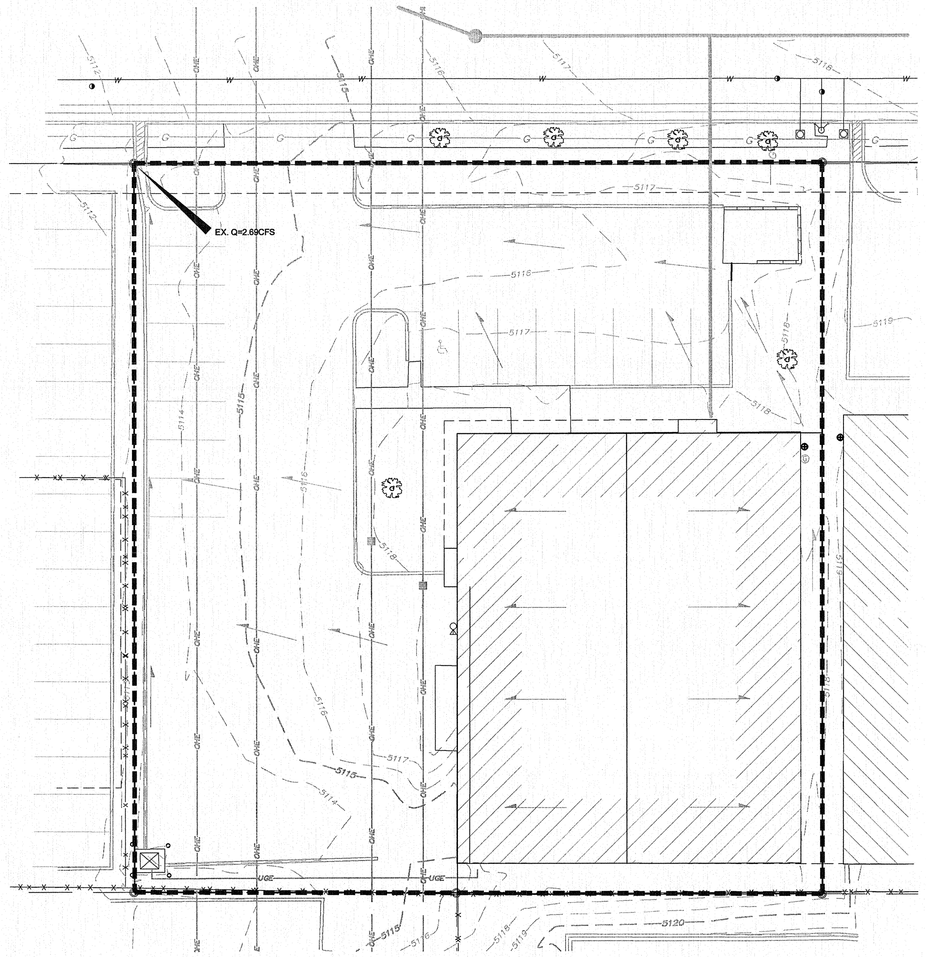
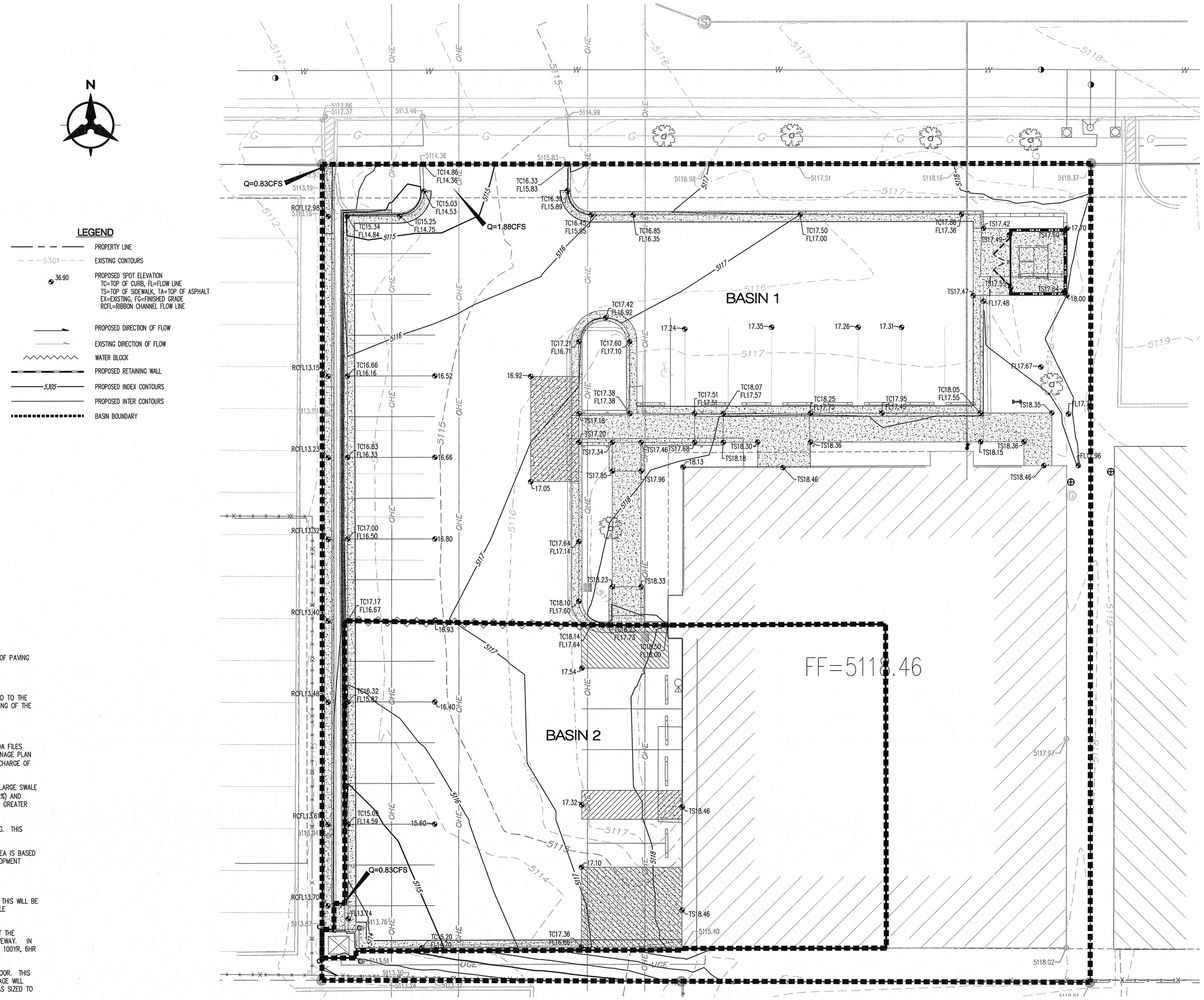


EXISTING CONDITIONS
SCALE 1"=20'



PROPOSED CONDITIONS
SCALE 1"=10'

LEGEND

- PROPERTY LINE
- 5301 EXISTING CONTOURS
- 36.90 PROPOSED SPOT ELEVATION
  TC=TOP OF CURB, FL=FLOW LINE
  TS=TOP OF SIDEWALK, TA=TOP OF ASPHALT
  EX=EXISTING, FG=FINISHED GRADE
  RCFL=RIBBON CHANNEL FLOW LINE
- PROPOSED DIRECTION OF FLOW
- EXISTING DIRECTION OF FLOW
- WATER BLOCK
- PROPOSED RETAINING WALL
- 5305 PROPOSED INDEX CONTOURS
- PROPOSED INTER CONTOURS
- BASIN BOUNDARY

DRAINAGE MANAGEMENT PLAN

I. INTRODUCTION

THE PURPOSE OF THIS SUBMITTAL IS TO PROVIDE AN UPDATED GRADING AND DRAINAGE PLAN FOR THE SITE IMPROVEMENTS TO THE EXISTING SITE AT 3810 COMMONS AVE. NE IN SUPPORT OF PAVING PERMIT AND BUILDING PERMIT APPROVAL.

II. SITE LOCATION

THE SITE IS LOCATED ON 3810 COMMONS AVE. NE WITHIN AN EXISTING OFFICE PARK. IT IS BOUND TO THE NORTH BY COMMONS AVE., TO THE SOUTH BY CENTURY RIO 24 PARKING LOT AND TO THE EAST AND WEST BY EXISTING OFFICE BUILDINGS. THE COA ZONE ATLAS PAGE ASSOCIATED WITH THE SITE IS F-17. THE TOTAL SITE AREA IS APPROXIMATELY 0.63 ACRES. ONLY THE PARKING OF THE SITE WILL BE AFFECTED AS A RESULT OF THIS PROJECT (APPROXIMATELY 0.42 ACRES) REFERRED TO HEREAFTER AS, THE SITE.

III. EXISTING HYDROLOGIC CONDITIONS

CURRENTLY THE SITE IS FULLY DEVELOPED WITH AN EXISTING 8,000+SF BUILDING, ASSOCIATED PARKING AND LANDSCAPING. THERE WAS NO EXISTING DRAINAGE STUDY FOUND WITHIN THE COA FILES HOWEVER AN APPROVED GRADING AND DRAINAGE PLAN WAS FOUND WITHIN THE BUILDING PERMIT ARCHIVES WHICH DETAILED THE DRAINAGE. IT WAS NOTED WITHIN THAT GRADING AND DRAINAGE PLAN (ENGINEER STAMP DATED 10-14-1991) THAT PER THE MASTER DRAINAGE/GRADING PLAN FOR JEFFERSON COMMONS (APPROVED JANUARY 1990 AND REVISED AUGUST 1990) THAT "FREE DISCHARGE OF DEVELOPED FLOWS INTO COMMONS AVE NE IS ALLOWED".

THE ENTIRE SITE SLOPES TOWARD AN EXISTING SIDEWALK CULVERT LOCATED AT THE NORTHWEST CORNER OF THE PROPERTY WHERE IT OUTFALLS DIRECTLY TO COMMONS AVE. THERE IS A LARGE SWALE LOCATED DOWN THE MIDDLE OF THE PARKING JUST NORTH OF THE BUILDING WHICH DRAINS BOTH THE EAST AND NORTH SIDES OF THE BUILDING. SLOPES WITHIN THIS AREA ARE STEEP (>2%) AND EXCEED ADA REQUIREMENTS FOR PARKING STALLS. THE WEST SIDE OF THE BUILDING IS SLOPED TOWARD THE WEST INTO A CURB AND GUTTER. SLOPES HEADING FROM EAST TO WEST ARE GREATER THAN 6%. THE CURB AND GUTTER WHICH THIS DRAINAGE ENTERS IS SLOPED TO THE NORTH DIRECTLY TOWARD THE EXISTING SIDEWALK CULVERT AT AN APPROXIMATELY 0.5% SLOPE.

LASTLY THERE IS AN EXISTING DOCK AT THE SOUTHWEST CORNER OF THE BUILDING WHERE THE GRADES WITHIN THIS AREA DROP APPROXIMATELY 4' BELOW FINISHED FLOOR AT THE BUILDING. THIS AREA STILL DRAINS TO THE WEST AND THEN TO THE NORTH TO THE SIDEWALK CULVER BUT IS RELATIVELY FLAT.

THE PROJECT IS LOCATED WITHIN HYDROLOGIC ZONE 2 AS DEFINED BY FIGURE A-1 IN CHAPTER 22.2 OF THE DEVELOPMENT PROCESS MANUAL AND THE HYDROLOGIC ANALYSIS FOR THIS AREA IS BASED ON THE 100 YEAR, 6 HOUR STORM EVENT IN ACCORDANCE WITH CHAPTER 22.2 OF THE DPM. THE TOTAL FLOW FROM THIS SITE UNDER EXISTING CONDITIONS IS 2.69CFS AS SEEN IN DEVELOPMENT CONDITIONS BASIN TABLE.

IV. PROPOSED HYDROLOGIC CONDITIONS

THE PROPOSED IMPROVEMENTS ARE TO REMOVE AND REPLACE THE EXISTING ASPHALT AND REGRADE THE PARKING AREA TO ENSURE THE MAJORITY OF THE SPACES ARE ADA ACCESSIBLE. THIS WILL BE ACCOMPLISHED BY RAISING THE GRADES OF THE PARKING AND PROVIDING A RETAINING WALL AND CONCRETE RIBBON CHANNEL ALONG THE WEST PROPERTY LINE. THERE WILL BE VERY LITTLE DIFFERENCE IN THE LAND TREATMENTS AND THE SITE WILL CONTINUE TO DRAIN TO COMMONS AVE.

THE SITE IS NOW BROKEN UP INTO TWO BASINS. BASIN 1 INCLUDES THE MAJORITY OF THE BUILDING AND THE NORTH SIDE OF THE SITE. THIS AREA WILL BE RAISED AND GRADED SO THAT THE NORTHERN PARKING WILL CONTINUE TO DRAIN TO THE NORTH ALONG A NEW CURB AND GUTTER AND THEN EVENTUALLY TO THE WEST AND INTO COMMONS AVE. THROUGH THE EXISTING DRIVEWAY. IN ADDITION, THE NORTHWEST CORNER OF THE SITE WILL ALSO BE SLOPED TO DRAIN OUT OF THE EXISTING DRIVEWAY, IN LIEU OF THE EXISTING SIDEWALK CULVERT AS IT ORIGINALLY DID. THE 100YR, 6HR DISCHARGE FOR THIS BASIN IS 1.88CFS AND WILL EVENTUALLY ENTER THE AMAFCA NORTH DIVERSION CHANNEL VIA AN EXISTING RUN DOWN WITHIN COMMONS AVE.

BASIN 2 INCLUDES THE SOUTHWEST CORNER OF THE BUILDING AND SITE. THE LOADING DOCK WILL BE FILLED IN AND THE GRADES ADJACENT TO THE BUILDING WILL BE AT THE FINISHED FLOOR. THIS PORTION OF THE SITE WILL NOW DRAIN ALONG THE NEW CURB AND GUTTER ALONG THE WEST END OF THE SITE AND THEN TO THE SOUTH INTO A NEW CONCRETE RIBBON CHANNEL. DRAINAGE WILL THEN BE CONVEYED TO THE NORTH WITHIN AN 18" WIDE RIBBON CHANNEL INTO THE EXISTING SIDEWALK CULVERT AND INTO COMMONS AVE. THE 18" WIDE AND 6" TALL RIBBON CHANNEL WAS SIZED TO ACCEPT THIS DRAINAGE AND HAS A CAPACITY OF 2.07CFS AT 0.5% SLOPE (>0.83CFS).

THE EXISTING 24" SIDEWALK CULVERT WHERE THE ENTIRE SITE HAD DRAINED PREVIOUSLY, ACCEPTED THE FULL 2.69CFS WHICH IS GREATER THAN THE CAPACITY OF THIS CULVERT PER THE WEIR EQUATION. WITH THESE IMPROVEMENTS, AND REDUCING THE FLOW TO LESS THAN A THIRD OF THE ORIGINAL FLOW INTO THIS SIDEWALK CULVERT WILL ENSURE IT WILL FUNCTION MORE EFFICIENTLY.

THE RESULTANT Q WITHIN THIS AREA WILL BE INCREASED BY 0.02CFS (2.69 CFS < 2.71CFS) WHICH IS A MINOR INCREASE AND WILL NOT ADVERSELY AFFECT THE DOWNSTREAM INFRASTRUCTURE.

V. CONCLUSION

THIS DRAINAGE MANAGEMENT PLAN AND GRADING PLAN DEMONSTRATE THAT THE DRAINAGE ELEMENTS PROPOSED WITH THE PROJECT ARE CAPABLE OF SAFELY CONVEYING THE 100 YEAR, 6 HOUR STORM EVENT IN ACCORDANCE WITH THE DEVELOPMENT PROCESS MANUAL. WITH THIS SUBMITTAL WE ARE REQUESTING GRADING AND DRAINAGE APPROVAL FOR PAVING PERMIT AND BUILDING PERMIT APPROVAL.

LIBERTY DIALYSIS - 3810 Commons Ave. NE
Development Conditions Basin Data Table
This table is based on the DPM Section 22.2, Zone: 2

Basin ID	Area (SQ. FT)	Area (AC.)	Land Treatment Percentages A	B	C	D	Q(100yr) (cfs/ac.)	Q(100yr-6hr) (CFS)	WT E (inches)	V(100yr-6hr) (CF)	V(100yr-10day) CF
Existing Conditions											
EX	27280	0.63	0.0%	10.0%	10.0%	80.0%	4.30	2.69	1.89	4290	7200
Proposed Conditions											
1	19575	0.45	0.0%	10.0%	18.0%	72.0%	4.18	1.88	1.81	2949	4828
2	7705	0.18	0.0%	0.0%	0.0%	100.0%	4.70	0.83	2.12	1361	2389
	27280	0.63						2.71		4310	7217

Bohannan Huston

Christopher Kidd & Associates, LLC
Architects and Engineers
N48W16550 Lisbon Road
Menomonee Falls, Wisconsin 53051
Phone 262.901.0505 / Facsimile 262.901.0510
Email: arch@ckiddarchitects.com Website: www.ckiddarchitects.com

Proposed Dialysis Clinic for:
LD - Albuquerque
3810 Commons Avenue NE
Albuquerque, New Mexico 87109

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Drafted By:

Checked By:

Date Drafted:

Project #:

C0.1

DRAINAGE MANAGEMENT PLAN

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