

12/23/2025

**ADDENDUM NO. 1  
TO CONTRACT DOCUMENT PLANS SPECIFICATIONS**

**PROJECT: MWA METRO PARK WEST LANDFILL  
P-67 CELL E LINER, LEACHATE LAGOON, AND SED POND  
TO: PROSPECTIVE BIDDERS AND OTHER INTERESTED PARTIES**

The Contract Documents and Specifications, including the Contract Drawings, are hereby modified by the following items:

**CHANGES TO DRAWINGS**

AD-1 Item 1 REISSUANCE OF DRAWING SET

- A. REPLACE Original drawing set with attached set. Updates include:
- a. G002: Updated extents of project.
  - b. C105: ADDED for perimeter road and z-wall.
  - c. C106: ADDED for Northwest perimeter road over final cover area.
  - d. C509: Updated for perimeter road details.
  - e. C510: ADDED for z-wall details.

**CHANGES TO SPECIFICATIONS**

AD-1 Item 2 SECTION 00 41 00 – BID FORM

- A. REPLACE the specification section 00 41 00 – BID FORM with the attached 00 41 00 as part of this Addendum No. 1.
- a. This update includes an additional perimeter road on the North of the closed existing landfill area, included as bid alternates.
  - b. This update REMOVES the leachate evaporator bid alternate.
  - c. REMOVE jersey barriers from citizen's campus bid item scope. To be provided by Owner.
  - d. CHANGE bid item 124 from LUMP SUM to LINEAL FEET.

AD-1 Item 3 SECTION 01 29 01 PAYMENT PROCEDURES

- A. REPLACE the specification section 01 29 01 with the attached section 01 29 01 as part of this Addendum No. 1.

## CLARIFICATIONS & INFORMATION

### AD-1 Item 4 PROSPECTIVE BIDDER QUESTIONS AND RESPONSES:

*Question 1: NA*

Answer 1: NA

### AD-1 Item 2 PRE-BID MEETING NOTES

For Bidders' convenience a copy of the meeting notes from the pre-bid meeting are included with this addendum. Pre-bid meeting notes are not a part of the contract documents.

ALL ITEMS IN CONFLICT WITH THIS ADDENDUM ARE HEREBY DELETED.

THIS ADDENDUM IS MADE PART OF THE CONTRACT DOCUMENTS AND SHALL BE NOTED ON THE BID FORM.

HDR Engineering, Inc.

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Katie Kinley, P.E.

Certified copy provided to Owner on December 23, 2025

# Pre-Bid Meeting Notes

Project: P-67 MPW Cell E Liner, Leachate Lagoon, and Sed Pond

Subject: Pre-Bid Meeting

Date: Friday, December 12, 2025

Location: Metro Park West Landfill – 20 335<sup>th</sup> St. Perry, IA 50220

## SUMMARY OF WORK

- a. Cell E Liner Construction
  - i. Bulk Excavation
  - ii. Groundwater Control System
  - iii. Recompacted Clay Liner & Geosynthetics
  - iv. Leachate Collection System and Drainage Layer
  - v. Rain Cover in Cell E
- b. Leachate Lagoon
  - i. Bulk Excavation
  - ii. Recompacted Clay Liner & Geosynthetics
  - iii. Solid Wall HDPE Leachate Loadout Riser, Pump, and Pad
- c. Sedimentation Pond
  - i. Excavation and Placement of Structural Fill
  - ii. All Culverts
  - iii. Outfall
- d. Other Site Work
  - i. Culverts, Stormwater Improvements, Ditches, etc.
  - ii. Roadway Construction
  - iii. Security Fencing
  - iv. Topsoiling, Erosion Control, Seeding
- e. See Specification Section 01 11 00 and the Drawings and Specifications for work to be performed.

## Discussion:

- ***Geosynthetics will be installed for the cell, ~6.7 acres, and the pond, ~3.5 acres***
- ***Quantities for Bid Item 111 on the bid form will be measured by in-place survey (no allowance for shrink/swell).***
- ***HDR to provide additional information on leachate evaporator***
  - ***Metro Waste Authority to potentially pull this item from the bid (A-127)***
- ***Pumps for the stormwater control will be temporary rentals only and not remain onsite after final completion. Pump placed on top of rain cover on south end of cell will discharge to the south perimeter ditch.***



#### EXISTING CONDITIONS

- a. Bidders shall be aware of existing infrastructure such as leachate collection lines, groundwater and gas wells, groundwater collection trenches, and other utilities shown within the drawings and present at the site.
- b. Contractor to coordinate construction activities to allow the Owner uninterrupted operation of existing adjacent facilities.

#### **Discussion:**

- ***Currently there are a few monitoring wells in place that will be removed and/or raised. This is not included in the scope of this task of Cell E contract, but coordination will be required with drilling contractor.***
  - ***Groundwater monitoring well sampling will be conducted by MWA staff. Coordination will be required.***
  - ***Contractor responsible if they damage the monitoring well(s)***
- ***Clearing and grubbing of the site will be required. MWA has removed most of the necessary trees (root ball included) resulting in minimal tree removal being necessary. Due to the removal period for the specific type of trees, the anticipated start of construction is March 1, 2026, to ensure any outlying trees can be properly removed prior to March 31, 2026. Contractor would be responsible for remaining trees to be removed at the start of the project within the construction limits.***

#### BORROW SOURCE

- a. Soil borrow to be from the excavation area for Cell E.
- b. Proposed Stockpile Area
- c. Removing existing vegetation
- d. Site/project location access/right of way
- e. Placement of excess bulk excavation material shall be given the following priority:
  - a. Recompact Clay Liner and Structural Fill.
  - b. Daily Cover Stockpile at Landfill active working face.
  - c. Stockpile

#### **Discussion:**

- ***Sand pockets may be encountered during the excavation area of Cell E. Due to previous borings and cell construction activities, it is anticipated that the sand pockets will be minimal and that an adequate amount of borrow soil will be onsite to complete this project. Borings and historic soil data can be provided. A landfill expansion was recently approved by IDNR that has recent soil boring data.***
- ***Current stockpile quantity will be minimally impacted until project start date***
  - ***MWA Estimate: ~20 CYs per day until project start date (current operations daily cover amount)***



#### TESTING AND SURVEYING

- a. Contractor is responsible for testing. See Specification Sections 02 65 00, 31 23 00, and other specification sections for testing requirements.
- b. Contractor is responsible for surveying per the Contract Documents. See Specification Section 01 71 23 for additional information.
- f. Owner will conduct electrostatic leak location testing through CQA Consultant. Contractor is responsible for drainage layer wetting/grading, power generator, and fuel. See full list of requirements in Specification Section 01 71 24.
- c. CAD linework (.dwg) and grading files (.xml) are available to interested bidders, if desired. Submit requests to Aaron Brewer, HDR at [aaron.brewer@hdrinc.com](mailto:aaron.brewer@hdrinc.com) to obtain the CAD files. Contractor must fill out an "Agreement with Contractor for Delivery of Electronic Media" in order to obtain CAD files.

#### **Discussion:**

- ***Leak location surveys will be subcontracted by the CQA consultant, not the contractor. A bare (leachate pond) and covered (Cell E) leak location survey will be performed.***

#### SCHEDULE

- a. Questions regarding the Bidding Documents shall be submitted no later than business close on Wednesday, January 21, 2026.
- b. Bids are due Wednesday, January 28, 2026 by 3:00 PM.
  - i. Submit Bids to 300 East Locust Street, Suite 100 Des Moines, IA 50309 with attention to Andrew Phillips (Metro Waste Authority)
  - ii. The bid opening will be conducted in person at the Metro Waste Authority office at 3:00 PM on January 28, 2026.
- c. Anticipated Bid Award – February 18<sup>th</sup>, 2026
- d. Notice to Proceed – March 1, 2026
- e. Substantial Completion – August 31, 2026
- f. Final Completion – September 30, 2026

#### **Discussion:**

- ***The bid opening on January 28, 2026, is open to attend but not required. Questions are due to HDR by January 21, 2026.***

#### BIDDING

- a. Use Bid Form in the Project Manual
- b. See the Project Manual for specific protocols
- c. Include: Bid Security, Statement of Bidder's Qualifications, and other required documents
- d. Basis of Bid: Lump Sum and Select Unit Pricing.
- e. Alternate Bid Pricing.

**Discussion:**

- ***The Metro Waste Authority website is the official website for updates and bid information.***
- ***There is no available owner supplied topsoil stockpile. Topsoil required for the project is anticipated to be supplied from the topsoil stripping for cell, pond and stormwater pond construction.***

**INTERPRETATIONS:**

- a. No addenda have been issued to date. An addendum will be issued follow the pre-bid meeting to include meeting notes, attendance list, and any potential changes to the Bidding Documents.
- b. Only addenda can modify documents (See Specification Section 00 20 00)

**Discussion:**

- ***Anticipate Addendum 1 to be anticipated to be provided by 12/25 and will include;***
  - ***Perimeter road located around the stockpile area limits.***
  - ***Customer drop off with Z-wall will have two bays and approximately 20ft of concrete on each side (only concrete area) remaining access roads leading to the Z-wall will be aggregate.***
  - ***Road will increase in width where customer drop bins will be located.***
  - ***Updated bid form.***

**OTHER QUESTIONS AND DISCUSSION:**

**Discussion:**

- ***Additional information to be provided:***
  - ***Electrical details – Metro has no preferred electrical subcontractor, reference drawings for site electrical to be provided.***
  - ***HDR to review groundwater trench piping and details.***
  - ***Proposed stockpile to be further designated on drawing.***
  - ***Certification grid will be included in the IFC drawing for confirming design elevations for subgrade, recompacted clay liner and drainage layer. Certification points will be at a minimum 5 points per acre and changes in grades.***
  - ***HDR/MWA to refine exact fencing location for the project.***

**IFB Plans Discussion:**

- ***MWA likely to remove jersey barriers from the project.***
- ***Leachate pond detail has only 1 riser, entire perimeter will have a fence.***
- ***Drawing C505:***

- *Cell E has leachate extraction risers with one riser as a spare, the other for pump installation by the contractor. Detail 1 shows 2 risers and only 1 will have a pump*
- *Page 506 detail 1*
  - *HDR to verify if no pipe or if PVC will be used.*
- *Page 506 detail 3*
  - *Stormwater diversion berm will be used, but without the discharge pipe shown.*
- *Page 508:*
  - *The Leachate Loadout design is to drain back into the leachate pond*
    - *Pump manufacturer to drill out the check valve*
  - *A HDPE liner stripe will be cast in the Leachate Loadout bay to allow the leachate pond liner to be extrusion welded.*
- *HDR to provide additional detailing for the tie-in to the existing liner with Scrim termination.*

**Water Access Options:**

- *Previous construction project utilized a drainage tile that was dammed up.*
- *Mega tanker is available by the other leachate pond on the south side of the property.*
- *Potential Co-Op in town for a few loads as necessary.*

## Meeting Attendance

Project: Metro Waste Authority P-67 – MPW Cell E Liner Construction

Subject: Pre-Bid Meeting

Date: Friday, December 12, 2025

Location: Metro Park West Landfill Scale House

[illegible]

**SECTION 00 41 00**  
**BID FORM**  
**METRO WASTE AUTHORITY**  
**PROJECT P-67 - CELL E LINER, LEACHATE LAGOON, AND SED POND**

**ARTICLE 1 – BID RECIPIENT**

- 1.01 This Bid is submitted to:  
***Metro Waste Authority***  
300 East Locust Street, Suite 100  
Des Moines, IA 50309
- 1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

**ARTICLE 2 – BIDDER’S ACKNOWLEDGEMENTS**

- 2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.
- 2.02 BIDDER will sign and deliver the required number of counterparts of the AGREEMENT with the Bonds and other documents required by the Bidding Requirements within 15 days after the date of OWNER's Notice of Award.

**ARTICLE 3 – BIDDER’S REPRESENTATIONS**

- 3.01 In submitting this Bid, Bidder represents that:
- A. Bidder has examined and carefully studied the Bidding Documents, and any data and reference items identified in the Bidding Documents, and hereby acknowledges receipt of the following Addenda:

<u>Addendum No.</u>	<u>Addendum, Date</u>
_____	_____
_____	_____
_____	_____
_____	_____

- B. Bidder has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfied itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

- C. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.
- D. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and any Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder's safety precautions and programs.
- E. Bidder agrees, based on the information and observations referred to in the preceding paragraph, that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.
- F. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
- G. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and confirms that the written resolution thereof by Engineer is acceptable to Bidder.
- H. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work.
- I. The submission of this Bid constitutes an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, and that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.
- J. Bidder has examined and carefully prepared the proposal from the Bidding Documents and has checked the same in detail before submitting this Bid.
- K. Bidder will submit written evidence of its authority to do business in the state where the Project is located not later than the date of its execution of the Contract.
- L. Bidder agrees to waive any claim it has or may have against the Owner, the Engineer and the respective employees, arising out of or in connection with the administration, evaluation or recommendation of the Bid.

## **ARTICLE 4 – BIDDER'S CERTIFICATION**

### **4.01 Bidder certifies that:**

- A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;
- B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;
- C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and
- D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:
  - 1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process;

2. “fraudulent practice” means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
3. “collusive practice” means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and
4. “coercive practice” means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

## ARTICLE 5 – BASIS OF BID

5.01 Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

Item No.	Description	Estimated Quantity	Unit	Bid Unit Price	Bid Price
101	Mobilization, demobilization, and all work not included in Bid Item Nos. 102 through 125	1	LS		
102	Clearing and Grubbing, Culvert Removal and Salvage, drain tile management	1	LS		
103	Excavate and Load Soils from Cell, Runout Area, North Cell Access Road, South Perimeter Road, Leachate Pond, and Stormwater Pond	505,000	CY		
104	Haul, place, and Compact Structural Fill in Cell, Runout Area, North Cell Access Road, South Perimeter Road, Leachate Pond, and Stormwater Pond	15,000	CY		
105	Excavate and Load Soils from North Perimeter Road & Convenience Area	33,500	CY		
106	North Perimeter Road & Convenience Area Structural fill	1,500	CY		
107	Excavate and Load Soils from East Perimeter Road	25,000	CY		
108	Haul, place, and Compact Structural Fill for East Perimeter Road	650	CY		
109	Remove and Replace Unsuitable Soils Below Base Grade (Cell E Liner System)	5,000	CY		
110	Excavate, Haul, and Place Soil at Owner Operation’s Stockpile as Daily Cover	50,000	CY		
111	Excavate, Haul, and Place Soil at Owner Designated Stockpile	405,000	CY		
112	30" CMP 16 Gauge Culverts (2) with drop structures (1) & end sections (3), Riprap	500	LF		
113	Construct Cell E Groundwater Control System, Liner, Leachate Collection System, sump & loadout, and Raincover	1	LS		

114	Construct Leachate Pond, Liner, Loadout, sump and pump	1	LS		
115	Construct Leachate forcemain to leachate pond	1	LS		
116	Underground Electrical Extension - South of Cell	1	LS		
117	Construct Stormwater Pond- grading, outfall, topsoil, riprap	1	LS		
118	Terraces and stormwater control system	1	LS		
119	Construct South Perimeter Road	1	LS		
120	Tipping Pad & North Access Road with Culverts	1	LS		
121	Citizen's Campus & North Perimeter Road-aggregate surfacing	1	LS		
122	Citizen's Campus Z-wall with pavement	1	LS		
123	Construct East Perimeter Road	1	LS		
124	Chain Link Fence - Salvage and Install New	5,700	LF		
125	Seeding All Areas (Install Owner supplied Topsoil. Install Seed, Fertilize, and Mulch)	20	AC		
126	Allowance (2.5% of Total Combined Price of Bid Items 101 – 125)	1	LS		

A-127	Haul, Place, and compact structural fill at Northwest Perimeter Road	11,500	CY		
A-128	Northwest Perimeter Road – aggregate surfacing	1	LS		
A-129	Additional Seeding and Fertilizing (without topsoiling)	25	AC		

Bidder acknowledges that (1) each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item, and (2) estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents.



**Total Base Bid Price for Bid Items 101 through 126**  
**(Total of Lump Sum and Unit Price Bids = Total Bid Price)**

\$

(numerals)

(words)

**Total Bid Price for Bid Alternate Items A127 through A128**  
**(Total of Lump Sum and Unit Price Bids = Total Alternate Bid Price)**

\$

(numerals)

(words)

- 5.02 If the Contract is to be awarded, it will be awarded to the lowest responsive Bidder for the Work selected by Owner (Items 101-126, with consideration of the alternate bid items, Items A127 – A128). Owner will select the Work that will be in the best interest of the Owner.
- 5.03 Contractor computed quantity for bulk excavation is not guaranteed. Daily operational activities may result in varying quantities of soil to be excavated. Contractor to provide alternate pricing for various quantities that may be encountered. Owner will confirm quantity of soil excavation in addition to base bid with Contractor during Contract Negotiations. Total amount will be the unit price multiplied by the highest quantity of the range. Contractor to provide both unit price and total amount for the highest quantity of the range for all line items.
- 5.04 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.
- 5.05 Bidder accepts the provisions of the Agreement as to liquidated damages.

## **ARTICLE 6 – ATTACHMENTS TO THIS BID**

- 6.01 The following documents are submitted with and made a condition of this Bid:
- A. Required Bid security;
  - B. List of Project References;
  - C. Evidence of authority to do business in the state of the Project; or a written covenant to obtain such license within the time for acceptance of Bids;
  - D. Required Bidder Qualification Statement with supporting data.

## **ARTICLE 7 – DEFINED TERMS**

- 7.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

## ARTICLE 8 – BID SUBMITTAL

BIDDER: *[Indicate correct name of bidding entity]*

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By:

*[Signature]*

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*[Printed name]*

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*(If Bidder is a corporation, a limited liability company, a partnership, or a joint venture, attach evidence of authority to sign.)*

Attest:

*[Signature]*

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*[Printed name]*

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Title:

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Submittal Date:

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Address for giving notices:

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Telephone Number:

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Fax Number:

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Contact Name and e-mail address:

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State Contractor's License

No.:

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*(where applicable)*

**END OF BID FORM**

**SECTION 01 29 01**  
**PAYMENT PROCEDURES**

**PART 1 - GENERAL**

**1.1 SUMMARY**

A. This Section Includes:

1. Administrative and procedural requirements necessary to prepare and process Applications for Payment.

**1.2 SCHEDULE OF VALUES**

A. For lump sum contracts, furnish a statement allocating portions of the Contract Sum to various portions of the Work which will be used as the basis for reviewing Applications for Payment.

1. Submit preliminary Schedule of Values utilizing the template format and work breakdown provided as an attachment to this Section within 10 days after the effective date of the Agreement.
2. Before submittal of first progress payment, make corrections and adjustments as necessary to obtain an acceptable Schedule of Values and resubmit to the Engineer.
  - a. No progress payment requests will be processed until the Schedule of Values is accepted by the Engineer.

B. Format and Content:

1. Use the form provided and supplement as necessary using the Project Manual table of contents as a guide to establish additional line items for the Schedule of Values. Provide at least one line item for each Specification Section.
2. Include the following project identification on the Schedule of Values:
  - a. Project name, location, and Owner contract/project number.
  - b. Name of Engineer.
  - c. Engineer's project number.
  - d. Contractor's name and address.
  - e. Date of submittal.
3. Arrange the Schedule of Values for the lump sum Bid Item No. 1 (or, alternatively, the Bid Item No. fully executed) per Specification Section 00 80 00, with the following subdivisions, description of work and dollar values for each:
  - a. Subcontractor work.
  - b. Manufacturer or fabricator.
  - c. Supplier.
  - d. Contractor work.
4. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports.
5. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
6. Provide a separate line item in the Schedule of Values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
7. Each item in the Schedule of Values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item.
  - a. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the Schedule of Values or distributed as general overhead expense at Contractor's option.

### 1.3 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment shall be consistent with previous applications and payments as recommended by the Engineer and approved by Owner.
- B. The date for each progress payment is on or about the first of each month. The period covered by each Application for Payment starts on the day following the end of the preceding period and ends 10 days before the date for each progress payment.
- C. Requests for progress payments shall be submitted at least 10 days before the date established for each progress payment, but not more often than once a month. Use forms provided in Contract Documents for Applications for Payment. Sample copy of the Application for Payment and Continuation Sheet is included in Section 01 29 01A.
- D. Application Preparation Procedures:
  - 1. When requested by the Contractor, the Engineer will determine the estimated quantities and classifications of Unit Price Work performed.
    - a. Preliminary determinations will be reviewed with the Contractor before submitting Application for Payment.
    - b. Contractor will complete the Application for Payment based on Engineer's decision on actual quantities and classifications.
    - c. Engineer will submit copies of Application for Payment to Contractor for certification.
      - 1) Contractor shall submit signed Application for payment to Owner for approval within time frame agreed to at the Preconstruction Conference.
  - 2. For a lump sum price contract, the Contractor shall prepare a preliminary determination for payment based on the approved Schedule of Values and review with Engineer before completing Application for Payment.
    - a. Payment for lump sum bid items shall be in the amount of scheduled values of each of the aggregate components comprising the lump sum items multiplied by the respective percent completion estimate.
  - 3. If payment is requested for materials and equipment not incorporated in the Work, then the following shall be submitted with the Application for Payment:
    - a. Evidence that materials and equipment are suitably stored at the site or at another location agreed to in writing.
    - b. A bill of sale, invoice, or other documentation warranting that the materials and equipment are free and clear of all liens.
    - c. Evidence that the materials and equipment are covered by property insurance.
  - 4. Complete every entry on form. Execute by a person authorized to sign legal documents on behalf of Contractor.
- E. With each Application for Payment, submit the Following Documents:
  - 1. Waivers of liens from subcontractors and suppliers for the construction period covered by the previous application.
    - a. Submit partial waivers on each item for amount requested before deduction for retainage on each item.
    - b. When an application shows completion for an item, submit final or full waivers.
    - c. Owner reserves the right to designate which entities involved in the Work shall submit waivers.
    - d. Submit final Application for Payment with or proceeded by final waivers from every entity involved with performance of the Work covered by the application.
    - e. Submit waivers of lien on forms executed in a manner acceptable to Owner.
  - 2. Project schedule updated in accordance with criteria contained in Section 01 11 20 - Job Conditions.

- F. The following administrative actions and submittals shall precede or coincide with submittal of first Application for Payment:
  - 1. List of subcontractors.
  - 2. Schedule of Values.
  - 3. Contractor's construction schedule.
  - 4. Copies of applicable permits.
  - 5. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
- G. Submit final Application for Payment with releases and supporting documentation not previously submitted and accepted including, but not limited, to the following:
  - 1. Evidence of completion of Project closeout requirements.
  - 2. Insurance certificates for products and completed operations where required and proof that taxes, fees and similar obligations were paid.
  - 3. Updated final statement, accounting for final changes to the Contract Sum.
  - 4. Consent of Surety to Final Payment.
  - 5. Final lien waivers as evidence that claims have been settled.
  - 6. Final liquidated damages settlement statement.
  - 7. Requirements listed in Section 01 77 01 - Closeout Procedures.

#### **1.4 MEASUREMENT AND PAYMENT**

##### **A. Lump Sum Bid Items General:**

- 1. Measurement of lump sum bid items will be based on an estimated percent complete of the various components of the lump sum item established by the Contractor's Schedule of Values and approved by the Engineer. Contractor will make progress estimates on or about the first day of the month and submit to Engineer for review and approval.

##### **B. Lump Sum & Unit Price Items:**

- 1. Bid Item 101: Mobilization, demobilization, and all work not included in Bid Item Nos. 102-125:
  - a. Item shall include all work not included in other bid items needed to complete this project.
  - b. Measurement and payment will be based on an estimated percent complete of the various components of the lump sum item established by the Contractor's Schedule of Values and approved by the Engineer. Contractor will make progress estimates on or about the first day of the month and submit to Engineer for review and approval.
- 2. Bid Item 102: Clearing and Grubbing, Culvert Removal and Salvage, drain tile management:
  - a. Measurement shall be by the estimated percent complete of this item
  - b. Included in this item shall be management, extension, and tie-in of any encountered drain tiles.
  - c. Groundwater management is the responsibility of the contractor for the duration of the project.
  - d. Included in this item is removal and salvage of existing culverts in the project area.
  - e. Clearing and grubbing to include stockpiling of cleared vegetation at Owner designated stockpile.
- 3. Bid Item 103: Excavate and Load Soils from Cell, Runout Area, North Cell Access Road, South Perimeter Road, Leachate Pond, and Stormwater Pond
  - a. Measurement and payment shall be by the cubic yard volume of soil excavated from the Cell E project area, including cell, runout, roads, and full area as measured by survey.

- b. The quantity of bulk excavation shall be paid for at the Unit Price per cubic yard within the project area and design boundaries. Incidental to this item is any temporary stockpiling, and segregation of any topsoil. Incidental to this item is any clearing and grubbing. No additional payment shall be made for excavation made beyond the design grades. No allowances for shrink/swell in this project for pay items.
- 4. Bid Item 104: Haul, place, and Compact Structural Fill in Cell, Runout Area, North Cell Access Road, South Perimeter Road, Leachate Pond, and Stormwater Pond
  - a. Measurement and payment shall be by the cubic yard volume of soil placed as structural fill in the project area as measured by survey instrument. No allowances for shrink/swell in this project for pay items.
  - b. The quantity of structural fill shall be paid for at the Unit Price per cubic yard placed as structural fill to the design grades as shown on the Drawings, and per the project specifications. Item includes structural fill to the bottom of clay in the cell, road fill, perimeter fill, and tipping pad fill, with testing per the specifications. Included in this item is all fill, smooth grading, and shaping of roads and drainageways.
- 5. Bid Item 105: Excavate and Load Soils from North Perimeter Road & Convenience Area
  - a. Measurement and payment shall be by the cubic yard volume of soil excavated from the area per the drawings, as measured by survey.
  - b. The quantity of bulk excavation shall be paid for at the Unit Price per cubic yard within the project area and design boundaries. Incidental to this item is any temporary stockpiling, and segregation of any topsoil. Incidental to this item is any clearing and grubbing. No additional payment shall be made for excavation made beyond the design grades. No allowances for shrink/swell in this project for pay items.
- 6. Bid Item 106: North Perimeter Road & Convenience Area Structural fill
  - a. Measurement and payment shall be by the cubic yard volume of soil placed as structural fill in the project area as measured by survey instrument. No allowances for shrink/swell in this project for pay items.
  - b. The quantity of structural fill shall be paid for at the Unit Price per cubic yard placed as structural fill to the design grades as shown on the Drawings, and per the project specifications. Item includes structural fill with testing per the specifications. Included in this item is all fill, smooth grading, and shaping of roads and drainageways.
- 7. Bid Item 107: Excavate and Load Soils from East Perimeter Road
  - a. Measurement and payment shall be by the cubic yard volume of soil excavated from the area per the drawings, as measured by survey.
  - b. The quantity of bulk excavation shall be paid for at the Unit Price per cubic yard within the project area and design boundaries. Incidental to this item is any temporary stockpiling, and segregation of any topsoil. Incidental to this item is any clearing and grubbing. No additional payment shall be made for excavation made beyond the design grades. No allowances for shrink/swell in this project for pay items.
- 8. Bid Item 108: Haul, place, and Compact Structural Fill for East Perimeter Road
  - a. Measurement and payment shall be by the cubic yard volume of soil placed as structural fill in the project area as measured by survey instrument. No allowances for shrink/swell in this project for pay items.
  - b. The quantity of structural fill shall be paid for at the Unit Price per cubic yard placed as structural fill to the design grades as shown on the Drawings, and per the project specifications. Item includes structural fill with testing per the specifications. Included in this item is all fill, smooth grading, and shaping of roads and drainageways.
- 9. Bid Item 109: Remove and Replace Unsuitable Soils Below Base Grade (Cell E Liner System):
  - a. Measurement and payment shall be by the cubic yard volume of unsuitable soil removed and replaced as measured by tape or survey instrument, in coordination and with approval of RPR.

- b. Incidental to this item is testing per the specifications for structural fill placement. Incidental to this item is hauling unsuitable soils to the active face of the landfill for use as daily cover.
- 10. Bid Item 110: Haul and Place Soil at Owner Operation's Stockpile as Daily Cover:
  - a. Measurement and payment shall be by the cubic yard volume of soil excavated from the Cell E project area and placed as measured by survey instrument or verified load count in coordination with the RPR and as approved by the Engineer.
  - b. Total excavation and loading to be paid under Bid Item 103. This bid item measured by survey or load count shall be paid for material placed at the working face stockpile. At end of project, combined totals of Bid Items 104, 106, 108, 110, 111, and 35,000-cy for RCL placement, may exceed total excavation of Bid Item 103. No allowances will be made for soil shrink/swell.
    - 1) Anticipated to be ~300 CY/day, 6 days/week, for 27 weeks.
- 11. Bid Item 111: Haul, and Place Soil at Owner Designated Stockpile
  - a. Measurement and payment shall be by the cubic yard volume of soil excavated from the project areas and placed in the Owner Designated stockpile as measured by survey instrument and verified by final survey.
  - b. Material shall be placed in lifts in accordance with the project specifications, and segregated by material type.
  - c. Designated stockpile location is to the northeast of the project area, in coordination with the Owner and Engineer provided grades. Incidental to this item is fine grading stockpiles, maintaining positive drainage in stockpile areas, segregation of topsoil or any sand encountered into separate stockpiles. Incidental to this item is clearing and grubbing and stripping vegetation and topsoil from the stockpile area and grading into a stockpile prior to stockpiling additional material in the area. Incidental to this item is stormwater drainage promoted around the stockpile to the tributary to the east.
- 12. Bid Item 112: 30" CMP 16 Gauge Culverts (2) with drop structures (1) & end sections (3), Riprap
  - a. Measurement shall be by the lineal foot of corrugated metal pipe (CMP) culvert installed for the sediment pond inlet pipe as measured by survey instrument by the Owner's representative.
  - b. The quantity of CMP pipe installed shall be paid for at the Unit Price per lineal foot for this pay item. Drop inlet, flared end sections, erosion stone, and geotextile shall be incidental to this bid item. Fine grading around the inlets to the culvert, and setting culverts to the inverts and slopes as shown on the drawings is incidental to this item.
- 13. Bid Item 113: Construct Cell E Groundwater Control System, Liner, Leachate Collection System, sump & loadout, and raincover
  - a. Measurement will be based on an estimated percent complete of the various components of the lump sum item established by the Contractor's Schedule of Values and approved by the Engineer. Contractor will make progress estimates on or about the first day of the month and submit to Engineer for review and approval.
  - b. Include in this item all labor, materials, and testing to supply and install the groundwater control system, liner system, leachate control system with sump and loadout, and raincover system as shown in the Drawings and described in the specifications. Incidental to this item is soil hauling and placement for the recompacted clay liner, all temporary stockpiling of materials, & material management and testing. Incidental to this item is installation of seepage drain with groundwater control system as needed, as shown on the drawings. Seepage drain to include an 8-inch pipe and 2'x2' granular drainage material to extend the groundwater trench. In this item, include an estimated 1,000-LF of seepage drain.
- 14. Bid Item 114: Construct Leachate Pond, Liner, Loadout, sump and pump
  - a. Measurement will be based on an estimated percent complete of the various components of the lump sum item established by the Contractor's Schedule of Values

- and approved by the Engineer. Contractor will make progress estimates on or about the first day of the month and submit to Engineer for review and approval.
- b. Include in this item all labor, materials, and testing to supply and install the liner system, leachate control system, and pump and loadout system as shown in the Drawings and described in the specifications. Incidental to this item is soil hauling and placement for the recompacted clay liner, all temporary stockpiling of materials, & material management and testing. Incidental to this item is installation of seepage drain as needed, as shown on the drawings.
15. Bid Item 115: Construct Leachate Forcemain to Leachate Pond
- a. Item to include all HDPE piping installed to complete the forcemain from the Cell E sump to the leachate lagoon and the loadout line.
  - b. Incidental to this item is all fittings and appurtenances for forcemain installation.
  - c. Incidental to this item is all trenching and backfilling.
  - d. Measurement will be based on an estimated percent complete of the various components of the lump sum item established by the Contractor's Schedule of Values and approved by the Engineer. Contractor will make progress estimates on or about the first day of the month and submit to Engineer for review and approval.
16. Bid Item 116: Underground electrical extension – South of Cell
- a. Item to include all conduit and wire from tie-in to Cell E loadout and leachate pond loadout.
  - b. Incidental to this item is all fittings and appurtenances for electrical installation. Panels, handholes, tie-in, and startup of panels and pumps to be included in this item.
  - c. Incidental to this item is all trenching and backfilling.
  - d. Measurement will be based on an estimated percent complete of the various components of the lump sum item established by the Contractor's Schedule of Values and approved by the Engineer. Contractor will make progress estimates on or about the first day of the month and submit to Engineer for review and approval.
17. Bid Item 117: Construct Stormwater Pond- grading, outfall, topsoil, riprap
- a. Measurement will be based on an estimated percent complete of the various components of the lump sum item established by the Contractor's Schedule of Values and approved by the Engineer. Contractor will make progress estimates on or about the first day of the month and submit to Engineer for review and approval.
  - b. The quantity of excavation shall be paid for at the Unit Price per cubic yard within the project area and design boundaries of the pond under bid item 103.
  - c. Included in this item is fine grading, placement of outfall, topsoil, and riprap with associated geotextile as shown on the drawings. Incidental to this item is smooth grading in and around the pond to promote positive drainage and all stormwater control, sediment control, and water control for the duration of the project.
18. Bid Item 118: Terraces and stormwater control system
- a. Measurement will be based on an estimated percent complete of the various components of the lump sum item established by the Contractor's Schedule of Values and approved by the Engineer. Contractor will make progress estimates on or about the first day of the month and submit to Engineer for review and approval.
  - b. Include in this item all labor and materials to supply and install stormwater terraces as shown on the drawings, silt fence as needed, pumping equipment, and the stormwater control system as shown on the drawings and described in the project manual.
19. Bid Item 119: Construct South Perimeter Road
- a. Measurement will be based on an estimated percent complete of the various components of the lump sum item established by the Contractor's Schedule of Values and approved by the Engineer. Contractor will make progress estimates on or about the first day of the month and submit to Engineer for review and approval.
  - b. Include in this item all labor and materials to supply and install the road textile and aggregate, and tying in to the existing roadway as shown on the drawings and



described in the project manual. Structural fill, excavation, and smooth grading road and perimeter ditch to be included in the structural fill and excavation bid items 103 and 104 above.

20. Bid Item 120: Tipping Pad & North Access Road with Culverts

- a. Measurement will be based on an estimated percent complete of the various components of the lump sum item established by the Contractor's Schedule of Values and approved by the Engineer. Contractor will make progress estimates on or about the first day of the month and submit to Engineer for review and approval.
- b. Include in this item all labor and materials to supply and install textile and aggregate, grading in the drainageways to facilitate drainage, and tying in to the existing north roadway as shown on the drawings and described in the project manual. Structural fill, excavation, and smooth grading tipping pad, drainageways, and south road to be included in the structural fill and excavation bid items 103 and 104 above.
- c. Include in this item supply and install of 24-inch culverts with riprap, geotextile, and flared end sections as shown on the drawings.

21. Bid Item 121: Citizen's Campus & North Perimeter Road-aggregate surfacing

- a. Measurement will be based on an estimated percent complete of the various components of the lump sum item established by the Contractor's Schedule of Values and approved by the Engineer. Contractor will make progress estimates on or about the first day of the month and submit to Engineer for review and approval.
- b. Include in this item all labor and materials to supply and install the north area textile, and aggregate, and tying in to the existing roadway as shown on the drawings and described in the project manual. Structural fill, excavation, and smooth grading road and perimeter ditch to be included in the structural fill and excavation bid items 103 and 104 above.

22. Bid Item 122: Citizen's Campus Z-wall with pavement

- a. Measurement will be based on an estimated percent complete of the various components of the lump sum item established by the Contractor's Schedule of Values and approved by the Engineer. Contractor will make progress estimates on or about the first day of the month and submit to Engineer for review and approval.
- b. Include in this item all labor and materials to supply and install the z-wall as shown on the project drawings. Included in this item is all material, material testing, and pavement.
- c. Include in this item supply and install one 24-inch culvert with riprap, geotextile, and flared end sections as shown on the drawings.

23. Bid Item 123: Construct East Perimeter Road

- a. Measurement will be based on an estimated percent complete of the various components of the lump sum item established by the Contractor's Schedule of Values and approved by the Engineer. Contractor will make progress estimates on or about the first day of the month and submit to Engineer for review and approval.
- b. Include in this item all labor and materials to supply and install the road textile and aggregate, and tying in to the north and south roadway as shown on the drawings and described in the project manual. Structural fill, excavation, and smooth grading road and perimeter ditch to be included in the structural fill and excavation bid items 103 and 104 above.

24. Bid Item 124: Chain Link Fence - Salvage and Install New

- a. Measurement will be based on lineal feet installed as measured by survey and as designed on the drawings.
- b. Include in this item all labor and materials to supply and install new chain link fence as shown on the project drawings. Included in this item is salvage of existing fencing and re-use to the extent possible. New materials due to unsalvageable fencing is incidental to this item.
- c. Included in this item are 3-swing style gates, a minimum of 16-ft wide to be placed in coordination with the Owner.

25. Bid Item 125: Seeding All Areas (Install Owner supplied Topsoil. Install Seed, Fertilize, and Mulch):
- a. Measurement & payment shall be by the acreage of surveyed area, as coordinated with and approved by the Owner.
  - b. Additional areas to be seeded outside of the project area (including all disturbed, vegetated areas resulting from Contractor's work activities) shall be included within Lump Sum pricing and included within the Contractor's submitted schedule of values and will not be paid under this item, and will be incidental to the project.
26. Bid Item 126: Allowance:
- a. Item may not be used without written approval from Owner, for items outside of the existing scope of the project. See Specification Section 01 21 00 for more information.
27. ALTERNATE Bid Item 127: Haul, Place, and compact structural fill at Northwest Perimeter Road
- a. Measurement and payment shall be by the cubic yard volume of soil placed as structural fill in the project area as measured by survey instrument. No allowances for shrink/swell in this project for pay items.
  - b. The quantity of structural fill shall be paid for at the Unit Price per cubic yard placed as structural fill to the design grades as shown on the Drawings, and per the project specifications. Item includes structural fill with testing per the specifications. Included in this item is all fill, smooth grading, and shaping of roads and drainageways. Included in this item is all stripping of vegetation and replacement after structural fill placement.
28. ALTERNATE Bid Item 128: Northwest Perimeter Road – aggregate surfacing
- a. Measurement will be based on an estimated percent complete of the various components of the lump sum item established by the Contractor's Schedule of Values and approved by the Engineer. Contractor will make progress estimates on or about the first day of the month and submit to Engineer for review and approval.
  - b. Include in this item all labor and materials to supply and install the north area textile, and aggregate, and tying in to the existing roadway as shown on the drawings and described in the project manual. Structural fill, excavation, and smooth grading road and perimeter ditch to be included in the structural fill and excavation bid item 127 above.
  - c. Include in this item supply and install one 24-inch culvert with riprap, geotextile, and flared end sections as shown on the drawings.
29. ALTERNATE Bid Item 129: Additional Seeding and Fertilizing (without topsoiling)
- a. Measurement & payment shall be by the acreage of surveyed area, as coordinated with and approved by the Owner.
  - b. Additional areas to be seeded outside of the project area (including all disturbed, vegetated areas resulting from Contractor's work activities) shall be included within Lump Sum pricing and included within the Contractor's submitted schedule of values and will not be paid under this item, and will be incidental to the project.

## **PART 2 - PRODUCTS - (NOT APPLICABLE TO THIS SPECIFICATION SECTION)**

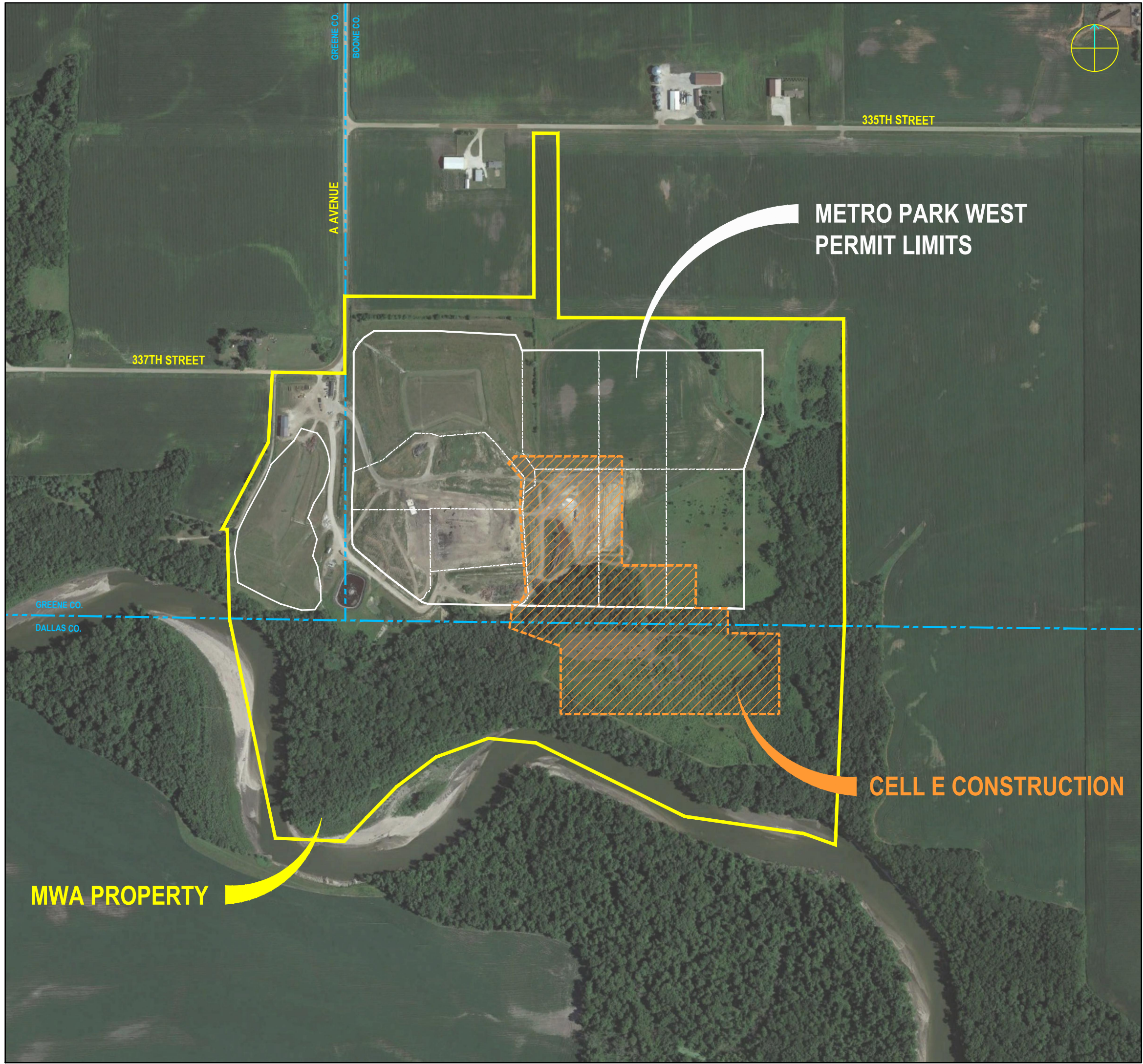
## **PART 3 - EXECUTION - (NOT APPLICABLE TO THIS SPECIFICATION SECTION)**

### **END OF SECTION**





Metro Waste Authority



METRO PARK WEST LANDFILL SITE LOCATION MAP  
SCALE: 1" = 500'

Contract Drawings For

# Metro Park West MSW Landfill

## MWA Project P-67 Cell E Liner Construction

Project No.  
10391837

Perry, Boone County, Iowa  
November 2025

Issued for Bid

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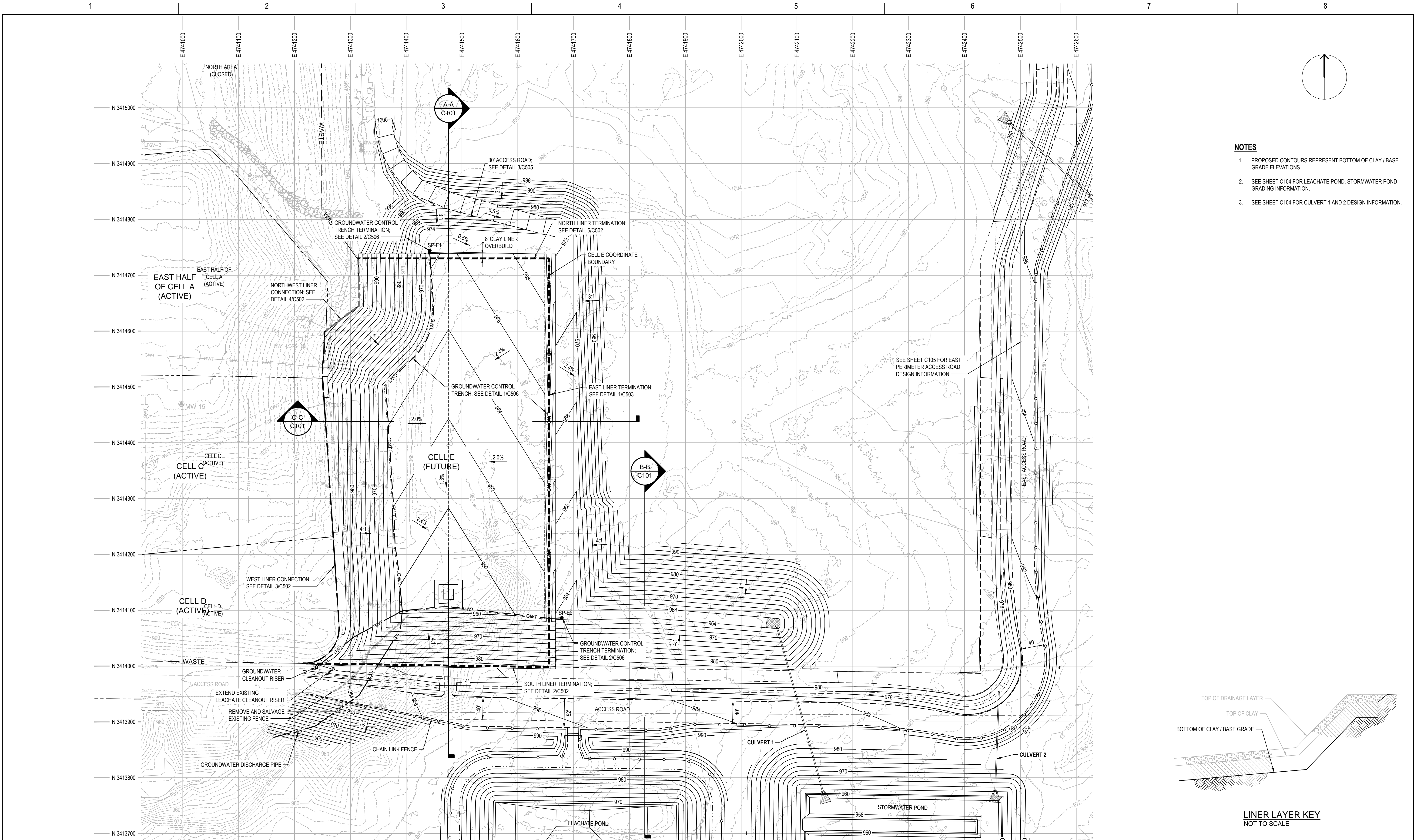
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<div><div><div><div><div></div><div>SECTION IDENTIFIER</div></div><div><div>FLAG INDICATIONS</div><div>DIRECTION OF SECTION CUT</div></div><div><div>X</div><div>XXX</div></div><div><div>SHEET WHERE SECTION IS LOCATED</div></div></div><div>SECTION CUT MARKER</div></div><div><div><div><div><div></div><div>SECTION LETTER</div></div><div><div>X</div><div>XXX</div></div><div><div>1" = 5'</div></div></div><div>SECTION</div><div>SHEET WHERE SECTION VIEW IS FIRST CUT</div></div><div>SECTION TITLE</div></div><div><div><div><div><div></div><div>DETAIL NUMBER</div></div><div><div>X</div><div>XXX</div></div><div><div>1" = 5'</div></div></div><div>SECTION</div><div>SHEET WHERE DETAIL IS FIRST CALLED OUT</div></div><div>DETAIL TITLE</div></div><div><div><div><div><div></div><div>DETAIL NUMBER</div></div><div><div>X</div><div>XXX</div></div></div><div>SHEET WHERE DETAIL IS LOCATED</div></div><div>DETAIL CALLOUT</div></div></div>		<div><div><div><div></div><div>STRUCTURAL FILL (SECTION)</div></div><div><div></div><div>PLACED SOIL (SECTION)</div></div><div><div></div><div>NATIVE SOIL (SECTION)</div></div><div><div></div><div>DAILY / INTERMEDIATE COVER (SECTION)</div></div><div><div></div><div>WASTE (SECTION)</div></div><div><div></div><div>RECOMPACTED CLAY (SECTION)</div></div><div><div></div><div>VEGETATIVE SOIL LAYER (SECTION)</div></div><div><div></div><div>PROTECTIVE SOIL COVER (SECTION)</div></div><div><div></div><div>DRAINAGE LAYER (SECTION)</div></div><div><div></div><div>RIP-RAP / REVETMENT STONE (PLAN/SECTION)</div></div><div><div></div><div>SAND (SECTION)</div></div><div><div></div><div>COARSE AGGREGATE (SECTION)</div></div><div><div></div><div>LETDOWN (PLAN)</div></div><div><div></div><div>HAUL ROAD (PLAN)</div></div><div><div></div><div>RECOMPACTED CLAY LINER (SECTION)</div></div><div><div></div><div>CAREFULLY COMPACTED BACKFILL (SECTION)</div></div></div></div>		<div><div><div><div></div><div>PROP</div><div>PROPERTY BOUNDARY</div></div><div><div></div><div>WASTE</div><div>LIMITS OF WASTE</div></div><div><div></div><div>INTERNAL CELL/PHASE BOUNDARY</div></div><div><div>X</div><div>X</div><div>X</div><div>FENCE - BARB WIRE</div></div><div><div></div><div></div><div></div><div>FENCE - CHAIN LINK</div></div><div><div></div><div></div><div></div><div>FENCE - WOOD</div></div><div><div></div><div>25</div><div>EXISTING MINOR CONTOUR</div></div><div><div></div><div>25</div><div>EXISTING MAJOR CONTOUR</div></div><div><div></div><div>PROPOSED MINOR CONTOUR</div></div><div><div></div><div>25</div><div>PROPOSED MAJOR CONTOUR</div></div><div><div></div><div>VEGETATION/BRUSH LINE</div></div><div><div></div><div>TREES / SHRUBBERY</div></div><div><div></div><div>LEA</div><div>LEACHATE PIPE - SOLID WALL</div></div><div><div></div><div>LEA</div><div>LEACHATE PIPE - PERFORATED</div></div><div><div></div><div>FM</div><div>LEACHATE FORCEMAIN</div></div><div><div></div><div>GWT</div><div>GROUNDWATER PIPE / TRENCH</div></div><div><div></div><div>LARGE PIPELINE</div></div><div><div></div><div>SD</div><div>STORMWATER PIPING</div></div><div><div></div><div>STORMWATER CULVERT</div></div><div><div></div><div>&gt;</div><div>DRAINAGE TERRACE</div></div><div><div></div><div>&gt;&gt;</div><div>DRAINAGE DITCH / SWALE</div></div><div><div></div><div>G</div><div>GAS HEADER PIPE</div></div><div><div></div><div>G</div><div>GAS COLLECTOR PIPE</div></div><div><div></div><div>UGE</div><div>UNDERGROUND POWER</div></div><div><div></div><div>OHE</div><div>OVERHEAD POWER LINE</div></div><div><div></div><div>FO</div><div>FIBER OPTIC SERVICE</div></div><div><div></div><div>W</div><div>WATER MAIN</div></div><div><div></div><div>WTL</div><div>WETLANDS DELINEATION</div></div></div></div>		<div><div><div><div><div>&amp;</div><div>AND</div></div><div><div>@</div><div>AT</div></div><div><div>ADS</div><div>ADVANCED DRAINAGE SYSTEMS, INC.</div></div><div><div>AI SI</div><div>AMERICAN IRON &amp; STEEL INSTITUTE</div></div><div><div>APPROX</div><div>APPROXIMATE</div></div><div><div>C or CL</div><div>CENTERLINE</div></div><div><div>CMP</div><div>CORRUGATED METAL PIPE</div></div><div><div>CONC</div><div>CONCRETE</div></div><div><div>CWTS</div><div>CONSTRUCTED WETLANDS TREATMENT SYSTEM</div></div><div><div>CPP</div><div>CORRUGATED PLASTIC PIPE</div></div><div><div>Ø or DIA</div><div>DIAMETER</div></div><div><div>E</div><div>EAST or ELECTRICAL</div></div><div><div>EL or ELEV</div><div>ELEVATION</div></div><div><div>EXST</div><div>EXISTING</div></div><div><div>EXT</div><div>EXTENSION</div></div><div><div>FES</div><div>FLARED END SECTION</div></div><div><div>FL</div><div>FLOWLINE</div></div><div><div>FT</div><div>FOOT or FEET</div></div><div><div>GALV</div><div>GALVANIZED</div></div><div><div>GAL</div><div>GALLON</div></div><div><div>GEW</div><div>GAS EXTRACTION WELL</div></div><div><div>GW</div><div>GROUNDWATER</div></div><div><div>HDPE</div><div>HIGH DENSITY POLYETHYLENE</div></div><div><div>HORIZ</div><div>HORIZONTAL</div></div><div><div>ID</div><div>INNER DIAMETER</div></div><div><div>IE</div><div>INVERT ELEVATION</div></div><div><div>IN</div><div>INCH or INCHES</div></div><div><div>L</div><div>ANGLE</div></div><div><div>LB or LBS</div><div>POUND/S</div></div><div><div>LLDPE</div><div>LINEAR LOW DENSITY POLYETHYLENE</div></div><div><div>MAX</div><div>MAXIMUM</div></div><div><div>MFG'S</div><div>MANUFACTURER'S</div></div><div><div>MH</div><div>MANHOLE</div></div><div><div>MIN</div><div>MINIMUM</div></div><div><div>MPE</div><div>METRO PARK EAST</div></div><div><div>MWA</div><div>METRO WASTE AUTHORITY</div></div><div><div>N</div><div>NORTH</div></div><div><div>NA</div><div>NOT APPLICABLE</div></div><div><div>NO.</div><div>NUMBER</div></div><div><div>OD</div><div>OUTER DIAMETER</div></div><div><div>OZ</div><div>OUNCE</div></div><div><div>PC</div><div>POINT OF CURVATURE</div></div><div><div>PI</div><div>POINT OF INTERSECTION</div></div><div><div>PL</div><div>PLATE</div></div><div><div>POB</div><div>POINT OF BEGINNING</div></div><div><div>POE</div><div>POINT OF END</div></div><div><div>PP</div><div>POLYPROPYLENE</div></div><div><div>PT</div><div>POINT OF TANGENCY</div></div><div><div>PVC</div><div>POLYVINYL CHLORIDE</div></div><div><div>R or RAD</div><div>RADIUS</div></div><div><div>REQ'D</div><div>REQUIRED</div></div><div><div>ROW</div><div>RIGHT OF WAY</div></div><div><div>SEC</div><div>SECTION</div></div><div><div>S</div><div>SOUTH</div></div><div><div>SPA</div><div>SPACING</div></div><div><div>SS</div><div>STAINLESS STEEL</div></div><div><div>STA</div><div>STATION</div></div><div><div>STL</div><div>STEEL</div></div><div><div>TEMP</div><div>TEMPORARY</div></div><div><div>TYP</div><div>TYPICAL</div></div><div><div>UNO</div><div>UNLESS NOTED OTHERWISE</div></div><div><div>VERT</div><div>VERTICAL</div></div><div><div>W</div><div>WEST</div></div><div><div>W/</div><div>WITH</div></div></div></div></div>		<div><div>1. SITE TOPOGRAPHY AERIAL SURVEY PROVIDED BY AEROVIEW SERVICES, DATED JULY 2, 2025. SITE LINework IS A COMPILATION OF HISTORIC SITE INFORMATION PROVIDED BY METRO WASTE AUTHORITY AND RECORD DRAWING INFORMATION.</div><div>2. SITE COORDINATES ARE BASED UPON IOWA STATE PLANE SOUTH, NAVD88.THIS SYSTEM SHALL BE USED FOR ALL PROJECT SURVEYING AND RECORD DOCUMENT PRODUCTION.</div><div>3. DO NOT OBSTRUCT LANDFILL SITE ACCESS ROADS, MAIN ACCESS ROADS, OR PROJECT ACCESS/EGRESS ROUTE. COORDINATE ALL ROADWAY WORK TO ENSURE CONTINUOUS SITE ACCESS. SEE SPECIFICATIONS.</div><div>4. OBTAIN ALL REQUIRED BORROW FROM WITHIN APPROVED SOIL BORROW AREA, UNLESS OTHERWISE APPROVED BY OWNER.</div><div>5. BULK EXCAVATION AND SOIL PLACEMENT AREAS SHALL BE GRADED AS SHOWN ON PLANS OR AS OTHERWISE APPROVED BY OWNER.</div><div>6. CONTRACTOR SHALL PROVIDE AND MAINTAIN THROUGHOUT CONSTRUCTION, TWO DIESEL POWERED PUMPS CAPABLE OF PUMPING 1,200 GPM AT 30' TDH, TO REMOVE ALL ACCUMULATED STORMWATER FROM WITHIN CELL E AND POND COORDINATE BOUNDARY, INCLUDING AT ALL TIMES OUTSIDE OF NORMAL WORK HOURS. STANDING WATER WITHIN THE CELL E LINER AREA IS NOT PERMITTED. NON-COMPLIANCE WITH THIS REQUIREMENT WILL RESULT IN OWNER HIRING A THIRD-PARTY TO COMPLETE CONSTRUCTION DEWATERING AT CONTRACTOR'S SOLE COST. STORMWATER SHALL BE DISCHARGED TO THE PERIMETER DITCH</div><div>7. LOCATE AND PROTECT SITE UTILITIES AND STRUCTURES (INCLUDING MONITORING WELLS, PIEZOMETERS, GROUNDWATER CONTROL STANDPIPES, RISERS, TRENCHES, BURIED UTILITIES, LEACHATE MANHOLES, ELECTRICAL, ETC.). ANY STRUCTURES REMOVED OR DAMAGED SHALL BE REPAIRED AND REPLACED AT CONTRACTOR'S EXPENSE.</div><div>8. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL WORK FROM EROSION AND SEDIMENT CAUSED BY THE ADJACENT EXISTING LANDFILL. SEDIMENT AND WASTE ACCUMULATION WITHIN THE LIMITS OF CONSTRUCTION SHALL BE REMOVED AT CONTRACTOR'S EXPENSE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE EROSION CONTROL MEASURES MEET MINIMUM FEDERAL, STATE, AND LOCAL REGULATIONS.</div><div>9. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING EXISTING DRAINAGE CHANNELS, CULVERTS, SEDIMENT BASINS, AND TRAPS AFFECTED BY THE WORK. CONTRACTOR SHALL REMOVE ACCUMULATED SEDIMENT AND DEBRIS FROM THE CONTROL MEASURES AND ANY AFFECTED STRUCTURES FOLLOWING COMPLETION OF THE WORK AND PLACE AT LOCATION APPROVED BY OWNER.</div><div>10. TERMINATION BERMS SHOWN ON SHEET 01C104 ARE PROVIDED TO BALLAST AND COMPLETE THE LINER SYSTEM. CONTRACTOR WILL PROVIDE ADDITIONAL TEMPORARY AND INTERMEDIATE BALLASTING UNTIL ALL TERMINATION BERMS ARE INSTALLED/COMPLETED. CONTRACTOR SHALL ALSO PROVIDE BALLASTING OF RAIN COVER. SEE PLAN SHEET 01C104, DETAIL 4/01C503 AND SPECIFICATIONS.</div><div>11. WHERE DESIGNATED ACCESS ROADS TO SPECIFIC CONSTRUCTION AREAS ARE NOT SHOWN, COORDINATE PLANNED ACCESS ROUTES WITH OWNER AND ENGINEER AT THE PRE-CONSTRUCTION CONFERENCE.</div><div>12. IN ALL CASES CONTRACTOR SHALL TAKE CARE TO PREVENT DAMAGE TO ESTABLISHED VEGETATION DUE TO CONTRACTOR VEHICLE TRAFFIC. CONTRACTOR SHALL REPAIR ALL VEGETATION AND SOIL DAMAGE (I.E. RUTTING) CAUSED BY CONSTRUCTION ACTIVITIES IN MANNER SUITABLE TO OWNER PRIOR TO COMPLETION OF PROJECT WORK.</div><div>13. CONTRACTOR ACCESS ROAD FROM STAGING/LAYDOWN AREA INTO CELL D AREA TO BE CONSTRUCTED FOLLOWING COORDINATION WITH AND APPROVED BY OWNER IN THE APPROXIMATE ALIGNMENT SHOWN ON SHEET 01C101.</div></div>	
CIVIL MAPPING SYMBOLOGY								<div><div>PROJECT SERIES DESCRIPTION</div><div><div>1. CELL E BULK EXCAVATION, INCLUDING:<div><div>a. SITE PREPARATION.</div><div>b. EARTHWORK AND STORMWATER IMPROVEMENTS.</div><div>c. EXCAVATION AND FINE GRADING OF CELL PERIMETER FEATURES AND PERIMETER ACCESS.</div><div>d. PLACEMENT AND STOCKPILE OF EXCAVATED SOIL (IN ORDER OF OWNER'S PREFERENCE) STORMWATER DIVERSION BERMS, OWNER'S OPERATIONS STOCKPILE AT ACTIVE WORK FACE, MISCELLANEOUS AREAS AS APPROVED BY OWNER.</div><div>e. OTHERS - SEE DRAWINGS AND SPECIFICATIONS.</div></div></div><div>2. CELL E LINER, LEACHATE POND, &amp; LEACHATE COLLECTION SYSTEM, INCLUDING:<div><div>a. EXCAVATION, CUT TO FILL AND FINE GRADING TO BASE GRADE.</div><div>b. RECOMPACTED CLAY LINER.</div><div>c. 60-MIL GEOMEMBRANE.</div><div>d. GEOTEXTILE.</div><div>e. TERMINATION BERMS ON THE NORTH SIDE.</div><div>f. DRAINAGE LAYER AND COARSE AGGREGATE.</div><div>g. SOLID WALL AND PERFORATED PVC LEACHATE COLLECTION PIPES.</div><div>h. 12-MIL SCRIM REINFORCED HDPE RAINCOVER.</div><div>i. LEACHATE LOADOUT, PUMP, PIPING</div><div>j. MISCELLANEOUS STRUCTURES AND APPURTENANCES.</div><div>k. OTHERS - SEE DRAWINGS AND SPECIFICATIONS.</div></div></div><div>3. PERIMETER ACCESS ROAD SURFACING:<div><div>a. FINE GRADING OF ACCESS ROAD.</div><div>b. ROADWAY GEOTEXTILE.</div><div>c. AGGREGATE SURFACING OF CELL E PERIMETER ACCESS ROAD.</div><div>d. EROSION CONTROLS.</div><div>e. CULVERT INSTALLATION.</div></div></div><div>4. STORMWATER POND<div><div>a. EXCAVATION AND GRADING</div><div>b. STORMWATER OUTFALL STRUCTURE</div><div>c. CULVERTS, GRAVEL, AND SEEDING</div><div>d. INTERMEDIATE STORMWATER CONTROLS AND EROSION CONTROL FEATURES</div></div></div></div></div>	

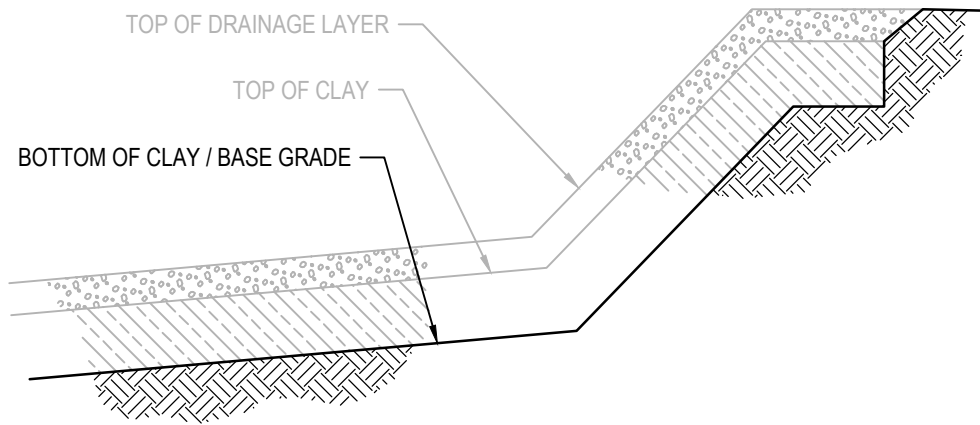




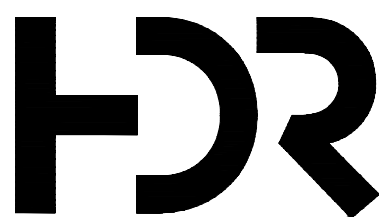




- NOTES**
1. PROPOSED CONTOURS REPRESENT BOTTOM OF CLAY / BASE GRADE ELEVATIONS.
  2. SEE SHEET C104 FOR LEACHATE POND, STORMWATER POND GRADING INFORMATION.
  3. SEE SHEET C104 FOR CULVERT 1 AND 2 DESIGN INFORMATION.



LINER LAYER KEY  
NOT TO SCALE



ISSUE	DATE	DESCRIPTION
2	12-23-2025	ADDENDUM NO. 1
1	11-26-2025	ISSUED FOR BID

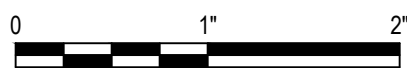
PROJECT MANAGER	K. KINLEY
CIVIL	K. KINLEY
CIVIL	M. CORRY
DRAWN BY	M. BICKFORD
QC BY	
PROJECT NUMBER	10408322

PRELIMINARY  
NOT FOR  
CONSTRUCTION OR  
RECORDING



**Metro Waste Authority**  
**METRO PARK WEST**  
**MWA PROJECT P-67**  
**CELL E LINER CONSTRUCTION**

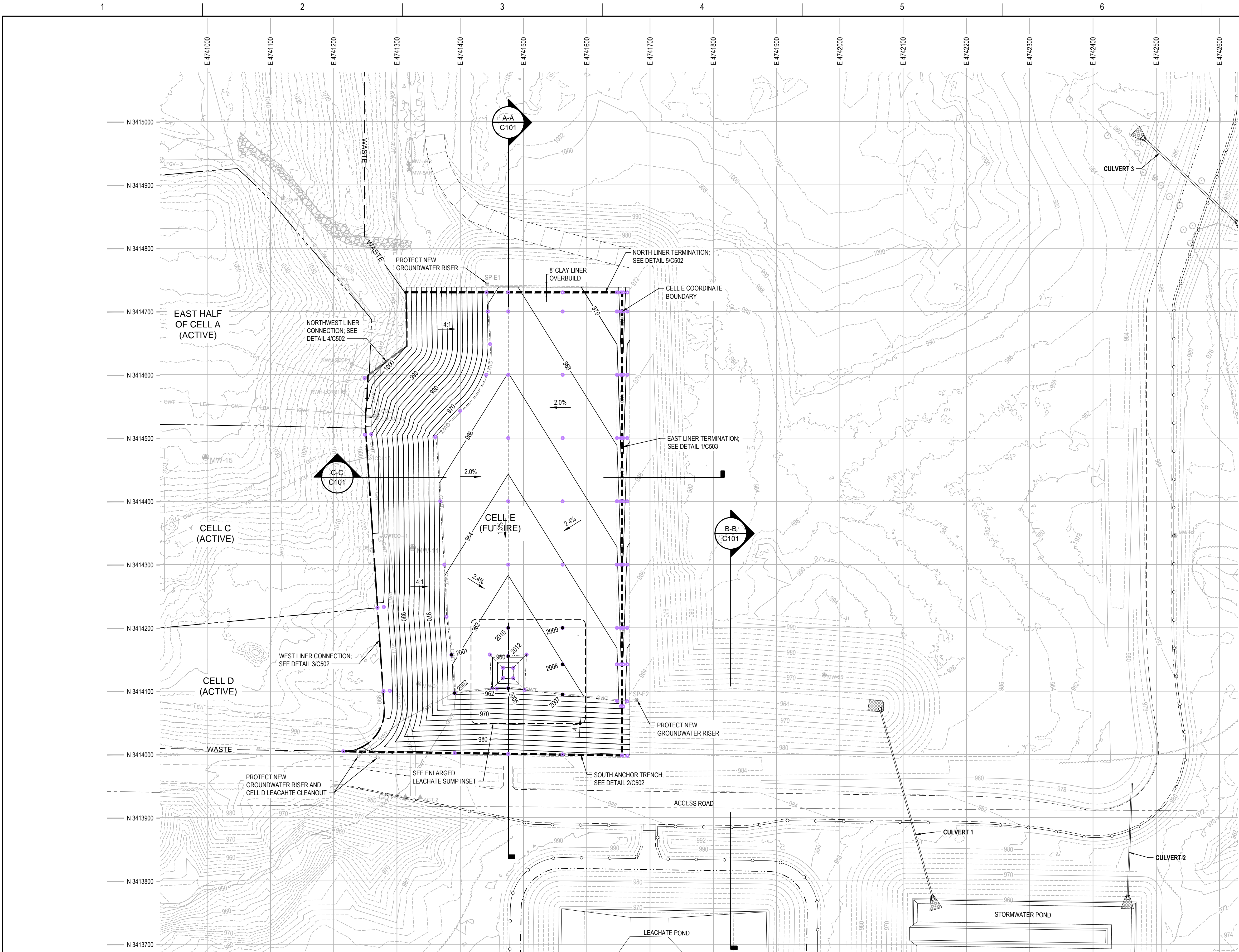
BASE GRADING PLAN



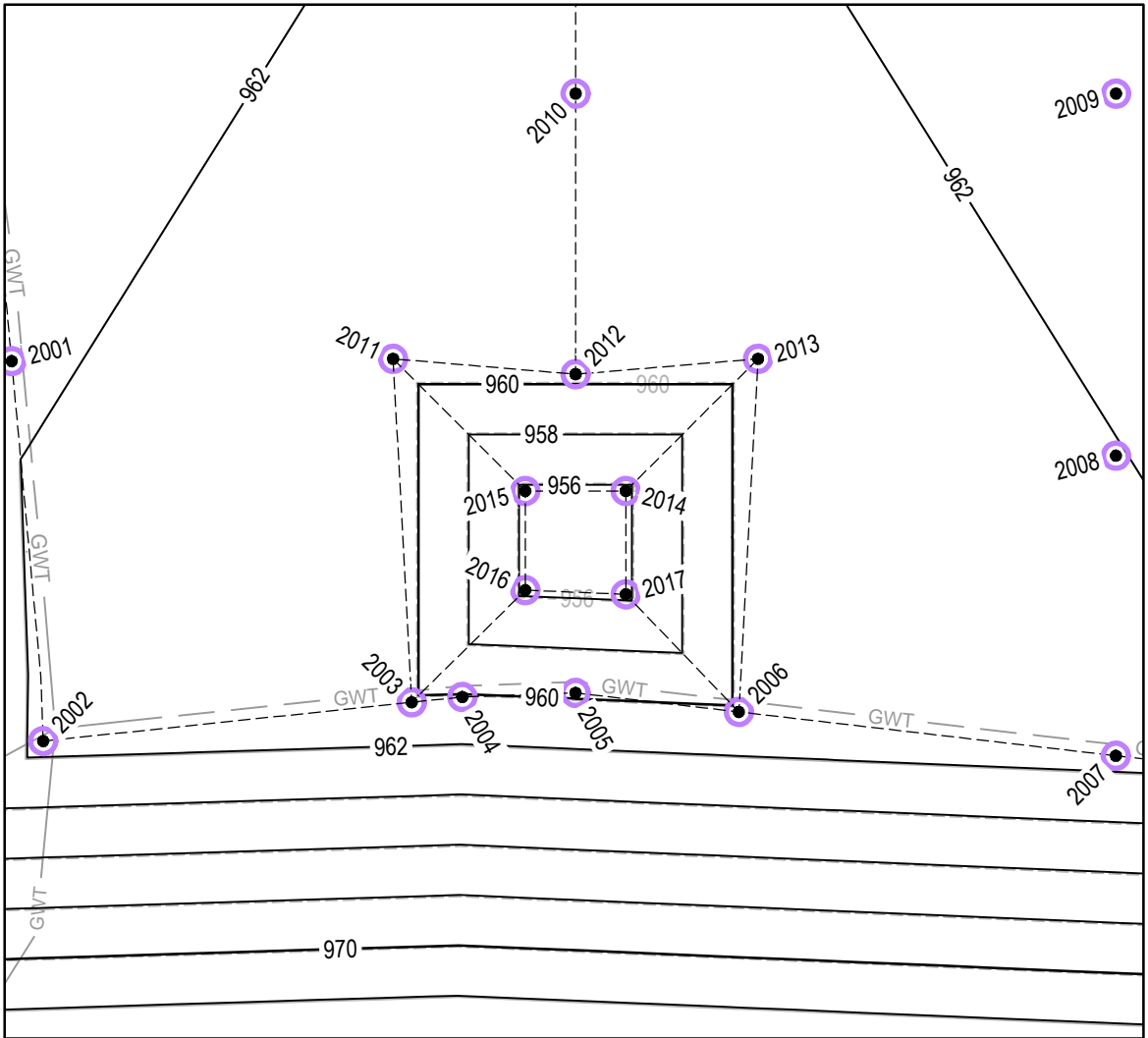
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SCALE | 1" = 80'

SHEET  
**C101**

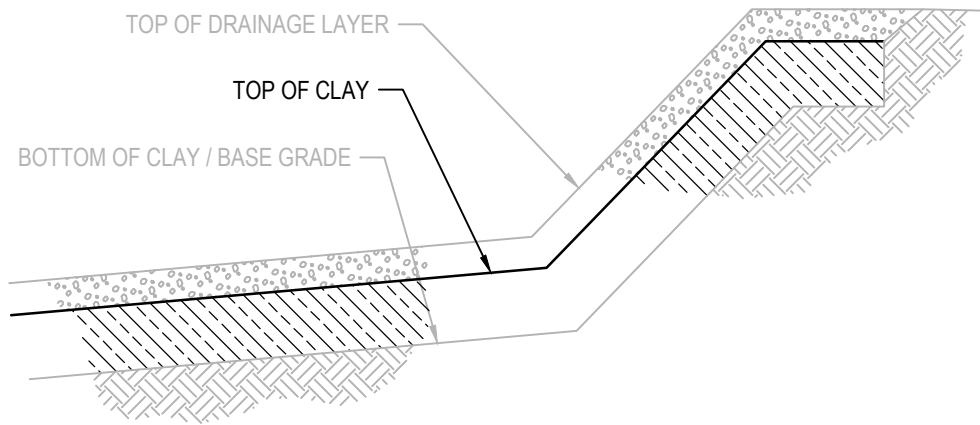




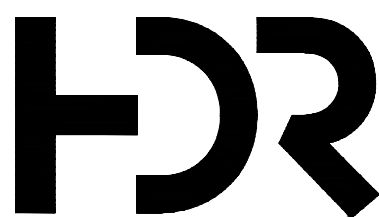
- NOTES**
1. PROPOSED CONTOURS REPRESENT TOP OF CLAY ELEVATIONS.
  2. SEE SHEET C105 FOR CERTIFICATION POINT TABLES.



**ENLARGED LEACHATE SUMP**  
SCALE: 1" = 30'



**LINER LAYER KEY**  
NOT TO SCALE



2			12-23-2025	ADDENDUM NO. 1
1			11-26-2025	ISSUED FOR BID
ISSUE	DATE	DESCRIPTION		

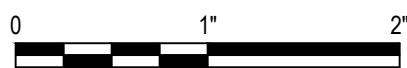
PROJECT MANAGER		K. KINLEY
CIVIL		K. KINLEY
CIVIL		M. CORRY
DRAWN BY		M. BICKFORD
QC BY		
PROJECT NUMBER		10408322

PRELIMINARY  
NOT FOR  
CONSTRUCTION OR  
RECORDING



**Metro Waste Authority**  
**METRO PARK WEST**  
**MWA PROJECT P-67**  
**CELL E LINER CONSTRUCTION**

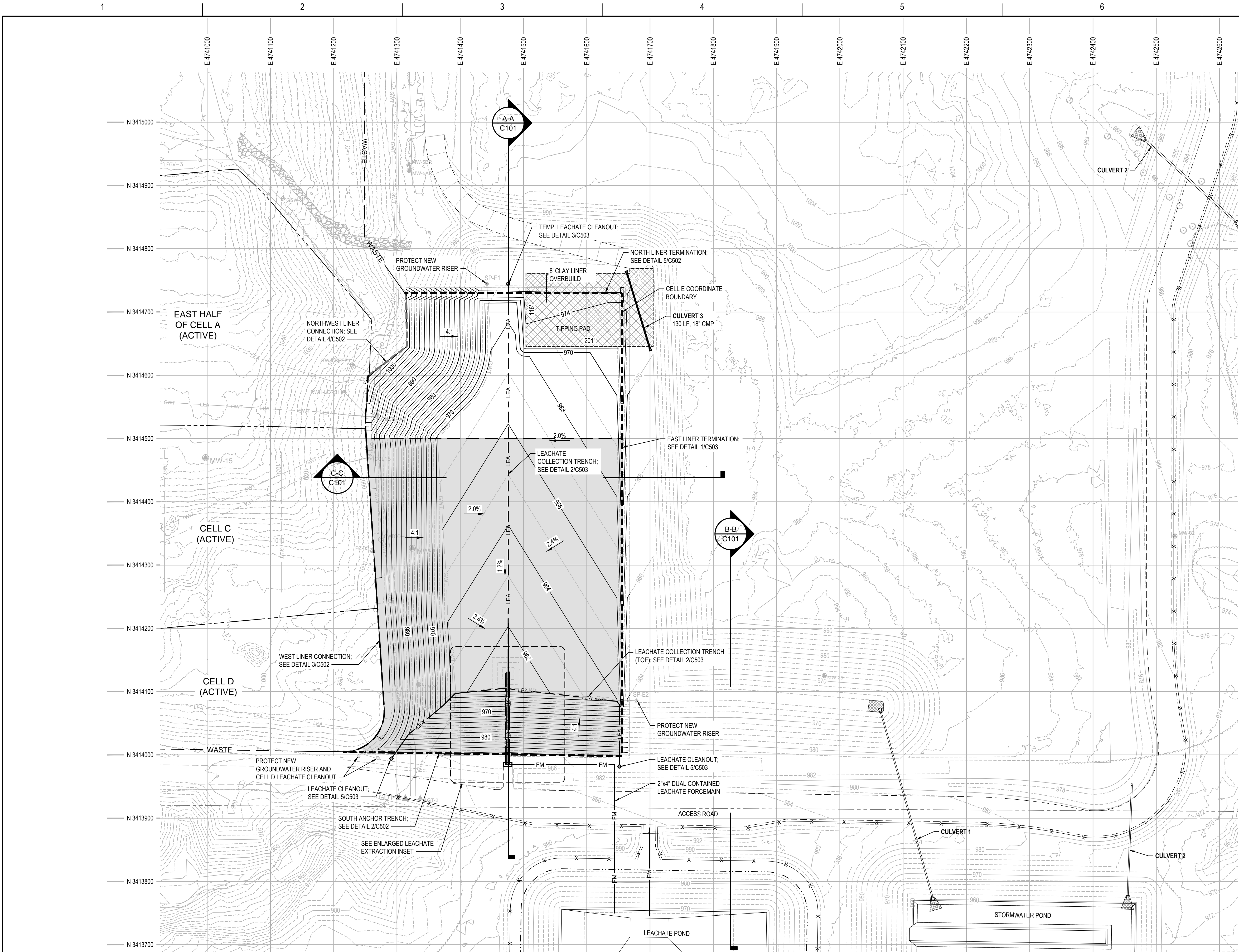
**TOP OF CLAY GRADING PLAN**



FILENAME | C102.dwg  
SCALE | 1" = 80'

SHEET  
**C102**



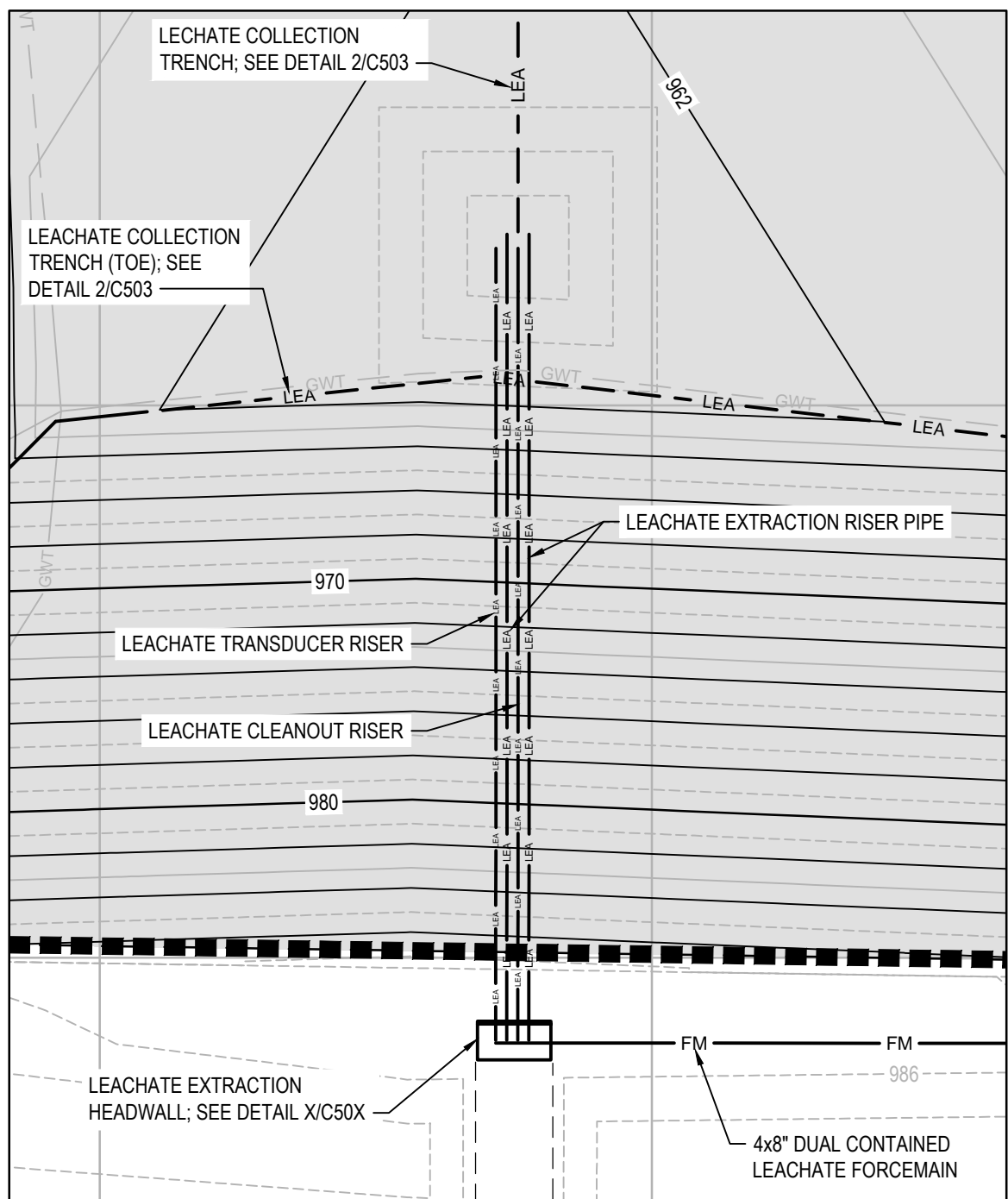


NOTES

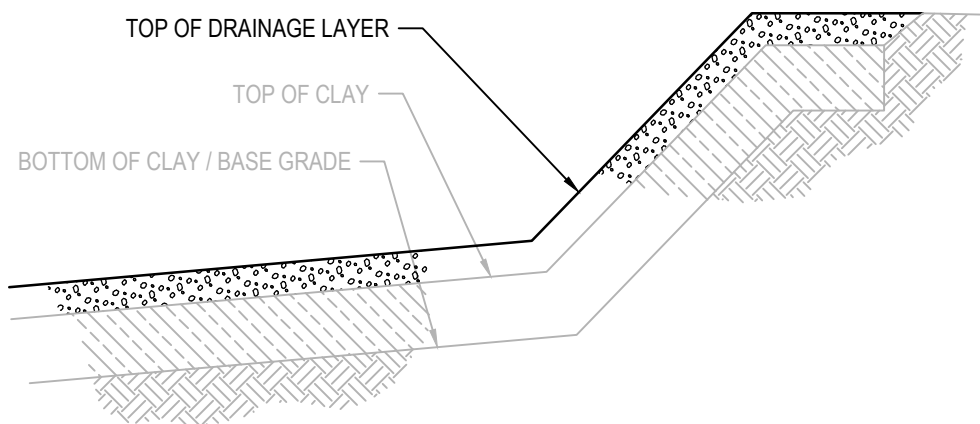
- PROPOSED CONTOURS REPRESENT TOP OF DRAINAGE LAYER ELEVATIONS.
- SEE DETAILS ON SHEET C50X FOR ADDITIONAL LEACHATE SUMP PIPING DETAILS.

LEGEND

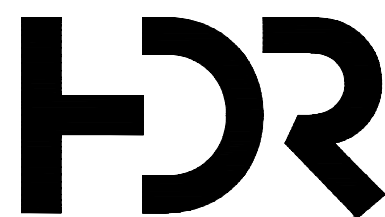
12-MIL SCRIM REINFORCED RAIN COVER; SEE DETAIL X/C50X FOR BALLASTING REQUIREMENTS



ENLARGED LEACHATE EXTRACTION PLAN  
SCALE: 1" = 30'



LINER LAYER KEY  
NOT TO SCALE



ISSUE	DATE	DESCRIPTION
2	12-23-2025	ADDENDUM NO. 1
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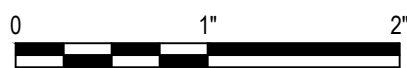
PROJECT MANAGER	K. KINLEY
CIVIL	K. KINLEY
CIVIL	M. CORRY
DRAWN BY	M. BICKFORD
QC BY	
PROJECT NUMBER	10408322

PRELIMINARY  
NOT FOR  
CONSTRUCTION OR  
RECORDING



**Metro Waste Authority**  
**METRO PARK WEST**  
**MWA PROJECT P-67**  
**CELL E LINER CONSTRUCTION**

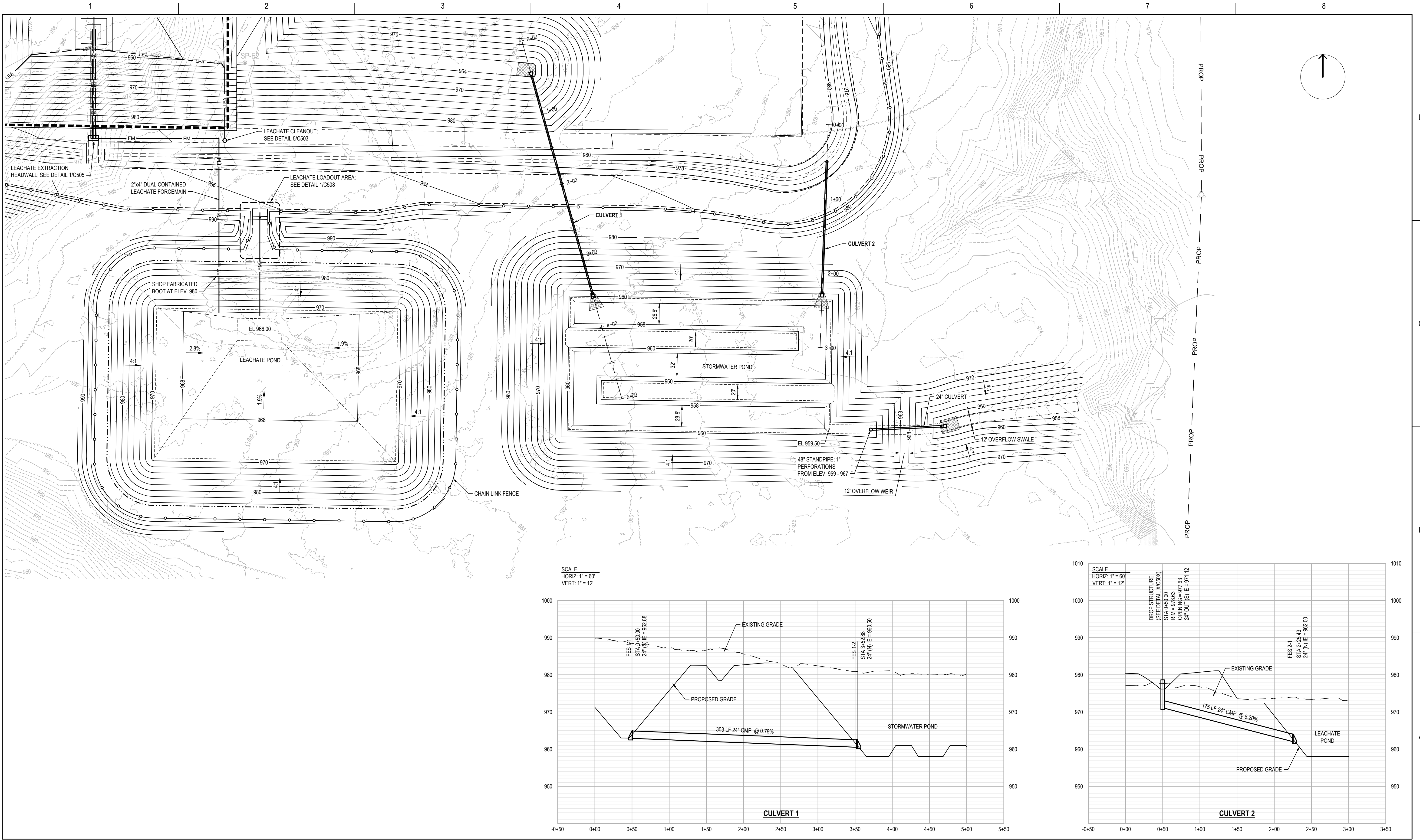
DRAINAGE LAYER GRADING PLAN



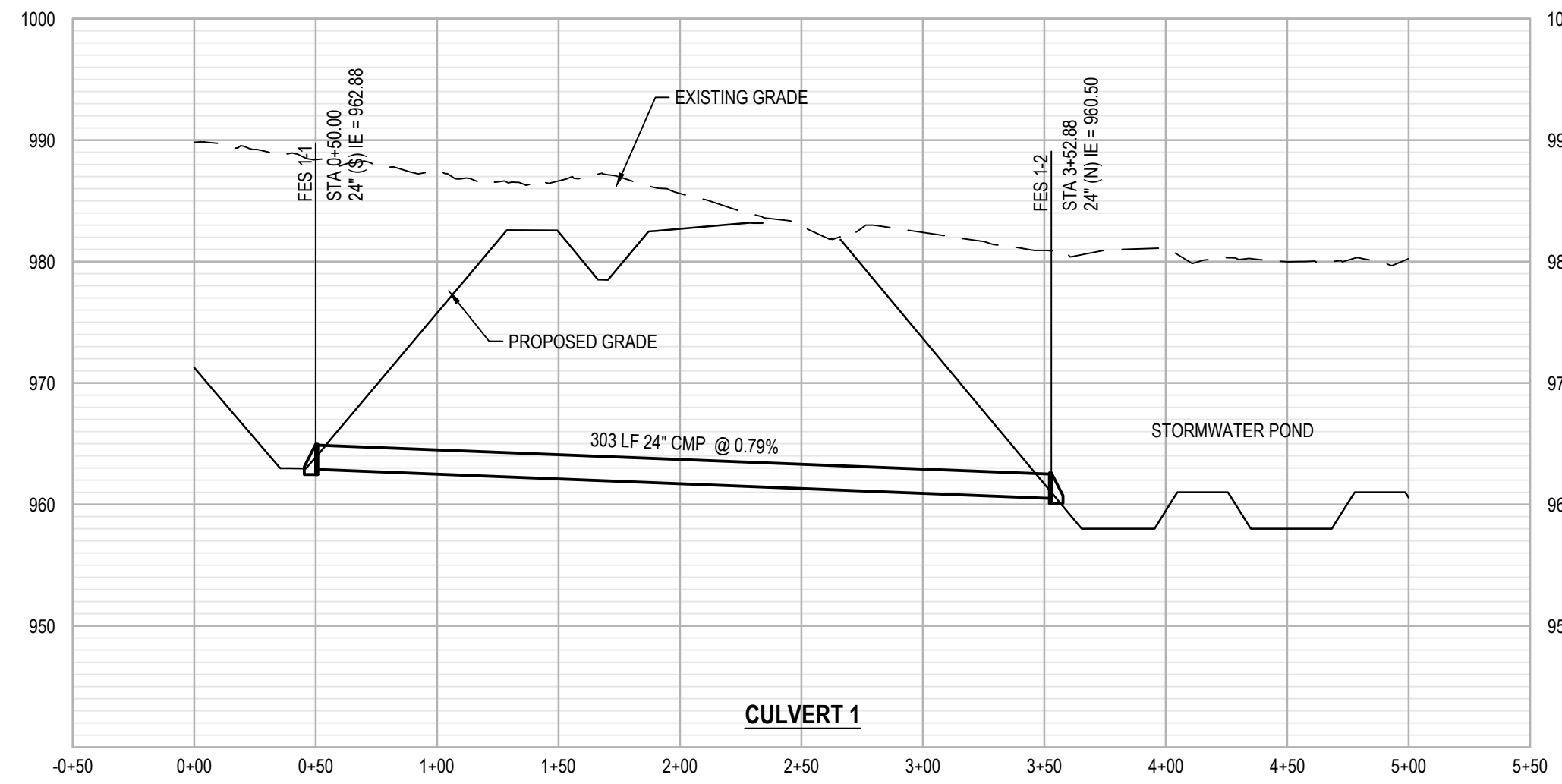
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SCALE 1" = 80'

SHEET  
**C103**

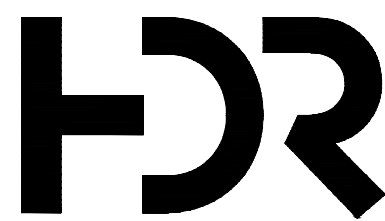
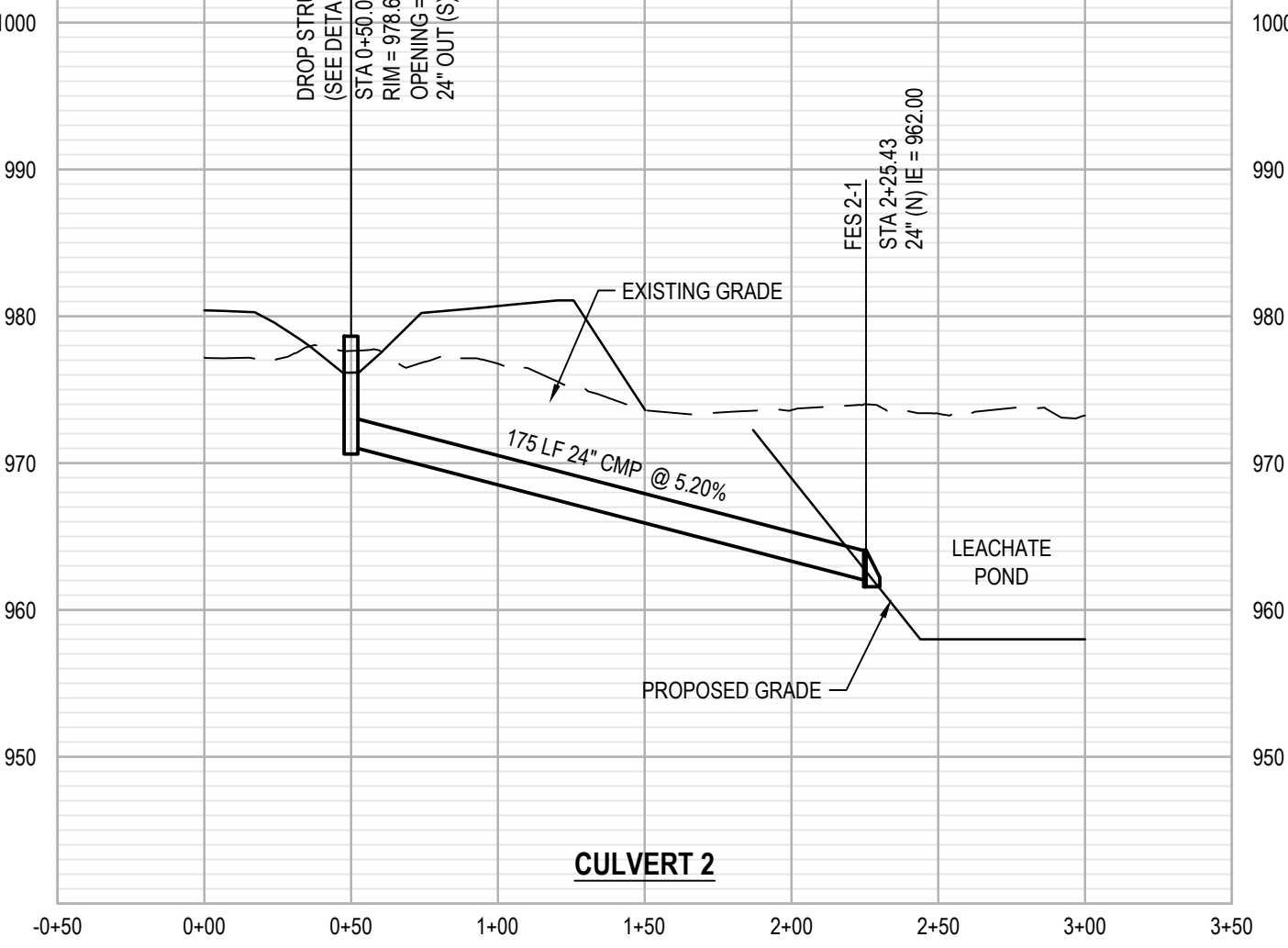




SCALE  
HORIZ: 1" = 60'  
VERT: 1" = 12'



SCALE  
HORIZ: 1" = 60'  
VERT: 1" = 12'



2	12-23-2025	ADDENDUM NO. 1
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ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	K. KINLEY
CIVIL	K. KINLEY
CIVIL	M. CORRY
DRAWN BY	M. BICKFORD
QC BY	
PROJECT NUMBER	10408322

PRELIMINARY  
NOT FOR  
CONSTRUCTION OR  
RECORDING

**Metro Waste Authority**

**METRO PARK WEST**  
**MWA PROJECT P-67**  
**CELL E LINER CONSTRUCTION**

**LEACHATE POND AND  
STORMWATER POND GRADING PLAN**



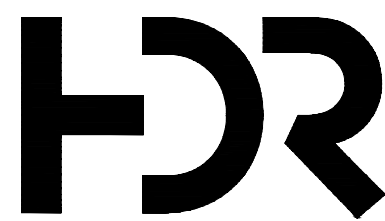
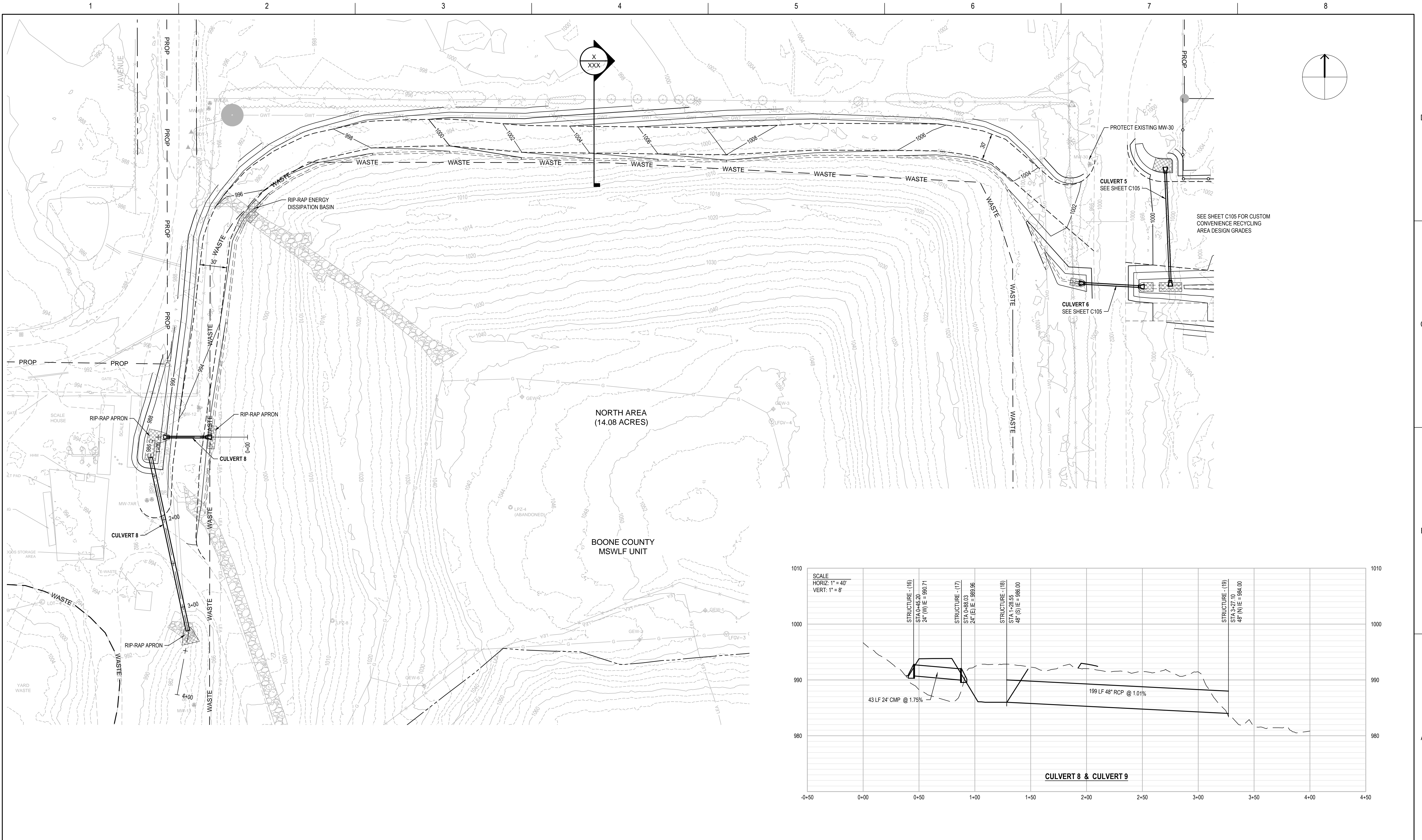
FILENAME | C104.dwg  
SCALE | 1" = 60'

SHEET  
**C104**









ISSUE	DATE	DESCRIPTION
2	12-23-2025	ADDENDUM NO. 1
1	11-26-2025	ISSUED FOR BID

PROJECT MANAGER	K. KINLEY
CIVIL	K. KINLEY
CIVIL	M. CORRY
DRAWN BY	M. BICKFORD
QC BY	
PROJECT NUMBER	10408322

PRELIMINARY  
NOT FOR  
CONSTRUCTION OR  
RECORDING



**Metro Waste Authority**  
**METRO PARK WEST**  
**MWA PROJECT P-67**  
**CELL E LINER CONSTRUCTION**

**NORTH AREA FINAL COVER ROAD  
GRADING PLAN**

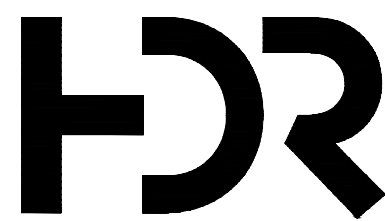
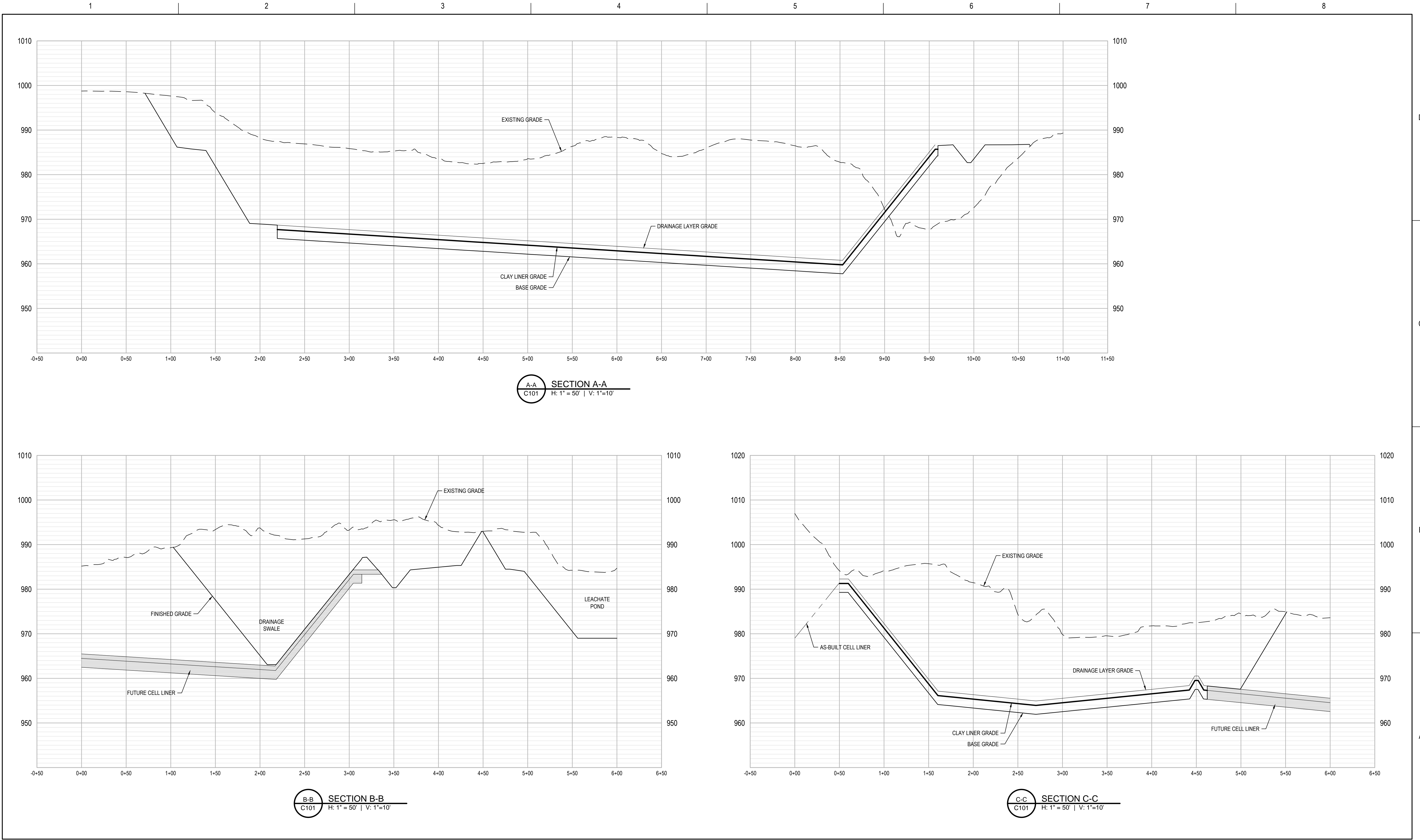


FILENAME C106.dwg  
SCALE 1" = 50'

SHEET  
**C106**



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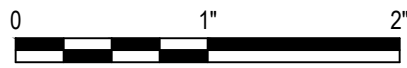
2	12-23-2025	ADDENDUM NO. 1
1	11-26-2025	ISSUED FOR BID
ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	K. KINLEY
CIVIL	K. KINLEY
CIVIL	M. CORRY
DRAWN BY	M. BICKFORD
QC BY	
PROJECT NUMBER	10408322

PRELIMINARY  
NOT FOR  
CONSTRUCTION OR  
RECORDING



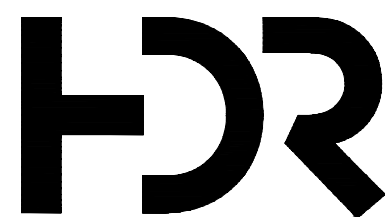
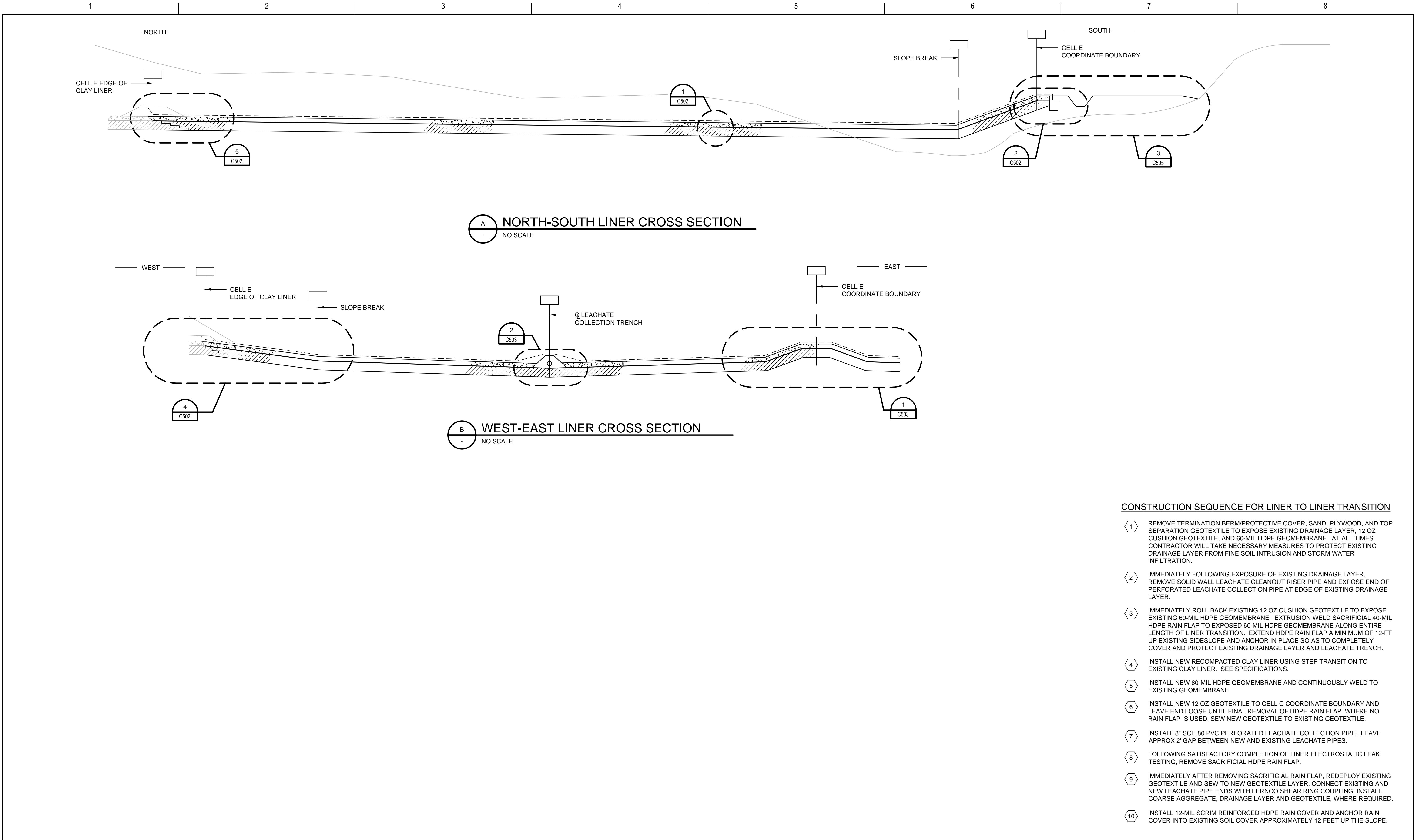
**Metro Waste Authority**  
**METRO PARK WEST**  
**MWA PROJECT P-67**  
**CELL E LINER CONSTRUCTION**



CROSS SECTIONS

FILENAME | C301.dwg  
SCALE | 1" = 80'

SHEET  
**C301**



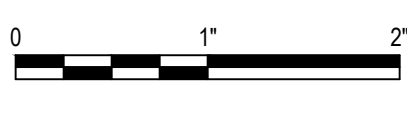
2	12-23-2025	ADDENDUM NO. 1
1	11-26-2025	ISSUED FOR BID
ISSUE	DATE	DESCRIPTION

PROJECT MANAGER		K. KINLEY
CIVIL		K. KINLEY
CIVIL		M. CORRY
DRAWN BY		M. BICKFORD
QC BY		
PROJECT NUMBER		10408322

PRELIMINARY  
NOT FOR  
CONSTRUCTION OR  
RECORDING

**Metro Waste Authority**

**METRO PARK WEST  
MWA PROJECT P-67  
CELL E LINER CONSTRUCTION**

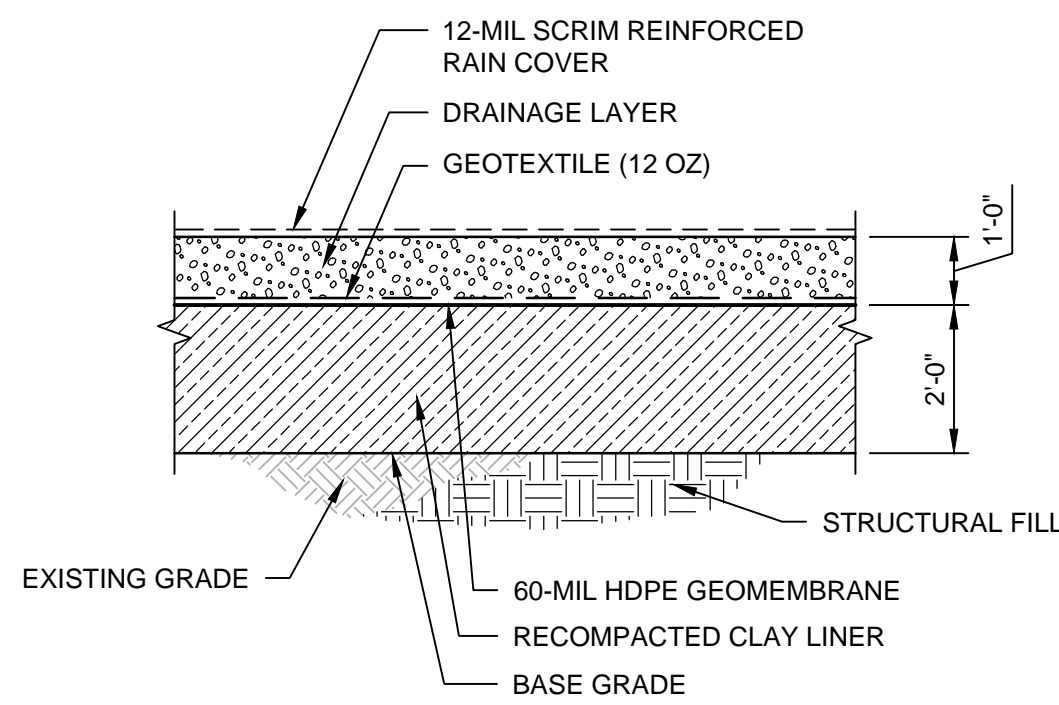


DETAILS

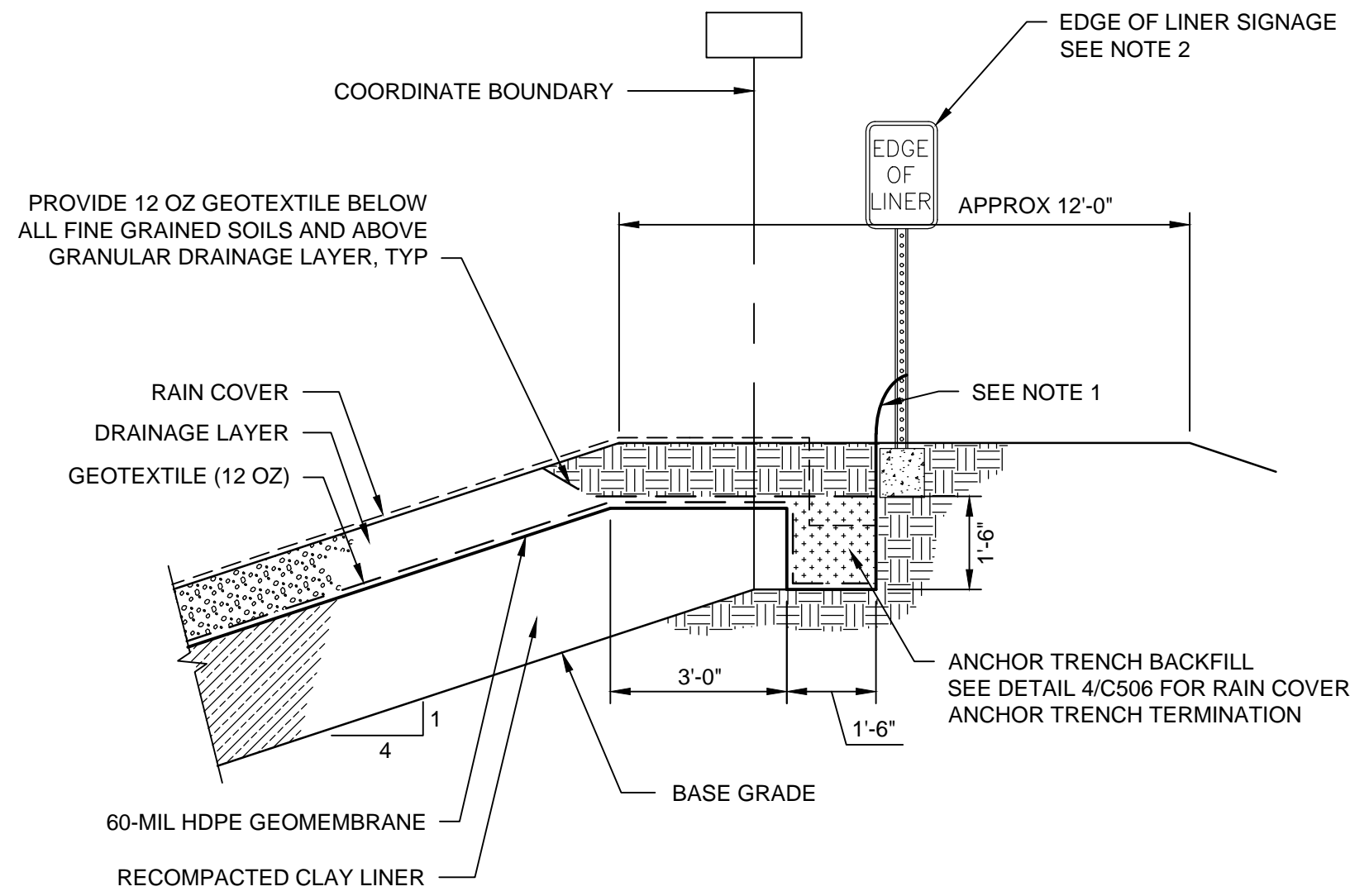
FILENAME	C501.DWG	SHEET	C501
SCALE	AS NOTED		



c:\pwworking\central\01\4618135\C502.dwg, Layout1, 12/16/2025 2:10:16 PM, MBICKFORD



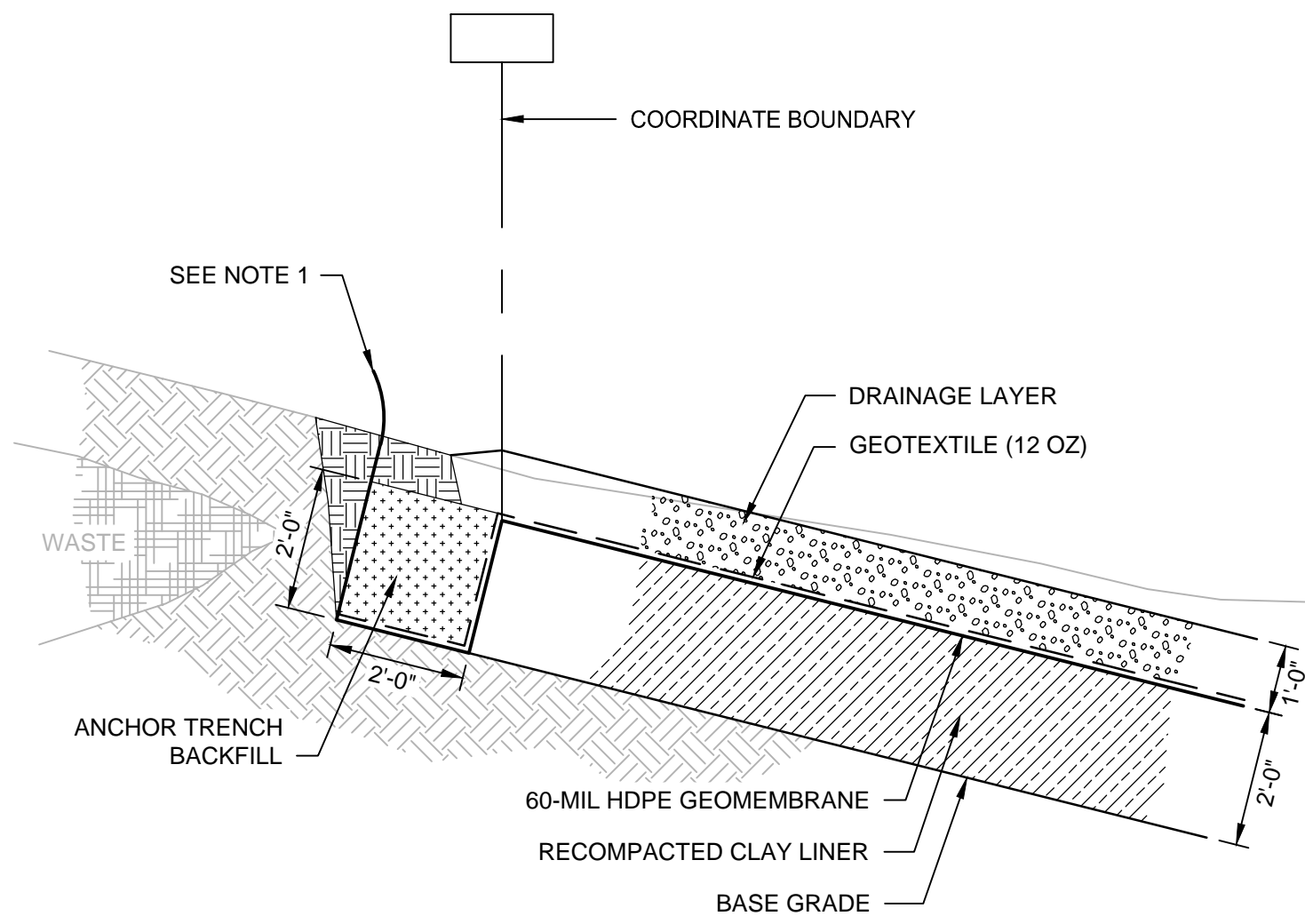
1 **BOTTOM LINER**  
C101 NO SCALE



**NOTES**

1. PROVIDE 1'-0" MINIMUM OF HDPE GEOMEMBRANE ABOVE GRADE FOR ELECTRICAL LEAK LOCATION SURVEY. SEE SPECIFICATIONS. TERMINATE HDPE GEOMEMBRANE AT GROUND SURFACE FOLLOWING COMPLETION OF ALL TESTING.
2. SIGN MOUNTED WITH SS BOLTS ON 8" GALV STEEL. "U" SIGN POST SET IN 5-GAL. BUCKET FILLED WITH CONCRETE FILL. SET TOP OF BUCKET BELOW GRADE. PLACE SIGNS ALONG EAST AND SOUTH HDPE LINER TERMINATIONS EVERY 100' AND AT SOUTHEAST, SOUTHWEST, AND NORTHEAST CORNERS.

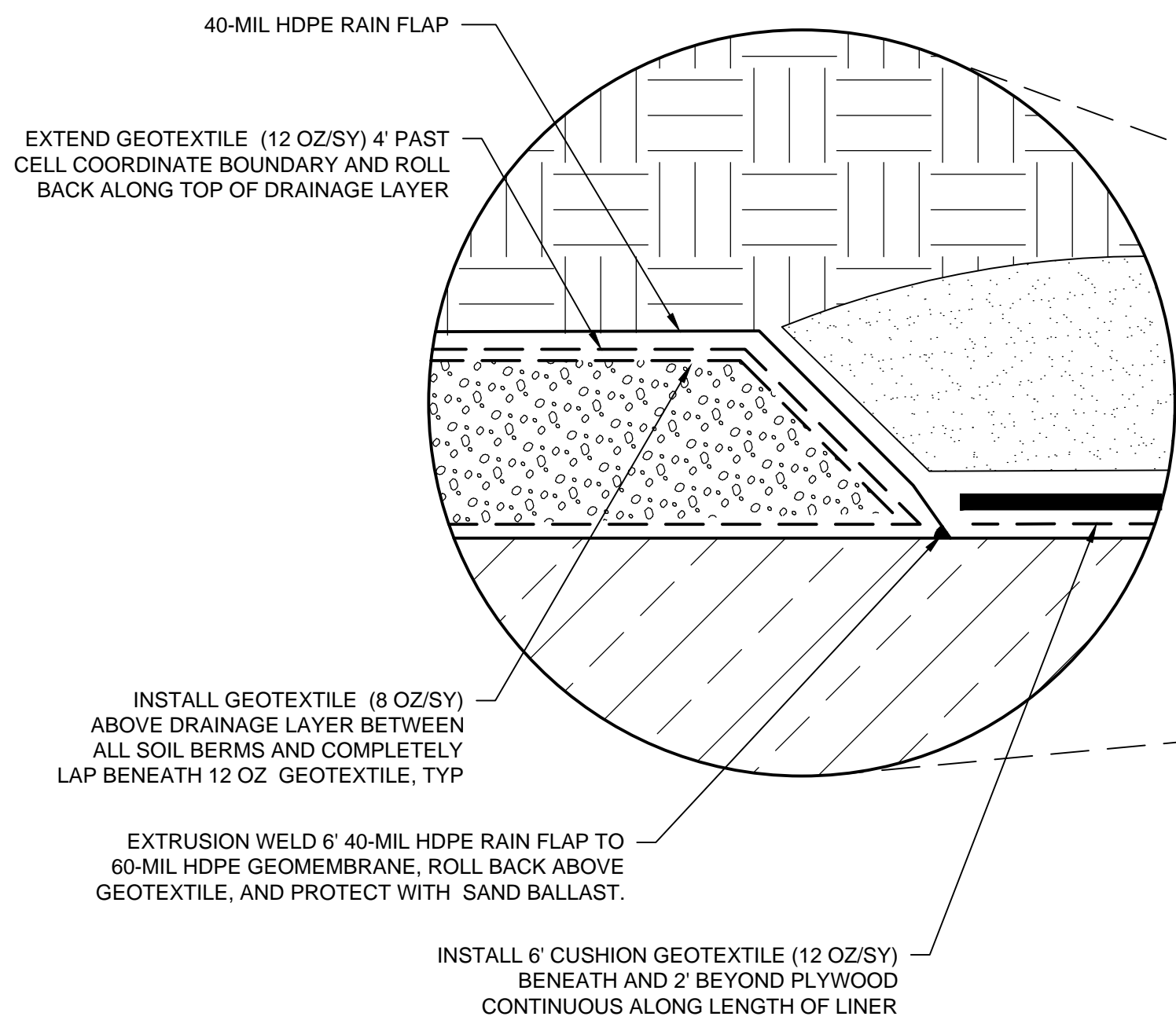
2 **SOUTH LINER TERMINATION**  
C101 NO SCALE



**NOTES**

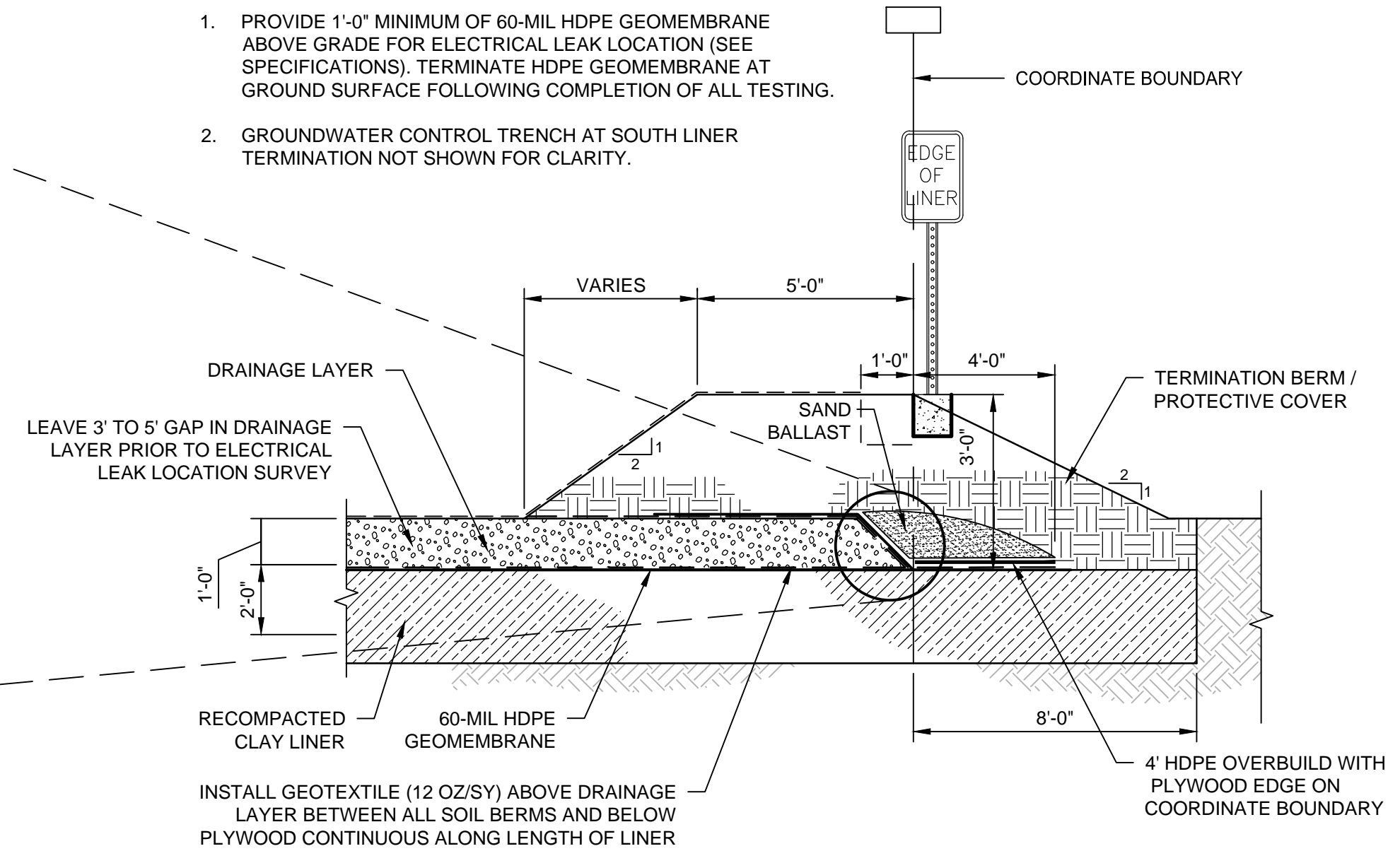
1. PROVIDE 1'-0" MINIMUM OF HDPE GEOMEMBRANE ABOVE GRADE FOR ELECTRICAL LEAK LOCATION SURVEY. SEE SPECIFICATIONS. TERMINATE HDPE GEOMEMBRANE AT GROUND SURFACE FOLLOWING COMPLETION OF ALL TESTING.
2. IF WASTE IS ENCOUNTERED DURING EXCAVATION FOR CLAY PLACEMENT, CONTRACTOR TO HAUL TO ACTIVE FACE OF LANDFILL.

4 **NORTHWEST LINER CONNECTION**  
C101 NO SCALE

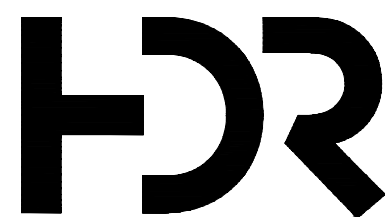


**NOTES**

1. PROVIDE 1'-0" MINIMUM OF 60-MIL HDPE GEOMEMBRANE ABOVE GRADE FOR ELECTRICAL LEAK LOCATION (SEE SPECIFICATIONS). TERMINATE HDPE GEOMEMBRANE AT GROUND SURFACE FOLLOWING COMPLETION OF ALL TESTING.
2. GROUNDWATER CONTROL TRENCH AT SOUTH LINER TERMINATION NOT SHOWN FOR CLARITY.



5 **NORTH LINER TERMINATION**  
C101 NO SCALE



ISSUE	DATE	DESCRIPTION
2	12-23-2025	ADDENDUM NO. 1
1	11-26-2025	ISSUED FOR BID

PROJECT MANAGER K. KINLEY

CIVIL K. KINLEY

CIVIL M. CORRY

DRAWN BY M. BICKFORD

QC BY

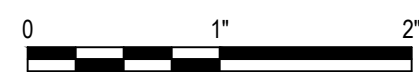
PROJECT NUMBER 10408322

PRELIMINARY  
NOT FOR  
CONSTRUCTION OR  
RECORDING



**Metro Waste Authority**

**METRO PARK WEST  
MWA PROJECT P-67  
CELL E LINER CONSTRUCTION**



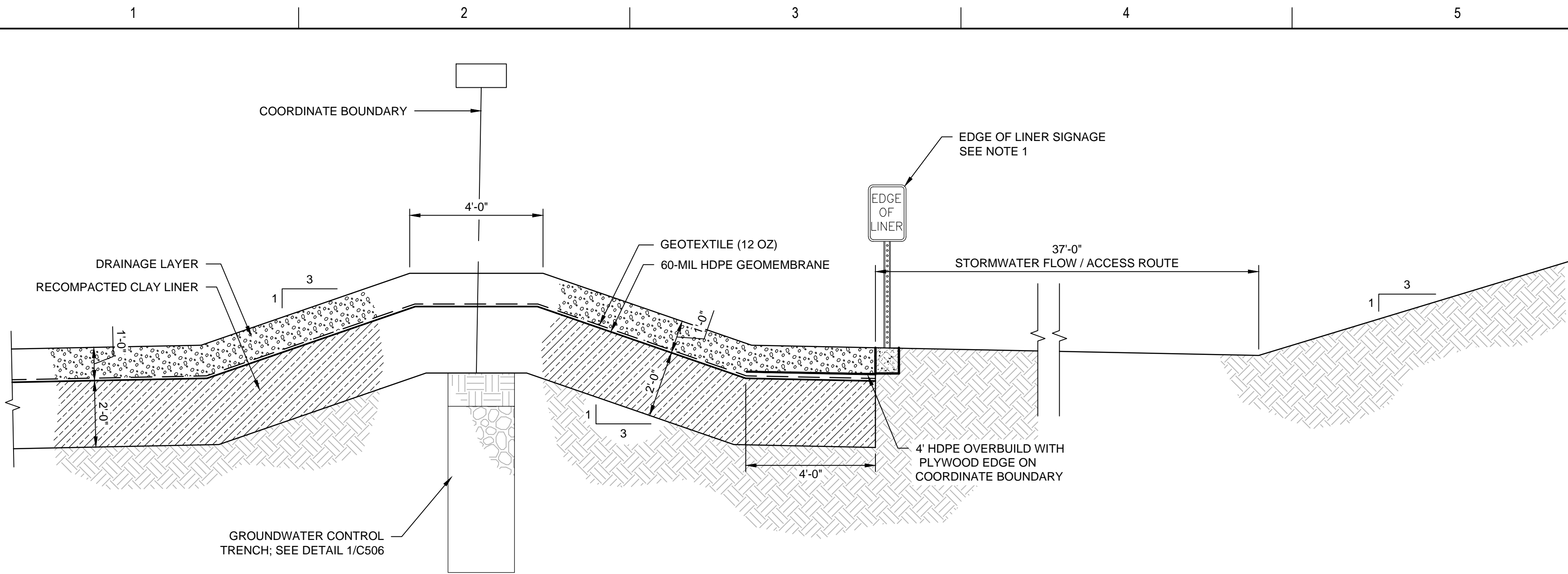
**DETAILS**

FILENAME C502.DWG  
SCALE AS NOTED

SHEET

**C502**

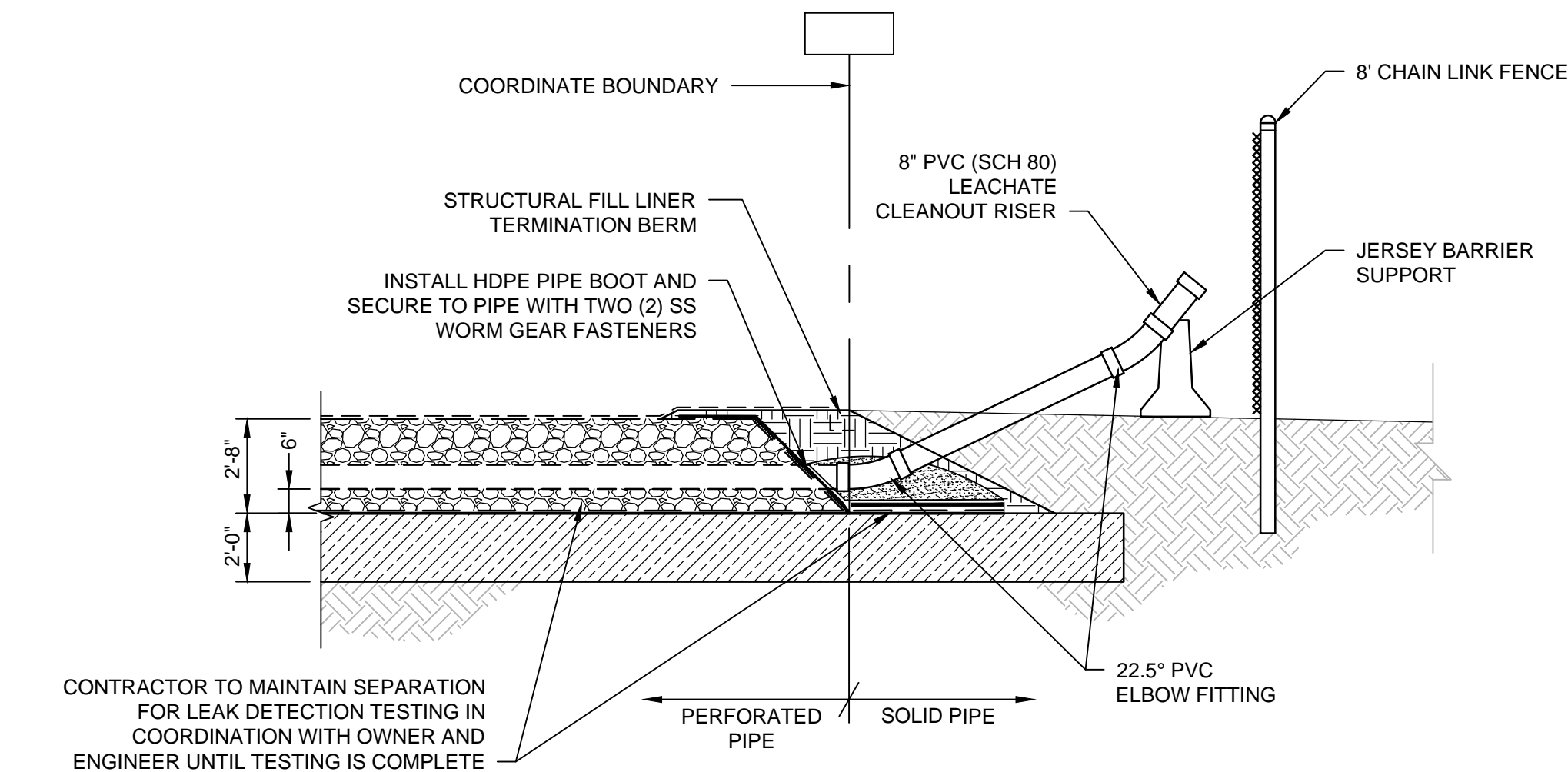




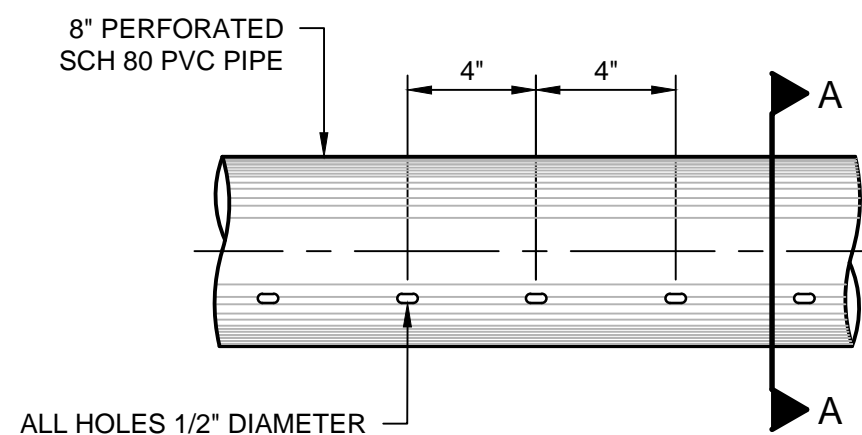
NOTES

1. SIGN MOUNTED WITH SS BOLTS ON 8' GALV STEEL. "U" SIGN POST SET IN 5-GAL. BUCKET FILLED WITH CONCRETE FILL. SET TOP OF BUCKET BELOW GRADE. PLACE SIGNS ALONG EAST AND SOUTH HDPE LINER TERMINATIONS EVERY 100' AND AT SOUTHEAST, SOUTHWEST, AND NORTHEAST CORNERS.

1 EAST LINER / INTERCELL BERM TERMINATION  
C101 NO SCALE



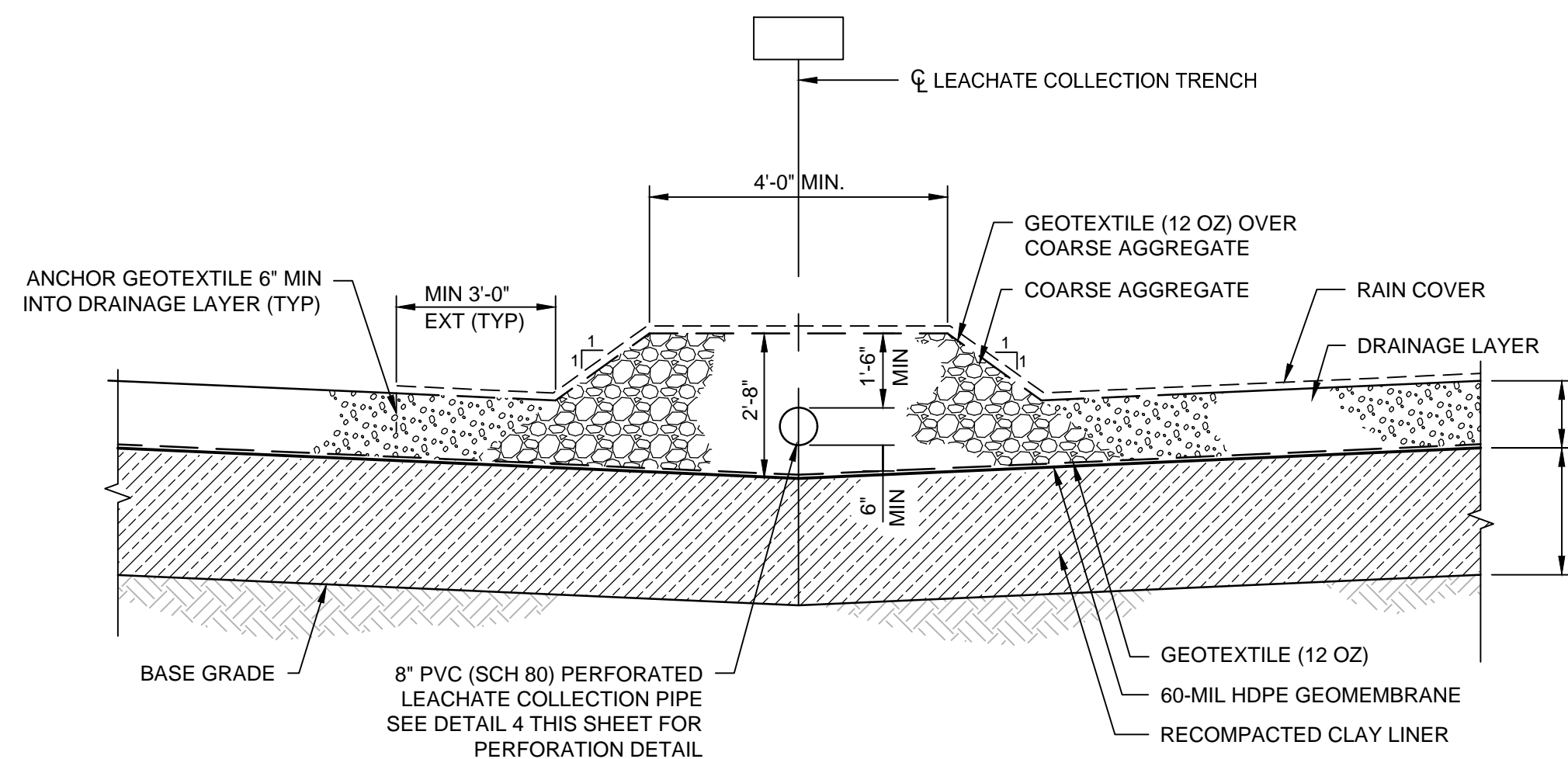
3 TEMPORARY LEACHATE CLEANOUT  
C103 NO SCALE



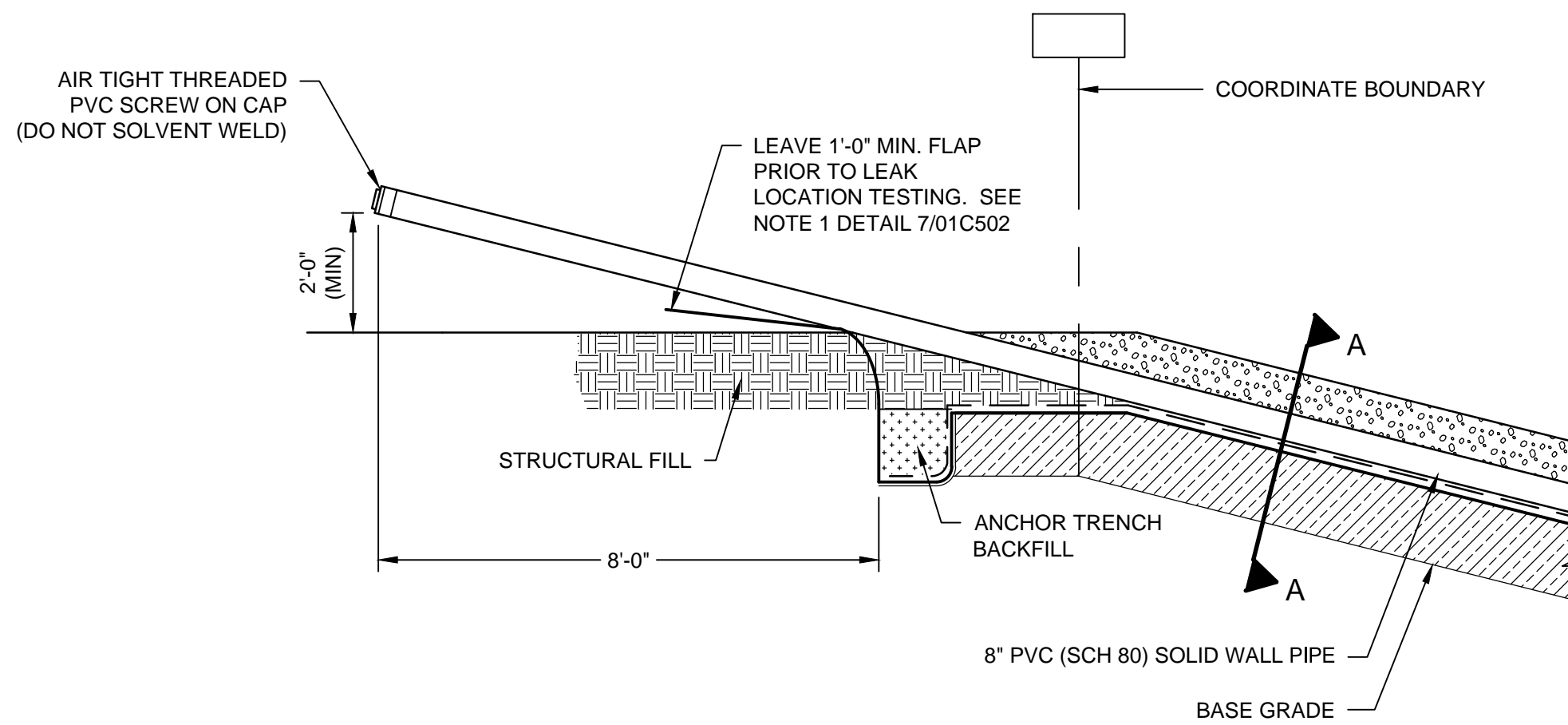
NOTES

1. PROVIDE TWO (2) ROWS 0.5" DIAMETER HOLES SPACED 4" ON CENTER ALIGNED 60 DEG FROM BOTTOM-CENTER OF PIPE.

4 PERFORATED LEACHATE COLLECTION PIPE  
NO SCALE



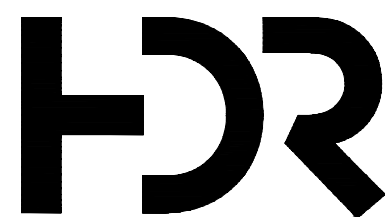
2 LEACHATE COLLECTION TRENCH  
C101 NO SCALE



NOTES

1. EDGE OF LINER SIGNAGE AND RAIN COVER NOT SHOWN FOR CLARITY.
2. ENSURE A MINIMUM 1'-6" DRAINAGE LAYER ABOVE LEACHATE CLEANOUT RISER ALONG ENTIRE LENGTH OF SIDESLOPE.
3. CONTRACTOR TO AVOID VEHICLE TRAFFIC ABOVE LEACHATE CLEANOUT RISER AT ALL TIMES, INCLUDING DURING PLACEMENT OF DRAINAGE LAYER.

5 LEACHATE CLEANOUT SIDESLOPE RISER  
C101 NO SCALE



ISSUE	DATE	DESCRIPTION
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PROJECT MANAGER	K. KINLEY
CIVIL	K. KINLEY
CIVIL	M. CORRY
DRAWN BY	M. BICKFORD
QC BY	
PROJECT NUMBER	10408322

PRELIMINARY  
NOT FOR  
CONSTRUCTION OR  
RECORDING



**Metro Waste Authority**  
**METRO PARK WEST**  
**MWA PROJECT P-67**  
**CELL E LINER CONSTRUCTION**



DETAILS

FILENAME	C503.DWG
SCALE	AS NOTED

SHEET

C503



1

2

3

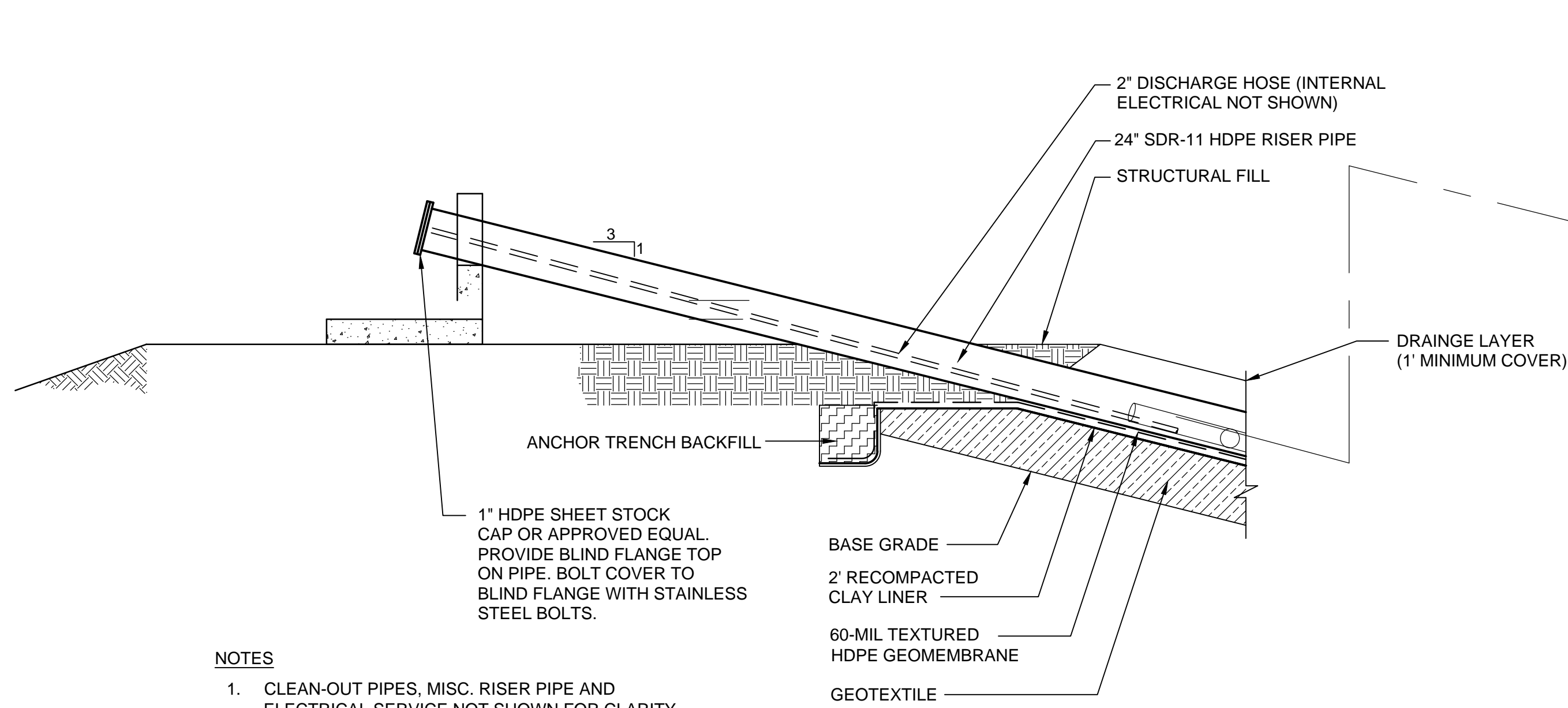
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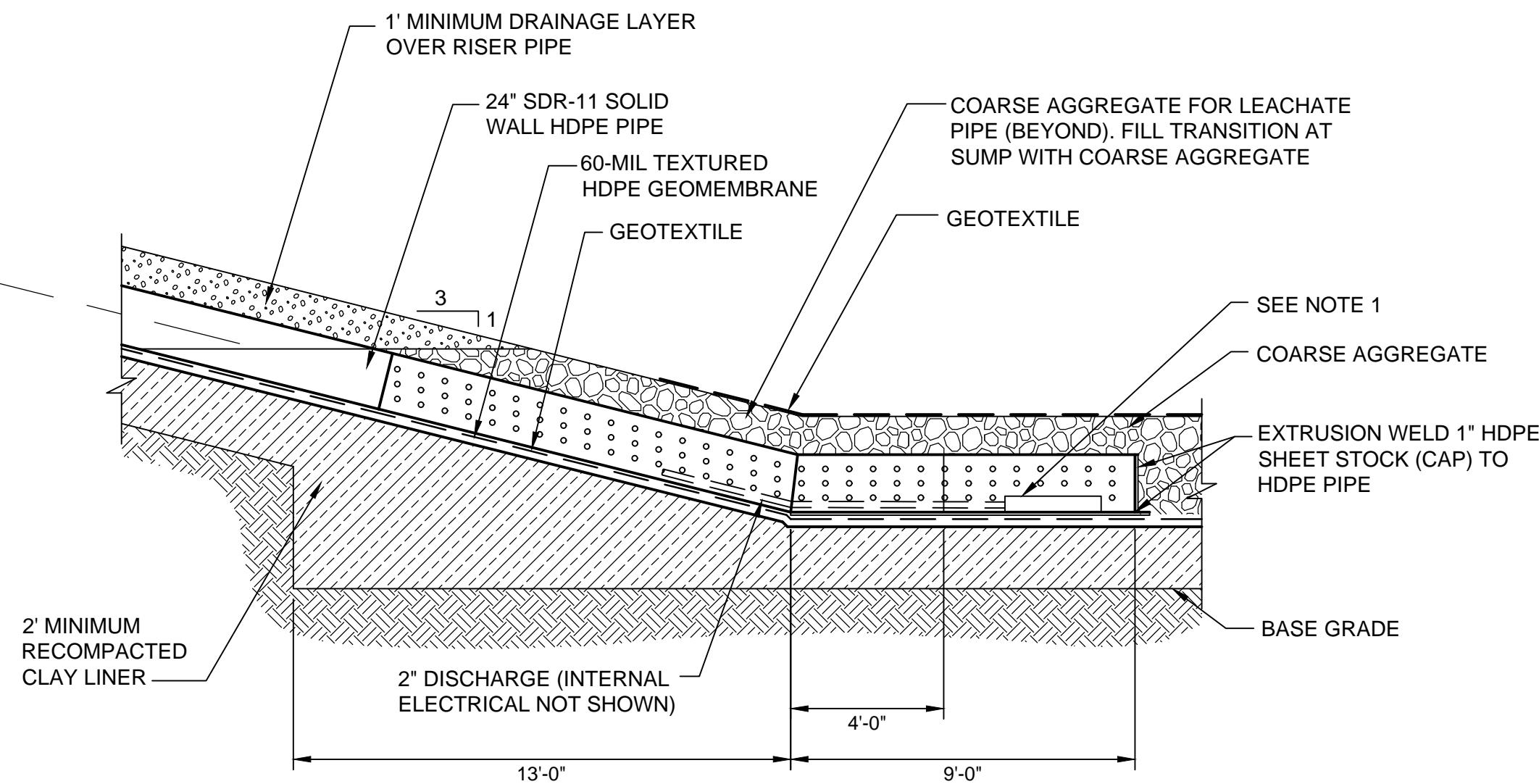
8



## NOTES

- CLEAN-OUT PIPES, MISC. RISER PIPE AND ELECTRICAL SERVICE NOT SHOWN FOR CLARITY.

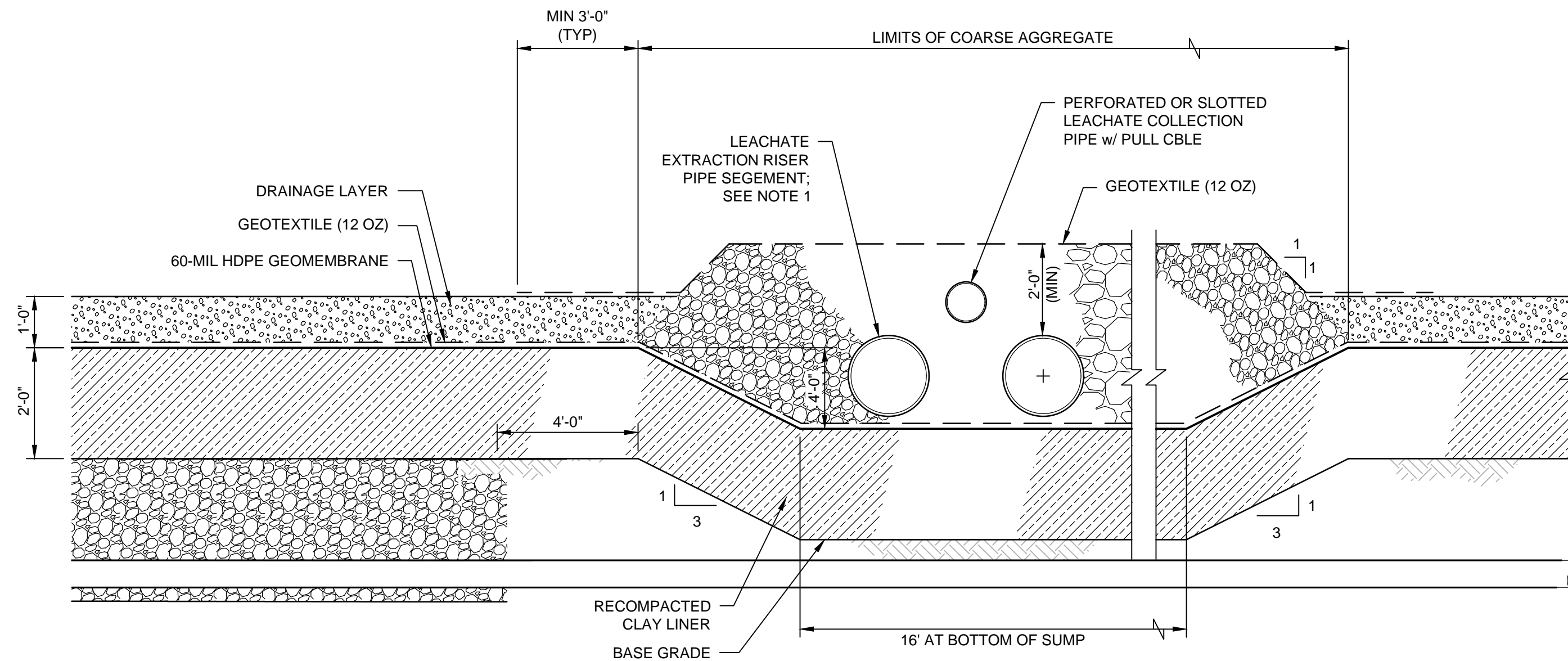
1 LEACHATE EXTRACTION RISER  
C103 NO SCALE



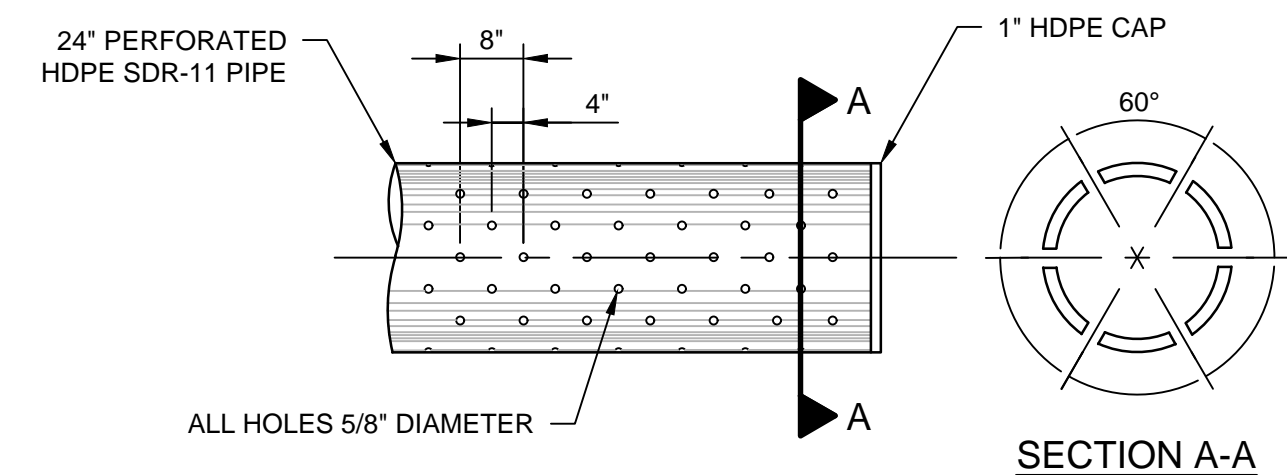
## NOTES

- PUMP, ELECTRICAL AND LEVEL TRANSDUCER DETAILS NOT SHOWN FOR CLARITY.

2 LEACHATE COLLECTION SUMP  
C103 NO SCALE



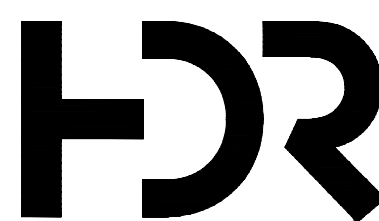
3 LEACHATE COLLECTION SUMP  
C103 NO SCALE



4 PERFORATED LEACHATE EXTRACTION PIPE  
NO SCALE

## NOTES:

- 0.5" DIAMETER HOLES, 6 ROWS EVENLY SPACED AROUND PERIMETER (60 DEGREES APART), 8" CENTER-TO-CENTER STAGGERED 4" BETWEEN ROWS.
- SEE SPECIFICATIONS ON PIPE JOINTING, REMOVING BEADS AND CLEANING INSIDE OF ALL PIPES. FOR 24" LEACHATE EXTRACTION RISERS AND LEACHATE COLLECTION LINES (INCLUDING SLOPE RISERS) PROVIDE BEVELED EDGE ON INSIDE OF JOINT SUCH THAT JOINT HAS MINIMAL TO NO BEAD PROJECTION ON INSIDE OF PIPE. PIPE TO BE REAMED TO REMOVED EXCESS BEADS.



ISSUE	DATE	DESCRIPTION
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PROJECT MANAGER K. KINLEY

CIVIL K. KINLEY  
CIVIL M. CORRY  
DRAWN BY M. BICKFORD  
QC BY

PROJECT NUMBER 10408322

PRELIMINARY  
NOT FOR  
CONSTRUCTION OR  
RECORDING



Metro Waste Authority

METRO PARK WEST  
MWA PROJECT P-67  
CELL E LINER CONSTRUCTION

DETAILS

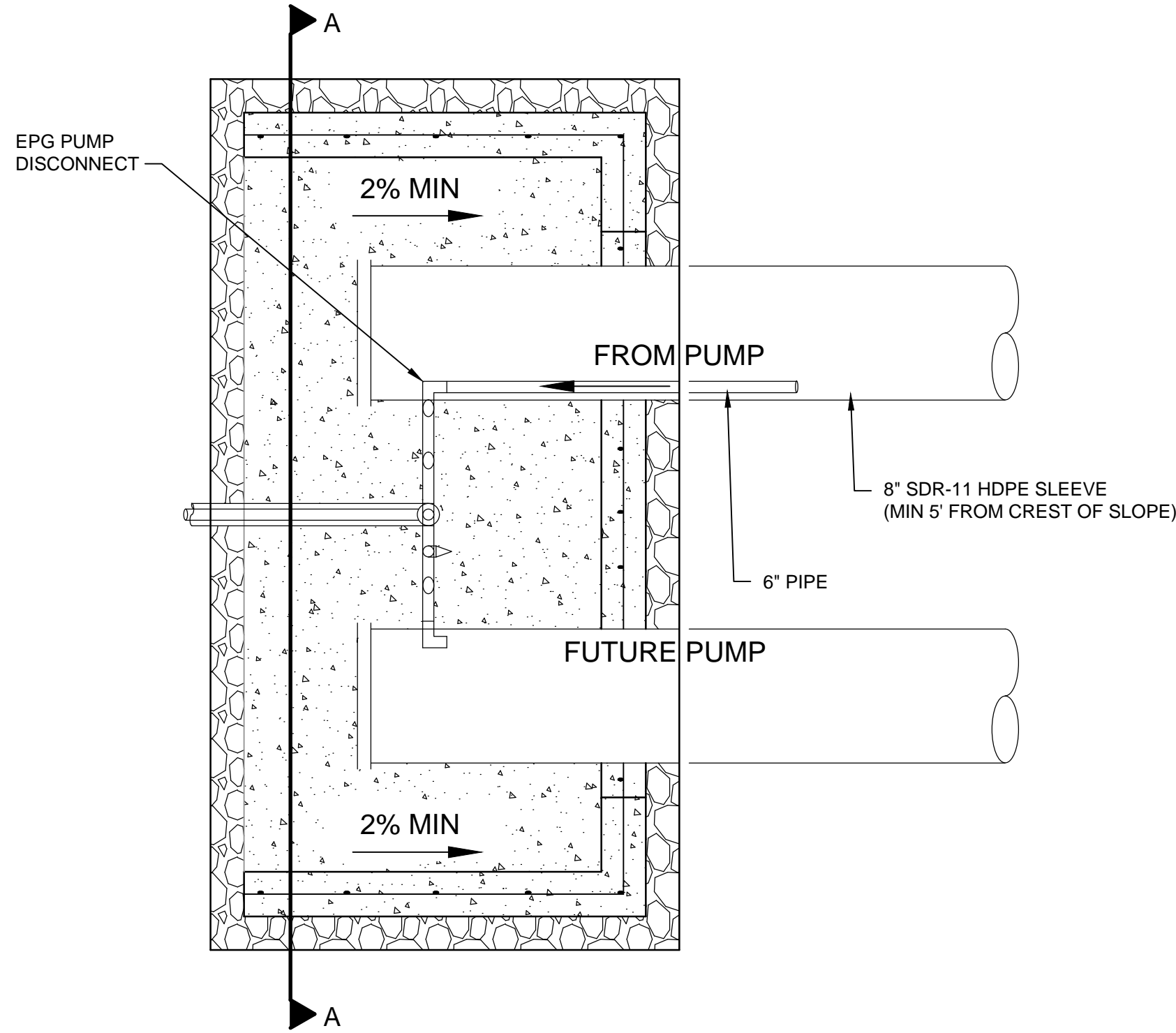


FILENAME C504.DWG  
SCALE AS NOTED

SHEET

C504



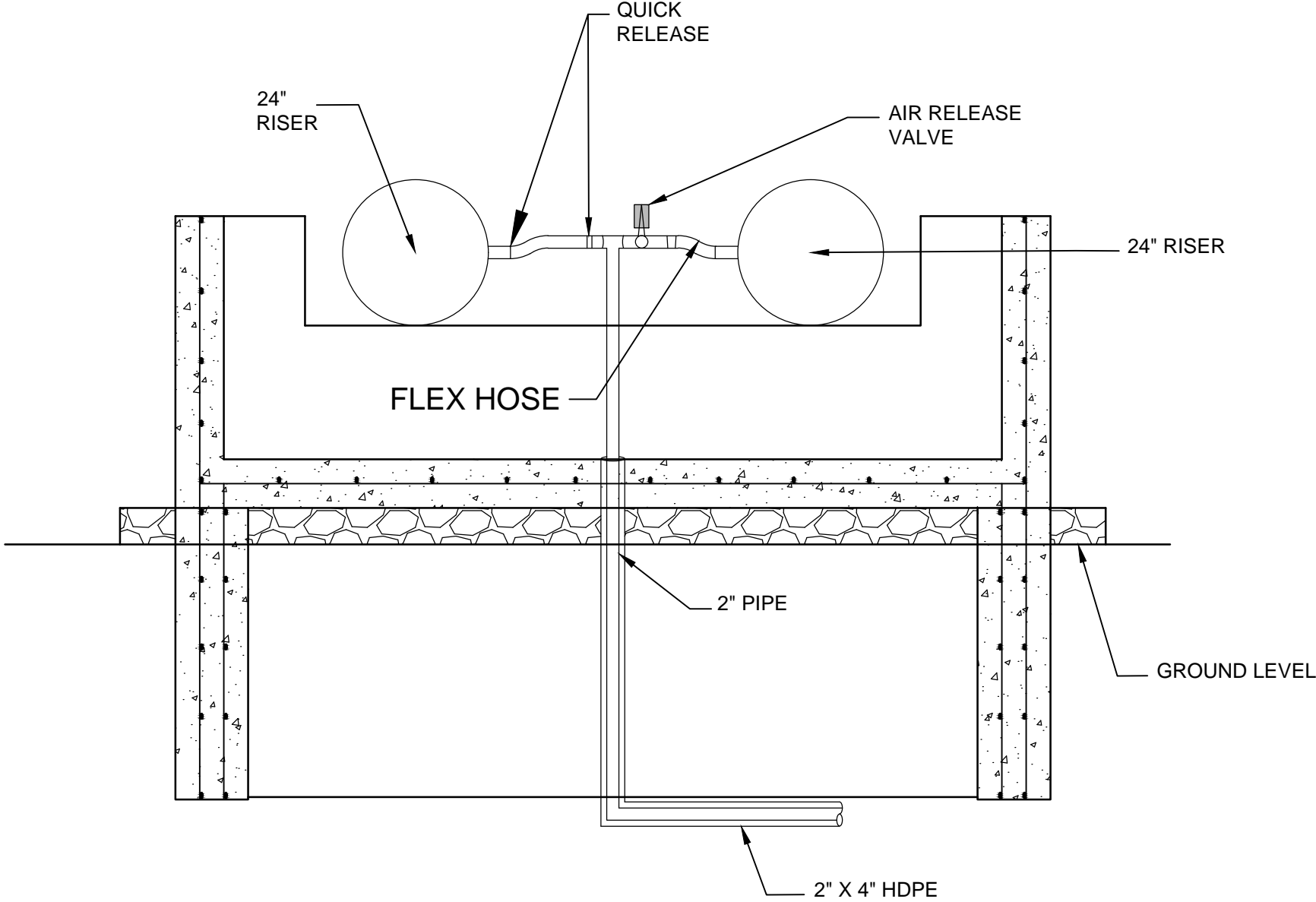


PLAN VIEW

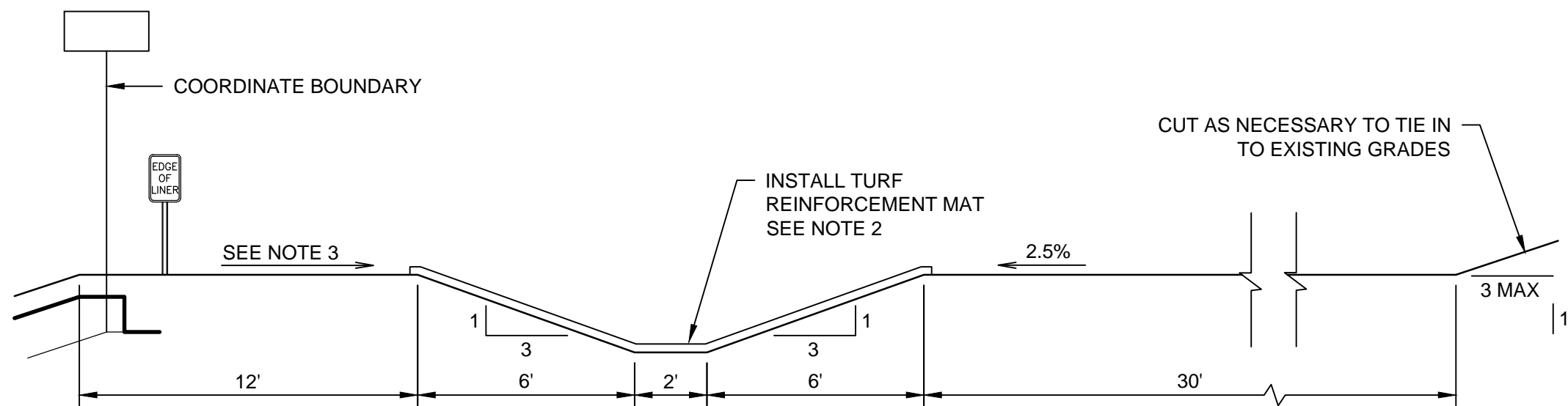
NOTES

- PUMP TO BE AN EPG 5-3, 0.75-HP OR APPROVED EQUIVALENT CAPABLE OF DELIVERING 25-GPM AT 5-FT TDH.

1 HEADWALL DETAIL  
C103 NO SCALE



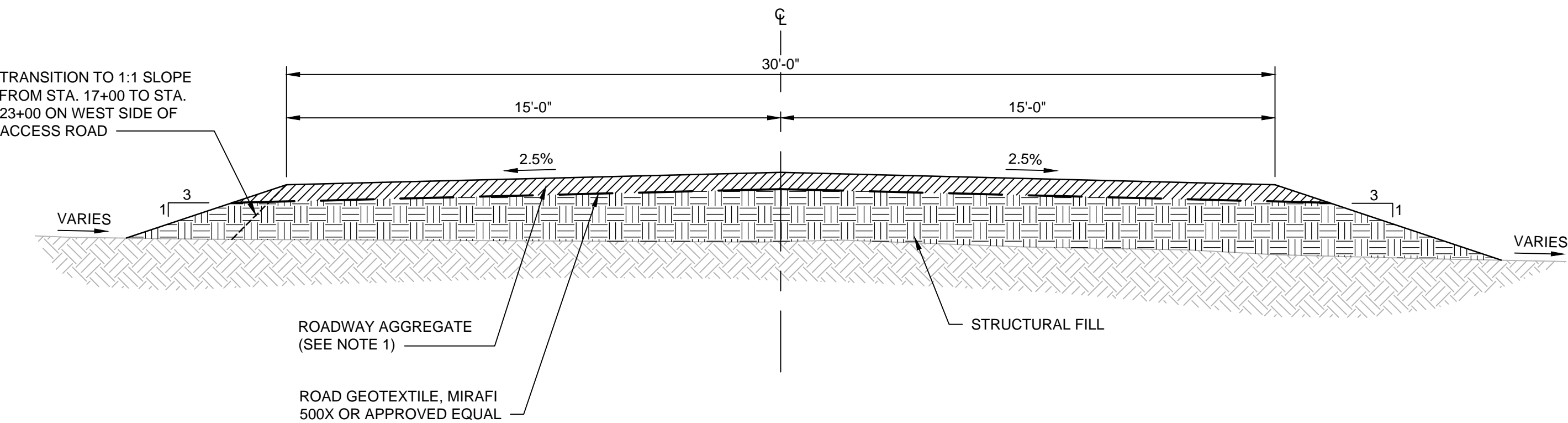
SECTION A-A



NOTES

- TO REACH GRADES ALONG PERMANENT PERIMETER DRAINAGE CHANNEL, BOTH EXCAVATION AND PLACEMENT OF STRUCTURAL FILL WILL BE REQUIRED. REFER TO SHEET 01C102 FOR FINAL CONTOURS.
- CHANNEL SHALL HAVE TURF REINFORCEMENT MAT (NORTH AMERICAN GREEN VMAX C350 OR APPROVED EQUAL). TOPSOIL SHALL BE PLACED ALONG ENTIRE BOTTOM AND SIDESLOPES OF CHANNEL. CHANNEL SHALL BE SEEDED AND FERTILIZED. INSTALL ALL EROSION CONTROL ELEMENTS PER MANUFACTURER'S SPECIFICATIONS.
- GRADE TO DRAIN TO PERIMETER DRAINAGE CHANNEL AT SLOPES NOT GREATER THAN 2% AND NO LESS THAN 0.5% UNLESS APPROVED BY ENGINEER.

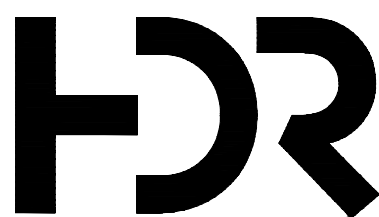
2 PERMANENT PERIMETER DRAINAGE CHANNEL  
C101 NO SCALE



NOTES

- ROADWAY AGGREGATE TO BE COMPRISED OF TWO COURSES, BASE AND SURFACE. BASE COURSE SHALL BE 6-INCHES THICK OF GRADATION NO. 13A. SURFACE COURSE SHALL BE 3-INCHES THICK OF GRADATION NO. 11. SEE SPECIFICATIONS.

3 ACCESS ROAD SECTION  
C101 NO SCALE



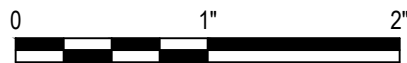
ISSUE	DATE	DESCRIPTION
2	12-23-2025	ADDENDUM NO. 1
1	11-26-2025	ISSUED FOR BID

PROJECT MANAGER	K. KINLEY
CIVIL	K. KINLEY
CIVIL	M. CORRY
DRAWN BY	M. BICKFORD
QC BY	
PROJECT NUMBER	10408322

PRELIMINARY  
NOT FOR  
CONSTRUCTION OR  
RECORDING



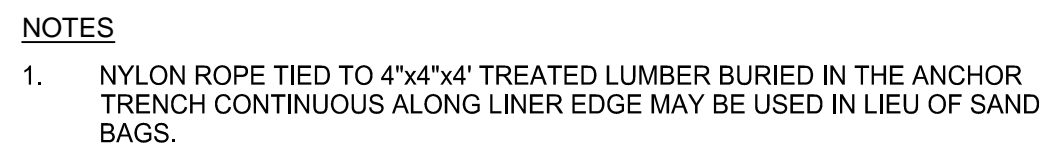
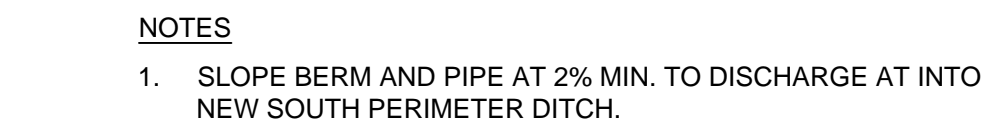
**Metro Waste Authority**  
**METRO PARK WEST**  
**MWA PROJECT P-67**  
**CELL E LINER CONSTRUCTION**



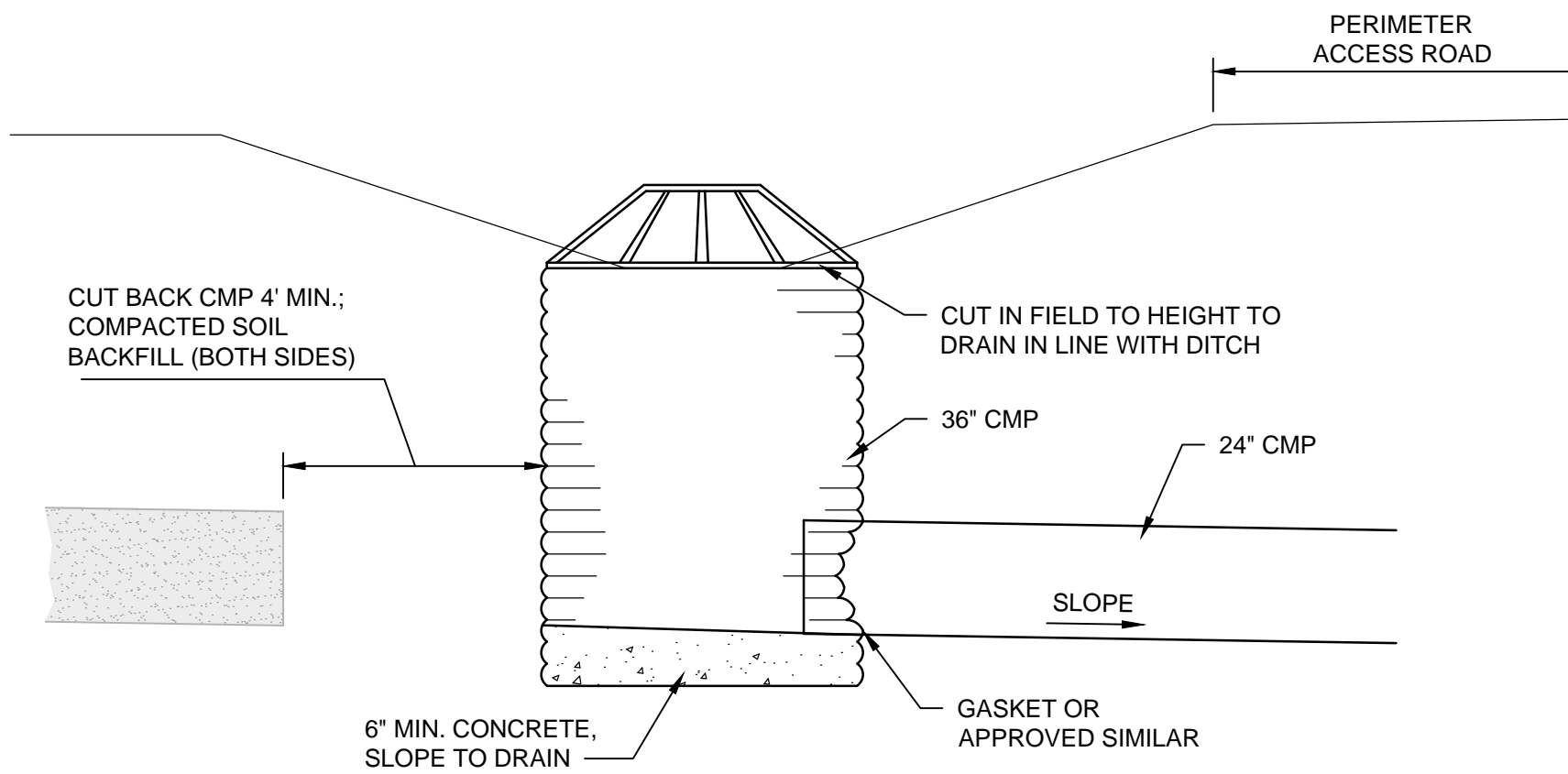
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FILENAME | C505.DWG  
SCALE | AS NOTED

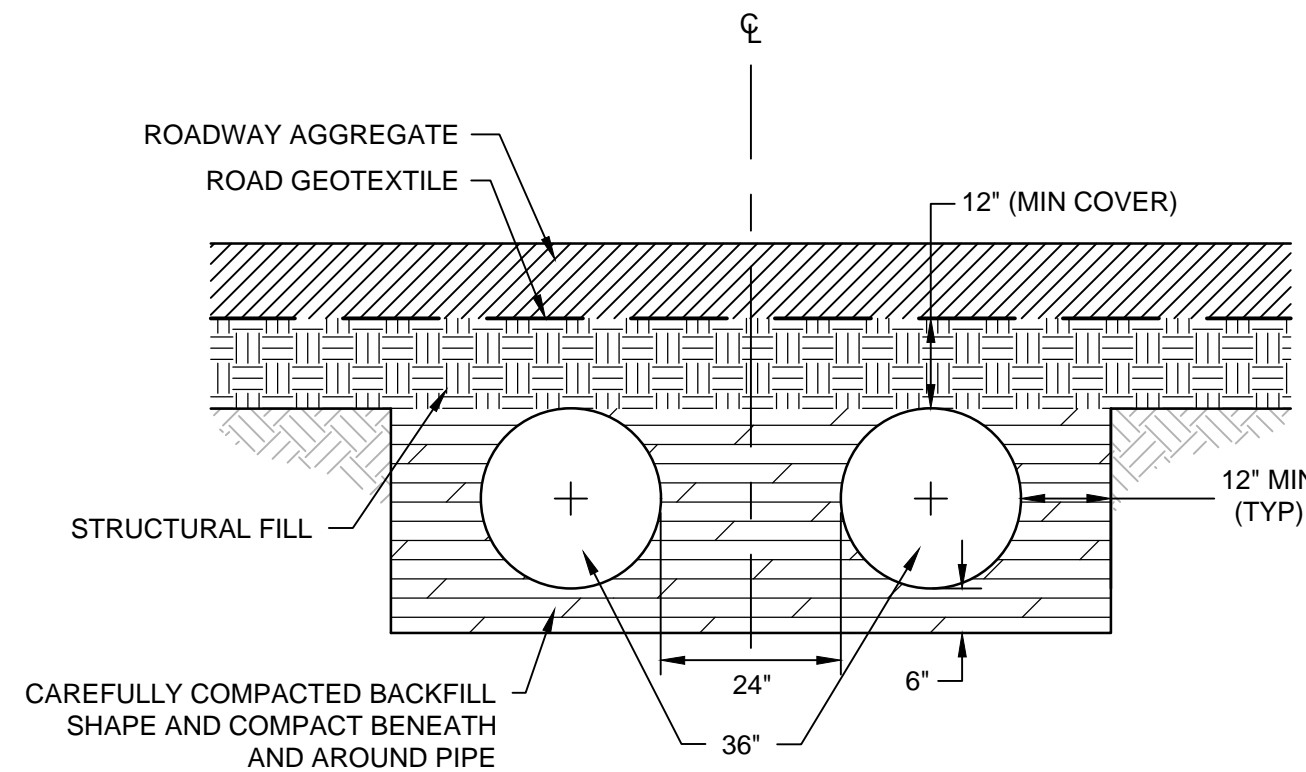
SHEET  
**C505**



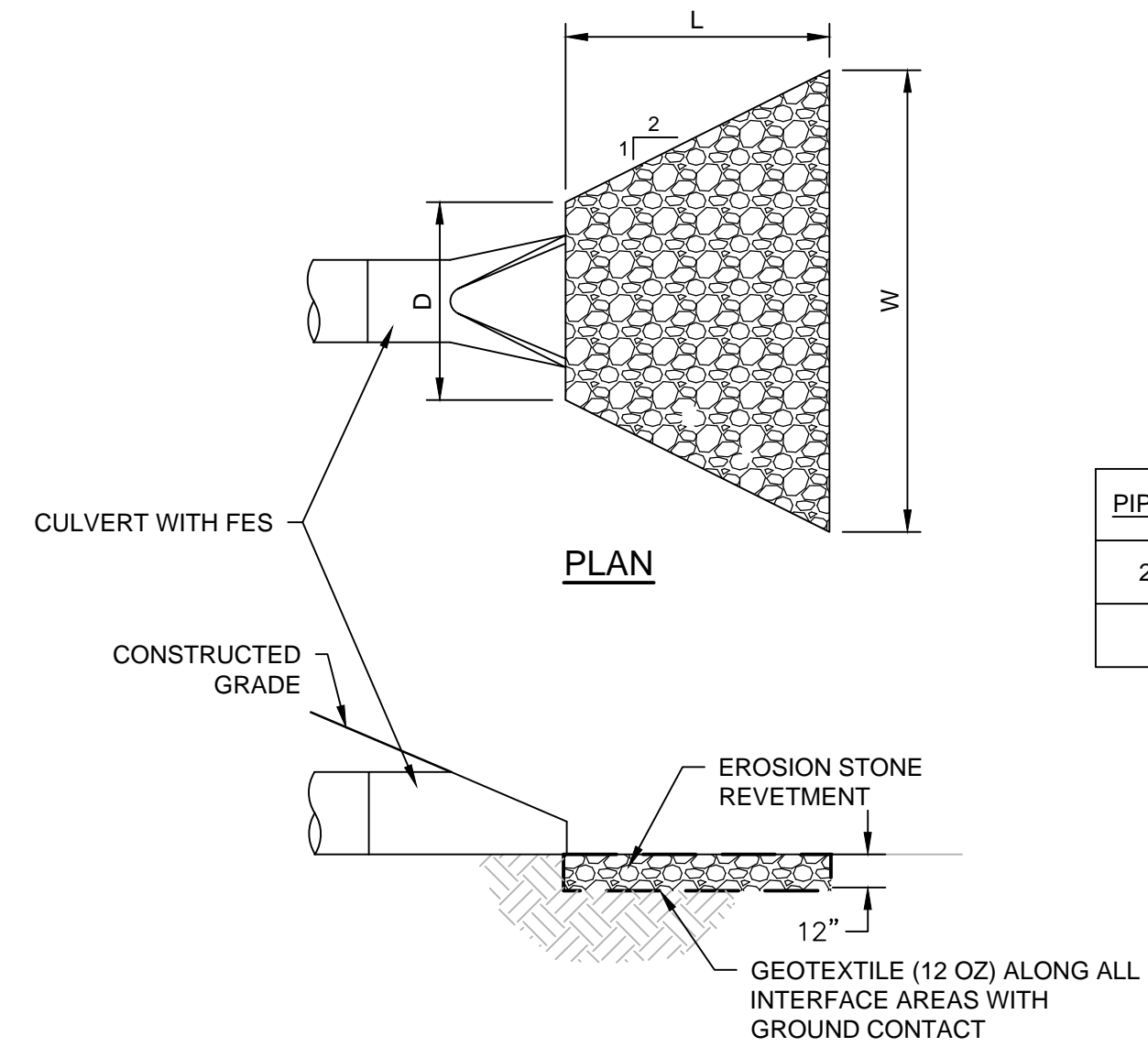




1 DROP STRUCTURE  
C101 NO SCALE



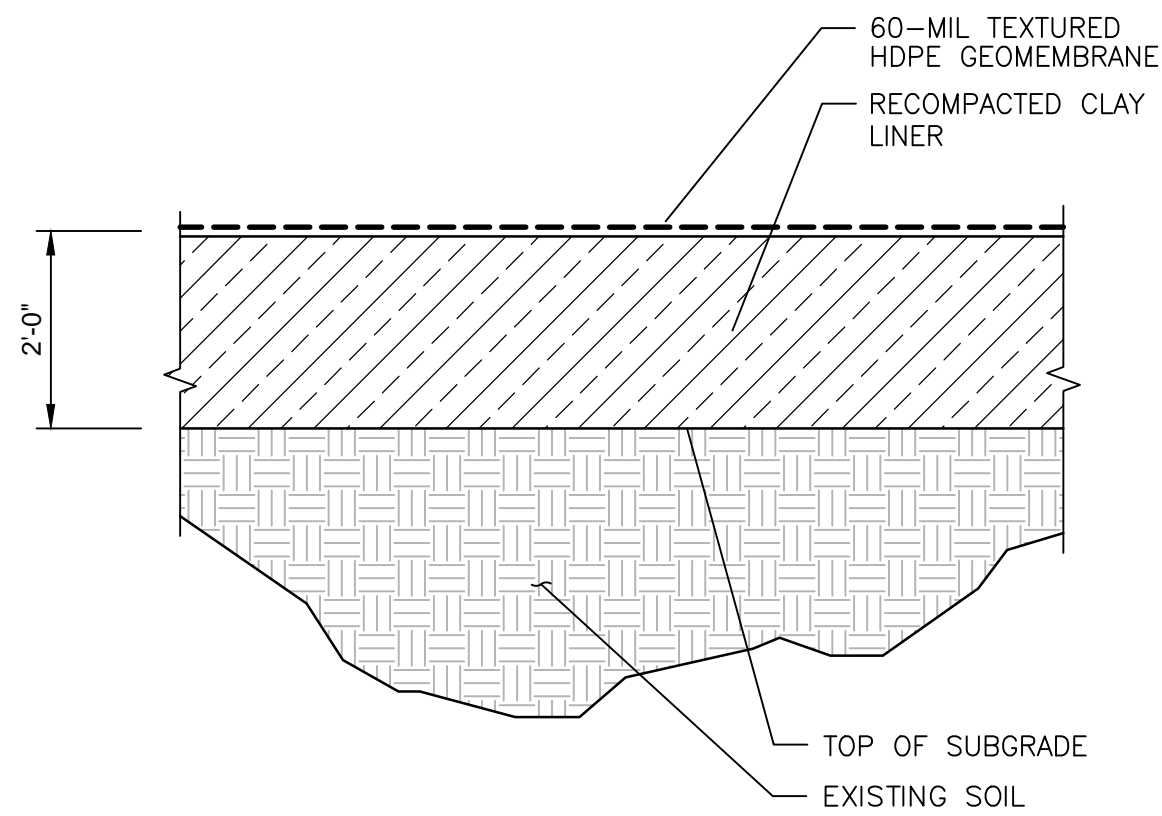
2 CULVERT ROAD CROSSING  
C101 NO SCALE



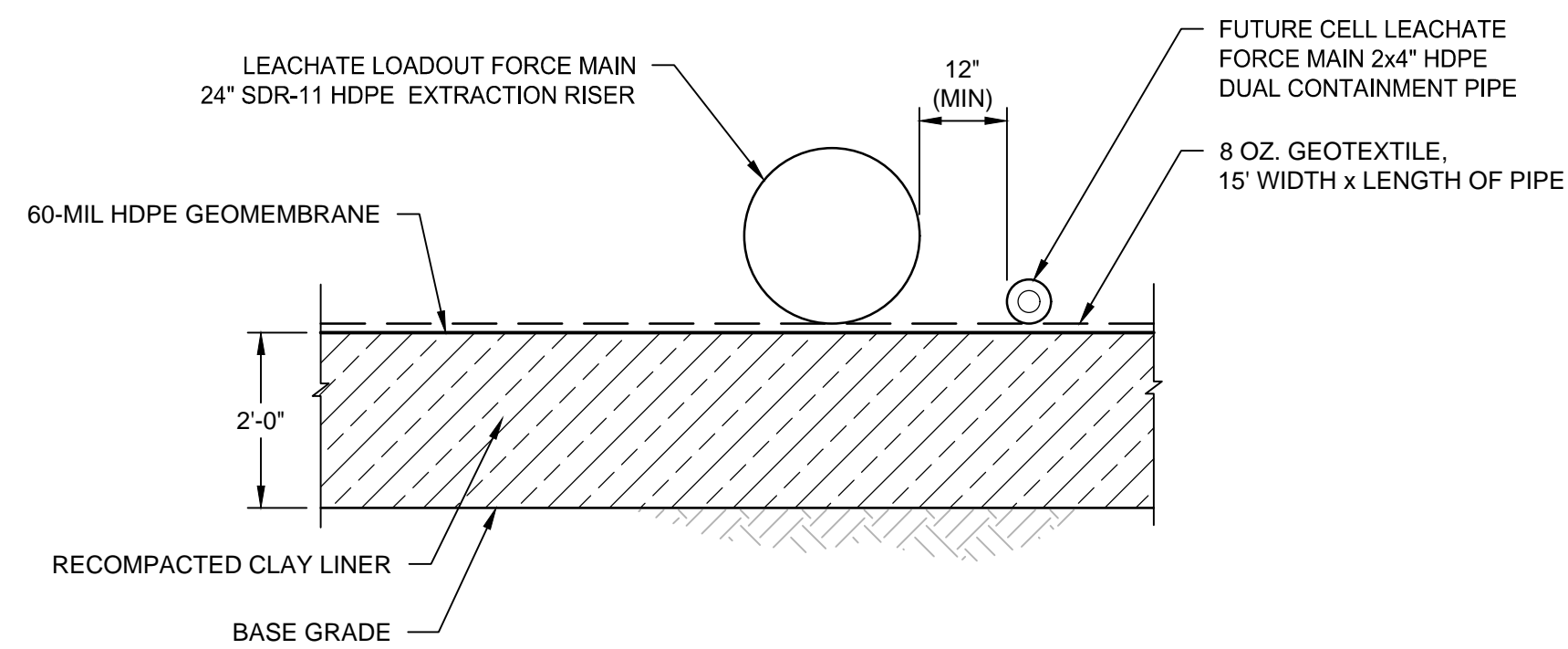
PIPE DIA.	D	W	L
2-24"	14'	14'	10'
12"	5'	5'	5'

SECTION

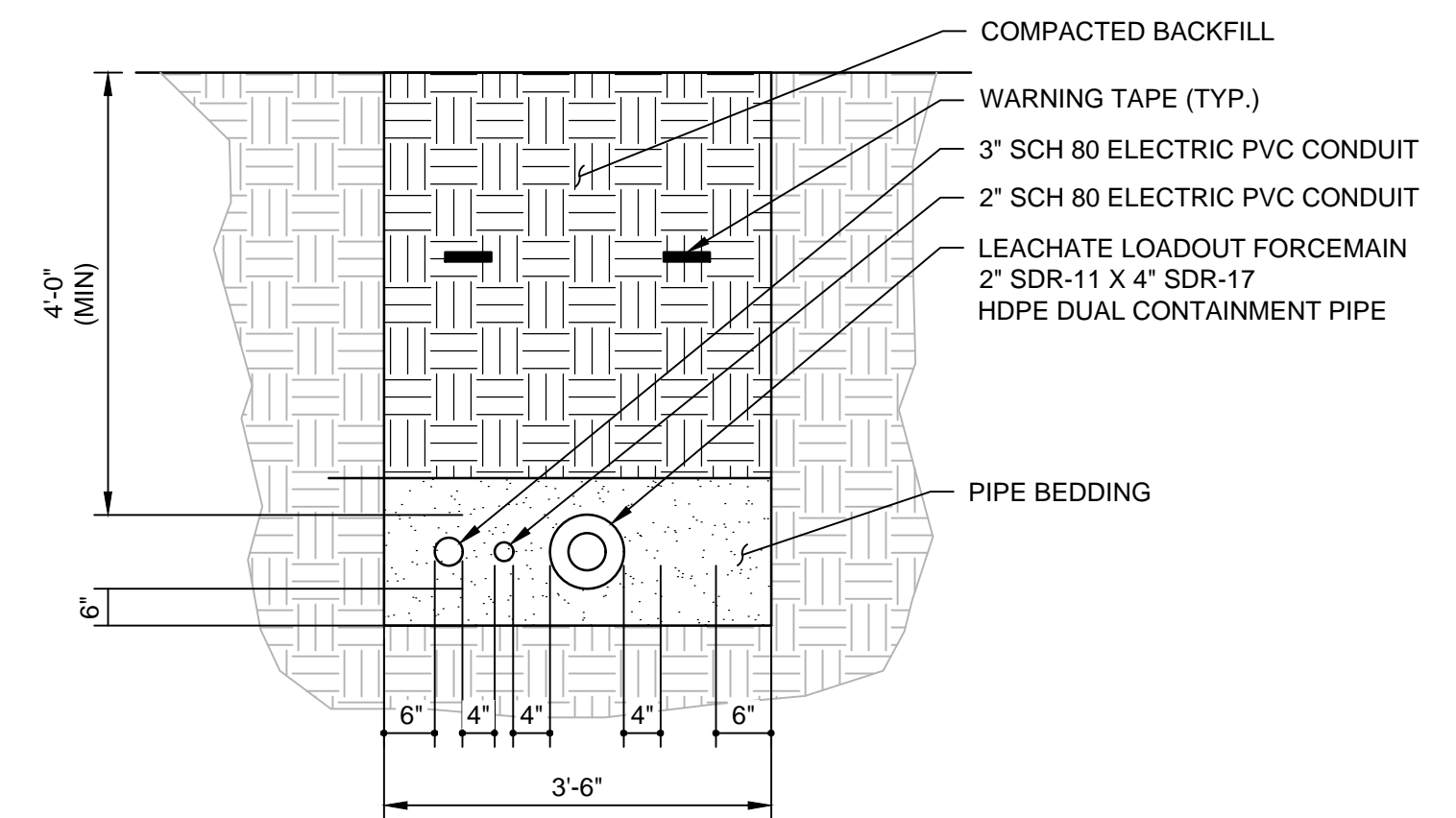
3 RIP-RAP APRON  
NO SCALE



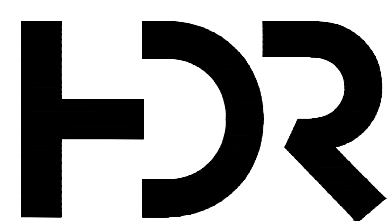
4 LEACHATE POND LINER  
C104 NO SCALE



5 LEACHATE RISER AND DISCHARGE SLOPE SECTION  
C104 NO SCALE



6 LEACHATE CONVEYANCE TRENCH OUTSIDE OF SOLID WASTE BOUNDARY  
C104 NO SCALE



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PROJECT MANAGER	K. KINLEY
CIVIL	K. KINLEY
CIVIL	M. CORRY
DRAWN BY	M. BICKFORD
QC BY	
PROJECT NUMBER	10408322

PRELIMINARY  
NOT FOR  
CONSTRUCTION OR  
RECORDING



**Metro Waste Authority**  
**METRO PARK WEST**  
**MWA PROJECT P-67**  
**CELL E LINER CONSTRUCTION**

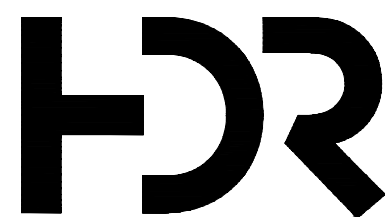
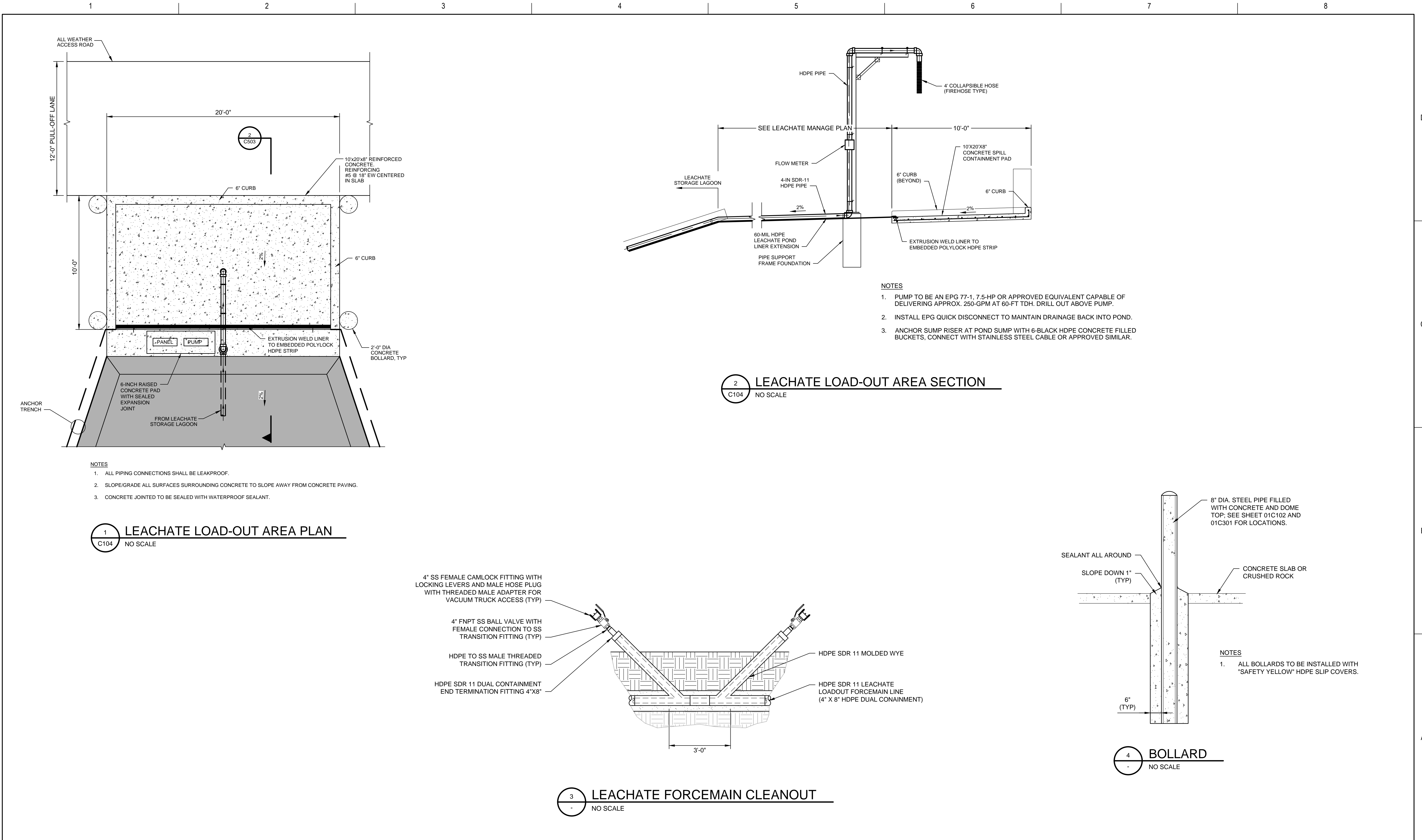


DETAILS

FILENAME | C507.DWG  
SCALE | AS NOTED

SHEET  
**C507**

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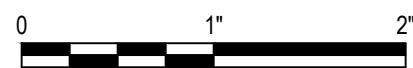
2	12-23-2025	ADDENDUM NO. 1
1	11-26-2025	ISSUED FOR BID
ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	K. KINLEY
CIVIL	K. KINLEY
CIVIL	M. CORRY
DRAWN BY	M. BICKFORD
QC BY	
PROJECT NUMBER	10408322

PRELIMINARY  
NOT FOR  
CONSTRUCTION OR  
RECORDING



**Metro Waste Authority**  
**METRO PARK WEST**  
**MWA PROJECT P-67**  
**CELL E LINER CONSTRUCTION**

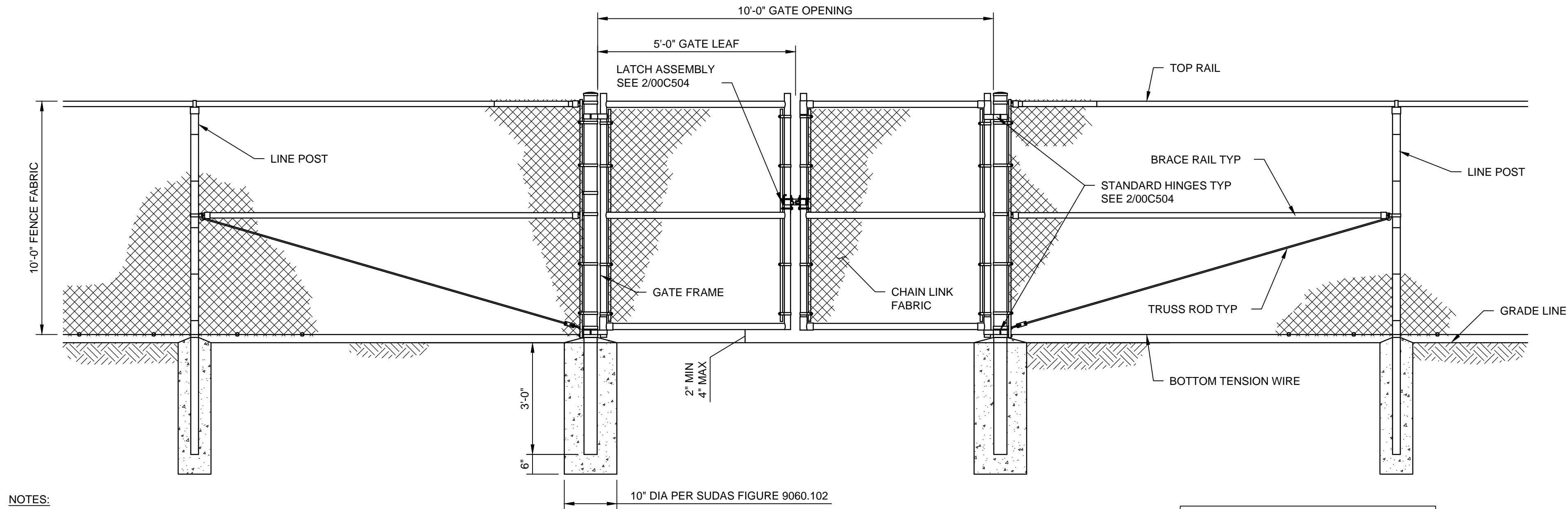


**DETAILS**

FILENAME | C508.DWG  
SCALE | AS NOTED

SHEET  
**C508**



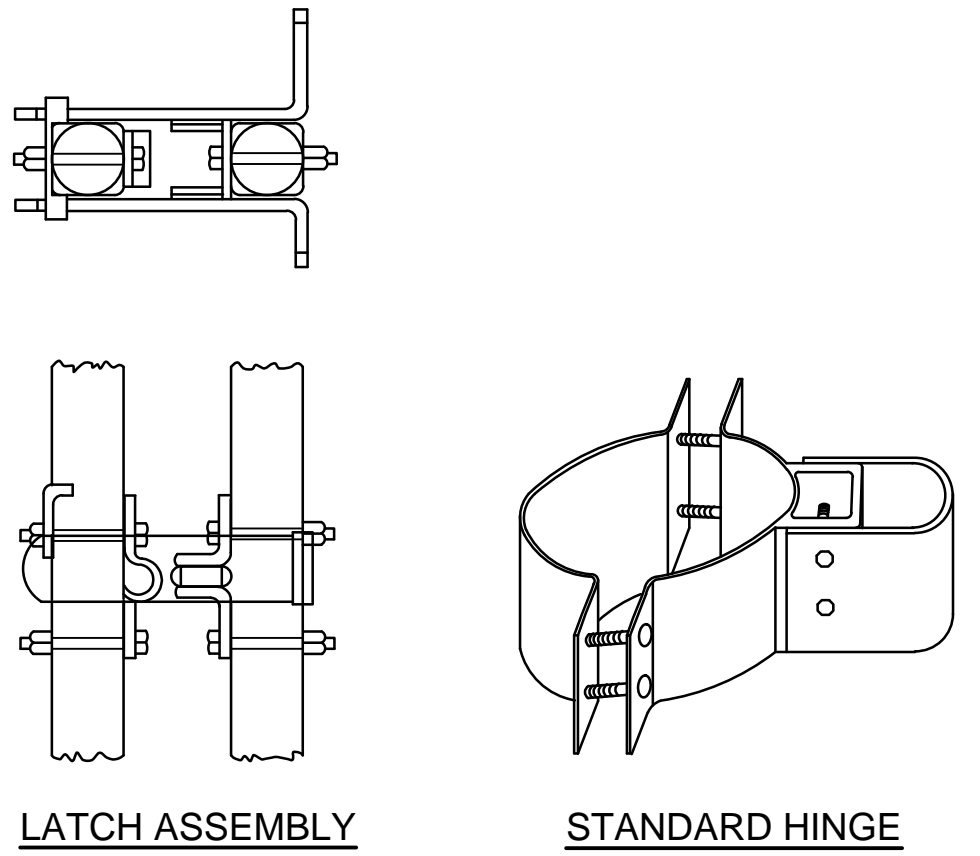


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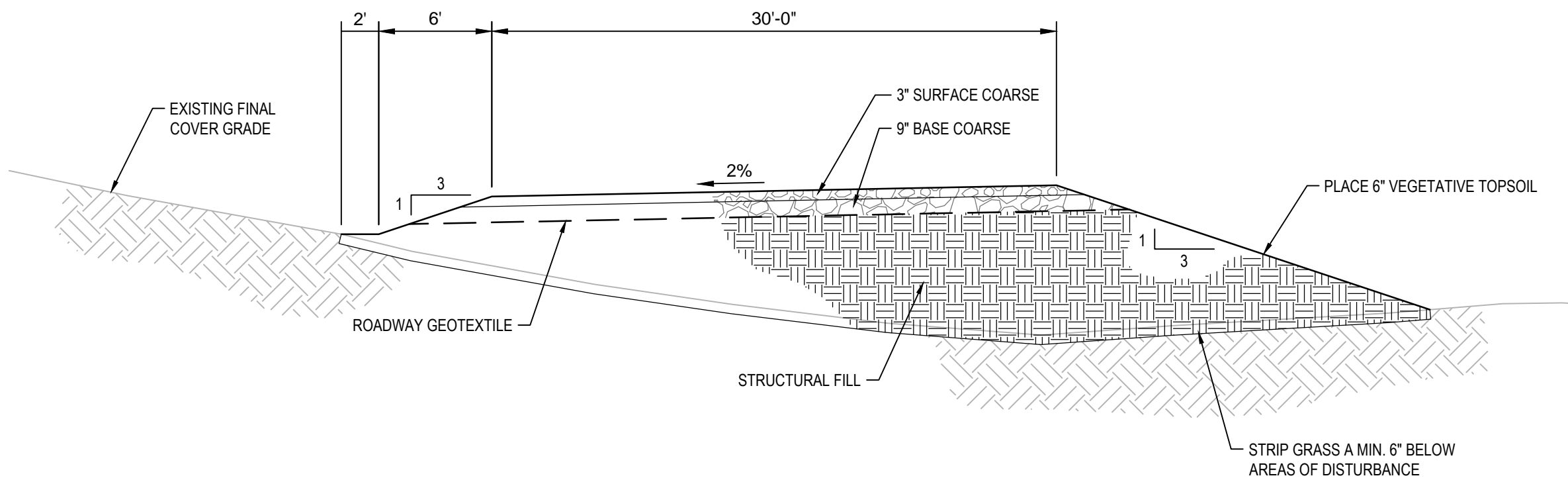
1. DETAILS SHOWN ARE TO CLARIFY REQUIREMENTS AND ARE NOT INTENDED TO LIMIT OTHER TYPES OF FENCE SECTIONS AND METHODS OF INSTALLATION.
2. SWING GATES SHALL BE CONSTRUCTED WITH PADLOCKS, AND LATCH ASSEMBLY.
3. ALL GATE FRAMES SHALL BE A MINIMUM 1.90" NOMINAL (ROUND) OR 2.00" NOMINAL (SQUARE). GATE FRAMES SHALL BE OF WELDED CONSTRUCTION OR ASSEMBLED USING HEAVY FITTINGS.

1 DOUBLE SWING GATE  
NO SCALE

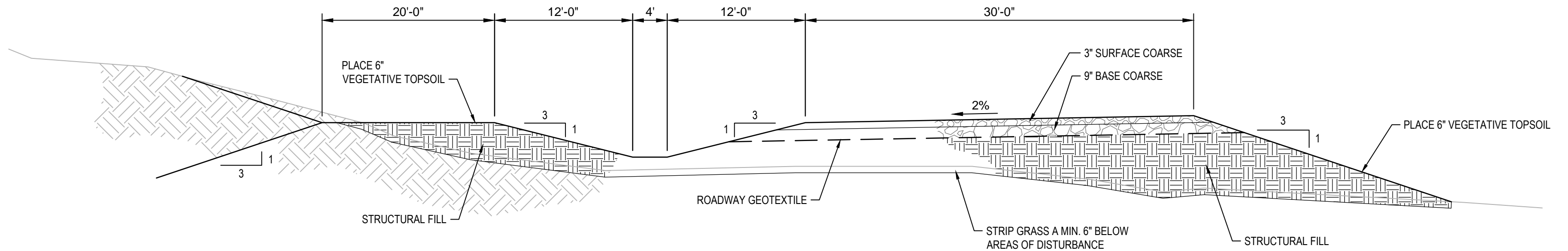
GATE POST SCHEDULE	
GATE LEAF WIDTH (NOMINAL)	OUTSIDE DIMENSION (NOMINAL)
5'	2.875" OD 2.5" SQ



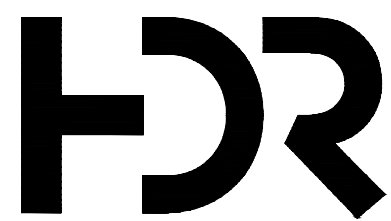
2 FENCE DETAILS  
NO SCALE



3 FINAL COVER ROAD TYPICAL SECTION  
C106 NO SCALE



4 EAST PERIMETER ROAD TYPICAL SECTION  
C105 NO SCALE



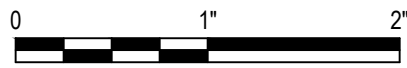
ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	K. KINLEY
CIVIL	K. KINLEY
CIVIL	M. CORRY
DRAWN BY	M. BICKFORD
PROJECT NUMBER	10408322

PRELIMINARY  
NOT FOR  
CONSTRUCTION OR  
RECORDING

 **Metro Waste Authority**

**METRO PARK WEST  
MWA PROJECT P-67  
CELL E LINER CONSTRUCTION**

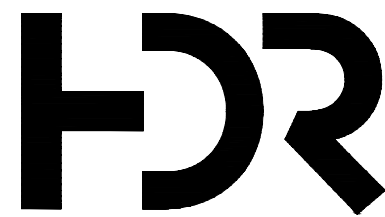


DETAILS

FILENAME	C509.DWG
SCALE	AS NOTED

SHEET  
**C509**

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2	12-23-2025	ADDENDUM NO. 1
1	11-26-2025	ISSUED FOR BID

ISSUE	DATE	DESCRIPTION
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PROJECT MANAGER K. KINLEY

CIVIL	K. KINLEY
CIVIL	M. CORRY
DRAWN BY	M. BICKFORD
QC BY	

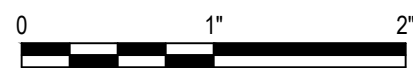
PROJECT NUMBER 10408322

PRELIMINARY  
NOT FOR  
CONSTRUCTION OR  
RECORDING



**Metro Waste Authority**  
**METRO PARK WEST**  
**MWA PROJECT P-67**  
**CELL E LINER CONSTRUCTION**

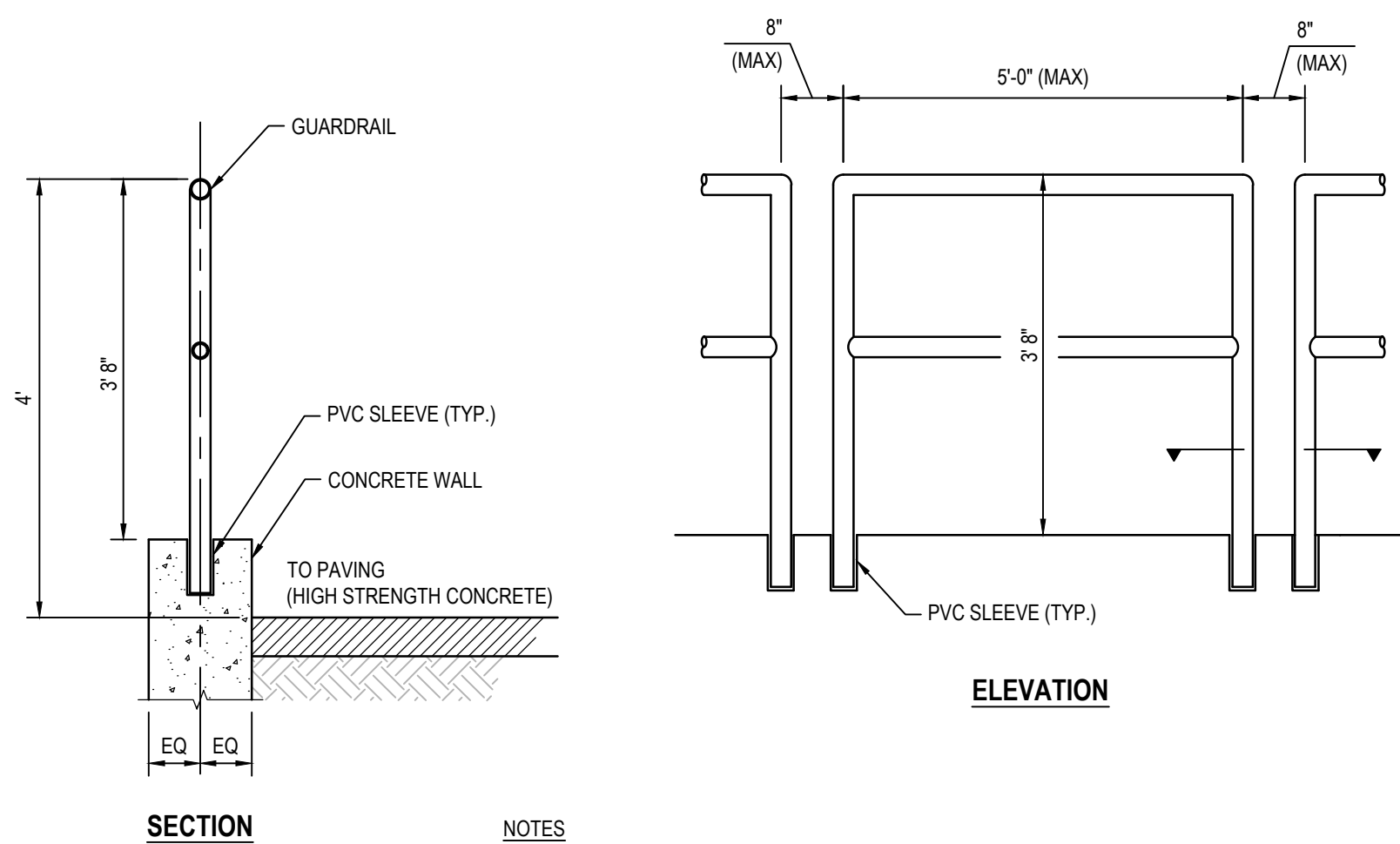
DETAILS



FILENAME C510.DWG  
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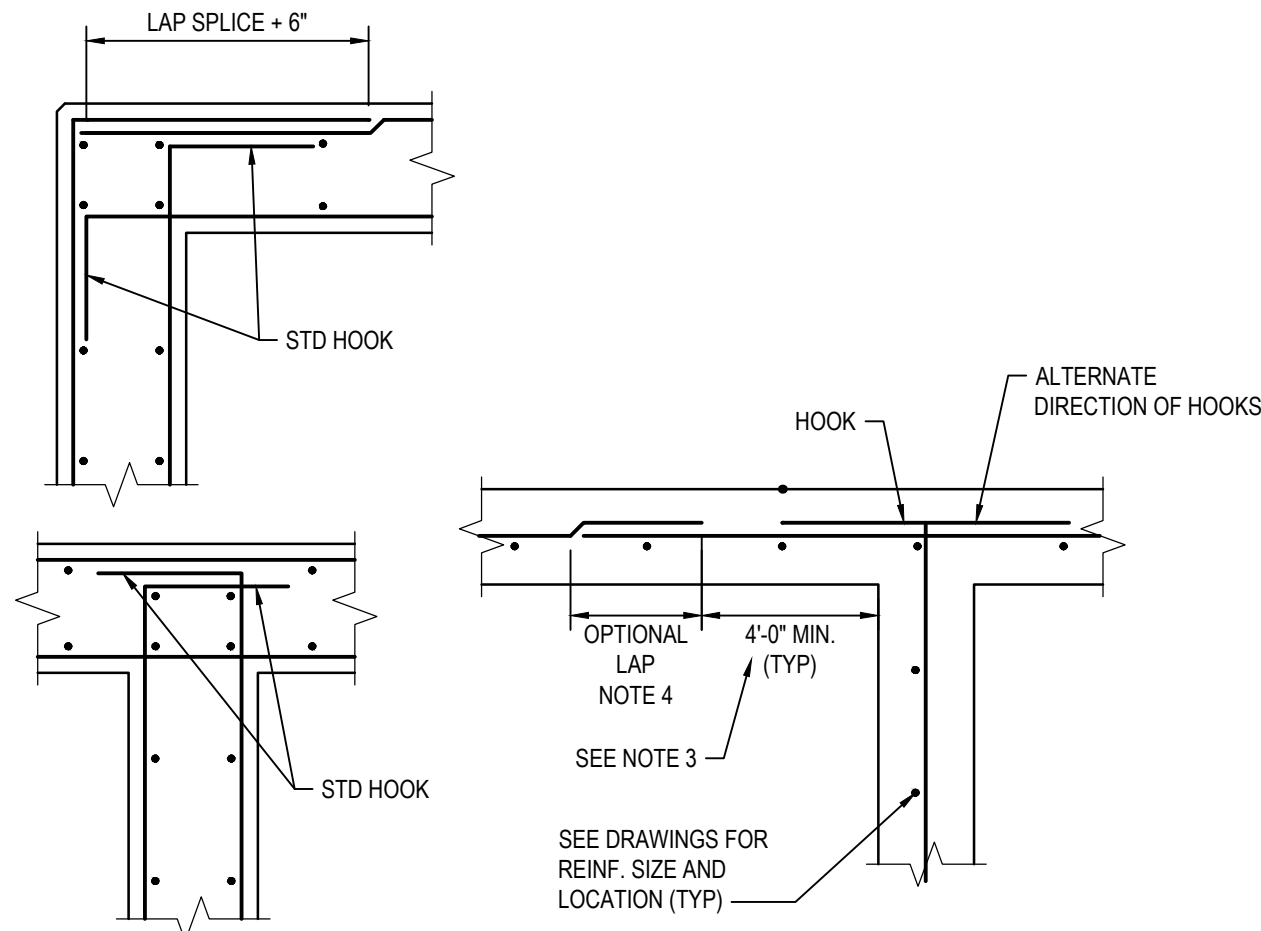
SHEET

C510



- NOTES
1. ALL MATERIAL TO BE ALUMINUM (UNO).
  2. 3" SCHEDULE 80 PVC SLEEVE TO EXTEND 8" INTO TOP OF WALL.

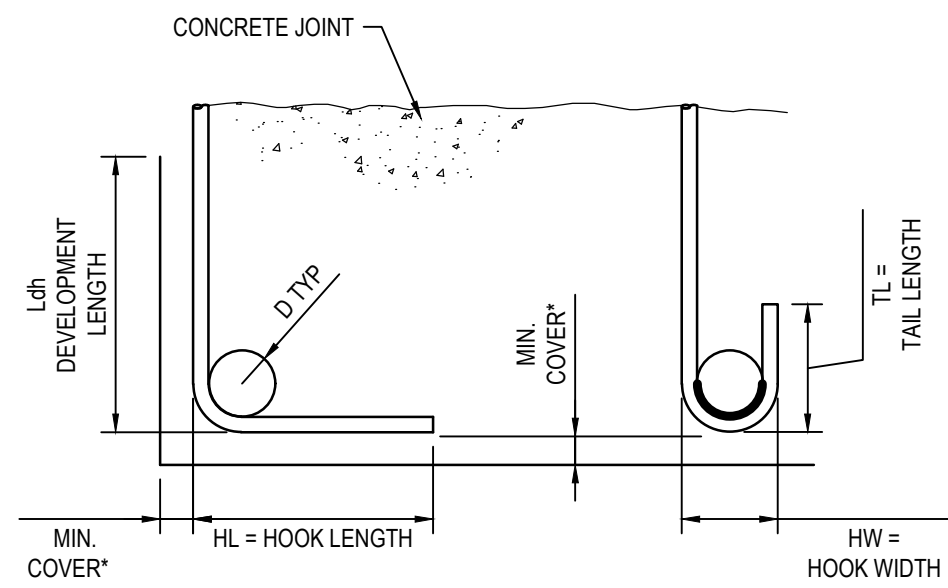
- NOTES
1. GUARDRAILS TO RUN THE TOTAL LENGTH OF THE TOP OF THE RETAINING WALL. GUARDRAIL SCHEDULE IS PROVIDED TO INDICATE IF ONE OR TWO HORIZONTAL RAILS ARE REQUIRED FOR EACH SECTION.



- NOTES
1. ALL HOOKS SHALL BE STD 90 DEGREE HOOKS.
  2. SEE DRAWINGS FOR ADDITIONAL HORIZONTAL BARS. STAGGER BETWEEN TYPICAL REINF. SPACING. EXTEND TO 1/5 OF DISTANCE TO NEAREST ADJACENT WALL IN EACH DIRECTION, UNO.
  3. OPTIONAL LAP LOCATION APPLIES TO BOTH DOUBLE AND SINGLE LAYER CONDITIONS TYP.
  4. BARS MAY BE ONE PIECE CONTINUOUS, THUS TWO PIECE REBAR NOT REQUIRED WITH LAP.

LAP SPLICE AND EMBEDMENT LENGTHS f <sub>c</sub> = 4.0 ksi f <sub>y</sub> = 60 ksi		
BAR	BARS SPACED GREATER THAN 4"	BARS SPACED LESS THAN OR EQUAL TO 4"
#3	14"	14"
#4	19"	19"
#5	24"	30"
#6	29"	43"
#7	46"	74"
#8	60"	96"
#9	76"	122"
#10	97"	155"
#11	120"	191"

- NOTES
1. PROVIDE MINIMUM LAP SPLICE LENGTHS AND EMBEDMENTS PER TABLE UNLESS NOTED OTHERWISE. EMBEDMENT LENGTH EQUALS THE LAP SPLICE LENGTH UNLESS OTHERWISE NOTED.
  2. BAR SPACING AT LAP SPLICE IS THE MINIMUM CLEAR DISTANCE BETWEEN LAPPED BARS PLUS ONE BAR DIAMETER.
  3. ALL SPLICES TO BE CONTACT SPLICES AND WIRED TOGETHER UNLESS OTHERWISE APPROVED BY ENGINEER.



90° STD HOOK

180° STD HOOK

BAR SIZE GRADE 60	HL	HW	TL	D	f <sub>c</sub> =4000 psi OR GREATER Ldh*
#5	10"	5"	5"	3 3/4"	9"
#6	1'-0"	6"	6"	4 1/2"	10"

\* COMPLYING WITH MINIMUM COVER REQUIREMENTS OF ACI 318, 12.5.3. OTHERWISE Ldh MUST BE RE-CALCULATED.

