

**EXCAVATION AND SAMPLING WORK PLAN FOR CATEGORY I MATERIALS  
CELL 3 MOUNDED AREA  
FORMER ASARCO SMELTER SITE  
EL PASO, TEXAS**

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This work plan describes procedures that will be followed to sample and excavate the identified Category I materials in the mounded portion of Cell 3. Test pits were completed in November 2012 to characterize the material contained in the mound. The test pit logs are included in this work plan package in Attachment ix. The test pits indicated the presence of an approximately three foot thick clean soil layer, the upper plastic liner material, and the underlying Category I waste, which consisted of a medium sand, wood debris and some bricks. It is assumed that all of the material below the liner is Category I waste. The mounded Cell 3 is shown in Figure 1.

### **1. Prerequisites and Pre-removal requirements**

- **Excavation Work Health & Safety:** A Job Loss Analysis (JLA) and Job Safety Analysis (JSA) have been previously generated for work related to excavation, test pitting, and trenching. These procedures shall be reviewed and revised by the Site Safety Officer to be appropriate for this specific work plan. The work plan specific JLA and JSA shall be inserted into Attachment i for reference.
- **Air Quality Monitoring:** There are two components to air monitoring, the work-zone monitoring required to be protective of worker health and safety and also perimeter air monitoring to be proactively protective of non-workers.

**Work Zone Monitoring:** All work being conducted onsite is being monitored for dust in the work zone. The overall dust number for the site is  $150 \text{ mg/m}^3$ . Dust levels above this standard during excavation activities would require workers to use respirators. The action levels for this are established in the Site Health and Safety Plan and the Malcolm Pirnie Health and Safety Plan. Copies of these current plans are available onsite.

**Perimeter Air Monitoring:** An air quality monitoring plan was developed specifically for the Category I placement in Cell 4. The plan is contained in Attachment v. The field manager shall review and become familiar with this monitoring plan. As described in the Community Assurance Plan, all activities that have the potential to generate dust will be monitored with onsite dust monitoring. Monitoring values will be compared to the sentinel value of  $43 \text{ mg/m}^3$ . Immediate actions will be required if the sentinel value is exceeded during excavation of the Category I material. The field supervisor or the CQA representative in the field is responsible to ensure appropriate actions are taken to prevent dust generation during excavation and landfill filling. The stop work thresholds and trigger points are summarized in Attachment iv. These will be updated as additional environmental information is collected.

- **Dust Control Procedures:** Due to the potential for excavation activities to generate dusts, the field manager will review the dust control methods summarized in Attachment vi.

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(CONTINUED)**

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## **2. Removal and Stockpiling of the Overlying Clean Soil Layer**

The overlying clean soil layer is to be removed and stockpiled for re-use. The procedure will be as follows:

- Prior to excavation, the contractor shall apply water throughout the prior day's shift to minimize dust generation. Additional water should be applied as needed to continue to prevent visible dust from being generated.
- A long reach excavator will be used to scrap the clean soil layer off of the mound, taking care not to damage the underlying liner material. This will prevent damage to the liner and prevent cross-contamination of the clean soil from the Category I material.
- The excavator will then move the clean soil to a nearby stockpiling location.
- The excavation activities will be documented with photographs to verify that the liner material was not damaged during the clean soil layer removal.
- If damage to the liner does occur during the clean soil layer removal, the material in the area will be tested using XRF to guide the disposition of this potentially contaminated clean soil. Prior to using the XRF equipment, the XRF Health and Safety procedures (Attachment vii) should be reviewed to ensure worker health and safety.

## **2. Removal of Liner Material**

- Liner shall be removed in minimal sized sections to allow access to the area of category 1 material to be removed during one days removal activities.
- Removed liner shall be cut into section small enough to be managed by hand and for disposal in the on-site Cell 4 landfill.
- The liner material will be removed to the elevation shown on drawing 1 of the AC drawing package in order to preserve the landfill anchor trench and allow grading to appropriate level.
- At any given time while a section of the liner has been removed for excavating the Category I material, there is the potential for wind-blown dust to be generated. If windy conditions are expected or occur, the procedures in Attachment vi should be followed until conditions improve. These procedures should also be followed at the end of any excavation work day to prevent dust generation during overnight hours.

## **3. Excavation and Transportation of the Category I material**



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(CONTINUED)**

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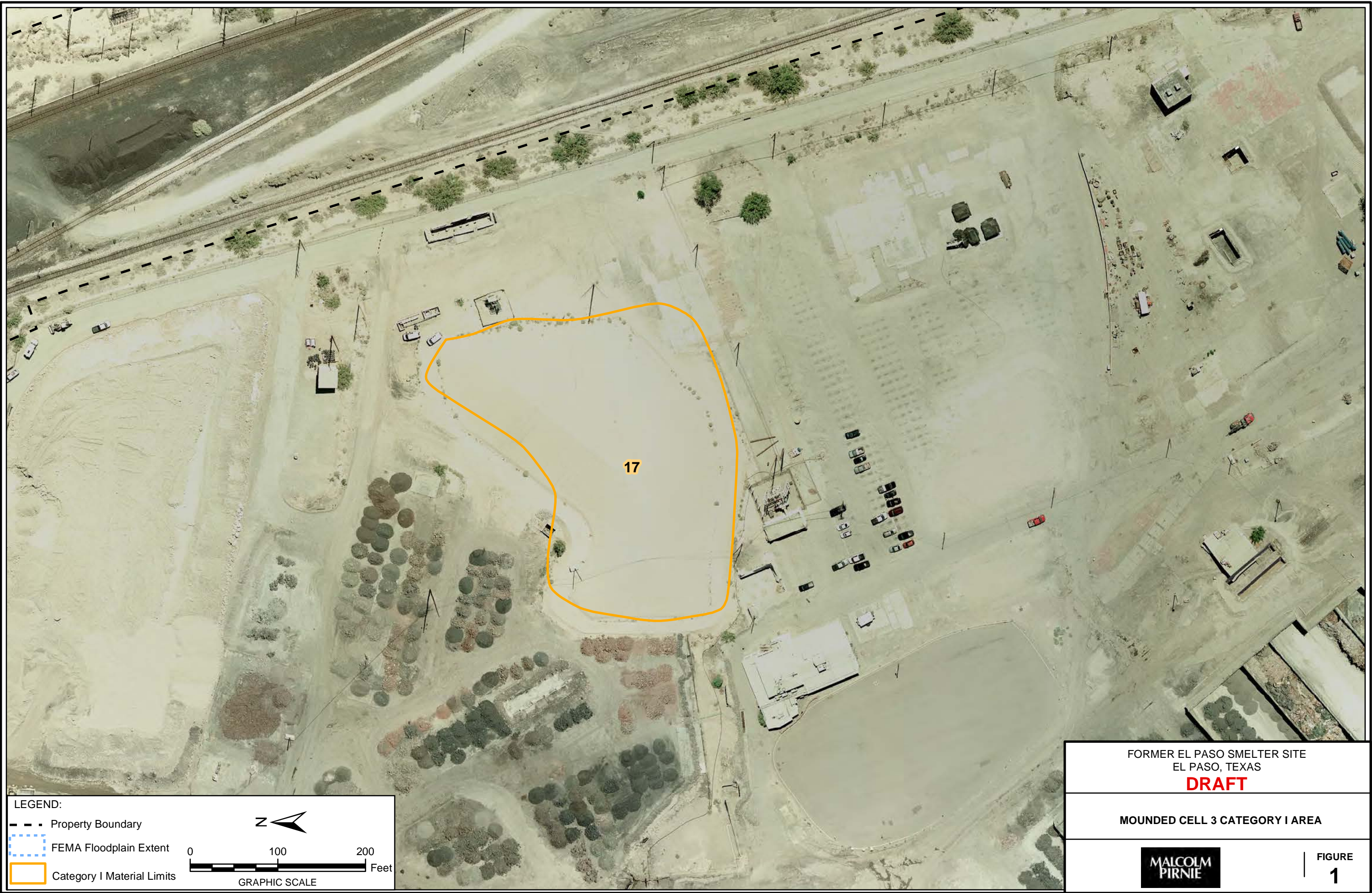
- Prior to the excavation and loading of Category I material, the contractor shall apply water to the area throughout the prior day's shift. Water will be applied as needed during excavation activities to prevent dust generation.
- The Category I material will be loaded into trucks using an excavator or backhoe. The volume to be excavated is shown in drawing 1 of the AC drawing package. Transport trucks will use pre-determined transport routes to haul the material to the Cell 4 area. The contractor shall perform the excavations in a manner to minimize displacement of Category I material beyond the Cell 3 footprint to ensure worker safety and minimize impacts of the excavations.
- Prior to transport to the Cell 4 area, the trucks will drive over a placed rumble strip to remove any potential Category I material from the tires, as well as shaking any loose material from the truck bin. This is to prevent any Category I material from falling onto non-Category I areas. The rumble strip will be inspected daily and maintained as needed. The inspection and maintenance of the rumble strips and haul routes shall be documented in a log and photographed.
- The Cell 3 mounded area footprint will be excavated until the area is to the grade specifications shown in Drawing 2 of the AC Drawing Package attachment.

#### **4. Cell 3 Temporary Cover**

A plan will be developed to describe the design of the temporary cover of the remaining Cell 3 material. Drawing 3 of the AC Drawing Package shows the design of the cover placement including a 1% crown to allow run-off and necessary liner materials.

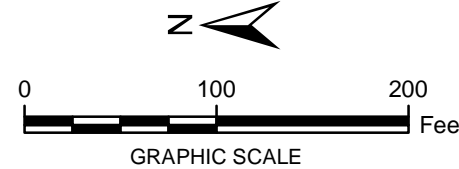


CITY: Highlands Ranch DIV/GROUP: GIS DB: BG  
Project (Project #)  
Path: I:\ASARCO - El Paso\GIS\MXD\WasteDisposal\Fig 1 MoundedCell3CatIArea.mxd Date: 8/13/2013 Time: 2:08:58 PM



LEGEND:

- - - Property Boundary
- - - FEMA Floodplain Extent
- Category I Material Limits



FORMER EL PASO SMELTER SITE  
EL PASO, TEXAS  
**DRAFT**

MOUNDED CELL 3 CATEGORY I AREA

**MALCOLM  
PIRNIE**

FIGURE  
**1**



**QUANTITIES**  
 EARTHWORK VOLUME 15,119 C.Y.  
 LINER AREA (INCLUDES 2' OVERLAP) 5,240 S.F.

EXISTING ANCHOR TRENCH TO REMAIN. PRESERVE AND PROTECT.

CELL 3 TO BE EXCAVATED TO ELEVATION 3788.

EXCAVATED MATERIAL TO BE PLACED IN CELL 4, CATEGORY I LANDFILL.

EXISTING ANCHOR TRENCH TO REMAIN. PRESERVE AND PROTECT.

PROPOSED CROWN LINE  
 ELEVATION = 3788.87

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 Acad Version: R12.1 (US Units)  
 User Name: jacobson

FIRM REGISTRATION F-979



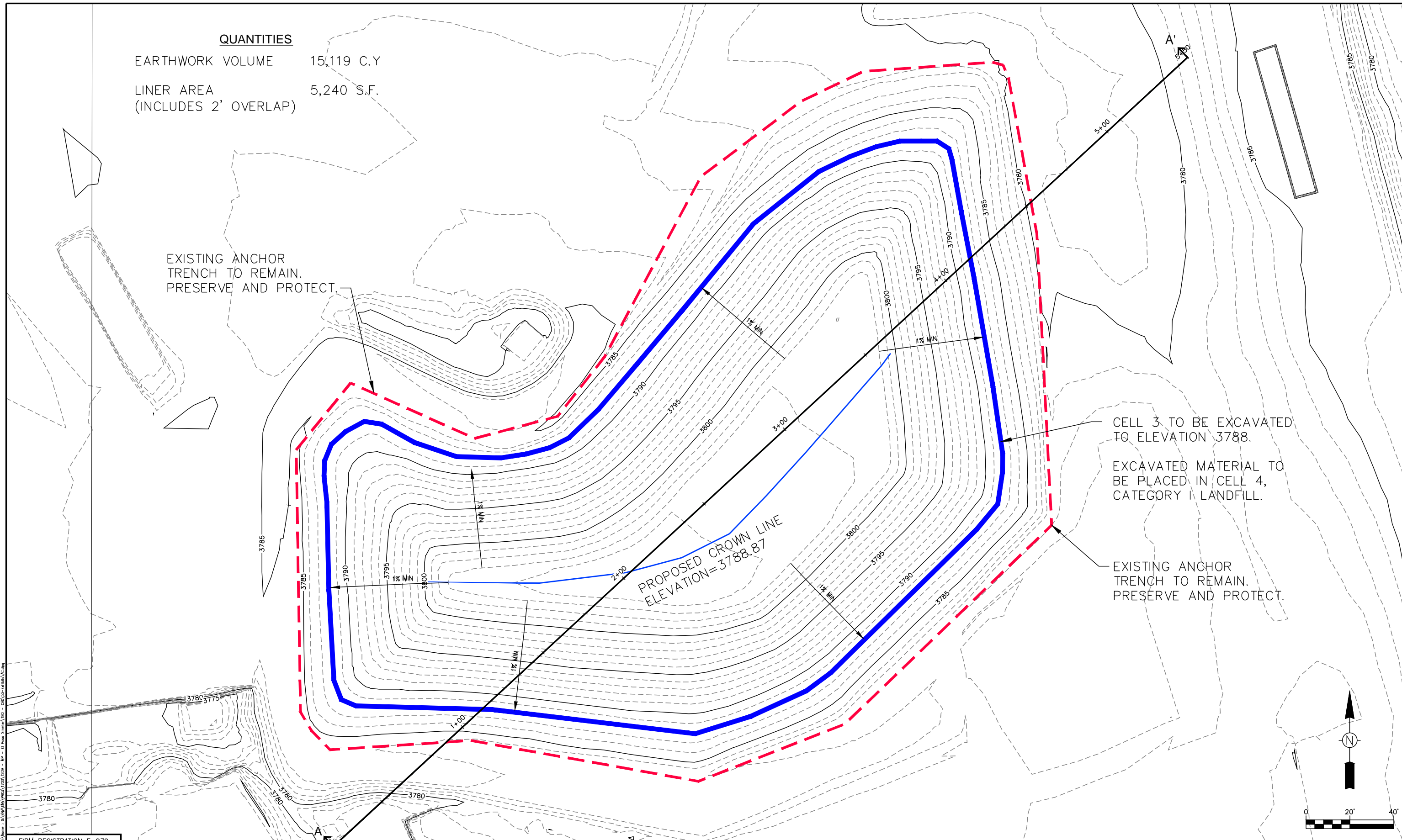
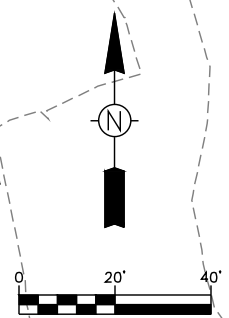
NO.		BY	DATE	REVISIONS	REMARKS

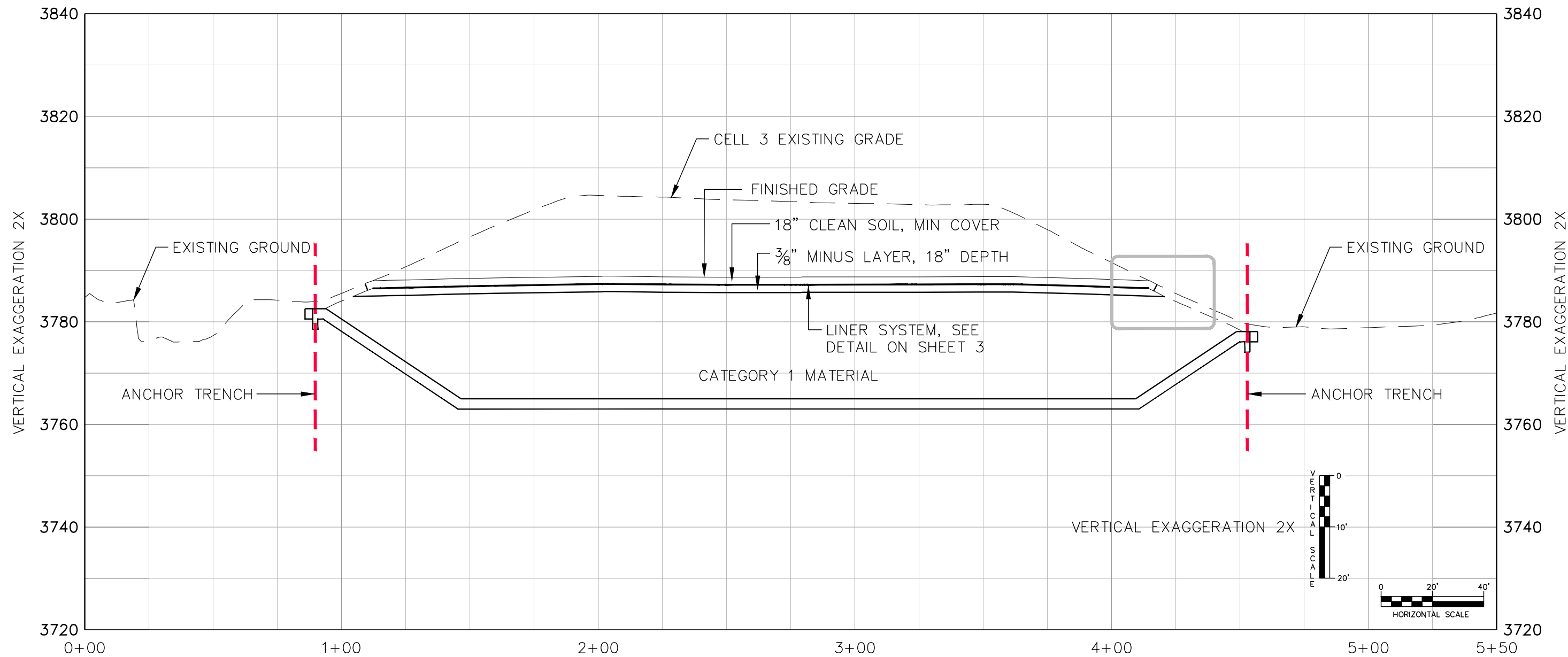
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 CKD: CMZ

FORMER SMELTER SITE  
 EL PASO, TEXAS

CELL 3 TEMPORARY COVER  
 SITE PLAN  
 SCALE: AS NOTED

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 MALCOLM PIRNIE, INC.  
 DATE: AUGUST 2013  
 AC SHEET 1 OF 3  
 CAD REF. NO. AC.dwg





SECTION A-A'

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FIRM REGISTRATION F-979



REVISIONS			
NO.	BY	DATE	REMARKS

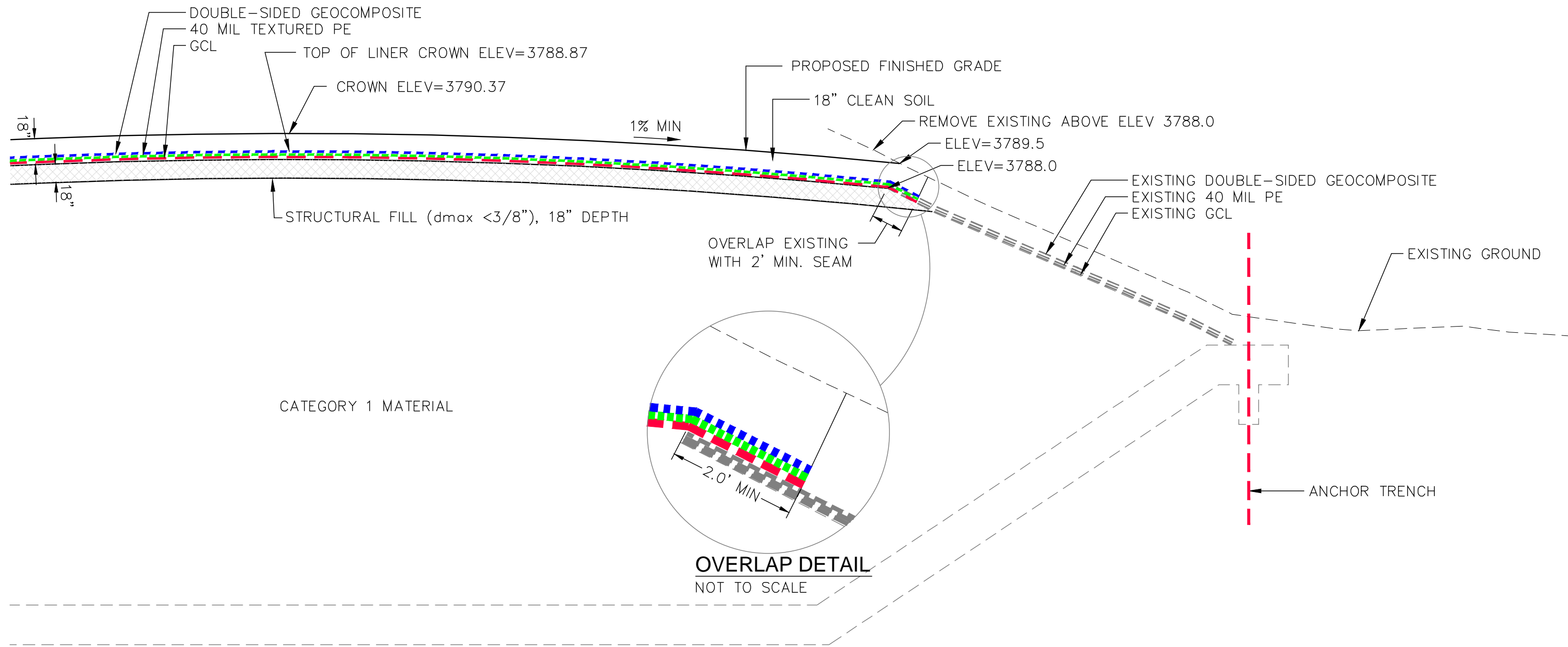
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FORMER SMELTER SITE  
 EL PASO, TEXAS

CELL 3 TEMPORARY COVER  
 TYPICAL SECTION

SCALE: AS NOTED

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 AC SHEET 2 OF 3  
 CAD REF. NO. AC.dwg



**PROPOSED SECTION**  
NOT TO SCALE

FORMER SMELTER SITE  
EL PASO, TEXAS

**CELL 3 TEMPORARY COVER**  
**TYPICAL SECTION**  
SCALE: AS NOTED

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CAD REF. NO. AC.dwg

FIRM REGISTRATION F-979



NO.		BY	DATE	REVISIONS	REMARKS

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DWN RJK  
CKD CMZ

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