



# Coyote Ridge Ponds Restoration Project, Ponds CR1 and CR4- Year 1 Monitoring Report

Prepared for:

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### Biotic Resources Group

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## Section A. General Project Information

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The Coyote Ridge Ponds Restoration Project (Project) is a priority for the implementation of the Conservation Strategy of the Santa Clara Valley Habitat Plan (Habitat Plan) (ICF 2012). The Santa Clara Habitat Agency constructed the project in partnership with the Santa Clara Valley Open Space Authority and is currently in the first year of the 5-year post-construction monitoring and management period. The projects were constructed to restore and establish pond habitat at two locations (CR1 and CR4) in the Coyote Ridge Open Space Preserve, located in the eastern foothills of the Diablo Range in the Coyote Creek watershed (Section E, Figures 1 and 2). Project objectives and compensatory mitigation credits are described in the *Coyote Ridge Ponds Restoration Project (CR1 and CR4) Restoration and Monitoring Plan* (MMP) (Swaim Biological Inc. 2018). The project's objectives are as follows:

### Pond Reestablishment Sites

- Restore breeding habitat for the California red-legged frog (*Rana draytonii*; CRLF) and California tiger salamander (*Ambystoma californiense*; CTS) and for common amphibians such as the Sierran tree frog (*Pseudacris sierra*) and California toad (*Anaxyrus boreas halophilus*), and basking habitat for Western Pond Turtle (*Actinemys marmorata*; WPT), by performing the following actions:
  - Deepen a portion of the pond to restore a hydroperiod suitable for the successful breeding and metamorphosis of CTS and CRLF
  - Repair berm failure to restore ponding capacity, hydroperiod, and water retention
  - Plant wetland vegetation
  - Exclude cattle from a portion of the pond
- Restore multiple wetland functions including sediment filtration, nutrient filtration, and erosion protection by performing the following actions. This Reestablishment will also provide aquatic refugia, foraging, and dispersal habitat for CRLF:
  - Exclude cattle from a portion of the pond
  - Plant native wetland vegetation
- Restore aquatic habitat and establish functional basking habitat for WPT by performing the following actions:
  - Lengthen the pond's hydroperiod
  - Deepen the pond's open water portion
  - Install anchored basking logs in the pond's deepened open water
- Improve climate change resiliency of pond habitat by performing the following actions:
  - Increase the water storage capacity and hydroperiod of the ponds
  - Establish a spring water source for cattle that graze the CROSP

Project construction commenced on August 6, 2019 and was completed on October 29, 2019. Sherwood Design Engineers provided a trip report, dated November 8, 2019, documenting the final walkthrough to assess that construction has been completed in accordance with the plans and specifications and that Best Management Practices (BMP's) are in place and stabilization has been achieved. An as-built survey was conducted on December 17, 2019, and as-built designs were provided shortly thereafter. A Letter of Completion will be provided by Sherwood Design Engineers once the wetland planting has been completed.

This report presents the results of the Year 1 monitoring in relation to the ecological performance standards outlined in the project's MMP. Monitoring results will also inform management activities to direct maintenance and potential remedial measures to ensure that the project's objectives are fulfilled. In accordance with the requirements of the MMP, this report was prepared in the format of the U.S. Army Corps of Engineers (USACE) South Pacific Division Mitigation Monitoring Report Form (USACE 2014).

## **A.1 Project Name**

Coyote Ridge Ponds Restoration Project, Ponds CR1 and CR4.

## **A.2 DA File Number(s)**

The project permit numbers are as follows:

- USACE File No. 2019-00086S
- Regional Water Quality Control Board, California Integrated Water Quality System (CIWQS) Place No. 855532 (bkw) and CIWQS Regulatory Measure No. 428417
- California Department of Fish and Wildlife (CDFW) Lake and Streambed Alteration Agreement No. 1600-2019-0019-R3
- CDFW Natural Community Conservation Plan Permit No. 2835-2012-002-03
- U.S. Fish and Wildlife Service (USFWS) Federal Fish and Wildlife Permit No. TE94345A-0
- Santa Clara Valley Water District Encroachment Permit File No. 33407
- County of Santa Clara License Agreement dated 9/6/16

## **A.3 Project Type**

Permittee responsible mitigation

#### **A.4 Permittee, Bank, or In-Lieu Fee Sponsor Name and Work Phone Number**

Edmund Sullivan, Santa Clara Valley Habitat Agency  
(408) 779-7261

#### **A.5 Permittee, Bank, or In-Lieu Fee Sponsor Mailing Address**

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#### **A.7 Agent Name and Work Phone Number**

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## **Section B. Notice of Commencement/Completion of Compensatory Mitigation Project**

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### **B.1 Commencement**

Y:  N:

Project construction commenced on August 6, 2019.

### **B.2 Completion**

Y:  N:

Project construction was completed on October 29, 2019. Sherwood Design Engineers provided a trip report, dated November 8, 2019, documenting the final walkthrough to assess that construction has been completed in accordance with the plans and specifications and that BMP's are in place and stabilization has been achieved (Sherwood Design Engineers 2019). An as-built survey was conducted on December 17, 2019 and as-built designs were provided shortly thereafter (Appendix D). A Letter of Completion will be provided by Sherwood Design Engineers once the wetland planting has been completed.

### **B.3 Financial Assurance Remains in Place**

Y:  N:

### **B.4 Requesting Release of a Financial Assurance?**

Y:  N:

### **B.5 Name of Contractor (If Any)**

Go Native Inc. constructed the project and are performing ongoing monitoring.

### **B.6 Phone Number of Contractor (If Any)**

Dave Sands, Go Native Inc.  
(650) 996-8996

## Section C. Mitigation Monitoring Status

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### C.1 Final Monitoring Completed and Verification Requested?

Y:  N:

### C.2 Date of Monitoring Reported

This monitoring report summarizes monitoring conducted during the calendar year 2020, Year 1 of the short-term (i.e., 5-year) post-construction ecological monitoring period set forth in the MMP.

### C.3 Monitoring Report Number

Monitoring report number 1.

### C.4 Management and Maintenance Activities Completed

Management and maintenance activities completed during Year 1 (2020) include the following:

- Herbicide treatment of artichoke thistle (*Cynara cardunculus*) and Purple star thistle (*Centaurea calcitrapa*) at CR4 and along the abandoned access road to the top of the hill (April 27, 2020).
- Hand pulled Black mustard (*Brassica nigra*) and Italian/slender flowered thistle (*Carduus* sp.) adjacent to and partially within the CR4 project area (April 27, 2020).
- Hand pulled Italian/slender flowered thistle (*Carduus* sp.) within and adjacent to the CR1 project area (April 27, 2020).
- Herbicide treatment of artichoke thistle (*Cynara cardunculus*) and Purple star thistle (*Centaurea calcitrapa*) at CR1 and to the top of the hill (May 8, 2020).
- Hand pulled Black mustard (*Brassica nigra*) and Italian/slender flowered thistle (*Carduus* sp.) adjacent to and partially within the CR1 project area (May 8, 2020).
- Shovel cut outlier Purple star thistle (*Centaurea calcitrapa*) (May 13, 2020).
- Hand pulled yellow star thistle (*Centaurea solstitialis*) and Italian thistle (*Carduus* sp.) on the CR4 pond berm (May 25, 2020).
- Removed yellow star thistle (*Centaurea solstitialis*) and barbed goatgrass through weedwacking at CR1 and CR4 (May 25, 2020).
- Conducted spring monitoring of infrastructure at CR1 and CR4 (April 28, 2020)

- Removed yellow star thistle (*Centaurea solstitialis*) and barbed goatgrass (*Aegilops triuncialis*) through weedwacking at CR1 and CR4 (June 7, 2020).
- Hand pulled yellow star thistle (*Centaurea solstitialis*) at CR1 and CR4 (June 7, 2020).
- Hand pulled yellow star thistle (*Centaurea solstitialis*), barbed goatgrass (*Aegilops triuncialis*) and Italian thistle (*Carduus* sp.) at CR1 and CR4 (August 5, 2020).
- Inspected infrastructure at CR1 and CR4 (August 5, 2020)

## C.5 Adaptive Management Activities Completed

No additional adaptive management activities were completed this year.

## C.6 Performance Standards

The project’s MMP describes performance standards during the 5 years of short-term post-construction ecological monitoring. Table 1 contains the Year 1 performance standards and an evaluation of whether Year 1 monitoring results met them. Section C.7 contains further discussion of the Year 1 results relative to the performance standards.

**Table 1. Year 1 Performance Standards and Results**

Performance Standard	Year 1 Goal	Goal Met in Year 1?	Year 1 Results
Target Hydrologic Regime	Depth of inundation at least 6" through Sept 30, if average rainfall year.	NA	The maximum water depth at CR1 was 0 feet. The maximum water depth at CR4 was 1.2 feet (April 2, 2020). CR4 fell to 0 feet on May 16, 2020. However, 2019-2020 was a very dry water year with well below average precipitation. Therefore, the performance standard was not applicable in Year 1.
California Red-legged Frog/ California Tiger Salamander/ Western Pond Turtle	Successful breeding of CRLF and CTS and WPT presence in at least one average rainfall monitoring year.	NA	As 2019-2020 was a very dry water year, with well below average precipitation, no water was ponded at CR1 to support breeding. Water was observed in CR4 for the first time on April 2, 2020, but no CRLF/CTS egg masses or larvae and no WPT were observed. The pond was dry on May 16, 2020. Therefore, the performance standard was not applicable in Year 1.
Aquatic Predator Presence/ Absence	No predator occurrences.	Yes	As 2019-2020 was a very dry water year, with well below average precipitation, CR1 was completely dry during the April 2, 2020 predator survey, so no management activities such as pond draining were recommended. CR4 dried by May 16, 2020. No predators were

<b>Performance Standard</b>	<b>Year 1 Goal</b>	<b>Goal Met in Year 1?</b>	<b>Year 1 Results</b>
			observed, and no management activities were recommended. .
Wetland Vegetation Percent Cover	15% wetland vegetation cover in planting zones; less than 50% in open water pond habitat; at least three wetland species will be present.	Yes	The average percent cover of wetland vegetation was 55.1% at CR1 and 40.9% at CR4. >50% open water occurred at CR1 and CR4. More than three wetland species were present at CR1 and CR4.
Invasive Plant Cover	Less than 5%	No	Invasive plant cover was greater than 5%, except for poison hemlock.
Wetland Delineation	NA	NA	A wetland delineation will be performed in Year 5.
Water for Cattle	Sufficient water to support the same grazing intensity of the CROSP lands as the existing conditions.	Yes	Water was not available for cattle at CR1. Water was temporarily available at CR4, April 2, 2020. However, we have met the criteria by providing water longer into the year than before the berms were reconstructed.

## **C.7 Short Statement on Whether the Performance Standards Are Being Met (Monitoring Methods, Results and Discussion, and Management Recommendations)**

Year 1 monitoring methods, results and discussion, and recommended management activities are provided below for each performance standard.

### **C.7.1 Methods**

Year 1 monitoring methods are discussed below for each performance standard and are in accordance with the project's MMP (Swaim Biological 2018).

#### **C.7.1.1 Target Hydrologic Regime**

Hydrologic monitoring at the pond and wetland mitigation sites was provided by Camara Environmental Consulting. On January 27, 2020, Go Native, Inc. installed a staff plate at the lowest point of each pond for visual observation of pond level. Appendix B contains water depth records to document the Year 1 hydrologic regime.

#### **C.7.1.2 California Red-legged Frog/California Tiger Salamander/Western Pond Turtle**

Camara Environmental Consulting conducted wildlife surveys for special-status species at both pond sites to evaluate the performance standards for the California red-legged frog, California tiger salamander, the western pond turtle, and aquatic predators. Surveys were conducted in accordance with the methods described in the MMP (Swaim Biological 2018), which follow the most recent wildlife agency protocols (USFWS 2005, USFWS

and CDFW 2003). The survey type, survey date, observer, and level of effort are described below and are also presented in Table 2.

Kelli Camara conducted a California red-legged frog egg mass and larvae survey on April 2, 2020, and a nighttime California red-legged frog survey on April 29, 2020 at CR1 and CR4. Based on the lack of water and per conversation with G. Haas (April 30, 2020), no additional nighttime surveys were conducted in 2020.

On April 2, 2020, Kelli dipnetted for California tiger salamander larvae at CR4. Kelli visited both ponds again on May 16, 2020, but both ponds were dry. Aquatic predator presence/absence and WPT presence was conducted with each visit and no predators were observed.

**Table 2. Level of Effort for Wildlife Surveys**

<b>Date</b>	<b>Survey Type</b>	<b>Observer</b>	<b>Pond CR1</b>	<b>Pond CR4</b>
April 2, 2020	California red-legged frog and California tiger salamander egg mass and larvae and WPT survey;	Kelli Camara	Pond dry	Daytime egg mass survey and dip-netted
April 2, 2020	Predator survey	Kelli Camara	Pond dry	Visual observation and dip-netted
April 29, 2020	Nighttime California red-legged frog visual encounter survey	Kelli Camara	Pond dry	<0.5" of water
May 16, 2020	California red-legged frog and California tiger salamander egg mass and larvae and WPT survey	Kelli Camara	Pond dry	Pond dry
May 16, 2020	Predator survey	Kelli Camara	Pond dry	Pond dry

### **C.7.1.3 Aquatic Predator Abundance**

The presence/absence of aquatic predators during each of the special-status wildlife surveys described above was recorded. No predators were encountered.

### **C.7.1.4 Wetland Vegetation Percent Cover**

The 2018 MMP (Swaim Biological, Inc., December 2018) identified a wetland plant palette for the two constructed ponds. The plant palette contains a mix of short emergent wetland species and drought tolerant wetland species to provide a range of species that will provide cover throughout the year as the depth of inundation and soil saturation vary. The plant palette was also developed to increase plant species richness at the site. This planting has not been done; however, it is scheduled for January or February 2021.

Despite the lack of wetland plant installation, Biotic Resources Group plant ecologist Kathleen Lyons conducted wetland vegetation monitoring at CR1 and CR4 on May 25, 2020. Percent cover of natural recruited vegetation was determined by species using the quadrat sampling method (Bonham 1989) along transects established within the un-grazed portions of CR1 and CR4 (see Figures A-1 and A-5 in Appendix A). The quadrats were placed along permanent transects within the wetland area (within the cattle exclusion fencing). Transect endpoints were marked with metal T-posts. Due to the small size of the ponds, quadrat sampling transects were established across each feature in alternating directions to capture all site conditions. The number of quadrats sampled was based the variability of the site's vegetative cover and 10 1-meter<sup>2</sup> quadrats was determined to adequately capture plant cover at each site. Cover was estimated to the nearest whole percent. Bare ground and open water were also recorded. All species in quadrats were identified using the Jepson Manual (Baldwin et al. 2012). Wetland species were defined as having a wetland indicator status of facultative (FAC), facultative wetland (FACW), or obligate (OBL) based on the *National Wetland Plant List for the Arid West Region* (Lichvar, et al. 2016), regardless of whether they were native or nonnative. Plant species were also distinguished as to plant guild, as follows: exotic annual forb (EAF), exotic annual grass (EAG), exotic perennial forb (EPF), exotic perennial grass (EPG), native annual forb (NAF), native annual grass (NAG), native perennial forb (NPF), or native perennial grass (NPG). The average percent wetland vegetation cover and number of wetland species observed at each site were evaluated.

#### **C.7.1.5 Invasive Plant Cover**

Invasive, non-native plant species were documented on site during preparation of the 2018 MMP (Swaim Biological, Inc. 2018). At that time, a small number of artichoke thistle (*Cynara cardunculus*) individuals were present in the uplands around pond site CR1. Non-native annual species typically found in California annual grassland habitat were also documented in the project area grasslands, including black mustard (*Brassica nigra*), artichoke thistle (*Cynara cardunculus*), purple star thistle (*Centaurea calcitrapa*), yellow star thistle (*Centaurea solstitialis*), black mustard (*Brassica nigra*) and barbed goat grass (*Aegilops triuncialis*). A small area of Himalayan blackberry (*Rubus armeniacus*) was documented on the banks of Pond CR4 (Swaim Biological, Inc. 2018).

2019 Baseline. Biotic Resources Group plant ecologist Kathleen Lyons and George McMenamin, restoration specialist, conducted surveys for invasive plant species at CR1 and CR4 on June 21, 2019 to document the pre-construction baseline condition. In addition, Ms. Lyons documented plant cover along five transects (see Figures 1 and 2 in Appendix A). Using the line intercept sampling method, plant species composition and cover was recorded at 1-meter intervals along 2 transects at CR1 and 3 transects at CR4. One-meter<sup>2</sup> quadrats were placed at 1-meter intervals along the transect to visually document the extent and severity of invasive, non-native plant cover, using the following metrics: low density (6-25% cover), moderate density (26-50% cover), and high density (51 -100% cover). Visual surveys were also conducted to map the density of each species through the site. Data from the point intercept sampling was compiled into an Excel spreadsheet to determine plant cover by species, plant guild and invasive status for each transect. Data from the quadrat sampling was used to refine maps showing the distribution of invasive plant species at each restoration site.

2020 Year 1 Condition. Biotic Resources Group plant ecologist Kathleen Lyons and George McMenamin, restoration specialist, conducted focused visual surveys for invasive plant species at both restoration sites. On April 27, 2020, Ms. Lyons documented invasive plant cover along the five transects previously established in 2019. Using the line intercept sampling method, plant species composition and cover was recorded at 1-meter intervals along 2 transects at CR1 and 3 transects at CR4. In addition, one-meter<sup>2</sup> quadrats were placed at 1-meter intervals to visually document cover of invasive, non-native plant occurrences, using the following

metrics: low (6-25% cover), moderate (26-50% cover), and high (51 -100% cover). Data from the point intercept sampling was compiled into an Excel spreadsheet to determine plant cover by species, plant guild and invasive status for each transect. Data from the quadrat sampling was used to refine maps showing the distribution of invasive plant species at each restoration site.

On April 27 and May 25<sup>th</sup>, Ms. Lyons and Mr. McMenamain visually assessed cover of invasive plant species throughout the two sites using the low, moderate, and high cover values. At those visits, cover by the following species were determined: wild mustard, Italian and slender thistle (*Carduus* spp.), artichoke thistle, yellow star thistle, purple star thistle, barbed goat grass, and poison hemlock (*Conium maculatum*). Additional visual assessments of invasive cover were conducted by Mr. McMenamain in June, July, and August 2020. The results of the invasive plant cover surveys, quadrat sampling, and visual assessments were used to prepare maps depicting the extent and severity of invasive plant species at CR1 and CR4.

#### **C.7.1.6 Wetland Delineation**

In accordance with the MMP, a wetland delineation will be conducted at the end of the 5-year monitoring period; therefore, one was not conducted in Year 1. Biotic Resources Group performed a qualitative assessment of wetland conditions in Year 1 during monitoring and maintenance visits.

#### **C.7.1.7 Water for Cattle**

Water availability for cattle was determined on the basis of observations of water infrastructure.

#### **C.7.1.8 Photodocumentation**

Photodocumentation of the pond sites was conducted by Camara Environmental Consulting from permanent locations established with G. Haas on August 7, 2020. Photos documenting the wetland and invasive plant cover was conducted by Biotic Resources Group plant ecologist Kathleen Lyons during monitoring on April 27 and May 25, 2020 from the beginning of each wetland transect and invasive plant transect. Additional photographs were taken throughout Year 1 to record observations and events that may affect the success of mitigation. Photographs are provided in Section D and the locations of the photodocumentation points are shown on Figures 3 and 4 in Section E.

### **C.7.2 Results and Discussion**

Year 1 monitoring results are provided below for each performance standard. These results are also summarized in Table 1.

#### **C.7.2.1 Target Hydrologic Regime**

**Pond Site CR1.** The hydrologic regime performance standard calls for a depth of inundation of at least 6 inches through August 31 of each monitoring year that exhibits average or above average precipitation. This standard is intended to achieve the target hydrologic regime that supports high quality breeding habitat for the California red-legged frog and California tiger salamander. 2019-2020 was a below average water year. Therefore, the hydrologic regime performance standard was not applicable in Year 1.

No water was observed in CR1 during WY 2019/2020.

**Pond Site CR4.** The hydrologic regime performance standard calls for a depth of inundation of at least 6 inches through August 31 of each monitoring year that exhibits average or above average precipitation. This standard is intended to achieve the target hydrologic regime that supports high quality breeding habitat for the California red-legged frog and California tiger salamander. 2019-2020 was a below average water year. Therefore, the hydrologic regime performance standard was not applicable in Year 1.

Water levels at CR4 were documented at their highest at the beginning of April. By May 16, 2020, 6 weeks later, the pond was observed to be completely dry.

### **C.7.2.2 California Red-legged Frog/California Tiger Salamander/Western Pond Turtle**

**California Tiger Salamander.** No California tiger salamanders (including larvae) were observed during the Year 1 monitoring at CR1 or CR4, due to a below average water year. A 2008 special-status amphibian aquatic survey by Biosearch Associates (2008) documented California tiger salamander larvae in Pond CR01 (Pond 2 in their report) and reported previous findings of larvae in 2005 and 2006. The same 2008 study documented California tiger salamander larvae in Pond CR04 (Pond 15 in their report) (Biosearch 2008).

**California Red-legged Frog.** No California red-legged frogs or egg masses were observed during the Year 1 monitoring at CR1 or CR4, due to a below average water year. Biosearch Associates (2008) reported an adult California red-legged frog at Pond CR01 in 2006 and a breeding pair at Pond CR04 in 2007.

**Western Pond Turtle.** Neither CR1 nor CR4 provided suitable western pond turtle habitat.

**Additional Wildlife Observations.** No additional wildlife was observed during day or night surveys.

**Comparison to Performance Standards.** The MMP performance standards call for CRLF and CTS breeding and WPT presence to be documented at CR1 and CR4 at least once during the five-year monitoring period, assuming average rainfall year/s. Due to a below average water year, performance standard was not applicable in Year 1.

### **C.7.2.3 Aquatic Predator Abundance**

Aquatic predators were not observed in CR1 nor CR4 during the dipnet and visual encounter surveys for special-status species. Pounded water was not observed during water year (WY) 2019/2020 in CR1. Water was observed in CR4 for a up to 6-week period starting April 2, 2020, but was completely dry by May 16, 2020, and could not support aquatic predators. Therefore, neither pond needed to be drained in order to control aquatic predators.

The MMP performance standard for aquatic predators requires draining the pond(s) to control predators if annual monitoring determines that bullfrog or crayfish have located to one or both ponds. The ponds will be

drained in mid-September of the current year and allowed to dry completely until winter rains refill the pond. Predators were not observed during Year 1; therefore, this criterion has been met.

#### C.7.2.4 Wetland Vegetation Percent Cover

The MMP requires the average percent cover of wetland vegetation will exhibit an increasing temporal trend across monitoring years at the pond sites; evaluated separately. Percent cover will be determined by species; at least three wetland species will be observed at each site during each monitoring year. For Year 1, wetland cover performance standard is 15%, with a minimum of three wetland plant species present.

In Year 1, average wetland vegetation cover ranged from 55.1% to 40.9% at ponds CR1 and CR4, respectively, during vegetation monitoring on May 20, 2020 (Table 3). At CR1, individual quadrat samples ranged from a low of 60% wetland cover to a high of 100%. At CR4, individual quadrat samples ranged from a low of 10% wetland cover to a high of 95%. Wetland cover data is presented in Appendix A, Table A-1 and Figures A-10 and A-15.

**Table 3. Wetland Vegetation Percent Cover and Number of Wetland Species, Year 1 (2020)**

Year	Site	Wetland Vegetation Cover (average) Year 1	Year 1 Wetland Vegetation Cover Performance Standard	Number of Wetland Species <sup>1</sup> Year 1	Year 1 Wetland Species Number Performance Standard	Year 1 Performance Standards Met?
Year 1	CR1	55.1%	15% in planting zones; less than 50% in open water pond habitat	5	3	Yes
	CR4	40.9%		3		Yes

<sup>1</sup> – Cover by OBL, FACW and FAC-designated species, as per Arid West 2016 Regional Wetland plant List, Lichvar, et al, 2016

Five wetland plant species were observed at the two sites (Table 4); ryegrass (*Festuca perennis*) (formerly *Lolium perenne*) (FAC) provided the most wetland cover, followed by rabbitsfoot grass (*Polypogon monspeliensis*) (FACW). Charts displaying the monitoring results for each site, including cover by plant guild and wetland indicator status, are provided in Appendix A, Table A-1 and Figure A-17.

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**Table 4. Wetland Plant Species Observed at CR1 and CR4, Year 1 (2020)**

Species Scientific Name	Species Common Name	Plant Guild	Wetland Indicator Status	Percent Cover CR1	Percent Cover CR4
<i>Festuca perennis</i>	Ryegrass	EAG	FAC	42.0	12.4
<i>Polypogon monspeliensis</i>	Rabbitsfoot grass	EAG	FACW	7.1	26.7
<i>Xanthium strumarium</i>	Cocklebur	NAF	FAC	0.3	0.9
<i>Polygonum aviculare</i>	Knotweed	EPF	FAC	5.0	0
<i>Phalaris aquatica</i>	Canary grass	EAG	FAC	0.7	0

1 – Cover by OBL, FACW and FAC-designated species, as per Arid West 2016 Regional Wetland plant List, Lichvar, etal, 2016

As per the MMP, vegetation cover at the CR1 and CR4 ponds should not exceed 50% in the open water pond habitat during any monitoring year to ensure establishment of breeding habitat for CTS and CRLF. In Year 1 both ponds were dry during the May 2020 sampling. A visual assessment of both cattle-grazed and cattle-excluded areas at the two ponds found bare ground at greater than 50%. If bare ground is assumed to have been open water earlier in the season, the open water performance criteria may have been met at both CR1 and CR4 during some portion of the winter/spring season. Where cattle grazing was excluded from the ponds, bare ground averaged 16% at CR1 and 54% at CR4. This data is portrayed in Appendix A, Table A-1.

### **C.7.2.5 Invasive Plant Cover**

As per the MMP, the average percent cover of nonnative, invasive plant species at the pond sites is required to be less than 5% in each monitoring year. Using the visual metrics, the performance standard would equate to be below the low-density metric (6-25% cover). All species with a Cal-IPC rating of moderate or high are to be considered nonnative, invasive plant species.

In the 2019 baseline, transect data documented invasive plant cover ranging from a low of 3% at CR4 (transect CR4.2) to a high of 30.8% at CR1 (transect CR1.1). Quadrat sampling along each transect documented densities of low, moderate, and high for yellow star thistle, purple star thistle, Italian/slender thistle, artichoke thistle, and goat grass at CR1. Low, moderate and high densities of wild mustard, yellow star thistle, Italian/slender thistle, and artichoke thistle were recorded in quadrats at CR4. Visual mapping of invasive plant polygons depicting the severity of the pre-construction infestations at each pond site is presented in Appendix A and summarized in Table 5. Charts displaying the transect monitoring results for each site, including cover by plant guild and invasive status, are provided in Appendix A., Figures A-11 and A-16.

**Table 5. Invasive Plant Polygons, Visual Assessment, Baseline (2019)**

Site	Species Scientific Name	Species Common Name	Cal IPC Rating	Low Density (6-25%)	Moderate Density (26-50%)	High Density (51-100%)
<b>CR1</b>	<i>Carduus spp.</i>	Italian/slender flowered thistle	High	Yes	No	No
	<i>Silybum marianum</i>	Milk thistle	Limited	Yes	No	No
	<i>Centaurea solstitialis</i>	Yellow star thistle	High	No	Yes	Yes
	<i>Cynara cardunculus</i>	Artichoke thistle	Moderate	Yes	No	No
	<i>Aegilops triuncialis</i>	Barbed goat grass	High	Yes	Yes	No
<b>CR4</b>	<i>Carduus spp.</i>	Italian/slender flowered thistle	High	No	Yes	Yes
	<i>Centaurea solstitialis</i>	Yellow star thistle	High	Yes	No	Yes
	<i>Cynara cardunculus</i>	Artichoke thistle	Moderate	Yes	No	No

In Year 1, transect data documented invasive plant cover with a low of 0% at CR4 (transect T-2) (a decrease from 3% in 2019) to a high of 15.5% at CR-4 (transect T-1) (increase from 13.4% in 2019). Quadrat sampling along each transect documented densities of low and moderate for wild mustard, yellow star thistle, Italian/slender thistle, and artichoke thistle at CR-1. One new invasive plant species was detected on site in 2020: poison hemlock. Quadrat sampling along each transect detected a decline in density of milk thistle, goat grass and yellow star thistle, compared to 2019. Low and moderate densities of wild mustard and Italian/slender thistle were recorded in quadrats at CR4.

The Year 1 visual mapping of invasive plant polygons at each pond site is presented in Appendix A and summarized in Table 4. Charts displaying the monitoring results for each site, including cover by plant guild and invasive plant status, are provided in Appendix A, Figures A-8, A-9, A-12, A-13 and A-14.

**Table 6. Invasive Plant Polygons, Visual Assessment, Year (2020)**

Site	Species Scientific Name	Species Common Name	Cal IPC Rating	Low Density (6-25%)	Moderate Density (26-50%)	High Density (51-100%)
<b>CR-1</b>	<i>Carduus spp.</i>	Italian/slender flowered thistle	High	No	Yes	No
	<i>Brassica sp.</i>	Wild mustard	Moderate	Yes	Yes	No
	<i>Centaurea solstitialis</i>	Yellow star thistle	High	Yes	Yes	No
	<i>Cynara cardunculus</i>	Artichoke thistle	Moderate	Yes	Yes	No
	<i>Conium maculatum</i>	Poison Hemlock	Moderate	Yes	No	No
	<i>Aegilops triuncialis</i>	Barbed goat grass	High	No	Yes	Yes
<b>CR-4</b>	<i>Carduus spp.</i>	Italian/slender flowered thistle	High	Yes	Yes	No
	<i>Centaurea solstitialis</i>	Yellow star thistle	High	Yes	No	No
	<i>Cynara cardunculus</i>	Artichoke thistle	Moderate	Yes	No	No
	<i>Brassica sp.</i>	Wild mustard	Moderate	Yes	Yes	No

The MMP identifies a performance standard threshold of 5% average percent cover each year for all invasive species, with 2019 being the baseline; however, during review of the work scope, this performance standard was deemed to be unattainable for some species. The 5% threshold, using 2019 as the baseline, was retained for Italian/slender thistle, wild mustard, artichoke thistle, and poison hemlock; yet modified for two species, yellow star thistle and barbed goat grass. For barbed goat grass and yellow star thistle, the Year 1 (2020) distribution of these two species will be the baseline upon which future years will be compared to, as listed in Table 7 and portrayed on maps presented in Appendix A, Figures A-2, A-3 and A-6.

**Table 7. Performance Standards for Invasive, Non-native Plant Species, Years 1-5<sup>2</sup>**

Species Scientific Name	Species Common Name	Year 1 (2020)	Year 2 (2021)	Year 3 (2022)	Year 4 (2023)	Year 5 (2024)	Meets Year 1 Performance Standard?
<i>Carduus spp.</i>	Italian/slender flowered thistle	5% cover	5% cover	5% cover	5% cover	5% cover	No
<i>Brassica sp.</i>	Wild mustard	5% cover	5% cover	5% cover	5% cover	5% cover	No
<i>Cynara cardunculus</i>	Artichoke thistle	5% cover	5% cover	5% cover	5% cover	5% cover	No
<i>Conium maculatum</i>	Poison hemlock	5% cover	5% cover	5% cover	5% cover	5% cover	Yes
<i>Aegilops triuncialis</i>	Barbed goat grass	Establish baseline	10% reduction in percent cover; 10% reduction in area from 2020 baseline.	30% reduction in percent cover; 25% reduction in area from 2020 baseline.	50% reduction in percent cover; 40% reduction in area from 2020 baseline.	80% reduction in percent cover; 60% reduction in area from 2020 baseline.	N/A
<i>Centaurea solstitialis</i>	Yellow star thistle	Establish baseline	15% reduction in percent cover; 10% reduction in area from 2020 baseline.	30% reduction in percent cover; 20% reduction in area from 2020 baseline.	50% reduction in percent cover; 30% reduction in area from 2020 baseline.	70% reduction in percent cover; 50% reduction in area from 2020 baseline.	N/A

The Year 1 observations found cover by Italian/slender thistle, wild mustard, and artichoke thistle to be greater than 5%. One species, poison hemlock, had less than 5% cover. Only one spot occurrence of poison hemlock was found at CR1 and it represents less than 5% cover. At CR1, milk thistle and Italian thistle had a reduction in cover and density compared to the 2019 baseline condition. At CR4, the density of milk thistle decreased but the area covered by the species increased. At CR1 and CR4, density of wild mustard increased in both density and area cover from the pre-project (2019) condition. This information is summarized in Table 8.

For barbed goat grass and yellow star thistle, 2020 cover is the baseline condition. Both species were found at CR1 wherein 14 of 15 polygons were mapped as low and moderate density; one polygon of barbed goat grass

<sup>2</sup> Performance standards are based on the pre-treatment condition. 2020 is baseline for this species; reduction in cover in subsequent years will be compared to this baseline

was identified as high density. As CR4, only yellow star thistle was found. Four polygons with low density were recorded. These maps are presented in Appendix A, Figures A-2, A-3 and A-6.

**Table 8. Trends in Percent Cover and Area of Select Invasive, Non-native Plant Species, Year 1 (2020)**

Species Scientific Name	Species Common Name	CR-1		CR-4	
		Change in Density from 2019	Change in Area from 2019	Change in Density from 2019	Change in Area from 2019
<i>Carduus spp.</i>	Italian/slender flowered thistle	Decrease	Decrease	Decrease	Increase
<i>Brassica sp.</i>	Wild mustard	Increase <sup>3</sup>	Increase	Increase	Increase
<i>Cynara cardunculus</i>	Artichoke thistle	Increase	Decrease	No Change	Decrease
<i>Conium maculatum</i>	Poison hemlock	Increase	Increase	N/A <sup>4</sup>	N/A
<i>Silybum marianum</i>	Milk thistle	Decrease	Decrease	N/A	N/A
<i>Centaurea solstitialis</i>	Yellow star thistle	No Change	Increase	Decrease	Decrease
<i>Aegilops triuncialis</i>	Barbed goat grass	Increase	Increase	N/A	N/A

### C.7.2.6 Wetland Delineation

A wetland delineation will be conducted at the end of the 5-year monitoring period; therefore, no wetland delineation was conducted in Year 1. Wetland conditions were observed to be establishing in the target wetland areas even though the water year 2019-2020 was below average precipitation and wetland planting per the planting palette has not occurred.

### C.7.2.7 Water for Cattle

We have met the criteria for cattle water by providing water longer into the year than before the berms were reconstructed.

### C.7.2.8 Photodocumentation

Photographs from established photodocumentation points and additional locations taken throughout Year 1 monitoring are provided in Section D. Photodocumentation points are shown on Figures 3 and 4 in Section E.

<sup>3</sup> Increase in cover from 2019 baseline, however, cover less than 5%.

<sup>4</sup> Species not found on site

### **C.7.3 Recommended Management Activities**

Management recommendations are provided below for relevant performance standards.

#### **C.7.3.1 Target Hydrologic Regime**

Camara Environmental Consulting prepared the following recommendations for target hydrologic regime:

- Monitor the seep, which was encountered during construction.

#### **C.7.3.2 Aquatic Predator Abundance**

Because both CR1 and CR4 were dry during the May 16, 2020 predator survey, no management activities such as pond draining were recommended.

#### **C.7.3.3 Wetland Vegetation Percent Cover**

The two pond sites currently meet the Year 1 wetland plant cover performance standards; however, plant cover is dominated by exotic annual grasses (EAG). One native species was detected: cocklebur. All of these species established naturally on site, as planting had not been implemented. Wetland plantings are scheduled for January or February 2021 wherein the species identified for planting (Table 4 of MMP) (Baltic rush, common rush, iris-leaved rush, water smartweed, or hard stem bulrush) will be installed. Future monitoring is expected to capture cover by these species.

The goal for open water is at least 50% during any monitoring year. The May 2020 visual assessment of both cattle-grazed and cattle excluded areas at the two ponds found bare ground at greater than 50%; which could suggest that the bare ground was open water earlier in the season. It is recommended that the visual assessment of open water be conducted earlier in the season (February or March).

#### **C.7.3.4 Invasive Plant Cover**

The MMP describes that all plant species with a Cal-IPC rating of moderate or high be considered invasive plant species; however, with the exception of the species noted above, additional invasive, non-native plant species with a moderate invasiveness rating were observed on site in 2020. These include species that have naturalized in California grasslands and wetlands and include moderately ranked species of Italian ryegrass, wild oat, and foxtail barley. It is recommended that these species not be targeted for control or removal because the associated ground disturbance may be substantial and negatively affect wetland habitat functions/performance standards.

The April site visit wherein transect data was collected and a visual estimate of invasive plant cover was conducted was suitable for documenting the pre-treatment infestations of several species prior to Year 1 invasive removal activities; however, the surveys were too early in the growing season to adequately capture the extent of yellow star thistle and goat grass. It is recommended that the pre-treatment transect data be footnoted as to this limitation. It is recommended that visual estimates of pre-treatment plant cover be conducted several times during the growing season (April – July) to adequately capture invasive plant cover. Invasive plant species control should continue in 2021 as per the scope of services.

Several reasons likely exist for the increase in density and area of coverage for the targeted invasive plant species. Prior to the beginning of construction, most targeted plant species would have created and released their seed into the existing seed bank. Although some reasonable effort was made to control the spread of invasive plant seed bank during construction by the contractor, this existing seed bank would have been carried unintentionally into previously uninfected areas. Additionally, most of the targeted plant species have airborne seed and/or seed viability of 3-6 years. Finally, these plant species are highly competitive and are disturbance oriented. As the entire project area was subject to a significant level of disturbance, it was expected that there would be some level of increase in area of coverage and density, the first year of treatment.

### **C.7.3.5 Water for Cattle**

Water was not available year-round for cattle from CR1 and CR4. However, berm reconstruction increases the opportunity for the ponds to provide water when compared to pre-construction conditions.

## **C.8 Conclusions and Adaptive Management Activities Proposed**

Given the below average rainfall year, monitoring results from Year 1 at CR1 and CR4 are inconclusive for ensuring the performance standard of 0.5 ft of standing water through September 30; and without adequate ponded water, amphibian breeding was not feasible. However, 2019-2020 was a below average rainfall year so the performance standard for target hydrologic regime and the presence of amphibian breeding in at least one monitoring year was not applicable in Year 1.

Year 1 monitoring shows positive trends in wetland plant cover meeting the standard for at least 3 wetland species at each pond and greater than 40% cover through natural colonization, since active wetland planting has not yet occurred. However, as most of the wetland species are non-native, active revegetation is recommended.

Invasive plant cover did not decrease, in general, post-construction due to disturbance and bare ground. However, this will be reduced through active control and poses a minimal threat to wetland habitat establishment at the pond sites and will continued to be monitored.

It is recommended that ongoing management and maintenance activities continue in 2021 to increase the likelihood that the pond sites fulfill the project's objectives and achieve the project's performance standards. These activities should include native re-planting and invasive and nonnative plant species control and removal. Future monitoring surveys will be conducted to determine if the California red-legged frog and/or California tiger salamander is present and successfully breeding during at least one of the first five monitoring years. No adaptive management activities are proposed at this time.

## Section D. Photodocumentation

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**Photo 1. Establishment of Photo Monitoring Point CR1\_PPT1 (August 12, 2019)**



**Photo 2. Establishment of Photo Monitoring Point CR1\_PPT2\_1 (August 12, 2019)**



**Photo 3. Establishment of Photo Monitoring Point CR1\_PPT2\_2 (August 12, 2019)**



**Photo 4. Establishment of Photo Monitoring Point CR1\_PPT2\_3 (August 12, 2019)**



**Photo 5. Establishment of Photo Monitoring Point CR1\_PPT3\_1 (August 12, 2019)**



**Photo 6. Establishment of Photo Monitoring Point CR1\_PPT3\_2 (August 12, 2019)**



**Photo 7. Establishment of Photo Monitoring Point CR1\_PPT3\_3 (August 12, 2019)**



**Photo 8. Establishment of Photo Monitoring Point CR4\_PPT1 (August 12, 2019)**



**Photo 8. Establishment of Photo Monitoring Point CR4\_PPT2 (August 12, 2019)**



**Photo 10. Post-Construction Photo Monitoring Point CR1\_PPT1 (November 14, 2019)**



**Photo 11. Post-Construction Photo Monitoring Point CR1\_PPT2\_1 (November 14, 2019)**



**Photo 12. Post-Construction Photo Monitoring Point CR1\_PPT2\_2 (November 14, 2019)**



**Photo 13. Post-Construction Photo Monitoring Point CR1\_PPT2\_3 (November 14, 2019)**



**Photo 14. Post-Construction Photo Monitoring Point CR1\_PPT3\_1 (November 14, 2019)**



**Photo 15. Post-Construction Photo Monitoring Point CR1\_PPT3\_2 (November 14, 2019)**



**Photo 16. Post-Construction Photo Monitoring Point CR1\_PPT3\_3 (November 14, 2019)**



**Photo 17. Post-Construction Photo Monitoring Point CR4\_PPT1 (November 14, 2019)**



**Photo 18. Post-Construction Photo Monitoring Point CR4\_PPT2 (November 14, 2019)**



**Photo 19. Year 1 Conditions at Photo Monitoring Point CR1\_PPT1 (January 28, 2020)**



**Photo 20. Year 1 Conditions at Photo Monitoring Point CR1\_PPT2\_1 (January 28, 2020)**



**Photo 21. Year 1 Conditions at Photo Monitoring Point CR1\_PPT2\_2 (January 28, 2020)**



**Photo 22. Year 1 Conditions at Photo Monitoring Point CR1\_PPT2\_3 (January 28, 2020)**



**Photo 23. Year 1 Conditions at Photo Monitoring Point CR1\_PPT3\_1 (January 28, 2020)**



**Photo 24. Year 1 Conditions at Photo Monitoring Point CR1\_PPT3\_2 (January 28, 2020)**



**Photo 25. Year 1 Conditions at Photo Monitoring Point CR1\_PPT3\_3 (January 28, 2020)**



**Photo 26. Year 1 Conditions at Photo Monitoring Point CR4\_PPT1 (January 28, 2020)**



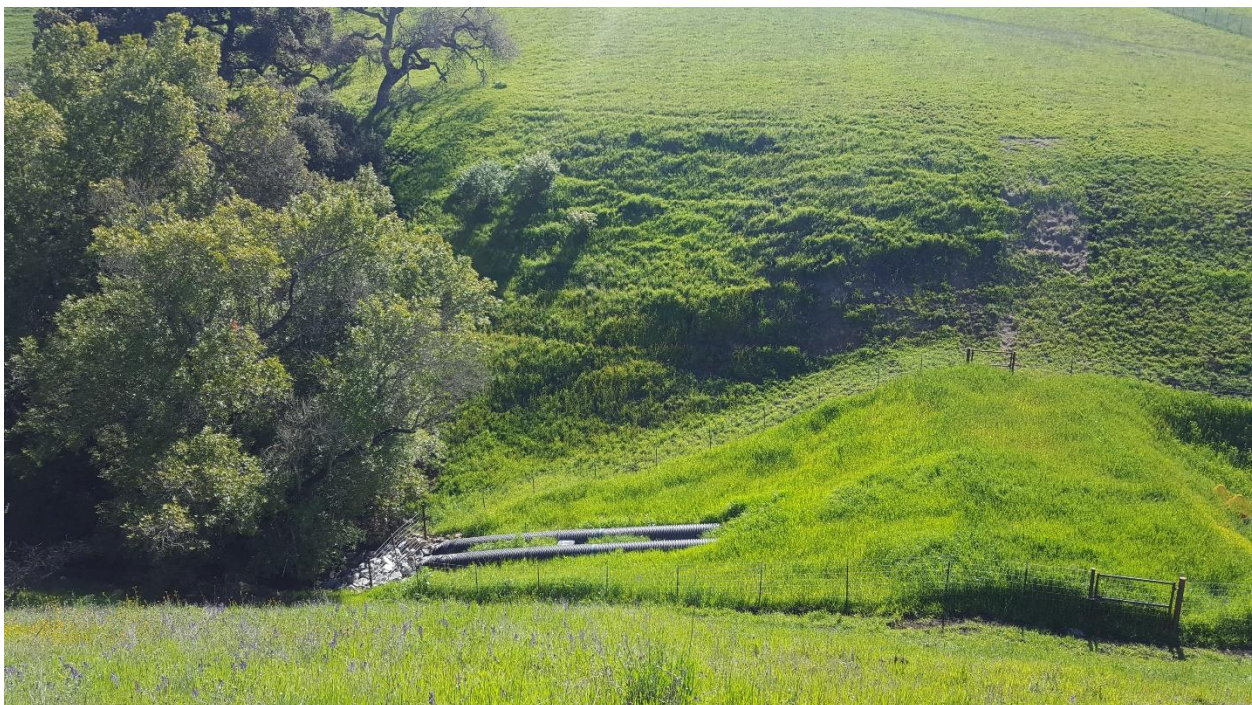
**Photo 27. Year 1 Conditions at Photo Monitoring Point CR4\_PPT2 (January 28, 2020)**



**Photo 28. Year 1 Conditions at Photo Monitoring Point CR1\_PPT1(April 2, 2020)**



**Photo 29. Year 1 Conditions at Photo Monitoring Point CR1\_PPT2\_1 (April 2, 2020)**



**Photo 30. Year 1 Conditions at Photo Monitoring Point CR1\_PPT2\_2 (April 2, 2020)**



**Photo 31. Year 1 Conditions at Photo Monitoring Point CR1\_PPT2\_3 (April 2, 2020)**



**Photo 32. Year 1 Conditions at Photo Monitoring Point CR1\_PPT3\_1 (April 2, 2020)**



**Photo 33. Year 1 Conditions at Photo Monitoring Point CR1\_PPT3\_2 (April 2, 2020)**



**Photo 34. Year 1 Conditions at Photo Monitoring Point CR1\_PPT3\_3 (April 2, 2020)**



**Photo 35. Year 1 Conditions at Photo Monitoring Point CR4\_PPT1 (April 2, 2020)**



**Photo 36. Year 1 Conditions at Photo Monitoring Point CR4\_PPT2 (April 2, 2020)**



**Photo 37. Year 1 Conditions at Photo Monitoring Point CR1\_PPT1 (August 5, 2020)**



**Photo 38. Year 1 Conditions at Photo Monitoring Point CR1\_PPT2\_1 (August 5, 2020)**



**Photo 39. Year 1 Conditions at Photo Monitoring Point CR1\_PPT2\_2 (August 5, 2020)**



**Photo 40. Year 1 Conditions at Photo Monitoring Point CR1\_PPT2\_3 (August 5, 2020)**



**Photo 41. Year 1 Conditions at Photo Monitoring Point CR1\_PPT3\_1 (August 5, 2020)**



**Photo 42. Year 1 Conditions at Photo Monitoring Point CR1\_PPT3\_2 (August 5, 2020)**



**Photo 43. Year 1 Conditions at Photo Monitoring Point CR1\_PPT3\_3 (August 5, 2020)**



**Photo 44. Year 1 Conditions at Photo Monitoring Point CR4\_PPT1 (August 5, 2020)**



**Photo 45. Year 1 Conditions at Photo Monitoring Point CR4\_PPT2 (August 5, 2020)**



**Photo 46. Year 1 Conditions at Photo Monitoring Point CR1\_PPT1 (October 23, 2020)**



**Photo 47. Year 1 Conditions at Photo Monitoring Point CR1\_PPT2\_1 (October 23, 2020)**



**Photo 48. Year 1 Conditions at Photo Monitoring Point CR1\_PPT2\_2 (October 23, 2020)**



**Photo 49. Year 1 Conditions at Photo Monitoring Point CR1\_PPT2\_3 (October 23, 2020)**



**Photo 50. Year 1 Conditions at Photo Monitoring Point CR1\_PPT3\_1 (October 23, 2020)**



**Photo 50. Year 1 Conditions at Photo Monitoring Point CR1\_PPT3\_1 (October 23, 2020)**



**Photo 51. Year 1 Conditions at Photo Monitoring Point CR1\_PPT3\_2 (October 23, 2020)**



**Photo 52. Year 1 Conditions at Photo Monitoring Point CR1\_PPT3\_2 (October 23, 2020)**



**Photo 53. Year 1 Conditions at Photo Monitoring Point CR4\_PPT1 (October 23, 2020)**



**Photo 54. Year 1 Conditions at Photo Monitoring Point CR4\_PPT2 (October 23, 2020)**

## Hydrologic Regime Monitoring

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**Photo 55. Completely Dry Pond Bed at CR1 (January 28, 2020)**



**Photo 56. Completely Dry Pond Bed at CR1 (February 17, 2020)**



**Photo 57. Completely Dry Pond Bed at CR1 (April 2, 2020)**



**Photo 58. Minimal ponding at CR4 (January 28, 2020)**



**Photo 59. Completely Dry Pond Bed at CR4 (February 17, 2020)**



**Photo 60. First documentation of ponded water at CR4 (April 2, 2020)**



**Photo 61. Completely Dry Pond Bed at CR4 (May 16, 2020)**

## Wetland Vegetation

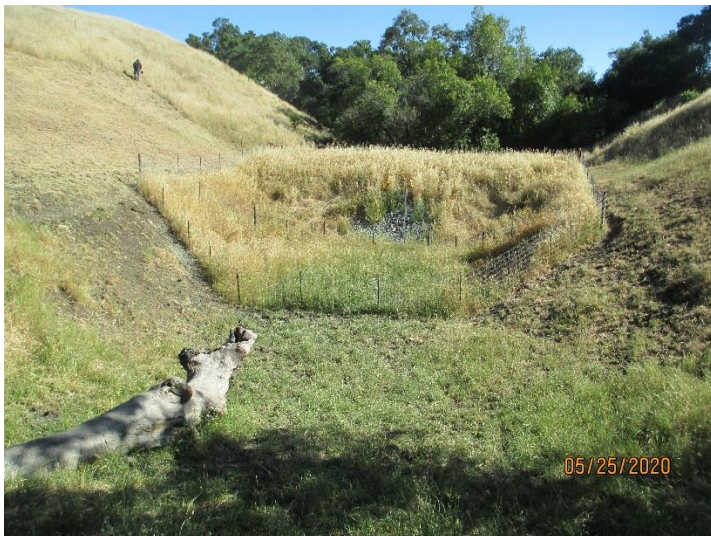
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CR-1, Wetland Transect within Cattle Enclosure, 2020



1m<sup>2</sup> Quadrat



CR-1, Wetland, 2020, Showing Grazed and Un-grazed Areas, May 2020



CR-4, Wetland Transect within Cattle Enclosure, 2020



1m<sup>2</sup> Quadrat



CR-4, Wetland Transect within Interior Fence, 2020



1m<sup>2</sup> Quadrat



CR-4 Wetland, Showing Grazed and Un-grazed Areas, May 2020

## Invasive Plant Cover Photo-Documentation

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CR-1, Transect T-1, June 2019 (Pre-Project)



CR-1, Transect T-1, April 2020 (Year 1)



CR-1, Transect T-2, June 2019 (Pre-Project)



CR-1, Transect T-2, April 2020 (Year 1)



CR-4, Transect T-1, June 2019 (Pre-Project)



CR-4, Transect T-1, April 2020 (Year 1)



CR-4, Transect T-2, June 2019 (Pre-Project)



CR-4, Transect T-2, April 2020 (Year 1)

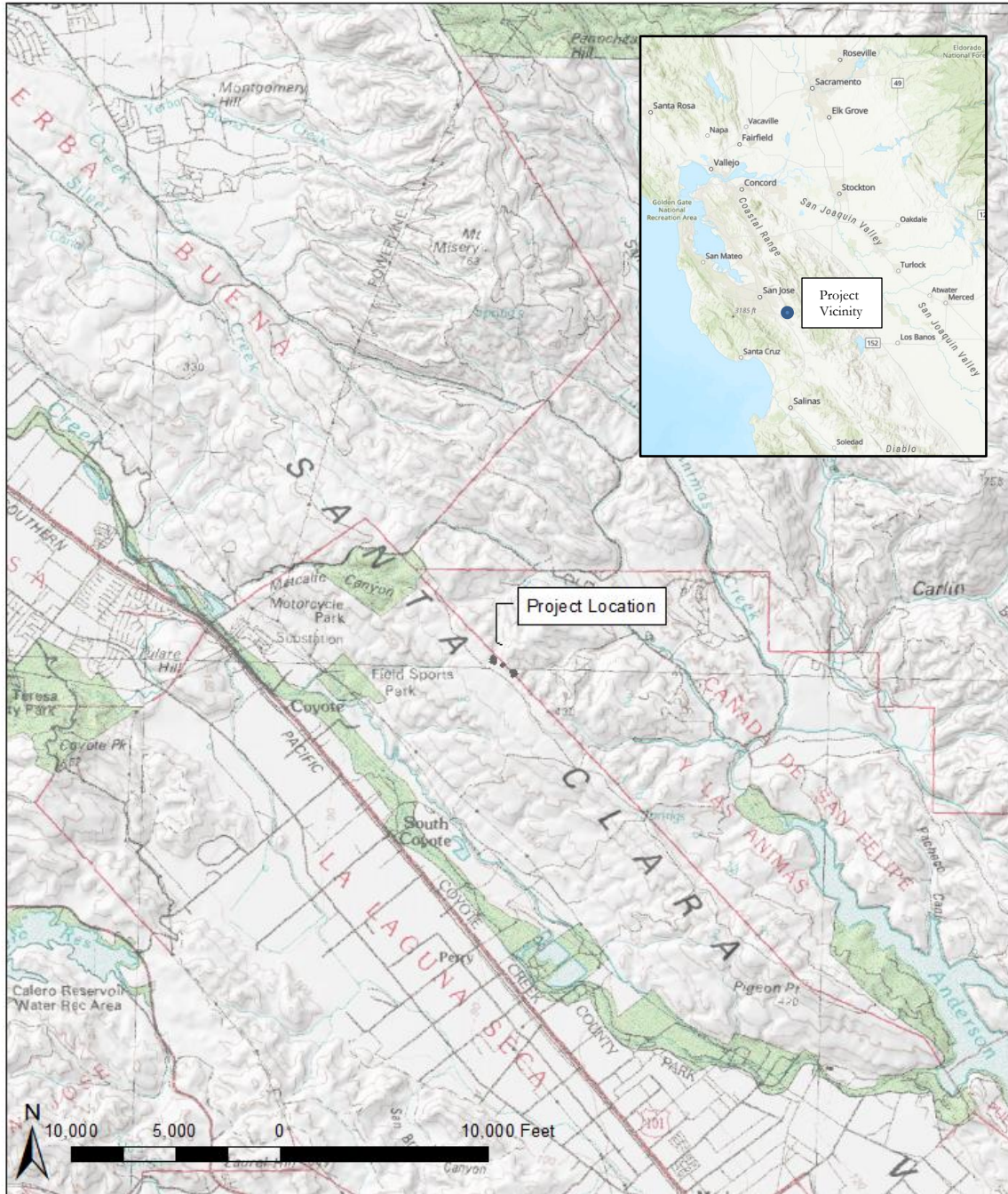


CR-4, Transect T-3, April 2020 (Year 1)

## Section E. Maps

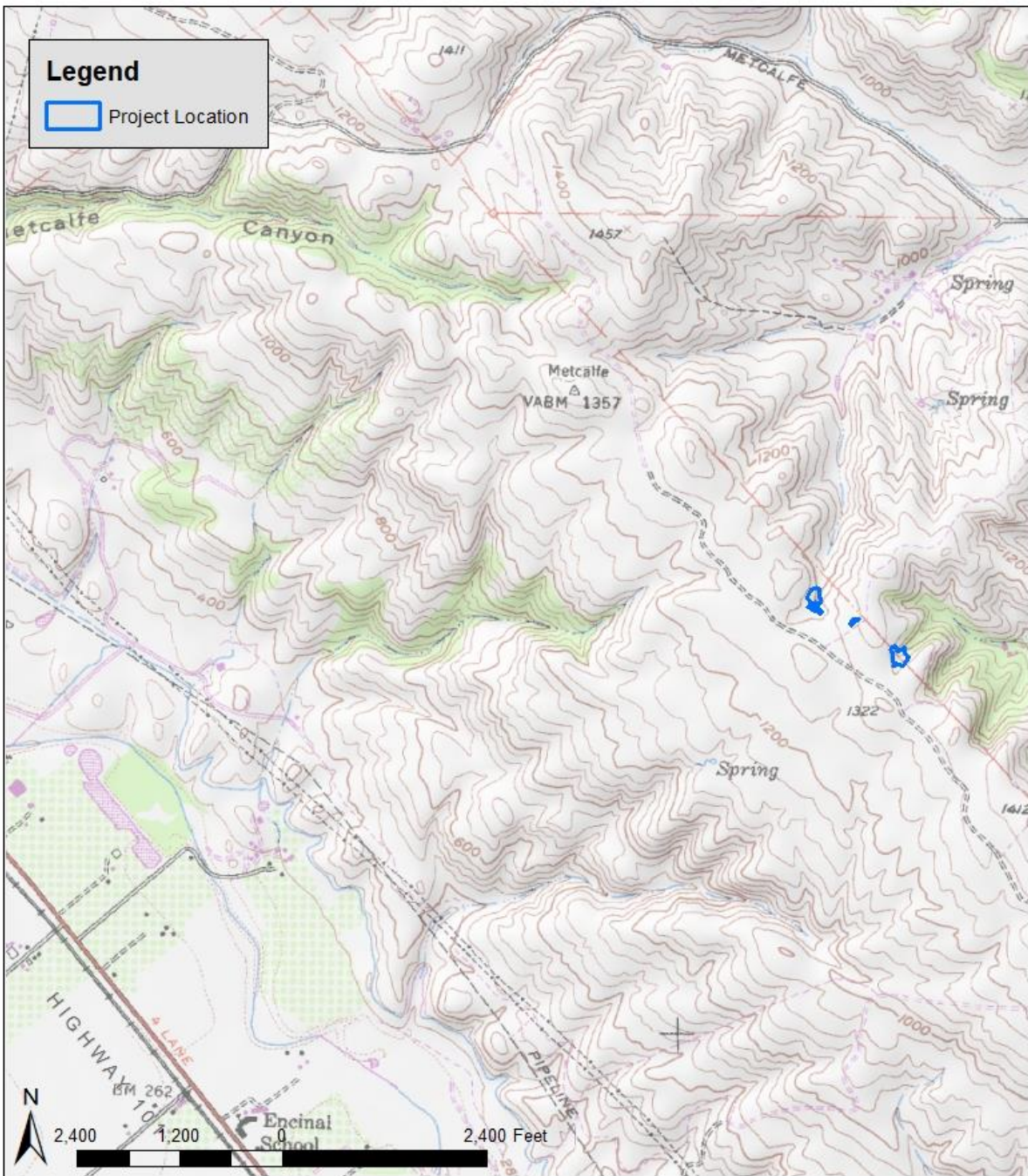
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Figures 1–4 are included below.



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**Figure 1. Coyote Ridge CR1 and CR4 Sites Vicinity Map**  
Coyote Ridge Ponds Restoration Project, Ponds CR1 and CR4  
Year 1 Monitoring Report  
November 2020



**Figure 2. Coyote Ridge CR1 and CR4 Sites USGS Topographical Map**  
 Coyote Ridge Ponds Restoration Project, Ponds CR1 and CR4 Year 1  
 Monitoring Report  
 November 2020





**Figure 3. Coyote Ridge CR1 Photo Monitoring Locations**  
 Coyote Ridge Ponds Restoration Project, Ponds CR1 and CR4 Year 1  
 Monitoring Report  
 November 2020





**Figure 3. Coyote Ridge CR4 Photo Monitoring Locations**  
 Coyote Ridge Ponds Restoration Project, Ponds CR1 and CR4 Year 1  
 Monitoring Report  
 November 2020

## Section F. References

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# Appendix A. Wetland Vegetation and Invasive Plant Cover Monitoring Results

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# Appendix A - Wetland Vegetation and Invasive Plants

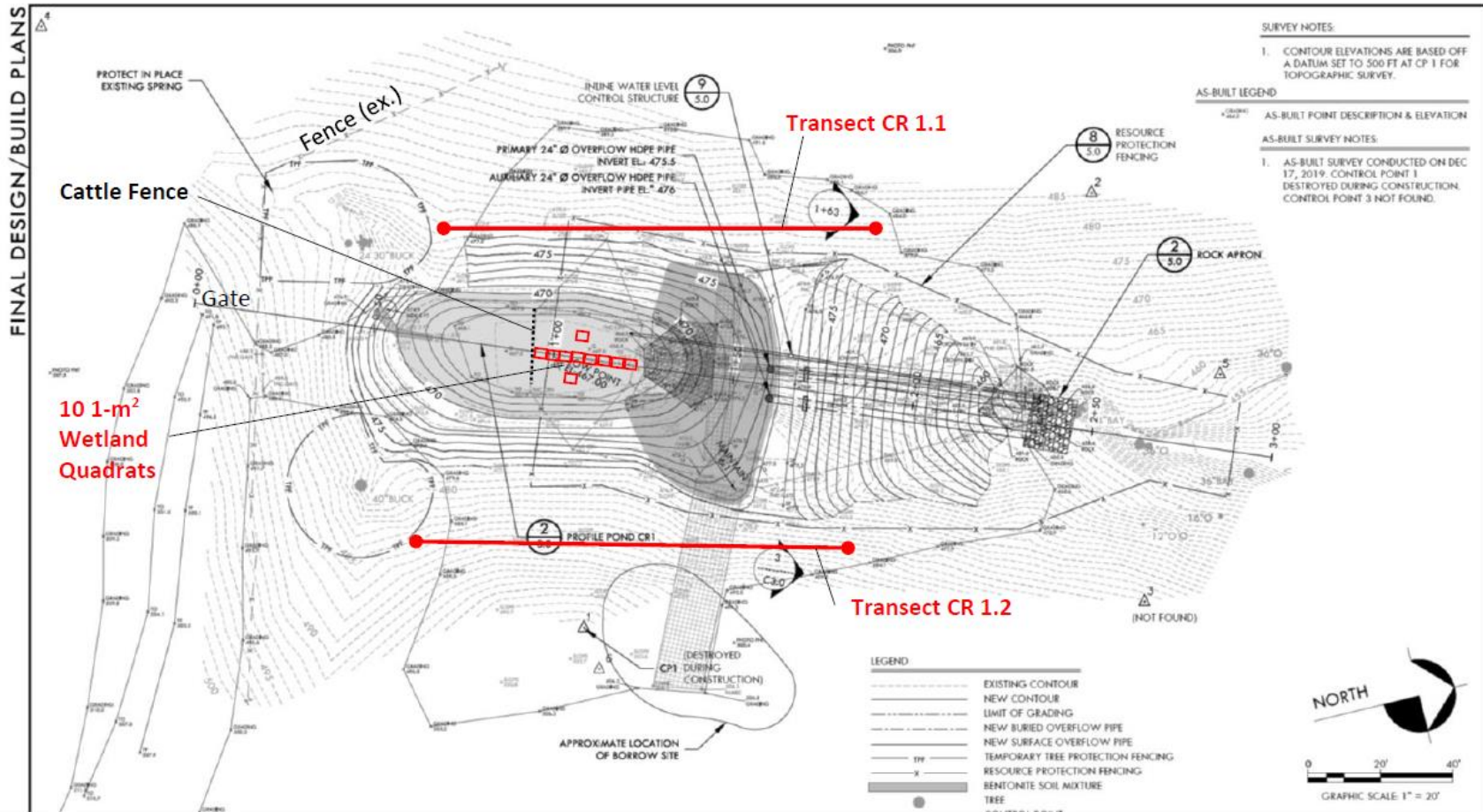


Figure A-1. Pond CR1 – Wetland and Invasive Plant Monitoring Transects

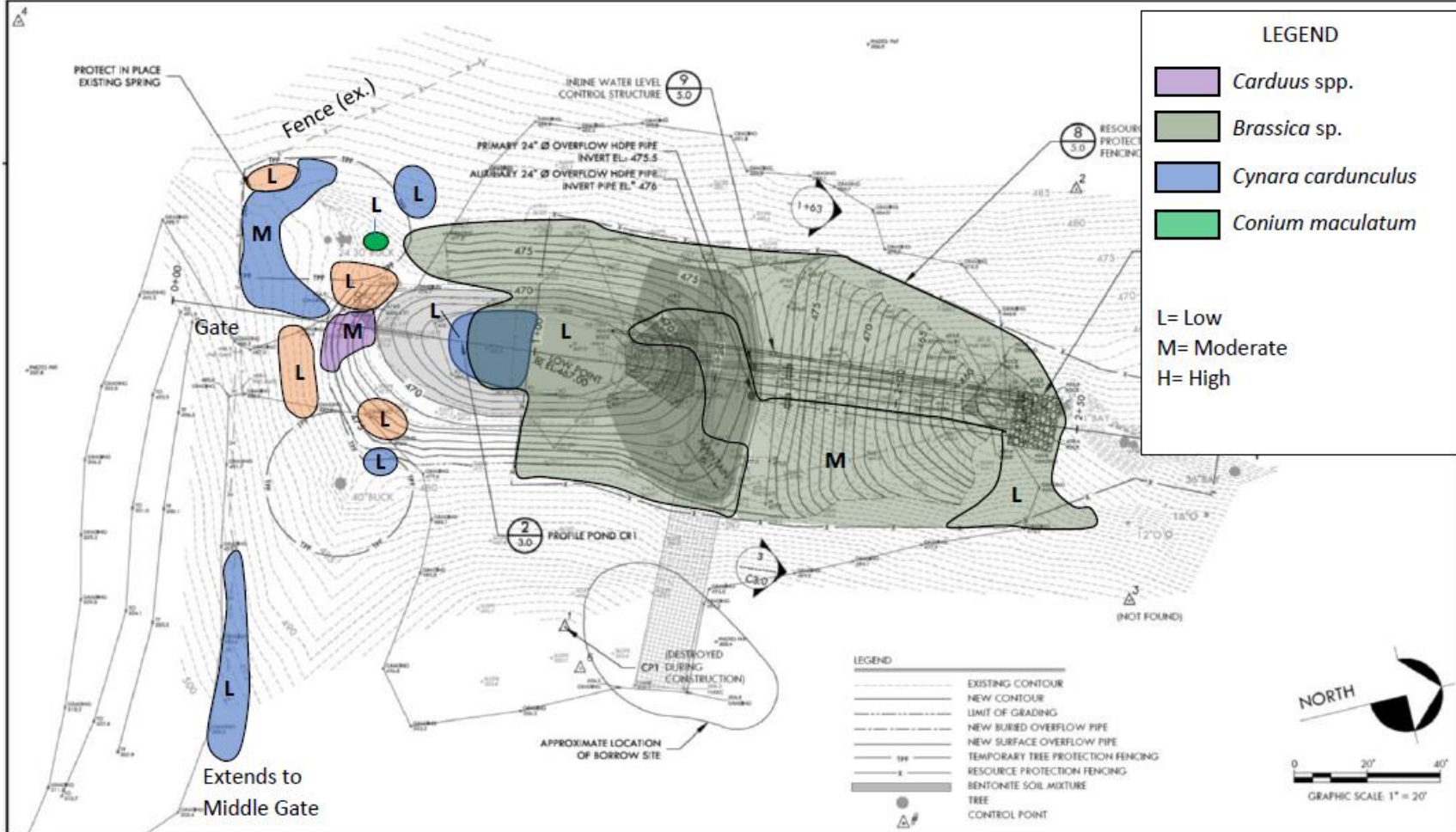


Figure A-2. Pond CR1 – Distribution of Invasive Plant Species, 2020 (Sheet 1 of 2)





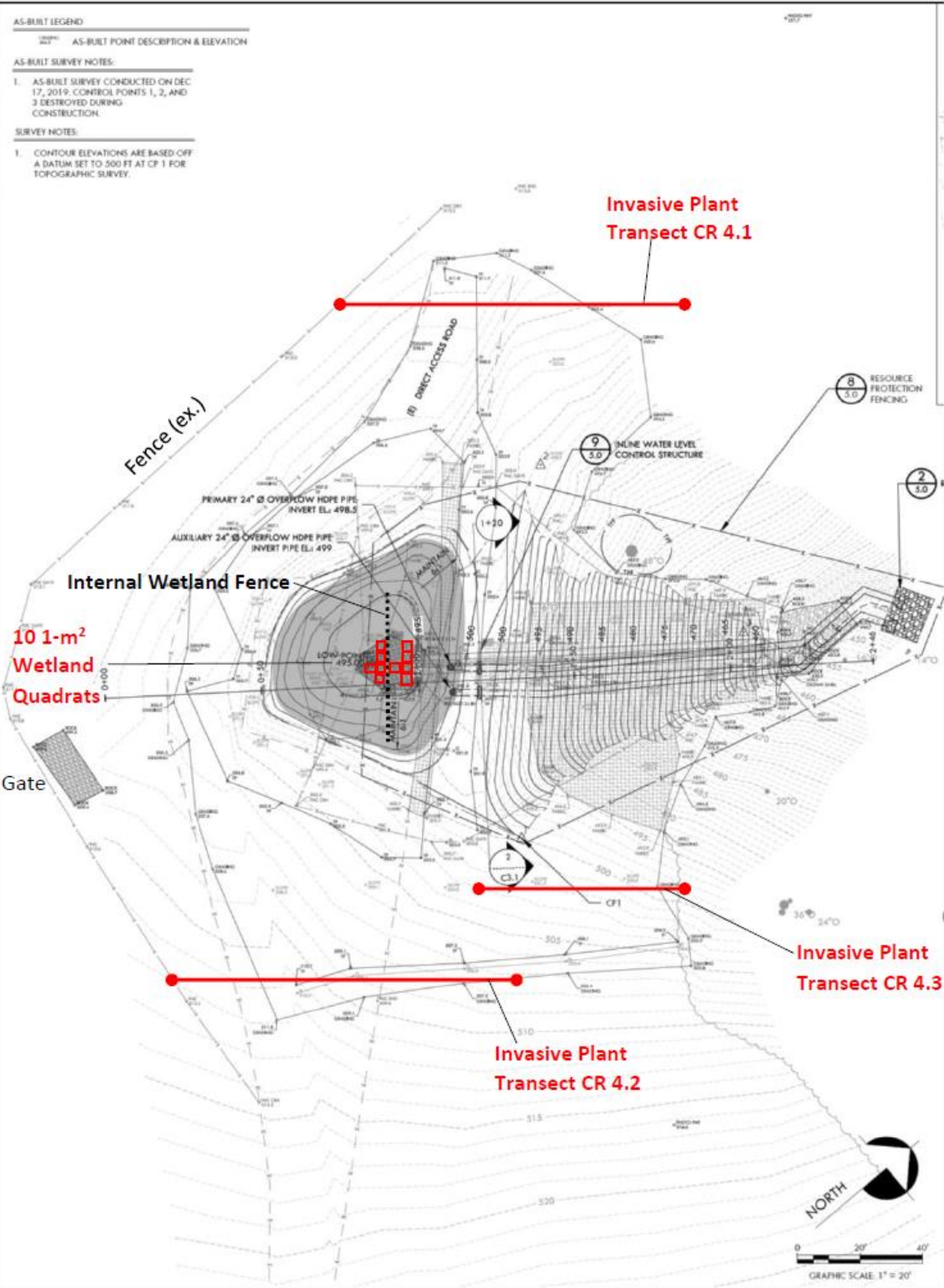


Figure A-5. Pond CR4 – Wetland and Invasive Plant Monitoring Transects

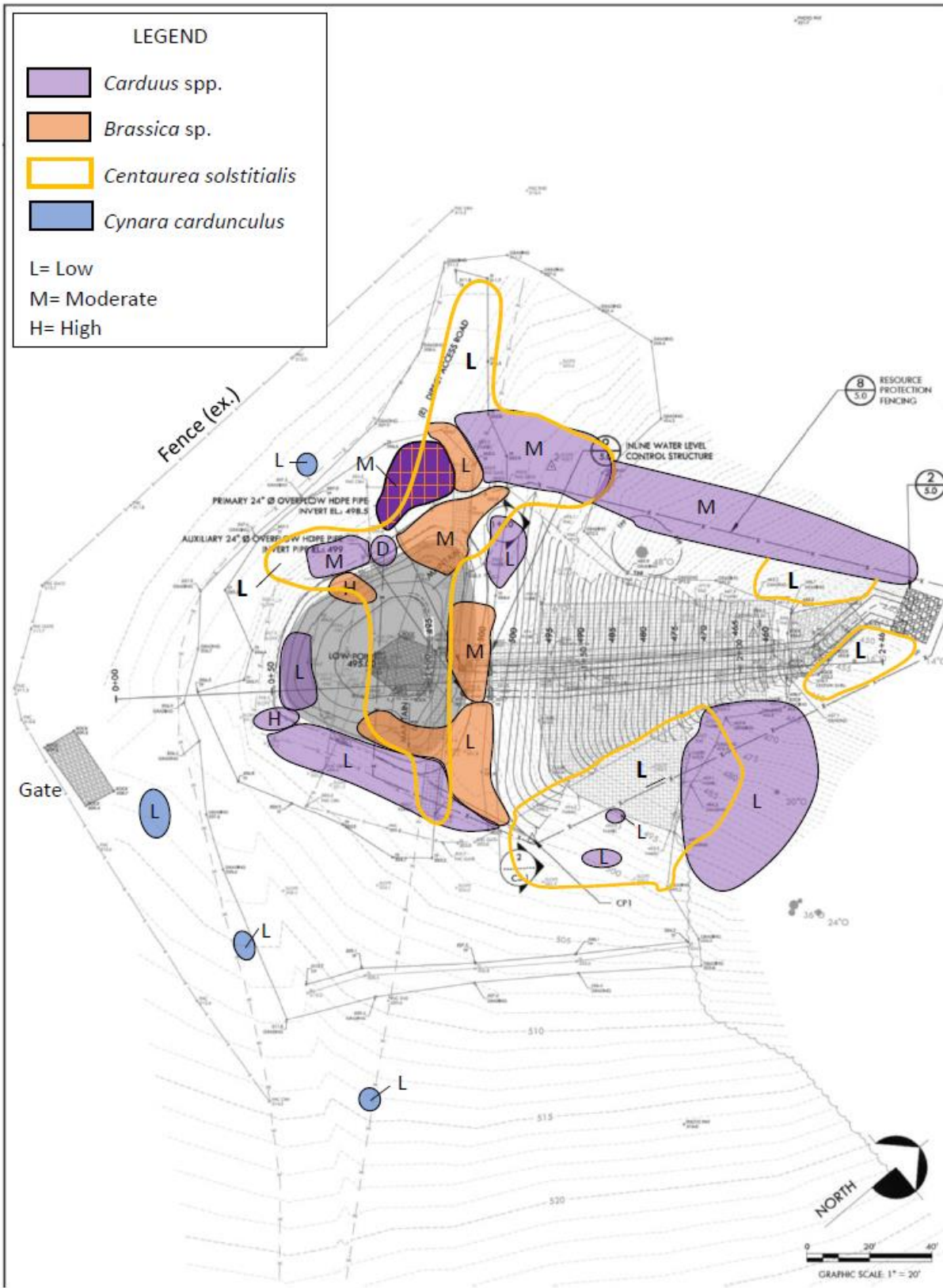


Figure A-6. Pond CR4 – Distribution of Invasive Plant Species, 2020

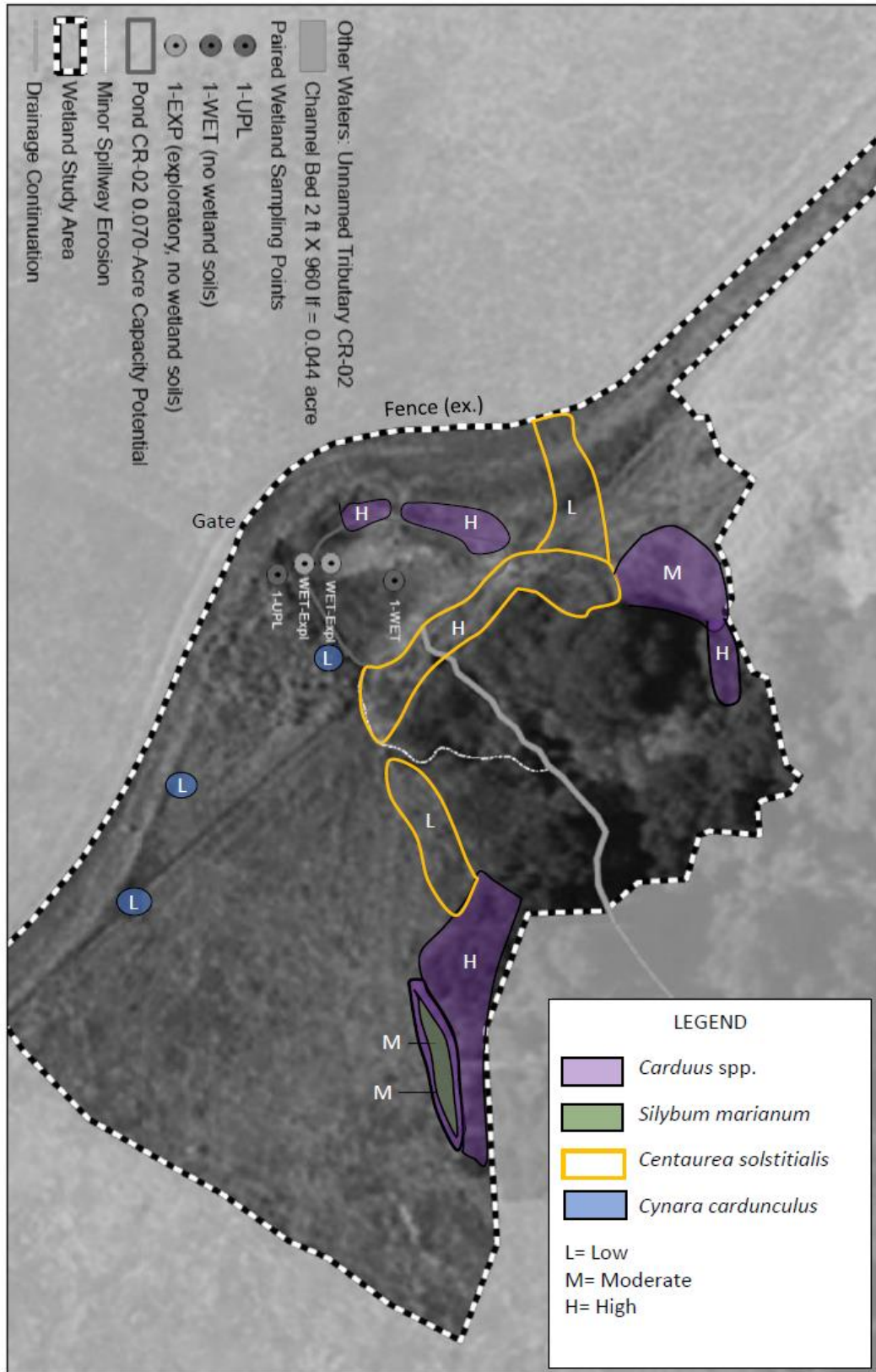


Figure A-7. Pond CR4 – Distribution of Invasive Plant Species, 2019 Baseline

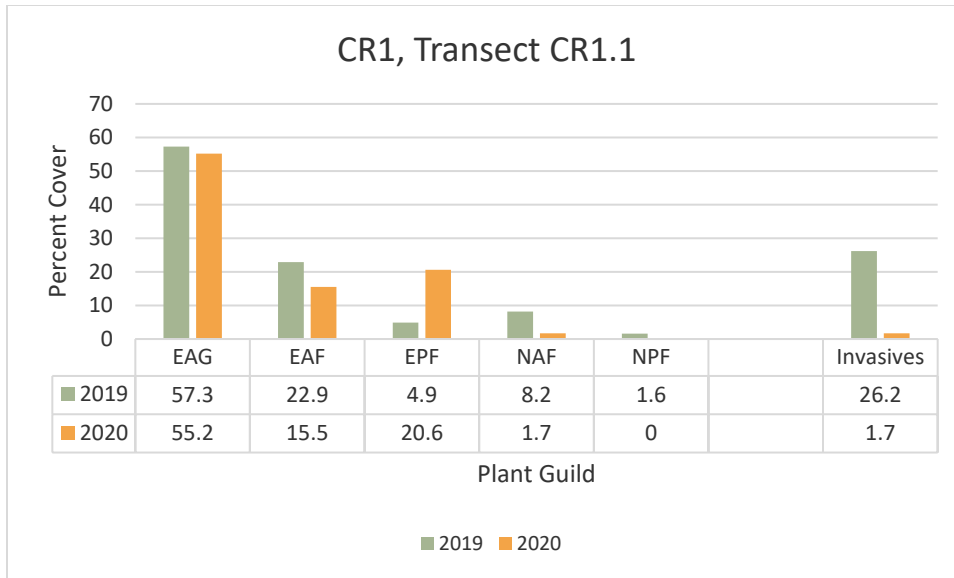
## Wetland Vegetation and Invasive Plant Cover Monitoring Results

**Table A-1. Plant Species Observed within Wetland Monitoring Sites**

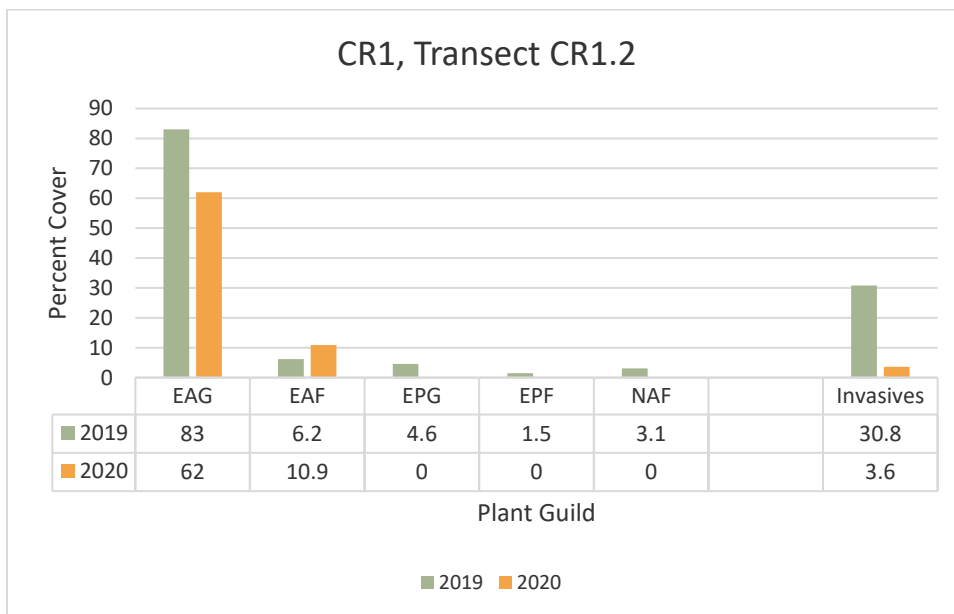
Scientific Name	Common Name	Plant Guild <sup>2</sup>	Wetland Indicator Status <sup>1</sup>	Average Percent Cover by Site	
				CR1	CR4
<i>Bromus hordeaceus</i>	Soft brome	EAG	FACU	2.9	-
<i>Festuca perennis</i>	Italian ryegrass	EAG	FAC	42.0	12.4
<i>Hordeum murinum</i>	foxtail barley	EAG	FACU	7.1	4.6
<i>Polypogon monspeliensis</i>	Rabbitsfoot grass	EAG	FACW	7.1	26.7
<i>Medicago polymorpha</i>	Bur Clover	EAF	FACU	3.1	-
<i>Polygonum aviculare</i>	Knotweed	EPF	FAC	5.0	-
<i>Vicia sativa</i>	Spring Vetch	EAF	FACU	2.0	-
<i>Avena sp.</i>	Wild oat	EAG	UPL	3.6	-
<i>Phalaris aquatica</i>	Canary Grass	EAG	FAC	0.7	-
<i>Xanthium strumarium</i>	Cocklebur	NAF	FAC	0.3	0.9
<i>Aegilops triuncialis</i>	Barbed Goat Grass	EAG	NI	1.3	-
Bare	-	-	-	16.0	54.0

<sup>1</sup> Wetland vegetation cover is defined as the combined cover of native and nonnative species with a wetland indicator status of facultative (FAC), facultative wetland (FACW), or obligate (OBL) based on the Arid West 2016 Regional Wetland Plant List (Lichvar et al. 2016). Species with a facultative upland (FACU), upland (UPL), or no indicator (NI) wetland indicator status are not considered wetland species.

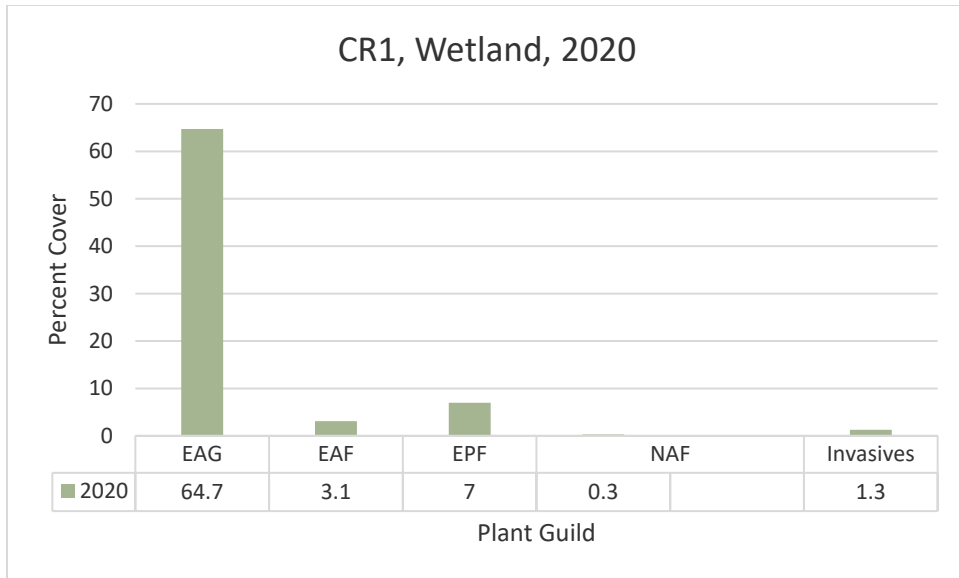
<sup>2</sup> Plant guilds are defined as: exotic annual grass (EAG), exotic annual forb (EAF), exotic perennial grass (EPG), exotic perennial forb (EPF), native annual grass (NAG), native annual forb (NAF), native perennial grass (NPG), and native perennial forb (NPF).



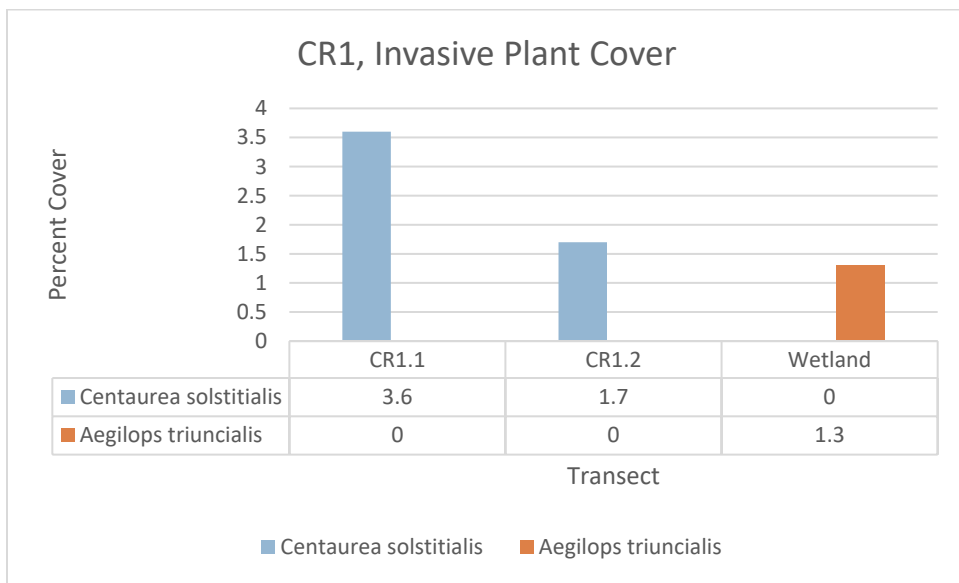
**Figure A-8. CR1, Transect CR1.1, Plant Cover, by Guild, 2019 (baseline) and 2020 (Year 1)**



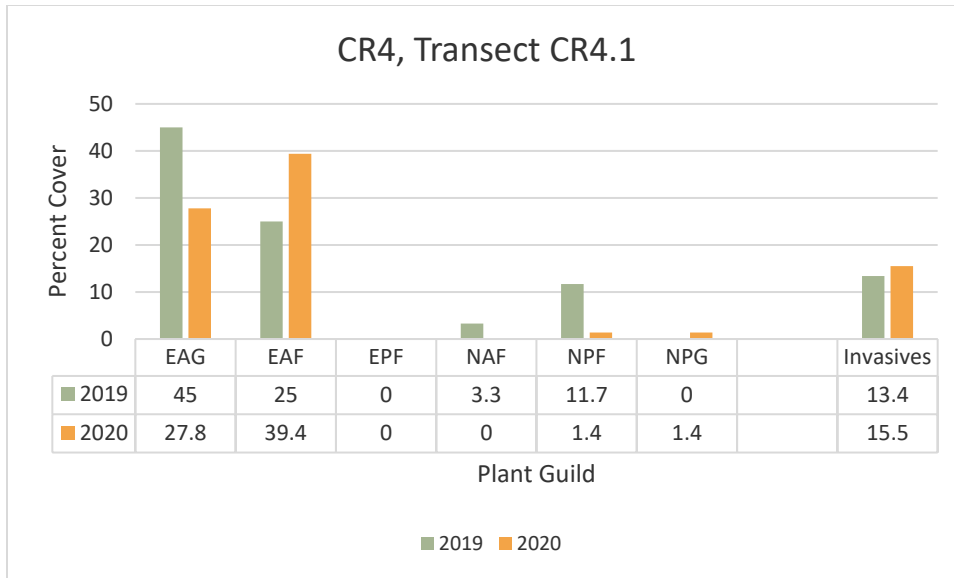
**Figure A-9. CR1, Transect CR1.2, Plant Cover, by Guild, 2019 (baseline) and 2020 (Year 1)**



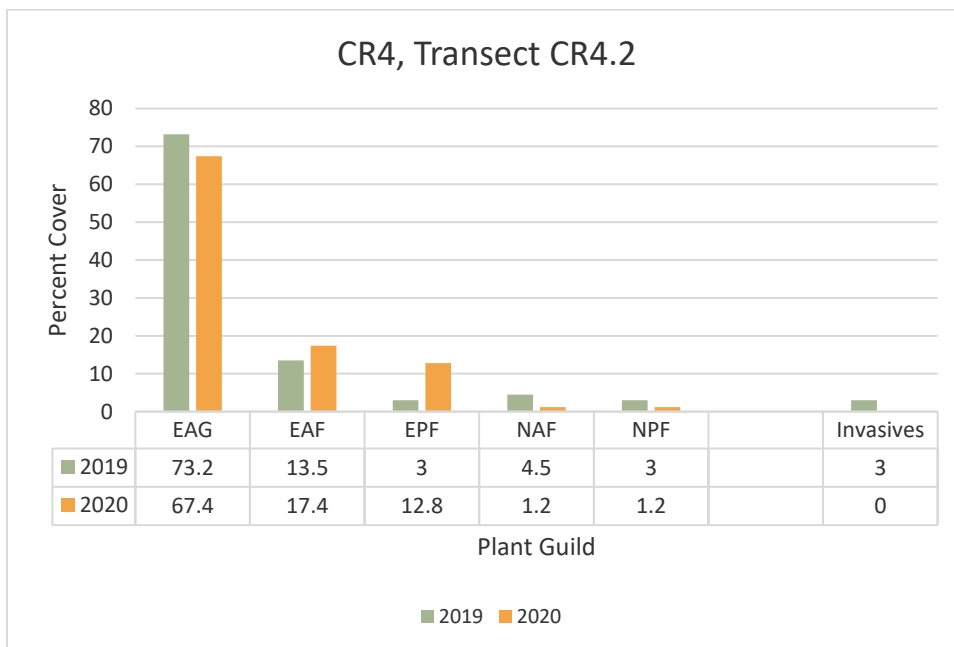
**Figure A-10. CR1, Wetland Quadrats, Plant Cover, by Guild, 2020 (Year 1)**



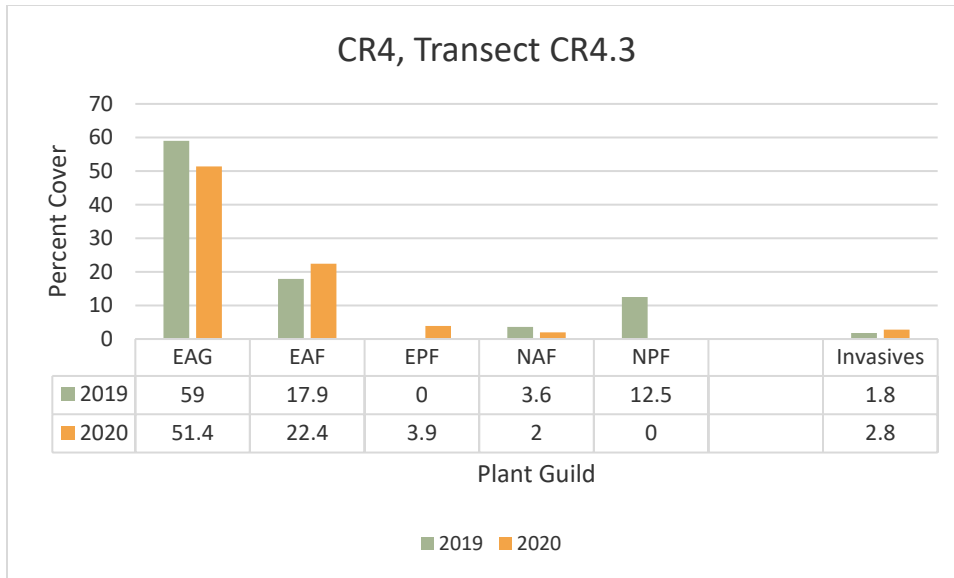
**Figure A-11. CR1 Transects, Invasive Plant Cover, by Species, 2020 (Year 1)**



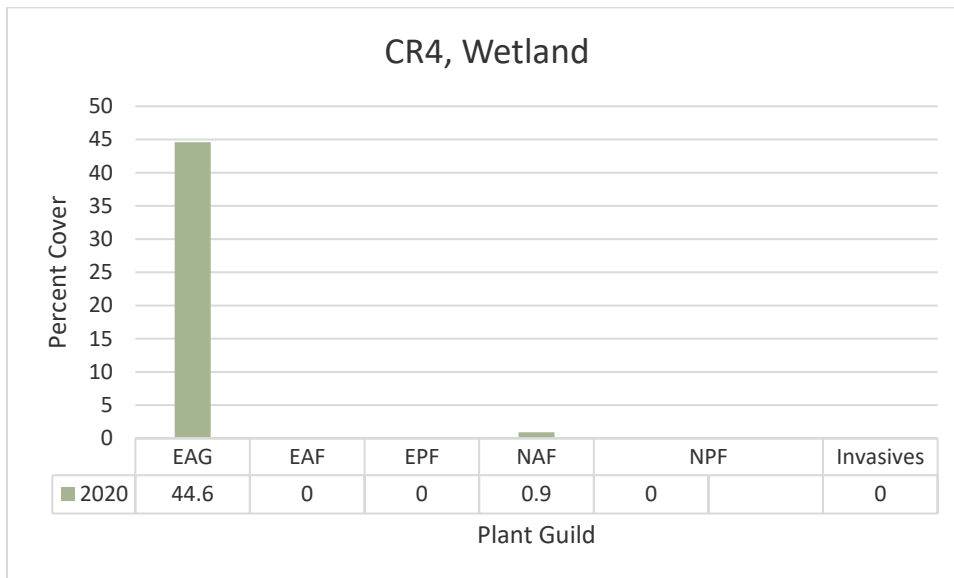
**Figure A-12. CR4, Transect CR4.1, Plant Cover, by Guild, 2019 (baseline) and 2020 (Year 1)**



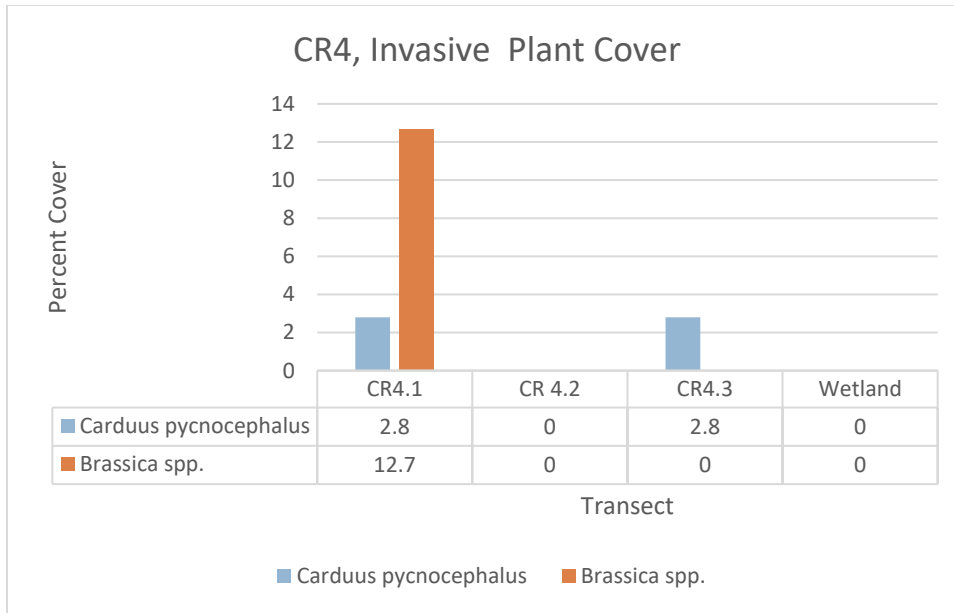
**Figure A-13. CR4, Transect CR4.2, Plant Cover, by Guild, 2019 (baseline) and 2020 (Year 1)**



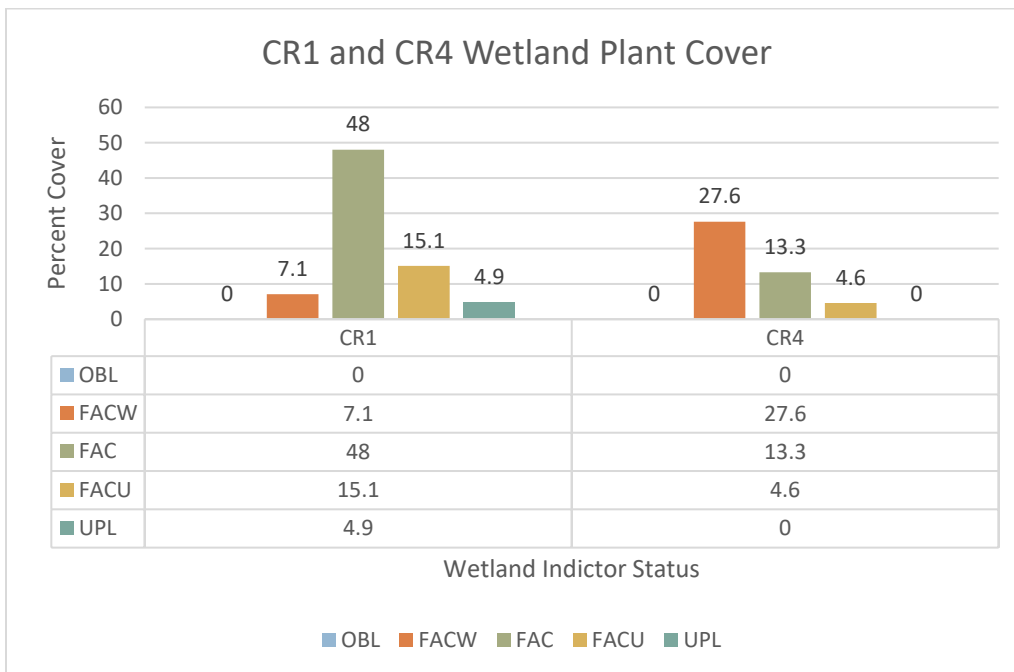
**Figure A-14. CR4, Transect CR4.3, Plant Cover, by Guild, 2019 (baseline) and 2020 (Year 1)**



**Figure A-15. CR4, Wetland Quadrats, Plant Cover, by Guild, 2020 (Year 1)**



**Figure A-16. CR4 Transects, Invasive Plant Cover, by Species, 2020 (Year 1)**



**Figure A-17. CR1 and CR4 Wetlands, Plant Cover by Wetland Indicator Status, 2020 (Year 1)**

## Appendix B. Year 1 Hydrologic Data

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**Table B-1. Staff Plate Readings**

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Date	Water Depth (in)	Water Depth (in)	Notes
	CR1	CR4	
1/28/2020 <sup>5</sup>	0	0	Water at CR4, but not to staff plate
2/18/2020	0	0	
4/2/2020	0	1.2	
4/29/2020	0	<0.5	
5/16/2020	0	0	

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<sup>5</sup> Staff plates were installed in CR1 and CR4 on January 27, 2020.

## Appendix C. Infrastructure Monitoring Reports and Data

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# Coyote Ridge Property Stock Pond Habitat Restoration

Prepared for Camara Environmental

By David Sands, Go Native, Inc.

Inspection date: April 28, 2020. 8:00 am

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Lupine on mound north of staging area

## Metcalf Road Entry gate to Staging Area

The main gate and the two cattle gates were intact and operational. The road survived the winter with no major issues. The grasses were green, thick and high in the fields and cattle were grazing everywhere. Wildflowers were blooming, mainly lupine and clover. No wild boars were observed. No deer, coyotes, or mountain lions were observed.

## CR01



- UTC fence and gates – fences intact, gates locked with UTC combo locks, one wild boar access under the fence observed between the two gates
- Perimeter pond exclusion fences and gates – fences and gates intact, no obvious incursion by the cattle. Grazing evident outside the perimeter fence.
- Overflow pipes and debris guards – intact
- Berm conditions and integrity – good vegetation growth, no evidence of erosion
- Side slopes in and outside the perimeter fence – good vegetation growth, no evidence of erosion
- Water level and staff gauge – staff gauge intact, no measurable water
- Restoration pond vegetation – no pond vegetation planted yet
- Restoration hydroseed vegetation – good hydroseed vegetation cover
- Observations, comments and recommendations – everything looked good, no problems except for the lack of sufficient rainfall. No recommendations.

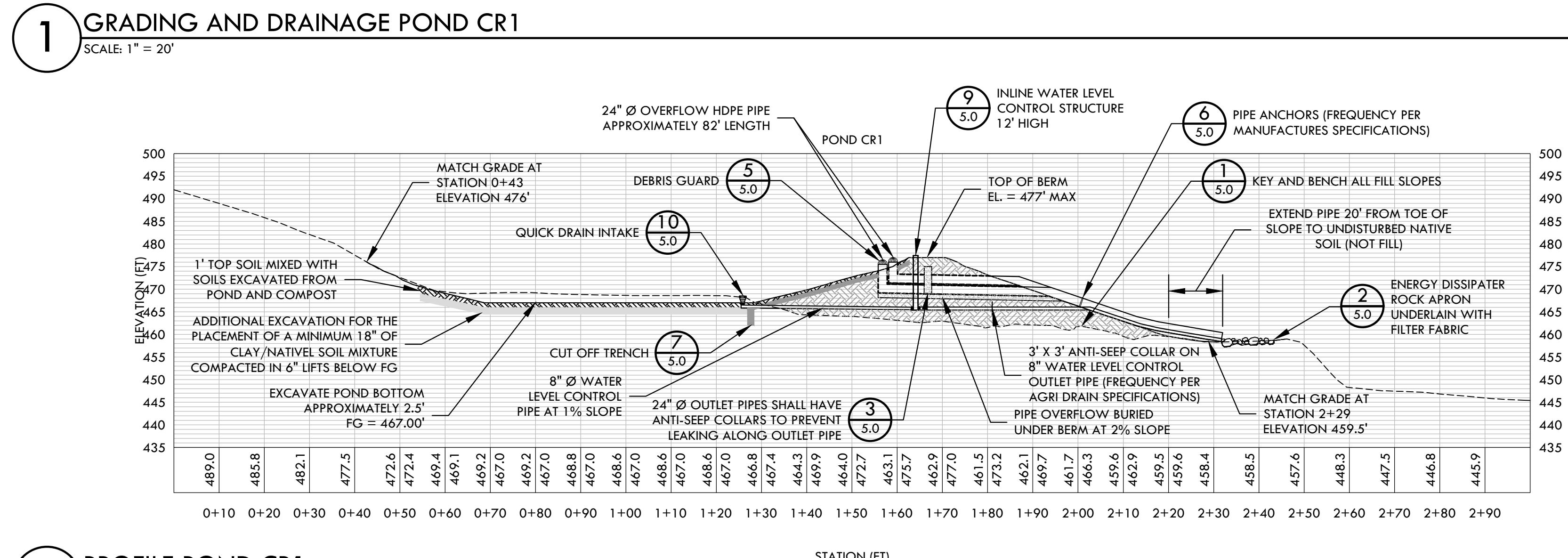
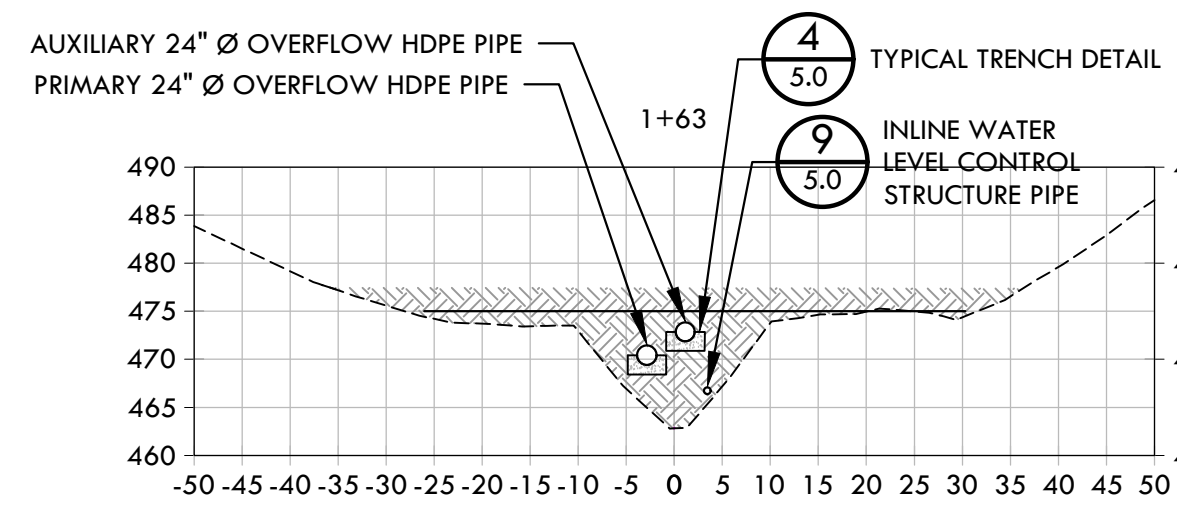
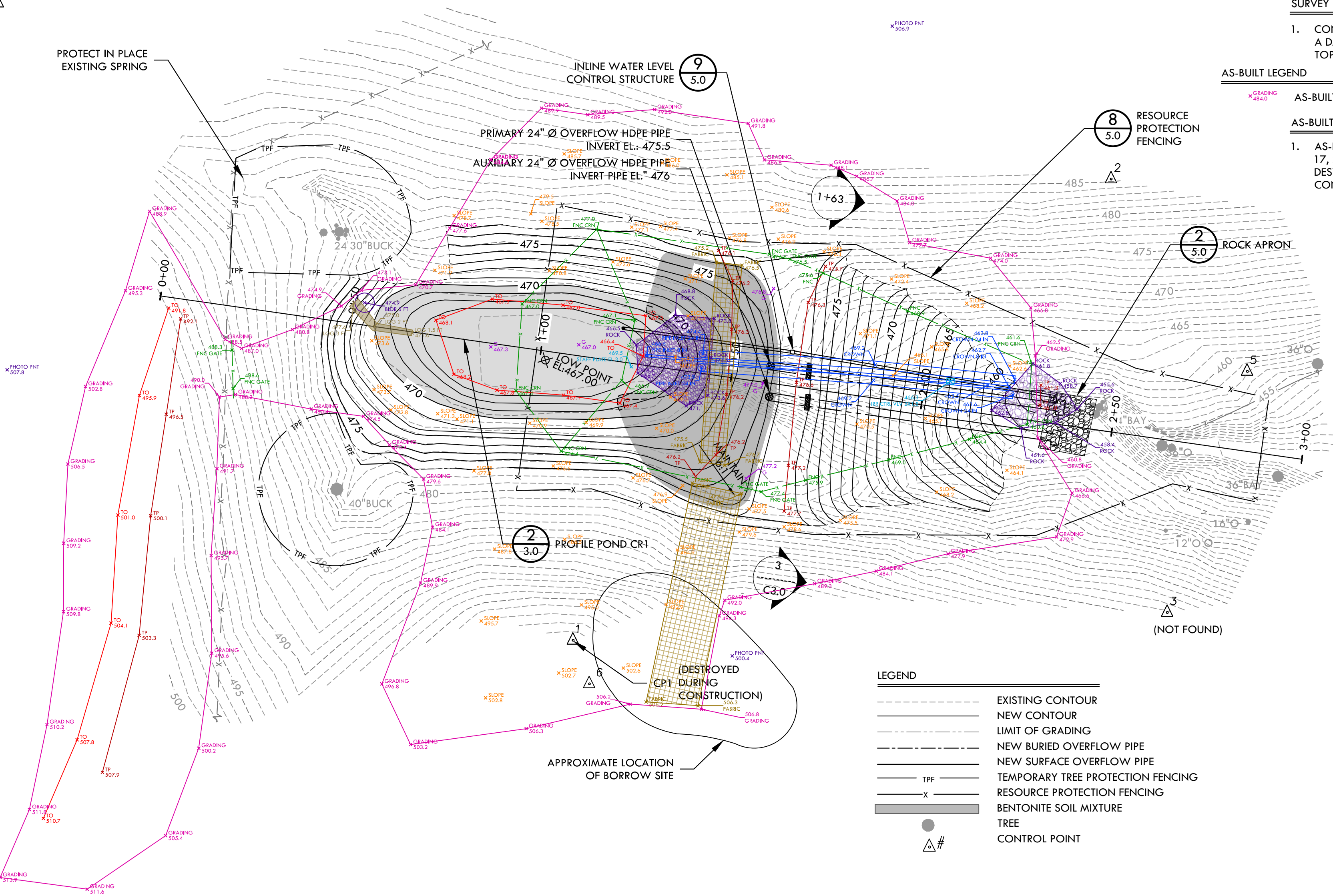
## CR04



- UTC fence and gates - fences intact, gates locked with UTC combo locks
- Perimeter pond exclusion fences and gates = perimeter fences intact, no obvious incursion by the cattle. Grazing evident outside the perimeter fence.
- Overflow pipes and debris guards - intact
- Berm conditions and integrity - good vegetation growth, no evidence of erosion
- Side slopes in and outside the perimeter fence - good vegetation growth, no evidence of erosion
- Water level and staff gauge - staff gauge intact, no measurable water
- Restoration pond vegetation - no pond vegetation planted yet
- Restoration hydroseed vegetation - good hydroseed vegetation cover
- Observations, comments and recommendations - everything looked good, no problems except for the lack of sufficient rainfall. No recommendations.

## Appendix D. As-Built Survey

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AS - BUILT

**SHEET TITLE:**  
GRADING AND DRAINAGE POND CR1  
POND LINING OPTION

**CLIENT:**  
SANTA CLARA VALLEY HABITAT AGENCY  
ATTN: EXECUTIVE OFFICER  
535 ALKIRE AVENUE, SUITE 100  
MORGAN HILL, CA 95037

**PROJECT TITLE:**  
COYOTE RIDGE PROPERTY  
HABITAT ENHANCEMENT AND STOCK POND RESTORATION  
METCALF ROAD  
MORGAN HILL, CA 95037

**FALL CREEK ENGINEERING, INC.**  
Consulting Engineers  
Civil/Environmental/Water Resources

1525 SEABRIGHT AVE.  
SANTA CRUZ, CA 95062  
TEL. (831) 426-9054

**DRAWN BY:** JCW  
**CHECKED BY:** RLC  
**DATE:** 2018  
**JOB NO.:** 21713  
**SCALE:** AS SHOWN  
**SHEET:** C3.0  
3 OF 9

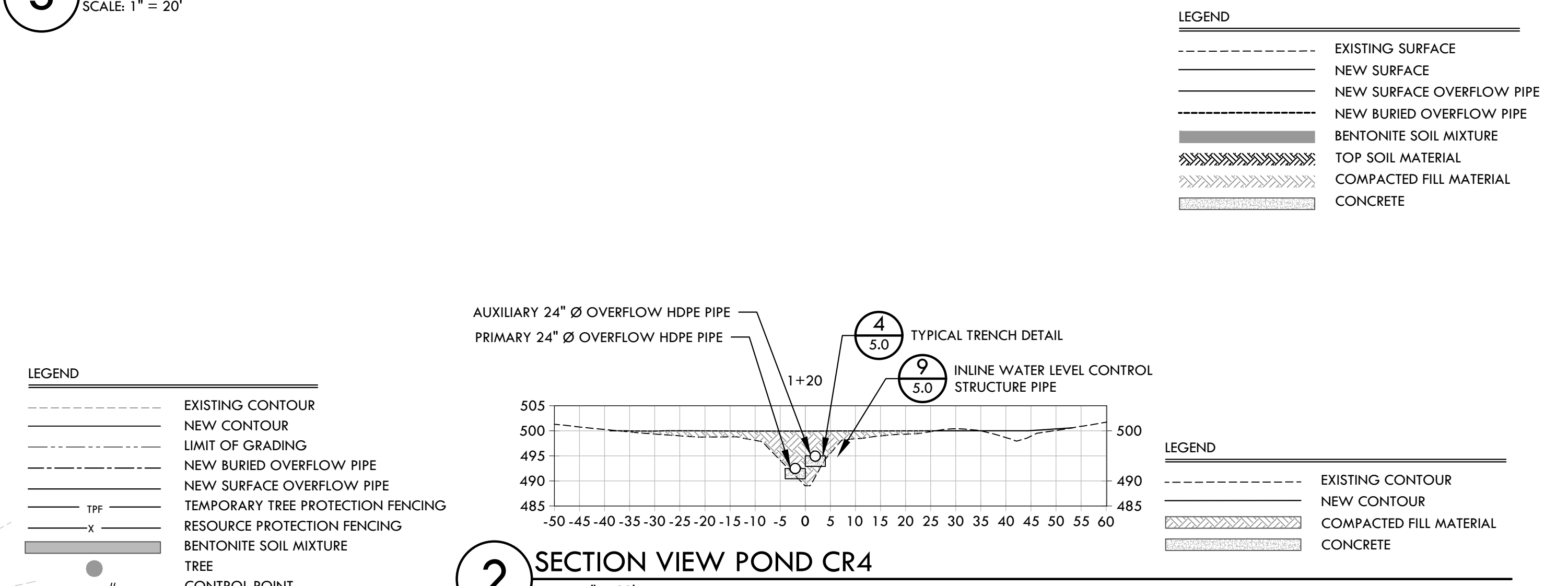
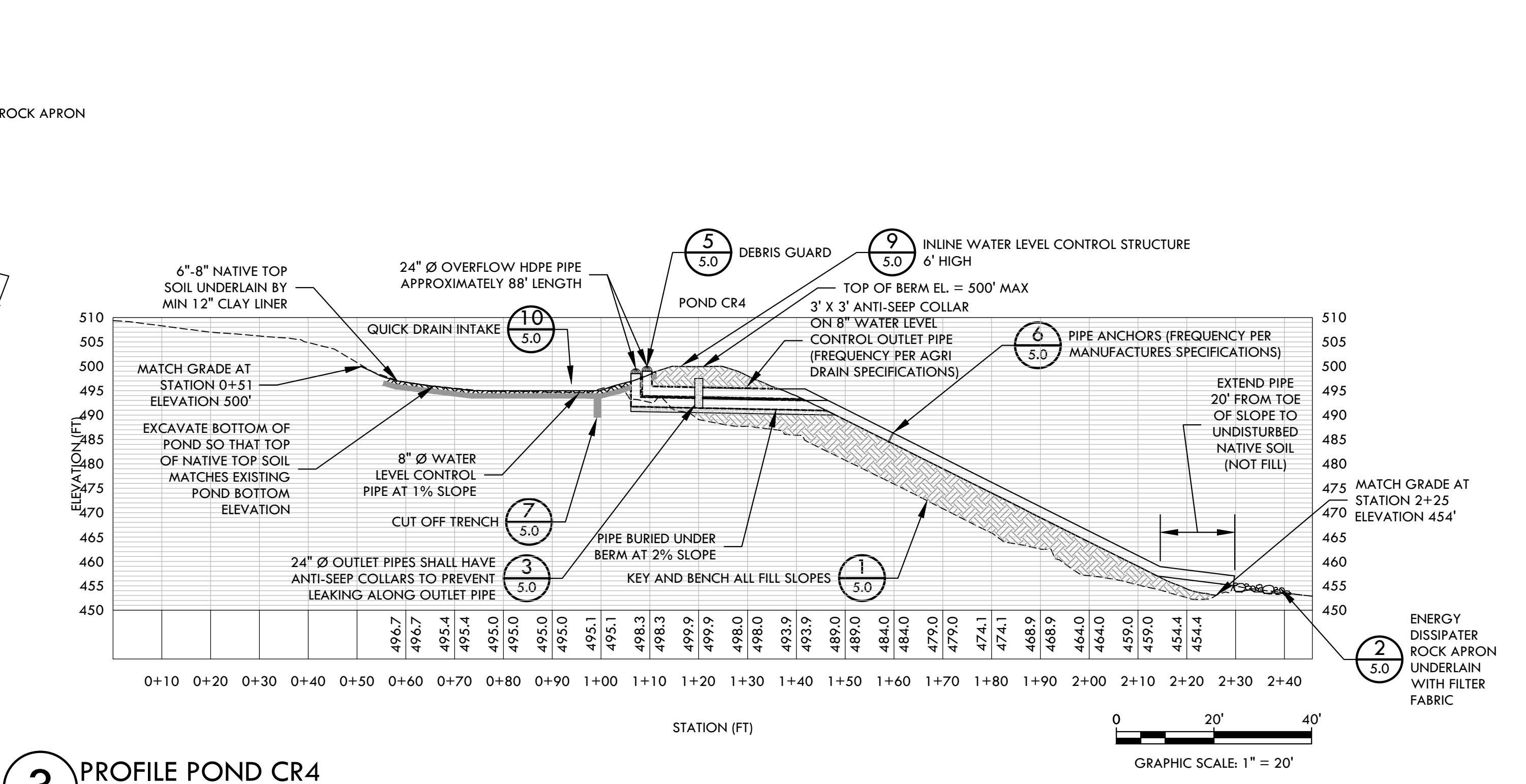
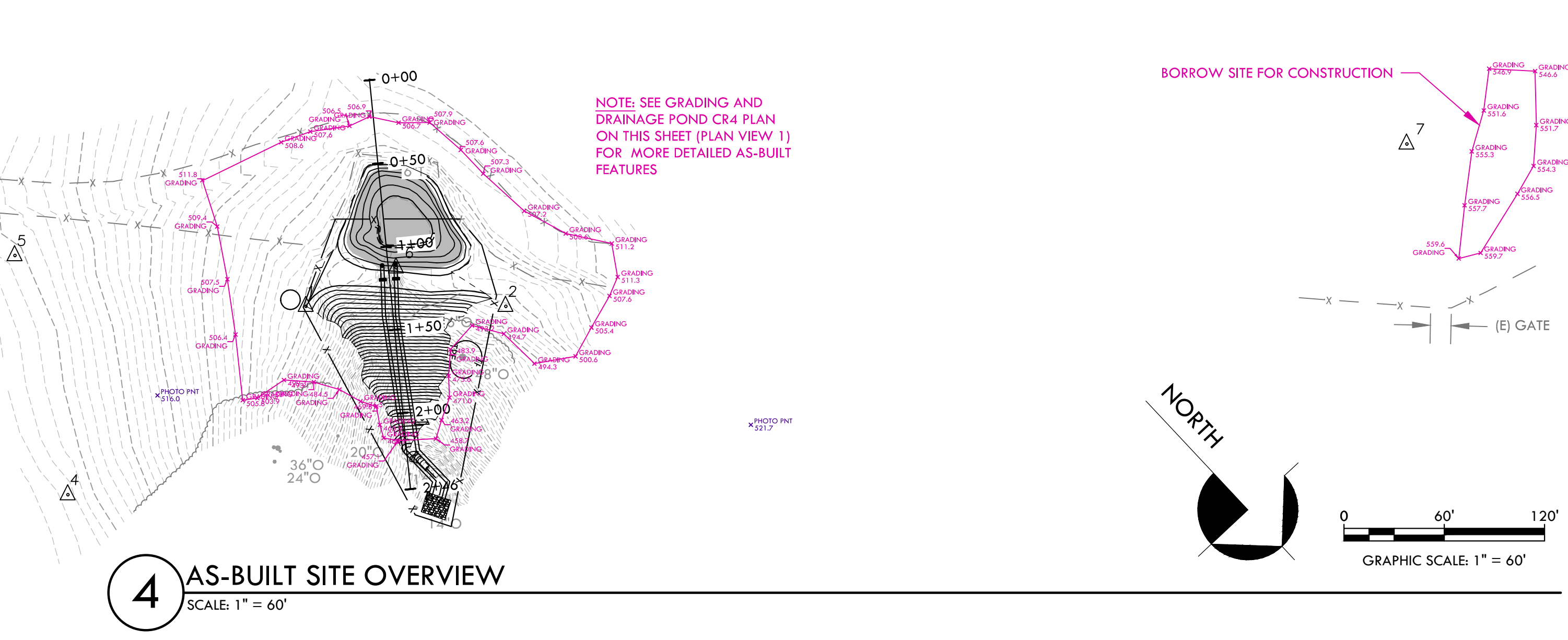
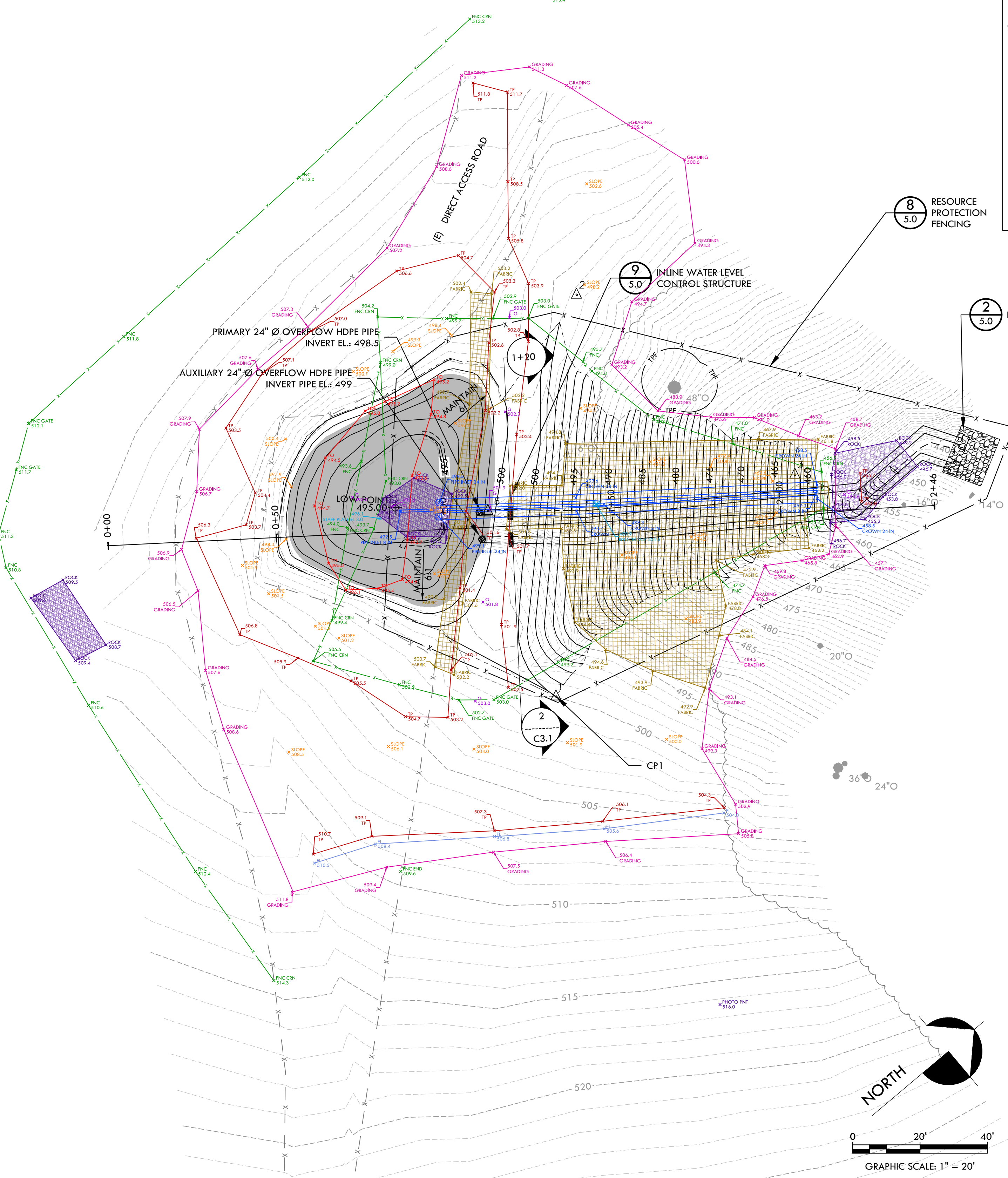
**AS-BUILT LEGEND**  
**AS-BUILT POINT DESCRIPTION & ELEVATION**

**AS-BUILT SURVEY NOTES:**

- AS-BUILT SURVEY CONDUCTED ON DEC 17, 2019. CONTROL POINTS 1, 2, AND 3 DESTROYED DURING CONSTRUCTION.

**SURVEY NOTES:**

- CONTOUR ELEVATIONS ARE BASED OFF A DATUM SET TO 500 FT AT CP 1 FOR TOPOGRAPHIC SURVEY.



**SHEET TITLE:**  
 GRADING AND DRAINAGE POND CR4

**CLIENT:**  
 SANTA CLARA VALLEY HABITAT AGENCY  
 ATTN: EXECUTIVE OFFICER  
 535 ALKIRE AVENUE, SUITE 100  
 MORGAN HILL, CA 95037

**PROJECT TITLE:**  
 COYOTE RIDGE PROPERTY  
 HABITAT ENHANCEMENT AND STOCK POND RESTORATION  
 METCALF ROAD  
 MORGAN HILL, CA 95037

**FALL CREEK ENGINEERING, INC.**  
 Consulting Engineers  
 Civil/Environmental/Water Resources

1525 SEABRIGHT AVE.  
 SANTA CRUZ, CA 95062  
 TEL (831) 426-9054

**DRAWN BY:** JCW  
**CHECKED BY:** RLC  
**DATE:** 2018  
**JOB NO.:** 21713  
**SCALE:** AS SHOWN  
**SHEET:**

**C3.1**  
 4 OF 9