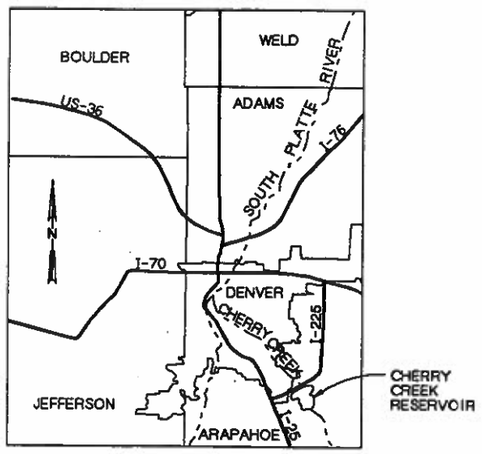
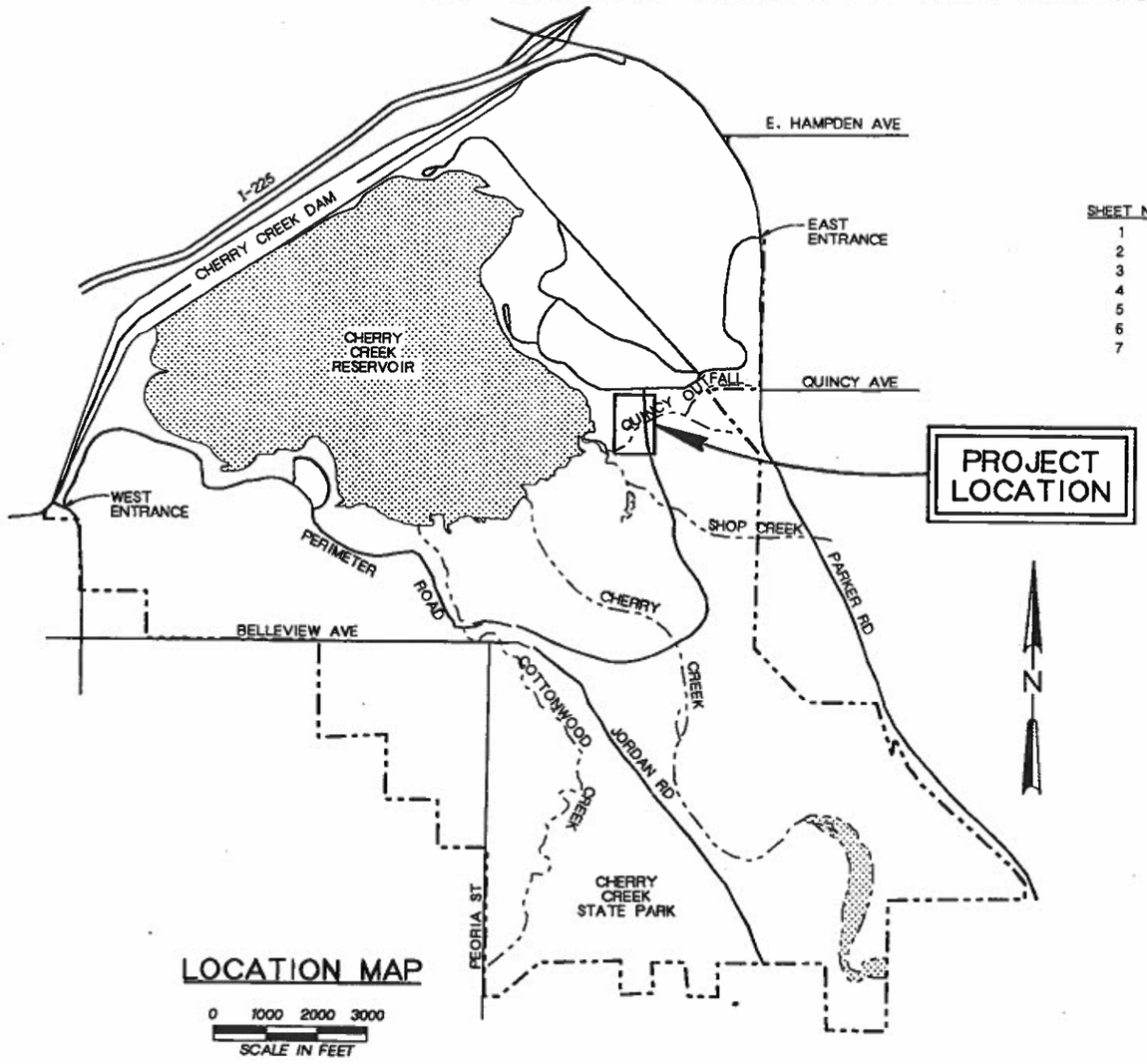
CONTRACT DOCUMENTS FOR CONSTRUCTION OF

QUINCY OUTFALL WATER QUALITY IMPROVEMENTS

CHERRY CREEK RESERVOIR WATER QUALITY PROJECT
CHERRY CREEK BASIN WATER QUALITY AUTHORITY



VICINITY MAP
NTS



LOCATION MAP
0 1000 2000 3000
SCALE IN FEET

INDEX OF DRAWINGS

CH2MHILL

DSGN	J. WULLIMAN
DR	R.WASILCHUK
CHK	D. JOHNS
APVD	J. WULLIMAN

NO.	DATE	REVISION	BY	APVD

BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

QUINCY OUTFALL
WATER QUALITY IMPROVEMENTS
CHERRY CREEK BASIN
WATER QUALITY AUTHORITY

GENERAL
TITLE SHEET, LOCATION MAPS AND INDEX OF DRAWINGS

SHEET	1
DWG NO.	G-1
DATE	MAY 1995
PROJ NO.	RMW40054.A3

0054g001.div 11-MAY-1995 09:31:11

ABBREVIATIONS

@	AT
AB	ANCHOR BOLT
ABDN	ABANDONED
ACI	AMERICAN CONCRETE INSTITUTE
ADDL	ADDITIONAL
ADJ	ADJUSTABLE
AGGR	AGGREGATE
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
AL	ALUMINUM
ALP	AIR, LOW PRESSURE
ALT	ALTERNATE
ANOD	ANODIZED
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
ASSY	ASSEMBLY
AUTO	AUTOMATIC
AUX	AUXILIARY
AVG	AVERAGE
AWG	AMERICAN WIRE GAUGE
BD	BOARD
BF	BLIND FLANGE, BOTTOM FACE
BLDG	BUILDING
BM	BENCH MARK, BEAM
BOL	BOTTOM OF LINE
BOTT	BOTTOM
BSP-40	BLACK STEEL PIPE, SCHEDULE 40
BSP-80	BLACK STEEL PIPE, SCHEDULE 80
BTWN	BETWEEN
BV	BALL VALVE, BUTTERFLY VALVE
C	CHANNEL (BEAM), CENTER, CONDUIT
CAB.	CABINET
CB	CIRCUIT BREAKER
CFM	CUBIC FEET PER MINUTE
CFS	CUBIC FEET PER SECOND
CHEM	CHEMICAL
CHKD	CHECKERED
CI	CAST IRON
CIMJ	CAST IRON MECHANICAL JOINT
CIP	CAST IRON PIPE
CISP	CAST IRON SOIL PIPE
CJ	CONSTRUCTION JOINT
CL	CONTROL LINE
CLG	CEILING
CLR	CLEAR
℄	CENTERLINE
CMP	CORRUGATED METAL PIPE
CMPA	CORRUGATED METAL PIPE ARCH
CMU	CONCRETE MASONARY UNIT
CO	CLEANOUT
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS, CONTINUATION
COORD	COORDINATE
COP.	COPPER
COR	CORNER
CP	CONTROL POINT
CPLG	COUPLING
C TO C	CENTER TO CENTER
CRS	COLD ROLLED STEEL
CTL	CONTROL
CTR	CENTER
CTRD	CENTERED
CU	CUBIC
CU FT	CUBIC FOOT
CU IN.	CUBIC INCH
CU YD	CUBIC YARD
CV	CHECK VALVE
CW	COLD WATER
°C	DEGREE CELSIUS
Δ	CENTRAL ANGLE

D	PENNY (NAIL SIZE)
DB	DISTRIBUTION BOX
DBA	DEFORMED BAR ANCHOR
DBL	DOUBLE
DESC	DESCRIPTION
DET	DETAIL
DF	DOUGLAS FIR
DI	DROP INLET
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DIMJ	DUCTILE IRON MECHANICAL JOINT
DIP	DUCTILE IRON PIPE
DIR	DIRECTION
DISCH	DISCHARGE
DR	DRAIN
DS	DOWNSPOUT
DSS	DESIGN SERVICE STORM
DWG	DRAWING
E	EAST
EA	EACH
ECC	ECCENTRIC
EF	EACH FACE
EL	ELEVATION
ELB	ELBOW
ELC	ELECTRICAL LOAD CENTER
ELEC	ELECTRIC, ELECTRICAL
ENGR	ENGINEER
EQL	EQUAL
EQL SP	EQUALLY SPACED
EQPT	EQUIPMENT
EW	EACH WAY
EXH	EXHAUST
EXP	EXPOSED
EXP JT	EXPANSION JOINT
EXST	EXISTING
EXT	EXTERIOR
FAB	FABRICATION
FC	FLEXIBLE COUPLING
FCA	FLANGED COUPLING ADAPTER
FD	FLOOR DRAIN
FDA	FLOOR DRAIN W/INTEGRAL TRAP
FDN	FOUNDATION
FES	FLARED END SECTION
FEXT	FIRE EXTINGUISHER
FF	FINISH FLOOR, FLAT FACED
FG	FINISH GRADE
FHY	FIRE HYDRANT
FIG	FIGURE
FIN	FINISH, FINISHED
FLEX	FLEXIBLE
FLG	FLANGE
FLH	FLAT HEAD
FL	FLOW LINE
FLTR	FILTER
FLR	FLOOR
FNSH	FINISH
FOW	FACE OF WALL
FRP	FIBERGLASS REINFORCED PLASTIC
FT	FOOT OR FEET
FTG	FOOTING
FWD	FORWARD
°F	DEGREE FAHRENHEIT
G	GROUND
GA	GAGE
GAL	GALLON
GALV	GALVANIZED
GALVI	GALVANIZED IRON
GALVS	GALVANIZED STEEL
GB	GRAB BAR
GC	GROOVED COUPLING
GCF	GROOVED COUPLING FITTING
GEOTECH	GEOTECHNICAL
GL	GLASS
GPD	GALLONS PER DAY
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GR	GRADE
GS	GRATING SUPPORT
GSP	GALVANIZED STEEL PIPE
GTV	GATE VALVE
GVL	GRAVEL
GWB	GYPSUM WALLBOARD
GYP	GYPSUM

H	HEIGHT
HBP	HOT BITUMINOUS PAVEMENT
HD	HUB DRAIN
HDNR	HARDNER
HDW	HARDWARE
HGT	HEIGHT
HH	HANDHOLE
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HM	HOLLOW METAL
HP	HORSEPOWER
HR	HOSE RACK, HOUR
HV	HORIZ. AND VERT. CONTROL POINT
I&C	INSTRUMENTATION AND CONTROL
ID	INSIDE DIAMETER
IDF	INFLOW DESIGN FLOOD
IF	INSIDE FACE
IN.	INCH
INSTL	INSTALL
INSTM	INSTRUMENTATION
INSUL	INSULATE
INT	INTERIOR
INV	INVERT
JT	JOINT
K	FRICTION LOSS COEFFICIENT
KIP	THOUSAND POUNDS
KW	KILOWATT
L	ANGLE, LENGTH, LEFT
LB	POUNDS
LB/CU FT	POUNDS PER CUBIC FOOT
LF	LINEAR FEET
LG	LONG
LH	LEFT HAND
LONG	LONGITUDINAL
LR	LONG RADIUS
LT	LIGHT
MAN	MANUAL
MATL	MATERIAL
MAX	MAXIMUM
MECH	MECHANICAL
MFR	MANUFACTURER
MGD	MILLION GALLONS PER DAY
MH	MANHOLE
MI	MILE, MILES
MIN	MINIMUM
MISC	MISCELLANEOUS
MJ	MECHANICAL JOINT
MO	MASONARY OPENING, MONTH
MON	MONUMENT
MPC	MINI-POWER CENTER
MTG	MOUNTING
MTL	METAL, MATERIAL
MTS	MILL TYPE STEEL PIPE
MWS	MAXIMUM WATER SURFACE
MSL	MEAN SEA LEVEL
MW	MONITORING WELL
N	NORTH
NIC	NOT IN CONTRACT
NO.	NUMBER
NOM	NOMINAL
NORM	NORMAL
NP	NATIONAL PIPE THREAD
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER, OVERFLOW DRAIN
OF	OUTSIDE FACE
OPNG	OPENING
OPP	OPPOSITE
OSD	OPEN SITE DRAIN
O TO O	OUT TO OUT
OVFL	OVERFLOW
OZ	OUNCE

P	PROPERTY LINE
PC	POINT OF CURVATURE
PE	PLAIN END
PI	POINT OF INTERSECTION
PJF	PREMOLDED JOINT FILLER
PK NAIL	SURVEY REFERENCE POINT
PL	PLATE (STEEL)
PLYWD	PLYWOOD
PMF	PROBABLE MAXIMUM FLOOD
PMP	PROBABLE MAXIMUM PRECIPITATION
POB	POINT OF BEGINNING
POC	POINT ON CURVE
POE	POINT OF ENDING
POT	POINT ON TANGENT
PREFAB	PREFABRICATED
PRESS.	PRESSURE
PRI	PRIMARY
PROP.	PROPERTY
PS	PUMP STATION
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH, GAUGE
PT	POINT OF TANGENCY
PV	PLUG VALVE
PVC	POINT OF VERTICAL CURVATURE
PVC	POLYVINYL CHLORIDE PLASTIC
PVMT	PAVEMENT
R	RADIUS, RIGHT, RISER
RC	REINFORCED CONCRETE
RCB	REINFORCED CONCRETE BOX
RCP	REINFORCED CONCRETE PIPE
RD	ROOF DRAIN
RDCR	REDUCER
RDW	REDWOOD
REF	REFER OR REFERENCE
REINF	REINFORCED, REINFORCING, REINFORCE
REQD	REQUIRED
RESIL	RESILIENT
RH	RODHOLE
RL	RAIN LEADER
RLS	RUBBER LINED STEEL
RM	ROOM
RO	ROUGH OPENING
RST	REINFORCING STEEL
RTN	RETURN
RV	ROOF VENT
ROW	RIGHT-OF-WAY
S	S-BEAM, SOUTH
SA	SAMPLER
SC	SOLID CORE
SCFM	STANDARD CUBIC FEET PER MINUTE
SCH	SCHEDULE
SDWK	SIDEWALK
SEC	SECONDARY
SECT	SECTION
SH	SHEET
SHTG	SHEETING
SIM	SIMILAR
SLP	SLOPE
SOLN	SOLUTION
SPA	SPACE OR SPACES
SPEC	SPECIFICATIONS
SPECD	SPECIFIED
SPG	SPACING
SPLY	SUPPLY
SQ	SQUARE
SQ FT	SQUARE FOOT
SQ IN	SQUARE INCH
SST	STAINLESS STEEL
STA	STATION
STD	STANDARD
STL	STEEL
STRL	STRUCTURAL
STRUCT	STRUCTURE
SUSP	SUSPEND
SW	SURFACE WASH
SYMM	SYMMETRICAL

T	TANGENT
TBG	TUBING
T&B	TOP AND BOTTOM
TC	TOP OF CURB
TDH	TOTAL DYNAMIC HEAD
TECH	TECHNICAL
TEL	TELEPHONE
TEMP	TEMPERATURE
TF	TOP FACE
T&G	TONGUE AND GROOVE
THD	THREAD
THK	THICK
THRD	THREADED
THRU	THROUGH
THHN	WIRE INSULATION
TO	TOP OF
TOC	TOP OF CONCRETE
TOG	TOP OF GROUT
TP	TURNING POINT
TPI	TURNOUT POINT OF INTERSECTION
TRANSV	TRANSVERSE
TS	TUBE STEEL
TST	TOP OF STEEL
TT	THRUST TIE
TYP	TYPICAL
UBC	UNIFORM BUILDING CODE
UH	UNIT HEATER
UNO	UNLESS NOTED OTHERWISE
USBR	U. S. BUREAU OF RECLAMATION
USGS	U.S. GEOLOGICAL SURVEY
V	VENT, VOLT, VELOCITY
VAC	VACUUM
VERT	VERTICAL
VTR	VENT THRU ROOF
W	WEST, W-BEAM
W/	WITH
WD	WOOD
WG	WIRE GLASS
WK	WEEK
WS	WATER SURFACE, WATER STOP, WELDED STEEL
W SH ST	WEATHERING SHEET STEEL
WSP	WELDED STEEL PIPE
WWM	WELDED WIRE MESH
YD	YARD
YR	YEAR

NOTES:
1. CONTACT THE ENGINEER FOR ABBREVIATIONS NOT LISTED
2. SOME ABBREVIATIONS MAY APPEAR ON THIS SHEET AND NOT ON THE DRAWINGS

CH2MHILL

DSGN	J. WULLIMAN
DR	R.WASILCHUK
CHK	D. JOHNS
APVD	J. WULLIMAN

NO.	DATE	REVISION	BY	APVD

BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

QUINCY OUTFALL
WATER QUALITY IMPROVEMENTS
CHERRY CREEK BASIN
WATER QUALITY AUTHORITY

GENERAL

ABBREVIATIONS

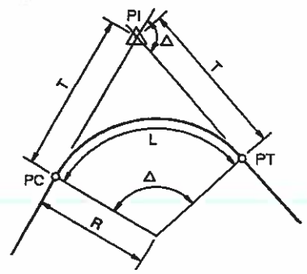
SHEET	2
DWG NO.	G-2
DATE	MAY 1995
PROJ NO.	RMW40054.A3

0054g002.dlv 11-MAY-1995 09:55:07

CIVIL SYMBOLS

- HORIZONTAL CONTROL LINE WITH STATIONING
- GRADE BREAK
- TOP OF CUT SLOPE
- TOE OF FILL SCOPE
- MATCH LINE
- ROADBASE SURFACE
- TYPE M RIPRAP
- NEW EMBANKMENT SLOPE AS INDICATED (HORIZ:VERT)
- DRAINAGE DITCH
- BORROW AREA LIMITS
- ⊗1000.0 FINISH GRADE
- EXISTING SECONDARY CONTOUR
- EXISTING PRIMARY CONTOUR
- NEW SECONDARY CONTOUR
- 1000 NEW PRIMARY CONTOUR
- PI (POINT OF INTERSECTION), NUMBER
- 42.6 OR 42.6 ELEVATION ORIGINAL GROUND
- RADIAL POINT / PC / PT
- PRIMARY CONTROL MONUMENT
- EXISTING TREE OR SHRUB
- INFORMATION SIGN
- PROPERTY LINE/RIGHT OF WAY
- EXISTING WIRE FENCE
- NEW WIRE FENCE
- CONSTRUCTION LIMIT
- EXISTING ROAD
- TP91-20 GEOTECH TEST PIT, NUMBER
- EDGE OF EXST VEGETATION

CURVE DEFINITIONS FOR CONTROL LINE LAYOUT



CURVE DATA
R = RADIUS
Δ = DELTA
L = LENGTH
T = TANGENT

NOTE:
IN GENERAL, EXISTING STRUCTURES AND FACILITIES ARE NOTED AS "EXISTING" AND SHOWN IN LIGHT LINES WEIGHTS, OR ARE SHOWN AS SCREENED BACKGROUND. NEW STRUCTURES ARE SHOWN IN HEAVY LINE WEIGHTS.

GENERAL DESIGN SYMBOLS

DETAIL AND SECTION DESIGNATION

SECTION (LETTER/NUMERAL) OR DETAIL (NUMERAL) DESIGNATION — A1 — C-8 — DRAWING NUMBER (REPLACE WITH A LINE IF TAKEN AND SHOWN ON SAME DRAWING)

ON DRAWING WHERE SECTION OR DETAIL IS TAKEN: DRAWING NUMBER WHERE SHOWN

ON DRAWING WHERE SECTION OR DETAIL IS SHOWN: DRAWING NUMBER(S) WHERE TAKEN

GENERAL DETAIL DESIGNATION

GENERAL DETAIL DESIGNATION (NUMERAL) — XXXXXX — SHOWN ON GENERAL DETAIL DRAWING(S)

NOTE:

GENERAL DETAIL REFERENCES FOR THE INSTALLATION OF INSTRUMENTATION ARE NOTED IN THE INSTRUMENT LIST IN THE SPECIFICATIONS.

GENERAL NOTES

1. THE HORIZONTAL CONTROL COORDINATE SYSTEM AND VERTICAL CONTROL DATUM FOR THE QUINCY OUTFALL WATER QUALITY IMPROVEMENTS ARE ARBITRARY AND ARE BASED ON CONTROL POINTS ESTABLISHED BY BENCHMARK SURVEYING, LTD. AND SHOWN ON DWG C-1.
2. TOPOGRAPHIC MAPPING SHOWN ON THE DRAWINGS WAS PREPARED BY BENCHMARK SURVEYING, LTD. BASED ON A FIELD SURVEY DATED MARCH, 1995. ACTUAL FEATURES AND TOPOGRAPHY COULD VARY. THE CONTRACTOR SHALL VERIFY SITE CONDITIONS BEFORE THE START OF WORK.
3. PROJECT FACILITIES ARE TO BE LOCATED BASED ON THE SURVEY COORDINATES, ELEVATIONS, DIMENSIONS, AND/OR GEOMETRIC DESIGN DATA PROVIDED ON THE DRAWINGS. DISTANCE, STATION, AND ANGLE INFORMATION SHOWN ON THE DRAWINGS WAS DERIVED FROM THE PI COORDINATES LISTED ON DWG C-1 AND HAS BEEN ROUNDED TO THE NEAREST SECOND OF ANGLE AND HUNDREDTH OF A FOOT. BORROW AREA GRADING SHOWN ON DWG C-1 IS TO BE BASED ON THE CONTOUR INFORMATION SHOWN.
4. THE FINAL FILL AND EXCAVATION SLOPES, LINES, AND GRADES SHOWN ON THE DRAWINGS ARE THE NEAT LINES FOR PAY PURPOSES AND ARE THE STEEPEST SLOPES PERMITTED UNLESS APPROVED BY THE ENGINEER. FLATTER SLOPES MAY BE NECESSARY, AS DETERMINED BY THE CONTRACTOR. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR PROVIDING STABLE EXCAVATIONS AND TEMPORARY SLOPES AND FOR SATISFYING ALL APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS. TEMPORARY EXCAVATIONS SHALL PROVIDE, AT MINIMUM, THE TRENCH DIMENSIONS AND CLEARANCES SHOWN OR SPECIFIED. TEMPORARY CONSTRUCTION SLOPES SHALL BE SLOPED, SHORED, SHEETED, AND/OR BRACED IN ACCORDANCE WITH STABILITY REQUIREMENTS AND APPLICABLE REGULATIONS, AND SHALL BE NO STEEPER THAN THE MINIMUM SLOPES SHOWN OR SPECIFIED WITHOUT THE APPROVAL OF THE ENGINEER. ANY SUCH APPROVALS BY THE ENGINEER WILL NOT RELIEVE THE CONTRACTOR FROM SOLE RESPONSIBILITY FOR PROVIDING STABLE EXCAVATIONS AND TEMPORARY SLOPES.
5. THE CONTRACTOR SHALL FIELD-LOCATE ALL UTILITIES PRIOR TO EXCAVATION. ALL EXISTING UTILITIES SHALL BE PROTECTED BY THE CONTRACTOR IN PLACE.
6. THE CONSTRUCTION WORK AREA IS LIMITED TO THE CONSTRUCTION LIMITS SHOWN ON THE DRAWINGS.
7. EXISTING SHRUBS AND TREES WITHIN EARTHFILL AREAS WILL BE REMOVED BY OTHERS PRIOR TO CONSTRUCTION. EXCAVATIONS PRODUCED BY SHRUB AND TREE REMOVAL SHALL BE FILLED BY THE CONTRACTOR

CH2M HILL

DSGN	J. WULLIMAN
DR	R.WASILCHUK
CHK	D. JOHNS
APVD	J. WULLIMAN

NO.	DATE	REVISION	BY	APVD

BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

QUINCY OUTFALL
WATER QUALITY IMPROVEMENTS
CHERRY CREEK BASIN
WATER QUALITY AUTHORITY

GENERAL

LEGENDS AND GENERAL NOTES

SHEET	3
DWG NO.	G-3
DATE	MAY 1995
PROJ NO.	RMW40054.A3

0054g003.div 11-MAY-1995 10:03:27

HORIZONTAL CONTROL

PI NO.	PT DESC	STATION	NORTHING	EASTING
1	POB	0+00	28905.01	30078.78
2	PI	2+95.83	29196.60	30028.85
	PC	1+46.10	29049.01	30054.12
	CC		28964.62	29561.29
	PT	4+37.06	29306.00	29926.62
3	PI	4+71.94	29331.48	29902.80
	PC	4+53.90	29318.30	29915.12
	CC		28976.93	29594.79
	PT	4+89.97	29343.75	29889.56
4	PI	8+08.70	29560.34	29655.73
	PC	6+57.69	29457.72	29766.52
	CC		29751.17	30038.34
	PT	9+46.48	29710.57	29640.41
5	PI	12+41.03	30003.60	29610.51
	PC	11+89.64	29952.47	29615.72
	CC		30003.22	30113.14
	PT	12+92.07	30054.73	29615.80
6	POE	13+42.94	30105.32	29621.04

CURVE INFORMATION

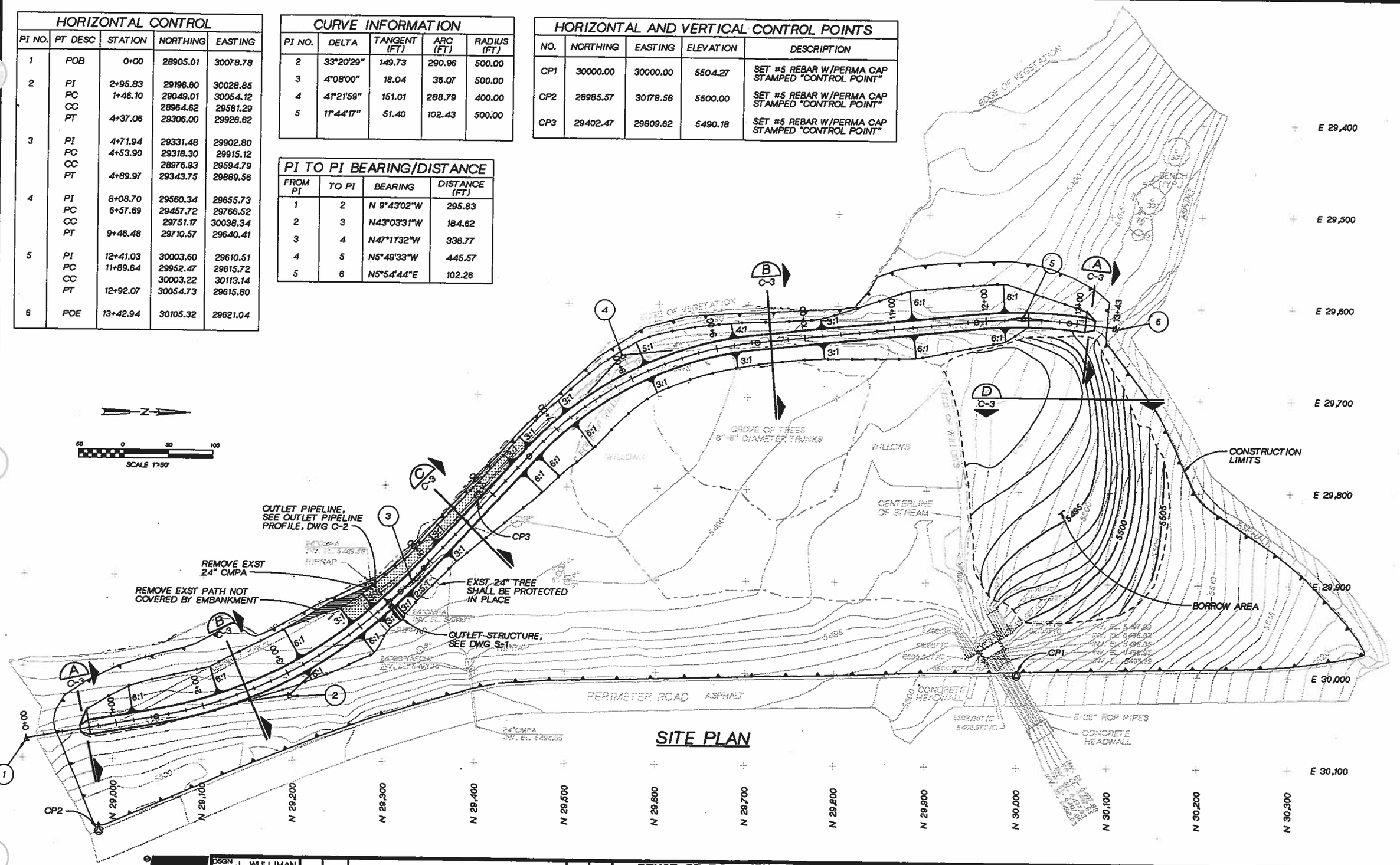
PI NO.	DELTA	TANGENT (FT)	ARC (FT)	RADIUS (FT)
2	33°20'29"	149.73	290.96	500.00
3	4°08'00"	18.04	36.07	500.00
4	41°21'59"	151.01	288.79	400.00
5	11°44'17"	51.40	102.43	500.00

PI TO PI BEARING/DISTANCE

FROM PI	TO PI	BEARING	DISTANCE (FT)
1	2	N 9°43'02"W	295.83
2	3	N43°03'31"W	184.62
3	4	N47°11'32"W	336.77
4	5	N5°49'33"W	445.57
5	6	N5°54'44"E	102.26

HORIZONTAL AND VERTICAL CONTROL POINTS

NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION
CP1	30000.00	30000.00	5504.27	SET #5 REBAR W/PERMA CAP STAMPED "CONTROL POINT"
CP2	28985.57	30178.56	5500.00	SET #5 REBAR W/PERMA CAP STAMPED "CONTROL POINT"
CP3	29402.47	29809.62	5490.18	SET #5 REBAR W/PERMA CAP STAMPED "CONTROL POINT"



SITE PLAN

DSGN	J. WULLIMAN				
DR	R.WASILCHUK				
CHK	D. JOHNS				
APVD	J. WULLIMAN	NO.	DATE	REVISION	BY / APVD

REUSE OF DOCUMENTS

THIS DOCUMENT, AND THE IDEAS AND DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, IS THE PROPERTY OF CH2M HILL AND IS NOT TO BE USED, IN WHOLE OR IN PART, FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF CH2M HILL.

BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

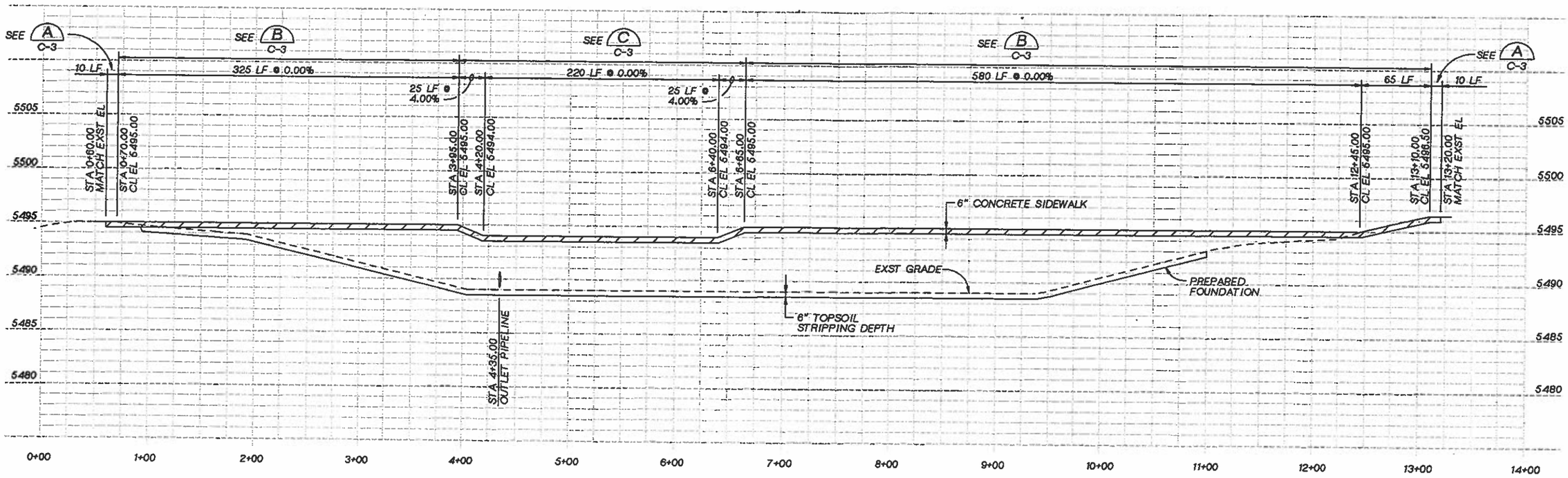
QUINCY OUTFALL
WATER QUALITY IMPROVEMENTS
CHERRY CREEK BASIN
WATER QUALITY AUTHORITY

CIVIL

SITE PLAN

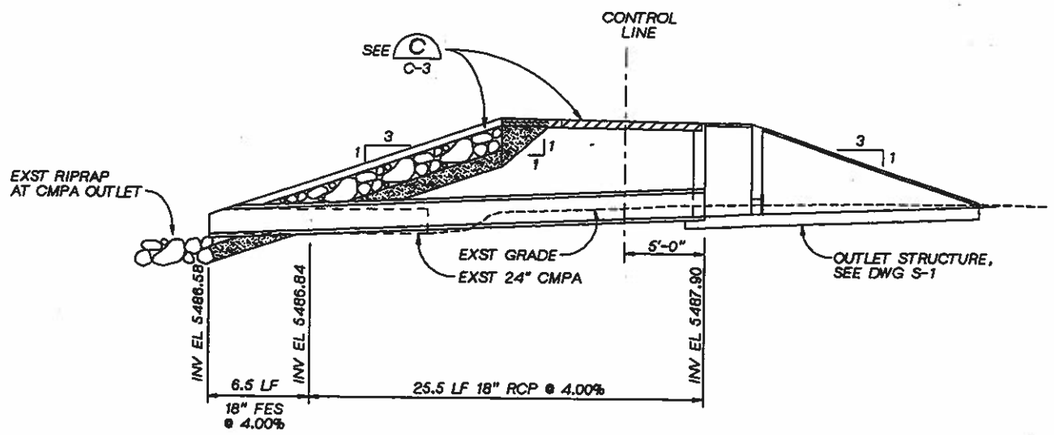
SHEET	4
DWG NO.	C-1
DATE	MAY 1995
PROJ NO.	RMW40054.A3

0054c001.dlv 10-MAY-1995 16:59:29



CONTROL LINE PROFILE

1"=5'-0" VERT
1"=50'-0" HORIZ



OUTLET PIPELINE PROFILE

STA. 4+35
1"=5'-0"

CH2MHILL

DSGN	J. WULLIMAN
DR	R.WASILCHUK
CHK	D. JOHNS
APVD	J. WULLIMAN

NO.	DATE	REVISION	BY	APVD

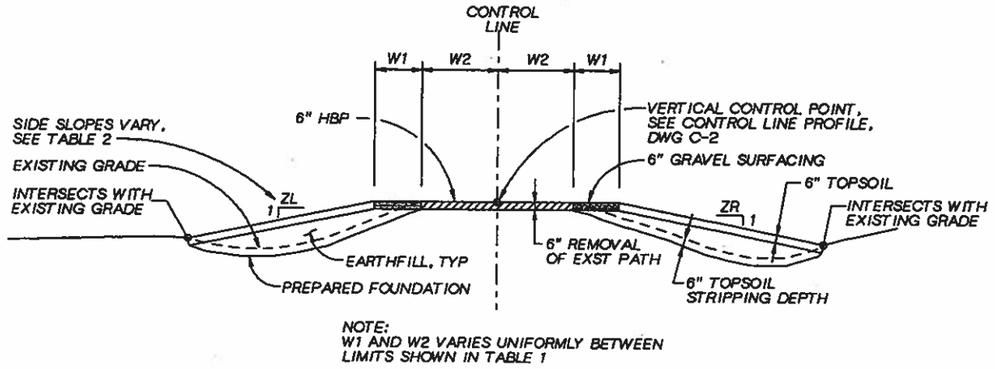
BAR IS ONE INCH ON ORIGINAL DRAWING.
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

QUINCY OUTFALL
WATER QUALITY IMPROVEMENTS
CHERRY CREEK BASIN
WATER QUALITY AUTHORITY

CIVIL
CONTROL LINE AND
OUTLET PIPELINE PROFILES

SHEET	6
DWG NO.	C-2
DATE	MAY 1995
PROJ NO.	RMW40054.A3

0054c002.div 15-MAY-1995 08:45:52

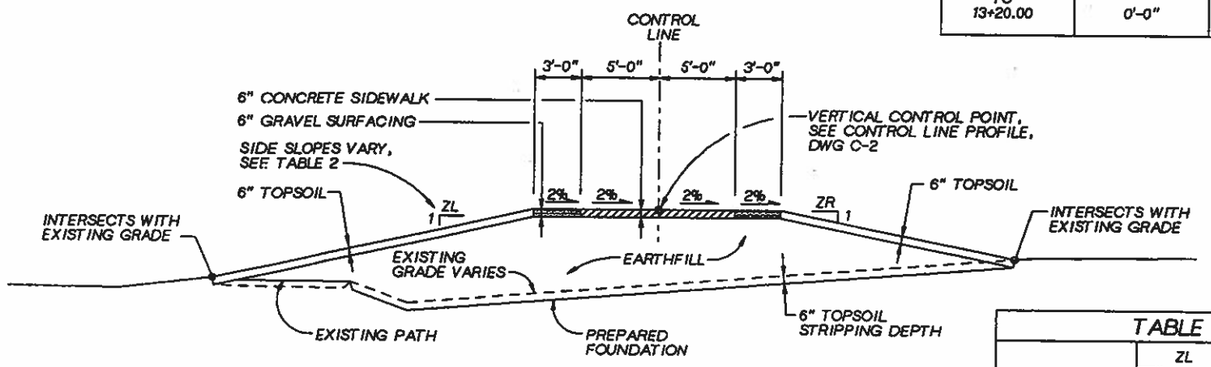


NOTE:
W1 AND W2 VARIES UNIFORMLY BETWEEN LIMITS SHOWN IN TABLE 1

TYPICAL SECTION A

C-1

STA. 0+60.00 TO STA. 0+70.00 AND
STA. 13+10.00 TO STA. 13+20.00
1"=5'-0"



TYPICAL SECTION B

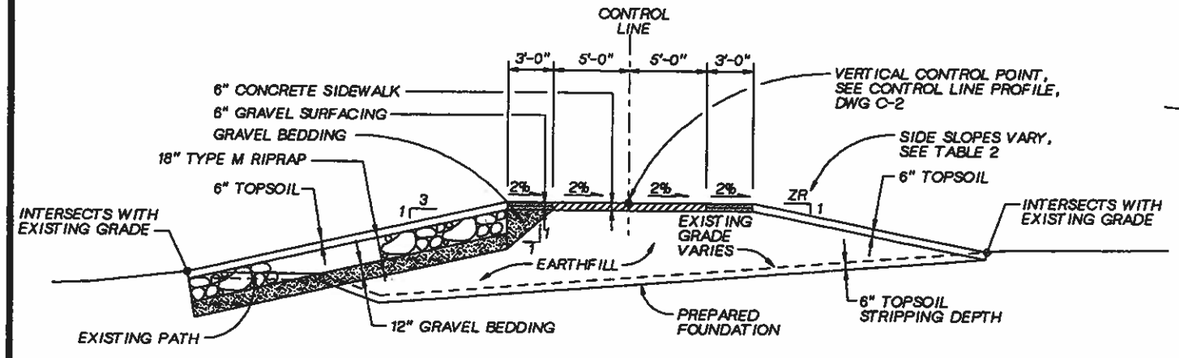
C-1

STA. 0+70.00 TO STA. 3+95.00 AND
STA. 6+65.00 TO STA. 13+10.00
1"=5'-0"

TABLE 1		
STATION	W1	W2
0+60.00 TO 0+70.00	0'-0" 3'-0"	MATCH EXST PATH WIDTH 5'-0"
13+10.00 TO 13+20.00	3'-0" 0'-0"	5'-0" MATCH EXST PATH WIDTH

TABLE 2			
		ZL	ZR
START OF PATH	0+60	6	3 (IN CUT)
	1+20	6	3 (IN CUT)
	1+90	6	6
	2+20	6	6
	3+20	6	6
	3+95	3	6
	4+20	3	3
	4+40	3	3
	4+60	3	2.5
	5+20	3	2.5
	6+40	3	6
	6+65	3	6
	7+20	3	6
	8+20	5	3
	9+20	4	3
	10+20	3	3
	11+20	6	6
END OF PATH	12+20	6	6
	13+20	6	6

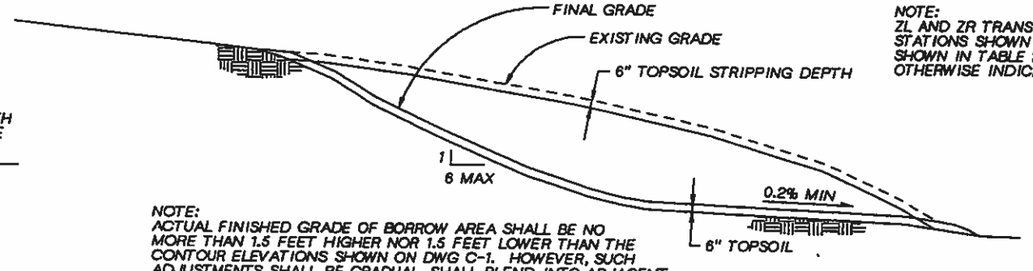
NOTE:
ZL AND ZR TRANSITION UNIFORMLY BETWEEN STATIONS SHOWN IN TABLE 2. ALL SLOPES SHOWN IN TABLE 2 ARE FILL SLOPES UNLESS OTHERWISE INDICATED.



TYPICAL SECTION C

C-1

STA.3+95.00 TO STA. 6+65.00
1"=5'-0"



NOTE:
ACTUAL FINISHED GRADE OF BORROW AREA SHALL BE NO MORE THAN 1.5 FEET HIGHER NOR 1.5 FEET LOWER THAN THE CONTOUR ELEVATIONS SHOWN ON DWG C-1. HOWEVER, SUCH ADJUSTMENTS SHALL BE GRADUAL, SHALL BLEND INTO ADJACENT TOPOGRAPHY, AND PROVIDE POSITIVE DRAINAGE.

TYPICAL SECTION D

C-1

BORROW AREA
1"=5'-0"

CH2M HILL

DSGN	J. WULLIMAN
DR	R.WASILCHUK
CHK	D. JOHNS
APVD	J. WULLIMAN

NO.	DATE	REVISION	BY	APVD

BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

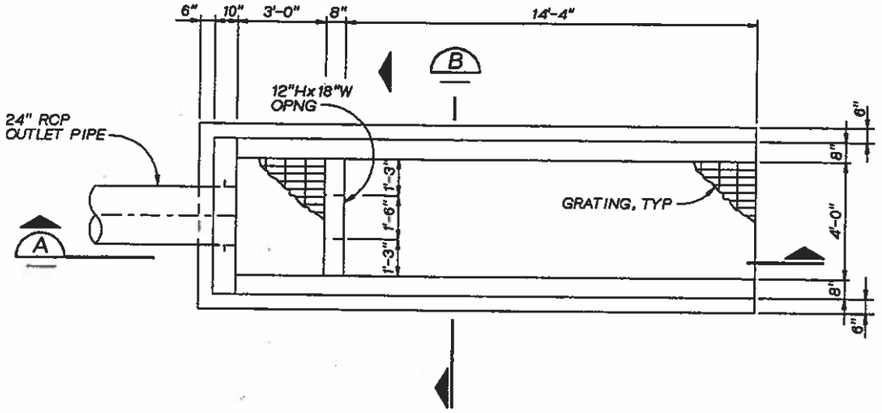
QUINCY OUTFALL
WATER QUALITY IMPROVEMENTS
CHERRY CREEK BASIN
WATER QUALITY AUTHORITY

CIVIL

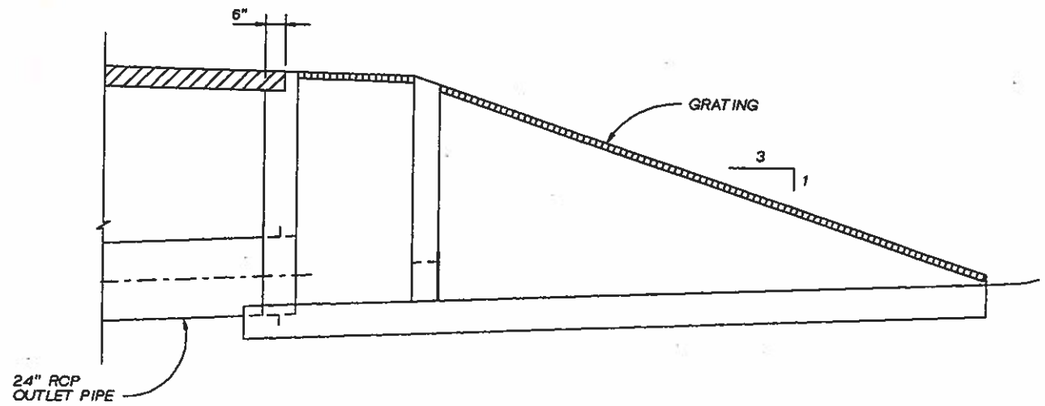
TYPICAL SECTIONS

SHEET	6
DWG NO.	C-3
DATE	MAY 1995
PROJ NO.	RMW40054.A3

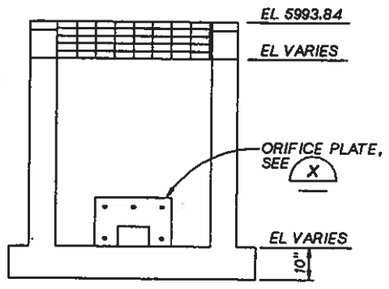
0054c003.div 15-MAY-1995 08:12:59



OUTLET STRUCTURE PLAN
3/8"=1'-0"



SECTION (A)
1/2"=1'-0"



SECTION (B)
1/2"=1'-0"

DSGN	J. MAXFIELD
DR	R.WASILCHUK
CHK	J. MAXFIELD
APVD	J. WULLIMAN

NO.	DATE	REVISION	BY	APVD

BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

QUINCY OUTFALL
WATER QUALITY IMPROVEMENTS
CHERRY CREEK BASIN
WATER QUALITY AUTHORITY

STRUCTURAL
OUTLET STRUCTURE PLAN, SECTIONS AND DETAILS

SHEET	7
DWG NO.	S-1
DATE	MAY 1995
PROJ NO.	RMW40054.A3