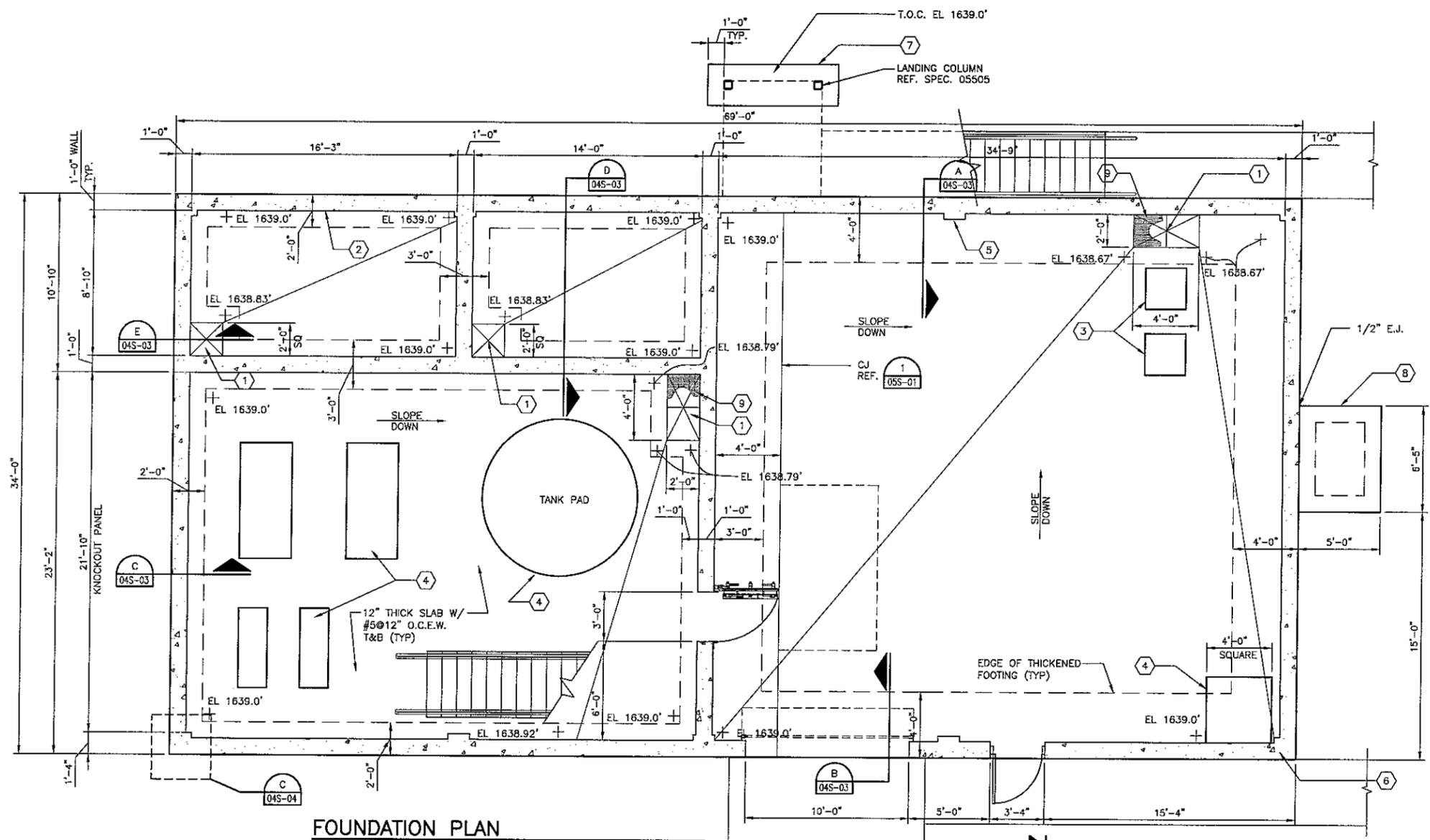


PLAN NOTES:

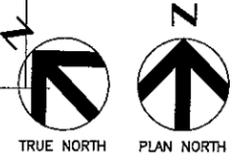
- 1.) REF SPEC 03311 FOR CONCRETE JOINT REQUIREMENT.
- 2.) PROVIDE TROWELED FINISH AT FLOOR SLAB.
- 3.) REF. $\frac{4}{05S-02}$ FOR ADDITIONAL REINF. @ SLAB AND WALL OPENINGS.

KEYED NOTES:

- 1) 2'-0" DEEP SUMP
- 2) APPLY SIKAGARO 75 & 62 TO INTERIOR OF MEMBRANE TANKS. (TYP) FOLLOW MANUFACTURERS RECOMMENDATIONS FOR APPLICATION. REF. SPEC 09905.
- 3) EQUIPMENT PAD REF. $\frac{2}{05S-02}$
- 4) EQUIP. PAD REF. $\frac{1}{05S-02}$
- 5) REF. $\frac{C}{04S-04}$ FOR TYP. PILASTER REINF.
- 6) REF. $\frac{2}{05S-03}$ FOR TYP. CORNER REINF.
- 7) 8" THICK SLAB W/ #4 @ 12" O.C.E.W. 2" FROM TOP OF SLAB.
- 8) EXTERIOR EQUIP. PAD REF. $\frac{2}{05S-01}$
- 9) GALV. STEEL GRATING REF. SPEC. 05505 REF. $\frac{4}{05S-03}$ FOR GRATING SUPPORT.
- 10) REF. ARCH, MECH AND PROCESS DRAWINGS FOR CONC. WALL PENETRATIONS. REF. $\frac{4}{05S-02}$ FOR REINF. REQUIREMENTS.



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



Issue No.	Description	Date	Drawn	Chkd.	Resp. Engr.	Proj. Mgr.
1	REVISED PRIOR TO FINAL BID ISSUE	07-14-04	WT	BKT	SWP	MCG
0	ISSUED FOR BID	06-02-04	WT	BKT	SWP	MCG
B	ISSUED FOR 100% REVIEW	05-19-04	WT	BKT	SWP	MCG
A	ISSUED FOR REVIEW	04-30-04	WT	BKT	SWP	MCG

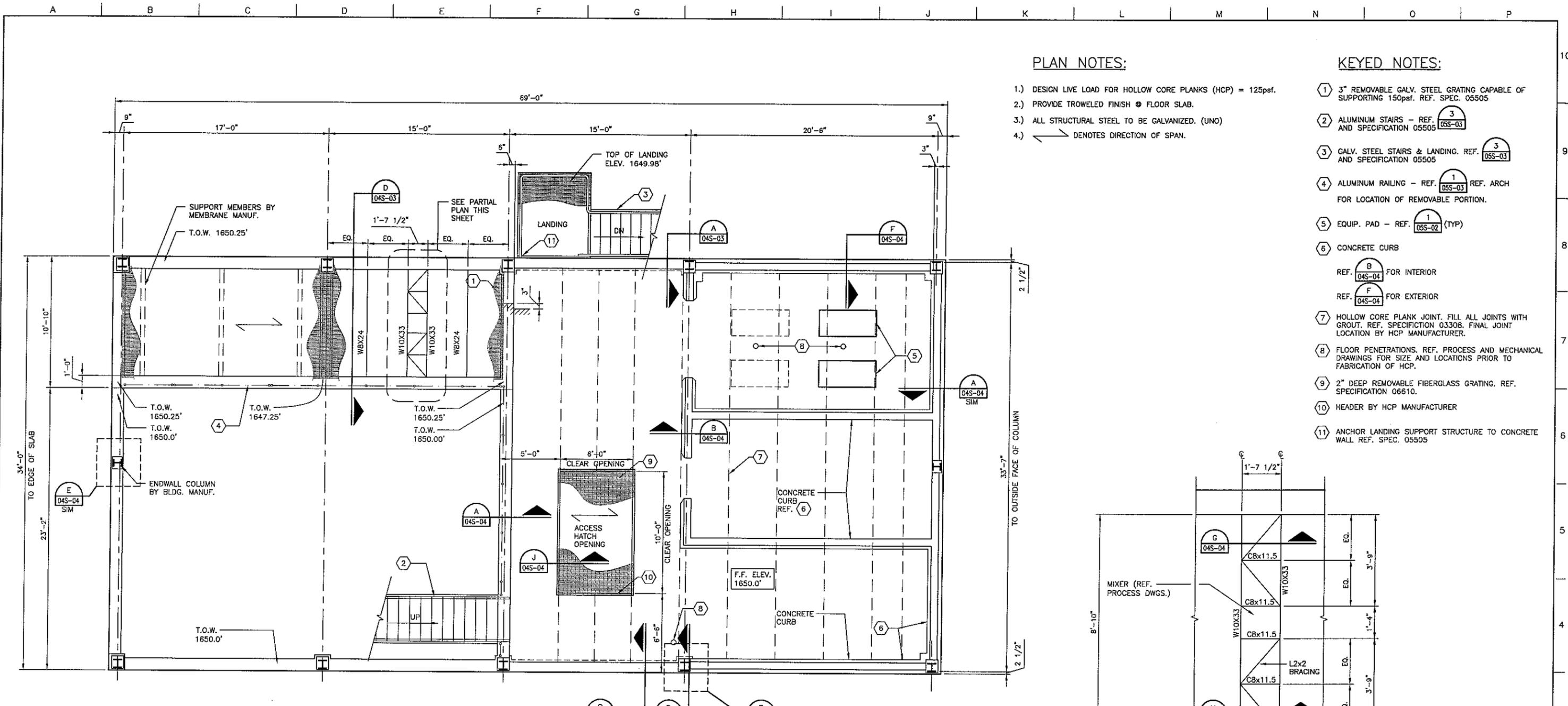


Project Manager	M. GRAVES
Designed	W. PEARCE
Designed	A. KLUMISCH
Checked	B. TAYLOR
Drawn	W. THOMAS



WATER TREATMENT PLANT EXPANSION 2004
THE CITY OF KERRVILLE, TEXAS

MEMBRANE SYSTEM STRUCTURAL FOUNDATION PLAN	
Date	JUNE 2004
Project No.	08340-025-035
Scale	1/4" = 1'-0"
File Name	04S-01.DWG
Issue	04S-01 1



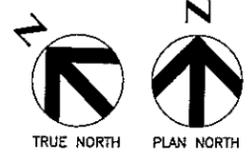
PLAN NOTES:

- 1.) DESIGN LIVE LOAD FOR HOLLOW CORE PLANKS (HCP) = 125psf.
- 2.) PROVIDE TROWELED FINISH @ FLOOR SLAB.
- 3.) ALL STRUCTURAL STEEL TO BE GALVANIZED. (UNO)
- 4.) DENOTES DIRECTION OF SPAN.

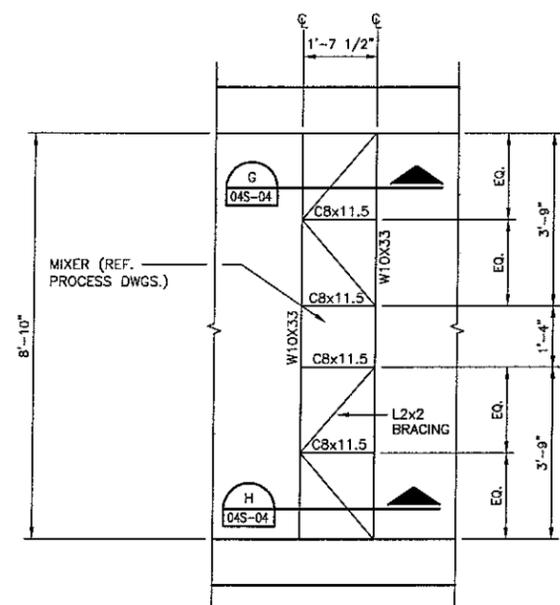
KEYED NOTES:

- 1) 3" REMOVABLE GALV. STEEL GRATING CAPABLE OF SUPPORTING 150psf. REF. SPEC. 05505
- 2) ALUMINUM STAIRS - REF. AND SPECIFICATION 05505
- 3) GALV. STEEL STAIRS & LANDING. REF. AND SPECIFICATION 05505
- 4) ALUMINUM RAILING - REF. REF. ARCH FOR LOCATION OF REMOVABLE PORTION.
- 5) EQUIP. PAD - REF. (TYP)
- 6) CONCRETE CURB
REF. FOR INTERIOR
REF. FOR EXTERIOR
- 7) HOLLOW CORE PLANK JOINT. FILL ALL JOINTS WITH GROUT. REF. SPECIFICATION 03308. FINAL JOINT LOCATION BY HCP MANUFACTURER.
- 8) FLOOR PENETRATIONS. REF. PROCESS AND MECHANICAL DRAWINGS FOR SIZE AND LOCATIONS PRIOR TO FABRICATION OF HCP.
- 9) 2" DEEP REMOVABLE FIBERGLASS GRATING. REF. SPECIFICATION 06610.
- 10) HEADER BY HCP MANUFACTURER
- 11) ANCHOR LANDING SUPPORT STRUCTURE TO CONCRETE WALL REF. SPEC. 05505

FLOOR FRAMING PLAN
1/4" = 1'-0"



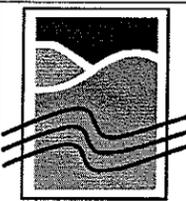
PARTIAL PLAN
1/2" = 1'-0"



Issue No.	Description	Date	Drawn	Checkd.	Resp. Engr.	Proj. Mgr.
1	REVISED PRIOR TO FINAL BID ISSUE	07-14-04	WT	BKT	SWP	MCG
0	ISSUED FOR BID	06-02-04	WT	BKT	SWP	MCG
B	ISSUED FOR 100% REVIEW	05-19-04	WT	BKT	SWP	MCG
A	ISSUED FOR REVIEW	04-30-04	WT	BKT	SWP	MCG

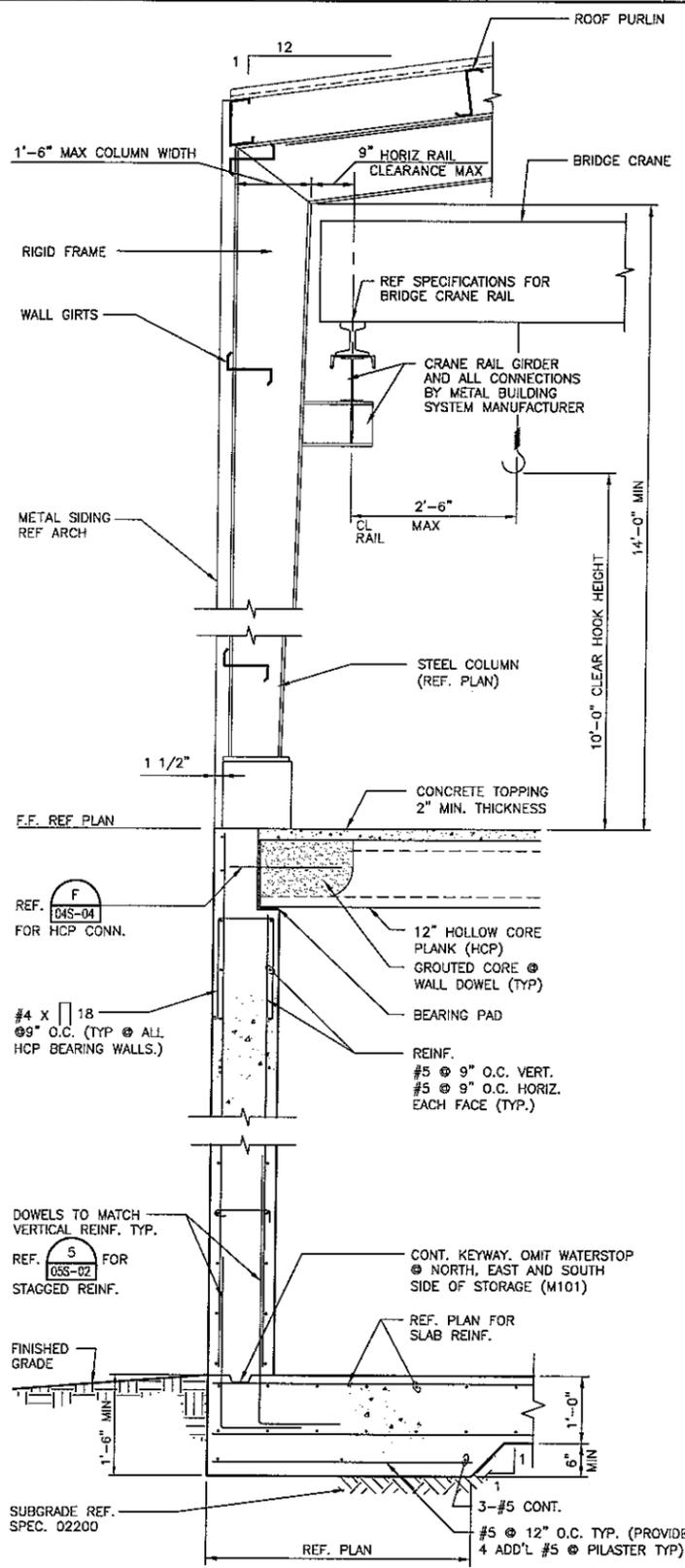


Project Manager
M. GRAVES
Designed
W. PEARCE
Designed
A. KLJMSCH
Checked
B. TAYLOR
Drawn
W. THOMAS

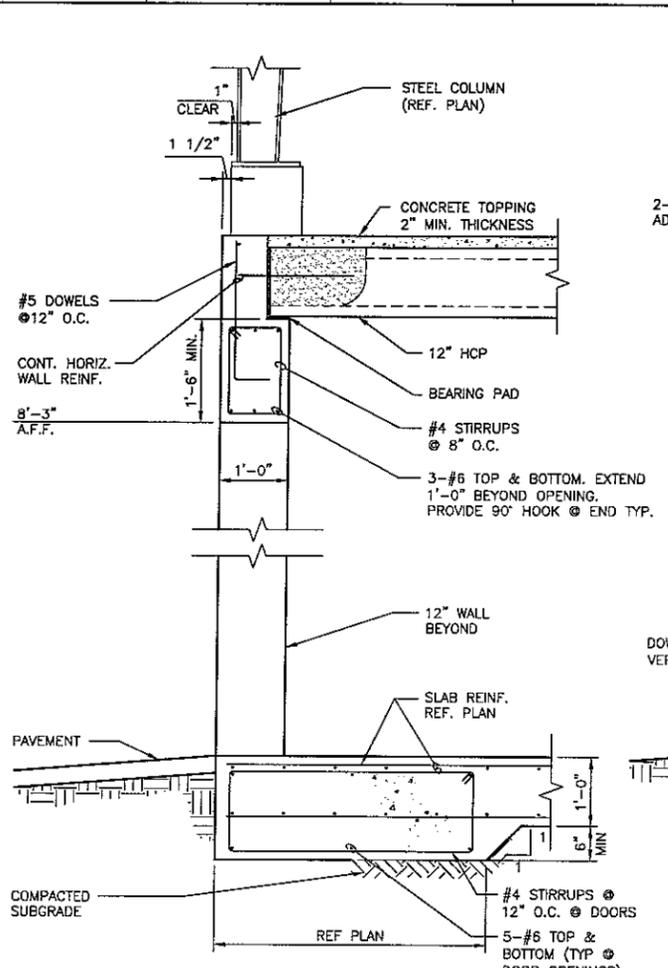


WATER TREATMENT PLANT EXPANSION 2004
THE CITY OF KERRVILLE, TEXAS

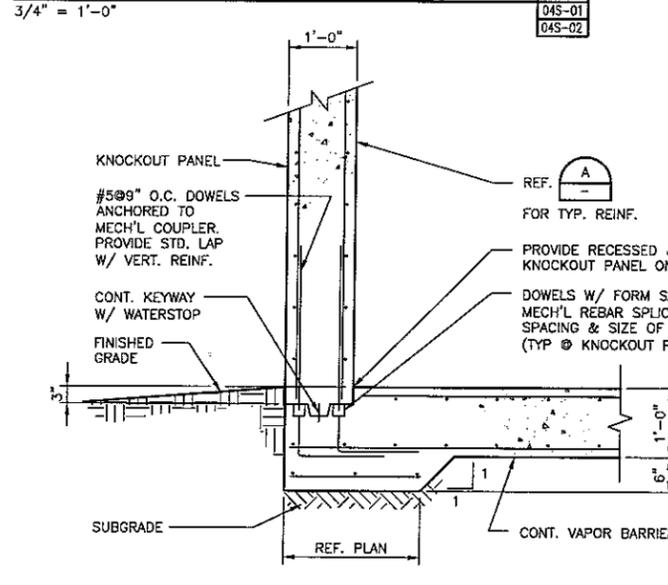
MEMBRANE SYSTEM STRUCTURAL		UPPER LEVEL FRAMING PLAN	
Date	JUNE 2004	Project No.	08340-025-036
Scale	1/4" = 1'-0"	File Name	04S-02.DWG
		Drawing No.	04S-02
		Issue	1



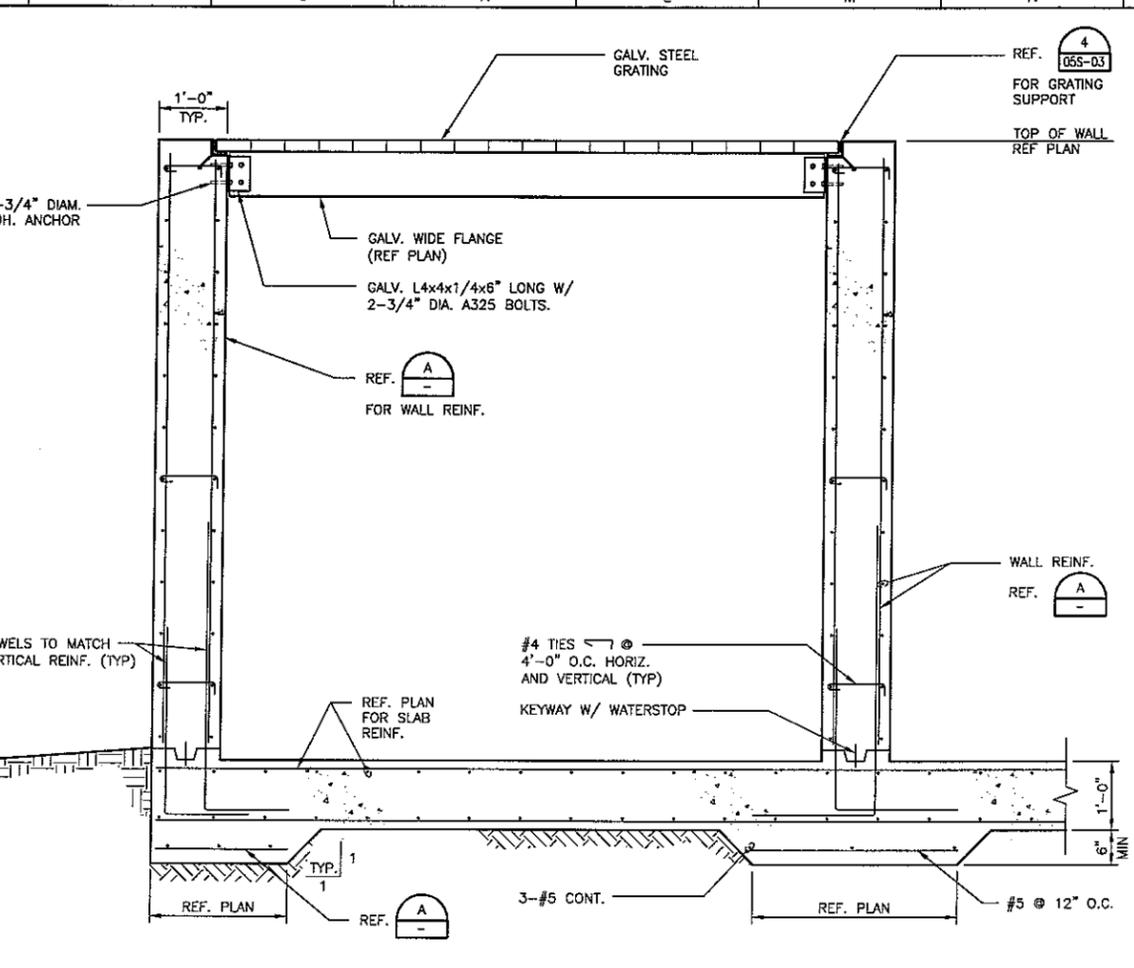
SECTION
3/4" = 1'-0"



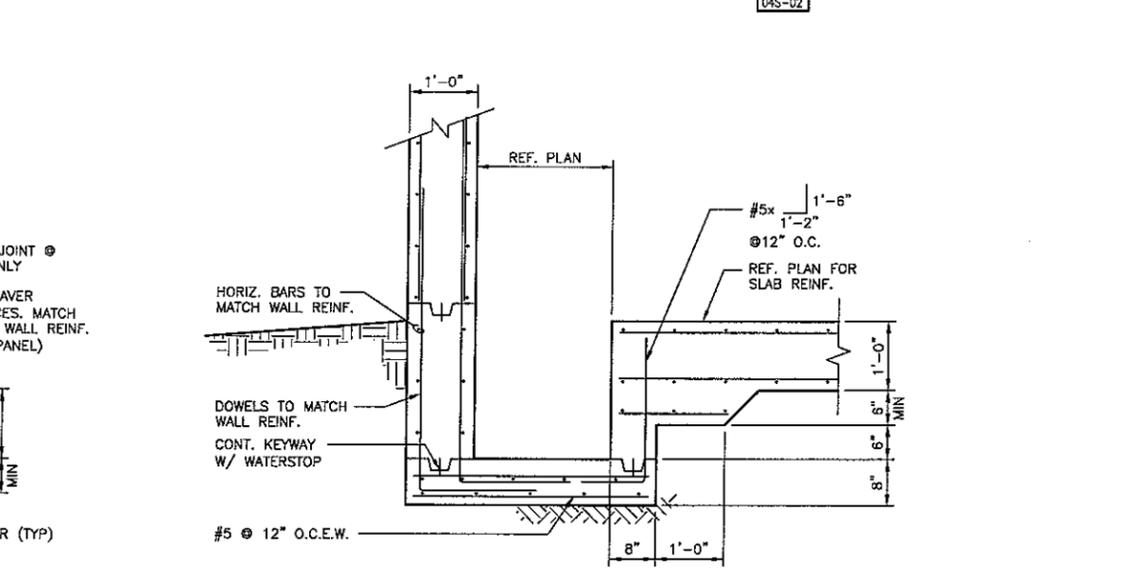
SECTION
3/4" = 1'-0"



SECTION
3/4" = 1'-0"

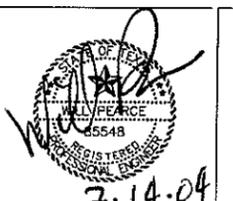


SECTION
3/4" = 1'-0"



SECTION
3/4" = 1'-0"

Issue No.	Description	Date	Drawn	Checked	Revised	Project Mgr.
1	REVISED PRIOR TO FINAL BID ISSUE	07-14-04	WT	BKT	SWP	MCG
0	ISSUED FOR BID	06-02-04	WT	BKT	SWP	MCG
B	ISSUED FOR 100% REVIEW	05-19-04	WT	BKT	SWP	MCG
A	ISSUED FOR REVIEW	04-30-04	WT	BKT	SWP	MCG



Project Manager	M. GRAVES
Designed	W. PEARCE
Checked	A. KLIMISCH
Drawn	B. TAYLOR
	W. THOMAS



**WATER TREATMENT
PLANT EXPANSION
2004**

THE CITY OF
KERRVILLE, TEXAS

MEMBRANE SYSTEM STRUCTURAL		SECTIONS AND DETAILS	
Date	JUNE 2004	Project No.	08340-025-036
Scale	3/4" = 1'-0"	Drawn No.	04S-03.DWG
		Issue	1

STRUCTURAL NOTES

GENERAL:

GN-1 THE STRUCTURES HAVE BEEN DESIGNED TO RESIST DESIGN LOADS ONLY AS A COMPLETED STRUCTURE. APPLICATION OF CONSTRUCTION LOADS TO THE PARTIALLY COMPLETED STRUCTURE SHALL BE CONSIDERED BY THE CONTRACTOR AND SO INCLUDED IN THE DESIGN OF SHORING, BRACING, FORMWORK, AND ANY OTHER SUPPORTING ELEMENTS PROVIDED FOR CONSTRUCTION OF THE STRUCTURE. WHEN SPECIFIED IN THE CONTRACT DOCUMENTS, OR REQUIRED BY THE STRUCTURAL ENGINEER, CONTRACTOR SHALL PRODUCE CALCULATIONS PREPARED BY A REGISTERED ENGINEER IN THE STATE OF NEBRASKA WHICH VERIFY THE MEANS OF STRUCTURALLY MAINTAINING THE INTEGRITY OF THE STRUCTURE DURING CONSTRUCTION.

GN-2 DURING ERECTION AND UNTIL ALL PERMANENT CONNECTIONS ARE MADE, THE CONTRACTOR SHALL PROVIDE TEMPORARY BRACING TO BRACE THE STRUCTURE IN ALL DIRECTIONS. (REF. GN-1).

GN-3 GENERAL CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS, GRADE CONDITIONS, (BOTH NEW AND EXISTING) REPORTING ANY DISCREPANCIES TO THE STRUCTURAL ENGINEER BEFORE PROCEEDING WITH ANY PHASE OF THE WORK AS THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK FITTING AS INTENDED BY THE CONTRACT DOCUMENTS.

GN-4 DETAILS IN THE CONTRACT DOCUMENTS INDICATED AS "TYPICAL" SHALL APPLY IN ALL AREAS WHERE CONDITIONS SIMILAR TO THE DETAIL OCCUR.

GN-5 STRUCTURAL DESIGN CRITERIA:

LIVE LOADS:

A. MINIMUM LIVE LOADS - LBS. PER SQUARE FOOT

MECHANICAL EQUIPMENT ROOM:	150 OR EQUIP. WT IF GREATER
ROOF LOADS:	20
STAIRWAYS:	100
SIDEWALKS:	250

B. WIND LOAD: 90 MPH WIND

2.1 EXPOSURE C
2.2 USE (IMPORTANCE) (IW) FACTOR - 1.15 (CATEGORY II)

C. SNOW LOAD: GROUND SNOW (Pg) - 5 PSF

3.1 EXPOSURE FACTOR (Ce) - 1.0
3.2 THERMAL FACTOR - 1.2
3.3 IMPORTANCE FACTOR - 1.2
3.4 PLUS DRIFTING
3.5 RAIN ON SNOW = 5 PSF PER CODE

D. SEISMIC LOAD:

4.1 SEISMIC USE GROUP = III (I = 1.50)
4.2 $S_s = 0.09$
4.3 $S_1 = 0.03$
4.4 $S_{DS} = 0.196g$
4.5 $S_{D1} = 0.048g$
4.6 SITE CLASS D
4.7 SEISMIC DESIGN CATEGORY A

FUTURE LOADS: UNLESS SPECIFICALLY NOTED, THERE ARE NO PROVISIONS MADE FOR FUTURE FLOORS, ROOFS, OR OTHER LOADS.

I. APPLICABLE CODES:

A.C.I. 318-99 - BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE AND COMMENTARY
A.C.I. 301-99 - STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE
A.I.S.C. ASD MANUAL-NINTH EDITION 1989
A.W.S. D1.1:2000 - STRUCTURAL WELDING CODE - STEEL
A.I.S.I. SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS, 1996 AND 1999 SUPP.
MBMA-METAL BUILDING SYSTEMS MANUAL 2002 EDITION
ICC - INTERNATIONAL BUILDING CODE, 2000 EDITION

II. THE FOUNDATION SYSTEM DESIGN IS BASED ON THE RECOMMENDATIONS OF GEOTECHNICAL REPORT DATED APRIL 2004 BY KLEINFELDER.

GN-6 REFERENCE MECHANICAL, ELECTRICAL AND PLUMBING CONTRACT DOCUMENTS FOR LOCATION AND SIZE OF ANY ITEMS WHICH MAY REQUIRE SLAB OPENINGS, SLEEVES, INSERTS, ANCHORS AND BOLTS REQUIRED BY VARIOUS TRADES.

GN-7 PROVIDE ADEQUATE STRUCTURAL FRAMING AS APPROVED BY THE STRUCTURAL ENGINEER FOR ALL REQUIRED MECHANICAL OPENINGS THROUGH SLABS, WALLS, FLOOR OR ROOF DECK, ETC., AND SUPPORT OF ALL MECHANICAL EQUIPMENT. OPENINGS SHALL NOT BE PERMITTED THROUGH BEAMS UNLESS SPECIFICALLY DETAILED BY THE STRUCTURAL ENGINEER.

GN-8 CONSTRUCTION MATERIALS SHALL NOT BE STORED ON FLOORS OR ROOFS IN EXCESS OF THE DESIGN LIVE LOADS REFERENCED IN NOTE GN-5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENFORCE THIS REQUIREMENT. IMPACT LOADS SHALL BE PREVENTED WHEN PLACING MATERIALS ON FLOORS OR ROOFS.

GN-9 SPECIAL INSPECTIONS ARE REQUIRED DURING EXCAVATION AND SUBGRADE PREPARATION, REINFORCED CONCRETE, PRECAST CONCRETE ERECTION, STRUCTURAL WELDING AND INSTALLATION OF HIGH STRENGTH BOLTS. SPECIAL INSPECTIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

FOUNDATIONS:

GS-1 SEE SPECIFICATION 02200 FOR SITE EXCAVATION, PREPARATION, FILL MATERIALS, FILL PLACEMENT AND COMPACTION.

GS-2 PROPER SITE DRAINAGE SHALL BE MAINTAINED DURING CONSTRUCTION TO INSURE SURFACE RUNOFF AWAY FROM THE STRUCTURES AND TO PREVENT PONDING OF SURFACE RUNOFF NEAR THE STRUCTURES.

SPECIAL INSPECTION REQUIREMENTS:

A. CONCRETE CONTINUOUS INSPECTION:

- SAMPLING FRESH CONCRETE AND PERFORMING SLUMP, AIR CONTENT AND DETERMINING THE TEMPERATURE OF FRESH CONCRETE AT THE TIME OF MAKING SPECIMENS FOR STRENGTH TESTS.
- INSPECTION OF CONCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES

B. CONCRETE PERIODIC INSPECTION:

- INSPECTION OF REINFORCING STEEL, INCLUDING SIZE AND PLACEMENT.
- VERIFYING USE OF REQUIRED DESIGN MIX.
- INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES
- ERECTION OF PRECAST CONCRETE MEMBERS
- INSTALLATION OF ANCHOR BOLTS.

C. METAL CONTINUOUS INSPECTION:

- INSPECTION OF WELDING:
 - COMPLETE AND PARTIAL PENETRATION GROOVE WELDS
 - MULTI-PASS FILLET WELDS
 - SINGLE-PASS FILLET WELDS > 5/16"

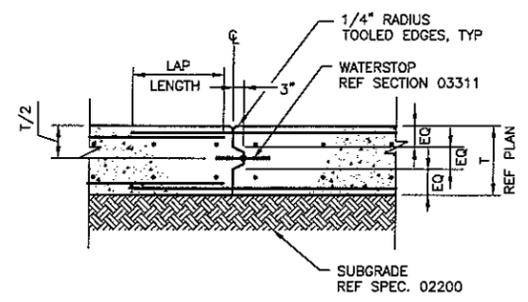
D. METAL PERIODIC INSPECTION:

- MATERIAL VERIFICATION OF BOLTS, NUTS, AND WASHERS
 - IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS.
 - MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED.
- INSPECTION OF BOLTING (BEARING-TYPE CONNECTIONS).
- INSPECTION OF WELDING:
 - SINGLE-PASS FILLET WELDS < 5/16"
 - FLOOR AND DECK WELDS
- INSPECTION OF FRAME JOINT DETAILS FOR COMPLIANCE WITH APPROVED CONSTRUCTION DOCUMENTS:
 - DETAILS SUCH AS BRACING AND STIFFENING
 - MEMBER LOCATIONS.
 - APPLICATIONS OF JOINT DETAILS AT EACH LOCATION.

NOTE: SEE SPECIFICATION 05505 FOR DETAILS AND FREQUENCY OF METALS TESTING.

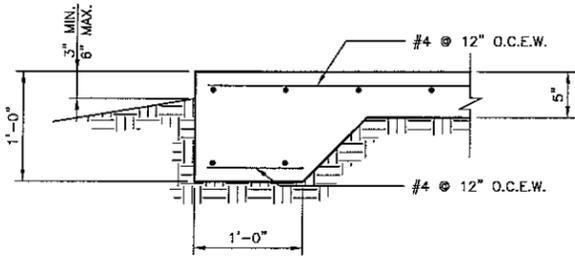
GENERAL NOTES:

1. DETAILS ON THIS SHEET APPLY TO THE ENTIRE SET OF PLANS EXCEPT WHERE SPECIFICALLY SHOWN OTHERWISE



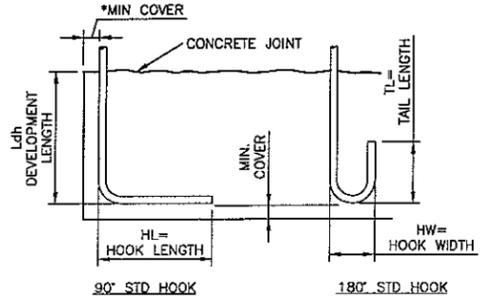
SLAB CONSTRUCTION JOINT DETAIL - (CJ)

NOT TO SCALE



EXTERIOR EQUIPMENT PAD

NOT TO SCALE



BAR SIZE	f'c=4000 psi			
	Ldh *	HL	HW	TL
#3	6"	6"	3"	3"
#4	7"	8"	4"	4 1/2"
#5	9"	10"	5"	5"
#6	11"	1'-0"	6"	6"
#7	1'-0"	1'-2"	7"	7"
#8	1'-2"	1'-4"	8"	8"
#9	1'-4"	1'-7"	11 3/4"	10 1/2"
#10	1'-6"	1'-10"	1'-1 1/4"	11 1/2"
#11	1'-7"	2'-0"	1'-2 3/4"	1'-1"

* COMPLYING WITH MINIMUM COVER REQUIREMENTS OF ACI 318, 12.5.3.2. OTHERWISE Ldh MUST BE RE-CALCULATED.

HOOK/DEVELOPMENT LENGTH SCHEDULE

NOT TO SCALE

BAR SIZE	f'c = 4000 psi		fy = 60.0 ksi	
	LAP LENGTH (IN.)		EMBEDMENT LENGTH (IN.)	
	TOP	OTHER	TOP	OTHER
#3	16	16	12	12
#4	18	16	14	12
#5	23	17	18	14
#6	27	21	21	17
#7	40	31	31	24
#8	45	35	35	27
#9	56	43	44	34
#10	68	53	54	42
#11	83	64	65	50

- NOTES:**
- LAP LENGTHS SHOWN ARE FOR CLASS "B" TENSION SPLICES.
 - LAP LENGTHS AND EMBEDMENTS SHOWN ARE FOR BARS SPACED LATERALLY @ > FIVE TIMES THE BAR DIAMETER AND FOR MINIMUM COVER IN ACCORDANCE WITH ACI 318-99.
 - IF SPACING IS < 5 TIMES BAR DIAMETER, INCREASE LAP LENGTH AND EMBEDMENT SHOWN BY 25%.
 - TOP REINFORCING IS HORIZONTAL STEEL SO PLACED THAT MORE THAN 12" OF CONCRETE IS CAST IN THE MEMBER BELOW THE REINFORCING.

LAP/EMBEDMENT LENGTH SCHEDULE

NOT TO SCALE

No.	Description	Date	Drawn	Chkd.	Resp. Engr.	Prnt. Mgr.
1	REVISED PRIOR TO FINAL BID ISSUE	07-14-04	WT	BKT	SWP	MCG
0	ISSUED FOR BID	06-02-04	WT	BKT	SWP	MCG
B	ISSUED FOR 100% REVIEW	05-19-04	WT	BKT	SWP	MCG
A	ISSUED FOR REVIEW	04-30-04	WT	BKT	SWP	MCG



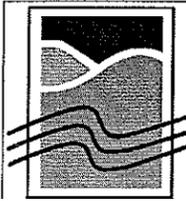
Project Manager
M. GRAVES

Designed
W. PEARCE

Designed
A. KLIMISCH

Checked
B. TAYLOR

Drawn
W. THOMAS



WATER TREATMENT PLANT EXPANSION 2004

THE CITY OF KERRVILLE, TEXAS

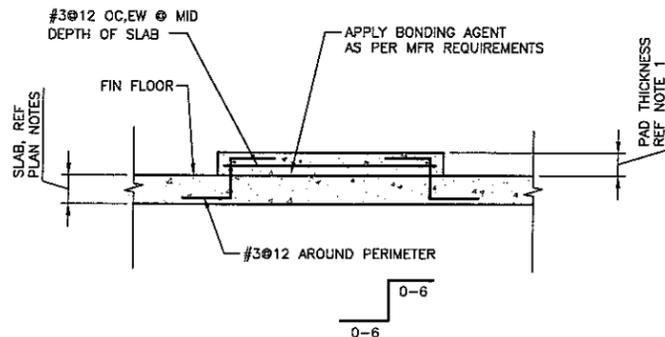
MISCELLANEOUS IMPROVEMENTS AND GENERAL DETAILS STRUCTURAL TYPICAL DETAILS	
Date JUNE 2004	Project No. 08340-025-036
Scale NOT TO SCALE	Drawing No. 05S-01
Issue 1	File Name 05S-01.DWG

ABBREVIATIONS

AB	ANCHOR BOLT	FUT	FUTURE	P/C	PRECAST
ADH ANC	ADHESIVE ANCHORS	FF	FINISHED FLOOR	PDT	PAINTED
AFF	ABOVE FINISHED FLOOR	FFV	FIELD VERIFY	PWD	PLYWOOD
ALUM	ALUMINUM	GA	GAGE	PMU	PRECAST MASONRY UNITS
B/B	BACK TO BACK	GALV	GALVANIZED	PREFAB	PREFABRICATED
BP	BASE PLATE	GR	GRADE	PL	PLATE
BT	BENT			PT	POINT
BUR	BUILT-UP ROOF	HK	HOOK	RD	ROOF DRAIN
BLK	BLOCK	HG	HEIGHT	REF	REFERENCE
BO	BOTTOM OF BEAM	HS	HIGH STRENGTH(BOLT)	REIN	REINFORCING/REINFORCED
BW	BOTH WAYS	HCA	HEADED CONCRETE ANCHOR	R	RISER
BRG	BEARING	HM	HOLLOW METAL	RO	ROUGH OPENING
BTW	BETWEEN	IE	INVERT ELEVATION	SPA	SPACES/SPACING
		IF	INSIDE FACE	SECT	SECTION
CANT	CANTILEVER	IN	INCH	SIM	SIMILAR
CIP	CAST-IN-PLACE	INT	INTERIOR	SOG	SLAB ON GRADE
CJ	CONSTRUCTION JOINT	INTE	INTERIOR END	SO	SQUARE
CLG	CEILING	JST	JOIST	SJ	SAWED JOINT
CLR	CLEAR	K	KIP(THOUSAND POUNDS)	SLV	SLEEVE
COL	COLUMN	L	ANGLE	SS	STAINLESS STEEL
CONTR	CONTRACTOR	L	ANGLE	STIF	STIFFENERS
CONN	CONNECTION	LE	LEFT END	STR	STIRRUPS
CONST	CONSTRUCTION	LLH	LONG LEG HORIZONTAL	STR	STAIR
COS	CENTERLINE OF SPLICE	LG	LONG	STRUC	STRUCTURE
CMU	CONCRETE MASONRY UNIT	LVL	LEVEL	SUP	SUPPORT
		LLV	LONG LEG VERTICAL	SUSP	SUSPENDED
DEMO	DEMOLITION	LLV	LONG LEG VERTICAL	SYMM	SYMMETRICAL
DIAG	DIAGONAL	MECH	MECHANICAL	T	TREAD
DIA	DIAMETER	MID	MIDDLE	THK	THICK/THICKNESS
DL	DEAD LOAD	MO	MASONRY OPENING	TOC	TOP OF CONCRETE
DWGS	DRAWINGS	MTL	METAL	TOF	TOP OF FOOTING
EE	EACH END	MU	MASONRY UNIT	TOB	TOP OF BEAM
EJ	EXPANSION JOINT	NS	NEAR SIDE	TOS	TOP OF STEEL
EMB	EMBEDMENT/EMBEDDED	NIC	NOT IN CONTRACT	TOW	TOP OF WALL
EQ	EQUAL	NOM	NOMINAL	TOFF	TOPPING
EQUIP	EQUIPMENT			TYP	TYPICAL
EXT	EXTERIOR				
EXP ANC	EXPANSION ANCHORS	OC	ON CENTER	UNO	UNLESS NOTED OTHERWISE
EW	EACH WAY	O/O	OUT TO OUT	VIF	VERIFY IN FIELD
FDTN	FOUNDATION	OF	OUTSIDE FACE	WD	WOOD
FIN GR	FINISHED GRADE	OP	OPENING	WP	WORK POINT
FOC	FACE OF CONCRETE	OPP	OPPOSITE	WT	WEIGHT
FTG	FOOTING	OPPH	OPPOSITE HAND	WWF	WELDED WIRE FABRIC

GENERAL NOTES:

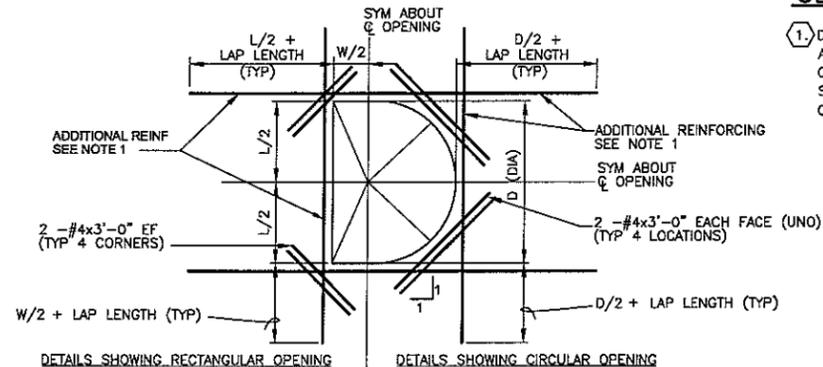
1. DETAILS ON THIS SHEET APPLY TO THE ENTIRE SET OF PLANS EXCEPT WHERE SPECIFICALLY SHOWN OTHERWISE



NOTE:

1. REF PROCESS AND ELECTRICAL DRAWINGS FOR DIMENSIONS & LOCATIONS OF PADS. FINAL PAD DIMENSIONS ARE TO ADJUST AS NEEDED TO FIT ACTUAL EQUIPMENT SELECTED.

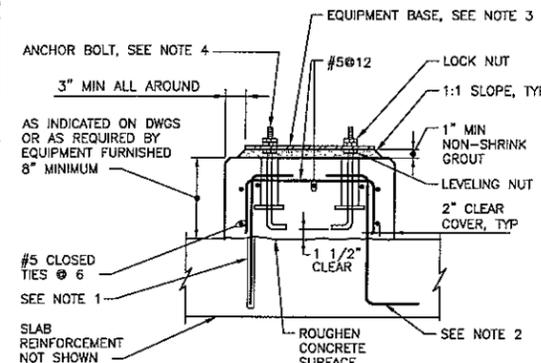
TYPICAL HOUSEKEEPING PAD



- NOTES:
- ADDITIONAL REINFORCING SHALL BE THE SAME SIZE AS DISCONTINUOUS REINFORCEMENT AT OPENING. QUANTITY OF REINFORCING IN EACH DIRECTION SHALL BE EQUAL TO OR ONE GREATER THAN THE NUMBER OF DISCONTINUOUS BARS. PLACE 1/2 OF ADDITIONAL REINFORCING BARS EACH SIDE OF OPENING. PLACE ADDITIONAL REINFORCEMENT AT 3" OC (TYPICAL BOTH DIRECTIONS AND ALL LAYERS OF REINFORCEMENT).
 - ADDITIONAL REINFORCING SHALL EXTEND BEYOND EDGE OF OPENING AS SHOWN ABOVE. ADDITIONAL BARS MAY TERMINATE AT THE END OF THE WALL WITH A STANDARD HOOK WHERE THE LENGTH OF THE WALL WILL NOT PERMIT BARS TO EXTEND AS SHOWN ABOVE.
 - TYPICAL WALL OR SLAB REINFORCING NOT SHOWN FOR CLARITY. TERMINATE TYPICAL REINFORCING 2" CLEAR TO OPENING.
 - OPENINGS 12" OR LESS IN SLABS & OPENINGS 18" OR LESS IN WALLS, NO EXTRA REBARS ARE REQUIRED UNLESS SHOWN OTHERWISE. TYPICAL REINFORCING SHALL BE SPREAD (NOT CUT) TO ALLOW FOR OPENINGS TO BE MADE.
 - UNLESS SHOWN OTHERWISE ON DRAWINGS, PROVIDE EXTRA REINFORCING AROUND OPENINGS AS SHOWN AND INDICATED ABOVE.

OPENINGS IN SLABS AND WALLS

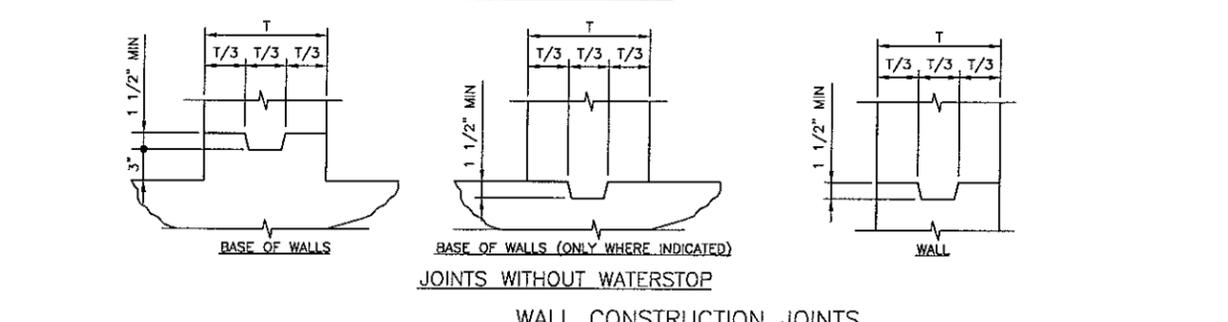
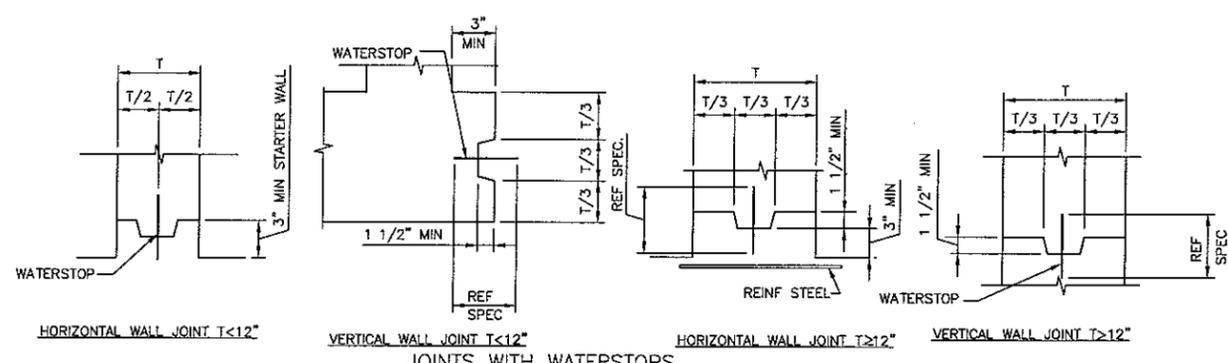
NOT TO SCALE



- NOTES:
- FOR NEW EQUIPMENT BASES ON EXISTING SLABS, DRILL INTO EXISTING SLAB TO DEVELOPMENT DEPTH AT 12" CENTERS AROUND PERIMETER OF EQUIPMENT BASE AND SET #5 HOOKED DOWELS IN EPOXY GROUT.
 - FOR EQUIPMENT BASES ON NEW SLABS, PROVIDE #5 DOWELS HAVING TWO HOOKED ENDS AT 12" CENTERS AROUND PERIMETER OF EQUIPMENT BASE.
 - EQUIPMENT BASE DIMENSIONS SHALL BE AS INDICATED ON THE DRAWINGS OR AS DETERMINED BY THE EQUIPMENT MANUFACTURER AND APPROVED BY THE ENGINEER.
 - ANCHOR BOLTS AS RECOMMENDED BY THE EQUIPMENT MANUFACTURER. BOLTS SHALL BE HELD IN POSITION WITH A TEMPLATE WHILE EQUIPMENT BASE IS BEING CAST.
 - PIPE SLEEVES SHALL BE USED TO PROVIDE THE ANCHOR BOLT A MINIMUM MOVEMENT OF 1/2" IN ALL DIRECTIONS. MINIMUM SLEEVE LENGTH SHALL BE 8 TIMES THE BOLT DIAMETER. SLEEVES SHALL BE FILLED WITH NON-SHRINK GROUT. PIPE SLEEVES SHALL HAVE A MINIMUM INTERNAL DIAMETER 1" GREATER THAN BOLT DIAMETER AND A MAXIMUM INTERNAL DIAMETER OF 3" GREATER THAN BOLT DIAMETER.
 - EQUIPMENT BASES SHALL BE INSTALLED LEVEL. TOLERANCE IS 1/16"

EQUIPMENT BASE DETAIL

NOT TO SCALE

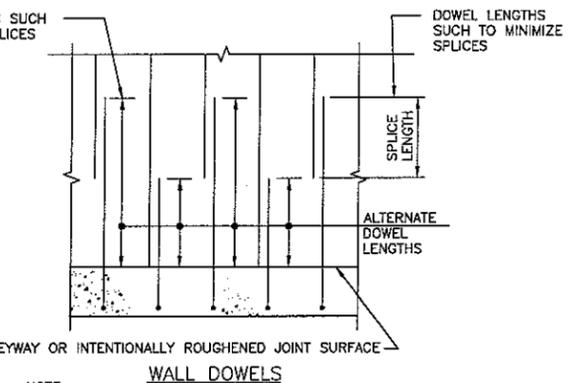
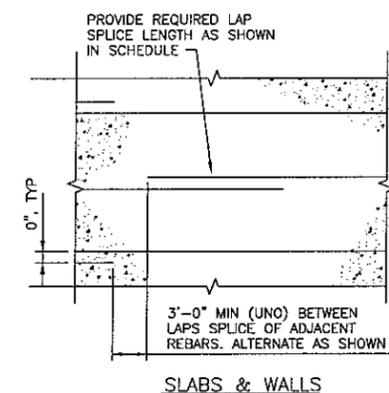


WALL CONSTRUCTION JOINTS

- NOTES:
- REINFORCING STEEL TO BE CARRIED ACROSS ALL CONSTRUCTION JOINTS.

CONSTRUCTION JOINT DETAILS

NOT TO SCALE



- NOTE:
- APPLIES TO SLABS, WALLS (BOTH HORIZONTAL AND VERTICAL)

REINFORCING SPLICE STAGGER

NOT TO SCALE

Issue No.	Description	Date	Drawn	Checked	Revised	Project Mgr.
1	REVISED PRIOR TO FINAL BID ISSUE	07-14-04	WT	BKT	SWP	MCG
0	ISSUED FOR BID	06-02-04	WT	BKT	SWP	MCG
B	ISSUED FOR 100% REVIEW	05-19-04	WT	BKT	SWP	MCG
A	ISSUED FOR REVIEW	04-30-04	WT	BKT	SWP	MCG

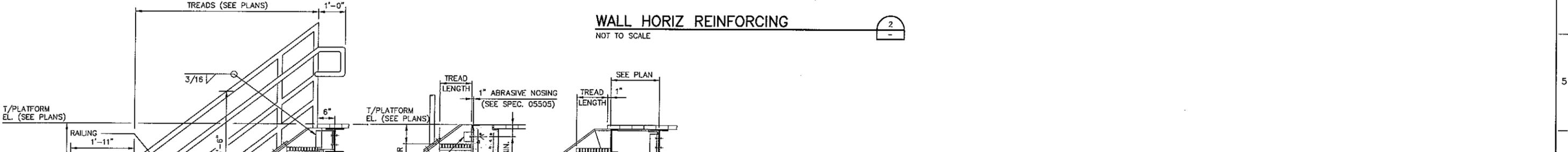
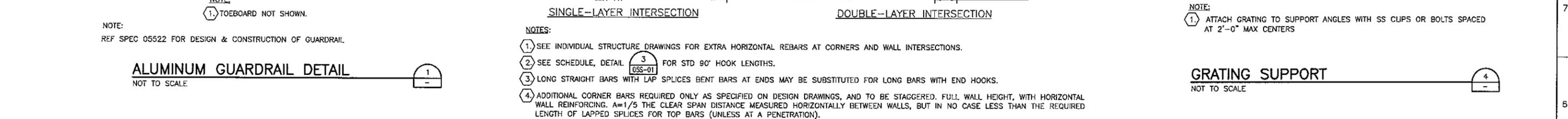
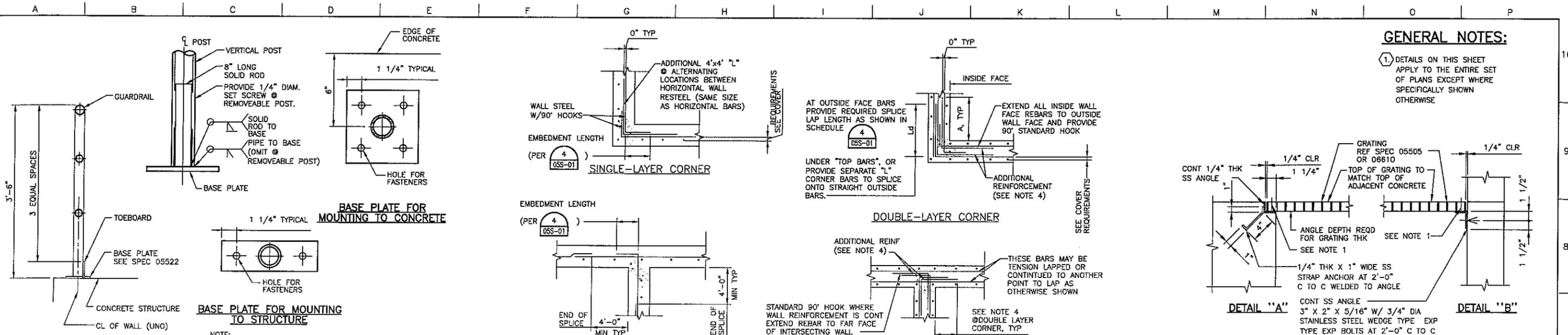


Project Manager	M. GRAVES
Designed	W. PEARCE
Designed	A. KLIMISCH
Checked	B. TAYLOR
Drawn	W. THOMAS

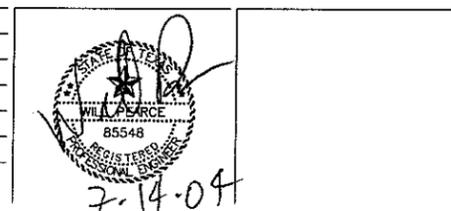


WATER TREATMENT PLANT EXPANSION 2004
THE CITY OF KERRVILLE, TEXAS

MISCELLANEOUS IMPROVEMENTS AND GENERAL DETAILS STRUCTURAL TYPICAL DETAILS	
Date	JUNE 2004
Project No.	08340-025-036
Scale	NOT TO SCALE
File Name	055-02.DWG
Drawing No.	055-02
Issue	1



Issue No.	Description	Date	Drawn	Checked	Responsible Eng.	Project Mgr.
1	REVISED PRIOR TO FINAL BID ISSUE	07-14-04	WT	BKT	SWP	MCG
0	ISSUED FOR BID	06-02-04	WT	BKT	SWP	MCG
B	ISSUED FOR 100% REVIEW	05-19-04	WT	BKT	SWP	MCG
A	ISSUED FOR REVIEW	04-30-04	WT	BKT	SWP	MCG



HDR
 HDR Engineering, Inc.

Project Manager
 M. GRAVES

Designed
 W. PEARCE

Designed
 A. KLIMISCH

Checked
 B. TAYLOR

Drawn
 W. THOMAS

WATER TREATMENT PLANT EXPANSION 2004

THE CITY OF
KERRVILLE, TEXAS

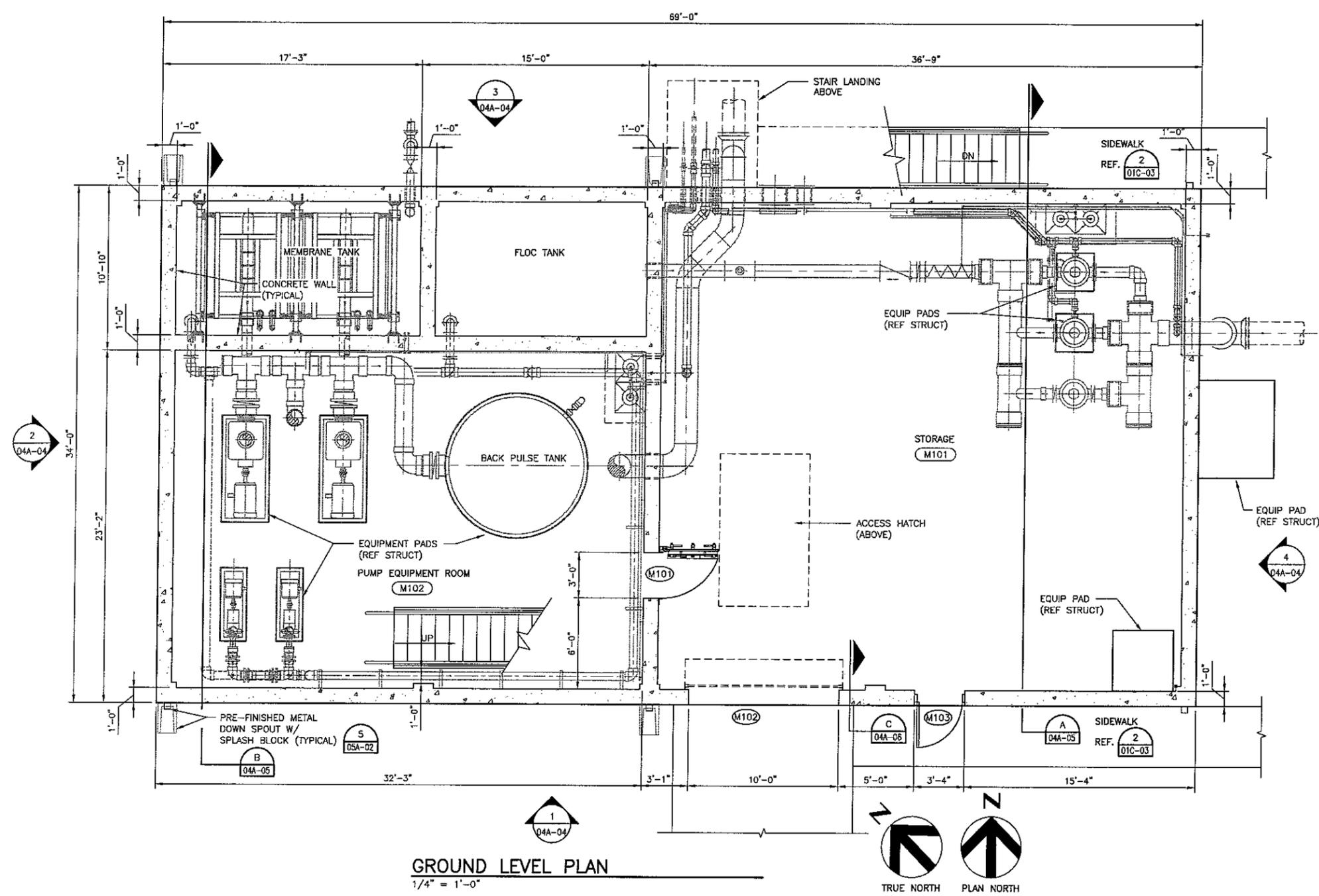
MISCELLANEOUS IMPROVEMENTS AND GENERAL DETAILS STRUCTURAL TYPICAL DETAILS

Date: JUNE 2004
 Scale: NOT TO SCALE

Project No.: 08340-025-036
 File Name: 05S-03.DWG

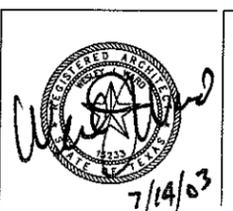
Drawing No.: **05S-03**
 Issue: **1**

BUILDING CODE INFORMATION		
CODE TYPE & ISSUE YEAR	IBC 2000	
CONSTRUCTION TYPE	TYPE III-B	
OCCUPANCY	OCCUPANCY TYPE	# OF OCCUPANTS
	F-2	23
OCCUPANCY NOTES:		
HEIGHT	ALLOWABLE HEIGHT	ACTUAL HEIGHT
	3 STORY	27'-0" (EAVE HEIGHT)
AREA	ALLOWABLE AREA	ACTUAL AREA
	54,000 S.F. 18,000 S.F. (PER FLOOR)	LOWER LEVEL 1964 S.F. UPPER LEVEL 1606 S.F. TOTAL 3570 S.F.
FIRE RESISTANCE REQUIREMENTS	NONE	

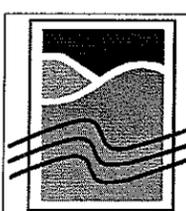


GROUND LEVEL PLAN
1/4" = 1'-0"

Issue No.	Description	Date	Drawn	Checked	Revis. Engr.	Proj. Mgr.
1	REVISED PRIOR TO FINAL BID ISSUE	07-14-04	WT	RHA	WJW	MCG
0	ISSUED FOR BID	06-02-04	WT	RHA	WJW	MCG
B	ISSUED FOR 100% REVIEW	05-19-04	WT	RHA	WJW	MCG
A	ISSUED FOR REVIEW	04-30-04	WT	RHA	WJW	MCG



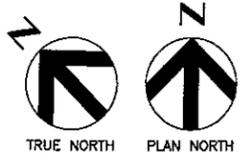
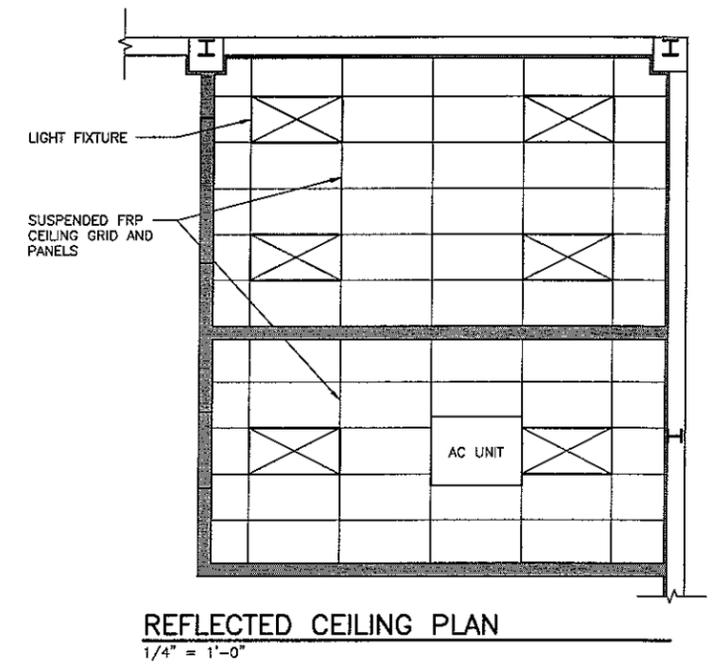
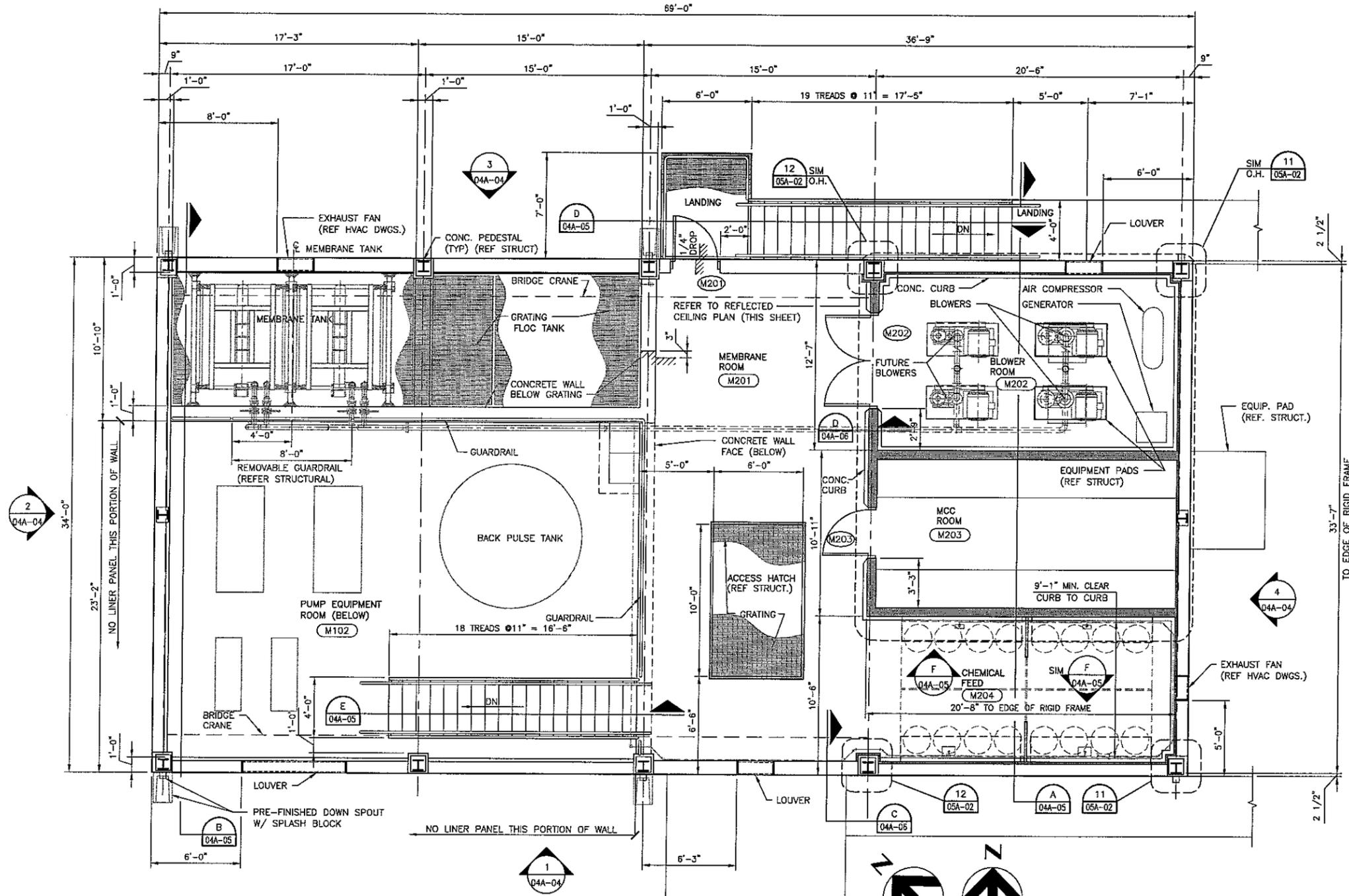
Project Manager	M. GRAVES
Designed	W. WARD
Checked	R. ANDREW
Drawn	W. THOMAS



**WATER TREATMENT
PLANT EXPANSION
2004**

THE CITY OF
KERRVILLE, TEXAS

MEMBRANE SYSTEM ARCHITECTURAL		Date	JUNE 2004	Project No.	08340-025-036	Drawing No.	04A-01	Issue	1
GROUND LEVEL FLOOR PLAN		Scale	1/4" = 1'-0"	File Name	04A-01.DWG				



Issue No.	Description	Date	Drawn	Chkd.	Resp. Engr.	Proj. Mgr.
1	REVISED PRIOR TO FINAL BID ISSUE	07-14-04	WT	RHA	WJW	MCG
0	ISSUED FOR BID	06-02-04	WT	RHA	WJW	MCG
B	ISSUED FOR 100% REVIEW	05-19-04	WT	RHA	WJW	MCG
A	ISSUED FOR REVIEW	04-30-04	WT	RHA	WJW	MCG

Date	Drawn	Chkd.	Resp. Engr.	Proj. Mgr.
07-14-04	WT	RHA	WJW	MCG
06-02-04	WT	RHA	WJW	MCG
05-19-04	WT	RHA	WJW	MCG
04-30-04	WT	RHA	WJW	MCG

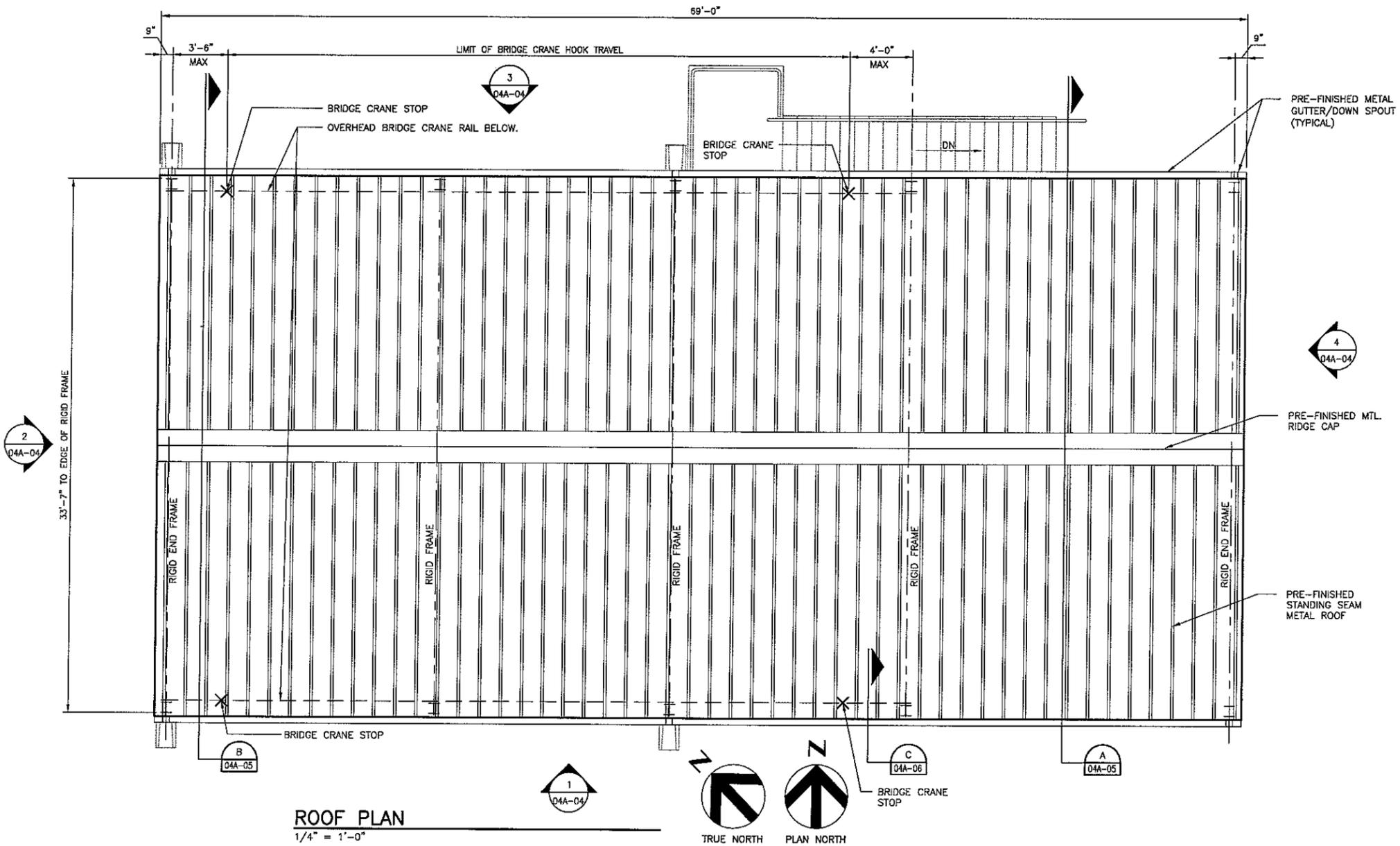


Project Manager	M. GRAVES
Designed	W. WARD
Checked	R. ANDREW
Drawn	W. THOMAS



WATER TREATMENT PLANT EXPANSION 2004
THE CITY OF KERRVILLE, TEXAS

Date	JUNE 2004	Project No.	08340-025-036	Drawing No.	04A-02	Issue	1
Scale	1/4" = 1'-0"	File Name	04A-02.DWG				



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

Issue No.	Description	Date	Drawn	Chkd.	Resp. Engr.	Proj. Mgr.
1	REVISED PRIOR TO FINAL BID ISSUE	07-14-04	WT	RHA	WJW	MCG
0	ISSUED FOR BID	06-02-04	WT	RHA	WJW	MCG
B	ISSUED FOR 100% REVIEW	05-19-04	WT	RHA	WJW	MCG
A	ISSUED FOR REVIEW	04-30-04	WT	RHA	WJW	MCG

Date	Drawn	Chkd.	Resp. Engr.	Proj. Mgr.
07-14-04	WT	RHA	WJW	MCG
06-02-04	WT	RHA	WJW	MCG
05-19-04	WT	RHA	WJW	MCG
04-30-04	WT	RHA	WJW	MCG



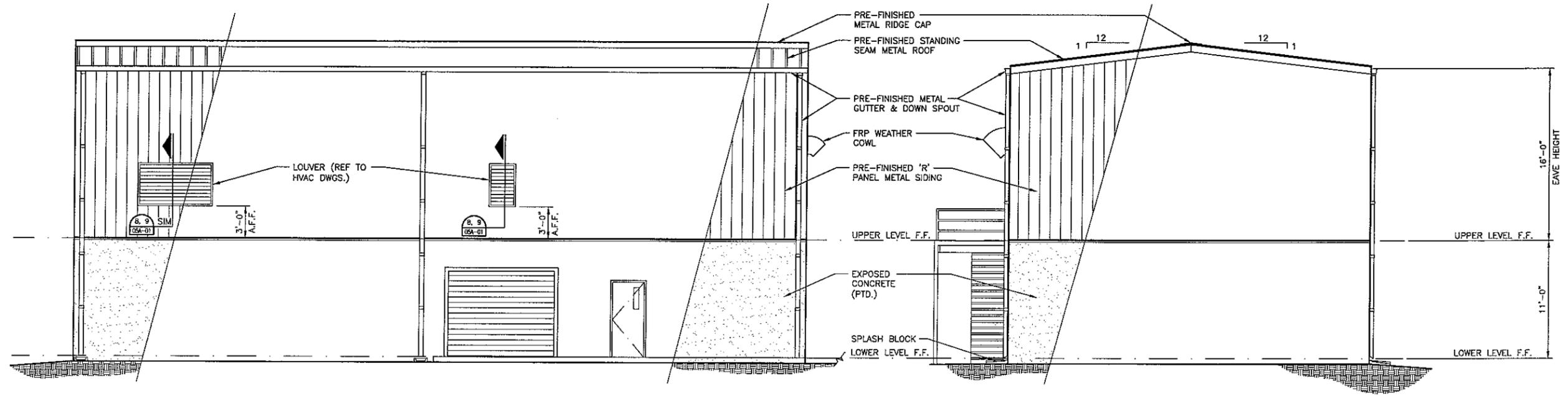
Project Manager	M. GRAVES
Designed	W. WARD
Checked	R. ANDREW
Drawn	W. THOMAS



**WATER TREATMENT
PLANT EXPANSION
2004**

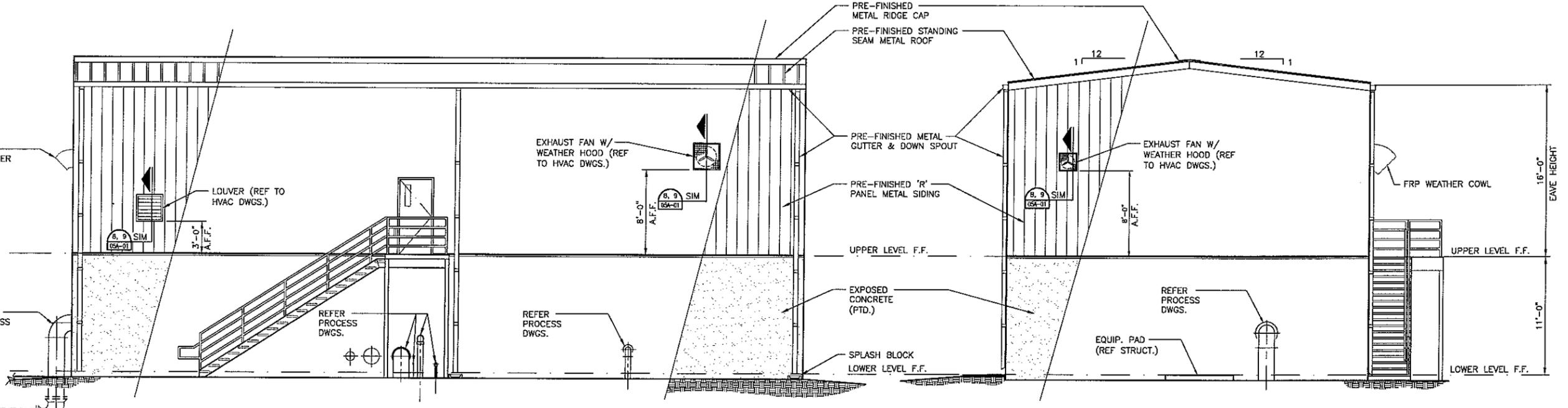
THE CITY OF
KERRVILLE, TEXAS

MEMBRANE SYSTEM ARCHITECTURAL ROOF PLAN		Date	JUNE 2004	Project No.	08340-025-036
		Scale	1/4" = 1'-0"	File Name	04A-03.DWG
Issue No.	1	Drawing No.	04A-03		



SOUTH ELEVATION
3/16" = 1'-0"

WEST ELEVATION
3/16" = 1'-0"



NORTH ELEVATION
3/16" = 1'-0"

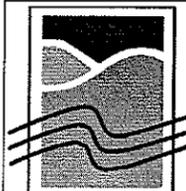
EAST ELEVATION
3/16" = 1'-0"

1	REVISED PRIOR TO FINAL BID ISSUE	07-14-04	WT	RHA	WJW	MCG
0	ISSUED FOR BID	08-02-04	WT	RHA	WJW	MCG
B	ISSUED FOR 100% REVIEW	05-19-04	WT	RHA	WJW	MCG
A	ISSUED FOR REVIEW	04-30-04	WT	RHA	WJW	MCG

Date	Drawn	Chkd.	Resp. Engr.	Proj. Mgr.



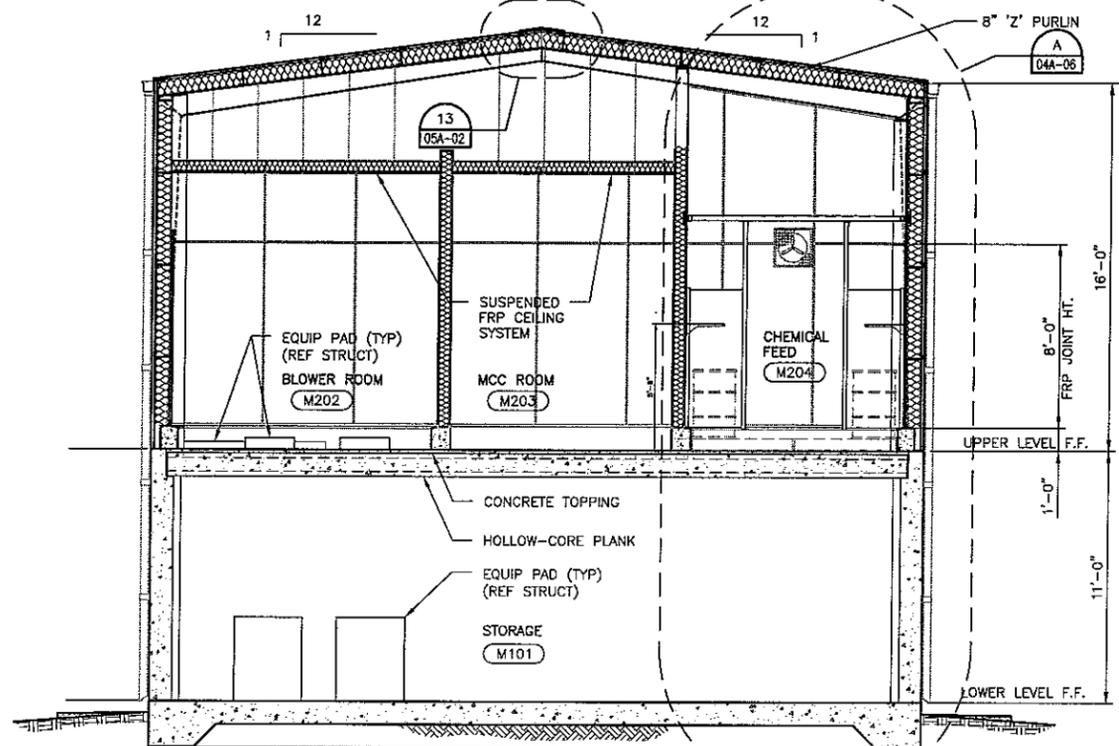
Project Manager	M. GRAVES
Designed	W. WARD
Checked	R. ANDREW
Drawn	W. THOMAS



WATER TREATMENT PLANT EXPANSION 2004
THE CITY OF KERRVILLE, TEXAS

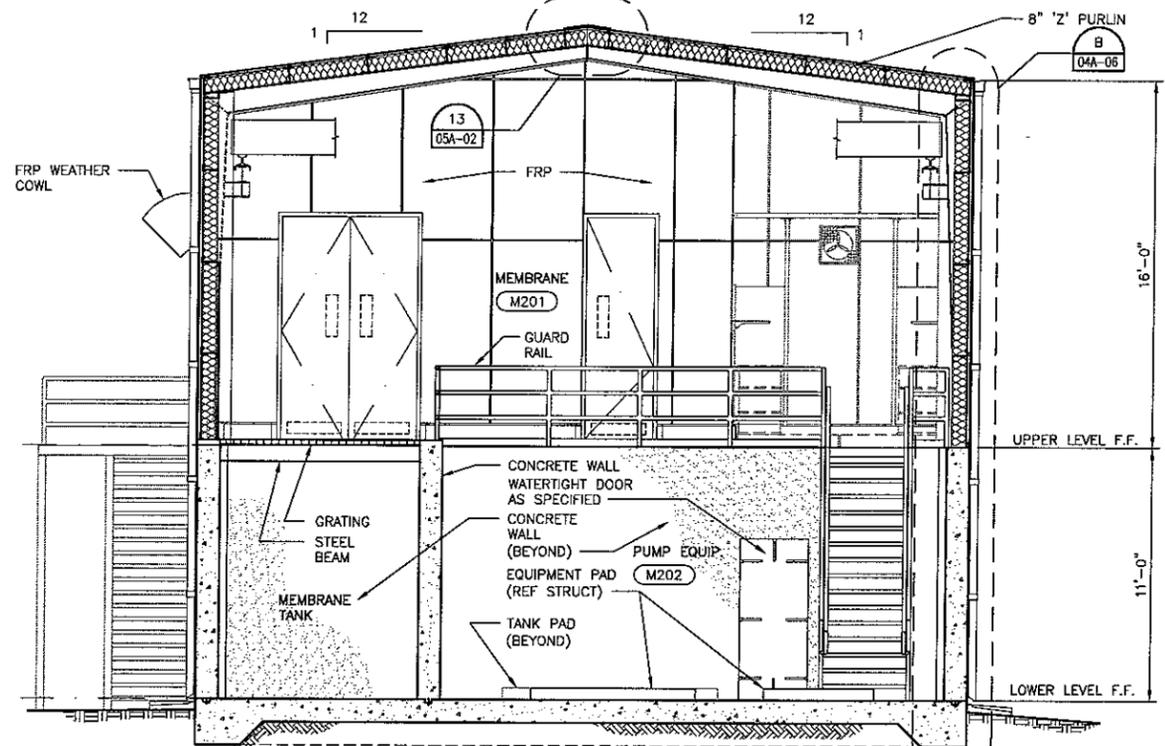
MEMBRANE SYSTEM ARCHITECTURAL EXTERIOR ELEVATIONS

Date	JUNE 2004	Project No.	08340-025-036	Drawing No.	04A-04	Issue	1
Scale	3/16" = 1'-0"	File Name	04A-04.DWG				



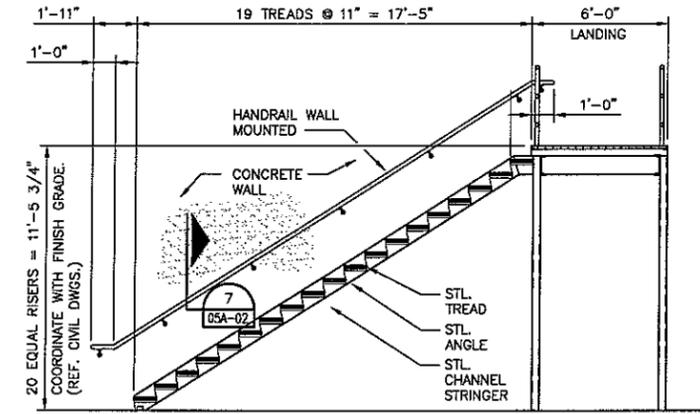
SECTION
1/4" = 1'-0"

A
04A-01
04A-02
04A-03



SECTION
1/4" = 1'-0"

B
04A-01
04A-02
04A-03

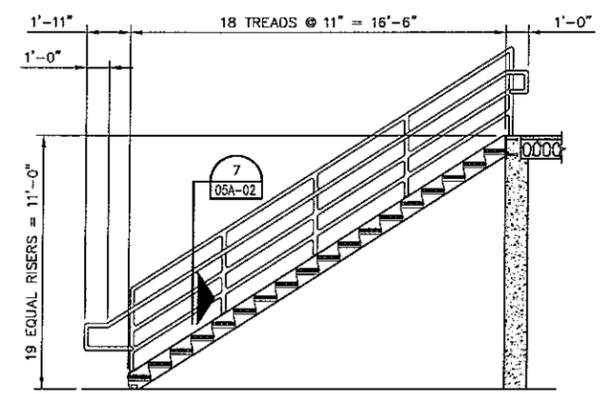


REFER TO STRUCTURAL DWGS. FOR MEMBER SIZES AND CONNECTION DETAILS.

SECTION

1/4" = 1'-0"

D
04A-02

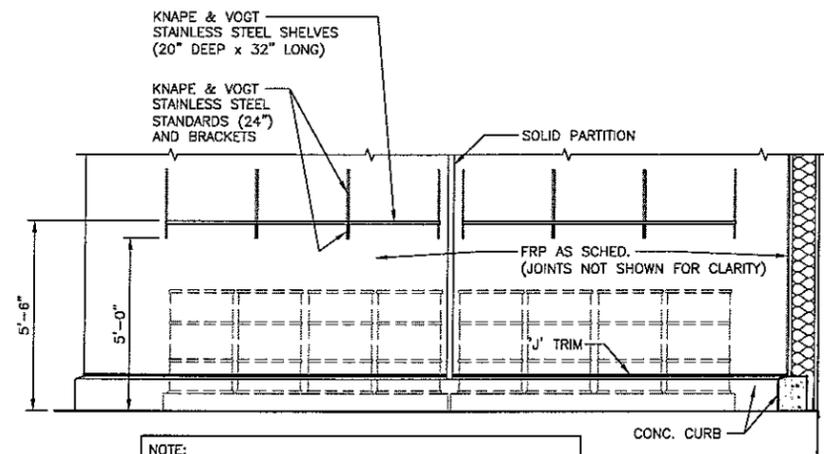


REFER TO STRUCTURAL DWGS. FOR MEMBER SIZES AND CONNECTION DETAILS.

SECTION

1/4" = 1'-0"

E
04A-02



NOTE: PROVIDE BLOCKING AS REQ'D TO MOUNT SHELVING SYSTEM.

ELEVATION

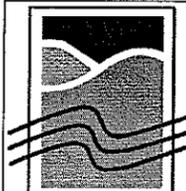
3/8" = 1'-0"

F
04A-02

Issue No.	Description	Date	Drawn	Chkd.	Resp. Engr.	Proj. Mgr.
1	REVISED PRIOR TO FINAL BID ISSUE	07-14-04	WT	RHA	WJW	MCG
0	ISSUED FOR BID	06-02-04	WT	RHA	WJW	MCG
B	ISSUED FOR 100% REVIEW	05-19-04	WT	RHA	WJW	MCG
A	ISSUED FOR REVIEW	04-30-04	WT	RHA	WJW	MCG

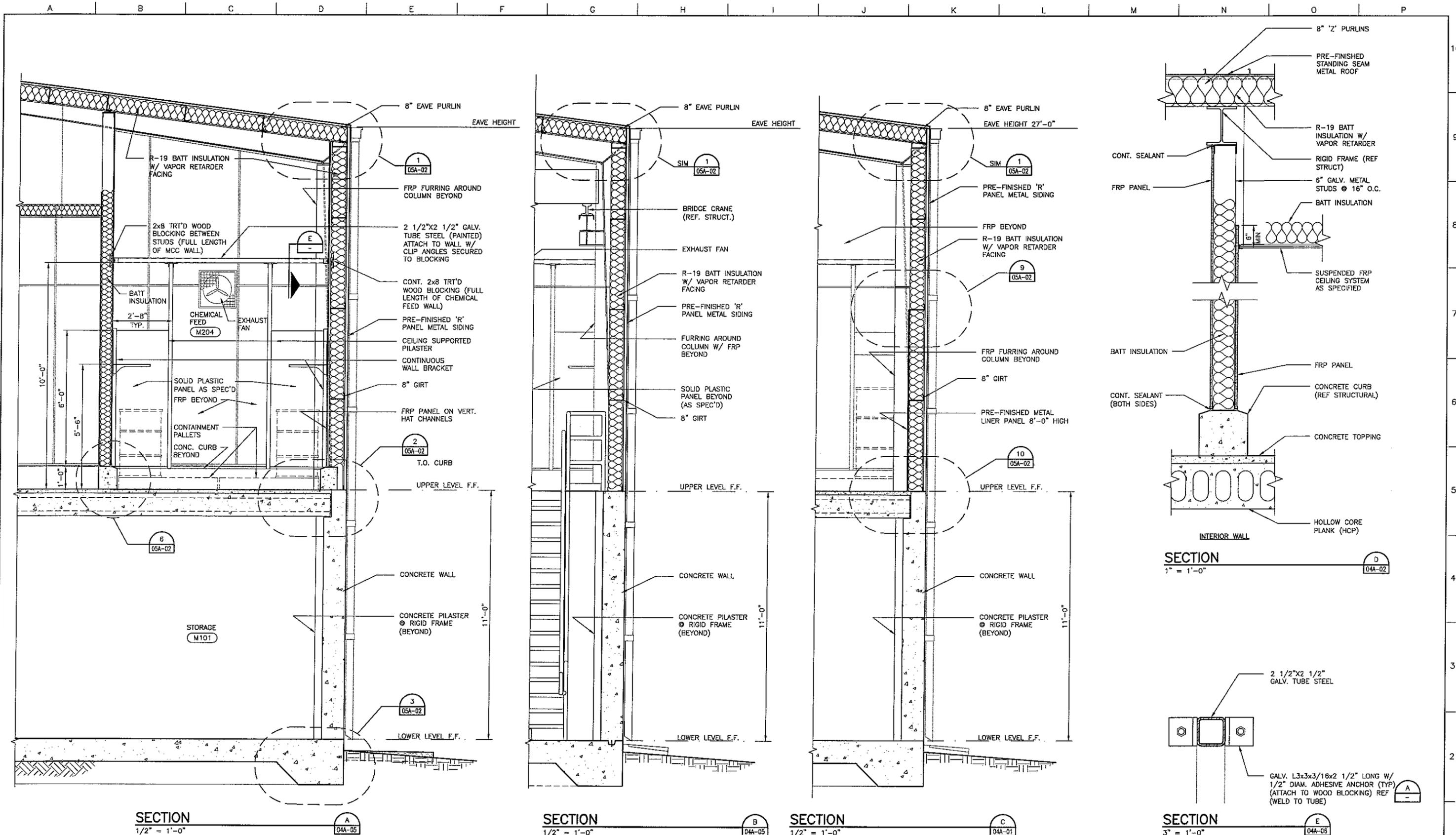


Project Manager	M. GRAVES
Designed	W. WARD
Checked	R. ANDREW
Drawn	W. THOMAS



WATER TREATMENT PLANT EXPANSION 2004
THE CITY OF KERRVILLE, TEXAS

Date	JUNE 2004	Project No.	08340-025-036	Issue	1
Scale	AS SHOWN	File Name	04A-05.DWG	Drawing No.	04A-05



Issue No.	Description	Date	Drawn	Chkd.	Resp. Engr.	Proj. Mgr.
1	REVISED PRIOR TO FINAL BID ISSUE	07-14-04	WT	RHA	WJW	MCG
0	ISSUED FOR BID	06-02-04	WT	RHA	WJW	MCG
B	ISSUED FOR 100% REVIEW	05-19-04	WT	RHA	WJW	MCG
A	ISSUED FOR REVIEW	04-30-04	WT	RHA	WJW	MCG

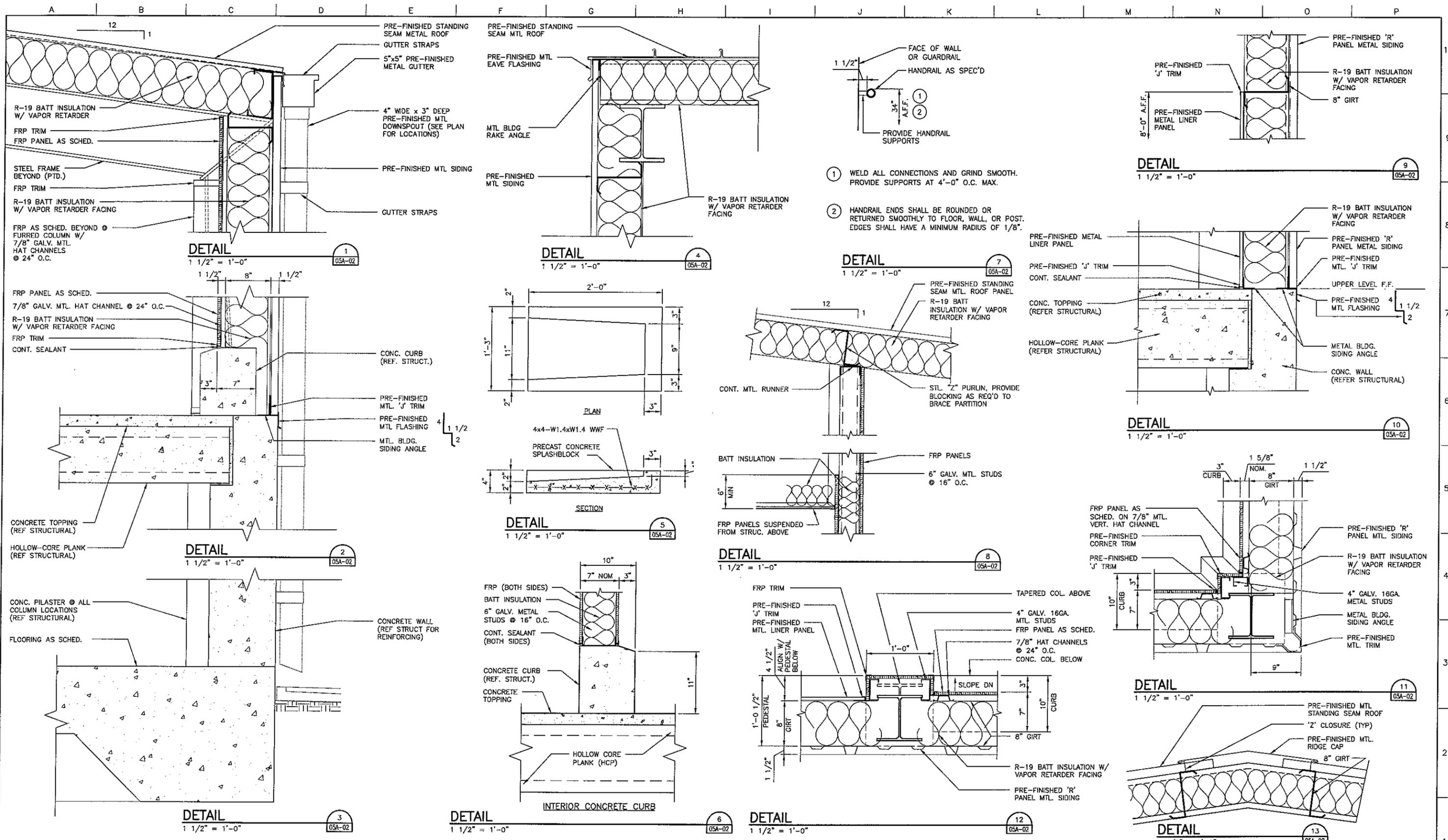


Project Manager	M. GRAVES
Designed	W. WARD
Checked	R. ANDREW
Drawn	W. THOMAS

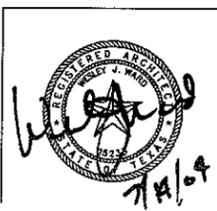


WATER TREATMENT PLANT EXPANSION 2004
THE CITY OF KERRVILLE, TEXAS

Date	JUNE 2004	Project No.	08340-025-036	Drawing No.	04A-06	Issue	1
Scale	AS SHOWN	File Name	04A-06.DWG				



Issue No.	Description	Date	Drawn	Checked	Responsible Engr.	Project Mgr.
1	REVISED PRIOR TO FINAL BID ISSUE	07-14-04	WT	RHA	WJW	MCG
0	ISSUED FOR BID	06-02-04	WT	RHA	WJW	MCG
B	ISSUED FOR 100% REVIEW	05-19-04	WT	RHA	WJW	MCG
A	ISSUED FOR REVIEW	04-30-04	WT	RHA	WJW	MCG



Project Manager
M. GRAVES
Designed
W. WARD
Checked
R. ANDREW
Drawn
W. THOMAS

WATER TREATMENT PLANT EXPANSION 2004
THE CITY OF KERRVILLE, TEXAS

MISCELLANEOUS IMPROVEMENTS AND GENERAL DETAILS ARCHITECTURAL TYPICAL DETAILS

Date: JUNE 2004
Scale: AS SHOWN
Project No.: 08340-025-036
File Name: 05A-02.DWG
Drawing No.: 05A-02
Issue: 1