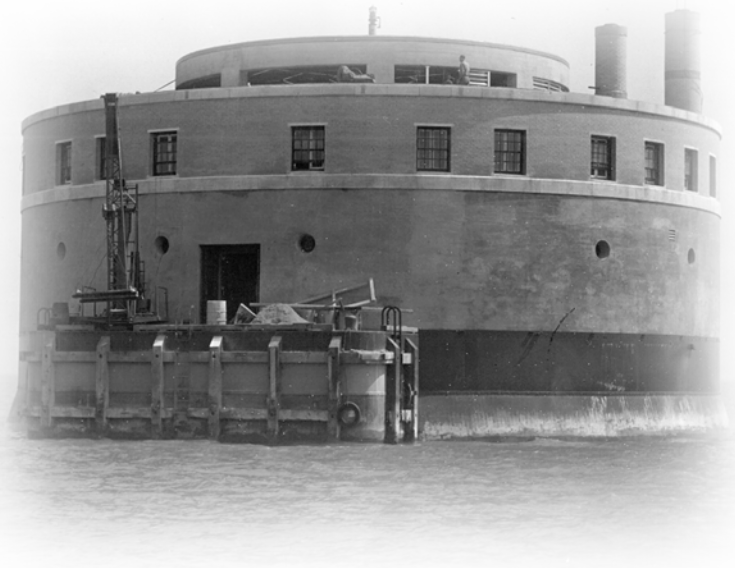
WELCOME

PRESENTATION TO JERUSALEM TOWNSHIP BY THE CITY OF TOLEDO

December 22, 2020

WHY IS THE PROJECT REQUIRED?

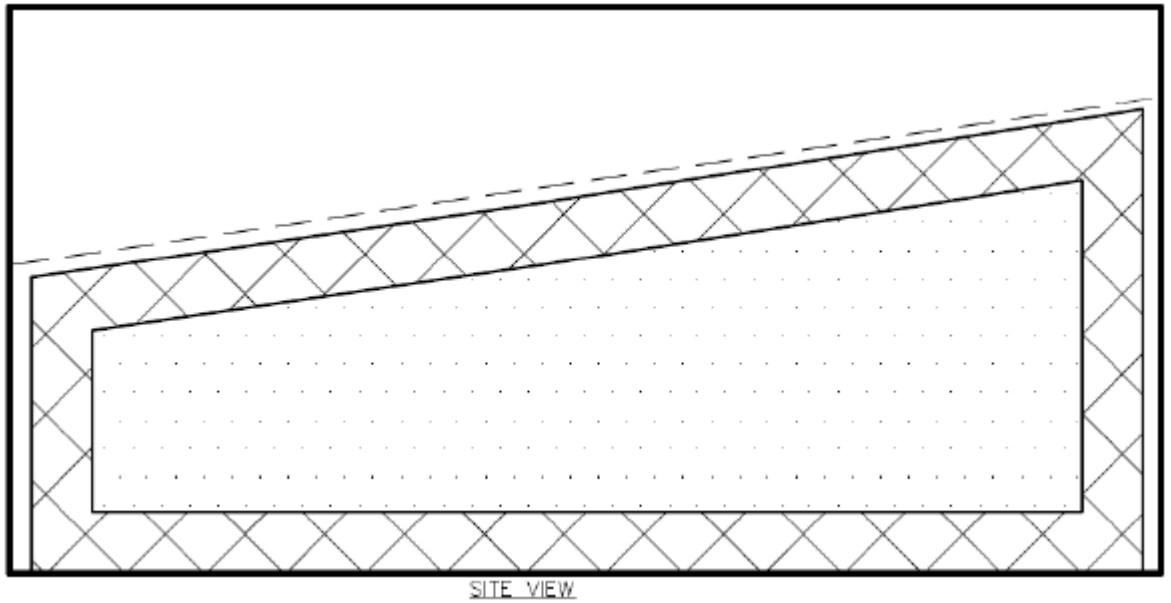
- Ohio Environmental Protection Agency (OEPA) resiliency requirements for both the City of Toledo and its regional partners
- Need redundancy throughout the whole system (Lake Erie ➔ treatment plant ➔ distribution system)
  - $500 million CIP addresses treatment plant and distribution system
  - Single Lake Erie water source needs to be addressed (redundancy)
  - Single intake pipe (redundancy)



RECOMMENDED ALTERNATIVE 5 - UPLAND RESERVOIR WITH OREGON

PRELIMINARY UPLAND RESERVOIR LAYOUT
(OREGON RWTM RELOCATION - 200 ACRES AVAILABLE)

- Criteria [Configuration 2b]
  - Berm width at top: 50-ft; bottom elevation 9-ft below existing grade
  - Berm side slope: 7:1 (exterior); 3:1 (interior)
- Berm height 22-feet, water depth at HWL is 26 feet with 5-ft freeboard
  - Net material balance: approx. -0- cubic yards
  - Total plan area used for reservoir: 191 acres



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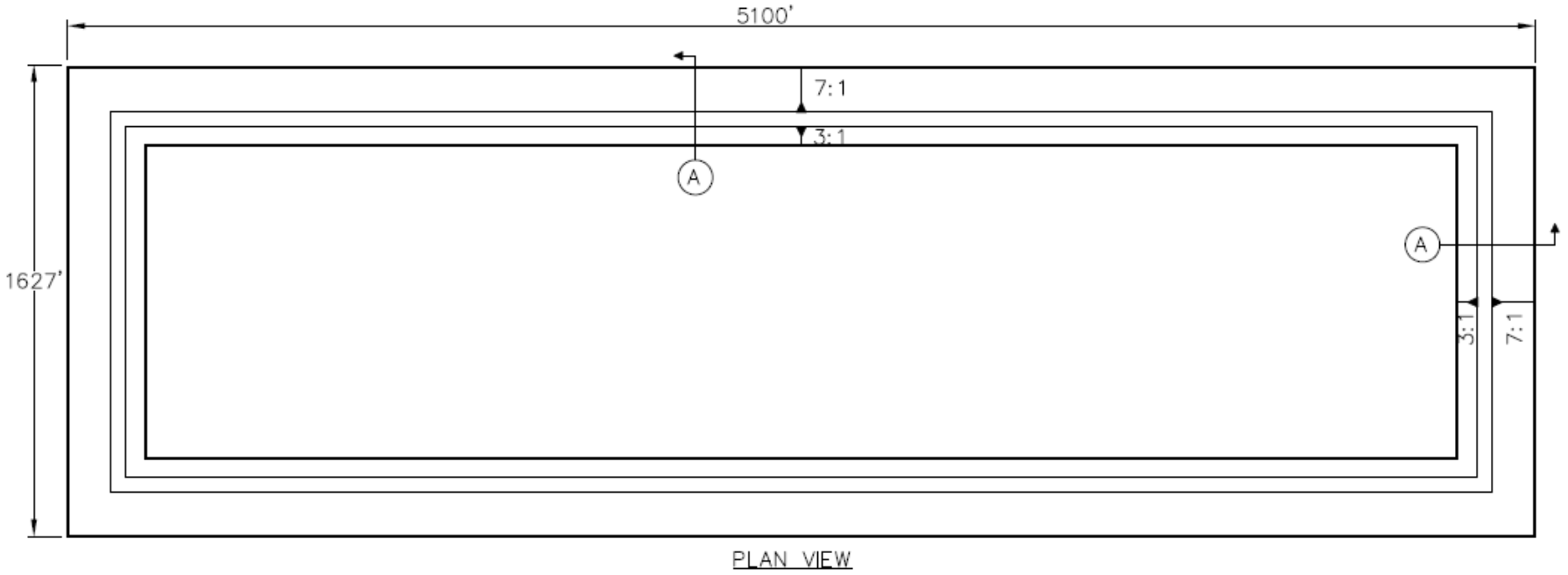
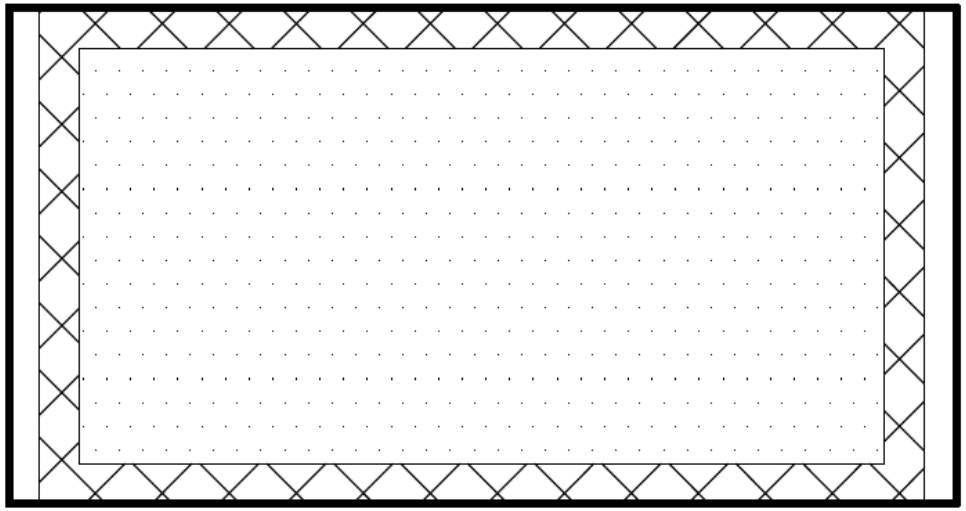


PRELIMINARY UPLAND RESERVOIR LAYOUT (300 ACRES AVAILABLE)

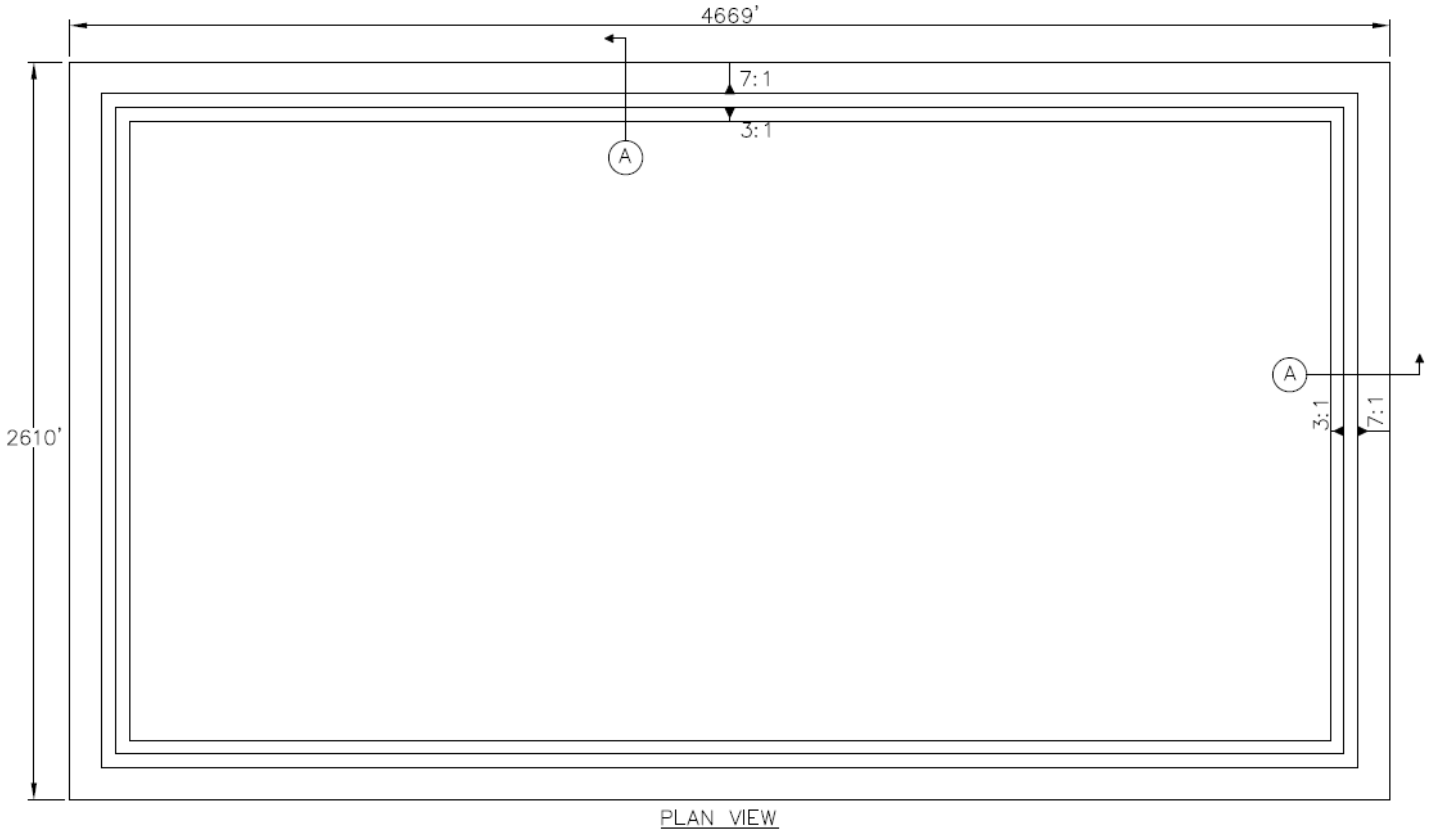
- Criteria [Configuration 3a]
  - Berm width at top: 50-ft; bottom elevation 3-ft below existing grade
  - Berm side slope: 7:1 (exterior); 3:1 (interior)

- Berm height 16-feet, water depth at HWL is 14 feet with 5-ft freeboard
  - Net material balance: approx. -0- cubic yards
  - Total plan area used for reservoir: 280 acres



SITE VIEW

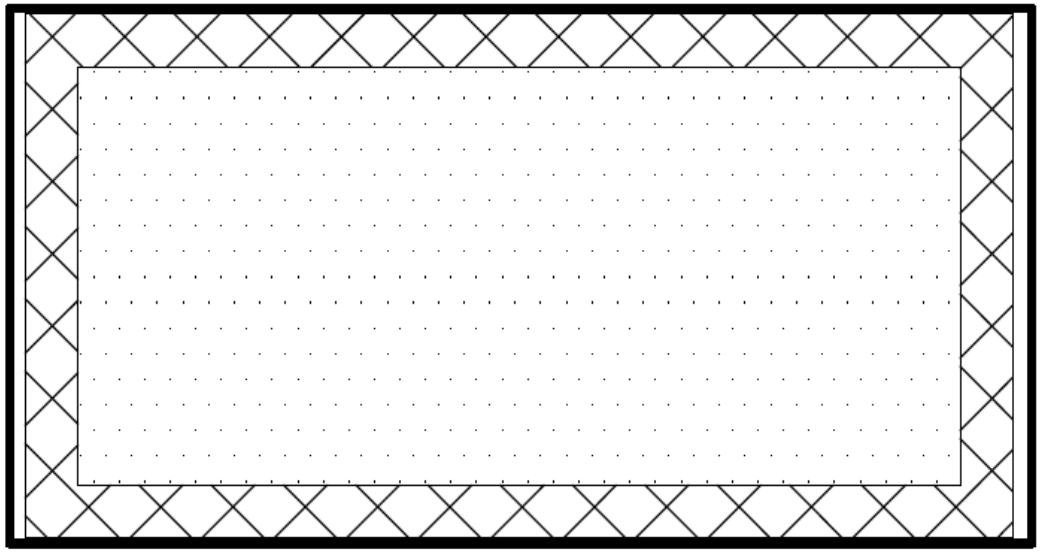
PRELIMINARY UPLAND RESERVOIR LAYOUT (300 ACRES AVAILABLE)



PRELIMINARY UPLAND RESERVOIR LAYOUT (300 ACRES AVAILABLE)

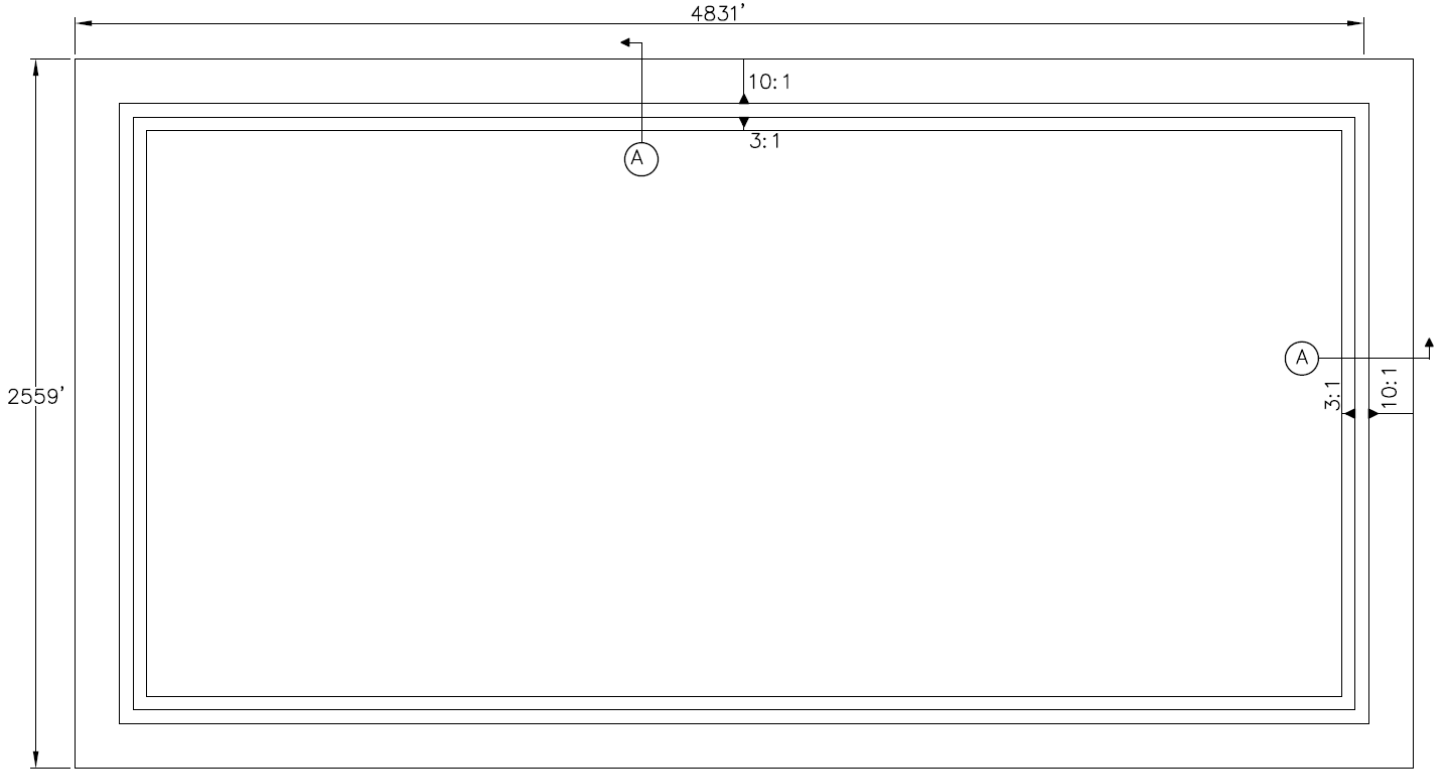
- Criteria [Configuration 3b]
  - Berm width at top: 50-ft; bottom elevation 4-ft below existing grade
  - Berm side slope: 10:1 (exterior); 3:1 (interior)

- Berm height 16-feet, water depth at HWL is 15 feet with 5-ft freeboard
  - Net material balance: approx. -0- cubic yards
  - Total plan area used for reservoir: 284 acres

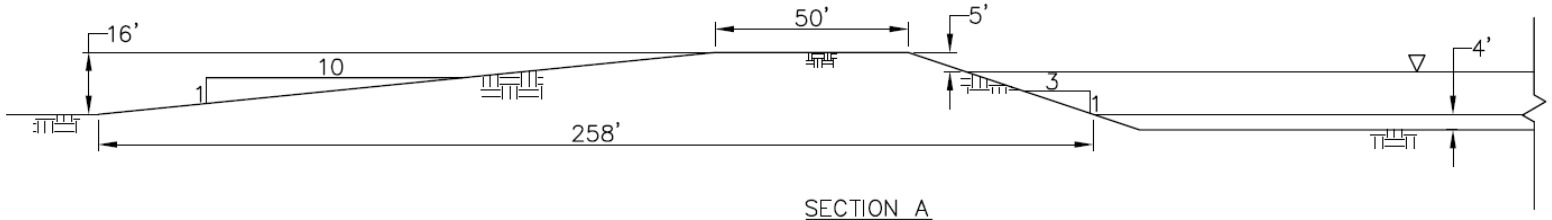


SITE VIEW

PRELIMINARY UPLAND RESERVOIR LAYOUT (300 ACRES AVAILABLE)



PLAN VIEW



SECTION A

PRELIMINARY UPLAND RESERVOIR LAYOUT (SUMMARY TABLE)

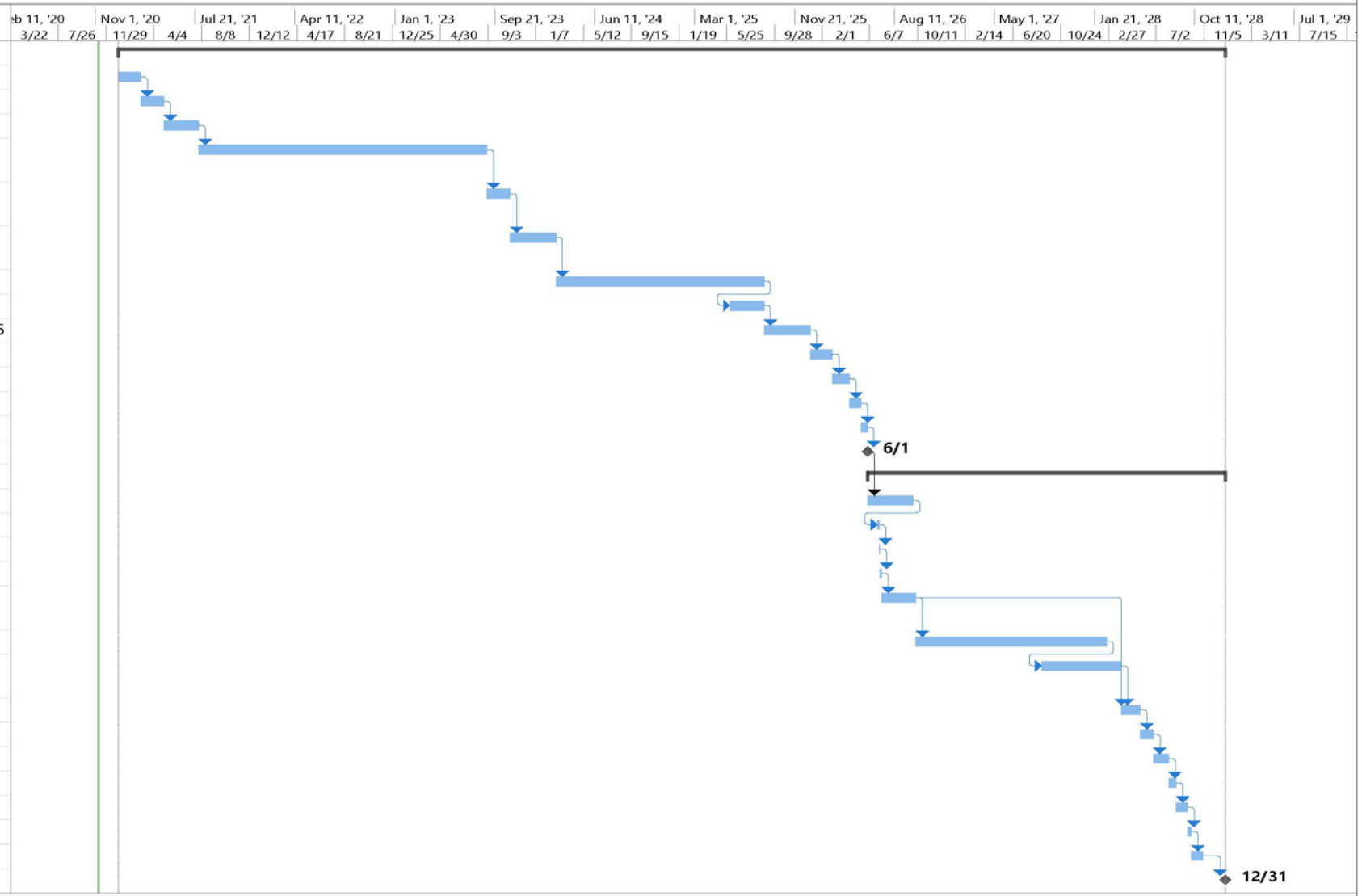
Configuration	Exterior Slope	Berm Width (ft)	Berm Height (ft)	Water Depth (ft)	Material Balance (CY)	Site Areas (Acres)
2b	7:1	50	22	26	0	191
3a	7:1	50	16	14	0	280
3b	10:1	50	16	15	0	284

UPLAND RESERVOIR CONCEPTUAL SCOPE

- Includes:
  - Clay liner
  - Structural and non-structural earthwork
  - Rip-rap
    - 12” thick along the interior slope of the entire operating range
  - Access road to site
  - 25’ wide perimeter road
  - Communication and Security Systems
  - Public restroom and control building with utilities
  - Parking lot with lighting and drainage (approximately 0.5 acres for 90 cars)

Alternate 5 (Upland Reservoir with Oregon)
Preliminary Construction Schedule

ID	Task Name	Duration	Start	Finish
1	**Toledo Alternate Water Source**	**2922 days**	**Fri 1/1/21**	**Sun 12/31/28**
2	Study Review and Approval	59 days	Fri 1/1/21	Sun 2/28/21
3	Advertisement	61 days	Mon 3/1/21	Fri 4/30/21
4	Bid & Award	92 days	Sat 5/1/21	Sat 7/31/21
5	Site Selection, Acquisition, & Jursisdictional Agreements *	761 days	Sun 8/1/21	Thu 8/31/23
6	Design Engineering RFP Advertisement	61 days	Fri 9/1/23	Tue 10/31/23
7	Design Engineering RFP, Contract and Negotiations Bid & Award	121 days	Wed 11/1/23	Thu 2/29/24
8	Design	549 days	Fri 3/1/24	Sun 8/31/25
9	Permitting	90 days	Tue 6/3/25	Sun 8/31/25
10	Review and Approval	122 days	Mon 9/1/25	Wed 12/31/25
11	Construction Advertisement	59 days	Thu 1/1/26	Sat 2/28/26
12	Bidding	45 days	Sun 3/1/26	Tue 4/14/26
13	Bid Review	30 days	Wed 4/15/26	Thu 5/14/26
14	Award	17 days	Fri 5/15/26	Sun 5/31/26
15	NTP	1 day	Mon 6/1/26	Mon 6/1/26
16	**Construction**	**944 days**	**Tue 6/2/26**	**Sun 12/31/28**
17	Submittals	120 days	Tue 6/2/26	Tue 9/29/26
18	Mobilization	5 days	Sat 6/27/26	Wed 7/1/26
19	MPT	2 days	Thu 7/2/26	Fri 7/3/26
20	E&S Controls	5 days	Sat 7/4/26	Wed 7/8/26
21	Relocate Raw Water Trasmission Mains	90 days	Thu 7/9/26	Tue 10/6/26
22	Reservoir Earthwork	504 days	Wed 10/7/26	Tue 2/22/28
23	New Raw Water Transmission Lines	210 days	Sat 9/4/27	Fri 3/31/28
24	Access Roads and Parking Lots	50 days	Sat 4/1/28	Sat 5/20/28
25	Site Electrical	35 days	Sun 5/21/28	Sat 6/24/28
26	Chemical Feed Facilities	40 days	Sun 6/25/28	Thu 8/3/28
27	Public Restroom	20 days	Fri 8/4/28	Wed 8/23/28
28	Control Building	30 days	Thu 8/24/28	Fri 9/22/28
29	Punch List	10 days	Sat 9/23/28	Mon 10/2/28
30	Start Up and Commissioning	30 days	Tue 10/3/28	Wed 11/1/28
31	Contract Close Out	60 days	Thu 11/2/28	Sun 12/31/28



Project: Toledo Alternate Water Source General Plan 11-9-20
Date: Mon 11/9/20

Task | Milestone | Summary

*Limited preliminary design engineering is assumed to be included in this task, since the final property purchase/acquisition will be contingent on preliminary engineering, suitable soils, etc.

IN CONCLUSION

Alternative No. 5 is recommended due to redundancy, total anticipated costs, low O&M costs, flexibility for pretreatment, possible partnering for mixed use, and potential for shared assets with the City of Oregon.

The Engineer’s Opinion of Probable Project Cost is $95 million.