Lake County Trail. The pond will provide water quality and storage for the 100year/24 hour storm event for a portion of proposed Hancock Road along with the trail and offsite area coming from the Black West property.

In addition, there is additional impervious proposed due to the realignment of Old Highway 50 from Turkey Farms Road to the New Highway 50/Black West intersection. This new impervious area (1.05 acres) is being diverted to the SkyRidge Pond J. No adverse impacts are anticipated to the SkyRidge Pond J since the project design proposes to remove 1.14 acres of old highway 50 from the SkyRidge Pond J basin. The result is a reduction in overall impervious area to the SkyRidge Pond J of 0.09 acres.

Basin #2 – From New Hwy 50/Blackwest Intersection to North of Fosgate Avenue (Stations 211+00 to 256+80):
This basin is located mostly on the undeveloped Blackwest property. The proposed Pond 2 is located adjacent to the east right-of-way line of Hancock Road and just south of Jim Hunt Road. A control structure will be installed in the pond to provide an overflow that discharges to the east into land-locked Patterson Lake (Pond Chain 555-1).

The pre-development basin for the attenuation analysis includes only the project area from Stations 214+10 to 233+80.

Basin #3 – From Station 233+80 to 240+20 (Big Sky Subdivision):
The proposed Hancock Road within this segment is discharging to proposed Pond 2 which removes 1.88 acres from the subdivision. However, the new alignment impacts the existing subdivision and its stormwater management system. In **Appendix D,** the existing SJRWMD permit data (permit #42-069-101701-1) has been included along with the proposed changes to those calculations based upon the impacts caused by the proposed project.

Basin #4 – From North of Fosgate Avenue to Project End (Stations 256+80 to End of Project):
The runoff from the roadway is to be collected and directed into the existing pond (NODE 30) within The Reserve at Minneola subdivision. The SJRWMD permit number for this subdivision is 4-069-92447-1. The total area allowed in the pond from Hancock Road is 2.341 acres of which 1.288 acres can be impervious area. Based upon the proposed improvements of Hancock Road, only the runoff from station 257+00 to the end of the project can be accommodated for in this pond. The total area discharging to the pond is 1.95 acres of which 1.25 acres is impervious.

Adjacent to the north end of the project continues another widening project is being designed by Lake County. There is no drainage co-mingling between the two projects.

Floodplains and Floodways

Flooding History:

According to Lake County staff, the project has no flooding issues. However, there is some existing erosion issues just east of the intersection of Old Hwy 50 and Hancock Road.

Floodways:

There are no regulatory floodways located within the limits of this corridor.

Floodplains:

Based upon the FEMA Flood Insurance Rate Map (Map No. 12096C0555 D) and current Lake County GIS, there is one (1) location within the project limits that is considered to have a 100 year floodplain. This location has an established elevation and is shown below.

Floodplain Name	Floodplain Elevation (NAVD 1988)	Floodplain Elevation (NGVD 1929)
Pond Chain 555-1 (Patterson Lake)	85.0	84.0

Source: FEMA FIRM's, July 3, 2002
The Conversion equation from NAVD 88 to NGVD 29 datum's is (NAVD 88)-(NGVD 29) = 0.965 ft.

Impacts to the 100 year floodplain are not anticipated. **See Appendix F for Floodplain Information.**

Geotechnical

Geotechnical information was obtained in the areas of both Ponds 1, 2, and the Big Sky pond modification. Below is a table identifying various pond control parameters based upon information provided by Andreyev Engineering, Inc. and is also included in **Appendix G.**

50126-4

Pond Number	Bottom of Aquifer Elevation (ft)	SHWT (ft)	Horizontal Hydraulic Conduct. (ft/day)	Unsatur. Vertical Hydraulic Conduct. (ft/day)	Storage Coefficient
Pond 1	81.0	92.0	40	26	0.25
Pond 2	56.0	80.0	32	21	0.25
Big Sky (Pond #3)	90.0	91.0	40	26	0.25