

# STORM DRAIN GENERAL NOTES

1. 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.
2. 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.
3. 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.
4. 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 (THIS NOTE REQUIRED ON ALL PLANS.)
5. QUANTITIES SHOWN ARE FOR INFORMATION ONLY AND THE CITY OF RIVERSIDE IS NOT RESPONSIBLE FOR THEIR ACCURACY.
6. WHEN A PORTION OF THE WORK IS TO BE DONE BY THE CITY, THE DEVELOPER AND/OR CONTRACTOR SHALL GIVE THE CITY 60-DAYS NOTICE SO THAT THE DEVELOPER'S WORK AND THE CITY'S WORK CAN BE PROPERLY COORDINATED. THE DEVELOPER SHALL PREPARE AND COMPACT THE SUBGRADE TO ELEVATIONS WITHIN  $\pm .1'$  OF THE DESIGN ELEVATIONS AND SHALL BE RESPONSIBLE FOR THE CONDITION OF THE SUBGRADE UNTIL ACCEPTED BY THE CITY. THE DEVELOPER SHALL ALSO BE RESPONSIBLE FOR ANY BARRICADING DURING THIS TIME.
7. THE DEVELOPER AND/OR CONTRACTOR SHALL CONTACT THE PUBLIC WORKS DEPARTMENT 30 DAYS PRIOR TO BEGINNING CONSTRUCTION TO NEGOTIATE THE COST OF THE CITY'S PORTION OF THE WORK.
8. 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.
9. SEE "STREET LIGHTING PLANS" FOR QUANTITY AND LOCATION OF REQUIRED STREET LIGHTS.
10. ALL FLAGGED ELEVATIONS SHALL BE STAKED IN THE FIELD BY THE PRIVATE ENGINEER.
11. WHERE NEW PAVEMENT IS TO JOIN THE EXISTING PAVEMENT, THE EDGE OF THE EXISTING PAVEMENT SHALL BE TRIMMED IN A SMOOTH AND STRAIGHT LINE. CONSTRUCT MATCH-UP PAVING AS SHOWN ON THE PLANS AND OVERLAY PAVING AS DIRECTED IN THE FIELD TO PRODUCE A SMOOTH SECTION.
12. CONSTRUCT DRIVEWAY APPROACHES PER STANDARD DRAWING 302. EXACT SIZE AND LOCATION TO BE STAKED BY THE PRIVATE ENGINEER PRIOR TO CONSTRUCTION OF THE CURB AND GUTTER.
13. THE SUBDIVIDER SHALL ARRANGE FOR A SOIL TEST TO BE MADE BY A SOILS ENGINEER AFTER THE STREETS HAVE BEEN PREPARED TO ROUGH GRADE AND PRIOR TO CURB AND GUTTER CONSTRUCTION. DEPTH OF BASE MATERIAL AND A.C. PAVING SHALL BE DETERMINED BY THE CITY OF RIVERSIDE DESIGN STANDARDS AND TEST PROCEDURES. (FOR TRACTS ONLY - SEE CHECK LIST ITEM 25 FOR OTHER PLANS.)
14. ALL OVERHANGING TREE LIMBS THAT ARE LESS THAN 14' ABOVE THE STREET GRADE SHALL BE TRIMMED BACK.
15. THE DEVELOPER IS RESPONSIBLE FOR PROVIDING ACCESS PAVING. SHOULD THE DEVELOPER AND/OR CONTRACTOR DECIDE TO INSTALL THE ACCESS PAVING PRIOR TO THE CITY COMMENCING ITS PAVING WORK, THE DEVELOPER SHALL COORDINATE HIS INSTALLATION OF ACCESS PAVING ON N/A WITH THE CITY INSPECTOR. FINAL COURSE OF PAVING IN ACCESS AREA TO BE PAID FOR BY DEVELOPER PRIOR TO THE CITY COMMENCING ITS PAVING OPERATION. DEVELOPER SHALL INSTALL TYPE F-1 FLEXIBLE DELINEATORS AT 20' INTERVALS ON OUTGOING TAPERS.
16. THE DEVELOPER AND/OR CONTRACTOR SHALL CONTACT THE STREET DIVISION (351-6127) TO PICK UP ANY EXISTING STD. 180 BARRICADES THAT ARE BEING REMOVED. THE CITY'S INSPECTOR WILL MAKE THE FINAL DETERMINATION ON WHETHER A BARRICADE CAN BE RELOCATED.
17. OR ALL SPECIAL WALLS, I.E. "BACK-UP WALLS", FLOODING PROTECTION WALLS, WALLS WITHIN CITY RIGHT OF WAY, ETC., THE FOLLOWING NOTE WILL BE REQUIRED:  
CONSTRUCT BLOCK WALL PER RIVERSIDE CITY STANDARD 704 OR APPROVED DESIGNS (SEE PLAN FOR HEIGHT(S)).  
TYPE/COLOR OF BLOCK N/A MORTAR COLOR N/A OTHER N/A  
SIZE N/A TYPE/COLOR CAP N/A  
THIS WALL REQUIRES A PERMIT AND INSPECTION FROM THE PUBLIC WORKS ENGINEERING DIVISION.
18. ON ALL AREAS WITHIN PUBLIC RIGHT OF WAY WHERE THE FILL IS ONE (1) FOOT OR GREATER, A LETTER WILL BE REQUIRED FROM THE SOILS ENGINEER, CERTIFYING THE COMPACTION OF THE FILL BELOW SUBGRADE, PRIOR TO ISSUANCE OF THE CONSTRUCTION PERMIT/CUT SHEETS.
19. STREET OPENING PERMIT FOR CONSTRUCTION AND/OR MODIFICATION OF TRAFFIC SIGNAL FACILITIES IS REQUIRED.
20. ALL TRAFFIC SIGNS SHALL BE INSTALLED PRIOR TO OPENING THE STREETS TO TRAFFIC.
21. SEE TRAFFIC SIGNAL PLAN X-N/A FOR TRAFFIC SIGNAL FACILITIES AND STRIPING.
22. ANY TRAFFIC CONTROL STRIPING OBLITERATED AND/OR BADLY WORN DURING CONSTRUCTION SHALL BE RESTORED BY THE CONTRACTOR WITHIN FIVE DAYS AFTER NOTIFICATION FROM THE CITY INSPECTORS.
23. STREET IMPROVEMENT WORK THAT WILL CAUSE DAMAGE TO THE DETECTOR LOOP(S) SHALL NOT BE PERFORMED UNTIL TRAFFIC SIGNAL MAINTENANCE PERSONNEL HAVE BEEN NOTIFIED AND THE NECESSARY TIMING ADJUSTMENTS ARE MADE TO MAINTAIN SIGNAL OPERATION.
24. FINAL STRIPING FOR TRAFFIC CONTROL AND/OR PAVEMENT MARKING TO BE THE RESPONSIBILITY OF THE DEVELOPER.
25. THE CONTRACTOR SHALL CALL IN A LOCATION REQUEST TO UNDERGROUND SERVICE ALERT (USA), PHONE # 1-800-227-2800, 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.
26. CONTRACTOR IS TO VERIFY EXISTING SEWER ELEVATION PRIOR TO CONSTRUCTION.
27. LOCATION OF LATERALS TO BE DETERMINED IN THE FIELD AT THE DIRECTION OF THE OWNER. AVOID CONFLICT WITH PROPOSED AND/OR EXISTING FACILITIES.
28. 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.
29. 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.
30. THE SEWER CONTRACTOR SHALL ADJUST MANHOLES TO FINAL GRADE AFTER PAVING IS COMPLETED.
31. PIPES JOINTS FOR VITRIFIED CLAY PIPE SHALL BE TYPE "G" AS SPECIFIED IN SECTION 208-2.3 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS PROJECTS. IF PLASTIC PIPE IS ALLOWED AS AN ALTERNATIVE, ALL PIPE JOINTS SHALL BE GASKETED. CEMENTED JOINTS SHALL NOT BE ALLOWED.
32. THE DEVELOPER AND/OR CONTRACTOR IS RESPONSIBLE FOR PERFORMING A VIDEO INSPECTION OF ALL NEW SEWER AND STORM DRAIN FACILITIES TO BE PUBLICLY OWNED AND MAINTAINED PRIOR TO FINAL ACCEPTANCE OF THE WORK. THE VIDEO INSPECTION MUST BE PERFORMED IN THE PRESENCE OF THE PUBLIC WORKS INSPECTOR. A RECORDING OF THE VIDEO INSPECTION MUST BE SUBMITTED TO THE CITY FOR REVIEW AND ACCEPTANCE.
33. DEVELOPER AND/OR CONTRACTOR TO GIVE RCFC 5-DAYS WRITTEN NOTICE PRIOR TO STARTING WORK ON STORM DRAIN (OR DOING ANY WORK WITHIN RCFC EASEMENTS). RCFC ENCROACHMENT PERMIT NO. N/A CONTACT (951) 955-1210.
34. BEFORE THE RIP-RAP AT THE OUTLET OF ANY DRAINAGE STRUCTURE IS ACCEPTED BY THE CITY, IT SHALL BE TESTED UNDER FLOWS AS CLOSE AS POSSIBLE TO DESIGN CONDITIONS WITH WATER OBTAINED FROM FIRE HYDRANTS IN THE IMMEDIATE AREA.
35. IN PAVEMENT OVERLAY AREAS, ANY DISTRESSED EXISTING PAVEMENT SHALL BE REMOVED AND REPLACED AS DIRECTED BY THE INSPECTOR PRIOR TO OVERLAYING WITH A.C. PAVING.
36. THE CONTRACTOR SHALL COORDINATE TRENCHING FOR CABLE TELEVISION WITH OTHER TRENCHING WITHIN THE SUBDIVISION.

# STORM DRAIN IMPROVEMENT PLANS

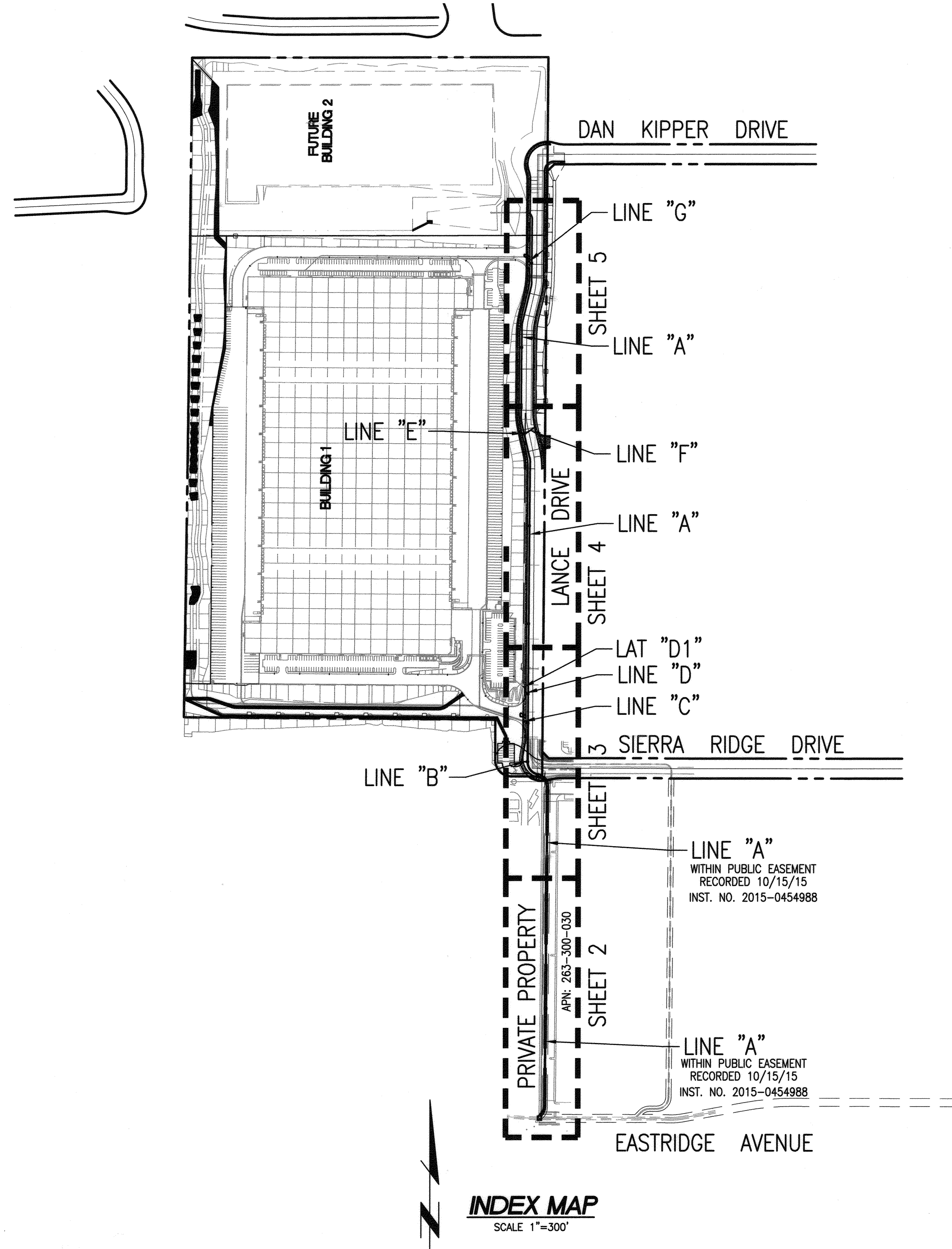
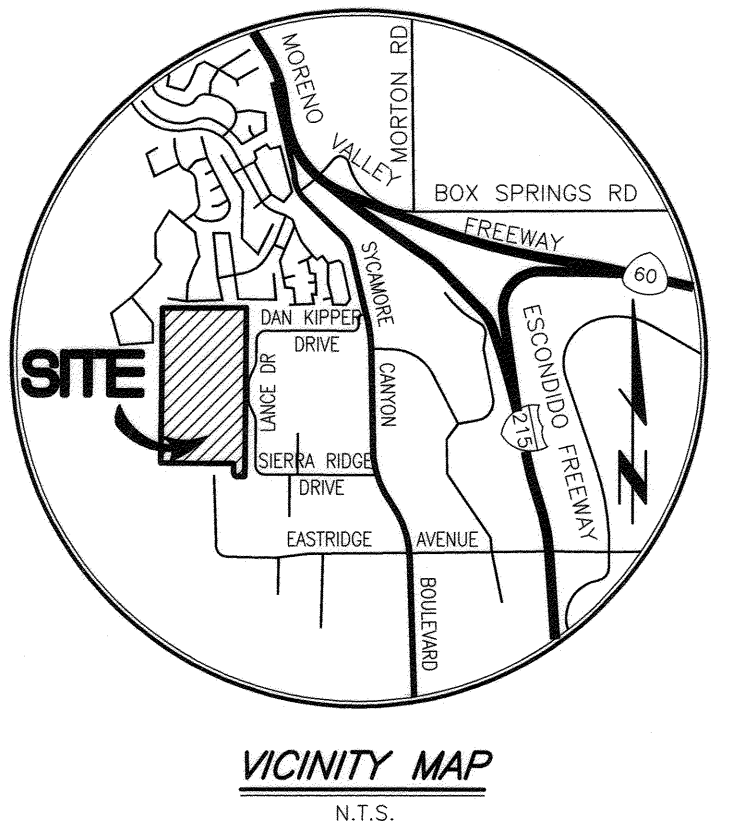
## FOR

## SYCAMORE CANYON-BUILDING 1

## PARCEL MAP NO. 36879

## LANCE DRIVE

## RIVERSIDE, CA



### SHEET INDEX

TITLE SHEET	SHEET 1
PLAN AND PROFILE LINE "A" STA. 10+00 TO 19+00	SHEET 2
PLAN AND PROFILE LINE "A" STA. 19+00 TO 28+00	SHEET 3
LINE "B", LINE "C", LINE "D", LATERAL "D1"	
PLAN AND PROFILE LINE "A" STA. 28+00 TO 37+00	SHEET 4
LINE "E", LINE "F"	
PLAN AND PROFILE LINE "A" STA. 37+00 TO 44+37.72	SHEET 5
LINE "G"	
DETAILS	SHEET 6
DETAILS	SHEET 7
DETAILS	SHEET 8

### STORM DRAIN CONSTRUCTION NOTES:

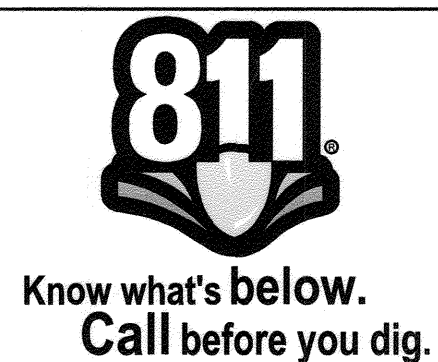
1. CONSTRUCT STORM DRAIN MANHOLE PER S.P.P.W.C. STD. PLAN No. 324-2. SEE SHEET 8. — 5 EA
2. CONSTRUCT STORM DRAIN MANHOLE PER S.P.P.W.C. STD. PLAN No. 321-2. SEE SHEET 8. — 2 EA
3. CONSTRUCT STORM DRAIN MANHOLE PER S.P.P.W.C. STD. PLAN No. 322-2. SEE SHEET 8. — 3 EA
4. CONSTRUCT CATCH BASIN PER S.P.P.W.C. STD. PLAN No. 300-3, "V" AND "W" PER PLAN, — 3 EA WITH LOCAL DEPRESSION PER S.P.P.W.C. STD. PLAN No. 313-3 CASE "E". SEE SHEET 7.
5. CONSTRUCT MONOLITHIC CONNECTION PER S.P.P.W.C. STD. PLAN No. 308-2. SEE SHEET 7. — 3 EA
6. CONSTRUCT JUNCTION STRUCTURE PER S.P.P.W.C. STD. PLAN No. 331-3. SEE SHEET 7. — 2 EA
7. BRICK AND MORTAR END OF PIPE PER DETAIL ON SHEET 6. — 6 EA
8. CONSTRUCT BIOCLEAN CURB INLET FILTER, MODEL No. BC-CURB-FC PER DETAIL ON SHEET 6. — 3 EA
9. PROVIDE STENCIL FOR CATCH BASIN PER DETAIL ON SHEET 6. — 3 EA
10. CONSTRUCT 18" R.C.P. D-LOAD PER PLAN, WITH CASE 1 BEDDING PER CITY STD. No. 452. — 110 LF
11. CONSTRUCT 24" R.C.P. D-LOAD PER PLAN, WITH CASE 1 BEDDING PER CITY STD. No. 452. — 6 LF
12. CONSTRUCT 30" R.C.P. D-LOAD PER PLAN, WITH CASE 1 BEDDING PER CITY STD. No. 452. — 833 LF
13. CONSTRUCT 36" R.C.P. D-LOAD PER PLAN, WITH CASE 1 BEDDING PER CITY STD. No. 452. — 1058 LF
14. CONSTRUCT 48" R.C.P. D-LOAD PER PLAN, WITH CASE 1 BEDDING PER CITY STD. No. 452. — 16 LF
15. CONSTRUCT 60" R.C.P. D-LOAD PER PLAN, WITH CASE 1 BEDDING PER CITY STD. No. 452. — 1486 LF
16. REMOVE EXISTING CATCH BASIN. — 1 EA
17. REMOVE EXISTING 24" STORM DRAIN. — 20 LF
18. SAWCUT AND REMOVE EXISTING ASPHALT PAVEMENT. REPLACE WITH — 11,800 SF ASPHALT AND AGGREGATE BASE SECTION IN KIND.

### ADDITIONAL NOTES:

- \*\* ALL BIOCLEAN CURB INLET FILTERS IN THE PUBLIC RIGHT OF WAY SHALL BE MAINTAINED BY THE PROPERTY OWNER

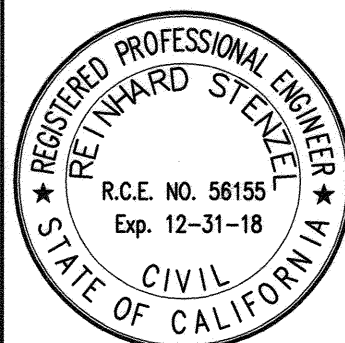
REVIEWED BY:  
WESTERN MUNICIPAL WATER DISTRICT  
FOR NON-INTERFERENCE COMPLIANCE  
SHEET 1 THROUGH 8  
  
APPROVED Debra Kanawala 05-30-2018 DATE

CITY OF RIVERSIDE - ELECTRICAL DEPARTMENT  
APPROVED [Signature] 5/17/18 DATE  
  
CITY OF RIVERSIDE - WATER DEPARTMENT  
APPROVED [Signature] 5/16/18 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 THE DESIGN AND 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.



PREPARED UNDER THE DIRECTION OF:  
[Signature] 5/14/18  
REINHARD STENZEL  
R.C.E. 056155 - EXP. 12/31/18

**Thienes Engineering, Inc.**  
CIVIL ENGINEERING • LAND SURVEYING  
14348 FIRESTONE BOULEVARD  
LA MIRADA, CALIFORNIA 90638  
PH (714) 521-4811 FAX (714) 521-4173  
  
CITY OF RIVERSIDE BENCHMARK NO. "21-A3"  
P.K. NAIL AND CITY ENGINEER TAG IN THE BASE OF A STREET LIGHT POLE ALONG THE NORTHERLY CURB OF EASTRIDGE AVENUE, 82 FEET WESTERLY OF BOX SPRINGS BOULEVARD.  
  
ELEVATION = 1534.311' (NGVD '29 / 1971 ADJ.)

1" = 40'  
DATE NOVEMBER, 2017

INDEX MAP  
SCALE 1"=300'

DESIGNED BY RH DRAWN BY RH CHECKED BY RS

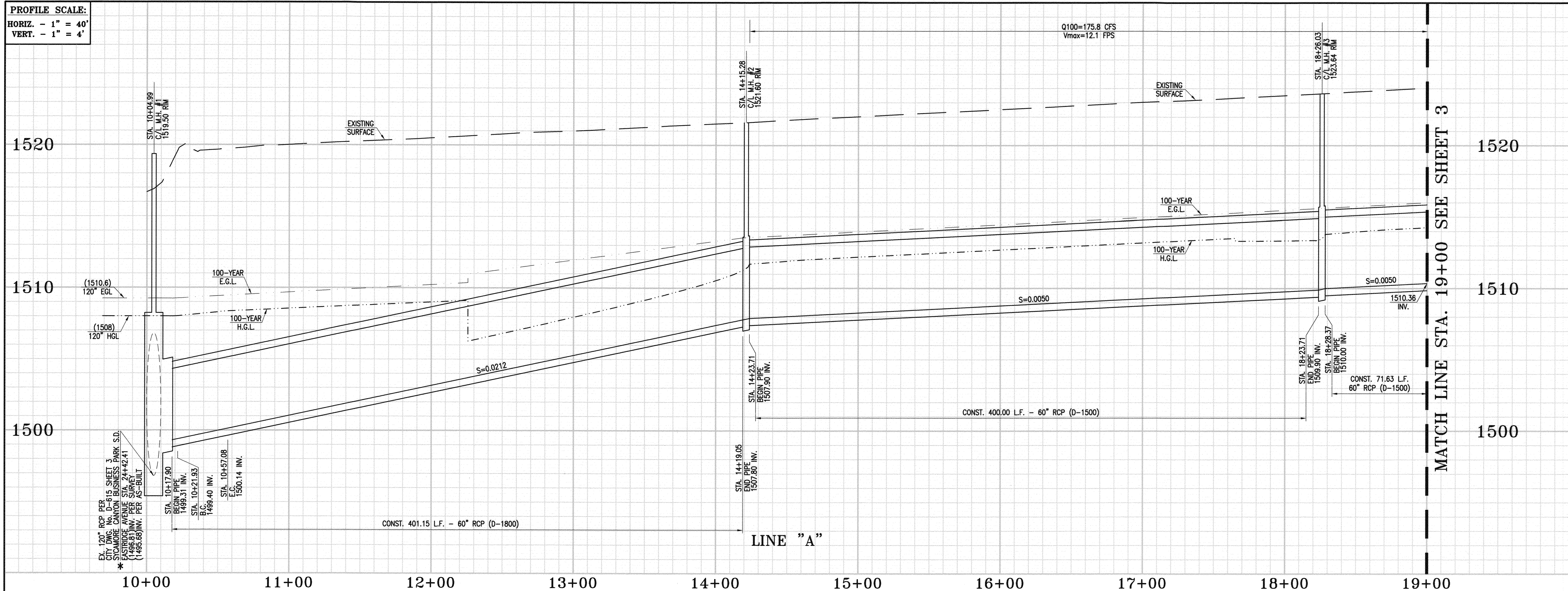
CITY OF RIVERSIDE, CALIFORNIA  
DEPARTMENT OF PUBLIC WORKS  
  
APPROVED BY \_\_\_\_\_ BY \_\_\_\_\_ DATE \_\_\_\_\_  
ENGINEERING MANAGER  
TRAFFIC DIVISION  
CONST MGMT  
  
CITY ENGINEER  
DATE 06/12/2018

**STORM DRAIN IMPROVEMENTS**  
**TITLE SHEET**  
**PM 36879**

HORIZONTAL SCALE: 1" = 40' VERTICAL SCALE: 1" = 4'

PROJ. NO. PW 17-0882  
**D-897**  
SHEET 1 OF 8



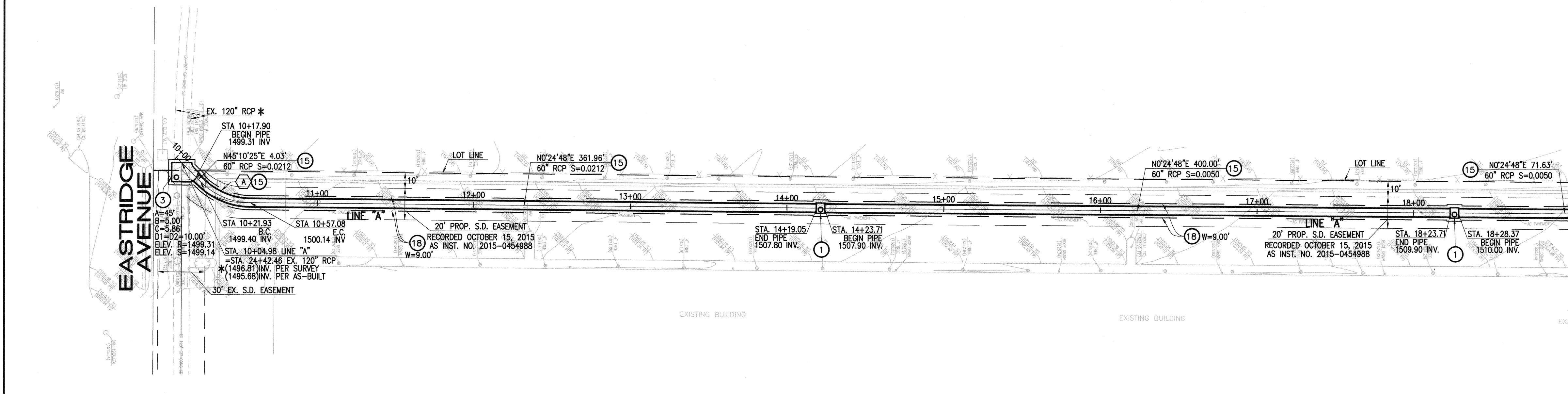


MATCH LINE STA. 19+00 SEE SHEET 3

**STORM DRAIN CONSTRUCTION NOTES:**

1. CONSTRUCT STORM DRAIN MANHOLE PER S.P.P.W.C. STD. PLAN No. 322-2. SEE SHEET 6.
2. CONSTRUCT STORM DRAIN MANHOLE PER S.P.P.W.C. STD. PLAN No. 322-2. SEE SHEET 8.
3. CONSTRUCT 60" R.C.P. D-LOAD PER PLAN, WITH CASE 1 BEDDING PER CITY STD. No. 452.
4. SAWCUT AND REMOVE EXISTING ASPHALT PAVEMENT. REPLACE WITH ASPHALT AND AGGREGATE BASE SECTION IN KIND.

MATCH LINE STA. 19+00 SEE SHEET 3

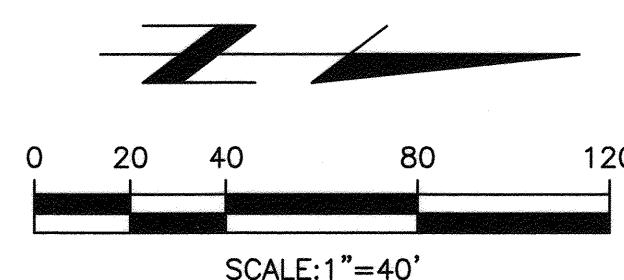


REVIEWED BY:  
WESTERN MUNICIPAL WATER DISTRICT  
FOR NON-INTERFERENCE COMPLIANCE  
SHEET 1 THROUGH 8

APPROVED  
DATE: 05-30-2018

CITY OF RIVERSIDE - ELECTRICAL DEPARTMENT  
APPROVED: [Signature] DATE: 5/17/18  
CITY OF RIVERSIDE - WATER DEPARTMENT  
APPROVED: [Signature] DATE: 5/16/18

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.



STORM DRAIN CURVE DATA				
INDEX	DELTA	RADIUS	TANGENT	LENGTH
A	44°45'37"	45.00'	18.53'	35.15'

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.

REGISTERED PROFESSIONAL ENGINEER  
REINHARD STENZEL  
R.C.E. NO. 56155  
Exp. 12-31-18  
STATE OF CALIFORNIA

PREPARED UNDER THE DIRECTION OF:  
[Signature]  
REINHARD STENZEL  
R.C.E. 056155 - EXP. 12/31/18  
DATE: 5/14/18

Thienes Engineering, Inc.  
CIVIL ENGINEERING • LAND SURVEYING  
14349 FIRESTONE BOULEVARD  
LA MIRADA, CALIFORNIA 90638  
PH (714) 521-4811 FAX (714) 521-4173

CITY OF RIVERSIDE BENCHMARK NO. "21-A3"  
P.K. NAIL AND CITY ENGINEER TAG IN THE BASE OF A STREET LIGHT POLE ALONG THE NORTHERLY CURB OF EASTRIDGE AVENUE, 82 FEET WESTERLY OF BOX SPRINGS BOULEVARD.  
ELEVATION = 1534.311' (NGVD '29 / 1971 ADJ.)

CITY OF RIVERSIDE, CALIFORNIA  
DEPARTMENT OF PUBLIC WORKS

APPROVED BY	BY	DATE	APPROVED BY
ENGINEERING MANAGER	[Signature]	6-4-18	[Signature]
TRAFFIC DIVISION			
CONST. MGMT			

DESIGNED BY: RH DRAWN BY: RH CHECKED BY: RS

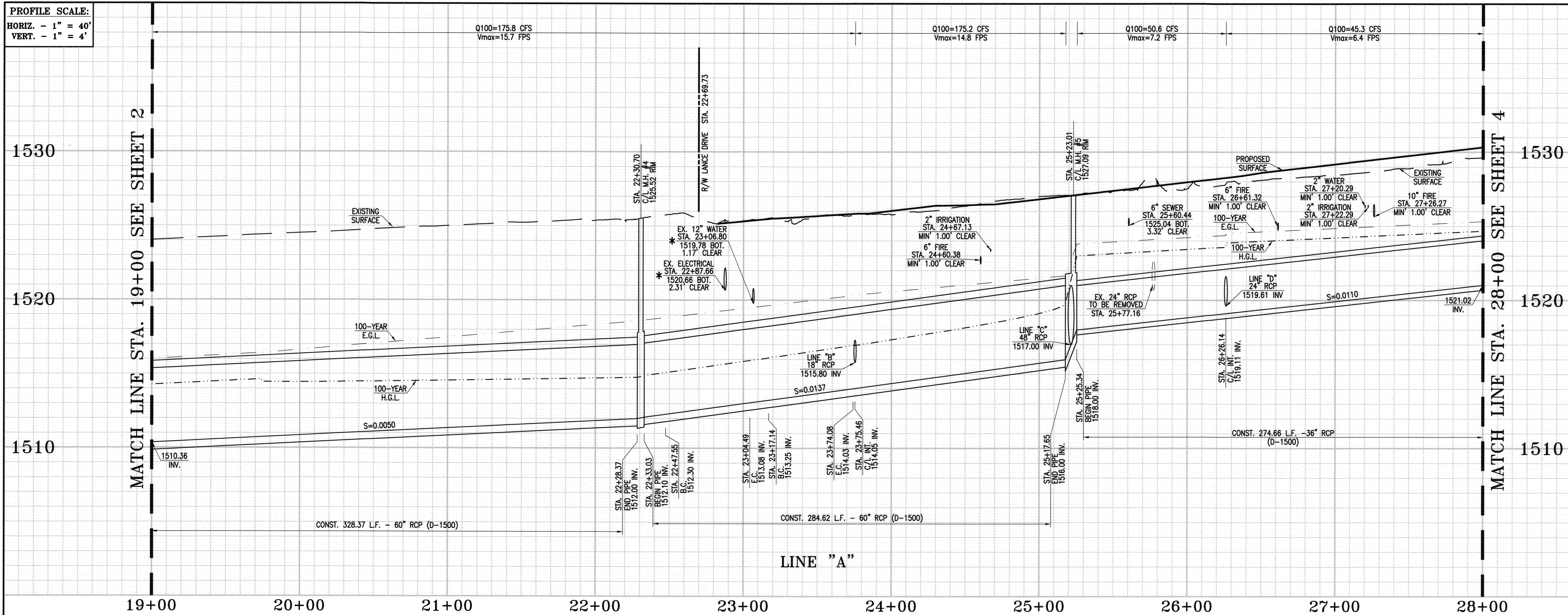
**STORM DRAIN IMPROVEMENTS**  
**STORM DRAIN PLAN AND PROFILE**  
**STA. 10+00.00 TO STA. 19+00.00**  
**PM 36879**

HORIZONTAL SCALE: 1" = 40' VERTICAL SCALE: 1" = 4'

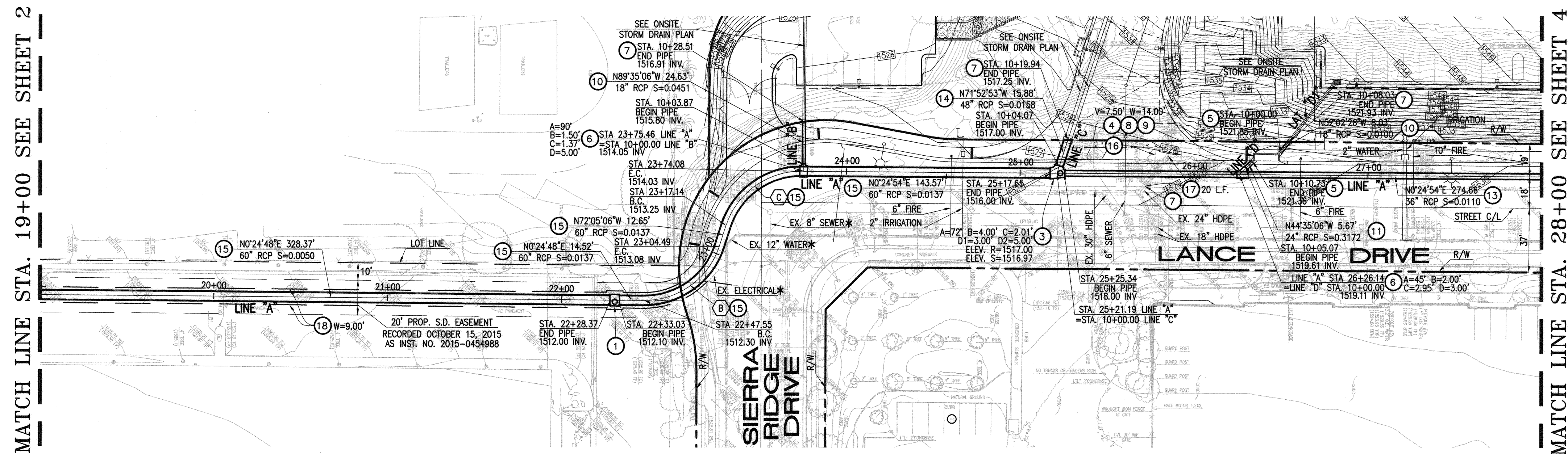
PROJ. NO. PW 17-0882  
**D-897**  
SHEET 2 OF 8



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



\* CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION.



**STORM DRAIN CONSTRUCTION NOTES:**

1. CONSTRUCT STORM DRAIN MANHOLE PER S.P.P.W.C. STD. PLAN No. 322-2. SEE SHEET 8.
2. CONSTRUCT STORM DRAIN MANHOLE PER S.P.P.W.C. STD. PLAN No. 322-2. SEE SHEET 8.
3. CONSTRUCT CATCH BASIN PER S.P.P.W.C. STD. PLAN No. 300-3. "V" AND "W" PER PLAN, WITH LOCAL DEPRESSION PER S.P.P.W.C. STD. PLAN No. 313-3 CASE "E". SEE SHEET 7.
4. CONSTRUCT MONOLITHIC CONNECTION PER S.P.P.W.C. STD. PLAN No. 308-2. SEE SHEET 7.
5. CONSTRUCT JUNCTION STRUCTURE PER S.P.P.W.C. STD. PLAN No. 331-3. SEE SHEET 7.
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13. CONSTRUCT 60" R.C.P. D-LOAD PER PLAN, WITH CASE 1 BEDDING PER CITY STD. No. 452.
14. REMOVE EXISTING CATCH BASIN.
15. REMOVE EXISTING 24" STORM DRAIN.
16. SAWCUT AND REMOVE EXISTING ASPHALT PAVEMENT. REPLACE WITH ASPHALT AND AGGREGATE BASE SECTION IN KIND.

STORM DRAIN CURVE DATA				
INDEX	DELTA	RADIUS	TANGENT	LENGTH
B	72°29'54"	45.00'	32.99'	56.94'
C	72°30'00"	45.00'	33.00'	56.94'

REVIEWED BY:  
WESTERN MUNICIPAL WATER DISTRICT  
FOR NON-INTERFERENCE COMPLIANCE  
SHEET 1 THROUGH 8

APPROVED: *Dan K...* DATE: 05-30-2018


CITY OF RIVERSIDE - ELECTRICAL DEPARTMENT

APPROVED: *...* DATE: 5/17/18

CITY OF RIVERSIDE - WATER DEPARTMENT

APPROVED: *...* DATE: 5/16/18

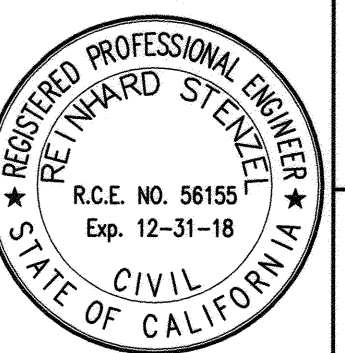
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Know what's below.  
Call before you dig.

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, 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  
REINHARD STENZEL  
R.C.E. No. 56155  
Exp. 12-31-18  
STATE OF CALIFORNIA

PREPARED UNDER THE DIRECTION OF:

*Reinhard Stenzel* 5/14/18  
REINHARD STENZEL  
R.C.E. 056155 - EXP. 12/31/18

1" = 40'

DATE: NOVEMBER, 2017

ELEVATION = 1534.311' (NGVD '29 / 1971 ADA)

Thienes Engineering, Inc.

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14349 FIRESTONE BOULEVARD  
LA MIRADA, CALIFORNIA 90638  
PH: (714) 521-4811 FAX: (714) 521-4173

CITY OF RIVERSIDE BENCHMARK NO. 71-43"  
P.K. NAIL AND CITY ENGINEER TAG IN THE BASE OF A STREET LIGHT POLE ALONG THE NORTHERLY CURB OF EASTRIDGE AVENUE, 82 FEET WESTERLY OF BOX SPRINGS BOULEVARD.

MARK

REVISIONS

APPR. DATE

DESIGNED BY: RH DRAWN BY: RH CHECKED BY: RS

CITY OF RIVERSIDE, CALIFORNIA  
DEPARTMENT OF PUBLIC WORKS

APPROVED BY: *...* BY: *...* DATE: 06-12-2018

ENGINEERING MANAGER  
TRAFFIC DIVISION  
CONST MGMT

**STORM DRAIN IMPROVEMENTS**  
**STORM DRAIN PLAN AND PROFILE**  
**STA. 19+00.00 TO STA. 28+00.00**  
**PM 36879**

HORIZONTAL SCALE: 1" = 40' VERTICAL SCALE: 1" = 4'

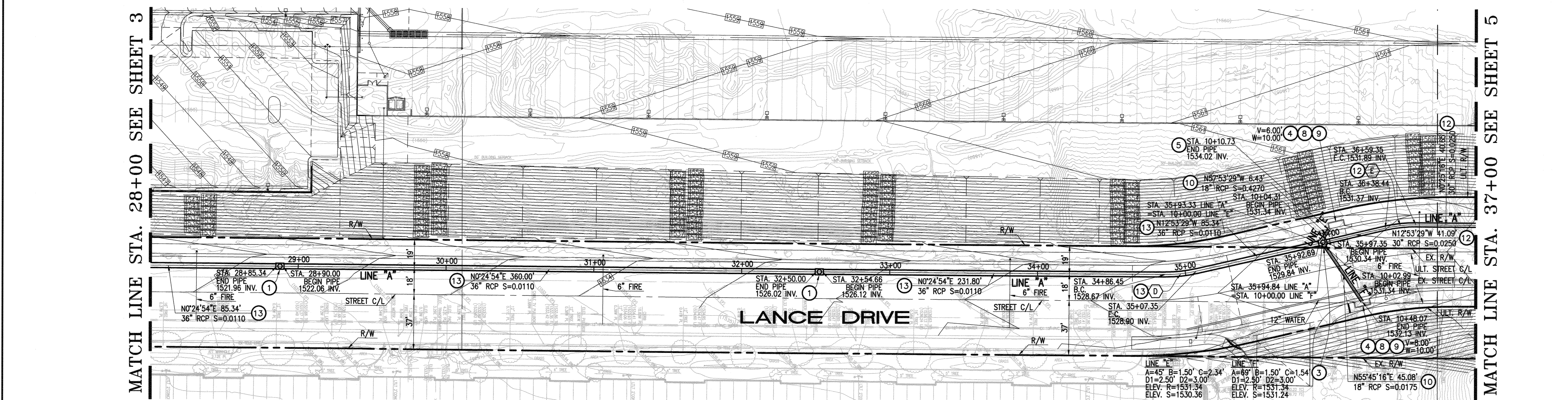
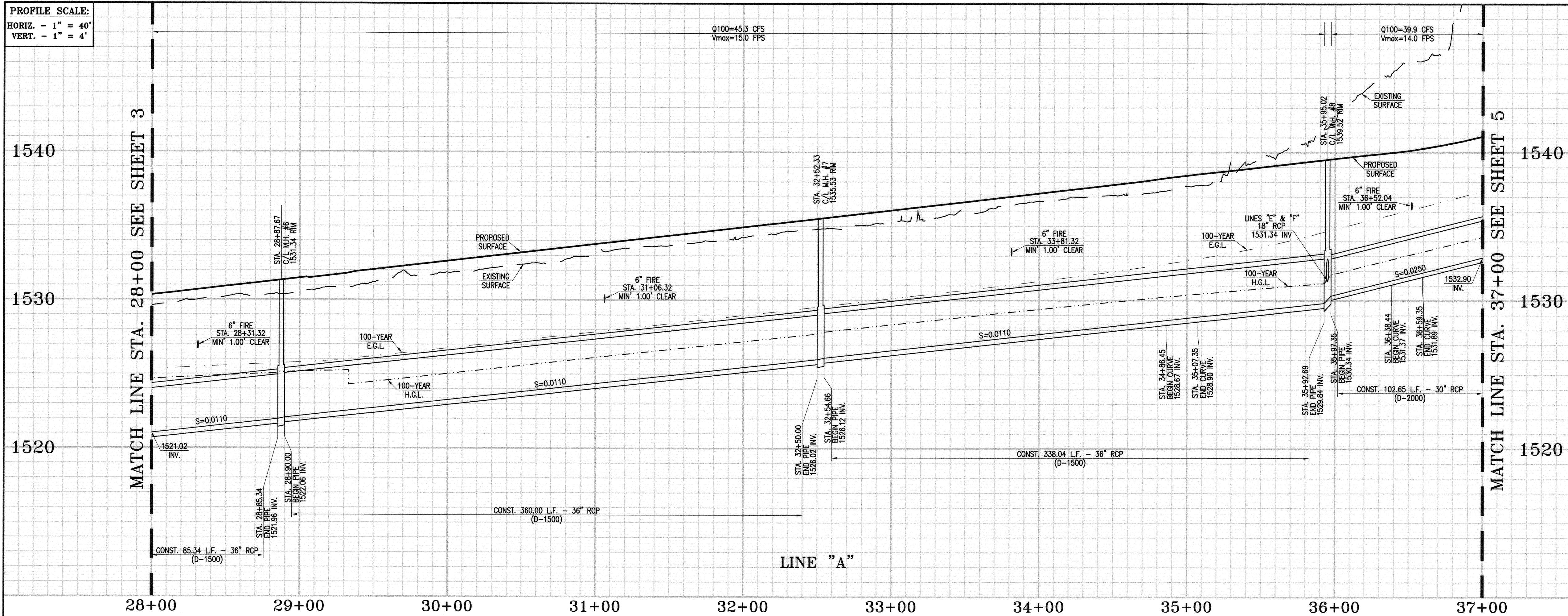
PROJ. NO. PW 17-0882

**D-897**

SHEET 3 OF 8



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



**STORM DRAIN CONSTRUCTION NOTES:**

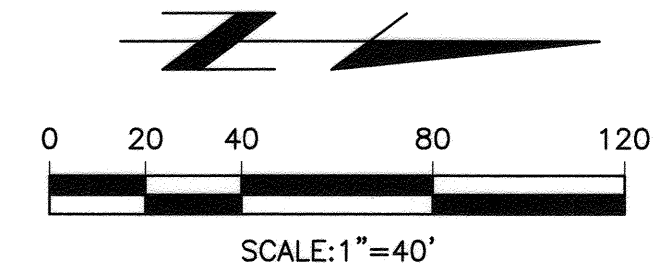
1. CONSTRUCT STORM DRAIN MANHOLE PER S.P.P.W.C. STD. PLAN No. 322-2. SEE SHEET 8.
2. CONSTRUCT STORM DRAIN MANHOLE PER S.P.P.W.C. STD. PLAN No. 322-2. SEE SHEET 8.
3. CONSTRUCT CATCH BASIN PER S.P.P.W.C. STD. PLAN No. 300-3, "V" AND "W" PER PLAN, WITH LOCAL DEPRESSION PER S.P.P.W.C. STD. PLAN No. 313-3 CASE "E". SEE SHEET 7.
4. CONSTRUCT MONOLITHIC CONNECTION PER S.P.P.W.C. STD. PLAN No. 308-2. SEE SHEET 7.
5. CONSTRUCT BIOCLEAN CURB INLET FILTER, MODEL No. BC-CURB-FC PER DETAIL ON SHEET 6.
6. PROVIDE STENCIL FOR CATCH BASIN PER DETAIL ON SHEET 6.
7. CONSTRUCT 18" R.C.P. D-LOAD PER PLAN, WITH CASE 1 BEDDING PER CITY STD. No. 452.
8. CONSTRUCT 30" R.C.P. D-LOAD PER PLAN, WITH CASE 1 BEDDING PER CITY STD. No. 452.
9. CONSTRUCT 36" R.C.P. D-LOAD PER PLAN, WITH CASE 1 BEDDING PER CITY STD. No. 452.

REVIEWED BY:  
WESTERN MUNICIPAL WATER DISTRICT  
FOR NON-INTERFERENCE COMPLIANCE  
SHEET 1 THROUGH 8  
  
APPROVED: *Don K...* 05-30-2018  
DATE

CITY OF RIVERSIDE - ELECTRICAL DEPARTMENT  
  
APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_  
  
CITY OF RIVERSIDE - WATER DEPARTMENT  
  
APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

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.

STORM DRAIN CURVE DATA				
INDEX	DELTA	RADIUS	TANGENT	LENGTH
D	13°18'22"	90.00'	10.50'	20.90'
E	13°18'45"	90.00'	10.50'	20.91'



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 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.

REINHARD STENZEL  
REGISTERED PROFESSIONAL ENGINEER  
R.C.E. NO. 56155  
Exp. 12-31-18  
CIVIL  
STATE OF CALIFORNIA

PREPARED UNDER THE DIRECTION OF:  
*Reinhard Stenzel* 5/14/18  
REINHARD STENZEL  
R.C.E. 056155 - EXP. 12/31/18

**Thienes Engineering, Inc.**  
CIVIL ENGINEERING • LAND SURVEYING  
14349 FIRESTONE BOULEVARD  
LA MIRADA, CALIFORNIA 90638  
PH: (714) 521-4811 FAX: (714) 521-4173

CITY OF RIVERSIDE BENCHMARK NO. 71-A3\*  
P.K. NAIL AND CITY ENGINEER TAG IN THE BASE OF A STREET LIGHT POLE ALONG THE NORTHERLY CURB OF EASTRIDGE AVENUE, 82 FEET WESTERLY OF BOX SPRINGS BOULEVARD.

ELEVATION = 1534.311' (NVD '29 / 1971 ADA)

MARK	REVISIONS	APPR.	DATE

DESIGNED BY RH DRAWN BY RH CHECKED BY RS

CITY OF RIVERSIDE, CALIFORNIA  
DEPARTMENT OF PUBLIC WORKS

APPROVED BY	BY	DATE	APPROVED BY
ENGINEERING MANAGER			
TRAFFIC DIVISION			
CONST MGMT			

DATE: 06/12/2018

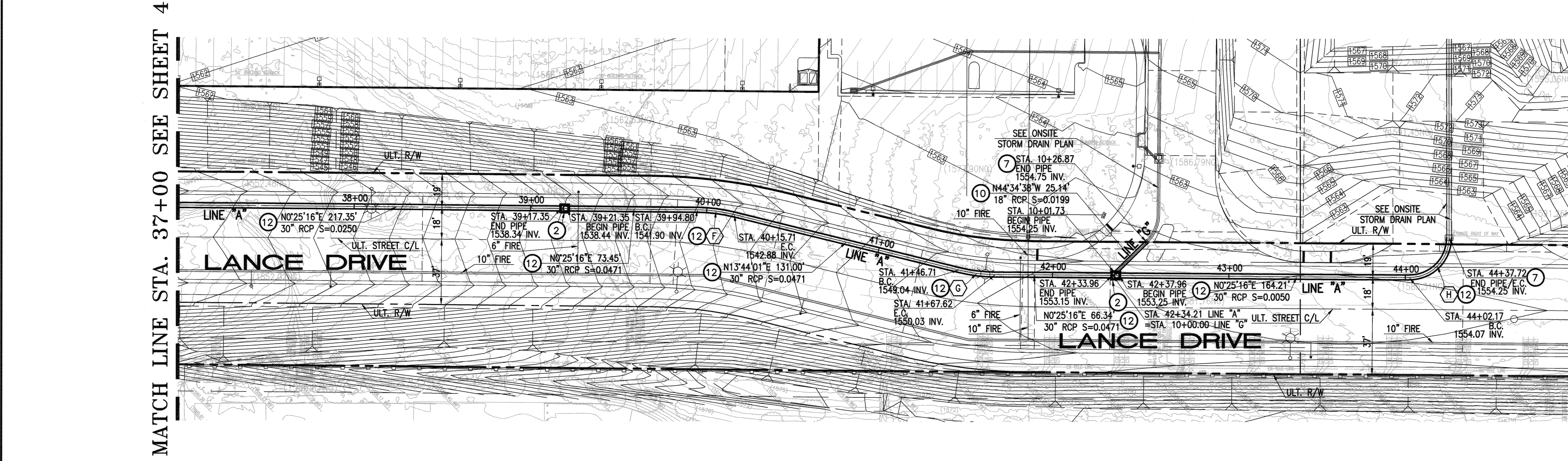
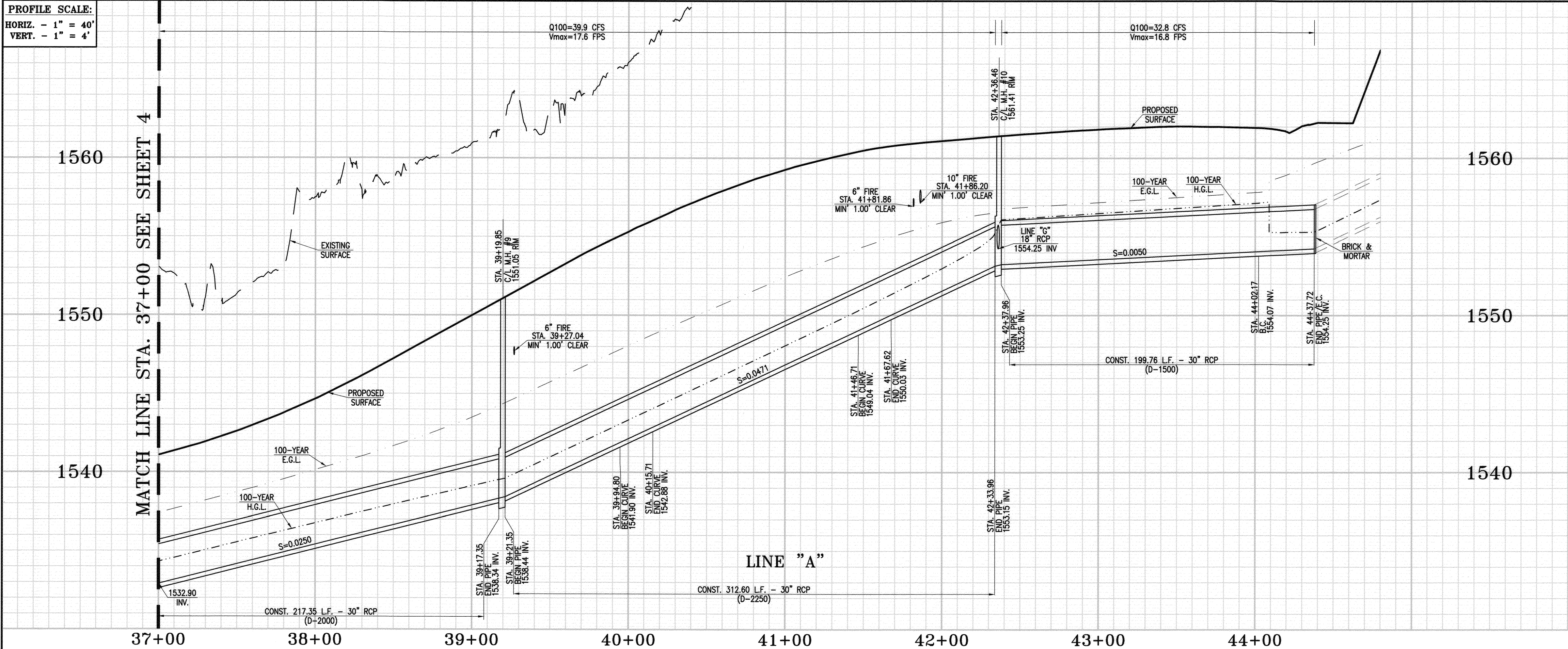
**STORM DRAIN IMPROVEMENTS**  
**STORM DRAIN PLAN AND PROFILE**  
**STA. 28+00.00 TO STA. 37+00.00**  
**PM 36879**

HORIZONTAL SCALE: 1" = 40' VERTICAL SCALE: 1" = 4'

PROJ. NO. PW 17-0882  
**D-897**  
SHEET 4 OF 8

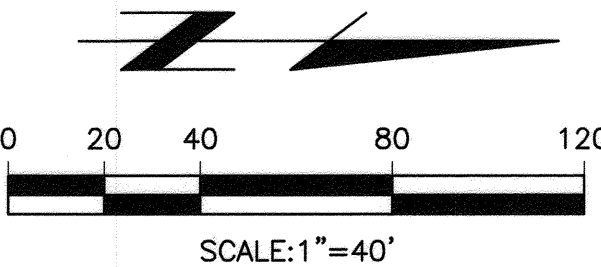


PROFILE SCALE:  
HORIZ. - 1" = 40'  
VERT. - 1" = 4'



- STORM DRAIN CONSTRUCTION NOTES:**
- 2. CONSTRUCT STORM DRAIN MANHOLE PER S.P.P.W.C. STD. PLAN No. 321-2. SEE SHEET 8.
  - 7. BRICK AND MORTAR END OF PIPE PER DETAIL ON SHEET 6.
  - 10. CONSTRUCT 18" R.C.P. D-LOAD PER PLAN, WITH CASE 1 BEDDING PER CITY STD. No. 452.
  - 12. CONSTRUCT 30" R.C.P. D-LOAD PER PLAN, WITH CASE 1 BEDDING PER CITY STD. No. 452.

STORM DRAIN CURVE DATA				
INDEX	DELTA	RADIUS	TANGENT	LENGTH
F	13°18'45"	90.00'	10.50'	20.91'
G	13°18'45"	90.00'	10.50'	20.91'
H	90°31'19"	22.50'	22.71'	35.55'



REVIEWED BY:  
WESTERN MUNICIPAL WATER DISTRICT  
FOR NON-INTERFERENCE COMPLIANCE  
SHEET 1 THROUGH 8

*Dan K...* 05-30-2018  
APPROVED DATE

CITY OF RIVERSIDE - ELECTRICAL DEPARTMENT

*Summer...* 5/12/18  
APPROVED DATE

CITY OF RIVERSIDE - WATER DEPARTMENT

*Chris...* 5/16/18  
APPROVED DATE

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

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.

PREPARED UNDER THE DIRECTION OF:

*Reinhard Stenzel* 5/14/18  
REINHARD STENZEL  
R.C.E. 056155 - EXP. 12/31/18

Thienes Engineering, Inc.  
CIVIL ENGINEERING • LAND SURVEYING  
14348 FIRESTONE BOULEVARD  
LA MIRADA, CALIFORNIA 90638  
PH: (714) 521-4811 FAX: (714) 521-4173

CITY OF RIVERSIDE BENCHMARK NO. "21-A3"  
P.K. NAIL AND CITY ENGINEER TAG IN THE BASE OF A STREET LIGHT POLE ALONG THE NORTHERLY CURB OF EASTRIDGE AVENUE, 82 FEET WESTERLY OF BOX SPRINGS BOULEVARD.  
ELEVATION = 1534.311' (NGVD '29 / 1971 ADJ.)

MARK	REVISIONS	APPR.	DATE

DESIGNED BY RH DRAWN BY RH CHECKED BY RS

CITY OF RIVERSIDE, CALIFORNIA  
DEPARTMENT OF PUBLIC WORKS

APPROVED BY	BY	DATE	APPROVED BY
ENGINEERING MANAGER	<i>[Signature]</i>	6-14-18	<i>[Signature]</i>
TRAFFIC DIVISION			
CONST MGMT			

CITY ENGINEER  
DATE 06/12/2018

**STORM DRAIN IMPROVEMENTS**  
**STORM DRAIN PLAN AND PROFILE**  
**STA. 37+00.00 TO STA. 44+37.72**  
**PM 36879**

HORIZONTAL SCALE: 1" = 40' VERTICAL SCALE: 1" = 4'

PROJ. NO. PW 17-0882

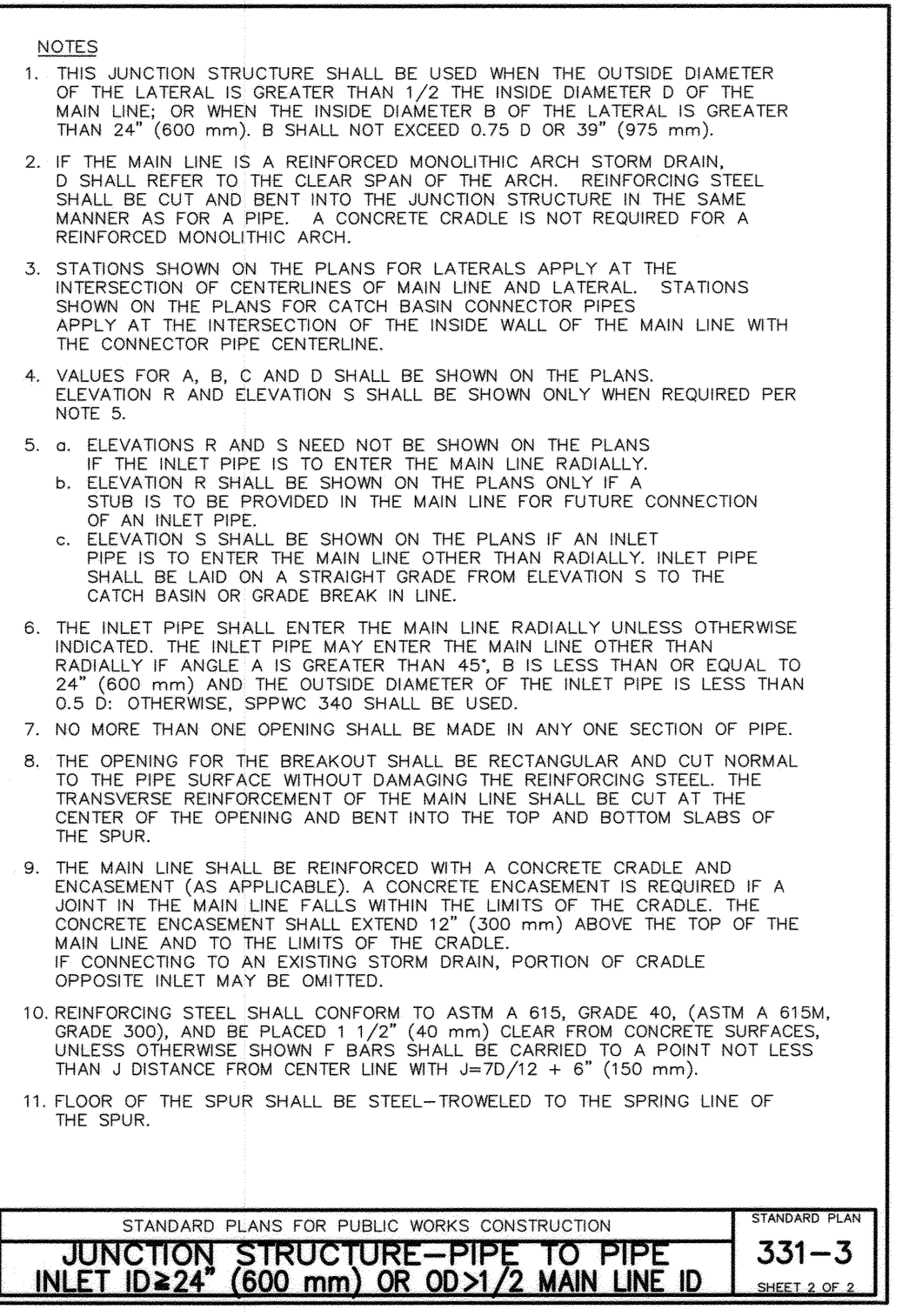
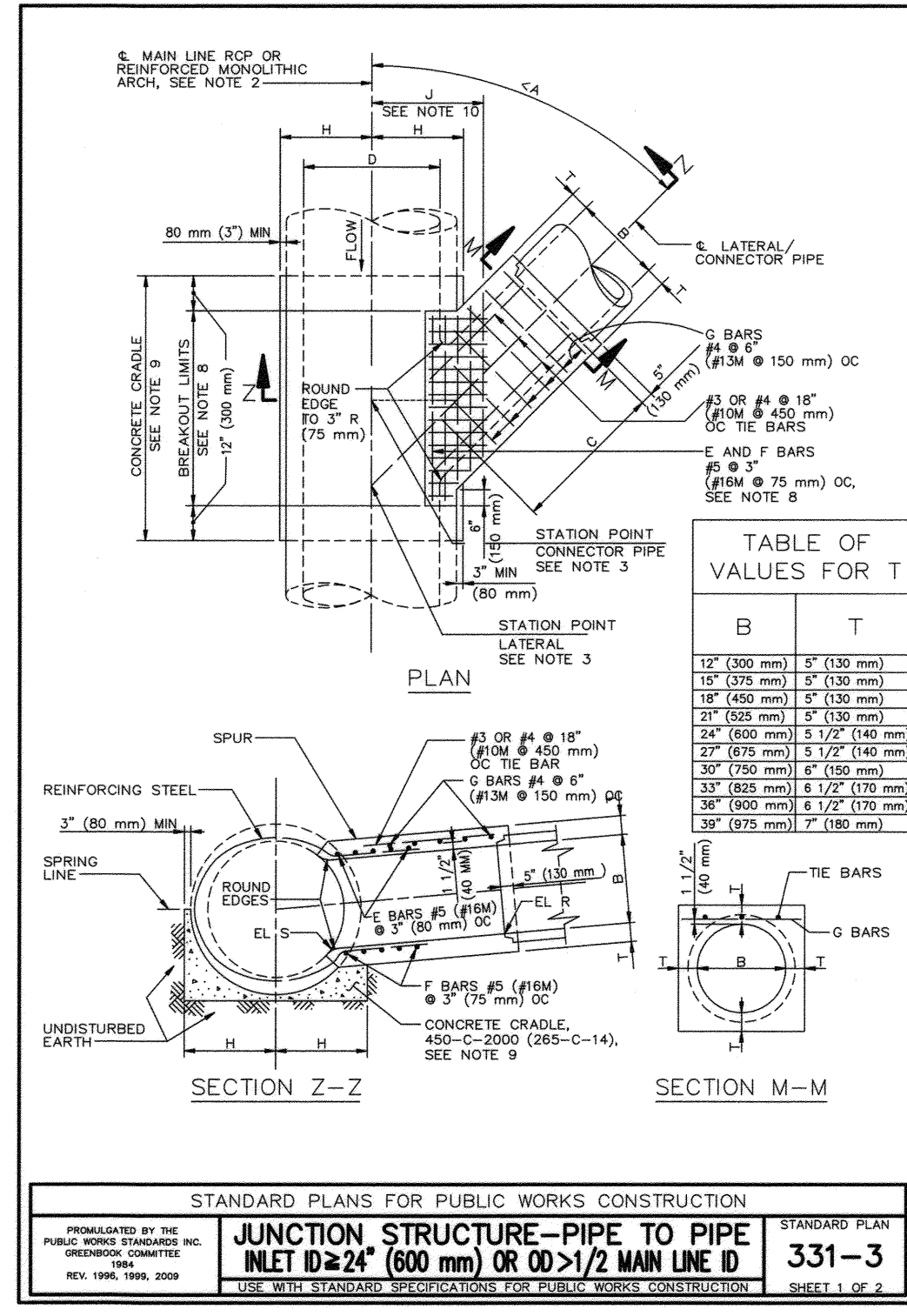
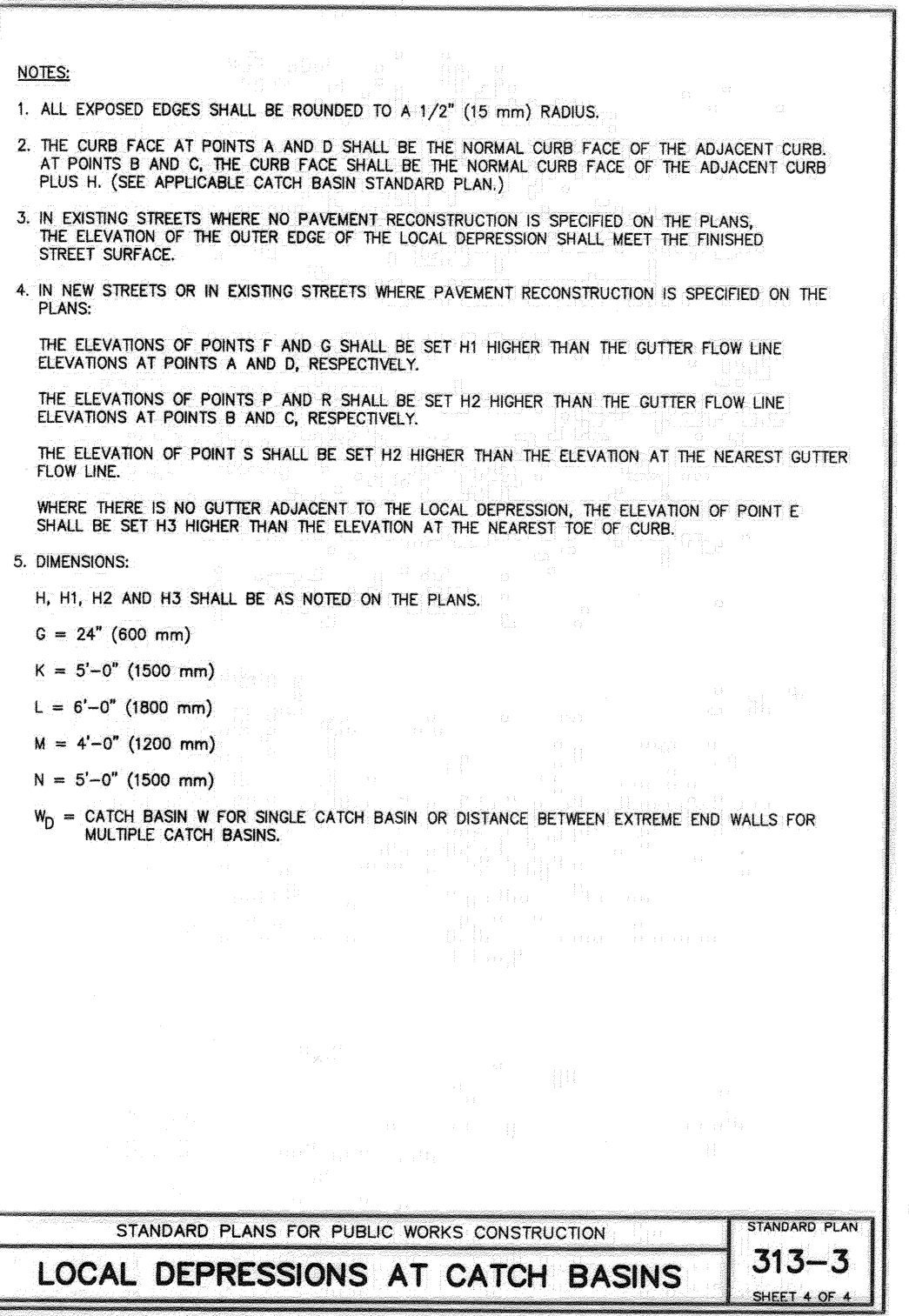
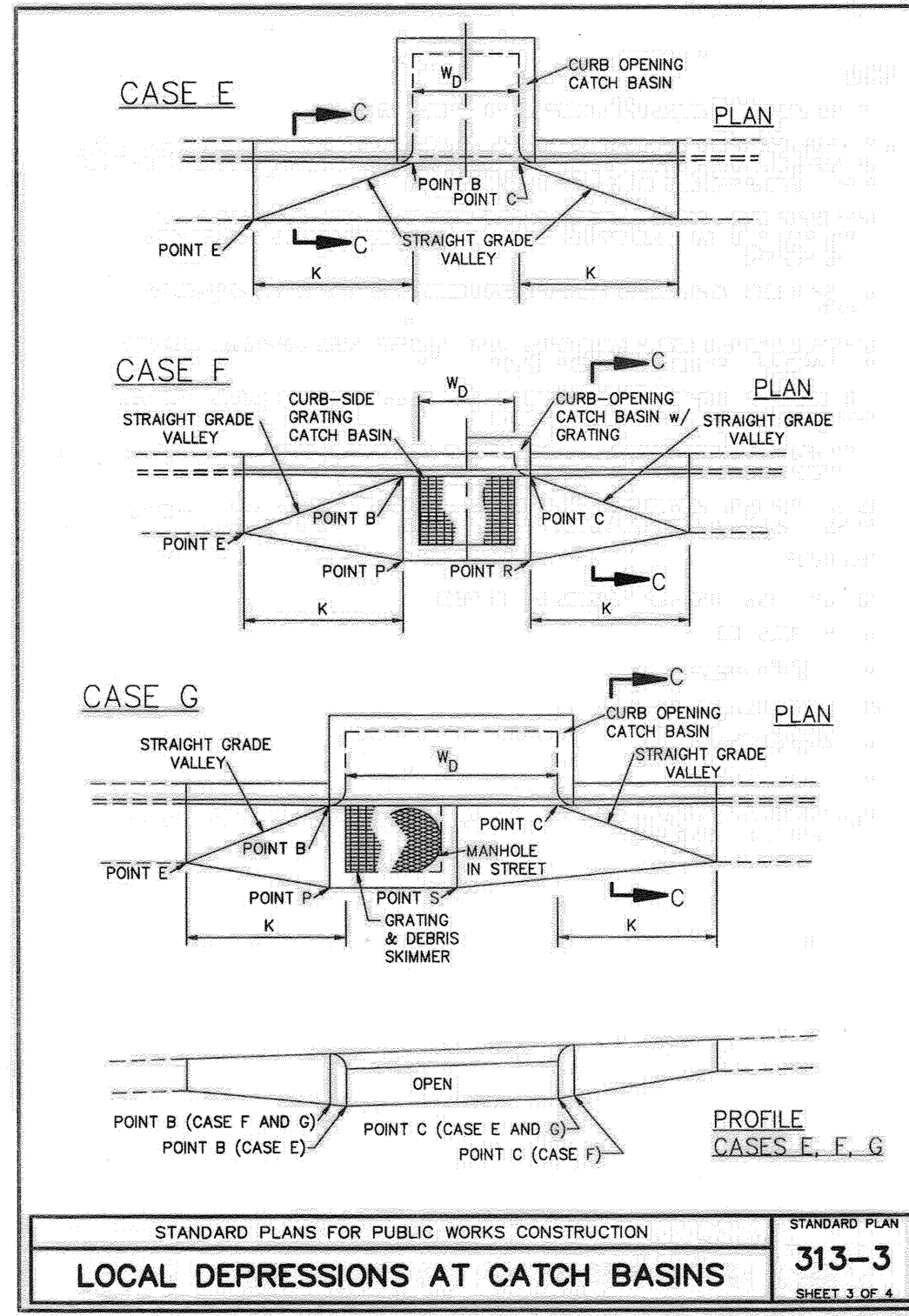
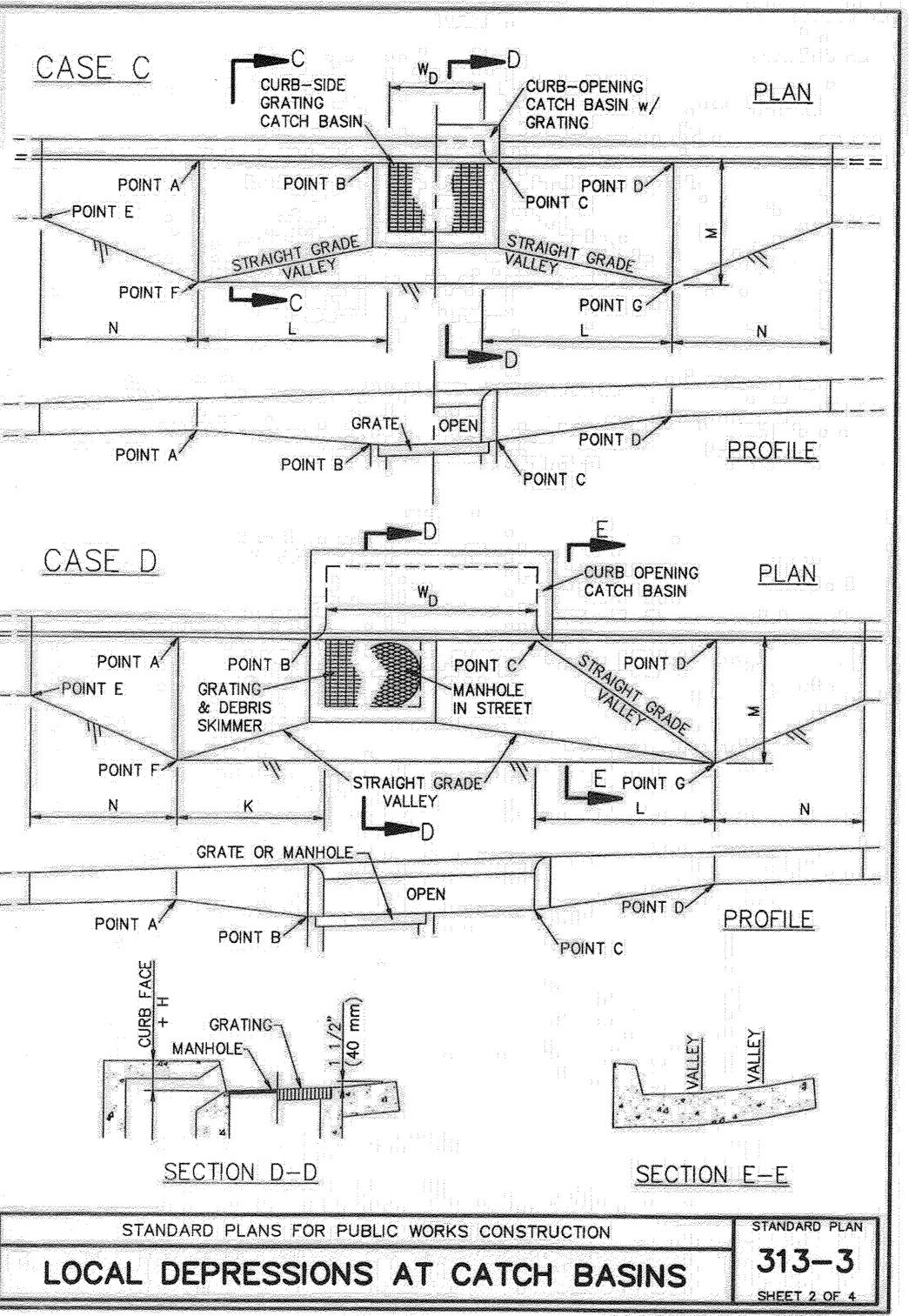
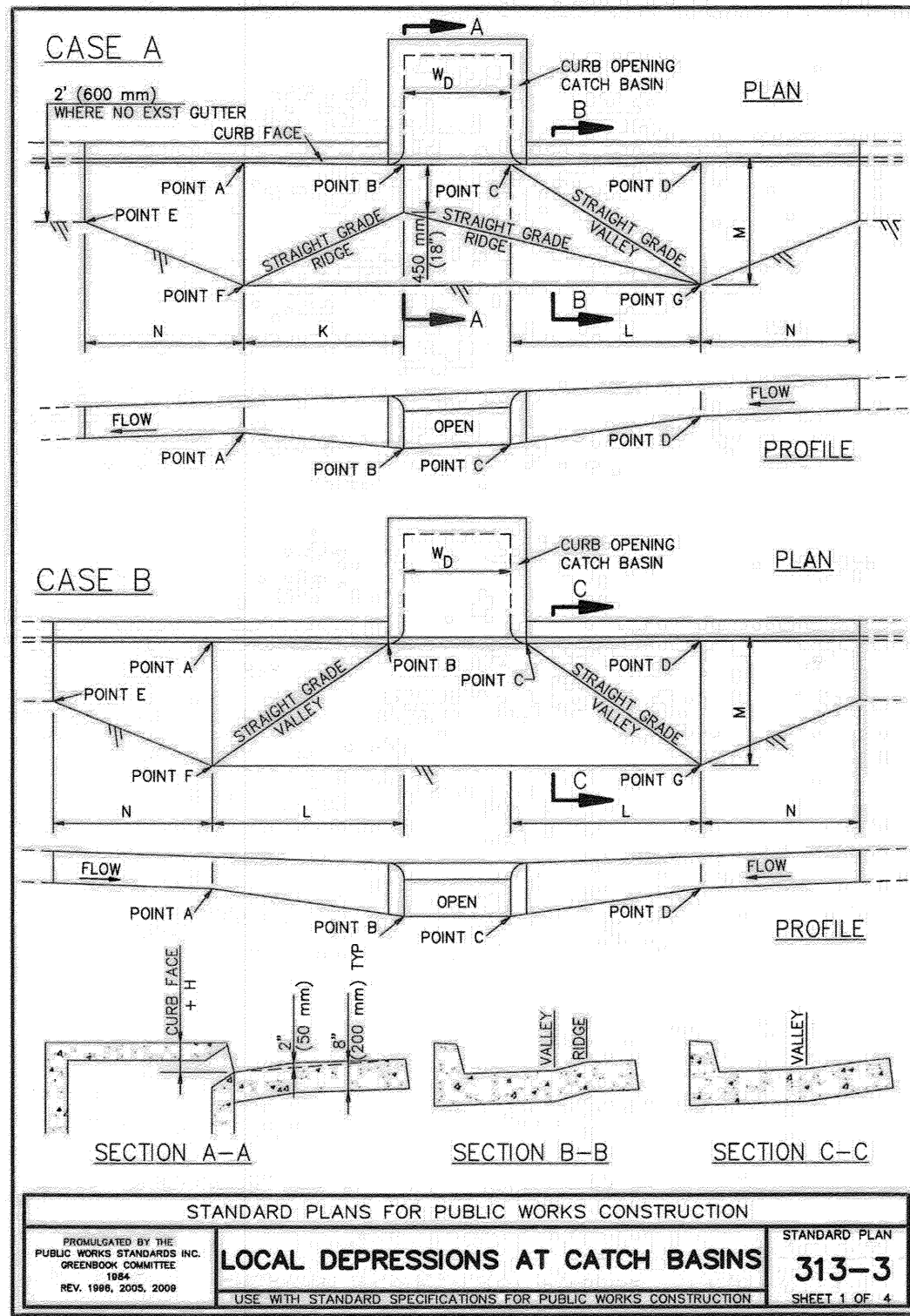
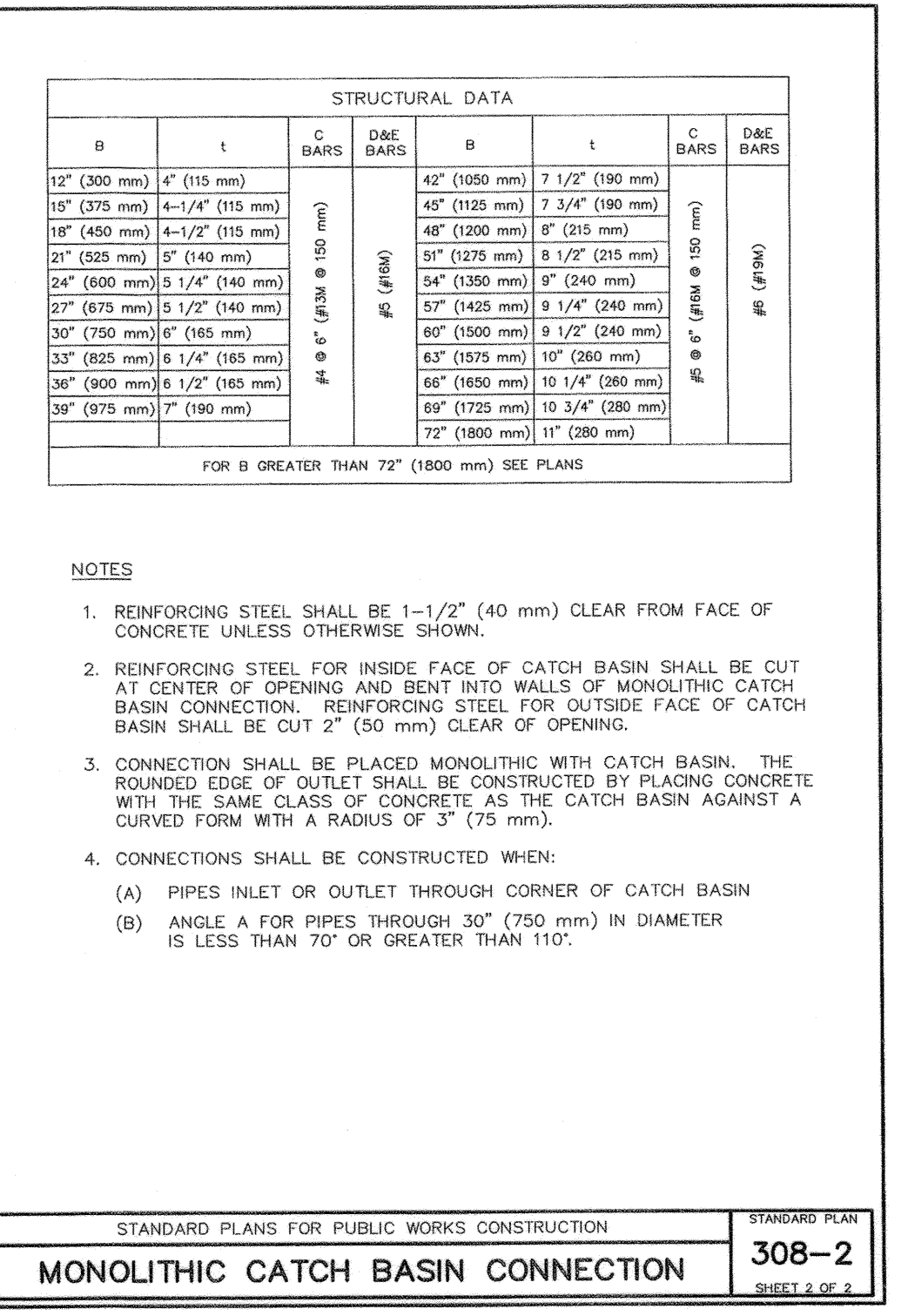
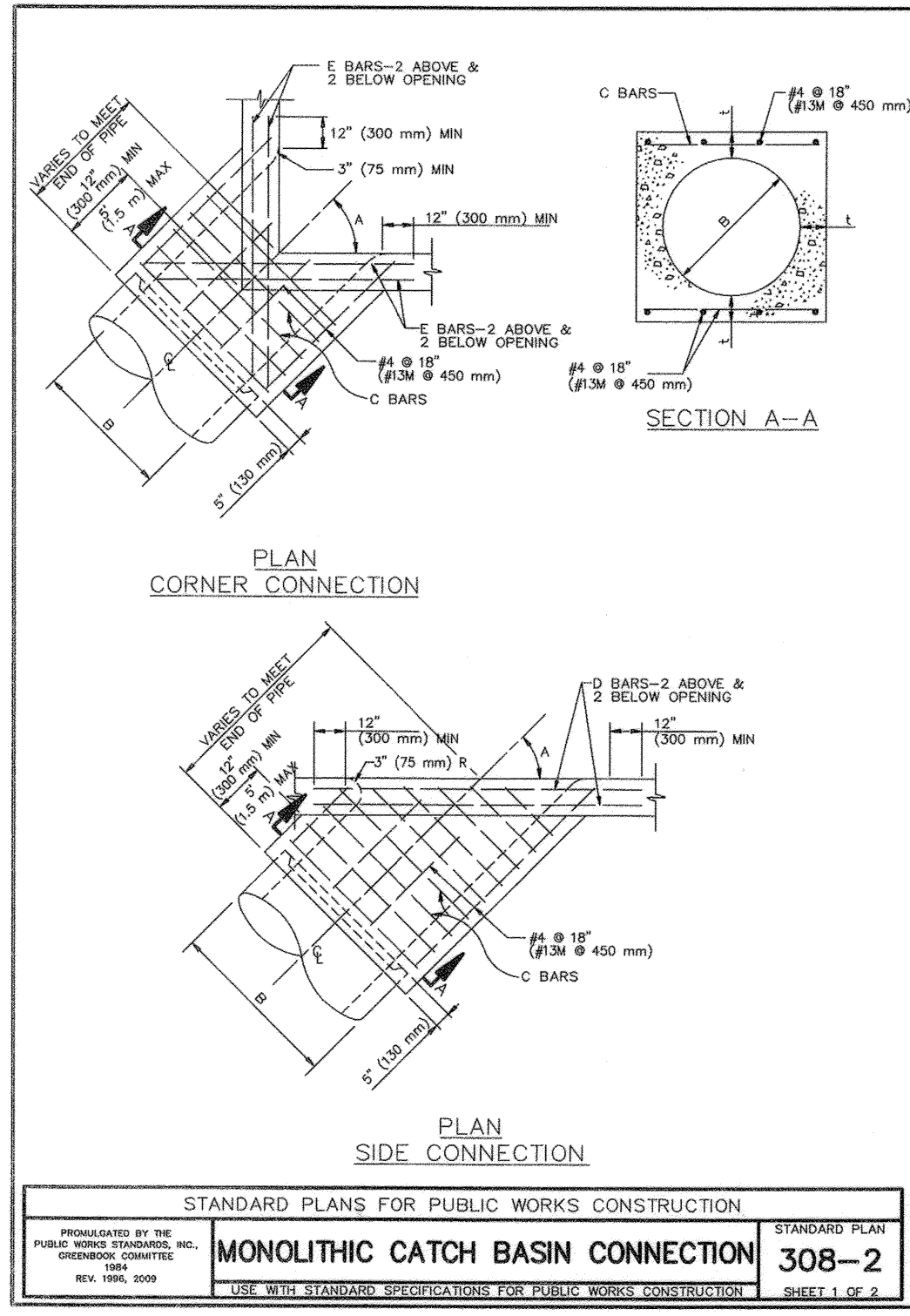
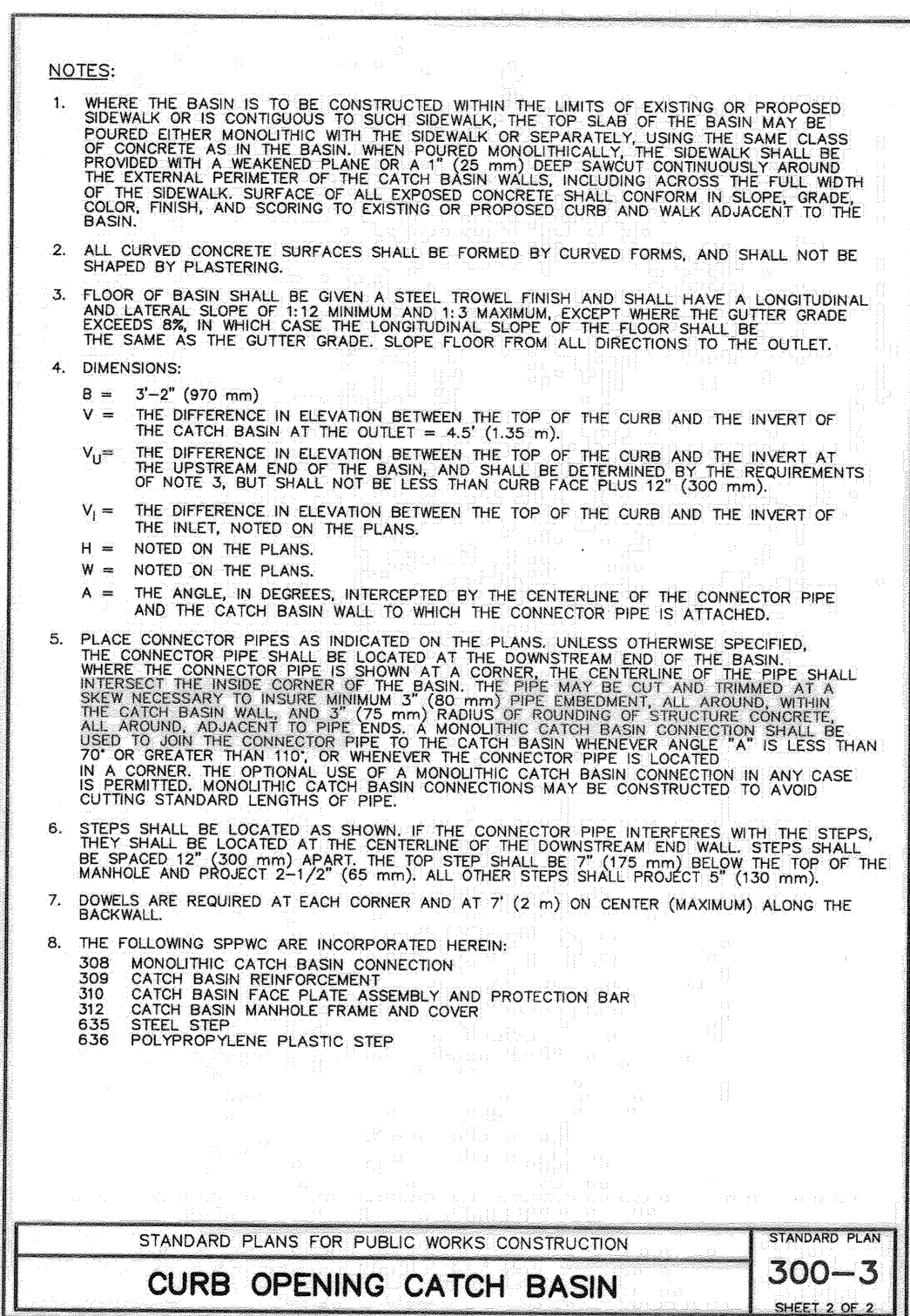
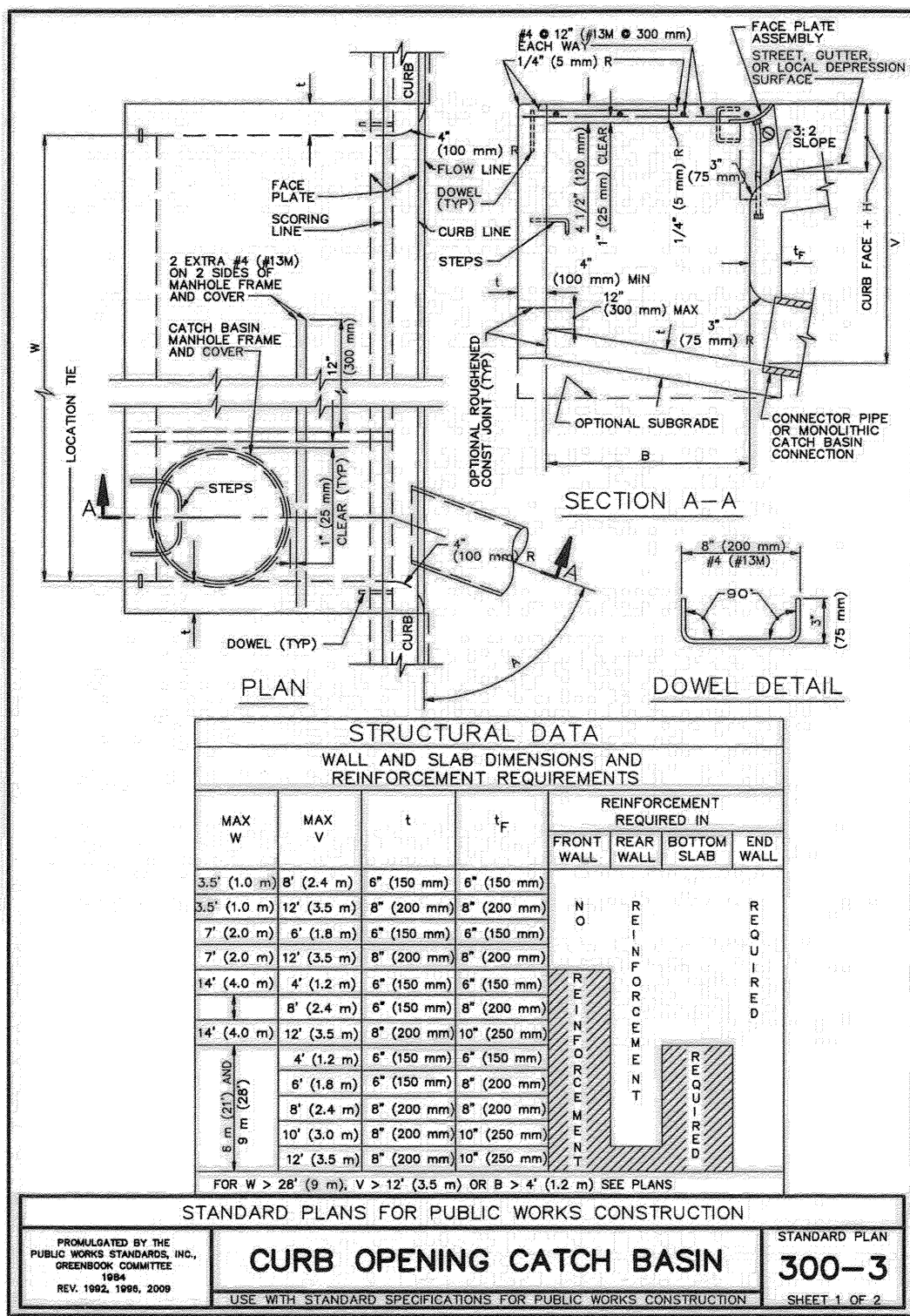
**D-897**

SHEET 5 OF 8







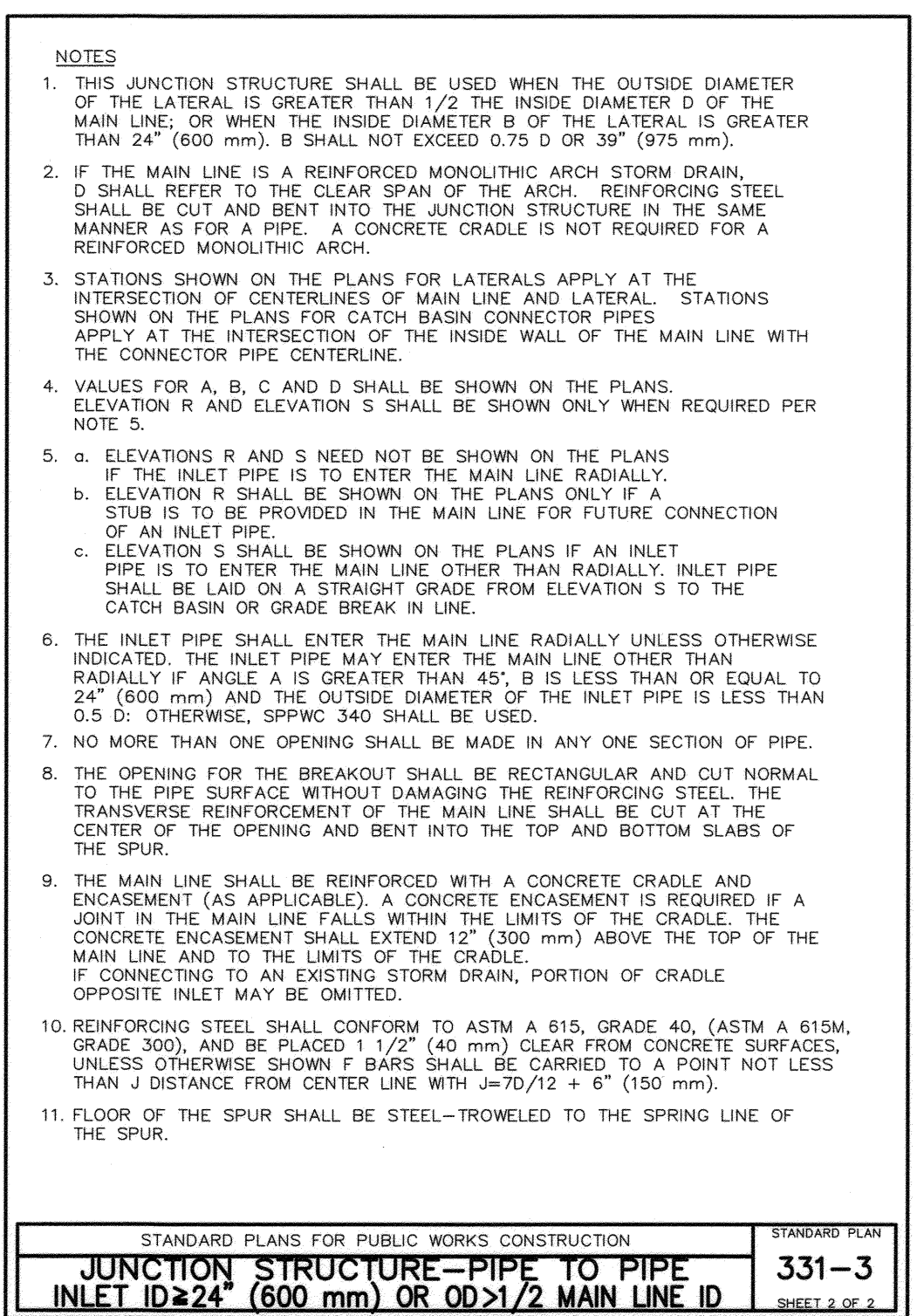
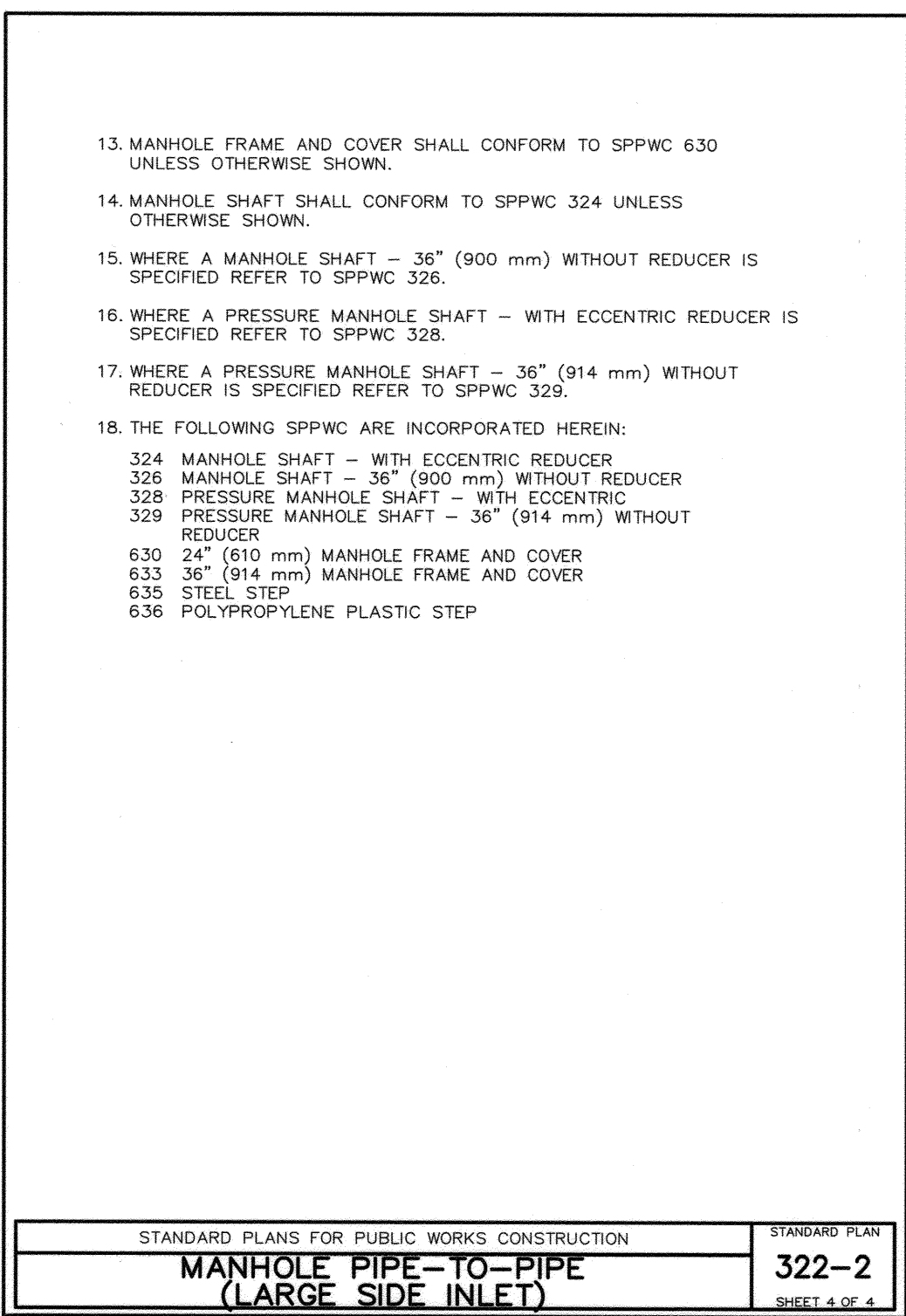
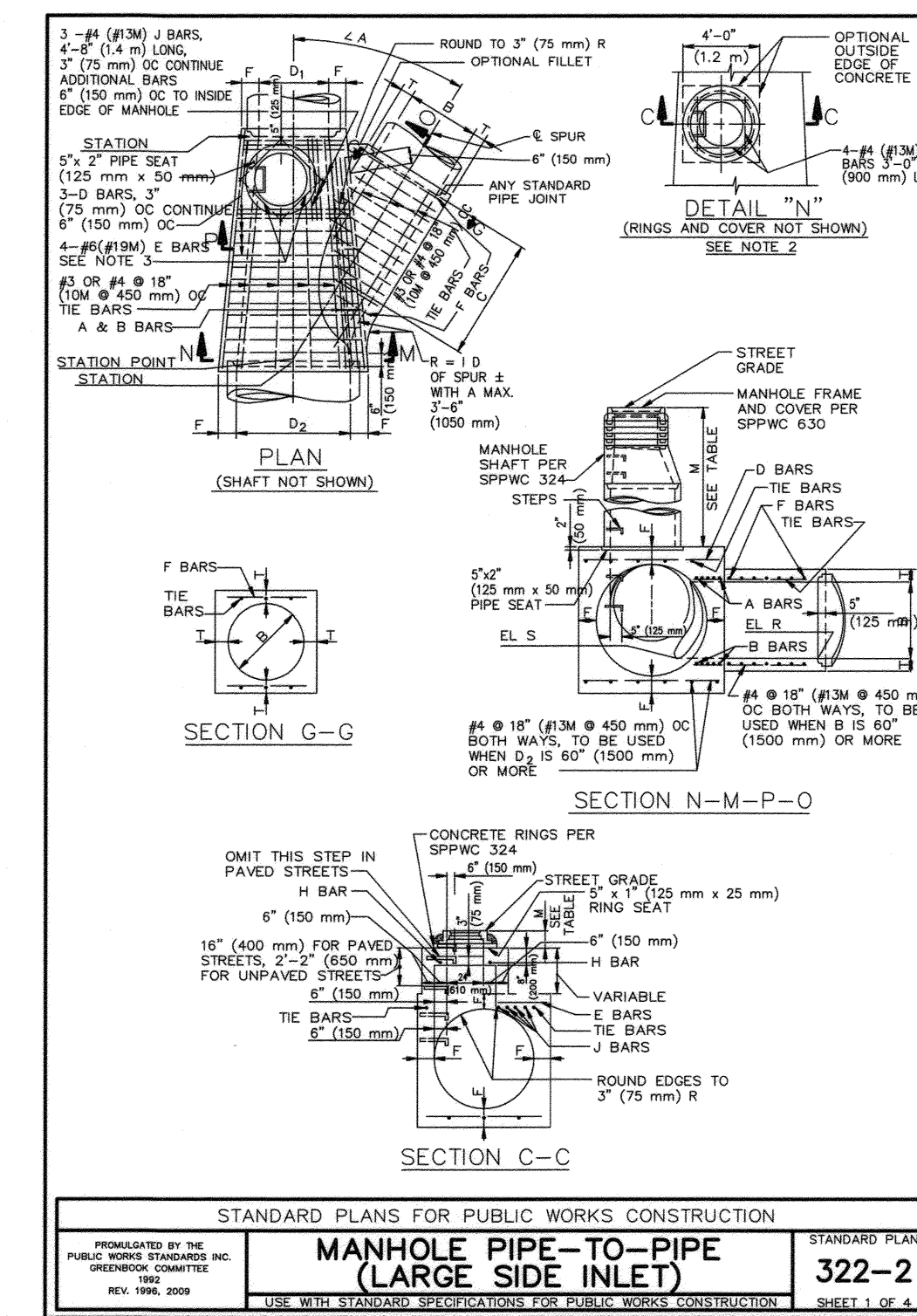
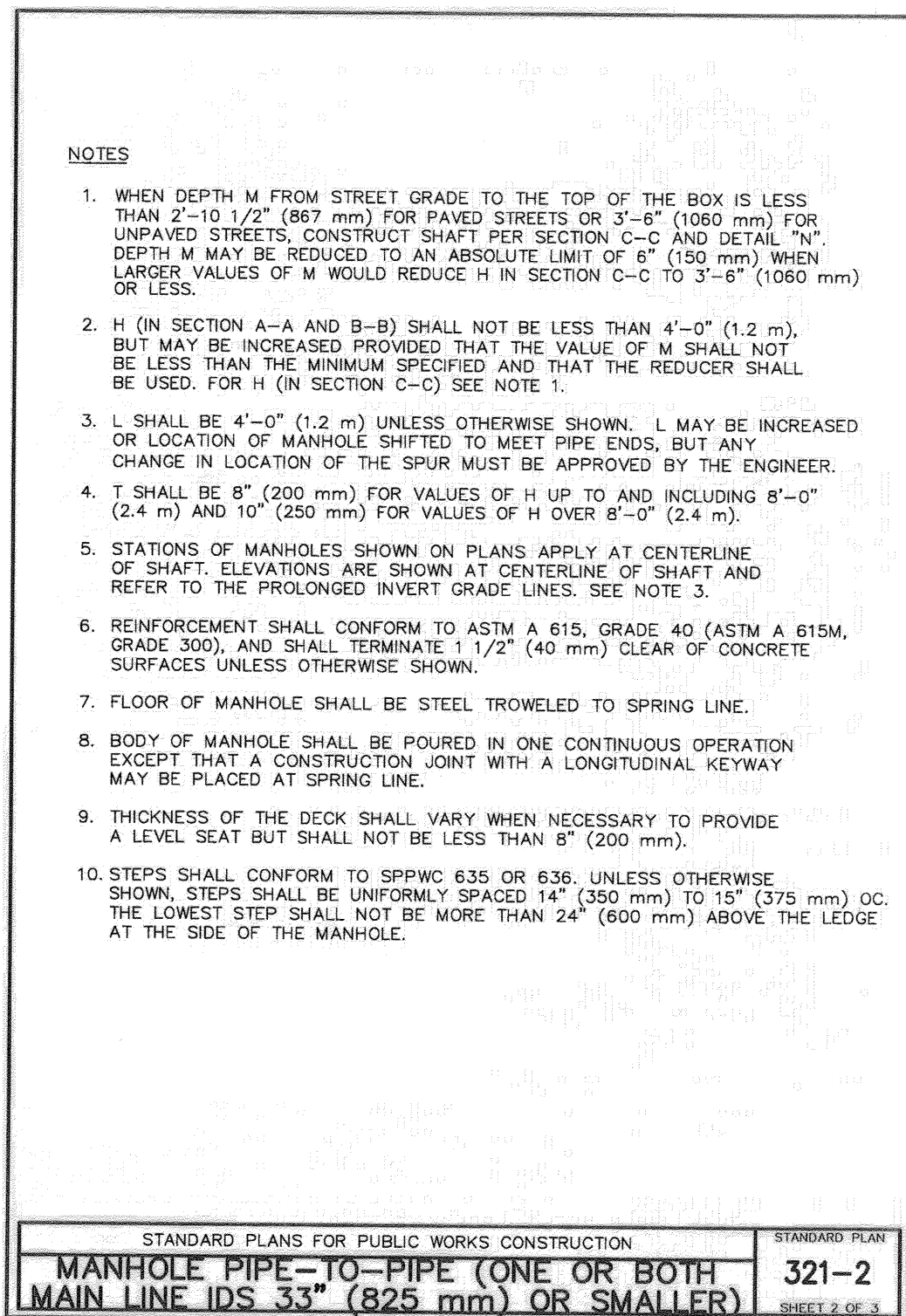


REVIEWED BY:  
WESTERN MUNICIPAL WATER DISTRICT  
FOR NON-INTERFERENCE COMPLIANCE  
SHEET 1 THROUGH 8

APPROVED: *[Signature]* DATE: 05-30-2018

CITY OF RIVERS





Last Update: 1/15/18  
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