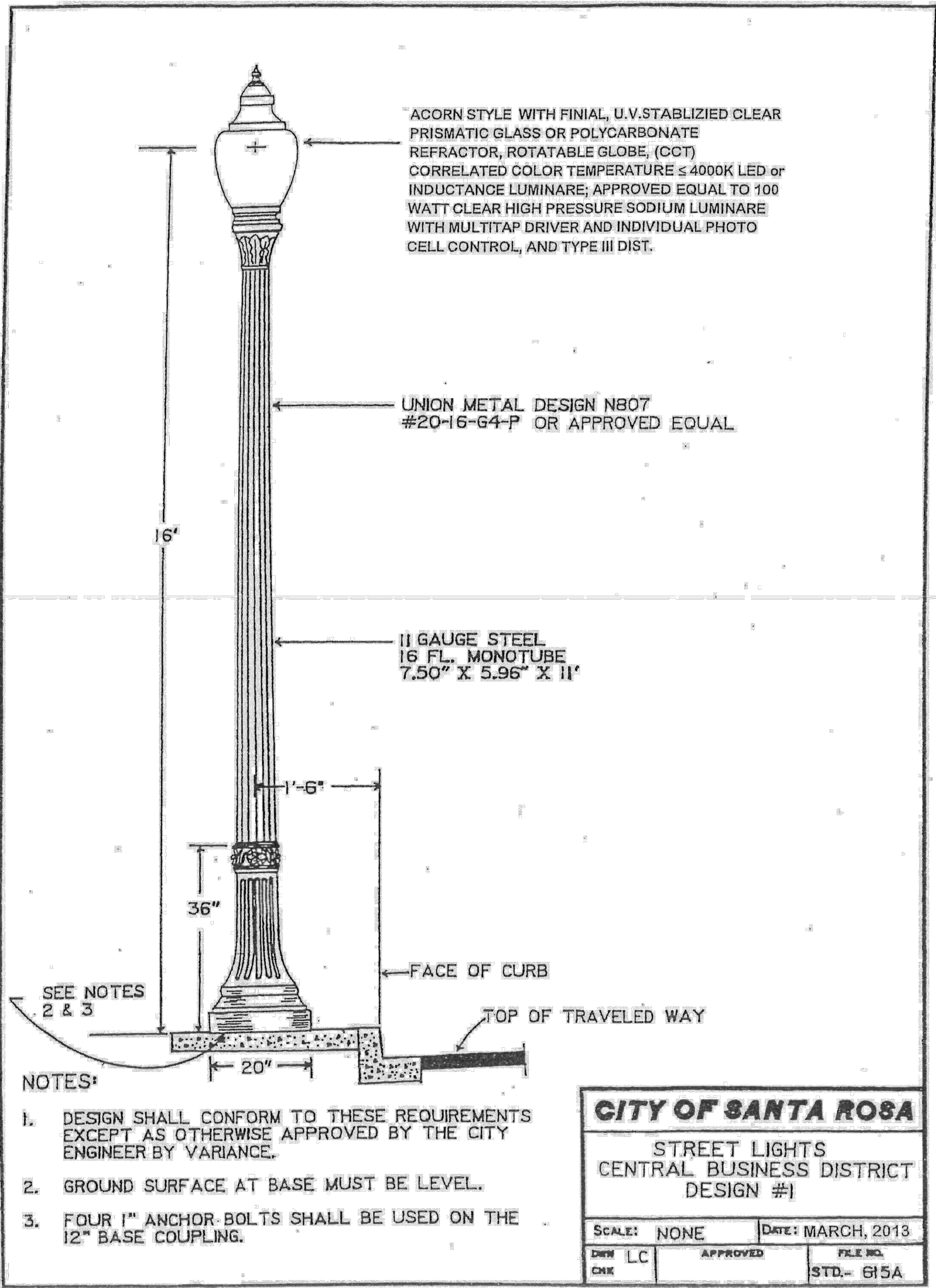
NO.	DATE	REVISION	BY

DWN BY:	ECD
CHK BY:	GSM
DATE:	12/2024
SCALE:	AS NOTED

City of Santa Rosa
**KAWANA SPRINGS COMMUNITY PARK
COMMUNITY GARDEN**
CONSTRUCTION DETAILS

L1.4
CONTRACT NO. C02393
SHEET 6 OF 27
FILE NO. 2022-0028

1



NOTES:

1. Light pole shall match existing style of light pole found at project site along Kawana Springs Road.
2. Light pole shall be connected to City street light system. Contractor shall coordinate with City's Transportation and Public Works, Street Light Division for ordering and installation of new light pole.
3. Contractor shall submit shop drawings and paint color samples for review and approval by City.
4. See Sheets L1.0 and L2.0 for light pole location.

1 LIGHT POLE - DEFERRED SUBMITTAL
NOT TO SCALE

REVIEWED FOR CODE COMPLIANCE

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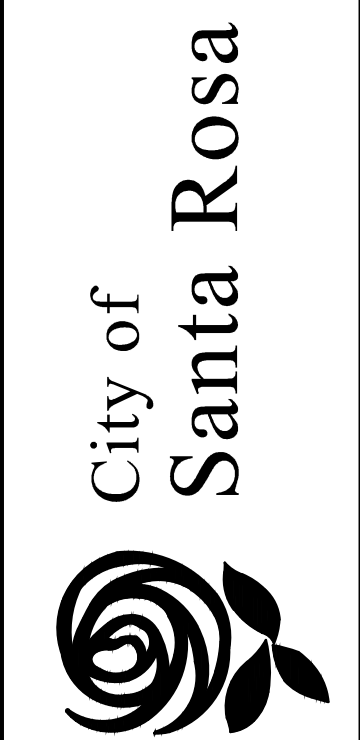
SIGNATURE: BV

DATE: 1/21/2025

CITY OF SANTA ROSA
APPROVED
Permit No. B22-6073
Date: 05/13/2025
Review and approval of these documents is based upon compliance with the 2022 California Code of Regulations, Title 24, and all applicable City of Santa Rosa ordinances and State of California laws.
Building Division Authorized Signature

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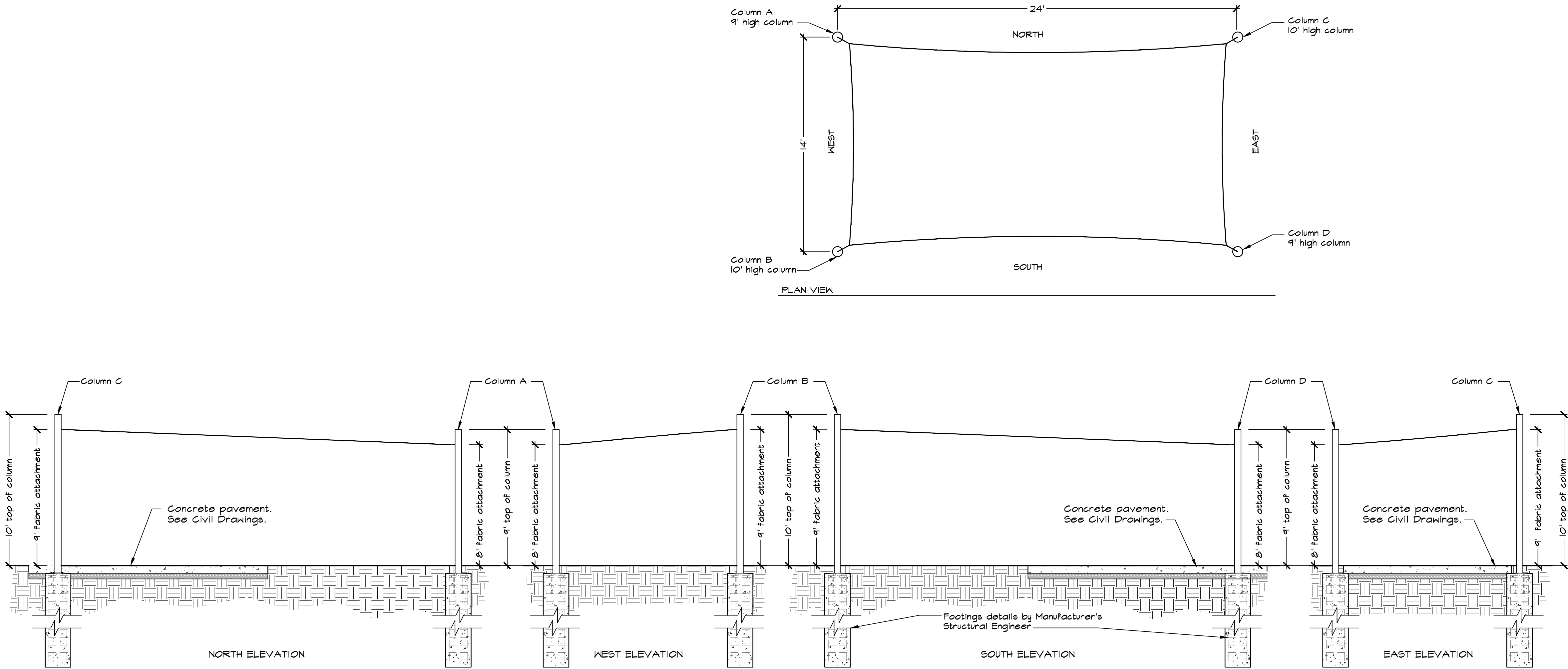


NO.	DATE	REVISION	BY

DWN BY:	ECD
CHK BY:	GSM
DATE:	12/2024
SCALE:	AS NOTED

City of Santa Rosa	KAWANA SPRINGS COMMUNITY PARK COMMUNITY GARDEN	CONSTRUCTION DETAILS
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L1.5
CONTRACT NO. C02393
SHEET 7 OF 27
FILE NO. 2022-0028



- NOTES:
- Shade Structure shall be Custom Canopies 4 Point Hypar Sail.
 - Top of footing shall be held below grade.
 - Columns shall match in diameter, minimum diameter of 5" and maximum diameter of 8".
 - Columns shall be powder coated in color grey.
 - Fabric shall be Alnet Extrablock Fabric in color latte.
 - Shade structure shall be 14' x 24'.
 - See Layout Enlargement 2 on Sheet L2.0 for location and orientation.
 - Permits: The Contractor shall be responsible for obtaining a building permit within two weeks of award of the contract. Contractor shall submit all required drawings, details, and calculations. All required documentation including drawings, material lists, calculations and engineering shall be paid for and provided by the Contractor.
 - Contact Shana Friesen at Miracle Playgroup, (510) 514-5212, shana@miracleplaygroup.com

1 SHADE STRUCTURE - DEFERRED SUBMITTAL
NOT TO SCALE

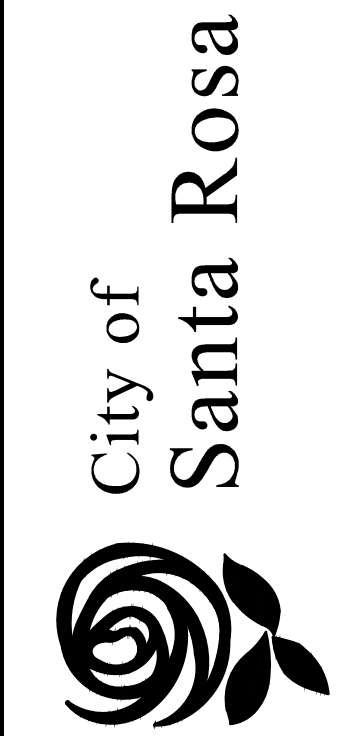
CITY OF SANTA ROSA
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Permit No. 022-6973
Date: 05/13/2025
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Building Division Authority Signature

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This sheet and details are shown for reference only. Contractor shall be responsible for design calculations or permitting of this pre-fabricated shade structure.

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NO.	DATE	REVISION	BY

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DATE:	12/2024
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City of Santa Rosa	KAWANA SPRINGS COMMUNITY PARK COMMUNITY GARDEN	CONSTRUCTION DETAILS
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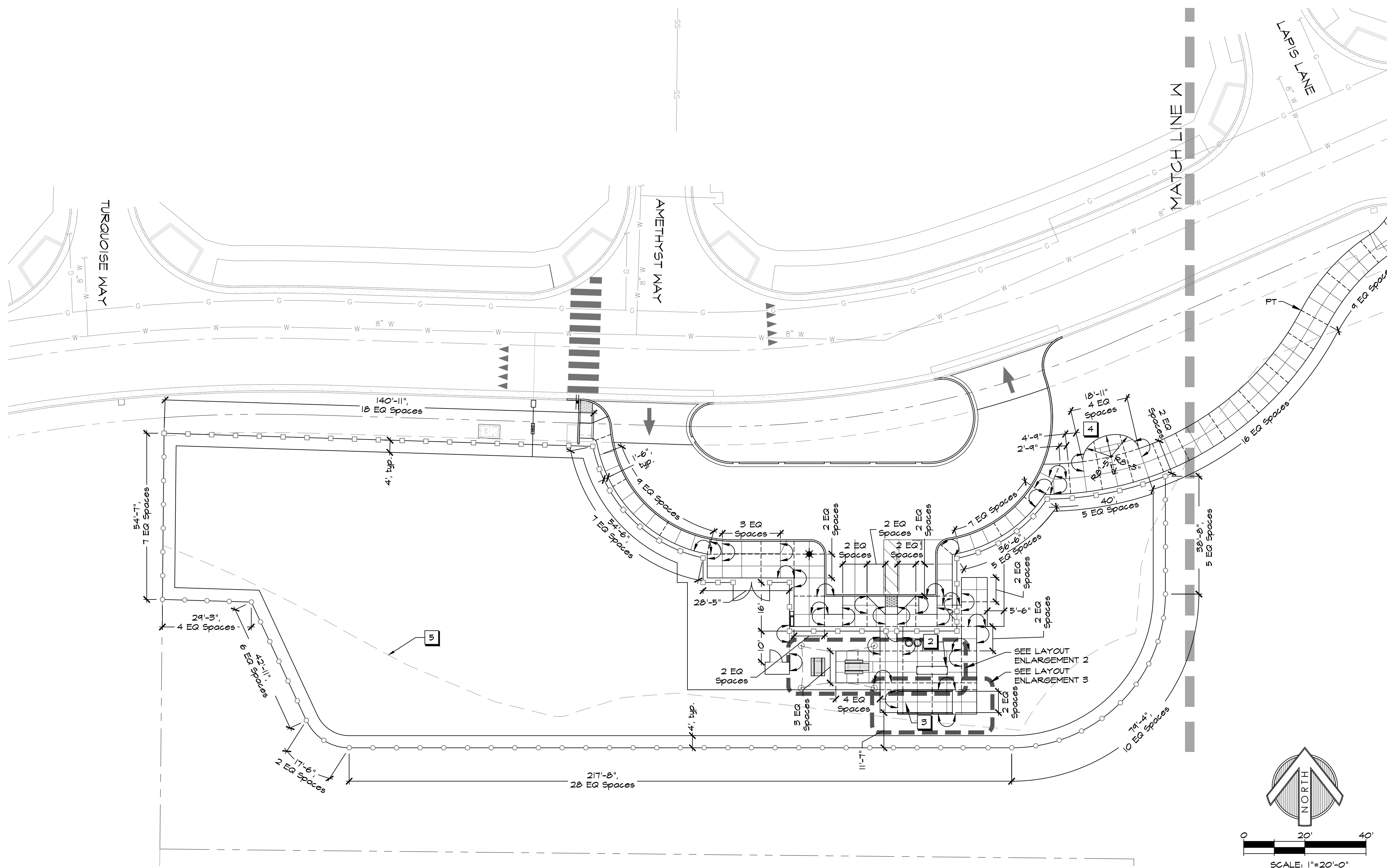
L1.6
CONTRACT NO. C02393
SHEET 8 OF 27
FILE NO. 2022-0028



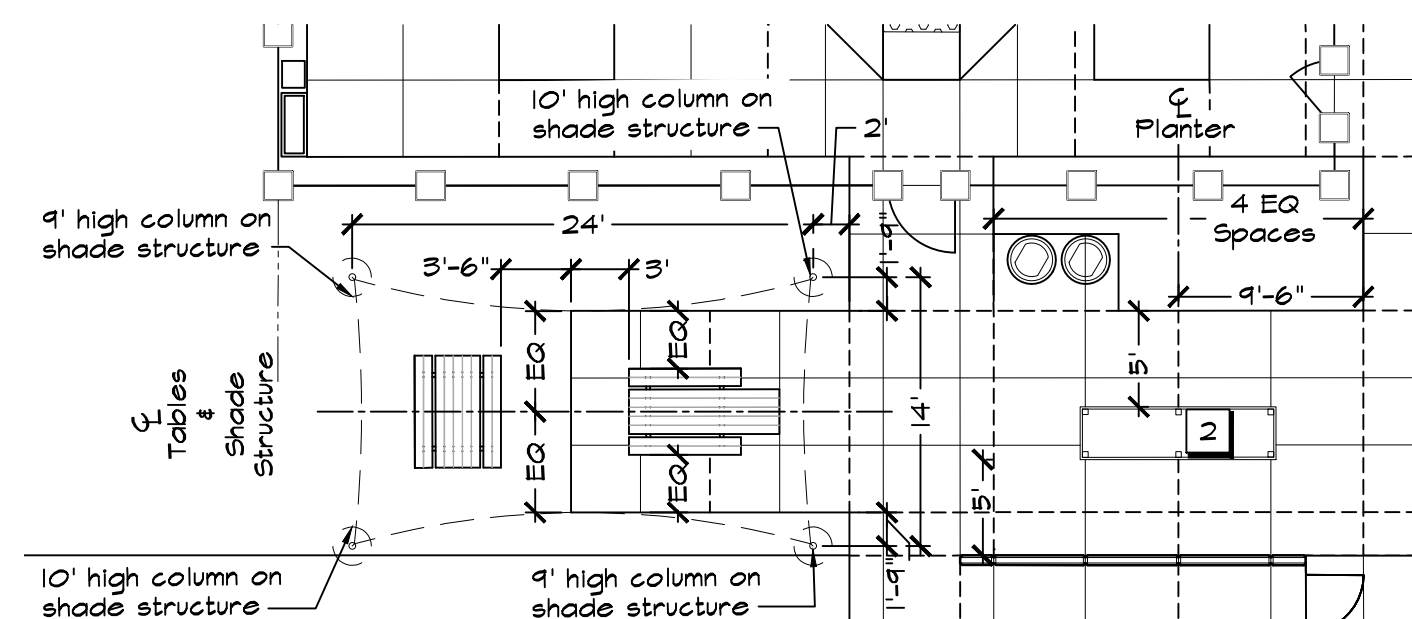
- 1 Gap between concrete cheek wall and shed face shall be less than 1/2".
- 2 ADA Raised Planter. See Detail B on Sheet L1.2 for dimensions.
- 3 Sloped walk. See Civil Drawings.
- 4 Seating area is half an ellipse. Contractor shall layout for review and approval by City prior to building formwork.
- 5 Creek Setback Line (Hydraulic Maintenance & Access Easement). See Civil Drawings.

- | | | | |
|----|-----------------------------|-----|-------------------|
| | Radial Dimension | | Centerline |
| | Arc Dimension | MA | Midpoint of Arc |
| | Linear Dimension | PT | Point of Tangency |
| | | Clr | Clear Opening |
| | | | 90 Degree Angle |
| | | | Electrical sleeve |
| | Guideline to show alignment | | |
| EQ | Equal | | |

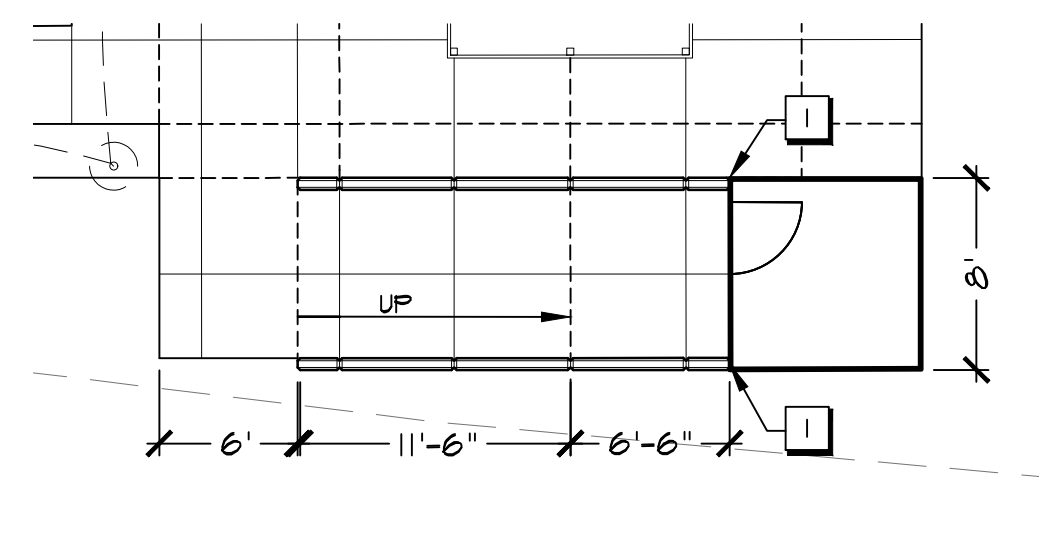
1. Contractor is responsible for providing all project related construction staking and layout.
2. Contractor shall notify all public or private utility companies two (2) working days prior to commencement of work on this project to verify the locations of existing utility lines. Call Underground Service Alert (U.S.A.) at 811, 7:00am to 5:00pm, Monday through Friday.
3. All coordinates and dimensions shown are in a horizontal plane.
4. Written dimensions always take precedence over scaled dimensions. If there is a conflict, notify the City to obtain clarification. No deviation or substitution shall be allowed without obtaining written approval from the City.
5. This Plan does not represent a Property Line Survey. Property lines shown hereon may not represent the true position of the line.
6. The Contractor shall coordinate all construction elements including utility locations and required sleeving prior to installation of any underground utilities.
7. The Contractor shall verify critical dimensions, reference and control point locations and construction conditions prior to construction.
8. All dimensions shall be verified in the field, chalked painted, and/or string lined. Any minor adjustments required to achieve overall design layout shall be reviewed and approved by the City prior to construction.
9. All materials shall be furnished and installed by the Contractor per Manufacturer's specifications, unless otherwise noted in these Plans or Specifications.
10. Existing features and topographic information have been taken from Survey performed by BKF Engineering and received on May 4, 2017 provided by City of Santa Rosa. G&M landscape architects, Inc. assumes no liability, real or alleged, regarding the accuracy of the existing features or topographic information shown.



1 LAYOUT PLAN FOR SCORE LINES, EXPANSION JOINTS, AND FENCE POST LAYOUT
SCALE: 1"=20'



2 LAYOUT ENLARGEMENT - SITE FURNISHINGS
SCALE: 1"=10'



3 LAYOUT ENLARGEMENT -
PATH TO SHED TYPE I
SCALE: 1-1/2"=1'-0"

CITY OF SANTA ROSA
APPROVED

Permit No. **B22-6973**

Date: **05/13/2025**

Review and approval of these documents is based upon compliance with the **2022** California Code Regulations, Title 24, and all applicable City of Santa Rosa ordinances and State of California laws.

[Signature]
Building Division Authorization Signature

REVIEWED FOR CODE COMPLIANCE

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BUREAU VERITAS NORTH AMERICA, INC.

SIGNATURE: BV

DATE: 1/21/2025

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City of Santa Rosa

KAWANA SPRINGS COMMUNITY PARK COMMUNITY GARDEN

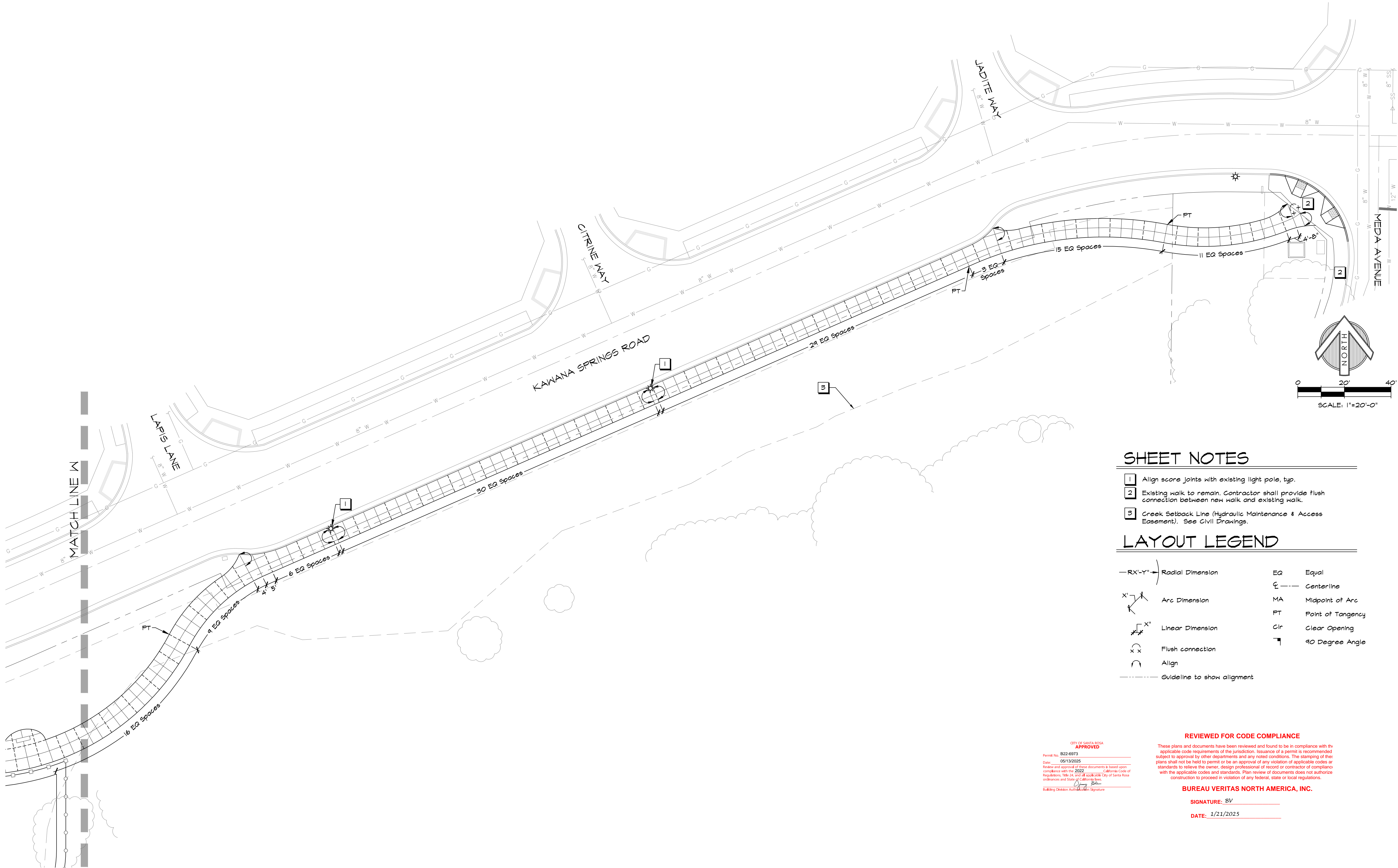
LAYOUT PLAN

20

CONTRACT NO.
C02393

SHEET 9 OF 27

LE NO. 2022-0028



SHEET NOTES

- Align score joints with existing light pole, typ.
- Existing walk to remain. Contractor shall provide flush connection between new walk and existing walk.
- Creek Setback Line (Hydraulic Maintenance & Access Easement). See Civil Drawings.

LAYOUT LEGEND

$RX'-Y''$	Radial Dimension	EQ	Equal
$X'-Y''$	Arc Dimension	CL	Centerline
X''	Linear Dimension	MA	Midpoint of Arc
$\times \times$	Flush connection	PT	Point of Tangency
\curvearrowright	Align	Clr	Clear Opening
-----	Guideline to show alignment	\square	90 Degree Angle

CITY OF SANTA ROSA
APPROVED
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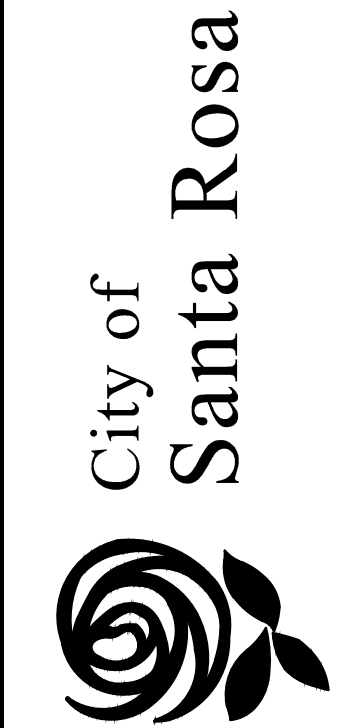
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revision	NO.	DATE	REVISION	BY

DWN BY:	ECD
CHK BY:	GSM
DATE:	12/2024
SCALE:	1" = 20'

City of Santa Rosa	KAWANA SPRINGS COMMUNITY PARK COMMUNITY GARDEN	LAYOUT PLAN
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L2.1
CONTRACT NO. C02393
SHEET 10 OF 27
FILE NO. 2022-0028

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- GIVEN DATA:
1. ZONE FLOW: 4 GPM (EMITTER)
 2. RCV'S ON AT ONE TIME: ONE MAXIMUM
 3. WATER METER FRICTION LOSS IS TAKEN FROM AWWA STANDARDS FOR WATER METERS.
 4. CALCULATED FROM THE FURTHEST AND HIGHEST REMOTE CONTROL VALVE AWAY FROM WATER METER.
 5. POTABLE WATER STREET MAIN PSI PER CIVIL FLOW STUDY: 45 PSI MINIMUM.

EMITTERS AT HIGHEST ELEVATION

PRESSURE LOSS CALCULATIONS			
IRRIGATION ITEM	SIZE	PSI LOSS OR GAIN	POSITIVE PSI
STATIC PSI			45.0
SERVICE LINE (25 FEET)	1"	-0.2	
WATER METER	1"	-0.2	
BACKFLOW DEVICE	1"	-12.0	
STRAINER	N/A	0.0	
SUBTOTAL			32.6
PRV	N/A	0.0	
PUMP PSI BOOST	N/A	0.0	
SUBTOTAL			32.6
MAIN CONTROL VALVE	1.5"	-0.2	
FLOW SENSOR	1"	-0.5	
MAIN LINE (800 FEET)	2"	-0.2	
ELEVATION UP	12	-5.2	
ELEVATION DOWN	0	0.0	
MISC. PSI LOSS	10% OF ALL	-1.3	
SUBTOTAL			25.2
RCV	1"	-2.9	
LATERAL LINE	VARIES	-2.0	
DYNAMIC PSI @ IRRIGATION HEAD (10 PSI REQUIRED)			20.3

- GIVEN DATA:
1. ZONE FLOW: 16 GPM (BUBBLER)
 2. RCV'S ON AT ONE TIME: ONE MAXIMUM
 3. WATER METER FRICTION LOSS IS TAKEN FROM AWWA STANDARDS FOR WATER METERS.
 4. CALCULATED FROM THE CLOSEST AND LOWEST REMOTE CONTROL VALVE AWAY FROM WATER METER.
 5. POTABLE WATER STREET MAIN PSI PER CIVIL FLOW STUDY: 45 PSI MINIMUM.

BUBBLERS AT LOW ELEVATION

PRESSURE LOSS CALCULATIONS			
IRRIGATION ITEM	SIZE	PSI LOSS OR GAIN	POSITIVE PSI
STATIC PSI			45.0
SERVICE LINE (25 FEET)	1"	-1.8	
WATER METER	1"	-1.2	
BACKFLOW DEVICE	1"	-12.0	
STRAINER	N/A	0.0	
SUBTOTAL			30.1
PRV	N/A	0.0	
PUMP PSI BOOST	N/A	0.0	
SUBTOTAL			30.1
MAIN CONTROL VALVE	1.5"	0.0	
FLOW SENSOR	1"	-0.5	
MAIN LINE (200 FEET)	2"	-0.4	
ELEVATION UP	0	0.0	
ELEVATION DOWN	0	0.0	
MISC. PSI LOSS	10% OF ALL	-1.6	
SUBTOTAL			27.6
RCV	1.5"	-2.6	
LATERAL LINE	VARIES	-2.0	
DYNAMIC PSI @ IRRIGATION HEAD (20 PSI REQUIRED)			23.0

1 PRESSURE LOSS CALCULATIONS - HIGH ELEVATION

NOT TO SCALE

2 PRESSURE LOSS CALCULATIONS - LOW ELEVATION

NOT TO SCALE

IRRIGATION DESIGNER:

James D. Eddy
JAMES D. EDDY ASSOCIATES, DANVILLE, CALIFORNIA
NOTE: NO LICENSE FOR THE LANDSCAPE IRRIGATION
SYSTEM DESIGN PROFESSION IS AVAILABLE IN THE STATE
OF CALIFORNIA.
MEMBER: AMERICAN SOCIETY OF IRRIGATION CONSULTANTS



JAMES D. EDDY ASSOCIATES
LANDSCAPE IRRIGATION ENGINEERS
DANVILLE, CALIFORNIA
P:(925) 867-3339
EMAIL: JIM@EDDYASSOCIATES.COM
PLANNING - DESIGN

JDE PROJECT NO: 22011



City of
Santa Rosa



NO.	DATE	REVISION	BY

DWN BY:	ST
CHK BY:	JDE
DATE:	12/2024
SCALE:	1" = 20'

City of Santa Rosa	IRRIGATION PLAN
KAWANA SPRINGS COMMUNITY PARK COMMUNITY GARDEN	

L3.1

CONTRACT NO.
C02393

SHEET 12 OF 27

FILE NO. 2022-0028

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Building Division Authorization Signature

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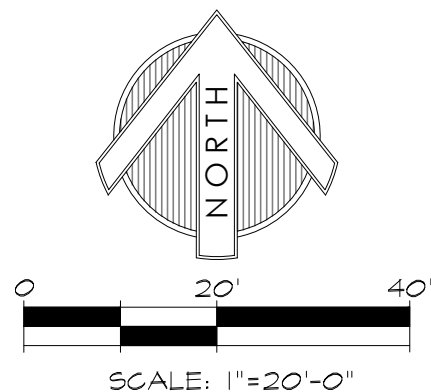
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SIGNATURE: BV

DATE: 1/21/2025

SHEET NOTES:

- 1 DO NOT INSTALL THE SENNINGER PRESSURE REGULATOR ON THESE TWO (2) EMITTER RCVS DUE TO LOW PSI AT THIS ELEVATION. CONFIRM DISCHARGE PSI AT RCV UNDER A DYNAMIC FLOW CONDITION (VALVE IS OPERATING TO ZONE) TO BE 22-30 PSI. IF DYNAMIC RCV DISCHARGE PSI IS GREATER THAN 50 PSI INSTALL THE REGULATOR AS SPECIFIED.



ABBREVIATIONS:	
AV	AIR VALVE
CI	CAST IRON
CU	COPPER
DEG	DEGREES
DI	DUCTILE IRON
DIA	DIAMETER
ECV	EMITTER CONTROL VALVE
EFF	EFFICIENCY
ETWU	ESTIMATED TOTAL WATER USE
ETO(ET)	EVAPOTRANSPIRATION
(E)	EXISTING
(F)	FUTURE
FC	FULL CIRCLE (360°)
FT	FEET
FIPT	FEMALE IRON PIPE THREAD
FPS	FEET PER SECOND
FS	FLOW SENSOR
FV	FLUSH VALVE
GA	GAUGE
GI	GALVANIZED IRON
GV	GATE VALVE
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
HW	HIGH WATER USE
ID	INTERNAL DIAMETER
IN	INCHES
IRR	IRRIGATION
LA	LANDSCAPE ARCHITECT
LW	LOW WATER USE
MAWA	MAXIMUM APPLIED WATER ALLOWANCE
MAX	MAXIMUM
MCV	MASTER CONTROL VALVE
MV	MASTER VALVE
MW	MEDIUM WATER USE
MIN	MINIMUM
MIPT	MALE IRON PIPE THREAD
MOE	MULTI-OUTLET EMITTER
MPR	MATCHED PRECIPITATION RATE
MWEL0	MODEL WATER EFFICIENT LANDSCAPE ORDINANCE
(N)	NEW
NIC	NOT IN CONTRACT
NPW	NON POTABLE WATER
NTS	NOT TO SCALE
OD	OUTSIDE DIAMETER
PC	PART CIRCLE (20°–360°)
PE	POLYETHYLENE
POC	POINT OF CONNECTION
PRECIP	PRECIPITATION
PRV	PRESSURE REDUCING VALVE
PVBA	PRESSURE VACUUM BREAKER ASSEMBLY
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYLCHLORIDE
PW	POTABLE WATER
QTY	QUANTITY
QCV	QUICK COUPLING VALVE
RCV	REMOTE CONTROL VALVE
RPBA	REDUCED PRESSURE BACKFLOW ASSEMBLY
RS	RIGID STEEL
RW	RECYCLED WATER
SCH	SCHEDULE
SOE	SINGLE-OUTLET EMITTER
SF	SQUARE FOOT OR FEET
SLA	SPECIAL LANDSCAPE AREA
SQ	SQUARE
SS	STAINLESS STEEL
STD	STANDARD
TBD	TO BE DETERMINED
TBE	THREADED BOTH ENDS
TOE	THREADED ONE END
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
UPC	UNIFORM PLUMBING CODE
USA	UNDERGROUND SERVICE ALERT
UV	ULTRAVIOLET
UVR	ULTRAVIOLET RESISTANT
VAC	VOLTS-ALTERNATING CURRENT
VB	VALVE BOX
WM	WATER METER

IRRIGATION NOTES

1.

PROVIDE INSTALLATION OF SYSTEM BY PERSONS FAMILIAR WITH IRRIGATION WORK AND UNDER THE SUPERVISION OF A QUALIFIED SUPERVISOR.
2.

OBTAIN THE PERMITS REQUIRED AND PROVIDE LABOR AND MATERIALS NECESSARY TO FULLY COMPLETE THE WORK IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS.
3.

LOCATE AND PROTECT NEW OR EXISTING UTILITIES PRIOR TO EXCAVATION WORK.
4.

DO NOT DAMAGE EXISTING UTILITIES, PAVING OR STRUCTURES. PROVIDE THE NECESSARY REPAIRS AT NO ADDITIONAL COST TO THE CITY.
5.

REMOVE DEBRIS AND ACCUMULATION OF DEBRIS AS A RESULT OF IRRIGATION CONSTRUCTION FROM THE SITE AND LEAVE AREA IN A CLEAN CONDITION ACCEPTABLE TO CITY'S REPRESENTATIVE.
6.

MAINTAIN SITE FOR THE SPECIFIED CALENDAR DAYS FOLLOWING ACCEPTANCE OF THE WORK BY THE CITY'S REPRESENTATIVE AND MAKE CORRECTIONS, REPAIRS AND REPLACEMENTS TO THE IRRIGATION AS DIRECTED BY CITY'S REPRESENTATIVE UNTIL THE COMPLETION OF THE MAINTENANCE PERIOD.
7.

THE DRAWINGS ARE DIAGRAMMATIC. EQUIPMENT SHOWN IN PAVED AREAS IS FOR CLARITY ONLY AND SHALL BE INSTALLED IN PLANTING AREAS WHERE POSSIBLE. DUE TO THE SCALE OF THE DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS, SLEEVES, ETC. WHICH MAY BE REQUIRED. INVESTIGATE THE STRUCTURAL AND FINISHED CONDITIONS AFFECTING THE CONTRACT WORK INCLUDING OBSTRUCTIONS, GRADE DIFFERENCES OR AREA DIMENSIONAL DIFFERENCES WHICH MAY NOT HAVE BEEN CONSIDERED IN THE ENGINEERING. WHERE FIELD DIFFERENCES EXIST, COORDINATE THE INSTALLATION WORK ACCORDINGLY BY NOTIFICATION AND APPROVAL OF CITY'S REPRESENTATIVE AND ACCORDING TO THE CONTRACT SPECIFICATIONS. NOTIFY AND COORDINATE IRRIGATION CONTRACT WORK WITH ALL APPLICABLE CONTRACTORS FOR THE LOCATION AND INSTALLATION OF PIPE, CONDUIT OR SLEEVES THROUGH OR UNDER WALLS, ROADWAYS, PAVING, STRUCTURE, ETC. BEFORE CONSTRUCTION. ASSUME FULL RESPONSIBILITY FOR REQUIRED REVISIONS IF THESE NOTIFICATIONS ARE NOT PERFORMED.
8.

THE INTENT OF THIS IRRIGATION SYSTEM DESIGN IS TO PROVIDE THE MINIMUM AMOUNT OF WATER REQUIRED TO SUSTAIN GOOD PLANT HEALTH.
9.

PROGRAM THE CONTROLLER TO PROVIDE THE MINIMUM AMOUNT OF WATER NEEDED TO SUSTAIN GOOD PLANT HEALTH. MAKE ADJUSTMENTS TO THE PROGRAM FOR SEASONAL WEATHER CHANGES, PLANT MATERIAL, WATER REQUIREMENTS, MOUNDS AND SLOPES, SUN, SHADE AND WIND EXPOSURES.
10.

ELECTRICAL SERVICE TO IRRIGATION CONTROLLER LOCATION IS PROVIDED BY A POLE MOUNTED SINGLE SOLAR PANEL. IRRIGATION CONTRACTOR SHALL INSTALL THE POLE WITH THE SOLAR PANEL, MAKE CONNECTION FROM SOLAR PANEL TO SOLAR CONTROLLER, AND PROVIDE PROPER GROUNDING PER CONTROLLER MANUFACTURER'S INSTRUCTIONS.
10.

INSTALL NEW BATTERIES IN CONTROLLER TO RETAIN PROGRAM IN MEMORY DURING TEMPORARY POWER ISSUES. USE QUANTITY, TYPE, AND SIZE REQUIRED AS PER CONTROLLER MANUFACTURER'S INSTRUCTIONS.
11.

SCHEDULE A MEETING WHICH INCLUDES REPRESENTATIVES OF THE IRRIGATION CONTROLLER VENDOR (ITS), THE MAINTENANCE CONTRACTOR, THE CITY'S REPRESENTATIVE, AND THE IRRIGATION CONTRACTOR AT THE SITE FOR INSTRUCTION ON THE PROPER PROGRAMMING AND OPERATION OF THE IRRIGATION CONTROLLER.
12.

THE IRRIGATION SYSTEM IS DESIGNED FOR ONE (1) VALVE TO OPERATE AT ONE TIME. THIS WILL ALLOW THE SYSTEM TO IRRIGATE IN APPROXIMATELY 1 TO 2 HOURS OR LESS ACCORDING TO WEATHER CONDITIONS. THE TOTAL GPM DEMAND OF SYSTEM WILL BE APPROXIMATELY 15 GPM OR LESS. DO NOT UNDER ANY CIRCUMSTANCE EXCEED 15 GPM OR OPERATE MULTIPLE CONTROL VALVES AT THE SAME TIME.
13.

IRRIGATION WIRES:

A.

CONTROLLER TO REMOTE CONTROL VALVE: 14 AWG-UF, SOLID COPPER, SINGLE JACKETED CONDUCTOR, DIRECT BURIAL WIRE

B.

SPLICES: MADE WITH 3M DBY-6 AND DBR-6, OR APPROVED EQUAL SEAL PACKS.

C.

SPARE WIRE: INSTALL TWO (2) SPARE SINGLE JACKETED CONDUCTOR WIRES ALONG THE ENTIRE MAIN LINE. INSTALL 24" OF EXCESS CABLE INTO A VALVE BOX AT EACH VALVE GROUP.

D.

STUBBED CABLE: WEATHERPROOF UNUSED WIRE ENDS.

E.

SPLICING: SPLICING OF CONTROL WIRES IS NOT PERMITTED EXCEPT IN VALVE BOXES. LEAVE A 36" LONG, 1" DIAMETER COIL OF EXCESS WIRE AT EACH SPLICE.

F.

DO NOT USE MULTI-STRAND WIRE.
15.

LEAVE A 36" LONG EXPANSION LOOP EVERY 100- FEET ALONG WIRE RUN. TAPE WIRES TOGETHER EVERY TEN FEET. TAPING OF WIRES IS NOT REQUIRED INSIDE SLEEVES OR CONDUITS.
16.

PLASTIC VALVE BOXES ARE SHALL BE GREEN IN COLOR WITH BOLT DOWN, NON-HINGED GREEN COVER MARKED "IRRIGATION". BOX BODY SHALL HAVE KNOCK OUTS. MANUFACTURER: RAIN BIRD, CARSON, BROOKS, OR APPLIED ENGINEERING.
17.

INSTALL REMOTE CONTROL VALVE BOXES 12" FROM WALK, CURB, LAWN, HEADERBOARD, BUILDING, OR LANDSCAPE FEATURE. AT MULTIPLE VALVE BOX GROUPS, EACH BOX SHALL BE AN EQUAL DISTANCE FROM THE WALK, CURB, LAWN, ETC. AND EACH BOX SHALL BE 12" APART. SHORT SIDE OF RECTANGULAR VALVE BOXES SHALL BE PARALLEL TO WALK, CURB, LAWN, ETC. REFER TO VALVE BOX INSTALLATION DETAIL.
18.

INSTALL QUICK COUPLING VALVES IN LOCATIONS EASILY ACCESSIBLE BY MAINTENANCE PERSONNEL, SUCH AS ADJACENT TO WALKS, CURBS, RCV VALVE BOXES, AND HEADERBOARDS.
19.

VALVE LOCATIONS ON DRAWINGS ARE DIAGRAMMATIC. INSTALL IN GROUND COVER/SHRUB AREAS.
20.

UNLESS INTEGRAL WITH THE RCV, INSTALL A SHUT-OFF VALVE TO ISOLATE EACH RCV. SIZE SHALL BE SAME AS RCV.
21.

FLUSH AND ADJUST SYSTEM FOR EFFICIENT PERFORMANCE. PREVENT WATER ON THE WALKS AND ROADWAYS.
22.

IRRIGATION HEAD LAYOUT AND PIPING AS SHOWN ON THE DRAWINGS IS INDICATIVE OF THE WORK TO BE INSTALLED. IRRIGATION HEADS AND PIPING AT CERTAIN LOCATIONS MAY REQUIRE FIELD ADJUSTMENT TO PREVENT HARM TO TREE ROOTS.
23.

LOCATE BUBBLER OR EMITTER OUTLETS ON UP-HILL SIDE OF PLANT OR TREE, REFER TO INSTALLATION DETAIL.
24.

THE IRRIGATION SYSTEM DESIGN IS BASED ON THE MINIMUM OPERATING PRESSURE SHOWN ON THE IRRIGATION DRAWINGS. VERIFY WATER PRESSURE PRIOR TO CONSTRUCTION. REPORT ANY DIFFERENCE BETWEEN THE WATER PRESSURE INDICATED ON THE DRAWINGS AND THE ACTUAL PRESSURE READING AT THE IRRIGATION POINT OF CONNECTION TO THE CITY'S REPRESENTATIVE.
25.

IRRIGATION DEMAND: 16 GPM AT 45 PSI STATIC PRESSURE. CONFIRM ACTUAL PSI WITH THE CITY OF SANTA ROSA WATER DEPARTMENT AT THE IRRIGATION WATER METER.
26.

PIPE THREAD SEALANT COMPOUND SHALL BE PERMATEX "TACK AND SEAL" OR RECTORSEAL T+2.
27.

AFTER THE PIPING AND WIRE IS INSTALLED THROUGH SLEEVES, TAPE THE ENDS OF THE SLEEVES WITH PVC ADHESIVE TAPE MIL 20 TO PREVENT ROOT INTRUSION INTO THE SLEEVE.
28.

DO NOT INSTALL MAIN OR LATERAL LINE PIPING UNDER TREE ROOTBALLS. PLAN PIPING INSTALLATION TO KEEP PIPING AWAY FROM TREE ROOTZONES.
29.

REFER TO PLANTING PLAN FOR EXACT QUANTITIES AND PLACEMENT FOR TREE AND SHRUB MATERIALS.
30.

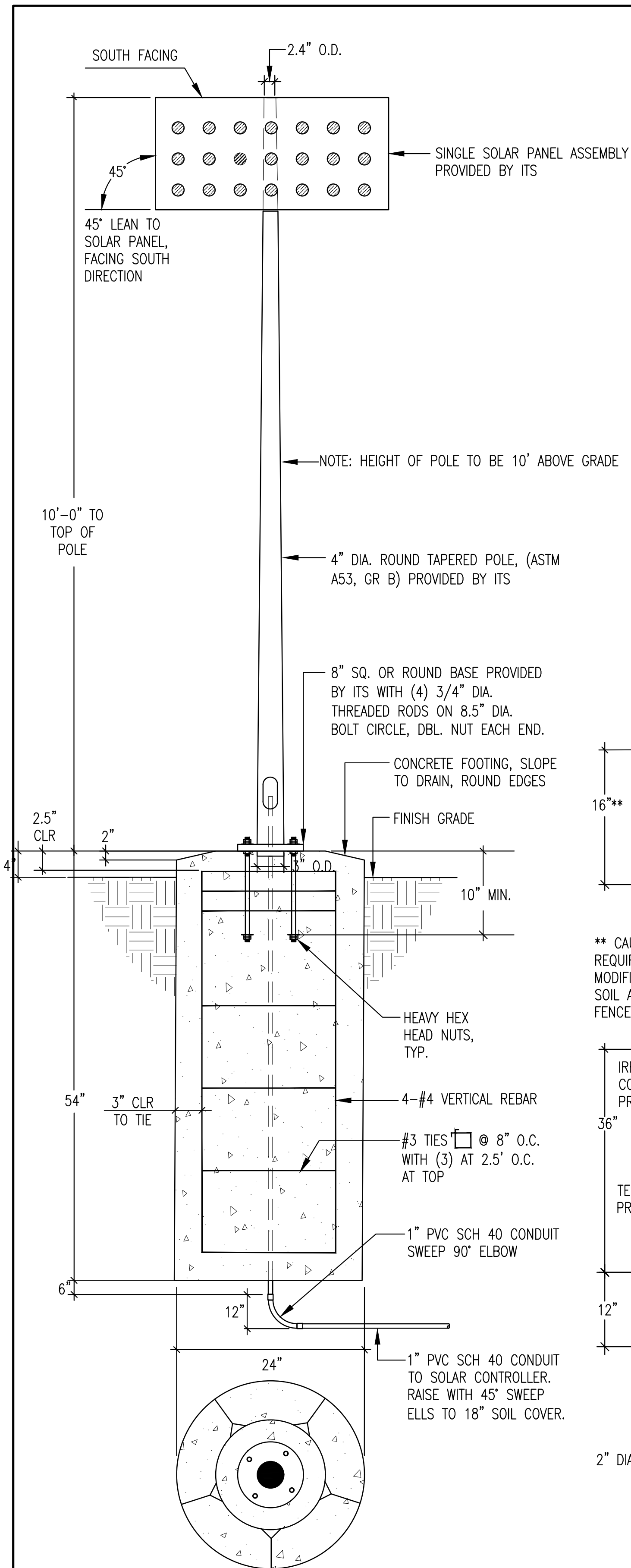
ANY VARIANCE IN THE FIELD TO THE DRAWINGS, SPECIFIED MATERIALS, AND SPECIFICATIONS WILL REQUIRE THE SUBMITTAL OF A SHOP DRAWING FROM THE CONTRACTOR AND AN APPROVAL BY THE CITY'S REPRESENTATIVE. CONSTRUCTION CHANGES BY THE CONTRACTOR AND WITHOUT THE SUBMITTAL OF SHOP DRAWINGS AND FINAL CITY REPRESENTATIVE'S APPROVAL ARE AT THE RISK OF THE CONTRACTOR.
31.

JDE HAS COMPLIED WITH THE CRITERIA OF THE CITY OF SANTA ROSA AND THE STATE OF CALIFORNIA'S MODEL WATER EFFICIENT LANDSCAPE ORDINANCE AND APPLIED THE CRITERIA ACCORDINGLY FOR THE EFFICIENT USE OF WATER IN THE IRRIGATION DESIGN PLAN.
32.

THE IRRIGATION DESIGN COMPLIES WITH THE STATE OF CALIFORNIA'S AB 1881 MODEL WATER EFFICIENT LANDSCAPE ORDINANCE, CHAPTER 2.7.

IRRIGATION LEGEND

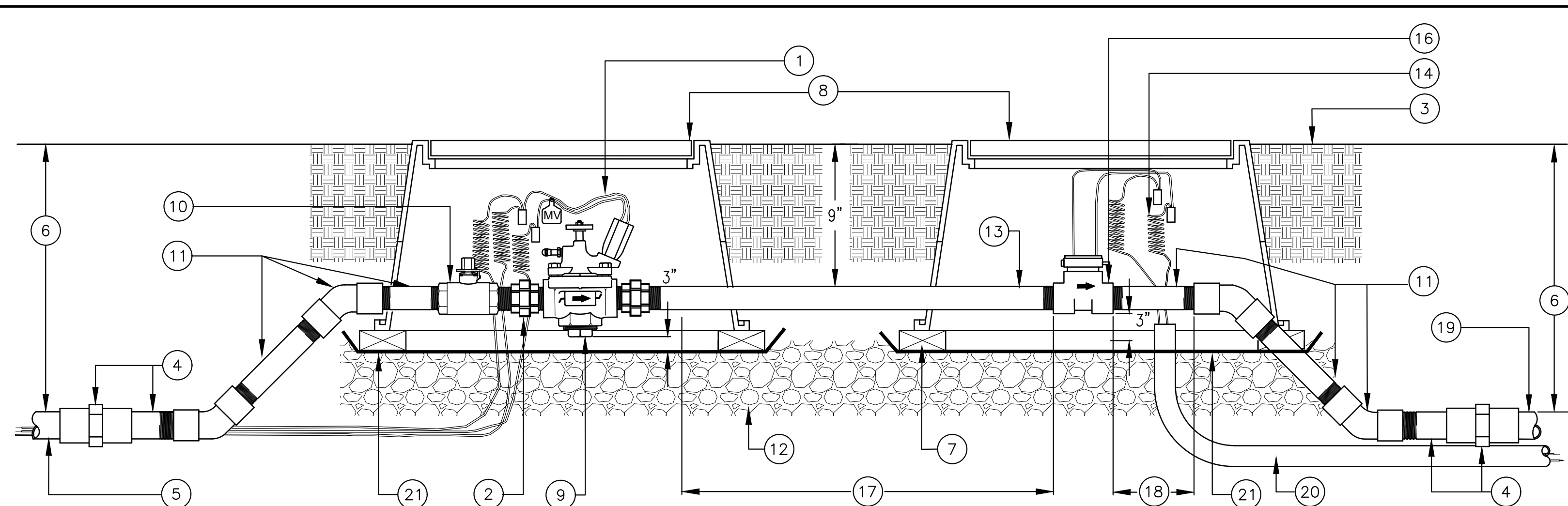
SYMBOL	MODEL NUMBER	MANUFACTURER	PSI	GPM OR GPH	CATALOG RADIUS	DESIGN RADIUS MIN.-MAX.
SHRUB EMITTER (1 PER SHRUB)						
⊙	PCT-10 (GREEN)	RAIN BIRD SHRUB EMITTER WITH 1/2" THREAD INLET, PLACED AT GRADE, ONE (1) TOTAL, (USED AT HIGHER ELEVATION DUE TO INCREASED PSI LOSSES)	10-15	10 GPH	EMITTER	N/A
TREE EMITTER (4 PER TREE)						
⊙	PCT-10 (GREEN)	RAIN BIRD TREE EMITTER WITH 1/2" THREAD INLET, PLACED AT GRADE, FOUR (4) TOTAL, 90° APART (USED AT HIGHER ELEVATION DUE TO INCREASED PSI LOSSES)	10-15	10 GPH	EMITTER	N/A
SHRUB BUBBLER (1 PER SHRUB)						
▪	1401	RAIN BIRD PRESSURE COMPENSATING BUBBLER	20-30	0.25 GPM	BUBBLER	N/A
BURIED TREE BUBBLER						
▪	[RWS-B-C-1401]+[RWS-SOCK]	RAIN BIRD PRESSURE COMPENSATING TREE ROOT DEEP WATERING SYSTEM WITH CHECK VALVE, PLACED ADJACENT TO ROOTBALL, QUANTITY AS FOLLOWS: 15 GAL. TREE: TWO BUBBLERS PER TREE, 180° APART 24" BOX TREE: FOUR BUBBLERS PER TREE, 90° APART	20-30	0.25 GPM	BUBBLER	N/A
VALVES						
☒	SEE CIVIL DRAWINGS	1" REDUCED PRESSURE BACKFLOW ASSEMBLY AND BACKFLOW ENCLOSURE OR COVER PROVIDED UNDER CIVIL WORK.				
⚙	[3300-150]+[IFS-100B]	SUPERIOR NORMALLY OPEN BRASS MAIN CONTROL VALVE (CAPABLE OF LOW FLOWS) AND CST BRASS FIPT FLOW SENSOR ASSEMBLY RATED FOR 0.8-50 GPM, ALL INCLUDED WITH CONTROLLER PACKAGE FROM ITS.				
⚙	DWS-100.IB (1") DWS-150.IB (1.5")	GRISWOLD DWS-SERIES NORMALLY CLOSED, SOLENOID CONTROL REMOTE CONTROL VALVE (CAPABLE OF LOW FLOWS), BRASS CONSTRUCTION, FIPT, WITH INTEGRAL UNION AND BALL VALVE (BUBBLER ZONES, MINIMUM FLOW: 0.8 GPM).				
⚙*	[DWS-100.IS]+[PRL-30] (1")	GRISWOLD DRIP ZONE DWS-SERIES NORMALLY CLOSED, SOLENOID CONTROL REMOTE CONTROL VALVE (CAPABLE OF LOW FLOWS), BRASS CONSTRUCTION, FIPT, WITH INTEGRAL UNION, BALL VALVE, STRAINER WITH 100 MESH SCREEN, AND SENNINGER LOW FLOW PRESSURE REGULATOR. SIZE: 1". (EMITTER ZONES, MINIMUM FLOW: 0.8 GPM)				
⏏	FBV-3	WATTS BRASS BALL VALVE, FIPT CONNECTIONS, SIZE EQUAL TO MAIN LINE SIZE (VALVE SPEC PER CITY)				
◆	33DNP	RAIN BIRD 3/4" QUICK COUPLING VALVE WITH NON-POTABLE LOCKABLE COVER (CITY AREAS)				
◆	B401LK	SUPERIOR HOSE BIB WITH LOOSE KEY FOR HAND WATERING AT GARDEN AREAS				
CONTROLLER						
C	[ICA8-IR1-12]+[SP]+	IMPERIAL TECHNICAL SERVICES (ITS) VENDOR-BUILT SOLAR-POWERED CONTROLLER ASSEMBLY WITH THE FOLLOWING EQUIPMENT: <ul style="list-style-type: none">12 STATION IRRITROL MC-E CONTROLLERFRONT ENTRY, SIDE-BY-SIDE, SS ENCLOSURE, 36"W X 36H X 12"DSURGE PROTECTION 120 VOLTIRRITROL CLIMATELOGIC WIRELESS SENSOR, POLE MOUNTED PER IRRITROL DIRECTIONS, USE SOLAR PANEL POLECST 1" BRASS TEE WITH FS3 FLOW SENSOR FOR IRRITROL SERIES1.5" SUPERIOR MAIN CONTROL VALVE, NORMALLY OPENSINGLE PANEL SOLAR OPTION WITH 4" DIA. x 10-FOOT STEEL MOUNTING POLENOTE: USE STATION C01 FOR THE NORMALLY OPEN MAIN CONTROL VALVE CONTACT KIM GOLDENSTEIN AT ITS FOR QUESTIONS AND ORDERING AT CELL# 619-380-1833.				
R	[IRCL-P]+					
	[IFS-100B/3300-150]+					
SP	[SLR1]+[POLE-4-10]					
		CONTROLLER STATION NUMBER				
		APPROXIMATE FLOW (GPM)				
		REMOTE CONTROL VALVE SIZE				
SLEEVES AND PIPE						
		MAIN LINE: 1120-SCHEDULE 40 PVC PLASTIC PIPE WITH SOLVENT WELDED CONNECTIONS. PROVIDE SCHEDULE 80 PVC PLASTIC SOLVENT WELDED FITTINGS. SOIL COVER: 18-INCH IN SOIL, 18-INCH UNDER PEDESTRIAN PAVEMENT, 24-INCH UNDER VEHICULAR PAVEMENT. SIZE: 2.0-INCH & 1.5-INCH DIA.. PROVIDE T. CHRISTY ENTERPRISES NON-POTABLE WATER DETECTABLE MARKING TAPE, TA-DT-6-BNP, PER THE SPECIFICATION, ABOVE MAIN LINE PIPE. PROVIDE A 4-INCH ±1-INCH SAND ENVELOPE ABOVE AND BELOW THE MAIN LINE PIPE.				
		LATERAL LINE: 1120-SCHEDULE 40 PVC PLASTIC PIPE WITH SOLVENT WELDED CONNECTIONS. PROVIDE SCHEDULE 40 PVC PLASTIC SOLVENT WELDED FITTINGS. SOIL COVER: 12-INCH IN SOIL, 12-INCH UNDER PEDESTRIAN PAVEMENT, 24-INCH UNDER VEHICULAR PAVEMENT. SIZE 1-INCH DIA. UNLESS OTHERWISE NOTED.				
		SLEEVE: 1120-CLASS 315 PVC PLASTIC PIPE WITH SCHEDULE 40 PVC PLASTIC SOLVENT WELDED FITTINGS. SOIL COVER TO BE EQUAL TO COVER REQUIRED FOR PIPE CONTAINED WITHIN SLEEVE 18-INCH MINIMUM COVER. SIZE 2-INCH DIA. UNLESS OTHERWISE NOTED.				
		ELECTRICAL CONDUIT FOR LOW VOLTAGE WIRE: 1120-SCHEDULE 40 PVC GRAY PLASTIC ELECTRICAL CONDUIT WITH SCHEDULE 40 PVC GRAY PLASTIC SOLVENT WELDED SWEEP ELBOWS AND FITTINGS. SIZE 1-INCH DIA. UNLESS OTHERWISE NOTED. SOIL COVER: 18-INCHES. INSTALL ALONGSIDE MAIN LINE WHEREVER POSSIBLE.				
		PULL BOX, 14 X 19 RECTANGULAR PLASTIC BOX				
		LOW VOLTAGE CONTROL WIRE ROUTE				
<div><div><div><div>CITY OF SANTA ROSA</div><div>APPROVED</div><div>Permit No. 822-6873</div><div>05/13/2025</div><div>Date: _____</div><div>Review and approval of these documents is based upon compliance with the 2022 California Code of Regulations, Title 24, and all applicable City of Santa Rosa ordinances and State of California laws.</div><div></div><div>Building Division Administrator Signature</div></div></div><div><div>REVIEWED FOR CODE COMPLIANCE</div><div>These plans and documents have been reviewed and found to be in compliance with the applicable code requirements of the jurisdiction. Issuance of a permit is recommended subject to approval by other departments and any noted conditions. The stamping of these plans shall not be held to permit or be an approval of any violation of applicable codes or standards to relieve the owner, design professional of record or contractor of compliance with the applicable codes and standards. Plan review of documents does not authorize construction to proceed in violation of any federal, state or local regulations.</div><div>BUREAU VERITAS NORTH AMERICA, INC.</div><div>SIGNATURE: BV</div><div>DATE: 1/21/2025</div></div></div>						



SOLAR ASSEMBLY POLE MOUNTED - ICA8 SIDE BY SIDE ENCLOSURE



IMPERIAL TECHNICAL SERVICES

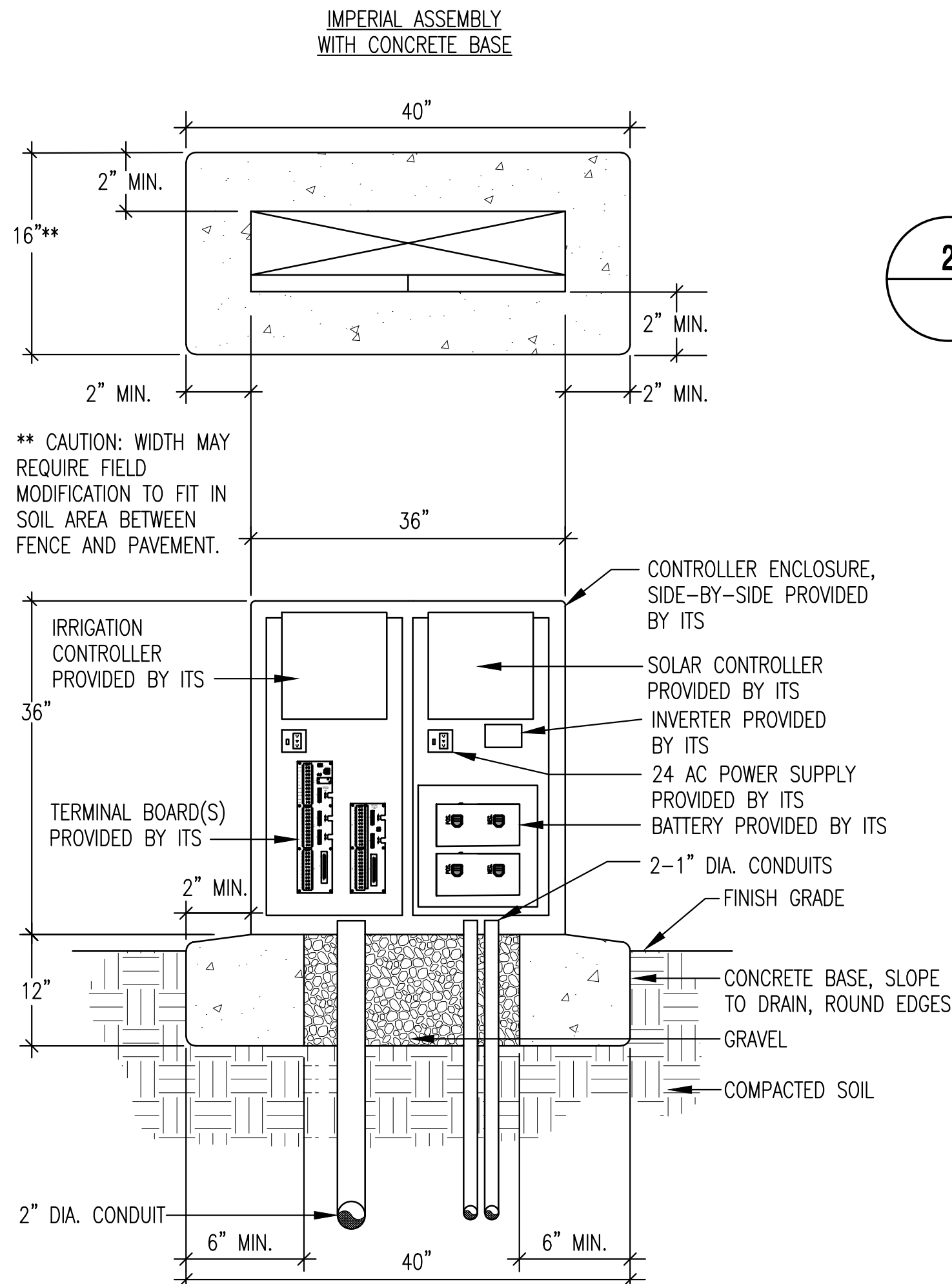


ITEM LIST AND INSTALLATION NOTES:

- | | |
|--|---|
| 1. VALVE CONTROL WIRE – PROVIDE 3M DBY SEAL PACKS AT SPLICES, 36" OF EXCESS UF WIRE IN A 1" DIAMETER COIL AND VALVE TAG | 14. CONTROL WIRE: PROVIDE 3M DBY SEAL PACKS AT SPLICES, 36" OF EXCESS WIRE IN A 1" DIAMETER COIL (#14 AWG-UF WIRE) AND CONTROLLER I.D. TAG |
| 2. UNION, BRASS, THREADED | 15. NOT USED |
| 3. FINISH GRADE | 16. FLOW SENSOR, SIZE AS SPECIFIED IN LEGEND – INSTALL FLOW SENSOR TO ALLOW STRAIGHT-FLOW OF A MINIMUM OF TEN TIMES THE DIAMETER OF THE MAIN LINE PIPE ON THE INLET SIDE AND FIVE TIMES THE DIAMETER OF THE MAIN LINE PIPE ON THE OUTLET SIDE OF THE SENSOR. WIRE TO CONTROLLER AS DIRECTED BY MANUFACTURER'S REPRESENTATIVE. |
| 4. FEMALE ADAPTER, SCH 80 PVC, S X S AND NIPPLE, TOE, SCH 80 PVC | 17. PROVIDE TEN (10) X THE PIPE DIAMETER; EX: 10 X 2.5" PIPE = 25" MINIMUM |
| 5. PVC MAIN LINE FROM PRESSURE REDUCING VALVE | 18. PROVIDE FIVE (5) X THE PIPE DIAMETER; EX: 5 X 2.5" = 12.5" MINIMUM |
| 6. REFER TO IRRIGATION LEGEND OR SPECIFICATIONS FOR SOIL COVER | 19. PVC MAIN LINE TO IRRIGATION SYSTEM |
| 7. COMMON BRICK, 8 TOTAL, INSTALL AT EACH CORNER OF EACH VALVE BOX | 20. INSTALL FLOW SENSOR CABLE IN 1" DIA. PVC CONDUIT FROM FLOW SENSOR TO CONTROLLER ENCLOSURE. USE RAINMASTER EV-CAB-SEN CABLE. PROVIDE AND INSTALL PULL BOXES EVERY 200 FEET. DO NOT SPLICE SENSOR CABLE. |
| 8. VALVE BOX, PLASTIC, RECTANGULAR WITH BOLT-DOWN LID. INSTALL BOX AS SHOWN IN BOX INSTALLATION DETAIL. USE JUMBO BOX FOR MAIN VALVE AND STANDARD BOX FOR THE FLOW SENSOR. | 21. METAL WIRE MESH TO PREVENT GOPHER INTRUSION, 1/2" MESH, 19 GAUGE, GALVANIZED |
| 9. MAIN CONTROL VALVE WITH FLOW CONTROL AND MANUAL BLEED (SIZE AS SPECIFIED IN IRRIGATION LEGEND OR SPECIFICATIONS) | |
| 10. BALL VALVE, BRASS, FULL PORT, THREADED, APOLLO 78-130 SERIES, SIZE EQUALS MCV SIZE | |
| 11. ELBOWS (45 DEGREE), NIPPLES (TBE), BRASS, THREADED, AS REQUIRED | |
| 12. 3/4" CLEAN WASHED GRAVEL – 6" DEEP BELOW VALVE (NO SOIL IN VALVE BOX) | |
| 13. NIPPLE, BRASS, TBE (BETWEEN MAIN VALVE & FLOW SENSOR) | |

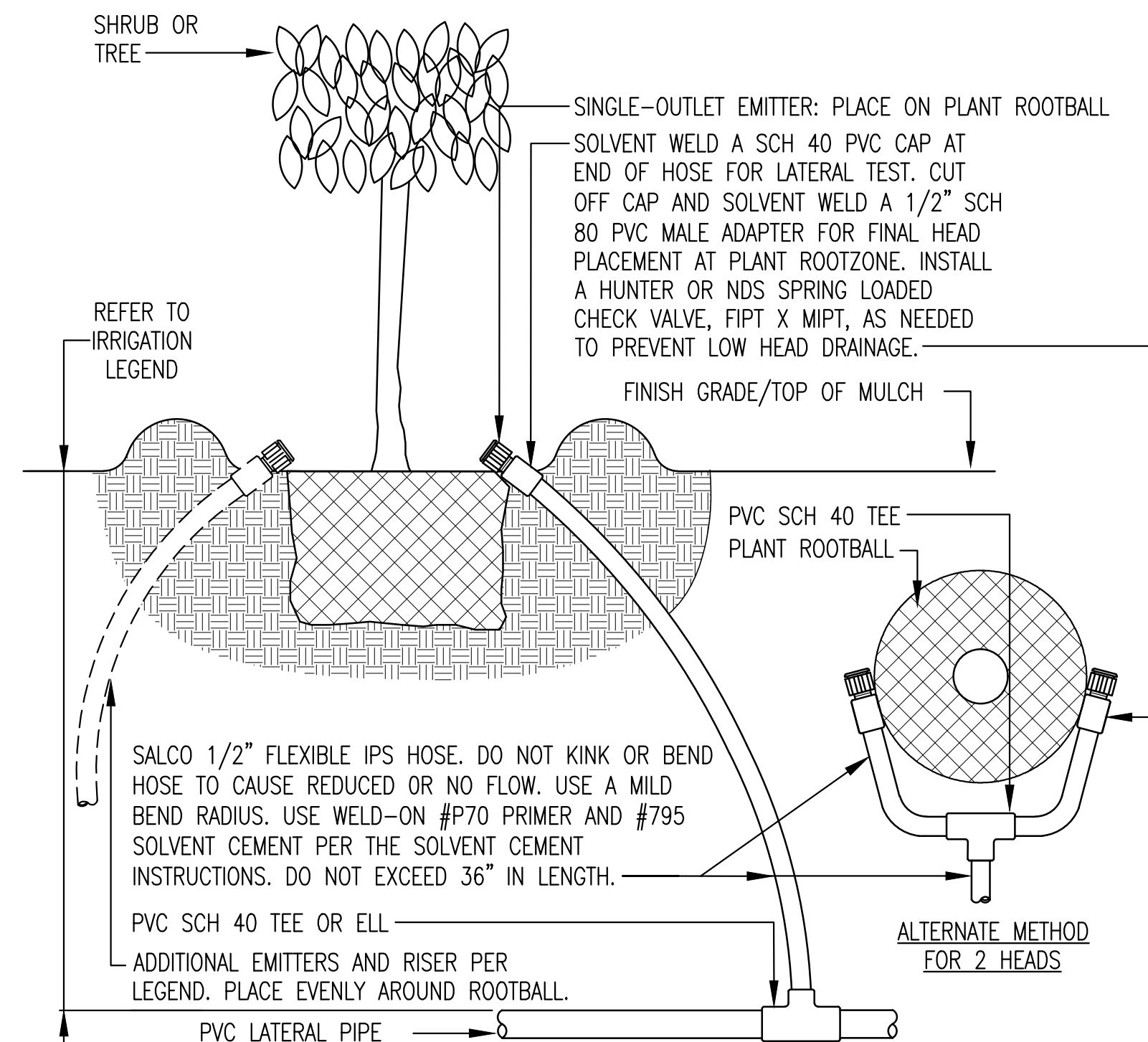
2 MAIN CONTROL VALVE & FLOW SENSOR

NOT TO SCALE



NOTES:

1. ALL GROUNDING REQUIREMENTS FOR CONTROLLER ASSEMBLY SHALL CONFORM TO LOCAL ELECTRICAL CODES.
2. COMPLETE CONTROLLER ASSEMBLY IS PRE-WIRED BY ITS.
3. DIRECT ALL CONTROLLER ASSEMBLY AND WIRING QUESTIONS TO ITS.
4. FIELD VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.



INSTALLATION NOTES:

1. AT SLOPE AREAS, INSTALL A HUNTER, NDS, OR EQUAL SPRING LOADED CHECK VALVE UNDER HEAD(S) TO PREVENT LOW HEAD DRAINAGE DOWN THE SLOPE. INSTALL HEAD(S) ON THE UPHILL SIDE OF THE PLANT ROOTBALL, INSIDE PLANTING BASIN, AND AT FINISHED GRADE AS SHOWN.
2. INSTALL ONE (1) EMITTER PER SHRUB AND FOUR (4) EMITTERS PER TREE, 90° APART. PLACE EMITTERS ON CONTAINER ROOTBALL AREA.

3 SINGLE-OUTLET EMITTER(S) AT SHRUBS AND TREES

NOT TO SCALE



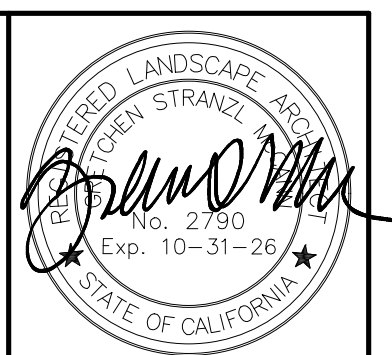
JAMES D. EDDY ASSOCIATES
LANDSCAPE IRRIGATION ENGINEERS
DANVILLE, CALIFORNIA
P:(925) 867-3339
EMAIL: JIM@EDDYASSOCIATES.COM
PLANNING-DESIGN

JDE PROJECT NO: 22011

OWNERSHIP OF DOCUMENTS

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City of
Santa Rosa



landscape
architects, inc.

DWN BY:	ST						
CHK BY:	JDE						
DATE:	12/2024						
SCALE:	AS NOTED						
		NO.	DATE		REVISION		BY

City of Santa Rosa

**KAWANA SPRINGS COMMUNITY PARK
COMMUNITY GARDEN**

IRRIGATION DETAILS

L3.3

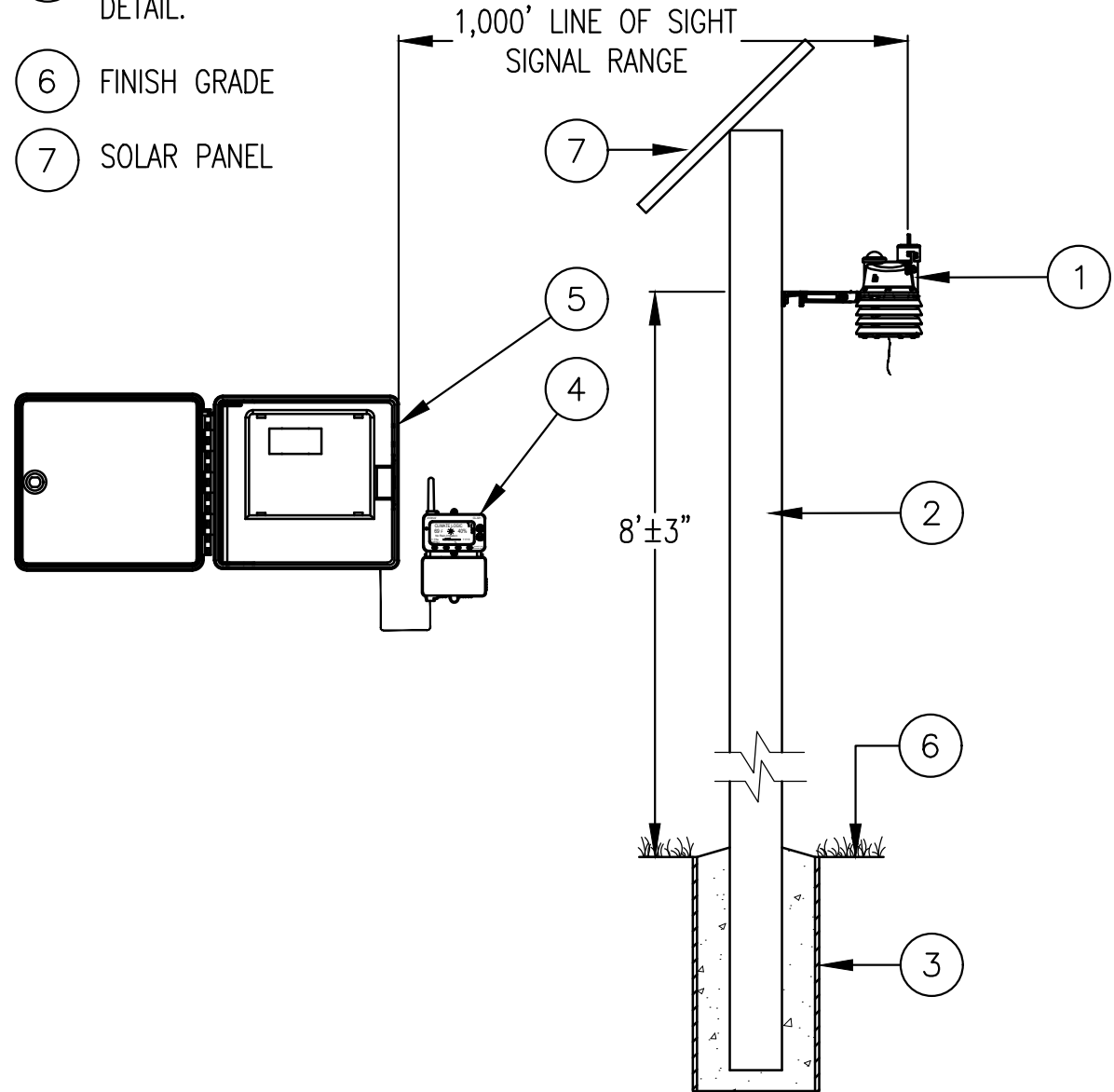
CONTRACT NO.
C02393

SHEET 14 OF 27

FILE NO. 2022-0028

ITEM LIST AND INSTALLATION NOTES:

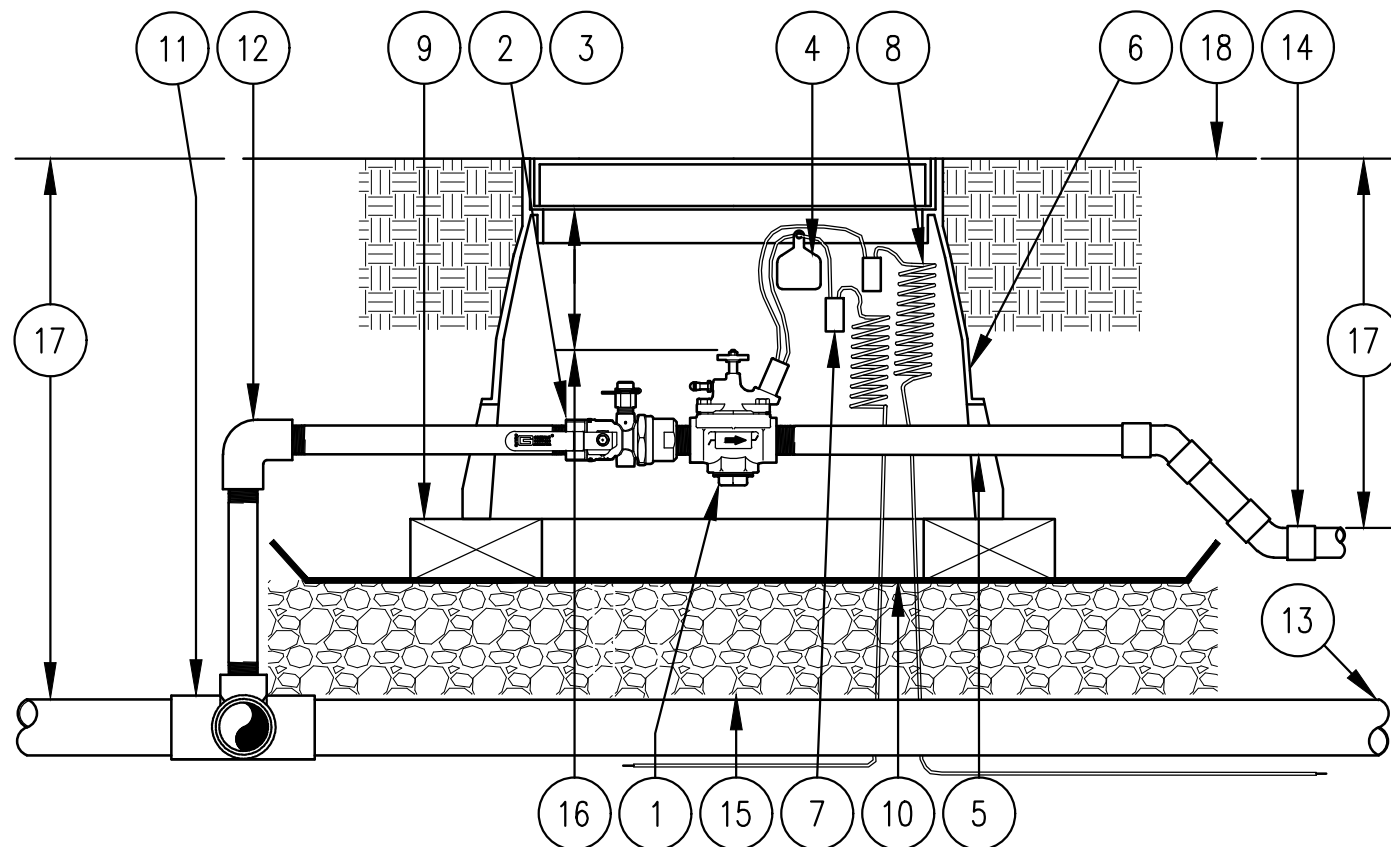
- 1 CLIMATE LOGIC SENSOR LESS THAN 1000- FEET AWAY FROM CONTROLLER. MOUNT PER IRRITROL INSTRUCTIONS 8- FEET ABOVE FINISH GRADE. MOUNT IN LOCATION WHERE SENSOR CAN RECEIVE FULL SUN, IS OPEN TO RAINFALL, AND OUT OF PUBLIC VIEW.
- 2 SOLAR PANEL POLE, SEE SOLAR PANEL DETAIL.
- 3 SEE SOLAR PANEL DETAIL.
- 4 IRRITROL CL-M1 RECEIVER MODULE MOUNTED INSIDE CONTROLLER PEDESTAL BY CONTROLLER VENDOR.
- 5 IRRITROL CONTROLLER, VENDOR MOUNTED INSIDE ENCLOSURE. SEE CONTROLLER DETAIL.
- 6 FINISH GRADE
- 7 SOLAR PANEL



1

IRRITROL CLIMATE LOGIC WIRELESS WEATHER SENSING SYSTEM FOR MC CONTROLLER
NOT TO SCALE

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EQUIPMENT NOTES:

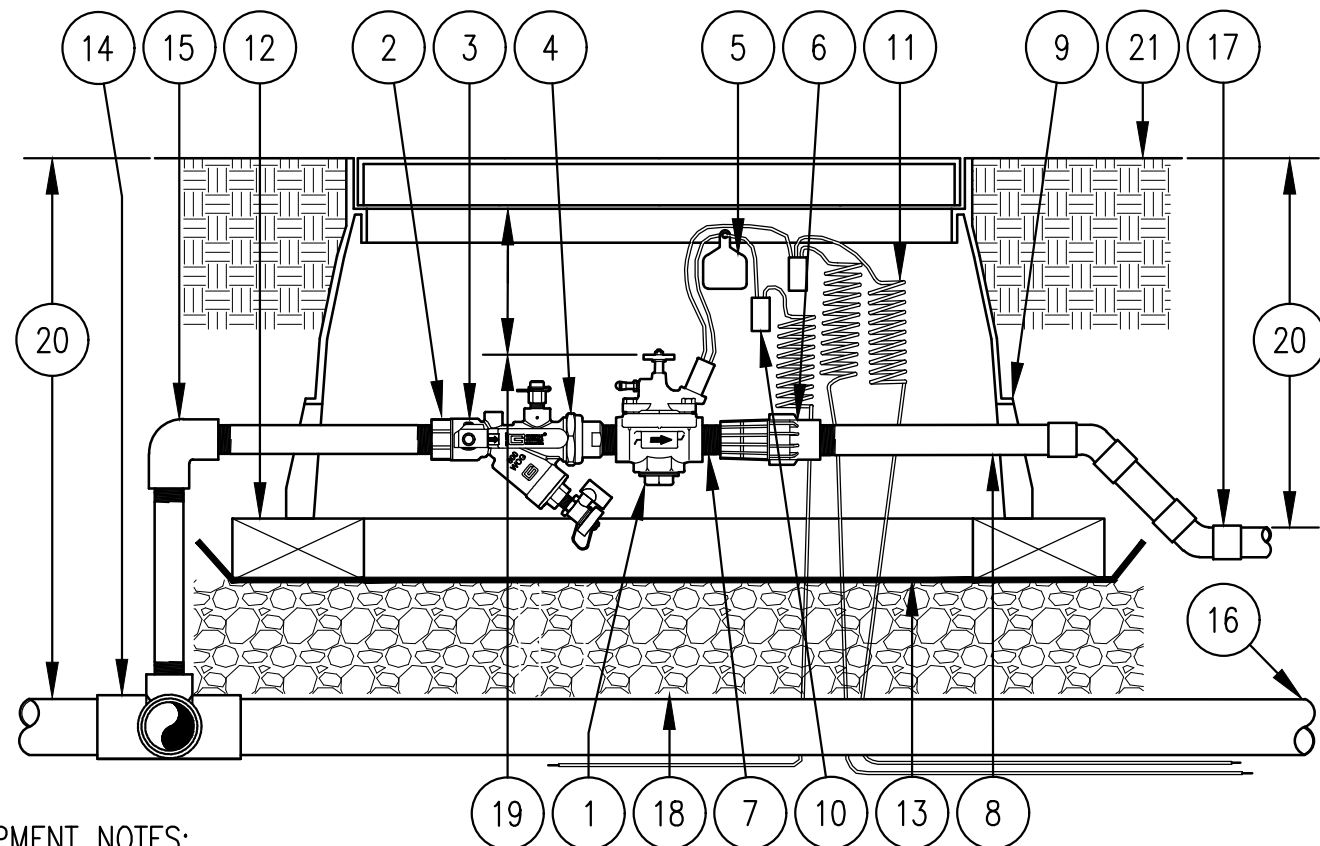
1. REMOTE CONTROL VALVE, SOLENOID CONTROLLED
2. BRASS BALL VALVE, INTEGRAL WITH VALVE
3. BRASS UNION, INTEGRAL WITH VALVE
4. RCV ID TAG
5. NIPPLE, PVC SCH 80, TOE, LENGTH AS REQUIRED
6. RECTANGULAR PLASTIC VALVE BOX WITH WITH BOLT DOWN LID. 12"x17"x12" DEEP. OLD CASTLE (CARSON) 1419 OR APPROVED EQUAL. REFER TO BOX INSTALLATION DETAIL.
7. WATER PROOF CONNECTION (1 OF 2)
8. CONTROL WIRE, 30-INCH LINEAR LENGTH OF COILED WIRE, TYP.
9. COMMON BRICK, 1 AT EACH CORNER OF BOX, FOUR TOTAL
10. GALVANIZED WIRE CLOTH, 1/2" MESH, 19 GAUGE
11. MAIN LINE TEE OR ELL, PVC SCH PER LEGEND, S X S X T
12. NIPPLE, PVC SCH 80, TBE, LENGTH AS REQUIRED AND ELL, PVC SCH 80, T X T
13. PVC MAIN LINE
14. PVC LATERAL LINE. LOWER LATERAL LINE DOWN WITH SOLVENT WELDED SCHEDULE 40 PVC 45 ELBOWS.
15. 3/4" AND 1/2" CLEAN CRUSHED GRAVEL BASE, 6" DEEP
16. 3"±1" MIN. CLEARANCE
17. REFER TO IRRIGATION LEGEND
18. FINISH GRADE

MANUFACTURER'S PIPING ASSEMBLY

2

REMOTE CONTROL VALVE WITH GRISWOLD .1B" ASSEMBLY
NOT TO SCALE

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EQUIPMENT NOTES:

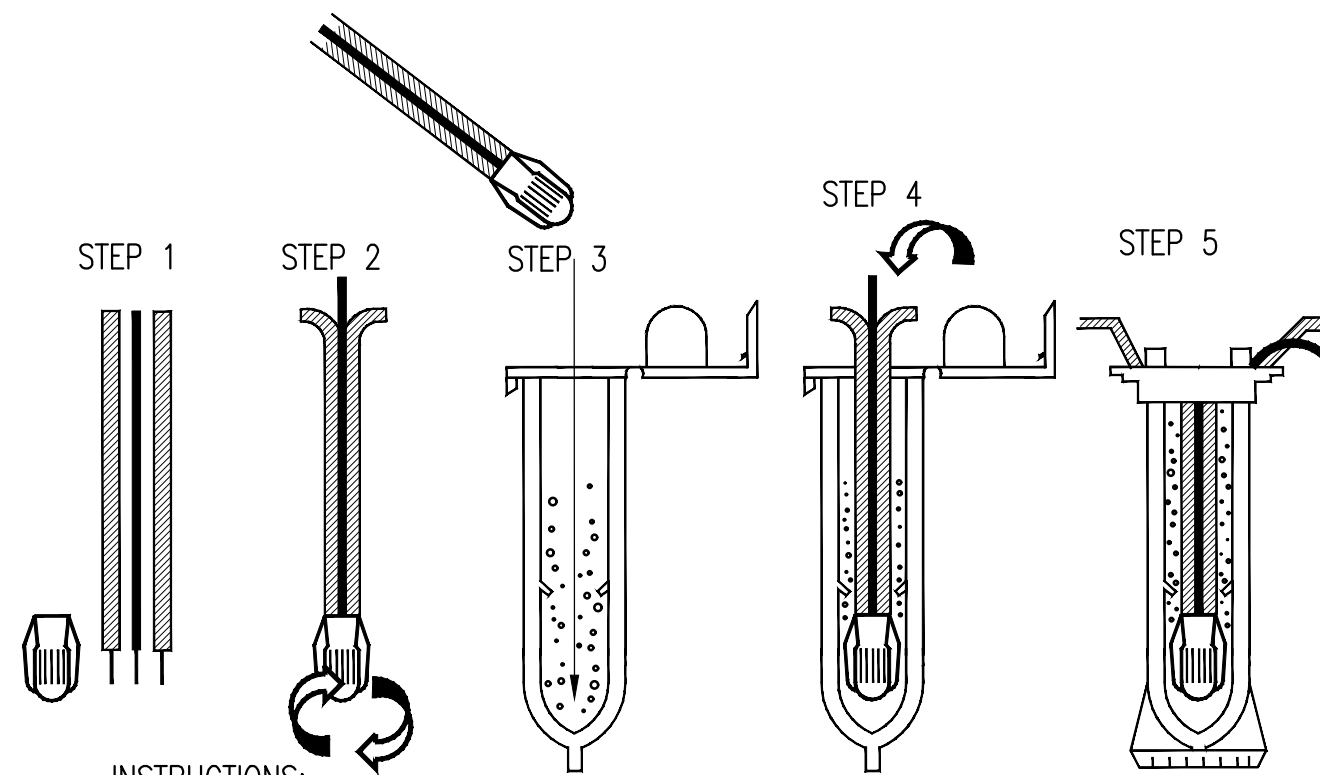
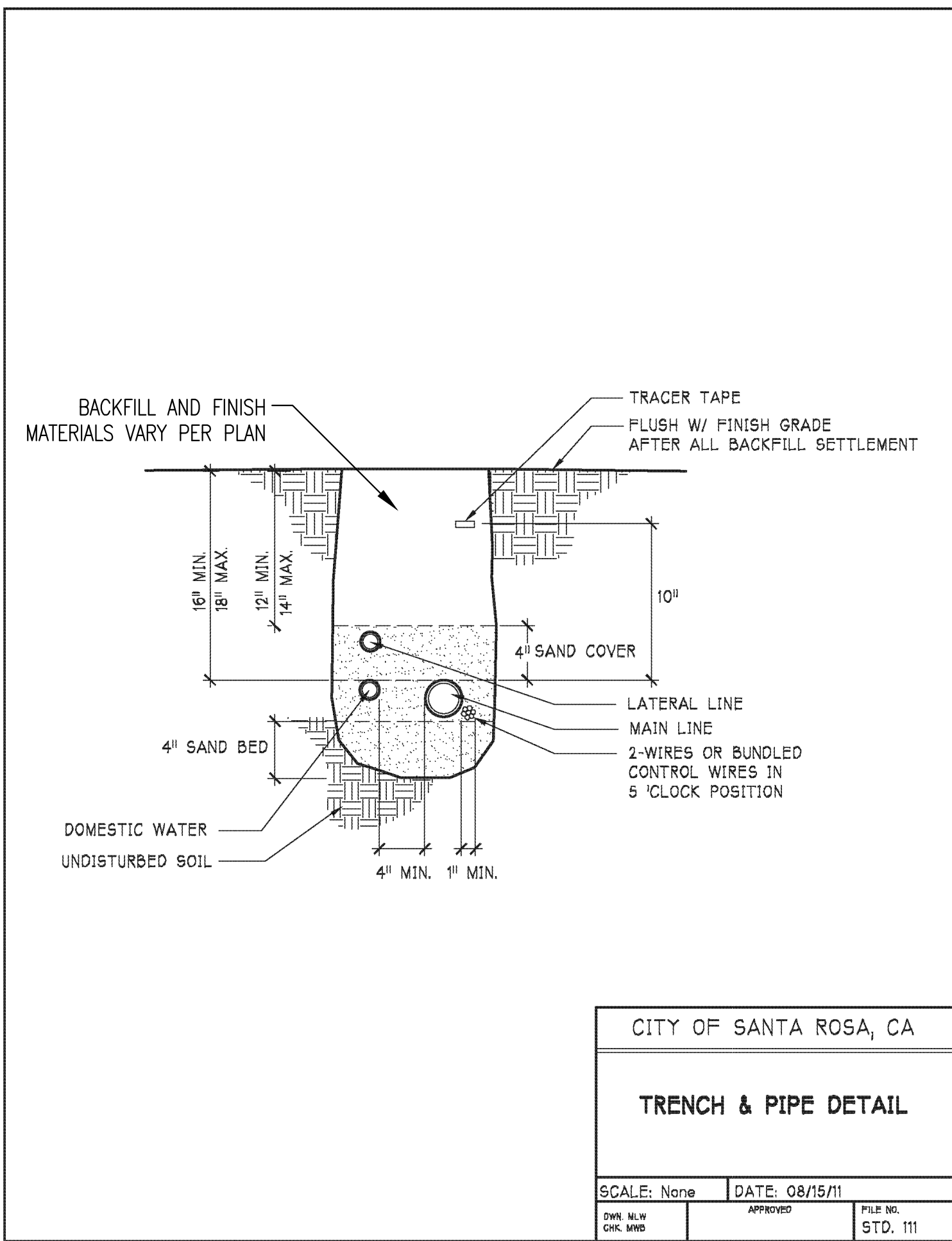
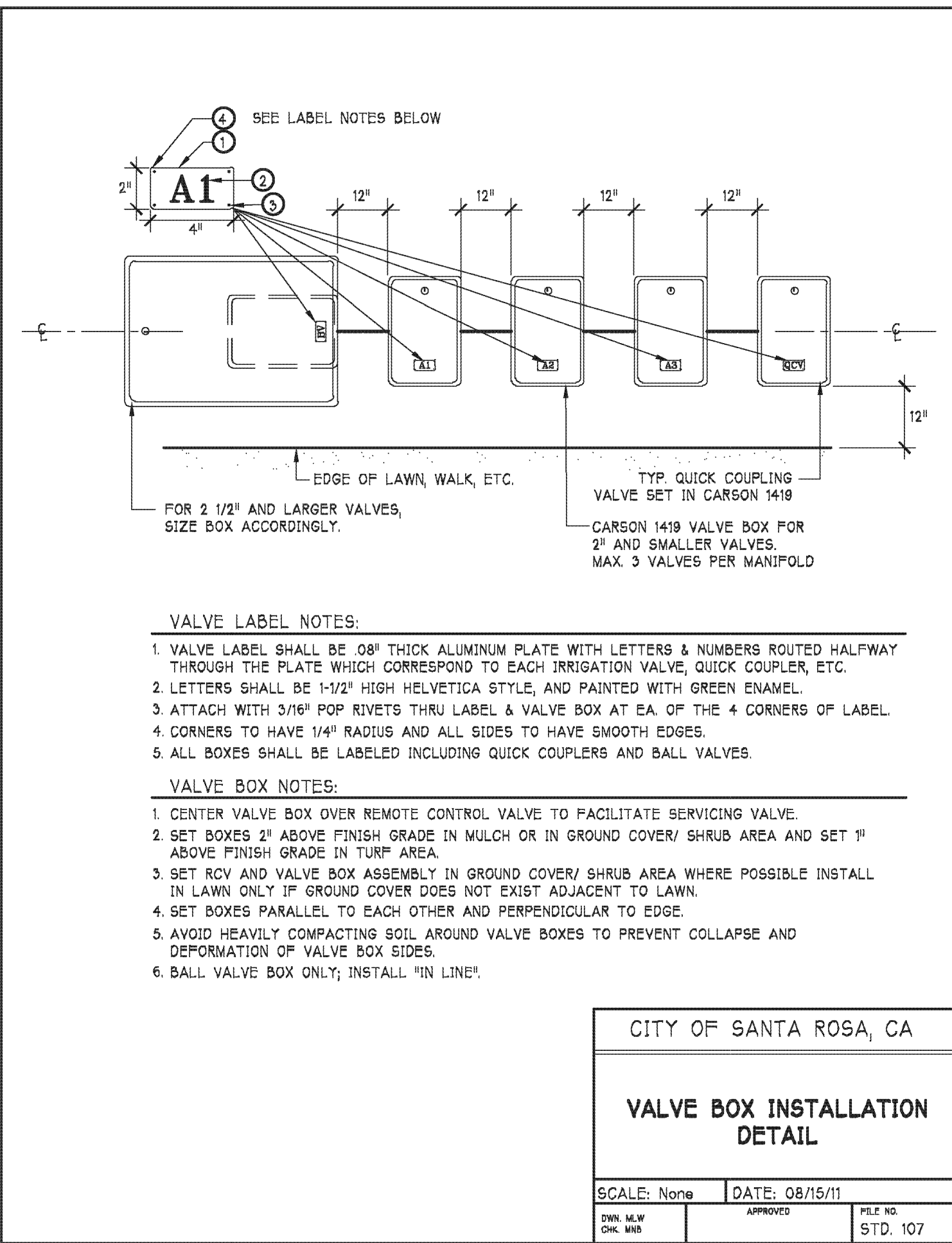
1. REMOTE CONTROL VALVE, SOLENOID CONTROLLED
2. BRASS BALL VALVE, INTEGRAL WITH VALVE
3. BRASS WYE STRAINER, INTEGRAL WITH VALVE
4. BRASS UNION, INTEGRAL WITH VALVE
5. RCV ID TAG
6. PRESSURE REDUCING VALVE TO PROVIDE 30 PSI AT ALL EMITTERS.
7. SHORT NIPPLE, PVC SCH 80, TBE,
8. NIPPLE, PVC SCH 80, TOE, LENGTH AS REQUIRED
9. RECTANGULAR PLASTIC VALVE BOX WITH WITH BOLT DOWN LID. 15-3/4"x25-1/4"x12" DEEP. OLD CASTLE (CARSON) 1324 OR APPROVED EQUAL. REFER TO BOX INSTALLATION DETAIL.
10. WATER PROOF CONNECTION (1 OF 2)
11. CONTROL WIRE, 30-INCH LINEAR LENGTH OF COILED WIRE, TYP.
12. COMMON BRICK, 1 AT EACH CORNER OF BOX, FOUR TOTAL
13. GALVANIZED WIRE CLOTH, 1/2" MESH, 19 GAUGE
14. MAIN LINE TEE OR ELL, PVC SCH PER LEGEND, S X S X T
15. NIPPLE, PVC SCH 80, TBE, LENGTH AS REQUIRED AND ELL, PVC SCH 80, T X T
16. PVC MAIN LINE
17. PVC LATERAL LINE. LOWER LATERAL LINE DOWN WITH SOLVENT WELDED SCHEDULE 40 PVC 45 ELBOWS.
18. 3/4" AND 1/2" CLEAN CRUSHED GRAVEL BASE, 6" DEEP
19. 3"±1" MIN. CLEARANCE
20. REFER TO IRRIGATION LEGEND
21. FINISH GRADE

MANUFACTURER'S PIPING ASSEMBLY

3

EMITTER CONTROL VALVE WITH GRISWOLD .1S" ASSEMBLY
NOT TO SCALE

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INSTRUCTIONS:

1. STRIP WIRES APPROXIMATELY 1/2" TO EXPOSE WIRE.
2. TWIST CONNECTOR AROUND WIRES CLOCKWISE UNTIL HAND TIGHT, DO NOT OVERTIGHTEN.
3. INSERT WIRE ASSEMBLY INTO PLASTIC TUBE UNTIL WIRE CONNECTOR SNAPS PAST LIP IN BOTTOM OF TUBE.
4. PLACE WIRES WHICH EXIT TUBE IN WIRE EXIT HOLES AND CLOSE CAP UNTIL IT SNAPS.
5. INSPECT FINAL SPLICE ASSEMBLY TO BE SECURE AND FINISHED.

4

WIRE SPLICE
NOT TO SCALE

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JDE

JAMES D. EDDY ASSOCIATES
LANDSCAPE IRRIGATION ENGINEERS
DANVILLE, CALIFORNIA
P: (925) 867-3339
EMAIL: JIM@EDDYASSOCIATES.COM
PLANNING - DESIGN

JDE PROJECT NO: 22011

IRRIGATION DESIGNER:

James D. Eddy
JAMES D. EDDY ASSOCIATES, DANVILLE, CALIFORNIA
NOTE: NO LICENSE FOR THE LANDSCAPE IRRIGATION SYSTEM DESIGN PROFESSION IS AVAILABLE IN THE STATE OF CALIFORNIA.
MEMBER: AMERICAN SOCIETY OF IRRIGATION CONSULTANTS



City of
Santa Rosa
architects, inc.



NO.	DATE	REVISION	BY

DWN BY:	ST
CHK BY:	JDE
DATE:	12/2024
SCALE:	AS NOTED

City of Santa Rosa
KAWANA SPRINGS COMMUNITY PARK
COMMUNITY GARDEN
IRRIGATION DETAILS

CITY OF SANTA ROSA

APPROVED

Permit No. B22-6975
Date: 06/19/2025
Review and approval of these documents is based upon compliance with the 2022 California Code of Regulations, Title 24, and all applicable City of Santa Rosa ordinances and State of California laws.
Building Division Authority Signature

REVIEWED FOR CODE COMPLIANCE

These plans and documents have been reviewed and found to be in compliance with the applicable code requirements of the jurisdiction. Issuance of a permit is recommended subject to approval by other departments and any noted conditions. The stamping of these plans shall not be held to permit or be an approval of any violation of applicable codes or standards to relieve the owner, design professional of record or contractor of compliance with the applicable codes and standards. Plan review of documents does not authorize construction to proceed in violation of any federal, state or local regulations.

BUREAU VERITAS NORTH AMERICA, INC.

SIGNATURE: BV

DATE: 1/21/2025

OWNERSHIP OF DOCUMENTS

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L3.4
CONTRACT NO. C02393
SHEET 15 OF 27
FILE NO. 2022-0028

IRRIGATION HEAD SCHEDULES

BUBBLER IRRIGATION @ SHRUBS – LOW WATER USE

MANUFACTURER: RAIN BIRD						SHRUB CANOPY(SQ.FT.): 3.1									
MODEL: 1401						SPECIES FACTOR(Kc): 0.3									
PSI: 30						MICROCLIMATE FACTOR(Kmc): 1									
GPM OF BUBBLER: 0.25						DENSITY FACTOR(Kd): 1									
NUMBER OF BUBBLERS: 1						IRRIGATION EFFICIENCY: 0.81									
GPM OF ALL BUBBLER(S): 0.25						SOIL INFILTRATION RATE(INCHES): 0.2									
SHRUB CANOPY(FT.): 2						YEAR 2 REDUCTION AMOUNT(%): 10									
		MONTH	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC	TOTAL
ETO/YEAR(INCHES)		1.2	1.7	2.8	3.7	5.0	6.0	6.1	5.9	4.5	2.9	1.5	0.7		42.0
ETO/MONTH(INCHES)		0.3	0.4	0.6	0.8	1.1	1.4	1.4	1.3	1.0	0.7	0.3	0.2		
MINUTES PER WEEK		YEAR 1	1	2	2	3	4	4	5	4	3	2	1	1	
		YEAR 2	1	2	2	3	4	4	5	4	3	2	1	1	
DAYS PER WEEK		YEAR 1	1	1	2	2	3	3	3	3	3	3	2	1	
		YEAR 2	1	1	2	2	3	3	3	3	3	3	2	1	
MINUTES OF WATER PER DAY		YEAR 1	1	2	1	2	2	2	2	2	1	1	1	1	
		YEAR 2	1	2	1	2	2	2	2	2	1	1	1	1	
CYCLES PER DAY TO MEET SOIL INFILTRATION RATE		YEAR 1	2	2	2	3	2	3	3	3	2	2	1	1	
		YEAR 2	2	2	2	3	2	3	3	3	2	2	1	1	
MAX. RUN TIME (MINUTES) PER CYCLE		YEAR 1	1	1	1	1	1	1	1	1	1	1	1	1	
		YEAR 2	1	1	1	1	1	1	1	1	1	1	1	1	

BUBBLER IRRIGATION @ SHRUBS – VERY LOW WATER USE

MANUFACTURER: RAIN BIRD							SHRUB CANOPY(SQ.FT.): 3.1								
MODEL: 1401							SPECIES FACTOR(Kc): 0.1								
PSI: 30							MICROCLIMATE FACTOR(Kmc): 1								
GPM OF BUBBLER: 0.25							DENSITY FACTOR(Kd): 1								
NUMBER OF BUBBLERS: 1							IRRIGATION EFFICIENCY: 0.81								
GPM OF ALL BUBBLER(S): 0.25							SOIL INFILTRATION RATE(INCHES): 0.2								
SHRUB CANOPY(FT.): 2							YEAR 2 REDUCTION AMOUNT(%): 10								
		MONTH	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC	TOTAL
ETO/YEAR(INCHES)		1.2	1.7	2.8	3.7	5.0	6.0	6.1	5.9	4.5	2.9	1.5	0.7		42.0
ETO/MONTH(INCHES)		0.3	0.4	0.6	0.8	1.1	1.4	1.4	1.3	1.0	0.7	0.3	0.2		
MINUTES PER WEEK		YEAR 1	1	1	1	1	2	2	2	2	1	1	1	1	
		YEAR 2	1	1	1	1	2	2	2	2	1	1	1	1	
DAYS PER WEEK		YEAR 1	1	1	2	2	3	3	3	3	3	3	2	1	
		YEAR 2	1	1	2	2	3	3	3	3	3	3	2	1	
MINUTES OF WATER PER DAY		YEAR 1	1	1	1	1	1	1	1	1	1	1	1	1	
		YEAR 2	1	1	1	1	1	1	1	1	1	1	1	1	
CYCLES PER DAY TO MEET SOIL INFILTRATION RATE		YEAR 1	2	2	2	3	2	3	3	3	2	2	1	1	
		YEAR 2	2	2	2	3	2	3	3	3	2	2	1	1	
MAX. RUN TIME (MINUTES) PER CYCLE		YEAR 1	1	1	1	1	1	1	1	1	1	1	1	1	
		YEAR 2	1	1	1	1	1	1	1	1	1	1	1	1	

BUBBLER IRRIGATION @ STAND ALONE TREES – LOW WATER USE

MANUFACTURER: RAIN BIRD						TREE CANOPY(SQ.FT.): 19.6									
MODEL: RWS						SPECIES FACTOR(Kc): 0.3									
PSI: 30						MICROCLIMATE FACTOR(Kmc): 1									
GPM OF BUBBLER: 0.25						DENSITY FACTOR(Kd): 0.9									
NO. OF BUBBLERS: 2						IRRIGATION EFFICIENCY: 0.81									
GPM OF ALL BUBBLER(S): 0.5						SOIL INFILTRATION RATE(INCHES): 0.2									
TREE CANOPY(FT.): 5						YEAR 2 REDUCTION AMOUNT(%): 10									
	MONTH	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC	TOTAL	
ADJUSTED ETO/MONTH(INCHES)		1.2	1.7	2.8	3.7	5.0	6.0	6.1	5.9	4.5	2.9	1.5	0.7	42.0	
ADJUSTED ETO/WEEK(INCHES)		0.3	0.4	0.6	0.8	1.1	1.4	1.4	1.3	1.0	0.7	0.3	0.2		
MINUTES PER WEEK	YEAR 1	3	4	6	7	10	12	12	11	9	6	3	2		
	YEAR 2	3	4	6	7	9	11	11	10	9	6	3	2		
DAYS PER WEEK	YEAR 1	1	1	2	2	3	3	3	3	3	3	2	1		
	YEAR 2	1	1	2	2	3	3	3	3	3	3	2	1		
MINUTES OF WATER PER DAY	YEAR 1	3	4	3	4	4	4	4	4	3	2	2	2		
	YEAR 2	3	4	3	4	4	4	4	4	3	2	2	2		
CYCLES PER DAY TO MEET SOIL INFILTRATION RATE	YEAR 1	2	2	2	3	2	3	3	3	2	2	1	1		
	YEAR 2	2	2	2	3	2	3	3	3	2	2	1	1		
MAX. RUN TIME (MINUTES) PER CYCLE	YEAR 1	2	2	2	2	2	2	2	2	2	1	2	2		
	YEAR 2	2	2	2	2	2	2	2	2	2	1	2	2		

BUBBLER IRRIGATION @ STAND ALONE TREES – MEDIUM WATER USE

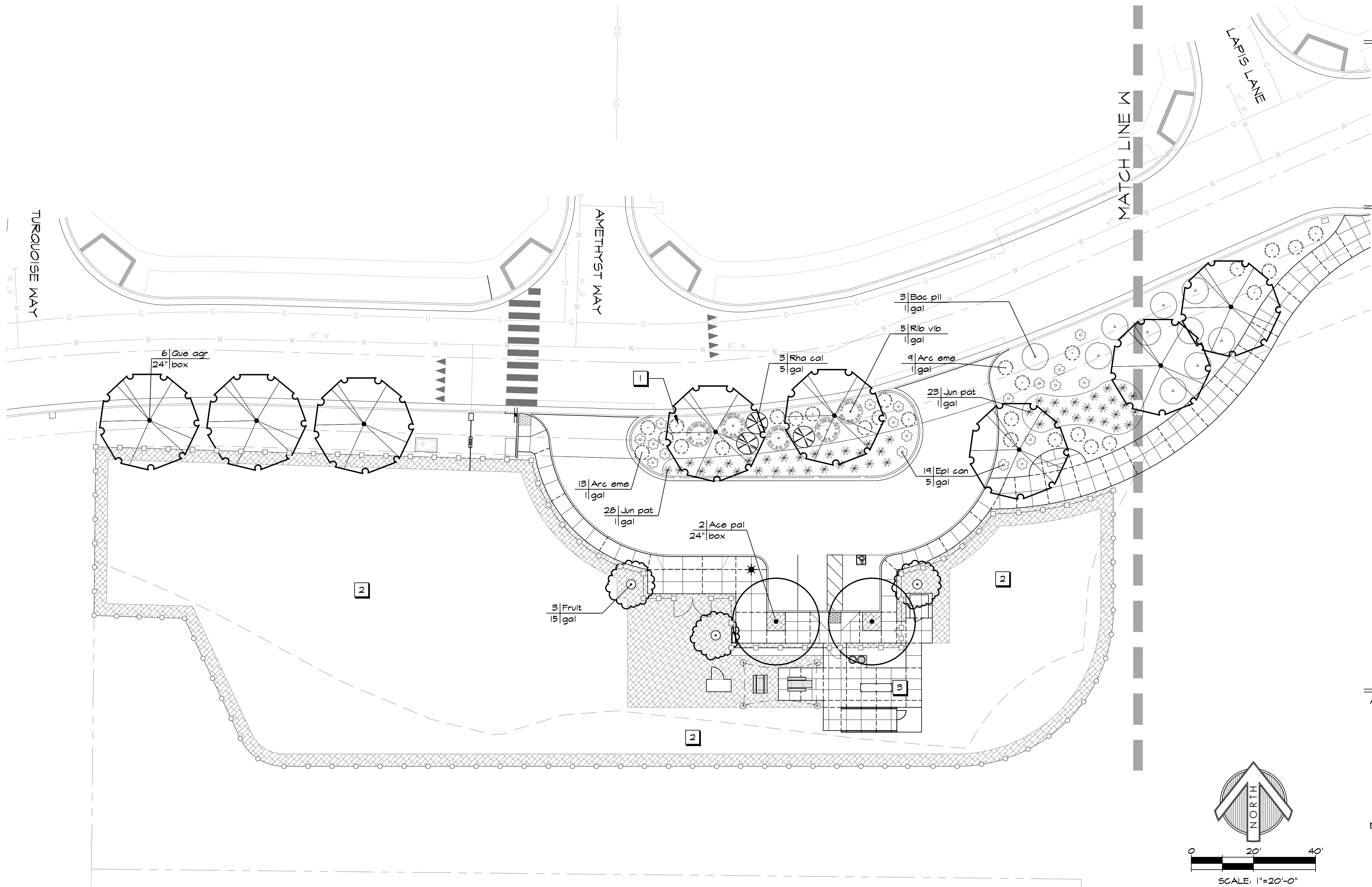
MANUFACTURER: RAIN BIRD						TREE CANOPY(SQ.FT.): 19.6									
MODEL: RWS						SPECIES FACTOR(Kc): 0.5									
PSI: 30						MICROCLIMATE FACTOR(Kmc): 1									
GPM OF BUBBLER: 0.25						DENSITY FACTOR(Kd): 0.9									
NO. OF BUBBLERS: 2						IRRIGATION EFFICIENCY: 0.81									
GPM OF ALL BUBBLER(S): 0.5						SOIL INFILTRATION RATE(INCHES): 0.2									
TREE CANOPY(FT.): 5						YEAR 2 REDUCTION AMOUNT(%): 10									
	MONTH	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC	TOTAL	
	ADJUSTED ETO/MONTH(INCHES)	1.2	1.7	2.8	3.7	5.0	6.0	6.1	5.9	4.5	2.9	1.5	0.7	42.0	
	ADJUSTED ETO/WEEK(INCHES)	0.3	0.4	0.6	0.8	1.1	1.4	1.3	1.0	0.7	0.3	0.2			
MINUTES PER WEEK	YEAR 1	4	6	9	12	16	19	19	19	14	9	5	3		
	YEAR 2	4	6	9	11	15	18	18	18	13	9	5	3		
DAYS PER WEEK	YEAR 1	1	1	2	2	3	3	3	3	3	3	2	1		
	YEAR 2	1	1	2	2	3	3	3	3	3	3	2	1		
MINUTES OF WATER PER DAY	YEAR 1	4	6	5	6	6	7	7	7	5	3	3	3		
	YEAR 2	4	6	5	6	6	7	7	7	5	3	3	3		
CYCLES PER DAY TO MEET SOIL INFILTRATION RATE	YEAR 1	2	2	2	3	2	3	3	3	2	2	1	1		
	YEAR 2	2	2	2	3	2	3	3	3	2	2	1	1		
MAX. RUN TIME (MINUTES) PER CYCLE	YEAR 1	2	3	3	2	3	3	3	3	3	2	3	3		
	YEAR 2	2	3	3	2	3	3	3	3	3	2	3	3		

SCHEDULE NOTES:

- THE SCHEDULES ARE INTENDED AS A GUIDE ONLY. ACTUAL WATERING TIMES WILL BE DEPENDANT ON ACTUAL Eto RATES, SOIL INFILTRATION RATE, AND SOIL WATER HOLDING CAPACITY.
- THE SCHEDULES ARE CALCULATED BASED UPON DEDUCTING 0% OF THE YEARLY RAINFALL FROM THE OVERALL EVAPOTRANSPIRATION RATE.
- PER THE CITY OF SANTA ROSA MODEL WATER EFFICIENT LANDSCAPE ORDINANCE AND CALIFORNIA STATE ORDINANCE, THE FOLLOWING APPLIES TO THIS PROJECT:
 - THE SANTA ROSA Eto IS TAKEN FROM APPENDIX A OF THE CA STATE MWEL0 ORDINANCE.
 - THE "SPECIAL LANDSCAPED AREA" (SLA) PLANT OR SPECIES FACTOR IS A FACTOR OF 1 FOR ALL PLANTS AND TURF.

SINGLE-OUTLET EMITTER IRRIGATION @ SHRUBS – LOW WATER USE

MANUFACTURER:RAIN BIRD						TOTAL NUMBER OF EMITTER OUTLETS: 1									
MODEL: PCT10						TOTAL GPM OF EMITTER(S): 0.167									
PSI: 10						MICROCLIMATE FACTOR(K _{mc}): 1									
GPH PER OUTLET: 10						DENSITY FACTOR(K _d): 1									
PLANT CANOPY(FT.): 2						IRRIGATION EFFICIENCY: 0.81									
PLANT CANOPY(SQ.FT.): 3.1						SOIL INFILTRATION RATE(INCHES): 0.2									
SPECIES FACTOR(K _c): 0.3						YEAR 2 REDUCTION AMOUNT(%): 10									
		MONTH	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC	TOTAL
		ADJUSTED ETO/MONTH(INCHES)	1.2	1.7	2.8	3.7	5.0	6.0	6.1	5.9	4.5	2.9	1.5	0.7	42.0
		ADJUSTED ETO/WEEK(INCHES)	0.3	0.4	0.6	0.8	1.1	1.4	1.4	1.3	1.0	0.7	0.3	0.2	
MINUTES PER WEEK		YEAR 1	2	2	3	4	5	6	7	6	5	3	2	1	
		YEAR 2	2	2	3	4	5	6	7	6	5	3	2	1	
DAYS PER WEEK		YEAR 1	1	1	2	2	4	4	4	4	4	3	2	1	
		YEAR 2	1	1	2	2	4	4	4	4	4	3	2	1	
MINUTES OF WATER PER DAY		YEAR 1	2	2	2	2	1	2	2	2	1	1	1	1	
		YEAR 2	2	2	1	2	1	2	1	1	1	1	1	1	
CYCLES PER DAY TO MEET SOIL INFILTRATION RATE		YEAR 1	2	2	2	3	2	2	2	2	2	2	1	1	
		YEAR 2	2	2	2	3	2	2	2	2	2	2	1	1	
MAX. RUN TIME (MINUTES) PER CYCLE		YEAR 1	1	1	1	1	1	1	1	1	1	1	1	1	
		YEAR 2	1	1	1	1	1	1	1	1	1	1	1	1	

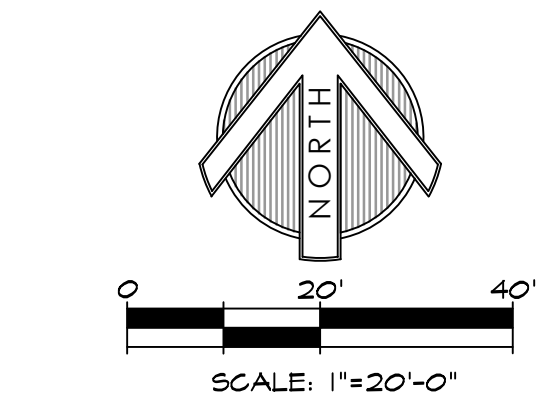


PLANT LEGEND

SYMBOL	CODE	BOTANICAL NAME COMMON NAME	QTY	SIZE	WATER USE
TREES					
	Que agr	Quercus agrifolia Coast Live Oak	11	24" box	L
	Ace pal	Acer pal. 'Sango-kaku' Coral Bark Maple	2	24" box	M
	Fruit	Fruit Tree Variety shall be selected by City	3	15 gallon or bare root	M

PLANT LEGEND CONT.

SYMBOL	CODE	BOTANICAL NAME COMMON NAME	QTY	SIZE	WATER USE
SHRUBS					
	Arc eme	Arctostaphylos 'Emerald Carpet' Emerald Carpet Dwarf Manzanita	42	1 gallon	L
	Bac pil	Baccharis p. 'Twin Peaks' Twin Peaks Coyote Brush	16	1 gallon	L
	Epi can	Epilobium canum California Fuchsia	19	1 gallon	L
	Jun pat	Juncus patens California Gray Rush	51	1 gallon	L
	Rha cal	Rhamnus californica Mound San Bruno Coffeeberry	3	5 gallon	L
	Rib vib	Ribes viburnifolium Evergreen Currant	5	5 gallon	L



SHEET NOTES

- Contractor shall sample soil from this area for fertility testing.
- Contractor shall incorporate 8 inch depth of Compost Plus in garden plot area. Compost Plus is available from Wheeler Zamaroni, 3500 Petaluma Hill Rd, Santa Rosa, CA 95404, (707) 543-8400, or approved equal. See Detail 1 on sheet L4.2.
- Contractor shall supply planting soil for ADA Raised Planter. Planting soil shall be Veggie Mix as available from Wheeler Zamaroni, 3500 Petaluma Hill Rd, Santa Rosa, CA 95404, (707) 543-8400, or approved equal.

PLANTING NOTES

- Prior to commencement of planting, the Contractor shall verify locations of all underground utilities.
- Contractor shall adjust all plant material around electrical utilities, valve boxes, etc., as required in the field.
- All landscape grades shall be smooth and feathered in appearance.
- Irrigation system shall be fully operational prior to planting. Contractor shall thoroughly water all plants immediately after planting.
- All trees shall be double staked and installed per planting details. All trees shall be of adequate trunk caliper to stand without support.
- Installing Contractor shall verify existing grade in the field prior to planting. Finished surfaces shall be uniform and smooth. Finished grade of planting and bark mulch areas shall be flush with top of edging, pavement and walks.
- Soil for all exposed soil and planting areas, except garden plot and bioretention areas, shall receive weed fabric and 4" minimum depth of mulch.
- See Mulch Details 1 and 2 on Sheet L1.2 for Mulch type. See Sheet Notes on this sheet for compost information in garden plot areas.
- Bioretention areas shall receive 3' minimum depth of the compost in lieu of bark mulch. Compost used shall match bioretention soil mix specified by Civil Engineer. See Civil Engineering Drawings for required depth of bioretention soil mix.
- All trees planted within 8' of adjacent paving, curbing, hardscape, water meters, joint trenches, etc. shall receive Deep Root Barrier UB 24-2 (24" depth x 10' min. length) as manufactured by Deep Root Partners (800) 458-7668, or approved equal.
- No plant material shall be substituted without prior written consent from the City.
- Contractor shall be responsible for the pre-ordering of all plant material after the Notice to Proceed. Photographs of all plants shall be submitted to the City prior to placing order.
- All plant material shall be certified by the Sonoma County Agricultural Commissioner inspection program for freedom from the glassy winged sharpshooter or other pests identified by the Agricultural Commissioner. The Agricultural Commissioner's office shall be notified of all impending deliveries of live plants with points of origin outside of Sonoma County so that inspection can be arranged.
- All trees, shrubs, grasses and groundcover of the same type and container size shall be matched in height and width.
- The Plant Legend is provided for convenience only, not accurate bidding purposes. Graphic depiction of plant material shall take precedence over stated quantities. Contractor shall notify the City to obtain clarification if there are discrepancies.

SOILS MANAGEMENT NOTES

- A. The following organic amendments, soil amendments and fertilizer rates and quantities shall be used for bid basis only. Contractor shall arrange and pay for two (2) soil fertility tests, in two (2) distinct project areas, by an accredited soils laboratory of existing site soil after rough grading operations are complete, and shall amend the soils according to said laboratory's recommendations. The soils recommendations shall be considered a part of these contract documents. The soils report must provide the following information:
- Soil permeability rate in inches per hour.
 - Soil texture test.
 - Cation exchange capacity.
 - Soil fertility, including test for nitrogen, potassium, phosphorous, pH, organic matter and specific conductance (electrical conductivity).
 - Recommendation for amendments to the planting area soil.
- B. Topsoil: All landscape areas shall have a minimum 8" depth of topsoil with greater depths as required for planting work. Contractor shall provide topsoil which is fertile and friable, possessing characteristics of representative productive soils on the site. It shall not contain toxic substances which may be harmful to plant growth. When herbicide contamination is suspected then a radish/rye grass growth trial must be performed. Consult with the City prior to decision to test. It shall be uniformly textured and free of all objectionable foreign materials, oil or chemicals which may be injurious to plant growth. Natural topsoil shall possess a pH factor between 5.5 and 7.5, a sodium absorption ratio (SAR) of less than 8, a boron concentration of the saturation extract of less than 1 ppm, and salinity of the saturation extract at 25 degrees C, of less than 4.0 millimhos per centimeter. If required to import topsoil, Contractor shall obtain topsoil from naturally well-drained sites where topsoil occurs in a depth of not less than four inches (4"); do not obtain from bogs or marshes.
- C. Organic Amendment: Nitrified fir bark having a minimum organic content of 94% and a nitrogen content of 0.8% minimum to 1.2% maximum on a dry weight basis. Fir bark shall be shredded to pass a one quarter inch (1/4") mesh screen. Incorporate organic amendment and fertilizer into the soil to a minimum depth of six inches (6") at a minimum rate of six cubic yards (6 cu yd) per one thousand square feet (1,000 sf) or per specific amendment recommendations from the soils report.
- D. Fertilizer, for landscape planting areas:
- Fertilizer shall be an organic fertilizer in the granular or pelleted form. Fertilizer shall be delivered to the site in containers labeled in accordance with the applicable State of California regulations, bearing the warranty of the producer or the grade furnished, and shall be uniform in composition, dry and free-flowing.
 - Shrubs:
 - 4N-3P-2K, Nutri-Rich pelleted type or equal.
 - Sulphate - sulphur
 - Lime for pH adjustment of moderately acid soil
 - Starting one (1) month after planting, on a monthly basis, 12N-0P-0K Feather Meal or equal. 25 lbs. per 1,000 square feet.
 - Trees:
 - 4N-3P-2K, Nutri-Rich pelleted type or equal. Use 0.5 lbs per height. Apply according to manufacturer's instructions.
 - After planting: 12N-0P-0K Feather Meal. 25 lbs. per 1,000 square feet

CITY OF SANTA ROSA
APPROVED
Permit No. B22-6973
Date: 05/13/2025
Review and approval of these documents is based upon compliance with the 2022 California Code of Regulations, Title 24, and all applicable City of Santa Rosa ordinances and State of California laws.
Building Division Architectural Signature

REVIEWED FOR CODE COMPLIANCE

These plans and documents have been reviewed and found to be in compliance with the applicable code requirements of the jurisdiction. Issuance of a permit is recommended subject to approval by other departments and any noted conditions. The stamping of these plans shall not be held to permit or be an approval of any violation of applicable codes or standards to relieve the owner, design professional of record or contractor of compliance with the applicable codes and standards. Plan review of documents does not authorize construction to proceed in violation of any federal, state or local regulations.

BUREAU VERITAS NORTH AMERICA, INC.

SIGNATURE: BV

DATE: 1/21/2025



City of
Santa Rosa



NO.	DATE	REVISION	BY

DWN BY: ECD	CHK BY: GSM	DATE: 12/2024	SCALE: 1" = 20'
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City of Santa Rosa	KAWANA SPRINGS COMMUNITY PARK COMMUNITY GARDEN	PLANTING PLAN
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L4.0

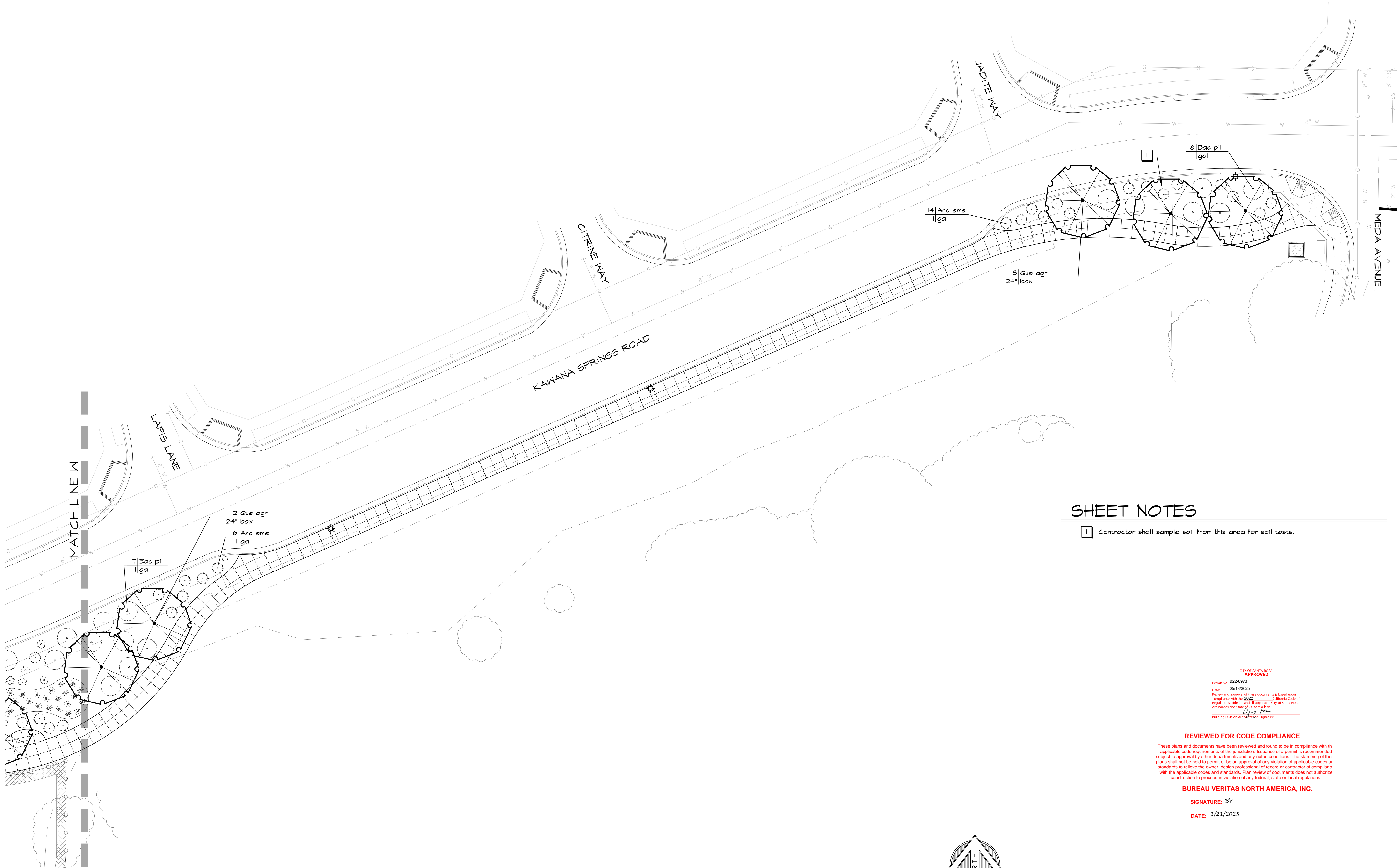
CONTRACT NO.
C02393

SHEET 18 OF 27

FILE NO. 2022-0028

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SHEET NOTES

- 1 Contractor shall sample soil from this area for soil tests.

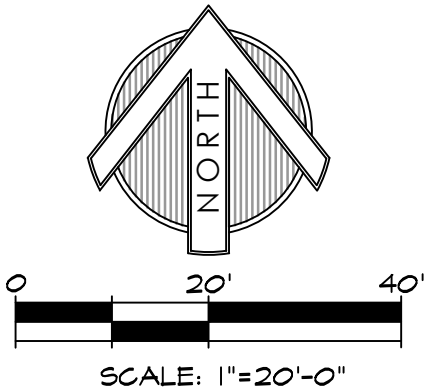
CITY OF SANTA ROSA
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Date: 05/13/2025
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Building Division Authority Signature

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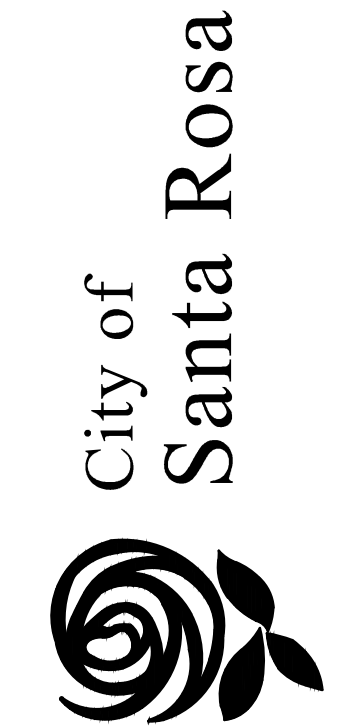
SIGNATURE: BV

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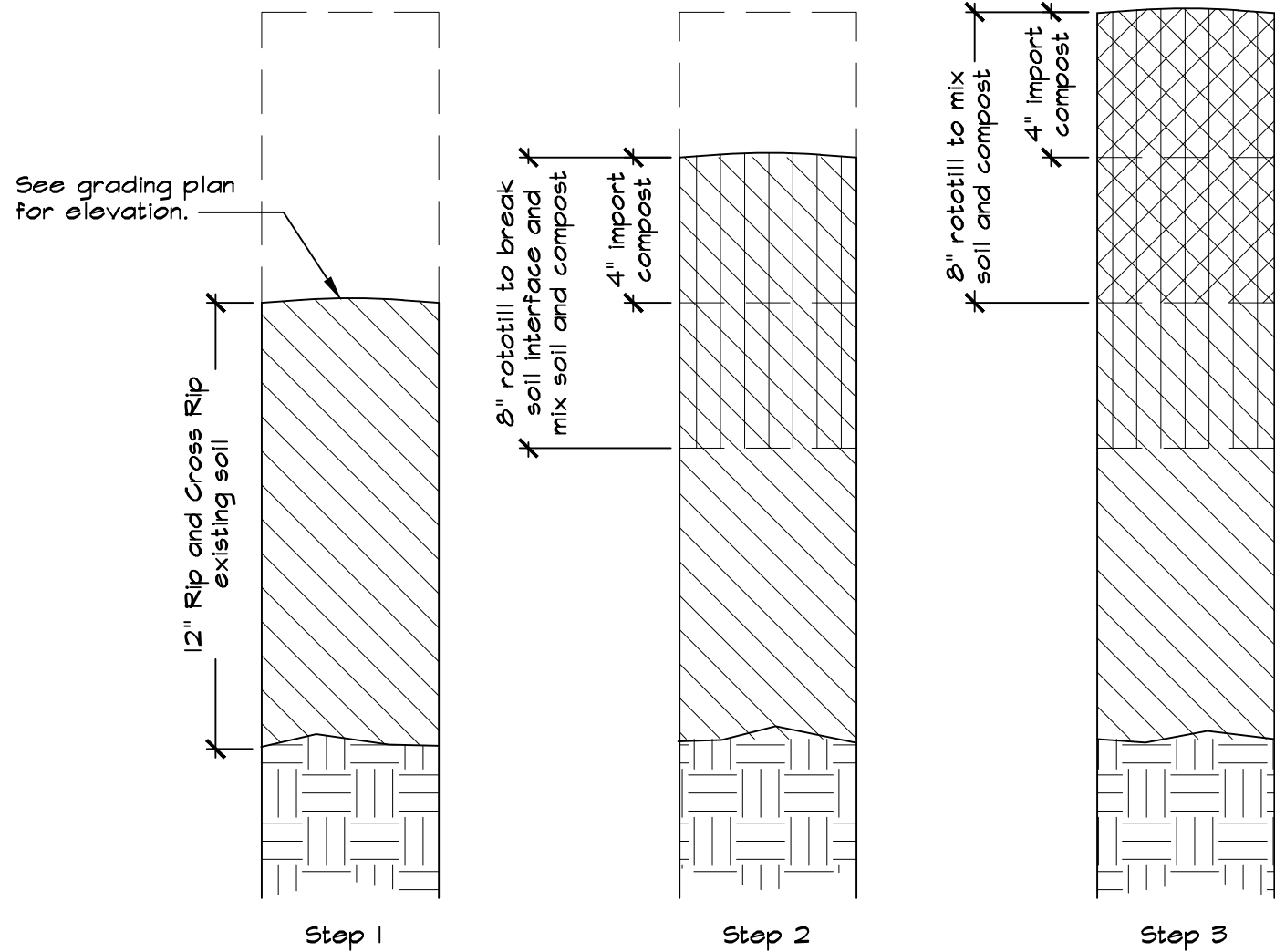


NO.	DATE	REVISION	BY

DWN BY:	ECD
CHK BY:	GSM
DATE:	12/2024
SCALE:	1" = 20'

CITY OF SANTA ROSA KAWANA SPRINGS COMMUNITY PARK COMMUNITY GARDEN PLANTING PLAN
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L4.1
CONTRACT NO. C02393
SHEET 19 OF 27
FILE NO. 2022-0028



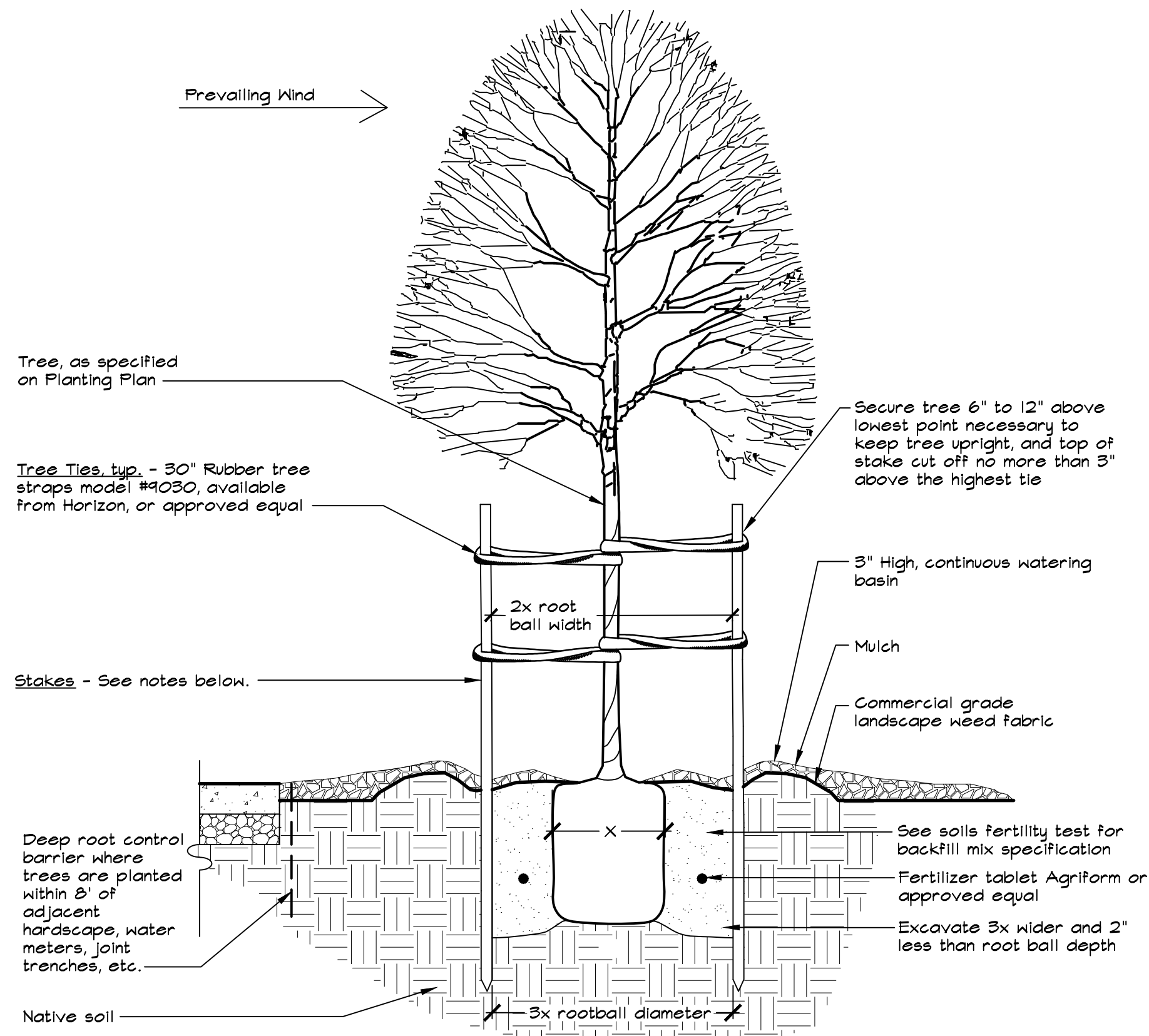
SEQUENCE:

- Contractor shall follow these steps:
1. Rip and cross rip existing soil to 12" depth and loosen all compacted soil in garden plot areas. Tractor teeth shall be a maximum 8" o.c.
 2. Evenly spread 4" depth of compost over garden plot areas and rototill to 8" depth to break soil interface.
 3. Evenly spread an additional 4" depth of compost and rototill to a 8" depth to thoroughly mix the soil and compost. Remove any debris and rocks over 1 inch in diameter and dispose of properly.

NOTES:

1. Rototill both passes to a 8" minimum depth.
2. Slopes 3:1; maximum at edges of garden plot areas.
3. See Sheet Notes on Planting Plan for compost specification.

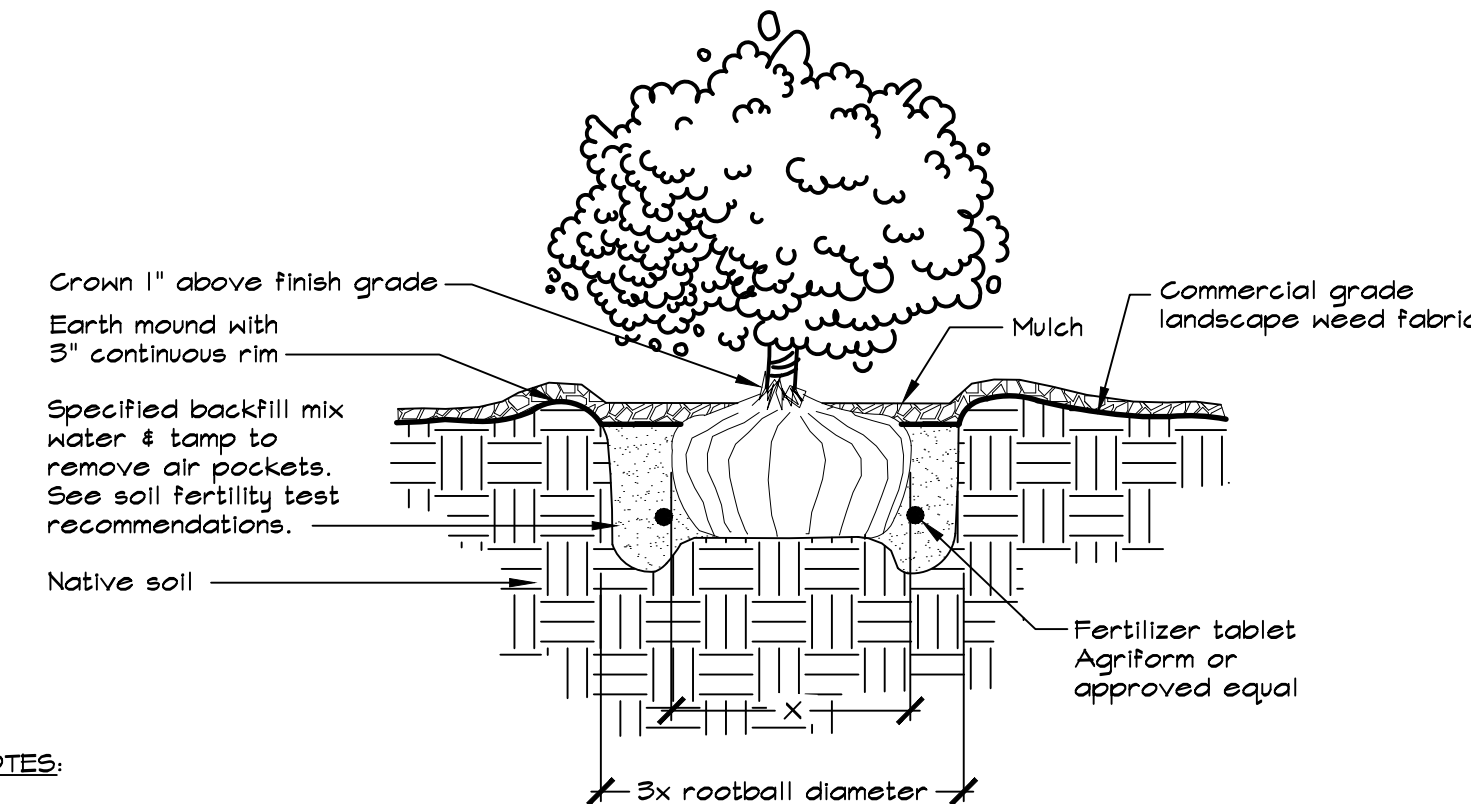
1 COMPOST IN GARDEN PLOT AREAS
NOT TO SCALE



NOTES:

1. Root ball shall rest on undisturbed soil.
2. Plant tablets shall be equally spaced around root ball. The number of tablets shall be four (4) for 15 gallon and six (6) for 24" box and larger, or as specified in the soils fertility test recommendations.
3. Contractor shall water planting pit thoroughly following planting.
4. Contractor shall install two (2) inch diameter by ten (10) foot minimum lodge pole pine stakes for 15 gallon and smaller trees and three (3) inch diameter by twelve (12) foot minimum lodge pole pine stakes for 24" box and larger trees. Stakes shall be pressure treated with a wood preservative material. Quantity, diameter and length shall be increased as necessary to securely support the tree in an upright manner.
5. Tree stakes shall have equal degree of separation between stakes.
6. Trees shall be staked parallel with the direction of the prevailing wind.
7. Contractor shall use Deep Root Control Barrier per Planting Notes on Planting Plan, Sheet L4.0.
8. See Detail 2 on Sheet L1.2 for mulch specifications.

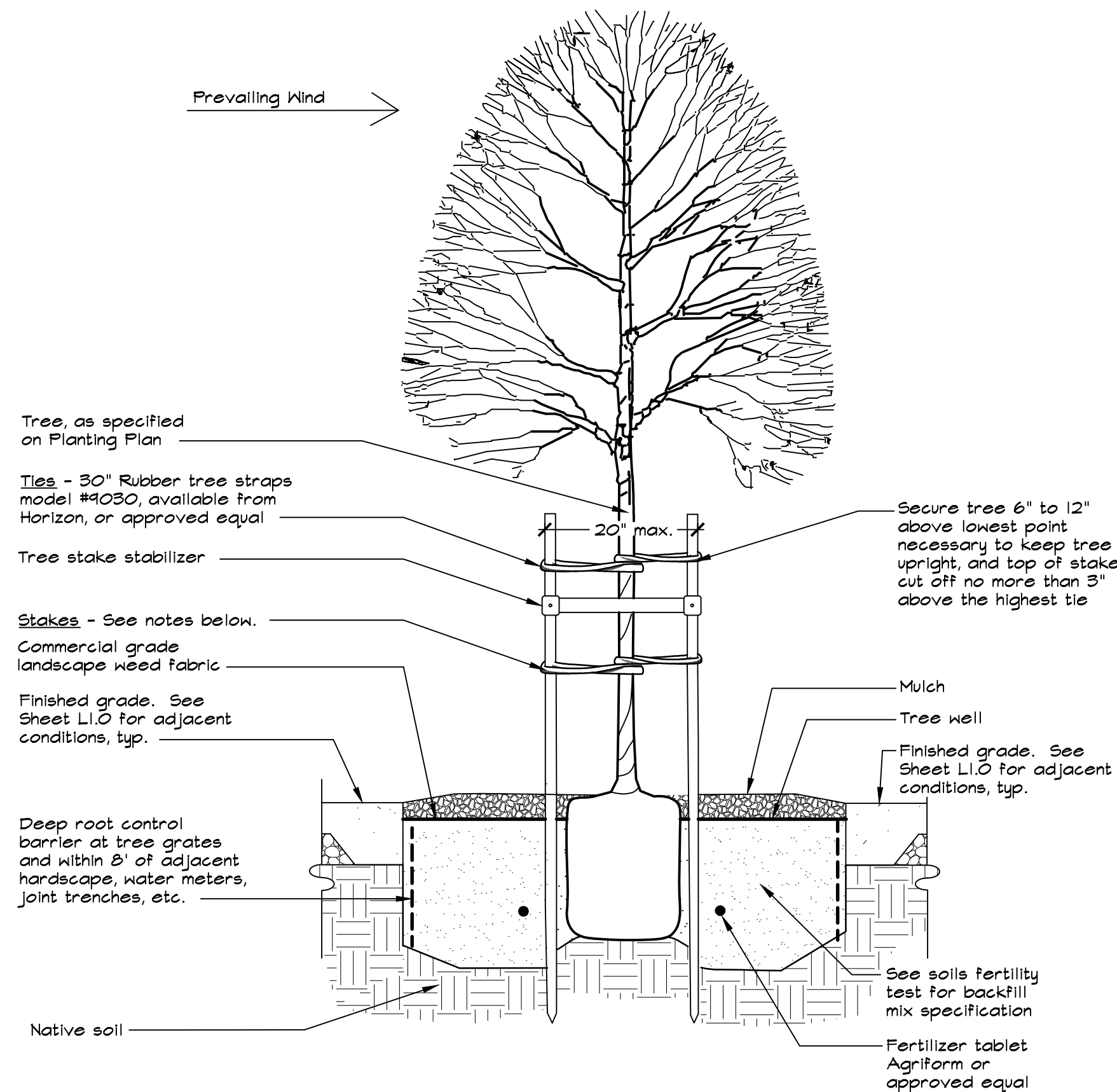
2 TREE PLANTING AND STAKING
NOT TO SCALE



NOTES:

1. Root ball shall rest on undisturbed soil.
2. Plant tablets shall be equally spaced around root ball. The number of tablets shall be 1 for 4" pot or liner, 2 for 1 gallon, 3 for 5 gallon, and 4 for 15 gallon, or as specified in the soils fertility test recommendations.
3. Contractor shall water planting pit thoroughly following planting.
4. See Planting Notes on Planting Plan.
5. See Detail 2 on Sheet L1.2 for mulch specifications.

2 SHRUB/GROUNDCOVER PLANTING
NOT TO SCALE



NOTES:

1. Root ball shall rest on undisturbed soil.
2. Plant tablets shall be equally spaced around root ball. The number of tablets shall be four (4) for 15 gallon and six (6) for 24" box and larger, or as specified in the soils fertility test recommendations.
3. Contractor shall water planting pit thoroughly following planting.
4. Contractor shall install two (2) inch diameter by ten (10) foot minimum lodge pole pine stakes for 15 gallon and smaller trees and three (3) inch diameter by twelve (12) foot minimum lodge pole pine stakes for 24" box and larger trees. Stakes shall be pressure treated with a wood preservative material. Quantity, diameter and length shall be increased as necessary to securely support the tree in an upright manner.
5. Tree stakes shall have equal degree of separation between stakes.
6. Trees shall be staked parallel with the direction of the prevailing wind.
7. Contractor shall use Deep Root Control Barrier per Planting Notes on Planting Plan, Sheet L4.0.
8. See Detail 2 on Sheet L1.2 for mulch specifications.

3 TREE PLANTING IN TREE WELL
NOT TO SCALE

CITY OF SANTA ROSA
APPROVED

Permit No. 022-6973
Date: 05/13/2025
Review and approval of these documents is based upon compliance with the 2022 California Code of Regulations, Title 24, and all applicable City of Santa Rosa ordinances and State of California laws.
Building Division Administrator Signature

REVIEWED FOR CODE COMPLIANCE

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BUREAU VERITAS NORTH AMERICA, INC.

SIGNATURE: BV

DATE: 1/21/2025



City of
Santa Rosa



NO.	DATE	REVISION	BY

DWN BY: ECD
CHK BY: GSM
DATE: 12/2024
SCALE: 1" = 20'

City of Santa Rosa
KAWANA SPRINGS COMMUNITY PARK
COMMUNITY GARDEN
PLANTING DETAILS

L4.2
CONTRACT NO.
C02393
SHEET 20 OF 27
FILE NO. 2022-0028

OWNERSHIP OF DOCUMENTS
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[illegible]

Plt Nov 26, 2024 at 3:55pm

UTILITY GENERAL NOTES

1. THE USE OF CONTROLLED DENSITY BACKFILL (CDF) WITHIN ANY PUBLIC SEWER OR WATER TRENCH IS NOT ALLOWED UNLESS SPECIFICALLY APPROVED BY THE DIRECTOR OF UTILITIES.
2. THERE SHALL BE NO UNMETERED CONNECTIONS TO THE CITY OF SANTA ROSA WATER SYSTEM INCLUDING CONNECTIONS BYPASSING THE METER FOR TESTING ONSITE PLUMBING OR FOR OBTAINING CONSTRUCTION WATER. SUCH CONNECTIONS SHALL BE SEVERED BY THE UTILITY DEPARTMENT AND WILL RESULT IN PENALTIES, INCLUDING PAYMENT OF FINES AND ESTIMATED WATER USAGE FEES.
3. CONTRACTOR SHALL NOTIFY INSPECTOR A MINIMUM OF 48 HOURS IN ADVANCE TO ALLOW FOR VISUAL ONSITE INSPECTION OF WATER PIPE JOINTS, VALVES, CONNECTIONS, SERVICE SADDLES, HARNESSSES, ANCHORS AND THRUST BLOCKS, PRIOR TO BACKFILLING.
4. CONTRACTOR SHALL NOTIFY INSPECTOR A MINIMUM OF 48 HOURS IN ADVANCE TO ALLOW FOR VISUAL INSPECTION OF CUT/TIE-INS TO THE SEWER SYSTEM AND ALL ABANDONMENTS.
5. ONLY AUTHORIZED CITY PERSONNEL SHALL OPERATE VALVES ON THE EXISTING WATER SYSTEM.
6. RESTRAINED MECHANICAL JOINTS SHALL BE USED ON ALL TEES, FITTINGS, AND ASSOCIATED GATE VALVES UNLESS OTHERWISE APPROVED OR DIRECTED BY THE INSPECTOR.
7. SUBMITTALS FOR ALL ITEMS USED FOR WATER AND SEWER CONSTRUCTION IN THE CITY RIGHT OF WAY ARE REQUIRED FOR REVIEW AND APPROVAL PRIOR TO THE START OF WORK.
8. CUT-IN TEES AND FINAL WATER MAIN TIE-INS SHALL BE DONE UNDER THE INSPECTION OF AUTHORIZED CITY PERSONNEL. CUT-IN TEES OR TIE-INS SHALL NOT BE DONE WITHIN 4-FEET OF A JOINT UNLESS DIRECTED BY THE INSPECTOR. IF THIS SPACING REQUIREMENT CANNOT BE MET THE INSPECTOR MAY DIRECT THAT THE JOINT BE REMOVED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH THE INSPECTOR FOR ALL REQUIRED INSPECTIONS.
9. ALL METER BOX COVERS SHALL BE CONSTRUCTED FROM A TRAFFIC RATED COMPOSITE MATERIAL WITH A 2-INCH DIAMETER BORE ALL THE WAY THROUGH THE LID, AND A 4-1/8" DIAMETER BY 5/16-INCH DEEP COUNTER-BORE CENTERED OVER THE 2-INCH BORE TO ACCOMMODATE AUTOMATED METER READING (AMR) EQUIPMENT. THE BORE HOLES SHALL BE SET TOWARD A CORNER OF THE BOX IN A MANNER THAT DOES NOT WEAKEN THE TRAFFIC RATING. CONTACT THE SANTA ROSA WATER DEPARTMENT IF ADDITIONAL INFORMATION IS NEEDED TO COMPLY WITH THESE REQUIREMENTS. LID SHALL BE CONSTRUCTED SPECIFICALLY FOR BOX USED ON. COVER MAY REQUIRE FIELD MODIFICATION TO ACCOMMODATE AMR EQUIPMENT. CONTACT WATER DEPARTMENT FOR DIRECTION.
10. ALL VERTICAL AND HORIZONTAL SEPARATIONS REQUIREMENTS BETWEEN UTILITIES TO MEET MOST RECENT STATE WATER RESOURCES CONTROL BOARD STANDARDS. THESE STATE REQUIREMENTS SUPERCEDE CITY STANDARDS AND APPROVAL FROM STATE WATER RESOURCES BOARD MAY BE REQUIRED.
11. CONTRACTOR SHALL CONTACT CITY OF SANTA ROSA PUBLIC WORKS DEPARTMENT FOR FINAL INSPECTION OF ALL SEWER MAINS AND LATERALS. ALL SEWER MAINS AND LATERALS MUST BE CLEANED & MANDRELED PRIOR TO CITY ACCEPTANCE.
12. THE CONTRACTOR SHALL HIRE AN INDEPENDENT TELEVISION INSPECTION SERVICE TO PERFORM A CLOSED-CIRCUIT TELEVISION INSPECTION OF ALL NEWLY CONSTRUCTED SEWERS INCLUDING LATERALS FROM THE MAIN TO THE CLEAN-OUT. THE TELEVISION SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 130-1.09 OF THE CITY OF SANTA ROSA SEWER SYSTEM CONSTRUCTION STANDARD SPECIFICATIONS.
13. ALL SEWER PIPE LENGTHS SHOWN ARE MEASURED HORIZONTALLY TO CENTER OF MANHOLES AND CLEANOUTS.
14. FOR HOT TAP CONNECTIONS, THE CONTRACTOR SHALL PROVIDE EXCAVATION, SHORING, BACKFILL, AND TRENCH SURFACING. THE CONTRACTOR SHALL ALSO PROVIDE AND INSTALL THE TAPPING SADDLE, TAPPING VALVE, AND RELATED HARDWARE. CITY PERSONNEL WILL MAKE THE HOT TAP. NO HOT TAP WILL BE MADE WITHIN FOUR FEET OF A JOINT AS MEASURED FROM JOINT TO CENTERLINE OF INTERSECTING PIPE UNLESS OTHERWISE DIRECTED BY THE INSPECTOR. IF THIS SPACING REQUIREMENT CANNOT BE MET, THE INSPECTOR MAY DIRECT THAT THE JOINT BE REMOVED AND THE PROPOSED HOT TAP BE REPLACED WITH A CUT-IN TEE. THE CONTRACTOR SHALL COORDINATE AND SCHEDULE THE HOT TAP WITH THE INSPECTOR.
15. METER BOXES SHALL BE INSTALLED OUT OF TRAFFIC LOADING AREAS WHEREVER POSSIBLE.
16. WATER SERVICE TAPS UP TO 1 1/2 INCH REQUIRE A MINIMUM OF 18 INCHES OF SPACING BETWEEN TAPS. FOR LARGER SERVICE TAPS, THE CONTRACTOR SHALL CONSULT INSPECTOR FOR SPACING REQUIREMENTS.
17. IF DAMAGE OCCURS TO ANY WATER SERVICE DURING CONSTRUCTION, THE CONTRACTOR SHALL REPLACE THE SERVICE FROM THE CORPORATION STOP AT THE MAIN TO THE WATER METER WITHOUT SPLICING.
18. CONTRACTOR TO PROVIDE A RECEIPT OF DISPOSAL FOR ALL ASBESTOS PIPE.

EARTHWORK SUMMARY

EARTHWORK QUANTITIES ARE APPROXIMATE ONLY AND COMPUTED FROM EXISTING GRADE TO SUBGRADE. WHILE IT IS ANTICIPATED THAT APPROXIMATELY 1,400 CY CUBIC YARDS OF MATERIAL WILL BE EXPORTED AS A RESULT OF THIS PROJECT, ACTUAL VOLUMES ARE VARIABLE BASED ON THE SOIL ENGINEER'S ASSESSMENT OF THE SOIL ENCOUNTERED, THE CONTRACTOR'S METHOD OF STRIPPING AND TRENCHING.

CUT: 2,100 CY
FILL: 700 CY
EXPORT: 1,400 CY
TOTAL EARTH MOVED: 2,100 CY

CITY OF SANTA ROSA
APPROVED
Permit No. R22-6973
Date: 05/13/2025
Review and approval of these documents is based upon compliance with the 2022 California Code of Regulations, Title 24, and all applicable City of Santa Rosa ordinances and State of California laws.
Building Division Authorization Signature

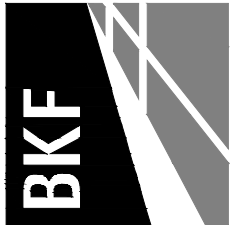
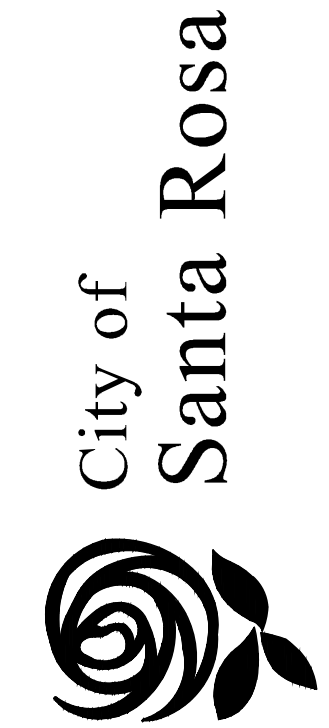
REVIEWED FOR CODE COMPLIANCE

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BUREAU VERITAS NORTH AMERICA, INC.

SIGNATURE: BV

DATE: 1/21/2025



NO.	DATE	REVISION	BY

DWN BY: SPT
CHK BY: RFC
DATE: 12/2024
SCALE: AS SHOWN

City of Santa Rosa

KAWANA SPRINGS COMMUNITY PARK
COMMUNITY GARDEN

GENERAL NOTES

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C2
CONTRACT NO.
C02393
SHEET 22 OF 27
FILE NO. 2022--0028

UNAUTHORIZED CHANGES & USES: THE PROFESSIONAL PREPARING THIS MAP
WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO
OR USES OF THIS MAP. CHANGES TO THIS MAP MUST BE REQUESTED IN
WRITING AND MUST BE APPROVED BY THE PROFESSIONAL.

TOPOGRAPHIC INFORMATION SHOWN HEREON WAS OBTAINED FROM SONOMA COUNTY VEGETATION MAPPING AND LIDAR PROGRAM, 2013, (DEPICTED AS DASHED LINETYPE CONTOURS) AND SUPPLEMENTED BY A FIELD SURVEY CONDUCTED BY BKF ENGINEERS (DEPICTED AS CONTINUOUS LINETYPE CONTOURS).

BOUNDARY INFORMATION SHOWN HEREON WAS OBTAINED FROM RECORD
INFORMATION AND DOES NOT CONSTITUTE A FORMAL BOUNDARY
DETERMINATION.

THE SURVEYOR DOES NOT ASSUME LIABILITY FOR TITLE SEARCH.

BENCHMARK: MAG NAIL, LOCATION SHOWN HEREON (SHEET 5).
ELEVATION: 194.90 (DATUM: NAVD 88).

ABBREVIATIONS

SYMBOLS & LEGEND

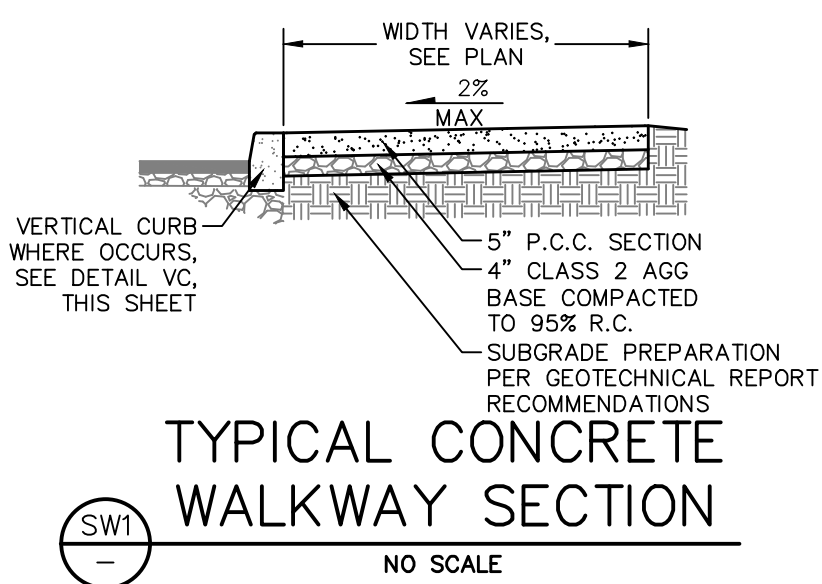
ASPHALT CONCRETE



SCARIFY EXISTING SUBGRADE A MINIMUM OF 8" IN DEPTH UNLESS OTHERWISE SPECIFIED BY CITY SOILS ENGINEER.

SEE LANDSCAPE ARCHITECTURAL DRAWINGS FOR ALL OTHER INFORMATION INCLUDING SCORING, FINISH COLOR, LOCATION OF CONTROL JOINTS EXPANSION JOINTS, AND EDGE TREATMENT.

WALKWAY SHALL HAVE A CROSS SLOPE NO GREATER THAN 2% IN ACCORDANCE WITH SECTION 11B405.3 OF THE CBC AND WHICH DOES NOT IMPEDE DRAINAGE.



- (D)** DEMOLITION KEYNOTES
- (G)** GRADING AND STREET IMPROVEMENT KEYNOTES
- (SS)** SANITARY SEWER UTILITY KEYNOTES
- (SD)** STORM DRAIN UTILITY KEYNOTES
- (U)** MISCELLANEOUS UTILITY KEYNOTES
- (P)** STRIPING AND HORIZONTAL CONTROL
- (EC)** EROSION CONTROL KEYNOTES

CITY OF SANTA ROSA
APPROVED
Permit No. **B22-6973**
Date: **05/13/2025**
Review and approval of these documents is based upon compliance with the **2022** California Code of Regulations, Title 24, and all applicable City of Santa Rosa ordinances and State of California laws.
Ginger Blum
Building Division Authorization Signature

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BUREAU VERITAS NORTH AMERICA, INC.

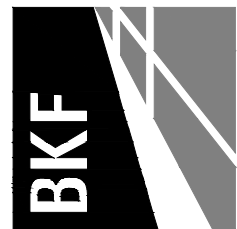
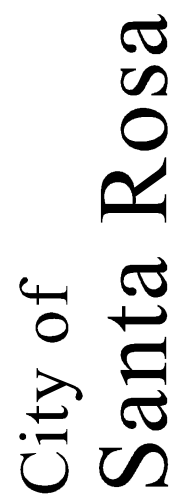
SIGNATURE: BV

DATE: 1/21/2025

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DWN BY: SPT				
CHK BY: RFC				
DATE: 12/2024				
SCALE: AS SHOWN				
	NQ	DATE	REVISION	BY

City of Santa Rosa

**KAWANA SPRINGS COMMUNITY PARK
COMMUNITY GARDEN**

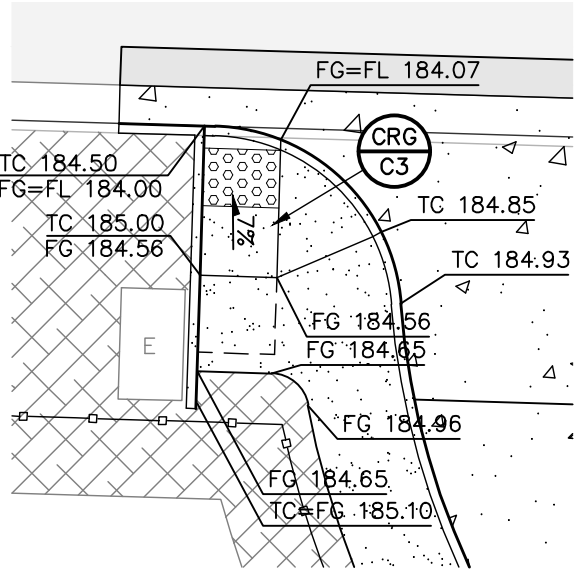
CONSTRUCTION DETAILS

C3

CONTRACT NO.
C02393

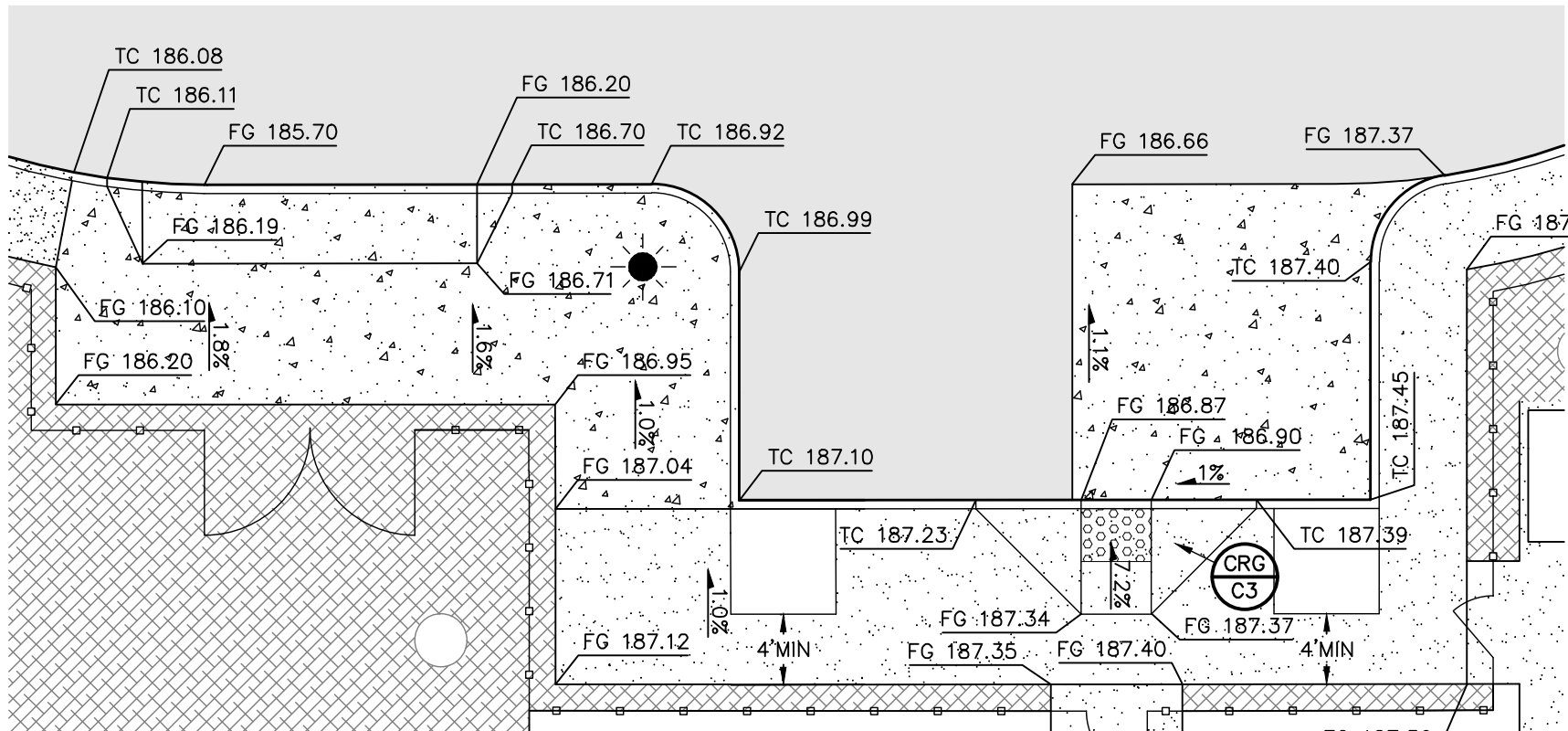
SHEET 23 OF 27

FILE NO. 2022-0028



CURB RAMP DETAIL 'A'

NO SCALE



CURB RAMP DETAIL 'B'

NO SCALE

MATERIALS TABLE						
SURFACE TYPE	LOCATION	THICKNESS	CL2 BASE ROCK	SAND	NOTE	LEGEND
REINFORCED VEHICULAR CONCRETE	DRIVEWAYS, ACCESSIBLE PARKING, MAINTENANCE ACCESS	6"	6"	-----	1	
ASPHALT CONCRETE DRIVEN AREA	DRIVEN AREA	3"	10"	-----		
PEDESTRIAN CONCRETE	WALK WAYS, NON-VEHICULAR AREAS	5"	4"	-----	2	
MULCH PATH AND AREA	SEE LANDSCAPE ARCHITECTURAL PLANS	--	--	-----	--	

1. PROVIDE NUMBER 4 BARS AT 18-INCH ON CENTER AND EXPANSION JOINTS IN ACCORDANCE WITH THE CALTRANS STANDARD SPECIFICATIONS. CONCRETE TO HAVE A BROOMED FINISH.
2. REFER TO THE LANDSCAPE ARCHITECTURAL DRAWINGS FOR COLOR AND CONCRETE FINISH. INSTALL #3 REBAR SPACED 18" ON CENTER BOTH WAYS.

NOTES
THE CONTRACTOR IS REQUIRED TO REVIEW THE GEOTECHNICAL REPORT PREPARED FOR THIS PROJECT TO CONFIRM THESE CONDITIONS AND TO REVIEW SAID REPORT FOR SITE PREPARATION AND GRADING RECOMMENDATIONS.

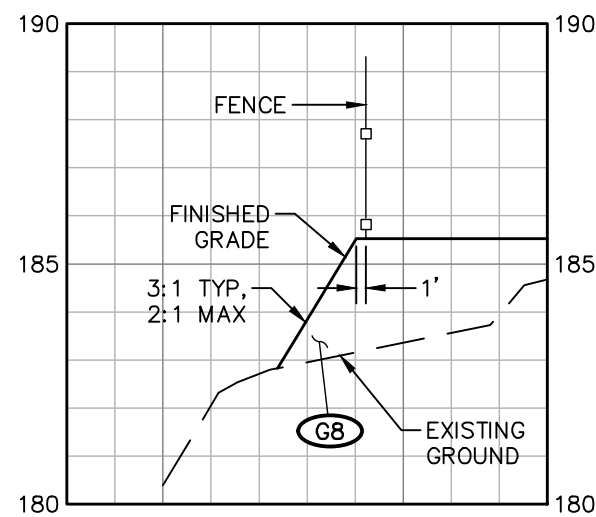
CONTRACTOR SHALL NOTIFY CITY ENGINEER IF SOIL CONDITIONS DO NOT ALLOW THE USE OF CITY OF SANTA ROSA GUIDELINES FOR SITE PREPARATION AND GRADING.

GRADING AND STREET KEYNOTES

- (G1) SAWCUT & REMOVE EXISTING ASPHALT 2" MINIMUM FROM NEW LIP OF GUTTER, REPAVE WITH 4-INCH DEEP LIFT AC. LIFTS BETWEEN 2" (MIN) AND 4" (MAX) THICK. AT CURB RAMP, DO NOT EXCEED 4.5% COUNTERSLOPE. CONFORM TO SURFACE IN A MANNER WHICH CREATES A UNIFORM TRANSITION AND DOES NOT IMPEDE DRAINAGE.
- (G2) INSTALL DRIVEWAY IN ACCORDANCE WITH CITY OF SANTA ROSA STANDARD 250C.
- (G3) SLOPE SURFACE AT A GRADIENT NOT EXCEEDING 2% IN ANY DIRECTION TO PROVIDE AN ACCESSIBLE LEVEL LANDING IN ACCORDANCE WITH SECTION 11B-403.3 OF THE 2022 CALIFORNIA BUILDING CODE (CBC) WHILE NOT IMPEDING DRAINAGE.
- (G4) SEE LANDSCAPE ARCHITECTURAL DRAWINGS FOR FENCE AND GATES.
- (G5) INSTALL CASE G CURB RAMP IN ACCORDANCE WITH CALTRANS STANDARD DETAIL, SHEET A88A. CONTRACTOR SHALL DEMO CONCRETE VAULT COLLAR TO WITHIN 4" OF VAULT EDGE TO ACCOMMODATE PROPOSED IMPROVEMENTS.
- (G6) SEE LANDSCAPE ARCHITECTURAL DRAWING FOR COMPOST IN GARDEN PLOT AREAS.
- (G8) INSTALL GRADING CONFORM AND KEYWAY AND BENCHING IN ACCORDANCE WITH GEOTECHNICAL RECOMMENDATIONS.

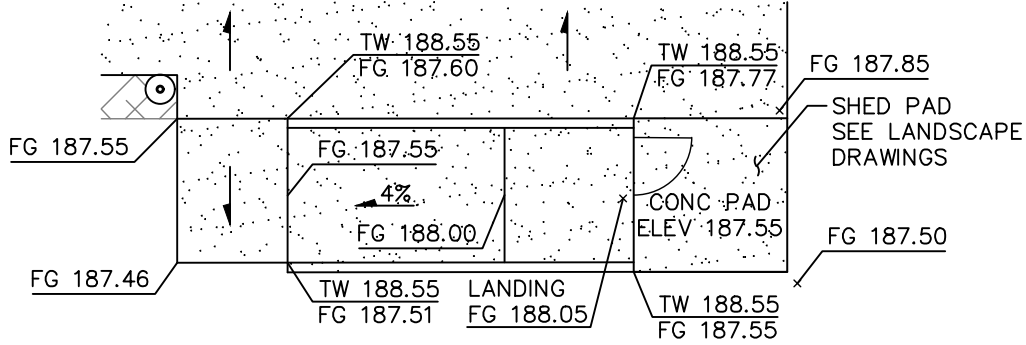
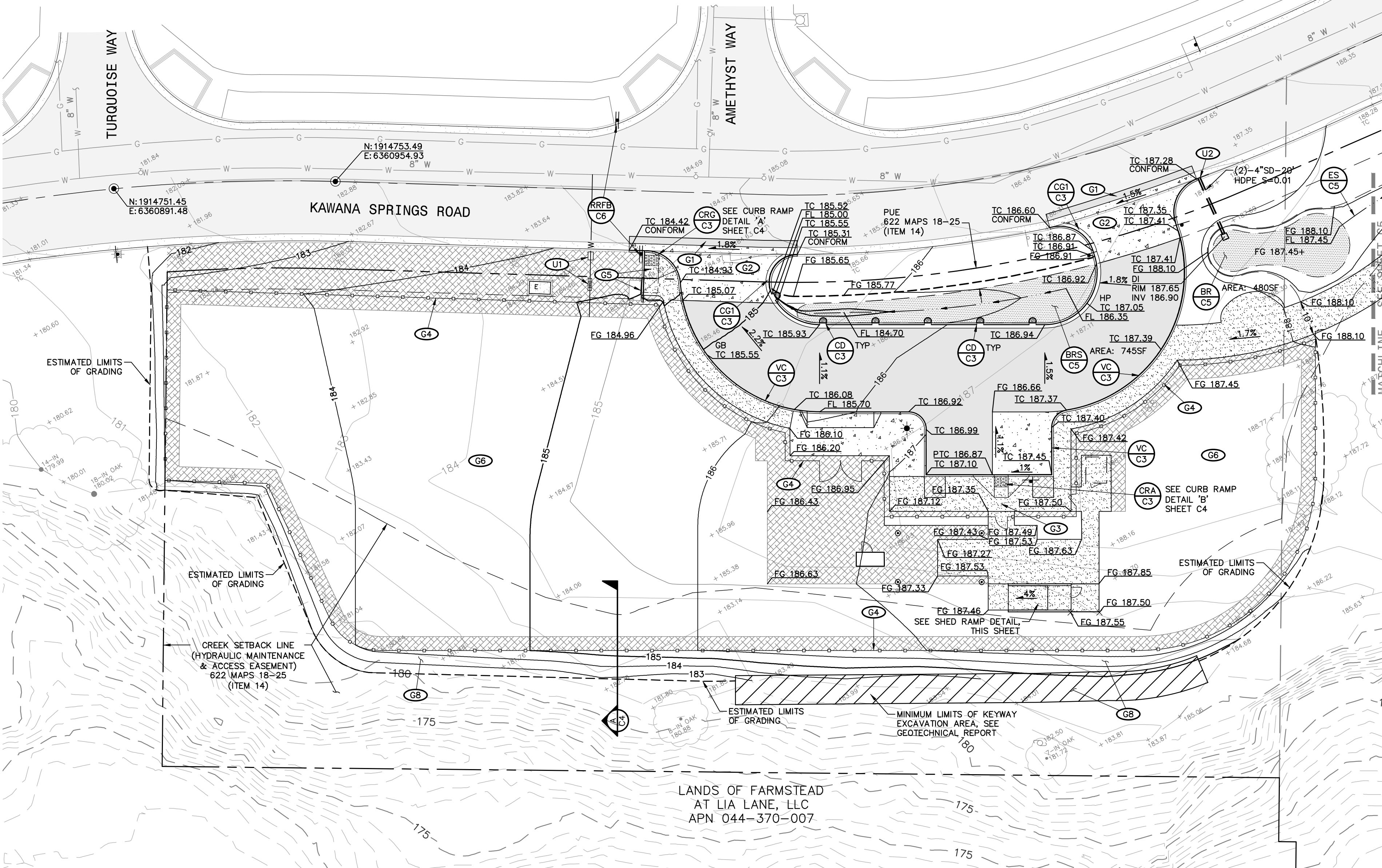
UTILITY KEYNOTES

- (U1) INSTALL 1-INCH IRRIGATION WATER SERVICE AND SECURE CAGE FOR (FOR VANDAL RESISTANCE) IN ACCORDANCE WITH CITY OF SANTA ROSA STANDARD 865-B. PROVIDE REDUCED PRESSURE BACKFLOW PREVENTION DEVICE WITH A PSI LOSS OF 12-PSI OR UNDER WITH A FLOW OF 12-15 GPM AND FROST PROTECTION BLANKET FOR THE DOMESTIC WATER SERVICE IN ACCORDANCE WITH CITY OF SANTA ROSA STANDARD 876.
- (U2) INSTALL SD THROUGH CURB IN ACCORDANCE WITH CITY OF SANTA ROSA STANDARD DETAIL 406A.



SECTION A

SCALE
HORZ: 1"=20'
VERT: 1"=4'



SHED RAMP DETAIL

NO SCALE

DRAINAGE STRUCTURE TABLE			
STRUCTURE	MODEL	SIZE	DETAIL
DROP INLET (DI)	OLDCASTLE PRECAST MODEL CB1212 AND GALVANIZED STEEL GRATE OR EQUIVALENT	12"x12"	

Permit No. B22-6973
Date: 05/13/2025
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Building Division Authorization Signature

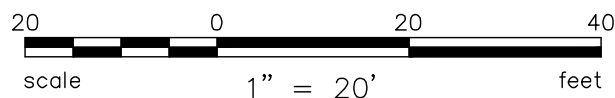
REVIEWED FOR CODE COMPLIANCE

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BUREAU VERITAS NORTH AMERICA, INC.

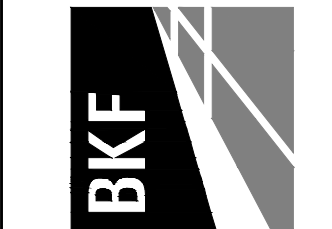
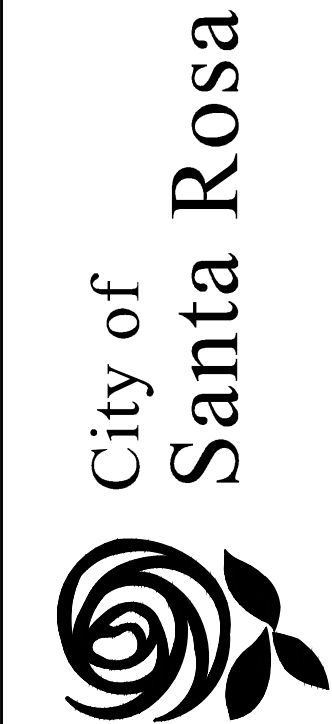
SIGNATURE: BV

DATE: 1/21/2025



OWNERSHIP OF DOCUMENTS

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NO.	DATE	REVISION	BY

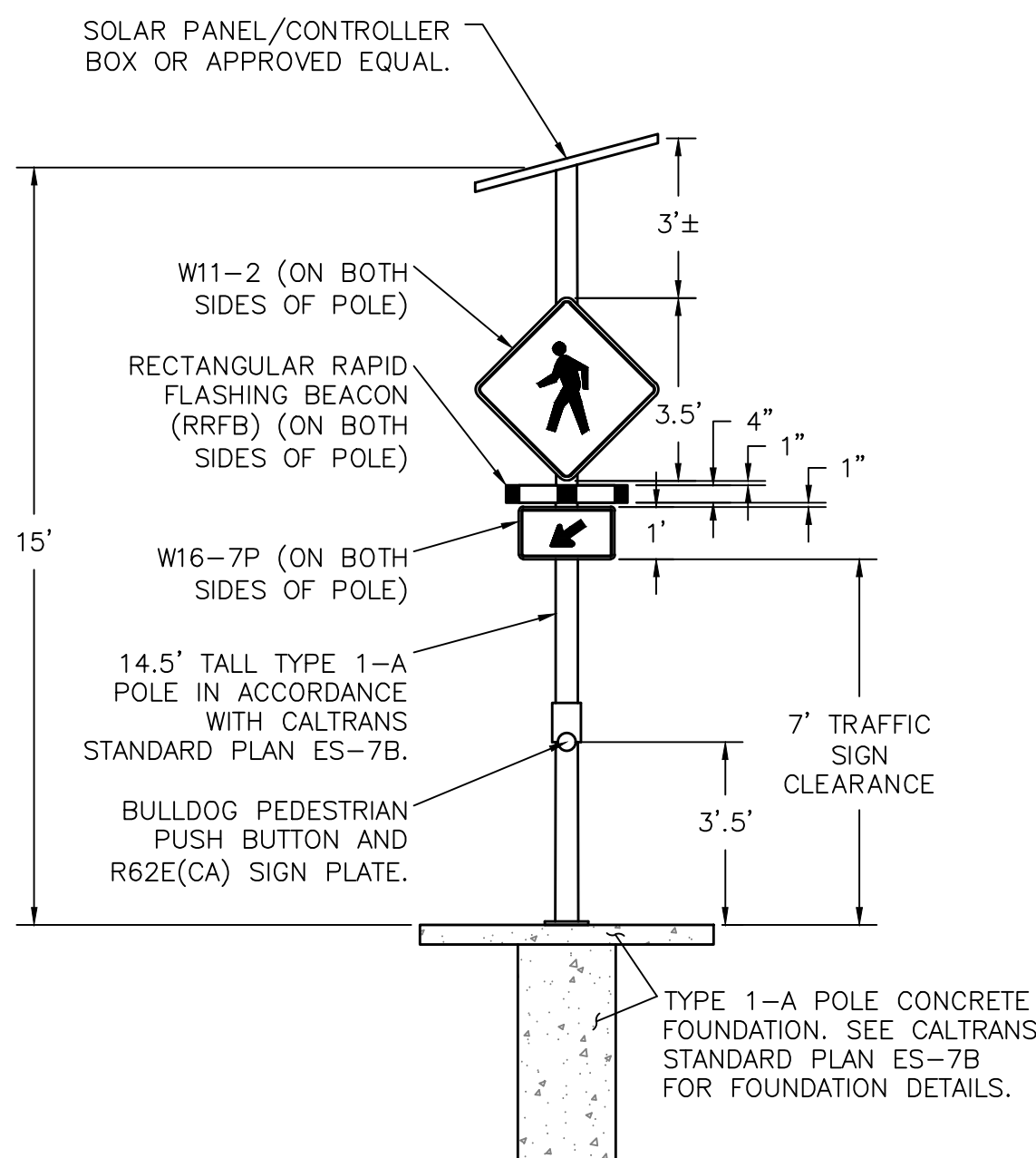
DWN BY: SPT	CHK BY: RFC	DATE: 12/20/24	SCALE: AS SHOWN
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City of Santa Rosa	KAWANA SPRINGS COMMUNITY PARK COMMUNITY GARDEN	GRADING & UTILITY PLAN
--------------------	---	------------------------

C4
CONTRACT NO. C02393
SHEET 24 OF 27
FILE NO. 2022-0028



1. DETECTABLE WARNING SURFACE SHALL MEET SPECIFICATIONS PER CBC 11B-705.1.
2. TRUNCATED DOMES SHALL ALIGN WITH THE RAMP IN THE DIRECTION OF TRAVEL.
3. AT CURB RAMPS, FRONT EDGE OF DETECTABLE WARNING SURFACE SHALL BE BETWEEN 6 AND 8 INCHES OF FACE OF CURB.
4. DETECTABLE WARNING SURFACE SHALL BE YELLOW CONFORMING TO FS 3353B OF FEDERAL STANDARD 595C.



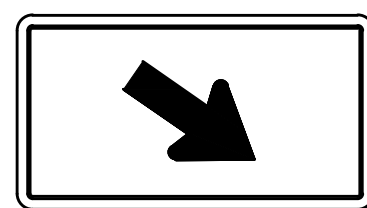
RECTANGULAR RAPID FLASHING BEACON

- STRIPING KEYNOTES

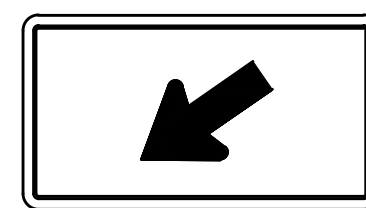
- (P1) PAINT CURB RED AND ANNOTATE WITH 3-INCH TALL WHITE LETTERS WHICH READ "NO PARKING FIRE LANE" IN ACCORDANCE WITH CITY OF SANTA ROSA FIRE DEPARTMENT BULLETIN 003, OPTION 2.
- (P2) FURNISH AND INSTALL W11-2 SIGN ON EXISTING POLE.
- (P3) FURNISH AND INSTALL W11-2 SIGN AND POLE.
- (P4) INSTALL WHITE THERMOPLASTIC 10-FT ARROW TYPE I WITH CONTRAST STRIPING IN ACCORDANCE WITH CALTRANS STANDARD DETAIL, SHEET A24A.
- (P5) INSTALL 10-FT WIDE 24-INCH THICK THERMOPLASTIC BARS SPACED 4-FT ON CENTER WHERE SHOWN ON PLANS.
- (P6) INSTALL 24-INCH R5-1 DO NOT ENTER SIGN IN ACCORDANCE WITH CITY OF SANTA ROSA STANDARD 701.

RECTANGULAR RAPID FLASHING BEACON NOTES

1. CONTRACTOR SHALL MARK POLE LOCATIONS AND HAVE THEM VERIFIED BY THE CITY TRAFFIC ENGINEER PRIOR TO INSTALLATION.
2. PLANS ARE ACCURATE FOR RECTANGULAR RAPID FLASHING BEACON (RRFB) ELECTRICAL WORK ONLY.
3. CONTRACTOR SHALL CALL U.S.A. AT 811 AND HAVE UTILITIES MARKED AT LEAST TWO WORKING DAYS BEFORE BEGINNING ANY WORK.
4. CONTRACTOR SHALL VERIFY OVERHEAD CLEARANCE WITH UTILITY COMPANIES PRIOR TO CONSTRUCTION.
5. CONTRACTOR SHALL PROVIDE ALL EQUIPMENT NECESSARY FOR COMPLETE OPERATING SYSTEMS.
6. THE PUSH BUTTON SHALL BE THE AUDIBLE TYPE CONFORMING TO CALTRANS ADA REQUIREMENTS, POLARA MODEL-S PUSH BUTTON STATION WITH MODEL X2 CONTROL UNIT OR APPROVED EQUAL.
7. RRFB SHALL BE THE JSF TECH RRFB AB-9407 SYSTEM WITH WIRELESS COMMUNICATION OR APPROVED EQUAL. RRFB SYSTEM SHALL OPERATE ON SOLAR POWER WITH BATTERY. CONTRACTOR SHALL SUBMIT SHOP DRAWING TO ENGINEER FOR APPROVAL.
8. W11-2 PEDESTRIAN CROSSING SIGNS SHALL BE 30"x30". SIGNS SHALL BE RETROREFLECTIVE AND FLUORESCENT YELLOW GREEN.
9. W16-7P ARROWS SHALL POINT TOWARD STREET.
10. SEE UNIFORM CONSTRUCTION STANDARD DRAWING 330 FOR CONDUIT TRENCH INSTALLATION REQUIREMENTS.



W16-7P (R)



W16-7P (L)

NEW SIGN QUANTITIES	
SIGN	QUANTITY
W11-2	6
W16-7P(R)	2
W16-7P(L)	2

REVIEWED FOR CODE COMPLIANCE

These plans and documents have been reviewed and found to be in compliance with the applicable code requirements of the jurisdiction. Issuance of a permit is recommended subject to approval by other departments and any noted conditions. The stamping of these plans shall not be held to permit or be an approval of any violation of applicable codes or standards to relieve the owner, design professional of record or contractor of compliance with the applicable codes and standards. Plan review of documents does not authorize construction to proceed in violation of any federal, state or local regulations.

BUREAU VERITAS NORTH AMERICA, INC.

SIGNATURE: BV

DATE: 1/21/2025

CITY OF SANTA ROSA
APPROVEDPermit No. **B22-6973**

Date: 05/13/2025
Review and approval of the

compliance with the 2022 California Code of Regulations, Title 24, and all applicable City of Santa Rosa

Jimmy Blinn

Building Division Administrator Signature

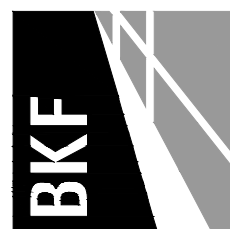
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City of
Santa Rosa



NO	DATE	REVISION	BY

DWN BY: SPT
CHK BY: RFC
DATE: 12/2024
SCALE: AS SHOWN

City of Santa Rosa

**KAWANA SPRINGS COMMUNITY PARK
COMMUNITY GARDEN**

STRIPING & HORIZONTAL CONTROL PLAN

C6

CONTRACT NO.
C02393

SHEET 26 OF 27

FILE NO. 2022-0028

