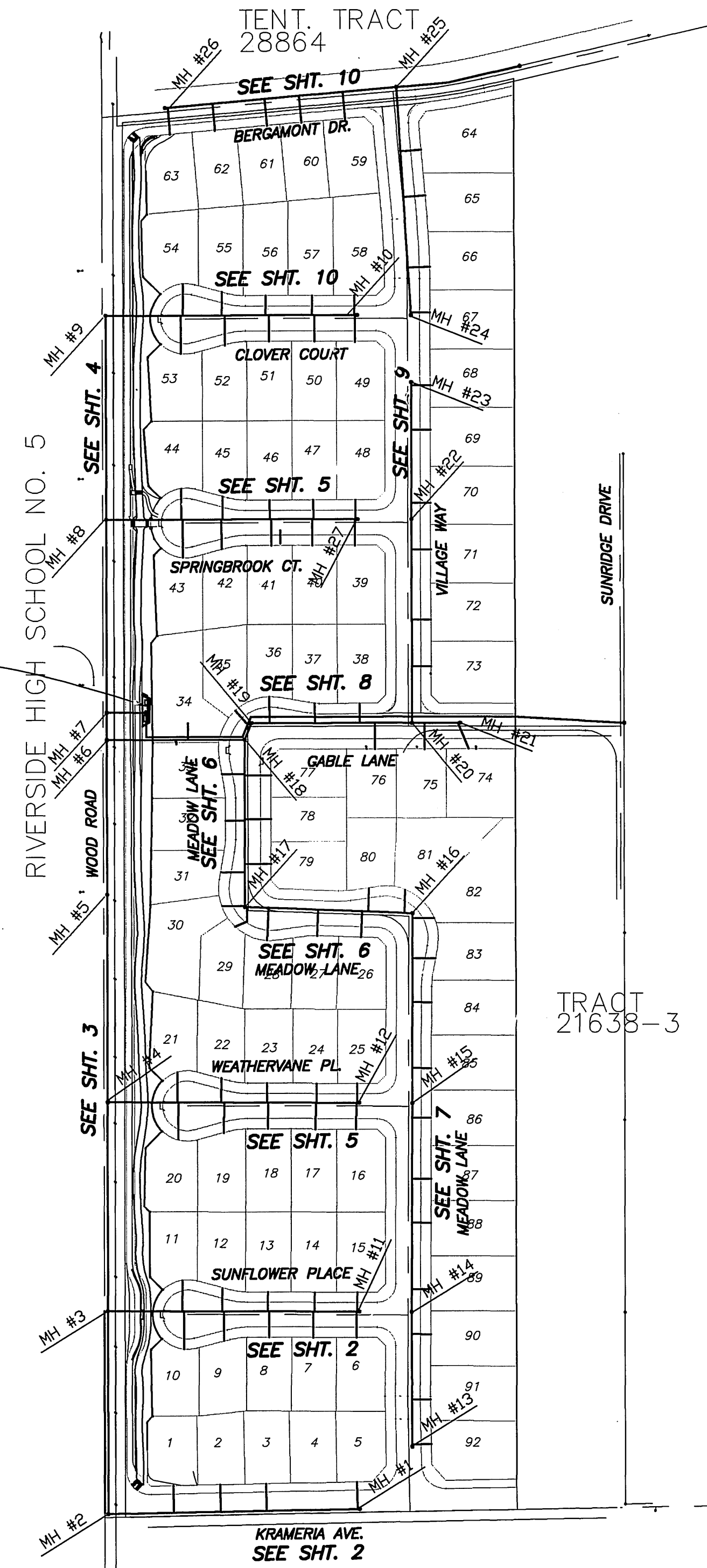
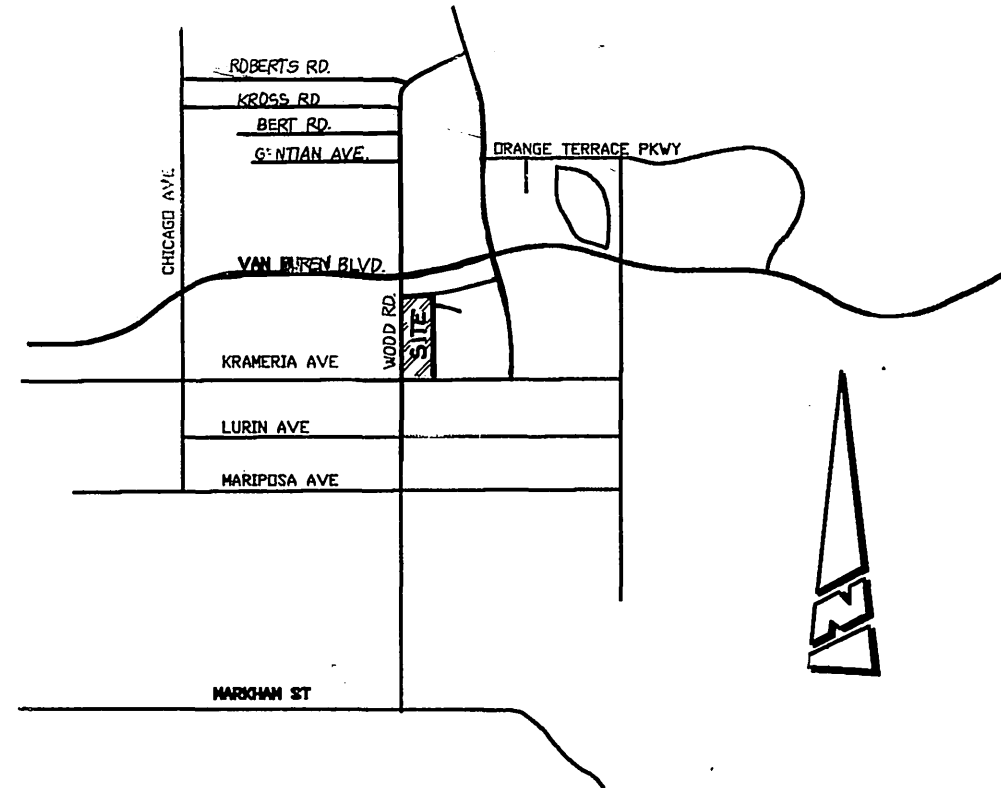


SEWER IMPROVEMENT PLANS

TRACT 28628 IN THE CITY OF RIVERSIDE

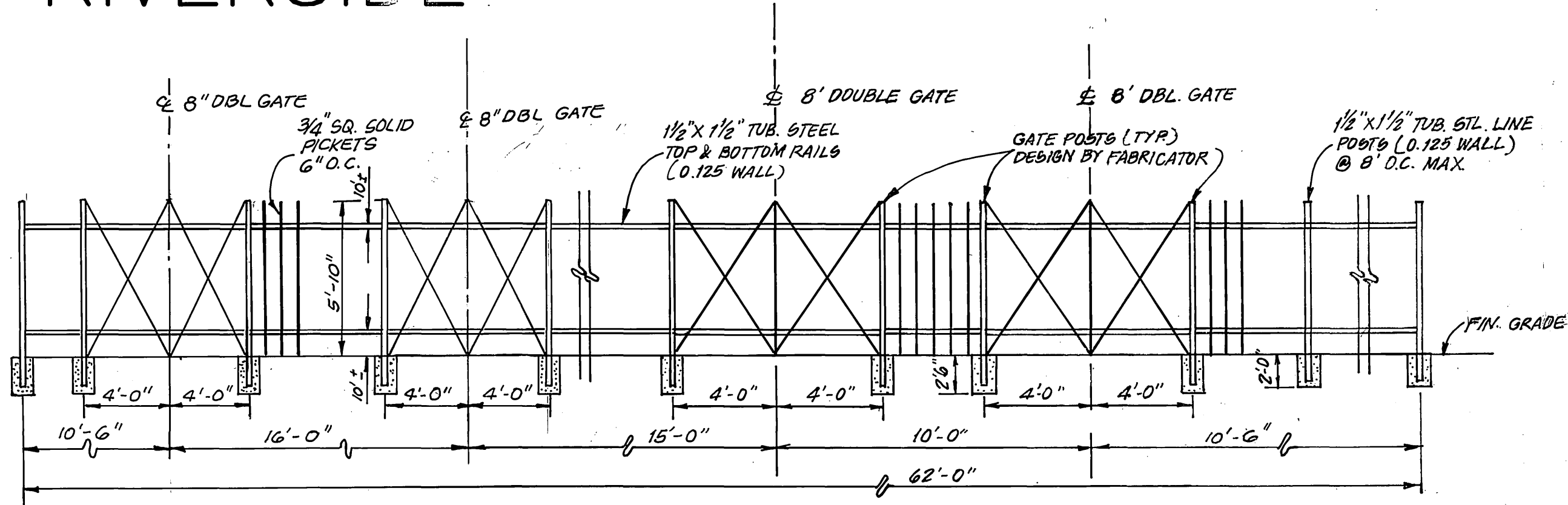


NOTE:
PUMP STATION SERVES ALL OF TRACT EXCEPT LOTS 63 THRU 67

SCALE: 1" = 150'

GENERAL NOTES - PUBLIC WORKS

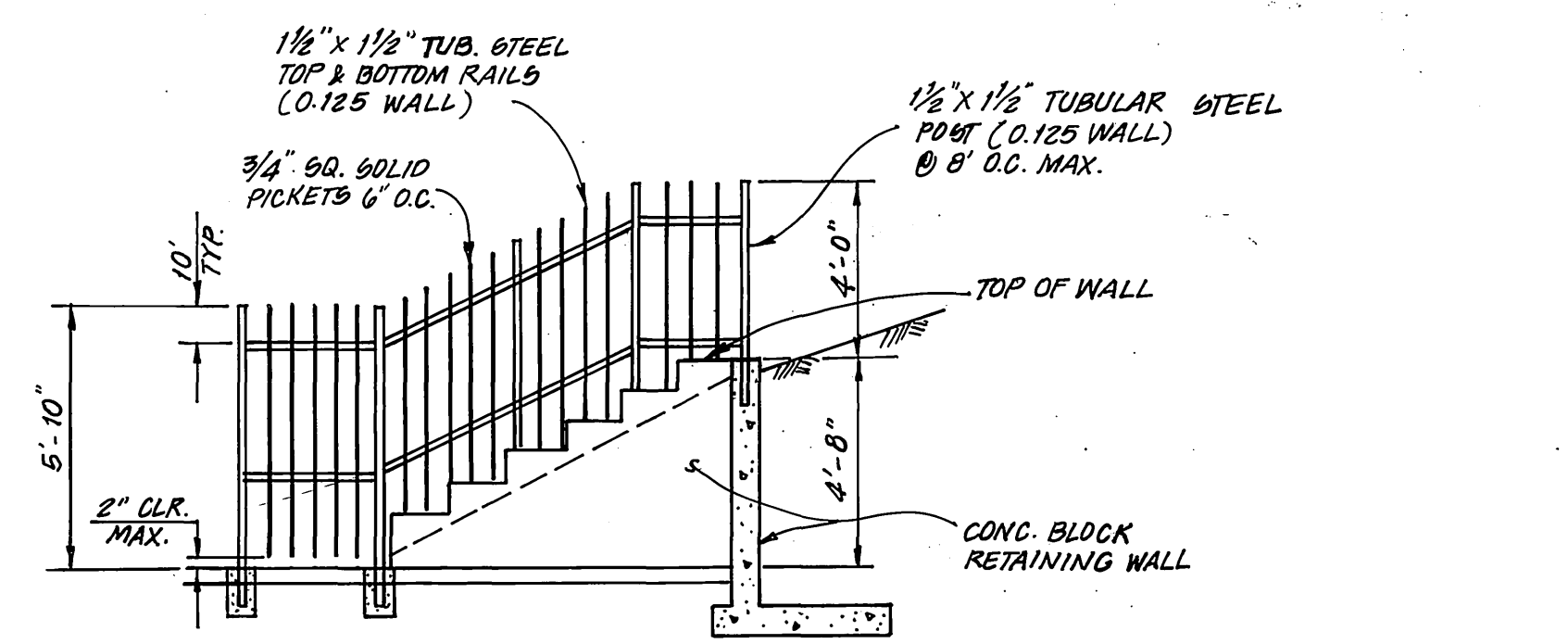
- NO PERSON SHALL PERFORM ANY CONSTRUCTION ACTIVITY OR INSTALL ANY OBJECTS WITHIN THE PUBLIC RIGHTS-OF-WAY OR EASEMENTS OF THE CITY OF RIVERSIDE WITHOUT A VALID CONSTRUCTION PERMIT OR, A STREET OPENING PERMIT OR AN ENCROACHMENT PERMIT ISSUED BY THE CITY'S PUBLIC WORKS DEPARTMENT.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CLEAR THE RIGHT-OF-WAY IN ACCORDANCE WITH THE PROVISIONS OF LAW AS IT AFFECTS EACH UTILITY INCLUDING IRRIGATION LINES AND APPURTENANCES AND AT NO COST TO THE CITY.
- CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF RIVERSIDE DEPARTMENT OF PUBLIC WORKS, STANDARD DRAWINGS, ITS SUPPLEMENTAL NOTES AND THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, CURRENT EDITION.
- THE PRIVATE ENGINEER SIGNING THESE PLANS IS RESPONSIBLE FOR ASSURING THE ACCURACY AND ACCEPTABILITY OF THE WORK HEREON. IN THE EVENT OF DISCREPANCIES ARISING DURING CONSTRUCTION, THE PRIVATE ENGINEER SHALL BE RESPONSIBLE FOR DETERMINING AN ACCEPTABLE SOLUTION AND REVISING THE PLANS FOR APPROVAL BY THE CITY.
- QUANTITIES SHOWN ARE FOR INFORMATION ONLY AND THE CITY OF RIVERSIDE IS NOT RESPONSIBLE FOR THEIR ACCURACY.
- THE DEVELOPER SHALL BE RESPONSIBLE FOR PRESERVING OR RE-ESTABLISHING AND REFERENCING SURVEY MONUMENTS DESTROYED, DISTURBED OR BURIED AS A RESULT OF CONSTRUCTION SHOWN HEREON.
- ALL FLAGGED ELEVATIONS SHALL BE STAKED IN THE FIELD BY THE PRIVATE ENGINEER.
- THE CONTRACTOR SHALL CALL IN A LOCATION REQUEST TO UNDERGROUND SERVICE ALERT (USA), PHONE #1-800-227-2600, TWO WORKING DAYS BEFORE DIGGING. NO CONSTRUCTION PERMIT WILL BE ISSUED BY THE PUBLIC WORKS DEPARTMENT INVOLVING EXCAVATION FOR UNDERGROUND FACILITIES UNLESS THE APPLICANT HAS BEEN PROVIDED AN INQUIRY IDENTIFICATION NUMBER BY U.S.A.
- CONTRACTOR IS TO VERIFY EXISTING SEWER ELEVATION PRIOR TO CONSTRUCTION.
- LOCATION OF LATERALS TO BE DETERMINED IN THE FIELD AT THE DIRECTION OF THE OWNER. AVOID CONFLICT WITH PROPOSED AND/OR EXISTING FACILITIES.
- NO FINISHED FLOOR ELEVATION SHALL BE LESS THAN 6" ABOVE THE UPPER MANHOLE RIM ELEVATION OF THE SEWER LINE SEGMENT BEING CONNECTED TO, WITHOUT HAVING A PROPER BACKWATER VALVE INSTALLED IN THE LATERAL.
- A PLUG SHALL BE INSTALLED AND WILL REMAIN IN PLACE WHERE THE NEW SEWER CONNECTS WITH THE EXISTING SEWER UNTIL THE NEW SEWER IS ACCEPTED BY THE CITY.
- THE SEWER CONTRACTOR SHALL ADJUST MANHOLES TO FINAL GRADE AFTER PAVING IS COMPLETED.
- PIPE BEDDING SHALL BE CASE I PER CITY STD. DWG. NO. 452 UNLESS OTHERWISE SHOWN ON THE PLANS IF GROUND WATER IS ENCOUNTERED, BEDDING SHALL BE CASE III IN ACCORDANCE WITH NOTE 2, CITY STD. DWG. NO. 452.



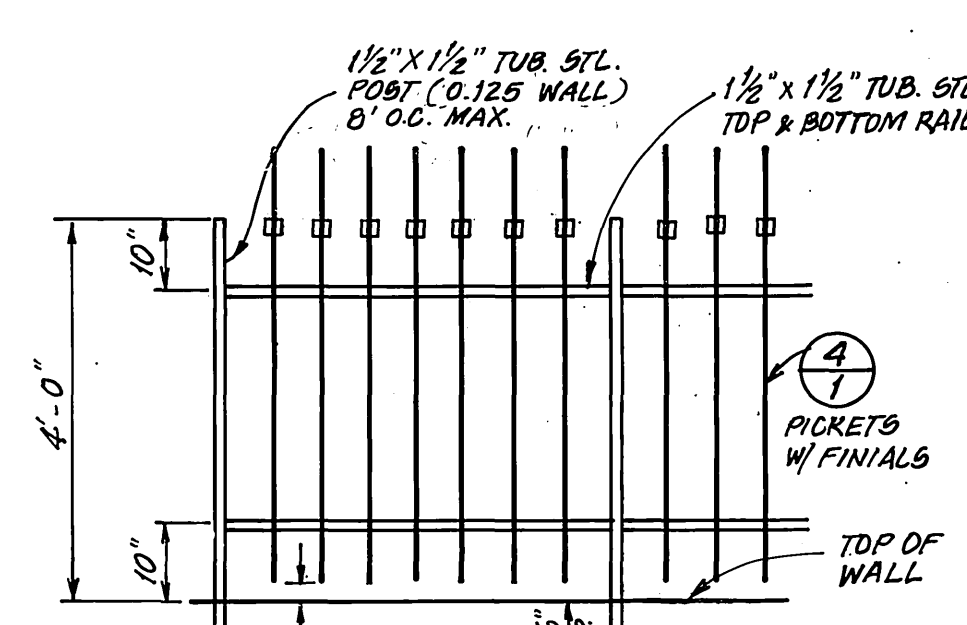
NOTE:
1. FENCE DESIGN DETAILS TO BE APPROVED PRIOR TO FABRICATION
2. CONTINUOUS WELD ALL METAL CONNECTIONS.

3 TUBULAR STEEL FENCE
1 FRONT ELEVATION
N.T.S.

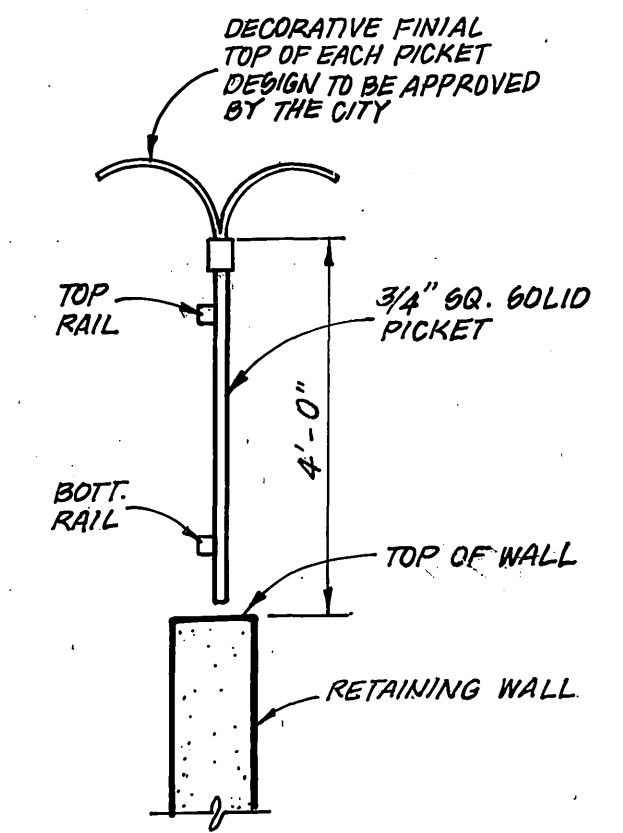
FINISH NOTE:
FINISH TO BE POWDER COATED SHOP APPLIED. COLOR TO BE LIGHT BEIGE



1 TUBULAR STEEL FENCE
1 SIDE ELEVATION
(2 EACH)
N.T.S.



2 TUBULAR STEEL FENCE
1 (TOP OF RETAINING WALL ONLY)
N.T.S.



4 PICKET DETAIL
1 (TOP OF RETAINING WALL ONLY)
N.T.S.

CONSTRUCTION NOTES

- CONSTRUCT MANHOLE PER CITY STD. 500. 27 EA.
 - CONSTRUCT 8" V.C.P. SEWER MAIN. 6,763 LF.
 - CONSTRUCT 4" V.C.P. SEWER LATERAL AND CLEANOUT PER CITY STD. 562A 3,166 LF.
 - CONSTRUCT 4" PVC SCHEDULE 80 FORCE MAIN. 738.88 LF.
 - CONSTRUCT SEWER LIFT STATION PER DETAILS ON SHEETS 1, 11 AND 12.
 - CONSTRUCT 8" STUBOUT AND CAP.
 - RECHANNEL FLOOR OF EXIST. MANHOLE
- *AS-BUILT 9-03-03 LHL

QUANTITIES

REVIEW BY:
WESTERN MUNICIPAL WATER DISTRICT
for Non-Interference Compliance

SHEET 1 THROUGH 12

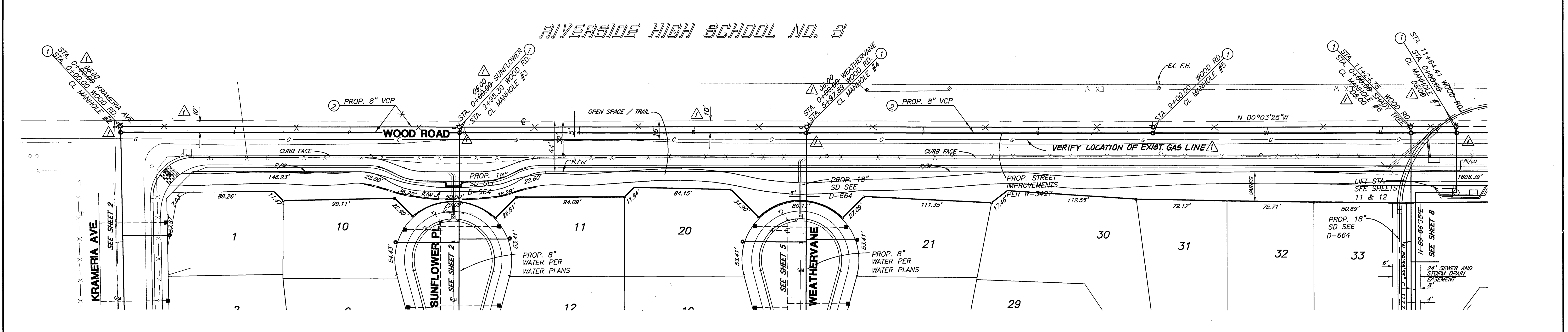
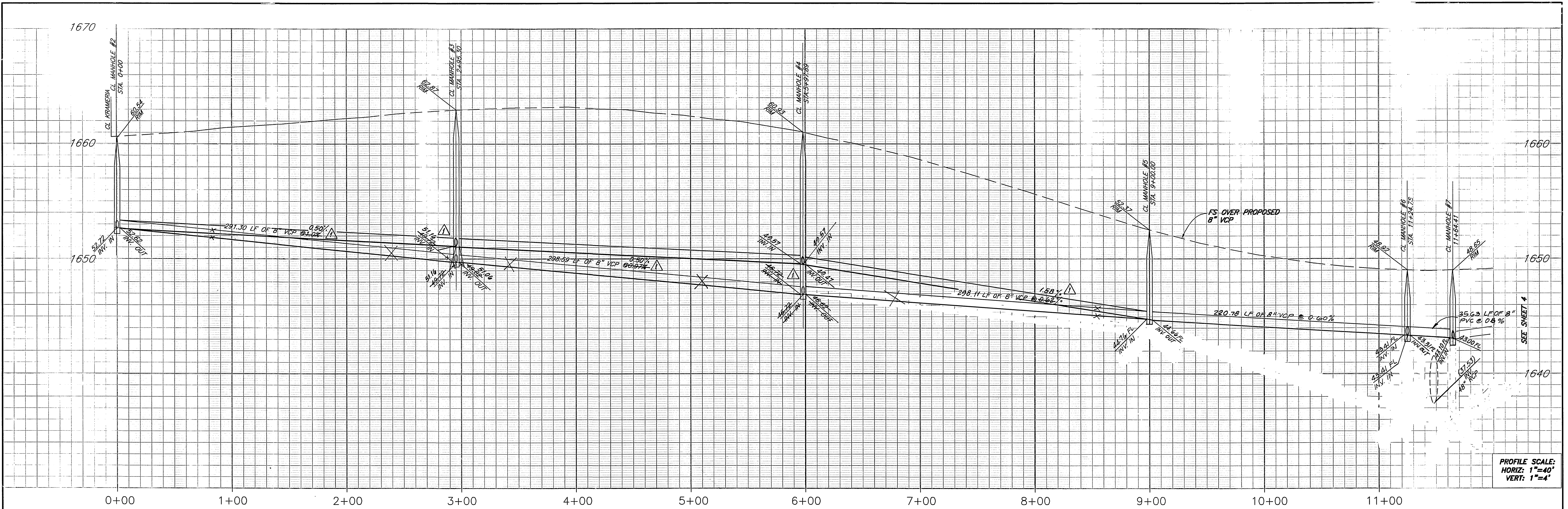
CIVIL ENGINEER: *Shawn J. Smith* R.C.E. 46242-21643 DATE: 4/16/99

SOUTHERN CALIFORNIA GAS COMPANY
APPROVED BY: *John L. ...* DATE: 9/22/99

BUSINESS TAX CERTIFICATE # 033595 EXP. DATE 4/2/99

	PRIVATE ENGINEERING NOTE CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE RESPONSIBLE TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT. THE SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL CONSTRUCTION AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO HOLD DEFENDERS AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF THIS PROJECT, EXCEPT LIABILITY ARISING FROM THE SOLE DESIGN PROFESSIONAL. EXISTING UTILITIES PER AVAILABLE RECORDS. CONTRACTOR TO VERIFY LOCATION PRIOR TO CONSTRUCTION.	PREPARED UNDER THE DIRECTION OF: George A. LENFESTEY R.C.E. 4-920 - EXP. 12/31/02 DATE: 4/7/99	The Keith Companies TKC 2800 Outlook Ave., Ste. 200, Miramar, CA 92051 (609) 669-0249	CITY OF RIVERSIDE, CALIFORNIA DEPARTMENT OF PUBLIC WORKS DESIGNED BY: L.H.L. DRAWN BY: L.H.L. CHECKED BY: B.B. DATE: 7-23-99	CITY OF RIVERSIDE, CALIFORNIA DEPARTMENT OF PUBLIC WORKS APPROVED BY: <i>R. McNeill</i> DIRECTOR OF PUBLIC WORKS	SEWER PLANS TR. 28623 TITLE SHEET	PROJECT NO. 31377 S-1704 SHEET 1 OF 12 INDEXED 5-4-2000 LHL
	BENCHMARK: RIVERSIDE COUNTY BENCHMARK, STAMPED V88-84 AT SOUTHWEST CORNER OF PLUMMER ROAD AND VAN BUREN BOULEVARD, 200.0 FEET SOUTH OF VAN BUREN BOULEVARD, 205.0 FEET WEST OF PLUMMER ROAD, ON THE TOP OF A 4.0 FOOT X 10.0 FOOT GRANITE BOLLARD A BRASS DISK FLUSH AND MARKED. ELEV. 1638.123		MARK REVISIONS APPR. DATE		HORIZ. SCALE: AS SHOWN VERT. SCALE:		

MISSING SHEET



- CONSTRUCTION NOTES**
- ① CONSTRUCT MANHOLE PER CITY STD. 500
 - ② CONSTRUCT 8" V.C.P. SEWER MAIN
 - ③ CONSTRUCT 4" V.C.P. SEWER LATERAL AND CLEANOUT PER CITY STD. 562A
 - ④ CONSTRUCT 4" PVC SCHEDULE 80 FORCE MAIN

REVIEWED BY: _____
 APPROVED BY: WESTERN MUNICIPAL WATER DISTRICT FOR NON-INTERFERENCE COMPLIANCE
 SHEET _____ THROUGH _____
 CIVIL ENGINEER RCE 46212
 DATE _____

SOUTHERN CALIFORNIA GAS COMPANY
 9/22/99
 APPROVED BY: *Glenn Parn* DATE _____

PRIVATE ENGINEERING NOTE
 CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT. INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THE REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF DESIGN PROFESSIONAL. EXISTING UTILITIES FOR AVAILABLE RECORD, CONTRACTOR TO VERIFY LOCATION PRIOR TO CONSTRUCTION.

PREPARED UNDER THE DIRECTION OF:
 George A. Lenfestey
 No. 45920
 Exp. 12-31-02
 STATE OF CALIFORNIA
 REGISTERED PROFESSIONAL ENGINEER
 CIVIL
 DATE: 4/1/99
 GEORGE A. LENFESTEY
 R.C.E. 45920 - EXP. 12/31/02

KEITH INTERNATIONAL, INC.
 "Planning • Civil Engineering • Environmental Services"
 "Land Surveying • Public Works • Water Resources"
 Inland Empire Division
 2800 Cactus Ave., Ste. 303, Moreno Valley, CA 92553 (909) 865-0841
 BENCHMARK:
 RIVERSIDE COUNTY BENCHMARK, STAMPED V88-64
 AT SOUTHWEST CORNER OF PLUMMER ROAD AND VAN BUREN BOULEVARD, 259.0 FEET SOUTH OF VAN BUREN BOULEVARD, 259.0 FEET WEST OF PLUMMER ROAD, ON THE TOP OF A 4.0 FOOT x 10.0 FOOT GRANITE BOULDER A BRASS DISK FLUSH AND MARKED.
 ELEV. 1638.123

BUSINESS TAX CERTIFICATE # 033595 EXP. DATE 4/2/00

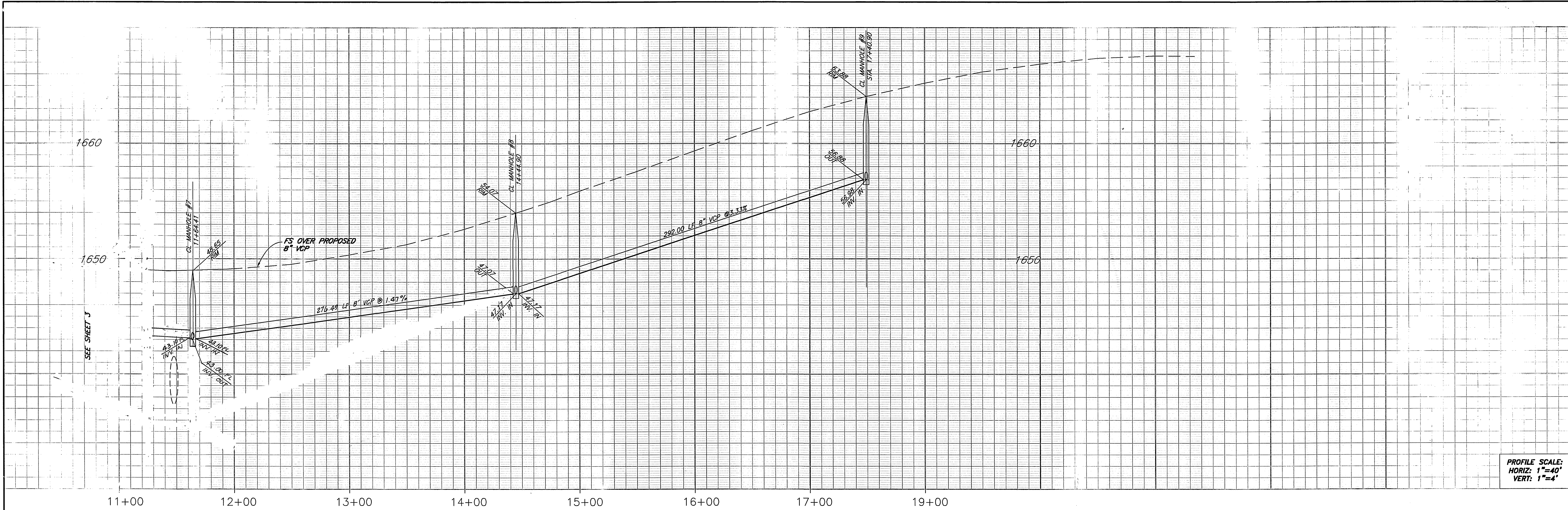
MARK	REVISIONS	APPR.	DATE
Δ	RELOCATED SEWER IN WOOD, ADJUSTED GRADES	BY: 9/18/99	

DESIGNED BY L.H.L. DRAWN BY L.H.L. CHECKED BY B.B.

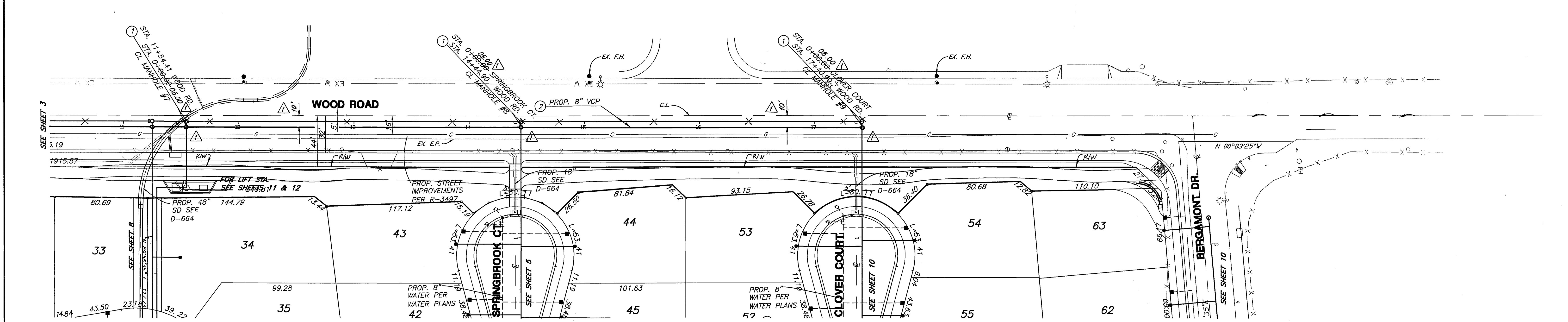
CITY OF RIVERSIDE, CALIFORNIA
 DEPARTMENT OF PUBLIC WORKS
 APPROVED BY: _____ BY DATE: 7-23-99
 PRINCIPAL ENGINEER: R. McQuath
 PARK DEPARTMENT: _____
 TRAFFIC DIVISION: _____
 ENGINEERING MANAGER: _____
 WASTE WATER TREATMENT: _____
 DATE: 7-23-99

SEWER PLANS
 TR. 28628
 WOOD ROAD
 PROJECT NO. 31377
S-1704
 SHEET 3 OF 12
 HORIZ. SCALE: 1" = 40' VERT. SCALE: 1" = 4'
 INDEXED 5-4-2000 L.H.

Plotfile: 02/22/99 18:48:48 : N:\31377\0001.dwg\Plan0007.dwg



PROFILE SCALE:
HORIZ: 1"=40'
VERT: 1"=4'

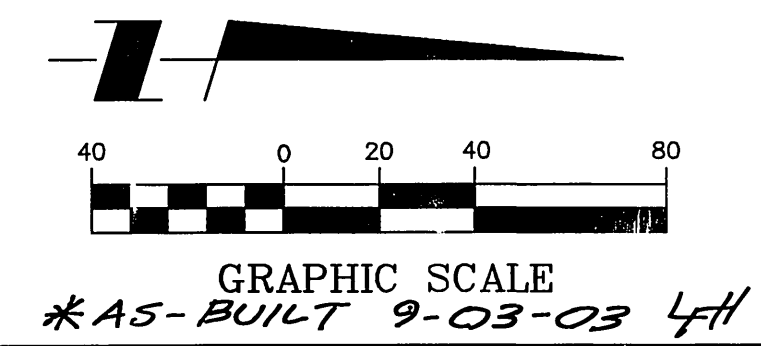


CONSTRUCTION NOTES

- ① CONSTRUCT MANHOLE PER CITY STD. 500
- ② CONSTRUCT 8" V.C.P. SEWER MAIN
- ③ CONSTRUCT 4" V.C.P. SEWER LATERAL AND CLEANOUT PER CITY STD. 562A
- ④ CONSTRUCT 4" PVC SCHEDULE 80 FORCE MAIN

REVIEWED BY: _____
APPROVED BY: WESTERN MUNICIPAL WATER DISTRICT FOR NON-INTERFERENCE COMPLIANCE
SHEET _____ THROUGH _____
CIVIL ENGINEER RCE-46212
DATE _____

SOUTHERN CALIFORNIA GAS COMPANY
9/22/99
APPROVED BY: *Neal Rans* DATE _____



CALL BEFORE YOU DIG
Understand Serv Alert
Call: 1-800-1-800-227-2600
TWO WORKING DAYS BEFORE YOU

PRIVATE ENGINEERING NOTE
CONSTRUCTION CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES AND AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES AND AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES AND AGENCIES.

REGISTERED PROFESSIONAL ENGINEER
Civil
George A. Lenfestey
No. 45920
Exp. 12-31-02
STATE OF CALIFORNIA

PREPARED UNDER THE DIRECTION OF:
George A. Lenfestey
GEORGE A. LENFESTEY
R.C.E. 45920 - EXP. 12/31/02
DATE 4/7/99

KEITH INTERNATIONAL, INC.
Planning • Civil Engineering • Environmental Services •
Land Surveying • Public Works • Water Resources
Inland Empire Division
28800 Ochoa Ave., Ste. 300, Moreno Valley, CA 92553 (951) 853-0354

BENCHMARK:
RIVERSIDE COUNTY BENCHMARK, STAMPED Y98-54
AT SOUTHWEST CORNER OF PLUMMER ROAD AND VAN BUREN BOULEVARD, 250.0 FEET SOUTH OF VAN BUREN BOULEVARD, 250.0 FEET WEST OF PLUMMER ROAD, ON THE TOP OF A 4.0 FOOT x 10.0 FOOT GRANITE BOULDER A BRASS DISK FLUSH AND MARKED.
ELEV. 1638.123

BUSINESS TAX CERTIFICATE # 033595 EXP. DATE 4/2/00

RELOCATED SEWER IN WOOD, ADJUSTED GRADES	REVISIONS	APPR. DATE
	By: 9/18/99	

DESIGNED BY L.H.L. DRAWN BY L.H.L. CHECKED BY B.B.

CITY OF RIVERSIDE, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS

APPROVED BY: *R. McKeith* DATE 7-23-99
PRINCIPAL ENGINEER
PARK DEPARTMENT
TRAFFIC DIVISION
ENGINEERING MANAGER
WASTE WATER TREATMENT

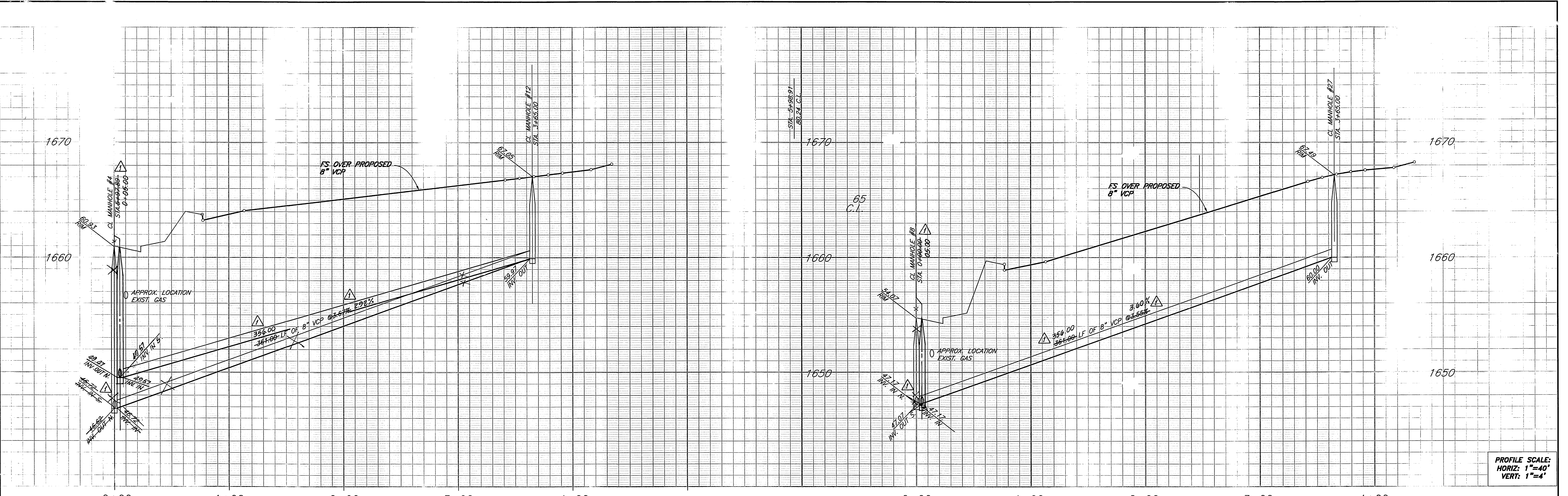
SEWER PLANS
TR. 28628
WOOD ROAD

PROJECT NO. 31377
S-1704

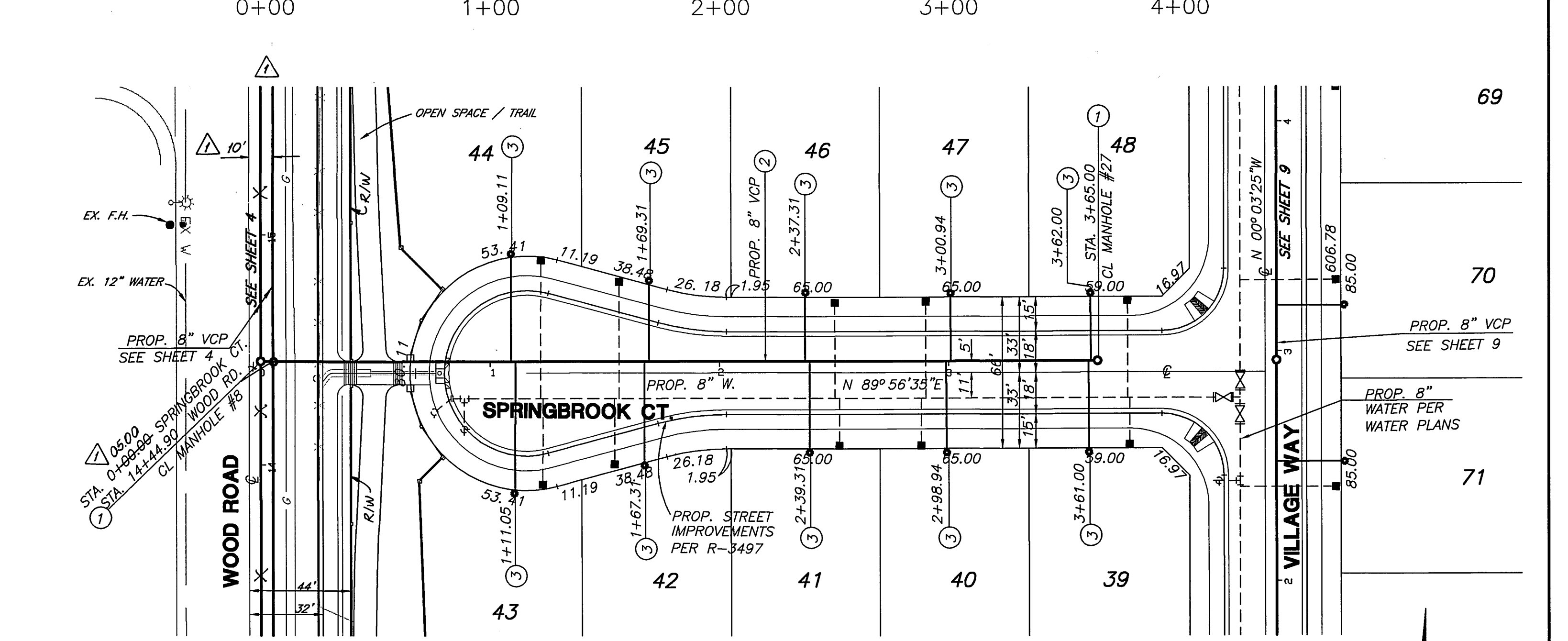
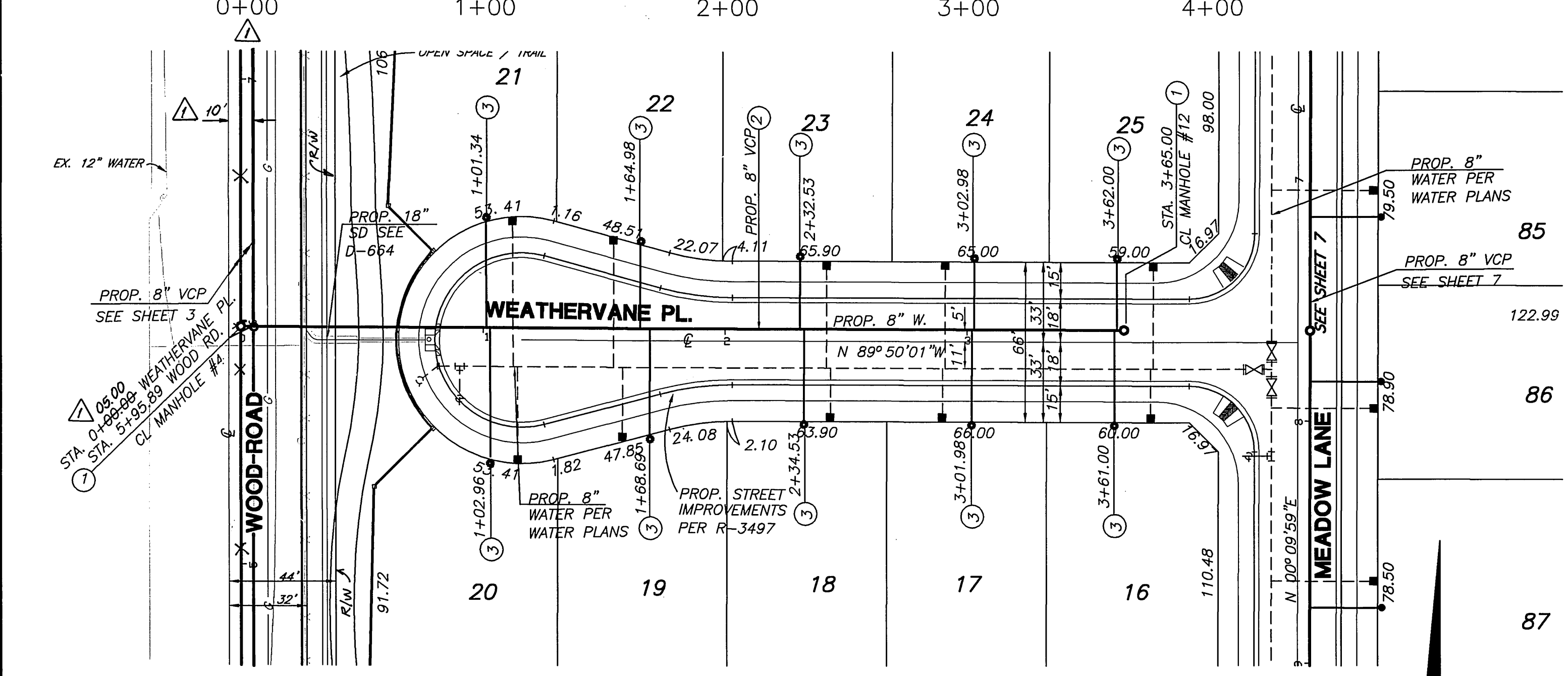
HORIZ. SCALE: 1"= 40' VERT. SCALE: 1"= 4'

SHEET 4 OF 12
INDEXED 5-4-2000 LHM

Postfiled 03/22/99 18:47:42 I:\A\31377\000\dwg\Frs\0008.dwg



PROFILE SCALE:
HORIZ: 1"=40'
VERT: 1"=4'



CONSTRUCTION NOTES

- ① CONSTRUCT MANHOLE PER CITY STD. 500
- ② CONSTRUCT 8" V.C.P. SEWER MAIN
- ③ CONSTRUCT 4" V.C.P. SEWER LATERAL AND CLEANOUT PER CITY STD. 562A
- ④ CONSTRUCT 4" PVC SCHEDULE 80 FORCE MAIN

REVIEWED BY:
APPROVED BY: WESTERN MUNICIPAL WATER DISTRICT
FOR NON-INTERFERENCE COMPLIANCE

SOUTHERN CALIFORNIA GAS COMPANY
9/22/99
APPROVED BY: *[Signature]* DATE

Underground Service Alert
Call: TOLL FREE 1-800-227-2600
TWO WORKING DAYS BEFORE YOU DIG

PRIVATE ENGINEERING NOTE
CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REC. OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE NEGLIGENCE OF DESIGN PROFESSIONAL, EXISTING UTILITIES PER AVAILABLE RECORD, CONTRACTOR TO VERIFY LOCATION PRIOR TO CONSTRUCTION.

REGISTERED PROFESSIONAL ENGINEER
Civil
George A. Lenfestey
No. 45920
Exp. 12-31-02
STATE OF CALIFORNIA

PREPARED UNDER THE DIRECTION OF:
[Signature]
GEORGE A. LENFESTEY
R.C.E. 45920 - EXP. 12/31/02

KEYTH INTERNATIONAL, INC.
"Planning • Civil Engineering • Environmental Services"
"Land Surveying • Public Works • River Assessment"
Inland Empire Division
2890 Clarks Ave., Ste. 200, Alhambra, CA 91803 (911) 651-0244

BENCHMARK:
RIVERSIDE COUNTY BENCHMARK, STAMPED VBS-84
AT SOUTHWEST CORNER OF FLUMMER ROAD AND VAN BUREN BOULEVARD, 259.0 FEET SOUTH OF VAN BUREN BOULEVARD, 205.0 FEET WEST OF FLUMMER ROAD, ON THE TOP OF A 4.0 FOOT x 10.0 FOOT GRANITE BOLLARD A BRASS DISK FLUSH AND MARKED. ELEV. 1638.123

BUSINESS TAX CERTIFICATE # 033595 EXP. DATE 4/2/00

CITY OF RIVERSIDE, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS

APPROVED BY: *[Signature]* DATE: 7-23-99
PRINCIPAL ENGINEER
TRAFFIC DIVISION
ENGINEERING MANAGER
WASTE WATER TREATMENT

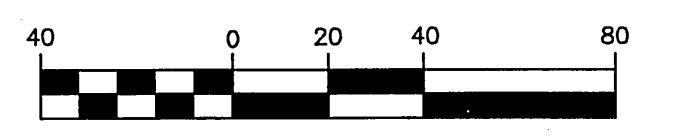
DESIGNED BY L.H.L., DRAWN BY L.H.L., CHECKED BY B.B.

SEWER PLANS
TR. 28628
WEATHERVANE PL. & SPRINGBROOK CT.

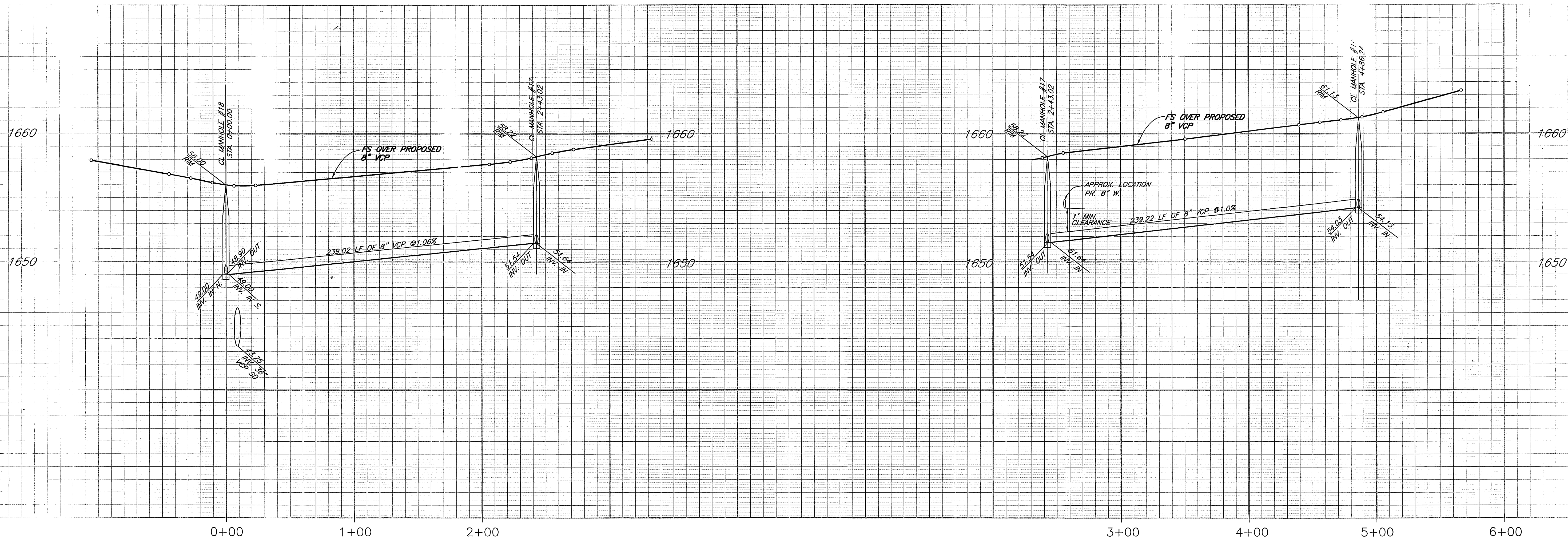
PROJECT NO. 31377
S-1704

HORIZ. SCALE: 1"= 40' VERT. SCALE: 1"= 4'

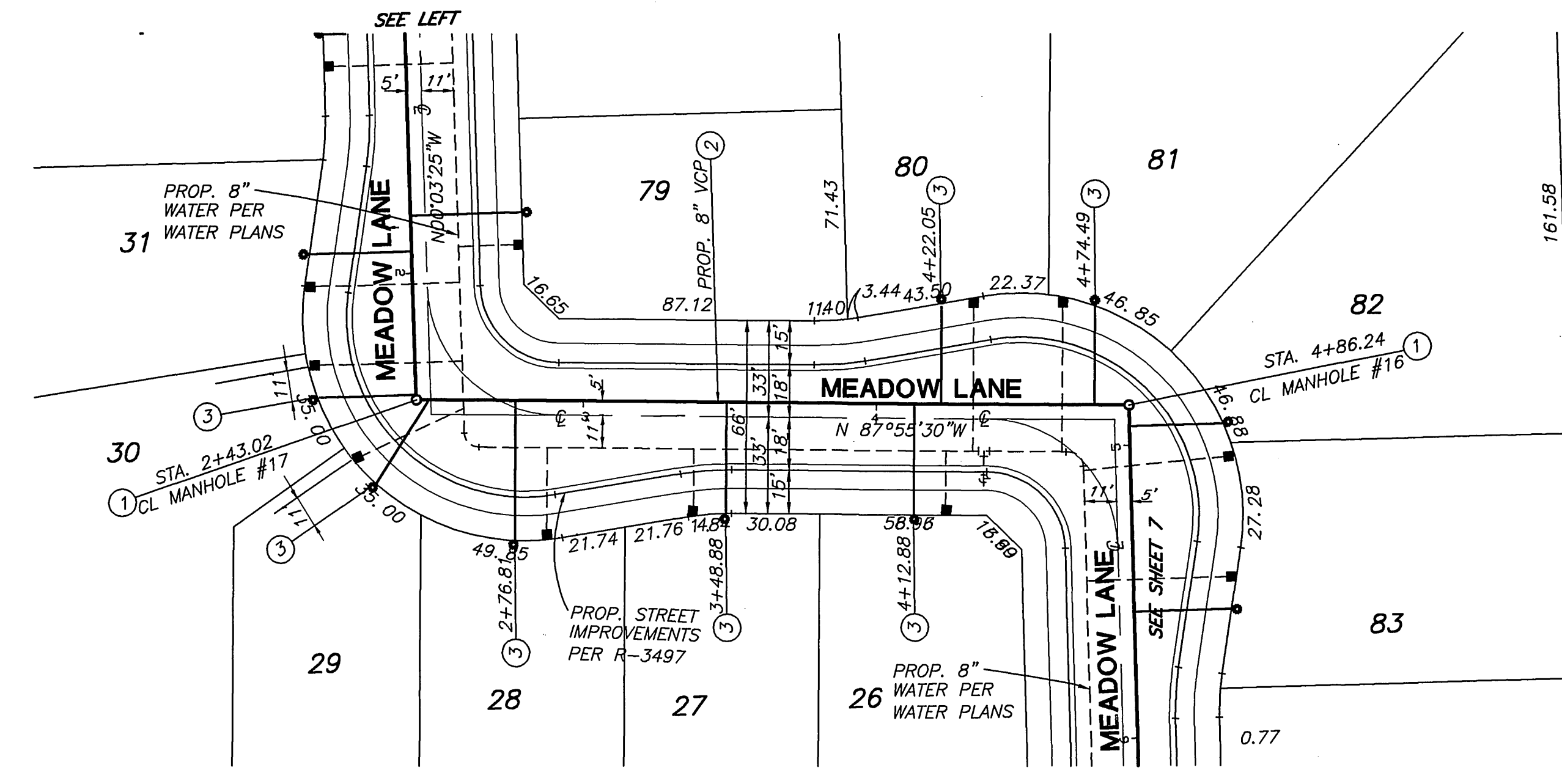
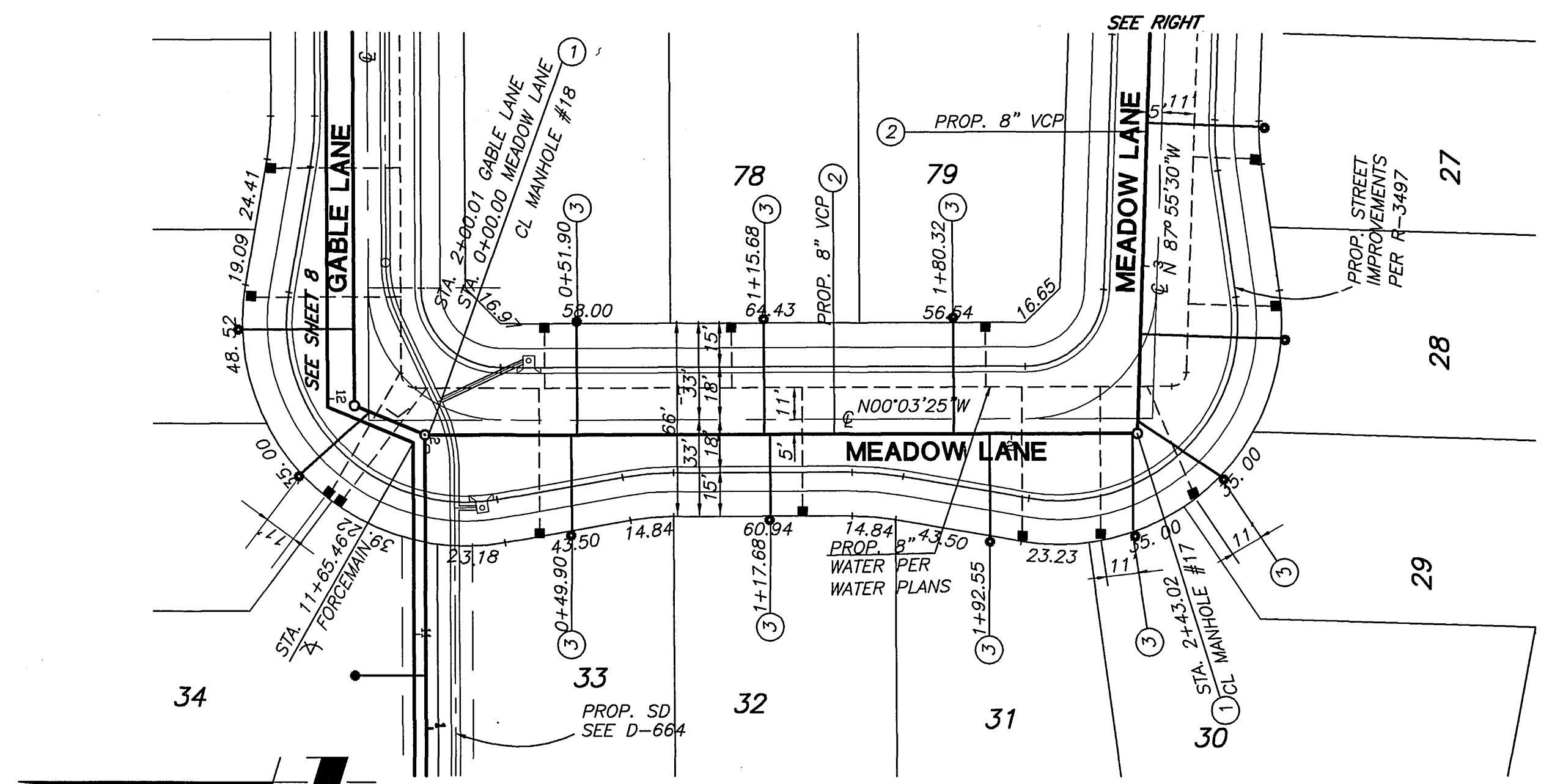
SHEET 5 OF 12



GRAPHIC SCALE
*AS-BUILT 9-03-03 LHL



PROFILE SCALE:
HORIZ: 1"=40'
VERT: 1"=4'



CONSTRUCTION NOTES

- ① CONSTRUCT MANHOLE PER CITY STD. 500
- ② CONSTRUCT 8" V.C.P. SEWER MAIN
- ③ CONSTRUCT 4" V.C.P. SEWER LATERAL AND CLEANOUT PER CITY STD. 562A
- ④ CONSTRUCT 4" PVC SCHEDULE 80 FORCE MAIN



GRAPHIC SCALE
*AS-BUILT 9-03-03 LHL

REVIEWED BY: _____
APPROVED BY: WESTERN MUNICIPAL WATER DISTRICT
FOR NON-INTERFERENCE COMPLIANCE
SHEET _____ THROUGH _____
CIVIL ENGINEER RCE-46212
DATE: _____

CALL BEFORE YOU DIG
Underground Service Alert
Call: TOLL FREE
1-800-227-2600
TWO WORKING DAYS BEFORE YOU DIG

PRIVATE ENGINEERING NOTE
CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR ALL SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPT LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF DESIGN PROFESSIONAL, EXISTING UTILITIES PER AVAILABLE RECORD, CONTRACTOR TO VERIFY LOCATION PRIOR TO CONSTRUCTION.

REGISTERED PROFESSIONAL ENGINEER
Civil
George A. Lenfestey
No. 45920
Exp. 12-31-02
STATE OF CALIFORNIA

PREPARED UNDER THE DIRECTION OF:
George A. Lenfestey
GEORGE A. LENFESTEY
R.C.E. 45920 - EXP. 12/31/02
DATE: 4/13/99

KEITH INTERNATIONAL, INC.
Planning • Civil Engineering • Environmental Services •
Land Development • Public Works • Water Resources
Inland Empire Division
28000 Oatman Ave., Ste. 200, Mirvale, CA 92552 (951) 952-2800
BENCHMARK:
RIVERSIDE COUNTY BENCHMARK, STAMPED V88-64
AT SOUTHWEST CORNER OF PLUMMER ROAD AND VAN BUREN BOULEVARD, 250.0 FEET SOUTH OF VAN BUREN BOULEVARD, 205.0 FEET WEST OF PLUMMER ROAD, ON THE TOP OF A 4.0 FOOT x 10.0 FOOT GRANITE BOULDER A BRASS DISK FLUSH AND MARKED. ELEV. 1638.123

BUSINESS TAX CERTIFICATE # 033595 EXP. DATE 4/2/00

MARK	REVISIONS	APPR.	DATE

CITY OF RIVERSIDE, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
APPROVED BY: _____ BY DATE: _____
PRINCIPAL ENGINEER: *P. Mc Grath*
PARK DEPARTMENT: _____
TRAFFIC DIVISION: _____
ENGINEERING MANAGER: _____
WASTE WATER TREATMENT: _____
DESIGNED BY L.H.L. DRAWN BY L.H.L. CHECKED BY B.B. DATE: 7-23-99

SEWER PLANS
TR. 28628
MEADOW LANE
HORIZ. SCALE: 1"= 40' VERT. SCALE: 1"= 4'

PROJECT NO. 31377
S-1704
SHEET 6 OF 12
INDEXED 5-4-2000 LHL

Plotter: 03/24/99 16:39:16 : N:\31377\000\dwg\Fsw0010.dwg

1670

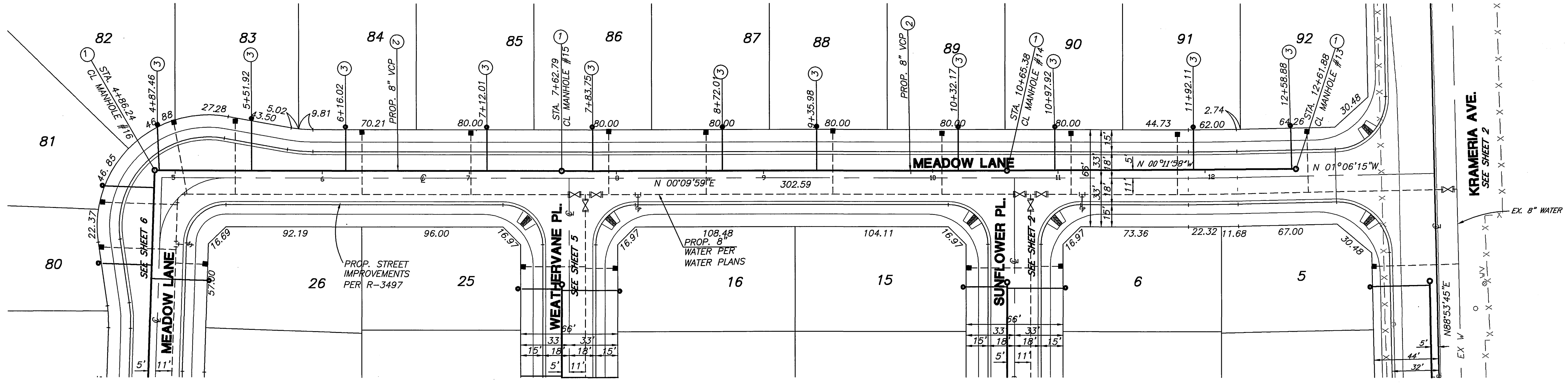
1660

1670

1660

5+00 6+00 7+00 8+00 9+00 10+00 11+00 11+00

PROFILE SCALE:
HORIZ: 1"=40'
VERT: 1"=4'



CONSTRUCTION NOTES

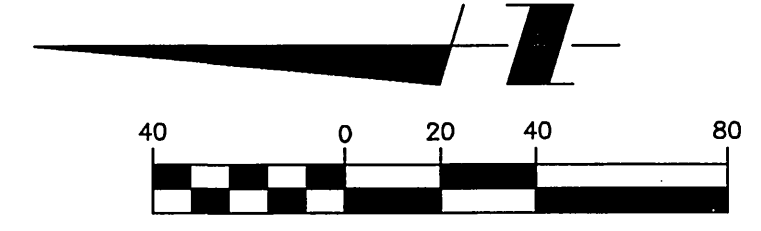
- ① CONSTRUCT MANHOLE PER CITY STD. 500
- ② CONSTRUCT 8" V.C.P. SEWER MAIN
- ③ CONSTRUCT 4" V.C.P. SEWER LATERAL AND CLEANOUT PER CITY STD. 562A
- ④ CONSTRUCT 4" PVC SCHEDULE 80 FORCE MAIN

REVIEWED BY:
APPROVED BY: WESTERN MUNICIPAL WATER DISTRICT
FOR NON-INTERFERENCE COMPLIANCE

SHEET _____ THROUGH _____

CIVIL ENGINEER RCE 46212

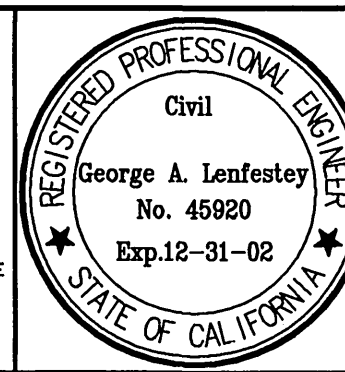
DATE: _____



BUSINESS TAX CERTIFICATE # 033595 EXP. DATE 4/2/00



PRIVATE ENGINEERING NOTE
CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF DESIGN PROFESSIONAL. EXISTING UTILITIES PER AVAILABLE RECORD, CONTRACTOR TO VERIFY LOCATION PRIOR TO CONSTRUCTION.



PREPARED UNDER THE DIRECTION OF:
George A. Lenfestey
GEORGE A. LENFESTEY
R.C.E. 45920 - EXP. 12/31/02
DATE: 4/2/99

KEITH INTERNATIONAL, INC.
*Planning * Civil Engineering * Environmental Services *
*Land Surveying * Public Works * Water Resources *
Inland Empire Division
2890 Quince Ave., Ste. 300, Moreno Valley, CA 92553 (951) 653-0851

BENCHMARK:
RIVERSIDE COUNTY BENCHMARK, STAMPED Y88-64
AT SOUTHWEST CORNER OF PLUMMER ROAD AND VAN BUREN BOULEVARD, 295.0 FEET SOUTH OF VAN BUREN BOULEVARD, 205.0 FEET WEST OF PLUMMER ROAD, ON THE TOP OF A 4.0 FOOT x 10.0 FOOT GRANITE BOULDER A BRASS DISK PLUSH AND MARKED. ELEV. 1638.123

MARK	REVISIONS	APPR.	DATE

DESIGNED BY L.H.L. DRAWN BY L.H.L. CHECKED BY B.B.

CITY OF RIVERSIDE, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS

APPROVED BY: *R. McHath*
PRINCIPAL ENGINEER
DATE: 7-23-99
APPROVED BY: *R. McHath*
DIRECTOR OF PUBLIC WORKS

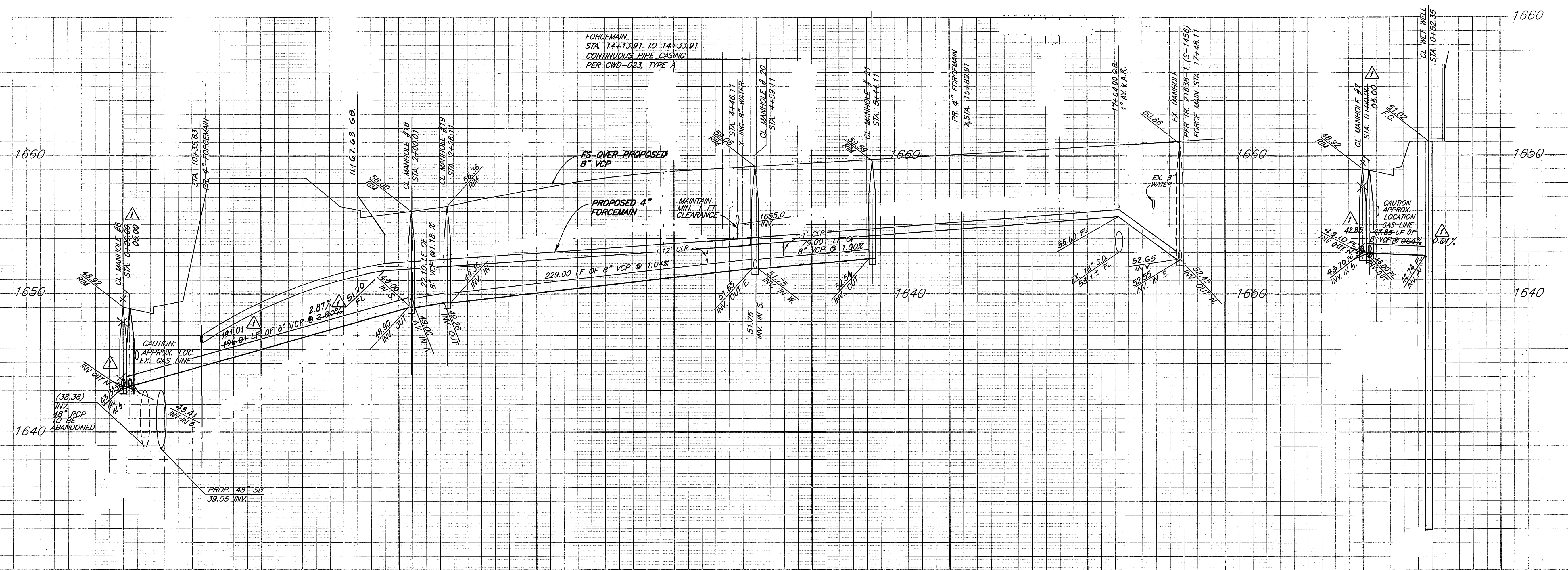
ENGINEERING MANAGER: *R. McHath*
WASTE WATER TREATMENT

SEWER PLANS
TR. 28628
MEADOW LANE

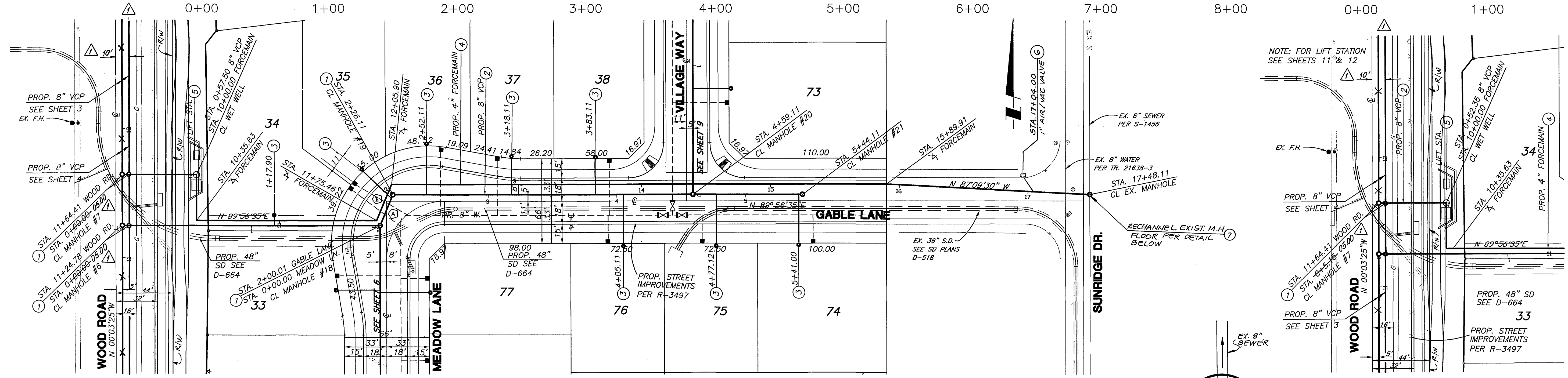
PROJECT NO. 31377
S-1704

HORIZ. SCALE: 1"= 40'
VERT. SCALE: 1"= 4'

SHEET 7 OF 12
INDEXED 5-4-2000 LHL



PROFILE SCALE:
HORIZ: 1"=40'
VERT: 1"=4'

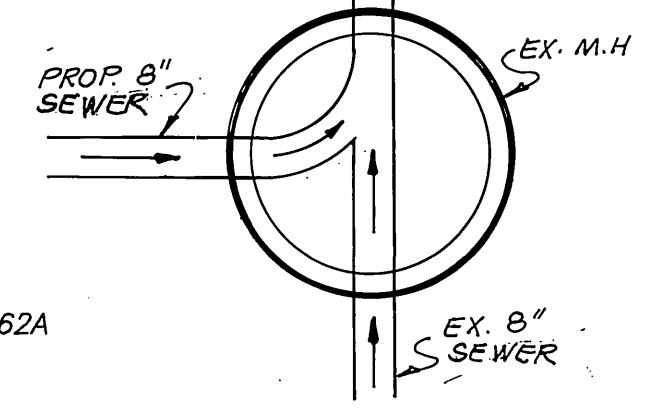


SEWER LINE DATA

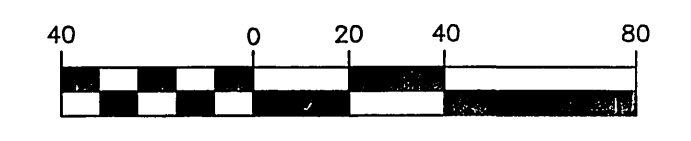
Δ	DELTA/BEARING	RADIUS	LEN./DIST.	TANGENT
A	N 22°27'58"E		31.52	
B	N 22°27'58"E		26.11	

CONSTRUCTION NOTES

1. CONSTRUCT MANHOLE PER CITY STD. 500
2. CONSTRUCT 8" V.C.P. SEWER MAIN
3. CONSTRUCT 4" V.C.P. SEWER LATERAL AND CLEANOUT PER CITY STD. 562A
4. CONSTRUCT 4" PVC SCHEDULE 80 FORCE MAIN
5. CONSTRUCT SEWER LIFT STATION PER DETAILS ON SHEETS 11 AND 12
6. CONSTRUCT 1" AIR/VAC VALVE AND VALVE VAULT
7. RECHANNELED FLOOR OF EXIST. MANHOLE



EXIST. MANHOLE FLOOR RECHANNELED
NOT TO SCALE



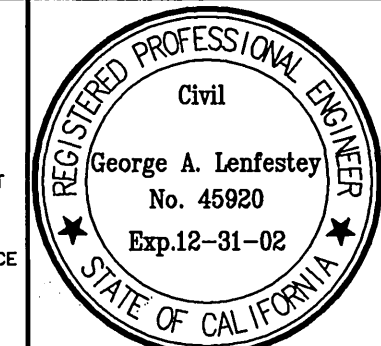
GRAPHIC SCALE
AS-BUILT 9-03-03 LHM

REVIEWED BY: _____
APPROVED BY: _____ WESTERN MUNICIPAL WATER DISTRICT FOR NON-INTERFERENCE COMPLIANCE
SHEET _____ THROUGH _____
CIVIL ENGINEER RCE-46212
DATE: _____

SOUTHERN CALIFORNIA GAS COMPANY
3A 9/2/99
APPROVED BY: _____ DATE: _____

CALL BEFORE YOU DIG
Underground Service Alert
Call: TOLL FREE 1-800-4-A-SAFE
222-7600
TWO WORKING DAYS BEFORE

PRIVATE ENGINEERING NOTE
CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT. INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO OBTAIN, MAINTAIN AND HOLD DESIGN PROFESSIONAL LIABILITY INSURANCE AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF DESIGN PROFESSIONAL. EXISTING UTILITIES PER AVAILABLE RECORD, CONTRACTOR TO VERIFY LOCATION PRIOR TO CONSTRUCTION.



PREPARED UNDER THE DIRECTION OF:
George A. Lenfestey
GEORGE A. LENFESTEY
R.C.E. 45920 - EXP. 12/31/02
DATE: 3/1/99

KEITH INTERNATIONAL, INC.
• Planning • Civil Engineering • Environmental Services •
• Land Surveying • Public Works • Water Resources •
Inland Empire Division
2890 Octavius Ave., Ste. 302, Moreno Valley, CA 92553 (909) 665-0324
BENCHMARK: RIVERSIDE COUNTY BENCHMARK, STAMPED V86-84 AT SOUTHWEST CORNER OF PLUMMER ROAD AND VAN BUREN BOULEVARD, 2050 FEET SOUTH OF VAN BUREN BOULEVARD, 2050 FEET WEST OF PLUMMER ROAD, ON THE TOP OF A 4.0 FOOT x 10.0 FOOT GRANITE BOULDER A BRASS DISK FLUSH AND MARKED. ELEV. 1628.123

BUSINESS TAX CERTIFICATE # 033595 EXP. DATE 4/2/00

RELOCATE SEWER IN WOOD, ADJUSTED GRADES 2/7/99

MARK REVISIONS APPR. DATE

DESIGNED BY: L.H.L. DRAWN BY: L.H.L. CHECKED BY: B.B.

CITY OF RIVERSIDE, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS

APPROVED BY: _____ BY DATE: _____
APPROVED BY: _____ BY DATE: _____
R. Mc Grath
DIRECTOR OF PUBLIC WORKS

ENGINEERING MANAGER: _____
WASTE WATER TREATMENT

DATE: 2-23-99

SEWER PLANS
TR. 28628
GABLE LANE

PROJECT NO. 31377
S-1704

HORIZ. SCALE: 1"= 40' VERT. SCALE: 1"= 4'
INDEXED 5-4-2000 LHM

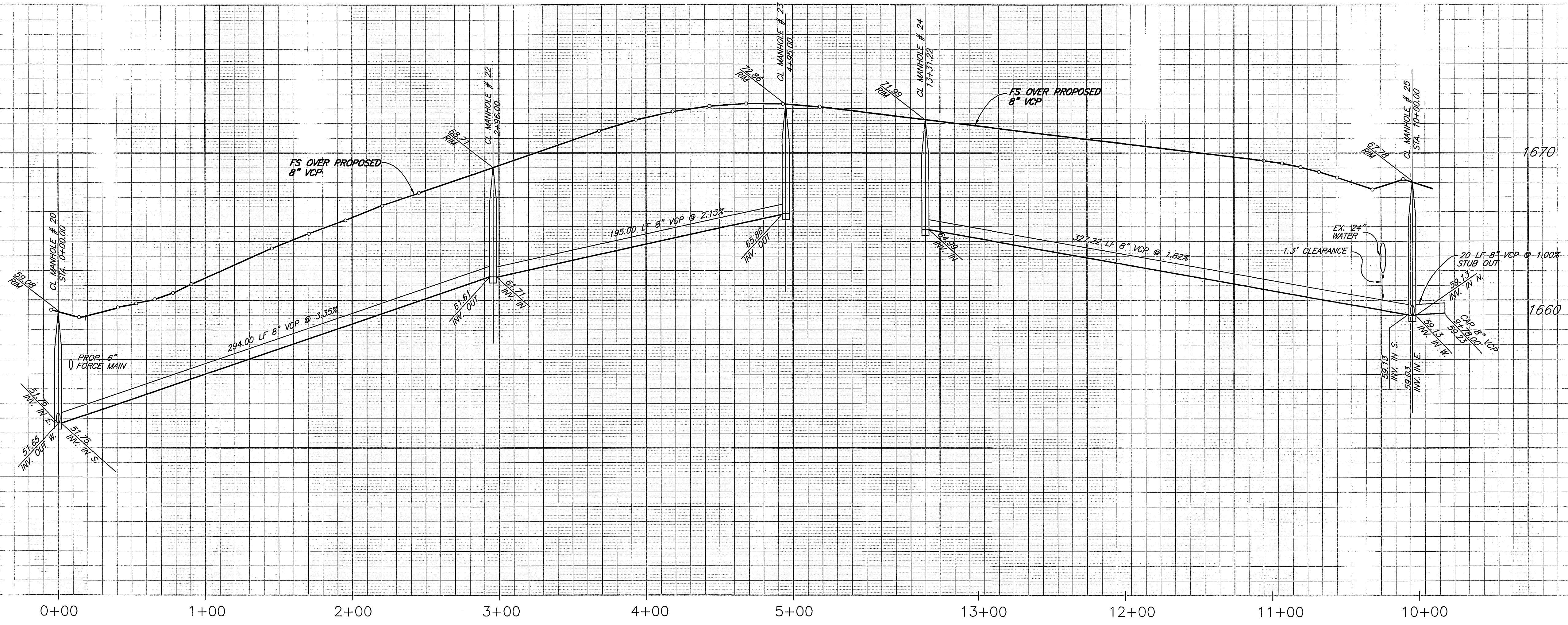
SHEET 8 OF 12

1670

1660

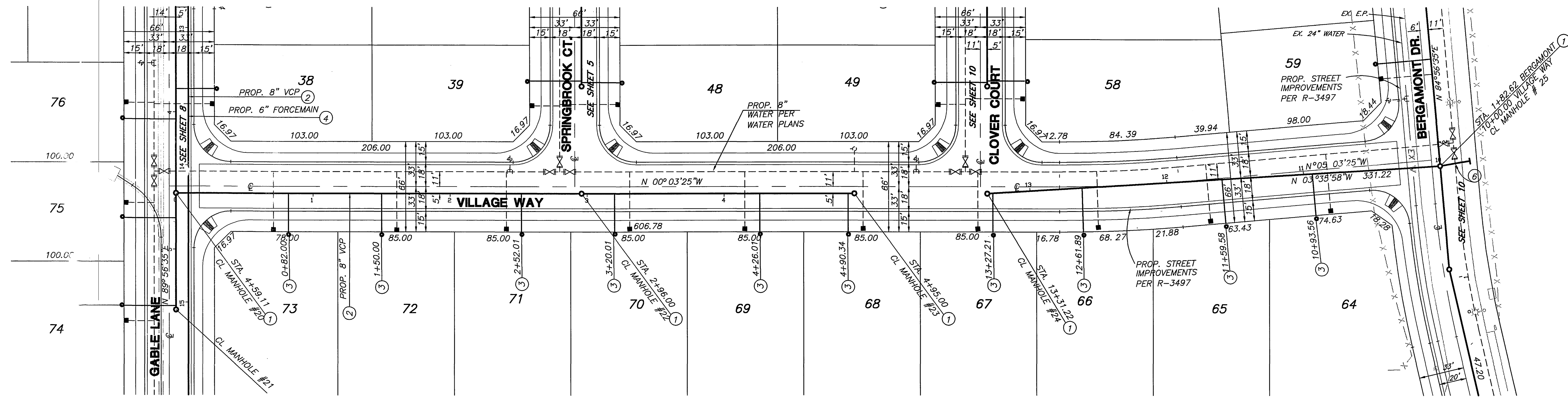
1670

1660



PROFILE SCALE:
 HORIZ: 1"=40'
 VERT: 1"=4'

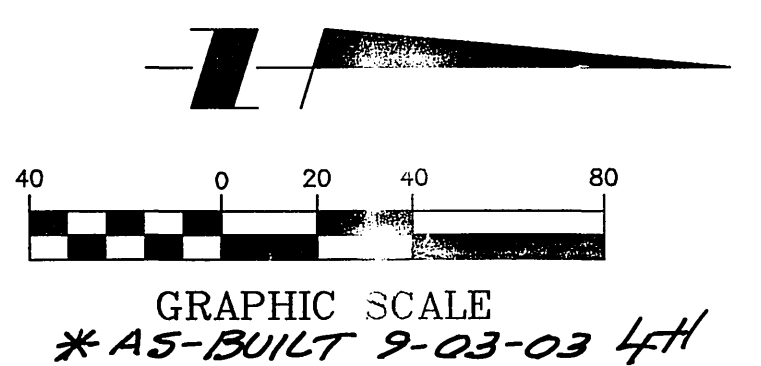
0+00 1+00 2+00 3+00 4+00 5+00 13+00 12+00 11+00 10+00



REVIEWED BY: _____
 APPROVED BY: WESTER MUNICIPAL WATER DISTRICT
 FOR NON-INTERFERENCE COMPLIANCE
 SHEET _____ THROUGH _____
 CIVIL ENGINEER RCE 46212
 DATE: _____

CONSTRUCTION NOTES

- ① CONSTRUCT MANHOLE PER CITY STD. 500
 - ② CONSTRUCT 8" V.C.P. SEWER MAIN
 - ③ CONSTRUCT 4" V.C.P. SEWER LATERAL AND CLEANOUT PER CITY STD. 562A
 - ④ CONSTRUCT 4" PVC SCHEDULE 80 FORCE MAIN
 - ⑤ CONSTRUCT 8" STUBOUT AND CAP.
- BUSINESS TAX CERTIFICATE # 033595 EXP. DATE 4/2/00



CALL BEFORE YOU DIG
 Underground Service Alerts
 Call: TOLL FREE 1-800-227-2600
 TWO WORKING DAYS BEFORE

PRIVATE
 NOTICE
 IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION CONTRACTS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF RIVERSIDE AND THE STATE OF CALIFORNIA. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF RIVERSIDE AND THE STATE OF CALIFORNIA.

REGISTERED PROFESSIONAL ENGINEER
 Civil
 George A. Lenfestey
 No. 45920
 Exp. 12-31-02
 STATE OF CALIFORNIA

PREPARED UNDER THE DIRECTION OF:
 GEORGE A. LENFESTEY
 R.C.E. 45920 - EXP. 12/31/02
 DATE: 4/2/99

KEITH INTERNATIONAL, INC.
 Planning • Civil Engineering • Environmental Services
 Land Surveying • Public Works • Water Resources
 Inland Empire Division
 28800 Carter Ave., Ste. 300, Moreno Valley, CA 92553 (909) 860-0850

BENCHMARK:
 RIVERSIDE COUNTY BENCHMARK, STAMPED V88-84
 AT SOUTHWEST CORNER OF PLUMMER ROAD AND VAN BUREN BOULEVARD, 259.0 FEET SOUTH OF VAN BUREN BOULEVARD, FEET WEST OF PLUMMER ROAD, ON THE TOP OF A 4.0 FOOT x 10.0 FOOT GRANITE BOULDER A BRASS DISK FLUSH AND MARKED. ELEV. 1638.123

MARK	REVISIONS	APPR.	DATE

DESIGNED BY: L.H.L. DRAWN BY: L.H.L. CHECKED BY: B.B.

CITY OF RIVERSIDE, CALIFORNIA
 DEPARTMENT OF PUBLIC WORKS

APPROVED BY: _____ BY DATE: _____
 PRINCIPAL ENGINEER: R. McHath
 PARK DEPARTMENT: _____
 TRAFFIC DIVISION: _____
 ENGINEERING MANAGER: _____
 WASTE WATER TREATMENT: _____

DATE: 7-23-99

SEWER PLANS
 TR. 28628
 VILLAGE WAY

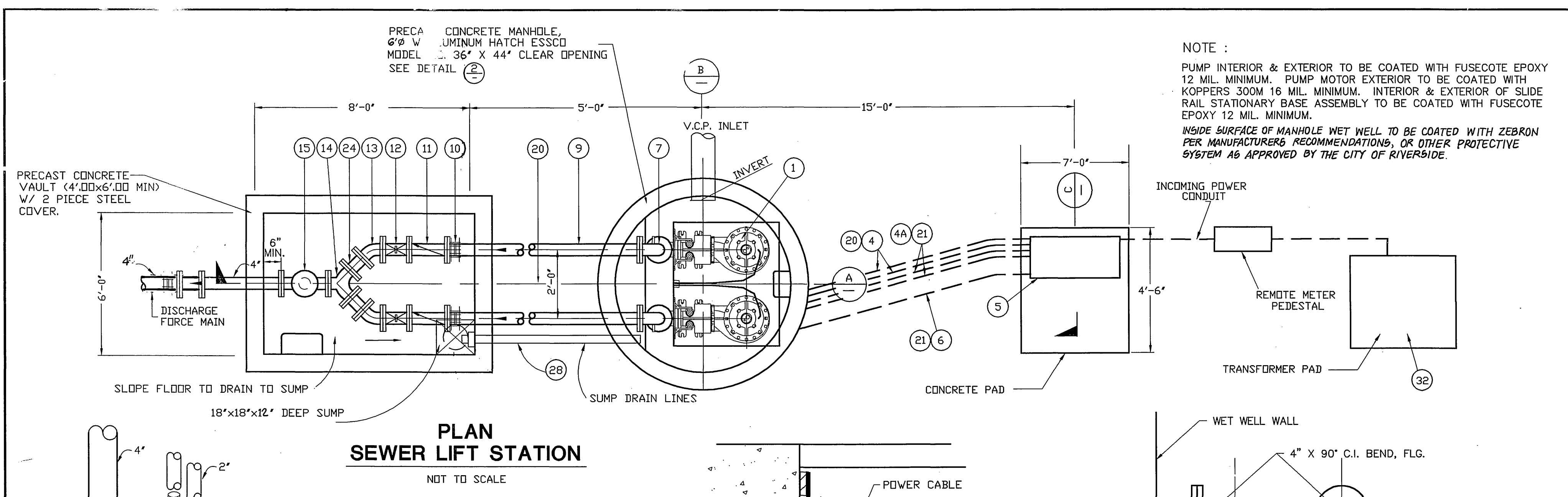
HORIZ. SCALE: 1"= 40' VERT. SCALE: _____

PROJECT NO. 31377
S-1704
 INDEXED 5-4-2000 4H

9 OF 12

03/24/99 18:57:44 I:\31377\000\dwg\p-rs-0013.dwg

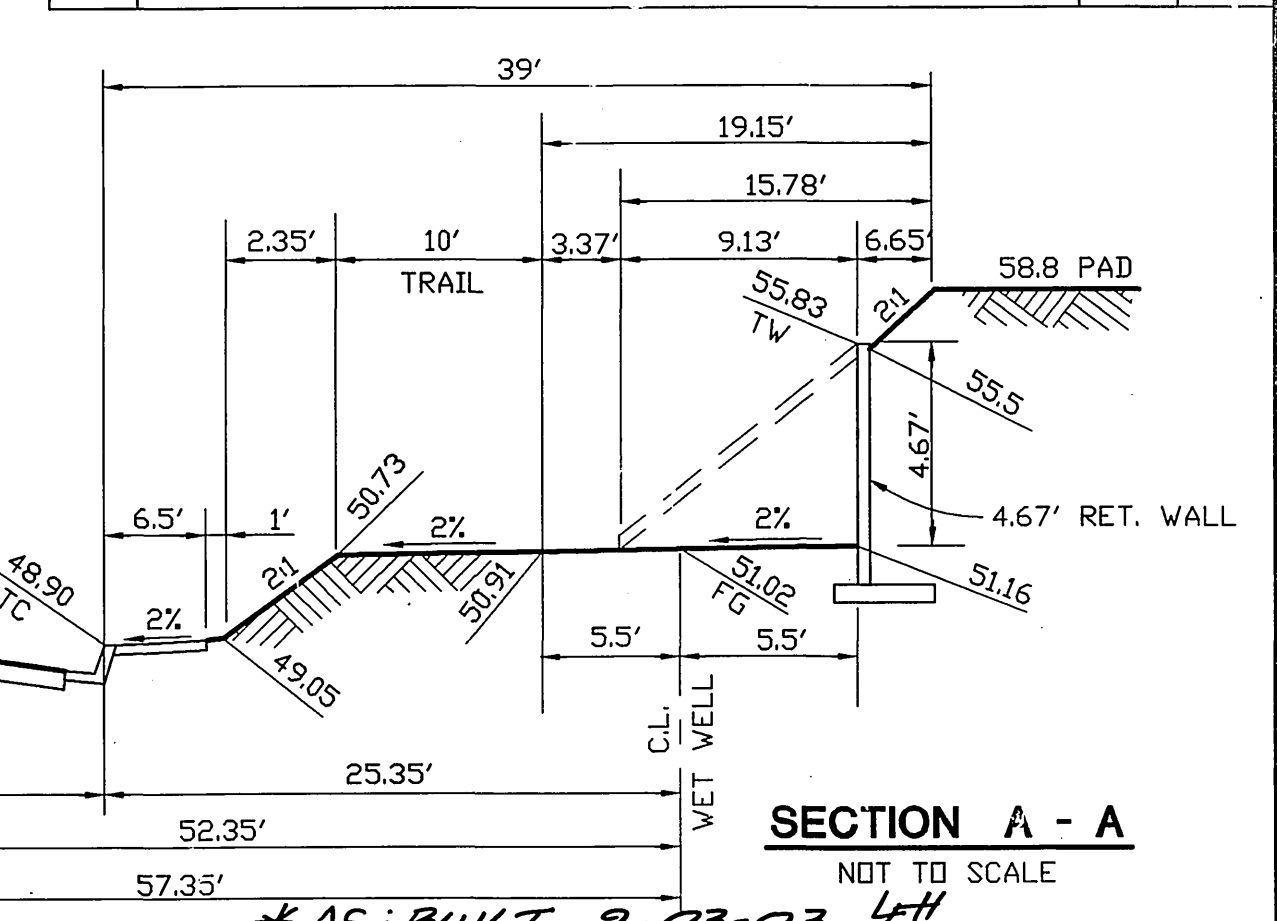
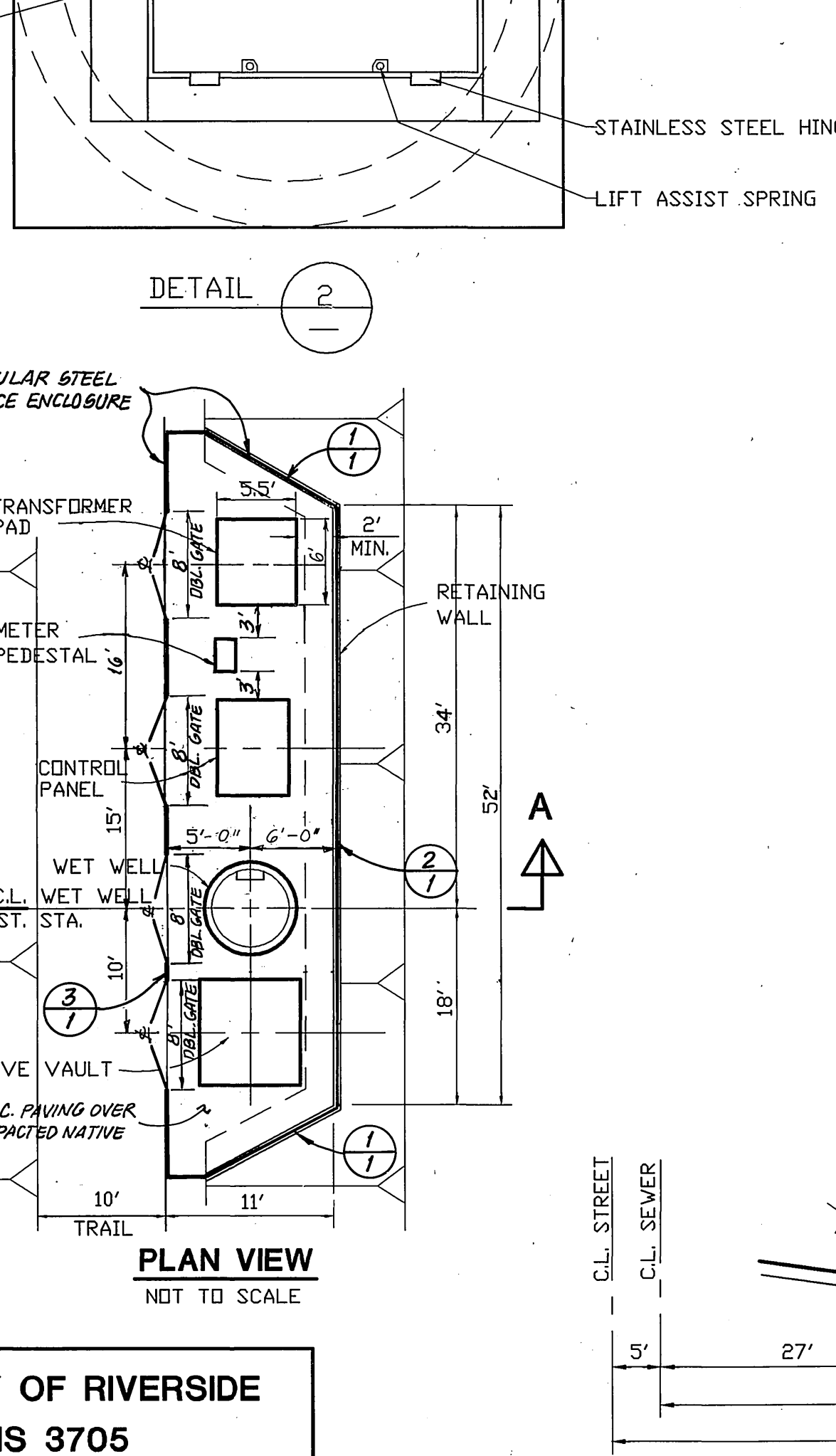
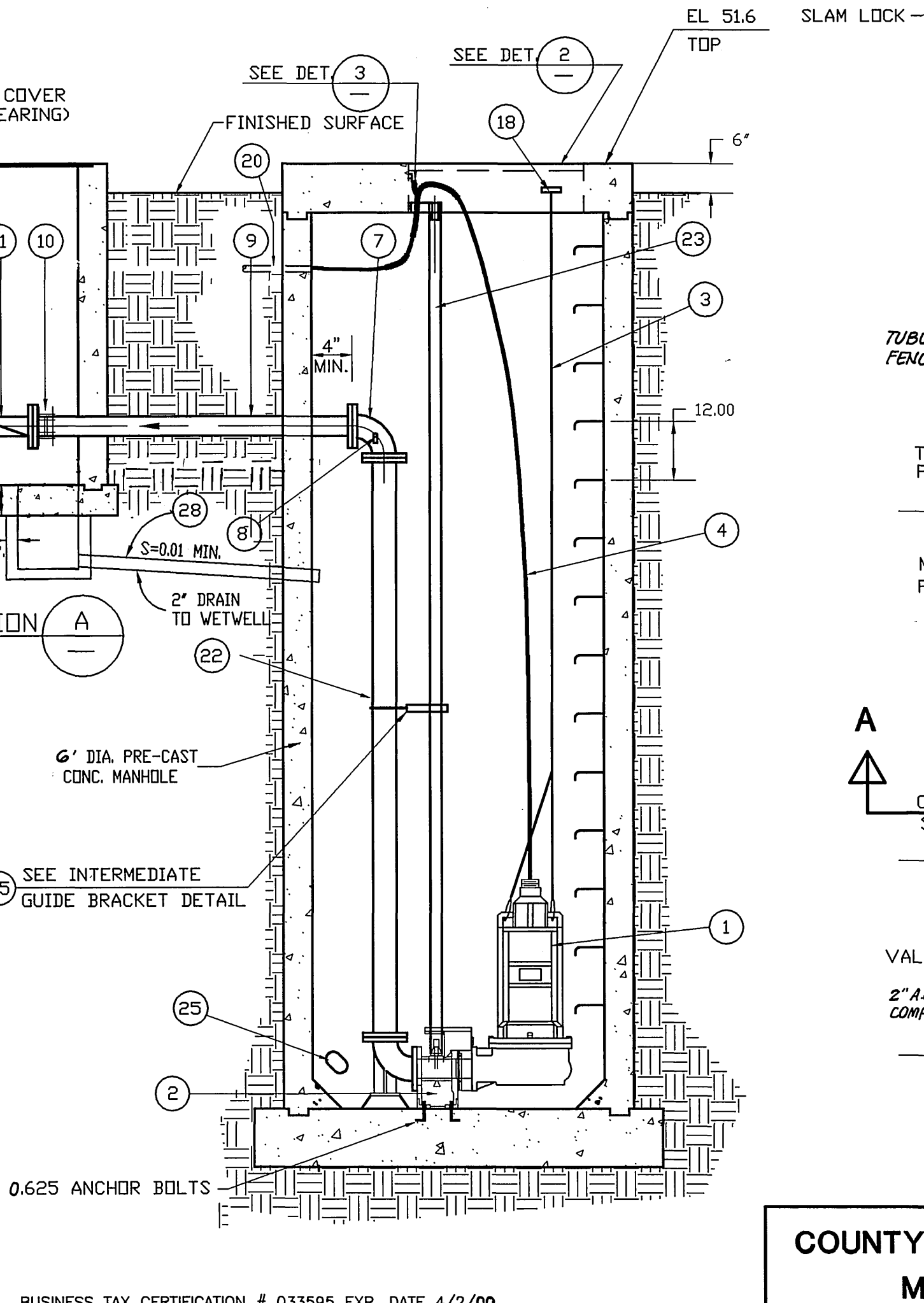
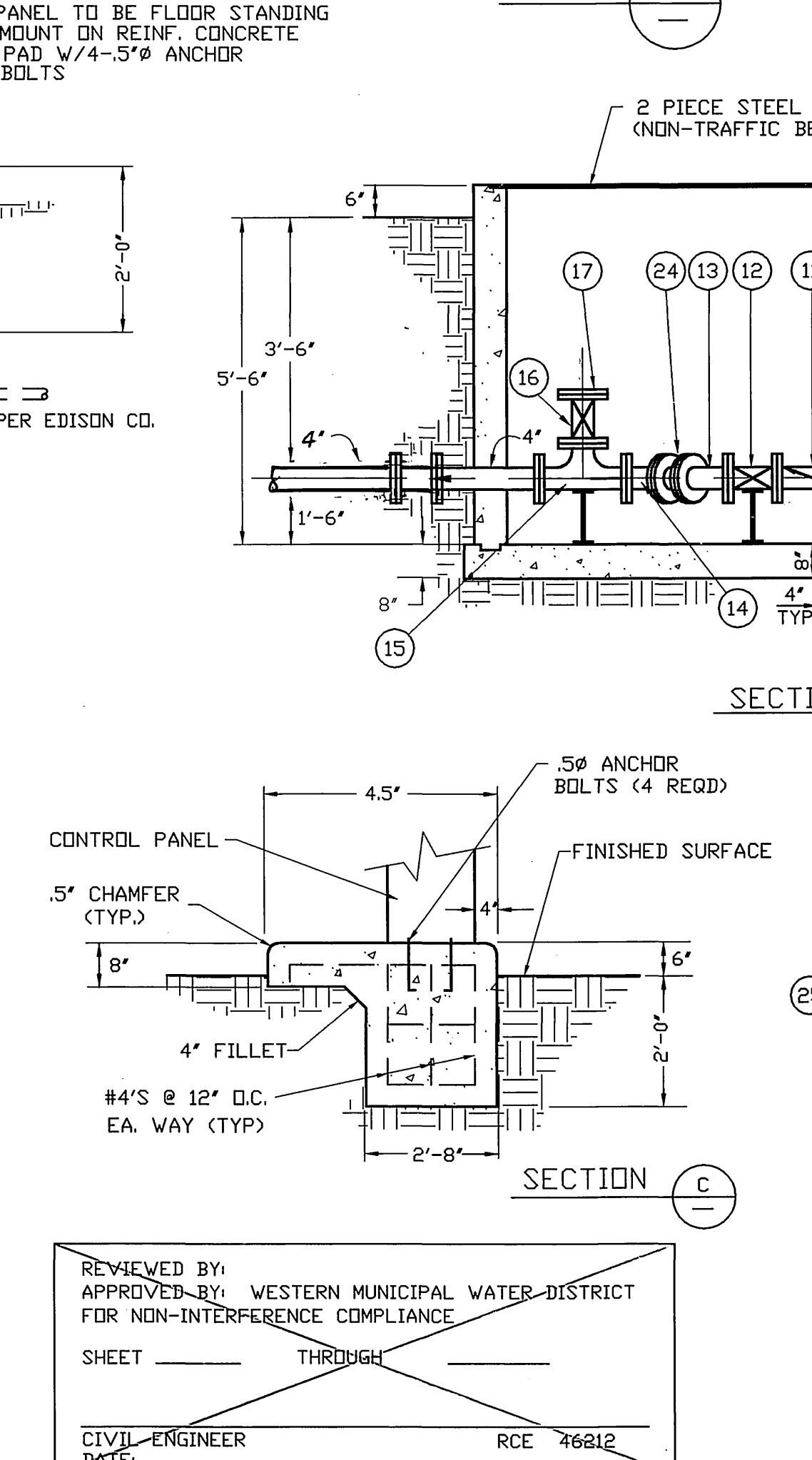
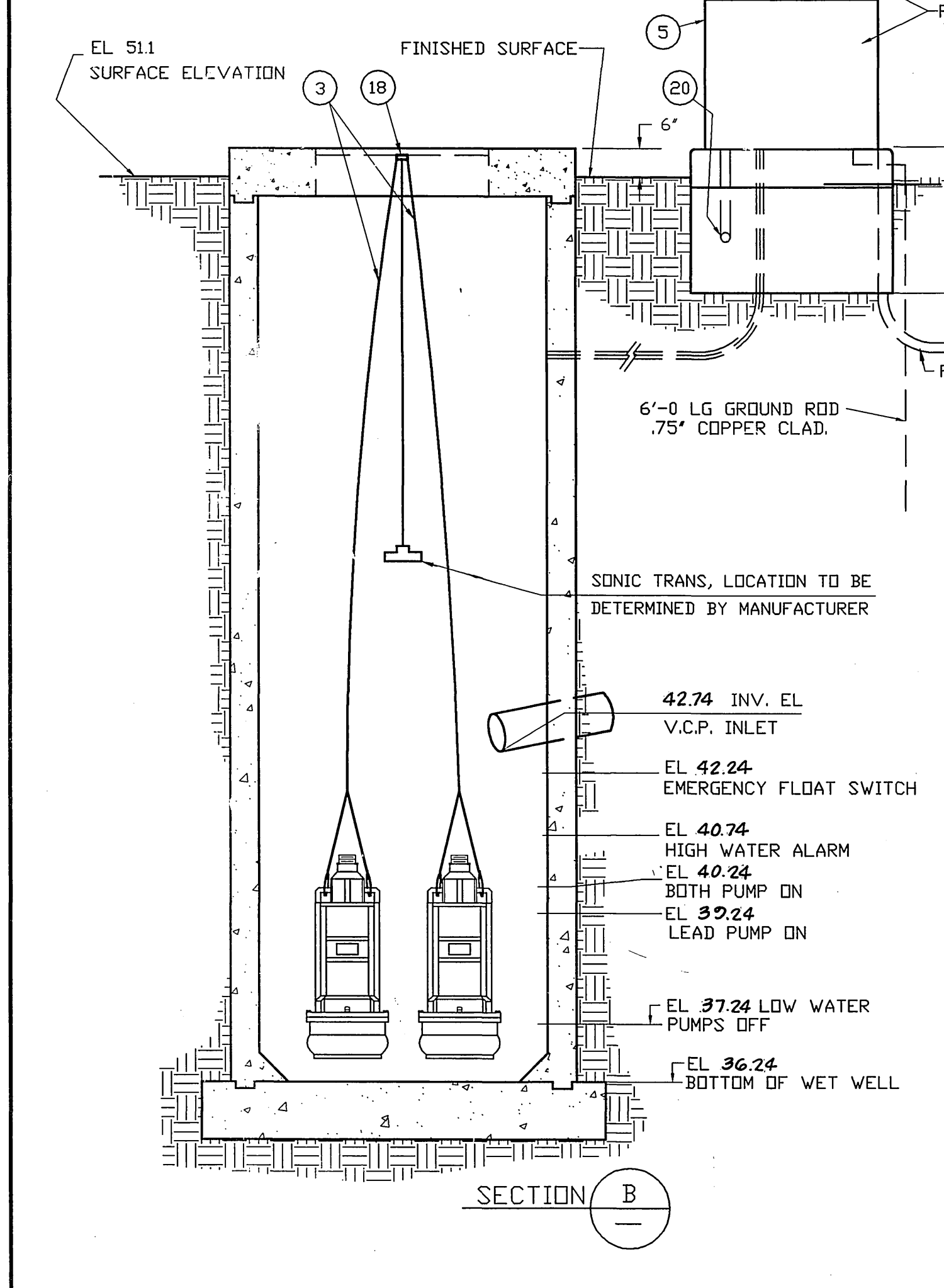
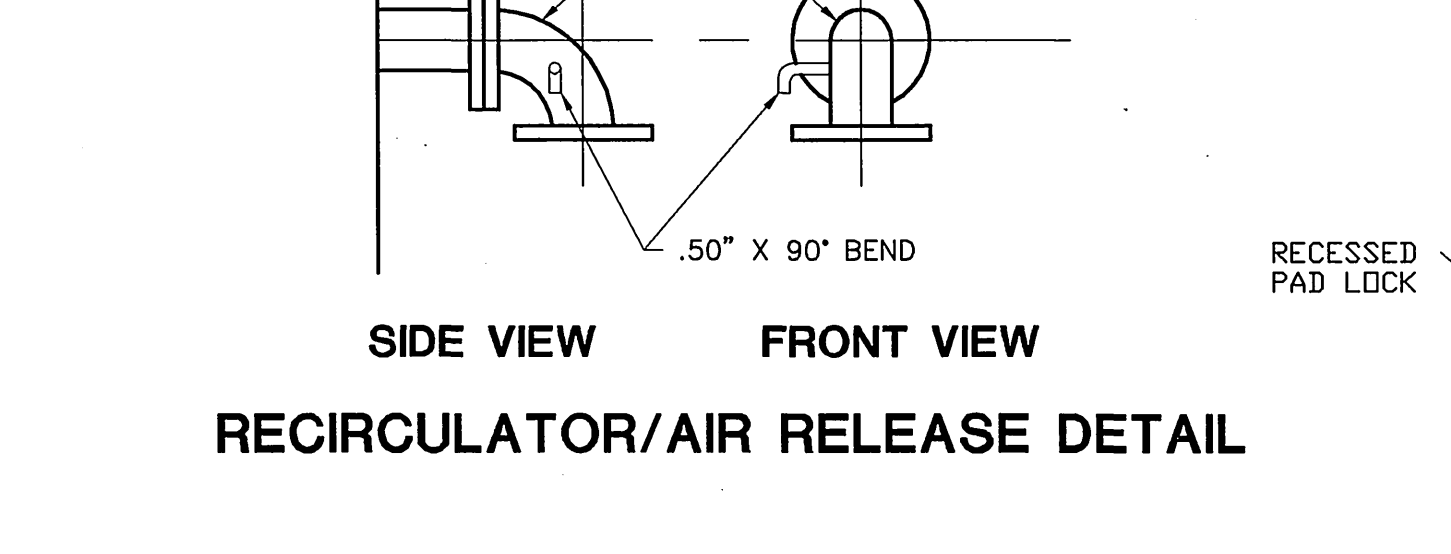
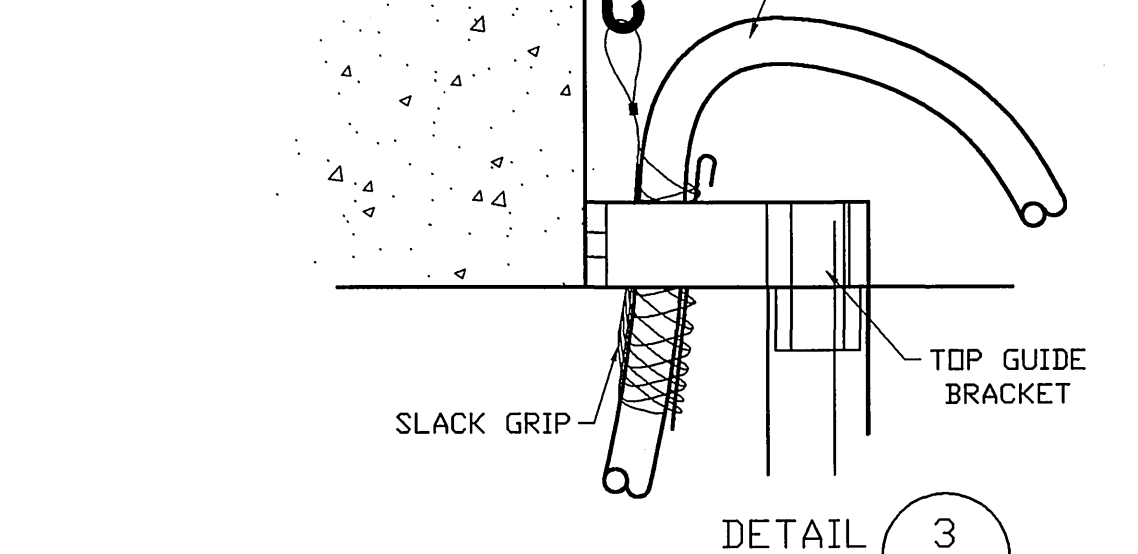
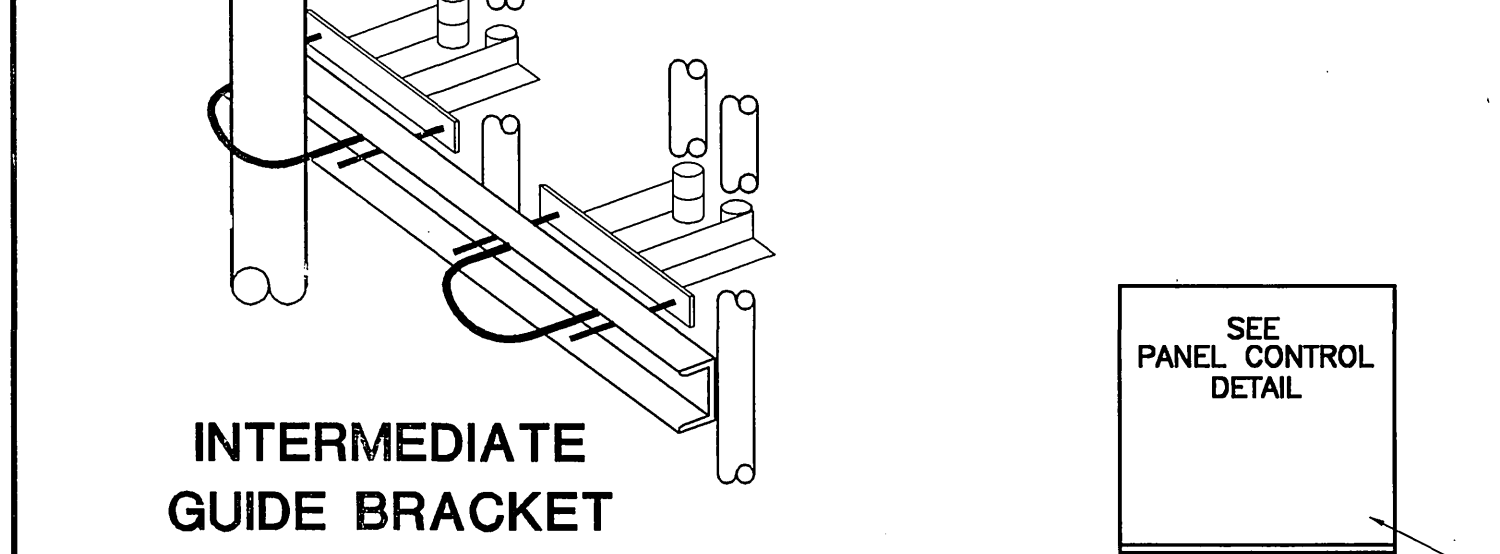
MISSING SHEET



- GENERAL NOTES
1. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND SITE CONDITIONS PRIOR TO BEGINNING CONSTRUCTION.
 2. SUPERVISION FOR INSTALLATION, START-UP AND TESTING TO BE PROVIDED BY MANUFACTURER'S REPRESENTATIVE AS PART OF THE EQUIPMENT PURCHASE CONTRACT.
 3. CONCRETE SHALL BE PORTLAND CEMENT CONCRETE AND SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF 3000 P.S.I. AT 28 DAYS.
 4. ALL FITTINGS AND VALVES SHALL BE CAST IRON, CLASS 125.
 5. ALL ELECTRICAL WIRING AND EQUIPMENT INSTALLED IN THE "WET WELL" SECTION MUST COMPLY W/ ARTICLE 22 OF THE ELECTRICAL SAFETY ORDERS FOR CLASS 1, DIVISION 1, HAZARDOUS LOCATION PROVISIONS OF THE "NATIONAL ELECTRICAL CODE" AND ALL OTHER APPLICABLE LOCAL CODES AND ORDINANCES.
 6. ALL CONDUITS SHALL BE P.V.C., SCHEDULE 80, OR APPROVED EQUAL.
 7. ALL ELECTRICAL WIRE SHALL BE "RHW" OR "THW" COPPER CONDUCTOR, OR APPROVED EQUAL.
 8. THE FLOOR OF THE WET WELL SHALL BE SMOOTH AND LEVEL.
 9. PUMP MOTORS WILL PULL EXCESS AMPS IF RUNNING BACKWARDS.
 10. INCOMING POWER CABLE _____"Ø. PUMP MOTOR CONTROL AND POWER CABLE _____"Ø.
 11. ALL PRACTICES AND PROCEDURES, MATERIALS AND PLACEMENT OF MATERIALS SHALL CONFORM IN EVERY RESPECT TO THE "STANDARD PLANS AND SPECIFICATIONS" OF THE CITY OF RIVERSIDE.
 12. ALL NUTS, BOLTS, AND WASHERS SHALL BE 304 S.S./316 S.S. NO EXCEPTIONS.

MATERIALS SCHEDULE

ITEM	DESCRIPTION	SIZE	QTY
1	SUBMERSIBLE SEWAGE PUMP ESSCO MODEL 4X12, SIZE 9, HEAVY DUTY NON-CLOG VORTEX TORQUE FLUID PUMP, 125 GPM AT 28.5 FT. T.D.H., RELIANCE SUBMERSIBLE MOTOR, 5 H.P. AT 1150 R.P.M. UL, TEMP. CLASS 1, GROUP D, W/50 FT. DF 9 WIRE CONTROL & POWER CABLE. TWO SEPARATE SEALS, OIL LUBRICATED 30 DAY WARNING SYSTEM, N/C THERMAL PROTECTION W/ ESSCO CDDI AGVENT® APPARATUS. (PATENT NO. 4,134,711)		2
2	SPARK PROOF SLIDE RAIL ASSEMBLY FOR USE IN HAZARDOUS LOCATIONS, (NO EXCEPTIONS) W/ 4"x4" FOOTED 90° ELBDW.	4'	2
3	LIFTING CABLE, 3/8" 7x19x304 S.S., NYLON COVERED, 6300 LB. TENSILE STRENGTH.	3/8"x28	2
4	POWER CABLE, SHALL BE UL LISTED 12/4 SDW 1"Ø (1 REQ'D) FOR EACH PUMP MOTOR	50'	2
4A	CONTROL CABLE, SHALL BE UL LISTED 18/5 SDW 1/2"Ø	50'	2
5	PUMP CONTROL PANEL SHALL BE CUSTOM MADE, NEMA 3 R, 304 SS UL, LISTED, HAZ. PROOF, DOUBLE DOOR, FACTORY WIRED AND TESTED, PRESET TESTED; PRESET ELECTRICAL CONTROL PANEL; INDICATING LIGHTS AS REQ'D, RELAYS, HDQ; COMBINATION STARTERS W/ QUICK-TRIP HEATERS; PUMP ALTERNATORS.		1
6	16/2 SDW FLDAT SWITCH CORP. CLAMPS AS REQUIRED.		1
7	FLANGED CAST IRON 90° BEND.	4'	2
8	WASH DOWN AND VACUUM BREAKER	1/2"	2
9	FLANGED x PLAIN END CAST IRON SPOOL.	4'	2
10	FLANGED CAST IRON COUPLING ADAPTOR (BAKER STYLE 601 OR APPROVED EQUAL).	4'	2
11	FLANGED SWING CHECK VALVE, W/ LEVER & WEIGHT.(IBBM)	4'	2
12	FLANGED GATE VALVE, NON RISING STEM.(IBBM)	4'	2
13	FLANGED CAST IRON 45° BEND.	4'	2
14	FLANGED CAST IRON TRUE WYE.	4'	1
15	FLANGED CAST IRON TEE.	4'	1
16	FLANGED GATE VALVE, NON-RISING STEM.(IBBM)	4'	1
17	CAST IRON BLIND FLANGE.	4'	1
18	EYE BOLT, .50"Ø S.S.	1/2"	1
20	2"Ø ELECTRICAL CONDUIT (PVC SCH. 80 OR APPROVED EQUAL)		
21	.75"Ø CONDUIT (PVC SCH. 80 OR APPROVED EQUAL)		
22	RIGID CLASS 125 DIP DISCHARGE PIPE FxF.	4'	2
23	2" 304 STAINLESS STL. SCH. 40 GUIDE PIPE	2'x15'	8
24	FLANGED BY FLANGED CIP SPOOL (SPACER)	4'	2
25	2" 304 STAINLESS STL. INTERMEDIATE GUIDE PIPE BRACKET	2'	2
26	2" PVC PIPE SCH. 40	2'	1
28	PRECAST 6' CONCRETE MANHOLE W/ CONC. BASE & TOP, INCLUDING 2 LEAF ALUMINUM ACCESS HATCH 36"x44" CLEAR OPENING (NON-Traffic) WITH LIFT ASSIST SPRINGS, DROP HANDLE, RECESSED PAD LOCK AND STAINLESS STEEL HINGES & HARDWARE, INSIDE PROTECTIVE FINISH PER NOTE THIS SHEET.		1
31	PRECAST CONCRETE VAULT 6'x8' INSIDE X 6' DEEP W/ CONCRETE BASE INCLUDING 2 LEAF STEEL COVER (NON-Traffic) WITH LIFT ASSIST SPRINGS, DROP HANDLE, RECESSED PAD LOCK, SLAM LOCK & STAINLESS STEEL HINGES & HARDWARE.		1
32	TRANSFORMER PAD		1



CALL BEFORE YOU DIG

Underground Service Alert

Call: TOLL FREE 1-800-227-2800

TWC WORKING DAYS BEFORE

PRIVATE ENGINEERING NOTE

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO OBTAIN, INDUPLY AND HOLD DESIGN PROFESSIONAL LIABILITY FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF DESIGN PROFESSIONAL.

REGISTERED PROFESSIONAL ENGINEER

Civil

George A. Lemfesty

No. 45920

Exp. 12-31-02

STATE OF CALIFORNIA

PREPARED UNDER THE DIRECTION OF:

GEORGE A. LEMFESTY

R.C.E. 45920 - EXP. 12/31/02

DATE 4/14/99

REVIEWED BY:

APPROVED BY: WESTERN MUNICIPAL WATER DISTRICT FOR NON-INTERFERENCE COMPLIANCE

SHEET THROUGH

CIVIL ENGINEER RCE 46612

DATE:

BUSINESS TAX CERTIFICATION # 033595 EXP. DATE 4/2/00

KEITH INTERNATIONAL, INC.

Planning • Civil Engineering • Environmental Services • Land Surveying • Public Works • Water Resources

Inland Empire Division

2889 Chester Ave., Ste. 300, Avocado Valley, CA 92603 (909) 883-0291

BENCHMARK: RIVERSIDE COUNTY BENCHMARK, STAMPED VBS-64 AT SOUTHWEST CORNER OF PLUMMER ROAD AND VAN BUREN BOULEVARD, 259.0 FEET SOUTH OF VAN BUREN BOULEVARD, 205.0 FEET WEST OF PLUMMER ROAD, ON THE TOP OF A 4.0 FOOT X 10.0 FOOT GRANITE BOULDER A BRASS DISK PLUSH AND MARKED. ELEV. 1438.123

COUNTY OF RIVERSIDE MS 3705

MARK	REVISIONS	APPR.	DATE

DESIGNED BY: LHL DRAWN BY: LHL CHECKED BY: BB

CITY OF RIVERSIDE, CALIFORNIA DEPARTMENT OF PUBLIC WORKS

APPROVED BY: [Signature] DATE: 7-23-99

PRINCIPAL ENGINEER: R. McGrath

PARK DEPARTMENT

TRAFFIC DIVISION

ENGINEERING MANAGER: [Signature]

WASTE WATER TREATMENT

DATE: 7-23-99

SEWER PLANS TR. 28628

LIFT STATION DETAILS

PROJECT NO. 31377

S-1704

HORIZ. SCALE: VERT. SCALE:

SHEET 11 OF 12

INDEXED 5-4-2000 LHL

LIFT STATION NOTES

GENERAL NOTES

- ALL HATCHES AND HATCH HARDWARE SHALL BE STAINLESS STEEL.
- THE INTERIOR OF THE GRAVITY MANHOLES NEED TO BE CORROSION.
- THE CONTRACTOR MUST SUBMIT COMPLETE MAINTENANCE AND SPARE PARTS INFORMATION FOR THE PUMPS, VALVES, ELECTRICAL AND INSTRUMENTATION COMPONENTS. MECHANICAL COMPONENTS MUST HAVE SECTION VIEWS, EXPLODED VIEWS, AND A COMPLETE PARTS LISTING. THE NAME, ADDRESS AND TELEPHONE NUMBER FOR ALL SUPPLIERS MUST.
- THE CONTRACTOR MUST PROVIDE SPARE PARTS.
- THREE PHASE POWER IS REQUIRED FOR LIFT STATION (480 VOLT).
- THE PUMP MOTORS MUST BE SIZED NOT TO EXCEED THEIR RATED HORSEPOWER AT ANY POINT ON THE PUMP CURVE.
- THE CONTRACTOR MUST PROVIDE A 20-FOOT JUMPER FROM THE CONTROL PANEL TO THE GENERATOR FOR EMERGENCY POWER CONNECTION.
- CONTRACTOR MUST PROVIDE COMPLETE AS-BUILT DRAWINGS OF THE ELECTRICAL SYSTEM. THIS INCLUDES THE GENERAL WIRING AND THE INTERNAL WIRING OF THE PANELS. THE CITY WILL REVIEW AND APPROVE THE DRAWINGS. THE CONTRACTOR WILL MAKE ANY CHANGES AND SUBMIT FINAL SETS. COMPLETED RECORDED DRAWINGS ARE REQUIRED BEFORE FINAL PAYMENT IS RECEIVED BY THE CONTRACTOR.
- ALL WIRES MUST BE INDIVIDUALLY TAGGED. THEY MUST BE TAGGED AT EVERY TERMINATION AND INSIDE EVERY JUNCTION BOX. WIRE NUMBERING AND TAGGING SYSTEMS MUST BE SUBMITTED TO THE CITY FOR REVIEW AND

INSTRUMENTATION AND CONTROL NOTES

- CONTROL PANEL MUST BE CUSTOM BUILT TO THE CITY REQUIREMENTS.
- CONTRACTOR MUST SUBMIT ALL WIRING DIAGRAMS FOR REVIEW BY THE CITY PRIOR TO ASSEMBLY.
- CONTRACTOR MUST PROVIDE THE CITY THE OPPORTUNITY TO INSPECT PANEL DURING ASSEMBLY.
- THE PANEL SHALL BE NEMA 4X.
- PUMPS SHALL BE CONTROLLED USING A SQUARE D PLC. NO SUBSTITUTIONS. THIS IS REQUIRED FOR STANDARDIZATION.
- CONTRACTOR MUST SUBMIT A COPY OF THE PLC PROGRAM FOR REVIEW AND APPROVAL. A FINAL FULLY ANNOTATED PROGRAM MUST BE PROVIDED WITH THE AS-BUILT DRAWINGS.
- WET WELL LEVEL MUST BE MONITORED USING A MILLTRONIC MULTIRANGER ULTRASONIC LEVEL METER. NO SUBSTITUTIONS. THIS IS REQUIRED FOR STANDARDIZATION.
- THE LIFT STATION SHALL BE EQUIPPED WITH ULTRASONIC FAILURE INDICATOR.
- THE CONTROL PANEL SHALL BE EQUIPPED WITH ACROSS THE LINE STARTING SO THE PUMPS CAN BE OPERATED MANUALLY IN THE EVENT OF PLC OR OTHER EQUIPMENT FAILURE.
- CONTROL PANEL MUST BE EQUIPPED WITH MOTOROLA INTRAC 2000 RTU. THE RTU WILL COMMUNICATE WITH THE INTRAC BASE STATION AT THE CITY RECLAMATION PLANT.
- THE CONTRACTOR MUST CONNECT AND TEST RTU TO ESTABLISH COMMUNICATION WITH PLANT BASE. CITY WILL INTEGRATE RTU INTO RTU INTO PLANT SCADA CONTROL SYSTEM.
- CONTRACTOR SHALL PROVIDE SUITABLE YAGI ANTENNA W/ MAST FOR RTU.

CONTROL LOGIC NOTES

THE PLC WILL PERFORM THE FOLLOWING CONTROL FUNCTIONS:

- CYCLE PUMPS ON AND OFF ACCORDING TO WET WELL LEVEL.
- ALTERNATE LEAD AND LAG PUMPS EVERY 24 HOURS.
- RECORD PUMP LAPPED TIME RUN HOURS.
- PROVIDE LOW LEVEL AND HIGH LEVEL ALARMS.
- TURN OFF PUMPS ON SEAL FAILURE.
- TURN OFF PUMPS ON THERMAL OVERLOAD.
- CALL LAG PUMP IN EVENT OF LEAD PUMP FAILURE.
- RECOGNIZE ULTRASONIC LEVEL CONTROL SYSTEM FAILURE AND CLOSE ALARM CONTACT.
- RECOGNIZE PUMP HAND SWITCH POSITION AND ADJUST CONTROL LOGIC.
- RECOGNIZE ANY FAILURE CONDITION AND CLOSE BEACON LIGHT CONTACT.
- RECOGNIZE POWER FAILURE AND CLOSE ALARM CONTACT.
- RECOGNIZE SITE ENTRIES AND CLOSE ALARM CONTACT.
- MILLTRONICS LEVEL CONTROLLERS SHALL PROVIDE BACKUP PUMP CONTROL IN THE EVENT OF PLC FAILURE.

ALL ALARM CONTACTS AND SIGNALS TO THE RTU WILL BE CONTROLLED BY THE PLC.

EXTERNAL RELAYS

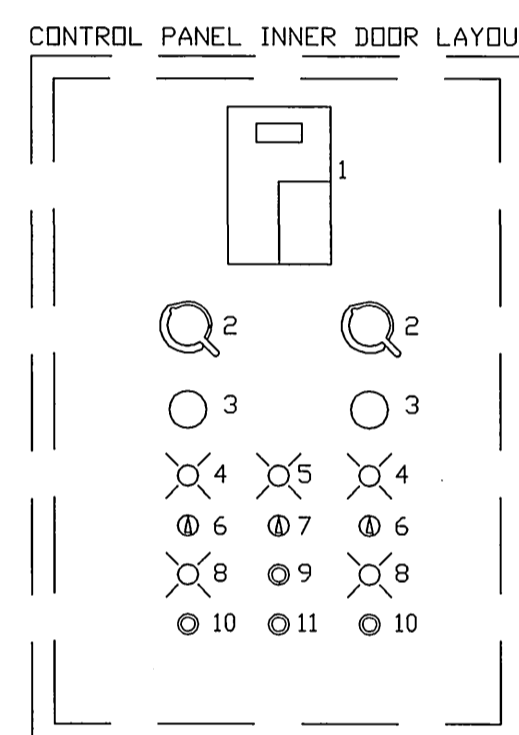
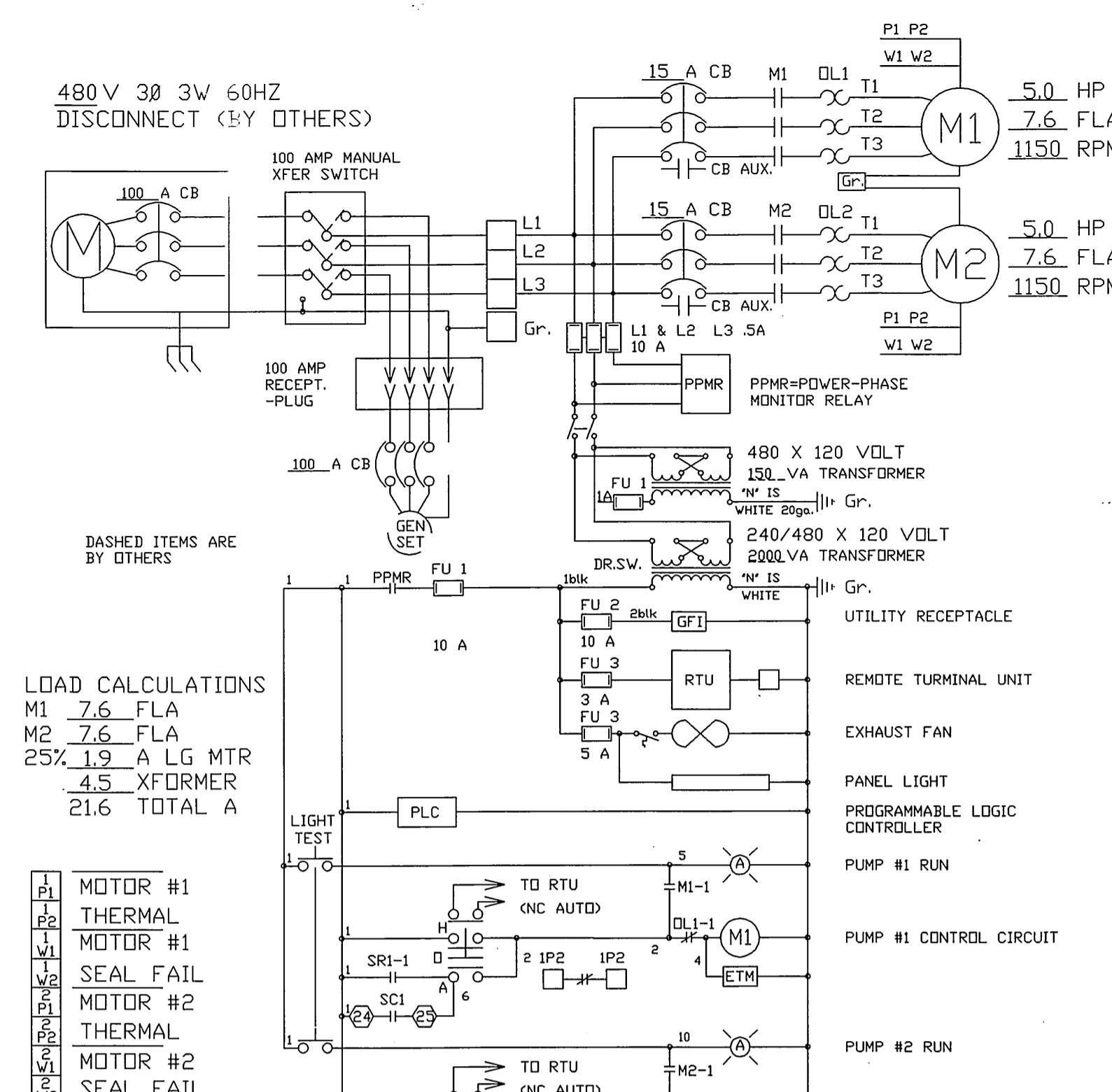
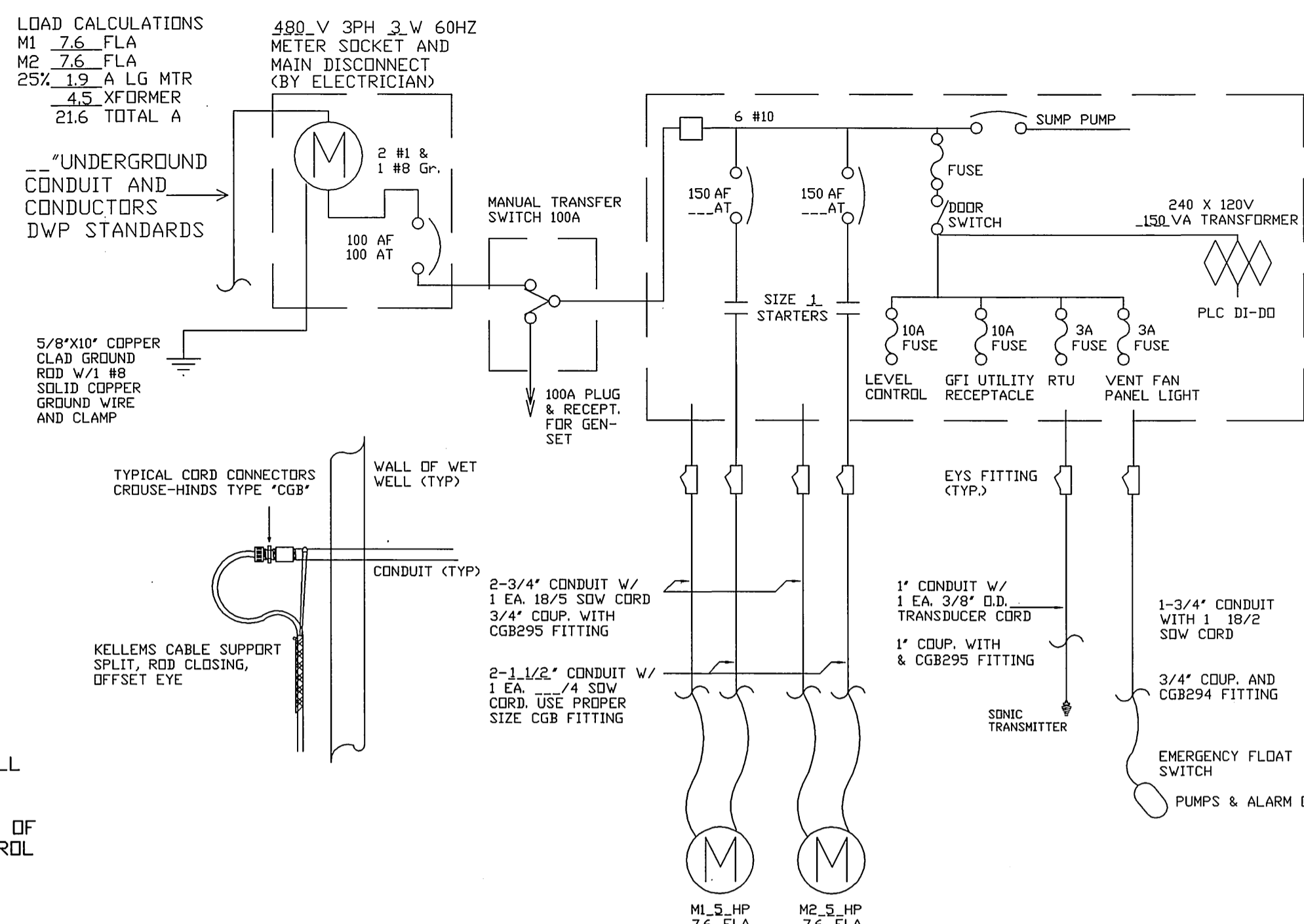
- INTRINSICALLY SAFE FOR THE HIGH, HIGH LEVEL FLOAT
- FOR SEAL FAILURE
- MOTOR STARTERS

RTU

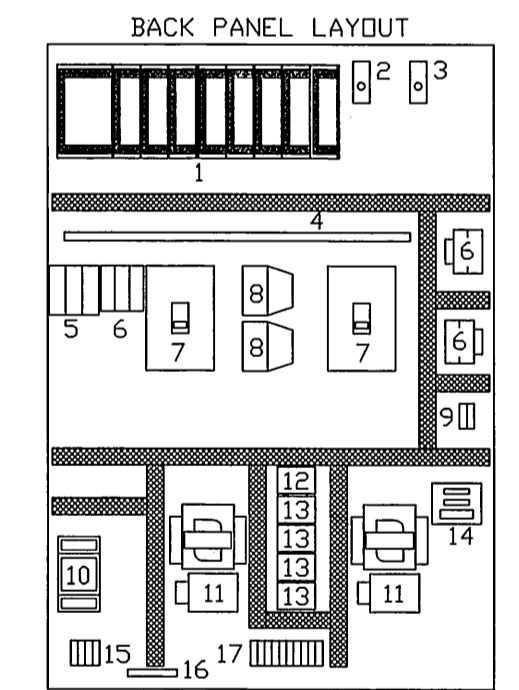
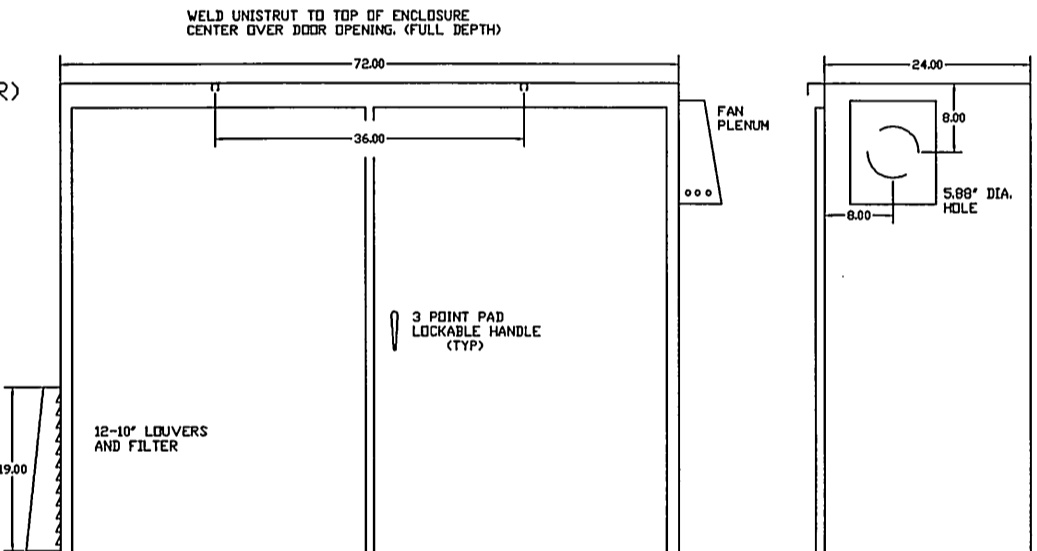
- SHALL MONITOR ONLY, NOT CONTROL
- INDICATE LOW LEVEL (DI)
- INDICATE WET WELL LEVEL ANALOG OUTPUT (DI)
- INDICATE HIGH LEVEL (DI)
- INDICATE SITE ENTRY (DI)
- INDICATE AC FAILURE (DI)
- INDICATE INDIVIDUAL PUMP FAILURE (DI)
- INDICATE PUMP AUTO, PUMP NOT AUTO (DI)
- HAND SWITCH POSITION HAND/OFF/AUTO
- INDICATE PUMP RUN STATUS (DI)
- INDICATE ULTRASONIC FAILURE (DI)

CONTROLS

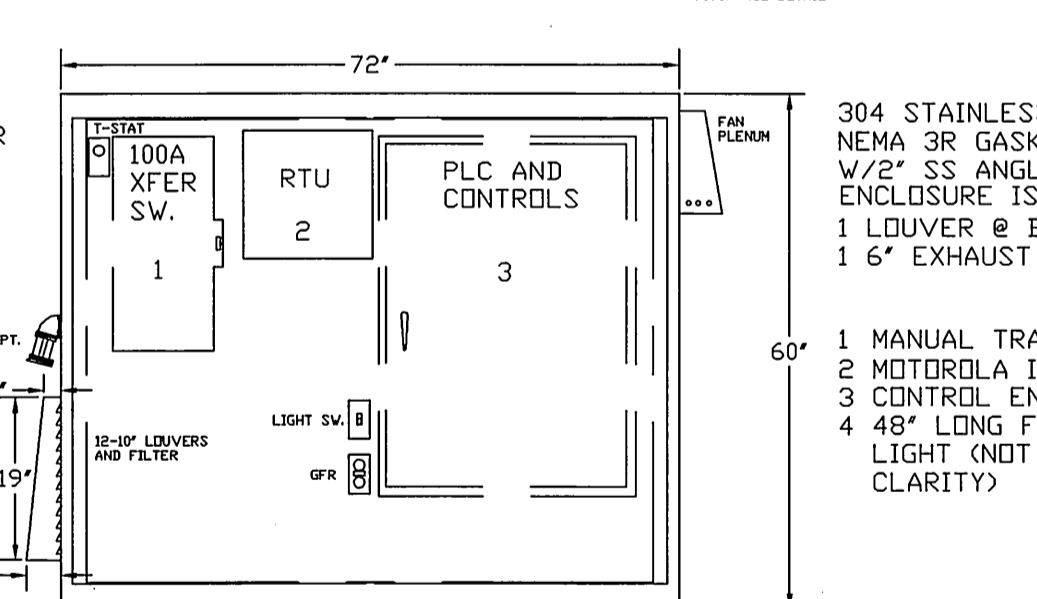
- HAND SHALL BYPASS LEVELS, PLC, MILLTRONICS, ETC., AND SHALL DIRECTLY ENERGIZE THE STARTERS.
- AUTO FUNCTION SHALL BE CONTROLLED BY THE PLC OR IN EVENT OF THE PLC FAILURE, THE MILLTRONICS WILL PROVIDE BACKUP CONTROL START, STOP, AND ALTERNATE LEAD AND LAG PUMPS.



- SONIC CONTROLLER
- CIRCUIT BREAKER OPERATORS
- ELAPSED TIME METERS
- MOTOR RUN PILOT LIGHT
- CONTROL POWER PILOT LIGHT
- HAND-OFF-AUTO (HQA) SWITCH
- LEAD-LAG SELECTOR SWITCH
- SEAL FAIL LIGHT
- LIGHT TEST PUSH BUTTON
- OVERLOAD RESET PUSH BUTTON
- SEAL FAIL TEST PUSH BUTTON
- UTILITY RECEPTACLE 10 AMP (GFR)



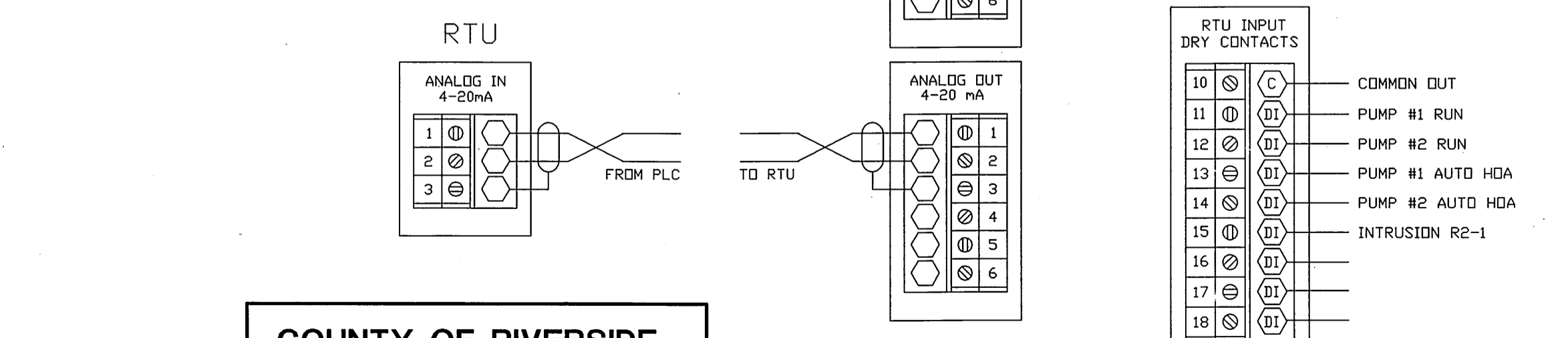
- MODICON PLC
- CONTROL POWER SWITCH
- CONTROL POWER SWITCH
- HIGH VOLTAGE BARRIER
- LINE VOLTAGE TERMINAL BLOCK
- CONTROL FUSE
- MOTOR CIRCUIT BREAKER
- SEAL FAIL RELAY
- CONTROL POWER TERMINAL
- INTRINSIC FLOAT SW. RELAY
- MOTOR STARTERS
- POWER/PHASE MONITOR RELAY
- CONTROL RELAY
- PLC DI DO ISOLATION TRANSFORMER
- INTRINSIC TERMINAL BLOCK
- GROUND TERMINAL BLOCK
- MOTOR CONTROL TERMINAL BLOCK



- MANUAL TRANSFER SWITCH
- MOTOROLA INTRAC 2000
- CONTROL ENCLOSURE
- 48" LONG FLUORESCENT LIGHT (NOT SHOWN FOR CLARITY)

LIFT STATION ELECTRICAL DETAILS

NOT TO SCALE



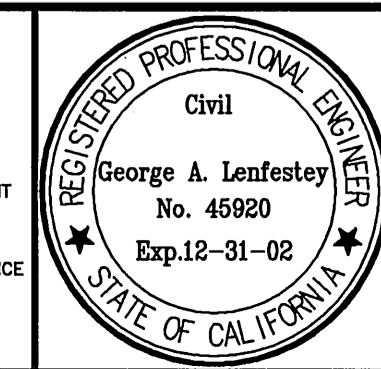
CONTROL PANEL DETAILS

NOT TO SCALE

REVIEWED BY: _____
 APPROVED BY: WESTERN MUNICIPAL WATER DISTRICT
 FOR NON-INTERFERENCE COMPLIANCE
 SHEET _____ THROUGH _____
 CIVIL ENGINEER RCE 46212
 DATE: _____



PRIVATE ENGINEERING NOTE
 CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF DESIGN PROFESSIONAL. EXISTING UTILITIES PER AVAILABLE RECORD, CONTRACTOR TO VERIFY LOCATION PRIOR TO CONSTRUCTION.



PREPARED UNDER THE DIRECTION OF:
 GEORGE A. LENFESTEY
 R.C.E. 45920 - EXP. 12/31/02
 DATE: 4/16/99

KEITH INTERNATIONAL, INC.
 Planning • Civil Engineering • Environmental Services
 Land Surveying • Public Works • Water Resources
 Inland Empire Division
 28590 Chatham Ave., Ste. 200, Moreno Valley, CA 92553 (951) 955-0254
 BENCHMARK: RIVERSIDE COUNTY BENCHMARK, STAMPED VBB-64 AT SOUTHWEST CORNER OF PLUMMER ROAD AND VAN BUREN BOULEVARD, 2560 FEET SOUTH OF VAN BUREN BOULEVARD, FEET WEST OF PLUMMER ROAD, ON THE TOP OF A 4.0 FOOT X 10.0 FOOT GRANITE BOULDER WITH A BRASS DISK FLUSH AND MARKED. ELEV. 1638.123

BUSINESS TAX CERTIFICATE # 033595 EXP. DATE 4/2/00

COUNTY OF RIVERSIDE
MS 3705
 CITY OF RIVERSIDE, CALIFORNIA
 DEPARTMENT OF PUBLIC WORKS
 APPROVED BY: R. McLaughlin
 DIRECTOR OF PUBLIC WORKS
 DATE: 7-23-99

*A5-BUILT 9-03-03 LHM

SEWER PLANS
 TR. 28628
LIFT STATION DETAILS

PROJECT NO. 31377
S-1704
 SHEET 12 OF 12
 INPEXED 5-4-2000 LHM

Plotted: 04/15/99 14:48:01 - N:\31377\000\dwg\Draw016.dwg