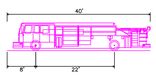

Pumper Fire Truck

Overall Length	40.000ft
Overall Width	8.167ft
Overall Body Height	7.745ft
Min Body Ground Clearance	0.656ft
Track Width	8.167ft
Lock-to-lock time	5.00s
Max Wheel Angle	45.00°

FIRE APPARATUS DETAIL

FIRE TURNING LEGEND:	
	FIRE TRUCK
	FIRE TRUCK BODY
	FIRE TRUCK CHASSIS

NORTH

0' 100' 200' 300' 400'

SCALE 1"=100'

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COUNTY OF RIVERSIDE
TENTATIVE TRACT MAP NO. 38578
SCHEDULE A SUBDIVISION
PRELIMINARY GRADING PLAN
THERMAL RANCH

DESIGN BY	SHEET
FS/NM	3
DRAWN BY	OF
FS/NM	5
CHECK BY	
JAD	

K:\2735\Acad\Grading\Preliminary\2735 Preliminary Grading Exhibit 03.dwg, 9/16/2025 4:24:18 PM, dgallerani, MSA Consulting Inc.

MATCHLINE - SEE SHEET 2

MATCHLINE - SEE SHEET 5

HARRISON STREET

Open Space

Open Space

STREET "A"
(PRIVATELY MAINTAINED)

STREET "B"
(PRIVATELY MAINTAINED)

STREET "AG"
(PRIVATELY MAINTAINED)

64TH AVENUE

INTERIM
RETENTION BASIN
TOP = 356.1
BTM = 354.0

STABLES (TYP.)

ARENA (TYP.)
PE 361.4

ARENA (TYP.)
PE 361.9

PE 364.7

PE 362.4

PE 362.4

PE 359.2

PE 363.7

PE 362.8

PE 360.4

PE 361.2

ARENA
PE 358.5

GRAND PRIX CLUBHOUSE
PE 362.4

PE 359.4

PE 359.7

ARENA
PE 356.9

CVWD
WELL SITE
PE 357.8

PROP. GUARDHOUSE AND GATE

PROP. ADMIN. BLDG.

PROP. GATE

PROP. RAISED MEDIAN (TYP)

PROPOSED ACCESS OPENING

PROP. PAINTED MEDIAN

PROP. 20' TRAIL ESMT.

EX. POWER POLE

EX. 18" PVC IRR MAIN

EX. 30" DIP WATER MAIN

EX. OH 92 KV ELEC. LINE

EX. OH 161 KV ELEC. LINE

EX. BOUNDARY

EX. C/L

PROP. R/W

PROP. S/W

PROP. C&G

EX. LOT LINE

PROP. EP (TYP.)

N 01°16'10" E 100.00'

N 89°37'52" E 2513.85

NORTH

0' 100' 200' 300' 400'

SCALE 1"=100'

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COUNTY OF RIVERSIDE
TENTATIVE TRACT MAP NO. 38578
SCHEDULE A SUBDIVISION
PRELIMINARY GRADING PLAN
THERMAL RANCH

DESIGN BY	FS/NM
DRAWN BY	FS/NM
CHECK BY	JAD

SHEET 4 OF 5

R:\27335\Acad\Grading\Preliminary\27335 Preliminary Grading Exhibit 04.dwg, 9/16/2025 4:24:29 PM, dgelfenon, MSA Consulting, Inc.

MATCHLINE - SEE SHEET 3

MATCHLINE - SEE SHEET 4

PE 359.5

PE 358.1

FIELD (TYP.)
PE 357.6

RETENTION BASIN
WSE100 = 353.0
BOTTOM = 351.5

PE 358.3

PE 358.4

PE 357.6

PE 357.8

PE 356.8

PE 357.1

PE 356.1

ARENA (TYP.)
PE 355.3

PE 362.3

PE 362.3

PE 356.8
EX. IRR LINE
(TO BE RELOCATED)

PROP. STAIRS (TYP.)

RETENTION BASIN
WSE100 = 350.5
BOTTOM = 349.0

STABLES (TYP.)

COMMUNITY CENTER
PE 356.5

PE 356.6

PE 357.6

PE 355.9

PE 355.8

PE 356.4

PE 356.1

PE 357.5

PE 355.3

PE 356.2

PE 356.4

PE 355.9

PE 355.8

PE 355.9

PE 356.0

PE 353.8

PE 354.4

PE 354.1

PE 356.2

PE 355.2

PE 356.4

PE 355.9

PE 356.4

PE 355.9

PE 356.9

PE 355.2

PE 356.4

PE 355.9

PE 356.3

PE 356.4

PE 356.3

PE 356.2

PE 356.4

PE 356.7

PE 356.5

PE 356.2

PE 356.7

PE 356.0

PE 355.9

PE 355.6

PE 355.6

PE 355.2

PE 355.3

PE 356.2

PE 356.7

PE 354.7

PE 355.2

PE 354.3

PE 354.3

PE 354.8

PE 354.8

PE 354.5

PE 354.9

PE 354.9

PE 354.9

PE 354.9

PE 354.5

PE 354.5

PE 354.5

PE 354.5

PE 351.7

PE 351.3

PE 351.1

PE 353.0

PE 353.0

PE 354.4

PE 354.4

PE 354.4

PE 354.4

PE 355.4

PE 355.4

PE 355.4

PE 355.4

PE 355.3

PE 355.2

PE 355.2

PE 354.7

PE 354.5

PE 354.3

PE 354.7

PE 354.5

PE 354.3

PE 356.1

PE 355.8

PE 354.1

PE 354.2

PE 353.8

PE 354.6

PE 354.8

PE 354.6

PE 354.6

PE 353.9

PE 353.9

PE 353.9

PE 353.5

PE 353.1

PE 355.5

PE 355.5

PE 354.7

PE 354.6

PE 354.6

PE 354.8

PE 354.8

PE 354.6

PE 354.2

PE 353.8

PE 353.9

PE 353.9

PE 353.9

PE 353.5

PE 353.1

COMMUNITY CENTER
PE 355.8

CVWD WELL SITE
PE 357.8

CVWD WELL SITE
PE 350.0

IID SUBSTATION
PE 350.0

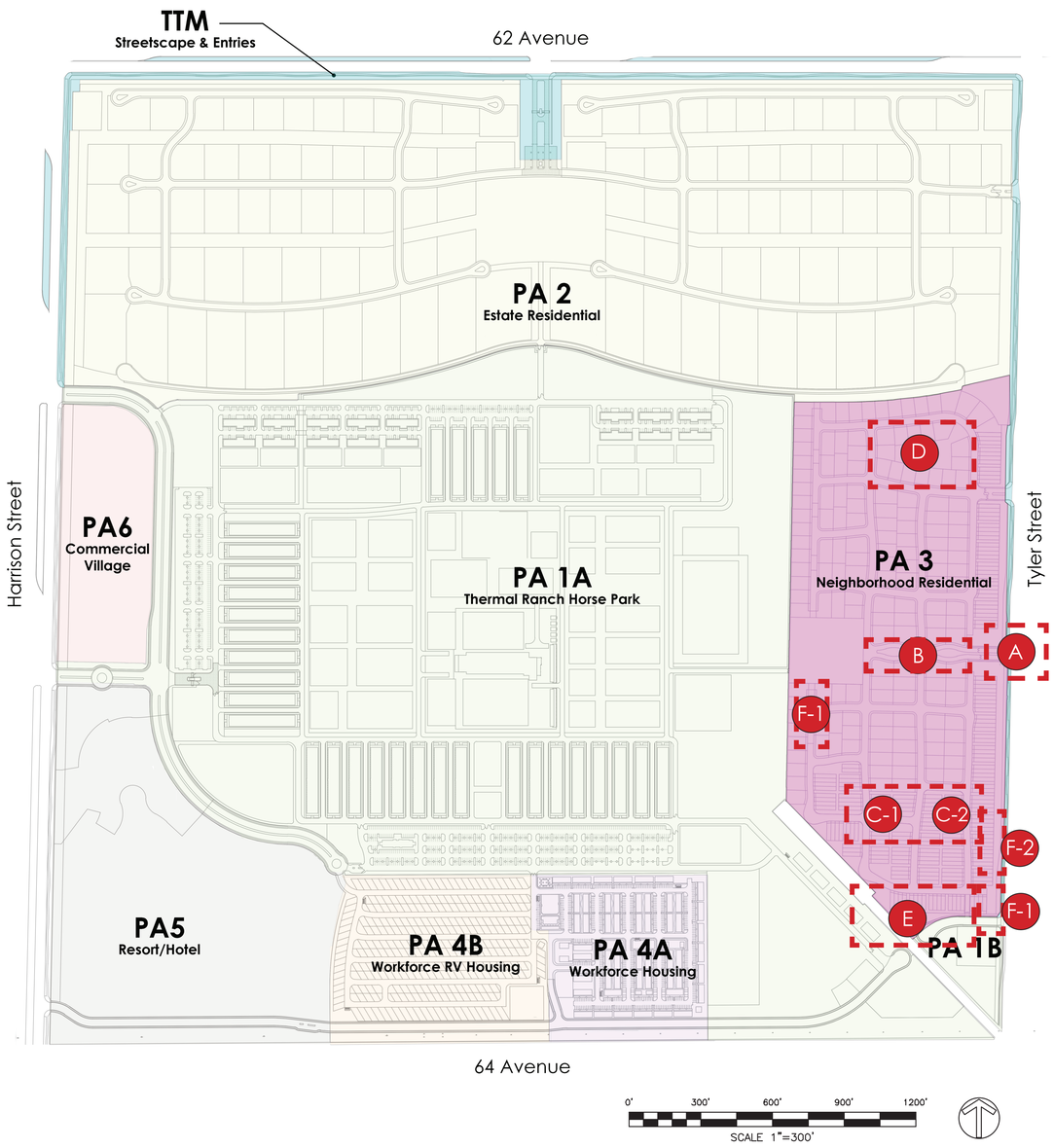
RETENTION BASIN
WSE100 = 348.40
BOTTOM = 346.4

Open Space / Pasture / Retention

Open Space

Open Space

Open Space



APPLICANT/LAND OWNER: THERMAL RANCH, LLC
19312 CANYON DRIVE
VILLA PARK, CALIFORNIA 92861
JEREMY SMITH 760-801-5166

LANDSCAPE ARCHITECT: MSA CONSULTING, INC.
34200 BOB HOPE DRIVE
RANCHO MIRAGE, CA 92270
ROBERT PARKER 760-320-9811

Prior to project construction, I agree to submit a complete Landscape Construction Document Package that complies with the requirements of applicable ordinances, including but not necessarily limited to Ordinance No. 859.2; Ordinance 348, Ordinance 461; project Conditions of Approval; and in substantial conformance with the approved Landscape Concept Plan. Should the ordinances be revised, plans may be subject to change.

Assessor's Parcel Number: 751-020-002, -003, -006, & -007

Notes per Ordinance 859.3
- Hydrozones will be properly designated. Applicant must indicate proposed method(s) of irrigation.
- No overhead irrigation allowed within 24" of non-permeable surfaces.
- Subsurface or low-volume irrigation must be used for irregularly shaped areas, or areas less than 8 feet in width.

All landscape plans shall comply with the screening and buffering Riverside County requirements.
- Evergreen plants shall be used where necessary to buffer and screen adjacent land uses.
- Landscaping shall be incorporated to soften the edges of buildings, structures, and streets in both commercial and indsutrial areas.
- Mechanical equipment and trash enclosure shall be identified and screened accordingly.
- Vines or other landscaping shall be added to fencing and walls to deter graffiti.

Proposed Maintenance Entity On-Site: Conventional Housing Maintained
Proposed Maintenance Entity Off-Site: Master Association Maintained

The project site is not located within Multiple Species Habitat Conservation Plan (MSHCP) area.

The projeict shall comply with the Thermal Design Guidelines.

Enlargement Areas

- A Primary Entry
- B Median Islands at Entry
- C-1 Common Areas Typical
- C-2 Common Areas Typical - Paseos
- D Retention Basin
- E Open Space Lot 294
- F-1 Open Space Area - Typical
- F-2 Open Space Area - Typical

REGISTERED LANDSCAPE ARCHITECT ROBERT E. PARKER JR #5219 REN: 8-31-27 STATE OF CALIFORNIA

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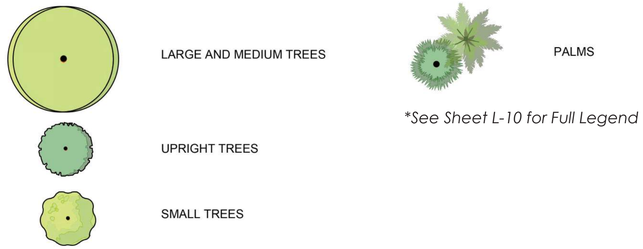
Legend

- A Primary Entry
- B Service Entry
- C CVWD Well Site
- D Gate to Horse Park
- E Fire Access
- F Retention Basin
- G Condominiums

Planting Legend



See Sheet L-10 for Full Legend

Preliminary Street Tree Counts

Area	Tree Count Required	Average Tree Count Proposed
Condominiums Lots 116, 213, 238, 239, 240, 241, 242, 253, 254, 267	1 per 60 LF	1 per 66 LF
Single Family Residential Lots	1 per Lot	1.8 per Lot
Riverside County Ordinance 460, Section 14.1		
• Street trees shall be a minimum of 60 ft. intervals along frontages or a minimum of one tree per lot frontage • On corner lots, street trees shall be required on both frontages provided such planting does not interfere with sight distances and setbacks		

Thermal Ranch Neighborhood Residential (PA3) | Overall Tree Plan

September 15, 2025 | L-2

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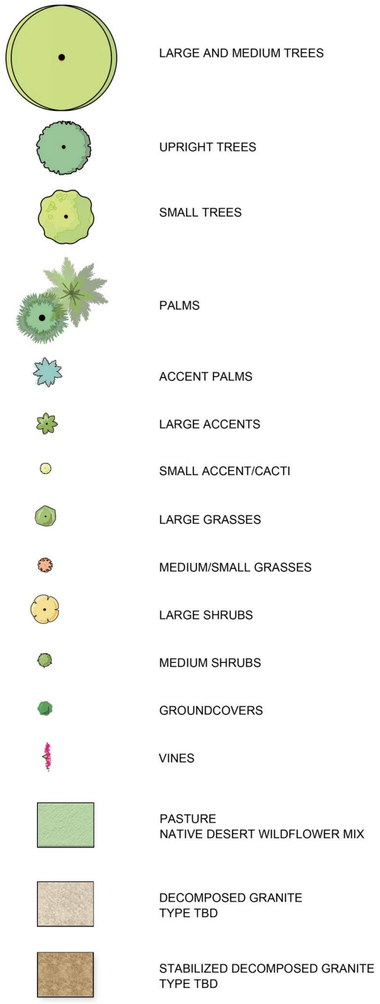
Legend

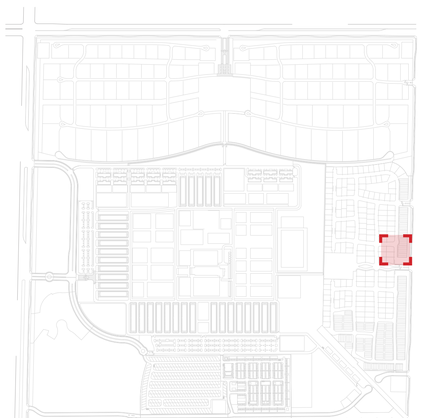
- A *Vehicular Gate*
- B Pedestrian Gate
- C *10' Paved Bike Trail*
- D *Ranch Fence*
- E *CMU Block Wall*
- F *Entry Monument*
- G *Callbox*
- H Mounded Landscaping
- I *18' Right-Of-Way*
- J *Sight Distance Line*
- K *5' Meandering Sidewalk*
- L Interior Trail

Planting Legend



**See Sheet L-10 for Full Legend*

Character Imagery



Thermal Ranch Neighborhood Residential (PA3) | Primary Entry (Area A)

September 15, 2025 | L-3

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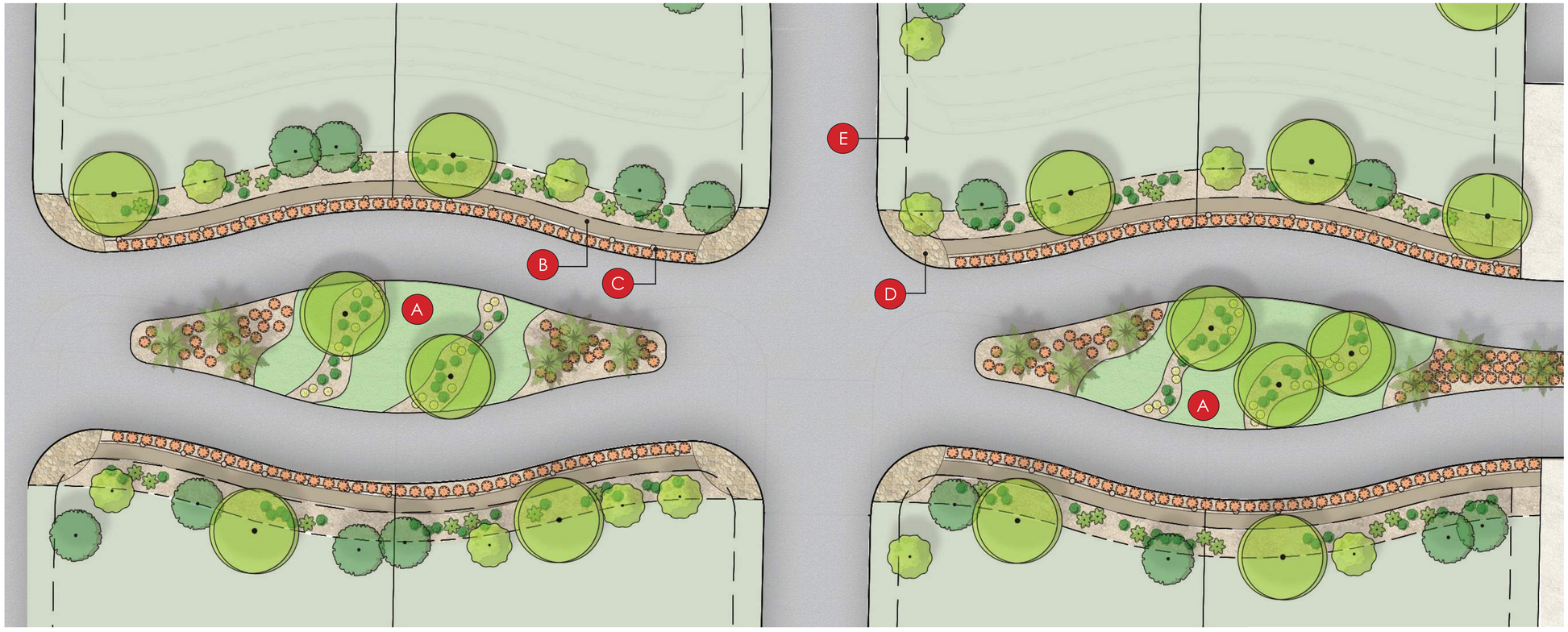


0' 20' 40' 60' 80'

SCALE 1"=20'

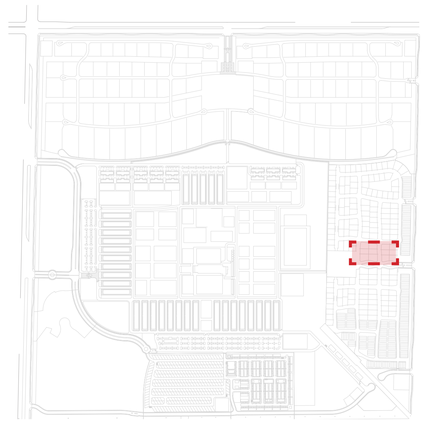
Legend

- A *Desert Wildflower Pasture*
- B *5' Sidewalk*
- C *2 Rail Ranch Fence*
- D *Enhanced Pavers*
- E *Utility Easement*

Planting Legend

- LARGE AND MEDIUM TREES
- UPRIGHT TREES
- SMALL TREES
- PALMS
- ACCENT PALMS
- LARGE ACCENTS
- SMALL ACCENT/CACTI
- LARGE GRASSES
- MEDIUM/SMALL GRASSES
- LARGE SHRUBS
- MEDIUM SHRUBS
- GROUNDCOVERS
- VINES
- PASTURE NATIVE DESERT WILDFLOWER MIX
- DECOMPOSED GRANITE TYPE TBD
- STABILIZED DECOMPOSED GRANITE TYPE TBD

*See Sheet L-10 for Full Legend



Thermal Ranch Neighborhood Residential (PA3) | Median Islands at Entry (Area B)

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Common Areas Typical

0' 30' 60' 90' 120'
SCALE 1"=30'

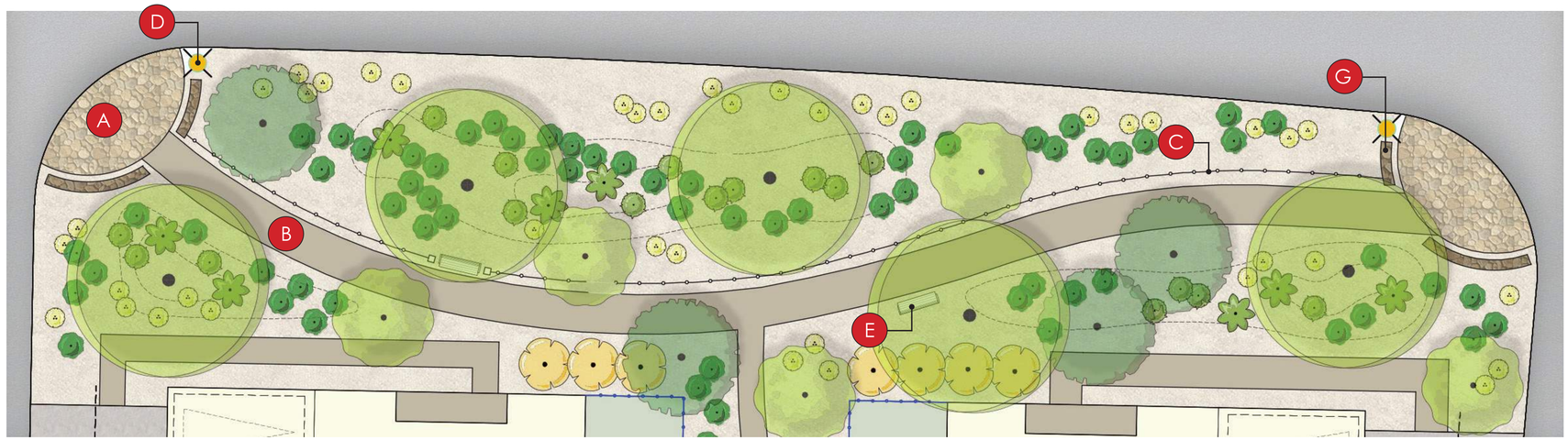
Planting Legend

- LARGE AND MEDIUM TREES
- UPRIGHT TREES
- SMALL TREES
- PALMS
- ACCENT PALMS
- LARGE ACCENTS
- SMALL ACCENT/CACTI
- LARGE GRASSES
- MEDIUM/SMALL GRASSES
- LARGE SHRUBS
- MEDIUM SHRUBS
- GROUNDCOVERS
- VINES
- PASTURE
  NATIVE DESERT WILDFLOWER MIX
- DECOMPOSED GRANITE
  TYPE TBD
- STABILIZED DECOMPOSED GRANITE
  TYPE TBD

*See Sheet L-10 for Full Legend

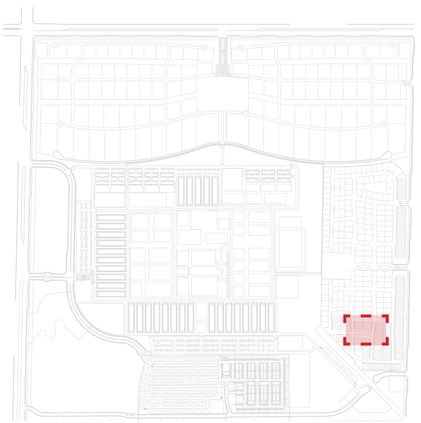
Legend

- A *Enhanced Pavers*
- B *Sidewalk*
- C *2 Rail Ranch Fence*
- D *Solar Bollard*
- E *Benches*
- F *3' - 4' View Fence*
- G *Low Stone Wall*



Common Areas Enlargement

0' 10' 20' 30' 40'
SCALE 1"=10'



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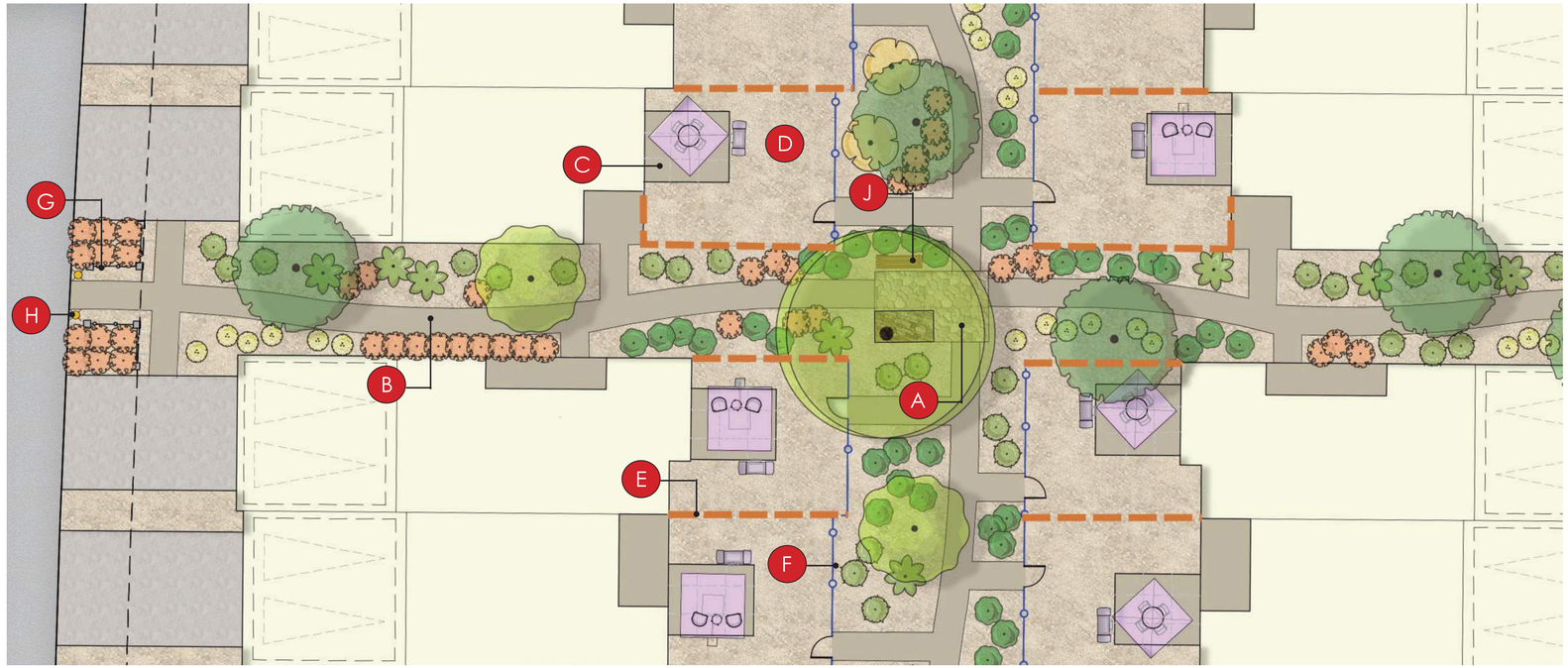
Thermal Ranch Neighborhood Residential (PA3) | Common Areas Typical (Area C-1)



0' 10' 20' 30' 40'

SCALE 1"=10'

Enlargement Area C-2

Legend

- A *Enhanced Paving*
- B *4' Sidewalk*
- C *10' x 12' Concrete Patio*
- D *Private Yard*
- E *4'-5' Ht. Privacy Wall*
- F *3'-4' Ht. View Fence*
- G *2 Rail Ranch Fence*
- H *Solar Bollard*
- J *Bench*

Planting Legend

- LARGE AND MEDIUM TREES
- UPRIGHT TREES
- SMALL TREES
- PALMS
- ACCENT PALMS
- LARGE ACCENTS
- SMALL ACCENT/CACTI
- LARGE GRASSES
- MEDIUM/SMALL GRASSES
- LARGE SHRUBS
- MEDIUM SHRUBS
- GROUNDCOVERS
- VINES
- PASTURE
  NATIVE DESERT WILDFLOWER MIX
- DECOMPOSED GRANITE
  TYPE TBD
- STABILIZED DECOMPOSED GRANITE
  TYPE TBD

**See Sheet L-10 for Full Legend*

Character Imagery

Thermal Ranch Neighborhood Residential (PA3) | Common Areas Typical - Paseo (Area C-2)

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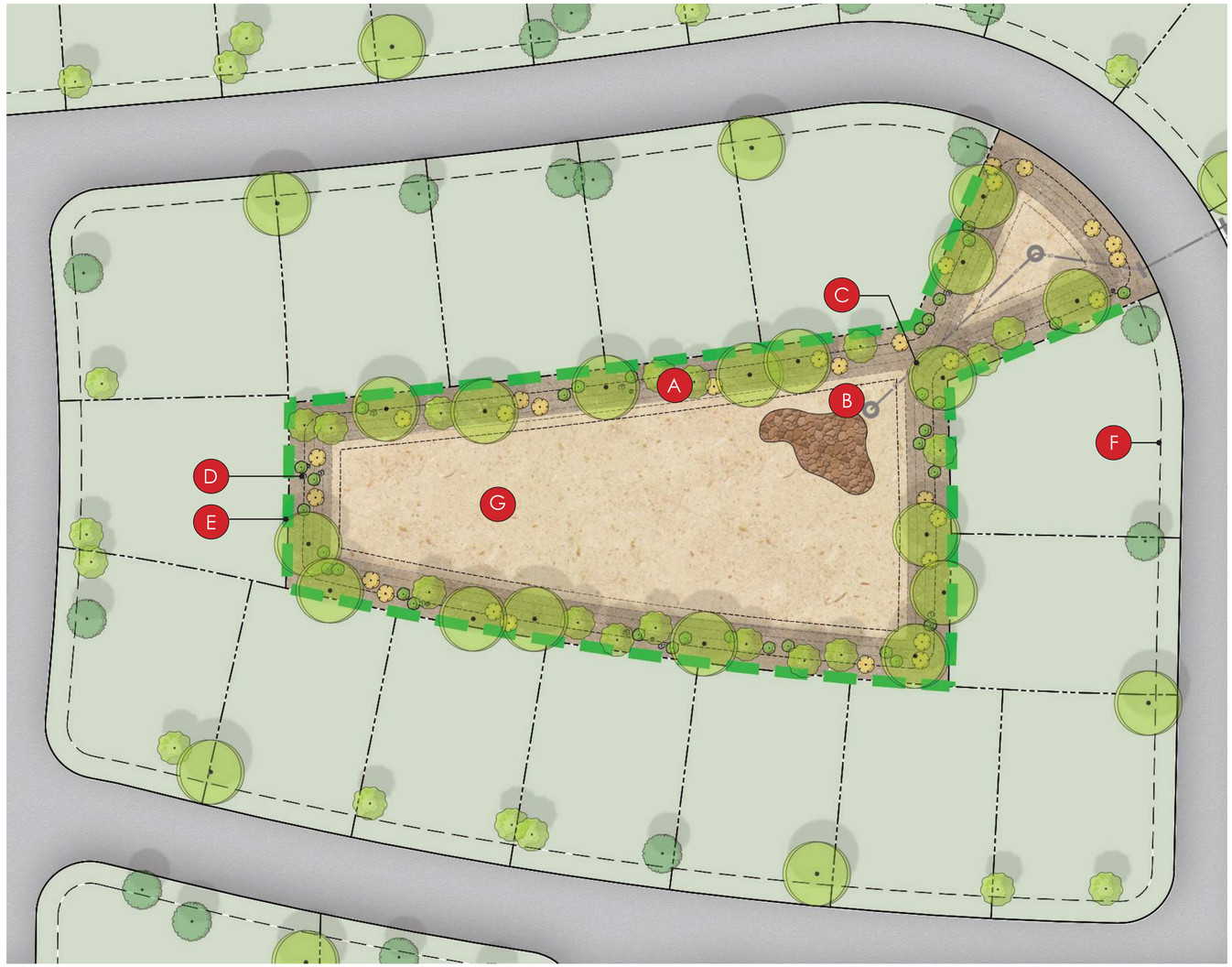


0' 30' 60' 90' 120'

SCALE 1"=30'

Legend

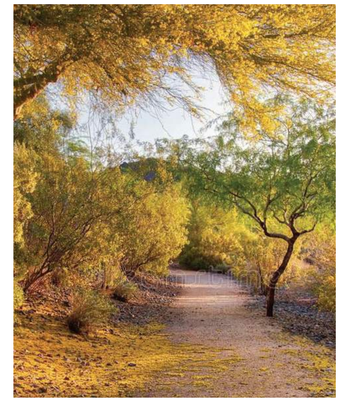
- A Retention Basin 4:1 Slope
- B 4" - 6" Crushed Rock (Dispersion Area)
- C Storm Drain
- D 2' - 3' Boulders
- E 6' View Fence
- F Utility Easement
- G Native soil at basin bottom and lower third of slope

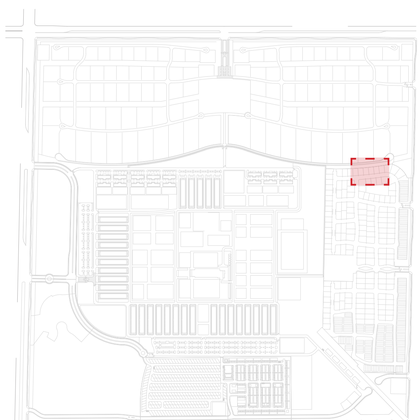
Planting Legend

- LARGE AND MEDIUM TREES
- UPRIGHT TREES
- SMALL TREES
- PALMS
- ACCENT PALMS
- LARGE ACCENTS
- SMALL ACCENT/CACTI
- LARGE GRASSES
- MEDIUM/SMALL GRASSES
- LARGE SHRUBS
- MEDIUM SHRUBS
- GROUNDCOVERS
- VINES
- DECOMPOSED GRANITE TYPE TBD
- STABILIZED DECOMPOSED GRANITE TYPE TBD
- BASIN 3/4" GRAVEL TYPE TBD
- BASIN CRUSHED ROCK 4-6" ROCK TYPE TBD
- NATIVE SOIL

*See Sheet L-10 for Full Legend

Character Imagery





Thermal Ranch Neighborhood Residential (PA3) | Retention Basin (Area D)

September 15, 2025 | L-7

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0' 30' 60' 90' 120'

SCALE 1"=30'

Legend

- A — CMU Block Wall
- B — Interior Trail
- C — Bench
- D — Sidewalk
- E — Mounded Landscaping
- F — Fire Access

Planting Legend

- LARGE AND MEDIUM TREES
- UPRIGHT TREES
- SMALL TREES
- PALMS
- ACCENT PALMS
- LARGE ACCENTS
- SMALL ACCENT/CACTI
- LARGE GRASSES
- MEDIUM/SMALL GRASSES
- LARGE SHRUBS
- MEDIUM SHRUBS
- GROUNDCOVERS
- VINES
- PASTURE
  NATIVE DESERT WILDFLOWER MIX
- DECOMPOSED GRANITE
  TYPE TBD
- STABILIZED DECOMPOSED GRANITE
  TYPE TBD

*See Sheet L-10 for Full Legend

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Thermal Ranch Neighborhood Residential (PA3) | Open Space Areas (Area E)

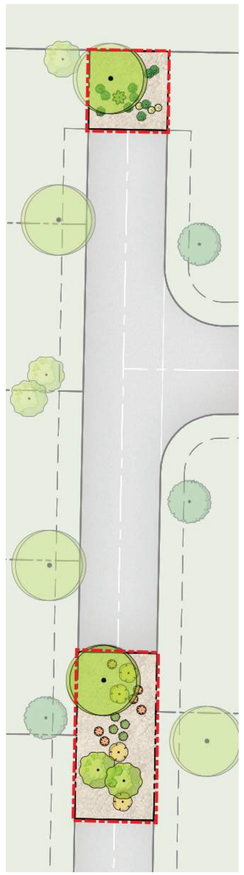
Planting Legend

- LARGE AND MEDIUM TREES
- UPRIGHT TREES
- SMALL TREES
- PALMS
- ACCENT PALMS
- LARGE ACCENTS
- SMALL ACCENT/CACTI
- LARGE GRASSES
- MEDIUM/SMALL GRASSES
- LARGE SHRUBS
- MEDIUM SHRUBS
- GROUNDCOVERS
- VINES
- PASTURE
  NATIVE DESERT WILDFLOWER MIX
- DECOMPOSED GRANITE
  TYPE TBD
- STABILIZED DECOMPOSED GRANITE
  TYPE TBD

See Sheet L-10 for Full Legend

Legend

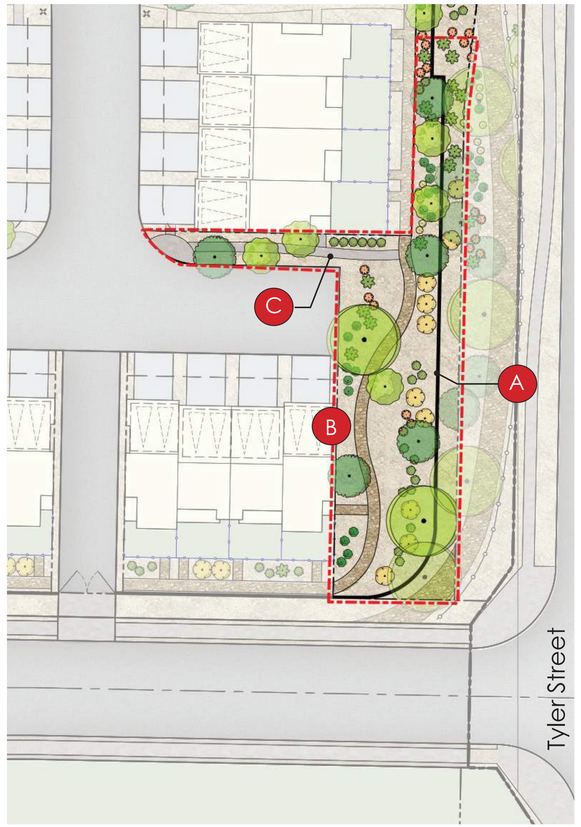
- A CMU Block Wall
- B Interior Trail
- C Sidewalk



0' 30' 60' 90' 120'
SCALE 1"=30'

Open Space Area Lots 319 and 320

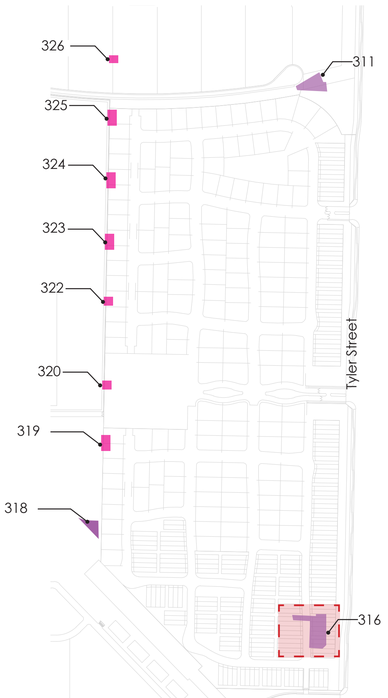
Typical applies to Lots 322, 323, 324, 325, 326



0' 30' 60' 90' 120'
SCALE 1"=30'

Open Space Area Lots 316

Typical applies to Lots 311 and 318



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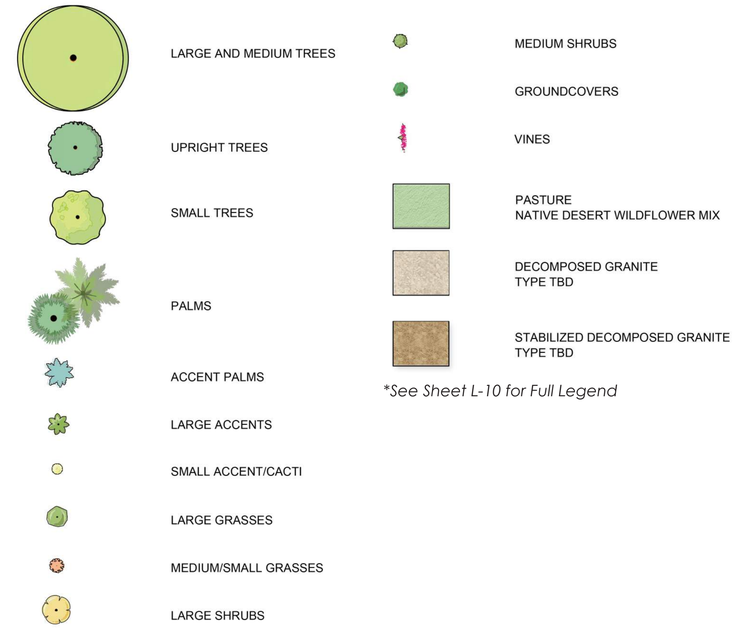
0' 20' 40' 60' 80'
SCALE 1"=20'

Open Space Area Lots 315/316

Typical applies to Lots 309/310, 313/314

Planting Legend



*See Sheet L-10 for Full Legend

Legend

A *10' Paved Bike Trail*

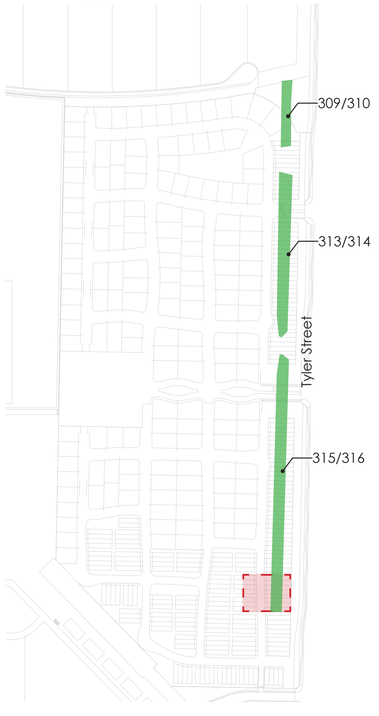
B *Ranch Fence*

C *CMU Block Wall*

D *18' Right-Of-Way*

E *5' Meandering Sidewalk*

F Interior Walkway



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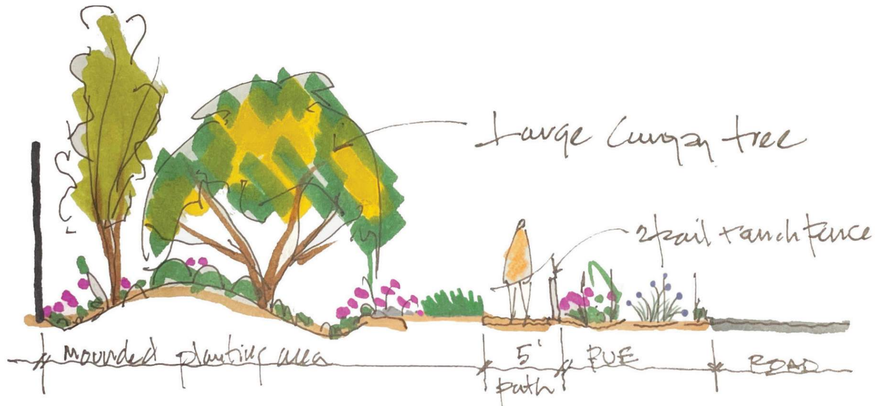
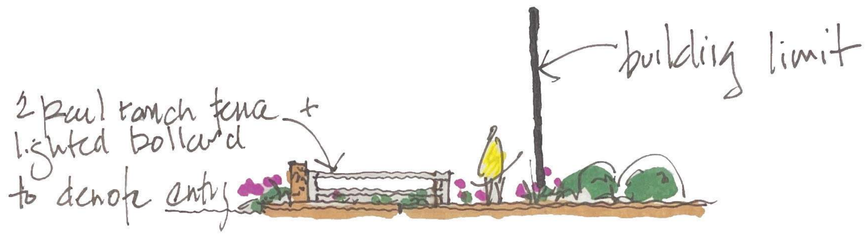
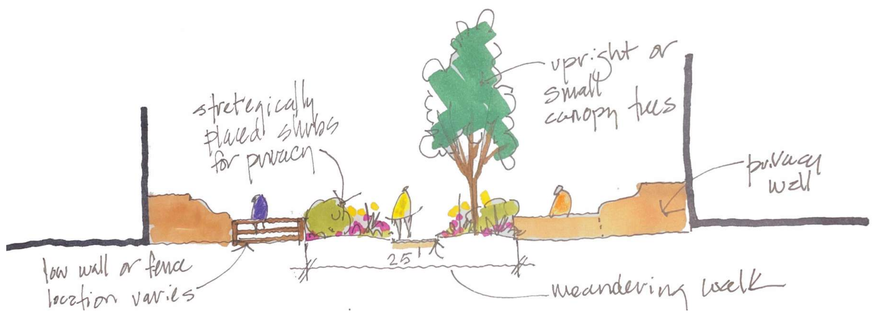


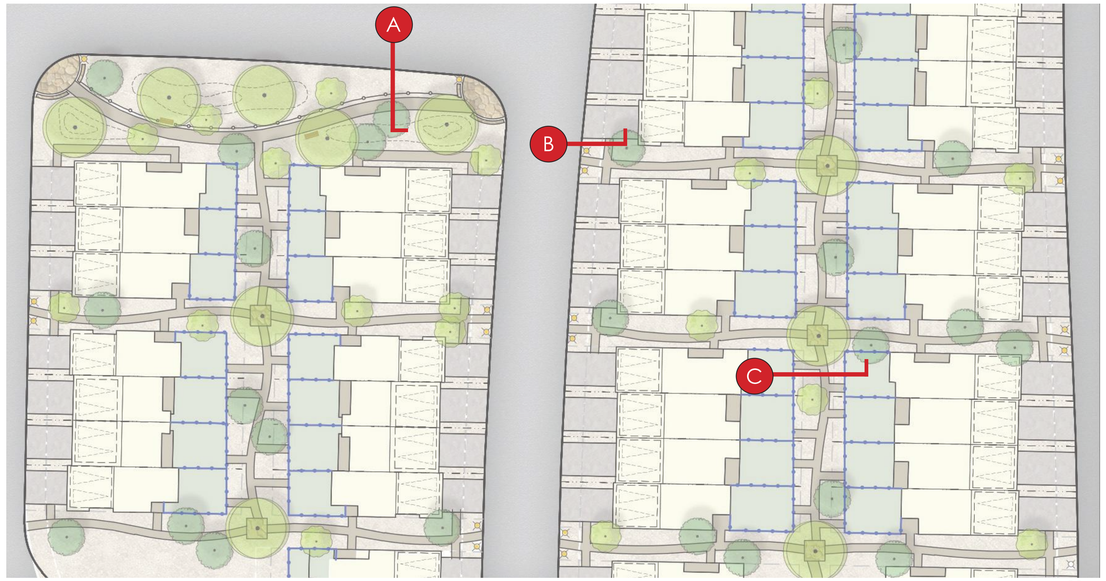
A Open Space Paseo Condition



B Street Edge Condition



C Common Space Behind Condominiums



NTS

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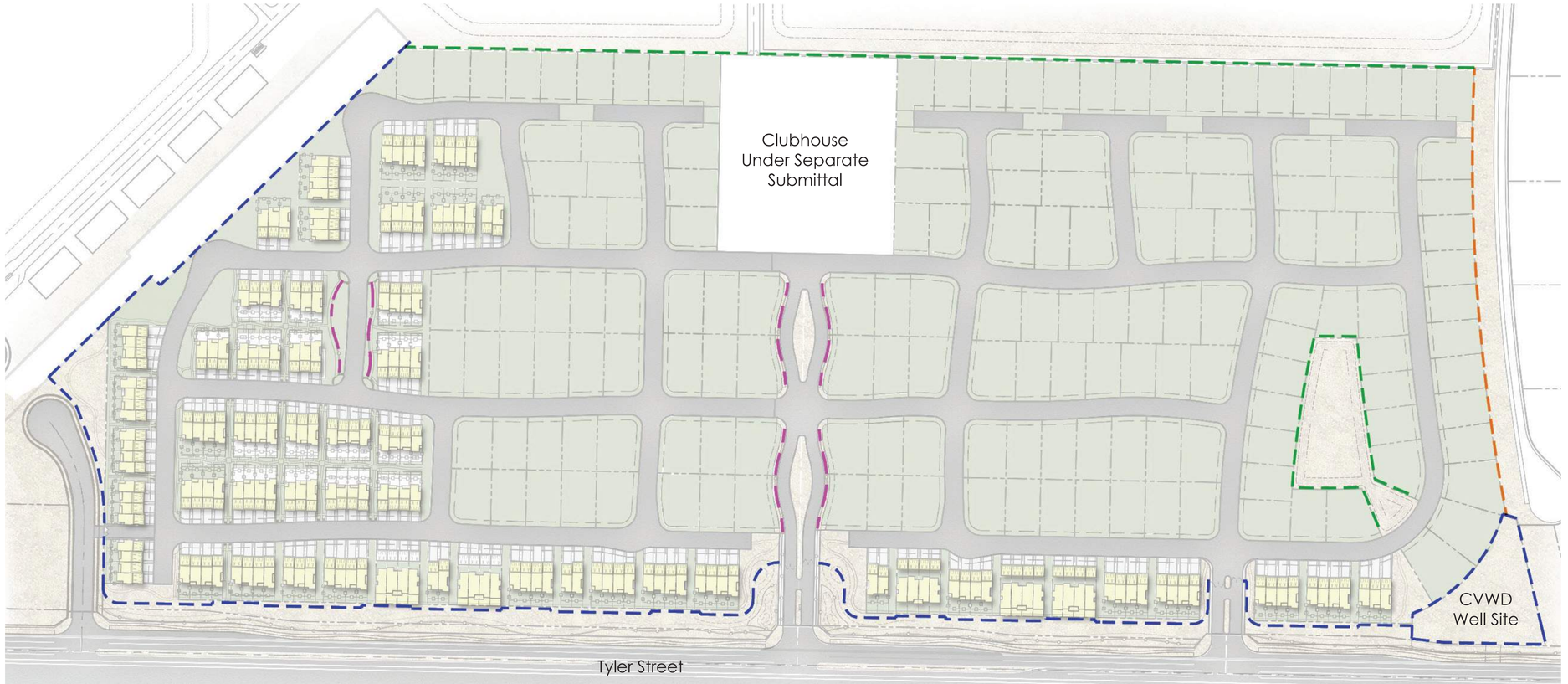
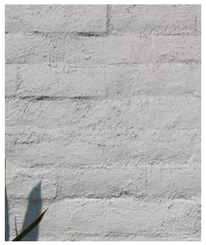


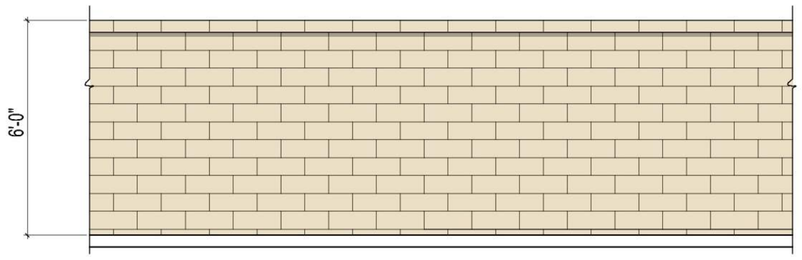
0' 120' 240' 360' 480'
SCALE 1"=120'

Character Imagery

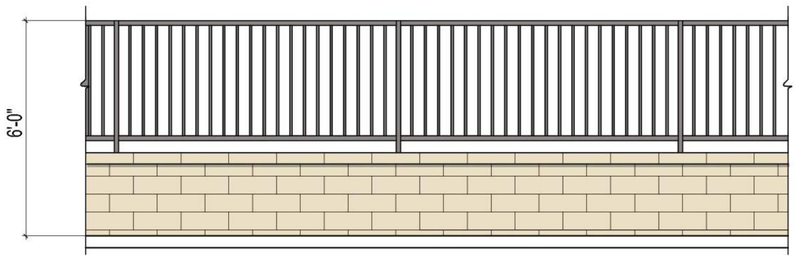


Legend

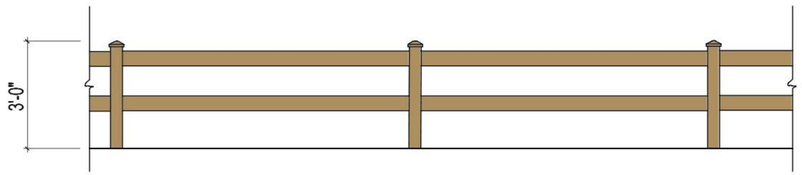
- A — 6' HT. Sack Finish or Colored Slump Block Wall
- B — 6' Ht. Combo Wall With Tube Steel Fence
- C — 36" Ht. 2-Rail Wood or Vinyl Ranch Fence
- D — 6' Ht. Tube Steel Fence



A 6' Sack Finish or Colored Slump Block Wall
Scale 1/2" = 1' - 0"



B 6' Combo Wall - 24" Slump Block Wall with 4' Tube Steel or Wood Fence
Scale 1/2" = 1' - 0"



C 36" Ht. 2-Rail Wood or Vinyl Ranch Fence
Scale 1/2" = 1' - 0"

Thermal Ranch Neighborhood Residential (PA3) | Wall and Fence Plan

September 15, 2025 | L- 12

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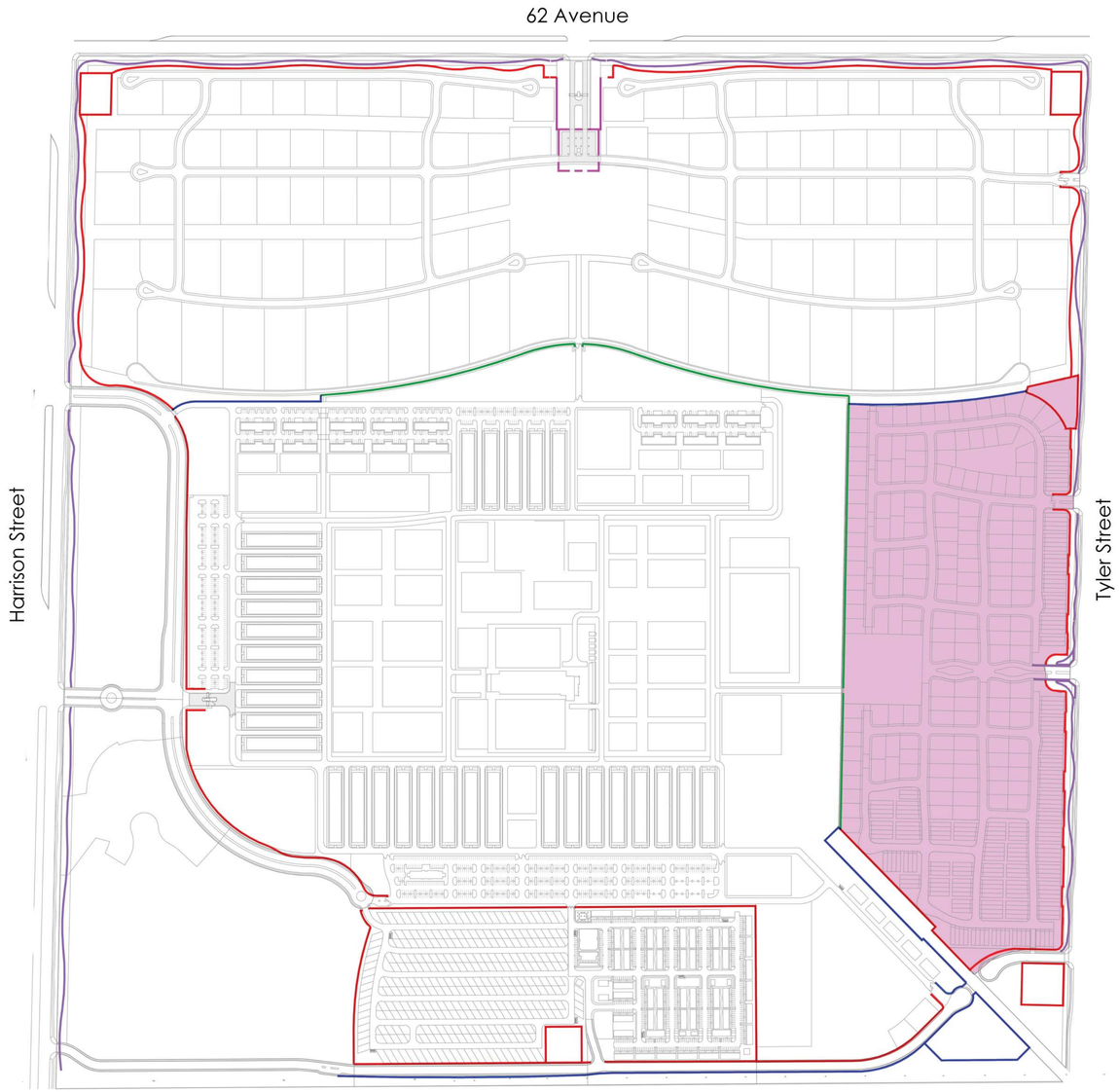

Legend

- *6' - 10' Sack Finish or Colored Slump Block Wall*
- *6' Tubular Steel Fence*
- *View Fence with Knee Wall - 6' Wood or Steel*
- *Ranch Fence - 2-4 Rail Wood or Vinyl*

6' Sack Finish or Colored Slump Block Wall

View Fence with Knee Wall - 6' Wood or Steel

Ranch Fence - 2-4 Rail Wood or Vinyl

Accent Wall - Masonry, Poured in Place Concrete, or Stucco

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Concept Plant Legend

LARGE AND MEDIUM TREES
15GAL - 36"BOX
BAUHINIA VARIEGATA (PURPUREA) / PURPLE ORCHID TREE
CHORISIA SPECIOSA / SILK FLOSS TREE
OLEA EUROPAEA `SWANHILL FRUITLESS` / EUROPEAN OLIVE
PARKINSONIA SPECIES
PROSOPIS SPECIES
TIPUANA TIPU / TIPU TREE
SCHINUS MOLLE / CALIFORNIA PEPPER

UPRIGHT TREES
15GAL - 36"BOX
ACACIA SALICINA / WILLOW ACACIA
ACACIA STENOPHYLLA / SHOESTRING ACACIA
ACACIA WILLARDIANA / PALO BLANCO
CALLISTEMON SPECIES
EUCALYPTUS SPECIES

SMALL TREES
15GAL - 36"BOX
ACACIA ANEURA / MULGA
ACACIA FARNESIANA / SWEET ACACIA
CAESALPINIA CACALACO "SMOOTHIE" / CASCALOTE
CITRUS SPECIES

PALMS
20`-30` HT
PHOENIX DACTYLIFERA / DATE PALM
WASHINGTONIA ROBUSTA / MEXICAN FAN PALM

ACCENT PALMS
24"-36" BOX
BISMARCKIA NOBILIS / BISMARK PALM
BEAUCARNEA RECURVATA / PONY TAIL PALM
CHAMAEROPS HUMILIS / MEDITERRANEAN FAN PALM

LARGE ACCENTS
5-15 GAL
AGAVE ANGUSTIFOLIA / CENTURY PLANT
DASYLIRION WHEELERI / GREY DESERT SPOON
FEROCACTUS ACANTHODES / COMPASS BARREL
NOLINA NELSONII / BLUE NOLINA
OPUNTIA SANTA-RITA / SANTA RITA PRICKLYPEAR
YUCCA SPECIES

SMALL ACCENTS/ CACTI
1 GAL
ECHINOCACTUS GRUSONII / GOLDEN BARREL CACTUS
HESPERALOE SPECIES

LARGE GRASS
1-5 GAL
SPOROBOLUS AIROIDES / ALKALI SACATON
SPOROBOLUS WRIGHTII / BIG SACATON

MEDIAN/SMALL GRASS
1-5 GAL
MUHLENBERGIA SPECIES
PENSTEMON SP.(RED) / MIXED PENSTEMON SPECIES
CAREX SPECIES

LARGE SHRUBS
5 GAL
CAESALPINIA PULCHERRIMA / RED BIRD OF PARADISE
CASSIA SPECIES
LEUCOPHYLLUM SPECIES
NERIUM OLEANDER / OLEANDER
SIMMONDSIA CHINENSIS / JOJOBA

MEDIUM SHRUBS
5 GAL
BOUGAINVILLEA SPECIES
CALLISTEMON VIMINALIS `LITTLE JOHN` / DWARF WEEPING BOTTLE BRUSH
CARISSA MACROCARPA `GREEN CARPET` / GREEN CARPET NATAL PLUM
DALEA SPECIES
EREMOPHILA SPECIES
JUNIPERUS C. `BLUE PACIFIC` / BLUE PACIFIC JUNIPER
LANTANA SPECIES
OLEA EUROPAEA `MONTRA` / LITTLE OLLIE DWARF OLIVE

GROUNDCOVERS
1-5 GAL
ACACIA REDOLENS `DESERT CARPET` TM / BANK CATCLAW
DALEA SPECIES
JUNIPERUS SPECIES
LANTANA SPECIES
PORTULACARIA AFRA / ELEPHANT BUSH
PYRACANTHA FORTUNEANA `GRABERI` / GRABERI PYRACANTHA

VINE
1-5 GAL
BOUGAINVILLEA X `BARBARA KARST` / BARBARA KARST BOUGAINVILLEA
ROSA BANKSIAE `ALBA PLENA` / WHITE LADY BANK`S ROSE

PASTURE
NATIVE DESERT WILDFLOWER MIX

DECOMPOSED GRANITE
TYPE TBD

STABILIZED DECOMPOSED GRANITE
TYPE TBD

BASIN
3/4" GRAVEL
TYPE TBD

BASIN CRUSHED ROCK
4-6" ROCK
TYPE TBD

NATIVE SOIL

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PLANT SCHEDULE TREES

BOTANICAL / COMMON NAME	SIZE	WU	CANOPY	MATURE HEIGHT	MATURE WIDTH
ACCENT PALM TREES					
BEAUCARNEA RECURVATA PONY TAIL PALM	24"BOX	M 0.5	10'	6 - 10ft. ht.	3 - 6ft. w.
BISMARCKIA NOBIUS BISMARK PALM	24"BOX	M 0.5	12'	20 - 50ft. ht.	10 - 15ft. w.
CHAMAEROPS HUMILIS MEDITERRANEAN FAN PALM	36"BOX	M 0.5	8'	6ft. ht.	6 - 10ft. w.
LARGE AND MEDIUM TREES					
BAUHINIA VARIEGATA (PURPUREA) PURPLE ORCHID TREE	15 GAL	M 0.5	20'	25 - 40ft. ht.	25 - 40ft. w.
CHORISIA SPECIOSA SILK FLOSS TREE	24"BOX	M 0.5	20'	40 - 65ft. ht.	25 - 40ft. w.
OLEA EUROPAEA `SWANHILL FRUITLESS` EUROPEAN OLIVE	36"BOX	L 0.2	30'	25 - 40ft. ht.	25 - 40ft. w.
PARKINSONIA SPECIES	24"BOX	L 0.2	20'	15 - 25ft. ht.	15 - 25ft. w.
PROSOPIS SPECIES	24"BOX	L 0.2	20'	25 - 40ft. ht.	25 - 40ft. ht.
SCHINUS MOLLE CALIFORNIA PEPPER	36"BOX	M 0.5	30'	25 - 40ft. ht.	25 - 40ft. w.
TIPUANA TIPU TIPU TREE	24"BOX	M 0.5	30'	25 - 40ft. ht.	25 - 40ft. w.
PALM TREES					
PHOENIX DACTYLIFERA DATE PALM	+20`-30` HTS	M 0.5	20'	25 - 40ft. ht.	25 - 40ft. w.
WASHINGTONIA ROBUSTA MEXICAN FAN PALM	+20`-30` HTS	M 0.5	15'	25 - 40ft. ht.	6 - 10ft. w.
SMALL TREES					
ACACIA ANEURA MULGA	24"BOX	L 0.2	15'	15ft. ht.	10 - 15ft. ht.
ACACIA FARNESIANA SWEET ACACIA	24"BOX	L 0.2	20'	15 - 25ft. ht.	15 - 25ft. w.
CAESALPINIA CACALACO "SMOOTHIE" CASCALOTE	24"BOX	L 0.2	20'	10 - 15ft. ht.	10 - 15ft. w.
CITRUS SPECIES	24"BOX	M 0.5	15'	20 - 30ft. ht.	15 - 25 ft. w.
UPRIGHT TREES					
ACACIA SALICINA WILLOW ACACIA	24"BOX	M 0.5	15'	25ft. ht.	15 - 25ft. w.
ACACIA STENOPHYLLA SHOESTRING ACACIA	24"BOX	L 0.2	20'	25 - 40ft. ht.	10 - 15ft. w.
ACACIA WILLARDIANA PALO BLANCO	24"BOX	L 0.2	20'	15 - 25ft. ht.	10 - 15ft. ht.
CALLISTEMON SPECIES	24"BOX	M 0.5	20'	15 - ' ht.	15 - 25ft. w.
EUCALYPTUS SPECIES	15 GAL	M 0.5	15'	25 ft. ht.	40 - 0' w.

PLANT SCHEDULE SHRUBS

BOTANICAL / COMMON NAME	SIZE	WU	SPACING	MATURE HEIGHT	MATURE WIDTH
SHRUBS					
BOUGAINVILLEA SPECIES	5 GAL	M 0.5	60" o.c.	3 - 15ft. ht.	6 - 15ft. ht.
CAESALPINIA PULCHERRIMA RED BIRD OF PARADISE	5 GAL	L 0.2	72" o.c.	10 - ' ht.	10 - 15ft. w.
CALLISTEMON VIMINALIS `LITTLE JOHN` DWARF WEEPING BOTTLE BRUSH	5 GAL	M 0.5	48" o.c.	18 - 36in. ht.	1 - 3ft. w.
CARISSA MACROCARPA `GREEN CARPET` GREEN CARPET NATAL PLUM	5 GAL	M 0.5	48" o.c.	6 - 18in. ht.	3 - 6ft. w.
CASSIA SPECIES	5 GAL	L 0.2	48" o.c.	10 - 15ft. ht.	10 - 15ft. w.
DALEA SPECIES	5 GAL	L 0.2	48" o.c.	18 - 36in. ht.	1 - 3ft. w.
EREMOPHILA SPECIES	5 GAL	L 0.2	36" o.c.	18 - 36in. ht.	4 - 10ft. ht.
JUNIPERUS SPECIES	5 GAL	M 0.5	48" o.c.	3 - 6ft. ht.	1 - 3ft. w.
LANTANA SPECIES	5 GAL	M 0.5	48" o.c.	18 - 36in. ht.	1 - 3ft. w.
LEUCOPHYLLUM SPECIES	5 GAL	L 0.2	48" o.c.	3 - 1' ht.	3 - 6ft. w.
NERIUM OLEANDER `PETITE PINK` DWARF OLEANDER	5 GAL	M 0.5	60" o.c.	3 - 6ft. ht.	3 - 6ft. w.
OLEA EUROPAEA `MONTRA` LITTLE OLLIE DWARF OLIVE	5 GAL	L 0.2	48" o.c.	3 - 6ft. ht.	3 - 6ft. w.
SIMMONDSIA CHINENSIS JOJOBA	5 GAL	L 0.2	48" o.c.	6 - 10ft. ht.	6 - 10ft. w.
ACCENTS					
AGAVE SPECIES	5 - 15 GAL	L 0.2	48" o.c.	1 - 6ft. ht.	1 - 6ft. ht.
DASYLIRION WHEELERI GREY DESERT SPOON	5 - 15 GAL	L 0.2	60" o.c.	3 - 1' ht.	3 - 6ft. w.
ECHINOCACTUS GRUSONII GOLDEN BARREL CACTUS	5 - 15 GAL	L 0.2	24" o.c.	18 - 36in. ht.	1 - 3ft. w.
FEROCACTUS ACANTHODES COMPASS BARREL	5 - 15 GAL	L 0.2	24" o.c.	1 - 8ft. ht.	2 - 3ft. ht.
HESPERALOE SPECIES	5 - 15 GAL	L 0.2	30" o.c.	2 - 4ft. ht.	1 - 4ft. ht.
NOLINA NELSONII BLUE NOLINA	5 - 15 GAL	L 0.2	48" o.c.	4 - 6ft. ht.	6 - 10ft. w.
OPUNTIA SANTA-RITA SANTA RITA PRICKLYPEAR	5 - 15 GAL	L 0.2	36" o.c.	3 - 1' ht.	3 - 1' w.
YUCCA SPECIES	5 - 15 GAL	L 0.2	72" o.c.	5 - 15ft. ht.	2 - 4ft. ht.
GRASSES					
MUHLENBERGIA RIGENS DEER GRASS	5 GAL	M 0.5	48" o.c.	3 - 6ft. ht.	3 - 6ft. w.
PENSTEMON SPECIES MIXED SPECIES	5 GAL	M 0.5	36" o.c.	18 - 36in. ht.	1 - 3ft. w.
SPOROBOLUS AIROIDES ALKALI SACATON	5 GAL	L 0.2	48" o.c.	18 - 36in. ht.	1 - 3ft. w.
SPOROBOLUS WRIGHTII BIG SACATON	5 GAL	M 0.5	48" o.c.	3 - 5ft. ht.	3 - 5ft. ht.

GROUNDCOVERS					
JUNIPERUS SPECIES	1 - 5 GAL	M 0.5	48" o.c.	2ft. ht.	6 - 8ft. w.
PYRACANTHA FORTUNEANA `GRABERI` GRABERI PYRACANTHA	1 - 5 GAL	M 0.5	96" o.c.	6 - 10ft. ht.	6 - 10ft. w.
ACACIA REDOLENS `DESERT CARPET` TM BANK CATCLAW	1 - 5 GAL	L 0.2	48" o.c.	18 - 36in. ht.	6 - 10ft. w.
DALEA SPECIES	1 - 5 GAL	L 0.2	48" o.c.	6 - 18in. ht.	4 - 6ft. ht.
LANTANA SPECIES	1 - 5 GAL	M 0.5	48" o.c.	6 - 18in. ht.	3 - 6ft. w.
PORTULACARIA AFRA ELEPHANT BUSH	1 - 5 GAL	L 0.2	48" o.c.	6 - ' ht.	3 - 6ft. w.
VINE/ESPALIER					
BOUGAINVILLEA X `BARBARA KARST` BARBARA KARST BOUGAINVILLEA	5 GAL	M 0.5	96" o.c.	10 - 15ft. ht.	10 - 20ft. ht.
ROSA BANKSIAE `ALBA PLENA` WHITE LADY BANK`S ROSE	5 GAL	M 0.5	96" o.c.	< 15ft. ht.	6 - 10ft. ht.
BASIN GRASSES					
MUHLENBERGIA SPECIES	5 GAL	M 0.5	48" o.c.	3 - 6 ft. ht.	3- 6 ft. ht.
CAREX SPECIES	5 GAL	M 0.5	36" o.c.	1 - 3 ft. ht.	1 - 3 ft. ht.

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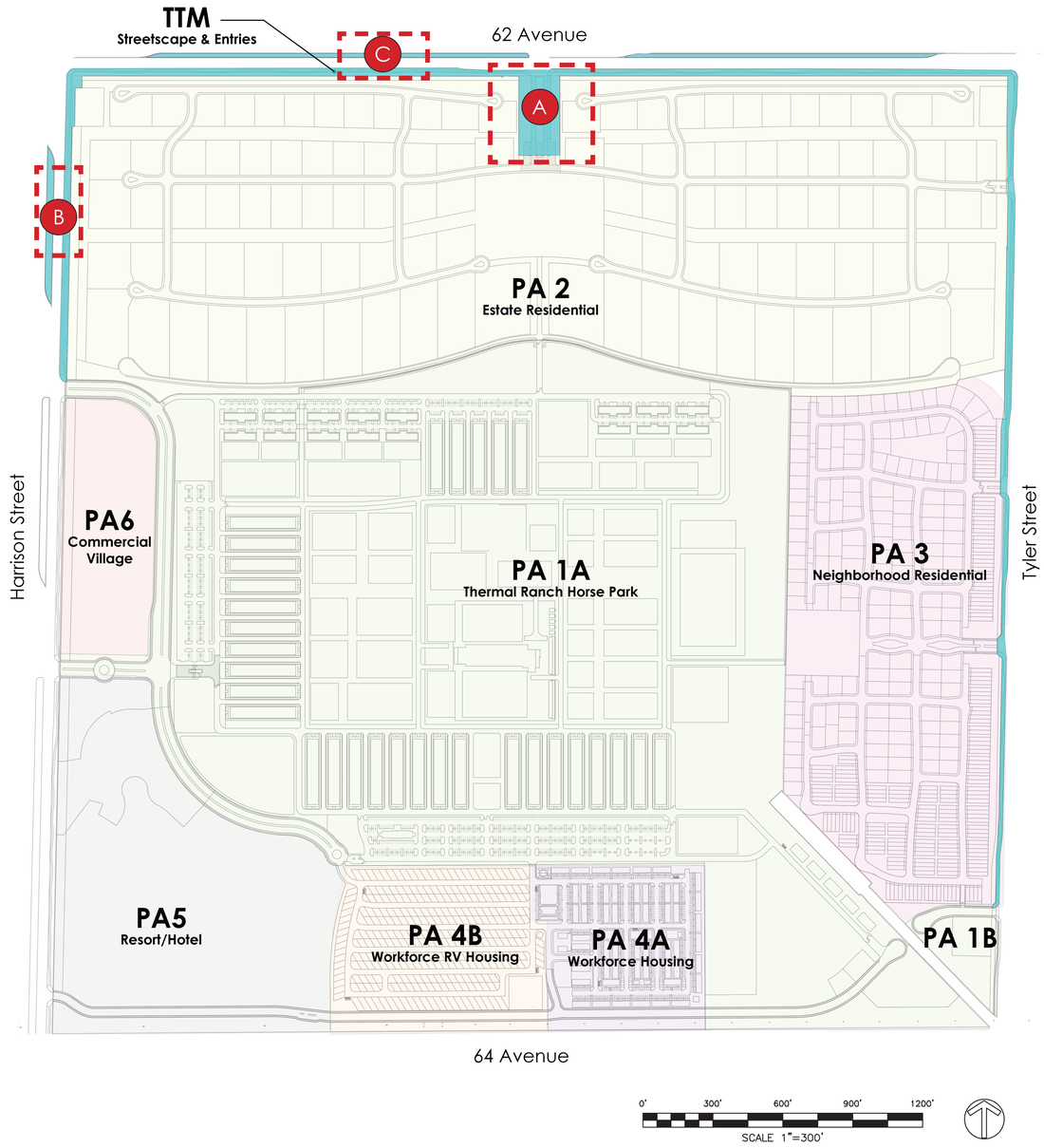

APPLICANT/LAND OWNER: THERMAL RANCH, LLC
19312 CANYON DRIVE
VILLA PARK, CALIFORNIA 92861
JEREMY SMITH 760-801-5166

LANDSCAPE ARCHITECT: MSA CONSULTING, INC.
34200 BOB HOPE DRIVE
RANCHO MIRAGE, CA 92270
ROBERT PARKER 760-320-9811

Prior to project construction, I agree to submit a complete Landscape Construction Document Package that complies with the requirements of applicable ordinances, including but not necessarily limited to Ordinance No. 859.2; Ordinance 348, Ordinance 461; project Conditions of Approval; and in substantial conformance with the approved Landscape Concept Plan. Should the ordinances be revised, plans may be subject to change.

Assessor's Parcel Number: 751-020-002, -003, -006, & -007

Notes per Ordinance 859.3
- Hydrozones will be properly designated. Applicant must indicate proposed method(s) of irrigation.
- No overhead irrigation allowed within 24" of non-permeable surfaces.
- Subsurface or low-volume irrigation must be used for irregularly shaped areas, or areas less than 8 feet in width.

All Landscape Plans shall comply with screening and buffering Riverside County requirements:
- Evergreen plants shall be used where necessary to buffer and screen adjacent land uses.
- Landscaping shall be incorporated to soften edge of buildings, structures and streets in both commercial and industrial areas.
- Mechanical equipment and trash enclosures shall be identified and screened accordingly.
- Vines and other landscaping shall be added to fencing and walls to deter graffiti.

Proposed Maintenance Entity On-Site: Master Association Maintained
Proposed Maintenance Entity Off-Site: Master Association Maintained

The project site is not located within Multiple Species Habitat Conservation Plan (MSHCP) area.

The projeict shall comply with the Thermal Design Guidelines.

Enlargement Areas

A *Estate Lot Primary Entry*

B *Streetscape Typical and Harrison St. Median*

C *62nd Street Median*

REGISTERED LANDSCAPE ARCHITECT ROBERT E. PARKER JR. #5219 REN 8-31-27 STATE OF CALIFORNIA

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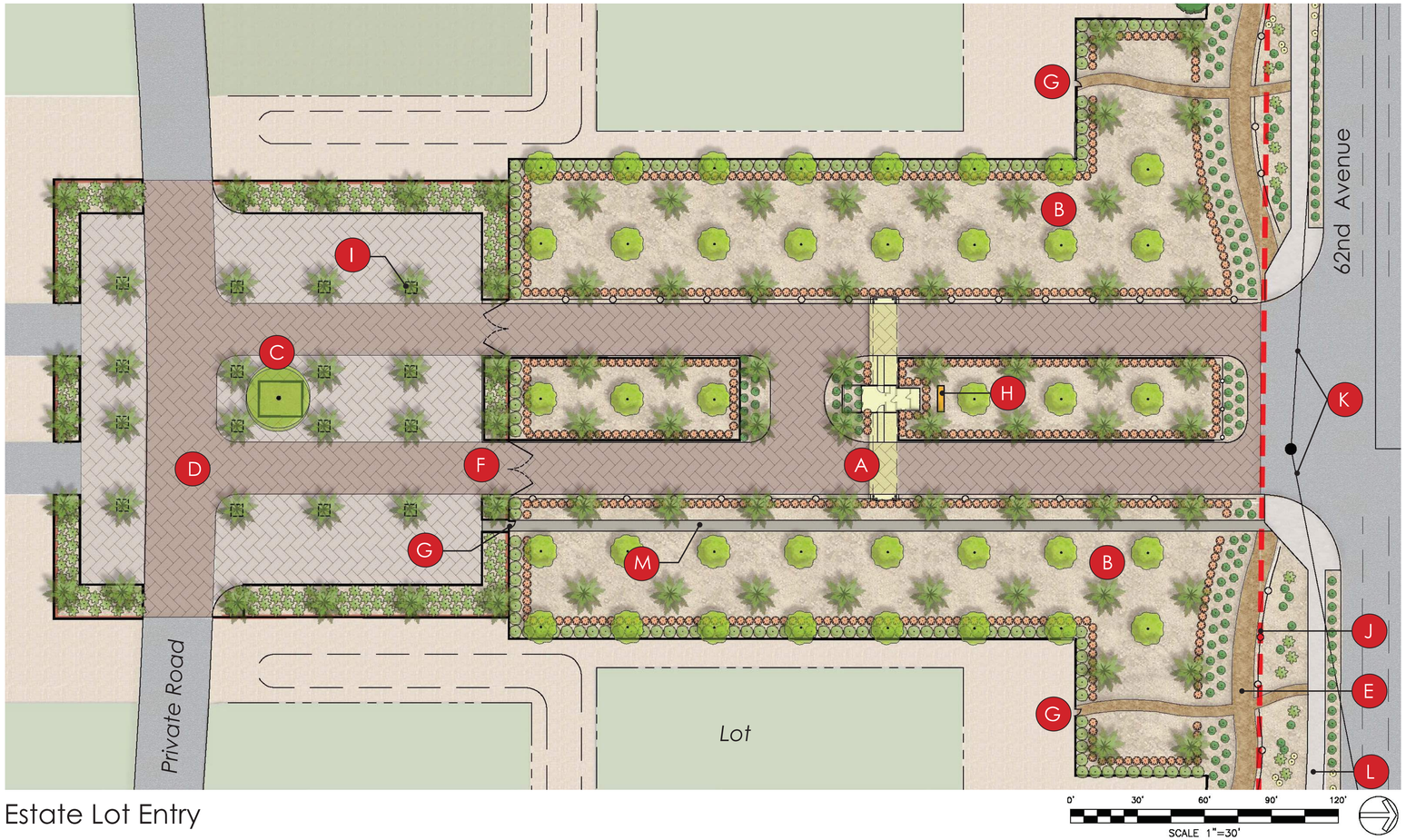


Estate Lot Entry

Planting Legend

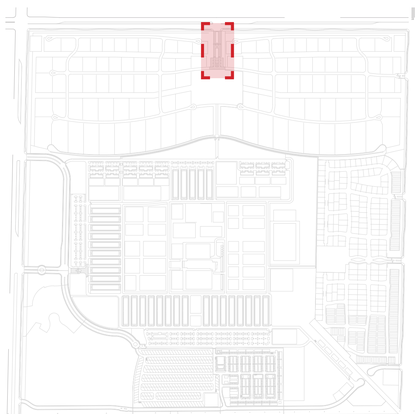
- LARGE AND MEDIUM TREES
- UPRIGHT TREES
- SMALL TREES
- PALMS
- ACCENT PALMS
- LARGE ACCENTS
- SMALL ACCENT/CACTI
- LARGE GRASSES
- MEDIUM/SMALL GRASSES
- LARGE SHRUBS
- MEDIUM SHRUBS
- GROUNDCOVERS
- VINES
- PASTURE
  NATIVE DESERT WILDFLOWER MIX
- DECOMPOSED GRANITE
  TYPE TBD
- STABILIZED DECOMPOSED GRANITE
  TYPE TBD

*See Sheet L-8 for Full Legend

Character Imagery

Legend

- A *Gate House*
- B *Palm and Citrus Grove*
- C *Special Feature at Entry Court*
- D *Enhanced Paving for Drive Aisle*
- E *10' Paved Bike Trail*
- F *Vehicular Gate*
- G *Pedestrian Gate*
- H *Entry Monument*
- I *Palm Grove with Flush Tree Wells*
- J *37' Right-Of-Way*
- K *Sight Distance Line*
- L *8' Meandering Sidewalk*
- M *5' Sidewalk*



Thermal Ranch TTM 38578 Streetscape and Entries | Estate Lot Primary Entry (Area A)

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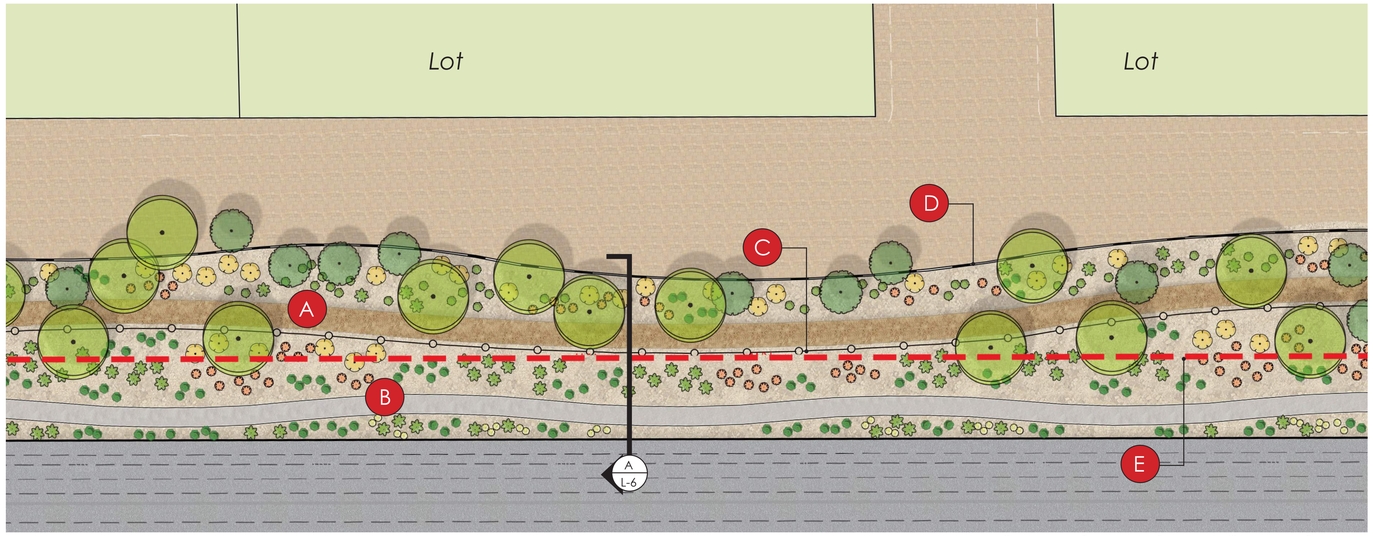
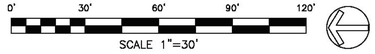
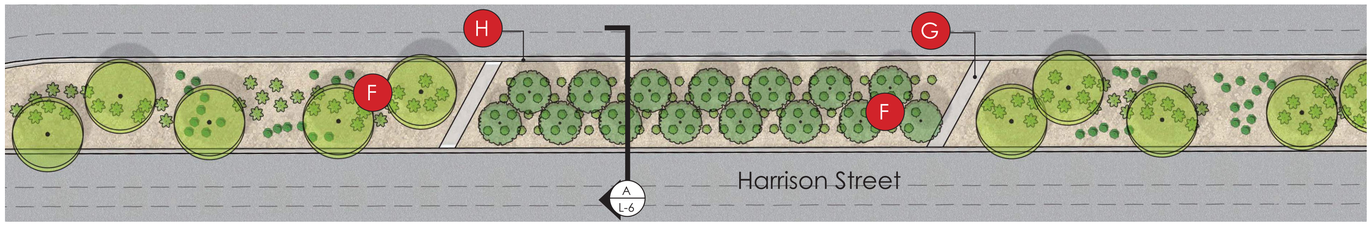
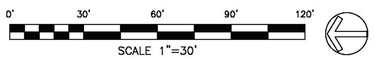


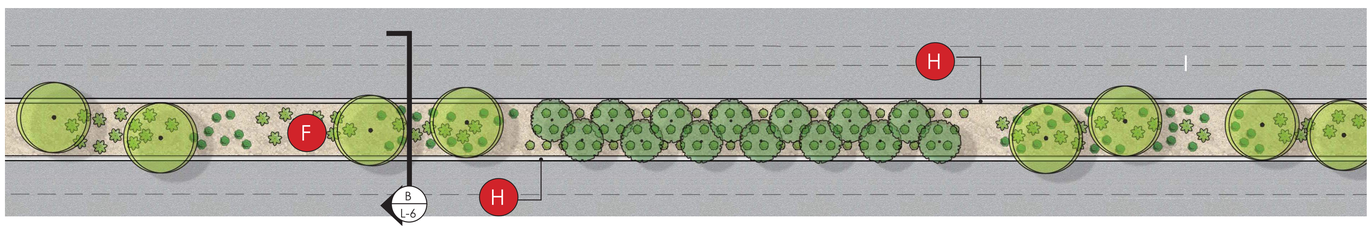
Streetscape Typical (Harrison St., 62 Ave., & Tyler St.)



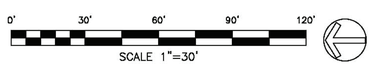


Harrison St. Median





62nd Ave. Median



Planting Legend

- LARGE AND MEDIUM TREES
- UPRIGHT TREES
- SMALL TREES
- PALMS
- ACCENT PALMS
- LARGE ACCENTS
- SMALL ACCENT/CACTI
- LARGE GRASSES
- MEDIUM/SMALL GRASSES
- LARGE SHRUBS
- MEDIUM SHRUBS
- GROUNDCOVERS
- VINES
- PASTURE
  NATIVE DESERT WILDFLOWER MIX
- DECOMPOSED GRANITE
  TYPE TBD
- STABILIZED DECOMPOSED GRANITE
  TYPE TBD

See Sheet L-8 for Full Legend

Legend

- A 10' Paved Bike Trail
- B 8' Meandering Sidewalk
- C Ranch Fence
- D Perimeter Wall
- E 34' Right-Of-Way
- F Desert Landscaping
- G 6' Concrete Band
- H 2' Maintenance Walk

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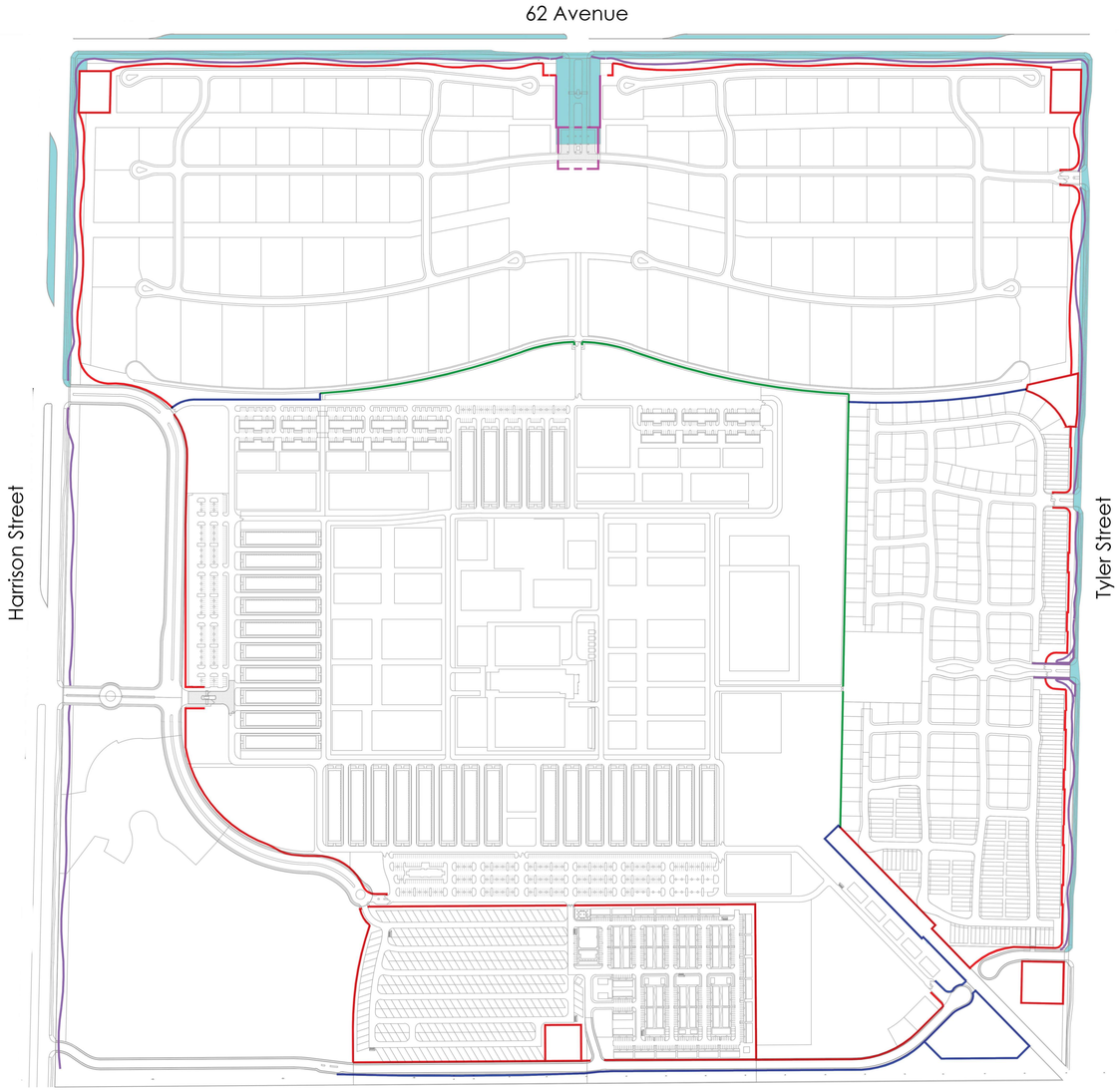
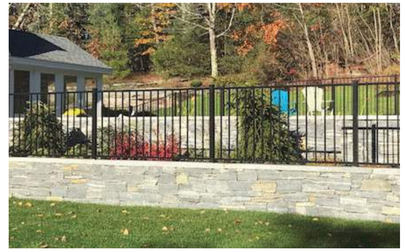


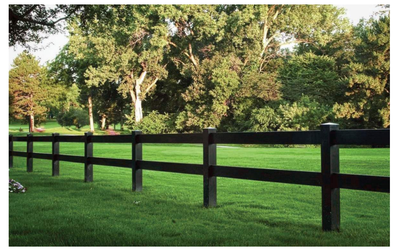
Legend

- *6' - 10' Sack Finish or Colored Slump Block Wall*
- *6' Tubular Steel Fence*
- *View Fence with Knee Wall - 6' Wood or Steel*
- *Ranch Fence - 2-4 Rail Wood or Vinyl*

6'-10' Sack Finish or Colored Slump Block Wall



View Fence with Knee Wall - 6' Wood or Steel



Ranch Fence - 2-4 Rail Wood or Vinyl

Accent Wall - Masonry, Poured in Place Concrete, or Stucco

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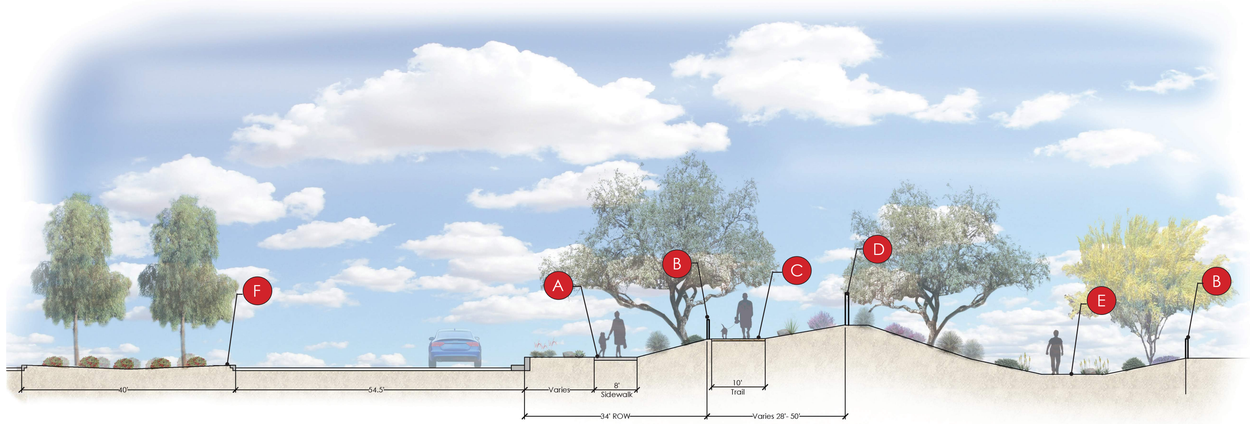
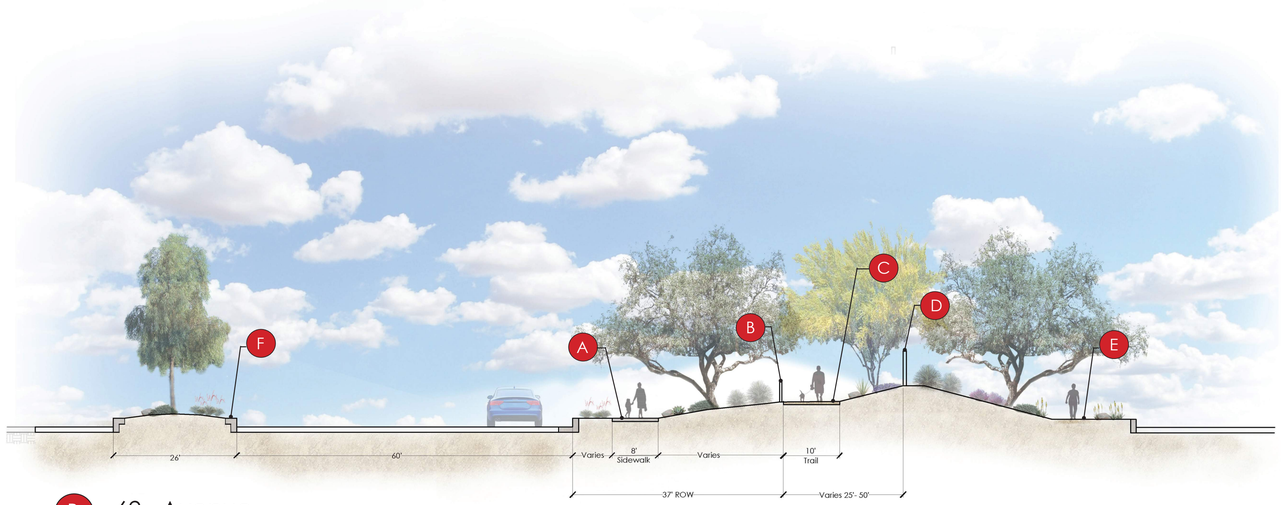
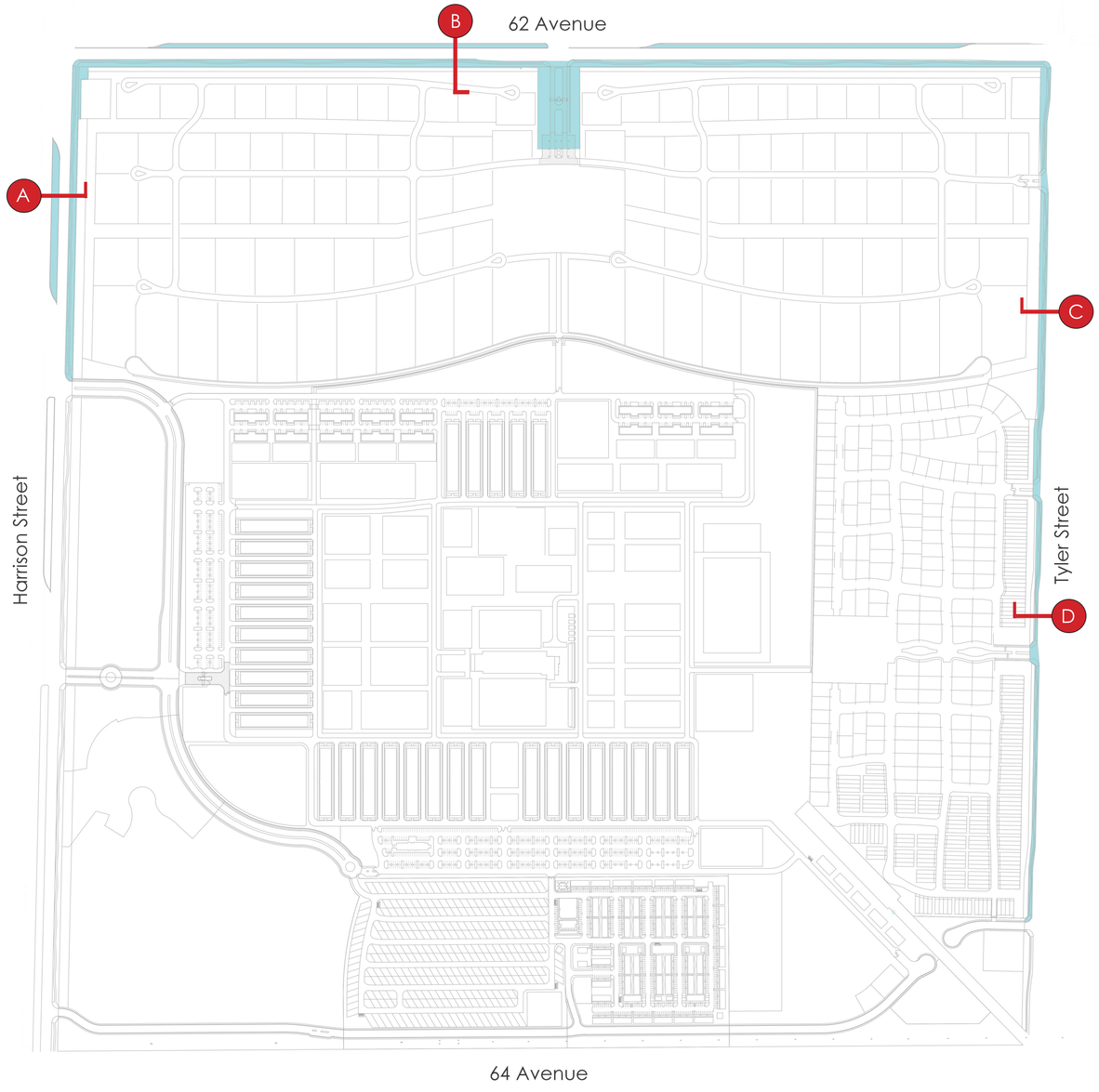


A Harrison Street



B 62 Avenue



Legend

- A 8’ Meandering Sidewalk
- B Split Rail Fence
- C 10’ Meandering Paved Bike Trail
- D 6’ Wall on 6’ Berm 3:1-4:1 Slope
- E Interior 5’ Meandering Path
- F 2’ Maintenance Walk

Thermal Ranch TTM 38578 Streetscape and Entries | Sections

September 15, 2025 | L-5

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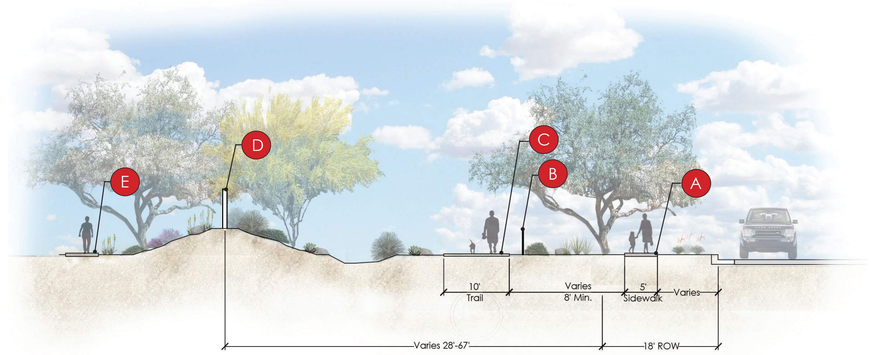
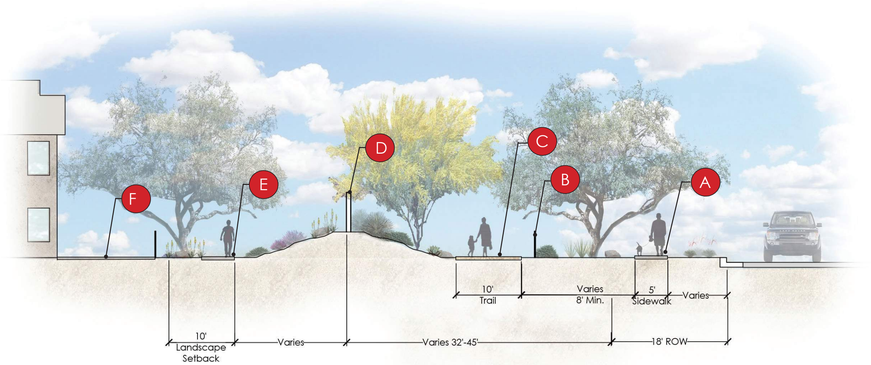


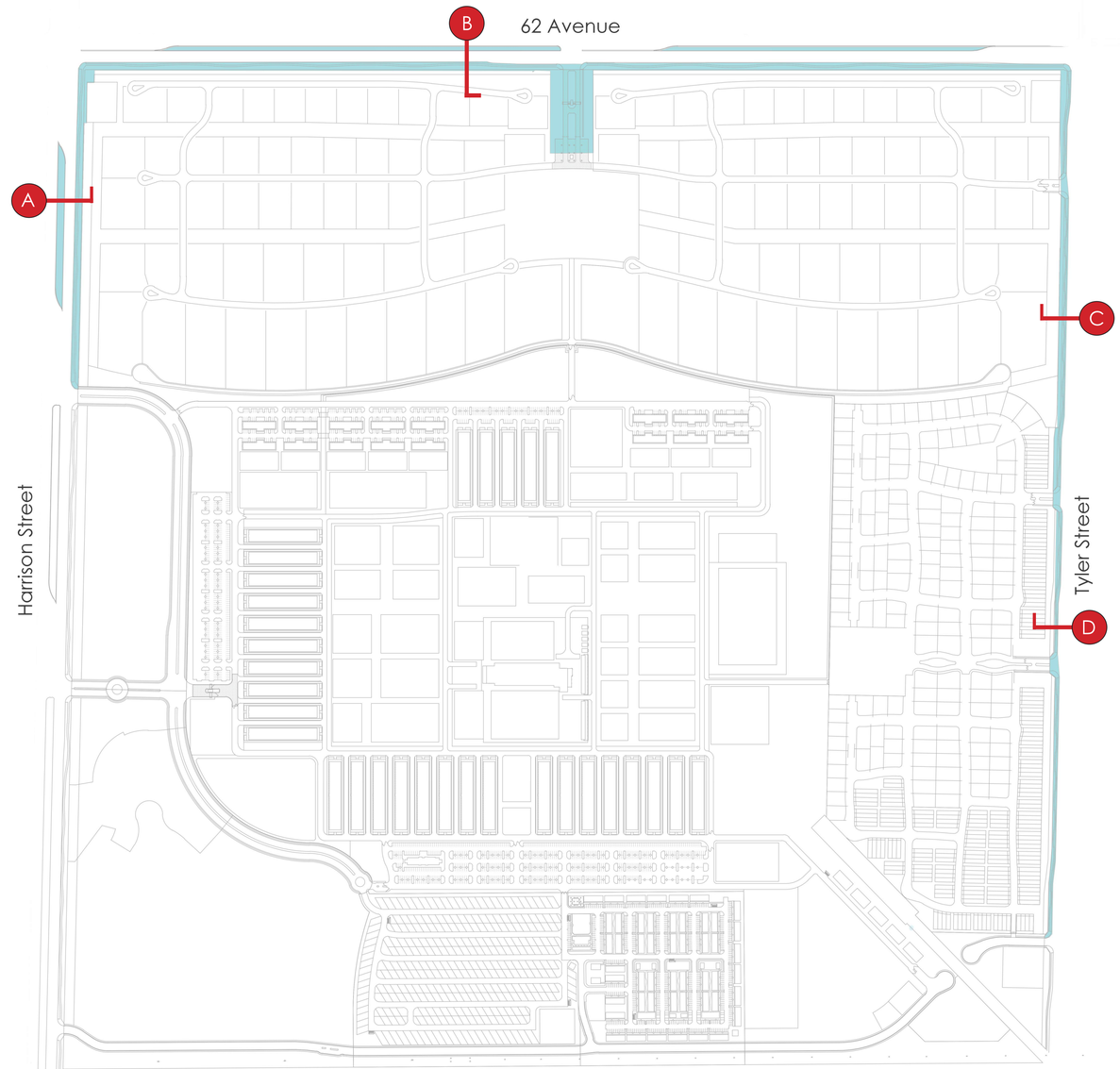
C Tyler Street at Estate Lots



D Tyler Street at Single Family Residential

Legend

- A 5' Meandering Sidewalk
- B *Split Rail Fence*
- C *10' Meandering Paved Bike Trail*
- D *6' Wall on 4' Berm 3:1-4:1 Slope*
- E *Interior 5' Meandering Path*
- F *Town Home Patio*



Thermal Ranch TTM 38578 Streetscape and Entries | Sections

September 15, 2025 | L-6

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Concept Plant Legend

LARGE AND MEDIUM TREES
15GAL - 36"BOX
BAUHINIA VARIEGATA (PURPUREA) / PURPLE ORCHID TREE
CHORISIA SPECIOSA / SILK FLOSS TREE
OLEA EUROPAEA `SWANHILL FRUITLESS` / EUROPEAN OLIVE
PARKINSONIA SPECIES
PROSOPIS SPECIES
TIPUANA TIPU / TIPU TREE
SCHINUS MOLLE / CALIFORNIA PEPPER

UPRIGHT TREES
15GAL - 36"BOX
ACACIA SALICINA / WILLOW ACACIA
ACACIA STENOPHYLLA / SHOESTRING ACACIA
ACACIA WILLARDIANA / PALO BLANCO
CALLISTEMON SPECIES
EUCALYPTUS SPECIES

SMALL TREES
15GAL - 36"BOX
ACACIA ANEURA / MULGA
ACACIA FARNESIANA / SWEET ACACIA
CAESALPINIA CACALACO "SMOOTHIE" / CASCALOTE
CITRUS SPECIES

PALMS
20`-30` HT
PHOENIX DACTYLIFERA / DATE PALM
WASHINGTONIA ROBUSTA / MEXICAN FAN PALM

ACCENT PALMS
24"-36" BOX
BISMARCKIA NOBILIS / BISMARK PALM
BEAUCARNEA RECURVATA / PONY TAIL PALM
CHAMAEROPS HUMILIS / MEDITERRANEAN FAN PALM

LARGE ACCENTS
5-15 GAL
AGAVE ANGUSTIFOLIA / CENTURY PLANT
DASYLIRION WHEELERI / GREY DESERT SPOON
FEROCACTUS ACANTHODES / COMPASS BARREL
NOLINA NELSONII / BLUE NOLINA
OPUNTIA SANTA-RITA / SANTA RITA PRICKLYPEAR
YUCCA SPECIES

SMALL ACCENTS/ CACTI
1 GAL
ECHINOCACTUS GRUSONII / GOLDEN BARREL CACTUS
HESPERALOE SPECIES

LARGE GRASS
1-5 GAL
SPOROBOLUS AIROIDES / ALKALI SACATON
SPOROBOLUS WRIGHTII / BIG SACATON

MEDIAN/SMALL GRASS
1-5 GAL
MUHLENBERGIA SPECIES
PENSTEMON SP.(RED) / MIXED PENSTEMON SPECIES
CAREX SPECIES

LARGE SHRUBS
5 GAL
CAESALPINIA PULCHERRIMA / RED BIRD OF PARADISE
CASSIA SPECIES
LEUCOPHYLLUM SPECIES
NERIUM OLEANDER / OLEANDER
SIMMONDSIA CHINENSIS / JOJOBA

MEDIUM SHRUBS
5 GAL
BOUGAINVILLEA SPECIES
CALLISTEMON VIMINALIS `LITTLE JOHN` / DWARF WEEPING BOTTLE BRUSH
CARISSA MACROCARPA `GREEN CARPET` / GREEN CARPET NATAL PLUM
DALEA SPECIES
EREMOPHILA SPECIES
JUNIPERUS C. `BLUE PACIFIC` / BLUE PACIFIC JUNIPER
LANTANA SPECIES
OLEA EUROPAEA `MONTRA` / LITTLE OLLIE DWARF OLIVE

GROUNDCOVERS
1-5 GAL
ACACIA REDOLENS `DESERT CARPET` TM / BANK CATCLAW
DALEA SPECIES
JUNIPERUS SPECIES
LANTANA SPECIES
PORTULACARIA AFRA / ELEPHANT BUSH
PYRACANTHA FORTUNEANA `GRABERI` / GRABERI PYRACANTHA

VINE
1-5 GAL
BOUGAINVILLEA X `BARBARA KARST` / BARBARA KARST BOUGAINVILLEA
ROSA BANKSIAE `ALBA PLENA` / WHITE LADY BANK`S ROSE

PASTURE
NATIVE DESERT WILDFLOWER MIX

DECOMPOSED GRANITE
TYPE TBD

STABILIZED DECOMPOSED GRANITE
TYPE TBD

Preliminary Street Tree Counts

Area	Total Linear Feet	Total Street Trees
Harrison Street	1,732 LF	73 Trees
62nd Street	4,905 LF	172 Trees
Tyler Street	4,068 LF	183 Trees

* Quantities Derived from the Corresponding Typical Planting Areas

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PLANT SCHEDULE TREES

BOTANICAL / COMMON NAME	SIZE	WU	CANOPY	MATURE HEIGHT	MATURE WIDTH
ACCENT PALM TREES					
BEAUCARNEA RECURVATA PONY TAIL PALM	24"BOX	M 0.5	10'	6 - 10ft. ht.	3 - 6ft. w.
BISMARCKIA NOBIUS BISMARK PALM	24"BOX	M 0.5	12'	20 - 50ft. ht.	10 - 15ft. w.
CHAMAEROPS HUMILIS MEDITERRANEAN FAN PALM	36"BOX	M 0.5	8'	6ft. ht.	6 - 10ft. w.
LARGE AND MEDIUM TREES					
BAUHINIA VARIEGATA (PURPUREA) PURPLE ORCHID TREE	15 GAL	M 0.5	20'	25 - 40ft. ht.	25 - 40ft. w.
CHORISIA SPECIOSA SILK FLOSS TREE	24"BOX	M 0.5	20'	40 - 65ft. ht.	25 - 40ft. w.
OLEA EUROPAEA `SWANHILL FRUITLESS` EUROPEAN OLIVE	36"BOX	L 0.2	30'	25 - 40ft. ht.	25 - 40ft. w.
PARKINSONIA SPECIES	24"BOX	L 0.2	20'	15 - 25ft. ht.	15 - 25ft. w.
PROSOPIS SPECIES	24"BOX	L 0.2	20'	25 - 40ft. ht.	25 - 40ft. ht.
SCHINUS MOLLE CALIFORNIA PEPPER	36"BOX	M 0.5	30'	25 - 40ft. ht.	25 - 40ft. w.
TIPUANA TIPU TIPU TREE	24"BOX	M 0.5	30'	25 - 40ft. ht.	25 - 40ft. w.
PALM TREES					
PHOENIX DACTYLIFERA DATE PALM	+20`-30` HTS	M 0.5	20'	25 - 40ft. ht.	25 - 40ft. w.
WASHINGTONIA ROBUSTA MEXICAN FAN PALM	+20`-30` HTS	M 0.5	15'	25 - 40ft. ht.	6 - 10ft. w.
SMALL TREES					
ACACIA ANEURA MULGA	24"BOX	L 0.2	15'	15ft. ht.	10 - 15ft. ht.
ACACIA FARNESIANA SWEET ACACIA	24"BOX	L 0.2	20'	15 - 25ft. ht.	15 - 25ft. w.
CAESALPINIA CACALACO "SMOOTHIE" CASCALOTE	24"BOX	L 0.2	20'	10 - 15ft. ht.	10 - 15ft. w.
CITRUS SPECIES	24"BOX	M 0.5	15'	20 - 30ft. ht.	15 - 25 ft. w.
UPRIGHT TREES					
ACACIA SALICINA WILLOW ACACIA	24"BOX	M 0.5	15'	25ft. ht.	15 - 25ft. w.
ACACIA STENOPHYLLA SHOESTRING ACACIA	24"BOX	L 0.2	20'	25 - 40ft. ht.	10 - 15ft. w.
ACACIA WILLARDIANA PALO BLANCO	24"BOX	L 0.2	20'	15 - 25ft. ht.	10 - 15ft. ht.
CALLISTEMON SPECIES	24"BOX	M 0.5	20'	15 - ' ht.	15 - 25ft. w.
EUCALYPTUS SPECIES	15 GAL	M 0.5	15'	25 ft. ht.	40 - 0' w.

PLANT SCHEDULE SHRUBS

BOTANICAL / COMMON NAME	SIZE	WU	SPACING	MATURE HEIGHT	MATURE WIDTH
SHRUBS					
BOUGAINVILLEA SPECIES	5 GAL	M 0.5	60" o.c.	3 - 15ft. ht.	6 - 15ft. ht.
CAESALPINIA PULCHERRIMA RED BIRD OF PARADISE	5 GAL	L 0.2	72" o.c.	10 - ' ht.	10 - 15ft. w.
CALLISTEMON VIMINALIS `LITTLE JOHN` DWARF WEEPING BOTTLE BRUSH	5 GAL	M 0.5	48" o.c.	18 - 36in. ht.	1 - 3ft. w.
CARISSA MACROCARPA `GREEN CARPET` GREEN CARPET NATAL PLUM	5 GAL	M 0.5	48" o.c.	6 - 18in. ht.	3 - 6ft. w.
CASSIA SPECIES	5 GAL	L 0.2	48" o.c.	10 - 15ft. ht.	10 - 15ft. w.
DALEA SPECIES	5 GAL	L 0.2	48" o.c.	18 - 36in. ht.	1 - 3ft. w.
EREMOPHILA SPECIES	5 GAL	L 0.2	36" o.c.	18 - 36in. ht.	4 - 10ft. ht.
JUNIPERUS SPECIES	5 GAL	M 0.5	48" o.c.	3 - 6ft. ht.	1 - 3ft. w.
LANTANA SPECIES	5 GAL	M 0.5	48" o.c.	18 - 36in. ht.	1 - 3ft. w.
LEUCOPHYLLUM SPECIES	5 GAL	L 0.2	48" o.c.	3 - 1' ht.	3 - 6ft. w.
NERIUM OLEANDER `PETITE PINK` DWARF OLEANDER	5 GAL	M 0.5	60" o.c.	3 - 6ft. ht.	3 - 6ft. w.
OLEA EUROPAEA `MONTRA` LITTLE OLLIE DWARF OLIVE	5 GAL	L 0.2	48" o.c.	3 - 6ft. ht.	3 - 6ft. w.
SIMMONDSIA CHINENSIS JOJOBA	5 GAL	L 0.2	48" o.c.	6 - 10ft. ht.	6 - 10ft. w.
ACCENTS					
AGAVE SPECIES	5 - 15 GAL	L 0.2	48" o.c.	1 - 6ft. ht.	1 - 6ft. ht.
DASYLIRION WHEELERI GREY DESERT SPOON	5 - 15 GAL	L 0.2	60" o.c.	3 - 1' ht.	3 - 6ft. w.
ECHINOCACTUS GRUSONII GOLDEN BARREL CACTUS	5 - 15 GAL	L 0.2	24" o.c.	18 - 36in. ht.	1 - 3ft. w.
FEROCACTUS ACANTHODES COMPASS BARREL	5 - 15 GAL	L 0.2	24" o.c.	1 - 8ft. ht.	2 - 3ft. ht.
HESPERALOE SPECIES	5 - 15 GAL	L 0.2	30" o.c.	2 - 4ft. ht.	1 - 4ft. ht.
NOLINA NELSONII BLUE NOLINA	5 - 15 GAL	L 0.2	48" o.c.	4 - 6ft. ht.	6 - 10ft. w.
OPUNTIA SANTA-RITA SANTA RITA PRICKLYPEAR	5 - 15 GAL	L 0.2	36" o.c.	3 - 1' ht.	3 - 1' w.
YUCCA SPECIES	5 - 15 GAL	L 0.2	72" o.c.	5 - 15ft. ht.	2 - 4ft. ht.
GRASSES					
MUHLENBERGIA RIGENS DEER GRASS	5 GAL	M 0.5	48" o.c.	3 - 6ft. ht.	3 - 6ft. w.
PENSTEMON SPECIES MIXED SPECIES	5 GAL	M 0.5	36" o.c.	18 - 36in. ht.	1 - 3ft. w.
SPOROBOLUS AIROIDES ALKALI SACATON	5 GAL	L 0.2	48" o.c.	18 - 36in. ht.	1 - 3ft. w.
SPOROBOLUS WRIGHTII BIG SACATON	5 GAL	M 0.5	48" o.c.	3 - 5ft. ht.	3 - 5ft. ht.

GROUNDCOVERS					
JUNIPERUS SPECIES	1 - 5 GAL	M 0.5	48" o.c.	2ft. ht.	6 - 8ft. w.
PYRACANTHA FORTUNEANA `GRABERI` GRABERI PYRACANTHA	1 - 5 GAL	M 0.5	96" o.c.	6 - 10ft. ht.	6 - 10ft. w.
ACACIA REDOLENS `DESERT CARPET` TM BANK CATCLAW	1 - 5 GAL	L 0.2	48" o.c.	18 - 36in. ht.	6 - 10ft. w.
DALEA SPECIES	1 - 5 GAL	L 0.2	48" o.c.	6 - 18in. ht.	4 - 6ft. ht.
LANTANA SPECIES	1 - 5 GAL	M 0.5	48" o.c.	6 - 18in. ht.	3 - 6ft. w.
PORTULACARIA AFRA ELEPHANT BUSH	1 - 5 GAL	L 0.2	48" o.c.	6 - ' ht.	3 - 6ft. w.
VINE/ESPALIER					
BOUGAINVILLEA X `BARBARA KARST` BARBARA KARST BOUGAINVILLEA	5 GAL	M 0.5	96" o.c.	10 - 15ft. ht.	10 - 20ft. ht.
ROSA BANKSIAE `ALBA PLENA` WHITE LADY BANK`S ROSE	5 GAL	M 0.5	96" o.c.	< 15ft. ht.	6 - 10ft. ht.
BASIN GRASSES					
MUHLENBERGIA SPECIES	5 GAL	M 0.5	48" o.c.	3 - 6 ft. ht.	3- 6 ft. ht.
CAREX SPECIES	5 GAL	M 0.5	36" o.c.	1 - 3 ft. ht.	1 - 3 ft. ht.

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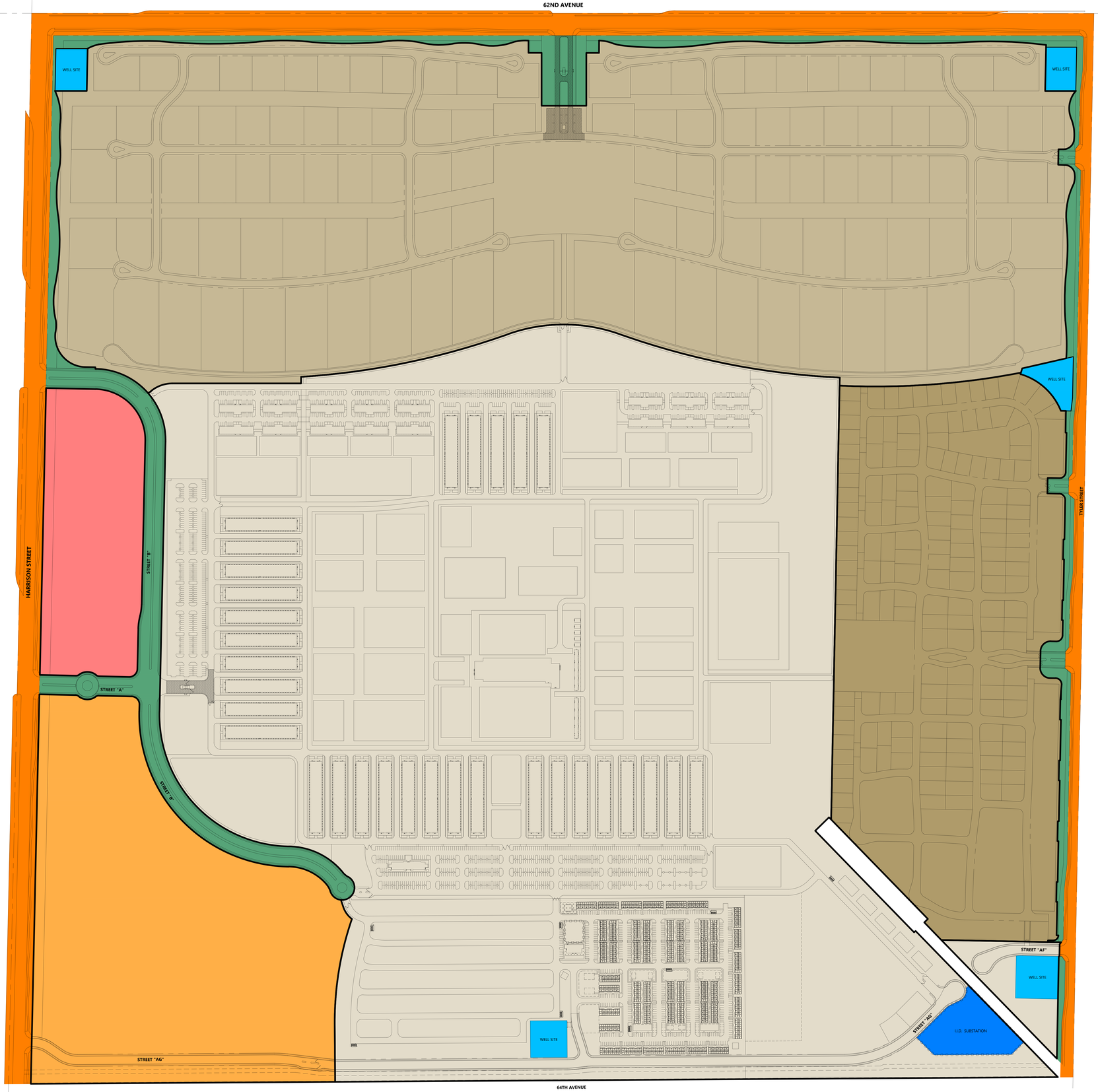


THE UNINCORPORATED AREA IN THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

MASTER ASSOCIATION MAINTENANCE EXHIBIT

EXHIBIT DATE: SEPTEMBER 16, 2025

REVISIONS

NO.	DATE	DESCRIPTION

DATA TABLE

APPLICANT / LAND OWNER	THERMAL RANCH, LLC		
ADDRESS	19312 CANYON DRIVE VILLA PARK, CALIFORNIA 92861		
CONTACT	JEREMY SMITH	**TELEPHONE**	(760) 801-5166
EXHIBIT PREPARER	MSA CONSULTING, INC.		
ADDRESS	34200 BOB HOPE DRIVE RANCHO MIRAGE, CALIFORNIA 92270		
CONTACT	PAUL DEPALATIS, AICP	**TELEPHONE**	(760) 320-9811
SOURCE OF TOPOGRAPHY	AEROTECH MAPPING, INC.		
ADDRESS	200 SPECTRUM CENTER DRIVE, SUITE 300 IRVINE, CALIFORNIA 92618		
DATE OF TOPOGRAPHY	DECEMBER 7, 2022	**TELEPHONE**	(619) 606-5020
ASSESSOR'S PARCEL NUMBERS	751-020-002, -003, -006 & -007		

LEGAL DESCRIPTION

A PORTION OF SECTION 5, TOWNSHIP 7 SOUTH, RANGE 8 EAST, SAN BERNARDINO MERIDIAN.

MAINTENANCE DESCRIPTION

COUNTY OF RIVERSIDE MAINTAINED
MASTER ASSOCIATION MAINTAINED
ESTATES MAINTAINED
CONVENTIONAL HOUSING MAINTAINED
EQUESTRIAN CENTER MAINTAINED
HOTEL MAINTAINED
SHOPPING CENTER MAINTAINED
C.V.W.D. WELL SITE
I.I.D. SUBSTATION

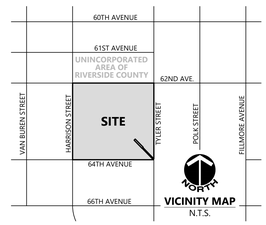
NOTE

1. THIS EXHIBIT SHOWS THE CONCEPTUAL MAINTENANCE RESPONSIBILITIES, WITH FINAL RESPONSIBILITIES TO BE INCLUDED IN THE RECORDED CC&RS, CONSISTENT WITH THE TERMS OF THE SPECIFIC PLAN.

NORTH

0' 200' 400' 600' 800'

SCALE 1"=200'



VICINITY MAP
N.T.S.

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SHEET 1 OF 1 SHEETS

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R:\2735\Accel\Planning\Exhibit\Maintenance\2735 Maintenance Exhibit.dwg, 9/16/2025 4:37:03 PM, dgallerani, MSA Consulting, Inc.

62ND AVENUE

PROP. MEDIAN
PROP. C&G
PROP. S/W
EX. R/W
EX. C/L
EX. BNDRY
PROP. R/W

EX. 42" VCP SEWER LINE
EX. 18" PVC IRRIGATION LINE

200 L.F. TO EX. WTR P.O.C.

EX. 24" IRR. LINE (TO BE RELOCATED)

PROP. R/W
PROP. S/W
PROP. C&G
EX. C/L
EX. R/W

EX. 18" PVC IRRIGATION LINE
EX. 30" DI WATER LINE
EX. OVERHEAD ELECTRIC LINE

EX. OVERHEAD CATV LINE
EX. OVERHEAD ELECTRIC LINE
EX. 14" PVC IRRIGATION LINE

CVWD WELL SITE

Open Space / Pasture / Retention

Retention

Retention Basin

STABLES (TYP.)

FIELD (TYP.)

ARENA (TYP.)

ARENA

GRAND PRIX CLUBHOUSE

COMMUNITY CENTER

TYLER STREET

Lagoon / Irrigation lake / Storm water retention

Community Center

IID SUBSTATION

PRIVATE SEWER LIFT STATION

Open Space / Pasture / Retention

64TH AVENUE

EX. OVERHEAD ELECTRIC LINE

PROP. BNDRY
EX. C/L
EX. R/W

PROP. C&G
PROP. R/W

960 L.F. TO EX. WTR P.O.C.

CASE: TTM38578
EXHIBIT: Exhibit U
DATE: 3/13/2025
PLANNER: Russell Brady

☐ Meeting ☑ Comment Agenda ☐ Final

LEGEND

- BROWN = BUILDING & SAFETY GRADING DIVISION COMMENTS
- PURPLE = PLANNING DEPARTMENT COMMENTS
- GREEN = ENVIRONMENTAL PROGRAMS DEPARTMENT COMMENTS
- LIGHT ORANGE = TRANSPORTATION DEPARTMENT COMMENTS
- BLUE = FLOOD CONTROL DISTRICT COMMENTS
- LIGHT GREEN = REGIONAL PARKS & OPEN SPACE DISTRICT COMMENTS
- RED = FIRE DEPARTMENT COMMENTS
- YELLOW = ENVIRONMENTAL HEALTH DEPARTMENT COMMENTS
- LIGHT BLUE = BUILDING & SAFETY PLAN CHECK COMMENTS
- ORANGE = WASTE MANAGEMENT DEPARTMENT COMMENTS

LEGEND

- EXISTING PUBLIC WATER MAIN
- EXISTING PUBLIC SEWER MAIN
- PROPOSED 8" PUBLIC SEWER MAIN APPROX. LENGTH: 16,750 L.F.
- PROPOSED 8" PUBLIC SEWER MAIN (OFFSITE) APPROX. LENGTH: 530 L.F.
- PROPOSED 12" PUBLIC SEWER MAIN (OFFSITE) APPROX. LENGTH: 3,140 L.F.
- PROPOSED 8" PUBLIC WATER MAIN APPROX. LENGTH: 12,230 L.F.
- PROPOSED 12" PUBLIC WATER MAIN APPROX. LENGTH: 34,560 L.F.
- PROPOSED 12" PUBLIC WATER MAIN (OFFSITE) APPROX. LENGTH: 4,700 L.F.
- PROPOSED 18" PUBLIC WATER MAIN APPROX. LENGTH: 6,140 L.F.
- PROPOSED 18" PUBLIC WATER MAIN (OFFSITE) APPROX. LENGTH: 2,000 L.F.
- PROPOSED PRIVATE SEWER LINE APPROX. LENGTH: 37,900 L.F.
- PROPOSED PRIVATE WATER LINE APPROX. LENGTH: 24,200 L.F.
- PROPOSED FIRE HYDRANT

NORTH

0' 200' 400' 600' 800'

SCALE 1"=200'

JANUARY 2025

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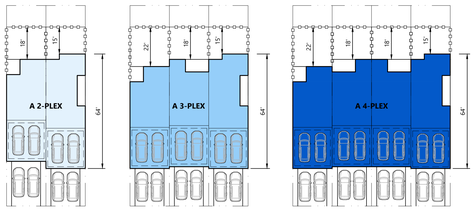
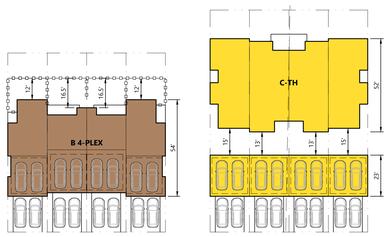
COUNTY OF RIVERSIDE
TENTATIVE TRACT MAP NO. 38578
THERMAL RANCH
PRELIMINARY WATER AND SEWER PLAN

DESIGN BY BSC
DRAWN BY BSC
CHECK BY MTC



ATTACHED BUILDING: PLAN TYPE "A"
SCALE: 1" = 30'
NOTE: PROPOSED VEHICLE PARKING AS SHOWN. GUESTS WILL UTILIZE DRIVEWAYS FOR PARKING.

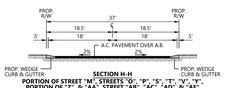


ATTACHED BUILDING: PLAN TYPE "B"
SCALE: 1" = 30'

ATTACHED BUILDING: PLAN TYPE "C"
SCALE: 1" = 30'

NOTE: PROPOSED VEHICLE PARKING AS SHOWN.
GUESTS WILL UTILIZE DRIVEWAYS FOR PARKING.

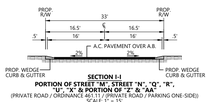
SECTION C-C
STREETS "AF" & "AG"
(PRIVATE ROAD / RESERVED LOT)
(ORDINANCE 461.11)
SCALE: 1" = 15'



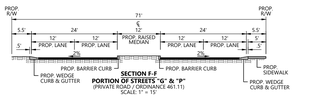
SECTION H-H
PORTION OF STREET "M", STREETS "O", "P", "S", "T", "V", "Y", PORTION OF "Z", & "AA", STREET "AB", "AC," "AD", & "AE"
(PRIVATE ROAD / PARKING ONE-SIDE)
SCALE: 1" = 15'

SECTION E-E
PORTION OF STREET "W"
(PRIVATE ROAD / ORDINANCE 461.11)
SCALE: 1" = 15'

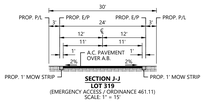
NOTE: 4-LANE ENTRY TO ACCOMMODATE STACKING AND PASS THROUGH LANES AT GATE.



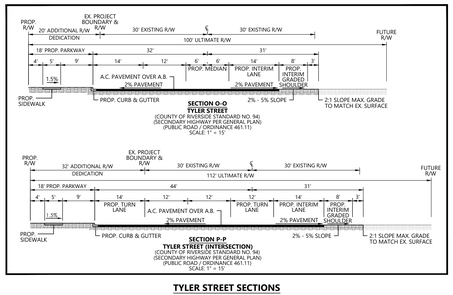
SECTION I-I
PORTION OF STREET "M", STREET "W", "O", "R", "U", "X" & PORTION OF "T" & "AA"
(PRIVATE ROAD / ORDINANCE 461.11 / 5 FT. SIDEWALK ROAD / PARKING ONE-SIDE)
SCALE: 1" = 15'



SECTION F-F
PORTION OF STREETS "G" & "P"
(PRIVATE ROAD / ORDINANCE 461.11)
SCALE: 1" = 15'



SECTION J-J
LOT 319
(EMERGENCY ACCESS / ORDINANCE 461.11)
SCALE: 1" = 15'



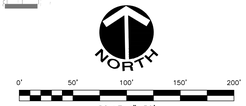
SECTION O-O
TYLER STREET
(COUNTY OF RIVERSIDE STANDARD NO. 94)
(SECONDARY HIGHWAY PER GENERAL PLAN)
(PUBLIC ROAD / ORDINANCE 461.11)
SCALE: 1" = 15'

SECTION P-P
TYLER STREET (INTERSECTION)
(COUNTY OF RIVERSIDE STANDARD NO. 94)
(SECONDARY HIGHWAY PER GENERAL PLAN)
(PUBLIC ROAD / ORDINANCE 461.11)
SCALE: 1" = 15'

TYLER STREET SECTIONS

LINE DATA		
NO.	BEARING	LENGTH
L1	N 01°07'13" E	797.52'
L2	N 85°17'57" E	192.17'
L3	N 88°52'47" W	286.59'
L4	N 83°25'20" W	92.13'
L5	N 07°42'06" E	73.74'
L6	N 88°23'11" E	90.29'
L7	N 88°52'47" W	806.00'
L8	N 01°07'13" E	212.82'
L9	N 03°38'01" E	50.65'
L10	N 04°19'42" W	26.21'
L11	N 88°52'47" W	101.89'
L12	N 88°52'47" W	414.99'
L13	N 01°07'13" E	80.02'
L14	N 01°07'13" E	115.40'
L15	N 88°52'47" W	347.63'
L16	N 01°07'13" E	219.00'
L17	N 01°07'13" E	186.05'
L18	N 01°07'13" E	781.81'
L19	N 01°07'13" E	245.28'
L20	N 01°07'13" E	215.14'
L21	N 88°52'47" W	374.42'
L22	N 88°52'47" W	60.00'
L23	N 88°52'47" W	31.48'
L24	N 86°12'45" W	233.81'
L25	N 88°52'47" W	35.53'
L26	N 88°52'47" W	39.06'
L27	N 01°07'13" E	400.12'
L28	N 02°52'07" W	32.02'
L29	N 01°07'13" E	95.48'
L30	N 84°06'46" W	11.62'
L31	N 87°02'47" W	100.30'
L32	N 01°07'13" E	290.90'
L33	N 01°07'13" E	200.72'

CURVE DATA			
NO.	DELTA	RADIUS	LENGTH
C1	30°00'00"	300.00'	157.08'
C2	04°52'01"	2500.00'	212.36'
C3	04°09'39"	3907.00'	283.73'
C4	99°58'56"	160.00'	279.20'
C5	03°32'01"	2000.00'	123.35'
C6	01°32'01"	3000.00'	185.02'
C7	08°07'29"	2000.00'	283.61'
C8	04°13'17"	2000.00'	147.35'
C9	12°01'06"	1000.00'	209.76'
C10	07°57'01"	2000.00'	277.52'
C11	02°40'02"	700.00'	32.59'
C12	06°03'36"	1000.00'	105.77'
C13	06°03'36"	700.00'	74.04'
C14	02°30'05"	3000.00'	130.97'
C15	06°09'25"	3000.00'	322.38'
C16	14°12'59"	500.00'	124.06'
C17	14°12'59"	300.00'	74.44'
C18	01°49'59"	3500.00'	111.98'
C19	06°11'30"	600.00'	64.84'
C20	06°11'30"	600.00'	64.84'
C21	13°14'07"	2000.00'	462.00'
C22	11°30'36"	300.00'	60.27'
C23	03°39'21"	3000.00'	191.42'
C24	05°41'50"	1500.00'	149.15'
C25	05°41'50"	1700.00'	169.04'
C26	06°57'44"	3000.00'	364.54'
C27	06°57'45"	600.00'	72.91'
C28	07°57'43"	600.00'	83.38'
C29	05°26'55"	750.00'	71.32'



THE UNINCORPORATED AREA IN THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

PLOT PLAN PPT240016
THERMAL RANCH SPECIFIC PLAN PA-3
FOR TENTATIVE TRACT MAP NO. 38578
FOR CONDOMINIUM PURPOSES

EXHIBIT DATE: SEPTEMBER 16, 2025

AMENDMENTS

NO.	DATE	DESCRIPTION

DATA TABLE

APPLICANT / LAND OWNER	THERMAL RANCH, LLC		
ADDRESS	19312 CANYON DRIVE VILLA PARK, CALIFORNIA 92861		
CONTACT	JEREMY SMITH	**TELEPHONE**	(760) 801-5166
EXHIBIT PREPARER	MSA CONSULTING, INC.		
ADDRESS	34200 BOB HOPE DRIVE RANCHO MIRAGE, CALIFORNIA 92270		
CONTACT	PAUL DEPALATIS, AICP	**TELEPHONE**	(760) 320-9811
SOURCE OF TOPOGRAPHY	AEROTECH MAPPING, INC.		
ADDRESS	200 SPECTRUM CENTER DRIVE, SUITE 300 IRVINE, CALIFORNIA 92618		
DATE OF TOPOGRAPHY	DECEMBER 7, 2022	**TELEPHONE**	(619) 606-5020
ASSESSOR'S PARCEL NUMBERS	751-020-002, -003, -006 & -007		

LEGAL DESCRIPTION

A PORTION OF SECTION 5, TOWNSHIP 7 SOUTH, RANGE 8 EAST, SAN BERNARDINO BASE AND MERIDIAN.

LAND USE DESCRIPTION	BUILDING	SF	ACREAGE	PERCENTAGE
PLANNING AREA 3 GROSS & NET AREA	-	3,019,298 SF	69.3 AC.	-
ATTACHED RESIDENTIAL LOTS	-	659,080 SF	15.1 AC.	100%
PROPOSED BUILDING AREA (A 2-PLEX)	4 BUILDINGS (2,499 SF / EA.)	±9,996 SF	±0.2 AC.	-
PROPOSED BUILDING AREA (A 3-PLEX)	9 BUILDINGS (3,728 SF / EA.)	±33,552 SF	±0.8 AC.	-
PROPOSED BUILDING AREA (A 4-PLEX)	23 BUILDINGS (4,957 SF / EA.)	±114,011 SF	±2.6 AC.	-
PROPOSED BUILDING AREA (B 4-PLEX)	11 BUILDINGS (4,547 SF / EA.)	±50,017 SF	±1.2 AC.	-
PROPOSED BUILDING AREA (C-TH)	5 BUILDINGS (6,383 SF / EA.)	±31,915 SF	±0.7 AC.	-
PROPOSED BUILDING TOTAL (PROPOSED BUILDING UNIT TOTAL)	52 BUILDINGS (191 UNITS)	±239,491 SF -	±5.5 AC. -	36% -
DRIVEWAY & HARDSCAPE	-	±110,820 SF	±2.5 AC.	17%
LANDSCAPE & OPEN SPACE AREAS	-	±319,850 SF	±7.3 AC.	47%

ONSITE VEHICULAR PARKING DATA	COUNT
PARKING SPACES REQUIRED	2 SPACES PER UNIT
PROPOSED PARKING SPACES PROVIDED - PROPOSED GARAGE PARKING SPACES PROVIDED - PROPOSED DRIVEWAY PARKING SPACES PROVIDED	764 SPACES 382 SPACES 382 SPACES

EXISTING EASEMENT NOTES

1. CENTERLINE OF 10' PIPELINE EASEMENT, RECORDED 3/22/1950, IN BOOK 1158, PAGE 39, O.R. (TO BE VACATED OR RELOCATED) (PLOTTED HEREON)
2. CENTERLINE OF POWER LINE EASEMENT, RECORDED 2/18/1965, AS INSTRUMENT NO. 18976, O.R. (TO BE VACATED OR RELOCATED) (PLOTTED HEREON)
3. 50' PIPELINE EASEMENT, RECORDED 10/20/1958, IN BOOK 2350, PAGE 562-564, O.R. (TO REMAIN) (PLOTTED HEREON)

EXISTING ZONING	CONTROLLED DEVELOPMENT (W-2) / HEAVY AGRICULTURE 10-ACRE MIN. LOT (A-2-10)
PROPOSED ZONING	THERMAL RANCH SPECIFIC PLAN, PA-1 EQUESTRIAN CENTER
EXISTING GENERAL PLAN LAND USE	AGRICULTURE
PROPOSED GENERAL PLAN LAND USE	COMMUNITY DEVELOPMENT FOUNDATION - TOURIST COMMERCIAL

PUBLIC UTILITY PURVEYORS

ELECTRIC	IMPERIAL IRRIGATION DISTRICT	(800) 303-7756
GAS	SOUTHERN CALIFORNIA GAS COMPANY	(800) 427-2200
TELEPHONE	FRONTIER COMMUNICATIONS	(800) 921-8101
WATER	COACHELLA VALLEY WATER DISTRICT	(760) 398-2651
CABLE	FRONTIER COMMUNICATIONS	(800) 921-8101
SEWER	COACHELLA VALLEY WATER DISTRICT	(760) 398-2651
SOLID WASTE (TRASH)	BURRTEC	(760) 340-2113
USA	UNDERGROUND SERVICE ALERT	(800) 227-2600

FEMA FLOOD ZONE DESIGNATION

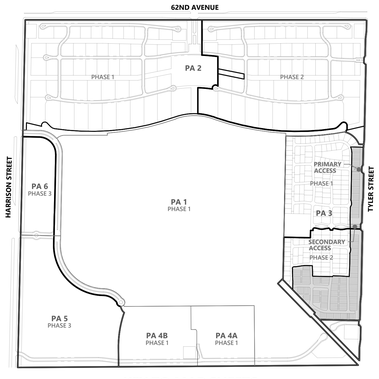
ZONE "A": WITHOUT BASE ELEVATION
ZONE "X": 0.2% ANNUAL CHANCE FLOOD & AREAS OF MINIMAL FLOOD HAZARD

AS SHOWN ON RIVERSIDE COUNTY, CALIFORNIA, FLOOD INSURANCE RATE MAP, COMMUNITY PANEL MAP NUMBER: 06065C2910H
EFFECTIVE DATE: MARCH 6, 2018.

LIQUEFACTION	HIGH LIQUEFACTION ZONE
SCHOOL DISTRICT	COACHELLA VALLEY UNIFIED
COUNTY SERVICE AREA	125 - THERMAL ST LIGHTING
EXISTING SPECIFIC PLAN	NONE
PROPOSED SPECIFIC PLAN	THERMAL RANCH SP

NOTES

1. PROVIDED PARKING CALCULATION AS PER THERMAL RANCH SP
2. ALTERNATIVE ARCHITECTURE PLANS THAT SUBSTANTIALLY CONFORM WITH THE CONDOMINIUM BUILDING ENVELOPES SHOWN ON TTM NO. 38578 FOR CONDOMINIUM PURPOSES (SHEET 5), ARE ALLOWED WITH ADMINISTRATIVE REVIEW BY COUNTY STAFF.
3. BURRTEC IS THE DESIGNATED FRANCHISE SOLID WASTE (TRASH) HAULER.



KEY TO MAP SHEETS
SCALE: 1" = 800'

ABBREVIATIONS

(E)	EAST
(N)	NORTH
(S)	SOUTH
(W)	WEST
A.C.	ASPHALT CONCRETE
AC	ACREAGE
APN	ASSESSORS PARCEL NUMBER
BNDRY	BOUNDARY
C/L	CENTERLINE
C&G	CURB AND GUTTER
E/P	EDGE OF PAVEMENT
ESMT.	EASEMENT
EX.	EXISTING
MAX.	MAXIMUM
M.B.	MAP BOOK
MIN.	MINIMUM
NO.	NUMBER
N.T.S.	NOT TO SCALE
O/H	OVERHEAD
OS/PP	OPEN SPACE / PARKS
PE	PAD ELEVATION
PG	PAGE
P/L	PROPERTY LINE
PROP.	PROPOSED
P.U.E.	PUBLIC UTILITY EASEMENT
R	RADIUS
R-L	LOW DENSITY (RESIDENTIAL)
R/W	RIGHT OF WAY
SF	SQUARE FEET
STD.	STANDARD
TYP.	TYPICAL
UG	UNDERGROUND

LEGEND

679.3 EXISTING SPOT ELEVATIONS
EXISTING CONTOURS
2 EXISTING EASEMENT DELTA
C EXISTING CABLE
DRN EXISTING IRRIGATION DRAIN LINE
EXISTING EASEMENT
E EXISTING ELECTRIC
G EXISTING GAS
IRR EXISTING IRRIGATION
EXISTING LOT LINE
EXISTING EDGE OF PAVEMENT
T EXISTING TELEPHONE
O/H T EXISTING OVERHEAD TELEPHONE
R/W EXISTING RIGHT OF WAY
S EXISTING SEWER
FM EXISTING SEWER FORCE MAIN
W EXISTING WATER
TENTATIVE TRACT MAP BOUNDARY
PROPOSED AND EXISTING CENTER LINE
PROPOSED CURB
PROPOSED EASEMENT
PROPOSED LOT LINE
PROPOSED RIGHT OF WAY

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R:\2725\Acad\Planning\Plot Plan\2725 Plot Plan 240016 - Attached Residential.dwg, 9/10/2025 1:34:56 PM, dgallerani, MSA Consulting, Inc.

THE UNINCORPORATED AREA IN THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

PLOT PLAN PPT240016

THERMAL RANCH SPECIFIC PLAN PA-3
FOR TENTATIVE TRACT MAP NO. 38578
FOR CONDOMINIUM PURPOSES

EXHIBIT DATE: SEPTEMBER 16, 2025

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NO.	DATE	DESCRIPTION

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EXISTING EASEMENT NOTES

1. CENTERLINE OF 10' PIPELINE EASEMENT, RECORDED 3/22/1950, IN BOOK 1158, PAGE 39, O.R. (TO BE VACATED OR RELOCATED) (PLOTTED HEREON)
2. CENTERLINE OF POWER LINE EASEMENT, RECORDED 2/18/1965, AS INSTRUMENT NO. 18976, O.R. (TO BE VACATED OR RELOCATED) (PLOTTED HEREON)
3. 50' PIPELINE EASEMENT, RECORDED 10/20/1958, IN BOOK 2350, PAGE 562-564, O.R. (TO REMAIN) (PLOTTED HEREON)

EXISTING ZONING	CONTROLLED DEVELOPMENT (W-2) / HEAVY AGRICULTURE 10-ACRE MIN. LOT (A-2-10)
PROPOSED ZONING	THERMAL RANCH SPECIFIC PLAN, PA-1 EQUESTRIAN CENTER
EXISTING GENERAL PLAN LAND USE	AGRICULTURE
PROPOSED GENERAL PLAN LAND USE	COMMUNITY DEVELOPMENT FOUNDATION - TOURIST COMMERCIAL

PUBLIC UTILITY PURVEYORS		
ELECTRIC	IMPERIAL IRRIGATION DISTRICT	(800) 303-7756
GAS	SOUTHERN CALIFORNIA GAS COMPANY	(800) 427-2200
TELEPHONE	FRONTIER COMMUNICATIONS	(800) 921-8101
WATER	COACHELLA VALLEY WATER DISTRICT	(760) 398-2651
CABLE	FRONTIER COMMUNICATIONS	(800) 921-8101
SEWER	COACHELLA VALLEY WATER DISTRICT	(760) 398-2651
SOLID WASTE (TRASH)	BURRTEC	(760) 340-2113
USA	UNDERGROUND SERVICE ALERT	(800) 227-2600

FEMA FLOOD ZONE DESIGNATION

ZONE "A": WITHOUT BASE ELEVATION
ZONE "X": 0.2% ANNUAL CHANCE FLOOD & AREAS OF MINIMAL FLOOD HAZARD

AS SHOWN ON RIVERSIDE COUNTY, CALIFORNIA, FLOOD INSURANCE RATE MAP, COMMUNITY PANEL MAP NUMBER: 06065C2910H
EFFECTIVE DATE: MARCH 6, 2018.

LIQUEFACTION	HIGH LIQUEFACTION ZONE
SCHOOL DISTRICT	COACHELLA VALLEY UNIFIED
COUNTY SERVICE AREA	125 - THERMAL ST LIGHTING
EXISTING SPECIFIC PLAN	NONE
PROPOSED SPECIFIC PLAN	THERMAL RANCH SP

NOTES

1. PROVIDED PARKING CALCULATION AS PER THERMAL RANCH SP
2. ALTERNATIVE ARCHITECTURE PLANS THAT SUBSTANTIALLY CONFORM WITH THE CONDOMINIUM BUILDING ENVELOPES SHOWN ON TTM NO. 38578 FOR CONDOMINIUM PURPOSES (SHEET 5), ARE ALLOWED WITH ADMINISTRATIVE REVIEW BY COUNTY STAFF.
3. BURRTEC IS THE DESIGNATED FRANCHISE SOLID WASTE (TRASH) HAULER.

SHEET MATCHLINE - SEE SHEET 1

LINE DATA		
NO.	BEARING	LENGTH
L1	N 01°07'13" E	797.52'
L2	N 85°17'57" E	192.17'
L3	N 88°52'47" W	286.59'
L4	N 83°25'20" W	92.13'
L5	N 07°42'06" E	73.74'
L6	N 88°27'11" E	90.29'
L7	N 88°52'47" W	806.00'
L8	N 01°07'13" E	212.82'
L9	N 03°38'01" E	50.65'
L10	N 04°19'42" W	26.21'
L11	N 58°52'47" W	101.89'
L12	N 88°52'47" W	414.99'
L13	N 01°07'13" E	80.02'
L14	N 01°07'13" E	115.40'
L15	N 88°52'47" W	347.63'
L16	N 01°07'13" E	219.00'
L17	N 01°07'13" E	186.05'
L18	N 01°07'13" E	781.81'
L19	N 01°07'13" E	245.28'
L20	N 01°07'13" E	215.14'
L21	N 88°52'47" W	374.42'
L22	N 88°52'47" W	60.00'
L23	N 88°52'47" W	31.48'
L24	N 86°12'45" W	233.81'
L25	N 85°41'50" W	35.53'
L26	N 88°52'47" W	39.06'
L27	N 01°07'13" E	400.12'
L28	N 03°32'07" W	32.02'
L29	N 01°07'13" E	95.48'
L30	N 84°00'46" W	11.62'
L31	N 87°02'47" W	100.30'
L32	N 01°07'13" E	290.90'
L33	N 01°07'13" E	200.72'

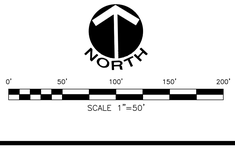
CURVE DATA			
NO.	DELTA	RADIUS	LENGTH
C1	30°00'00"	300.00'	157.08'
C2	04°52'01"	2500.00'	212.36'
C3	04°09'39"	3907.00'	283.73'
C4	99°58'56"	160.00'	279.20'
C5	03°32'01"	2000.00'	123.35'
C6	03°32'01"	3000.00'	185.02'
C7	08°07'29"	2000.00'	283.61'
C8	04°13'17"	2000.00'	147.35'
C9	12°01'06"	1000.00'	209.76'
C10	07°57'01"	2000.00'	277.52'
C11	02°40'02"	700.00'	32.59'
C12	06°03'36"	1000.00'	105.77'
C13	06°03'36"	700.00'	74.04'
C14	02°30'05"	3000.00'	130.97'
C15	06°09'25"	3000.00'	322.38'
C16	14°12'59"	500.00'	124.06'
C17	14°12'59"	300.00'	74.44'
C18	01°49'39"	3500.00'	111.98'
C19	06°11'30"	600.00'	64.84'
C20	06°11'30"	600.00'	64.84'
C21	13°14'07"	2000.00'	462.00'
C22	11°50'36"	300.00'	60.27'
C23	03°39'21"	3000.00'	191.42'
C24	05°41'50"	1500.00'	149.15'
C25	05°41'50"	1700.00'	169.04'
C26	06°57'44"	3000.00'	364.54'
C27	06°57'45"	600.00'	72.91'
C28	07°57'43"	600.00'	83.38'
C29	05°26'55"	750.00'	71.32'

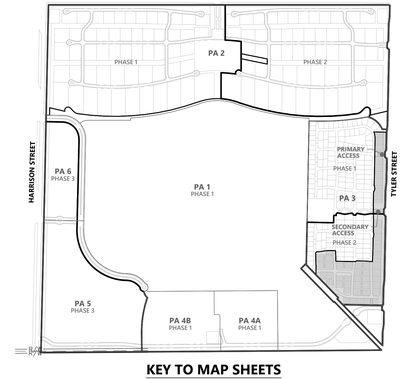
ABBREVIATIONS

(E)	EAST
(N)	NORTH
(S)	SOUTH
(W)	WEST
A.C.	ASPHALT CONCRETE
AC	ACREAGE
APN	ASSESSORS PARCEL NUMBER
BNDRY	BOUNDARY
C/L	CENTERLINE
C&G	CURB AND GUTTER
E/P	EDGE OF PAVEMENT
ESMT.	EASEMENT
EX.	EXISTING
MAX.	MAXIMUM
M.B.	MAP BOOK
MIN.	MINIMUM
NO.	NUMBER
N.T.S.	NOT TO SCALE
O/H	OVERHEAD
OS/PP	OPEN SPACE / PARKS
PE	PAD ELEVATION
PG.	PAGE
P/L	PROPERTY LINE
PROP.	PROPOSED
P.U.E.	PUBLIC UTILITY EASEMENT
R	RADIUS
R-L	LOW DENSITY (RESIDENTIAL)
R/W	RIGHT OF WAY
SF	SQUARE FEET
STD.	STANDARD
TYP.	TYPICAL
UG	UNDERGROUND

LEGEND

679.3	EXISTING SPOT ELEVATIONS
	EXISTING CONTOURS
1	EXISTING EASEMENT DELTA
C	EXISTING CABLE
DRN	EXISTING IRRIGATION DRAIN LINE
	EXISTING EASEMENT
E	EXISTING ELECTRIC
G	EXISTING GAS
IRR	EXISTING IRRIGATION
	EXISTING LOT LINE
	EXISTING EDGE OF PAVEMENT
T	EXISTING TELEPHONE
O/H	EXISTING OVERHEAD TELEPHONE
R/W	EXISTING RIGHT OF WAY
S	EXISTING SEWER
FM	EXISTING SEWER FORCE MAIN
W	EXISTING WATER
	TENTATIVE TRACT MAP BOUNDARY
	PROPOSED AND EXISTING CENTER LINE
	PROPOSED CURB
	PROPOSED EASEMENT
	PROPOSED LOT LINE
	PROPOSED RIGHT OF WAY





KEY TO MAP SHEETS
SCALE: 1" = 800'

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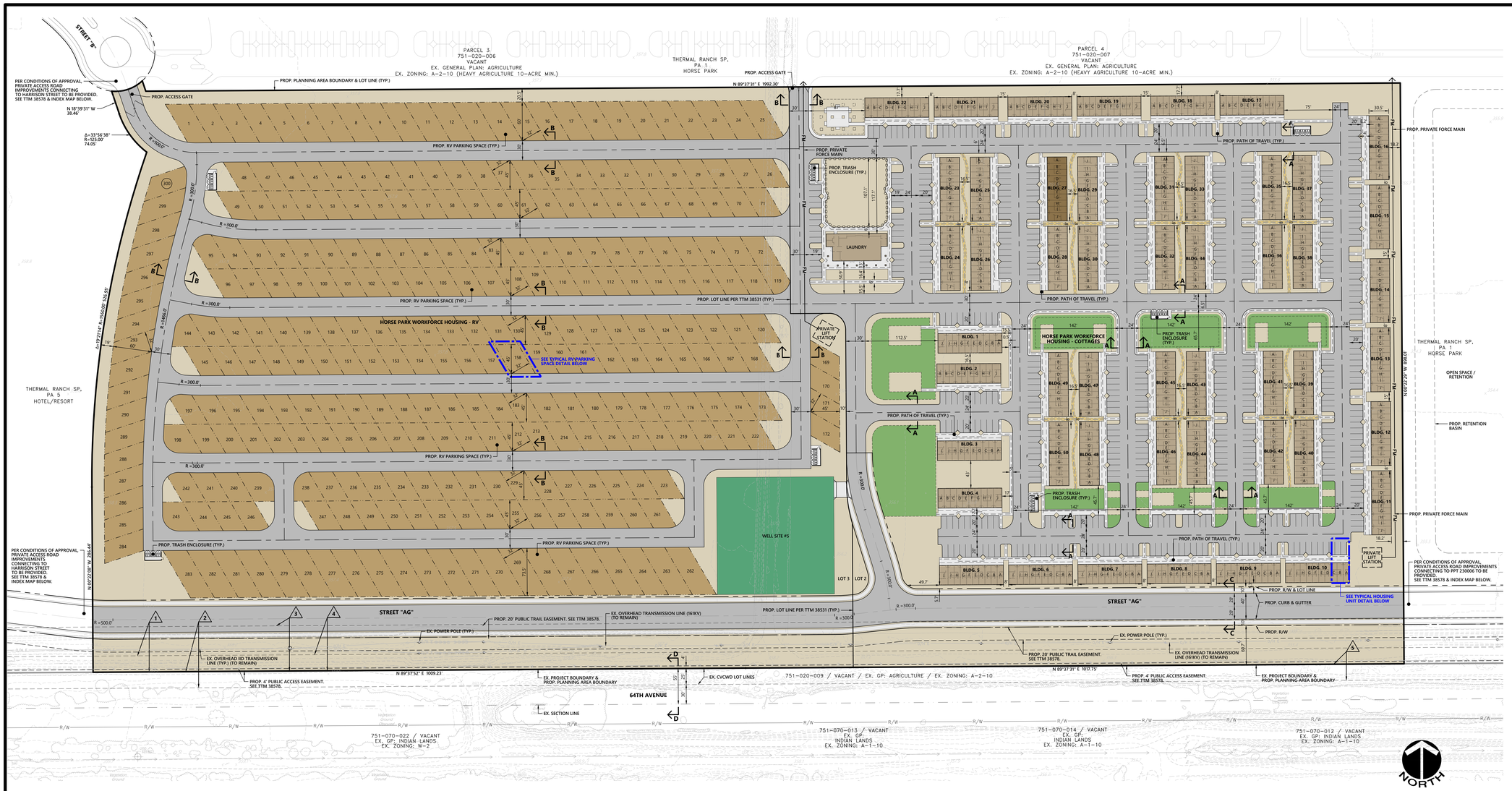
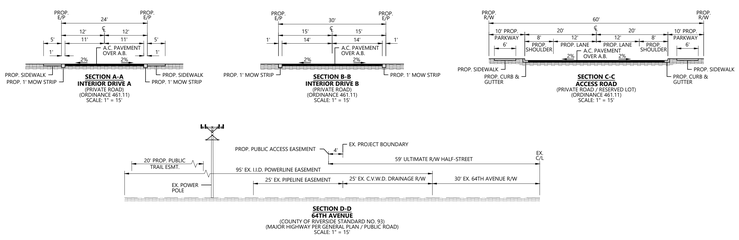
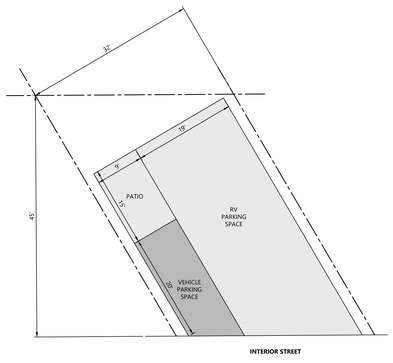
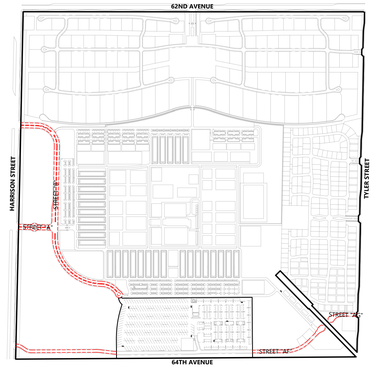




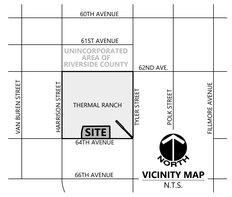


TYPICAL WORKFORCE RV SPACE
SCALE: 1" = 10'

TYPICAL WORKFORCE HOUSING UNIT
SCALE: 1" = 8'



INDEX MAP
SCALE: 1" = 800'



VICINITY MAP
N.T.S.

ABBREVIATIONS

(E)	EAST	NO.	NUMBER
(N)	NORTH	N.T.S.	NOT TO SCALE
(S)	SOUTH	O/H	OVERHEAD
(W)	WEST	OS/PP	OPEN SPACE / PARKS
A.C.	ASPHALT CONCRETE	PG	PAGE
AC	ACREAGE	P/L	PROPERTY LINE
APN	ASSESSORS PARCEL NUMBER	PROP.	PROPOSED
BNDRY	BOUNDARY	P.U.E.	PUBLIC UTILITY EASEMENT
C/L	CENTERLINE	R	RADIUS
C&G	CURB AND GUTTER	R-L	LOW DENSITY (RESIDENTIAL)
E/P	EDGE OF PAVEMENT	R/W	RIGHT OF WAY
ESMT.	EASEMENT	SF	SQUARE FEET
EX.	EXISTING	STD.	STANDARD
MAX.	MAXIMUM	TYP.	TYPICAL
M.B.	MAP BOOK	UG	UNDERGROUND
MIN.	MINIMUM		

LEGEND

- 679.3 EXISTING SPOT ELEVATIONS
- EXISTING CONTOURS
- EXISTING EASEMENT DELTA
- EXISTING CABLE
- EXISTING IRRIGATION DRAIN LINE
- EXISTING EASEMENT
- EXISTING ELECTRIC
- EXISTING GAS
- EXISTING IRRIGATION
- EXISTING LOT LINE
- EXISTING EDGE OF PAVEMENT
- EXISTING TELEPHONE
- EXISTING OVERHEAD TELEPHONE
- EXISTING RIGHT OF WAY
- EXISTING SEWER
- EXISTING SEWER FORCE MAIN
- EXISTING WATER
- TENTATIVE TRACT MAP BOUNDARY
- PROPOSED AND EXISTING CENTER LINE
- PROPOSED CURB
- PROPOSED EASEMENT
- PROPOSED LOT LINE
- PROPOSED RIGHT OF WAY

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THE UNINCORPORATED AREA IN THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

PLOT PLAN PPT230005
THERMAL RANCH SPECIFIC PLAN PA-4A & 4B (HORSE PARK WORKFORCE HOUSING)

EXHIBIT DATE: SEPTEMBER 16, 2025

AMENDMENTS

NO.	DATE	DESCRIPTION
1	3/24/2025	UPDATED THE DATA TABLE PER COUNTY COMMENTS DATED 3/13/2025

DATA TABLE

APPLICANT / LAND OWNER	THERMAL RANCH, LLC		
ADDRESS	19312 CANYON DRIVE VILLA PARK, CALIFORNIA 92861		
CONTACT	JEREMY SMITH	TELEPHONE	(760) 801-5166
EXHIBIT PREPARER	MSA CONSULTING, INC.		
ADDRESS	34200 BOB HOPE DRIVE RANCHO MIRAGE, CALIFORNIA 92270		
CONTACT	PAUL DEPALATIS, AICP	TELEPHONE	(760) 320-9811
SOURCE OF TOPOGRAPHY	AEROTECH MAPPING, INC.		
ADDRESS	200 SPECTRUM CENTER DRIVE, SUITE 300 IRVINE, CALIFORNIA 92618		
DATE OF TOPOGRAPHY	DECEMBER 7, 2022	TELEPHONE	(619) 606-5020
ASSESSOR'S PARCEL NUMBERS	751-020-006 & -007		

LEGAL DESCRIPTION

A PORTION OF SECTION 5, TOWNSHIP 7 SOUTH, RANGE 8 EAST, SAN BERNARDINO BASE AND MERIDIAN.

LAND USE DESCRIPTION	UNIT	SF	ACREAGE	PERCENTAGE
PLANNING AREA 4A & 4B GROSS AREA	-	1,800,268 SF	41.3 AC.	-
PROPOSED WELL SITE #5	-	32,760 SF	0.8 AC.	-
PROPOSED NET AREA	-	1,767,508 SF	40.5 AC.	100%
PROPOSED BUILDING AREA (LAUNDRY BUILDING)	1 BUILDING	3,530 SF	-	-
PROPOSED BUILDING AREA (WORKFORCE HOUSING - COTTAGES) - STANDARD UNIT (450 UNITS) - ACCESSIBLE UNIT (50 UNITS)	500 UNITS - (300 SF / UNIT) (400 SF / UNIT)	155,000 SF - 135,000 SF 20,000 SF	-	-
PROPOSED BUILDING TOTAL	-	158,530 SF	3.7 AC.	9%
PROPOSED RV SPACE	-	548,988 SF	12.6 AC.	31%
ACCESS ROADS, HARDSCAPE & PARKING	-	656,332 SF	15.1 AC.	37%
LANDSCAPE & OPEN SPACE AREAS	-	403,658 SF	9.1 AC.	23%

PLANNING AREA 4A BUILDING LOT COVERAGE	SF	ACREAGE	PERCENTAGE
PLANNING AREA 4A GROSS AREA	800,176 SF	18.4 AC.	100%
LAUNDRY BUILDING	3,530 SF	-	-
WORKFORCE HOUSING - COTTAGES	155,000 SF	-	-
TOTAL PLANNING AREA 4A BUILDING COVERAGE	158,530 SF	3.7 AC.	20%

PLANNING AREA 4B BUILDING LOT COVERAGE	SF	ACREAGE	PERCENTAGE
PLANNING AREA 4B GROSS AREA	1,000,092 SF	23.0 AC.	100%
TOTAL PLANNING AREA 4B BUILDING COVERAGE	0 SF	0 AC.	0%

ONSITE PARKING DATA	PARKING RATIO	PARKING %	COUNT
PROPOSED WORKFORCE BUILDING (500 TOTAL UNITS) - STANDARD UNIT (300 SF / UNIT) - ACCESSIBLE UNIT (400 SF / UNIT)	- 1 PER UNIT - -	- 45% - -	- 500 SPACES - -
PROPOSED RV SPACES - VEHICLE SPACE PER RV SPACE	- 1 PER SPACE	55% -	300 RV SPACES (300 SPACES)
TOTAL PARKING REQUIRED	-	**100%**	**800 SPACES**
RV PARKING SPACES - VEHICLE SPACE PER RV SPACE WORKFORCE HOUSING PARKING **TOTAL PARKING PROVIDED**	- - - -	54% - 46% **100%**	300 SPACES (300 SPACES) 511 SPACES **1,111 SPACES**

EXISTING EASEMENT NOTES

1. 25' PIPELINE EASEMENT, RECORDED 5/9/1957, IN BOOK 2085, PAGE 184-186, O.R. (TO REMAIN) (PLOTTED HEREON)
2. GRANT DEED TO C.V.W.D. AND 25' DRAINAGE CHANNEL R/W, RECORDED 5/9/1957, IN BOOK 2085, PAGE 187-189, O.R. (TO REMAIN) (PLOTTED HEREON)
3. 95' POWER LINE EASEMENT, RECORDED 1/4/1989, AS INSTRUMENT NO. 1502, O.R. (TO REMAIN) (PLOTTED HEREON)
4. 25' PIPELINE EASEMENT, RECORDED 5/9/1957, IN BOOK 2085, PAGE 190-192, O.R. (TO REMAIN) (PLOTTED HEREON)
5. GRANT DEED TO C.V.W.D. AND 25' DRAINAGE CHANNEL R/W, RECORDED 5/9/1957, IN BOOK 2085, PAGE 193-195, O.R. (TO REMAIN) (PLOTTED HEREON)

EXISTING ZONING	CONTROLLED DEVELOPMENT (W-2) / HEAVY AGRICULTURE 10-ACRE MIN. LOT (A-2-10)
PROPOSED ZONING	THERMAL RANCH SPECIFIC PLAN, PA 4 RECREATIONAL VEHICLE PARKING / WORKFORCE HOUSING
EXISTING GENERAL PLAN LAND USE	AGRICULTURE
PROPOSED GENERAL PLAN LAND USE	COMMUNITY DEVELOPMENT FOUNDATION - HIGH DENSITY

PUBLIC UTILITY PURVEYORS

ELECTRIC	IMPERIAL IRRIGATION DISTRICT	(800) 303-7756
GAS	SOUTHERN CALIFORNIA GAS COMPANY	(800) 427-2200
TELEPHONE	FRONTIER COMMUNICATIONS	(800) 921-8101
WATER	COACHELLA VALLEY WATER DISTRICT	(760) 398-2651
CABLE	FRONTIER COMMUNICATIONS	(800) 921-8101
SEWER	COACHELLA VALLEY WATER DISTRICT	(760) 398-2651
SOLID WASTE (TRASH)	BURRTEC	(760) 340-2113
USA	UNDERGROUND SERVICE ALERT	(800) 227-2600

FEMA FLOOD ZONE DESIGNATION

ZONE "A": WITHOUT BASE ELEVATION
ZONE "X": 0.2% ANNUAL CHANCE FLOOD & AREAS OF MINIMAL FLOOD HAZARD

AS SHOWN ON RIVERSIDE COUNTY, CALIFORNIA, FLOOD INSURANCE RATE MAP, COMMUNITY PANEL MAP NUMBER: 06065C2910H
EFFECTIVE DATE: MARCH 6, 2018.

LIQUEFACTION	HIGH LIQUEFACTION ZONE
SCHOOL DISTRICT	COACHELLA VALLEY UNIFIED
COUNTY SERVICE AREA	125 - THERMAL ST LIGHTING
EXISTING SPECIFIC PLAN	NONE
PROPOSED SPECIFIC PLAN	THERMAL RANCH SP

NOTES

1. PROVIDED PARKING CALCULATION AS PER THERMAL RANCH SP
2. BURRTEC IS THE DESIGNATED FRANCHISE SOLID WASTE (TRASH) HAULER.
3. NO DETENTION/RETENTION BASINS ARE PROPOSED WITHIN PPT 230005. WILL RELY ON BASINS ELSEWHERE. SEE SEPARATE GRADING PLAN.

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Planning • Environmental Services • Dry Utility Coordination • GIS
34200 Bob Hope Drive Rancho Mirage, CA 92270 | 760.320.9811 | MSAConsultinginc.com

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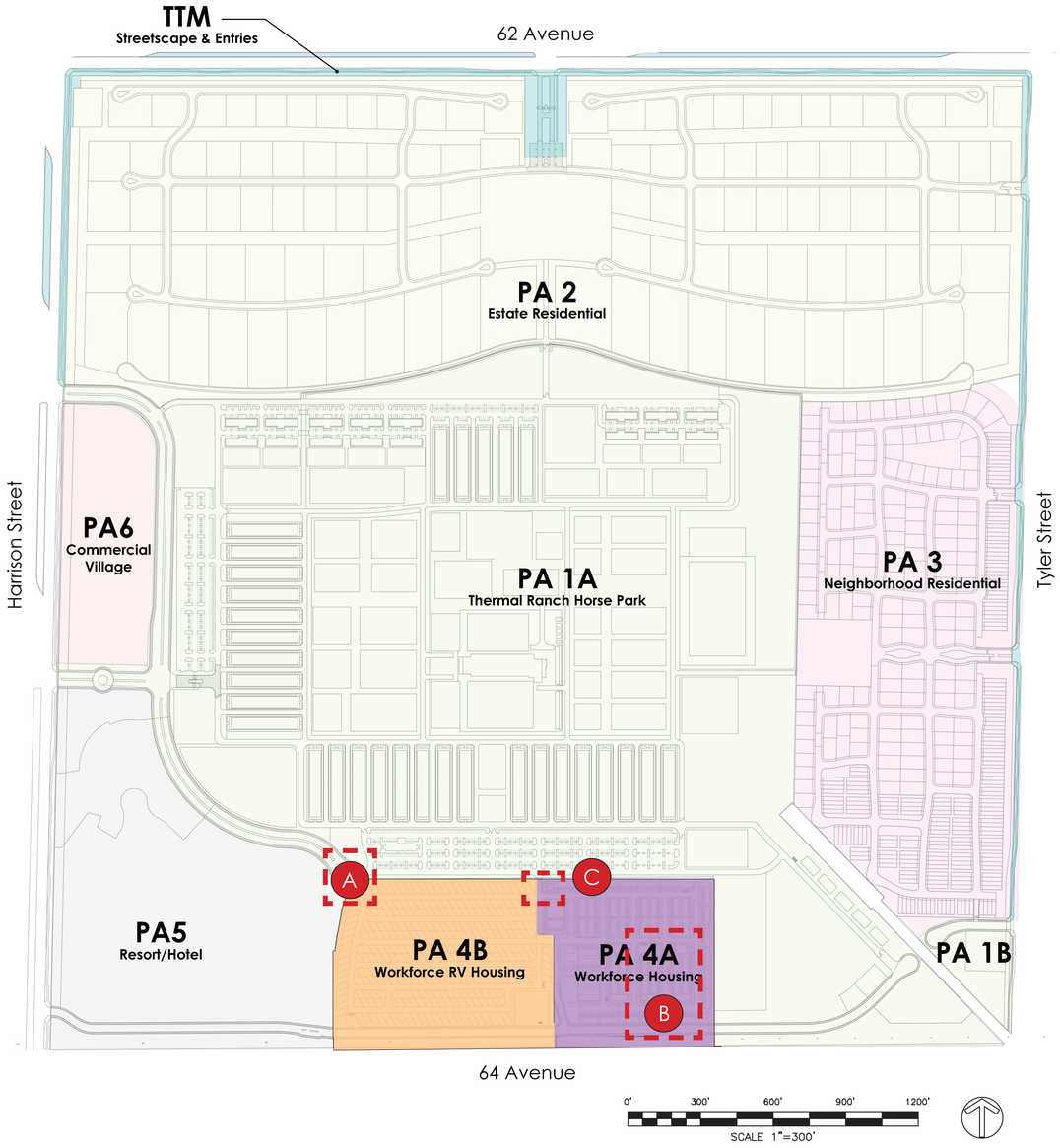

APPLICANT/LAND OWNER: THERMAL RANCH, LLC
19312 CANYON DRIVE
VILLA PARK, CALIFORNIA 92861
JEREMY SMITH 760-801-5166

LANDSCAPE ARCHITECT: MSA CONSULTING, INC.
34200 BOB HOPE DRIVE
RANCHO MIRAGE, CA 92270
ROBERT PARKER 760-320-9811

Prior to project construction, I agree to submit a complete Landscape Construction Document Package that complies with the requirements of applicable ordinances, including but not necessarily limited to Ordinance No. 859.2; Ordinance 348, Ordinance 461; project Conditions of Approval; and in substantial conformance with the approved Landscape Concept Plan. Should the ordinances be revised, plans may be subject to change.

Assessor's Parcel Number: 751-020-002, -003, -006, & -007

Notes per Ordinance 859.3
- Hydrozones will be properly designated. Applicant must indicate proposed method(s) of irrigation.
- No overhead irrigation allowed within 24" of non-permeable surfaces.
- Subsurface or low-volume irrigation must be used for irregularly shaped areas, or areas less than 8 feet in width

All landscape plans shall comply with the screening and buffering Riverside County requirements.
- Evergreen plants shall be used where necessary to buffer and screen adjacent land uses.
- Landscaping shall be incorporated to soften the edges of buildings, structures, and streets in both commercial and indsutrial areas.
- Mechanical equipment and trash enclosure shall be identified and screened accordingly.
- Vines or other landscaping shall be added to fencing and walls to deter graffiti.

Proposed Maintenance Entity On-Site: Equestrian Center Maintained
Proposed Maintenance Entity Off-Site: Master Association Maintained

The project site is not located within Multiple Species Habitat Conservation Plan (MSHCP) area.

The projeict shall comply with the Thermal Design Guidelines.

Enlargement Areas

A *North Entry*

B *Workforce Housing*

C *Entry & Picnic Area*

REGISTERED LANDSCAPE ARCHITECT ROBERT E. PARKER JR. #5219 REN 8-31-27 STATE OF CALIFORNIA

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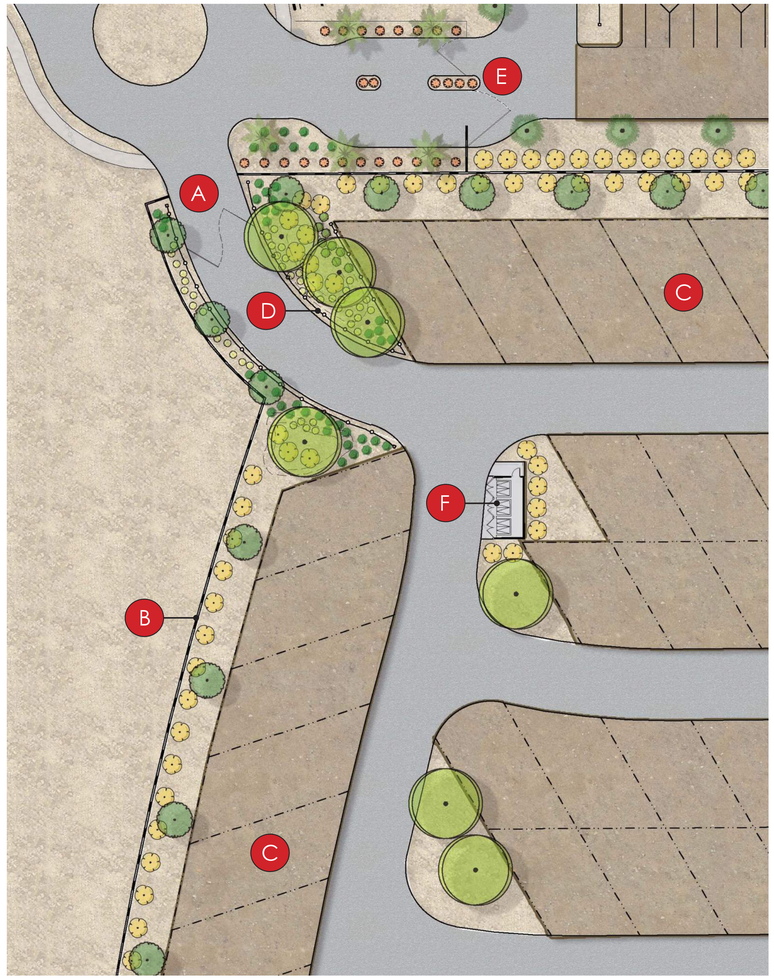
Planning • Environmental Services • Dry Utility Coordination • GIS

Thermal Ranch Workforce Housing (PA-4 A & B) | Key Map

September 15, 2025 | L-1



North Entry

0' 30' 60' 90' 120'
SCALE 1"=30'

Legend

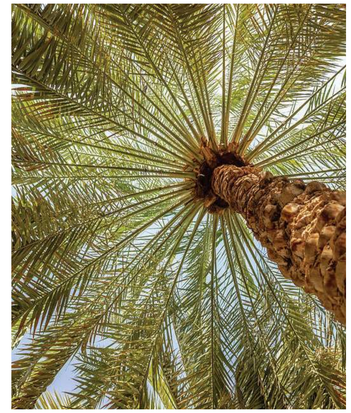
- A *Egress and RV Entry Gate*
- B *CMU Block Wall*
- C *RV Spaces*
- D *Ranch Fence*
- E *Horse Park VIP Gate*
- F *Trash Enclosure*

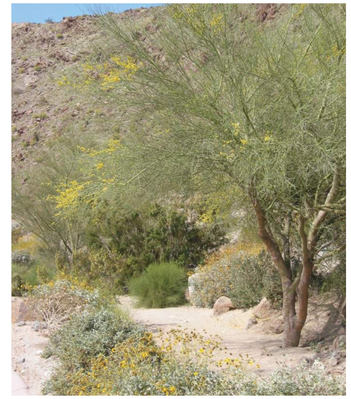
Planting Legend

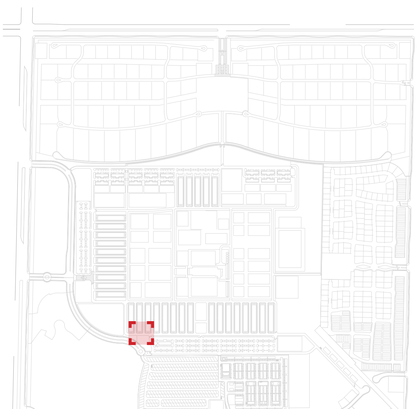
- LARGE AND MEDIUM TREES
- UPRIGHT TREES
- SMALL TREES
- PALMS
- ACCENT PALMS
- LARGE ACCENTS
- SMALL ACCENT/CACTI
- LARGE GRASSES
- MEDIUM/SMALL GRASSES
- LARGE SHRUBS
- MEDIUM SHRUBS
- GROUNDCOVERS
- VINES
- LAWN TYPE TBD
- DECOMPOSED GRANITE TYPE TBD
- STABILIZED DECOMPOSED GRANITE TYPE TBD
- 3/8" GRAVEL TYPE TBD

**See Sheet L-8 for Full Legend*

Character Imagery







Thermal Ranch Workforce Housing (PA-4 A & B) | North Entry

September 15, 2025 | L-2

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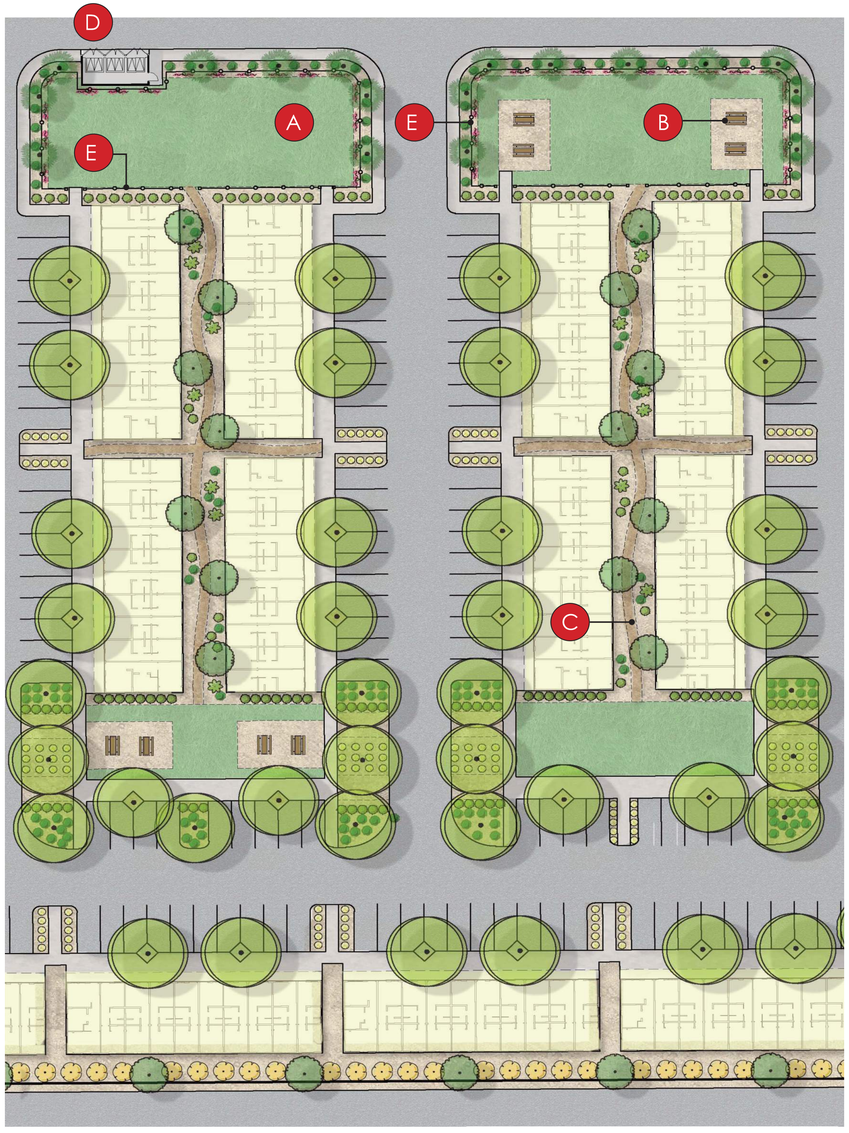
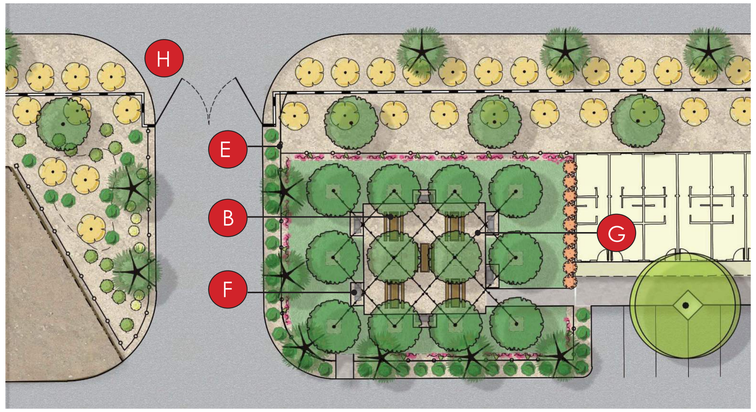


Workforce Housing

0' 30' 60' 90' 120'
SCALE 1"=30'



Entry & Picnic Area

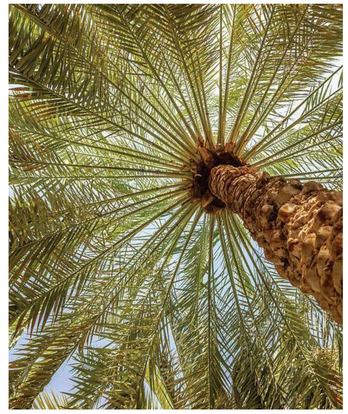
0' 20' 40' 60' 80'
SCALE 1"=20'

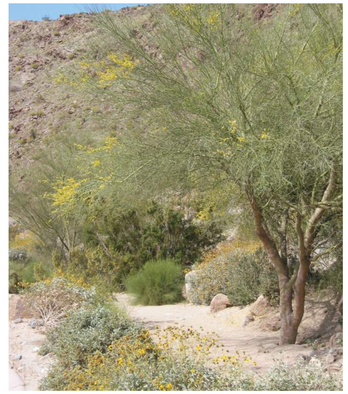
Planting Legend

LARGE AND MEDIUM TREES	LARGE SHRUBS
UPRIGHT TREES	MEDIUM SHRUBS
SMALL TREES	GROUNDCOVERS
PALMS	VINES
ACCENT PALMS	LAWN TYPE TBD
LARGE ACCENTS	DECOMPOSED GRANITE TYPE TBD
SMALL ACCENT/CACTI	STABILIZED DECOMPOSED GRANITE TYPE TBD
LARGE GRASSES	3/8" GRAVEL TYPE TBD
MEDIUM/SMALL GRASSES	

See Sheet L-8 for Full Legend

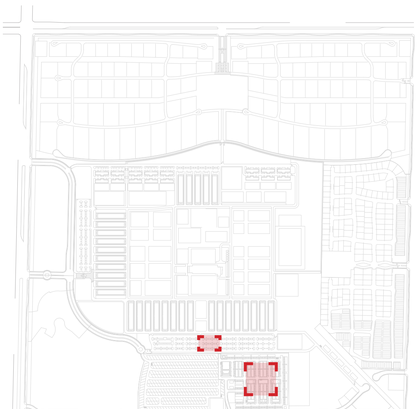
Character Imagery





Legend

- A *Activity Lawn*
- B *Picnic Tables*
- C *Trail*
- D *Trash Enclosure*
- E *Ranch Fence*
- F *BBQ*
- G *String Lights*
- H *Entry Gate*



Thermal Ranch Workforce Housing (PA-4 A & B) | Workforce Housing

September 15, 2025 | L-3

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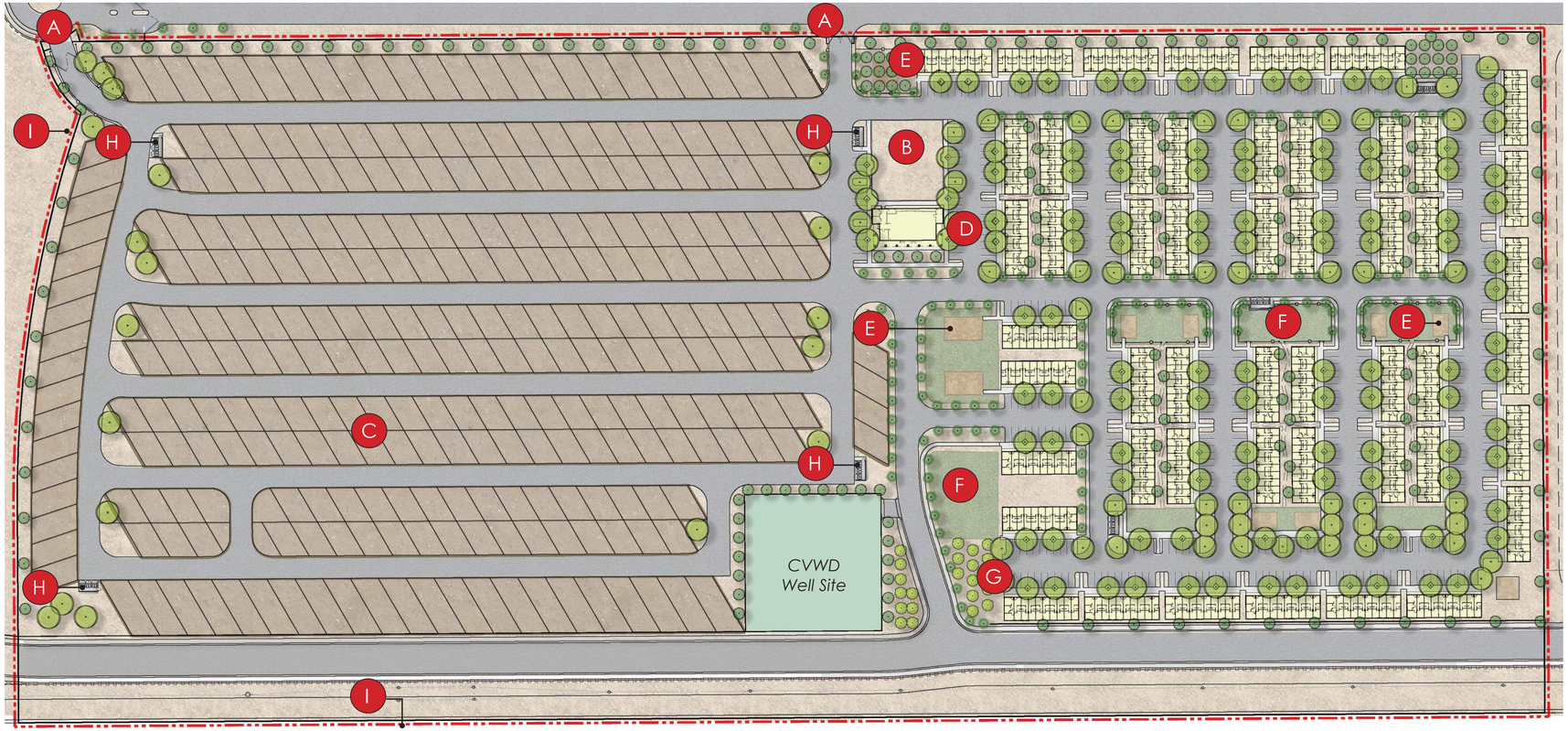


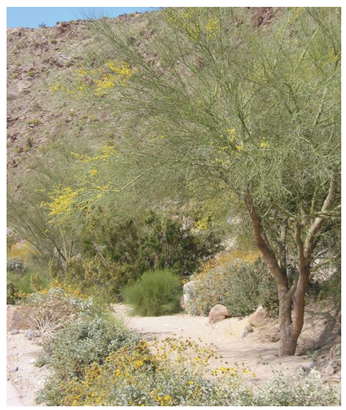
Overall Tree Plan

0' 80' 160' 240' 320'
SCALE 1"=80'

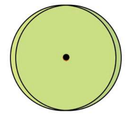
Legend

- A *Entry Gate*
- B *BOH Storage*
- C *RV Spaces*
- D *Laundry Mat*
- E *Picnic Area*
- F *Activity Lawn*
- G *Citrus Tree Grove*
- H *Trash Enclosure*
- I *Limit Of Work Line*

Character Imagery



Planting Legend



LARGE AND MEDIUM TREES

UPRIGHT TREES

SMALL TREES

PALMS

ACCENT PALMS

LARGE ACCENTS

SMALL ACCENT/CACTI

LARGE GRASSES

MEDIUM/SMALL GRASSES

LARGE SHRUBS

MEDIUM SHRUBS

GROUNDCOVERS

VINES

LAWN
TYPE TBD

DECOMPOSED GRANITE
TYPE TBD

STABILIZED DECOMPOSED GRANITE
TYPE TBD

3/8" GRAVEL
TYPE TBD

**See Sheet L-8 for Full Legend*

Thermal Ranch Workforce Housing (PA-4 A & B) | Overall Tree Plan

September 15, 2025 | L-4

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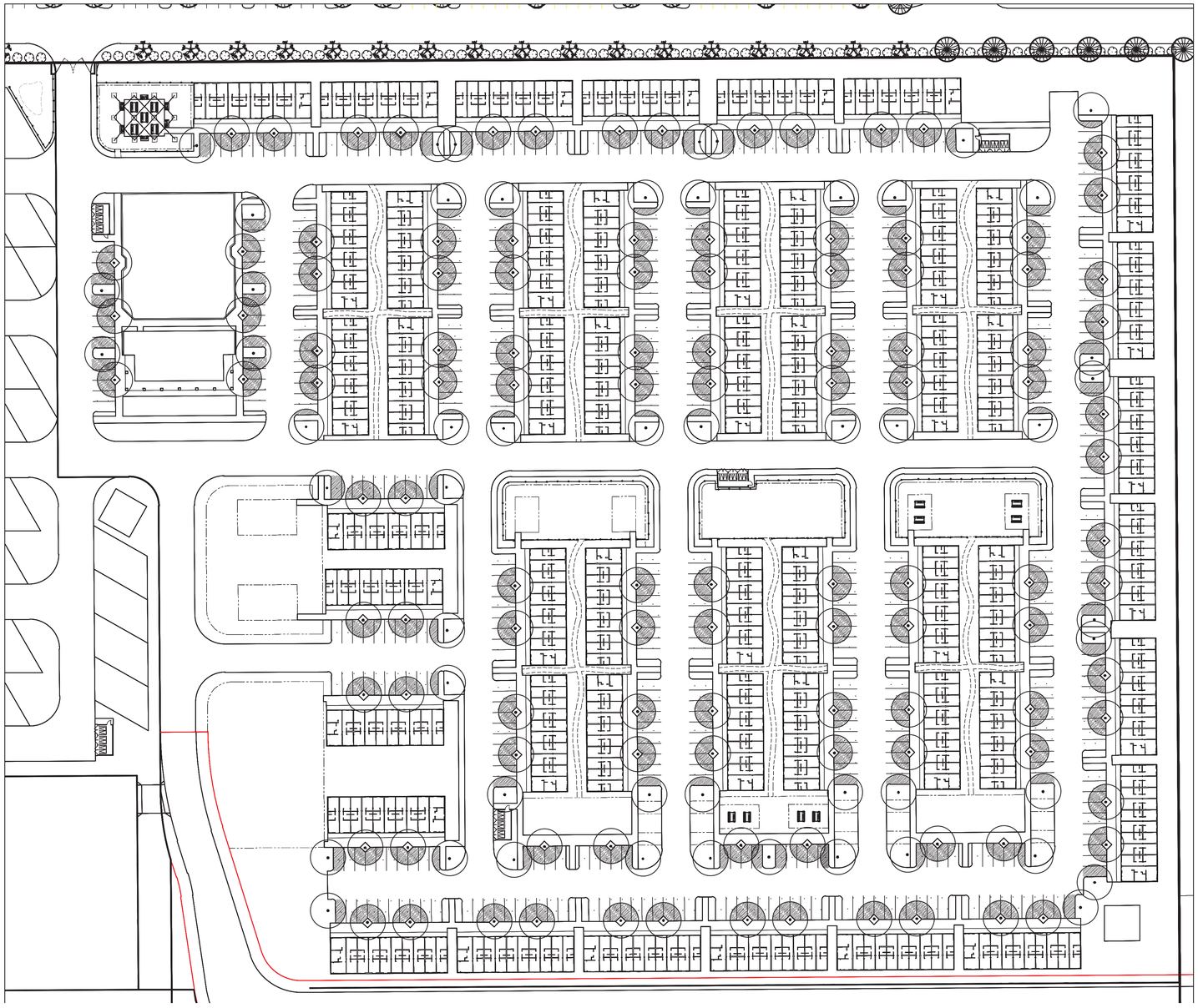

IN THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

Landscape Shade Analysis

EXHIBIT DATE: DECEMBER 6, 2024

ONSITE PARKING DATA:	PARKING STALL AREA	SHADED PARKING AREA	PERCENTAGE	LANDSCAPE AREA	PERCENTAGE
TOTAL PARKING	97,398 SF	48,530 SF	50%	15,088 SF	15%

*TREES SHOWN WITH 25' CANOPY AT 15 YEARS OF AGE per Riverside County Ordinance 348, Section 18.12 and meets required "Percentage of Parking Area to be Shaded" based on number of parking spaces; 50+ parking spaces, 50% minimum shading.

Landscape area calculations (islands, medians, etc.) within the parking areas per Riverside County Ordinance 348, Section 18.12, requirement: 50+ parking spaces, 10% of parking area.

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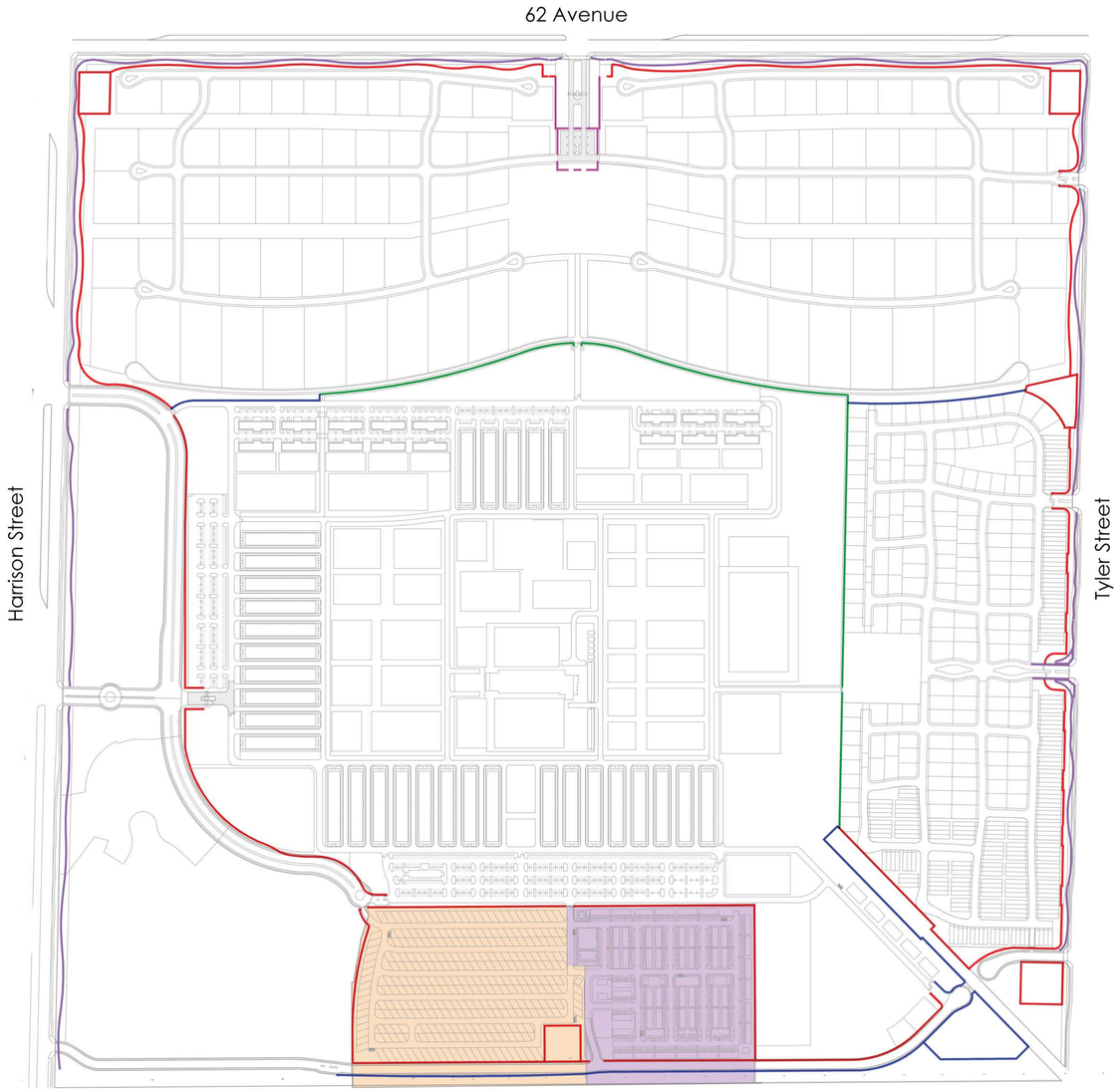
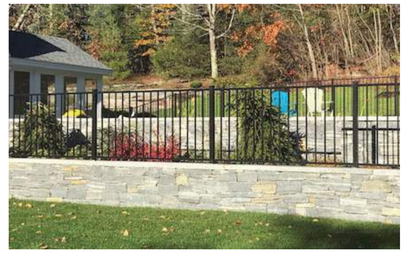


Legend

- *6' - 10' Sack Finish or Colored Slump Block Wall*
- *6' Tubular Steel Fence*
- *View Fence with Knee Wall - 6' Wood or Steel*
- *Ranch Fence - 2-4 Rail Wood or Vinyl*

6'-10' Sack Finish or Colored Slump Block Wall



View Fence with Knee Wall - 6' Wood or Steel

Ranch Fence - 2-4 Rail Wood or Vinyl

Accent Wall - Masonry, Poured in Place Concrete, or Stucco

Thermal Ranch Workforce Housing (PA-4 A & B) | Wall and Fence Plan

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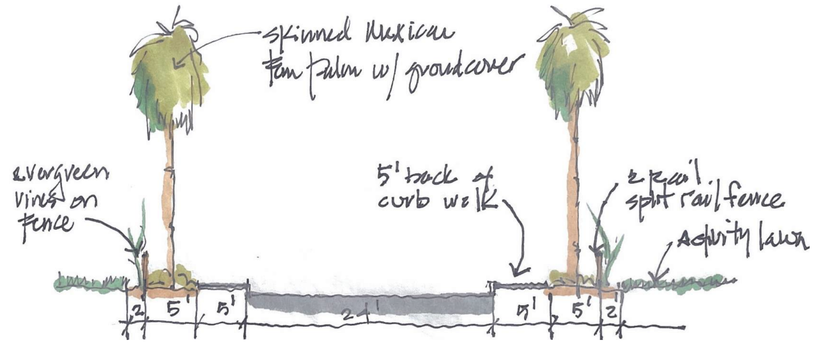
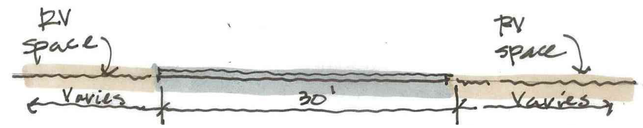
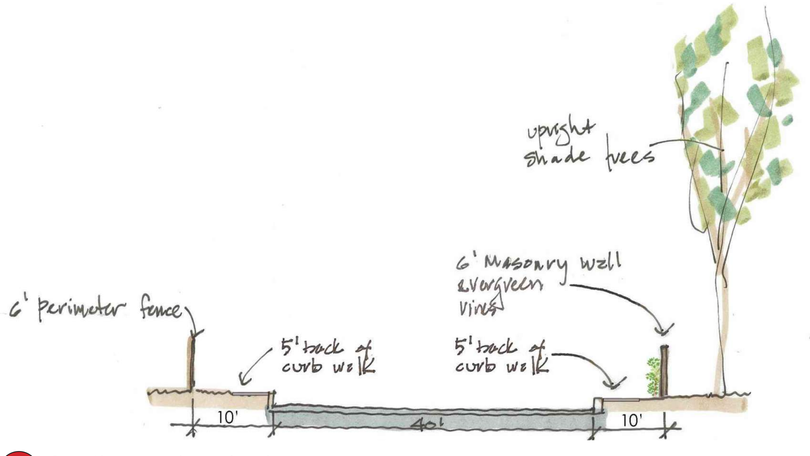


A Interior Street



B RV Park Street



C South Road Typical

Thermal Ranch Workforce Housing (PA-4 A & B) | Sections

September 15, 2025 | L-7

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Concept Plant Legend

LARGE AND MEDIUM TREES
15GAL - 36"BOX
BAUHINIA VARIEGATA (PURPUREA) / PURPLE ORCHID TREE
CHORISIA SPECIOSA / SILK FLOSS TREE
OLEA EUROPAEA `SWANHILL FRUITLESS` / EUROPEAN OLIVE
PARKINSONIA SPECIES
PROSOPIS SPECIES
TIPUANA TIPU / TIPU TREE
SCHINUS MOLLE / CALIFORNIA PEPPER

UPRIGHT TREES
15GAL - 36"BOX
ACACIA SALICINA / WILLOW ACACIA
ACACIA STENOPHYLLA / SHOESTRING ACACIA
ACACIA WILLARDIANA / PALO BLANCO
CALLISTEMON SPECIES
EUCALYPTUS SPECIES

SMALL TREES
15GAL - 36"BOX
ACACIA ANEURA / MULGA
ACACIA FARNESIANA / SWEET ACACIA
CAESALPINIA CACALACO "SMOOTHIE" / CASCALOTE
CITRUS SPECIES

PALMS
20`-30` HT
PHOENIX DACTYLIFERA / DATE PALM
WASHINGTONIA ROBUSTA / MEXICAN FAN PALM

ACCENT PALMS
24"-36" BOX
BISMARCKIA NOBILIS / BISMARK PALM
BEAUCARNEA RECURVATA / PONY TAIL PALM
CHAMAEROPS HUMILIS / MEDITERRANEAN FAN PALM

LARGE ACCENTS
5-15 GAL
AGAVE ANGUSTIFOLIA / CENTURY PLANT
DASYLIRION WHEELERI / GREY DESERT SPOON
FEROCACTUS ACANTHODES / COMPASS BARREL
NOLINA NELSONII / BLUE NOLINA
OPUNTIA SANTA-RITA / SANTA RITA PRICKLYPEAR
YUCCA SPECIES

SMALL ACCENTS/ CACTI
1 GAL
ECHINOCACTUS GRUSONII / GOLDEN BARREL CACTUS
HESPERALOE SPECIES

LARGE GRASS
1-5 GAL
SPOROBOLUS AIROIDES / ALKALI SACATON
SPOROBOLUS WRIGHTII / BIG SACATON

MEDIAN/SMALL GRASS
1-5 GAL
MUHLENBERGIA SPECIES
PENSTEMON SP.(RED) / MIXED PENSTEMON SPECIES
CAREX SPECIES

LARGE SHRUBS
5 GAL
CAESALPINIA PULCHERRIMA / RED BIRD OF PARADISE
CASSIA SPECIES
LEUCOPHYLLUM SPECIES
NERIUM OLEANDER / OLEANDER
SIMMONDSIA CHINENSIS / JOJOBA

MEDIUM SHRUBS
5 GAL
BOUGAINVILLEA SPECIES
CALLISTEMON VIMINALIS `LITTLE JOHN` / DWARF WEEPING BOTTLE BRUSH
CARISSA MACROCARPA `GREEN CARPET` / GREEN CARPET NATAL PLUM
DALEA SPECIES
EREMOPHILA SPECIES
JUNIPERUS C. `BLUE PACIFIC` / BLUE PACIFIC JUNIPER
LANTANA SPECIES
OLEA EUROPAEA `MONTRA` / LITTLE OLLIE DWARF OLIVE

GROUNDCOVERS
1-5 GAL
ACACIA REDOLENS `DESERT CARPET` TM / BANK CATCLAW
DALEA SPECIES
JUNIPERUS SPECIES
LANTANA SPECIES
PORTULACARIA AFRA / ELEPHANT BUSH
PYRACANTHA FORTUNEANA `GRABERI` / GRABERI PYRACANTHA

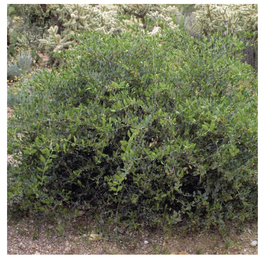
VINE
1-5 GAL
BOUGAINVILLEA X `BARBARA KARST` / BARBARA KARST BOUGAINVILLEA
ROSA BANKSIAE `ALBA PLENA` / WHITE LADY BANK`S ROSE

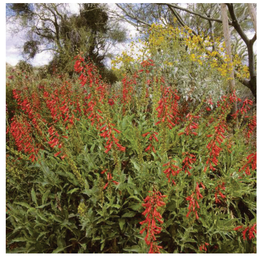
LAWN
TYPE TBD

DECOMPOSED GRANITE
TYPE TBD

STABILIZED DECOMPOSED GRANITE
TYPE TBD

3/8" GRAVEL
TYPE TBD





Thermal Ranch Workforce Housing (PA-4 A & B) | Plant Legend

September 15, 2025 | L-8

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PLANT SCHEDULE TREES

BOTANICAL / COMMON NAME	SIZE	WU	CANOPY	MATURE HEIGHT	MATURE WIDTH
ACCENT PALM TREES					
BEAUCARNEA RECURVATA PONY TAIL PALM	24"BOX	M 0.5	10'	6 - 10ft. ht.	3 - 6ft. w.
BISMARCKIA NOBIUS BISMARK PALM	24"BOX	M 0.5	12'	20 - 50ft. ht.	10 - 15ft. w.
CHAMAEROPS HUMILIS MEDITERRANEAN FAN PALM	36"BOX	M 0.5	8'	6ft. ht.	6 - 10ft. w.
LARGE AND MEDIUM TREES					
BAUHINIA VARIEGATA (PURPUREA) PURPLE ORCHID TREE	15 GAL	M 0.5	20'	25 - 40ft. ht.	25 - 40ft. w.
CHORISIA SPECIOSA SILK FLOSS TREE	24"BOX	M 0.5	20'	40 - 65ft. ht.	25 - 40ft. w.
OLEA EUROPAEA `SWANHILL FRUITLESS` EUROPEAN OLIVE	36"BOX	L 0.2	30'	25 - 40ft. ht.	25 - 40ft. w.
PARKINSONIA SPECIES	24"BOX	L 0.2	20'	15 - 25ft. ht.	15 - 25ft. w.
PROSOPIS SPECIES	24"BOX	L 0.2	20'	25 - 40ft. ht.	25 - 40ft. ht.
SCHINUS MOLLE CALIFORNIA PEPPER	36"BOX	M 0.5	30'	25 - 40ft. ht.	25 - 40ft. w.
TIPUANA TIPU TIPU TREE	24"BOX	M 0.5	30'	25 - 40ft. ht.	25 - 40ft. w.
PALM TREES					
PHOENIX DACTYLIFERA DATE PALM	+20`-30` HTS	M 0.5	20'	25 - 40ft. ht.	25 - 40ft. w.
WASHINGTONIA ROBUSTA MEXICAN FAN PALM	+20`-30` HTS	M 0.5	15'	25 - 40ft. ht.	6 - 10ft. w.
SMALL TREES					
ACACIA ANEURA MULGA	24"BOX	L 0.2	15'	15ft. ht.	10 - 15ft. ht.
ACACIA FARNESIANA SWEET ACACIA	24"BOX	L 0.2	20'	15 - 25ft. ht.	15 - 25ft. w.
CAESALPINIA CACALACO "SMOOTHIE" CASCALOTE	24"BOX	L 0.2	20'	10 - 15ft. ht.	10 - 15ft. w.
CITRUS SPECIES	24"BOX	M 0.5	15'	20 - 30ft. ht.	15 - 25 ft. w.
UPRIGHT TREES					
ACACIA SALICINA WILLOW ACACIA	24"BOX	M 0.5	15'	25ft. ht.	15 - 25ft. w.
ACACIA STENOPHYLLA SHOESTRING ACACIA	24"BOX	L 0.2	20'	25 - 40ft. ht.	10 - 15ft. w.
ACACIA WILLARDIANA PALO BLANCO	24"BOX	L 0.2	20'	15 - 25ft. ht.	10 - 15ft. ht.
CALLISTEMON SPECIES	24"BOX	M 0.5	20'	15 - ' ht.	15 - 25ft. w.
EUCALYPTUS SPECIES	15 GAL	M 0.5	15'	25 ft. ht.	40 - 0' w.

PLANT SCHEDULE SHRUBS

BOTANICAL / COMMON NAME	SIZE	WU	SPACING	MATURE HEIGHT	MATURE WIDTH
SHRUBS					
BOUGAINVILLEA SPECIES	5 GAL	M 0.5	60" o.c.	3 - 15ft. ht.	6 - 15ft. ht.
CAESALPINIA PULCHERRIMA RED BIRD OF PARADISE	5 GAL	L 0.2	72" o.c.	10 - ' ht.	10 - 15ft. w.
CALLISTEMON VIMINALIS `LITTLE JOHN` DWARF WEEPING BOTTLE BRUSH	5 GAL	M 0.5	48" o.c.	18 - 36in. ht.	1 - 3ft. w.
CARISSA MACROCARPA `GREEN CARPET` GREEN CARPET NATAL PLUM	5 GAL	M 0.5	48" o.c.	6 - 18in. ht.	3 - 6ft. w.
CASSIA SPECIES	5 GAL	L 0.2	48" o.c.	10 - 15ft. ht.	10 - 15ft. w.
DALEA SPECIES	5 GAL	L 0.2	48" o.c.	18 - 36in. ht.	1 - 3ft. w.
EREMOPHILA SPECIES	5 GAL	L 0.2	36" o.c.	18 - 36in. ht.	4 - 10ft. ht.
JUNIPERUS SPECIES	5 GAL	M 0.5	48" o.c.	3 - 6ft. ht.	1 - 3ft. w.
LANTANA SPECIES	5 GAL	M 0.5	48" o.c.	18 - 36in. ht.	1 - 3ft. w.
LEUCOPHYLLUM SPECIES	5 GAL	L 0.2	48" o.c.	3 - 1' ht.	3 - 6ft. w.
NERIUM OLEANDER `PETITE PINK` DWARF OLEANDER	5 GAL	M 0.5	60" o.c.	3 - 6ft. ht.	3 - 6ft. w.
OLEA EUROPAEA `MONTRA` LITTLE OLLIE DWARF OLIVE	5 GAL	L 0.2	48" o.c.	3 - 6ft. ht.	3 - 6ft. w.
SIMMONDSIA CHINENSIS JOJOBA	5 GAL	L 0.2	48" o.c.	6 - 10ft. ht.	6 - 10ft. w.
ACCENTS					
AGAVE SPECIES	5 - 15 GAL	L 0.2	48" o.c.	1 - 6ft. ht.	1 - 6ft. ht.
DASYLIRION WHEELERI GREY DESERT SPOON	5 - 15 GAL	L 0.2	60" o.c.	3 - 1' ht.	3 - 6ft. w.
ECHINOCACTUS GRUSONII GOLDEN BARREL CACTUS	5 - 15 GAL	L 0.2	24" o.c.	18 - 36in. ht.	1 - 3ft. w.
FEROCACTUS ACANTHODES COMPASS BARREL	5 - 15 GAL	L 0.2	24" o.c.	1 - 8ft. ht.	2 - 3ft. ht.
HESPERALOE SPECIES	5 - 15 GAL	L 0.2	30" o.c.	2 - 4ft. ht.	1 - 4ft. ht.
NOLINA NELSONII BLUE NOLINA	5 - 15 GAL	L 0.2	48" o.c.	4 - 6ft. ht.	6 - 10ft. w.
OPUNTIA SANTA-RITA SANTA RITA PRICKLYPEAR	5 - 15 GAL	L 0.2	36" o.c.	3 - 1' ht.	3 - 1' w.
YUCCA SPECIES	5 - 15 GAL	L 0.2	72" o.c.	5 - 15ft. ht.	2 - 4ft. ht.
GRASSES					
MUHLENBERGIA RIGENS DEER GRASS	5 GAL	M 0.5	48" o.c.	3 - 6ft. ht.	3 - 6ft. w.
PENSTEMON SPECIES MIXED SPECIES	5 GAL	M 0.5	36" o.c.	18 - 36in. ht.	1 - 3ft. w.
SPOROBOLUS AIROIDES ALKALI SACATON	5 GAL	L 0.2	48" o.c.	18 - 36in. ht.	1 - 3ft. w.
SPOROBOLUS WRIGHTII BIG SACATON	5 GAL	M 0.5	48" o.c.	3 - 5ft. ht.	3 - 5ft. ht.

GROUNDCOVERS					
JUNIPERUS SPECIES	1 - 5 GAL	M 0.5	48" o.c.	2ft. ht.	6 - 8ft. w.
PYRACANTHA FORTUNEANA `GRABERI` GRABERI PYRACANTHA	1 - 5 GAL	M 0.5	96" o.c.	6 - 10ft. ht.	6 - 10ft. w.
ACACIA REDOLENS `DESERT CARPET` TM BANK CATCLAW	1 - 5 GAL	L 0.2	48" o.c.	18 - 36in. ht.	6 - 10ft. w.
DALEA SPECIES	1 - 5 GAL	L 0.2	48" o.c.	6 - 18in. ht.	4 - 6ft. ht.
LANTANA SPECIES	1 - 5 GAL	M 0.5	48" o.c.	6 - 18in. ht.	3 - 6ft. w.
PORTULACARIA AFRA ELEPHANT BUSH	1 - 5 GAL	L 0.2	48" o.c.	6 - ' ht.	3 - 6ft. w.
VINE/ESPALIER					
BOUGAINVILLEA X `BARBARA KARST` BARBARA KARST BOUGAINVILLEA	5 GAL	M 0.5	96" o.c.	10 - 15ft. ht.	10 - 20ft. ht.
ROSA BANKSIAE `ALBA PLENA` WHITE LADY BANK`S ROSE	5 GAL	M 0.5	96" o.c.	< 15ft. ht.	6 - 10ft. ht.
BASIN GRASSES					
MUHLENBERGIA SPECIES	5 GAL	M 0.5	48" o.c.	3 - 6 ft. ht.	3- 6 ft. ht.
CAREX SPECIES	5 GAL	M 0.5	36" o.c.	1 - 3 ft. ht.	1 - 3 ft. ht.

MSA CONSULTING, INC.
Landscape Architecture • Civil Engineering • Land Surveying
Planning • Environmental Services • Dry Utility Coordination • GIS
34200 Bob Hope Drive Rancho Mirage, CA 92270 | 760.320.9811 | MSAConsultingInc.com

CASE: PPT230005
EXHIBIT: Exhibit B
DATE: 3/13/2025
PLANNER: Russell Brady

☐ Meeting ☑ Comment Agenda ☐ Final

LEGEND

BROWN = BUILDING & SAFETY GRADING DIVISION COMMENTS
PURPLE = PLANNING DEPARTMENT COMMENTS
GREEN = ENVIRONMENTAL PROGRAMS DEPARTMENT COMMENTS
LIGHT ORANGE = TRANSPORTATION DEPARTMENT COMMENTS
BLUE = FLOOD CONTROL DISTRICT COMMENTS
LIGHT GREEN = REGIONAL PARKS & OPEN SPACE DISTRICT COMMENTS
RED = FIRE DEPARTMENT COMMENTS
YELLOW = ENVIRONMENTAL HEALTH DEPARTMENT COMMENTS
LIGHT BLUE = BUILDING & SAFETY PLAN CHECK COMMENTS
ORANGE = WASTE MANAGEMENT DEPARTMENT COMMENTS

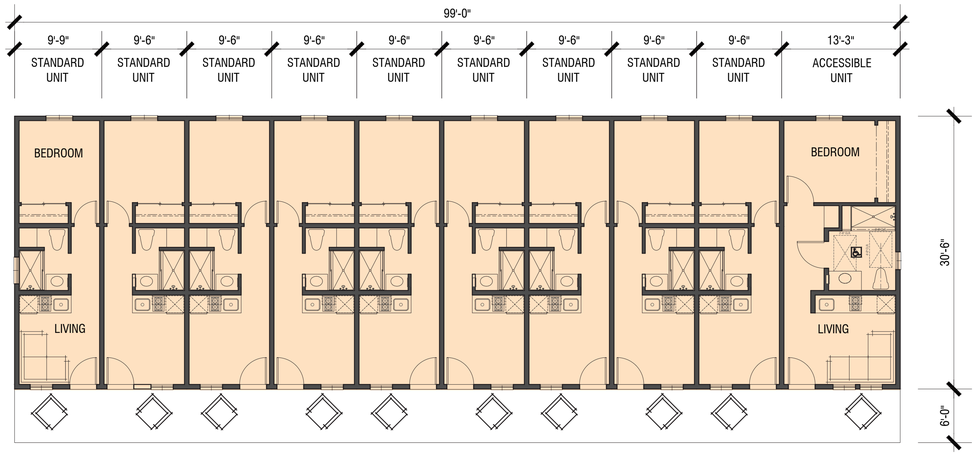
DESERT EQUESTRIAN HOLDING

THERMAL RANCH

THERMAL, CALIFORNIA

ARCHITECTS . PLANNERS . DESIGNERS
WHA.
ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

02-16-2023



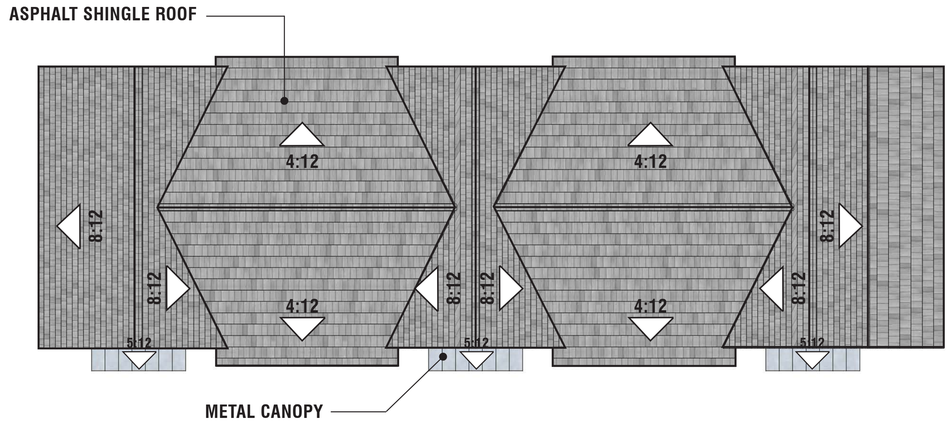
3020 SQ. FT.

FLOOR PLAN

0 4 8 16

FLOOR AREA TABLE	
FLOOR AREA	3020 SQ. FT.
STANDARD UNIT	300 SQ. FT.
ACCESSIBLE UNIT	400 SQ. FT.

NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION



ROOF PLAN

0 4 8 16

WORKFORCE HOUSING

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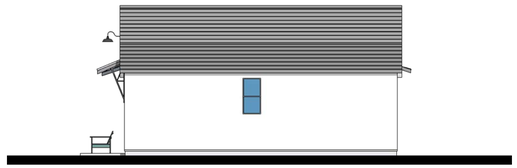
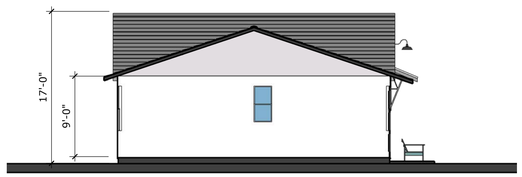
FRONT ELEVATION

0 4 8 16



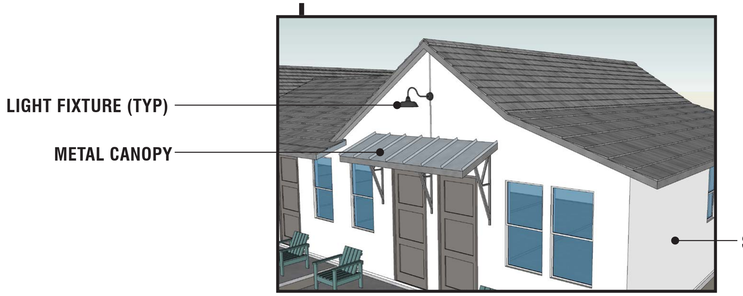
RIGHT ELEVATION

0 4 8 16



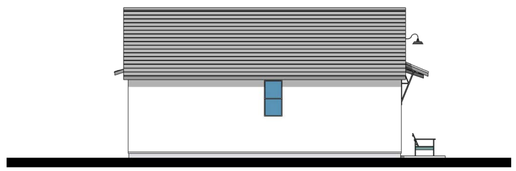
SECTION

0 4 8 16



REAR ELEVATION

0 4 8 16



LEFT ELEVATION

0 4 8 16

WORKFORCE HOUSING

EQUESTRIAN CENTER AT THERMAL RANCH

THERMAL, CALIFORNIA

COUNTY SUBMITTAL

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DESERT EQUESTRIAN HOLDING LLC

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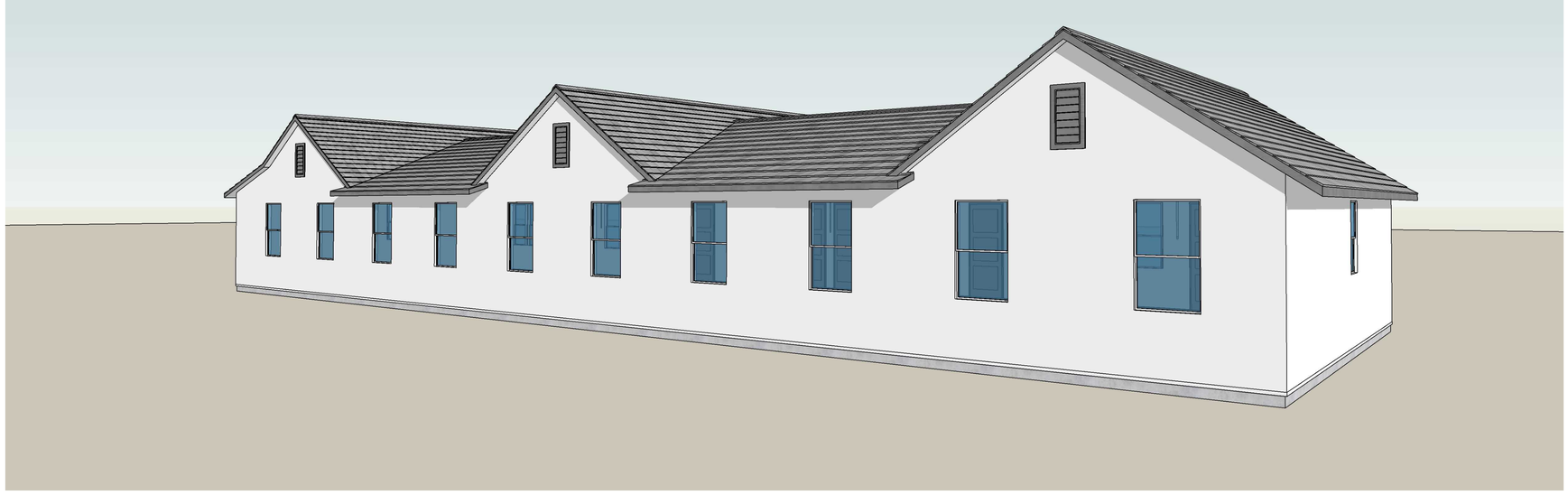
ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

PERSPECTIVE - FRONT VIEW



PERSPECTIVE - REAR VIEW

WORKFORCE HOUSING

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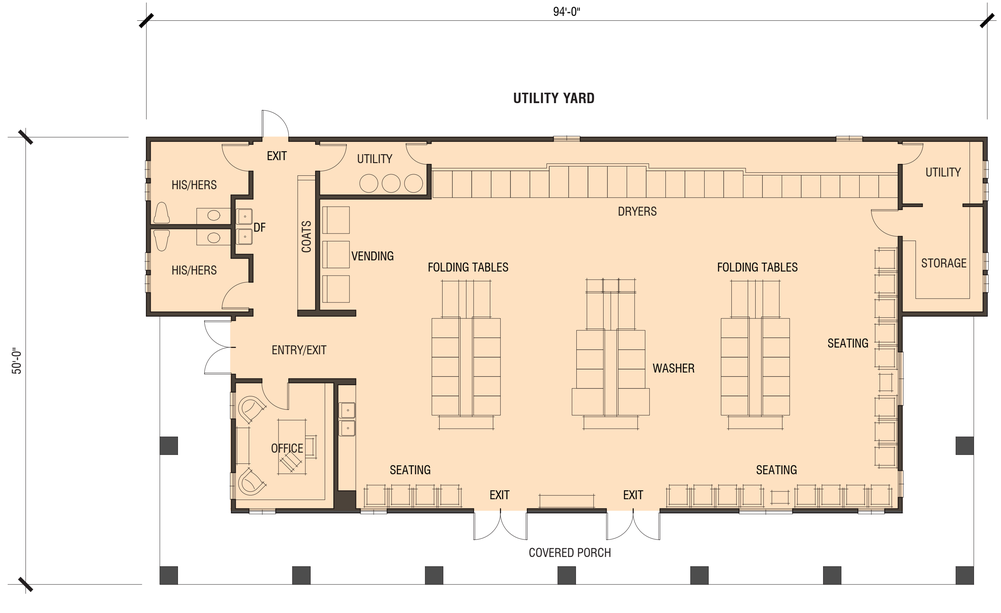
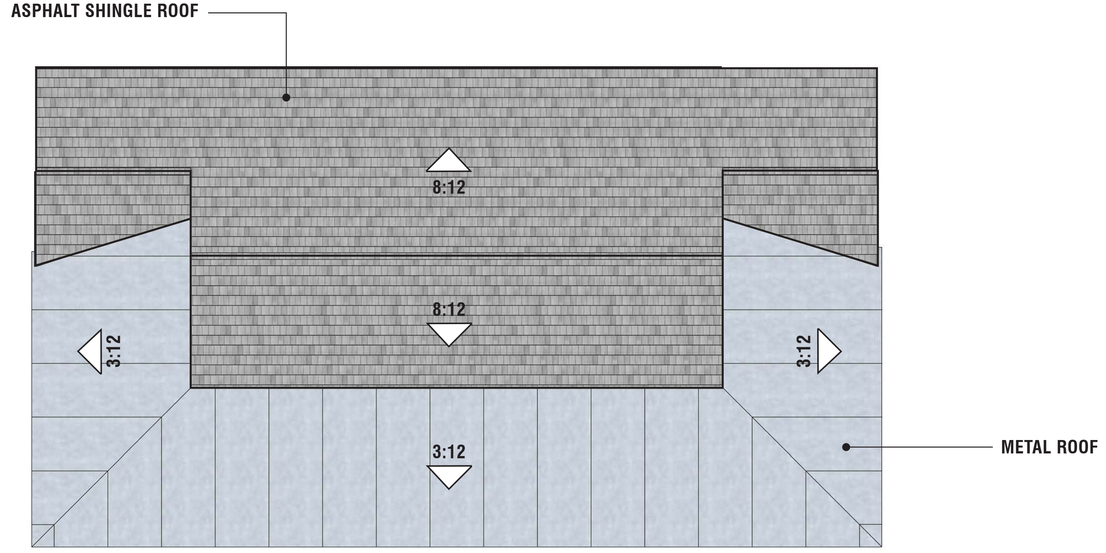


3530 SQ. FT.

FLOOR PLAN

0 4 8 16



ROOF PLAN

LAUNDRY BUILDING

EQUESTRIAN CENTER AT THERMAL RANCH

THERMAL, CALIFORNIA

DESERT EQUESTRIAN HOLDING LLC

COUNTY SUBMITTAL

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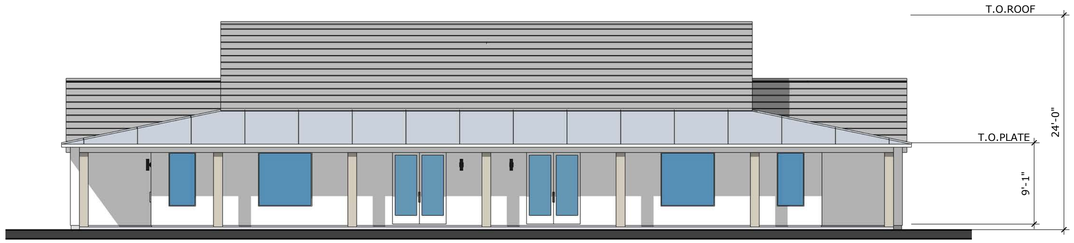
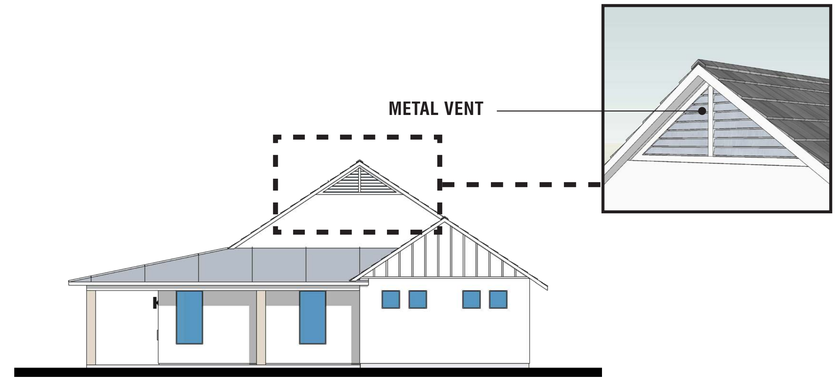


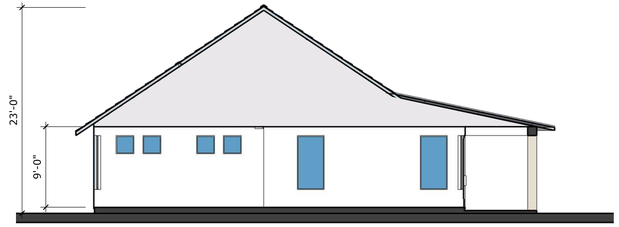
FRONT ELEVATION

0 4 8 16



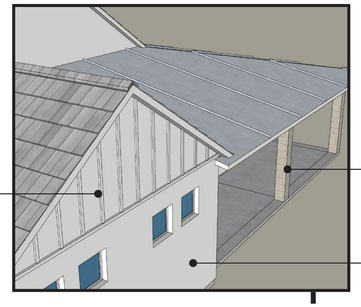
RIGHT ELEVATION

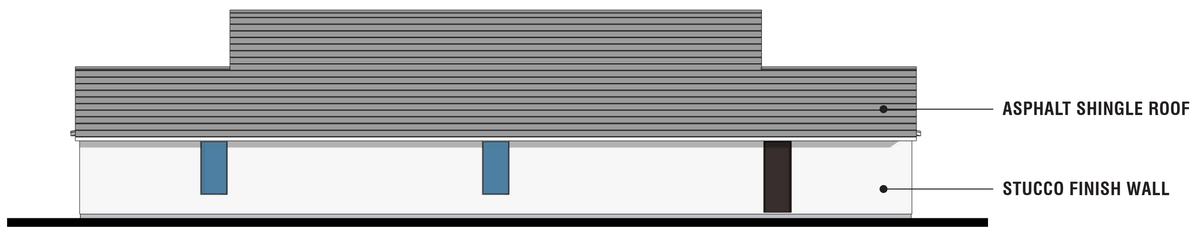
0 4 8 16



SECTION

0 4 8 16





REAR ELEVATION

0 4 8 16

LEFT ELEVATION

0 4 8 16

LAUNDRY BUILDING

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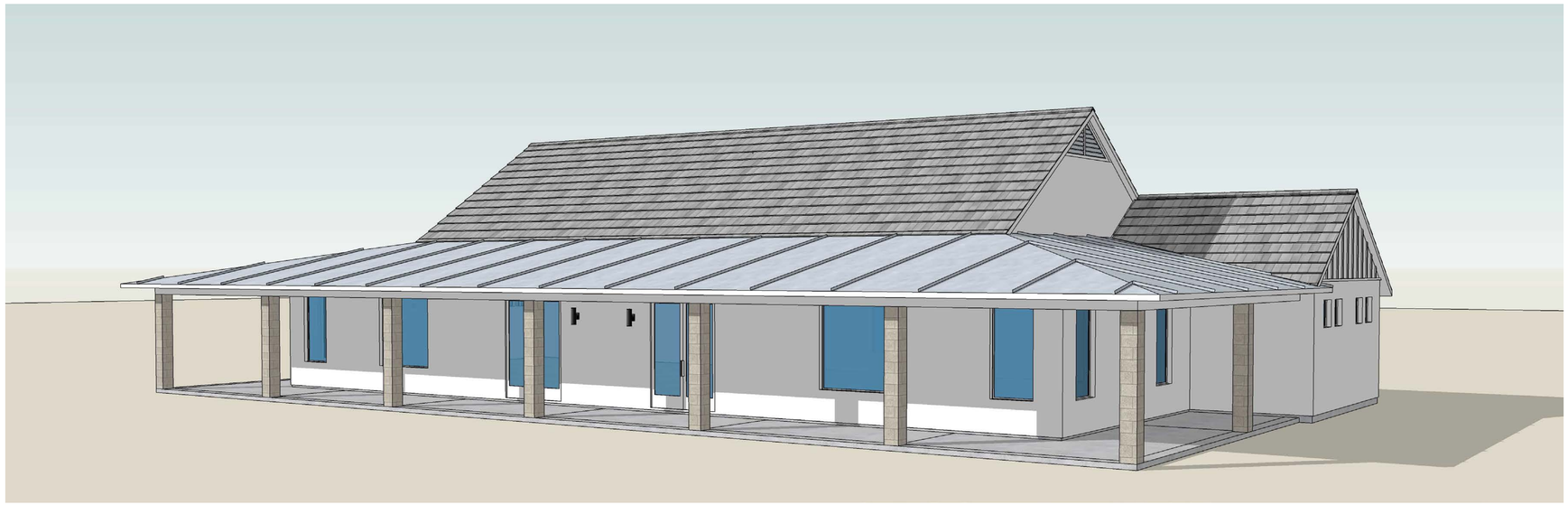
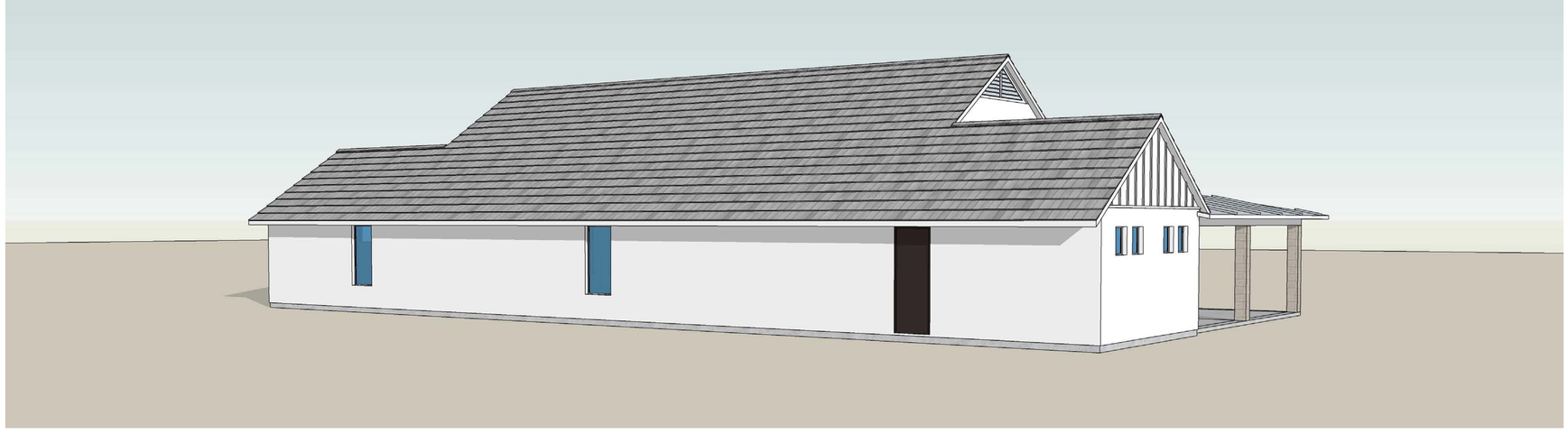


PERSPECTIVE - FRONT VIEW



PERSPECTIVE - REAR VIEW

LAUNDRY BUILDING

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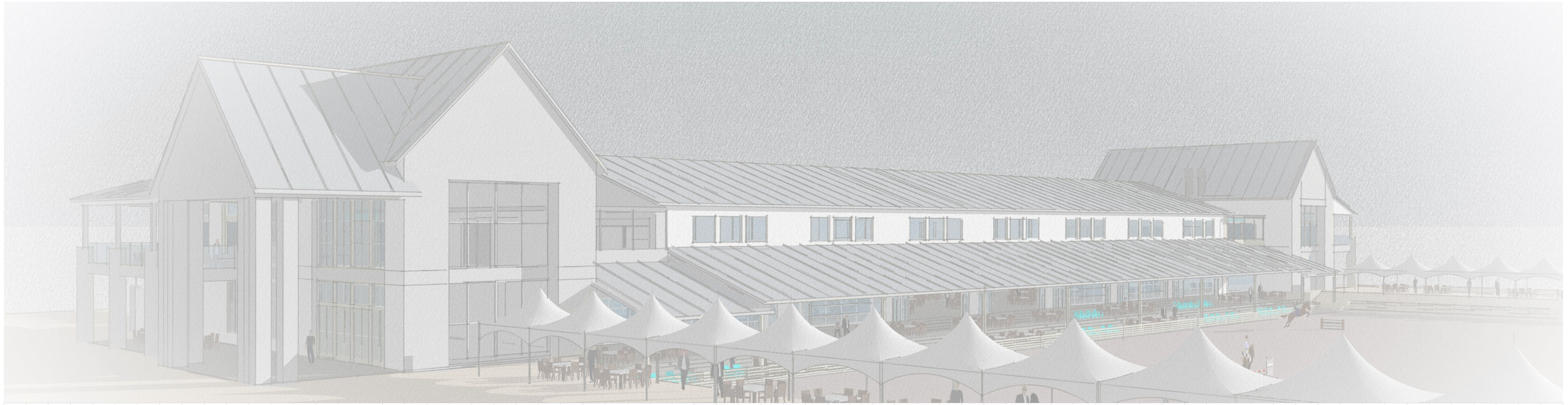
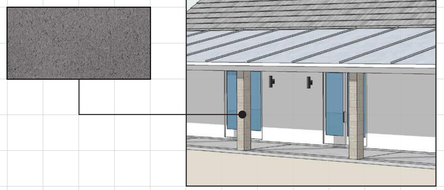
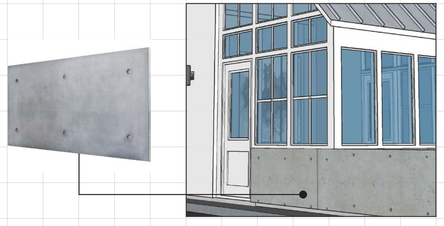


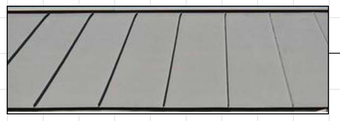


CONCRETE BLOCK COLUMN @ LAUNDRY BLDG.

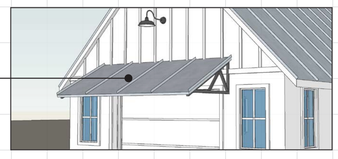
ASPHALT SHINGLE ROOFING

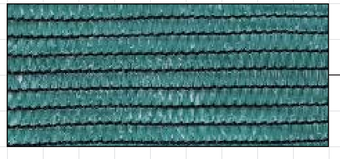


PRECAST CONCRTE BASE @ PRIMARY ENTRY GATE

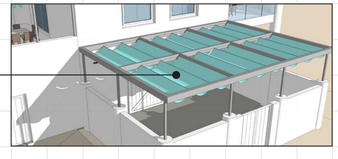


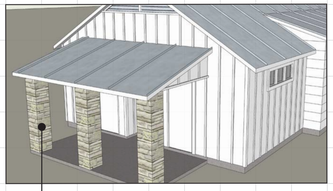
METAL ROOFING



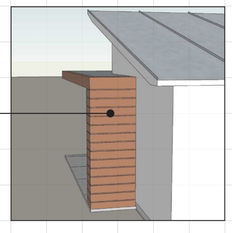


CANOPY FABRIC @ VIP BARN

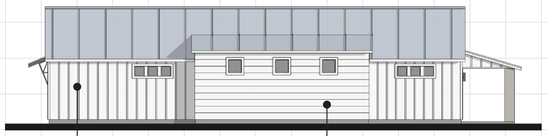




STONE VENEER @ LARGE RESTROOM



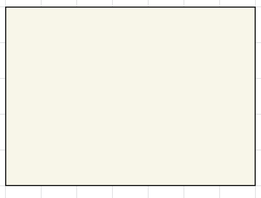
SIMULATED WOOD SIDING @ RETAIL BLDG.



PAINTED BOARD & BATTEN SIDING

PAINTED HORIZONTAL SIDING

16/20 STUCCO TEXTURE



STUCCO & PAINTED SIDING CLR.

CONCEPTUAL COLORS AND MATERIALS

EQUESTRIAN CENTER AT THERMAL RANCH

THERMAL, CALIFORNIA

DESERT EQUESTRIAN HOLDING LLC

COUNTY SUBMITTAL

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ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

THE UNINCORPORATED AREA IN THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

PLOT PLAN PPT230006
THERMAL RANCH SPECIFIC PLAN PA-1
(HORSE PARK)

EXHIBIT DATE: SEPTEMBER 16, 2025

AMENDMENTS

NO.	DATE	DESCRIPTION

DATA TABLE

APPLICANT / LAND OWNER	THERMAL RANCH, LLC		
ADDRESS	19312 CANYON DRIVE VILLA PARK, CALIFORNIA 92861		
CONTACT	JEREMY SMITH	**TELEPHONE**	(760) 801-5166
EXHIBIT PREPARER	MSA CONSULTING, INC.		
ADDRESS	34200 BOB HOPE DRIVE RANCHO MIRAGE, CALIFORNIA 92270		
CONTACT	PAUL DEPALATIS, AICP	**TELEPHONE**	(760) 320-9811
SOURCE OF TOPOGRAPHY	AEROTECH MAPPING, INC.		
ADDRESS	200 SPECTRUM CENTER DRIVE, SUITE 300 IRVINE, CALIFORNIA 92618		
DATE OF TOPOGRAPHY	DECEMBER 7, 2022	**TELEPHONE**	(619) 606-5020
ASSESSOR'S PARCEL NUMBERS	751-020-002, -003, -006 & -007		

LEGAL DESCRIPTION

A PORTION OF SECTION 5, TOWNSHIP 7 SOUTH, RANGE 8 EAST, SAN BERNARDINO BASE AND MERIDIAN.

LAND USE DESCRIPTION	BUILDING	SF	ACREAGE	PERCENTAGE
PLANNING AREA 1 GROSS AREA	-	9,725,794 SF	223.3 AC.	-
PROPOSED WELL SITE #4	-	44,099 SF	1.0 AC.	-
PROPOSED I.I.D. SUBSTATION	-	100,126 SF	2.3 AC.	-
PROPOSED NET AREA	-	9,581,569 SF	220.0 AC.	100%
PROPOSED BUILDING AREA (GRAND VIP BARN)	51,620 SF	51,620 SF	1.2 AC.	-
PROPOSED BUILDING AREA (PRIVATE BARN 1)	8 BUILDINGS (6,472 SF / EA.)	51,776 SF	1.2 AC.	-
PROPOSED BUILDING AREA (PRIVATE BARN 2)	8 BUILDINGS (6,046 SF / EA.)	48,368 SF	1.1 AC.	-
PROPOSED BUILDING AREA (LARGE BARN)	21 BUILDINGS (21,240 SF / EA.)	446,040 SF	10.2 AC.	-
PROPOSED BUILDING AREA (RETAIL)	2 BUILDINGS (4,000 SF / EA.)	8,000 SF	0.2 AC.	-
PROPOSED BUILDING AREA (RETAIL BARN 20'x30')	5 BUILDINGS (600 SF / EA.)	3,000 SF	0.1 AC.	-
PROPOSED BUILDING AREA (OFFICE)	1 BUILDING	6,885 SF	0.2 AC.	-
PROPOSED BUILDING TOTAL	-	615,689 SF	14.1 AC.	6%
ACCESS ROADS, HARDSCAPE & PARKING	-	1,462,880 SF	33.6 AC.	16%
LANDSCAPE & OPEN SPACE AREAS	-	7,503,000 SF	172.3 AC.	78%

ONSITE REQUIRED PARKING DATA PER PARKING STUDY	COUNT
PARKING SPACES PER DAILY GUESTS	0.188
PROJECTED NUMBER OF GUESTS OVER 24-HOUR PERIOD	8,100 GUESTS
TOTAL REQUIRED PARKING SPACES	**1,371 SPACES**
HORSE STALLS (OCCUPIED)	2,700 STALLS
TRAILER PARKING SPACES PER HORSE STALL	0.14 STALL
TRAILER SPACES REQUIRED	378 SPACES
ONSITE PROPOSED PARKING DATA	
PROPOSED STANDARD PAVED PARKING SPACES PROVIDED	1,195 SPACES
PROPOSED E.V. PARKING SPACES PROVIDED	137 SPACES
PROPOSED HANDICAP PARKING SPACES PROVIDED	40 SPACES
PROPOSED DG PARKING OVERFLOW CAPACITY	248 SPACES
TOTAL PROPOSED PARKING SPACES PROVIDED	**1,620 SPACES**
TOTAL TRAILER SPACES PROVIDED	**378 SPACES**

EXISTING EASEMENT NOTES

1. CENTERLINE OF 10' PIPELINE EASEMENT, RECORDED 3/22/1950, IN BOOK 1158, PAGE 39, O.R. (TO BE VACATED OR RELOCATED) (PLOTTED HEREON)
2. CENTERLINE OF POWER LINE EASEMENT, RECORDED 2/18/1965, AS INSTRUMENT NO. 18976, O.R. (TO BE VACATED OR RELOCATED) (PLOTTED HEREON)
3. CENTERLINE OF 10' POWER LINE EASEMENT, RECORDED 4/16/1951, BOOK 1277, PAGE 70, O.R. (TO BE VACATED OR RELOCATED) (PLOTTED HEREON)
4. 50' PIPELINE EASEMENT, RECORDED 10/20/1958, IN BOOK 2350, PAGE 565-567, O.R. (TO REMAIN) (PLOTTED HEREON)
5. 50' PIPELINE EASEMENT, RECORDED 10/20/1958, IN BOOK 2350, PAGE 562-564, O.R. (TO REMAIN) (PLOTTED HEREON)
6. 25' PIPELINE EASEMENT, RECORDED 5/9/1957, IN BOOK 2085, PAGE 184-186, O.R. (TO REMAIN) (PLOTTED HEREON)
7. GRANT DEED TO C.V.W.D. AND 25' DRAINAGE CHANNEL R/W, RECORDED 5/9/1957, IN BOOK 2085, PAGE 187-189, O.R. (TO REMAIN) (PLOTTED HEREON)
8. 95' POWER LINE EASEMENT, RECORDED 1/4/1989, AS INSTRUMENT NO. 1502, O.R. (TO REMAIN) (PLOTTED HEREON)
9. 25' PIPELINE EASEMENT, RECORDED 5/9/1957, IN BOOK 2085, PAGE 190-192, O.R. (TO REMAIN) (PLOTTED HEREON)
10. GRANT DEED TO C.V.W.D. AND 25' DRAINAGE CHANNEL R/W, RECORDED 5/9/1957, IN BOOK 2085, PAGE 193-195, O.R. (TO REMAIN) (PLOTTED HEREON)

EXISTING ZONING	CONTROLLED DEVELOPMENT (W-2) / HEAVY AGRICULTURE 10-ACRE MIN. LOT (A-2-10)
PROPOSED ZONING	THERMAL RANCH SPECIFIC PLAN, PA-1 EQUESTRIAN CENTER
EXISTING GENERAL PLAN LAND USE	AGRICULTURE
PROPOSED GENERAL PLAN LAND USE	COMMUNITY DEVELOPMENT FOUNDATION - TOURIST COMMERCIAL

PUBLIC UTILITY PURVEYORS

ELECTRIC	IMPERIAL IRRIGATION DISTRICT	(800) 303-7756
GAS	SOUTHERN CALIFORNIA GAS COMPANY	(800) 427-2200
TELEPHONE	FRONTIER COMMUNICATIONS	(800) 921-8101
WATER	COACHELLA VALLEY WATER DISTRICT	(760) 398-2651
CABLE	FRONTIER COMMUNICATIONS	(800) 921-8101
SEWER	COACHELLA VALLEY WATER DISTRICT	(760) 398-2651
SOLID WASTE (TRASH)	BURRTEC	(760) 340-2113
USA	UNDERGROUND SERVICE ALERT	(800) 227-2600

FEMA FLOOD ZONE DESIGNATION

ZONE "A": WITHOUT BASE ELEVATION
ZONE "X": 0.2% ANNUAL CHANCE FLOOD & AREAS OF MINIMAL FLOOD HAZARD

AS SHOWN ON RIVERSIDE COUNTY, CALIFORNIA, FLOOD INSURANCE RATE MAP, COMMUNITY PANEL MAP NUMBER: 06065C2910H
EFFECTIVE DATE: MARCH 6, 2018.

LIQUEFACTION	HIGH LIQUEFACTION ZONE
SCHOOL DISTRICT	COACHELLA VALLEY UNIFIED
COUNTY SERVICE AREA	125 - THERMAL ST LIGHTING
EXISTING SPECIFIC PLAN	NONE
PROPOSED SPECIFIC PLAN	THERMAL RANCH SP

NOTES
1. PROVIDED PARKING CALCULATION AS PER THERMAL RANCH SP
2. BURRTEC IS THE DESIGNATED FRANCHISE SOLID WASTE (TRASH) HAULER.

LEGEND

	FIRE TRUCK
	PROPOSED FIRE TRUCK PATH

SIGHT LINE KEY MAP "B"
(PER COUNTY STANDARD NO. 821)
SCALE 1" = 80'
NOTE: SIGHT LINE DISTANCE MEASURED FOR 30MPH

SIGHT LINE KEY MAP "A"
(PER COUNTY STANDARD NO. 821)
SCALE 1" = 80'
NOTE: SIGHT LINE DISTANCE MEASURED FOR 55MPH

LEGEND: LIMITED USE AREA; SIGHT LINE; CENTERLINE OF ROADWAY

ABBREVIATIONS

(E)	EAST	NO.	NUMBER
(N)	NORTH	N.T.S.	NOT TO SCALE
(S)	SOUTH	O/H	OVERHEAD
(W)	WEST	OS/PP	OPEN SPACE / PARKS
A.C.	ASPHALT CONCRETE	PG.	PAGE
AC.	ACREAGE	P.A.	PROPERTY LINE
APN	ASSESSORS PARCEL NUMBER	PROP.	PROPOSED
BNDRY	BOUNDARY	P.U.E.	PUBLIC UTILITY EASEMENT
C/L	CENTERLINE	R	RADIUS
C&G	CURB AND GUTTER	R-L	LOW DENSITY (RESIDENTIAL)
E/P	EDGE OF PAVEMENT	R/W	RIGHT OF WAY
ESMT.	EASEMENT	SF	SQUARE FEET
EX.	EXISTING	STD.	STANDARD
MAX.	MAXIMUM	TYP.	TYPICAL
M.B.	MAP BOOK	UG	UNDERGROUND
MIN.	MINIMUM		

LEGEND

679.3 EXISTING SPOT ELEVATIONS
EXISTING CONTOURS
EXISTING EASEMENT DELTA
EXISTING GABLE
EXISTING IRRIGATION DRAIN LINE
EXISTING EASEMENT
EXISTING ELECTRIC
EXISTING GAS
EXISTING IRRIGATION
EXISTING LOT LINE
EXISTING EDGE OF PAVEMENT
EXISTING TELEPHONE
EXISTING OVERHEAD TELEPHONE
EXISTING RIGHT OF WAY
EXISTING SEWER
EXISTING SEWER FORCE MAIN
EXISTING WATER
TENTATIVE TRACT MAP BOUNDARY
PROPOSED AND EXISTING CENTER LINE
PROPOSED CURB
PROPOSED EASEMENT
PROPOSED LOT LINE
PROPOSED RIGHT OF WAY

NORTH
0' 150' 300' 450' 600'
SCALE 1"=150'

VICINITY MAP
N.T.S.
60TH AVENUE; 61ST AVENUE; UNINCORPORATED AREA OF RIVERSIDE COUNTY; 62ND AVE.; THERMAL RANCH; SITE; VAN BUREN STREET; HARRISON STREET; TYLER STREET; POLK STREET; FILLMORE AVENUE; 64TH AVENUE; 66TH AVENUE

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R:\27301 Acad\Planning\Plot Plan\27301 Plot Plan 250004 - Equestrian.dwg, 9/10/2025 1:38:56 PM, dgallerani, MSA Consulting Inc.

THE UNINCORPORATED AREA IN THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

BUILDING PROGRAM
THERMAL RANCH SPECIFIC PLAN PA-1 (HORSE PARK)

EXHIBIT DATE: SEPTEMBER 16, 2025

REVISIONS

NO.	DATE	DESCRIPTION

DATA TABLE

APPLICANT / LAND OWNER	THERMAL RANCH, LLC		
ADDRESS	19312 CANYON DRIVE VILLA PARK, CALIFORNIA 92861		
CONTACT	JEREMY SMITH	**TELEPHONE**	(760) 801-5166
EXHIBIT PREPARER	MSA CONSULTING, INC.		
ADDRESS	34200 BOB HOPE DRIVE RANCHO MIRAGE, CALIFORNIA 92270		
CONTACT	PAUL DEPALATIS, AICP	**TELEPHONE**	(760) 320-9811
SOURCE OF TOPOGRAPHY	AEROTECH MAPPING, INC.		
ADDRESS	200 SPECTRUM CENTER DRIVE, SUITE 300 IRVINE, CALIFORNIA 92618		
DATE OF TOPOGRAPHY	DECEMBER 7, 2022	**TELEPHONE**	(619) 606-5020
ASSESSOR'S PARCEL NUMBERS	751-020-002, -003, -006 & -007		

LEGAL DESCRIPTION

A PORTION OF SECTION 5, TOWNSHIP 7 SOUTH, RANGE 8 EAST, SAN BERNARDINO MERIDIAN.

COVERED BUILDING DESCRIPTION

DESCRIPTION	CONSTRUCTION TYPE	OCCUPANCY CLASSIFICATION	
PRIVATE BARN	III	U	NFPA-13 (SPRINKLED)
LARGE BARN	III	U	NFPA-13 (SPRINKLED)
RETAIL BARN & RESTROOMS	V	M/B	NFPA-13 (SPRINKLED)
OFFICE	V	B	NFPA-13 (SPRINKLED)
GRAND VIP BARN	III	A	NFPA-13 (SPRINKLED)
STEEL STORAGE BUILDING	V	S	NFPA-13 (SPRINKLED)
EQUESTRIAN THEMED VENDOR SPACE & RESTROOMS	V	M/B	NFPA-13 (SPRINKLED)

EXISTING ZONING	CONTROLLED DEVELOPMENT (W-2) / HEAVY AGRICULTURE 10-ACRE MIN. LOT (A-2-10)
PROPOSED ZONING	THERMAL RANCH SPECIFIC PLAN, PA-1 EQUESTRIAN CENTER
EXISTING GENERAL PLAN LAND USE	AGRICULTURE
PROPOSED GENERAL PLAN LAND USE	COMMUNITY DEVELOPMENT FOUNDATION - TOURIST COMMERCIAL

PUBLIC UTILITY PURVEYORS

ELECTRIC	IMPERIAL IRRIGATION DISTRICT	(800) 303-7756
GAS	SOUTHERN CALIFORNIA GAS COMPANY	(800) 427-2200
TELEPHONE	FRONTIER COMMUNICATIONS	(800) 921-8101
WATER	COACHELLA VALLEY WATER DISTRICT	(760) 398-2651
CABLE	FRONTIER COMMUNICATIONS	(800) 921-8101
SEWER	COACHELLA VALLEY WATER DISTRICT	(760) 398-2651
SOLID WASTE (TRASH)	BURRTEC	(760) 340-2113
USA	UNDERGROUND SERVICE ALERT	(800) 227-2600

FEMA FLOOD ZONE DESIGNATION

ZONE "A": WITHOUT BASE ELEVATION
ZONE "X": 0.2% ANNUAL CHANCE FLOOD & AREAS OF MINIMAL FLOOD HAZARD

AS SHOWN ON RIVERSIDE COUNTY, CALIFORNIA, FLOOD INSURANCE RATE MAP, COMMUNITY PANEL MAP NUMBER: 06065C2910H
EFFECTIVE DATE: MARCH 6, 2018.

LIQUEFACTION	HIGH LIQUEFACTION ZONE
SCHOOL DISTRICT	COACHELLA VALLEY UNIFIED
COUNTY SERVICE AREA	125 - THERMAL ST LIGHTING
EXISTING SPECIFIC PLAN	NONE
PROPOSED SPECIFIC PLAN	THERMAL RANCH SP

ABBREVIATIONS

(E)	EAST	NO.	NUMBER
(N)	NORTH	N.T.S.	NOT TO SCALE
(S)	SOUTH	O/H	OVERHEAD
(W)	WEST	OS/PP	OPEN SPACE / PARKS
A.C.	ASPHALT CONCRETE	PG.	PAGE
AC.	ACREAGE	P/L	PROPERTY LINE
APN	ASSESSORS PARCEL NUMBER	PROP.	PROPOSED
BNDRY	BOUNDARY	P.U.E.	PUBLIC UTILITY EASEMENT
C/L	CENTERLINE	R	RADIUS
C&G	CURB AND GUTTER	R-L	LOW DENSITY (RESIDENTIAL)
E/P	EDGE OF PAVEMENT	R/W	RIGHT OF WAY
ESMT.	EASEMENT	SF	SQUARE FEET
EX.	EXISTING	STD.	STANDARD
MAX.	MAXIMUM	TYP.	TYPICAL
M.B.	MAP BOOK	UG	UNDERGROUND
MIN.	MINIMUM		

LEGEND

- 679.3 EXISTING SPOT ELEVATIONS
- EXISTING CONTOURS
- C EXISTING CABLE
- DRN EXISTING IRRIGATION DRAIN LINE
- EXISTING EASEMENT
- E EXISTING ELECTRIC
- G EXISTING GAS
- IRR EXISTING IRRIGATION
- EXISTING LOT LINE
- EXISTING EDGE OF PAVEMENT
- T EXISTING TELEPHONE
- O/H T EXISTING OVERHEAD TELEPHONE
- R/W EXISTING RIGHT OF WAY
- S EXISTING SEWER
- FM EXISTING SEWER FORCE MAIN
- W EXISTING WATER
- TENTATIVE TRACT MAP BOUNDARY
- PROPOSED AND EXISTING CENTER LINE
- PROPOSED CURB
- PROPOSED EASEMENT
- PROPOSED LOT LINE
- PROPOSED RIGHT OF WAY

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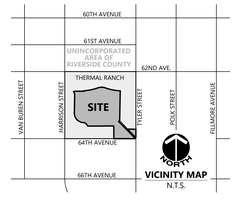
NORTH
0' 150' 300' 450' 600'
SCALE 1"=150'



VICINITY MAP
N.T.S.

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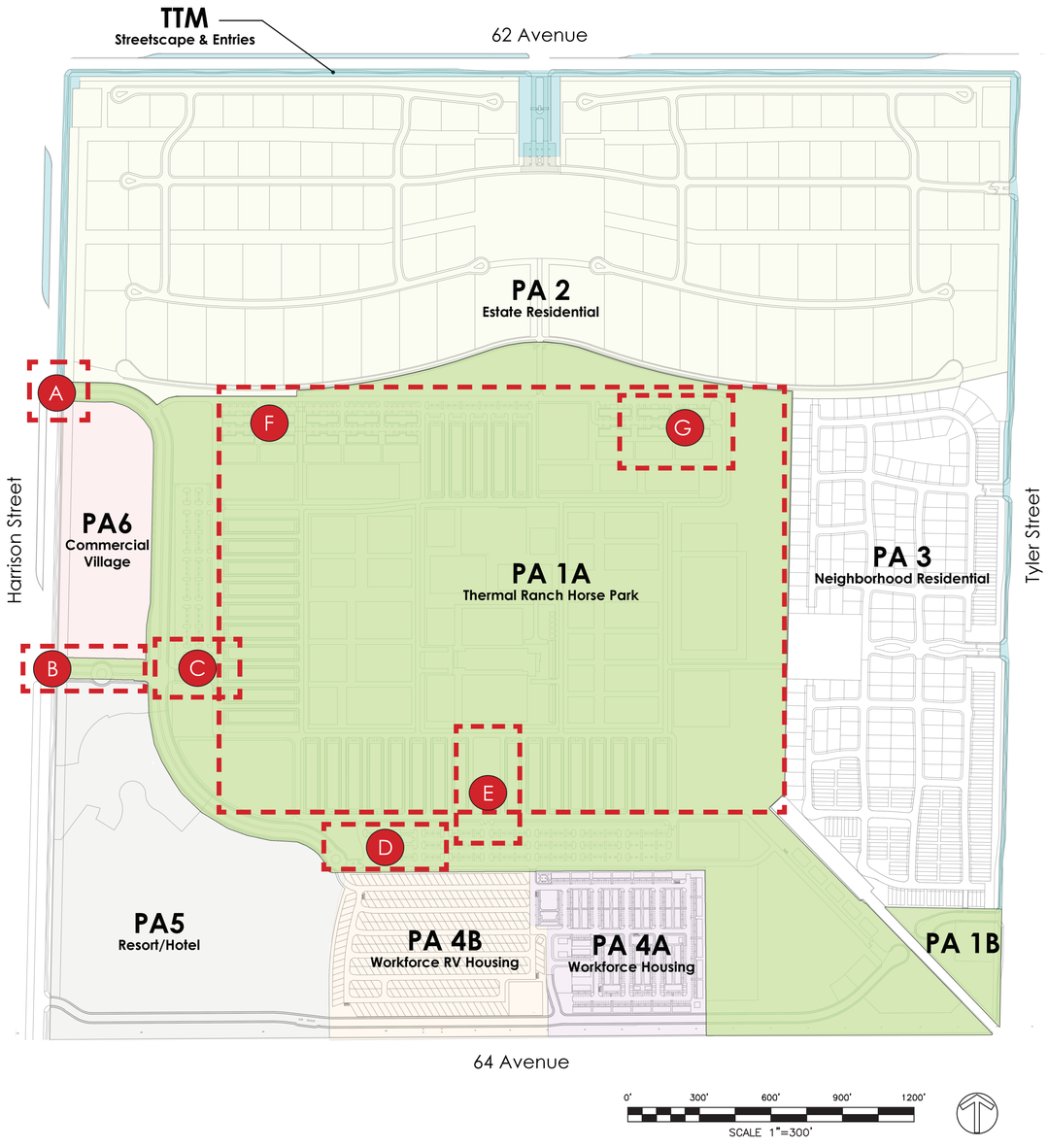
R:\2735\Acad\Planning\1Exhibits\Building Program\2735 Equestrian Center Building Program.dwg 9/16/2025 4:58:36 PM dgallemore, MSA Consulting, Inc.



APPLICANT/LAND OWNER: THERMAL RANCH, LLC
19312 CANYON DRIVE
VILLA PARK, CALIFORNIA 92861
JEREMY SMITH 760-801-5166

LANDSCAPE ARCHITECT: MSA CONSULTING, INC.
34200 BOB HOPE DRIVE
RANCHO MIRAGE, CA 92270
ROBERT PARKER 760-320-9811

Prior to project construction, I agree to submit a complete Landscape Construction Document Package that complies with the requirements of applicable ordinances, including but not necessarily limited to Ordinance No. 859.2; Ordinance 348, Ordinance 461; project Conditions of Approval; and in substantial conformance with the approved Landscape Concept Plan. Should the ordinances be revised, plans may be subject to change.

Assessor's Parcel Number: 751-020-002, -003, -006, & -007

Notes per Ordinance 859.3
- Hydrozones will be properly designated. Applicant must indicate proposed method(s) of irrigation.
- No overhead irrigation allowed within 24" of non-permeable surfaces.
- Subsurface or low-volume irrigation must be used for irregularly shaped areas, or areas less than 8 feet in width.

All Landscape Plans shall comply with screening and buffering Riverside County requirements:
- Evergreen plants shall be used where necessary to buffer and screen adjacent land uses.
- Landscaping shall be incorporated to soften edge of buildings, structures and streets in both commercial and industrial areas.
- Mechanical equipment and trash enclosures shall be identified and screened accordingly.
- Vines and other landscaping shall be added to fencing and walls to deter graffiti.

Proposed Maintenance Entity On-Site: Equestrian Center Maintained
Proposed Maintenance Entity Off-Site: Master Association Maintained

The project site is not located within Multiple Species Habitat Conservation Plan (MSHCP) area.

The projeict shall comply with the Thermal Design Guidelines.

Enlargement Areas

- A *Spine Road Entry*
- B *Retail Entry*
- C *Main Entry*
- D *VIP Entry & Office*
- E *Grand Entry*
- F *Main Event Area*
- G *Private Barns*

REGISTERED LANDSCAPE ARCHITECT ROBERT E. PARKER, JR. #5219 REN 8-31-27 STATE OF CALIFORNIA

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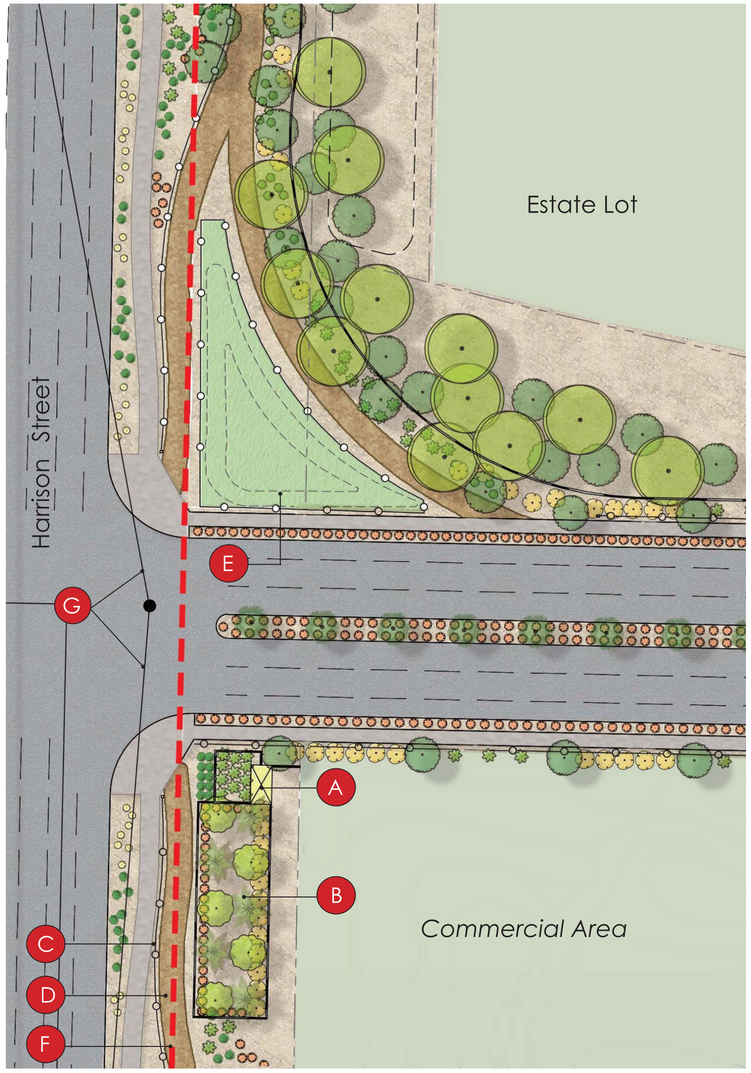


Spine Road Entry

0' 30' 60' 90' 120'
SCALE 1"=30'

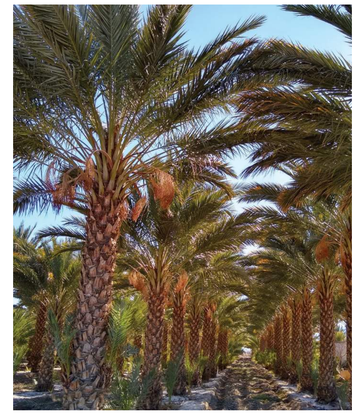
Planting Legend

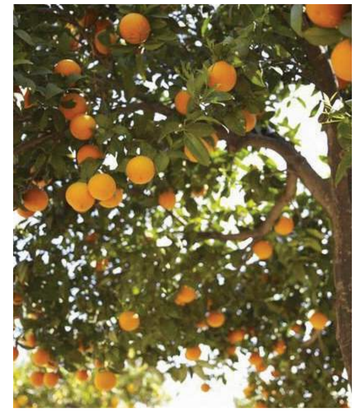
- LARGE AND MEDIUM TREES
- UPRIGHT TREES
- SMALL TREES
- PALMS
- ACCENT PALMS
- LARGE ACCENTS
- SMALL ACCENT/CACTI
- LARGE GRASSES
- MEDIUM/SMALL GRASSES
- LARGE SHRUBS
- MEDIUM SHRUBS
- GROUNDCOVERS
- VINES

- PASTURE
  NATIVE DESERT WILDFLOWER MIX
- LAWN
  TYPE TBD
- DECOMPOSED GRANITE
  TYPE TBD
- STABILIZED DECOMPOSED GRANITE
  TYPE TBD
- OVERFLOW PARKING -
  3/8" GRAVEL
  TYPE TBD

**See Sheet L-14 for Full Legend*

Character Imagery





Legend

- A *Monument Sign*
- B *Citrus and Palm Grove*
- C *Ranch Fence*
- D *10' Paved Bike Trail*
- E *Pasture*
- F *Right-Of-Way*
- G *Site Distance Line*

Thermal Ranch Horse Park (PA-1) | Spine Road Entry (Area A)

September 15, 2025 | L-2

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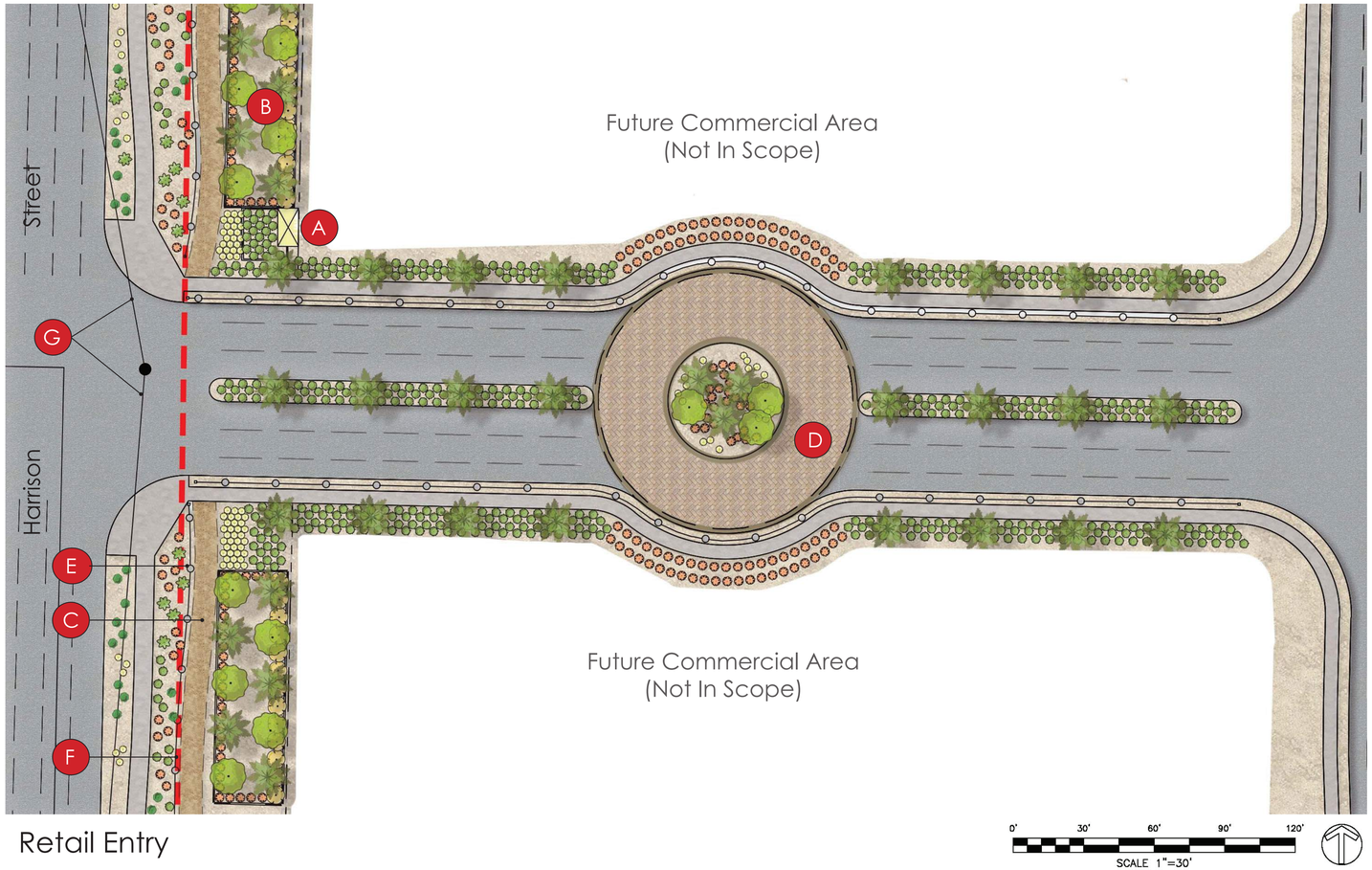

Retail Entry

Planting Legend

- LARGE AND MEDIUM TREES
- UPRIGHT TREES
- SMALL TREES
- PALMS
- ACCENT PALMS
- LARGE ACCENTS
- SMALL ACCENT/CACTI
- LARGE GRASSES
- MEDIUM/SMALL GRASSES
- LARGE SHRUBS
- MEDIUM SHRUBS
- GROUNDCOVERS
- VINES
- PASTURE
  NATIVE DESERT WILDFLOWER MIX
- LAWN
  TYPE TBD
- DECOMPOSED GRANITE
  TYPE TBD
- STABILIZED DECOMPOSED GRANITE
  TYPE TBD
- OVERFLOW PARKING -
  3/8" GRAVEL
  TYPE TBD

*See Sheet L-14 for Full Legend

Legend

- A *Monument Sign*
- B *Citrus/Palm Grove*
- C *10' Paved Bike Trail*
- D *Enhanced Pavement*
- E *Ranch Fence*
- F *34' Right-Of-Way*
- G *Site Distance Line*

Character Imagery

Thermal Ranch Horse Park (PA-1) | Retail Entry (Area B)

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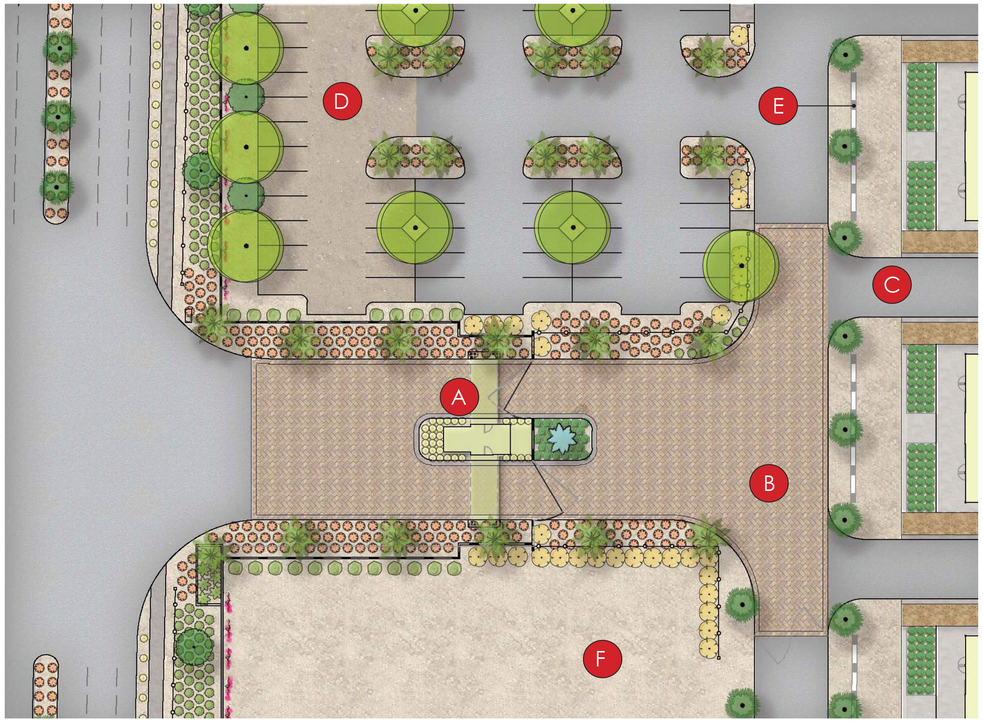


Main Entry

Legend

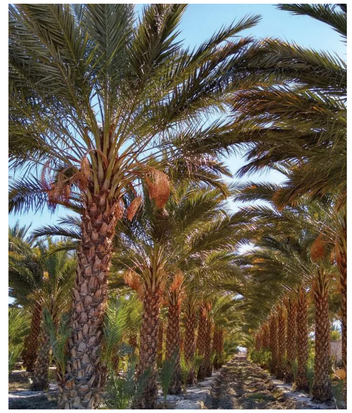
- A *Gate House*
- B *Enhanced Pavement*
- C *Maintenance Road*
- D *Overflow Parking*
- E *Low Concrete Wall*
- F *Feed Staging Area*

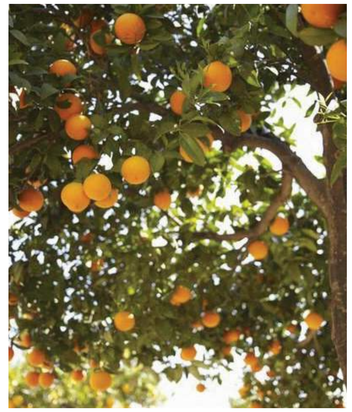
Planting Legend

- LARGE AND MEDIUM TREES
- UPRIGHT TREES
- SMALL TREES
- PALMS
- ACCENT PALMS
- LARGE ACCENTS
- SMALL ACCENT/CACTI
- LARGE GRASSES
- MEDIUM/SMALL GRASSES
- LARGE SHRUBS
- MEDIUM SHRUBS
- GROUNDCOVERS
- VINES
- PASTURE
  NATIVE DESERT WILDFLOWER MIX
- LAWN
  TYPE TBD
- DECOMPOSED GRANITE
  TYPE TBD
- STABILIZED DECOMPOSED GRANITE
  TYPE TBD
- OVERFLOW PARKING -
  3/8" GRAVEL
  TYPE TBD

*See Sheet L-14 for Full Legend

Character Imagery





Thermal Ranch Horse Park (PA-1) | Main Entry (Area C)

September 15, 2025 | L-4

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VIP Entry & Office

0' 30' 60' 90' 120'
SCALE 1"=30'

Legend

- A *Office*
- B *Feed Staging Area*
- C *CMU Block Wall*
- D *Large Barns*
- E *Gate*
- F *Overflow Parking - Decomposed Granite*

Character Imagery

Planting Legend

- LARGE AND MEDIUM TREES
- UPRIGHT TREES
- SMALL TREES
- PALMS
- ACCENT PALMS
- LARGE ACCENTS
- SMALL ACCENT/CACTI
- LARGE GRASSES
- MEDIUM/SMALL GRASSES
- LARGE SHRUBS
- MEDIUM SHRUBS
- GROUNDCOVERS
- VINES
- PASTURE
  NATIVE DESERT WILDFLOWER MIX
- LAWN
  TYPE TBD
- DECOMPOSED GRANITE
  TYPE TBD
- STABILIZED DECOMPOSED GRANITE
  TYPE TBD
- OVERFLOW PARKING -
  3/8" GRAVEL
  TYPE TBD

See Sheet L-14 for Full Legend

Thermal Ranch Horse Park (PA-1) | VIP Entry & Office (Area D)

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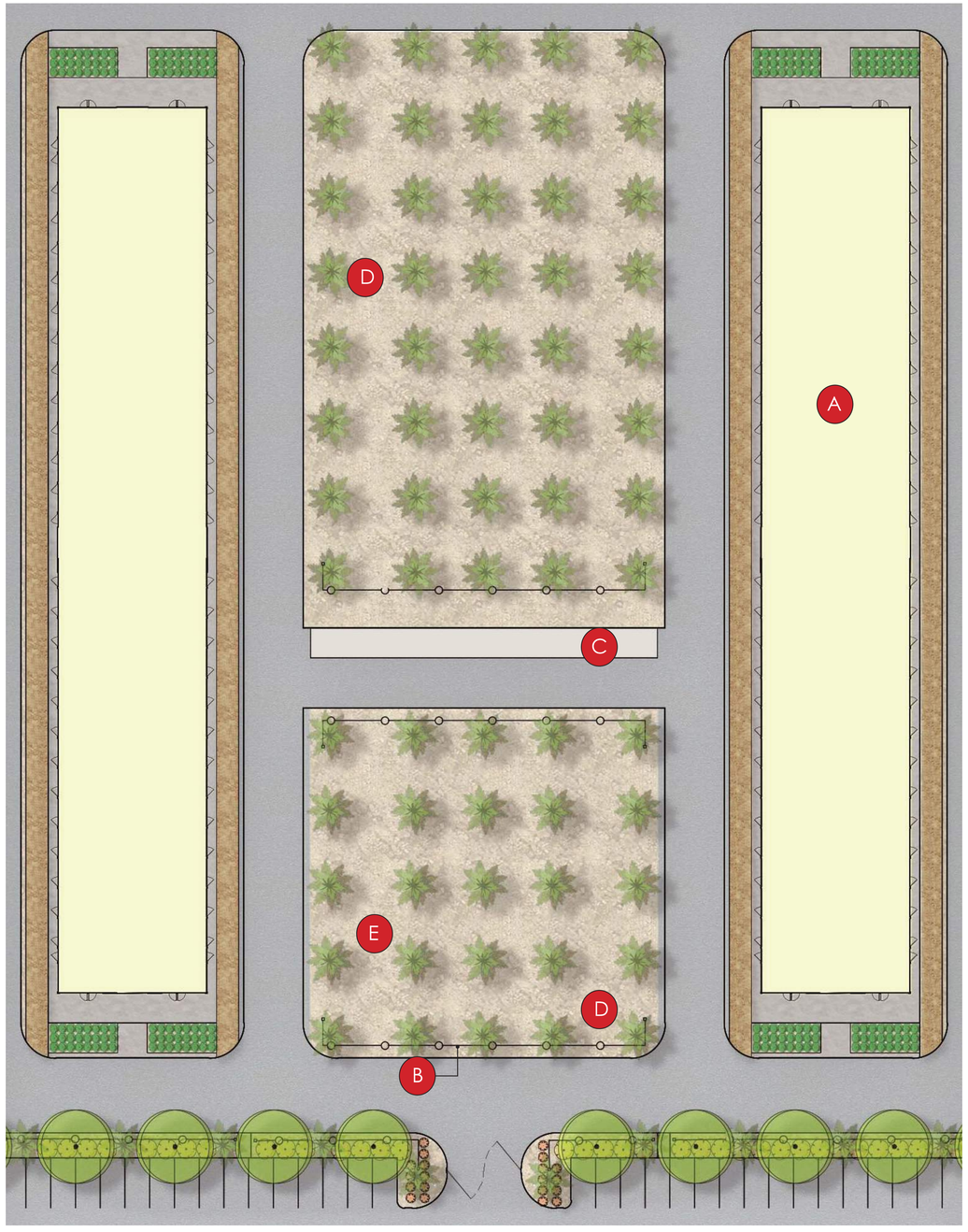


Grand Entry

0' 30' 60' 90' 120'
SCALE 1"=30'

Planting Legend

LARGE AND MEDIUM TREES

UPRIGHT TREES

SMALL TREES

PALMS

ACCENT PALMS

LARGE ACCENTS

SMALL ACCENT/CACTI

LARGE GRASSES

MEDIUM/SMALL GRASSES

LARGE SHRUBS

MEDIUM SHRUBS

GROUNDCOVERS

VINES

PASTURE
NATIVE DESERT WILDFLOWER MIX

LAWN
TYPE TBD

DECOMPOSED GRANITE
TYPE TBD

STABILIZED DECOMPOSED GRANITE
TYPE TBD

OVERFLOW PARKING -
3/8" GRAVEL
TYPE TBD

**See Sheet L-14 for Full Legend*

Legend

A *Large Barn*

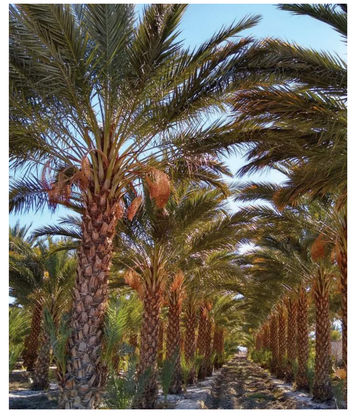
B *Ranch Fence*

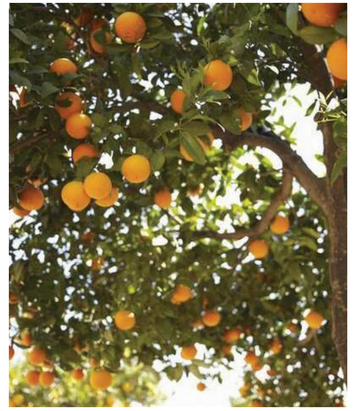
C *Valet Waiting Area*

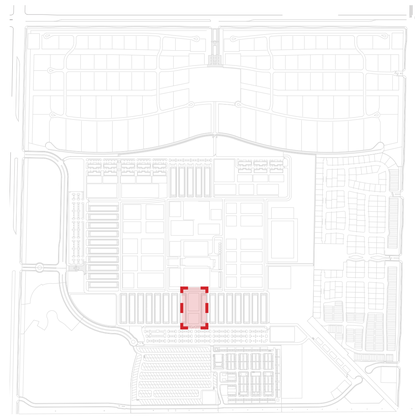
D *Date Palm Grove*

E *Valet Parking*

Character Imagery







Thermal Ranch Horse Park (PA-1) | Grand Entry (Area E)

September 15, 2025 | L-6

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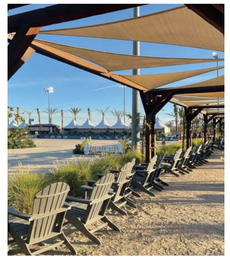
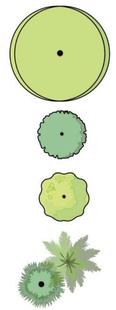
Legend

- A *Bridal Trail*
- B *Promenade*
- C *Vendors*
- D *Private Barns*
- E *Large Barns*
- F *Horse Exercise Area*

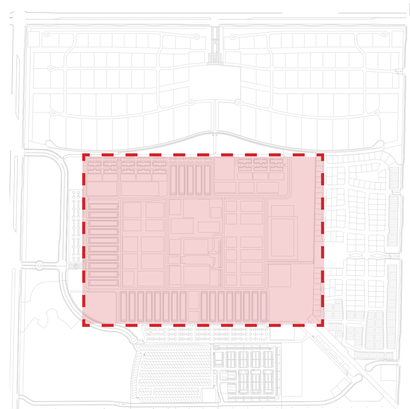
Character Imagery



Planting Legend



**See Sheet L-14 for Full Legend*



Thermal Ranch Horse Park (PA-1) | Main Event Area (Area F)

September 15, 2025 | L-7

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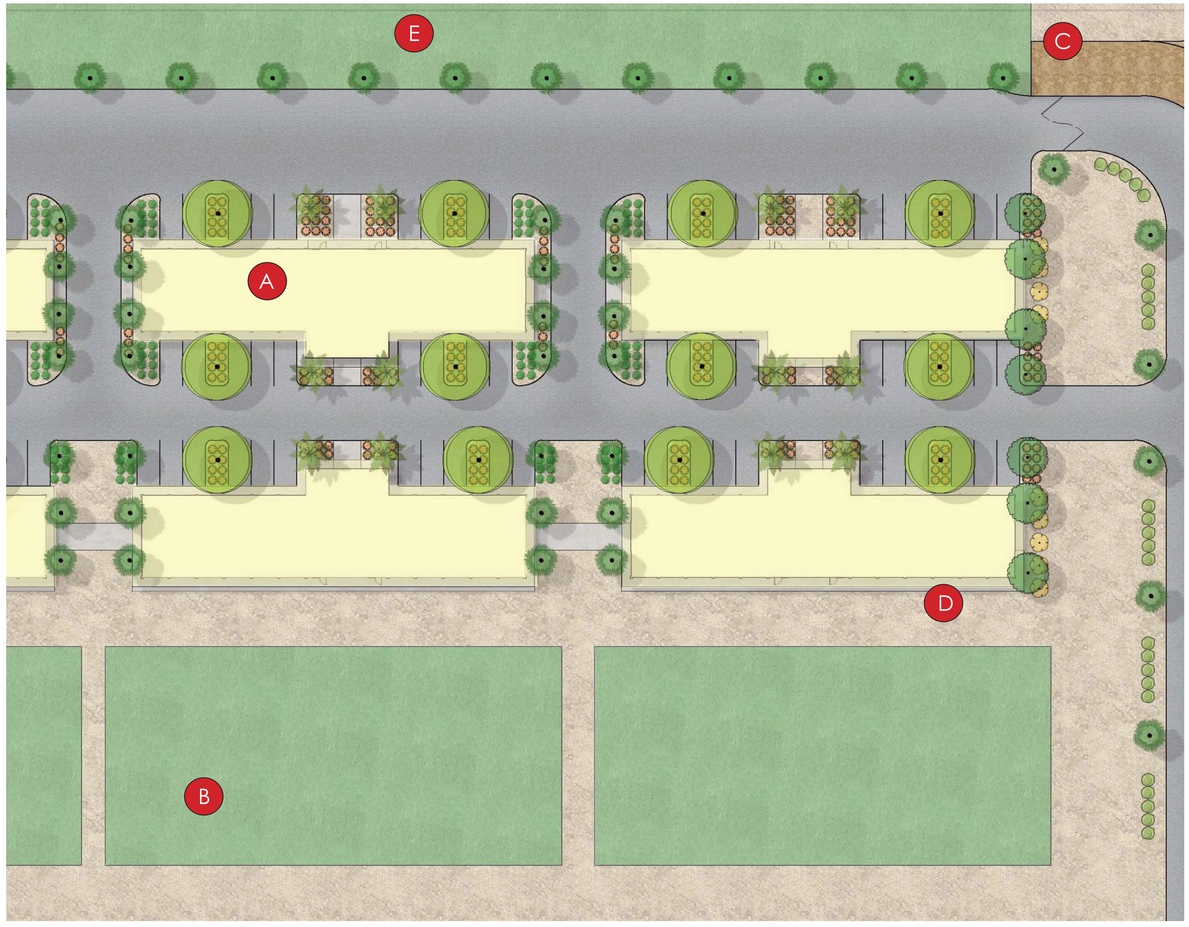


Private Barns

0' 30' 60' 90' 120'
SCALE 1"=30'

Legend

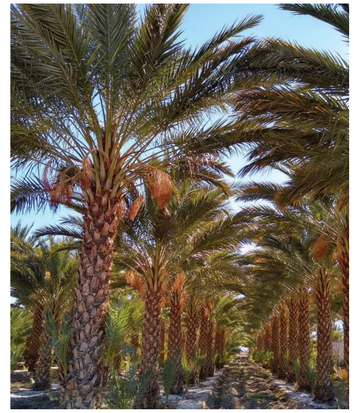
- A *Private Barns*
- B *Warm Up Rings*
- C *Bridal Trail*
- D *Golf Cart Parking*
- E *Open Field*

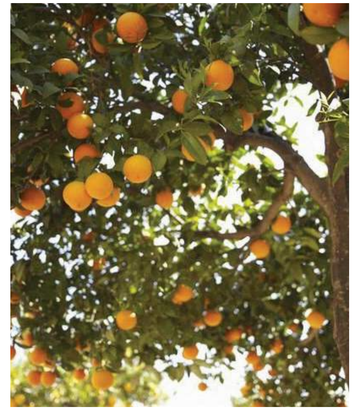
Planting Legend

- LARGE AND MEDIUM TREES
- UPRIGHT TREES
- SMALL TREES
- PALMS
- ACCENT PALMS
- LARGE ACCENTS
- SMALL ACCENT/CACTI
- LARGE GRASSES
- MEDIUM/SMALL GRASSES
- LARGE SHRUBS
- MEDIUM SHRUBS
- GROUNDCOVERS
- VINES
- PASTURE
  NATIVE DESERT WILDFLOWER MIX
- LAWN
  TYPE TBD
- DECOMPOSED GRANITE
  TYPE TBD
- STABILIZED DECOMPOSED GRANITE
  TYPE TBD
- OVERFLOW PARKING -
  3/8" GRAVEL
  TYPE TBD

**See Sheet L-14 for Full Legend*

Character Imagery





Thermal Ranch Horse Park (PA-1) | Private Barns (Area G)

September 15, 2025 | L-8

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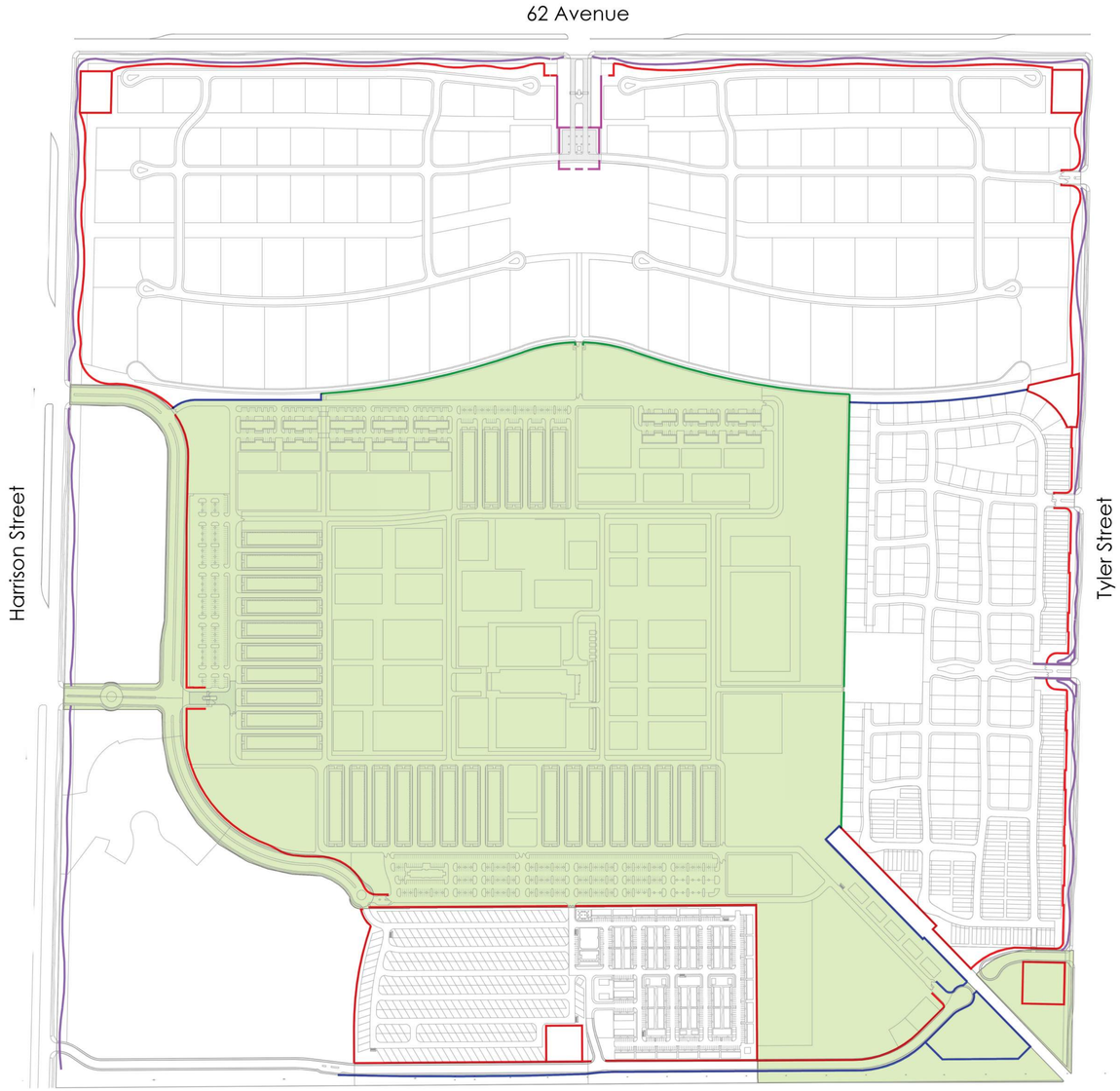

Legend

- *6' - 10' Sack Finish or Colored Slump Block Wall*
- *6' Tubular Steel Fence*
- *View Fence with Knee Wall - 6' Wood or Steel*
- *Ranch Fence - 2-4 Rail Wood or Vinyl*

6'-10' Sack Finish or Colored Slump Block Wall

View Fence with Knee Wall - 6' Wood or Steel

Ranch Fence - 2-4 Rail Wood or Vinyl

Accent Wall - Masonry, Poured in Place Concrete, or Stucco

Thermal Ranch Horse Park (PA-1) | Wall and Fence Plan

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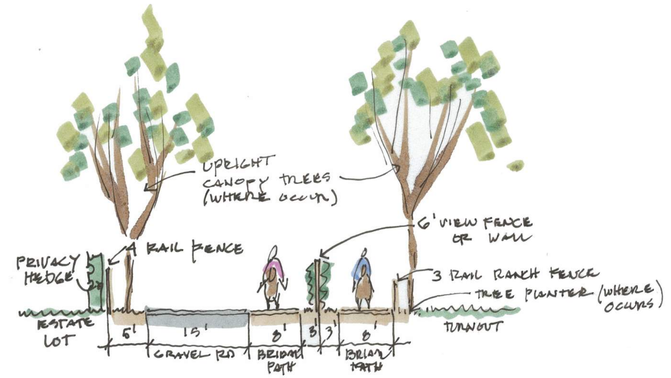
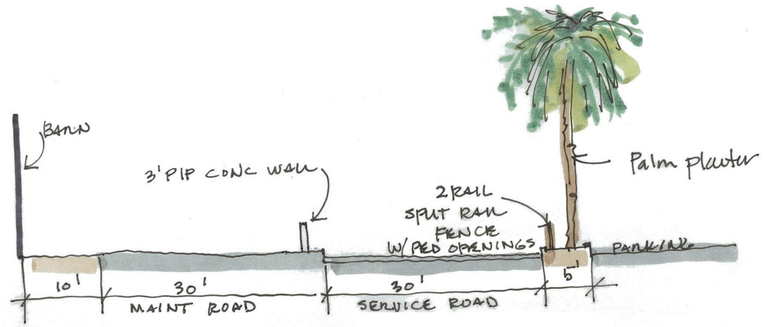


A Estate Lot at Southern Boundry



B Barn and West Parking Lot

C Spine Road

Thermal Ranch Horse Park (PA-1) | Sections

September 15, 2025 | L- 10

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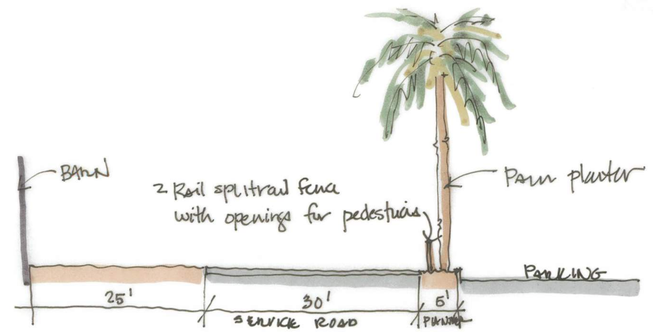

D Barn and South Parking Lot

E Jumper Rings

Thermal Ranch Horse Park (PA-1) | Sections

September 15, 2025 | L- 11

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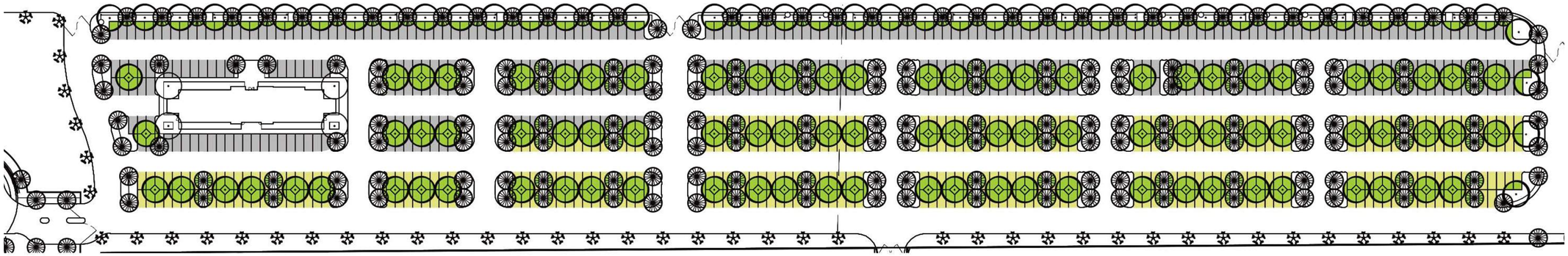
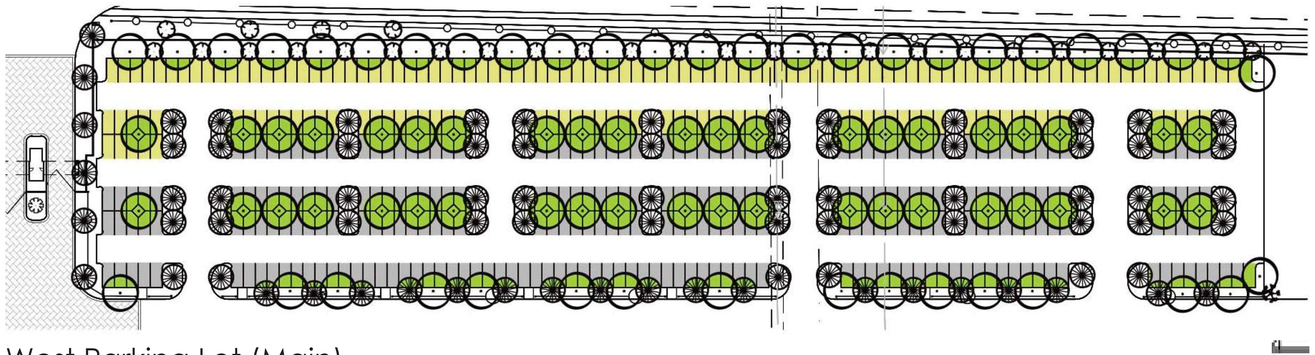


South Parking Lot (VIP & Office)

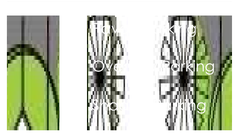


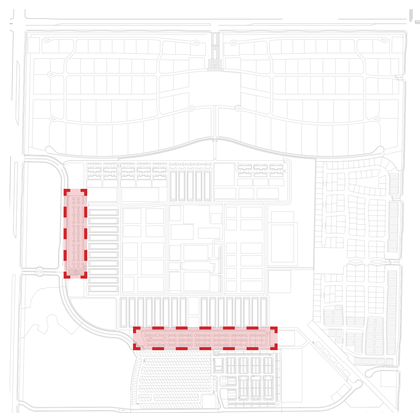
West Parking Lot (Main)

IN THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA					
Landscape Shade Analysis					
EXHIBIT DATE: DECEMBER 10, 2024					
ONSITE PARKING DATA:	**PARKING STALL AREA**	**SHADED PARKING AREA**	**PERCENTAGE**	**LANDSCAPE AREA**	**PERCENTAGE**
SOUTH PARKING	151,992 SF	78,423 SF	52%	44,925 SF	29%
WEST PARKING	86,257 SF	42,661 SF	50%	28,659 SF	33%
TOTAL	238,249 SF	121,084 SF	50%	73,584 SF	30%

RIVERSIDE COUNTY ORDINANCE 348, SECTION 18.12	
SHADED PARKING: • 50+ PARKING SPACES, 50% MINIMUM SHADING • TREES SHOWN AT 25' CANOPY AT 15 YEARS OF AGE	LANDSCAPE AREA COVERAGE: • 50+ PARKING SPACES, 10% OF PARKING AREA

Legend





Thermal Ranch Horse Park (PA-1) | Shade Analysis

September 15, 2025 | L-12

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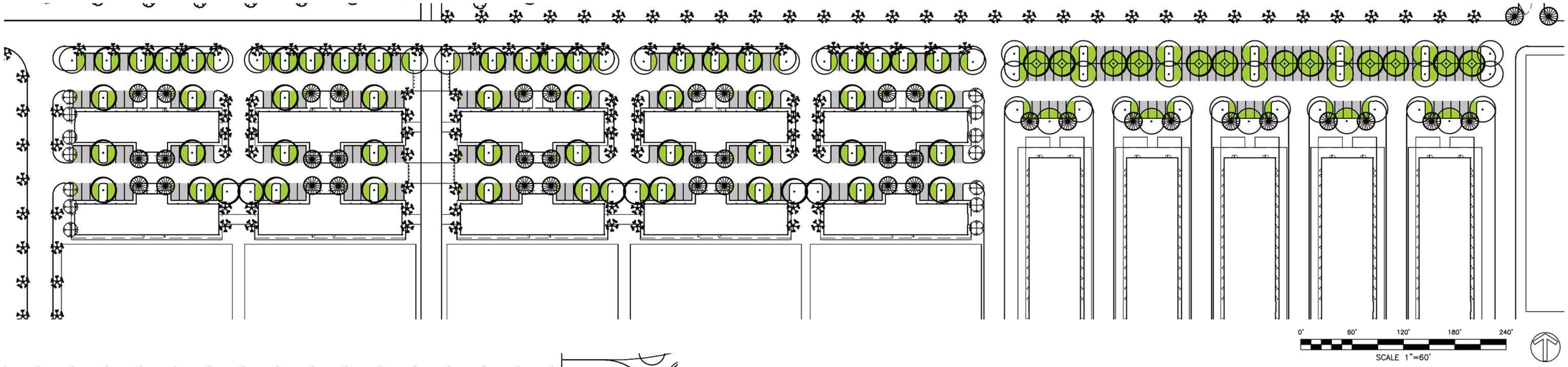

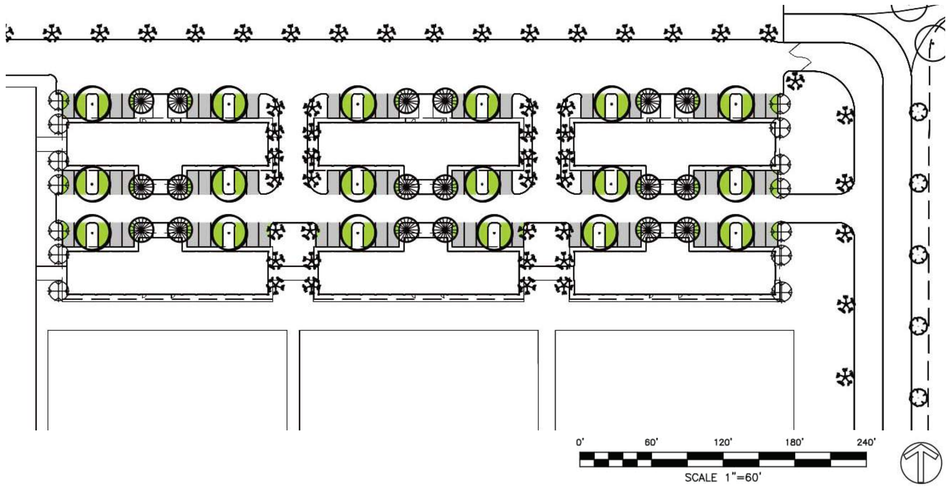

IN THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA					
Landscape Shade Analysis					
EXHIBIT DATE: JANUARY 28, 2025					
ONSITE PARKING DATA:	**PARKING STALL AREA**	**SHADED PARKING AREA**	**PERCENTAGE**	**LANDSCAPE AREA**	**PERCENTAGE**
TOTAL PARKING	85,500 SF	43,300 SF	51%	45,573 SF	50%
RIVERSIDE COUNTY ORDINANCE 348, SECTION 18.12					
SHADED PARKING: • 50+ PARKING SPACES, 50% MINIMUM SHADING • TREES SHOWN AT 25' CANOPY AT 15 YEARS OF AGE			LANDSCAPE AREA COVERAGE: • 50+ PARKING SPACES, 10% OF PARKING AREA		

Legend

- Paved Parking
- Shaded Parking

Thermal Ranch Horse Park (PA-1) | Shade Analysis

September 15, 2025 | L-13

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Concept Plant Legend

LARGE AND MEDIUM TREES
15GAL - 36"BOX
BAUHINIA VARIEGATA (PURPUREA) / PURPLE ORCHID TREE
CHORISIA SPECIOSA / SILK FLOSS TREE
OLEA EUROPAEA `SWANHILL FRUITLESS` / EUROPEAN OLIVE
PARKINSONIA SPECIES
PROSOPIS SPECIES
TIPUANA TIPU / TIPU TREE
SCHINUS MOLLE / CALIFORNIA PEPPER

UPRIGHT TREES
15GAL - 36"BOX
ACACIA SALICINA / WILLOW ACACIA
ACACIA STENOPHYLLA / SHOESTRING ACACIA
ACACIA WILLARDIANA / PALO BLANCO
CALLISTEMON SPECIES
EUCALYPTUS SPECIES

SMALL TREES
15GAL - 36"BOX
ACACIA ANEURA / MULGA
ACACIA FARNESIANA / SWEET ACACIA
CAESALPINIA CACALACO "SMOOTHIE" / CASCALOTE
CITRUS SPECIES

PALMS
20`-30` HT
PHOENIX DACTYLIFERA / DATE PALM
WASHINGTONIA ROBUSTA / MEXICAN FAN PALM

ACCENT PALMS
24"-36" BOX
BISMARCKIA NOBILIS / BISMARK PALM
BEAUCARNEA RECURVATA / PONY TAIL PALM
CHAMAEROPS HUMILIS / MEDITERRANEAN FAN PALM

LARGE ACCENTS
5-15 GAL
AGAVE ANGUSTIFOLIA / CENTURY PLANT
DASYLIRION WHEELERI / GREY DESERT SPOON
FEROCACTUS ACANTHODES / COMPASS BARREL
NOLINA NELSONII / BLUE NOLINA
OPUNTIA SANTA-RITA / SANTA RITA PRICKLYPEAR
YUCCA SPECIES

SMALL ACCENTS/ CACTI
1 GAL
ECHINOCACTUS GRUSONII / GOLDEN BARREL CACTUS
HESPERALOE SPECIES

LARGE GRASS
1-5 GAL
SPOROBOLUS AIROIDES / ALKALI SACATON
SPOROBOLUS WRIGHTII / BIG SACATON

MEDIAN/SMALL GRASS
1-5 GAL
MUHLENBERGIA SPECIES
PENSTEMON SP.(RED) / MIXED PENSTEMON SPECIES
CAREX SPECIES

LARGE SHRUBS
5 GAL
CAESALPINIA PULCHERRIMA / RED BIRD OF PARADISE
CASSIA SPECIES
LEUCOPHYLLUM SPECIES
NERIUM OLEANDER / OLEANDER
SIMMONDSIA CHINENSIS / JOJOBA

MEDIUM SHRUBS
5 GAL
BOUGAINVILLEA SPECIES
CALLISTEMON VIMINALIS `LITTLE JOHN` / DWARF WEEPING BOTTLE BRUSH
CARISSA MACROCARPA `GREEN CARPET` / GREEN CARPET NATAL PLUM
DALEA SPECIES
EREMOPHILA SPECIES
JUNIPERUS C. `BLUE PACIFIC` / BLUE PACIFIC JUNIPER
LANTANA SPECIES
OLEA EUROPAEA `MONTRA` / LITTLE OLLIE DWARF OLIVE

GROUNDCOVERS
1-5 GAL
ACACIA REDOLENS `DESERT CARPET` TM / BANK CATCLAW
DALEA SPECIES
JUNIPERUS SPECIES
LANTANA SPECIES
PORTULACARIA AFRA / ELEPHANT BUSH
PYRACANTHA FORTUNEANA `GRABERI` / GRABERI PYRACANTHA

VINE
1-5 GAL
BOUGAINVILLEA X `BARBARA KARST` / BARBARA KARST BOUGAINVILLEA
ROSA BANKSIAE `ALBA PLENA` / WHITE LADY BANK`S ROSE

PASTURE
NATIVE DESERT WILDFLOWER MIX

LAWN
TYPE TBD

DECOMPOSED GRANITE
TYPE TBD

STABILIZED DECOMPOSED GRANITE
TYPE TBD

OVERFLOW PARKING -
3/8" GRAVEL
TYPE TBD

Thermal Ranch Horse Park (PA-1) | Plant Legend

September 15, 2025 | L-14

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PLANT SCHEDULE TREES

BOTANICAL / COMMON NAME	SIZE	WU	CANOPY	MATURE HEIGHT	MATURE WIDTH
ACCENT PALM TREES					
BEAUCARNEA RECURVATA PONY TAIL PALM	24"BOX	M 0.5	10'	6 - 10ft. ht.	3 - 6ft. w.
BISMARCKIA NOBIUS BISMARK PALM	24"BOX	M 0.5	12'	20 - 50ft. ht.	10 - 15ft. w.
CHAMAEROPS HUMILIS MEDITERRANEAN FAN PALM	36"BOX	M 0.5	8'	6ft. ht.	6 - 10ft. w.
LARGE AND MEDIUM TREES					
BAUHINIA VARIEGATA (PURPUREA) PURPLE ORCHID TREE	15 GAL	M 0.5	20'	25 - 40ft. ht.	25 - 40ft. w.
CHORISIA SPECIOSA SILK FLOSS TREE	24"BOX	M 0.5	20'	40 - 65ft. ht.	25 - 40ft. w.
OLEA EUROPAEA `SWANHILL FRUITLESS` EUROPEAN OLIVE	36"BOX	L 0.2	30'	25 - 40ft. ht.	25 - 40ft. w.
PARKINSONIA SPECIES	24"BOX	L 0.2	20'	15 - 25ft. ht.	15 - 25ft. w.
PROSOPIS SPECIES	24"BOX	L 0.2	20'	25 - 40ft. ht.	25 - 40ft. ht.
SCHINUS MOLLE CALIFORNIA PEPPER	36"BOX	M 0.5	30'	25 - 40ft. ht.	25 - 40ft. w.
TIPUANA TIPU TIPU TREE	24"BOX	M 0.5	30'	25 - 40ft. ht.	25 - 40ft. w.
PALM TREES					
PHOENIX DACTYLIFERA DATE PALM	+20`-30` HTS	M 0.5	20'	25 - 40ft. ht.	25 - 40ft. w.
WASHINGTONIA ROBUSTA MEXICAN FAN PALM	+20`-30` HTS	M 0.5	15'	25 - 40ft. ht.	6 - 10ft. w.
SMALL TREES					
ACACIA ANEURA MULGA	24"BOX	L 0.2	15'	15ft. ht.	10 - 15ft. ht.
ACACIA FARNESIANA SWEET ACACIA	24"BOX	L 0.2	20'	15 - 25ft. ht.	15 - 25ft. w.
CAESALPINIA CACALACO "SMOOTHIE" CASCALOTE	24"BOX	L 0.2	20'	10 - 15ft. ht.	10 - 15ft. w.
CITRUS SPECIES	24"BOX	M 0.5	15'	20 - 30ft. ht.	15 - 25 ft. w.
UPRIGHT TREES					
ACACIA SALICINA WILLOW ACACIA	24"BOX	M 0.5	15'	25ft. ht.	15 - 25ft. w.
ACACIA STENOPHYLLA SHOESTRING ACACIA	24"BOX	L 0.2	20'	25 - 40ft. ht.	10 - 15ft. w.
ACACIA WILLARDIANA PALO BLANCO	24"BOX	L 0.2	20'	15 - 25ft. ht.	10 - 15ft. ht.
CALLISTEMON SPECIES	24"BOX	M 0.5	20'	15 - ' ht.	15 - 25ft. w.
EUCALYPTUS SPECIES	15 GAL	M 0.5	15'	25 ft. ht.	40 - 0' w.

PLANT SCHEDULE SHRUBS

BOTANICAL / COMMON NAME	SIZE	WU	SPACING	MATURE HEIGHT	MATURE WIDTH
SHRUBS					
BOUGAINVILLEA SPECIES	5 GAL	M 0.5	60" o.c.	3 - 15ft. ht.	6 - 15ft. ht.
CAESALPINIA PULCHERRIMA RED BIRD OF PARADISE	5 GAL	L 0.2	72" o.c.	10 - ' ht.	10 - 15ft. w.
CALLISTEMON VIMINALIS `LITTLE JOHN` DWARF WEEPING BOTTLE BRUSH	5 GAL	M 0.5	48" o.c.	18 - 36in. ht.	1 - 3ft. w.
CARISSA MACROCARPA `GREEN CARPET` GREEN CARPET NATAL PLUM	5 GAL	M 0.5	48" o.c.	6 - 18in. ht.	3 - 6ft. w.
CASSIA SPECIES	5 GAL	L 0.2	48" o.c.	10 - 15ft. ht.	10 - 15ft. w.
DALEA SPECIES	5 GAL	L 0.2	48" o.c.	18 - 36in. ht.	1 - 3ft. w.
EREMOPHILA SPECIES	5 GAL	L 0.2	36" o.c.	18 - 36in. ht.	4 - 10ft. ht.
JUNIPERUS SPECIES	5 GAL	M 0.5	48" o.c.	3 - 6ft. ht.	1 - 3ft. w.
LANTANA SPECIES	5 GAL	M 0.5	48" o.c.	18 - 36in. ht.	1 - 3ft. w.
LEUCOPHYLLUM SPECIES	5 GAL	L 0.2	48" o.c.	3 - 1' ht.	3 - 6ft. w.
NERIUM OLEANDER `PETITE PINK` DWARF OLEANDER	5 GAL	M 0.5	60" o.c.	3 - 6ft. ht.	3 - 6ft. w.
OLEA EUROPAEA `MONTRA` LITTLE OLLIE DWARF OLIVE	5 GAL	L 0.2	48" o.c.	3 - 6ft. ht.	3 - 6ft. w.
SIMMONDSIA CHINENSIS JOJOBA	5 GAL	L 0.2	48" o.c.	6 - 10ft. ht.	6 - 10ft. w.
ACCENTS					
AGAVE SPECIES	5 - 15 GAL	L 0.2	48" o.c.	1 - 6ft. ht.	1 - 6ft. ht.
DASYLIRION WHEELERI GREY DESERT SPOON	5 - 15 GAL	L 0.2	60" o.c.	3 - 1' ht.	3 - 6ft. w.
ECHINOCACTUS GRUSONII GOLDEN BARREL CACTUS	5 - 15 GAL	L 0.2	24" o.c.	18 - 36in. ht.	1 - 3ft. w.
FEROCACTUS ACANTHODES COMPASS BARREL	5 - 15 GAL	L 0.2	24" o.c.	1 - 8ft. ht.	2 - 3ft. ht.
HESPERALOE SPECIES	5 - 15 GAL	L 0.2	30" o.c.	2 - 4ft. ht.	1 - 4ft. ht.
NOLINA NELSONII BLUE NOLINA	5 - 15 GAL	L 0.2	48" o.c.	4 - 6ft. ht.	6 - 10ft. w.
OPUNTIA SANTA-RITA SANTA RITA PRICKLYPEAR	5 - 15 GAL	L 0.2	36" o.c.	3 - 1' ht.	3 - 1' w.
YUCCA SPECIES	5 - 15 GAL	L 0.2	72" o.c.	5 - 15ft. ht.	2 - 4ft. ht.
GRASSES					
MUHLENBERGIA RIGENS DEER GRASS	5 GAL	M 0.5	48" o.c.	3 - 6ft. ht.	3 - 6ft. w.
PENSTEMON SPECIES MIXED SPECIES	5 GAL	M 0.5	36" o.c.	18 - 36in. ht.	1 - 3ft. w.
SPOROBOLUS AIROIDES ALKALI SACATON	5 GAL	L 0.2	48" o.c.	18 - 36in. ht.	1 - 3ft. w.
SPOROBOLUS WRIGHTII BIG SACATON	5 GAL	M 0.5	48" o.c.	3 - 5ft. ht.	3 - 5ft. ht.

GROUNDCOVERS					
JUNIPERUS SPECIES	1 - 5 GAL	M 0.5	48" o.c.	2ft. ht.	6 - 8ft. w.
PYRACANTHA FORTUNEANA `GRABERI` GRABERI PYRACANTHA	1 - 5 GAL	M 0.5	96" o.c.	6 - 10ft. ht.	6 - 10ft. w.
ACACIA REDOLENS `DESERT CARPET` TM BANK CATCLAW	1 - 5 GAL	L 0.2	48" o.c.	18 - 36in. ht.	6 - 10ft. w.
DALEA SPECIES	1 - 5 GAL	L 0.2	48" o.c.	6 - 18in. ht.	4 - 6ft. ht.
LANTANA SPECIES	1 - 5 GAL	M 0.5	48" o.c.	6 - 18in. ht.	3 - 6ft. w.
PORTULACARIA AFRA ELEPHANT BUSH	1 - 5 GAL	L 0.2	48" o.c.	6 - ' ht.	3 - 6ft. w.
VINE/ESPALIER					
BOUGAINVILLEA X `BARBARA KARST` BARBARA KARST BOUGAINVILLEA	5 GAL	M 0.5	96" o.c.	10 - 15ft. ht.	10 - 20ft. ht.
ROSA BANKSIAE `ALBA PLENA` WHITE LADY BANK`S ROSE	5 GAL	M 0.5	96" o.c.	< 15ft. ht.	6 - 10ft. ht.
BASIN GRASSES					
MUHLENBERGIA SPECIES	5 GAL	M 0.5	48" o.c.	3 - 6 ft. ht.	3- 6 ft. ht.
CAREX SPECIES	5 GAL	M 0.5	36" o.c.	1 - 3 ft. ht.	1 - 3 ft. ht.

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CASE: PPT230005
EXHIBIT: Exhibit B
DATE: 3/13/2025
PLANNER: Russell Brady

☐ Meeting ☑ Comment Agenda ☐ Final

LEGEND

ORANGE = BUILDING & SAFETY GRADING DIVISION COMMENTS
PURPLE = PLANNING DEPARTMENT COMMENTS
GREEN = ENVIRONMENTAL PROGRAMS DEPARTMENT COMMENTS
LIGHT ORANGE = TRANSPORTATION DEPARTMENT COMMENTS
BLUE = FLOOD CONTROL DISTRICT COMMENTS
LIGHT GREEN = REGIONAL PARKS & OPEN SPACE DISTRICT COMMENTS
RED = FIRE DEPARTMENT COMMENTS
YELLOW = ENVIRONMENTAL HEALTH DEPARTMENT COMMENTS
LIGHT BLUE = BUILDING & SAFETY PLAN CHECK COMMENTS
ORANGE = WASTE MANAGEMENT DEPARTMENT COMMENTS

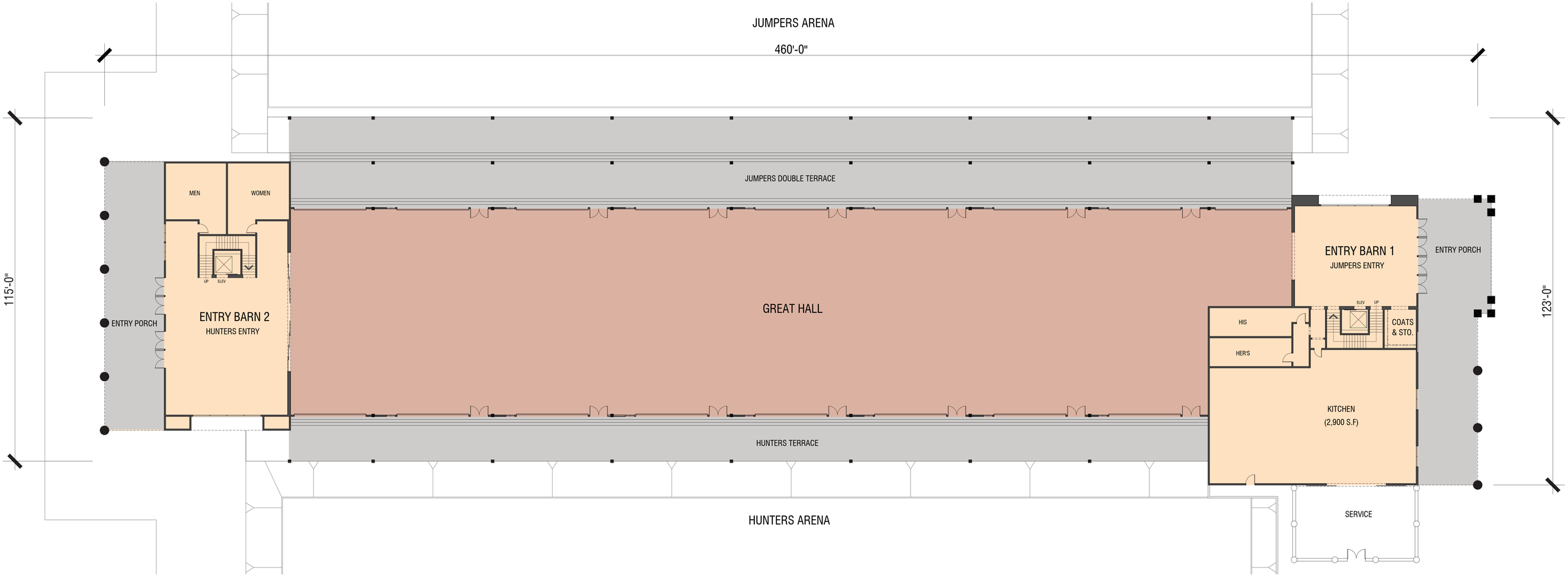
DESERT EQUESTRIAN HOLDING

THERMAL RANCH

THERMAL, CALIFORNIA

ARCHITECTS . PLANNERS . DESIGNERS
WHA.
ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

02-16-2023



HUNTERS	ENTRY BARN 2
FIRST LEVEL	3698 SQ. FT.
SECOND LEVEL	3452 SQ. FT.
TOTAL	7150 SQ. FT.
ENTRY PORCH	1800 SQ. FT.
BALCONY	1800 SQ. FT.
LOGGIA	2003 SQ. FT.
SUB- TOTAL	12753 SQ. FT.

GREAT HALL	
GREAT HALL (ENCLOSED)	22441 SQ. FT.
JUMPERS TERRACE	10199 SQ. FT.
HUNTERS TERRACE	4610 SQ. FT.
SUB- TOTAL	37251 SQ. FT.

0 8 16 32

SCALE: 1/16" = 1'-0"

FIRST FLOOR PLAN

65395 SQ. FT.

JUMPERS	ENTRY BARN 1
FIRST LEVEL	5709 SQ. FT.
SECOND LEVEL	3769 SQ. FT.
TOTAL	9478 SQ. FT.
ENTRY PORCH	2089 SQ. FT.
BALCONY	1150 SQ. FT.
LOGGIA	2674 SQ. FT.
SUB- TOTAL	15391 SQ. FT.

BUILDING SUMMARY (A/C)	
ENTRY BARN 1	9478 SQ. FT.
ENTRY BARN 2	7150 SQ. FT.
GREAT HALL	22441 SQ. FT.
SUB- TOTAL	39070 SQ. FT.
BUILDING SUMMARY - OVERALL	
ENTRY BARN 1	15391 SQ. FT.
ENTRY BARN 2	12753 SQ. FT.
GREAT HALL	37251 SQ. FT.
GRAND- TOTAL	65395 SQ. FT.

GRAND VIP BARN

EQUESTRIAN CENTER AT THERMAL RANCH

THERMAL, CALIFORNIA

DESERT EQUESTRIAN HOLDING LLC

COUNTY SUBMITTAL

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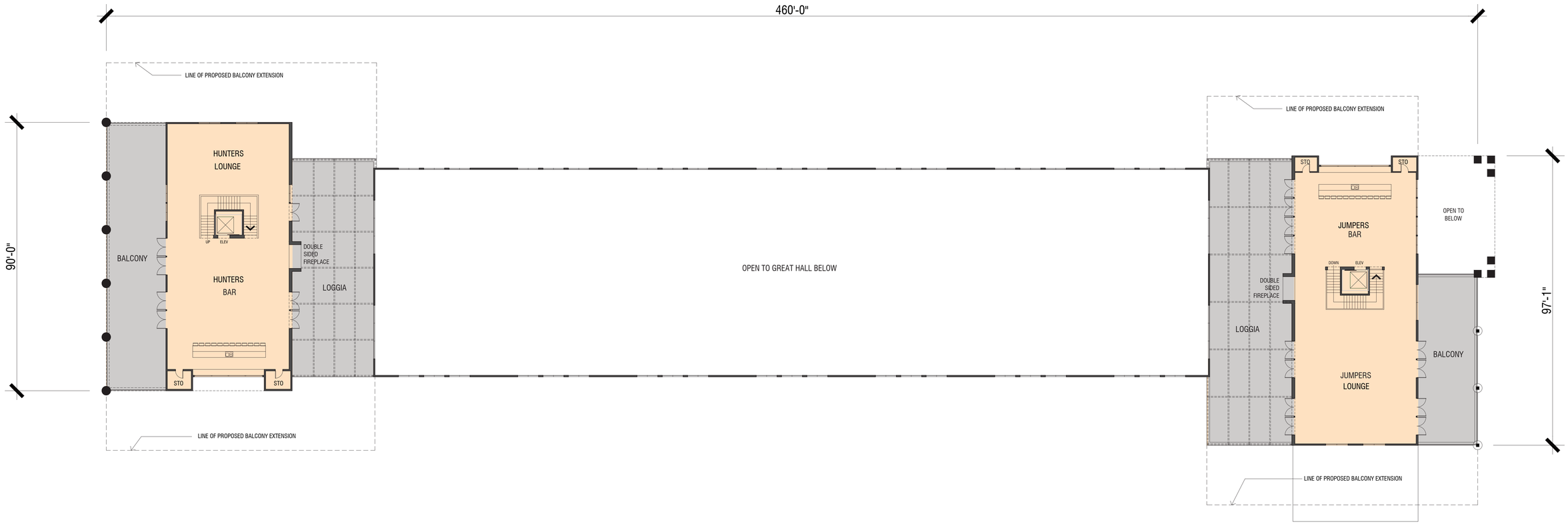
WHA
ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO



HUNTERS	ENTRY BARN 2
FIRST LEVEL	3698 SQ. FT.
SECOND LEVEL	3452 SQ. FT.
TOTAL	7150 SQ. FT.
ENTRY PORCH	1800 SQ. FT.
BALCONY	1800 SQ. FT.
LOGGIA	2003 SQ. FT.
SUB- TOTAL	12753 SQ. FT.

GREAT HALL	
GREAT HALL (ENCLOSED)	22441 SQ. FT.
JUMPERS TERRACE	10199 SQ. FT.
HUNTERS TERRACE	4610 SQ. FT.
SUB- TOTAL	37251 SQ. FT.

0 8 16 32

SCALE: 1/16" = 1'-0"

SECOND FLOOR PLAN

JUMPERS	ENTRY BARN 1
FIRST LEVEL	5709 SQ. FT.
SECOND LEVEL	3769 SQ. FT.
TOTAL	9478 SQ. FT.
ENTRY PORCH	2089 SQ. FT.
BALCONY	1150 SQ. FT.
LOGGIA	2674 SQ. FT.
SUB- TOTAL	15391 SQ. FT.

BUILDING SUMMARY (A/C)	
ENTRY BARN 1	9478 SQ. FT.
ENTRY BARN 2	7150 SQ. FT.
GREAT HALL	22441 SQ. FT.
SUB- TOTAL	39070 SQ. FT.
BUILDING SUMMARY - OVERALL	
ENTRY BARN 1	15391 SQ. FT.
ENTRY BARN 2	12753 SQ. FT.
GREAT HALL	37251 SQ. FT.
GRAND- TOTAL	65395 SQ. FT.

GRAND VIP BARN

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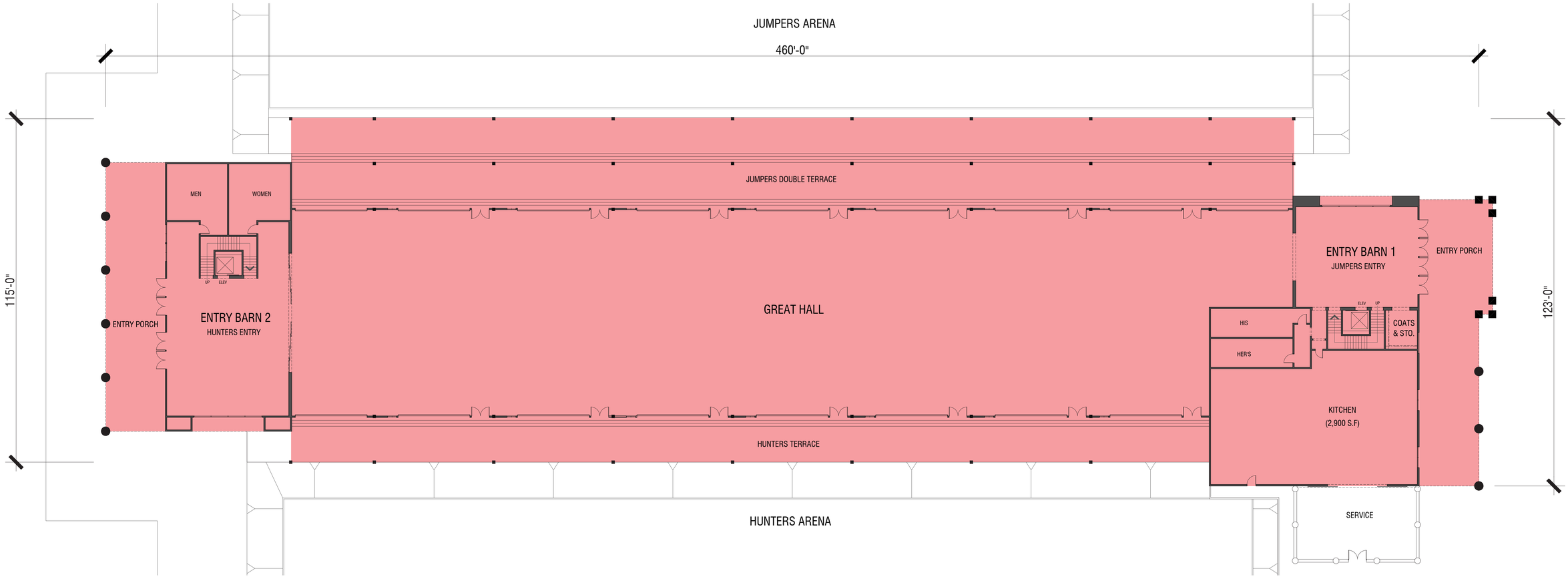

0 8 16 32

SCALE: 1/16" = 1'-0"

BUILDING FOOTPRINT = 51,620 S.F.

GRAND VIP BARN

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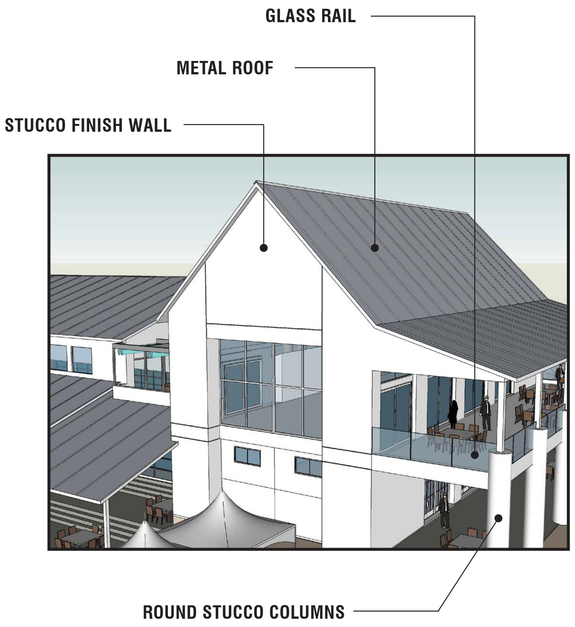
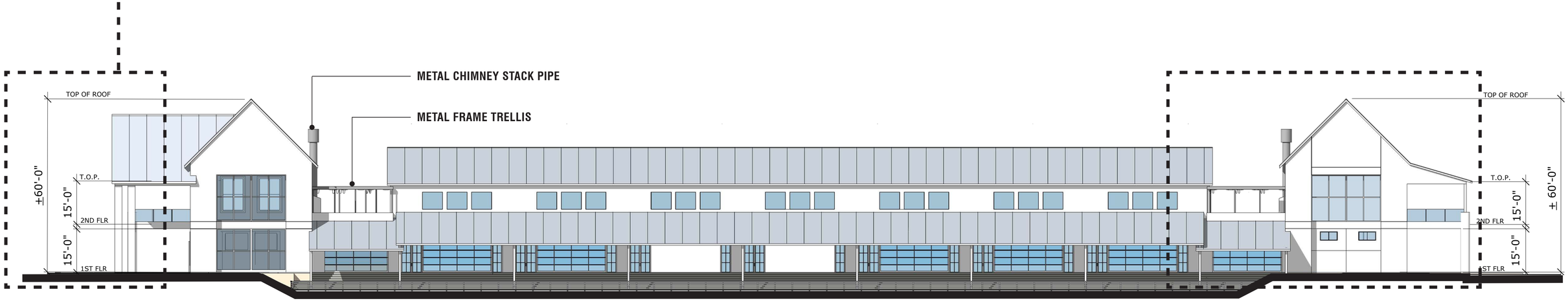
SIDE ELEVATION - ENTRY BARN 1

0 8 16 32





JUMPERS SIDE ELEVATION

0 8 16 32

GRAND VIP BARN

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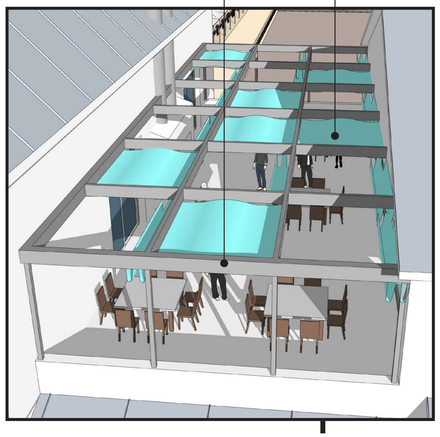
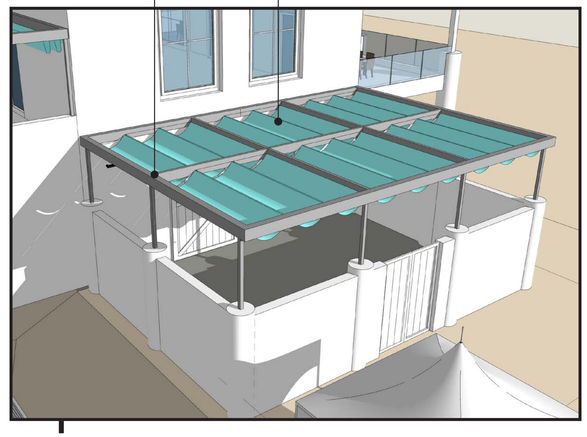
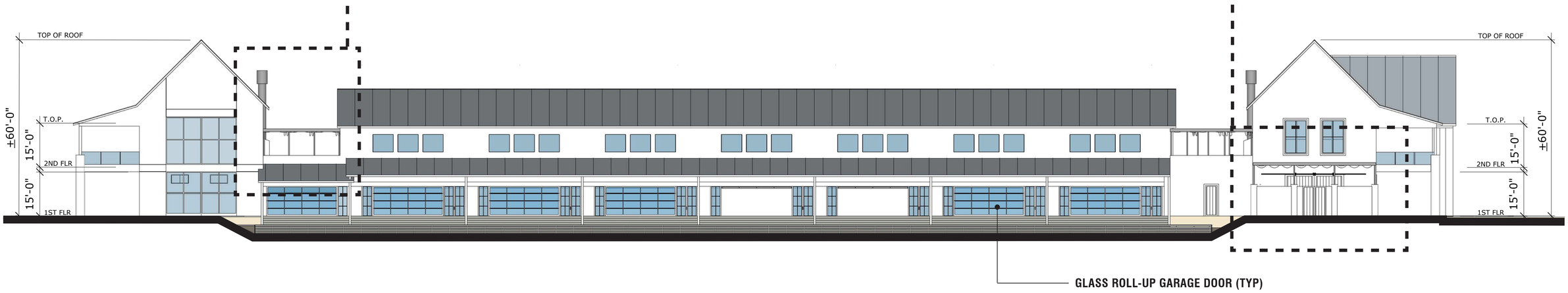


SIDE ELEVATION - ENTRY BARN 2

0 8 16 32





HUNTERS SIDE ELEVATION

0 8 16 32

GRAND VIP BARN

EQUESTRIAN CENTER AT THERMAL RANCH

THERMAL, CALIFORNIA

DESERT EQUESTRIAN HOLDING LLC

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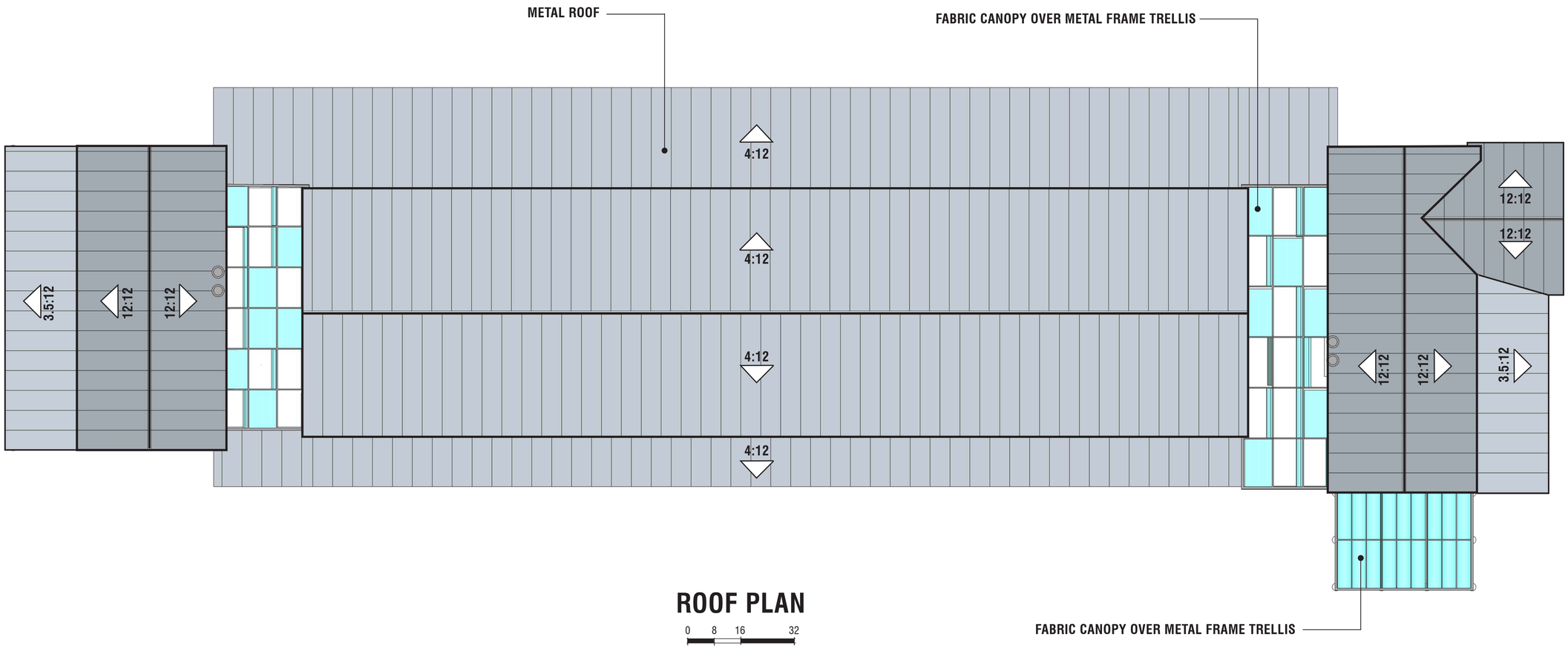

ROOF PLAN

0 8 16 32

GRAND VIP BARN

EQUESTRIAN CENTER AT THERMAL RANCH

THERMAL, CALIFORNIA

DESERT EQUESTRIAN HOLDING LLC

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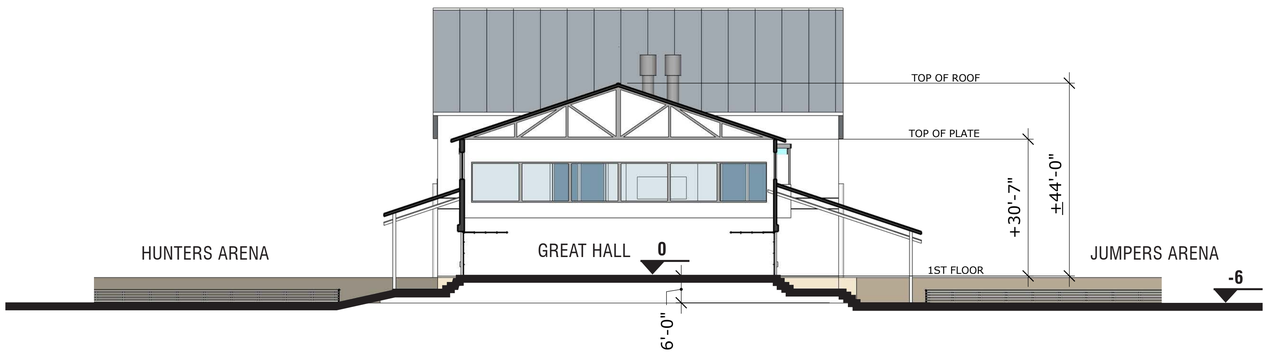
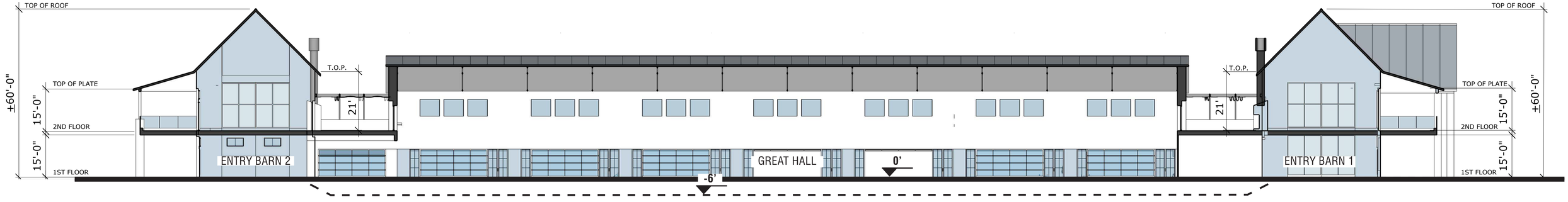


CROSS SECTION

0 8 16 32



LONGITUDINAL SECTION

0 8 16 32

GRAND VIP BARN

EQUESTRIAN CENTER AT THERMAL RANCH

THERMAL, CALIFORNIA

DESERT EQUESTRIAN HOLDING LLC

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PERSPECTIVE - VIEWING JUMPERS ARENA AND ENTRY BARN 2

PERSPECTIVE - VIEWING HUNTERS ARENA AND ENTRY BARN 1

GRAND VIP BARN

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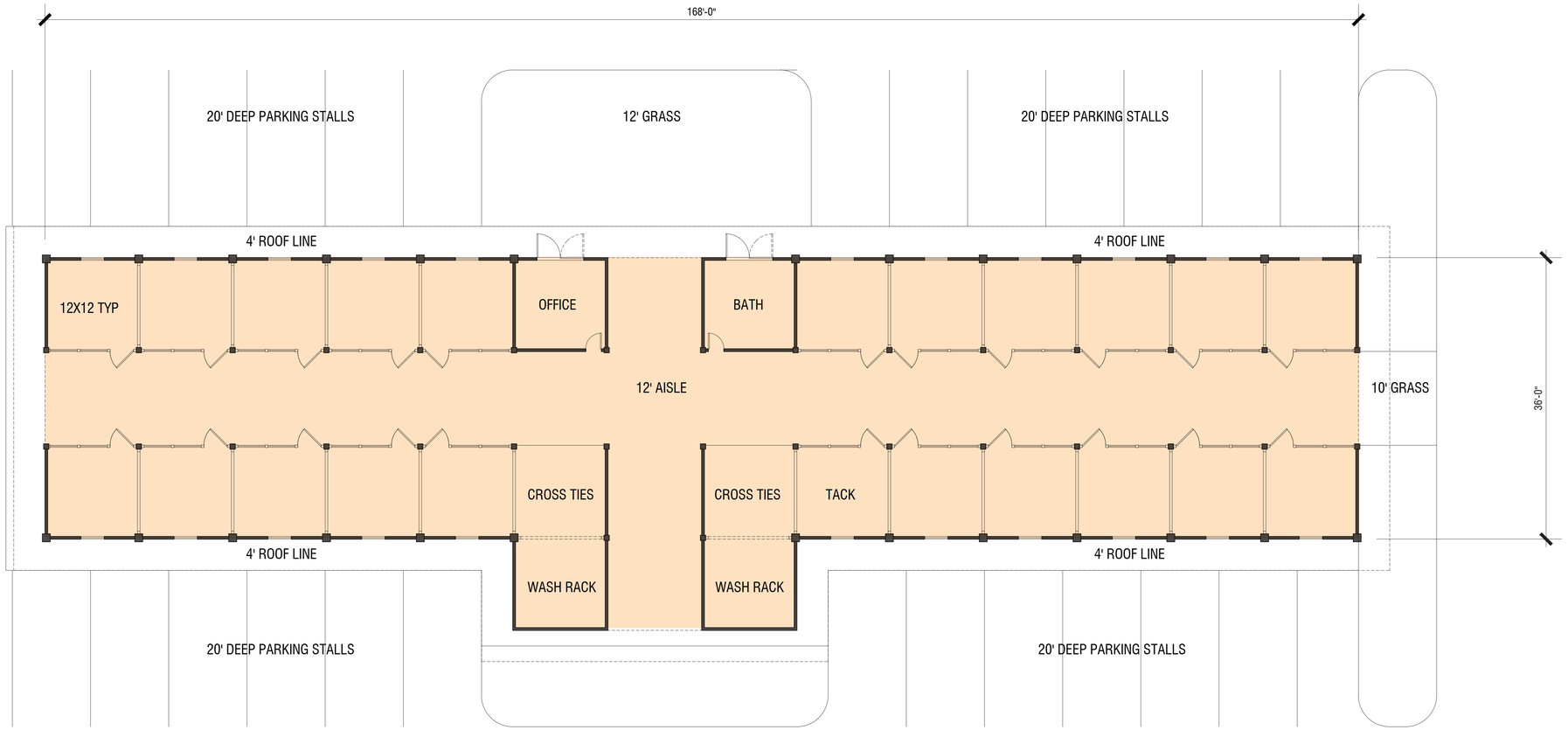

0 4 8 16

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

6472 SQ. FT.

FLOOR PLAN

PRIVATE BARN 1 (TYPICAL)

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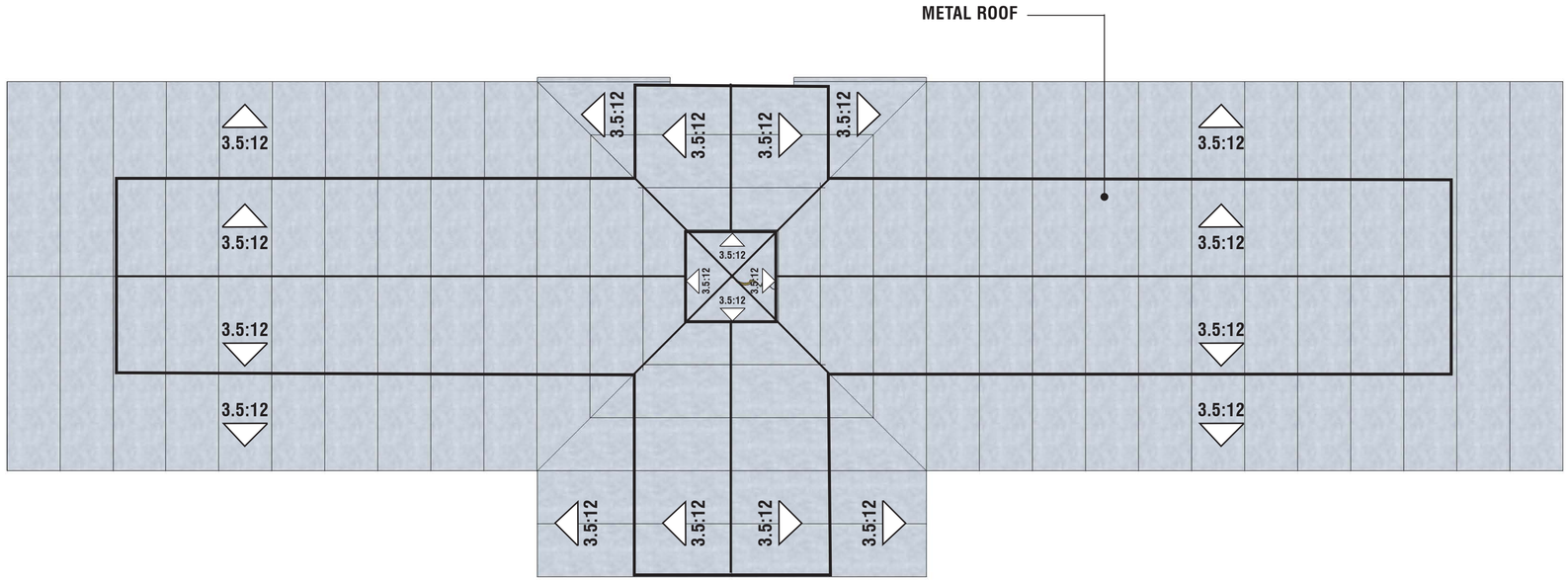

ROOF PLAN

0 4 8 16

PRIVATE BARN 1 (TYPICAL)

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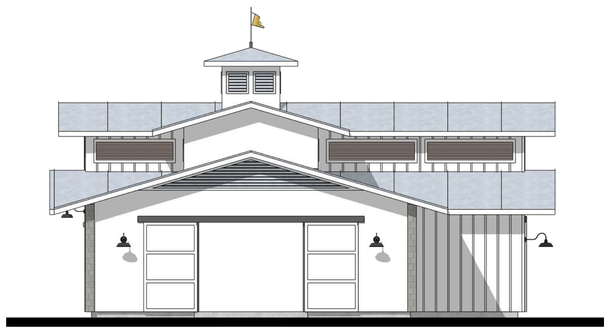
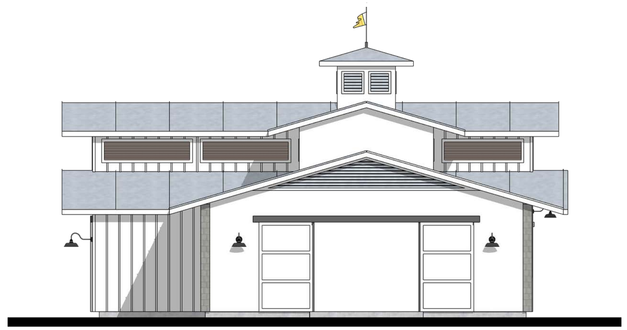


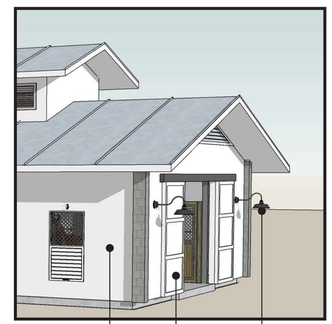
LEFT ELEVATION

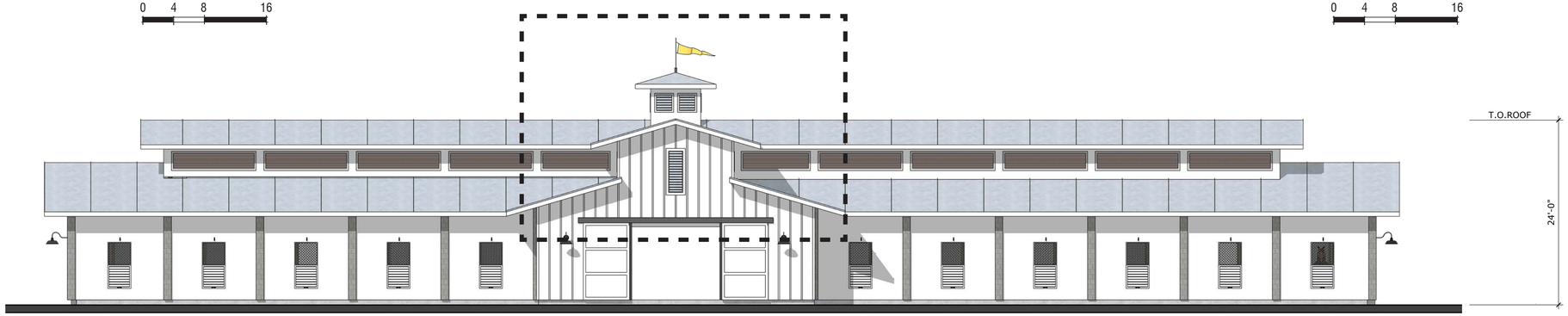
0 4 8 16



RIGHT ELEVATION

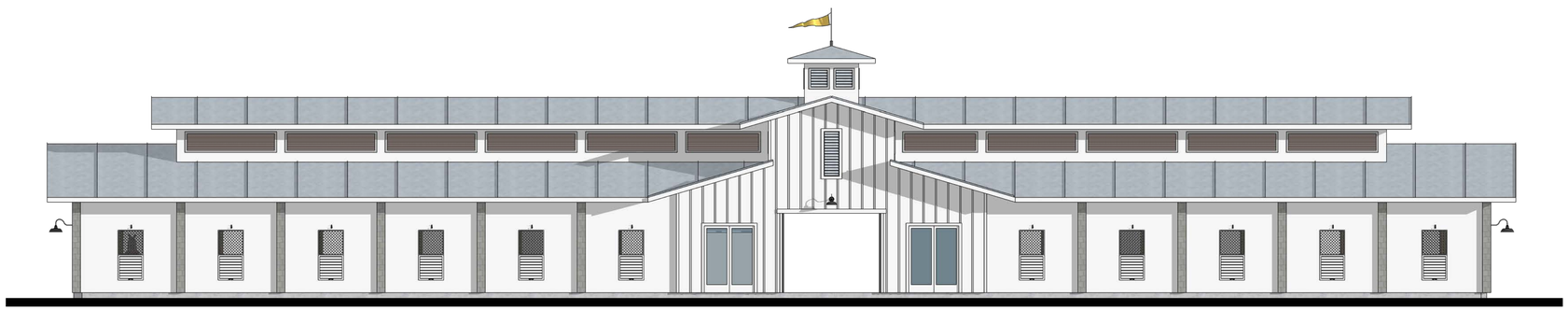
0 4 8 16





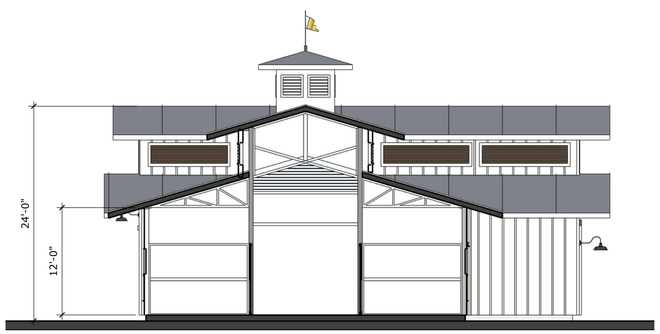
FRONT ELEVATION

0 4 8 16



REAR ELEVATION

0 4 8 16



CROSS SECTION

0 4 8 16

PRIVATE BARN 1 (TYPICAL)

DESERT EQUESTRIAN HOLDING LLC

EQUESTRIAN CENTER AT THERMAL RANCH

THERMAL, CALIFORNIA

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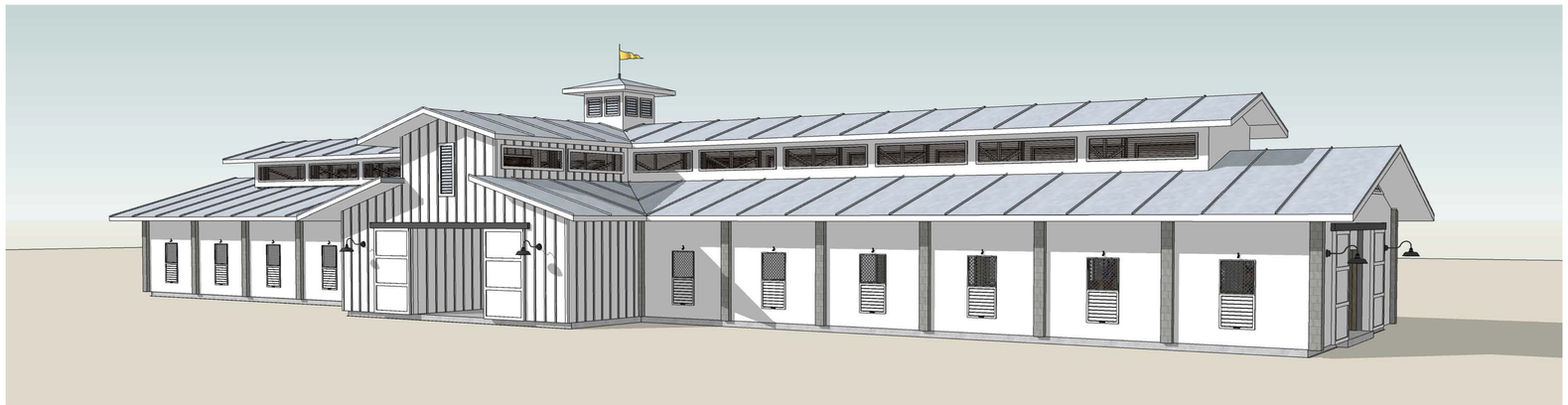
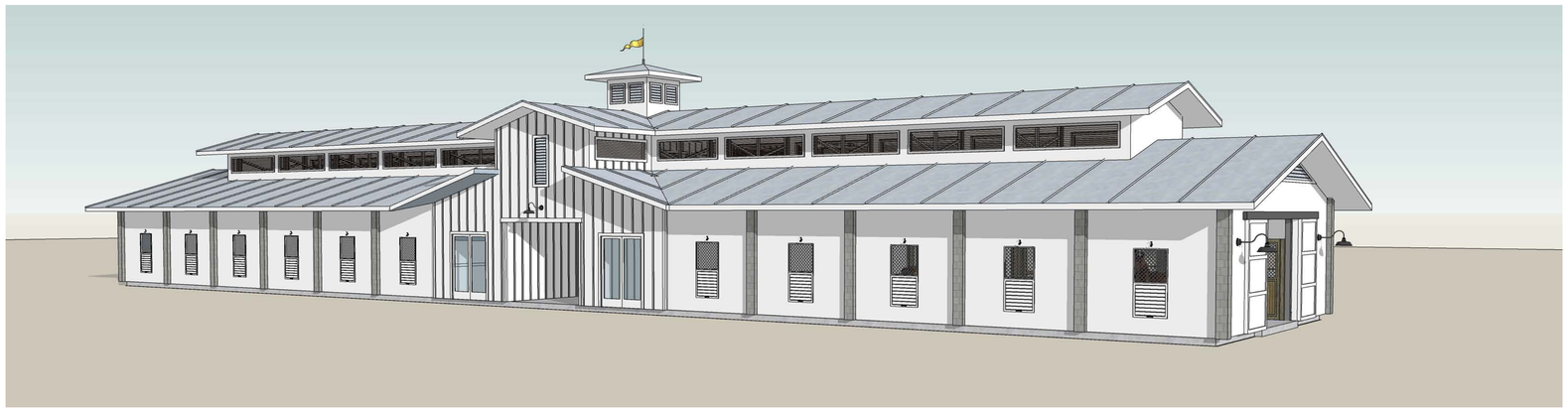


PERSPECTIVE - FRONT VIEW



PERSPECTIVE - REAR VIEW

PRIVATE BARN 1 (TYPICAL)

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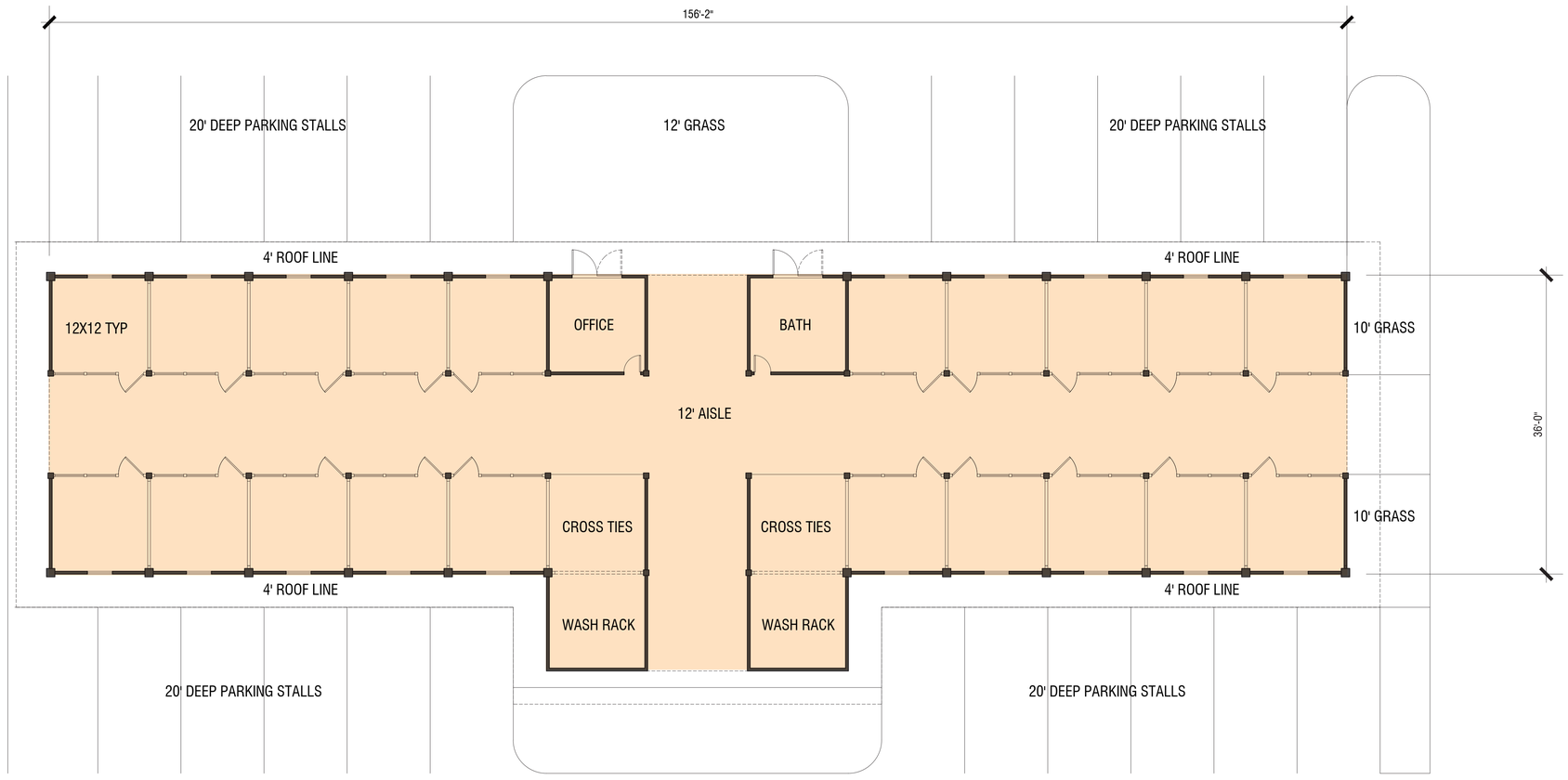

0 4 8 16

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

6046 SQ. FT.

FLOOR PLAN

PRIVATE BARN 2 (TYPICAL)

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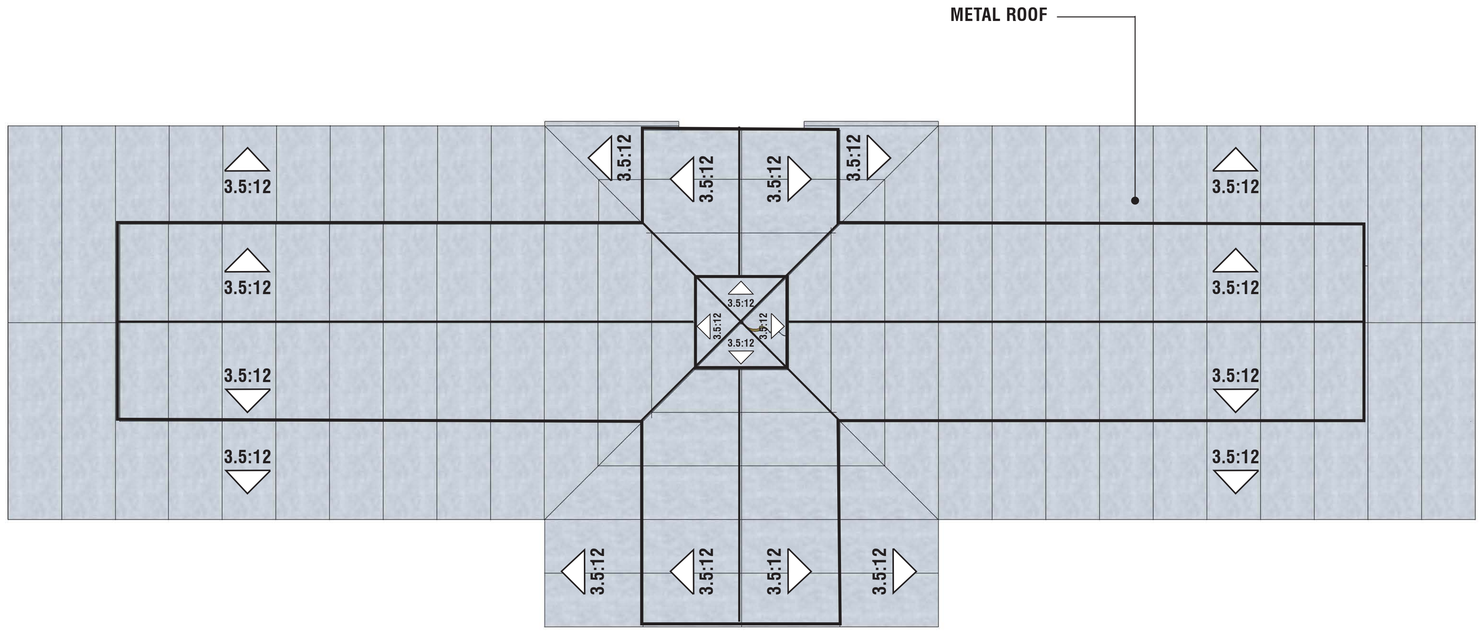

ROOF PLAN

PRIVATE BARN 2 (TYPICAL)

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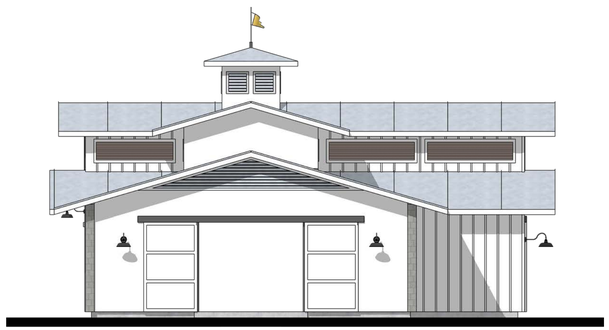
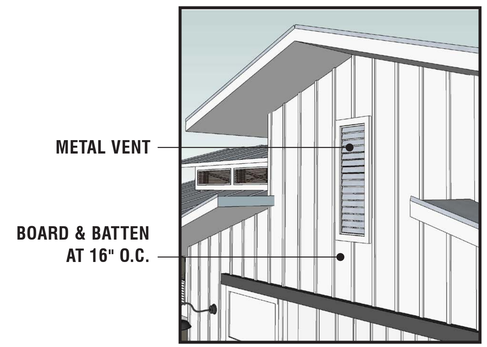
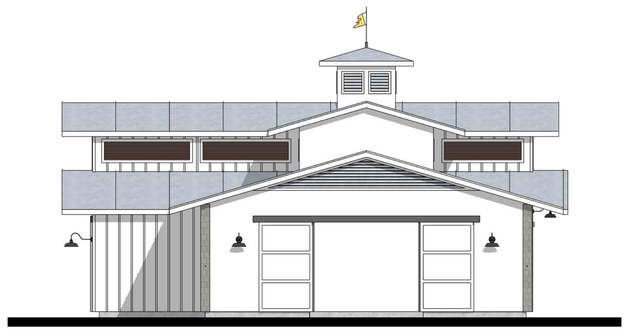


LEFT ELEVATION

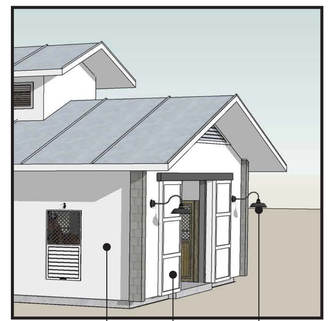
0 4 8 16

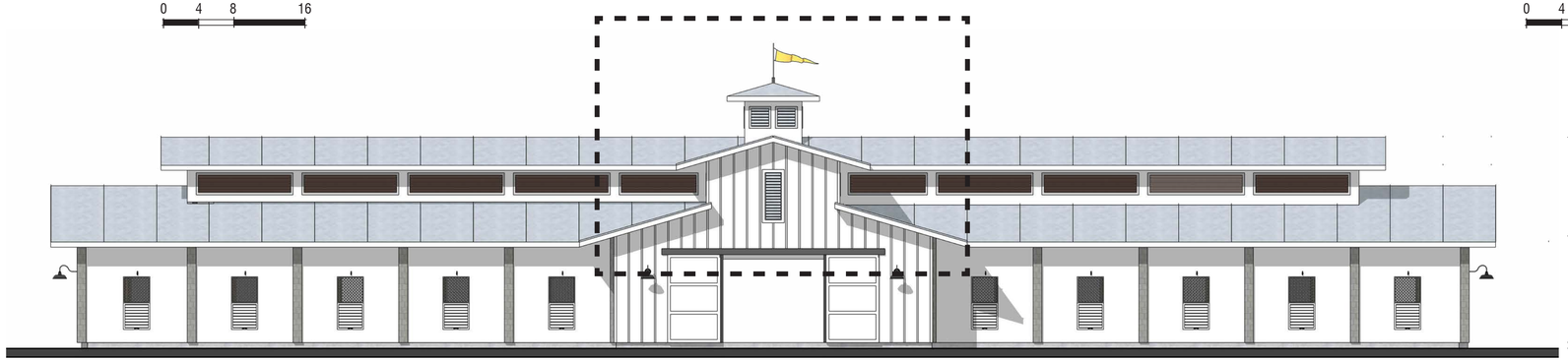




RIGHT ELEVATION

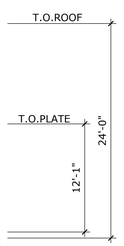
0 4 8 16

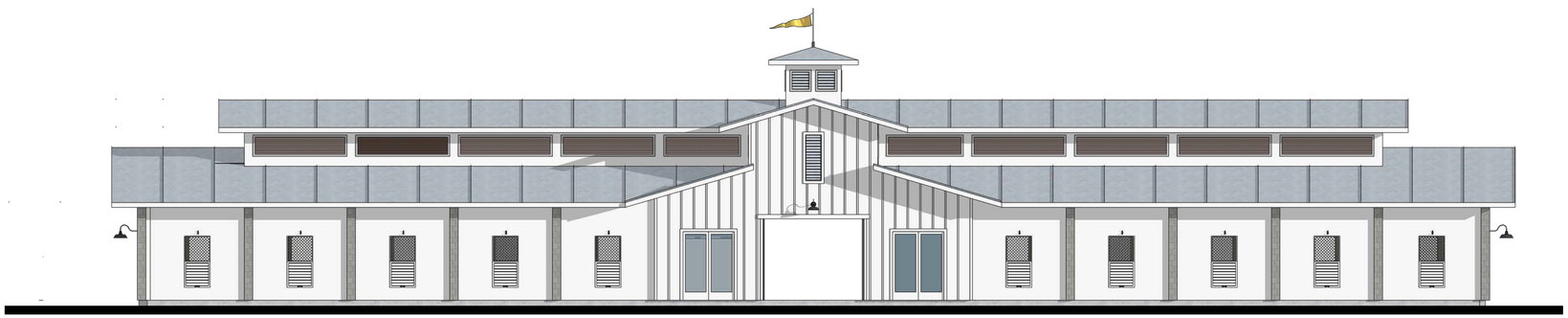




FRONT ELEVATION

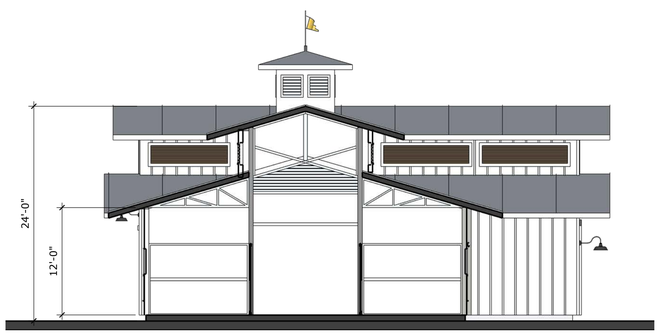
0 4 8 16





REAR ELEVATION

0 4 8 16



CROSS SECTION

PRIVATE BARN 2 (TYPICAL)

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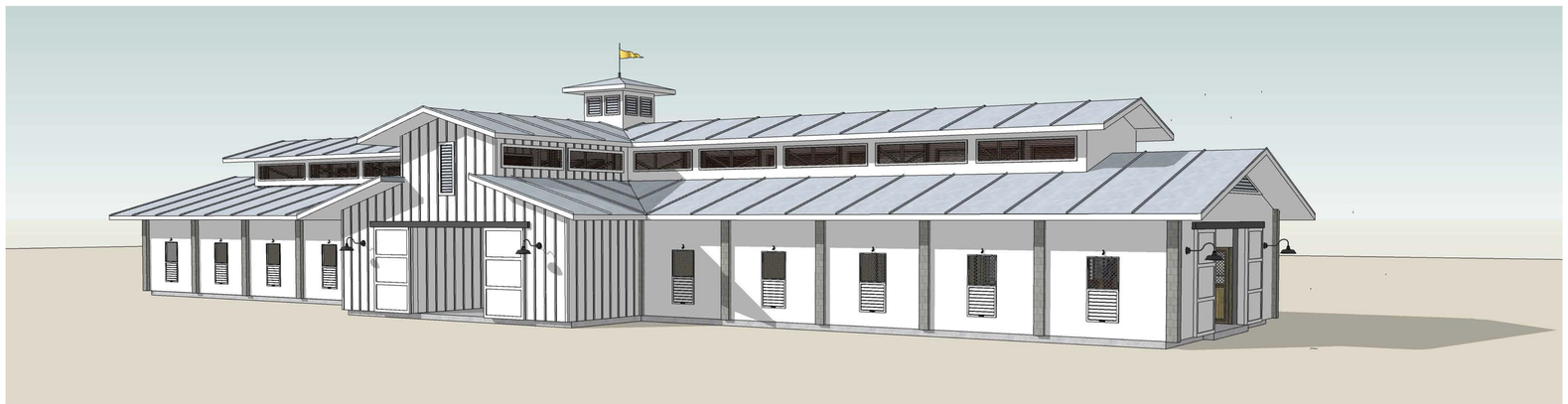

PERSPECTIVE - FRONT VIEW

PERSPECTIVE - REAR VIEW

PRIVATE BARN 2 (TYPICAL)

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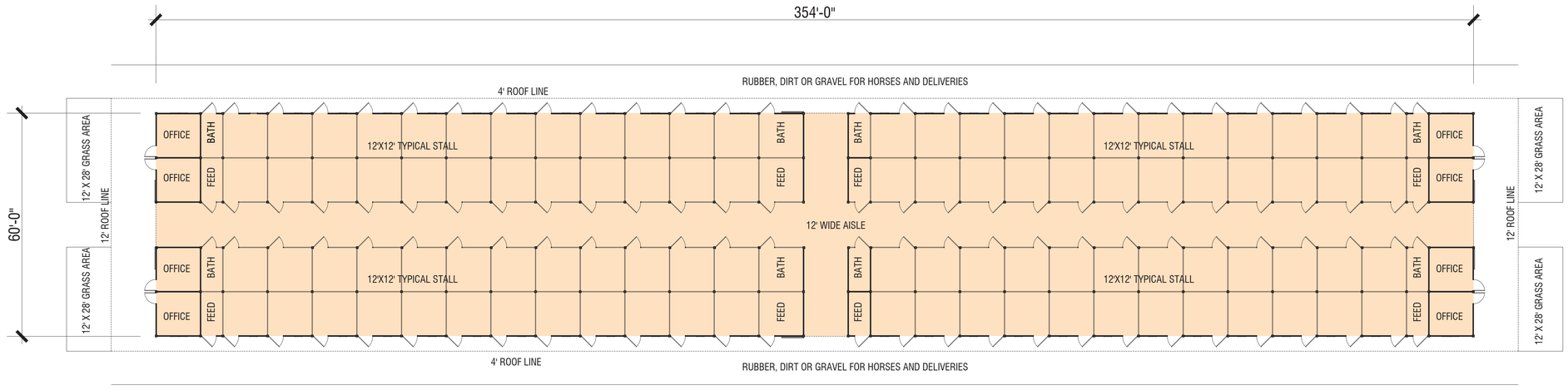
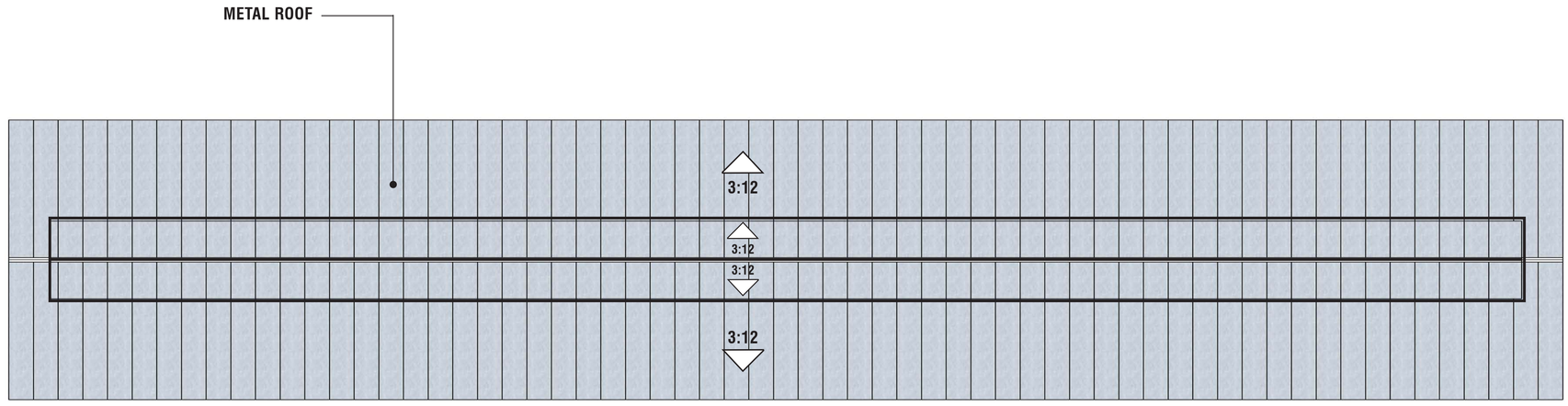


21240 SQ. FT.

FLOOR PLAN

0 8 16 32



ROOF PLAN

0 8 16 32

THE LARGE BARN (TYPICAL)

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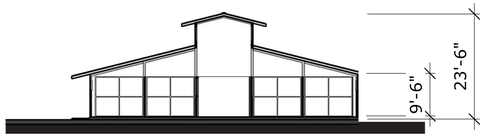
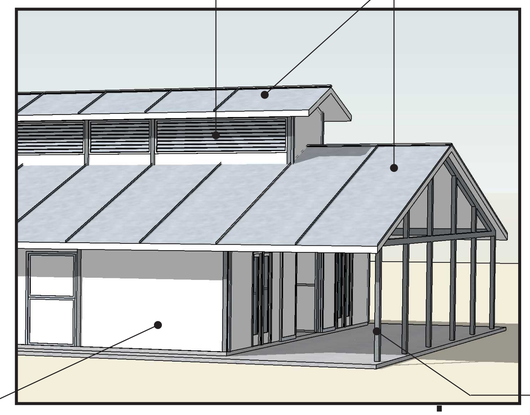


CROSS SECTION

0 8 16 32

LEFT SIDE ELEVATION

0 8 16 32

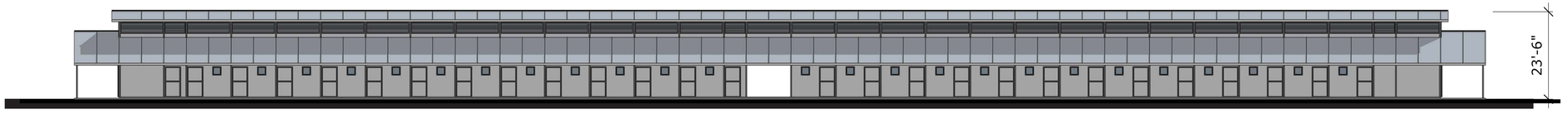


RIGHT SIDE ELEVATION

0 8 16 32

FRONT ELEVATION

0 8 16 32



REAR ELEVATION

0 8 16 32

THE LARGE BARN (TYPICAL)

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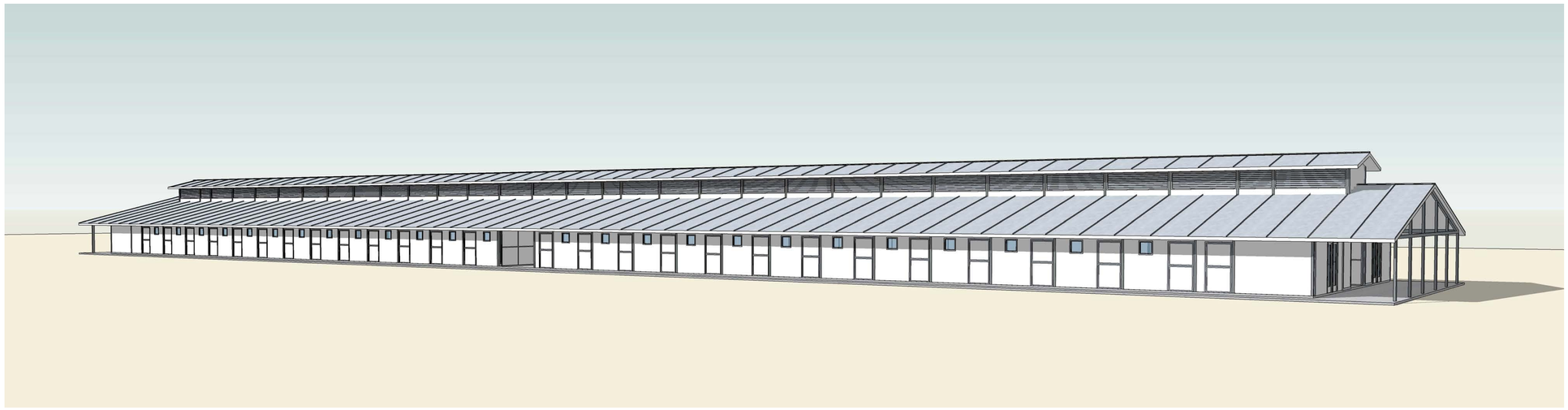
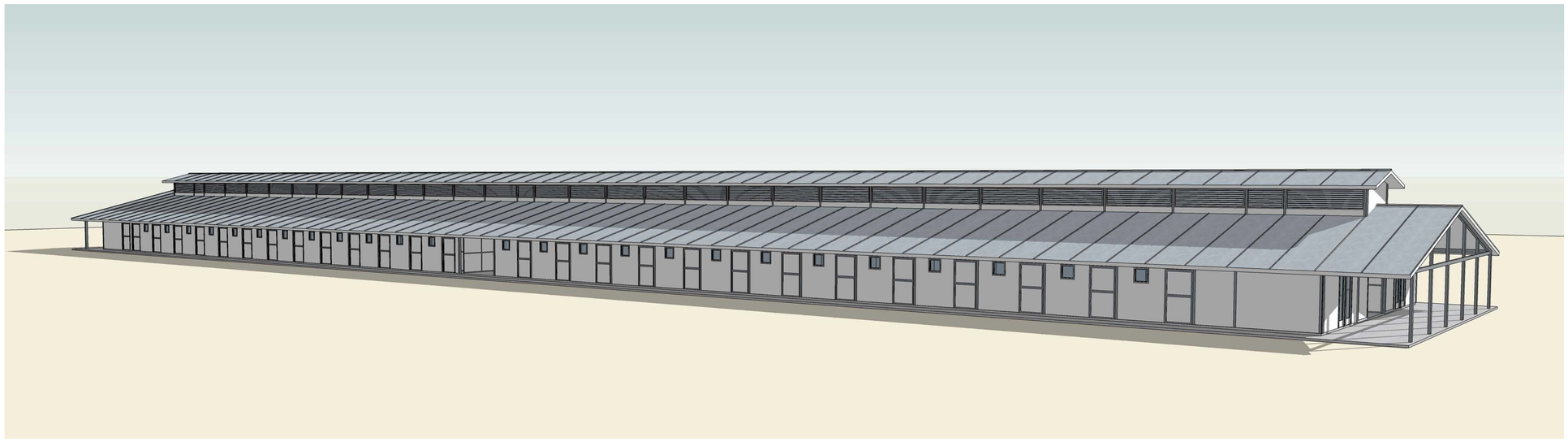


PERSPECTIVE - FRONT VIEW



PERSPECTIVE - REAR VIEW

THE LARGE BARN (TYPICAL)

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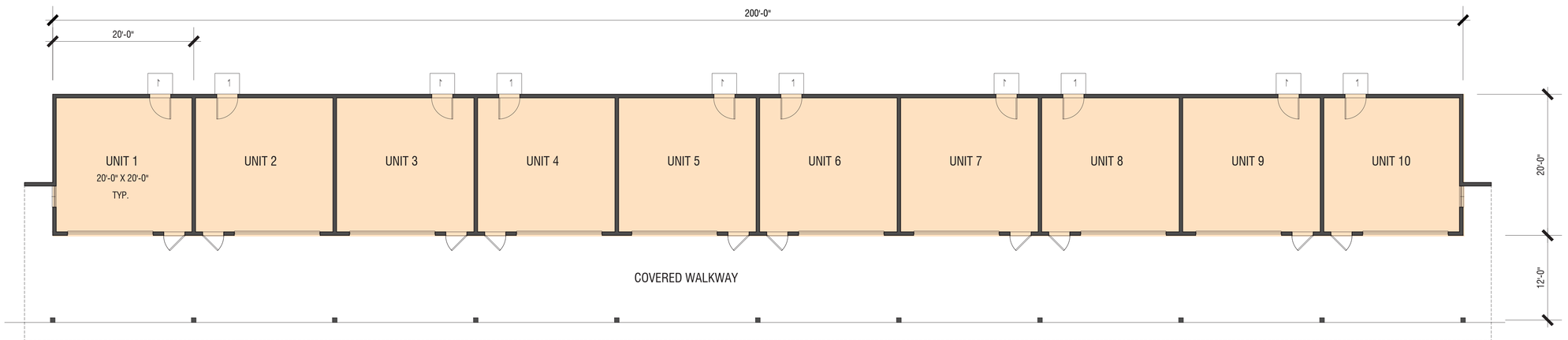
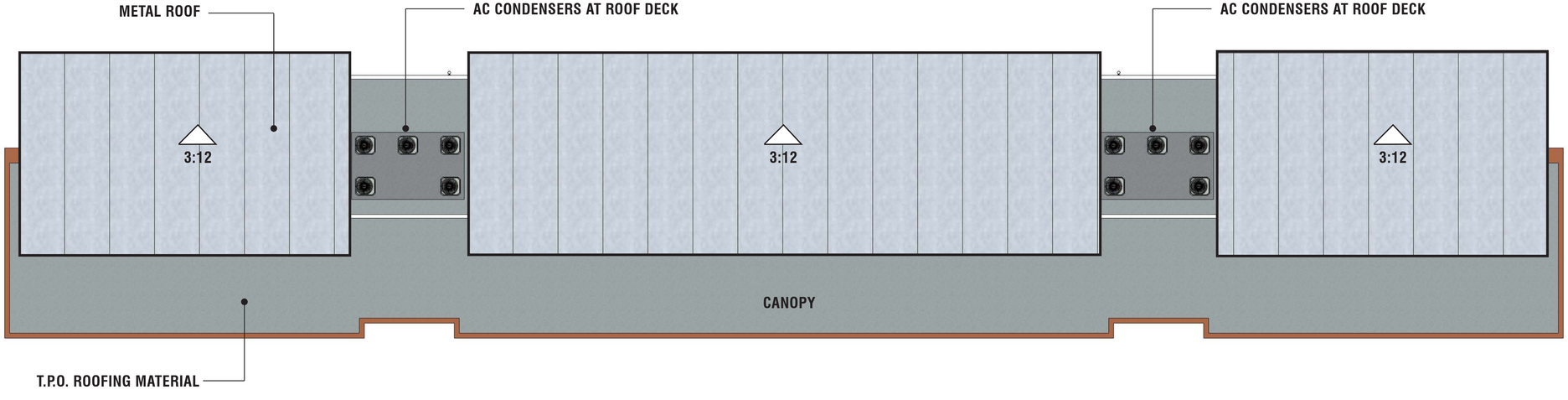


4000 SQ. FT.

FLOOR PLAN

0 4 8 16



ROOF PLAN

0 4 8 16

RETAIL BUILDING

EQUESTRIAN CENTER AT THERMAL RANCH

THERMAL, CALIFORNIA

DESERT EQUESTRIAN HOLDING LLC

COUNTY SUBMITTAL

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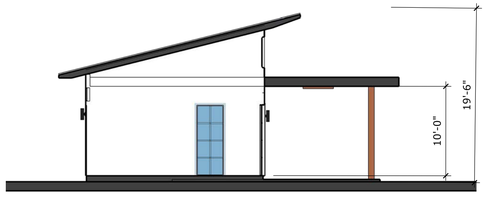
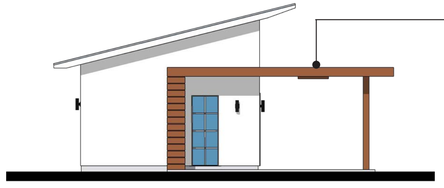
WHA.
ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO



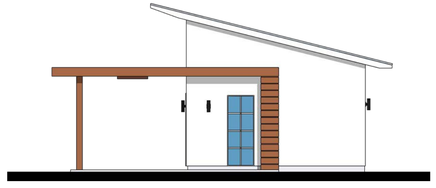
CROSS SECTION

0 4 8 16



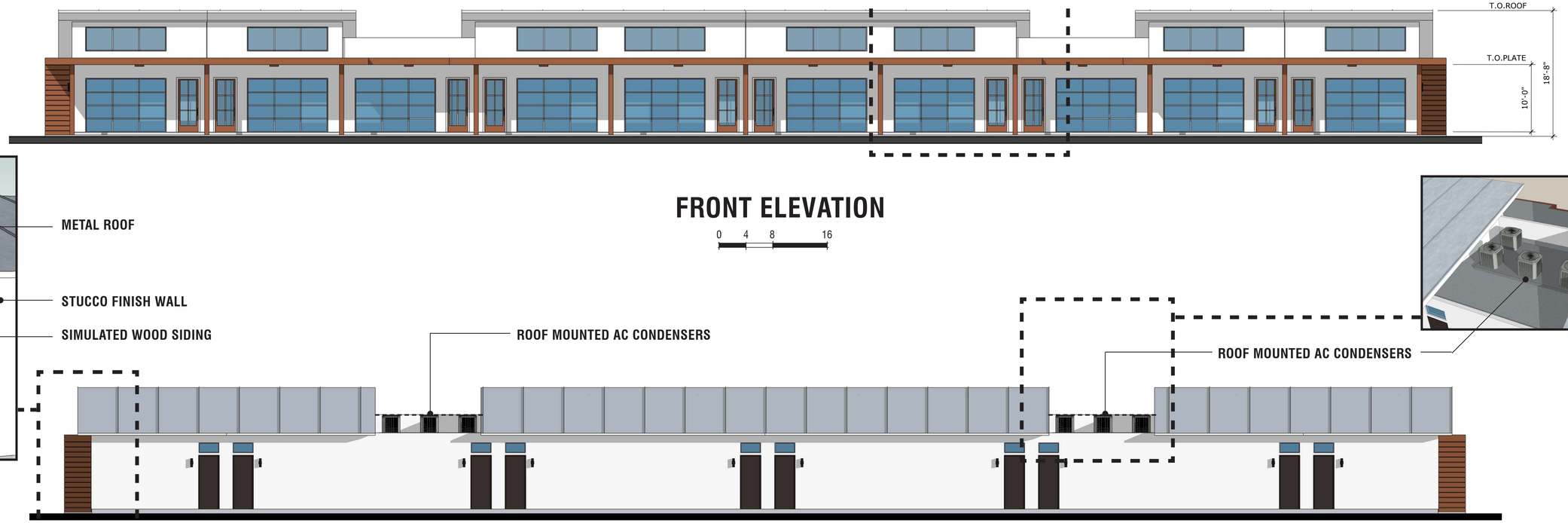
LEFT ELEVATION

0 4 8 16



RIGHT ELEVATION

0 4 8 16



FRONT ELEVATION

0 4 8 16

REAR ELEVATION

0 4 8 16

RETAIL BUILDING

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ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

PERSPECTIVE - FRONT VIEW

PERSPECTIVE - REAR VIEW

RETAIL BUILDING

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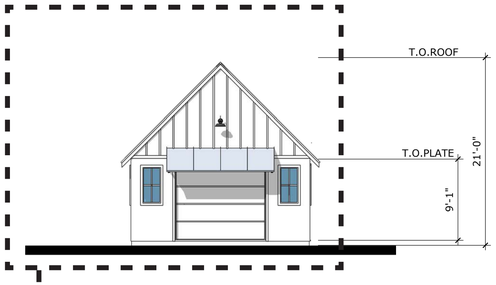
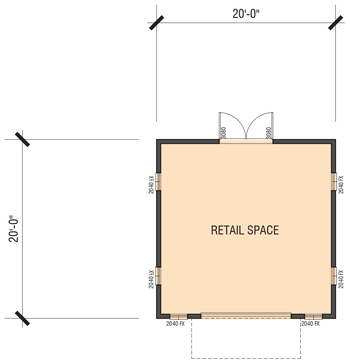


FRONT ELEVATION

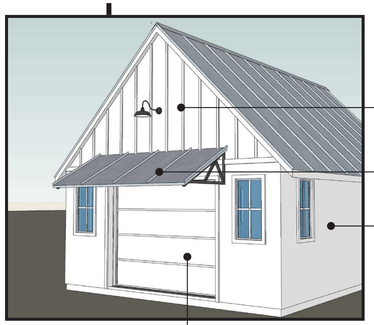
0 4 8 16



FLOOR PLAN

0 4 8 16

400 SQ. FT.

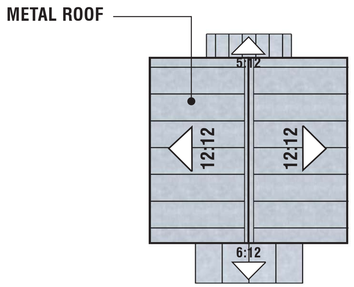


BOARD AND BATTEN AT 16" O.C.

METAL CANOPY

STUCCO FINISH WALL

ROLL-UP GARAGE DOOR

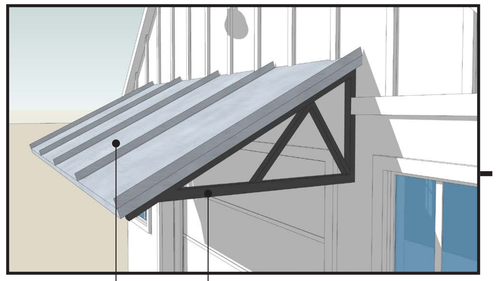


ROOF PLAN

0 4 8 16

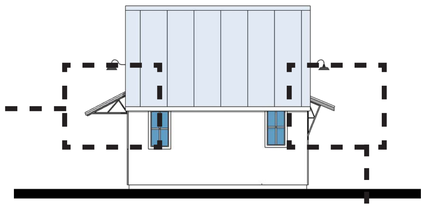
REAR ELEVATION

0 4 8 16



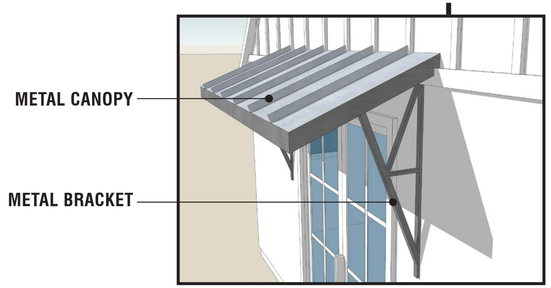
METAL BRACKET

METAL CANOPY



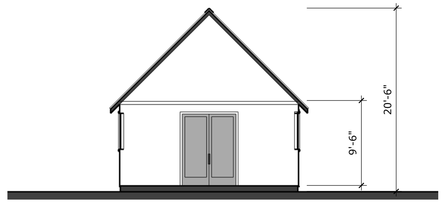
RIGHT ELEVATION

0 4 8 16



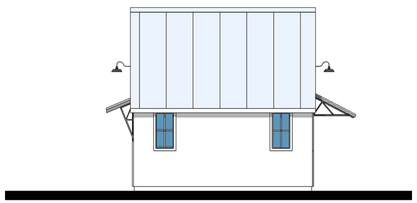
METAL CANOPY

METAL BRACKET



SECTION

0 4 8 16



LEFT ELEVATION

0 4 8 16

20X20 RETAIL BARN

DESERT EQUESTRIAN HOLDING LLC

EQUESTRIAN CENTER AT THERMAL RANCH

THERMAL, CALIFORNIA

COUNTY SUBMITTAL

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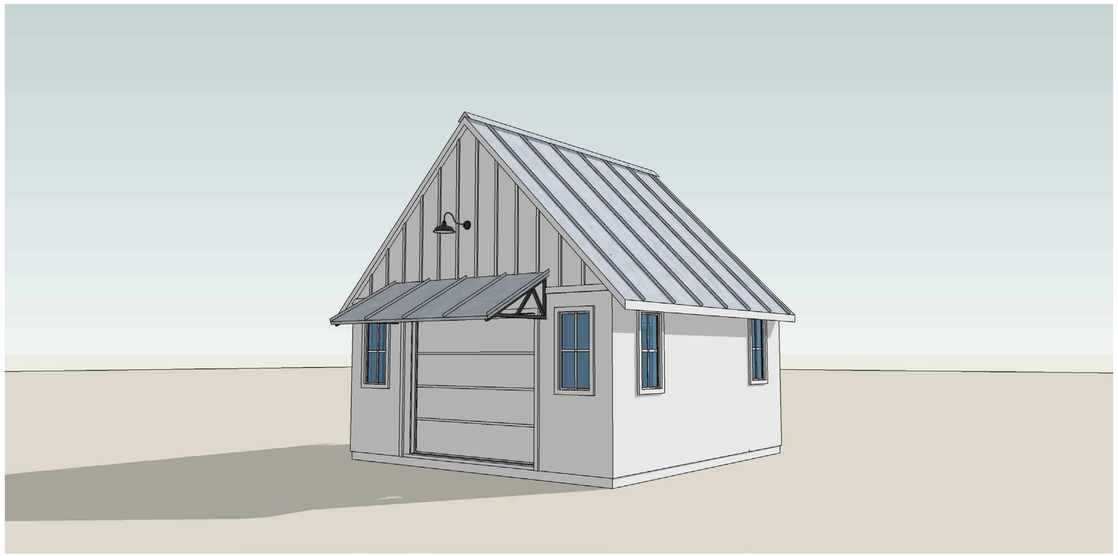
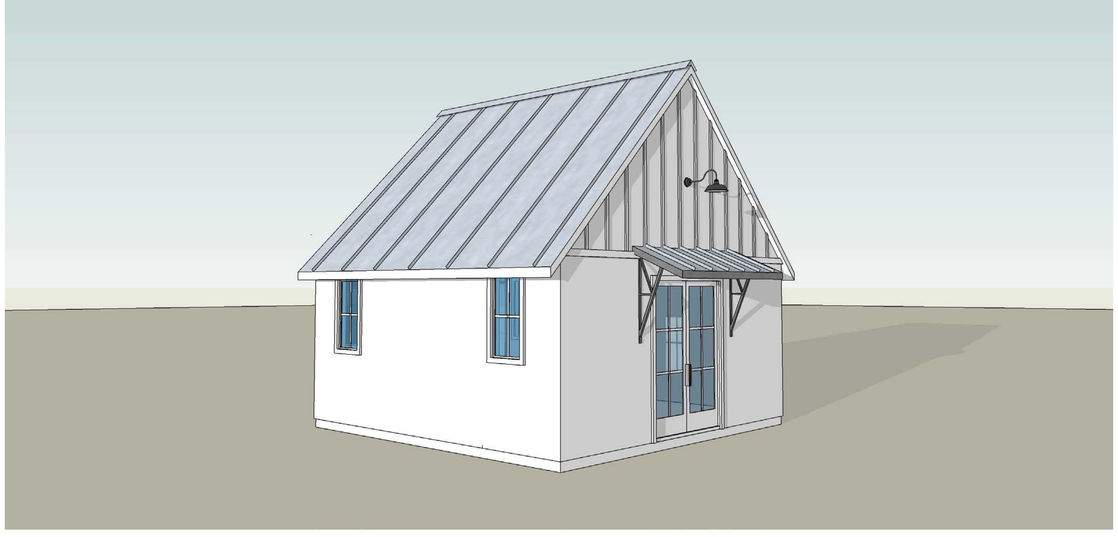


PERSPECTIVE - FRONT VIEW



PERSPECTIVE - REAR VIEW

20X20 RETAIL BARN

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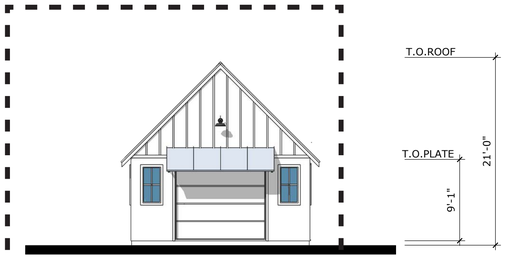
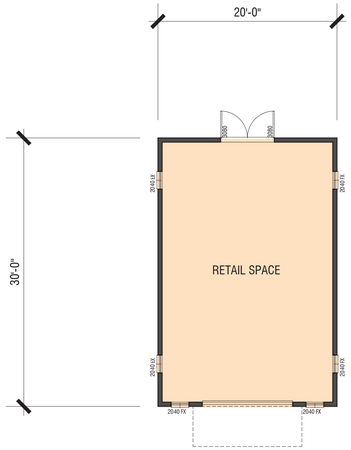


FRONT ELEVATION

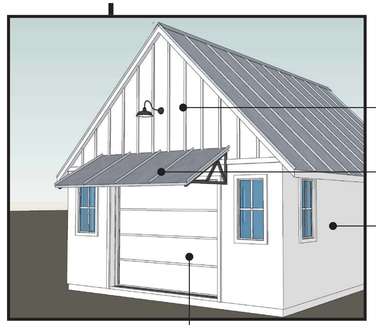
0 4 8 16



FLOOR PLAN

0 4 8 16

400 SQ. FT.

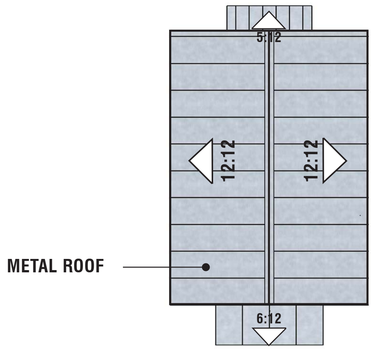


BOARD AND BATTEN AT 16" O.C.

METAL CANOPY

STUCCO FINISH WALL

ROLL-UP GARAGE DOOR



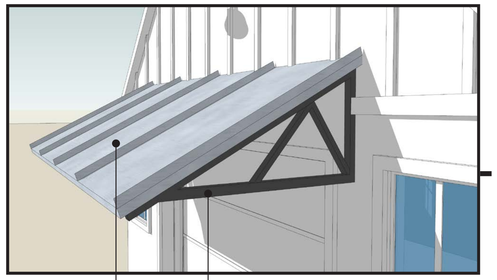
METAL ROOF

ROOF PLAN

0 4 8 16

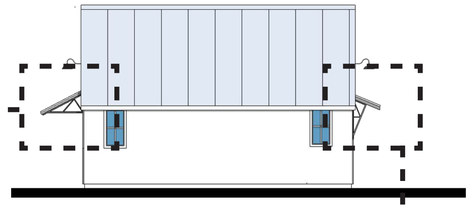
REAR ELEVATION

0 4 8 16



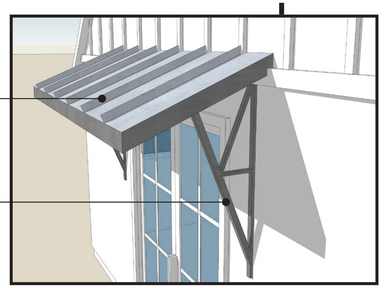
METAL BRACKET

METAL CANOPY



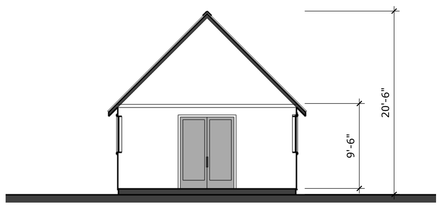
RIGHT ELEVATION

0 4 8 16



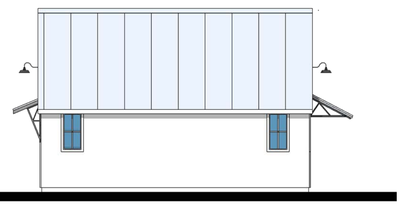
METAL CANOPY

METAL BRACKET



SECTION

0 4 8 16



LEFT ELEVATION

0 4 8 16

20X30 RETAIL BARN

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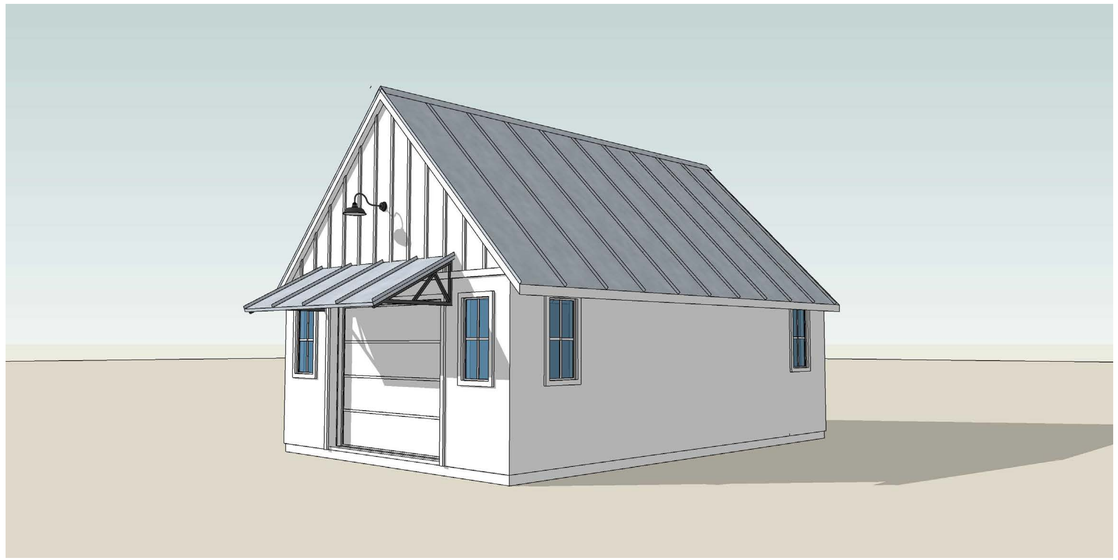
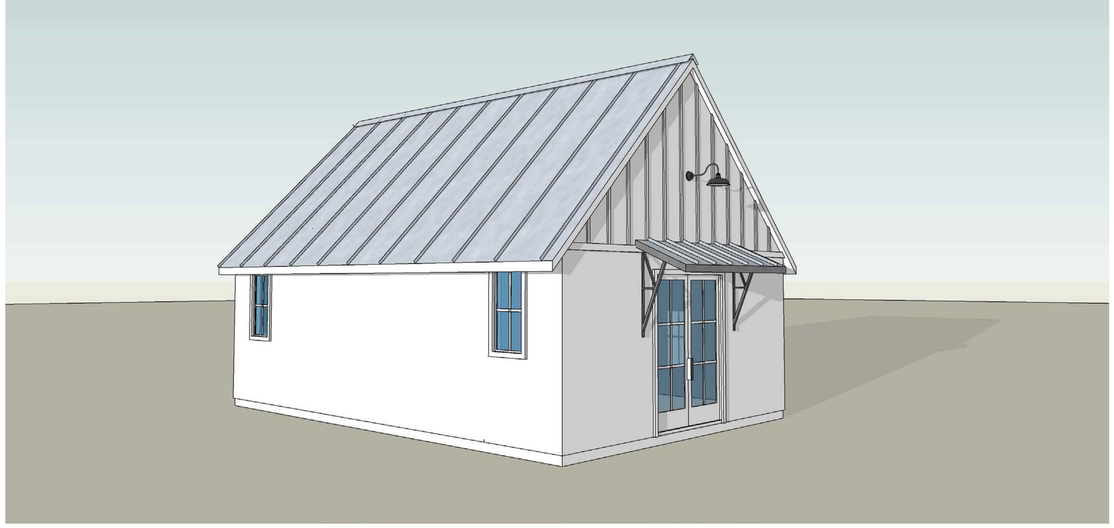


PERSPECTIVE - FRONT VIEW



PERSPECTIVE - REAR VIEW

20X30 RETAIL BARN

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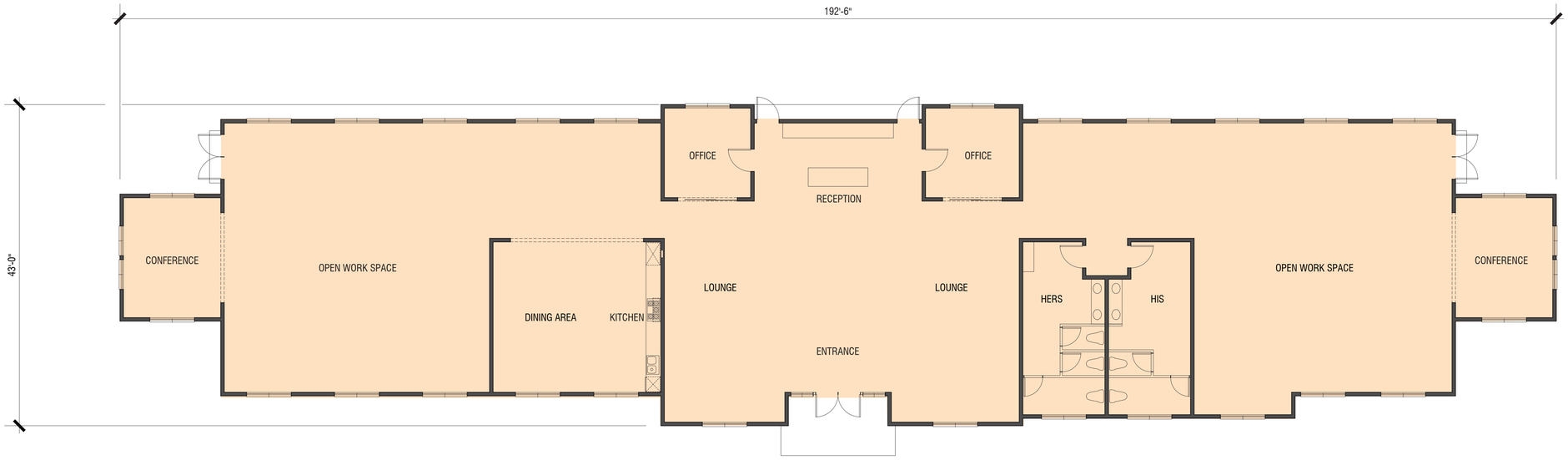
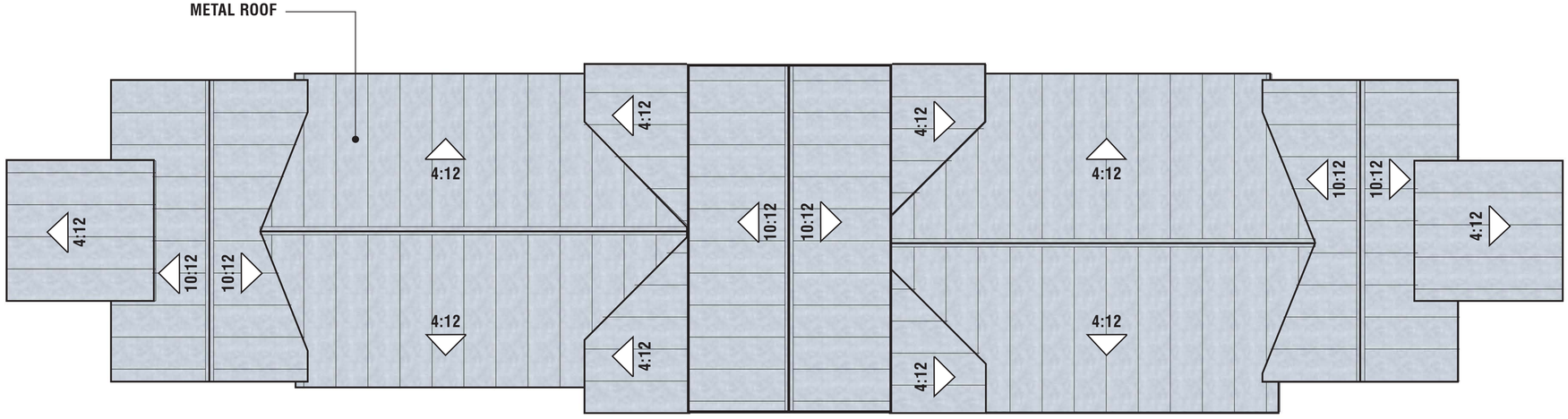


6885 SQ. FT.

FLOOR PLAN

0 4 8 16



ROOF PLAN

0 4 8 16

OFFICE BUILDING

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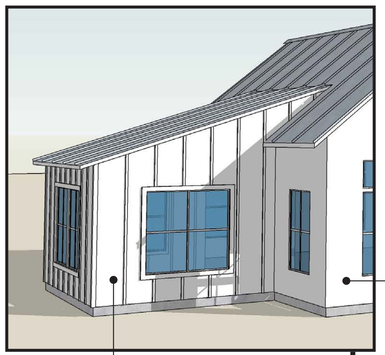
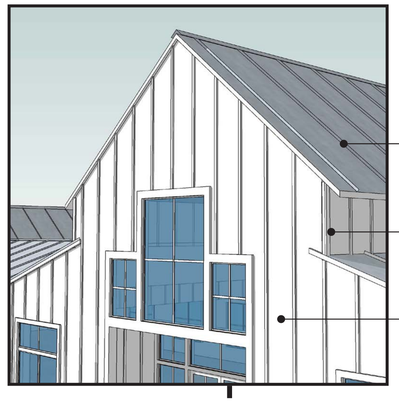


STUCCO FINISH WALL

BOARD AND BATTEN
AT 16" O.C.

LEFT ELEVATION

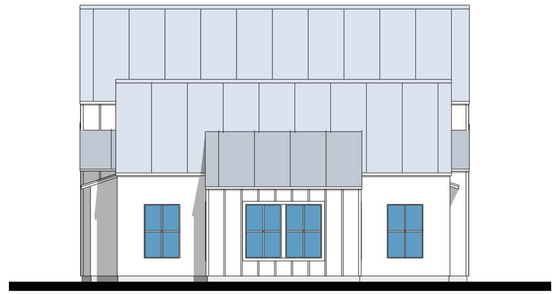
0 4 8 16



METAL ROOF

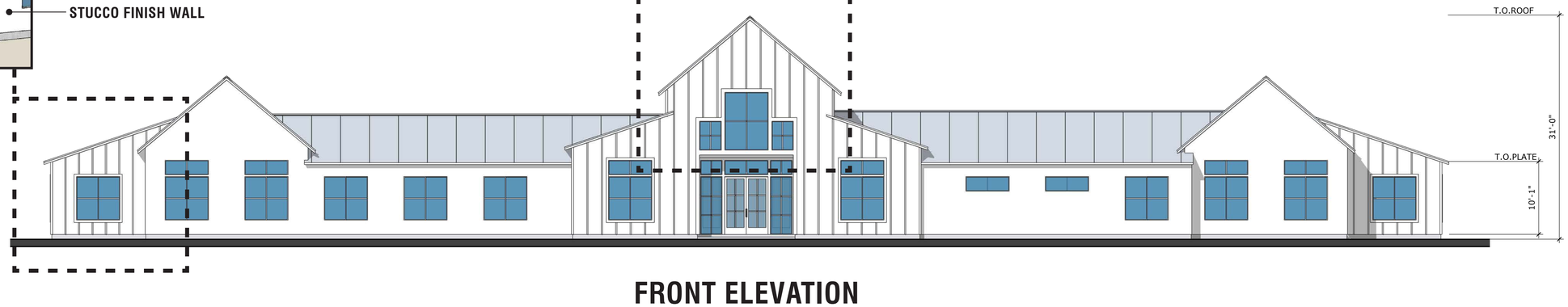
TRIM

BOARD AND BATTEN
AT 16" O.C.



RIGHT ELEVATION

0 4 8 16

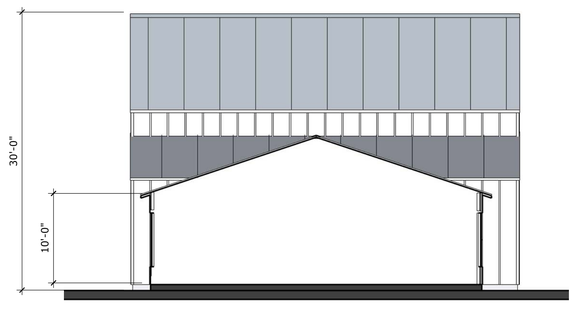


FRONT ELEVATION

0 4 8 16

REAR ELEVATION

0 4 8 16



CROSS SECTION

0 4 8 16

OFFICE BUILDING

EQUESTRIAN CENTER AT THERMAL RANCH

THERMAL, CALIFORNIA

DESERT EQUESTRIAN HOLDING LLC

COUNTY SUBMITTAL

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PERSPECTIVE - FRONT VIEW

PERSPECTIVE - REAR VIEW

OFFICE BUILDING

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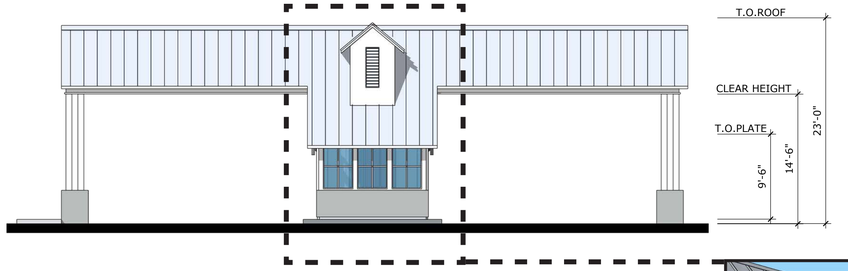
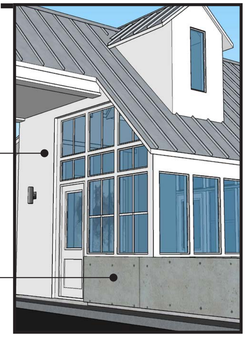
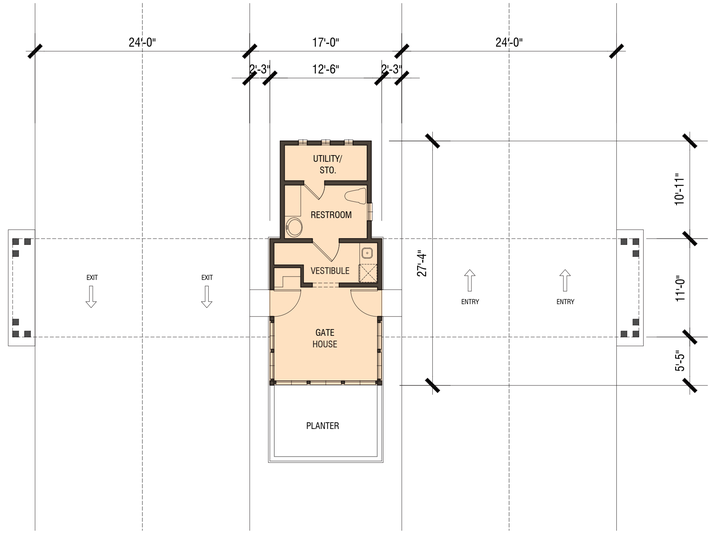


FRONT ELEVATION

0 4 8 16

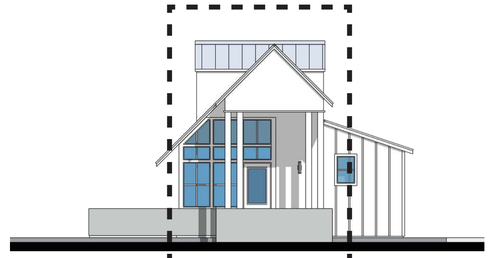




316 SQ. FT.

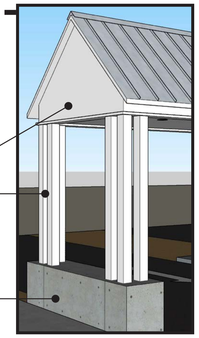
FLOOR PLAN

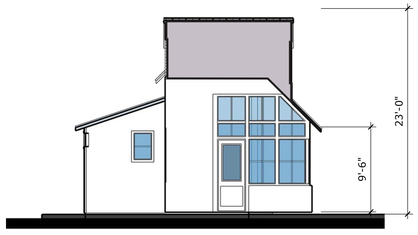
0 4 8 16



RIGHT ELEVATION

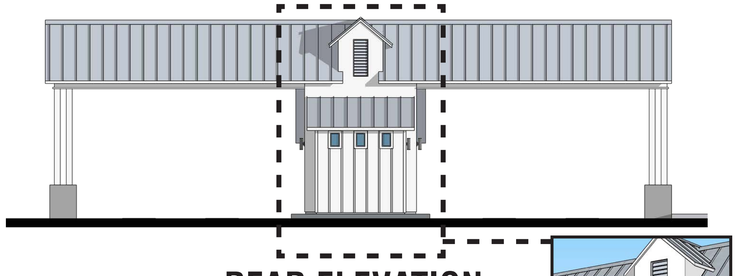
0 4 8 16





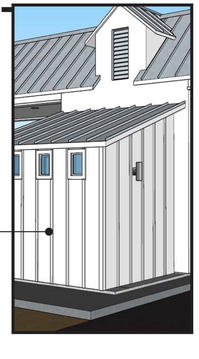
CROSS SECTION

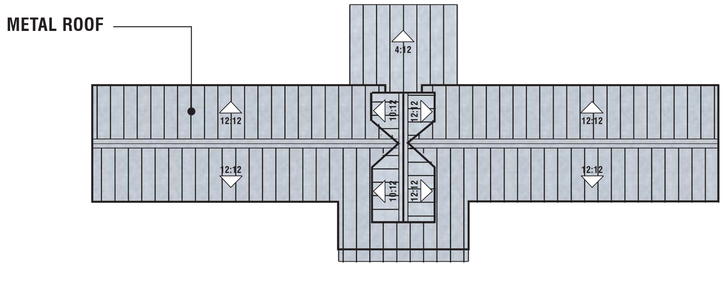
0 4 8 16



REAR ELEVATION

0 4 8 16





ROOF PLAN

0 4 8 16

LEFT ELEVATION

0 4 8 16

PRIMARY ENTRY GATE HOUSE

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PERSPECTIVE - FRONT VIEW

PERSPECTIVE - REAR VIEW

PRIMARY ENTRY GATE HOUSE

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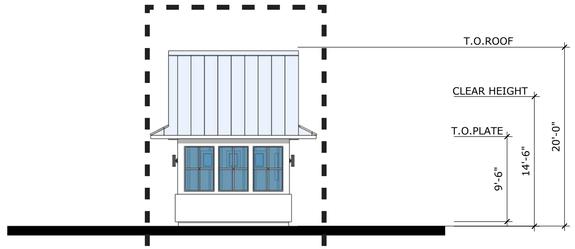
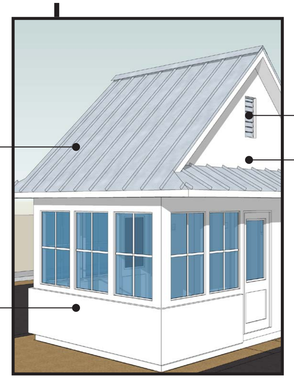
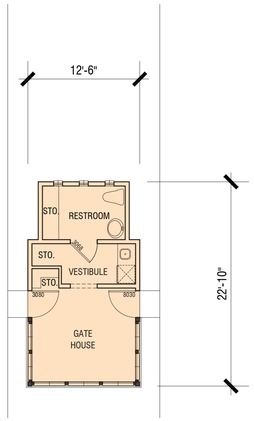


FRONT ELEVATION

0 4 8 16





270 SQ. FT.

FLOOR PLAN

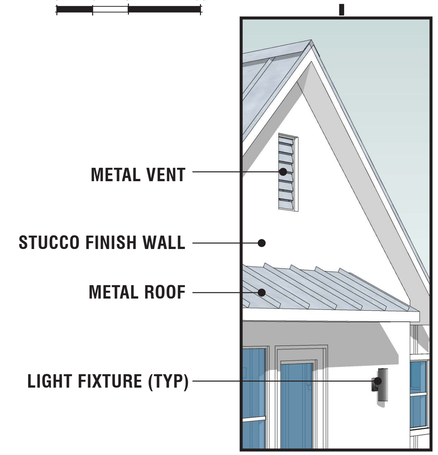
0 4 8 16

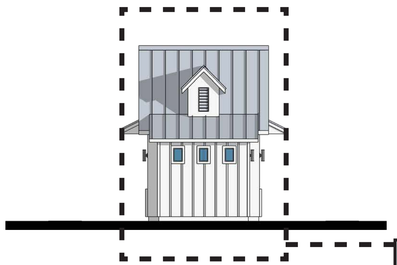
SECTION

0 4 8 16

RIGHT ELEVATION

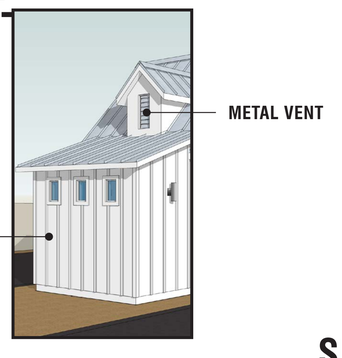
0 4 8 16

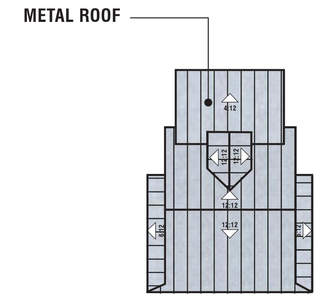




REAR ELEVATION

0 4 8 16





ROOF PLAN

0 4 8 16

LEFT ELEVATION

0 4 8 16

SECONDARY ENTRY GATE HOUSE

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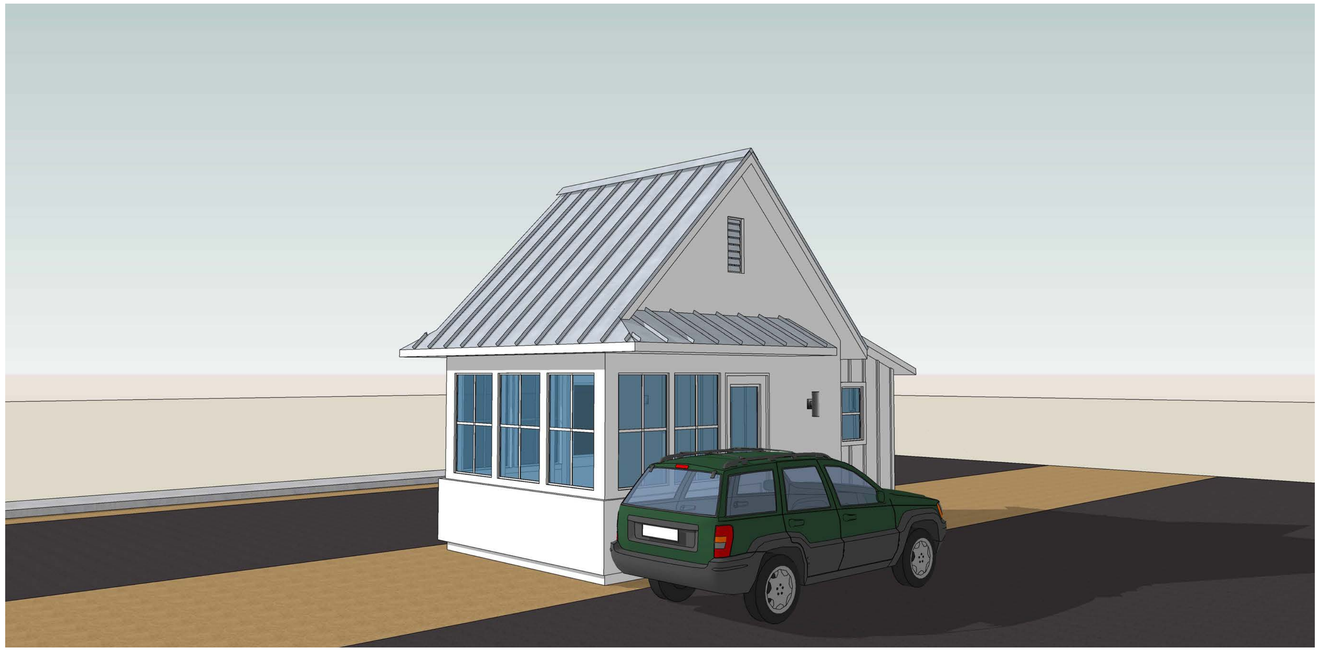

PERSPECTIVE - FRONT VIEW

PERSPECTIVE - REAR VIEW

SECONDARY ENTRY GATE HOUSE

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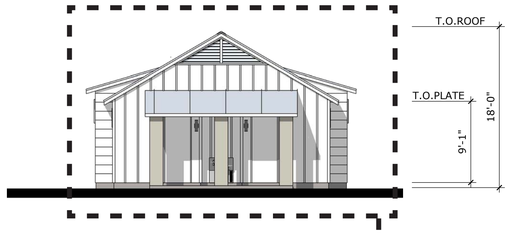
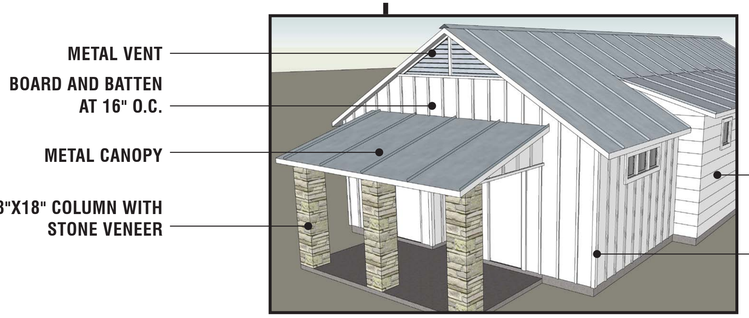
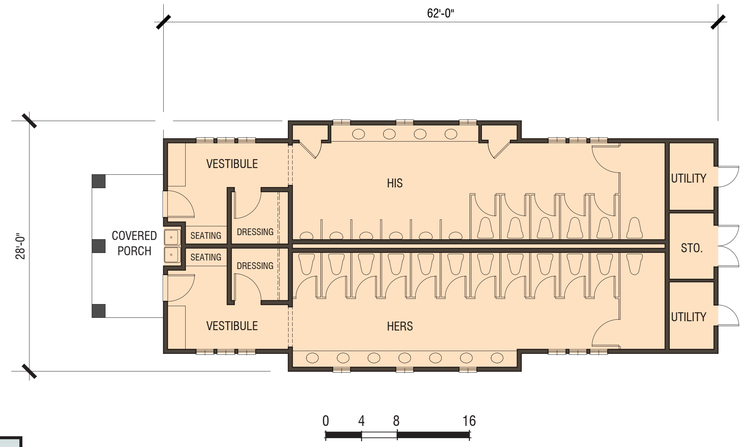


FRONT ELEVATION

0 4 8 16

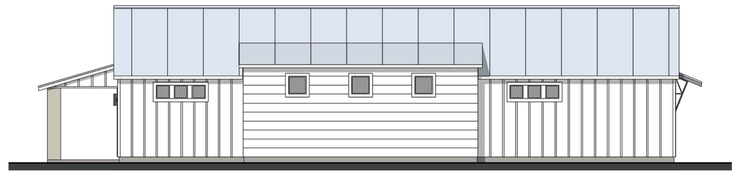




0 4 8 16

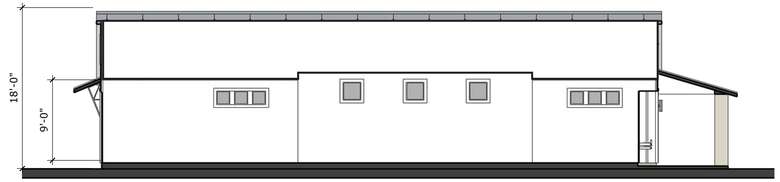
FLOOR PLAN

1592 SQ. FT.



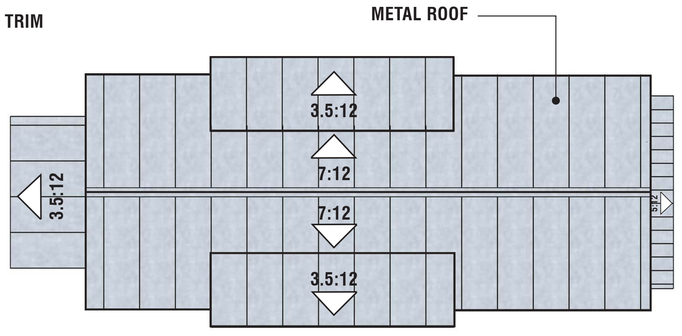
RIGHT ELEVATION

0 4 8 16



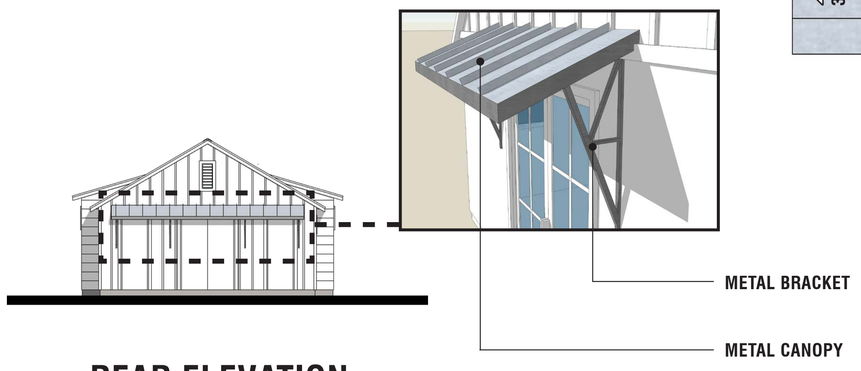
SECTION

0 4 8 16



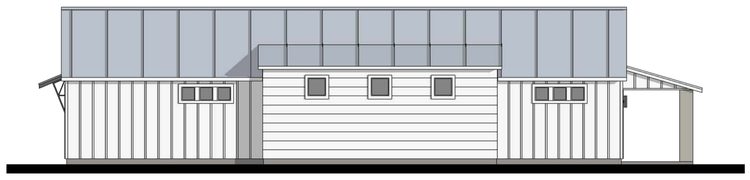
ROOF PLAN

0 4 8 16



REAR ELEVATION

0 4 8 16



LEFT ELEVATION

0 4 8 16

LARGE RESTROOM

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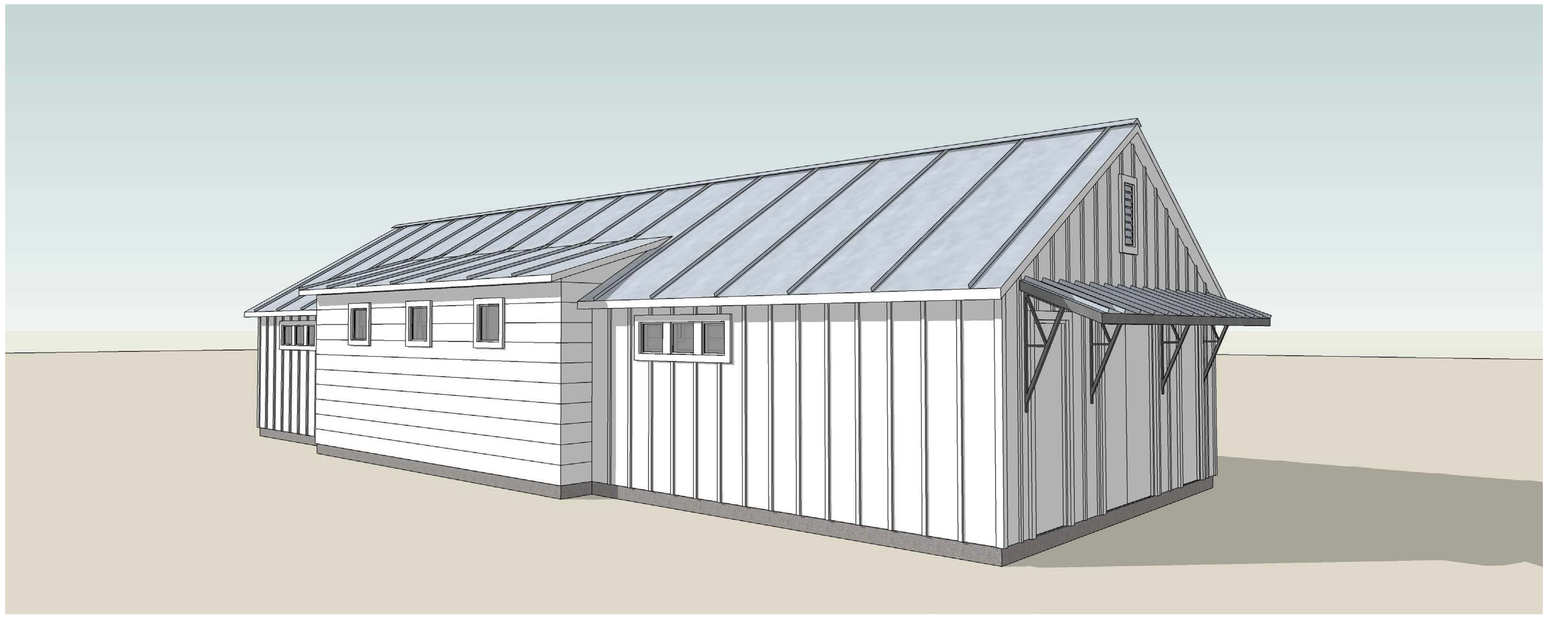
ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

PERSPECTIVE - FRONT VIEW



PERSPECTIVE - REAR VIEW

LARGE RESTROOM

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FLOOR PLAN

0 4 8 16

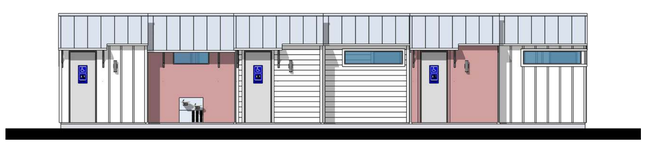
FRONT ELEVATION

0 4 8 16

ONE STALL (OPTION)

FLOOR PLAN

0 4 8 16

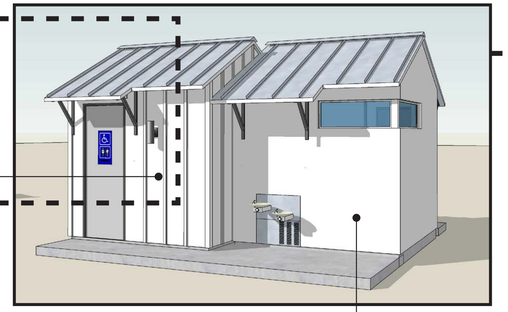


FRONT ELEVATION

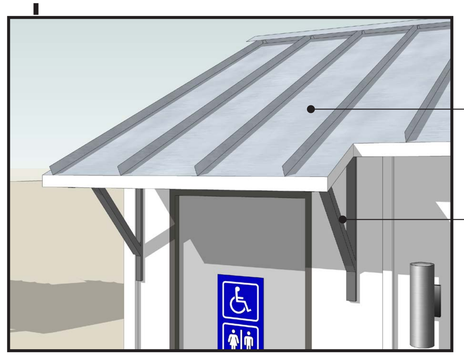
0 4 8 16

SIX STALLS (OPTION)

BOARD AND BATTEN AT 16" O.C.

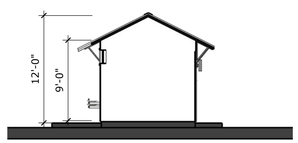


STUCCO FINISH WALL



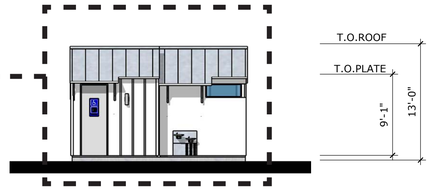
METAL ROOF

METAL BRACKET



SECTION

0 4 8 16

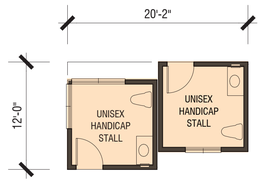


FRONT ELEVATION

0 4 8 16

REAR ELEVATION

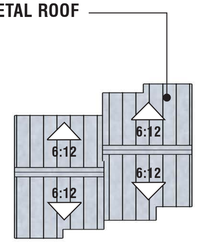
0 4 8 16



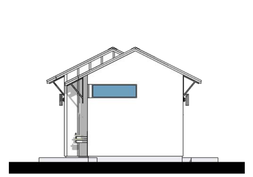
FLOOR PLAN

0 4 8 16

200 S.F.

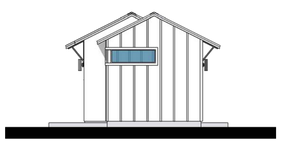


ROOF PLAN



RIGHT ELEVATION

0 4 8 16



LEFT ELEVATION

0 4 8 16

TWO STALLS (STANDARD)

SMALL RESTROOM

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ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

PERSPECTIVE - TWO STALLS (STANDARD)

PERSPECTIVE - ONE STALL (OPTION)

PERSPECTIVE - SIX STALLS (OPTION)

SMALL RESTROOM

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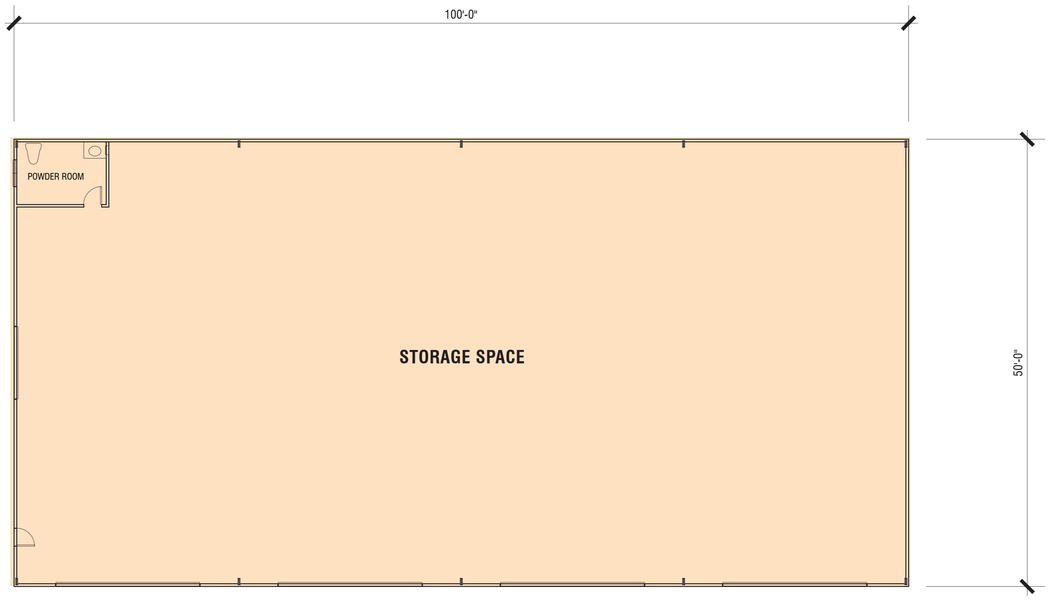
ARCHITECTS . PLANNERS . DESIGNERS

WHA.

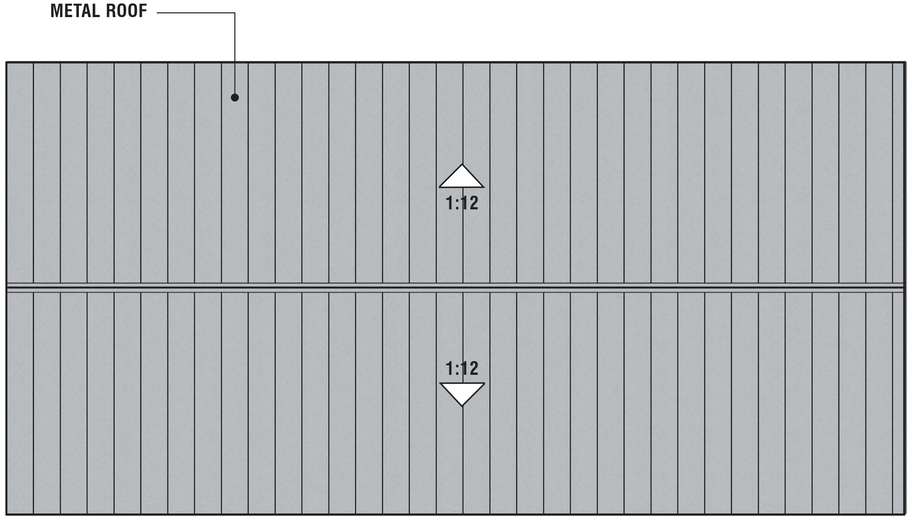
ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO



5000 SQ. FT.

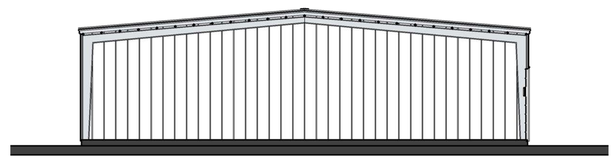
FLOOR PLAN

0 4 8 16



ROOF PLAN

0 4 8 16



SECTION

0 4 8 16

50X100 STORAGE BARN

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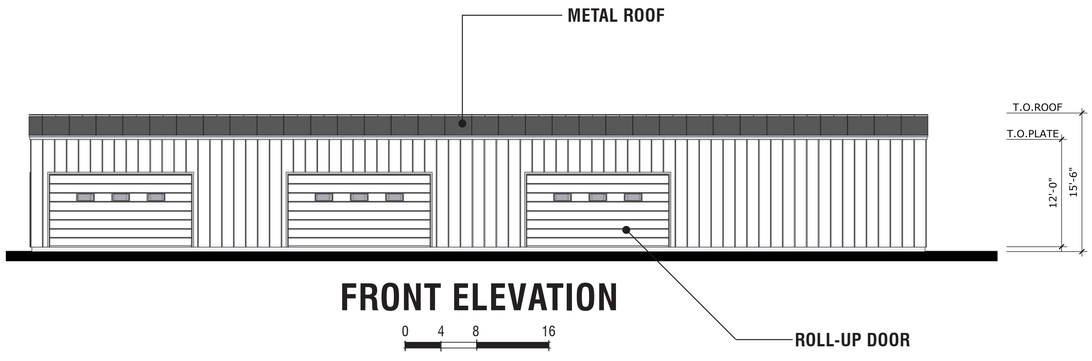
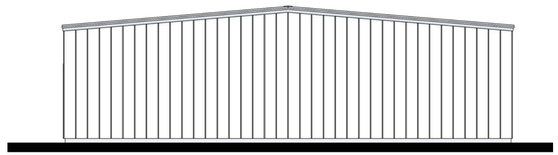


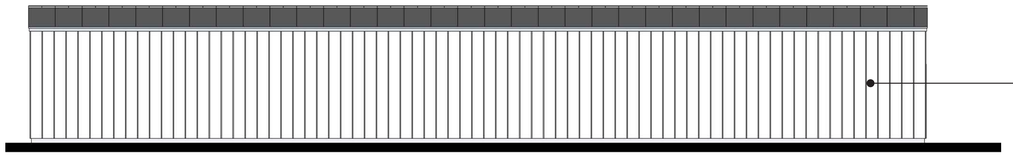
FRONT ELEVATION

0 4 8 16



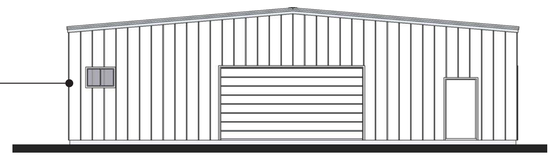
RIGHT ELEVATION

0 4 8 16



REAR ELEVATION

0 4 8 16



LEFT ELEVATION

0 4 8 16

50X100 STORAGE BARN

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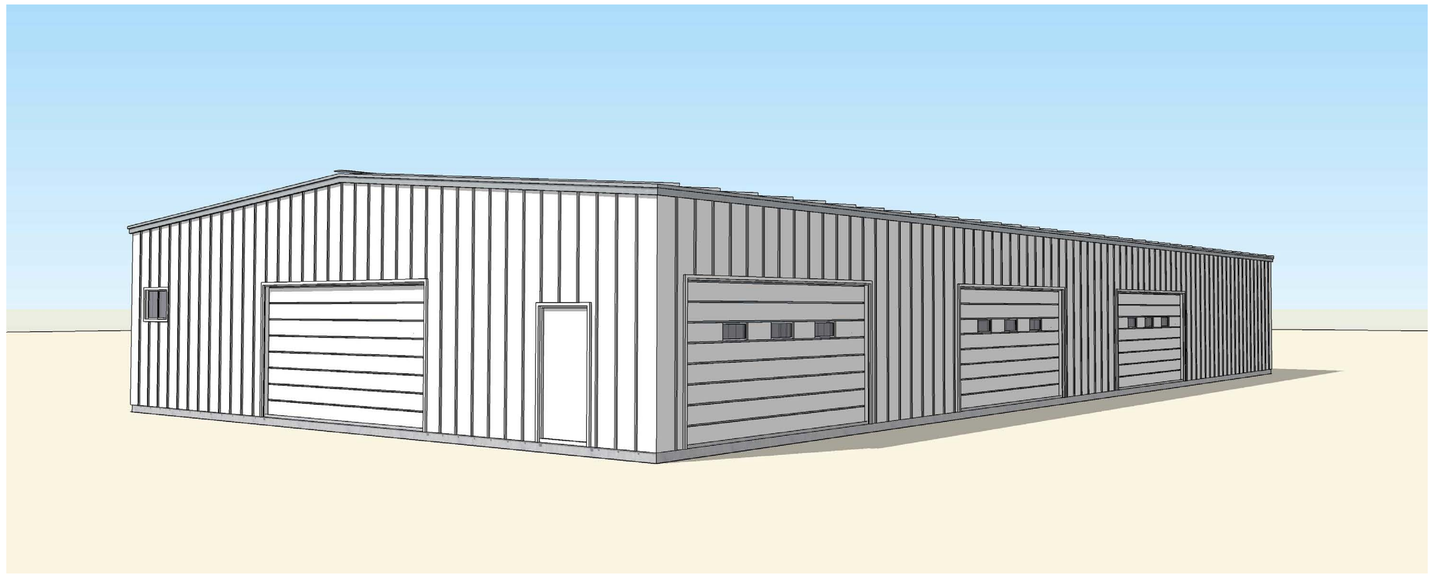
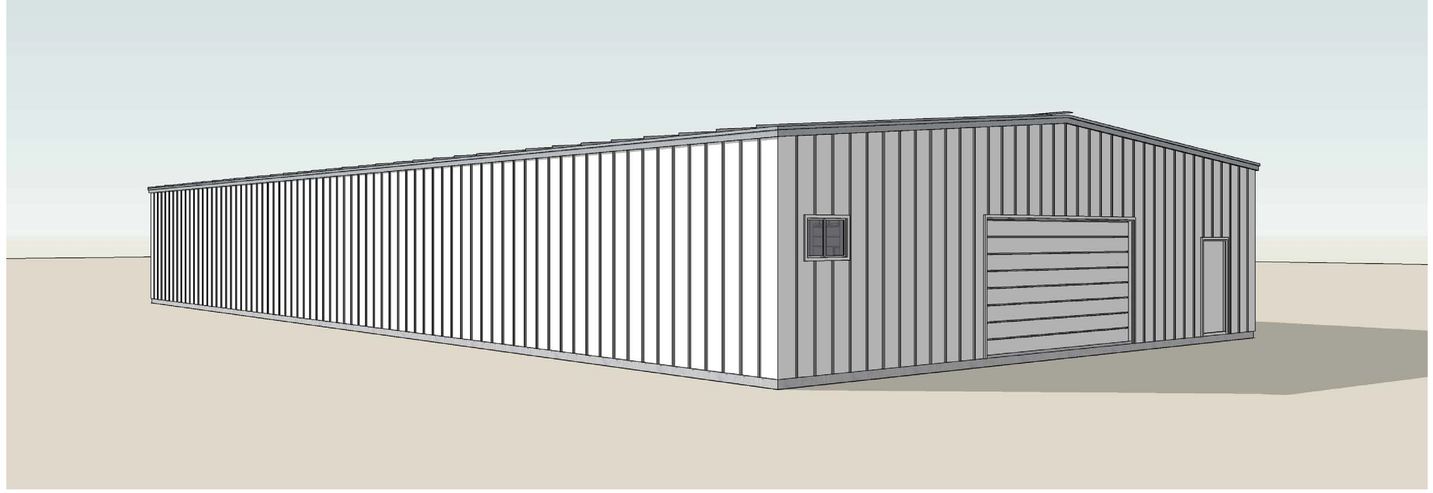


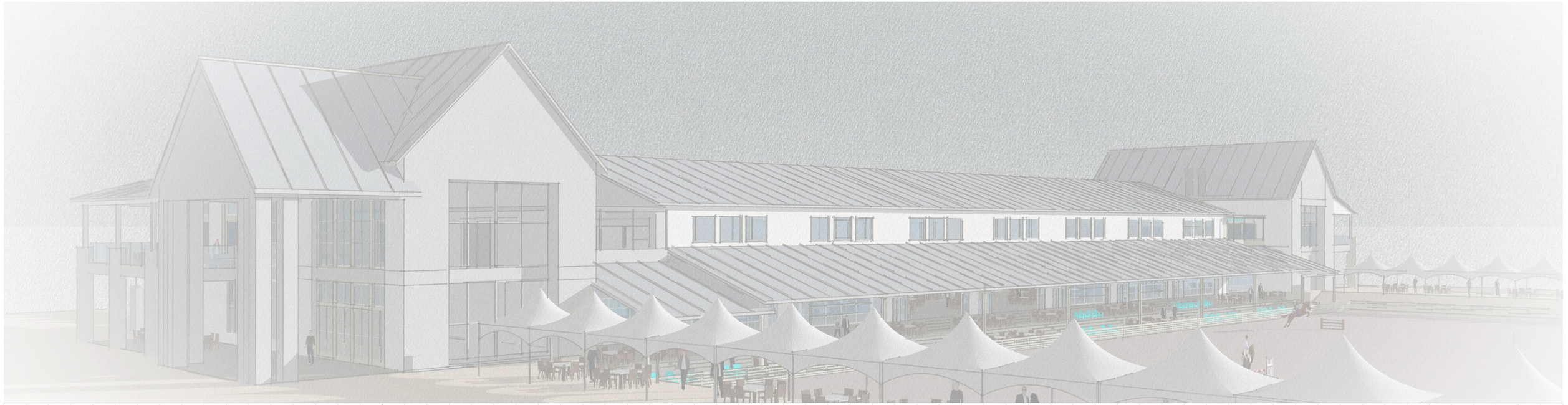
PERSPECTIVE - FRONT VIEW

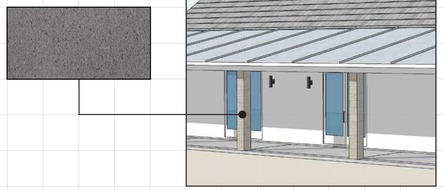


PERSPECTIVE - REAR VIEW

50X100 STORAGE BARN

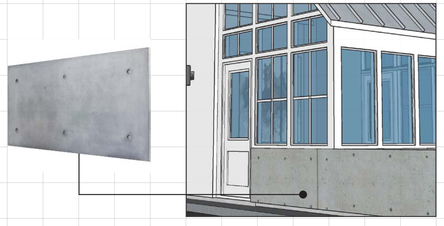
© 2022 WILLIAM HEZMALHALCH ARCHITECTS, INC. DBA WHA. | 2022229 | 02-16-23



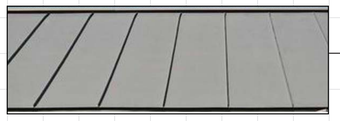


CONCRETE BLOCK COLUMN @ LAUNDRY BLDG.

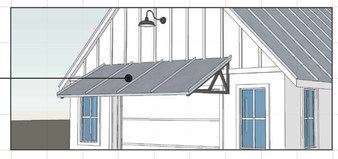
ASPHALT SHINGLE ROOFING

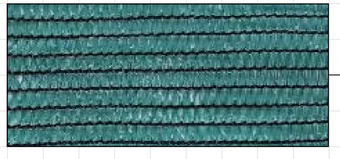


PRECAST CONCRTE BASE @ PRIMARY ENTRY GATE

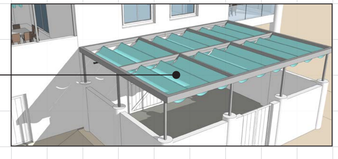


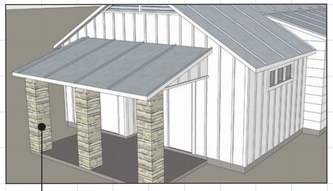
METAL ROOFING



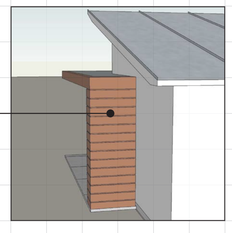


CANOPY FABRIC @ VIP BARN

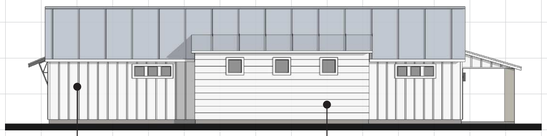




STONE VENEER @ LARGE RESTROOM



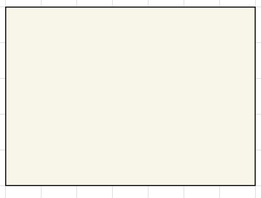
SIMULATED WOOD SIDING @ RETAIL BLDG.



PAINTED BOARD & BATTEN SIDING

PAINTED HORIZONTAL SIDING

16/20 STUCCO TEXTURE



STUCCO & PAINTED SIDING CLR.

CONCEPTUAL COLORS AND MATERIALS

EQUESTRIAN CENTER AT THERMAL RANCH

THERMAL, CALIFORNIA

DESERT EQUESTRIAN HOLDING LLC

COUNTY SUBMITTAL

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ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA . SACRAMENTO

Thermal Ranch Equestrian Center
Operations Plan
2025-02-14

Overview

The Thermal Ranch Equestrian center is planned on 231 acres at the center of the Thermal Ranch development. The equestrian Center will be a world class facility that hosts equestrian competitions from October through April. The equestrian center will be the winter home of horse competitions on the west coast, with over 2.5 million square feet of riding arenas including 19 competition arenas and horse stabling for up to 2,800 horses. Limited by the desert temperatures the equestrian center opens and starts receiving horses in October and operates continuously through April every year when the facility closes. The Equestrian Center is open to the public every day when competitions are taking place. All visitors enter through the main gates which are operated 24 hours a day.

The horse show industry estimates that for every horse at a horse show there will be 3 people attending to either ride, caring for horses or in support the horse show. Using this ratio, 8,100 people a day will visit the Equestrian Center throughout a horse show day with an average of 40% onsite at any given time or 3,240 people.

The Equestrian Center is closed from May to September and access is limited to staff.

Events

The Equestrian Center is built specifically to host horses and horse competitions and will be used for that purpose. The equestrian center will host equestrian competitions and provide entertainment and services for guest attending those competitions which could include live music. Live music is planned to be generally located in the central area of the equestrian center (Grand Prix, Grand Ring, and VIP Barn Areas). The equestrian center will not be used for ticketed concerts, or public events that are not complementary to the equestrian lifestyle.

Competitions take place in many arenas simultaneously throughout the day. We also have the ability to host evening classes in our arenas that have lighting. Each riding arena will have amplified public address systems, similar to the existing horse show operations. Our Grand Prix and Grand Hunter arenas located at the center of the facility will have lighting to hold evening and night classes. These night classes end before 10:00 p.m.

The operation of the horse show requires over 300 staff which work to put on the show each week. An estimated 150 people work in the dining services, 150 people in putting on the show and maintaining the facility. Though most employees are seasonal the horse park maintains 20 to 30 year-round employees. In addition to staff working directly for the horse show there are trainers and groomers that work for the horse owners, as well as outside vendors and suppliers that operate onsite with their own employees, including veterinary, farriers, food, and retail shops. These additional suppliers and workers are included in the 8,100 person estimate provided above.

PA systems will be integrated throughout the horse park (including horse park and warm up areas). All competition rings have a PA system so that the judges can address the riders. These systems are local in nature and operate through multiple speakers located around each ring in the planters vs a larger system mounted to overhead poles. The typical decibel range for each ring is limited to 75db to keep instruction in one ring from being heard in another ring. Our larger event rings also follow this direction and rely on many smaller speakers vs larger pole mounted address speakers.

Facilities

As a full-service show grounds, the Equestrian Center will have everything needed onsite to keep horses happy and healthy including 47 barns, indoor riding arena, a veterinary clinic, food and bedding supplies and horse supply stores.

For attendees including riders, trainers, staff and spectators, the onsite facilities will offer everything needed to have an amazing day with the horses. The equestrian Center will have 75,000 square feet of equestrian based retail and dining options located in center of the show in the Grand Prix Plaza. Other onsite buildings include a VIP great hall which overlooks the Grand Hunter and Grand Prix arenas, a show office located near the south horse stables and restrooms located throughout the property.

Feed Staging Area: The feed staging area will consist of a large gravel lot for receiving, storing, and distributing hay shavings, and grain for all the horses in the horse park. The hay and shavings are stored in the open air on pallets or in rows on the ground. We receive the deliveries of hay, shavings and grain via trucks which are unloaded in the feed staging area by forklifts.

In the southeast corner of the property is the back of house operations for the Equestrian Center. There will be five buildings as described below. There will also be a nursery to maintain our landscaping plants year-round.

Building 1- Food Services

To be used for receiving and storage of all food and beverage deliveries for the horse park.

The building will include the following.

- Receiving dock;
- Commercial freezer and refrigerator;
- Commercial kitchen for food prep;
- Restrooms for employees;
- Small office for food service.

Building 2- Facilities- Landscaping Maintenance building

This building will be the base for facilities maintenance for the horse show grounds. This building will include the following,

- Restroom;
- Break room for employees;
- Office;
- Supplies storage area;
- Tool storage area;
- Supply storage area.

Building 3- Horse show maintenance building

This building will be the base for horse show maintenance operations. This building will include the following,

- Restroom,
- Break room for employees,
- Office.

- Supplies storage area,
- Tool storage area
- Supply storage area

Building 4- Horse Show Jump storage building
This building will be where we store and maintain all the jumps and ring decorations for the horse show. This warehouse will include a restroom and small office area.

Building 5- Summer storage
This building will store equipment during the summer months. This warehouse will be open so we can park and secure our equipment from the harsh heat of the summer. It will be an open warehouse.

Below is a detailed explanation of the other operations that take place in the back of house area.

Manure: During horse park operations from October through April every year, horses are boarded on the property in 12x12 horse stalls. Prior to a horse entering its stall, each stall has about 10 bags of pine shavings installed to create bedding for the horses. This bedding serves a dual purpose. First, it creates a soft place for the horses to lay on. Second, the shavings stick to the manure and absorb the urine from the horses and absorb any odors from the urine and manure.

Typically, two to four times a day the horse care takers use wheelbarrows and specifically designed rakes or pitch forks to remove wet shavings and manure from each stall and dump it into piles in special corrals constructed at the end of each barn access road for removal to the centralized staging area for offsite transport.

Throughout the day, horse park staff collect the wet shavings and manure from the barn area holding corrals using a loader and a dump truck and transports them to the centralized staging area for pick up. At Thermal Ranch, the staging area will be located in the back of house area toward the southern portion of the site and setback at least 500 feet from all project perimeter boundaries. The staging area is rectangle and has concrete walls on three sides containing the manure and shavings. The approximate size is 50 feet wide by 100 feet long with 6-foot walls on the sides and back. Tarps are available in case it rains to cover any shavings to prevent them from absorbing the rain and becoming heavy

Our removal contractor, Southern California Mobile Grinding, Inc. (SCMG), removes the shavings and manure from the holding area on a daily basis throughout the season using a loader and covered trailers. The manure and shavings mixture is then delivered to farmers throughout the Coachella valley. The manure is used as fertilizer, mulch and for dust control. This disposal process has been confirmed by SCMG in the attached memo describing their manure disposal process. Additional options for manure disposal exist including using the local landfill operated by Burrtec Waste & Recycling.

Trash - Trash will be collected throughout the day by the show trash crew using tractors and trailers and taken to the trash area in back of house where it will be placed in large roll off dumpsters to be picked up daily during the season and as needed during the offseason.

PA 4-a Workforce Housing.
A few of the challenges facing many of the support staff required to hold a horse show are housing availability, location to the horse show and the cost of housing. To address the cost and availability of housing, we are offering onsite affordable Workforce housing. When complete, our workforce housing community will have 50-10 unit buildings with each unit measuring 10x30 and include a bedroom, bathroom and shower, kitchenet and living area. In all there will be 500 units available for rent.

From October 15th to March 30th every year the housing will be available weekly to workers at the Equestrian Center and from April 1st to October 14th the housing is available for weekly rental to farm workers in the local area.

The Workforce housing community will have outdoor community areas, awnings and picnic tables. There will be a management office and laundromat onsite. Trash dumpsters will be located near each building and will be picked up as needed.

PA 4-B. RV PARK

The RV park sits on 23 acres and can accommodate 301 Recreational Vehicles. Many of the attendees of the horse show prefer to bring their accommodations with them making it a requirement for a horse show facility to operate a RV park when the show is running. The RV Park will be operational from October to April and will offer spaces for rent to horse show exhibitors. Bookings will be handled through the horse show office. Guest of the RV park will have access to the laundromat in PA 4A. All RV spots will be provided Sewer, Power, water, and Internet connections. Trash dumpsters will be located throughout the RV park and will be picked up as needed.

County of Riverside
Fiscal Impact Report
May 2023

Prepared for:

Thermal Ranch, LLC

Prepared by:

ZIMMERMAN GROUP
PUBLIC FINANCE SOLUTIONS

28202 Cabot Road, Suite 620
Laguna Niguel, CA 92677
T. 949-542-7070

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EXECUTIVE SUMMARY

Thermal Ranch, LLC (the "Developer") has engaged Zimmerman Group, Inc. to analyze the recurring fiscal impacts to the County of Riverside's (the "County") general fund (the "County General Fund") and structural fire protection fund (the "County Fire Fund") resulting from development of approximately 630 gross acres known as Thermal Ranch (the "Project"). The fiscal impact analysis is based on the anticipated land uses and Project descriptions provided by the Developer. The proposed Project is within the unincorporated area of the County, located approximately 25 miles southeast of Palm Springs and about 9.5 miles north of the Salton Sea. The Project is bounded by the following roadways; 1) 62nd Avenue to the north; 2) Harrison Street to the west; 3) 64th Avenue to the south; and 4) Tyler Street on the east (See Figure 1-1B).

Project Land Uses and Population

The Project is proposed for a mixed-use development oriented around an equestrian center. As further detailed in Section 2, the Project is planned for a total of 1,362 residential units (including a 500-unit workforce housing complex), a 110,000 square foot 4-Star Hotel consisting of approximately 150 rooms, approximately 150,000 square feet of mixed-use retail, a 223-acre equestrian center for seasonal horse shows, and RV parking accommodations.

Projected assessed value for the Project at build-out is detailed on Table 2-1 and totals an estimated $1,123,350,000. Existing assessed value for the Project site is $13,248,000; therefor the increased assessed value resulting from Project development is $1,110,102,000. As detailed in Table 2-2, the Project is anticipated to generate both permanent and seasonal residents from the new residential units. It is expected that many of the units will be second or third homes which will be occupied only seasonally. The seasonal residents from these homes will generate a lower need for public services compared to permanent residents. In an effort to be very conservative, this fiscal impact analysis assumes that all 862 for-sale residential units will be permanently occupied and generate 2,723 permanent residents. The 500 workforce housing units are expected to have a 70% year-round occupancy rate and generate an additional 350 equivalent permanent residents. The Project is also anticipated to have approximately 780 employees resulting in an additional 358 equivalent residents. Total Project population at build-out is estimated to be 3,431 equivalent residents.

Scope and Methodology

The purpose of the analysis is to estimate the fiscal impact on the County General Fund and the County Fire Fund resulting from development of the Project. That is, the analysis estimates whether the County General Fund and County Fire Fund revenues generated by the Project will cover the costs of providing public services related to the Project. The fiscal impacts identified in this Report include recurring revenues and costs that will result from the development of the Project. Revenues are derived from various taxes and fees, and costs are associated with a variety of services such as public safety services, public works, development services, and County-wide general government services. The methodology used to estimate the fiscal impacts in this analysis focuses on the per capita multiplier method for numerous cost and revenue categories. This methodology involves calculating the average cost or revenue per person served and applying this factor to the Project at build-out. Some of the revenues, including property taxes, sales taxes, and transient occupancy taxes are calculated using the case study method.

Summary of Recurring General Fund Fiscal Impacts

Table 1-1 below illustrates the estimated annual recurring revenues to the County General Fund at Project build-out. As shown, total estimated annual recurring revenues related to the Project are anticipated to be approximately $5,021,414, with the vast majority of the revenues being generated by property related taxes and transient occupancy taxes. Section 3 provides details on all recurring revenues and the assumptions used in their derivation.

TABLE 1-1

GENERAL FUND - RECURRING REVENUES

Description:	**Amount**	**Percent**
Property Taxes	$1,448,331	28.8%
Property Taxes In Lieu of VLF	1,012,954	20.2%
Prop 172 Public Safety Sales Tax	267,851	5.3%
Fines, Forfeitures and Penalties	83,155	1.7%
Sales Taxes	535,703	10.7%
Documentary Transfer Tax	87,764	1.7%
Licenses, Permits and Franchises	182,914	3.6%
Transient Occupancy Tax	1,402,741	27.9%
Total Countywide Recurring Revenues	**$5,021,414**	**100%**

Table 1-2 below illustrates the estimated annual recurring costs to the County General Fund at Project build-out. As shown total annual recurring costs related to the Project are anticipated to be approximately $2,290,620 with the vast majority of the costs associated with public safety services. Section 3 provides details on all recurring costs and the assumptions used in their derivation.

TABLE 1-2

GENERAL FUND - RECURRING COSTS

Description:	**Amount**	**Percent**
Finance & Government Services	$31,923	1.4%
Human Services	131,107	5.7%
Internal Services	15,996	0.7%
Public Safety-Excluding Structural Fire & Sheriff	434,165	19.0%
Sheriff Non-Patrol Services	359,512	15.7%
Sheriff Patrol Services	1,041,874	45.5%
Public Works and Community Services	42,281	1.8%
Registrar of Voters	16,511	0.7%
RUHS Health and Hospital Services	113,289	4.9%
Contributions to Other Funds	103,962	4.5%
Total Countywide Recurring Costs	**$2,290,620**	**100%**

General Fund Fiscal Impacts

As shown in Table 1-3 below, the overall annual fiscal impact of the Project to the County General Fund is estimated to be $2,730,794 based on $5,021,414 in recurring annual revenues and $2,290,620 in recurring annual costs. This results in a revenue-to-cost ratio of approximately 2.19 as shown in Table 1-3 below. Various factors could ultimately affect the fiscal impact. For example, economic circumstances such as a recession could affect the projected revenues and costs. Also, a change to the operations of the Desert International Horse Park ("DIHP") due to the new Project horseshow facility could have a modest impact on revenues and costs. However, with a revenue-to-cost ratio above 2-to-1, the revenues would need to decrease by more than fifty percent, while costs stayed unchanged or increased, before the fiscal impact would be negative for the Project. With respect to DIHP, Developer has indicated that the DIHP plans to continue operating the existing facility and maintain the lease at this property for the foreseeable future. While the programming at DIHP is likely to change as a result of the Project, these changes are not anticipated to substantially alter the fiscal impacts to the County, including continued revenue to the County from the lease

payments and sales taxes. Accordingly, no adjustments have been made to this fiscal impact analysis related to the existence or potential termination of the DIHP facility.

TABLE 1-3

GENERAL FUND – OVERALL FISCAL IMPACTS

County General Fund	Amount
Total Recurring Revenues	$5,021,414
Less Total Recurring Costs	2,290,620
Net Fiscal Impact	**$2,730,794**
Revenue/Cost Ratio	**2.19**

Summary of Fiscal Impacts on County Fire Fund

Table 1-4 below summarizes the fiscal impacts on the County Fire Fund analyzed in this report. The Project has a positive fiscal impact on the County Fire Fund in the amount of $119,450. As discussed further in Section 4, the County Fire Fund analysis uses a per capita cost methodology based on the Unincorporated County Population and contract cities population served as shown in Table A-6. Revenues are generated from a portion of the one percent property tax levy as shown in Table A-3 of the appendix.

TABLE 1-4

STRUCTURAL FIRE FUND - SUMMARY OF FISCAL IMPACTS

County Fire Fund	Amount
Total Recurring Revenues	$604,176
Total Recurring Costs	484,726
Net Fiscal Impact	**$119,450**
Revenue/Cost Ratio	**1.25**

SECTION 1
INTRODUCTION

1.1 Background

The Project is located on the west of California State Route 86 as shown in figures 1-1A and 1-1B below. The Project encompasses approximately 630 gross acres within the unincorporated area of the County and is planned for various residential and non-residential uses as described below.

Figure 1-1A
Regional Location

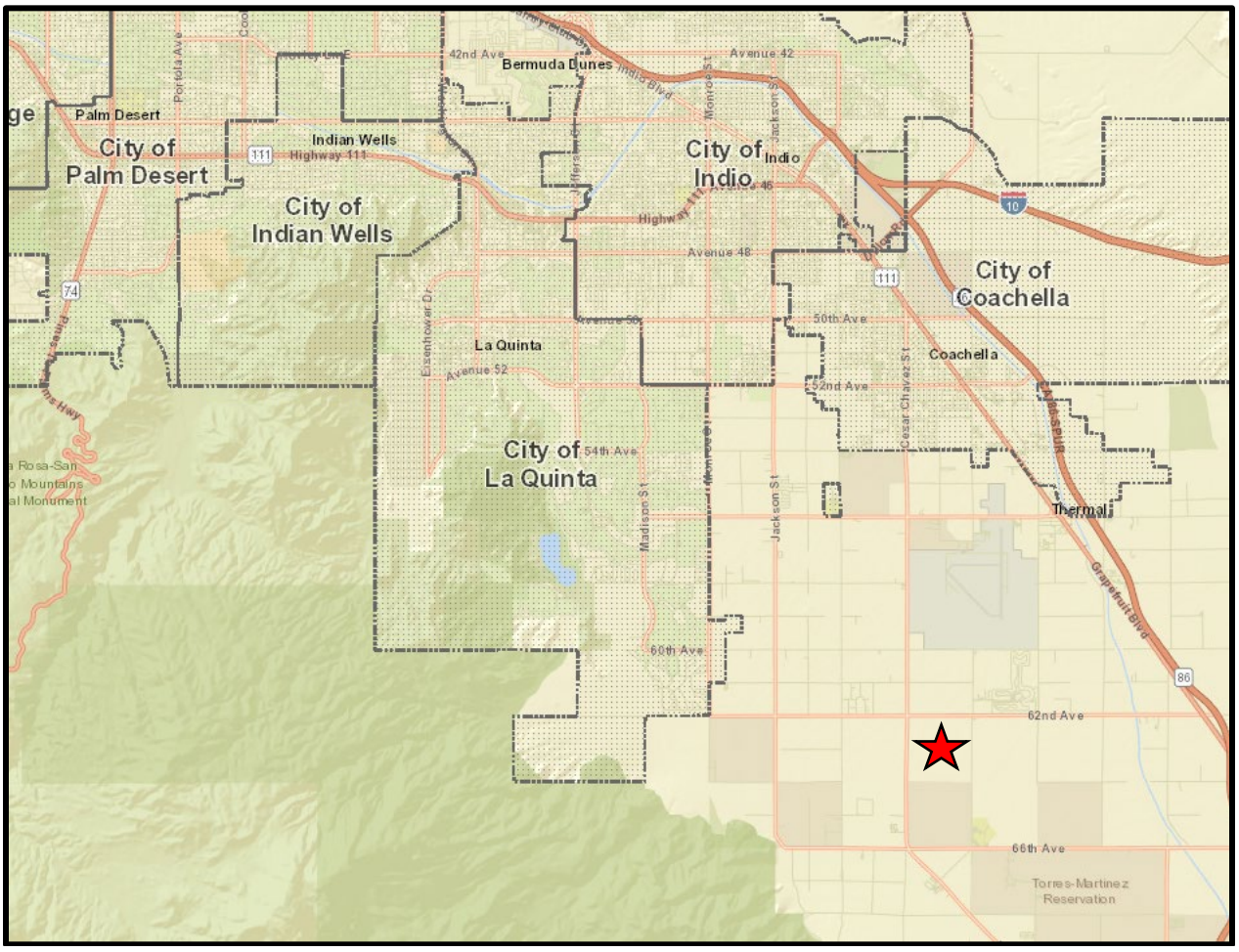
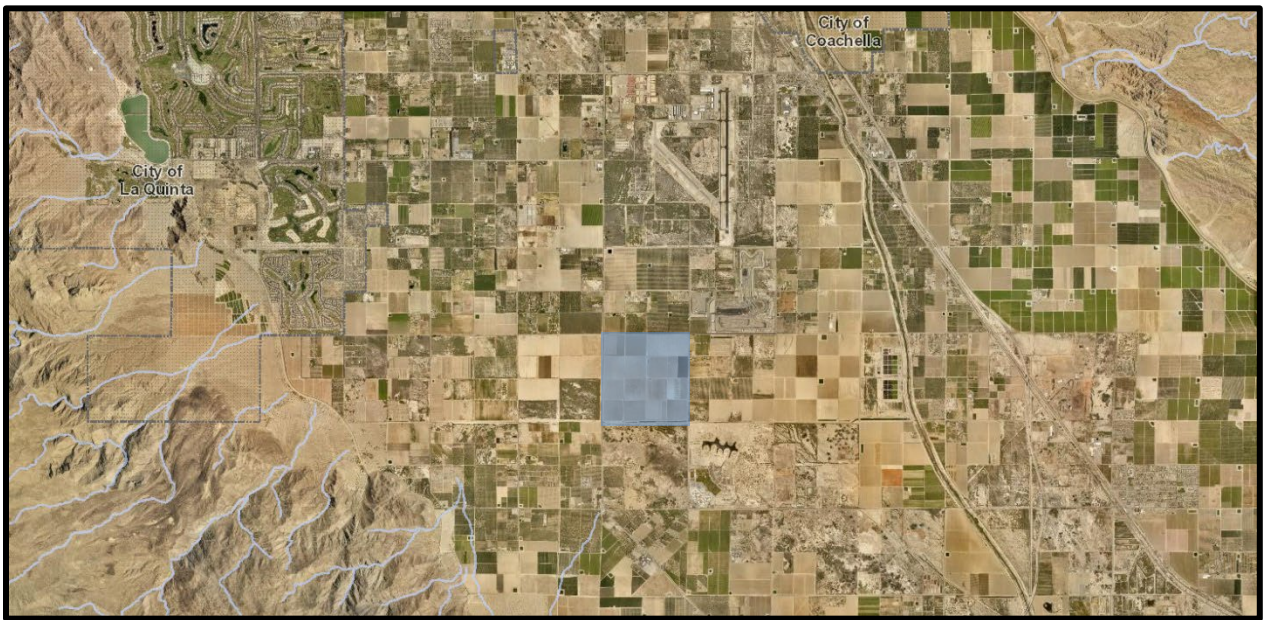
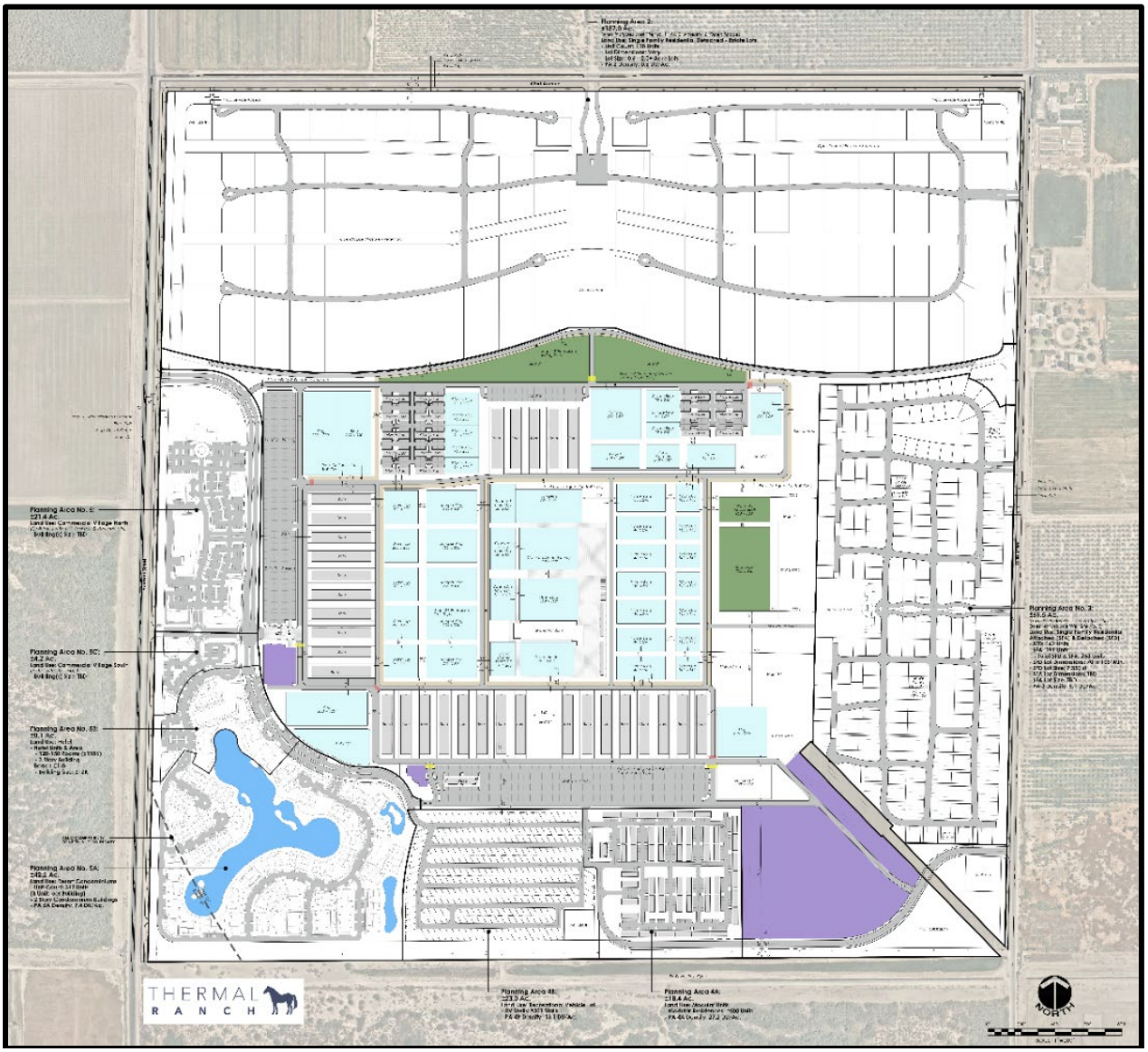


Figure 1-1B
Project Location



As shown in Figure 1-1C below, the Project is a large mixed-use development with the center of the site consisting of a 223 acre equestrian area to be used for horse shows and events. The north and east portions of the Project will be residential, consisting of custom home sites up to two acres and traditional single family tract homes. The west portion of the Project will consist of retail uses, and the southwest portion will include a hotel and resort condominiums around a lagoon. The south portion of the Project will be RV parking and workforce rental housing to support the equestrian events.

Figure 1-1C
Project Site Plan



1.2 Approach

Fiscal impacts arising from a land development project can be broadly categorized as one of two types: recurring impacts or one-time impacts. Each of these broad types may, in turn, be divided into a revenue component and a cost component. The fiscal impacts considered in this report focus only on ongoing, or recurring, fiscal impacts pertaining to the Project.

It is often difficult to determine appropriate levels of service for new development in cases where current levels of service within the existing jurisdiction may not apply. For example, the number of police officers or firemen per person may vary depending upon whether a new police or fire station is to be constructed, or whether staffing and equipment within existing facilities are sufficient to adequately serve the new project. The methodology employed in estimating fiscal impacts on the County utilizes a "Per Capita Multiplier" method for most cost categories and some revenue categories. This method assumes applicable recurring costs or revenues will result from the Project at the same rates per person that currently prevail within the County. Certain per capita costs have been adjusted to reflect marginal costs per capita rather than average costs per capita. As described in further detail herein, certain cost categories involve fixed costs that are not expected to increase as a result of the additional residents generated from the Project.

Fiscal impacts to the County General Fund have been estimated based on an analysis of the County's adopted budget for fiscal year 2022-2023, except where noted otherwise. All fiscal impacts are stated in 2023 dollars. This report is primarily based upon the following information sources:

- Analysis of the County of Riverside 2022-2023, Adopted Budget ("Adopted Budget").
- Property tax allocation from the Riverside County Auditor-Controller Office.
- Estimated Project valuation and information provided by the Developer.
- Demographic data from the California Department of Finance, January 2022 Data.

1.3 Report Overview

Section 2 presents the description of the Project at build-out, Section 3 is an evaluation of the projected recurring fiscal impacts to the County General Fund, and Section 4 discusses fiscal

impacts to the County Fire Fund. The Appendix includes supporting tables and source information used in preparation of the fiscal impacts presented in this report.

SECTION 2
DEVELOPMENT DESCRIPTION

This section presents the build-out development description for the Project, which includes the residential and non-residential development, projected Project population from both residents and employees, and projected additional assessed valuation.

2.1 Land Use, Population, and Project Valuation

The Project is designed with an equestrian area of approximately 223 acres in the center of the site, which will be used for horse shows similar to the nearby Desert International Horse Park. The perimeter of the Project is planned for various uses including the following: 1,362 total residential dwelling units that include 340 resort condominiums, 522 single family residential units and a 500 unit workforce housing complex to support the horse shows; a 110,000 square foot 4-star hotel consisting of approximately 150 rooms; and approximately 150,000 square feet of mixed-use retail.

As shown in Table 2-1 below, total assessed valuation for the Project is estimated at $1,123,350,000 after build-out. Estimated values for each land use have been provided by the Developer. It is expected that the equestrian area will be owned by a non-profit organization so no value has been assigned to that portion of the Project. The current assessed value of the property is $13,248,000. Therefore, the estimated increase in assessed valuation at build-out is $1,110,102,000.

TABLE 2-1

DEVELOPMENT DESCRIPTION AND VALUATION

For-Sale Residential Units		Units	Assessed Value Per Unit	Estimated Assessed Value
Estate Lot SFD				
Half Acre		53	$2,500,000	$132,500,000
One Acre		53	$3,000,000	159,000,000
Two Acre		26	$6,000,000	156,000,000
Traditional Single Family				
Detached Homes		179	$1,250,000	223,750,000
Attached Homes		211	$600,000	126,600,000
Resort Condominiums		340	$750,000	255,000,000
Rental Units				
Workforce Housing Complex		500	$36,000	18,000,000
Total		1,275		$1,070,850,000
Hotel	Square Feet	Rooms	Assessed Value Per Room	Estimated Assessed Value
4-Star Hotel	110,000	150	$100,000	$15,000,000
Commercial		Square Feet	Assessed Value Per Sq. Ft.	Estimated Assessed Value
Village Retail/Restaurant/Entertainment		150,000	$250	$37,500,000
Equestrian Center				$0
Total Secured Assessed Valuation				**$1,123,350,000**
Less Existing Assessed Value				$13,248,000
Total Increase in Assessed Valuation				**$1,110,102,000**

Source:
Estimated buildout values provided by Developer.
Existing assessed value from County Assessor.

The Project is expected to generate additional permanent residents, seasonal residents, and employee residents. The majority of the residential units are expected to be occupied only on a seasonal basis for approximately six to nine months per year. However, to be conservative in the report, it is assumed that all for-sale residential units will be permanently occupied and generate permanent residents. Accordingly, the 862 for-sale residential units are expected to generate 2,723 new residents within the County. The 500-unit workforce housing complex is expected to generate an additional 350 residents. These units are expected to be small modular housing units consisting of one person per unit when occupied and a 70% occupancy rate. Additionally, the non-residential portions of the Project will require approximately 780 permanent and seasonal employees. These employees result in an additional 358 equivalent residents. Table 2-2 below provides the details of the expected residents and employees to be generated from the Project.

TABLE 2-2

PROJECT POPULATION

Units	Permanently Occupied Units	Seasonally Occupied Units (4)	Total Units
Estate Lot (0% Seasonal)	132	0	132
Traditional Single Family (0% Seasonal)	390	0	390
Resort Condominiums (0% Seasonal)	340	0	340
Workforce Housing Complex (0% Seasonal)	500	0	500
Total	1,362	0	1,362

Population (1)	Permanent Residents	Seasonal Residents (4)	Total Residents
Estate Lot	417	0	417
Traditional Single Family	1,232	0	1,232
Resort Condominiums	1,074	0	1,074
Workforce Housing Complex (2)	350	0	350
Total	3,073	0	3,073

Employees (3)	Employees	Equivalent Residents
Non-Residential - Full Time Employees	300	150
Hotel - Full Time Employees	180	90
Horse Show - Year-Round Employees	40	20
Horse Show - Seasonal Employees	260	98
Total	780	358

Total Project Population with Employees **3,431**

Notes:

(1) Resident population is projected using the E-5 City/County Population and Housing Estimates for the Unincorporated County of Riverside of 3.16 residents per household as of 1/1/2022 as shown in Table A-1.

(2) Workforce Housing population is estimated at 1 resident per unit with an estimated occupancy rate of 70%.

(3) Employee count assumes one employee per 500 square feet of commercial space (300 employees for the 150,000 retail sf), 1.2 employees per hotel room, and horse show employee count provided by Developer with seasonal employees working approximately 9 months per year. Employees are counted as 1/2 of a resident for project population purposes.

(4) It is expected that many of the residential units will only be occupied seasonally, but to be conservative, the analysis assumes full time occupancy of all for-sale residential units.

SECTION 3

FISCAL IMPACTS

This Section presents the fiscal impacts to the County General Fund at build-out. Table 3-1 below details each of the assumed recurring revenues and costs resulting from the Project. Section 3.1 provides additional details regarding the County General Fund revenues. Section 3.2 provides additional details regarding County General Fund costs. As shown, the revenue to cost ratio is 2.19, meaning that the annually recurring revenues are 2.19 times the annually recurring costs. This high revenue to cost ratio is primarily a result of the revenues from non-residential development and the significant increase in assessed value. Fiscal impacts are shown in constant 2023 dollars.

TABLE 3-1

GENERAL FUND – RECURRING FISCAL IMPACTS

Recurring Revenues:	**Amount**	**Percent**
Property Taxes	$1,448,331	28.8%
Property Tax In Lieu of VLF	$1,012,954	20.2%
Prop 172 Public Safety Sales Tax	$267,851	5.3%
Fines, Forfeitures and Penalties	$83,155	1.7%
Sales Taxes	$535,703	10.7%
Documentary Transfer Tax	$87,764	1.7%
Licenses, Permits and Franchises	$182,914	3.6%
Transient Occupancy Tax	$1,402,741	27.9%
Total Recurring Revenues	**$5,021,414**	**100%**
Recurring Costs:		
Finance and Government Services	$31,923	1.4%
Human Services	$131,107	5.7%
Internal Services	$15,996	0.7%
Public Safety-Excluding Sheriff	$434,165	19.0%
Sheriff Non-Patrol Services	$359,512	15.7%
Sheriff Patrol Services	$1,041,874	45.5%
Public Works and Community Services	$42,281	1.8%
Registrar of Voters	$16,511	0.7%
RUHS Health and Hospital Services	$113,289	4.9%
Contribution to Other Funds	$103,962	4.5%
Total Recurring Costs	**$2,290,620**	**100%**
Total Impact to General Fund	**$2,730,794**	
Revenue/Cost Ratio	**2.19**	

3.1 County General Fund – Recurring Revenues

Property Taxes

The County Auditor-Controller identifies property tax rates as a percentage of total assessed valuation by Tax Rate Area ("TRA"). The Project is located in TRA 058-038. The TRA apportionment factors are used to forecast property tax revenues resulting from the Project to the County General Fund. Based on information provided by the Auditor-Controller's office, the County receives approximately 13.05% of the basic one percent ad valorem property tax levy. Based on projected assessed value for the Project, additional property tax revenues to the County General Fund are projected to be $1,448,331 annually at build-out. See Table A-3 of the Appendix for an allocation of the one percent property tax levy.

Property Tax In Lieu of VLF

Historically, approximately three-fourths of Vehicle License Fee (VLF) revenue was allocated to cities and counties as general purpose funding. Beginning in 1998-99, the State reduced the VLF payment required from vehicle owners. However, the State made up the revenue impact of the VLF rate reductions with State general fund revenue (the "VLF Backfill"). The VLF Backfill was eliminated in the 2004-05 State Budget. In that year, the VLF Backfill to cities and counties was permanently replaced with an equivalent increase in property tax revenues (Property Tax In Lieu of VLF). This increase was funded by decreases in property tax revenues allocated to schools and community colleges.

Annual Property Taxes in Lieu of VLF are estimated to be $1,012,954 for the Project. Revenues from Property Taxes In Lieu of VLF are estimated at .09125% of the increase in assessed valuation of $1.11 billion. This percentage is based on the total Property Tax In Lieu of VLF in the Adopted Budget of $325,215,478 divided by the total County assessed valuation of $356,405,346,718.

Public Safety Sales Tax (Prop. 172)

Public Safety Sales Tax or Proposition 172 ("Prop. 172"), effective on January 1, 1994, established a permanent one-half cent sales tax. These additional revenues support public safety services in cities and counties. These funds partially replace the shift in property taxes to the Educational Revenue Augmentation Fund (ERAF). The tax is collected by the state and allotted to each county based on

its proportionate share of statewide taxable sales. Total revenue from Prop. 172 is estimated at $267,851 per year at Project build-out as shown in Table A-8 based on total taxable sales of $53,570,298.

Fines, Forfeitures and Penalties

Fines, Forfeitures and Penalties includes court fines, traffic school fines, alcohol education prevention, penalties and interest on late or unpaid taxes, bail forfeitures, etc. and are anticipated to generate approximately $83,155 annually at Project build-out. Revenues from Fines, Forfeitures and Penalties are estimated at $24.24 per capita based upon the Adopted Budget amount of $59,037,825, divided by the total County population of 2,435,525.

Sales Tax

Sales tax revenues are generated by taxable purchases made within the County. As shown in Table A-8 of the Appendix, it is anticipated that the Project will generate approximately $53,570,298 in annual taxable sales. This includes taxable sales at the 4-Star Hotel, the retail center, and the equestrian center. Additional sales taxes will be generated from offsite purchases by the Project residents, but a portion of those sales will be in neighboring cities. To be conservative, this analysis only projects new taxable sales within the Project boundary. The County will receive 1.00% of taxable sales resulting in estimated annual sales tax revenues of $535,703 to the County General Fund.

Documentary Transfer Taxes

Property transfer tax applies to all sales of real property at a rate of $1.10 per $1,000 of sale or resale value, excluding assumed liens or encumbrances. It is assumed that the single-family residential units have a turnover rate of 10% per year and the non-residential properties will be retained indefinitely by the Developer. To be conservative, the resort condominiums have also been excluded since a portion of those are expected to be in the resort rental pool and used as operating property. Based on the projected assessed value of the residential portion of the Project, and assuming that continuing liens and encumbrances are insignificant, annual property transfer taxes to the County General Fund are projected to total approximately $87,764.

Licenses, Permits & Franchises

Licenses and Permit fees revenues include fees from animal licenses, business licenses, hazardous waste permits, gun permits, etc. Franchise Fee revenues include fees paid by businesses such as utility companies for the use of public streets and roadways. Licenses, Permits, and Franchise Tax revenues are estimated to be approximately $182,914 annually for the Project at build-out. Licenses, Permits, and Franchise Tax revenues are estimated at $53.32 per capita based upon the Adopted Budget Franchise Tax amount of $21,913,005, divided by the unincorporated County population of 410,952.

Transient Occupancy Tax

Transient Occupancy Tax ("TOT") revenues result from persons staying 30 days or less in hotels, motels, and similar lodgings. The Project is anticipated to have 150 hotel rooms and 113 of the 340 resort condominiums are expected to be in the resort rental pool program for 13 weeks per year as shown in Table A-7. TOT revenues are estimated to be approximately $1,067,625 for the 150 rooms in the 4-Star Hotel assuming an average occupancy rate of 65.0%. An additional $335,116 in TOT is estimated for the resort condominiums as shown in Table A-7. Total TOT revenue is estimated to be $1,402,741 for the Project at build-out.

3.2 County General Fund - Recurring Costs

Recurring costs are estimated for each major Net County Cost Department as shown in the Adopted Budget based on either a case study or a per capita approach. Average per capita costs applied to the Project don't necessarily reflect marginal cost increases as a result of the development of the Project. Cost categories for which marginal per capita costs are not expected to be the same as average per capita costs, the marginal cost increases can vary substantially from the average cost due to fixed costs in such categories. Estimated marginal costs will depend on the cost category and the amount of fixed vs. variable costs associated with the specific budget component. While significant reductions for fixed costs are common, in an effort to be conservative and not understate costs, this analysis applies 90% of the average per capita costs to the Finance and Government Services and Registrar of Voters cost categories (representing 10% fixed costs), and 110% to Public Safety and Public Works to account for higher variable costs due to the location of the Project. Each Net County Cost category is discussed further below, and Table A-4 of the appendix provides details about the projected cost calculation for each category.

Finance & Government Services

The Finance & Government Services category provides services that are for the benefit of the community overall and affect multiple functions and activities. Specific lines of work carried on by the County to perform this function include legislative, administrative, finance, counsel, elections, property management, plant acquisition, and promotional activities. The total annual costs to the County General Fund are estimated at $31,923 at build-out. The Finance & General Government Services costs are estimated at $9.31 per capita based upon the adjusted budget amount of $22,664,089, divided by the total County population of 2,435,525.

Human Services

Specific lines of work carried on by the County under Human Services primarily include those services provided by the Department of Public Social Services (DPSS). DPSS provides various aid programs, general relief, care of court wards, and veteran services. Total Human Services costs for the Project are projected at $131,107 annually at build-out. The Human Services costs are estimated at $38.22 per capita based upon the Adopted Budget amount of $93,081,122 as shown in Table A-4 of the Appendix, divided by the total County population of 2,435,525.

Internal Services

The lines of work carried on by the County under Internal Services include records management, custodial and maintenance services, real estate and project management services, dental, life, property, disability, and unemployment insurance, information technology, central mail, purchasing, and supply services. The total Internal Services cost for the Project are estimated at $15,996 per year at build-out. The Internal Services costs are estimated at $4.66 per capita based upon the Adopted Budget amount of $11,356,590, divided by the total County population of 2,435,525.

Office of Economic Development

The Office of Economic Development consists of Economic Development, the Riverside County Library System, the Edward Dean Museum, and Special Districts. The Special Districts department handles the county service areas and community facilities districts, including the maintenance community facilities district expected for the Project detailed in the Public Works and Community Services section below. There is no net County cost allocation for each of these departments.

There is a separate library fund which is allocated a portion of the one percent ad valorem taxes as shown in Table A-3. Library fund revenues from the Project are estimated to be $147,797 annually. The County Free Library fund has an Adopted Budget amount of $45,023,464, resulting in a per capita cost of $18.49, and an estimated Project costs of $63,417 per year. This results in a positive fiscal impact on the library fund from the Project and a corresponding revenue-to-cost ratio of approximately 2.33 to 1.

Public Safety

Specific lines of work carried on by the County to perform public safety services include probation services, the District Attorney's Office, the Law Offices of the Public Defender, the Fire Department (excluding Structural Fire Protection), and the Emergency Management Department's services. The Public Safety costs to the County General Fund are projected at $434,165 per year at build-out. Public Safety costs are estimated at $126.56 per capita based upon the adjusted budget amount of $308,240,539 (excludes Structural Fire Protection and Sheriff services analyzed separately), divided by the total County population of 2,435,525.

Sheriff Non-Patrol Services

Sheriff Services grouped under the County Public Safety portfolio have been categorized for this analysis as Sheriff Non-Patrol Services and Sheriff Patrol Services. The Sheriff Non-Patrol costs include Administration, Coroner, Correction, Court Services, Support, Ben Clark Training Center, CAC Security, and Public Administrator services. The Sheriff Non-Patrol Services costs to the County General Fund are projected at $359,512 per year at build-out. Sheriff Non-Patrol Services costs are estimated at $104.80 per capita based upon the Adopted Budget amount of $255,240,139, divided by the total County population of 2,435,525.

Sheriff Patrol Services

Although Sheriff Patrol Services costs are grouped under the County Public Safety portfolio, they have been removed from the Public Safety per capita costs estimated above. Since many cities do not contract with the County for Sheriff Patrol Services, the population served by the County needs to be calculated to produce the appropriate per capita costs. In addition to providing Sheriff services to the unincorporated areas of the County, the County provides contract Sheriff services to 16 cities/towns. The total estimated population served for the 16 cities on a contract basis, and cost for contract Sheriff services is shown in Table A-5 of the Appendix. The County Sheriff Patrol Services costs are estimated at $303.71 per capita based upon the Adopted Budget amount of $284,184,227 charged to the cities, divided by the population served of 935,712 for such cities. While the per capita costs of the partner cities may vary greatly between cities, the average of $303.71 is very close to the per capita costs for the unincorporated service population. The net County cost for Sherrif Patrol Services is $126,495,614, resulting in a per capita cost of $307.81, which is nearly the same as the partner cities' per capita cost. Considering the location of the Project and the fact that the per capita cost for the nearby City of Coachella is approximately $251, this analysis uses $303.71 as a conservative estimate. Accordingly, the Sheriff Patrol Services costs are projected at $1,041,874 per year at build-out.

Public Works and Community Services

The Public Works, Land Use & Environment cost portfolio includes costs for the Agricultural Commissioner's Office, the Department of Animal Services, the Department of Environmental Health, the Department of Waste Resources, the Flood Control and Water Conservation District, the Regional Parks & Open Space District, and the Transportation and Land Management Agency. Total

Public Works and Community Services costs for the Project are projected at $42,281 annually at build-out. The Public Works and Community Services costs are estimated at $12.33 per capita based upon the adjusted budget amount of $30,018,005, divided by the total County population of 2,435,525.

With respect to new infrastructure to be built in connection with the Project that would be within this cost category, the County Office of Economic Development has implemented a community facilities district ("CFD") program which fully mitigates the County's costs of maintaining the new Project infrastructure. Examples of the facilities for which the maintenance is funded by the CFD include, among other things, streets, storm drains, basins, landscaping, and street lighting. The CFD will levy special taxes annually to fund the County's expected cost of maintaining this infrastructure. Accordingly, the above per capita cost is likely overstated because the net County cost for public facilities maintenance will not increase as a result of Project development. To be conservative, no adjustment has been made to the per capita cost to account for the anticipated CFD.

Registrar of Voters

Specific lines of work carried out by the County under the Registrar of Voters include providing access for all eligible citizens in Riverside County to participate in the democratic process, protecting the integrity of votes, and maintaining transparent, accurate and fair elections for federal, state, and local offices. Total Registrar of Voters costs for the Project are projected at $16,511 annually at build-out. The Registrar of Voters costs are estimated at $4.81 per capita based upon the adjusted budget amount of $11,722,500, divided by the total County population of 2,435,525.

RUHS Health and Hospital Services

Specific lines of work carried on by the County under Riverside University Health System (RUHS) Health and Hospital Services include Community Health Centers, Behavioral Health, Public Health, RUHS Medical Center, Correctional Health Services, and Medically Indigent Services Program. Total RUHS Health and Hospital costs for the Project are estimated at $113,289 per year at build-out. The RUHS Health and Hospital Services costs are estimated at $33.02 per capita based upon the Adopted Budget amount of $80,430,646, divided by the total County population of 2,435,525.

Contingency, Contribution to Other Funds, and Debt Services

The Contingency, Contribution to Other Funds, and Debt Services sections include the combined County portfolio net costs for various functions. The Contingency category includes costs for allocating General Fund dollars to a contingency fund and the Debt Service category includes costs related to retirement of long-term debt, principal, and interest on notes and warrants. For purposes of this report, the Contingency and Debt Service cost categories are excluded from the analysis shown in Table A-4 of the Appendix as these costs are not anticipated to change as a result of the Project. The Other Fund Contributions is a budget unit organized by the Executive Office and used to contribute discretionary support to operations and programs outside of the general fund, including public safety, revenue-sharing agreements, and debt service related expenditures that require general fund support. The Other Fund Contributions costs allocated to the Project are $103,962 annually at build-out. These costs are estimated at $30.31 per capita based on the Adopted Budget amount of $73,808,944 as shown in Table A-4, divided by the total County population of 2,435,525.

3.3 County General Fund – Net Recurring Impact

Based on the assumptions in this analysis, the Project will have a positive fiscal impact on the County General Fund. The Project is anticipated to generate $5,021,414 in recurring annual revenues with anticipated annual recurring costs of $2,290,620, for a revenue-to-cost ratio of 2.19. As a result, the County can anticipate a net recurring surplus of $2,730,794 per year from the Project at build-out. Economic circumstances, such as a recession, could affect the projected revenues and costs and the resulting fiscal impact. Considering the target demographic for expected homebuyers and visitors to the Project, a recession is not expected to have a significant impact on Project assessed values or tax revenues. In addition, with a revenue-to-cost ratio above 2 to 1, the Project revenues would need to decrease by more than fifty percent, while costs stayed unchanged or increased, before the fiscal impact would be negative for the Project. The net recurring impacts of the Project to the County General Fund are summarized in Table 3-2 below.

TABLE 3-2

SUMMARY OF FISCAL IMPACTS AFTER BUILD-OUT

County General Fund	
Total Recurring Revenues	$5,021,414
Total Recurring Costs	2,290,620
Net Fiscal Impact	**$2,290,620**
Revenue/Cost Ratio	**2.19**

SECTION 4
COUNTY FIRE FUND

The Fire Department contracts with the California Department of Forestry and Fire Protection (CalFire) for services. The revenues for the Project are based on the basic tax rate applicable to County Structure Fire Protection. As shown on Table A-3 of the Appendix, the County Structure Fire Protection is estimated to generate $604,176 in revenues for the Project at build-out. This is calculated by multiplying the portion of the 1% ad valorem tax of 0.05442523% by the Project's increase in assessed valuation at build-out of $1,110,102,000.

The Fire Fund costs have been estimated by analyzing the Structural Fire Protection Fund (non-forest, non-contractual fire protection budget) separately from other funds. The Adopted Budget indicates that this budget unit (Fund 21000) has a net cost of $81,316,117. The following analysis has been prepared to illustrate the anticipated impacts to the County Fire Fund resulting from the Project.

The analysis shown in Table A-6 of the Appendix results in a per capita cost of $141.30 based on the total charges for Contract Services of $144,634,556 and County Structural Fire Protection and Capital Project Funds of $84,887,562, totaling $229,522,118, divided by the Total Population Served of 1,624,374. This per capita Fire Fund cost analysis results in Project Fire Fund costs of $484,726, which results in a positive annual recurring net fiscal impact of $119,450 at build-out. The Project is three miles from Fire Station #39 located at the corner of Avenue 58 and Polk Street. No cost adjustment has been made to the per capita costs for the Project's distance to Fire Station #39; however, the per capita fire costs could increase by up to 25% without the Fire Fund revenue-to-cost ratio falling below one-to-one.

The net fiscal impact of the Project on the County Fire Fund discussed above is summarized below. While fiscal impacts to the fire fund are often negative, the impacts from the Project are positive because of the significant increase in assessed value while generating a relatively low number of additional County residents. These net recurring impacts for the Project are summarized in Table 4-1 below.

TABLE 4-1

SUMMARY OF FISCAL IMPACTS AFTER BUILD-OUT

County Fire Fund	**Amount**
Total Recurring Revenues	$604,176
Total Recurring Costs	484,726
Net Fiscal Impact	**$119,450**
Revenue/Cost Ratio	**1.25**

APPENDIX

ASSUMPTIONS AND SOURCES

TABLE A-1
SUMMARY OF GENERAL POPULATION ASSUMPTIONS

Description	Assumption
Total County Population (1)	2,435,525
Unincorporated County Population & Housing (1)	
Total Unincorporated Resident Population	392,625
Total Unincorporated Housing Units	141,319
Persons per Unincorporated Occupied Housing Unit	3.16
Unincorporated County Employment (2)	
Total Employment - SCAG 2021	115,167
Estimated Share of total employment from outside the Unincorporated County	32%
Estimated Employment from outside the Unincorporated County	36,654
Unincorporated County Estimated Service Population	
Total Resident Population	392,625
Estimated employment at 50% of employment from outside the Unincorporated County	18,327
Total Estimated Unincorporated Service Population	410,952

Notes:

(1) State of California, Department of Finance, Table 2: E-5 City/County Population and Housing Estimates, 1/1/2022.
(2) SCAG Employment Statistics, Riverside County (Unincorporated), Riverside County, 2021.

TABLE A-2

SUMMARY OF GENERAL FUND REVENUES & ASSUMPTIONS

General Fund Revenue Source	FY 2022-2023 Budget	Projection Basis	Projection Factor	Project Totals
Property Taxes	Case Study	Assessed Valuation	Case Study (1)	$1,448,331
Property Tax In-Lieu of VLF	Case Study	Assessed Valuation	Case Study (2)	1,012,954
Prop 172 Public Safety Sales Tax	Case Study	Sales Tax Projection	Case Study (3)	267,851
Fines, Forfeitures and Penalties	59,037,825	Total County Population	$24.24 Per Capita	83,155
Sales Taxes	Case Study	Sales Tax Projection	Case Study (3)	535,703
Documentary Transfer Tax	Case Study	Assessed Valuation	Case Study (4)	87,764
Licenses, Permits and Franchises	21,913,005	Unincorporated Service Population	$53.32 Per Capita	182,914
Transient Occupancy Tax	Case Study	TOT Tax Projection	Case Study (5)	1,402,741
Total				**$5,021,414**

Notes:

(1) Based on 13.05% of basic Ad Valorem Tax (See Table A-3) based on total increase in Project Assessed Value of $1,110,102,000.

(2) Based on 0.09125% of increased Project Assessed Valuation. Percentage based on Motor Vehicle in Lieu revenues of $325,215,478 from 2022-2023 Adopted Budget divided by total County Assessed Valuation of $356,405,346,718.

(3) Calculated at 1% of annual taxable sales estimated for the Project at buildout from non-residential property. Prop 172 revenues are 0.5% of taxable sales. See Table A-8.

(4) Documentary Transfer Tax rate of 0.110% of assessed valuation of for-sale residential property within the Project based on an annual turnover rate of 10% at Project buildout.

(5) Calculated at 10% of annual hotel and resort condominium room revenues. See Table A-7.

Source:

County of Riverside, Auditor Controller.

County of Riverside, Adopted Budget 2022-23.

State of California, Department of Finance, 2022.

See Table A-1 for Total Unincorporated County of Riverside Population

TABLE A-3
TRA: 058-038
BREAKDOWN OF 1% AD VALOREM TAX

District	District Name	Agency Pct of Revenue	Property Taxes at Buildout
01-1001	GENERAL FUND	0.1304683120	$1,448,331
01-1121	COUNTY FREE LIBRARY	0.0133138541	$147,797
01-1123	COUNTY STRUCTURE FIRE PROTECTION	0.0544252276	$604,176
01-1134	SUPERVISORIAL ROAD DISTRICT 4	0.0093118602	$103,371
03-1601	COACHELLA VALLEY UNIFIED SCHOOL	0.4322142527	$4,798,019
03-9001	DESERT COMMUNITY COLLEGE	0.0697577584	$774,382
03-9896	RIV. CO. OFFICE OF EDUCATION	0.0379518107	$421,304
04-1110	RIV CO REGIONAL PARK & OPEN SP	0.0032203810	$35,750
04-4015	COACHELLA VALLEY PUBLIC CEMETERY	0.0021306436	$23,652
04-4555	CV MOSQUITO & VECTOR CONTROL	0.0090594613	$100,569
04-4611	COACHELLA VALLEY REC AND PARK	0.0109682220	$121,758
04-4821	CV WATER DISTRICT STATE WTR PROJ	0.0253629312	$281,554
28-4705	COACHELLA VALLEY RESOURCE CONSER	0.0003251639	$3,610
28-4831	CVWD IMP DIST 1 DS	0.0118351706	$131,382
38-4822	CVWD STORM WATER UNIT	0.0320955557	$356,293
88-7109	ERAF FUND	0.1575593950	$1,749,070
Total		**1.0000000000**	**$11,101,020**

Source:
Riverside County Auditor - Controller office
1% TAG Breakdown with ERAF, effective fiscal year 2022-2023

TABLE A-4

SUMMARY OF COST ASSUMPTIONS

Net Countywide Costs	FY 2022-2023 Budget	Adjusted Costs	Projection Basis	Projection Factor	Project Totals
Cooperative Extension (1)	$687,896	$0	Fixed Cost	N/A	$0
Finance and Government Services (2)	25,182,321	22,664,089	Total County Population	$9.31 Per Capita	31,923
Human Services	93,081,122	93,081,122	Total County Population	$38.22 Per Capita	131,107
Internal Services	11,356,590	11,356,590	Total County Population	$4.66 Per Capita	15,996
Public Safety-Excluding Sheriff (3)	280,218,672	308,240,539	Total County Population	$126.56 Per Capita	434,165
Sheriff Non-Patrol Services	255,240,139	255,240,139	Total County Population	$104.80 Per Capita	359,512
Sheriff Patrol Services (4)	126,495,614		Contract Service Population (Table A-5)	$303.71 Per Capita	1,041,874
Public Works and Community Services (3)	27,289,095	30,018,005	Total County Population	$12.33 Per Capita	42,281
Registrar of Voters (2)	13,025,000	11,722,500	Total County Population	$4.81 Per Capita	16,511
RUHS Health and Hospital Services	80,430,646	80,430,646	Total County Population	$33.02 Per Capita	113,289
Contingency (1)	20,000,000	0	Fixed Cost	N/A	0
Contribution to Other Funds	73,808,944	73,808,944	Total County Population	$30.31 Per Capita	103,962
Debt Services (1)	6,532,189	0	Fixed Cost	N/A	0
Total	**$1,013,348,228**				**$2,290,620**

Notes:

(1) The Adjusted Cost excludes this item as such cost is not anticipated to be impacted by the Project.

(2) An adjustment factor of negative 10% has been applied to account for certain fixed costs that are not anticipated to change as a result of the Project population.

(3) An adjustment factor of positive 10% has been applied to account for potential increased services costs related to the Project location.

(4) See Table A-5 for a determination of Sheriff Patrol services costs resulting from the Project.

Source:

Riverside County, Adopted Budget, 2022-2023.

TABLE A-5
COUNTY SHERIFF PATROL SERVICES COST

Jurisdiction (1)	1/1/2022 Population
Calimesa	10,899
Canyon Lake	11,056
Coachella	42,158
Eastvale	69,929
Indian Wells	4,762
Jurupa Valley	105,384
Lake Elsinore	71,615
La Quinta	37,860
Moreno Valley	209,407
Norco	24,909
Palm Desert	50,889
Perris	78,890
Rancho Mirage	16,804
San Jacinto	54,593
Temecula	109,925
Wildomar	36,632
Total Contract City Population	935,712

Charges for Current Services (2)	$284,184,227
Police Patrol Cost Per Capita (3)	$303.71
Project Population	3,431
Total Project Sheriff Patrol Costs	$1,041,874

Notes:

(1) The County Sheriff's Department provides police protection to 16 cities on a contract basis, in addition to serving the unincorporated County area.

(2) Represents the charges to the contract cities for police services per the County 2022-2023 Adopted Budget.

(3) Represents the cost per capita for sheriff patrol services. Non-patrol services analyzed separately.

Source:

County of Riverside, Adopted Budget 2022-2023.

State of California, Department of Finance, Table 2: E-5 City/County Population and Housing Estimates, 1/1/2022.

TABLE A-6
COUNTY FIRE FUND

Jurisdiction (1)	1/1/2022 Population
Banning	30,877
Beaumont	54,690
Coachella	42,158
Desert Hot Springs	32,569
Eastvale	69,929
Indian Wells	4,762
Indio	89,137
Jurupa Valley	105,384
Lake Elsinore	71,615
La Quinta	37,860
Menifee	106,627
Moreno Valley	209,407
Norco	24,909
Palm Desert	50,889
Perris	78,890
Rancho Mirage	16,804
San Jacinto	54,593
Temecula	109,925
Wildomar	36,632
Total City Population Served	1,227,657
Unincorporated County Population	396,717
Total Population Served	1,624,374
Charges for Current Contract Services (1)	$144,634,556
County Structural Fire Protection & Capital Project Funds (1)	84,887,562
Total Structural Fire Protection Costs	$229,522,118
Structural Fire Protection Cost Per Capita	$141.30
Project Population (2)	3,431
Total Project Fire Fund Costs	$484,726
County Fire Fund	
Total Recurring Revenues (3)	$604,176
Total Recurring Costs	$484,726
Net Fiscal Impact	**$119,450**
Revenue/Cost Ratio	**1.25**

Notes:

(1) The County funds fire protection costs from General Fund Revenues, the County Structural Fire Protection Fund, and Fire Capital Project Fund. The costs above are funded from partner cities' contracts, County Structural Fire Fund and Fire Capital Project Fund. Note: The fire costs funded from the General Fund are included in Table A-4.

(2) Total Project Population calculations are included in Table A-1.

(3) The County Fire Fund receives 5.44% of the 1% ad valorem tax rate as shown in Table A-3.

Source:

County of Riverside, Adopted Budget 2022-23.

State of California, Department of Finance, Table 2: E-5 City/County Population and Housing Estimates, 1/1/2022.

TABLE A-7
CALCULATION OF TRANSIENT OCCUPANCY TAX

	4-Star Hotel Rooms	Resort Condos (1)
Number of Rooms/Units	150	113
Annual Availability	100%	25%
Average Daily Rate (ADR) (2)	$300	$500
Occupancy Rate (%) (2)	65.0%	65.0%
Total Annual Room Revenues	$10,676,250	$3,351,156
Annual County TOT (10%)	$1,067,625	$335,116
Total Projected Transient Occupancy Tax (TOT) Revenues:		**$1,402,741**

Notes:
(1) Assumes one-third of the resort condominiums are included in the hotel rental pool for 13 weeks per year.
(2) Average Daily Rate and Occupancy Rate provided by Developer.

TABLE A-8
NON-RESIDENTIAL SALES TAX

	4-Star Hotel Rooms	Resort Condominiums
Rooms/Units	150	113
Annual Availability	100%	25%
Occupancy Rate	65%	65%
Est. Daily Taxable Sales per Room	$30	$75
Annual Taxable Sales per Room (1)	$7,118	$4,448
Total Annual Taxable Sales	$1,067,625	$502,673
County Share of Taxable Sales	$10,676	$5,027
		Mixed-Use Retail
Retail Sq. Ft.		150,000
Est. Annual Taxable Sales per Sq. Ft.		$300
Total Annual Taxable Sales		$45,000,000
County Share of Taxable Sales		$450,000
Horse Show Taxable Sales (2)		$7,000,000
County Share of Taxable Sales		$70,000
Total Project Annual Taxable Sales		**$53,570,298**
Total Non-Residential Sales Tax to the County		**$535,703**
Prop 172 Sales Tax from Non-Residential Property		**$267,851**

Notes:

(1) Estimated occupancy rate provided by developer.

(2) Based on estimate from Desert International Horse Park increased by 30% due to increased show size.

Thermal Ranch Outreach Efforts

Dates	Person/Organization	Subject
October 27,2022 July 22, 2023 September 19, 2023, October 11, 2024	Riverside County Supervisor Perez	Introduce property owner and discuss Desert International Horse Park operations and proposed Thermal Ranch project and follow up meetings to provide updates.
November 3, 2022	John Hildebrand, Riverside County Planning Department	Discuss proposed Thermal Ranch project.
November 10, 2022 June 20, 2023	Paul Rull, Riverside County Airport Land Use Commission	Discuss proposed Thermal Ranch project.
October 23, 2023 November 2, 2023	Marie Perotti, Director of CVUSD Career Technical Education Program, and other teachers from CVUSD	Introduction to current Desert Internation Horse Park operations, student job training, internship opportunities, business opportunities with CVUSD Career Technical Education Program.
November 2, 2023	Larry Salas, CVUSD Adult Education and Citizen Program	Introduction to current Desert Internation Horse Park operations and opportunities for future citizens and possible partnering with CVUSD.
November 9, 2023	Dr. Valentino, Superintendent Coachella Valley Unified School District	Introduction of proposed Thermal Ranch project and establishing partnerships.
November 9, 2023	Alex Cardenas, IID Chairman, Sabrina Barber, Asst. Energy Mgr.	Discuss energy needs for the proposed Thermal Ranch project.
November 30, 2023	Ernie Rios, Thermal/Oasis Community Council Chairman	Discuss affordable housing, Gents Alliance program and conference in February 2024, guest speakers and role models. Also discuss resources and community support. Introduced Mr. Rios to the Thermal Club by Tony Fimbres of Statewide Services. Discuss potential vocational training programs for construction and automotive tech.
December 1, 2023	CVUSD Adult Education Team – Jeremy Weischedel, Larry Salas, Dr. Jesus Perez, and Lupe Hansen	Discuss Workforce Development Programs, Talent Bank Development, job fairs, placement opportunities and other vocational program opportunities.
December 7, 2023	Robert Wright, Coachella Valley Housing Coalition Board Chair, Pedro Rodriguez, Coachella Valley Housing Coalition Executive Director	Discuss the proposed Thermal Ranch project and status of Coachella Valley Housing Coalition's affordable housing projects.

December 7, 2023	Pedro Rodriguez and Bob Wright, Coachella Valley Housing Coalition	Discuss affordable housing projects and infrastructure development. Partnership to support mutual projects, Community Sub-Station.
December 12, 2023	Riverside County Supervisor Chief of Staff Steven Hernandez	Outreach to attend the horse park in January 2024.
January 12, 2024	Tomas Tortez, Torrez-Martinez Desert Cahuilla Indians	Introduction of proposed Thermal Ranch project and potential partnerships.
February 5, 2024	Scott Bruckner, Riverside County Administrative Office	Outreach to set up a meeting at Desert International Horse Park to discuss the Enhanced Infrastructure Financing District and benefits of proposed Thermal Ranch project.
February 7, 2024	Heidi Marshall, Jamil Dada, and Stehanie Adams of Riverside County Economic Development Agency	Introduction of Desert International Horse Park and proposed Thermal Ranch project.
February 16, 2024	Bob Wright and Joaquin Tijerina from Riverside County Economic Development Agency	Meeting to discuss current Desert International Horse Park operations and future Thermal Ranch Project.
February 17, 2024	Castulo Estrada, City of Coachella Utility Director, City of Coachella Councilmember Neftali Galarza, City of Mexicali Treasurer and Public Relations Officer and Jason Herandez.	Discuss Desert International Horse Park operations and proposed Thermal Ranch project.
February 23, 2024	Jesus Arguelles, Torres Martinez Desert Cahuilla Indians Economic Development Director.	Discuss Desert International Horse Park operations and proposed Thermal Ranch project.
February 28, 2024	Bob Wright, Riverside County Economic Development Agency	Discuss status of their affordable housing projects near the proposed Thermal Ranch project, CVHC infrastructure needs and potential assistance.
March 1, 2024	Steve Lawrence, Alan Pace, Brian Colbert, Secure Energy Sources	Discuss energy needs for proposed Thermal Ranch project.
March 6, 2024	Marco Celedon and Sergio Duran. Thermal/Oasis Community Council	Discuss Thermal-Oasis Community Council needs and introduction to Desert International Horse Park.
March 10, 2024	Jesus Arguelles, Torres Martinez Economic Development Director, Rosalie Arguelles and Brandon	Discuss Desert International Horse Park operations and proposed Thermal Ranch project.

	Morreo, Torres Martinez Tribal Council member.	
March 13, 2024	Mike Wells, Thermal-Oasis Community Council Member.	Discuss Thermal-Oasis Community Council needs and current Desert International Horse Park operations and proposed Thermal Ranch project and benefits.
March 14, 2024	Heidi Marshall, Riverside County Housing Director and Stephanie Adams, Workforce Development Director	Discuss current Desert International Horse Park operations and proposed Thermal Ranch project and benefits.
March 18, 2024	Juan Perez, Riverside County CEO	Discuss Desert International Horse Park operations and proposed Thermal Ranch project, discuss EIR status and provide updates.
March 21, 2024	Growing Coachella Valley,	Introduction of proposed Thermal Ranch project and establishing partnerships.
March 24, 2024 September 30, 2024 November 25, 2024 May 28, 2025	Thermal – Oasis Community Council	Introduction of proposed Thermal Ranch project and follow-up meetings to provide updates.
May 3, 2024	Timothy Goulet, 29 Palms Band of Mission Indians Director of Aviation	Discuss Desert International Horse Park operations and proposed Thermal Ranch project, potential partnership and opportunities regarding land owned by 29 Palms near the Thermal Airport.
May 24, 2024	Antonio Ortega, Government Affairs and Communications Officer at Imperial Irrigation District and City of Coachella Mayor, Steve Hernandez	Discuss proposed Thermal Ranch project and energy infrastructure development.
November 3, 2024	Steve Hernandez, Coachella Mayor, Castulo Estrada, CVWD Director, William Sanchez, Riverside County 4th District Planning Commissioner and Tomas Tortez, Torres Martinez Tribal Chairman	Introduction, tour, and orientation of Desert International Horse Park operations. Discussion of community needs and future cultural and special events. Job opportunities for tribal members. Commitment for future meetings.
November 21, 2024 December 12, 2024	Dr. Frances Esparza, Superintendent Coachella Valley Unified School District	Introduction of proposed Thermal Ranch project and establishing partnerships.

June 17, 2024	Jose Mota, Lift to Rise and other staff members	Discuss Desert International Horse Park operations and proposed Thermal Ranch project.
June 17, 2024	Riverside County Chief of Staff Steve Hernandez	Discuss affordable housing and infrastructure needs in Thermal.
July 16, 2024	Juan Perez, Riverside County CEO, Charissa Leach, Assistant TLMA Director, and Rania Odenbaugh, Agency Director	Discuss updates and planning issues related to the proposed Thermal Ranch project.
August 15, 2024	Carrie Oliphant, Coachella Valley Water District Director of Engineering	Discuss water conservation program, proposed Thermal Ranch project. District needs in Thermal.
September 24, 2024	Pedro Rodriguez, Executive Director, Coachella Valley Housing Coalition	Discuss proposed Thermal Ranch project; infrastructure needs related to Coachella Valley Housing Coalition projects in Thermal and Oasis.
October 9, 2024	Jesus Montanez, Thermal-Oasis Community Council member.	Discuss proposed Thermal Ranch project and community needs.
October 15, 2024	Alexis Galarza, Thermal-Oasis Community Council member	Discuss proposed Thermal Ranch project and community needs.
October 22, 2024	Riverside County Supervisor Perez Chief of Staff Steve Hernandez	Discuss follow up matters related to housing, recreational and Thermal-Oasis community needs.
October 22, 2024	Riverside County Supervisor Chief of Staff Steven Hernandez	Discuss proposed Thermal Ranch project.
November 14, 2024	Jesus Montanez, Thermal-Oasis Community Councilmember	Discuss proposed Thermal Ranch project and community needs.
December 16, 2024	Ivanna Uriarte and Crystal Otworth, Leadership Counsel	Discuss Desert International Horse Park operations and proposed Thermal Ranch project, community benefits, community concerns. Invited community to Desert International Horse Park to see the operations.
January 16, 2025	Alex Cardenas, IID Board Member Chair, Martha Cardenas Singh, Imperial County Supervisor	Discuss Desert International Horse Park operation and proposed Thermal Ranch project energy needs.
January 23, 2025	Jeff Gonzalez, Assemblyman (D-36), Jose Esparza, Assemblyman Gonzalez' Field Representative	Discuss Desert International Horse Park operations and proposed Thermal Ranch project.
January 31, 2025	Anthony Bianco, Scott Chuchian, Kieth Chuchian, DJ Ryan (Date and Grape Growers)	Discuss Desert International Horse Park operations and proposed Thermal Ranch project.

March 1, 2025	Former Assemblyman Eduardo Garcia, Senator Padilla's office staff, Armando Avalos, Joselyn Ramirez, Armando Martinez, Assemblyman Gonzales' office staff, Jose Esparza, Felipe Ortiz	Discuss Desert International Horse Park operations and proposed Thermal Ranch project and letter of support.
March 1, 2025	Assemblyman Gonzalez's staff, Jose Esparza, Felipe Ortiz	Introduction of proposed Thermal Ranch project and establishing partnerships.
March 12, 2025	Coachella Valley High School Students, Teachers, and Advisors	Discuss Desert International Horse Park operations and proposed Thermal Ranch project, CET Program, vocational training and potential job opportunities and internships for students.
April 17, 2025	Growing Coachella Valley Board	Discuss Desert International Horse Park operations and proposed Thermal Ranch project, letter of support.
April 29, 2025	Torres Martinez Desert Cahuilla Planning Commission with Riverside County Planning Commissioner Bill Sanchez	Discuss Desert International Horse Park operations and proposed Thermal Ranch project update.
May 27, 2025	Thermal – Oasis Community Council	Discuss Desert International Horse Park operations and proposed Thermal Ranch project. Thermal-Oasis Community Council requested more community input and a continuance to June 16, 2025 meeting.
June 16, 2025	Thermal – Oasis Community Council	Updated the Community Council and requested a letter of support. After hearing the request and public comments, the Thermal-Oasis Community Council approved a letter of support with conditions.
June 26, 2025	Riverside County Chief of Staff Steve Hernandez	Update Mr. Hernandez on June 16, 2025 meeting with Thermal – Oasis Community Council.
July 30, 2025	Riverside County Supervisor Perez	Updated Supervisor Perez and staff (Mr. Steve Hernandez and Ms. Stephanie Virgen) on project status, community outreach efforts, and Thermal-Oasis Community Council meetings.

RIVERSIDE COUNTY
PLANNING DEPARTMENT
Riverside County, California

Draft Environmental Impact Report
(SCH No. 2023050624)

THERMAL RANCH SPECIFIC PLAN PROJECT

Thermal Ranch Specific Plan SP No. 00401
and associated
General Plan Amendment No. GPA 2300001
Change of Zone No. 2300003
Tentative Tract Map No. 38578
Plot Plan No.s 230005, 230006 and 240016

PREPARED FOR

RIVERSIDE COUNTY
PLANNING DEPARTMENT
4080 LEMON STREET, 12TH FLOOR
RIVERSIDE, CA 92501

PREPARED BY

TERRA NOVA PLANNING & RESEARCH, INC.®
42635 MELANIE PLACE, SUITE 101
PALM DESERT, CA 92211

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COUNTY OF RIVERSIDE

THERMAL RANCH SPECIFIC PLAN No. SP00401
General Plan Amendment No. GPA 2300001 & Change of Zone No. CZ 2300003
Tentative Tract Map No. 38578
Plot Plan Nos. 230005, 230006 & 240016
Environmental Impact Report Case No. CEQ240001

DRAFT ENVIRONMENTAL IMPACT REPORT
SCH No. 2023050624

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RIVERSIDE COUNTY THERMAL RANCH SPECIFIC PLAN

DRAFT ENVIRONMENTAL IMPACT REPORT

EXECUTIVE SUMMARY & ENVIRONMENTAL MATRIX

INTRODUCTION

The County of Riverside (County) has prepared this Environmental Impact Report (EIR) to evaluate the potential environmental impacts associated with implementation of the Thermal Ranch Specific Plan SP No. 00401 (Project) and associated General Plan Amendment Case No. GPA No. 2300001, Change of Zone No. 2300003, Tentative Tract Map No. 38578; and Plot Plan No.s 230005, 230006 and 240016. The County is the Lead Agency under the California Environmental Quality Act (CEQA) for this proposed Project.

The EIR has been prepared in accordance with CEQA (as amended) (Public Resources Code §§21000-21189.57) and the State CEQA Guidelines (California Code of Regulations, Title 14, Chapter 3, §§15000-15387). Under State CEQA Guidelines §15121 (Informational Document):

- *An EIR is an informational document which will inform public agency decisionmakers and the public generally of the significant environmental effect of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project. The public agency shall consider the information in the EIR along with other information which may be presented to the agency.*
- *While the information in the EIR does not control the agency's ultimate discretion on the project, the agency must respond to each significant effect identified in the EIR by making findings under Section 15091 and if necessary by making a statement of overriding consideration under Section 15093.*
- *The information in an EIR may constitute substantial evidence in the record to support the agency's action on the project if its decision is later challenged in court.*

Under State CEQA Guidelines §15123, this Executive Summary describes the proposed Project, potentially significant impacts that could result from its implementation, and required avoidance, minimization and mitigation measures. Also identified in this chapter is a summary of the alternatives to the Project evaluated in this Draft EIR (Draft EIR or DEIR), including those that would avoid potentially significant effects; issues of concern/areas of controversy known to the Lead Agency; and issues to be resolved, including the choice among alternatives and how best to mitigate the potentially significant effects.

The reader should review, but not rely exclusively on the Executive Summary as the sole basis for judgment of the proposed Project and alternatives. The complete DEIR should be consulted for specific information about the potential environmental effects and mitigation measures to address those effects.

LEAD AGENCY CONTACT:

Russell Brady, Senior Planner
County of Riverside Planning Department
4080 Lemon Street, 12th Floor
Riverside, California 92501
Phone: (951) 955-3025
Email: rbrady@rivco.org

SUMMARY OF THE PROPOSED PROJECT

The Thermal Ranch Specific Plan project, inclusive of accompanying Tentative Tract Map (TTM), three plot plan applications (PPAs), and a General Plan Amendment (GPA) and Change of Zone (CZ), is proposed on 619±-acres and will be comprised of a mix of uses including and centered around a 231-acre equestrian center and related show facilities, including barns, stabling and related equestrian services. The equestrian center will require a maximum of 300 staff, and will have up to an additional 8,100 visitors on peak event days comprised of owners, trainers, stable hands and visitors.

Other components of the Thermal Ranch Specific Plan would include a mix of residential neighborhoods ranging from seasonal and year-round workforce housing and RV park facilities to large single-family estate lots, some suitable for keeping horses. Other residential product planned includes single-family attached and detached homes and resort condominiums. At buildout, the Project will provide up to 1,362 dwelling units ranging in densities from 0.67 to 27.3 units per acre and up to 320 RV spaces.

Proposed commercial areas would provide 275,000± square feet of retail and other commercial space, including 75,000± square feet of equestrian event-related retail space, and 10,000 square feet of office space at the equestrian center; and up to 150,000 square feet of retail space. A 54.4±-acre mixed use resort with a 150± key resort hotel, beach club, pool and other recreational amenities, and ancillary retail is also proposed. The Project provides four Coachella Valley Water District (CVWD) well sites to be located in the northern and eastern portions of the Project site.

Additionally, a subdivision map (TTM No. 385378) and three Plot Plan applications have been filed and are addressed in this CEQA analysis. TTM No. 38578 will subdivide the property into large parcels and PA-2 (Estate Residential) into 132 individual lots and PA-3 into 390 single-family lots. The three plot plans will allow development to commence at the equestrian center and workforce housing and RV park (PA-1 and PA-4a and b) following approval of the Specific Plan and these related applications.

The Project will result in full part-width roadway improvements, phased to Project improvements, of Avenue 62, Harrison Street and Tyler Street. Water and sewer will be extended from immediately off-site to serve the proposed Project. Two sewerage lift stations are proposed in the southerly portion of the Project. An on-site electric power substation is also planned.

The Thermal Ranch Specific Plan site is currently designated “Agriculture” in the Foundation Element and the Eastern Coachella Valley Area Plan (ECVAP) of the General Plan. The applicant proposes a land use change to the Foundation Element designation to “Community Development” and to apply a variety of ECVAP land use designations consistent with proposed underlying land uses. Consistency zoning is also proposed and a part of this Project, with proposed zoning designation that correspond to the proposed ECVAP and use designations. The Project GPA application also requests the deletion of two trail segments designated in the center of the subject property.

STATEMENT OF PROJECT OBJECTIVES

According to the Thermal Ranch Specific Plan, various issues were considered and evaluated during the preparation of the Specific Plan. Engineering feasibility, water efficiency, General Plan goals, and compatibility with surrounding land uses were considered during the planning process. To ensure the functional integrity, economic viability, environmental sensitivity, and positive aesthetic contribution of this development, unique Project objectives were established as follows:

1. Develop a high-quality master planned equestrian community and world-class equestrian center that will ensure equestrian sports continue to exist in the Thermal area.

2. Develop an integrated community that allows equestrians, residents, and workers to live, work, and recreate within the project and enjoy the equestrian lifestyle.

3. Develop a thoughtfully planned and integrated project to allow for a variety of uses including but not limited to residential, neighborhood and tourist commercial uses that compliment and support the equestrian center.

4. Create a thriving equestrian community by providing a variety of housing options including estate residences, traditional single-family homes (attached and detached), modular homes, and RV park. The many housing options will promote housing diversity within the project and provide housing for people working or otherwise associated with the equestrian center.

5. Provide a comprehensive land use plan that establishes development standards, land use regulations, and programs to guide the orderly transition/development of the property and enhances connectivity with the surrounding community.

6. Provide a commercial center with amenities for residents and visitors of the project and the surrounding communities. The commercial center will have store fronts for grocery, restaurants, and other retailers or service providers including enhancing access to fresh food choices.

7. Accommodate phasing that provides for multi-year project development in an orderly and environmentally efficient manner.

8. Provide flexible development regulations that allow future projects to be entitled quickly and easily in response to market demand and evolving design needs.

9. Establish design guidelines, development regulations, use standards and procedures that result in cohesive and attractive landscape and architectural treatments.

10. Provide a safe and efficient circulation system.

11. Provide a safe and efficient network of golf-cart and pedestrian paths.

12. Provide water, sewer, drainage systems and other utilities to adequately service the project and enhance such infrastructure in the Thermal and Oasis area to help promote housing and economic development opportunities in the surrounding communities.

13. Promote quality development consistent with the goals and policies of the County of Riverside General Plan.

SUMMARY OF PROJECT IMPACTS AND MITIGATION MEASURES

This DEIR presents the environmental impact analyses for all CEQA resource topics identified for further analysis in the Project's Initial Study and Notice of Preparation (IS/NOP) and identifies mitigation measures to reduce significant impacts to a less than significant level, where appropriate and feasible. A summary of all potential environmental impacts and mitigation measures is provided in the Mitigation Monitoring and Reporting Program (MMRP) at the end of this summary. It is intended to provide a summary of the Project's impacts and mitigation measures; please refer to Section 2 of the DEIR for the complete discussion and analysis. The DEIR analysis indicates that implementation of the Proposed Project could result in unmitigable environmental impacts. Therefore, statements of overriding considerations are expected to be needed, as discussed in Section 2.

ALTERNATIVES SUMMARY

This DEIR presents the alternatives analysis for the proposed Project. State CEQA Guidelines §15126.6 requires that an EIR describe and evaluate the comparative merits of a range of alternatives to the project that could feasibly attain most of the objectives of the project but would avoid or substantially lessen any significant adverse effects of the project. An EIR is not required to consider every conceivable alternative to a project; rather, it must consider a reasonable range of potentially feasible alternatives that will foster informed decision-making and public participation. The State CEQA Guidelines further state that the specific alternative of "no project" shall also be evaluated. The alternatives evaluated in this DEIR were identified based on public and agency input and identification of the project's significant environmental impacts in this DEIR.

Alternative A – Increased Intensity Mixed-Use Alternative

Alternative A would assume the same basic goal of a mixed-use resort residential community focused around a world-class equestrian center but with a greater intensification of urban land uses. Under this scenario, the equestrian center (PA-1) acreage would remain at 223± acres to ensure the equestrian uses remain viable. PA-4, which is designed to house workers and visiting competition staff at the equestrian center, would also remain the same as planned in the proposed Project. Estate lot development (PA-2) would develop at a density of 2 units per acre and provide 388 lots of 0.50± acre each. Densities of detached and attached single-family homes would increase to 8.7± units per acre, and are assumed to be attached single-family product and resulting in 605 units.

Under Alternative A, commercial uses (PA-5) would increase, providing 300 hotel rooms (keys), 60,000 square feet of retail space and 505 condo units. Commercial retail space along Harrison Street (PA-6) would be maximized to provide up to 200,000 square feet. In comparison with the proposed Project, Alternative A would result in 636 additional residential units for a 46% increase. The rationale for this alternative is increasing land use efficiencies, use of infrastructure, potential reductions in off-site vehicle miles travelled (VMT), as well as reduced pressure to develop on other, more environmentally sensitive sites, and enhanced airport land use compatibility.

Alternative B – Low Density Residential Alternative

Alternative B has been developed to offer a development scenario that is more consistent with the site's existing use and rural uses in the area, while still facilitating the equestrian center development and associated resort residential character. This alternative generates lower GHG and air pollutant emissions, less traffic, lower demand for energy and natural resources, and a lower overall demand for public utilities and services.

Under Alternative B, the equestrian center (PA-1) acreage would remain at 223± acres to ensure the equestrian uses remain viable. However, the density of residential estate lots (PA-2) would be reduced to five acre lots, the density of attached and detached single-family homes (PA-3) would be reduced to 2 units per acre with only single-family detached homes. The density of the resort condos (PA-5) would be reduced to 5 units per acre. Commercial development would also play a less prominent role under Alternative B, providing a total of 100,000 square feet of retail space (PA-5 and 6). The 150 key hotel in PA-5 would remain the same under this alternative. In comparison with the proposed Project, Alternative B would result in 474 fewer residential units for a 34% decrease. The rationale for this alternative is increasing consistency with surrounding land use, reduced demand for infrastructure and services, and potentially reducing environmental impacts due to the reduced number of residents and guests.

Alternative C - No Project Alternative
Under Alternative C (No Project Alternative) the subject property remains designated as “Agriculture” in the Foundation Element and the Eastern Coachella Valley Area Plan (ECVAP) of the County General Plan. The subject property is currently being farmed with row crops. This designation allows row crops, groves, nurseries, dairies, poultry farms, processing plants, and other related uses. Equestrian uses are not provided for under this designation. Residential development is allowed under the “Agriculture” designation at a maximum density of one dwelling unit per 10-acre and could provide up to 62 resident lots or units. Therefore, Alternative C assumes a continuation of the existing agricultural activity.

Alternative D - No Retail Commercial Center or Resort Uses
Alternative D has been developed to offer a development scenario that replaces the retail commercial center, resort condominium uses and hotel with estate residential property, while still facilitating the equestrian center development. Under Alternative D, all resort condominium uses in PA-5 and retail commercial square footage in PA-6 would be replaced with estate residential uses with a density of 0.42 dwelling units per acre, or 2.3 acre lots. In addition, the density of residential lots in PA-2 would be slightly reduced from 0.6 to 0.5 dwelling units per acre, or two acre lots. In comparison with the proposed Project, Alternative D would result in 340 fewer residential units (resort condominiums) for a 25% decrease, a reduction in retail commercial space by 200,000 square feet for a 73% decrease, and elimination of the hotel use. The rationale for this alternative is reducing land use intensities, potentially reducing environmental impacts from mobile emissions due to the reduced number of residents and commercial users.

NOTICE OF PREPARATION AND PUBLIC SCOPING MEETINGS

When a Lead Agency determines that an EIR is required for a project, a Notice of Preparation (NOP) must be prepared and submitted to the State Clearinghouse, and responsible and trustee agencies. In addition, the County provided a copy of NOP to the Riverside County Clerk; mailed the NOP to the proposed project distribution list; and published the NOP in The Desert Sun newspaper (refer to Appendix A for these materials). The purpose of the NOP is to provide responsible and trustee agencies, and the public, with sufficient information describing the proposed project and the potential environmental effects, to enable interested parties/persons to make a meaningful response.

The County issued the NOP for the Project on May 26, 2023 for a 30-day public review period which concluded on June 27, 2023. Two public scoping meetings were also held on-line and in-person on June 19 and July 10, 2023 at 1:30 p.m. and served the purpose of educating and informing the public about the proposed Project, addressing public questions and concerns, and collecting input on the CEQA process. The first part of each scoping meeting included a 5-minute Power Point presentation followed by an open question and answer period where additional maps and exhibits were made available to facilitate the meeting. Comment cards and note pads were also used by County staff to record comments

and questions raised by attendees. Approximately 10 members of the public attended the two public scoping meetings (see Scoping Meeting Report in Appendix A: CEQA Initial Study, NOP and Scoping Meeting Report).

The NOP was also submitted to the State of California Governor's Office of Planning and Research, State Clearinghouse (SCH), which circulated the NOP to state agencies for a 30-day review and comment period. A public notice was also published in a newspaper of local circulation. Approximately 18 written comments were received from a diverse group, including individuals, association members, law firms, state agencies, and other organizations. The State Clearinghouse sent acknowledgement of NOP circulation (see Appendix A).

ISSUES OF CONCERN/AREAS OF CONTROVERSY

Comments received on the Thermal Ranch Notice of Preparation and at the two scoping meetings were diverse and of local and broader concern. They included the following:

- Project IID substation and use of renewable energy technologies
- Scope and scale of commercial development
- Land use compatibility, including Native American and airport lands
- Low-income and affordable housing
- Lack of basic infrastructure in area
- Community engagement
- Local socio-economic conditions
- Air quality and greenhouse gas emissions
- Manure odor and management
- Transportation, traffic and vehicle miles traveled
- Biological and cultural resources
- Water resources and landscape materials
- Artificial nighttime lighting
- Agricultural lands
- Aesthetic and scenic resources

ENVIRONMENTAL SUMMARY MATRIX

MITIGATION MONITORING & REPORTING PROGRAM
County of Riverside / Thermal Ranch Specific Plan et al
Draft EIR/ SCH No. 2023050624

Resource Topic	Level of Impact After Mitigation	Mitigation Measures	Responsible Party/ Monitoring Party	Implementation Timing
Aesthetics	a) Less Than Significant	AES-1 Landscaping plans and materials along rights-of-way and other development site perimeters shall serve to create a harmonious transition between individual development sites and the surrounding environment. Visual order in landscape designs and materials shall be used to establish or enhance visual order to streetscapes, parking areas, building perimeters and open space areas.	County, Developer	Prior to approval of landscaping plans.
	b) Less Than Significant	AES-2 Free-standing walls and fences, where contemplated, shall be constructed as so as to minimize impacts to scenic vistas to the greatest extent practicable, and to define and delineate surrounding areas. Individual project landscaping should frame views, obscure or soften hard edges and enhance security.	County, Developer	Prior to approval of landscaping plans and site plans.
	c) Less Than Significant	AES-3 All outdoor lighting shall be in compliance with Riverside County Lighting Ordinances 655 and 915, and applicable Specific Plan guidelines. Other lighting recommendations include the following: a. Outdoor lighting shall be limited to the minimum height, number and intensity of fixtures needed to provide security and identification, taking every reasonable effort to preserve the community's night skies. b. Lighting fixtures shall be of appropriate scale, style, and character of the architecture. No lighting which incorporates flashing, pulsing or is otherwise animated shall be permitted. c. The intensity of light at the boundary of the HBFC campus shall not exceed seventy-five (75) foot lamberts from a source of reflected light. d. All lighting shall be directed onto the site and away from adjacent properties with appropriate shielding, and minimal fixture height to ensure minimum impact on adjoining lands and streets. e. Elevated lighting, including but not limited to parking lot lighting, shall be full-cutoff fixtures. Drop or sag lens fixtures shall not be permitted.	County, Developer	Prior to approval of landscape/lighting plans.
	a) b) Other Lighting Less Than Significant	AES-4 Landscape lighting shall be shielded to direct and limit areas of illumination to the individual development site. No up-lighting that spills into the night sky shall be used. Landscape lighting plans and details shall be included with the final landscape plans.	County, Developer	Prior to approval of landscape/lighting plans.
		AES-5 Exterior building and other security lighting for individual developments shall be integral to the building architecture and/or landscape plan, shall avoid excessive lighting levels and direct and shield illumination to protect adjoining properties and night skies.	County, Developer	Prior to approval of landscape/lighting plans.

Resource Topic	Level of Impact After Mitigation	Mitigation Measures	Responsible Party/ Monitoring Party	Implementation Timing
Aesthetics Cont.		AES-6 Where practicable, on-site electrical power lines shall be installed underground. Transformers and other power conditioning equipment shall be pad-mounted or placed in underground vaults, as determined appropriate by the County and Imperial Irrigation District (IID).	County, IID, Developer	Concurrent with project construction.
		AES-7 Lighting at the IID substation and all CVWD well sites shall be fully shielded from adjoining properties or streets, and the minimum intensity needed to provide security and meet the functional needs of these facilities.	County, CVWD, IID, Developer	Prior to approval of substation and well site plans.
Air Quality	Less Than Significant	AQ-1 <u>Dust Control</u> The Project will be required to prepare a construction Dust Control Plan pursuant to SCAQMD Rule 403.1 (General Policy AQ Policy 4.9) that shall be prepared and implemented by all contractors during construction activities, including ground disturbance, grading, and materials import and export. The plan requires implementation of best management practices, which may include: • Treat and stabilize soil where activity will cease for at least four consecutive days; • All construction grading operations and earth moving operations shall cease when winds exceed 25 miles per hour; • Water of site and equipment morning and evening and during all earth-moving operations; • Operate street-sweepers on impacted paved roads adjacent to site; • Establish and strictly enforce limits of grading for each phase of construction; • Wash off trucks as they leave the project site to control fugitive dust emissions; • Cover all transported loads of soils, wet materials prior to transport, provide freeboard (space from the top of the material to the top of the truck) to reduce PM10 and deposition of particulate matter during transportation; • Use track-out reduction measures such as gravel pads at project access points to minimize dust and mud deposits on roads affected by construction traffic. • Dust suppressants shall be applied on all unpaved roads within the project construction footprint. • Limit vehicle speeds on unpaved roads to 25 mph.	County, Developer	Approved dust control plans prior to site disturbance. Adherence to the confirmed plans during all project plan reviews.
	Less Than Significant	AQ-2 <u>Construction Equipment Emission Reductions</u> The following measures will reduce NOx and ROG emissions from construction equipment: • Limit heavy-duty diesel vehicle idling to less than 5 minutes at a single location (vehicles more than 10,000 lbs.) • Use oxidation catalysts on all construction equipment. The oxidation catalyst must achieve a minimum 15% reduction in NOx emissions.	County, Developer	Approved dust control plans prior to site disturbance. Adherence to the confirmed plans during all project plan reviews.

Resource Topic	Level of Impact After Mitigation	Mitigation Measures	Responsible Party/ Monitoring Party	Implementation Timing
Air Quality Cont.	Less Than Significant	AQ-3 Title 24 Compliance All building construction shall comply with energy use guidelines detailed in Part 6 (California Energy Code) and/or Part 11 (California Green Building Standards Code) of Title 24 of the California Code of Regulations.	County, Developer	Ongoing
	Less Than Significant	AQ-4 Operational Dust Control Plan The Project proponent shall prepare and implement an operational Fugitive Dust Control Plan for the proposed equestrian center (Planning Area 1) consistent with the recommendations in SCAQMD Rule 403, including Table 4 therein. The plan shall effectively reduce particulate matter emissions associated with the equestrian center, including the application of dust suppressants to disturbed or unpaved surfaces.	Developer, HOA	Ongoing
	Less Than Significant	AQ-5 Landscape Maintenance Electric landscape maintenance equipment, including leaf blowers and lawn mowers, shall be used on-site to the greatest extent practicable.	Developer, HOA	Ongoing
		AQ-6 Cleaning Products Water-based or low VOC cleaning products shall be used on-site to the greatest extent practicable.		
		AQ-7 Recycling Programs All future development shall participate in a recycling program to reduce the amount of solid waste disposed of in landfills.		
Biological Resources	Less Than Significant	BIO-1 Construction of the Project and the Middleton Reservoir either must avoid initiating site disturbance during the nesting season (February 1 to August 31) or, if construction or other Project-related activities will proceed during nesting season, then nesting bird surveys must be conducted by a qualified ornithologist or biologist immediately prior to on-site disturbance. Surveys must be conducted no more than three days prior to commencement of site disturbance. Surveys must be conducted no more than three days prior to commencement of site disturbance. The biologist must have a Memorandum of Understanding (MOU) with the County. The biologist must have a Memorandum of Understanding (MOU) with the County. If nesting birds are found on the Project site, no work is permitted near the nest until the young have fledged. The CDFW generally recommends avoidance buffers of about 500 feet for birds-of-prey and species listed as threatened or endangered, and 100 to 300 feet for unlisted songbirds. Relocation plans must also be submitted to and approved by the County Environmental Programs Department prior to implementation.	County, Developer	Prior to issuance of grading permits or other site-disturbing authorizations.

Resource Topic	Level of Impact After Mitigation	Mitigation Measures	Responsible Party/ Monitoring Party	Implementation Timing
Biological Resources Cont.	Less Than Significant	BIO-2 A preconstruction burrowing owl survey following the CDFG (2012) guidelines must be conducted prior to any ground-disturbing activities at the Project and Middleton Reservoir sites. If found on site, and unless avoidable, all burrowing owls must be relocated prior to any ground disturbing activities. If burrowing owls remain on-site, a Burrowing Owl Relocation and Management Plan must be prepared to describe how the burrowing owl will be actively or passively relocated per CDFW guidelines. Relocation will also require prior permission from the CDFW and shall only occur outside of the breeding season. Relocation plans must also be submitted to and approved by the County Environmental Programs Department prior to implementation.	County, Developer	Prior to ground disturbance.
Cultural and Historic Resources	Less Than Significant	CUL-1 Concurrent with the initiation of ground disturbing activities, a Native American monitor shall be present on site to observe earthwork and related activities (including any archaeological testing and surveys). If during ground-disturbance activities, including grading, excavation and other construction activities, unanticipated cultural resources are discovered, the following procedures must be followed: All grading and construction activities within 100 feet of the discovered cultural resource must be halted and the applicant shall contact the County Archaeologist immediately upon discovery of the cultural resource. A meeting shall be organized convening appropriate parties, potentially including the developer, the project archaeologist, Native American tribal representatives, and the County Archaeologist, to discuss the significance of the find. The convened parties shall decide upon the appropriate treatment for the cultural resource. Resource evaluations shall be limited to nondestructive analysis. Further ground disturbance must not resume within the area of the discovery until the appropriate treatment has been accomplished.	County, Developer	During site disturbance, excavations and grading.
	Less Than Significant	CUL-2 If human remains are encountered during grading or other construction activities, no further disturbance shall occur until the Riverside County Coroner has made the necessary findings as to origin. The remains must be left in place and free from disturbance until a final decision as to the treatment and their disposition has been made. If the coroner determines the remains to be of Native American heritage, the NAHC shall be contacted by the Coroner within 24 hours. The NAHC must identify the most likely descendant, who may then make recommendations and engage in consultation with the property owner concerning the appropriate treatment of the remains.	County, Developer	During all phases of construction, as appropriate.
Energy	Less Than Significant	No mitigation required.	N/A	N/A

Resource Topic	Level of Impact After Mitigation	Mitigation Measures	Responsible Party/ Monitoring Party	Implementation Timing
Geology & Solis	Less Than Significant	GEO-1 Earthwork and Grading: All earthwork and grading should be performed in accordance with all applicable requirements of the grading and excavation codes of the County of Riverside, and in compliance with all applicable provisions of the 2019 California Building Code (2019 CBC). Grading shall also be performed in accordance with the Petra Geotechnical Report.	County, Developer, Project Geologist	Following issuance of grading permits; Ongoing
	Less Than Significant	GEO-2 Liquefaction: Structural foundation designs and subsurface soil improvements shall be conducted as recommended in the Petra Geotechnical Investigation and based on the California Code of Regulations Volume 18, Title 14, Article 10, Section 3721[a]) to minimize liquefaction hazards. Such measures shall include but are not limited to overexcavation and hydrocompaction, other remedial grading, strengthening and deepening structural foundations.	County, Developer, Project Geologist	Following issuance of grading permits; Ongoing
	Less Than Significant	GEO-3 Geotechnical Observations and Testing: Prior to the start of earthwork, the owner, contractor and geotechnical consultant shall meet to discuss the work schedule and geotechnical aspects of the grading.	County, Developer	Prior to initiation of earthwork.
	Less Than Significant	GEO-4 Earthwork: Earthwork will generally entail removal and re-compaction of the near surface soils, and as appropriate shall be accomplished under full-time observation and testing by the Project geotechnical consultant. The geotechnical consultant shall, as appropriate, be present onsite during all earthwork operations to document placement and compaction of fills, as well as to document compliance with the other recommendations presented in the Petra Geotechnical Report. Fill materials shall be free of rocks or cobble larger than 8 inches.	County, Developer, Project Geologist	Following issuance of grading permits; Ongoing
	Less Than Significant	GEO-5 Ground Improvement: Ground improvements consisting of removal and recompaction of loose, near surface soils, is required to minimize dynamic settlement of dry soils. Other methods may include deep dynamic compaction, additives to the soils, such as cement or fiber (e.g., nylon) and flooding of in-place loose granular soils, to increase the density of the resultant compacted fill and thereby removing or reducing to insignificant levels the tendency to settle under dynamic shaking. Deep foundation elements should also be considered, as determined by the project geologist, when effective at bypassing zones of loose sand subject to dynamic settlement.	County, Grading Contractor, Project Geologist	Ongoing.
	Less Than Significant	GEO-6 Demolition, Clearing and Grubbing: All existing structures, foundations, asphalt or concrete pavements, vegetation and subsurface utility installations throughout the site shall be demolished and removed from the site. Following demolition, clearing operations shall also include the removal of any remaining trash, debris, vegetation and similar deleterious materials including the root balls from any trees or other vegetation. Any cavities or excavations created upon removal of subsurface structures or inclusions shall be cleared of loose soil, shaped to provide access for backfilling and compaction equipment and then backfilled with engineered fill.	County, Developer, Demolition Contractor, Grading Contractor County, Developer,	Prior to initiating grading or other site disturbance. During grading and other site disturbance.

Resource Topic	Level of Impact After Mitigation	Mitigation Measures	Responsible Party/ Monitoring Party	Implementation Timing
Geology & Soils Cont.		The project geotechnical consultant shall provide periodic observation and testing services during final clearing and grubbing operations to document compliance with the above recommendations. In addition, should unusual or adverse soil conditions or unanticipated buried structures be encountered during grading that are not described in the Project Geotechnical Report, these conditions shall be brought to the immediate attention of the project geotechnical consultant for corrective recommendations.	Grading Contractor, Project Geologist	
		GEO-7 Undocumented Fill: Any existing undocumented fill and near surface native soils are considered unsuitable for support of proposed structures and should be removed to expose underlying competent alluvial materials as approved by the project geotechnical consultant. The estimated depth of removal of fill soils, if any, is recommended to be approximately 6 feet below the existing ground surface in proposed building areas, and 2 feet for local streets, alleyways and drives. The actual depths and horizontal limits of soil removals and overexcavations shall be evaluated upon availability of the site grading plan and during grading on the basis of observations and testing performed by the project geotechnical consultant. Excavated soils, if free of deleterious materials, are considered acceptable for use as compacted fill.		
	Less Than Significant	GEO-8 Dust Control/Soil Erosion Plan: All grading plans shall include a soil erosion prevention/dust control plan. Blowing dust and sand during grading operations shall be mitigated by adequate watering of soils prior to and during grading, and limiting the area of dry, exposed and disturbed materials and soils during these activities. To mitigate against the effects of wind erosion after site development, a variety of measure shall be provided including maintaining moist surface soils using chemical soil stabilizers or by other approved means. Project grading shall be conducted in strict compliance with the requirements of the SCAQMD and the Coachella Valley PM10 SIP. Also see Section 2.5: Air Quality.	County, Developer	Prior to approval of grading plans.
	Less Than Significant	GEO-9 Graded Slopes: Unprotected, permanent graded slopes shall not be steeper than 3:1 (horizontal/vertical) to reduce wind and water erosion. Fill slopes shall be overfilled and trimmed back to competent material. Fill slope surfaces shall be compacted to 90% of the laboratory maximum dry density by either over-filling and cutting back to expose a compacted core, by approved mechanical methods and as otherwise recommended in the Petra Geotechnical Investigation.	County, Developer, Grading Contractor, Project Geologist	Ongoing.
	Less Than Significant	GEO-10 Site Drainage: Positive surface drainage shall be provided around buildings and within any planter areas to collect and direct all surface waters to an appropriate drainage facility as determined by the project civil engineer. The ground surfaces of planter and landscape areas that are located within 10 feet of building foundations should be sloped at a minimum gradient of 5 percent away from the foundations and	County, Developer	During grading permits and other ground disturbance; fine grading stage.

Resource Topic	Level of Impact After Mitigation	Mitigation Measures	Responsible Party/ Monitoring Party	Implementation Timing
Geology & Soils Cont.		towards the nearest area drains. The ground surface of planter and landscape areas located more than 10 feet away from building foundations may be sloped at a minimum gradient of 2 percent away from the foundations and towards the nearest area drains. Concrete flatwork surfaces to be located within 10 feet of building foundations shall be inclined at a minimum gradient of one percent away from the building foundations and towards the nearest area drains. Concrete flatwork surfaces that are located more than 10 feet away from building foundations may be sloped at a minimum gradient of 1 percent towards the nearest area drains. Surface waters should not be allowed to collect or pond against building foundations and within the level areas of the site. All drainage devices shall be properly maintained throughout the lifetime of the development. Future changes to site improvements, or planting and watering practices, shall not be allowed to cause over-saturation of site soils adjacent to the structures. To maintain the integrity of local and regional groundwater level controls, a subsurface tile drain system shall be constructed or maintained to ensure that on-site groundwater levels are properly managed and maintained. To maintain the integrity of local and regional groundwater level controls, a subsurface tile drain system shall be constructed or maintained to ensure that on-site groundwater levels are properly managed and maintained.		
	Less Than Significant	GEO-11 Soil Erosion Protection: There shall be a cessation of grading activities during rainstorms or high wind events. As necessary, the project contractor shall install flow barriers and soil catchments (such as straw bales, silt fences, and temporary detention basins) during construction to control soil erosion.	County, Developer	Prior to development approval and final construction plan set.
	Less Than Significant	GEO-12 Imported Soils: Imported soils (if needed) shall be non-expansive, granular soils meeting USCS classifications of prescribed in the Petra Geotechnical Investigation. Imported fill shall be placed in maximum 8-inch lifts (loose) and compacted to at least 90 percent relative compaction (ASTM D 1557) near optimum moisture content.	County, Developer	During site grading.
	Less Than Significant	GEO-13 Excavations: Excavations within sandy soil shall be kept moist, but not saturated, to reduce the potential of caving or sloughing. Where excavations over 4 feet deep are planned, lateral bracing or appropriate cut slopes of 1.5:1 (horizontal/vertical) shall be provided. No surcharge loads from stockpiled soils or construction materials shall be allowed within a horizontal distance measured from the top of the excavation slope and equal to the depth of the excavation.	County, Developer	During site grading.

Resource Topic	Level of Impact After Mitigation	Mitigation Measures	Responsible Party/ Monitoring Party	Implementation Timing
Greenhouse Gas Emissions	Less Than Significant	GHG-1 Solar Energy Requirements As required by Measure R2-CE1 of the Riverside County CAP Update, the project will generate on-site renewable energy providing at least 20% of energy demanded for commercial, office, industrial, and multi-family development, and at least 30% of energy demanded for single-family residential development. As required by 2022 Title 24 building standards, all new residential builds shall install solar panels.	County, Developer	Concurrent with preparation and approval of building plans.
	Less Than Significant	GHG-2 Electric Vehicle Charging Provide electric vehicle charging infrastructure in both commercial parking lots and residential garages.	County, Developer	Concurrent with preparation and approval of improvement plans.
	Less Than Significant	GHG-3 Energy Efficient Appliances and Equipment All new residential and commercial construction shall install energy efficient appliances that are ENERGY STAR-certified. The project shall require the use of all feasible efficient heating equipment and other appliances, such as water heaters, swimming pool heaters, cooking equipment, refrigerators, furnaces and boiler units (General Plan AQ Policy 4.2)	County, Developer	Concurrent with preparation and approval of building plans.
	Less Than Significant	GHG-4 Loading Dock Electrification All commercial and industrial loading docks shall be electrified, and transport refrigeration units (TRUs) and auxiliary power units (APUs) shall be plugged into the electric dock instead of running on diesel.	County, Developer	Concurrent with preparation and approval of building plans.
	Less Than Significant	GHG-5 Public Lighting Public street and area lighting shall use high efficiency lighting, such as warm temperature LED lighting, consistent with guidelines of the International Dark Sky Association.	County, Developer	Concurrent with preparation and approval of street and street lighting plans.
	Less Than Significant	GHG-6 Water-Efficient Landscapes Design water-efficient landscapes. Assumes most residential and commercial landscaping will be drought tolerant landscaping with a low water demand requiring a drip system, with the exception of the equestrian center which will include large grass areas. This is a proposed design feature of the Project.	County, Developer	Concurrent with preparation and approval of landscape and irrigation plans.
Hazards and Hazardous Materials	Less Than Significant	HAZ-1 The waste oil in the 5-gallon bucket in the shop building and 55-gallon drum south of the shop building shall be transferred to DOT-certified 55-gallon drums, appropriately labeled, and then transported from the site to a local State-licensed recycler. The oil-impacted soil beneath and adjacent to the waste oil containers shall be excavated and placed into DOT-certified 55-gallon drums. The estimated volume of impacted soil beneath the 5-gallon bucket is 24 cubic feet (four 55-gallon drums). The estimated volume of impacted soil beneath the 55-gallon drum is 40 cubic feet (six	County, Developer	Prior to disturbance.

Resource Topic	Level of Impact After Mitigation	Mitigation Measures		Responsible Party/ Monitoring Party	Implementation Timing
			55-gallon drums). This soil shall be transported from the site and properly disposed at a State-licensed disposal facility.		
	Less Than Significant	HAZ-2	If the on-site groundwater well will not be used during Project operations, then it shall be abandoned in accordance with applicable County regulations (Ordinance No. 682). If the well will be used for potable purposes (animal or human), groundwater shall first be tested for potential contaminants such as arsenic and fluoride. If elevated concentrations are identified, then the groundwater must be treated before potable use or must be limited to non-potable uses.	County, Developer, General Contractor	As deemed appropriate by Developer
Hazards and Hazardous Materials Cont.	Less Than Significant	HAZ-3	If the on-site irrigation pipes are removed, they shall be tested for asbestos. If asbestos is reported in the pipe in concentrations that exceed regulatory limits, then it shall be removed and disposed in accordance with local and state guidelines, and under the guidance of a state-certified Asbestos Consultant.	County, Developer, General Contractor	As deemed appropriate by Developer
	Less Than Significant	HAZ-4	Prior to removal, the existing on-site shop and other buildings shall be surveyed for asbestos in accordance with County demolition guidelines. The survey shall be overseen by a state-certified Asbestos Consultant, and provide results regarding the presence of asbestos-containing materials, their location, estimated quantity, and recommendations for removal, containment, and disposal.	County, Developer, General Contractor	Prior to disturbance to or demolition of buildings.
	Less Than Significant	HAZ-5	The grading and general contractors shall monitor site disturbing operations for visible soil staining and odor, as well as the presence of unknown hazardous material sources during on-site soil excavations. If evidence of hazardous materials contamination or sources, such as buried 55-gallon drums or underground storage tanks, are suspected or identified, then an environmental professional shall be retained to evaluate the proper course of remedial action.	Developer, General and Grading Contractors	Ongoing
		HAZ-6	Prior to the initiation of Project-related site disturbance and in consultation with the Department of Toxic Substance Control, additional soil sample collection and testing shall be conducted across the site, including around the existing ag buildings and in areas where soil contamination has been identified. Sampling shall also be conducted at locations such as pits, sumps, or other underground waste disposal areas where agro-chemicals or other potentially hazardous materials may have been prepared or disposed of. Said sampling and testing shall be performed in conformance with the Department of Toxic Substance Control's "Interim Guidance for Sampling Agricultural Properties" (DTSC, 2008). The results shall be reported to County Environmental Health and shall be found to be acceptable prior to the initiation of site disturbing activities.		
	Less Than Significant	AIR-1	If the Project will include stormwater retention basins, such features must drain within 48 hours following the end of flooding events. Retention structures shall remain dry between such events. Permanent retention of water, defined as outside the above parameters, is prohibited within the separation criteria defined by the FAA and ALUC.	Developer, Project Engineer, Contractor	Concurrent with final drainage facilities designs.

Resource Topic	Level of Impact After Mitigation	Mitigation Measures	Responsible Party/ Monitoring Party	Implementation Timing
Hazards and Hazardous Materials Cont.	Less Than Significant	AIR-2 If the developer proposes any long-term water features with untreated water that could allow vegetation in or along the edges of the feature, the following strategies must be applied to minimize the attractiveness to potentially hazardous species: o The shape of any natural water features shall be engineered to eliminate coves, peninsulas, and convoluted shorelines to create an open structure that is less attractive to species of interest. o A water clarification system shall be installed to "sterilize" the water and remove organic matter that would otherwise form the base of a food chain that could promote zooplankton, macroinvertebrates and larger species that would feed on. o The walls of any potential water features shall be designed with steep sides in order to limit shallow shoreline access for wading birds, and developed with a sand or gravel shoreline to prevent vegetation from forming. In addition, vegetation shall be prevented from growing along the margins of water features. o The Project shall have staff dedicated to maintenance of any potential water features. This maintenance would involve cleaning of debris, and removal of vegetation and algae.	Developer, Project Engineer, Project Landscape Architect	Prior to approval of related grading plans.
	Less Than Significant	AIR-3 Equestrian buildings, including stables and arenas, shall include measures to deter birds from using such structures for shade or cover, as well as for nesting or roosting. Facilities for housing animals, feed production areas, feed troughs, and manure may also attract birds, and thus require mitigation. The following design and passive deterrence measures, as appropriate, will serve to avoid and/or minimize bird-related impacts: o Stables, arenas, and other structures shall be designed to minimize open, exposed ceilings with perching sites available. o Netting may be applied inside stables, arenas, and other structures to limit access to I-beams or other such supporting structures that may be favorable perching sites. Anti-perching spike strips may also be applied to favorable perching sites. o Feeding troughs, feed storage areas, or feed bins should occur under shade or other covered structures to limit visual exposure to flocking birds. o Minimize or preclude standing water in irrigated hayfields or other grazing areas. Water applied to such areas shall be limited to what is necessary to control dust or maintain vegetation and shall not be allowed to accumulate in puddles or along furrows. o Riding, training, and competition areas with grassy covering should use drought-resistant grass species to minimize water use. Manure shall be routinely removed from facilities and training areas and contained for disposal to avoid exposure to wildlife.	Developer, Project Architect, Equestrian Center Manager	Prior to final building design approvals and ongoing.

Resource Topic	Level of Impact After Mitigation	Mitigation Measures	Responsible Party/ Monitoring Party	Implementation Timing
Hazards and Hazardous Materials Cont.	Less Than Significant	AIR-4 If the Project will include a miniature golf course, it shall be constructed using artificial turf. No water features should be included as part of the course design.	Developer, General Contractor	Prior to final approval of feature.
	Less Than Significant	AIR-5 The Project shall ensure that landscape plans, including for the equestrian center, are compliant with the Riverside County ALUC landscaping guidelines. The guidelines include: o Vegetation used on site shall be suitable for xeriscape landscapes to minimize the need for irrigation. o Vegetation that produces seeds, fruits, or berries, or that will provide dense cover for nesting for roosting should be avoided.	Developer, Project Landscape Architect, CVWD	Prior to issuance of final landscape plan approvals.
	Less Than Significant	AIR-6 All household or industrial trash that includes organic material or food items shall be contained and covered at all times. o Manure generated in both community and individuals stables and horse training and competition areas shall be removed in conjunction with daily maintenance of facilities. o Dumpsters and household trash containers shall have lids that remain closed and that cannot be breeched or opened by birds or other wildlife. o Signs should be prominently placed in strategic locations to ensure that concessions and patrons using on-site swimming pools, recreational facilities, miniature golf courses, and clubhouses shall not intentionally or unintentionally feed birds anywhere on site. The no feeding policy shall be strictly enforced and shall be a mandatory inclusion in project covenants governing residents and guests.	Equestrian Center and Commercial Center Manager, HOAs, etc.	Ongoing.
	Less Than Significant	AIR-7 In addition to the passive deterrent measures provided above, wildlife management may include additional active deterrent measures, as necessary. Examples of possible active deterrent measures include: o Maintenance personnel trained and equipped to disperse birds that may attempt to access the facility. Such active harassment would be particularly important for the equestrian facilities and for any water bodies. o Sonic devices, particularly long-range hailing devices with focused, high-decibel sound may be used to deter birds from the site. o Other methods of active deterrents, each with specific requirements and limitations include: remote-controlled devices such as drones, trained dogs, trained birds of prey, lasers, and removal of nests.	Equestrian Center Manager,	Ongoing.

Resource Topic	Level of Impact After Mitigation	Mitigation Measures	Responsible Party/ Monitoring Party	Implementation Timing
Hydrology and Water Quality	Less Than Significant	HYD-1 Project Plan Review: Prior to finalizing the hydrologic design and engineering plans for Project stormwater improvements, said plans shall be reviewed and approved by County Planning and CVWD to ensure that these improvements do not interfere with or adversely affect local groundwater or drainage facilities.	County, Developer	Prior to the issuance of grading permits.
	Less Than Significant	HYD-2 NPDES Requirements: The proposed Project shall comply with the requirements of the National Pollution Discharge Elimination System (NPDES).	County, Developer, Project Engineer	Prior to the issuance of grading permits.
	Less Than Significant	HYD-3 General BMPs: The implementation of BMPs during and following construction activities shall ensure that erosion and siltation from earthmoving and other activities is limited. Exposed soil from excavated areas, stockpiles, and other areas where ground cover is removed shall be stabilized by wetting or other approved means to avoid or minimize the inadvertent transport by wind or water. Temporary construction BMPs considered and incorporated into the project, as appropriate, would include: • Soil stabilization (erosion control) techniques such as on-going site watering, soil binders, etc.; • Sediment control methods such as retention basins, silt fences, and dust control; • Temporary de-silting basins will be constructed incrementally to store and clarify water adjoining de-watered areas and will be backfilled once work is completed. • Contractor training programs; • Material transfer practices; • Waste management practices such as providing designated storage areas and containers for specific waste for regular collection; • Concrete washout slurry shall be discharged and disposed of in an approved manner; • Access drive cleaning/tracking control practices; • Vehicle and equipment cleaning and maintenance practices; and • Fueling practices.	County, Developer	Prior to initiation of grading and ground disturbance; ongoing.
	Less Than Significant	HYD-4 Stormwater Pollution Prevention Plan: The construction contractor shall implement a County-approved (SWPPP) during construction of the Project. The SWPPP shall identify specific best management practices (BMPs) that will be implemented during project construction. BMPs implemented as a part of the Project will ensure that the Project meets the requirements of the California State Water Resources Control Board NPDES Construction General Permit. Construction-related erosion and sediment controls, including any necessary stabilization practices or structural controls, shall be implemented at and in all	County, Project Engineer, General Contactor	Prior to issuance of grading permits.

Resource Topic	Level of Impact After Mitigation	Mitigation Measures	Responsible Party/ Monitoring Party	Implementation Timing
Hydrology and Water Quality Cont.		potentially affected drainages. General structural practices may include, but are not limited to, silt fences, earth dikes, drainage swales, sediment traps, check dams, reinforced soil retaining systems, temporary or permanent sediment basins and flow diversion. Temporary erosion and sediment control measures shall be installed during or immediately after initial disturbance of the soil, maintained throughout construction (on a daily basis), and reinstalled until replaced by permanent erosion control structures or final grading and other site disturbances are complete. In addition, the following specific actions shall be taken to ensure that impacts are less than significant. a) The construction shall be avoided within the limits of identified drains or waterways, except as authorized by federal, state or local permits. b) Protect drainage inlets and outlets from construction material intrusions using temporary berms to prevent incision, erosion, and sedimentation. c) Erosion control measures appropriate for on-the-ground conditions, including percent slope, length of slope, and soil type and erosive factor, shall be implemented. d) Temporary erosion controls such as straw bales and tubes, geotextiles and other appropriate diversion and impounding materials and facilities shall be properly maintained throughout construction (on a daily basis) and reinstalled (such as after backfilling) until replaced with permanent erosion controls or restoration is complete. e) Along the Project's south boundary and adjacent to or within the Project construction area, the contractor shall install sediment barriers along the edge of the construction right-of-way to contain spoil and sediment within the construction area and limit discharge into adjoining ag drains. f) Ensure that all employees and contractors are properly informed and trained on how to properly install and maintain erosion control BMPs. Contractors shall require all employees and contractors responsible for supervising the installation and maintenance of BMPs and those responsible for the actual installation and maintenance to receive training in proper installation and maintenance techniques. g) Project scheduling will include efficient staging of the construction that minimizes the extent of disturbed and destabilized work area and reduces the amount of soil exposed and the duration of its exposure to wind, rain, and vehicle tracking.		

Resource Topic	Level of Impact After Mitigation	Mitigation Measures	Responsible Party/ Monitoring Party	Implementation Timing
		h) The sequencing and time frame for the initiation and completion of tasks, such as site clearing, grading, excavation, paving and other construction, shall be planned in advance to ensure minimization of potential impacts.		
Hydrology and Water Quality Cont.	Less Than Significant	HYD-5 Petroleum BMPs: To prevent petroleum products from contaminating soils and water bodies in the vicinity, the following BMPs shall be implemented: a) Construction equipment and vehicles shall be properly maintained to prevent leakage of petroleum products. b) Vehicle maintenance fluids and petroleum products shall be stored, and/or changed in staging areas established at least 100 feet from delineated streams and other drainages. These products must be discarded at disposal sites in accordance with state and federal laws, rules, and regulations. c) Drip pans and tarps or other containment systems shall be used when changing oil or other vehicle/equipment fluids. d) Areas where discharge material, overburden, fuel, and equipment are stored shall be designed and established at least 100 vegetated (permeable) feet from the edge of drainages. e) Any contaminated soils or materials shall be disposed of off-site in proper receptacles at an approved disposal facility. f) All erosion control measures shall be inspected and repaired after each rainfall event that results in overland runoff. The Project contractor shall be prepared year-round to deploy and maintain erosion control BMPs associated with the project. g) Existing off-site ag drains shall be carefully maintained in place to ensure proper functioning. Considerations include: maintenance of inlet and outlet elevations, grade, adequately compacted material cover, and inlet/outlet protection.	Developer, General Contractor, Grading Contractor	Ongoing.
	Less Than Significant	HYD-6 The Project shall implement water-conserving technologies throughout the development, in conformance with Section 17921.3 of the Health and Safety Code, Title 20, California Administrative Code Section 1601(b), and other applicable sections of Title 24 of the Public Code.	Developer, Project Architect, Project Landscape Architect	Ongoing.

Resource Topic	Level of Impact After Mitigation	Mitigation Measures	Responsible Party/ Monitoring Party	Implementation Timing
Hydrology and Water Quality Cont.	Less Than Significant	HYD-7 Manure storage areas shall be constructed in an approved manner that protects against surface and groundwater contamination. If storage is to occur on a soil pad, said pad shall be constructed in a manner consistent with the following guidelines: a) Soils used for the pad should have at least 30% of the particles passing a #200 sieve, less than 20% retained on a #4 sieve, and no rocks greater than 3 inches. (Sieve analysis according to ASTM D-422) b) Soils should have a plasticity index greater than 7% (ASTM D4318) c) Soils during placement should be maintained at a moisture content of 0 to 5% above optimum (ASTM D-698 or ASTM D-1557 during construction) d) Soils should be placed in multiple lifts and compacted with at least three passes of a "sheeps-foot" type roller with feet that extend through the loose lift and into the previously compacted lift or compacted until achievement of 90% of standard proctor density, verified (ASTM 2922) at a frequency of one sample per 3,000 sq ft.	Developer, Project Landscape Architect, Equestrian Center Manager	Concurrent with construction of equestrian center.
	Less Than Significant	HYD-8 Manure storage areas shall be placed minimal distances from sensitive uses, as set forth below: Sensitive Area — Minimum Separation Distance (feet) • Property line — 50–100 • Residence or place of business — 200–500 • Private well or other potable water source — 100–200 • Wetlands or surface water (streams, pond, lakes) — 100–200 • Subsurface drainage pipe or drainage ditch discharging to a natural water course — 25 • Water table (seasonal high) — 2–5	Developer, Project Landscape Architect, Equestrian Center Manager	Prior to issuance of grading or development permits.
Land Use	Less Than Significant	No mitigation required.	N/A	N/A
Mineral & Paleo Resources	Less Than Significant	PALEO 1. The applicant shall retain a qualified paleontologist approved by the County to create and implement a project-specific plan for monitoring site grading/earthmoving activities (project paleontologist).	Developer, Project Paleontologist	Prior to initiating of site disturbance.
	Less Than Significant	PALEO-2 The project paleontologist retained shall review the approved development plan and grading plan and conduct any pre-construction work necessary to render appropriate monitoring and mitigation requirements as appropriate. These requirements shall be documented by the Project paleontologist in a Paleontological Resource Impact Mitigation Program (PRIMP). This PRIMP shall be submitted for approval by the County Geologist prior to issuance of a Grading Permit. Information to be contained in the PRIMP, at a minimum and in addition to other industry standards and Society of Vertebrate Paleontology standards, are as follows:	Developer, Project Paleontologist	Ongoing.

Resource Topic	Level of Impact After Mitigation	Mitigation Measures	Responsible Party/ Monitoring Party	Implementation Timing
Mineral & Paleo Resources Cont.		a) A corresponding and active County Grading Permit (BGR) Number must be included in the title of the report. PRIMP reports submitted without a BGR number in the title will not be reviewed. b) PRIMP must be accompanied by the final grading plan for the subject project. c) Description of the proposed site and planned grading operations. d) Description of the level of monitoring required for all earth-moving activities in the project area. e) Identification and qualifications of the qualified paleontological monitor to be employed for grading operations monitoring. f) Identification of personnel with authority and responsibility to temporarily halt or divert grading equipment to allow for recovery of large specimens. g) Direction for any fossil discoveries to be immediately reported to the property owner who in turn will immediately notify the County Geologist of the discovery. h) Means and methods to be employed by the paleontological monitor to quickly salvage fossils as they are unearthed to avoid construction delays. i) Sampling of sediments that are likely to contain the remains of small fossil invertebrates and vertebrates. j) Procedures and protocol for collecting and processing of samples and specimens. k) Fossil identification and curation procedures to be employed. l) Identification of the permanent repository to receive any recovered fossil material. *Pursuant the County “SABER Policy”, paleontological fossils found in the County should, by preference, be directed to the Western Science Center in the City of Hemet. A written agreement between the property owner/developer and the repository must be in place prior to site grading. m) All pertinent exhibits, maps, and references. n) Procedures for reporting of findings. o) Identification and acknowledgement of the developer for the content of the PRIMP as well as acceptance of financial responsibility for monitoring, reporting and curation fees. The property owner and/or applicant on whose land the paleontological fossils are discovered shall provide appropriate funding for monitoring, reporting, delivery and curating the fossils at the institution where the fossils will be placed and will provide confirmation to the County that such funding has been paid to the institution. All reports shall be signed by the qualified paleontologist responsible for the report’s content. All reports shall also be signed by all other parties responsible for the report’s content (eg. Professional Geologist), as necessary a signed electronic copy of the report,		

Resource Topic	Level of Impact After Mitigation	Mitigation Measures	Responsible Party/ Monitoring Party	Implementation Timing
Mineral & Paleo Resources Cont.		project plans, and all required review applications shall be uploaded to the County's PLUS Online System. Please use the following for this purpose: https://planning. Org/sites/g/files/aldnop416/files/users/user91/Filing_Instructions_Paleonological_ Report_Review_Application.pdf. https://planning.rctlma.org/sites/g/files/aldnop 416/files/users/user91/PLUS_Online_Upload_Instructions_Paleontology.pdf https://planning.rctlma.org/sites/g/files/aldnop46/files/users/user91/Supplemental_ Information_Form_PALEO.pdf. Reports and/or review applications are not to be submitted directly to the County Geologist, Project Planner, Land Use Counter, Plan Check, or any other County office. In addition, the applicant shall submit proof of hiring (i.e., copy of executed contract, retainer agreement, etc.) a project paleontologist for the in-grading implementation of the PRIMP. (Safeguard Artifacts Being Excavated in Riverside County (SABER)).		
Noise	Less Than Significant	NOI-1 Detailed noise analysis is required for all future residential land uses. These final noise studies shall combine the recommendations provided in the Project-wide Noise Analysis Report with precise grading plans and building design specifications. Prior to the recordation of final maps or the issuance of building permits for planned residential uses, the applicant shall provide precise grading plans and actual building design specifications, as well as detailed analysis demonstrating the efficacy of the planned noise mitigation measures, including location and height of masonry walls, distance between the noise source and residential lots, and other noise buffers, to ensure that the County of Riverside 65 dBA CNEL exterior noise level standard is met.	County, Developer, Project Architect	Prior to development approval and final construction plan set.
	Less Than Significant	NOI-2 Perimeter masonry walls shall extend either to the recommended height above the pad elevation of the lot being shielded, or if the road is elevated above the pad, then the barrier shall be extended to the recommended height above the highest point between the residence and the road. Wall construction shall be in accordance with the specifications set forth in the Project Noise Report.	County, Developer, Project Landscape Architect	Prior to development approval and final construction plan set.

Resource Topic	Level of Impact After Mitigation	Mitigation Measures	Responsible Party/ Monitoring Party	Implementation Timing
Noise Cont.	Less Than Significant	NOI-3 In order to meet the 45 dBA CNEL interior noise level standard established the County of Riverside, all residential units shall meet a 'windows-closed condition' by including a means of mechanical ventilation (e.g. air conditioning). The Project's residences shall also provide the following standard building construction measures to ensure the interior noise level standard is met: • Windows and glass doors: All windows must have a minimum Sound Transmission Class (STC) rating of 27. Hotel and condominiums in PA-5 must provide upgraded windows with a minimum STC rating of 36 for all windows facing Harrison Street and Avenue 64. • Doors (non-glass): All exterior doors must be weather-stripped and have minimum STC ratings of 27. • Walls: Any penetrations of exterior walls by pipes, ducts, or conduits, the space between the wall and pipes, ducts, or conduits shall be caulked or filled with mortar to form an airtight seal. • Roof: Roof sheathing of wood construction shall be installed per manufacturer's specification or caulked plywood of at least one-half inch thick. Ceiling shall be per manufacturer's specification or well-sealed gypsum board of at least one-half inch thick. Insulation with at least a rating of R-19 shall be used in the attic. • Ventilation: All habitable rooms must be designed such that circulated air will be provided even if exterior doors and windows are closed. A forced air circulation system (e.g., air conditioning) or active ventilation system (e.g. fresh air supply) shall be provided to satisfy the requirements of the Uniform Building Code.	County, Developer, Project Architect(s)	Prior to issuance of building permits.
Population, Housing and Env. Justice	Less Than Significant	No mitigation required.	NA	NA
Public Services	Less Than Significant	No mitigation required.	NA	NA
Recreational Resources	Less Than Significant	No mitigation required.	NA	NA
Transportation and Traffic	Significant and Unavoidable	VMT Mitigation: Project determined to be inconsistent with and to exceed the threshold for vehicle miles traveled (VMT) primarily due to its location along the edge of the urbanizing patterns in the area, although the Project's net contribution to county-wide VMT is expected to go down over time. Project incorporates county-recommended design features to reduce project VMT to the extent feasible, including a complementary mix of land uses, an extensive network of multi-modal paths to facilitate travel by walking, bicycle and golf cart throughout the project. Nonetheless, adoption of a statement of overriding consideration would be required.	NA	NA

Resource Topic	Level of Impact After Mitigation	Mitigation Measures	Responsible Party/ Monitoring Party	Implementation Timing
Transportation and Traffic Cont.	Less Than Significant	Mitigation for Access Across Federal Lands: As noted elsewhere in this Draft EIR, the US Bureau of Reclamation (USBR) owns a narrow strip of land that projects northwest from the intersection of Tyler Street and Ave 64. This existing parcel varies in width from 60' to 90' and is 1,700± feet in length. The CVWD has confirmed, based on their consultation with the USBR, that the USBR will authorize a public roadway crossing of this parcel provided that the license or contract to do so is with the County and on behalf of the public.[1] Other options, include an outright sale of the subject parcel, may also affect the planned roadway crossing of the USBR parcel. Therefore, prior to recordation of the Project Tentative Tract Map, a license, contract or other appropriate agreement shall be reached with the USBR to secure authorization for the proposed crossing of the USBR parcel.	Developer, USBR, CVWD	Prior to recordation of Final TTM.
Tribal Cultural Resources	Less Than Significant	Mitigation measures are provided in Section 2.7 (see below) to ensure that impacts to any unanticipated cultural resources or human remains, including those of potential significance to California Native American tribes, are less than significant. CUL-1 Concurrent with the initiation of ground disturbing activities, a Native American monitor shall be present on site to observe earthwork and related activities (including any archaeological testing and surveys). If during ground-disturbance activities, including grading, excavation and other construction activities, unanticipated cultural resources are discovered, the following procedures must be followed: All grading and construction activities within 100 feet of the discovered cultural resource must be halted and the applicant shall contact the County Archaeologist immediately upon discovery of the cultural resource. A meeting shall be organized convening appropriate parties, potentially including the developer, the project archaeologist, Native American tribal representatives, and the County Archaeologist, to discuss the significance of the find. The convened parties shall decide upon the appropriate treatment for the cultural resource. Resource evaluations shall be limited to nondestructive analysis. Further ground disturbance must not resume within the area of the discovery until the appropriate treatment has been accomplished. CUL-2 If human remains are encountered during grading or other construction activities, no further disturbance shall occur until the Riverside County Coroner has made the necessary findings as to origin. The remains must be left in place and free from disturbance until a final decision as to the treatment and their disposition has been made. If the coroner determines the remains to be of Native American heritage, the NAHC shall be contacted by the Coroner within 24 hours. The NAHC must identify	General Contractor, Grading Contractor, Project Archaeologist	During site disturbance, excavations and grading.

[1] Chris Bogan, Right-of-Way Supervisor at Coachella Valley Water District, January 18, 2024.

RIVERSIDE COUNTY THERMAL RANCH SPECIFIC PLAN

DRAFT ENVIRONMENTAL IMPACT REPORT

1. INTRODUCTION AND PROJECT DESCRIPTION

The following discussion describes the CEQA Lead Agency for the Thermal Ranch Specific Plan/SP No. 00401 (Project) and associated General Plan Amendment Case No. GPA No. 2300001, Change of Zone No. 2300003, Tentative Tract Map No. 38578; and Plot Plan No.s 230005, 230006 and 240016. This section provides a comprehensive summary project description, describes the location and geographic limits for the planning area, the purpose and need for the subject analysis, and a statement of Project objectives. The CEQA process and details regarding this EIR are also provided.

Lead Agency
The County of Riverside (RivCo or County) is the Lead Agency responsible for the preparation of this Draft Environmental Impact Report (EIR or DEIR) pursuant to the California Public Resources Code Sections 21000-21189.57, and the 2022 California Environmental Quality Act (CEQA) Guidelines Sections 15000-15387, as amended. CEQA defines “Lead Agency” as the public agency which has the principal responsibility for carrying out or approving a project which may have a significant effect upon the environment (State CEQA Guidelines Section 15367). The proposed action evaluated in this EIR constitutes a “project”, as defined by Section 15378 of the State CEQA Guidelines.

The Lead Agency contact person and mailing address regarding this Project is: Russel Brady, Riverside County Planning Department, 4080 Lemon Street, 12th Floor, Riverside, CA 92501. The Planning Department’s phone number is: (951) 955-3025. Mr. Brady’s email address is: rbrady@rivco.org.

1.1 Project Summary

The Thermal Ranch Specific Plan project, inclusive of accompanying a Tentative Tract Map (TTM), three plot plan applications (PPAs), and a General Plan Amendment (GPA) and Change of Zone (CZ), is proposed on 619±-acres and will be comprised of a mix of uses including and centered around a 231±-acre equestrian center and related show facilities, including barns, stabling and related equestrian services (Planning Area 1/PA-1). The equestrian center will require a maximum of 300 staff, and will have up to an additional 8,100 visitors on peak event days comprised of owners, trainers, stable hands and visitors.

Other components of the Thermal Ranch Specific Plan would include a mix of residential neighborhoods ranging from seasonal and year-round workforce housing and RV park facilities (Planning Area4/PA-4a and b), to large single-family estate lots, some suitable for keeping horses (Planning Area 2/PA-2). Other residential product planned includes single-family attached and detached homes (Planning Area 3/PA-3) and resort condominiums in Planning Area 5 (PA-5). At buildout, the Project will provide up to 1,362 dwelling units ranging in densities from 0.67 to 27.3 units per acre and up to 320 RV spaces.

Proposed commercial areas would provide 275,000± square feet of retail and other commercial space, including 75,000± square feet of equestrian event-related retail space, and 10,000 square feet of office space in Planning Area 1 (PA-1); and up to 150,000 square feet of retail space in Planning Area 6 (PA-6). A 54.4±-acre mixed use resort with a 150± key resort hotel, beach club, pool and other recreational amenities, and ancillary retail is also proposed (Planning Area 5/PA-5). The Project provides four Coachella Valley Water District (CVWD) well sites to be located in the northern and eastern portions of the Project site.

Additionally, a subdivision map (TTM No. 38578, and three Plot Plan applications have been filed and are addressed in this CEQA analysis. TTM No. 38578 will subdivide the property into large parcels and PA-2 (Estate Residential) into 132 individual lots and PA-3 into 390 single-family lots. The three plot plans will allow development to commence in PA-1 and PA-4a and b following approval of the Specific Plan and these related applications. Each major Specific Plan component is described below.

The Project will result in full part-width street improvements, phased to Project improvements, of Avenue 62, Harrison Street and Tyler Street. Water and sewer will be extended from immediately off-site to serve the proposed Project. Two sewerage lift stations are proposed in the southerly portion of the Project. An on-site electric power substation is also planned in the southeast portion of the Project site.

Off-Site CVWD Reservoir

An off-site 5-million-gallon (mg) domestic water reservoir is required to meet Project demand and fire flows. The new reservoir will be approximately 163 feet in diameter and 38 feet in total height. CVWD has identified the existing CVWD Middleton Reservoir 7802-1 site located 2.4± miles southwest of the Project site at an elevation of 61± feet above sea level (see Exhibit 1-11) as the appropriate location for the new reservoir. The existing site currently hosts a CVWD 2.5 million tank and is planned and has been partially improved for multiple tanks[1]. The existing reservoir is located behind a 25-foot earthen berm with existing access and site security. To accommodate the new 5 mg tank, the northerly portion of the existing berm will be shifted farther north approximately 35 feet. The new reservoir will connect to existing lines and no new off-site reservoir water lines will be required.

The Thermal Ranch Specific Plan site is currently designated “Agriculture” in the Foundation Element and the Eastern Coachella Valley Area Plan (ECVAP) of the General Plan. The applicant proposes a land use change to the Foundation Element designation to “Community Development” and to apply a variety of ECVAP land use designations consistent with proposed underlying land uses. Consistency zoning is also proposed and a part of this Project, with proposed zoning designation that correspond to the proposed ECVAP and use designations. See Table 2 below.

[1] Thermal Ranch Hydraulic Modeling Results (Project No. ST0257) letter, Hector Rodriguez, Domestic Water Engineer, CVWD. September 27,2023 and Personal communication on October 20, 2023.

Development Agreement

The applicant may request the County to enter into a Development Agreement (DA), which allows the County and/or public agencies greater latitude to advance local planning policies, sometimes in new and innovative ways. A DA may also allow greater flexibility in imposing conditions and requirements on proposed projects and provide the project proponents greater assurance that once approved, the project can be built.

Project Phasing

The Thermal Ranch Specific Plan and related projects are to be implemented in two phases. Phase I will involve construction of PA-1 (Equestrian Center) and PA-4 (RV Park & Workforce Housing) and to be completed in 2026. Phase 2 will involve PAs-2, 3, 5 and 6 with completion scheduled for 2032.

1.2 Project Location

The subject Thermal Ranch Specific Plan property is located in the southeastern portion of the Coachella Valley in the central unincorporated area of Riverside County. The subject property encompasses approximately one square mile with a net acreage of 622± acres. It is bounded on the north by Avenue 62, on the south by Avenue 64, on the west by Harrison Street and on the east by Tyler Street. It is comprised of Assessor's Parcel Numbers: 751-020-002,003, 006, 007 and 010.

RIVERSIDE COUNTY

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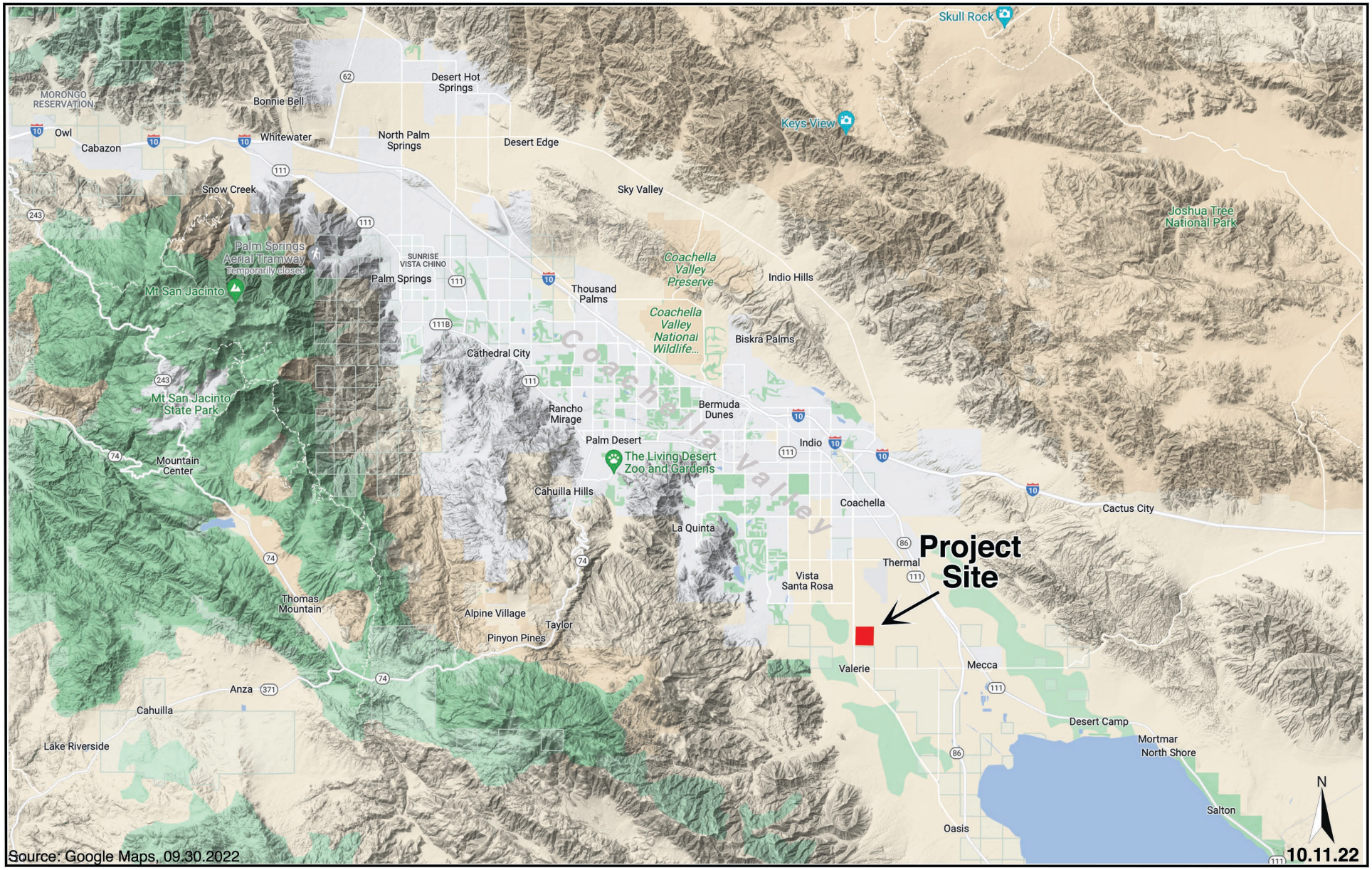
Thermal Ranch Specific Plan EIR
Regional Location Map
Thermal, California

Exhibit
1-1



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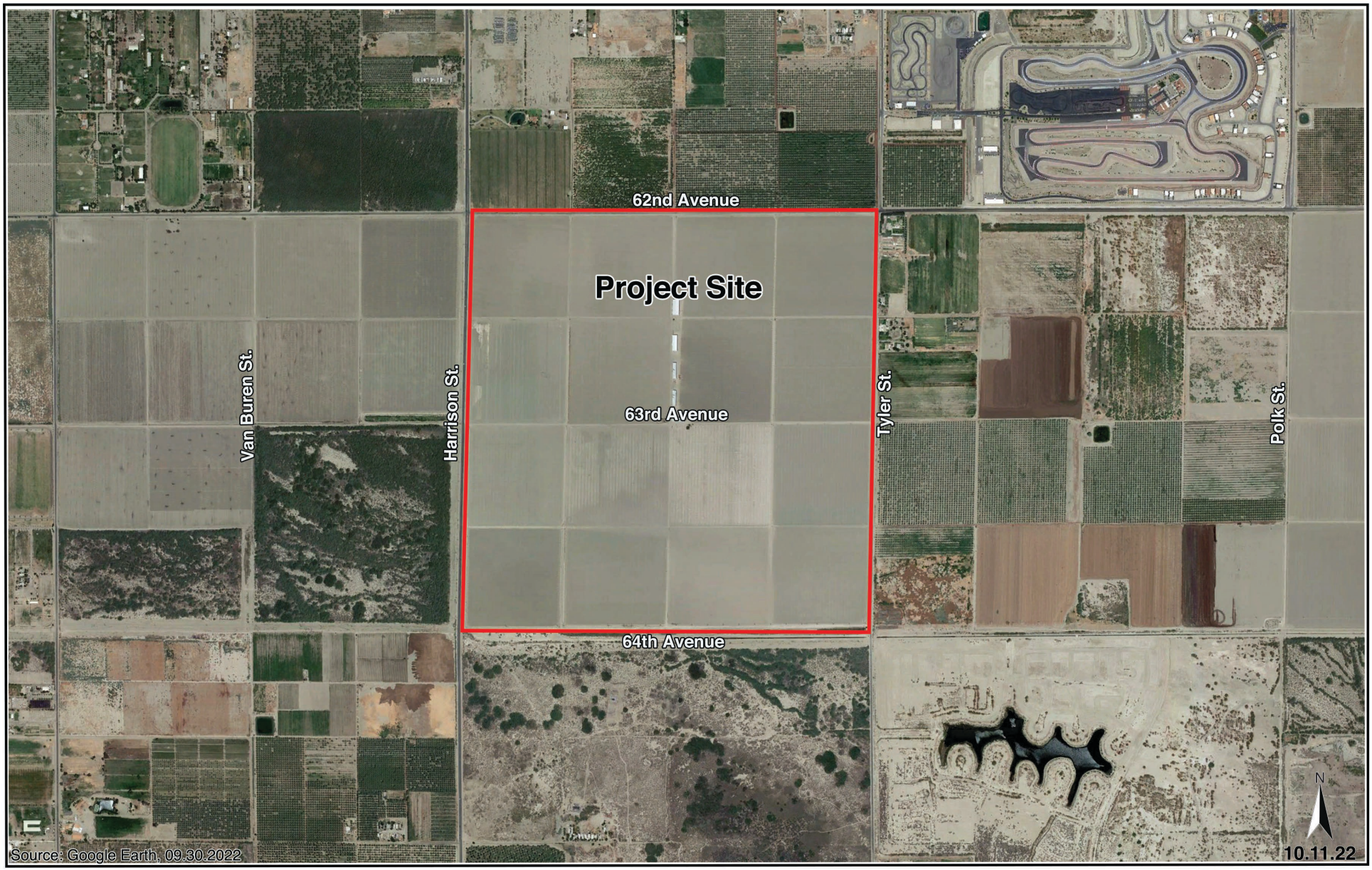
Thermal Ranch Specific Plan EIR
Project Vicinity Map
Thermal, California

Exhibit
1-2



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Thermal Ranch Specific Plan EIR
Project Location Map
Thermal, California

Exhibit
1-3

The subject property is also described as being Section 5, Township 7 South, Range 8 East, SBB&M. It is located 3.7± miles west of State Highway 86 Expressway and 2 miles west of the CVWD Water Reclamation Plant No. 4 (WRP # 4). The site is also approximately 1.25 miles south of the closest runway of the Jackie Cochran Regional Airport and approximately 2.5 miles west of the Coachella Valley Stormwater Channel. The separate APN: 751-020-010 is an exempt parcel under "USA" (US Bureau of Reclamation/USBR) ownership and planned for avoidance or as an owner-allowed "off-site" use area with USBR permission.

Existing Conditions
The entire Project property is currently in agricultural use inclusive of several ag-related haybarns, packing sheds and other structures, which are planned for removal. The existing on-site irrigation water well and other irrigation-related infrastructure (i.e., tile drains) may remain to provide landscape irrigation and to facilitate site drainage. A CVWD agricultural drain along the property's south boundary within or adjacent to the Avenue 64 alignment will remain. There are no undisturbed areas within the boundaries of the subject property (see Exhibit 1-3).

The Project's north boundary of Avenue 62 is partially improved, providing approximately 24 feet of pavement and two travel lanes with graded but not otherwise improved shoulders. The south of the subject property is bounded by the future Avenue 64 right-of-way, a parallel 95-foot wide utility easement with power poles and an adjoining parallel 50-foot wide CVWD irrigation easement, 25 feet of which is located south of the subject property line. These easements separate the development portion of the site from the future Avenue 64 right-of-way (see Exhibit 1-6: TTM 38578).

1.3 Project Description – Thermal Ranch Development Plan

The proposed Thermal Ranch Specific Plan project is comprised of six planning areas (PAs), each of which is described below. Also see the Draft Thermal Ranch Specific Plan and related applications.

Planning Area 1 - Equestrian Center
The Equestrian Center is planned as PA-1 and is comprised of 231± acres located primarily in the central portion of the Project site, with an outlying area for hay and feed storage, short-term manure storage for daily transport off-site, limited composting, and related functions to support the Equestrian Center("Back of House Functions") that extends southeast to the corner of Tyler Street and the future Avenue 64 right-of-way. Primary access for PA-1 will be from two access drives to be located on Harrison Street, one approximately 700± feet north and one 700± feet south of Avenue 63 extended. Secondary/emergency access will be from the secondary access drive on Tyler Street approximately 500 feet north of the Avenue 64 center line (see Exhibit 1-6).

The Equestrian Center will include 47 barns with capacity for up to 2,700 horses and over 2.5 million square feet of riding space including 18 sand competition rings and one (1) grass competition field with highest occupancy occurring during the Coachella Valley's October through March equestrian show season.

Of the overall Project's 275,000± square feet of commercial space, the equestrian center portion of the project will include 75,000± square feet of event-related commercial and administrative space. The Project will also provide 10,000 square feet of office space. PA-1 will also include Back of House Functions described above on 18.5± acres. Storage buildings, shade structures, sheds, storage bins, additional parking, greenhouse and a small staff building are also planned in this portion of PA-1. An electric power substation is also planned in consultation with Imperial Irrigation District (IID) in the southeast portion of PA-1. Maximum building/structure height will not exceed 65 feet and most structures in PA-1 will be 44 feet or less in height. Security, commercial, event and work area lighting will also be provided, with maximum (arena) light standard height of 65 feet.

Planning Area 2 - Estate Residential
PA-2 is comprised of 194.3± acres located in the northern-most portion of the project site, fronting on and taking primary access from Avenue 62. PA-2 development would provide up to 132 estate lots ranging in size from one-half acre to two acres and at a density of 0.6 dwelling units per acre. One and two-story construction of up to 35 feet will be permitted as will the keeping of horses on the southern-most row of lots only, closest to the equestrian center. PA-2 will also include a community recreation area with tennis and pickleball courts, gym, pool, meeting areas, club house, restaurant, spa and landscaped open space in the central portion of the planning area. These facilities are for the exclusive use of PA-2 residents and their guest.

Planning Area 3 – Detached and Attached Single-Family Residential
PA-3 is comprised of 69.5± acres on the east side of the Project with one primary and one secondary access drives from Tyler Street. PA-3 development would provide up to 390 dwelling units, including detached and attached single-family units planned in this area. PA-3 also provides a 3.1± acre open space and recreation area (amenities area) that could include private tennis and pickleball courts, gym, pool, meeting areas and landscaped open space in the west-central portion of the planning area. These facilities are for the exclusive use of PA-3 residents and their guest. Overall density will be 5.6 dwelling units per acre, and residences of up to 40 feet in height will be permitted.

Planning Area 4 – Workforce Housing High Density Residential and RV Park
PA-4 is comprised of two sub-areas totaling 41.1± acres located at the south end of the Project and bounded by Avenue 64 (unimproved). Access will be provided from Tyler Street and internal roads connected to Harrison Street. PA-4a development would provide up to 500 units of modular homes on 18.3± acres envisioned for Equestrian Center workforce housing from October through March and farmworker housing during the rest of the year. PA-4b will provide up to 320 RV spaces on 22.8 acres. PA-4a also provides a 0.7± acre pool and recreation area (amenities area), and on-site laundry and convenience store in the central portion of the planning area that will be accessible to residents of both the RV park and the modular home village. The RV park area (PA-4b) will be developed at a density of 14± spaces per acre. The modular workforce housing (PA-4a) densities will be up to 27.3 dwelling units per acre and building heights of up to 20 feet in height will be permitted.

Planning Area 5 – Resort Residential Complex
PA-5 is comprised of 54.4± acres located at the southwest corner of the Project site and bounded on the south by the future Avenue 64 right-of-way, on the west by Harrison Street, and on the east by a major interior drive that separates PA-5 from PA-4 to the east and PA-1 to the northeast. Primary access will be from one drive on Harrison Street that is 2,100± feet north of the future Avenue 64 centerline, with secondary access from an unsignalized access drive along Harrison Street, approximately 1,900 feet north of the aforementioned primary access drive. Building heights would range from one to four-stories and a maximum height of 65 feet. Development planned for PA-5 includes the following:

- 42.1± acres providing up to 340 resort condominiums (may be included in planned hotel rental pool in addition to the 150 hotel keys) at a density of 8.1 dwelling units per acre, located around a central recreational amenity area.
- 8.1± acre hotel site planned for up to 150 hotel keys and including pool and pool club and other recreational and open space amenities.
- 4.2± acres for up to 50,000 square feet of retail space.

Planning Area 6 – Commercial Village (Neighborhood-Scale Shopping Center)
PA-6 is comprised of 21.4± acres and located along the west boundary of the Project site. Primary access will be from two drives on Harrison Street at the eastward extension of Avenue 63, one 700± feet north and one 700± south of Avenue 63. Buildings of up to 50 feet in height are permitted in PA-6. PA-6 provides 150,000± square feet of commercial retail, restaurants, and office space.

	Project Boundary				
1	Horse Park	A	Grand Entry	H	Private Barns
2	Estate Lots	B	Gathering/Dining Commons	I	Pasture
3	Neighborhoods	C	Competition Rings	J	Grass Field
4	Horse Park Workforce Housing	D	Warmup/Jumper Rings	K	Back of House
5	Hotel/Resort	E	Common Barns	L	Office
6	Commercial	F	Parking	M	CVWD Well Site
		G	Staging Area	N	Potential Substation

Note: This exhibit illustrates one possible development scenario. Other site development concepts are allowed subject to the standards and guidelines of this Specific Plan.

Source: MSA Consulting, Inc., 08.04.23

08.11.23

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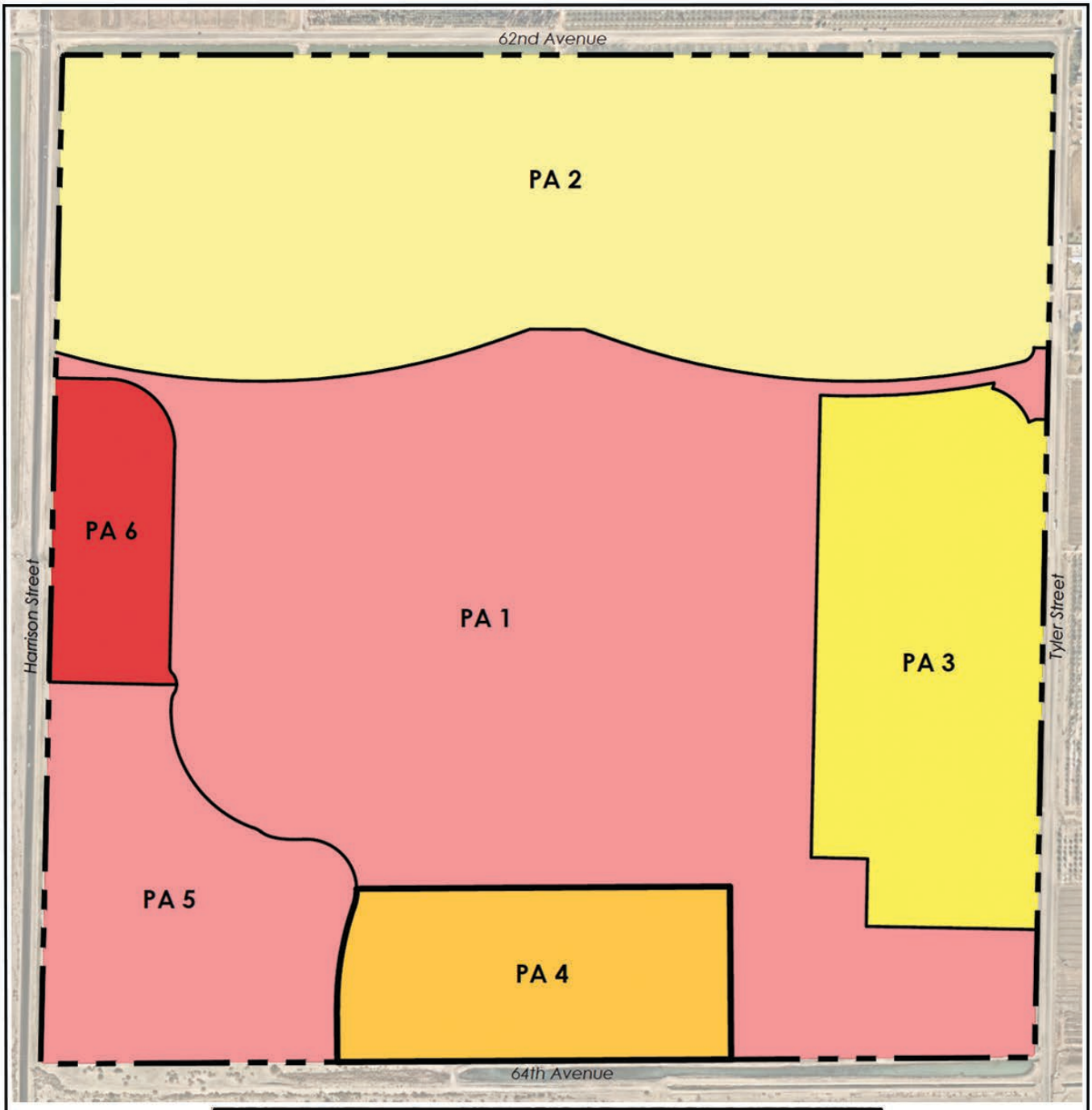
Thermal Ranch Specific Plan EIR
Project Site Plan
Thermal, California

Exhibit
1-4



Legend	
— — —	Project Boundary
———	Planning Area Boundary
	PA 1: Tourist Commercial (CT)
	PA 2: Low Density Residential (LDR)
	PA 3: Medium Density Residential (MDR)
	PA 4: High Density Residential (HDR)
	PA 5: Tourist Commercial (CT)
	PA 6: Commercial Retail (CR)

Source: MSA Consulting, Inc., 09.23.2022

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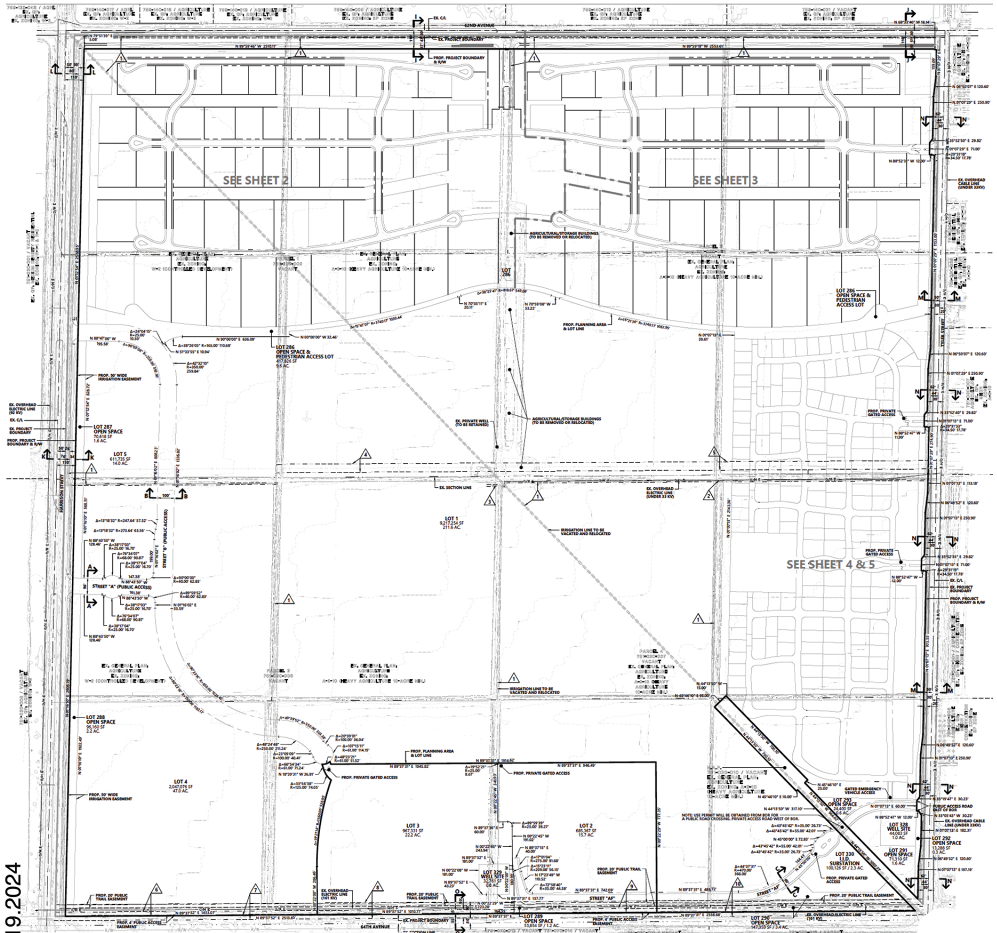
Thermal Ranch Specific Plan EIR
Planning Areas Map
Thermal, California

Exhibit
1-5

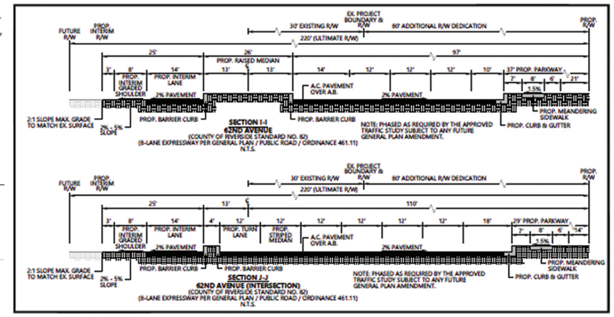


ABBREVIATIONS

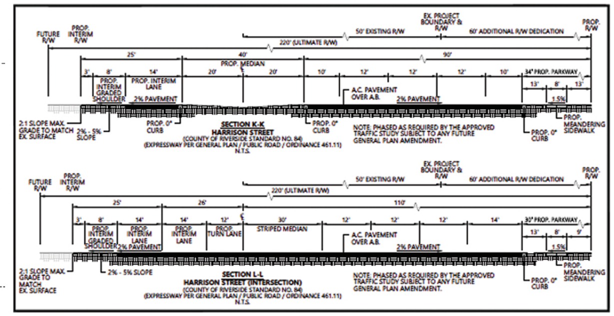
(E)	EAST
(N)	NORTH
(S)	SOUTH
(W)	WEST
A.C.	ASPHALT CONCRETE
AC	ACREAGE
APN	ASSESSORS PARCEL NUMBER
BNDRY	BOUNDARY
C/L	CENTERLINE
C&G	CURB AND GUTTER
E/P	EDGE OF PAVEMENT
ESMT.	EASEMENT
EX.	EXISTING
MAX.	MAXIMUM
M.B.	MAP BOOK
MIN.	MINIMUM
NO.	NUMBER
N.T.S.	NOT TO SCALE
O/H	OVERHEAD
OS/PP	OPEN SPACE / PARKS
PE	PAD ELEVATION
PG.	PAGE
P/L	PROPERTY LINE
PROP.	PROPOSED
P.U.E.	PUBLIC UTILITY EASEMENT
R	RADIUS
R-L	LOW DENSITY (RESIDENTIAL)
R/W	RIGHT OF WAY
SF	SQUARE FEET
STD.	STANDARD
TYP.	TYPICAL
UG	UNDERGROUND

LEGEND

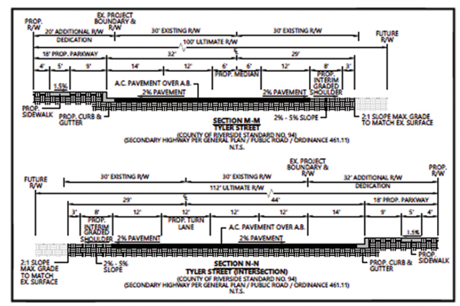
- 679.5 EXISTING SPOT ELEVATIONS
- EXISTING CONTOURS
- X EXISTING EASEMENT DELTA
- EXISTING CABLE
- EXISTING IRRIGATION DRAIN LINE
- EXISTING EASEMENT
- EXISTING ELECTRIC
- EXISTING GAS
- EXISTING IRRIGATION
- EXISTING LOT LINE
- EXISTING EDGE OF PAVEMENT
- EXISTING TELEPHONE
- EXISTING OVERHEAD TELEPHONE
- EXISTING RIGHT OF WAY
- EXISTING SEWER
- EXISTING SEWER FORCE MAIN
- EXISTING WATER
- TENTATIVE TRACT MAP BOUNDARY
- PROPOSED AND EXISTING CENTER LINE
- PROPOSED CURB
- PROPOSED EASEMENT
- PROPOSED LOT LINE
- PROPOSED RIGHT OF WAY



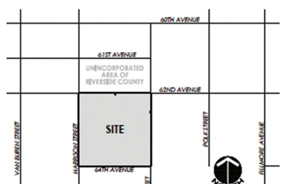
62ND AVENUE SECTIONS



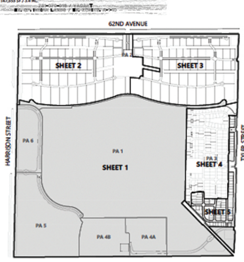
HARRISON STREET SECTIONS



TYLER STREET SECTIONS



VICINITY MAP
N.T.S.



PHASING/KEY MAP

THE UNINCORPORATED AREA IN THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

TENTATIVE TRACT MAP NO. 38578

SCHEDULE A SUBDIVISION

EXHIBIT DATE: SEPTEMBER 20, 2024

REVISIONS

NO.	DATE	DESCRIPTION

DATA TABLE

APPLICANT / LAND OWNER	THERMAL RANCH, LLC		
ADDRESS	19312 CANYON DRIVE VILLA PARK, CALIFORNIA 92861		
CONTACT	JEREMY SMITH	TELEPHONE	(760) 801-5166
EXHIBIT PREPARER	MSA CONSULTING, INC.		
ADDRESS	34200 BOB HOPE DRIVE RANCHO MIRAGE, CALIFORNIA 92270		
CONTACT	PAUL DEPALATIS, AICP	TELEPHONE	(760) 320-9811
SOURCE OF TOPOGRAPHY	AEROTECH MAPPING, INC.		
ADDRESS	200 SPECTRUM CENTER DRIVE, SUITE 300 IRVINE, CALIFORNIA 92618		
DATE OF TOPOGRAPHY	DECEMBER 7, 2022	TELEPHONE	(619) 606-5020
ASSESSOR'S PARCEL NUMBERS	751-020-002, -003, -006 & -007		

LEGAL DESCRIPTION

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE UNINCORPORATED AREA OF THERMAL IN THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

PARCEL 1: THE NORTHWEST ONE-QUARTER OF SECTION 5, TOWNSHIP 7 SOUTH, RANGE 8 EAST, SAN BERNARDINO BASE AND MERIDIAN. EXCEPTING THEREFROM THE WESTERLY 50 FEET THEREOF LYING WITHIN STATE HIGHWAY 68 AND THE NORTHERLY 30 FEET THEREOF LYING WITHIN 62ND STREET.

PARCEL 2: THE NORTHEAST ONE-QUARTER OF SECTION 5, TOWNSHIP 7 SOUTH, RANGE 8 EAST, SAN BERNARDINO BASE AND MERIDIAN. EXCEPTING THEREFROM THE EASTERLY AND NORTHERLY 30 FEET THEREOF LYING WITHIN TYLER AND 62ND STREET.

PARCEL 3: THE SOUTHWEST ONE-QUARTER OF SECTION 5, TOWNSHIP 7 SOUTH, RANGE 8 EAST, SAN BERNARDINO BASE AND MERIDIAN. EXCEPTING THEREFROM THE WESTERLY 50 FEET THEREOF LYING WITH STATE HIGHWAY 68 AND THE SOUTHERLY 30 FEET THEREOF LYING WITHIN 64TH STREET. ALSO EXCEPTING THEREFROM THE NORTH TWENTY-FIVE FEET OF THE SOUTH 55 FEET AS CONVEYED TO COACHELLA VALLEY COUNTY WATER DISTRICT BY DEED RECORDED MAY 9, 1957 IN BOOK 2085, PAGE 188 OF OFFICIAL RECORDS OF RIVERSIDE COUNTY, CALIFORNIA.

PARCEL 4: THE SOUTHEAST ONE-QUARTER OF SECTION 5, TOWNSHIP 7 SOUTH, RANGE 8 EAST, SAN BERNARDINO BASE AND MERIDIAN. EXCEPTING THEREFROM THE SOUTHERLY AND EASTERLY 30 FEET THEREOF LYING WITH 64TH AND TYLER STREETS.

ALSO EXCEPTING THEREFROM THE NORTH 25 FEET OF THE SOUTH 55 FEET AS CONVEYED TO COACHELLA VALLEY COUNTY WATER DISTRICT BY DEED RECORDED MAY 9, 1957 IN BOOK 2085, PAGE 193 OF OFFICIAL RECORDS OF RIVERSIDE COUNTY, CALIFORNIA.

ALSO EXCEPTING THEREFROM THAT PORTION CONVEYED TO THE UNITED STATES OF AMERICA BY FINAL DECREE IN CONDEMNATION RECORDED JUNE 6, 1951 IN BOOK 1277, PAGE 70 OF OFFICIAL RECORDS OF RIVERSIDE COUNTY, CALIFORNIA.

APN 751-020-002-3 (AFFECTS PARCEL 1)
APN 751-020-003-4 (AFFECTS PARCEL 2)
APN 751-020-006-7 (AFFECTS PARCEL 3)
APN 751-020-007-8 (AFFECTS PARCEL 4)

LAND USE DESCRIPTION	ACREAGE
EXISTING GROSS ACREAGE	619.1 AC.
PROPOSED PUBLIC RIGHT OF WAY DEDICATION (62ND AVENUE, HARRISON STREET & TYLER STREET)	19.6 AC.
PROPOSED C.V.W.D. WELL SITE (LOT 325, 326, 327, 328 & 329)	4.1 AC.
PROPOSED I.I.D. SUBSTATION (LOT 330)	2.3 AC.
PROPOSED NET ACREAGE	593.1 AC.
PROPOSED EQUESTRIAN CENTER LOT (LOT 1)	211.6 AC.
PROPOSED HORSE PARK WORKFORCE HOUSING LOTS (LOTS 2 & 3)	37.9 AC.
PROPOSED COMMERCIAL LOTS (LOTS 4 & 5)	61.0 AC.
PROPOSED PRIVATE RESIDENTIAL LOTS: ESTATE LOTS (LOTS 6-115)	121.8 AC.
PROPOSED PRIVATE RESIDENTIAL LOTS: SINGLE FAMILY DETACHED (117-212, 214-237, 242-251, 254-265 & 267-285)	32.7 AC.
PROPOSED CONDOMINIUM LOTS (LOTS 116, 213, 238-241, 252, 253 & 266)	15.1 AC.
PROPOSED PRIVATE STREETS (STREET "A" THRU "AF")	48.9 AC.
PROPOSED PRIVATE OPEN SPACE & PEDESTRIAN ACCESS LOT (LOT 286)	9.6 AC.
PROPOSED PRIVATE OPEN SPACE LOTS (LOTS 287 THRU 324) (FOR OPEN SPACE / RETENTION PURPOSES)	54.5 AC.

EXISTING EASEMENT NOTES

1	CENTERLINE OF 10' PIPELINE EASEMENT, RECORDED 3/22/1950, IN BOOK 1158, PAGE 39, O.R. (TO BE VACATED OR RELOCATED) (PLOTTED HEREON)
2	CENTERLINE OF POWER LINE EASEMENT, RECORDED 2/18/1965, AS INSTRUMENT NO. 18976, O.R. (TO BE VACATED OR RELOCATED) (PLOTTED HEREON)
3	CENTERLINE OF 10' POWER LINE EASEMENT, RECORDED 4/16/1951, BOOK 1277, PAGE 70, O.R. (TO BE VACATED OR RELOCATED) (PLOTTED HEREON)
4	50' PIPELINE EASEMENT, RECORDED 10/20/1958, IN BOOK 2350, PAGE 565-567, O.R. (TO REMAIN) (PLOTTED HEREON)
5	50' PIPELINE EASEMENT, RECORDED 10/20/1958, IN BOOK 2350, PAGE 562-564, O.R. (TO REMAIN) (PLOTTED HEREON)
6	25' PIPELINE EASEMENT, RECORDED 5/9/1957, IN BOOK 2085, PAGE 184-186, O.R. (TO REMAIN) (PLOTTED HEREON)
7	GRANT DEED TO C.V.W.D. AND 25' DRAINAGE CHANNEL R/W, RECORDED 5/9/1957, IN BOOK 2085, PAGE 187-189, O.R. (TO REMAIN) (PLOTTED HEREON)
8	95' POWER LINE EASEMENT, RECORDED 1/4/1989, AS INSTRUMENT NO. 1502, O.R. (TO REMAIN) (PLOTTED HEREON)
9	25' PIPELINE EASEMENT, RECORDED 5/9/1957, IN BOOK 2085, PAGE 190-192, O.R. (TO REMAIN) (PLOTTED HEREON)
10	GRANT DEED TO C.V.W.D. AND 25' DRAINAGE CHANNEL R/W, RECORDED 5/9/1957, IN BOOK 2085, PAGE 193-195, O.R. (TO REMAIN) (PLOTTED HEREON)

EXISTING ZONING	CONTROLLED DEVELOPMENT (W-2) / HEAVY AGRICULTURE 10-ACRE MIN. LOT (A-2-10)
PROPOSED ZONING	THERMAL RANCH SPECIFIC PLAN
EXISTING GENERAL PLAN LAND USE	AGRICULTURE
PROPOSED GENERAL PLAN LAND USE	COMMUNITY DEVELOPMENT FOUNDATION - TC, CR, LDR, MDR, HDR

PUBLIC UTILITY PURVEYORS

ELECTRIC	IMPERIAL IRRIGATION DISTRICT	(800) 303-7756
GAS	SOUTHERN CALIFORNIA GAS COMPANY	(800) 427-2200
TELEPHONE	FRONTIER COMMUNICATIONS	(800) 921-8101
WATER	COACHELLA VALLEY WATER DISTRICT	(760) 398-2651
CABLE	FRONTIER COMMUNICATIONS	(800) 921-8101
SEWER	COACHELLA VALLEY WATER DISTRICT	(760) 398-2651
USA	UNDERGROUND SERVICE ALERT	(800) 227-2600

FEMA FLOOD ZONE DESIGNATION

ZONE "A": WITHOUT BASE ELEVATION
ZONE "X": 0.2% ANNUAL CHANCE FLOOD & AREAS OF MINIMAL FLOOD HAZARD

AS SHOWN ON RIVERSIDE COUNTY, CALIFORNIA, FLOOD INSURANCE RATE MAP, COMMUNITY PANEL MAP NUMBER: 06065C2910H
EFFECTIVE DATE: MARCH 6, 2018.

LIQUEFACTION	HIGH LIQUEFACTION ZONE
SCHOOL DISTRICT	COACHELLA VALLEY UNIFIED
COUNTY SERVICE AREA	125 - THERMAL ST LIGHTING
EXISTING SPECIFIC PLAN	NONE
PROPOSED SPECIFIC PLAN	THERMAL RANCH SP
NOTE	1. THIS MAP INCLUDES THE ENTIRE CONTIGUOUS OWNERSHIP OF THE LAND DIVIDER.

N

0' 200' 400' 600' 800'
SCALE 1"=200'

10.11.24

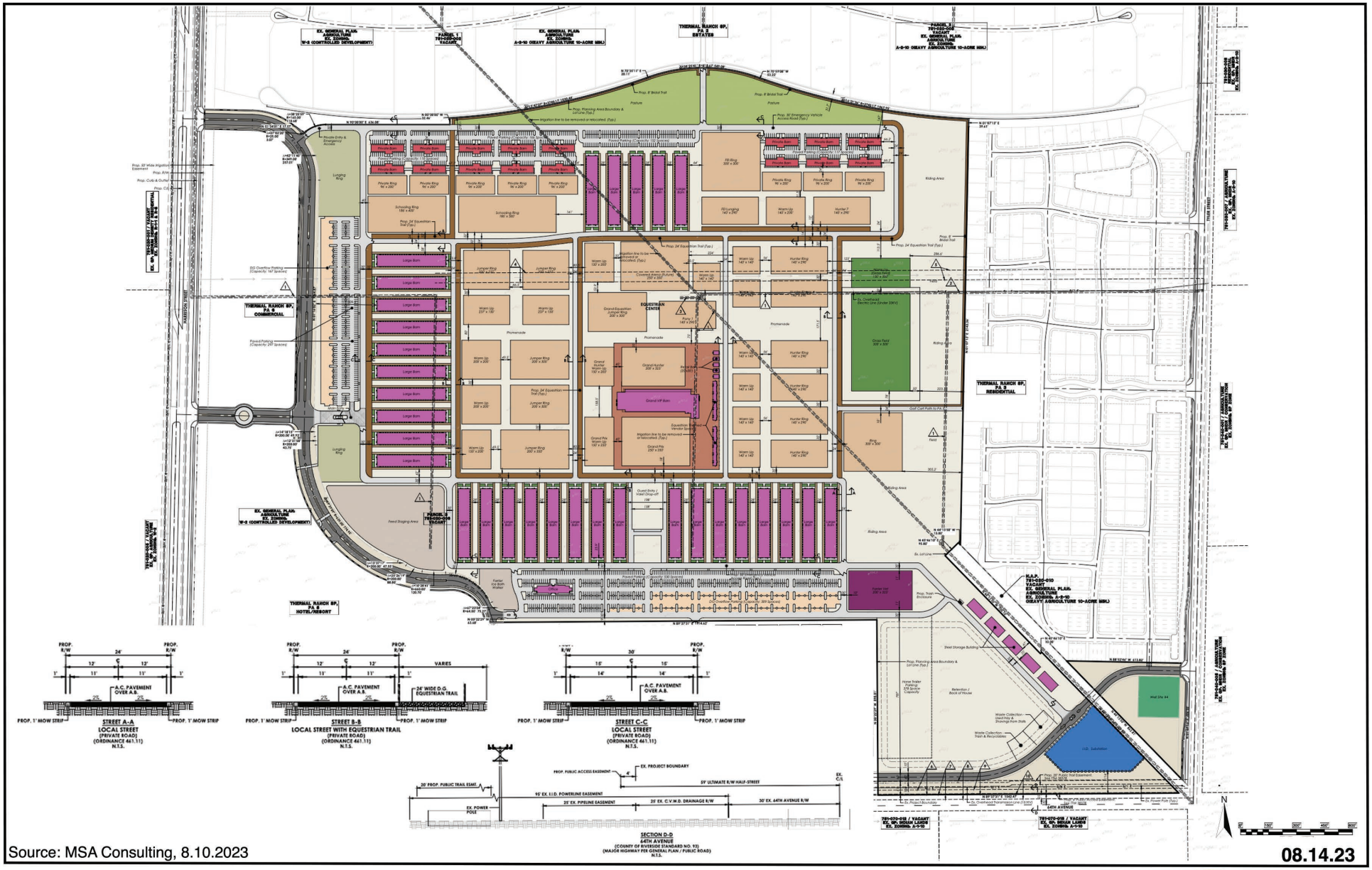
Source: MSA Consulting, 9.19.2024

TERRA NOVA®
PLANNING & RESEARCH, INC.

Thermal Ranch Specific Plan EIR
Tentative Tract Map
Thermal, California

Exhibit

1-6



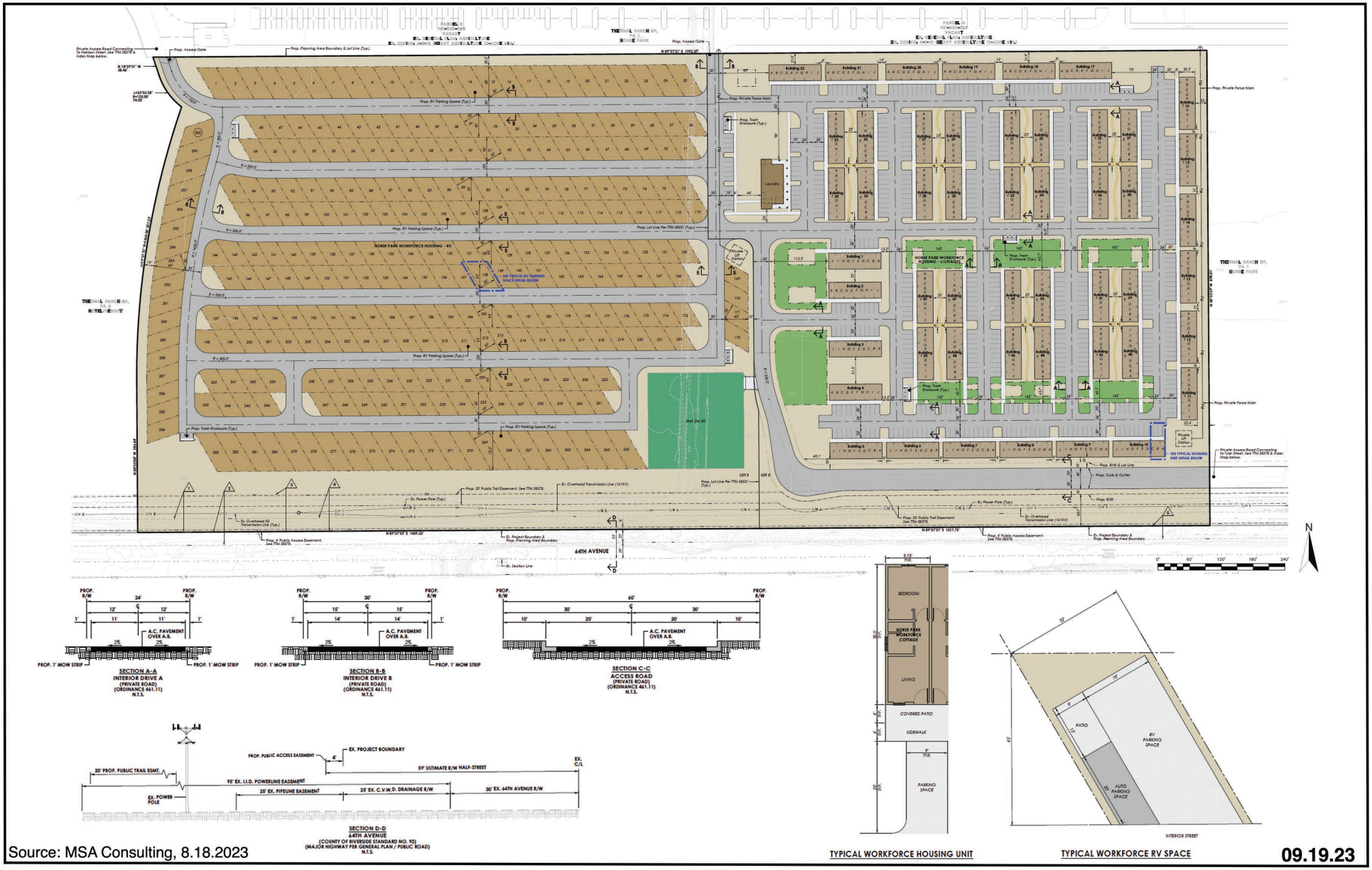
Source: MSA Consulting, 8.10.2023

08.14.23

TERRA NOVA®
PLANNING & RESEARCH, INC.

Thermal Ranch Specific Plan EIR
PA 1 Plot Plan - Equestrian Center
Thermal, California

Exhibit 1-7



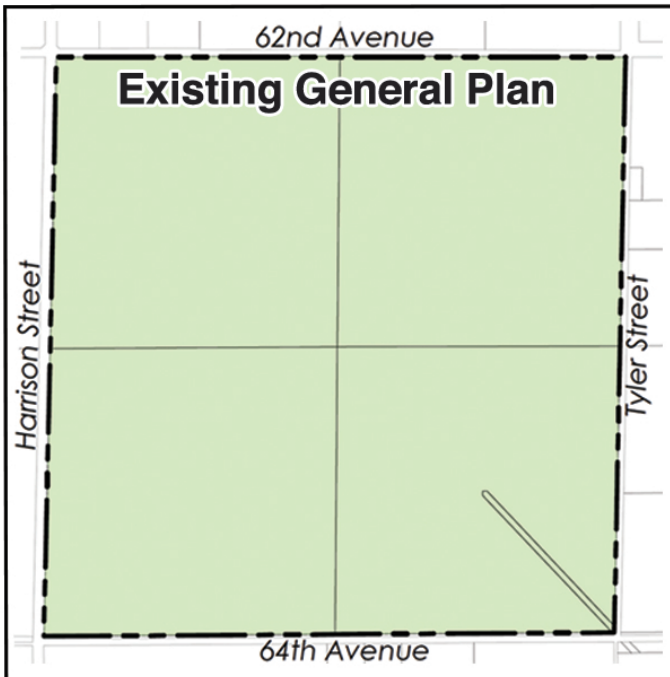
Source: MSA Consulting, 8.18.2023

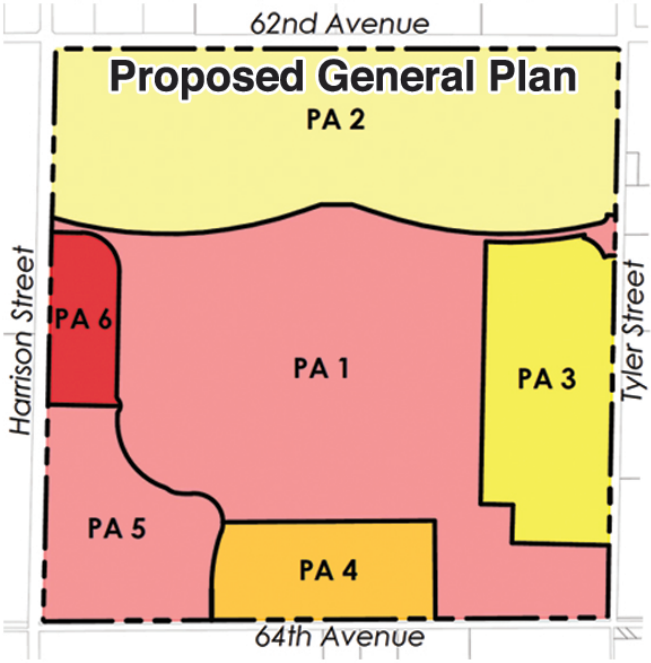
09.19.23

TERRA NOVA®
PLANNING & RESEARCH, INC.

Thermal Ranch Specific Plan EIR
PA 4 Plot Plan - RV Park and Workforce Housing
Thermal, California

Exhibit 1-8



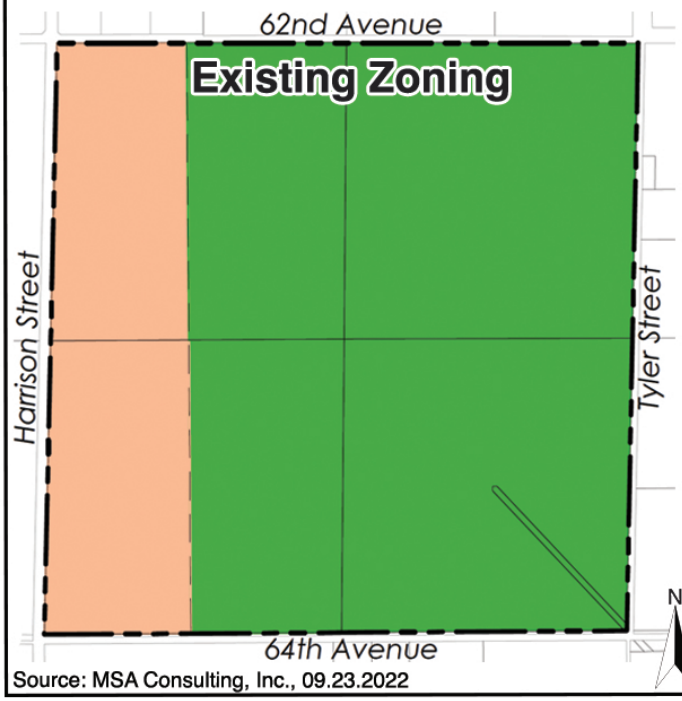


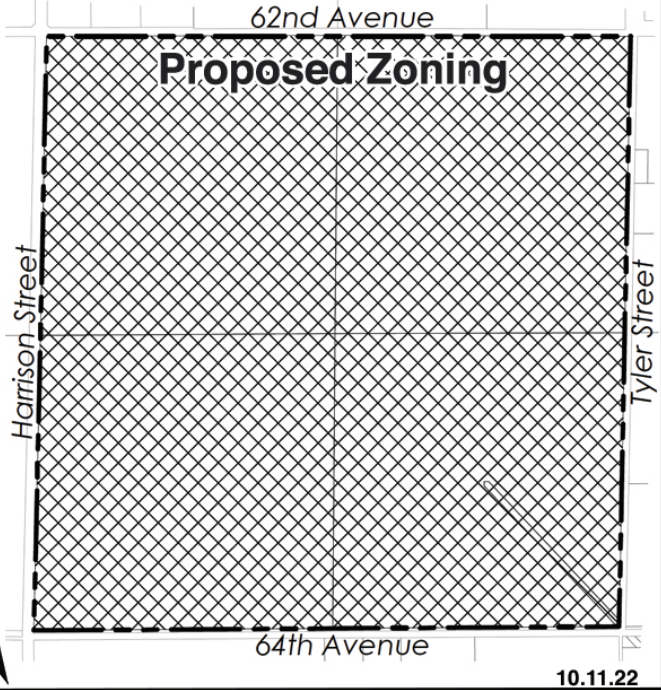
Zoning Legend

	Specific Plan Boundary
Existing	
A-2-10	Heavy Agriculture - 10 Acre Min. Lot Size
W-2	Controlled Development Area
Proposed	
	Specific Plan

General Plan Legend

	Specific Plan Boundary
	Planning Area Boundary
	Existing
	Agriculture
	Proposed
PA 1	Tourist Commercial (CT)
PA 2	Low Density Residential (LDR)
PA 3	Medium Density Residential (MDR)
PA 4	High Density Residential (HDR)
PA 5	Tourist Commercial (CT)
PA 6	Commercial Retail (CR)





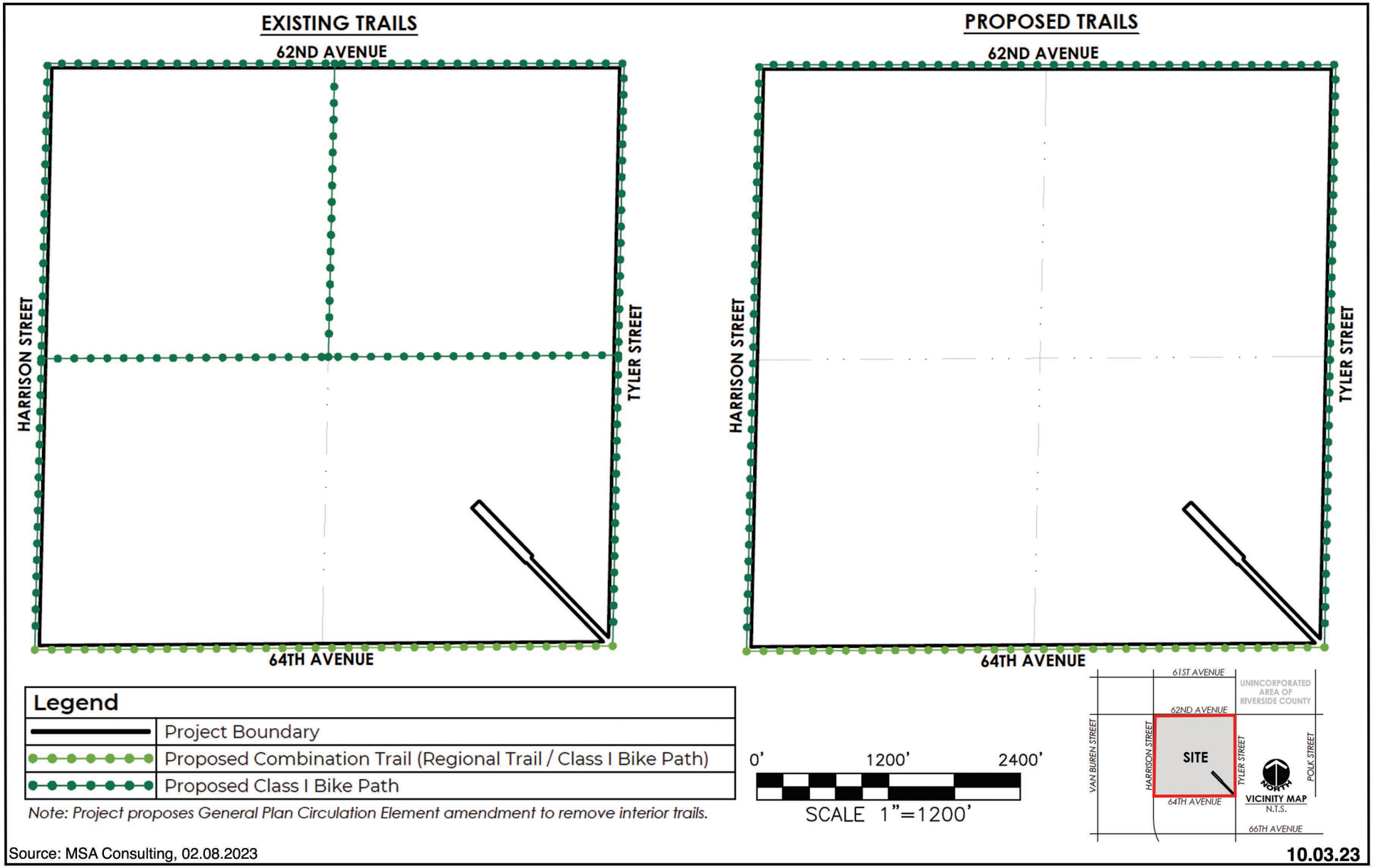
Source: MSA Consulting, Inc., 09.23.2022

10.11.22

TERRA NOVA®
PLANNING & RESEARCH, INC.

Thermal Ranch Specific Plan EIR
Proposed Land Use and Zoning
Thermal, California

Exhibit
1-9



Source: MSA Consulting, 02.08.2023

10.03.23

TERRA NOVA®
PLANNING & RESEARCH, INC.

Thermal Ranch Specific Plan EIR
Proposed General Plan Trails Amendment
Thermal, California

Exhibit
1-10

Source: MSA Consulting, Inc., 12.2023

12.08.23

TERRA NOVA®
PLANNING & RESEARCH, INC.

Thermal Ranch Specific Plan EIR
Project Middleton Reservoir Site
Thermal, California

Exhibit
1-11

Table 1-1: Land Use Summary
Thermal Ranch Specific Plan

Planning Area	GPLU	Base Zone	Description	Acres	Residential Units & Density	Hotel Keys	Population	Commercial FAR	Commercial SF	Office SF	Employees	Bldg Height (feet)
1	C-T	A-1	Horse Park	223.1					75,000	10,000	300	65
2	LDR	R-R	Estate Residential	194.3	132 / 0.6		356					35
3	MDR	R-1	Single Family Attached/Detached	69.5	390 / 5.6		1,053					40
4a	HDR	R-T	Workforce Cottages	18.3	300-500 / 16.3-27.3		810-1,350					20
4b	HDR	R-T	Workforce RV Park	22.8	320 spaces[1]							20
5a	CT	C-T	` Resort Condos	42.1	340 / 8.1		918					40
5b	CT	C-T	Hotel	8.1		150					180-300	65
5c	CT	C-T	Resort Retail	4.2				0.20 - 0.35	50,000		200	40
6	CR	C-1	Commercial Retail	21.4				0.20 - 0.35	150,000		600	50
Perimeter ROW				15.3								
TOTALS				**619.1**	**1,162 - 1,362 Residences 320 RVs**	**150**	**4,001 – 4,541**		**275,000**	**10,000**	**1,280-1,400**	

[1.] RV spaces not included in residential unit count.

Off-Site Improvements
In addition to the improvements described above, the Project will also require the extension of existing sanitary sewer lines from Avenue 62 and existing domestic water lines in Harrison Street into the Project site. Direct roadway improvements are expected to be limited to lands adjoining the site. Natural gas lines will need to be extended and applicant has consulted with SoCalGas on this line extension, which is expected to be placed in existing road rights of way.

Off-Site CVWD Middleton Reservoir 7802
An off-site 5-million-gallon (mg) domestic water reservoir is required to meet Project demand and fire flows. The new reservoir will be at the existing, improved CVWD Middleton reservoir site located approximately 2.4± miles southwest of the Project site. The new reservoir will be approximately 163 feet in diameter and 38 feet in total height. CVWD has identified the existing CVWD Middleton Reservoir 7802-1 site, which occurs at an elevation of 68± feet above sea level (see Exhibit 1-11), as the appropriate location for the new reservoir. The existing site currently hosts a CVWD 2.5-million-gallon tank and is planned and has been improved for multiple tanks[2]. The existing reservoir is located behind a 25-foot earthen berm with existing access and site security. To accommodate the new 5 mg tank, the northerly portion of the existing berm will be shifted farther north approximately 35 feet. The new reservoir will connect to existing lines and no new off-site reservoir water lines will be required.

No other off-site improvements are anticipated.

General Plan Amendment and Change of Zoning
As noted above, the proposed Project includes the processing of a General Plan Amendment (GPA) and a Change of Zone (CZ) on the subject property. The GPA proposes to change the General Plan Foundation Component from “Agriculture” to “Community Development. The GPA also proposes to change the General Plan land use designation from “Agriculture” to a set of five land use categories, including “Tourist Commercial” (CT), “Low Density Residential” (LDR), “Medium Density Residential” (MDR), High Density Residential (HDR), and “Commercial Retail” (CR). Existing and proposed land use designations are also shown on Exhibit 1-9. Finally, the GPA address the deletion of two Circulation Element trail segments delineated within the central portion of the subject property (see Exhibit 1-10).

1.4 Purpose and Need

The purpose of the Thermal Ranch Specific Plan is to create a unique and diverse mixed-use resort residential community that is centered around a world-class equestrian center and provides a wide range of residential neighborhoods and product, and resort and neighborhood-serving commercial services. The Specific Plan is necessary to ensure that the development of this mix of uses and site amenities is implemented through the overarching and planning area-specific development standards and design guidelines set forth in the Thermal Ranch Specific Plan. It is also intended to ensure quality development consistent with the goals, objectives, and policies of the County of Riverside General Plan.

1.5 Statement of Project Objectives

The eastern Coachella Valley has traditionally been an area of extensive agriculture and associated uses, and small rural communities that support the east valley economy, including Mecca, Oasis and Thermal. In the early 2000s, a great deal of development interest was focused on the east Coachella Valley, which spurred planning of several master planned communities, most of which were never realized. Since 2008, major projects such as Kohl Ranch and the Thermal Club have started

[2] Thermal Ranch Hydraulic Modeling Results (Project No. ST0257) letter, Hector Rodriguez, Domestic Water Engineer, CVWD. September 27,2023 and Personal communication on October 20, 2023.

development and are furthering the transition of this area from predominantly agriculture to a mix of land uses that currently includes a satellite campus of College of the Desert north of Avenue 62 and four miles east of the Thermal Ranch Specific Plan site. In addition, an elementary, middle and high school have been developed on Tyler Street, approximately one-half mile south of the Thermal Ranch Specific Plan site.

According to the Thermal Ranch Specific Plan, various issues were considered and evaluated during the preparation of the Specific Plan. Engineering feasibility, water efficiency, General Plan goals, and compatibility with surrounding land uses were considered during the planning process. To ensure the functional integrity, economic viability, environmental sensitivity, and positive aesthetic contribution of this development, unique project objectives were established as follows:

1. Develop a high-quality master planned equestrian community and world-class equestrian center that will ensure equestrian sports continue to exist in the Thermal area.

2. Develop an integrated community that allows equestrians, residents, and workers to live, work, and recreate within the project and enjoy the equestrian lifestyle.

3. Develop a thoughtfully planned and integrated project to allow for a variety of uses including but not limited to residential, neighborhood and tourist commercial uses that compliment and support the equestrian center.

4. Create a thriving equestrian community by providing a variety of housing options including estate residences, traditional single family homes (attached and detached), modular homes, and RV park. The many housing options will promote housing diversity within the project and provide housing for people working or otherwise associated with the equestrian center.

5. Provide a comprehensive land use plan that establishes development standards, land use regulations, and programs to guide the orderly transition/development of the property and enhances connectivity with the surrounding community.

6. Provide a commercial center with amenities for residents and visitors of the project and the surrounding communities. The commercial center will have store fronts for grocery, restaurants, and other retailers or service providers including enhancing access to fresh food choices.

7. Accommodate phasing that provides for multi-year project development in an orderly and environmentally efficient manner.

8. Provide flexible development regulations that allow future projects to be entitled quickly and easily in response to market demand and evolving design needs.

9. Establish design guidelines, development regulations, use standards and procedures that result in cohesive and attractive landscape and architectural treatments.

10. Provide a safe and efficient circulation system.

11. Provide a safe and efficient network of golf-cart and pedestrian paths.

12. Provide water, sewer, drainage systems and other utilities to adequately service the project and enhance such infrastructure in the Thermal and Oasis area to help promote housing and economic development opportunities in the surrounding communities.

13. Promote quality development consistent with the goals and policies of the County of Riverside General Plan.

1.6 CEQA Process

California Environmental Quality Act

In accordance with Sections 15063, 15064 and 15065 of the State CEQA Guidelines, the County prepared an Initial Study and Notice of Preparation to identify potentially significant impacts associated with the proposed Project. Based on the preliminary assessment, the County determined that an EIR should be prepared to evaluate the potential environmental effects associated with the implementation of the Project (refer to Appendix A).

The EIR has been prepared in accordance with CEQA (as amended), pursuant to State CEQA Guidelines §15121 (Informational Document) and the County's Rules to Implement CEQA:

- *An EIR is an informational document which will inform public agency decision makers and the public generally of the significant environmental effects of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project. The public agency shall consider the information in the EIR along with other information which may be presented to the agency.*
- *While the information in the EIR does not control the agency's ultimate discretion on the project, the agency must respond to each significant effect identified in the EIR by making findings under Section 15091 and if necessary by making a statement of overriding consideration under Section 15093.*
- *The information in an EIR may constitute substantial evidence in the record to support the agency's action on the project if its decision is later challenged in court.*

1.6.1 Notice of Preparation and Public Scoping Meeting

The process of determining the appropriate scope, focus, and content of an EIR is known as "scoping" (Public Resources Code 21083.9 and CEQA Guidelines Section 15082). The first step in the scoping process is conducting a preliminary assessment of the project and the issuance of a Notice of Preparation (NOP) of an Environmental Impact Report to solicit input from agencies and other parties of interest, including the general public.

The NOP was released on May 26, 2023, and the 30-day public review period concluded on June 27, 2023. Two public scoping meetings were also held on-line and in-person on June 19 and July 10, 2023 at 1:30 p.m. and served the purpose of educating and informing the public about the proposed Project, addressing public questions and concerns, and collecting input on the CEQA process. The first part of the scoping meeting included a 5-minute Power Point presentation followed by an open question and answer period where additional maps and exhibits were made available to facilitate the meeting. Comment cards and note pads were also used by staff to record comments and questions raised by attendees. Approximately 10 members of the public attended the public scoping meetings (see Scoping Meeting Report in Appendix A: CEQA Initial Study, NOP and Scoping Meeting Report).

The NOP (see Appendix A) was submitted to the Riverside County Clerk for 30-day posting. The NOP was also submitted to the State of California Governor's Office of Planning and Research, State Clearinghouse (SCH), which circulated the NOP to state agencies for a 30-day review and comment period. A public notice was also published in a newspaper of local circulation. Eighteen (18) written comments were received from a diverse group, including individuals, association members, law firms, state agencies, and other organizations. The State Clearinghouse sent acknowledgement of NOP circulation (see Appendix A).

1.6.2 Draft EIR

This Draft EIR is being circulated along with the Notice of Availability and Notice of Completion for public review for a 45-day review period, in accordance with State CEQA Guidelines Section 15105.

1.6.3 Final EIR

Following the public review and comment period, the County will prepare written responses to the written comments received on the Draft EIR. Where necessary, the Draft EIR may be revised directly or by reference, as appropriate, and together with the Response to Comments, will constitute the Final EIR. In accordance with State CEQA Guidelines Sections15090-15097, Riverside County will be the final authority certifying the Final EIR during a noticed public hearing of the Board of Supervisors.

Following Final EIR certification, the County may proceed with consideration of the proposed Project approval action. CEQA also requires the adoption of findings prior to approval of a project where a certified Final EIR identifies significant unmitigated environmental effects that would be caused by implementation of a project.

If the Project that is approved would result in significant unmitigated effects that are identified in the Final EIR and that cannot be avoided or substantially lessened, the County shall so state in writing in a "statement of overriding considerations" the specific reasons to support its action based on the Final EIR and/or other information in the record. If the Project is approved, the County would file a Notice of Determination (NOD) with the County Clerk and State Clearinghouse within five working days following project approval.

1.6.4 Mitigation Monitoring and Reporting

CEQA requires lead agencies to adopt a Mitigation Monitoring and Reporting Program (MMRP) at the same time the Final EIR is certified. The MMRP is an implementation and verification tool for use by the Lead Agency that lists the mitigation program task, entity responsible for implementation, timing of compliance, and record of date of compliance. Once the Final EIR and MMRP are certified, the mitigation measures become conditions of the Project.

1.6.5 Organization of the Draft EIR

The organization of the Draft EIR is as follows:

Environmental Matrix - Summary of Project, Impacts and Mitigation

Section 1 – Introduction and Project Description. The section includes a description of the proposed Project and summarizes construction and operational characteristics of the proposed Project. Areas of controversy are also identified. This section describes the CEQA process and the organization of this document.

Section 2 – Environmental Setting, Impacts and Mitigation Measures. The environmental setting discussion provides important background data and information on all CEQA analysis categories on a regional and area-wide basis. This section of the EIR serves to establish the physical context within which the Project is being considered and analyzed. It also presents the physical and regulatory setting by environmental resource category, identifies impact significance criteria, and analyzes potential impacts of the Project, including potential cumulative impacts. Mitigation measures and monitoring and reporting programs are identified, where applicable. Section 2 analyzes the following resource areas:

- Aesthetics in Section 2.3
- Agriculture and Forestry in Section 2.4
- Air Quality in Section 2.5
- Biological Resources in Section 2.6
- Cultural Resources in Section 2.7
- Energy Resources in Section 2.8
- Geology and Soils in Section 2.9
- Greenhouse Gas Emissions in Section 2.10
- Hazards and Hazardous Materials in Section 2.11
- Hydrology and Water Quality in Section 2.12
- Land Use and Planning in Section 2.13
- Mineral and Paleontology Resources in Section 2.14
- Noise in Section 2.15
- Population, Housing and Socio-Economic Resources in Section 2.16
- Public Services in Section 2.17
- Recreational Resources in Section 2.18
- Transportation and Traffic in Section 2.19
- Tribal Cultural Resources in Section 2.20
- Utilities and Service Systems in Section 2.21
- Wildfire in Section 2.22

Impact Categories Not Further Analyzed
The Initial Study prepared for the Notice of Preparation and this EIR[3] evaluated each of the analysis categories set forth in Appendix G of the CEQA Guidelines. Two CEQA analysis categories were determined to be not impacted by development of the proposed Project. These include *Mineral Resources* and *Wildfire*. There are no permitted mining operations nor land zoned for mineral resource extraction in the Project vicinity. The Project area lies well outside any identified wildfire hazard zone. Nonetheless, these two analysis categories are further analyzed in this EIR.

Section 3 – Project Alternatives Analysis. This section describes alternatives to the proposed Project that have the potential to further reduce significant impacts associated with the proposed Project and compares the potential impacts of the alternatives to those of the Project. This section also identifies which alternative is environmentally superior on a categorical basis and overall.

Section 4 – Unavoidable Significant Impacts. This section discusses significant environmental effects that cannot be avoided if the Project is implemented, and significant irreversible environmental changes associated with the Project. This section also provides a summary of any significant unavoidable cumulative impacts that are discussed in the resource sections.

Section 5 – Irreversible and Irretrievable Commitment of Resources. This section evaluates the Project's effects on natural resources, including energy and water, and the level of commitment of these resources associated with the Project.

Section 6 – Growth Inducing Impacts. This section discusses the Project's potential to induce growth both locally and regionally.

Section 7 – Organizations, Persons and Documents Consulted. This section describes and lists the various parties, agencies, documents and other resources used in preparing the subject EIR.

Technical Appendices - These are identified in the Table of Contents.

[3] See Appendix A of this Draft EIR.

1.6.6 Responsible and Cooperating Agencies

Under CEQA, provision is made for state agencies to act as "Responsible Agencies." Per California Public Resources Code Section 21069, a "Responsible Agency" is a public agency, other than the Lead Agency, which has responsibility for carrying out or approving a project. The authority of responsible agencies that may have responsibility for carrying out or approving a project and for complying with CEQA is limited to that part of the project that they will be called upon to carry out or approve (Public Resources Code Sections 21140(c), 21153(c); CEQA Guidelines Sections 15041(b), 15042).

Among others, the California Regional Water Quality Control Board (Colorado River Basin), the Coachella Valley Water District (CVWD), Imperial Irrigation District (IID) among others are or may be CEQA Responsible Agencies and may issue permits and approvals for projects made possible by and analyzed in the subject EIR (CEQA-tiering). These and other responsible agencies, including the US Bureau of Reclamation, may be able to rely on the subject EIR, at least in part, for issuance of encroachment permits or other permitting or regulatory actions.

1.7 Project's Relationship to Other Plans

Regional Plans

The proposed Project is related to or must accommodate other plans developed in the County and Coachella Valley. These include the Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP), the South Coast Air Quality Management District (AQMD) Air Quality Management Plan, and the Coachella Valley PM10 State Implementation Plan.

Local Plans

Local plans taken into consideration include the Riverside County General Plan (2015) and the East Coachella Valley Area Plan (ECVAP), a sub-plan of the General Plan. Also considered is the Jacqueline Cochran Regional Airport Land Use Compatibility Plan prepared by the County Airport Land Use Commission. The intent of the Thermal Ranch Specific Plan is implementation of the goals, policies and programs of the County General Plan and the ECVAP, addressing the types, locations and distributions of various land uses, the availability and adequacy of major infrastructure and services, development standards and processes. In addition, the County General Plan recognizes the appropriateness of these land uses and allows both high-density residential and mixed-use development at higher densities.

1.8 Permits, Approvals, Easements

The County is the CEQA Lead Agency and is empowered with regulating land use and other activities on unincorporated lands within its boundaries. The Project is a private-sponsored proposal that serves to implement the County General Plan and ECVAP, as amended, and facilitates processing and approval of conforming development plans and subdivision maps. The subject EIR is also used by the County and may be used by others to authorize the actions of Responsible Agencies, including the IID, CVWD, Regional Water Quality Control Board and possibly others. Either based entirely on the subject EIR or upon analysis that tiers analysis from the certified EIR, will also serve for the issuance of certain permits and authorizations.

1.9 Project Alternatives

As noted above, in addition to the proposed Project, this Draft EIR analyses alternatives to the proposed Project, including an alternative site and "No Project" alternative. The Project Alternatives and their potential impacts are described in Section 3.0 of this EIR. CEQA Guidelines Section 15126.6 states that an EIR must describe and evaluate a reasonable range of alternatives to a project that would feasibly attain most of the project's basic objectives, but that would avoid or substantially lessen any identified significant adverse environmental effects of the project. The EIR also evaluates the comparative merits of the project. Specifically, Section 15126.6 sets forth criteria for selecting and evaluating alternatives.

Pursuant to CEQA Guidelines Section 15124(b), the Project description includes a statement of objectives. The purpose of the Project objectives is to assist in developing a reasonable range of project alternatives to evaluate in this EIR. These objectives are intended to explain the purpose of the project, and to aid the decision-makers in preparing findings or a statement of overriding considerations, if necessary.

Unmitigable Project Impacts

The proposed Project will have less than significant impacts across most areas of analysis. Impacts that cannot be feasibly mitigated, or that require adoption of findings of consistency or to override impacts, include operational impacts to air quality (NOx, ROG, CO), transportation level of service policy, minimal exceedance of the County's vehicle miles traveled (VMT) threshold, and impacts to important farmlands. For all other areas of analysis, the Draft EIR supports a determination of No Significant Impacts from development and operation of the proposed Project with the implementation of mitigation measures set forth in this EIR. Findings and a statement of overriding consideration for air quality, levels of service, VMT and impacts to farmland would be required to certify the EIR.

RIVERSIDE COUNTY
THERMAL RANCH SPECIFIC PLAN

DRAFT
ENVIRONMENTAL IMPACT REPORT

2. ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

2.1 Introduction

This section of the Thermal Ranch Specific Plan EIR provides an overview of the regional environmental setting in which the Project is located, with particular emphasis on the environmental constraints and resources most likely to be affected by implementation of the proposed Project and provides detailed analysis of the effects the proposed Project will have on the environment. As prescribed by CEQA, the analysis is conducted on a categorical basis. Each discussion includes a description of the thresholds of significance considered in the analysis, the regulatory framework, description of the impacts the proposed Project would have on the environment and identifies the anticipated level of impact. If the impacts are expected to be potentially significant, mitigation measures are provided. Finally, the level of impact after the imposition of these mitigation measures is determined (residual impact), and cumulative impacts are addressed.

2.2 Summary of Environmental Impact Analysis

The following resource topics are assessed for potential impacts associated with the proposed Project:

- Aesthetics in Section 2.3
- Agriculture and Forestry in Section 2.4
- Air Quality in Section 2.5
- Biological Resources in Section 2.6
- Cultural Resources in Section 2.7
- Energy Resources in Section 2.8
- Geology and Soils in Section 2.9
- Greenhouse Gas Emissions in Section 2.10
- Hazards and Hazardous Materials in Section 2.11

- Hydrology and Water Quality in Section 2.12
- Land Use and Planning in Section 2.13
- Mineral and Paleontological Resources in Section 2.14
- Noise in Section 2.15
- Population, Housing and Socio-Economic Resources in Section 2.16
- Public Services in Section 2.17
- Recreational Resources in Section 2.18
- Transportation and Traffic in Section 2.19
- Tribal Cultural Resources in Section 2.20
- Utilities and Service Systems in Section 2.21
- Wildfire in Section 2.22

As analyzed in the Initial Study/Notice of Preparation, the Project will not impact *Mineral Resources* or expose the Project or community to a threat of *Wildfire*. Therefore, these two sections will not be discussed further in the EIR. Individual questions within each of the above subsections for which No Impact was determined in the Initial Study/Notice of Preparation are identified individually in each subsection of Section 2.

Threshold of Significance: This subsection identifies the CEQA thresholds that are applicable to the resource topic and the Project.

Regulatory Framework: This subsection provides a brief discussion of federal, State, and local regulations and policies that are applicable to the resource topic and the Project.

Environmental Setting: This subsection provides an overview of the regional environmental setting in which the proposed Project is located, with particular emphasis on the environmental constraints and resources most likely to be affected by implementation of the Project.

Existing Conditions: This subsection presents a description of the existing physical environmental conditions at and in the immediate vicinity of the Project site with respect to each resource area, at an appropriate level of detail to understand the impact analysis.

Impacts and Mitigation Measures: This subsection evaluates the potential for the Project to affect the physical environment. Significance criteria for evaluation of environmental impacts are defined in the beginning of the impact analysis section, including an explanation of how the significance criteria are used in the evaluation of impacts for the Project. This subsection includes a discussion of the approach to the analysis, including identification of the significance criteria applicable to the Project. Potential impacts are identified and characterized. Where feasible, mitigation measures are identified to avoid or reduce identified significant impacts to a less-than-significant level.

The Impacts and Mitigation Measures subsection in each resource discussion includes an impact statement followed by the evaluation of the impact for the relevant category components, and a conclusion regarding the impact for the Project as a whole. Many of the Specific Plan's objectives, standards and guidelines serve to avoid or minimize impacts associated with the Project's implementation and are described generally and referenced in this discussion. When applicable, mitigation measures are also presented.

> No Impact: This determination is made if a resource is absent or if a resource exists within the project area or area of potential effect, but there is no potential that the project could affect the resource.

Less than Significant: This determination applies if there is a potential for some limited impact on a resource, but the impact is not significant under the significance criterion.

Less than Significant with Mitigation: This determination applies if it is certain that the project would result in an adverse effect that meets the significance criteria, but mitigation is available to reduce the impact to a less than significant level.

Significant and Unavoidable: This determination applies if the project would result in a significant adverse effect in accordance with the significance criteria and there is some mitigation available to lessen the impact, but the residual effect after implementation of the mitigation would remain significant.

Mitigation Monitoring and Reporting Programs (MMRP): Where applicable, MMRPs have been developed to ensure that avoidance, minimization and mitigation measures are implemented, and assigned responsibility and schedules.

Significance after Mitigation: This subsection identifies the level of significance of impacts after avoidance, minimization, and mitigation measures are implemented.

Cumulative Impacts: Cumulative impacts are discussed in each environmental resource section following the description of project-specific impacts and mitigation measures. CEQA requires that an EIR contain an assessment of the cumulative impacts of a project when the project's incremental effect may be cumulatively considerable. As defined in State CEQA Guidelines §15065(a)(3), "cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.

The nature of the Specific Plan Project lends itself to a cumulative impact analysis based on the regional plan approach. Guidance for cumulative impact analysis is provided in State CEQA Guidelines §15130, which states that:

- An EIR shall discuss cumulative impacts of a project when the Project's incremental effect is "cumulatively considerable" (i.e., the incremental effects of an individual project are considerable when viewed in connection with the effects of past, current, and probable future projects, including those outside the control of the agency, if necessary).
- An EIR should not discuss impacts that do not result in part from the Project evaluated in the EIR.
- A Project's contribution is less than cumulatively considerable, and thus not significant, if the Project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact.
- The discussion of impact severity and likelihood of occurrence need not be as detailed as for effects attributable to the Project alone.

The focus of analysis should be on the cumulative impact to which the identified other projects contribute, rather than on attributes of the other projects that do not contribute to the cumulative impact.

2.3 Aesthetics

2.3.1 Introduction

This section evaluates potential impacts of building out the proposed Project on aesthetic, visual, and scenic resources, including potential loss of views, direct impacts to scenic resources, and effects of increased lighting on motorists, residents and commercial and institutional uses, and open space in and near the planning area. Specific Plan and relevant General Plan Policies and standard County requirements are evaluated as to their effect of mitigating or avoiding any potentially significant effects.

2.3.2 Thresholds of Significance

Based on Appendix G of the 2022 State CEQA Guidelines as set forth in the Riverside County Initial Study, impacts related to aesthetics would be significant if the proposed Project would:

Scenic Resources

a) Have a substantial effect upon a scenic highway corridor within which it is located?
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings and unique or landmark features; obstruct any prominent scenic vista or view open to the public; or result in the creation of an aesthetically offensive site open to public view?
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Mt. Palomar Observatory

a) Interfere with the nighttime use of the Mt. Palomar Observatory, as protected through Riverside County Ordinance No. 655?

Other Lighting Issues

a) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?
b) Expose residential property to unacceptable light levels?

2.3.3 Regulatory Framework

Federal

The National Environmental Policy Act of 1969 states that it is the responsibility of the federal government to “ensure all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings … and to attain the widest range of beneficial uses in the environment with degradation, risk to health or safety, or other undesirable and unintended consequences.”[1] The Federal Highway Administration (FHWA) in its implementation of the National Environmental Policy Act (NEPA)[2] dictates that final decisions regarding projects are to be implemented according to the best overall public interest, taking into consideration the adverse environmental impacts, including the destruction or disruption of aesthetic values that would occur as result of a proposed Project. As noted below, there are no federally designated "scenic highways", scenic byways or other aesthetic or cultural resources that would be impacted by the proposed Project.

1 National Environmental Policy Act of 1969 (Section 101 42 USC Section 4331 [b] [2])
2 Ibid. (USC Section 109 [h])

State

California Scenic Highway Program

Established in 1963 through Senate Bill 1467 (SB 1467), the Scenic Highway Program added Section 260 through 263 to the California Streets and Highways Code. These sections required local government agencies to take the following actions to protect the appearance and values of a scenic corridor:

- Regulate land use and density of development;
- Provide detailed land and site planning;
- Prohibit off-site outdoor advertising and control on-site outdoor advertising;
- Control earthmoving and landscaping; and
- Scrutinize the design and appearance of structures and equipment.

As will be further discussed below, there are no state-designated scenic corridors that would be impacted by the proposed Project.

Regional/Local

Riverside County General Plan

The Riverside County General Plan (2021) includes the following policies pertaining to visual resources that are relevant to the proposed Project:

Chapter 3 – Land Use Element

LU 3.3 Promote the development and preservation of unique communities in which each community exhibits a special sense of place and quality of design.

LU 4.1 Require that new developments be located and designed to visually enhance, not degrade the character of the surrounding are through consideration of the following contexts:
a) Compliance with the design standards of the appropriate area plan land use category
b) Require that structures be constructed in accordance with the requirements of Riverside County's zoning, building, and other pertinent codes and regulations.
g) Encourage innovative and creative design concepts.
k) Locate site entries and storage bays to minimize conflicts with adjacent residential neighborhoods.
l) Mitigate noise, odor, lighting, and other impacts on surrounding properties.

LU 7.3 – Consider the positive characteristics and unique features of the project site and surrounding community during the design and development process.

LU 7.4 Retain and enhance the integrity of existing residential, employment, agricultural, and open space areas by protecting them from encroachment of land uses that would result in impacts from noise, noxious fumes, glare, shadowing, and traffic.

LU 7.5 Require buffering to the extent possible between urban uses and adjacent rural/equestrian oriented land uses.

LU 14.1 Scenic Corridors: Preserve and protect outstanding scenic vistas and visual features for the enjoyment of the traveling public.

Chapter 5 – Multipurpose Open Space Element

OS 21.1 Identify and conserve the skylines, view corridors, and outstanding scenic vistas within Riverside County.

Eastern Coachella Valley General Plan

ECVAP 4.1 Require the inclusion of outdoor lighting features that would minimize the effects on the nighttime sky and wildlife habitat areas.

ECVAP 4.2 Adhere to Riverside County's lighting requirements for standards that are intended to limit light leakage and spillage that may interfere with the operations of the Palomar Observatory.

ECVAP 15.1 Protect the scenic highways in the Eastern Coachella Valley from change that would diminish the aesthetic value of adjacent properties in accordance with the Scenic Corridors section of the General Plan Land Use, Multipurpose Open Space, and Circulation Elements.

Riverside County Ordinances

Ordinance No. 348 – Land Use Ordinance
This ordinance established allowable uses of land and sets standards for how allowable uses are developed.

Ordinance No. 457 – Building Codes and Fees Ordinance
The purpose of this ordinance is to adopt the (most recent) California Building Standards Code, California Code of Regulations, Title 24, to establish the minimum requirements for buildings standards of buildings, structures, and improvements, which are necessary to protect the public health, safety and general welfare.

Ordinance No. 655 – Regulating Light Pollution
The intent of this ordinance is to restrict the permitted use of certain light fixtures emitting into the night sky undesirable light rays which have a detrimental effect on astronomical observation and research.

Ordinance 915 – Regulating Outdoor Lighting
The purpose of this Ordinance is to provide minimum requires for outdoor lighting in order to reduce light trespass, and to protect the health, property, and well-being of residents in the unincorporated areas of the County.

2.3.4 Environmental Setting

The Coachella Valley and the proposed Project area are distinguished by the low-lying desert valley floor surrounded by the high terrain of the San Jacinto, San Bernardino, Little San Bernardino, and Santa Rosa Mountains. These contrasting viewsheds result in an exceptional display of open space and mountain scenery that is a major component of the aesthetic quality of the area. The mountainous areas that ring the Coachella Valley are comprised of a variety of rock formations including darkly varnished rock that contrasts with large expanses of light gray granite, and a diversity of vegetation. Views of the mountain ranges and the expansive desert floor that are visible within the project planning area are highly valued.

The two highest peaks associated with the region are San Jacinto Peak in the San Jacinto Mountains located to the northwest and rising to an elevation of 10,804 feet, and San Gorgonio Peak in the San Bernardino Mountains with an elevation of 11,502 feet. The rise of Mt. San Jacinto, from the desert floor to the peak, is the steepest gradient in North America. The Santa Rosa Mountains are located 2.25± miles west and southwest of the planning area, with highest peaks being Toro Peak at 8,717 and Santa Rosa Peak at about 8,000 feet.

To the north and northeast of the subject property are the Indio Hills and Mecca Hills, with elevations rising to about 1,600 feet, with the Little San Bernardino Mountains bounding the valley to the northeast. The lowest portions of the project area are also a result of tectonic forces associated with the San Andreas Fault Zone. The Coachella Valley is the northwestern extension of a fault-controlled spreading zone, which extends from the Gulf of California. The spreading and subsidence has created a terminal lake, the Salton Sea, which has no outlet and currently stands at a surface elevation of 228± feet below mean sea level. The proposed Project is surrounded by natural vistas including the surrounding mountains and the expanse of cultivated fields and native desert lands.

2.3.5 Existing Conditions

The subject site has been in active agriculture use since at least the 1950s and continuing to the present. The middle of the north half of the site is partially occupied by agricultural sheds and a shop, water tank and well near the center of the site, and irrigation standpipes. A series of high-voltage power pools run east-west along the south boundary of the subject property within an Imperial Irrigation District (IID) easement. The balance of the site is in cultivation of produce crops and is therefore seasonally fallow part of the year.

The proposed Project is situated on a primarily flat rural agricultural area of the eastern Coachella Valley. The Project area provides significant views of the Santa Rosa Mountains to the west and southwest, the San Jacinto Mountains to the northwest, and the Mecca Hills and Little San Bernadino Mountains to the north and northeast. These features provide scenic vistas for much of the eastern Valley. There are no significant scenic resources, such as trees, rock outcroppings and unique or landmark features on the Project site or immediate vicinity.

The Project will provide a 5-million-gallon storage reservoir at the existing CVWD Middleton Reservoir 7802-1 site located 2.4± miles southwest of the Project site (see Exhibit 1-11). The existing site currently hosts a CVWD 2.5 million tank and is planned for multiple tanks. It occurs at an elevation of 61± feet above sea level. The Middleton Reservoir 7802-1 site is surrounded by an earthen berm that serves to visually buffer the existing reservoir at this site.

Mt. Palomar Observatory

Mt. Palomar Observatory is a major scientific resource located in San Diego County approximately 5.5 miles south of the Riverside County border and approximately 45 miles southwest of the Project site. In general, astronomic observatories need to be sites at least 30 to 40 miles away from large, brightly lit areas, such as cities and other urban concentrations to ensure adequate dark skies for observing. To minimize nighttime light pollution within the region surrounding the observatory, the County of Riverside enforces Ordinance No. 655 (Regulating Light Pollution). This ordinance established two zones for specific lighting controls based on distance from the Observatory: Zone A encompasses a sphere with a 15-mile radius; Zone B encompasses a 45-mile radius from the Observatory. The intent of the ordinance is to restrict urban lighting that could interfere with operations at the observation.

Lighting

As noted above, the Project planning area is predominantly rural but with increasingly urban uses in the vicinity, including the Thermal Club development to the northeast and the night-lite sports stadium of the Desert Mirage High School which is located 0.50 southeast of the Project site.

Resource Concepts and Terminology

The following section describes the terms used in this aesthetics evaluation. Aesthetics resources are typically defined as both the natural and built environments of the surrounding landscapes that influence the public's enjoyment and appreciation of the environment. A visual or aesthetic impact may occur depending on the extent to which a project's presence would alter the visual character of the area in which it is located.

Visual Character
Visual character includes attributes such as form, line, color, and texture, and is used to describe, not evaluate; that is, these attributes are neither considered good nor bad. However, a change in visual character can be evaluated when it is compared with the viewer response to that change. Changes in visual character can be identified by how visually compatible a proposed project would be with the existing condition by using visual character attributes as an indicator. The following attributes were considered:

Dominance is position, size, or contrast;
Scale is apparent size as it related to the surroundings;
Form is visual mass or shape;
Color is reflective brightness (light, dark) and hue (red, green); and
Continuity is uninterrupted flow of form, line, color, or textural pattern.

Visual Quality
Visual quality is evaluated by identifying the vividness, intactness, and unity present in the project corridor. Public attitudes validate the assessed level of quality and predict how changes to the project corridor can affect these attitudes. This process helps identify specific methods for addressing each impact that may occur as a result of the project. The three evaluation criteria for visual quality are:

Vividness is the extent to which the landscape is memorable and is associated with distinctive, contrasting, and diverse visual elements.
Intactness is the integrity of visual features in the landscape and the extent to which the existing landscape is free from non-typical visual intrusions.
Unity is the extent to which all visual elements combine to form a coherent, harmonious visual pattern.

Affected Viewers
Travelers and project neighbors are people who have views *to* the Project site. For this project, the project neighbors include roadway travelers especially those on surrounding major roadways. Local residents with existing views of the channel will also be affected viewers, as will those who work at adjoining agricultural lands and businesses; this group of prospective viewers is currently very limited.

Visual Sensitivity
Visual sensitivity is a measure of the viewer's recognition of a particular object. It has three attributes: activity, awareness, and local values. Activity relates to the preoccupation of viewers – are they preoccupied, thinking of something else, or are they truly engaged in observing their surroundings. The more they are actually observing their surroundings the greater the sensitivity the viewer will have of changes to visual resources. Awareness relates to the focus of the view – the focus is wide, and the view is general, or the focus is narrow and the view specific. The more specific the awareness, the more sensitive a viewer is to change.

Existing Visual Environment
The subject property is flat with a gentle gradient to the south and southeast. The entire site has been in active cultivation for several decades. Views across the site are essentially unobstructed, with the five hayshed and shop buildings being located in the center of the property and one-quarter to one-half mile from the nearest public roads. Twenty IID high-voltage power poles 60+ feet in height run east-west along the south boundary of the subject property. A comparable row of high voltage power poles runs north-south along the west side of Harrison Street, which bounds the Project site on the west.

Surrounding lands are also essentially flat with no noticeable topographic relief. Lands to the east include equestrian uses and related structures, including residences, barns and other outbuildings, and corrals and meadows. Most of these easterly lands and the section to the south and southeast of the subject property are part of the Kohl Ranch Specific Plan.

Portions of the Kohl Ranch project are partially developed and located immediately northeast of the Project site and include the *Thermal Club*, an auto racing and partially built out residential resort. Immediately southeast of the project site are Kohl Ranch lands that have been graded and a lake installed; however, it appears that this development has been abandoned and there are no homes or other improvements on these lands. Most of the lands north of the project site are also a part of the Kohl Ranch project but are currently in agriculture and related uses.

Surrounding viewsheds are comprised largely of the foothills and elevated terrain of the Santa Rosa Mountains that are clearly visible to the northwest, west and southwest. The area also has distant views to the northwest of Mt. San Jacinto and the San Bernardino Mountains beyond. The Little San Bernardino mountains to the north and northeast lie low on the horizon.

The CVWD Middleton Reservoir 7802-1 site located 2.4± miles southwest of the Project site that currently hosts a CVWD 2.5 million tank and occurs at an elevation of 61-± feet above sea level. The reservoir site is surrounded by an earthen berm that will be shifted approximately 35 feet north of its current location to accommodate the new reservoir. As with the existing reservoir site design, the shifted berm will serve to visually buffer the existing and future reservoir at this site. Nearby development includes the Ladera golf club to the immediate south, extensive agriculture and the Santa Rosa Mountains foothills 0.60± miles to the west, providing a steep and dominant backdrop to the area viewshed. The nearest major public roadway, Harrison Street, is located 1.3± miles to the northeast at an elevation 135± feet below (downslope of) the reservoir site.

2.3.6 Project Impacts

The following discussion analyzes the proposed Project's impacts on scenic resources, scenic vistas, and the overall visual quality and character of the surrounding areas. The visual setting is characterized by the natural, agricultural and built landscape features that may be viewed from publicly accessible vantage points. For analysis purposes, scenic resources are categorized as the built or natural environment that contributes to a scenic public setting. This includes but is not limited to trees and rock outcroppings. Scenic vistas are considered any publicly accessible viewpoints that provide expansive views of a highly valued landscape view. Impacts are assessed based on the Project's potential to have a substantial adverse effect on scenic vistas, substantially damage scenic resources, or substantially degrade the existing visual character or overall quality of the site and its surroundings, including through the potential creation of light and glare and adversely impacting the night sky, including astronomical instruments located at the Mt. Palomar Observatory located to the west.

Scenic Resources

a) *Have a substantial effect upon a scenic highway corridor within which it is located?*

There are no officially designated or eligible state scenic highways in the Project area or the CVWD Middleton Reservoir site, nor any locally designated scenic corridors (ECVAP Figure 10). The nearest scenic or eligible scenic highway is Highway 111, which is a State-eligible Scenic Highway between Bombay Beach on the Salton Sea and State Avenue 66 near Mecca and approximately 3.50 miles southeast of the Project and reservoir sites. Intervening development includes agricultural lands, mobile homes parks and scattered residences, the Coachella Valley Stormwater Channel, Coachella Valley Water District Water Reclamation Plant (CVWD WRP 4), the Thermal Club resort development and vacant lands. US Interstate-10 located 7.50± miles to the northeast is designated a County Eligible scenic highway. Therefore, the proposed Project will not have a significant adverse effect on any eligible county or state-designated highway.

b) ***Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings and unique or landmark features; obstruct any prominent scenic vista or view open to the public; or result in the creation of an aesthetically offensive site open to public view?***

As noted in the above background discussion, there are no scenic resources or unique landmarks or features on the subject property, the entirety of which is in active cultivation. The aforementioned on-site agricultural buildings do not constitute a visual (or architectural) resource. Dominant visual elements on or close to the Project site include the IID high voltage power poles and lines located along the south boundary of the site and along the west side of Harrison Street. Prominent vista and viewsheds are generally to the south, west and northeast, as shown on the photos below. The Project will not have any significant adverse effects on scenic resources.

Construction of the Project reservoir at CVWD Middleton Reservoir 7802-1 site will occur on the already developed and screened site. The Project will construct a 5 mg reservoir north of the existing 2.5 mg reservoir, and shift the existing berm approximately 35± feet to the north to continue to screen the site from downslope views. No existing scenic resources will be damaged, nor will there be any significant impact to existing prominent public scenic vistas or views.

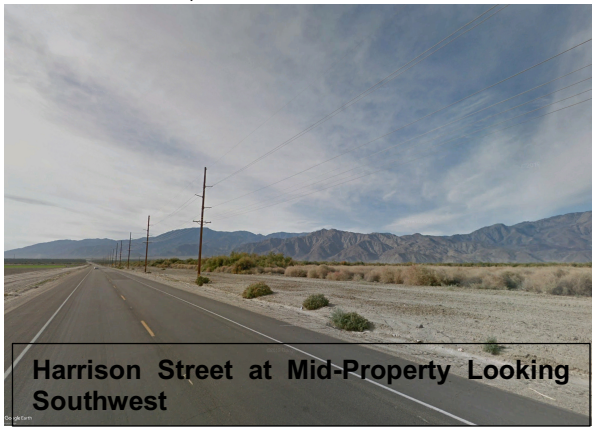
c) ***In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?***

The distance between the subject property and the foothills and mountains to the southwest through northwest viewsheds places these features relatively low on the viewers' horizon. Therefore, these views would be most affected as seen from Tyler Street and Avenue 62, with little or no effect for views seen from Harrison Street. The result is that development along major roadways bounding the site will somewhat obscure views from Tyler Street and Avenue 62.

Tyler Street Frontage

However, there are elements of the proposed Project that by design will serve to minimize the effects of development on the subject site on views. Development planned along Tyler Street would be comprised of large single-family lots on the north (PA-2) with lots oriented north-south. PA-2 setbacks along Tyler

Street will include 20-foot parkways, a six-foot decorative block wall, an additional 32-foot interior landscape stripe and a 50±-foot stormwater retention basin. Overall distance from curb to residential lots along Tyler Street in PA-2 will be 102± feet. This setback does not include side yard setbacks. Maximum building height in PA-2 would be 35 feet.


Harrison Street at Mid-Property Looking Southwest

To the south, lot lines for planned attached and detached single family homes (PA-3) would also begin 57± feet west of the future Tyler Street curb. For both subdivisions, side and rear yard setback would add to the overall setback of future structures from Tyler Street. Maximum building height in PA-3 would be 40 feet. With the addition of front yard setbacks, structures in PA-3 will be well set back from Tyler Street approximately 77 feet and are expected to have a less than significant impact on scenic resources.

The Project's Tyler Street frontage near Ave 64 would consist of a CVWD well site and a future IID substation site. The IID substation has not yet been designed but is planned adjacent to existing IID overhead high-voltage transmission lines and will be set back from the east and south Project property lines. The height of stanchions and other elevated substation equipment could exceed 25 feet and security lighting will be an integral part of this facility. Adequate room for a decorative block wall and landscaping are planned along the Tyler Street frontage of this facility.

Typical IID Substation

CVWD facilities will also be surrounded by a six-foot decorative block wall and landscaping. CVWD well structures typically do not exceed 12 feet in height. Therefore, viewshed impacts associated with the future CVWD well and IID substation are expected to be less than significant.

Typical CVWD Well Site

Avenue 62 Frontage

Project frontage along Avenue 62 (PA-2) would be comprised of large single-family lots that would be buffered from the street by a 25-foot parkway, a six-foot decorative block wall, an additional 25 feet of combined interior landscape and 52-foot stormwater retention basins, as well as a 32-foot interior street. The overall distance between the relocated curb on Avenue 62 and the nearest residential lot line will be 134± feet. With the addition of front yard setbacks, structures in PA-2 will be well set back from the Avenue 62 viewshed and are expected to have a less than significant impact on scenic resources.

Ave 62 at Mid-Property Looking West

Harrison Street Frontage

Viewsheds along Harrison Street can be characterized as rural agriculture with areas of fallow lands that have been revegetated with volunteer native and invasive non-native vegetation.

The Project Specific Plan calls for substantial building setbacks along Harrison Street, including on the north where the large lot residential subdivision of PA-2 provide the same mix of enhanced parkways, decorative block walls and lot setbacks behind open space trails providing a 102± feet separation between the future curb and residential lots.

In the central and southern portion of Project frontage along Harrison Street (PA-5 & 6) a mix of retail commercial, resort hotel and condominiums are planned. Building setbacks along this portion of the development will be a minimum of 75 feet behind the future curb of fully improved Harrison Street.

Harrison Street at Mid-Property Looking North/Northeast

Buildings would range in height from one to four-story with a maximum height of 50 feet in PA-6 and 65 feet in PA-5. Primary viewsheds are to the southwest, west and northwest. For northbound travelers, distant viewsheds are comprised the low-lying Little San Bernardino Mountains more than 10 miles to the north. The Mecca Hills are low on the horizon and approximately 7.25 miles to the northeast.

Perimeter Landscape Concept

Project landscaping, including that along street rights-of-way, will be comprised of a desert plant palette with native and non-invasive non-native, drought tolerant vegetation. The palette should complement native vegetation in the area and further enhance the Project's integration with the surrounding landscape.

As noted above and elsewhere in this EIR, the Project site is in active cultivation as is much of the surrounding land. Over the past three decades, an urbanizing pattern of land uses has been encroaching into the area and most notably includes existing and future development associated with the approved Kohl Ranch Specific Plan to the east, northeast and north. While the area may still be characterized as "rural" it is slowly urbanizing as is evidenced by major street widening, construction of block walls and berms around new development, and ongoing land conversion.

The existing visual character of the subject property, which is comprised of laser-graded farmland growing truck crops and other seasonal crops, is extremely limited. It is noted by either disced dry soils, verdant green crops or fallow fields depending on the time of year. The existing outbuildings are located in the center of the property, one-quarter to one-half mile from the nearest public roads and are visually nondescript.

Based on the Project setting and its anticipated effects on surrounding scenic resources, the Project is expected to have a less than significant impact on scenic resources and will not result in the creation of an aesthetically offensive site that would be open to public view. Neither will the Project conflict with applicable zoning and other regulations governing scenic quality. Specific Plan design standards and guidelines will ensure that potential impacts are less than significant.

CVWD Middleton Reservoir 7802-1 Site

The CVWD Middleton Reservoir 7802-1 site is located 2.4± miles southwest of the Project site that currently hosts a CVWD 2.5 million tank and occurs at an elevation of 61± feet above sea level. The reservoir site is surrounded by an earthen berm that will be shifted approximately 35 feet north of its current location to accommodate the new reservoir. As with the existing reservoir site design, the shifted berm will serve to visually buffer the existing and future reservoir at this site. Nearby development includes the Ladera golf club to the immediate south, extensive agriculture and the Santa Rosa Mountains foothills 0.60± miles to the west, providing a steep and dominant backdrop to the area viewshed. The nearest major public roadway, Harrison Street, is located 1.3± miles to the northeast at an elevation 135± feet below (downslope of) the reservoir site.

The new reservoir will have no or very limited impacts on the surrounding scenic resources, which are dominated by the foothills and mountains to the west and southwest, as well as the Martinez Canyon alluvial cone which extends upslope behind the reservoir site. The future reservoir will therefore not degrade the visual character of the area and impacts will be less than significant.

Mt. Palomar Observatory

2. a) Interfere with the nighttime use of the Mt. Palomar Observatory, as protected through Riverside County Ordinance No. 655?

Mt. Palomar Observatory is a major scientific resource located in San Diego County approximately 5.5 miles south of the Riverside County border and 45± miles southwest of the Project site. In general, astronomic observatories need to be sited at least 30 to 40 miles away from large, brightly lit areas, such as cities and other urban concentrations to ensure adequate dark skies for observing. To minimize nighttime light pollution within the region surrounding the observatory, the County of Riverside enforces Ordinance No. 655 (Regulating Light Pollution). This ordinance establishes two zones for specific lighting controls based on distance from the Observatory: Zone A encompasses a sphere with a 15-mile radius; Zone B encompasses a 45-mile radius from the Observatory. The intent of the ordinance is to restrict urban lighting that could interfere with operations at the observatory.

The Project site is located at the edge of Zone B and approximately 43± miles northeast of the observatory. Intervening terrain includes the Santa Rosa Mountains ranging up to 8,600 feet in elevation. Issues of Project lighting and potential impacts to the night sky are of primary concern. Project design guidelines indicate that the Project will conform to the County Lighting Ordinances.

The proposed Project will include a variety of lighting, ranging from low-voltage landscape lighting to arena lighting up to 65 feet in height associated with the equestrian center. In addition to street lighting along the major arterials bounding the Project site, lighting within the Project will include parking lot illumination, architectural lighting, a variety of security lighting, including that associated with the future IID substation and CVWD wells. Overall lighting levels are expected to fall within and comply with County standards and regulations, including Ordinance No. 655, and will be sensitive to the many residential uses throughout the proposed Project. Therefore, Project lighting impacts to the Mt. Palomar Observatory will be less than significant.

CVWD Middleton Reservoir 7802-1 Site

The CVWD Middleton Reservoir 7802-1 site currently hosts a CVWD 2.5 million tank and occurs at an elevation of 61± feet above sea level. The reservoir site is surrounded by an earthen berm that will be shifted approximately 35 feet north of its current location to accommodate the new reservoir. The Santa

Rosa Mountains foothills and mountains begin 0.60± miles to the west, providing a steep terrain between the site and Palomar Observatory to the west. Additional security light may be incorporated in the design but will be shielded to preclude uplighting or the creation of significant light spillage. Impacts to Palomar Observatory are expected to be less than significant.

Other Lighting Issues

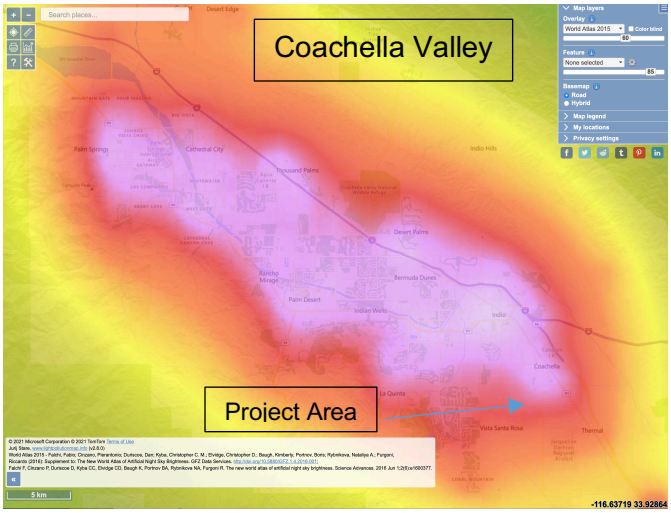
a) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

b) Expose residential property to unacceptable light levels?

Light and glare impacts are associated with increased urbanization and without proper regulation will continue to increase with the buildout of the Project planning area. Within the planning area, the majority of lands are undeveloped, and daytime and nighttime skies are only modestly affected by light and glare, as evidenced on the following 2015 satellite data image of light pollution levels. The proposed Project may induce additional urban development and associated light impacts.

Dark skies will diminish with more traffic, buildings, streetlights and indoor illumination. The Specific Plan provides regulations and guidance for reducing light and glare caused by new development. The Project promotes low lighting levels at all levels of outdoor application, including equestrian arenas in the center of the site where fixtures will provide shielded, focus lighting on the performance spaces, which will protect on-site and off-site properties and the JCR Airport.

Within the Thermal Ranch community, implementation of Specific Plan lighting guidelines and standards, and conformance with the County Lighting Ordinance will ensure that Project residences will not be exposed to unacceptable lighting levels. It should also be noted that the Project site is bounded by existing and planned arterial-scale roadways with rights-of-way of up to 220 feet. These Project bounding roadways will further ensure that Project lighting does not expose off-site residences to unacceptable lighting from the Project. Therefore, impacts will be less than significant.



In summary, the proposed Specific Plan introduces standards, regulations and guidelines to protect against excessive lighting, and maintains practices currently in effect that limit lighting. The Specific Plan and the County Zoning Ordinance prohibit light spillage onto neighboring properties or the street. Therefore, implementation of the Specific Plan will have a less than significant impact on light and glare impacts within the Project area.

<u>CVWD Middleton Reservoir 7802-1 Site</u>
The construction of the future reservoir will occur within the existing developed Middleton site, behind the existing earthen berm. New security lighting at the Middleton reservoir site will be shielded to preclude uplighting or the creation of significant light spillage. The new reservoir and related security lighting will not result in a new source of substantial light or glare and is not expected to impact day or nighttime views in the area. Impacts will be less than significant.

2.3.7 Mitigation Measures

The Thermal Ranch Specific Plan will facilitate continued urbanization in the Project planning area, where aesthetic resources have been impacted by surrounding urban development, including Kohl Ranch and the Thermal Club. The Specific Plan provides goals, objectives, standards and guidelines to reduce aesthetic impacts associated with Project development and operation. The Specific Plan and County Zoning Ordinance ensure project-specific design review that will control design aesthetics, massing and scale of Project development. Therefore, the proposed Specific Plan serves to avoid or minimize the potential adverse effects of continuing urbanization on the planning area's visual and other aesthetic resources. Impacts to aesthetic resources are expected to be less than significant, and no mitigation measures are required. Nonetheless, the following project design features derived from the proposed Specific Plan and its conditions of approval will further assure that impacts related to aesthetics are less than significant.

AES-1 Landscaping plans and materials along rights-of-way and other development site perimeters shall serve to create a harmonious transition between individual development sites and the surrounding environment. Visual order in landscape designs and materials shall be used to establish or enhance visual order to streetscapes, parking areas, building perimeters and open space areas.

AES-2 Free-standing walls and fences, where contemplated, shall be constructed as so as to minimize impacts to scenic vistas to the greatest extent practicable, and to define and delineate surrounding areas. Individual project landscaping should frame views, obscure or soften hard edges and enhance security.

AES-3 All outdoor lighting shall be in compliance with Riverside County Lighting Ordinances 655 and 915, and applicable Specific Plan guidelines. Other lighting requirements include the following:

a. Outdoor lighting shall be limited to the minimum height, number and intensity of fixtures needed to provide security and identification, taking every reasonable effort to preserve the community's night skies.

b. Lighting fixtures shall be of appropriate scale, style and character of the architecture. No lighting which incorporates flashing, pulsing or is otherwise animated shall be permitted.

c. The intensity of light at the boundary of a development site shall not exceed seventy-five (75) foot lamberts from a source of reflected light.

d. All lighting shall be directed onto the individual development site and away from adjacent properties and public streets, provide appropriate shielding and minimal fixture height to ensure minimum impact on adjoining lands and streets.

e. Elevated lighting, including but not limited to arena and parking lot lighting, shall be full cut-off fixtures. Drop or sag lens fixtures shall not be permitted.

AES-4 Landscape lighting shall be shielded to direct and limit areas of illumination to the individual development site. No up-lighting that spills into the night sky shall be used. Landscape lighting plans and details shall be included with the final landscape plans for each planning area.

AES-5 Exterior building and other security lighting for individual developments shall be integral to the building architecture and/or landscape plan, shall avoid excessive lighting levels and direct and shield illumination to protect adjoining properties and night skies.

AES-6 Where practicable, on-site electrical power lines shall be installed underground. Transformers and other power conditioning equipment shall be pad-mounted or placed in underground vaults, as determined appropriate by the County and Imperial Irrigation District (IID).

AES-7 Lighting at the IID substation and all CVWD well sites shall be fully shielded from adjoining properties or streets, and the minimum intensity needed to provide security and meet the functional needs of these facilities.

2.3.8 Significance After Mitigation

As noted in Sections 2.3.6 and 2.3.7, the Project includes a wide range of design and development standards and guidelines and is not expected to have a significant adverse impact on area aesthetic resources. In addition, the aforementioned project design features and County Ordinance control and further ensure that impacts will be less than significant.

2.3.9 Cumulative Impacts

Cumulative impacts are those resulting from past, present, and reasonably foreseeable future actions. The Thermal Ranch Specific Plan provides design regulation and guidance for future development in the Project planning area, and augments additional regulations provided by County lighting ordinances. To protect against aesthetic resources being degraded by potential future development, the Specific Plan recognizes the importance of and vested interest in preserving and enhancing the planning area's aesthetic resources. Therefore, any such impacts resulting from the implementation of the Thermal Ranch Specific Plan will not make a considerable cumulative contribution to regional impacts to these resources.

2.4 Agriculture and Forestry Resources

2.4.1 Introduction

This section addresses the potential environmental impacts of the proposed Project related to agriculture and forest resources. A background discussion of agricultural and soils classification systems and programs is provided and existing agriculture in the Project area and surrounding area are characterized. The impact analysis focuses on potential direct and indirect conversion of agriculture and forest resources as well as potential conflicts with existing zoning for agricultural and forestry uses.

Information used in the preparation of this section was obtained from sources including the California Department of Conservation (CDC), the US Department of Agriculture Natural Resources Conservation Services, and the Riverside County General Plan. This section uses the LESA Model[1], created by the California Department of Conservation, as an analytical tools to assess the proposed Project's potential impacts on agricultural conversion (see Appendix A: LESA Model Outputs).

2.4.2 Thresholds of Significance

According to the Riverside County CEQA Guidelines, based on Appendix G of the 2018 State CEQA Guidelines, impacts related to agriculture and forestry would be significant if the Proposed Project would:

1. **Agriculture**
   a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?
   b) Conflict with existing agricultural zoning, agricultural use or with land subject to a Williamson Act contract or land within a Riverside County Agricultural Preserve?
   c) Cause development of non-agricultural uses within 300 feet of agriculturally zoned property (Ordinance No. 625 "Right-to-Farm")?
   d) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?

2. **Forest**
   a) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Govt. Code section 51104(g))?
   b) Result in the loss of forest land or conversion of forest land to non-forest use?
   c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of forest land to non-forest use?

The Initial Study determined that the Project would result in "No Impact' for Forestry Resources threshold questions a-c) above. Therefore, forestry is not analyzed further in this EIR.

[1] California Agricultural Land Evaluation and Site Assessment Model (LESA), Department of Conservation.

2.4.3 Regulatory Framework

Federal

Farmland Protection Policy Act

The Farmland Protection Policy Act (FPPA) requires an evaluation of the relative value of farmland that could be affected by decisions sponsored in whole or part by the federal government. The Natural Resources Conservation Service (NRCS), a federal agency within the U.S. Department of Agriculture (USDA), is the agency primarily responsible for implementation of the FPPA. The Act is intended to minimize the impact federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses. It assures that, to the extent possible, federal programs are administered to be compatible with State, local units of government, and private programs and policies to protect farmland.

"Important Farmland" includes prime farmland, unique farmland, and farmland of statewide or local importance, as defined by Section 1540(c)(1) of the FPPA. Classification standards differ from state to state; each state may set its own criteria for classification in each category. Farmland subject to FPPA requirements can be forestland, pastureland, cropland, or other land, but not water or urban built-up land. As discussed below, the proposed Project has the potential to impact important farmlands.

State

California Land Conservation Act

The California Land Conservation Act of 1965, commonly referred to as the Williamson Act, is the State's primary program aimed at conserving private land for agricultural and open space use by applying an "agricultural preserve" designation. It is a voluntary, locally administered program that offers reduced property taxes on lands whose owners place enforceable restrictions through contracts between the individual landowners and local governments. Applications for agricultural preserve status require a minimum of 100 acres of contiguous agricultural land. Once an agricultural preserve is established, the land is restricted to agricultural and compatible uses for the duration of the 10-year contract. None of the parcels on the Project site or in its immediate vicinity are under Williamson Act contracts.

State Farmland Designations

The California Department of Conservation, Division of Land Resource Protection, runs the Farmland Mapping and Monitoring Program (FMMP) to provide data on the state's agricultural resources. Important farmlands are classified based on criteria including soil type, moisture content, water supply, soil temperature, acidity, salinity, depth, drainage, water table, flooding, slope, erodibility, growing seasons, crop type and value, as well as other economic factors. The FMMP incorporates soil data issued by the US Department of Agricultural Natural Resource Conservation Service. The Department of Conservation FMMP defines the important farmland categories as follows:[2]

Prime Farmland: Farmland with the best combination of physical and chemical features able to sustain long term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.

[2] California Department of Conservation, Important Farmland Categories, https://www.conservation.ca.gov/dlrp/fmmp/Pages/Important-Farmland-Categories.aspx (accessed May 2023).

Statewide Important Farmlands: Farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.

Unique Farmlands: Farmland of lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the four years prior to the mapping date.

Farmland of Local Importance: Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.

The Riverside County General Plan (2015) defines Farmland of Local Importance as farmlands that are of locally significant economic importance, which are not covered by the above categories, and which include the following:[3]

- Lands with soils that would be classified as Prime or Statewide Important Farmlands but lack available irrigation water.
- Lands planted in 1980 or 1981 in dry land grain crops such as barley, oats, and wheat.
- Lands producing major crops for Riverside County but that are not listed as Unique Farmland crops. Such crops are permanent pasture (irrigated), summer squash, okra, eggplant, radishes, and watermelon.
- Dairylands including corrals, pasture, milking facilities, hay and manure storage areas if accompanied with permanent pasture or hayland of 10 acres or more.
- Lands identified by Riverside County with Agriculture land use designations or contracts.
- Lands planted with jojoba that are under cultivation and are of producing age.

Right to Farm Act

The stated purpose of the Right to Farm Act is to “conserve, protect and encourage the development, improvement and continued viability of agricultural land and industries for the long-term production of food and other agricultural products, and for the economic well-being of the county’s residents.” It seeks to “balance the rights of farmers to produce food and other agricultural products with the rights of non-farmers who own, occupy or use land within or adjacent to agricultural areas.” The Right to Farm Act is enacted in Riverside County by Ordinance 625.1.

Regional/Local

Riverside County General Plan / Eastern Coachella Valley Area Plan

The proposed Project is located within the Riverside County Eastern Coachella Valley Area Plan (ECVAP), which is a sub-area of the Riverside County General Plan (Riverside County 2015). The General Plan establishes policies to guide development and conservation within the entire unincorporated County territory, while the Area Plan details standards and policy direction specifically for the eastern Coachella Valley. The General Plan provides policies that are intended to preserve areas where agricultural uses are the long-term desirable use, and to minimize conflicts between agricultural and urban/suburban uses:

[3] County of Riverside General Plan (2015) Multipurpose Open Space Element, p.OS-19.

LU 20.1 Encourage retaining agriculturally designated lands where agricultural activity can be sustained at an operational scale, where it accommodates lifestyle choice, and in locations where impacts to and from potentially incompatible uses, such as residential uses, are minimized, through incentives such as tax credits.

LU 20.4 Encourage conservation of productive agricultural lands. Preserve prime agricultural lands for high-value crop production.

LU 20.5 Continue to participate in the California Land Conservation Act (the Williamson Act) of 1965.

LU 20.6 Require consideration of state agricultural land classification specifications when a 2.5-year Agriculture Foundation amendment to the General Plan is reviewed that would result in a shift from an agricultural to a non-agricultural use.

LU 20.7 Adhere to Riverside County's Right-to-Farm Ordinance.

OS 7.2 In cooperation with individual farmers, farming organizations, and farmland conservation organizations, the County of Riverside shall employ a variety of agricultural land conservation programs to improve the viability of farms and ranches and thereby ensure the long-term conservation of viable agricultural operations within Riverside County.

The ECVAP recognizes the importance of preserving the Coachella Valley's agricultural resources for their economic, cultural and scenic values. The plan contains the following policies relevant to agriculture preservation:

ECVAP 5.1 Retain and protect agricultural lands through adherence to the policies contained in the Agriculture section of the General Plan Land Use Element.

ECVAP 8.2 Discourage industrial uses that may conflict with agricultural or residential land uses either directly or indirectly within the Eastern Coachella Valley Area Plan.

Riverside County Land Use Ordinance

The Riverside County Land Use Ordinance (Ordinance 348.4802) provides for land use planning and zoning regulations and related functions of Riverside County. The Land Use Ordinance establishes zoning districts, standards, and regulations to guide development within the County. Most of the Project site is zoned for Heavy Agriculture, while the western quarter of the property, adjacent to Harrison Street, is zoned as a Controlled Development Area (W-2).

SCAG Regional Transportation Plan / Sustainable Communities Strategy

The 2020-2045 Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS), prepared by the Southern California Association of Governments (SCAG), is a long-range plan for achieving connected transportation projects and investments across a six-county region. One of the goals of the RTP/SCS is to "promote conservation of natural and agricultural lands and restoration of habitats." The Plan includes a Natural and Farm Land Conservation technical report, which outlines SCAG approach to conservation planning, including through the implementation of policies to protect threatened natural and farm lands, while accounting for the needs of current and future populations.

2.4.4 Environmental Setting

Agriculture is an industry of major economic importance to the Coachella Valley, as well as to the county and state. It is one of the most valuable industries in Riverside County, and is an important source of employment opportunities for many residents. In 2020, Riverside County's total crop valuation was $1,418,220,000, ranking it as the 14th most valuable agricultural county in the state.[4]

The climate in the Coachella Valley is characterized by low humidity, high summer temperatures, and mild dry winters. According to the CVWD Colorado River Water Agricultural Water Conservation Plan, these desert conditions allow diverse crops to be grown year-round, including through the winter when most agricultural production in the county is off-season. Much of the Eastern Coachella Valley Area Plan region is dedicated to agriculture, including crops such as date palms, grapes, citrus, and seasonal row crops. According to the Riverside County Agricultural Commissioner's Office 2020 Report, the Coachella Valley agricultural district's crop valuation was $703,250,000 in 2020. The Coachella Valley's crop value represents approximately 58% of the county-wide crop valuation.

Farmland Conversion

As shown in Table 2.4-1, the Southern California Association of Governments (SCAG) region lost 21% of its agricultural lands from 1984 to 2016. While farmland conversion was considerably more significant in Orange County and San Bernardino County, Riverside County lost 25% of its farmland over the 32-year period.

Table 2.4-1: Farmland Loss by County, 1984 to 2016

County	1984	2016	Percent Change
Imperial County	562,132	528,471	-6%
Los Angeles County	60,877	27,390	-55%
Orange County	26,535	5,715	-78%
Riverside County	**561,542**	**419,835**	**-25%**
San Bernardino County	69,575	20,293	-71%
Ventura County	132,388	118,508	-10%
SCAG Region	**1,413,049**	**1,120,212**	**-21%**

Source: SCAG 2020-2045 RTP/SCS Natural and Farm Land Conservation Technical Report, Table 6.

Data from the California Department of Conservation Farmland Mapping and Monitoring Program (FMMP) shows the change in acres of important farmlands in Riverside County from 2006 to 2018. As shown in Table 2.4-2, approximately 7%, or 30,612 acres, of the County's important farmlands were converted to other land uses over the twelve-year period.

Table 2.4-2: Riverside County Important Farmland Loss, 2006 to 2018

Land Use Category	2006	2018	Percent Change
Prime Farmland	128,510	116,926	-9%
Farmland of Statewide Importance	46,920	43,610	-7%
Unique Farmland	37,950	32,610	-14%
Farmland of Local Importance	231,090	221,201	-4%
Important Farmland Subtotal	**444,470**	**413,858**	**-7%**
Total Area Inventoried	1,934,620	1,944,480	+0.5%

Source: California Department of Conservation, Farmland Mapping and Monitoring Program, Riverside County Land Use Conversion Tables https://www.conservation.ca.gov/dlrp/fmmp/Pages/Riverside.aspx (accessed April 2023); County of Riverside Environmental Impact Report No.521, February 2015.

[4] 2020 Report prepared by the Riverside County Agricultural Commissioner's Office, 2020.

According to Riverside County EIR No.521 prepared for the 2015 update to the County General Plan, homes, golf courses, commercial uses, and community facilities constituted most of the new urban land uses resulting from the conversion of farmland. Some farmlands in the County were also fallowed or converted to grazing uses, a process known as land idling. According to the State of California, the trend towards idling agricultural lands can be attributed in part to the lack of water availability and agricultural market conditions.[5]

2.4.5 Existing Conditions

The subject property is located in the agricultural region of the eastern Coachella Valley, in central Riverside County. More than two-thirds of farmland in the Coachella Valley is irrigated with Colorado River water, delivered via the Coachella Branch Canal of the All-American Canal and distributed to farmlands via the irrigated distribution system operated by the US Bureau of Reclamation (USBR) and Coachella Valley Water District (CVWD).[6] As shown in Exhibit 2.4-1, the Project site is located within CVWD Improvement District No.1 (ID-1), the service area for Colorado River water delivery. ID-1 encompasses a 136,400-acre area, including most of the eastern Coachella Valley and part of the western Valley.

The 619.1-acre Project site is currently in use for agriculture and has been for decades. According to the Phase 1 ESA prepared for the Project, agricultural activities first began on part of the site between 1949 and 1953, when irrigation standpipes and underground irrigation pipelines were first established on the property.[7] By 1959 the entire site was in agricultural use, and it has continued to be in agricultural use since this time.

The Project site is relatively flat and comprised of five soil types (see Exhibit 2.9-1). As shown in Table 2.4-3, Indio series comprise the majority of soils on the property.

According to the Biological Resources Assessment prepared for the Project,[8] Indio soil series consist of “very deep, well or moderately well drained soils formed in young calcareous, silty mixed alluvium derived from mixed rock sources. They are intermittently moist soils typically found on alluvial fans, lacustrine basins and flood plains that were historically, and still are used for irrigated cropland and livestock grazing”.

Gilman soils are the second most prevalent series on the subject site. Gilman series consist of very deep, well drained soils formed in stratified alluvium that typically occur on flood plains and alluvial fans. These soils are also historically and currently used for irrigated cropland and livestock grading. As stated in the Biological Resources Assessment, despite the “wet” designation of the Gilman soil, the site does not contain springs, seeps, or other natural wet areas.

Salton soils make up a small portion of the Project site (8.5%). These soils are, according to the NRCS soil survey, “somewhat poorly drained soils formed in alluvium”, and are used for cotton, alfalfa hay, irrigated pasture, truck crops, dates, and recreation.

5 County of Riverside Environmental Impact Report No. 521, February 2015.
6 Colorado River Water Agricultural Water Conservation Plan, prepared by Coachella Valley Water District, December 2021.
7 Phase 1 Environmental Site Assessment for the Agricultural Property Located at 85400 Avenue 62 and 62101 Tyler Street, prepared by Terra Nova Planning & Research, September 2022.
8 “Thermal Ranch Development Project Biological Resources Assessment & CVMSHCP Compliance Report” prepared by WSP USA Environment & Infrastructure, Inc., September 2022.

Table 2.4-3
Project Site Soils

Soil Symbol	Soil Unit Name	Acres on Project Site[1]	Percent of Project Site
Ir	Indio fine sandy loam, wet	245.5	39.5%
It	Indio very fine sandy loam, wet	195.3	31.4%
GcA	Gilman fine sandy loam, wet, 0 to 2 percent slopes	123.4	19.8%
Sb	Salton silty clay loam	52.6	8.5%
GfA	Gilman silt loam, wet, 0 to 2 percent slopes	5.3	0.09%

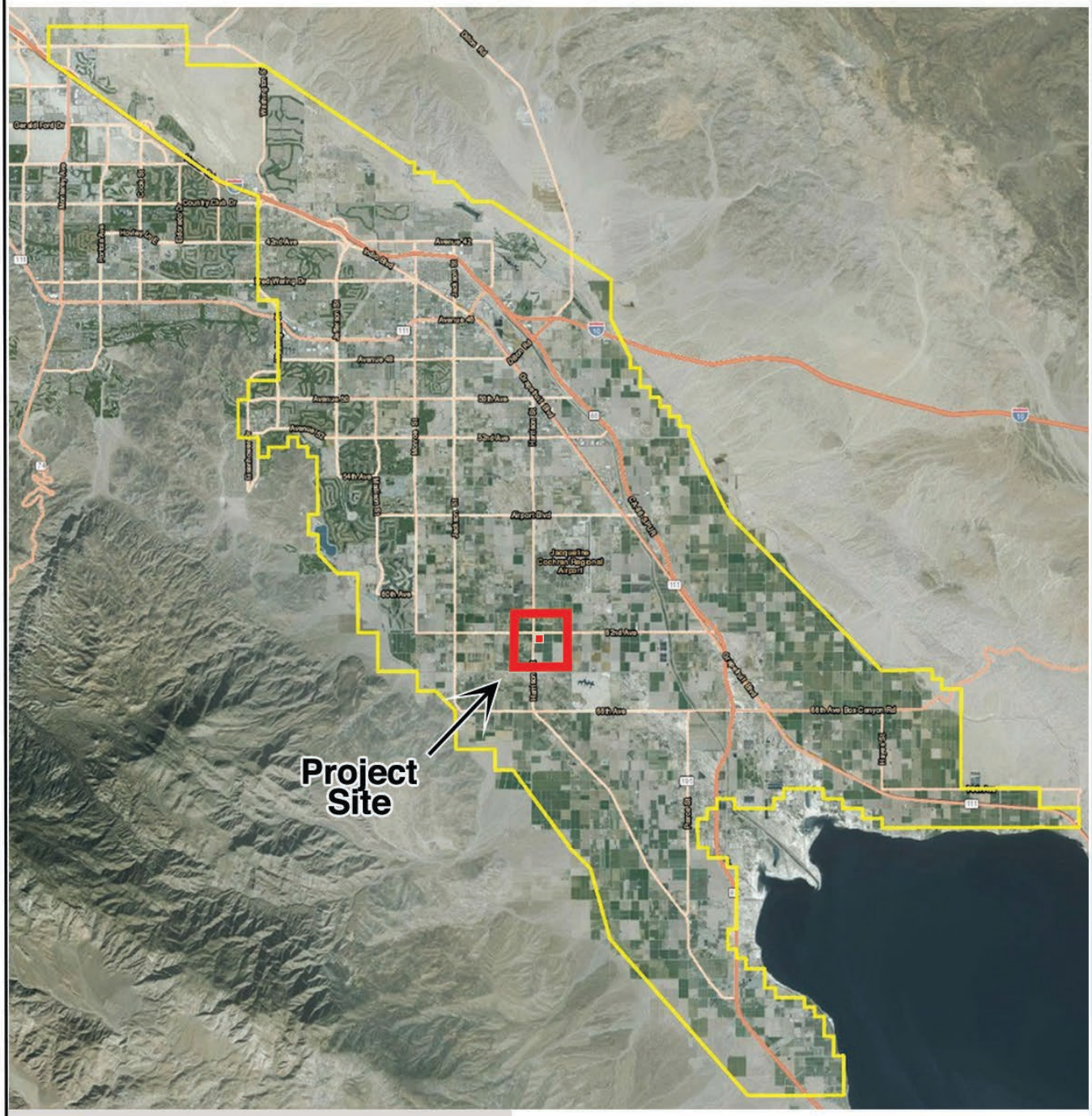
Source: USDA National Resources Conservation Service, Web Soil Survey, https://websoilsurvey.nrcs.usda.gov (Accessed April 2023).
[1] The on-site acreage of each soil unit is estimated for analysis purposes using NRCS Web Soil Survey.

According to the California Department of Conservation (CDC) Farmland Mapping and Monitoring Program, all but the southwest corner of the subject property is designated as Prime Farmland (Exhibit 2.4-2). The small remaining portion in the southwestern corner of the site is designated as Farmland of State-wide Importance. Other lands surrounding the site also include Prime Farmland, Farmland of State-wide Importance, Unique Farmland and Farmland of Local Significance.

The Project site is not under a Williamson Act contract. As shown in Exhibit 2.4-3, the nearest properties under a Williamson Act contract are one mile east of the site and 1.2 miles southwest of the site. The lands one mile east of the Project are designated as Mixed Enrollment Agriculture Land, which the Department of Conservation defines as “enrolled lands containing a combination of Prime, Non-Prime, Farmland Security Zone (FSZ), or other contracted or enrolled lands not yet delineated by the county.” The lands 1.2 miles southwest of the site have a Prime Agricultural Land enrollment status, which is defined as land enrolled in a Williamson Act contract and that meets any of the criteria set forth under California Government Code §51201.

The Project site is currently designated “Agriculture” in the General Plan Foundation Element and the Eastern Coachella Valley Area Plan (ECVAP). The majority of the subject property is currently zoned as Heavy Agriculture, as shown in Exhibit 2.4-4. An approximate west half of the west half of the subject Section 5 site, adjacent to Harrison Street, is zoned as Controlled Development Area (W-2).

The subject site is located on the western edge of land uses that have been in the process of transitioning away from agriculture to urban uses for many years. As shown in Exhibit 2.4-4 and 2.4-5, lands to the east and north of the subject site are within the Kohl Ranch Specific Plan, which has undergone the entitlements process for conversion from agricultural to residential and commercial uses. Some lands to the west of the Project site are also zoned for residential use.



Sources: Coachella Valley Water District, District Code, Ch. 3.10

04.18.23

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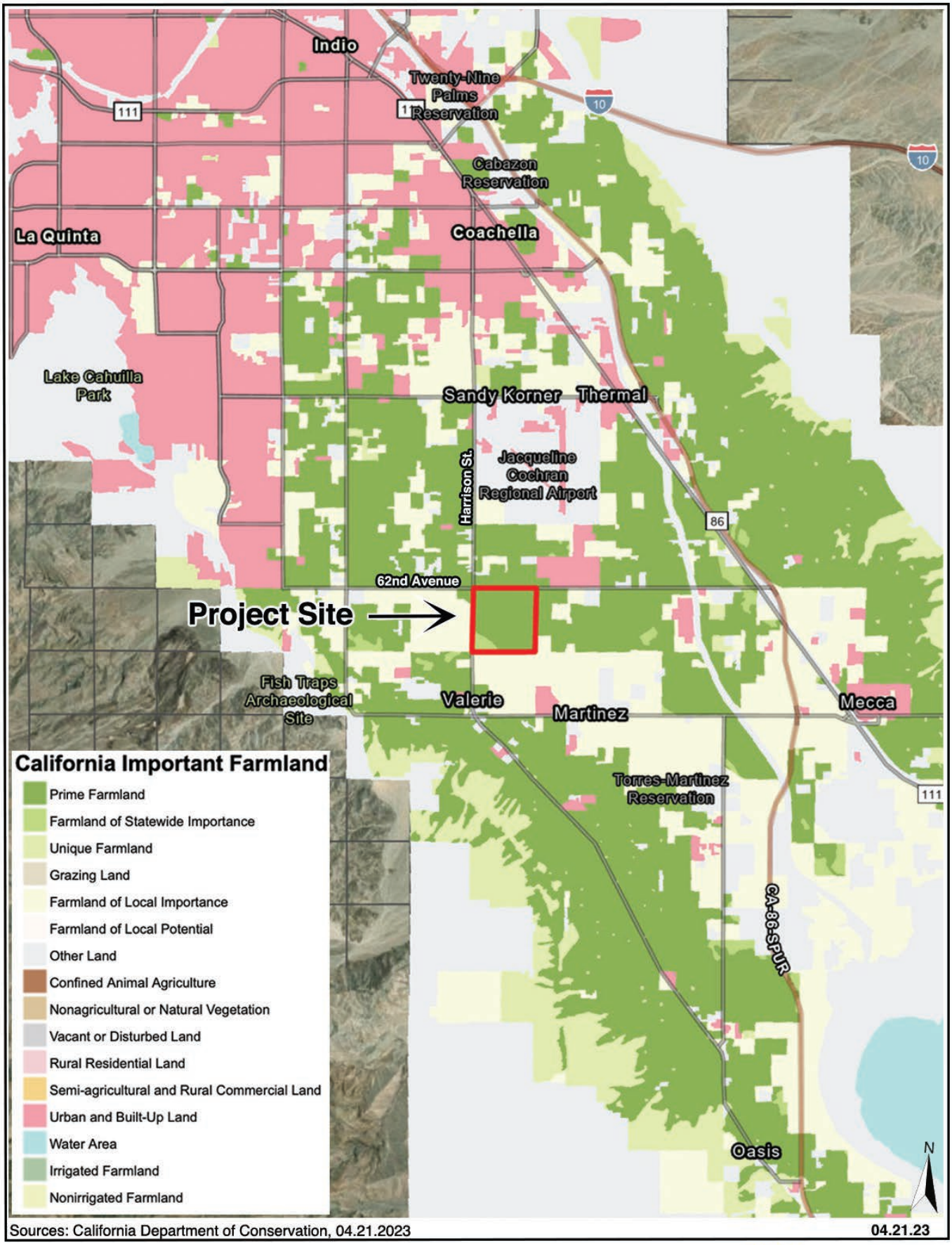
Thermal Ranch Specific Plan EIR
CVWD Improvement District No. 1
Thermal, California

Exhibit

2.4-1



Sources: California Department of Conservation, 04.21.2023

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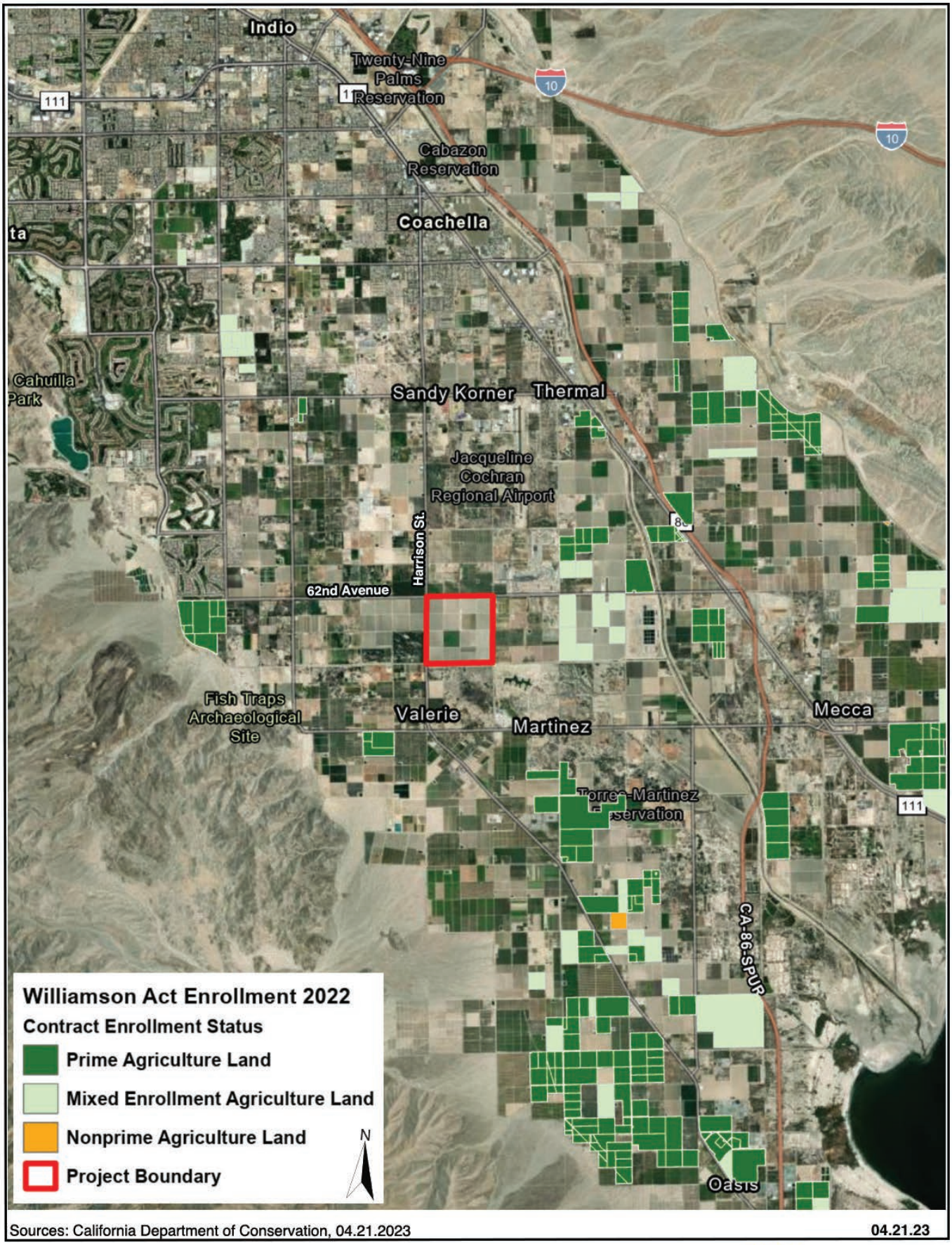
Thermal Ranch Specific Plan EIR
Important Farmland
Thermal, California

Exhibit
2.4-2



Sources: California Department of Conservation, 04.21.2023

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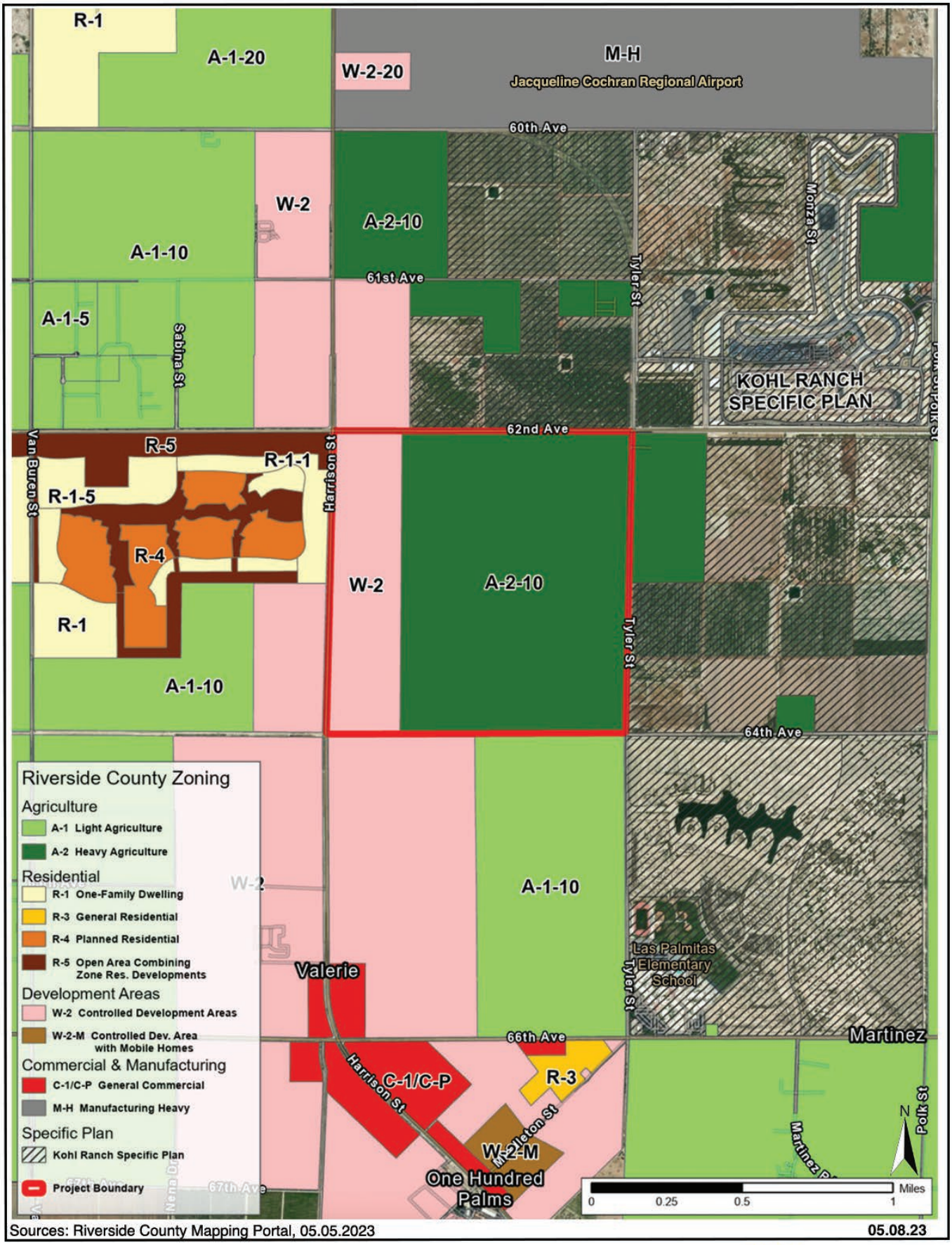
Thermal Ranch Specific Plan EIR
Williamson Act Enrollment
Thermal, California

Exhibit
2.4-3



Sources: Riverside County Mapping Portal, 05.05.2023

05.08.23

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Thermal Ranch Specific Plan EIR
Existing Zoning
Thermal, California

Exhibit

2.4-4

2.4.6 Project Impacts

Introduction
The Project proposes the development of an equestrian-oriented, resort residential community on the approximately 619-acre site. Its development would result in a 231-acre equestrian center surrounded by a variety of complementary uses including a diversity of residential neighborhoods, resort and hospitality development, and neighborhood commercial. The proposed Project would constitute a major encroachment into an agricultural area, on a site that is well served by CVWD/USBR irrigation systems, tile drainage and agricultural drain facilities.

Agricultural Land Evaluation and Site Assessment (LESA)

Given the potential impacts associated with the proposed farmland conversion, this EIR utilizes the LESA Model as a tool by which to assess the potential significance of impacts. Appendix G of the *California Environmental Quality Act (CEQA) Guidelines* states that: "In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation (CDC) as an optional model to use in assessing impacts on agriculture and farmland."

Further, as stated above, the LESA Model was specifically created by the CDC in order to provide "specific guidance concerning how agencies should address farmland conversion impacts."[9] It is therefore an appropriate tool to guide the following analysis and by which to determine the significance of impacts. As noted in Section 2.4.2, the CEQA Appendix G thresholds are used to assess potential impacts to agricultural lands and are evaluated below following the discussion of the LESA analysis.

The LESA Model uses six different factors (two based on soil resource quality and four based on on-site and adjacent land characteristics) to develop a weighted score that identifies the significance of potential impacts to agricultural resources. The Land Evaluation (LE) scoring utilizes two soil factors. The Land Capability Classification (LCC) indicates the suitability of soils for most kinds of crops, and the risk of damage when they are used in agriculture, while the Storie Index provides a numeric rating (0–100) of the relative degree of suitability or value of a given soil for intensive agriculture. The Site Assessment (SA) scoring considers the size of the site to be converted, water supply restrictions in drought and non-drought years, and the presence (or absence) of adjacent agricultural, habitat, or parkland uses.

By assessing a variety of soil, water, and land use characteristics, it is possible that the conversion of a large parcel containing poor soils and with limited access to water would not result in a significant impact, while the conversion of a much smaller well-watered parcel with quality soils could be considered significant. To ensure that potential impacts to adjacent agricultural activities are appropriately considered, the LESA Model requires an examination of land use on all parcels within a Zone of Influence (ZOI) that extends a minimum 0.25 mile (mi) from the actual boundary of the site.

Tables 2.4-4 to 2.4-10 show the land evaluation and site assessment scores for the Project, as well as the resulting significance.

LESA Land Evaluation Factors – Land Capability Classification and Storie Index
The suitability of land for agricultural use is evaluated based on Land Capability Classification (LCC) and the Storie Index. LCC indicates the suitability of soils for most crops, with classifications made based on the limitations of the soils when used to grow crops and the risk of damage to the soils when they are used in agriculture.

[9] California Agricultural Land Evaluation and Site Assessment Model, Instruction Manual, 1987, p.3.

Soils are rated from Class I to Class VIII. Class I indicates the fewest restrictions, and higher numbering of the soil classes (e.g. Class VIII) indicates progressively greater limitations and narrower choices for practical agricultural use. The classes are defined as follows:

- Class I soils have few limitations that restrict their use.
- Class II soils have moderate limitations that reduce the choice of plants or that require special conservation practices, or both.
- Class III soils have severe limitations that reduce the choice of plants.
- Class IV soils have severe limitations that reduce the choice of plants, or that require very careful management, or both.
- Class V soils are not likely to erode but have other limitations, impractical to remove, that limit their use. Class VI soils have severe limitations that make them generally unsuitable for cultivation. Class VII soils have very severe limitations that make them unsuitable for cultivation.
- Class VIII soils have very severe limitations that nearly preclude their use for commercial crop production.

In general, the fewer the limitations, the more suitable the soil is for agriculture, and the lower the costs of overcoming limitations. LCC subclasses are designated by lowercase letters e, w, s, or c.

Using soil survey information from the Department of Agriculture Natural Resources Conservation Service (NRCS), the Project was found to have mostly Class IIw soils, with a small portion of the site containing Class IVw soils. Subclass “w” indicates that the presence of water within the soil can cause a limitation in plant growth. The LCC rating for the Project is based on irrigated use. Given that most of the Project site is comprised of Class II soils, it can be understood that the soils have moderate limitations that reduce the choice of plants and/or that require special conservation practices.

The Storie Index provides a rating for a given soil’s degree of suitability for intensive agriculture, based on the soil’s profile characteristics, surface layer texture, slope, and other factors. Soil survey data from the NRCS shows the Project site as containing primarily soils rated 88, with a small portion of soils rated 40. That the majority of the site has a high Storie Index rating indicates the site generally has a high degree of suitability for intensive agriculture.

Table 2.4-4 shows the LCC and Storie Index scores for the Project site. Total LCC and Storie Index scores are weighted based on the proportion of the subject site made up of each soil unit.

Table 2.4-4
Land Capability Classification (LCC) and Storie Index Scores

Soil Unit	Proportion of Project Area	LCC (irrigated)	LCC Rating (irrigated)	LCC Score	Storie Index	Storie Index Score
Gilman fine sandy loam (GcA)	0.198	2w	80	15.87	88	17.46
Gilman silt loam (GfA)	0.009	2w	80	0.68	88	0.75
Indio fine sandy loam (Ir)	0.395	2w	80	31.57	88	34.73
Indio very fine sandy loam (It)	0.314	2w	80	25.11	88	27.63
Salton silty clay loam (Sb)	0.085	4w	40	3.38	40	3.38
Totals	**1**			**76.62 LCC Total Score**		**83.94 Storie Index Total Score**

LCC Rating based on Table 2 of the LESA Instruction Manual (California Department of Conservation, 1997).

LESA Site Assessment – Project Size

The LESA Model analyses a project's size in recognition that the size of a farm can impact the viability of commercial agricultural operations. Agriculture requires large fields, high-quality soils, and water sources. In order to account for the quality of the agricultural land, three consolidated LCC categories are used to determine a score based on acreage in each category.

As shown in Table 2.4-5, 569.5 acres of the Project site are comprised of soils in LCC Classes I-II, and 52.6 acres are in LCC Class IV-VIII. The Project received the maximum score, representing 80-acres or above, for the LCC Class I-II category. It received a score of 20, indicating 40 to 99 acres, for LCC Class IV-VIII.

Table 2.4-5
Project Size Score

	Acreage per Soil Unit				**Total Acres**	**Project Size Scores**
LCC Class I-II	123.4	5.3	245.5	195.3	**569.5**	100
LCC Class III	0	0	0	0	**0**	0
LCC Class IV-VIII	52.6	0	0	0	**52.6**	20

Project size score based on Table 3 of the LESA Instruction Manual (California Department of Conservation, 1997).

The points for the LCC Class with the highest score, in this case 100 points for LCC Class I-II, is used as the project size score in the final LESA score table (Table 2.4-9).

LESA Site Assessment – Water Resources Availability

The LESA Model evaluates whether irrigated and dryland agriculture is feasible on a given site, and, based on the water resources that supply a site, whether restrictions exist on drought or non-drought years. The model assesses the occurrence of two kinds of restrictions to agricultural production: physical and economic.

As defined in the LESA Instruction Manual, a physical restriction is *"an occasional or regular interruption or reduction in a water supply, or a shortened irrigation season, that forces a change in agricultural practices -- such as planting a crop that uses less water, or leaving land fallow."* The Instruction Manual defines an economic restriction as "*a rise in the cost of water to a level that forces a reduction in consumption*." This could include surcharge increases from suppliers or additional costs incurred from pumping groundwater.

Under the model, irrigated agricultural production is considered feasible when a) there is an existing irrigated system on the project site, b) physical and/or economic restrictions are not severe enough to halt production, and c) it is possible to achieve viable economic returns on crops through irrigated production.[10] Based on these definitions, Table 2.4-6 shows the feasibility of irrigated production on the Project site on drought and non-drought years, and the resulting water resource score.

Table 2.4-6
Water Resources Availability Factors

Option	Non-Drought Years			Drought Years			Water Resource Score
	Irrigated Production Feasible?	Physical Restrictions?	Economic Restrictions?	Irrigated Production Feasible?	Physical Restrictions?	Economic Restrictions?	
1	Yes	No	No	Yes	No	No	100

Water resources availability score based on Table 5 of the LESA Instruction Manual (California Department of Conservation, 1997).

The Project site is located in CVWD Improvement District No. 1 (ID-1). Lands within ID-1 are served by imported water from the Colorado River provided from the 122-mile long Coachella Canal, a branch of the All-American Canal. The water is distributed to farmlands via the irrigated distribution system operated by the US Bureau of Reclamation (USBR) and CVWD. CVWD's Canal Water Shortage Contingency Plan (Article XII of the CVWD District Code) outlines the priority that different user groups have over the Colorado River water imported via the canal, and the resulting order in which water reductions would be applied. Water reductions to users would be implemented in the following order:

1. Groundwater replenishment inside and outside ID-1.
2. Non-agricultural and Mid-Valley pipeline customers outside ID-1.
3. Agricultural customers outside ID-1.
4. Non-agricultural or Class II customers inside ID-1.
5. Commercial agricultural inside ID-1.

According to these priorities provided in §3.10.490 of the CVWD District Code, commercial agricultural production on the Project site would have the highest priority in the District for imported Colorado River water. It is therefore determined that during drought and non-drought years, the Project site does not experience physical restrictions that are severe enough to halt production.

CVWD evaluates the cost of service for canal water based on reappraisals every five years. The most recent Canal Water Cost of Service Study, prepared for CVWD by Carollo Engineers, Inc., identifies the operating, capital, reserve, and policy costs of CVWD's Canal fund, and apportions these costs to customer rates based on user class.[11] As a commercial agriculture user within ID-1, the Project site is exempt from certain fees.

[10] LESA Instruction Manual, prepared by California Department of Conservation, 1997, page 18.
[11] "Coachella Valley Water District Canal Water Cost of Service Study" prepared by Carollo Engineers, Inc. for CVWD, February 2021.

Based on the most recent rate study, CVWD is proposing incremental rate increases from 2022 to 2026. The exact impact of rate increases to the commercial viability of the Project cannot be determined without in-depth analysis of the current agricultural operation on-site. However, it is likely that the five-year rate-setting system used by CVWD would stabilize water costs during drought years.

It should be acknowledged that California has been experiencing unprecedented drought, which could worsen as a result of climate change. While it can be assumed that CVWD will attempt to stabilize water deliveries as much as possible, particularly for priority users such as commercial agriculture in ID-1, the sustainability of the supply cannot be guaranteed in the long term. Nonetheless, under the current and near-term conditions, the Project site has priority access to affordably priced irrigation water. Therefore, for the purpose of analysis, it will be assumed that the subject site would not be subject to economic restrictions on drought or non-drought years such that production would be halted or economically unviable.

Given that the Project site is serviced by an existing irrigation system, and that it was determined that the water supply would not be subject to physical or economic restrictions on drought or non-drought years, a water availability score of 100 was assigned.

Table 2.4-7
Water Resources Availability Score

Water Source	Proportion of Project Area	Water Availability Score	Weighted Availability Score
Colorado River	1	100	100

Water resources availability score based on Table 5 of the LESA Instruction Manual (California Department of Conservation, 1997).

LESA Site Assessment – Surrounding Agricultural and Protected Resource Land

A "Zone of Influence" (ZOI) was identified for the Project which includes all parcels that are within or are intersected by a 0.25-mile buffer around the subject site (Exhibit 2.4-5). The percent of the Project's ZOI that is currently in agriculture was calculated based primarily on the Department of Conservation's Important Farmland Map Series.

Protected resource lands include Williamson Act contracted lands, publicly owned park or forest land, and lands with agricultural, wildlife habitat, or other natural resource easements. Table 2.4-8 shows the percent of the Project's ZOI that is in agriculture or is protected resource land.

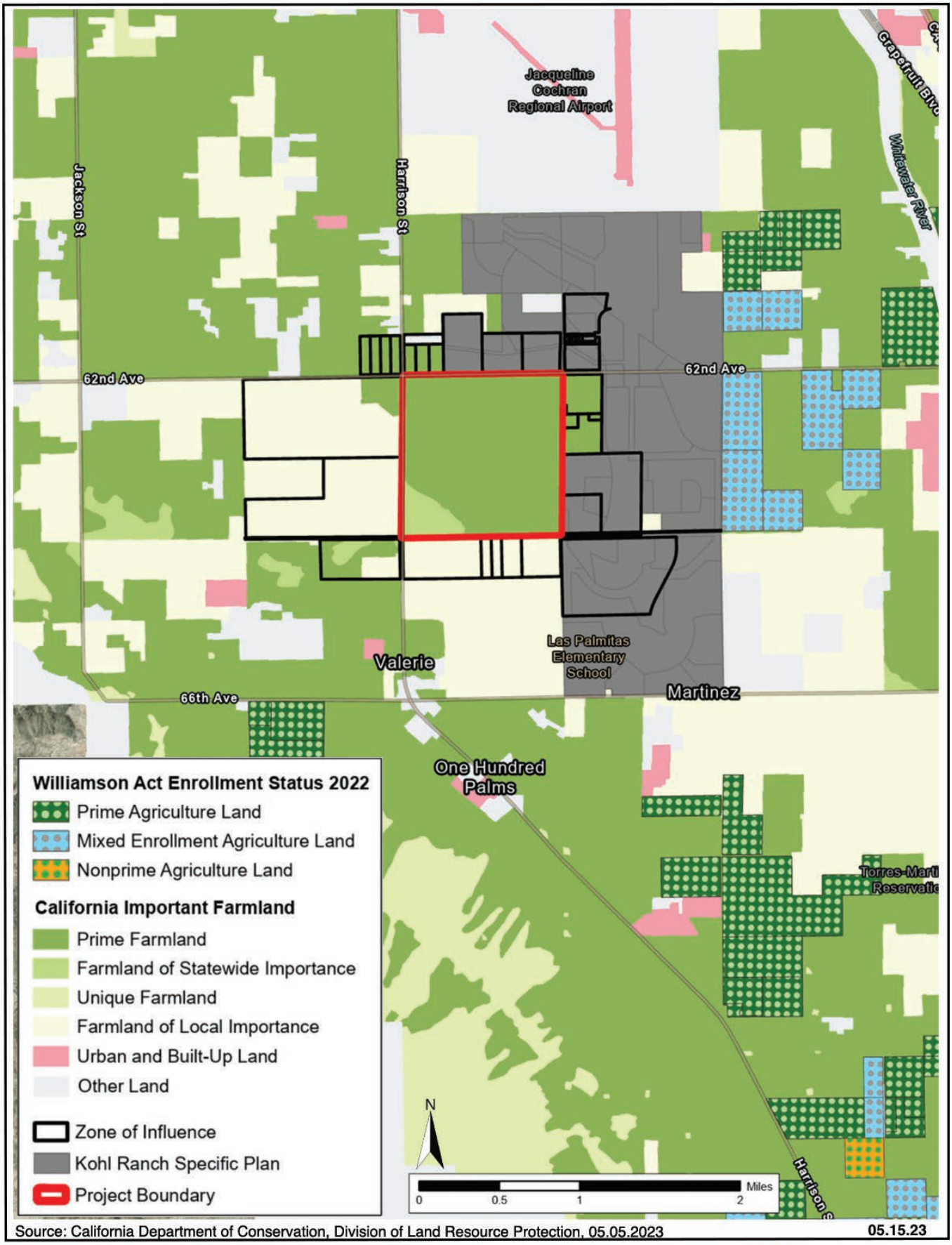
Table 2.4-8
Surrounding Agricultural and Protected Resource Land

Zone of Influence					Surrounding Agricultural Land Score	Surrounding Protected Resource Land Score
Total Acres	Acres in Agriculture	Acres of Protected Resource Land	Percent in Agriculture	Percent Protected Resource Land		
1489.60	915.00	0	61.43	0	50	0

Agricultural Land Score and Surrounding Protected Resource Land Score based on Tables 6 and 7 of the LESA Instruction Manual (California Department of Conservation, 1997).

As shown in the above table, the Project's ZOI comprises approximately 1,489.6 acres of land. Of this area, approximately 915 acres or 61.43% of the land is in agriculture. Parcels are counted as being in agriculture if identified as Prime Farmland, Farmland of Statewide Importance, Farmland of Local Importance, or other classifications indicating agricultural use according to the California Important Farmland Finder. Adjacent parcels within the approved Kohl Ranch Specific Plan (SP) area were not counted as agricultural land. The SP has been through the entitlements process to develop these sites for residential and commercial uses, and thus the Kohl Ranch SP planning area has been formally "committed" to nonagricultural use.

Based on the percent of the ZOI in agriculture (61.43%), the Project received a score of 50 for surrounding land in agriculture. None of the land in the Project's ZOI is protected resource land, and therefore the Project received a surrounding protected resource land score of 0.



Source: California Department of Conservation, Division of Land Resource Protection, 05.05.2023

05.15.23

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Thermal Ranch Specific Plan EIR
Zone of Influence
Thermal, California

Exhibit

2.4-5

LESA Analysis Results

The California LESA Model is weighted so that 50 percent of the total LESA score is derived from the Land Evaluation factors (Table 2.4-4) and 50 percent from the Site Assessment factors (Table 2.4-5 to 2.4-8). As shown in Table 2.4-9, the total LESA score for the Project site is 77.64.

Table 2.4-9
Final LESA Score

	Factor Scores	Factor Weight	Weighted Factor Scores
Land Evaluation Factors			
Land Capability Classification	76.62	0.25	19.15
Storie Index	83.94	0.25	20.99
LE Subtotal	--	0.50	**40.14**
Site Assessment Factors			
Project Size Score	100	0.15	15.00
Water Resource Availability	100	0.15	15.00
Surrounding Agricultural Land	50	0.15	7.50
Protected Resource Land	0	0.15	0
SA Subtotal	--	0.50	**37.50**
		Final LESA Score	77.64

As shown in Table 2.4-10, a score of 60 to 79 points indicates that the subject site is a high-quality agricultural resource. Given the quality of the site, impacts to farmlands resulting from its conversion are considered significant. Based on this analysis, the conversion of the subject 619.1-acre agricultural property to the proposed equestrian-centered development would potentially have significant impacts.

Table 2.4-10
LESA Model Significance Thresholds

Total LESA Score	Scoring Decision
0 to 39 points	Not considered significant
40 to 59 points	Considered significant only if LE and SA subscores are each greater than or equal to 20 points
60 to 79 points	**Considered significant unless either LE or SA subscore is less than 20 points**
80 to 100 points	Considered significant

While the LESA Model determined that the Project could have significant impacts related to the conversion of farmland to non-agricultural uses, additional factors should be taken into consideration. The area around the Project site has been in use for agriculture for several decades, however, over the past two decades the area has been undergoing a shift towards increasing urbanization.

As discussed in the Surrounding Agricultural Lands section, most of the lands to the east and north of the subject site have already undergone an entitlements process for the development of residential and commercial land uses on what was agricultural land. Properties to the west of the site have land use and zoning designations for future residential uses. As these changes in land use occur in the Project's immediate vicinity, the best use of the property could shift towards urban and built-up uses that would serve the community. The site is sufficiently serviced by existing utilities to support urban development.

Also of note is the increasing water scarcity facing regions dependent on Colorado River water. As climate change and other factors have put an increasing strain on water supplies, agriculture remains the largest consumer of water in California. While commercial agricultural production on the subject site has senior water rights to Colorado River water, additional efforts to reduce water consumption across the board will likely be required in the near future. As discussed in the Water Supply Assessment prepared for the Project, as well as in Section 2.12 of this EIR, the current agricultural operation on-site uses approximately 2,000 acre-feet of water per year (AFY). The proposed development is projected to use approximately 1,754 AFY.

Overall, the conversion of the subject site from farmland to the proposed residential and commercial uses would have a variety of impacts. However, based on the results of the LESA Model and the thresholds of significance provided in Appendix G of the CEQA Guidelines, the Project's impact to agricultural resources would be considered significant. The LESA Model found that the subject site is a high-quality agricultural resource based on the soil quality, the size of the site, the reliability of the water supply, and the presence of adjacent agricultural lands. Mitigation measures, such as preserving other agricultural land, would not change the fact that the Project would result in the conversion of 619.1-acres of quality agricultural land to urban and other non-agricultural uses. Therefore, as discussed in more detail below, the Project's impacts to agricultural resources are considered significant and unavoidable.

CEQA Threshold Analysis
The proposed Project would result in the conversion of approximately 619.1± acres of farmland. The Project's approval requires approval of a General Plan Amendment and Change of Zone in order to facilitate the development of the proposed equestrian center and supporting uses. As previously stated, the subject property is not under a Williamson Act contract, and no adjacent properties are under such a contract. Nonetheless, the proposed Project would constitute a major change in land use from agriculture to diverse urban development and the associated extension of public services and utilities.

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

Approximately 91.5 percent of the Project site, or 568.30 acres, is designated as Prime Farmland (Exhibit 2.4-2). The remaining 52.59 acres in the southwestern corner of the site are designated as Farmland of Statewide Importance. Development of the proposed Project would convert the entire 619.1±-acre site from Prime Farmland and Farmland of Statewide Importance to non-agricultural uses. Project impacts to prime farmlands and those of statewide importance would be significant.

b) Conflict with existing agricultural zoning, agricultural use or with land subject to a Williamson Act contract or land within a Riverside County Agricultural Preserve?

The entire Project site is currently designated as "Agriculture" in the General Plan Land Use Foundation Element. The Project includes a General Plan Amendment that would change the General Plan Foundation Element designation to "Community Development", with which the proposed Project would be consistent. Most (±75%) of the Project site is zoned as "Heavy Agriculture" (Exhibit 2.4-4), with the westerly most portion of the Project site (±25%) adjacent to Harrison Street zoned as "Controlled Development Area" (W-2). The Project also includes a Change of Zone that will change the entire site to non-agricultural zoning as set forth in the proposed Specific Plan.

The subject property is in active cultivation and has been for several decades. The proposed Project would include uses, such as residential and commercial development, that conflict with the current

agricultural use. Although not explicitly recognized as an agricultural use, the proposed equestrian center is akin to agricultural uses and traditions. Nonetheless, the development of the Thermal Ranch project would conflict with current agricultural uses of the site.

It should be noted that the proposed Project is not the first to propose conversion of agricultural lands in this area of the valley. The Kohl Ranch Specific Plan, once built out, will convert more than 2,200 acres to urban uses, some of which is adjacent to the subject site to the north and east. County land use and zoning designations for urban uses are also in place on approximately 320 acres located immediately west of the subject property and south of Ave 62. The section to the south is located in the Torres Martinez Reservation is zoned for agriculture on the east half and "Controlled Development" on the west half. While these lands were once in cultivation, they have been largely vacant for many years.

The subject property is not subject to a Williamson Act contract, nor is it within a Riverside County Agricultural Reserve. The nearest property under a Williamson Act contract is one mile east of the Project site (see Exhibit 2.4-3). The Project will not conflict with land subject to a Williamson Act contract.

In summary, while the subject site is not under a Williamson Act contract nor are these lands located within a Riverside County Agricultural Preserve, the proposed Project would conflict with the site's existing agricultural zoning. Impacts related to conflicts with existing agricultural zoning, agricultural use or with land subject to a Williamson Act contract or within a Riverside County Agricultural Preserve would therefore be significant.

c) Cause development of non-agricultural uses within 300 feet of agriculturally zoned property (Ordinance No. 625 "Right-to-Farm")?

The Riverside County Right-To-Farm Ordinance and the state statute it implements specifically protect the cultivation and tillage of soil, dairy operations, and the production of any agricultural commodity, including: timber, viticulture, apiculture, horticulture livestock, fur bearing animals, fish, and poultry. The statute and County ordinance aim to conserve the continued viability of agricultural land by limiting the circumstances under which agricultural operations may be deemed to constitute a nuisance. The Ordinance prevents any tentative land divisions occurring within 300 feet of land zoned for agricultural purposes from declaring the existing agricultural operations as a nuisance.

The Thermal Ranch project would occupy a section of land and would be bounded by existing and future arterial roadways that serve to effectively isolate the Project site from surrounding lands, including those in and/or designated for agricultural use. Nearby properties designated by the County for agricultural use and occurring within 300 feet of the Project site include 80± acres comprised of two horse ranches and meadows at the southeast corner of Avenue 62 and Tyler Street, and the long-fallow lands being the east one-half of Section 8 to the immediate south of the subject site, which are located within the Torrez Martinez Reservation.

Although the Project will include development of non-agricultural uses within 300 feet of agriculturally zoned property, the surrounding roadways and the Project's perimeter improvements will provide a sufficient buffer to prevent interfering with the limited agricultural uses in the vicinity of the project. In addition, the Project is subject to the notice requirements of Ordinance No. 625, which further ensures that the proximity of the Project to agricultural uses will not result in a public or private nuisance. As such, while the Project has the potential to cause development of non-agricultural uses within 300 feet of these agriculturally zoned properties, impacts would be less than significant.

d) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?

As evaluated in detail in the above-described LESA analysis, the proposed Project would remove 619± acres from agricultural land use and zoning assignments and, with development, would cease farming activities on this site. Development of the Project would not directly affect surrounding agricultural lands. The Project site encompasses a section of land and is bounded and isolated by existing and future arterial roadways. Domestic water and sewer service is already located adjacent to the Project site. Nonetheless, ongoing urban development in the area could induce or encourage other land conversions. The Project proposes utility infrastructure improvements, including the extension of a natural gas lines to the site and construction of a power substation. These improvements to utilities could facilitate further development in the Project vicinity.

The proposed Project would therefore result in both the direct conversion of the subject property to non-agricultural use, and could indirectly induce the conversion of agricultural lands to non-agricultural use by facilitating further urban development in the area. Impacts would therefore be significant.

CVWD Middleton Reservoir 7802-1 Site

An off-site 5-million-gallon domestic water reservoir is required to meet Project demand and fire flows. The new reservoir will be constructed on an existing reservoir site currently hosting a CVWD 2.5 million tank and planned for multiple tanks. The existing reservoir site is graded and located behind an earthen berm with existing access and site security. The new reservoir will require the shifting of the existing earthen berm 35± feet farther north to accommodate the new reservoir, which will connect to existing lines. There will be no impacts to agricultural lands as a result of the future reservoir's construction.

2.4.7 Mitigation Measures

The Project proposes the development of the entire site, resulting in the conversion of the existing 619.1± acres of farmland into non-farmland uses. Based on the significance thresholds provided in the LESA model and Appendix G of the CEQA Guidelines, the resulting impacts to agricultural resources will be significant.

The California Department of Conservation submitted a letter in response to the Notice of Preparation for this Draft EIR, dated June 22, 2023, which recommends that the County of Riverside consider agricultural conservation easements as a form of feasible mitigation to substantially lessen or avoid the Project's significant impacts to agricultural resources. In considering agricultural conservation easements as potential mitigation measures, the following are key considerations that should be taken into account:

(i) Permanently preserving agricultural land elsewhere in the County will not reduce or avoid conversion of the 619.1±-acres of land within the Project currently used for agricultural production, and therefore, would not be effective at mitigating the conversion of agricultural resources to a less-than-significant level. Specifically, a recent California Court of Appeal determined that *agricultural conservation easements "were not effective at reducing the project's conversion of agricultural land to a less than significant level for purposes of CEQA*". *See King & Gardiner Farms, LLC v. County of Kern* (2020) 45 Cal.App.5th 814, 875-876.

A subsequent Court of Appeal decision held that while agricultural conservation easements do not reduce the project's impacts to a level of less than significant, they may still be used as an effective way to partially reduce impacts from the conversion of agricultural land. See V Lions Farming, LLC v. County of Kern (2024) 100 Cal.App.5th 412, 437.

(ii) Adding a requirement to purchase an easement on other property that requires that property to remain in agricultural production will add a significant cost to the Project that may or may not be financially feasible and that the County may or may not find feasible on policy grounds;

(iii) Adding a requirement to purchase an easement on other property that requires that property to remain in agricultural production has implications on the use of Colorado River water and/or groundwater pumping that the County may or not find infeasible on policy grounds. It is noteworthy that CVWD has notified the property owner that no imported water will be provided to the subject property for at least the coming two years, further bringing into question the viability of farming on these and other farmlands in the Project area;

(iv) The County of Riverside recognizes that the Project site and surrounding lands are in transition from agricultural to urban uses and that such conversion is needed in the ECVAP area in order to address the significant need for housing and commercial and other services, and to support the County's recently established Enhanced Infrastructure Financing District (EIFD), which encompasses the subject and other lands in the Project area;

The adopted 2015 County General Plan Final EIR further addresses the impacts of farmland conversions and states[12], in part, "*in order to ensure the reduction of potential impacts to agricultural resources within the County, several policies are proposed within GPA No. 960 including a number of protections for farmlands and their operations.*" And *"Several policies and existing ordinances provide future protections for farmland resources within the County. These policies include the incorporation of agricultural land conservation (Policy OS 7.3), allowance of accessory agricultural uses on designated agricultural land (Policy OS 7.5), and agricultural incentive programs including tax incentives to increase the viability of agricultural uses (Policy LU 20.1)."* Finally, in its response to referenced comment 3.3, the County recognized that "*even with the incorporation of the proposed policies related to agricultural resources within GPA No. 960 and existing ordinances, impacts that will occur as a result of GPA No. 960 will remain significant and unavoidable for agricultural resources."*[13]

(v) The County General Plan allows for the conversion of up to 7% of all land designated as Agriculture to other Foundation and land use designations during each 2.5-year cycle, which reflects the County's balancing of the policy favoring the preservation of agricultural resources with the policies favoring additional housing and economic development, and imposing an additional requirement of preserving agricultural land through conservation easements may be considered infeasible on policy grounds as inconsistent with County's balancing of these competing interests.

Ultimately, the Board of Supervisors must decide if requiring agricultural conservation easements over other land is feasible and effective mitigation for the Project's conversion of agricultural resources. However, the above considerations support the conclusion that requiring an agricultural conservation easement over an equal number of acres of agricultural land would not be effective or feasible mitigation in this case, particularly in light of the previously approved conversion of agricultural land in the immediate

12 County of Riverside Final Environmental Impact Report No. 521, response to comment 3.3 from the California Department of Conservation, August 2015.

13 Ibid.

vicinity of the project and the need for housing and further economic development opportunities in the project location. In addition, because the conversion of agricultural land caused by this Project would be consistent with the 7% limit on such conversions previously adopted by the County, the Project's impact would not be any more severe than already approved and deemed acceptable in the previously certified General Plan EIR No. 521.

2.4.8 Significance After Mitigation

The impacts resulting from the proposed conversion of the subject site from agricultural to non-agricultural uses will remain significant and unavoidable.

2.4.9 Cumulative Impacts

The Project proposes to develop farmland that is currently designated for "Agriculture" according to the County General Plan Land Use Element Foundation Component. Combined with other approved, planned, and pending developments in the Project vicinity, the Project would contribute to the cumulative conversion of agricultural lands in the eastern Coachella Valley to non-agricultural uses.

The 2015 Riverside County General Plan designated 180,178 acres in unincorporated areas of the County for agricultural uses under the "Agriculture" Foundation Component. Given that 266,926 acres of agricultural lands existed at this time, the General Plan land use designations proposed to convert 86,748 acres of agricultural land in the unincorporated County to non-agricultural uses. The General Plan EIR No.441 determined that this potential loss of 32.5% of farmland in unincorporated areas of the County, as well as other indirect impacts to farmlands and conflicts in land uses, would constitute a significant and unavoidable impact.[14]

Beyond this farmland conversion accounted for in the County General Plan EIR No.441, the proposed Project would result in the conversion of an additional 619.1±-acres of farmland to non-agricultural uses. The Project, combined with the farmland conversion planned in the General Plan, would therefore result in cumulatively considerable impacts to agricultural resources in the ECVAP region.

[14] EIR No. 441 prepared for the Riverside County General Plan, August 2002.

2.5 Air Quality

2.5.1 Introduction

The following section describes existing air quality in the Coachella Valley and analyzes the potential impacts associated with the proposed Project. A variety of local and regional data and information, ranging from research and analysis conducted for the Project site to regional-scale planning and environmental documents, have been used in researching and analyzing the project and its potential effects on air quality. Analysis of Project emissions, as well as background information, discussed in this section area based on the Air Quality and Greenhouse Gas Report prepared for the Project (Appendix B).

2.5.2 Thresholds of Significance

The project would have a significant effect to air quality if the proposed Project would:

a) Conflict with or obstruct implementation of the applicable air quality plan?
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?
c) Expose sensitive receptors, which are located within one (1) mile of the project site, to substantial pollutant concentrations?
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

2.5.3 Regulatory Framework

Federal and State

Federal Clean Air Act (FCAA) - 42 U.S.C. §7401 et seq.
The Federal Clean Air Act, which was first enacted in 1970 and last amended in 1990, remains the federal government's primary air quality law regulating air emissions from stationary and mobile sources. There are several regulatory programs bought about by FCAA amendments, including National Ambient Air Quality Standards (NAAQS), National Emissions Standards for Hazardous Air Pollutants (NESHAPs), New Source Performance Standards (NSPS), the Acid Rain Program (APP), and the CAA ozone program consistent with the Montreal Protocol. Notably, the FCAA gives the Environmental Protection Agency (EPA) that authority to establish the National Air Quality Standards.

National Ambient Air Quality Standards (NAAQS)
The FCAA authorizes the EPA to establish National Ambient Air Quality Standards (40 CFR Part 50) for six criteria air pollutants which are potentially harmful to the public and to the environment. The NAAQS define what qualifies as clean air by identifying the maximum amount of a pollutant, averaged over a specified timeframe, that can be present without harming public health.[1] The EPA reviews the NAAQS at five-year intervals, and makes revisions as needed. The six criteria air pollutants currently covered by the NAAQS are: particulate matter (PM_{10} and $PM_{2.5}$), ozone (O_3), nitrogen oxides (NO_X), sulfur oxides (SO_X), carbon monoxide (CO), and lead. Under the FCAA, nonattainment areas (areas that exceed that maximum standard for one or more of the criteria pollutants) must prepare State Implementation Plans (SIPs) describing the actions the area will take to meet the NAAQS by the applicable attainment deadlines.

[1] California Air Resources Board, National Ambient Air Quality Standards https://ww2.arb.ca.gov/resources/national-ambient-air-quality-standards (Accessed June 2023).

The six primary criteria pollutants, as well as the potential health impacts associated with exposure to them, are described below:[2]

- Ozone (O3) is a secondary pollutant resulting from hydrocarbons and oxides of nitrogen, emitted by cars, solvents, factories, and pesticides, reacting in the presence of sunlight. The health impacts associated with ozone include difficulty breathing, chest pains, aggravate lung diseases such as asthma, emphysema, and chronic bronchitis, as well as shortness of breath, coughing, and lung damage with prolonged and chronic exposure.
- Carbon monoxide (CO) results from the combustion of fossil fuel by vehicles, as well as household sources such as some appliances, fireplaces, portable generators, charcoal grills. Carbon monoxide can cause headaches, dizziness, vomiting, and nausea. Severe health effects associated with exposure to concentrations of carbon monoxide include risk of loss of unconsciousness or death.
- Particulate matter (PM10) and fine particulate matter (PM2.5) are particulates of fugitive dust from construction projects and vehicles on unpaved roads, industrial smokestacks, and wildfires. The atmospheric formation of PM10 and PM2.5 can also result from SO2 and NOx. Health effects resulting from particulate matter include coughing, asthma, cancer, lung damage, heart attacks, and in severe cases, premature death.
- Nitrogen dioxide (NO2) is generated from fossil fuel combustion by vehicles, of road equipment, power generation, and household appliances such as furnaces, clothes dryers, ovens, and fireplaces. It can result in lung irritation and damage.
- Lead (Pb) is emitted as a result of lead smelters, ore and metals processing, combustion of leaded aviation fuel, waste incineration, utilities, and lead-acid battery manufacturing facilities. The health impacts associated with exposure to lead include damage to the nervous, immune, reproductive, developmental, and cardiovascular systems, as well as damage to kidney function.
- Sulfur dioxide (SO2) is generated from the combustion of fossil fuels by power plants and industries, refineries, and diesel engines. Sulfur dioxide can cause irritation to the nose, throat, and airways. It can also cause coughing, shortness of breath, tightness of chest, and puts individuals with asthma at high risk for developing issues.

A Supreme Court of California decision, Sierra Club v. County of Fresno (Friant Ranch), states that EIRs should relate a project's expected significant adverse air quality impacts to likely human health consequences or explain why it is not feasible at the time of preparing the EIR to provide such an analysis. Project-related health impacts are discussed in Section 2.5.6 c.

California Clean Air Act

The California Clean Air Act (CCAA) was passed into law in 1988, establishing ambient air quality standards for the State of California that exceed the NAAQS, as well as accelerated attainment dates for criteria pollutants established in the FCAA. The CCAA establishes requirements for district air quality plans to ensure that the state standards for criteria pollutants are met.

The National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) establish thresholds to determine whether the contaminant levels in the air are considered unhealthy. The current federal and state standards are shown in **Table 2.5-1**.

[2] CARB 2022 Scoping Plan Update, Environmental and Regulatory Setting, Table 3.

Table 2.5-1
State and National Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards	National Standards	
		Concentrations[1]	Primary	Secondary
Ozone (O_3)	1 Hour	0.09 ppm	--	
	8 Hour	0.070 ppm	0.070 ppm	
Particulate Matter (PM_{10})	24 Hour	50 µg/m^3	150 µg/m^3	
	AAM[2]	20 µg/m^3	--	
Fine Particulate Matter ($PM_{2.5}$)	24 Hour	--	35 µg/m^3	
	AAM	12 µg/m^3	9.0 µg/m^3	15 µg/m^3
Carbon Monoxide	1 Hour	20 ppm	35 ppm	--
	8 Hour	9.0 ppm	9 ppm	--
Nitrogen Dioxide (NO_2)	1 Hour	0.18 ppm	100 ppb	--
	AAM	0.030 ppm	0.053 ppm	
Sulfur Dioxide (SO_2)	1 Hour	0.25 ppm	75 ppb	--
	3 Hour	--	--	0.5 ppm
	24 Hour	0.04 ppm	0.14 ppm	--
	AAM	--	0.030 ppm	--
Lead	30 Day Average	1.5 µg/m^3	--	--
	Calendar Quarter	--	1.5 µg/m^3	
	Rolling 3-Month Average	--	0.15 µg/m^3	
Visibility Reducing Particles	8 Hour	--	No National Standards	
Sulfates	24 Hour	25 µg/m^3		
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)		
Vinyl Chloride	24 Hour	0.01 ppm (26 µg/m^3)		

[1] *µg/m^3 = micrograms per cubic* meter of air
[2] *AAM = Annual Arithmetic Mean*
Source: California Air Resources Board, Ambient Air Quality Standards (May 2016) https://ww2.arb.ca.gov/sites/default/files/2020-07/aaqs2.pdf (accessed June 2023).

CARB
The California Air Resources Board (CARB) is part of the California Environmental Protection Agency and is responsible for preparation of the SIP for submission to the EPA, as well as for overseeing air quality districts and approving district air quality plans. Established in 1967, the CARB regulates vehicle emissions standards and sets area designation for criteria pollutants.

Title 24 Energy Efficiency Standards & California Green Building Standards
Title 24 of the California Code of Regulations was established in 1978 and serves to enhance and regulate California's building standards. The Building Energy Efficiency Standards, Parts 6 and 11 of Title 24, are updated by the California Energy Commission (CEC) every three years. The 2022 Energy Code (Part 6), effective as of January 1, 2023, includes regulations encouraging efficient electric heat pumps, establishing electric-ready requirements for appliances and mechanical systems in new homes, strengthening ventilation standards, as well as expanding solar photovoltaic and battery storage standards. The 2022 update to Part 11, the California Green Building Standards Code (CALGreen), includes mandatory minimum environmental performance standards for all new construction of commercial, residential, and State-owned buildings, as well as schools and hospitals.

CALGreen Section 4.106 requires that all new single family and multifamily dwellings, as well as hotels, are built with EV Capable parking spaces. One and two-family dwellings must include one EV capable space per dwelling unit, and multifamily buildings and hotels must build a proportion of all provided parking to be either EV Capable or EV Ready.[3] In accordance with Section 5.106, all new non-residential developments must provide both a portion of parking spaces are that EV Capable, as well as a portion of spaces with EV charging stations.

Toxic Air Contaminants (TACs)
According to §39655 of the California Health and Safety Code, a toxic air contaminant (TAC) is "an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health." The Health and Safety Code definition of TACs also covers substances listed as hazardous air pollutants pursuant to §7412 of Title 42 of the United States Code. TACs are identified and controlled by the California Air Resources Board (CARB) in conjunction with the Office of Environmental Health Hazard Assessment (OEHHA). As an exception, TACs used in pesticides are regulated by the Department of Pesticide Regulation.

To reduce exposure to TACs, CARB recommends minimum separation distances between new sensitive land uses, such as residences, and eight categories of existing sources: high-traffic freeways and roads, distribution centers, rail yards, ports, refineries, chrome plating facilities, perchloroethylene dry cleaners, and large gas stations.[4] The proposed Project neither proposes any such facilities, nor is it situated in proximity to any such facility.

Regional and Local

South Coast Air Quality Management District (SCAQMD)
The California Air Resources Board (CARB) is responsible for regulating mobile emissions sources, while air quality management districts such as SCAQMD are responsible for controlling stationary sources and enforcing regulations. The SCAQMD is responsible for preparing the local portion of the State Implementation Plan, through which it is the primary authority for regulating stationary emissions sources.

The SCAQMD jurisdiction covers approximately 10,743 square miles including the South Coast Air Basin as well as the Riverside County portions of the Salton Sea Air Basin (SSAB) and Mojave Desert Air Basin (MDAB). The Coachella Valley Planning Area is within the Riverside County portion of the SSAB.

In accordance with the FCAA, areas that do not attain the NAAQS are required to develop and implement plans to attain healthy air quality in reasonable timeframe. Likewise, areas that do not attain the NAAQS are required to apply and enforce measures in order to meet the State standard by the earliest practicable date. Regions under the SCAQMD have historically been nonattainment areas for particulate matter and fine particulate matter (PM_{10} and $PM_{2.5}$) as well as ozone (O_3). The SCAQMD regulates air quality through air quality management plans (AQMPs) as well as the adoption of rules targeting specific sources of emissions.

> **Final 2022 Air Quality Management Plan**: The SCAQMD has developed six air quality management plans (AQMPs) since the 1990s. The District's 2022 AQMP focuses on implementing provisions to bring the Coachella Valley Planning Area in compliance with the federal 8-hour ozone standard by August 3, 2033.

[3] EV Capable refers to parking spaces which have electrical panel capacity, a dedicated branch circuit, and a raceway to support future installation of a charging station. EV Ready refers to the same conditions as EV Capable, with the addition of other electrical components as well as a receptable or blank cover to support future installation of a charging station.

[4] CalEPA and CARB, Air Quality and Land Use Handbook: A Community Health Perspective (April 2005).

Final 2003 Coachella Valley PM10 State Implementation Plan: The 2003 Coachella Valley PM_{10} State Implementation Plan (CVSIP) builds on the 2002 CVSIP which provided a comprehensive strategy to meet the NAAQS for PM_{10} by 2006. The 2003 CVSIP update is based on updated motor vehicle emissions modeling and assumptions from CARB, and thus includes updated emissions inventories, mobile source budgets and attainment demonstration.

The SCAQMD has also established construction and operation thresholds for criteria air pollutants, as shown in **Table 2.5-2**. If exceeded, these thresholds indicate that a project has significant impacts to air quality:

Table 2.5-2
SCAQMD Air Quality Mass Daily Thresholds

Criteria Pollutant	Daily Thresholds (pounds)	
	Construction	Operation
Oxides of Nitrogen (NO_x)	100	55
Reactive Organic Gases (ROG)	75	55
Particulate Matter (PM_{10})	150	150
Particulate Matter ($PM_{2.5}$)	55	55
Oxides of Sulfur (SO_x)	150	150
Carbon Monoxide (CO)	550	550
Lead (Pb)	3	3
Source: South Coast AQMD Air Quality Significance Thresholds (March 2023).		

The SCAQMD has adopted rules and regulations to improve and maintain air quality in the district. The rules and regulations also implement state and federal policies, such as the Clean Air Act. The current SCAQMD rule book contains 28 regulations and associated rules. Excerpts of applicable regulations to the Project are listed below. The complete list and full text of the current rule book is available on the SCAQMD website.[5]

Regulation II – Permits

Rule 201: Permits to Construct: A person shall not build, erect, install, alter or replace any equipment or agricultural permit unit, the use of which may cause the issuance of air contaminants or the use of which may eliminate, reduce or control the issuance of air contaminants without first obtaining written authorization for such construction from the Executive Officer. A permit to construct shall remain in effect until the permit to operate the equipment or agricultural permit unit for which the application was filed is granted or denied, or the application is canceled.

Regulation IV – Prohibitions

Rule 402: Nuisance: A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

Rule 403: Fugitive Dust Control: The purpose of this Rule is to reduce the amount of particulate matter entrained in the ambient air as a result of anthropogenic (man-made) fugitive dust sources by requiring actions to prevent, reduce or mitigate fugitive dust emissions.

[5] South Coast AQMD Rule Book, http://www.aqmd.gov/home/rules-compliance/rules/scaqmd-rule-book (accessed June 2023).

Rule 404: Particulate Matter Concentration: A person shall not discharge into the atmosphere from any source, particulate matter except liquid sulfur compounds, in excess of the concentration at standard conditions, shown in Table 404(a). Where the volume discharged is between figures listed in the table, the exact concentration permitted to be discharged shall be determined by linear interpolation.

Regulation XI – Source Specific Standards

Rule 1113: Architectural Coatings: This rule is applicable to any person who supplies, sells, markets, offers for sale, or manufactures any architectural coating that is intended to be field applied within the District to stationary structures or their appurtenances, and to fields and lawns; as well as any person who applies, stores at a worksite, or solicits the application of any architectural coating within the District. The purpose of this rule is to limit the VOC content of architectural coatings used in the District.

Regulation XIII – New Source Review

Rule 1300: New Source Review General: This regulation sets forth pre-construction review requirements for new, modified, or relocated facilities, to ensure that the operation of such facilities does not interfere with progress in attainment of the national ambient air quality standards, and that future economic growth within the South Coast Air Quality Management District (District) is not unnecessarily restricted. The specific air quality goal of this regulation is to achieve no net increases from new or modified permitted sources of nonattainment air contaminants or their precursors.

Assembly Bill 617 (AB 617)

AB 617 was signed into law in July 2017 and aims to address the disproportionate impacts of air pollution of environmental justice communities. CARB designated the Eastern Coachella Valley (ECV) as an AB 617 community in 2019. As a result, SCAQMD was required to develop and implement a Community Emissions Reduction Plan (CERP) and Community Air Monitoring Plan (CAMP) in collaboration with the Community Steering Committee (CSC). The CSC is comprised of a diverse group of people who live, work, and/or study in the ECV. The Eastern Coachella Valley CERP (July 2021) identifies the following air quality priorities: the Salton Sea, pesticides, open burning and illegal dumping, fugitive road dust and off-roading, diesel mobile sources, and the Greenleaf Desert View Power Plant. The CERP establishes monitoring and enforcement measures that SCAQMD and CARB will undertake in order to reduce air pollution from the identified sources.

Riverside County General Plan

The County General Plan includes an Air Quality Element which sets forth policies promoting pollution control, as well as land use and transportation measures to reduce pollutant emissions. The following policies from the Air Quality Element are relevant to the proposed Project:

AQ 2.2 Require site plan designs to protect people and land uses sensitive to air pollution through the use of barriers and/or distance from emissions sources when possible.

AQ 2.3 Encourage the use of pollution control measures such as landscaping, vegetation and other materials, which trap particulate matter or control pollution.

AQ 4.4 Require residential building construction to comply with energy use guidelines detailed in Part 6 (California Energy Code) and/or Part 11 (California Green Building Standards Code) of Title 24 of the California Code of Regulations.

AQ 4.7 To the greatest extent possible, require every project to mitigate any of its anticipated emissions which exceed allowable emissions as established by the SCAQMD, MDAQMD, SCAB, the Environmental Protection Agency and the California Air Resources Board.

AQ 4.9 Require compliance with SCAQMD Rules 403 and 403.1 and support appropriate future measures to reduce fugitive dust emanating from construction sites.

AQ 8.2 Emphasize job creation and reductions in vehicle miles traveled in job-poor areas to improve air quality over other less efficient methods.

2.5.4 Environmental Setting

Regional and local agencies have assumed some responsibility for assuring that state and federal air quality standards are achieved. For the Coachella Valley, the South Coast Air Quality Management District (SCAQMD) is responsible for establishing air quality measurement criteria and relevant management policies for the Salton Sea Air Basin (SSAB). The 2003 PM_{10} Coachella Valley State Implementation Plan (CVSIP) was jointly developed by SCAQMD, Coachella Valley Association of Governments (CVAG) and its member jurisdictions (including the County), and was approved by the U.S. EPA. The 2003 PM_{10} CVSIP updated the 2002 plan, which was drafted as a requirement of the federal Clean Air Act to demonstrate expeditious attainment of PM_{10} standards.[6] On April 18, 2003, U.S. EPA approved the updated CVSIP.

The SSAB, including the Coachella Valley, is subject to the provisions of the SCAQMD Rule Book,[7] which sets forth policies and other measures designed to meet federal and state ambient air quality standards. These rules, along with SCAQMD's 2022 Air Quality Management Plan are intended to satisfy the planning requirements of both the federal and state Clean Air Acts. The SCAQMD also monitors daily pollutant levels and meteorological conditions throughout the District.

Federal and state air quality standards established for specific pollutants, which are called "criteria pollutants," are designed to protect the general population and particularly those who are susceptible to respiratory distress or infection, such as the elderly, children, asthmatics, or those weak from disease or illness. The following air pollutants are collectively known as criteria air pollutants and are defined as those pollutants for which established air quality standards have been adopted by federal and state governments: ozone (O_3), carbon monoxide (CO), nitrogen oxide (NO_x), sulfur dioxide (SO_2), particulate matter (PM_{10} and $PM_{2.5}$), volatile organize compounds (VOC), lead (Pb).

2.5.5 Existing Conditions

Air Quality Monitoring

Air quality is measured at monitoring stations operated by the air quality management district. The SCAQMD operates three air monitoring stations in Source Receptor Area (SRA) 30 (Coachella Valley): Indio, Palm Springs, and Mecca. The stations have been operational since 1985, 1987, and 2013, respectively. Ozone is regularly measured at the Palm Springs and Indio monitoring stations. PM_{10} and $PM_{2.5}$ are measured at the Palm Springs, Indio and Mecca stations. The Indio and Mecca stations are the nearest to the Project, located approximately 7.8 miles north and 5.75 miles southeast of the Project site, respectively.

The following tables show the maximum concentration and number of days annually that ambient air quality measured at Coachella Valley monitoring stations exceeded state and national standards for ozone and particulate matter (PM_{10}) from 2016 to 2023.

6 2003 Coachella Valley PM_{10} State Implementation Plan, August 1, 2003.
7 South Coast Air Quality Management District Rules and Regulations, Adopted February 4, 1977.

Table 2.5-3 shows the ozone monitoring data for the Palm Springs and Indio monitoring stations. Palm Springs consistently had more days per year exceeding the state and federal standards for ozone.

Table 2.5-3
Ozone Monitoring Data

Monitoring Station	Year	Maximum Concentration		Number of Days Standard Exceeded		
				Federal	State	
		1 Hour ppm	8 Hour ppm[1]	8 Hour[2]	1 Hour	8 Hour
Palm Springs	2016	0.103	0.092	46	6	48
	2017	0.113	0.097	57	18	63
	2018	0.111	0.099	56	11	58
	2019	0.100	0.084	34	5	39
	2020	0.119	0.094	49	9	53
	2021	0.110	0.092	35	10	38
	2022	0.106	0.089	39	7	43
	2023	0.116	0.093	38	8	39
Indio	2016	0.099	0.089	27	3	29
	2017	0.107	0.093	44	8	47
	2018	0.106	0.091	49	4	52
	2019	0.103	0.087	43	4	47
	2020	0.097	0.084	42	2	44
	2021	0.099	0.078	18	2	24
	2022	0.072	0.069	0	0	0
	2023	0.081	0.072	1	0	1

Source: iAdam: Air Quality Data Statistics, California Air Resources Board; www.arb.ca.gov/adam (accessed August 2024).
[1] 8-Hour Average National 0.07 ppm Standard Maximum
[2] Days Exceeding National 0.070 ppm Standard

Table 2.5-4 shows the PM_{10} data collected at the Palm Springs, Indio, and Mecca monitoring stations. All three stations had days over the eight-year period that exceeded the national and/or state standards. The annual arithmetic mean federal standard of less than 50 $\mu g/m^3$ was not exceeded at any of the monitoring stations from 2016 to 2023.

Table 2.5-4
Particulate Matter 10 Monitoring Data

Monitoring Station	Year	Maximum Concentration (µg/m³/24 hours)[1]		Number of Days Standard Exceeded		Annual Arithmetic Mean[3]
		Federal	State[2]	Federal	State	
Palm Springs	2016	447.2	113.1	1.1	*	23.1
	2017	105.6	60.5	0	*	22.1
	2018	442.3	37.4	2.0	0	22.9
	2019	75.6	51.8	0	6.0	20.7
	2020	129.8	40.8	*	*	23.2
	2021	35.2	34.5	0	0	18.4
	2022	159.5	156.3	*	*	21.1
	2023	173.6	170.1	*	*	23.1
Indio	2016	393.2	261.2	*	135.7	37.0
	2017	198.6	143.1	1.0	*	34.8
	2018	336.0	149.6	2.2	88.4	34.8
	2019	141.9	80.3	0	25.7	28.5
	2020	145.2	53.8	0	*	31.6
	2021	100.4	100.6	0	29.3	28.6
	2022	160.3	160.0	*	*	19.8
	2023	*	*	*	*	*
Mecca	2016	468.9	183.1	*	*	41.1
	2017	477.6	198.8	*	81.5	47.5
	2018	275.2	59.8	6.3	*	40.8
	2019	232.9	213.7	*	49.2	35.0
	2020	680.6	62.6	10.0	*	45.5
	2021	334.5	118.3	3.0	*	41.5
	2022	*	*	*	*	*
	2023	*	*	*	*	*

Source: iAdam: Air Quality Data Statistics, California Air Resources Board; www.arb.ca.gov/adam (accessed August 2024).
[1] Note: Federal maximum concentration is based on the highest *standard-conditions* 24-hour PM_{10} average observed within a year. State maximum concentration is based on the highest *local-condition* 24-hour PM_{10} average.
[2] * = There was insufficient (or no) data available to determine the value.
[3] Federal Annual Average Standard AAM exceeding 50 µg/m³

Regional Attainment

The air quality of a particular locale is considered to be in attainment if the measured ambient air pollutant levels for O_3, CO, SO_2 (1-hour and 24-hour), NO_2, and PM_{10} and $PM_{2.5}$ are not exceeded and all other standards are not equaled or exceeded at any time in any consecutive three-year period. Attainment also assumes the national standards (other than O_3, PM_{10}, and those based on annual averages or arithmetic mean) are not exceeded more than once per year. The O_3 standard is in attainment when the fourth highest eight-hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when 99 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.

The Project is located in the Coachella Valley Planning Area within the Salton Sea Air Basin (SSAB). **Table 2.5-5** shows the Coachella Valley's attainment status for the criteria air pollutants, as designated by the EPA. The Coachella Valley is designated as being in nonattainment for regional levels of particulate matter (PM_{10}) and ozone (O_3).

Table 2.5-5
Regional Attainment Status – Coachella Valley

Criteria Pollutant	Attainment Status
Ozone (O_3)	Nonattainment – Extreme
Carbon Monoxide (CO)	Attainment
Fine Particulate Matter ($PM_{2.5}$)	Attainment
Particulate Matter (PM_{10})	Nonattainment - Serious
Nitrogen Dioxide (NO_2)	Attainment
Lead (Pb)	Attainment
Sulfur Dioxide (SO_2)	Attainment
Source: EPA Green Book (Updated July 31, 2024).	

Existing Land Use

The subject 619.1±-acre property is currently in active agricultural cultivation and is subject to seasonal disturbance and is susceptible to wind and water erosion. Agricultural operations, like the existing on-site operation, are one of the largest sources of dust in the eastern Coachella Valley. Dust emissions from agricultural operations result from the disturbance of soil inherent in farming. These include discing, leveling, and other mechanical operations. Dust emissions from agriculture exhibits a somewhat seasonal pattern and includes dust emissions arising from the harvesting and transport of agricultural crops. During periods when the subject site is left fallow, it is subject to serious wind erosion and generation of fugitive dust. Today, the Project site and current agricultural activities are a significant source of area concentrations of suspended particulates. Dust emissions from agricultural operations are exempt from regulation.

The Project will require construction of an off-site water reservoir at the CVWD Middleton Reservoir site. The proposed 5-million-gallon (mg) reservoir would be constructed next to the existing 2.5 mg tank on the Middleton Reservoir site.

Lands surrounding the Project site are in a variety of uses. Agriculture is the predominant land use in the area, in addition to fallow natural areas, several equestrian uses, and scattered residential. The Thermal Club is to the immediate northeast of the subject site, and the Jacqueline Cochran Regional Airport is located 1.25± miles also to the northeast. The CVUSD Mirage High School, Toro Canyon Middle School and Las Palmitas Elementary School are located to the south at the northeast corner of Avenue 66 and Tyler Street. Lands of the Torres-Martinez Tribe are located immediately south of the subject property. A few residential properties occur immediately east of the subject property, on Tyler Street south of Avenue 62.

2.5.6 Project Impacts

The proposed Project will generate air pollutants during both construction and operational phases. CalEEMod Version 2022.1[8] was used to project pollutant emissions. The following parameters and assumptions were put into the model:

- A seven-year construction period and operational year of 2032 were established based on the Traffic Impact Analysis (TIA) prepared for the Project by Urban Crossroads, Inc.
- Criteria pollutant emissions are projected based on the estimated conditions during the October to April event season at the equestrian center, when the Project will be busiest.

[8] The online application of CalEEMod Version 2022.1.1.23 was used. The online application is frequently updated to fix minor format issues and bugs.

- At buildout, the Project will generate an average of 18,939 weekday trips, 21,523 Saturday trips, and 13,995 Sunday trips, as provided in the TIA by Urban Crossroads, Inc.
- The Project will require construction of an off-site water reservoir at the CVWD Middleton Reservoir site. Criteria pollutant emissions associated with construction of the proposed reservoir were included in the CalEEMod analysis for the Project. For analysis purposes, construction of the water tank was modeled using the User Defined Industrial land use type in CalEEMod.
- The breakdown of land use parameters inputted to CalEEMod are provided **Table 2.5-6**.

Table 2.5-6
CalEEMod Land Use Assumptions

Planning Area	Land Use (proposed)	Land Use (CalEEMod)	Acres	Dwelling Units	Commercial SF	Other	Trip Rate[1]		
							Week	Sat	Sun
1	Equestrian Center (barns)	Unrefrigerated Warehouse – No Rail	182.43			597,800 SF	0.7	1.24	1.25
	Equestrian Center (commercial)	Strip Mall	1.72		75,000		35.97	41.45	24.79
	Equestrian Center (office)	General Office Building	0.23			10,000 SF	10.84	2.21	0.70
2	Estate Residential	Single Family Housing	263.80	522			7.47	8.09	5.00
3	Single Family Attached/Detached								
4a	Workforce Housing	Mobile Home Park	18.30	500			1.94	2.58	1.94
4b	Equestrian RV Park	Mobile Home Park	22.80			320 RV spaces	1.94	2.95	1.94
5	Resort Condos	Condo/ Townhouse High Rise	42.10	340			6.74	7.69	4.09
	Hotel	Hotel	8.10			150 rooms	12.23	14.38	10.51
	Resort Retail	Regional Shopping Center	25.60		200,000		30.49	32.11	21.10
6	Commercial Retail								
Project-wide	Perimeter ROW	Other Asphalt Surfaces	15.30				0.00	0.00	0.00
	--	Parking Lot	38.72			4,302 spaces	0.00	0.00	0.00
Off-Site Water Reservoir		User Defined Industrial	13.6			20,867 SF	0.00	0.00	0.00
		TOTALS:	632.7	1,362	275,000	--	--	--	--

[1] Thermal Ranch Specific Plan Traffic Analysis, prepared by Urban Crossroads, Inc. (July 2023), Section 4.1.

Land uses are primarily based on the Thermal Ranch Specific Plan and the TIA prepared for the Project. However, in instances where CalEEMod did not provide a land use category for a proposed use, the most applicable option was selected. The following land uses proposed in the Thermal Ranch Specific Plan were replaced with CalEEMod categories for analysis purposes:

- Modular Homes and RV Park: The Mobile Home Park land use was applied to both intended uses, and trip rates were adjusted based on the Project-specific TIA.

- Specialty Retail (Equestrian Center): The Strip Mall land use was used in CalEEMod, and trip rates were adjusted based on the Project-specific TIA.

- Equestrian Center (Barns): Unrefrigerated Warehouse used in CalEEMod. Trip rates were adjusted based on traffic count data collected at the existing Desert International Horse Show facility, as provided in the Project-specific TIA. Operational energy use was also adjusted to account for no natural gas connections in the barns.

It is also assumed that the Project will comply with the Title 24 requirements for the provision of photovoltaic systems on new single and multifamily residential buildings and on most new commercial buildings, and that as required by the Riverside County CAP Update, it will generate on-site renewable energy providing for at least of at least 20% of energy demand for commercial, office, industrial, and multi-family development, and at least 30% of energy demand for single-family residential development.

a) Conflict with or obstruct implementation of the applicable air quality plan?

The Project site is located within the Riverside County portion of the Salton Sea Air Basin, also known as the Coachella Valley planning area. The Coachella Valley is within the jurisdiction of the SCAQMD, which is responsible for monitoring criteria air pollutant concentrations and establishing management policies for the South Coast Air Basin as well as the Coachella Valley.

All development within the Coachella Valley, including the proposed Project, is subject to the provisions of the 2022 Air Quality Management Plan (2022 AQMP) as well as the 2003 Coachella Valley PM_{10} State Implementation Plan (2003 CV PM_{10} SIP). The 2022 AQMP describes the District's plan to achieve Federal and State air quality standards set forth in the Federal and State Clean Air Acts. The 2003 CV PM_{10} SIP was prepared by SCAQMD in conjunction with the Coachella Valley Association of Governments (CVAG), Riverside County and other local jurisdictions. The plan includes PM_{10} control program enhancements and requests an extension of the region's PM_{10} attainment date. The Coachella Valley is designated as a serious non-attainment area for PM_{10} and thus subject to the regulations in the 2003 SIP as well as the rules and regulations imposed by the SCAQMD, including Rule 403.1, which governs fugitive dust emissions from construction within the Coachella Valley.

Southern California Association of Governments 2024 RTP/SCS

SCAQMD works in conjunction with the Southern California Association of Governments (SCAG), county transportation commissions, and local governments. It also cooperates with all state and federal agencies. SCAG adopted the 2024 to 2050 Regional Transportation Plan / Sustainable Communities Strategy (2024 RTP/SCS) to comply with metropolitan planning organization (MPO) requirements under the Sustainable Communities and Climate Protection Act. The Growth Management chapter of the RTP/SCS forms the basis for land use and transportation controls of air quality plans. Projects that are consistent with the projections of population forecasts are considered consistent with the AQMP.

The Project proposes a substantial change in land use. There are currently no dwelling units or other types of urban development on the Project site and the site is currently zoned for Agriculture (A-2-10) and Controlled Development (W-2). Under the existing zoning, development of four parcels making up the subject site (751-020-002, -003, -006, and -007) at the maximum permitted density would result in a total of 148 units (1 primary residence and 36 units of agricultural employee housing[9] per parcel). Based on an average of 3.12 persons per household in unincorporated Riverside County, maximum buildout under the existing conditions could result in approximately 462 residents.[10]

[9] Eligible agricultural employee housing as defined under the Employee Housing Act, pursuant to §17021.8 of the Health and Safety Code.

[10] State of California, Department of Finance, E-5 Population and Housing Estimates for Cities, Counties and the State — January 1, 2021-2024.

The Project proposes the development of up to 1,362 dwelling units, which, according to the estimated household sizes provided in the VMT study prepared for the Project by Urban Crossroads, could result in up to 3,677 residents on-site.[11] Buildout of the Project could therefore result in up to a 696% increase in on-site population compared to maximum buildout under the existing conditions.

The growth forecast provided in the RTP/SCS is based, in part, on local land use plans. Given that the Project proposes a substantial change in the existing and designated use of the subject property, it can be assumed that the resulting population would not have been accounted for in local and regional growth projections. The Demographics and Growth Forecast prepared for the 2024 RTP/SCS projects that the population in Riverside County will grow by approximately 25.4% from 2019 to 2050, increasing from 2,386,000 to 2,992,000 residents. In 2024, the total population in Riverside County is estimated to be 2,442,378 residents, according to the Department of Finance Table E-5 Population and Housing Estimates. Based on this population estimate, population growth in the County is generally on-track with the growth forecasted in the RTP/SCS.[12] The significant intensification in land use proposed for the Project site could therefore result in population growth beyond what was accounted for in the RTP/SCS growth forecast.

The Riverside County population, housing, and employment forecasts for 2010, 2020, and 2035 are provided in the Population and Employment Forecasts technical appendix to the County General Plan. These forecasts project that population in the Eastern Coachella Valley Area Plan would increase by 121% (74,954 to 166,106) from 2010 to 2020.[13] However, data from the 2010 and 2020 census indicates that growth in the Project planning area has occurred significantly more slowly than anticipated in the General Plan. According to census data for the Coachella Valley Census County Division (CCD), the area's population grew by 5.5% over the ten-year period.[14]

Furthermore, aside from the growth forecast component of the RTP/SCS, it should be noted that the Project would be consistent with some of the goals and strategies provided in the Sustainable Communities Strategy. For example, consistent with the goal to "Focus growth near destinations and mobility options," the proposed development would provide a significant number of housing units in proximity to the employment and recreation opportunities associated with the proposed equestrian center and commercial space.

For those living on-site, this land use pattern would facilitate multimodal access to work and other destinations, and for those living in the eastern Coachella Valley more broadly, the jobs generated by this development could reduce commute times and distances. Consistent with the SCS goal to "Promote diverse housing choices," the Project will provide a range of housing options, including workforce housing, attached and detached single family homes, and resort condominiums.

Riverside County General Plan – Air Quality Element

Development resulting from the proposed Project would be required to adhere to the County General Plan policies designed to reduce air quality impacts. The proposed development must also be implemented in accordance with all applicable SCAQMD rules and regulations to ensure that impacts to

11 Thermal Ranch Specific Plan Vehicle Miles Traveled (VMT) Analysis, prepared by Urban Crossroads, Inc. (December 2023).

12 The RTP/SCS forecasts a 25.4% increase in population over the 31-year period of 2019 to 2050, or an increase of 606,000 new residents. As of 2024, approximately 16% of the 31-year period has passed. 16% of the projected growth would result in 96,960 more residents than 2019, or a total population of 2,482,960 in 2024. The Department of Finance population estimate therefore represents 98.4% of the RTP/SCS forecast for 2024.

13 Riverside County General Plan Appendix F-1 Population and Employment Forecasts.

14 U.S. Census Bureau, 2010 and 2020 Decennial Census.

air quality are reduced to the greatest extent practicable. As stated in policy AQ 4.9 in the General Plan, all developments must comply with SCAQMD Rules 403 and 403.1 in order to reduce fugitive dust generated by construction sites.

Consistent with Rule 403.1, the Project will be required to prepare a Fugitive Dust Control Plan which may include standard dust control measures such as watering exposed areas. Furthermore, as stated in AQ 4.7 of the Riverside County General Plan, all projects must mitigate, to the greatest extent possible, any anticipated emissions that would exceed the thresholds established by SCAQMD. Compliance with General Plan policies and SCAQMD rules and regulations will ensure that the Project will comply with air quality management plans, to the greatest extent possible.

Conclusion

Given that the Project proposes a General Plan Amendment and a Change of Zone to develop a mixed-use community on the currently agricultural site, the resulting intensification of residential and commercial uses will make a substantial contribution to unincorporated County growth. It should be noted that this growth would occur in the ECVAP planning area where real growth has been significantly slower than was projected to occur between 2010 and 2020.[15] Nonetheless, the population growth resulting from the Project would not have been accounted for during the development of the SCAG RTP/SCS growth forecasts, and as a result, the Project could contribute to the County's possible exceedance of the growth planned for in the development of SCAQMD's plans.

While increases in population are generally correlated with increased levels of air pollutant emissions, State laws and regional policies pertaining to air quality, in combination with proper land use planning, adherence to the Title 24 building and energy codes, and increased opportunities for alternative modes of transportation, are intended to remove the direct correlation between population growth and air quality impacts. As a result, the population growth county-wide in unincorporated Riverside County potentially resulting from the Project would not necessarily conflict with or obstruct implementation of future Air Quality Management Plans.

Despite compliance with General Plan air quality policies and SCAQMD rules and regulations, the proposed Project still has the potential to conflict with or obstruct the implementation of applicable air quality plans. As discussed in Section 2.5.6(b), below, air quality emissions modeled using CalEEMod project that operation of the Project will result in emissions of CO, NO_x and ROG exceeding SCAQMD's daily thresholds. These emissions would primarily be from mobile sources (i.e. vehicle emissions from residents, employees, and visitors to the site) and area sources (i.e. architectural coatings, consumer products, landscaping equipment). Due to the rural location of the Project site and the elective nature of residents' transportation choices, mitigation measures cannot be reliably enforced or quantified for mobile emissions.

Similarly, the use of consumer products and landscaping equipment in the proposed development would be subject to the choices of individual residents and commercial tenants. Insofar as the proposed development's operational CO, NO_x and ROG emissions may exceed the SCAQMD thresholds, the Project has the potential to conflict with or obstruct the implementation of applicable air quality plans, including SCAQMD's 2022 Air Quality Management Plan. As noted, evaporative reactive organic gas (ROG), nitrous oxides (NO_x), and carbon monoxide (CO) emissions are the consequence of current internal combustion engine technology.

[15] Population in the Eastern Coachella Valley Area Plan was projected to increase by approximately 120% from 2010 to 2020. Population in the Coachella Valley Census County Division increased by 5.5% from 2010 to 2020.

Current emissions control technologies, including catalytic converters, have reduced but not yet eliminated ROG, NO_x and CO emissions. Driver-implemented actions to further reduce CO and NO_x emissions include using higher octane fuels, changing oil and air filters more frequently, and driving on properly inflated tires. As noted, these involve personal choices and their implementation cannot be assured. Considering that mitigation measures cannot be confidently enforced or quantified for mobile and area sources of operational emissions associated with the Project, the resulting impacts would be potentially significant and unavoidable.

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

A project's impacts to air quality are considered significant if there is a cumulatively considerable net increase of any criteria pollutant for which the project area is in non-attainment under the federal and state ambient air quality standards. The two primary pollutants of concern in non-attainment in the Coachella Valley are ozone (O_3) and particulate matter (PM_{10}).

As stated above, and as described in greater detail in the Air Quality and Greenhouse Gas Report prepared for the Project (see Appendix B), air quality emissions were projected for the proposed development using CalEEMod Version 2022.1. The Project will release criteria pollutants during its construction and operation.

Project Construction Emissions

The Project will be built out in phases over several years. For the purpose of analysis, it is conservatively assumed that the Project will be built out over a seven-year period, concluding in 2032. This conservative assumption likely overstates the concentration of criteria pollutants that would be emitted on a daily basis because it compresses the expected construction activities into a shorter timeframe, resulting in more construction activity and resulting emissions per day. Based on market conditions, it is likely that actual buildout would occur over ten or more years, thus resulting in lower daily emissions stretched over a longer period.

The construction phase would include demolition of the existing agricultural sheds and structures, site preparation, excavation and grading, paving, building construction, and application of architectural coatings. Worker and vendor trips would be required throughout the construction phase. For analysis purposes, it is assumed that building construction, paving, and the application of architectural coatings will occur in staggered, overlapping phases.

Construction of the water tank is expected to occur over a 12-month period. Construction would include grading, construction of the tank, and the application of architectural coatings. To accommodate the proposed 5 mg tank on the Middleton Reservoir site, the northly portion of the existing berm will be shifted approximately 35 feet further north. The new reservoir will be approximately 163.1 feet in diameter, and a portion of the tank is expected to be constructed sub-grade. Grading is expected to involve 11,900 cubic yards (CY) of earthwork, including 7,500 CY of cut, 4,400 CY of import, and 10,800 CY of fill.

Table 2.5-7 shows that the emissions generated by construction of the Project and off-stie water reservoir t will not exceed the SCAQMD daily thresholds for any criteria air pollutants. The data represent maximum daily unmitigated emissions over the seven-year construction period, and assumes standard dust control measures have been applied to reduce particulate matter emissions per SCAQMD Rule 403.1. The emissions in the below table represent the maximum daily unmitigated emissions across summer and winter conditions. Given that SCAQMD's thresholds for criteria air pollutants will not be exceeded during unmitigated construction activities, and would therefore not result in a cumulatively considerable net increase of any criteria pollutant. Impacts are considered less than significant.

Table 2.5-7
Maximum Daily Construction-Related Emissions Summary (lbs per day)

	CO	NO_x	ROG	SO_x	PM_{10}	$PM_{2.5}$
Daily Maximum	165.0	56.8	28.2	0.13	27.0	7.67
SCAQMD Threshold	550	100	75	150	150	55
Exceeds?	**No**	**No**	**No**	**No**	**No**	**No**

Note: Construction-related PM_{10} and $PM_{2.5}$ emissions are shown as "mitigated" in the CalEEMod output tables; however, the mitigation used is standard dust control requirements per SCAQMD Rule 403.1, such as watering exposed on-site soil.

While impacts would be less than significant without mitigation, mitigation measures **AQ-1** and **AQ-2** are intended to further reduce emissions of particulate matter, NOx and ROG to the greatest extent practicable. **AQ-1** reiterates the requirement for a dust control plan per SCAQMD Rule 403.1, and **AQ-2** intends to reduce construction equipment emissions by limiting the idling of heavy-duty diesel equipment and requiring the use of a diesel oxidation catalyst in all off-road equipment used during the grading phase in construction of the Project and the water tank. The oxidation catalyst must achieve a minimum 15% reduction in NO_x emissions. Impacts would be less than significant with mitigation.

Operational Emissions

Operational emissions refer to the ongoing emissions over the life of a project. They include area source emissions (e.g. architectural coatings, consumer products, electric landscaping equipment), emissions from energy demand (e.g. electricity, natural gas) and mobile source emissions (e.g. vehicle trips).

Operation of the proposed 5 mg reservoir is not expected to generate new sources of criteria pollutant emissions. The only potential source of pollutant emissions associated with operation of the water tank would be the electricity used to pump water from the reservoir to the Project site. However, the Project's operational emissions, as projected using CalEEMod, already account for pollutant emissions resulting from energy and water demand. Therefore, operation of the 5 mg tank will not generate any additional operational emissions beyond those already accounted for in the Project's operations, as shown in **Table 2.5-11**.

According to the Traffic Impact Analysis (TIA) prepared by Urban Crossroads, the Project is expected to generate 18,939 weekday trips, 21,532 Saturday and 13,995 Sunday trips. Mobile emissions were projected in CalEEMod based on the TIA trip estimates and the land use assumptions provided in **Table 2.5-6**.

The SCAQMD threshold evaluates the maximum criteria pollutant emissions expected on any day of operations, and therefore, the Project's daily maximum emissions represent worst-case scenario conditions. As shown in **Table 2.5-8**, the Project-generated operational emissions will not exceed SCAQMD thresholds for SO_x, PM_{10}, or $PM_{2.5}$. However, daily emissions during Project operations will exceed the SCAQMD thresholds for carbon monoxide (CO), nitrogen oxides (NO_x), and reactive organic compounds (ROG).

Table 2.5-8
Maximum Daily Operational-Related Emissions Summary (lbs per day)

	CO	NO_x	ROG	SO_x	PM_{10}	$PM_{2.5}$
Daily Maximum	761	87.1	145	1.76	149	40
SCAQMD Threshold	550	55	55	150	150	55
Exceeds?	**Yes**	**Yes**	**Yes**	**No**	**No**	**No**

As shown in the above table, operation of the proposed Project would exceed the SCAQMD daily thresholds for CO, NO_x, and ROG. Approximately 80% of CO emissions, 83% of NO_x emissions, and 45% of ROG emissions associated with Project operations are from mobile sources, resulting in part from the large quantity of daily vehicle trips that the Project is projected to produce during the October to April competition season. It should be noted that the operational emissions in Table 2.5-8 represent the maximum emissions that would occur on any day of operations and, given the seasonal nature of the proposed equestrian center, it can be expected that mobile emissions would be significantly lower during the summer-off season. As such, given that CO, NO_x and ROG are relatively short-lived pollutants, daily emissions of these pollutants would fall well below SCAQMD thresholds during this five-month period.

Area Emissions

The majority of the Project's projected ROG exceedances are the result of area and mobile sources. Approximately 57% of the projected ROG emissions are from area sources, and approximately 43% of projected ROG emissions are from mobile sources. The mobile emissions of ROG are, like the CO and NO_x emissions, mostly the result of the number of daily trips estimated to be generated by the Project. ROG emissions from area sources may be the result of the reapplication of architectural coatings, as well as the use of consumer products such as cleaning supplies and kitchen aerosols, and the operation of landscaping equipment.[16]

ROG emissions from the reapplication of architectural coatings can be reduced by using low-VOC products as well as by reducing the frequency with which architectural coatings are reapplied. The VOC content of architectural coatings is already regulated and mitigated to the maximum extent feasible by SCAQMD Rule 1113, which provides VOC limits for products sold within the District's jurisdiction, and thus further mitigation cannot be reasonably applied to this source. The type of consumer products (cleaning products, kitchen aerosols) used on-site and the frequency and quantity in which they are used would have an impact on the level of ROG emissions during Project operations, as would the use of electric landscaping equipment in place of traditional gas-powered equipment.

However, these operational ROG/VOC emissions[17] cannot be feasibly mitigated to less than significant levels because they are largely dependent on the choices of individual vehicle owners, consumers, tenants, and property-owners, except to the extent that state or federal regulations further limit these emissions in the future. In the meantime, these practices would largely be subject to the discretion of residents and tenants of the Project, but despite these limitations, **AQ-5** and **AQ-6** recommend the use of low-VOC cleaning products and electric landscaping equipment on-site to the greatest extent practicable. These measures are dependent on voluntarily implementation, and as a result there are no practicable means through which the measures can be enforced as requirements, or that the resulting reductions in ROG emissions can be quantified. Given these factors, area-source emissions of ROG cannot be confidently reduced to meet the SCAQMD daily threshold, and this impact is considered significant.

Mobile Emissions

Mobile sources of CO, NO_x and ROG emissions could be reduced through the reduction of vehicle miles traveled (VMT) associated with the Project. The proposed development has already been designed with an extensive internal multi-modal trail network that is intended to enhance onsite connectivity for golf carts, bicycles and pedestrians, thereby reducing the need for vehicle trips within the property. The potential reductions in internal vehicle trips resulting from the Project's site designed have been accounted for in the TIA trip rates inputted to CalEEMod.

[16] California Emissions Estimator Model User's Guide Version 2022.1, prepared for California Air Pollution Control Officers Association (CAPCOA), April 2022.

[17] The Environmental Protection Agency formerly defined organic compounds in the air as Reactive Organic Gases (ROG), but later changed the terminology to Volatile Organic Compounds (VOC). For the purpose of this analysis, ROG emissions are assumed to be equivalent to VOC.

VMTs associated with trips to external destinations could be reduced by the use of public transportation and the promotion of carpooling programs for Project employees. However, the enforcement of these options are not considered feasible as mitigation measures here due to Project's location in a relatively rural area. While the Project area receives bus service from SunLine Transit Agency, including Route 9 which generally runs along Avenue 66 to Harrison Street, the nearest bus stop is currently approximately one mile from the southern edge of the subject site. The perimeter of the Project will also be lined by bike trails, which will implement and eventually connect with the area-wide trail network set forth in the County General Plan. Along with the design features described above, VMT associated with the Project has been reduced to the maximum extent feasible.

Furthermore, the installation of electric vehicle (EV) charging stations on site would support the use electric vehicles, thereby reducing mobile emissions resulting from gasoline-powered vehicles. Pursuant to measure R2-T4 in the Riverside County Climate Action Plan Update (2019), the Settlement Agreement requires the installation of EV charging stations in all garages of new units of residential development. Furthermore, according to Part 11 of the Title 24 regulations (CALGreen), multi-family developments with 20 or more dwelling units, hotels with 20 or more rooms, and all non-residential developments must provide EV chargers for a portion of all parking spaces (see mitigation measure **AQ-3**, Title 24 requirements)

The use of public transit, carpooling, electric vehicles, and bicycle facilities would reduce Project-related VMTs, thereby reducing the Project's CO, NO_x and ROG emissions. However, the elective use of alternative modes of transportation by residents, employees, and visitors of the Project cannot be confidently quantified and applied as mitigation measures in a way that ensures operational CO, NO_x and ROG emissions will not exceed the SCAQMD thresholds. Therefore, operational emissions of criteria pollutants CO, NO_x and ROG are considered significant and unavoidable.

While Project operations are not expected to exceed the daily threshold for PM_{10} or $PM_{2.5}$, an operational Fugitive Dust Control Plan should be prepared and implemented for Planning Area 1, the equestrian center, to ensure that particulate matter emissions are minimized to the maximum extent feasible (see mitigation measure **AQ-4**). This plan should be developed to reduce particulate matter emitted as a result of equestrian activities on unpaved surfaces, and may include stabilization measures such as the application of water or the application of dust suppressants. The implementation of **AQ-4** will ensure that PM_{10} and $PM_{2.5}$ emissions will be less than significant; however, this measure will not impact the Project's exceedance of the daily thresholds for CO, NO_x and ROG, and impacts associated with the emission of these pollutants will still be significant and unavoidable.

Cumulative Contribution – Non-Attainment Criteria Pollutants

Given the dispersing nature of pollutant emissions and aggregate impacts from nearby jurisdictions, cumulative air quality is evaluated on a regional scale. As previously described, the Riverside County portion of the Salton Sea Air Basin (also known as the Coachella Valley planning area) is a designated non-attainment region for PM_{10} and ozone. Any development resulting in emissions of PM_{10}, ozone, or ozone precursors will, to some extent, contribute to existing regional non-attainment.

The SCAQMD does not currently provide thresholds of significance for the cumulative emissions of multiple projects. Instead, a project's potential cumulative contributions can be analyzed using the criteria for project-specific impacts, assuming that if an individual development generates less than significant construction and operation emissions, then it would not generate a cumulatively considerable increase in non-attainment criteria pollutants.

The Project is located in a non-attainment area for PM_{10}, as well ozone, for which precursors include CO, NO_x, and ROG. As shown in Tables 2.5-7 and 2.5-8, the Project's emissions of PM_{10} are projected to be below the SCAQMD thresholds for project-specific impacts. However, the Project's operational emissions

of CO, NO_x and ROG are expected to exceed the District's project-specific thresholds. As discussed above, mobile sources form the majority of the Project's CO, NO_x and ROG emissions, and while the Project incorporates an extensive internal multi-modal trail network that is intended to enhance onsite connectivity for golf carts, bicycles and pedestrians, thereby reducing the need for vehicle trips within the property, these efforts will not reduce the Project's CO, NO_x and ROG emissions below SCAQMD thresholds. Therefore, the Project's contributions of ozone precursors will be significant and unavoidable, and the resulting contributions to regional non-attainment will be cumulatively considerable.

c) Expose sensitive receptors, which are located within one (1) mile of the project site, to substantial pollutant concentrations?

Sensitive receptors located within one mile of the Project site include residential properties on Tyler Street, east of the subject site, and the CVUSD school complex located approximately 2,890 feet south of the subject site. The potential for a project to generate significant localized air quality impacts adversely affecting sensitive receptors can be determined through the analysis of Localized Significance Thresholds (LST).

The proposed 5 mg reservoir will be constructed on CVWD's existing Middleton Reservoir site, next to the existing 2.5 mg reservoir. This property is approximately 3,020 feet (920 meters) from the nearest sensitive receptor land use, a single-family residence located northeast of the subject reservoir site.

The Project is not expected to generate substantial pollutant concentrations during construction, as evidenced by its attainment of the SCAQMD daily maximum construction related emissions thresholds, demonstrated in Table 2.5-7. According to SCAQMD, the analysis of LSTs designed for projects that are less than or equal to 5 acres.[18] Buildout of the Project will eventually involve disturbance of the entire 619.1±-acre site, over the course of at least seven years. However, while the total Project area greatly exceeds 5 acres, the area of daily disturbance (for purposes of LST analysis only)[19] would be limited to 5 acres or less per day at any given location on-site. Therefore, the Project's construction-related emissions will be analyzed using LSTs because the SCAQMD 5-acre look up table is appropriate under the District's methodology to screen for potential localized air quality impacts

Sensitive receptor land uses include, but are not limited to, schools, churches, residences, hospitals, day care facilities, and elderly care facilities. LST thresholds are provided for distances of 25, 50, 100, 200, and 500 meters from sensitive receptors. The nearest sensitive receptors to the subject site are the few existing residences located on Tyler Street, less than 25 meters from the eastern boundary of the Project site when measuring from the property lines (**Exhibit 2.5-1**).[20]

The CVUSD high school/middle school/elementary school complex is also a sensitive receptor and is located at Avenue 66 and Tyler Street, more than 500 meters from the Project site. SCAQMD recommends that if projects have boundaries closer than 25 meters to the nearest sensitive receptor,

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18 South Coast Air Quality Management District, Localized Significance Thresholds http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/localized-significance-thresholds (accessed April 2023).

19 5-acres is the largest area of disturbance available in the SCAQMD Mass Rate LST Look-Up Tables: http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/appendix-c-mass-rate-lst-look-up-tables.pdf?sfvrsn=2 (accessed July 2023).

20 In Section 2.15 Noise, the nearest sensitive receiver distance (single family residence) was measured from the project boundary to the building façade, which is the standard practice when no outdoor living areas are present. The noise analysis cites the nearest sensitive receiver (residence building façade) as being 148 feet from the project boundary. The LST analysis measured the distance from the property lines, which was less than 80 feet (25 meters). Both measurements are appropriate for the types of analyses being performed.

then the LSTs for receptors located at 25 meters should be used. Given that the residences on Tyler are the closest sensitive receptor, and are within 25 meters of the subject site, the 25-meter distance will be used for the purpose of LST analysis.

A separate modeling run in CalEEMod was conducted to determine the potential construction emissions resulting from buildout of Planning Area 3 (PA-3). PA-3 proposes the development of 390 units of detached and attached single family housing on the east side of the subject site, adjacent to Tyler Street. Relative to the other proposed Project planning areas, PA-3 is the most intensive land use, and thus its construction would have the greatest potential to generate significant air quality impacts. PA-3 is also the planning area in closest proximity to the existing residences on Tyler Street (and the only planning area located within 25 meters of these residences), and therefore its construction would have the greatest potential to impact existing sensitive receptors.

The proposed Project does not include major stationary polluters such as a landfill, chemical plant, or refinery, and therefore LST analysis was not conducted or required for the development's operations.[21] According to SCAQMD, the use of LSTs for project operations is voluntary, and is most appropriate for industrial and other heavy uses that generate substantial pollutant concentrations. Operation of the proposed Project will not involve any substantial stationary sources, such as industrial or heavy agricultural uses, that might result in substantial pollutant concentrations. Therefore, operational emissions will not be further analyzed using LSTs.

The SCAQMD Mass Rate LST Look-up Tables were used to determine if the Project would result in significant adverse localized air quality impacts during construction. The LST Look-Up Table for SRA 30 (Coachella Valley) was used to established thresholds. Given that the residences on Tyler Street are approximately 50 feet (15.24 meters) from the boundary of the Project site, the shortest available receptor distance of 25 meters was used. As shown in **Table 2.5-9**, the SCAQMD LST thresholds are not expected to be exceeded for any criteria pollutant during the Project's construction.

Table 2.5-9
Project Construction: Localized Significance Thresholds (25 Meters, 5 Acres)
(lbs per day)

	CO	NO_x	PM_{10}	$PM_{2.5}$
Construction[1]	36.6	29.2	9.1	5.1
LST Threshold	2,292	304	14	8
Exceeds?	No	No	No	No

[1]Construction emissions based on special model run for Planning Area 3 only, assuming a maximum area of daily disturbance of 5 acres.
Note: Construction-related PM_{10} and $PM_{2.5}$ emissions assume the used of standard dust control requirements per SCAQMD Rule 403.1, such as watering exposed on-site soil.

As shown in the above table, the Project is not expected to exceed LSTs during its construction. As stated above, construction emissions represent a maximum of 5-acres of daily disturbance during the construction of PA-3. Given that the LST threshold would not be exceeded, the existing sensitive receptors in the Project vicinity, the existing residences on Tyler Street, would not be significantly impacted by adverse air quality during the Project's construction.

Given that the Project may be constructed in phases, it is possible that sensitive land uses built on-site in earlier phases may be impacted by criteria pollutants emitted during the construction of subsequent phases. **Exhibit 2.5-2** shows the potential phasing plan proposed in the Thermal Ranch Specific Plan.

[21] South Coast Air Quality Management District, Fact Sheet for Applying CalEEMod to Localized Significance Thresholds, http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/caleemod-guidance.pdf (accessed April 2023).

However, LSTs were analyzed using the most intensive proposed land use and the minimum receptor distance to provide a conservative assessment of potential impacts. Therefore, the results in **Table 2.5-9** are applicable to construction and receptors within the Project, and impacts would be less than significant.

Likewise, future sensitive receptors could be constructed off-site within the Project vicinity prior to the completion of the construction of all planning areas. However, because construction LSTs were projected using the worst-case scenario, the findings presented in **Table 2.5-9** are still applicable.

While the above evidence indicates that construction of the Project and the off-site water reservoir will not generate substantial pollutant concentrations, numerous local and state policies are in place to further reduce the construction-related emissions. For example, any heavy-duty diesel-fueled trucks involved in construction of the Project will also be subject to the CARB Airborne Toxic Control Measure (CCR, Title 13, §2485), which prohibits idling for more than five minutes unless in possession of a certified Clean Idle sticker. Furthermore, and as previously stated, the Project will be required to prepare a construction Dust Control Plan pursuant to SCAQMD Rule 403.1. The Dust Control Plan shall be prepared and implemented by all contractors during construction activities, including ground disturbance, grading, and materials import and export. The plan requires implementation of best management practices, which may include:

- Treat and stabilize soil where activity will cease for at least four consecutive days;
- All construction grading operations and earth moving operations shall cease when winds exceed 25 miles per hour;
- Water of site and equipment morning and evening and during all earth-moving operations;
- Operate street-sweepers on impacted paved roads adjacent to site;
- Establish and strictly enforce limits of grading for each phase of construction;
- Wash off trucks as they leave the project site to control fugitive dust emissions;
- Cover all transported loads of soils, wet materials prior to transport, provide freeboard (space from the top of the material to the top of the truck) to reduce PM10 and deposition of particulate matter during transportation;
- Use track-out reduction measures such as gravel pads at project access points to minimize dust and mud deposits on roads affected by construction traffic.

Compliance with these standard requirements, as set forth in mitigation measures **AQ-1** and **AQ-2**, will ensure that construction of the Project will not result in substantial pollutant concentrations impacting sensitive receptors, including existing residences and schools within one mile of the Project site, future sensitive receptors within one mile of the Project site, and future sensitive receptors in the Project vicinity, to substantial pollutant concentrations.

Health Impacts

As noted above, Supreme Court of California decision, Sierra Club v. County of Fresno (Friant Ranch), states that EIRs should relate a project's expected significant adverse air quality impacts to likely human health consequences or explain why it is not feasible at the time of preparing the EIR to provide such an analysis. The SCAQMD does not currently have a methodology to consistently and meaningfully correlate the expected air pollutant emissions of a project to the likely health consequences of those emissions.[22]

[22] Amicus Curiae Brief of South Coast Air Quality Management District, Sierra Club v. County of Fresno (Friant Ranch). Case No. S219783. April 13, 2015

There are several factors that make it scientifically impossible with the technology available today to calculate the degree to which an individual's health would be impacted by exposure to various levels of criteria pollutant emissions:

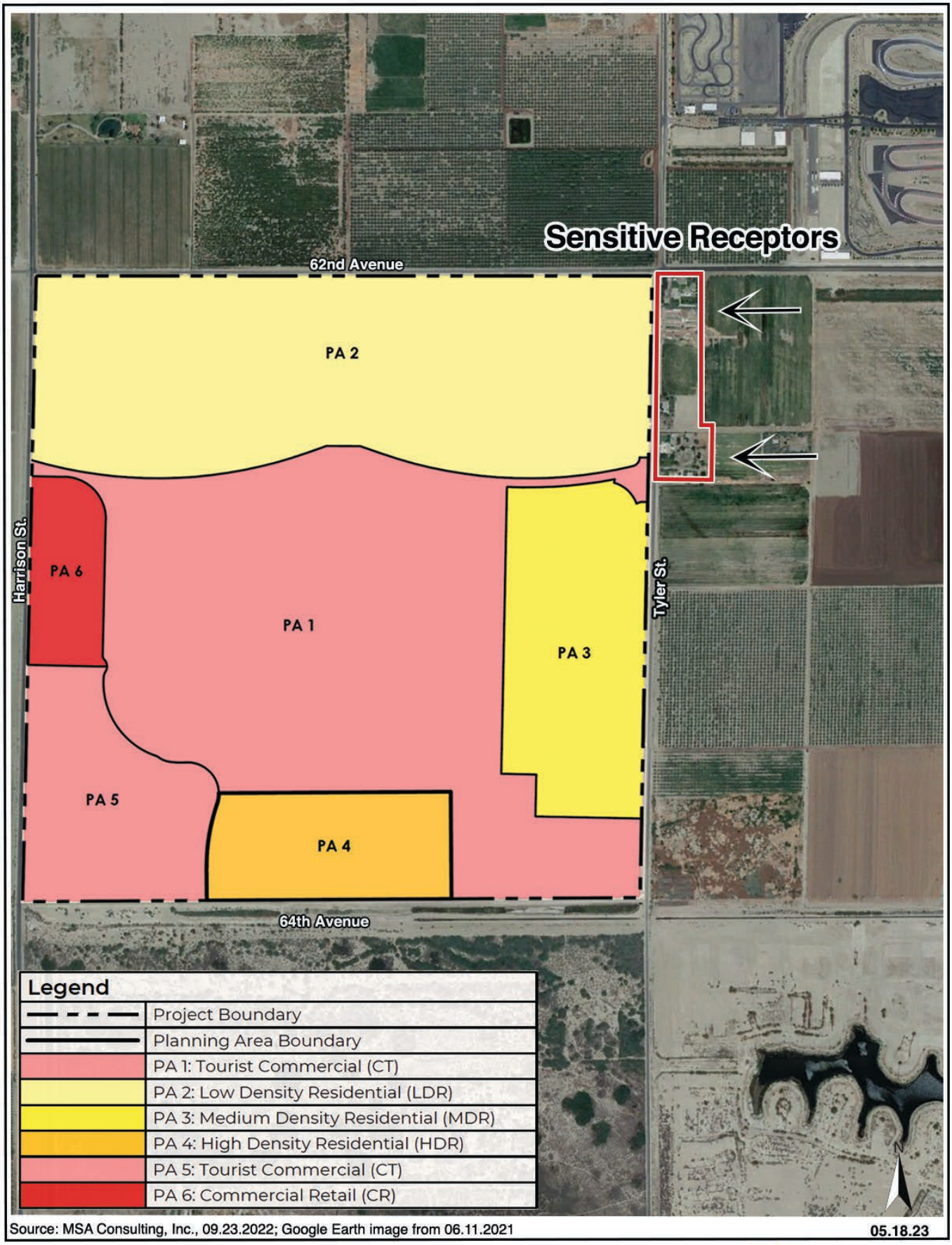
- Individual medical histories mean that everyone is affected differently. Some individuals have medical predispositions, and diet and exercise levels various across the population too.
- Due to the dispersing nature of pollutants, it is difficult to locate and identify which individuals will be impacted to what extent, either directly or indirectly.
- There are currently no agreed upon methodology or studies upon which to base assumptions, such as baseline health levels or emissions level to health risk ratios.

Due to these limitations, the extent to which the Project poses a health risk is somewhat uncertain. However, the application of the SCAQMD localized significance thresholds indicates that construction of the Project would have less than significant impacts to sensitive receptors, which means that the Project will not generate localized emissions that post a significant health risk. Likewise, the overall emissions expected to result from the Project based on projections developed using CalEEMod indicate that the development-related emissions will fall below the SCAQMD mass rate thresholds.

Pursuant to Rule 1401, 1401.1, and 212 of the SCAQMD rulebook, the District requires the preparation of a Health Risk Assessment (HRA) for facilities associated with high levels of toxic air contaminants. To reduce exposure to toxic air contaminants (TACs), CARB recommends minimum separation distances between new sensitive land uses, such as residences, and eight categories of existing sources of TACs: high-traffic freeways and roads, distribution centers, rail yards, ports, refineries, chrome plating facilities, perchloroethylene dry cleaners, and large gas stations.[23] The proposed Project neither proposes the development of any such facilities, nor is it situated in proximity to any such facility. While the Project is bound by three existing arterial roads, CARB defines freeways and high traffic roads as including rural roads with 50,000 vehicles per day. As shown in the Traffic Impact Analysis prepared for the Project by Urban Crossroads, nearby roadways have average daily traffic (ADT) volumes of up to 39,300 vehicles per day in horizon year (2045) with Project weekday conditions.[24] The preparation of an HRA is therefore not required nor needed to determine that the Project will not cause any significant air quality-related health risks to residents in the Project vicinity.

Based on these findings, it is therefore anticipated that the Project's impacts and associated health effects resulting from criteria pollutants will overall be less than significant. The Project will not expose sensitive receptors within one mile of the project site to substantial pollutant concentrations.

[23] CalEPA and CARB, Air Quality and Land Use Handbook: A Community Health Perspective (April 2005).
[24] Thermal Ranch Specific Plan Traffic Analysis, prepared by Urban Crossroads, Inc. (date), Exhibit 7-9: Horizon Year (2045) with Project Weekday Average Daily Traffic (ADT) Volumes.



Source: MSA Consulting, Inc., 09.23.2022; Google Earth image from 06.11.2021

05.18.23

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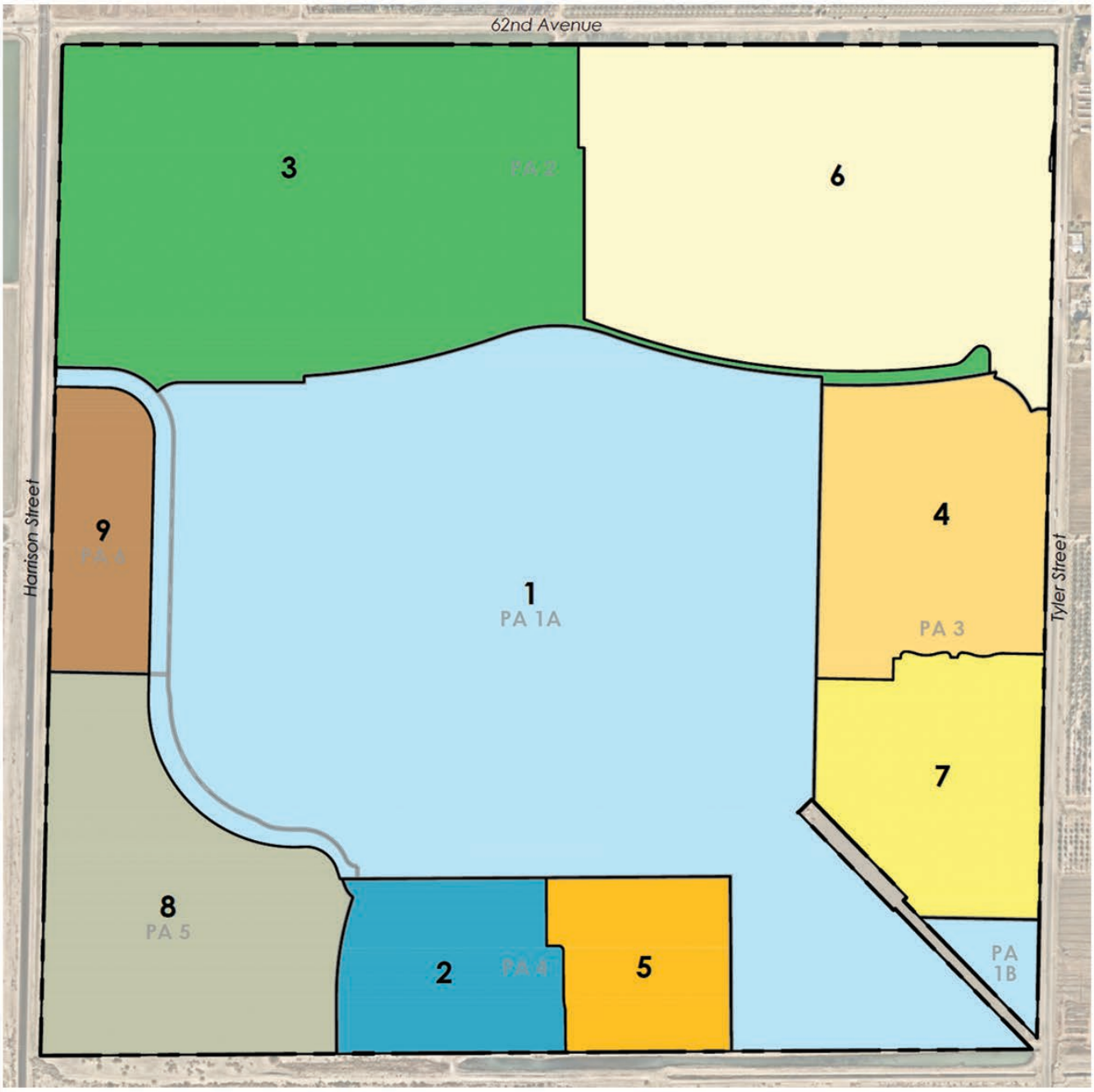
Thermal Ranch Specific Plan EIR
Nearby Sensitive Receptors
Thermal, California

Exhibit **2.5-1**



Legend

Project Boundary		Phase 1		Phase 6
Phase Boundary		Phase 2		Phase 7
Planning Area Boundary		Phase 3		Phase 8
Note: Exhibit shows expected sequence of development, but may change in response to market conditions.		Phase 4		Phase 9
		Phase 5		

N

Source: MSA Consulting, 02.16.2023

05.09.23

TERRA NOVA®
PLANNING & RESEARCH, INC.

Thermal Ranch Specific Plan EIR
Project Conceptual Phasing Plan
Thermal, California

Exhibit
2.5-2

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Some land uses can be sources of odors that, while not necessarily physically harmful, may be unpleasant and distressing to the public. The SCAQMD identifies land uses such as agriculture, chemical plants, composting operations, dairies, fiberglass molding, landfills, refineries, rendering plants, rail yards, and wastewater treatment plants as more likely to generate odors. Development and improvements facilitated by the proposed Project, including the equestrian center and related operations, have the potential to result in short-term and long-term odors.

The Project has the potential to result in short-term odors associated with the operation of heavy equipment during grading, building construction, and other construction activities. Construction-related odors would be limited and temporary, and quickly dispersed below detectable levels as distance from the construction area increases.

The Project's equestrian operations could pose a long-term impact to local air quality. In particular, animal waste generated in the equestrian center could generate nuisance odors if not managed properly. Based on a peak horse occupancy of 2,700 animals, the Project could generate up to 140,000± pounds of manure daily. Project manure management will include distributed short-term (intra-day) concrete storage areas and centralized handling in the back-of-house area adjacent to the IID substation site and away from any sensitive receptors. From this handling area haulers will remove manure daily. Daily removal of manure from the Project site will further reduce potential odors, which are considered to be less than significant.

The Project also proposes the development of two sewer lift stations in Planning Area 4 (PA-4). These private lift stations will be subterrain, and will be built to industry standards. They will be designed with standard odor control measures, including ventilation, and will be subject to review by the Riverside County Building and Safety Department. This will ensure that impacts resulting from potential odors will be less than significant.

The proposed restaurants and other commercial uses could have the potential to generate odors during operations. Restaurants would be required to receive development plan approval from the County of Riverside Department of Environmental Health demonstrating compliance with regulations for food facilities, including the provision of ventilation in cooking areas and associated odor control.[25] Therefore, the emission of odors from the Project will not adversely affect a substantial number of people, and impacts will be less than significant.

The proposed off-site water tank will contain domestic water supplies and would not result in objectionable odors or other emissions. The Middleton Water Reservoir site is located more than a mile from any sensitive receptors. No impacts would result from the reservoir.

2.5.7 Mitigation Measures

Emissions generated by construction of the Project will not exceed the SCAQMD daily thresholds for any criteria air pollutants. Nonetheless, mitigation measure **AQ-1 and AQ-2** will further ensure construction emissions are reduced to the greatest extent practicable.

[25] "Construction Plan Approval Procedures for Food Facilities" prepared by County of Riverside Department of Environmental Health, September 2013.

AQ-1 **Dust Control**

The Project will be required to prepare a construction Dust Control Plan pursuant to SCAQMD Rule 403.1 (General Policy AQ Policy 4.9) that shall be prepared and implemented by all contractors during construction activities, including ground disturbance, grading, and materials import and export. The plan requires implementation of best management practices, which may include:

- Treat and stabilize soil where activity will cease for at least four consecutive days;
- All construction grading operations and earth moving operations shall cease when winds exceed 25 miles per hour;
- Water of site and equipment morning and evening and during all earth-moving operations;
- Operate street-sweepers on impacted paved roads adjacent to site;
- Establish and strictly enforce limits of grading for each phase of construction;
- Wash off trucks as they leave the project site to control fugitive dust emissions;
- Cover all transported loads of soils, wet materials prior to transport, provide freeboard (space from the top of the material to the top of the truck) to reduce PM10 and deposition of particulate matter during transportation;
- Use track-out reduction measures such as gravel pads at project access points to minimize dust and mud deposits on roads affected by construction traffic.
- Dust suppressants shall be applied on all unpaved roads within the project construction footprint.
- Limit vehicle speeds on unpaved roads to 25 mph.

AQ-2 **Construction Equipment Emission Reductions**

The following measures will reduce NOx and ROG emissions from construction equipment:

- Limit heavy-duty diesel vehicle idling to less than 5 minutes at a single location (vehicles more than 10,000 lbs.)
- Use oxidation catalysts on all construction equipment. The oxidation catalyst must achieve a minimum 15% reduction in NOx emissions.

Mitigation Measure **AQ-3** requires all future development comply with current state energy and/or green building codes. Mitigation measures **AQ-4** through **AQ-6** are intended to improve operational air emissions. **AQ-4** is intended to further reduce operational emissions of fugitive dust (PM10 and PM2.5), despite the determination that these criteria pollutants will not exceed the SCAQMD threshold. **AQ-5** and **AQ-6** are intended to reduce area emissions of ROG. **AQ-7** is intended to reduce the amount of pollutants emitted from the production of new materials while preserving raw materials through recycling.

As previously discussed, there are no feasible, quantifiable or enforceable ways to further mitigate for CO, NO_x and ROG emissions from vehicle trips and, with respect to area emissions of ROG, for the elective use of consumer products. Therefore, operational impacts will continue to exceed CO, NO_x and ROG emissions, and impacts will be significant and unavoidable.

AQ-3 **Title 24 Compliance**

All building construction shall comply with energy use guidelines detailed in Part 6 (California Energy Code) and/or Part 11 (California Green Building Standards Code) of Title 24 of the California Code of Regulations.

AQ-4 **Operational Dust Control Plan**
The Project proponent shall prepare and implement an operational Fugitive Dust Control Plan for the proposed equestrian center (Planning Area 1) consistent with the recommendations in SCAQMD Rule 403, including Table 4 therein. The plan shall effectively reduce particulate matter emissions associated with the equestrian center, including the application of dust suppressants to disturbed or unpaved surfaces.

AQ-5 **Landscape Maintenance**
Electric landscape maintenance equipment, including leaf blowers and lawn mowers, shall be used on-site to the greatest extent practicable.

AQ-6 **Cleaning Products**
Water-based or low VOC cleaning products shall be used on-site to the greatest extent practicable.

AQ-7 **Recycling Programs**
All future development shall participate in a recycling program to reduce the amount of solid waste disposed of in landfills.

2.5.8 Significance After Mitigation

Implementation of AQ-1 and AQ-2 will ensure that the combined maximum daily emissions resulting from construction of the Project and water reservoir will not exceed the SCAQMD thresholds, and impacts resulting from construction emissions will therefore be less than significant.

Impacts on sensitive receptors and odor generation from construction and operation will be less than significant. Given that measures to further reduce operational emissions of CO, NO_x and ROG cannot not be quantified and applied as enforceable mitigation measures, the Project's operational criteria pollutant emissions will continue to exceed the SCAQMD thresholds for CO, NO_x and ROG , and impacts are considered significant and unavoidable.

2.5.9 Cumulative Impacts

Impacts to air quality are assessed on a cumulative, regional scale due to the dispersing nature of pollutant emissions and the aggregate impacts from surrounding jurisdictions. The Coachella Valley is non-attainment for PM_{10} and ozone. Any activity resulting in the emissions of PM_{10}, ozone, or ozone precursors will contribute, to some extent, to the regional non-attainment designation for these criteria pollutants. However, the level of cumulative impacts on regional air quality resulting from a single project are difficult to measure. It should also be noted that, although difficult to quantify, current farming activities on the Project site are making a substantial contribution to the PM_{10} and $PM_{2.5}$ levels in the Project vicinity. Site stabilization through development will to a meaningful degree reduce if not eliminate current dust emissions from the site.

The Project will contribute to incremental increases in criteria air pollutant emissions. As discussed in Section 2.5.6 (b), the Project is expected to exceed the SCAQMD thresholds for CO, NO_x and ROG during its operations, at least in the near to mid-term; both pollutants are ozone precursors. The majority of the Project's CO, NO_x and ROG emissions are the result of mobile sources, which cannot be feasibly reduced to a level of less than significant due to the elective nature of individual transportation choices.

Given that the Project would contribute significant impacts to pollutants for which the region is in non-attainment, impacts to regional ozone levels would be cumulatively considerable.

2.6 Biological Resources

2.6.1 Introduction

The following section provides an overview of the existing biological resources within the Project area and surrounding region, as well as an analysis of potential impacts that could result from implementation of the proposed Project. The regulatory environment and thresholds of significance are described below, as are the Project's potential impacts and mitigation measures, where needed. This discussion is based on the Project-specific Biological Resources Assessment and Coachella Valley Multiple Specifics Habitat Conservation Plan Compliance Report prepared by Wood Environment & Infrastructure, Inc.[1] The report is appended to this EIR as Appendix C. The Project site was surveyed on foot on September 12, 2022; the findings of the survey are included in the report.

2.6.2 Thresholds of Significance

The following thresholds of significance or criteria are derived from Appendix G of CEQA, which is used to determine if and to what extent a project may have a potentially significant impact on biological resources. The proposed Project would have a significant effect on biological resources if it is determined that the Project will:

a) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state conservation plan?
b) Have a substantial adverse effect, either directly or through habitat modifications, on any endangered, or threatened species, as listed in Title 14 of the California Code of Regulations (Sections 670.2 or 670.5) or in Title 50, Code of Federal Regulations (Sections 17.11 or 17.12)?
c) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U. S. Wildlife Service?
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?
e) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U. S. Fish and Wildlife Service?
f) Have a substantial adverse effect on State or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?
g) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The Initial Study determined that the Project would result in "No Impact" for threshold question f), because there are no wetlands, marshes or vernal pools on or in the vicinity of the Project site. Therefore, this question will not be further analyzed in this EIR.

[1] "Biological Resources Assessment and Coachella Valley Multiple Species Habitat Conservation Plan Compliance Report, Thermal Ranch Development Project, Thermal, Riverside County, California," prepared by Wood Environment & Infrastructure, Inc., September 28, 2022.

2.6.3 Regulatory Framework

Federal

Endangered Species Act (ESA)
Established in 1973, the ESA is administered by the US Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Fisheries Service (NOAA Fisheries Service). The Act provides a regulatory program for the conservation of endangered or threatened plants and animals and the habitats in which they are found. The Act designated species as 'endangered' and 'threatened' and requires federal agencies to ensure that the actions they authorize, fund, or carry out are not likely to jeopardize designated species. It prohibits the 'take', as well as import, export, or commerce, of any listed species, and requires environmental assessments to consider the listed species and their habitats. The ESA definition of take is "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct."[2]

Migratory Bird Treaty Act (MBTA)
The Migratory Bird Treaty Act began with a 1916 joint treaty with Canada. The 1918 Act implements the original treaty with Canada as well as subsequent treaties established with Mexico, Japan, and Russia. The Act prohibits the take, or attempted take, of listed birds, as well as their nests and eggs, without prior authorization from the USFWS. Under the MBTA, take includes killing, capturing, selling, trading, and transport for listed migratory birds. According to the USFWS, criteria for migratory birds to be listed under the act include the following:

- It occurs in the United States or U.S. territories as the result of natural biological or ecological processes and is currently, or was previously listed as, a species or part of a family protected by one of the four international treaties or their amendments.
- Revised taxonomy results in it being newly split from a species that was previously on the list, and the new species occurs in the United States or U.S. territories as the result of natural biological or ecological processes.
- New evidence exists for its natural occurrence in the United States or U.S. territories resulting from natural distributional changes and the species occurs in a protected family.[3]

Clean Water Act (CWA) Section 404
Administered by the U.S. Army Corps of Engineers (USACE), Section 404 of the CWA established a permitting program to regulate the discharge of dredged or fill material into waters and wetlands. In order to obtain authorization to discharge dredged or fill material, there is a requirement to show proof that no practicable alternative exists and that impacts will not be significant (i.e., potential impacts will be minimized, and that compensation will be provided for unavoidable impacts).

State

California Endangered Species Act (CESA)
Enacted in 1970 and administered by the California Department of Fish and Wildlife (CDFW), CESA prohibits the unauthorized take, import, export, possession, purchase, and sale of listed species. CESA is similar to the federal ESA, but while the ESA offers no protection to candidate species, CESA offers full protection to candidate species.[4] State lead agencies are required to consult with CDFW to ensure that actions are not likely to jeopardize the continued existence of any state-listed species or result in the destruction of degradation of occupied habitat.

2 Endangered Species Act, Section 3 (19)
3 U.S. Fish & Wildlife Service, Migratory Bird Treaty Act of 1918.
4 California Fish and Game Code, Section 2068.

Native Plant Protection Act (NPPA)
Administered by the California Department of Fish and Wildlife (CDFW) and enacted in 1977, the NPPA enables the CDFW to designate plants as 'rare' or 'endangered'. The list of species protected under NPPA is different than the plants covered by CESA. NPPA establishes measures to prohibit take of rare and endangered plant species, including, but not limited to, the list of plant species covered by CESA. If rare or endangered plants are identified on a project site, under NPPA authorization is required from CDFW prior to situations including: the removal of vegetation from canals, roads, or other sites; changes in land use. Pursuant to section 1903.5, if a landowner is notified by CDFW that a rare or endangered plant is growing on their property, the landowner must notify CDFW at least 10 days prior to further action towards any of the aforementioned situations in order to allow plant salvaging.

Natural Community Conservation Planning (NCCP) Program
Founded in 1991 and administered by the CDFW, the NCCP program takes an ecosystem approach to protecting biological diversity. The program works with local planning processes to provide preventative protection for wildlife and habitats. Instead of conserving small, potentially isolated 'islands' of habitat for individual listed species, agencies and local governments have an opportunity to work through the NCCP to cooperatively develop plans that establish broad areas of land for conservation that would provide habitat for many species. It aims to protect wildlife and habitats as a measure to prevent the environment from becoming so fragmented that species require CESA listing.

Local agencies can work through NCCP to establish multiple species conservation areas. The program aims to balance conservation with economic development by protecting areas with high conservation value and approving development in areas with lower conservation value. An NCCP is included as part of the Coachella Valley Multiple Species Habitat Conservation Plan.

California Fish and Game Code
Sections 1600 – 1603 prohibit the unauthorized diversion, obstruction, or change in the natural flow or bed, channel, or bank of any river, stream, or lake that supports fish or wildlife resources. These sections of the Code also prohibit the unauthorized deposit or disposal of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into a river, stream, or lake. CDFW requires projects apply for a Streambed Alteration Agreement for any project that may impact a streambed or wetland.

Section 2081 of the Fish and Game Code permits otherwise prohibited activities (import, export, take, or possession of state endangered, threatened, or candidate species) through the issuance of a memorandum of understanding, if:

- The take is incidental to otherwise lawful activities;
- Impacts of the take are minimized and fully mitigated;
- The permit is consistent with regulations adopted in accordance with any recovery plan for the species in question; and
- The applicant ensures suitable funding to implement the measures required by CDFW.[5]

The CDFW must make this determination based on the best scientific evidence reasonably available and must include consideration of the species' capability to survive and reproduce.
Section 3505.5 of the Fish and Game Code prohibits the take, sale, or purchase of any birds in the Falconiformes of Strigiformes orders (birds-of-prey) or to take, sell, or purchase the nest or eggs of any bird-of-prey.

[5] "Biological Resources Assessment and Coachella Valley Multiple Species Habitat Conservation Plan Compliance Report, Thermal Ranch Development Project, Thermal, Riverside County, California," Wood Environment & Infrastructure, Inc., September 28, 2022.

Regional/Local

Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP)
Finalized in 2008 and updated in 2016, the CVMSHCP addresses the conservation needs of a variety of animal and plant species and communities occurring in the Coachella Valley region. It is a comprehensive regional plan encompassing a planning area of approximately 1.1 million acres and conserving approximately 240,000 acres of land, in addition to public lands already in conservation. The network of preserves established through the CVMSHCP are generally located outside of urban areas in order protect lands with high conservation value for 27 plant and wildlife species and 27 natural communities.

The proposed Project is within the CVMSHCP fee area but is located outside of a CVMSHCP Conservation Area. The nearest Conservation Areas are the Santa Rosa and San Jacinto Mountains Conservation Area, located to the west of the Project site, and the Coachella Valley Stormwater Channel and Delta Conservation Area to the southeast.

Riverside County General Plan
The Preservation section of the Multipurpose Open Space Element in the Riverside County General Plan (revised 2015) includes policies for the conservation and protection of biological resources.

OS 18.1 Preserve multi-species habitat resources in the County of Riverside through the enforcement of the provisions of applicable MSHCP's and through implementing related Riverside County policies.

OS 18.3 Prohibit the planting or introduction of invasive, non-native species to watercourses, their banks, riparian areas, or buffering setbacks.

Eastern Coachella Valley Area Plan
The Eastern Coachella Valley Area Plan (revised 2021) protected biological resources through the implementation of applicable policies in the Riverside County General Plan and the CVMSHCP.

ECVAP 16.1 Protect visual and biological resources in the Eastern Coachella Valley Area Plan through adherence to General Plan Policies found in the Preservation section of the Multipurpose Open Space Element, as well as policies contained in the Coachella Valley Multiple Species Habitat Conservation Plan.

2.6.4 Environmental Setting

The Project site is situated in the Coachella Valley, on the western edge of the Colorado subdivision of the Sonoran Desert. This region has an extremely hot and dry climate, with the low elevation floor of the valley bordered by rocky mountain slopes and ranges. These surrounding mountain ranges isolate the valley from moisture coming off the Pacific Ocean to the west. These unique conditions support a diversity of species that have adapted to the Coachella Valley's extreme climatic conditions.

The subject property is in the southeastern Coachella Valley, in an unincorporated area of Riverside County. The site and surrounding area, located on the valley floor, is essentially flat with a mild gradient to the south and southeast.

Plant species such as mesquite, smoke tree, desert holly, creosote bush, and palo verde are common in the valley. Coachella Valley milkvetch and triple-ribbed milkvetch are federally listed endangered plant species found in the valley. The area is also home to some sensitive wildlife species, such as the Coachella Valley fringe-toed lizard, Peninsular bighorn sheep, Casey's June beetle, arroyo southwestern toad, Least Bell's vireo and southwestern flycatcher.

The subject and surrounding properties are located within the boundaries of the Coachella Valley MSHCP and approximately 2.25 miles northeast of the Santa Rosa and San Jacinto Mountains Conservation Area, which is comprised primarily of Sonoran creosote scrub and desert dry wash woodland on lower elevations, and Sonoran mixed wood and succulent scrub in the upper elevations. The Project site is also located approximately three miles northwest of the Coachella Valley Stormwater Channel and Delta Conservation Area, which is comprised predominantly of desert saltbush scrub, mesquite hummocks and desert sink scrub.

2.6.5 Existing Conditions

The land on and adjacent to the Project site has mostly been heavily altered for agricultural development, road construction and maintenance, and, to a lesser extent, residential and livestock use. To the east of the subject property there is low density residential development, agricultural land, and equestrian paddocks. Active date palm groves and agricultural lands occupy the area to the north. Lands to the south and west of the Project site are occupied by fallow, former agricultural lands that appear to have lain fallow for a long time and have, in some areas, revegetated with Saltbush Scrub communities.[6]

The Project site has been in active agricultural use since at least 1959.[7] At the time of the biological resource survey, most of the Project site consisted of plowed but unplanted agricultural land. It appears to have been routinely disturbed and is mostly barren with a sparse growth of low-growing weedy plants scattered among portions of the site which currently appear to be fallow. As a result of the routine disturbance on the Project site, there are no native vegetation communities, no fully developed nonnative vegetation communities, and no trees present on the property.[8] There are four hay sheds and a shop in the central portion of the site.

The Project proposes the development of the subject 619±-acre site to provide a mixed-use community, centered around an equestrian center and related show facilities, and surrounded by residential neighborhoods at a mix of densities, as well as resort and commercial areas. The proposed development would involve the disturbance of the entire site.

CVWD Middleton Reservoir 7802-1 Site

The Project off-site water reservoir required to meet Project demand and fire flows will be constructed on the existing CVWD Middleton Reservoir site located 2.4± miles southwest of the Project site. The reservoir site has been graded, is surrounded by an earthen berm and is largely barren of vegetation. Access to the site already exists and construction of the new reservoir will not result in any new disturbance to sensitive biological resources. The existing site currently hosts a CVWD 2.5 million tank. The reservoir site is located behind a 25-foot earthen berm with existing access and site security. To accommodate the new 5 mg tank, the northerly portion of the existing berm will be shifted farther north approximately 35 feet. The new reservoir will connect to existing lines and no new off-site reservoir water lines will be required.

6 Ibid.

7 "Phase 1 Environmental Site Assessment for the Agricultural Property Located At 85400 Avenue 62 and 62101 Tyler Street, Thermal, California," Terra Nova Planning and Research, Inc., September 2022.

8 "Biological Resources Assessment and Coachella Valley Multiple Species Habitat Conservation Plan Compliance Report, Thermal Ranch Development Project, Thermal, Riverside County, California," Wood Environment & Infrastructure, Inc., September 28, 2022.

Biological Conditions

Vegetation: The field survey identified sixteen plant species on the subject site, including nine native and seven nonnative and/or weedy species. While most of the site has been plowed, weedy herbaceous plants were identified in sparse patches through some of the fallow agricultural field subdivisions. Plant species identified on site include big saltbush (*Atriplex lentiformis*), western sea-pursplane saltcedar (*Tamarix ramosissima*), yellow nutsedge (*Cyperus esculentus*), and Bermuda grass (*Cynodon dactylon*).

Wildlife: Due to the lack of habitat and highly disturbed nature of the subject property and surrounding lands, the vertebrate wildlife observed on-site was not diverse or abundant. A total of five species were observed during the field survey, all of which are common to the area, and of which two are nonnative introduced species. The wildlife included one amphibian, Rio Grande leopard frog (*Lithobates berlandieri*), and four birds: Eurasian collard-dove (*Stptopelia decaocto*), common raven (*Corvus corax*), song sparrow (*Melospize melodia*) and great blue heron (*Ardea herodias*)[9]. No actively nesting birds, or inactive bird nests, were observed on or adjacent to the Project site.

Special status species: Due to declining populations, vulnerability to climate change, habitat loss and/or fragmentation, some plant and animal species are given special status. This includes those listed as threatened or endangered by the US Fish & Wildlife Service (USFWS) or the CDFW, those protected by the federal ESA and CESA, as well as those identified for conservation by private organizations. Of the 62 special status species with potential to occur on the Project site and vicinity, none were observed during the field survey (Appendix C). A great blue heron was observed immediately to the south of the subject property in an adjacent wet area which may provide foraging habitat for the species.[10] Blue heron rookeries are considered sensitive, however no suitable nesting habitat occurs on or adjacent to the site.

Soils: The subject property is relatively flat and comprised of five primary soil types: Gilman fine sandy loam, wet, 0 to 2 percent slopes (GcA); Indio very find sandy loam, wet (It); Indio find sandy loam, wet (Ir); Salton silty clay loam (Sb); Gilman wilt loam, wet, 0 to 2 percent slopes (GfA). Both Gilman and Indio soil series are typically found on alluvial fans and flood plains, and were historically, and still today, used for irrigated cropland and livestock grazing. Salton soil series are used for cotton alfalfa hay, irrigated pasture, truck crops, date groves, and recreation.[11]

2.6.6 Project Impacts

As stated above, the Project proposes the development of the entire 619±-acre site into a mix of uses, including an equestrian center, residential neighborhoods, commercial areas, and resort areas. A Biological Resources Assessment and Coachella Valley Multiple Species Habitat Conservation Plan Compliance Report was prepared for the proposed Project by Wood Environment & Infrastructure, Inc. The following analysis is based in part on the findings of this report.

a) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state conservation plan?

9 The great blue heron was observed just to the south of the site.

10 "Biological Resources Assessment and Coachella Valley Multiple Species Habitat Conservation Plan Compliance Report, Thermal Ranch Development Project, Thermal, Riverside County, California," Wood Environment & Infrastructure, Inc., September 28, 2022.

11 USDA, NRCS. 2019. Web Soil Survey. Accessed online at: http://websoilsurvey.nrcs.usda.gov/app/

The County is a permittee under the CVMSHCP/NCCP, the comprehensive regional plan that addresses the conservation needs of a variety of wildlife and plant species and communities in the Coachella Valley region.

The Project site is located within the CVMSHCP/NCCP planning area but is not located within a CVMSHCP Conservation Area. Two conservation areas, the Santa Rosa and San Jacinto Mountains Conservation Area and the Coachella Valley Stormwater Channel and Delta Conservation Area, are within three miles of the subject site. Development of the proposed Project is not expected to have any impacts on these conservation areas and will not be subject to CVMSHCP land use adjacency guidelines.
The Project will comply with the CVMSHCP and will pay the land development/mitigation fees required from all new developments in the plan area. These fees help fund the ongoing assembly of lands for conservation. Given that on-site habitat has been disturbed and essentially removed over the course of decades of active cultivation, it would not be suitable for assembly into a conservation area.

As is further elaborated upon in threshold discussion C), below, the development of the proposed Project is not anticipated to have any impacts on CVMSHCP covered species. No such species were observed on the Project site during the field survey, and there is a low likelihood for most covered species to occur on the property due to lack of habitat. Section C) also outlines mitigation measures (**BIO-1** and **BIO-2**) that must be implemented in order to further minimize potential impacts to any covered species encountered during Project construction.

The Biological Resources Assessment and Coachella Valley Multiple Species Habitat Conservation Plan Compliance Report prepared for the Project concluded that with the implementation of the provided recommendations, the proposed development would be compliant with the CVMSHCP. Given that the Project will comply with the requirements of the CVMSHCP, the local adopted Habitat Conservation Plan and Natural Community Conservation Plan, impacts will be less than significant.

<u>CVWD Middleton Reservoir 7802-1 Site</u>
The existing reservoir site has previously been graded and partially developed to accommodate multiple future water tanks. Site vegetation is of the creosote scrub community and is without trees, has few shrubs no sensitive vegetation or wildlife. Shifting the existing berm 35± feet to the north and construction of the new reservoir will result in limited additional site disturbance and will not conflict with the provisions of the Coachella Valley MSHCP/NCCP or any other conservation plan.

b) Have a substantial adverse effect, either directly or through habitat modifications, on any endangered, or threatened species, as listed in Title 14 of the California Code of Regulations (Sections 670.2 or 670.5) or in Title 50, Code of Federal Regulations (Sections 17.11 or 17.12)?

Based on a literature review prepared for the Biological Resources Assessment, eleven species listed as endangered or threatened under Title 14 of the CCR or Title 50 of the FCR were identified as having the potential to occur on the Project site and its vicinity (4 to 5-mile radius). No special status species were observed on the site during the assessment; however, the number of species detected does not necessarily represent the number of species that may occur on the site. Nonetheless, the extensive agricultural activity on the site limits the potential for other sensitive species to occur there.

Table 2.6-1 shows the occurrence probability of the eleven endangered or threatened species known to occur in the Project vicinity.

Table 2.6-1
Endangered and Threatened Species Potentially on Site

Species	Status	Occurrence Probability
	Plants	
Coachella Valley milkvetch	Federal: Endangered	**Absent.** Habitat lacking; site below known elevational range of species.
Triple-ribbed milk-vetch	Federal: Endangered	**Absent.** Habitat is not present; site is below known elevational range of species.
	Fish	
desert pupfish	Federal: Endangered State: Endangered	**Absent.** No habitat present.
razorback sucker	Federal: Endangered State: Endangered	**Absent.** No habitat present; site not in species range.
	Amphibians	
desert slender salamander	Federal: Endangered State: Endangered	**Absent.** No habitat on or adjacent to site, site not in species range (historically or currently).
	Reptiles	
Desert tortoise	Federal: Threatened State: Threatened	**Absent.** Habitat lacking; site isolated from any adjacent habitat.
Coachella Valley fringe-toed lizard	Federal: Threatened State: Endangered	**Absent.** Habitat not present; site isolated from sand sources.
	Birds	
Southwestern willow flycatcher	Federal: Endangered State: Endangered	**Nesting: Absent.** No suitable nesting habitat. **Foraging: Absent.** No suitable foraging habitat on-site.
Yuma Ridgway's (clapper) rail	Federal: Endangered Sate: Threatened	**Nesting: Absent.** No suitable nesting habitat onsite. Potential breeding habitat adjacent to southern edge of site. **Foraging: Absent.** No suitable foraging habitat on-site, but potential habitat just offsite to south.
Least Bell's vireo	Federal: Endangered State: Endangered	**Nesting: Absent.** No suitable nesting habitat. **Foraging: Absent.** No suitable foraging habitat.
	Mammals	
Peninsular bighorn sheep DPS	Federal: Endangered Sate: Threatened	**Absent.** No suitable habitat on project site; site is on valley floor. Surrounded by agricultural lands.

Source: Biological Resources Assessment and Coachella Valley Multiple Species Habitat Conservation Plan Compliance Report, Thermal Ranch Development Project, Thermal, Riverside County, California," Wood Environment & Infrastructure, Inc., September 28, 2022.

As shown in the above table, the highly disturbed nature of the Project site suggests a very low occurrence probability for the eleven endangered and threatened species that are known to occur in the vicinity of the property.

Plants

Neither of the endangered plant species are expected to occur on the subject site. These species are known to occur at higher elevations, such as the hills and mountains that flank the Coachella Valley. The subject site is located on the valley floor and thus lacks the habitat favored by these species.

Invertebrates

Monarch butterflies are a Candidate Species under the Federal Endangered Species Act. They are known to occur in the Project area; however, were not identified on site during the field survey. Additionally, the Monarch butterfly's food plant and larval host plan, milkweed, was also not detected on site. This indicates a very low likelihood of the species occurring on the subject property or being impacted by the Project.

Fish
Standing or flowing water does not occur on the subject site. The property thus lacks the habitat for either species of endangered fish.

Amphibians and Reptiles
None of the threatened or endangered amphibians or reptiles with the potential to occur in the Project area are expected to occur on the Project site due to the lack of appropriate habitat and the overall disturbed nature of the site.

Birds
As indicated in the above table, suitable habitat does not occur on the subject property for any of the endangered or threatened bird species. Potential nesting and foraging habitat for Yuma Ridgway's (clapper) rail was identified near the Project site, in a ponded area adjacent to the southern boundary of the property. However, given that the potential habitat is located off-site, the proposed developed is not expected to impact the species or its habitat.

Mammals
The Project site was surveyed and evaluated for a variety of mammal species, including rodents and bats. Potentially sensitive mammal species include pallid San Diego pocket mouse and San Diego desert woodrat. The potential for occurrence of several bat species was also evaluated, including pallid bat, Townsend's big-eared bat, spotted bat, Western mastiff bat, western yellow bat (see Table 3 of Appendix C). These species were absent, and their potential was considered low based on the lack of nest/roosting and foraging habitat. It should also be noted that all of these are "Covered Species" under the CVMSHCP. Therefore, potential impacts to these and related species will be less than significant.

The Peninsular bighorn sheep (PBS) is the only endangered or threatened mammal known to occur in the vicinity of the Project site. However, bighorn sheep generally live in mountainous habitat, particularly steep-walled canyons and ridges. Given the property's location on the valley floor and 2.25± miles distance from the nearest foothills of the Santa Rosa Mountains foothills, and isolation by surrounding agricultural and other disturbed lands, the sheep are not expected to occur on the Project site or vicinity. Neither are any indirect impacts to PBS expected to occur.

CVWD Middleton Reservoir 7802-1 Site
The existing reservoir site has previously been graded and developed to accommodate multiple future water tanks. Site vegetation is of the creosote scrub community and is without trees and has few shrubs. No sensitive vegetation or wildlife are expected to occur on the reservoir site. Shifting the existing berm 35± feet to the north and construction of the new reservoir will result in limited additional site disturbance and will not conflict with the provisions of the Coachella Valley MSHCP/NCCP or any other conservation plan.

Summary
Based on the evidence presented above, it can be assumed that there is a very low probability of the Project adversely affecting any endangered or threatened species, as listed in Title 14 of the California Code of Regulations (Sections 670.2 or 670.5) or in Title 50, Code of Federal Regulations (Sections 17.11 or 17.12), either directly or through habitat modifications. Impacts will be less than significant.

c) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U. S. Wildlife Service?

As discussed above, the subject site has been highly disturbed and lacks the habitat for many species to occur.

Plants
Eighteen sensitive plant species are known to occur in the greater Project vicinity. However, none of these species were observed on the subject property, and none of these species are expected to occur on the property. Some of the eighteen sensitive plant species occur on the mountains to the south and west of the Project site, but do not grow on the valley floor, where the Project is situated. The other sensitive plant species would not occur on the Project site due to lack of habitat.

Invertebrates
Six special status invertebrates are known to occur in the vicinity of the Project. However, the subject site lacks the habitat and/or food plants for all six species, and thus they are not expected to occur on-site.

Amphibians, Reptiles, and Mammals
Due to the absence of food plants on site and/or the overall degraded/disturbed nature of the subject property, no suitable habitat exists on the Project site for desert tortoise or the Coachella Valley fringe-toed lizard.

Birds
Of the 43 special status wildlife species listed as potentially occurring in the Project area, only one, a great blue heron, was observed adjacent to the subject property. The heron is only considered sensitive when at its nesting rookeries, and due to lack of habitat there is no potential for a rookery to occur on the site. The heron was observed in a wet area past the southern edge of the subject site, which is not expected to be impacted by the proposed Project. Seven other special status species have the potential to forage on the Project site or adjacent area. However, none of these species were observed during the field survey, and none are expected on the Project site due to a lack of suitable habitat.

The protection of both native migratory and resident birds when nesting is a requirement of the permits issued by the CVMSHCP, as well as a requirement of the MBTA. To prevent impacts to potentially nesting birds protected by the MBTA and California Fish and Game Code, the Project either must avoid disturbance during the nesting season (February 1 to August 31) or, if construction will proceed during nesting season, then nesting bird surveys must be conducted by a qualified ornithologist or biologist immediately prior to on-site disturbance (**BIO-1**).

Burrowing owl, a CVMSHCP covered species, was not observed on the Project site. The species has a very low potential to forage on or adjacent to the property, and due to the ongoing agriculture-related disturbance of the site, burrowing owl is not expected to occupy the site permanently. Furthermore, no suitable nesting habitat, no burrows, and no burrow surrogates (mammal borrows) suitable for burrowing owls were observed in the area during the field survey. However, because burrowing owls can disperse from nearby occupied areas, a preconstruction survey following the CDFW (2012) guidelines must be conducted prior to any ground-disturbing activities (**BIO-2**).

CVWD Middleton Reservoir 7802-1 Site
The existing reservoir site has previously been graded and partially developed with an earthen berm to accommodate multiple future water tanks. Site vegetation is of the creosote scrub community, is without trees, has few shrubs and no sensitive vegetation or wildlife. Shifting the existing berm 35± feet to the north and construction of the new reservoir will result in limited additional site disturbance. Construction of the new reservoir will occur within the already developed and improved site and will not impact any candidate, sensitive, or special status species.

Summary
Overall, the Biological Resources Assessment Report prepared for the Project found that the subject site lacks adequate habitat for the identified special status species to occur. The Project is therefore not expected to impact, either directly or through habitat modifications, any CVMSHCP covered species, or species designated as candidate, sensitive, or special status by the CDFW.
However, participation in the CVMSHCP, payment of the CVMSHCP development/mitigation fee and participation in the plan will ensure that any Project-related impacts to any covered species will be mitigated. Furthermore, preconstruction surveys must be conducted to ensure that any unanticipated burrowing owl and nesting birds occurring on the site are not impacted by development of the proposed Project. Impacts will be less than significant with mitigation.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

According to the Biological Resources Assessment Report prepared for the Project, the site does not provide connectivity to any adjacent well-developed native habitat or conservation areas. The subject property is currently open agricultural lands that is unfenced and fully accessible to a variety of wildlife. This condition also occurs on most of the surrounding lands, which include disturbed lands, lands in cultivation and native undisturbed lands. While the Project site shows signs of considerable disturbance, and is thus not considered pristine habitat, and adjacent sites also lack well-developed native habitat, the area may still provide wildlife corridors.

Some sensitive bird species may forage over the Project site. Great egret, snow egret, black-crowned night heron, and white-face ibis have the potential to forage over the Project site or surrounding area; however, this potential is considered low to very low. Additionally, a great blue heron was observed in the Project vicinity. All nesting native birds are protected by the Migratory Bird Treaty Act (MBTA). While the subject site lacks the suitable habitat for these species to nest, **BIO-1** provides measures to ensure that any unanticipated nesting birds on the property will not be impacted. As provided in the mitigation measure, site disturbances that occur between February 1 and August 31 and have the potential to impact nesting birds may require a biologist to conduct nesting bird surveys. Construction outside the February 1 and August 31 period, or implementation of the surveys and appropriate avoidance measures during the nesting season will ensure that potential impacts to nesting birds are reduced to less than significant levels.

No migratory fish occur on the Project site, nor could they occur given the lack of flowing or standing water.

Given that the subject site is currently unfenced and adjoined by vacant lands to the south and west of the Project site, it is possible that some species may use the site as a movement corridor. Development of the site, as proposed, could potentially incrementally limit the ability of various species to use the site as a movement corridor. However, because the site is currently in active agricultural use and provides little to no vegetative cover or habitat for nesting birds, fish, or other migratory wildlife, it is not expected to be in use as an established corridor. Furthermore, given the prevalence of vacant sites and other lands in agriculture in the Project vicinity, it is unlikely that the proposed development would interfere substantially with the movement of any migratory or native species. The Project would not impact currently undisturbed lands, occurring mostly to the south of the site, which may provide more established movement corridors.

CVWD Middleton Reservoir 7802-1 Site
The existing reservoir site has previously been graded, surrounded with an earthen berm, and developed to accommodate multiple future water tanks. The site is without trees, has few shrubs, and no sensitive vegetation or wildlife are expected to occur on site. Construction of the required tank and the shifting of the earthen berm will not interfere with the movement of native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, and will not impede the use of native wildlife nursery sites. Overall, the Project site, adjacent properties and the Middleton Reservoir Site lack the habitat to serve as a nursery site or wildlife corridor for many species, and impacts to wildlife movement and nurseries are expected to be less than significant.

e) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U. S. Fish and Wildlife Service?

There is no riparian habitat present on the Project site. There is also a lack of adequate riparian habitat in the Project vicinity to support least Bell's vireo or the southwestern willow flycatcher, both species covered by the CVMSHCP.

Beyond the southern edge of the property there is a ponding area that periodically and temporarily holds agricultural tail water which is then re-used to irrigate crops. Seasonal vegetation including cattails that have some potential to support Yuma Ridgway's (clapper) rail, another CVMSHCP covered species. However, the ponded area is intermittent, is located offsite and does not represent a permanent riparian or wetland habitat. Neither will this feature be impacted by the proposed development.

The proposed development will not involve the planting or introduction of invasive nonnative plants. It is recommended that landscaping for the Project use species of vegetation from the Coachella Valley Native Plants Recommended for Landscaping and Prohibited Invasive Ornamental Plants lists in Appendix D and E of the Biological Resources Assessment in Appendix C of this document.

Overall, there are no riparian habitat or other sensitive natural communities identified in local or regional plans, policies, and regulations, or by the CDFW or USFWS on the Project site. The proposed landscape palette will not use invasive plants, which will protect sensitive natural communities potentially occurring in the Project vicinity from potential impacts. It can therefore be concluded that the Project will not have substantial adverse effects on riparian habitat of other sensitive natural communities.

CVWD Middleton Reservoir 7802-1 Site
The existing reservoir site has previously been graded, a berm constructed, and the site developed to accommodate the existing and future water tanks. The reservoir site is without trees, has few shrubs and no sensitive vegetation or wildlife. Construction of the required tank and the shifting of the existing berm 35± feet to the north will not impact any sensitive habitats or plant communities.

g) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The Multipurpose Open Space Element of the Riverside County General Plan includes policies supporting the enforcement of local multiple species habitat conservation plans and prohibiting the planting or introducing of invasive, nonnative plants. The Project will not conflict with these policies. The landscaping design guidelines proposed in the Specific Plan emphasize native plants, and non-invasive non-native drought tolerant plants. As stated above, the plant palette should conform to the species recommended in Appendix D and E of the Biological Resources Assessment.

The Project will comply with the CVMSHCP, the local multiple species habitat conservation plan, by paying into the land development/mitigation fees required from all new developments in the plan area, which supports the further assembly of lands for conservation. Also, as demonstrated above, the Project will not impact any species covered by the plan. Implementation of mitigation measures BIO-1 to BIO-2 will further ensure that there are no impacts to protected species, and that the Project conforms with local policies and ordinances.

Compliance with the CVMSHCP and use of native and non-invasive plants for the site's landscaping will ensure that there are no Project-related impacts that conflict with local policies or ordinance protecting biological resources.

CVWD Middleton Reservoir 7802-1 Site

The existing reservoir site was constructed in 2004, is surrounded by an earthen berm and is developed to accommodate the existing and future water tanks. Construction of the new Project tank will require shifting the existing berm 35± feet to the north. The new reservoir will connect to existing feeder and transmission lines. The reservoir's construction will not conflict with local policies or ordinances that project biological resources. Therefore, there will be no impacts.

2.6.7 Mitigation Measures

BIO-1 Construction of the Project and the Middleton Reservoir either must avoid initiating site disturbance during the nesting season (February 1 to August 31) or, if construction or other Project-related activities will proceed during nesting season, then nesting bird surveys must be conducted by a qualified ornithologist or biologist immediately prior to on-site disturbance. Surveys must be conducted no more than three days prior to commencement of site disturbance. The biologist must have a Memorandum of Understanding (MOU) with the County. If nesting birds are found on the Project site, no work is permitted near the nest until the young have fledged. The CDFW generally recommends avoidance buffers of about 500 feet for birds-of-prey and species listed as threatened or endangered, and 100 to 300 feet for unlisted songbirds.

BIO-2 A preconstruction burrowing owl survey following the CDFG (2012) guidelines must be conducted prior to any ground-disturbing activities at the Project and Middleton Reservoir sites. If found on site, and unless avoidable, all burrowing owls must be relocated prior to any ground disturbing activities. If burrowing owls remain on-site, a Burrowing Owl Relocation and Management Plan must be prepared to describe how the burrowing owl will be actively or passively relocated per CDFW guidelines. Relocation will also require prior permission from the CDFW and shall only occur outside of the breeding season. Relocation plans must also be submitted to and approved by the County Environmental Programs Department prior to implementation.

2.6.8 Significance After Mitigation

Impacts after implementation of the above mitigation measures will be less than significant.

2.6.9 Cumulative Impacts

The Project proposes the development of a property that has been heavily altered through agricultural activity for several decades. The only plants observed on site are nonnative low-growing weedy plants. No sensitive or special status wildlife was observed on the property, primarily due to lack of habitat. Therefore, even without the proposed development, the subject property can be considered to have low conservation value.

The lands adjacent to the Project have also been disturbed for agricultural development, road maintenance, residential use, and livestock use. Surrounding properties are presently used for residential development, agriculture, equestrian paddocks, and date palm groves. Other nearby lands are vacant but have previously been in cultivation greatly reducing the habitat values of these lands. Developing the Project site would be therefore likely to have less than significant impacts to wildlife movement in the area.

The Project is located within the CVMSHCP fee area. The intent of the CVMSHCP is to preserve lands of high conservation value, while permitting the development of areas with low conservation value. The Project would pay into the CVMSHCP development impact/mitigation fee, which would directly contribute to funding the assembly of land in conservation areas.

Impacts are considered cumulatively considerable when the impacts of two or more projects compound or are considerable when considered together, even if each project's impacts are insignificant when looked at individually. Given that the Project site and vicinity are on land that has been heavily altered for many years, the proposed developed will not significantly contribute to the cumulative conversion of valuable biological resources. Moreover, by paying into the CVMSHCP development fee, the Project will contribute to funding the consolidation of more valuable conservation lands into conservation areas. This will effectively mitigate any incremental impact contribution the Project may make to biological resources in the area. Impacts will not be cumulatively considerable.

2.7 Cultural and Historic Resources

2.7.1 Introduction

This section evaluates the potential for the proposed Project to result in adverse impacts to cultural and historic resources. Cultural resources include archaeological resources, historic architectural resources, and human remains. Mitigation measures to reduce impacts to a less than significant level are identified, where appropriate. This section is based primarily on the 2022 Historical/Archaeological Resources Survey prepared for the Project as well as the 2006 Historical/Archaeological Resources Survey, both prepared by CRM TECH[1] (Appendix D).

2.7.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines and the Riverside County Rules to Implement CEQA, the Project would have a significant effect on cultural and historic resources if it would:

Historic Resources

a) Alter or destroy a historic site?
b) Cause a substantial adverse change in the significance of a historical resource, pursuant to California Code of Regulations, Section 15064.5?

Archaeological Resources

a) Alter or destroy an archaeological site?
b) Cause a substantial adverse change in the significance of an archaeological resource, pursuant to California Code of Regulations, Section 15064.5?
c) Disturb any human remains, including those interred outside of formal cemeteries?

2.7.3 Regulatory Framework

Federal

National Historic Preservation Act

The National Historic Preservation Act (NHPA) was established in 1966 by the Advisory Council on Historic Preservation (ACHP) with the goal to encourage federal agencies to factor historic preservation into federal project requirements. ACHP is an independent federal agency that promotes the preservation, enhancement, and productive use of the nation's historic resources, and advises government leaders on national historic preservation policy. The ACHP defines “historic properties” as “any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places.”

Section 106 of the NHPA applies when two thresholds are met: 1) there is a federal or federally licensed action, including grants, licenses, and permits, and 2) that action has the potential to affect properties listed in or eligible for listing in the National Register of Historic Places. Section 106 requires each federal agency to identify and assess the effects of its actions on historic resources. If it is determined that a proposed action has the potential to affect historic properties, the federal agency must identify the appropriate State Historic Preservation Officer/Tribal Historic Preservation Officer (SHPO/THPO) to consult with during the process.

[1] “Historical/Archaeological Resources Survey, Thermal Ranch Specific Plan,” prepared by CRM TECH, October 2022; and “Historical/Archaeological Resources Survey Report, APNs 751-020-002, -003, -006, and -007,” prepared by CRM TECH, March 2006.

National Register of Historic Places

Authorized under the NHPA, the National Register of Historic Places is the nation's official list of cultural resources that qualify for preservation. Properties listed in the Register include districts, sites, buildings, structures, and objects that are significant in American history, architecture, archaeology, engineering, and culture. The following criteria are used to determine eligibility for inclusion in the National Register. These criteria have been developed by the National Park Service as provided for in the NHPA and require a determination whether resources:

a) Are associated with events that have made a significant contribution to the broad patterns of our history;
b) Are associated with the lives of persons significant in our past;
c) That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
d) That yielded, or may be likely to yield, information important in prehistory or history (36 CFR 60.4).

State

California Public Resources Code

The California Environmental Quality Act (CEQA) is the principal statute governing the environmental review of projects within the State and includes the State of California's Public Resources Code (PRC) sections 21000-21189 and the CEQA Guidelines (California Code of Regulations, Title 14, Sections 1500-15387). The State of California establishes the definitions and criteria for "historical resources," which require similar protection to what the NHPA mandates for historic properties.

According to PRC Section 5020.1(j), an "historical resource includes, but is not limited to, any object, building, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California."

If a lead agency determines that an archaeological site is an historical resource, the provisions of PRC Section 21084.1 and CEQA Guidelines Section 15064.5 would apply. If an archaeological site does not meet the CEQA Guidelines criteria for a historical resource, then the site may meet the threshold of PRC Section 21083 regarding unique archaeological resources.

In addition, PRC Section 5097.98 states that if Native American human remains are identified within a project area, the landowner must notify and consult with the Native American Most Likely Descendant (MLD), as identified by the Native American Heritage Commission (NAHC), to develop a plan for proper treatment and/or removal of the human remains and associated burial of artifacts. These procedures are also addressed in Section 15046.5 of the CEQA Guidelines and within the California Health and Safety Code.

Assembly Bill 52

Assembly Bill (AB) 52 was passed by the California Legislature and signed into law by the Governor in 2015. It established a new category of resources in the California Environmental Quality Act called Tribal Cultural Resources (see Section 2.20 of this EIR). (Public Resources Code § 21074.) "Tribal cultural resources" are either of the following:

(1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:

(A) Included or determined to be eligible for inclusion in the California Register of Historical Resources.

(B) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.

(2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

AB 52 establishes a formal project consultation process for California Native American tribes and lead agencies regarding tribal cultural resources, referred to as government-to-government consultation. Per Public Resources Code Section 21080.3.1.(b), the AB52 consultation process must begin prior to release of an environmental impact report, mitigated negative declaration, or negative declaration. Native American tribes to be included in the formal consultation process are those that have requested notice of projects proposed within the jurisdiction of the lead agency.

SB 18

Senate Bill-18 (SB 18) requires local (city and county) governments to consult with California Native American tribes to aid in the protection of traditional tribal cultural places ("cultural places") through local land use planning. SB 18 requires local governments to consult with tribes prior to making certain planning decisions and to provide notice to tribes at certain key points in the planning process. These consultations and notice requirements apply to adoption and amendment of both general plans (defined in Government Code §65300 et seq.) and specific plans (defined in Government Code §65450 et seq.).

California Register of Historical Resources

For CEQA purposes, "historical resources" applies to any such resources listed in or determined to be eligible for listing in the California Register of Historical Resources, included in a local register of historical resources, or determined to be historically significant by the Lead Agency (Title 14 CCR Section 15064.5(a)(1)-(3)). CEQA guidelines mandate that "generally a resource shall be considered by the lead agency to be 'historically significant' if the resource meets the criteria for listing on the California Register of Historical Resources" (Title 14 CCR Section 15064.5(a)(3)). A resource may be listed in the California Register if it meets any of the following criteria:

a) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
b) Is associated with the lives of persons important in the State's past.
c) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
d) Has yielded, or may be likely to yield, information important in prehistory or history. (Public Resources Code section 5024.1(c))

California Health and Safety Code

California Health and Safety Code Section 7050.5 regulates the treatment of human remains and states that in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined that the remains are not subject to further investigation. If the coroner recognizes or has reason to believe that the human remains are those of a Native American, he or she shall contact the NAHC to determine the Most Likely Descendant (MLD). Consultation with the designated MLD will determine the final disposition of the remains.

Local

Riverside County General Plan

The Multipurpose Open Space Element of the Riverside County General Plan provides background on the role of cultural and historic resources in the county. It also provides the following policies regarding the consideration and management of cultural and historic resources:

OS 19.1 Cultural resources (both prehistoric and historic) are a valued part of the history of the County of Riverside.

OS 19.2 The County of Riverside shall establish a Cultural Resources Program in consultation with Tribes and the professional cultural resources consulting community that, at a minimum, would address each of the following: application of the Cultural Resources Program to projects subject to environmental review; government-to-government consultation; application processing requirements; information database(s); confidentiality of site locations; content and review of technical studies; professional consultant qualifications and requirements; site monitoring; examples of preservation and mitigation techniques and methods; curation and the descendant community consultation requirements of local, state and federal law.

OS 19.3 Review proposed development for the possibility of cultural resources and for compliance with the cultural resources program.

OS 19.4 To the extent feasible, designate as open space and allocate resources and/or tax credits to prioritize the protection of cultural resources preserved in place or left in an undisturbed state.

OS 19.5 Exercise sensitivity and respect for human remains from both prehistoric and historic time periods and comply with all applicable laws concerning such remains.

2.7.4 Environmental Setting

In order to identify and evaluate the potential for cultural resources on and in the vicinity of the Project site, a cultural resources survey was conducted by CRM TECH for the approximately 619-acre site. The site was previously subject to a Phase 1 cultural resources survey in 2006, which included an historical/archaeological resources literature search, historical background research, Native American scoping, and an intensive-level field survey. The 2006 survey found no historical resources, as defined by CEQA, on or adjacent to the site. A new cultural survey, and corresponding cultural resources report, were prepared by CRM TECH for the Project in October 2022. Intended as an update to the 2006 study, the cultural resources report prepared for the Project includes a new historical/archaeological resources records search, supplementary historical background research, Native American consultation, and field reconnaissance.

The Project site is situated in the southeastern portion of Coachella Valley, on the valley floor. Surrounding lands are predominantly agricultural, both active and fallow. Previously undisturbed lands adjacent to and in proximity of the Project site are limited and include vegetation and habitat that may have served as an important food source for native Cahuilla peoples.

The Coachella Valley has long been occupied by the Cahuilla people, a Takic-speaking group of hunters and gatherers. Anthropologists study the Cahuilla as three distinct groups based on geographic setting: the Pass Cahuilla of the San Gorgonio Pass – Palm Springs area; the Mountain Cahuilla of the San Jacinto and Santa Rosa Mountain and the Cahuilla Valley; and the Desert Cahuilla of the eastern Coachella Valley. Little population data for the Cahuilla prior to European contact is available but estimates range from 3,600 to 10,00 persons. The Cahuilla population was decimated as a result of the introduction of European disease in the 19th century. Today, Native Americans of Pass or Desert Cahuilla heritage are mostly affiliated with one or more of the Indian reservations in and near the Coachella Valley, including Torres Martinez, Augustine, Cabazon, Agua Caliente, Twenty-Nine Palms and Morongo.

José Romero, José Maria Estudillo, and Romualdo Pacheco were the first noted European explorers to travel through the Coachella Valley, in 1823 to 1825. The Cocomaricopa Trail was an ancient Native American trading route, which was later again “discovered” in 1862 by William David Bradshaw, and renamed the Bradshaw Trail. The Euro-American settlement of the Coachella Valley began in the 1870s with the establishment of railroad stations along the Southern Pacific Railroad. With the development of underground water sources such as artesian wells, and eventually the completion of the Coachella Canal in 1948-1949, farming became the dominant economic activity in the area. The date palm was introduced to the Valley around the turn of the 20th century and became the agricultural staple for the region by the late 1910s. Starting in the 1920s, resorts and other tourism-related industries made the Coachella Valley into a popular winter destination.

2.7.5 Existing Conditions

The topography of the subject property is relatively level, with elevations ranging from approximately 130 to 150 feet below mean sea level. The site is bounded by Harrison Avenue to the west, Avenue 62 to the north, Tyler Street on the east, and Avenue 64 to the south. Lands within the Reservation boundary of the Torres-Martinez Desert Cahuilla Indians are located immediately south of the subject property.

The Project site has been in active agriculture for several decades. Five agricultural out-buildings, including hay sheds and an equipment/shop building are also located in the central portion of the subject the property.

In the Project vicinity, numerous Native American cultural resources have been found and documented, including fish traps, pottery scatters, grinding rocks, trail segments, and rock cairn features. While the Project planning area does not provide perennial or even seasonal water sources, native habitat of the past may have provided valuable food and fiber resources.

Beyond the existing five buildings, there is no evidence of building foundations or other structures that might imply earlier development or occupation during historic times. Surrounding lands have mostly been disturbed for agriculture and other uses for many years. The subject property does not appear to harbor nor is it located near important historic structures that could be affected directly or indirectly by the proposed Project.

<u>Historical/Archaeological Records Search</u>
Historical/archaeological records searches were conducted for the subject site in 2005 and again in 2022. Both records searches included the examination of maps and records for previously identified cultural resources in or near the Project area and were conducted by the Eastern Information Center (EIC) of the California Historical Resources Information System, located at the University of California, Riverside. A search was also conducted for previously prepared cultural resources reports pertaining to the area (**Exhibit 2.7-1**).

The records search in 2005 found four historic-period sites and eight isolates, mainly refuse scatters and isolate glass shards dating to the early 20th century, within a one-mile radius of the subject site. No prehistoric archaeological sites within one mile of the site were on record, and none of the historic sites and isolate were within or adjacent to the Project area. Therefore, none of the identified sites or isolates required further consideration.

Since 2006, six additional cultural resources have been recorded within a one-mile radius of the subject property, including four historic-period roads and two prehistoric isolates. One of the roads represents two segments of Avenue 62, an asphalt-paved road first noted in 1940, which includes a short segment across Harrison Street, adjacent to the northwestern corner of the site. None of the other resource sites or isolates are in the immediate vicinity of the Project, and thus do not require further consideration.

Historical Background Research

Historical background research was also conducted for the subject property and vicinity. In 2006, this research included a review of published literature in local and regional history and historic maps depicting the Project vicinity. Background research for the updated cultural resources report included the examination of aerial and satellite photographs taken between 1953 and 2021.

Historical maps from 1856 to 1972 show no evidence of any settlement or development activities beyond agricultural operations in the Project area, other than two prominent Desert Cahuilla (present-day Torres Martinez Desert Cahuilla Indians) settlements in the general vicinity. The two villages served as important stops on the Cocomaricopa-Bradshaw Trail, which during the 19th and early 20th centuries passed through the area approximately 1,000 feet to the southwest of the subject site. One of the villages, Torres, located approximately two miles west of the Project, is no longer occupied, while Martinez, located approximately 1.5 miles southeast of the subject site, is now the headquarters of the Torres Martinez Indian Reservation.

Aerial and satellite photographs show that part of the subject property has been under cultivation since at least 1953, and nearly the entire area was under use by farming operations by the 1970s. The photographs suggest that the metal sheds on the site are the only notable structures to appear on the property over this period, with the earliest of the sheds first built between 1975 and 1984.

Native American Consultation

A written request was submitted to the State of California Native American Heritage Commission (NAHC) in March 2023 for a records search in the Sacred Lands File maintained by the commission. The NAHC reported that the Sacred Lands File identified no known Native American cultural resources in the Project vicinity. However, the absence of specific information does not necessarily preclude the presence of resources. As such, 15 tribal representatives for local Native American groups were contacted at the recommendation of the NAHC. SB-18 and AB-52 notification letters were sent out on March 29, 2023.

At the time that the cultural resources report was written, five tribes had responded to notifications. The Cahuilla Band of Indians and the Quechan Tribe of the Fort Yuma Reservation offered no comments regarding this project and deferred to tribes located in proximity to the Project site, with the Cahuilla Band deferring specifically to the Torres Martinez Desert Cahuilla Indians. The Augustine Band of Cahuilla Indians were unaware of any cultural resources that may be affected by the proposed project but requested notification if such resources are discovered during the project. The Agua Caliente Band of Cahuilla Indians requested copies of all cultural resource documentation generated in connection with the project for tribal review as well as Native American monitoring during ground disturbing activities on the property. Consultation was concluded on December 27, 2023.[2]

[2] Native American Consultation Summary for GPA230001, SP00401, TTM38578, PPT23005 & 006, prepared by the Heather Thomson, Riverside County Archaeologist. May 2024.

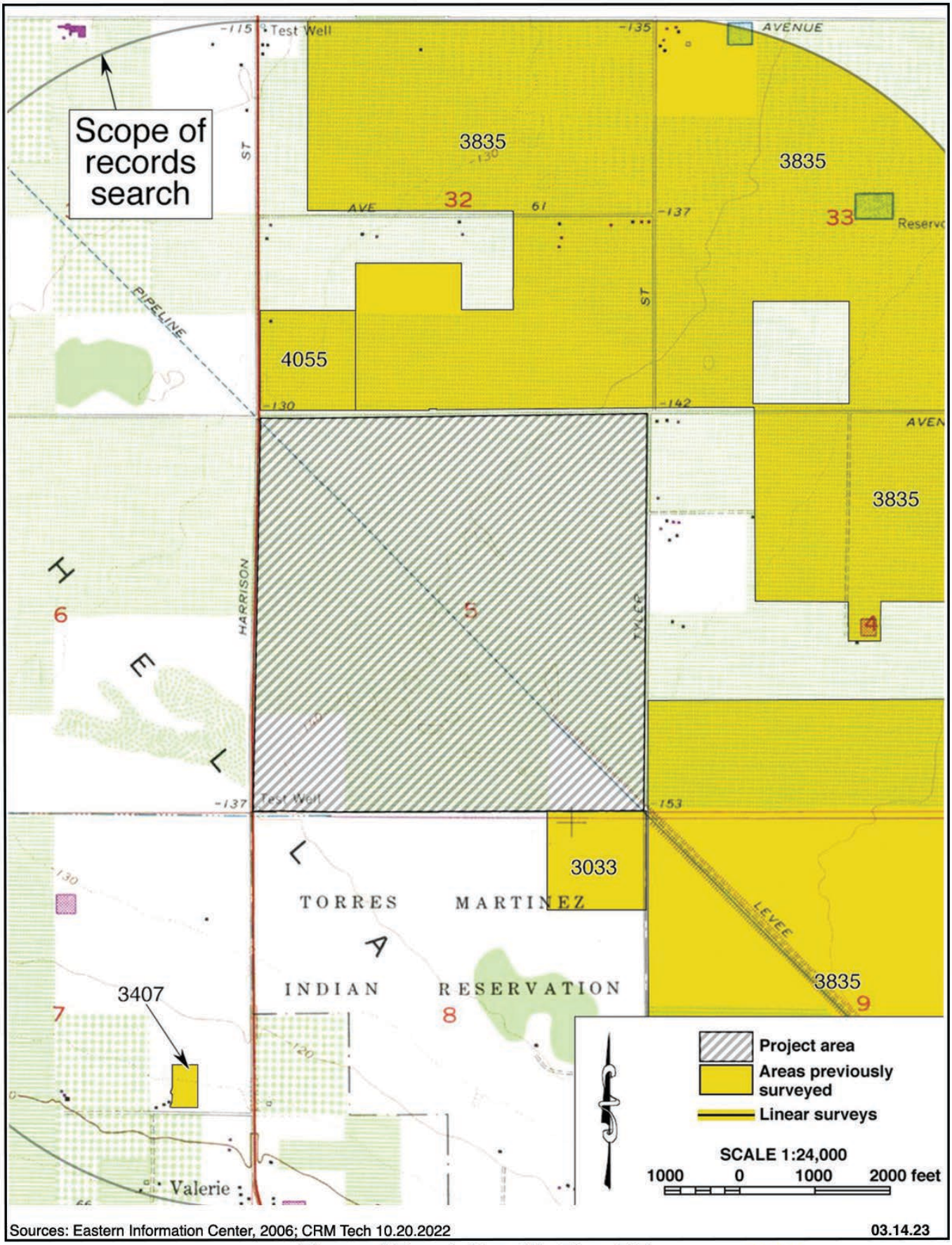
The Torres Martinez Desert Cahuilla Indians, with Reservation lands adjacent to the subject site, requested further consultation and expressed concern regarding prehistoric settlement and land use patterns. The tribe provided a list of village sites and cultural landscapes in the Project vicinity, recommended archaeological testing and the development of a plan for recovered archaeological materials, and requested Native American monitoring during construction. A representative of the Torres Martinez Desert Cahuilla Indians also accompanied the archaeologist on the field reconnaissance conducted for the Project.

Field Survey

A field inspection survey of the Project site was completed on foot, examining various locations where potential cultural resources are most likely to be encountered. Such locations on the Project site include around the metal sheds near the center of the property, across some of the recently disked fields, and along the property boundaries. The field survey found no potential archaeological or historical resources, as defined by CEQA, in the Project area.

CVWD Middleton Reservoir 7802-1 Site

As noted, the Project includes the construction of a 5-millon-gallon water reservoir pursuant to the requirements of CVWD, which has directed the Project proponent to the existing CVWD Middleton Reservoir site, which was developed pursuant to CEQA. Site development was completed and the first of multiple reservoirs built in 2004. To accommodate the new reservoir the existing earthen berm must be shifted 35± feet to the north. The CVWD Middleton Reservoir 7802-1 site located 2.4± miles southwest of the Project site.



Sources: Eastern Information Center, 2006; CRM Tech 10.20.2022

03.14.23

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Thermal Ranch Specific Plan EIR
2006 Records Search:
Previous Cultural Resources Studies
Thermal, California

Exhibit

2.7-1

2.7.6 Project Impacts

Historic Resources

a) Alter or destroy a historic site?

b) Cause a substantial adverse change in the significance of a historical resource, pursuant to California Code of Regulations, Section 15064.5?

As stated above, the 2006 EIC records search found five previous cultural resources studies conducted within a one-mile radius of the Project site which identified at least four historic-period sites and eight isolates, predominantly refuse scatters and isolated glass shards dating to the early 20th century. However, none of these sites or isolates are within or adjacent to the Project area. The 2022 records search found previous studies identifying four historic-period roads and two prehistoric isolates.

One of the identified historic period roads represents segments of Avenue 62, an asphalt-paved road first noted in 1940, including a short segment across Harrison Street, adjacent to the northwestern corner of the site. While Avenue 62 was historically a narrow dirt road, it was paved between 1984 and 1996, and thus is essentially a modern feature in its current state. Likewise, both Harrison Street and Tyler Street predate 1941, but as the result of modern upgrades and maintenance neither road has potential for historical significance in their current state. None of the other sites or isolates identified in the records search are in the immediate vicinity of the Project, and thus do not require further consideration. The records search conducted by the NAHC for the Project found no results in the Sacred Lands Files identifying Native American cultural resources in the Project vicinity.

The field reconnaissance conducted on the site in both 2006 and 2022 identified no potential historical resources on the property. The metal sheds on the site were built after 1975 and therefore, as utilitarian structures that are less than 50 years in age, are not considered historical resources.

CEQA establishes that “a project that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment” (PRC §21084.1). “Substantial adverse change,” according to PRC §5020.1(q), “means demolition, destruction, relocation, or alteration such that the significance of a historical resource would be impaired.”

According to Public Resources Code §5020.1(j), "historical resource" includes, but is not limited to, any object, building, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California." More specifically, CEQA guidelines state that the term "historical resources" applies to any such resources listed in or determined to be eligible for listing in the California Register of Historical Resources, included in a local register of historical resources, or determined to be historically significant by the Lead Agency (Title 14 CCR §15064.5(a)(1)-(3)).

Regarding the proper criteria for the evaluation of historical significance, CEQA guidelines mandate that "a resource shall be considered by the lead agency to be 'historically significant' if the resource meets the criteria for listing on the California Register of Historical Resources" (Title 14 CCR §15064.5(a)(3)). A resource may be listed in the California Register if it meets any of the following criteria:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
2. Is associated with the lives of persons important in our past.
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
4. Has yielded, or may be likely to yield, information important in prehistory or history. (PRC §5024.1(c))

According to the above definitions of historical resources, the records search, historical research, Native American consultation, and field surveys conducted for the subject site identified no such sites or resources on or adjacent to the Project site. No buildings, structures, or objects more than 50 years of age were encountered or identified within the Project area. Based on these findings, development of the Project would not alter or destroy an historic site, nor would it cause a substantial adverse change in the significance of an historical resource pursuant to California Code of Regulations, Section 15064.5. The Project would have no impacts to a historic site or resource.

CVWD Middleton Reservoir 7802-1 Site

As noted, the Project includes the construction of a 5-millon-gallon water reservoir at the existing CVWD Middleton Reservoir site. The subject reservoir site was previously in agriculture at least prior to 1986. Site development was completed and the first reservoir constructed by 2004. The reservoir site is located on the lower Martinez Canyon alluvial fan 2.4± miles southwest of the Project site. The construction of the Project reservoir will result in limited site disturbance to enlarge the area behind the existing earthen berm and shifting the berm farther north approximately 35 feet. Considering the site's location, decades of active agriculture and the development of the site for domestic water reservoirs, the potential for construction of the Project reservoir site to alter or destroy a historic site or cause a substantial adverse change in the significance of an historical resource is considered low. Nonetheless, the implementation of mitigation measures set forth below will further ensure that impacts are less than significant.

Archaeological Resources

a) Alter or destroy an archaeological site?

b) Cause a substantial adverse change in the significance of an archaeological resource, pursuant to California Code of Regulations, Section 15064.5?

The historical/archaeological records search found no results that indicated the presence of archaeological sites or resources in the vicinity of the subject site. The search of the Sacred Lands File conducted by the NAHC also identified no known Native American cultural resources in the Project area.

The Torres Martinez Desert Cahuilla Indians, who have a reservation immediately to the south of the subject site, requested further consultation on the Project. The tribe expressed concern regarding prehistoric settlement and land patterns in the area and provided a list of village sites and cultural landscapes in the surrounding area. A representative of the Torres Martinez Desert Cahuilla Indians participated in the field survey of the subject site. While scattered refuse was observed along the Project boundaries, including concrete fragments, asphalt, broken bottles, and beverage cans, none of these items appear to be from the early historic or prehistoric periods, and none of them demonstrated any historical or archaeological value.

Given that no archaeological resources and no archaeological sites were identified as occurring in the Project vicinity, the Project is not expected to have any significant impacts related to the alteration or destruction of an archaeological site, nor is it expected to cause a substantial adverse change in the significance of an archaeological resource. However, archaeological resources can be buried or otherwise made obscure by land disturbance, including activities associated with agriculture and other types of disturbance and development.

As recommended by the County of Riverside, and reflected in **CUL-1**, procedures will be in place to ensure that any unanticipated cultural resources potentially on the subject site are not destroyed, altered, or otherwise adversely changed by the Project. The provided measures ensure that if unanticipated cultural resources are discovered during ground-disturbing activities, then the appropriate parties, including Native American tribal representatives if applicable, will be consulted in order to determine the appropriate treatment for the resources. Compliance with this measure will ensure that the Project will have less than significant impacts related to archaeological sites and resources.

CVWD Middleton Reservoir 7802-1 Site

The Project includes the construction of a 5-millon-gallon water reservoir pursuant to the requirements of CVWD, which has directed the Project proponent to the existing CVWD Middleton Reservoir site. The subject reservoir site was previously in agriculture at least prior to 1986. Site development was completed and the first reservoir constructed by 2004. The reservoir site is located on the lower Martinez Canyon alluvial fan 2.4± miles southwest of the Project site. The construction of the Project reservoir will result in limited site disturbance to enlarge the reservoir site and shift the existing earthen berm farther north approximately 35 feet. Considering the site's location, decades of active agriculture and the development of the site for domestic water reservoirs, the potential for construction of the Project reservoir site to alter or destroy an archaeological site or cause a substantial adverse change in the significance of an archaeological resource is considered low. Nonetheless, the implementation of mitigation measures set for below will further ensure that impacts are less than significant.

c) Disturb any human remains, including those interred outside of formal cemeteries?

Project archaeologists note that any surface evidence of historic or prehistoric human burials or cremations on the subject site have been erased by the years of agricultural activity, including the installation of irrigation lines and tile drains, annual discing and other site preparations for growing. No evidence of human remains, burials or cremations, or signs of formal or informal cemeteries were identified in the records searches, historical background research, Native American consultation, or field inspection, as occurring on the subject site.

However, should any human remains be encountered during ground-disturbing activities related to the Project, compliance with California Health and Safety Code §7050.5 and Public Resources Code §5097.98(b) would be required. Pursuant to State Health and Safety Code Section 7050.5, if human remains are encountered, no further ground-disturbing activities shall occur in that area until the coroner has determined the origin.

In accordance with Public Resources Code Section 5097.98 (b), remains shall be left in place and free from disturbance until a final decision as to the treatment and their disposition has been made. If the remains are determined to be of Native American heritage, the mostly likely descendent must be contacted and given the opportunity to recommend appropriate burial. Compliance with these measures, as provided in **CUL-2**, will ensure that the Project's impacts associated with human remains would be less than significant.

CVWD Middleton Reservoir 7802-1 Site

The Project includes the construction of a 5-millon-gallon water reservoir at the existing CVWD Middleton Reservoir site, which was developed in 2002-04 pursuant to CEQA. Site development was completed with the installation for the first reservoir and included extensive excavation of this sloping site, construction of the surrounding earthen berm, and fine grading of tank pads. Construction of the Project reservoir is not expected to result in disturb any human remains, including those that may have been interred outside of formal cemeteries. No impacts in this regarding are expected. Nonetheless, mitigation set forth below will further ensure that subject impacts are less than significant.

2.7.7 Mitigation Measures

CUL-1 Concurrent with the initiation of ground disturbing activities, a Native American monitor shall be present on site to observe earthwork and related activities (including any archaeological testing and surveys). If during ground-disturbance activities, including grading, excavation and other construction activities, unanticipated cultural resources are discovered, the following procedures must be followed: All grading and construction activities within 100 feet of the discovered cultural resource must be halted and the applicant shall contact the County Archaeologist immediately upon discovery of the cultural resource. A meeting shall be organized convening appropriate parties, potentially including the developer, the project archaeologist, Native American tribal representatives, and the County Archaeologist, to discuss the significance of the find. The convened parties shall decide upon the appropriate treatment for the cultural resource. Resource evaluations shall be limited to nondestructive analysis. Further ground disturbance must not resume within the area of the discovery until the appropriate treatment has been accomplished.

CUL-2 If human remains are encountered during grading or other construction activities, no further disturbance shall occur until the Riverside County Coroner has made the necessary findings as to origin. The remains must be left in place and free from disturbance until a final decision as to the treatment and their disposition has been made. If the coroner determines the remains to be of Native American heritage, the NAHC shall be contacted by the Coroner within 24 hours. The NAHC must identify the most likely descendant, who may then make recommendations and engage in consultation with the property owner concerning the appropriate treatment of the remains.

2.7.8 Significance After Mitigation

Based on the records search, historical background research, Native American consultation, and the field survey conducted for the subject site and surrounding area, no historical or archaeological resources or sites are known to occur on site or in the vicinity of the Project. Based on these results, and the mitigation measures provided above, the Project will not result in any significant adverse impacts to cultural resources.

2.7.9 Cumulative Impacts

The geographic scope of the analysis of potential cumulative impacts on cultural resources includes the Project site, reservoir site and surrounding areas. The proposed Project would contribute considerably to cumulative impacts if it were to have a significant adverse effect on cultural resources, including historical and archaeological sites and resources, and cultural resources of importance to local Native American tribes. The cultural resources surveys conducted for the Project and reservoir sites, including the evaluation of a wide range of literature, data, and information on historic, tribal, and other archaeological resources, found no evidence of such resources occurring on or adjacent to the Project or reservoir sites. If unanticipated resources occur on the site, then the proposed development could contribute to the regional losses of cultural resources. However, the provided mitigation measures will reduce impacts to historic and archaeological resources to less than significant levels.

As other projects are developed in the eastern Coachella Valley, surveys for historical and archaeological resources will be required under CEQA on a project-by-project basis. Should these surveys identify the presence of cultural resources, mitigation would be required to ensure that there is no cumulative loss of such resources. These requirements ensure that there would not be cumulative impacts associated with historical or archaeological resources. Therefore, the proposed Project's incremental impacts to these resources would not be cumulatively considerable.

2.8 Energy Resources

2.8.1 Introduction

This section of the EIR describes existing conditions regarding energy resources within the Project area and analyzes the potential impacts of the Project on these resources. This analysis was prepared pursuant to Appendix G and Appendix F of the CEQA Guidelines, as amended. A wide range of data and information, ranging from research to regional scale planning and environmental documents, have been used in researching and analyzing the Project and its potential effects. Specifically, this section evaluates the demand for energy resources attributable to the Project during construction and operation, demonstrates whether the current and planned electrical, natural gas, and petroleum-based fuel supplies and distribution systems are adequate to meet the Project's forecasted energy consumption, and determines the impacts based on the Project's use and conservation of energy resources.

2.8.2 Thresholds of Significance

The following analysis criteria and thresholds are based on Appendix G and derived from Appendix F of State CEQA Guidelines. A project would have a significant impact relating to energy and mineral resources if it would:

Energy

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.

b) Conflict with or obstruct a State or Local plan for renewable energy or energy efficiency.

2.8.3 Regulatory Framework

Federal

National Energy Policy Act of 2005
The National Energy Policy Act of 2005 sets equipment energy-efficiency standards, seeks to reduce reliance on nonrenewable energy resources, and provides incentives to reduce current demand on these resources. The act provides for incentives for high-efficiency (including electric) vehicles, new and existing homes, commercial buildings, and manufacturers of high-efficiency appliances. It also addresses combined heat and power, appliance labeling, research and development, efficiency in federal and public facilities, building energy codes, public housing, and other efficiency topics.

State

California 2008 Energy Action Plan Update
The 2008 update to the 2005 Energy Action Plan II is the State's principal energy planning and policy document. The updated document examines the State's ongoing actions in the context of global climate change. The Energy Action Plan II continues the goals of the original 2003 Energy Action Plan, describes a coordinated implementation plan for state energy policies, and identifies specific action areas to ensure that California's energy resources are adequate, affordable, technologically advanced, and environmentally sound. In accordance with this plan, the first-priority actions to address California's increasing energy demands are energy efficiency and demand response (i.e., reduction of customer energy usage during peak periods to address system reliability and support the best use of energy infrastructure).

Additional priorities include the use of renewable sources of power and distributed generation (i.e., the use of relatively small power plants near or at centers of high demand). To the extent that these actions are unable to satisfy the increasing energy demand and transmission capacity needs, clean and efficient fossil-fired generation is supported. The California 2008 Energy Action Plan Update examines policy changes in the areas of energy efficiency, demand response, renewable energy, electricity reliability and infrastructure, electricity market structure, natural gas supply and infrastructure, research and development, and climate change.

Assembly Bill 32 (2006) and Senate Bill 32 (2016)

In 2006, the Legislature enacted AB 32, the California Global Warming Solutions Act of 2006. AB 32 requires California to reduce its GHG emissions to 1990 levels by 2020 and 80% below 1990 levels by 2050. In 2016, the Legislature enacted SB 32, which established an interim reduction target of 40% below 1990 levels by 2030. In accordance with AB 32 and SB 32, the California Air Resources Board (CARB) prepares scoping plans to guide the development of statewide policies and regulations for the reduction of GHG emissions. Many of the policy and regulatory concepts identified in the scoping plans focus on increasing energy efficiencies and the use of renewable resources and reducing the consumption of petroleum-based fuels (such as gasoline and diesel). As such, the State's GHG emissions reduction planning framework creates co-benefits for energy-related resources. Additional information on AB 32 and SB 32 is provided in Section 2.10, Greenhouse Gas Emissions, of this EIR.

California Building Standards

Title 24 of the California Code of Regulations was established in 1978 and serves to enhance and regulate California's building standards. The Building Energy Efficiency Standards, Parts 6 and 11 of Title 24, are updated by the California Energy Commission (CEC) every three years.

The 2022 California Energy Code (Title 24, Part 6), which became effective on January 1, 2023, provides measures to continue reducing energy consumption in California. The 2022 Update includes regulations encouraging efficient electric heat pumps, establishing electric-ready requirements for appliances and mechanical systems in new homes, strengthening ventilation standards, as well as expanding solar photovoltaic and battery storage standards.

According to the Energy Code, all single-family residential buildings, low-rise and high-rise multifamily buildings, as well as non-residential buildings such as grocery stores, offices, retail, hotels, and restaurants[1], must have a newly installed photovoltaic (PV) system. The required annual electrical output of a building's PV system is determined based on the maximum size of PV system that can be installed on the building's Solar Access Roof Area (SARA), or based on Equations 150.1-C, 170.2-C or 140.10-A depending on the building type.[2] Additionally, all high-rise residential and non-residential buildings required to have PV systems must also have a battery storage system that meets the requirements provided in Section 140.10 of the Energy Code.

Title 24 also includes Part 11, the California Green Building Standards Code (CALGreen). The California Building Standards Commission first developed "green" standards in 2007 in an effort to meet the greenhouse gas reduction targets established by AB 32. The 2022 CALGreen standards, effective as of January 1, 2023, institute mandatory minimum environmental performance standards for all new construction of commercial, residential, and State-owned buildings, as well as schools and hospitals.

[1] High-rise multifamily and non-residential buildings requiring photovoltaic systems are listed in Table 140.10-A of the Energy Code.

[2] Equation 150.1-C for single family buildings, Equation 170.2-C for low-rise multifamily buildings, or Equation 140.10-A for other building types.

According to CALGreen Section 4.106, all new single family and multifamily dwellings, as well as hotels, must be built with EV Capable parking spaces. One and two-family dwellings must include one EV capable space per dwelling unit, and multifamily buildings and hotels must build a proportion of all provided parking to be either EV Capable or EV Ready.[3] In accordance with Section 5.106, all new non-residential developments must provide both a portion of parking spaces are that EV Capable, as well as a portion of spaces with EV charging stations.

Integrated Energy Policy Report

In accordance with Senate Bill 1389, the California Energy Commission (CEC) is required to prepare a biennial report providing an assessment of the state's main energy needs and issues, including those pertaining to electricity, natural gas, and transportation fuels. The CEC's 2021 Integrated Energy Policy Report (IEPR) provides recommendations for decarbonizing the building and agriculture sectors as well as the state's natural gas system, and recommendations for ensuring energy reliability. The IEPR also includes the California Energy Demand Forecast, which provides projections through 2035.

California Renewables Portfolio Standards

The Renewables Portfolio Standard (RPS) was established in 2002 and is administered by the California Energy Commission (CEC). The program establishes increasingly stringent renewable energy procurement requirements for the state's energy providers. Senate Bill (SB) 100 updated the RPS in 2018, requiring that by 2030, 60% of the state's electricity must be generated by renewable energy resources such as solar, wind, geothermal, biomass, small hydro, renewable methane, ocean wave or thermal, or fuel cells using renewable fuels. SB 100 aims to achieve 100% renewable energy by 2045.[4]

State Vehicle Standards

In response to the transportation sector accounting for more than half of California's carbon dioxide (CO_2) emissions, AB 1493 was enacted in 2002. AB 1493 required CARB to set GHG emission standards for passenger vehicles, light-duty trucks, and other vehicles determined by the State board to be vehicles whose primary use is noncommercial personal transportation manufactured in 2009 and all subsequent model years. The 2009–2012 standards resulted in a reduction in approximately 22% in GHG emissions compared to emissions from the 2002 fleet, and the 2013–2016 standards resulted in a reduction of approximately 30%.

In 2012, CARB approved a new emissions-control program for model years 2017 through 2025. The program combines the control of smog, soot, and global warming gases and requirements for greater numbers of zero-emission vehicles into a single package of standards called Advanced Clean Cars. By 2025, when the rules would be fully implemented, new automobiles would emit 34% fewer global warming gases and 75% fewer smog-forming emissions (CARB 2011).

Although the focus of the State's vehicle standards is on the reduction of air pollutants and GHG emissions, one co-benefit of implementation of these standards is a reduced demand for petroleum-based fuels.

[3] EV Capable refers to parking spaces which have electrical panel capacity, a dedicated branch circuit, and a raceway to support future installation of a charging station. EV Ready refers to the same conditions as EV Capable, with the addition of other electrical components as well as a receptable or blank cover to support future installation of a charging station.

[4] Senate Bill 100 Joint Agency Report, Achieving 100 Percent Clean Electricity in California (2021).

Regional and Local

County of Riverside Climate Action Plan Update

The Riverside County 2019 Climate Action Plan (CAP) Update establishes the County's GHG reduction targets of 49% below 2008 baseline levels by 2030 and 80% below baseline levels by 2050. Chapter 4 of the CAP provides the GHG reduction measures that will help the County achieve the reduction targets for 2030 and 2050. The reduction measures focus on different sectors, including transportation, energy efficiency and clean energy.

The 2019 CAP Update includes required measures resulting from the 2017 Settlement Agreement with the Sierra Club, Center for Biological Diversity, San Bernardino Audubon Society, and respondents (Petitioners). These Petitioners challenged the County's 2015 CAP, including commitments to solar and electric vehicles. The following County requirements are applicable to the proposed Project:

R2-T4 Electrify the Fleet

- The Settlement Agreement requires that all new residential developments install EV charging stations in the garages of each unit. The Settlement Agreement also requires that the capacity and circuits for the installation of EV charging stations are provided in the garages of all new residential developments and all new large-scale commercial buildings that are over 162,000 square feet.
- Comply with Title 24, Part 11 requirements for new commercial development to install e-chargers starting in 2020.

R2-CE1 Clean Energy

- The Settlement Agreement requires on-site renewable energy production (including but not limited to solar) for any tentative tract map, plot plan, or conditional use permit that proposes to add more than 75 new dwelling units of residential development or one or more new buildings totaling more than 100,000 gross square feet of commercial, office, or manufacturing development. Renewable energy production shall be onsite generation of at least 20 percent of energy demand for commercial, office, industrial or manufacturing development, meet or exceed 20 percent of energy demand for multi-family residential development, and meet or exceed 30 percent of energy demand for single-family residential development.

County of Riverside General Plan

The Riverside County General Plan includes policies addressing overlapping goals such as energy conservation, GHG emissions reduction, reduced automobile use, and improving air quality. General plan policies related to energy efficiency and clean energy are provided in the land use, multipurpose open space, and air quality elements. The following policies are applicable to the proposed Project:

LU 4.1 Require that new developments be located and designed to visually enhance, not degrade the character of the surrounding area through consideration of the following concepts:

b. Require that structures be constructed in accordance with the requirements of Riverside County's zoning, building, and other pertinent codes and regulations.
e. Pursue energy efficiency through street configuration, building orientation, and landscaping to capitalize on shading and facilitate solar energy, as provided for in Title 24 Part 6 and/or Part 11, of the California Code of Regulations (CCR).

OS 11.1 Enforce the state Solar Shade Control Act, which promotes all feasible means of energy conservation and all feasible uses of alternative energy supply sources.

OS 11.2 Support and encourage voluntary efforts to provide active and passive solar access opportunities in new developments.

OS 11.3 Permit and encourage the use of passive solar devices and other state-of-the-art energy resources.

OS 11.4 Encourage site-planning and building design that maximizes solar energy use/potential in future development applications.

OS 16.1 Continue to implement Title 24 of the California Code of Regulations (the "California Building Standards Code") particularly Part 6 (the California Energy Code) and Part 11 (the California Green Building Standards Code), as amended and adopted pursuant to County ordinance. Establish mechanisms and incentives to encourage architects and builders to exceed the energy efficiency standards of within CCR Title 24.

OS 16.9 Encourage increased use of passive, solar design and day-lighting in existing and new structures.

AQ 4.1 Require the use of all feasible building materials/methods which reduce emissions.

AQ 4.2 Require the use of all feasible efficient heating equipment and other appliances, such as water heaters, swimming pool heaters, cooking equipment, refrigerators, furnaces and boiler units.

AQ 4.3 Require centrally heated facilities to utilize automated time clocks or occupant sensors to control heating where feasible.

AQ 4.4 Require residential building construction to comply with energy use guidelines detailed in Part 6 (California Energy Code) and/or Part 11 (California Green Building Standards Code) of Title 24 of the California Code of Regulations.

AQ 20.11 Reduce energy consumption of the new developments (residential, commercial and industrial) through efficient site design that takes into consideration solar orientation and shading, as well as passive solar design.

AQ 20.12 Increase energy efficiency of the new developments through efficient use of utilities (water, electricity, natural gas) and infrastructure design. Also, increase energy efficiency through use of energy efficient mechanical systems and equipment.

AQ 20.18 Encourage the installation of solar panels and other energy- efficient improvements and facilitate residential and commercial renewable energy facilities (solar array installations, individual wind energy generators, etc.).

2.8.4 Environmental Setting

Sources of energy include primary and secondary sources. Primary energy, which is the energy contained in raw fuels, include fossil fuels (oil, coal and natural gas), nuclear, and renewable sources such as wind, solar, geothermal, and hydropower. Secondary sources of energy, which refers to energy that has been converted or stored, include electricity, heat, biofuels, hydrogen, and gasoline.

California Electricity Sources
Currently, most electricity is generated by harnessing power from one of the above-referenced sources to turn a dynamo, or through the direct conversion of solar energy to electricity via the photovoltaic process. The California electric grid provides electricity from a variety of sources, including those

mentioned above. Natural gas is the state's largest single energy source, providing approximately 37.9% of the total electric power mix in 2021. Renewable energy sources, such as wind, solar, geothermal, and biomass, provided approximately 33.6% of California's energy mix in 2021. California thermal and non-renewable sources, including natural gas, as well as nuclear, large hydro, and coal, contributed 66.4% of the power mix in 2021.[5]

According to the California Energy Consumption Database, state-wide electricity consumption in 2021 was 280,738.38 million kWh.[6] The 2021 Integrated Energy Policy Report (IEPR) Energy Demand Forecast projects that state-wide electricity consumption could reach 340,000 million kWh by 2030.[7]

In addition to utility-provided electrical power, many homes and business are installing rooftop solar and storage. New construction and renovation is required to conform to the state's strict building code, as set forth in the Title 24 regulations, which further serves to ensure that energy resources are used economically and wisely. These regulations require that all new single family residential and commercial buildings install solar photovoltaic systems. Both the regulatory environment and the economy have moved toward greater energy efficiency and reliance on non-polluting renewables sources.

IID Electricity Sources

The Imperial Irrigation District (IID) is California's sixth-largest electrical utility, and its third largest public power utility. IID has been incrementally increasing the amount of renewable energy sources in its generating portfolio. For 2021, the IID Power Content Label[8] indicates that natural gas (35.6%) comprised its largest source of energy used to generate electricity. This is followed by "eligible renewables" at 40%, nuclear at 3.5% and large hydroelectric at 4.8%. Eligible renewables were led by "solar", which generated 12.3% of IID power in 2021, followed close by geothermal which provided 12.1%.

Natural Gas

Natural gas is a fuel source comprised of a combustible mix of simple hydrocarbon compounds, primarily methane. In addition to electricity generation, natural gas is used in California for space heating, water heating, cooking, industrial processes, and as a transportation fuel. According to the California Energy Consumption Database, state-wide natural gas consumption in 2021 was 119,922,710,000 therms.[9] The 2021 IEPR Energy Demand Forecast projects that state-wide natural gas consumption, excluding gas used for electricity generation, could reach 13,254,000,000 therms by 2035.[10]

Transportation Fuels

Transportation uses a variety of energy sources including petroleum (gasoline and diesel), natural gas, hydrogen fuel cells, and electricity. In 2015, the total amount of energy consumed by California's transportation sector was equivalent to 23.2 billion gallons of gasoline, including 3.7 billion gallons of diesel.[11]

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5 California Energy Commissions, 2021 Total System Electric Generation,https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2021-total-system-electric-generation (accessed April 2023).

6 Ibid.

7 Based on the mid-case electricity consumption forecast in the California Energy Demand Forecast, California Energy Commission Final 2021 IEPR Volume IV, p.21.

8 Imperial Irrigation District 2021 Power Content Label; http://www.iid.com/energy/renewable-energy/power-content -label

9 California Energy Commission, California Energy Consumption Database, http://www.ecdms.energy.ca.gov/Default.aspx (accessed December 2022). A therm is the energy equivalent of 100,000 British thermal units (BTU).

10 Based on the mid-case gas consumption forecast in the California Energy Demand Forecast, California Energy Commission Final 2021 IEPR Volume IV, p.25.

11 California Energy Commissions, Transportation Energy Demand Forecast, 2018-2030 – Staff Report (2017).

Riverside County Energy Consumption
Table 2.8-1 shows the energy consumed in 2017 in unincorporated areas of Riverside County by residents, businesses, and municipal operations. Energy consumption is measured in terms of electricity, natural gas, and vehicle miles traveled, the latter of which is associated with transportation fuel consumption.

Table 2.8-1
Riverside County Community-Wide Energy Use 2017

Category		Quantity per Year
Electricity	SCE	2,080,338,050 kWh
	IID	829,657,212 kWh
	Anza	59,236,020 kWh
Natural Gas	SoCalGas	89,469,089 therms
Transportation	VMT	4,284,955,458
Source: County of Riverside Climate Action Plan Update (November 2019), Table 3-1.		

2.8.5 Existing Conditions

Electricity
The Project site is located within the electric power service boundaries of IID. IID has overhead, high-voltage power lines along the south boundary of the Project site, which are believed suitable to provide power to the proposed development. IID also has transmission lines along the west side of Harrison Street and lower voltage distribution lines along the east side of Tyler Street.

Natural Gas
Natural gas services in the Project area are provided in the Coachella Valley by Southern California Gas Company (SoCalGas). Natural gas supplies are transported from Texas to the Coachella Valley through three east-west trending gas lines, which cross the valley near and parallel to Interstate-10 and continue west to Los Angeles. The pipelines include one 30-inch line and two 24-inch lines, with pressures of 2,000 pounds per square inch (psi). There is currently no natural gas service to the Project site. The closest high pressure natural gas lines are located within the Highway 111 right of way approximately three miles east of the Project site, and in Monroe Street at Ave 54 three miles to the north of the site.

Alternative Energy
IID continues to meet or exceed California's Renewable Portfolio Standard primarily with local resources. As noted above, IID's power mix in 2021 included 40% renewable sources. There is also large-scale wind power production in the Coachella Valley, large-scale solar arrays are being constructed to the east and north. There are no utility-scale renewable energy facilities in the Project area. It should be noted that SoCalGas is developing "green" sources of natural gas that may reduce GHG and other emissions associated with its use. Geothermal energy on a utility scale has been found and developed at the south end of the Salton Sea in Imperial County, where more than 721.4 megawatts of geothermal electric power have been developed.[12]

[12] California Geothermal Energy Statistics & Data, California Energy Commission website, https://ww2.energy.ca.gov/almanac/renewables_data/geothermal/index_cms.php, accessed July 2020.

2.8.6 Project Impacts

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.

The Project proposes the development of an equestrian center surrounded by a mix of other land uses, including residential of varying densities, a range of retail commercial and resort uses, and offices. The proposed equestrian center could accommodate up to 2,700 horses on site at one time with primary use occurring between October and April. Other uses would include up to 1,362 dwelling units and 320 RV spaces, 275,000 square feet of commercial space and hotel and other resort uses, and 10,000 square feet of office space. The Project would consume energy during the construction and operational phases.

Construction Energy Demand

During construction of the proposed Project, energy would be consumed in three general forms:

1. Petroleum-based fuels used to power off-road construction vehicles and equipment, on-road vehicle trips for construction workers travelling to and from the Project site, and on-road delivery and hauling truck trips.
2. Electricity associated with the conveyance of water that would be used during Project construction for dust control (supply and conveyance) and electricity to power any necessary lighting during construction, electronic equipment, or other construction activities necessitating electrical power; and
3. Energy used in the production of construction materials, including asphalt, steel, concrete, pipes, and manufactured or processed materials such as lumber and glass.

Construction – Electricity Use:

The subject Project site is serviced by existing power lines along Tyler Street, Harrison Street and the future Avenue 64. The Project proposes the construction of an IID substation in the southeastern corner of the site. Construction of this substation will be required to comply with IID's guidelines and requirements to ensure the Project's proper interconnection to the IID power grid.

Construction of the Project would consume electricity for activities such as powering outdoor security and worksite lightings, pumps for water supply and de-watering, hand tools and other construction equipment, operation and charging of electronic equipment, and powering temporary worksite offices/trailers. The levels of electricity consumed during construction would fluctuate throughout the process depending on the activities being performed. Electricity is not the primary energy source used during construction. During this phase, equipment fuels such as diesel and gasoline will be the primary sources of energy.

Overall, electricity demand during the construction of the Project would be temporary, nominal, and would cease upon Project buildout. Accordingly, energy use would not be wasteful, inefficient, or unnecessary, and impacts would be less than significant. In addition, the Project is required to comply with IID guidelines and requirements as well as the County's General Plan and CAP Update, which further ensures that the use of electricity during Project construction would not be wasteful, inefficient, or unnecessary.

Construction – Natural Gas Use:

The extension of distribution lines to the Project site could be accommodated within existing roadways without imposing significant environmental impacts. Construction of the Project would involve no or limited consumption of natural gas. It will therefore not be used in a wasteful, inefficient, or unnecessary manner during the construction phase, and impacts would be less than significant.

Construction – Transportation:

The Project would consume energy during the construction phase for uses related to transportation. Vehicle miles travelled (VMT) associated with the transport of construction materials as well as construction worker commutes would mostly consume petroleum-based fuels. Heavy duty equipment

and trucks used during construction would typically consume diesel fuel. While transportation for construction workers to and from the site would continue throughout the construction period, other transportation-related energy consumption would fluctuate depending on the stage of construction, including grading, paving, and building construction.

It is assumed that construction workers would travel to and from the Project site primarily in gasoline-powered vehicles and that most construction workers live in the Coachella Valley area. As shown in the CalEEMod outputs (Appendix B), the average worker trip length would be 18.5 miles and the average vendor trip length would be 10.2 miles. These trips would cease upon completion of Project construction, which is expected to take place over a seven-year buildout period.[13] Overall, gasoline and diesel fuels consumed for transportation during construction of the Project would be temporary and would not be wasteful or inefficient. Therefore, impacts would be less than significant.

Overall, electricity demand during the construction of the Project would be temporary, nominal, and would cease upon Project buildout. Accordingly, energy use would not be wasteful, inefficient, or unnecessary, and impacts would be less than significant. In addition, the Project is required to comply with IID guidelines and requirements as well as the County's General Plan and CAP Update, which further ensures that the use of electricity during Project construction would not be wasteful, inefficient, or unnecessary.

Reservoir Construction – Energy Use
The CVWD Middleton Reservoir site is powered via a connection with the Imperial Irrigation District (IID) grid. Construction energy use is expected to be largely limited to liquid fuels (gasoline, diesel) to power on-street and construction equipment, including deliverables such as additional fill, concrete, tank components (steel) and related materials. Tank welding is expected to be the primary user of electric power. Energy needed to construct the Project reservoir are expected to be limited and will end once construction is completed.

Operational Energy Demand
The proposed Thermal Ranch community will be comprised of an equestrian event and training center, including barns, show rings, office space, food and beverage and limited specialty retail space. Non-equestrian uses including estate homes, detached and attached single family homes, workforce housing and RV spaces, resort condominiums, a 150-key hotel, and resort and neighborhood retail village. The land use assumptions used for analysis purposes in CalEEMod are provided in Section 2.5, Air Quality.

The proposed Project would constitute a substantial new demand in the area for energy for a wide range of uses, including space heating and cooking, lighting, hot water, process heat, and electric power. As shown in Table 2.8-2, it is estimated that the Project will consume a total of 47,988,737 kBTU (480,001 therms) of natural gas per year, and 28,001,888 kilowatt hours per year of electricity.

Operations – Electricity Use:
The Project's estimated annual use of 28,001,888 kWh per year of electricity represents approximately 0.94% of the community-wide electricity use in unincorporated areas in Riverside County in 2017, and 3.37% of the electricity delivered by IID to unincorporated areas in the County in 2017.[14]

[13] Per the Traffic Impact Analysis prepared for the Project by Urban Crossroads, Inc. (July 2023), the development will be operational by 2032.
[14] County of Riverside Climate Action Plan Update (November 2019), Table 3-1.

The Project's projected electricity use as provided in the table below is a conservative estimate based on the Project's maximum development potential. The parameters inputted to CalEEMod estimates energy use, including that associated with water pumping to the Project reservoir and other water infrastructure, and is based on peak season conditions when the equestrian center will be most active. However, it should be noted that during the summer months, equestrian activity levels will be substantially reduced, and electricity consumption, particularly in the equestrian center, will likely be reduced as well. Therefore, the effects of the equestrian center on energy demand are considered conservative.

Table 2.8-2
Project Operations Energy Consumption

Land Use	Natural Gas (kBTU per year)[1]	Electricity (kWh per year)[1]
Barns (equestrian center)	0	6,706,220
General Office (equestrian center)	107,164	380,325
Specialty Retail (equestrian center)	503,458	1,108,805
Single Family Homes (attached and detached)	18,564,572	4,875,085
Workforce Housing	12,878,656	3,419,003
RV Spaces	0	2,188,162
Condominiums	7,089,230	2,491,908
Hotel	7,503,104	2,398,832
Commercial Retail	1,342,553	2,956,812
Hardscaped Area	0	0
Parking Lot (project-wide)	0	1,476,736
Total:	**47,988,737**	**28,001,888**

Source: CalEEMod 2022.1. Based on Project buildout.
1. Reflects "unmitigated" energy demand in CalEEMod outputs. "Mitigated" energy demands include reductions from required on-site renewable energy.

Furthermore, the Project's consumption of electricity generated off-site will be further reduced by compliance with the mandatory Title 24 Energy Code requirements. The Project will be required to comply with §150.1, §170.2, and §140.10 of the Energy Code, which require the installation of photovoltaic systems on the roofs of all new single family residential, multifamily residential, and non-residential buildings, respectively.[15] All eligible new non-residential buildings will also be required to install battery storage systems to capture and store excess electricity generated by the photovoltaic system, as stated in §140.10(b). These mandatory design features will greatly reduce the amount of electricity from external sources required by the Project.

The Title 24 solar requirements are based on roof area. Given that the Project does not include site plans or building plans for all land uses, the required area of solar panels and resulting energy that could potentially be generated cannot accurately be determined at this time. As individual site plans are prepared, the solar access roof area (SARA) will be determined for each building, and the corresponding photovoltaic requirements will be implemented.

Pursuant to R2-CE1 of the 2019 Climate Action Plan (CAP) Update, the Riverside County Settlement Agreement requires any tentative tract map, plot plan, or conditional use permit that proposes to add more than 75 new dwelling units of residential development or one or more new buildings totaling more than 100,000 gross square feet of commercial, office, industrial, or manufacturing development, to include on-site renewable energy production. This on-site renewable energy production must meet at

[15] The required installation of photovoltaic systems applies to new non-residential buildings including grocery stores, retail, offices, hotels, restaurants, and other uses specified in §140.10, Table 140.10-A.

least 20 percent of energy demand for commercial, office, industrial, manufacturing, and multi-family residential uses, and at least 30 percent of single-family residential uses. Given that the Project is subject to this requirement, **Table 2.8-3** shows the quantity of energy, in kWh per year, that the proposed development would require from off-site sources during operations.

Table 2.8-3
Project Energy Demand and Mandated On-Site Renewable Generation
(kWh per year)

Land Use	Total Electricity Demand[2]	Required On-site Renewable Generation	Off-site Electricity Demand[3]
Single Family Residential	4,875,085	1,462,525	3,412,560
Other[1]	23,126,803	4,625,360	18,501,443
Total	**28,001,888**	**4,453,997**	**21,914,003**

[1] Includes electricity demand from the proposed equestrian barns, special retail, and offices, as well as the proposed neighborhood shopping center, resort condos, hotel, workforce housing, RV spaces, and parking lots.
[2] Based on the electricity demand projected for the Project using CalEEMod Version 2022.1
[3] Accounting for on-site renewable energy production providing for at least 30% of single-family residential electricity demand and 20% of electricity demand for other land uses, per Riverside County CAP Update R2-CE1.

As shown in the above table, the Project will be required to produce approximately 4,453,997 kWh per year from renewable sources, with a remaining demand for 21,914,003 kWh per year being allowed to come from off-site sources. Furthermore, the California Renewables Portfolio Standard requires that electricity providers such as IID procure at least 60% of electricity they deliver from renewable sources by 2030 and 100% by 2045.[16] As a result, the estimated 21,914,003 kWh per year of operational electricity demand not met by the Project's on-site photovoltaic system will be sourced from an increasing share of renewable sources from the utility grid. Overall, compliance with state and County requirements will ensure that the Project's electricity consumption will not be wasteful, inefficient, or unnecessary, resulting in less than significant impacts.

Operations – Natural Gas Use:
As shown in Table 2.8-2, at buildout the Project is estimated to use approximately 47,988,737 kBTU (480,001 therms) of natural gas per year. This represents approximately 0.53% of the of the 89,469,089 therms of natural gas delivered from SoCalGas to unincorporated areas of Riverside County in 2017.[17] As stated above, the Project's energy consumption was projected in CalEEMod based on peak-season activity levels in the equestrian center. However, most land uses in the equestrian center, such as barns and outdoor competition spaces, do not use natural gas. Therefore, seasonal changes in natural gas consumption would not be greatly impacted by the seasonal event schedule at the equestrian center.

The Project will be required to comply with the Title 24 Energy efficiency standards, including regulations that will reduce natural gas consumption. For example, as provided in §§150.00(t)-(v) and §160.9, new single family and multi-family homes must be "electric ready", meaning that they must be designed to accommodate electric furnaces, cooktops, and clothes dryers. This regulation will facilitate the transition away from natural gas fueled household equipment and appliances. Compliance with these requirements will ensure that the Project's natural gas use during operations is not wasteful, inefficient, or unnecessary, resulting in less than significant impacts.

16 Senate Bill 100 Joint Agency Report, Achieving 100 Percent Clean Electricity in California (2021).
17 County of Riverside Climate Action Plan Update (November 2019), Table 3-1.

Operations – Transportation Energy Use:
During operation, the Project would consume petroleum-based fuels related to vehicle travel to and from the subject site. Trips associated with the Project may include employee commutes, daily trips for residents, and trips associated with visitors to Project commercial services and the equestrian center. According to the Traffic Impact Analysis, the Project would generate approximately 18,939 daily trips.[18] During the equestrian event season, daily visitors may include a mix of local residents and out of town visitors. It should be noted that the proposed site plan has been designed with a network of internal routes for pedestrian, golf cart, bicycle, and equestrian transportation. These trails are intended to reduce the need for vehicle trips between planning areas within the Project.

Based on CalEEMod, the Project would generate approximately 63,260,124 VMT per year.[19] The amount of fuel consumed by these vehicle trips is variable based on fuel economy and the increasing adoption of zero-emission vehicles. Project VMTs represent a 1.47% increase over the 4,284,955,458 VMTs generated by unincorporated areas of the County.[20] It should be noted that VMTs are regional in nature, and that not all Project VMTs will occur solely within the boundaries of Riverside County.

The federal EPA and state CARB continue to increase vehicle fuel efficiency standards. For example, the Advanced Clean Cars II regulations require that all new passenger cars, trucks, and SUVs sold in California will be zero emissions as of 2035. The installation of electric vehicle (EV) charging stations on-site will also support the use electric vehicles. Pursuant to measure R2-T4 in the Riverside County Climate Action Plan Update (2019), the Settlement Agreement requires the installation of EV charging stations in the garages of all units of new residential development. Furthermore, according to Part 11 of the Title 24 regulations (CALGreen), multi-family developments with 20 or more dwelling units, hotels with 20 or more rooms, and all non-residential developments must provide EV chargers for a portion of all parking spaces. These policies and regulations will reduce vehicle emissions as well as the quantity of fuel energy required per mile traveled. Therefore, while the Project will result in a direct increase in VMTs, it will not result in wasteful, inefficient, or unnecessary consumption of transportation energy resources during operation. Impacts will be less than significant.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

Development resulting from the proposed Project must be designed, built, and operated in accordance with all applicable state and local regulations intended to reduce energy demand. Compliance with these regulations would ensure that the Project does not conflict with any applicable energy efficiency and conservation standards. Such standards and regulations include Part 6 and Part 11 of Title 24 of the California Code of Regulations. As discussed above, the Project will be required to comply with all Title 24 requirements, including the mandatory installation of photovoltaic systems for new residential and non-residential buildings, the installation of battery storage systems in non-residential buildings, and electric readiness for residential equipment such as furnaces, cooktops, and clothes dryers. These regulations will increase the amount of electricity generated on-site, and reduce the consumption of natural gas. The Project would also be subject to all applicable policies in the Riverside County General Plan, including the above-cited Land Use, Air Quality, and Multipurpose Open Space Elements, as well as applicable policies in the Riverside County CAP Update. Adherence to the applicable State and County policies would ensure that the Project does not conflict with or obstruct any applicable plans for renewable energy or energy efficiency. Impacts would be less than significant.

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18 Thermal Ranch Specific Plan Traffic Analysis, prepared by Urban Crossroads, March 2023. Represents average weekday, closely matching the estimated weighted average daily trip volume of 18,602.

19 The Project's projected VMT according to CalEEMod was used here for the purpose of analyzing energy impacts only. The significance of Project-related VMT impacts is discussed in greater detail in Section 2.18, Transportation and Traffic, based on the VMT Analysis prepared for the Project by Urban Crossroads, Inc.

20 County of Riverside Climate Action Plan Update (November 2019), Table 3-1.

2.8.7 Mitigation Measures

The potential energy use and sources thereof, as described above, indicate that the Project will not result in any potentially significant environmental impacts as a result of using energy in a wasteful, inefficient, or unnecessary manner, during either construction or Project operations. As is also demonstrated, the Project will not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Given that the Project would have less than significant impacts related to energy consumption and energy efficiency plans, no mitigation measures are required.

2.8.8 Significance After Mitigation

The Project's impacts on energy resources would be less than significant.

2.8.9 Cumulative Impacts

Cumulatively considerable environmental impacts related to energy resources could occur if the Project, as well as past, current, and future projects, are wasteful or inefficient in their energy consumption and thereby cause significant environmental impacts. The subject and other future projects will be required to comply with the Title 24 regulations, with measures associated with AB 32 and SB 32, or the Riverside County 2019 CAP Update.

It should also be noted that plans for energy efficiency and renewable energy are being regularly updated, requirements are becoming increasingly stringent, and the availability of cost-competitive renewable energy technologies is expanding. These changes are already supporting increases in energy efficiency and the adoption of renewable energy, and, in turn, will drive reductions in the consumption of energy from non-renewable sources.

Overall, the Project's compliance with applicable local, state, and federal policies will ensure that the use of energy related to the Project will not be wasteful or inefficient. While the Project will contribute incrementally to cumulative increases in state-wide energy consumption, impacts from the development will not be cumulatively considerable.

2.9 Geology and Soils

2.9.1 Introduction

This section of the EIR describes existing geologic and soils conditions within the Project planning area and analyzes the potential impacts of regional and local geology and soils to the proposed Project. A wide range of data and information, ranging from research and subsurface borings conducted on the Project site to regional-scale planning and environmental documents, have been used in researching and analyzing the Project and its potential effects. These include detailed analysis of regional and local geology, soils, and seismic conditions. A project-specific geotechnical study (see Appendix E) was also prepared for the proposed Project.[1]

2.9.2 Thresholds of Significance

Based upon Appendix G of the CEQA Guidelines and County Rules to Implement CEQA, the proposed Project would result in a potentially significantly impact if it would directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving:

Alquist-Priolo Earthquake Fault Zone or County Fault Hazard Zones

a) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?

Liquefaction Potential Zone

a) Be subject to seismic-related ground failure, including liquefaction?

Ground-shaking Zone

a) Be subject to strong seismic ground shaking?

Landslide Risk

a) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, collapse, or rockfall hazards

Ground Subsidence

a) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in ground subsidence?

Other Geologic Hazards

a) Geologic hazards, such as seiche, mudflow, or volcanic hazard?

Slopes

a) A change topography or ground surface relief features?
b) Create cut or fill slopes greater than 2:1 or higher than 10 feet?
c) Result in grading that affects or negates subsurface sewage disposal systems?

Soils

a) Result in substantial soil erosion or the loss of topsoil?
b) Be located on expansive soil, as defined in Section 1803.5.3 of the California Building Code (2022), creating substantial direct or indirect risks to life or property?

[1] Updated Geotechnical Report, Equestrian Estates Development, Petra Geosciences, April 13, 2022

c) Have soils incapable of adequately supporting use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

Wind Erosion and Blowsand from project either on or off site.

a) Be impacted by or result in an increase in wind erosion and blowsand, either on or off site?

2.9.3 Regulatory Framework

Federal

No federal regulations are associated with geology and soils that are applicable to the proposed Project.

State

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act was enacted in 1972 to mitigate the hazard of surface faulting. The main purpose of the Act is to prevent the construction of structures used for human occupancy on the surface trace, the line delineating the fault on the earth's surface, of active faults. Fault zones are mapped in the California Geological Survey (CGS) Special Publication 42. The scope of the Act is specifically focused on fault rupture, and does not address other hazards related to seismic activity.

Seismic Hazards Mapping Act (SHMA)

The SHMA was enacted in 1990 through Public Resources Code, Chapter 7.8, Section 2690 to 2699.6. Like the Alquist-Priolo Act, the SHMA aims to reduce damage resulting from earthquakes. However, while the Alquist-Priolo Act addresses fault rupture specifically, the SHMA addresses other seismic hazards, such as strong ground shaking, landslides, and liquefaction. Under the SHMA, the State Geologist is responsible for identifying and mapping seismic hazards. The CGS Special Publication 117 establishes guidelines, adopted by the State Mining and Geology Board, for evaluating seismic hazards other than surface faulting.

Permit review is the primary mechanism through which the SHMA is implemented. The Act prohibits cities and counties from issuing development permits for sites within a Seismic Hazard Zone until adequate project-specific geological/geotechnical investigations have been conducted and adequate mitigation measures have been incorporated into the project plans.

California Code of Regulations – Seismic Hazards Mapping

Title 14, Division 2, Chapter 8, Article 10 of the CCR establishes regulations to govern the exercise of city, county, and state agency responsibilities to identify and map seismic hazards and to mitigate seismic hazards to protect public health and safety in accordance with the SHMA (Public Resources Code Section 2690).

California Building Code (CBC)

Enacted through California Code of Regulations Title 24, Part 2, the California Building Code regulated the design, construction, quality of materials, use/occupancy, location, and maintenance of all buildings in its jurisdiction. The CBC establishes minimum standards related to the strength and stability of buildings to safeguard public health and safety. Part 2, page xxi of the CBC establishes earthquake design requirements, through which projects are assigned a Seismic Design Category based on considerations such as the structure's occupancy category, the site class, soil classifications, and various seismic coefficients.

California Civil Code – Natural Hazards Disclosure Act

Established through California Civil Code Section 1103, the Natural Hazards Disclosure Act requires that real estate sellers and brokers disclosure if a subject property is located in on or more of the following: Special flood hazard area, very high fire severity zone, wildfire zone, earthquake fault zone, and/or seismic hazard zone.

Regional and Local

Riverside County Ordinances

- Ordinance No. 457: Riverside County Building and Fire Codes
- Ordinance No. 547: Implementation of the Alquist-Priolo Earthquake Fault Zoning Act
- Ordinance No. 484: Control of Blowing Dust

Riverside County General Plan[2]

Chapter 6, Safety Element, of the Riverside County General Plan addresses the issue of protection of its people from unreasonable risks associated with natural disasters, e.g., fires, floods, and earthquakes. The Safety Element of the General Plan contains policies that emphasize seismic safety issues because seismic events present the most widespread threat of devastation to life and property.

Within the Riverside County General Plan, policies S-2.1 to S-2.20 of the Safety Element address Seismic and Geologic Hazards, and policies AQ-15.1 to AQ-17.11 of the Air Quality Element address particulate matter. The following policies set forth in the Riverside County General Plan are applicable to the proposed Project in terms of geology and soils:

- Fault Rupture
    - **S 2.1**: Minimize fault rupture hazards through enforcement of Alquist-Priolo Earthquake Fault Zoning Act provisions and the following:
        - A) Require geologic studies or analyses for critical structures, lifelines, high-occupancy, schools, and high-risk structures, within 0.5 miles of all Quaternary to historic faults shown on the Earthquake Fault Studies Zones map. The County geologist shall review and make recommendations based on the results to reduce the potential risk.
        - B) Request geologic trenching studies within all designated Earthquake Fault Studies Zones, unless adequate evidence, as determined by the Riverside County Geologist, is accepted. The County of Riverside may request geologic trenching of non-zoned faults for especially critical or vulnerable structures or lifelines.
        - C) Require that infrastructure systems, such as energy, communications, and transportation infrastructure be designed to resist, without failure to the extent feasible, their crossing of a fault, should fault rupture occur.

- Seismically-Induced Liquefaction, Landslides, and Rock Falls
    - **S 2.2** Request geological and geotechnical investigations in areas with potential for earthquake-induced liquefaction, landslides, or settlement, for any building proposed for human occupancy and any structure whose damage would cause harm, except for accessory structures/buildings, as determined by County officials. Any studies or surveys should be prepared/completed by a state-licensed professional.

[2] Riverside County General Plan Update GPA No. 960 and Eastern Coachella Valley Area Plan, 2015, Amended.

- **S 2.4** Request that engineered slopes be designed to resist seismically-induced failure as appropriate. For lower-risk projects, this may include requiring slope design to be based on pseudo-static stability analyses using soil engineering parameters that are established on a site-specific basis. For high-risk projects, appropriate standards may include requiring the stability analyses to factor in the intensity of expected ground-shaking, using a Newmark-type deformation analysis or other analyses as appropriate.
- **S 2.5** Request that cut-and-fill transition lots appropriately mitigate the potential of seismically-induced differential settlement, including through using over-excavation and other techniques as required by geotechnical, soils, and grading requirements.
- **S 2.6** Request structures in liquefaction and slope instability hazard zones to mitigate the potential of seismically-induced differential settlement through appropriate techniques as determined by geotechnical studies, including a 100-percent maximum variation of fill depths as warranted.

- Landslides, Rockfalls, and Debris Flows
  - **S 2.8** Request the following in landslide potential hazard management zones, or when deemed necessary for compliance with the California Environmental Quality Act (CEQA), prior to the issuance of development permits or approval of project designs
    - A) Preliminary geotechnical and geologic investigations, including certification regarding the stability of the site against adverse effects of earthquake and subsidence.
    - B) Evaluations of site stability, including any possible impact on adjacent properties.
    - C) Consultant reports, investigations, and design recommendations required for grading permits, building permits, and subdivision applications, shall by prepared by state-licensed professionals.
  - **S 2.9** Require new development in areas prone to geologic hazards (e.g., landslides, steep topography) to be adequately mitigated against these hazards, as feasible. Any development in hillside areas should prepared drainage plans to direct runoff and drainage away from potentially unstable slopes. New developments should incorporate hillside design techniques and features to mitigate and support slope stability.
  - **S 2.10** Identify and request mitigation of on-site slope instability, debris flow, and erosion hazards on lots undergoing substantial improvements, particularly during the entitlement or permitting process.
  - **S 2.11** Request grading plans, environmental assessments, engineering and geologic technical reports, irrigation and landscaping plans, including ecological restoration and revegetation plans, as appropriate, to ensure the adequate demonstration of a project's ability to mitigate the potential impacts of slope and erosion hazards and loss of native vegetation.
- Subsidence and Expansive and Collapsible Soils
  - **S 2.15** Request geotechnical studies within documented subsidence zones, as well as zones that may be susceptible to subsidence, prior to the issuance of development permits. Within the documented subsidence zones of Coachella, San Jacinto, and Elsinore Valleys, the studies should address the potential impact on the project and provide adequate and acceptable mitigation measures.
- Wind Erosion
  - **S 2.18** Request studies that assess the potential of this hazard on proposed development within "High" and "Very High" wind erosion hazard zones and request appropriate mitigation to wind erosion hazards prior to the issuance of development permits.
  - **S 2.20** Request buildings to be designed to resist wind loads as appropriate for their form and location.

Eastern Coachella Valley Area Plan

The following policies set forth in the Eastern Coachella Valley Area Plan area applicable to the proposed Project:

ECVAP 20.1: Protect life and property from seismic-related incidents through adherence to the Seismic Hazards section of the General Plan Safety Element.

ECVAP 22.1: Minimize damage from and exposure to wind erosion and blowsand through adherence to the Slope and Soil Instability section of the General Plan Safety Element.

ECVAP 22.2: Require protection of soil in areas subject to wind erosion or blowsand. Mitigation measures that may be required include, but are not limited to, windbreaks, walls, fences, vegetative groundcover, rock, other stabilizing materials, and installation of an irrigation system or provision of other means of irrigation.

ECVAP 22.3: Control dust through the policies of the Particulate Matter section of the General Plan Air Quality Element.

2.9.4 Environmental Setting

Regional Geologic Setting

The proposed Project is located in the southeast portion of the Coachella Valley, which is a rift valley associated with the San Andreas Fault System in Southern California. The valley is located in the northwestern portion of the Salton Trough, a tectonic depression roughly 130 miles long and 70 miles wide that extends from the San Gorgonio Pass to the Gulf of Mexico. Tectonically, the valley is a deep fault graben formed by tectonic movement along the San Andreas Fault (SAF)[3], a continental transform fault that extends roughly 808 miles through California. SAF forms the tectonic boundary between the Pacific and North American tectonic plates, which are sliding past one another at a rate of about 16 to 30 millimeters per year depending upon the model.[4] It is a complex strike-slip fault that represents a continuous zone of faulting from the San Francisco area to the Salton Sea. Motion accommodated by the fault zone is distributed along a complex system of interrelated faults.[5]

Approximately 70% of the movement between these plates is accommodated by the San Andreas Fault, which crosses the easterly portion of the Coachella Valley.[6] Given its proximity to this and other active and potentially active faults, the composition of underlying soils, the presence of strong sustained winds, and steep and rugged mountains, the region is highly susceptible to seismic and other geologic forces. These issues are further addressed below and in the Geotechnical Report prepared for the Project, Appendix E. [7]

Regional Soils and Surficial Rocks

Coachella Valley is bounded by the San Bernardino Mountains on the north and northeast, Santa Rosa and San Jacinto Mountain Range on the southwest and west. Together the San Jacinto and Santa Rosa Mountains form the Peninsular Ranges Province and is classified as Mesozoic granite and first exposed 95± million years ago. San Jacinto Mountain Range is traversed by San Jacinto Fault zone.

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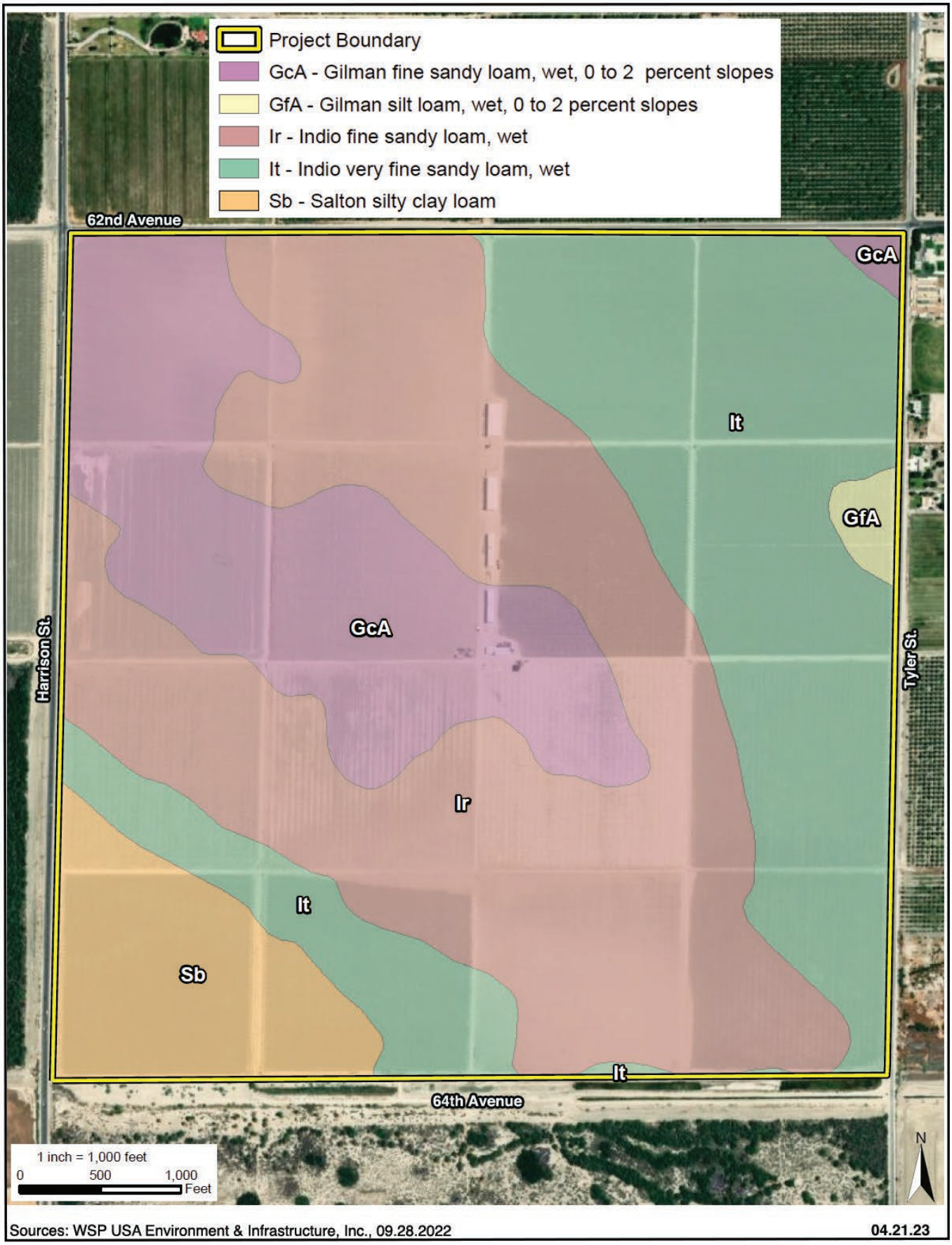
3 Alles, D. L. (2012). Geology of the Salton Trough.

4 "Technical Background Report to the Safety Element of the General Plan for Coachella," Earth Consultants International, Inc. 2014. Note that the Project Petra Study (2022) (Appendix E, cites a slip rate of 20 mm/yr.

5 Hill, M. L., & Dibblee, T. W. (1953). San Andreas, Garlock, and Big Pine faults, California a study of the character, history, and tectonic significance of their displacements. Geological Society of America Bulletin, 64(4), 443-458.

6 Ibid.

7 Op. cit. Petra 2022



Sources: WSP USA Environment & Infrastructure, Inc., 09.28.2022

04.21.23

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Thermal Ranch Specific Plan EIR
Project Site Soils
Thermal, California

Exhibit
2.9-1

Regional soils range from bedrock and rocky outcrops within the mountains bordering the valley to coarse gravels of mountain canyons and recently laid fine- and medium-grained alluvial (stream deposited) and aeolian (wind deposited) sediments on the central valley floor. Sediments from the bounding mountain ranges are carried into and across the Coachella Valley through numerous seasonal streams. The Whitewater River and its extension the Coachella Valley Stormwater Channel are the master drainage for the valley, which generally flows northwest to southeast. Episodic flooding of major regional drainages results in the deposition of sand and gravel on the valley floor.

Faults

In the region, there are numerous earthquake-producing faults, including the San Andreas Fault Zone (that includes the San Gorgonio Pass Thrust Fault and sub-parallel fault strands of Mission Creek, San Gorgonio, and Banning Faults)[8], San Jacinto Fault Zone (e.g., Buck Ridge Fault and Clark Fault)[9], Pinto Mountain Fault, faults in the Eastern California Shear Zone (including the Burnt Mountain, Eureka Peak, and Pisgah-Bullion Mountain-Mesquite Lake faults)[10], and the Elsinore Fault[11]. The nearest fault to the project site is the San Andreas Fault, which is located approximately 6 miles northeast of the Project planning area, and capable of generating magnitude 7.34± earthquakes. The network of the faults in the region is broadly classified as: San Andreas Fault Zone and San Jacinto Fault Zone, and is discussed below.

San Andreas Fault Zone

The San Andreas Fault Zone is the principal boundary between the Pacific and North American plates and locally has been divided into several segments. This fault is considered the master fault in Southern California because it has frequent, large earthquakes and controls the seismic hazards of the area. In the vicinity of Riverside County, the San Andreas Fault Zone Coachella Valley segment is of primary relevance to the project.[12] Additional information on the local portion of the San Andreas Fault Zone is provided below.

The Coachella segment of the San Andreas Fault extends 71 miles from approximately the Salton Sea to the San Gorgonio Pass. The Coachella segment of the San Andreas Fault generally parallels the All-American Canal, northeast of the project site[13].

Co-seismically-triggered surface displacements and creep caused by historical regional earthquakes have occurred on the Coachella segment of the San Andreas fault following the April 23, 1992 Joshua Tree and June 28, 1992 Landers earthquakes, and the July 8, 1986 North Palm Spring earthquake.[14]

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8 Sieh, K., & Williams, P. L. (1990). Behavior of the southernmost San Andreas fault during the past 300 years. Sharp, R. V. (1967). San Jacinto fault zone in the Peninsular Ranges of southern California. *Geological Society of America Bulletin*, *78*(6), 705-730.

9. Ibid.

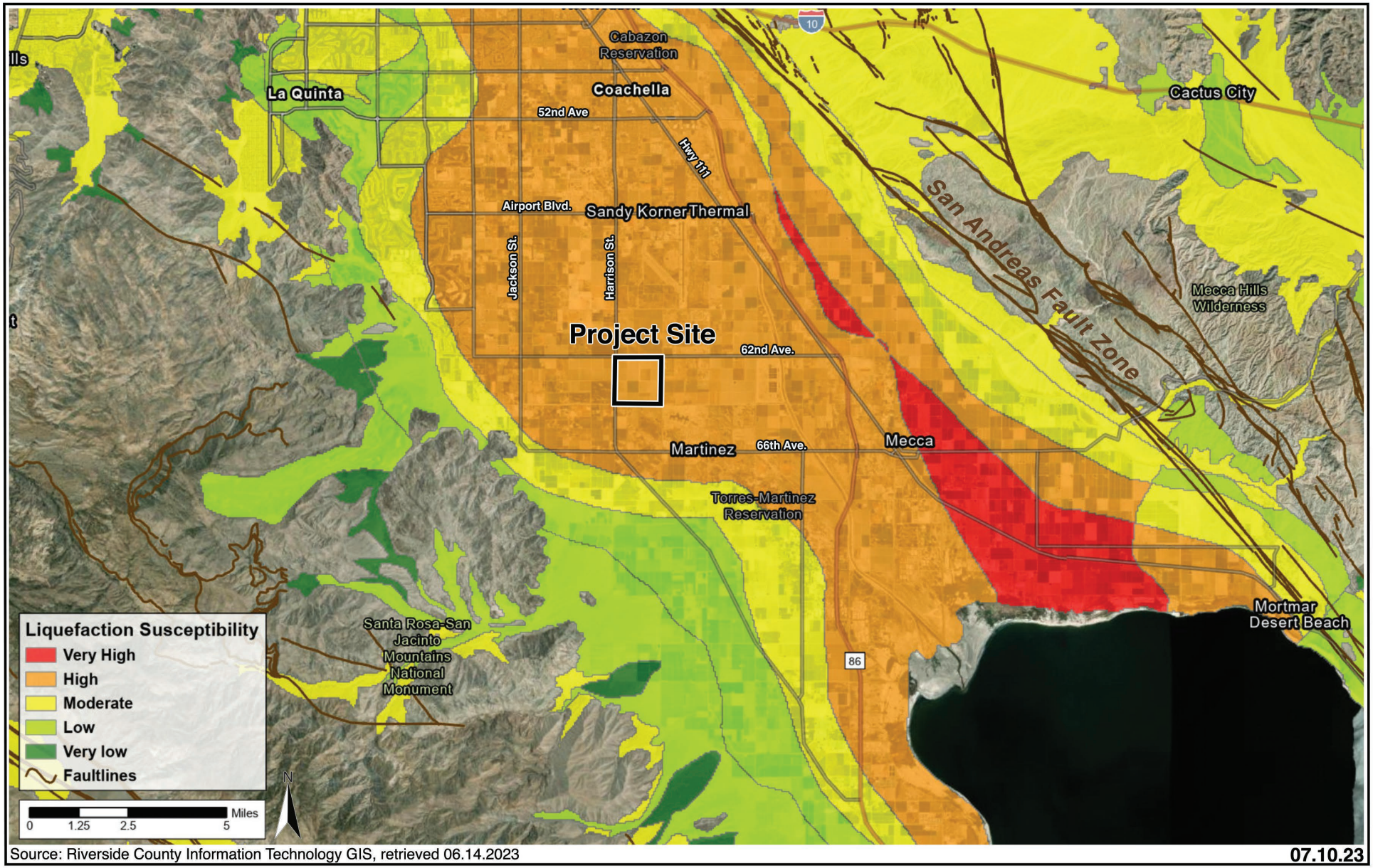
10 Frankel, K. L., Glazner, A. F., Kirby, E., Monastero, F. C., Strane, M. D., Oskin, M. E., ... & Coleman, D. S. (2008). Active tectonics of the eastern California shear zone. *Field Guides*, *11*, 43-81.

11 D. W., & Richards, G. (1988). such as the Elsinore-Whittierfault system and the Newport-Inglewood fault zone, which strike subparallel to the San Andreas fault. The strike-slip faults are typically well.

12 Natural Hazard Mapping, Analysis, and Mitigation: a Technical Background Report in Support of the Safety Element of the New Riverside County 2015 General Plan, prepared by Earth Consultants International on August 2000.

13 Preliminary Geotechnical Investigation, Approximately 2200-Acre La Entrada Project (Preliminary Geotechnical Investigation), Petra Geotechnical, Inc. April 15, 2013

14 Ibid. Fumal, T. E., Rymer, M.J., Seitz, G.G. (2002). "Timing of large earthquakes since A.D. 800 on the Mission Creek strand of the San Andreas fault zone at Thousand Palms Oasis, near Palm Springs, California." Bulletin of the Seismological Society of America v. 92(no. 7): p. 2841-2860.



Source: Riverside County Information Technology GIS, retrieved 06.14.2023

07.10.23

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Thermal Ranch Specific Plan EIR
Liquefaction Susceptibility and Fault Map
Thermal, California

Exhibit
2.9-2

The most recent surface-rupturing earthquake on the Coachella segment of the San Andreas Fault likely occurred in the late 1600's. Prior to that, apparently five such "paleo earthquakes" occurred on the Coachella segment in about A.D. 825, 982, 1231, 1502, and 1680 based on a trenching study at Thousand Palms Oasis. These data indicate that the average repeat time for surface-rupturing earthquakes on the Coachella-Indio segment of the San Andreas fault is approximately 215 (±25) years, and that the last surface-rupturing event occurred approximately 325 years ago.[15] This segment has not produced any large surface-rupturing earthquakes in historic times. This fault segment has the potential to generate a magnitude 7.2 earthquake and peak ground accelerations in the Coachella/Thermal area greater than 0.5g.[16]

2.9.5 Existing Conditions

Regional Geology

The Project is located in the eastern portion of the Coachella Valley, in Southern California and situated in the Salton Trough, within a portion of the Colorado Desert Geomorphic Province. The Coachella Valley is a rift valley in the northwestern portion of the Salton Trough, a tectonic depression roughly 130 miles long and 70 miles at its widest, extending from the San Gorgonio Pass to the Gulf of Mexico. Tectonically, the valley is a deep, sediment-filled fault graben formed by tectonic movement along the San Andreas Fault, a continental transform associated with the faults forming the margin between the Pacific and North American tectonic plates. The "pull-apart" oblique strike-slip motion between these two tectonic plates formed the Salton Trough.

Regional Faulting and Seismicity

The Pacific and North American tectonic plates continue to slide past one another at a rate locally estimated at 16 to 20 mm/yr., and elsewhere as high as 50± millimeters per year. The motion accommodated by this strike-slip fault zone, which runs from the San Francisco area to the Salton Sea, is distributed along a complex network of interrelated faults.

At least two active branches of the San Andreas Fault Zone pass northwest/southeast through the valley and occur within 5.5 miles of the site. The Project planning area could be significantly affected by faulting along the San Andreas Fault Zone; however, the segment of the San Andreas Fault in the Project area has not produced any large surface-rupturing earthquakes in historic times.

This segment has the potential to generate a 7.2 magnitude earthquake and peak ground accelerations in the Coachella/Thermal area greater than 0.5g. Site specific seismic modeling was conducted for the Project site, based on a 7.34 magnitude earthquake and with resulting in peak ground accelerations of 0.612g and 0.734g based on site specific conditions.[17]

By 2045, the SAF has a 24.21% chance of producing an earthquake with a magnitude of 6.7 of greater, a 21.29% chance of producing an earthquake with a magnitude of 7.0 of greater, and an 11.62% change of generating an earthquake of 7.5 of greater. (Riverside County Safety Element, Table 1).

Despite the region's potential for severe seismic activity, earthquakes in the Coachella Valley region have been infrequent and mostly of small magnitude in historic times. The largest historic earthquake in the Project area was the Magnitude 7.3 Landers earthquake in 1992. This earthquake and associated aftershocks occurred approximately 34 miles northwest of the Project site.

15 Ibid.
16 Ibid.
17 Op. cit., Petra 2022. Based on Site Class F which identifies soils vulnerable to failure or collapse under seismic loading or other susceptible soil conditions (see Table 20.3-1 of the American Society of Civil Engineers, Standard 7-10).

Soils/Sediments

The Coachella Valley is an erosion-filled depression bound by the San Jacinto and Santa Rosa Mountains to the west and southwest, the San Bernardino Mountains to the north, and the Little San Bernardino Mountains to the northeast, and the Mecca Hills and Orocopia Mountains to the east. The Salton Trough, part of which is below sea level, has progressively been filling with sediments eroded from the surrounding mountains, and sediments deposited by the periodic intrusion of the Colorado River into the valley from southeast. Valley sediments are estimated to form a 3 to 4-mile thick deposit in the Salton Trough.

On-Site and Surrounding Soils

The Project site and surrounding areas are underlain by geologically young (late-Quaternary) alluvial deposits. These soils are described as generally consisting of unconsolidated, very fine-grained sand and silty sand. According to the National Resources Conservation Service Web Soil Survey, the primary soil types on the subject property area Indio fine sandy loam, wet (38.5%), Indio very fine sandy loam, wet (32.2%), and Gilman fine sandy loam with 0 to 2 percent slopes (19.7%). Indio series soils are very deep, well or moderately well drained soils formed in alluvium derived from mixed rock sources. Indio soils are on alluvial fans, lacustrine basins and flood plains. Gilman series soils are very deep, well drained soils that formed in stratified stream alluvium. Gilman soils are on flood plains and alluvial fans.

Soils Wind Erosion

The subject property and surrounding lands are identified as having a high potential for strong winds and associated soil erosion. When barren sand or sandy loam soils are exposed to high wind in the absence of moisture, wind erosion can occur. For each specific soil type and surface condition, there is a minimum "threshold velocity" required to move soil particles, which is also dependent upon the particle size, the cloddiness of the particles, and the wind velocity itself. While soil can be blown away at virtually any height, the majority (over 93 percent) of soil movement takes place at or within one meter (3 feet) of the ground surface. The site is currently in active cultivation and the full expanse of the site is periodically without vegetation between crop rotations. Removal of surface vegetation and its stabilizing effects causes disruption of soil formations and compaction, and the disturbance of the stabilizing and wind-breaking effects of dunes, can all lead to increased wind erosion.

Subsidence

Ground subsidence is the gradual settling or sinking of the ground surface with little or no horizontal movement. During this process, water contained in subsurface clay layers is squeezed out, and the clay is compacted by the weight of overlying sediments. Subsidence can result in structural damage to structures that are sensitive to slight changes in elevation, such as larger buildings, canals and channel lining, and wells.

In the Coachella Valley, subsidence is primarily associated with long-term groundwater extraction, although it may also be induced by strong seismic groundshaking. Regional subsidence is most likely to occur in the central and southeasterly portions of the valley, which are underlain by numerous clay layers that separate water-producing zones.[18] Land at or near the valley margins is also particularly susceptible to subsidence. The subject site is not located within an area of know subsidence associated with fluid (groundwater or petroleum) withdrawal, peat oxidation or hydroconsolidation; therefore, the potential for subsidence is low.

[18] "Coachella Valley Water Management Plan," Coachella Valley Water District, January 2012.

Expansive Soils

Expansive soils contain significant amounts of clay particles and, therefore, have the ability to give up (shrink) or take on (swell) water. When swelling occurs, the soils can exert significant pressure on structures (e.g., buildings, channel linings and other structures) built upon them. Based on the soil conditions described above, the soils on site are considered Very Low in expansion potential.[19]

Collapsible Soils

Based upon the soils analyses conducted on-site, these soils are expected to have an average shrinkage factor estimated at 19 to 25 percent when excavated on-site soils are replaced as properly compacted fill.

Groundwater and Liquefaction

Seismically induced liquefaction is the loss of soil strength caused by a sudden increase in pore water pressure after an earthquake, particularly as a result of strong ground shaking. Loose sands and gravels have a higher risk of liquefaction. Liquefaction occurs when strong seismic shaking of a saturated sand or silt causes intergranular fluid (porewater) pressures to increase to levels where grain-to-grain contact is lost, and material temporarily behaves as a viscous fluid. Liquefaction can cause settlement of the ground surface, loss of bearing, settlement and tilting of structures, flotation and buoyancy of buried structures and fissuring of the ground surface. A common surface expression of liquefaction is the formation of sand boils, short-lived fountains of soil and water that emerge from fissures or vents and leave freshly deposited mounds of sand or silt on the ground surface.

On-site conditions, including near surface soil type and density, as well as current and historic groundwater level, suggest a potential for liquefaction during a design-level earthquake. A review of limited groundwater level data available on the California Department of Water Resources website for a nearby monitoring well (CASGEM Well ID 51659, located approximately 1 mile southeast of the Project site) indicates that high ground water for this area, within the timespan recorded for the well, is approximately 10 feet below ground surface. The Project is mapped in a “High” Liquefaction Zone in the ECVAP due to the shallow groundwater and susceptible sediments.

Seiches and Tsunamis

The subject property is located east of the east margin of the Santa Rose Mountains on the valley floor. The site is not located near any body of water that could be subject to seiching or cause associated flooding in the area. Neither is the site in proximity of any volcanic or related hazard area, being located approximately 40 miles northwest of the Salton Sea volcanic region where cinder cone, mud pots, and other signs of volcanic and magmatic hazards are known to exist. Neither is the subject property subject to mud flows associated with unstable unconsolidated slopes in or areas of steep slopes denuded by fire.

CVWD Middleton Reservoir 7802-1 Site

As noted, the Project includes the construction of a 5-millon-gallon water reservoir pursuant to the requirements of CVWD at the existing CVWD Middleton Reservoir site, which was developed by CVWD in 2004 with the installation of the first reservoir. The CVWD Middleton Reservoir 7802-1 site located 2.4± miles southwest of the Project site. CVWD evaluated soils and geotechnical conditions at the site prior to its development. There are no known geotechnical constraints that would prevent the construction of the Project’s 5-million-gallon tank.

[19] Op. cit. Petra 2022.

2.9.6 Project Impacts

The following analysis is based, in part, on a Geotechnical Report prepared for the Project by Petra Geosciences, Inc. (Petra) and a variety of other soils and geotechnical reports. The project-specific geotechnical report included the analysis of field data and provides conclusions and recommendations for the grading, design, and construction of the proposed Project, in conformance with the 2019 California Building Code. The scope of Petra's review and analysis included pertinent literature and maps, an engineering and geologic analysis of data from the field investigation and laboratory testing, as well as seismic hazard and liquefaction analyses (see Appendix E). The following discussions analyse a wide range of geotechnical areas of concerns.

Would the Project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving:

Alquist-Priolo Earthquake Fault Zone or County Fault Hazard Zones

a) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?

The Project site is not located within or in proximity to an Earthquake Fault Zone, nor are any other active or potentially active faults located in proximity of the subject property. No active faults are known to project through the subject property; however, the San Andreas Fault is located approximately 5.5 miles northeast of the Project site. The associated surface projection of this fault system is less than 9.5 miles from the Project and is capable of generating a magnitude 6 or larger event, as discussed further below. Given the proximity of the Project to active faults, moderate to severe grounds shaking is a hazard. However, impacts from fault-related ground rupture are not anticipated due to the subject property's distance from active faults and location outside of any Alquist-Priolo Fault Zone. Therefore, the Project site would not be subject to rupture of an on-site fault.

<u>CVWD Middleton Reservoir 7802-1 Site</u>

The CVWD Middleton Reservoir 7802-1 site located 2.4± miles southwest of the Project site. CVWD evaluated soils and geotechnical conditions at the site prior to its development. There are no known geotechnical constraints that would prevent the construction of the subject 5-million-gallon tank. Impacts from fault-related ground rupture are not anticipated due to the reservoir's distance from active faults (9± miles) and location outside of any Alquist-Priolo Fault Zone. Therefore, the reservoir site would not be subject to rupture of an on-site fault.

Liquefaction Potential Zone

a) Subject to strong seismic-related ground failure, including liquefaction?

As noted above, liquefaction is a potentially destructive secondary effect of strong ground shaking that has a high potential of occurring on the Project site. Ground shaking can cause soils to behave like a liquid, venting excess water pressure upwards through fissures and soil cracks, potentially resulting in a water-soil slurry to flow onto the ground surface. Site conditions, including surface soil types and density, as well as the current and historically high groundwater level (10± feet), indicate a high potential for liquefaction during a local earthquake and associated strong ground shaking.

In addition to the settlement of wet, sandy deposits during liquefaction, seismic-related ground failure can also take the form of dry sand settlement. Table 2.9-1, below, shows the estimated liquefaction and dry sand settlement potential for the Project site.

Table 2.9-1
Total On-Site Seismic Settlement

CPT Sounding Number	Estimated Liquefaction Settlement, in.	Estimated Dry Sand Settlement, in.	Total Combined Dry Sand & Liquefaction Settlement, in.
CPT-1	1.00	0.25	1.25
CPT-2	1.10	0.25	1.35
CPT-3	1.10	0.25	1.35
CPT-4	1.30	0.25	1.55
CPT-5	0.80	0.25	1.05
CPT-6	1.25	0.25	1.50
CPT-7	1.20	0.25	1.45
CPT-8	1.10	0.25	1.35

Source: Geotechnical Report prepared for the Project by Petra Geosciences, Inc.

Table 2.9-1 indicates that total free-field liquefaction settlement would range from 0.25 to 1.50 inches, with differential settlement estimated to be on the order of 1 inch over a span of 40 feet. According to the Project geotechnical report, liquefaction settlement can typically be mitigated by structural methods when total settlements are less than four inches. Given the seismic settlement range estimated for the Project, as shown in Table 2.9-1, including the relative uniformity of the settlements over a relatively large distance, deep ground improvements or other seismic related mitigations are not necessary for the Project. With the implementation of mitigation measures (GEO-2 and GEO-5), impacts due to liquefaction will be less than significant.

CVWD Middleton Reservoir 7802-1 Site

The CVWD Middleton Reservoir 7802-1 site is located at an elevation of approximately 61 feet above sea level on the lower slopes of the Martinez Canyon alluvial fan. The reservoir site is 2.4± miles southwest of the Project site. CVWD evaluated soils and geotechnical conditions, including the potential for liquefaction, at the site prior to its development. The site is located well above groundwater levels and approximately nine miles from the closest active fault (San Andreas). There are no known geotechnical constraints that would prevent the construction of the subject 5-million-gallon tank. Impacts from liquefaction are not anticipated. Therefore, the reservoir site would not be subject to a significant liquefaction hazard.

Ground-shaking Zone

a) Be subject to strong seismic ground shaking?

As a result of its proximity to fault zones and the characteristics of the site's subsurface soils, the planning area can be expected to experience strong ground shaking during its lifespan. As noted in Section 2.9.5, above, the Project site and planning area have a high potential of strong ground shaking associated with a major earthquake on a local fault. For purposes of analysis, Petra assumed an earthquake on the local branch of the San Andreas Fault. A moment magnitude earthquake of 7.34 and ground acceleration of 0.73 g were assumed based on the results of a seismic hazard analysis conducted for the Project site. Therefore, a major earthquake on nearby faults could expose people and structures to risks associated with strong seismic ground shaking.

The Project geotechnical report sets forth a wide range of recommendations regarding grading and soils engineering, and foundation and building design and construction methods that can effectively reduce the effects of strong ground shaking and increase the integrity of building and other structures during such events. Implementation of mitigation measures **GEO-1 – GEO-13** set forth below, and adherence to detailed technical recommendations set forth in the geotechnical report will further ensure that impacts will be less than significant.

CVWD Middleton Reservoir 7802-1 Site

The CVWD Middleton Reservoir 7802-1 site located at an elevation of approximately 61± feet above sea level on the lower slopes of the Martinez Canyon alluvial fan and can be subject to strong ground shaking from a nearby earthquake during its lifespan. CVWD evaluated soils and geotechnical conditions, including the potential for strong ground shaking, at the site prior to its development. There are no known geotechnical constraints that would prevent the construction of the subject 5-million-gallon tank. Impacts from strong ground shaking are expected to be less then significant with proper seismic design. Therefore, the Project reservoir would not be subject to a significant ground shaking hazard.

Landslide Risk

a) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, collapse, or rockfall hazards?

The subject property has generally flat topography, with a mild gradient consistent with the area-wide agricultural drain system that directs flows to the southeast. This topography is not prone to landslides or rockfall hazards. Lateral spreading is the tendency of liquefied soil to move, either downslope or toward an open face such as a channel. Lateral spreading is not a likely occurrence on the subject site because it is relatively flat and potentially associated impacts will be less then significant.

Site development may result in temporary excavations varying up to a depth of approximately 8 feet, with limited but potentially deeper localized removes. Based on the physical properties of the onsite soils, temporary excavations exceeding 4 feet in heigh could collapse and should be cut back based on the stability of the temporary slopes. Applicable requirements of the California Construction and General Industry Safety Orders, the Occupational Safety and Healthy Act of 1970, and the Construction Safety Act are prescribed in the project geotechnical report.

Given the relatively flat topography of the Project site, the risk of landslide, lateral spreading, collapse, or rockfall hazards is less than significant.

CVWD Middleton Reservoir 7802-1 Site

The CVWD Middleton Reservoir 7802-1 site located at an elevation of approximately 61± feet above sea level and graded into the lower slopes of the Martinez Canyon alluvial fan. The reservoir site proper is essentially flat and is surrounded by an earthen berm designed for stability during seismic events; this berm will be shifted 35± feet to the north to accommodate the new 5 mg reservoir. CVWD evaluated soils and geotechnical conditions, including the potential for slope failure and landslides. Lateral spreading is not a likely occurrence on the reservoir site and potentially associated impacts will be less then significant. There are no known geotechnical constraints that would prevent the construction of the subject 5-million-gallon tank on this already engineered and partially developed reservoir site. Impacts from slope failure ort landslides are expected to be less then significant.

Ground Subsidence

a) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in ground subsidence?

This hazard is associated with the gradual settling or sinking of the ground surface with little or no horizontal movement and can result in soils compacted by the weight of overlying sediments. Subsidence can result in structural damage to structures that are sensitive to slight changes in elevation, such as larger buildings, canals and channel lining, and wells. It should be noted that the subject site is not located within an area of know subsidence associated with groundwater withdrawal or hydroconsolidation; therefore, the potential for subsidence is considered to be low.

The Project geotechnical report estimates an average shrinkage factor of 19 to 25 percent when excavated on-site soils are replaced as properly compacted fill. Subsidence of 0.15 to 0.25 feet may occur when exposed bottom surface in soil removal areas are scarified and re-compacted. With the implementation of mitigation measures GEO-1 through GEO-13, and by following grading, excavation, and recompaction protocols prescribed in the project geotechnical report, impacts related to soil subsidence and shrinkage will be less than significant.

CVWD Middleton Reservoir 7802-1 Site
The CVWD Middleton Reservoir 7802-1 site located at an elevation of approximately 61± feet above sea level and graded into the lower slopes of the Martinez Canyon alluvial fan. The developed reservoir site is not located on an unstable geologic unit or soils, but rather on alluvial sands and gravels of the Carsitas soils series, which are well-suited for the planned reservoir. There is no liquefaction hazard associated with the reservoir site and the construction of the required Project reservoir will not create such an instability. Impacts would be less than significant.

Other Geologic Hazards

a) Be subject to a geologic hazard, such as seiche, mudflow, or volcanic hazard?

The Project site has been evaluated for other geotechnical conditions not previously discussed, including seiche, tsunamis, volcanoes or mud flows. As noted above, the subject property is not located near any body of water that could be subject to seiching or cause associated flooding in the area.

Neither is the site in proximity of any volcanic or related hazard area, being located approximately 40 miles northwest of the Salton Sea volcanic region where cinder cone, mud pots, and other signs of volcanic and magmatic hazards are known to exist. Neither is the subject property subject to mud flows associated with unstable unconsolidated slopes in or areas of steep slopes, including those that may have been denuded by fire. These conditions do not constitute a hazard to the Project site and potential impacts associated with a potential volcanic hazard, seiche, mudflows or other geologic hazards will be less than significant.

CVWD Middleton Reservoir 7802-1 Site
The CVWD Middleton Reservoir 7802-1 site is located at an elevation of approximately 61± feet above sea level and has been graded into the lower slopes of the Martinez Canyon alluvial fan. The reservoir site is not located near any body of water that could be subject to seiching or cause associated flooding in the area. Neither is the site in proximity of any volcanic or related hazard area, being located approximately 40 miles northwest of the Salton Sea volcanic region where cinder cone, mud pots, and other signs of volcanic and magmatic hazards are known to exist. Neither is the reservoir site subject to mud flows associated with unstable unconsolidated slopes in or areas of steep slopes, including those that may have been denuded by fire. These conditions do not constitute a hazard to the reservoir site and potential impacts associated with a potential volcanic hazard, seiche, mudflows or other geologic hazards will be less than significant.

Slopes

a) A change in topography or ground surface relief features?
b) Creation of cut or fill slopes greater than 2:1 or higher than 10 feet?
c) Grading that affects or negates subsurface sewage disposal systems?

The subject property is essentially flat with a mild gradient to the south and southeast, which is consistent with the area-wide agricultural drains system that serves the Project site and surrounding properties. The site topography indicates no threat of natural slope failures or landslides. However, the soils on-site are described as generally consisting of unconsolidated, very fine-grained and silty sand.

Trenches and excavations in such soils can result in failure of manufactured slopes if not properly designed and constructed. The Project geotechnical report sets forth guidance that, as mitigation measures GEO-1, 4, 7, 9, 12 and 10, will assure that changes in topography and manufacturing of slopes and excavation of trenches is carried out in a manner that ensures that potential impacts will be less than significant.

The Project does not intend to create any significant changes in site topography. While some riding arenas may be graded to be approximately four feet below grade, any slopes manufactured on site will be of limited height and with slopes not exceeding a 2:1 slope.

The Project does not propose the use of on-lot septic tanks with or without leech fields or seepage pits. The project will construct an on-site sewage collection system and a lift station that will connect the Project to the large gravity sewer line located in Avenue 62, which conveys local sewerage to the CVWD WRP-4 sewage treatment plant located three miles east of the Project site. Therefore, the Project will have no impact on on-site soils or their use for on-lot septic systems.

CVWD Middleton Reservoir 7802-1 Site

The CVWD Middleton Reservoir 7802-1 site was fully developed by 2004 at an elevation of approximately 61± feet above sea level and graded into the lower slopes of the Martinez Canyon alluvial fan. No changes in reservoir site topography or surface relief will occur with construction of the Project reservoir; however, the existing 25-foot high earthen berm will be shifted north 35± feet to accommodate the new reservoir. Neither will its development result in the creation of new unstable slopes, as berm slopes will be shallow at 2:1 slope or less. Subsurface sewage disposal is not associated with the reservoir's construction or operation. There will be less than significant effects associated with the development of the Project reservoir.

Soils

a) **Result in substantial soil erosion or the loss of topsoil?**
b) **Be located on expansive soil, as defined in Section 1803.5.3 of the California Building Code (2022), creating substantial direct or indirect risks to life or property?**
c) **Have soils incapable of adequately supporting use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?**

The subject and surrounding properties are located on the desert floor and have soils comprised primarily of fine sand and silt deposited by wind and water. These soils, when dry and exposed, have a high potential for wind erosion. All of the subject lands are currently in active cultivation, which involves periodic discing, vegetation clearing and other disturbance. When not in cultivation, these lands can be a substantial source of blowing sand and fugitive dust, resulting in an ongoing loss of topsoil.

Development of the proposed Project will result in stabilization of on-site soils and greatly reduce soil erosion and associated loss of topsoil. During site construction, a County-approved dust control plan issued with grading permits will ensure that soils are stabilized and that blowing sand and dust will be effectively avoided and minimized.

Once constructed, the Project will include large areas of open space, including riding arenas and horse pastures, that will be regularly maintained and exposed soils will be stabilized. Therefore, the Project will greatly reduce the potential for soil erosion and will have a less than significant impact on soil erosion and/or loss of topsoil.

Expansive soils contain significant amounts of clay particles and, therefore, have the ability to give up (shrink) or take on (swell) water. When swelling occurs, the soils can exert significant pressure on structures (e.g., buildings, channel linings and other structures) built upon them. Based on the soil conditions described above, the soils on site are considered Very Low in expansion potential.[20] Soils on the subject property were tested by the Project geotechnical consultant. It was determined that the Project site has a very low potential for expansive soils, as defined in Section 1803.5.3 of the California Building Code (2022), and will not create a substantial direct or indirect risks to life or property. Impacts will be less then significant.

As noted above, the use of on-lot septic tanks, with or without leech fields or seepage pits, is not proposed. The proposed on-site sewage collection system and a lift station will connect the Project existing CVWD facilities located in Avenue 62. Therefore, the Project will have no impact on on-site soils or their use for on-lot septic systems.

CVWD Middleton Reservoir 7802-1 Site
The CVWD Middleton Reservoir 7802-1 site was fully developed by 2004 at an elevation of approximately 61± feet above sea level and graded into the lower slopes of the Martinez Canyon alluvial fan. The potential for significant soils erosion either during or following construction is considered low with site soils comprised of the Carsitas series and being comprised of course sand and gravels with a low expansion potential. Subsurface sewage disposal is not associated with the reservoir's construction or operation. There will be less than significant effects associated with the development of the Project reservoir.

Wind Erosion and Blowsand from project either on or off site.

a) Be impacted by or result in an increase in wind erosion and blowsand, either on or off site?

As discussed above, the subject property's soils are comprised primarily of fine sand and silt that, when dry and exposed, have a high potential for wind erosion. While the site is located in an area with a high wind erosion potential, it is located well south of mapped blowsand hazard areas. The site is in active cultivation, which can be a substantial source of blowing sand and fugitive dust.

Proposed development will stabilize on-site soils and greatly reduce soil erosion and associated loss of topsoil. A County-approved dust control plan will be issued with grading permits to ensure that soils are stabilized and that blowing sand and dust will be effectively avoided and minimized. Once constructed, the Project will be maintained and exposed soils will be stabilized. Therefore, the Project will significantly reduce the potential for soil erosion, will not contribute to a blowsand hazard and will have a less than significant impact associated with wind erosion. Impacts will be less than significant.

CVWD Middleton Reservoir 7802-1 Site
The construction of an additional reservoir on the Middleton site will involve shifting the existing earthen berm 35± feet north of its current location to accommodate the new reservoir. CVWD Middleton Reservoir 7802-1 site was developed by 2004 at an elevation of 61± feet above sea level and graded into the lower slopes of the Martinez Canyon alluvial fan. The site is also surrounded and protected by an earthen berm that will remain intact and be modestly shifted north with the construction of the new reservoir. The potential for the reservoir construction to cause either substantial wind erosion or blowing sand is low and impacts will be less than significant.

[20] Op. cit. Petra 2022.

2.9.7 Mitigation Measures

The proposed Project will not have a significant adverse on the environment and will not be significantly affected by geotechnical conditions that cannot be adequately addressed through project design and engineering, and standard construction management. These include implementation of the various design and remedial grading recommendations set forth in the Petra Geotechnical Investigation prepared for this project. Therefore, while specific mitigation measures are not required, the following measures are recommended to ensure that appropriate structural and geotechnical engineering are incorporated in final project design.

General Mitigation Measures

GEO-1 Earthwork and Grading
All earthwork and grading should be performed in accordance with all applicable requirements of the grading and excavation codes of the County of Riverside, and in compliance with all applicable provisions of the 2019 California Building Code (2019 CBC). Grading shall also be performed in accordance with the Petra Geotechnical Report.

GEO-2 Liquefaction
Structural foundation designs and subsurface soil improvements shall be conducted as recommended in the Petra Geotechnical Investigation and based on the California Code of Regulations Volume 18, Title 14, Article 10, Section 3721[a]) to minimize liquefaction hazards. Such measures shall include but are not limited to overexcavation and hydrocompaction, other remedial grading, strengthening and deepening structural foundations.

GEO-3 Geotechnical Observations and Testing
Prior to the start of earthwork, the owner, contractor and geotechnical consultant shall meet to discuss the work schedule and geotechnical aspects of the grading.

GEO-4 Earthwork
Earthwork will generally entail removal and re-compaction of the near surface soils, and as appropriate shall be accomplished under full-time observation and testing by the Project geotechnical consultant. The geotechnical consultant shall, as appropriate, be present onsite during all earthwork operations to document placement and compaction of fills, as well as to document compliance with the other recommendations presented in the Petra Geotechnical Report. Fill materials shall be free of rocks or cobble larger than 8 inches.

GEO-5 Ground Improvement
Ground improvements consisting of removal and recompaction of loose, near surface soils, is required to minimize dynamic settlement of dry soils. Other methods may include deep dynamic compaction, additives to the soils, such as cement or fiber (e.g., nylon) and flooding of in-place loose granular soils, to increase the density of the resultant compacted fill and thereby removing or reducing to insignificant levels the tendency to settle under dynamic shaking. Deep foundation elements should also be considered, as determined by the project geologist, when effective at bypassing zones of loose sand subject to dynamic settlement.

GEO-6 Demolition, Clearing and Grubbing
All existing structures, foundations, asphalt or concrete pavements, vegetation and subsurface utility installations throughout the site shall be demolished and removed from the site. Following demolition, clearing operations shall also include the removal of any remaining trash, debris, vegetation and similar deleterious materials including the root balls from any trees or other vegetation. Any cavities or excavations created upon removal of subsurface structures or inclusions shall be cleared of loose soil, shaped to provide access for backfilling and compaction equipment and then backfilled with engineered fill.

The project geotechnical consultant shall provide periodic observation and testing services during final clearing and grubbing operations to document compliance with the above recommendations. In addition, should unusual or adverse soil conditions or unanticipated buried structures be encountered during grading that are not described in the Project Geotechnical Report, these conditions shall be brought to the immediate attention of the project geotechnical consultant for corrective recommendations.

GEO-7 Undocumented Fill

Any existing undocumented fill and near surface native soils are considered unsuitable for support of proposed structures and should be removed to expose underlying competent alluvial materials as approved by the project geotechnical consultant. The estimated depth of removal of fill soils, if any, is recommended to be approximately 6 feet below the existing ground surface in proposed building areas, and 2 feet for local streets, alleyways and drives. The actual depths and horizontal limits of soil removals and overexcavations shall be evaluated upon availability of the site grading plan and during grading on the basis of observations and testing performed by the project geotechnical consultant. Excavated soils, if free of deleterious materials, are considered acceptable for use as compacted fill.

GEO-8 Dust Control/Soil Erosion Plan

All grading plans shall include a soil erosion prevention/dust control plan. Blowing dust and sand during grading operations shall be mitigated by adequate watering of soils prior to and during grading, and limiting the area of dry, exposed and disturbed materials and soils during these activities. To mitigate against the effects of wind erosion after site development, a variety of measure shall be provided including maintaining moist surface soils using chemical soil stabilizers or by other approved means. Project grading shall be conducted in strict compliance with the requirements of the SCAQMD and the Coachella Valley PM10 SIP. Also see Section 2.5: Air Quality.

GEO-9 Graded Slopes

Unprotected, permanent graded slopes shall not be steeper than 3:1 (horizontal/vertical) to reduce wind and water erosion. Fill slopes shall be overfilled and trimmed back to competent material. Fill slope surfaces shall be compacted to 90% of the laboratory maximum dry density by either over-filling and cutting back to expose a compacted core, by approved mechanical methods and as otherwise recommended in the Petra Geotechnical Investigation.

GEO-10 Site Drainage

Positive surface drainage shall be provided around buildings and within any planter areas to collect and direct all surface waters to an appropriate drainage facility as determined by the project civil engineer. The ground surfaces of planter and landscape areas that are located within 10 feet of building foundations should be sloped at a minimum gradient of 5 percent away from the foundations and towards the nearest area drains. The ground surface of planter and landscape areas located more than 10 feet away from building foundations may be sloped at a minimum gradient of 2 percent away from the foundations and towards the nearest area drains.

Concrete flatwork surfaces to be located within 10 feet of building foundations shall be inclined at a minimum gradient of one percent away from the building foundations and towards the nearest area drains.

Concrete flatwork surfaces that are located more than 10 feet away from building foundations may be sloped at a minimum gradient of 1 percent towards the nearest area drains.

Surface waters should not be allowed to collect or pond against building foundations and within the level areas of the site. All drainage devices shall be properly maintained throughout the lifetime of the development. Future changes to site improvements, or planting and watering practices, shall not be allowed to cause over-saturation of site soils adjacent to the structures.

To maintain the integrity of local and regional groundwater level controls, a subsurface tile drain system shall be constructed or maintained to ensure that on-site groundwater levels are properly managed and maintained.

GEO-11 Soil Erosion Protection
There shall be a cessation of grading activities during rainstorms or high wind events. As necessary, the project contractor shall install flow barriers and soil catchments (such as straw bales, silt fences, and temporary detention basins) during construction to control soil erosion.

GEO-12 Imported Soils
Imported soils (if needed) shall be non-expansive, granular soils meeting USCS classifications of prescribed in the Petra Geotechnical Investigation. Imported fill shall be placed in maximum 8-inch lifts (loose) and compacted to at least 90 percent relative compaction (ASTM D 1557) near optimum moisture content.

GEO-13 Excavations
Excavations within sandy soil shall be kept moist, but not saturated, to reduce the potential of caving or sloughing. Where excavations over 4 feet deep are planned, lateral bracing or appropriate cut slopes of 1.5:1 (horizontal/vertical) shall be provided. No surcharge loads from stockpiled soils or construction materials shall be allowed within a horizontal distance measured from the top of the excavation slope and equal to the depth of the excavation.

2.9.8 Significance After Mitigation

The geotechnical conditions at the Project site pose certain constraints, including seismic, high groundwater and soil conditions that require specific design and engineering solutions. With the application of the avoidance/minimization/mitigation measures set forth above and in the Petra Geotechnical Investigation, impacts associated with project geotechnical conditions will be less than significant.

2.9.9 Cumulative Impacts

A consideration of cumulative effects associated with geotechnical conditions includes the degree to which a project may contribute to the cumulative impacts from seismic events, high groundwater, marginal soils, steep and unstable terrain and other conditions. The proposed Project will not significantly increase the community impacts associated with prevailing geotechnical conditions in the Coachella Valley, nor will it have a cumulatively considerable effect on geotechnical hazards or risk in the Project area.

2.10 Greenhouse Gas Emissions

2.10.1 Introduction

The following section describes the existing greenhouse gas emissions in Riverside County, and analyzes the potential impacts associated with buildout of the proposed Project. A variety of local and regional data and information, ranging from research and analysis conducted for the planning area, to regional-scale planning and environmental documents, have been used in researching and analyzing the Project and its potential effects on greenhouse gases and climate change. In addition, a Project-specific Air Quality and Greenhouse Gas Report was prepared, and is included in Appendix B.

2.10.2 Thresholds of Significance

The project would have a significant effect on greenhouse gases if the proposed Project were to:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

2.10.3 Regulatory Framework

Federal

GHG Endangerment Finding
Under section 202(a) of the Clean Air Act, the EPA determined that GHGs threaten public health and welfare, and that GHG emissions from motor vehicles contribute to this threat. The two distinct findings, signed by the EPA Administrator in December 2009, concluded the following:

1. The Endangerment Finding: Concentrations of six greenhouse gases (carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride) in atmosphere constitute air pollution and threaten the health and welfare of the public.
2. The Cause or Contribute Finding: Emissions from new motor vehicles and motor vehicle emissions contribute to GHG concentrations in the atmosphere and thus to climate change.[1]

Mandatory Reporting of GHGs (40 CFR Parts 86, 87, 89 et al.)
The Mandatory Reporting of Greenhouses Gases rule provided in the Code of Federal Regulations requires the reporting of greenhouse gas emissions from major fossil fuel suppliers, industrial gas suppliers, direct greenhouse gas emitters and manufacturers of heavy-duty and off-road vehicles and engines. The rule requires facilities that emit 25,000 tons or more per year (MT/yr) of GHGs to submit annual reports to the EPA.[2]

1 United States Environmental Protection Agency, EPA's Endangerment Finding.
2 Federal Register, Part II Environmental Protection Agency (October 30, 2009).

State

Assembly Bill 32 (AB 32)
The California Global Warming Solutions Act of 2006 (AB 32) required California to adopt regulations to reduce statewide GHG emissions to 1990 levels by 2020. This represents reductions of approximately 15 percent below the emissions projected in a "business as usual" scenario. The California Air Resources Board (CARB) prepared a Scoping Plan (2008) and Update (2014) to establish the state's strategy to meet the targets set forth by AB 32. CARB reported that 1990 GHG emissions totaled 431 million metric tons (MMT) for the state of California. In 2020, statewide GHG emissions totaled 369.2 MMT of CO_2e, which is 61.8 $MMTCO_2e$ below the 2020 GHG limit pursuant to AB 32.[3] Moving forward, AB 32 requires California to maintain and continue reductions beyond 2020 and continues to require CARB to update the Scoping Plan every 5 years.

Senate Bill 32 (SB 32)
The California Global Warming Solutions Act of 2016: emissions limit (SB 32) builds on AB 32 by establishing a new goal for California's greenhouse gas reductions. SB 32 requires California to reduce GHG emissions to 40% below 1990 levels by 2030, and to reduce emissions to 80% below 1990 levels by 2050.

CARB 2022 Scoping Plan Update
The 2022 Scoping Plan provides CARB's update to the 2017 Plan. Pursuant to SB 32, the plan sets forth the state's plan to stay on track towards reducing GHG emission by at least 40% below 1990 levels by 2030. The 2022 Plan Update expands on earlier targets, establishing a new goal of reducing GHG emissions to 85% below 1990 levels by 2045. Additionally, the 2022 Plan Update establishes a path for the state to achieve carbon neutrality by 2045 through technologically feasible, cost-effective means.[4]

Senate Bill 375 (SB 375)
SB 375 directs CARB to set regional GHG emissions reduction targets. The intent of the bill is to ensure local and regional governments are involved in efforts to meet the reduction targets set forth by AB 32 and SB 32. Alignment between state and local emission reduction efforts is important particularly because regional transportation planning and housing needs allocation, factors that have a major impact on GHG emissions in California, are overseen by local elected officials. The bill encourages an integrated approach by requiring the inclusion of Sustainable Communities Strategies in regional transportation plans, synchronizing the General Plan Housing Element's update schedule to align with regional transportation planning cycles, and adding CEQA incentives for projects that align with regional plans and reduce GHG emissions.

Clean Energy and Pollution Reduction Act of 2015 (SB 350)
SB 350 establishes a state renewable energy procurement goal, increasing from 33% by 2020 to 50% by 2030. It is implemented by the California Energy Commission in conjunction with state agencies including the Public Utilities Commission and CARB. The bill also requires large utility companies to prepare integrated resource plans (IRPs) that establish how the utilities will meet customer demands while reducing GHG emissions and increasing the use of clean energy sources.

Title 24 of the California Code of Regulations
Title 24 of the California Code of Regulations was established in 1978 and serves to enhance and regulate California's building standards. The Building Energy Efficiency Standards, Parts 6 and 11 of Title 24, are updated by the California Energy Commission (CEC) every three years.

[3] California Air Resources Board, California Greenhouse Gas Emissions for 2000 to 2020 (October 2022).
[4] California Air Resources Board, 2022 Scoping Plan for Achieving Carbon Neutrality (November 2022).

The 2022 California Energy Code (Title 24, Part 6), which became effective on January 1, 2023, provides measures to continue reducing energy consumption in California. The 2022 Update includes regulations encouraging efficient electric heat pumps, establishing electric-ready requirements for appliances and mechanical systems in new homes, strengthening ventilation standards, as well as expanding solar photovoltaic and battery storage standards. According to the Energy Code, all single-family residential buildings, low-rise and high-rise multifamily buildings, as well as non-residential buildings such as grocery stores, offices, retail, hotels, and restaurants[5], must have a newly installed photovoltaic (PV) system. Additionally, all high-rise residential and non-residential buildings required to have PV systems must also have a battery storage system that meets the requirements provided in Section 140.10 of the Energy Code.

Title 24 also includes Part 11, the California Green Building Standards Code (CALGreen). The California Building Standards Commission first "green" standards for new developments in 2007 in an effort to meet the greenhouse gas reduction targets established by AB 32. The 2022 CALGreen standards, effective as of January 1 2023, institute mandatory minimum environmental performance standards for all new construction of commercial, residential, and State-owned buildings, as well as schools and hospitals. According to CALGreen Section 4.106, all new single family and multifamily dwellings, as well as hotels, must be built with EV Capable parking spaces. One and two-family dwellings must include one EV capable space per dwelling unit, and multifamily buildings and hotels must build a proportion of all provided parking to be either EV Capable or EV Ready.[6] In accordance with Section 5.106, all new non-residential developments must provide both a portion of parking spaces are that EV Capable, as well as a portion of spaces with EV charging stations.

Senate Bill 97 (SB 97)
SB 97 recognized the need for state agencies to analyze GHG emissions as part of the California Environmental Quality Act project review process. The bill updated CEQA to require the Office of Planning and Research (OPR) to develop guidelines for the feasible mitigation of GHG emissions, of the effects of GHG emissions, to be transmitted to the California Air Resources Board for approval. The adopted guidelines apply to effects associated with transportation and energy consumption.

Assembly Bill 1493 – The Pavley Bill
California was the first state to establish regulations that require the reduction of emissions of GHGs from motor vehicles. On September 24, 2004, the California legislature adopted the Pavley Bill that requires all motor vehicles of 2009 vintage or later to reduce their greenhouse gas emissions by about 30% by the year 2016. The second phase of the implementation for the Pavley bill was incorporated into Amendments to the Low-Emission Vehicle Program (LEV III) or the Advanced Clean Cars program. The Advanced Clean Car program combines the control of smog-causing pollutants and GHG emissions into a single coordinated package of requirements for model years 2017 through 2025. The regulation will reduce GHGs emissions from new cars by 34% from 2016 levels by 2025.

Approved in November 2022, the Advanced Clean Cars II (ACC II) regulations require that all new passenger cars, trucks, and SUVs sold in California are zero emission vehicles by 2035.

[5] High-rise multifamily and non-residential buildings requiring photovoltaic systems are listed in Table 140.10-A of the Energy Code.

[6] EV Capable refers to parking spaces which have electrical panel capacity, a dedicated branch circuit, and a raceway to support future installation of a charging station. EV Ready refers to the same conditions as EV Capable, with the addition of other electrical components as well as a receptable or blank cover to support future installation of a charging station.

Regional and Local

SCAQMD GHG Significance Thresholds

The South Coast Air Quality Management District (SCAQMD) is responsible for monitoring air resources and enforcing air pollution regulations in the South Coast Air Basin as well as the Riverside County portions of the Salton Sea Air Basin (SSAB) and portions of the Mojave Desert Air Basin (MDAB). The Coachella Valley Planning Area is within the Riverside County portion of the SSAB. On December 5, 2008, the SCAQMD formally adopted a greenhouse gas significance threshold for stationary sources of 10,000 MTCO2e per year for industrial projects and 3,000 MTCO2e per year for residential and commercial projects where SCAQMD is the lead agency (SCAQMD Resolution No. 08-31). This threshold was adopted based upon a December 2008 staff report and draft interim guidance document that also recommended a threshold for all projects using a tiered approach.[7]

It was recommended by SCAQMD staff that a project's greenhouse gas emissions would be considered significant if it could not comply with at least one of the following "tiered" tests:

- Tier 1: Is there an applicable exemption?
- Tier 2: Is the project compliant with a greenhouse gas reduction plan that is, at a minimum, consistent with the goals of AB 32?
- Tier 3: Is the project below an absolute threshold (10,000 MTCO2e/yr for industrial projects; 3,000 MTCO2e/yr for residential and commercial projects)?
- Tier 4: Is the project below a (yet to be set) performance threshold?
- Tier 5: Would the project achieve a screening level with off-site mitigation?

County of Riverside Climate Action Plan Update (2019)

The County of Riverside Climate Action Plan (CAP) Update establishes the County's efforts to reduce GHG emissions in line with the targets set by AB 32 and SB 32. Consistent with CARB's climate change scoping plan, the CAP aims for a 49% reduction below 2008 levels by 2030 and an 80% reduction below 2008 levels by 2050.[8] As shown in **Table 2.10-1**, to meet these targets the County would need to reduce 2030 emissions by 525,511 MT CO_2e from an adjusted business-as-usual forecast and by 2,982,947 MT CO_2e by 2050.

Table 2.10-1
Riverside County CAP Update
State-Aligned GHG Emissions Reductions Targets by Year (MT CO_2e)

Sector	Baseline (2008)	2020	2030	2050
BAU Emissions	7,012,938	5,185,305	6,368,781	11,305,026
ABAU Emissions	-	4,861,109	4,102,109	4,175,146
State-Aligned Target	-	5,960,997	3,576,598	1,192,199
Reductions from ABAU needed to meet Target	-	Target Met	525,511	2,982,947

Source: County of Riverside Climate Action Plan Update, November 2019.
BAU = Business-As-Usual; ABAU = Adjusted Business-As-Usual

[7] SCAQMD, Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans (December 2008).

[8] Riverside County uses 2008 as baseline year because this was the earliest year with a full emissions inventory. The CAP emission reduction targets are equivalent to State goals, which use a 1990 baseline. These targets are to achieve 1990 levels of emissions by 2020 (equivalent to 15% below 2008 baseline levels), 40% below 1990 levels of emissions by 2030 (equivalent to 49% below 2008 baseline levels), and 80% below 1990 levels of emissions by 2050 (equivalent to 83% below 2008 baseline levels).

The CAP Update outlines actions to be untaken at the local level which, in conjunction with state policies, will support efforts to meet the County's emissions reduction targets. The provisions in the CAP include encouraging energy efficiency and use renewable energy, supporting the use of zero-emission vehicles, as well as increasing water conservation and waste diversion. As a result of the 2017 Settlement Agreement with the Sierra Club, Center for Biological Diversity, San Bernardino Audubon Society, and respondents (Petitioners), the 2019 CAP Update includes a number of required measures. The following County requirements are applicable to the proposed Project:

R2-T4 Electrify the Fleet

- The Settlement Agreement requires that all new residential developments install EV charging stations in the garages of each unit. The Settlement Agreement also requires that the capacity and circuits for the installation of EV charging stations are provided in the garages of all new residential developments and all new large-scale commercial buildings that are over 162,000 square feet.
- Comply with Title 24, Part 11 building code requirements for new commercial development to install EV charging stations.

R2-CE1 Clean Energy

- The Settlement Agreement requires on-site renewable energy production (including but not limited to solar) for any tentative tract map, plot plan, or conditional use permit that proposes to add more than 75 new dwelling units of residential development or one or more new buildings totaling more than 100,000 gross square feet of commercial, office, or manufacturing development. Renewable energy production shall be onsite generation of at least 20 percent of energy demand for commercial, office, industrial or manufacturing development, meet or exceed 20 percent of energy demand for multi-family residential development, and meet or exceed 30 percent of energy demand for single-family residential development.

In order to meet the County's GHG reduction targets, the CAP Update establishes a review process for new development projects. Provided in Appendix D of the CAP Update, the development review process establishes thresholds to determine the significance of project-generated GHG emissions in accordance with CEQA. Under this process, it must first be determined whether a project is subject to CEQA and will exceed the 3,000 MT CO_2e emission level. The 3,000 MT CO_2e threshold is based on the GHG threshold adopted by SCAQMD. If a project's annual emissions are anticipated to exceed 3,000 MT CO_2e, then the Project must either use the County's Screening Tables or must quantify and disclose the GHG emissions anticipated to result from the proposed development.

For projects not using the Screening Tables, the CAP process for project-specific quantification recommends the use of the California Emissions Estimator Model (CalEEMod). To determine the significance of GHG emissions two modeling runs must be completed. The first modeling run must calculate GHG emissions at 2017 levels of efficiency and the second modeling run must calculate GHG emissions for the efficiency levels for the project's buildout year and should include any relevant project design features and/or mitigation measures.

The efficiency levels for 2017 can be modeled using approved energy efficiency standards (2016 Title 24, effective January 2017) and the 2017 CARB on-road vehicle emissions factors (EMFAC 2017). Both sets of factors are pre-set in CalEEMod. In order for a project's GHG emissions to be considered less than significant, emissions for the project's buildout year must meet or exceed a 25% reduction from the project's 2017 emissions.[9]

[9] Riverside County 2019 Climate Action Plan Update, Appendix A: GHG Development Review Process Flow Chart Diagram.

Riverside County General Plan
The County General Plan includes an Air Quality Element which sets forth policies promoting pollution control, as well as land use and transportation measures to reduce greenhouse gas emissions. The following policies from the Air Quality Element are relevant to the proposed Project:

AQ 3.4 Encourage employee rideshares and transit incentives for employers with more than 25 employees at a single location.

AQ 4.4 Require residential building construction to comply with energy use guidelines detailed in Part 6 (California Energy Code) and/or Part 11 (California Green Building Standards Code) of Title 24 of the California Code of Regulations.

AQ 4.7 To the greatest extent possible, require every project to mitigate any of its anticipated emissions which exceed allowable emissions as established by the SCAQMD, MDAQMD, SCAB, the Environmental Protection Agency, and the California Air Resources Board.

AQ 8.2 Emphasize job creation and reductions in vehicle miles traveled in job-poor areas to improve air quality over other less efficient methods.

AQ 8.4 Support new mixed-use land use patterns and community centers which encourage community self-sufficiency and containment, and discourage automobile dependency.

AQ 8.9 Promote land use patterns that promote alternative modes of travel.

AQ 20.5 Reduce emissions from standard gasoline vehicles, through VMT, by requiring all new residential units to install circuits and provide capacity for electric vehicle charging stations.

AQ 20.6 Reduce emissions from commercial vehicles, through VMT, by requiring all new commercial buildings, in excess of 162,000 square feet, to install circuits and provide capacity for electric vehicle charging stations.

AQ 20.7 Reduce VMT through increased densities in urban centers and encouraging emphasis on mixed use to provide residential, commercial and employment opportunities in closer proximity to each other. Such measures will also support achieving the appropriate jobs-housing balance within the communities.

AQ 20.8 Reduce VMT by increasing options for non-vehicular access through urban design principles that promote higher residential densities with easily accessible parks and recreation opportunities nearby.

AQ 20.10 Reduce energy consumption of the new developments (residential, commercial and industrial) through efficient site design that takes into consideration solar orientation and shading, as well as passive solar design.

AQ 20.18 Encourage the installation of solar panels and other energy- efficient improvements and facilitate residential and commercial renewable energy facilities (solar array installations, individual wind energy generators, etc.)

2.10.4 Environmental Setting

Over the last two centuries, human activity, such as the burning of fossil fuels, industrial activity, deforestation, and land use changes, began to intensify the natural greenhouse effect. While the combustion of fossil fuels produces and emits greenhouse gases into the atmosphere at levels elevated far beyond the natural production of these gases, the removal of trees and other vegetation reduces the earth's ability to sequester CO_2.[10] As the concentrations of these gases increase, so too does the amount of heat that they trap in the atmosphere and the oceans.

According to the Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report (AR6), atmospheric concentrations of CO_2 have increased by 50 percent since the industrial revolution and continue to increase at a rate of two parts per million each year. At this rate, the world will exceed 1.5°C above pre-industrial levels by the 2030s.[11] This level of global warming is associated with global mean sea level rise as well as regional climatic changes such as extreme temperatures, increases in the frequency and intensity of heavy precipitation in some regions, and increases in the intensity and frequency of droughts in some regions.[12]

The California Air Resources Board is required to monitor and regulate seven GHGs: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), sulfur hexafluoride (SF_6), nitrogen trifluoride (NF_3), perfluorocarbons (PFCs), and hydrofluorocarbons (HFCs).[13] The latter four gases, all of which contain fluorine, are sometimes collectively referred to as high global warming potential greenhouse gases (high-GWP gases). Global warming potential (GWP) is a metric used to convert all GHGs into carbon dioxide equivalents. Carbon dioxide equivalents (CO_2e), and specifically metric tons of carbon dioxide equivalents ($MTCO_2e$), are units of measure used to compare emissions of various greenhouse gases. Carbon equivalent refers to the mass of carbon dioxide that would produce the same estimated radiative force as that of another greenhouse gas.[14] These metrics facilitate the development of multi-gas frameworks and policies which are crucial to action addressing climate change.

The primary contributor to air pollution is the mining and burning of fossil fuels in motor vehicles, power and heat generators, and industrial processes. Emissions from the combustion or extraction and use of fossil fuels are also responsible for the poor air quality that is evident in industrial centers worldwide.

California is the second largest greenhouse gas producing state in the U.S., and the 16th largest contributor in the world; it is also the fifth largest economy in the world. In 2020, emissions from GHG emitting activities in California were 369.2 $MMTCO_2e$, 35.3 $MMTCO_2e$ below 2019 levels and 61.8 $MMTCO_2e$ below the 2020 GHG Limit. CARB acknowledges that 2020 emissions may have been skewed by the COVID-19 pandemic, and that 2021 emissions could be higher. However, based on 2019 emissions, the state was still on track to meet its GHG reduction targets.

2.10.5 Existing Conditions

The proposed Project site is located within the Riverside County portion of the Salton Sea Air Basin (SSAB), which is referred to as the Coachella Valley Planning Area. The Coachella Valley Planning Area encompasses 2,500± square miles bound by the San Jacinto and Santa Rosa Mountains to the west, the Little San Bernardino Mountains to the north and east, and extends from the San Gorgonio Pass in

10 California Air Resources Board 2022 Scoping Plan, Environmental and Regulatory Setting.
11 IPCC Climate Change 2021: The Physical Science Basis. Contribution of Working Group 1 to the Sixth Assessment Report of the IPCC (2021).
12 IPCC Special Report: Global Warming of 1.5°C – Summary for Policymakers (2018).
13 California Health and Safety Code § 38505 (g).
14 California Air Resources Board.

the northwest to the Salton Sea in the southeast. The SSAB is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD), which encompasses portions of Los Angeles, Orange, Riverside, and San Bernardino Counties. The Coachella Valley has a desert climate with hot summers, mild winters, and very low precipitation. The area is also subject to frequent strong winds.

Pursuant to AB 32 and SB 32, the Riverside County Climate Action Plan (CAP) Update establishes targets for annual GHG emissions of 49% below 2008 baseline emissions levels by the year 2030 and 83% below the 2008 baseline levels by 2050. As set forth in Table 2.10-1 above, to meet these emissions reductions targets, the County would need to reduce emissions in 2030 by 545,511 MT CO_2e from the adjusted business-as-usual (ABAU) forecast and by 2,982,947 MT CO_2e from the ABAU forecast by 2050. The CAP Update includes community-wide GHG emissions reduction targets as well as measures that all new development projects must follow to meet the County's targets.

Table 2.10-2 shows total GHG emissions in unincorporated areas of Riverside County in 2017, broken down by emissions category. The three categories responsible for the most GHG emissions were transportation (36%), agriculture (34%), and energy use in buildings (24%).

Table 2.10-2
Riverside County 2017 Community-Wide GHG Emissions by Source

Emissions Category	Metric Tons of CO_2e
On-Road Transportation	1,766,784
Agriculture	1,670,954
Energy (Electricity and Natural Gas)	1,188,138
Solid Waste	204,365
Water and Wastewater	44,606
Aviation	26,786
Off-Road Sources	3,883
Total	**4,905,518**
Source: County of Riverside Climate Action Plan Update, November 2019.	

2.10.6 Project Impacts

The Project proposes the development of the 619.1±-acre site to include a 223.1± acre equestrian center and a mix of community uses including up to 1,362 dwelling units, 285,000± gross leasable square feet of retail and office space, and a 150-key hotel. The Project will also require construction of a 5-million-gallon (mg) water tank on the Middleton Reservoir site.

The Project would provide neighborhood commercial services, on-site workforce housing, and a network of multi-user trails which, once built, will serve to reduce post-construction vehicle trips and vehicle miles traveled (VMTs). The subject property is located away from existing urban centers and services but in an area that is transitioning to suburban uses. The proposed Project will generate GHGs from both construction and operation.

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

The Riverside County CAP Update provides screening tools and significance thresholds to facilitate CEQA compliance for new development. Under the development review process in the CAP Update, a project can be screened from GHG analysis if it is exempt under CEQA or if the project's GHG emissions would be less than 3,000 MT CO_2e per year. The 3,000 MT CO_2e threshold is based on the SCAQMD adopted GHG threshold.

According to Table C-A of Appendix C of the CAP Update, typical project sizes that would generate less than 3,000 MT CO_2e per year include 80 single-family units, or 120 condominium units, or 160,000 square feet of commercial space. Given that the Project far exceeds these size thresholds and is subject to an Environmental Impact Report (EIR), it is not eligible for either screening criteria.

For projects with annual GHG emissions exceeding 3,000 MT CO_2e, the CAP Update provides two methods for determining significance: screening tables or calculation of GHG emissions. Screening tables may be used to assign a score based on the number of GHG reduction design features that will be integrated into the project. Although the Thermal Ranch Specific Plan only provides sufficient details for two planning areas (PA-1 and PA-4), and details for all planning areas would typically be required for this level of analysis, the County has requested the screening tables be completed for the proposed Project.

Screening Tables

The County CAP provides separate Screening Tables for residential and commercial/industrial developments. For mixed-use projects, both tables must be filled out, but the points must be weighted in proportion to the proposed mix of uses. In the case of the proposed Project, the mix of uses is approximately 50 percent residential and 50 percent commercial. As such, the points for each table were calculated, then multiplied by 0.50 to adjust for the mix of uses. The completed screening tables can be found in the Project Air Quality and Greenhouse Gas Report (Appendix B).

The Project gained points in the residential and commercial Screening Tables for design features proposed in the Thermal Ranch Specific Plan and required by the most recent Title 24 regulations and with required measures in the CAP. Before weighting, the Project garnered a subtotal of 139 points in Table 1, Screening Table for Residential Development, and a subtotal of 110 points in Table 2, Screening Table for Commercial Development. Weighting the points for 50 percent residential and 50 percent commercial uses, the proposed mixed-use development garnered a total of 124.5 points. According to the CAP, mixed-use projects that garner at least 100 points will be consistent with the reduction quantities in the County's CAP Update and would be considered less than significant for GHG emissions. It can therefore be concluded that, based on the Screening Tables provided in the Riverside County CAP Update, the proposed Thermal Ranch Specific Plan would have less than significant impacts for GHG emissions.

In addition to the screening tables, the GHG emissions expected to result directly and indirectly from the Project were calculated using the California Emissions Estimator Model (CalEEMod), consistent with the CAP Update guidance.

Project-Specific Emissions Quantification

Per the CAP Update's CEQA thresholds guidelines, projects should complete two modeling runs in CalEEMod. The first run should calculate GHG emissions at 2017 levels of efficiency, including application of 2017 energy efficiency standards and on-road vehicle emissions factors. The second modeling run should calculate GHG emissions at the project's buildout year levels of efficiency, and should include mitigation measures as needed. As provided in the Approach to Implementation of GHG Development Review flow chart,[15] a project's GHG emissions are less than significant if the annual emissions calculated for the project's buildout year are reduced by at least 25% from the annual emissions calculated for 2017.

[15] Appendix D of the Riverside County Climate Action Plan Update, Appendix A: GHG Development Review Process Flow Chart Diagram, March 2019.

The proposed Project will generate GHG emissions during both construction and operational phases. CalEEMod Version 2022.1 was used to project greenhouse gas emissions. The following parameters and assumptions were used in developing the model:

- A six-year construction period and operational year of 2032 were established based on the Traffic Impact Analysis (TIA) prepared for the Project by Urban Crossroads, Inc.
- GHG emissions are projected based on the Project operational conditions during the October to April event season at the equestrian center, when the Project will be busiest.
- At buildout, the Project will generate an average of 18,939 weekday trips, 21,523 Saturday trips, and 19,995 Sunday trips, as provided in the TIA by Urban Crossroads, Inc.
- As required by Riverside County, pursuant to Measure R2-CE1 of the 2019 Climate Action Plan Update, the Project must provide for on-site renewable energy generation that meets 20% of energy demand for commercial, office and multi-family residential uses, and 30% of single-family residential.
- The breakdown of land use parameters used in the CalEEMod are provided Table 2.5-6, in Section 2.5, Air Quality.

Construction
Construction activities will result in short-term GHG emissions associated with the operation of construction equipment, vehicle emissions from construction employee commutes, material hauling, and other ground disturbing activities. For an assumed buildout in 2017, the Project is projected to generate 30,326 metric tons of CO_2e over the seven-year construction period. For buildout in 2032, the Project is estimated to generate 24,954 metric tons of CO_2e over the seven-year construction period. Construction of the off-site water reservoir was included in these emissions.

There are currently no construction-related GHG emissions thresholds for projects of this nature. Therefore, construction-related GHG emissions were amortized over a 30-year period and added to the annual operational emissions. The combined construction and operation emissions for the 2017 and 2032 modeling runs were compared, per the CAP Update significance threshold.

Operation
Once the Project reaches the operational phase, five categories of emissions will contribute to its annual GHG emissions either directly or indirectly: area emissions (e.g. pavement and architectural coating off-gassing); energy use, mobile source emissions; solid waste disposal; and water use. As stated above, GHG emissions from construction of the Project were amortized over a 30-year period and added to the total operational emissions. **Table 2.10-3** and **2.10-4** show a summary of the total annual construction and operational GHG emissions projected for buildout of the Project in 2017 and 2032, respectively.

As shown in **Table 2.10-3** the modeling run for hypothetical buildout in 2017 found that the Project would generate a total of 40,146 metric tons of CO_2e per year. As shown in **Table 2.10-4**, below, the modeling run for buildout in 2032 found that the Project would generate 28,605 metric tons of CO_2e per year.

Table 2.10-3
Projected GHG Emissions Summary (2017 Buildout)

Phase	CO_2e (MT/YR)
Construction	
2011	1,156
2012	3,041
2013	5,167
2014	5,410
2015	5,370
2016	5,339
2017	4,843
Total Construction	**30,326**
Operation	
Area	238
Energy	8,309
Mobile	29,032
Waste	711
Water	786
Refrigerants	59
Construction: 30-year amortized	1,011
Total Operational	**40,146**
Source: CalEEMod Version 2022.1	

Table 2.10-4
Projected GHG Emissions Summary (2032 Buildout)

Phase	CO2e (MT/YR)
Construction	
2026	1,144
2027	2,603
2028	4,294
2029	4,428
2030	4,348
2031	4,272
2032	3,865
Total Construction	**24,954**
Operation	
Area	228
Energy	4,672
Mobile	21,532
Waste	711
Water	571
Refrigerants	59
Construction: 30-year amortized	832
Total Operational	**28,605**
Source: CalEEMod Version 2022.1.	

According to the CAP Update GHG Development Review Process, after conducting project-specific emissions quantification, emissions can be determined to be less than significant if buildout year emissions will be reduced from 2017 emissions by 25%. As shown in **Table 2.10-5**, the Project's annual emissions modeled for buildout in 2032 would be reduced by 28.7% from 2017 project emissions.

Table 2.10-5
GHG Emissions Significance

Buildout Year	2017	2032	**Percent Change**
Annual Emissions (CO_2e MT/YR)	40,146	28,605	**-28.7%**
		Emissions reduction of 25% or greater?	**Yes**
Source: CalEEMod Version 2022.1.			

As shown in the above table, the projected annual emissions resulting from the Project would be 25% or less than the emissions expected from buildout of the Project in 2017. While the Project will generate GHG emissions, the level of emissions will not have a significant adverse effect because the GHG emissions from the Project will be substantially below the significance thresholds established in the CAP Update, and thus help meet the County's overall goals for reductions in GHG emissions.

Therefore, based on the results of the project screening tables and project-specific quantification method of development review provided in the CAP Update, the Project's GHG emissions are less than significant.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

The California Air Resources Board (CARB) 2022 Scoping Plan puts forward the ambitious target of achieving carbon neutrality in state-wide emissions by 2045 or earlier. This plan builds on the efforts of CARB's three previous scoping plans, which established goals to meet 1990 levels by 2020 and 40 percent below 1990 levels by 2030, in compliance with Senate Bill 32 (SB 32). The 2022 Scoping Plan Update aims to further reduce anthropogenic emissions in California to 85 percent below 1990 levels by 2045.[16]

The County of Riverside 2019 Climate Action Plan (CAP) Update provides the County's strategy for reducing GHG emissions pursuant to State GHG reduction policies, including AB 32 and SB 32, as well as the CARB Scoping Plan. The 2019 CAP Update provides measures to meet the State targets of 49% below 2008 baseline levels by 2030 and 80% below baseline levels by 2050. To meet the emissions reductions targets provided by the State at the time that the CAP Update was written, the County would need to reduce emissions in 2030 by 545,511 MT CO_2e from the adjusted business-as-usual (ABAU) forecast and by 2,982,947 MT CO_2e from the ABAU forecast by 2050.

The 2019 CAP Update also provides screening process and significance thresholds for new developments to ensure CEQA compliance. The development review process provided in the CAP Update was designed based on the GHG Inventory, Forecasting, and Target-Setting Report (Appendix A of the CAP Update), as well as the GHG reduction measures provided in the report. As discussed in Section 2.10.6(a), the CAP Update development review process determined that the Project would have less than significant impacts on GHG emissions. Therefore, the Project would not conflict with the County or State GHG emissions reduction plans.

[16] California Air Resources Board 2022 Scoping Plan Update.

The CAP Update also provides required measures for new developments. Some of these measures are a result of the partial settlement agreement resulting from the challenge to the 2015 CAP, which required the County to implement additional requirements in the CAP Update. For example, pursuant to measure R2-CE1, any tentative tract map, plot plan, or condition use permit proposing 75 new residential units or commercial buildings totaling 100,000 square feet must install on-site renewable energy systems.[17] The CAP Update also requires that new developments comply with regulations in Title 24, Part 11, establishing the number of EV-capable parking spaces and/or EV charging stations required for residential and non-residential developments. The proposed Project must comply with these and other applicable requirements provided in the CAP Update.

Overall, the targets set in the CAP Update are based on compliance with the state targets, and the development review process is based on the measures and targets provided in the CAP Update. As explained above, the Project would not conflict with the CAP or with SB 32. Accordingly, impacts will be less than significant.

2.10.7 Mitigation Measures

The Project's impacts related to GHG emissions will be less than significant. While mitigation is not required, Mitigation Measures **GHG-1** and **GHG-6** are provided to ensure future development projects apply energy efficient building strategies to reduce GHG emissions to the greatest extent practicable.

GHG-1 **Solar Energy Requirements**
As required by Measure R2-CE1 of the Riverside County CAP Update, the project will generate on-site renewable energy providing at least 20% of energy demanded for commercial, office, industrial, and multi-family development, and at least 30% of energy demanded for single-family residential development. As required by 2022 Title 24 building standards, all new residential builds shall install solar panels.

GHG-2 **Electric Vehicle Charging**
Provide electric vehicle charging infrastructure in both commercial parking lots and residential garages.

GHG-3 **Energy Efficient Appliances and Equipment**
All new residential and commercial construction shall install energy efficient appliances that are ENERGY STAR-certified. The project shall require the use of all feasible efficient heating equipment and other appliances, such as water heaters, swimming pool heaters, cooking equipment, refrigerators, furnaces and boiler units (General Plan AQ Policy 4.2)

GHG-4 **Loading Dock Electrification**
All commercial and industrial loading docks shall be electrified, and transport refrigeration units (TRUs) and auxiliary power units (APUs) shall be plugged into the electric dock instead of running on diesel.

GHG-5 **Public Lighting**
Public street and area lighting shall use high efficiency lighting, such as warm temperature LED lighting, consistent with guidelines of the International Dark Sky Association.

[17] County of Riverside Climate Action Plan Update, November 2019.

GHG-6 **Water-Efficient Landscapes**
Design water-efficient landscapes. Assumes most residential and commercial landscaping will be drought tolerant landscaping with a low water demand requiring a drip system, with the exception of the equestrian center which will include large grass areas. This is a proposed design feature of the Project.

2.10.8 Significance After Mitigation

The Project's impacts related to GHG emissions will be less than significant.

2.10.9 Cumulative Impacts

Due to their dispersing natural and aggregate regional impacts, greenhouse gases are analyzed in terms of cumulative impacts. The above analysis considered the potential cumulative impacts of the Project on greenhouse gas emissions in the Riverside County portion of the Salton Sea Air Basin, using the significance criteria provided by the County. The County's CAP Update was prepared with consideration to the state greenhouse gas reduction plans and targets.

While the Project will contribute to cumulative greenhouse gas emissions in the Coachella Valley, conformance to the County significance thresholds indicates that impacts will be less than significant. Furthermore, all future development projects occurring in the County will also be subject to the development review process provided in the CAP Update, as well as other local and regional standards and requirements, as applicable. The Project's impacts are therefore not anticipated to be cumulatively considerable.

2.11 Hazards and Hazardous Materials

2.11.1 Introduction

This section describes the use of hazardous materials and other hazards to public health and safety that could result from the proposed Project. This section is based in part on the Phase 1 Environmental Site Assessment prepared for the Project (Appendix G)[1], as well as the Riverside County General Plan and the Riverside County Airport Land Use Compatibility Plan.

The California Health and Safety Code defines a 'hazardous material' as "a substance or waste, that, because of its physical, chemical, or other characteristics, may pose a risk of endangering human health or safety or of degrading the environment".[2] In this section, the term "hazardous materials" refers to both hazardous substances and hazardous waste. Under federal and state law, materials and wastes may be considered hazardous if they are specifically listed by statute or if they are toxic, ignitable, corrosive, or reactive. In some cases, past industrial or commercial activities on a site could have resulted in spills or leaks of hazardous materials to the ground, resulting in soil and/or groundwater contamination. Hazardous materials may also be required as part of, or result from, construction and operation of a project.

If improperly handled, hazardous materials and waste can cause public health hazards when released to the soil, groundwater, or air. The four basic exposure pathways through which an individual can be exposed to a chemical agent include: inhalation, ingestion, bodily contact, and injection. Exposure can come as a result of an accidental release during construction, which can also lead to exposure of workers or the public to health hazards when released to the soil, groundwater, or air. Disturbance of subsurface soil during construction can also lead to exposure of workers or the public from stockpiling, handling, or transportation of soils contaminated by hazardous materials from pervious spills or leaks.

2.11.2 Thresholds of Significance

The following thresholds or criteria are derived from Appendix G of the CEQA Guidelines and are used to determine if and to what extent a project may have a potentially significant impact regarding hazards and hazardous materials. The Project would have a significant effect on or risk exposure to hazards or hazardous materials if it were to:

Hazards and Hazardous Materials

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?
c) Impair implementation of or physically interfere with an adopted emergency response plan or an emergency evacuation plan?
d) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter (1/4) mile of an existing or proposed school?
e) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

[1] "Phase 1 Environmental Site Assessment For the Agricultural Property Located at 85400 Avenue 62 and 62101 Tyler Street" prepared by Terra Nova Planning & Research, Inc., September 2022.
[2] California Health and Safety Code, Section 25260 (d).

The Initial Study determined that the Project would result in "No Impact" for threshold questions d) and e), above. Therefore, they are not analyzed further in this EIR.

Airports

a) Result in an inconsistency with an Airport Master Plan?
b) Require review by the Airport Land Use Commission?
c) For a project located within an airport land use plan or, where such a plan has not been adopted, within two (2) miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?
d) For a project within the vicinity of a private airstrip, or heliport, would the project result in a safety hazard for people residing or working in the project area?

The Initial Study determined that the Project would result in "No Impact" for threshold question d), above. Therefore, it is not analyzed further in this EIR.

2.11.3 Regulatory Framework

Federal

Hazardous Materials Transport Act (49 USC 5105)
Passed in 1975 and administered by the U.S. Department of Transportation, this statute regulates the transport of hazardous materials. According to the Code of Federal Regulations (CFR) Title 49, Section 5101, the purpose of the Hazardous Materials Transport Act is "to protect against the risks to life, property, and the environment that are inherent in the transportation of hazardous material in intrastate, interstate, and foreign commerce." CFR 49, §171-180 regulates the transportation of hazardous materials, the types of materials defined as hazardous, and the marking of vehicles transporting hazardous materials.

Resource Conservation and Recovery Act (42 USC 6901 et seq.)
Enacted in 1976, the Resource Conservation and Recovery Act (RCRA) gives the authority to the EPA to control the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also establishes a framework for the management of non-hazardous solid wastes.

The 1984 Hazardous and Solid Waste Amendments (HSWA) enabled the EPA to address the environmental problems that can result from the land disposal of hazardous waste, such as underground tanks storing petroleum.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)
Established in 1980, this act provides a federal "Superfund" for the cleanup of uncontrolled or abandoned hazardous waste sites and provides the EPA with the authority to seek out parties responsible for the release of hazardous waste. The Superfund Amendments and Reauthorization Act (SARA) of 1986 extended CERCLA and provided additional definitions and enforcement authority.

Federal Aviation Administration
The Federal Aviation Administration (FAA) has jurisdiction over airspace in the United States. The Federal Aviation Regulations (FAR) provide criteria for evaluating the potential effects of obstructions on the safe and efficient use of navigable airspace within approximately two to three miles of airport runways. The FAA requires notification of proposed construction projects that meet specific height requirements. As discussed below, the Jacqueline Cochran Regional Airport is in the vicinity of the project.

State

California Occupational Safety and Health Act
Enacted in 1973, the Act addresses California employees' working conditions, enables the enforcement of workplace standards, and provides for advancements in the field of occupational health and safety. The Act also created the California Occupational Safety and Health Administration (Cal OSHA), the agency with primary responsibility for worker safety in the handling and use of chemicals in the workplace. Cal OSHA's standards are generally more stringent than federal regulations.

California Health and Safety Code
Title 22, Chapter 20 of the Health and Safety Code (HSC), the Hazardous Waste Permit Program establishes the provisions for the issuance and administration of hazardous waste permits. The program requires a permit for the transfer, treatment, storage, and disposal of hazardous waste.

HSC Division 20, Chapter 6.5, the Hazardous Waste Control Law regulates hazardous waste generated in the State of California. The law provides guidance for the proper handling, storage, use, and disposal of hazardous waste. It also identifies the need for proper landfill disposal in order to reduce long-term threats to public health, air quality, and water quality. Sections 25505 et seq. require the preparation of Hazardous Materials Business Plans (HMBPs) for businesses that handle specified quantities of chemicals. The plans allow local agencies to prepare appropriately for chemical releases, fires, or other incidents.

California Health and Safety Code, Title 22, Chapter 20 Hazardous Waste Permit Program
Title 22, Chapter 20 Hazardous Waste Permit Program, establishes provisions for the issuance and administration of hazardous waste permits pursuant to the Health and Safety Code. Regulations cover basic permitting requirements, such as application requirements, standard permit conditions, and monitoring and reporting requirements. Hazardous Waste Permits are required for the transfer, treatment, storage, and disposal of any hazardous waste pursuant to section 66261.3. Owners and operators of certain facilities require hazardous waste facility permits as well as permits under other programs for certain aspects of the facility operation.

California Health and Safety Code, Division 20, Chapter 6.5, Hazardous Waste Control Law
California Health and Safety Code, Division 20, Chapter 6.5, Hazardous Waste Control Law regulates hazardous wastes generated within the State of California. The Law identifies proper guidance for the handling, storage, use, and disposal of hazardous wastes. Additionally, the law identifies the need for proper landfill disposal in order to reduce long-term threats to public health and to air and water quality.

Included in this is the preparation of Hazardous Materials Business Plans (HMBPs) (Chapter 6.95 of the Health and Safety Code, Sections 25501 et seq.), which are required of businesses that handle specified quantities of chemicals in accordance with community right-to-know laws. This plan allows local agencies to plan appropriately for a chemical release, fire, or other incidents. Hazardous waste regulations establish criteria for identifying, packaging, and labeling hazardous wastes; dictate the management of hazardous waste; establish permit requirements for hazardous waste treatment, storage, disposal and transportation; and identify hazardous wastes that cannot be disposed of in landfills.

Cortese List (California Government Code Section 65962.5(a))
According to §65962.5(a) of California Government Code, the Department of Toxic Substances Control is required to compile and update as appropriate, but at least annually, and shall submit to the Secretary for Environmental Protection, a list of all the following:

(1) All hazardous waste facilities subject to corrective action pursuant to HSC Section 25187.5.

(2) All land designated as hazardous waste property or border zone property pursuant to HSC Article 11 (commencing with Section 25220) of Chapter 6.5 of Division 20.
(3) All information received by the Department of Toxic Substances Control pursuant to HSC Section 25242 on hazardous waste disposals on public land.
(4) All sites listed pursuant to HSC Section 25356 of the Health and Safety Code.
(5) All sites included in the Abandoned Site Assessment Program.

License to Transport Hazardous Materials – California Vehicle Code, Section 32000.5 et seq.
Administered by Caltrans in conjunction with the California Highway Patrol, this law establishes driver training requirements, load labeling procedures, and container specifications for vehicles transporting hazardous materials.

State Water Resources Control Board and Regional Water Quality Control Boards
The State Water Resources Control Board (SWRCB) and California's nine regional water quality control boards (RWQCBs) are responsible for the implementation and compliance with the federal Clean Water Act and the 1969 Porter-Cologne Act. The Porter-Cologne Act establishes the state's statutory authority to protect water quality and the beneficial uses of water. The SWRCB and RWQCB share the protection of water quality with numerous water supply and wastewater management agencies and local governments throughout the state.

RWQCBs are responsible for the identification, monitoring, and cleanup of leaking underground storage tanks (LUSTs), while the SWRCB's underground storage tank cleanup unit oversees the investigation and cleanup of LUSTs. The proposed Project is under the jurisdiction of the Lahontan Regional Water Quality Control Board.

California Fire Code (Title 24, Part 9 of the California Code of Regulations)
The 2019 California Fire Code establishes regulations to safeguard against the hazards of fires, explosions, and other potentially dangerous conditions in new and existing buildings, structures, and premises.[3] The Fire Code includes regulations for safe procedures for fire fighters and emergency responders during emergency operations, as well as well as requirements for fire resistant and fire protective building systems.

Regional/Local

Riverside County General Plan Safety Element
The Safety Element of the County General Plan provides policies regarding seismic and geologic hazards, flood and inundation hazards, fire hazards, and hazardous waste and materials. The Hazardous Waste and Materials section addresses emergency preparedness, disaster preparedness, public power safety shutoffs, evacuation needs, and mutual aid. Policies applicable to the proposed Project are as follows:

S 5.1 Enforce land use policies and existing criteria related to hazardous materials and waste through ongoing implementation of the programs identified in the County's Hazardous Waste Management Plan (CHWMP). (AI 88)

S 5.2 Review all proposed development projects that manufacture, use, or transport hazardous materials for compliance with the CHWMP. Such projects shall provide a buffer zone, to be determined by the County, between the installation and property boundaries sufficient to protect public safety.

[3] California Code of Regulations Title 24, Part 9.

S 5.3 Require that applications for discretionary development projects that will generate hazardous wastes or use hazardous materials include detailed information on hazardous waste reduction, recycling, and storage.

S 5.6 Require that any business that handles a hazardous material prepare a plan for emergency response to a release or threatened release of a hazardous material, including providing updated information to emergency responders on the type and quantity of hazardous materials kept on-site.

S 5.7 Identify sites that are inappropriate for hazardous material storage, maintenance, use, and disposal facilities due to potential impacts on adjacent land uses and the surrounding natural environment. Prohibit the siting of new or expanded hazardous material facilities on such sites to the extent feasible.

S 5.9 Require commercial businesses, utilities, and industrial facilities that handle hazardous materials to install automatic fire and hazardous materials detection, reporting, and shut-off devices, and install an alternative communication system in the event power is out or telephone service is saturated following an earthquake.

Riverside County General Plan Circulation Element

The County General Plan Circulation Element includes discussions and policies regarding the operation and optimization of airports located in the County, including the Jacqueline Cochran Regional Airport. The following Circulation Element policy is relevant to the airport discussion.

C 14.2 Apply a variety of land use planning techniques to maintain the viability of Riverside County's Airports.

East Coachella Valley Area Plan

The proposed Project is located within the boundaries of the *East Coachella Valley Area Plan* (ECVAP), which includes information and policies related to a wide range of community and environmental planning. The following ECVAP policy is relevant to the proposed Project.

ECVAP 3.1 To provide for the orderly development of Jacqueline Cochran Regional Airport and Chiriaco Summit Airport and the surrounding areas, comply with the Airport Land Use Compatibility Plans for Jacqueline Cochran Regional Airport and Chiriaco Summit Airport as fully set forth in Appendix L-1 and as summarized in Tables 4 and 5, as well as any applicable policies related to airports in the Land Use, Circulation, Safety and Noise Elements of the Riverside County General Plan.

Riverside County Department of Environmental Health, Hazardous Materials Branch

The Riverside County Department of Environmental Health Hazardous Materials Branch is designated by the California Environmental Protection Agency as the Certified Unified Program Agency (CUPA) for the County. The Branch is responsible for overseeing the six hazardous materials programs in the County, including inspecting facilities that handle hazardous materials, generate hazardous waste, treat hazardous waste, own/operate underground storage tanks, own/operate aboveground petroleum storage tanks, or handle other materials subject to the California Accidental Release Program.

In addition, the Branch maintains an emergency response team that responds to hazardous materials and other environmental health emergencies 24 hours a day, 7 days a week. The County-wide Hazardous Materials Emergency Response Team consists of personnel from the Riverside County Fire Department and Environmental Health HazMat Program staff.

Riverside County Hazardous Waste Management Plans (HWMP)
Pursuant to AB 2948, Riverside County prepared the Hazardous Waste Management Plans (HWMP), adopted in 1990. The HWMP identifies the type and quantity of hazardous waste generated in the County. It projects future quantities likely to be generated, and includes goals, policies, and standards for the management of hazardous waste. Also, the HWMP establishes procedures for the siting of new hazardous materials treatment, storage, and disposal facilities. HWMP policies require the County to coordinate its efforts with state and federal agencies in the identification and establishment of programs for managing these wastes.

County of Riverside Multi-Jurisdictional Local Hazard Mitigation Plan
The 2018 Local Hazard Mitigation Plan (LHMP) identifies potential hazards facing Riverside County, reviews past disasters, estimates the probably of future occurrences, and establishes goals to mitigate associated risks. The 2018 LHMP provides an update to the 2012 plan, prepared in accordance with the Disaster Mitigation Act of 2000. The LHMP covers potential risks including hazardous materials incidents and water supply disruption/contamination.

Riverside County Operational Area (OA) Emergency Operations Plan (EOP)
The 2019 EOP provides the County's response and recovery operations plan in the event of an emergency, including localized events or larger catastrophes. The plan establishes roles and responsibilities, specific policies, and general procedures, and aims to facilitate collaboration between the County of Riverside Operational Area Emergency Operations Center, first responders, and support agencies.

Riverside County Airport Land Use Compatibility Plan
The Riverside County Airport Land Use Compatibility Plan Policy Document (ALUCP) was adopted by the Riverside County Airport Land Use Commissions (ALUC) in 2004. The plan establishes land use compatibility criteria for the influence areas of airports in Riverside County, including the Jacqueline Cochran Regional Airport. As defined by the California State Aeronautics Act (Public Utilities Code Sections 21670 et seq.), the purpose of the ALUC, and, likewise the ALUCP, is "… to protect public health, safety, and welfare by ensuring the orderly expansion of airports and the adoption of land use measures that minimize the public's exposure to excessive noise and safety hazards within areas around public airports to the extent that these areas are not already devoted to incompatible uses." As discussed in this document, the Project site is within the influence area for the Jacqueline Cochran Regional Airport (JCRA).

2.11.4 Environmental Setting

A hazardous material is any substance that, because of its quantity, concentration, or physical or chemical properties, may pose a hazard to human health and the environment. Under Title 22 of the California Code of Regulations (CCR), the term "hazardous substance" refers to both hazardous materials and hazardous wastes. Both of these are classified according to four properties: (1) ignitability; (2) corrosivity; (3) reactivity; and (4) toxicity. A hazardous material is defined as a substance or combination of substances which may either (1) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness; or (2) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of or otherwise managed.

Hazardous materials and chemicals are commonly used by industry, businesses, and at home. Sources of hazardous materials include smaller businesses, such as service stations and dry cleaners, as well as larger operations, such as chemical manufacturers. Common household products such as paints, cleaners, oils, batteries, and pesticides also contain potentially hazardous ingredients. If improperly

handled, hazardous materials and waste can compromise public health when released to the soil, groundwater, or air. The four basic exposure pathways through which an individual can be exposed to a chemical agent include: inhalation, ingestion, bodily contact, and injection.

Both the federal government and the State of California require all businesses that store hazardous materials in excess of specified quantities to report their chemical inventories in a Hazardous Materials Management Plan. Businesses are also required to report releases of toxic chemicals into the air, water, and land, as well as off-site transfers of waste to another location. Facilities that store hazardous materials are required to report on pollution prevention activities and chemical recycling. All of these businesses operate under stringent regulations governing the storage, use, manufacturing, and handling of hazardous materials.

In addition to the use of hazardous materials during the operations of industry, businesses, and residences, construction can also result in an accidental release. The accidental release of hazardous materials or waste can lead to exposure of workers or the public to health hazards when such materials are released to the soil, groundwater, or air. Disturbance of subsurface soil during construction can also lead to exposure of workers or the public from stockpiling, handling, or transportation of soils contaminated by hazardous materials from pervious spills or leaks.

There are several transit routes that pass through or near the project planning area and that transport hazardous materials. These transit routes include Highway 111, SR 86, and the Union Pacific Railroad. In the event a hazardous materials spill occurs on or along highways and freeways, the California Highway Patrol is responsible for coordinating clean up, with assistance from Caltrans and local law enforcement and fire agencies.

2.11.5 Existing Conditions

The Project property was in an undeveloped and natural state up until at least 1949, when agricultural activities began on the northeastern portion of the site. By 1959 the entire site was in agricultural use and has continued in this state to the present day.

A Phase 1 Environmental Site Assessment was prepared for the Project to determine if Recognized Environmental Conditions (RECs) are present on the subject property. RECs are defined as being the presence or likely presence of hazardous material releases within a property. The proposed Project would result in a mix of residential, commercial, resort, RV park and equestrian uses on 619.1± acres. The site is currently in use for agriculture, and is mostly either fallow, recently disked, or recently planted. On-site structures and equipment associated with agricultural activity include irrigation standpipes, irrigation pipelines, and sprinklers, as well as one shop building and four large shelters. In the shop building area, there is also a fenced equipment storage yard, scattered farming equipment, a groundwater pump, a water tank, and two empty aboveground tanks.

The eight (8) aboveground storage tanks occurring on the site have the following contents: one former diesel tank, one former gasoline tank, one former waste oil tank, one active water tank next to a groundwater well, two empty and unlabeled tanks, and two active water/fertilizer tanks. Previous reports, observation, and soil samples indicate that there has not been a significant release of fuels or petroleum hydrocarbons associated with these tanks. No underground storage tanks have been reported on the subject site.

Drums containing potentially hazardous materials including waste oil, equipment lube, motor oil, hydraulic oil, mineral spirits, Stoddard solvent, automatic transmission fluid, and herbicides, were also reported or observed on the subject site. Releases of these materials were not reported or observed, other than waste oil spilled from one drum, resulting in an impacted area of soil approximately five feet wide and two feet deep. The Phase 1 ESA identified this spilled waste oil as a REC.

Smaller containers holding grease, transmission oil, gear lubricant, and ethylene glycol also occur on the site, including one bucket of waste oil that impacted soils in an approximately four-by-six foot area at a depth of approximately one foot. Soil testing of the subject property found that elevated pesticide concentrations are not present within the on-site soils. No other RECs were identified on the site, including historical RECs.

Other Environmental Conditions (OEC) are defined as features or issues that, while being determined to have a relatively low probability of resulting in significant contamination, should be considered in project planning and risk management. The four following OECs were encountered on the Project site: (1) the potential removal of the onsite groundwater well; (2) reported elevated arsenic concentrations in the groundwater underlying the site; (3) potential presence of asbestos in the irrigation pipes underlying the site; and (4) potential asbestos-containing materials present in a converted container in the shop building on the site.

Local Hazardous Materials Sites

Existing land uses in the vicinity of the Project site are largely agricultural with increasing urbanization to the north and east. There are no large or small commercial enterprises, auto dealerships with related maintenance facilities, gasoline service stations, restaurants or other potential generators of hazardous materials in the Project vicinity. Sites to the north and east of the subject property are occupied by agricultural uses including date palm orchards, pastures, and horse corrals, as well as dwellings. Land to the south of the property includes an unlined and water-filled reservoir, two large, motorized water pumps, a dry concrete-lined canal, and vacant land. Minor nuisance debris was visible along the canal and on the vacant property to the south, but no potentially hazardous materials were observed. Lands to the west of the subject property are also vacant, and no potential hazardous material sources were observed.

The former Thermal Landfill site is approximately 2.5 miles northeast of the subject property. The landfill was closed in 1972. The site is identified on the Cortese List as a source of “metals, organochlorine pesticides and polynuclear aromatic hydrocarbons”. On July 27, 2016, the Department of Toxic Substances Control (DTSC) approved the Removal Action Work plan and an agency-approved maintenance plan is in effect. There are no other hazardous material sites in proximity of the subject property. The Phase 1 ESA prepared for the Project concluded that there is a relatively low potential that contaminants from offsite properties have migrated to the subject site or impacted underlying soils and/or groundwater.

Schools

The subject property is located one-half mile north of the Desert Mirage High School, Toro Canyon Middle School and the Las Palmas Elementary School located at the northeast corner of Tyler Street and Ave 66.

Airports

The proposed Project site is located 1.25± miles southwest of the nearest runway of the County-owned and operated Jacqueline Cochran Regional Airport (JCRA; aka Thermal Airport), which consists of a long north-south runway and a shorter NW/SE runway, as well as a variety of hangers, offices and other buildings and facilities. As shown in **Exhibit 2.11-4**, nearly the entire Project site is located within Land Use Compatibility Zone D for the airport (a small portion in the S/W corner is in Zone E). The proposed Project’s uses and densities/intensities were found by the Riverside County Airport Land Use Commission to be generally consistent with the Basic Compatibility Criteria in Table 2A of the Airport Land Use Compatibility Plan (ALUCP).

The entire Project site lies outside of the 55 dB CNEL contour for the ultimate buildout of the airport (see **Exhibit 2.11-3**). As shown in Table 2B on page 2-23 of the ALUCP, residential uses are considered “clearly appropriate” outside of the 55 dB CNEL contour.

CVWD Middleton Reservoir 7802-1 Site

An off-site 5-million-gallon domestic water reservoir is required to meet Project demand and fire flows. CVWD has identified the existing CVWD Middleton Reservoir 7802-1 site located 2.4± miles southwest of the Project site (see Exhibit 1-11) as the appropriate location for the new reservoir. A 2.5 mg reservoir was constructed at this site in 2002-04. The existing reservoir site is graded and located behind an earthen berm with existing access and site security. The berm will be shifted north 35± feet to accommodate the new reservoir. The new reservoir will connect to existing lines and no new off-site water lines will be required.

2.11.6 Project Impacts

Hazards and Hazardous Materials

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Neither the construction nor long-term operation of the proposed Project is expected to involve the routine transport, loading or unloading of hazardous materials that could pose a threat to the public.

Construction:

The Project proposes the development of residential, commercial, resort, RV park and equestrian uses on the subject property. Construction of these uses would likely involve the temporary use of potentially hazardous and flammable materials such as vehicle fuels, paints, and oils. The use of these substances would be temporary, would not be stored or used in large quantities, and would not be stored in a manner that would pose a significant hazard to the public. All potentially hazardous materials would be contained, stored, and used in accordance with the manufacturers' instructions and handled in compliance with applicable federal, State, and local regulations. Any associated risk would be reduced to less than a significant level through compliance with these standards and regulations.

Operation:

The proposed residential, commercial, resort, and equestrian uses could involve the use of limited quantities of hazardous materials, which could be transported and stored within the subject site. Operation of the Project could involve cleaning and degreasing solvents, fertilizers, pesticides, and other materials used in the regular maintenance of buildings and landscaping, the proposed equestrian uses will also involve the use of fuels for grounds and facilities maintenance. The quantities stored on the site would be typical of commercial uses, would be contained, stored, and used in accordance with the manufacturers' instructions, and would be regulated by State and local laws, including the California Fire Code (Title 24, Part 9, Chapter 50 – Hazardous Materials).

Operation of the equestrian center will also result in the generation of manure. Based upon a peak horse occupancy of 2,700 animals the Project could generate approximately 135,000 pounds of manure daily.[4] Manure is not classified as a hazardous material, but it can contain harmful elements such as phosphorus, salts, ammonia, bacteria, and viruses. If these elements contaminate waterways or water supplies as a result of improper management, impacts to ecosystems and/or drinking water may occur.[5] The equestrian center will be responsible for collecting and hauling manure off-site on a daily basis. Horse stalls will also have mats installed to help prevent seepage of manure into the ground. Proper handling and removal will ensure that no hazards to the public or the environment occur as a result of the manure.

[4] Horse Manure Management Plans (September 2020), Michigan State University https://www.canr.msu.edu/resources/horse-manure-management-plans (accessed June 2023).

[5] Riverside County Watershed Protection, Horse Owners https://rcwatershed.org/residents/at-home/horse-owners/ (Accessed February 2023).

The Project proposes the installation of an IID substation in PA-1. Operation and maintenance of the substation could involve hazardous materials such as transformer oil, sulfur hexafluoride circuit breakers, battery acid, as well as paints, lubricants, and gases for minor maintenance. The storage and use of these substances would be subject to State and federal regulations. Applicable regulations from the US EPA and the CalEPA may require the preparation of a Spill Prevention, Control, and Countermeasure (SPCC) Plan and/or a Hazardous Materials Business Plan (HMBP). Proper design and maintenance of the proposed substation, as well as compliance with the applicable laws and regulations for the storage and handling of hazardous materials, will prevent hazards impacting the public or the environment.

CVWD Middleton Reservoir 7802-1 Site

Construction and operation of the Project reservoir will not involve the routine transport, use, or disposal of hazardous materials. The reservoir site has already been partially developed for multiple tanks and is surrounded by a 25-foot earthen berm. Development of the subject 5 mg tank will require substantial earthwork associated with the shifting of the existing berm north 35± feet. Its construction will rely on conventional construction methods and materials, including haul vehicles, cranes, concrete trucks and related materials. The reservoir will be of welded steel on a concrete pad. Once in operation, CVWD staff will make periodic trips to inspect the reservoir. Construction and operation of the Project reservoir will not involve the routine transport, use, or disposal of hazardous materials associated with the construction or operation of the reservoir.

Overall, the Project is not expected to create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials during construction or operation given the Project's compliance with all applicable regulatory requirements. Impacts will be less than significant.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

The subject site has been in use for agriculture since the early 1950s. Multiple structures, a well and irrigation lines have been constructed on the site over decades, and various equipment and containers remain on the site. Some of these containers hold potentially hazardous materials such as waste oils, fertilizers, and lubricants. These substances must be handled and disposed of appropriately to minimize risk of exposure, particularly during development of the Project.

The Phase 1 ESA prepared for the Project site identified one recognized environmental condition (REC) on the site, as well as four other environmental conditions (OECs). These conditions, as well as recommended actions to mitigate potential impacts, are described below. The Phase 1 ESA also concluded that there is a low potential that contaminants from off-site properties have migrated to the subject site and impacted the underlying soil and/or groundwater. The report also found no record of historical RECs on the site, which are past releases that have been remediated to below residential cleanup standards and given regulatory closure.

As discussed above, multiple aboveground tanks, drums of 30- and 55-gallon capacities, and smaller containers holding potentially hazardous materials occur on the site. These potentially hazardous substances are mostly related to maintaining agricultural equipment and other agricultural activities conducted on the site. Such substances include fuels, waste oil, pesticides, and fertilizers, as well as oils, lubricants, and solvents. Except for the REC identified in the ESA, significant releases of these materials were not reported or observed at the site.

The identified REC is waste oil spilled from a 55-gallon drum located approximately 85 feet south of the shop building on the site (**Exhibit 2.11-1**). The resulting stained and odorous soil covers an area approximately 5 feet in diameter and 2 feet deep. An additional, and smaller spill, not identified as a REC, occurred in the eastern portion of the shop building. This spilled waste oil, from a 5-gallon bucket, was observed as having affected an area of approximately 4 by 6 feet, and a depth of one foot. **HAZ-1** provides measures to mitigate the potential impact associated with these spills of waste oil. It is recommended that the waste oil contained in the 5-gallon bucket and the 55-gallon be transferred to U.S. Department of Transportation (DOT)-certified 55-gallon drums, as defined in §173.3 of Title 49 of the Code of Federal Regulations. The DOT-certified drums should then be appropriately labeled and transported from the site to a local State-licensed recycler. It is also recommended that impacted soils beneath and adjacent to the waste oil containers be excavated and placed into DOT-certified 55-gallon drums. The drums of oil-impacted soil should also be disposed of at a State-licensed disposal facility.

Given that the Project site has been in use for agriculture for multiple decades, it was suspected that pesticides would be present in superficial soils on the property. Of the seven soil samples collected, most did not contain detectable levels of any pesticides, and those detected reported only trace concentrations well below regulatory screening levels. The Phase 1 ESA determined that levels of pesticide concentrations exceeding regulatory limits are not present on the soils covering the subject site.

As noted above, a groundwater well is located on the subject site and its use will be limited to landscape and arena irrigation and watering. If the groundwater beneath the site will be used for human or animal consumption, then it should first be tested to ensure that it has not been contaminated by pesticides. As stated in **HAZ-2**, if the groundwater on-site will be consumed, then it should be first tested for contaminants including arsenic and fluoride. If contaminants are present, then the water should be treated before use.

Four OECs were identified on the subject site. These conditions were judged to have a relatively low probability of resulting in a significant contaminant impact to the site but should be considered in project planning and risk management. Two of the conditions refer to the use of on-site well water and reports of elevated arsenic concentrations. These OECs are addressed above and by the implementation of **HAZ-2** if necessary. The other two identified OECs pertain to asbestos and are discussed below.

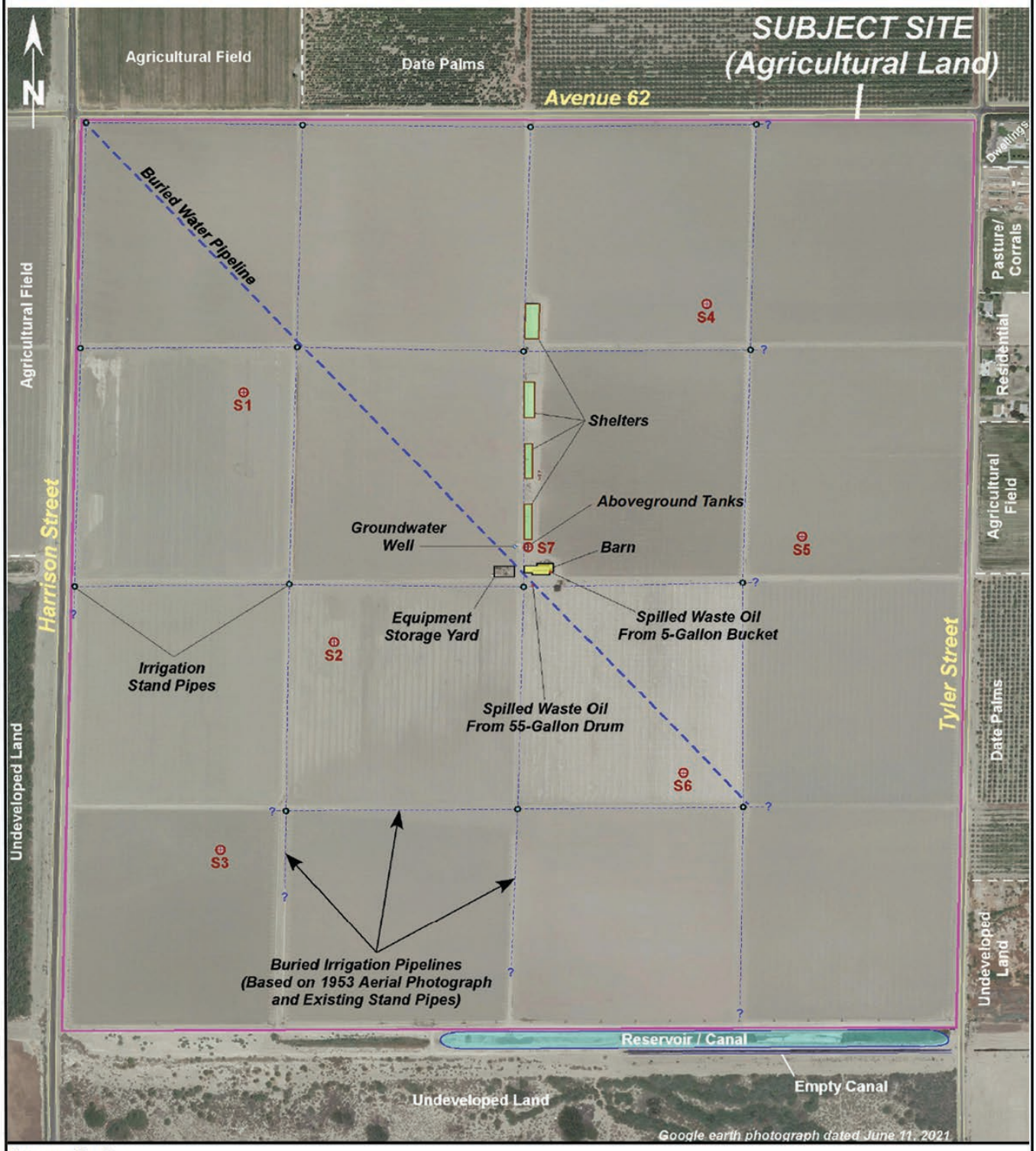
The four on-site shelters and one shop building are all comprised of steel beams and corrugated sheet metal. Materials potentially containing asbestos were not observed in the four shelter structures. The shop building contains a storage container that has been converted into an office, storage room, and bathroom. While no asbestos was observed in the building or container, the suspected date of construction of the container (ca. 1978 - 1981) indicates the potential for asbestos-containing materials. Additionally, based on aerial photographs, approximately 6-miles of irrigation pipe were placed beneath the Project site in the early 1950s. It is possible that this pipe could be comprised of asbestos-concrete (transite). While testing for asbestos-containing materials in the container or in the irrigation pipe has not been conducted, precautionary measures are recommended in **HAZ-3** and **HAZ-4** to reduce potential exposure.

Finally, given the long-term agricultural activities on the site, unknown hazardous materials sources may occur underground. It is recommended in **HAZ-5** that during soil excavations for Project construction, monitoring be conducted for evidence of potential material spills or sources, such as unanticipated underground drums or storage tanks. While these conditions are not anticipated, monitoring during excavation, grading, or other ground-disturbing activities will ensure that proper action can be taken should contamination or sources be identified.

Overall, while multiple sources of potentially hazardous materials may occur on the subject site, mitigation measures have been provided to ensure that a significant hazard to the public or the environment will not occur as a result. The hazardous materials identified on-site primarily have a risk of toxicity with exposure or consumption. With implementation of **HAZ-1** to **HAZ-5** the Project will not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

CVWD Middleton Reservoir 7802-1 Site

Construction and operation of the Project reservoir will not involve the routine transport, use, or disposal of hazardous materials. The reservoir site has already been partially improved for multiple tanks and is surrounded by a 25-foot earthen berm. Development of the subject 5 mg reservoir will require conventional construction methods and materials, including haul vehicles, cranes, concrete trucks and related materials. The reservoir will be of welded steel on a concrete pad. Once in operation, CVWD staff will make periodic trips to inspect the reservoir. Construction and operation of the Project reservoir will not result in a significant potential for reasonably foreseeable upset or accidents involving the release of hazardous materials into the environment. Impacts will be less than significant.



Approx. Scale:
0 400 800 feet

LEGEND
⊕ Location of collected soil sample

Sources: Terra Nova Planning & Research, 09.2022; Google Earth, 06.2021

03.14.23

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Thermal Ranch Specific Plan EIR
Existing Conditions:
Potentially Hazardous Materials
Thermal, California

Exhibit
2.11-1

c) Impair implementation of or physically interfere with an adopted emergency response plan or an emergency evacuation plan?

Harrison Street, Tyler Street, and 62nd Avenue are all existing 2-lane paved roads along the Project's north, east, and west frontages; 64th Avenue is currently undeveloped along the Project's southern boundary. Per the County's General Plan Circulation Element, each of these roads will require dedication of additional right-of-way (ROW) to accommodate the ultimate half-street design improvements required by the General Plan.

The County's General Plan and Emergency Operations Plans do not designate official emergency evacuation routes. However, Highway 86 and Highway 111/Grapefruit Boulevard are located approximately 3.5 miles to the east of the subject site, and Harrison Street and 62nd Avenue, which bound the site to the north and west, are designated expressways. These highways and roadways would likely be important routes in the case of evacuation.

The Project will improve the half-widths of three existing two-lane paved roads along its frontages in order to meet the standard provided in the County General Plan Circulation Element, which will ensure that these roads provide adequate capacity for emergency response and evacuation.

With the proposed improvements, the bounding roadways will be of arterial scale, and would be of adequate capacity and condition to be used as evacuation routes if needed. Furthermore, Avenue 62 provides direct access to Grapefruit Boulevard / Highway 111 and Highway 86 to the east of the Project site. These regional roadways could be used by people evacuating the area during an emergency.

Construction of the Project would involve temporary impacts to the bounding roadways, including during the installation of utilities in the right of ways and construction of the roadway improvements. This construction would be temporary and impacts to roadways would not endure through the entire Project construction period. Although temporary lane closures may occur, in the event of an emergency, construction crews would cease all work and would remove any equipment that would impede the flow of traffic. Furthermore, while construction activities may require temporary lane closures, appropriate traffic management and control measures would be followed. A standard construction traffic management plan will be prepared. Therefore, construction of the proposed development would not physically interfere with emergency response or evacuation plans.

The proposed road improvements, once complete, would facilitate evacuations and emergency responses. Project operations would not impair or interfere with emergency response or evacuation plans. The Project will provide one entry point on Avenue 62, two along Harrison Street, and three on Tyler Street (see **Exhibit 2.11-2**). Project entries and internal circulation will be reviewed by the County Fire Department and Knox Boxes provided to ensure adequate emergency access.

Events will regularly be held during the competition season in the proposed equestrian center, during which traffic on surrounding major roadways may be temporarily increased. However, the transportation impact analysis (Section 2.18 of this EIR) analyzed potential traffic impacts during event levels of activity to ensure that any potential impacts will be mitigated. Furthermore, direct access to each of the six Planning Areas, and adequate on-site parking and internal circulation will ensure that events held at the equestrian center will not physically interfere with emergency evacuation.

<u>CVWD Middleton Reservoir 7802-1 Site</u>
The reservoir site has already been improved and is surrounded by a 25-foot earthen berm. The reservoir site is located away from most development on the lower slopes of the Martinez Canyon alluvial fan and is not near any paved public road that may be used for emergency access or evacuation purposes.

Therefore, the Project reservoir will not physically interfere with an adopted emergency response plan or an emergency evacuation plan.

Overall, the proposed Project is not expected to interfere with any emergency response or evacuation plans or programs. Site plan review from the County Fire Department will ensure that impacts will be less than significant.

Legend

Project Boundary		**Private Streets**		**Access Points**	
Planning Area Boundary		Primary Collector with Public Access (23'-112' ROW Varies)		Primary Entry	
Public Streets		Local Street with Public Access (60' ROW)		Secondary Entry	
Expressway (184' ROW)		Local Street (60' ROW)		EVA Only Access	
Major Highway (118' ROW)		Local Street (37' ROW)		Cart Entry	
Secondary Highway (100' ROW)		Local Street (33' ROW)		Cart / Trailer Entry	
Note: All other streets are local roads and may use any of the typical sections shown in Figure XX. Street patterns shown are illustrative only and may be adjusted subject to approval of a tentative tract map or plot plan that complies with County engineering standards.		Local Street (32' ROW)			
		Local Street (30' ROW)			
		Emergency Access (24' Easement)			
		Service Driveway (15' Driveway)			
		Horse Park Circulating Road			

N

Sources: MSA Consulting, Inc., 02.16.2023

03.14.23

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Thermal Ranch Specific Plan EIR
Master Circulation Plan
Thermal, California

Exhibit
2.11-2

Airports

a) Result in an inconsistency with an Airport Master Plan?
b) Require review by the Airport Land Use Commission?

The Project site is located 1.25± miles southwest of the nearest runway of the Jacqueline Cochran Regional Airport (JCRA). The Project includes a General Plan Amendment, Specific Plan, subdivisions and development plans, which are subject to review by the County Airport Land Use Commission (ALUC). Pursuant to consultation with ALUC staff, the Project proponent submitted an ALUC application and supporting data and information addressing areas of ALUC purview and concern. At ALUC's recommendation, the applicant also filed applications with the FAA asking that they evaluate the Project's potential to obstruct navigation at the airport. As noted above, the FAA issued notices determining that the Project will not adversely impact or obstruct aircraft navigation at the airport.[6]

In addition, the Riverside County ALUC considered the Project at its July 13, 2023 meeting and determined that the Project is "consistent" with the Riverside County-Wide Land Use Compatibility Policies and the JCRA Land Use Compatibility Plan, including with respect to noise, safety, and occupancy/density considerations. ALUC conditions of approval include hooded or shielded lighting on site and property buyer notification of a nearby airport. The ALUC approval also cites a variety of prohibited uses, including lighting or electrical interference that could adversely impact aircraft navigation.

Noise
As noted above, the entire site lies well outside the future 60 dB and 55 dB CNEL contours for ultimate airport operations (**see Exhibit 2.11-3**). The ALUC also determined that the project will not be exposed to unacceptable noise levels from airport operations. The Project will therefore not expose residents or the public to excessive noise levels.

Safety and Occupancy Density
As shown in **Exhibit 2.11-4**, all but a limited portion of the site is located in Land Use Compatibility Zone D, which allows or conditionally allows for the proposed plan and uses. A small portion of the southwestern corner of the site is in Compatibility Zone E. Both Zone D and Zone E have a low safety risk level.[7]

All of the proposed land uses and densities/intensities within the Project were considered by the Riverside County ALUC and found to be consistent with the applicable Airport Land Use Compatibility Plan (ALUCP). The record of proceedings of the ALUC hearing on July 13, 2023 are hereby incorporated into the analysis contained in this section of the Draft EIR. The single-family estates homes proposed for Planning Area 2, which makes up the northern portion of the site, were found to be compatible with the airport land use compatibility plan based on unique aspects of the planning area, including large areas of open land and low residential densities. As noted in the noise discussion above, the entire site is outside the airport's ultimate 55 dB CNEL contour. County-wide ALUC policy states that residential uses are considered "clearly appropriate" outside of the 55 dB CNEL contour.

Both Zones D and E are designated as low safety risk areas with regard to aircraft operations at the airport. Zone D is assigned to areas outside of the extended approach and departure zones for airport traffic, and thus is considered to have a low risk of safety impacts. As was noted by the ALUC, the Project provides three times the requisite open lands to ensure adequate on-site safety. Therefore, as determined by the Riverside County ALUC, the Project will not expose Project residents or visitors to a significant safety hazard and impacts will be less than significant.

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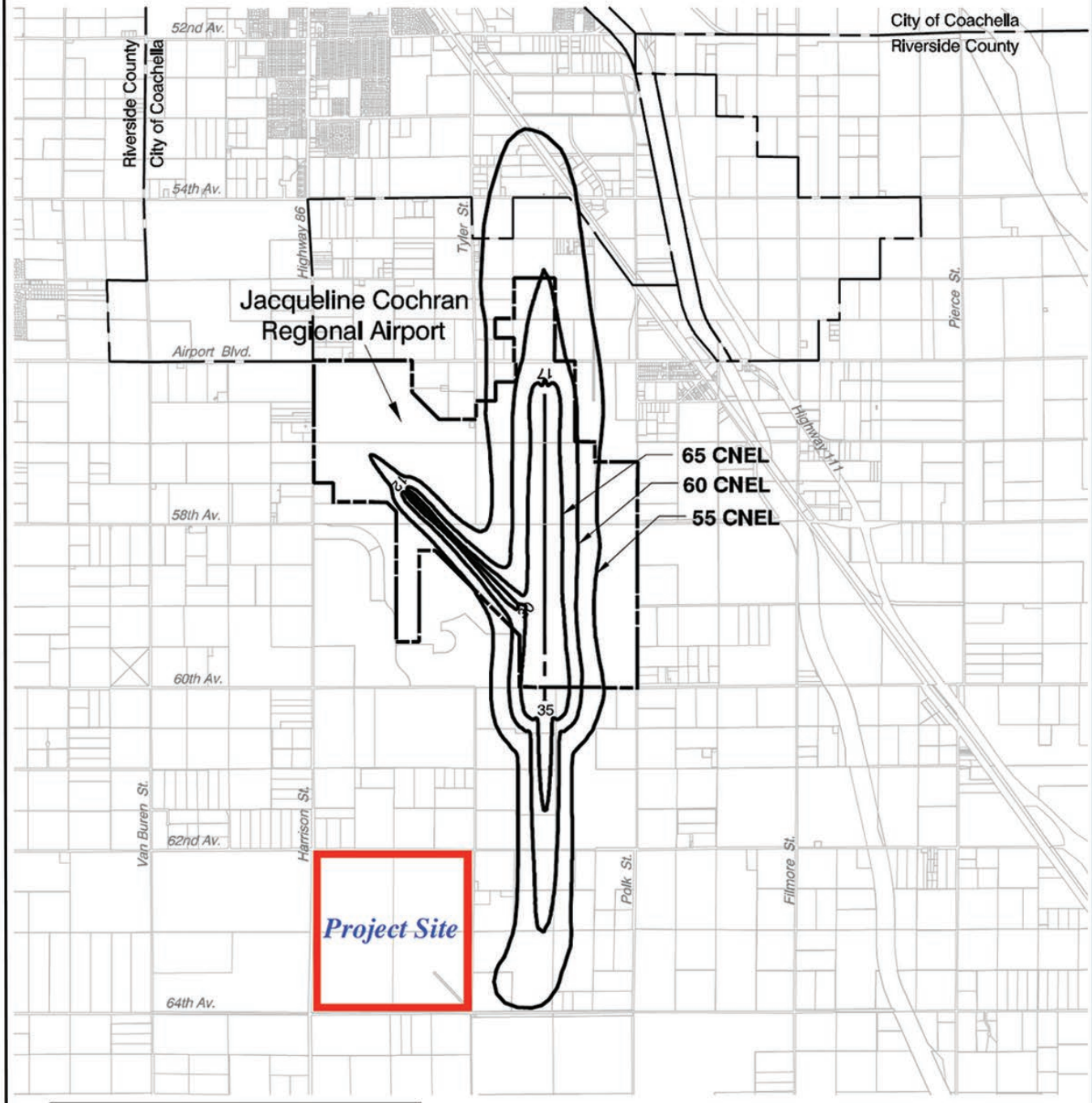
6 Op. cit. FAA June 12, 2023 (where can this be found? Can we include it in an appendix?).
7 Riverside County Airport Land Use Compatibility Plan, p.3-3, table 3A.

CVWD Middleton Reservoir 7802-1 Site

The reservoir site is located outside any airport, the Jacqueline Cochran Regional Airport (JCRA) being located 4.80± miles to the north. Therefore, construction of the subject Project reservoir will not create an inconsistency with an JCRA Airport Master Plan, nor will it require review by the County Airport Land Use Commission. The Project reservoir will create no impacts in this regard.

Conclusion

On July 13, 2023, the Riverside County ALUC held a public hearing on the Project's consistency with county-wide airport policy and the JCRA Land Use Compatibility Plan and determined that the noise and safety hazards to the Project site and to airport operations will not be increased by the Project. Accordingly, the Project will be consistent with the JCRA Land Use Compatibility Plan, will not exposed Project residents and guests to significant noise and safety hazards, and with the implementation of ALUC conditions of approval will have a less than significant impact on airport operations. Impacts will be less than significant.



Ultimate	
Annual Operations	220,000
Average Annual Day	616*

* Also representative of future (2025) peak-season day

5,000'
0 FEET 10,000'

N

Source: Mead & Hunt, Inc. (October 2004)

Source: Riverside County Airport Land Use Compatibility Plan Policy Document, 06.2005

03.14.23

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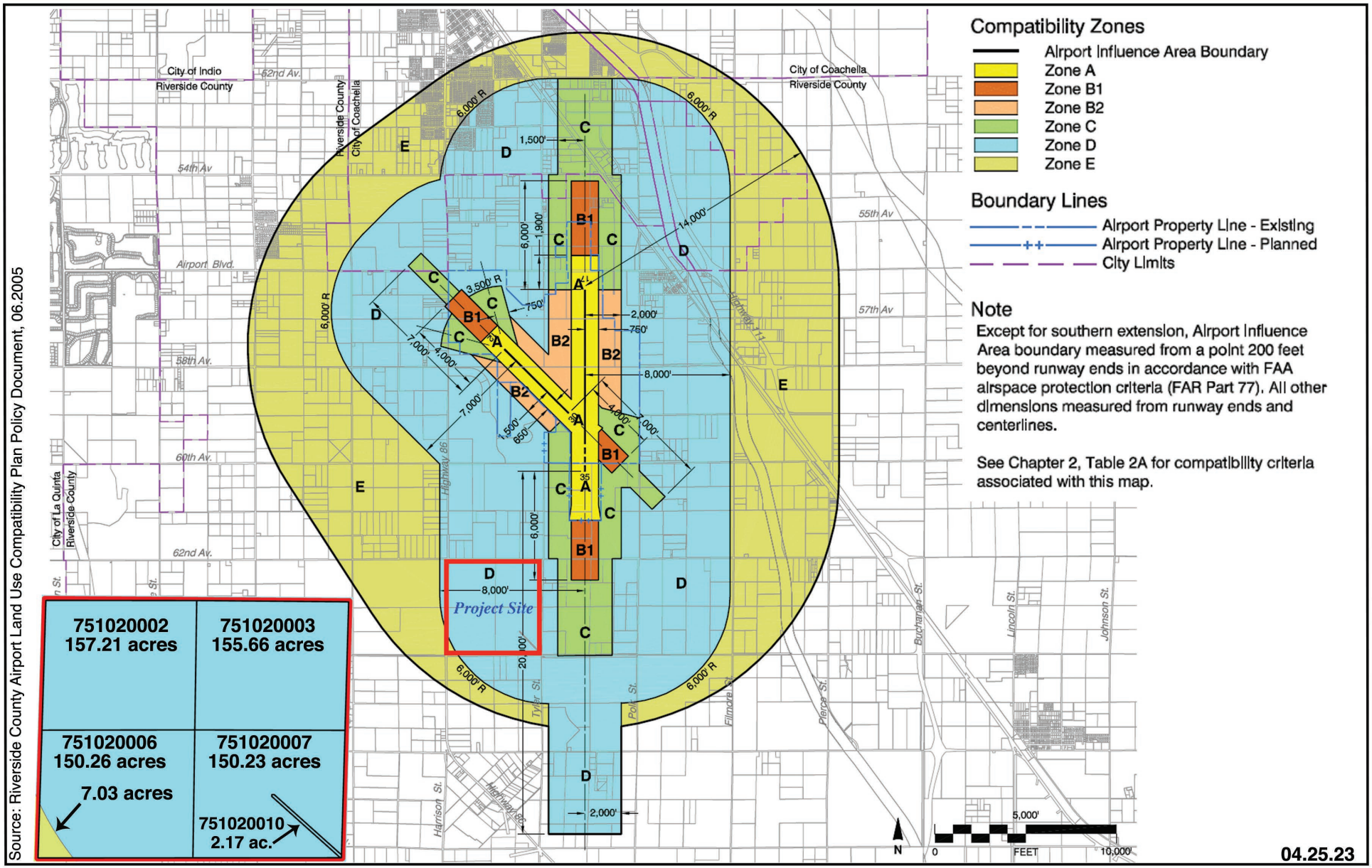
Thermal Ranch Specific Plan EIR
Jacqueline Cochran Regional Airport
Noise Contours
Thermal, California

Exhibit
2.11-3



Source: Riverside County Airport Land Use Compatibility Plan Policy Document, 06.2005

04.25.23

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Thermal Ranch Specific Plan EIR
Jacqueline Cochran Regional Airport Land Use Compatibiltiy Zones
Thermal, California

Exhibit
2.11-4

c) For a project located within an airport land use plan or, where such a plan has not been adopted, within two (2) miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

Safety and Occupancy Density

As discussed in Section 2.11.6 (d) above, the Project site is located almost entirely within Land Use Compatibility Zone D, which is characterized as an area associated with primary traffic patterns and runway buffer areas. The small remaining portion of the Project site is located in Zone E, which is associated with other airport environs. According to Table 3A in the ALUCP, Zone D and E have a low safety risk level.

As discussed in the previous section, the proposed development densities and future occupancy levels fall within allowable or conditionally allowable ranges. The potential visitor densities at the equestrian center planned in PA-1 and the proposed residential density in Planning Area 2, were determined by the ALUC to be consistent with county-wide airport policy and with the JCRA Land Use Compatibility Plan. The ALUC concluded that the proposed Project would not result in a significant safety hazard, whether from noise or emergency landings, for people residing or working in the Project area, and determined the Project to be consistent with county-wide and airport-specific policies.

Aircraft Overflights

Table 2A in the ALUCP prohibits hazards to flight, which includes physical, visual and electronic forms of interference, as well as land use development that may attract birds. Zone D requires airspace review if proposed structures would exceed 70 feet in height, and Zone E requires airspace review for structures more than 100 feet tall. The Project proposes buildings and structures no taller than 65 feet, and thus would not result in physical hazards to flight related to tall objects.

Nonetheless, the Project proponent prepared and submitted an obstruction evaluation application with the Federal Aviation Administration (FAA)[8]. This application serves to allow the FAA to further evaluate the project and potential obstructions to navigation. The FAA conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77. On June 12, 2023, the FAA issued a "*Determination of No Hazard to Navigation*" and found that the Project will not adversely affect operations at the airport.[9]

Bird Hazards

Pursuant to consultation with ALUC staff, the Project proponent prepared a Wildlife Hazard Management Plan (WHMP) and report addressing the potential attraction of birds as a land use compatibility issue[10]. The WHMP report provides recommendations to ensure that the proposed Project does not create or result in significant hazards to airport operations. According to the WHMP report, the FAA Wildlife Strike Database reports strike rates for the Jacqueline Cochran Regional Airport as being well below those observed at other airports of a similar size. Various water bodies, including puddles, irrigation canals, stormwater detention/retention ponds, recreational lakes, and sewage treatment plant ponds occur in the Project area. The Salton Sea is also located approximately 8.4 miles south of the subject site. Wildlife species, including birds, have the potential to be attracted to these water bodies, as well as to the various agricultural activities in the area. An existing equestrian facility to the northeast of the Project was found to have small numbers of birds on the site.

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8 Notice of Proposed Construction or Alteration – Off Airport, 2023-AWP-7551-OE Obstruction Evaluation Version 2022.

9 Federal Aviation Administration Aeronautical Study No. 2023-AWP-9101-OE. June 12, 2023.)

10 Wildlife Hazard Site Visit and Wildlife Hazard Management Plan, prepared for Thermal Ranch Project, Thermal, California. Prepared by BASH Incorporated. July 2022 (Revised March 2023).

At the time that the WHMP was prepared, fields on the subject site were plowed and supported almost no vegetation. Only a few small birds were observed on the site at this time; however, it is possible that larger bird aggregations could be attracted to the site during active cultivation. The surveys for wildlife in the surrounding area focused on an approximately 5-miles radius around the subject site, but also extended to the Salton Sea due its importance for wildlife. The survey observed 99 species of bird and eleven species or mammal or their sign in the area; however, the vast majority of these species were not observed directly on the Project site.

Overall, the WHMP found that some features of the proposed Project, including the equestrian facilities and operations, landscaping, food and trash management, as well as any potential water bodies, have the potential to attract wildlife to the subject site. The report concludes that without proper Project design or the implementation of appropriate mitigation, the Project could create a moderate risk of bird strikes to aircrafts operations from the JCRA.

Based on these findings, the WHMP provides several mitigation measures which may be adopted by the County as they have by ALUC and will ensure that potential wildlife-related obstructions to airport safety will be less than significant. Compliance with the provisions of the WHMP were incorporated in the ALUC's Project conditions of approval and EIR Mitigation Measures. Mitigation Measures **AIR-1 through AIR-7** set forth both passive control and active deterrent measures to ensure that wildlife will not be attracted to the Project site such that a safety hazard could occur as a result. Proper implementation of the provided measures will ensure that any potential risks resulting from the Project will be less than significant.

CVWD Middleton Reservoir 7802-1 Site

The Project reservoir site is located outside any airport land use plan and is not locate within two (2) miles of a public airport or public use airport. Therefore, construction and operation of the Project reservoir will not result in a safety hazard for people residing or working in the project area.

2.11.7 Mitigation Measures

Hazards and Hazardous Materials

HAZ-1 The waste oil in the 5-gallon bucket in the shop building and 55-gallon drum south of the shop building shall be transferred to DOT-certified 55-gallon drums, appropriately labeled, and then transported from the site to a local State-licensed recycler.

The oil-impacted soil beneath and adjacent to the waste oil containers shall be excavated and placed into DOT-certified 55-gallon drums. The estimated volume of impacted soil beneath the 5-gallon bucket is 24 cubic feet (four 55-gallon drums). The estimated volume of impacted soil beneath the 55-gallon drum is 40 cubic feet (six 55-gallon drums). This soil shall be transported from the site and properly disposed at a State-licensed disposal facility.

HAZ-2 If the on-site groundwater well will not be used during Project operations, then it shall be abandoned in accordance with applicable County regulations. If the well will be used for potable purposes (animal or human), groundwater shall first be tested for potential contaminants such as arsenic and fluoride. If elevated concentrations are identified, then the groundwater must be treated before potable use or must be limited to non-potable uses.

HAZ-3 If the on-site irrigation pipes are removed, they shall be tested for asbestos. If asbestos is reported in the pipe in concentrations that exceed regulatory limits, then it shall be removed and disposed in accordance with local and state guidelines, and under the guidance of a state-certified Asbestos Consultant.

HAZ-4 Prior to removal, the existing on-site shop and other buildings shall be surveyed for asbestos in accordance with County demolition guidelines. The survey shall be overseen by a state-certified Asbestos Consultant, and provide results regarding the presence of asbestos-containing materials, their location, estimated quantity, and recommendations for removal, containment, and disposal.

HAZ-5 The grading and general contractors shall monitor site disturbing operations for visible soil staining and odor, as well as the presence of unknown hazardous material sources during on-site soil excavations. If evidence of hazardous materials contamination or sources, such as buried 55-gallon drums or underground storage tanks, are suspected or identified, then an environmental professional shall be retained to evaluate the proper course of remedial action.

HAZ-6 Prior to the initiation of Project-related site disturbance and in consultation with the Department of Toxic Substance Control, additional soil sample collection and testing shall be conducted across the site, including around the existing ag buildings and in areas where soil contamination has been identified. Sampling shall also be conducted at locations such as pits, sumps, or other underground waste disposal areas where agro-chemicals or other potentially hazardous materials may have been prepared or disposed of. Said sampling and testing shall be performed in conformance with the Department of Toxic Substance Control's "Interim Guidance for Sampling Agricultural Properties" (DTSC, 2008). The results shall be reported to County Environmental Health and shall be found to be acceptable prior to the initiation of site disturbing activities.

Airports

AIR-1 If the Project will include stormwater retention basins, such features must drain within 48 hours following the end of flooding events. Retention structures shall remain dry between such events. Permanent retention of water, defined as outside the above parameters, is prohibited within the separation criteria defined by the FAA and ALUC.

AIR-2 If the developer proposes any long-term water features with untreated water that could allow vegetation in or along the edges of the feature, the following strategies must be applied to minimize the attractiveness to potentially hazardous species:

- The shape of any natural water features shall be engineered to eliminate coves, peninsulas, and convoluted shorelines to create an open structure that is less attractive to species of interest.
- A water clarification system shall be installed to "sterilize" the water and remove organic matter that would otherwise form the base of a food chain that could promote zooplankton, macroinvertebrates and larger species that would feed on.
- The walls of any potential water features shall be designed with steep sides in order to limit shallow shoreline access for wading birds, and developed with a sand or gravel shoreline to prevent vegetation from forming. In addition, vegetation shall be prevented from growing along the margins of water features.
- The Project shall have staff dedicated to maintenance of any potential water features. This maintenance would involve cleaning of debris, and removal of vegetation and algae.

AIR-3 Equestrian buildings, including stables and arenas, shall include measures to deter birds from using such structures for shade or cover, as well as for nesting or roosting. Facilities for housing animals, feed production areas, feed troughs, and manure may also attract birds, and thus require mitigation. The following design and passive deterrence measures, as appropriate, will serve to avoid and/or minimize bird-related impacts:

- Stables, arenas, and other structures shall be designed to minimize open, exposed ceilings with perching sites available.
- Netting may be applied inside stables, arenas, and other structures to limit access to I-beams or other such supporting structures that may be favorable perching sites. Anti-perching spike strips may also be applied to favorable perching sites.
- Feeding troughs, feed storage areas, or feed bins should occur under shade or other covered structures to limit visual exposure to flocking birds.
- Minimize or preclude standing water in irrigated hayfields or other grazing areas. Water applied to such areas shall be limited to what is necessary to control dust or maintain vegetation and shall not be allowed to accumulate in puddles or along furrows.
- Riding, training, and competition areas with grassy covering should use drought-resistant grass species to minimize water use.
- Manure shall be routinely removed from facilities and training areas and contained for disposal to avoid exposure to wildlife.

AIR-4 If the Project will include a miniature golf course, it shall be constructed using artificial turf. No water features should be included as part of the course design.

AIR-5 The Project shall ensure that landscape plans, including for the equestrian center, are compliant with the Riverside County ALUC landscaping guidelines. The guidelines include:

- Vegetation used on site shall be suitable for xeriscape landscapes to minimize the need for irrigation.
- Vegetation that produces seeds, fruits, or berries, or that will provide dense cover for nesting for roosting should be avoided.

AIR-6 All household or industrial trash that includes organic material or food items shall be contained and covered at all times.

- Manure generated in both community and individuals stables and horse training and competition areas shall be removed in conjunction with daily maintenance of facilities.
- Dumpsters and household trash containers shall have lids that remain closed and that cannot be breeched or opened by birds or other wildlife.
- Signs should be prominently placed in strategic locations to ensure that concessions and patrons using on-site swimming pools, recreational facilities, miniature golf courses, and clubhouses shall not intentionally or unintentionally feed birds anywhere on site. The no feeding policy shall be strictly enforced and shall be a mandatory inclusion in project covenants governing residents and guests.

AIR-7 In addition to the passive deterrent measures provided above, wildlife management may include additional active deterrent measures, as necessary. Examples of possible active deterrent measures include:

- Maintenance personnel trained and equipped to disperse birds that may attempt to access the facility. Such active harassment would be particularly important for the equestrian facilities and for any water bodies.

- Sonic devices, particularly long-range hailing devices with focused, high-decibel sound may be used to deter birds from the site.
- Other methods of active deterrents, each with specific requirements and limitations include: remote-controlled devices such as drones, trained dogs, trained birds of prey, lasers, and removal of nests.

2.11.8 Significance After Mitigation

With implementation of the mitigation measures provided above, Project-related impacts will be less than significant.

2.11.9 Cumulative Impacts

Hazardous materials and risk of upset conditions are largely site-specific, resulting from the local conditions of individual developments. All new developments in the County are required to evaluate potential threats to public safety, including those associated with the accidental release of hazardous materials into the environment during construction and operation, the transport, use and disposal of hazardous materials, hazards to sensitive receptors, and emergency response.

Likewise, the Riverside County Airport Land Use Compatibility Plan ensures that as the area around the JCRA urbanizes, cumulative impacts related to public safety will not occur or will not be considerable. The Project, and other development in the vicinity of the JCRA, will be subject to the regulations associated with the applicable land use compatibility zones, ensuring that potential safety hazards are minimized. All new developments in the Jacqueline Cochran airport influence area will be subject to the ALUCP policies and, if necessary, reviewed by the ALUC.

Overall, compliance with local, state, and federal laws pertaining to hazardous materials, hazards and emergency response, as well as airport safety hazards, will ensure that the proposed Project will not combine with any related projects to cause a cumulatively considerable impact. Cumulative impacts would therefore be less than significant.

2.12 Hydrology and Water Quality

2.12.1 Introduction

This section describes existing hydrological conditions, including groundwater, surface water, water quality, stormwater, and flooding conditions within the Project area and evaluates potential impacts to hydrology and water quality that could result from implementation of the Project. The analysis in this section is based on the review of existing resources, applicable laws and regulations, and the Preliminary Drainage Report[1] and prepared for the proposed Project.

2.12.2 Thresholds of Significance

The following thresholds or criteria are those recommended in §15064.7 of the CEQA Guidelines and Appendix G of the Guidelines, and are used to determine if and to what extent a project may have a potentially significant impact on area hydrology and water resources. The Project would have a significant effect if it would:

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces?
d) Result in substantial erosion or siltation on-site or off-site?
e) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-site or off-site?
f) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?
g) Impede or redirect flood flows?
h) In flood hazard, tsunami, or seiche zones, risk the release of pollutants due to project inundation?
i) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

2.12.3 Regulatory Framework

Federal

National Flood Insurance Program

The Federal Emergency Management Agency (FEMA) administers the National Flood Insurance Program (NFIP), which provides flood insurance, floodplain management, and flood hazard mapping. Communities subject to flood hazards voluntarily participate in the NFIP by adopting and enforcing floodplain management ordinances to reduce the potential for flood damage. In turn, the NFIP offers federally funded flood insurance to homeowners, renters, and business owners in participating communities. Under this program, FEMA produces Flood Insurance Rate Maps (FIRM) that identify properties and buildings in flood insurance risk areas. Flood hazards related to storm events are generally described in terms of 100- or 500-year floods with a 1 percent and 0.2 percent chance, respectively, of occurring every year.

[1] Preliminary Hydrology Report For Property Located in Section 5, T.7S., R.8E, prepared by MSA Consulting, Updated August 20, 2024.

Coachella Valley Water District (CVWD) and the County of Riverside are participants in the NFIP. As such, residents within these jurisdictions are eligible to purchase flood insurance if located in areas with a high risk of flooding. FEMA requires each participating jurisdiction to adopt a floodplain management ordinance to ensure that any new construction and/or substantial improvement within a mapped floodplain occurs in a manner that reduces potential damage to the public and property and discourages new development within floodways.

Clean Water Act

The Clean Water Act (CWA) was enacted by Congress in 1972 and amended several times since inception. It is the primary federal law regulating water quality in the United States and forms the basis for several state and local laws throughout the nation. Its objective is to reduce or eliminate water pollution in the nation's rivers, streams, lakes, and coastal waters. The CWA prescribes the basic federal laws for regulating discharges of pollutants and sets minimum water quality standards for all "waters of the United States."

Several mechanisms are employed to control domestic, industrial, and agricultural pollution under the CWA. At the federal level, the CWA is administered by the U.S. Environmental Protection Agency (USEPA). At the state and regional level, the CWA is administered and enforced by the State Water Resources Control Board (SWRCB) and nine Regional Water Quality Control Boards (RWQCB). The State of California has developed several water quality laws, rules, and regulations, in part to assist in the implementation of the CWA and related federally mandated water quality requirements. In many cases, the federal requirements set minimum standards and policies, and the laws, rules, and regulations adopted by the State and regional boards exceed the federal requirements.

CWA Section 303(d) lists polluted water bodies which require further attention to support future beneficial uses. For each listed water body, the State of California is required to establish Total Maximum Daily Load (TMDL) criteria for the pollutant(s) causing conditions of impairment.

National Pollutant Discharge Elimination System

The CWA has nationally regulated the discharge of pollutants to the waters of the U.S. from any point source since 1972. In 1987, amendments to the CWA added section 402(p), which established a framework for regulating nonpoint source (NPS) stormwater discharges under the National Pollutant Discharge Elimination System (NPDES). The Phase I NPDES stormwater program regulates stormwater discharges from industrial facilities, large and medium-sized municipal separate storm sewer systems (those serving more than 100,000 persons), and construction sites that disturb five or more acres of land. Under the program, the project sponsor is required to comply with two NPDES permit requirements.

The NPDES General Construction Permit Requirements apply to clearing, grading, and disturbances to the ground, such as excavation. Construction activities on one or more acres are subject to a series of permitting requirements contained in the NPDES General Construction Permit. This permit requires the preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP) that includes Best Management Practices (BMPs) to be implemented during project construction.

The NPDES program provides two levels of control for the protection of water quality: technology-based limits and water quality-based limits. Technology-based limits are based on the ability of dischargers to treat the water, while water quality-based limits are required if technology-based limits are not sufficient to protect the water body. The water quality-based effluent limitations required to meet water quality criteria in the receiving water are based on the National Toxics Rule, the California Toxics Rule, and the Basin Plan (see below under Porter-Cologne Water Quality Control Act).

Regional Water Quality Control Board – 401 Certification
Pursuant to Section 401 of the CWA and EPA 404(b)(1) guidelines, in order for a USACOE federal permit applicant to conduct any activity that may result in discharge into navigable waters, the applicant must provide a certification from the RWQCB that such discharge will comply with State water quality standards. The RWCQB has a policy of no-net-loss of wetlands and typically requires mitigation for all impact to wetlands before it will issue water quality certification. To meet RWQCB 401 Certification standards, it is necessary to address all hydrologic issues related to a project, including:

- Wetlands;
- Watershed hydrograph modification;
- Proposed riverine related modifications; and
- Long term post-construction water quality.

CWA Section 303(d) and Total Maximum Daily Loads (TMDLs)
The CWA contains two strategies for managing water quality. One is a technology-based approach that includes requirements to maintain a minimum level of pollutant management using the best available technology. The other is a water quality-based approach that relies on evaluating the condition of surface waters and setting limitations on the amount of pollution that the water resource can be exposed to without adversely affecting the beneficial uses of those waters. Section 303(d) of the CWA bridges these two strategies and requires that states make a list of waters that are not attaining standards after the technology-based limits are put into place.

For waters on this list, the states are required to develop total maximum daily loads or TMDLs. Total Maximum Daily Load (TMDL) refers to the amount of a specific pollutant a river, stream, or lake can assimilate and still meet federal water quality standards as provided in the CWA and addressed in the CWA 401 permit application. TMDL accounts for all sources of pollution, including point sources, non-point sources, and natural background sources. Section 303(d) requires that regulatory agencies determine TMDLs for all water bodies that do not meet water quality standards.

Section 303(d) list of impaired water bodies provides a prioritization and schedule for the development of TMDLS for the state. In compliance with Section 303(d) of the CWA (33 U.S. Code [USC] Section 1313[d], the SWRCB prepared, and USEPA approved, a 2010 list of impaired water bodies in California. The list includes a priority schedule for the development of TMDLs for each contaminant or “stressor” impacting the water body.

The Coachella Valley Stormwater Channel is listed as being impaired[2] and is on the TMDL required list for DDT (Dichlorodiphenyltrichloroethane), Dieldrin, Nitrogen, ammonia (Total Ammonia), PCBs (Polychlorinated biphenyls), Toxaphene, Toxicity and Indicator Bacteria under Section 303(d) of the Clean Water Act (CWA).

State

Porter-Cologne Water Quality Control Act (PCWQCA)
California’s primary statute governing water quality and water pollution issues is the Porter-Cologne Water Quality Control Act of 1970 (Porter-Cologne Act). The Porter-Cologne Act grants the State Water Resource Control Board (SWRCB) and the Regional Water Quality Control Boards (RWQCBs) broad powers to protect water quality and is the primary vehicle for implementing California’s responsibilities under the federal CWA.

[2] Coachella Valley Water Management Plan, prepared by the Coachella Valley Water District. 2010.

The Porter-Cologne Act grants the SWRCB and the RWQCBs authority and responsibility to (1) adopt plans and policies; (2) regulate discharges to surface water and groundwater; (3) regulate waste disposal sites; and (4) require cleanup of discharges of hazardous materials and other pollutants. The Porter-Cologne Act also establishes reporting requirements for unintended discharges of any hazardous substance, sewage, and oil or petroleum products.

Each RWQCB must formulate and adopt a water quality plan (or Basin Plan) for its region. The regional plans conform to the policies set forth in the Porter-Cologne Act and those established by the SWRCB in its State Water Policy. The Porter-Cologne Act also enables the RWQCBs to include water discharge prohibitions applicable to particular conditions, areas, or types of waste within its regional plan. The RWQCBs are also authorized to (1) enforce discharge limitations; (2) take actions to prevent violations of these limitations from occurring; and (3) conduct investigations to determine the quality of any of the waters of the State. Civil and criminal penalties are imposed on persons who violate the requirements of the Porter-Cologne Act or any SWRCB/RWQCB orders.

The Project is located within the jurisdiction of the Colorado River Basin Regional Water Quality Control Board (RWQCB) which has the authority to implement water quality protection standards through the issuance of permits for discharges to waters at locations within its jurisdiction. In this jurisdiction, all discharges to surface waters are subject to the Colorado River Basin Plan.

Regional and Local

Colorado River Basin Regional Water Quality Control Board (RWQCB)

The Project planning area is under the jurisdiction of the Colorado River Basin RWQCB, which is responsible for the preparation and implementation of the water quality control plan for the basin. The Basin Plan defines the beneficial uses, water quality objectives, implementation programs, and monitoring and assessment programs for the waters in the region. Specifically, the Basin Plan designates beneficial uses for surface water and groundwater; sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state's anti-degradation policy; describes implementation programs to protect the beneficial uses of all waters in the region; and describes surveillance and monitoring activities to evaluate the effectiveness of the Basin Plan.

The Colorado River Basin RWQCB issues permits (i.e., waste discharge requirements and master reclamation permits) which require that waste and reclaimed water not be discharged in a manner that would cause an exceedance of applicable water quality objectives or adversely affect beneficial uses designated in the Basin Plan. The Colorado River Basin RWQCB enforces these permits through a variety of administrative means.

Integrated Regional Water Management Plan

The Coachella Valley Regional Water Management Group is a collaborative effort led by the five water purveyors in the Coachella Valley to develop an Integrated Regional Water Management Plan (IRWM) to address the valley's water resources and water quality planning needs. The Coachella Valley Water District (CVWD), which provides water to Rancho Mirage, is partner in this organization. The IRWM applies Integrated Water Management (IWM) principles on a regional scale. In 2008, the five public water agencies in the Coachella Valley (including CVWD) formed the Coachella Valley Regional Water Management Group (CVRWMG). In 2010, they adopted the Coachella Valley Integrated Regional Water Management Plan (IRWMP). The IRWMP was updated in 2014 and 2018.[3]

[3] 2018 Coachella Valley Integrated Regional Water Management & Stormwater Resource Plan (2018)

These efforts ensure that the Coachella Valley will focus on sustainable water resources. All water agencies in the Coachella Valley work together, share information, discuss concerns and viewpoints, and build consensus in supporting future projects that benefit the entire region. Since its formation, the CVRWMG has added Valley Sanitary District (VSD) as a member.

Whitewater River Region Stormwater Management Plan

The Whitewater River Region Stormwater Management Plan (SWMP) describes the activities and programs implemented by the Permittees to manage Urban Runoff to comply with the requirements of the National Pollutant Discharge Elimination System (NPDES) municipal separate storm sewer system (MS4) permit (MS4 Permit) for the Whitewater River Region. Cities of Banning, Cathedral City, Coachella, Desert Hot Springs, Indian Wells, Indio, La Quinta, Palm Desert, Palm Springs, and Rancho Mirage, Riverside County and CVWD are Permittees under WRSWMP. Each Permittee is required to establish adequate legal authority to implement the provisions of the MS4 Permit in accordance with Federal regulations at 40 CFR 122.26.[4]

CVWD NPDES MS4 Permit

The Regional Water Quality Control Board issued a National Pollutant Discharge Elimination System (NPDES) Permit (Municipal Permit) to the jurisdictions within Riverside County. The minimum requirement of the Municipal Permit is to ensure that pollutants discharged from storm drain systems owned and operated by the co-permittees are reduced to the maximum extent practicable. The Municipal Permit outlines the individual responsibilities of the co-permittees, including but not limited to, the implementation of management programs, best management practices (BMPs), and monitoring programs. NPDES regulations also consider the need to conserve natural areas, minimize impervious surfaces, and encourage the use of native or drought-tolerant plant material in landscaping.

Riverside County General Plan

S 3.6 * All projects in unincorporated Riverside County should address and mitigate where applicable, adverse impacts to the carrying capacity of local and regional storm drain systems.

S 3.9 * Ensure that new development projects and retrofits to existing large-scale projects incorporate design strategies and features to reduce the area of impervious surfaces. (AI 4, 25, 100, 101, 156)

OS 1.1 Balance consideration of water supply requirements between urban, agricultural, and environmental needs so that sufficient supply is available to meet each of these different demands.

OS 2.1 Implement a water-efficient landscape ordinance and corresponding policies that promote the use of water-efficient plants and irrigation technologies, minimizes the use of turf, and reduces water-waste without sacrificing landscape quality. (AI 3, 57, 130, 58, 62)

OS 2.2 Encourage the installation of water-conserving systems such as dry wells and graywater systems, where feasible, especially in new developments. The installation of cisterns or infiltrators shall also be encouraged to capture rainwater from roofs for irrigation in the dry season and flood control during heavy storms. (AI 57, 62)

OS 3.2. Encourage wastewater treatment innovations, sanitary sewer systems, and groundwater management strategies that protect groundwater quality in rural areas.

[4] Whitewater River Region Stormwater Management Plan, prepared in June 2014 and Revised in January 2015.

OS 3.3. Minimize pollutant discharge into storm drainage systems, natural drainages, and aquifers (AI 3

OS 3.5. Integrate water runoff management within planned infrastructure and facilities such as parks, street medians and public landscaped areas, parking lots, streets, etc. where feasible.

OS 3.7. Where feasible, decrease stormwater runoff by reducing pavement in development areas, reducing dry weather urban runoff, and by incorporating "Low Impact Development," green infrastructure and other Best Management Practice design measures such as permeable parking bays and lots, use of less pavement, bio-filtration, and use of multi-functional open drainage systems, etc. (AI 57, 62)

OS 4.6. Retain storm water at or near the site of generation for percolation into the groundwater to conserve it for future uses and to mitigate adjacent flooding. Such retention may occur through "Low Impact Development" or other Best Management Practice measures. (AI 57)

2.12.4 Environmental Setting

Climatic conditions in the Coachella Valley are characterized as "subtropical desert". Mean annual rainfall is very low on the desert floor and into the foothills, ranging from 2 to 4 inches per year and averaging about 5 to 6 inches along the foothills. Generally, temperatures decrease and precipitation increases with increasing elevation. In some years no measurable rainfall has been reported on portions of the valley floor. Most of the valley's rainfall occurs during the cooler months of November through March, but occasional high-intensity thunderstorms and tropical storms occur in late summer and early fall. Although the ground may be generally dry at the beginning of a storm, sufficient amounts and intensities of rainfall can saturate the surface, substantially reducing percolation and increasing runoff.

Floods that impact the project planning area can be attributed to three different types of storm events: general winter storms, combining high-intensity rainfall and rapid melting of the mountain snowpack; tropical storms out of the southern Pacific Ocean; and summer thunderstorms. Summer storms pose a greater threat of localized flooding than winter storms because of their high intensity and short duration of rainfall. Monsoons, and warm winter storms with snowmelt, can generate significant runoff over a much larger area.

Major historic storm events are used to gauge the potential for future flooding. Benchmark storms used by the U.S. Army Corps of Engineers (USACE) to calculate the most intense credible storm include the storm of September 24, 1939. It was centered over Indio and consisted of a thunderstorm that preceded a major storm off the west coast of Mexico. This intense storm generated 6.45 inches of rain in a period of 6 hours. Tropical storm Kathleen is another example of the storm runoff potential in the area. During September 9–11, 1976, very heavy general rainfall was generated over a three-county area, with parts of the valley receiving 6.81 inches of rain. In the past few years, highly localized late summer thunderstorms have generated rainfall intensities of almost three inches per hour, the equivalent of 200-year and 500-year storm events. The surrounding hills and mountains received as much as 14 inches, with rainfalls generally increasing with elevation.

Local and Regional Flood Control

The generation and management of stormwater runoff are typically divided into two separate categories, local and regional drainage, which are ultimately interrelated. Local drainage is either defined by the limited size of the drainage or the volume generated. Local facilities capture and convey local runoff to regional drainage facilities including the Whitewater River and the Coachella Valley Stormwater Channel.

The CVWD is responsible for the management of regional drainage within most of the Coachella Valley, including the Project. The District is empowered with broad management functions, including development review and conditioning, flood control planning, construction, operation and maintenance of regional drainage improvements, as well as watershed and watercourse protection related to those facilities. To carry out its mandate, the District also has powers of taxation, bonded indebtedness, land and water rights acquisition, and cooperative partnerships with local, State, and Federal agencies. An elected Board acts as the official decision-making body of CVWD.

FEMA and the Federal Flood Insurance Rate Maps

Many of the areas of the United States subject to flooding in 100-year storms have been mapped by the Federal Emergency Management Agency (FEMA). The resulting documents are the FEMA Flood Insurance Rate Maps (FIRMs), which serve as the basis for determining the need for and availability of Federal flood insurance. The FEMA maps for the project vicinity designate most lands as Zone X[5], which is outside the 100-Year flood zone.

Groundwater Resources

As described by the California Department of Water Resources (DWR) Bulletin 118, the local groundwater basin is bounded on the easterly side by the San Bernardino and Little San Bernardino Mountains and on the westerly side by the Santa Rosa and San Jacinto Mountains. The lower or southern boundary is formed primarily by the watershed of the Mecca Hills and by the Salton Sea. Movement of groundwater within the basin is limited and controlled by fault barriers, physical and elevation constrictions in the basin profile, and areas of low permeability. Based on these physical factors, the basin has been subdivided into subbasins and subareas. The boundaries between subbasins are generally based upon faults that are effective barriers to the lateral movement of groundwater.

CVWD obtains groundwater from both the Whitewater River and the Mission Creek Subbasins of the Coachella Valley Groundwater Basin. The Whitewater River Subbasin is a common groundwater source which is shared by numerous public and private groundwater producers. None of the groundwater basins in the Coachella Valley are adjudicated, and there are no legal agreements limiting pumping from the Whitewater River and Mission Creek subbasins. CVWD works with local public water agencies and other Coachella Valley stakeholders to implement the water management plans identified above for the Whitewater River, Mission Creek, and Garnet Hill Subbasins. These plans define a long-term approach for eliminating groundwater overdraft and providing sustainable water supply for the Coachella Valley.

The Coachella Valley Groundwater Basin has been used for urban and agricultural supply since the early 20th century. The basin was first identified by DWR as being in a condition of overdraft in the 1940s. Overdraft is defined as the condition of a groundwater basin in which the outflows (demands) exceed the inflows (supplies) to the groundwater basin over the long term. The overdraft condition has caused Coachella Valley groundwater levels to decline in some areas and has raised concerns about water quality degradation and land subsidence.

In-lieu groundwater replenishment using imported Colorado River water began in 1949 when the first deliveries from the Coachella Canal were received in the eastern portion of the Coachella Valley. To further address the overdraft conditions, CVWD and DWA jointly operate direct groundwater replenishment programs in the basin. Recharge activities using imported water began in the western portion of Coachella Valley in 1973, at the Whitewater River Groundwater Replenishment Facility.

Additionally, recharge activities in the eastern portion of Coachella Valley were commenced in 1997 at the Dike No. 4 pilot recharge facility and expanded by CVWD in 2009; this facility is now called the Thomas E. Levy Groundwater Replenishment Facility (CVWD 2006). CVWD and DWA also began

[5] Flood Insurance Rate Map Panel 2270, Map Number 06065C2910H. Effective March 6, 2018.

replenishment of the Mission Creek Subbasin in 2003. The water management plans identify the continued use of these recharge facilities as a critical component of the Coachella Valley's water supply. As of 2019, CVWD operates a fourth groundwater replenishment facility located in the central valley within the city of Palm Desert. Once fully built-out, the facility will have the capacity to recharge up to 25,000 acre feet annually.

Tables 2.12-1 below shows the recent and projected water deliveries (demand) within the entire CVWD service area. The CVWD service area includes lands primarily within Riverside County but also within Imperial and San Diego Counties and includes the subject property.

Table 2.12- 1
Total Recent and Projected Water Deliveries in CVWD Service Area by Land Use
(acre-feet per year)

Year	Potable Water Use			Non-Potable Recycled Water	Total Water Delivery
	Residential	Commercial[1]	Institutional		
2015	55,033	27,507	868	8,749	101,723
2020	67,800	33,900	1,100	14,300	128,900
2025	80,500	40,300	1,300	27,700	163,800
2030	93,300	46,700	1,500	30,800	188,500
2035	105,900	52,900	1,700	33,900	212,800
2040	115,000	57,500	1,800	36,300	230,600

Source: CVWD 2015 Urban Water Management Plan (Table ES-1 and ES-2)
1. Commercial includes "Landscaping" and "Other" water demands per Table ES-1
Note: Table does not include water losses.

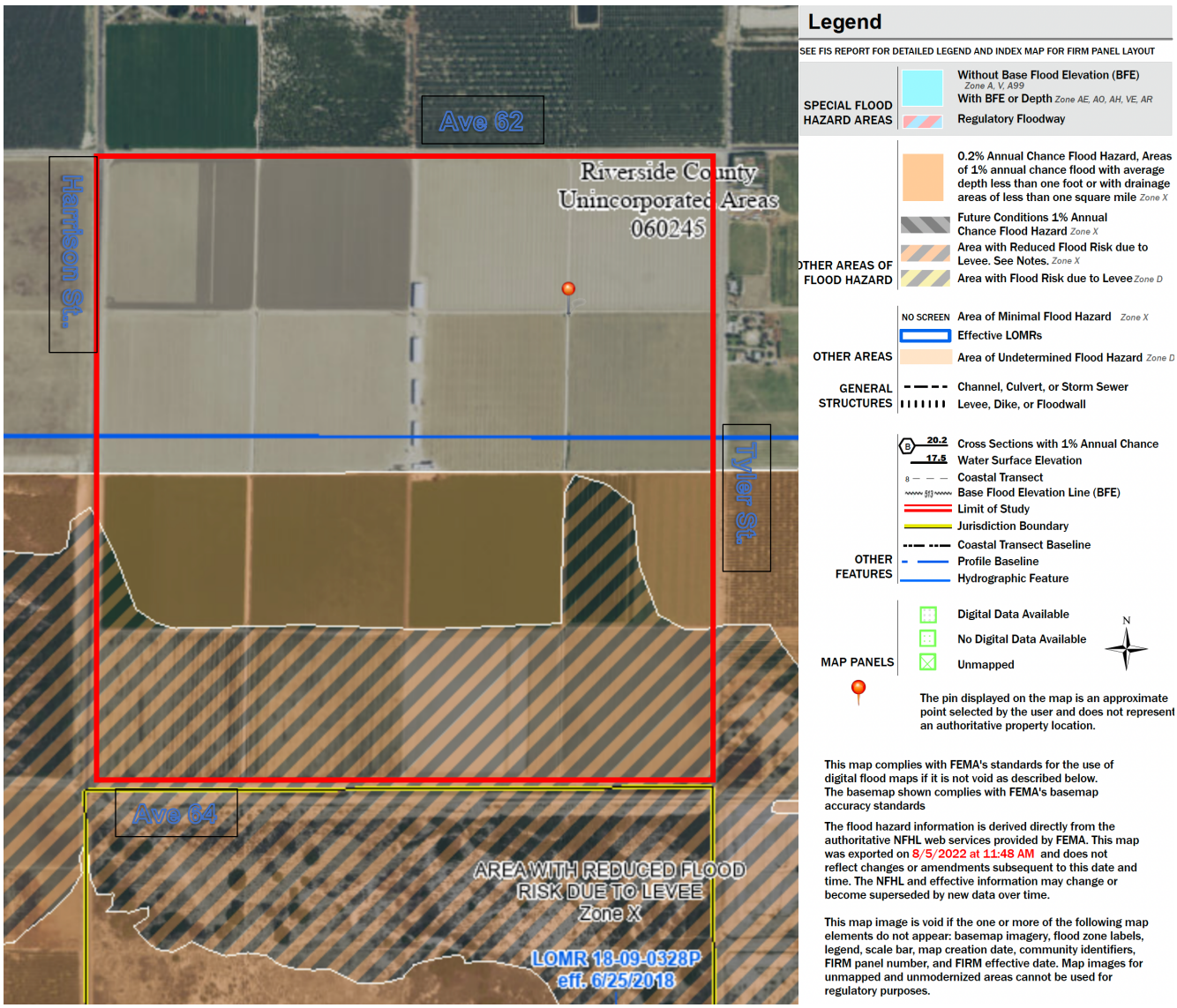
In 2009, the Water Conservation Act (SB X7-7) was passed under the Urban Water Management Plan Act (UWMP Act), requiring a 20 percent reduction in per capita water use by the year 2020. CVWD (and DWA) has set forth water conservation goals and programs that include increased general awareness of the need for water conservation, tiered billing rates that encourage conservation and wise water use, and turf buy-back programs that rewards property owners for replacing turf with drought-tolerant landscape materials.

2.12.5 Existing Conditions

The proposed Project site is located in an area with extensive cultivation supported by a network of water lines, tile drains and agricultural drains, including drains along Harrison Street to the immediate west, and the future Ave 64 along the Project's south boundary. The site occurs at 140± feet below mean sea level (-140'). The average annual rainfall in the area is 3± inches and the estimated 100-year 6-hour storm rainfall in the area ranges between 2.65 and 2.79 inches.

The property is subject to local flooding primarily from the Santa Rosa Mountains to the west and southwest. The site is also located west of the Coachella Valley Stormwater Channel (CVSC) and one mile west of the 100- Year flood plain associated with this major drainage feature. The south half of the subject property is designated Zone X on the FEMA Flood Insurance Rate Maps with reference to a 2018 FEMA Letter of Map Revision". The Zone X designation indicates inundation threat of less than 1-foot in depth and partially associated with a reduced flood risk due to levee protection. The referenced levee is presumably the Dike No 4 protective levee to the west built by the US Bureau of Reclamation.

Exhibit 2.12-1: FEMA Flood Hazard Zones



The subject property is within the boundaries of the CVWD 2015 Eastern Coachella Valley Stormwater Master Plan[6]. This plan shows an east-west "open channel" along Ave 64 (south Project boundary) designated as "N01" and extending from just east of Jackson Street east to its discharge into the CVSC. The N01 channel is also called out as the "Avenue 64 Evacuation Channel" with its future location to be along the north side of Ave 64. The master plan also identified open channel "N01-02 along the west side of Harrison Street (west Project boundary) as part of the area stormwater plan.[7] This channel ultimately connects to the NO1 channel planned along the future Avenue 64 right of way.

6 Eastern Coachella Valley Stormwater Master Planning, CVWD 2015

7 Oasis/Valley Floor Stormwater Master Plan prepared by AA Webb & Associates for the Coachella Valley Water District. April 2015.

CVWD Middleton Reservoir 7802-1 Site
The Project reservoir site has been partially developed for multiple tanks, and the site is surrounded by an existing 25-foot earthen berm. There3fore, the site is isolated from tributary flows by the berm and includes on-site drainage facilities to manage on-site runoff. Other than the existing 2.5 mg reservoir, the balance of the site does not have any significant amount of impervious surface and storm runoff is expected to be retained on site.

2.12.6 Project Impacts

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.

Construction Impacts
For the proposed Project, most of the construction activities will be occurring within the Project boundaries and within rights of way of adjoining public streets. Other construction activities will include grading and excavation and the transport of materials. Construction activities at the site would entail the use of heavy equipment and associated potentially hazardous materials, such as fuels (gasoline and diesel), oils and lubricants, and cleaners (e.g., solvents, corrosives, soaps, detergents), which are commonly used in construction projects. During construction, accidental spills could occur and potentially cause a discharge of hazardous materials to surface or groundwater and violating water quality standards. Preparation of staging areas and construction site prior to construction will be required. See Section 2.12.7 for related mitigation measures and best management practices.

Several components of the project would include construction with concrete. Uncured concrete is extremely alkaline with a pH near 12 and this caustic material is harmful to plants and wildlife. Of particular concern is concrete washout from cleaning ready mixed concrete trucks and hoppers of concrete pump trucks, highly diluted concrete slurry. Concrete washout slurry can alter soil chemistry, inhibit plant growth, can degrade surface and groundwater and violate water quality standards.

Ground-disturbing activities during construction could result in increased soil erosion and input of sediment into water sources. It should be noted that the existing soils are generally very dry and subject to fluvial and wind erosion. Under the proposed Project, grading, excavation and other ground-disturbing activities may contribute to soil erosion. Project activities that could increase soil erosion and possible deposition into surface waters include:

- Demolition and excavation of existing structures, concrete and earthen materials,
- Excavation and grading of earthen material,
- Use of heavy equipment for hauling excess cut and debris, and
- Stockpiling of excavated materials or soils to be used for backfill.

Soils in the Project area would be disturbed during construction as a result of excavation and grading, and during construction and use of access roads. Erosion may also occur at staging areas, where initial grading and subsequent disturbance by construction equipment would destabilize soils, leaving them vulnerable to erosion. Soils stockpiling, hauling or backfill would be especially vulnerable to erosive effects of wind and rain. As soils in the project area are relatively easily erodible, even soils that are stockpiled properly may erode as a result of rain or high winds.

Impacts associated with excessive erosion include degraded water quality and excessive sedimentation. Erosion would be limited by application of a variety of methods and materials to stabilize disturbed surfaces, including on-going site watering, which is planned as part of project construction.

Temporary or portable sanitary facilities provided for construction workers could be a source of sanitary waste that could affect the human use environment if not properly managed. The use and maintenance of these facilities, however, is regulated, and any contractor engaged to provide the service will be subject to and must implement these regulations.

Construction BMPs referenced above and required by Mitigation Measures HYD-3, 4 and 5, below, will effectively reduce or avoid the discharge of any pollutants of concern that might enter nearby receiving waters by establishing limits of construction and the use of a variety of standard practices, including silt berms and fences, earth dikes, drainage swales, sediment traps, check dams, reinforced soil retaining systems, temporary sediment basins and flow diversion. With the application of mitigation set forth below the Project will not exceed wastewater discharge requirements and impacts to water quality will be less than significant.

To protect the water quality during construction, SWRCB's existing construction policy (Construction General Permit Order 2009-0009-DWQ) will require the development of a project specific construction SWPPP in compliance with the State's General Construction Permit. Temporary construction BMPs considered and incorporated into the project, as appropriate, would include:

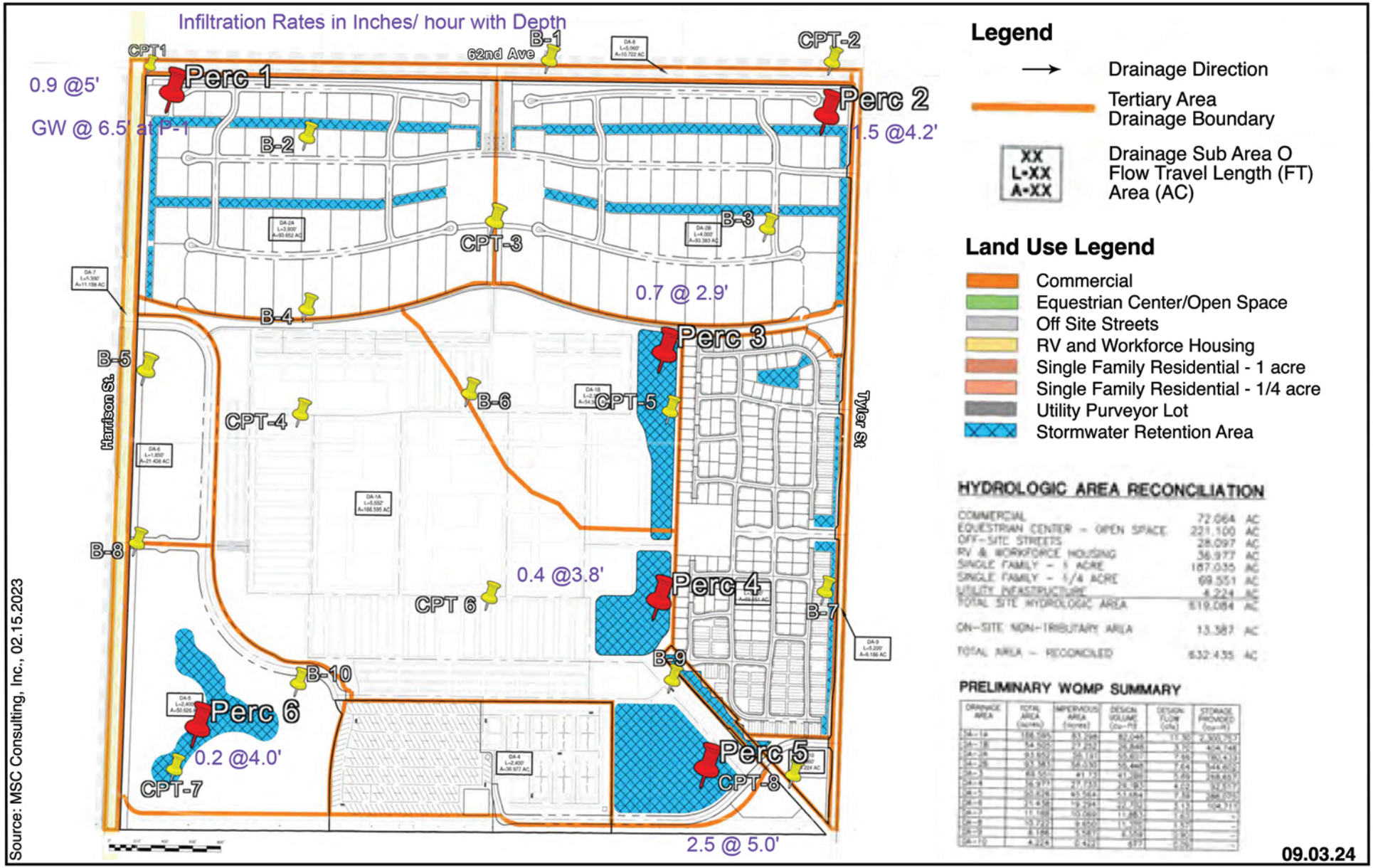
- Soil stabilization (erosion control) techniques such as on-going site watering, soil binders, etc.;
- Sediment control methods such as detention basins, silt fences, and dust control;
- Contractor training programs;
- Material transfer practices;
- Waste management practices such as providing designated storage areas and containers for specific waste for regular collection;
- Concrete washout slurry shall be discharged and disposed of in an approved manner;
- Vehicle tracking control practices;
- Vehicle and equipment cleaning and maintenance practices; and
- Fueling practices.

By following the procedures outlined in the mitigation measures set forth below, as well as SWPPP, impacts to water quality associated with construction activities would be less than significant because pollution, contamination or nuisance as defined in Section 13050 of the CWC or violation of regulatory standards as defined in the applicable NPDES stormwater permit or Water Quality Control Plan for receiving water body would be minimized and less than significant with mitigation.

Operational Impacts

The proposed Project will convert approximately 619.1± acres of active cropland into a series of urban uses. The Project incorporates a diverse system of on-site stormwater facilities, including extensive open lands associated with the equestrian center (PA-1). The Project has been designed to retain on site all incremental runoff from the 100-year storm (2.66 inches in 6-hour storm) and will have 51± acres of retention area dispersed across 13 basins across nine drainage areas to accommodate this runoff. On-site stormwater will be conveyed to these basins in a non-erosive manner and expected to infiltrate basin soils within 48 hours of a major event. The depth of the soil column and vegetation in some basin locations will serve to bioremediate runoff before and during retention and infiltration.

During the months of October through April, the Project equestrian center is expected to generate a substantial waste stream of horse manure. Based upon a peak horse occupancy of 2,700 animals the project could generate up to 140,000± pounds of manure daily. Manure storage areas are to be constructed in an approved manner that protects against surface and groundwater contamination. An operations plan has been developed addressing the handling and management of these materials, which are to be removed from the site on a daily basis and hauled to an approved disposal or composing facility.



Legend

- Drainage Direction
- Tertiary Area Drainage Boundary
- XX / L-XX / A-XX — Drainage Sub Area O / Flow Travel Length (FT) / Area (AC)

Land Use Legend

- Commercial
- Equestrian Center/Open Space
- Off Site Streets
- RV and Workforce Housing
- Single Family Residential - 1 acre
- Single Family Residential - 1/4 acre
- Utility Purveyor Lot
- Stormwater Retention Area

HYDROLOGIC AREA RECONCILIATION

COMMERCIAL	72.064	AC
EQUESTRIAN CENTER - OPEN SPACE	231.100	AC
OFF-SITE STREETS	28.097	AC
RV & WORKFORCE HOUSING	36.977	AC
SINGLE FAMILY - 1 ACRE	187.035	AC
SINGLE FAMILY - 1/4 ACRE	69.551	AC
UTILITY INFRASTRUCTURE	4.224	AC
TOTAL SITE HYDROLOGIC AREA	619.084	AC
ON-SITE NON-TRIBUTARY AREA	13.387	AC
TOTAL AREA - RECONCILED	632.435	AC

PRELIMINARY WQMP SUMMARY

DRAINAGE AREA	TOTAL AREA (acres)	IMPERVIOUS AREA (acres)	DESIGN VOLUME (cu-ft)	DESIGN FLOW (cfs)	STORAGE PROVIDED (cu-ft)
DA-1a	156.195	83.246	812,645	11.50	2,300,757
DA-1b	54.205	33.272	324,848	3.30	404,748
DA-1c	93.605	58.131	570,013	7.96	760,433
DA-1d	83.181	50.403	492,000	7.04	656,000
DA-2	68.501	41.731	407,500	5.69	543,400
DA-2a	16.971	10.731	104,800	1.43	139,800
DA-2b	33.826	19.544	190,900	2.72	254,500
DA-3	31.458	19.544	190,900	2.72	254,500
DA-4	11.168	6.944	67,800	0.97	90,400
DA-5	13.223	8.220	80,300	1.15	107,000
DA-6	8.166	5.076	49,600	0.70	66,100
DA-7	4.224	0.422	4,121	0.06	5,495

09.03.24

TERRA NOVA®
PLANNING & RESEARCH, INC.

Thermal Ranch Specific Plan EIR
Project Stormwater Retention Schematic
Thermal, California

Exhibit
2.12-2

The Project is to connect to the CVWD sanitary sewer system adjacent to the site and no on-site septic tanks are contemplated. Existing and future off-site stormwater drains are planned by CVWD along the site's south and west boundaries. The proposed Project area of disturbance lies outside areas planned for CVWD drainage facilities and will not interfere with the construction or operation of these future facilities. Therefore, the proposed Project is not expected to violate any water quality standards or waste discharge requirements and will not substantially degrade surface or ground water quality. Impacts will be less than significant.

CVWD Middleton Reservoir 7802-1 Site

The Project reservoir site has been partially developed for multiple tanks. To accommodate the future Project reservoir the existing 25-foot earthen berm will be shifted 35± feet to the north (downslope) and will continue to isolate the reservoir site from tributary flows by the berm. Water to be delivered to the subject reservoir will be from CVWD wells. The reservoir will be constructed and operated in accordance with applicable water quality regulations of the California regional Water Quality Control Board. Standard BMPs will be implemented during reservoir construction. Neither the construction nor operation of the project reservoir will violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality. Impacts will be less than significant.

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

The entirety of the subject property is in active cultivation of row crops and has been for several decades. Crops are irrigated using imported Colorado River water delivered to the area by the Coachella Branch and the All-American Canals. Although agricultural water use at the site changes from year to year depending on the type of crops and water demand, an average of 2,000-acre feet per year has been used or available to the subject property for crop irrigation.[8] The Project site is located in the Coachella Valley Groundwater Basin/Indio Subbasin.

Thermal Ranch Water Supply Assessment[9]

As a part of an assessment of the Project's potential water demand, a Water Supply Assessment (WSA) was prepared and reviewed by CVWD. The WSA provides an assessment of the availability of sufficient water supplies during normal, single-dry, and multiple-dry years over a 20-year projection to meet the projected demands of the Project, in addition to existing and planned future water demands of CVWD, as required by Senate Bill (SB) 610 and SB 1262. The WSA also includes identification of existing water supply entitlements, water rights, water service contracts, or agreements relevant to the identified water supply for the Project and quantities of water received in prior years pursuant to those entitlements, rights, contracts, and agreements. The CVWD-approved WSA is Appendix M of this DEIR.

Table 2.12-2: Groundwater Storage in the Indio Subbasin

Indio Subbasin & Subareas	Storage (AF) [1]
Palm Springs Subarea	4,600,000
Thousand Palms Subarea	1,800,000
Oasis Subarea	3,000,000
Garnet Hill Subarea	1,000,000
Thermal Subarea	19,400,000
Indio Subbasin Subtotal	**29,800,000**

Source: DWR Bulletin 108 (1964)
[1] First 1,000 feet below ground surface. (DWR, 1964)

[8] Personal communication, John Powell, Peter Rabbit Farms and current lessee and grower on the subject property. April 6, 2023.

[9] Water Supply Assessment for the Proposed Thermal Ranch Specific Plan, prepared by Terra Nova Planning & Research, Inc. June 2023. Approved by the Coachella Valley Water District, July 2023.

Annual inflows to the Indio Subbasin are highly variable with years of high inflows corresponding to wet years when State Water Project (SWP) delivery volumes were greater. Higher inflows in the mid-1980s occurred when the Metropolitan Water District of Southern California (MWD) commenced large-scale advanced water deliveries to the Indio Subbasin. After an extended period of decline, both the 10-year and 20-year running-average change in storage have shown positive trends since 2009, and the 10-year running-average has been positive since 2017.

Regional water planners use the Indio Subbasin Annual Report 2009 water levels as a metric of sustainability because historical low groundwater levels occurred in the years around 2009 throughout most of the Indio Subbasin. The Indio Subbasin shows a long-term positive trend in sustainability resulting from implementation of the Indio Subbasin Alternative Plan. For a detailed discussion and analysis of various water supplies used to meet local demand and recharge the groundwater basin, please see the Project WSA (Appendix M).

Project Water Demand

Pursuant to Senate Bills 610 and 1262, and in accordance with CVWD guidelines, the WSA prepared for the Project broke down the areas of consumption by land use type and category, including residential indoor use, commercial/retail indoor use, and outdoor irrigate demand. The following tables set forth the Project's projected water demand on a categorical basis.

Project Indoor Residential Water Demand

The projected indoor residential unit usage is based on indoor water use performance standards as provided in the California Water Code (CWC) for residential water demand (Water Code Section 10910 approved November 10, 2009, codified in CWC section 10608.20 (b)(2)(A)). The projected indoor residential water demand for the Project totals 279.79 acre-feet per year (AFY) as shown in **Table 2.12-3**. SB 606 and AB 1668 established guidelines for efficient water use and a framework for the implementation and oversight of the new standards. Based on results of the Indoor Residential Water Use Study, DWR and the State Water Resources Control Board jointly recommended that the indoor residential standard remain at 55 gallons per capita per day (gpcd) through 2024 and decline to 47 gpcd in 2025 and to 42 gpcd in 2030.

Table 2.12-3: Projected Indoor Residential Water Demand

Planning Area	Land Area (Acres)	Estimated Dwelling Units (EDUs)	Estimated Occupants per Home [1]	Gallons per Day (gpd) per Occupant [2]	gpd/EDU	Water Demand (gpd)	Water Demand (AFY)
PA-2	194.3	132	2.7	55	148.5	19,602	21.96
PA-3	69.5	390	2.7	55	148.5	57,915	64.87
PA-4	41.1	820	2.7	55	148.5	121,770	136.40
PA-5	42.1	340	2.7	55	148.5	50,490	56.56
Total	**347**	**1,682**				**249,777**	**279.79**

[1] Occupant assumptions based on U.S. Census Bureau American Community Survey 2021 5-year data for Coachella Valley CCD, Thermal, and Mecca; and Project specific Vehicle Mile Traveled (VMT) analysis that averages the occupancy rates across the entire project as 2.7 persons per dwelling unit: estate and single-family detached housing (3 persons), resort condo and attached housing (2.5 to 3 persons) and RV (2.5 persons).

[2] CA Indoor Water Use Performance Standard

Project Indoor Commercial Water Demand

The projected indoor commercial and industrial unit usage for the WSA are based on the American Water Works Association Research Foundations (AWWARF's) Commercial and Industrial End Uses of Water. The projected indoor commercial and industrial water demand for the Project totals 231.28 AFY is as shown in Table 2.12-4 below. Eight separate land use categories were used to estimate water demand from planned commercial and related uses.

Table 2.12-4: Projected Indoor Commercial Water Demand

Thermal Ranch Planning Area	Indoor Area (ft^2)	Number of Rooms/ Stalls	Water Demand Factor (gal/ ft^2)[1]	Water Demand (gpd)	Water Demand (AFY)
PA-1: Office/Commercial	55,250		35	5,297.95	5.93
PA-1: Restaurant	29,750		331	26,978.77	30.22
PA-1: Stable Stalls		2,700	30[2]	81,000.00	90.73
PA-5: Hotel[3]	112,500	150	115	17,250.00	19.32
PA-5: Restaurant	17,500		331	15,869.86	17.78
PA-5: Commercial	32,500		35	3,116.44	3.49
PA-6: Restaurant	52,500		331	47,609.59	53.33
PA-6: Commercial	97,500		35	9,349.32	10.47
Total	**397,500**			**206,471.92**	**231.28**

[1] AWWARF Commercial and Industrial End Uses of Water, 2000.
[2] Stable stall water demand is 30 gallons per day per stall. Includes drinking water, bathroom/washroom/shower flush, equipment cleaning.
[3] 150-key hotel is estimated to be 112,500 square feet. Number of hotel rooms is used to estimate demand.

Project Outdoor Irrigation Water Demand

The projected outdoor irrigation water usage is based on the Maximum Applied Water Allowance (MAWA) equation from Appendix D of Coachella Valley Water District's (CVWD's) Landscape Ordinance No. 1302.5, which meets the water conservation goals of the California Department of Water Resources (DWR) Model Efficient Landscape Ordinance (MWELO). The projected outdoor irrigation water demand for the Project is 1,168.39 AFY as shown in **Table 2.12-5** below. See the Project WSA (Appendix M) for additional information on demand analysis.

Table 2.12-5: Projected Outdoor Irrigation Water Demand

Planning Area	Landscaped Area (ft^2)	ETo (in/yr) [1]	ETAF [2]	Conversion Factor (gal/ft^2) [3]	Water Demand (gpd)	Water Demand (AFY)
PA-1 – 54% irrigated	5,185,626.34	76.46	0.45	0.62	303,072.72	339.49
PA–1 26% dust control	2,554,114.46	See footnote 4			148,962.98	166.86
PA-1 – Irrigation Pond	43,560.00	76.46	1.1	0.62	6,223.20	6.97
PA-2 – 75% irrigated	6,347,781.00	76.46	0.45	0.62	370,994.58	415.57
PA-3 – 55% irrigated	1,665,081.00	76.46	0.45	0.62	97,315.27	109.01
PA-4 – 40% irrigated	716,126.40	76.46	0.45	0.62	41,853.84	46.88
PA-5 – 30% irrigated	710,899.20	76.46	0.45	0.62	41,548.34	46.54
PA-6 – 25% irrigated	233,046.00	76.46	0.45	0.62	13,620.32	15.26
ROW – 50% irrigated	333,234.00	76.46	0.45	0.62	19,475.78	21.82
Total	**17,789,468.40**				**1,043,378.68**	**1,168.39**

[1] Reference Evapotranspiration (ETo) for ETo Zone 4 from CVWD Landscape Ordinance 1302.5, Appendix C
[2] Evapotranspiration Adjustment Factor (ETAF) from CVWD Landscape Ordinance 1302.5, Appendix D
[3] Conversion Factor from CVWD Landscape Ordinance 1302.5, Appendix D
[4] Dust control water demand based on current dust control operations at the existing off-site equestrian center:
- During Season (7 months, Oct-Apr, approx. 210 days)
- Road Dust Control: 1 truck (5,000 gals) 10 trips per day for 210 days = 50,000 gal/day or 10,500,000 gal total during season
- Arena/Riding Path Dust Control: 4 trucks (5,000 gals each) 10 trips each per day, or 40 trips total per day for 210 days = 200,000 gal/day or 42,000,000 gals total during season

Project Outdoor Water Features Demand

The projected outdoor water features usage is based on the Estimated Total Water Usage (ETWU) equation from Appendix D of CVWD's Landscape Ordinance No. 1302.5. Outdoor water features include community and private pools, as well as decorative water features or irrigation ponds. The estimates are conservative and assume a seven-acre lagoon, which is no longer proposed as part of the project. The projected outdoor water features demand for the Project is 74.18 AFY as shown in **Table 2.12-6** below.

Table 2.12-6: Projected Outdoor Water Features Demand

Planning Area	Water Feature Area (ft^2)	ETo (in/yr) [1]	Plant Factor [2]	Conversion Factor (gal/ft^2) [3]	Water Demand (gpd)	Water Demand (AFY)
PA-2	79,200	76.46	1.1	0.62	11,314.91	12.67
PA-3	69,400	76.46	1.1	0.62	9,914.83	11.11
PA-4	5,000	76.46	1.1	0.62	714.32	0.80
PA-5	309,920	76.46	1.1	0.62	44,276.72	49.60
Total	**463,520**				**66220.78**	**74.18**

[1] Reference Evapotranspiration (ETo) for ETo Zone 4 from CVWD Landscape Ordinance 1302.5, Appendix C
[2] Plant Factor of 1.1 for a stationary body of water from CVWD Landscape Ordinance 1302.5
[3] Conversion Factor from CVWD Landscape Ordinance 1302.5, Appendix D

Total Projected Project Water Demand

The total projected water demand for the Project is 1,753.63 AFY, or 2.83 acre-feet per acre, as shown in **Table 2.12-7** below.

Table 2.12-7: Projected Total Project Water Demand

Planning Area	Land Area (Acres)	Indoor Residential Demand (AFY)	Indoor Commercial Demand (AFY)	Outdoor Irrigation Demand (AFY)	Outdoor Water Features Demand (AFY)	Total Water Demand (AFY)
PA-1	223.10		126.89	513.32		640.20
PA-2	194.30	21.96		415.57	12.67	450.20
PA-3	69.50	64.87		109.01	11.11	184.99
PA-4	41.10	136.40		46.88	0.80	184.08
PA-5	54.40	56.56	40.59	46.54	49.60	193.28
PA-6	21.40		63.80	15.26		79.06
ROW	15.30			21.82		21.82
Total	**619.10**	**279.79**	**231.28**	**1,168.39**	**74.18**	**1,753.63**

Based upon the above conservative estimates of Project water demand, the development of the Project and the elimination of farming on the subject property will result in a net water demand reduction of approximately 12 percent. It should also be noted that the Thermal Ranch Specific Plan landscape guidelines emphasize non-invasive drought tolerant plant materials that are climate-appropriate, water efficient, and sustainable. The plant palette shall utilize a low maintenance and low water palette. Turfed areas, including those in PA-1 and PA-2, will be limited. The landscaping and irrigation plans and system shall comply with all CVWD and County ordinances relating to water. The Project's adherence to the CVWD conservation programs, most notably in CVWD Landscape Ordinance 1302.5, has guided development of the Project landscape plan and will further enforce the water conservation ethic and strategy.

Adequacy of Water Supplies

CVWD's long-term water management planning ensures that adequate water supplies are available to meet existing and future water needs within its service area. CVWD's current urban water demand was 100,066 acre-feet (AF) for 2022, and the projected urban water demand by 2045 is 148,166 AFY. The Thermal Ranch Project's water demand of 1,753.63 AFY accounts for approximately 3.6% percent of the total planned increases in demand of 48,100 AFY by 2045. Therefore, based upon the WSA reviewed and approved by CVWD, the Project will not substantially decrease groundwater supplies or interfere substantially with groundwater recharge, and will not impede sustainable groundwater management of the basin. Impacts will be less than significant

CVWD Middleton Reservoir 7802-1 Site

The Project reservoir construction and operation will not, in and of itself, substantially decrease groundwater supplies or interfere substantially with groundwater recharge and will not impede sustainable groundwater management of the basin. The Project reservoir's potential impacts to groundwater resources will be less than significant.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces?

d) Result in substantial erosion or siltation on- or off-site?

e) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

f) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff

g) Impede or redirect flood flows?

The proposed Project is located on generally flat to gently sloping terrain that drains to the southeast. The site does not receive any tributary flows, which are intercepted by local streets and an extensive network of agricultural drains. The existing drainage pattern on site will not be altered and the proposed plan calls for a series of on-site stormwater retention basins that will preclude any alteration to the local drainage pattern. A detailed grading and drainage plan and associated hydrology analysis have been conducted and will be reviewed by the County and CVWD. Impacts to the existing drainage pattern will be less than significant.

Currently, the Project site is fully disturbed and in active cultivation, and is subject to both wind and water erosion. Section 2.5 of this DEIR discusses the potential for wind erosion during Project construction and sets forth a variety of mitigation measures and best management practices (BMPs) to ensure that wind erosion impacts are less than significant.

Site grading and development will be conducted in a controlled manner, implementing a variety of construction BMPs referenced above and required by Mitigation Measures HYD-3, HYD-3 and HYD-4, below, which will effectively reduce or avoid the discharge of turbid water or siltation of any water body. Potential sand and silt discharges that might enter nearby receiving waters will be avoided and minimized using a variety of standard practices, including silt berms and fences, earth dikes, drainage swales, sediment traps, check dams, reinforced soil retaining systems, temporary sediment basins and flow diversion. With the application of mitigation set forth below, impacts will be less then significant.

As noted, the Project has been designed to retain on site all incremental runoff from the 100-year storm and will provide 51± acres of retention area dispersed across 13 basins in nine drainage areas to accommodate this runoff. The difference in stormwater runoff between the undeveloped and developed state will be retained on site. All on-site runoff will be managed on site and will not substantially increase the rate or amount of runoff in a manner that could cause flooding on- site or off.

Furthermore, the Project will not rely on off-site stormwater facilities and will not create or contribute runoff to such facilities that would exceed the capacity of existing or planned stormwater drainage systems, and will provide no additional sources of polluted runoff, on-site runoff being maintained and managed on site.

With appropriate on-site stormwater capture, conveyance and retention, the proposed Project is not expected to substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-site or off-site. The difference in stormwater runoff between the undeveloped and developed state will be retained on site.

As noted, the planning area includes large areas of active cultivation and CVWD maintains numerous agricultural drains that intercept high groundwater and other runoff from these lands and convey them to the Coachella Valley Stormwater Channel to the east. Therefore, in the Project area sheet flows prevail and concentrations of flows are along paved roadways. The Project will not substantially interrupt, imped or redirect local or regional flows and impacts will be less then significant.

CVWD Middleton Reservoir 7802-1 Site

The Project reservoir site has been partially improved for construction of multiple tanks. Site drainage is isolated by an existing 25-foot earthen berm, which will be shifted 35± feet north to accommodate the Project reservoir. Therefore, construction of the Project reservoir will not alter the existing drainage pattern on-site or in the vicinity. Neither will construction and operation of the Project reservoir result in substantial erosion given that the site is isolated from the surrounding drainage patterns. The construction of additional impervious surfaces at the Project reservoir site will be limited to the surface area of the Project tank. Surface runoff during storm events will not significantly contribute to the potential for on-site or off-site flooding. No new drainage or flood control facilities are required, and the Project reservoir will not impede or redirect local flood flows. Therefore, impacts will be limited and less than significant.

h) In flood hazard, tsunami, or seiche zones, risk the release of pollutants due to project inundation?

The subject property is potentially subject to local 100-Year flooding primarily from the Santa Rosa Mountains to the west. The site is also located west of the Coachella Valley Stormwater Channel (CVSC) and one mile west of the 100-Year flood plain associated with this major drainage feature. The south half of the subject property is designated Zone X on the FEMA Flood Insurance Rate Maps with reference to a 2018 FEMA *Letter of Map Revision"* (see Exhibit 2.12-1, above). The Zone X designation indicates inundation threat of less than 1-foot in depth and partially associated with a reduced flood risk due to levee protection. A CVWD open stormwater channel is planned along the intervening Ave 64 right of way that, once constructed, will offer at least some protection against this flooding (inundation) threat.

It should be noted that the mapped inundation threat appears to be associated with the assumed failure of the Dike 4 protective levee to the west, although the significance of that threat appears limited. The subject property is not located downstream of any large water storage facility and is not subject to tsunami or seiches. The Project includes a 231± acre equestrian center a portion of which would be located within the identified 1-foot inundation area as shown on the current FEMA maps. The Project site is not located in an area with a significant flood hazard or where tsunamis of seiches may occur and, therefore, the Project will not create a significant risk of release of pollutants due to inundation.

CVWD Middleton Reservoir 7802-1 Site
The Project reservoir will be located 2.4± miles southwest of the Project site at an elevation of 61± feet above sea level. The Middleton Reservoir 7802-1 site is surrounded by an earthen berm that serves to isolate the site. The Project reservoir site is not located within a 100-year flood zone and is not subject to tsunamis, seiching associated with the Salton Sea or other body or water, or the related release of pollutants due to such events. The Project reservoir will generate no impacts in this regard.

i) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

The proposed Project will be required to comply with all applicable stormwater management plans and water quality plans of CVWD and the Regional Water Quality Control Board. The Project site is located 4 miles east and down-gradient of major CVWD groundwater recharge facilities and will have no effect on them or their function. The Project is also projected to use approximately 12 percent less water than does current agriculture on the site. Storm runoff will be retained on site and in an approved manner. Therefore, the Project is not expected to conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

CVWD Middleton Reservoir 7802-1 Site
The Project reservoir will further implement CVWD's urban water management plan and will not conflict with or obstruct implementation of a water quality control plan. Neither will the project reservoir affect or impact any groundwater management plan. The reservoir project will have no impacts in this regard.

2.12.7 Mitigation Measures

The Project design process has taken into consideration the relationship to and potential impacts on the proposed development on area hydrology, water supplies and water quality. Design mitigation includes a series of on-site retention facilities that will ensure properly treated and infiltrated storm runoff in a manner that shall be approved by CVWD and the RWQCB. The following measures are set forth to ensure that project impacts are below levels of significance.

HYD-1 Project Plan Review

Prior to finalizing the hydrologic design and engineering plans for Project stormwater improvements, said plans shall be reviewed and approved by County Planning and CVWD to ensure that these improvements do not interfere with or adversely affect local groundwater or drainage facilities.

HYD-2 NPDES Requirements

The proposed Project shall comply with the requirements of the National Pollution Discharge Elimination System (NPDES).

HYD-3 General BMPs

The implementation of BMPs during and following construction activities shall ensure that erosion and siltation from earthmoving and other activities is limited. Exposed soil from excavated areas, stockpiles, and other areas where ground cover is removed shall be stabilized by wetting or other approved means to avoid or minimize the inadvertent transport by wind or water. Temporary construction BMPs considered and incorporated into the project, as appropriate, would include:

- Soil stabilization (erosion control) techniques such as on-going site watering, soil binders, etc.;
- Sediment control methods such as retention basins, silt fences, and dust control;
- Temporary de-silting basins will be constructed incrementally to store and clarify water adjoining de-watered areas and will be backfilled once work is completed.
- Contractor training programs;
- Material transfer practices;
- Waste management practices such as providing designated storage areas and containers for specific waste for regular collection;
- Concrete washout slurry shall be discharged and disposed of in an approved manner;
- Access drive cleaning/tracking control practices;
- Vehicle and equipment cleaning and maintenance practices; and
- Fueling practices.

HYD-4 Stormwater Pollution Prevention Plan

The construction contractor shall implement a County-approved (SWPPP) during construction of the Project. The SWPPP shall identify specific best management practices (BMPs) that will be implemented during project construction. BMPs implemented as a part of the Project will ensure that the Project meets the requirements of the California State Water Resources Control Board NPDES Construction General Permit.

Construction-related erosion and sediment controls, including any necessary stabilization practices or structural controls, shall be implemented at and in all potentially affected drainages. General structural practices may include, but are not limited to, silt fences, earth dikes, drainage swales, sediment traps, check dams, reinforced soil retaining systems, temporary or permanent sediment basins and flow diversion.

Temporary erosion and sediment control measures shall be installed during or immediately after initial disturbance of the soil, maintained throughout construction (on a daily basis), and reinstalled until replaced by permanent erosion control structures or final grading and other site disturbances are complete. In addition, the following specific actions shall be taken to ensure that impacts are less than significant.

a) The construction shall be avoided within the limits of identified drains or waterways, except as authorized by federal, state or local permits.
b) Protect drainage inlets and outlets from construction material intrusions using temporary berms to prevent incision, erosion, and sedimentation.
c) Erosion control measures appropriate for on-the-ground conditions, including percent slope, length of slope, and soil type and erosive factor, shall be implemented.
d) Temporary erosion controls such as straw bales and tubes, geotextiles and other appropriate diversion and impounding materials and facilities shall be properly maintained throughout construction (on a daily basis) and reinstalled (such as after backfilling) until replaced with permanent erosion controls or restoration is complete.
e) Along the Project's south boundary and adjacent to or within the Project construction area, the contractor shall install sediment barriers along the edge of the construction right-of-way to contain spoil and sediment within the construction area and limit discharge into adjoining ag drains.
f) Ensure that all employees and contractors are properly informed and trained on how to properly install and maintain erosion control BMPs. Contractors shall require all employees and contractors responsible for supervising the installation and maintenance of BMPs and those responsible for the actual installation and maintenance to receive training in proper installation and maintenance techniques.
g) Project scheduling will include efficient staging of the construction that minimizes the extent of disturbed and destabilized work area and reduces the amount of soil exposed and the duration of its exposure to wind, rain, and vehicle tracking.
h) The sequencing and time frame for the initiation and completion of tasks, such as site clearing, grading, excavation, paving and other construction, shall be planned in advance to ensure minimization of potential impacts.

HYD-5 Petroleum BMPs

To prevent petroleum products from contaminating soils and water bodies in the vicinity, the following BMPs shall be implemented:

a) Construction equipment and vehicles shall be properly maintained to prevent leakage of petroleum products.
b) Vehicle maintenance fluids and petroleum products shall be stored, and/or changed in staging areas established at least 100 feet from delineated streams and other drainages. These products must be discarded at disposal sites in accordance with state and federal laws, rules, and regulations.
c) Drip pans and tarps or other containment systems shall be used when changing oil or other vehicle/equipment fluids.
d) Areas where discharge material, overburden, fuel, and equipment are stored shall be designed and established at least 100 vegetated (permeable) feet from the edge of drainages.
e) Any contaminated soils or materials shall be disposed of off-site in proper receptacles at an approved disposal facility.
f) All erosion control measures shall be inspected and repaired after each rainfall event that results in overland runoff. The Project contractor shall be prepared year round to deploy and maintain erosion control BMPs associated with the project.
g) Existing off-site ag drains shall be carefully maintained in place to ensure proper functioning. Considerations include: maintenance of inlet and outlet elevations, grade, adequately compacted material cover, and inlet/outlet protection.

HYD-6 The Project shall implement water-conserving technologies throughout the development, in conformance with Section 17921.3 of the Health and Safety Code, Title 20, California Administrative Code Section 1601(b), and other applicable sections of Title 24 of the Public Code.

HYD-7 Manure storage areas shall be constructed in an approved manner that protects against surface and groundwater contamination. If storage is to occur on a soil pad, said pad shall be constructed in a manner consistent with the following guidelines:

a) Soils used for the pad should have at least 30% of the particles passing a #200 sieve, less than 20% retained on a #4 sieve, and no rocks greater than 3 inches. (Sieve analysis according to ASTM D-422)
b) Soils should have a plasticity index greater than 7% (ASTM D4318)
c) Soils during placement should be maintained at a moisture content of 0 to 5% above optimum (ASTM D-698 or ASTM D-1557 during construction)
d) Soils should be placed in multiple lifts and compacted with at least three passes of a "sheeps-foot" type roller with feet that extend through the loose lift and into the previously compacted lift or compacted until achievement of 90% of standard proctor density, verified (ASTM 2922) at a frequency of one sample per 3,000 sq ft.

HYD-8 Manure storage areas shall be placed minimal distances from sensitive uses, as set forth below:

Sensitive Area	Minimum Separation Distance (feet)
• Property line	50–100
• Residence or place of business	200–500
• Private well or other potable water source	100–200
• Wetlands or surface water (streams, pond, lakes)	100–200
• Subsurface drainage pipe or drainage ditch discharging to a natural water course	25
• Water table (seasonal high)	2–5

2.12.8 Significance After Mitigation

Surface and groundwater quality will not be significantly impacted by the Project and will be managed by on-site stormwater facilities and by connection of the project to the CVWD sanitary sewer system. At buildout, the Project will consume approximately 12 percent less water per year compared to current levels of on-site irrigation and Project impacts to water supplies will be less than significant. The Project will not alter any local or regional drainage pattern or contribute runoff to existing and planned drainage facilities, nor will it contribute to erosion or siltation. Therefore, with implementation of design standards and guidelines set forth in the Thermal Ranch and as represented in the subdivision map and development plans, and with application of the above mitigation measures, potential impacts to hydrology and water quality and supplies will be less than significant.

2.12.9 Cumulative Impacts

Project cumulative impacts are expected to be limited. The Project will not contribute to water quality degradation, and will result in less water demand compared to current conditions. The Project will have no effect on local or area-wide drainage facilities and will not require capacity from any existing or future off-site drainage facility. The Project will not have a cumulatively considerable impact on area drainage or local or regional water quality or supplies.

2.13 Land Use and Planning

2.13.1 Introduction

The Land Use and Planning section describes the existing land uses of the Project site and its surroundings, and evaluates potential Project impacts on those lands. The Project is analyzed in terms of consistency with the General Plan, the East Coachella Valley Area Plan (ECVAP) and other land use planning documents potentially having regulatory effect on the subject property. Land use regulations affecting the Project site are described, as are the Project's appropriateness, suitability, and compatibility with existing and planned land uses in the vicinity. This section includes a brief discussion of the Coachella Valley Multiple Species Habitat Conservation Plan (MSHCP). Also, please refer to Section 2.6 Biological Resources for a comprehensive resource-based discussion of the Project's potential effects on species and habitats covered by the MSHCP. Finally, the following discussion evaluates the compatibility of the Project with the Jacqueline Cochran Regional Airport Land Use Compatibility Plan and surrounding agricultural lands, which are analyzed in detail in Section 2.4 of this DEIR.

2.13.2 Thresholds of Significance

The thresholds of significance analyzed herein have been taken from Appendix G of the State CEQA Guidelines. For purposes of this EIR, the proposed Project would have a significant effect on existing and planned land use if it were to:

a) Physically divide an established community.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

The Initial Study determined that the Project would result in "No Impact' for threshold question a) above. Therefore, it is not analyzed further in this EIR.

2.13.3 Regulatory Framework

SCAG Regional Transportation Plan / Sustainable Communities Strategy

The 2020-2045 Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS), prepared by the Southern California Association of Governments (SCAG), is a long-range plan for achieving connected transportation projects and investments across the six-county region. The Sustainable Communities Strategy (SCS) component of the plan outlines growth strategies for land use and transportation to help reduce California's greenhouse gas emissions. Strategies provided in the SCS include the following: focus growth near destinations and mobility options; promote diverse housing choices; leverage technology innovations; support implementation of sustainability policies; promote a green region.

Riverside County General Plan

The Riverside County General Plan sets forth policies meant to enhance community identity within the County of Riverside and strengthen quality of life at the community level. The General Plan's jurisdiction covers 19 Area Plans and all unincorporated communities.

Infrastructure, Public Facilities and Service Provision

LU 5.1 Ensure that development does not exceed the ability to adequately provide supporting infrastructure and services, such as libraries, recreational facilities, educational and day care centers, transportation systems, and fire/police/medical services.

LU 5.2 Monitor the capacities of infrastructure and services in coordination with service providers, utilities, and outside agencies and jurisdictions to ensure that growth does not exceed acceptable levels of service.

Land Use Compatibility

LU 7.4 Retain and enhance the integrity of existing residential, employment, agricultural, and open space areas by protecting them from encroachment of land uses that would result in impacts from noise, noxious fumes, glare, shadowing, and traffic.

LU 7.5 Require buffering to the extent possible between urban uses and adjacent rural/equestrian oriented land uses.

Circulation

LU 13.1 Provide land use arrangements that reduce reliance on the automobile and improve opportunities for pedestrian, bicycle, and transit use in order to minimize congestion and air pollution.

LU 13.2 Locate employment and service uses in areas that are easily accessible to existing or planned transportation facilities.

Airports

LU 15.2 Review all proposed projects and require consistency with any applicable airport land use compatibility plan as set forth in Appendix I-1 and as summarized in the Area Plan's Airport Influence Area section for the airport in question.

LU 15.4 Prior to the adoption or amendment of the General Plan or any specific plan, or the adoption or amendment of a zoning ordinance or building regulation with the Airport Influence Area of any airport land use compatibility plan, refer such proposed actions of the ALUC for review and determination as provided by the Airport Land Use Law.

LU 15.9 Ensure that no structures or activities encroach upon or adversely affect the use of navigable airspace.

Agriculture

LU 20.1 Encourage retaining agriculturally designated lands where agricultural activity can be sustained at an operational scale, where it accommodates lifestyle choice, and in locations where impacts to and from potentially incompatible uses, such as residential uses, are minimized, through incentives such as tax credits.

LU 20.2 Protect agricultural uses, including those with industrial characteristics (dairies, poultry, hog farms, etc.) by discouraging inappropriate land division in the immediate proximity and allowing only uses and intensities that are compatible with agricultural uses.

LU 20.3 Permit farm-workers housing as an interim land use under the following circumstances: (AI 31)

a. The area in which the proposal is located appears to be predominantly agricultural in nature and does not appear it will change in the near future.

b. The proposal is an interim use (5 to 10 years) and will not substantially affect the existing character of the area.
c. Adequate infrastructure exists in the area to ensure safe, sound, and decent housing for farm workers.
d. The proposal will not create any significant land use incompatibilities.
e. The proposal will not jeopardize public health, safety, and welfare.

LU 20.4 Encourage conservation of productive agricultural lands. Preserve prime agricultural lands for high-value crop production.

LU 20.5 Continue to participate in the California Land Conservation Act (the Williamson Act) of 1965.

LU 20.6 Require consideration of state agricultural land classification specifications when a 2.5-year Agriculture Foundation amendment to the General Plan is reviewed that would result in a shift from an agricultural to a non-agricultural use.

LU 20.7 Adhere to Riverside County's Right-to-Farm Ordinance.

LU 20.8 Encourage educational and incentive programs in coordination with the Riverside County Agricultural Commissioner's Office, the University of California Cooperative Extension Service, and the Riverside County Farm Bureau, that convey the importance of conserving watercourses and their associated habitat, as well as protective buffers for domestic and farm livestock grazing.

LU 20.9 Weigh the economic benefits of surface mining with the preservation/ conservation of agriculture when considering mineral excavation proposals on land classified for agricultural uses.

LU 20.10 Allow agriculturally related retail uses such as feed stores and permanent produce stands in all areas and land use designations. It is not the County's intent pursuant to this policy to subject agricultural related uses to any discretionary permit requirements other than those in existence at the time of adoption of the General Plan.

LU 20.11 The County of Riverside shall pursue the creation of new incentive programs, such as tax credits, that encourage the continued viability of agricultural activities.

LU 20.12 Support and participate in ongoing public education programs by organizations such as the County Agricultural Commissioner's Office, University of California Cooperative Extension, Farm Bureau, and industry organizations to help the public better understand the importance of the agricultural industry.

Riverside County General Plan – Administration Element

The Administration Element provides policies intended to establish, maintain, and apply the intent of the General Plan, including with respect to amendments. It includes provisions specific to Agriculture Foundation Amendments, which involve amendments to property designated in the General Plan as Agriculture. The Agriculture Foundation Amendment Cycle allows up to 7% of all land designated as Agriculture to change to other Foundation and land use designations during each 2.5 year cycle. The 7% conversion can occur anytime within the cycle, and is calculated separately for each of the following three areas:

A. The area covered by the Palo Verde and Desert Center Area Plans and the Eastern Desert Land Use Plan;
B. The area covered by the Eastern Coachella Valley and Western Coachella Valley Area Plans; and,
C. The area covered by all other Area Plans.

The Project proposes an amendment to convert the subject property from the Agriculture Foundation to the Community Development Foundation. The site is in the area covered by the Eastern Coachella Valley and Western Coachella Valley Area Plans.

Eastern Coachella Valley Area Plan

The Eastern Coachella Valley Area Plan is a subarea plan under the County of Riverside General Plan, which encompasses many unincorporated communities in the eastern Coachella Valley and lays forth long-term visions, policy, and management regarding housing, population growth, conservation and open space resources, education, agriculture, intergovernmental cooperation, the local economy, and air quality. Under the Eastern Coachella Valley Area Plan, the Project site is designated as "Agriculture" on the ECVAP Land Use Plan and is therefore subject to the following ECVAP policies.

Jacqueline Cochran Regional Airport and Chiriaco Summit Airport Influence Areas

ECVAP 3.1 To provide for the orderly development of Jacqueline Cochran Regional Airport and Chiriaco Summit Airport and the surrounding areas, comply with the Airport Land Use Compatibility Plans for Jacqueline Cochran Regional Airport and Chiriaco Summit Airport as fully set forth in Appendix L-1 and as summarized in Tables 4 and 5, as well as any applicable policies related to airports in the Land Use, Circulation, Safety and Noise Elements of the Riverside County General Plan.

Agricultural Lands

ECVAP 5.1 Retain and protect agricultural lands through adherence to the policies contained in the Agriculture section of the General Plan Land Use Element.

ECVAP 5.2 Refer to the General Plan Certainty System in the General Plan Administrative Element. An exception is provided allowing limited changes from the Agriculture designation to be processed and approved.

Multipurpose Open Space

ECVAP 16.1 Protect visual and biological resources in the Eastern Coachella Valley Area Plan through adherence to General Plan policies found in the Preservation section of the Multipurpose Open Space Element, as well as policies contained in the Coachella Valley Multiple Species Habitat Conservation Plan.

Coachella Valley Multiple Species Conservation plan (CVMSHCP)

The Coachella Valley Multi-Species Habitat Conservation Plan became effective within the County of Riverside on October 2nd, 2008, and was last updated in 2016. The CVMSHCP addresses the conservation needs of a variety of animal and plant species and communities occurring in the Coachella Valley region. It is a comprehensive regional plan encompassing a planning area of approximately 1.1 million acres and conserving approximately 240,000 acres of land, in addition to public lands already in conservation. The network of preserves established through the CVMSHCP are generally located outside of urban areas in order protect lands with high conservation value for 27 plant and wildlife species and 27 natural communities.

The proposed Project is within the CVMSHCP fee area but is located outside of any CVMSHCP Conservation Area. The nearest Conservation Areas are the Santa Rosa and San Jacinto Mountains Conservation Area, located 2.25± miles to the west of the Project site, and the Coachella Valley Stormwater Channel and Delta Conservation Area 3.25± miles to the southeast.

The CVMSHCP aims to avoid the lengthy and costly development reviews by State and Federal Wildlife agencies, instead using a comprehensive landscape approach to conserving protected species and their habitats. Within the Plan's jurisdiction new developments must pay a Local Development Mitigation Fee in order to mitigate the potential negative effects of development. The size and type of development determines the fee amount. Conservation areas within the CVMSHCP jurisdiction are subject to additional review and limitations. Payment of the development fee is required prior to the issuance of the Certificate of Occupancy or Final Inspection

Thermal Community Plan

The Riverside County Board of Supervisors authorized the preparation of a new Thermal Community Plan through General Plan Amendment No. 210110 on September 15, 2021. As of the writing of this EIR, the Thermal Community Plan is not yet available. The area encompassing the unincorporated community of Thermal is within the planning area for the Eastern Coachella Valley Area Plan, as well as the Riverside County General Plan.

Airport Land Use Commission (ALUC)

The State of California requires all counties with public use airports to have an Airport Land Use Commission to implement state law regarding airports and surrounding land use compatibility. The ALUC must develop a plan for promoting and ensuring compatibility between each airport in the county and surrounding land uses. As defined by the California State Aeronautics Act (Public Utilities Code Sections 21670 et seq.), the purpose of the ALUC is "… to protect public health, safety, and welfare by ensuring the orderly expansion of airports and the adoption of land use measures that minimize the public's exposure to excessive noise and safety hazards within areas around public airports to the extent that these areas are not already devoted to incompatible uses."

Riverside County Airport Land Use Compatibility Plan

The Riverside County Airport Land Use Compatibility Plan Policy Document (ALUCP) was adopted by the Riverside County Airport Land Use Commissions (ALUC) in 2004. The plan establishes land use compatibility criteria for the influence areas of airports in Riverside County, including the Jacqueline Cochran Regional Airport. As discussed in this document, the Project site is within the influence area for the Jacqueline Cochran Regional Airport (JCRA).

2.13.4 Environmental Setting

The Coachella Valley is located in the central portion of Riverside County in the western edge of the Sonoran Desert and the Colorado Desert sub-unit. The southeast portion of the valley is bound by the Santa Rosa Mountains to the west and southwest, and the Mecca Hills to the northeast and east. Much of the urbanization in the Coachella Valley initially took place along the foothills of the San Jacinto and Santa Rosa Mountains and spread progressively onto the valley floor. Agriculture in the east valley began in the early 20th Century supported by groundwater. Agriculture in this area expanded rapidly with the construction of the 122-mile Coachella Branch Canal of the All-American Canal with deliveries beginning in the late 1940s. Farming expanded rapidly and since that time canal water has supported farming, aquaculture, and groundwater recharge.

The eastern Coachella Valley is noted for prime agricultural lands and for scenic vistas that have attracted resort residential and tourist developments. Urban development in the area extends to the late 1880s following the extension of Southern Pacific Railroad facilities in 1876. The cities of Coachella and Indio originally developed with and in support of local agriculture. Today, the majority of the eastern valley, from the Salton Sea north to the City of Coachella, continues to be devoted to growing such crops as dates, grapes, citrus, and seasonal row crops. In addition to its important agricultural production, the area is home to natural desert and mountain environments that have attracted residents and victors from around the world.

A significant portion of the Project vicinity is within the Torres Martinez Desert Cahuilla Indians Reservation, which is designated in a checkerboard pattern and includes lands to the immediate south of the Project site on the south side of future Avenue 64.

The Jaqueline Cochran Regional Airport is located in eastern Coachella Valley, near the community of Thermal and northeast of the Project site. The airport is operated by the County of Riverside. Lands within the Airport Influence Areas are subject to the County's Airport Land Use Compatibility Plan.

2.13.5 Existing Conditions

The Project site is located in an unincorporated portion of Riverside County within the community of Thermal. The urban center of the unincorporated community of Thermal is located approximately a mile to the northeast of the subject site, and the community of Mecca is approximately 4.4 miles to the southeast. Lands directly to the south of the Project property are part of the Torres Martinez Desert Cahuilla Indians Reservation.

The Project site is currently designated "Agriculture" in the Foundation Element of the General Plan and the Eastern Coachella Valley Area Plan (ECVAP). The western half of the 2 western quadrants of the Project site adjacent to Harrison Street are zoned as Controlled Development Area (W-2) and the remaining Project area is zoned as Heavy Agriculture (**Exhibit 2.13-2**). Additionally, the Project site is designated for Agriculture under the Riverside County General Plan.

The subject property is located at the western edge of transitional land uses that have for many years been evolving away from agriculture to a variety of urban uses, including planned mixed-use developments that are building out under approved Specific Plans. Smaller-scale equestrian-oriented ranch development has also occurred to the immediate east and northwest. The nearest urban center is the community of Mecca located 5± miles southeast of the subject property. The ECVAP also anticipates the eventual development of an urban center for the Vista Santa Rosa community, which would be approximately 3.5 miles northwest of the subject site.

The Kohl Ranch Specific Plan

The Kohl Ranch Specific Plan encompasses 2,162.65± acres and is located directly to the east, northeast and north of the subject site, and is approved to construct approximately 7,161 dwelling units.[1] Approved residential densities range from Medium Density Residential (3.3± du/ac) to Very High Residential (15.5± du/ac). The Kohl Ranch Specific Plan also provides 277± acres of Mixed-Use and Mixed-Use/Air Park that also provides for up to 159 residential units. Commercial retail uses are assigned to 28.27 acres and Heavy Industrial is assigned to 81.17 acres. Also see **Exhibit 2.13-1**.

[1] The Kohl Ranch Specific Plan No. 303, Amd. No. 2, adopted November 6, 2018.

Jacqueline Cochran Regional Airport (JCRA)

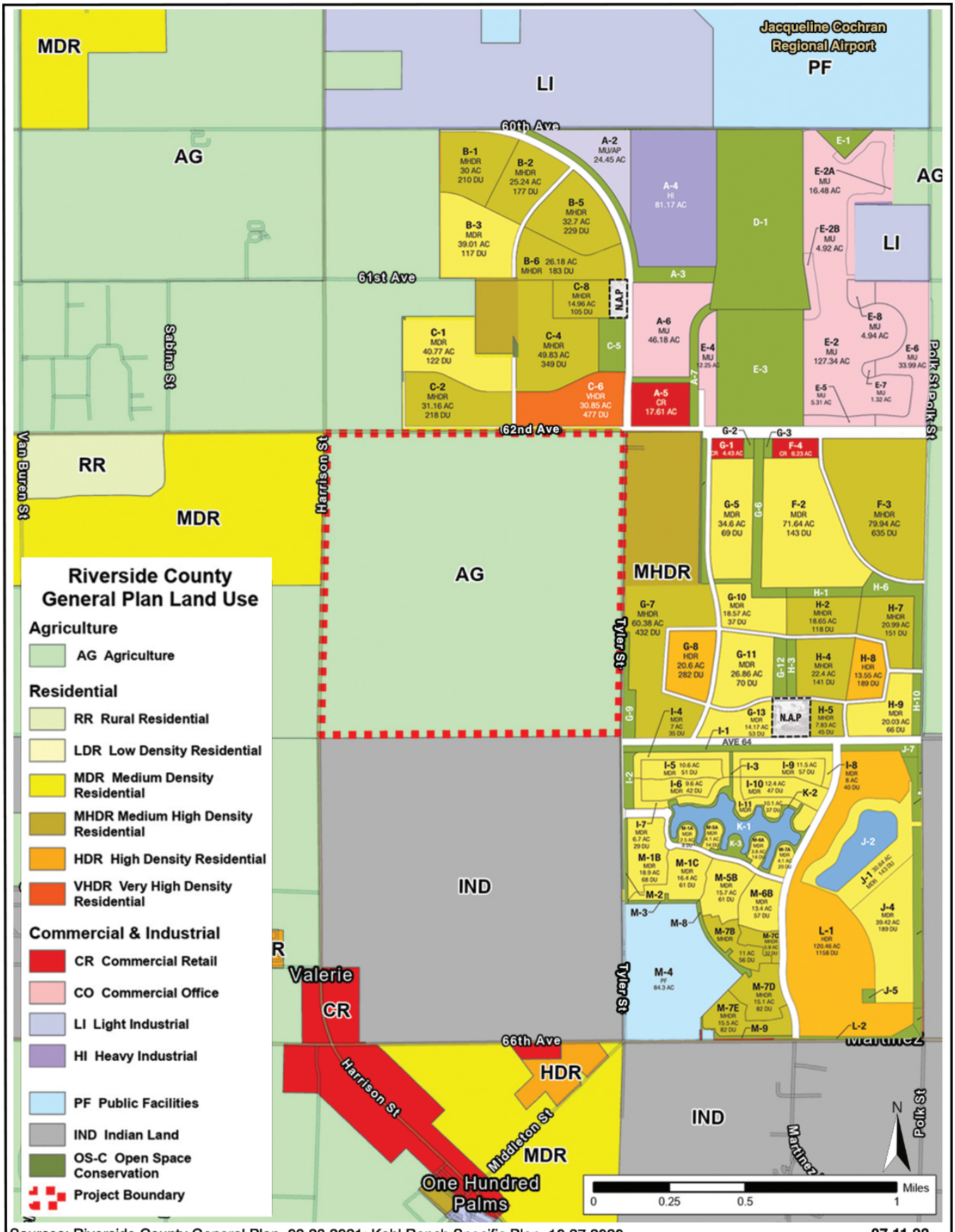
The nearest runway of the Jacqueline Cochran Regional Airport (JCRA) lies approximately 6,400 feet northeast of the subject site. The Thermal Ranch Project site falls within the Airport Influence Area of the JCRA as shown on the Airport Land Use Compatibility Plan. The majority of the Project site is located in Zone D, with a small portion (6.50± acres) in the southwest corner located in Zone E. For purposes of analysis, the Project is analyzed as if entirely located within Zone D, although the site's location at the outer edge of Zone D and inclusive of Zone E is also worthy of consideration.

Approved Tentative Tract Maps (TTM) No. 32693 and 32694

The lands included in these tract maps are located immediately west of Harrison Street and the subject property and immediately south of Avenue 62, extending from Harrison Street to Van Buren Street. Combined, these two subdivisions are approved for the development of up to 775 dwelling units. TTM 32694 subdivides 396 acres into 547 residential lots with common areas, including recreational trails, equestrian pastures, and open space lot, two (2) lots for equestrian uses, and one (1) lot for a school. TTM 32693 subdivides 162 acres into 228 single family residential lots with common areas, including recreational trails, equestrian pastures, and open space lots, and one (1) lot for an equestrian use. Residential lots range from one unit per acre to 3-5 units per acre.

CVWD Middleton Reservoir 7802-1 Site

The existing CVWD Middleton Reservoir 7802-1 site located 2.4± miles southwest of the Project site, currently hosts a CVWD 2.5 million tank and is planned for multiple tanks. The existing reservoir site is fully graded and located behind an earthen berm with existing access and site security.



Sources: Riverside County General Plan, 09.28.2021; Kohl Ranch Specific Plan, 10.27.2020

07.11.23

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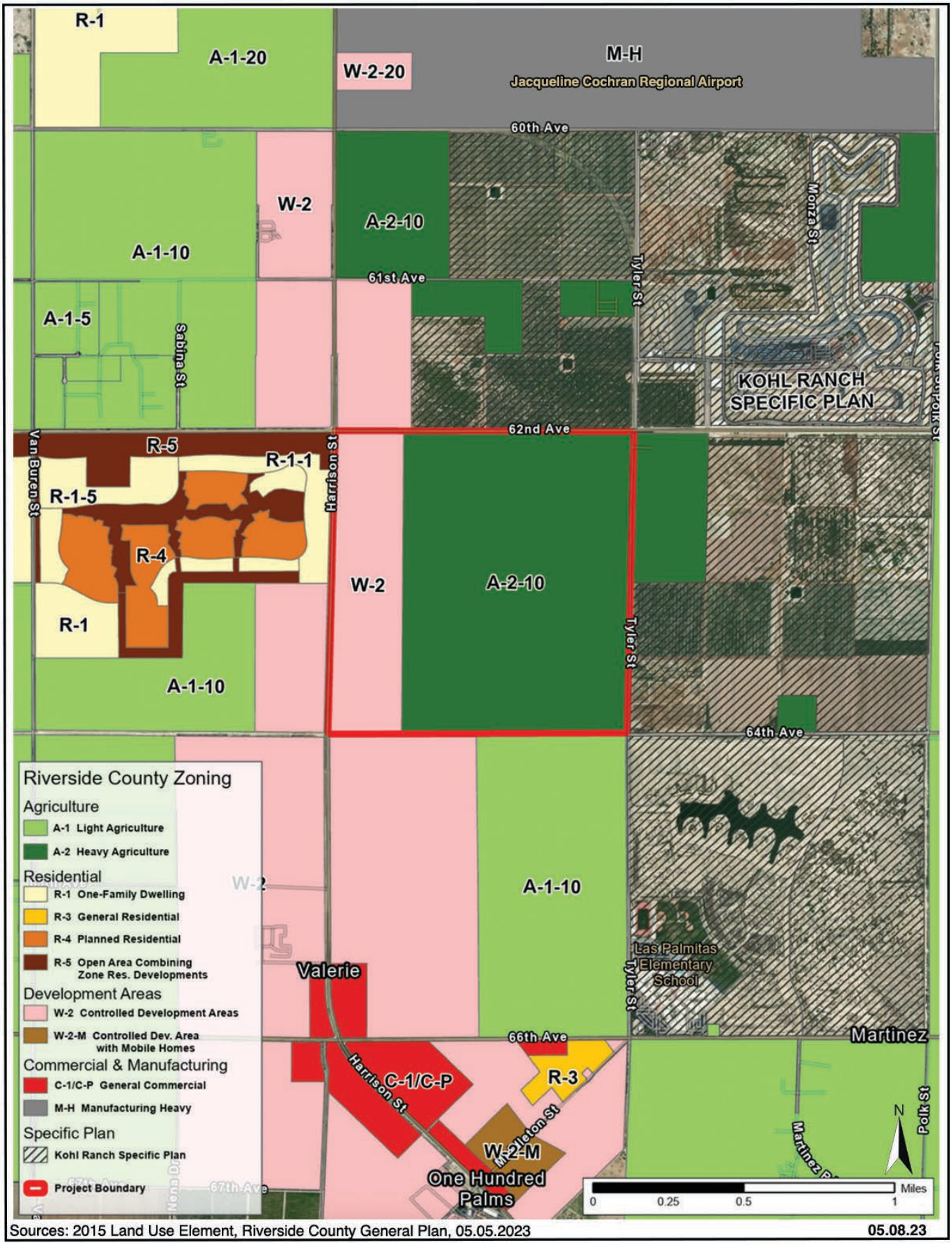
Thermal Ranch Specific Plan EIR
Existing Land Use Designations
Thermal, California

Exhibit
2.13-1



Sources: 2015 Land Use Element, Riverside County General Plan, 05.05.2023

05.08.23

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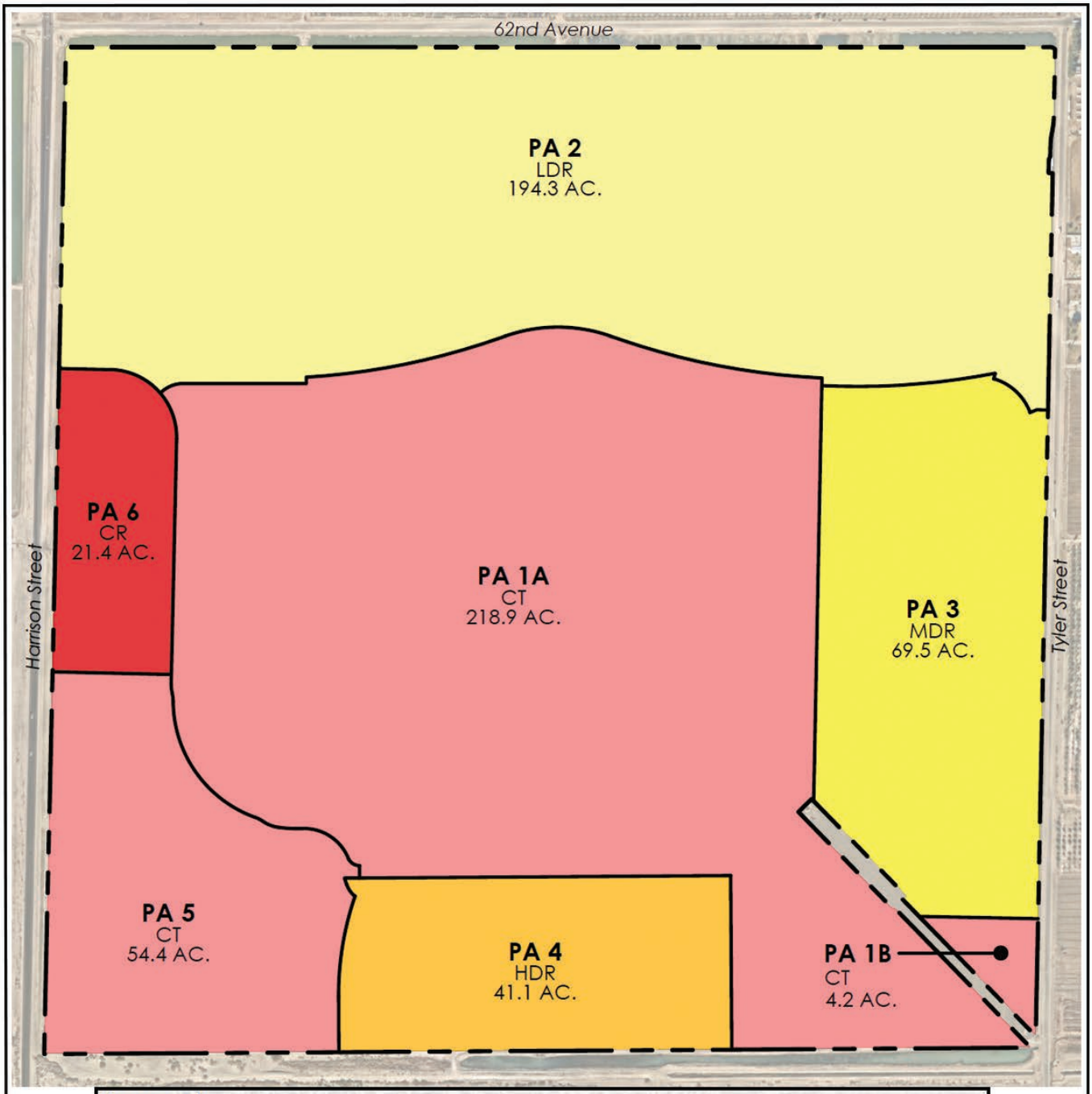
Thermal Ranch Specific Plan EIR
Existing Zoning
Thermal, California

Exhibit
2.13-2



Legend

Symbol	Description / Planning Area	Land Use Code	Land Use Name	Acreage
	Project Boundary	-	-	-
	Planning Area Boundary	-	-	-
	PA 1	CT	Tourist Commercial	223.1
	PA 2	LDR	Low Density Residential	194.3
	PA 3	MDR	Medium Density Residential	69.5
	PA 4	HDR	High Density Residential	41.1
	PA 5	CT	Tourist Commercial	54.4
	PA 6	CR	Commercial Retail	21.4

Source: MSA Consulting, 02.16.2023

N

05.09.23

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Thermal Ranch Specific Plan EIR
Proposed Land Uses
Thermal, California

Exhibit
2.13-3

2.13.6 Project Impacts

The applicant proposes a change of the Foundation Element land use designation on the subject property from “Agriculture” to “Community Development”, and also proposes to apply a variety of ECVAP land use designations consistent with proposed underlying land uses. Consistency zoning is also proposed as a part of this Project, with proposed zoning designations that correspond to the proposed uses and General Plan and ECVAP land use designations. The Project application includes Tentative Tract Map (TTM) No. 38578, three plot plan applications, and a General Plan Amendment (GPA) and Change of Zone (CZ).

Proposed Land Use Designations

The Project proposes the development of an approximately 619.1-acre equestrian-oriented community. It will result in a mix of uses centered around a 231.1-acre equestrian center and related show facilities including barns, stables, and arenas. Surrounding the central facilities will be various complementary uses, including residential neighborhoods with a mix of housing types and densities, resort and hospitality development, and neighborhood commercial. The Project is made up of six Planning Areas within the proposed Community Development Foundation. These Planning Areas, which would be developed in phases, would include lands designated for Low, Medium, and High Density Residential, as well Commercial Tourist and Commercial Retail (Exhibit 2.13-3)

Table 2.13-1
Proposed Land Use Designations

Foundation Component	
Community Development The Community Development General Plan Foundation Component depicts areas where urban and suburban development is appropriate. It is the intent of this Foundation Component to provide a breadth of land uses that foster variety and choice, accommodate a range of lifestyles, living and working conditions, and accommodate diverse community settings. The goal is to accommodate a balance of jobs, housing and services within communities to help achieve other aspects of the RCIP Vision, such as mobility, open space, and air quality goals. It is the expressed goal of the General Plan to focus future growth into those areas designated for Community Development and in a pattern that is adaptive to transit and reduces sprawl.	
Planning Area	**Land Use Designation**
PA 1	**Commercial Tourist (CT)** The Commercial Tourist land use designation allows for tourist-related commercial uses such as hotels, golf courses, recreation, and amusement facilities. Commercial Tourist uses will be permitted based on their compatibility with surrounding land uses. FAR range from 0.2 to 0.35.
PA 5	
PA 2	**Low Density Residential (LDR)** The Low Density Residential land use designation provides for the development of detached single family residential dwelling units and ancillary structures on large parcels. In the Community Development Foundation Component (unlike the Rural Community Foundation Component, which also permits the LDR designation), intensive animal-keeping uses are discouraged or would be limited to ensure compatibility between the LDR designation and other, more intense Community Development residential uses in the vicinity. Limited agriculture is permitted in this designation. The density range is from 2 dwelling units per acre to 1 dwelling per acre, which allows a minimum lot size of one – half acre.

PA 3	**Medium Density Residential (MDR)** The Medium Density Residential land use designation provides for the development of conventional single family detached houses and suburban subdivisions. Limited agriculture and animal-keeping uses, such as horses, are also allowed within this category. The density range is 2.0 to 5.0 dwelling units per acre, which allows for a lot size that typically ranges from 5,500 to 20,000 square feet.
PA 4	**High Density Residential (HDR)** The High Density Residential land use designation allows detached, small lot single family and attached single family homes, patio homes, zero lot line homes, multi-family apartments, duplexes, and townhouses. The potential for clustered development is provided for in this land use category. The density range Is 8.0 to 14.0 dwelling units per acre.
PA 6	**Commercial Retail (CR)** The Commercial Retail land use designation allows for the development of commercial retail uses at a neighborhood, community and regional level, as well as for professional office and tourist-oriented commercial uses. Commercial Retail uses will be permitted based on their compatibility with surround land uses, and based on the amount of Commercial Retail acreage already developed within County of Riverside unincorporated territory. The amount of land designated for Commercial Retail development within Riverside County's land use plan exceeds that amount which is anticipated to be necessary to serve Riverside County's population at build out. This oversupply will ensure that flexibility is preserved in site selection opportunities for future retail development within the county. Floor area ratios range from 0.2 to 0.35
Source: Riverside County General Plan Land Use Element (September 2021).	

The potential impacts of the proposed Project on land use and planning are discussed below.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

The Project is subject to the provisions of the Southern California Association of Governments (SCAG) 2020-20245 Regional Transportation Plan/Sustainable Communities Strategy (TRP/SCS), as well as the Riverside County General Plan and the Eastern Coachella Valley Area Plan. The site is also located within the planning boundaries of the Jacqueline Cochran Regional Airport and the Coachella Valley Multiple Specifies Habitat Conservation Plan. A community plan for the Unincorporated Community of Thermal is forthcoming, but it was not available for consideration in this EIR at the time of writing. The County's General Plan currently classifies the subject site under the Agriculture Foundation Component and the Agriculture land use designation. The site is zoned for Controlled Development (W-2) and Heavy Agriculture (A-Z-10). The following discussion describes current land use and related designations and policies, and evaluates the potential environmental effects of approving the Thermal Ranch Specific Plan and associated applications.

SCAG 2020-2045 RTP/SCS

The Sustainable Communities Strategy (SCS) component of the RTP/SCS provides land use and transportation strategies with the aim of meeting greenhouse gas emissions reduction targets, as mandated by AB 32 and SB 32, at the regional level by facilitating per-capita reductions in vehicles miles traveled (VMT). The SCS sets forth five sets of strategies: Focus growth near destinations and mobility options; Promote diverse housing choices; Leverage technology innovations; Support implementation of sustainability policies; and Promote a green region.

While some of the strategies provided in the SCS are targeted at local governments, the proposed Project is consistent with some of the strategies, as discussed in Section 2.5, Air Quality. For example, consistent with the goal to "Focus growth near destinations and mobility options," the proposed development would provide 1,362 units of housing on-site, in proximity to the employment and recreation opportunities associated with the proposed equestrian center and commercial space.

For those living on-site, this land use pattern would facilitate multimodal access to work and other destinations, and for those living in the eastern Coachella Valley more broadly, the jobs generated by this development could reduce commute times and distances. Consistent with the SCS goal to "Promote diverse housing choices," the Project will provide a range of housing options, including workforce housing, attached and detached single family homes, and resort condominiums.

Riverside County General Plan Land Use Element

As noted, the Project includes a Specific Plan (SP), General Plan Amendment (GPA) and a Change of Zone (CZ), three Plot Plans (PP), and a Tentative Tract Map (TTM). The Specific Plan and associated applications encompass 619.1 acres and consideration and approval requires public hearings before the County Planning Commission and Board of Supervisors.

The proposed Thermal Ranch GPA would change the site's General Plan Foundation designation from Agriculture to Community Development. It also proposes that the land use designation be changed from Agriculture to Tourist Commercial (TC), Regional Commercial (CR), Low Density Residential (LDR), Medium Density Residential (MDR), and High Density Residential (HDR). Under the proposed Change of Zone, the site would change approximately 475 acres currently designated Heavy Agriculture (A-Z-10) and the balance of the site (144± acres) currently designated for Controlled Development (W-2) to Specific Plan (SP). With the adoption of the proposed GPA and CZ, the proposed Project would be made consistent with the Foundational Component and land use designation of the General Plan and zoning ordinance.

A General Plan Consistency Analysis was prepared for the proposed Specific Plan in order to demonstrate consistency with applicable policies in the Riverside County General Plan (2015). This analysis is included in Appendix J of this EIR. The following section addresses the Project's compliance with applicable policies that are not also covered in the Eastern Coachella Valley Area Plan (see the subsequent section for a consistency analysis of the proposed Specific Plan with the ECVAP).

Agricultural Land Conversion Policy

The Riverside County General Plan Administration Element establishes the Agriculture Foundation Amendment Cycle. This provision allows up to 7% of designated agricultural lands in the area covered by the Eastern Coachella Valley and Western Coachella Valley Area Plans to be converted to another Foundation and Land Use designation during each 2.5-year cycle. In the event that the 7% threshold has been exceeded, the proposed project would be subject to review by an Agricultural Task Force.

The Thermal Ranch GPA proposes to convert 619± acres from the Agriculture Foundation into the Community Development Foundation. According to communication with County staff, the conversion of Agriculture Foundation land proposed by the Project will fall within the permitted 7% conversion for the current cycle.[2] Therefore, the adoption of the proposed General Plan Amendment will not conflict with the Riverside County General Plan, including the Land Use and Administration Elements.

[2] Personal communication, Russell Brady, Riverside County Planning. July 10, 2023.

Infrastructure and Services Policies

The infrastructure section of the General Plan Land Use Element includes policies LU 5.1 and 5.2, which require that new development does not exceed the capacity of public services and utilities. Domestic water, sanitary sewer, electric power and natural gas are all located near or in proximity of the Project site. Section 2.21: Utilities and Service Systems of this Draft EIR describes the capacity and location of public utilities that are available to provide urban-scale services to the Thermal Ranch site.

As discussed in Section 2.17 of this EIR, Public Services, the subject site is within an acceptable fire protection response time and is within the existing beat patrol area for the County Sheriff's Department. The Thermal Sheriff's Station is located at 86625 Airport Boulevard and approximately 2.85 miles from the Thermal Ranch site. County Fire Station 39 is located at 86911 58th Ave, Thermal approximately 3 miles northeast of the Project site with a response time of approximately five minutes.

As discussed in Section 2.17, the Project site is in proximity to multiple libraries and medical and healthcare facilities. The Project is within the boundary of the Coachella Valley Unified School District, which, as of the 2022/23 enrollment, had sufficient capacity to accommodate the number of students projected to be generated by the proposed development. It is appropriate to note that several CVUSD schools are located within one-half mile of the Thermal Ranch.

Land Use Policies

Land Use Compatibility policies LU 7.4 and 7.5 require protection against encroaching impacts from conflicting land uses and buffering between urban and rural/equestrian land uses. The Project site is located in an area with transitioning land uses from primarily rural and agricultural to increasing urbanization. Approved changes in area land use include the 2,162± acre Kohl Ranch Specific Plan, as well as the residential zoned and subdivided lands immediately west of the subject site. Local schools and other supporting land uses also support the conclusion that the Thermal Ranch Project will be consistent and compatible with the evolving character of the planning area and is not expected to result in impacts as a result of encroachment. The surrounding existing and planned arterial-scale roadways will further ensure that the Project does not interfere with area planning meant to avoid or mitigate an environmental effect.

Also see an evaluation of airport planning and associated land use policies included under Section 2.11, Hazards and Hazardous Materials.

Circulation Policies

Circulation policies LU 13.1 and 13.2 promote land use arrangements that reduce automobile dependance and prioritize development in areas with existing or planned transportation facilities. The public streets forming the Project boundaries are Avenue 62, Harrison Street, Tyler Street, and Avenue 64. Avenue 62 and Harrison Street are designated as multi-lane expressways and the Project will be easily accessible from existing and planned transportation facilities. Thermal Ranch is planned as an integrated community with resort, retail and service commercial uses. The Project circulation plan provides an internal trail system that is intended to minimize internal vehicular trips, instead facilitating travel between on-site uses on foot, or via bicycle, golfcart, or horseback. The Thermal Ranch Project will be compatible with these County General Plan circulation policies. The Project's compatibility with the Jacqueline Cochran Regional Airport is described below.

Eastern Coachella Valley Area Plan (ECVAP)

The Project site is located within the planning boundaries of the Eastern Coachella Valley Area Plan, a sub-area component of the County General Plan. The ECVAP states that the purpose of the land use plan is to maintain the character of the area, and to "*focus growth adjacent to where it currently exists*

and in areas where growth is desirable in order to bolster the economic base of the local communities."[3] The proposed Project would maintain the existing agricultural character of the site at least to the extent it would emphasize equestrian lifestyles, which are emphasized throughout the ECVAP.

Throughout the ECVAP, and specifically in the "Thermal Town Center" discussion, it states that *"it is recognized that new towns and planned communities will also play a role in the future development of Riverside County….. including areas of the Eastern Coachella Valley Area Plan that are not adjacent to existing cities or developed areas*."[4] Among the land uses and events that the ECVAP cites as beneficial to the community is the "*HITS (Horse Shows in the Sun) facilities and events*", which is the equestrian center planned for relocation to the Thermal Ranch Project. In this regard, the proposed equestrian-center community is complementary to the County's vision for the Thermal community.

The ECVAP planning area has been undergoing community-wide planning and urbanization for many years. Existing properties approved for residential development occur adjacent to and in the vicinity of the Project site to the east, northeast, and northwest. The Desert Mirage High School, Toro Canyon Middle School, and Las Palmitas Elementary School are located approximately one-half mile south of the subject property on Tyler Street. Furthermore, the ongoing buildout of the Kohl Ranch Specific Plan, including the auto-centric Thermal Club development, is bringing medium density residential development to the lands immediately just east and north of the Project.

Properties west of the Project site include approved Tentative Tract Maps No. 32693 and 32694 located immediately west of Harrison Street and south of Avenue 62, which are planned for up to 775 dwelling units at densities ranging from one unit per acre to 3 to 5 dwellings per acre. Land use trends in the Project planning area indicate that the current and planned uses are gradually urbanizing. Furthermore, and as noted above, the Project site is currently well served by utilities. Existing water and sewer mains run in the Harrison St and Avenue 62 rights-of-way, and existing electricity and telecommunication lines occur overhead along site boundaries.

As discussed above, the ECVAP aims to maintain the current character of the region and to concentrate growth in areas that are economically beneficial to existing communities. The Project site is currently in use for agriculture and is surrounded by both undeveloped and urbanizing lands that are well served by public services and facilities. Lands to the east, north, and west of the site are zoned for low to medium density residential development. In the context of existing and planned land uses, and the availability of public services and facilities, the Project site is in the path of future urbanization and is a logical extension of this pattern envisioned in the ECVAP. The proposed development would both be focused where growth is already occurring, and would be consistent with the equestrian character in prevalent in the area.

ECVAP Agricultural Lands

The Land Use section of the ECVAP includes provisions addressing agricultural lands, which require adherence to the Agriculture section of the County General Plan. Policies LU.1 to LU.12 of the General Plan (provided in Section 2.13.3, above), which pertain to the Agricultural Foundation Component, aim to "*provide for the continued and even expanded production of agricultural products by conserving areas appropriate for agriculture and relate infrastructure and supporting services."*[5]

The Project proposes the development of an equestrian-oriented, resort residential community on the approximately 619±-acre site, all of which is currently used for agriculture. The proposed development would constitute an encroachment into an area dominated by agriculture and related uses, and more

3 Eastern Coachella Valley Area Plan, September 2021, page 11.
4 Ibid.
5 County of Riverside General Plan Land Use Element (September 2021), p.LU-45.

recently hosting residential, institutional, recreational and other urban land uses. Agricultural lands in the area, including the subject property, are well served by the CVWD/USBR irrigation systems, tile drainage and agricultural drain facilities.

The potential environmental impacts associated with this farmland conversion are addressed in depth in Section 2.4 of this EIR, which addresses Agriculture and Forestry Resources. Using the Land Evaluation and Site Assessment Model (LESA) developed by the state Department of Conservation for analysis, it was determined that the subject site is a high-quality agricultural resource due to its size, soil quality, access to a reliable water supply for irrigation, and the presence of adjacent agricultural lands. Impacts related to Agricultural Resources were determined to be significant and unavoidable.

It should be noted that provision is made in the ECVAP for the conversion of agricultural lands in areas where expansion into urban uses is in keeping with the larger planning goals within the ECVAP planning areas. The subject western portion of the Thermal planning area has seen and is planned for continuing conversion of these lands to urban uses. To the extent the Project is consistent with the ECVAP's long-term plans for this area, the Project can be considered to be consistent with ag-related ECVAP guidance.

Nonetheless and in strict consideration of applicable policies, the conversion of this site to non-agricultural uses would be in conflict with certain General Plan agriculture policies, including LU-20.4: "*Encourage conservation of productive agricultural lands. Preserve prime agricultural lands for high-value crop production."* The proposed Project would therefore result in potential conflicts with policies that promote the conservation of productive agricultural lands.

ECVAP Policy Areas: Jacqueline Cochran Regional Airport Influence Area

The Policy Areas section of the ECVAP identifies areas with special or unique characteristics, including the Jacqueline Cochran Regional Airport (JCRA) and its Influence Area. Airport compatibility is determined by the County Airport Land Use Commission (ALUC). According to policy ECVAP 3.1, development in the JCRA Influence Area must comply with the applicable Airport Land Use Compatibility Plans and any other applicable policies in the County General Plan. The proposed Thermal Ranch Project lies approximately 6,400 feet southwest of the nearest runway of the JCRA and largely within zone of influence "D". Pursuant to consultation with ALUC staff, the Project proponent prepared an Airport Land Use Compatibility application. The Project's consistency with the Airport Land Use Compatibility Plan (ALUCP) is discussed in greater detail in this EIR in Section 2.11: Hazards and Hazardous Materials, and 2.15: Noise.

On July 13, 2023, the Riverside County ALUC held a public hearing on the Project's consistency with county-wide airport policy and the JCRA Land Use Compatibility Plan. The ALUC determined that as proposed and with proper implementation of Project development standards and guidelines, the Project will result in less than significant noise and safety hazards and will have a less than significant impact on airport operations. The commission therefore concluded that the Project is compatible with the JCRA Land Use Compatibility Plan.

In addition, the Project proponent submitted applications to the Federal Aviation Administration (FAA) asking that the FAA evaluate the potential impacts of the Project on airport operations. On June 12, 2023 the FAA determined that the Project will not have an adverse effect on aircraft navigation or create an obstruction to aircraft operations at the JCRA. Overall, the FAA and ALUC determined that, given the appropriate implementation of the Mitigation Measures provided in Section 2.11 (AIR-1 through AIR-7), the Project would not be subject to significant noise or safety hazards, nor would it adversely affect airport operations or aircraft navigation and operations. Therefore, as concluded by the Riverside County ALUC, the Project would not conflict with the applicable airport land use compatibility plans.

ECVAP Multipurpose Open Space

The Multipurpose Open Space section of the ECVAP includes policies pertaining to habitat conservation and the Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP). The Project's compliance with the CVMSHCP is discussed in greater detail in Section 2.6 of this EIR, Biological Resources.

The Project site is located within the CVMSHCP planning area but is not located within a Conservation Area. Two Conservation Areas, the Santa Rosa and San Jacinto Mountains Conservation Area and the Coachella Valley Stormwater Channel and Delta Conservation Area, are within three miles of the subject site. As stated in Section 2.6.6(a) of this EIR, development of the proposed Project is not expected to have any impacts on these Conservation Areas.

The Project will comply with the CVMSHCP policies and as discussed in Section 2.6 of this EIR, is not expected to impact any CVMSHCP-covered species on the Project site or the conservation areas located in the project vicinity. The Project proponent will pay an MSHCP development impact fee which is required of all new developments in the plan area and fund the ongoing assembly of conservation lands. Given that the habitat on the Project site has been disturbed and essentially removed over the course of decades of active cultivation, it would not be suitable for assembly into a conservation area. Given these facts, the Project is not expected to conflict with the CVMSHCP or with the related policies contained in the ECVAP.

CVWD Middleton Reservoir 7802-1 Site

The Project reservoir site was approved in 2002 by CVWD and has been partially improved to accommodate multiple tanks with one 2.5 mg tank having been built to date. The dedicated site is located on the lower slopes of the Martinez Canyon alluvial fan. The development of the Project reservoir at this location will not conflict with any land use plan or policy or regulation, including those adopted to avoid or mitigate adverse environmental impacts. There will be no impact.

Summary

The Project proposes to amend the County General Plan Foundation Element and Land Use Element based upon and to be implemented by the proposed Thermal Ranch Specific Plan and associated applications. The GPA and associated Change of Zone will align the Thermal Ranch Project with the Riverside County General Plan and the Eastern Coachella Valley Area Plan goals. No significant environmental impacts are expected to occur as a result of the proposed changes in land use, with the exception of impacts associated with the conversion of agricultural lands.

Analysis in the Agriculture and Forestry Resources section of this EIR determined that significant and unavoidable impacts could result from the proposed conversion of the Project site to non-agricultural uses. Nonetheless, the Project's proposed conversion of farmland the Agriculture Foundation Element to the Community Development Foundation falls within the County threshold of 7% conversion per 2.5-year cycle and, therefore, will not conflict with the General Plan Foundation Component or Administration Element of the County General Plan.

The Project has been thoroughly assessed by the County ALUC for conflicts or incompatibilities of the Project with current and future operations at the Jacqueline Cochran Regional Airport. The ALUC determined that the Project will not create any significant incompatibilities or conflict with the JCRA Land Use Compatibility Plan.

2.13.7 Mitigation Measures

As discussed above, the proposed Thermal Ranch Specific plan project will not cause or result in the division of any existing community or neighborhood. Therefore, no mitigation is required. With the approval of the Thermal Ranch GPA and CZ, the Specific Plan and associated applications will be consistent with the County General Plan and the ECVAP. The Project also lies outside of a Conservation Area as established by the Coachella Valley MSHCP, will pay appropriate development impact fees as provided for in the MSHCP for all development and will be consistent with the MSHCP and its goals and policies. No mitigation is required with regard to General Plan land use conformity or consistency with the Coachella Valley MSHCP.

The Riverside County ALUC reviewed the proposed Project and determined that the Thermal Ranch Project will be consistent and compatible with the Jacqueline Cochran Regional Airport Land Use Compatibility Plan. The FAA also conducted several obstruction evaluations for the Project and determined that the Project will not obstruct or adversely affect navigation at the airport. Therefore, no mitigation is required to ensure Project compatibility with the JCRA compatibility plan.

The Section 2.4 analysis of the Project's impacts on agricultural resources has determined that the Project has the potential to have a significant impact on these resources. However, the Project can also be found to be consistent with County's Agriculture Foundation Amendment Cycle in that the subject conversion does not exceed the County's 7% threshold for the current 2.5-year cycle. Therefore, the Project will not conflict with the General Plan Foundation Component or Administration Element of the County General Plan with regard to agricultural land conversion.

2.13.8 Significance After Mitigation

The impacts resulting from the proposed change in General Plan Land Use Element Foundation Component and policies will be less than significant.

2.13.9 Cumulative Impacts

The proposed General Plan Amendment and Change of Zone apply only to the subject property. As noted, the Project will not contribute to the division or segregation of any existing community or neighborhood. In addition, the Project GPA, CZ and Specific Plan Project has been found to be consistent with applicable land use and zoning designations, approved development on neighboring properties, as well as with the JCRA Land Use Compatibility Plan. Finally, the conversion of agricultural land is consistent with the County's General Plan policies and projections for a limited amount of acreage to be converted from agricultural to community development uses every 7 years. Therefore, the Project's impacts on surrounding land use and applicable land use policies will not be cumulatively considerable. Cumulative impacts related to the conversion of farmland resulting from proposed change of General Plan Land Use Element Foundation Component are addressed in Section 2.4.9.

2.14 Mineral and Paleontology Resources

2.14.1 Introduction

This section of the EIR describes existing conditions with regard to mineral and paleontological resources within the Project planning area and analyzes the potential impacts of the project on these resources. The region is important in terms of construction-related mineral resources and their production. Mineral resources are largely associated with fluvial deposits in the Indio Hills, Mecca Hills, and foothills of the Little San Bernardino Mountains. The proposed Project will depend on aggregate for concrete and asphalt production, as well as direct use. Local paleontological resources are limited to bivalves associated with various standards of ancient Lake Cahuilla. A wide range of data and information, ranging from research to regional-scale planning and environmental documents, have been used in researching and analyzing the Project and its potential effects.

2.14.2 Thresholds of Significance

The thresholds of significance analyzed herein have been taken from Appendix G of the State CEQA Guidelines and from the Riverside County Initial Study Checklist. For purposes of this EIR, the proposed Project would have a significant effect on mineral resources if it were to:

a) Result in the loss of availability of a known mineral resource that would be of value to the region or the residents of the State?
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?
c) Potentially expose people or property to hazards from proposed, existing, or abandoned quarries or mines?
d) Directly or indirectly destroy a unique paleontological resource, site, or unique geologic feature?[1]

2.14.3 Regulatory Framework

Federal

No federal regulations relative to mineral resources would be applicable to the proposed Project.

State

Surface Mining and Reclamation Act of 1975

The State Mining and Reclamation Act (SMARA) was enacted in 1975 in response to land use conflicts between urban growth and essential mineral production. In accordance with SMARA and as discussed below, the State has established the Mineral Land Classification System to help identify and protect mineral resources in areas that are subject to urban expansion or other irreversible land uses that would preclude mineral extraction. Protected mineral resources include construction materials, industrial and chemical mineral materials, metallic and rare minerals, and non-fluid mineral fuels.

Regional and Local

Riverside County General Plan

OS 14.2 Restrict incompatible land uses within the impact area of existing or potential surface mining areas.

[1] A stand-alone threshold in the RivCo Initial Study Checklist, the threshold for impacts to paleontological resources is included in this resource discussion consistent with Appendix G of the CEQA Guidelines.

OS 14.3 Prohibit land uses incompatible with mineral resource recovery within areas designated Open Space-Mineral Resources and within areas designated by the State Mining and Geology Board as being of regional or statewide significance.

OS 19.6 Whenever existing information indicates that a site proposed for development has high paleontological sensitivity as shown on Figure OS-8 OS-7, a paleontological resource impact mitigation program (PRIMP) shall be filed with the Riverside County Geologist prior to site grading. The PRIMP shall specify the steps to be taken to mitigate impacts to paleontological resources.

OS 19.8 Whenever existing information indicates that a site proposed for development has undetermined paleontological sensitivity as shown on Figure OS-8, a report shall be filed with the County Geologist documenting the extent and potential significance of the paleontological resources on site and identifying mitigation measures for the fossil and for impacts to significant paleontological resources prior to approval of that department.

The Eastern Coachella Valley Area Plan (ECVAP) is a subarea plan under the County of Riverside General Plan, which encompasses several unincorporated communities in the eastern Coachella Valley and lays forth long-term visions, policy, and management regarding housing, population growth, conservation and open space resources, education, agriculture, intergovernmental cooperation, the local economy, and air quality.

No other local or regional regulations relative to mineral or paleontological resources would be applicable to the proposed Project.

2.14.4 Environmental Setting

The mountains and foothills surrounding the Coachella Valley have a history of mining that dates back to the late 1800s. Mines in the Santa Rosa and San Jacinto National Monument have produced gold, asbestos, beryllium, limestone, tungsten, copper, tourmaline, and garnet. With the exception of limestone, however, these mineral deposits have not been extensively mined, are limited, or are not precisely known.

The surrounding mountain ranges and eroding hills have filled the valley with deep and extensive deposits of sand and gravel, known collectively as aggregate. Aggregate is used for asphalt, concrete, road base, stucco, plaster, and other similar construction materials. The Palm Springs Production-Consumption (P-C) Region is a 631 square mile area in the Coachella Valley that is heavily mined for aggregate. [2,3,4] This region covers the area east of Cabazon, south of Morongo Valley and Joshua Tree National Park, west of the Mecca Hills, and north of the community of Mecca and east of the San Jacinto Mountains. According to California Geological Survey, the Palm Springs P-C Region has 30,072 acres classified as land where significant mineral deposits are present, or where it is judged that a high likelihood for their presence exists. The Palm Springs region contains 3.2± billion tons of aggregate resources.

The subject property is located on the Valerie Quad of the *Mineral Land Classification Map* published by the California Department of Conservation-Division of Mines and Geology (now the California Geological

2 Op cit. (BLM 2002)
3 Op cit. CA Mines and Geology. 1988.
4 The Palm Springs Production-Consumption Region generally extends from Cabazon on the west to Mecca on the east.

Survey). The mineral mapping and classification identifies aggregate materials in the 629± square mile Palm Springs Production-Consumption Region. The report was prepared to determine quantities of available aggregate resources, and to evaluate the adequacy of permitted aggregate reserves for meeting the future needs of each region. The report assigned Mineral Resource Zone (MRZ) classifications to all lands within the region. MRZ classifications describe the location of significant PCC-grade aggregate deposits as follows.

> MRZ-1: Areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence. Includes Quaternary alluvial deposits of the central upper Coachella Valley, the Imperial Formation of the Indio Hills, Garnet Hill, the hills west of Whitewater River Canyon, and the Borrego Formation of the southeastern Coachella Valley.
>
> MRZ-2: Areas where adequate information indicates that significant mineral deposits are present, or where it is judged that a high likelihood for their presence exists. Includes the following areas:
>
> 1) Whitewater River floodplain extending from the Whitewater River Trout Farm to the City of Palm Springs, 2) San Gorgonio River floodplain from Cabazon to its confluence with the Whitewater River, 3) the river channel in the lower part of Little Morongo Canyon, 4) a small alluvial wash north of Thousand Palms, 5) the confluent alluvial fans of Berdoo and West Berdoo Canyons, 6) the alluvial fan of Fargo Canyon, 7) an alluvial fan north of Indio, and 8) an alluvial wash and fan east of Thermal.
>
> MRZ-3: Areas containing mineral deposits, the significance of which cannot be evaluated from available data. Includes lands composed of Cabazon Fanglomerate, Ocotillo Conglomerate, Painted Hills Formation, Palm Springs Formation, Mecca Formation, and metamorphic rocks of the San Jacinto Mountains and the San Gorgonio Complex.

The Project site is located outside the Palm Spring P-C mineral resources mapping area, the closest mapped resource area occurring approximately one mile north of the site. Mapped mineral resource lands in the Project vicinity are classified as MRZ-1,[5] indicating that no significant mineral resources occur or are expected to occur in this area. The proposed Project area and much of the surrounding land is in agricultural use, is developed or otherwise unavailable for mining.

The Coachella Valley has nearly a dozen permitted aggregate operations, which contain approximately 272 million tons of mineable aggregate.[6] These reserves are expected to meet the demand and provide adequate supply at current rates of consumption for approximately 130 years. The ECVAP identifies 737 acres designated as "Open Space-Mineral Resources (OS-MIN)[7] Existing permitted sand and gravel operations located in the vicinity of the subject property include the following:

Indio Quarry/Indio Hills Fan: Sand and gravel is the mineral commodity excavated from the Indio Quarry. The subject resource area consists of a moderate sized deposit that is located within 750 acres of an alluvial fan adjacent to and immediately south of the Indio Hills. It is located in the CVMSHCP Indio Hills Palms Conservation Area. The deposit contains approximately 73 million tons of aggregate resource to an average depth of approximately 200 feet and includes aggregate meeting the specifications for making Portland cement concrete-grade aggregate. The Indio quarry is the largest producer of concrete (PCC)-grade aggregate material in the Palm Springs Production-Consumption (P-C) Region.

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5 Figure OS-6 Mineral Resources Zones, County of Riverside General Plan, Multipurpose Open Space Element, 2015.

6 Ibid.

7 Table 2, Riverside County General Plan, East Coachella Valley Area Plan, 9.28.21

Thermal Area 1: Thermal Area 1 includes deposits on an alluvial fan and wash near the mouth of an unnamed canyon about three miles east of the community of Therma. The area is located adjacent to the CVMSHC Mecca Hills/Orocopia Mountains Conservation Area. PCC-grade aggregate is produced in the upper and lower portions of this deposit. These lesser-quality deposits have a relatively high (65%) ratio of sand to gravel. The deposit is crossed by the Coachella Branch of the All-American Canal, and the southwesterly deposit is now inactive.

Thermal Area 2: Another approved and active quarry in this area encompasses 120± acres and is a source of PCC-grade aggregate and clay deposits occurring on adjoining alluvium. Permitted in 1995-96, this site is located within the CVMSHCP Mecca Hills/Orocopia Mountains Conservation Area and is east of the Coachella Branch Canal and the mining area described immediately above.

Naturally occurring mineral deposits are nonrenewable resources that cannot be replaced once they are depleted. The primary mineral resources within the Coachella Valley are aggregates such as sand, gravel, and crushed stone. Other mineral deposits in the region are generally limited to rocky outcroppings within the Little San Bernardino and Santa Rosa Mountains and have not been mined. These resources include copper, limestone, specialty sands, and tungsten.

There are decorative stone deposits that are being mined on public land in the Painted Hills area west of Desert Hot Springs, as well as clay deposits at the base of the Mecca Hills east of Thermal on public and private land. These clay deposits may be used as an impermeable layer for lining landfills, ponds, and similar construction applications, and some of these deposits have been permitted for mining.

Paleontological Resources
In general, the defining character of fossils or fossil deposits is their geologic age, which is typically older than 10,000 years, the generally accepted temporal boundary marking the end of the last late Pleistocene glaciation and the beginning of the current Holocene epoch. Fossil resources generally occur in areas of sedimentary rock (e.g., sandstone, siltstone, mudstone, claystone, and shale) or fluvial sands, mud, and silt. Occasionally fossils may be exposed at the surface through the process of natural erosion or as a result of human disturbances; however, they generally lay buried beneath surficial soils. Thus, the absence of fossils on the surface does not preclude the possibility of them being present in subsurface deposits, while the presence of fossils at the surface is often a good indication that more remains may be found in the subsurface.

2.14.5 Existing Conditions

The subject property is comprised of sandy and silty soils to a depth of at least 20 feet, according to subsurface investigations performed as a part of the Project geotechnical and soils analysis.[8] The Project site is also located more than two miles from the point of contact of alluvial fans and foothills of the Santa Rosa Mountains to the west. As noted above, the subject property and surrounding lands are located south and outside of mineral resource mapping, the closest mapped area occurring one mile to the north and designated MRZ-1 with known localities where sand and/or aggregate have previously been mined.

Mapping for the subject and nearby lands appears to indicate that no significant mineral resources occur or are expected to occur in this area. The proposed Project area and much of the surrounding land is in active agriculture, is developed or otherwise unavailable for mining. The Coachella Valley has nearly a dozen permitted aggregate operations, including those described above, which contain approximately 272 million tons of mineable aggregate. These reserves are expected to meet the demand and provide adequate supply at current rates of consumption for approximately 130 years.

[8] Appendix A Exploration Borings Logs prepared by Earth Systems Southwest, 2004, cited in Updated Geotechnical Report, Equestrian Estates Development, Petra Geosciences, April 13, 2022

Paleontological Resources

The County General Plan maps large portions of the Coachella Valley, including the Project site, as having a high sensitivity for the occurrence of paleontological resources. In the Project vicinity, these are largely associated with common fossil bivalves from earlier stands of Ancient Lake Cahuilla, which reached an elevation of approximately 42 feet above mean sea level. Evidence of this high stand can be clearly seen along the edge of the Santa Rosa Mountains where a "bathtub" ring can be seen.

In addition to lacustrine sediments from the Coachella soil series and fluvial sediments from the Gilman soil series, several shell and shell fragments of freshwater mollusks have been observed in the Project vicinity. Previous paleontological surveys conducted in the area have identified three species of freshwater mollusks, *Physa* sp., *Tryonia* sp., and *Gyraulus* sp., which are among the most common species of freshwater mollusks to be found in the lakebed sediments. While the lakebed sediments are often called the Quaternary Lake Cahuilla beds (Rogers 1965; Dibblee 1954: Plate 3; Scott 2010), no Pleistocene-age fossils localities have been reported from these lakebed sediments or their equivalent strata in the Coachella Valley (CRM TECH 2010).

During site-specific paleontological resource surveys conducted in 2006 and 2022[9] [10] scattered shells and shell fragments from freshwater snails that once thrived in the Lake Cahuilla of the Holocene era, such as *Gyraulus* sp. and *Physa* sp., were observed in abundance in the areas surveyed. Also present on the surface were shell fragments of the freshwater mussel, *Anodonta* sp., further documenting Holocene-era lakebed deposits. No fish bone or other vertebrate fossil remains were observed during field surveys. The Project site has been deeply disturbed during the installation of tile drains and ongoing discing and cultivation.

The Project site is essentially flat and featureless, having been graded over the course of many years to facilitate crop irrigation. There are no unique geologic features on the site or in the vicinity.

CVWD Middleton Reservoir 7802-1 Site

The Project reservoir site, located 2.4± miles southwest of the Project site, currently hosts a CVWD 2.5 million gallon tank and is planned and improved for multiple tanks. It is located on deep alluvium at an elevation of approximately 68 feet above sea level and above the highest stand of Ancient Lake Cahuilla. The Middleton Reservoir site is designated as having a "Low" potential to yield important paleontological resources (RivCo General Plan Exhibit OS-8). The existing reservoir site is fully graded and located behind an earthen berm with existing access and site security.

2.14.6 Project Impacts

a) Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

c) Potentially expose people or property to hazards from proposed, existing, or abandoned quarries or mines?

[9] Update to Paleontological Resource Assessment Report – Thermal Ranch Specific Plan (SP No. 00401) prepared by CRM Tech, October 20, 2022.

[10] Paleontological Resources Assessment Report – Assessor's Parcel Nos. 751-020-002, -003, -006, and -007, prepared by CRM TECH, March 28, 2006 and Revised June 14, 2006.

The subject property is located on the valley floor and approximately 2.8 miles east of alluvial washes emanating from the Santa Rosa Mountains, where minable sands and aggregate occur. On-site soils are sands, silt and fine silt and are not considered a potential source of aggregate and a limited source for sand. The nearest mapped mineral resource zone is located one mile north. The site is not mapped or otherwise identified as a locally-important mineral resource recovery site delineated on the County General Plan or the ECVAP. The subject property is not located in proximity to any existing or abandoned quarries or mines.

Furthermore, the Project planning area has been in active cultivation, ranches, airport and other uses for many years and in recent time has experienced encroaching urbanization from the north and east, further reducing the site and vicinity's value as a mineral resource area. The local market is demonstrably well supplied for the foreseeable future through a variety of active mining permits in the valley and vicinity. The proposed Project will have a less than significant impact on or result in the loss of availability of a known mineral resource of local, regional or state-wide value or a so-delineated resource recovery site.

There are no proposed, existing, or abandoned quarries or mines in the project vicinity and the Project will not expose people or property to hazards associated with mining or mineral extraction activities.

CVWD Middleton Reservoir 7802-1 Site

The Middleton reservoir site has been previously disturbed through decades of agricultural use. In 2002, CVWD approved the site for the development of multiple water tanks. The site currently hosts one 2.5 mg tank. The existing 25-foot berm screening the reservoir site will be shifted 35± feet north to accommodate the Project reservoir. Given the site's developed state, development of the Project reservoir will not result in the loss of a known mineral resource or locally important resource site, or potentially expose people or property to proposed, existing, or abandoned quarries or mines. There will be no significant impacts to mineral resources from development of the Project reservoir.

d) ***Directly or indirectly destroy a unique paleontological resource, site, or unique geologic feature?***

The Project site and surround valley floor are designated with a "High" potential for sensitive paleontological resources based on 1999 resource data (RivCo General Plan 2015). The Project site has been disturbed by extensive agricultural activity for many years, which has included mass grading, installation of sub-surface tile drains, a network of main and lateral irrigation lines, and field discing multiple times a year. Prior to construction of the USBR Dike 4 flood protection levee to the west, the Project site was subject to sediment deposition from mountain and foothill runoff.

Based upon these previous disturbances and the nature of the fluvial deposits at and around the Project site, the Project area has a low potential to harbor significant vertebrate fossil remains and none were found during site surveys. Resources observed on site included scattered Holocene era shells and shell fragments as were shell fragments of a species of Holocene era freshwater mussel. No fish bone or other vertebrate fossil remains were observed during field surveys. The Project site has been deeply disturbed during the installation of tile drains and ongoing discing and cultivation. Extensive research, specimen collection and documentation have been conducted in the area and there is limited potential for new species of invertebrates beyond those identified above and studied extensively.

The two paleontological resource assessments (CRM TECH 2006 and 2022) established site-specific conditions and the likelihood of occurrence of important new resources on the Project site. Buildout of the proposed Project is not expected to have significant adverse impacts on any unique paleontological resources or unique geologic feature. Nonetheless, the paleontological resources reports recommend measures to further ensure that impacts will be less than significant.

There are no unique geologic features on the site or in the vicinity.

CVWD Middleton Reservoir 7802-1 Site

The Middleton reservoir site is designated as having a "Low" potential to yield important paleontological resources (RivCo General Plan Exhibit OS-8). It is located on deep alluvium at an elevation of 61± feet above sea level and above the highest stand of Ancient Lake Cahuilla. The Middleton reservoir site currently hosts one 2.5 mg tank. Given the site's developed state, development of the Project reservoir is not expected to result in the direct or indirect loss of a known unique paleontological resource or site, or unique geological feature. There will be no significant impacts to paleontological resources from development of the Project reservoir.

2.14.7 Mitigation Measures

Mineral Resources

No mitigation measures are required.

Paleontological Resources

The Project site is mapped in the County's General Plan as having a High potential for paleontological resources (fossils). Proposed Project site grading/earthmoving activities could potentially impact this resource. Therefore, prior to issuance of grading permits the following actions shall be taken to ensure that impacts to paleontological resources are less than significant.

PALEO 1. The applicant shall retain a qualified paleontologist approved by the County to create and implement a project-specific plan for monitoring site grading/earthmoving activities (project paleontologist).

PALEO 2. The project paleontologist retained shall review the approved development plan and grading plan and conduct any pre-construction work necessary to render ~~appropriate~~ monitoring and mitigation requirements as appropriate. These requirements shall be documented by the Project paleontologist in a Paleontological Resource Impact Mitigation Program (PRIMP). This PRIMP shall be submitted for approval by the County Geologist prior to issuance of a Grading Permit. Information to be contained in the PRIMP, at a minimum and in addition to other industry standards and Society of Vertebrate Paleontology standards, are as follows:

a. A corresponding and active County Grading Permit (BGR) Number must be included in the title of the report. PRIMP reports submitted without a BGR number in the title will not be reviewed.
b. PRIMP must be accompanied by the final grading plan for the subject project.
c. Description of the proposed site and planned grading operations.
d. Description of the level of monitoring required for all earth-moving activities in the project area.
e. Identification and qualifications of the qualified paleontological monitor to be employed for grading operations monitoring.
f. Identification of personnel with authority and responsibility to temporarily halt or divert grading equipment to allow for recovery of large specimens.
g. Direction for any fossil discoveries to be immediately reported to the property owner who in turn will immediately notify the County Geologist of the discovery.
h. Means and methods to be employed by the paleontological monitor to quickly salvage fossils as they are unearthed to avoid construction delays.
i. Sampling of sediments that are likely to contain the remains of small fossil invertebrates and vertebrates.
j. Procedures and protocol for collecting and processing of samples and specimens.

k. Fossil identification and curation procedures to be employed.
l. Identification of the permanent repository to receive any recovered fossil material. *Pursuant the County "SABER Policy", paleontological fossils found in the County should, by preference, be directed to the Western Science Center in the City of Hemet. A written agreement between the property owner/developer and the repository must be in place prior to site grading.
m. All pertinent exhibits, maps, and references.
n. Procedures for reporting of findings.
o. Identification and acknowledgement of the developer for the content of the PRIMP as well as acceptance of financial responsibility for monitoring, reporting and curation fees. The property owner and/or applicant on whose land the paleontological fossils are discovered shall provide appropriate funding for monitoring, reporting, delivery and curating the fossils at the institution where the fossils will be placed and will provide confirmation to the County that such funding has been paid to the institution. All reports shall be signed by the qualified paleontologist responsible for the report's content. All reports shall also be signed by all other parties responsible for the report's content (eg. Professional Geologist), as necessary a signed electronic copy of the report, project plans, and all required review applications shall be uploaded to the County's PLUS Online System.

Please use the following for this purpose: https://planning.rctlma.org/sites/g/files/aldnop416/files/users/user91/Filing_Instructions_Paleontological_Report_Review_Application.pdfhttps://planning.rctlma.org/sites/g/files/aldnop416/files/users/user91/PLUS_Online_Upload_Instructions_Paleontology.pdfhttps://planning.rctlma.org/sites/g/files/aldnop416/files/users/user91/Supplemental_Information_Form_PALEO.pdf.

Reports and/or review applications are not to be submitted directly to the County Geologist, Project Planner, Land Use Counter, Plan Check, or any other County office. In addition, the applicant shall submit proof of hiring (i.e., copy of executed contract, retainer agreement, etc.) a project paleontologist for the in-grading implementation of the PRIMP. (Safeguard Artifacts Being Excavated in Riverside County (SABER)).

2.14.8 Significance After Mitigation

There will be less than significant impacts to mineral and paleontological resources as a consequence of the construction of this Project. Potential impacts to paleontological resources will be reduced to less than significant levels with implementation of the above mitigation.

2.14.9 Cumulative Impacts

As development in the valley continues, the demand for mineral resources will also continue to expand. The proposed Project will result in a limited demand for the total aggregate resources currently permitted for extraction in the Coachella Valley. Other construction projects, particularly those requiring foundations, concrete and stucco for structures such as homes and commercial buildings, will collectively result in a much higher demand for aggregate than that created by the proposed Project. Although the aggregate required for the proposed Project will contribute to the continued reduction in this material, the Project's impacts will not be cumulatively considerable.

Extensive scientific research and documentation of Holocene freshwater mussels and snails has occurred over the past several decades, which have provided a complete picture of nonvertebrate Holocene remains and fossils associated with the lacustrine deposits of Holocene Ancient Lake Cahuilla. Any additional information collected at the Project site will further contribute to the scientific understanding of these resources. Impacts to unique paleontological resources will not be cumulatively considerable.

There will be no cumulatively considerable impacts to unique geologic features.

2.15 Noise

2.15.1 Introduction

This section evaluates the potential for noise and groundborne vibration impacts resulting from the proposed Project, including impacts associated with a substantial temporary and/or permanent increase in ambient noise levels in the vicinity of the Project site; exposure of people in the vicinity of the Project to excessive noise or groundborne vibration levels and whether this exposure is in excess of standards established in the Riverside County General Plan Noise Element and the County Noise Ordinance.

This section is based on the Thermal Ranch Specific Plan Noise and Vibration Analysis prepared for the Project by Urban Crossroads (Appendix H), as well as on noise and vibration information provided in the County General Plan (2015) and other sources.

2.15.2 Thresholds of Significance

Airport Noise

a) For a project located within an airport land use plan or, where such a plan has not been adopted, within two (2) miles of a public airport or public use airport would the project expose people residing or working in the project area to excessive noise levels?
b) For a project located within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

The Initial Study determined that the Project would result in "No Impact" for the Airport Noise threshold question (b), above. Therefore, it is not analyzed further in this EIR.

Noise Effects by the Project

a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan, noise ordinance, or applicable standards of other agencies?
b) Generation of excessive ground-borne vibration or ground-borne noise levels?

2.15.3 Regulatory Framework

Federal

Noise Control Act

The Noise Control Act of 1972 was enacted to promulgate noise emission standards for interstate commerce, assist state and local abatement efforts, and encourage noise education and research. The Act is implemented by a number of agencies, including the Occupational Safety and Health Administration (OSHA), which limits noise exposure of workers to 90 dB Leq or less for 8 continuous hours or 105 dB Leq or less for 1 continuous hour. The Department of Transportation (DOT) assumed a significant role in noise control through its various operating agencies. Surface transportation system noise is regulated by multiple agencies, including the Federal Transit Administration (FTA), the Urban Mass Transit Administration (UMTA), and the Federal Highway Administration (FHWA).

The federal government actively advocates for local jurisdictions to use their land use regulatory authority to arrange new development in such a way that "noise sensitive" uses are either prohibited from being sited adjacent to a highway or, alternately, that the developments are planned and constructed in such a manner that potential noise impacts are minimized.

Since the federal government has preempted the setting of standards for noise levels that can be emitted by transportation sources, the County is restricted to regulating the noise generated by the transportation system through nuisance abatement ordinances and land use planning.

Federal Aviation Regulation Part 150 Noise Compatibility Program

Federal Aviation Regulation (FAR) Part 150 Airport Noise Compatibility Planning was required by the Aviation Safety and Noise Abatement Act of 1979 (ASNA). It was adopted as an interim rule in February 1981. FAR Part 150 establishes requirements for airport owners who choose to submit to the FAA for review and approval of noise exposure maps and develop noise compatibility planning programs to the FAA for review and approval. Revisions to Part 150 Airport Noise Compatibility Planning were adopted on December 13, 1984 and became effective on January 18, 1985. Revisions to Part 150 were based, in part, on comments invited and received following passage of the interim rule.

As required by the Act, revisions to the regulations established a single system of measuring aircraft noise and a single system for determining the exposure of individuals to noise in the vicinity of airports. The regulations as revised also established a standardized airport noise compatibility planning program. The Final Rule included language that stated that Part 150 regulations apply to any “public use airport” as defined by Section 502 (17) of the Airport and Airway Improvement Act of 1982. The Rule specifies requirements that must be met when submitting NEMs and airport NCPs to the FAA; the submission of these maps and programs is completely voluntary. ASNA does not allow the federal government to interfere with or override local government zoning, subdivision building, and health authority.

State

General Plan Noise Elements

State law requires that all counties and cities develop, in their General Plan, a Noise Element that effectively limits the exposure of sensitive receptors to excessive noise levels. The State of California General Plan Guidelines, published by the California Governor’s Office of Planning and Research (OPR), provide guidance for the compatibility of projects within areas of specific noise exposure. The OPR Guidelines identify acceptable and unacceptable community noise exposure limits for various land use categories. Where the “normally acceptable” range is used, it is defined as the highest noise level that should be considered for the construction of buildings which do not incorporate treatment or noise mitigation. The “conditionally acceptable” or “normally unacceptable” ranges include conditions calling for detailed acoustical study prior to the construction or operation of the proposed Project.

California Noise Control Act of 1973

Pursuant to Sections 46000 through 46080 of the California Health and Safety Code, known as the California Noise Control Act of 1973, the State Legislature found that excessive noise is a serious hazard to the public health and welfare and that exposure to certain levels of noise can result in physiological, psychological, and economic damage. The state has a responsibility to protect the health and welfare of its citizens by the control, prevention, and abatement of noise. It is the policy of the state to provide an environment for all Californians that is free from noise that jeopardizes their health or welfare.

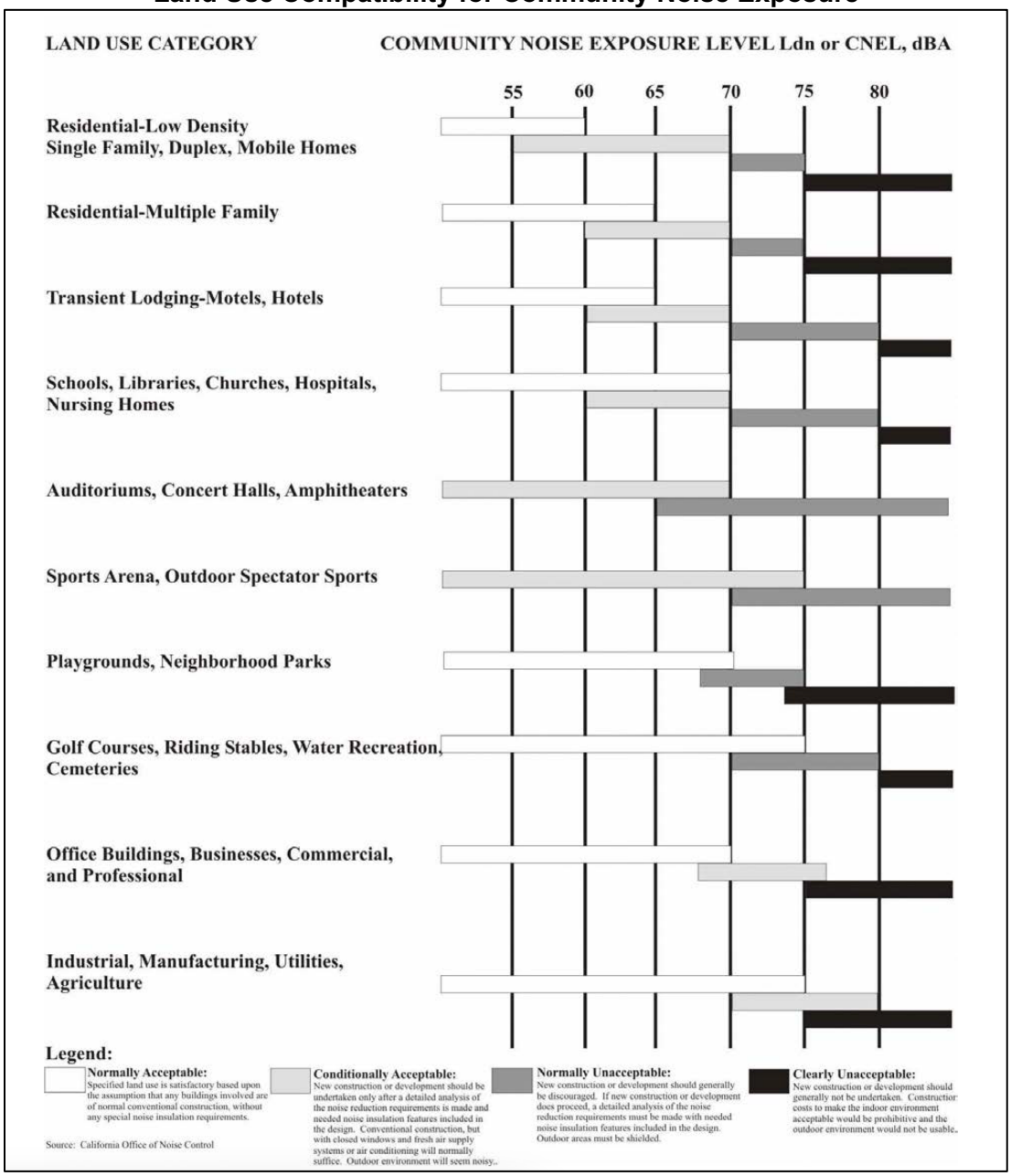
State regulations (8 California Code of Regulations, Section 5095) also address worker exposure to noise levels. These regulations limit worker exposure to noise levels of 85 dBA or lower over an 8-hour period. The state has not established noise levels for non-work-related environments.

Local

County of Riverside General Plan Noise Element

The Noise Element of the Riverside County General Plan addresses common sources of noise in the county and quantifies existing and projected ambient noise levels. The Noise Element also provides policies and standards to regulate the generation of noise and to ensure land use compatibility for noise exposure. Table 2.15-1, shows the County's Land Use Compatibility for Community Noise Exposure matrix.

Table 2.15-1
Land Use Compatibility for Community Noise Exposure



Source: County of Riverside General Plan (December 2015) Noise Element, Table N-1.

The County Noise Element also includes the follow policies which are relevant to the proposed Project:

N 1.1 Protect noise-sensitive land uses from high levels of noise by restricting noise-producing land uses from these areas. If the noise-producing land use cannot be relocated, then noise buffers such as setbacks, landscaping, or block walls shall be used.

N 1.3 Consider the following uses noise-sensitive and discourage these uses in area in excess of 65 CNEL:

- Schools
- Hospitals
- Rest Homes
- Long Term Care Facilities
- Mental Care Facilities
- Residential Uses
- Libraries
- Passive Recreation Uses
- Places of Worship

N 1.5 Prevent and mitigate the adverse impacts of excessive noise exposure on the residents, employees, visitors, and noise-sensitive uses of Riverside County.

N 2.3 Mitigate exterior and interior noises to the levels listed in Table N-2 below to the extent feasible, for stationary sources:

Table 2.15-2
Stationary Source Land Use Noise Standards[1]

Land Use	Interior Standards	Exterior Standards
Residential		
10:00 p.m. to 7:00 a.m.	40 L_{eq} (10 minute)	45 L_{eq} (10 minute)
7:00 a.m. to 10:00 p.m.	55 L_{eq} (10 minute)	65 L_{eq} (10 minute)
[1] These are only preferred standards; final decision will be made by the Riverside County Planning Department and Office of Public Health.		

N 4.1 Prohibit facility-related noise, received by any sensitive use, from exceeding the following worst-case noise levels:

a. 45 dBA 9-minute Leq between 10:00 p.m. and 7:00 a.m.;
b. 65 dBA 9-minute Leq between 7:00 a.m. and 10:00 p.m.

N 7.1 New land use development within Airport Influence Areas shall comply with airport land use noise compatibility criteria contained in the corresponding airport land use compatibility plan for the area. Each Area Plan affected by a public-use airport includes one or more Airport Influence Areas, one for each airport. The applicable noise compatibility criteria are fully set forth in Appendix I-1 and summarized in the Policy Area section of the affected Area Plan.

N 7.3 Prohibit new residential land uses, except construction of a single-family dwelling on a legal residential lot of record, within the current 60 dB CNEL contours of any currently operating public-use, or military airports. The applicable noise contours are as defined by the Riverside County Airport Land Use Commissions and depicted in Appendix I-1, as well as in the applicable Area Plan's Airport Influence Area section.

N 13.1 Minimize the impacts of construction noise on adjacent uses within acceptable standards.

N 13.2 Ensure that construction activities are regulated to establish hours of operation in order to prevent and/or mitigate the generation of excessive or adverse impacts on surrounding areas.

N 13.3 Condition subdivision approval adjacent to developed/occupied noise-sensitive land uses (see policy N 1.3) by requiring the developer to submit a construction-related noise mitigation plan to the [County] for review and approval prior to issuance of a grading permit. The plan must depict the location of construction equipment and how the noise from this equipment will be mitigated during construction of this project, through the use of such methods as:

i. Temporary noise attenuation fences;
ii. Preferential location and equipment; and
iii. Use of current noise suppression technology and equipment.

N 14.1 Enforce the California Building Standards that set standards for building construction to mitigate interior noise levels to the tolerable 45 CNEL limit. These standards are utilized in conjunction with the Uniform Building Code by the County's Building Department to ensure that noise protection is provided to the public. Some design features may include extra-dense insulation, double-paned windows, and dense construction materials.

N 16.3 Prohibit exposure of residential dwellings to perceptible ground vibration from passing trains as perceived at the ground or second floor. Perceptible motion shall be presumed to be a motion velocity of 0.01 inches/second over a range of 1 to 100 Hz.

County of Riverside Ordinance No.847

Ordinance No. 847 regulates noise in the County, including through the provision of maximum allowable noise standards for General Plan land use designations. The ordinance includes various exemptions, including private construction projects located within one-quarter (1/4) of a mile from an inhabited dwelling, provided that:

1. Construction does not occur between the hours of 6:00 p.m. and 6:00 a.m. during the months of June through September; and
2. Construction does not occur between the hours of 6:00 p.m. and 7:00 a.m. during the months of October through May.

Riverside County Airport Land Use Compatibility Plan

The Riverside County Airport Land Use Compatibility Plan Policy Document (ALUCP) was adopted by the Riverside County Airport Land Use Commissions (ALUC) in 2004. The plan establishes land use compatibility criteria for the influence areas of airports in Riverside County, including the Jacqueline Cochran Regional Airport. As discussed in this document, the Project site is within the influence area for the Jacqueline Cochran Regional Airport (JCRA).

As defined by the California State Aeronautics Act (Public Utilities Code Sections 21670 et seq.), the purpose of the ALUC, and, likewise the ALUCP, is "… to protect public health, safety, and welfare by ensuring the orderly expansion of airports and the adoption of land use measures that minimize the public's exposure to excessive noise and safety hazards within areas around public airports to the extent that these areas are not already devoted to incompatible uses." Section 4.1 of the Countywide Policies chapter of the ALUCP provides noise compatibility criteria. **Table 2.15-3** shows acceptable noise levels by land use in an airport's area of influence, as provided in the ALUCP.

Table 2.15-3
Noise Compatibility Criteria

Land Use Category	CNEL (dB) 50–55	55–60	60–65	65–70	70–75
Residential *					
single-family, nursing homes, mobile homes	++	o	–	– –	– –
multi-family, apartments, condominiums	++	+	o	– –	– –
Public					
schools, libraries, hospitals	+	o	–	– –	– –
churches, auditoriums, concert halls	+	o	o	–	– –
transportation, parking, cemeteries	++	++	++	+	o
Commercial and Industrial					
offices, retail trade	++	+	o	o	–
service commercial, wholesale trade, warehousing, light industrial	++	++	+	o	o
general manufacturing, utilities, extractive industry	++	++	++	+	+
Agricultural and Recreational					
cropland	++	++	++	++	+
livestock breeding	++	+	o	o	–
parks, playgrounds, zoos	++	+	+	o	–
golf courses, riding stables, water recreation	++	++	+	o	o
outdoor spectator sports	++	+	+	o	–
amphitheaters	+	o	–	– –	– –

Land Use Acceptability		Interpretation/Comments
++	*Clearly Acceptable*	The activities associated with the specified land use can be carried out with essentially no interference from the noise exposure.
+	*Normally Acceptable*	Noise is a factor to be considered in that slight interference with outdoor activities may occur. Conventional construction methods will eliminate most noise intrusions upon indoor activities.
o	*Marginally Acceptable*	The indicated noise exposure will cause moderate interference with outdoor activities and with indoor activities when windows are open. The land use is acceptable on the conditions that outdoor activities are minimal and construction features which provide sufficient noise attenuation are used (e.g., installation of air conditioning so that windows can be kept closed). Under other circumstances, the land use should be discouraged.
–	*Normally Unacceptable*	Noise will create substantial interference with both outdoor and indoor activities. Noise intrusion upon indoor activities can be mitigated by requiring special noise insulation construction. Land uses which have conventionally constructed structures and/or involve outdoor activities which would be disrupted by noise should generally be avoided.
– –	*Clearly Unacceptable*	Unacceptable noise intrusion upon land use activities will occur. Adequate structural noise insulation is not practical under most circumstances. The indicated land use should be avoided unless strong overriding factors prevail and it should be prohibited if outdoor activities are involved.

* Subtract 5 dB for low-activity outlying airports (Chiriaco Summit and Desert Center)

Source: Riverside County Airport Land Use Compatibility Plan Policy Document (Adopted October 2004), Table 2B.

2.15.4 Environmental Setting

The standard unit of sound amplitude measurement is the decibel (dB). The decibel scale is a logarithmic scale that describes the physical intensity of the pressure vibrations that make up any sound. The pitch of the sound is related to the frequency of the pressure vibration. Since the human ear is not equally sensitive to a given sound level at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale (dBA) provides this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear.

Noise can be defined as “unwanted sound.” The evaluation and mitigation of noise in a community is essential to protecting the health and welfare of the general public, and preserving the inherent value of recreation, open space, and conservation lands. Environmental noise levels are generally considered low when the CNEL (Community Noise Equivalent Level) is below 45 dBA, moderate in the 45-60 dBA range, and high when above 60 dBA. **Table 2.15-4** shows examples of representative sound levels associated with common indoor and outdoor noise sources.

Table 2.15-4
Representative Environmental Noise Levels

Common Outdoor Activities	Common Indoor Activities	A-Weighted Sound Level dBA	Subjective Loudness	Effects of Noise
Threshold of pain		140	Intolerable or deafening	Hearing loss
Near jet engine		130		
		120		
Jet fly-over at 300m (1000ft)	Rock band	110		
Loud auto horn		100	Very noisy	
Gas lawn mower at 1m (3ft)		90		
Diesel truck at 15m (50ft) at 80 km/hr (50 mph)	Food blender at 1m (3ft)	80		Speech interference
Noise urban area, daytime	Vacuum cleaner at 3m (10ft)	70	Loud	
Heavy traffic at 90m (300 ft)	Normal speech at 1 m (3ft)	60		
Quiet urban daytime	Large business office	50	Moderate	Sleep disturbance
Quiet urban nighttime	Theater, large conference room (background)	40		
Quiet suburban nighttime	Library	30	Faint	No effect
Quiet rural nighttime	Bedroom at night, concert hall (background)	20		
	Broadcast/recording studio	10	Very faint	
Lowest threshold of human hearing		0		

Source: Environmental Protection Agency Office of Noise Abatement and Control, Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety (EPA/ONAC 550/9-74-004) March 1974.

Sound from a particular source generally declines as the receptor's distance from the source increases. The sound level decreases at a rate of 6 dB for each doubling of distances from a point source (e.g., jack-hammer), and decreases at a rate of 3 dB for each doubling of distance from a line source (e.g., roadway traffic). Noise propagation can also be affected by terrain and surrounding development. Noise barriers, including walls and berms, or other intervening structures, can provide noise level reductions ranging from approximately 5 to 20 dBA.[1]

Multiple scales are used to analyze noise. Given that the impact of noise on people varies based on numerous factors, these scales account for the fluctuation of noise over time, the total acoustical energy content of noise, and the time of day that the noise occurs.

Leq: An Leq or equivalent energy noise level is the average acoustic energy content of noise for a stated period of time. Thus, the Leq of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.

Lmax: Lmax is the maximum instantaneous noise level experience during a given period of time.

Lmin: Lmin is the minimum instantaneous noise level experience during a given period of time.

CNEL: The Community Noise Equivalent Level is a 24-hour average Leq with a 5 dBA "weighting" during the hours of 7:00 PM to 10:00 PM and a 10 dBA "weighting" added to noise during the hours of 10:00 PM to 7:00 PM to account for noise sensitivity in the evening and nighttime, respectively. The logarithmic effect of these additions is that a 60 dBA 24-hour Leq would result in a measurement of 66.7 dBA CNEL.

Groundborne Vibration

Groundborne vibration is sound radiated through the ground. Typical outdoor sources of perceptible groundborne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. Groundborne vibration is measured as peak particle velocity (PPV) in inches per second, or as vibration decibels (VdB). It is discussed in decibel (dB) units in order to compress the range of numbers required to describe vibration. The human threshold of perception for vibration is 65 Vdb, or 0.0018 inches/second, and is not usually significant until 70 Vdb, or 0.0031 inches/second. Typical levels of ground vibration range between 50 Vdb and 100 Vdb. Vibration caused by heavy truck traffic is generally around 65 Vdb. In comparison, construction related vibration can range between 90 Vdb and 100 Vdb.

The effects of ground-borne vibration generally include movement of building floors, rattling of windows, and rumbling sounds. Ground-borne vibrations associated with construction attenuate rapidly as one moves away from the source. According to Caltrans, vibration caused by truck traffic attenuates to below perception levels at distances greater than 130 feet. The County has specific standards for construction vibrations. **Table 2.15-5** provides Caltrans and County standards for reference and comparison.

Ground borne vibration can fall off quickly with distance, dropping to about 6 mm/second (0.23 inch/sec) at 15 meters (49.2 feet) from the source and can also be further reduced by "soft site" conditions as is the case with soils and vegetation.

[1] Caltrans Technical Noise Supplement to the Traffic Noise Analysis Protocol (September 2013).

Table 2.15-5
Construction Vibration Standards

Jurisdiction	Municipal Code Section(s)	Construction Vibration Standards
Caltrans	Transportation- and Construction-Induced Vibration Guidance Manual	**Building Damage:** 0.12 in/sec PPV* **Human Annoyance:** 0.01 in/sec PPV
County of Riverside	County of Riverside General Plan Noise Element, Policy 16.3	0.01 in/sec RMS (0.254 mm/sec RMS)

***Notes:** "PPV" = Peak Particle Velocity; "RMS" = Root-Mean-Square.

2.15.5 Existing Conditions

Transportation is one of the primary sources of noise in Riverside County, including that associated with vehicular traffic, airports, and railroads. The operation of various equipment and appliances for household use, construction, industry, and agriculture, also contribute to the noise environment in the County. To address the potential nuisance associated with this noise, the County regulates noise-generating activities through interior and exterior noise level standards for sensitive land uses, as well as through the establish of restrictions on permitted hours for construction activities to occur.

Airport Noise

The subject site is located 1.25± miles southwest of the nearest runway of the County-owned and operated Jacqueline Cochran Regional Airport (JCRA). The airport consists of a long north-south runway and a shorter NW/SE runway, as well as a variety of hangars, offices and other buildings and facilities. Pursuant to consultation with ALUC staff, the Project proponent prepared an Airport Land Use Commission (ALUC) application that includes an airport noise impact assessment (also see Sections 2.11 and 2.13.

As discussed in greater detail in Section 2.11, Hazards and Hazardous Materials, nearly the entire Project site is located within Land Use Compatibility Zone D for the airport. A small portion in the southwest corner is in Zone E. All of the proposed uses and densities/intensities are consistent with the Basic Compatibility Criteria in Table 2A of the Airport Land Use Compatibility Plan (ALUCP), except for single-family estate homes proposed in Planning Area 2.

The entire Project site lies outside of the ultimate 55 dBA CNEL contour associated with buildout and full projected operations at the airport. As shown in Table 2.15-3, residential uses are considered “normally acceptable” outside of the airport’s 55 dB CNEL contour.

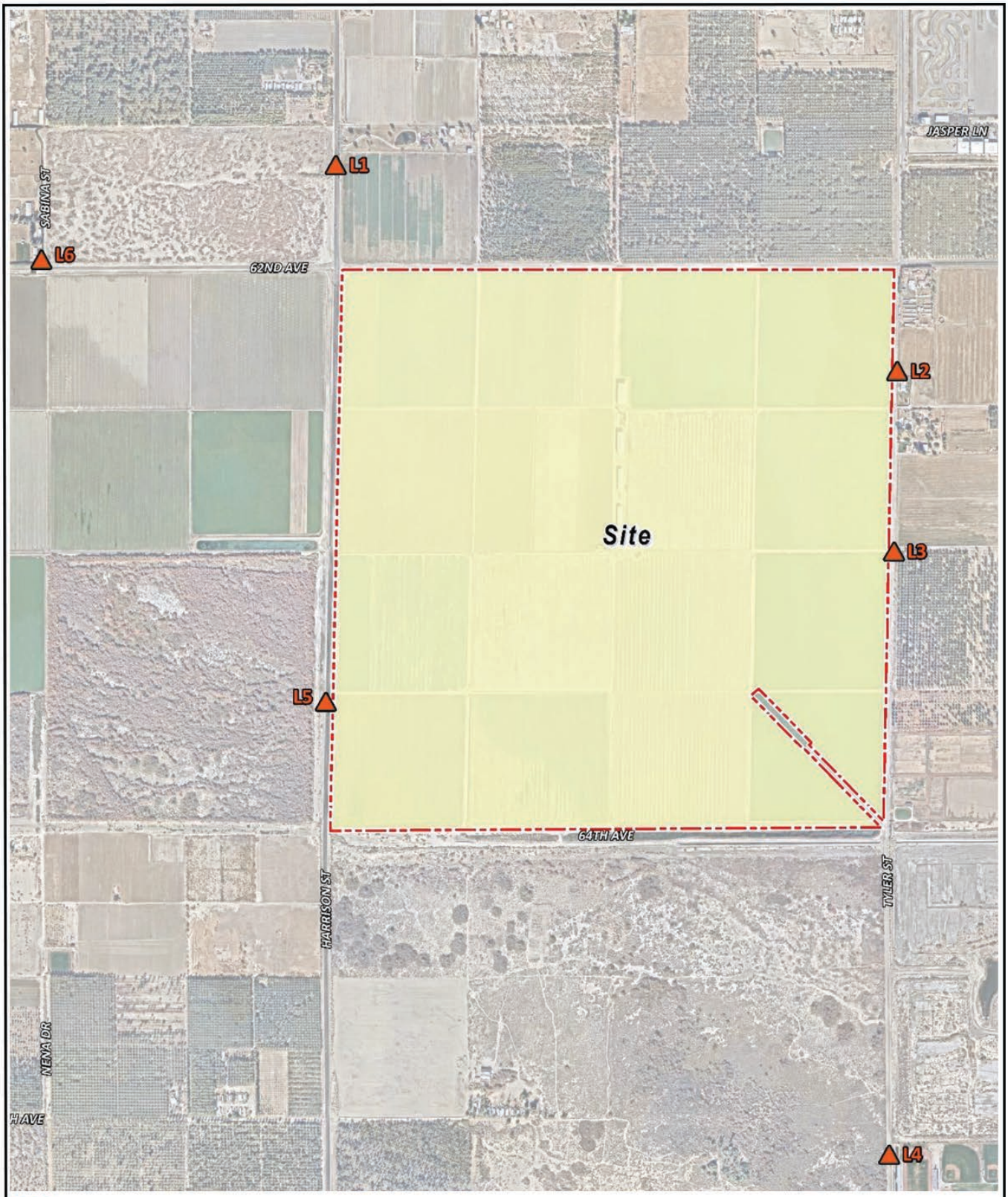
Existing ambient daytime noise levels

Existing land uses within the planning area and vicinity include extensive agriculture and scattered development with some vacant land. To assess the existing noise environment, Urban Crossroads, Inc., measured the ambient noise level at six locations near sensitive receptors in the Project area, the location of which are shown in Exhibit 2.15-1. As shown in **Table 2.15-6**, the ambient noise level in the Project area currently ranges from 62.7 to 70.4 dBA L_{eq} during the day.

Table 2.15-6
Ambient Noise Levels at Receiver Locations

Location[1]	Description	Energy Average Noise Level (dBA L_{eq})[2]		CNEL
		Daytime	Nighttime	
L1	Located northwest of the site near the residence at 61610 Harrison St.	62.7	61.1	68.1
L2	Located east of the site near the residence at 62800 Tyler St.	70.4	67.4	74.5
L3	Located east of the Project site south of the residence at 62800 Tyler St.	67.0	63.7	70.9
L4	Located southeast of the Project site near the Desert Mirage High School	64.7	61.7	68.8
L5	Located west of the Project site north 64th Ave.	66.2	66.3	72.9
L6	Located northwest of the Project site near the residence at 61855 Sabina St.	63.2	61.3	68.2

[1] See Exhibit 2.15-1 for the noise level measurement locations.
[2] Energy (logarithmic) average levels). The long-term 24-hour measurement worksheets are included in Appendix 5.2 of the Project-specific Noise and Vibration Analysis, in Appendix H of this document.
"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.



Source: Urban Crossroads, "Noise and Vibration Analysis," 05.22.2023

05.23.23

TERRA NOVA®
PLANNING & RESEARCH, INC.

Thermal Ranch Specific Plan EIR
Noise Measurement Locations
Thermal, California

Exhibit
2.15-1

Existing Roadway Noise Sources and Levels Off-Site

As shown in **Table 2.15-7**, the existing traffic noise levels measured near roadway segments in the Project vicinity would range from 55.2 dBA CNEL to 68.9 dBA CNEL.

Table 2.15-7
Existing Off-Site Traffic Noise Levels

ID	Road	Segment	Receiving land use[1]	CNEL at receiving land use (dBA)[2]	Distance to contour from centerline (feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Monroe St.	n/o 62nd Av.	Sensitive	61.7	RW	RW	65
2	Van Buren St.	n/o 62nd Av.	Non-Sensitive	60.5	RW	RW	64
3	Cesar Chavez St.	n/o 54th Av.	Sensitive	68.9	RW	200	430
4	Harrison St.	n/o Airport Bl.	Sensitive	66.3	RW	135	290
5	Harrison St.	n/o 58th Av.	Sensitive	65.3	RW	116	249
6	Harrison St.	n/o 60th Av.	Non-Sensitive	65.2	RW	114	245
7	Harrison St.	n/o 62nd Av.	Non-Sensitive	64.8	RW	RW	231
8	Harrison St.	s/o 62nd Av.	Non-Sensitiv	64.5	RW	RW	218
9	Harrison St.	n/o 66th Av.	Non-Sensitive	64.9	RW	RW	233
10	Harrison St.	s/o 66th Av.	Non-Sensitive	68.2	RW	104	225
11	Harrison St.	s/o Middleton St.	Non-Sensitive	68.8	RW	135	291
12	Harrison St.	s/o Desert Empire Homes	Sensitive	67.1	RW	106	227
13	Tyler St.	n/o 62nd Av.	Non-Sensitive	57.7	RW	RW	RW
14	Tyler St.	s/o 62nd Av.	Non-Sensitive	63.9	RW	RW	91
15	Tyler St.	n/o 66th Av.	Sensitive	60.0	RW	RW	50
16	Polk St.	n/o 62nd Av.	Non-Sensitive	60.1	RW	RW	65
17	Pierce St.	s/o 66th Av.	Non-Sensitive	63.1	RW	RW	103
18	52nd Av.	e/o Cesar Chavez St.	Sensitive	68.3	RW	126	272
19	54th Av.	w/o Cesar Chavez St.	Non-Sensitive	65.6	RW	84	180
20	Airport Bl.	e/o Harrison St.	Non-Sensitive	67.7	RW	115	249
21	Airport Bl.	e/o Polk St.	Sensitive	67.3	RW	108	232
22	Airport Bl.	e/o Palm St.	Sensitive	67.5	RW	112	240
23	60th Av.	w/o Harrison St.	Non-Sensitive	55.6	RW	RW	RW
24	62nd Av.	w/o Jackson St.	Non-Sensitive	58.2	RW	RW	RW
25	62nd Av.	w/o Van Buren St.	Non-Sensitive	55.2	RW	RW	RW
26	62nd Av.	w/o Harrison St.	Non-Sensitive	55.7	RW	RW	RW
27	62nd Av.	e/o Harrison St.	Non-Sensitive	59.8	RW	RW	RW
28	62nd Av.	w/o Tyler St.	Non-Sensitive	59.8	RW	RW	RW
29	62nd Av.	e/o Tyler St.	Non-Sensitive	59.9	RW	RW	RW
30	62nd Av.	e/o Polk St.	Non-Sensitive	57.3	RW	RW	RW
31	62nd Av.	e/o Fillmore St.	Non-Sensitive	58.2	RW	RW	RW
32	62nd Av.	e/o Pierce St.	Non-Sensitive	58.4	RW	RW	RW
33	66th Av.	e/o Harrison St.	Non-Sensitive	62.6	RW	RW	112
34	66th Av.	e/o Tyler St.	Sensitive	67.7	RW	115	247
35	66th Av.	e/o Pierce St.	Non-Sensitive	65.6	RW	83	179

[1] Based on a review of existing aerial imagery.
[2] The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

CVWD Middleton Reservoir 7802-1 Site
The Project reservoir site is located 2.4± miles southwest of the Project site, currently hosts a CVWD 2.5 million tank and is planned and improved for multiple tanks. The existing reservoir site is fully graded and located behind a 25-foot earthen berm with existing access and site security. To accommodate the future Project reservoir, the existing earthen berm will be shifted 35± feet to the north. The reservoir site is located in a relatively isolated location on the lower portions of the Martinez Canyon alluvial fan. There are no sensitive receptors in the vicinity.

2.15.6 Project Impacts

Airport Noise

a) For a project located within an airport land use plan or, where such a plan has not been adopted, within two (2) miles of a public airport or public use airport would the project expose people residing or working in the project area to excessive noise levels?

The Project site is located 1.25± miles southwest of the nearest runway of the County-owned and operated Jacqueline Cochran Regional Airport (JCRA), within the airport influence area. As shown in Exhibit 2.11-3, JCRA Noise Contours, the entire Project site lies outside of the ultimate 55 dBA CNEL contour. As stated in **Table 2.15-3**, all land use categories are considered at least "normally acceptable" in areas outside of the airport's 55 dBA CNEL noise contour. Residential land uses, including single-family, multi-family, mobile homes, and condominiums, are considered "clearly acceptable" beyond the 55 dBA noise level contour boundaries. Based on this Riverside County ALUCP compatibility criteria, "the activities from the specified land use can be carried out with essentially no interference from the noise exposure."

It should also be noted that on July 13, 2023, the County ALUC reviewed the Project for its compatibility with the JCRA and county-wide airport policies, including those associated with potential noise impacts (also see Section 2.11); therefore, the proposed Project would not expose people residing or working on the site or project area to excessive noise levels. Noise impacts related to public airports would therefore be less than significant.

CVWD Middleton Reservoir 7802-1 Site
The Project reservoir site is outside of an airport land use plan and is more than two miles from any public or private airport. Development of the Project reservoir will not expose people residing or working in the Project area is excessive noise from reservoir construction or operation.

Noise Effects by the Project

a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;

The proposed Project is expected to generate new sources of temporary noise during construction and long-term noise during operations. The operation of the various Project components will result in permanent and intermittent sources of increased ambient noise in the surrounding area, which will primarily be associated with Project traffic. Importantly, the proposed land uses are generally consistent with the proposed urban commercial and residential environment, and noise sources are expected to be similar to those already operating in the surrounding area, including motorsport, equestrian and other activities.

New Project-related noise sources are expected to include vehicle traffic, waste management activities, as well as the operation of roof-top air conditioning units, future Coachella Valley Water District (CVWD) well sites, and the proposed Imperial Irrigation District (IID) substation. The 231± acre equestrian center will include multiple horse rings that also serve as event space for horse shows and related events. The equestrian center may also include a low-volume PA system, which is considered in this report for analysis purposes.

The following analysis is based primarily on the Noise and Vibration Analysis prepared for the Project by Urban Crossroads (see Appendix H of this EIR). **Table 2.15-8** provides significance criteria for Project-related noise generated by off-site traffic, operations, and construction, based on noise standards provided by the Federal Interagency Committee on Noise (FICON), the Federal Transit Administration, Caltrans, and Riverside County.

Table 2.15-8
Significance Criteria Summary

Analysis	Receiving Land Use	Condition(s)	Significance Criteria	
			Daytime	Nighttime
Off-site traffic	Noise-sensitive[1]	If ambient is <60 dBA CNEL	≥ 5 dBA CNEL Project increase	
		If ambient is 60-65 dBA CNEL	≥ 3 dBA CNEL Project increase	
		If ambient is > 65 dBA CNEL	≥ 1.5 dBA CNEL Project increase	
	Non-noise-sensitive[2]	If ambient is < 75 dBA CNEL	≥ 3 dBA CNEL Project increase	
Operational	Noise-sensitive	Exterior noise level standards[3]	55 dBA L_{eq}	45 dBA L_{eq}
		If ambient is < 60 dBA L_{eq}[1]	≥ 5 dBA L_{eq} Project increase	
		If ambient is 60 - 65 dBA L_{eq}[1]	≥ 3 dBA L_{eq} Project increase	
		If ambient is > 65 dBA L_{eq}[1]	≥ 1.5 dBA L_{eq} Project increase	
Construction	Noise-sensitive	Noise level threshold[4]	80 dBA L_{eq}	70 dBA L_{eq}
		Vibration level threshold[5]	0.3 PPV (in/sec)	

[1] FICON, 1992.
[2] County of Riverside General Plan Noise Element, Table N-1.
[3] County of Riverside Municipal Code, Section 9.52.040.
[4] Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual.
[5] Caltrans Transportation and Construction Vibration Manual, April 2020 Table 19 "Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

Off-Site Traffic Noise

The proposed development would generate off-site noise as a result of increased traffic associated with the proposed Project uses. The significance of off-site traffic noise is evaluated based on the magnitude of the noise increase, the existing ambient noise levels, and the location of noise-sensitive receivers. Based on the Traffic Analysis prepared for the Project, noise contours were developed for the Noise Analysis to assess the Project's incremental 24-hour dBA CNEL traffic-related noise impacts at receiving land uses adjacent to roadways conveying Project traffic. The noise contours are measured from the centerline of the roadways and represent the 70, 65, and 60 dBA CNEL noise levels. The noise contours do not account for attenuation of traffic noise from intervening barriers or topography, nor do they reflect noise contributions from stationary sources in the study area.

The off-site traffic noise analysis measures the impact of traffic generated by the Project on existing sensitive receiver land uses.

As shown in **Table 2.15-7**, above, noise sensitive land uses with an existing noise level ranging from 60 to 65 dBA CNEL would experience a significant increase in environmental noise if the Project results in an increase of 3 or more dBA CNEL. Noise sensitive land uses with an ambient noise level greater than 65 dBA CNEL would experience a significant increase in environmental noise if the Project results in an increase of 1.5 or more dBA CNEL. These thresholds are based on guidance developed by the Federal Interagency Committee on Noise (FICON), which account for the ambient noise level when assessing project-generated increases in noise.

Table 2.15-9 shows the existing traffic noise levels plus the traffic noise generated by the proposed Project.

Table 2.15-9
Existing Plus Project Traffic Noise Level Increases

ID	Road	Segment	Receiving land use[1]	CNEL at receiving land use (dBA)[2]			Incremental noise level increase threshold[3]	
				No Project	With Project	Project Addition	Limit[4]	Exceeded?
1	Monroe St.	n/o 62nd Ave.	Sensitive	61.7	63.0	1.3	3.0	No
2	Van Buren St.	n/o 62nd Ave.	Non-Sensitive	60.5	61.8	1.3	n/a	No
3	Cesar Chavez St.	n/o 54th Ave.	Sensitive	68.9	69.2	0.3	1.5	No
4	Harrison St.	n/o Airport Bl.	Sensitive	66.3	67.1	0.8	1.5	No
5	Harrison St.	n/o 58th Ave.	Sensitive	65.3	67.2	1.9	1.5	**Yes**
6	Harrison St.	n/o 60th Ave.	Non-Sensitive	65.2	67.3	2.1	n/a	No
7	Harrison St.	n/o 62nd Ave.	Non-Sensitive	64.8	67.2	2.4	n/a	No
8	Harrison St.	s/o 62nd Ave.	Non-Sensitive	64.5	68.9	4.4	n/a	No
9	Harrison St.	n/o 66th Ave.	Non-Sensitive	64.9	65.9	1.0	n/a	No
10	Harrison St.	s/o 66th Ave.	Non-Sensitive	68.2	68.6	0.4	n/a	No
11	Harrison St.	s/o Middleton St.	Non-Sensitive	68.8	69.0	0.2	n/a	No
12	Harrison St.	s/o Desert Empire Homes	Sensitive	67.1	67.5	0.4	1.5	No
13	Tyler St.	n/o 62nd Ave.	Non-Sensitive	57.7	60.4	2.7	n/a	No
14	Tyler St.	s/o 62nd Ave.	Non-Sensitive	63.9	67.7	3.8	n/a	No
15	Tyler St.	n/o 66th Ave.	Sensitive	60.0	61.7	1.7	3.0	No
16	Polk St.	n/o 62nd Ave.	Non-Sensitive	60.1	62.6	2.5	n/a	No
17	Pierce St.	s/o 66th Ave.	Non-Sensitive	63.1	63.8	0.7	n/a	No
18	52nd Av.	e/o C. Chavez St.	Sensitive	68.3	68.5	0.2	1.5	No
19	54th Av.	w/o C. Chavez St.	Non-Sensitive	65.6	65.9	0.3	n/a	No
20	Airport Bl.	e/o Harrison St.	Non-Sensitive	67.7	69.4	1.7	n/a	No
21	Airport Bl.	e/o Polk St.	Sensitive	67.3	68.7	1.4	1.5	No
22	Airport Bl.	e/o Palm St.	Sensitive	67.5	68.8	1.3	1.5	No
23	60th Av.	w/o Harrison St.	Non-Sensitive	55.6	58.7	3.1	n/a	No
24	62nd Av.	w/o Jackson St.	Non-Sensitive	58.2	60.3	2.1	n/a	No
25	62nd Av.	w/o Van Buren St.	Non-Sensitive	55.2	60.1	4.9	n/a	No
26	62nd Av.	w/o Harrison St.	Non-Sensitive	55.7	61.3	5.6	n/a	No
27	62nd Av.	e/o Harrison St.	Non-Sensitive	59.8	65.8	6.0	n/a	No
28	62nd Av.	w/o Tyler St.	Non-Sensitive	59.8	65.9	6.1	n/a	No
29	62nd Av.	e/o Tyler St.	Non-Sensitive	59.9	66.2	6.3	n/a	No
30	62nd Av.	e/o Polk St.	Non-Sensitive	57.3	65.2	7.9	n/a	No
31	62nd Av.	e/o Fillmore St.	Non-Sensitive	58.2	65.1	6.9	n/a	No
32	62nd Av.	e/o Pierce St.	Non-Sensitive	58.4	65.1	6.7	n/a	No
33	66th Av.	e/o Harrison St.	Non-Sensitive	62.6	63.8	1.2	n/a	No
34	66th Av.	e/o Tyler St.	Sensitive	67.7	69.1	1.4	1.5	No
35	66th Av.	e/o Pierce St.	Non-Sensitive	65.6	66.5	0.9	n/a	No

[1] Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the receiving land use.
[3] Does the Project create an incremental noise level increase exceeding the significance criteria (Table 4-1)?
[4] "n/a" Per the County of Riverside General Plan Noise Element Table N-1, impacts to non-sensitive land uses would only be considered significant if A) the "With Project" noise level would exceed 75 dBA CNEL, or B) a barely perceptible 3 dBA or greater noise level increase occurs in a segment where the ambient non-noise sensitive noise level is greater than the normally acceptable 75 dBA CNEL land use compatibility criteria.

As shown in the above table, existing traffic noise levels without the Project range from 55.2 to 68.9 dBA CNEL. With the addition of traffic noise generated by the Project, the existing conditions would increase by a range of 0.2 to 7.9 dBA CNEL.

According to the FICON significance criteria for noise sensitive land uses, if the ambient noise level at the receiving land use is less than 60 dBA CNEL, then a noise level increase of 5 dBA CNEL or greater would be considered significant; if the ambient noise level at the receiving land use ranges from 60 to 65 dBA CNEL, then a noise level increase of 3 dBA CNEL or more would be considered significant; and if the ambient noise level at the receiving land use is higher than 65 dBA CNEL, then a noise level increase of 1.5 dBA CNEL or more would be considered significant. Based on these significance criteria, one of the study area roadway segments would experience potentially significant noise level increases due to the existing with project conditions. This segment, Harrison Street north of 58th Avenue (Segment #5), has an ambient noise level of 65.3 dBA CNEL and with Project traffic noise, is projected to experience a noise level increase exceeding the threshold of 1.5 dBA CNEL for noise-sensitive land uses with an existing noise level of 65 dBA CNEL or greater.

It should be noted that Table 2.15-9 evaluates potential impacts based only on the noise sensitivity of existing land uses and does not evaluate the significance of impacts based on potential future uses. As such, impacts to non-noise sensitive land uses are only considered significant if A) the “With Project” ambient noise level would exceed 75 dBA CNEL, which is considered a “normally acceptable” exterior noise level for non-noise sensitive land uses according to the Riverside County General Plan Noise Element, Table N-1; or B) if the Project would result in a 3 dBA or greater noise level increase to a non-noise sensitive land use with an ambient “No Project” noise level already exceeding 75 dBA CNEL.

The Project is expected to take eight to ten years for buildout, with an interim Phase 1 to be completed in 2026, and full buildout projected for 2032. The Project will not be fully developed and occupied under existing conditions, and therefore the noise contributed by Project-related traffic should be evaluated against the increases in ambient noise level expected to result from cumulative increases in traffic. Tables **2.15-9 to 2.15-11** evaluate Project-related traffic noise with ambient noise levels under projected 2026, 2032, and 2045 traffic levels.

The expected roadway noise level increases from vehicular traffic were calculated using a computer program that replicates the Federal Highway Administration (FHWA) Traffic Noise Prediction Model, as discussed in Appendix H, p. 29. The predicted noise levels account for: the roadway classification (e.g., collector, secondary, major or arterial), the roadway active width (i.e., the distance between the center of the outermost travel lanes on each side of the roadway), the total average daily traffic (ADT), the travel speed, the percentages of automobiles, medium trucks, and heavy trucks in the traffic volume, the roadway grade, the angle of view (e.g., whether the roadway view is blocked), the site conditions ("hard" or "soft" relates to the absorption of the ground, pavement, or landscaping), and the percentage of total ADT which flows each hour throughout a 24-hour period. This methodology is consistent with the County of Riverside Office of Industrial Hygiene Requirements for Determining and Mitigating Traffic Noise Impacts to Residential Structures, which specifically requires the FHWA RD-77-108 model to be used in analysis within the County’s jurisdiction.

Table 2.15-10
Existing plus Ambient plus Cumulative (2026)
Project Traffic Noise Level Increases

ID	Road	Segment	Receiving land use[1]	CNEL at receiving land use (dBA)[2]			Incremental noise level increase threshold[3]	
				No Project	With Project	Project Addition	Limit	Exceeded?
1	Monroe St.	n/o 62nd Av.	Sensitive	62.3	62.7	0.4	3.0	No
2	Van Buren St.	n/o 62nd Av.	Non-Sensitive	61.3	61.8	0.5	n/a	No
3	Cesar Chavez St.	n/o 54th Av.	Sensitive	69.3	69.4	0.1	1.5	No
4	Harrison St.	n/o Airport Bl.	Sensitive	66.8	67.2	0.4	1.5	No
5	Harrison St.	n/o 58th Av.	Sensitive	65.9	66.8	0.9	1.5	No
6	Harrison St.	n/o 60th Av.	Non-Sensitive	65.9	66.9	1.0	n/a	No
7	Harrison St.	n/o 62nd Av.	Non-Sensitive	65.4	66.6	1.2	n/a	No
8	Harrison St.	s/o 62nd Av.	Non-Sensitive	65.2	66.9	1.7	n/a	No
9	Harrison St.	n/o 66th Av.	Non-Sensitive	65.5	65.7	0.2	n/a	No
10	Harrison St.	s/o 66th Av.	Non-Sensitive	68.6	68.7	0.1	n/a	No
11	Harrison St.	s/o Middleton St.	Non-Sensitive	69.2	69.3	0.1	n/a	No
12	Harrison St.	s/o Desert Empire Homes	Sensitive	67.6	67.8	0.2	1.5	No
13	Tyler St.	n/o 62nd Av.	Non-Sensitive	60.0	61.1	1.1	n/a	No
14	Tyler St.	s/o 62nd Av.	Non-Sensitive	64.6	68.5	3.9	n/a	No
15	Tyler St.	n/o 66th Av.	Sensitive	61.0	62.6	1.6	3.0	No
16	Polk St.	n/o 62nd Av.	Non-Sensitive	62.6	63.6	1.0	n/a	No
17	Pierce St.	s/o 66th Av.	Non-Sensitive	63.8	64.3	0.5	n/a	No
18	52nd Av.	e/o Cesar Chavez St.	Sensitive	68.6	68.7	0.1	1.5	No
19	54th Av.	w/o Cesar Chavez St.	Non-Sensitive	66.0	66.1	0.1	n/a	No
20	Airport Bl.	e/o Harrison St.	Non-Sensitive	70.9	71.3	0.4	n/a	No
21	Airport Bl.	e/o Polk St.	Sensitive	67.9	68.7	0.8	1.5	No
22	Airport Bl.	e/o Palm St.	Sensitive	68.0	68.7	0.7	1.5	No
23	60th Av.	w/o Harrison St.	Non-Sensitive	59.8	60.4	0.6	n/a	No
24	62nd Av.	w/o Jackson St.	Non-Sensitive	59.4	60.1	0.7	n/a	No
25	62nd Av.	w/o Van Buren St.	Non-Sensitive	57.3	58.9	1.6	n/a	No

26	62nd Av.	w/o Harrison St.	Non-Sensitive	57.3	59.6	2.3	n/a	No
27	62nd Av.	e/o Harrison St.	Non-Sensitive	60.5	64.4	3.9	n/a	No
28	62nd Av.	w/o Tyler St.	Non-Sensitive	60.5	64.5	4.0	n/a	No
29	62nd Av.	e/o Tyler St.	Non-Sensitive	60.8	65.2	4.4	n/a	No
30	62nd Av.	e/o Polk St.	Non-Sensitive	59.4	64.4	5.0	n/a	No
31	62nd Av.	e/o Fillmore St.	Non-Sensitive	63.4	66.0	2.6	n/a	No
32	62nd Av.	e/o Pierce St.	Non-Sensitive	60.6	64.5	3.9	n/a	No
33	66th Av.	e/o Harrison St.	Non-Sensitive	64.2	64.3	0.1	n/a	No
34	66th Av.	e/o Tyler St.	Sensitive	69.3	70.0	0.7	1.5	No
35	66th Av.	e/o Pierce St.	Non-Sensitive	66.8	67.3	0.5	n/a	No

[1] Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the receiving land use.
[3] Does the Project create an incremental noise level increase exceeding the significance criteria (Table 4-1)?
"n/a" Per the County of Riverside General Plan Noise Element Table N-1, a barely perceptible 3 dBA or greater noise level increase is considered a significant impact when the ambient non-noise sensitive noise level is greater than the normally acceptable 75 dBA CNEL land use compatibility criteria.

Table 2.15-11
Existing plus Ambient plus Cumulative (2032)
Project Traffic Noise Level Increases

ID	Road	Segment	Receiving land use[1]	CNEL at receiving land use (dBA)[2]			Incremental noise increase threshold[3]	
				No Project	With Project	Project Addition	Limit	Exceeded?
1	Monroe St.	n/o 62nd Av.	Sensitive	63.9	64.7	0.8	3.0	No
2	Van Buren St.	n/o 62nd Av.	Non-Sensitive	65.9	66.3	0.4	n/a	No
3	Cesar Chavez St.	n/o 54th Av.	Sensitive	69.9	70.2	0.3	1.5	No
4	Harrison St.	n/o Airport Bl.	Sensitive	67.7	68.3	0.6	1.5	No
5	Harrison St.	n/o 58th Av.	Sensitive	66.9	68.3	1.4	1.5	No
6	Harrison St.	n/o 60th Av.	Non-Sensitive	66.8	68.4	1.6	n/a	No
7	Harrison St.	n/o 62nd Av.	Non-Sensitive	66.1	68.0	1.9	n/a	No
8	Harrison St.	s/o 62nd Av.	Non-Sensitive	66.1	69.5	3.4	n/a	No
9	Harrison St.	n/o 66th Av.	Non-Sensitive	66.1	66.9	0.8	n/a	No
10	Harrison St.	s/o 66th Av.	Non-Sensitive	69.3	69.6	0.3	n/a	No
11	Harrison St.	s/o Middleton St.	Non-Sensitive	70.0	70.2	0.2	n/a	No
12	Harrison St.	s/o Desert Empire Homes	Sensitive	68.6	68.8	0.2	1.5	No
13	Tyler St.	n/o 62nd Av.	Non-Sensitive	60.4	62.0	1.6	n/a	No
14	Tyler St.	s/o 62nd Av.	Non-Sensitive	65.0	68.2	3.2	n/a	No
15	Tyler St.	n/o 66th Av.	Sensitive	61.4	62.6	1.2	3.0	No
16	Polk St.	n/o 62nd Av.	Non-Sensitive	65.5	66.4	0.9	n/a	No
17	Pierce St.	s/o 66th Av.	Non-Sensitive	64.9	65.4	0.5	n/a	No
18	52nd Av.	e/o C. Chavez St.	Sensitive	69.1	69.3	0.2	1.5	No
19	54th Av.	w/o C. Chavez St.	Non-Sensitive	66.6	66.9	0.3	n/a	No
20	Airport Bl.	e/o Harrison St.	Non-Sensitive	72.0	72.7	0.7	n/a	No
21	Airport Bl.	e/o Polk St.	Sensitive	68.9	70.0	1.1	1.5	No
22	Airport Bl.	e/o Palm St.	Sensitive	68.9	69.9	1.0	1.5	No
23	60th Av.	w/o Harrison St.	Non-Sensitive	62.5	63.3	0.8	n/a	No
24	62nd Av.	w/o Jackson St.	Non-Sensitive	61.7	62.8	1.1	n/a	No
25	62nd Av.	w/o Van Buren St.	Non-Sensitive	61.5	63.2	1.7	n/a	No
26	62nd Av.	w/o Harrison St.	Non-Sensitive	61.5	63.8	2.3	n/a	No
27	62nd Av.	e/o Harrison St.	Non-Sensitive	63.5	67.1	3.6	n/a	No

28	62nd Av.	w/o Tyler St.	Non-Sensitive	63.5	67.2	3.7	n/a	No
29	62nd Av.	e/o Tyler St.	Non-Sensitive	63.8	67.4	3.6	n/a	No
30	62nd Av.	e/o Polk St.	Non-Sensitive	63.0	66.7	3.7	n/a	No
31	62nd Av.	e/o Fillmore St.	Non-Sensitive	64.1	67.1	3.0	n/a	No
32	62nd Av.	e/o Pierce St.	Non-Sensitive	64.3	67.1	2.8	n/a	No
33	66th Av.	e/o Harrison St.	Non-Sensitive	65.1	65.8	0.7	n/a	No
34	66th Av.	e/o Tyler St.	Sensitive	70.8	71.5	0.7	1.5	No
35	66th Av.	e/o Pierce St.	Non-Sensitive	68.3	68.8	0.5	n/a	No

[1] Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the receiving land use.
[3] Does the Project create an incremental noise level increase exceeding the significance criteria (Table 4-1)?
"n/a" Per the County of Riverside General Plan Noise Element Table N-1, a barely perceptible 3 dBA or greater noise level increase is considered a significant impact when the ambient non-noise sensitive noise level is greater than the normally acceptable 75 dBA CNEL land use compatibility criteria.

Table 2.15-10, above, shows the Existing plus Ambient Growth plus Cumulative (EAC) (2026) traffic noise with Project traffic conditions. Without noise resulting from Project traffic, the EAC (2026) noise levels would range from 57.3 to 70.9 dBA CNEL. The EAC (2026) with Project traffic noise would range from 58.9 to 71.3 dBA CNEL, representing a noise level increase ranging from 0.1 to 5.0 dBA CNEL. Based on the noise level increase thresholds provided in **Table 2.15-8**, the land uses adjacent to all the study area roadway segments would experience a less than significant increase in noise level as a result of the EAC (2026) conditions with the addition of Project-related traffic.

Table 2.15-11, above, shows the Existing plus Ambient Growth plus Cumulative (EAC) (2032) traffic noise with Project traffic conditions. Without Project-related traffic noise, the EAC (2032) ambient noise levels would range from 60.4 to 72.0 dBA CNEL. The EAC (2032) with Project-related traffic noise would range from 62.0 to 72.7 dBA CNEL, representing a noise level increase ranging from 0.2 to 3.7 dBA CNEL. Based on the noise level increase thresholds provided in **Table 2.15-8**, the existing land uses adjacent to the study area roadway segments would experience a less than significant increase in noise levels under the EAC (2032) scenario with Project-related traffic.

Table 2.15-12, below, shows the Horizon Year (2045) traffic noise with and without Project traffic conditions. Without Project traffic conditions, the Horizon Year (2045) exterior noise levels would range from 62.2 to 75.1 dBA CNEL. With Project-related traffic noise, the Horizon Year noise levels would range from 63.4 to 75.5 dBA CNEL, representing a traffic noise increase for existing land uses adjacent to the study area roadway segments ranging from 0.1 to 2.5 dBA CNEL. Based on the noise level increase thresholds provided in **Table 2.15-8**, the land uses adjacent to all the study area roadway segments would experience a less than significant increase in noise level resulting from the Horizon Year (2045) plus Project-related traffic.

The Noise Analysis conducted for the Project analyzed the impacts of Project-related traffic noise on the existing conditions, the interim EAC (2026) and full Project buildout EAC (2032) conditions, as well as the Horizon Year (2045) conditions. According to the significance criteria based on the FICON significance criteria and the standards provided in the Riverside County Noise Element, the EAC (2026), EAC (2032) and Horizon Year (2045) scenarios would all experience less than significant noise level increases as a result of traffic generated by the proposed Project.

As shown in **Table 2.15-9**, one roadway segment (#5) under the Existing plus Project would experience a significant noise level increase as a result of the Project-related traffic. However, the Project will not be fully developed and occupied under the existing conditions, but rather under future conditions after the expected eight-to-ten-year buildout period. Since the Existing plus Project conditions do not have the potential to occur, potential impacts resulting from this scenario do not warrant further consideration. Given that the EAC (2026), EAC (2032) and Horizon Year (2045) scenarios would all experience less than significant noise level increases as a result of traffic generated by the proposed Project, impacts to existing sensitive receivers would be less than significant.

Table 2.15-12
Horizon Year (2045) Project Traffic Noise Level Increases

ID	Road	Segment	Receiving land use[1]	CNEL at receiving land use (dBA)[2]			Incremental noise level increase threshold[3]	
				No Project	With Project	Project Addition	Limit	Exceeded?
1	Monroe St.	n/o 62nd Av.	Sensitive	63.9	64.7	0.8	3.0	No
2	Van Buren St.	n/o 62nd Av.	Non-Sensitive	65.9	66.3	0.4	n/a	No
3	Cesar Chavez St.	n/o 54th Av.	Sensitive	69.9	70.2	0.3	1.5	No
4	Harrison St.	n/o Airport Bl.	Sensitive	67.7	68.3	0.6	1.5	No
5	Harrison St.	n/o 58th Av.	Sensitive	66.9	68.3	1.4	1.5	No
6	Harrison St.	n/o 60th Av.	Non-Sensitive	66.8	68.4	1.6	n/a	No
7	Harrison St.	n/o 62nd Av.	Non-Sensitive	66.1	68.0	1.9	n/a	No
8	Harrison St.	s/o 62nd Av.	Non-Sensitive	66.1	69.5	3.4	n/a	No
9	Harrison St.	n/o 66th Av.	Non-Sensitive	66.1	66.9	0.8	n/a	No
10	Harrison St.	s/o 66th Av.	Non-Sensitive	69.3	69.6	0.3	n/a	No
11	Harrison St.	s/o Middleton St.	Non-Sensitive	70.0	70.2	0.2	n/a	No
12	Harrison St.	s/o Desert Empire Homes	Sensitive	68.6	68.8	0.2	1.5	No
13	Tyler St.	n/o 62nd Av.	Non-Sensitive	60.4	62.0	1.6	n/a	No
14	Tyler St.	s/o 62nd Av.	Non-Sensitive	65.0	68.2	3.2	n/a	No
15	Tyler St.	n/o 66th Av.	Sensitive	61.4	62.6	1.2	3.0	No
16	Polk St.	n/o 62nd Av.	Non-Sensitive	65.5	66.4	0.9	n/a	No
17	Pierce St.	s/o 66th Av.	Non-Sensitive	64.9	65.4	0.5	n/a	No
18	52nd Av.	e/o Cesar Chavez St.	Sensitive	69.1	69.3	0.2	1.5	No
19	54th Av.	w/o Cesar Chavez St.	Non-Sensitive	66.6	66.9	0.3	n/a	No
20	Airport Bl.	e/o Harrison St.	Non-Sensitive	72.0	72.7	0.7	n/a	No
21	Airport Bl.	e/o Polk St.	Sensitive	68.9	70.0	1.1	1.5	No
22	Airport Bl.	e/o Palm St.	Sensitive	68.9	69.9	1.0	1.5	No
23	60th Av.	w/o Harrison St.	Non-Sensitive	62.5	63.3	0.8	n/a	No
24	62nd Av.	w/o Jackson St.	Non-Sensitive	61.7	62.8	1.1	n/a	No
25	62nd Av.	w/o Van Buren St.	Non-Sensitive	61.5	63.2	1.7	n/a	No
26	62nd Av.	w/o Harrison St.	Non-Sensitive	61.5	63.8	2.3	n/a	No
27	62nd Av.	e/o Harrison St.	Non-Sensitive	63.5	67.1	3.6	n/a	No
28	62nd Av.	w/o Tyler St.	Non-Sensitive	63.5	67.2	3.7	n/a	No
29	62nd Av.	e/o Tyler St.	Non-Sensitive	63.8	67.4	3.6	n/a	No
30	62nd Av.	e/o Polk St.	Non-Sensitive	63.0	66.7	3.7	n/a	No
31	62nd Av.	e/o Fillmore St.	Non-Sensitive	64.1	67.1	3.0	n/a	No
32	62nd Av.	e/o Pierce St.	Non-Sensitive	64.3	67.1	2.8	n/a	No
33	66th Av.	e/o Harrison St.	Non-Sensitive	65.1	65.8	0.7	n/a	No
34	66th Av.	e/o Tyler St.	Sensitive	70.8	71.5	0.7	1.5	No
35	66th Av.	e/o Pierce St.	Non-Sensitive	68.3	68.8	0.5	n/a	No

[1] Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the receiving land use.
[3] Does the Project create an incremental noise level increase exceeding the significance criteria (Table 4-1)?
"n/a" Per the County of Riverside General Plan Noise Element Table N-1, a barely perceptible 3 dBA or greater noise level increase is considered a significant impact when the ambient non-noise sensitive noise level is greater than the normally acceptable 75 dBA CNEL land use compatibility criteria.

On-Site Traffic Noise

The Noise Analysis conducted for the Project considered the impact of traffic noise on land uses within the proposed development. The Project would mainly be impacted from traffic noise emanating from the surrounding arterials roadways: Harrison Street, Tyler Street, Avenue 62, and once built out, Avenue 64. While internal roadways within the subject site would also generate some noise from on-site traffic, the Noise Analysis concluded that noise from these sources would not make a substantive contribution to ambient noise conditions due to topography and low traffic volume and speed. On-site traffic noise is evaluated in terms of both interior and exterior noise standards.

Exterior Noise Levels:

Pursuant to Policy N 1.3 of the General Plan Noise Element, the Riverside County exterior noise level standard for residential land use is 65 dBA CNEL. The County does not have an established exterior noise standard for commercial land uses. **Table 2.15-13** shows the future unmitigated exterior noise levels for each of the planning areas.

Table 2.15-13
Unmitigated Future Exterior Noise Levels

Planning Area	Land Use	Noise-Sensitive Land Use?	Roadway	Unmitigated Exterior Noise Level (dBA CNEL)[1]
2	Low Density Residential (LDR)	Yes	Harrison St.	78
			Tyler St.	71
			62nd Av.	78
3	Medium Density Residential (MDR)	Yes	Tyler St.	71
4	High Density Residential (HDR)	Yes	64th Av.	75
5	High Density Residential (HDR) Tourist Commercial (CT)	Yes	Harrison St.	78
			64th Av.	75
6	Commercial Retail (CR)	No	Harrison St.	78

[1] Based on future long-range traffic conditions per Figure C-3 of the 2008 County of Riverside General Plan Circulation Element. Exterior noise level represents noise level at the property boundary for each planning area, based on noise contours measured from the roadway center line. Unmitigated on-site exterior traffic noise level calculations are included in Appendix 8.1 of the Thermal Ranch Specific Plan Noise and Vibration Analysis.

As shown in the above table, the unmitigated exterior noise level in the proposed residential planning areas, as measured at the property line, will range from 71 to 78 dBA CNEL, and 75 to 78 dBA CNEL in proposed commercial planning areas.

According to the Riverside County Noise Element Land Use Compatibility for Community Noise Exposure matrix, exterior noise levels of up to 80 dBA CNEL are considered conditionally acceptable for non-noise sensitive land uses, provided noise insulation features are included in the design. Typically, conventional construction with closed windows and mechanical ventilation (e.g., air conditioning) suffices. Given that Planning Area 6 does not include any noise sensitive (residential) land uses, no mitigation is required for the projected exterior noise level of 78 dBA CNEL.

The projected noise level on surrounding arterial roadways would exceed the County standards of 65 dBA CNEL for noise sensitive residential land uses for the outdoor living areas (backyards) of residences in Planning Areas 2, 3, and 4. As stated in Policy N 1.5 of the General Plan Noise Element, exterior noise attenuation measures are required for sensitive land uses exposed to transportation related noise levels higher than 65 dBA CNEL. In order to reduce the noise level in these areas, noise reduction measures such as setbacks, berms, or 6- to 10-foot-high noise barriers is recommended along the perimeter of the residential planning areas where they abut existing or future arterial roadways.

While Planning Area 5 will include sensitive residential uses and will be subject to exterior noise levels exceeding 65 dBA CNEL, the proposed resort condominiums will not include private outdoor living areas (backyards), noise mitigation will be limited to the interior areas of these noise sensitive uses.

Table 2.15-14 shows the recommended mitigation, also described in NOI-1 and NOI-2, that would ensure that the outdoor areas of residential properties within the Project meet the County noise standard of 65 dBA CNEL.

Table 2.15-14
Mitigated Future Exterior Noise Levels

Planning Area (PA)	Land Use[1]	Noise-Sensitive Land Use?	Roadway	Mitigated Exterior Noise Level (dBA CNEL)[2]	Barrier Height (Feet)[1]
2	Low Density Residential (LDR)	Yes	Harrison St.	65	10'
			Tyler St.	62	6'
			62nd Av.	65	10'
3	Medium Density Residential (MDR)	Yes	Tyler St.	62	6'
4	High Density Residential (HDR)	Yes	64th Av.	65	8'

[1] As measured from the roadbed.

As shown in the above table, noise barriers ranging from 6 to 10 feet in height are recommended for the residential frontages with Harrison Street, Tyler Street, Avenue 62, and Avenue 64 in order to reduce the outdoor residential noise level to a range of 62 to 65 dBA CNEL. Other noise mitigation measures, such as increased setbacks or the use of berms, could be used in conjunction with the recommended barriers. As noted in the Noise Analysis prepared for the Project, the residential lot locations and configurations will provide generous setbacks with substantial open space and intra-project roads that separate and will help to buffer the effects of traffic noise. Nonetheless, as provided in mitigation measures NOI-1 and NOI-2, prior to the recordation of the final tract map or issuance of grading permits for the development of future residential uses, a more detailed assessment will be required, based on precise grading plans and building specifications, to make sure that sound impacts will be sufficiently mitigated to 65 dBA CNEL or below.

Interior Noise Levels:
In addition to exterior noise levels standards, residential and other sensitive land uses are subject to the Riverside County interior noise standard of 45 dBA CNEL. According to the Noise Analysis prepared for the Project, interior noise levels can be reduced through typical building construction measures such as weather-stripped solid core exterior doors, upgraded dual glaze windows, mechanical ventilation/air conditioning, and exterior wall/roof assembles free of cut outs or openings. Typical building construction will provide a noise reduction of approximately 12 dBA with “windows open” conditions, and a minimum of 25 dBA noise reduction with “windows closed” and other typical measures implemented. **Table 2.15-15** shows the projected interior noise levels within residential land uses with and without the implementation of typical noise reduction measures.

Table 2.15-15
Interior Noise Impacts (CNEL)

PA	Land Use	Noise Sensitive	Roadway	Noise Level at Façade	Required Interior Noise Reduction[1]	Estimated Interior Noise Reduction[2]	Upgraded Windows[3]	Interior Noise Level[4]
2	LDR	Yes	Harrison	67	21.6	25.0	No	41.6
			Tyler	62	17.4	25.0	No	37.4
			62	67	21.6	25.0	No	41.6
3	MDR	Yes	Tyler	62	17.4	25.0	No	37.4
4	HDR	Yes	64	66	21.0	25.0	No	41.0
5	HDR	Yes	Harrison	78	32.9	34.0	Yes	43.9
			64	75	30.4	34.0	Yes	41.4

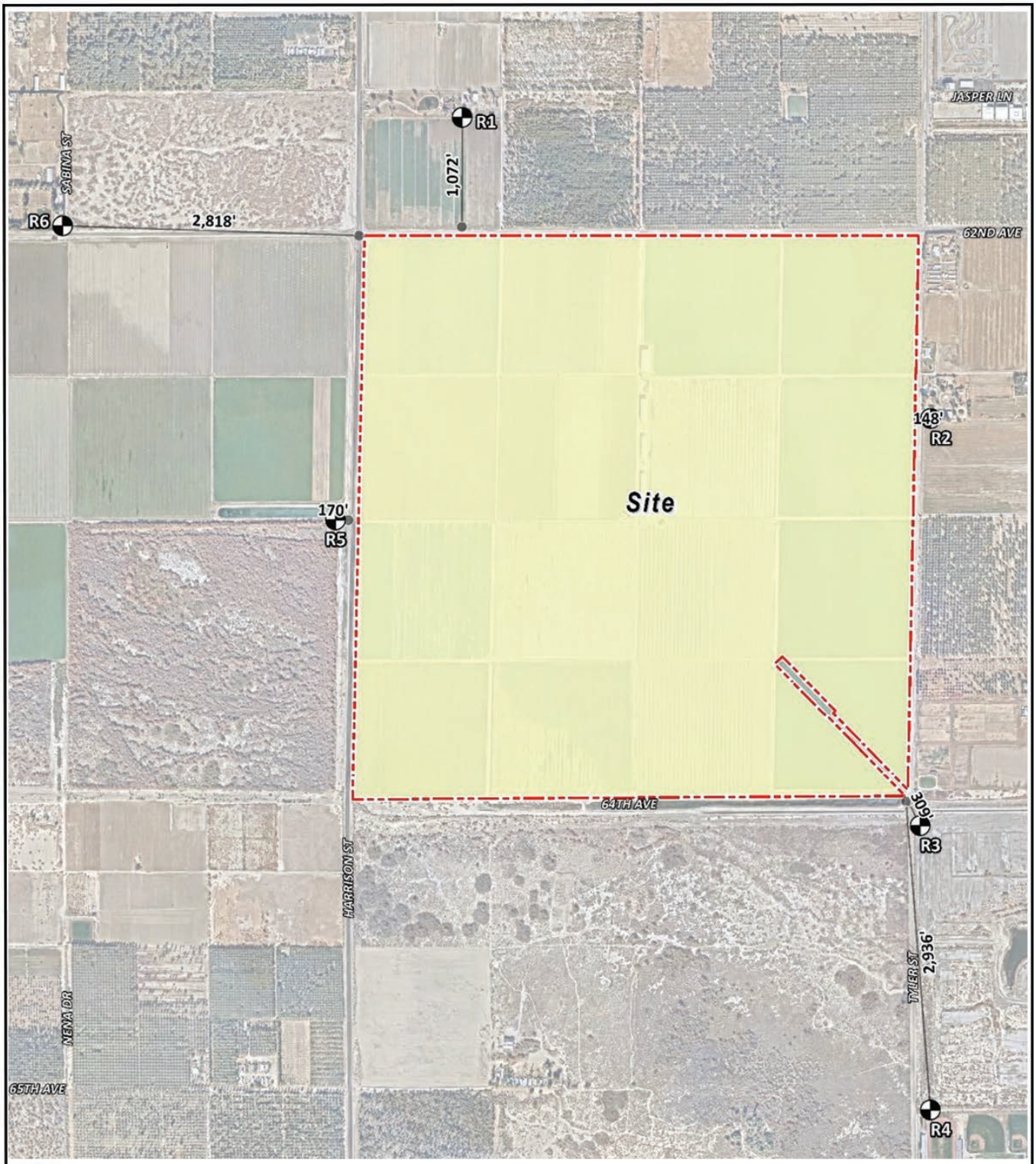
[1] Noise reduction required to satisfy the 45 dBA CNEL interior noise limits.
[2] A minimum of 25 dBA noise reduction is assumed with standard building construction.
[3] Does the required interior noise reduction trigger upgraded windows with a minimum STC rating of greater than 27?
[4] Estimated interior noise level with a means of mechanical ventilation and a minimum STC rating of 27 for all windows.

As shown in the above table, the noise level at the façade of sensitive receptors would range from 62 to 78 dBA CNEL. With the noise reduction of 12 dBA expected from "windows open" building conditions, the interior noise level would range from 50 to 55 dBA CNEL, which exceeds the County interior noise level standard of 45 dBA CNEL. To satisfy the County interior noise standard, all units will require a means of mechanical ventilation (e.g., air conditioning) in order to achieve "windows closed" noise reductions of at least 25 dBA CNEL. Hotel and resort condominium buildings in Planning Area 5 would additionally require upgraded windows in order to achieve the required noise reduction of 34 dBA CNEL. As stated in mitigation measure NOI-3, standard building construction measures, including mechanical ventilation and windows with a minimum Sound Transmission Class (STC) rating of 27, or a minimum STC rating of 36 for PA-5, will be required to achieve the County interior noise standard for residential land uses.

With implementation of NOI-1, NOI-2 and NOI-3, traffic related noise impacts on the interior and exterior of the proposed Project would be less than significant.

Operational Noise

The proposed Project is expected to generate noise during operations from sources including horse park activities, public address (PA) speaker system, CVWD well sites, IID substation, roof-top air conditioning units, trash enclosure activity, and parking lot activity. As a component of the Noise Analysis, reference noise level measurements were collected from similar types of activities to represent the noise levels expected with the development of the proposed Project. **Table 2.15-16** shows the reference noise levels expected to result from the operational sources. It should be noted that the noise level measurement assumed a worst-case scenario in which all noise sources are operating at the same time. Actual noise activities will likely vary throughout the day and should be lower than those cited on the table.



Source: Urban Crossroads, "Noise and Vibration Analysis," 05.22.2023

05.23.23

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Thermal Ranch Specific Plan EIR
Noise Receiver Locations
Thermal, California

Exhibit
2.15-2

Table 2.15-16
Reference Noise Level Measurements

Reference Noise Source	Noise Source Height (feet)	Min./Hour		Reference Noise Level (dBA Leq) @ 50 ft	Sound Power Level (dBA)
		Day	Night		
Horse Park Activities	5'	60	20	60.2	92.0
Public Address System	25'	60	0	68.1	100.0
CVWD Well Site	5'	60	60	45.4	77.0
IID Substation	8'	60	60	55.6	87.3
Roof-Top Air Conditioning Units	5'	39	28	57.2	88.9
Trash Enclosure Activity	5'	60	20	57.3	89.0
Parking Lot Vehicle Activity	5'	60	20	52.6	84.3

[1] Anticipated duration (minutes within the hour) of noise activity during typical hourly conditions expected at the Project site. "Daytime" = 7:00 a.m. - 10:00 p.m.; "Nighttime" = 10:00 p.m. - 7:00 a.m.
[2] Sound power level represents the total amount of acoustical energy (noise level) produced by a sound source independent of distance or surroundings. Sound power levels calculated using the CadnaA noise model at the r reference distance to the noise source.

Source: Thermal Ranch Specific Plan Noise and Vibration Analysis, prepared by Urban Crossroads (May 2023), Table 1-10.

Based on the reference noise levels in the above table, **Table 2.15-17** and **2.15-18** show the Project-related noise level increases that would be experienced at the six off-site sensitive receiver locations, as shown in Exhibit 2.15-2. **Table 2.15-17** shows the operational noise levels during daytime hours of 7:00 a.m. to 10:00 p.m.

Table 2.15-17
Daytime Project Operational Noise Levels (dBA Leq)

Noise Source	Operational Noise Levels by Receiver Location					
	R1	R2	R3	R4	R5	R6
Horse Park Activities	36.1	39.4	37.4	32.4	42.6	32.4
Public Address System	34.6	38.0	36.0	30.8	40.5	30.9
CVWD Well Site	10.5	24.7	15.7	4.4	7.5	4.2
IID Substation	5.4	14.1	27.8	14.5	8.8	2.3
Roof-Top Air Conditioning Units	27.3	28.8	32.6	27.5	41.7	26.5
Trash Enclosure Activity	22.5	24.3	23.5	18.7	37.4	20.7
Parking Lot Vehicle Activity	25.7	26.6	29.4	24.1	39.7	24.2
Total (All Noise Sources)	**39.1**	**42.3**	**41.1**	**35.9**	**47.7**	**35.8**

See Exhibit 10-A of the Thermal Ranch Specific Plan Noise and Vibration Analysis for noise source locations, and the CadnaA noise model calculations in Appendix 10.1.

As shown in the above table, unmitigated exterior noise levels at off-site receiver locations during daytime hours are expected to range from 35.8 to 47.7 dBA L_{eq}.

Table 2.15-18 shows the operational noise levels during nighttime hours of 10:00 p.m. to 7:00 a.m. Unmitigated noise levels at off-site receiver locations during nighttime hours are expected to range from 38.4 to 41.6 dBA L_{eq}.

Table 2.15-18
Nighttime Project Operational Noise Levels (dBA Leq)

Noise Source	Operational Noise Levels by Receiver Location					
	R1	R2	R3	R4	R5	R6
Horse Park Activities	30.3	33.6	31.6	26.7	36.9	26.6
Public Address System	0.0	0.0	0.0	0.0	0.0	0.0
CVWD Well Site	10.5	24.7	15.7	4.4	7.5	4.2
IID Substation	5.4	14.1	27.8	14.5	8.8	2.3
Roof-Top Air Conditioning Units	24.9	26.4	30.2	25.1	39.3	24.1
Trash Enclosure Activity	16.8	18.6	17.8	12.9	31.6	15.0
Parking Lot Vehicle Activity	24.8	25.6	28.4	23.1	38.7	23.2
Total (All Noise Sources)	**32.4**	**35.4**	**35.9**	**30.2**	**43.5**	**29.8**

See Exhibit 10-A of the Thermal Ranch Specific Plan Noise and Vibration Analysis for noise source locations, and the CadnaA noise model calculations in Appendix 10.1.

Pursuant to County Ordinance 847, the daytime and nighttime noise level standards for sensitive receptors (residential land uses) are 55 dBA L_{eq} and 45 dBA L_{eq}, respectively. As shown in **Table 2.15-19** the operational noise levels associated with the proposed Project will not exceed the County's daytime or nighttime noise level standards.

Table 2.15-19
Operational Noise Level Compliance

Receiver Location	Project Operational Noise Levels (dBA Leq)		Noise Level Standards (dBA Leq)		Noise Level Standards Exceeded?	
	Daytime	Nighttime	Daytime	Nighttime	Daytime	Nighttime
R1	39.1	32.4	55	45	No	No
R2	42.3	35.4	55	45	No	No
R3	41.1	35.9	55	45	No	No
R4	35.9	30.2	55	45	No	No
R5	47.7	43.5	55	45	No	No
R6	35.8	29.8	55	45	No	No

Source: Thermal Ranch Specific Plan Noise and Vibration Analysis, prepared by Urban Crossroads (May 2023), Table 1-10.

As previously stated, the Federal Interagency Committee on Noise (FICON) provides thresholds for noise level increases based on the sensitivity of the receiving land use and the ambient noise level. Based on these thresholds, **Table 2.15-20** and **2.15-21** show the noise level increases expected to result from the operation of the proposed Project during daytime and nighttime hours.

Table 2.15-20
Daytime Project Operational Noise Level Increase

Receiver Location	Total Project Op. Noise Level	Measurement Location	Reference Ambient Noise Levels	Combined Project and Ambient	Project Increase	Increase Criteria	Increase Criteria Exceeded?
R1	39.1	L1	62.7	62.7	0.0	5.0	No
R2	42.3	L2	70.4	70.4	0.0	1.5	No
R3	41.1	L3	67.0	67.0	0.0	1.5	No
R4	35.9	L4	64.7	64.7	0.0	5.0	No
R5	47.7	L5	66.2	66.3	0.1	1.5	No
R6	35.8	L6	63.2	63.2	0.0	5.0	No

As shown in the above table, the proposed Project's operational noise increases are expected to result in daytime noise level increases ranging from 0.0 to 0.1 dBA Leq at the receiver location closest to a sensitive receptor (receiver R2) which is closest to a residence located immediately east of Tyler Street.

According to the Federal Interagency Committee on Noise (FICON) significance criteria for noise sensitive land uses, if the ambient noise level at the receiving land use is less than 60 dBA CNEL, then a noise level increase of 5 dBA CNEL or greater would be considered significant; if the ambient noise level at the receiving land use ranges from 60 to 65 dBA CNEL, then a noise level increase of 3 dBA CNEL or more would be considered significant; and if the ambient noise level at the receiving land use is higher than 65 dBA CNEL, then a noise level increase of 1.5 dBA CNEL or more would be considered significant. Given that the daytime noise associated with the Project would result in noise level increases of 0 to 0.1 dBA CNEL, it can be concluded that daytime operational noise would not exceed the FICON significance criteria.

Table 2.15-21 shows that the Project is not expected to generate a measurable nighttime operational noise level increase at any of the receiver locations. Operation of the Project would therefore not exceed the FICON noise increase criteria for nighttime hours.

Table 2.15-21
Nighttime Project Operational Noise Level Increase

Receiver Location	Total Project Op. Noise Level	Measurement Location	Reference Ambient Noise Levels	Combined Project and Ambient	Project Increase	Increase Criteria	Increase Criteria Exceeded?
R1	32.4	L1	61.1	61.1	0.0	5.0	No
R2	35.4	L2	67.4	67.4	0.0	1.5	No
R3	35.9	L3	63.7	63.7	0.0	1.5	No
R4	30.2	L4	61.7	61.7	0.0	1.5	No
R5	43.5	L5	66.3	66.3	0.0	1.5	No
R6	29.8	L6	61.3	61.3	0.0	5.0	No

Overall, the proposed Project would not exceed the operational noise level increase significance criteria provided in **Table 2.15-8**, including both exterior noise level standards provided by the County and noise level increase criteria provided by FICON. The impacts of the operational noise generated by the proposed Project on nearby receiver locations would therefore be less than significant.

Construction Noise

Buildout of the proposed Project will involve site preparation, excavation and grading, building construction, paving, and other noise generating activities, which will result in localized and temporary increases in ambient noise levels. The Noise Analysis prepared for the Project collected reference noise levels for standard equipment involved in each construction phase. Pursuant to Federal Transit Administration (FTA) guidance for construction noise assessment, **Table 2.15-22** shows the combined noise levels for the loudest construction equipment, assuming the equipment is operated at the same time.

Table 2.15-22
Construction Reference Noise Levels

Construction Phase	Reference Construction Activity	Reference Noise Level @ 50 ft (dBA Leq)[1]	Combined Noise Level (dBA Leq)[2]	Combined Sound Power Level (PWL)[3]
Site Preparation	Crawler Tractors	78	80	112
	Hauling Trucks	72		
	Rubber Tired Dozers	75		
Grading	Graders	81	83	115
	Excavators	77		
	Compactors	76		
Building Construction	Cranes	73	81	113
	Tractors	80		
	Welders	70		
Paving	Pavers	74	83	115
	Paving Equipment	82		
	Rollers	73		
Architectural Coating	Cranes	73	77	109
	Air Compressors	74		
	Generator Sets	70		

[1] FHWA Roadway Construction Noise Model (RCNM).
[2] Represents the combined noise level for all equipment assuming they operate at the same time consistent with FTA Transit Noise and Vibration Impact Assessment guidance.
[3] Sound power level represents the total amount of acoustical energy (noise level) produced by a sound source independent of distance or surroundings. Sound power levels calibrated using the CadnaA noise model at the reference distance to the noise source.

As shown in the above table, construction noise levels are expected to result in combined sound power level of 109 to 115. **Table 2.15-23**, below, shows the expected noise levels at the six nearby sensitive receiver locations. Noise levels at the receiver locations would range from 39.4 to 62.9 dBA L_{eq}.

Table 2.15-23
Project Construction Noise Summary and Compliance

Receiver Location	Construction Noise Levels (dBA Leq)							
	Site Prep.	Grading	Building Constrct.	Paving	Off-site Utilities	Highest Noise Levels	Threshold	Exceeded?
R1	49.3	52.3	50.3	52.3	47.3	52.3	80	No
R2	59.9	62.9	60.9	62.9	57.9	62.9	80	No
R3	56.7	59.7	57.7	59.7	54.7	59.7	80	No
R4	41.4	44.4	42.4	44.4	39.4	44.4	80	No
R5	59.4	62.4	60.4	62.4	57.4	62.4	80	No
R6	41.8	44.8	42.8	44.8	39.8	44.8	80	No

The Federal Transit Administration provides a construction noise threshold of 80 dBA Leq during daytime hours and 70 dBA Leq during nighttime hours.[2] As shown in the above table, the Project's construction noise levels, which range from 39.4 to 62.9 at nearby sensitive receiver locations, do not exceed the threshold at any of the received locations.

[2] Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual (September 2018).

Furthermore, in recognition that construction noise is difficult to control, Riverside County Noise Ordinance (Ordinance No.847) exempts private construction projects located within one-quarter mile of an inhabited dwelling from compliance with the general sound level standards, provided that: construction does not occur between the hours of 6:00 p.m. and 6:00 a.m. during the months of June through September; and construction does not occur between the hours of 6:00 p.m. and 7:00 a.m. during the months of October through May. Construction of the proposed Project would abide by these restrictions, further reducing potential noise impacts to nearby sensitive receivers to less than significant levels.

Given that construction of the proposed Project does not exceed the FTA noise threshold and would be restricted to less noise sensitive daytime hours, impacts related to construction noise would be less than significant.

CVWD Middleton Reservoir 7802-1 Site

The Project reservoir site is located 2.4± miles southwest of the Project site, currently hosts a CVWD 2.5 million tank and is planned for multiple tanks. The existing reservoir site is fully graded and located behind a 25-foot earthen berm with existing access and site security. The reservoir site is located in a relatively isolated location on the lower portions of the Martinez Canyon alluvial fan. Development of the Project reservoir will involve shifting the existing berm 35± feet to the north, pouring of a concrete tank pad and construction of the tank, which will be comprised of welded steel. While construction noise levels are expected to be limited and to not exceed County or CVWD standards, they will be further mitigated by the 25-foot earthen berm surrounding the reservoir site. There are no sensitive receptors in the vicinity of the reservoir site. There will be limited and essentially undiscernible noise emanating from the site follow completion of construction. Therefore, impacts will be less than significant.

Summary

The above discussion considered the potential off-site noise impacts resulting from Project-related traffic increases, on-site noise impacts resulting from traffic noise, operational noise impacts on nearby sensitive receivers, and construction noise impacts on nearby sensitive receivers. The analysis determined that noise impacts related to off-site traffic noise, operational noise, and construction noise would be less than significant. It was also determined that on-site traffic noise, including interior and exterior noise levels would require the implementation of NOI-1 and NOI-2 to mitigate on-site noise to less than significant levels.

Overall, the Project's potential to generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project and in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies would be less than significant with mitigation.

b) Generation of excessive groundborne vibration or groundborne noise levels;

Operation of the proposed Project is not expected to generate significant or ongoing groundborne vibration. Construction of the proposed Project will require the use of trenching, excavation, grading and compaction equipment, all of which have the potential to generate substantial ground vibrations. The strength of construction-related vibration depends on the equipment used and methods employed, and diminishes with distance.

Representative vibration levels were selected for standard construction equipment types. As shown in **Table 2.15-24**, standard construction equipment would generate 0.003 to 0.210 in/sec peak particle velocity (PPV) of vibration at a distance of 25 feet.

Table 2.15-24
Representative Vibration Levels for Construction Equipment

Equipment	PPV (in/sec) at 25 feet
Small bulldozer	0.003
Jackhammer	0.035
Loaded Trucks	0.076
Large bulldozer	0.089
Vibratory Roller	0.210
Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual	

Table 2.15-25 shows the potential impacts of Project-related construction vibration on nearby sensitive receivers. The receivers would range in distance from 148 to 2,936 feet from Project construction. At these distances, the receivers would be exposed to 0.000 to 0.015 in/sec PPV. These levels of vibrations would be intermittent and temporary, and would only occur when heavy equipment is being operated near the perimeter of the Project site.

Furthermore, pursuant to Riverside County Noise Ordinance (Ordinance No.847), private construction projects located within one-quarter mile of an inhabited dwelling must cease construction operations between the hours of 6:00 p.m. and 6:00 a.m. during the months of June through September, and between the hours of 6:00 p.m. and 7:00 a.m. during the months of October through May. Construction of the proposed Project would abide by these restrictions, further reducing potential groundborne vibration impacts to nearby sensitive receivers.

Table 2.15-25
Representative Vibration Levels for Construction Equipment

Location	Distance to construction (feet)	Typical construction vibration levels PPV (in/sec)						Thres-hold ppv (in/sec)	Thresholds exceeded?
		Small bull-dozer	Jack-hammer	Loaded trucks	Large bulldozer	Vibratory roller	Highest vibration level		
R1	1,072'	0.000	0.000	0.000	0.000	0.001	**0.001**	0.3	No
R2	148'	0.000	0.002	0.005	0.006	0.015	**0.015**	0.3	No
R3	309'	0.000	0.001	0.002	0.002	0.005	**0.005**	0.3	No
R4	2,936'	0.000	0.000	0.000	0.000	0.000	**0.000**	0.3	No
R5	170'	0.000	0.002	0.004	0.005	0.012	**0.012**	0.3	No
R6	2,818'	0.000	0.000	0.000	0.000	0.000	**0.000**	0.3	No

According to the Caltrans Transportation and Construction Vibration Guidance Manual, the maximum continuous vibration threshold at which a building may be damaged is 0.3 PPV (in/sec). As shown in the above table, the vibration levels experienced at nearby receiver locations as a result of Project construction would be well below the building damage threshold. Therefore, Project-related vibration impacts are considered less than significant.

CVWD Middleton Reservoir 7802-1 Site

Development of the Project reservoir will include the shifting of the existing 25-foot high berm 35± feet farther north. The existing reservoir site is improved with existing access and site security. The reservoir site is located in a relatively isolated location on the lower portions of the Martinez Canyon alluvial fan. Development of the Project reservoir will involve the shifting of the existing berm, pouring of a concrete tank pad and construction of the tank, which will be comprised of welded steel. As discussed above, ground vibration falls off sharply with distance. There are no sensitive receptors in the vicinity of the reservoir site. Construction of the Project reservoir is expected to generate limited and less than significant ground-bourn vibrations or noise. Therefore, impacts will be less than significant.

2.15.7 Mitigation Measures

NOI-1 Detailed noise analysis is required for all future residential land uses. These final noise studies shall combine the recommendations provided in the Project-wide Noise Analysis Report with precise grading plans and building design specifications.

Prior to the recordation of final maps or the issuance of building permits for planned residential uses, the applicant shall provide precise grading plans and actual building design specifications, as well as detailed analysis demonstrating the efficacy of the planned noise mitigation measures, including location and height of masonry walls, distance between the noise source and residential lots, and other noise buffers, to ensure that the County of Riverside 65 dBA CNEL exterior noise level standard is met.

NOI-2 Perimeter masonry walls shall extend either to the recommended height above the pad elevation of the lot being shielded, or if the road is elevated above the pad, then the barrier shall be extend to the recommended height above the highest point between the residence and the road. Wall construction shall be in accordance with the specifications set forth in the Project Noise Report.

NOI-3 In order to meet the 45 dBA CNEL interior noise level standard established the County of Riverside, all residential units shall meet a 'windows-closed condition' by including a means of mechanical ventilation (e.g. air conditioning). The Project's residences shall also provide the following standard building construction measures to ensure the interior noise level standard is met:

- Windows and glass doors: All windows must have a minimum Sound Transmission Class (STC) rating of 27. Hotel and condominiums in PA-5 must provide upgraded windows with a minimum STC rating of 36 for all windows facing Harrison Street and Avenue 64.
- Doors (non-glass): All exterior doors must be weather-stripped and have minimum STC ratings of 27.
- Walls: Any penetrations of exterior walls by pipes, ducts, or conduits, the space between the wall and pipes, ducts, or conduits shall be caulked or filled with mortar to form an airtight seal.
- Roof: Roof sheathing of wood construction shall be installed per manufacturer's specification or caulked plywood of at least one-half inch thick. Ceiling shall be per manufacturer's specification or well-sealed gypsum board of at least one-half inch thick. Insulation with at least a rating of R-19 shall be used in the attic.
- Ventilation: All habitable rooms must be designed such that circulated air will be provided even if exterior doors and windows are closed. A forced air circulation system (e.g., air conditioning) or active ventilation system (e.g. fresh air supply) shall be provided to satisfy the requirements of the Uniform Building Code.

2.15.8 Significance After Mitigation

With the implementation of NOI-1, NOI-2 and NOI-3, the proposed Project will meet the Riverside County interior and exterior residential noise level standards, and on-site traffic noise impacts will be less than significant. Impacts resulting from airport noise, off-site traffic noise, operational noise, construction noise, and construction vibration will not require mitigation, and will be less than significant.

2.15.9 Cumulative Impacts

Cumulative impacts are those resulting from the proposed Project in combination with other future or ongoing projects. A cumulative noise impact occurs when cumulative projects would result in a substantial noise level increase and would exceed applicable standards.

The construction noise and vibration associated with the Project would be temporary and would therefore not contribute to long-term increases in ambient noise levels in the Project vicinity.

The traffic noise analysis conducted by Urban Crossroads evaluated the noise associated with Project-related traffic against projected traffic noise levels in Existing Plus Ambient Growth Plus Cumulative in 2026 (EAC 2026) and EAC 2029 conditions, as well as against the Horizon Year (2045) noise levels. As discussed in Section 2.15.6(a), land uses adjacent to all the studied roadway segments would experience less than significant noise level increases as a result of Project-related traffic. Given that these three scenarios account for cumulative traffic conditions, it can be concluded that the Project's cumulative traffic noise impacts would be incremental, and would not be cumulatively considerable.

2.16 Population, Housing and Environmental Justice

2.16.1 Introduction

This section of the EIR describes existing population, housing, and socio-economic conditions in the Project area, as well as issues associated with environmental justice. It analyzes the potential impacts of the proposed Project on those resources, including changes in population and the demand for housing. The analysis is partly based on data and information from sources and agencies including the County of Riverside General Plan and the Southern California Association of Governments.

2.16.2 Thresholds of Significance

The CEQA Guidelines define the parameters under which the consideration of socio-economic impacts may be included in an environmental evaluation. CEQA Guidelines Section 15131 states that *"[e]conomic or social information may be included in an EIR or may be presented in whatever form the agency desires."* Further, Section 15131(a) of the Guidelines states that *"[e]conomic or social effects of a project shall not be treated as significant effects on the environment. An EIR may trace a chain of cause and effect from a proposed decision on a project through anticipated economic or social changes resulting from the project to physical changes caused in turn by the economic or social changes [emphasis added]. The intermediate economic or social changes need not be analyzed in any detail greater than necessary to trace the chain of cause and effect. The focus of the analysis shall be on the physical changes."*

CEQA Section 15131(b) also provides that *"[e]conomic or social effects of a project may be used to determine the significance of physical changes caused by the project."* For example, the level of significance of a physical division of a community from transit facilities could be measured by the social effect on the community.

Cities, counties, and other local governmental entities have an important role to play in ensuring environmental justice for all of California's residents. Under state law: *"[E]nvironmental justice" means the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies."* (Gov. Code, § 65040.12, subd. (e).) Fairness in this context means that the *benefits* of a healthy environment should be available to everyone, and the *burdens* of pollution or other physical impacts should not be focused on sensitive populations or on communities that already are experiencing its adverse effects.

Project impacts to population and housing are analyzed using the thresholds of significance provided in Appendix G of the CEQA Guidelines. Appendix G uses the following questions to evaluate the project's potential impacts.

Housing

a) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

b) Create a demand for additional housing, particularly housing affordable to households earning 80% or less of the County's median income?

c) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

The Initial Study determined that the Project would result in "No Impact' for threshold question a) above. Therefore, it is not analyzed further in this EIR.

2.16.3 Regulatory Framework

Federal

There are no federal regulations governing population and housing that apply to the proposed Project.

State

Regional Housing Needs Allocation
The Southern California Association of Governments (SCAG) prepared the Regional Housing Needs Allocation (RHNA) for the County of Riverside as required by the California Department of Housing and Community Development (HCD) pursuant to Government Code §65584. The RHNA allocates to cities and the unincorporated county their share of the region's projected housing needs.

Senate Bill 1000: Environmental Justice
SB 1000 requires local governments to identify environmental justice communities or "disadvantaged communities" in their jurisdictions. If such communities are present within the local government's jurisdiction, then environmental justice must be addressed in their general plan. According to Government Code §65302, for the purpose of SB 1000, "disadvantaged communities" refers to an area identified by the California Environmental Protection Agency (CalEPA) or a low-income area that is disproportionately affected by environmental pollution and other hazards that can lead to negative health effects, exposure, or environmental degradation. CalEPA identifies such communities based on socioeconomic, public health, and environmental hazard data, using the CalEnviroScreen tool. The Project site is located within an environmental justice community, as defined by CalEnviroScreen 4.0.

"Low-income area" means an area with household incomes at or below 80 percent of the statewide median income or with household incomes at or below the threshold designated as low income by the Department of Housing and Community Development's list of state income limits adopted pursuant to Section 50093 of the Health and Safety Code.

Senate Bill 535: Greenhouse Gas Reduction Fund
In recognition of the potential vulnerability of low-income and disadvantaged populations to efforts to reduce greenhouse gas emissions and to the impacts of climate change, SB 535 directs proceeds from the state's Cap-and-Trade program towards disadvantaged communities. For the purpose of SB 535, CalEPA designates four categories of geographic areas as disadvantaged:

1. Census tracts receiving the highest 25 percent of overall scores in CalEnviroScreen 4.0.

2. Census tracts lacking overall scores in CalEnviroScreen 4.0 due to data gaps, but receiving the highest 5 percent of CalEnviroScreen 4.0 cumulative pollution burden scores.

3. Census tracts identified in the 2017 DAC designation as disadvantaged, regardless of their scores in CalEnviroScreen 4.0.

4. Lands under the control of federally recognized Tribes.

The Project site is not within a disadvantaged community pursuant to SB 535. However, the adjacent land to the south is designated as a disadvantaged community.

Regional/Local

SCAG Regional Transportation Plan / Sustainable Communities Strategy

The 2020-2045 Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS), prepared by the Southern California Association of Governments (SCAG), is a long-range plan for achieving connected transportation projects and investments across the six-county region. The RTP/SCS includes a Demographics and Growth Forecast technical report, which projects employment, population, and household growth at the jurisdictional, county, and regional levels for the purpose of developing long-range regional land use and transportation planning strategies. The SCAG population, households, and employment projections for the unincorporated portion of Riverside County are shown in **Table 2.13-1**.

Table 2.16-1
SCAG Jurisdiction-Level Growth Forecast – Riverside County

Jurisdiction	Population		Households		Employment[1]	
	2016	2045	2016	2045	2016	2045
Unincorporated	370,500	525,600	113,600	180,900	76,100	139,600

Source: Southern California Association of Governments RTP/SCS Demographics and Growth Forecast Technical Report (September 2020).
[1] Employment data represents the number of jobs in the unincorporated portion of the County.

Riverside County General Plan

The Riverside County General Plan outlines policy approaches to enhance community identity within the County of Riverside and strengthen quality of life at the community level. The General Plan's jurisdiction covers nineteen Area Plans and all unincorporated communities. Policies in the Land Use, Housing and Healthy Communities Elements are relevant to population, housing, and environmental justice.

Land Use

LU 8.1 Accommodate the development of a balance of land uses that maintain and enhance Riverside County's fiscal viability, economic diversity, and environmental integrity.

LU 8.2 Promote and market the development of a variety of stable employment and business uses that provide a diversity of employment opportunities.

Housing Element

H 3.1 Encourage housing developers to produce affordable units by providing assistance and incentives for projects that include new affordable units available to lower-/moderate-income households or special-needs housing.

H 5.1 Facilitate the development of new employee or farmworker housing, including Palanco Parks.

Healthy Communities Element

HC 3.4 Provide for a range of housing options to accommodate a range of income levels and household types.

HC 16.5 Evaluate the compatibility of unhealthy and polluting land uses being located near sensitive receptors including possible impacts on ingress, egress, and access routes. Similarly, encourage sensitive receptors, such as housing, schools, hospitals, clinics, and childcare facilities to be located away from uses that pose potential hazards to human health and safety.

HC 16.10 Plan for compact development projects in appropriate locations, including in existing communities and the clustering of affordable and mixed-income housing therein, that make the most efficient use of land and concentrate complementary uses close to transit or non-transit mobility options and advocate for expanded transit and non-transit mobility options to serve such areas.

HC 16.16 Apply pollution control measures such as landscaping, vegetation, and green zones (in cooperation with the SCAQMD) and other materials, which trap particulate matter or control air pollution.

HC 16.18 Promote new development that emphasizes job creation and reduction in vehicle miles traveled in job-poor areas and does not otherwise contribute to onsite emissions to improve air quality.

HC 17.2 Orient buildings closer to streets or provide landscaped promenades that connect buildings to bus stops with routes that provide access to shopping centers, grocery stores, and areas where farmer's markets are held.

HC 18.9 Encourage the location and design of new developments to visually enhance and not degrade the character of the surrounding area through consideration of the following concepts.

HC 19.2 Develop of high-quality parks, green space, hiking trails, recreational facilities and natural environments in areas where such facilities are lacking.

HC 19.6 Plan for a system of local trails that enhances recreational opportunities and connects with regional trails.

HC 19.7 Incorporate open space, community greenbelt separators, and recreational amenities into development areas in order to enhance recreational opportunities and community aesthetics to improve the quality of life.

HC 20.1 New development should provide for public services including but not limited to solar street lighting, shading structures at bus stops, other supporting infrastructure, and extension of trash and recyclables pickup routes.

HC 20.2 New development should promote convenient internal pedestrian circulation among land uses (existing and proposed) within each neighborhood and connecting with existing adjacent developed areas and as applicable consistent with the Southern California Association of Governments Regional Transportation Plan/Sustainable Communities Strategy, and amendments thereto.

Eastern Coachella Valley Area Plan

The Eastern Coachella Valley Are Plan (ECVAP) is a subarea plan under the County of Riverside General Plan, which encompasses many unincorporated communities in the eastern Coachella Valley and elsewhere in the County. The ECVAP lays forth long-term visions, policy, and management regarding housing, population growth, conservation and open space resources, education, agriculture, intergovernmental cooperation, the local economy, and air quality.

As shown in **Table 2.16-2**, buildout of the area plan over 20 years is expected to result in a total of 119,304 dwelling units, 557,627 residents, and 146,360 jobs in the eastern Coachella Valley.

Table 2.16-2
Eastern Coachella Valley Population at Buildout

	Land Use[1]	Acreage	Dwelling Units	Population
	Agriculture	42,066	2,693	12,587
	Community Development	28,028	113,408	530,068
	Other [2]	351,754	3,093	14,457
	Total	**421,848**	**119,304**	**557,627**

Source: Eastern Coachella Valley Area Plan, Table 2: Statistical Summary of Eastern Coachella Area Plan
[1] Land Use Foundation Components
[2] Includes the Rural, Rural Community, and Open Space Foundation Components

Under the Eastern Coachella Valley General Plan, the Project site is designated for agriculture on the Land Use Map. The Project is therefore subject to the following policy which is also pertinent to population and housing:

Farm Worker Housing

ECVAP 6.1 Allow farmworker housing that meets basic safety standards in agriculturally designated areas per the land use designations section of the General Plan Land Use Element, and the Five-Year Action Plan and Special Housing Need sections of the Housing Element.

2.16.4 Environmental Setting

Population

The Eastern Coachella Valley is a historically rural and agricultural area in central Riverside County. Crops such as date palms, grapes, citrus, and seasonal row crops have contributed to the Eastern Coachella Valley's status as one of the state's most important areas for agricultural production.

In addition to the City of Coachella, the Eastern Coachella Valley is comprised of several small unincorporated communities, including Thermal, Mecca, Vista Santa Rosa, and Oasis. The Augustine Band of Mission Indians, the Torres Martinez Desert Cahuilla Indians, the 29 Palms Band of Mission Indians, and the Cabazon Band of Mission Indians all have reservation lands within the Eastern Coachella Valley Area Plan (ECVAP) area.

Prior to the adoption of the ECVAP, the area's population had almost doubled over the previous 20 years.[1] The Population and Employment Forecasts technical appendix to the County General Plan includes population, housing, and employment forecasts for 2010, 2020, and 2035. The 2010 projections were based on demographic and economic trends, as well as land use policies, provided in the plan. As shown in **Table 2.16-3**, the County anticipated that the population in the ECVAP would continue to growth at rapid pace, projected to more than double from 2010 to 2020, and again from 2020 to 2035.

[1] County of Riverside General Plan, Eastern Coachella Valley Area Plan (Adopted December 2009, Revised September 2021), p.2.

Table 2.16-3
Eastern Coachella Valley Population and Employment Forecasts

Eastern Coachella Valley Area Plan	Population			Housing Units			Employment		
	2010	2020	2035	2010	2020	2035	2010	2020	2035
Incorporated	42,500	76,500	135,00	9,300	19,010	36,542	6,351	12,700	30,400
Unincorporated	32,454	89,606	206,313	7,363	22,971	55,286	6,878	15,849	35,577
Total	**74,954**	**166,106**	**341,313**	**16,663**	**41,981**	**91,828**	**13,229**	**28,549**	**65,977**

Source: Riverside County General Plan Appendix F-1 Population and Employment Forecasts

As shown in the above table, this projected growth was expected to occur in both incorporated and unincorporated areas of the ECVAP.

Counter to the County's population projections, census data indicates that actual growth in the Project area has occurred significantly more slowly than anticipated in the General Plan. **Table 2.16-4** shows the population change from 2010 to 2020 across multiple communities and cities in the eastern Valley.

Table 2.16-4
Eastern Coachella Valley
2010 to 2020 Census - Population Change

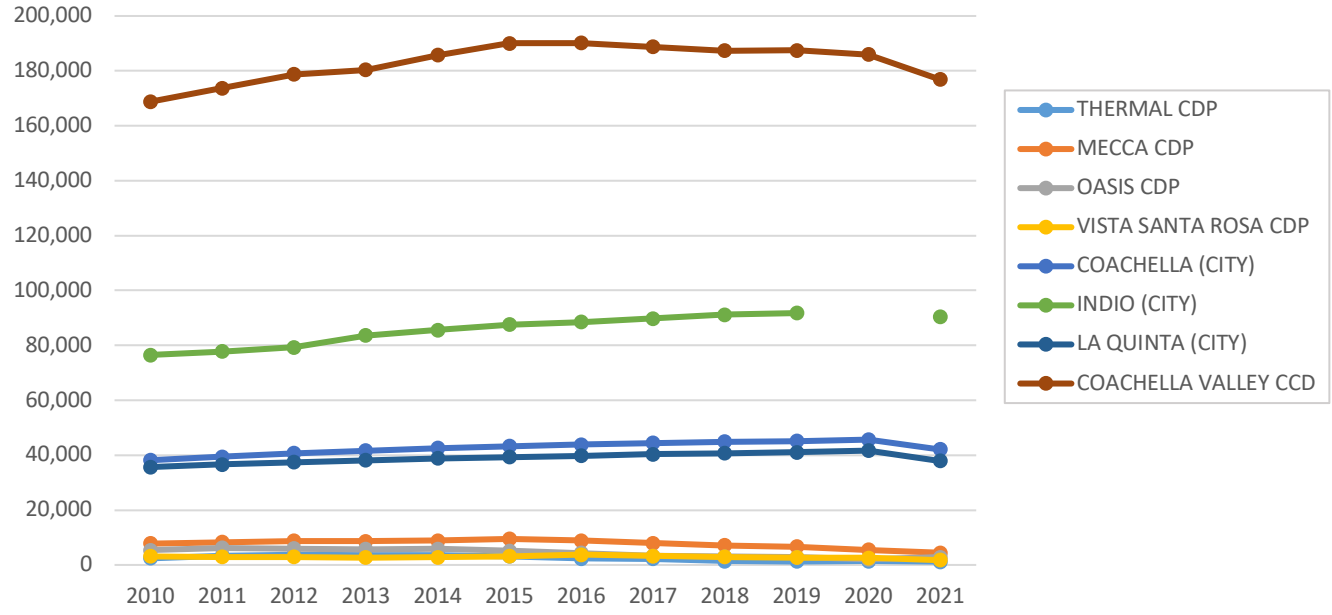
Community	Total Population		Change
	2010	2020	
Thermal CDP	2,865	1,371	-52.1%
Mecca CDP	8,577	8,219	-4.2%
Oasis CDP	6,890	4,468	-35.2%
Vista Santa Rosa CDP	2,926	2,607	-10.9%
Coachella (City)	40,704	41,941	+3.0%
Indio (City)	76,036	89,137	+17.2%
La Quinta (City)	37,467	37,558	+0.24%
Coachella Valley CCD[1]	180,693	190,541	+5.5%

Source: U.S. Census Bureau, 2010 and 2020 Decennial Census.
CDP = Census Designated Place
CCD = Census County Division
[1] The Coachella Valley CCD covers a large area in the eastern Coachella Valley, from the southern boundary of Riverside County to north of the I-10, and including a portion of the cities of La Quinta and Coachella, all of Indio, as well as the Thermal, Mecca, Oasis, and Vista Santa Rosa CDPs.

While the census reports population data using different geographic boundaries than the County, the population change shown in the above table indicates that growth is occurring significantly more slowly than projected in the General Plan. In fact, the four unincorporated communities (census designated places) all experienced decreases in population over the ten-year period. While the Coachella Valley CCD grew by 5.5% over the decade, this growth is likely attributable to population growth in the cities of Coachella, Indio, and/or La Quinta, which are all at least partially covered by the CCD boundaries.

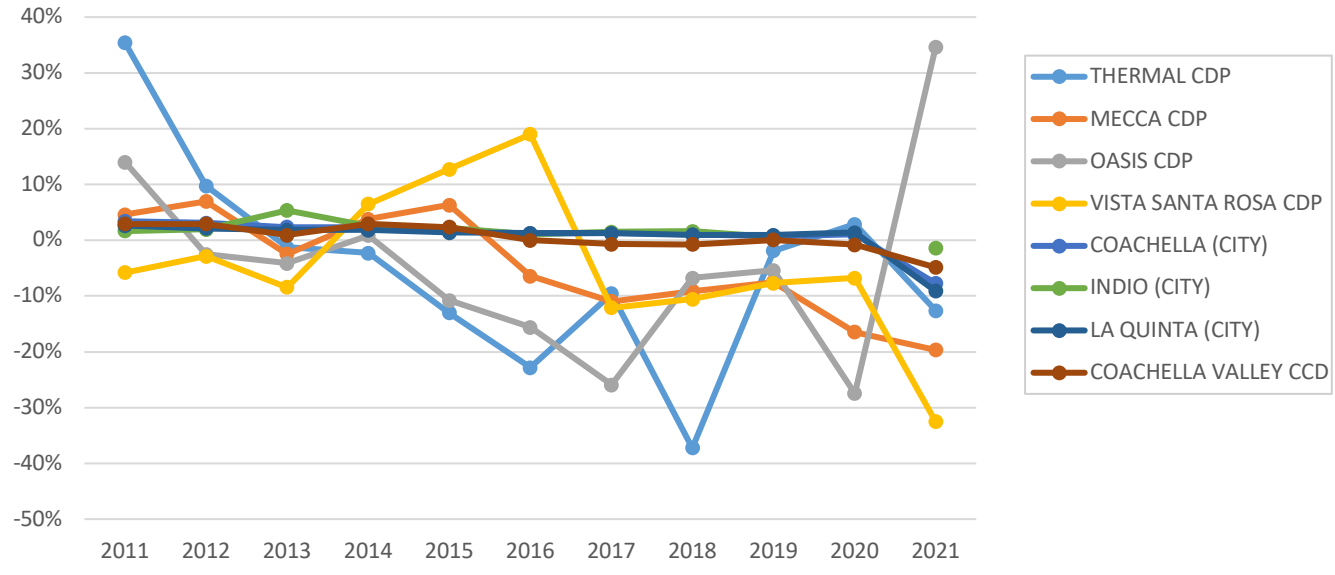
The Project site is within the boundaries of the Coachella Valley CCD; however, it is not located directly in any of the above cities or CDPs. Nonetheless, in contrast with the County's growth projections in **Table 2.16-3**, the census data in **Table 2.16-4,** suggests that actual population growth in the area over the last decade has been significantly slower than anticipated.

Figure 2.16-1
Coachella Valley Population Totals by Year, 2010-2021
American Community Survey: 5-Year Estimates



Source: U.S. Census Bureau, 2006-2010 to 2017-2021 American Community Survey 5-Year Estimates.

Figure 2.16-2
Coachella Valley Population Change (Year Over Year), 2010-2021
American Community Survey: 5-Year Estimates



Source: U.S. Census Bureau, 2006-2010 to 2017-2021 American Community Survey 5-Year Estimates.

Population trends in the Coachella Valley CCD and communities surrounding the Project area are shown in greater detail in the graphs above. **Figure 2.16-1** show the population estimates for each census area from the American Community Survey (ACS) 5-Year Estimates from 2010 to 2021. **Figure 2.16-2** shows the year-over-year percent change in the ACS population estimates for each community. Both the population estimates and year-over-year change for the Coachella Valley CCD, the encompassing area, indicates that change has been gradual, and that the population has declined slightly in recent years. Consistent with the 2010 and 2020 census data, these population estimates suggest that population growth in the eastern Coachella Valley has been substantially slower than projected in the County's General Plan.

Housing

There were an estimated 70,384 occupied housing units in the Coachella Valley CCD in 2021.[2] As shown in **Table 2.16-5**, the existing housing stock in eastern unincorporated areas of Riverside County is comprised of approximately 19,836 units. The table also shows that a significant portion, approximately 36.9%, of housing units in the area are used seasonally, mostly as vacation homes, but also for migrant workers.

Table 2.16-5
Housing Inventory by Tenure, 2018

Planning Area	Total Units	Occupied Units		Vacant Units		
		Rental	Owner	For Rent	For Sale	Other[1]
Eastern Unincorporated	19,836	5,186	14,640	370	586	7,310
		26.1%	73.8%	1.9%	3.0%	36.9%

Source: Riverside County draft 6th Cycle Housing Element Update Housing Background Report, Table P-16.
[1] Includes seasonal, recreational, occasional use, for migrant workers and other vacant.

According to the Housing Element Update Background Report, the vacancy rates in the eastern unincorporated portion of the County in 2018 were 1.9% for rental units, 3.0% for owner occupied units, and 36.9% for 'other' unit types,[3] including seasonal, recreational, and occasional use, as well as migrant workforce housing.[4] In its RHNA methodology, SCAG uses a healthy-market vacancy rate of 5% for rental units and 1.5% for owner-occupied units, as determined by the California Department of Housing and Community Development (HCD).[5] Based on these measures, the eastern unincorporated County has a healthy stock of owner-occupied housing available, but a substantial deficit in available rental housing.

SCAG adopted the 6th Cycle Final Regional Housing Needs Assessment (RHNA) Plan for the 2021-2029 planning period in March 2021. The RHNA is based on household income groupings over the eight-year planning period, relative to the county's median income. The median income for a four-person household in Riverside County is $60,250. The allocation for the unincorporated County of Riverside is a total of 40,647 housing units. **Table 2.16-5** shows the housing allocation per income category for unincorporated Riverside County.

2 U.S. Census Bureau, 2017-2021 American Community Survey 5-Year Estimates, 2021 Occupancy Characteristics, Coachella Valley CCD.
3 The Housing Element Background Report notes that the high vacancy rate for 'other' housing types is due primarily to the large number of vacation homes in the area.
4 Riverside County draft 6th Cycle Housing Element Update Housing Background Report, Table P-16.
5 Southern California Association of Governments, Final RHNA Methodology (March 2020), https://scag.ca.gov/sites/main/files/file-attachments/scag-final-rhna-methodology-030520.pdf?1602189316 (accessed September 2023).

Table 2.16-6
Unincorporated Riverside County Housing Allocation

Income Category		Income Range [1]	2021-2029 RHNA
Very-low income	Up to 50% of median income	$0 - $37,650	10,371
Low income	51% to 80% of median income	$37,651 – $60,250	6,627
Moderate income	81% to 120% of median income	$60,251 – $90,350	7,347
Above-moderate income	More than 120% of median income	$90,351 or more	16,301
		Total	**40,647**

Source: Southern California Association of Governments Sixth Cycle Final Regional Housing Needs Allocation Plan
[1] Based on a four-person household

The US Department of Housing and Urban Development (HUD) defined housing affordability as the expenditure of no more than 30% of the household income on housing costs. If a household spends more than 50% of its income on housing it is considered a severe cost burden.[6] Based on the income categories provided in the above table, affordable rent for a very-low income household would be approximately $941 per month or less, and affordable rent for a low income household would be $1,506 or less.

Employment

According to 2021 American Community Survey 5-Year Estimates for the Coachella Valley CCD, of the population aged 16 years and older (147,365 people), an estimated 89,434 people were in the labor force in 2021 (60.7%).[7] In 2018, the largest job sectors in Riverside County were educational and social services (19.2%), retail trade (11.6%), professional services (11.4%), and arts and entertainment (10.3%), according to the County Housing Element Background Report. Approximately 3.8%, or a total of 5,752 jobs, were farm jobs in the same year. In January 2020, the unemployment rate in the County was 4.2%, somewhat higher than the statewide average of 3.5%.

Table 2.16-6 shows the distribution of households by income category in the unincorporated areas of eastern Riverside County, compared to the County as a whole. The largest income category in the eastern county is the extremely low category, which represents households making less than 30% of the county's median household income.

Table 2.16-7
Households by Income Category

Income Category [1]	Eastern Unincorporated		Riverside County Total	
	Number	Percentage	Number	Percentage
Extremely Low	6,633	33.5%	135,700	18.7%
Very low	2,514	12.7%	69,204	9.6%
Low	3,494	17.7%	120,652	16.6%
Moderate	3,181	16.1%	131,440	18.15
Above moderate	3,956	20.2%	267,891	37.0%
Total Households	19,778	100%	724,887	100%

Source: Riverside County 6th Cycle Housing Element Update Background Report, Table P-13.
[1] Based on a four-person household.

6 Riverside County draft 6th Cycle Housing Element Update Housing Background Report.
7 U.S. Census Bureau, 2017-2021 American Community Survey 5-Year Estimates, Coachella Valley CCD.

Government Code §65890.1 states that land use patterns should be organized to balance the location of employment-generating uses with residential uses in order to minimize commuting distances. The balance of employment-generating and residential uses can be measured using the jobs-to-housing ratio. A jobs-to-housing ratio of 1.5:1 is considered balanced according to the Governor's Office of Planning and Research (OPR).[8] According to the Riverside County Housing Element Background Report, eastern unincorporated areas of the County had a jobs-to-housing ratio of 1.02:1 in 2018, which is below the county-wide ratio (1.55:1) and the target ratio according to OPR. Similarly, employment and household estimates for the Coachella Valley CCD from the American community Survey 2021 5-year estimates show a jobs-household ratio of 1.125:1, which is still below the target ratio provided by OPR.[9]

The low jobs-to-housing ratio in eastern unincorporated areas of Riverside County suggests that this region has unmet demand for job opportunities. Accordingly, communities in this region have an above average unemployment rate, as shown in **Table 2.16-8**.

Table 2.16-8
Unemployment Rate 2017-2022

Year	Mecca (CDP)	Coachella (City)	Riverside County
2017	5.3%	12.3%	5.3%
2018	4.8%	10.9%	4.4%
2019	6.8%	10.2%	4.2%
2020	15.6%	15.9%	10.1%
2021	17.2%	13.2%	7.3%
2022	10.2%	7.6%	4.1%

Source: State Employment Development Department, Labor Force and Unemployment Rate for Cities and Census Designated Places, https://labormarketinfo.edd.ca.gov/data/labor-force-and-unemployment-for-cities-and-census-areas.html#Data (Accessed May 2023).

The above table shows the unemployment rates over a six-year period in Riverside County, Mecca, and Coachella. Mecca and Coachella are two closest communities with available data from the Employment Development Department. Both communities are within the eastern Coachella Valley, within 6 miles of the property, and thus are representative of the general employment trend in the area. As shown in **Table 2.16-8**, with a couple of exceptions, the two communities have consistently had a higher unemployment rate than the County average.

2.16.5 Existing Conditions

The entire 619.1± acre Project site is currently in active agriculture and inclusive of storage buildings, sheds and a well. There are currently no residential buildings on the property. The County General Plan Socioeconomic Buildout-out Assumptions and Methodology documents provides an agricultural employment factor of 0.05 employees per acre. Based on this factor and the size of the subject site, the existing on-site agricultural operation could employ approximately 31 people.

[8] State of California General Plan Guidelines prepared by the Governor's Office of Planning and Research (2017).

[9] Based on 79,197 employed civilians aged 16 years and older, and 70,384 households. Source: U.S. Census Bureau, 2017-2021 American Community Survey 5-Year Estimates.

Environmental Justice

Government Code §65040.12 defines environmental justice as "the fair treatment of people of all races, cultures, and incomes with respect to development, adoption, implementation, and enforcement of environmental laws, regulations, and policies." California law recognizes that low-income communities and communities of color often bear a disproportionate burden of pollution and associated health risks. The state aims to reduce these inequities through environmental justice laws such as Senate Bill (SB) 1000 and SB 535.

SB 1000 requires local governments to identify environmental justice communities or "disadvantaged communities" in their jurisdictions, and, if any such communities present, address environmental justice in their general plan. CalEPA identifies environmental justice communities based on socioeconomic, public health, and environmental hazard data, using the CalEnviroScreen tool. As shown in **Exhibit 2.16-1**, the census tract within which the Project site is located ranked in the 66th percentile overall according to the CalEnviroScreen 4.0 results. CalEnviroScreen calculates a community's overall score based on two categories of indicators: population characteristics and pollution burden. The subject census tract is in the 75th percentile for population characteristics, and the 45th percentile for pollution burden. Rankings in the upper percentiles are worse than lower rankings. The Project area's results for relevant indicators are as follows:

Population Characteristics

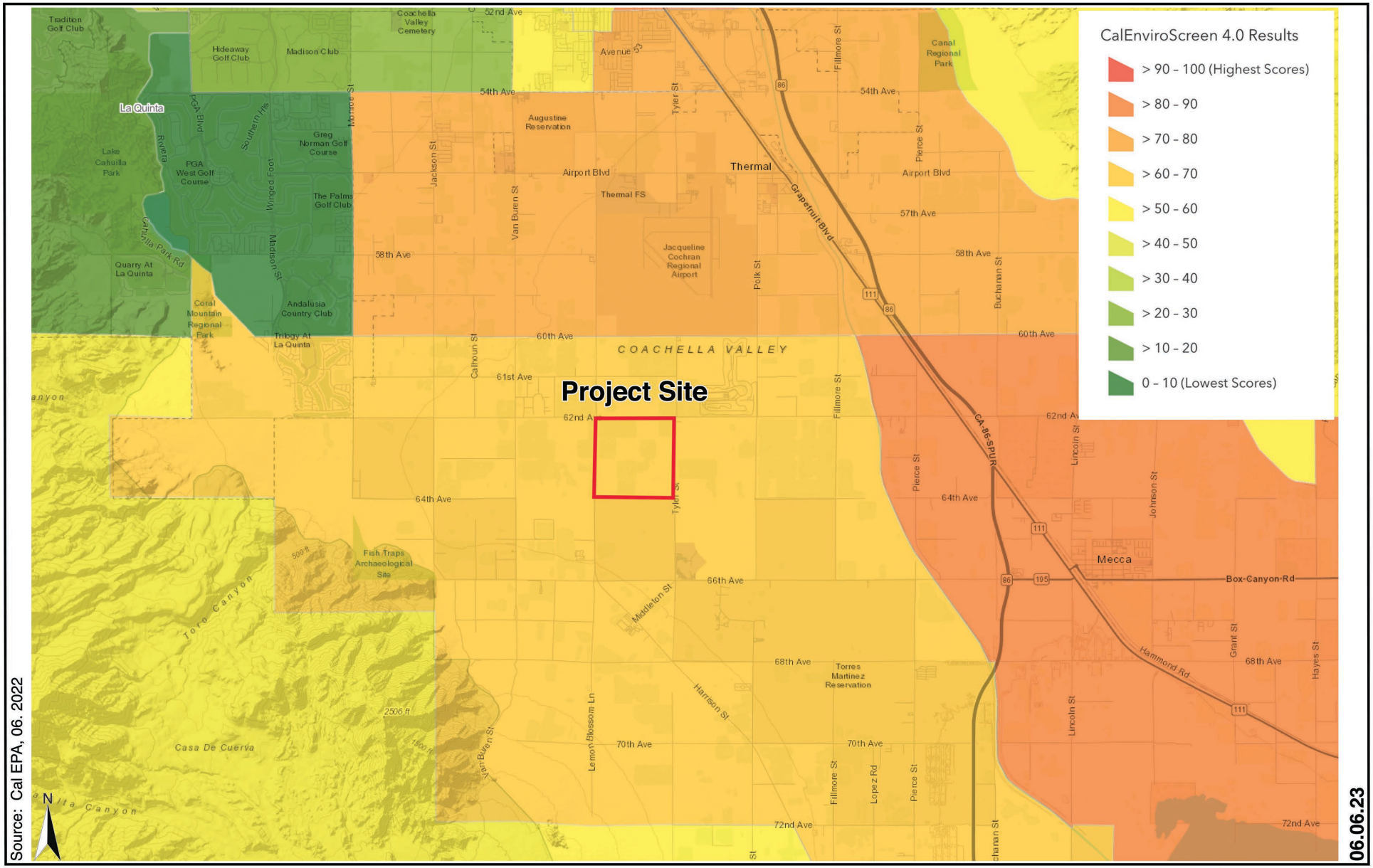
- Unemployment: 13% of working age adults in the Project area are unemployed, ranking the census tract in the 94th percentile statewide.
- Poverty: 66% of people living in the Project area are living below twice the federal poverty level, ranking the census tract in the 96th percentile statewide.
- Housing burden: Housing burdened households refer to those that are low income and paying more than 50% of their income to housing costs. 24% of people in the Project area are in low income, housing burdened households, ranking in the 77th percentile statewide.
- Low education attainment: 49% of adults in the Project area have less than a high school education, ranking the census tract in the 96th percentile.

Pollution Burden

- Pesticide use: The Project census tract is ranked in the 95th percentile statewide for the presence of hazardous and volatile pesticides used for agriculture.
- Impaired waters: The Project census tract is ranked in the 98th percentile statewide for the number of pollutants in nearby water bodies.
- Drinking water contamination: The Project census tract ranks in the 67th percentile for the number of contaminants found in the drinking water.

As shown in **Exhibit 2.16-2**, the Project site is located within the Thermal Oasis environmental justice community. As such, the proposed Project is subject to the environmental justice policies provided in the Healthy Communities Element of the General Plan. As summarized below in Section 2.16.6 and analyzed in greater detail in the Environmental Justice Form (Appendix I), the Project generally complies with the applicable environmental justice policies, and thus is not expected to adversely impact a disadvantaged community.

SB 535 identifies disadvantaged communities eligible to receive funding from California's Cap-and-Trade program. The four categories of geographic areas which are defined as disadvantaged pursuant to SB 535 are defined above in Section 2.16-3, Regulatory Framework. A considerable amount of land in the vicinity of the Project site is designated as disadvantaged pursuant to SB 535, as shown in **Exhibit 2.16-3**, including the property immediately to the south of the subject site. However, the subject site is not within a disadvantaged community pursuant to SB 535.



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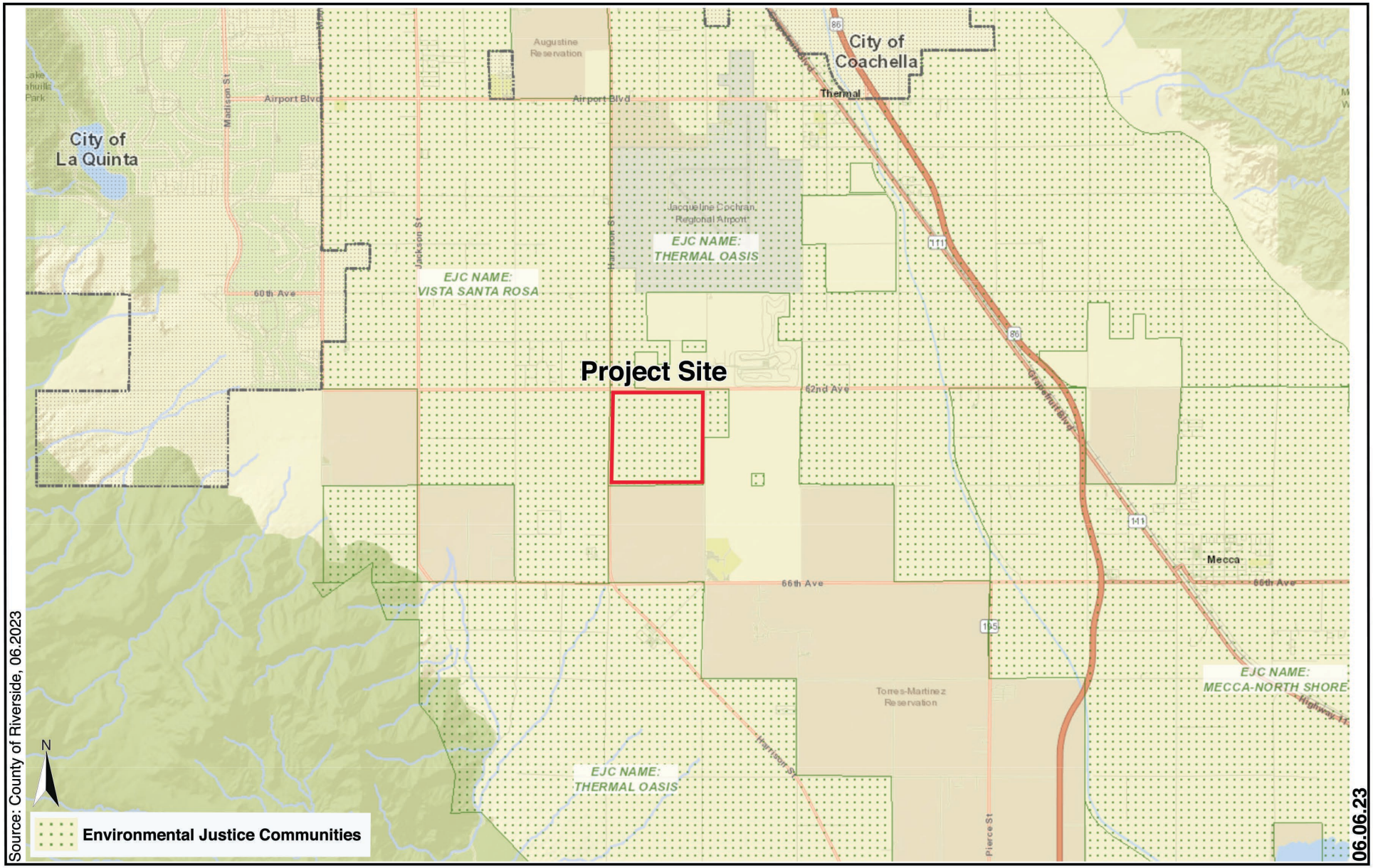
Thermal Ranch Specific Plan EIR
CalEnviroScreen 4.0 Results
Thermal, California

Exhibit
2.16-1



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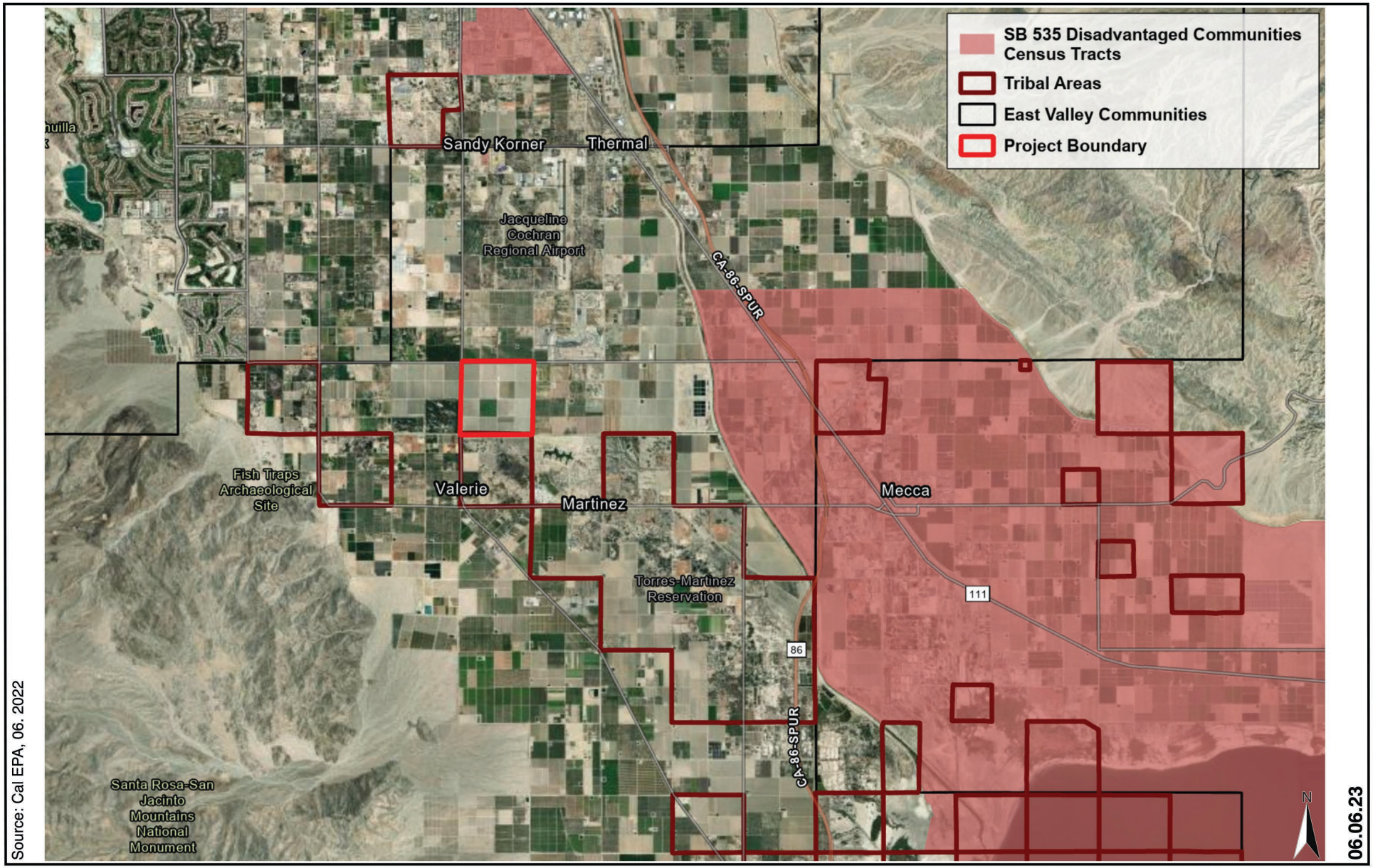
Thermal Ranch Specific Plan EIR
SB 1000 Environmental Justice Communities
Thermal, California

Exhibit
2.16-2



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Thermal Ranch Specific Plan EIR
SB 535 Disadvantaged Communities
Thermal, California

Exhibit
2.16-3

2.16.6 Project Impacts

Housing

The following significance question is not discussed further in this section of the EIR because the Initial Study/Notice of Preparation determined that there would be no environmental impacts as a result of the proposed Project:

a) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

There are currently no residential buildings or housing on the Project site. Therefore, implementation of the proposed Project would not displace people or housing and would not require the construction of replacement housing. No impact would occur.

b) Create a demand for additional housing, particularly housing affordable to households earning 80% or less of the County's median income?

The Project proposes an equestrian-oriented mixed-use development. As shown in **Table 2.16-9**, it includes planning areas proposed for estate residential, medium density residential, and high density residential, as well as a commercial tourist area that will include resort condominiums. The PA-4 high-density residential area will support equestrian center employees and will be comprised of up to 500 units of workforce housing and up to 320 recreational vehicle (RV) spaces.

Table 2.16-9
Project Land Use Summary

Planning Area	Land Use	Acres (Net)	Residential Dwelling Units	RV Spaces
PA 1	Commercial Tourist	223.1		
PA 2	Estate Residential	194.3	132	
PA 3	Medium Density Residential	69.5	390	
PA 4	High Density Residential	41.1	500	320
PA 5	Commercial Tourist	54.4	340	
PA 6	Commercial Retail	21.4		
	Totals	**603.8±**	**1,362**	**320**

The Project will contribute up to 1,362 residential units to the local housing stock. This represents almost 7 percent of the total existing housing stock in the eastern unincorporated portion of the County in 2018,[10] or 1.9% of the occupied housing units in the Coachella Valley CCD in 2021.[11] While the Project will result in a significant contribution to the local housing supply, the jobs created by the Project will also generate demand for housing, including housing affordable to households earning 80% of less of the County's median income.

The RHNA for Riverside County defines low- and very low-income households as those making $60,250 or less annually, or 80% or less of the County's median income. The 2021-2029 Regional Housing Needs Allocation for Unincorporated Riverside County allocated 16,997 units of housing for very low- to low-income households. According to the Housing Element Background Report, the County

10 Riverside County draft 6th Cycle Housing Element Update Housing Background Report, Table P-16.

11 U.S. Census Bureau, 2017-2021 American Community Survey 5-Year Estimates, 2021 Occupancy Characteristics, Coachella Valley CCD.

plans to meet the RHNA using vacant land, specific plans, projected ADUs, and projected manufactured homes. The County's land analysis found that these potential sites and sources of housing would be sufficient to accommodate the RHNA, including the allocation for low and very-low income households. The 619±-acre Project site is currently designated for agriculture according to the General Plan Foundation Element. No residential development on these lands was therefore accounted for in the calculation of available land for the RHNA/Housing Element, and as such, development of the Project would not adversely impact the inventory of land relied on by the County for meeting its RHNA allocations.

The Project will create jobs resulting from the proposed equestrian center, hotel, and commercial uses. The Project proposes approximately 285,000 square feet of commercial uses, including the equestrian center, a hotel, and a commercial village. As shown in **Table 2.16-10**, these uses are estimated to generate approximately 1,325 part-time and full-time jobs.

Table 2.16-10
Estimated Project Employment

Land Use	Quantity	Estimated Employees
Commercial Retail	200,000 square feet	800
Hotel	150 rooms	225
Equestrian Center	223.1 acres	300
	Total	**1,325**

Source: Thermal Ranch Specific Plan Vehicles Miles Traveled Analysis, prepared by Urban Crossroads, January 30, 2023.

The County General Plan Socioeconomic Buildout-out Assumptions and Methodology document provides an agricultural employment factor of 0.05 employees per acre. Based on the size of the subject site, it can be estimated that the existing agricultural operation could employ approximately 31 people, of which the majority may be seasonal. The combined commercial, hotel, and equestrian center jobs created by the proposed Project could therefore contribute approximately 1,294 net employment opportunities to the local job market. Given that in 2021 there were an estimated 89,434 employed people in the Coachella Valley CCD, the jobs created by the Project would contribute approximately a 1.45% increase in the local job market.[12]

Equestrian Center Employees

Of the 300± jobs to be generated by the equestrian center, approximately 80% would be seasonal in nature, active only during the October to April event season. It is expected that employees of the equestrian center would fall into roughly three wage ranges:[13]

- 70% of employees would earn an average of $21/hr.
- 25% of employees would earn an average of $30/hr., and
- 5% of employees would earn an average of $50/hr.

Some of these employees will require housing, including affordable housing. The proposed PA-4 workforce housing would provide up to 500 units of workforce housing to accommodate the approximate 300 jobs generated by the equestrian center.

12 U.S. Census Bureau, 2017-2021 American Community Survey 5-Year Estimates, Coachella Valley CCD, Employment status for population 16 years and over in 2021.

13 Personal communication, Jeremy Smith, Managing Partner, Desert International Horse Show. March 30, 2023.

Given the seasonal nature of the equestrian center jobs, the proposed workforce housing, of up to 500 units, would be unoccupied during the May to September off-season. The Project proponent proposes to make at least some of these workforce housing units available for rent by farmworkers and others from May to September.

In addition to staff employed by the equestrian center, individual equestrian competitors and exhibitors will have private staff working on-site during the competition season. In general, each competition horse will have one groom and one trainer responsible for its care. These private staff may stay in RVs in one of the 230 provided RV spaces on the Project site, or may find temporary accommodations elsewhere in the area. They will not contribute to the area's permanent population and will not contribute to the demand for housing.

Commercial and Hotel Employees

As previously stated, at full buildout, the non-equestrian portions of the Project are projected to employ approximately 800 full-time and part-time staff for the proposed commercial uses, and approximately 225 staff for the proposed hotel. Some of these jobs may be seasonal in nature, given that demand for staff may fluctuate with the additional business generated by visitors and area residents attending competitions at the equestrian center.

The estimated 1,025 hotel and commercial staff could create a demand for additional housing, including housing affordable to households earning 80% of less of the County's median income. According to the U.S. Bureau of Labor Statistics, the mean hourly wage for food preparation and serving related occupations in the Riverside-San Bernardino-Ontario Metropolitan Statistical Area is $16.81 as of May 2022. Based on the same source, the mean hourly wage for sales and related occupations is $22.98.[14] Converted to annual salaries and compared to the County's median income[15], these wages would fall into the very-low income (up to 50% of median income or $0 - $37,650 per year) and low income (51% to 80% of median income or $37,651 - $60,250) categories.[16]

For the reasons stated above, the jobs generated by the Project could create demand for housing, including affordable housing. The Project will provide up to 1,362 residential units, including attached and detached single family housing, as well as workforce cottages. While the proposed workforce housing is primarily intended for employees of the equestrian center, some of the units may be available for other employees of the Project. Moreover, as discussed below, it is likely that the majority of commercial retail, restaurant and hotel jobs generated by the Project would be filled by existing residents of the Coachella Valley that are already housed. As previously stated, eastern unincorporated areas of Riverside County have a below average jobs-to-housing ratio.

According to the Riverside County Housing Element Background Report, eastern unincorporated portion County had a jobs-to-household ratio of 1.02:1 in 2018, and according to the American Community Survey, the Coachella Valley CCD had a jobs-to-households ration of 1.124:1 in 2021.[17] Both ratios representing the jobs-housing balance in the Project area fall below the county-wide ratio (1.55:1) and the target ratio according to the Office of Planning and Research (1.5:1). This indicates that there may currently be unmet demand for local jobs within the eastern unincorporated County.

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14 U.S. Bureau of Labor Statistics, Occupational Employment and Wages in Riverside-San Bernardino-Ontario – May 2022, https://www.bls.gov/regions/west/newsrelease/occupationalemploymentandwages_riverside.htm (accessed June 2023).

15 Southern California Association of Governments Sixth Cycle Final Regional Housing Needs Allocation Plan.

16 Based on a four-person household. Assumes full-time employment, $16.81 hourly = $34,964.80 salary; $22.98 hourly = $47,798.40 salary.

17 U.S. Census Bureau, 2017-2021 American Community Survey 5-Year Estimates.

Furthermore, the nearby community of Mecca and the City of Coachella both had an unemployment rate above the County average for several years (10.2% and 7.6%, respectively; also see **Table 2.16-8**). Based on these facts, it is likely that the eastern unincorporated county, including the area around the Project site, has latent demand for local employment opportunities. As such, it is probable that most of the jobs created by the Project would be filled by existing residents of the area, and thus would not generate substantial additional demand for housing.

Conclusion

Overall, the Project is not expected to generate a significant demand for housing. Workforce housing will be provided on the Project site to accommodate the estimated 300 employees of the equestrian center. While on-site housing will not be dedicated for the projected 1,025 staff of the proposed retail, restaurant, and hotel uses, it is expected that the majority of these positions will be filled by existing residents of the Coachella Valley. Some jobs may be filled by new residents of the area, but the associated demand for additional housing is not expected to be significant given the complimentary mix of uses within the Project and the existing jobs-to-housing ratio in the area.

Furthermore, given that the Project will not impact lands identified by the County for meeting the RHNA obligations, the proposed development will not impede planned additions to the area's housing stock. Given that the proposed development is expected to occur in phases over several years, it is expected that the market will respond to any demand for additional housing resulting from the Project.

The Project would both contribute a substantial number of new housing units to the local housing supply ranging from workforce housing to estate homes. Nonetheless, the Project could contribute to demand for additional local housing as a result of the jobs created by commercial portions of the development. These effects on demand for local housing would, to some extent, off set each other. For the reasons explained above, impacts are therefore expected to be less than significant.

c) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

The subject site is currently designated for "Agriculture" in the Foundation Element and the Eastern Coachella Valley Area Plan (ECVAP) of the General Plan. The western quarter of the Project site adjacent to Harrison Street is zoned as Controlled Development Area (W-2) and the remaining Project area is zoned as Heavy Agriculture. The Project proposes a Specific Plan, a General Plan Amendment, and a Change of Zone. These actions would result in the site being designated for the Community Development foundation component, and create specific Planning Areas designated for Low Density Residential, Medium Density Residential, High Density Residential, Commercial Tourist, and Commercial Retail development. Given that the Project proposes the development of new homes and businesses not accounted for in the General Plan, it may directly induce unplanned population growth.

Housing

The proposed Project will result in the development of up to 1,362 new dwelling units, including estate lots, attached and detached single family homes, high density workforce housing, and resort condominiums. The proposed 132 units of estate housing, 390 units of medium density residential, and 340 units of resort condominiums could all induce population growth. Based on an average household size of approximately 2.7 persons,[18] occupancy of the proposed 862 non-workforce residential units could directly generate population growth of 2,416 new residents, many of whom will be seasonal.

[18] Assuming that estate and medium density residential have occupancies of 3.0 persons per dwelling unit, and resort condos have occupancies of 2.5 persons per unit. Occupancy rates based on Thermal Ranch Specific Plan Vehicles Miles Traveled Analysis, prepared by Urban Crossroads, January 30, 2023.

Population growth generated by the proposed workforce housing (up to 500 units) is discussed below, in tandem with the population generated by employment opportunities.

Jobs

As shown in **Table 2.16-10**, the Project is estimated to generate approximately 1,325 jobs, including full time and part time employees of the proposed equestrian center, commercial uses, and hotel. As stated above, it can be estimated that the existing agricultural operation employs approximately 31 people, most of which are likely employed on a seasonal basis.[19] The Project would therefore contribute approximately 1,294 net jobs to the area.

If 100% of Project-related jobs were to be filled by new residents of the Coachella Valley, the Project could induce population growth of approximately 3,494 residents in the eastern Valley.[20] However, as discussed above under significance threshold b), the Eastern Coachella Valley has a below average jobs-to-housing ratio and employment rate. This indicates that the Project area has latent and unmet demand for additional employment opportunities. It is therefore likely that most of the jobs generated by the Project would be filled by existing residents of the area. Based on the number of jobs and households reported for the eastern unincorporated portion of the County in 2018,[21] an additional 9,579 jobs would be required in the region in order to achieve a "balanced" jobs-to-housing ratio.[22] The number of jobs generated by the Project would contribute to achieving this balance.

Infrastructure

The Project site is in an area undergoing a transition to suburban and resort uses; however, many properties in the area remain in agricultural use. With increasing development in the area, roadway and utility improvements and other infrastructure extensions have occurred and will be required of the proposed Project.

Current General Plan roadway classifications call for Harrison Street and Avenue 62 to be "Expressways" (8-lane divided within a 220-foot right of way). Existing utilities include IID transmission and distribution lines, a 30-inch CVWD water main along the Project's Harrison Street frontage, and a CVWD 42-inch gravity main in the Project's Ave 62 frontage. CVWD's drainage master plan calls for area-wide drainage facilities along the Ave 64 right of way. In sum, the Project site is already, and in the future will be, well served by public roadways and utility services.

The Project will be required to construct half-street improvements along Avenue 62, Harrison Street, and Tyler Street. The Project does not plan to improve Avenue 64, which runs south of the site's southern frontage and which is currently unimproved and encumbered with utility and drainage facilities and easements and separate ownerships. Planned improvement of the adjoining arterial roadways will be consistent with the planned improvements in the General Plan. No additional or unplanned rights of way or improvements are required due to construction of the proposed Project. Therefore, while these planned future roadway improvements could support additional urban development in the area, thereby inducing additional population growth, the growth would be consistent with the County's long-range planning and can be well accommodated by planned General Plan roadways and other infrastructure, and thus would not be unplanned.

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19 Based on agricultural employment factor of 0.05 employees per acre, according to the County of Riverside General Plan Socioeconomic Build-out Assumptions and Methodology, p.4.

20 Assuming an average of 2.7 persons per household, as provided in the Project-specific VMT analysis prepared by Urban Crossroads. 1,294 jobs x 2.7-person household size = 3,493.8 people.

21 Based on 20,175 jobs and 19,836 households, according to the Riverside County draft 6th Cycle Housing Element Update Housing Background Report, Table P-8 Job-Household Ratios, Unincorporated Riverside County, 2010-2018.

22 Based on the target ratio of 1.5:1 according to the State of California General Plan Guidelines prepared by the Governor's Office of Planning and Research.

Minor water and sewer extensions will be required to extend service laterals from existing lines into the Project site from the adjacent rights-of-way. Two sewer lift stations are also proposed for installation on the southern portion of the subject site and would serve just the Project site. Therefore, these improvements would not be expected to substantially impact population growth.

Existing electricity lines bound the subject site to the east, west, and south. The Project proposes the construction of an IID substation on the southeastern corner of the property. This substation will reduce line voltage and facilitate service to current and future IID customer needs, including those of the Project. Likewise, a natural gas line would also need to be extended into the property either from an existing line located approximately 3.5 miles to the west of the Project site or 4 miles northeast. These improvements could also facilitate future development in the area, thereby indirectly inducing population growth. However, these improvements are not expected to facilitate development in excess of the County's long-range planning.

Conclusion

Overall, the housing, jobs, and infrastructure proposed by the Project could all induce population growth, directly and indirectly, to the Eastern Coachella Valley. Given that the subject site is designated and zoned for agricultural use, the proposed mixed-use development of the 619.1±-acre site was not planned for in the General Plan or ECVAP. Resulting population growth on the subject site is therefore considered unplanned. However, local demographic and socio-economic conditions, and the scale of existing and planned infrastructure adjacent to and in the vicinity of the subject site, indicates that the Project will have very limited growth-inducing effects.

Furthermore, and discussed in the Environmental Setting section, the General Plan projected significantly more rapid growth between 2010 and 2020 than actually occurred in the Eastern Coachella Valley over this period. The ECVAP area was expected to experience a 121.6% increase in population over this ten-year period, while actual growth according to the census, albeit using somewhat different geographic boundaries, was approximately 5.5%.

As such, while no population growth was planned for on the subject site, less growth has occurred in the wider planning area than anticipated in the General Plan and ECVAP. Therefore, while the Project will contribute to population growth both directly and indirectly, the impacts to population growth in the eastern Valley overall are not expected to substantially increase beyond what was planned, if at all. Overall, the Project will induce population growth, but the associated impacts are expected to be less than significant.

Environmental Justice

The current (2022) CEQA Guidelines do not provide specific significance or threshold questions that address environmental justice. CEQA does require that a project analyze whether sensitive receptors will be exposed to substantial pollutant concentrations. This is addressed in Section 2.5.6 (Air Quality) and further below. As stated above, as a proposed development within an environmental justice community pursuant to SB 1000, the Project is subject to the environmental justice policies provided in the Healthy Communities Element of the Riverside County General Plan. The following discussion provides overview of how the Project design complies with the County's environmental justice policies.

Pollution Exposure:

The proposed equestrian-oriented, mixed-use community does not propose unhealthy, polluting, or hazardous land uses, associated with significant negative impacts to nearby sensitive receptors. The proposed Project will be designed to minimize the emission of pollutants resulting from on-site land uses and related vehicle trips. The development is designed with an internal network of trails to

promote non-vehicle trips between planning areas. These trails will connect a range of housing types with commercial amenities and the equestrian center. Public sidewalks and bike paths will also be provided along the site's perimeter arterial roadways and will provide enhanced connectivity to the regional trail network and surrounding communities.

The commercial, hotel, and equestrian components of the proposed development are estimated to generate approximately 1,325 jobs. The provision of these jobs would help balance the deficit of approximately 9,579 jobs in the area, based on the current jobs-housing imbalance. Additional employment opportunities in this region would help reduce commute costs and lengths and associates VMTs and pollutant emissions. However, as noted in Sections 2.5 (Air Quality) and 2.19 (Transportation and Traffic), the Project is also expected in the early years to exceed the County threshold for VMTs, and is also expected to exceed SCAQMD thresholds for daily carbon monoxide (CO) and reactive organic gases (ROG) emissions. These criteria pollutant emissions would primarily be associated with mobile sources, and therefore would not be expected to have any direct adverse effects on sensitive receptors on-site or in the Project vicinity.

The proposed equestrian center will generate large quantities of manure. Manure is not considered a toxic or hazardous material; however, it can contain potentially harmful elements such as phosphorus, ammonia, bacteria, and viruses. As discussed in Section 2.11 (Hazards and Hazardous Materials), the Project will be required to implement proper manure management practices, which are expected to prevent adverse air emissions or contamination of water supplies. For example, liners will be installed in horse stalls in order to prevent any potential seepage of manure into the ground.

Food Access:
The Project proposes neighborhood commercial retail uses which would allow for the development of a variety of commercial services, including full-service grocery stores providing healthy and diverse food options, drug stores, restaurants and other commercial services. These commercial areas would also accommodate a local farms' market. Amenity areas within residential portions of the Project would also allow for community gardens and potential edible landscaping instead of ornamental plants and grasses. Public open space including meandering sidewalks and bike paths will be included within the Project and along the public roads on the perimeter of the site, which will provide access to the on-site retail amenities.

Safe and Sanitary Homes:
The subject site is currently occupied by farmland. No residential buildings occur on the site, and no existing residents would be displaced by the proposed development.

The proposed Specific Plan provides for the development of up to 500 units of workforce housing in a clean and well managed environment with on-site laundry and recreational amenities. The Specific Plan and TTMs are designed to ensure that the development does not degrade the character of the surrounding area and to provide proposed residential uses with adequate separation from roadways and equestrian back-of-house operations. The development will be subject to the California Building Code and Energy Code. Landscaping will comply with the County and CVWD water conservation standards. These standards and guidelines will ensure that all Project residential buildings are safe and sanitary.

Physical Activity:
A variety of pedestrian, bicycle and equestrian paths are planed throughout the Project. Public open space will be provided along the perimeter of the Project site, including meandering sidewalks and bike and pedestrian paths and will provide connection to the greater county-planned trails network in the area. As noted above, the workforce housing neighborhood will include on-site recreational amenities.

The equestrian center and on-site recreational amenities will provide opportunities for physical activity for residents of the development. The Project also calls for the incorporation of trees to shade paths and walkways, plazas, standing areas, and recreational spaces. In addition, shade structures will be provided over parking areas to provide for the opportunity to install solar roof systems.

Public Facilities:
The Project will be required to pay the County's Development Impact Fees, will contribute to funding for public facilities such as fire stations, schools, and libraries. It will also construct or contribute to the construction of utility improvements, including an IID substation, water and sewer line extensions, and major roadway improvements as called for in the County General Plan. Consistent with the Southern California Association of Governments Regional Transportation Plan / Sustainable Communities Strategy, the Project will provide internal paths and trails connecting planning areas, as well as perimeter trails improving connectivity to surrounding communities and the regional trail network. Each planning area will have access to the public trails network.

2.16.7 Mitigation Measures

The Project is expected to have less than significant impacts to population and housing. The Project is note expected to adversely impact a disadvantaged community, including creating an exposure to a disproportionate burden of pollution or associated health risks. The Project will not result in the unfair treatment of people of any individual or group or special class with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies.

No mitigation is required.

2.16.8 Significance After Mitigation

No mitigation is required. Impacts would be less than significant.

2.16.9 Cumulative Impacts

Housing Supply
The proposed Project will contribute up 1,362 new units to the local housing supply, including up to 500 units of workforce housing. It will also generate approximately 1,325 new jobs in a jobs-poor area. Nonetheless, some of Project jobs may be filled by new residents requiring housing, including affordable housing. The Project could therefore contribute incrementally to demand for additional housing. However, because the Project will not impact the inventory of land planned for residential use by the County to meet its RHNA obligations, the proposed development is not impacting existing land assets expected to accommodate future growth. Additionally, given the phased buildout of the Project over multiple years, there will be ample time for the housing market to respond to any limited incremental increases in demand the Project might generate. Therefore, while the Project may contribute incrementally to local demand for affordable housing, this contribution would not be cumulatively considerable.

Population Growth
The housing, jobs, and infrastructure proposed by the Project, in combination with other future developments in the ECVAP area, would all contribute incrementally to population growth. Given that the Project site is designated and zoned for agriculture, the General Plan and ECVAP did not anticipate population growth associated with the subject site. However, as discussed above, population growth in the area since 2010 has been significantly slower (or negative) than anticipated by the County. Therefore, while the Project will contribute to cumulative population growth, impacts related to unplanned population growth would not be cumulatively considerable.

2.17 Public Services

2.17.1 Introduction

The following section describes the existing public services in the Project vicinity, including fire and police services, schools, parks and other public facilities, and analyzes the potential impacts associated with the proposed Thermal Ranch project. A variety of local and regional data and information, ranging from research and analysis conducted for the Project site, to regional planning and environmental documents, have been used in researching and analyzing the Project and its potential effects on public services.

2.17.2 Thresholds of Significance

Potential impacts to public services are analyzed using the thresholds of significance provided in Appendix G of the CEQA Guidelines. Appendix G uses the following questions to evaluate the Project's potential impacts.

Would the project:

a) Result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:

- Fire Services?
- Sheriff Services?
- Schools?
- Libraries?
- Health Services

Potential impacts related to the use of existing neighborhood and regional parks is analysed in Chapter 2.16 Recreational Resources along with an analysis of other recreational facilities.

2.17.3 Regulatory Framework

Federal

There are no federal regulations governing public services that apply to the proposed Project.

State

Senate Bill 50

Senate Bill 50 (SB 50 or the "Leroy Greene School Facilities Act"), enacted in 1998, represents the most significant school facility finance and developer fee reform legislation for school facilities construction and modernization since the adoption of the 1986 School Facilities Act. Section 65995 of the California Government Code establishes the statutory criteria for assessing construction fees. The legislation recognizes the need for fees to be adjusted periodically to keep pace with inflation; therefore, the State of California Department of General Services State Allocation Board increases the maximum fees according to the adjustment for inflation in the statewide cost index for Class B construction.

The payment of school mitigation impact fees authorized by SB 50 is deemed to provide full and complete mitigation of project impacts on school facilities pursuant to Section 65995 of the California Government Code. SB 50 provides that a State or local agency may not deny or refuse to approve the planning, use, or development of real property on the basis of a developer's refusal to provide mitigation in amounts in excess of that established by SB 50.

California Fire Code
Title 24, Part 9 of the California Code of Regulations addresses fire prevention and safety through the provision of minimum fire safety requirements for new and existing buildings. The code establishes requirements for the design, installation, inspection, operation, testing, and maintenance of fire protection systems, as well as requirements to ensure adequate site access for fire protection services.

Regional and Local

Riverside County General Plan
The County's General Plan Land Use Element establishes policies and programs to ensure the continued provision of adequate infrastructure, public facilities and services as the population grows.

Land Use Element

LU 5.1 Ensure that development does not exceed the ability to adequately provide supporting infrastructure and services, such as libraires, recreational facilities, educational and day care centers, transportation systems, and fire/police/medical services.

LU 5.2 Monitor the capacities of infrastructure and services in coordination with service providers, utilities, and outside agencies and jurisdictions to ensure that growth does not exceed acceptable levels of service.

2.17.4 Environmental Setting

Fire protection, first response, emergency medical services, and natural disaster preparedness services in unincorporated Riverside County are provided by the Riverside County Fire Department and CalFire, which the County contracts with to provide fire protection and rescue services. The Riverside County Sheriff's Department provides police protection in unincorporated areas of the County and contract services to nearby cities. K-12 school services in Thermal and surrounding areas are provided by the Coachella Valley Unified School District. The Mecca Library and multiple branches of the Riverside County Library System are accessible to unincorporated areas of the eastern Coachella Valley. A range of hospitals and urgent care clinics are also available in the area.

2.17.5 Existing Conditions

The approximately 619.1-acre Project site is currently agricultural land and is in active cultivation. The property is located in the unincorporated community of Thermal, in Riverside County.

Fire Services
Fire protection services are provided to the Project area and the surrounding communities by the Riverside County Fire Department (RCFD) under a contract with CalFire. RCFD serves approximately 1.6 million residents in an area of approximately 7,004 square miles. According to the Riverside County Fire Department Strategic Plan, the department supplements its staff of 175 employees through a contract with CalFire, which employees an additional 1,077 staff. The department also maintains a roster of approximately 700 volunteers. RCFD operates 93 fire stations. Stations in the Project vicinity include:

- Station 39 at 86911 58th Ave, Thermal: located approximately 3 miles northeast.
- Station 40 at 91350 66th Ave, Mecca: located approximately 5.4 miles southeast.
- Station 70 at 54001 Madison St, La Quinta: located approximately 5.7 miles northwest.
- Station 79 at 1377 6th St, Coachella: located approximately 5.5 miles to the north.

Sheriff Services

The County Sheriff's Department provides law enforcement and corrections services to the unincorporated areas and several incorporated jurisdictions in Riverside County, as well as certain Native American Tribes. The department also performs the functions of the County Coroner's Office, being responsible for recovering deceased persons within the county and conducting autopsies. The department also provides services such as air support, special weapons teams for high-risk critical incidents, forensics services and crime laboratories, homicide investigations, and academy training to smaller law enforcement agencies within the county and in surrounding counties.

The Sheriff's Department employs more than 3,600 staff. The nearest Riverside County Sheriff's Station is located at 86625 Airport Boulevard in Thermal, approximately 3 miles from the subject site. The City of La Quinta also contracts with the County Sheriff's Department and provides mutual aid across the County Sheriff's various clients in the Coachella Valley. The La Quinta station is located at 78-495 Calle Tampico, approximately 10 miles northwest of the subject property.

Schools

The subject property is located within the boundaries of the Coachella Valley Unified School District (CVUSD). The CVUSD has 14 elementary schools, 3 middle schools and 4 high schools, plus one adult school. Desert Mirage High School, Toro Canyon Middle School and Las Palmitas Elementary School are in the vicinity of the Project site, located approximately one-half mile south of the site at the northeast corner of Tyler Street and Avenue 66.

Libraries

The Riverside County Library System is comprised of 333,884 square feet of facilities distributed across 35 libraries. The system includes a catalogue of 1.5 million items. In 2010, the library system reported 681,117 registered borrowers.[1] Three branches of the Riverside County Library System are located in the vicinity of the Project site.

The Mecca Library is located at 91620 Ave 66, Mecca, approximately 5.5 miles east of the Project site. The Mecca Library offers a full range of information services and assistance, including children's programs, literacy tutoring, English as a second language classes, and homework help. The library also provides internet access, as well as access to copy machines and word processing software. A variety of media options are available, including large print books, audio books, DVDs, music, newspapers and magazines.

The Coachella Library is located at 1500 Sixth Street, Coachella, approximately 5 miles north of the subject property. The Coachella Library provides a number of services and resources to the local community such as lending books and DVDs, internet access, and community events.

The La Quinta Library is located at 78-275 Calle Tampico, approximately 9 miles northwest of the subject property. As with other members of the Riverside County Library System, the La Quinta Library offers a variety of resources and services to residents across the system.

[1] GPA EIR No. 521 prepared by the County of Riverside, February 2015.

Health Services

Local and regional medical facilities in the Project area include the John F. Kennedy (JFK) Memorial Hospital in Indio, Eisenhower Medical Center (EMC) in Rancho Mirage, and Desert Regional Medical Center in Palm Springs. JFK is located nearest to the subject property, at 47-111 Monroe Street, approximately 8 miles north of the proposed Project site. This facility contains 158 beds, offers a variety of inpatient and outpatient services, and includes a 24-hour emergency room. JFK provides a full range of medical services, including surgical, cardiology, gastrointestinal, diagnostic imaging, and outpatient rehabilitation. The hospital also provides obstetrics and houses an orthopedic/bone/joint institute.

There are also a variety of urgent and immediate care clinics and other medical offices in the region. The Indio Family Care Center is located on 47-923 Oasis Street. Services include primary care, family planning, prenatal care, childcare and nutrition. Although all emergency services are not offered at this clinic, walk-in patients are welcome and will be referred to an emergency facility as needed.

Mecca Health Clinic is located at 91275 Ave 66, Mecca, approximately 5.25 miles east of the subject property. Mecca Health Clinic is operated by Innercare, a private, non-profit organization providing an array of comprehensive primary care services to residents throughout Imperial and Riverside Counties.

2.17.6 Project Impacts

The Project proposes the development of the approximately 619.1-acre site into a master-planned mixed-use community centered around an equestrian event center. Table 2.17-1 shows the quantity of building areas and estimate population and employees that would result from the development.

Table 2.17-1 Project Land Use, Population, and Employment Estimates

Land Use	Quantity	Estimated Population or Employees
Residential	1,362 dwelling units	2,416 residents[1]
Commercial Retail	200,000 square feet	800 employees
Hotel	150 rooms	225 employees
Equestrian Center[2]	223.1 acres	300 employees

Source: Thermal Ranch Specific Plan Vehicle Miles Traveled (VMT) Analysis, prepared by Urban Crossroads (January 2023).

[1]Assuming that estate and medium density residential have occupancies of 3.0 persons per dwelling unit, and resort condos have occupancies of 2.5 persons per unit, per the VMT Analysis cited above. The total of 2,416 residents accounts for the number of residents estimated to reside in 132 units of estate housing, 390 units of single family attached/detached housing, and 340 resort condominiums. The proposed 500 units of workforce housing are expected to be occupied by single employees of the equestrian center, and are counted in this table as employees, not residents.

[2] Includes 10,000 square feet of office space and 75,000 square feet of commercial retail.

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

- Fire Services?
- Sheriff Services?
- Schools?
- Libraries?
- Health Services

Fire Services

The Riverside County Fire Department provides fire protection services to the Project area. Development of the proposed Project would impact fire services by increasing demand on existing fire protection resources as a result of an increase in residents, businesses and employees, guests, and additional structures in the fire department's service area.

As shown in Table 2.17-1 above, buildout of the proposed Project could result in up to 1,362 dwelling units, 200,000 square feet of commercial retail space, a 150-room hotel, and a 223.1-acre equestrian center[2]. Buildout of these land uses could result in approximately 2,416 residents and approximately 1,325 employees on the subject site. Given that the existing agricultural use of the land may have employed approximately 31 people on-site,[3] the proposed Project represents a considerable increase in buildings and people on the site potentially requiring fire protection. While the increase in buildings and people on the subject site could increase demand on the fire department, development will be subject to the latest building and fire codes, which may serve to minimize Project-related demand for fire protection services. In addition, the Project will be responsible for the payment of development impact fees (DIF) for fire protection that will help offset potential impacts. According to County Ordinance No.659.13, which establishes the County's current DIF program, new development in the ECVAP area is required to pay $1,248 per dwelling unit and $14,722 per acre of commercial development for fire protection. In addition, the Project would contribute to the County's tax revenues, some of which could be allocated towards the RCFD's budget. According to the Fiscal Impact Analysis completed for the Project, at buildout the Project is anticipated to generate approximately $600,000 annually to the County's Fire Fund, which exceeds the Project's estimated additional costs for fire services of approximately $485,000 annually.

Development on the subject site will be required to comply with standard design and building measures to minimize demand for fire protection. In compliance with the county and state fire code as well as applicable building codes, development must include sprinklers, fire hydrants, and sufficient emergency vehicle access. Prior to the issuance of development permits, the Riverside County Fire Marshall will review Project plans to ensure that they comply with the RCFD's design and safety standards.

The Project is approximately three miles from RCFD Station 39, and is less than six miles from Stations 40, 70, and 79 with good accessibility. The Project site is located within 3 miles of a fire station that is expected to meet the target response time set forth in the General Plan, and slightly exceeds the 2 mile/4 minute standard cited by Riverside County Fire Department staff.

The Project will be required to fund its fair-share of additional fire protection facilities through payment of the applicable DIF, which will provide funding for new fire stations, expansion of existing fire stations, and/or additional fire response equipment to ensure that acceptable service ratios and response times are maintained. The Project's funding of additional fire services and facilities may also include participation in a Communities Facilities District, Enhanced Infrastructure Finance District, or similar funding mechanisms. Overall, the Project would not result in substantial adverse physical impacts associated with the provision of fire services because the Project will be required to fund its fair share of additional fire protection facilities. Accordingly, impacts to fire protection services would be less than significant.

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2 The proposed equestrian center will include up to 75,000 square feet of commercial space an 10,000 square feet of office space.

3 Based on an agricultural employment factor of 0.05 employees per acre according to the Riverside County General Plan Socioeconomic Buildout Assumptions and Methodology document, the 619.1±-acre site is estimated to have employed approximately 31 staff.

Sheriff Services

The County Sheriff's Department utilizes a patrol beat system to patrol prescribed geographic areas which allows patrolling officers to respond immediately to a call for service. Response times are a function of distance between the responding officer and the location of the call for service and are also prioritized based on incident urgency; therefore, response times can vary. According to the County's General Plan EIR (2015), Riverside County shall meet and maintain a goal of 1.5 sworn officers per 1,000 population, as recommended by the International City Managers' Association.

The proposed Project will include a variety of uses, some of which may choose to have their own private security. The provision of private security may serve to reduce the Project's demand on the services of the Sheriff's Department; however, the following analysis conservatively assumes there will be no reduction in demand for services as a result of any private security. Buildout of the proposed land uses could result in approximately 2,416 residents on the subject site. Based on the County's service standard of 1.5 offices per 1,000 residents, the Project could require three to four additional sworn officers. While the Project would not directly necessitate new facilities for the County Sheriff's Department, the additional sworn offices and supporting staff and supervisors may contribute to additional demand for expanded facilities.

The County charges development impact fees to offset the costs of new criminal justice public facilities. In areas covered by the Eastern Coachella Valley Area Plan, including the Project site, these fees are $1,269 per single family residential dwelling unit and $3,798 per acre of commercial development. The proposed development would also contribute to the County's tax revenues, including via the public safety sales tax (Prop. 172), which could be allocated towards increases in the Sheriff's Department budget.

Overall, the Project is not expected to directly require the provision of new or physically altered governmental facilities, and thus is not expected to result in substantial adverse physical impacts associated with new or expanded facilities. However, the additional staff needed to maintain the County's target officers per capita service ratio may require additional staff and vehicles. This potential impact would be mitigated by future project tax revenues that flow to the County and the possible payment of fees if there is a future need for expanded facilities. Impacts will be less than significant.

Schools

The Project proposes up to 1,362 dwelling units, however, many of these units are expected to be occupied on a seasonal basis and this proposed workforce housing is not expected to be a source of "household formation" or student generation. Only the estate housing, medium density housing, and resort condominiums offered on-site would likely result in the formation of permanent households. The Project is therefore estimated to create 862 households (up to 132 units of estate residential, up to 390 units of medium density residential, up to 340 resort condominium units). Using the student generation rates provided by the CVUSD, Table 2.17-2 shows the estimated number of students to be generated by buildout of the Project.

Table 2.17-2
Project Projected Student Generation at Buildout

School Level	Generation Factor per Dwelling Unit	Student Generation at Project Buildout
Elementary School (Grades K-6)	0.2942	254
Middle School (Grades 7-8)	0.0849	73
High School (Grades 9-12)	0.1742	150
Total	**0.5533**	**477**

Source: "Fee Justification Study for New Residential and Commercial/Industrial Development" prepared by Coachella Valley Unified School District, November 2022.

As shown in the table above, the buildout of the Project could generate approximately 477 students from kindergarten to grade 12. Based on growth forecasts provided by SCAG, CVUSD is planning for a 79.63% increase in the number of dwelling units within its jurisdiction from 2022 to 2045. Excluding new developments for which mitigation has already been arranged with the District, the District is expecting the construction of an additional 16,360 dwelling units, or 9,052 new students, by 2045.

Pursuant to SB 50, school districts can collect school impact fees as new development occurs. These fees serve to fund additional school facilities and resources. CVUSD charges a fee of $4.79 per square foot of new residential development and $0.78 per square foot of new commercial development. The Fee Justification Study prepared by CVUSD in November 2022 determined that these fees would not cover the cost of providing adequate school facilities required to accommodate the full 2045 growth forecast.[4]

The 477 students estimated to be generated by the proposed Projects would represent approximately 5.3% of the growth anticipated by the District. Therefore, while the total growth forecast analyzed in the CVUSD Fee Justification Study exceeds the funding currently available to the District, the number of students generated by the Project represents only a small portion of that growth.

As part of its Fee Justification Study, CVUSD conducted a capacity analysis based on student enrollment in the fall of 2022. The analysis found a surplus in capacity of 4,507 students, including 3,445 elementary school, 296 middle school, and 766 high school students. Based on the surplus in capacity in the 2022/2023 school year, the District would be able to accommodate the students generated by the proposed Project. While CVUSD may need to increase fees or find additional funding sources as population growth occurs within the District's boundaries, given the existing capacity and the fact that CVUSD would not be required to construct or alter facilities to accommodate the Project, resulting environmental impacts are considered less than significant, with payment of applicable school fees. Under Government Code §65996, payment of statutory school fees is deemed to mitigate a project's impacts on the need to construct additional school facilities. In addition, the Project is not expected to have any other significant adverse effects on schools in the area.

Libraries

Demand for library services has changed over the years with online access to a wide range of library, research, and media resources. Nonetheless, libraries continue to play an important community role, including serving as a venue for community events and activities. The subject property is within 5± miles of the Coachella and Mecca Libraries, both of which are part of the Riverside County Library System. The Project site is also 9± miles southwest of the La Quinta Library.

As stated in the EIR for the Riverside County General Plan (2015), the American Library Association suggests that an appropriate service level for library facilities and catalogues should be at a rate of 0.5 square foot of library space and 2.5 volumes per capita. The County's General Plan EIR calculated the library's service level based on per capita service for the number of registered borrowings in the system, not the total population of the County. Given the 2010 count of 681,117 registered borrowers, the Riverside County Library System provides approximately 0.49 square feet of facilities space and approximately 1.9 volumes per borrower.

In 2010, the County's population was approximately 2,202,000 residents. The number of registered library borrowers (681,117) of the Riverside County Library System in that year represents approximately 31% of the County's population. Using this proportion to estimate the number of Project residents that would be registered borrowers of the library, the proposed development could contribute an additional 749 borrowers to the system.[5]

[4] "Fee Justification Study for New Residential and Commercial/Industrial Development" prepared by Coachella Valley Unified School District, November 2022.

[5] 2,416 Project residents x 0.31 = 748.96 borrowers.

While this increase in registered borrowers may justify expanded library facilities, the decreased demand on library services that has resulted from the availability of internet research may offset the demands of additional borrowers, and in any event, the additional borrowers expected from the Project will not require the construction of additional facilities. However, when considered in combination with other planned future growth, the Project may contribute to a significant cumulative impact, as discussed further below.

Health Services
The Project site is located approximately 8 miles south of the John F. Kennedy (JFK) Memorial Hospital in Indio. It is also located within about five miles of a full-service medical clinic in the community of Mecca. According to the EIR for the County General Plan, the demand generation factor for hospital beds is 1.9 beds per 1,000 population. Based on a Project buildout population of approximately 2,416 people, the proposed development could generate demand for five additional hospital beds at local medical facilities.[6]

EIR No.521 for the 2015 County General Plan provided mitigation measures (Measure 4.15.7A and 4.15.7B) requiring the County to conduct period medical needs assessments to evaluate the demand and level of service being provided, and to fund new or expanded medical facilities based on the results of the assessment. These measures would ensure that any unmet demand on medical facilities induced by the Project could be identified and addressed.

Overall, the Project is in proximity to existing medical facilities, and the County will conduct periodic medical needs assessments to ensure that demand is being met. Impacts will be less than significant.

CVWD Middleton Reservoir 7802-1 Site
The CVWD has indicated that the Project will be required to provide 5-milllion-gallons of off-site storage at CVWD's Middleton Reservoir site located 2.4± miles south of the Project site. The reservoir site has been partially improved for multiple tanks with one 2.5 mg tank having been built to date. The addition of the subject 5mg tank will have no adverse impact on public services analysed in this discussion.

2.17.7 Mitigation Measures

Impacts will be less than significant. No mitigation measures are required.

2.17.8 Significance After Mitigation

The proposed Project will not result in any significant impacts to public services.

2.17.9 Cumulative Impacts

The Project will contribute an incremental increase in demand for the public services described above. When considered in combination with other planned future growth in the area could have potentially significant cumulative impacts, as discussed below.

Fire Protection
The Project site is outside an adequate response time of the RCFD and could increase requests for service in the area. This incremental increase in demand on the fire protection services could, in conjunction with other development in the area, result in impacts to the ability of the RCFD to provide an adequate level of service. However, both the Project and other future development would be subject to the County's DIF for fire protection to offset increased demand.

[6] (2,416 residents / 1,000) x1.9 hospital bed demand generation factor = 4.59

In addition, the Project will also be subject to any other applicable fire services funding mechanisms adopted by the County and applicable to new development in the area, which could include, but may not be limited to, allocating funds for a new fire station, remodeling or expanding existing fire stations, providing necessary fire response equipment, or contributing additional funds through a Community Facilities District (CFD) or a similar funding mechanism. Finally, the Project will help facilitate the tax increment financing of fire facilities and other public infrastructure and facilities in the area through the County's adopted Enhanced Infrastructure Financing District for the Thermal/Oasis area, which further ensures that the Project will not contribute to a significant cumulative impact regarding fire services.

Police Protection

Increases in population resulting from the Project and other new development would also cumulatively increase demand on the Riverside County Sheriff's Department. Incremental increases in the number of personnel could eventually necessitate additional facilities. The Project and other future development would contribute to the County's tax revenues, which could be allocated to offset incremental increases in the Sheriff's Department budget if additional staff and/or facilities are needed. If additional or expanded facilities were to be required, environmental impacts of these facilities would be assessed on a project-specific basis. This would ensure that the Project will have a less than cumulatively considerable impact on police protection.

Schools

The Project, combined with future residential development in the area, would cumulatively increase demand on existing school facilities and resources in the CVUSD. If this cumulative growth were to reach the growth forecasted by SCAG, then, as demonstrated in CVUSD's Fee Justification Study[7], the existing fee structure would not provide sufficient funding for the school district to accommodate the new students generated by this growth. However, as noted above, the CVUSD currently has a surplus in capacity of 4,507 students, including 3,445 elementary school, 296 middle school, and 766 high school students.

Nonetheless, as growth incrementally occurs, CVUSD is expected to prepare updated Fee Justification Studies and raise fees or identify additional sources of funding, as needed. The proposed Project will pay the existing school impact fees, as will all future development in the Project area. Likewise, given that full buildout of the Project is expected by in 2032, later stages of the proposed development may be required to pay higher DIF fees, as revised by CVUSD. In summary, the District currently has a capacity surplus but while the Project will have incremental impacts, these impacts will be offset by DIFs, and impacts will not be cumulatively considerable.

Libraries

While the Project site currently has access to three libraries in relative proximity, future development in the eastern Coachella Valley could increase the demand on library facilities and resources. However, both the Project and other future development will be required to pay into the DIF for libraries, which would help to offset the impacts of cumulative growth. Moreover, the widespread availability of the internet has reduced the dependance on physical library facilities.

According to Ordinance No.659, the County charges a DIF of $179 per single family residential dwelling unit for library construction, and $57 per single family dwelling unit for library books and media. The fees collected from the development of the proposed Project would thus help to offset any increased demand on the existing facilities as a result of population growth. Impacts related to the provision of libraries services are therefore less than significant with payment of mandated impact fees.

[7] Fee Justification Study for New Residential and Commercial/Industrial Development, prepared by the Coachella Valley Unified School District. November 2022. Fees are levied for a variety of land uses, including $ 4.70 per square foot of new residential and $ 48.88 per square foot of commercial retail center space.

Therefore, the Project's contribution to cumulative demand would be incremental, and impacts would not be cumulatively considerable.

Health Services

The proposed Project, in combination with other future development, would incrementally increase the need for additional hospital beds in the area. As stated in Section 2.17.6, the County is committed to conducting period medical needs assessments to evaluate the demand and level of service being provided, and to fund new or expanded medical facilities based on the results of the assessment. The Project and other future development would contribute to the County's tax revenues, which would help to offset the cost of new medical facilities as needed. If additional or expanded facilities were to be required, environmental impacts would be assessed on a project-specific basis. This would ensure that the Project will have a less than cumulatively considerable impact on health services.

2.18 Recreational Resources

2.18.1 Introduction

This section of the EIR describes and evaluates the potential impacts of the proposed Thermal Ranch Project to existing and future parks and recreation facilities. The potential for adverse impacts to recreational facilities were evaluated based on existing and proposed facilities, as well as projected demand for recreational parks and facilities in the eastern Coachella Valley.

2.18.2 Thresholds of Significance

The thresholds of significance analyzed herein have been taken from Appendix G of the State CEQA Guidelines. For purposes of this EIR, the proposed Project would have a significant effect on recreational resources if it were to:

Parks and Recreation

a) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?
b) Increase the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?
c) Be located within a Community Service Area (CSA) or recreation and park district with a Community Parks and Recreation Plan (Quimby fees)?

Recreational Trails

a) Include the construction or expansion of a trail system?

2.18.3 Regulatory Framework

Federal

There are no federal regulations applicable to the proposed Project regarding parks and recreational facilities.

State

Quimby Act

Known as the Quimby Act, California Government Code 66477 gives cities and counties the ability to adopt an ordinance that requires the dedication of land, the payment of fees in lieu, or a combination of both, for park and recreational purposes as a condition of approval of a subdivision. This legislation also establishes a minimum parkland dedication of 3 acres of parkland per 1,000 residents for new subdivision development unless the amount of existing parkland in the neighborhood already exceeds that quantity.

California Government Code Sections 66000 – 66003

These sections of the Government Code establish the ability for local agencies to charge fees for development projects. Local agencies may levy fees to offset cost of development impacts towards facilities or improvements including, per Section 66002 (c)(7), parks and recreation facilities.

Regional and Local

Riverside County General Plan

The Circulation Element of the Riverside County General Plan provides policies guiding the buildout of an accessible and well-connected network of non-motorized transportation and multipurpose recreation trails. The Healthy Communities Element provides policies related to land use and community design, transportation, parks trails and open space, as well as schools, recreational centers, and daycare centers.

These policies provide a framework for building communities that promote public and environmental health in the County. The following policies from these two elements pertaining to parks and recreation are applicable to the proposed Project:

Circulation Element

C 16.1 Implement the Riverside County trail system as depicted in the Bikeways and Trails Plan, Figure C-6.

C 16.4 Require that all development proposals along a planned trail or trails provide access to, dedicate trails easements or right-of-way, and construct their fair share portion of the trails system. Evaluate the locations of existing and proposed trails within and adjacent to each development proposal and ensure that the appropriate easements are established to preserve planned trail alignments and trail heads.

a. Require that all specific plans and other large-scale development proposals include trail networks as part of the circulation systems.

Healthy Communities Element

HC 2.2 Promote increased physical activity, reduced driving and increased walking, cycling and public transit by:

a. Requiring where appropriate the development of compact development patterns that are pedestrian and bicycle friendly.
b. Increasing opportunities for active transportation (walking and biking) and transit use.

HC 6.4 Ensure that regional trail plans are implemented at the Area Plan and Specific Plan level.

HC 9.1 Coordinate the development of complete neighborhoods that provide for the basic needs of daily life and for the health, safety, and welfare of residents.

HC 9.3 Require safe and appealing recreational opportunities.

HC 9.5 Where appropriate, require neighborhood retail, service, and public facilities within walking distance of residential areas.

HC 10.2 Increase access to open space resources by:

d. Requiring that development of parks, trails, and open space facilities occur concurrently with other area development.

Multipurpose Open Space Element

OS 20.5 Require that development of recreation facilities occurs concurrent with other development in an area.

OS 20.6 Require new development to provide implementation strategies for the funding of both active and passive parks and recreational sites.

Eastern Coachella Valley Area Plan

The Eastern Coachella Valley Area Plan (ECVAP) implements policies specific to the Eastern Coachella Valley region of Riverside County. It includes the following policy regarding recreational trail systems:

ECVAP 14.1 Implement the Trails and Bikeway System, Figure 9, as discussed in the Non-motorized Transportation section of the General Plan Circulation Element.

2.18.4 Environmental Setting

Parks and recreational facilities provide residents, visitors and the community with both active and passive health and recreational benefits. The Coachella Valley and the broader region provides rich parks and recreational resources such as the Santa Rosa and San Jacinto Mountains (SRSJM) National Monument, Joshua Tree National Park, Mount San Jacinto State Park, and the Indian Canyons south of Palm Springs managed by the Agua Caliente Band of Cahuilla Indians. Each city in the Coachella Valley has its own parks and recreation facilities. Generally, parks are classified based on their sizes, as discussed below.

Desert Recreation District

The subject property is located within the 1,800 square mile service area of the Desert Recreation District (DRD), which has been providing recreational services to residents and visitors in the Greater Coachella Valley for more than 70 years. The District's service area encompasses numerous cities in the Coachella Valley, as well as unincorporated communities such as Thermal, Mecca, Oasis, Vista Santa Rosa, and North Shore. The District provides barrier-free, safe services to unincorporated areas of the Coachella Valley and municipalities. It is the largest park and recreation district in California, and manages, maintains and assists in maintaining more than 30 parks and recreation facilities.

The District creates and delivers quality programs, services, and classes, and facilitates leisure opportunities through partnerships with private and public agencies and other entities. DRD facilities in the Project vicinity include the Bagdouma Park Community Center in Coachella, the Mecca Community Center and Pool at 65-250 Cahuilla Street in Mecca, and the Indio Community Center located at 45-871 Clinton Street in Indio. In May 2021, the County approved and adopted the Desert Recreation District's 2020 Master Plan.

Quimby Fee

In accordance with the Quimby Act, Riverside County Ordinance No.460 and 671 of the County Code requires for subdivision projects to provide for the dedication of land or the payment of in lieu fees at a rate of three acres for every one thousand residents residing within the county or, if the amount of existing neighborhood and community park area exceeds that limit, up to five acres per thousand residents.

The Project proposes the provision of five acres of public parkland for each one-thousand residents of the Specific Plan, or a payment of an in-lieu fee, or a combination of both.

2.18.5 Existing Conditions

The subject property is located in a rural but urbanizing portion of eastern Coachella Valley. Local, regional, state and federal park and open space lands are located in and near the Coachella valley and Project vicinity. These include the SRSJM National Monument located 2.25± miles to the west, the park and open space and recreational resources at Lake Cahuilla Veterans County Park and the Salton Sea State Recreation Area.

Lake Cahuilla Veterans County Park

Lake Cahuilla Veterans Regional Park encompasses 710 acres with expansive lawns and picturesque mountain views, situated at the base of the Santa Rosa Mountains 5 miles west of the subject property. With 96 individual and group campsites, Lake Cahuilla is an easily accessible destination for the many