



# Little Bear Creek Recharge Enhancement Project

C20-2023-009

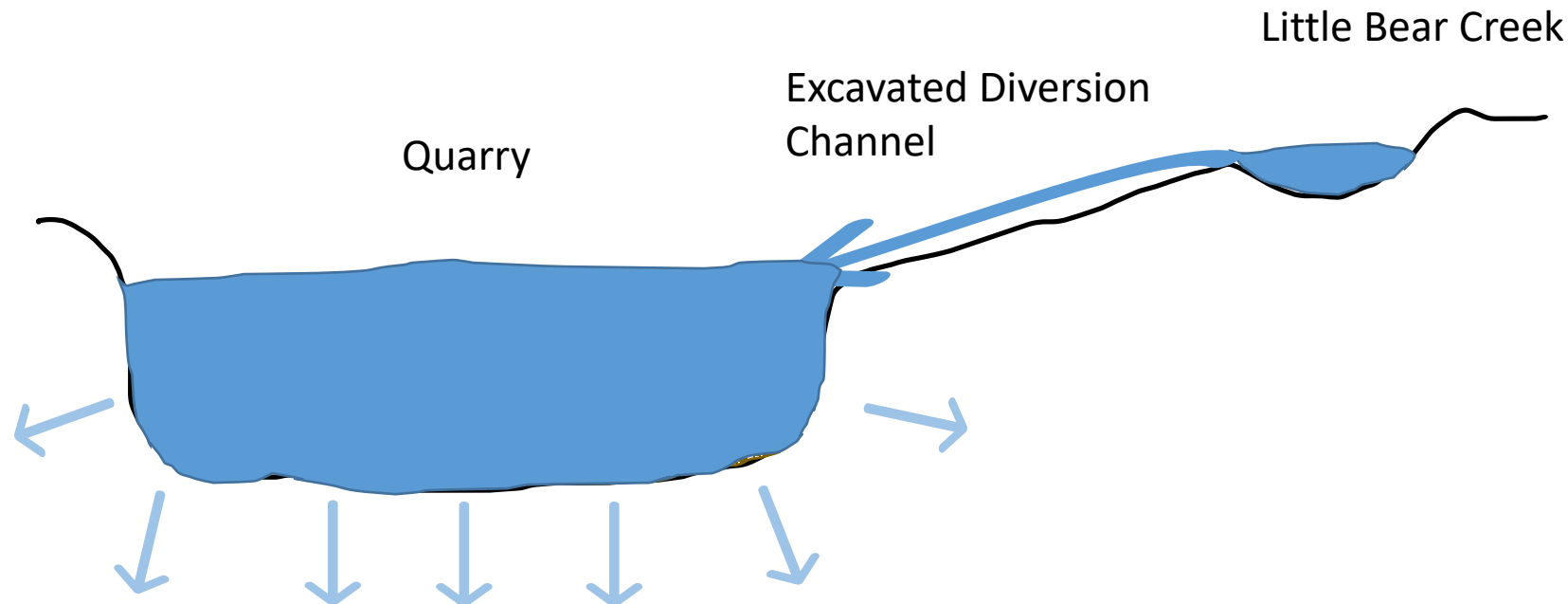
**Capital Improvement Project 6660.024**

*Scott E. Hiers, P.G.  
Watershed Protection Manager  
Project Coordinator*



# What is the project

**Diverting flood water from the channel of Little Bear Creek into an abandoned quarry via an excavated trench**





# Why do is the Project



- A unique opportunity
- Enhance recharge to the Edwards Aquifer
- The site is hydrologically connected to Barton Springs
- Preserve flows at Barton Springs
- Maintain groundwater for wells in the area



# Needs



**Unique nature of this project makes it necessary to seek an Amendment to the Save Our Springs Ordinance.**

**Council initiated Amendment process April 20, 2023.**

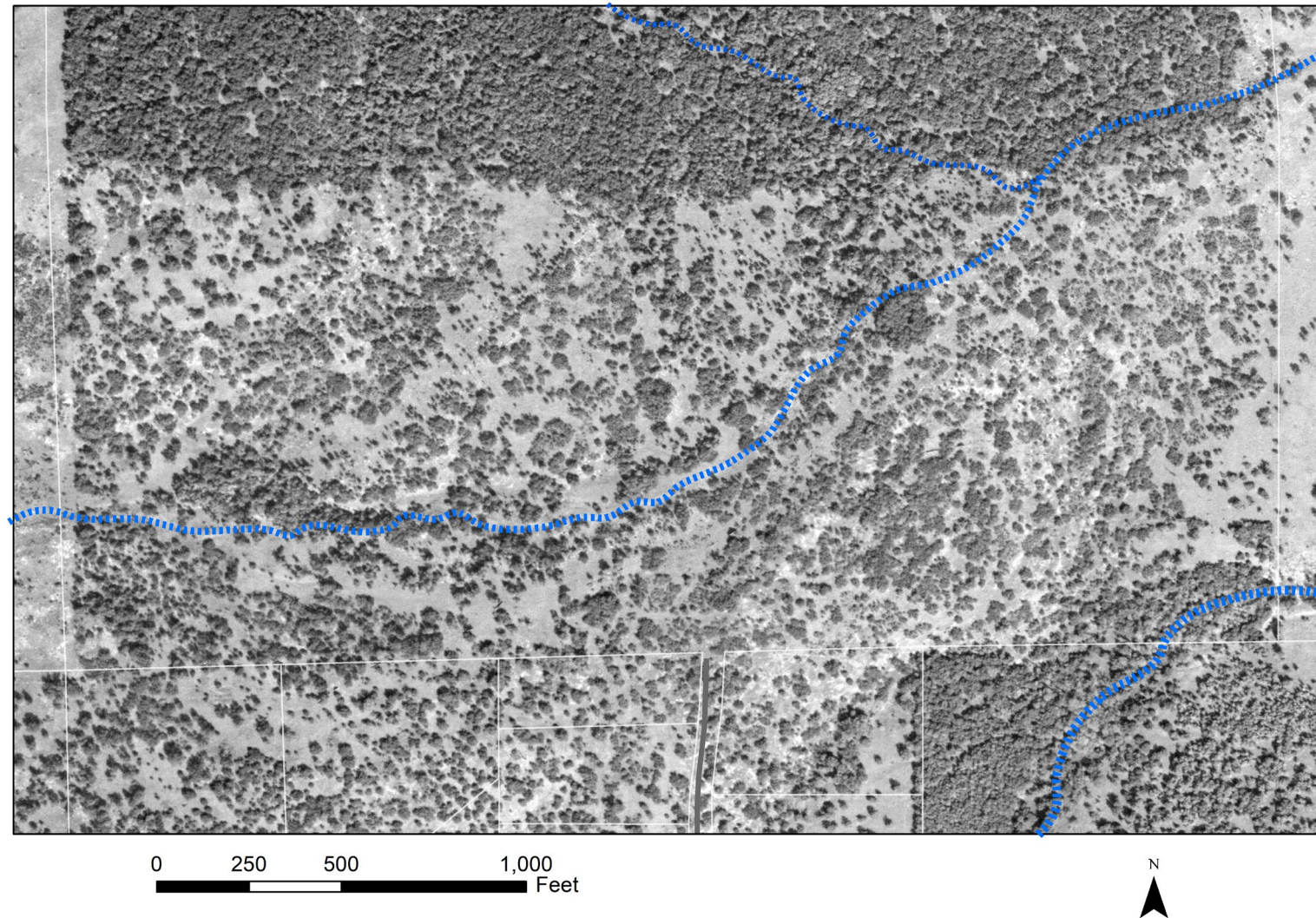
- **Water Quality: LDC 25-8-211**
- **Floodplain modification: LDC 25-8-263**
- **Cut: LDC 25-8-341**
- **Fill: LDC 25-8-342**
- **Construction in the Transition Zones: LDC 25-8-482**







1965





1984



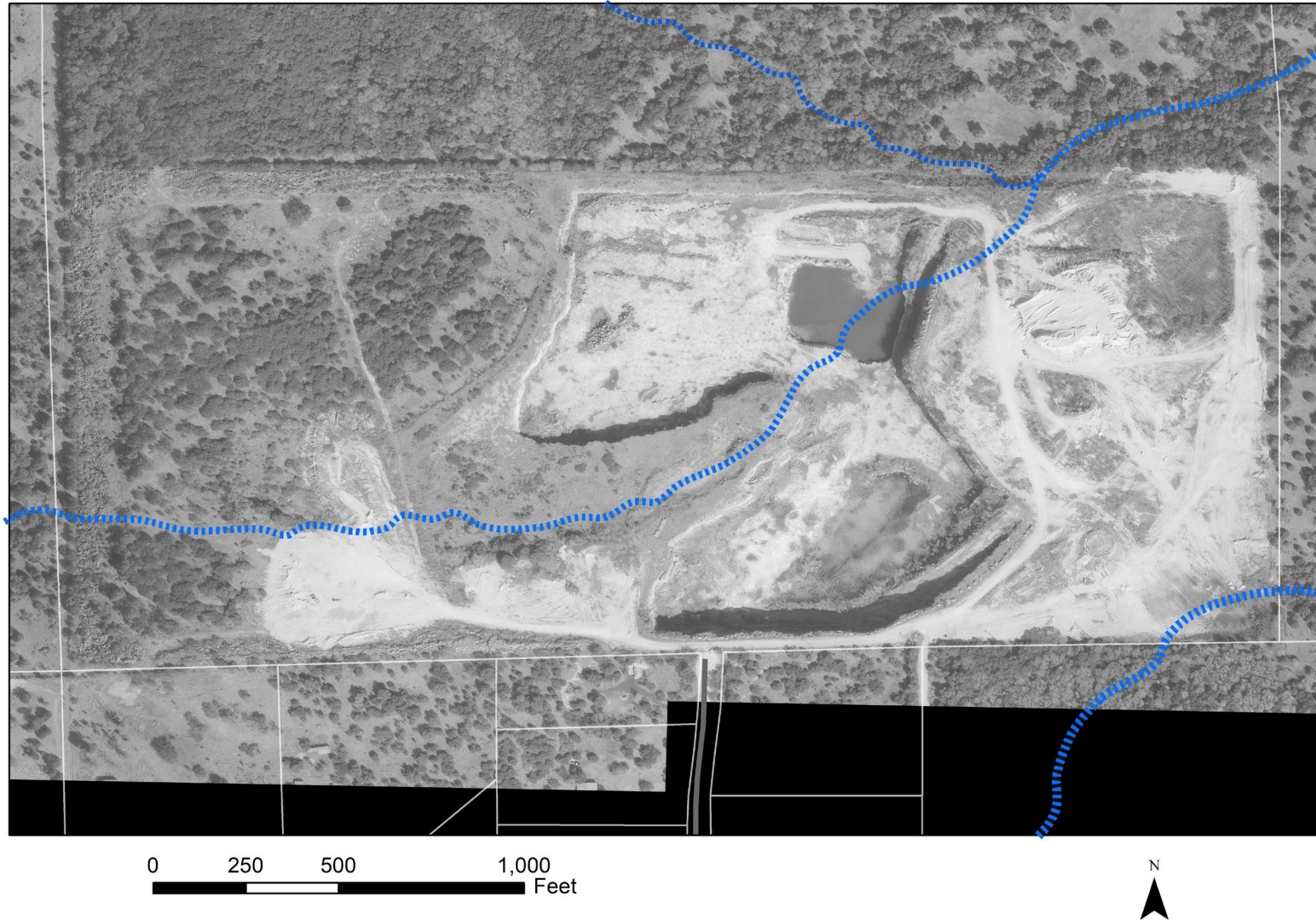
600 250 0 500 1,000  
Feet







1997







2009



0 250 500 1,000  
Feet







2019







# Site Location



Stoneledge (Wenzel) Quarry – Northwest View



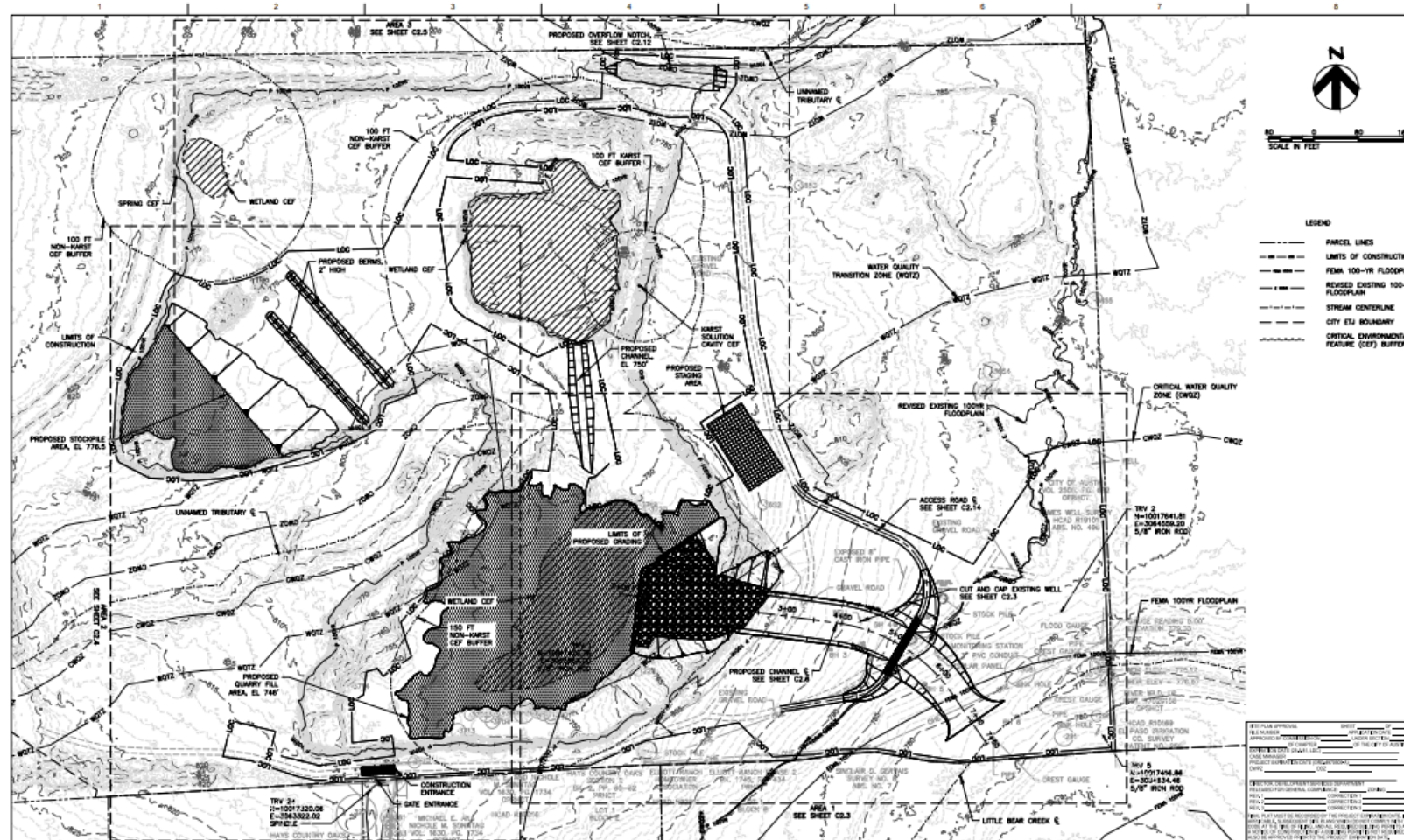
Little Bear Creek Channel –Southwest/Upstream View





# What is the Project

100% Design



DATE	DESCRIPTION

PROJECT MANAGER: E. STEWART, P.E.
DRAWN BY: J. CANTY
CHECKED BY: S. MARTIN
PROJECT NUMBER: 1010355



LITTLE BEAR CREEK  
RECHARGE ENHANCEMENT  
FACILITY  
CIP 0650.024

SP-2022-0462D

QUARRY SITE PLAN

FILENAME: G14.DWG  
SCALE: 1" = 80'

SHEET  
G1.4  
4 of 39







# Water Quality



## LDC 25-8-211

2018



To allow natural vegetated filter strips or alternative water quality controls to provide water quality treatment in the Barton Springs Zone.

The project will provide SOS non-degradation water quality treatment for all new -impervious cover or equivalent area to the maximum extent technically feasible.

The new impervious cover will be limited to an unimproved road with a maximum use of 50 vehicle trips per year.





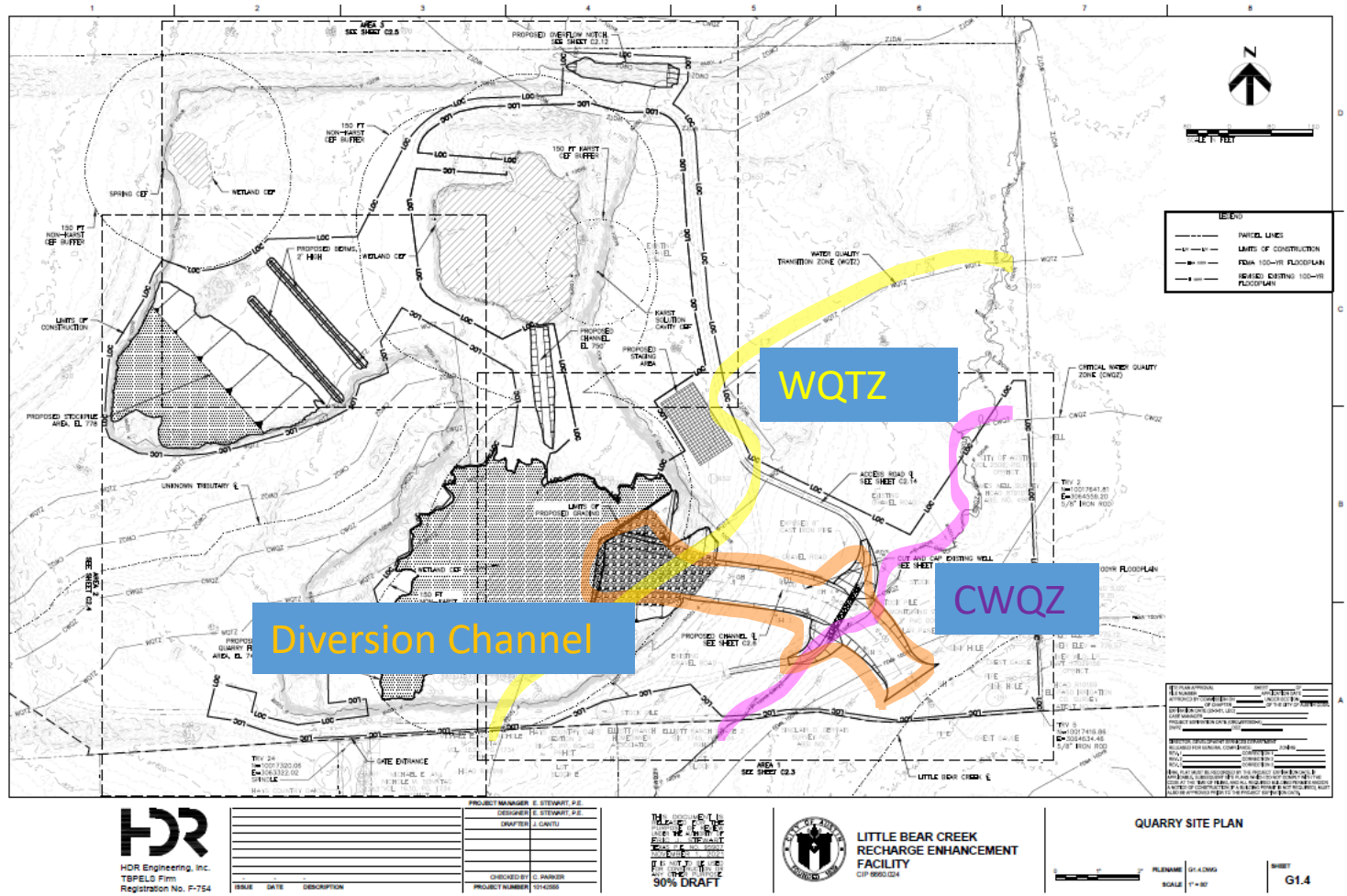
# Floodplain Modification Construction in WQTZ.

**LDC 25-8-263**

To allow floodplain modification within a CWQZ.

**LDC 25-8-482**

To allow development in a water quality transition zone that lies over the Edwards Aquifer recharge zone in the Barton Springs Zone.



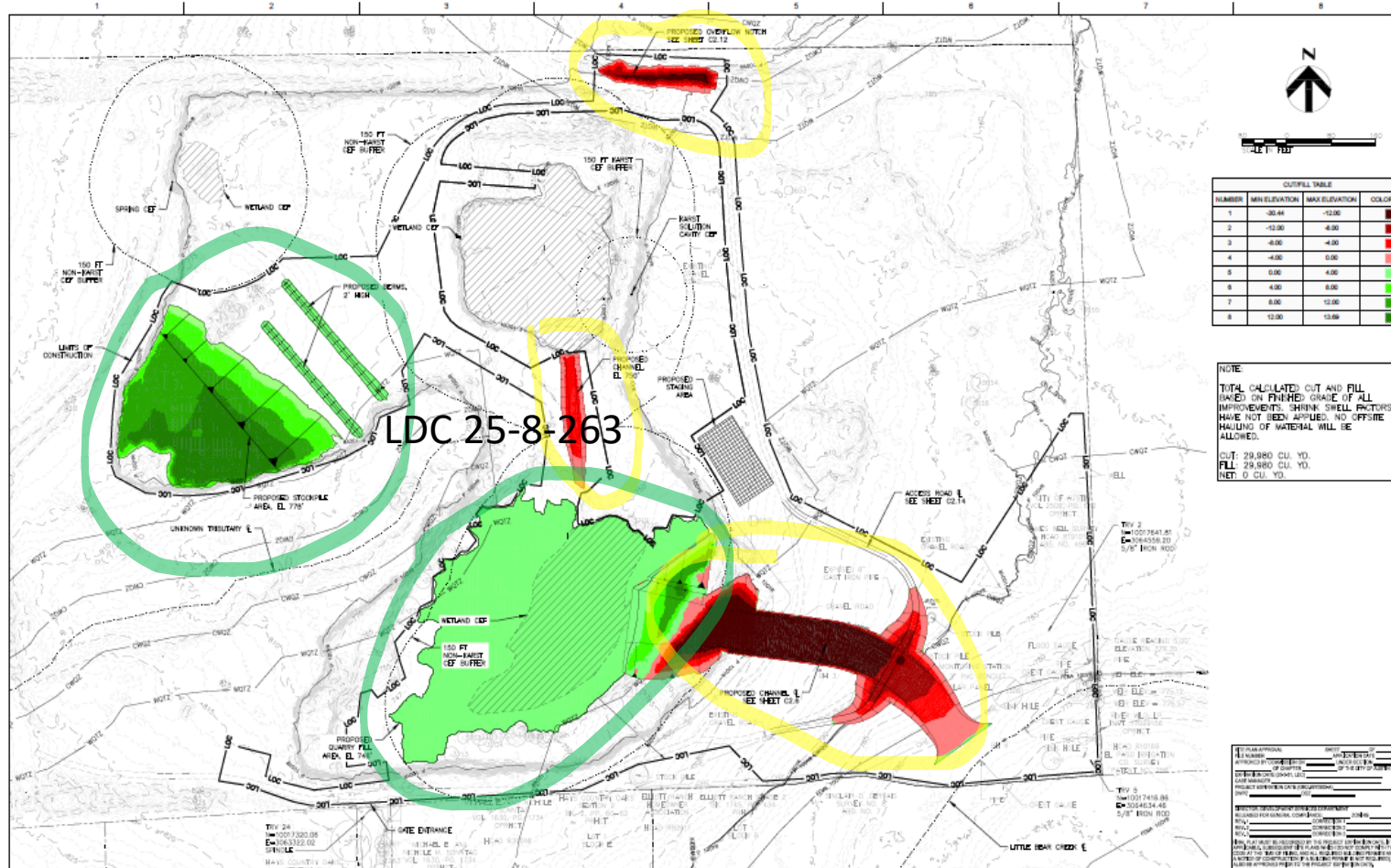


# Cut and Fill



**WATERSHED  
PROTECTION**

## LDC 25-8-341 LDC 25-8-342



NUMBER	MIN ELEVATION	MAX ELEVATION	COLOR
1	-30.44	-12.00	
2	-12.00	-8.00	
3	-8.00	-4.00	
4	-4.00	0.00	
5	0.00	4.00	
6	4.00	8.00	
7	8.00	12.00	
8	12.00	13.69	

NOTE:  
TOTAL CALCULATED CUT AND FILL  
BASED ON FINISHED GRADE OF ALL  
IMPROVEMENTS. SHRINK SWELL FACTORS  
HAVE NOT BEEN APPLIED. NO OFFSITE  
HAULING OF MATERIAL WILL BE  
ALLOWED.  
CUT: 29,980 CU. YD.  
FILL: 29,980 CU. YD.  
NET: 0 CU. YD.

CUT/FILL TABLE			
NUMBER	MIN ELEVATION	MAX ELEVATION	COLOR
1	-30.44	-12.00	
2	-12.00	-8.00	
3	-8.00	-4.00	
4	-4.00	0.00	
5	0.00	4.00	
6	4.00	8.00	
7	8.00	12.00	
8	12.00	13.69	

To allow cut and fill in excess of 4 feet.

Cut and Fill Cost is 1.9 M

73% of the Estimated Project Cost  
(Excluding Contingences)



ISSUE	DATE	DESCRIPTION

PROJECT MANAGER: E. STEWART, P.E.  
DESIGNER: E. STEWART, P.E.  
DRAWN: J. DAVIS  
CHECKED BY: C. PARKER  
PROJECT NUMBER: 104355



**LITTLE BEAR CREEK  
RECHARGE ENHANCEMENT  
FACILITY**  
CIP 9950.024

CUT/FILL MAP

FILE NAME	CIP 9950.024	SHEET	C2.2
SCALE	1" = 50'		

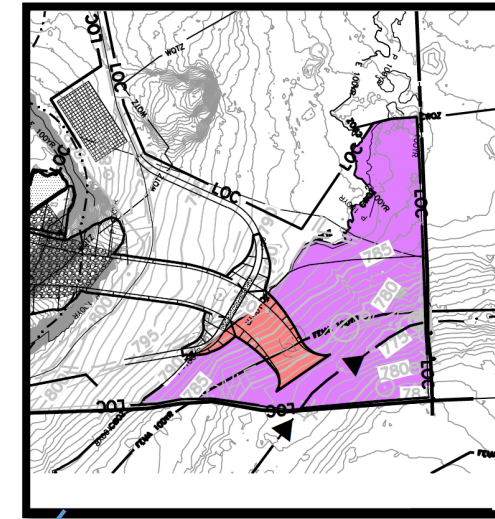
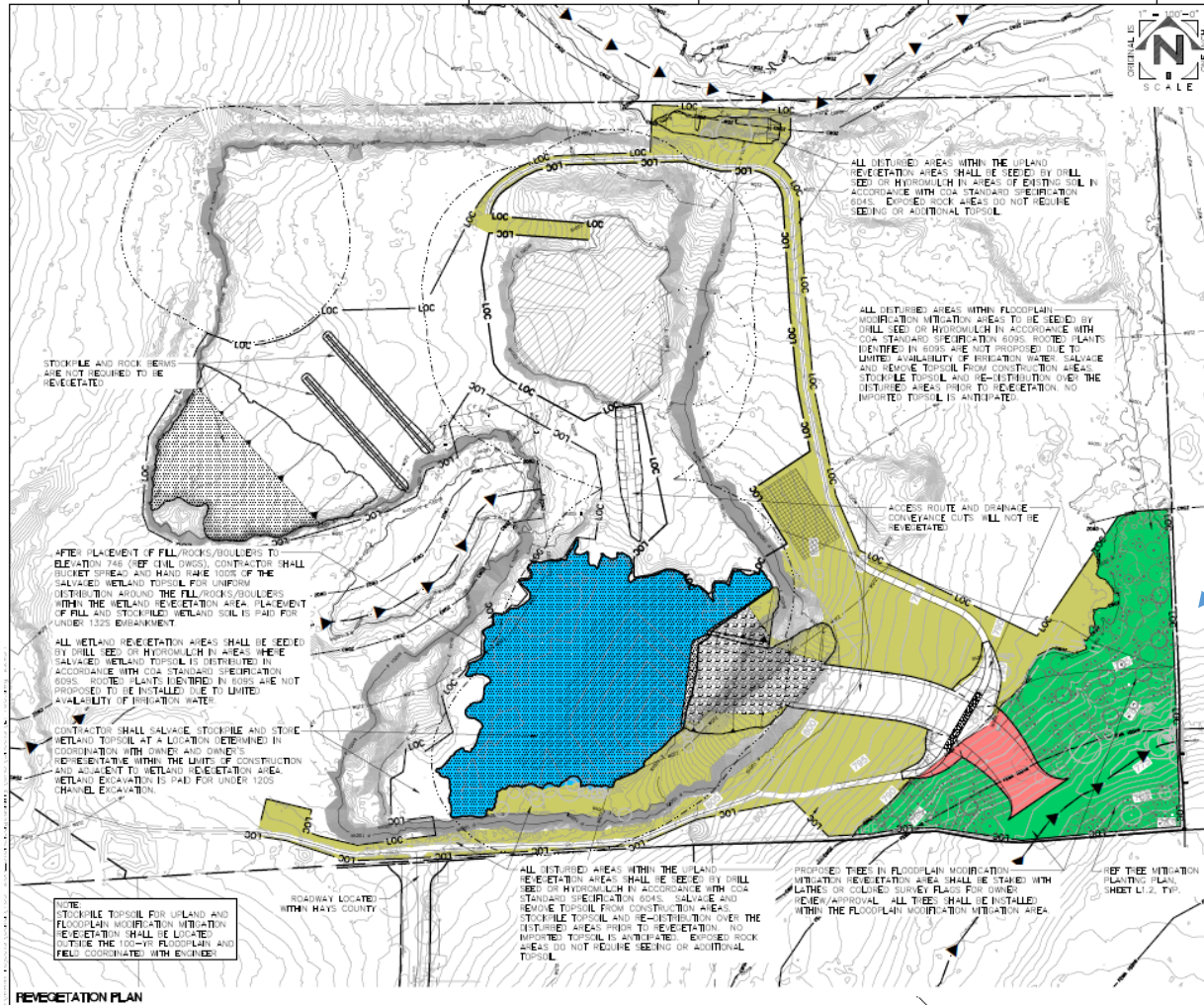




# Landscape Plan



WATERSHED  
PROTECTION



## LEGEND

- AVAILABLE MITIGATION AREA WITHIN CRITICAL WATER QUALITY ZONE
- DISTURBED AREA WITHIN FLOODPLAIN
- UPLAND REVEGETATION AREA
- FLOODPLAIN MODIFICATION MITIGATION REVEGETATION AREA
- WETLAND REVEGETATION AREA

- The project will provide 3 acres of floodplain restoration which is ~140% of the required mitigation for the proposed floodplain modification in a CWQZ.
- The project will provide 5.23 acres of upland restoration.





# Summary

**Significant long-term benefits completing this unique project.**

**Requires amending to Land Development Code(LDC) limits set by the Save Our Springs Ordinance covering:**

- **Water Quality: LDC 25-8-211**
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# Thank You!