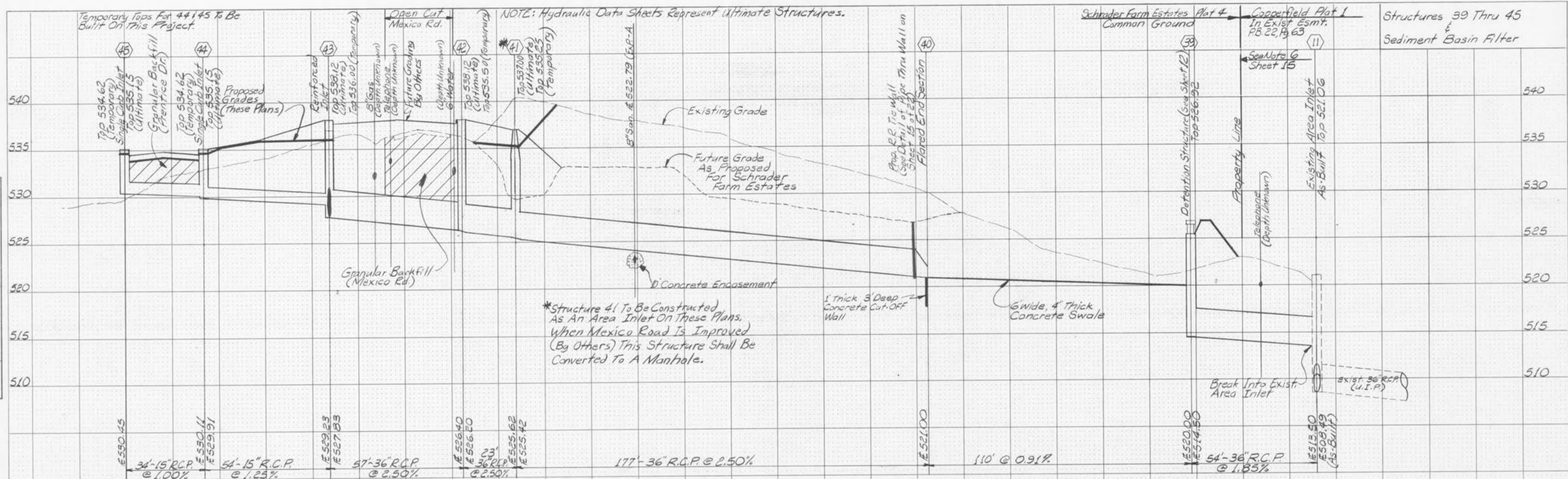


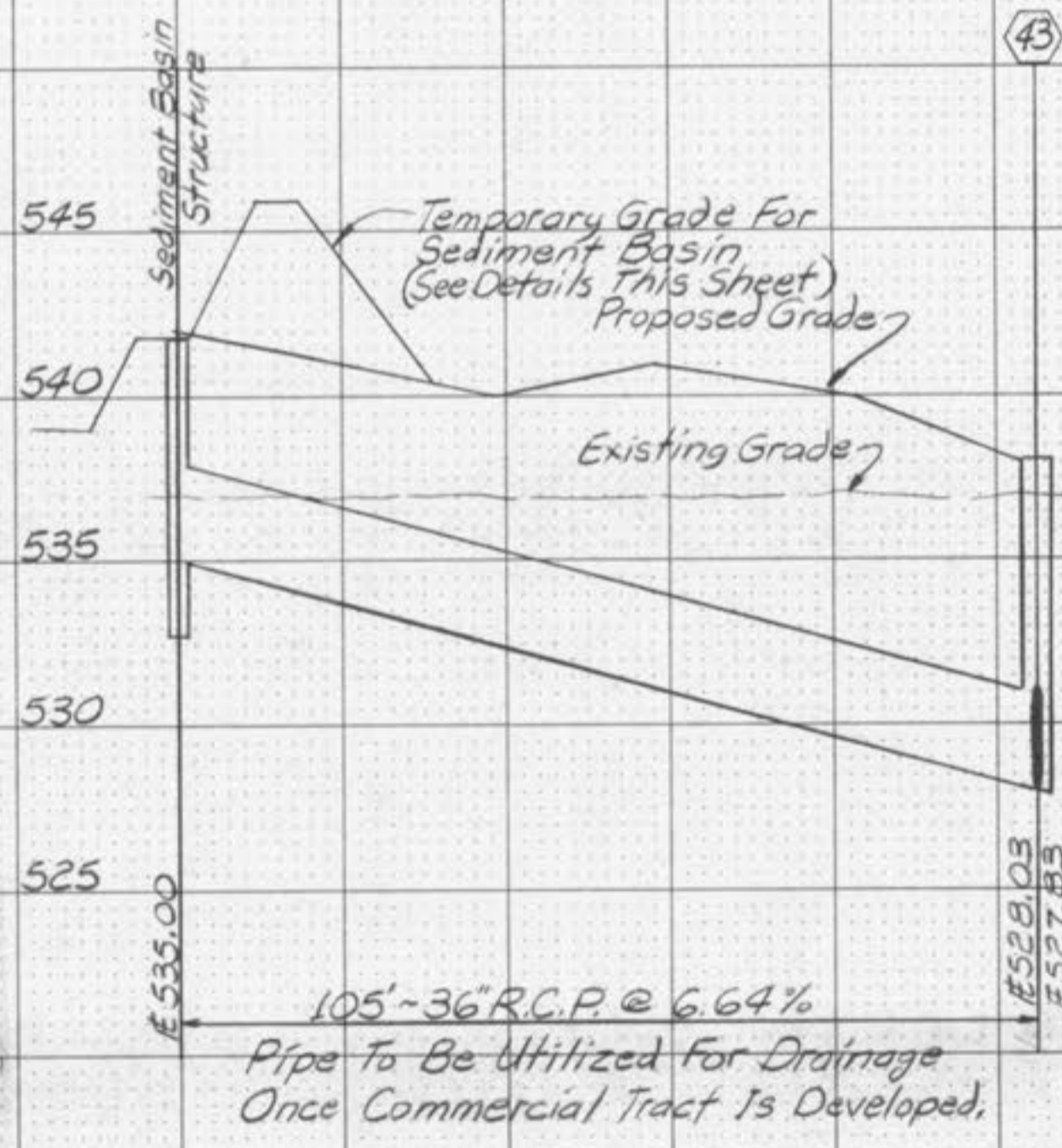
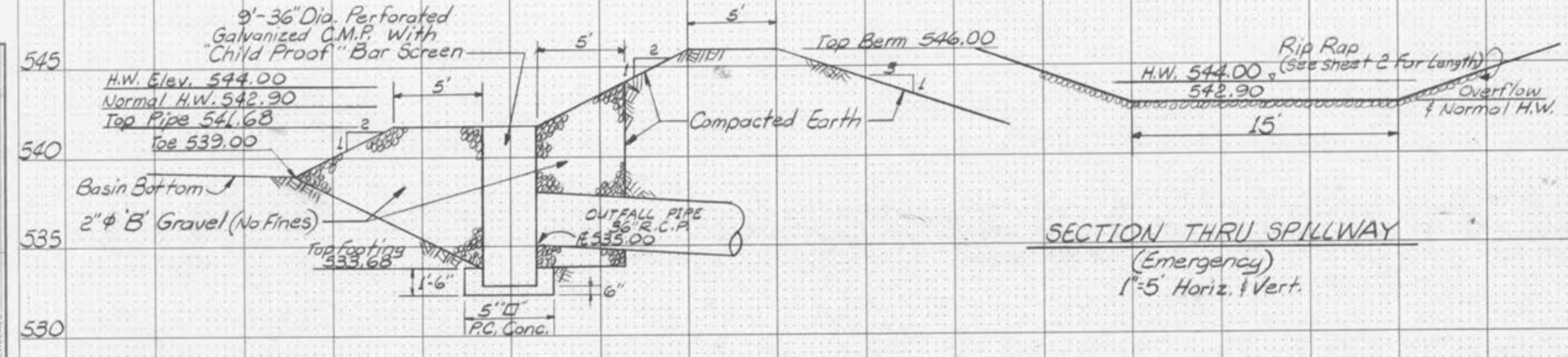
FINAL SURVEY
 SURVEYED BY
 DATE
 NOTE BOOK NO.
 TEMPLATE NO.
 AREA CHECKED

ORIGINAL SURVEY
 SURVEYED BY
 DATE
 NOTE BOOK NO.
 TEMPLATE NO.
 AREA CHECKED



*Structure 41 To Be Constructed As An Area Inlet On These Plans. When Mexico Road Is Improved (By Others) This Structure Shall Be Converted To A Manhole.

All Top Elevations Of Area Inlets & Manholes, And Flowline Elevations Of Flared End Sections At Discharge Points Have Been Established From The Grading Plan And/Or Topographic Survey. Prior To Construction Of The Sewers The Elevations Shall Be Verified Following Grading Of The Site



*SEDIMENT BASIN FILTER (Washed Gravel) 1'-5' Horiz. & Vert.

SEDIMENT BASIN NOTES
 1. THE SEDIMENT BASIN, BAR SCREEN AND OTHER SEDIMENT CONTROL DEVICES SHALL BE CONSTRUCTED AND OPERABLE PRIOR TO ANY OTHER EXCAVATION ON THE SITE.
 2. THE SEDIMENT BASIN SHALL BE INSPECTED BY A REGISTERED ENGINEER, AND ALL THE ACCUMULATED SILT REMOVED. THE BASIN SHALL BE REINSPECTED BY THE ENGINEER. LINES AND GRADES AS NECESSARY, IN NO INSTANCE SHALL THE SILT ACCUMULATE IN THE BASIN TO A DEPTH HIGHER THAN WITHIN ONE (1) FOOT OF THE TOP OF THE C.M.P. REINFORCING PIPE. THE WASHED GRAVEL FILTER SHALL BE REPLACED WHEN SATURATED WITH SEDIMENT.

Q = TRIBUTARY TO BASIN (ASSUME ALL AT UNDEVELOPED RATE)

RIVER TRIBUTARY TO BASIN = 10.85 AC.
 OFF-SITE TRIBUTARY TO BASIN = 6.87 AC.
 (10.85 AC. x 6.87 AC.) x 2.15 C.F.S./AC. = 37.81 C.F.S. (25 YR.)
 (10.85 AC. x 6.87 AC.) x 2.08 C.F.S./AC. = 36.43 C.F.S. (100 YR.)

DESIGN FLOW CALCULATIONS
 BASED ON WEIR FLOW Q = C L H^{3/2} MINOR C = 3.0, L = 15' (WEIR LENGTH)
 SOLVING FOR H = 1.10', WITH 100 YR. "Q" = 51.66 C.F.S.

TOP BERM (546.00) PERFORMED (2) x 5' (1.10') x 542.90

HYDRAULIC ANALYSIS AT OVERFLOW (C.M.P. RISEN)

10' C.M.P. RISER TUBE, TOP ELEVATION = H.W. (Elev. 542.90) - OVERFLOW HEIGHT

BASED ON WEIR FLOW Q = C L H^{3/2} MINOR C = 3.0, L = 15' PERIMETER (9' x 42")
 SOLVING FOR H = 1.22', WITH Q (25 YR.) = 37.81 C.F.S.

BASED ON ORIFICE FLOW Q = C A √2gH MINOR C = 0.6, A = 1.38 SQ. FT.
 SOLVING FOR H = 1.22', WITH Q (25 YR.) = 37.81 C.F.S. &
 THEREFORE ORIFICE FLOW CONTROLS. THE TOP OF THE C.M.P. OVERFLOW TO BE SET AT ELEV. 543.90 - 1.22' = 541.68

CITY BASIN VOLUME CALCULATION (Based upon basin geometry)

ELEVATION (sq. ft.)	INCREMENTAL VOL. (cu. ft.)	CUMULATIVE VOL. (cu. ft.)
539	0	0
540	2475	2475
542	11850	14325
544	2800	17125
546	9200	26325

17053 CU. FT. = 10756 CU. FT. THEREFORE ALGAE STORAGE IS PROVIDED.

CITY STORAGE REQUIRED IN BASIN
 PER ANNUAL STORAGE CHART (CITY OF D'ALTON, MISSOURI)
 NATIONAL MEDIAN RAINFALL COEFFICIENT "C" = 0.57
 SEDIMENT STORAGE = 195 CU. FT. PER ACRE PER YEAR
 TOTAL SEDIMENT STORAGE = 195 x 10.85 AC. = 2105.75 CU. FT. PER YEAR
 5 YEAR STORAGE REQUIRED = 5 x 2070.00 CU. FT. PER YR. = 10350.00 CU. FT.

SEDIMENT STORAGE AT OVERFLOW (BASED UPON 10' DIA. C.M.P.)

ELEVATION (sq. ft.)	INCREMENTAL VOL. (cu. ft.)	CUMULATIVE VOL. (cu. ft.)
539	0	0
540	2475	2475
541.58	5262	7737

*Design Based upon 25-year storm

LAKEVIEW
 STORM SEWER PROFILES

HALL, HALSEY & WIND
 LAND PLANNING
 CIVIL ENGINEERING
 LANDSCAPE ARCHITECTURE

0820 SUNSET OFFICE DRIVE, SUITE 208, ST. LOUIS, MO 63127 - 314/966-5572

Drawn By: VLH
 Checked By: DCW
 Date: 2/28/87
 Project Number: 86025
 Sheet Number: 10 OF 22
 Revisions: City 5-2-87

UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE RECORDS. THEREFORE, THE RELATIONSHIP BETWEEN PROPOSED WORK AND EXISTING FACILITIES, STRUCTURES AND UTILITIES MUST BE CONSIDERED APPROXIMATE AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THEIR EXACT LOCATION AND THE EXISTENCE OF ANY NOT SHOWN.
 ALL UTILITIES SHALL BE LOCATED BOTH HORIZONTALLY AND VERTICALLY TO VERIFY CLEARANCE/OVER OF ANY PROPOSED GRADING, SEWERS, FOOTINGS, ETC. PRIOR TO CONSTRUCTION. UTILITY COMPANY REPRESENTATIVES SHALL BE ON SITE DURING SUCH TIMES THAT EXCAVATION IS TAKING PLACE IN THE VICINITY OF THEIR FACILITIES.