# 3. PROJECT DESCRIPTION

## 3.1 INTRODUCTION

This chapter provides a detailed description of the proposed Teichert Shifler Mining and Reclamation Project, based on the application and supporting information submitted by the applicant (Teichert Materials) on September 25, 2018 and found to be substantially complete on May 21, 2019.

## 3.2 OVERVIEW AND BACKGROUND

Teichert Aggregates (Teichert) has submitted an application to Yolo County to conduct mining and reclamation activities on the Shifler property south of Cache Creek and west of the City of Woodland. This project is known as the Teichert Shifler Mining and Reclamation project (proposed project). The requested approval would be a discretionary action by Yolo County. As such the County is the lead agency under CEQA, responsible for the preparation of this Draft EIR. The proposed project is located within the bounnetries of the Cache Creek Area Plan (CCAP) adopted by the Board of Supervisors in 1996, and most recently updated in 2019. The project must comply with the requirements of this program, including all relevant components of adopted plans and regulations. The key proposed elements of this project are as follows: 1) relocation of a segment of Moore Canal to the northerly portion of the site and modification of Magnolia Canal to align with the relocated Moore Canal; 2) transfer of tonnage from the Teichert Esparto and Teichert Schwarzgruber operation to the Teichert Shifler operation; 3) continued operation and expansion of the Teichert Woodland Plant facilities (including new equipment and increased processing capacity); 4) excavation at the Shifler site; 5) reclamation of the Shifler site; 6) delayed reclamation at Woodland Plant site; 7) dedication of various reclaimed properties to the County; and 8) completion of an in-channel gravel bar removal project.

The project site consists of approximately 319 acres located three miles west of the City of Woodland in unincorporated Yolo County, California. The project site is bounded by Cache Creek to the north, County Road 94B to the west, County Road 22 to the south, and unpaved dirt access roads to the east. Currently, the central and southern portions of the project site consist primarily of actively managed agricultural land. The northern portion of the project site consists of 52 scattered oak trees and ruderal grassland vegetation, as well as an electric conveyor and associated gravel roads formerly used to transport mined aggregate from Teichert's Storz mining site to the Woodland Plant located north of the project site. Moore Canal, an approximately 15-foot wide concrete-lined water conveyance structure owned and operated by the Yolo County Flood Control and Water Conservation District (YCFCWCD), bisects the central portion of the site from west to east. A gate structure exists near the northeastern portion of the project site, which allows water from the Moore Canal to be diverted into the Magnolia Canal. Within the project site, the Magnolia Canal is an approximately seven-foot-wide earthen-lined canal that starts at the gate structure and flows in a northeasterly direction.

The site contains all or portions of the following Assessor's Parcel Numbers (APNs): 025-120-032, 025-120-033, 025-430-001, 025-430-002, 025-430-009, and 025-430-011 (see Table 3-1). The Shifler property parcels in their entirety total approximately 442.4 acres. However, the portions of the Shifler property within the Cache Creek channel and on Monument Hill have been

excluded from the project site for the purpose of this analysis because no disturbance is proposed to those portions of the Shifler property. Thus, the 319.3-acre project site is limited to the proposed 277.1-acre mining area and surrounding areas needed for the proposed relocation/realignment of Moore Canal, setbacks, visual screening, noise and safety berms, aggregate conveyors, access roads, and other project-related uses.

**Table 3-1**
**Parcel Overview**

| APN | Total Parcel Acreage | Acreage Included in Site | Acreage Included in Proposed Mining Area |
|---|---|---|---|
| **Shifler Property Project Site** | | | |
| 025-120-032 | 186.2 | 127.6 | 115.8 |
| 025-120-033 | 4.4 | 2.8 | 1.3 |
| 025-430-001 | 66.5 | 1.9 | 0 |
| 025-430-002 | 188.3 | 187 | 160 |
| 025-430-009 | -- | - | - |
| 025-430-011 | -- | - | - |
| **EIR Total:** | **442.4** | **319.3** | **277.1** |
| **Woodland Plant Site** | | | |
| 025-350-018 | 2.65 | 2.65 | 0 |
| 025-350-037 | 111.27 | 111.27 | 0 |
| 025-120-039 | 18.25 | 18.25 | 0 |
| 025-120-041 | 6.65 | 0 | 0 |
| **Total:** | **138.82** | **132.17** | **0** |

Note: APNs 025-430-009 and 025-430-011 not included in Shifler property/project site totals. APN 025-120-041, known as the County Borrow Pit property, is leased to Teichert Materials by the County.

The proposed project is mining of 41.6 million tons (35.25 million tons sold) of aggregate resources (sand and gravel) over a requested 30-year period at an annual rate not to exceed 2.6 million tons mined per year (2.2 million tons sold). Mining is proposed in two phases moving from north to south, commencing with Phase A on the north. Reclamation is proposed in three phases, resulting ultimately in approximately 86 acres of agricultural land on the west, approximately 31 acres of agricultural land on the east, and a 161-acre open water lake in the central portion of the proposed mining area. As a component of the project, the applicant proposes relocation of the Moore Canal to the northerly portion of the project site.

The aggregate removed from the subject site would be processed at the adjoining Teichert Woodland Plant. Teichert's Woodland Plant has been operating since the 1950s. The applicant has indicated that the plant serves the surrounding region, including, Yolo, Solano, and Sacramento counties. Processing facilities include, a rock plant, a recycle plant, and an asphalt plant. The Woodland Plant does not include concrete batch facilities. The processing plant and associated processing facilities are located on the approximately 132.17-acre plant site, which is comprised of three parcels (APNs 025-350-018 and -037, and 025-120-039). Teichert also has a long-term lease agreement with the County for the use of a fourth parcel totaling 6.65-acre (APN 025-120-041), known as the County Borrow Site, as a part of their plant operations. The plant, including associated processing facilities, is considered part of the proposed project; however, no new areas of disturbance at the Woodland Plant site are proposed.

The Reclamation Plan for the Woodland Plant site was approved in 2013. The property will be reclaimed as grassland, mixed riparian forest, and willow/cottonwood forest. Reclamation on APN 25-120-41 (6.65 acres), which is owned by the County, will consist of removal of stockpiles and returning the parcel to the condition it was found at the commencement of Teichert's lease in 2002. The timing for completion of reclamation activities at the Woodland Plant may vary depending on market conditions, quality of mineable materials, and ultimate mining depths at the properties supplying aggregate to the facility. All reclamation on the Woodland Plant site is anticipated to be completed within two years following the completion of processing operations.

Approval of the Teichert Shifler proposal would extend the life of the Woodland Plant commensurate with the requested 30-year mining permit. If approved, the Teichert Shifler project and the Woodland Plant would be authorized to operate for 30-years (through approximately 2050) or until the approved mining is completed, whichever occurs first.

Between 1998 and 2017, the Woodland Plant processed materials from the Teichert Woodland operation consisting of the Muller, Coors, and Storz properties totaling 252 acres. Mining at the Teichert Woodland operation was approved in December 1996 for a total of 17.88 million tons (15.2 million tons sold) over a maximum 30-year period at an annual rate not to exceed 1,176,471 tons mined (1.0 million tons sold) per year (Zone File 95-095). Mining on all three sites has been completed and reclamation is underway. The Muller property has been reclaimed to agriculture and habitat uses, consisting of a seasonal pond and riparian habitat uses. The Coors property has been reclaimed to agriculture. The Storz property is being reclaimed to habitat uses, including open water and riparian wetland.

In November 2012, the County approved the Teichert Schwarzgruber operation with mining to commence following the completion of mining at the Teichert Woodland sites. Mining at the 41-acre Schwarzgruber site was approved for a total of 4.65 million tons (4.0 million tons sold) over a maximum 30-year period at an annual rate not to exceed 1,176,471 tons mined (1.0 million tons sold) per year (Zone File 2011-0035). Mining on the Schwarzgruber site commenced in 2017 and if anticipated to be completed in 2020, depending on market demand. Aggregate extracted from the Schwarzgruber site is being processed at the Teichert Woodland Plant. Teichert is seeking approval of mining at the Shifler property to commence following the completion of mining at the Schwarzgruber site. The Schwarzgruber site will be reclaimed to habitat uses, consisting of seasonal pond, grassland, riparian, and riparian wetland habitat. Teichert is requesting to transfer the annual production allotment from the Schwarzgruber operation to the Shifler site.

The Teichert Esparto operation was approved in December 1996 for a total of 25.88 million tons (22.0 million tons sold) over a maximum 30-year period at an annual rate not to exceed 1,176,471 tons mined (1.0 million tons sold) per year. Teichert is also requesting that it be allowed to transfer its annual production allotment from the Teichert Esparto operation to the Shifler site once mining at the Teichert Esparto site has been completed or the Teichert Esparto mining permit expires (January 1, 2028), whichever occurs first. The Teichert Esparto site, including the Esparto Plant site, will be reclaimed to open space and habitat uses, consisting of open water and riparian wetland uses.

Together the proposed transfers (from Schwarzgruber and Esparto) would allow the Teichert Shifler operation to excavate a maximum of 2,588,237 tons mined (2.2 million tons sold) in any given year, provided that production over a consecutive 10-year period does not exceed 20 million tons sold (23,529,430 tons mined) (see Table 3-2).

**Table 3-2**
**Teichert Tonnage Summary**

| Plant (Mining Site) | Maximum Tons/Year Mined (10-Year Average) | Maximum Tons/Year Mined (20% Exceedance) | Maximum Tons/Year Sold (10-Year Average) | Maximum Tons/Year Sold (20% Exceedance) |
|---|---|---|---|---|
| **Existing Conditions – Schwarzgruber and Esparto** | | | | |
| Schwarzgruber | 1,176,471 | 1,411,766 | 1,000,000 | 1,200,000 |
| Esparto | 1,176,471 | 1,176,471 | 1,000,000 | 1,000,000 |
| **Total** | **2,352,942** | **2,588,237** | **2,000,000** | **2,200,000** |
| **Proposed Conditions – Shifler and Esparto Mining** | | | | |
| Schwarzgruber | 0 | 0 | 0 | 0 |
| Shifler | 1,176,471 | 1,411,766 | 1,000,000 | 1,200,000 |
| Esparto | 1,176,471 | 1,176,471 | 1,000,000 | 1,000,000 |
| **Total** | **2,352,942** | **2,588,237** | **2,000,000** | **2,200,000** |
| **Proposed Conditions – Shifler, Post-Esparto Operations** | | | | |
| Schwarzgruber | 0 | 0 | 0 | 0 |
| Shifler | 2,352,942 | 2,588,237 | 2,000,000 | 2,200,000 |
| Esparto | 0 | 0 | 0 | 0 |
| **Total** | **2,352,942** | **2,588,237** | **2,000,000** | **2,200,000** |

The Teichert Esparto Plant is comprised or newer and more modern equipment than the Teichert Woodland Plant. Upon completion of mining at the Esparto site, the Esparto Plant equipment is proposed to be dismantled and moved to the Teichert Woodland Plant site where the Esparto equipment will replace most of the Woodland equipment. The existing Woodland asphalt plant would remain in operation. One additional crusher and two additional screens are proposed at the Woodland Plant to facilitate processing of the requested total annual production of 2.6 million tons mined.

## 3.3 SETTING

The following sections describe the existing setting of the project site, including the site location, existing on-site uses, and land uses in the site vicinity.

### Site Location and Description

The project site consists of 319.3 acres[1] located three miles west of the City of Woodland in unincorporated Yolo County, California (see Figure 3-1 through Figure 3-3). The site contains all or portions of four parcels identified by Assessor's Parcel Numbers (APNs) 025-120-032, 025-120-033, 025-430-001, and 025-430-002.[2]

[1] The four Shifler property parcels (APNs 025-120-032, 025-120-033, 025-430-001, and 025-430-002) in their entirety total approximately 442.4 acres. However, the portions of the Shifler property within the Cache Creek channel and on Monument Hill have been excluded from the project site for the purpose of this analysis because no disturbance is proposed to those portions of the Shifler property. The 319.3-acre project site is defined as the proposed 277.1-acre mining area and surrounding areas that would be modified for the proposed relocation/realignment of Moore Canal, setbacks, visual screening, noise and safety berms, aggregate conveyors, access roads, and other project-related uses.

[2] The portions of the Moore Canal and Magnolia Canal that traverse the project site have been assigned APNs by the Yolo County Assessor (APNs 025-120-010, 025-120-011, and 025-430-009), but these APNs are easements held by the YCFCWCD, not separate legal parcels The District does not have fee title to the land underlying the canals on the project site.

**Figure 3-1**
**Regional Location Map**

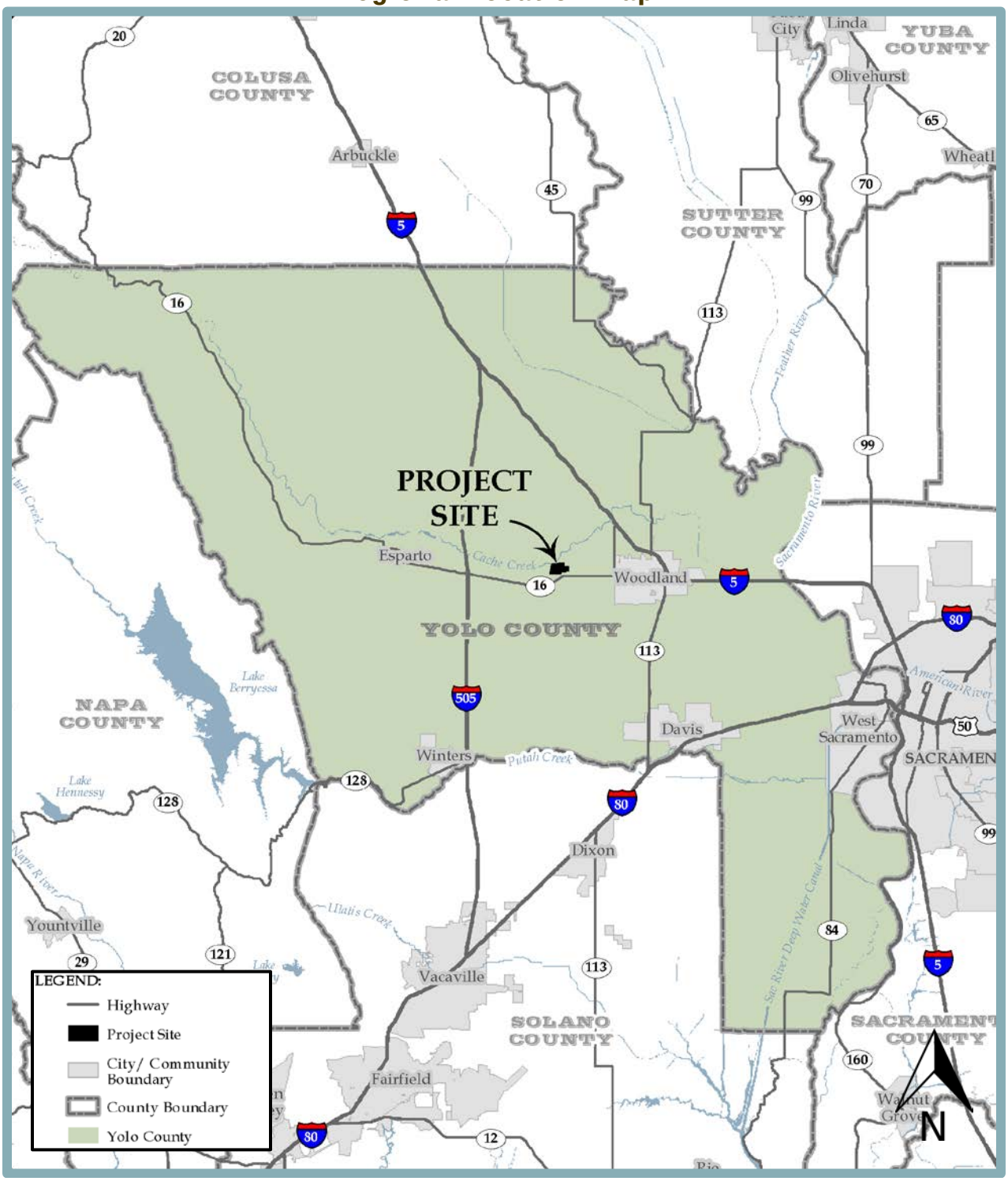
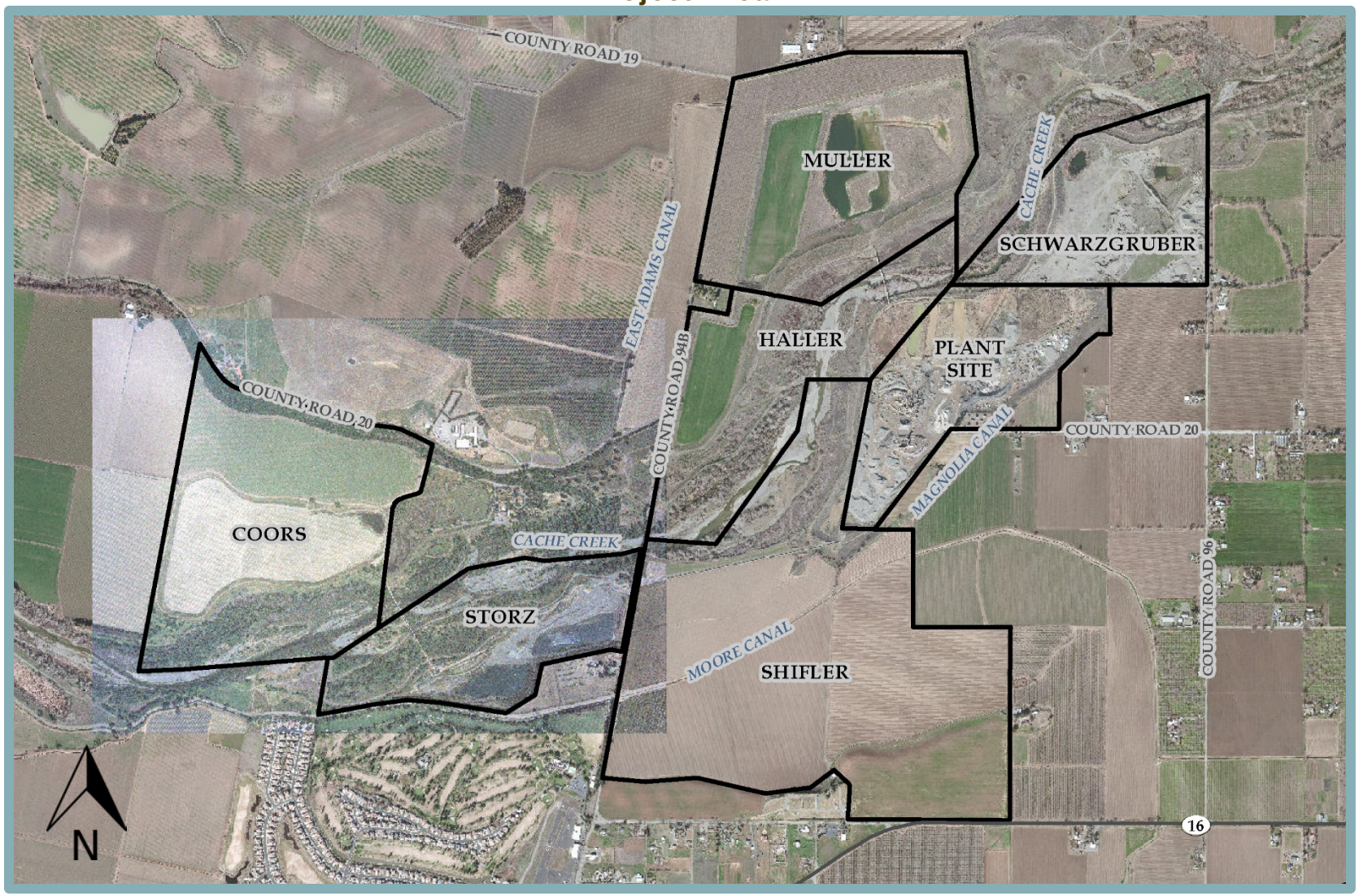
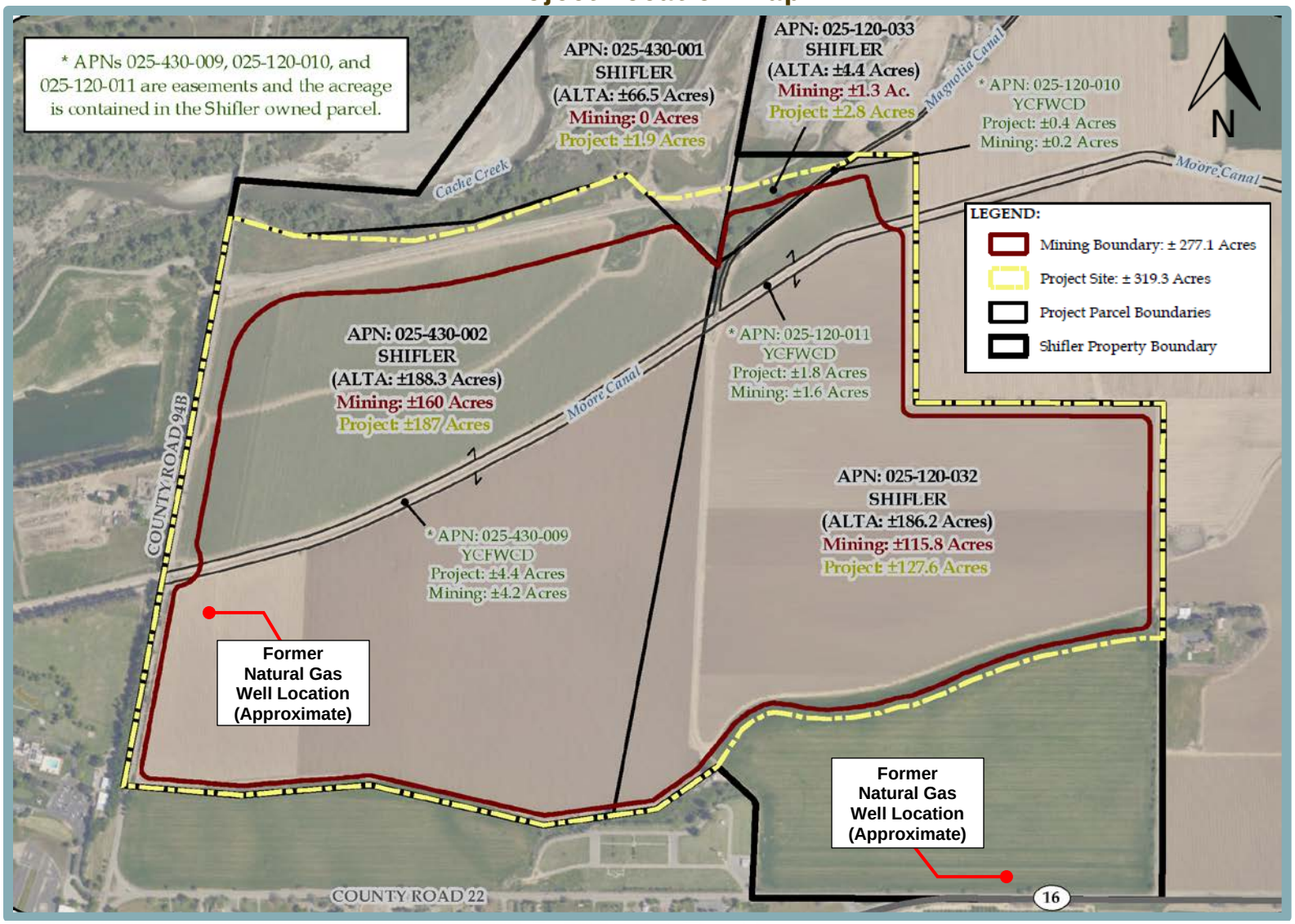


**Figure 3-2**
**Project Area**



## Figure 3-3
## Project Location Map



As noted above and shown in Figure 3-4, the central and southern portions of the project site consist primarily of actively managed agricultural land.

Crops planted at the site over the past decade have included wheat, alfalfa, tomatoes, cucumbers, canola, sunflower, and safflower. The northeastern portion of the site previously contained a ranch headquarters (Stevens Ranch); however, the structures that comprised the headquarters were burned down as part of a fire department training exercise in the late 1970s or early 1980s. Currently, structures do not exist at the location and the area is currently overgrown by low-lying brush. An existing groundwater well used for agricultural purposes is located along the western site boundary. In addition, a domestic water supply well is located at the location of the former ranch headquarters. An abandoned gas well is located within the southwestern portion of the site (see Figure 3-3). The on-site gas well was abandoned in 1994. The southern portion of Parcel 3 also includes a gas well, abandoned in 1985; however, this gas well is located outside of the project site boundaries, along County Road 22.[3] Most of the project site (APNs 025-120-032 and 025-430-002) was subject to a Williamson Act contract that expired at the end of January 2016.

The northern portion of the site consists of 52 scattered oak trees and ruderal grassland vegetation, as well as an electric conveyor and associated gravel road formerly used to transport mined aggregate from the Teichert Storz mining site to the Woodland Plant located north of the project site. Moore Canal, a concrete-lined water conveyance structure owned and operated by the YCFCWCD, bisects the central portion of the site from west to east. Magnolia Canal is an unlined water conveyance structure owned and operated by the YCFCWCD that intersects the Moore Canal on the northeastern portion of the project site. A small oak woodland stand is located north of where the Moore Canal meets the Magnolia Canal, with additional scattered oaks occurring along the northern portion of the project site. The Yolo County General Plan designates the site Agriculture (AG), with approximately 107 acres within the northern portion of the project site also designated Mineral Resource Overlay (MRO). The site is zoned Agriculture Intensive (A-N).

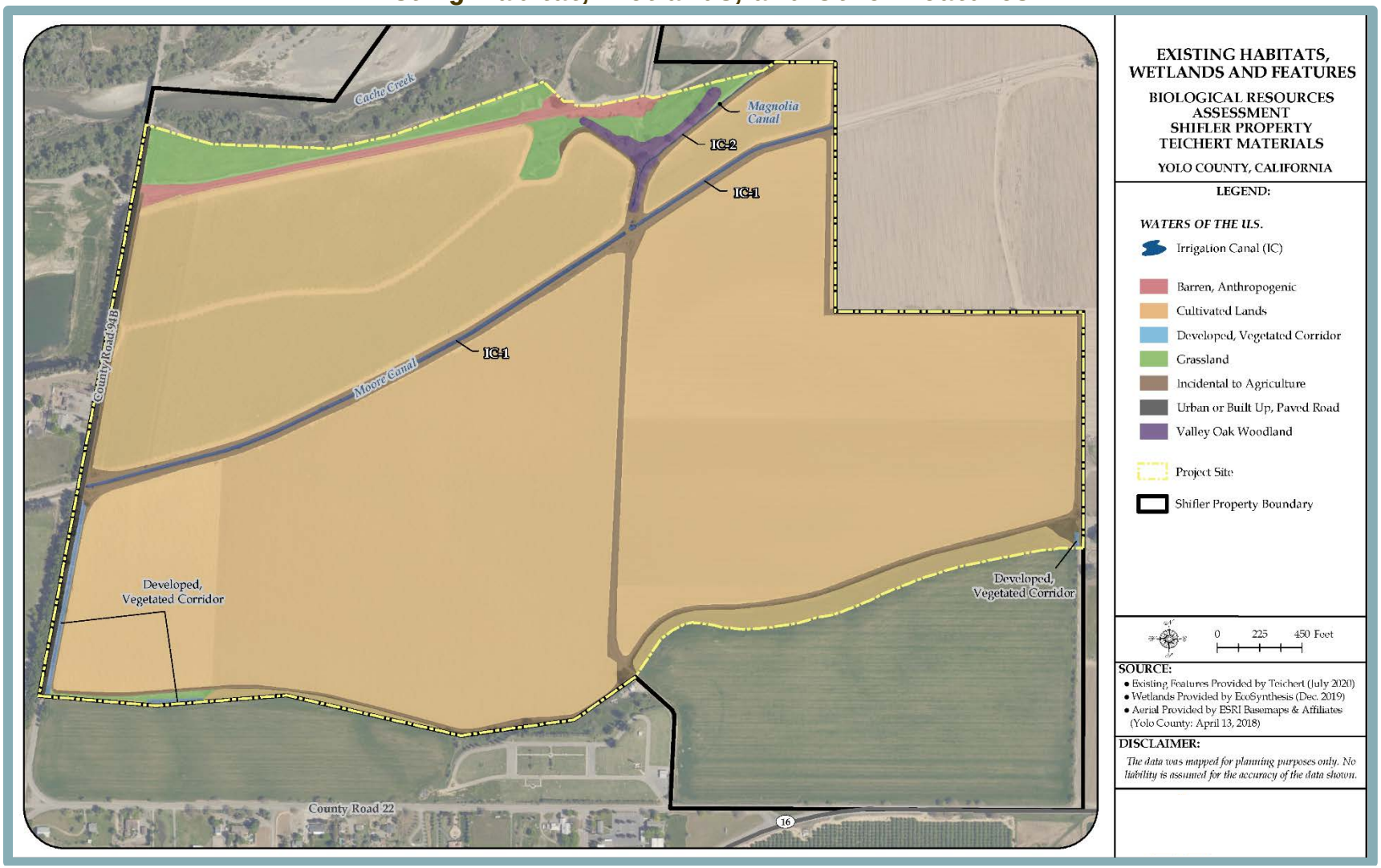
Existing surface elevations on the project site range from approximately 98 to 112 feet above mean sea level (MSL), with the proposed mining area elevations between approximately 103 and 112 feet above MSL. On-site soils include Brentwood silty clay loam, 0 to 2 percent slopes, Loamy alluvial land, Riverwash, Sehorn-Balcom complex, 2 to 15 percent slopes, Sehorn-Balcom complex, 30 to 50 percent slopes, eroded, and Yolo silt loam, 0 to 2 percent slopes. Approximately 107 acres of the project site are located within Mineral Resources Zone (MRZ)-2, which generally includes areas underlain by mineral deposits where geologic data show that significant measured or indicated resources are present. The remainder of the project site is located within MRZ-3, which indicates that this area includes mineral deposits, the significance of which cannot be evaluated from available data.

## Land Uses in the Vicinity

The project site is bounded by Cache Creek to the north, County Road 94B to the west, County Road 22 to the south, and unpaved dirt access roads to the east.

[3] Nichols Consulting Engineers, Chtd. *Phase I and Limited Phase II Environmental Site Assessment, Shifler Property, Yolo County APNs 025-430-01, 025-430-02, 025-120-32, and 025-120-33, Yolo County, California.* September 27, 2007.

## Figure 3-4
## Existing Habitat, Wetlands, and Other Features




***Source: Teichert Materials, 2020.***

Surrounding land uses include Teichert's Woodland Plant site to the northeast; Teichert's Storz mining site and the Cache Creek Nature Preserve to the northwest; agricultural land and farm dwellings (APNs 025-430-006 and -007) to the west; the Yolo Fliers Club golf course, the Watts-Woodland Airport, and Wild Wings residential subdivision to the southwest; the Monument Hill Memorial Park cemetery[4] and Rural Residential to the south; and agricultural lands to the east (see Figure 3-5). The agricultural land to the east of the site includes one farm dwelling located near the eastern project site boundary.

On December 16, 2014, the County Board of Supervisors held a public hearing and approved a recommended action to consider authorization to further study a General Plan Amendment and Rezone for the Teichert Shifler Mining and Reclamation Project, which is the subject of this EIR.[5]

Policy CO-A107 of the Yolo County General Plan provides a County specific definition of sensitive receptors using the following criteria: residentially designated land uses; hospitals, nursing/convalescent homes, and similar board and care facilities; hotels and lodgings; schools and day care centers; and neighborhood parks. Considering Yolo County's definition of sensitive receptors, the nearest sensitive receptors to the project site are a church-run school located approximately 650 feet south of the Shifler mining site, residences located approximately 430 feet south of the site across County Road 22, and residences located in the Wild Wings subdivision, which is located approximately 1,140 feet to the southwest of the Shifler mining site. The residences to the south of the site, across County Road 22, are located on parcels zoned Rural Residential – 5 Acre (RR-5). The residences to the southwest of the site within the Wild Wings subdivision are located on parcels zoned Low Density Residential (R-L).

Although not considered sensitive receptors per the County's General Plan, various farm dwellings exist within areas designated for agricultural uses by Yolo County, which are in close proximity to both the existing Teichert operational areas as well as the proposed Shifler site. For instance, the nearest farm dwelling to the Shifler site is approximately 165 feet to the west, while another farm dwelling approximately 180 feet to the east, and multiple farm dwellings exist to the south of the Shifler site, beyond the County Road 22 as well as in close proximity to the existing Woodland Plant.

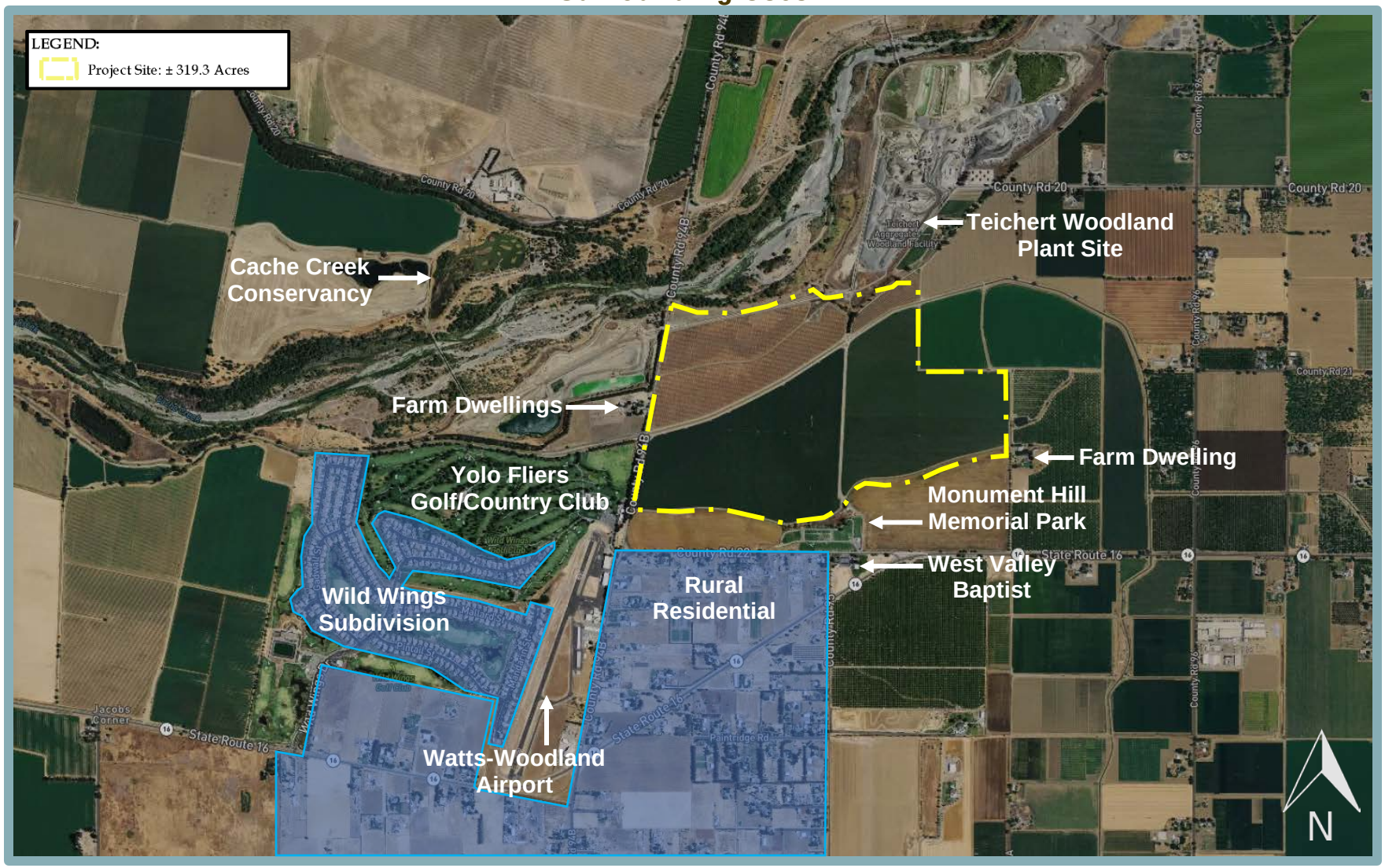
## 3.4 PROJECT OBJECTIVES

The following project objectives have been submitted by the project applicant (Teichert):

1. Permit an additional 277± acres of permitted mining area with approximately 35.25 million tons sold (41.6 million tons mined) of Portland Cement Concrete (PCC) grade aggregate reserves for mining and processing at Teichert's Woodland Plant for a period of 30 years;
2. Extend the life of the existing Woodland Plant consistent with the requested 30-year life of the Shifler mining permit and allow the facility to continue to operate as needed to meet market demand;
3. Allow Teichert to transfer the Esparto Plant's current annual permitted volume of 1 million tons sold (1.18 million tons mined) to the Woodland Plant once mining is complete at Esparto or the Esparto permit expires, whichever occurs first;
4. Ensure that irrigation water deliveries in Moore Canal are not affected by the proposed project;

[4] This cemetery is privately owned by Yateman and Associates.
[5] Yolo County Board of Supervisors. *Minutes & Supporting Materials.* December 16, 2014.

**Figure 3-5**
**Surrounding Uses**



5. Reclaim the mined land to agriculture and a mix of habitat uses, including pond, grassland, riparian woodland, and native landscape, in accordance with the requirements of the Surface Mining and Reclamation Act (SMARA), the Yolo County Off-Channel Mining Plan (OCMP), Off-Channel Surface Mining Ordinance (OCSMO), and Surface-Mining Reclamation Ordinance (SMRO).

## 3.5 PROJECT COMPONENTS

The project is a proposed new aggregate mining operation on the Shifler property. Excavated sand and gravel would be processed at the existing Teichert Woodland Plant northeast of the site. The project components, including requested entitlements, are discussed in greater detail below.

### Mining Plan

The proposed project would allow for mining of approximately 277 acres of the 319.3-acre project site (see Figure 3-6). All of the proposed mining area would be off-channel and set back a minimum of 200 feet from Cache Creek.

Depth of mining will vary depending on the location, quality, and quantity of aggregate reserves present. Existing surface elevations on the project site range from approximately 98 to 112 feet above MSL, with the proposed mining area elevations between approximately 103 and 112 feet above MSL. It is anticipated that the proposed mining would reach a maximum depth of 5 feet below MSL, or approximately 110 feet below existing ground surface, near the northeastern corner of the mining area. The proposed depths of mining for the remainder of the site would be approximately 40 feet below existing ground surface in the southeastern portion of the mining area, approximately 65 feet below existing ground surface in the northwestern corner of the mining area, and approximately 70 feet below existing ground surface in the southwestern corner of the mining area. Detailed mining sheets are provided at the end of this chapter (see Figure 3-21 through Figure 3-28). The total amount of aggregate (sand and gravel) proposed to be mined will vary depending upon the quality and location of aggregate onsite, but will not exceed 35.25 million tons (approximately 23.5 million cubic yards) sold (41.6 million tons mined).

The proposed mining activities would comply with the following minimum slopes, described as a ratio of horizontal to vertical:

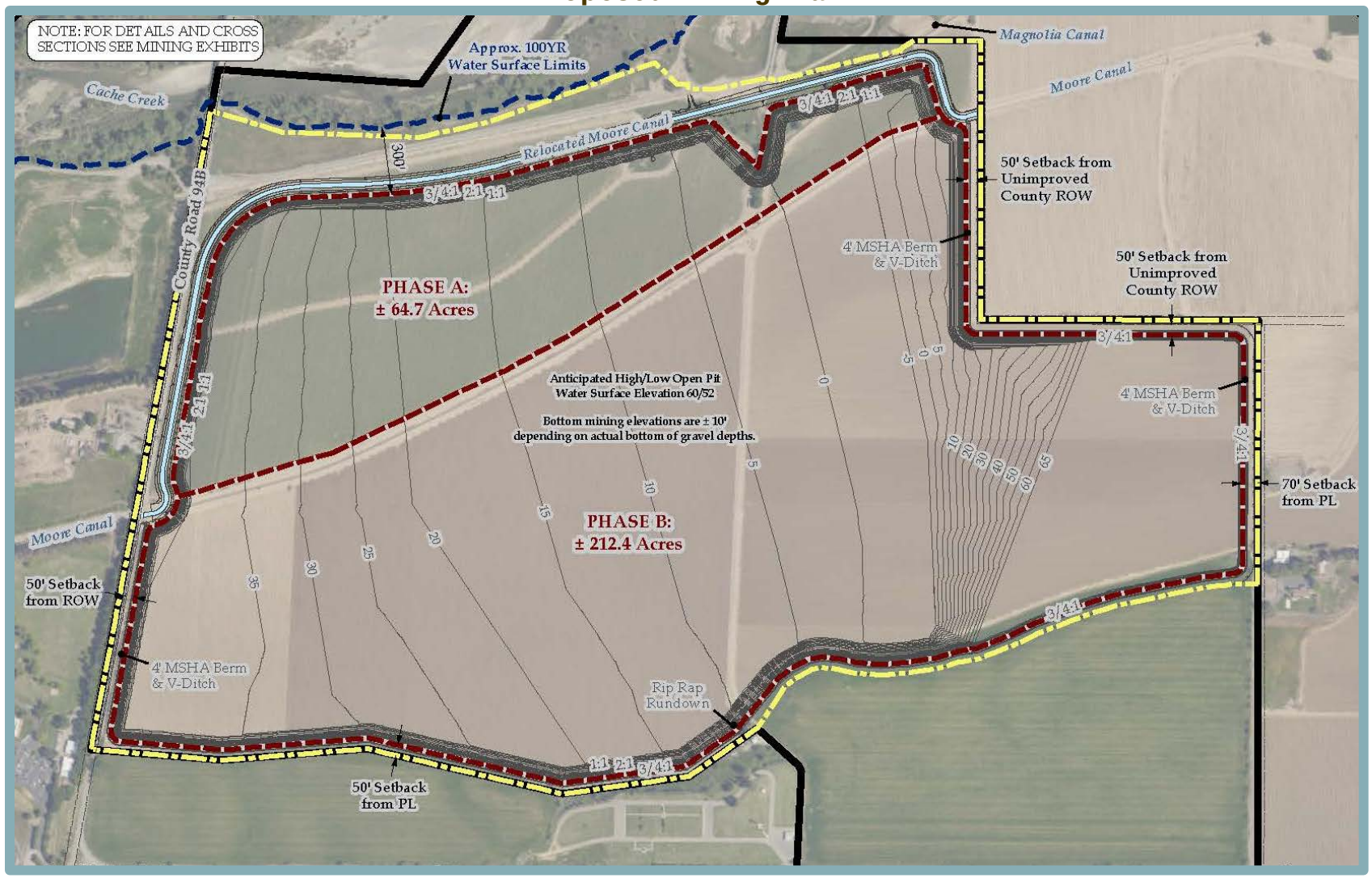
- 0.75:1 down to average low groundwater level during mining (52 feet above MSL);
- 2:1 between average low groundwater level during mining (52 feet MSL) and five feet below average low groundwater level during mining (47 feet MSL); and
- 1:1 five feet or greater below average low groundwater level during mining (47 feet MSL).

The proposed mining activities would necessitate removal of 46 of the 52 existing oak trees on the project site.

### Aggregate Processing

Aggregate mined from the project site would be processed at the existing Woodland Plant located northeast of the site. The proposed project includes a request to extend the permitted life of the Woodland Plant from the current expiration date of January 1, 2028 (under the Schwarzgruber approval) to 30 years beyond approval of mining activities on the project site, consistent with the requested Shifler Mining Permit. Continued operation of the Woodland Plant is incorporated as a part of the subject application.

**Figure 3-6**
**Proposed Mining Plan**



Relevant conditions of approval for this project would extend to the Plant and its operations. Figure 3-7 shows the existing configuration of the Woodland Plant. The proposed project would not result in new areas of disturbance at the Plant.

In order to transfer mined aggregate from the location of mining to the Woodland Plant, a conveyor/equipment over-crossing of the relocated Moore Canal is proposed (see Figure 3-8). Aggregate trucks going to and from the Woodland Plant currently access the plant from its entrance on County Road 20. Trucks are required to use designated haul routes of County Road 20, County Road 96, and State Route 16 to and from Interstates 5 and 505 (see Figure 3-9). Local deliveries are allowed to use roads other than State Route 16, County Road 20, or County Road 96. The project does not propose changes to the designated haul routes.

## Excavation Operations

The proposed mining would generally be conducted with the same equipment, technology, and design considerations as utilized at the Teichert Esparto and Teichert Schwarzgruber operations. Topsoil or "overburden" would be removed and stockpiled (see Figure 3-10). The marketable sand and gravel deposits below would be continuously loaded and hauled to the plant by conveyor. Removal of overburden on the project site would be accomplished using scrapers, motor graders and bull dozers. Overburden would be progressively removed ahead of mining and stockpiled in setback areas and internal storage locations until retrieved for reclamation. The top layers of topsoil would be placed in temporary berms and/or stockpiles and seeded with naturalized annual grasses and forbs. Considering that the proposed excavation activity would result in disturbance of the majority of the project site, the proposed project would result in the loss of all aquatic habitats depicted in Figure 3-4.

Berms and stockpiles would not exceed 40 feet in height with slopes no steeper than 2:1 horizontal to vertical. All stockpiles would remain a minimum of 100 feet from the top of bank of Cache Creek. The stockpiles would be trapezoidal in shape. As shown in Figure 3-10, all proposed overburden stockpiles would be located within the boundaries of the mining area. The overburden stockpiles within the western and central portions of the site would be set below grade, while the easternmost overburden stockpile would be at grade. These stockpiles would be planted with an annual grassland seed mix to minimize soil erosion. Material stockpiles would be primarily located at the Woodland Plant site (see Figure 3-7), with smaller material stockpiles at the conveyor loading locations. Visual and noise berms would be located along the perimeter of mining areas, including within mining setbacks, to provide noise shielding of mining activities from nearby noise-sensitive uses and to allow mining to occur without the need to relocate berms and/or stockpiles before reclamation occurs. The visual and noise berms would be 300 feet long (minimum), eight feet tall (minimum), and would be triangular or trapezoidal in shape. The berms would be seeded with seed mix; the seed mix would be similar to the mix type identified in the Reclamation Plan.

As required by the Mine Safety and Health Administration (MSHA), the proposed project include four-foot-high, 10-foot-wide berms around the perimeter of the mining pit (see Figure 3-10). The MSHA berm would serve to prevent vehicles or personnel from accidentally falling into the mining pit. The MSHA berm would include 2:1 slopes on either side, with a V-shaped ditch along the outside perimeter of the berm, and would be hydro-seeded to prevent erosion and limit growth of invasive weeds.

**Figure 3-7**
**Woodland Plant: Existing Configuration**

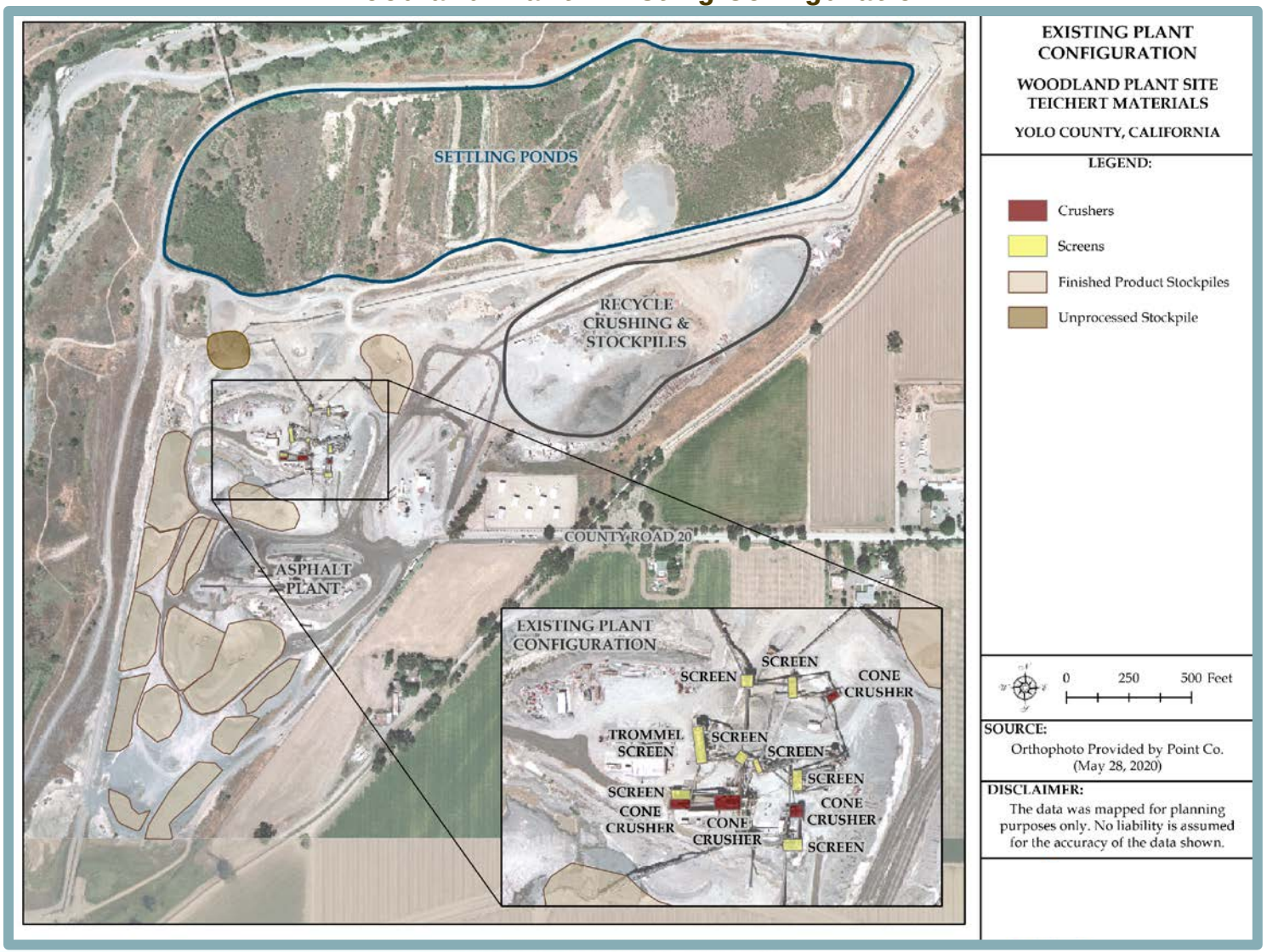


**Figure 3-8**
**Canal Crossing and Ingress/Egress Locations**

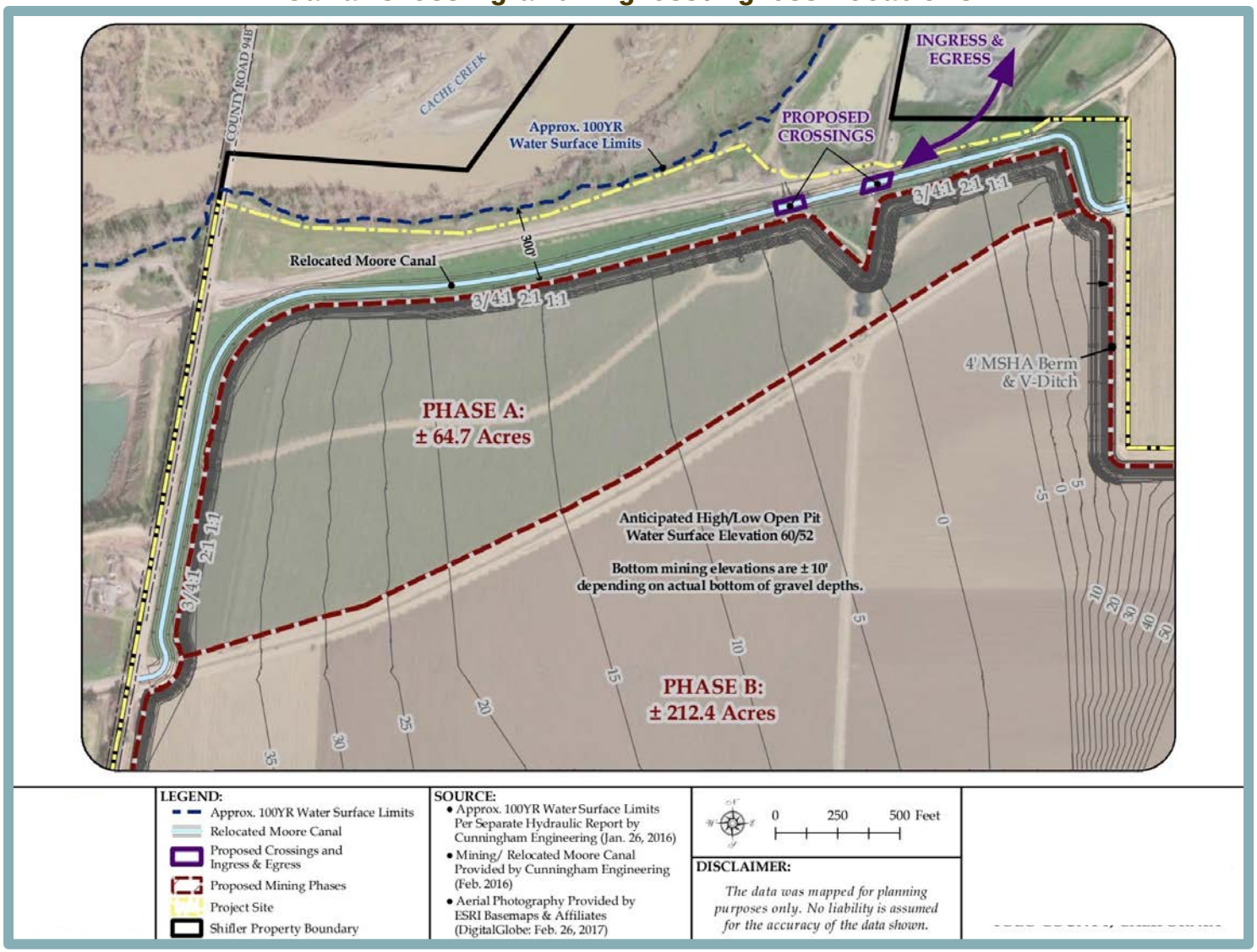


**Figure 3-9**
**Haul Route Map**

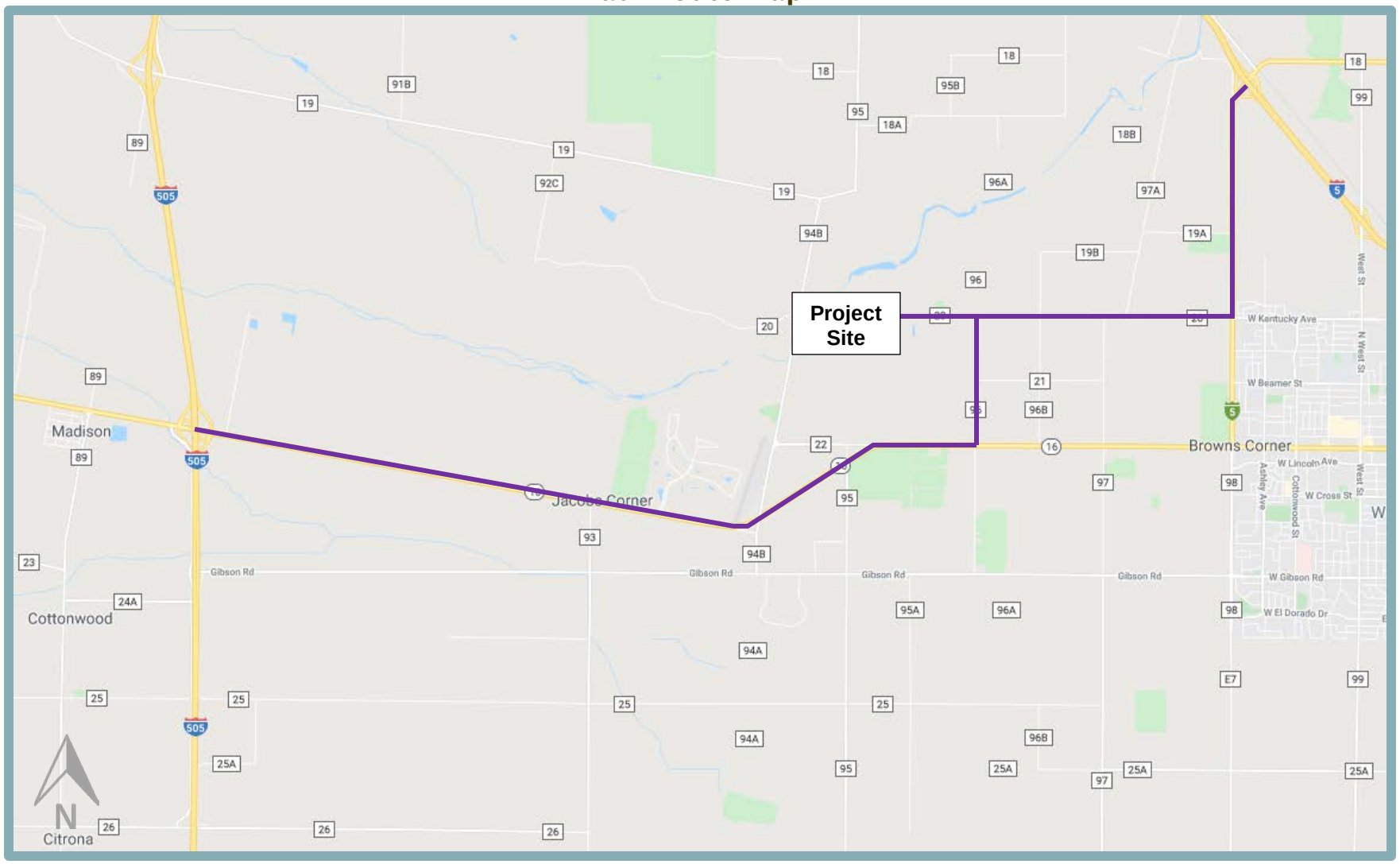
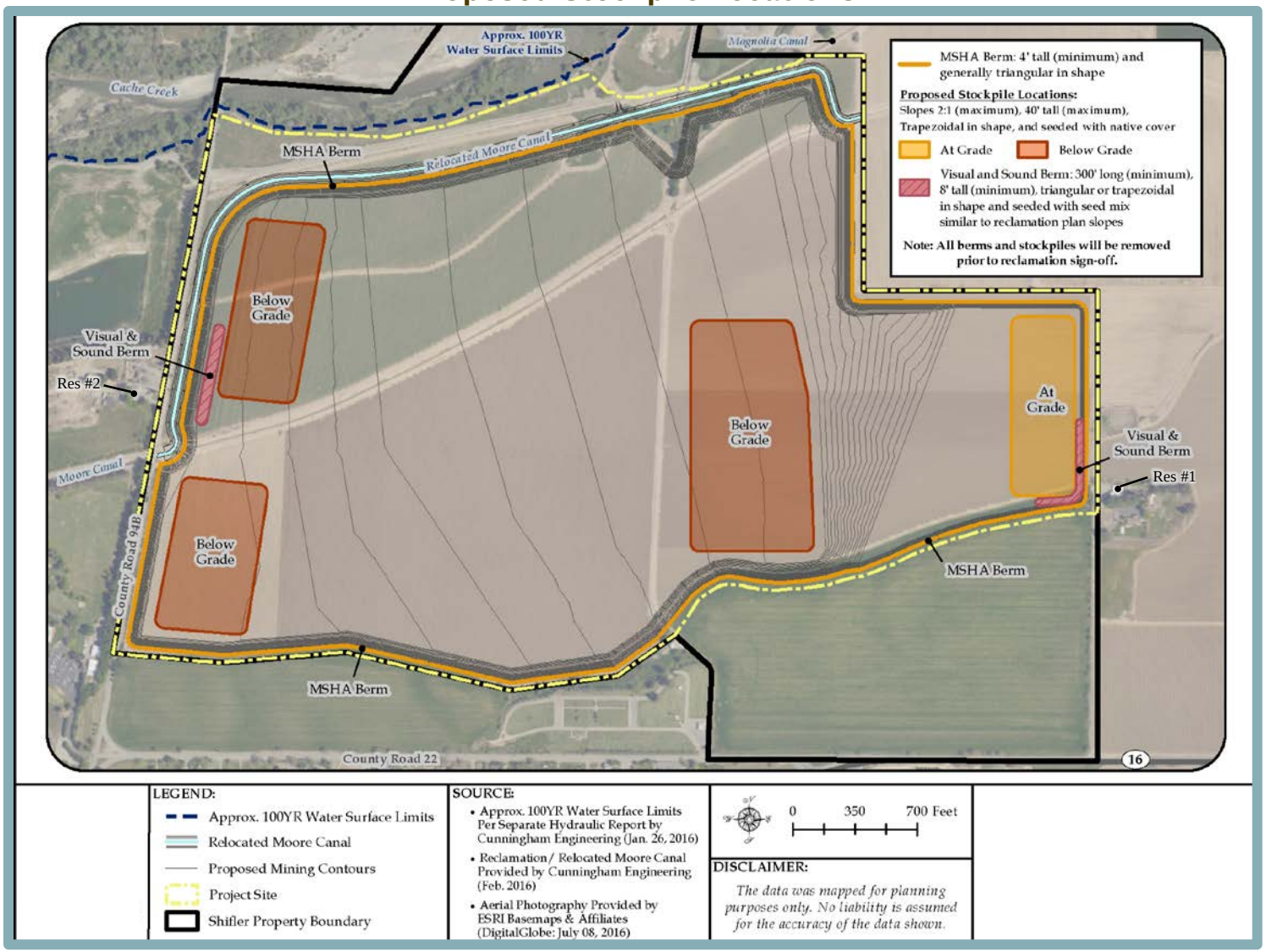


**Figure 3-10**
**Proposed Stockpile Locations**



Aggregate above the groundwater level would be harvested by scrapers and dozers. Aggregate mined below the water table would be extracted by a combination of equipment such as excavators, draglines, and potentially a floating dredge. Water trucks would be used to control dust. Table 3-3 below provides a summary of the mining equipment that would typically be used on-site.

**Table 3-3**
**Typical Mining Equipment**

| Type | Quantity |
|---|---|
| Motor Grader | 1 |
| Excavator | 1 to 2 |
| Scraper | 1 to 4 |
| Water Truck | 1 to 3 |
| Crane/Winch | 1 |
| Dozer | 1 |
| Dredge or Dragline | 1 |

As discussed under the "Schedule and Employees" section below, normal operating hours for the mining site would be 6:00 AM to 6:00 PM, Monday through Saturday. Typically, nighttime operations, when needed, would only occur for processing and load out at the Woodland Plant, not at the mining site. Because nighttime mining would be a rare occurrence, stationary lighting would not be provided on the mining site. However, should nighttime mining be required, which is unlikely, the mining equipment used on-site would include lighting that would be directed downwards toward the active work area. Some safety lighting may be used for the conveyor, which would primarily be located at transfer points and as the conveyor approaches the Woodland Plant.

## Project Energy Supply

Both the proposed mining and processing activity would require energy for various activities. For instance, mining at the Shifler site would entail the use of heavy-duty off-road equipment, which is typically diesel fueled, as well as electricity to transport the mined material from the Shifler site to the Woodland Plant. Processing activities would also require the use of some heavy-duty off-road equipment, as well as electricity for conveyors, crushing machinery, and sorting machinery.

Existing operations at the Woodland and Esparto Plants currently create demand for electricity, while existing mining activity at Esparto and the Schwarzgruber site similarly requires the use of heavy-duty off-road equipment. In order to meet the existing demand for electricity, Teichert has voluntarily installed a photovoltaic energy system at the Woodland Plant. The electricity generated by the photovoltaic energy system is fed into the grid, and off-sets a portion of the electricity demanded by existing operations. The photovoltaic system would remain in operation with implementation of the proposed project, and would continue to provide renewably sourced electricity to the existing and proposed equipment at the plant.

Teichert investigated the potential for installation of either a wind energy or photovoltaic system at the Shifler site. Based on Teichert's research, the Shifler site does not experience adequate wind to make a wind turbine feasible. Photovoltaic installations of sufficient size for the project would require substantial amounts of space. Dedicating space to a photovoltaic installation would interfere with the mining activity proposed for the site. Furthermore, use of a mobile photovoltaic system would be hindered through conflict with the phased approach to farming, mining, and

reclamation. Consequently, Teichert concluded that installation of renewable energy systems at the Shifler site would be infeasible.

## Environmental Monitoring

Groundwater levels and quality in the vicinity of the project site have been monitored since 1986 as required by permit conditions for Teichert's Woodland mining operations. The groundwater monitoring network across the Teichert Woodland properties currently consists of 26 monitoring wells and 13 water supply wells monitored by Teichert. In addition, numerous water supply wells near the Teichert Woodland properties are monitored by the YCFCWCD. The locations of these wells are shown in Figure 3-11 below.

The results of groundwater monitoring by the applicant and the YCFCWCD show that groundwater levels on the project site are highest in the western and northwestern portions of the site and lowest in the eastern and south eastern portions of the site.

During a typical spring, high groundwater levels range from approximately 50 feet above MSL in the southeastern corner of the site to approximately 70 feet above MSL in the northwestern corner of the site.[6] During a typical fall, low groundwater levels range from approximately 35 to 40 feet above MSL in the eastern portion of the site to approximately 65 feet above MSL in the northwestern portion of the site.[7] However, during unusually wet or dry years, seasonal differences can vary greatly with historical lows ranging from 10 to 60 feet above MSL onsite and historical highs ranging from 60 feet to 75 feet above MSL onsite.[8]

## Moore / Magnolia Canal Relocation

The project proposes relocation of Moore Canal to an alignment along the western and northern boundary of the project site. Mining of the project site would commence in the northwest corner of the site. Relocation of the canal would occur prior to the commencement of mining within 50 feet of the canal. The relocated canal would be located a minimum of 200 feet from the existing top bank of Cache Creek, and the reclaimed mining slopes within 50-feet of the relocated canal would have 3:1 slopes. The proposed project would also include modification of Magnolia Canal to accommodate the proposed Moore Canal alignment. The proposed locations of the modified canals are shown in Figure 3-6.

The relocated Moore Canal would be concrete-lined and have an access road on each side for periodic maintenance by the YCFCWCD. Two over-crossings (see Figure 3-8) of the relocated Moore Canal would be constructed to facilitate the transport of aggregate by conveyor to the Woodland Plant site and to allow mining equipment to access the project site from the Woodland Plant site. The over-crossings would remain after completion of mining and reclamation to allow vehicular access across the relocated Moore Canal.

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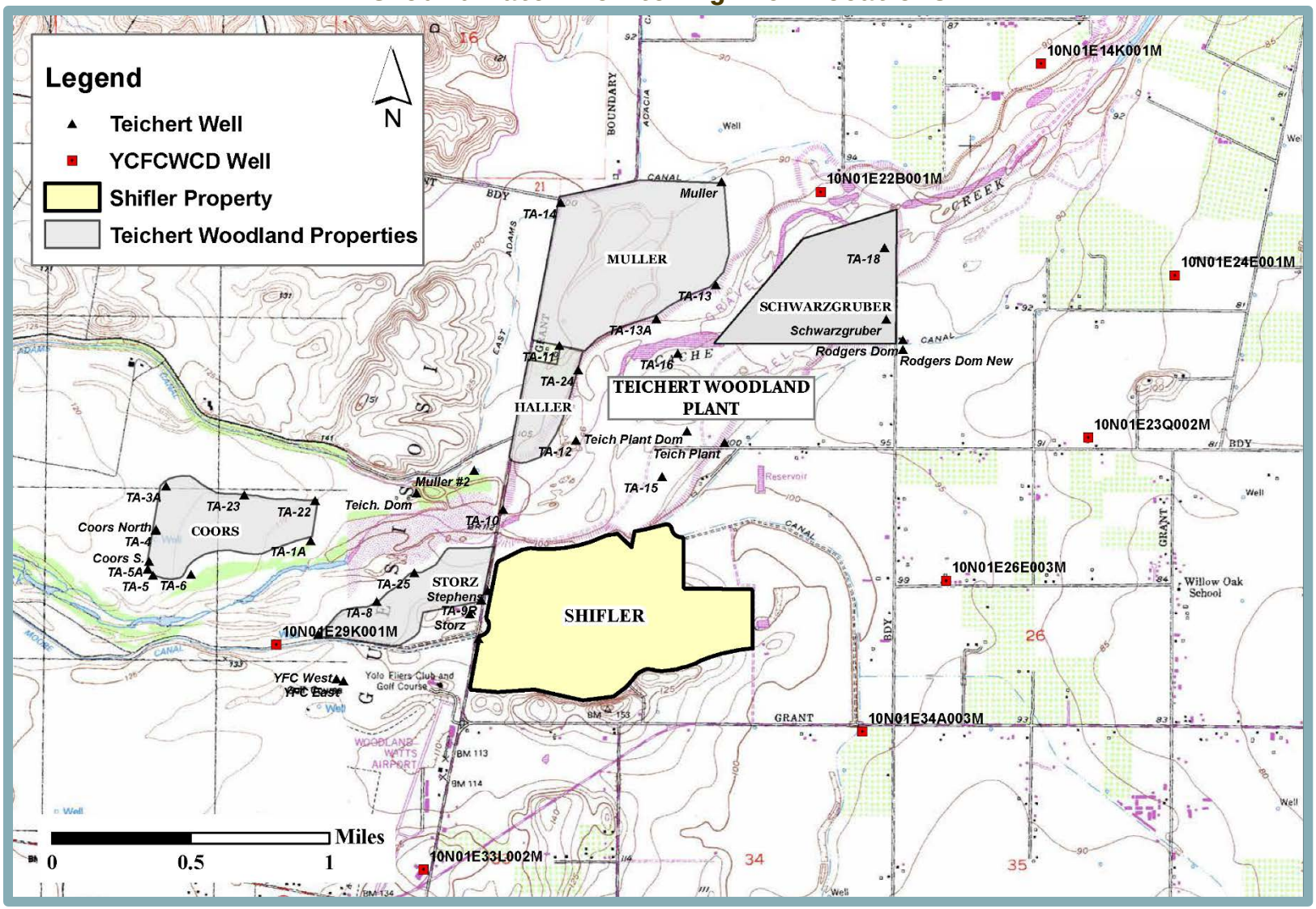
6 Luhdorff & Scalmanini Consulting Engineers. *Groundwater Conditions in the Vicinity of Planned Wetpit Mining Operations, Shifler Property* [Figure 23]. February 2016.

7 Luhdorff & Scalmanini Consulting Engineers. *Groundwater Conditions in the Vicinity of Planned Wetpit Mining Operations, Shifler Property* [Figure 22]. February 2016.

8 Luhdorff & Scalmanini Consulting Engineers. *Groundwater Conditions in the Vicinity of Planned Wetpit Mining Operations, Shifler Property* [Figures 24 and 25]. February 2016.

## Figure 3-11
## Groundwater Monitoring Well Locations



Operations and maintenance activities of the YCFCWCD that occur under existing conditions would continue after canal relocation. During the summer irrigation season, the canal road is driven multiple times per day to deliver water, measure flows, check and adjust gates, inspect the canals and infrastructure, perform gate maintenance, control terrestrial and aquatic weeds, and maintain native habitat plantings. During winter, major maintenance occurs, such as removing silt with an excavator, and rebuilding roads with bulldozers, dump trucks, backhoes, and graders. Erosion repairs and gate replacements also occur in the winter time. Cranes are sometimes used. Culverts, bridge crossings, and drop structure also need periodic maintenance or replacement. Canal roads are also traveled for water quality sample collection, groundwater monitoring, access to other canal locations, and similar activities related to delivering water. Temporary storage of equipment and material will also occur along canal rights-of-way, along with burning of downed vegetation and woody debris occurs when permitted by air quality regulations. Encroachment permits are also sometimes granted for installation of private infrastructure, such as field drains and backwash disposal from pump station filters. During winter rain storms, the canal system receives storm runoff, and the system must be patrolled to find and remove blockages. During non-storm periods in the winter, winter water from Cache Creek is placed (when available and by State permit), into the canals for groundwater recharge purposes.

## Setbacks and Landscaping

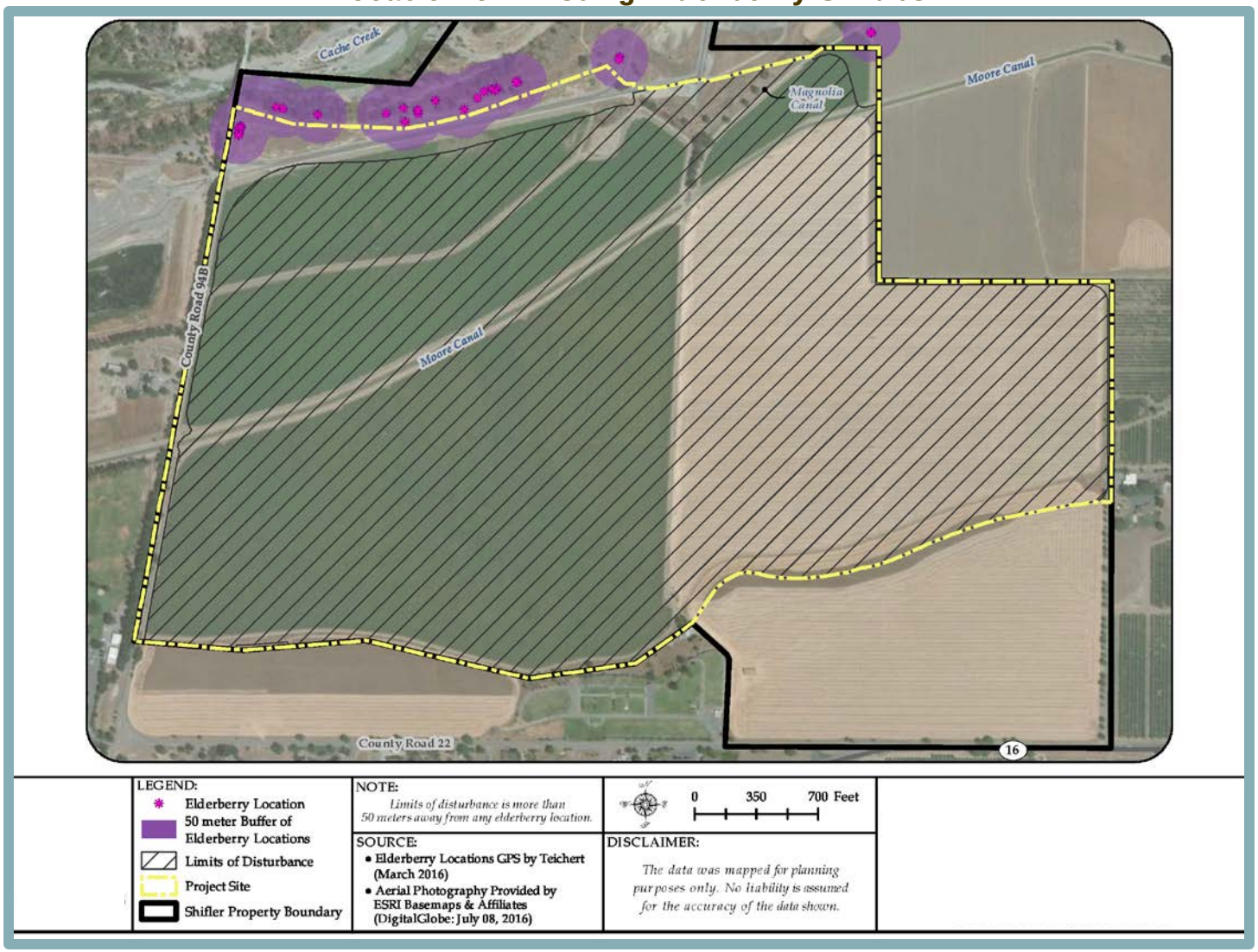
The relocated Moore Canal would be set back a minimum of 200 feet from top of bank and the nearest mining activities would be located approximately 300 feet from Cache. The project is proposed to include a minimum 50-foot setback from County Road 94B to the west of the proposed site with visual screening consisting of berms and landscaping and a setback of approximately 400 feet or more from County Road 22 to the south of the site with visual screening provided by existing topography and landscaping. A 50-foot setback is proposed between the site and the adjacent Woodland Plant site to the north. Implementation of the project would include removal of 46 of the 52 existing oak trees identified within the project site (see Figure 4.4-5 in Chapter 4.4, Biological Resources, of this EIR).

Several elderberry bushes located along the northern boundary of the project site near Cache Creek (see Figure 3-12) are potential habitat for the endangered valley elderberry longhorn beetle (VELB) (*Desmocerus californicus dimorphus*), a threatened species under the federal Endangered Species Act (ESA). The proposed project would not include disturbance within 50 meters (165 feet) of the identified elderberry bushes.

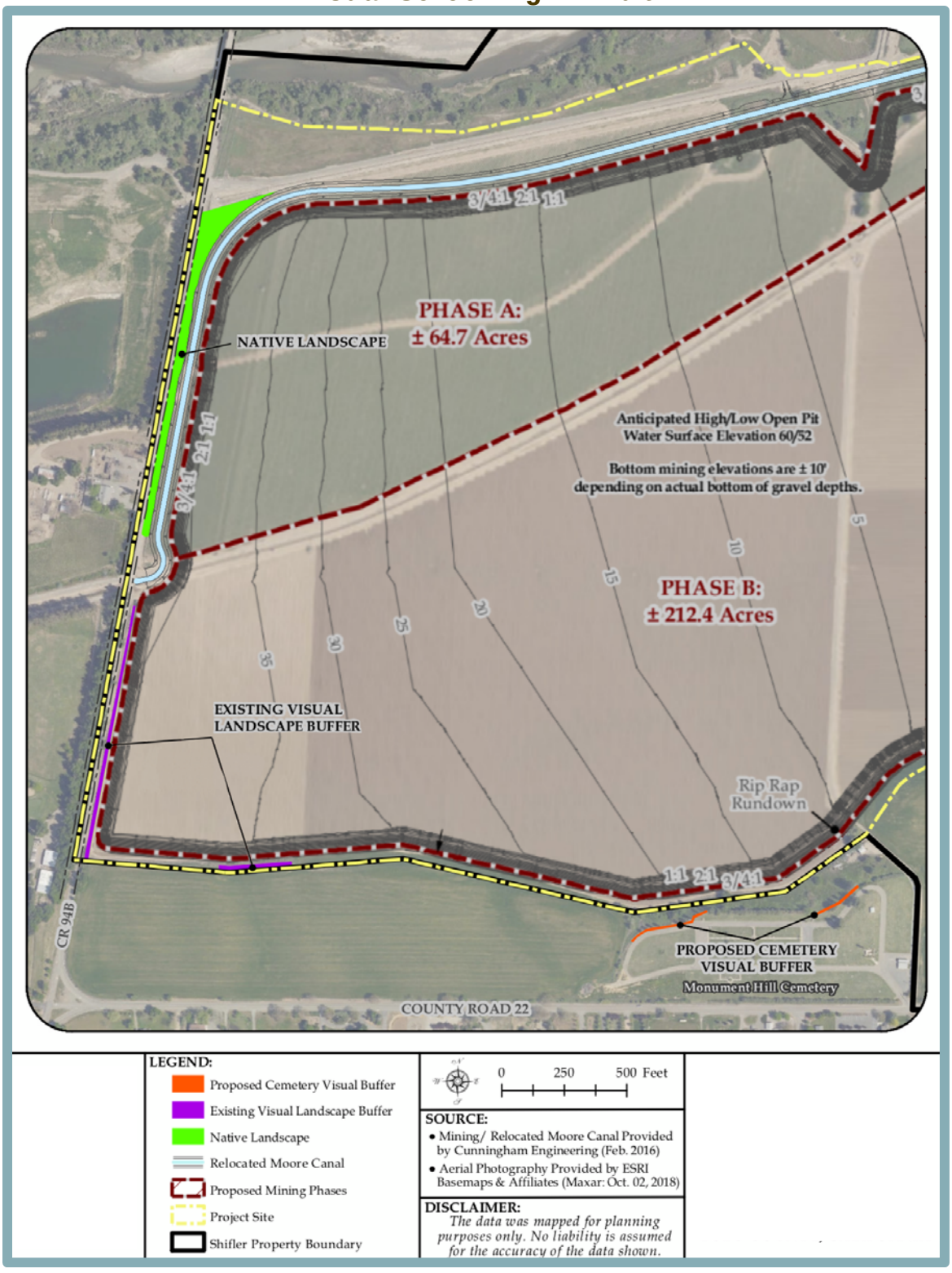
Currently, a landscape buffer is located along the southern portion of the western perimeter of the project site along County Road 94B (see Figure 3-13). A second landscape buffer is provided along a portion of the southern site boundary near County Road 22. As part of the proposed project, the northern section of the western perimeter would be planted with native tree and shrub species prior to commencement of mining activities. The proposed landscape buffers would extend along the north side of the relocated Moore Canal, eventually connecting with the existing Cache Creek riparian corridor.

The project proposes a visual screening program to screen views of the proposed mining operations from the Monument Hill Memorial Park cemetery to the south of the project site. Due to the topography at that location, the landscape plantings would need to be on the Memorial Park property to be effective. Teichert is proposing that the visual screening would be planted on the cemetery property prior to commencement of mining activities on the project site, and is currently in negotiations with the property owner regarding this proposal.

**Figure 3-12**
**Location of Existing Elderberry Shrubs**



## Figure 3-13
## Visual Screening Exhibit



## Schedule and Employees

Existing operations at the Woodland Plant and the associated Schwarzgruber mining site are governed by Condition 38 of the Schwarzgruber Mining Permit, which states the following:

> 38. The hours of operation for the mining site are 6:00am to 6:00pm Monday through Saturday. Occasional 24-hour operations to fulfill contract requirements are allowed within the regulations established in Section 10-4.421 of the mining ordinance. The hours of operation for the Teichert-Woodland plant are 6:00am to 6:00pm Monday through Friday. For the months of August, September, and October, hours may be extended to 10:00pm (Monday through Friday) and 6:00am to 6:00pm Saturday and/or Sunday subject to compliance with Section 10-4.421 of the Mining Ordinance.

Operations at the project site would be consistent with the existing hours of operation as described in this condition.

The Teichert Schwarzgruber operation involves 28 employees, including 22 operating engineers, one teamster, one laborer, and four clerical staff, for aggregate processing activities occurring at the Woodland Plant site and mining and reclamation activities occurring at the Schwarzgruber mining site. The proposed project would maintain similar levels of employment.

Employment at Teichert's Esparto Plant has varied historically depending on production. While the Esparto Plant is currently idle, the Esparto Plant was operating at peak production as recently as April 2017. At peak production, the Esparto Plant employed 24 people, including 18 operating engineers, one teamster, one laborer, and four clerical staff. Once mining ceases at the Esparto Plant, these employees would be transferred over to the Woodland Plant to accommodate the production increase associated with the proposed Shifler operation. Thus, with the proposed transfer of the Esparto production allotment to the Shifler operation, total employment for operations at Shifler including operation of the Woodland Plant, under peak production, would consist of 52 people, including 40 operating engineers, two teamsters, two laborers, and eight clerical staff.

## Drainage and Water Supply

Stormwater runoff would not leave the site during, or after completion of, the proposed mining activities. The project site would be graded to allow stormwater runoff to collect in the proposed mining pit, where the runoff would gradually percolate or evaporate. At the conclusion of mining, the site would remain contoured such that stormwater runoff would be directed to the reclaimed mining area. New stormwater detention basins would be provided within the western and eastern reclaimed agricultural areas of the site.

The project site is currently provided with agricultural water from the YCFCWCD by way of the Moore Canal, which would continue to supply on-site agricultural activities during mining and after reclamation. The project site contains two unused wells: one agricultural well located near the western boundary of the site, and a domestic well located near the northern boundary of the site. The applicant proposes to fill and seal the domestic well, and retain the unused agricultural well as a monitoring well.

As is currently the case for the Teichert Schwarzgruber mining operations, water for aggregate processing and dust suppression at the project site would be supplied by two wells at the

Woodland Plant site and groundwater from the proposed mining pit. Groundwater from the mining pit would be pumped to the Woodland Plant to supply aggregate processing operations at the plant. The proposed water transfer to the Woodland Plant would require installation of a new underground water pipe, to be located alongside the existing conveyor belt alignment. Processing water (also called aggregate wash water) from the project site and the Woodland Plant would be recycled through the use of settling ponds located at the Woodland Plant site. The discharge of aggregate wash water to the settling ponds at the Woodland Plant site would be regulated through Waste Discharge Requirements (WDRs) issued by the Central Valley Regional Water Quality Control Board (RWQCB), as is currently the case. The project proposes modifications to the existing WDRs to allow for the use of fine sediment from aggregate processing (i.e., "fines") in the eventual reclamation of the project site. The processing fines would be pumped from the Woodland Plant site as a slurry (mix of water and fines) and discharged into the mining area/pond in accordance with the requirements of the revised WDRs.

Teichert requests the ability to conduct dewatering activities at the project site subject to the following conditions:

- Groundwater pumping rate from the Shifler mining area may not exceed 3,500 gallons per minute (gpm), consistent with the maximum pumping rate for dewatering at Esparto.
- Annual water use may not exceed 1,910 acre-feet/year (average steady state flow rate of 1,184 gpm or 227,920 cubic feet per day based on 24 hours/day, 365 days/year operations).
- Off-site discharge of pumped groundwater shall not occur. Groundwater from the Shifler mining area would be pumped through a new water pipe to the adjacent Woodland Plant for use in aggregate processing. Aggregate wash water from the Woodland Plant would be discharged to the Shifler mining area in accordance with WDRs to be specified by the RWQCB.
- Groundwater levels would be monitored quarterly, as required under OCSMO Section 10-4.412.
- Groundwater pumping volumes would be recorded, as required under OCSMO Section 10-4.412.

As required under Section 10-4.412 of the OCSMO, Teichert proposes to monitor water levels in the wet pit(s), and nearby monitoring wells on a quarterly basis and would quantify the amount of water pumped from and returned to the wet pit(s).

Potable water demand would be met through bottled drinking water, which would be provided at the adjacent Woodland Plant. Portable toilet facilities would be provided at the project site and existing portable toilet facilities would continue to be used at the adjacent Woodland Plant.

## Phasing

The project includes a phasing plan to minimize the area of disturbed agricultural lands during each mining phase and to encourage the early completion of agricultural reclamation (see Table 3-4). Under the proposed phasing plan, mining activities within the project site would be phased generally from north to south (see Figure 3-14). Agricultural reclamation of the western portion of the project site would occur concurrently with mining activities within the eastern portion of the project site. Mining would occur in two phases: (Phase A (64.7 acres) and Phase B (212.4 acres). Reclamation would occur in three phases: Phase A (98.1 acres), Phase B (142.2 acres), and Phase C (36.8 acres).

**Figure 3-14**
**Proposed Phasing Plan**

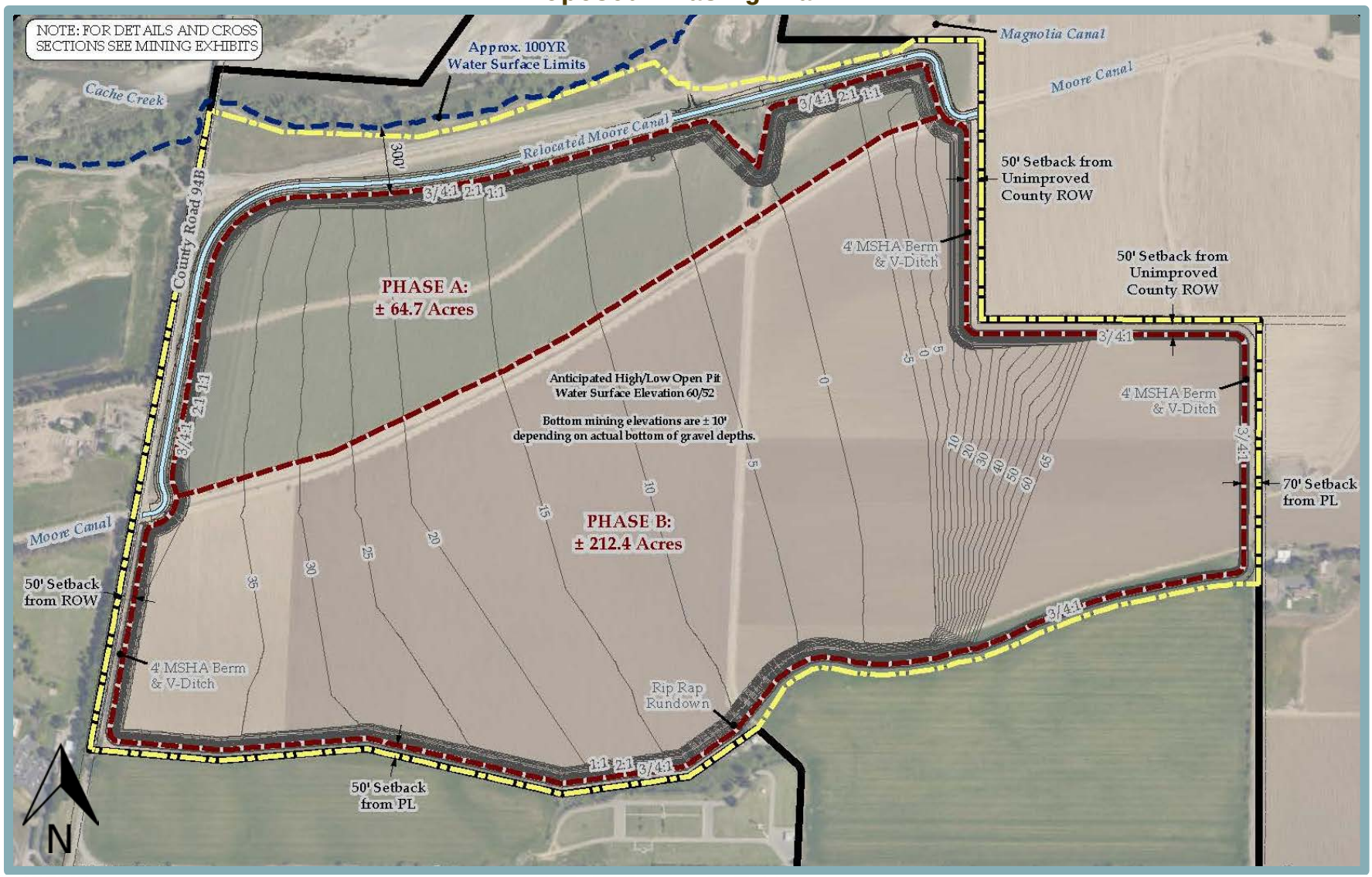


**Table 3-4**
**Mining and Reclamation Phasing Example**

| Years | Mining Activity | Reclamation Activity | Farming Activity |
|---|---|---|---|
| 1 to 10 | Mining in Phase A | Begin Reclamation in Phase A | Farming in Phase B until disturbance and in Phase C |
| 11 to 20 | Mining in Phase B | Continue Reclamation in Phase A, Start Reclamation in Phase B | Continue Farming in Phase B until disturbance |
| 21 to 30 | Mining in Phase B | Complete Reclamation in Phase A, Continue Reclamation in Phase B, Begin Reclamation in Phase C | Begin Farming in reclaimed Phase A |
| 2 years Post Mining | None | Complete Reclamation in Phase B and Phase C | Continue Farming in reclaimed Phase A and Begin Farming in reclaimed Phase C |

## Reclamation Plan

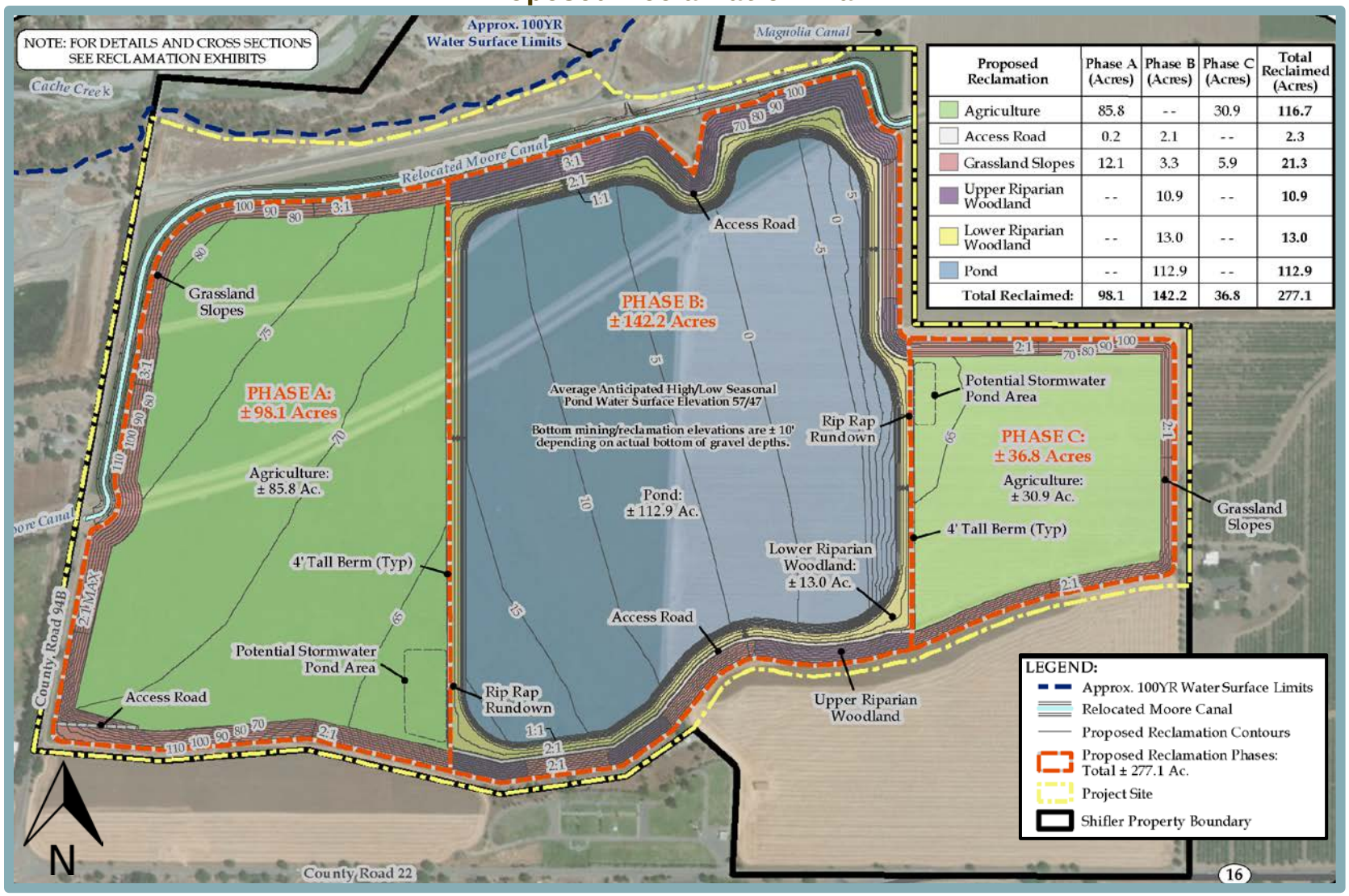
The applicant proposes to reclaim the approximately 277-acre proposed mining area to agriculture and habitat uses (see Figure 3-15). Approximately 116 acres of the mining area would be reclaimed to agricultural use, while the remainder of the mining area would be reclaimed to a lake with riparian woodland along the fringes/shoreline. Slopes would be reclaimed to grassland. The amount of each habitat type could vary depending on actual mining depths and groundwater elevations. Detailed reclamation sheets are provided at the end of this chapter (see Figure 3-29 through Figure 3-36).

Approximately 798,000 cubic yards of reclamation soils would be spread across the 85.8-acre agricultural field and slopes. The agricultural field would have a minimum four feet of reclamation soils placed. The slopes would be graded from the mining grade of 0.75:1 to on average between 2:1 and 3:1 in accordance with the Reclamation Plan using scrapers. Slopes would be track walked using dozers to prepare the slopes for seeding. The seed mix would contain the following pounds per acre (lbs/acre) mix: eight lbs/acre Blue Wild Rye, 12 lbs/acre California Brome, six lbs/acre Annual Fescue, one lb/acre California Poppy, five lbs/acre Arroyo Lupine.

In addition to agriculture and associated access roads, a total of four reclaimed habitat communities are proposed. These include grassland slopes, lake, upper riparian woodland, and lower riparian woodland. Some of these communities may overlap or transition into one another. Grassland and woodland communities would be established surrounding a reclaimed lake in order to enhance habitat values and protect neighboring agricultural fields. These vegetation communities and their associated microhabitats are typical of naturally-occurring ones in the area. Each habitat community is designed to have a diversity of plants and conditions that would complement each other and provide a diverse habitat for wildlife.

After mining has ceased on the project site, all mining equipment would be removed from the site. Reclamation of the project site would occur as soon as feasible. Once groundwater elevations have reached equilibrium, reclamation of the pit floor would occur.

**Figure 3-15**
**Proposed Reclamation Plan**




| Proposed Reclamation | Phase A (Acres) | Phase B (Acres) | Phase C (Acres) | Total Reclaimed (Acres) |
|---|---|---|---|---|
| Agriculture | 85.8 | -- | 30.9 | **116.7** |
| Access Road | 0.2 | 2.1 | -- | **2.3** |
| Grassland Slopes | 12.1 | 3.3 | 5.9 | **21.3** |
| Upper Riparian Woodland | -- | 10.9 | -- | **10.9** |
| Lower Riparian Woodland | -- | 13.0 | -- | **13.0** |
| Pond | -- | 112.9 | -- | **112.9** |
| **Total Reclaimed:** | **98.1** | **142.2** | **36.8** | **277.1** |

Overburden and processing fines generated from the Woodland Plant would be used to create any remaining slopes and benches within the mining area. Reclamation to habitat uses (lake, riparian wetland, riparian oak woodland, and grassland/slopes) would include a minimum of 12 inches of soil (topsoil/overburden/silt) to be placed on all surfaces.[9]

Agricultural reclamation would require the use of overburden and processing fines to raise the pit floor elevation above the average high groundwater level followed by the placement of a minimum of four feet of salvaged reclamation soils (stockpiled topsoil and upper layers of overburden) on the created land (see Appendix C).[10] The Reclamation Plan proposes reclaimed agricultural field elevations of a minimum of five feet above the average high groundwater elevations.

Average high groundwater levels would range from 75 feet MSL in the northwestern corner to 57 feet MSL in the southeastern corner of the western agricultural field, and from 57 feet MSL in the northwestern corner to 47 feet MSL in the southeastern corner of the eastern agricultural field. The Reclamation Plan requires that the reclaimed agricultural land demonstrate productivity that is equal to or greater than existing productivity (see Appendix C).[11]

## Reclamation Slopes

Reclamation of the project site would comply with the following minimum slopes, as described as a ratio of horizontal to vertical:

- 2:1 above average high reclaimed groundwater level (57 feet MSL at the reclaimed lake), except for reclaimed mining slopes that are within 50 feet of the relocated Moore Canal, which will have a minimum slope of 3:1;
- 4:1 between average high reclaimed groundwater level (57 feet MSL) and five feet below average high reclaimed groundwater level (52 feet MSL);
- 2:1 between five feet below average high reclaimed groundwater level (52 feet MSL) and five feet below average low reclaimed groundwater level (42 feet MSL); and
- 1:1 below five feet below average low reclaimed groundwater level (42 feet MSL).

## Financial Assurances

SMARA requires that each mining operation have a financial assurance to ensure that reclamation is performed in accordance with the approved reclamation plan. Financial assurances must be payable to "lead agency" and the Department of Conservation. If a change of ownership occurs, the existing financial assurance remains in force until a replacement financial assurance is approved by the lead agency.

For private entities, financial assurances must be in the form of surety bond, irrevocable letter of credit, or trust fund (such as an assigned certificate of deposit) acceptable to the State. SMARA requires that the financial assurances be adjusted annually. The adjustments account for new lands disturbed, inflation and for reclamation of lands accomplished in accordance with the approved reclamation plan (PRC 2773.1(a)(3). In other words, the financial assurances are calculated based on the state of the mining operation each year (e.g. the cost to reclaim should the operation close during that year) rather than from the final anticipated state of the land at the planned end of mining. Teichert's Shifler Mining and Reclamation Plan application included a Financial Assurance Cost Estimate (FACE) of $777,486.43 for the first phase of mining.

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9 Teichert Materials. *Shifler Mining and Reclamation Project, Project Description.* August 2018.
10 Teichert Materials. *Shifler Mining and Reclamation Plan, Yolo County, California.* June 2018.
11 Teichert Materials. *Shifler Mining and Reclamation Plan, Yolo County, California.* June 2018.

## 3.6 REQUIRED DISCRETIONARY APPROVALS

The following sections describe the required Yolo County approvals associated with the proposed project. In addition to certification of this EIR, the proposed project would require the following approvals from Yolo County. Each entitlement is described in greater detail below:

- General Plan Amendment (GPA) to extend the MRO over the entire project site;
- Rezone to add a Sand and Gravel Overlay (SG-O) over the entire project site
- Mining Permit (30-year Off-Channel Surface Mining Permit) for new excavation site, and continued operation at the Woodland Plant site;
- Transfer of annual permitted tonnage allocation from Teichert Schwarzgruber and Teichert Esparto projects to the Teichert Shifler project;
- Reclamation Plan;
- Approval of 20 percent exceedance of annual production limits under County Code Section 10.4-405;
- Streambank Stabilization Plan; and
- Development Agreement.

### General Plan Amendment

Per the Yolo County General Plan, the project site is designated AG, and approximately 107 acres of the project site is included in the MRO designation. The proposed project requires a General Plan Amendment to extend the MRO designation over an additional 212 acres to cover the remainder of the 319.3-acre project site (see Figure 3-16).

At the time of the Notice of Preparation (NOP), the project required an amendment to the CCAP to include the project site in the OCMP boundary. However, an update to the CCAP was approved in December 2019 and included the necessary amendments to the OCMP boundary. The OCMP "Planning Area" now covers all land inside the CCAP boundary but outside the CCRMP boundary, as depicted in Figure 4 of the CCAP. Thus, as a result of the recent updates to the CCAP, the project site is now included in the OCMP Planning Area, and amendment to the CCAP is no longer required.

### Rezone

The project site is currently zoned A-N. The proposed project would include a rezone to add the SG-O overlay to the site, resulting in a zoning designation of A-N/SG-O (see Figure 3-17). Aggregate mining is a conditionally allowed use in the A-N/SG-O zone subject to the approval of a Surface Mining Permit as described below.

### Mining Permit

The proposed project would require approval of a Surface Mining Permit (Mining Permit) as described in Chapter 4 of Title 10 of the County Code entitled Off-Channel Surface Mining Ordinance (Mining Ordinance). A mining permit is a type of conditional use permit.

**Figure 3-16**
**Proposed General Plan Amendment**

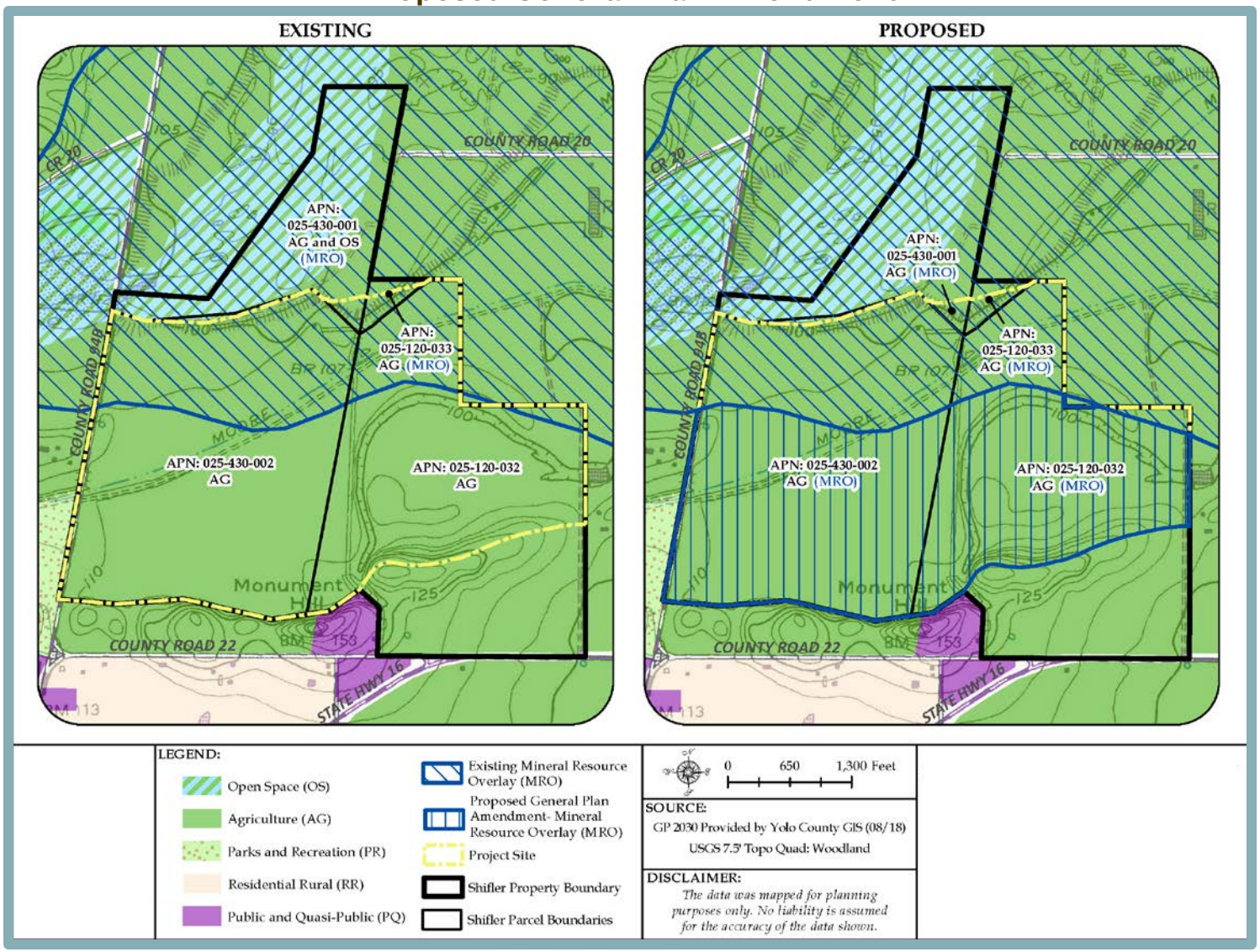
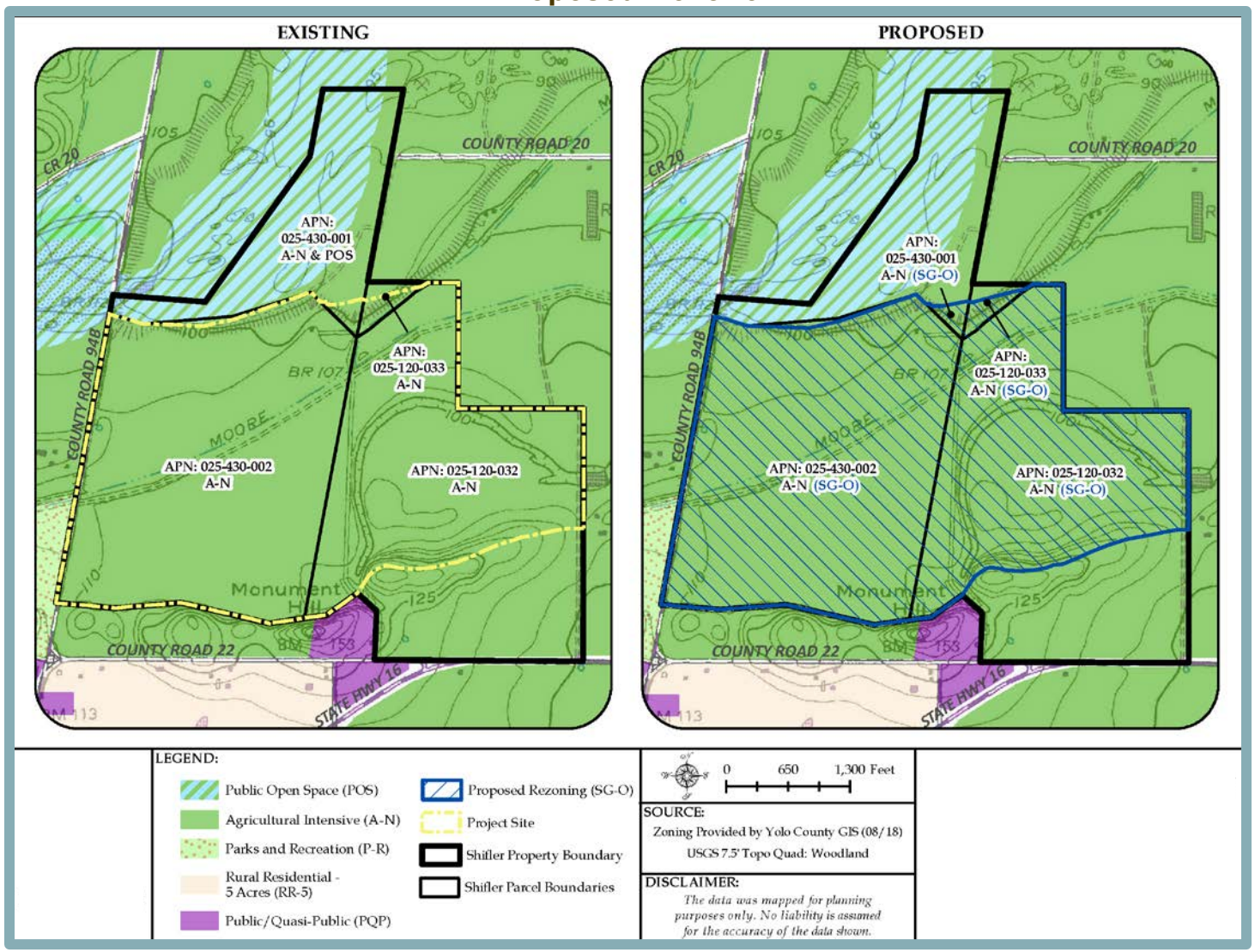


**Figure 3-17**
**Proposed Rezone**



Mining of the aggregate reserves on the project site could take 20 years or longer, depending on market demand. OCMP Policy 2.4-3 limits surface mining permits to a maximum of 30 years, with the potential to extend the permit life by a maximum of 20 years with subsequent approvals. Accordingly, the applicant is requesting approval of a Mining Permit with a duration of 30 years from the commencement of mining on the project site. Thus, if approval is granted in 2020, the permit would expire in 2050. Reclamation activities could continue for an additional two years after the expiration of the requested Mining Permit.

The proposed project includes a request to extend the permitted life of the Woodland Plant from the current expiration date of January 1, 2028 (under the Schwarzgruber approval) to 30 years beyond approval of mining activities on the project site, consistent with the requested Shifler Mining Permit. Increased processing capacity, new equipment, and continued operation of the Woodland Plant is incorporated as a part of the subject application. Relevant conditions of approval for this project would extend to the Plant and its operations.

## Transfer of Mining Allocation

The applicant is requesting to transfer the annual permitted tonnage allocation associated with the Teichert Schwarzgruber operation and the Teichert Esparto operation upon completion of mining or permit expiration at either site. Together, the proposed transfers would allow the Teichert Shifler operation to mine a maximum of 2,588,237 tons (2.2 million tons sold) in any given year, provided that production over a consecutive 10-year period does not exceed 23,529,430 tons mined (20 million tons sold).

## Reclamation Plan Approval

The project proposes reclamation of the 277.1-acre mining area to 116.7 acres of agriculture, 112.9 acres of lake, 45.2 acres of grasslands and riparian habitat, and 2.3 acres of access road. Reclamation would be undertaken over time as mining occurs, and would be completed within approximately two-years of completion of the final phase of mining.

## Exceedance of Annual Production Limits

Pursuant to Section 10-4.405 of the Mining Ordinance, surface mines must operate within the limits of the annual production level established in the applicable mining permit. Annual aggregate production may not exceed the established annual level, except to meet temporary market demand. Individual producers may exceed their maximum annual allocation by up to 20 percent in any one calendar year, so long as their running 10-year average does not exceed the maximum level. Aggregate sold in excess of the established annual level is subject to a $0.10/ton mining fee surcharge. The Teichert Schwarzgruber operation has approval under this section of the code. The Teichert Esparto operation does not. The project includes a request to apply this Section of the code to the tonnage allocation transferred from the Schwarzgruber operation to Shifler.

## Streambank Stabilization Plan

The proposed project is requesting approval of mining, and relocation of the Moore Canal, within 700 feet of, but no closer than 200 feet to, the Cache Creek channel bank. The area within 700 feet of the channel bank is called the “streamway influence boundary”. In support of this request a Streambank Stabilization Plan (SSP) is required for the south bank of Cache Creek adjacent to the northern margin of the proposed mining area. The SSP must comply with the provisions of Section 10-4.429(d) of the Mining Ordinance and must implement channel bank improvements (referred to as the Channel Form Template) along the property creek frontage, consistent with

the CCRMP and Cache Creek Improvement Plan (CCIP), if the aforementioned improvements are required.

The technical analysis of conditions at this location (see Appendix J) demonstrates that this area has low potential for lateral stream migration or bank retreat, that additional bank stabilization measures are not currently necessary, and that the channel bank alignment is substantially consistent with the CFT along the property creek frontage. This is discussed further in Chapter 4.8, Hydrology and Water Quality. Therefore, the purpose of the required SSP is to identify preventive measures (bank reinforcement and habitat enhancement), operation and maintenance requirements, and any requirements for preemptive stream stabilization mechanisms that the County determines to be necessary to support activity within the streamway influence boundary at this location. The applicant will be required to secure a Flood Hazard Development Permit (FHDP) in conjunction with approval of an SSP, pursuant to Section 8-4.404 of the County Code, to address required improvements within a special flood hazard area. The FHDP will be examined at the time of submittal will be subject to review at that time to ensure compliance with the CCRMP/CCIP and appropriate CEQA coverage in the CCAP Update FEIR.

## Development Agreement

The proposed project includes the execution of a new development agreement between the applicant and the County. Among other things, the development agreement vests the requested approvals and commits the applicant to participation in the CCAP including payment of per-ton mining fees and the provision of other specified public benefits known also as “net gains”.

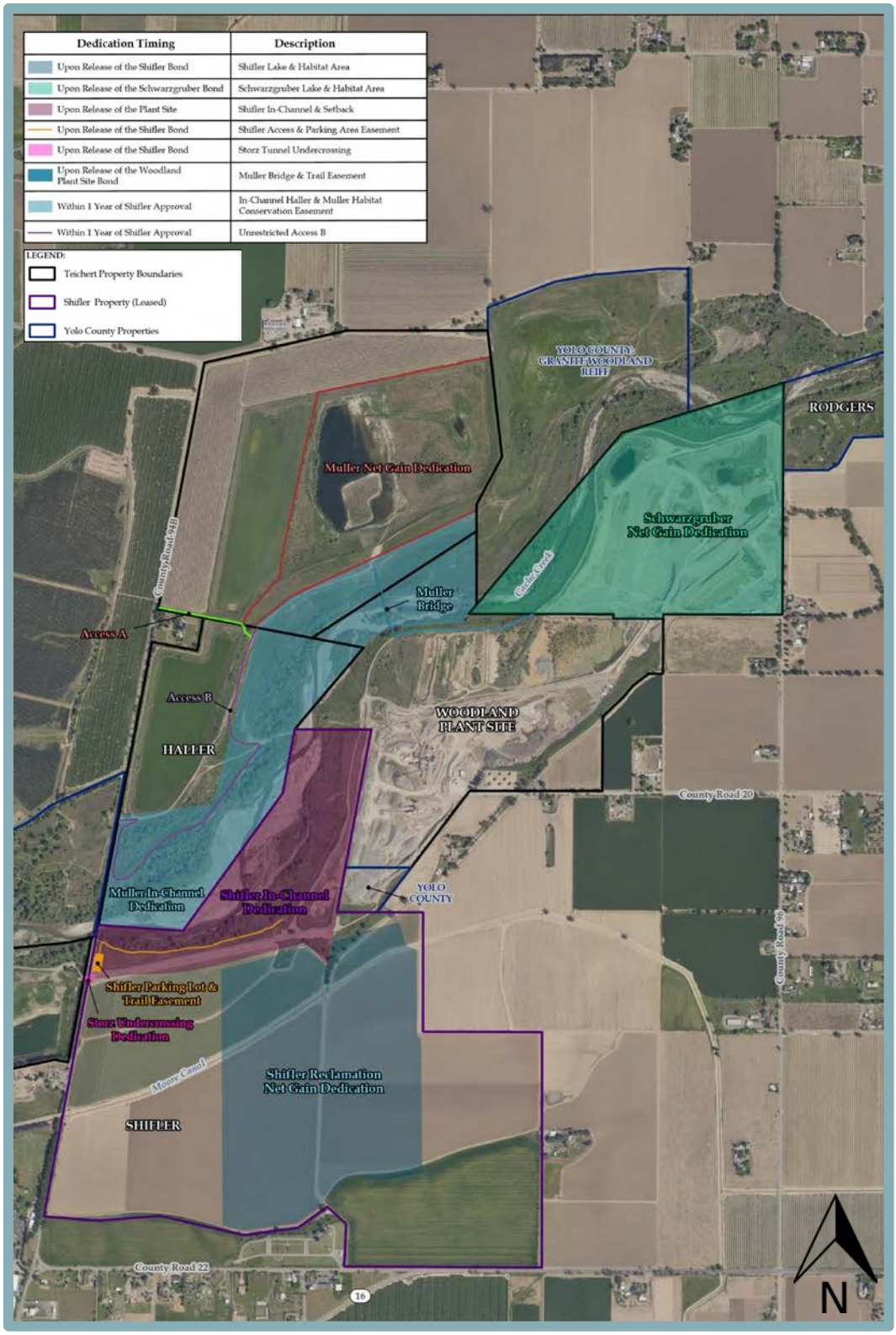
The following net gains are under consideration as a part of the Teichert Shifler development agreement and are analyzed in this EIR as a part of the proposed project:

- In-channel bar skimming pursuant to the CCRMP – Figure 3-18 identifies the extent of the area proposed for in-channel bar skimming. The applicant is proposing to design and complete a gravel bar removal project to help prevent further channel bank erosion and provide for addition capacity in the Cache Creek channel. The proposed in-channel bar skimming would take place over a five-year period in the area in-channel segment bounded by the County Road 87 bridge to the west and the Interstate 505 bridge to the east. The project would remove approximately 3,000,000 tons of excess sand and gravel material from the Cache Creek channel, realign the low-flow channel of Cache Creek away from the banks and toward the center of the creek channel, remove invasive species from the project area, and complete bank repairs adjacent to the Teichert Esparto Plant consistent with the CRMP/CCIP Channel Form Template. The amount of material removed in any one year would be governed by Section 10.3-409 of the In-Channel Maintenance Mining Ordinance and would generally not exceed 690,800 tons in any one year.

  This work is anticipated and encouraged in the CCRMP/CCIP and associated impacts are addressed in the CCAP Update EIR (certified December 2019). The work would require issuance of a subsequent Flood Hazard Development Permit (FHDP) by the County and would require subsequent hydraulic analysis to confirm public benefit through reduction of flood risk. All removal would be subject to review and oversight by the Cache Creek Technical Advisory Committee (TAC).

**Figure 3-18**
**In-Channel Bar Skimming**

## Figure 3-19
## Dedication of Reclaimed Lands



- Dedication of reclaimed lands – Figure 3-19 identifies three properties offered for dedication to the County. Future uses would include public recreation, open space, and habitat pursuant to the proposed/approved reclamation plan for each property and consistent with the Cache Creek Parkway Plan documents.

    - Shifler Lake -- the Shifler reclaimed lake and surrounding habitat totaling approximately 142 acres would be dedicated to the County as part of the Cache Creek Parkway system following reclamation which is estimated to occur in 2051. Dedication would include trails, the existing conveyor tunnel under County Road 94B, and a gravel parking area to be constructed by the applicant.

    - Shifler In-Channel – the northerly area of the Shifler property totaling approximately 123 acres lies primarily in-channel, between the Haller-Muller In-Channel property already slated for dedication to the County and the Woodland Plant. Dedication would occur following reclamation of the Woodland Plant which is estimated to occur in 2051. This dedication would also serve to partially offset the requirements of Mitigation Measure 4.2-1 related to agricultural mitigation equivalency allowed under Section 10-5.525 of the County Reclamation Ordinance.

    - Schwarzgruber Property – the Schwarzgruber reclaimed lake and surrounding habitat totaling approximately 132 acres would be dedicated to the County as part of the Cache Creek Parkway system following reclamation which is estimated to occur in 2028. This dedication would also serve to partially offset the requirements of Mitigation Measure 4.2-1 related to agricultural mitigation equivalency allowed under Section 10-5.525 of the County Reclamation Ordinance.

    - Woodland Plant Site – the reclaimed Woodland Plant site totaling approximately 132 acres may be offered for dedication in partial satisfaction of Mitigation Measure 4.2-1 related to agricultural mitigation equivalency allowed under Section 10-5.525 of the County Reclamation Ordinance.

- Cash donation of $15,000 to Cache Creek Nature Preserve within one year of approval of the Shifler project.

- Cash donation of $5,000 to the County for update of the Cache Creek Parkway Plan documents within one year of approval of the Shifler project.

- Cash or in-kind donation equivalent to $20,000 for safe pedestrian crossing of County Road 94B for purposes of trail connection within one year of approval of the Shifler project.

- Continued designation of the Woodland Plant site as sales tax place of sale

- Dedication of Teichert In-Channel Haller/Muller within one year of approval of the Shifler project. Dedication of this property was a commitment of two previous agreements however the dedication date was tethered to the date of reclamation of the Woodland Plant site; this commitment provides a date certain.

- Enhanced reclamation of the County Borrow Site property to include improvements consistent with the Cache Creek Parkway Plan documents including trail connections, grading for mountain bike pump track use, and installation of antique mining equipment as part of living museum on site. Reclamation would occur in conjunction with reclamation of the Woodland plant site which is estimated to occur in 2051.

- Clarification of previously negotiated terms of the Teichert Muller Bridge dedication to include dedication of a trail easement connection from the south landing, east to the Schwarzgruber property. Dedication of the trail easement connection would occur following reclamation of the Woodland plant which is estimated to occur in 2051, at the same time as the bridge dedication.

- Modification to previously negotiated terms of Teichert Muller Trail Access B (see Figure 3-20) to allow unlimited public access upon dedication and into perpetuity. The change would be effective within one year of approval of the Shifler project.

## Summary of Responsible Agency Approvals

The proposed project may require the following approvals/permits:

- Approval of the proposed Moore Canal relocation (YCFCWCD Board of Directors);
- Clean Water Act Section 404 Permit (U.S. Army Corps of Engineers);
- Clean Water Act Section 401 Water Quality Certification (Central Valley RWQCB);
- Waste Discharge Requirements (WDRs) for use of sediment fines from the Woodland Plant site for reclamation of the project site (Central Valley RWQCB);
- SMARA Compliance Review (California Department of Conservation, Division of Mine Reclamation);
- Gas Well Abandonment Permit (California Department of Conservation, Division of Oil, Gas, and Geothermal Resources); and
- Water Well Abandonment Permit (Yolo County Environmental Health Division).

**Figure 3-20**
**Teichert Muller Trail Access B**

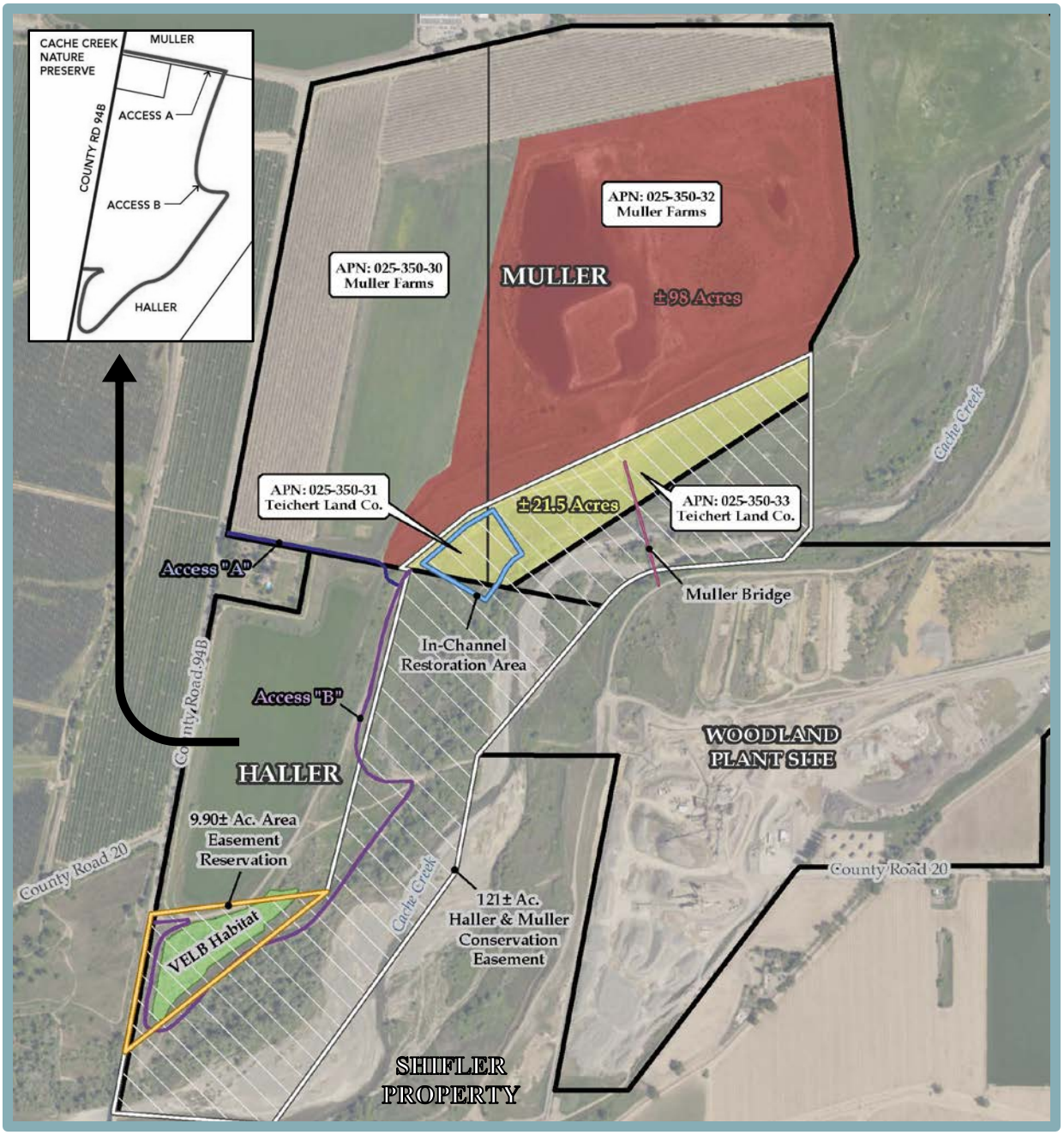


**Figure 3-21**
**Proposed Mining Limits**

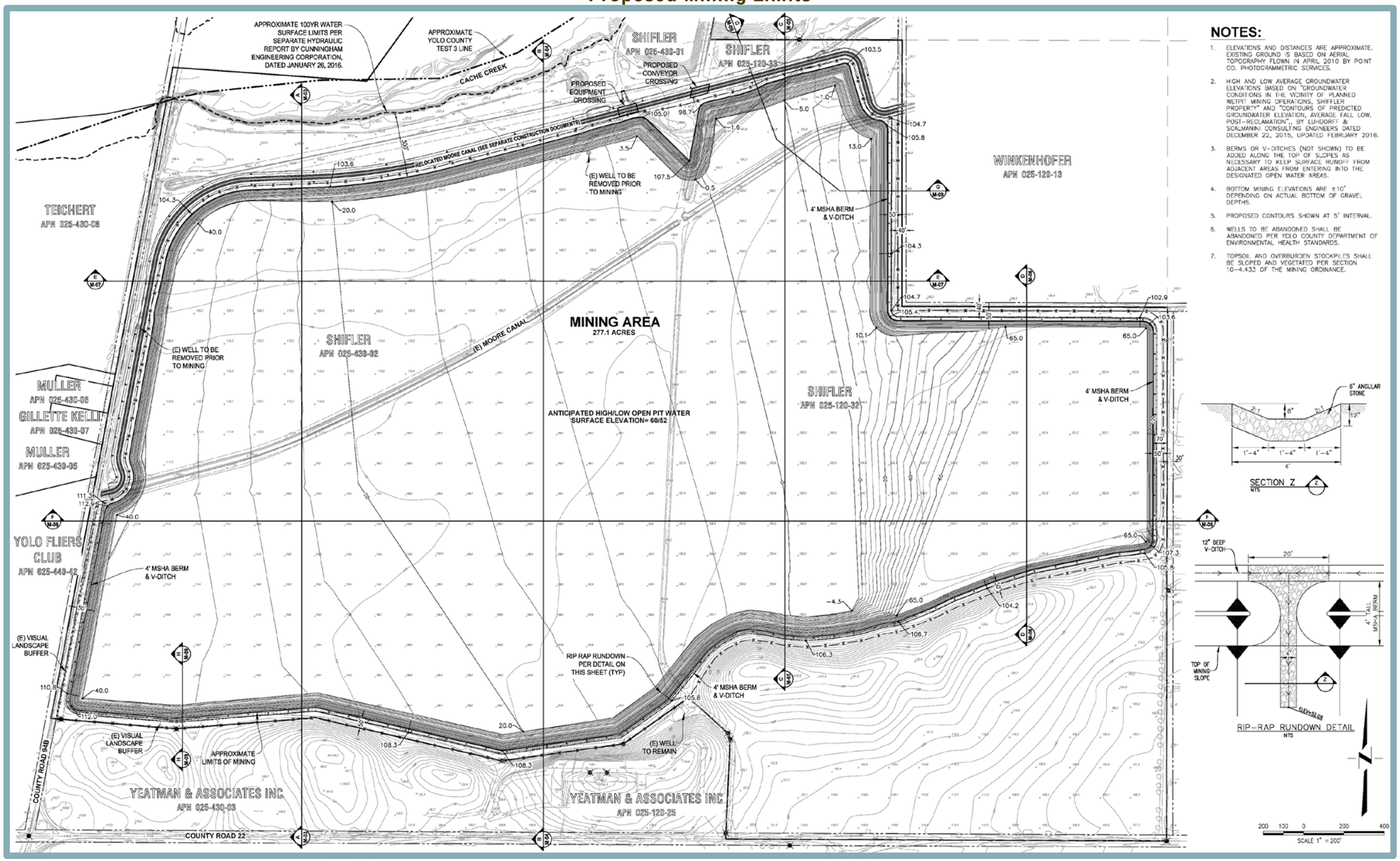
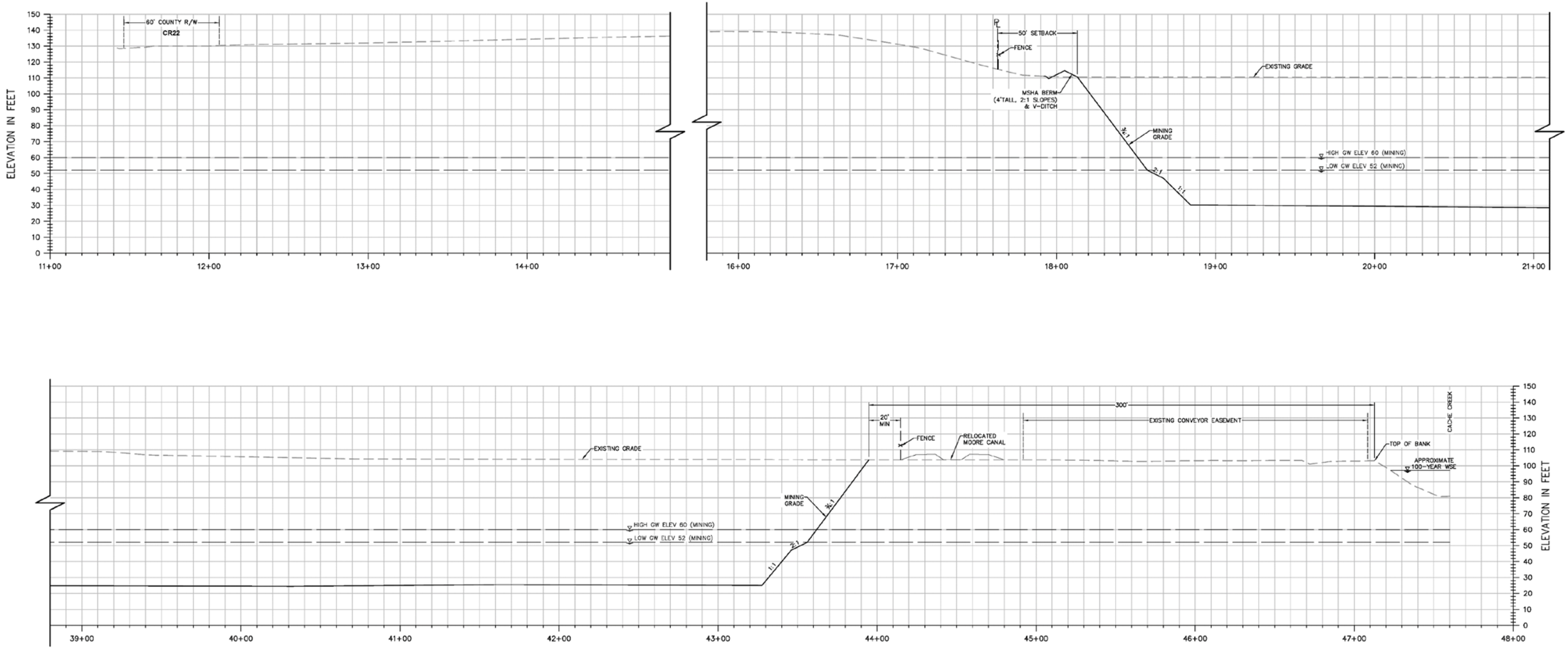


**Figure 3-22**
**Proposed Mining Cross-Sections – Section A-A**

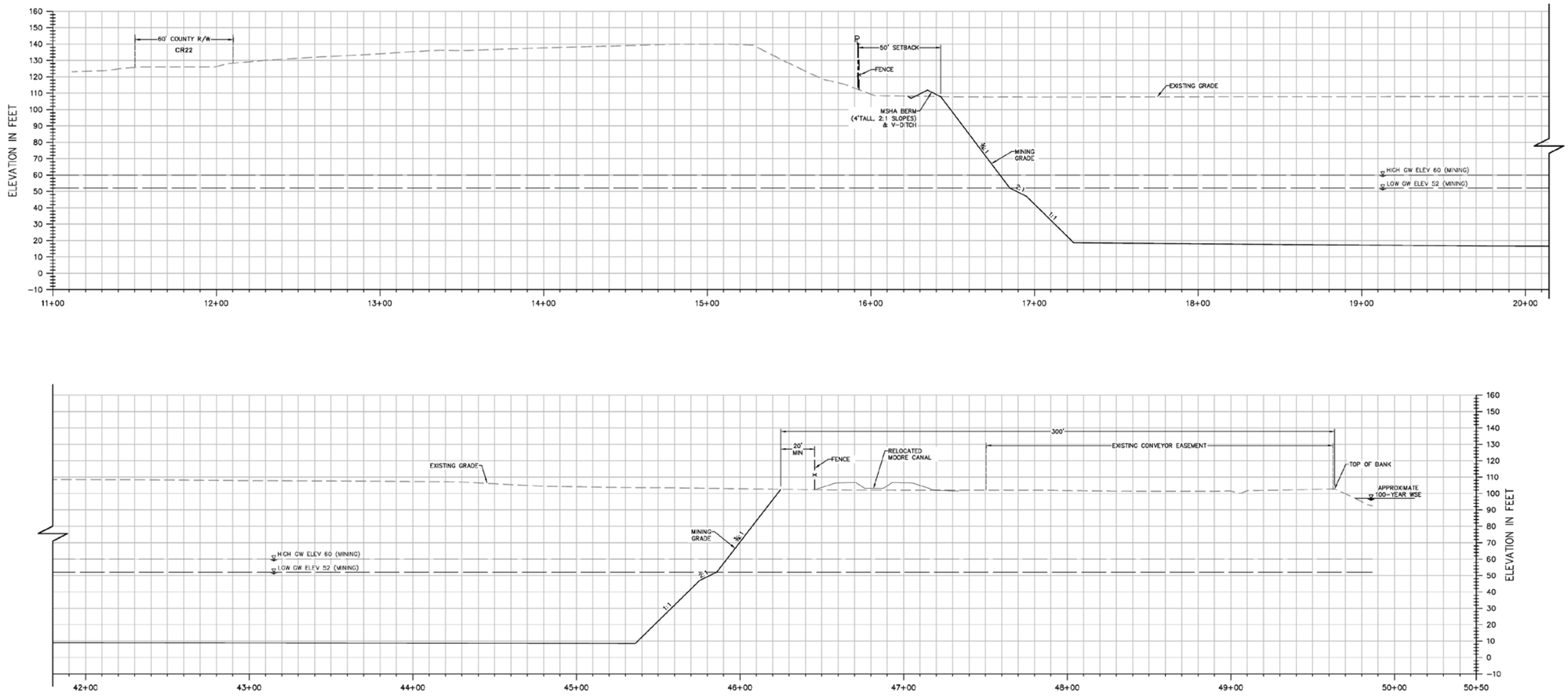



**SECTION A-A**
H: 1"=30'
V: 1"=30'

**NOTES:**

1. ELEVATIONS AND DISTANCES ARE APPROXIMATE. EXISTING GROUND IS BASED ON AERIAL TOPOGRAPHY FLOWN IN APRIL 2010 BY POINT CO. PHOTOGRAMMETRIC SERVICES.
2. HIGH AND LOW AVERAGE GROUNDWATER ELEVATIONS BASED ON "GROUNDWATER CONDITIONS IN THE VICINITY OF PLANNED WETPIT MINING OPERATIONS, SHIFFLER PROPERTY" AND "CONTOURS OF PREDICTED GROUNDWATER ELEVATION, AVERAGE FALL LOW, POST-RECLAMATION", BOTH BY LUHDORFF & SCALMANINI CONSULTING ENGINEERS DATED DECEMBER 22, 2015, UPDATED FEBRUARY 2016.
3. BERMS OR V-DITCHES TO BE ADDED ALONG THE TOP OF SLOPES AS NECESSARY TO KEEP SURFACE RUNOFF FROM ADJACENT AREAS FROM ENTERING INTO THE DESIGNATED OPEN WATER AREAS.
4. BOTTOM MINING ELEVATIONS ARE ±10' DEPENDING ON ACTUAL BOTTOM OF GRAVEL DEPTHS.

**Figure 3-23**
**Proposed Mining Cross-Sections – Section B-B**




**SECTION B-B**
H: 1"=30'
V: 1"=30'

**NOTES:**

1. ELEVATIONS AND DISTANCES ARE APPROXIMATE. EXISTING GROUND IS BASED ON AERIAL TOPOGRAPHY FLOWN IN APRIL 2010 BY POINT CO. PHOTOGRAMMETRIC SERVICES.
2. HIGH AND LOW AVERAGE GROUNDWATER ELEVATIONS BASED ON "GROUNDWATER CONDITIONS IN THE VICINITY OF PLANNED WETPIT MINING OPERATIONS, SHIFFLER PROPERTY" AND "CONTOURS OF PREDICTED GROUNDWATER ELEVATION, AVERAGE FALL LOW, POST-RECLAVATION", BOTH BY LUHDORFF & SCALMANINI CONSULTING ENGINEERS DATED DECEMBER 22, 2015, UPDATED FEBRUARY 2016.
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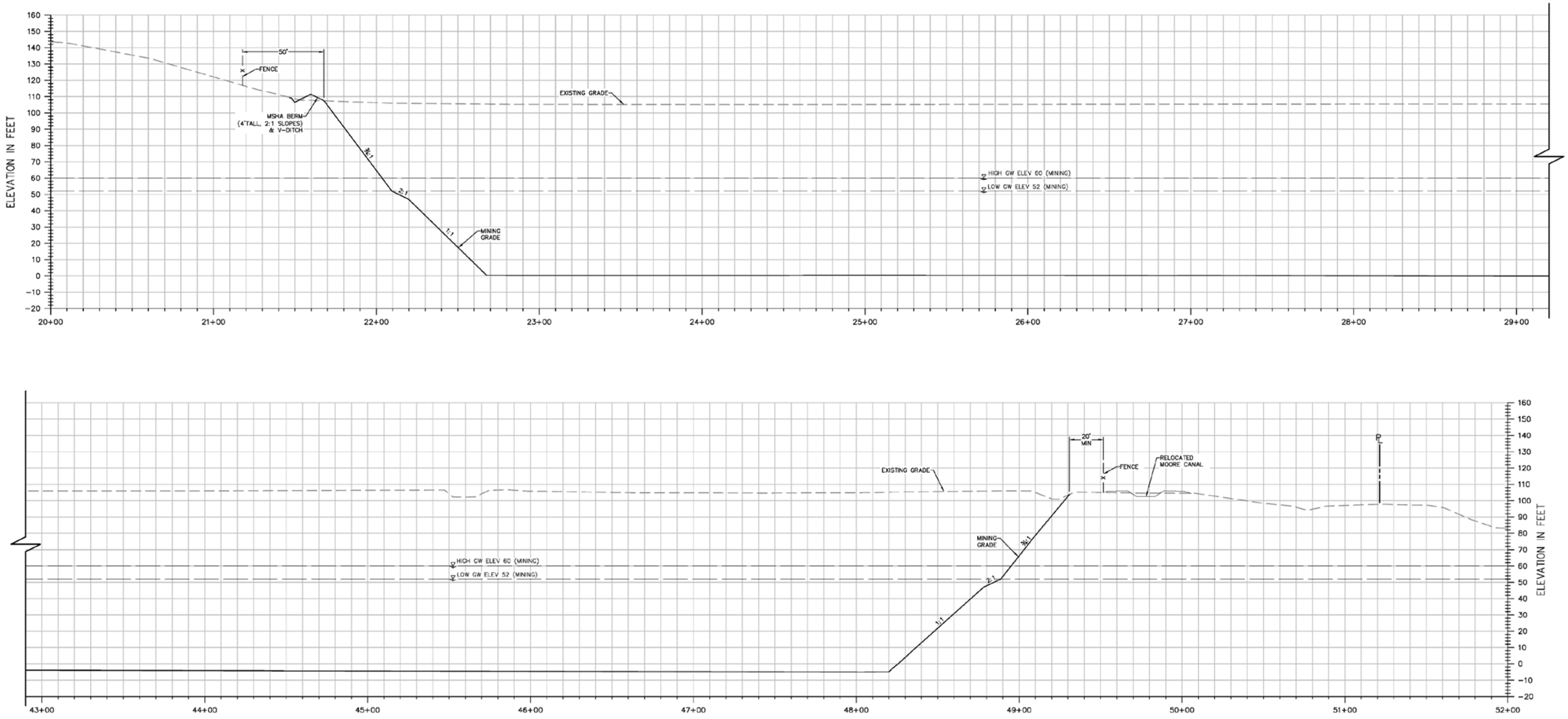
4. BOTTOM MINING ELEVATIONS ARE ±10' DEPENDING ON ACTUAL BOTTOM OF GRAVEL DEPTHS.

**Figure 3-24**
**Proposed Mining Cross-Sections – Section C-C**

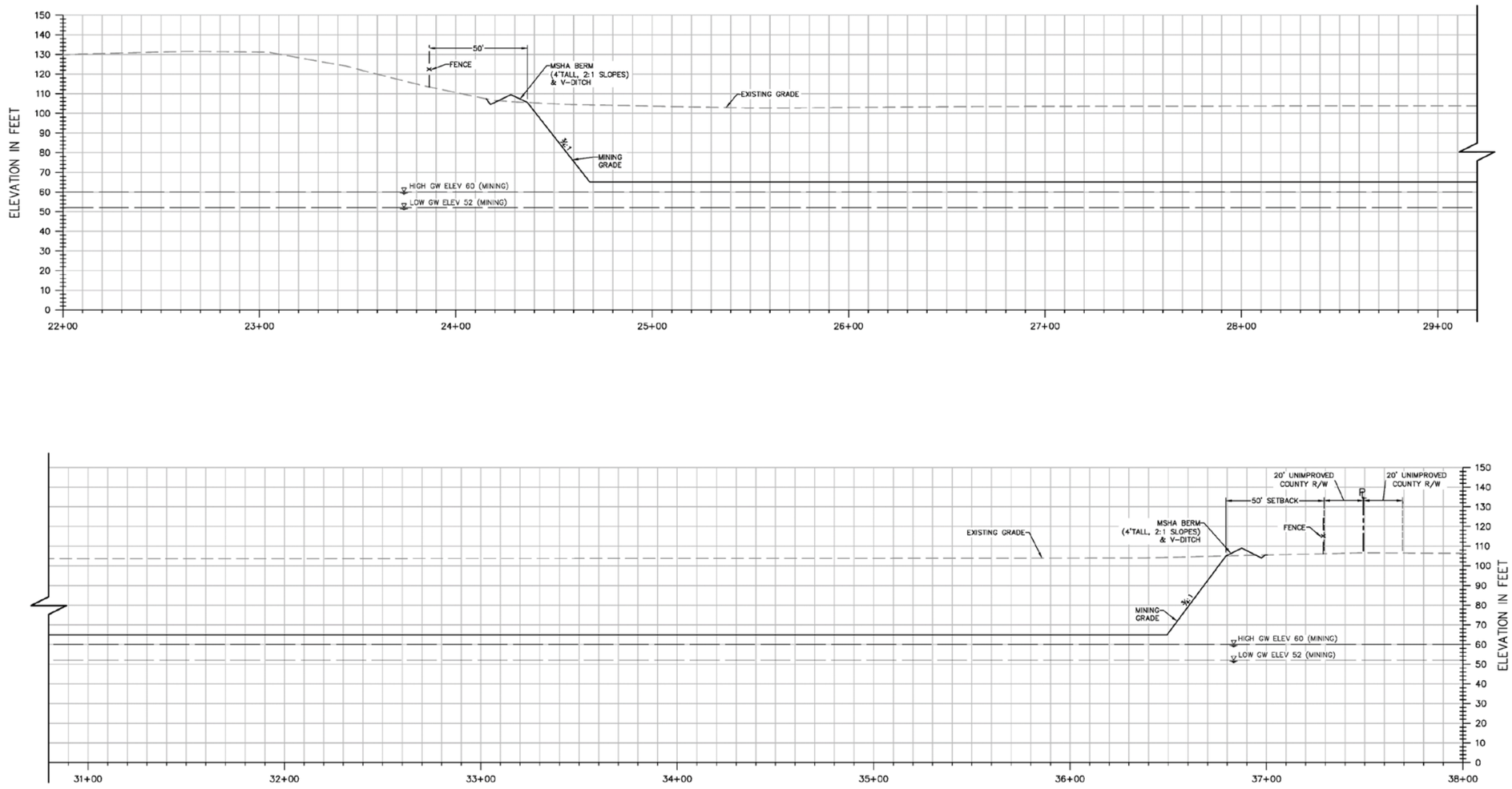



**SECTION C-C**
H: 1"=30'
V: 1"=30'

**NOTES:**

1. ELEVATIONS AND DISTANCES ARE APPROXIMATE. EXISTING GROUND IS BASED ON AERIAL TOPOGRAPHY FLOWN IN APRIL 2010 BY POINT CO. PHOTOGRAMMETRIC SERVICES.
2. HIGH AND LOW AVERAGE GROUNDWATER ELEVATIONS BASED ON "GROUNDWATER CONDITIONS IN THE VICINITY OF PLANNED WETPIT MINING OPERATIONS, SHIFFLER PROPERTY" AND "CONTOURS OF PREDICTED GROUNDWATER ELEVATION, AVERAGE FALL LOW, POST-RECLAMATION", BOTH BY LUHDORFF & SCALMANINI CONSULTING ENGINEERS DATED DECEMBER 22, 2015, UPDATED FEBRUARY 2016.
3. BERMS OR V-DITCHES TO BE ADDED ALONG THE TOP OF SLOPES AS NECESSARY TO KEEP SURFACE RUNOFF FROM ADJACENT AREAS FROM ENTERING INTO THE DESIGNATED OPEN WATER AREAS.
4. BOTTOM MINING ELEVATIONS ARE ±10' DEPENDING ON ACTUAL BOTTOM OF GRAVEL DEPTHS.

**Figure 3-25**
**Proposed Mining Cross-Sections – Section D-D**

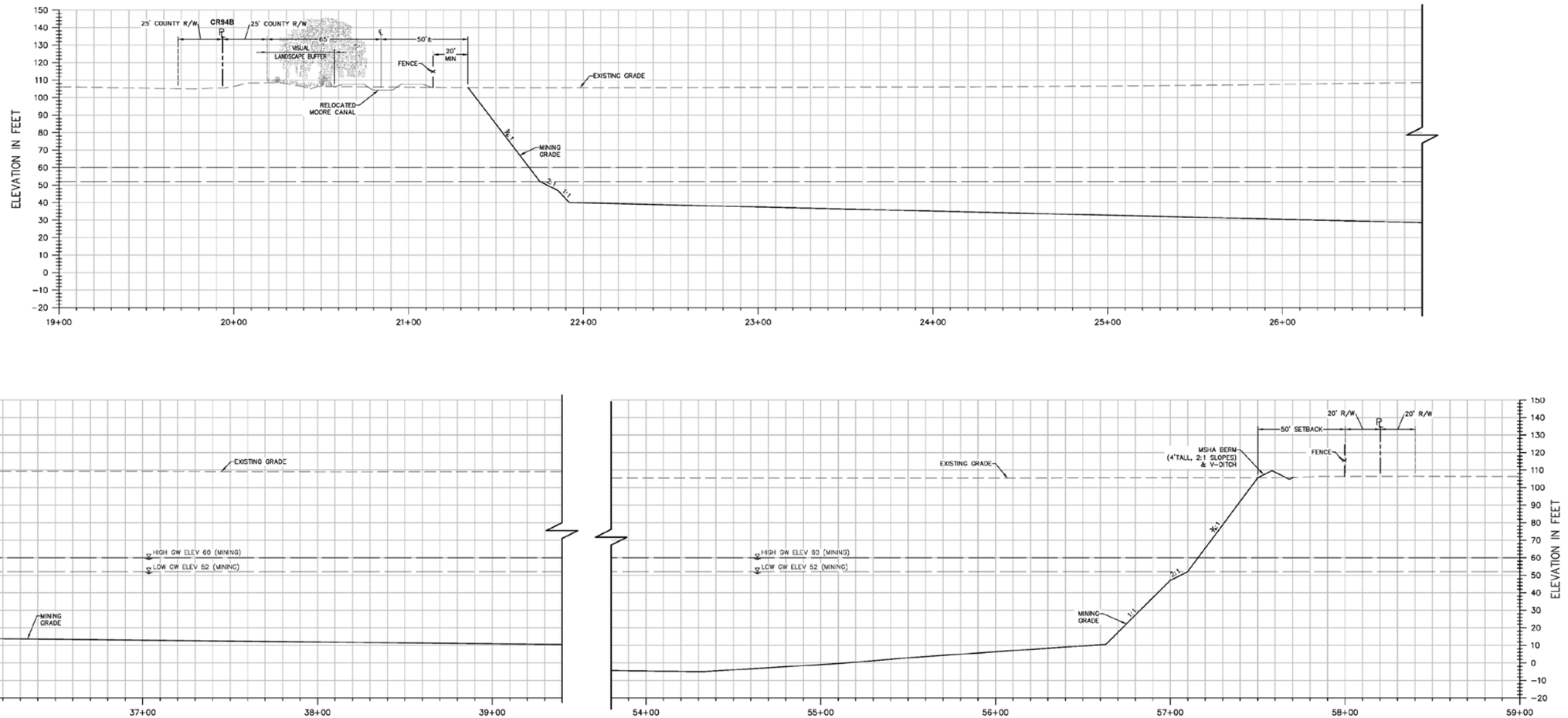



**SECTION D-D**
H: 1"=30'
V: 1"=30'

**NOTES:**

1. ELEVATIONS AND DISTANCES ARE APPROXIMATE. EXISTING GROUND IS BASED ON AERIAL TOPOGRAPHY FLOWN IN APRIL 2010 BY POINT CO. PHOTOGRAMMETRIC SERVICES.
2. HIGH AND LOW AVERAGE GROUNDWATER ELEVATIONS BASED ON "GROUNDWATER CONDITIONS IN THE VICINITY OF PLANNED WETPIT MINING OPERATIONS, SHIFFLER PROPERTY" AND "CONTOURS OF PREDICTED GROUNDWATER ELEVATION, AVERAGE FALL LOW, POST-RECLAMATION", BOTH BY LUHDORFF & SCALMANINI CONSULTING ENGINEERS DATED DECEMBER 22, 2015, UPDATED FEBRUARY 2016.
3. BERMS OR V-DITCHES TO BE ADDED ALONG THE TOP OF SLOPES AS NECESSARY TO KEEP SURFACE RUNOFF FROM ADJACENT AREAS FROM ENTERING INTO THE DESIGNATED OPEN WATER AREAS.
4. BOTTOM MINING ELEVATIONS ARE ±10' DEPENDING ON ACTUAL BOTTOM OF GRAVEL DEPTHS.

**Figure 3-26**
**Proposed Mining Cross-Sections – Section E-E**

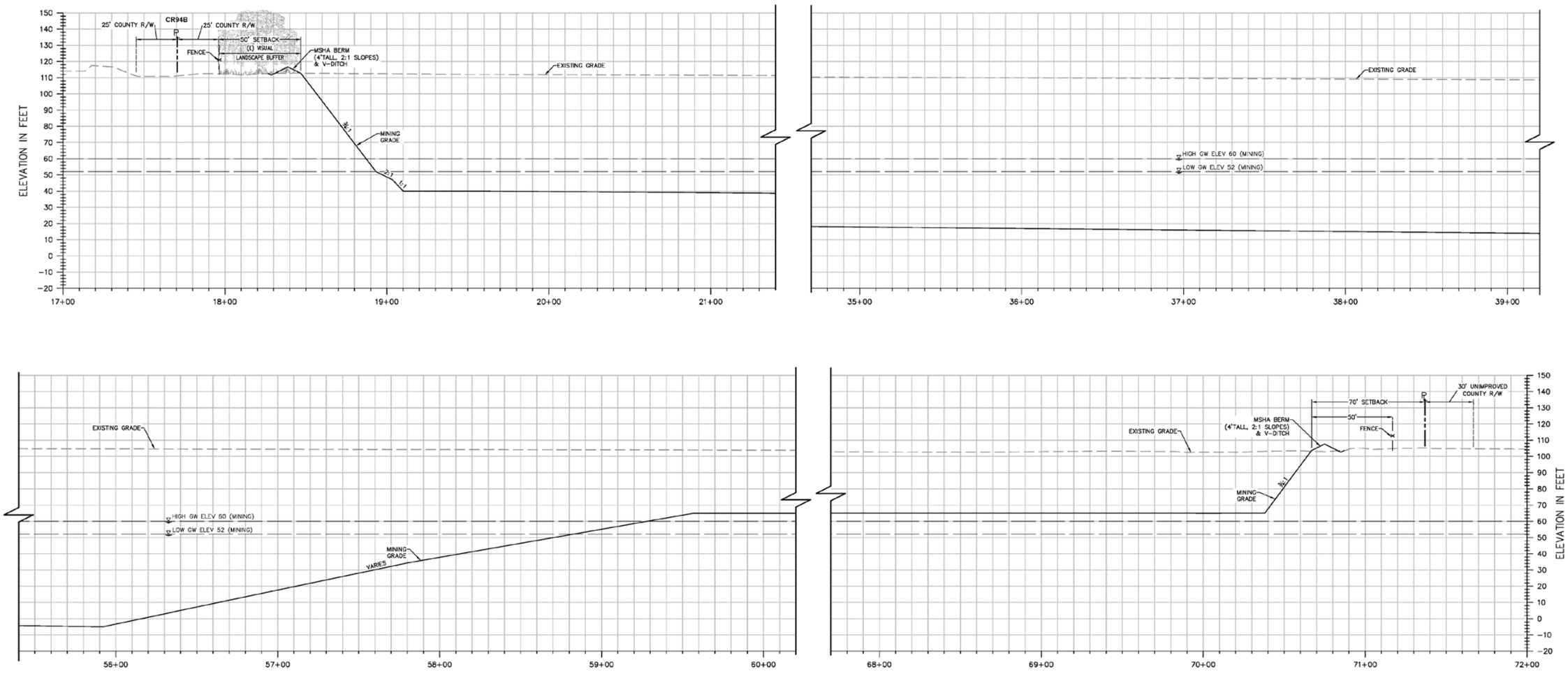



**SECTION E-E**
H: 1"=30'
V: 1"=30'

**NOTES:**

1. ELEVATIONS AND DISTANCES ARE APPROXIMATE. EXISTING GROUND IS BASED ON AERIAL TOPOGRAPHY FLOWN IN APRIL 2010 BY POINT CO. PHOTOGRAMMETRIC SERVICES.
2. HIGH AND LOW AVERAGE GROUNDWATER ELEVATIONS BASED ON "GROUNDWATER CONDITIONS IN THE VICINITY OF PLANNED WETPIT MINING OPERATIONS, SHIFFLER PROPERTY" AND "CONTOURS OF PREDICTED GROUNDWATER ELEVATION, AVERAGE FALL LOW, POST-RECLAMATION", BOTH BY LUHDORFF & SCALMANINI CONSULTING ENGINEERS DATED DECEMBER 22, 2015, UPDATED FEBRUARY 2016.
3. BERMS OR V-DITCHES TO BE ADDED ALONG THE TOP OF SLOPES AS NECESSARY TO KEEP SURFACE RUNOFF FROM ADJACENT AREAS FROM ENTERING INTO THE DESIGNATED OPEN WATER AREAS.
4. BOTTOM MINING ELEVATIONS ARE ±10' DEPENDING ON ACTUAL BOTTOM OF GRAVEL DEPTHS.

**Figure 3-27**
**Proposed Mining Cross-Sections – Section F-F**

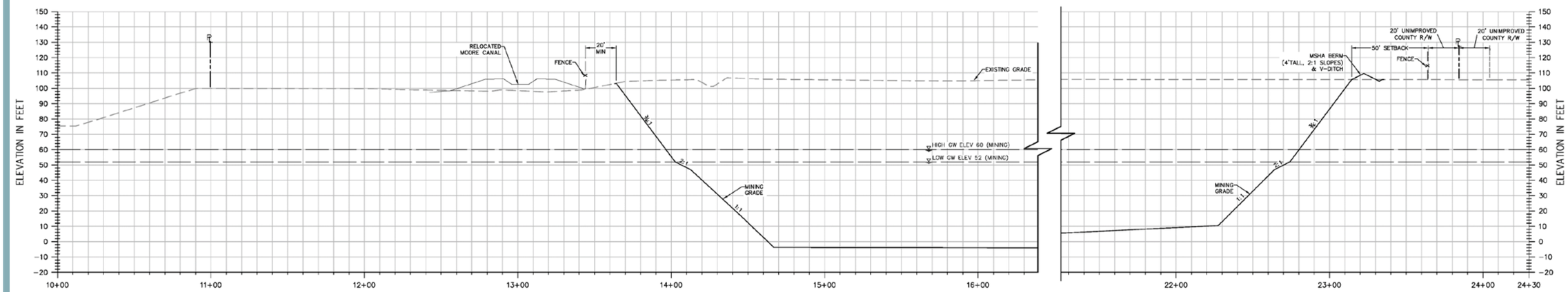



**SECTION F-F**
H: 1"=30'
V: 1"=30'

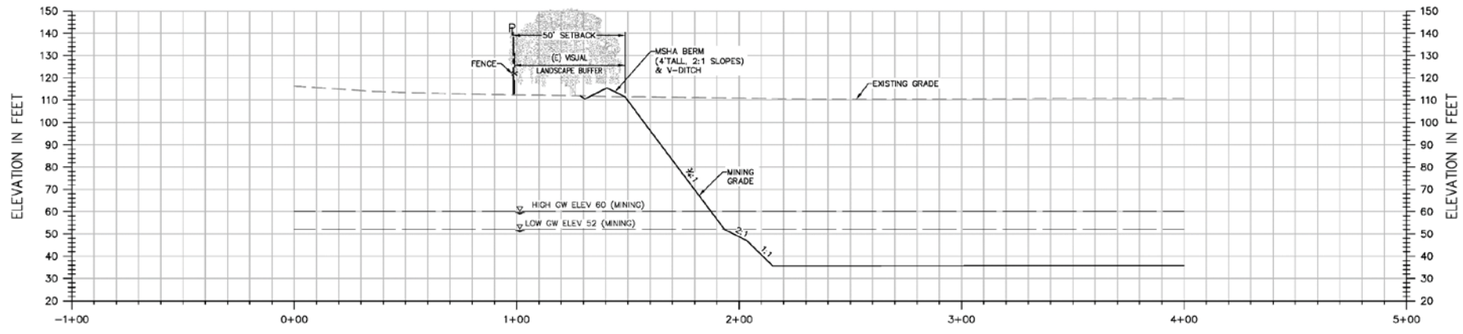
**NOTES:**

1. ELEVATIONS AND DISTANCES ARE APPROXIMATE. EXISTING GROUND IS BASED ON AERIAL TOPOGRAPHY FLOWN IN APRIL 2010 BY POINT CO. PHOTOGRAMMETRIC SERVICES.
2. HIGH AND LOW AVERAGE GROUNDWATER ELEVATIONS BASED ON "GROUNDWATER CONDITIONS IN THE VICINITY OF PLANNED WETPIT MINING OPERATIONS, SHIFFLER PROPERTY" AND "CONTOURS OF PREDICTED GROUNDWATER ELEVATION, AVERAGE FALL LOW, POST-RECLAMATION", BOTH BY LUHDORFF & SCALMANINI CONSULTING ENGINEERS DATED DECEMBER 22, 2015, UPDATED FEBRUARY 2016.
3. BERMS OR V-DITCHES TO BE ADDED ALONG THE TOP OF SLOPES AS NECESSARY TO KEEP SURFACE RUNOFF FROM ADJACENT AREAS FROM ENTERING INTO THE DESIGNATED OPEN WATER AREAS.
4. BOTTOM MINING ELEVATIONS ARE ±10' DEPENDING ON ACTUAL BOTTOM OF GRAVEL DEPTHS.

**Figure 3-28**
**Proposed Mining Cross-Sections – Section G-G**




**SECTION G-G**
H: 1"=30'
V: 1"=30'




**SECTION H-H**
H: 1"=30'
V: 1"=30'

**NOTES:**

1. ELEVATIONS AND DISTANCES ARE APPROXIMATE. EXISTING GROUND IS BASED ON AERIAL TOPOGRAPHY FLOWN IN APRIL 2010 BY POINT CO. PHOTOGRAMMETRIC SERVICES.
2. HIGH AND LOW AVERAGE GROUNDWATER ELEVATIONS BASED ON "GROUNDWATER CONDITIONS IN THE VICINITY OF PLANNED WETPIT MINING OPERATIONS, SHIFFLER PROPERTY" AND "CONTOURS OF PREDICTED GROUNDWATER ELEVATION, AVERAGE FALL LOW, POST-RECLAMATION", BOTH BY LUHDORFF & SCALMANINI CONSULTING ENGINEERS DATED DECEMBER 22, 2015, UPDATED FEBRUARY 2016.
3. BERMS OR V-DITCHES TO BE ADDED ALONG THE TOP OF SLOPES AS NECESSARY TO KEEP SURFACE RUNOFF FROM ADJACENT AREAS FROM ENTERING INTO THE DESIGNATED OPEN WATER AREAS.
4. BOTTOM MINING ELEVATIONS ARE ±10' DEPENDING ON ACTUAL BOTTOM OF GRAVEL DEPTHS.

**Figure 3-29**
**Proposed Reclamation Elevations**

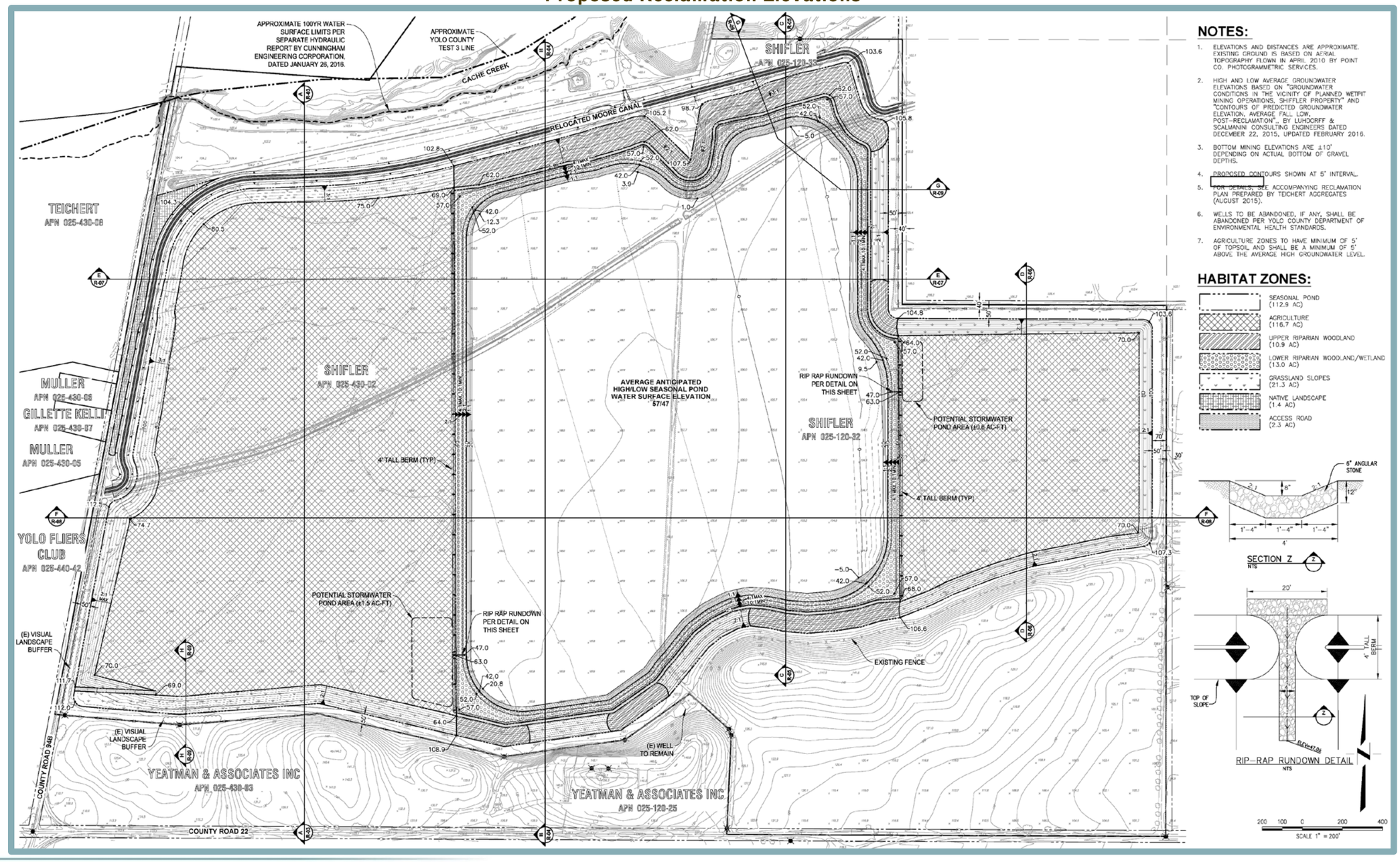
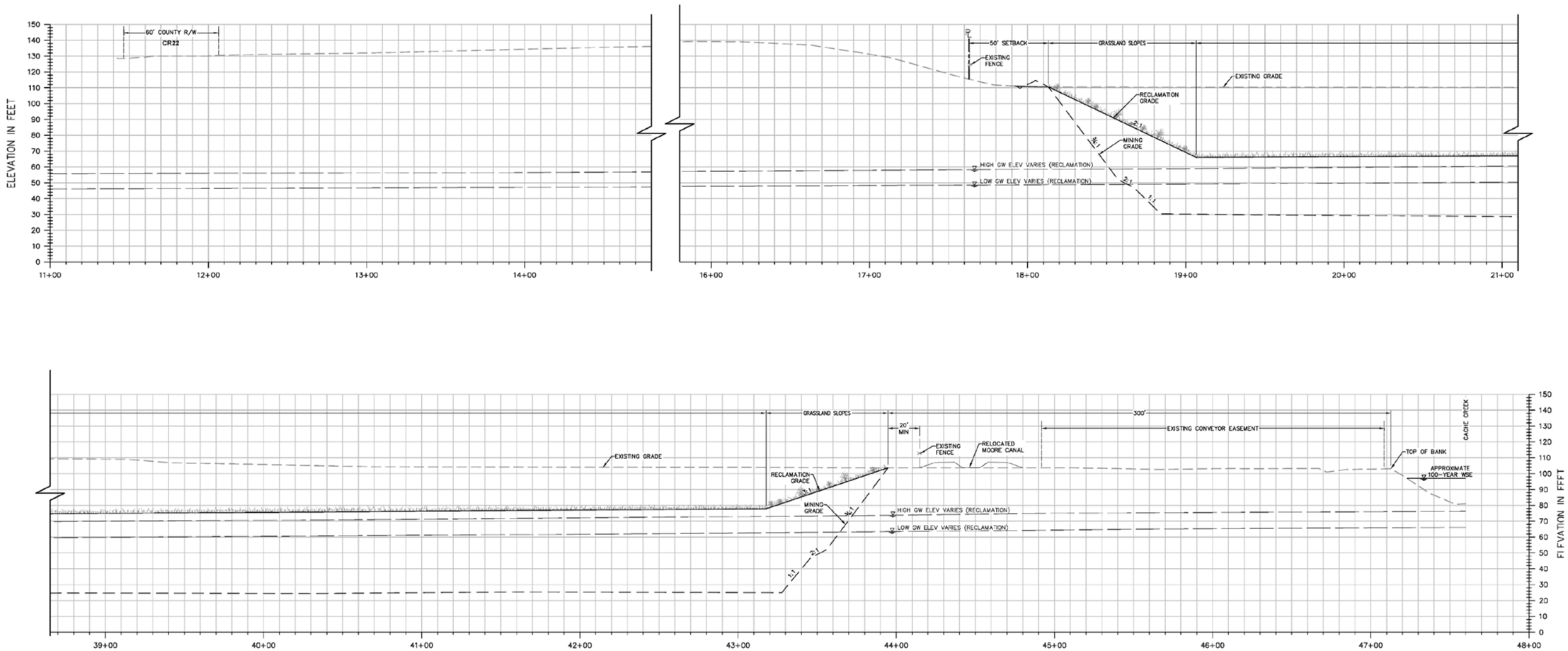


**Figure 3-30**
**Proposed Reclamation Cross-Sections – Section A-A**




**SECTION A-A**
H: 1"=30'
V: 1"=30'

**NOTES:**

1. ELEVATIONS AND DISTANCES ARE APPROXIMATE. EXISTING GROUND IS BASED ON AERIAL TOPOGRAPHY FLOWN IN APRIL 2010 BY POINT CO. PHOTOGRAMMETRIC SERVICES.
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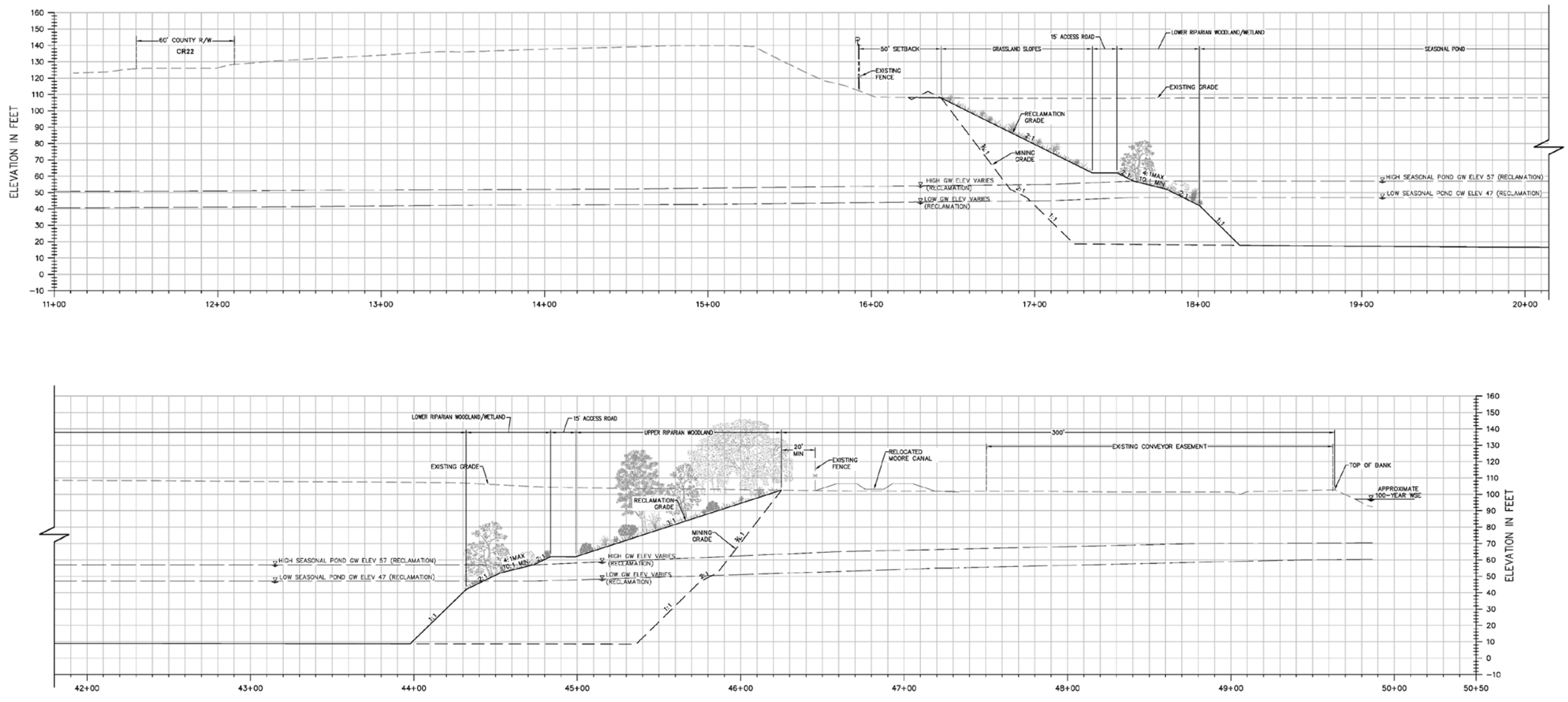
4. BOTTOM MINING ELEVATIONS ARE ±10' DEPENDING ON ACTUAL BOTTOM OF GRAVEL DEPTHS.
5. AGRICULTURE ZONES TO HAVE MINIMUM OF 5' OF TOPSOIL AND SHALL BE A MINIMUM OF 5' ABOVE THE AVERAGE HIGH GROUNDWATER LEVEL.

**Figure 3-31**
**Proposed Reclamation Cross-Sections – Section B-B**




**SECTION B-B**
H: 1"=30'
V: 1"=30'

**NOTES:**

1. ELEVATIONS AND DISTANCES ARE APPROXIMATE. EXISTING GROUND IS BASED ON AERIAL TOPOGRAPHY FLOWN IN APRIL 2010 BY POINT CO. PHOTOGRAMMETRIC SERVICES.
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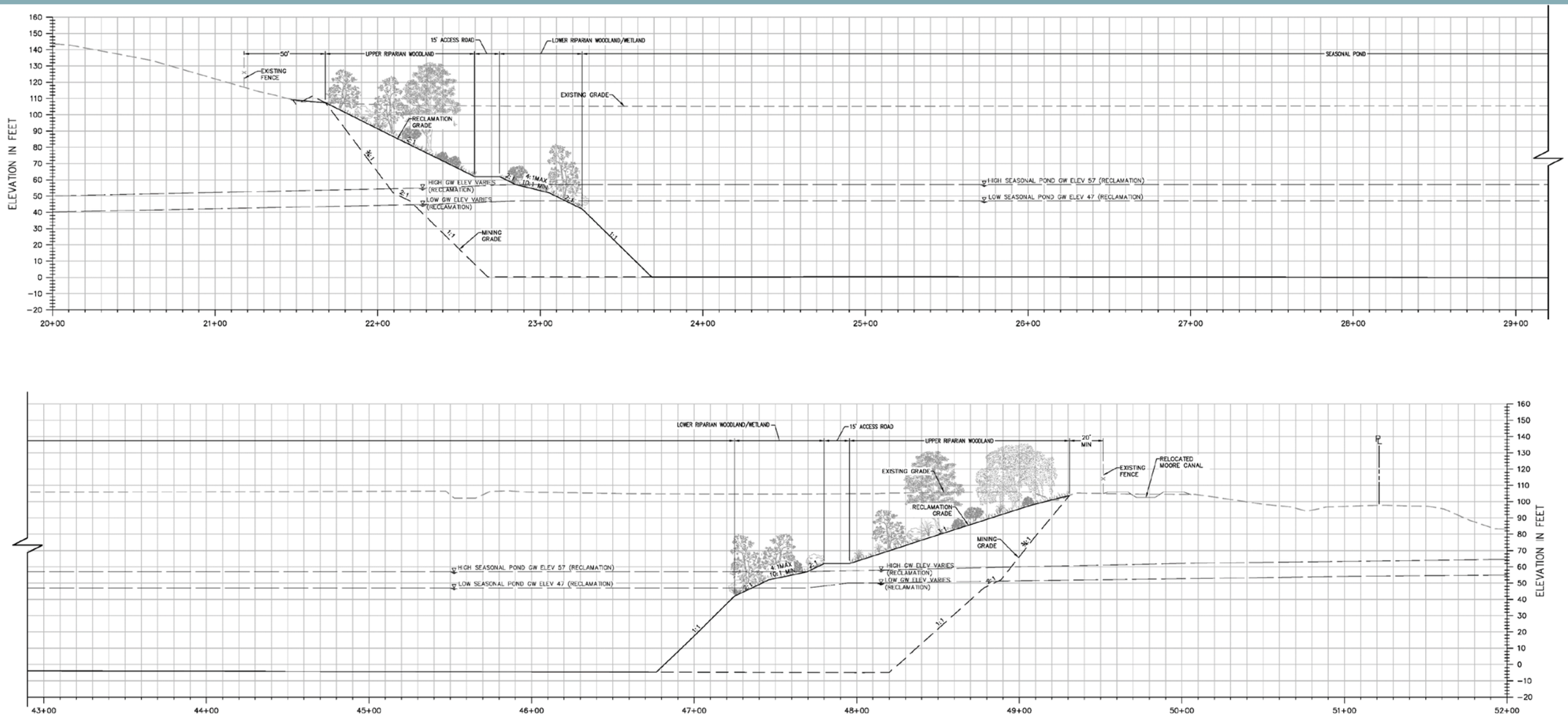
4. BOTTOM MINING ELEVATIONS ARE ±10' DEPENDING ON ACTUAL BOTTOM OF GRAVEL DEPTHS.
5. AGRICULTURE ZONES TO HAVE MINIMUM OF 5' OF TOPSOIL AND SHALL BE A MINIMUM OF 5' ABOVE THE AVERAGE HIGH GROUNDWATER LEVEL.

**Figure 3-32**
**Proposed Reclamation Cross-Sections – Section C-C**




**SECTION C-C**
H: 1"=30'
V: 1"=30'

**NOTES:**

1. ELEVATIONS AND DISTANCES ARE APPROXIMATE. EXISTING GROUND IS BASED ON AERIAL TOPOGRAPHY FLOWN IN APRIL 2010 BY POINT CO. PHOTOGRAMMETRIC SERVICES.
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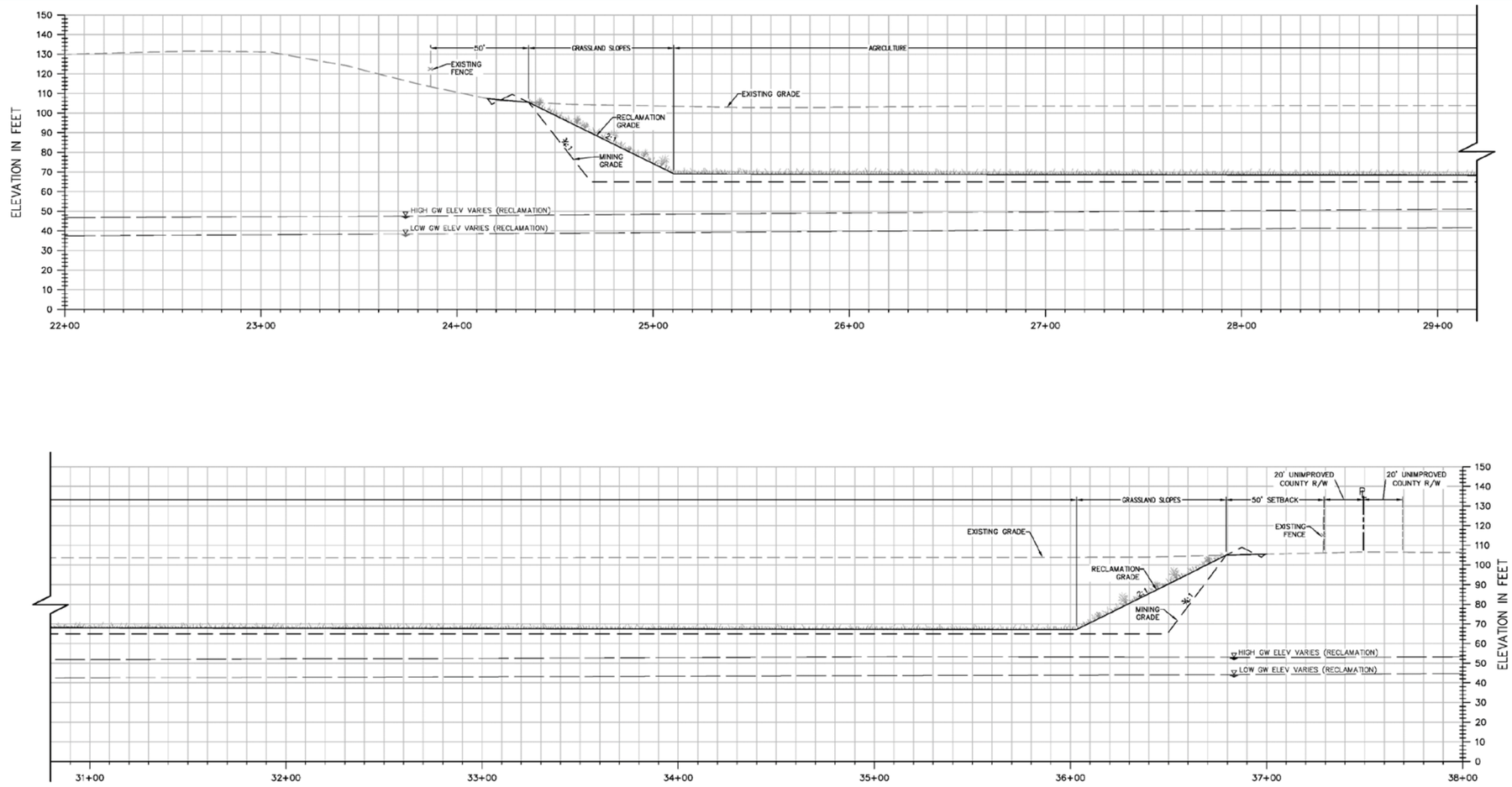
4. BOTTOM MINING ELEVATIONS ARE ±10' DEPENDING ON ACTUAL BOTTOM OF GRAVEL DEPTHS.
5. AGRICULTURE ZONES TO HAVE MINIMUM OF 5' OF TOPSOIL AND SHALL BE A MINIMUM OF 5' ABOVE THE AVERAGE HIGH GROUNDWATER LEVEL.

**Figure 3-33**
**Proposed Reclamation Cross-Sections – Section D-D**




**SECTION D-D**
H: 1"=30'
V: 1"=30'

**NOTES:**

1. ELEVATIONS AND DISTANCES ARE APPROXIMATE. EXISTING GROUND IS BASED ON AERIAL TOPOGRAPHY FLOWN IN APRIL 2010 BY POINT CO. PHOTOGRAMMETRIC SERVICES.
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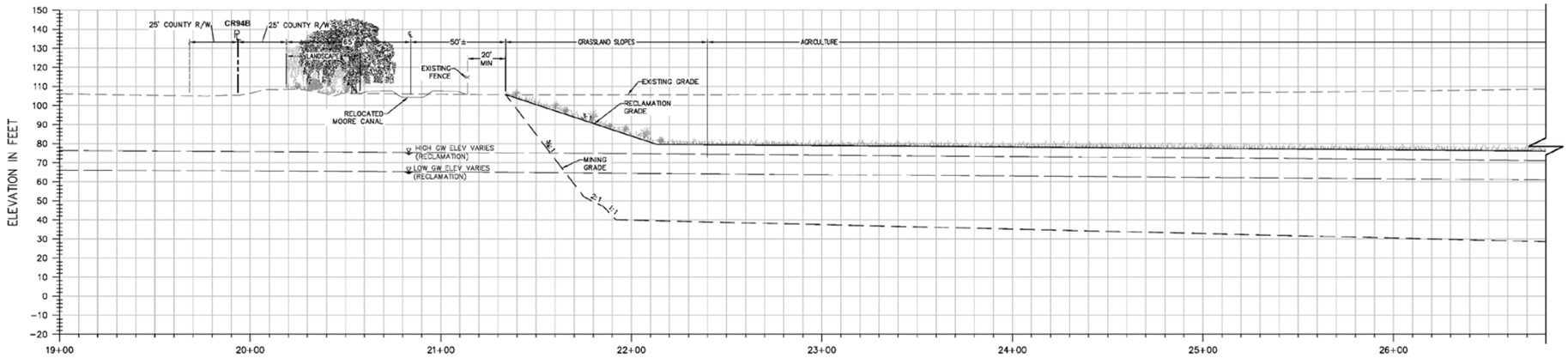
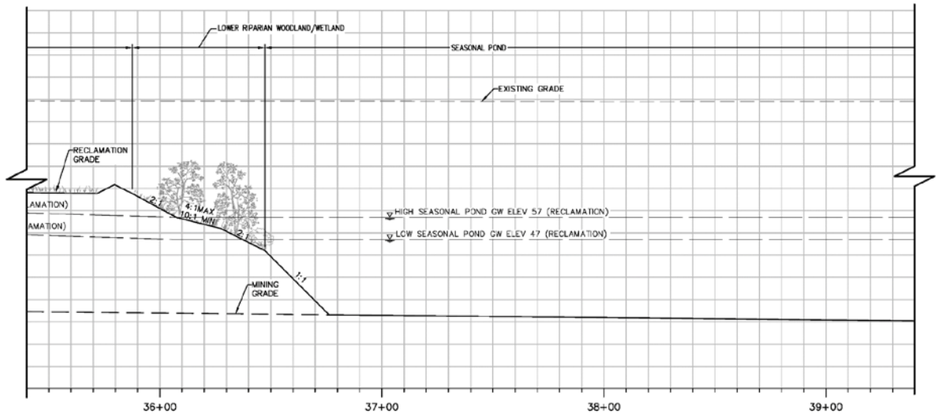
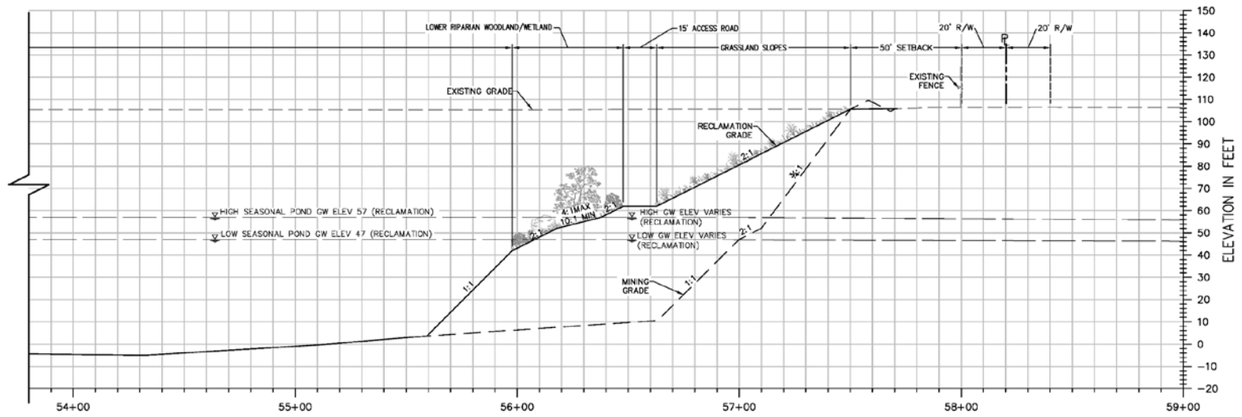
4. BOTTOM MINING ELEVATIONS ARE ±10' DEPENDING ON ACTUAL BOTTOM OF GRAVEL DEPTHS.
5. AGRICULTURE ZONES TO HAVE MINIMUM OF 5' OF TOPSOIL AND SHALL BE A MINIMUM OF 5' ABOVE THE AVERAGE HIGH GROUNDWATER LEVEL.

**Figure 3-34**
**Proposed Reclamation Cross-Sections – Section E-E**




**SECTION E-E**
H: 1"=30'
V: 1"=30'

**NOTES:**

1. ELEVATIONS AND DISTANCES ARE APPROXIMATE. EXISTING GROUND IS BASED ON AERIAL TOPOGRAPHY FLOWN IN APRIL 2010 BY POINT CO. PHOTOGRAMMETRIC SERVICES.
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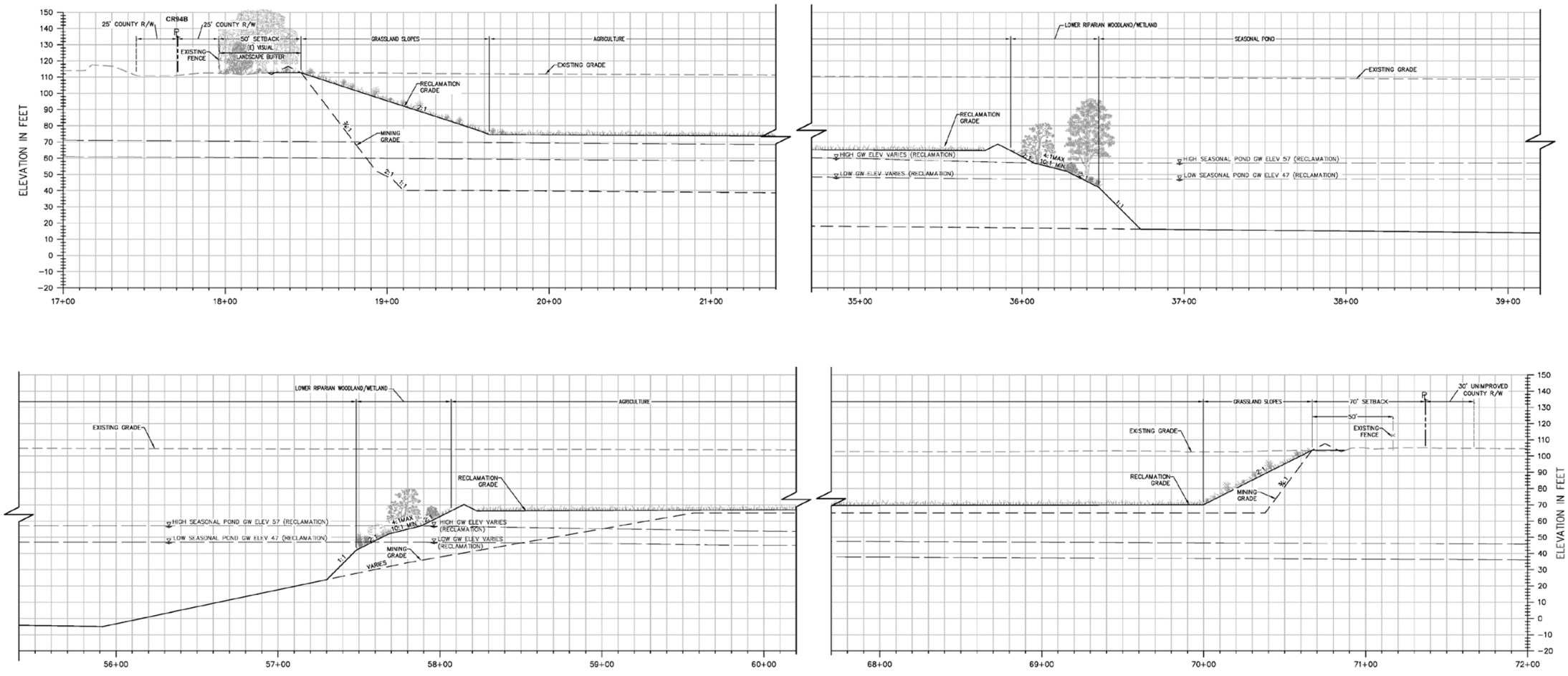
5. AGRICULTURE ZONES TO HAVE MINIMUM OF 5' OF TOPSOIL AND SHALL BE A MINIMUM OF 5' ABOVE THE AVERAGE HIGH GROUNDWATER LEVEL.

30 15 0 30 60

**Figure 3-35**
**Proposed Reclamation Cross-Sections – Section F-F**

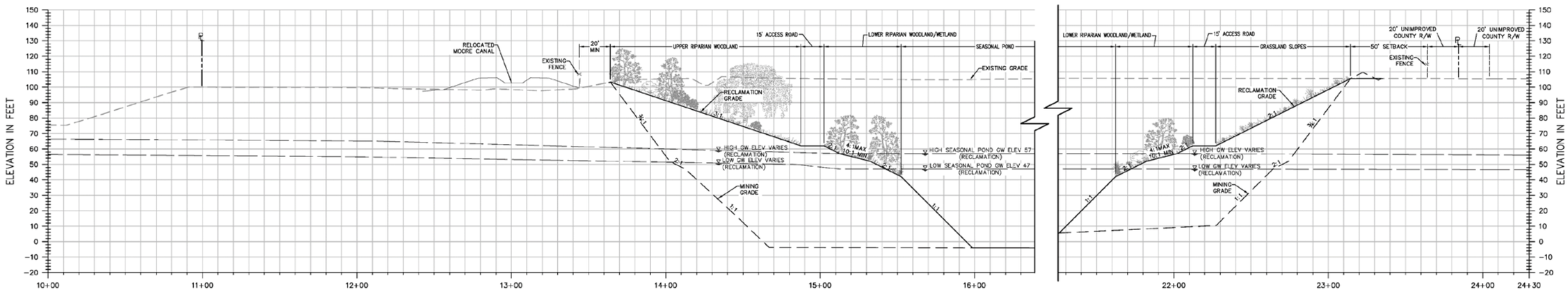



**SECTION F-F**
H: 1"=30'
V: 1"=30'

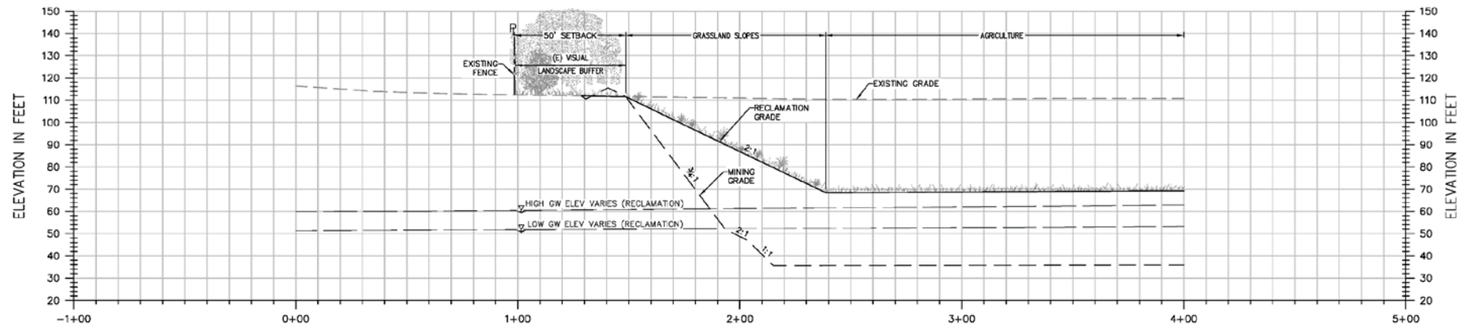
**NOTES:**

1. ELEVATIONS AND DISTANCES ARE APPROXIMATE. EXISTING GROUND IS BASED ON AERIAL TOPOGRAPHY FLOWN IN APRIL 2010 BY POINT CO. PHOTOGRAMMETRIC SERVICES.
2. HIGH AND LOW AVERAGE GROUNDWATER ELEVATIONS BASED ON "GROUNDWATER CONDITIONS IN THE VICINITY OF PLANNED WETPIT MINING OPERATIONS, SHIFFLER PROPERTY" AND "CONTOURS OF PREDICTED GROUNDWATER ELEVATION, AVERAGE FALL LOW, POST-RECLAMATION", BOTH BY LUHDORFF & SCALMANINI CONSULTING ENGINEERS DATED DECEMBER 22, 2015, UPDATED FEBRUARY 2016.
3. BERMS OR V-DITCHES TO BE ADDED ALONG THE TOP OF SLOPES AS NECESSARY TO KEEP SURFACE RUNOFF FROM ADJACENT AREAS FROM ENTERING INTO THE DESIGNATED OPEN WATER AREAS.
4. BOTTOM MINING ELEVATIONS ARE ±10' DEPENDING ON ACTUAL BOTTOM OF GRAVEL DEPTHS.
5. AGRICULTURE ZONES TO HAVE MINIMUM OF 5' OF TOPSOIL AND SHALL BE A MINIMUM OF 5' ABOVE THE AVERAGE HIGH GROUNDWATER LEVEL.

**Figure 3-36**
**Proposed Reclamation Cross-Sections – Section G-G**




**SECTION G-G**
H: 1"=30'
V: 1"=30'




**SECTION H-H**
H: 1"=30'
V: 1"=30'

**NOTES:**

1. ELEVATIONS AND DISTANCES ARE APPROXIMATE. EXISTING GROUND IS BASED ON AERIAL TOPOGRAPHY FLOWN IN APRIL 2010 BY POINT CO. PHOTOGRAMMETRIC SERVICES.
2. HIGH AND LOW AVERAGE GROUNDWATER ELEVATIONS BASED ON "GROUNDWATER CONDITIONS IN THE VICINITY OF PLANNED WETPIT MINING OPERATIONS, SHIFFLER PROPERTY" AND "CONTOURS OF PREDICTED GROUNDWATER ELEVATION, AVERAGE FALL LOW, POST-RECLAMATION", BOTH BY LUHDORFF & SCALMANINI CONSULTING ENGINEERS DATED DECEMBER 22, 2015, UPDATED FEBRUARY 2016.
3. BERMS OR V-DITCHES TO BE ADDED ALONG THE TOP OF SLOPES AS NECESSARY TO KEEP SURFACE RUNOFF FROM ADJACENT AREAS FROM ENTERING INTO THE DESIGNATED OPEN WATER AREAS.
4. BOTTOM MINING ELEVATIONS ARE ±10' DEPENDING ON ACTUAL BOTTOM OF GRAVEL DEPTHS.
5. AGRICULTURE ZONES TO HAVE MINIMUM OF 5' OF TOPSOIL AND SHALL BE A MINIMUM OF 5' ABOVE THE AVERAGE HIGH GROUNDWATER LEVEL.