



Little Bear Creek Recharge Enhancement Project

C20-2023-0009

Capital Improvement Project 6660.024

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



What is an SOS Amendment?

- 1992 Save Our Springs ordinance adopted by citizen initiative.
- Per 25-8-515, variances to SOS are not allowed
- Three-quarters majority of Council must approve amendments to SOS.
- Council approved resolution 20230423-026 to initiate the SOS amendment on April 23, 2023.
- Code & Ordinances Joint Subcommittee voted support of the amendment on June 21, 2023.



Variances



- 25-8-263 (*Floodplain Modification*) to allow floodplain modification within a Critical Water Quality Zone (CWQZ).
- 25-8-341 (*Cut*) and 25-8-342 (*Fill*) to allow cut and fill in excess of 4 feet.
- 25-8-482 (*Water Quality Transition Zone*) to allow development in a water quality transition zone that lies over the Edwards Aquifer recharge zone in the Barton Springs Zone.



Little Bear Recharge Enhancement Project

- Divert 30-50% of storm flows in Little Bear Creek over 50 cfs.
- Diverted water enters the quarry through a diversion channel.
- Diverted water pools in the quarry (few ft to 25 ft).
- Water slowly recharges the aquifer.
- Increases storage in aquifer and flows at Barton Springs.
- Supports aquatic and terrestrial species dependent on water.








Little Bear Recharge Enhancement Project

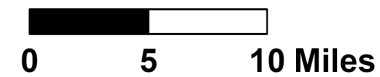
- Upstream drainage area is approximately 6,900 acres.
- 42% (approximately 2,900 acres) is protected from future development by City of Austin Water Quality Protection Lands (WQPL) and conservation easements Hill County Conservancy.
- Project capitalizes on WQPL water protection.

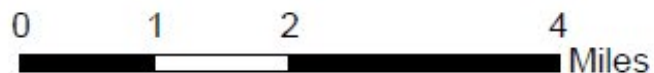
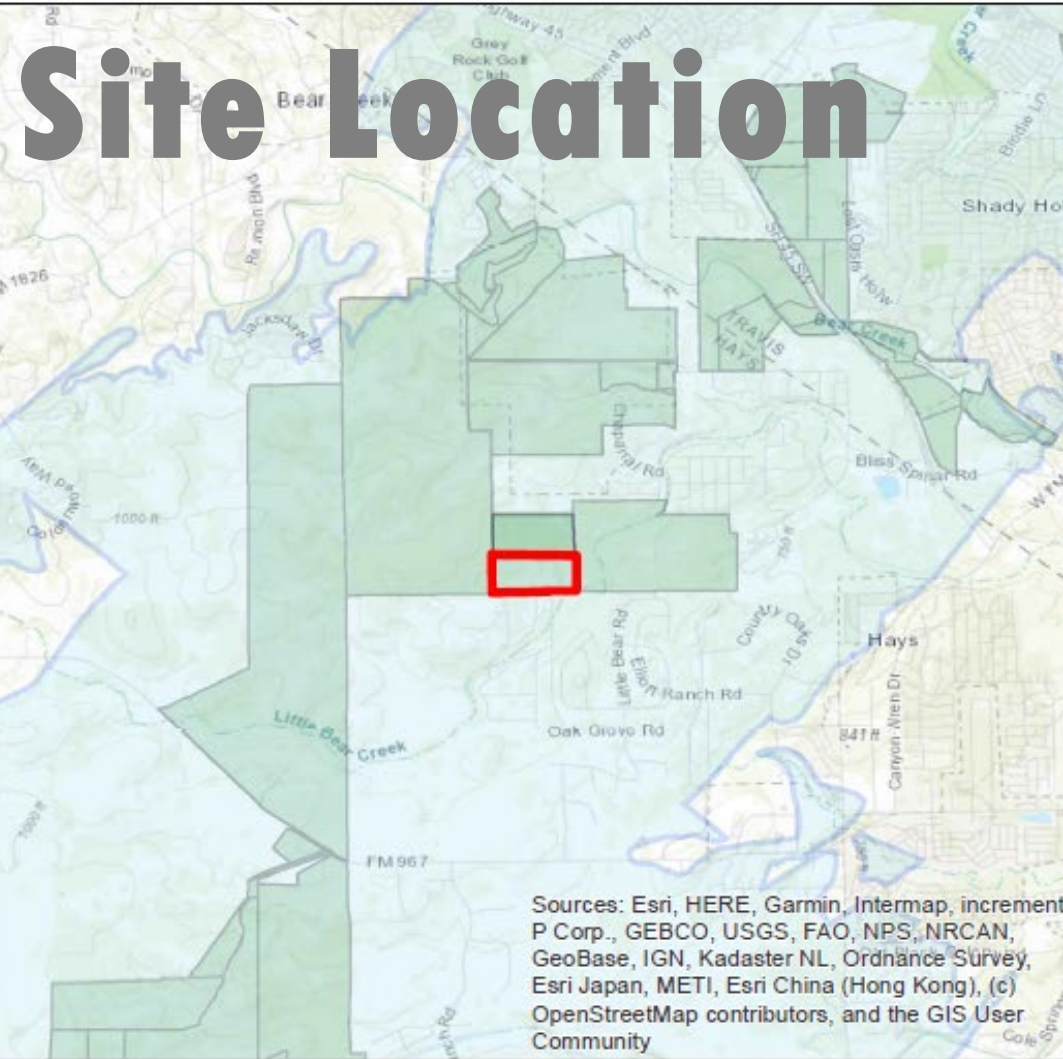


C20-2023-0009

Site

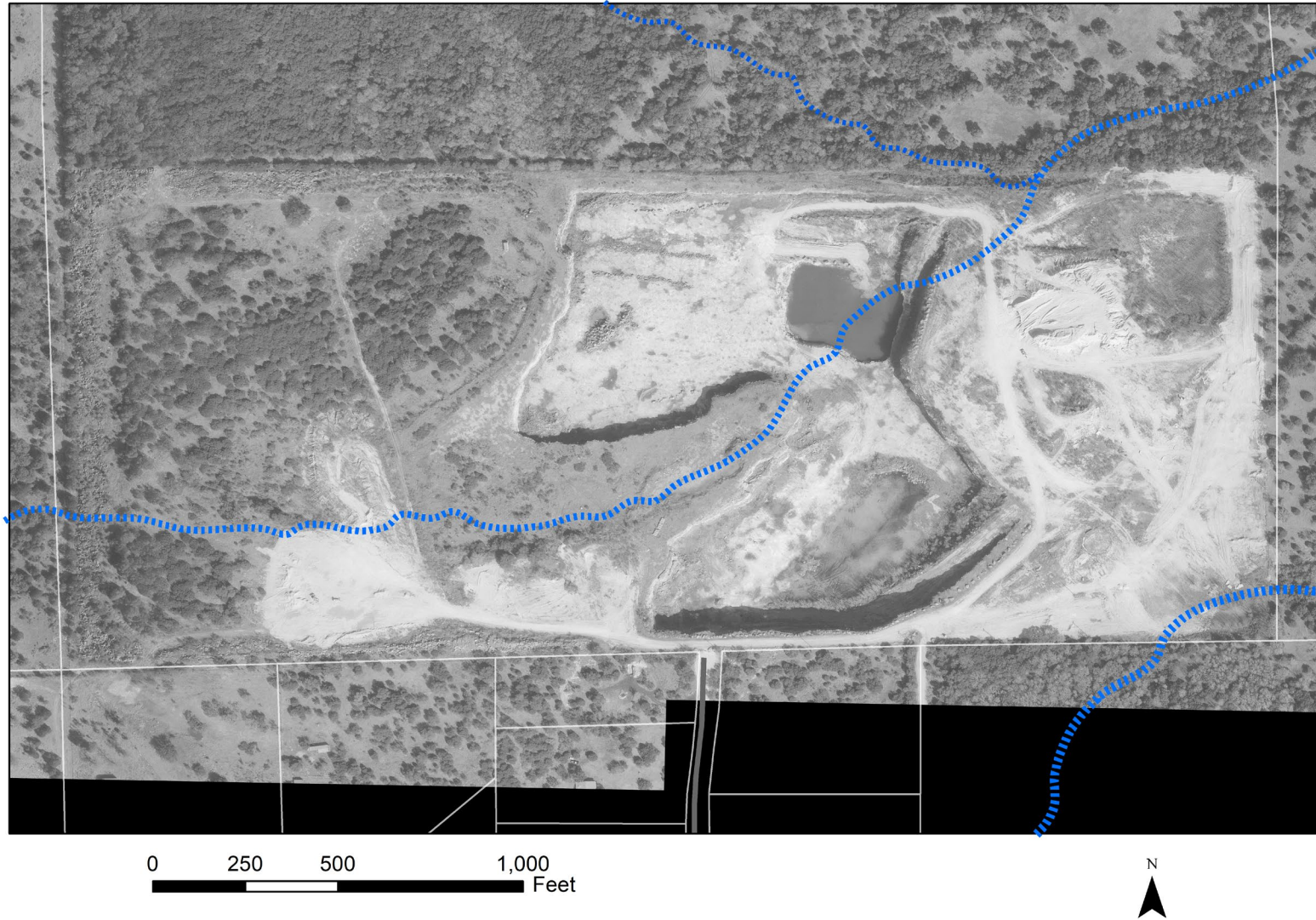
-  Austin ETJ
-  Austin City Limits
-  Edwards Aquifer Recharge Zone
-  Edwards Aquifer Contributing Zone
-  Watershed Areas Full Extent







1997



[illegible]



Site Location



Stoneledge (Wenzel) Quarry – Northwest View



Little Bear Creek Channel –Southwest/Upstream View



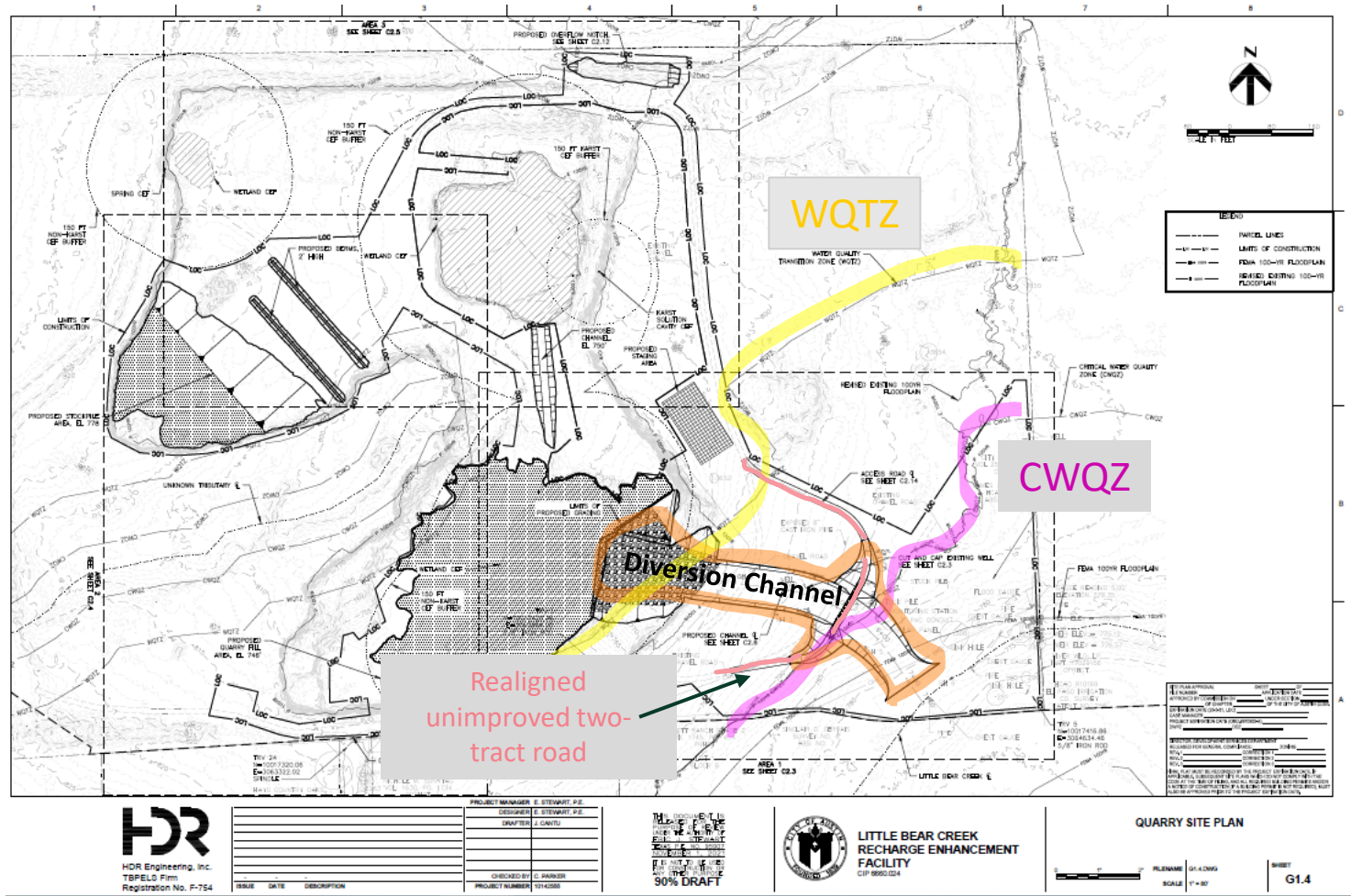
Floodplain Modification and Construction in WQTZ

LDC 25-8-263

To allow floodplain modification within a Critical Water Quality Zone (CWQZ).

LDC 25-8-482

To allow development in a water quality transition zone (WQTZ) that lies over the Edwards Aquifer Recharge Zone in the Barton Springs Zone.



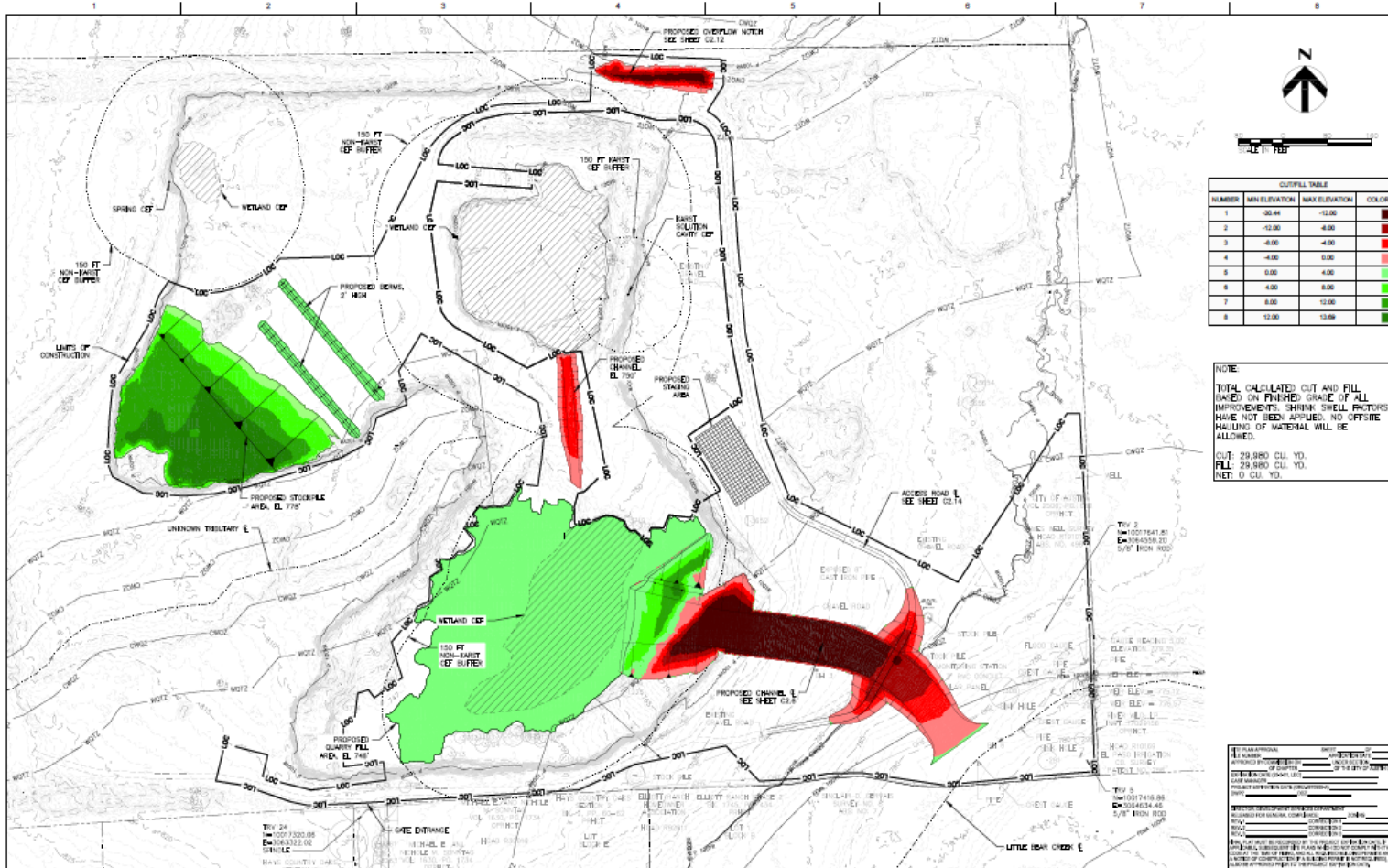


Cut and Fill



**WATERSHED
PROTECTION**

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



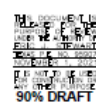
CUT/FILL TABLE			
NUMBER	MIN ELEVATION	MAX ELEVATION	COLOR
1	-30.44	-12.00	Dark Red
2	-12.00	-8.00	Red
3	-8.00	-4.00	Light Red
4	-4.00	0.00	Light Green
5	0.00	4.00	Green
6	4.00	8.00	Light Green
7	8.00	12.00	Green
8	12.00	13.69	Dark Green

- To allow cut in excess of 4 feet.
- To allow fill in excess of 4 feet.



HDR Engineering, Inc.
TSP/ELIS Firm
Registration No. F-754

ISSUE	DATE	DESCRIPTION



**LITTLE BEAR CREEK
RECHARGE ENHANCEMENT
FACILITY**
CIP 9655.024

CUT/FILL MAP



PLANESHEET CIP 9655.024
SCALE 1" = 100'

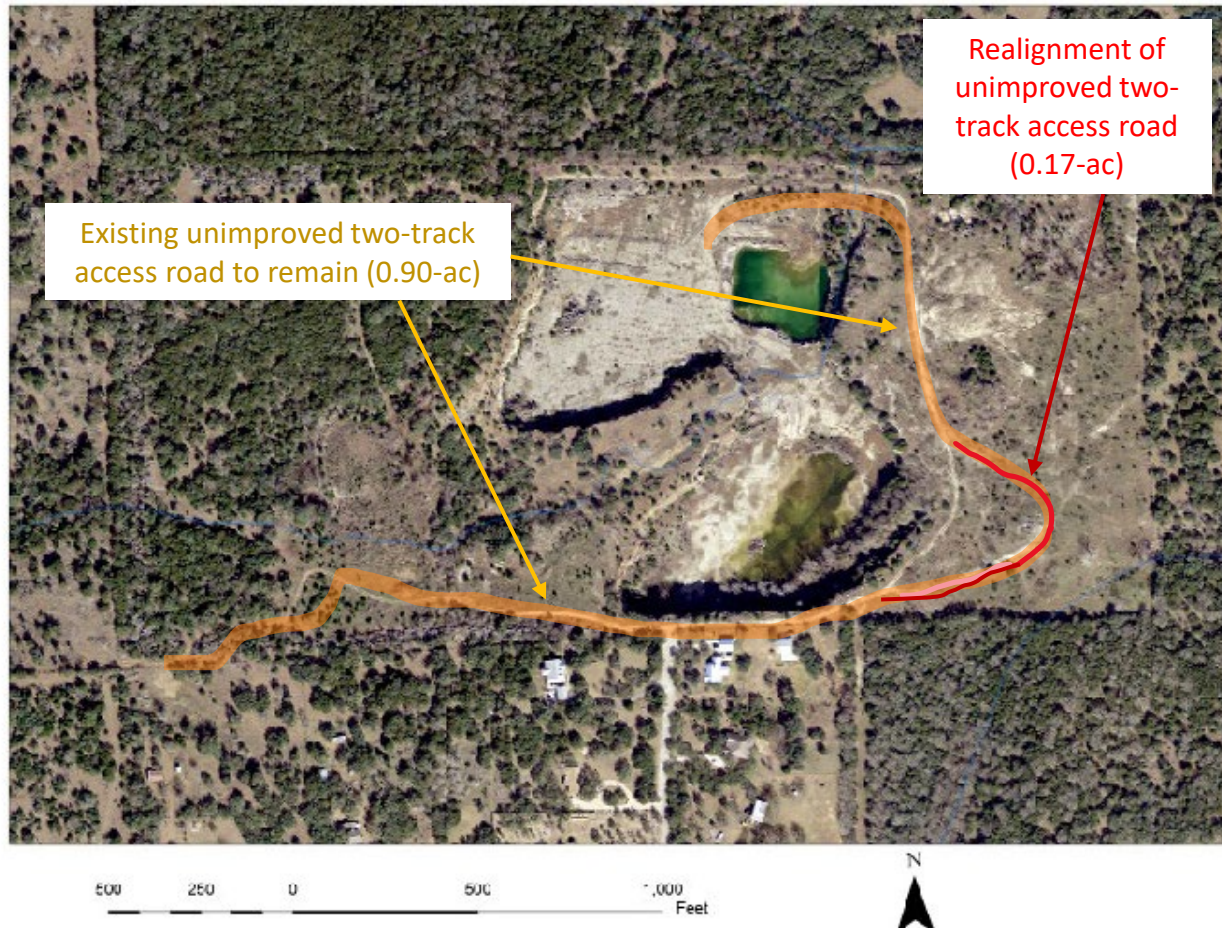
SHEET
C2.2



Water Quality

LDC 25-8-151

2018



Innovative Management Practices

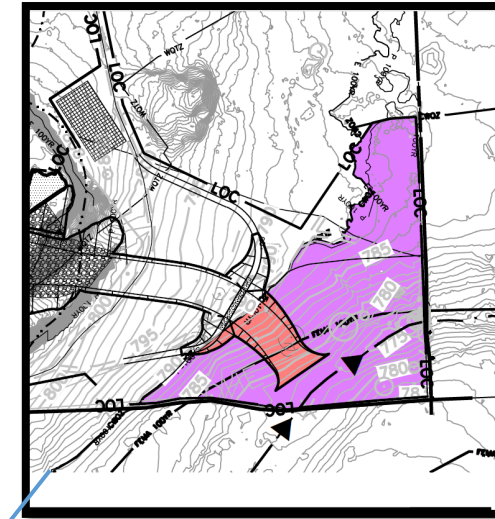
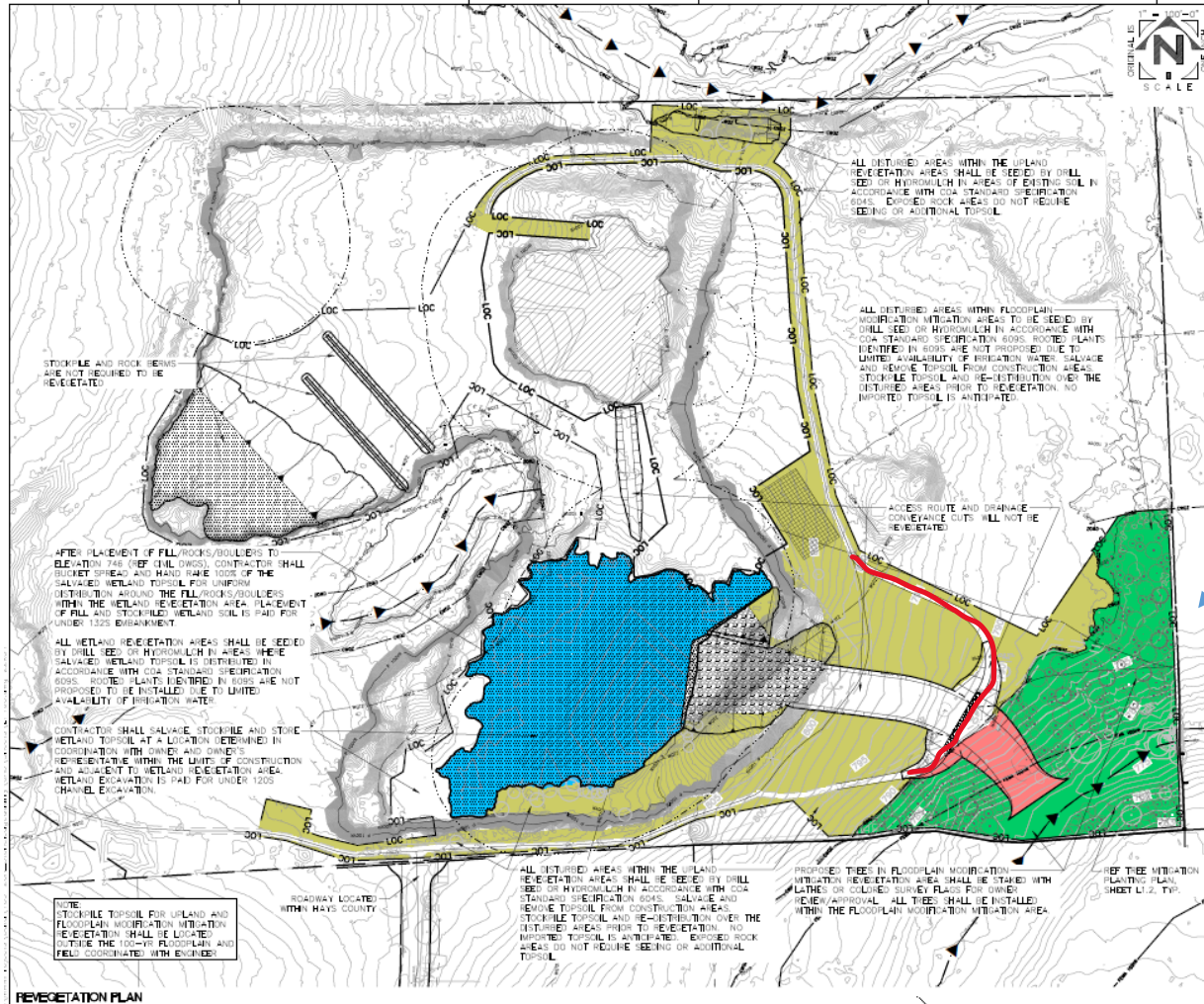
- Combination of infiltration area and natural vegetated filter strips.
- Water quality treatment for all new impervious cover or an equivalent area.
- Like the water controls used at Zilker Park Disc Golf area.
- Approved by water quality engineers in Watershed Protection Dept.



Landscape Plan



WATERSHED
PROTECTION



- 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.



Staff Recommendation

- **Staff recommends approval of the proposed amendment and associated variances with the following conditions:**
- The project will provide compliant SOS non-degradation water quality treatment for all new and reconstructed impervious cover or equivalent area with innovative management practice in accordance with LDC 25-8-151.
- The new impervious cover proposed by the project is limited to an unimproved road with gated and restricted access for use by City of Austin staff in maintenance, land management and educational activities.
- 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.
- The project will pay into the Tree Fund in lieu of providing tree mitigation on-site.



Questions?

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