



South Washington Watershed District
Woodbury, Minnesota

Wilmes Lake Gate Design

Bid Package

August 7, 2008

HDR Project No. 64197

PRELIMINARY COPY

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SITE PLAN SYMBOLOLOGY

DESIGNATION: SLOPE

- CONTOUR
- VEGETATION (SIZE)
- CLEAREDT
- MANHOLE
- WATERING WELL
- PEDESTRIAN
- STORM DRAIN CATCH BASIN
- UTILITY WALL
- POWER POLE
- TELEPHONE POLE
- FIRE HYDRANT
- YARD HYDRANT
- EXISTING SPOT ELEVATION
- FINISHED SPOT ELEVATION
- BENCHMARK
- IDENTIFICATION AND APPROXIMATE LOCATION OF SOL TEST TUBE
- CONDUIT
- EXTERIOR PAD MOUNTED TRANSFORMER
- POLE - MOUNTED TRANSFORMER
- ELECTRIC METER
- MANHOLE OR WHIMPLE
- INDICATES SEQUENCE NUMBER

NOTES:

- UTILITIES THAT ARE SUSPENDED ABOVE GROUND ARE DESIGNATED BY THE PREFIX "U" (OVERHEAD).

MATERIALS IN PLAN/SECTION

- ACROUSTICAL CEILING TILE (SECTION)
- ASPHALT (PLAN OR SMALL-SCALE SECTION)
- ASPHALT (LARGE-SCALE SECTION)
- BATT INSULATION (SECTION)
- BRICK MASONRY (PLAN AND/OR SECTION)
- CHECKERED PLATE (PLAN)
- CONCRETE (PLAN AND/OR SECTION)
- CONCRETE MASONRY (PLAN AND/OR SECTION)
- INSULATION (PLAN AND/OR SECTION)
- EARTH (SECTION)
- FILTER POINT MAT (PLAN)
- FINISHED WOOD (SECTION)
- GULLIM LUMBER (SECTION)
- GRAVEL/FILL (SECTION)
- GRADING (SECTION)
- GRATING (PLAN)
- GROUT (SECTION)
- GYPSUM BOARD (SECTION)
- METAL (SECTION)
- ORIENTED STRAND BOARD (SECTION)
- PARTICLE BOARD (SECTION)
- PLYWOOD (LARGE-SCALE SECTION)
- PLYWOOD (SMALL-SCALE SECTION)
- PRECAST CONCRETE (PLAN AND/OR SECTION)
- ROAD INSULATION (SECTION)
- REFRAC (PLAN AND/OR SECTION)
- SAND (SECTION)
- SID (SECTION)
- WEED JOINT MOTOR PROTECTION SYSTEM (SECTION)
- WOOD - CONTINUOUS (SECTION)
- WOOD BLOCKING (SECTION)

GENERAL SYMBOLOLOGY

ARROW INDICATES DIRECTION OF PLAN NORTH

PLAN
1/4" = 1'-0"
PLAN TITLE

SECTION LETTER
FLAG INDICATES DIRECTION OF SECTION CUT

SECTION CUT MARKER
SECTION LETTER
SECTION WHERE SECTION IS LOCATED

SECTION
3/8" = 1'-0"
SECTION LETTER
SECTION WHERE SECTION IS LOCATED

DETAIL NUMBER
SECTION LETTER
SECTION WHERE DETAIL IS LOCATED

DETAIL MARKER
FOR REFERENCING DETAILS IN DRAWING SET.

DETAIL MARKER
FOR REFERENCING DETAILS BEING IN SPECIFICATIONS OR SEPARATE VOLUME.

DETAIL
3" = 1'-0"
DETAIL NUMBER
SECTION LETTER
SECTION WHERE DETAIL WAS CALLED OUT

DETAIL TITLE
FOR COMMON DETAILS AND SECTIONS AND DETAILS THAT ARE REPEATED ON MULTIPLE SHEETS, THE SHEET NUMBER IS REPLACED BY A DASH (-).

SINGLE ELEVATION OR PHOTO MARKER
ELEVATION NUMBER
SECTION LETTER
SECTION WHERE ELEVATION OR PHOTO MARKER IS LOCATED

MULTIPLE ELEVATION OR PHOTO MARKER
ELEVATION NUMBER
SECTION LETTER
SECTION WHERE POINT OF VIEW ELEVATION OR PHOTO MARKER IS LOCATED

ELEVATION
3" = 1'-0"
ELEVATION IDENTIFICATION NUMBER
SECTION LETTER
SECTION WHERE POINT OF VIEW IS TO BE FOUND

ELEVATION TITLE

SHEET NAMING CONVENTION

AREA DESIGNATION
TO BE USED ON ALL DRAWINGS, THEY REFER TO THIS GENERAL LEGEND.

01 BUILDING OR AREA NAME
02 BUILDING OR AREA NAME

DISCIPLINE DESIGNATOR & DISCIPLINE ORDER

C GENERAL ARCHITECTURAL
X ARCHITECTURAL
U MULTI-DISCIPLINE
A ARCHITECTURAL
P PLUMBING
D ELECTRICAL
L MECHANICAL
I INSTRUMENTATION

DRAWING TYPE DESIGNATOR

0 GENERAL (SYMBOLS, LEGENDS)
1 ELEVATIONS
2 DETAILS
3 LARGE SCALE VIEWS
4 DETAILS AND DIAGRAMS
5 PROFILES
6 JOINT REVISIONS

EXAMPLE

GRAVITY THICKENER ARCHITECTURAL SECTION, SHEET 01

0 1 2 3 4 5 6 7 8 9

0 1 2 3 4 5 6 7 8 9

0 1 2 3 4 5 6 7 8 9

0 1 2 3 4 5 6 7 8 9


0 1 2 3 4 5 6 7 8 9

0 1 2 3 4 5 6 7 8 9

0 1 2 3 4 5 6 7 8 9


GENERAL NOTES

- THIS IS A STANDARD SHEET SHOWING COMMON SYMBOLOLOGY. ALL SYMBOLS ARE NOT NECESSARILY USED ON THIS PROJECT.
- REVISIONS OR CHANGES OF WORK IS USED TO INDICATE EXISTING COMPONENTS OR TO DIS-CORRECT PROPOSED IMPROVEMENTS TO HIGHLIGHT SELECTED TRADE WORK. REFER TO CONTEXT OF EACH SHEET FOR USAGE.
- CONTRACTOR SHALL CALL CARRIER STATE ONE CALL OR 1-800-252-1164, PRIOR TO ANY EXCAVATION.
- CARE SHALL BE TAKEN TO MINIMIZE POTENTIAL FOR SEDIMENT WASHING INTO WATERBODIES.
- WORK SHALL BE COMPLETED IN A MANNER AS TO NOT BLOCK OR IMPURE EXISTING DRAINAGE SYSTEMS.
- CONTRACTOR SHALL MAINTAIN ALL EXISTING UTILITIES AND STRUCTURES UNLESS OTHERWISE NOTED. NOTIFY ENGINEER OF ANY DISCREPANCIES GREATER THAN 0.10 FEET PRIOR TO COMMENCING ANY CONSTRUCTION.
- CONTRACTOR IS TO DEMURSE AND MAINTAIN TEMPORARY BENCH MARK FOR DURATION OF CONSTRUCTION.



PROJECT MANAGER: J. WETTERSCHEIDER
STRUCTURAL: M. CONROY
CIVIL: M. REMINGTON
MECHANICAL:
ELECTRICAL:
PLUMBING:
PROJECT NUMBER: 041197

WILMES LAKE GATE DESIGN



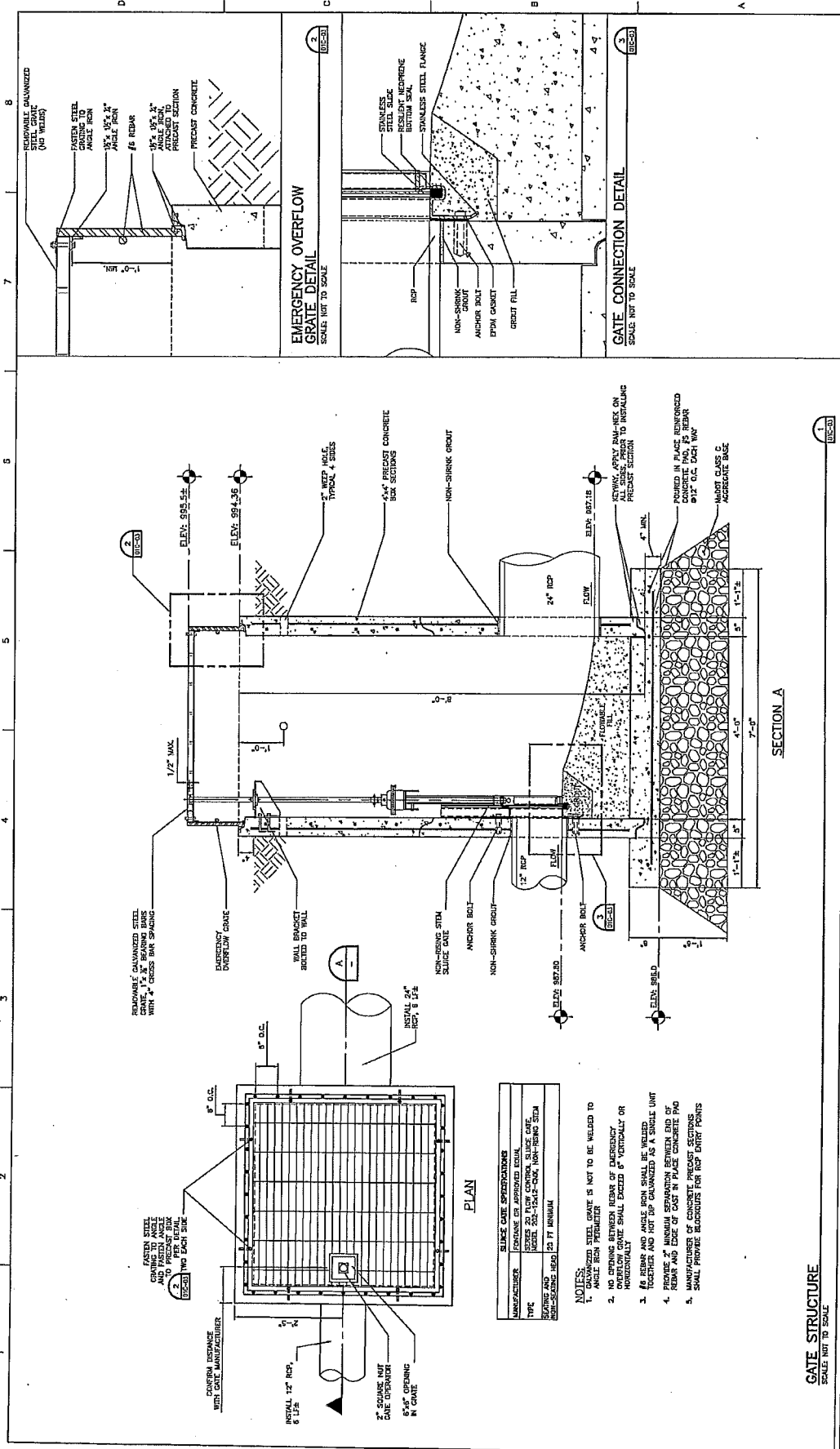
GENERAL LEGEND AND NOTES

SCALE: AS NOTED

FILENAME: 000-02.dwg

SHEET: 000-02

NOT FOR CONSTRUCTION



SLICE GATE OPERATORS

MANUFACTURER	FINISHES OR APPROVED EQUAL
TYPE	EMERGENCY OVERFLOW GRATE
SEATING AND	NON-SHRINK GROUT
NON-SHRINK GROUT	13 FT MINIMUM

- NOTES:**
- EMERGENCY OVERFLOW GRATE IS NOT TO BE WELDED TO ANGLE IRON PERMITTER
 - NO OPENING BETWEEN REBAR OF EMERGENCY OVERFLOW GRATE SHALL EXCEED 6" VERTICALLY OR HORIZONTALLY
 - REBAR AND ANGLE IRON SHALL BE WELDED TOGETHER AND NOT TO BE GALVANIZED AS A SINGLE UNIT
 - PROVIDE 2" MINIMUM SEPARATION BETWEEN END OF REBAR AND EDGE OF CAST IN PLACE CONCRETE PAD
 - MANUFACTURER OF CONCRETE PRECAST SECTIONS SHALL PROVIDE BUSHINGS FOR RCP ENTRY POINTS

GATE STRUCTURE
SCALE: NOT TO SCALE

EVERGREEN
GATE STRUCTURE DETAILS

FILENAME: D1C-03.dwg
SCALE: AS NOTED

SHEET
01C-03

WILMIES LAKE
GATE DESIGN

Washington State Department of Ecology
Ecology

NOT FOR CONSTRUCTION

PROJECT MANAGER'S APPROVAL	DATE
STRUCTURAL	M. COMBEN
CIVIL	H. REDINGTON
MECHANICAL	J. SPENCER
ELECTRICAL	
ISSUE	DATE
A	10/27/08
B	02/27/09

HDR
Hydro-Design, Inc.

Opinion of Probable Cost

Client: South Washington Watershed District
 Project Name: Wilmes Lake Gate Design
 Project Number: 64197

Evergreen Wetland

Items	Quantity	Units	Cost/Unit	Cost	Percent of Subtotal
Silt Fence	60	LF	\$ 3.00	\$ 180.00	1%
Stockpile existing topsoil	12.2	CY	\$ 5.00	\$ 61.20	0%
Excavation	116	CY	\$ 25.00	\$ 2,900.00	13%
Demo Manhole	1	EA	\$ 600.00	\$ 600.00	3%
Hauling	6	CY	\$ 15.00	\$ 90.00	0%
Tipping Fee	4.3	TON	\$ 90.00	\$ 387.00	2%
Dewatering	10	DAY	\$ 250.00	\$ 2,500.00	11%
Subgrade Preparation (Compaction)	49	SF	\$ 5.00	\$ 245.00	1%
Aggregate Base for Structure	2.7	CY	\$ 100.00	\$ 272.22	1%
Concrete Base Slab	1.2	CY	\$ 600.00	\$ 725.93	3%
Precast Concrete Box Section, 4' x 4'	8	LF	\$ 500.00	\$ 4,000.00	18%
Flowable Fill	0.6	CY	\$ 200.00	\$ 118.52	1%
Fontaine stainless steel sluice gate, 12" x 12"	1	EA	\$6,000.00	\$ 6,000.00	27%
12" RCP	6	LF	\$ 35.00	\$ 210.00	1%
24" RCP	6	LF	\$ 45.00	\$ 270.00	1%
Galvanized Steel Grate	16	SF	\$ 37.00	\$ 592.00	3%
Trash Rack	1	EA	\$1,000.00	\$ 1,000.00	4%
Backfill	105.8	CY	\$ 3.00	\$ 317.44	1%
Remove excess soil to offsite location	10.2	CY	\$ 15.00	\$ 152.78	1%
Fine Grading and Seeding	1	EA	\$ 200.00	\$ 200.00	1%
Erosion Control Mat	636	SF	\$ 2.50	\$ 1,590.00	7%
Subtotal.....				\$ 22,412.09	

Markgraf Lake

Items	Quantity	Units	Cost/Unit	Cost	Percent of Subtotal
Silt Fence	60	LF	\$ 3.00	\$ 180.00	1%
Stockpile existing topsoil	7.4	CY	\$ 5.00	\$ 37.13	0%
Excavation	54	CY	\$ 25.00	\$ 1,350.00	6%
Demo Pipe Segments	12	LF	\$ 10.00	\$ 120.00	1%
Dewatering	10	DAY	\$ 250.00	\$ 2,500.00	11%
Subgrade Preparation	49	SF	\$ 5.00	\$ 245.00	1%
Aggregate Base for Structure	2.7	CY	\$ 100.00	\$ 272.22	1%
Concrete Base Slab	1.2	CY	\$ 600.00	\$ 725.93	3%
Precast Concrete Box Section, 4' x 4'	6	LF	\$ 500.00	\$ 3,000.00	13%
Flowable Fill	2.5	CY	\$ 200.00	\$ 508.15	2%
Fontaine stainless steel sluice gate, 12" x 12"	1	EA	\$6,000.00	\$ 6,000.00	27%
12" RCP	12	LF	\$ 35.00	\$ 420.00	2%
Galvanized Steel Grate	16	SF	\$ 37.00	\$ 592.00	3%
Backfill	46.8	CY	\$ 3.00	\$ 140.33	1%
Remove excess soil to offsite location	7.2	CY	\$ 15.00	\$ 108.33	0%
Fine Grading and Seeding	1	EA	\$ 200.00	\$ 200.00	1%
Erosion Control Mat	376	SF	\$ 2.50	\$ 940.00	4%

Subtotal..... \$ 17,339.09

Mobilization \$ 4,000.00
 Soils Engineer Services \$ 1,200.00

Total Project Cost \$ 44,951.19

Contingency (8%) \$ 3,596.09

Total Estimated Opinion of Probable Cost..... \$ 48,547.28