

Call before
you Dig
1-800-227-2600

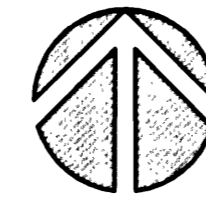
Call before
you Overhead
1-702-593-6111

BASIS OF BEARINGS

NORTH 89°53'30" WEST, BEING THE BEARING OF THE SOUTH LINE OF THE SOUTHWEST QUARTER (SW 1/4) OF SECTION 8, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, AS SHOWN IN FILE 86 OF SURVEYS, PAGE 75, OFFICIAL RECORDS OF CLARK COUNTY, NEVADA.

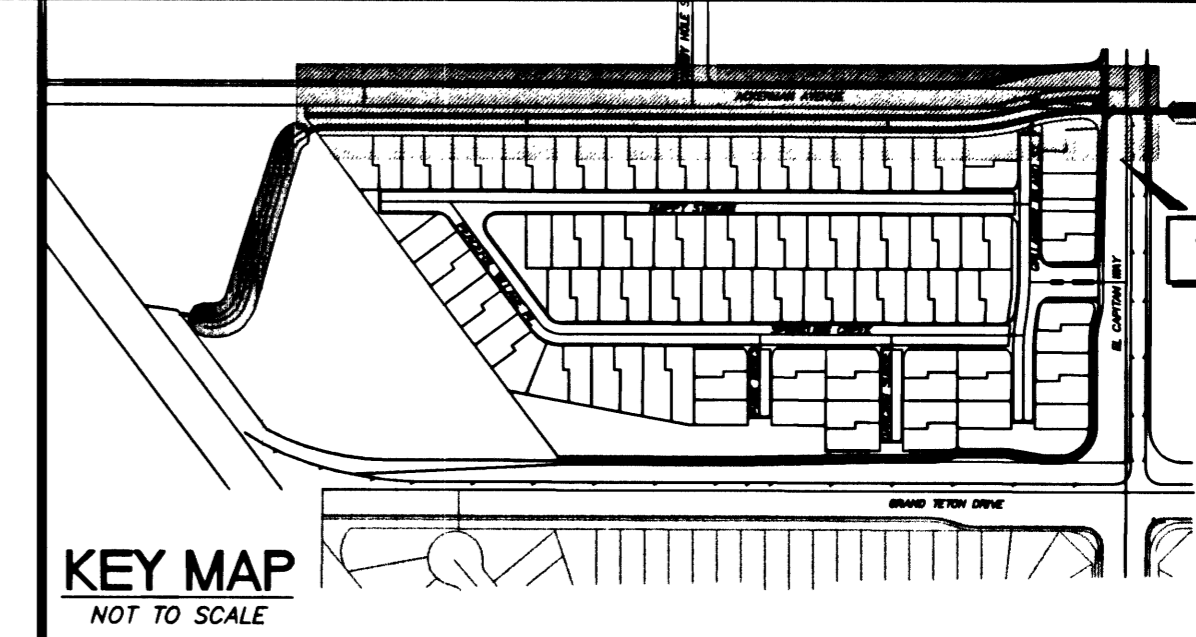
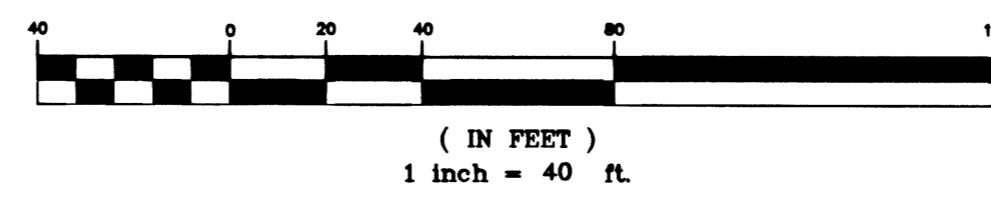
BENCHMARK

Elevation - 2532.70 FEET (NAVD 88 DATUM)
CITY OF LAS VEGAS BENCHMARK No. 1LV908NE
A BLM BRASS CAP AT THE INTERSECTION OF DURANGO DRIVE AND IRON MOUNTAIN ROAD
NAVD 88 ELEVATION = 771.9689 METERS

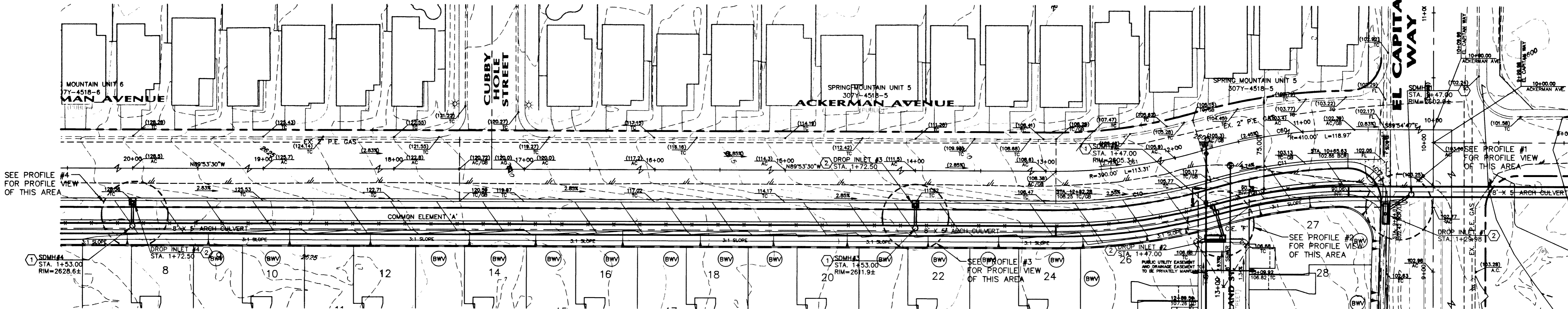


NORTH

GRAPHIC SCALE



DESIGNED BY:	J.T.C.
DRAWN BY:	B.W.A.
CHECKED BY:	P. SMITH
PROJECT DATE:	04-24-02



PLAN VIEW FOR STORM DRAIN AND DROP INLETS

NOTE:

PRIVATE STREETS ARE P.U.E.'s, CLV SEWER EASEMENTS AND PUBLIC DRAINAGE EASEMENTS TO BE PRIVATELY MAINTAINED.

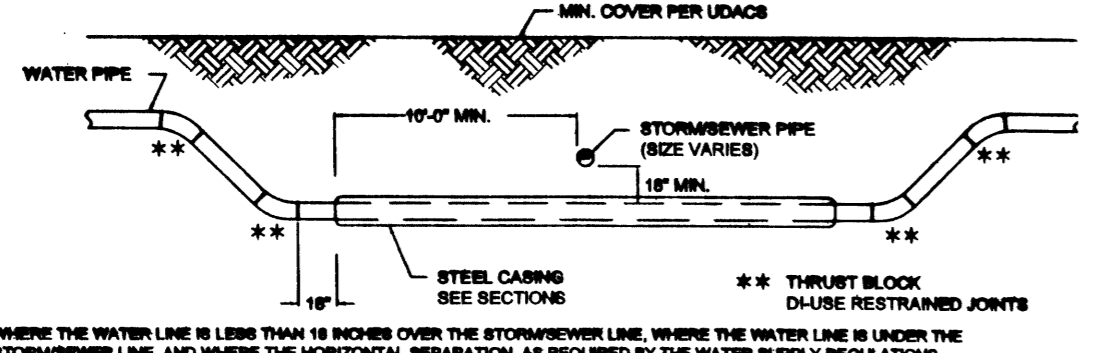
GRADING KEY NOTES

- 1. INSTALL TYPE I MANHOLE WITH LEFT OFF-SET. CONSTRUCT PER DETAIL "N" ON SHEET DI AND C.C.N.A.S.D. #403.
- 2. INSTALL A NEEAH DROP INLET. SEE PROFILE FOR LENGTH AND DEPTH. CONSTRUCT PER

NOTES :

STORM DRAIN MANHOLES HAVE TO BE OFF-SET TO THE RIGHT OR LEFT OF THE CULVERT TO PROVIDE STAIRS ALL THE WAY DOWN TO THE BOTTOM OF THE CULVERT.

STORM/SEWER WATER CROSSING DETAIL

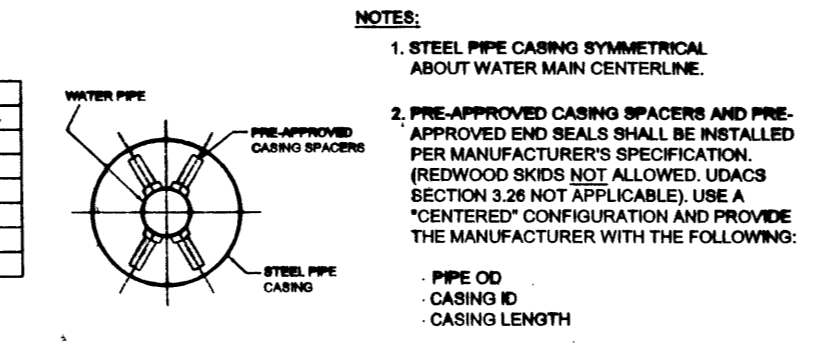


WHERE THE WATER LINE IS LESS THAN 18 INCHES OVER THE STORM/SEWER LINE, WHERE THE WATER LINE IS UNDER THE STORM/SEWER LINE AND WHERE THE HORIZONTAL SEPARATION AS REQUIRED BY THE WATER SUPPLY REGULATIONS CANNOT BE MAINTAINED BECAUSE OF PHYSICAL OBSTRUCTIONS, THE WATER LINE SHALL BE PROTECTED BY CONSTRUCTION OF THE STORM/SEWER OR WATER LINE IN THE FOLLOWING PRIORITY:

1. THE STORM/SEWER MAIN MUST BE CONSTRUCTED OF WATER SUPPLY QUALITY MATERIALS MEETING AWWA STANDARDS.
2. THE WATER MAIN SHALL BE D.I.P. WITH RESTRAINED JOINTS. INSTALL IN A STEEL CASING WHICH EXTENDS 12" ON EACH SIDE OF THE CROSSING.
3. THE STORM/SEWER MAIN OR WATER MAIN (DEPENDS ON THE FIELD CONDITIONS) SHALL BE TOTALLY ENCASED IN A MINIMUM OF FOUR (4) INCHES OF CONCRETE SLURRY (DIP FOR A DISTANCE OF TEN (10) FEET ON EACH SIDE OF THE CROSSING ONLY WITH AGENCY APPROVAL. ENCASEMENT WILL NOT BE PERMITTED FOR ASBESTOS CEMENT PIPE.

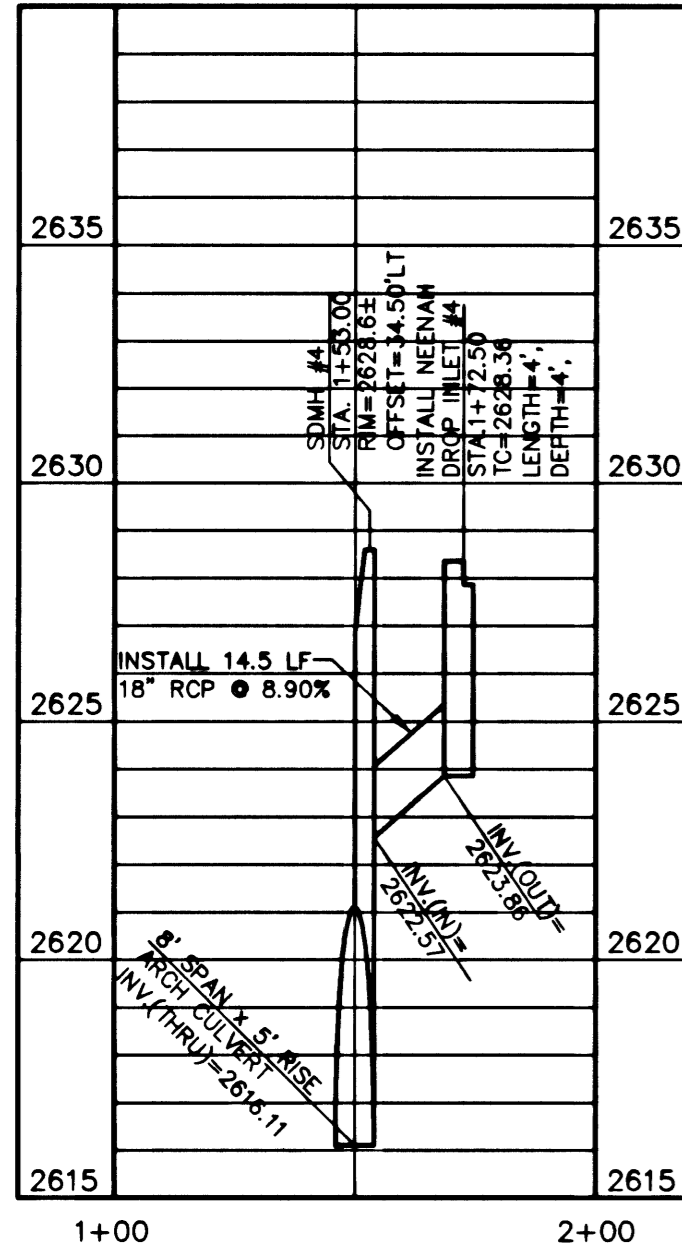
BACK OF THESE PROVISIONS SHALL ALSO BE EXTENDED FOR OTHER THAN 90 DEGREE CROSSINGS TO THE POINT AT WHICH THE TEN FOOT SEPARATION BETWEEN THE WATER AND SEWER LINES IS ACHIEVED (10% OF CROSSING ANGLE).

TYPICAL CASING SECTION

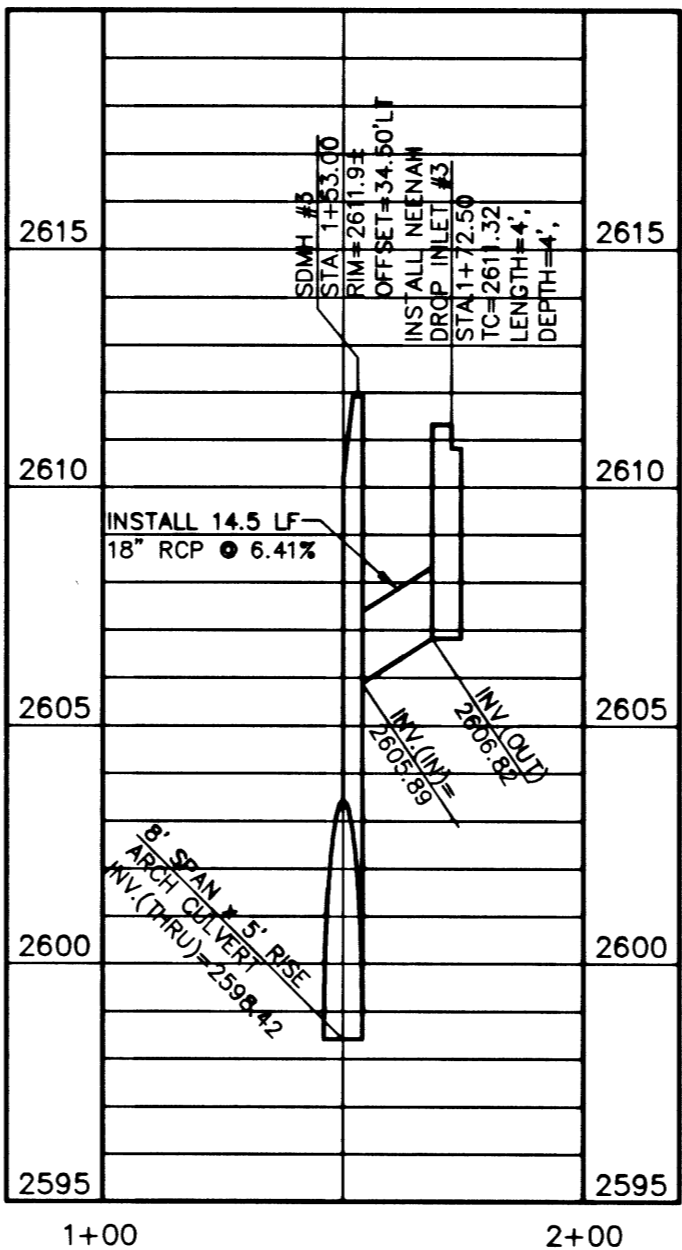


PIPE DIA.	CASING DIA.
8	18
10	24
12	30
16	36
24	42

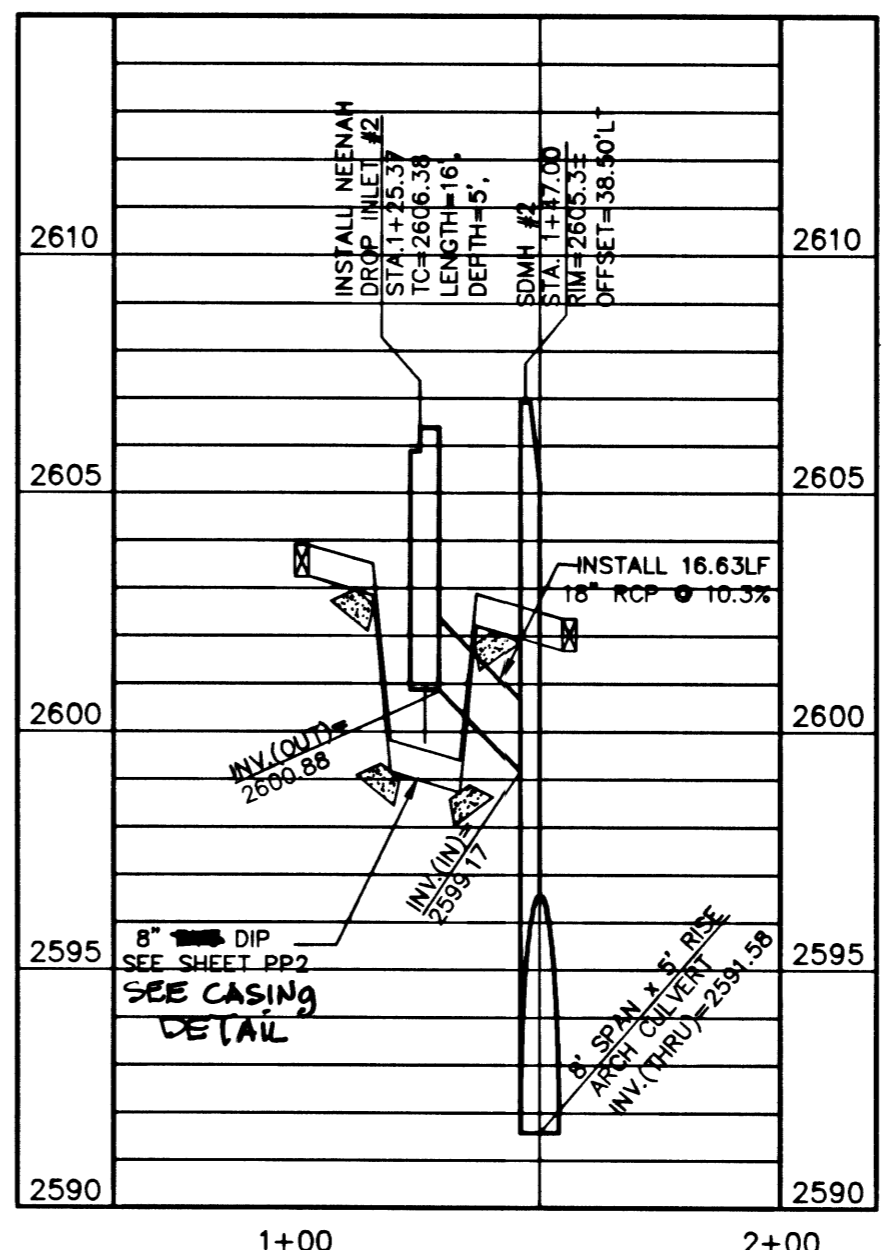
- NOTES:
1. STEEL PIPE CASING SYMMETRICAL ABOUT WATER MAIN CENTERLINE.
 2. APPROVED END SEALS SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATION. BRESWOOD SEALS NOT ALLOWED. LEAKS SECTION 3.28 NOT APPLICABLE. USE A "CENTERED" CONFIGURATION AND PROVIDE THE MANUFACTURER WITH THE FOLLOWING:
 - PIPE OD
 - CASING ID
 - CASING LENGTH
 3. THE PIPE SHALL BE SUPPORTED AT EACH END JOINT WITH SPACERS. AFTER INSTALLATION OF THE PIPE, THE CASING SHALL BE SEALED AT BOTH END WITH CASING END SEALS. DUCTILE IRON PIPE JOINTS INSIDE CASING ARE TO BE RESTRAINED.



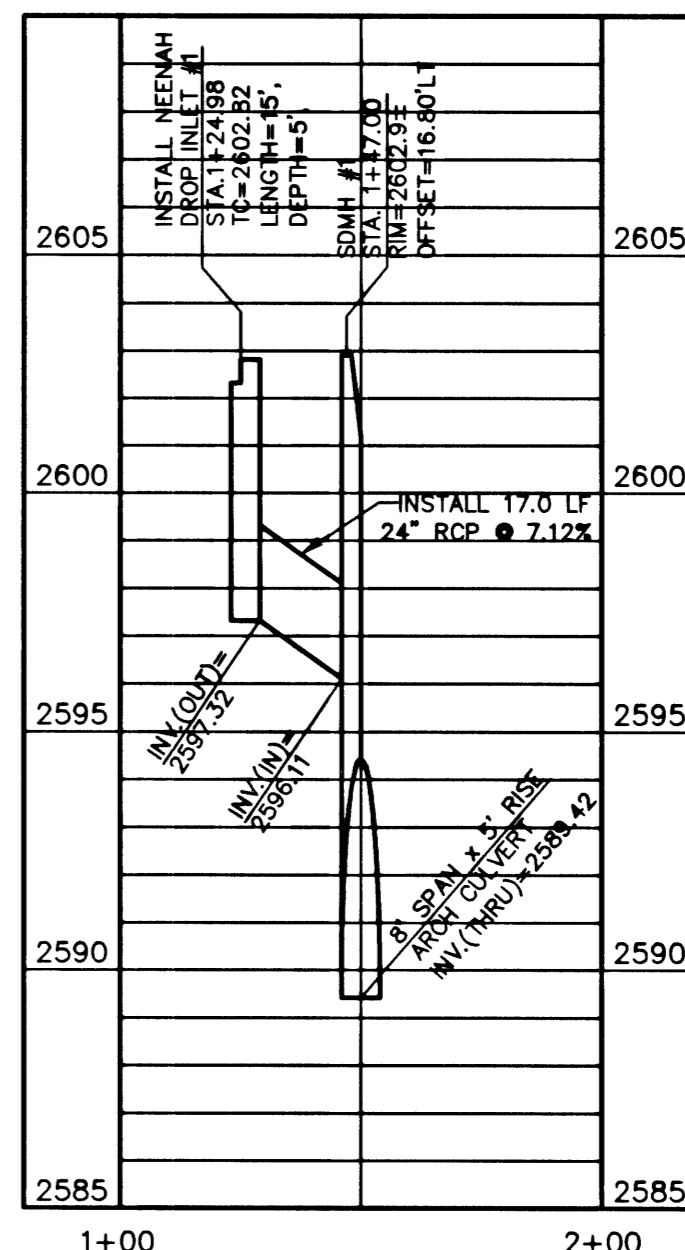
PROFILE #4
SCALE: HORIZ. 1" = 40'
VERT. 1" = 4'



PROFILE #3
SCALE: HORIZ. 1" = 40'
VERT. 1" = 4'



PROFILE #2
SCALE: HORIZ. 1" = 40'
VERT. 1" = 4'



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

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT DATE

I CERTIFY THAT THIS GRADING PLAN CONFORMS TO THE APPROVED DRAINAGE STUDY FOR THIS SITE ON FILE AT CITY OF LAS VEGAS PUBLIC WORKS

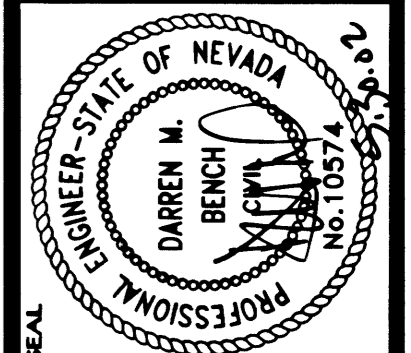
DARREN M. BENCH P.E. No. 10574
DATE: 5/30/02

SHEET
G8
15 OF 25

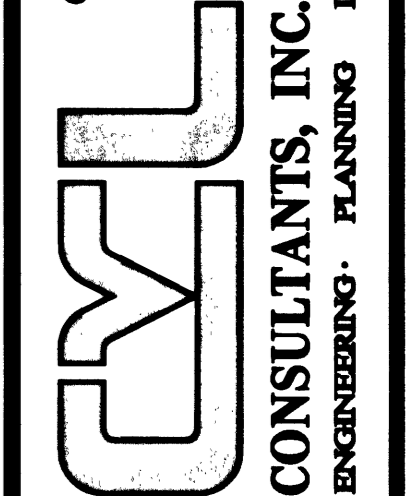
AGENCY DWG. NO.
327Y-4701

CVL Proj. No.

D.R. HORTON



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