

# SALT LAKE CITY CORPORATION

## THE DEPARTMENT OF PUBLIC UTILITIES

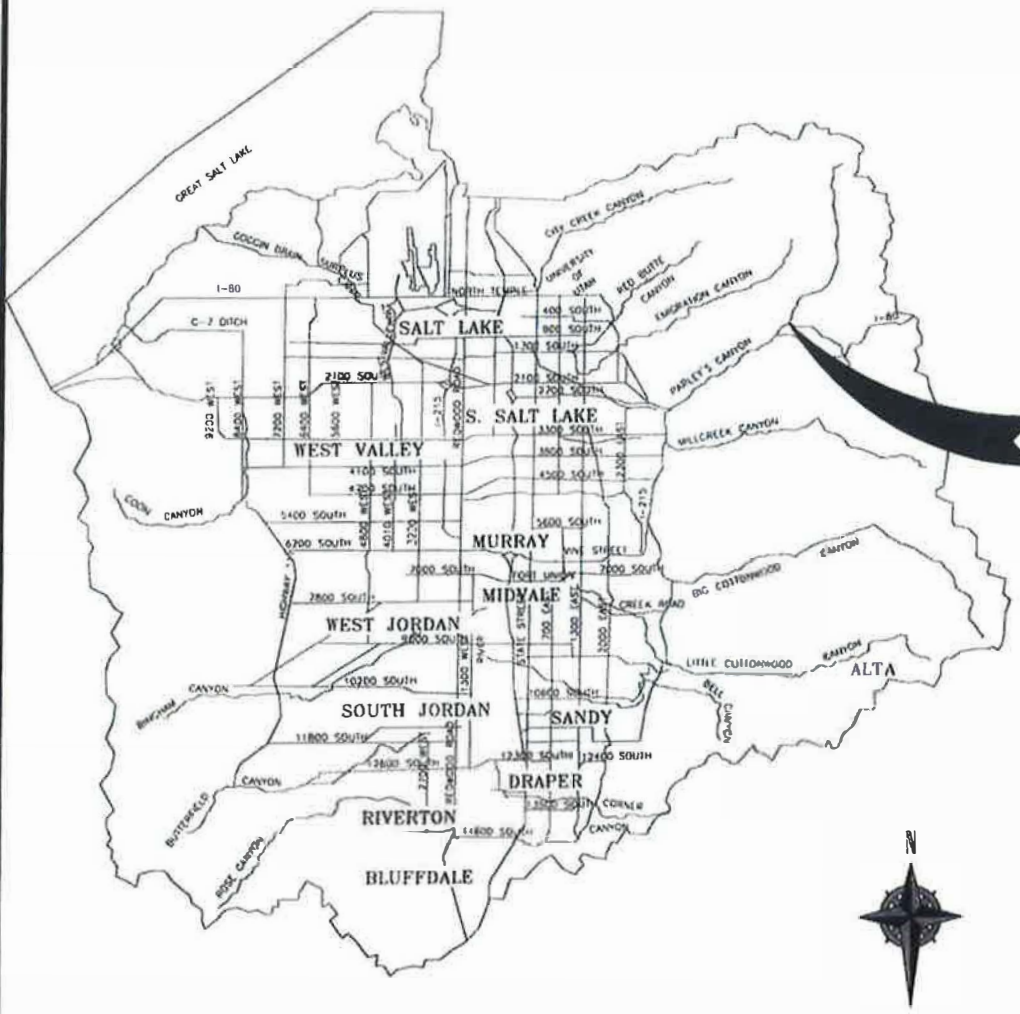
Vicinity MAP

DRAWINGS FOR CONSTRUCTION OF  
MOUNTAIN DELL DAM – REHABILITATION OF OUTLET WORKS

PROJECT NO. 512700027  
FISCAL YEAR 2020-2021

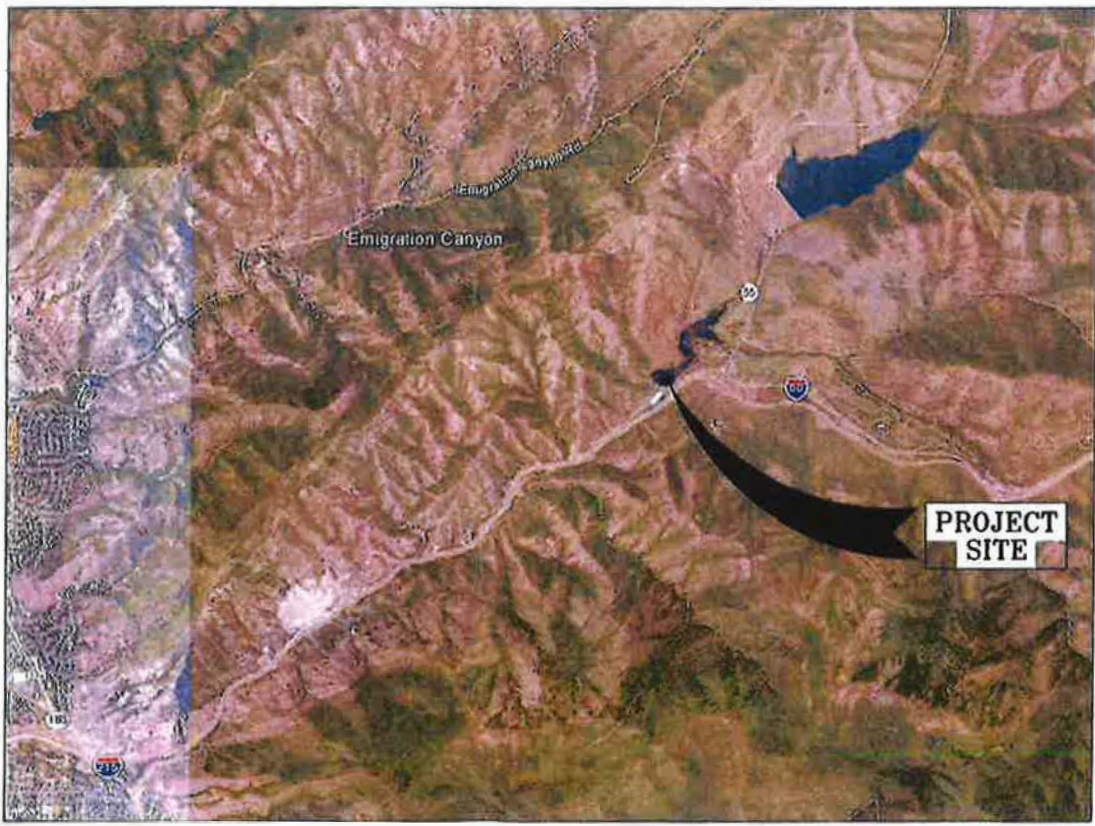


# Public Utilities



PROJECT VICINITY MAP

PROJECT  
LOCATION



PROJECT LOCATION

ERIN MENDENHALL – MAYOR

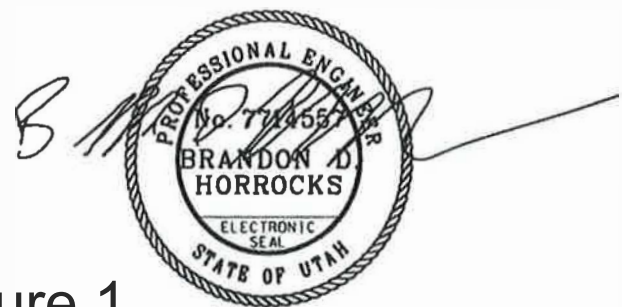
CITY COUNCIL

JAMES ROGERS  
ANDREW JOHNSTON  
CHRIS WHARTON  
AMY FOWLER

ANA VALDEMOROS  
DARIN MANO  
DAN DUGAN

APPROVED  
  
LAURA BRIEFER  
DIRECTOR OF PUBLIC UTILITIES

APPROVED  
  
JASON BROWN, P.E.  
CHIEF ENGINEER



Enclosure 1

05/03/2021  
DESIGNED BY

BRANDON D. HORROCKS, P.E.  
DESIGN ENGINEER



4

Spillway  
High  
eluv.  
Water  
5504.9  
mark

spillway →

Mr Dell DAM

2-40

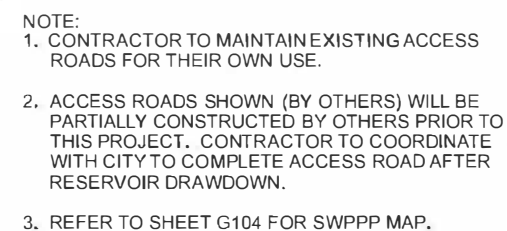




## Pre-Conditions Map





[illegible]



Block 18  
Block 21

NOTE:  
1. CONTRACTOR TO MAINTAIN EXISTING ACCESS ROADS FOR THEIR OWN USE.  
2. ACCESS ROADS SHOWN (BY OTHERS) WILL BE PARTIALLY CONSTRUCTED BY OTHERS PRIOR TO THIS PROJECT. CONTRACTOR TO COORDINATE WITH CITY TO COMPLETE ACCESS ROAD AFTER RESERVOIR DRAWDOWN.  
3. REFER TO SHEET G104 FOR SWPPP MAP.

BORROW AREA A ACCESS ROAD (BY OTHERS)  
EXISTING SILT FENCE  
ACCESS ROAD (BY OTHERS)  
STOCK PILE  
BORROW AREA B ACCESS ROAD SEE SHEET AR101  
BORROW AREAS SEE SHEET DW103  
MOUNTAIN DELL RESERVOIR  
EXCAVATED MATERIAL DISPOSAL AREA  
38,000 CY MAXIMUM VOLUME  
3' below 20' datum MAX. HEIGHT  
DEWATERING SEE SHEET DW101

TP 01, TP 02, TP 03, TP 04, TP 05, TP 06, TP 07, TP 08, TP 09, TP 10, TP 11, TP 12, TP 13, TP 14, TP 15, TP 16, TP 17, TP 18, TP 19, TP 20, TP 21, TP 22, TP 23, TP 24

AT-1  
N=7442275.634  
E=1578871.780  
EL=5523.55  
OUTLET WORKS SEE SHEET P100  
STILLING BASIN  
EXISTING CHLORINATION BUILDING  
WATER TREATMENT PLANT  
EXISTING ENERGY DISSIPATION STRUCTURE  
AT-12  
N=7441990.591  
E=1579114.163  
EL=5411.56  
AT-11  
N=7442570.393  
E=1579768.621  
EL=5516.79  
MON-J01  
N=7442304.530  
E=1578802.456  
EL=5547.39

SCALE IN FEET

0 100 200 300 400  
SCALE IN FEET

SALT LAKE CITY DEPARTMENT OF PUBLIC UTILITIES

MOUNTAIN DELL DAM - REHABILITATION OF OUTLET WORKS

**PROJECT SITE PLAN**

**AND SURVEY CONTROL**



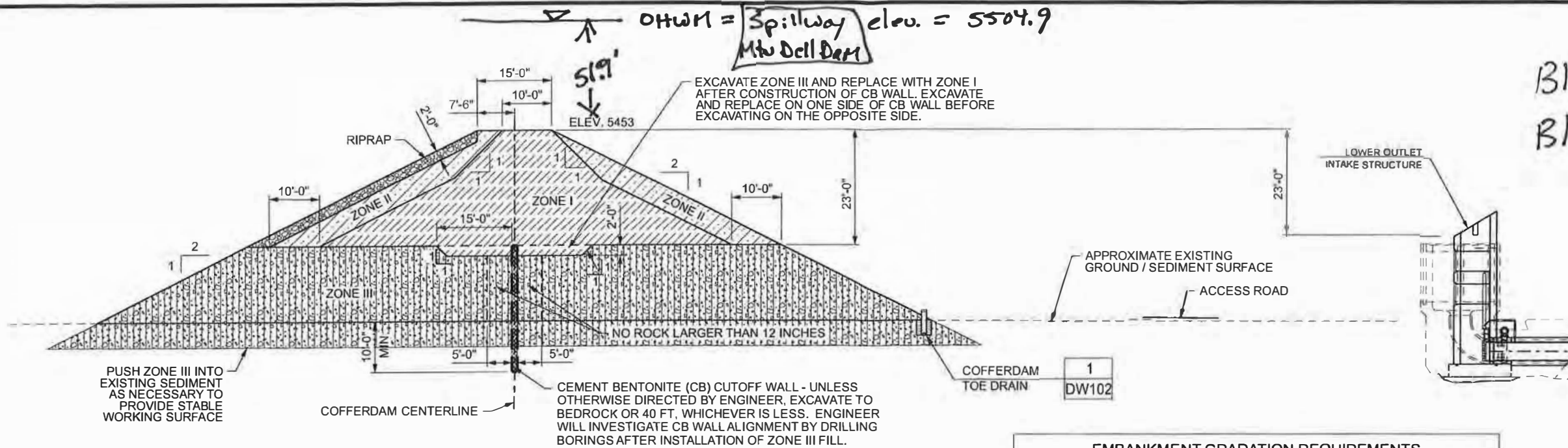

DRAWING NO. **G103**

SHEET 4 OF 66

DATE: \_\_\_\_\_

SCALE: \_\_\_\_\_



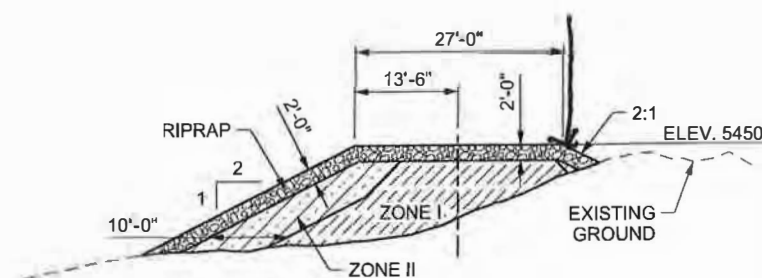


NOTE:  
OWNER TO LOWER RESERVOIR TO AT LEAST EL. 5428.0 PRIOR  
TO CONSTRUCTION OF COFFER DAM

SECTION A  
COFFERDAM  
DW101

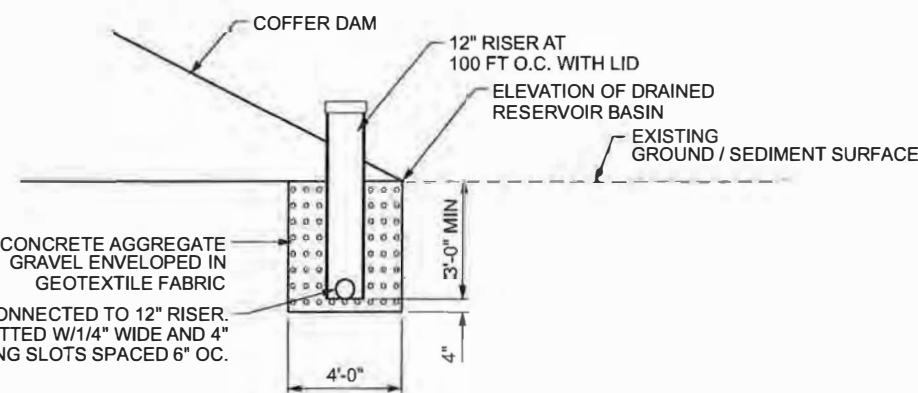
| EMBANKMENT GRADATION REQUIREMENTS |                 |                            |                 |
|-----------------------------------|-----------------|----------------------------|-----------------|
| ZONE I                            |                 | ZONE II                    |                 |
| SIEVE SIZE                        | PERCENT PASSING | SIEVE SIZE                 | PERCENT PASSING |
| 2"                                | 100             | 6"                         | 100             |
| #4                                | 70 - 100        | #4                         | 10 - 60         |
| #200                              | 25 - 90         | #200                       | 0 - 30          |
| 6 ≤ PI ≤ 20                       | LL < 50         |                            |                 |
| ZONE III                          |                 | RIPRAP GRADATION           |                 |
| SIEVE SIZE                        | PERCENT PASSING | SIEVE SIZE                 | PERCENT PASSING |
| 24"                               | 100             |                            |                 |
| #200                              | 0 - 30          |                            |                 |
|                                   |                 | see specification 31 37 00 |                 |

- NOTES:
1. ZONE III QUANTITY ESTIMATE ASSUMES 5 FT OF MATERIAL WILL BE INSTALLED TO STABILIZE EXISTING SEDIMENTS.
  2. CONTRACTOR TO PUMP WATER FROM TOE DRAIN CONTINUALLY WHEN WATER LEVEL ON DOWNSTREAM SIDE OF COFFER DAM IS LOW ENOUGH FOR ACCESS TO TOE DRAIN.
  3. CEMENT BENTONITE (CB) WALL TO BE 2 - 3 FEET WIDE UNLESS OTHERWISE APPROVED BY ENGINEER.



SECTION B  
COFFERDAM  
DW101

(Spillway  
Cofferdam)



COFFERDAM TOE DRAIN 1  
DW101

Block 21  
Block 18

SALT LAKE CITY DEPARTMENT OF PUBLIC UTILITIES  
MOUNTAIN DELL DAM - REHABILITATION OF OUTLET WORKS

DEWATERING SECTIONS

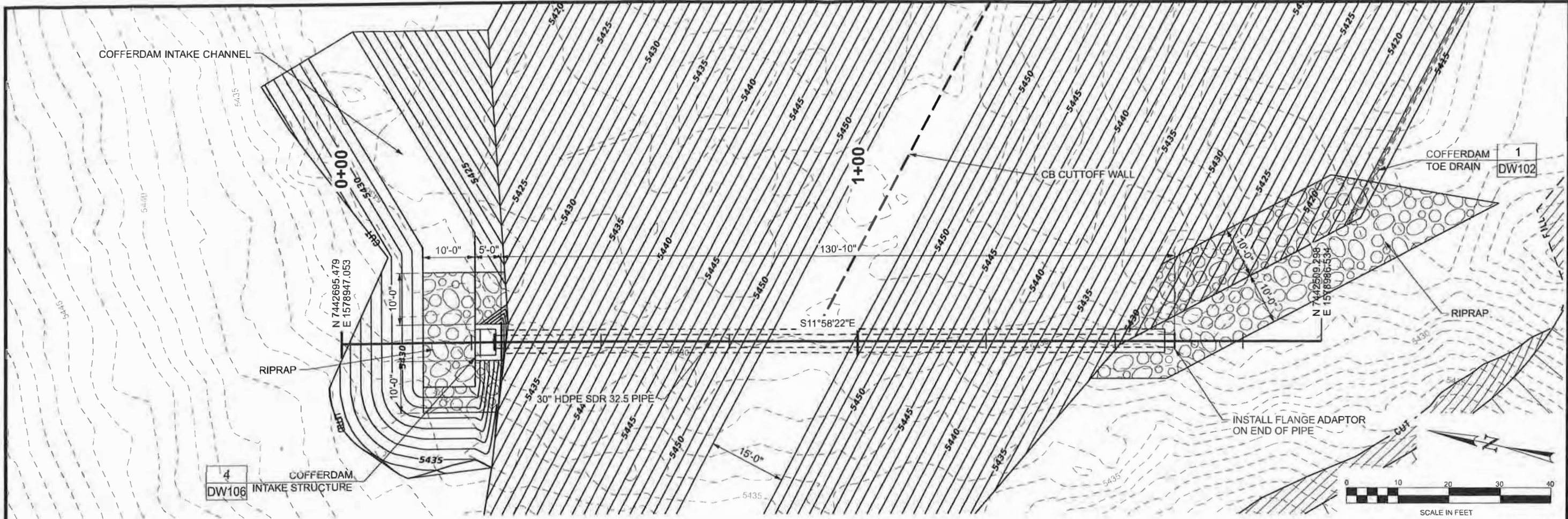


DRAWING NO.

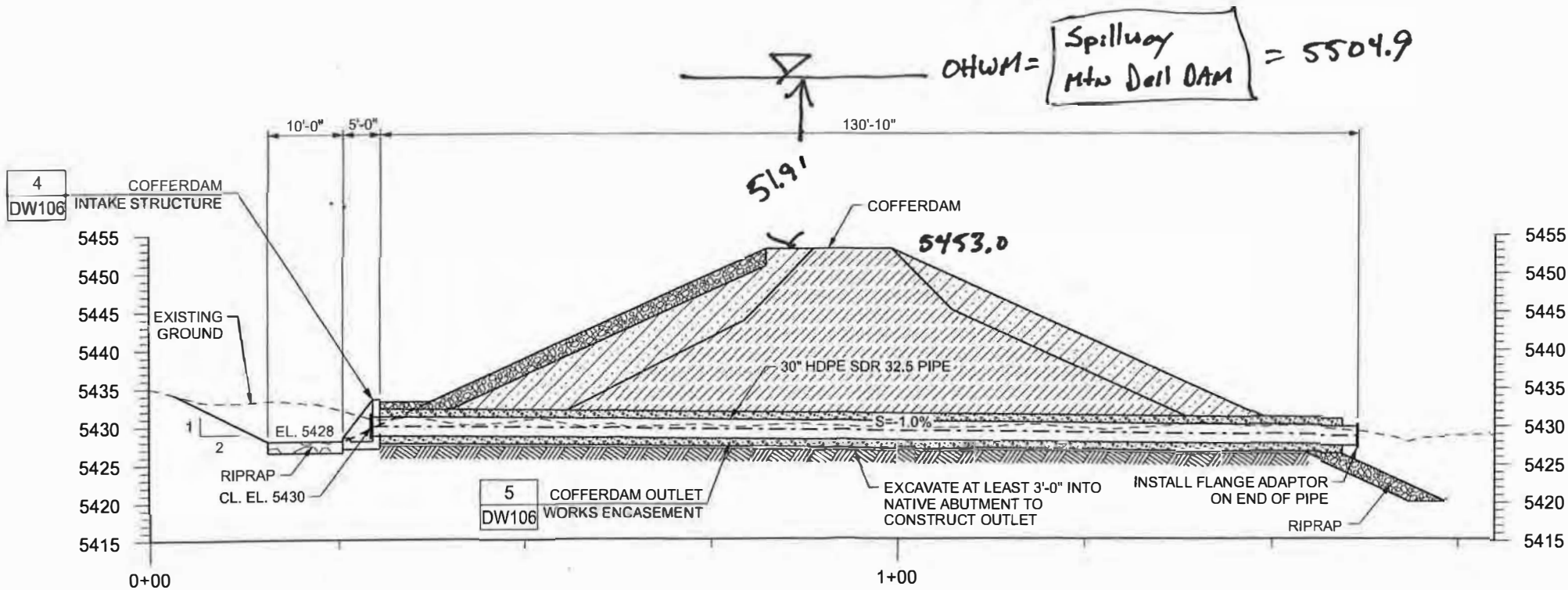
DW102

SHEET 8 OF 66





COFFERDAM OUTLET WORKS PLAN 3  
DW101



COFFERDAM OUTLET WORKS PROFILE

DESIGNED BY: M. HARRIS

DRAWN BY: J. RUSBY

CHECKED BY: B. HORROCKS

APPROVED BY: X XXXXX

DATE: 30-APR-2021

EWO NO: XXXX

ACCOUNT NO: XXXX

SCALE: 1\"/>

REVISIONS

| NO. | DATE | BY | DESCRIPTION |
|-----|------|----|-------------|
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|     |      |    |             |

SALT LAKE CITY DEPARTMENT OF PUBLIC UTILITIES

MOUNTAIN DELL DAM - REHABILITATION OF OUTLET WORKS

**COFFERDAM OUTLET**

30-APR-2021

DGN FILE: C:\MSWML\Gis\2018\1-218\1-218\_3\DW101.dwg

PROFESSIONAL ENGINEER

BRANDON D. HORROCKS

STATE OF UTAH

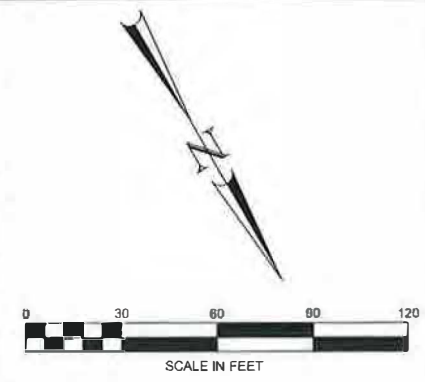
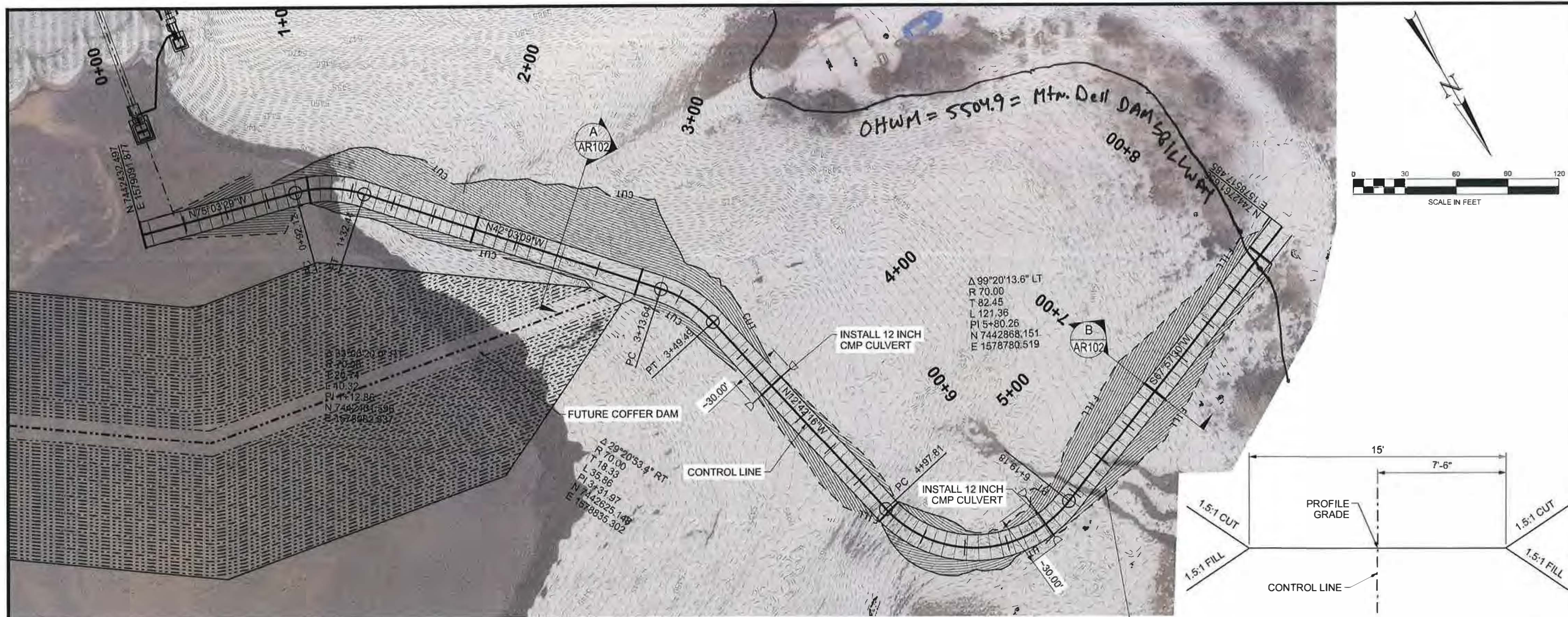
05/03/2021

DRAWING NO: DW105

SHEET 11 OF 66

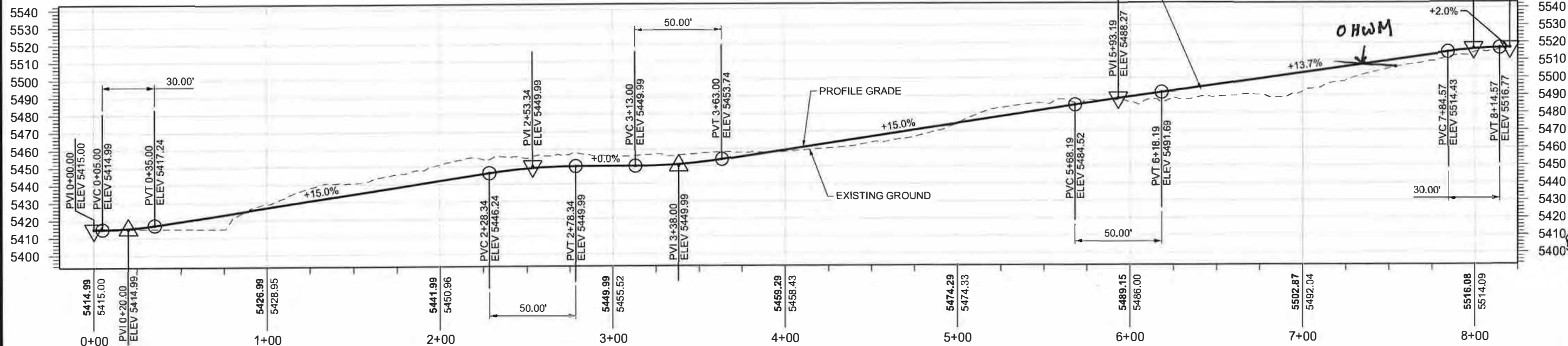
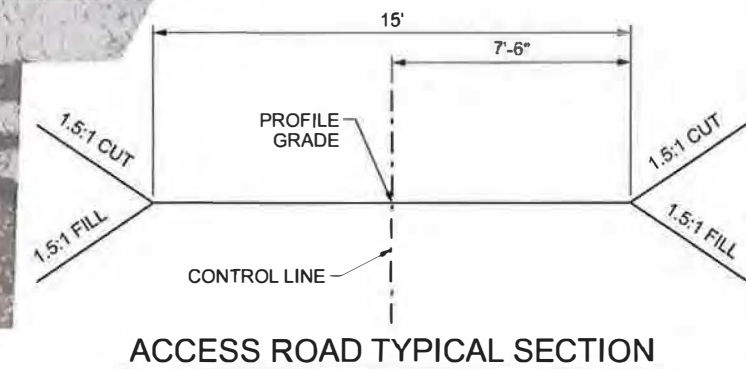


11-JUN-2020  
DON FILE C:\DMSM\Draw\201801-018\Task 3\Access Road Plans\201801-018\_AR101.dgn



- NOTE:
1. CONSTRUCT ACCESS ROAD FROM THE TOP OF THE ROAD TO THE RESERVOIR WATER SURFACE ELEVATION. DEMOBILIZE AND REMOBILIZE AS APPROVED BY THE ENGINEER TO COMPLETE THE ACCESS ROAD CONSTRUCTION AFTER THE RESERVOIR IS DRAINED.
  2. CONSTRUCTION OF LOWER PORTION OF ACCESS ROAD WILL LIKELY REQUIRE STABILIZATION OF EXISTING SEDIMENTS. CONTRACTOR SHALL COUNT LOADS OF FILL REQUIRED FOR STABILIZATION. NATIVE EARTH FILL QUANTITY FOR STABILIZATION SHALL BE PAID BASED ON QUANTITY AGREED UPON BY ENGINEER AND CONTRACTOR.

MODIFY PROFILE GRADE  
AS NEEDED TO KEEP AT  
LEAST 2FT. OF FILL OVER WET AREAS



| DESIGNED BY: |  | CL. COOK    |  |
|--------------|--|-------------|--|
| DRAWN BY:    |  | J. RUSBY    |  |
| CHECKED BY:  |  | B. HORROCKS |  |
| APPROVED BY: |  | XXXXXX      |  |
| DATE:        |  | 11-JUN-2020 |  |
| EWO NO:      |  | XXXX        |  |
| ACCOUNT NO:  |  | XXXX        |  |

SCALE: \_\_\_\_\_

VERIFY SCALE  
BAR IS 1/2" INCH ON  
ORIGINAL DRAWING

REVISIONS

| NO. | DATE | BY | DESCRIPTION |
|-----|------|----|-------------|
|     |      |    |             |
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|     |      |    |             |

SALT LAKE CITY DEPARTMENT OF PUBLIC UTILITIES  
MOUNTAIN DELL OUTLET  
OUTLET REHABILITATION - ACCESS ROAD  
ACCESS ROAD PLAN AND PROFILE

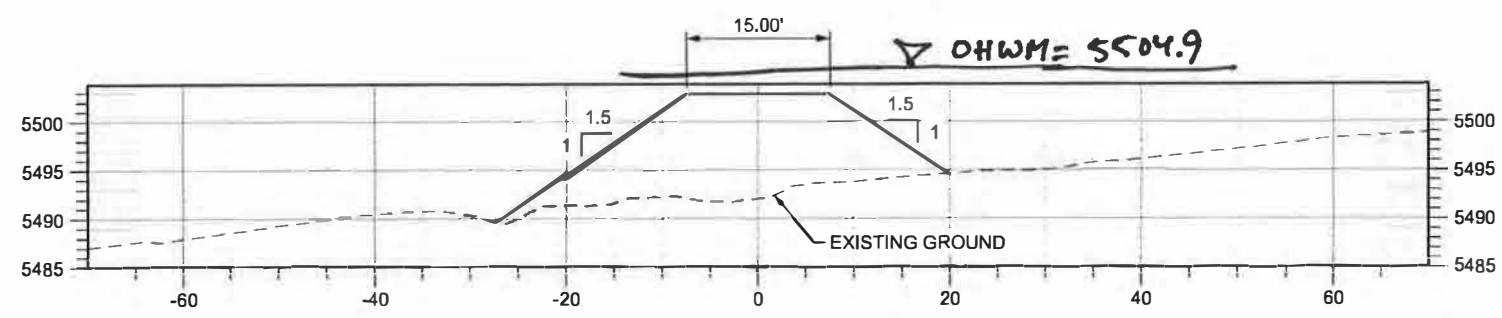
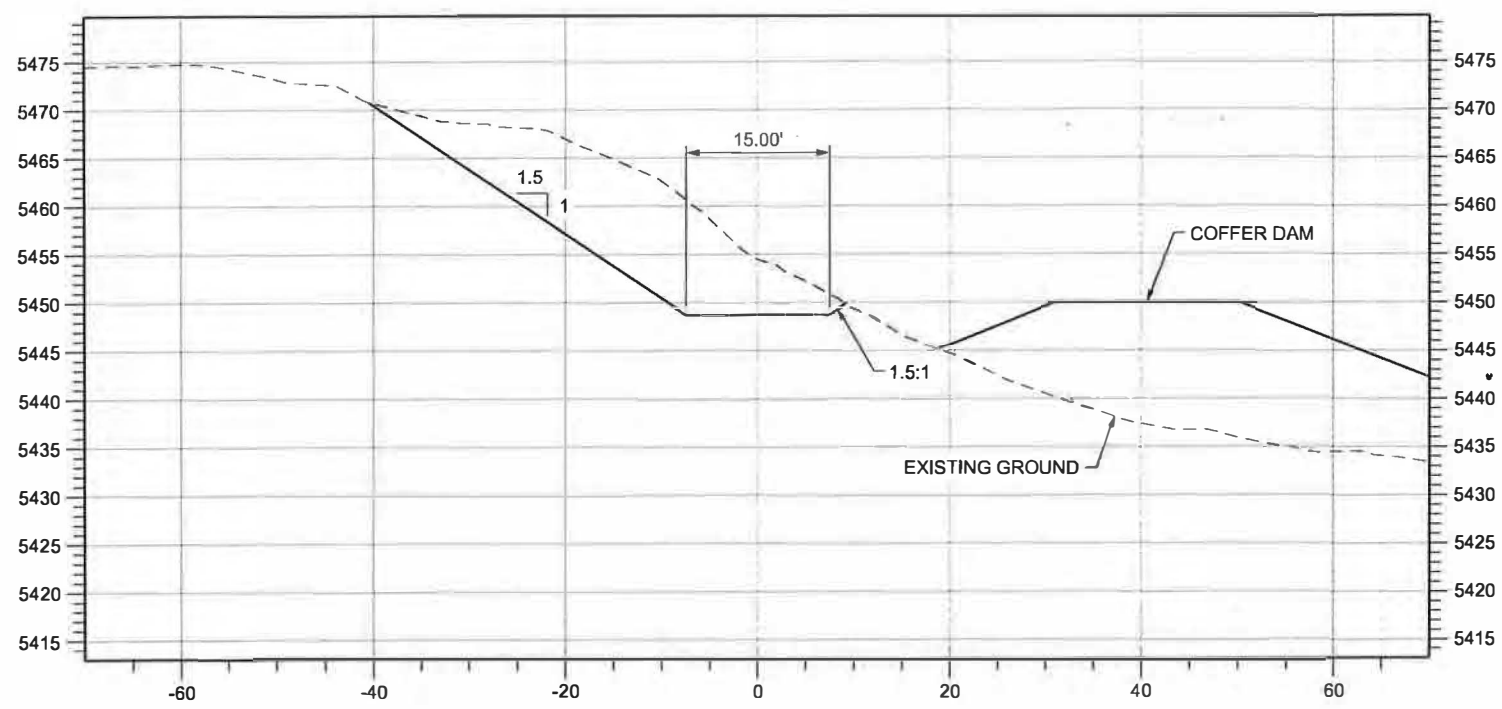
PROFESSIONAL ENGINEER  
BRANDON D. HORROCKS  
STATE OF UTAH  
06/11/2020

DRAWING NO.  
**AR101**

SHEET 5 OF 6



▽ OHWM = 5504.9 = Mtn Dell DAM Spillway



SCALE:  
VERIFY SCALE  
BAR IS 1/2 INCH ON ORIGINAL DRAWING

DESIGNED BY: C.L. CODE  
DRAWN BY: J. RUSBY  
CHECKED BY: B. HORROCKS  
APPROVED BY: XXXXXX  
DATE: 11-JUN-2020  
EWO NO: XXX  
ACCOUNT NO: XXX

NO. DATE  
MADE BY  
AUTH. BY

REVISIONS

SALT LAKE CITY DEPARTMENT OF PUBLIC UTILITIES  
MOUNTAIN DELL OUTLET  
OUTLET REHABILITATION - ACCESS ROAD  
ACCESS ROAD SECTIONS

PROFESSIONAL ENGINEER  
BRANDON D. HORROCKS  
STATE OF UTAH  
06/11/2020

DRAWING NO.  
AR102  
SHEET 6 OF 6



Table 1 – Area of Fill

| Type                        | Use                                              | Specification                                                                                                                                                                  | Volume (CY) | Area (Square feet)                                                                       |
|-----------------------------|--------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------------------------------------------------------------------------------------|
| Native Backfill             | Access Road                                      | Clay w/sand and gravel                                                                                                                                                         | 2,000       | 4,175                                                                                    |
| Zone III                    | Lower section of Cofferdam                       | 100% passing 24" sieve<br>0-30% passing #200 sieve – fines will be predominately clay                                                                                          | 30,130      | 95,900<br>Note: footprint of cofferdam                                                   |
| Zone II                     | Outer shell of cofferdam                         | 100% passing 6" sieve<br>10-60% passing #4 sieve<br>0-30% passing #200 sieve                                                                                                   | 7,500       | 10,450<br>Note: Entire footprint of rests on Zone III fill                               |
| Zone I                      | Upper portion of Cofferdam                       | 100% passing 2" sieve<br>70-100% passing #4 sieve<br>25-95% passing #200 sieve<br>Plasticity index greater than or equal to 6 and less than or equal to 20<br>Liquid limit <50 | 16,650      | 56,400<br>Note: Entire footprint of rests on Zone III fill                               |
| Rip Rap                     | Upstream face and downstream groins of cofferdam | 100% passing 36" sieve<br>25% 3' boulder<br>50 % 1.5' to 3' Boulders<br>No more than 10% 0.2' or less<br>Hard Durable Stone                                                    | 2,770       | 8400<br>Note: 5000 square feet is on Zone III fill, 3400 square feet on reservoir bottom |
| Cement Bentonite            | Cofferdam core wall                              | Clay-Portland cement-Bentonite slurry                                                                                                                                          | 3,200 CY    | 1400<br>Note: Will be in footprint of Zone III                                           |
| Cofferdam Outlet Encasement | Cofferdam Outlet                                 | Concrete                                                                                                                                                                       | 104         | 2300                                                                                     |