

ROYS REDWOODS OPEN SPACE PRESERVE

MARIN COUNTY

FINAL SCHEMATIC DESIGN MARCH 31, 2020

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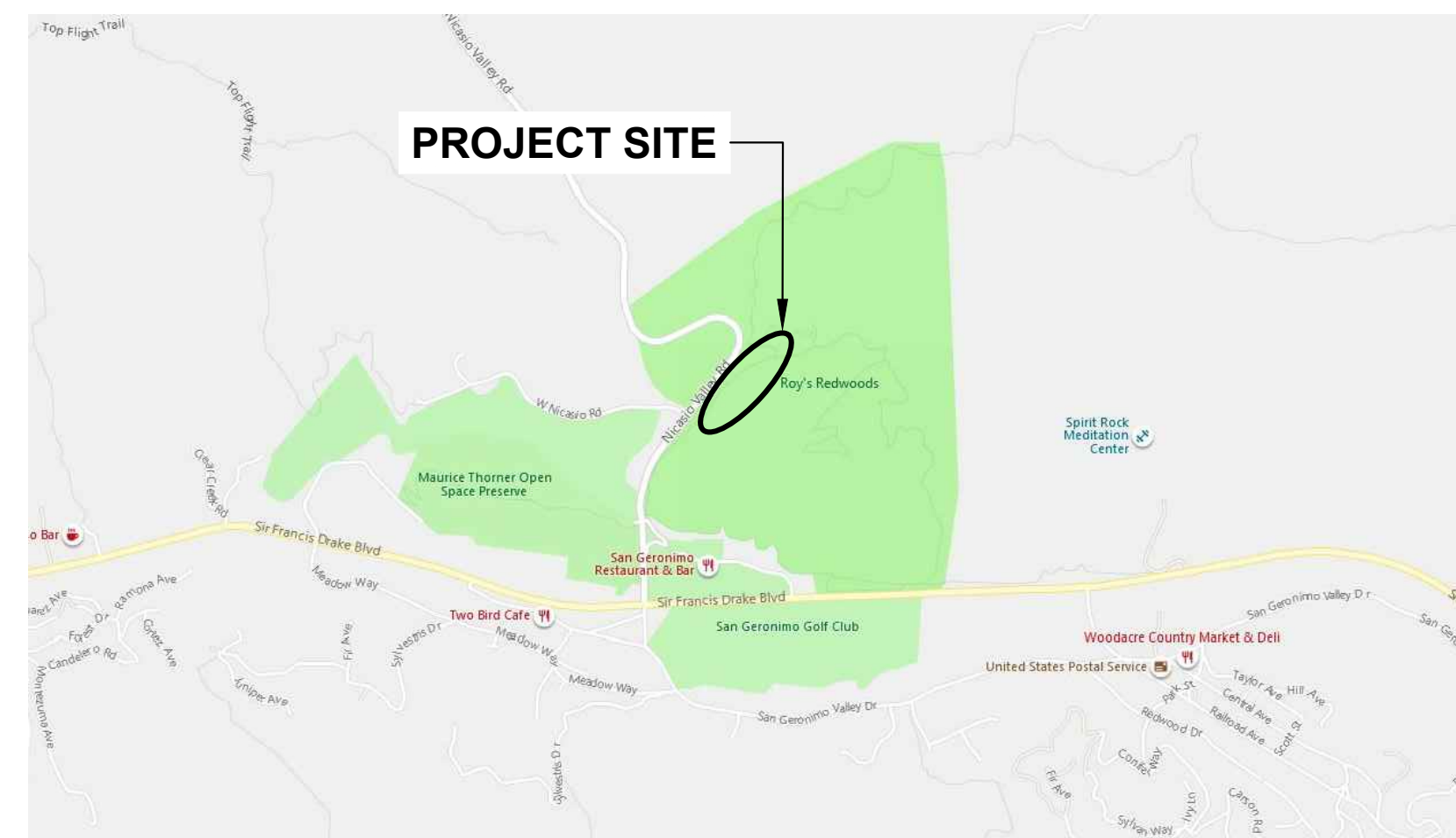
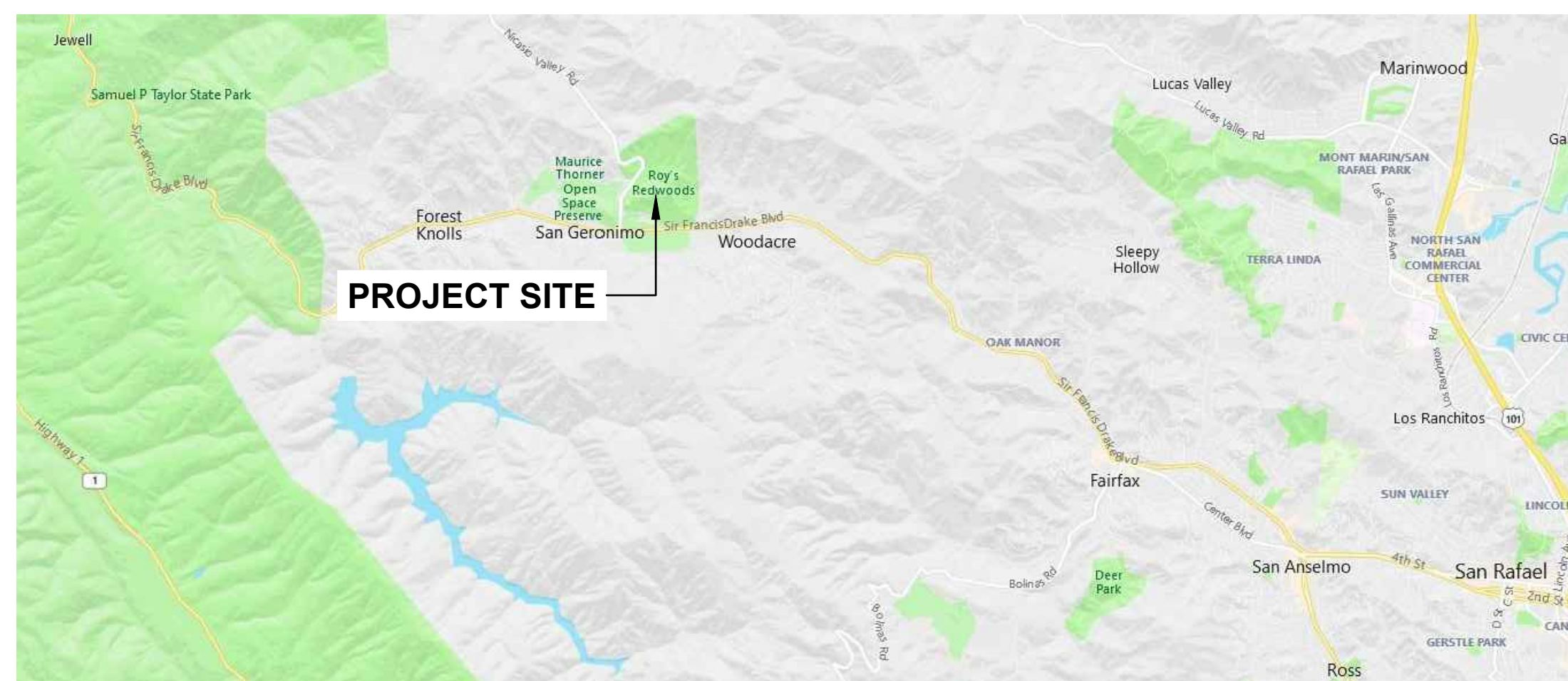
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PROJECT LOCATION:

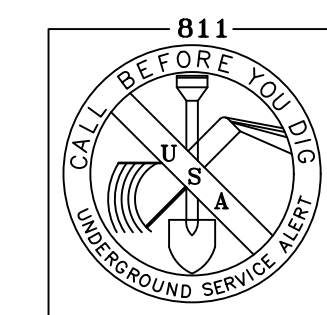


SHEET LIST TABLE

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- S-4 BOARDWALK DECKING
- S-5 BOARDWALK SECTION AND DETAILS

ABBREVIATIONS

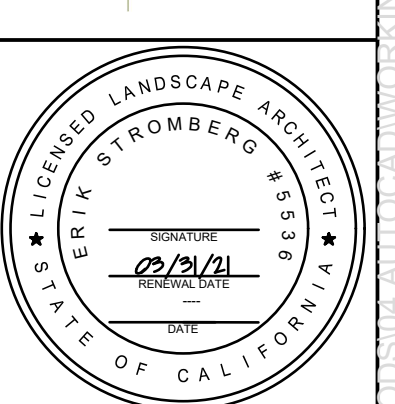
- CLR CLEAR
- C CENTERLINE
- (E) EXISTING
- GB GRADE BREAK
- PP PRESERVE AND PROTECT
- TYP. TYPICAL



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REVISIONS	
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PROJECT TITLE
ROYS REDWOODS OPEN SPACE PRESERVE
 VISITOR ACCESS AND PUBLIC ENGAGEMENT
 SHEET TITLE
 COVER SHEET
 DESIGN PHASE
 FINAL SCHEMATIC DESIGN



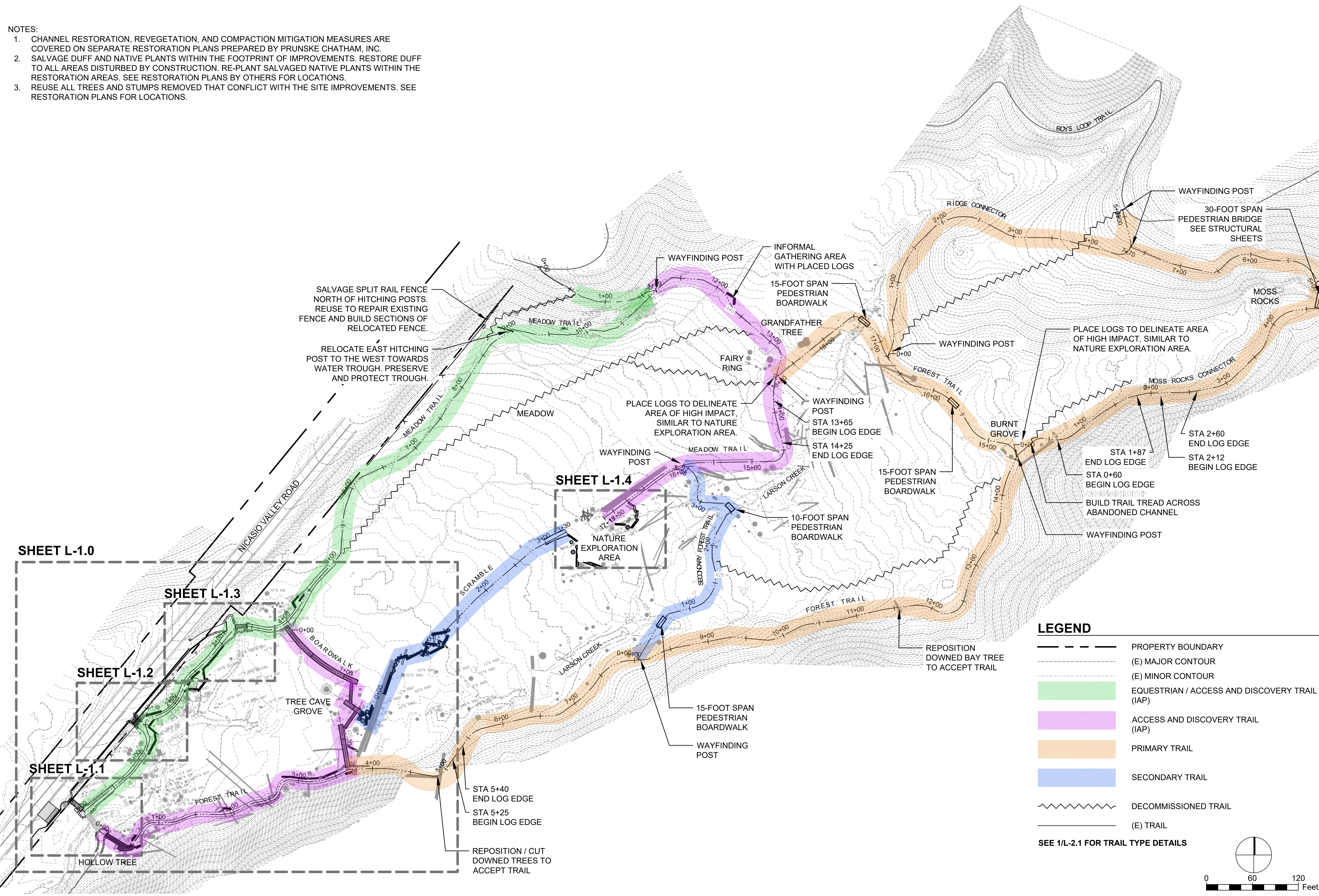
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SCALE	NTS
DATE	MARCH 31, 2020
SHEET	

T-1

OF 17

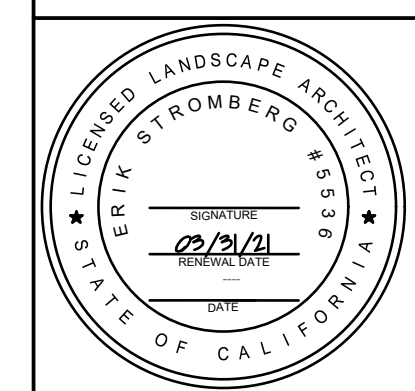
NOTES:

1. CHANNEL RESTORATION, REVEGETATION, AND COMPACTION MITIGATION MEASURES ARE COVERED ON SEPARATE RESTORATION PLANS PREPARED BY PRUNSKA CHATHAM, INC.
2. SALVAGE DUFF AND NATIVE PLANTS WITHIN THE FOOTPRINT OF IMPROVEMENTS. RESTORE DUFF TO ALL AREAS DISTURBED BY CONSTRUCTION. RE-PLANT SALVAGED NATIVE PLANTS WITHIN THE RESTORATION AREAS. SEE RESTORATION PLANS BY OTHERS FOR LOCATIONS.
3. REUSE ALL TREES AND STUMPS REMOVED THAT CONFLICT WITH THE SITE IMPROVEMENTS. SEE RESTORATION PLANS FOR LOCATIONS.

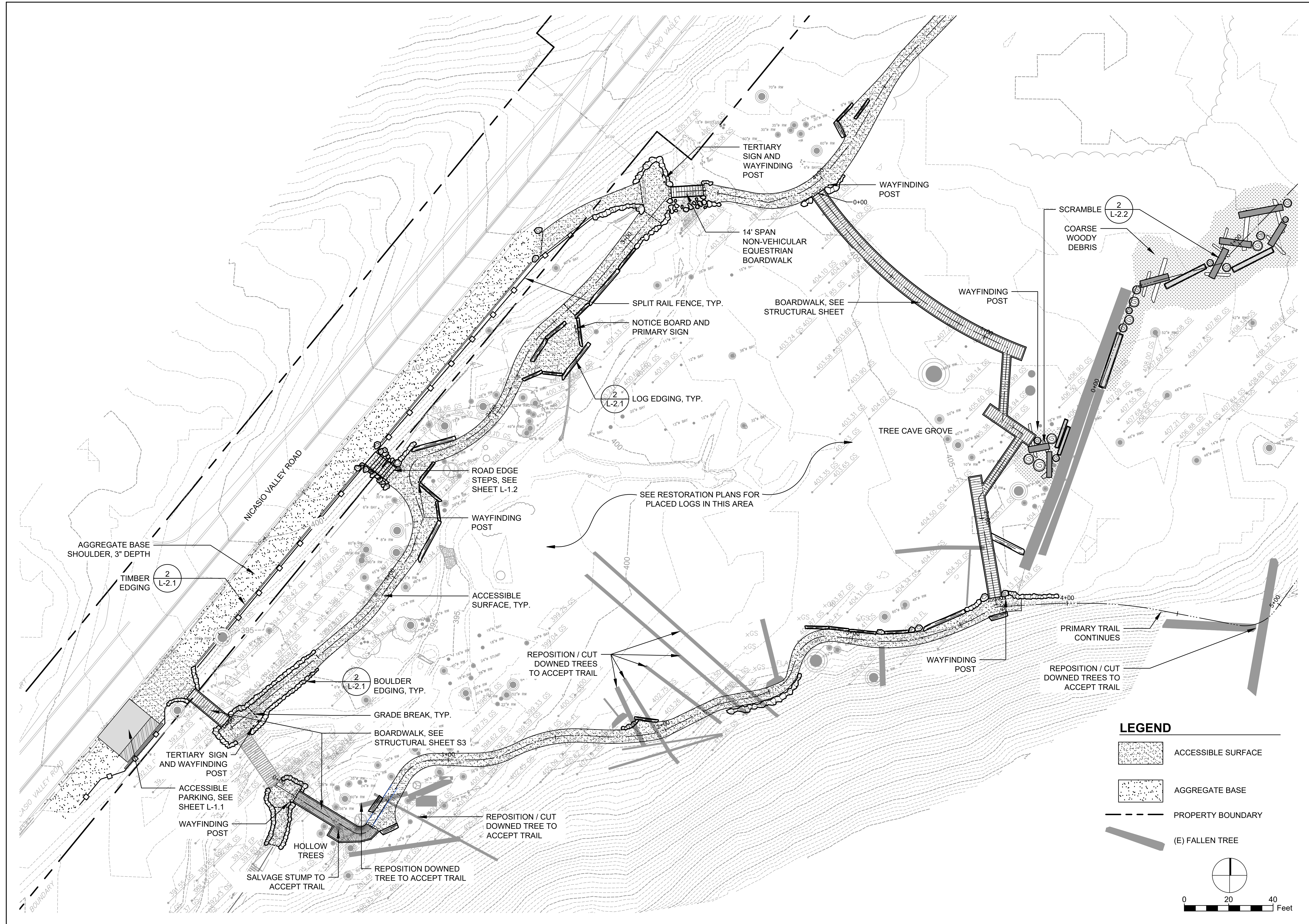


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PROJECT TITLE
ROYS REDWOODS OPEN SPACE PRESERVE
 VISITOR ACCESS AND PUBLIC ENGAGEMENT
 SHEET TITLE
 OVERVIEW
 DESIGN PHASE
 FINAL SCHEMATIC DESIGN



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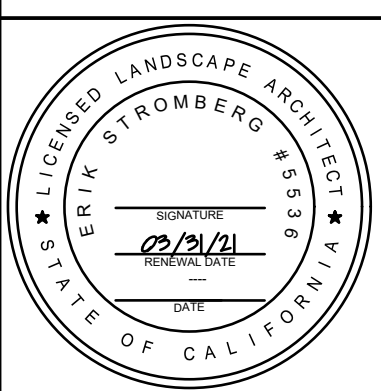


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DATE	DESCRIPTION

PROJECT TITLE
ROYS REDWOODS OPEN SPACE PRESERVE
 VISITOR ACCESS AND PUBLIC ENGAGEMENT

SHEET TITLE
ACCESSIBLE LOOP

DESIGN PHASE
 FINAL SCHEMATIC DESIGN

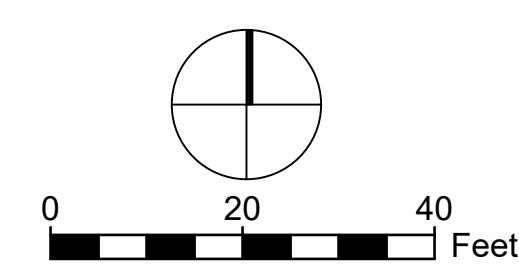


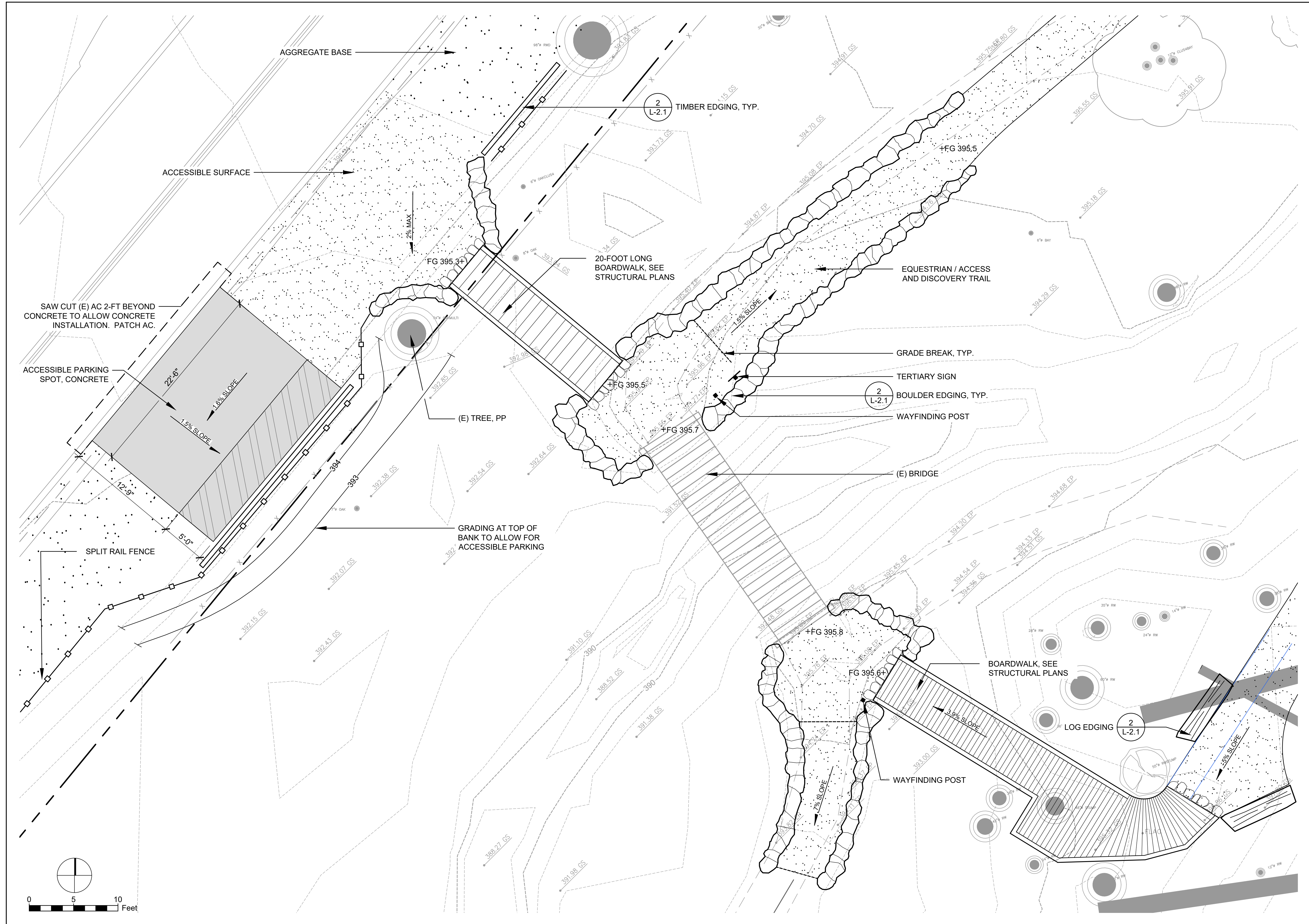
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L-1.0
 OF 17

LEGEND

- ACCESSIBLE SURFACE
- AGGREGATE BASE
- PROPERTY BOUNDARY
- (E) FALLEN TREE

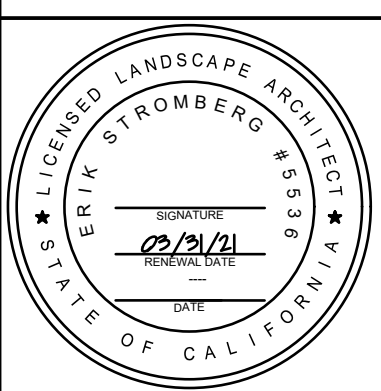




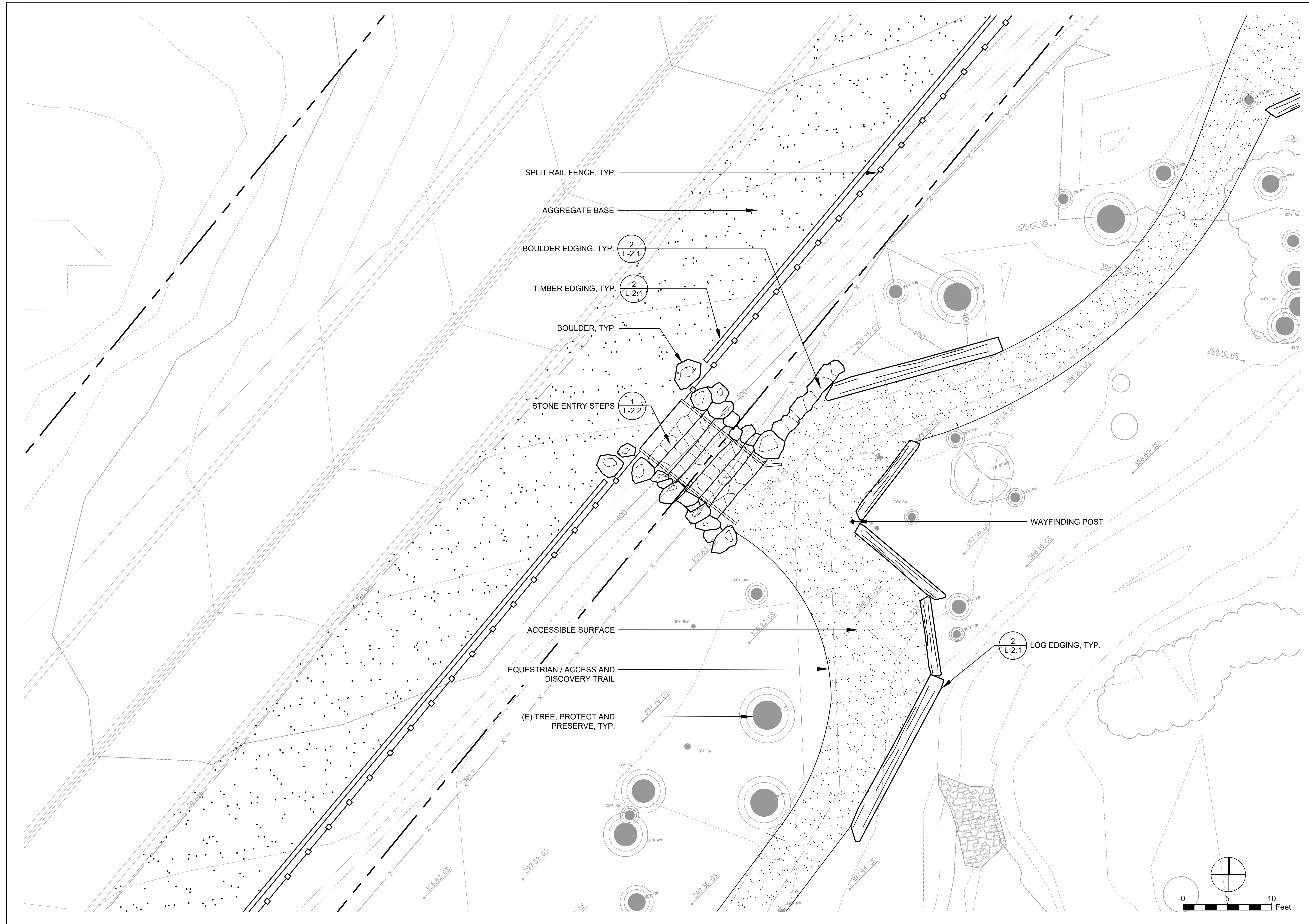
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PROJECT TITLE
ROYS REDWOODS OPEN SPACE PRESERVE
 VISITOR ACCESS AND PUBLIC ENGAGEMENT
 SHEET TITLE
ACCESSIBLE PARKING AND ENTRY

DESIGN PHASE
FINAL SCHEMATIC DESIGN



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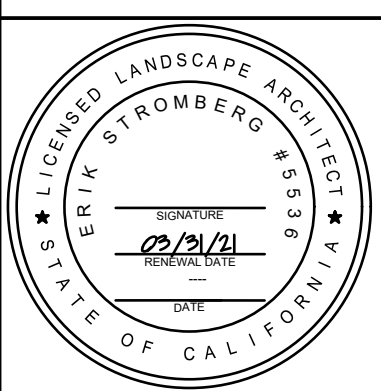


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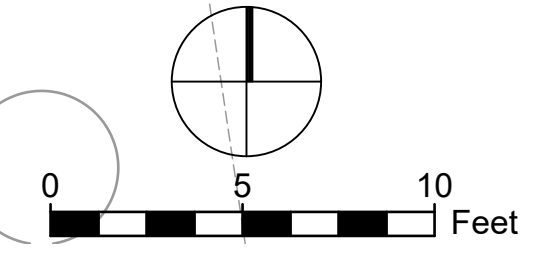
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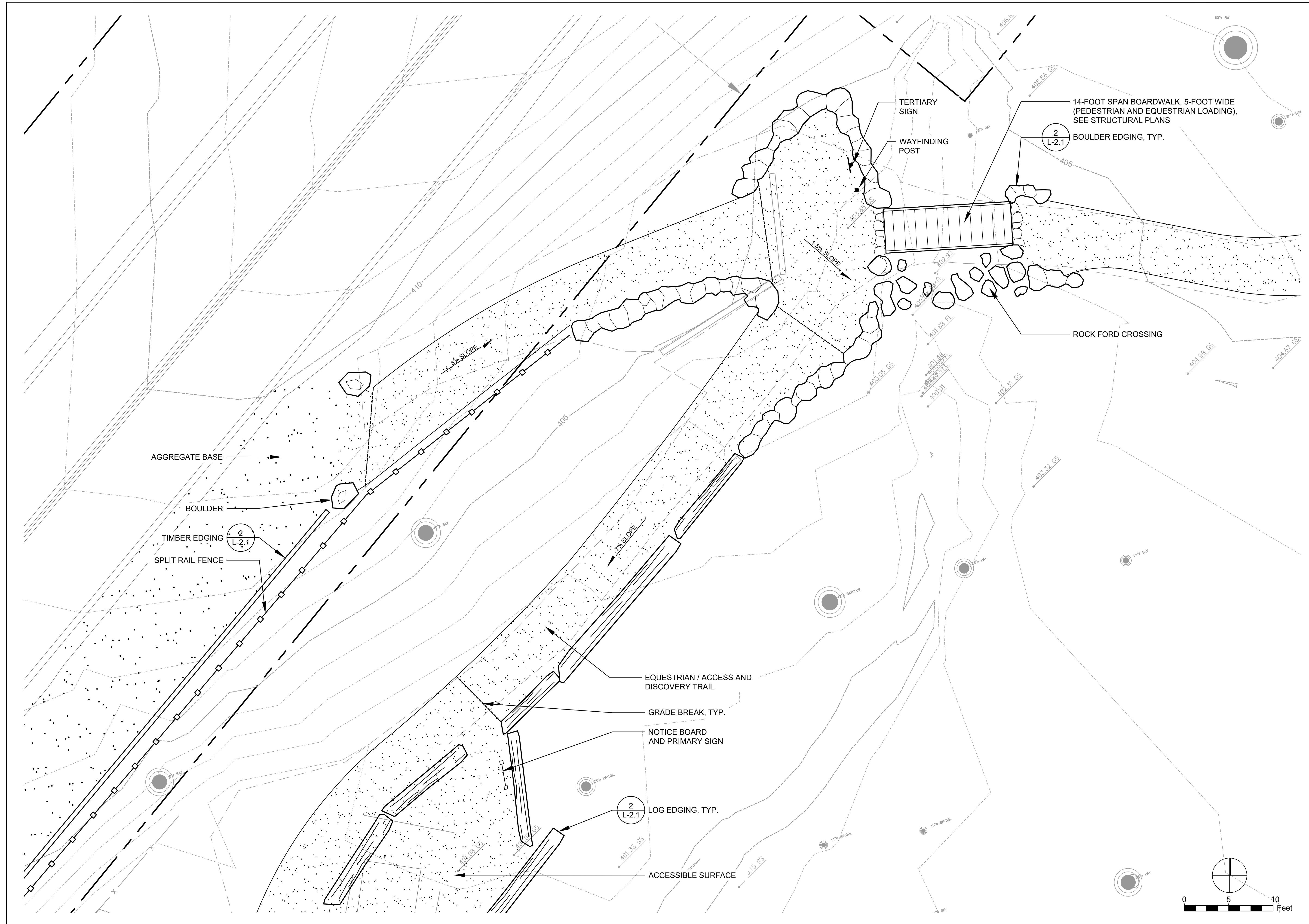
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SHEET TITLE
 ROAD EDGE STEPS



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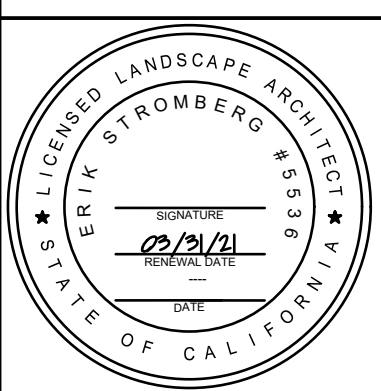


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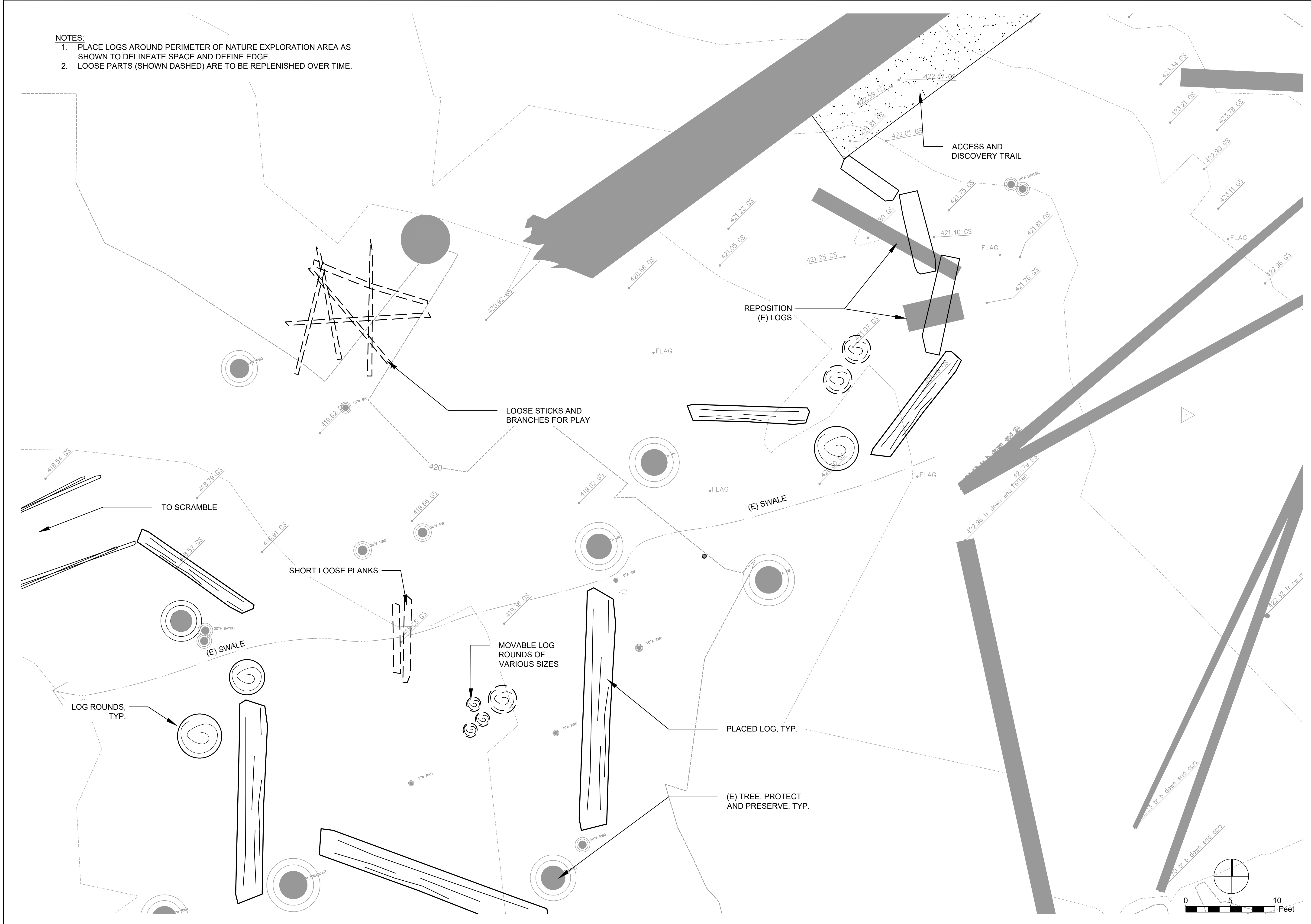
SHEET TITLE
 NORTH ENTRY



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SCALE	1" = 20'-0"
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SHEET	

L-1.3
 OF 17

- NOTES:**
1. PLACE LOGS AROUND PERIMETER OF NATURE EXPLORATION AREA AS SHOWN TO DELINEATE SPACE AND DEFINE EDGE.
 2. LOOSE PARTS (SHOWN DASHED) ARE TO BE REPLENISHED OVER TIME.

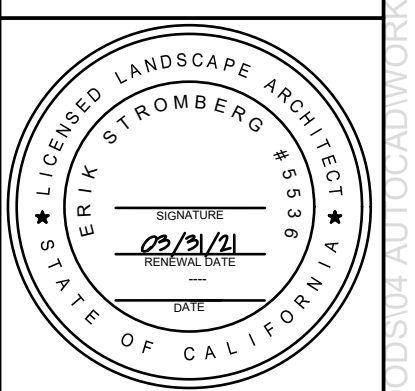


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PROJECT TITLE
ROYS REDWOODS OPEN SPACE PRESERVE
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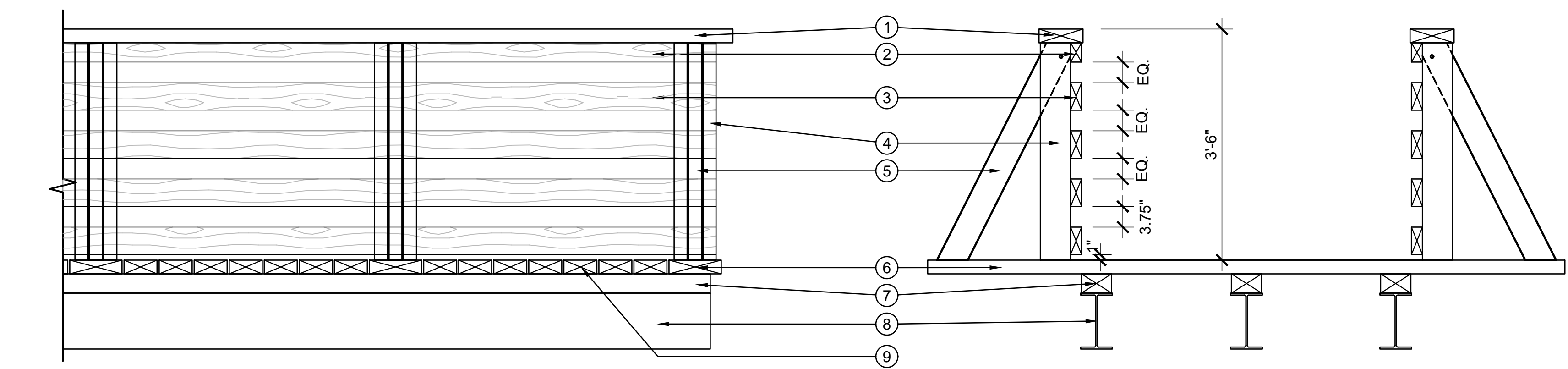
DESIGN PHASE
FINAL SCHEMATIC DESIGN

SHEET TITLE
NATURE EXPLORATION AREA



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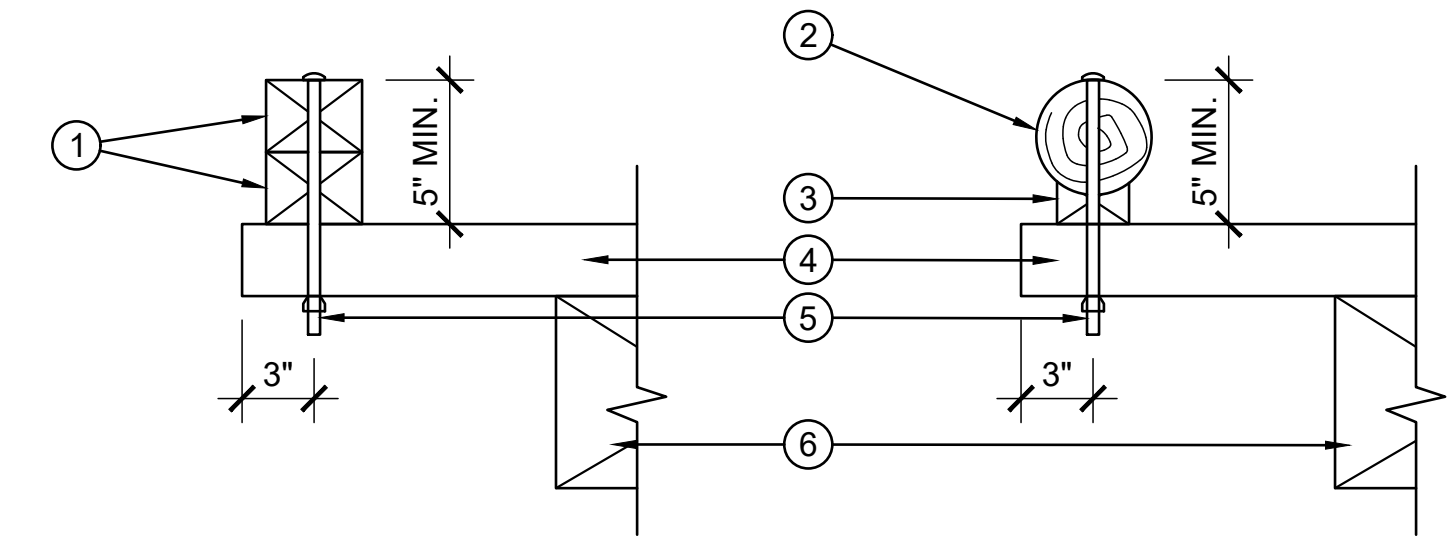
L-1.4
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1 WOOD GUARDRAIL ON FOOTBRIDGE
SCALE: NTS

- ① 3X8 RECLAIMED REDWOOD CAP
- ② 2X4 RECLAIMED REDWOOD RAIL
- ③ 2X5 RECLAIMED REDWOOD RAIL, TYP U.O.N
- ④ 3X6 RECLAIMED REDWOOD POST
- ⑤ 2.5 X 5 RECLAIMED REDWOOD BRACE
- ⑥ 3X10 RECLAIMED REDWOOD DECKING AT POSTS
- ⑦ WOOD NAILER
- ⑧ STEEL BRIDGE BEAMS
- ⑨ 3X6 RECLAIMED REDWOOD DECKING

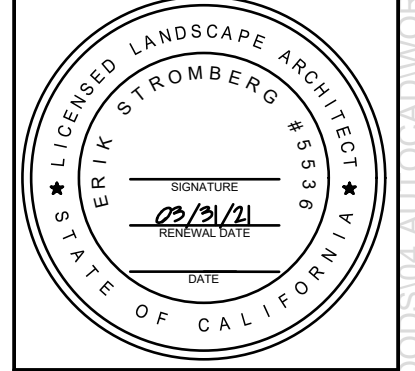
- ① 3X4 RECLAIMED REDWOOD CURB AND BLOCKING
- ② 4"Ø MIN. REDWOOD BRANCH
- ③ 2X3 RECLAIMED REDWOOD BLOCKING
- ④ 3X DECKING
- ⑤ 1/2"Ø CARRIAGE BOLT
- ⑥ RECLAIMED REDWOOD BOARDWALK BEAM



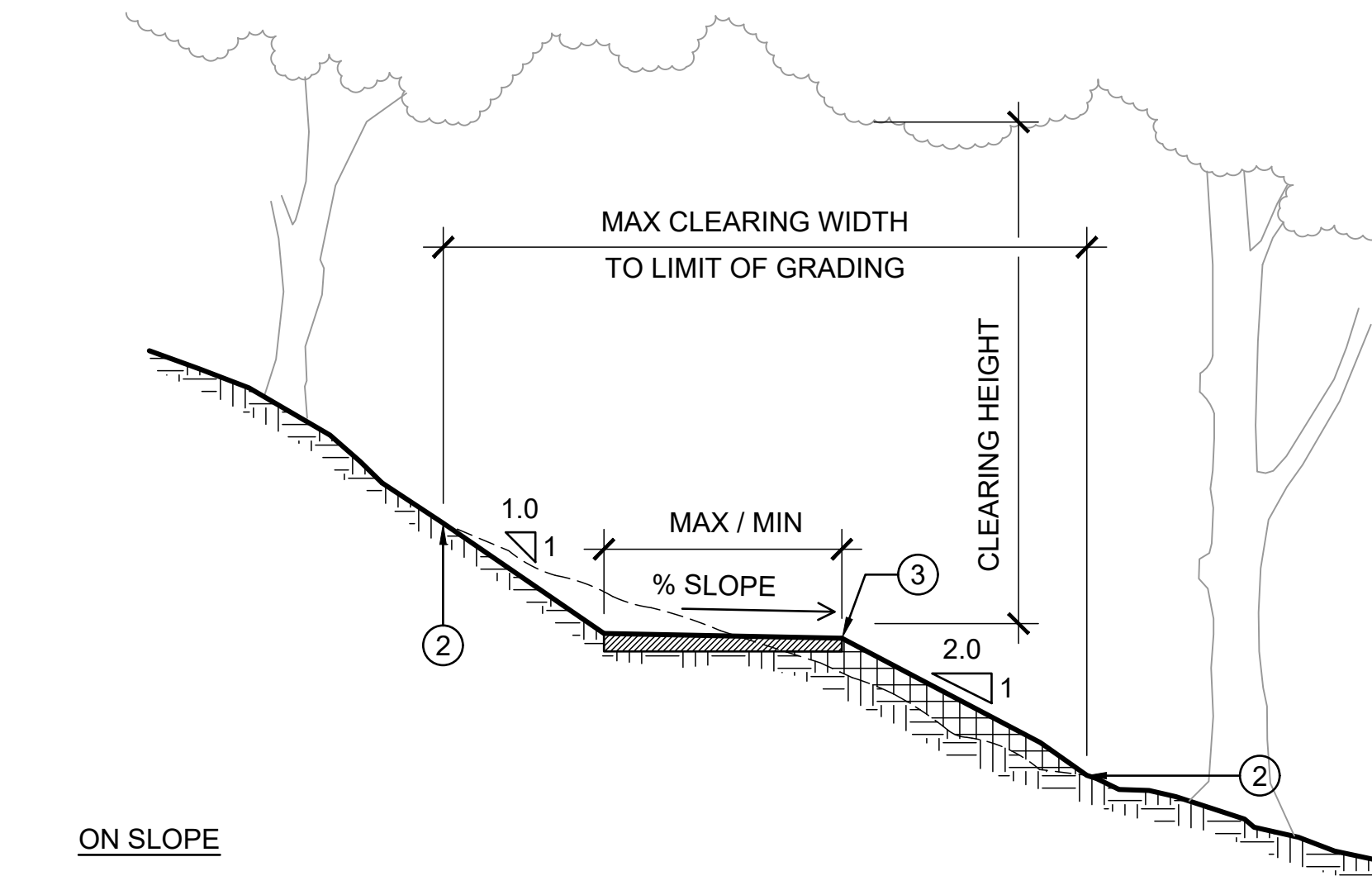
2 EDGE PROTECTION
SCALE: NTS

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FINAL SCHEMATIC DESIGN
 SHEET TITLE
CONSTRUCTION DETAILS



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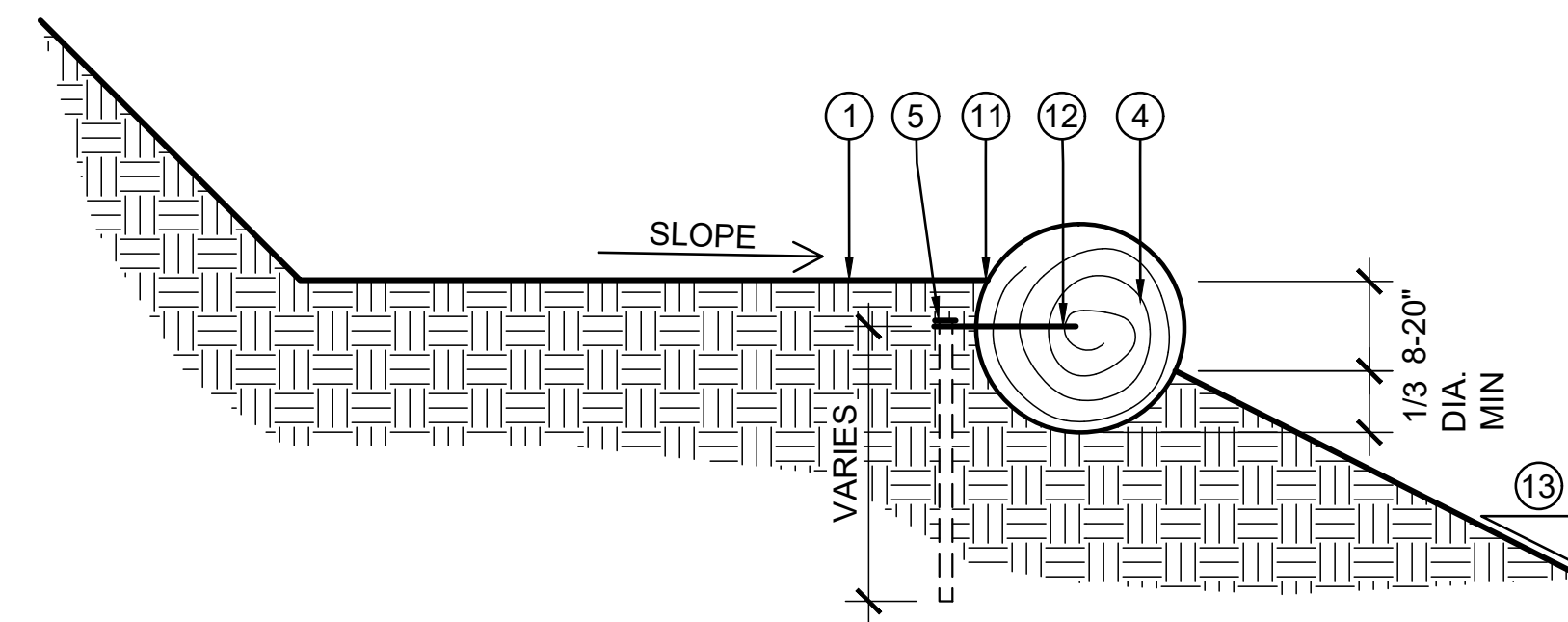


- ① DUFF, RE-PLACE SALVAGED DUFF, TO LIMIT OF DISTURBANCE, 3" MIN DEPTH
- ② LIMIT OF GRADING
- ③ EDGE CONDITION (NOT SHOWN), DTL 2 / L-2.1

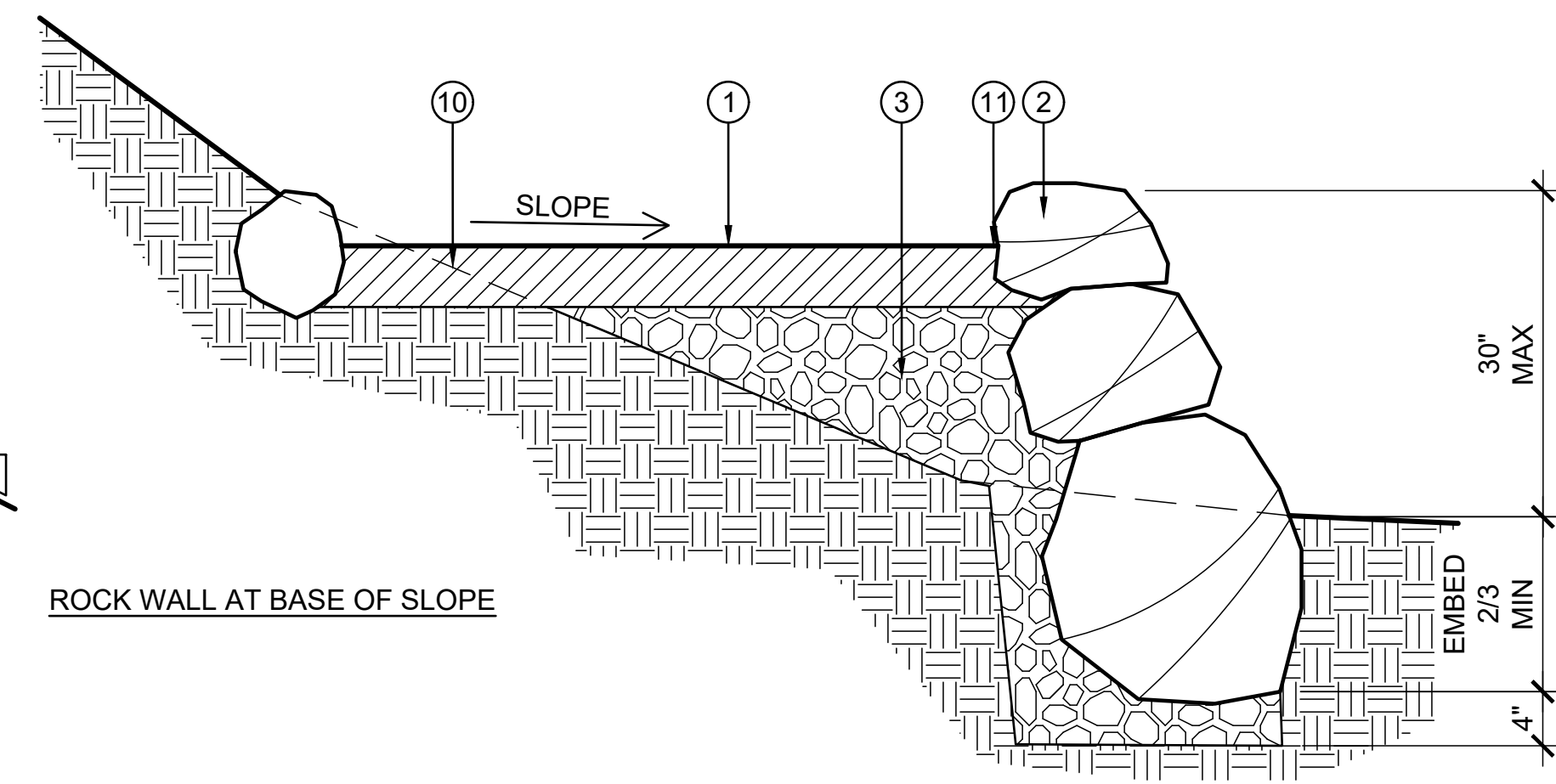
TRAIL TABLE

TRAIL TYPE	TREAD MATERIAL	MAX WIDTH	MIN WIDTH	CROSS SLOPE	CLEARING HEIGHT	MIN. CLEARING WIDTH
ACCESS AND DISCOVERY	PARK TREAD OR SIMILAR	6'-0"	4'-0"	2% MAX	8' MIN	6' MIN
EQUESTRIAN	PARK TREAD OR SIMILAR	6'-0"	4'-0"	2% MAX	12' MIN	10' MIN
PRIMARY TRAIL	EARTHEN	4'-0"	2'-0"	5% MAX	8' MIN	4' MIN
SECONDARY TRAIL	EARTHEN	3'-0"	2'-0"	5% MAX	8' MIN	3' MIN

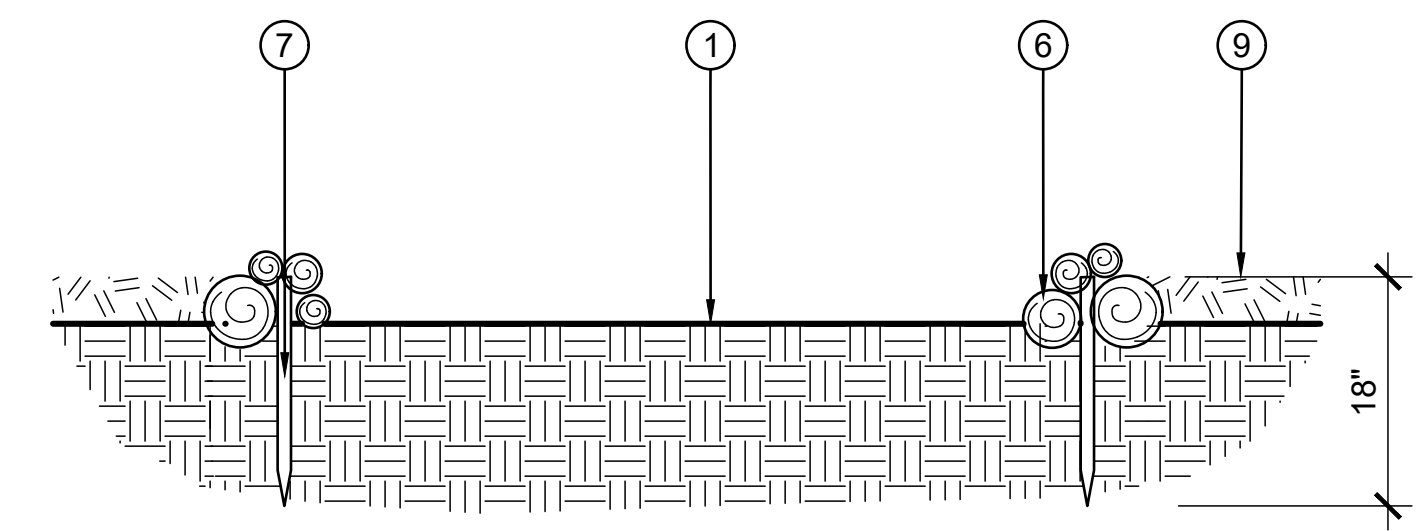
ON SLOPE
1 TRAIL TYPES
 SCALE: NTS



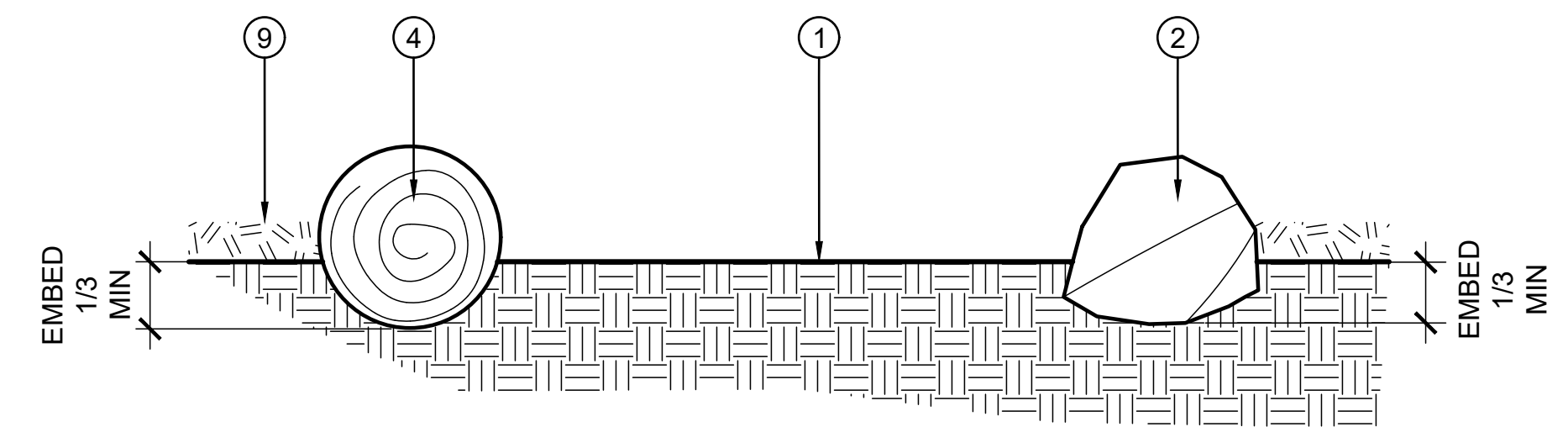
LOG EDGING AT STEEP SLOPE



ROCK WALL AT BASE OF SLOPE

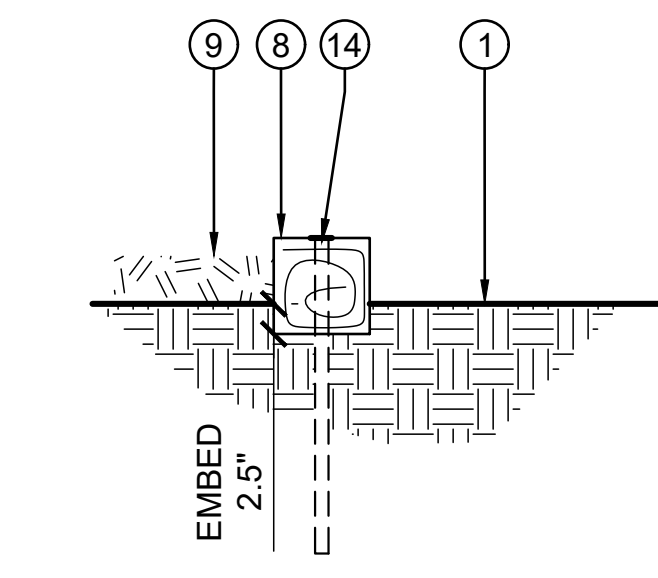


FASCINE EDGING ON LEVEL GROUND



ROCK AND LOG EDGING ON LEVEL GROUND

- ① COMPACTED SURFACE
- ② BOULDER, 12" - 30" DIAMETER
- ③ AGGREGATE BASE BACKFILL MATERIAL
- ④ REDWOOD OR BAY LOG, 18" - 42"Ø
- ⑤ REBAR SPIKE, #5 x 48" W/ FLAT CAP 3' O.C.; WHERE DOWNHILL SLOPE FOR LOG EDGING IS STEEPER THAN 2:1 SPACE AT 18" O.C.
- ⑥ FASCINE, (3-5) 2" - 5"Ø BUNDLED STICKS WOUND WITH BRAIDED JUTE TWINE
- ⑦ 2" X 2" WOOD STAKE
- ⑧ 8 X 8 TIMBER
- ⑨ DUFF
- ⑩ EXISTING GRADE
- ⑪ PROVIDE GAPS BETWEEN LOGS/BOULDERS AT TRAIL LOW POINTS AND AS REQUIRED TO PROVIDE POSITIVE DRAINAGE.
- ⑫ LAG EYE BOLT, STAINLESS STEEL, 1/2"Ø x 8" FOR REBAR SPIKE
- ⑬ DOWNHILL SLOPE
- ⑭ REBAR SPIKE, #5 X 24" WITH FLAT CAP 3' O.C.



TIMBER EDGE ON LEVEL GROUND

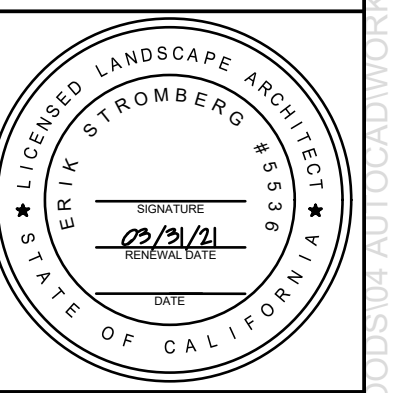
2 EDGING CONDITIONS
 SCALE: NTS

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PROJECT TITLE
ROY'S REDWOODS OPEN SPACE PRESERVE
 VISITOR ACCESS AND PUBLIC ENGAGEMENT

DESIGN PHASE
FINAL SCHEMATIC DESIGN

SHEET TITLE
CONSTRUCTION DETAILS



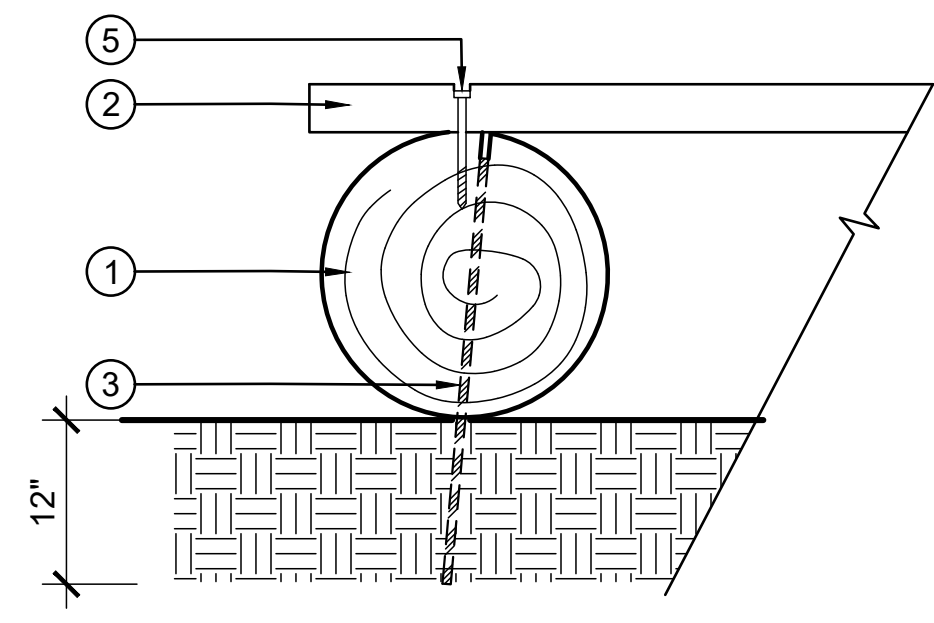
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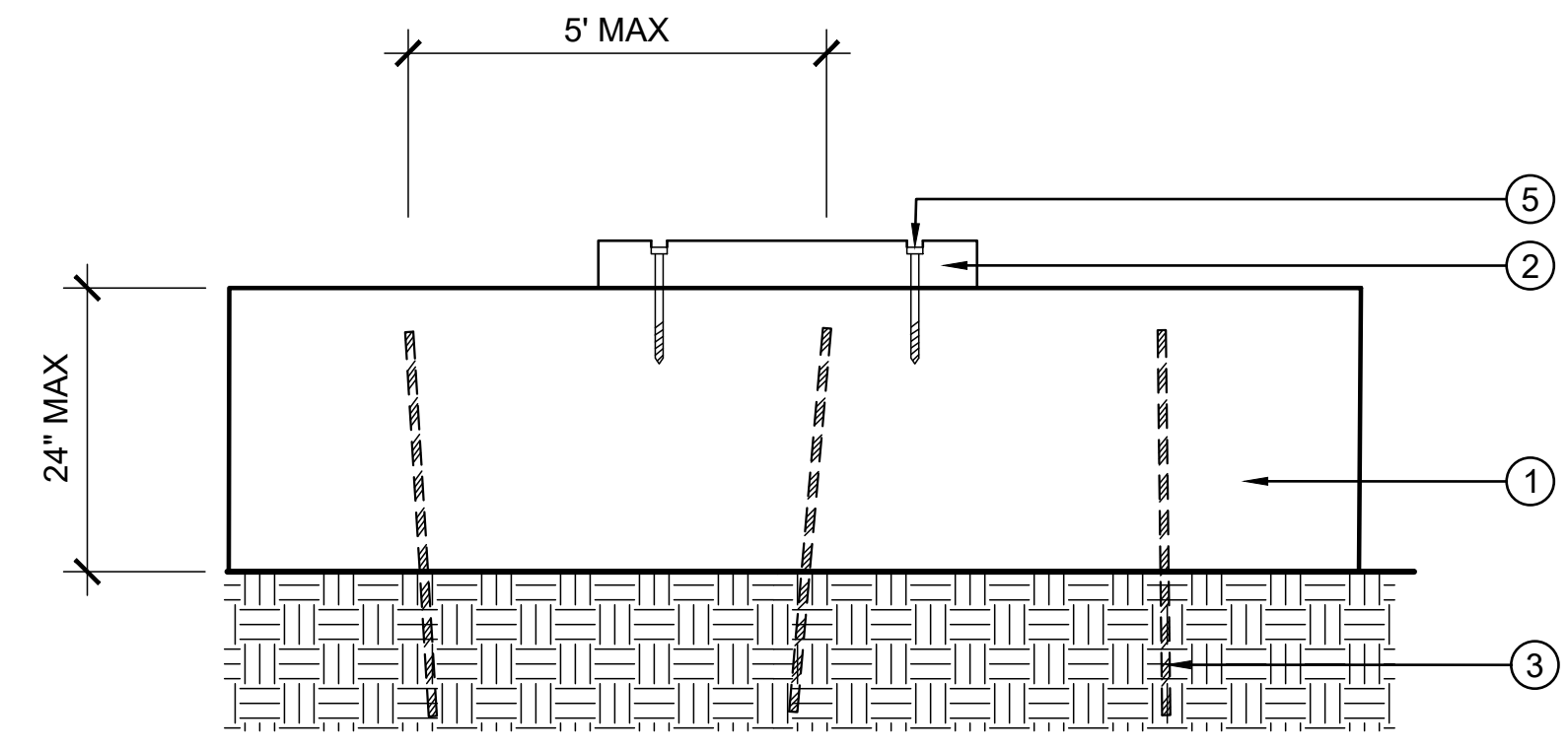
1 ROAD ENTRY STEPS
SCALE: NTS

- ① REDWOOD LOG, 8" - 20" Ø
- ② REDWOOD PLANK, 3" X 10" - 3" X 24"
- ③ NO. 5 REBAR X 48", COUNTER SINK 2", SPACE 24" MIN AT TOP, ANGLE 5° OFF VERTICAL ALL DIRECTIONS AS SHOWN. MIN (2) PER LOG.
- ④ COARSE WOODY DEBRIS, 2-6" THICK LAYER OF TWIGS AND BRANCHES PLACED NATURALISTICALLY TO PROTECT FOREST FROM TRAMPLING, SEE PLANS FOR EXTENTS
- ⑤ WOOD FASTENER

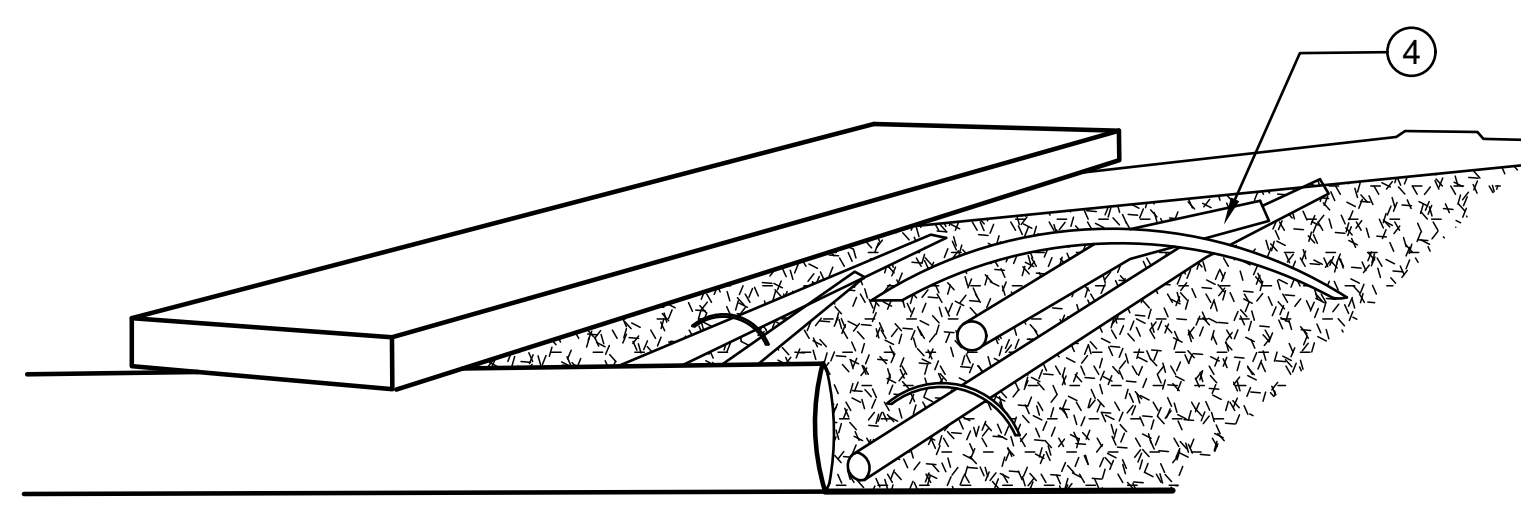
- NOTES:**
1. ENSURE ALL ELEMENTS ARE SET FREE OF MOVEMENT / WOBBLE.
 2. USE REBAR/FASTENERS TO HOLD POSITIONS OF ELEMENTS NOT TO STABILIZE ELEMENTS.
 3. SCARIFY AS NECESSARY TO PROVIDE ROUGHENED TEXTURE TO WALKING SURFACES.



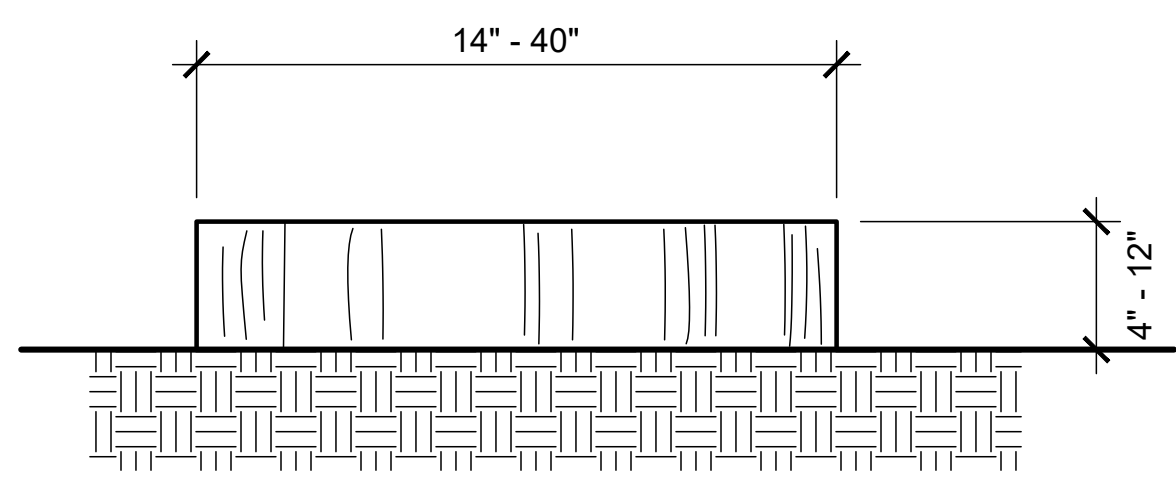
PLANK ON LOG - PROFILE



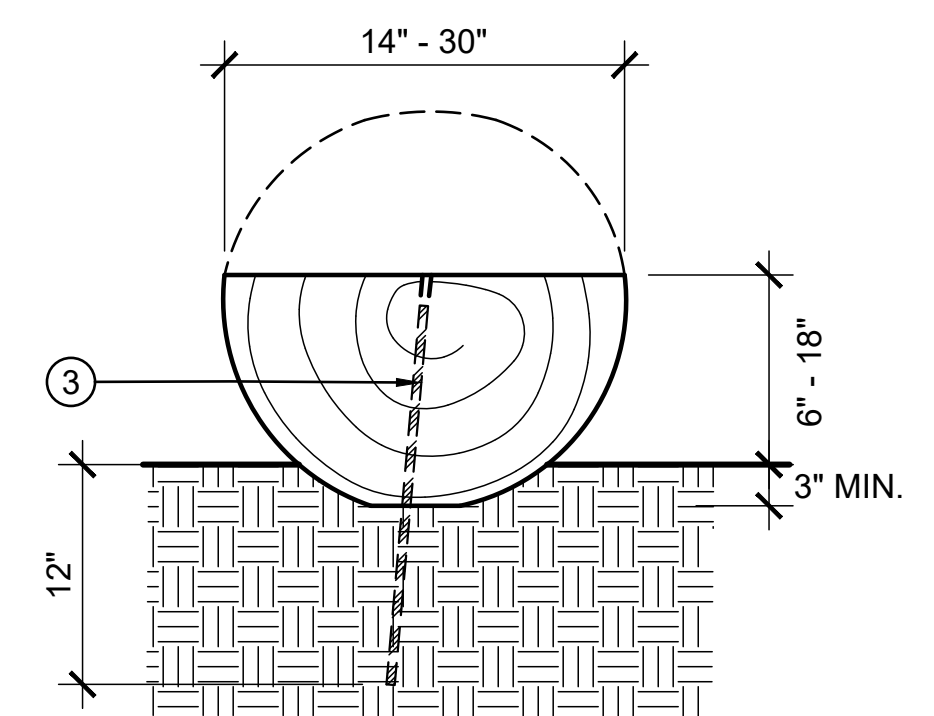
PLANK ON LOG - SECTION



SCRAMBLE EDGING



LOG ROUND ON GRADE



LOG AS TREAD

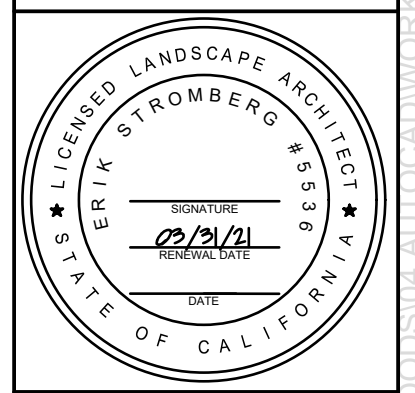
2 SCRAMBLE ELEMENTS
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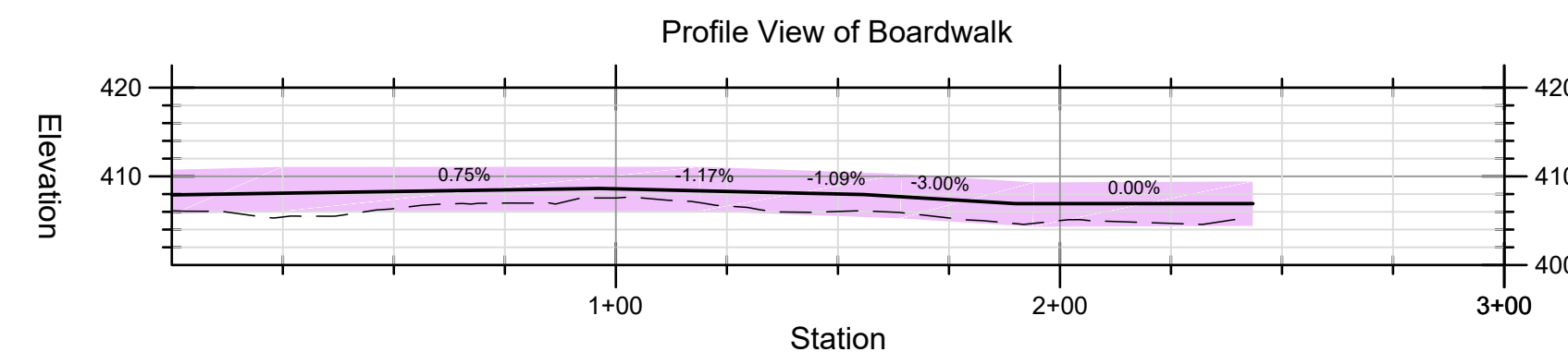
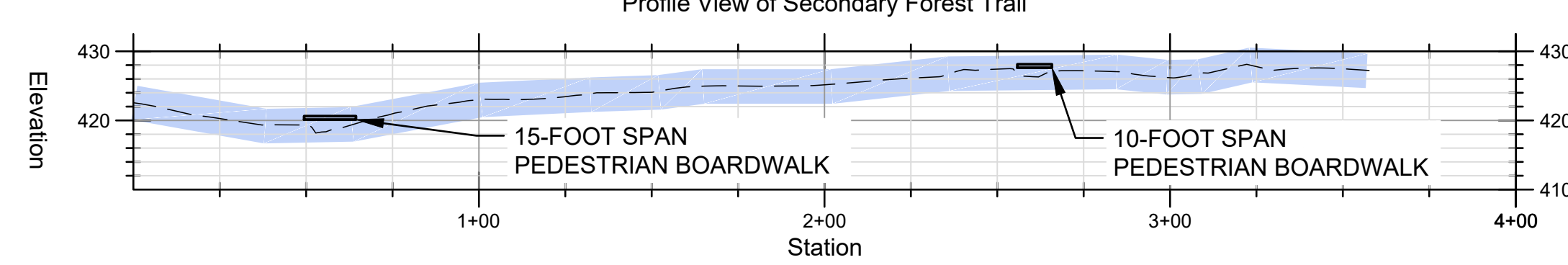
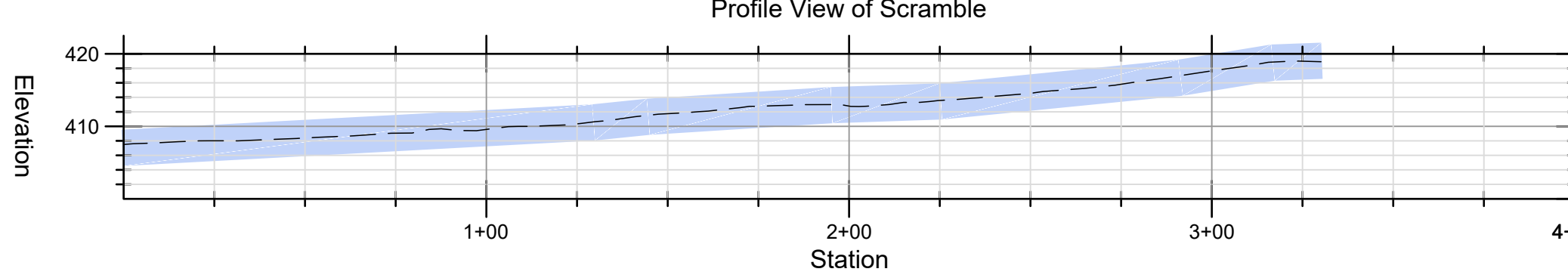
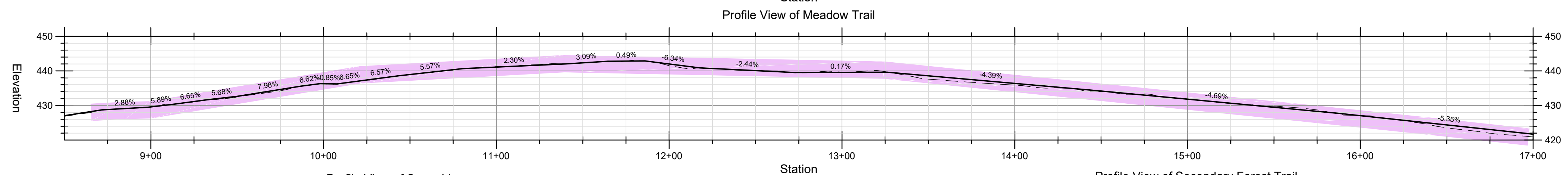
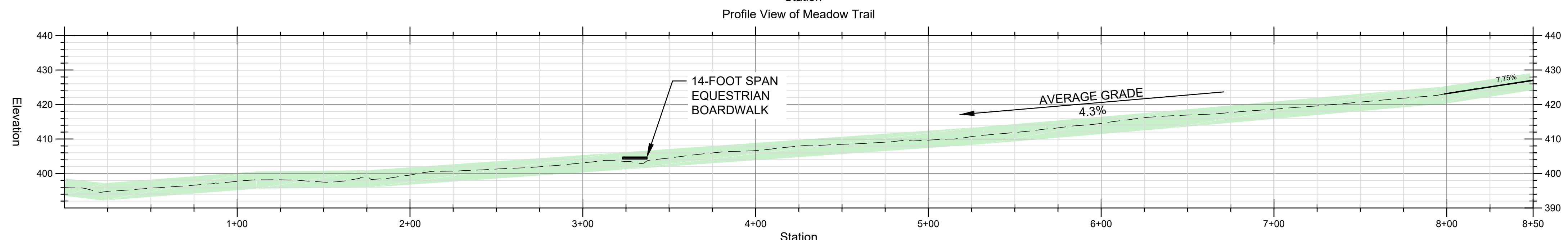
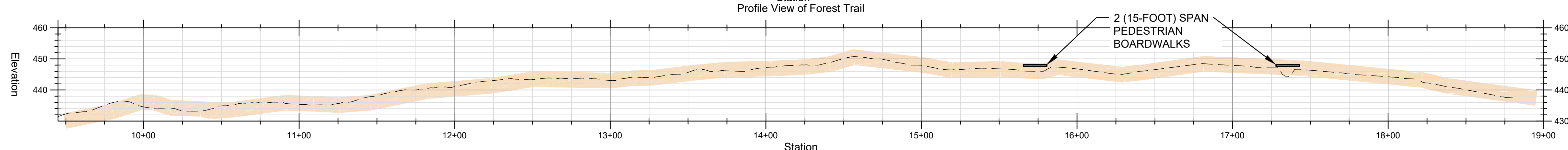
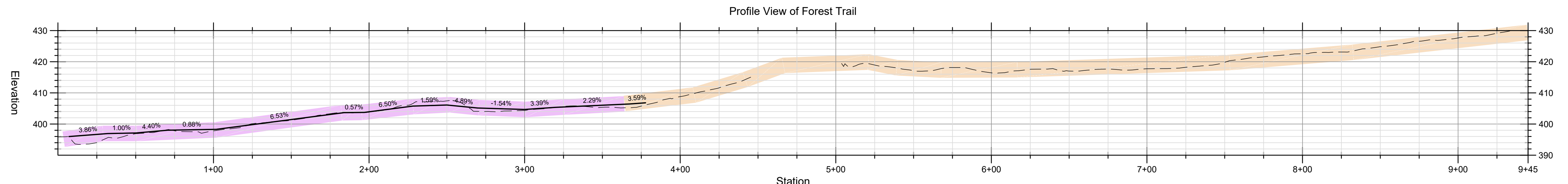
PROJECT TITLE
ROYS REDWOODS OPEN SPACE PRESERVE
VISITOR ACCESS AND PUBLIC ENGAGEMENT

DESIGN PHASE
FINAL SCHEMATIC DESIGN

SHEET TITLE
CONSTRUCTION DETAILS



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LEGEND

- EQUESTRIAN / ACCESS AND DISCOVERY TRAIL
- ACCESS AND DISCOVERY TRAIL
- PRIMARY TRAIL
- SECONDARY TRAIL
- EXISTING GRADE
- PROPOSED GRADE

SEE 1/L-2.1 FOR TRAIL TYPE DETAILS

0 40 80 Feet
2X VERTICAL EXAGGERATION

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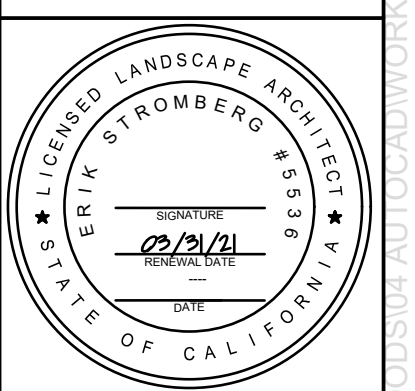
ROYS REDWOODS OPEN SPACE PRESERVE
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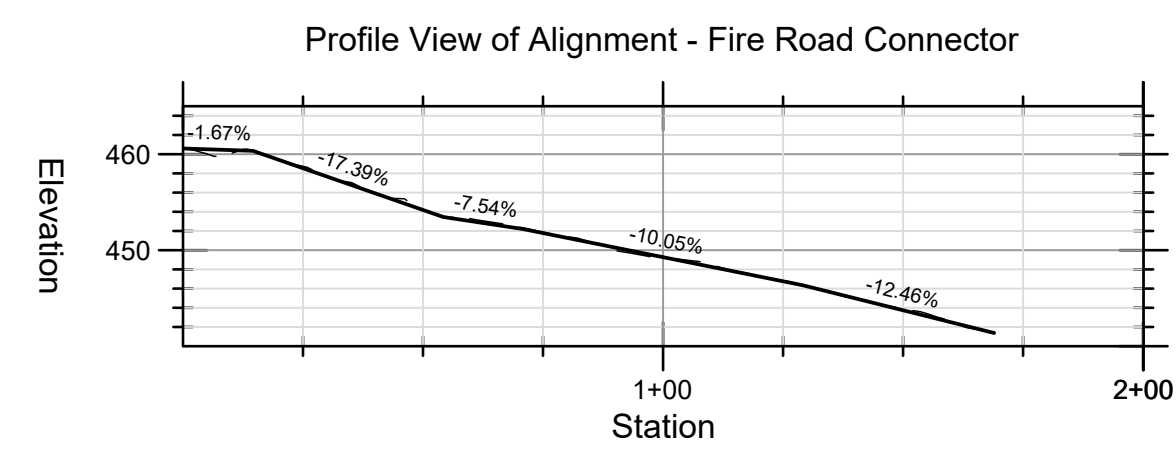
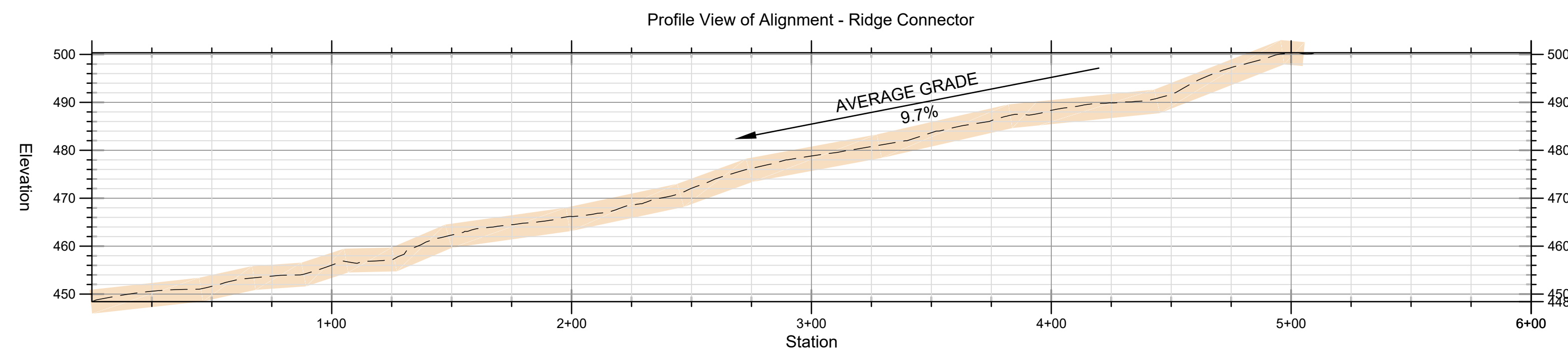
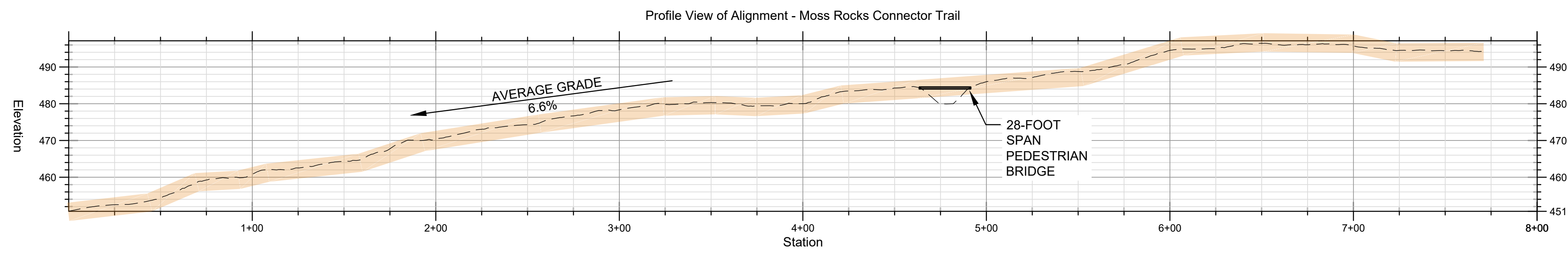
TRAIL PROFILES

DESIGN PHASE

FINAL SCHEMATIC DESIGN



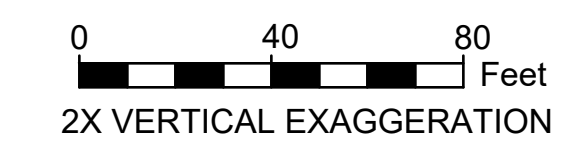
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SHEET	L-3.0



LEGEND

- EQUESTRIAN / ACCESS AND DISCOVERY TRAIL
- ACCESS AND DISCOVERY TRAIL
- PRIMARY TRAIL
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- EXISTING GRADE
- PROPOSED GRADE

SEE 1/L-2.1 FOR TRAIL TYPE DETAILS

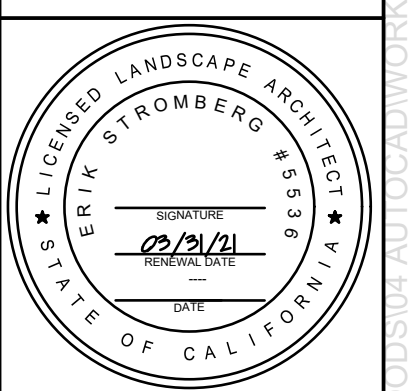


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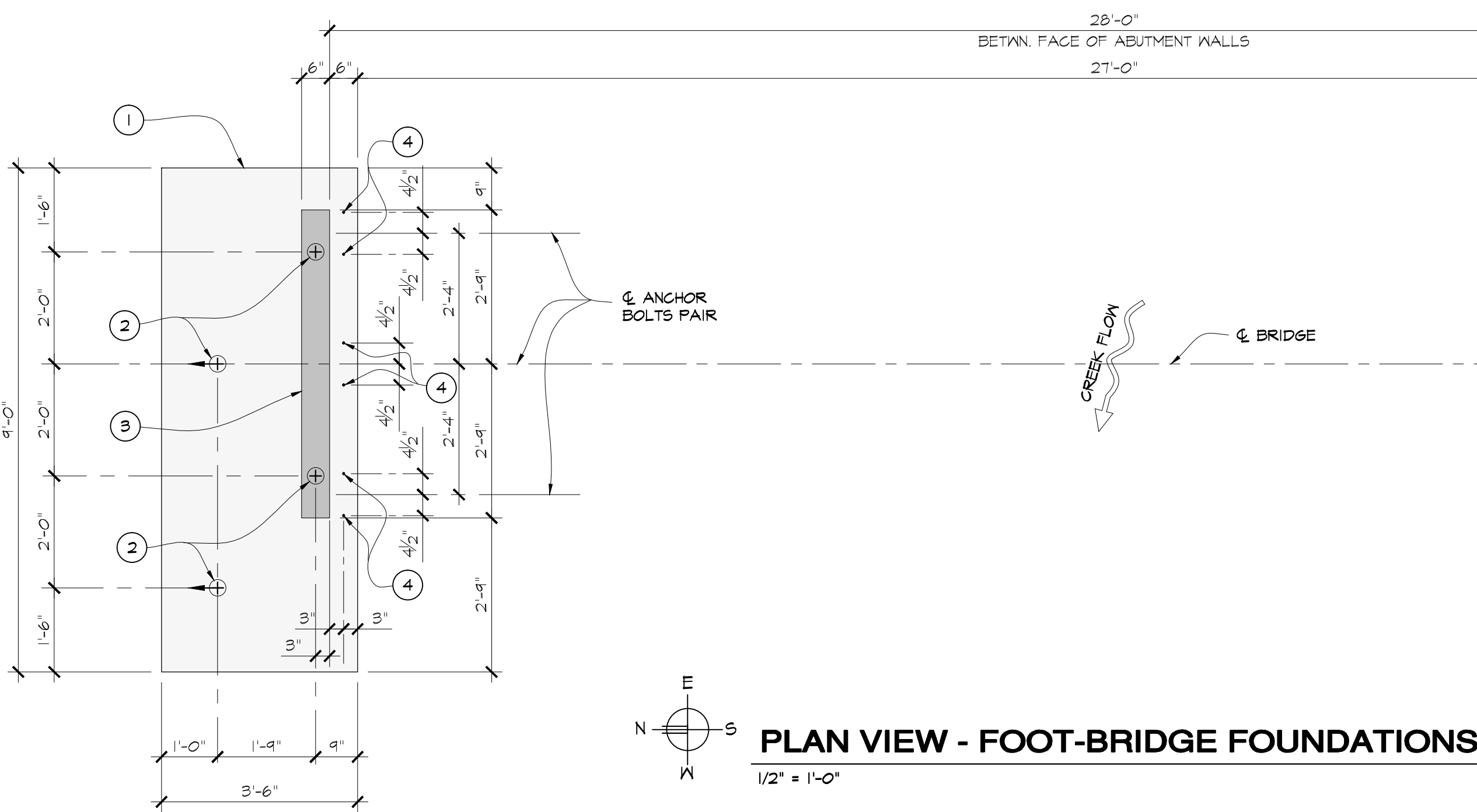
PROJECT TITLE
ROY'S REDWOODS OPEN SPACE PRESERVE
VISITOR ACCESS AND PUBLIC ENGAGEMENT

DESIGN PHASE
FINAL SCHEMATIC DESIGN

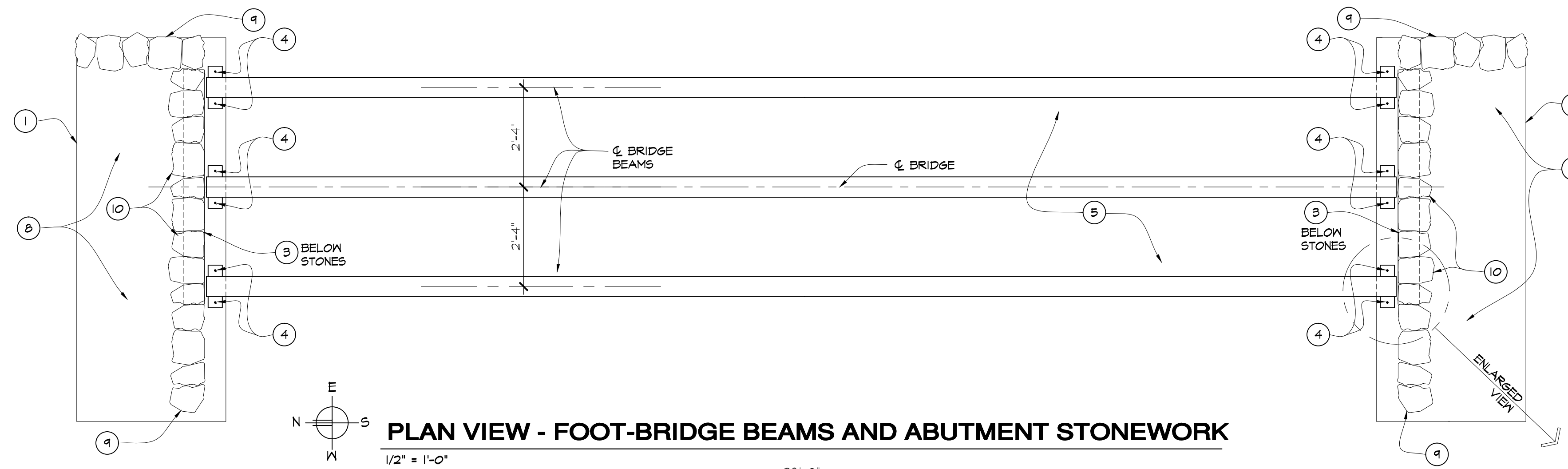
SHEET TITLE
TRAIL PROFILES



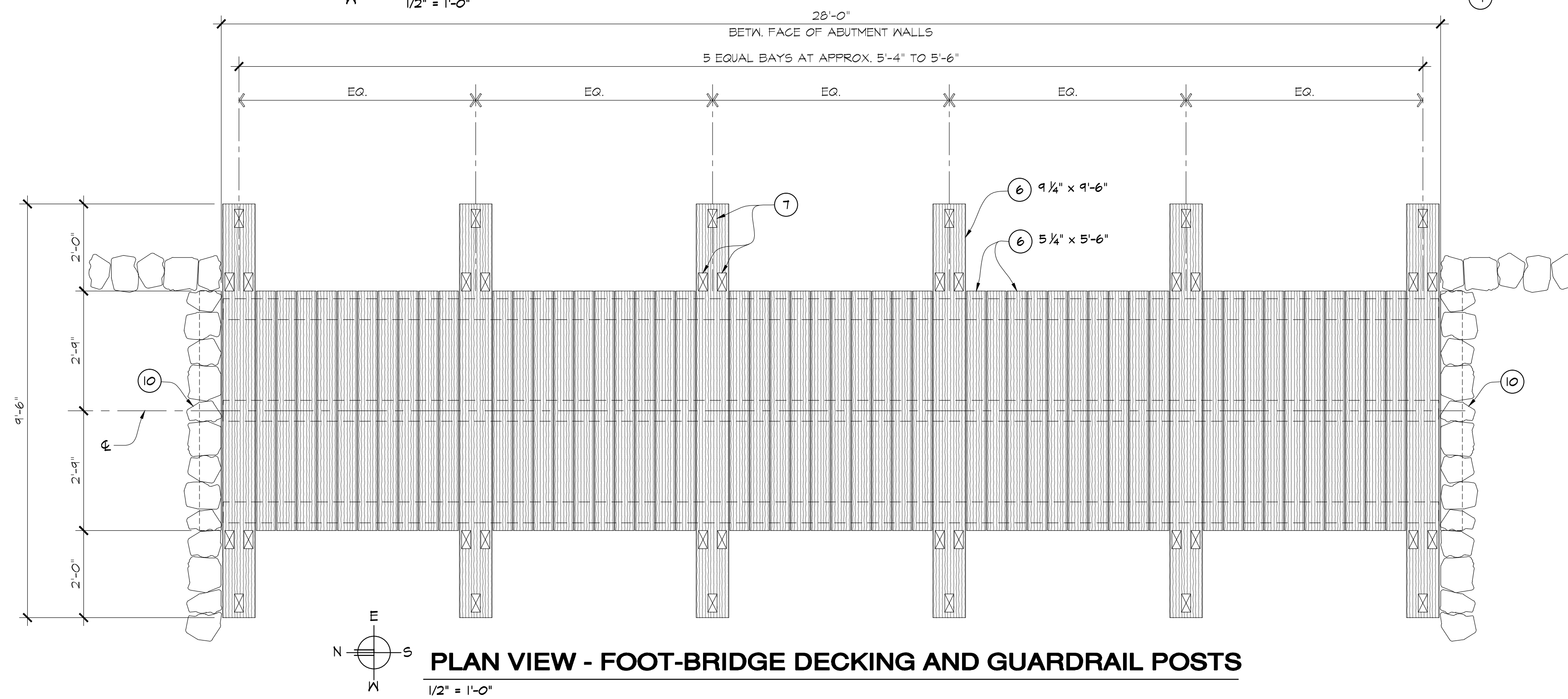
DESIGN BY	ES,GR
DRAWN BY	ES,KB
CHECKED BY	ES
SCALE	1" = 70'-0"
DATE	MARCH 31, 2020
SHEET	L-3.1



PLAN VIEW - FOOT-BRIDGE FOUNDATIONS
1/2" = 1'-0"



PLAN VIEW - FOOT-BRIDGE BEAMS AND ABUTMENT STONEMWORK
1/2" = 1'-0"



PLAN VIEW - FOOT-BRIDGE DECKING AND GUARDRAIL POSTS
1/2" = 1'-0"

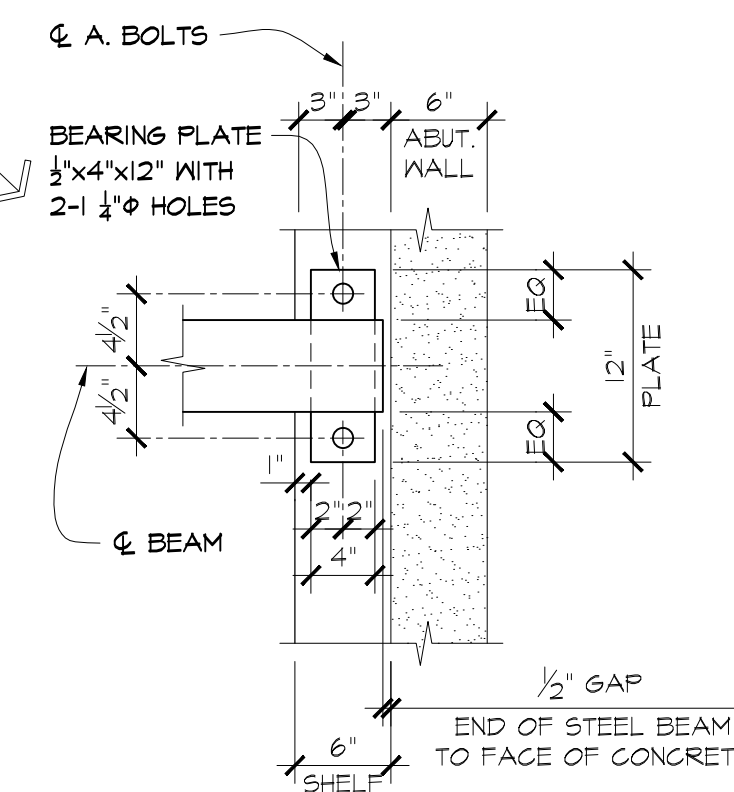
DESIGN LOADS:

This bridge has been designed for the following Live Loads:

- Uniform: 85 psf (assembly of people)
- Concentrated: 750 lbs. (horse)

LEGEND (applies to this sheet only)

- 1 Cast-in-place concrete platform / cap for helical piles. Dimensions and reinforcing as shown on this sheet and next. Use 2500 psi concrete mix.
- 2 Helical piles, four each bridge abutment, 2 vertical and 2 battered as shown. The battered piles shall be set in at a 30 degree angle. These helical piles shall have 3" standard steel pipe shafts. The vertical piles shall be designed for a 12 kip downward load each and the battered piles shall be designed for a tension of 3 kips each. (These are safe working loads with a built-in factor of safety of 2.) Appropriate embedment depths shall be worked out between the pile installer and the Soils Engineer. For cap detail see next sheet.
- 3 6" Thick x 11" high cast-in-place concrete abutment wall, dimensions and reinforcing as shown on this sheet and next.
- 4 Anchor bolts, 1" diameter, hot-dip galvanized, two each end of each bridge girder. Align carefully as dimensioned.
- 5 Steel bridge beams, W10x22, use weathering steel (aka: Corten or ASTM A588 steel). Shop fabricate to 27'-11" with base plates each end and welded threaded studs for wood nailer on top as shown.
- 6 Wood deck boards. Use reclaimed, clear redwood hand-selected for quality. Neatly rip-cut pieces to fit leaving 1/4" gaps between deck boards. Common deck board width will end up at roughly 5" to 5 1/4" wide. Deck boards supporting guardrail posts shall be roughly 9" to 9 1/4" wide. Thickness of deck boards shall be 2 1/2" +/- 1/8" but differential thickness from one board to next shall be 1/8" max. All deck boards shall be lightly sanded on top and all top edges shall be routed with a 1/8" radius round-over bit.
- 7 Guardrail posts and braces, reclaimed clear redwood. See next sheet.
- 8 Lean concrete fill over platform. Extend up to same elevation as top of concrete curb. See next sheet.
- 9 Large stonework as directed by Landscape Architect. Install stainless steel all-threaded dowels in major rocks and extend back into lean concrete fill over concrete platform. See next sheet.
- 10 Neatly fitted threshold stonework. These stones shall rest partially on top of cast concrete curb and partly on lean concrete fill. Installation of these stones shall be as directed by Landscape Architect.



REVISIONS	
DATE	DESCRIPTION
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PROJECT TITLE
ROY'S REDWOODS OPEN SPACE PRESERVE
VISITOR ACCESS AND PUBLIC ENGAGEMENT

DESIGN PHASE
FINAL DRAFT SCHEMATIC DESIGN

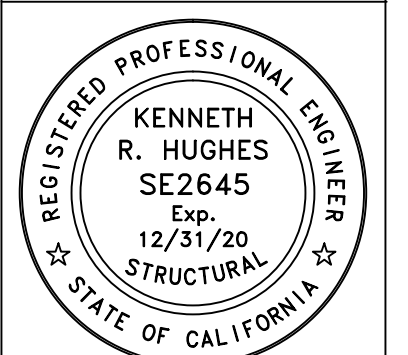
SHEET TITLE
FOOT BRIDGE PLANS



Kenneth R. Hughes

Structural Engineer

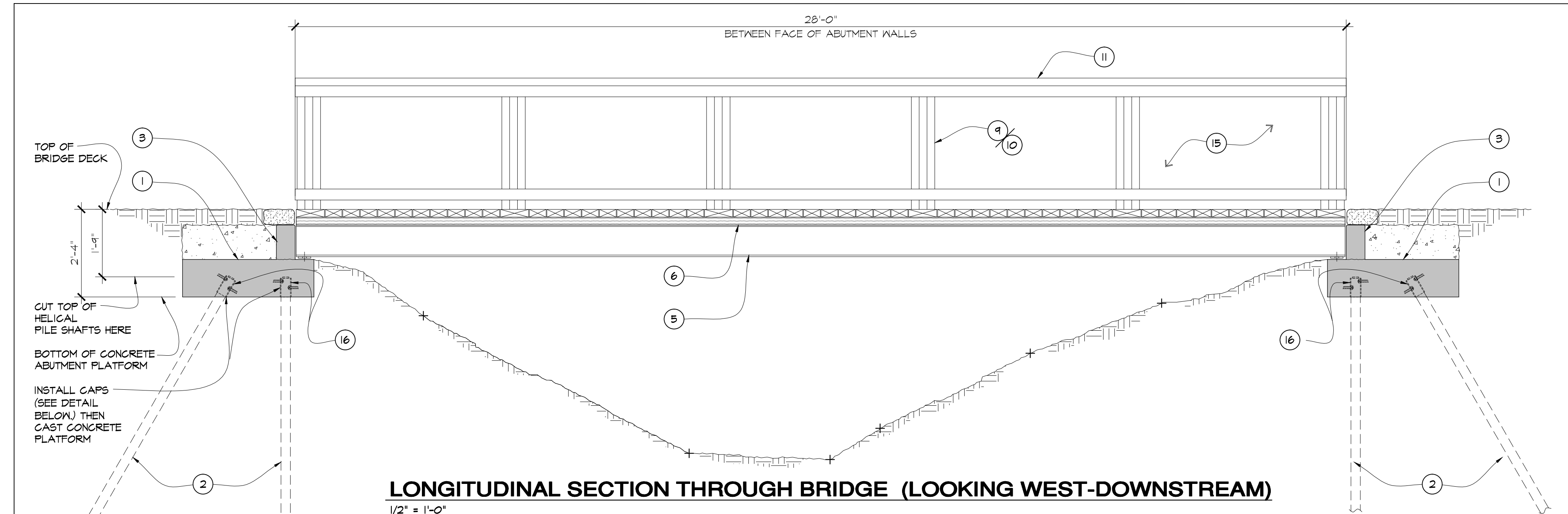
3620 Mt. Diablo Blvd., #203
Lafayette, California 94549
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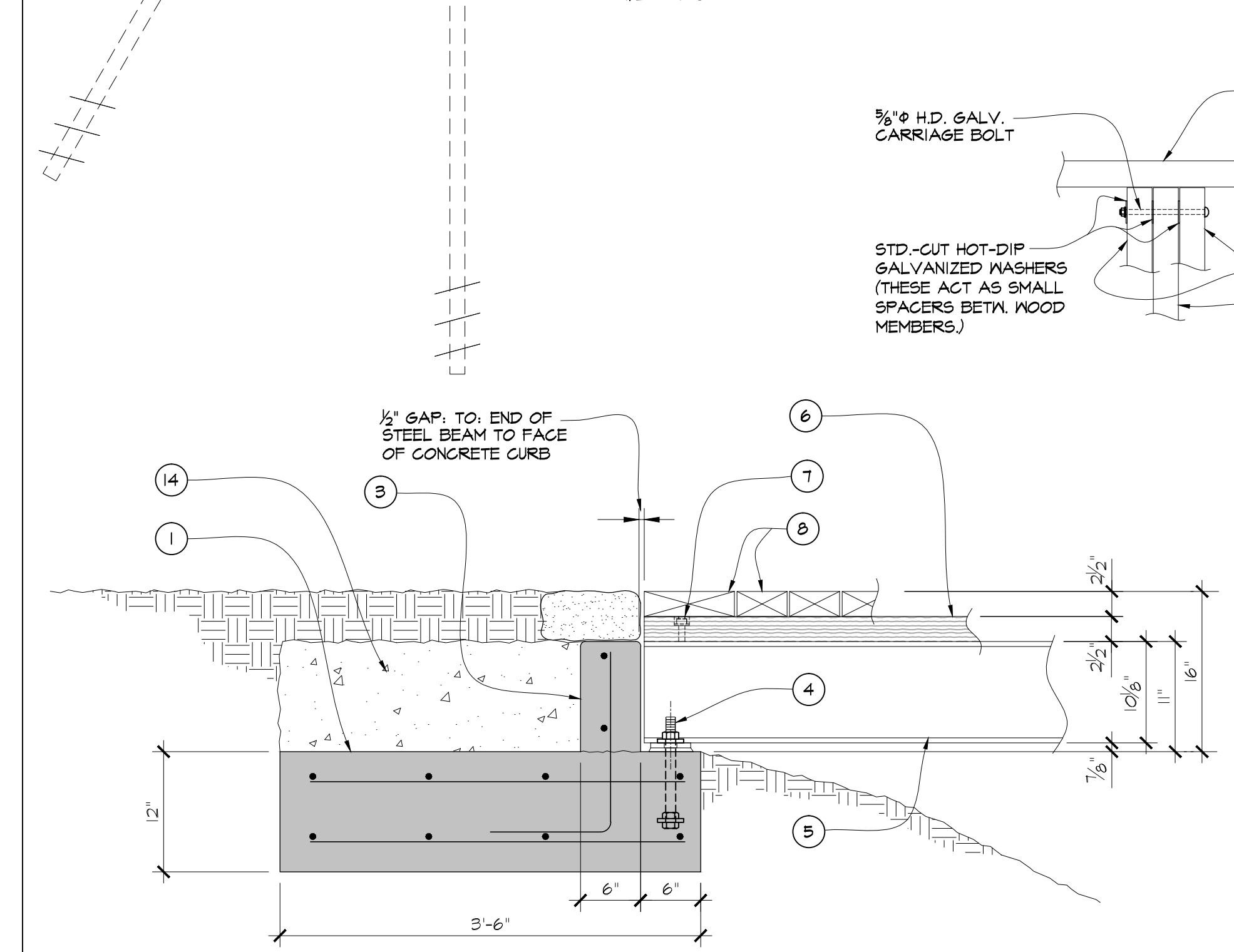
DESIGN BY K.H.
DRAWN BY A.M.
CHECKED BY
SCALE AS NOTED
DATE MARCH 27, 2020
SHEET

S-1

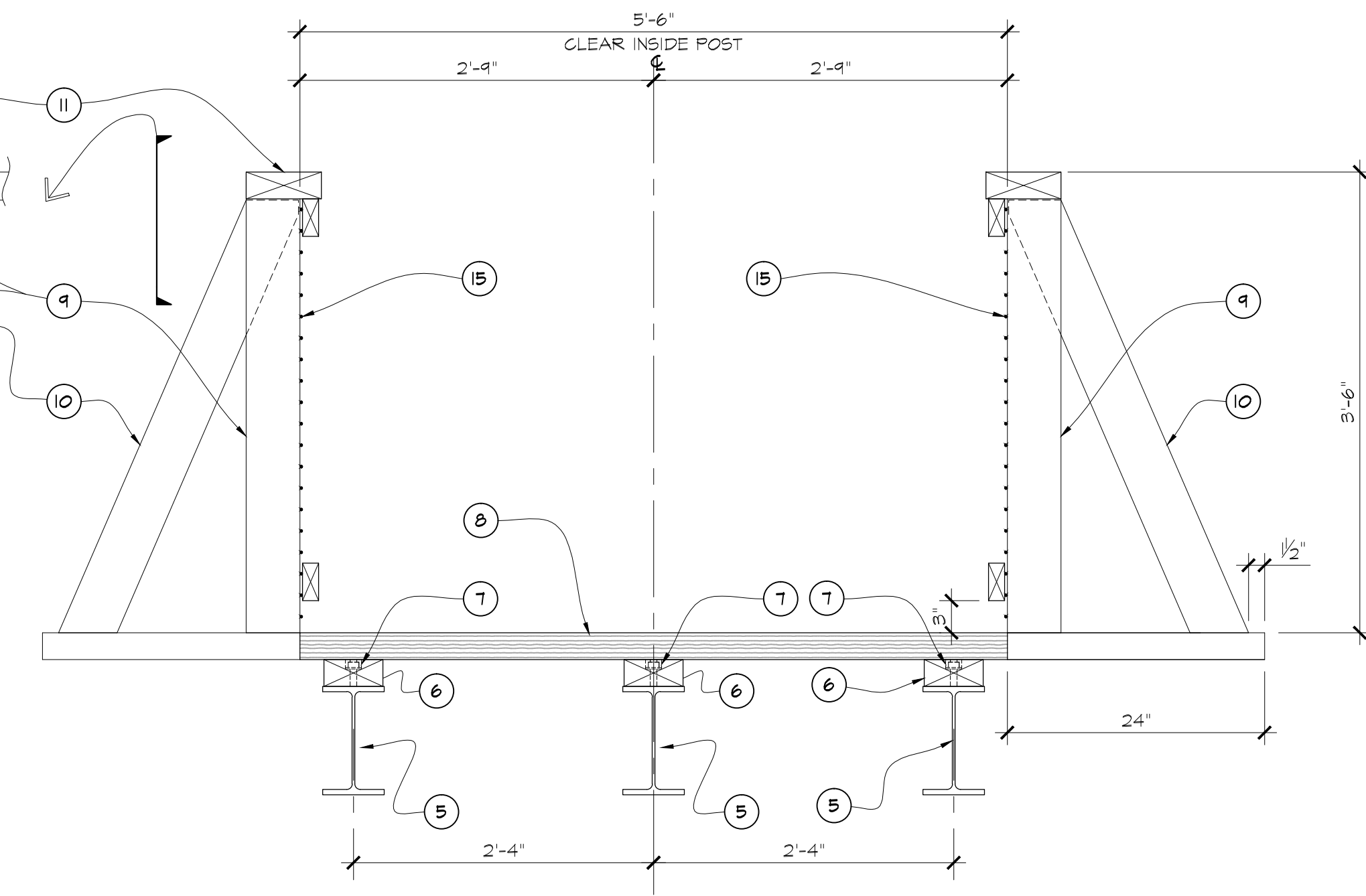
OF 17



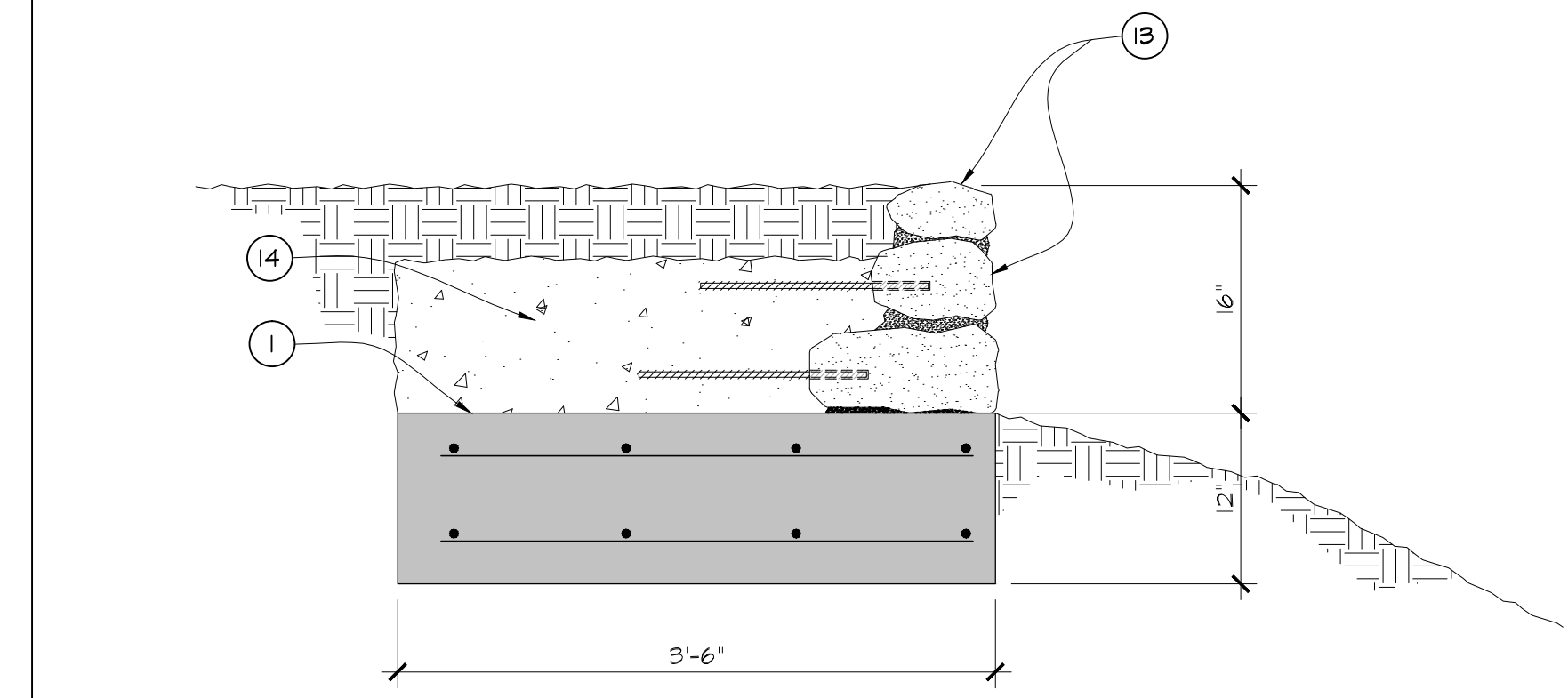
LONGITUDINAL SECTION THROUGH BRIDGE (LOOKING WEST-DOWNSTREAM)
1/2" = 1'-0"



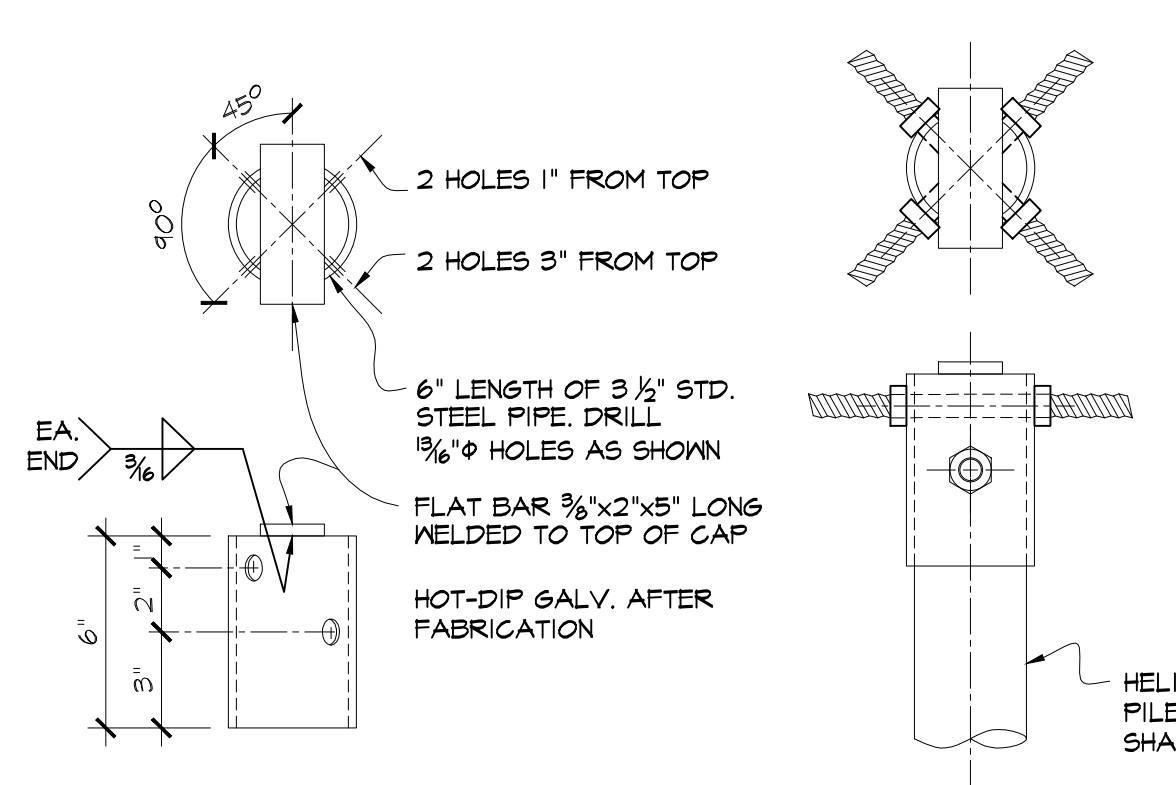
SECTION AT ABUTMENT - END OF BRIDGE BEAMS
1" = 1'-0"



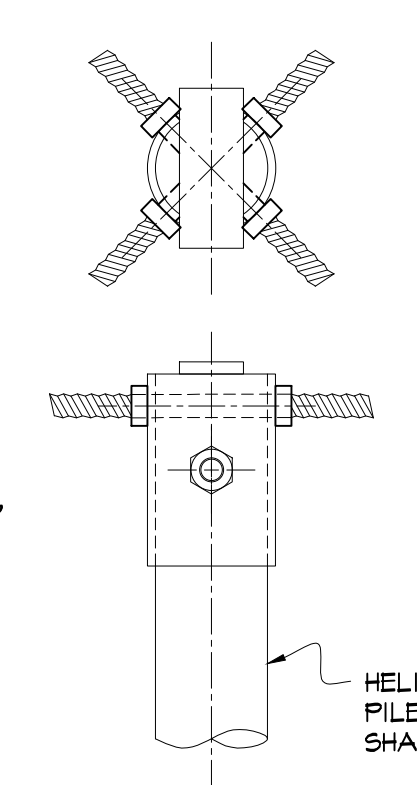
SECTION THROUGH BRIDGE
1" = 1'-0"



SECTION AT ABUTMENT - THRU STONEMWORK
1" = 1'-0"



CAP FABRICATION DETAIL



CAP INSTALLATION DETAIL

- CONSTRUCTION SEQUENCE:**
- CUT TOP OF HELICAL PILE SHAFT TO ELEVATION SHOWN IN LONGITUDINAL SECTION ABOVE.
 - SLIP CUSTOM STEEL CAP OVER TOP OF PILE SHAFT.
NOTE: SHAFT O.D. = 3.50"
CAP I.D. = 3.55"
THEN DRILL 3/4" OR 5/8" Ø HOLES THROUGH PILE SHAFT ALIGN WITH HOLES IN CAP.
 - INSTALL ALL-THREAD RODS THROUGH ASSEMBLY. USE 10" LENGTHS OF 3/4" Ø H.D. GALV. ALL-THREAD. SECURE TIGHT WITH FIXING NUTS.

LEGEND (applies to this sheet only)

- Cast-in-place concrete platform / cap for helical piles. Dimensions and reinforcing as shown.
- Helical piles, four each bridge abutment, 2 vertical and 2 battered as shown. The battered piles shall be set in at a 30 degree angle. See previous sheet for load requirements. See details on this sheet for sleeve / cap detail.
- 6" Thick x 11" high cast-in-place concrete abutment wall, dimensions and reinforcing as shown.
- Anchor bolts, 1" diameter, two each end of each bridge girder. Use hot-dip galvanized steel, ASTM F1554, Gr.55. Use 12" length of all-thread with a double-nuts jammed together at the embedded end. Embed 8", project up 4". Align carefully as dimensioned. Once bridge girders are installed secure with double fixing nuts on top - jammed together.
- Steel bridge beams, W10x22, weathering steel. (3 req'd)
- Wood nailer on top flange of steel bridge girders. Use reclaimed redwood 2 1/2" thick, 5" to 5 1/2" wide. Drill and counter-bore for welded studs. Counter-bore to set standard-cut washer and nut just below flush with top of nailer. Use hot-dip galvanized washer and nut to secure nailer. Fill hole around nut and washer with mastic.
- Threaded, welded studs, to secure wood nailer, 5/8" diameter x 2-3/8" long. Space at 4 ft. max., more as needed so there is one within 6" of end of each run of wood nailer. Shop weld these to top flange of steel bridge beams.
- Wood deck boards. Use reclaimed, clear redwood hand-selected for quality. Neatly rip-cut pieces to fit leaving 1/4" gaps between deck boards. Common deck board width will end up at roughly 5" to 5 1/4". Rail support deck boards shall be 9" to 9 1/4". Thickness of deck boards shall be 2 1/2" +/- 1/8" but differential thickness from one board to next shall be 1/8" max. All deck boards shall be lightly sanded on top and all top (120 sandpaper) edges shall be routed with a 1/8" radius round-over router bit.
- Guardrail posts. Use reclaimed, clear, redwood, hand selected for appearance and overall quality. Rip-cut to create fresh edges and 5" width route all edges with 1/8" round-over bit. Then sand all surfaces to 120 grit.
- Guardrail post braces. Use reclaimed, clear, redwood, hand selected for appearance and overall quality. Rip-cut to create fresh edges and 5" width route all edges with 1/8" round-over bit. Then sand all surfaces to 120 grit.
- Wood top rail. Use reclaimed, clear redwood, hand-selected for straightness, appearance and overall quality. Top rail shall be 2 1/2" thick x 7" wide. All edges of this member shall be routed with a 1/8" radius round-over bit. Then all surfaces shall be sanded to 120 grit.
- Large stonework as directed by Landscape Architect. Install 1/2" Ø stainless steel all-threaded dowels in major rocks and extend back into lean concrete fill over platform.
- Lean concrete fill over platform. Extend to height to match concrete curb.
- Guardrail infill - see landscape plans.
- Custom steel cap secured to top of each Helical pile shafts. See details below.

REVISIONS	
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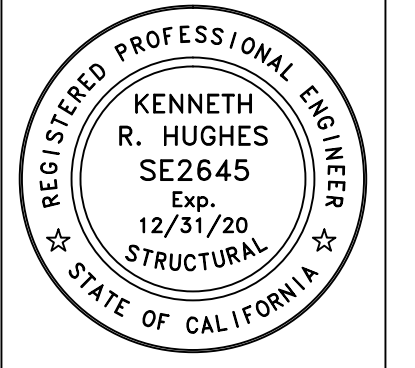
PROJECT TITLE: ROYS REDWOODS OPEN SPACE PRESERVE VISITOR ACCESS AND PUBLIC ENGAGEMENT
 SHEET TITLE: FOOTBRIDGE SECTIONS & DETAILS
 DESIGN PHASE: FINAL DRAFT SCHEMATIC DESIGN



Kenneth R. Hughes

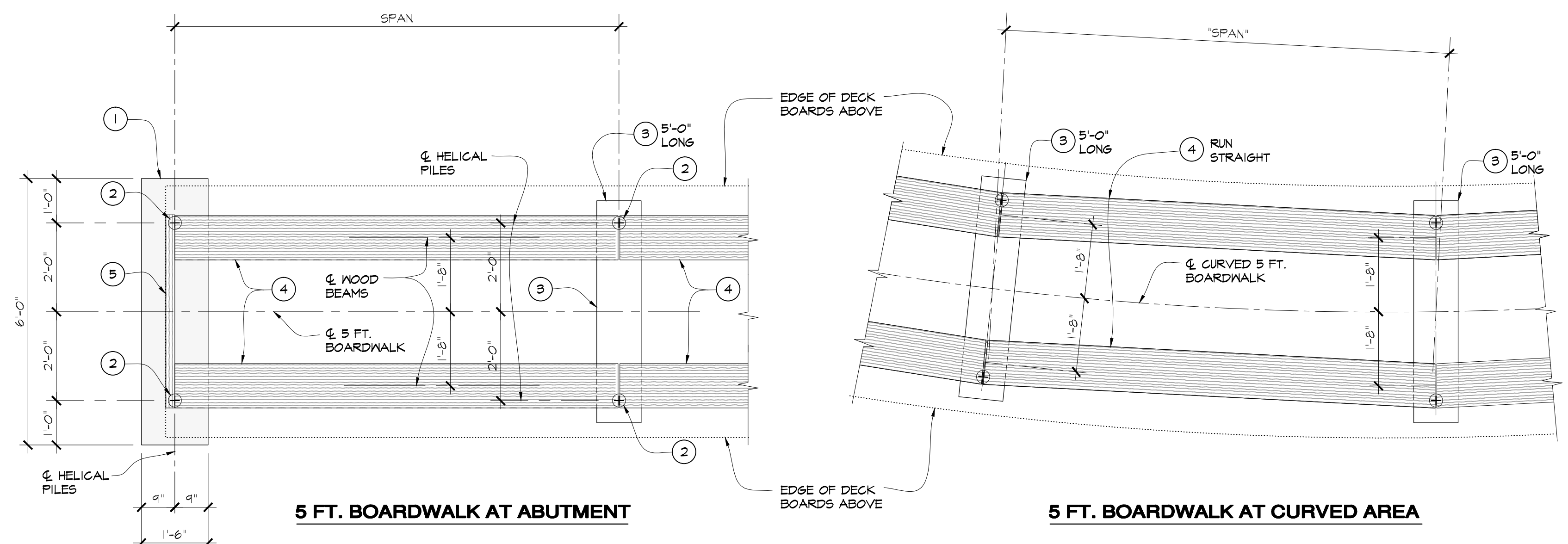
Structural Engineer

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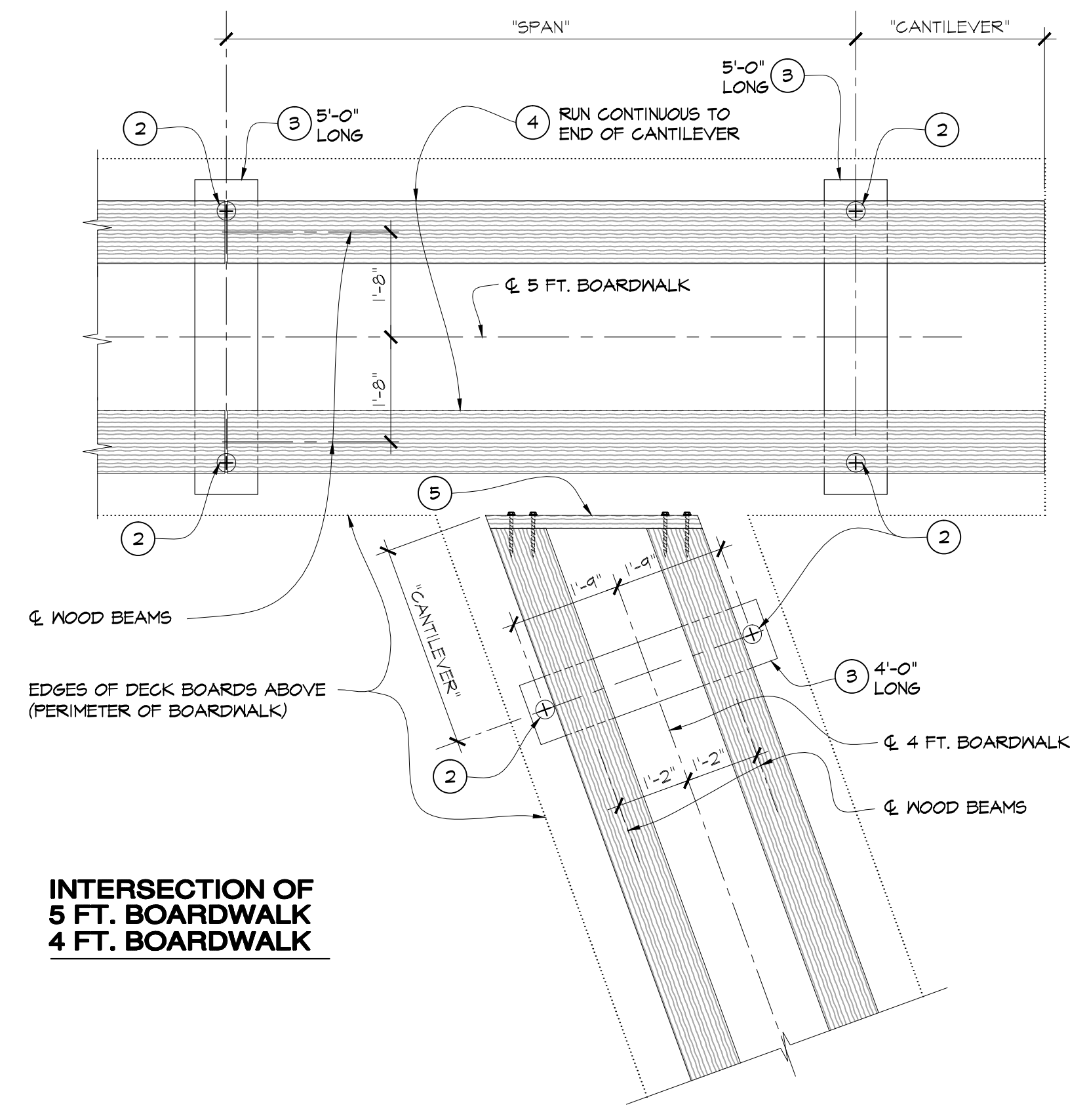


DESIGN BY	K.H.
DRAWN BY	A.M.
CHECKED BY	
SCALE	AS NOTED
DATE	MARCH 27, 2020
SHEET	

S-2



PLAN VIEW - BOARDWALK FOUNDATIONS AND MAIN BEAMS (VARIOUS CONFIGURATIONS SHOWN)
 1/2" = 1'-0"



INTERSECTION OF 5 FT. BOARDWALK 4 FT. BOARDWALK

DESIGN LOADS:
 This bridge has been designed for the following Live Loads:
 Uniform: 85 psf (assembly of people)
 Concentrated: 750 lbs. (horse)

BOARDWALK BEAM SCHEDULE				
BEAM	MAX. SPAN 5 FT. BN.	MAX. SPAN 4 FT. BN.	MAX. CANTILEVER 5 FT. BN.	MAX. CANTILEVER 4 FT. BN.
6x6	7'-6"	8'-6"	3'-0"	3'-6"
6x8 FLAT (5 1/2"H. X 7 1/2"W.)	8'-6"	9'-6"	3'-6"	4'-0"
6x10 FLAT (5 1/2"H. X 9 1/2"W.)	9'-6"	10'-6"	4'-0"	4'-6"
6x12 FLAT (5 1/2"H. X 11 1/2"W.)	10'-6"	11'-6"	4'-6"	5'-0"

- LEGEND** (applies to this sheet only)
- Cast-in-place concrete platform / cap for helical piles. Dimensions and reinforcing as shown on this sheet and next. Use 2,500 psi concrete mix.
 - Helical piles, two each support point (either abutment or intermediate support), both vertical. These helical piles shall have 3" standard steel pipe shafts. The vertical piles shall be designed for a 8 kip downward load each. (This is a safe working load with a built-in factor of safety of 2.) Appropriate embedment depths shall be worked out between the pile installer and the Soils Engineer. For custom cap detail see next sheet.
 - Steel plate / platform / cap for helical piles, plate shall be 3/4" thick x 12" wide x 5'-0" long for 5 ft. boardwalk and 3/4" x 12" x 4'-0" for 4 ft. boardwalk.
 - Wood boardwalk beams. Use reclaimed, clear, redwood. See schedule.
 - End trim board: Reclaimed redwood 2 1/2" wide x 5 1/2" H. Secure each end with 2- 5/8" x 8"L. H.D. galv. hex-headed lag screws into end grain of each wood beam.

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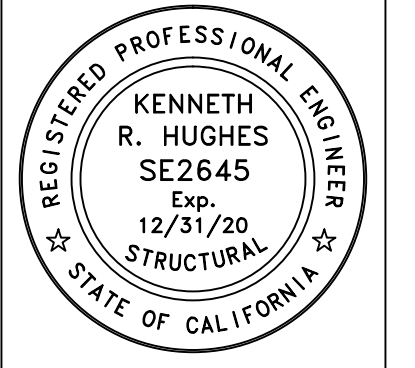
PROJECT TITLE
ROY'S REDWOODS OPEN SPACE PRESERVE
 VISITOR ACCESS AND PUBLIC ENGAGEMENT

DESIGN PHASE
 FINAL DRAFT SCHEMATIC DESIGN

SHEET TITLE
 BOARDWALK PLANS

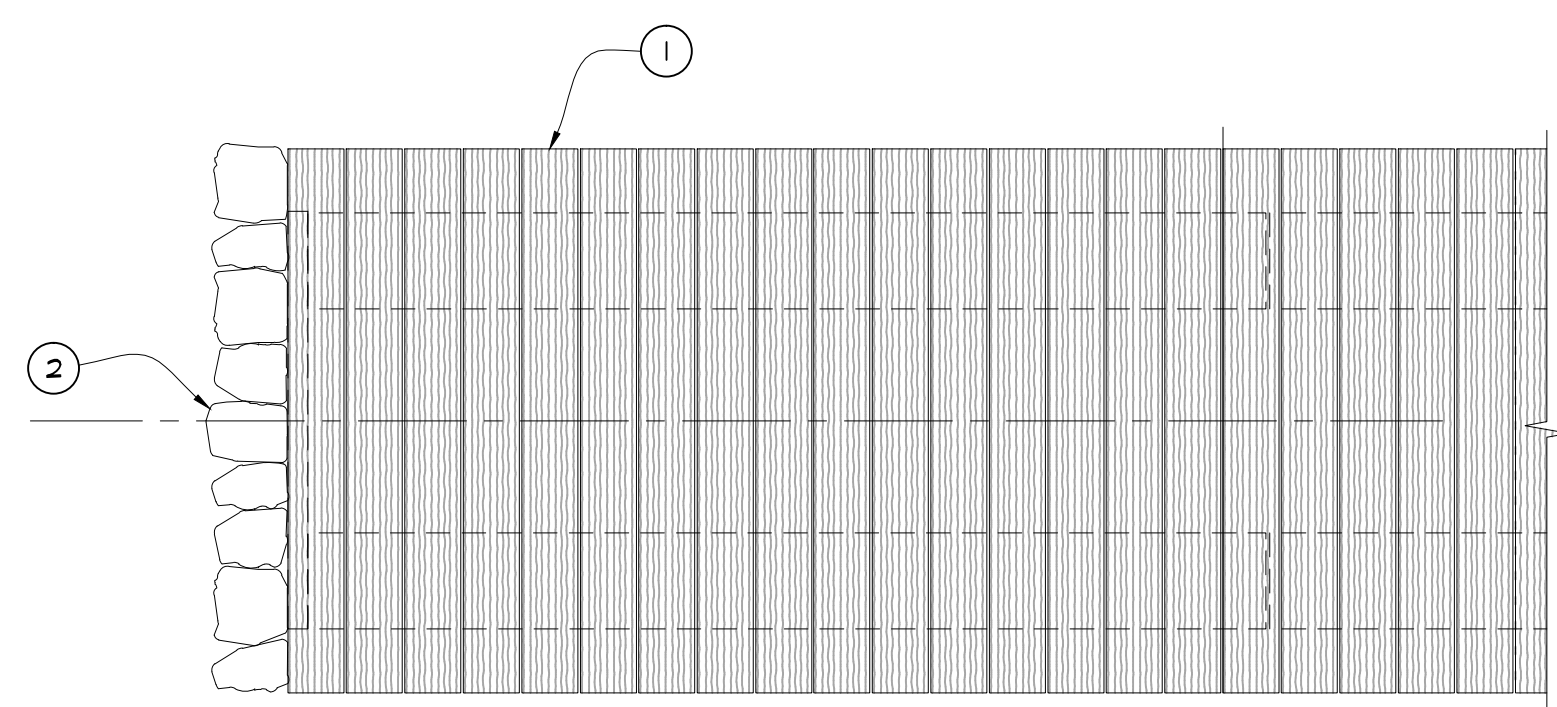


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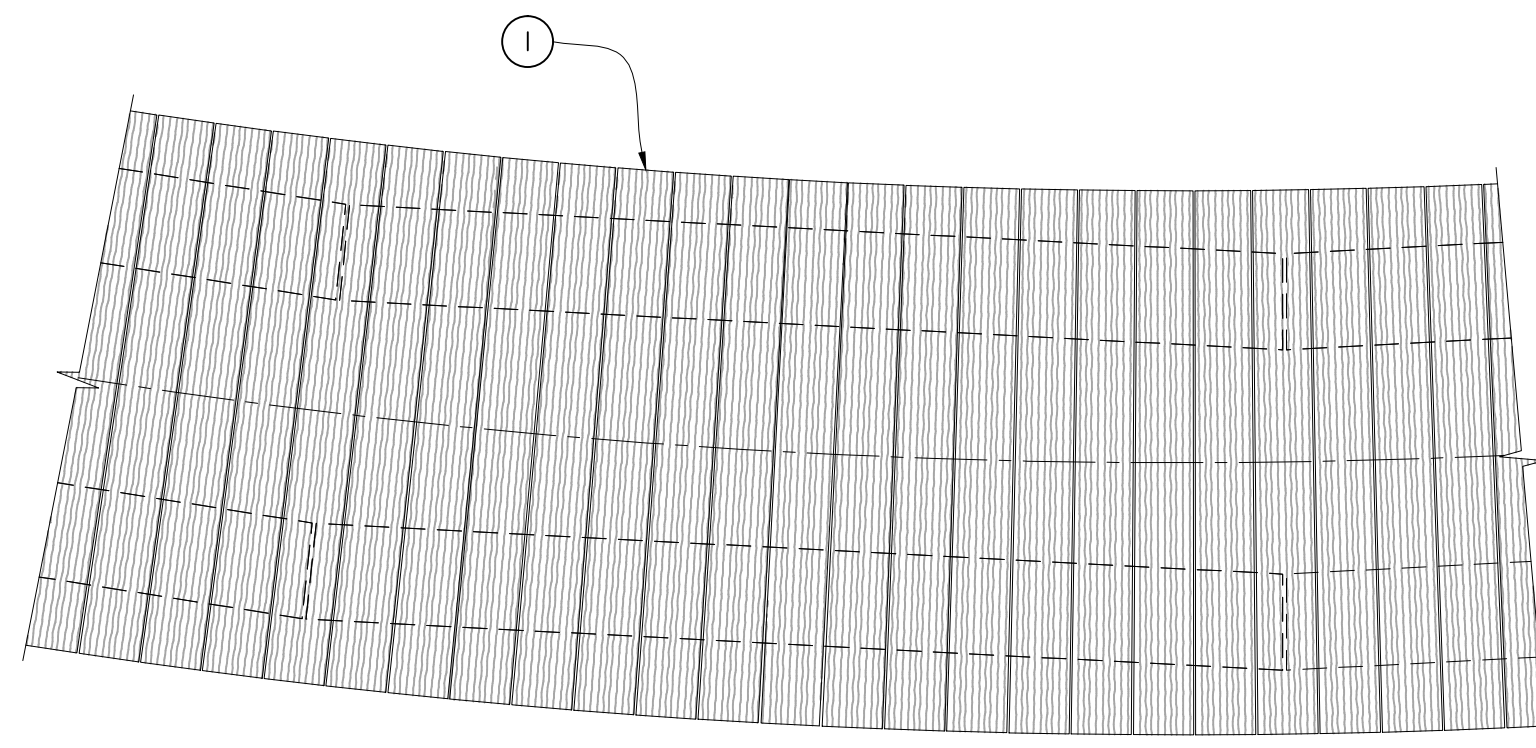


DESIGN BY K.H.
 DRAWN BY A.M.
 CHECKED BY
 SCALE AS NOTED
 DATE MARCH 27, 2020
 SHEET

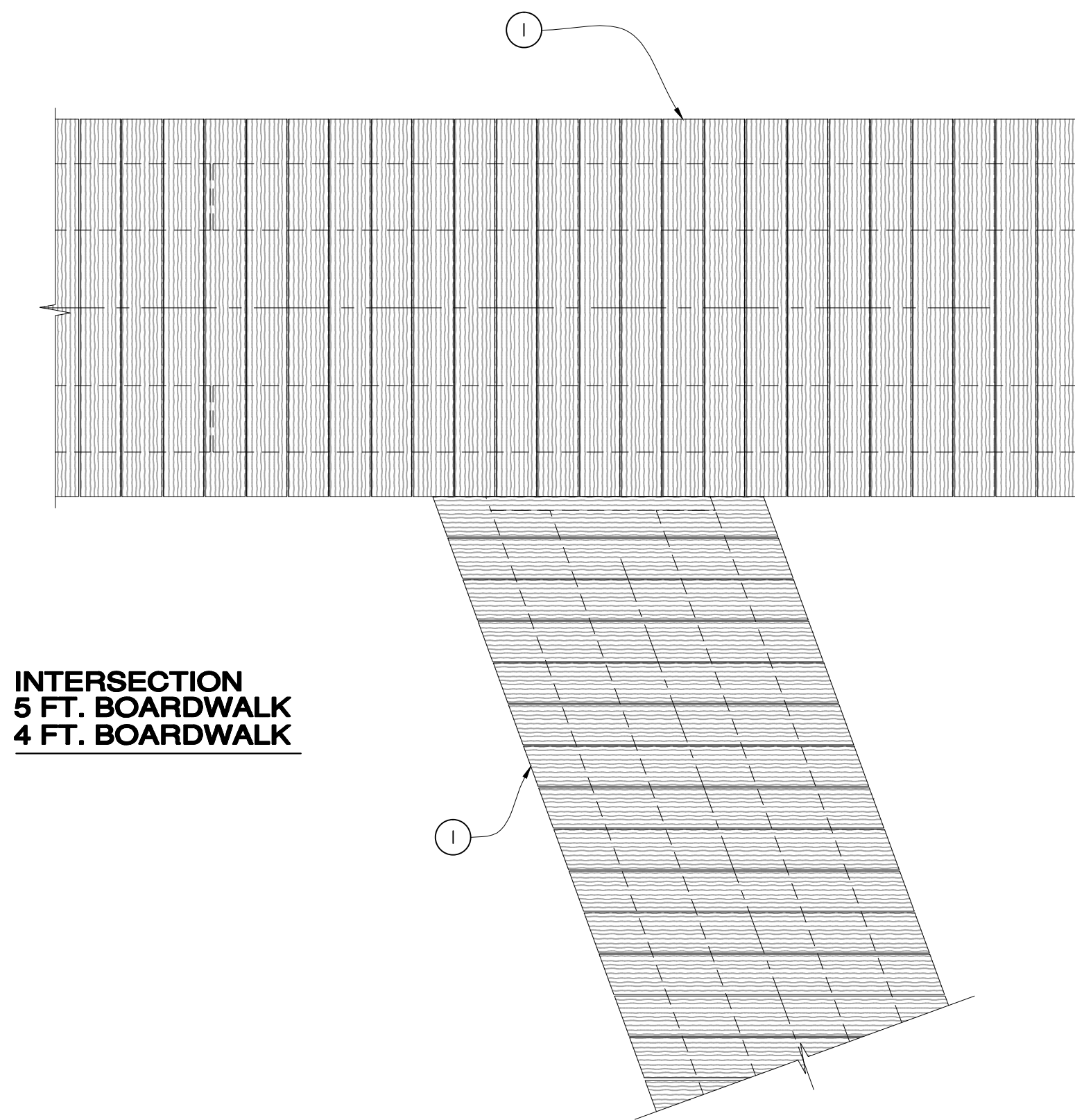
S-3



5 FT. BOARDWALK AT ABUTMENT



5 FT. BOARDWALK AT CURVED AREA



**INTERSECTION
5 FT. BOARDWALK
4 FT. BOARDWALK**

PLAN VIEW - BOARDWALK FOUNDATIONS AND MAIN BEAMS (VARIOUS CONFIGURATIONS SHOWN)

1/2" = 1'-0"

LEGEND (applies to this sheet only)

- ① Wood deck boards. Use reclaimed, clear redwood hand-selected for quality. Neatly rip-cut pieces to fit leaving 1/4" gaps between deck boards. Common deck board width will end up at roughly 7" to 7 1/4" wide or 5" to 5 1/4" wide. Thickness of deck boards shall be 2 1/2" +/- 1/8" but differential thickness from one board to next shall be 1/8" max. All deck boards shall be lightly sanded on top and all top edges shall be routed with a 1/8" radius round-over bit. Where boardwalk is curved start with 7 1/4" wide boards and taper rip-cut as req'd, maintaining 1/4" gaps between boards. Deck board layout throughout all areas of boardwalk shall conform to the following maximum spans:

Board	Clear span betw. supports	Cantilevered span over edge support
2 1/2 x 5 1/4	2'-8"	1'-4"
2 1/2 x 7 1/4	3'-6"	1'-8"
2 1/2 x 9 1/4	4'-4"	2'-0"
2 1/2 x 11 1/4	5'-0"	2'-4"

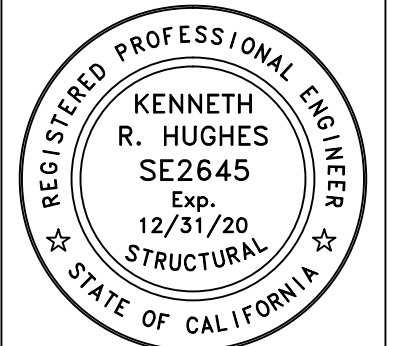
- ② Neatly fitted threshold stonework. Installation of these stones shall be as directed by Landscape Architect,

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PROJECT TITLE
ROYS REDWOODS OPEN SPACE PRESERVE
 VISITOR ACCESS AND PUBLIC ENGAGEMENT
 DESIGN PHASE
 FINAL DRAFT SCHEMATIC DESIGN
 SHEET TITLE
 BOARDWALK DECKING

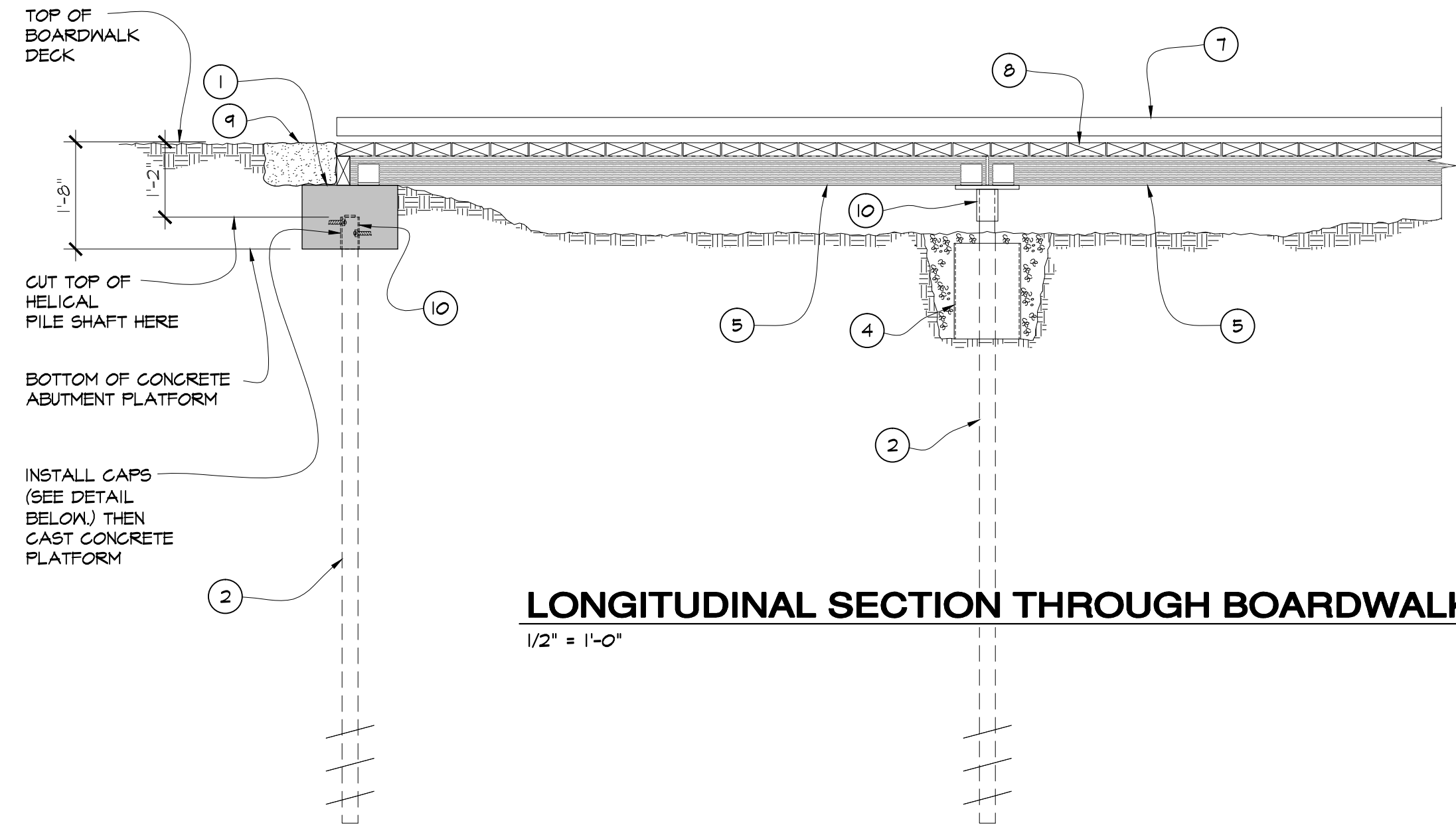


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DESIGN BY K.H.
 DRAWN BY A.M.
 CHECKED BY
 SCALE AS NOTED
 DATE MARCH 27, 2020
 SHEET

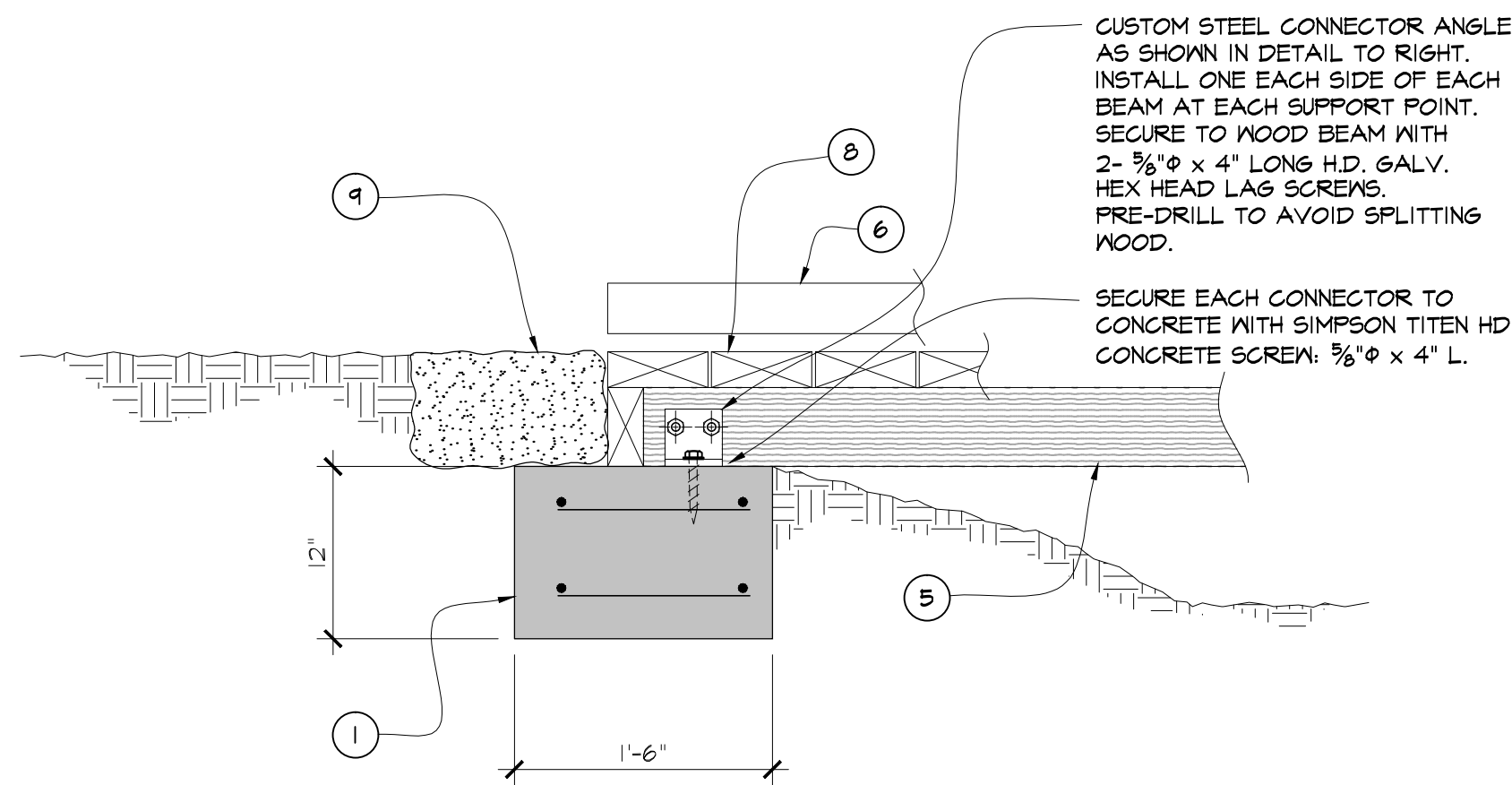
S-4



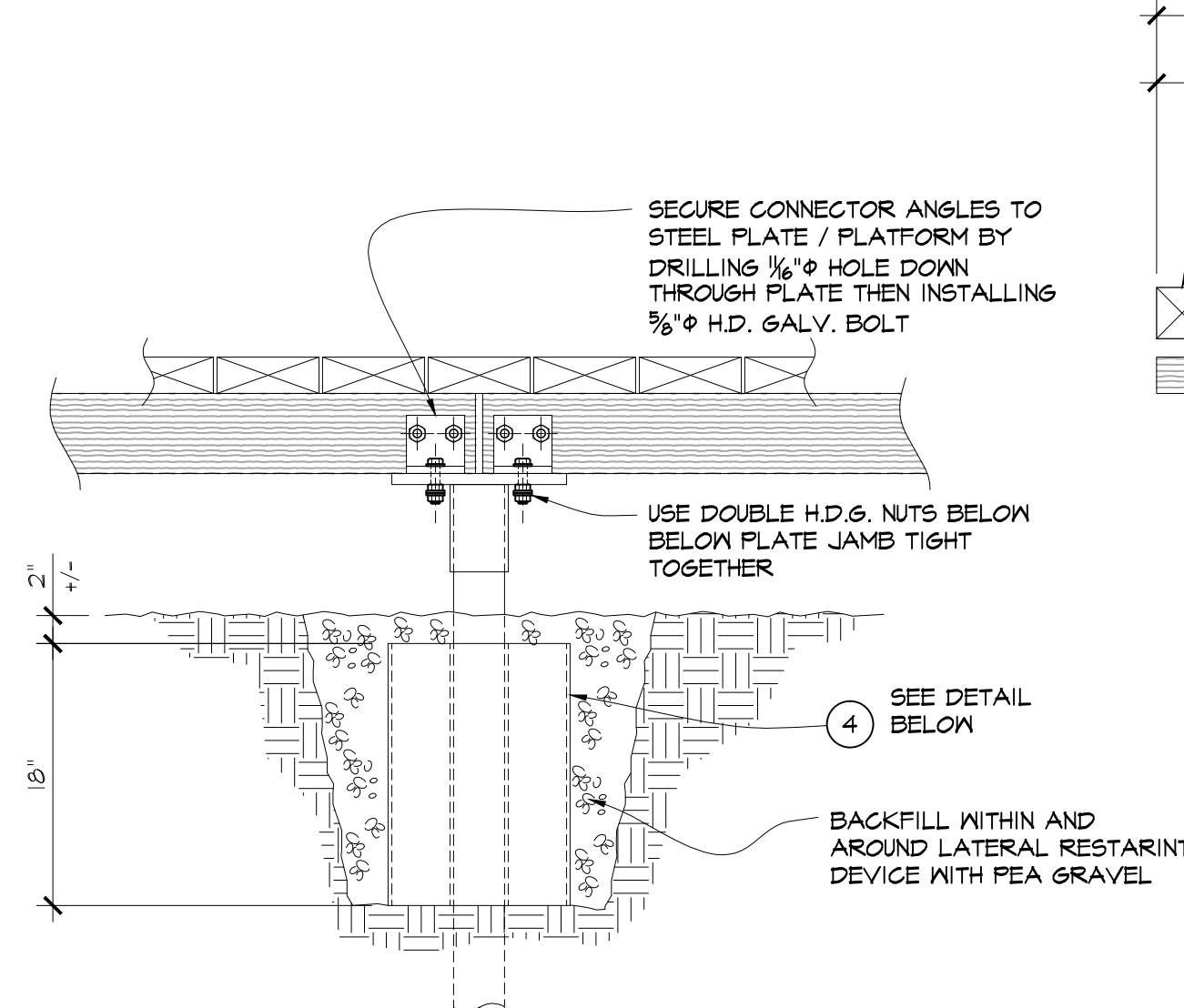
LONGITUDINAL SECTION THROUGH BOARDWALK
1/2" = 1'-0"

LEGEND (applies to this sheet only)

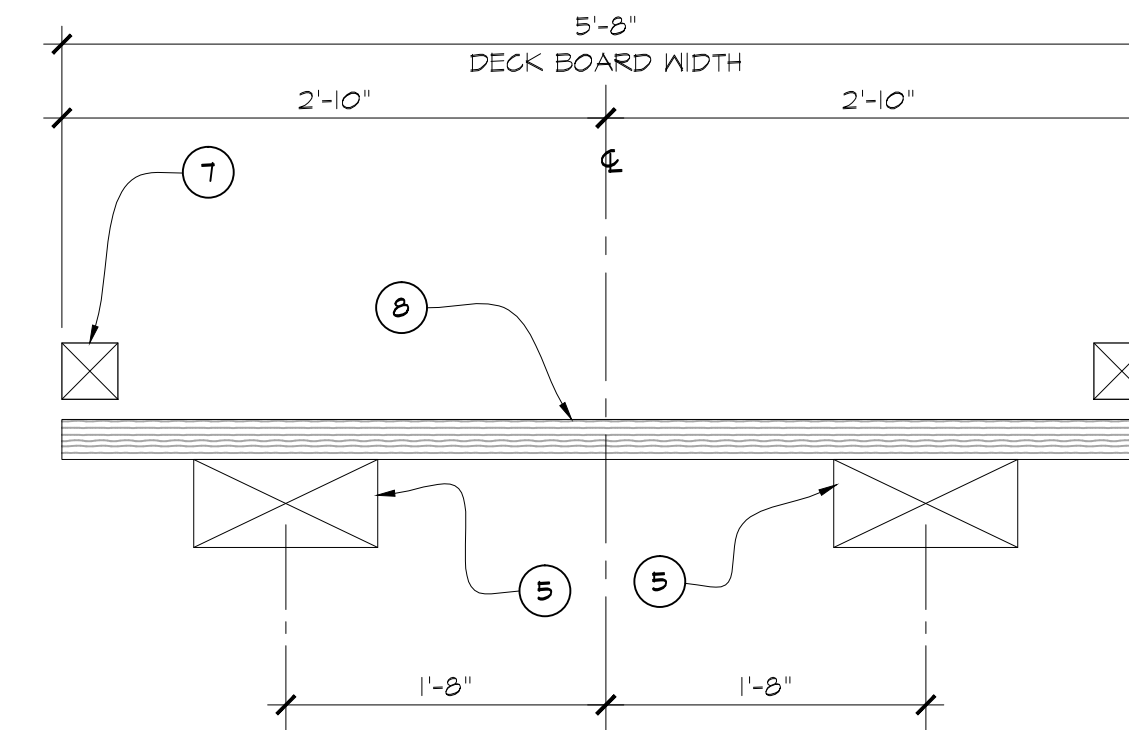
- ① Cast-in-place concrete platform / cap for helical piles. Dimensions and reinforcing as shown.
- ② Helical piles set in vertical. See sheet S-3 for load requirements. See details on this sheet for sleeve / cap detail.
- ③ Steel plate / platform / cap for helical piles, plate shall be 3/4" thick x 12" wide x length as shown on sheet S-3.
- ④ Lateral restraint device. Fabricate as shown in detail on this sheet. Slip over to top of helical pile shaft as shown then backfill with pea gravel both within and around lateral restraint device. This is req'd at all intermediate support helical piles.
- ⑤ Reclaimed redwood boardwalk beams. See sheet S-3.
- ⑥ Steel angle connectors to secure ends of wood beams to concrete abutment and to steel plate intermediate support. See details.
- ⑦ Wood curb and stand-off. (Details to be worked out)
- ⑧ Wood deck boards. See sheet S-4.
- ⑨ Neatly cut and fitted threshold stonework as directed by Landscape Architect.
- ⑩ Custom steel cap secured to top of each helical pile shaft. See details below.
- ⑪ End trim board: Reclaimed redwood 2 1/2" wide x 5 1/2" H. Secure each end with 2- 5/8" x 8" L. H.D. galv. hex-headed lag screws into end grain of each wood beam.



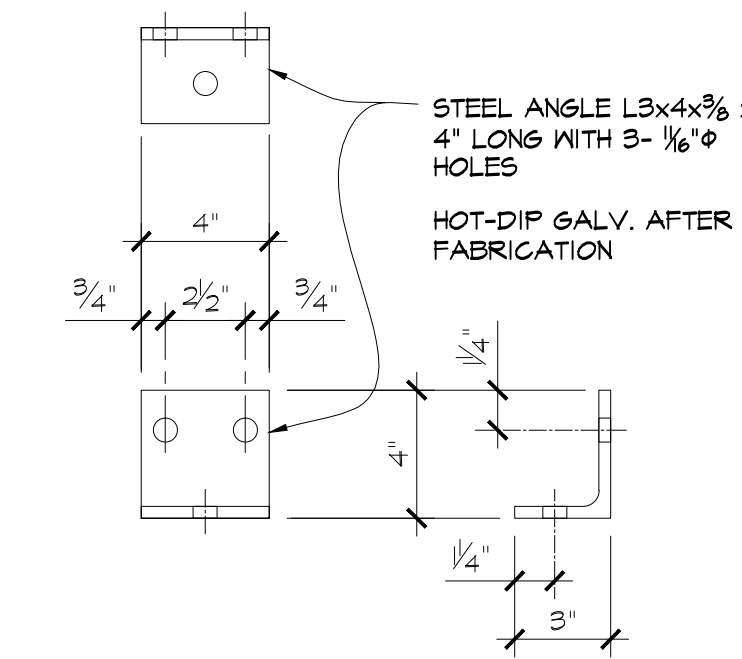
SECTION AT ABUTMENT - END OF BOARDWALK
1" = 1'-0"



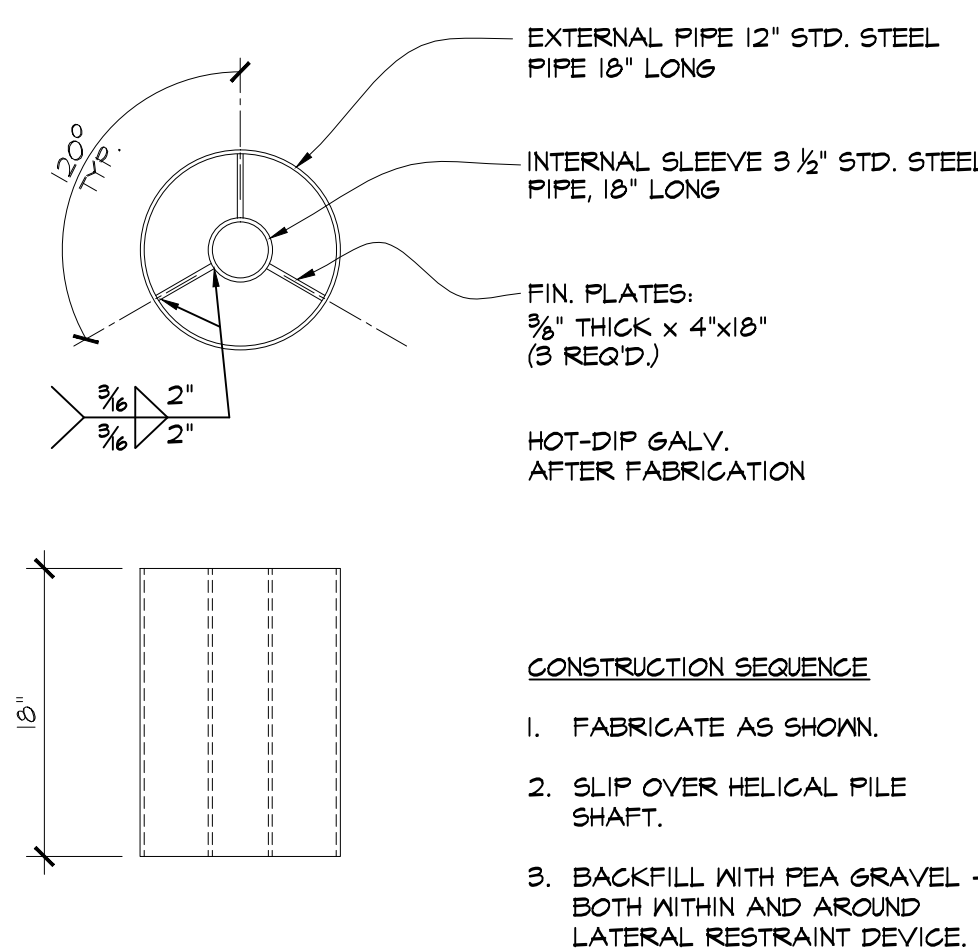
SECTION AT INTERMEDIATE SUPPORT
1" = 1'-0"



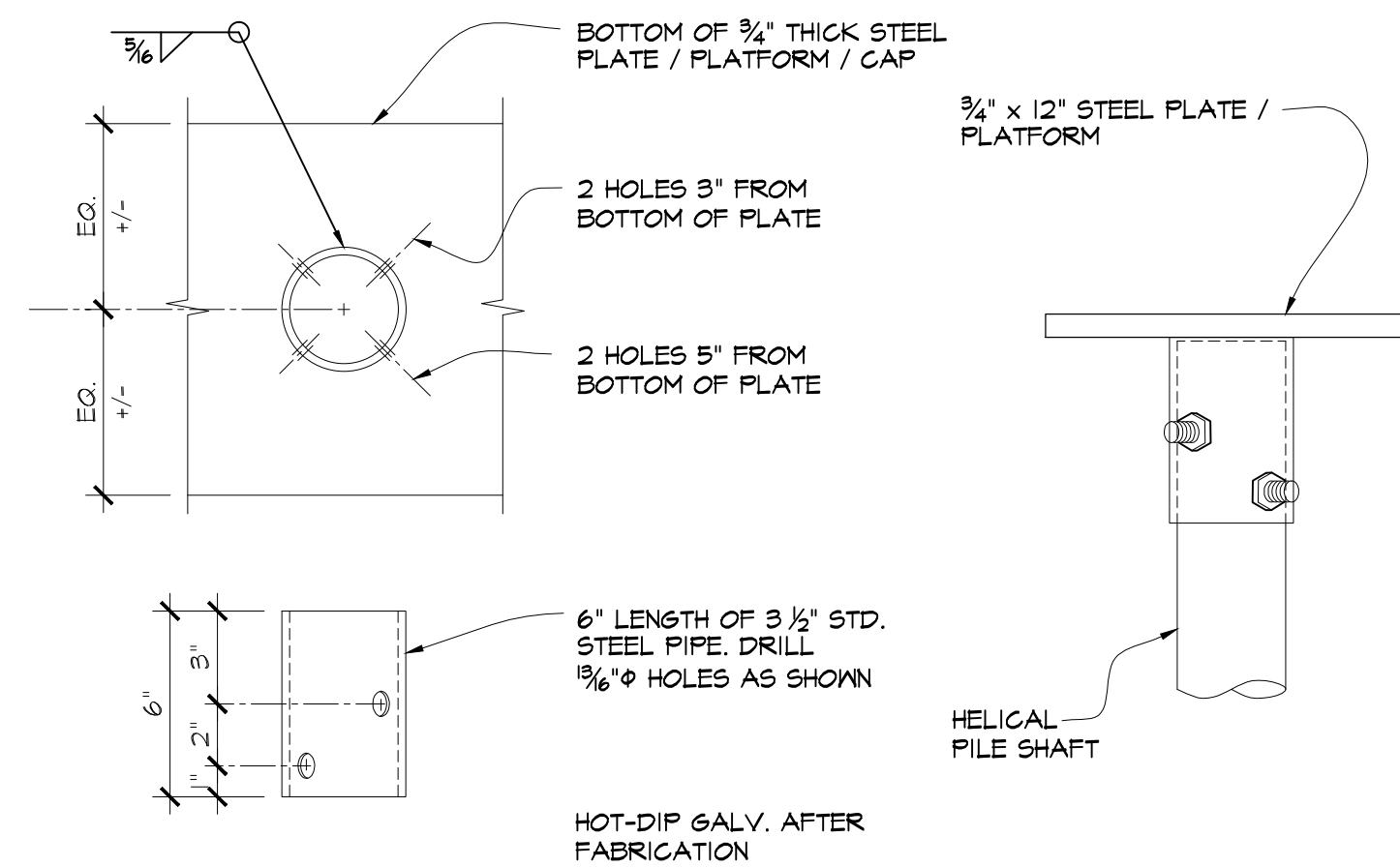
SECTION THROUGH BOARDWALK
1" = 1'-0"



STEEL CONNECTOR ANGLE DETAIL
2" = 1'-0"



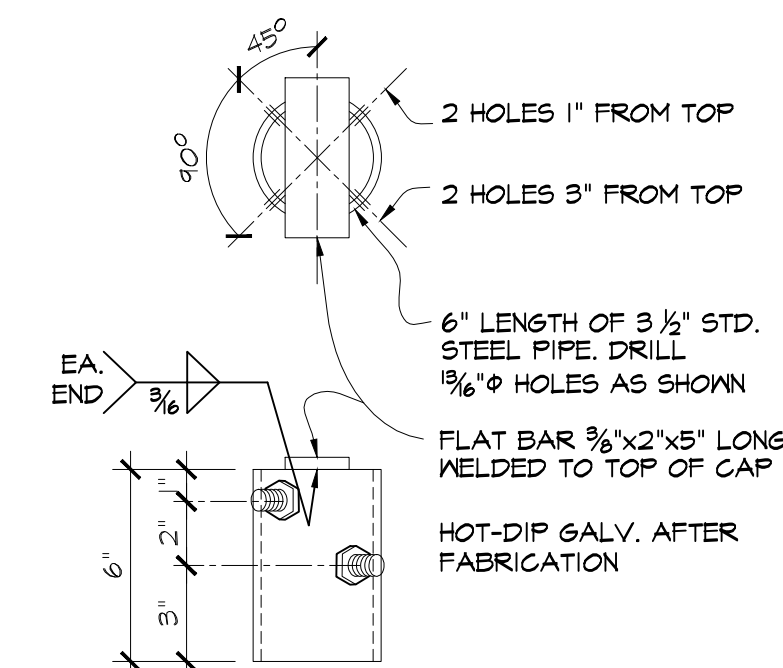
LATERAL RESTRAINT DEVICE
1" = 1'-0"



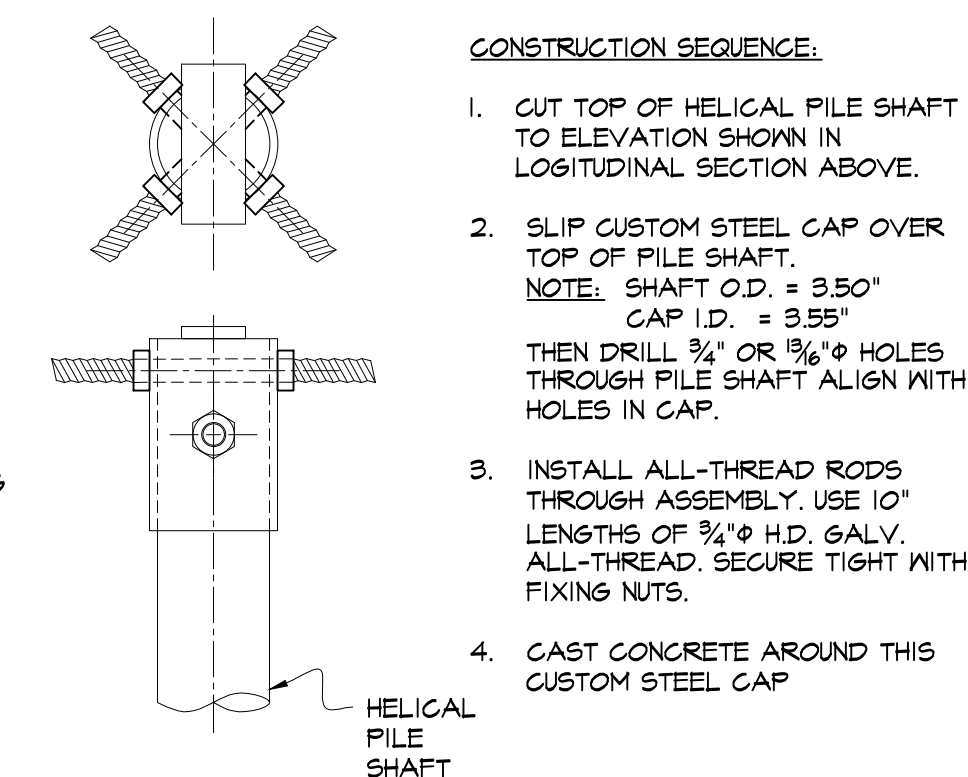
CAP FABRICATION DETAIL
2" = 1'-0"

CONSTRUCTION SEQUENCE:

1. CUT TOP OF HELICAL PILE SHAFT TO ELEVATION SHOWN IN LOGITUDINAL SECTION ABOVE.
2. MEASURE SPACE BETWEEN PROJECTING PILE CAPS.
3. FABRICATE STEEL PLATE PLATFORM BY WELDING STEEL CAPS TO BOTTOM AT REQ'D. SPACING. (FROM FIELD MEASUREMENT)
4. SLIP STEEL PLATE / PLATFORM WITH STEEL CAPS OVER TOP OF PILE SHAFTS. NOTE: SHAFT O.D. = 3.50" CAP I.D. = 3.55"
5. INSTALL 3/4" H.D. GALV. BOLTS OR ALL-THREAD RODS THROUGH ASSEMBLY. SECURE TIGHT WITH FIXING NUTS.



CAP FABRICATION DETAIL
2" = 1'-0"



CAP INSTALLATION DETAIL

REVISIONS	
DATE	DESCRIPTION
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PROJECT TITLE
ROY'S REDWOODS OPEN SPACE PRESERVE
VISITOR ACCESS AND PUBLIC ENGAGEMENT

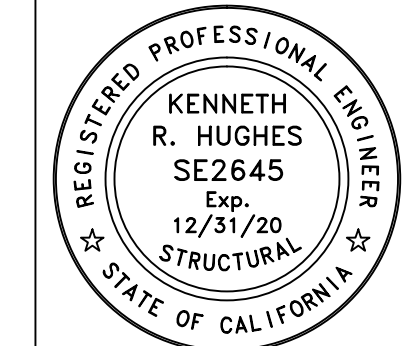
DESIGN PHASE
FINAL DRAFT SCHEMATIC DESIGN

SHEET TITLE
BOARDWALK SECTIONS & DETAILS



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DESIGN BY	K.H.
DRAWN BY	A.M.
CHECKED BY	
SCALE	AS NOTED
DATE	MARCH 27, 2020
SHEET	