

Work Variance Request Form

Groundwater Remedy Phase 2A Construction, PG&E Topock Compressor Station, Needles, California

PG&E TOPOCK GROUNDWATER REMEDIATION PROJECT

Work Variance Request #14 – Proposed Installation of Pipeline C18 at Current Post-NTCRA Elevation and Addition of Aggregate-Based Access Road in East Ravine for Remedy Operation and Maintenance

Request Prepared By: PG&E

Date Submitted: 4/15/2025

Variance Request No.: 14

Location: East Ravine

Request Approval From: DTSC and DOI

Date Approval Required: To Be Determined

Map Area: See attached drawings

Land Manager/Parcel No.: PG&E/APN 650-161-08 and US Fish and Wildlife Services for Havasu National Wildlife Refuge/APN 650-161-12

Current Vegetative Cover/Land Use: Sparse vegetation/Industrial

Existing Sensitive Resource? ☐ No ☒ Yes, Specify: Palo verde trees nearby

Variance From: ☐ Mitigation Measure ☐ Work Plan/Procedure ☐ Response to Comments Drawing
☐ Permit Condition ☒ Other – Approved WVR #10 and C/RAWP Figure 4.3-2

Detailed Description of Variance and Justification (Attach additional information if necessary):

☒ Attachments: ☐ Photo ☒ Construction Drawing ☐ Aerial Photo Mark-Up ☐ Correspondence ☐ Other

Potential Impacts of Variance:

- | | | |
|---|--|--|
| ☐ Air Quality | ☐ Hazardous Materials | ☐ Aesthetic |
| ☐ Biological Resources | ☐ Noise | ☐ Water Resources |
| ☒ Soils | ☐ Paleo Resources | |
| ☐ Cultural Resources | ☐ Hydrology and Water Quality | |

Work Variance Request Form (Continued)

Groundwater Remedy Phase 2A Construction, PG&E Topock Compressor Station, Needles, California

PG&E TOPOCK GROUNDWATER REMEDIATION PROJECT

Work Variance Request #14 – Proposed Installation of Pipeline C18 at Current Post-NTCRA Elevation and Addition of Aggregate-Based Access Road in East Ravine for Remedy Operation and Maintenance

Description and Justification:

This Work Variance Request (WVR) proposes to install pipeline C18 at current elevation and add an access road in East Ravine. The rationale and specifics are described below and included in the attached drawings.

A. Justification for installation of remedy pipeline C18 at current post-NTCRA elevation

During the Soil Non-Time Critical Removal Action (NTCRA) project, PG&E submitted a request to DOI for approval to eliminate the need for imported backfill at the East Ravine. The rationale was to reduce the need for importing approximately 5,000 cubic yards of backfill and maximizing the beneficial use of available onsite material. DOI approved PG&E's request on February 3, 2023.

Consistent with that rationale, PG&E proposes to install remedy pipeline C18 in the East Ravine at current post-NTCRA elevation, instead of at the higher pre-NTCRA elevation in the 2015 Final Design. This will reduce the need to import approximately 5,000 cubic yards of fill materials to backfill the East Ravine to pre-NTCRA elevation. No material changes to the pipeline C18 alignment, as approved in WVR #10 (can be downloaded via [Link](#)), is proposed.

B. Justification for an aggregate-based (AB) access road in the East Ravine for the operation and maintenance (O&M) of remedy wells, monitoring wells, and pipeline

Figure 4.3-2 of the Construction/Remedial Action Work Plan (C/RAWP) shows an existing access route in the East Ravine. To support the remedy O&M activities for remedy wells and pipeline in the East Ravine, it is anticipated that this access dirt route would require frequent maintenance resulting in repeated soil disturbance. Therefore, to minimize soil disturbance, PG&E proposes to construct a 14-foot wide, aggregate-based (AB) access road on top of the pipeline C18 alignment. This AB access road would require less maintenance and minimize the level of soil disturbance over the anticipated decades-long duration of the Topock remediation project.

In total, the estimated net change in the volumes of soils/other materials and access road length associated with this WVR are:

1. Import back fill: a reduction of approximately 4,227 cubic yards (5,000 cy reduction by not backfill East Ravine plus 773 cubic yards of fill estimated for pipeline C18 [see attached C-07-61])
2. Import riprap: an increase of approximately 198 cubic yards
3. Import AB: an increase of approximately 245 cubic yards
4. Access road length: an increase of 970 feet

In addition, there are no additional impacts to biological, historical, and cultural resources associated with this WVR not already evaluated in the 2018 Subsequent Environmental Impact Report (SEIR).

Approval Signatures:



4/14/25

PG&E Project Manager

Date

Christopher Ioan

5/9/25

Approving Agency

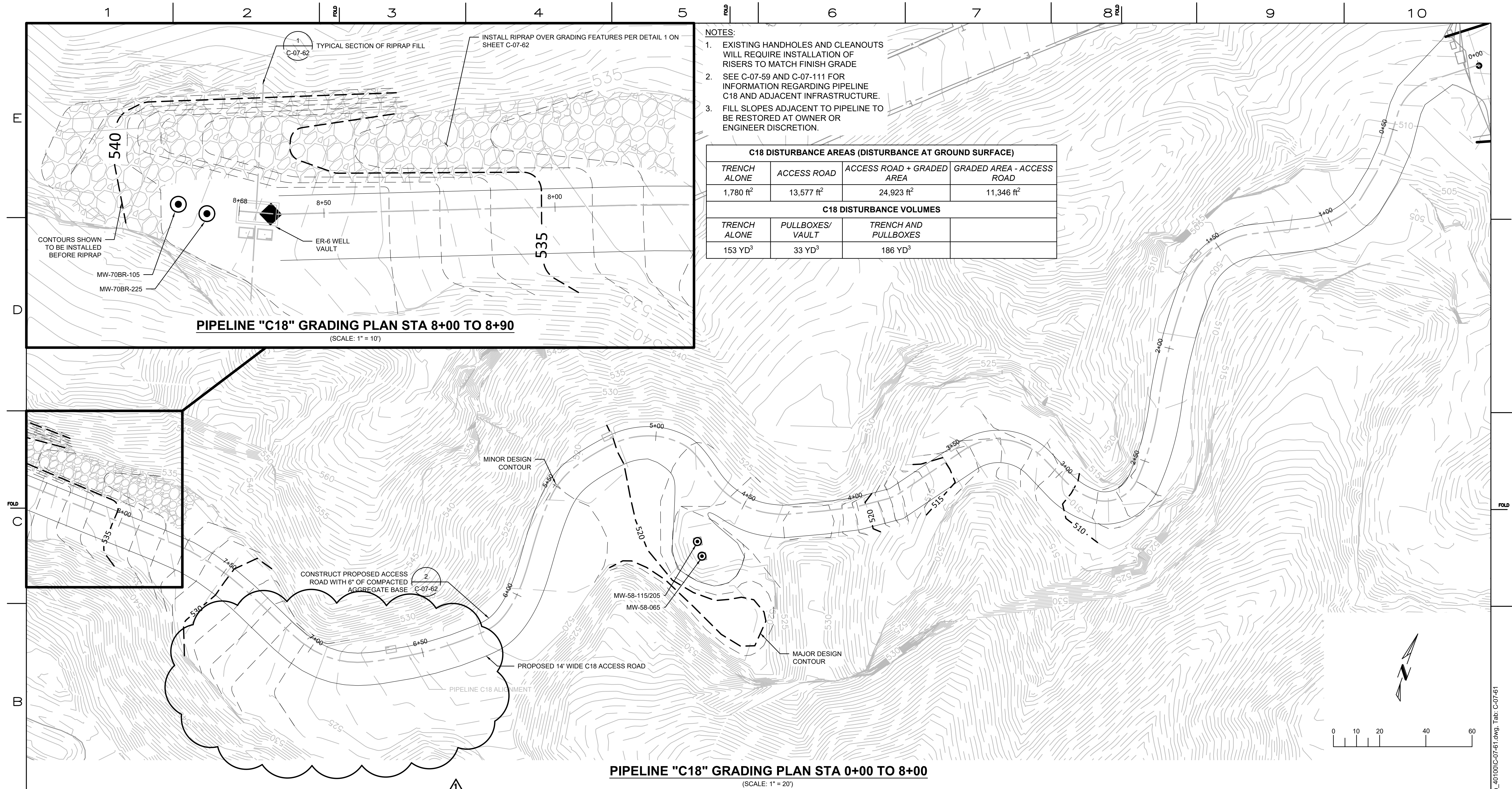
Date

VERONICA DICKERSON

Digitally signed by VERONICA DICKERSON
Date: 2025.05.16 15:02:44 -04'00'

Approving Agency

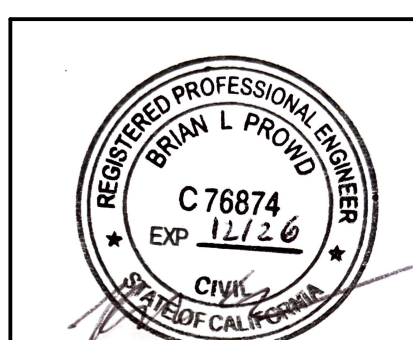
Date



C18 WEST (STA 7+25 TO 8+90) CUT/FILL REPORT		
CUT	FILL	NET
0 CU.YD.	434 CU.YD.	434 CU.YD.

C18 EAST (STA 2+50 TO 6+00) CUT/FILL REPORT		
CUT	FILL	NET
18 CU.YD.	339 CU.YD.	321 CU.YD.

ESTIMATED RIPRAP AND SURFACING FILL	
RIPRAP 198 CU.YD.	AGGREGATE BASE 245 CU.YD.



MICROFILM		
BILL OF MATL		
DWG LIST		
SUPSDS		
SUPSD BY		
SHEET NO.	of	SHEETS
C-07-61		REV 1

TOPOCK GROUNDWATER REMEDIATION PROJECT
PIPELINE - GRADING PLAN
PIPELINE "C18"
STA 0+00 TO 8+90
GAS TRANSMISSION & DISTRIBUTION
PACIFIC GAS AND ELECTRIC COMPANY
SAN FRANCISCO, CALIFORNIA

[illegible]

E

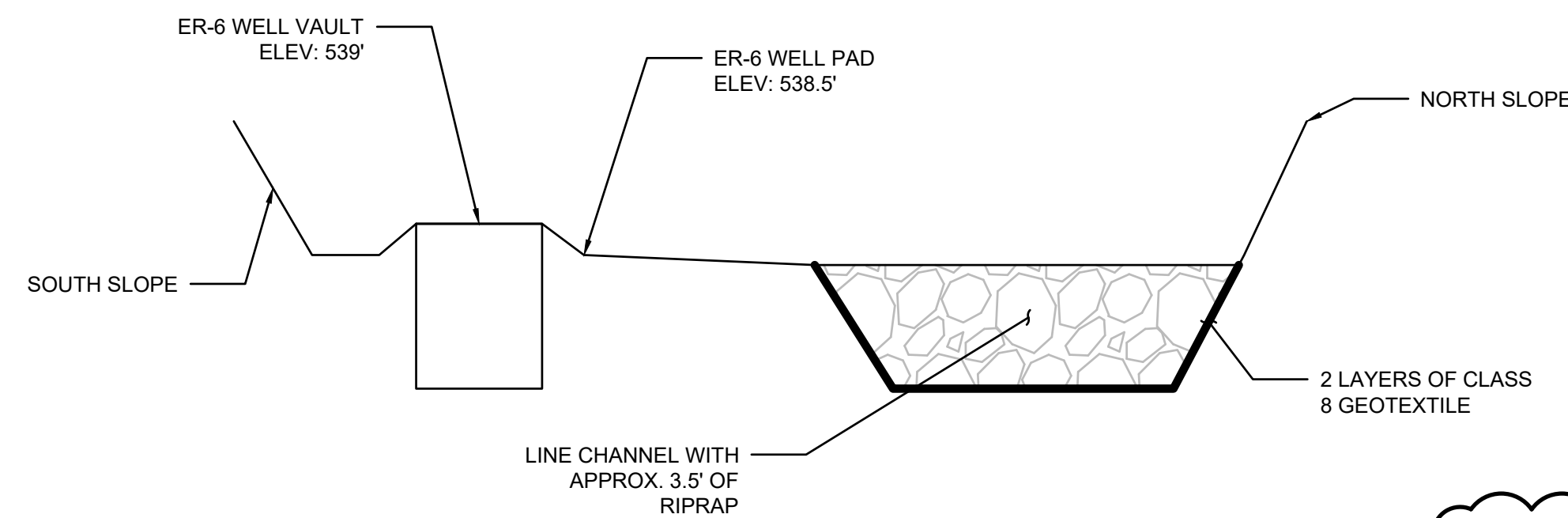
D

FOLD

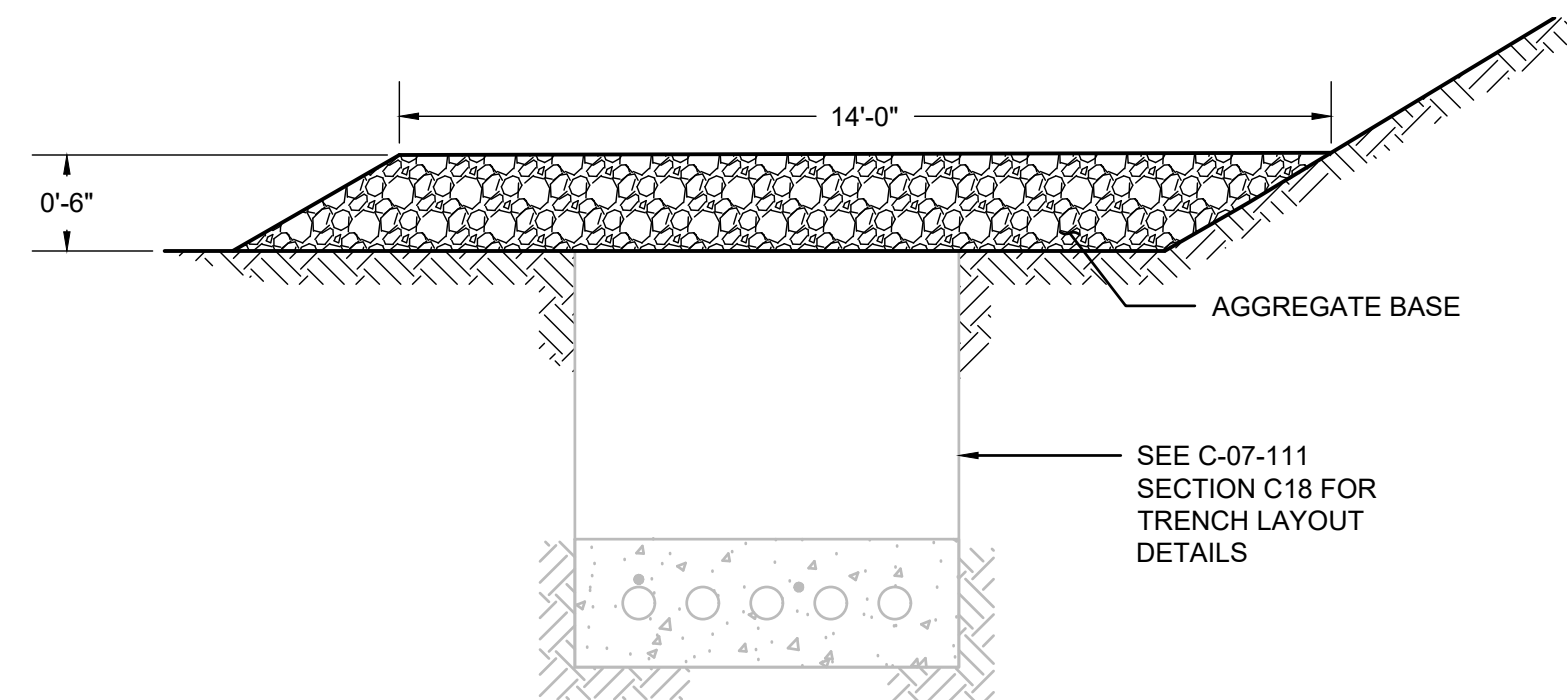
C

B

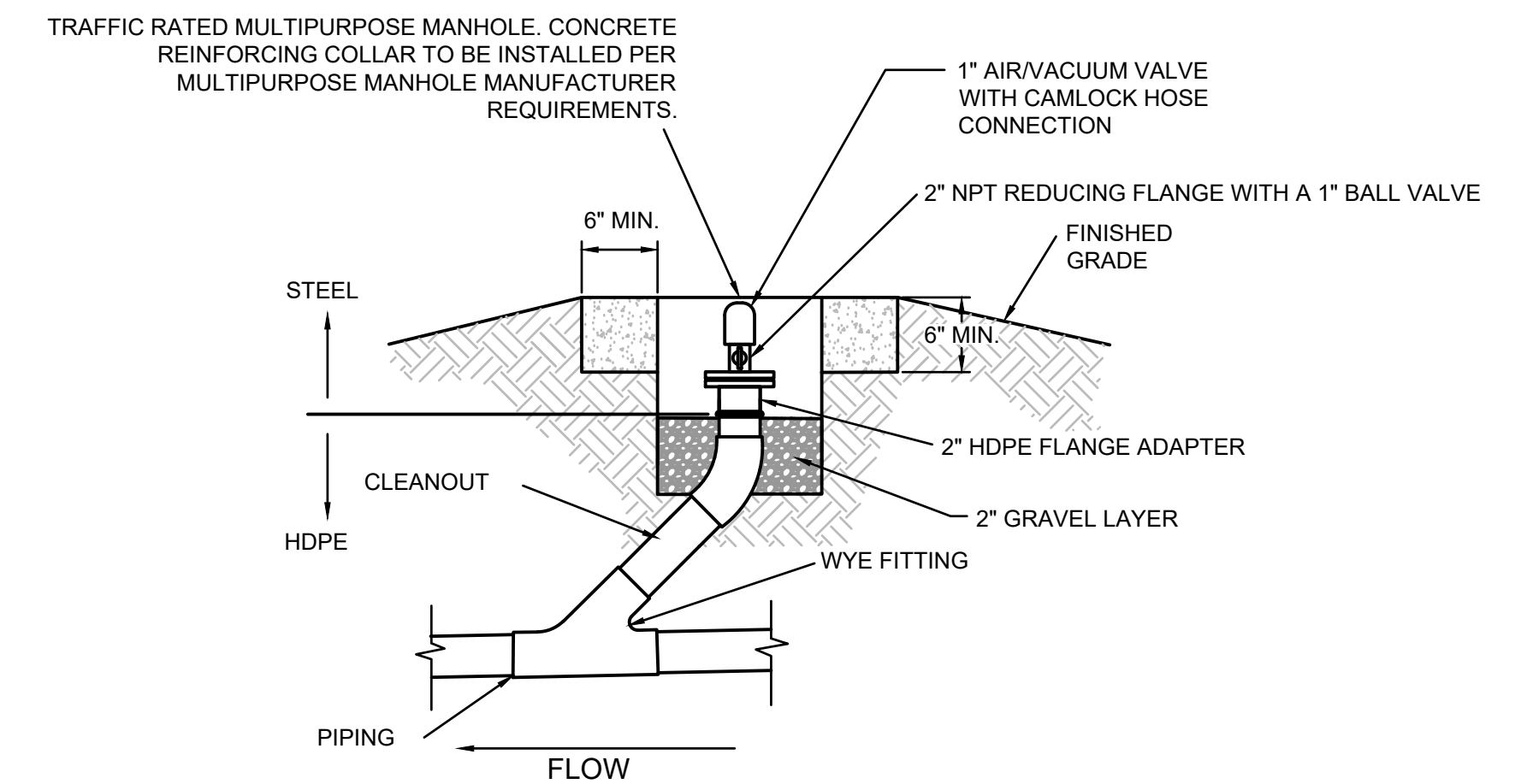
A



1 TYPICAL SECTION OF RIPRAP FILL
NOT TO SCALE
C-07-61



2 TYPICAL SECTION OF EAST RAVINE ACCESS ROAD
NOT TO SCALE
C-07-61



3 AIR/VACUUM VALVE DETAIL

NOT TO SCALE

C-07-59

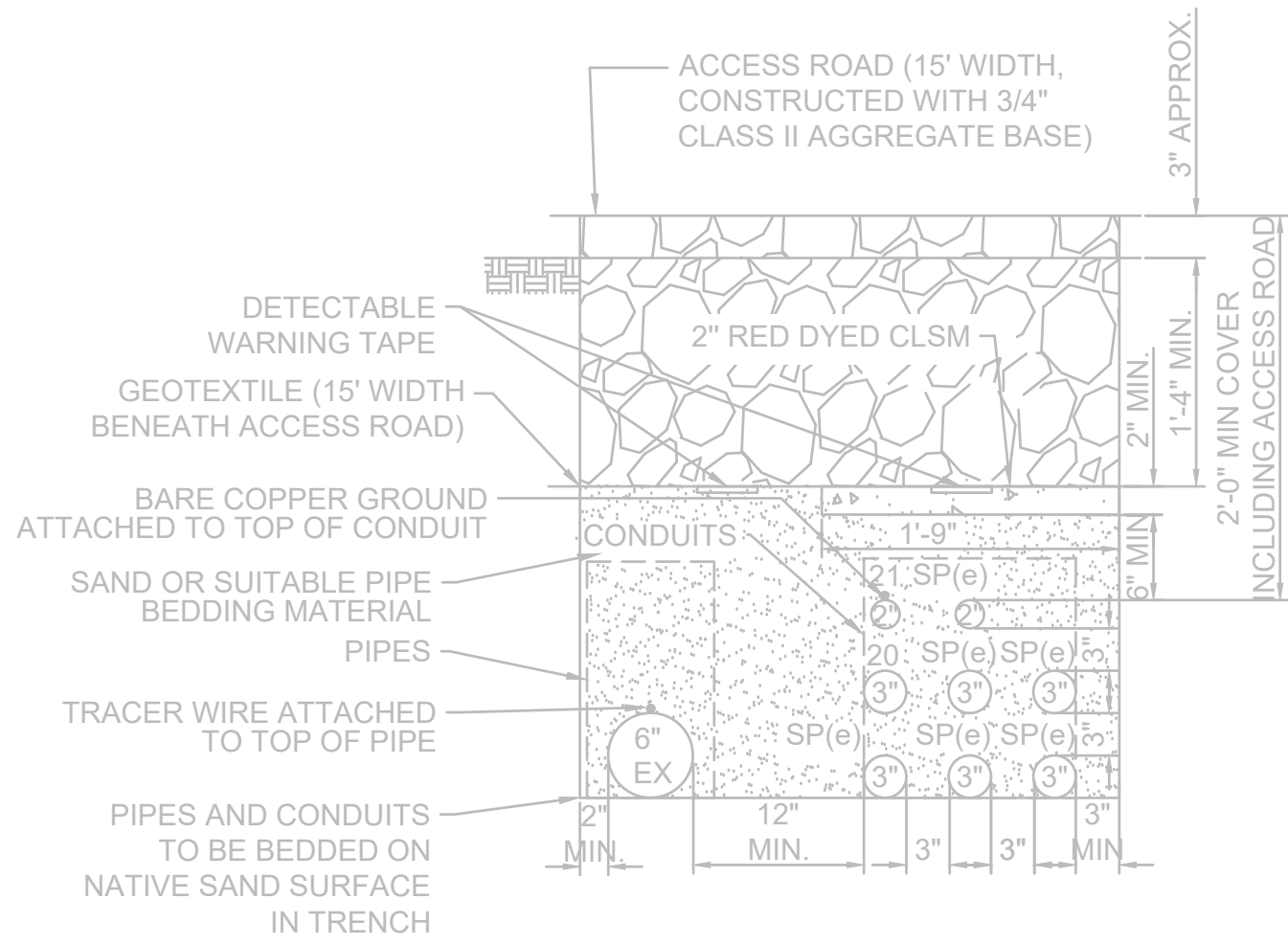
[illegible]

TOPOCK GROUNDWATER REMEDIATION PROJECT
PIPELINE - GRADING PROFILE
PIPELINE "C18"
STA 0+00 TO 8+68
GAS TRANSMISSION & DISTRIBUTION
PACIFIC GAS AND ELECTRIC COMPANY
SAN FRANCISCO, CALIFORNIA

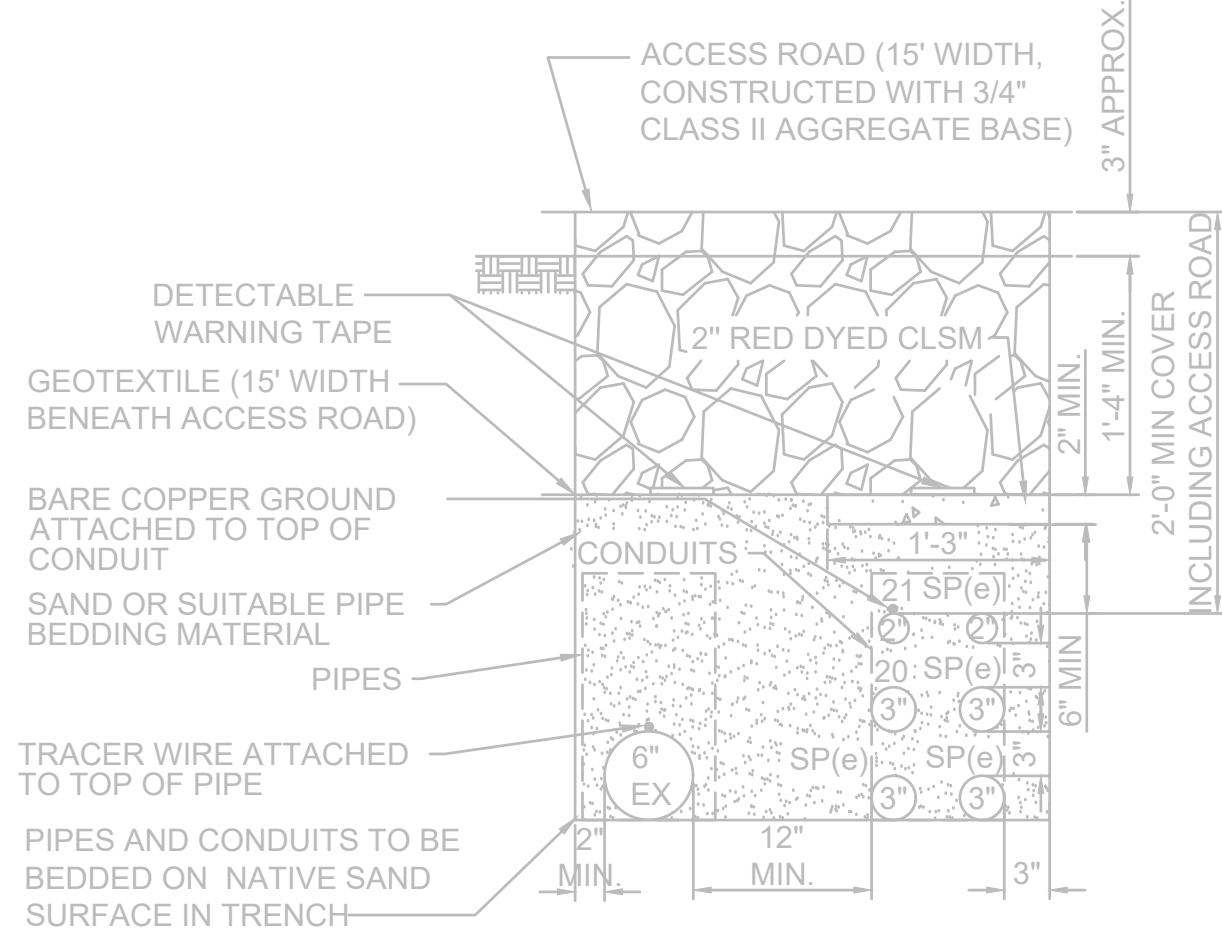


MICROFILM		
BILL OF MATL		
DWG LIST		
SUPSDS		
SUPSD BY		
SHEET NO.		SHEETS
C-07-62		REV 1

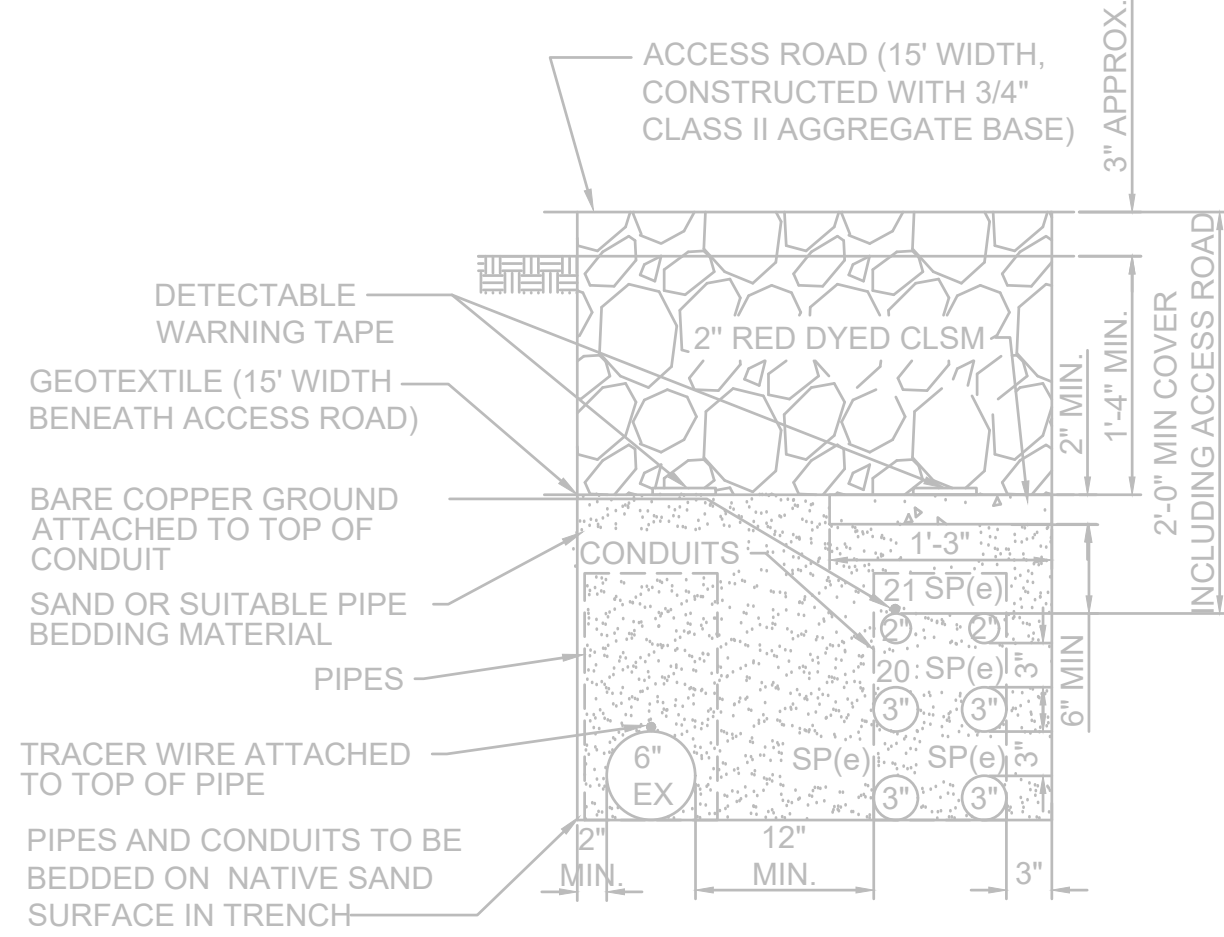
E
D
C
B
A



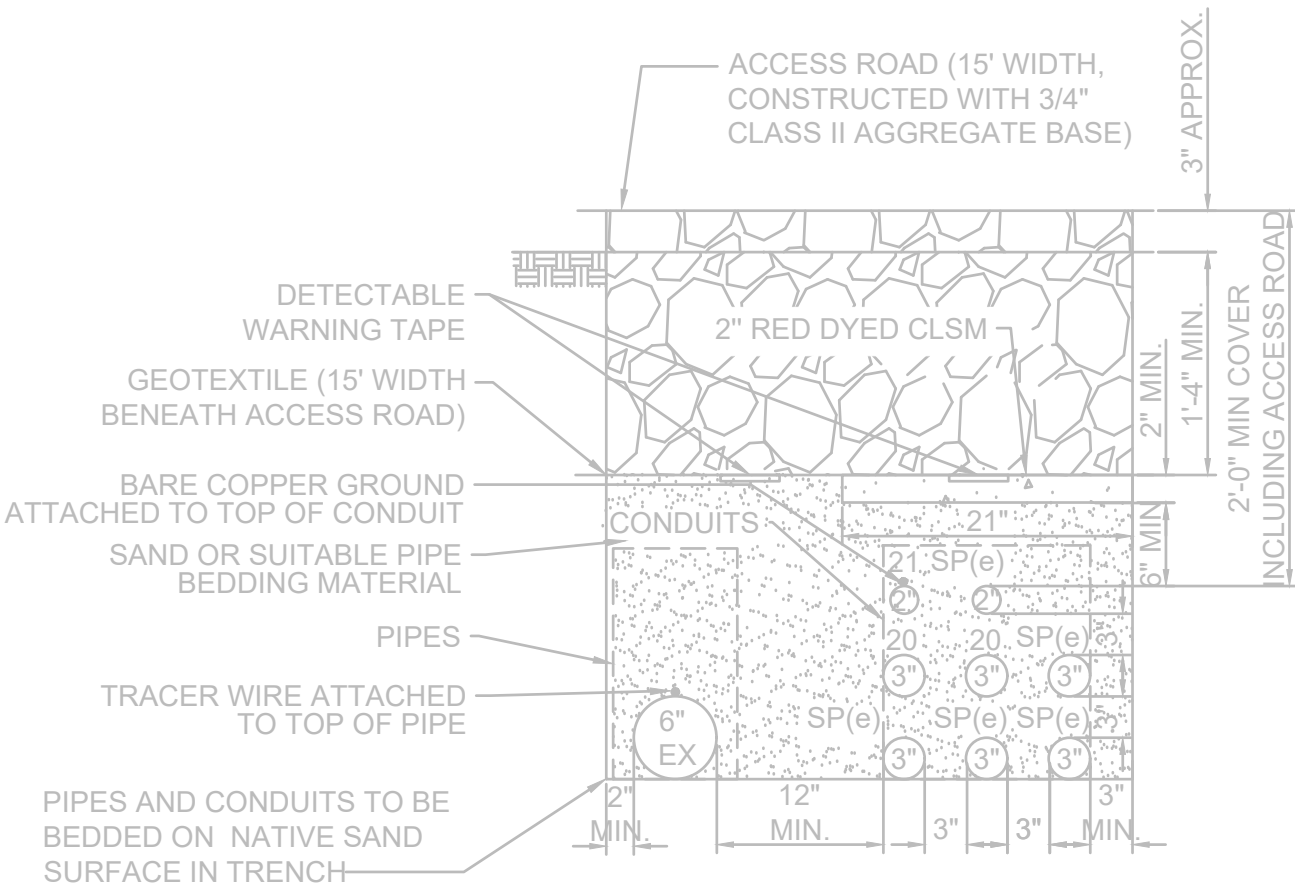
SECTION G5
1"=1'-0"
C-07-54,-55,-56,-57,-58



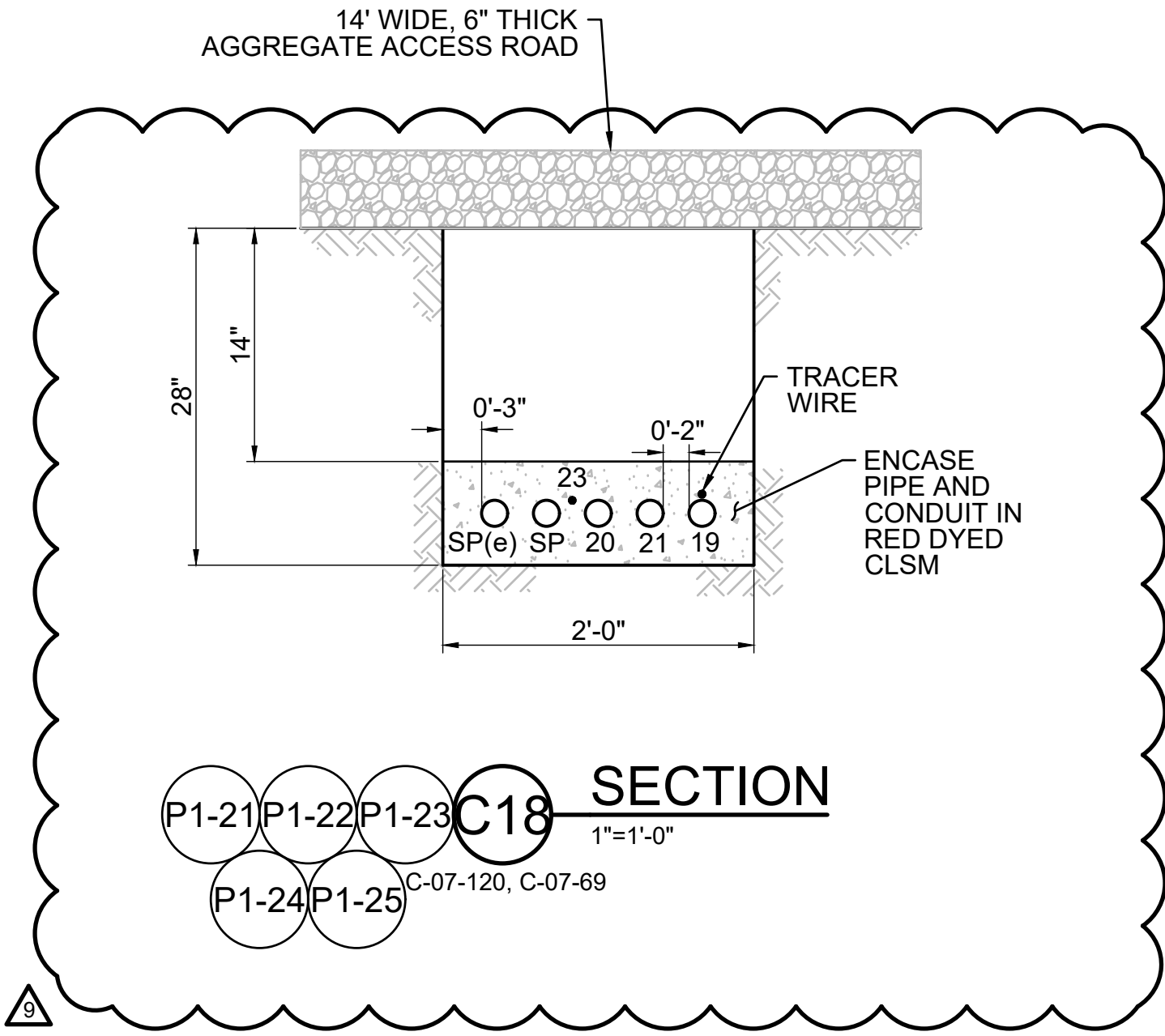
SECTION G4
1"=1'-0"
C-07-54,-55,-56,-57,-58



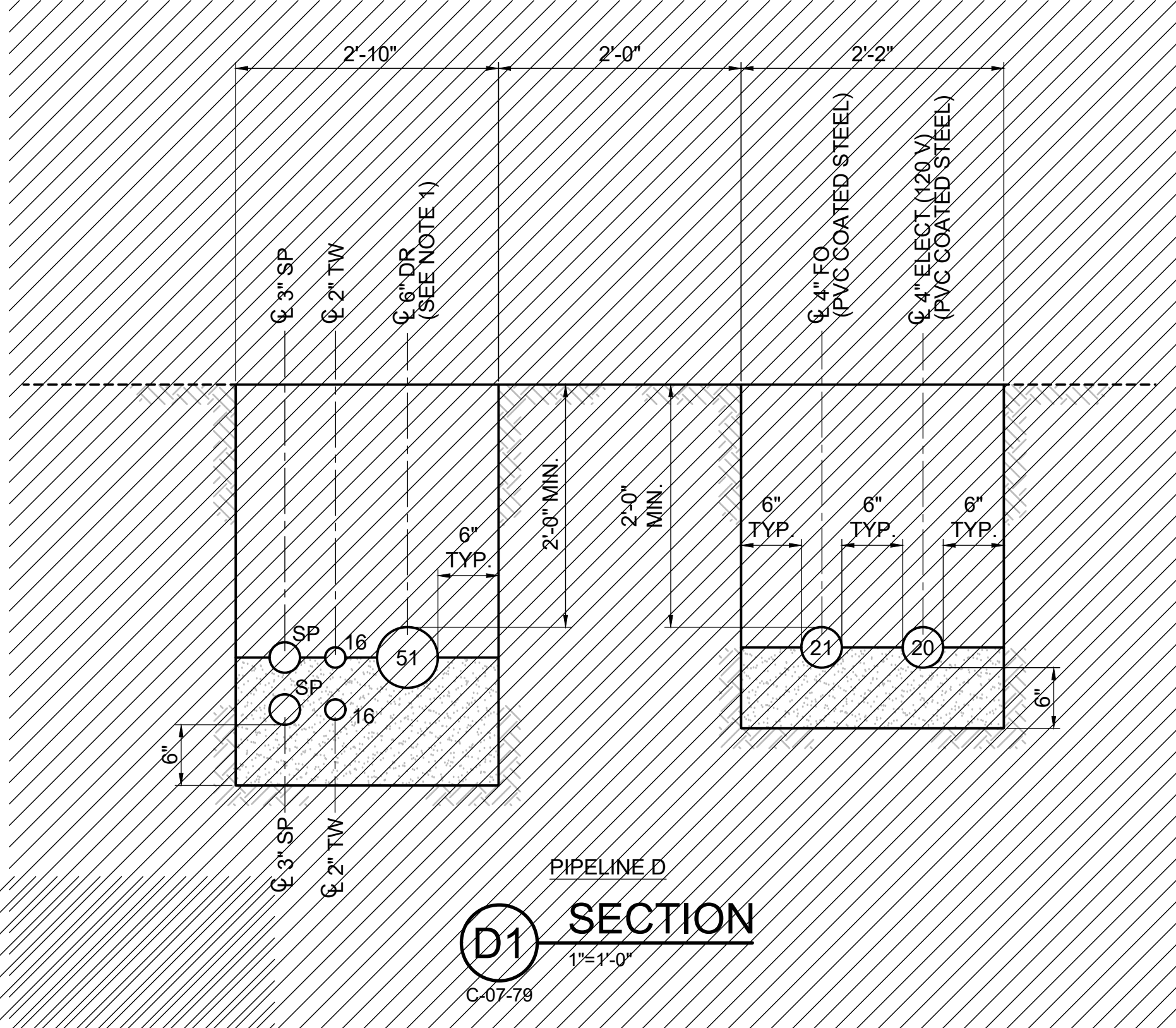
SECTION G3
1"=1'-0"
C-07-54,-55,-56,-57,-58



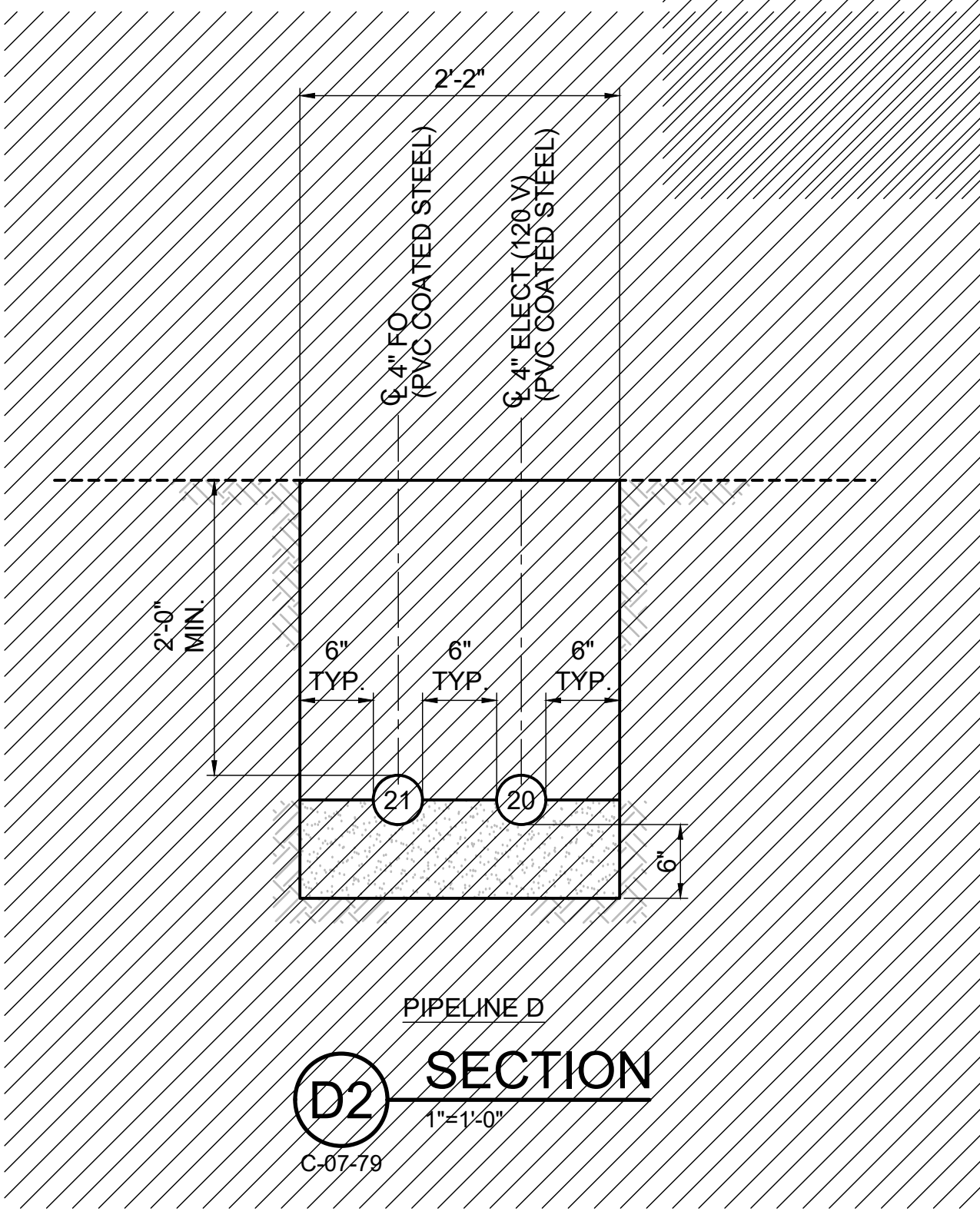
SECTION G6
1"=1'-0"
C-07-54,-55,-56,-57,-58



SECTION C18
1"=1'-0"
C-07-120, C-07-69



PIPELINE D SECTION D1
1"=1'-0"
C-07-79



PIPELINE D SECTION D2
1"=1'-0"
C-07-79

- NOTES:**
- PIPE SUPPORTS AND CLEANOUTS NOT SHOWN FOR CLARITY.
 - CASING SPACERS NOT SHOWN FOR CLARITY.
 - PIPE BEDDING SHALL EXTEND HALF WAY UP THE PIPES PER THE SPECIFICATIONS.
 - REFER TO DETAIL 1 ON C-07-102 FOR PIPE SPACING.

- ELECTRICAL NOTES:**
- SEE CONDUIT AND CABLE SCHEDULES AND SINGLE LINE DIAGRAMS ON SHEETS E-00-05 THRU E-00-13.
 - BEDDING SHALL EXTEND HALF WAY UP TOP CONDUIT PER THE SPECIFICATIONS.

LEGEND:
TO BE COMPLETED DURING FUTURE PHASE OF WORK.



REVISIONS						REVISIONS					
NO.	DATE	DESCRIPTION	GM/SPEC	DWN	CHKD	SUPV	APVD BY	NO.	DATE	DESCRIPTION	GM/SPEC
9	4/4/25	PHASE 2B ISSUED FOR CONSTRUCTION						5	10/29/21	PHASE 2A DESIGN IFB	
8	01/08/24	EAST RAVINE GRADING						4	12/11/18	ISSUED FOR CONSTRUCTION	
7	04/29/22	PHASE 2A DESIGN IFC						3	6/16/17	ISSUED FOR BID	
6	01/10/22	PHASE 2A DESIGN IFB - FINAL						2	11/18/15	FINAL DESIGN	
								1	9/8/14	PRE-FINAL (90%) DESIGN	
								0	4/5/13	INTERMEDIATE (60%) DESIGN	

APPROVED BY JPB	SO	
	SUPV	
	DSGN	
	DWN	
	CHKD	
	OK	
	DATE	
	SCALES	

TOPOCK GROUNDWATER REMEDIATION PROJECT

TRENCH SECTIONS

GAS TRANSMISSION & DISTRIBUTION
PACIFIC GAS AND ELECTRIC COMPANY
SAN FRANCISCO, CALIFORNIA

MICROFILM	
BILL OF MATL	
DWG LIST	
SUPSDS	
SUPSD BY	
SHEET NO.	of SHEETS
C-07-111	REV 9

Future Activity Allowance Determination Matrix for Work Variance Request (WVR)

Work Variance Request No. 14

Date: 4/15/25

Future Activity Allowance is an activity that is not considered in the remedy design but necessary to support the project objectives. Future Activity Allowance is a Material Deviation which is defined in the final groundwater remedy design as: Material Deviation means a change or correction required to prevent a condition that would (1) render the approved design non-compliant with codes, regulations, and /or engineering standard of practices, (2) render planned well locations and/or constructions fail to meet the project objectives, (3) cause significant schedule delay, and/or (4) cause a significant increase in costs. (CH2M Hill, 2015)

According to the SEIR Project Description, "The inclusion of the Future Activity Allowance is not intended to account for minor adjustments (work variances) of the remedy design during construction resulting from field conditions. DTSC's objective for the inclusion of the Future Activity Allowance is to consider the potential impacts of needing to take additional but previously unforeseen activities that were not contemplated as part of the Final Remedy Design but are activities that would improve the performance of the remedy, or are necessary to gather additional information on the remedy performance, and/or aid in the transition of the active remedy to monitored natural attenuation." (ESA, 2017)

1. Are all components of the WVR in the approved final design as reviewed in the SEIR?

☒ Yes ☐ No

2. Are all components of the WVR staying within an infrastructure alignment in the approved final design?

☐ Yes ☒ No However, all components of the WVR are within the revised pipeline C18 alignment approved by DTSC and DOI in WVR #10

If answers to both 1 and 2 are Yes, STOP – action is not Future Activity Allowance

3. For components not in approved final design, will the WVR require new access not identified for use in the final design and create new ground disturbance beyond those anticipated in final design?

☐ Yes ☒ No

If answer is No, STOP – action is not Future Activity Allowance. If Yes, proceed...

4. For components not in approved final design and require new access or new ground disturbance, will the ground disturbing activity be outside the 2018 SEIR project boundary?

☐ Yes ☐ No

If answer is Yes, STOP – action is subject to additional CEQA evaluation. WVR approval will be considered after DTSC completes CEQA determination.

5. For WVR requiring new access and/or new ground disturbance, but project components are in approved final design and within the 2018 SEIR project boundary, is the variance necessitated by field conditions which are outside the control of the operator (e.g., refusal during drilling, unstable ground, existing design jeopardizes health and safety, modification to avoid archaeological resource, existing design does not conform to engineering standards, etc.)?

☐ Yes ☐ No

Future Activity Allowance Determination Matrix

WVR No. 14

If answer is No or otherwise explained in Section 7 below, action is Future Activity Allowance, follow Communication Protocol for Future Activities Allowance, Exhibit 3 to the Statement of Decision and Resolution of Approval. If the answer is Yes, action is Future Activity Allowance, and DTSC will work with Tribes to meet the time sensitivity of the WVR. Regardless of response, because of new access and/or new ground disturbance, WVR action may be subject to Federal Consultation. Inquire with BLM to determine whether there is a need to follow Consultation during Construction protocol.

6. Does the addition of WVR cause an exceedance from infrastructure limits specified in the 2018 certified Final SEIR (Table 3-1 for well boreholes; Table 3-2 for pipeline trenches, electrical/communication conduit, roadway improvements, or sizes of buildings and structures; Table 3-4 for volume of soil disturbance and Table 3-5 for water usage)?

☐ Yes ☐ No

If answer is Yes, STOP – action is subject to additional CEQA evaluation. WVR approval will be considered after DTSC completes a CEQA checklist to determine if there are new or substantially more significant environmental impacts than disclosed in the 2018 SEIR.

7. Other extenuating circumstances or information for FAA considerations: ☐ No

☐ Yes – provide information and/or justification

Conclusion: WVR No. 14

☒ is not a FAA ☐ is a FAA

Signature of DTSC reviewer: Christopher Ioan

Date: 5/9/2025

Future Activity Allowance Determination Matrix
WVR No. 14

Future Activity Allowance Determination Matrix
WVR No. 14