

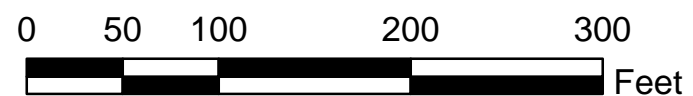
# Attachment H-13: Woodlawn Park Levee Information




**St. Paul District**  
 GEOLOGY  
 GEOTECHNICAL  
**US Army Corps**  
**of Engineers®**

FMMFS\_P2\_geotech\_2009-04.mxd  
 Printed 20 NOV 09

## FMMFS: Credit to Existing Levees Woodlawn Park, 97-13-15 (Moorhead)





ENGINEERING DEPARTMENT  
CONSTRUCTION PLANS FOR  
WOODLAWN PARK DIKE IMPROVEMENTS  
ENGR. NO. 97-13-15

datum - 29  
change to 88 in 02-03

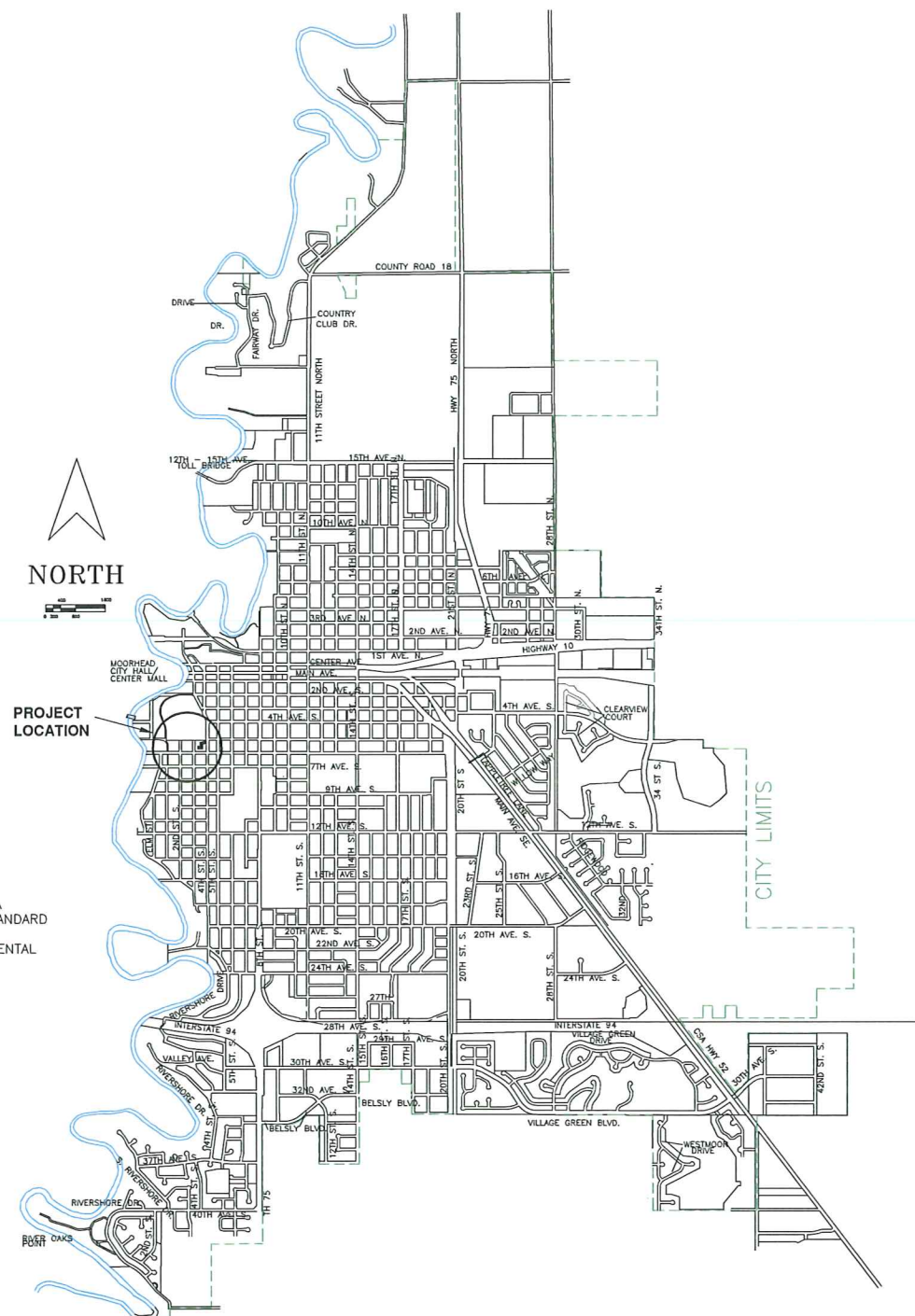
LEGEND

---	PROPOSED OR EXISTING C&G
---	NEW CURB AND GUTTER
---	EXISTING SEWER
---	NEW SEWER
W	WATERMAIN
G	GAS MAIN
T	TELEPHONE -OH OR BURIED
E	ELECTRICAL -OH OR BURIED
---	FENCE
---	DRIVEWAY APPROACH
---	PAVEMENT REMOVAL
---	HEDGE
---	TREE
---	EXISTING MANHOLE
---	NEW MANHOLE
---	EXISTING CATCH BASIN
---	NEW CATCH BASIN
---	HYDRANT
---	GATE VALVE
---	UTILITY POLE

INDEX

SHEET NO. 1 TITLE SHEET AND LOCATION  
SHEET NO. 2 DIKE CONSTRUCTION PLAN  
SHEET NO. 3-4 CROSS SECTIONS

SPECIFICATION REFERENCE  
THE 1988 EDITION OF THE MINNESOTA  
DEPARTMENT OF TRANSPORTATION "STANDARD  
SPECIFICATIONS FOR CONSTRUCTION"  
SHALL GOVERN ALONG WITH SUPPLEMENTAL  
SPECIFICATIONS DATED MAY 2,1994



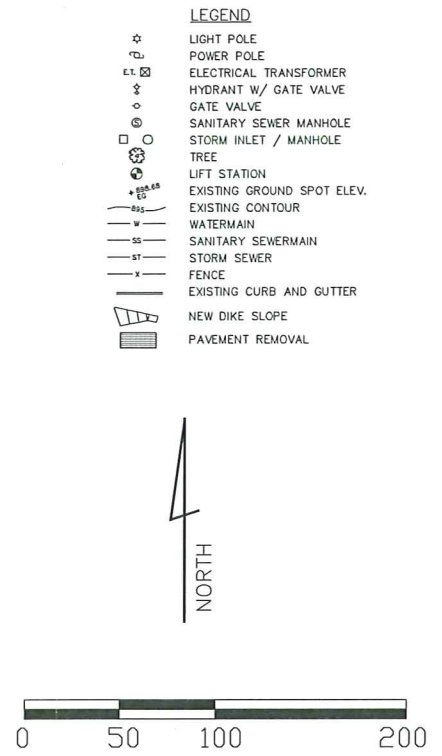
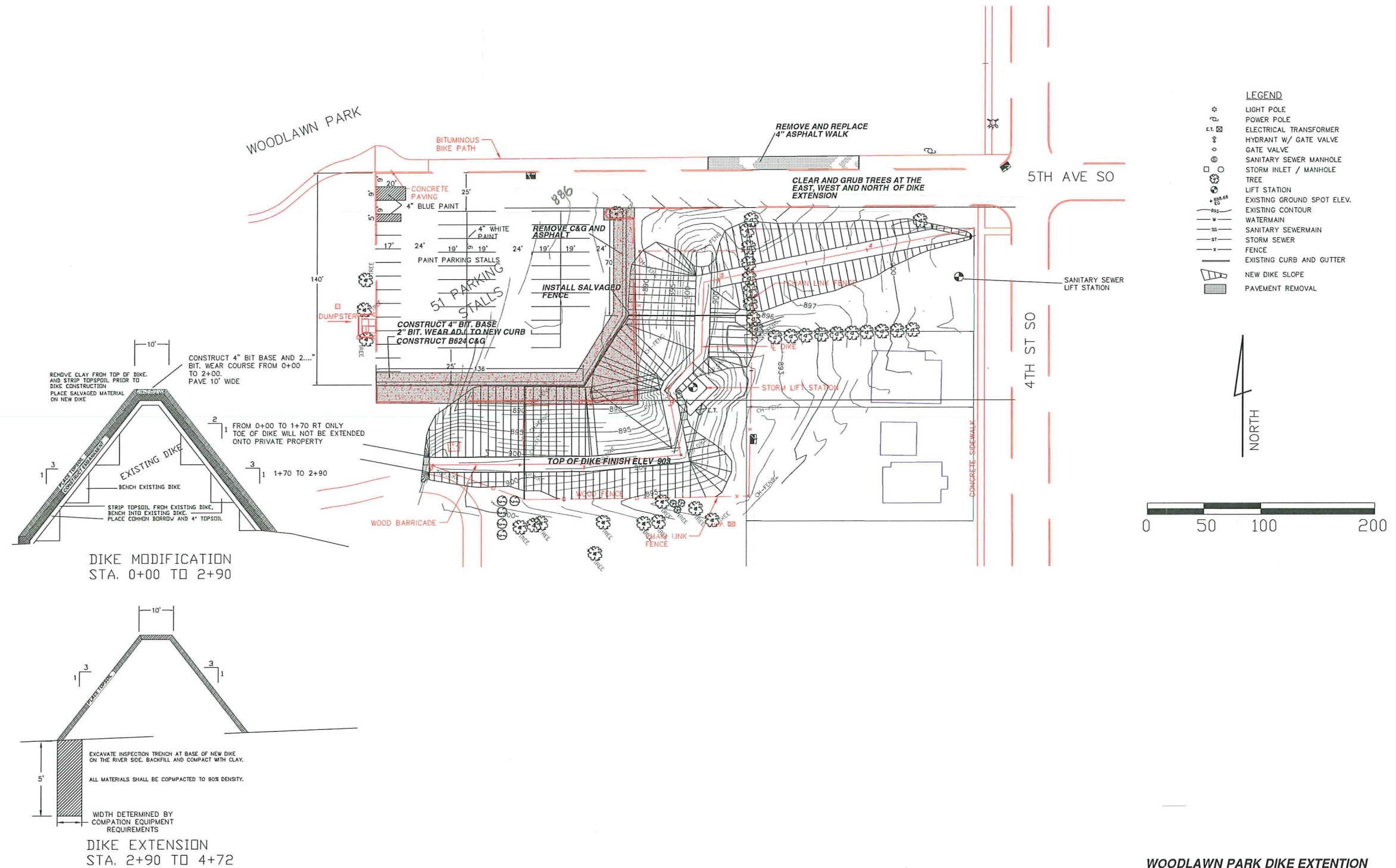
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY  
DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL  
ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

CITY ENGINEER	DATE
	REG. NO 8835
RECOMMENDED FOR APPROVAL	DATE
	DISTRICT STATE AID ENGINEER
RECOMMENDED FOR APPROVAL	DATE
	STATE AID PLANS & SPECS ENGINEER
APPROVED	DATE
	STATE AID ENGINEER

DRAWN BY	CHECKED BY	REVISION	REVISION	REVISION	INSPECTOR	CONTRACTOR	SUBCONTRACTOR	SUBCONTRACTOR	LEGAL NO.	ENGINEERING NO.	SHT. 1 OF 4
									13-15-1997	97-13-15	

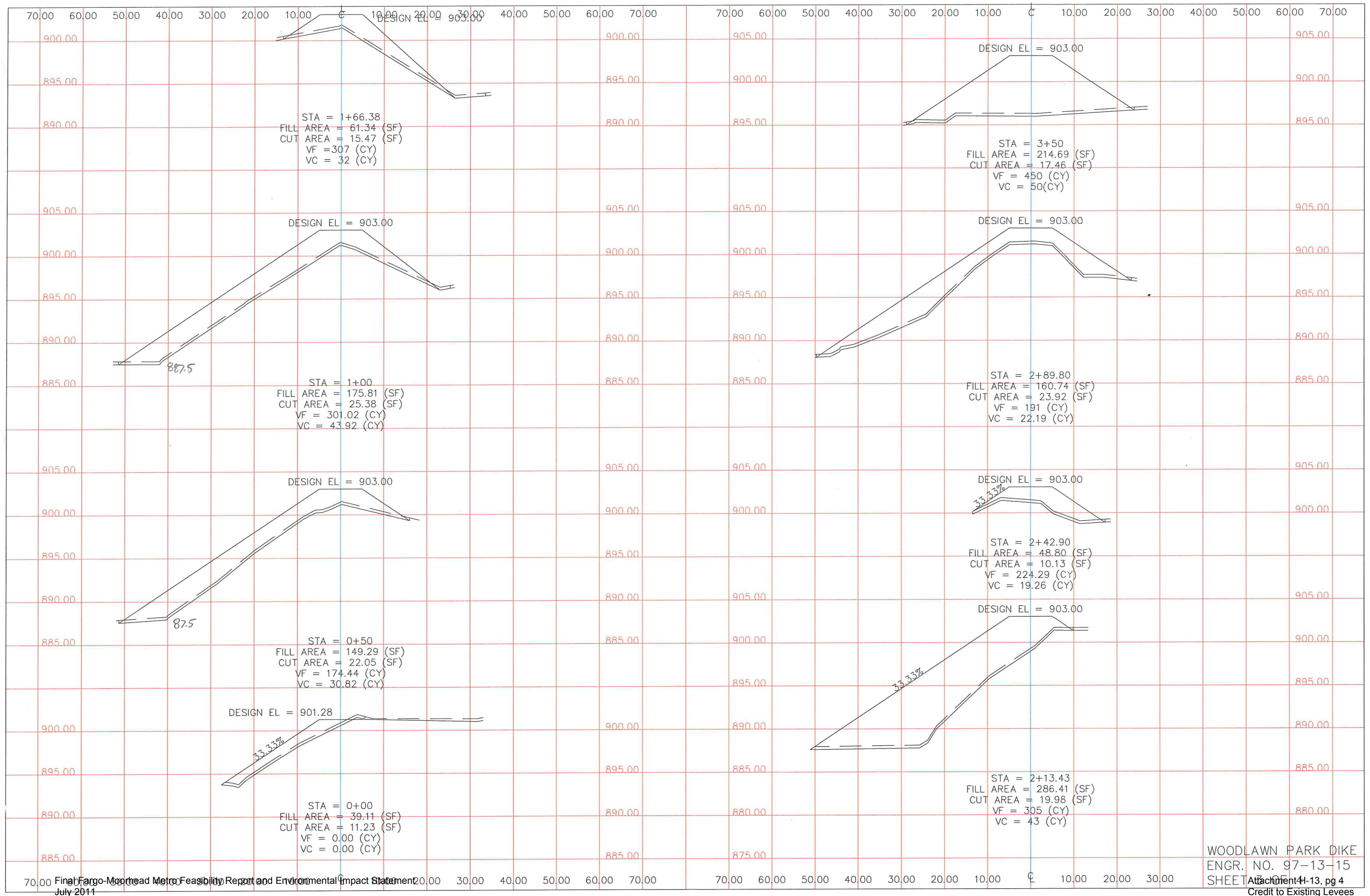


893-897 : 57'  
 897-900 : 40'

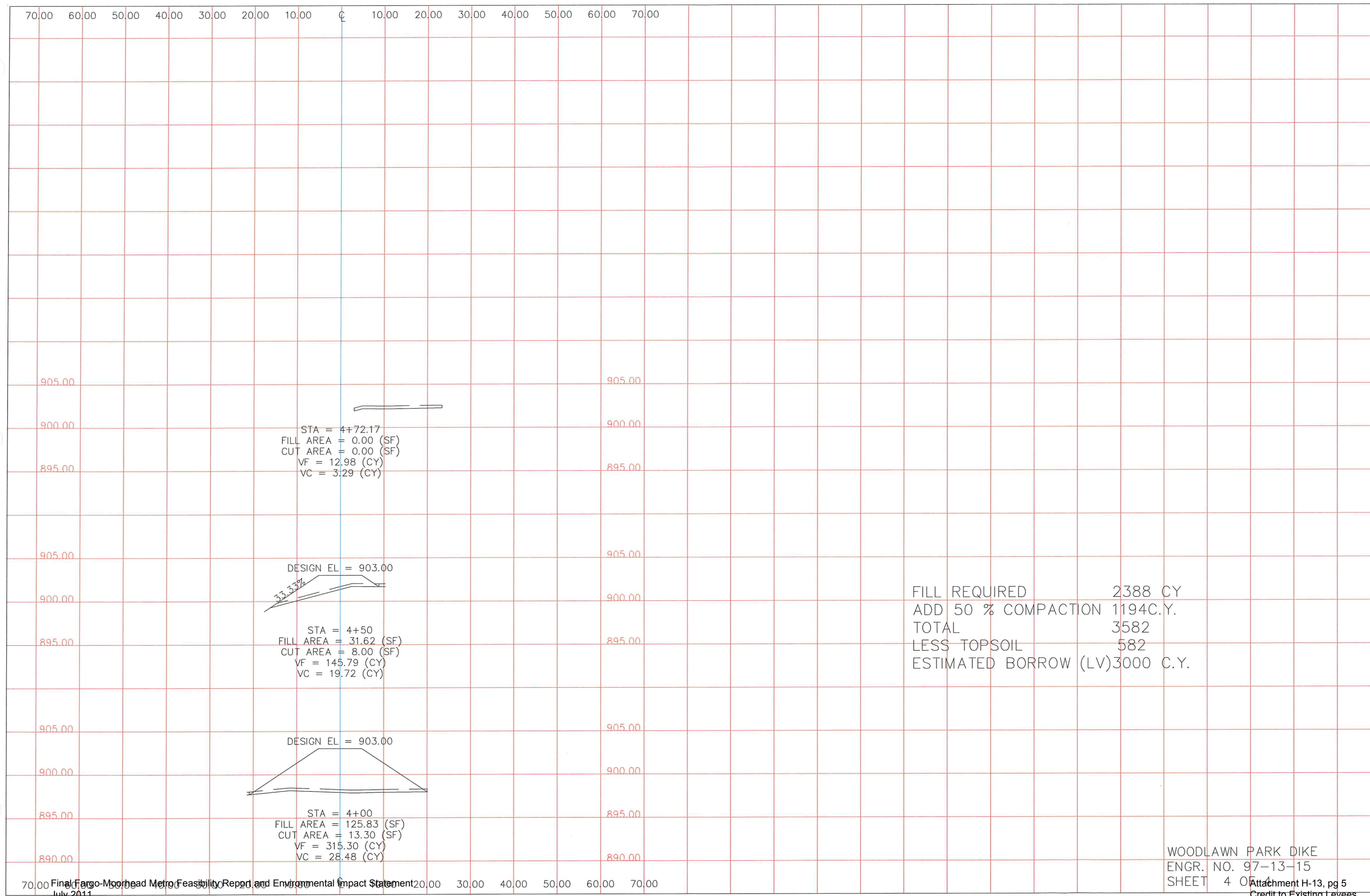


**WOODLAWN PARK DIKE EXTENTION**  
**CITY ENGR. PROJECT 97-13-15**

**SHEET 2 OF 4**







STA = 4+72.17  
FILL AREA = 0.00 (SF)  
CUT AREA = 0.00 (SF)  
VF = 12.98 (CY)  
VC = 3.29 (CY)

DESIGN EL = 903.00  
33.33%  
STA = 4+50  
FILL AREA = 31.62 (SF)  
CUT AREA = 8.00 (SF)  
VF = 145.79 (CY)  
VC = 19.72 (CY)

DESIGN EL = 903.00  
STA = 4+00  
FILL AREA = 125.83 (SF)  
CUT AREA = 13.30 (SF)  
VF = 315.30 (CY)  
VC = 28.48 (CY)

FILL REQUIRED 2388 CY  
ADD 50 % COMPACTION 1194 C.Y.  
TOTAL 3582  
LESS TOPSOIL 582  
ESTIMATED BORROW (LV) 3000 C.Y.