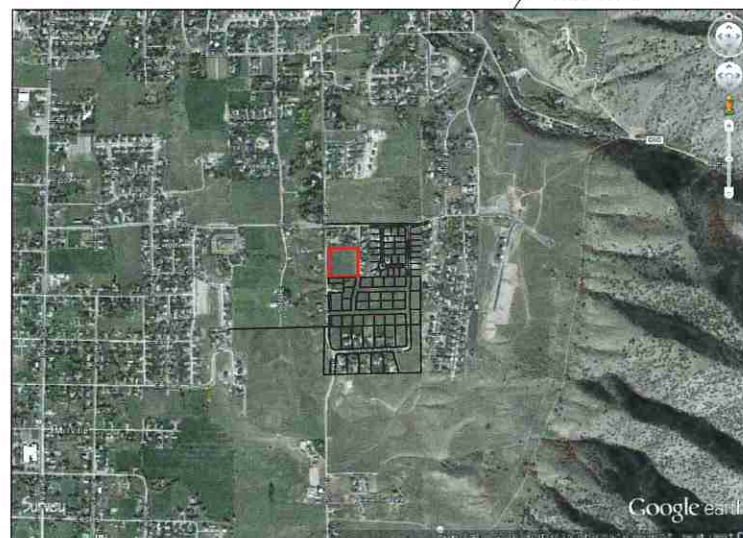


**BENTLEY ESTATES SUBDIVISION
PROVIDENCE, UTAH**
PART OF THE SOUTHWEST QUARTER OF SECTION 14,
TOWNSHIP 11 NORTH, RANGE 1 EAST, SALT LAKE
BASE AND MERIDIAN
CACHE COUNTY,
400 EAST, 1100 SOUTH, PROVIDENCE, UTAH
INDEX SHEET

VICINITY MAP



SHEET INDEX	
SHEET NO.	SHEET DESCRIPTION
1	INDEX SHEET
2	ROAD CONSTRUCTION PLAN
3	GRADING/DRAINAGE PLAN

OWNER/DEVELOPER

**ANDY BENTLEY
JABAA, LLC
40 WEST CACHE VALLEY BLVD
LOGAN, UTAH**

CIVIL ENGINEER

**ALLIANCE CONSULTING
ENGINEERS, INC.
150 EAST 200 NORTH SUITE P
LOGAN, UTAH 84321
435-755-5121**

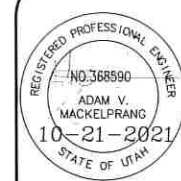
CITY ENGINEER

MAX PIERCE

Max Pierce
Approved October 21, 2021

- GENERAL NOTES (APPLICABLE TO ALL DWG. SHEETS)
- ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, PROVIDENCE CITY STANDARDS, STATE OF UTAH AND ANY OTHER APPLICABLE STANDARDS ISSUED BY THE CONTROLLING AGENCY.
 - CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS BEFORE CONSTRUCTION. ANY DISCREPANCIES BETWEEN CONSTRUCTION DOCUMENTS AND FIELD CONDITIONS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE OWNER.
 - CONTRACTOR SHALL REPAIR AND/OR REPLACE ANY AREAS AND/OR MATERIALS DAMAGED DURING CONSTRUCTION.
 - CONTRACTOR SHALL MAINTAIN ALL ADJACENT PROPERTY (PUBLIC & PRIVATE) FROM ALL CONSTRUCTION DEBRIS.
 - CONTRACTOR SHALL PROVIDE SMOOTH TRANSITION FROM ALL NEW CONSTRUCTION TO EXISTING CONDITIONS.
 - CONTRACTOR SHALL PROVIDE ALL NECESSARY AUTOMOBILE AND PEDESTRIAN TRAFFIC CONTROL DEVICES REQUIRED BY LOCAL, STATE, AND FEDERAL CODES AND ORDINANCES.
 - CONTRACTOR SHALL REPLACE SURVEY MONUMENTS DAMAGED DURING CONSTRUCTION. SURVEY MONUMENTS TO BE REPLACED BY A REGISTERED, LICENSED LAND SURVEYOR.
 - CONTRACTOR TO LOCATE ALL EXISTING UTILITIES, INCLUDING FIBER OPTIC. ANY DAMAGES TO EXISTING UTILITIES WILL BE REPAIRED AT CONTRACTORS EXPENSE.
 - DIMENSIONS SHOWN ARE TO THE CENTER OF THE PIPELINE UNLESS OTHERWISE NOTED.
 - DISTANCES SHOWN ALONG PIPELINES ARE HORIZONTAL DISTANCES AND NOT ACTUAL PIPE LENGTHS. MORE PIPE MAY BE REQUIRED TO COMPLETE CONSTRUCTION THAN IS DIMENSIONED IN THE PLANS.
 - THRUST BLOCKS SHALL BE PLACED ON WATERLINES AT ALL DIRECTION CHANGES, FITTINGS, BENDS, ELBOWS, FIRE HYDRANTS AND GATES VALVES AS SHOWN IN THE PROJECT PLANS AS PER PROVIDENCE CITY STANDARDS AND SPECIFICATIONS MANUAL.
 - CONTRACTOR IS REQUIRED TO HAVE AN APPROVED SET OF PLANS ON THE SITE AT ALL TIMES. ANY WORK COMPLETED WITHOUT A SET PRESENT IS DONE SO AT THE CONTRACTORS RISK AND EXPENSE IF ERRORS OCCUR.
 - CONTRACTOR IS RESPONSIBLE FOR PROVIDING WATER NECESSARY FOR DUST ABATEMENT, COMPACTION, ETC.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING SOURCES FOR GRANULAR MATERIALS, WATER, WASTE SITES, AND ANY OTHER MATERIALS SOURCES AS REQUIRED FOR PROJECT COMPLETION.
 - ANY WORK DONE WITHIN A PUBLIC RIGHT-OF-WAY SHALL BE COORDINATED WITH THE APPROPRIATE TRANSPORTATION AGENCY AND SHALL MEET THE REQUIREMENTS OF THAT AGENCY AND THE REQUIREMENTS OF ANY RIGHT-OF-WAY OR SPECIAL USE PERMITS.
 - THE CONTRACTOR SHALL COORDINATE ALL LIVE TAPS AND ANY OTHER WORK OR MANIPULATION OF THE EXISTING WATER SYSTEM WITH THE CITY.
 - ON SLOPING AREAS THE CONTRACTOR SHALL TAKE PRECAUTIONS TO MITIGATE ANY POSSIBLE EROSION PROBLEMS IN THE TRENCHES DUE TO STORM WATER THAT MIGHT OCCUR DURING OR AFTER CONSTRUCTION AS DIRECTED OR APPROVED BY ENGINEER.
 - THE CONTRACTOR SHALL INSTALL AND MAINTAIN ALL EROSION CONTROL MEASURES AS DETAILED IN THE PROJECT PLANS UNTILL FINAL ACCEPTANCE OF THIS PROJECT.
 - THE CONTRACTOR IS REQUIRED TO TAKE ALL PRECAUTIONS NECESSARY TO INSURE THAT NO STORM WATER/SEDIMENT AND/OR CONSTRUCTION DEBRIS ARE RELEASED FROM THE SITE. ANY RELEASES SHALL BE CLEANED AND MITIGATED AT THE CONTRACTOR'S EXPENSE.
 - CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION ACCESS AND RELATED TRAFFIC CONTROL WITH THE COUNTY, CITY, AND STATE ROADWAY DEPARTMENTS. THE ENGINEER SHALL REVIEW ALL TRAFFIC CONTROL PLANS.
 - ALL GATE VALVES SHALL BE LOCATED NEAR TO TEES OR CROSSES AND THEIR ASSOCIATED REDUCERS AS SHOWN ON THE PROJECT PLANS.
 - CONTRACTOR SHALL PROVIDE ALL NECESSARY FITTINGS, HARDWARE, LABOR, ETC. TO CONSTRUCT VERTICAL AND HORIZONTAL BENDS IN PIPE AS NEEDED TO MEET THE REQUIRED GRADES, ALIGNMENTS AND COVER REQUIREMENTS.
 - ALL AIR RELEASE VALVES SHALL BE INSTALLED AT THE CREST OF THE VERTICAL CURVATURE OF THE WATER LINE. CONTRACTOR SHALL RECORD ACTUAL LOCATION OF VALVES ON FIELD RECORD DRAWINGS.
 - THE CONTRACTOR SHALL COORDINATE WITH PROVIDENCE CITY FOR ALL UTILITY INSPECTIONS PRIOR TO BACKFILLING.
 - ALL WATER SYSTEM COMPONENTS SHALL BE INSTALLED, PRESSURE TESTED, AND CHLORINATED PRIOR TO COMPLETING ANY ROADWAY CONSTRUCTION.
 - ADJUSTABLE MANHOLE RINGS AND COVERS WILL BE REQUIRED ON ROADS WITH SLOPES GREATER THAN 4%. THE LIDS AND RINGS MUST MATCH THE FINISHED ASPHALT SLOPE.

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By *AP*



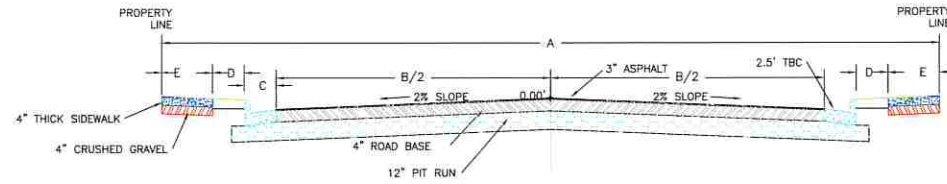
REVISION	
DATE	9-2021
SCALE	
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DRAWN BY	AM

**BENTLEY ESTATES SUBDIVISION
PROVIDENCE, UTAH**
PART OF THE SOUTHWEST QUARTER OF SECTION 14,
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INDEX SHEET

**ALLIANCE CONSULTING
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150 EAST 200 NORTH SUITE P
LOGAN, UTAH 84321
(435) 755-5121

AEI
SHEET
1
OF
3 SHEETS

**BENTLEY ESTATES SUBDIVISION
PROVIDENCE, UTAH
ROAD CONSTRUCTION PLAN**



ROAD CROSS-SECTIONS
SEE ALSO PROVIDENCE CITY WORKS DRAWING C-1

CROSS-SECTION INFORMATION							
	A/2	B/2	C	D	E	F	G
470 EAST	33'	17'	2.5'	8.5'	5.0'	0.0'	-0.01
400 EAST	33'	18.5'	2.5'	7.0'	5.0'	0.0'	-0.04

LEGEND

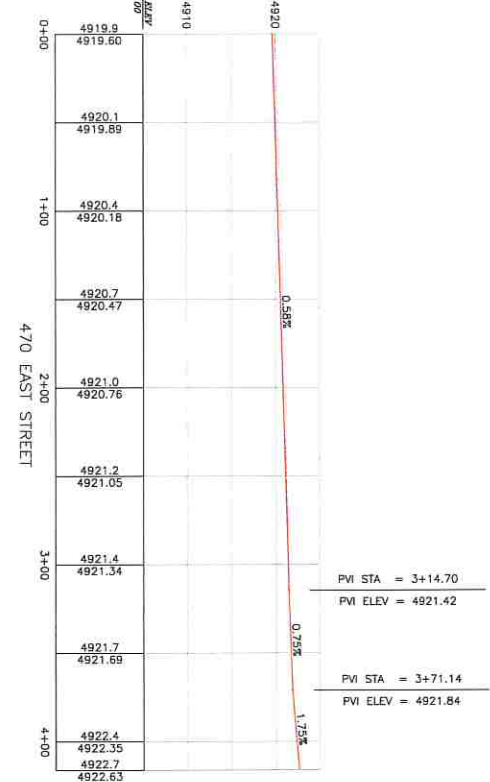
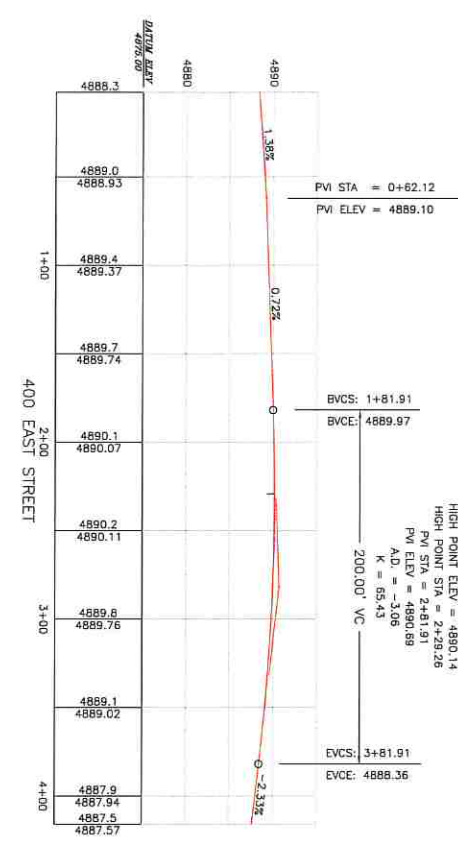
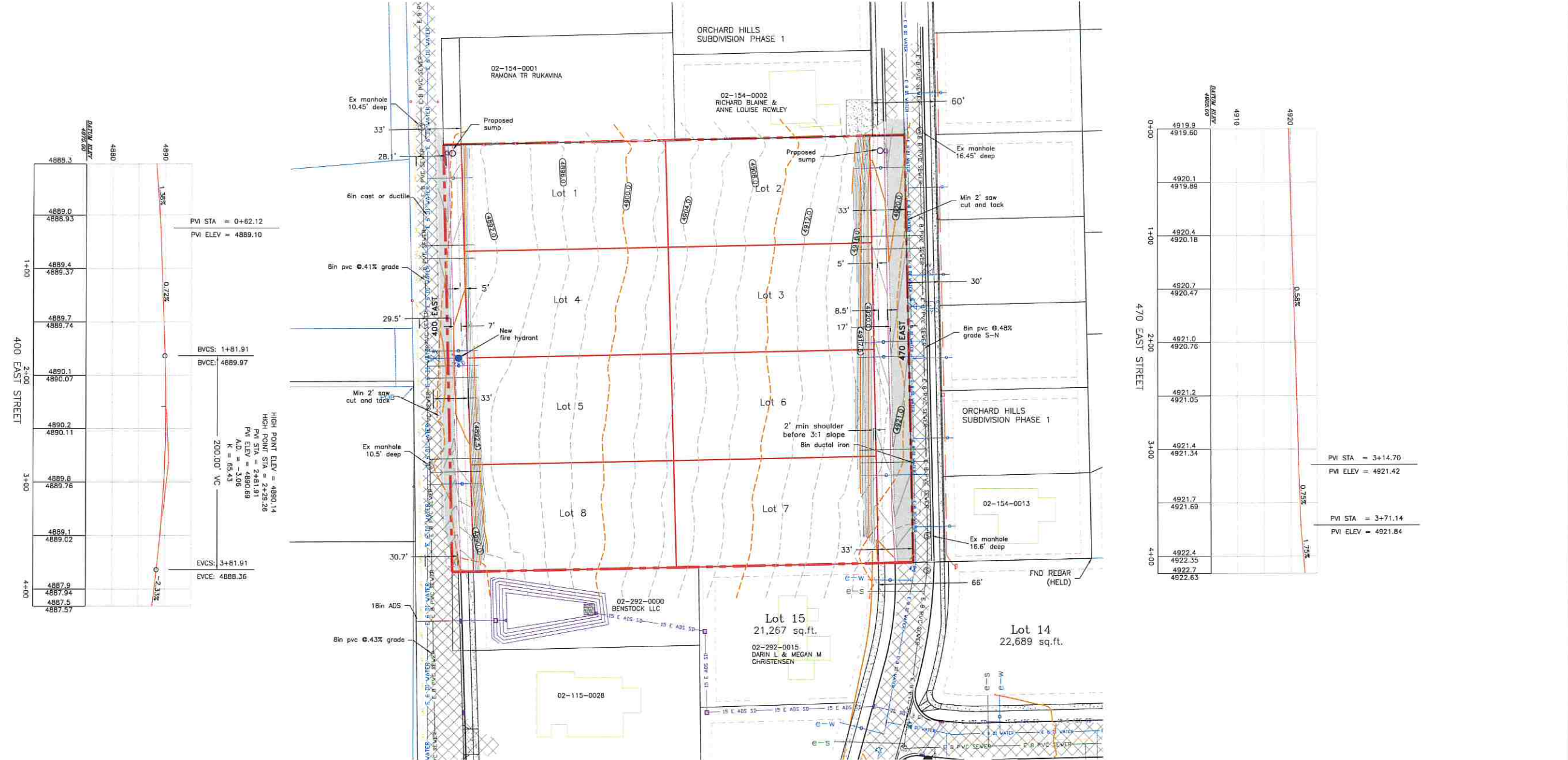
	PHASE BOUNDARY LINE		PROPOSED SIDEWALK
	EXISTING FENCE		EXISTING ASPHALT
	STREET CENTERLINE		PROPOSED ASPHALT
	EXISTING 8" DI WATERLINE/FH		EXIST CONTOUR (10 FT INTERVAL)
	PROPOSED WATER SERVICE LINE AND METER		EXIST CONTOUR (2 FT INTERVAL)
	EXISTING 8" PVC SEWER/MH		NEW CONTOUR (2.5 FT INTERVAL)
	NEW 4" SEWER SERVICE LINE		NEW CONTOUR (0.5 FT INTERVAL)
	EXISTING STORM		
	NEW STORM		
	EXISTING POWERLINE/POLE		
	EXISTING GAS LINE		
	EXISTING PHONE LINE		

NORTH

SCALE
1" = 50'-0" HOR
1" = 10'-0" VERT

REVISIONS:	DATE	DRAWING
	9-2021	HILL.DWG
JOB NO.	DATE	DRAWN BY
		BGL

REGISTERED PROFESSIONAL ENGINEER
NO. 368590
ADAM V. MACKELPRANG
10-21-2021
STATE OF UTAH



**BENTLEY ESTATES SUBDIVISION
PROVIDENCE, UTAH**
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**BENTLEY ESTATES SUBDIVISION
PROVIDENCE, UTAH
GRADING/DRAINAGE PLAN**

LEGEND

- PHASE BOUNDARY LINE
- EXISTING STORM
- NEW STORM
- EXIST CONTOUR (10 FT INTERVAL)
- EXIST CONTOUR (2 FT INTERVAL)
- NEW CONTOUR (2.5 FT INTERVAL)
- NEW CONTOUR (0.5 FT INTERVAL)

NORTH

SCALE
0 50
1" = 50'-0" HOR
1" = 10'-0" VERT

Perc rate per test 10-20-2021: 5 inch per hour

Pond 400 East
 Drainage Area to Pond: 0.15 acres
 Weighted 'C' value for Pond Drainage Area: 0.35
 Allowable Infiltration Rate: 5.0 inches/hr = 0.0069 ft/min per Perc test
 Pond Bottom Area: 33 ft x 4 ft = 133 sq. ft.
 Allowable Discharge Rate: 0.0 cfs/acre

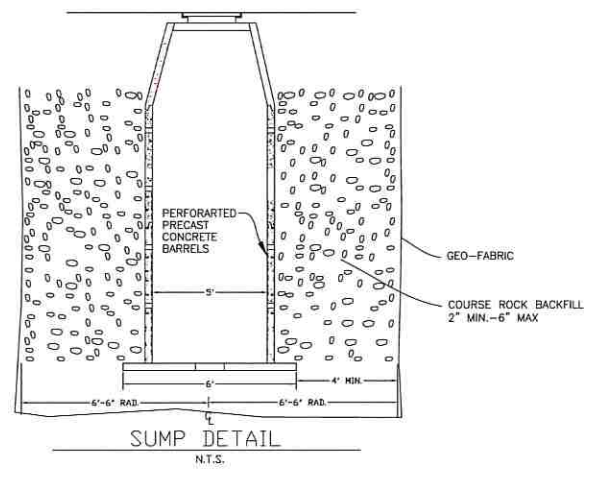
100-Year Return Period

Interval (min)	Precip. Intensity (in/hr)	Precip. Depth (in)	Area (ac)	C Value	CxAx3630 (ft ³ /in)	Accum. Inflow (ft ³ /min)	Allowable Discharge (ft ³ /min)	Accum. Discharge (ft ³)	Required Storage (ft ³)	Required Storage (ac-ft)
5	5.53	0.46	0.1489	0.35	189	87	1	5	83	0.00
10	4.21	0.70	0.1489	0.35	189	133	1	9	124	0.00
15	3.48	0.87	0.1489	0.35	189	165	1	14	151	0.00
30	2.34	1.17	0.1489	0.35	189	221	1	28	194	0.00
60	1.45	1.45	0.1489	0.35	189	274	1	55	219	0.01
120	0.85	1.69	0.1489	0.35	189	320	1	111	209	0.00
180	0.60	1.80	0.1489	0.35	189	341	1	166	174	0.00
360	0.37	2.19	0.1489	0.35	189	414	1	333	82	0.00
720	0.23	2.75	0.1489	0.35	189	520	1	665	0	0.00
1440	0.15	3.48	0.1489	0.35	189	658	1	1330	0	0.00

Pond 470 East
 Drainage Area to Pond: 0.31 acres
 Weighted 'C' value for Pond Drainage Area: 0.35
 Allowable Infiltration Rate: 5.0 inches/hr = 0.0069 ft/min per Perc test
 Pond Bottom Area: 33 ft x 4 ft = 133 sq. ft.
 Allowable Discharge Rate: 0.0 cfs/acre

100-Year Return Period

Interval (min)	Precip. Intensity (in/hr)	Precip. Depth (in)	Area (ac)	C Value	CxAx3630 (ft ³ /in)	Accum. Inflow (ft ³ /min)	Allowable Discharge (ft ³ /min)	Accum. Discharge (ft ³)	Required Storage (ft ³)	Required Storage (ac-ft)
5	5.53	0.46	0.309	0.35	393	181	1	5	176	0.00
10	4.21	0.70	0.309	0.35	393	275	1	9	266	0.01
15	3.48	0.87	0.309	0.35	393	342	1	14	328	0.01
30	2.34	1.17	0.309	0.35	393	459	1	28	432	0.01
60	1.45	1.45	0.309	0.35	393	569	1	55	514	0.01
120	0.85	1.69	0.309	0.35	393	663	1	111	553	0.01
180	0.60	1.80	0.309	0.35	393	707	1	166	540	0.01
360	0.37	2.19	0.309	0.35	393	860	1	333	527	0.01
720	0.23	2.75	0.309	0.35	393	1079	1	665	414	0.01
1440	0.15	3.48	0.309	0.35	393	1366	1	1330	36	0.00



REVISIONS:

DATE	DRAWING	HILL/DWG
9-2021	DRAWING	HILL/DWG

JOB NO.
DRAWN BY: BCL

REGISTERED PROFESSIONAL ENGINEER
 NO. 368590
 ADAM V. MACKELPRANG
 10-20-2021
 STATE OF UTAH

PROJECT
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