



# City of Grand Island

Tuesday, July 16, 2002

Study Session

## Item -2

### Final Report for Platte Valley Industrial Park Drainage

*Engineering consulting firm Olsson Associates of Grand Island was hired to study the stormwater drainage for the Platte Valley Industrial Park. The drainage system within the Park was part of the platting/subdividing of the property. An outlet for the ditch and detention cell system is needed. Olsson Associates will present two alternatives for carrying the stormwater to an outlet.*

*Staff felt it was appropriate to brief the Council on the results of the study before we begin discussions with property owners downstream of the Industrial Park. When more precise details of the plan as well as Right-of-Way requirements are known, another presentation will be made. A Public Hearing will be held and approval to acquire Right-of-Way by Resolution requested from the Council so that discussions on acquisition of Right-of-Way can begin.*

Staff Contact: Steve Riehle, City Engineer/Public Works Director

# **Stormwater System Platte Valley Industrial Park Grand Island, NE**

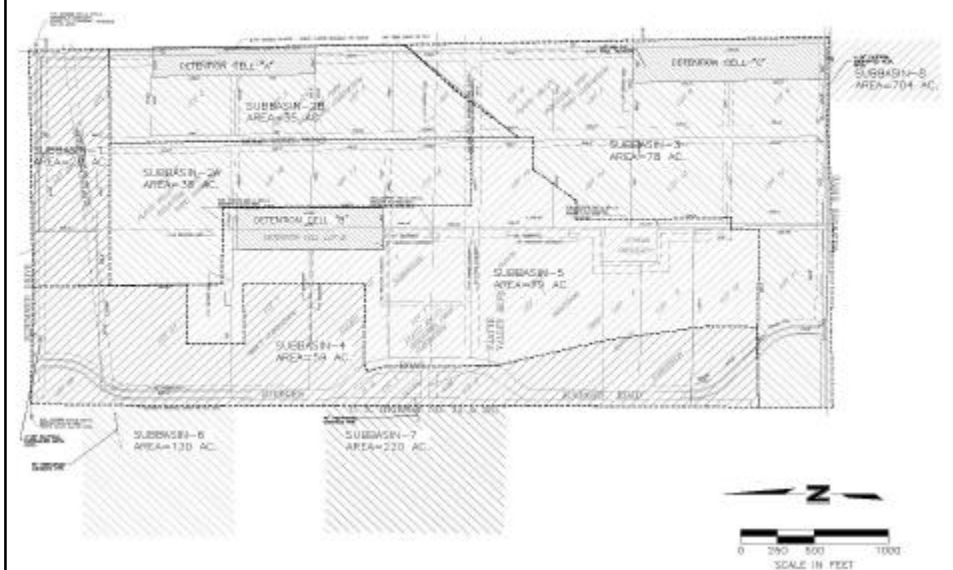
## **Scope of Study**

- Review existing stormwater runoff characteristics of the Platte Valley Industrial Site.
- Evaluate existing stormwater structures and determine runoff from the site and surrounding areas.
- Evaluate how development of the site will effect stormwater runoff.
- Evaluate various stormwater outlets for the Platte Valley Industrial Site.
- Complete hydrologic/hydraulic calculations and preliminary designs for the storm water improvements.

## Existing System

- Open ditches.
- Pipe outlets.
- Detention cell.

## Existing System

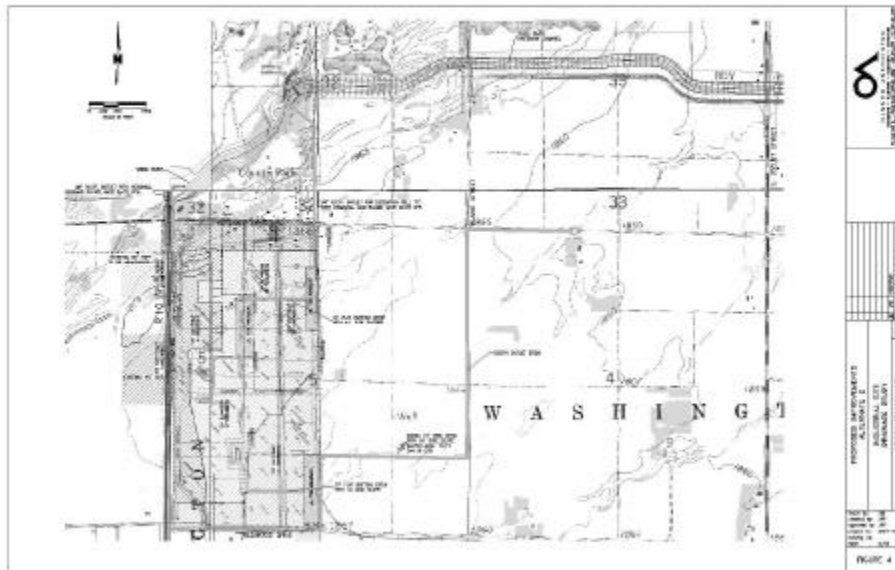




## Summary of Costs for Alternate 1

■ Onsite Improvements	\$230,230
■ West Drain Improvements	\$184,990
■ North Drain Improvements	\$ 76,720
■ South Drain Improvements	\$109,005

## Alternate 2



## **Summary of Costs for Alternate 2**

■ Onsite Improvements	\$230,230
■ West Drain Improvements	\$ 70,200
■ North Drain Improvements	\$285,220
■ South Drain Improvements	\$109,005

## **Recommendations-On Site Improvements**

- Three detention cells should be constructed in the areas shown in Figure 2 to provide storm water retention for the Industrial Park.
- Install a 36” RCP from Detention Cell “A”, north under Schimmer Drive to the bridge under the Union Pacific Railroad tracks, approximately 750 feet north of Schimmer Drive.
- Estimated Cost- \$230,230

## **Recommendations-West Drain**

- The existing 60” RCP that is installed under Highway 281 should be removed or plugged to prevent any water within the Wood River Diversion Channel Levee from entering the Industrial Park storm water system.
- The existing drainage channel through Hall County Park should be cleared, grubbed, and re-graded to provide an adequate outlet for drainage from the culverts under Schimmer Drive
- Estimated Cost- \$184,990

## **Recommendations-North Drain**

- Grade an outlet ditch from the bridge under the Union Pacific Railroad tracks north of Schimmer Drive north and east along the Wood River Diversion Channel to Blaine Street.
- Re-grade the south channel of the Wood River Diversion Channel from Blaine Street, 4500 feet east.
- Estimated Cost- \$76,720

## **Recommendations-South Drain**

- Construct a channel from the culverts under Wildwood Drive to the steel pipes under the Union Pacific Railroad tracks.
- Install 2-36" RCP under the railroad tracks at the south end of the Industrial Site.
- Grade a ditch from the railroad, east and north to an existing box culvert under Schimmer Drive.
- Estimated Cost- \$109,005