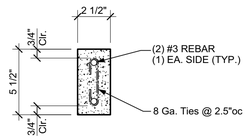
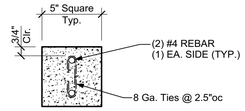


RAIL SECTION



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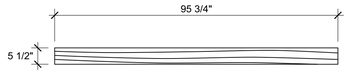

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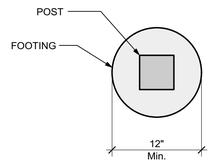
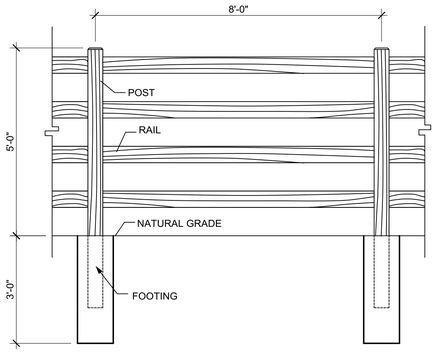
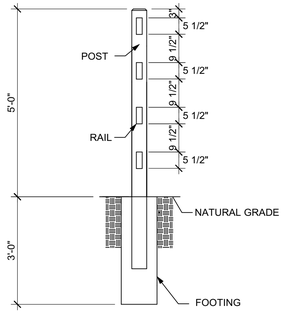


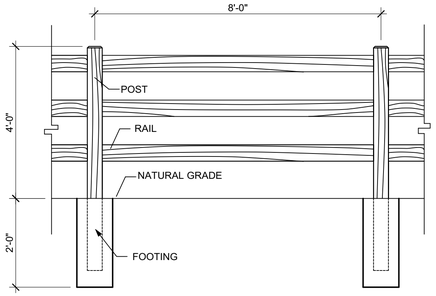
FOOTING



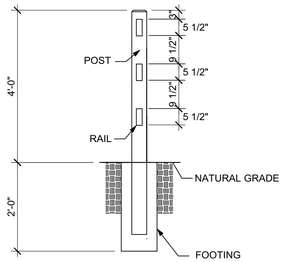
ELEVATION - 4 RAIL FENCE



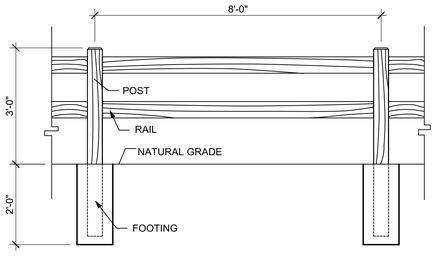
SECTION - 4 RAIL FENCE



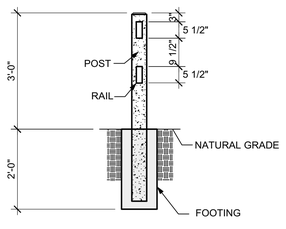
ELEVATION - 3 RAIL FENCE



SECTION - 3 RAIL FENCE



ELEVATION - 2 RAIL FENCE



SECTION - 2 RAIL FENCE

SPECIFICATIONS AND NOTES

GENERAL:

1. This project has been designed in accordance with the California Building Code, 2019 Edition.
2. Applied loads:
   a. Wind Velocity (V) = 100 mph
   b. Exposure: C
   c. Velocity Pressure Exposure Coefficient (Kz) = 0.85
   d. Wind Directionality Factor (Kd) = 0.85
   e. Topographic Factor (Kzt) = 1.0
   f. Wind Pressure P = 0.00256(Kz)(Kzt)(Kd)(V^2)(I)
      P = 0.00256(0.85)(1.0)(0.85)(100)^2(1.0)
      P = 18.50 psf
   g. Working Design Stress: 33% Increase (1.33)
   h. Seismic Design: Site Class D
   i. Importance Factor (I_e) = 1.0
3. Screening wall is to be constructed entirely on the project property.
4. Color:
   a. Post, Panels and Panel caps shall be integrally colored.
   b. Color shall be brown as approved by the on-site owner.
5. The contractor/owner is responsible for hiring a geotechnical engineer to determine if local soil conditions meet or exceed minimum soil properties shown on this plan.
6. Pier installation may encounter areas of granular, collapsing soils that may contain perched groundwater. Piers must be extended through soft and organic deposits to provide adequate lateral and vertical support. Temporary casing may be necessary for the drilled pier installation operations to maintain the drilled shaft open through these soils during construction.
7. If the contractor finds any discrepancies between the site and these plans, he shall notify the engineer immediately.
8. Upon receipt of precast products at the job site, the Installation Team shall verify those products are free of cracks and defects prior to installation. Any precast products found to have defects shall be replaced.
9. Unless specifically noted otherwise, no surcharges may be placed behind a retaining wall within a horizontal distance that is equal to the retained height. Prohibited surcharges include staging of construction materials, vehicles, construction, compaction equipment, and vegetation.
10. Unless specifically noted otherwise, the wall and piers shall not be installed adjacent to hillsides, berms, retaining walls, or other areas that may affect the lateral bearing capacity of the piers. Contact the engineer prior to installation if such a condition exists.

CONCRETE:

1. Concrete Materials:
   a. Concrete shall be normal weight concrete having sand and gravel or crushed stone aggregate. Mixed with ASTM-C150, type I or III portland cement to meet the minimum compressive strength as follows:

Elements	f'c (28 days)	Slump	Max w/c Ratio	Insp. Req'd?
Precast Panels & Posts	3000 psi	5"	0.55	No*
Footings & Piers	3000 psi	5"	0.60	No*

   *Precast Panels & Posts have been designed for f'c of 2500 psi, therefore inspection is not required.
   *Footings & Piers have been designed for f'c of 2500 psi, therefore inspection is not required.
   b. Water used for concrete shall be clean water and free from injurious amounts of oils, acids, alkalites, organic or other deleterious substances.
2. Concrete workmanship:
   a. Fresh poured concrete shall be tamped in to place using steel rammer, slicing tools, or mechanical vibrator, until concrete is thoroughly compact and without void.
   b. Excavation for footing shall be on undisturbed soil or to the depth noted on the drawings. Leave the bottom bearing surface clean and smooth. If footing excavations are made deeper than intended, only concrete shall be used for fill. Remove all loose material from excavations prior to concrete pour.
3. All aggregates shall conform to ASTM C33. Maximum aggregate sizes:
   a. Footings: 1-1/2"
   b. All other work: 3/4"
4. The Owner recognizes his or her obligation to ensure that the construction complies with the approved permit documents and to implement this program of special inspections. In partial fulfillment of these obligations, the Owner will retain and directly pay for the Special Inspections as required in the Governing Building Code, Section 1704.2.

SOILS:

1. Footing size is based on the following minimum soil properties:
   a. Soil Compaction ******* 95
   b. Density ******* 110 pcf
   c. Bearing Capacity (Total Load + W/E) ******* 1500 psf
   d. Friction Resistance ****** 0.25
   e. Lateral Bearing ******* 100 psf/ft of depth
   f. Active Pressure ******* 40 pcf

Soils values per geologic/geotechnical report (or "soils report") by LGC Geotechnical, Inc., Project No. 19067-01, dated July 12, 2019. This report and all recommendations contained therein are to be considered a part of these plans.

FILL:

1. All design criteria based on construction on natural ground. Screenwall not to be constructed on berms or fill dirt.

REINFORCEMENTS:

1. Reinforcing material:
   a. Deformed type bars shall conform to ASTM-A 615, Grade 60 placed as shown on the drawings.
   b. Steel reinforcing wire shall meet U.S. Steel Wire gauge, ASTM-A 82. fy = 70,000 psi min galvanized.
   c. All ties and stirrups shall conform to the of ASTM-A 615, grade 40.
   d. All wire mesh shall be galvanized with the gauge and spacing per plan. The smaller spacing shall be placed in the horizontal direction.
2. Reinforcing workmanship:
   a. Reinforcement steel shall be fabricated in accordance with the CRSI Standard Detail. Reinforcing bars shall be cold-bent only. Use of heat to bend reinforcement steel shall be cause for rejection.
   b. Reinforcement steel bars and wire fabric shall be thoroughly cleaned before placing and again before the concrete is placed. Shall be accurately positioned and secured in place. No brick of porous materials may be used to support the steel off the ground.
   c. Install all reinforcement with the following clearance between reinforcing steel and face of concrete:
      1. Footing, pier or beam bottom (3")
      2. Earth-formed pier or beam side (2")
      3. Formed footing, pier or beam sides, exposed (1")
      4. Precast exposed to weather: panels (3/4"), posts (1-1/4")
   d. Splices within continuous unscheduled reinforcing steel shall have a minimum lap of 30 bar diameters.

SEISMIC DESIGN BASIS

Seismic Design Category	E
Site Class	D
Seismic Factors	
S_S / S_1	1.666 / 0.767
S_{DS} / S_{D1}	1.111 / 0.869
Risk Category	II
Importance Factor, I_e	1.00
Resisting System:	Ground Supported Cantilever Fence
Response Mod. Coefficient, R	1.25
Design Base Shear	V = 0.889W
Analysis Procedure:	Eqv. Lateral Force (ASCE 7-16, T. 15.4-2)

AMERICAN PRECAST CONCRETE INC
2246 Durfee Avenue, El Monte, CA 91732, (800) 691-7118
www.AmericanPrecast.com

Note: The Drawings and Specifications and Ideas, Designs and Arrangements Represented Thereby are and Shall Remain the Property of the American Precast Concrete, Inc. and No Part Thereof Shall be Copied, Disclosed to Others or Used in Connection with any Work or Project other than the Specific Project for which they have been Prepared and Developed without the Written Consent of the American Precast Concrete, Inc.

Woodcrete Ranch Rails

Revision:

Proj. Engr.:

Proj. Mngr.:

Date: Scale:

SHEET

1 OF 1

Apr 2, 2020
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Theses Specifications are not Job Specific - Additional Engineering Shall be Required. American Precast Concrete - Reserves the Rights to Change & Update Dimensions Without Notice.