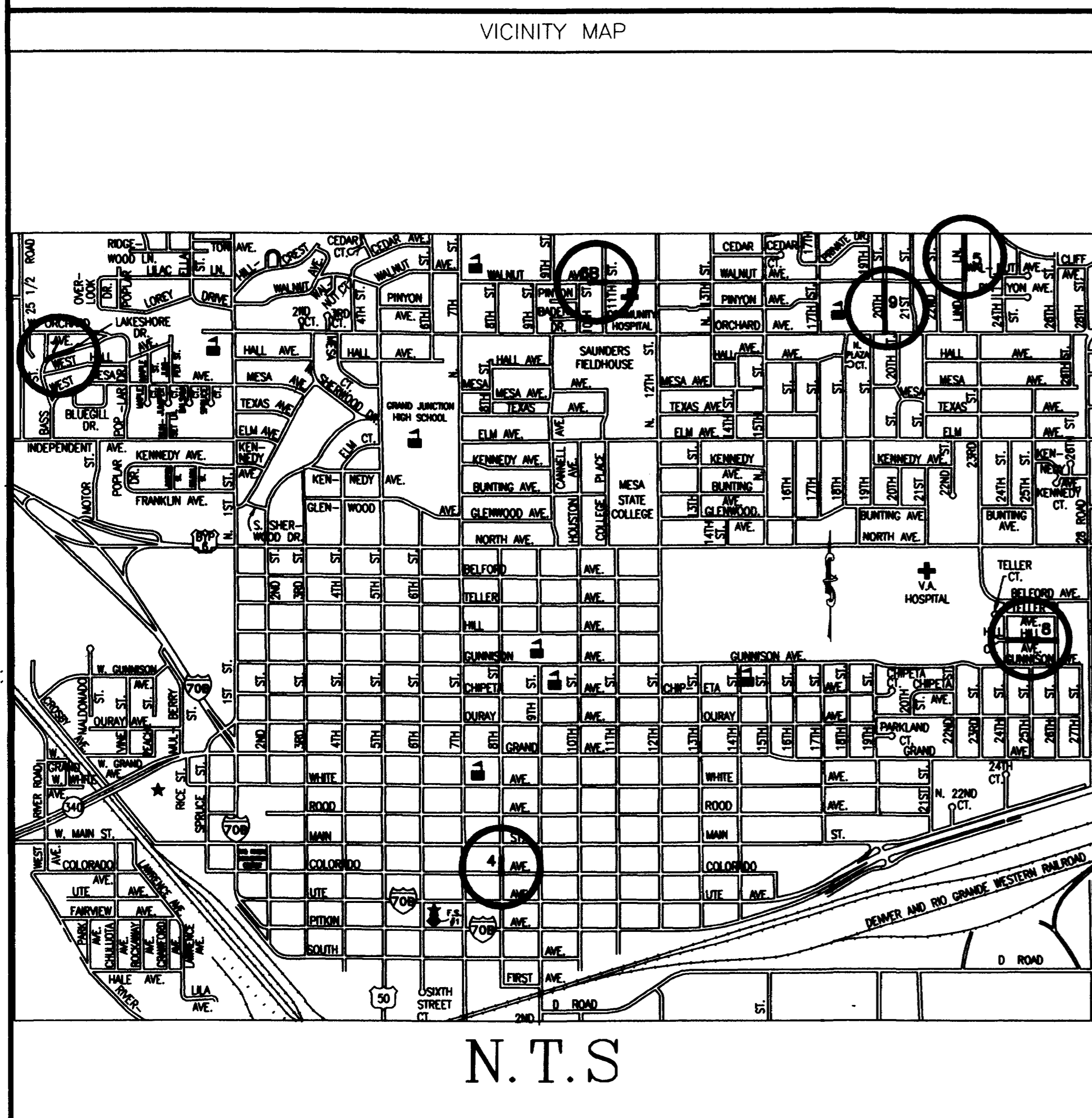


1997 SEWERLINE REPLACEMENTS

*City of Grand Junction, Colorado
Department of Public Works*



VICINITY MAP		SHEET INDEX		ENGINEERING APPROVALS																																																			
SHEET #	SHEET DESCRIPTION	PROJECT PHASE	SIGNATURE			DATE																																																	
1	COVER SHEET	BIDDING																																																					
2	QUANTITIES SUMMARY	CONSTRUCTION																																																					
3	DRAFTING STANDARDS & ABBREVIATIONS	FINAL ACCEPTANCE																																																					
4	8th STREET (COLO. AVE to MAIN ST.)	<table border="1"> <thead> <tr> <th colspan="7">UTILITIES AND AGENCIES</th> </tr> <tr> <th>AGENCY</th> <th>NAME</th> <th>POSITION</th> <th>MAILING ADDRESS</th> <th>CITY, STATE</th> <th>VOICE</th> <th>FAX</th> </tr> </thead> <tbody> <tr> <td>GRAND JUNCTION, CITY OF</td> <td>STEVE SHARPE</td> <td>PROJECT ENGINEER</td> <td>250 N. 5th STREET</td> <td>GRAND JUNCTION, CO 81501</td> <td>244-1425</td> <td>256-4011</td> </tr> <tr> <td>PSCO</td> <td>JOHN SALAZAR</td> <td>AREA #4</td> <td></td> <td></td> <td>244-2781</td> <td></td> </tr> <tr> <td>PSCO</td> <td>JON PRICE</td> <td>AREA #3</td> <td></td> <td></td> <td>244-2693</td> <td></td> </tr> <tr> <td>TCI</td> <td>GLENN VANCIL</td> <td></td> <td>2502 FORESIGHT CIRCLE</td> <td>GRAND JUNCTION, CO 81504</td> <td>245-8750</td> <td>245-6803</td> </tr> <tr> <td>U.S. WEST</td> <td>MAX WARD</td> <td>ENGINEER</td> <td></td> <td></td> <td>244-4721</td> <td></td> </tr> </tbody> </table>					UTILITIES AND AGENCIES							AGENCY	NAME	POSITION	MAILING ADDRESS	CITY, STATE	VOICE	FAX	GRAND JUNCTION, CITY OF	STEVE SHARPE	PROJECT ENGINEER	250 N. 5th STREET	GRAND JUNCTION, CO 81501	244-1425	256-4011	PSCO	JOHN SALAZAR	AREA #4			244-2781		PSCO	JON PRICE	AREA #3			244-2693		TCI	GLENN VANCIL		2502 FORESIGHT CIRCLE	GRAND JUNCTION, CO 81504	245-8750	245-6803	U.S. WEST	MAX WARD	ENGINEER			244-4721	
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5	LINDA LANE (WALNUT TO THE NORTH)																																																						
6	11th. ST. AND WALNUT (WEST ON WALNUT)																																																						
7	LAKESHORE DRIVE (FROM BASS ST. EAST)																																																						
8	HILL AVE. (24th ST. to 26th ST.)																																																						
9	20th. ST. (ORCHARD AVE. to WALNUT AVE.)																																																						
10	EXHIBIT "E" (STANDARD PAVEMENT DETAILS)																																																						
11	EXHIBIT "I" (STANDARD SANITARY SEWER DETAILS)																																																						

PREPARED BY

**ENGINEERING &
TECHNICAL SERVICES
DIVISIONS**

GENERAL NOTES

(G01) Unless noted otherwise, Standard Details and Specifications and Special Provisions apply.

(G02) Notes numbered between 20 and 99 pertain to Work governed by the City of Grand Junction's standard specifications, as may be modified by Project Contract Documents.

(G03) Notes numbered between 200 and 699 pertain to Work governed by corresponding sections of the CDOT Standard Specifications for Road and Bridge Construction, as may be modified by Owner Standard Specifications and/or Project Contract Documents.

(G04) Notes numbered above 1000 pertain to miscellaneous Work not governed by standard specifications.

(G05) Note numbers preceded with a "C" and italicized are informational or general in nature and, as incidental to the Work, are no-pay items.

(G06) Property lines shown are approximate only.

NOT ASBUILT

ITEM NO.	ITEM/REFERENCE NO. & DESCRIPTION OF WORK	UNITS	8TH STREET BETWEEN MAIN ST. AND COLORADO AVE.	LINDA LANE FROM WALNUT TO BOOKCLIFF AVENUE	11TH STREET AND WALNUT AVENUE	LAKESHORE DRIVE FROM BASS ST. TO EAST	HILL AVENUE FROM 24TH ST. TO 26TH ST.	20TH STREET FROM ORCHARD TO WALNUT AVE.	MISC.	ESTIMATED TOTAL QUANTITY	ACTUAL TOTAL QUANTITY	COMMENTS
1	20.1/202.53 Construct 8" SDR 35 PVC sanitary sewer.	LF	190	605	178	313	620	632	0	2538		
2	20.8 Construct sewerline through new MH, cut out top of pipe, form ...	EA	0	0	0	0	0	1	0	1		
3	21.1 Connect the proposed sewerline to the existing MH, and grout seal...	EA	2	4	2	2	4	2	0	16		
4	24.8 Install full body wye sewer tap and connect to all active existing...	EA	0	21	6	2	18	18	0	65		
5	24.85 Install full body wye sewer tap and connect to all active existing...	EA	0	3	0	0	0	0	0	3		
6	24.9 4" SDR 35 PVC sewer services.	LF	0	120	30	15	100	100	0	365		
7	61.2 Provide MH corrosion protection per Special Provisions.	EA	1	3	0	1	0	1	0	6		
8	62.1 Reshape the MH invert with epoxy grout. Grout thickness shall be at...	EA	0	2	1	1	2	2	0	8		
9	64.1/202.21 Construct standard 4' dia. MH.	EA	2	0	0	0	0	1	0	3		
10	81.1 Overexcavate trench below required bedding as directed by Engineer...	CY	0	0	0	0	0	0	150	150		
11	202.34 Remove concrete valley gutter to joints or dimensions where...	SY	0	0	0	0	6	0	0	6		
12	202.39 Sawcut and remove concrete pavement to dimensions shown...	SY	0	0	0	0	12	0	0	12		
13	202.41 Remove asphalt pavement as shown.	SY	310	680	340	420	675	785	0	3210		
14	203.3 Import trench backfill material (pit run) including disposal of ...	TON	95	303	89	157	310	316	0	1270		
15	300/400.5 Construct ABC and HMA pavement patch. Match existing...	SY	310	680	340	420	675	785	0	3210		
16	609.1 Construct concrete valley pan gutter.	SY	0	0	0	0	6	0	0	6		
17	625.3 Provide construction surveying and red-lined plans as-constructed...	LS	--	--	--	--	--	--	1	1		
18	626.1 Provide all mobilization, bonds, insurances, and other incidentals...	LS	--	--	--	--	--	--	1	1		
19	630.1 Provide traffic control in accordance with General Contract Conditions.	LS	--	--	--	--	--	--	1	1		
20	1998.1 Provide newsletters per Special Conditions.	LS	--	--	--	--	--	--	1	1		
21	1999 FORCE ACCOUNT	FA	--	--	--	--	--	--	1	1		

REVISION	DESCRIPTION	DATE
△	_____	____
△	_____	____
△	_____	____

SCALE	PLAN	PROFILE
HORIZ. _____	HORIZ. _____	VERT. _____

DEPARTMENT OF PUBLIC WORKS AND UTILITIES
ENGINEERING DIVISION
CITY OF GRAND JUNCTION, COLORADO

1997 SEWERLINE REPLACEMENTS
QUANTITIES SUMMARY

CITY OF GRAND JUNCTION DRAFTING STANDARDS AND ABBREVIATIONS

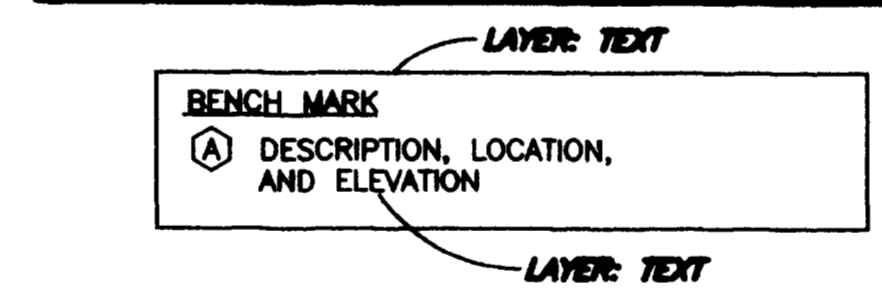
PROJECT NO. ?????-?????

		ENTITY DESCRIPTION			
		LAYER	LINE TYPE	BLOCK	SPACING
PROPERTY OR TRACT LINE	-----	PROP	ROW	-	-
RAILROAD	+++++	EXIST/NEW	CONTINUOUS	RAIL	4
EDGE OF PAVEMENT	- - - - -	EXIST/ASPH	DASHED	-	-
RIGHT OF WAY	-----	ROW	ROW	-	-
BARBED WIRE FENCE	x x x x x	EXIST/NEW	CONTINUOUS	BARB	15
CHAIN LINK FENCE	o o o o o	EXIST/NEW	CONTINUOUS	CHAIN	15
BARRIER TYPE FENCE	/// /// ///	EXIST/NEW	CONTINUOUS	BARRIER	15
WOVEN WIRE FENCE	/// /// ///	EXIST/NEW	CONTINUOUS	WOVEN	15
WOOD FENCE	o o o o o	EXIST/NEW	CONTINUOUS	WOOD	15
EXISTING GUARD RAIL	o o o o o	EXIST	CONTINUOUS	GUARD	5
NEW GUARD RAIL	o o o o o	NEW	CONTINUOUS	NEWGUARD	5
RETAINING WALL	=====	EXIST	CONTINUOUS	RETAIN	6
SIDEWALK	4' S.W.	EXIST/CONC	CONTINUOUS	-	-
CURB & GUTTER	2' CURB & GUTTER	EXIST/CONC	CONTINUOUS	-	-
CURB, GUTTER & SIDEWALK	6' C.G. & SW.	EXIST/CONC	CONTINUOUS	-	-
BURIED TELEPHONE CABLE	T T T T T	UTIL	CONTINUOUS	-	-
BURIED ELECTRIC CABLE	E E E E E	UTIL	CONTINUOUS	-	-
GAS LINE	2" MW	UTIL	CONTINUOUS	-	-
WATER LINE	6" C.I.	UTIL/WATER	CONTINUOUS	-	-
SANITARY SEWERS	8" SAN.	UTIL/SEWER	CONTINUOUS	AROW	-
STORM SEWERS	8" STORM	UTIL/STORM	CONTINUOUS	AROW	-
UNDERGROUND IRRIG. PIPE	IRRIG.	UTIL/NEW	CONTINUOUS	AROW	-
SIPHON PIPE	o o o o o	UTIL/NEW	CONTINUOUS	AROW	-
EARTH DITCH	- - - - -	EXIST/NEW	DIVIDE	-	-
CONCRETE DITCH	=====	EXIST/CONC	CONTINUOUS	-	-
CULVERT	6" R.C.P.	EXIST/NEW	DASHED	-	-
CULVERT WITH HEADWALL	6" R.C.P.	EXIST/NEW	DASHED	-	-
CULVERT WITH END SECTION	6" R.C.P.	EXIST/NEW	DASHED	-	-
MONUMENT LINE	MONUMENT LINE	0	CONTINUOUS	-	-
CONTROL LINE	1+00 2+00	0	CONTINUOUS	-	100
MATCH LINE	MATCH LINE SHEET NO.	0	CONTINUOUS	-	-

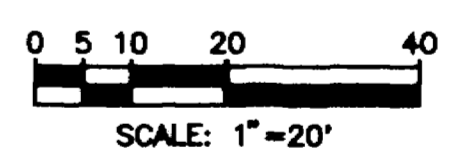
		LIST OF ABBREVIATIONS			
AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY & TRANSPORTATION OFFICIALS	EP	EDGE OF PAVEMENT	PRC	POINT OF REVERSE CURVATURE
AC	ASBESTOS CEMENT	EX	EXISTING	PT	POINT OF TANGENCY
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS	FB	FULL BODY	PVC	POLYVINYL CHLORIDE
AWWA	AMERICAN WATER WORKS ASSOCIATION	FF	FINISH FLOOR	PCC	PORTLAND CEMENT CONCRETE
BC	BACK OF CURB	FL	FLANGE	R	RADIUS
BF	BUTTERFLY	FTG	FOOTING	RG	RESTRAINED GLANDS
BOW	BACK OF WALK	FS	FAR SIDE	RR	RADIUS POINT
BCR	BEGIN CURB RETURN	FC	FACE OF CURB	RCP	RAIL ROAD
BOT	BOTTOM	FG	FINISHED GRADE	REQ'D	REINFORCED CONCRETE PIPE
CH	CHORD	GV	GATE VALVE	RT	REQUIRED
CAP	CORRUGATED ALUMINUM PIPE	IRRIG	IRRIGATION	RT	RIGHT
CDOT	COLORADO DEPARTMENT OF TRANSPORTATION	L	LENGTH OF ARC	ROW	RIGHT OF WAY
CI	CAST IRON	LT	LEFT	RL	LONG RADIUS
C	CENTER LINE	LF	LINEAR FEET	RS	SHORT RADIUS
CL or CI	CLEAR	LL	LONG ARC	S	SLOPE
C.O.	CLEAN OUT (SEWER SERVICE)	LS	SHORT ARC	STA	STATION
CONC	CONCRETE	MH	MANHOLE	STL	STEEL
CMP	CORRUGATED METAL PIPE	MJ	MECHANICAL JOINT	T	TYPICAL
CSP	CORRUGATED STEEL PIPE	MW	MILL WRAP	T	LENGTH OF TANGENT
CG & SW	CURB, GUTTER & SIDEWALK	N/A	NOT APPLICABLE	TC	TOP OF CURB
CU	COPPER	NS	NEAR SIDE	VC	VERTICAL CURVE
CL	LONG CHORD	NIC	NOT IN CONTRACT	VCP	VITRIFIED CLAY PIPE
CS	SHORT CHORD	NRCP	NON-REINFORCED CONCRETE PIPE	VPC	VERTICAL POINT OF CURVATURE
DI	DUCTILE IRON	NOP	NO ONE PERSON	VPI	VERTICAL POINT OF INTERSECTION
DR or DWY	DRIVEWAY	NTS	NOT TO SCALE	VPT	VERTICAL POINT OF TANGENCY
ELEC	ELECTRIC	PC	POINT OF CURVATURE	Δ	DELTA ANGLE
EL or ELEV	ELEVATION	PI	POINT OF INTERSECTION		
ECR	END CURB RETURN	PR	PROPOSED		

ENTITY CHARACTERISTICS				
ENTITY	LAYER	COLOR	TEXT STYLE	LINE TYPE
DIMENSION LINES	0	WHITE	-	CONTINUOUS
TEXT	TEXT	YELLOW	TEXT	-
SHEET TITLE	TITLE	CYAN	TITLE	-
STREET NAMES	TITLE	CYAN	TITLE	-
SUBTITLES	TITLE	CYAN	HEADINGS	-
AS BUILT INFO.	ASBLT	RED	ASBLT	-
ROW LINES	ROW	RED	-	PHANTOM
EXISTING TOPO	EXIST	WHITE	-	CONTINUOUS
NEW CONCRETE	CONC	GREEN	-	CONTINUOUS
NEW ASPHALT	ASPH	YELLOW	-	DASHED
PROPERTY LINES	PROP	BLUE	-	ROW
SHADING	HATCH	WHITE	-	HATCH
EXISTING PROFILE	EXPRO	WHITE	-	DASHED
NEW PROFILE	PROFILE	GREEN	-	CONTINUOUS
SOLID GRID	GRID1	8	-	CONTINUOUS
DOTTED GRID	GRID2	8	-	L1
EXISTING UTILITY	UTIL	WHITE	-	CONTINUOUS
NEW SEWER	SEWER	15	-	CONTINUOUS
NEW STORM SEWER	STORM	9	-	CONTINUOUS
NEW WATER	WATER	9	-	CONTINUOUS
NEW MISC.	NEW	MAGENTA	-	CONTINUOUS
SHEET BORDER	BORDER	GREEN	-	PLINE (WIDTH=1)

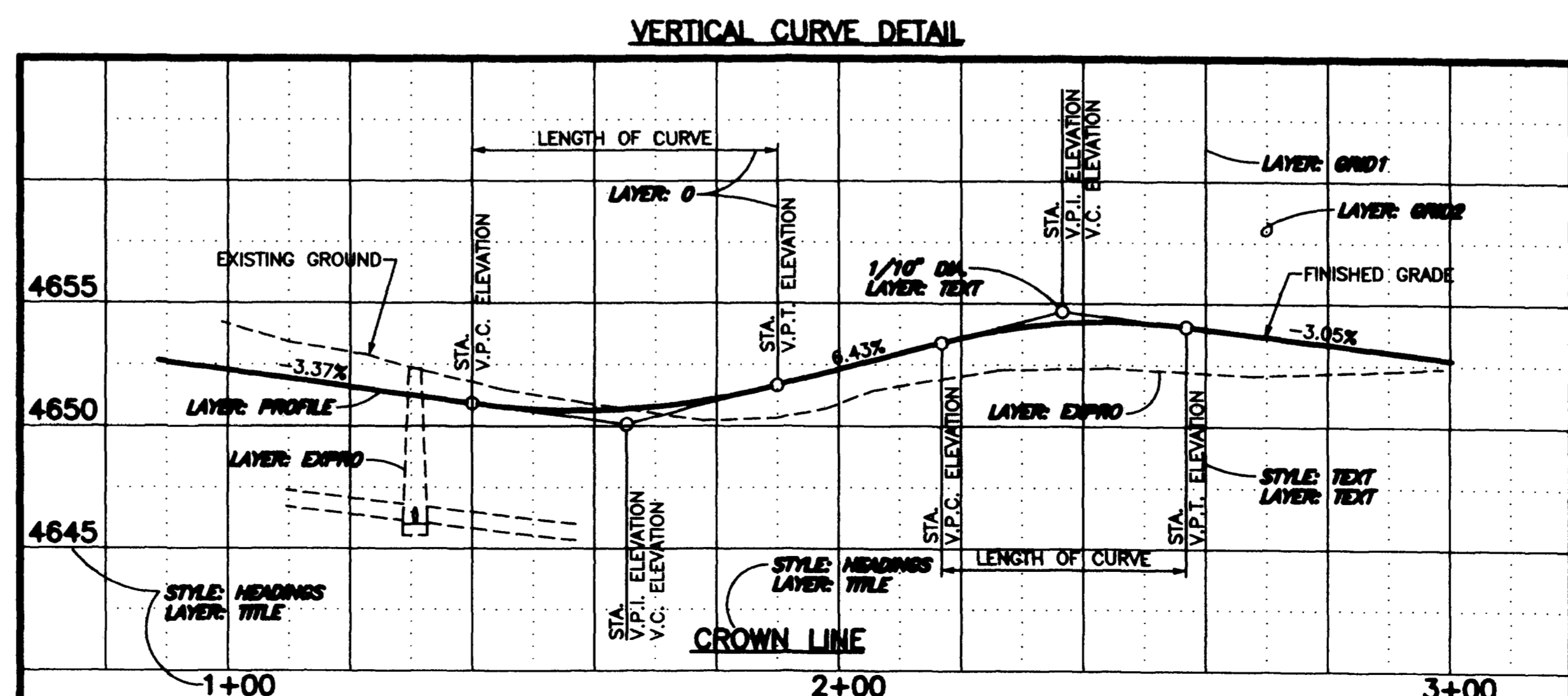
PLOTING PARAMETERS		
COLOR NAME	PEN SIZE	SHADING
RED	0.25	45%
YELLOW	0.70	15%
GREEN	0.50	100%
CYAN	0.50	100%
BLUE	0.50	100%
MAGENTA	0.50	100%
WHITE	0.35	100%
8	0.13	100%
9	0.70	100%
10	0.65	100%
11	0.50	60%
12	0.18	100%
13	0.18	100%
14	0.35	20%
15	0.70	45%
16	0.50	45%
17	0.18	100%
18	0.35	30%
22	0.25	100%



SHADING LEGEND
SEE INDIVIDUAL PLAN & PROFILE SHEETS



TEXT STYLE DESCRIPTIONS	
TEXT	- FONT=ROMANS, HEIGHT=2.0, WIDTH FACTOR=1.0 OBLIQUE ANGLE=0°
HEADINGS	- FONT=ROMANS, HEIGHT=3.0, WIDTH FACTOR=1.0 OBLIQUE ANGLE=0°
TITLE	- FONT=COMPLEX, HEIGHT=4.0, WIDTH FACTOR=1.2 OBLIQUE ANGLE=0°
ASBLT	- FONT=ROMANS, HEIGHT=2.0, WIDTH FACTOR=1.0 OBLIQUE ANGLE=20°

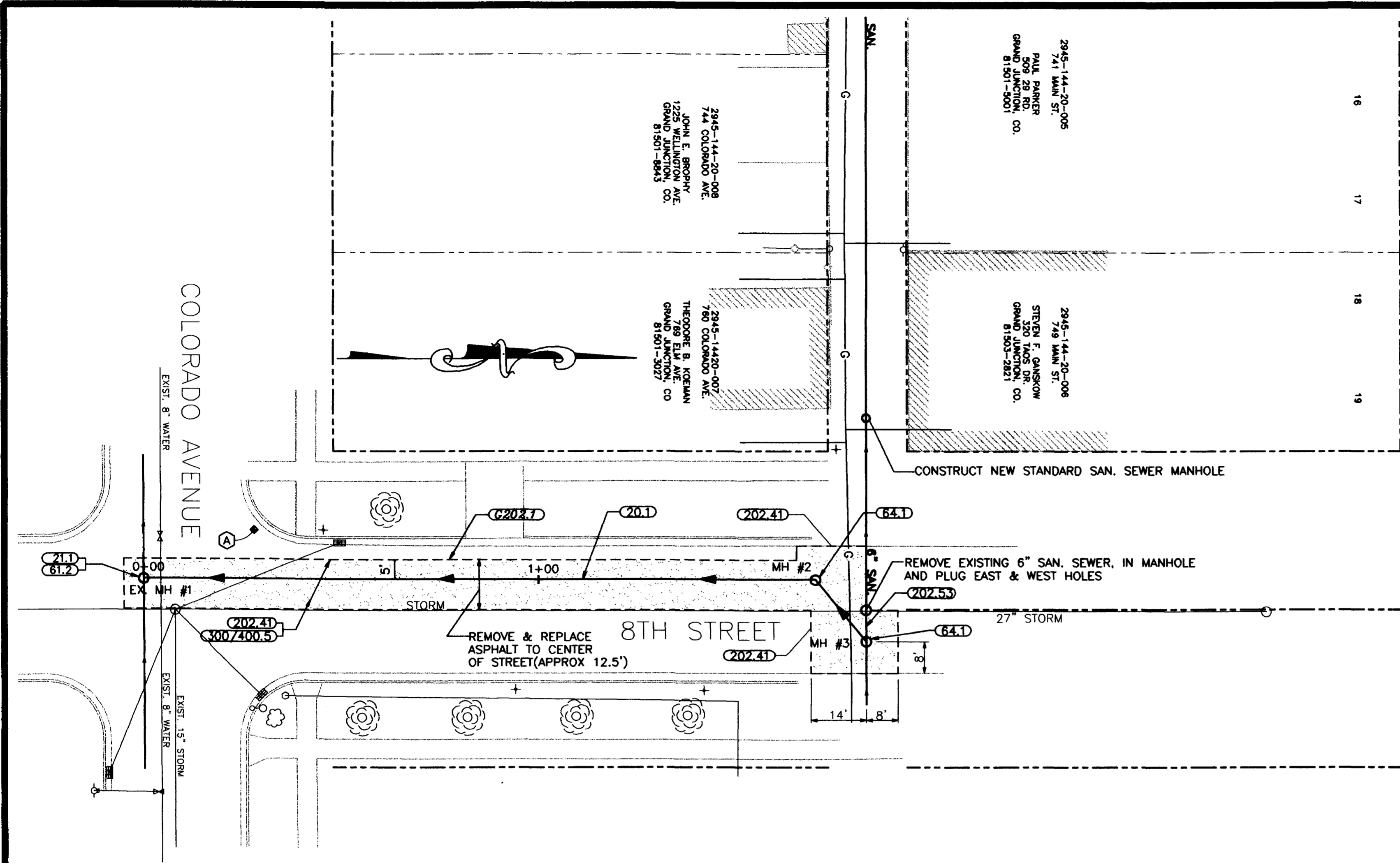


REVISION	DESCRIPTION	DATE	DRAWN BY	DATE	CHECKED BY	DATE	APPROVED BY	DATE	FIELD BOOK NO.	PAGE
Δ			KADEL	7/28/92	KADEL	7/28/92	T.A.B.	7/28/92		

**DEPARTMENT OF PUBLIC WORKS AND UTILITIES
ENGINEERING DIVISION
CITY OF GRAND JUNCTION, COLORADO**

**MAIN PROJECT TITLE
SUB-PROJECT TITLE
Sheet Description**

SHEET NO. 98SLR-3
OF _____
FILE NO. 98SLR-3.DWG

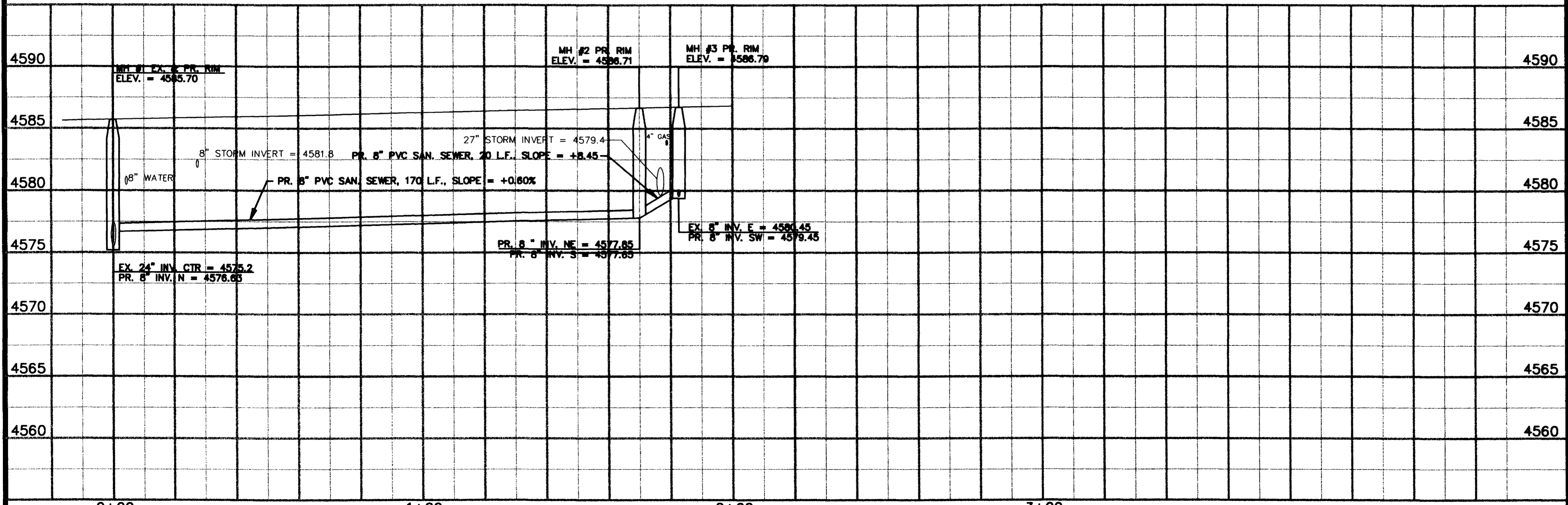


COORDINATES				
PT.	DESCRIPTION	NORTHING	EASTING	ELEVATION
A	CSM 8th/COLO.	1000.00	1500.00	4584.00
B	CSM 8th./MAIN	1370.75	1500.00	4587.42

COORDINATES				
PT.	DESCRIPTION	NORTHING	EASTING	ELEVATION

CONSTRUCTION NOTES

- (20.1) Construct 8" SDR 35 PVC sanitary sewer.
- (21.1) Connect the proposed sewerline to the existing MH, and grout seal around pipe.
- (61.2) Provide MH corrosion protection per Special Provisions.
- (64.1) Construct standard 4' dia. MH.
- (202.1) Boundary shows limits of demolition and removals. Any removals and replacements outside of the boundary shall be at the contractor's expense, unless specifically provided for otherwise.
- (202.41) Remove asphalt pavement as shown.
- (202.53) Remove sanitary sewer.
- (300/400.5) Construct ABC and HMA pavement patch. Match existing thickness unless noted otherwise.

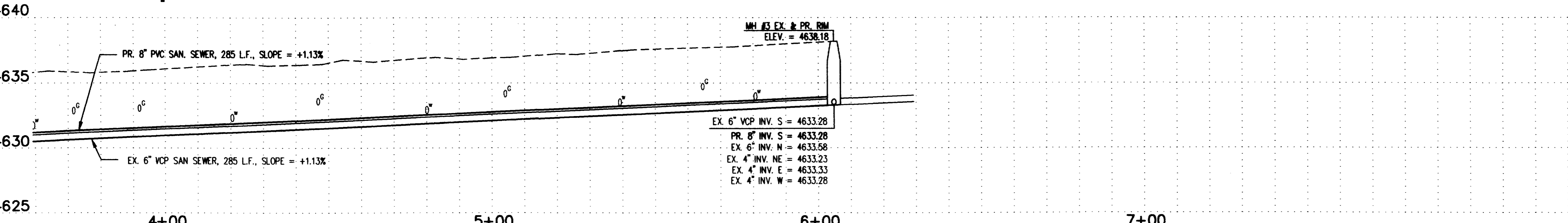
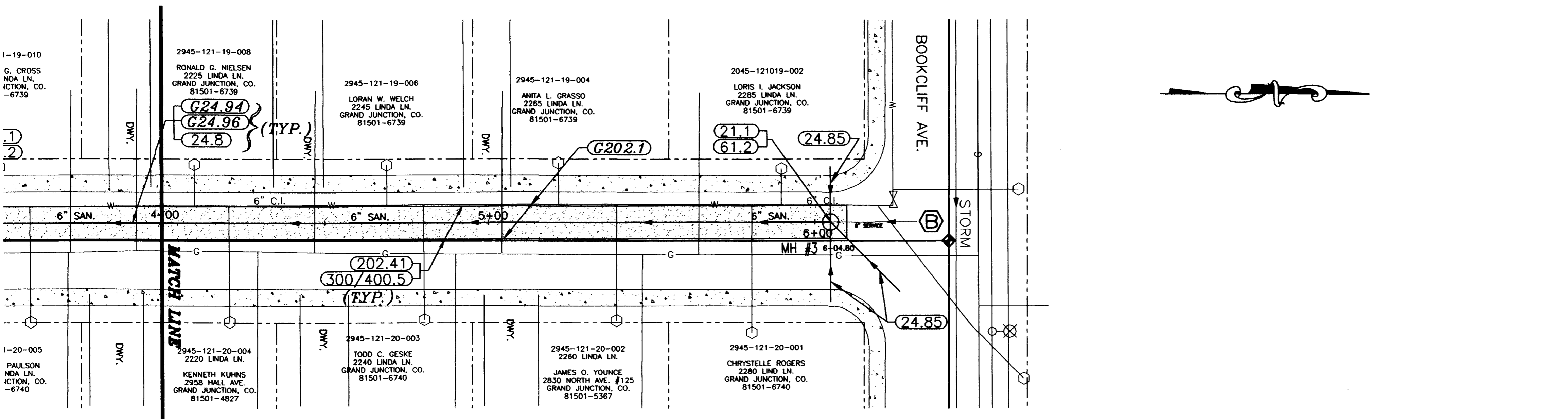
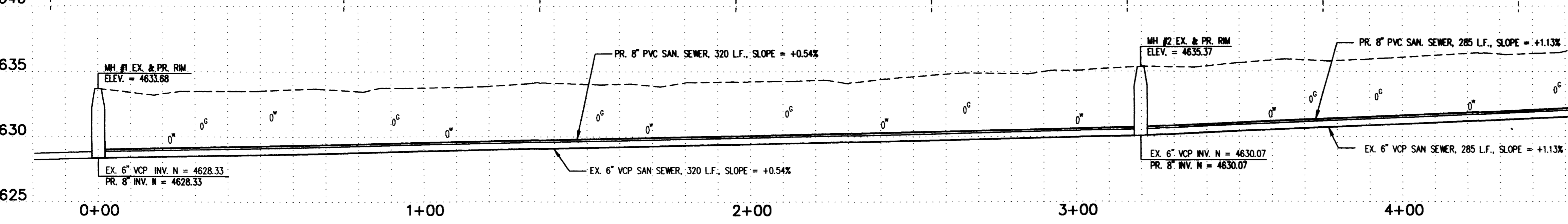
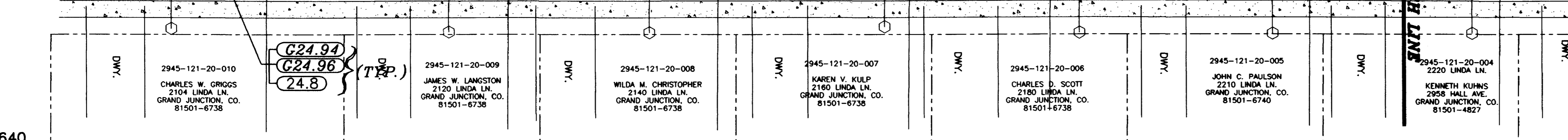
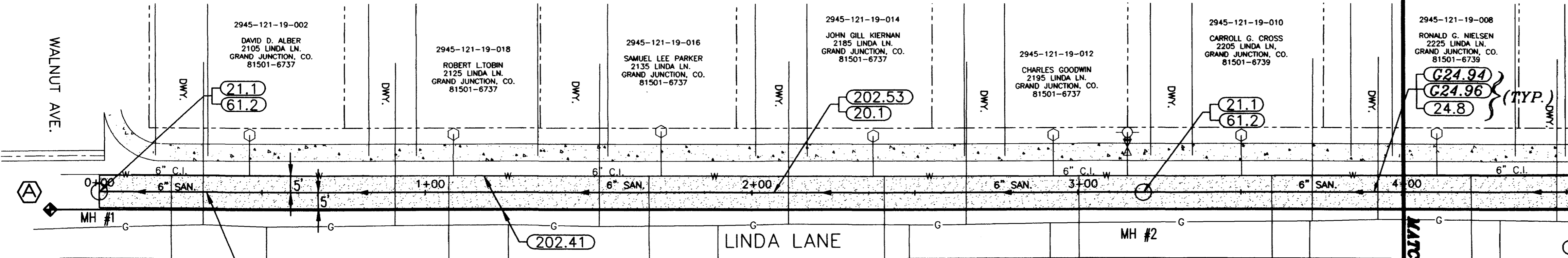


REVISION Δ	DESCRIPTION	DATE	DRAWN BY	E.P.T.	DATE	6-12-97	SCALE
REVISION Δ			CHECKED BY		DATE		PLAN 1"=20' PROFILE 1"=20'
REVISION Δ			APPROVED BY		DATE		HORIZ. 1"=20' VERT. 1"=5'
REVISION Δ			FIELD BOOK NO.		PAGE		

**DEPARTMENT OF PUBLIC WORKS AND UTILITIES
ENGINEERING DIVISION
CITY OF GRAND JUNCTION, COLORADO**

**1997 SEWERLINE REPLACEMENTS
8TH STREET & COLORADO AVENUE
Plan & Profile**

SHEET NO. 4
OF 11
FILE NO.
COLOMAIN2.DWG



SHADING AND TEXTURE LEGEND			
FACILITY OR SURFACE TREATMENT	EXISTING	PROPOSED	REMOVE & REPLACE
ASPHALT PAVEMENT	[Pattern]	[Pattern]	[Pattern]
CONCRETE (C, G, SW, SLABS)	[Pattern]	[Pattern]	[Pattern]
CONCRETE (DWYS, RAMPS)	[Pattern]	[Pattern]	[Pattern]
CONCRETE (DECORATIVE)	[Pattern]	[Pattern]	[Pattern]
CLASS 6 AGGREGATE GRAVEL	[Pattern]	[Pattern]	[Pattern]
LANDSCAPE ROCK ON PLASTIC	[Pattern]	[Pattern]	[Pattern]
GRASS SOD	[Pattern]	[Pattern]	[Pattern]
BUILDING	[Pattern]	[Pattern]	[Pattern]

COORDINATES (TOP & BOTTOM PLAN)				
(PT.)	DESCRIPTION	NORTHING	EASTING	ELEVATION
A	CSM - WALNUT & LINDA	2000.00	2000.00	4633.41
B	CSM - BOOKCLIFF & LINDA	2656.22	2000.00	4638.59
	MH - 1	2015.08	1994.50	4633.68
	MH - 2	2335.14	1994.75	4635.37
	MH - 3	2619.88	1994.29	4638.18

(PT.)	DESCRIPTION	NORTHING	EASTING	ELEVATION

CONSTRUCTION NOTES

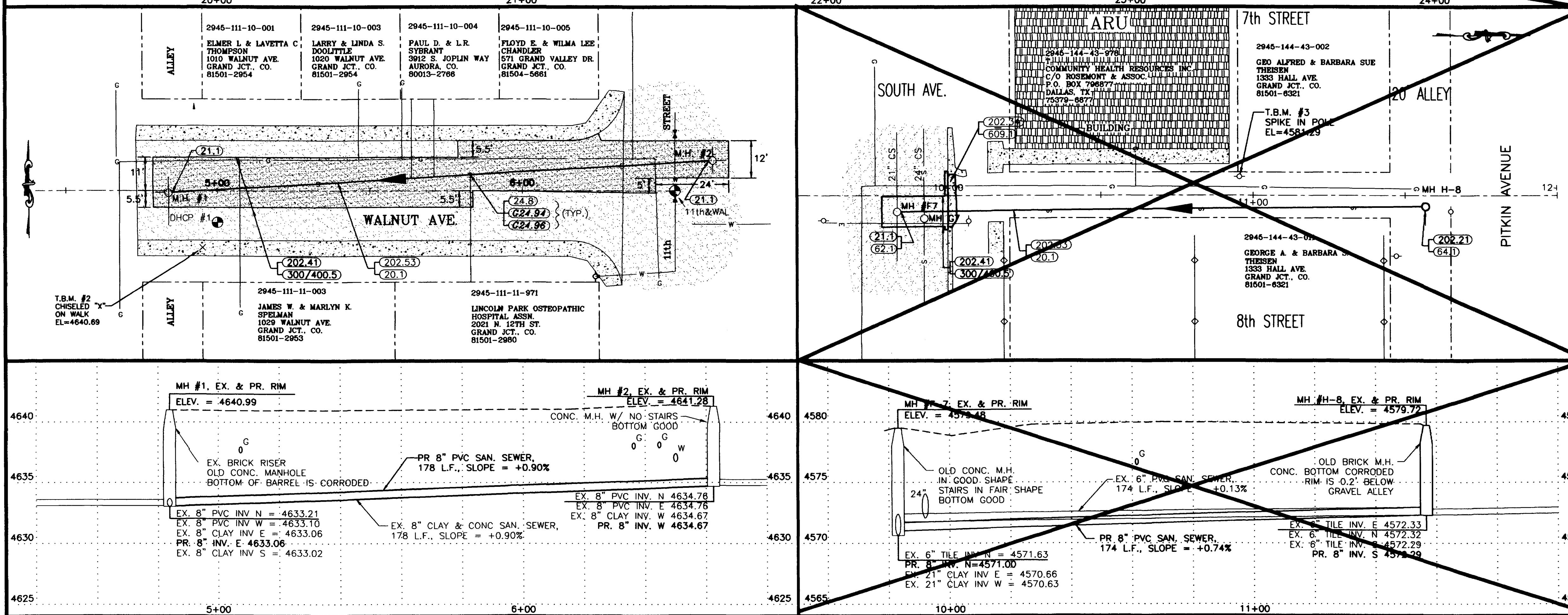
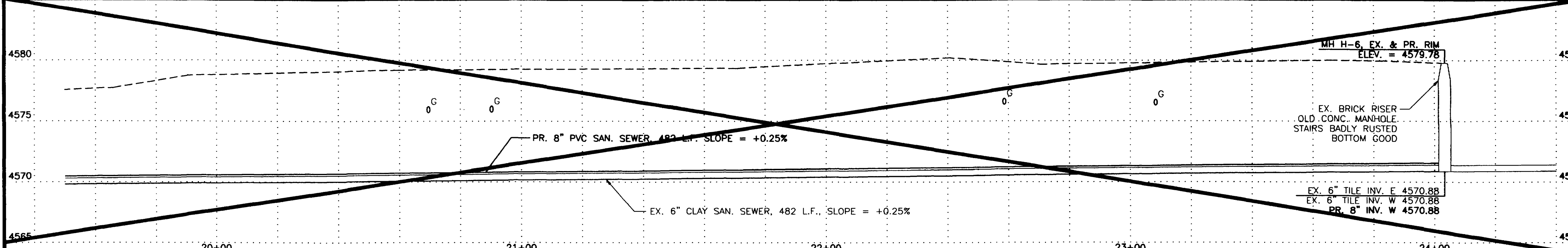
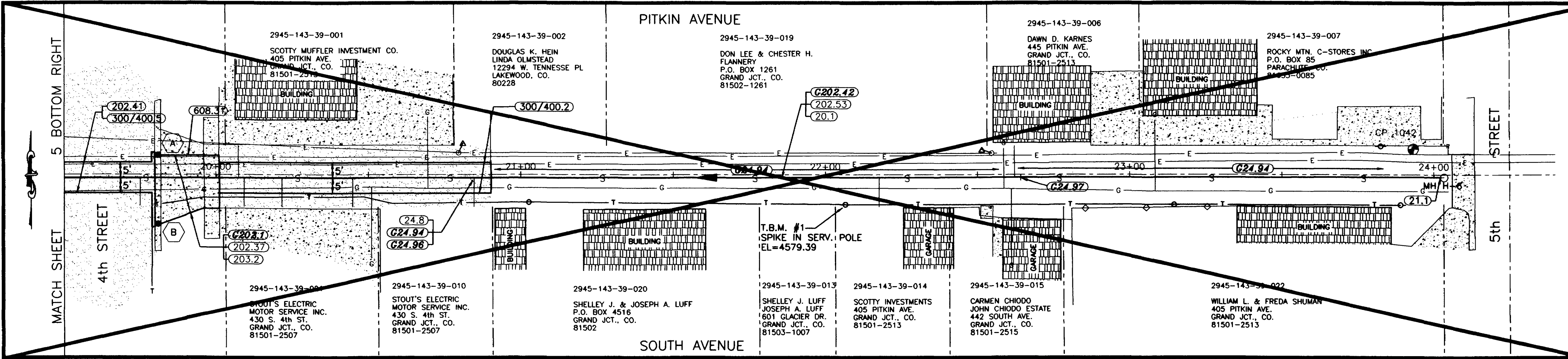
- (20.1) Construct 8" SDR 35 PVC sanitary sewer.
- (21.1) Connect the proposed sewerline to the existing MH, and grout seal around pipe.
- (24.8) Install full body wye sewer tap and connect to all active existing sewer services.
- (24.85) Install full body wye sewer tap and connect to all active existing sewer services downstream of MH. Grout and seal abandoned service lines in MH.
- (24.94) Not all sewer services may be shown. The Contractor shall locate all active services and provide as-constructed locations for all taps.
- (24.96) Use of dye is effective in locating active sewer taps. If in doubt as to whether a tap is active or not, replace and reconnect.
- (61.2) Provide MH corrosion protection per Special Provisions.
- (202.1) Boundary shows limits of demolition and removals. Any removals and replacements outside of the boundary shall be at the contractor's expense, unless specifically provided for otherwise.
- (202.41) Remove asphalt pavement as shown.
- (202.53) Remove sanitary sewer.
- (300/400.5) Construct ABC and HMA pavement patch. Match existing thickness unless noted otherwise.

REVISION	DESCRIPTION	DATE	DRAWN BY	E.P.T.	DATE	6-4-97	SCALE
REVISION			CHECKED BY		DATE		PLAN 1"=20'
REVISION			APPROVED BY		DATE		PROFILE 1"=20'
REVISION			FIELD BOOK NO.		PAGE		VERT. 1"=5'

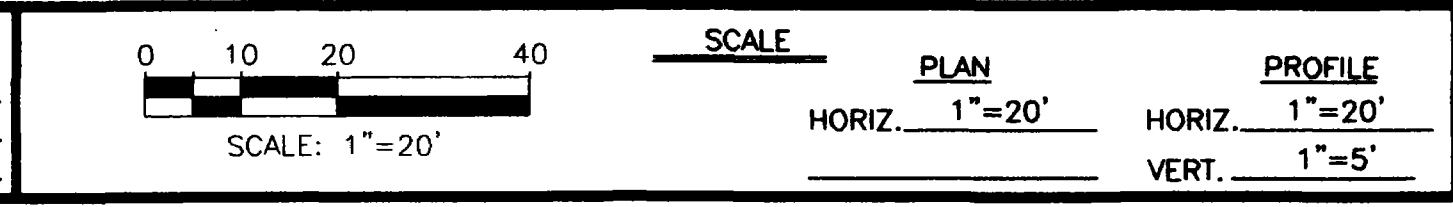
DEPARTMENT OF PUBLIC WORKS AND UTILITIES
ENGINEERING DIVISION
CITY OF GRAND JUNCTION, COLORADO

1997 SEWERLINE REPLACEMENTS
LINDA LANE
Plan & Profile

SHEET NO. 5
OF 11
FILE NO. LINDLANE.DWG



REVISION	DATE



SHADING AND TEXTURE LEGEND

FACILITY OR SURFACE TREATMENT	EXISTING	PROPOSED	REMOVE & REPLACE
ASPHALT PAVEMENT	[Pattern]	[Pattern]	[Pattern]
CONCRETE (C, G, SW, SLABS)	[Pattern]	[Pattern]	[Pattern]
CONCRETE (DWYs, RAMPS)	[Pattern]	[Pattern]	[Pattern]
CONCRETE (DECORATIVE)	[Pattern]	[Pattern]	[Pattern]
CLASS 6 AGGREGATE GRAVEL	[Pattern]	[Pattern]	[Pattern]
LANDSCAPE ROCK ON PLASTIC	[Pattern]	[Pattern]	[Pattern]
GRASS SOD	[Pattern]	[Pattern]	[Pattern]
BUILDING	[Pattern]	[Pattern]	[Pattern]

COORDINATES (TOP PLAN)

PT.	DESCRIPTION	NORTHING (0.0 = ?)	EASTING (STATIONING)	ELEVATION
CP6		10.48	1940.11	4578.74
CP1042		8.38	2393.30	4580.01
TBM #1		-9.71	2206.59	4580.56
MH H-6		-0.91	2402.47	--
A	EDGE OF DWY ?	6.23	1980.77	4578.01
B	EDGE OF DWY ?	-16.10	1980.80	4577.88

COORDINATES (BOTTOM LEFT)

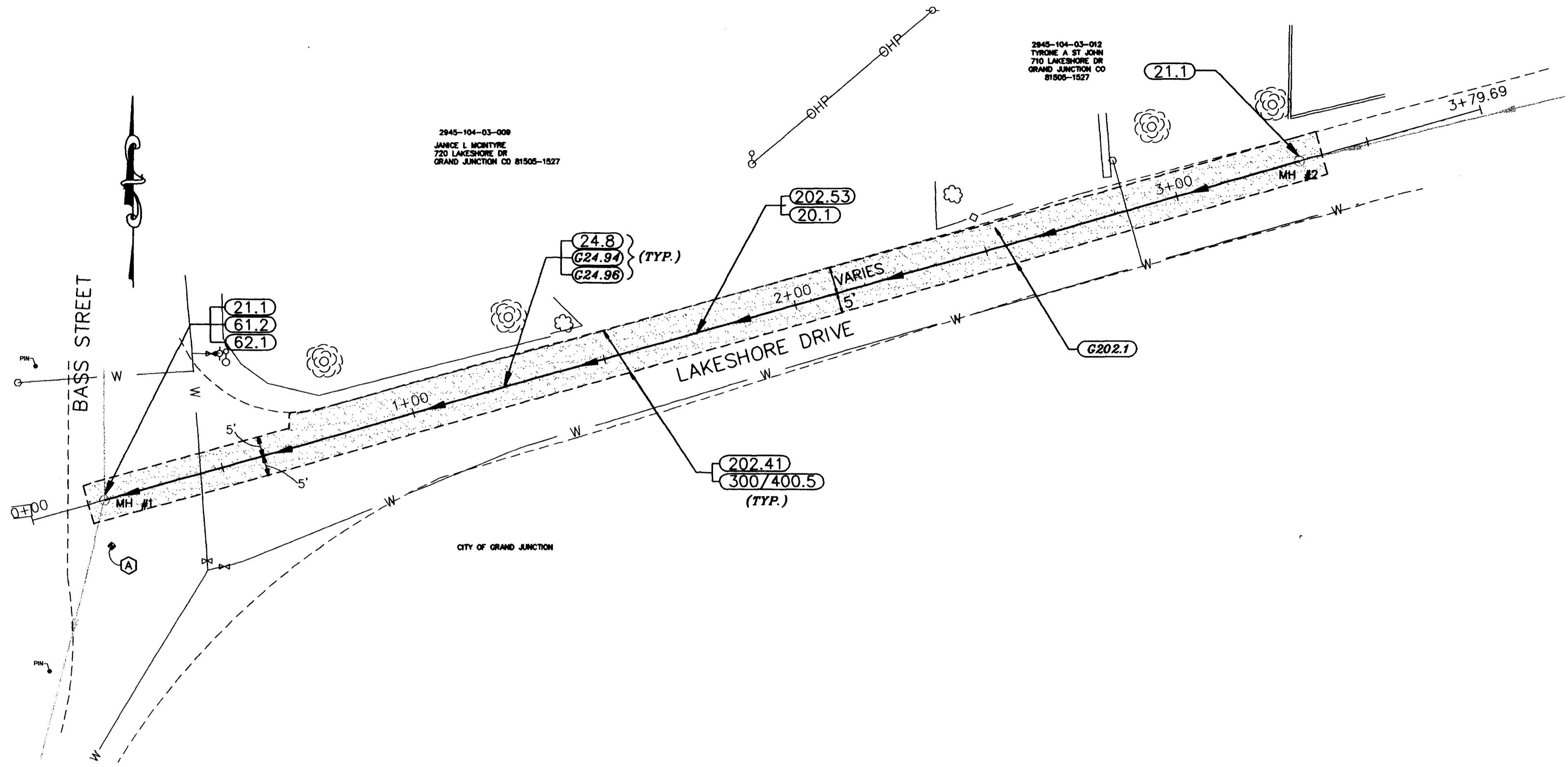
PT.	DESCRIPTION	NORTHING (0.0 = ?)	EASTING (STATIONING)	ELEVATION
	10th & WALNUT	0.0	320.00	4640.78
	11th & WALNUT	0.0	650.00	4641.51
	TBM #2	-18.62	495.11	4640.89
	DHCP #1	-10.37	500.00	4640.00
	MH #1	-0.68	483.70	--
	MH #2	9.95	662.37	--

COORDINATES (BOTTOM RIGHT)

PT.	DESCRIPTION	NORTHING (STATIONING)	EASTING (0.0 = ?)	ELEVATION
	8th & SOUTH CP2	1000.00	253.36	--
	7th & SOUTH CP57	1000.00	-218.08	4578.42
	TBM #3	1095.54	-6.10	4581.29
	MH #F-7	983.00	5.42	--
	MH #H-8	1156.67	3.67	--

CONSTRUCTION NOTES

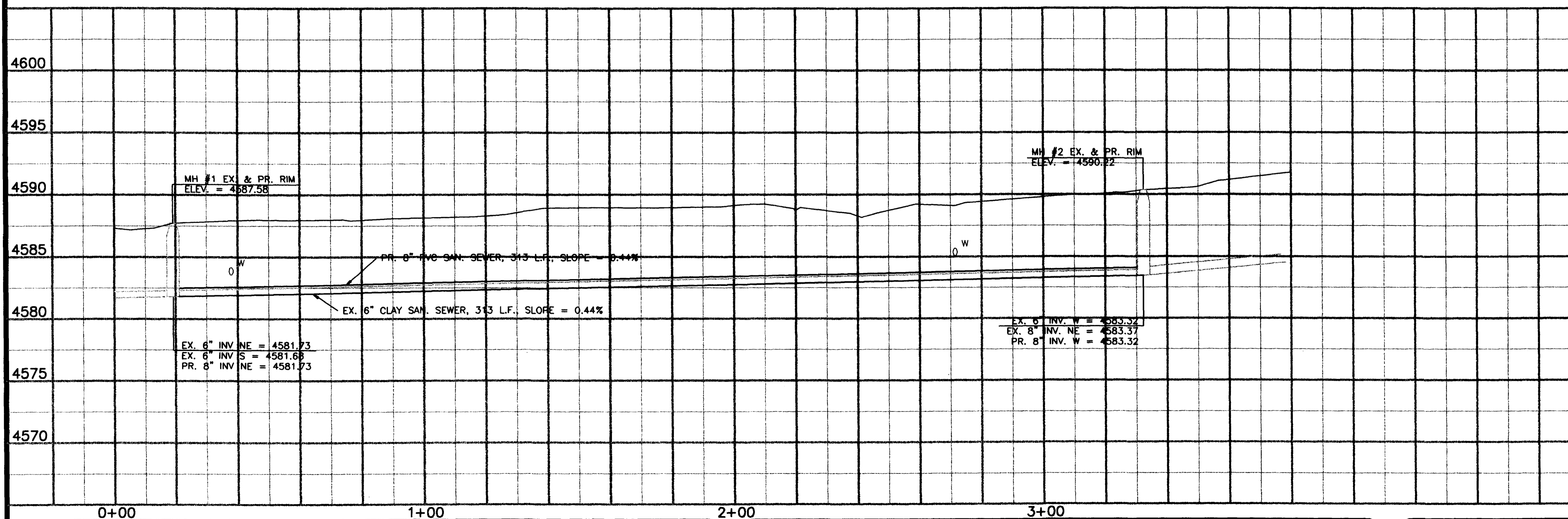
- (20.1) Construct 8" SDR 35 PVC sanitary sewer.
- (21.1) Connect the proposed sewerline to the existing MH, and grout seal around pipe.
- (24.8) Install full body wye sewer tap and connect to all active existing sewer services.
- (G24.87) Not all sewer services may be shown. The Contractor shall locate all active services and provide as-constructed locations for all taps.
- (G24.88) Use of dye is effective in locating active sewer taps. If in doubt as to whether a tap is active or not, replace and reconnect.
- (G24.89) The existing sewer service enters the top of the pipe in coming direction is unknown.
- (G24.90) Reshape the MH invert with epoxy grout. Grout thickness shall be at least 1". Remove existing concrete as required.
- (G24.91) Construct standard 1-210m dia. MH.
- (G24.92) Boundary shows limits of demolition and removal. Any removal and replacement outside of the boundary shall be at the contractor's expense, unless specifically provided for otherwise.
- (G24.93) Remove manhole.
- (G24.94) Remove concrete valley gutter to joints or dimensions where shown; otherwise, remove as required for construction. Sewout where necessary.
- (G24.95) Remove concrete curb, gutter, sidewalks, driveways, pavement, and/or slabs to joints or dimensions where shown; otherwise, remove as required for construction. Sewout as necessary.
- (202.41) Remove asphalt pavement as shown.
- (G202.42) Removal of asphalt pavement within alleys for pipe installation shall be paid for as part of the pipeline construction unit price.
- (202.53) Remove sanitary sewer.
- (G202.54) Excavate and/or backfill as required for proposed improvements.
- (G202.48.2) Construct 6" ABC and 3" single lift HMA pavement.
- (300/400.5) Construct ABC and HMA pavement patch. Match existing thickness unless noted otherwise.
- (301.4) Construct aggregate surface course.
- (608.33) Construct concrete driveway.
- (609.3) Construct concrete valley pan gutter.



COORDINATES (PLAN)				
PT.	DESCRIPTION	NORTHING	EASTING	ELEVATION
(A)	BASS & LAKESHORE	2213.41	561.18	4587.08
	MH-1	2225.03	559.35	4587.58
	MH-2	2310.17	860.66	4590.22
	MCSM PPLR / W.ORCH	2522.32	1585.66	4596.17

COORDINATES (BOTTOM RIGHT PLAN)				
PT.	DESCRIPTION	NORTHING	EASTING	ELEVATION

- CONSTRUCTION NOTES**
- (20.1) Construct 8" SDR 35 PVC sanitary sewer.
 - (21.1) Connect the proposed sewerline to the existing MH, and grout seal around pipe.
 - (24.8) Install full body wye sewer tap and connect to all active existing sewer services.
 - (G24.94) Not all sewer services may be shown. The Contractor shall locate all active services and provide as-constructed locations for all taps.
 - (G24.96) Use of dye is effective in locating active sewer taps. If in doubt as to whether a tap is active or not, replace and reconnect.
 - (61.2) Provide MH corrosion protection per Special Provisions.
 - (G202.1) Boundary shows limits of demolition and removals. Any removals and replacements outside of the boundary shall be at the contractor's expense, unless specifically provided for otherwise.
 - (202.41) Remove asphalt pavement as shown.
 - (202.53) Remove sanitary sewer.
 - (300/400.5) Construct ABC and HMA pavement patch. Match existing thickness unless noted otherwise.
 - (62.1) Reshape the MH invert with epoxy grout. Grout thickness shall be at least 1". Remove existing concrete as required.

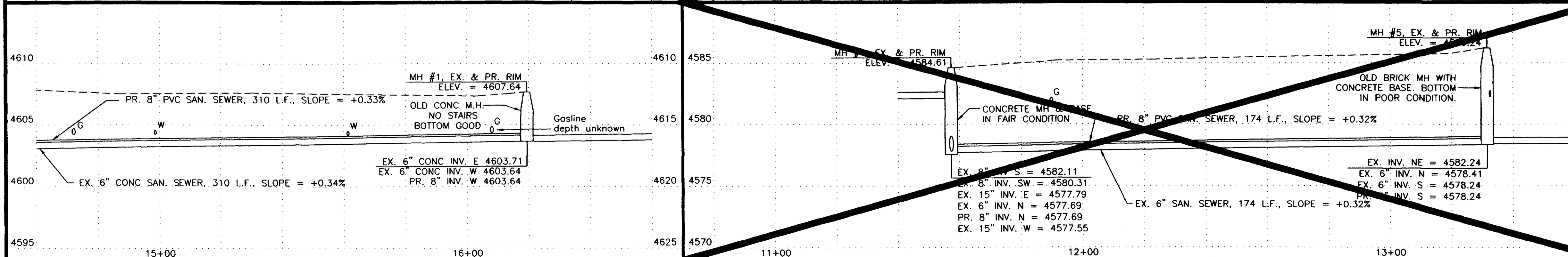
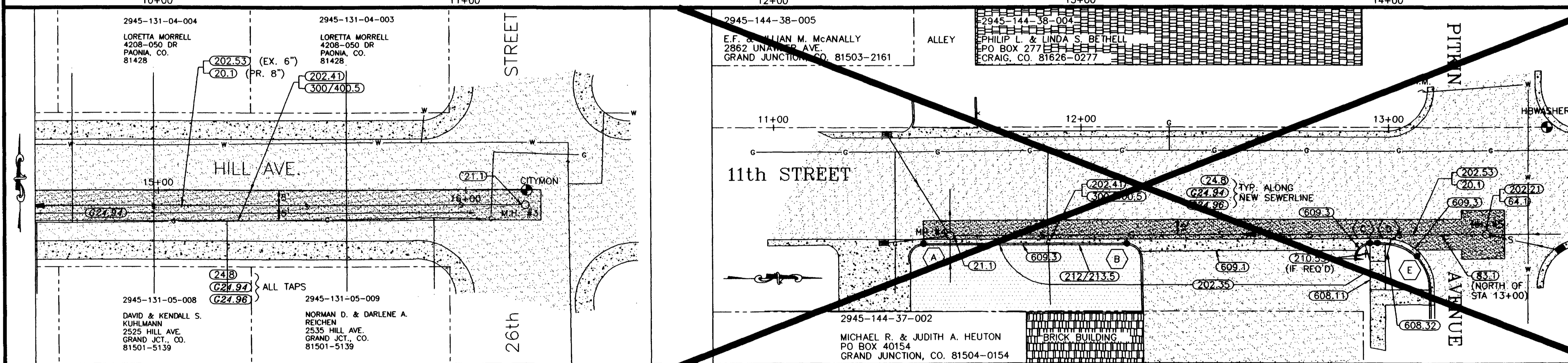
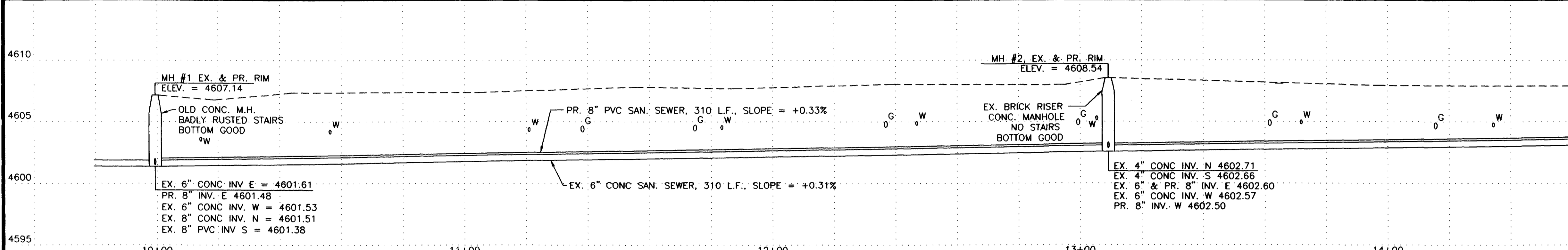
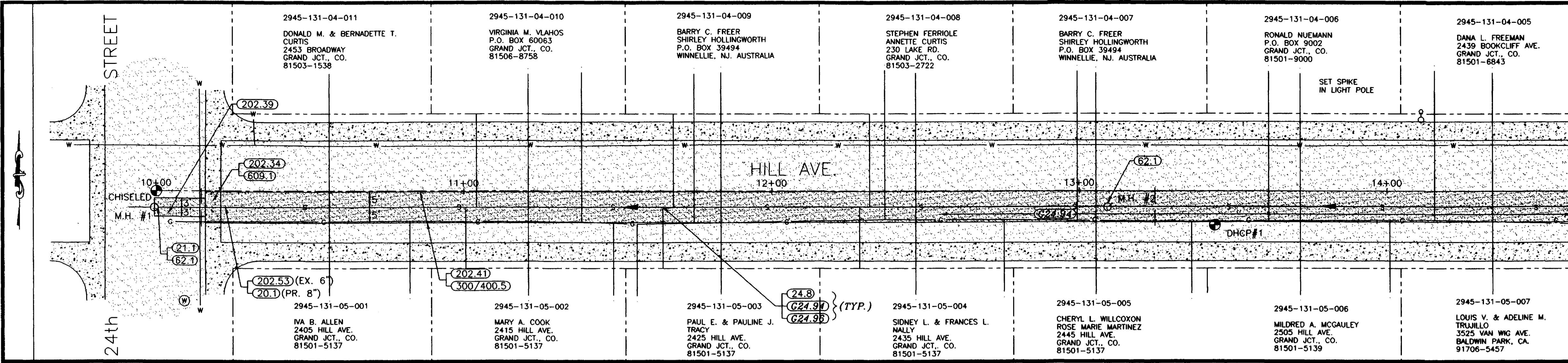


REVISION Δ	DESCRIPTION	DATE	DRAWN BY E.P.T.	DATE 6-13-97	SCALE
REVISION Δ			CHECKED BY	DATE	PLAN 1"=20'
REVISION Δ			APPROVED BY	DATE	PROFILE 1"=20'
REVISION Δ			FIELD BOOK NO.	PAGE	VERT. 1"=5'

DEPARTMENT OF PUBLIC WORKS AND UTILITIES
ENGINEERING DIVISION
CITY OF GRAND JUNCTION, COLORADO

1997 SEWERLINE REPLACEMENTS
LAKESHORE DRIVE
Plan & Profile

SHEET NO. 7
 OF 11
 FILE NO. LAKER2.DWG



SHADING AND TEXTURE LEGEND

FACILITY OR SURFACE TREATMENT	EXISTING	PROPOSED	REMOVE & REPLACE
ASPHALT PAVEMENT	[Pattern]	[Pattern]	[Pattern]
CONCRETE (C. G. SW. SLABS)	[Pattern]	[Pattern]	[Pattern]
CONCRETE (DWYS, RAMPS)	[Pattern]	[Pattern]	[Pattern]
CONCRETE (DECORATIVE)	[Pattern]	[Pattern]	[Pattern]
CLASS 6 AGGREGATE GRAVEL	[Pattern]	[Pattern]	[Pattern]
LANDSCAPE ROCK ON PLASTIC	[Pattern]	[Pattern]	[Pattern]
GRASS SOD	[Pattern]	[Pattern]	[Pattern]
BUILDING	[Pattern]	[Pattern]	[Pattern]

COORDINATES (TOP PLAN)

(PT.)	DESCRIPTION	NORTHING (0.0 = ?)	EASTING (STATIONING)	ELEVATION
	CHISELED	0.0	1000.00	4608.22
	DHCP#1	-11.05	1343.93	4608.22
	SPIKE	23.04	1411.12	4608.07
	MH-1	-5.30	999.34	---
	MH-2	-5.16	1309.12	---

COORDINATES (BOTTOM LEFT)

(PT.)	DESCRIPTION	NORTHING (0.0 = ?)	EASTING (STATIONING)	ELEVATION
	CITYMON	0.0	1619.73	4607.47
	MH-3	-4.77	1619.35	---

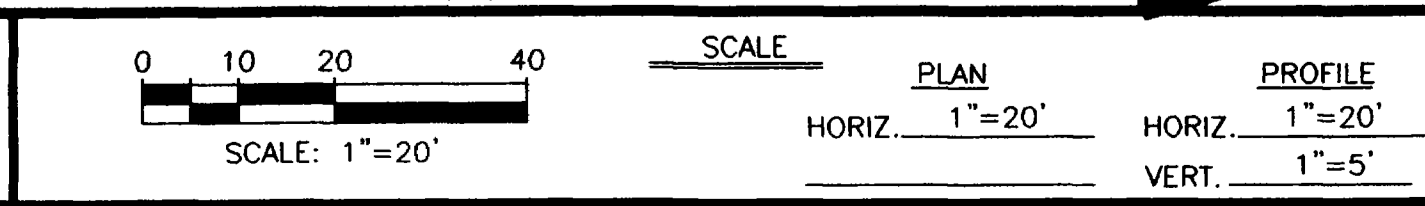
COORDINATES (BOTTOM RIGHT)

(PT.)	DESCRIPTION	NORTHING (STATIONING)	EASTING (0.0 = ?)	ELEVATION
	"X" INROC	1000.00	0.0	4584.49
	HBWASHER	1351.46	0.0	4585.62
	MH-4	1157.27	-35.28	---
	MH-5	1331.57	-34.78	---
	A ? AT CURB RETURN	1148.63	37.86	4584.47
	B ? AT CURB RETURN	1214.68	37.91	4585.12
	C ? AT CURB RETURN	1293.76	37.66	4583.91
	D ? AT ? RAMP	1296.24	37.64	4583.93
	E ? AT ? CURB RET.	1309.06	41.94	4585.26

CONSTRUCTION NOTES

- (20.1) Construct 8" SDR 35 PVC sanitary sewer.
- (21.1) Connect the proposed sewerline to the existing MH, and groud seal around pipe.
- (24.8) Install full body wye sewer top and connect to all active existing sewer services.
- (G24.94) Not all sewer services may be shown. The Contractor shall locate all active services and provide as-constructed locations for all taps.
- (G24.96) Use of dye is effective in locating active sewer taps. If in doubt as to whether a tap is active or not, replace and reconnect.
- (62.1) Reshape the MH invert with epoxy grout. Grout thickness shall be at least 1". Remove existing concrete as required.
- (64.1) Construct standard 4" dia. MH.
- (65.1) Provide flowable fill backfill.
- (202.21) Remove manhole.
- (202.34) Remove concrete valley gutter to joints or dimensions where shown; otherwise, remove as required for construction. Sawcut where necessary.
- (202.35) Remove all concrete curb, gutter, sidewalk, driveway, and/or slabs as shown. Sawcut where necessary.
- (212/213.5) Replace removed or damaged landscape rock on plastic along the edge of proposed improvements.
- (202.39) Sawcut, remove and replace concrete pavement, including doweling, to dimensions shown. Construct 8" thick Portland Cement concrete pavement patch. Smooth steel dowels (1" dia. x 15") shall be placed at 12" centers and located in center of thickness on North and South sides of patch only.
- (202.41) Remove asphalt pavement as shown.
- (202.53) Remove sanitary sewer.
- (210.55) Relocate traffic sign.
- (300/400.5) Construct ABC and HMA pavement patch. Match existing thickness unless noted otherwise.
- (608.11) Construct concrete sidewalk.
- (608.32) Construct concrete disabled pedestrian ramp.
- (609.1) Construct concrete valley pan gutter.
- (609.3) Construct concrete curb and gutter.

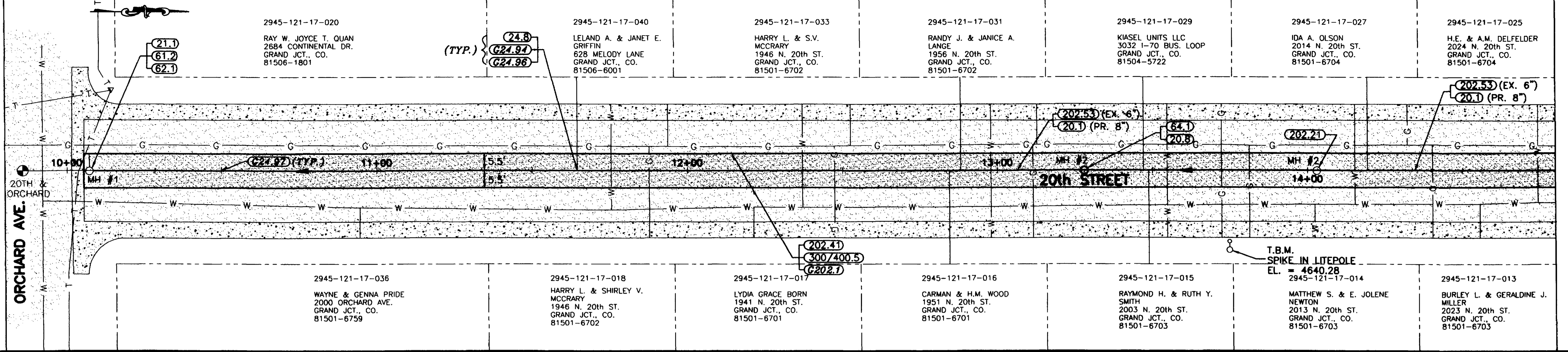
REVISION	DESCRIPTION	DATE



WILLIAMS ENGINEERING
 1231 19 ROAD, FRUITA, COLORADO 81521-9689
 (970) 858-1014 PHONE (970) 858-1007 FAX

1996 SEWERLINE REPLACEMENTS
COLLECTOR SEWERS
 24th-26th, Hill Ave. & 11th, Pitkin Ave. - Alley

SHEET 8
 FILENAME
 96SLR-8.DWG



SHADING AND TEXTURE LEGEND

FACILITY OR SURFACE TREATMENT	EXISTING	PROPOSED	REMOVE & REPLACE
ASPHALT PAVEMENT	[Pattern]	[Pattern]	[Pattern]
CONCRETE (C. G. SW. SLABS)	[Pattern]	[Pattern]	[Pattern]
CONCRETE (DWYS, RAMPS)	[Pattern]	[Pattern]	[Pattern]
CONCRETE (DECORATIVE)	[Pattern]	[Pattern]	[Pattern]
CLASS 6 AGGREGATE GRAVEL	[Pattern]	[Pattern]	[Pattern]
LANDSCAPE ROCK ON PLASTIC	[Pattern]	[Pattern]	[Pattern]
GRASS SOD	[Pattern]	[Pattern]	[Pattern]
BUILDING	[Pattern]	[Pattern]	[Pattern]

COORDINATES (TOP & BOTTOM LEFT PLAN)

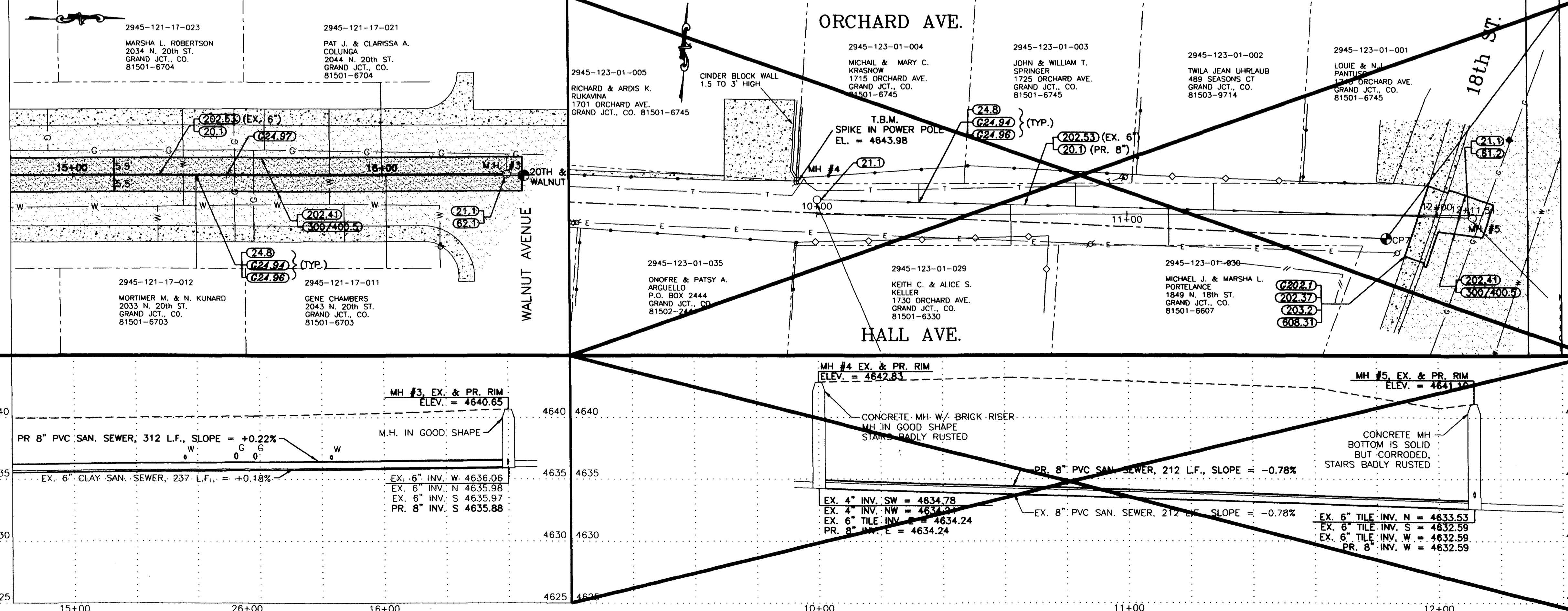
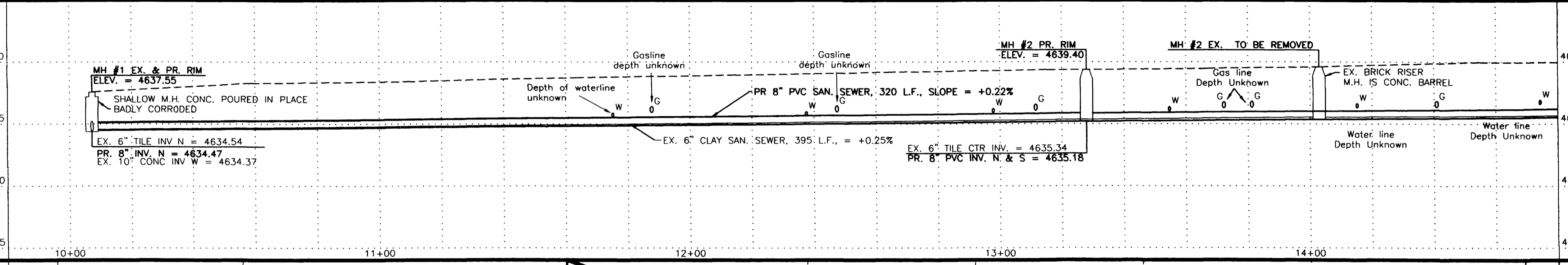
PT.	DESCRIPTION	NORTHING (STATIONING)	EASTING (0.0 = ?)	ELEVATION
	20th & ORCHARD	985.73	0.00	4640.40
	20th & WALNUT	1645.56	0.00	4640.40
	TBM LITEPOLE	1374.63	25.44	4640.28
	MH-1	1007.20	0.14	---
	MH-2	1402.94	-0.01	---
	MH-3	1640.00	-0.43	---

COORDINATES (BOTTOM RIGHT PLAN)

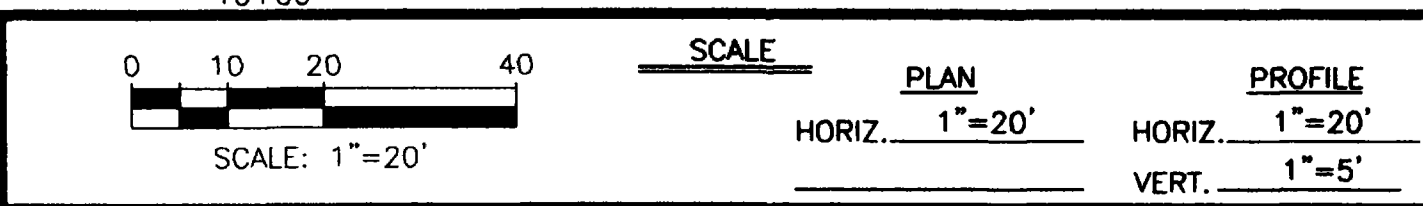
PT.	DESCRIPTION	NORTHING (STATIONING)	EASTING (STATIONING)	ELEVATION
	CP-2	107.98	1271.52	---
	CP-7	-7.81	1183.43	4641.51
	CP 68	12.75	724.03	4639.90
	TBM #2	10.33	993.37	4643.98
	MH-4	4.75	1000.00	---
	MH-5	-1.02	1211.43	---

CONSTRUCTION NOTES

- (20.1) Construct 8" SDR 35 PVC sanitary sewer.
- (20.8) Construct sewerline through new manhole, cut out top of pipe, form bottom of manhole around new pipe.
- (21.1) Connect the proposed sewerline to the existing MH, and grout seal around pipe.
- (24.8) Install full body wye sewer tap and connect to all active existing sewer services.
- (G24.97) Not all sewer services may be shown. The Contractor shall locate all active services and provide as-constructed locations for all taps.
- (G24.98) Use of dye is effective in locating active sewer taps. If in doubt as to whether a tap is active or not, replace and reconnect.
- (G24.97) The existing sewer service enters the top of the pipe. In-coming direction is unknown.
- (61.2) Provide MH corrosion protection per Special Provisions.
- (62.1) Reshape the MH invert with epoxy grout. Grout thickness shall be at least 1". Remove existing concrete as required.
- (64.1) Construct standard 4' dia. MH.
- (202.21) Remove manhole.
- (G202.1) Boundary shows limits of demolition and removals. Any removals and replacements outside of the boundary shall be at the contractor's expense, unless specifically provided for otherwise.
- (G202.37) Remove concrete curb, gutter, sidewalks, driveways, pavement, and/or slabs to joints or dimensions where shown; otherwise, remove as required for construction. Sewer as necessary.
- (202.41) Remove asphalt pavement as shown.
- (202.53) Remove sanitary sewer.
- (203.1) Excavate and/or backfill as required for proposed improvements.
- (300/400.5) Construct ABC and HMA pavement patch. Match existing thickness unless noted otherwise.
- (608.13) Construct concrete driveway.



REVISION	DATE
REVISION A	
REVISION B	
REVISION C	



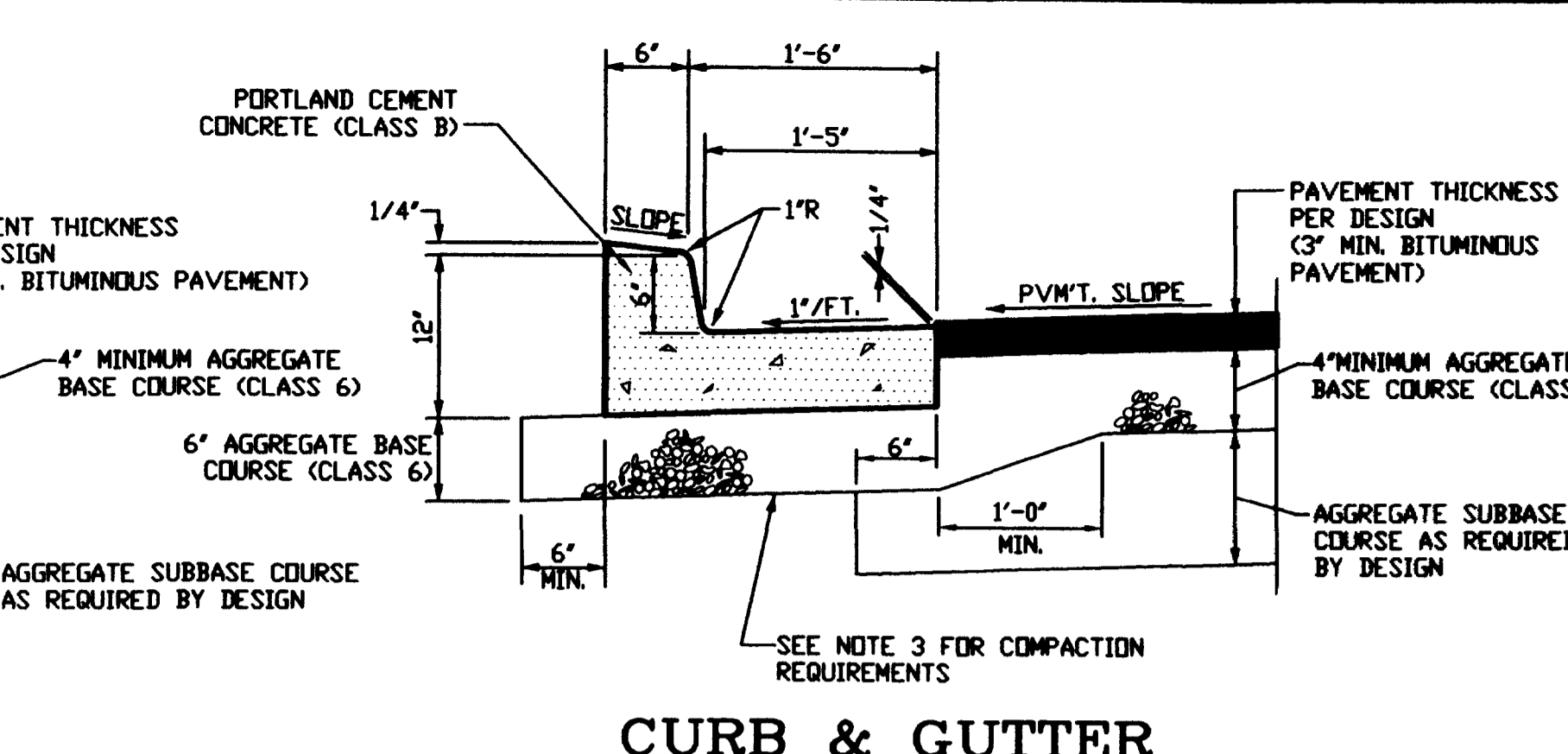
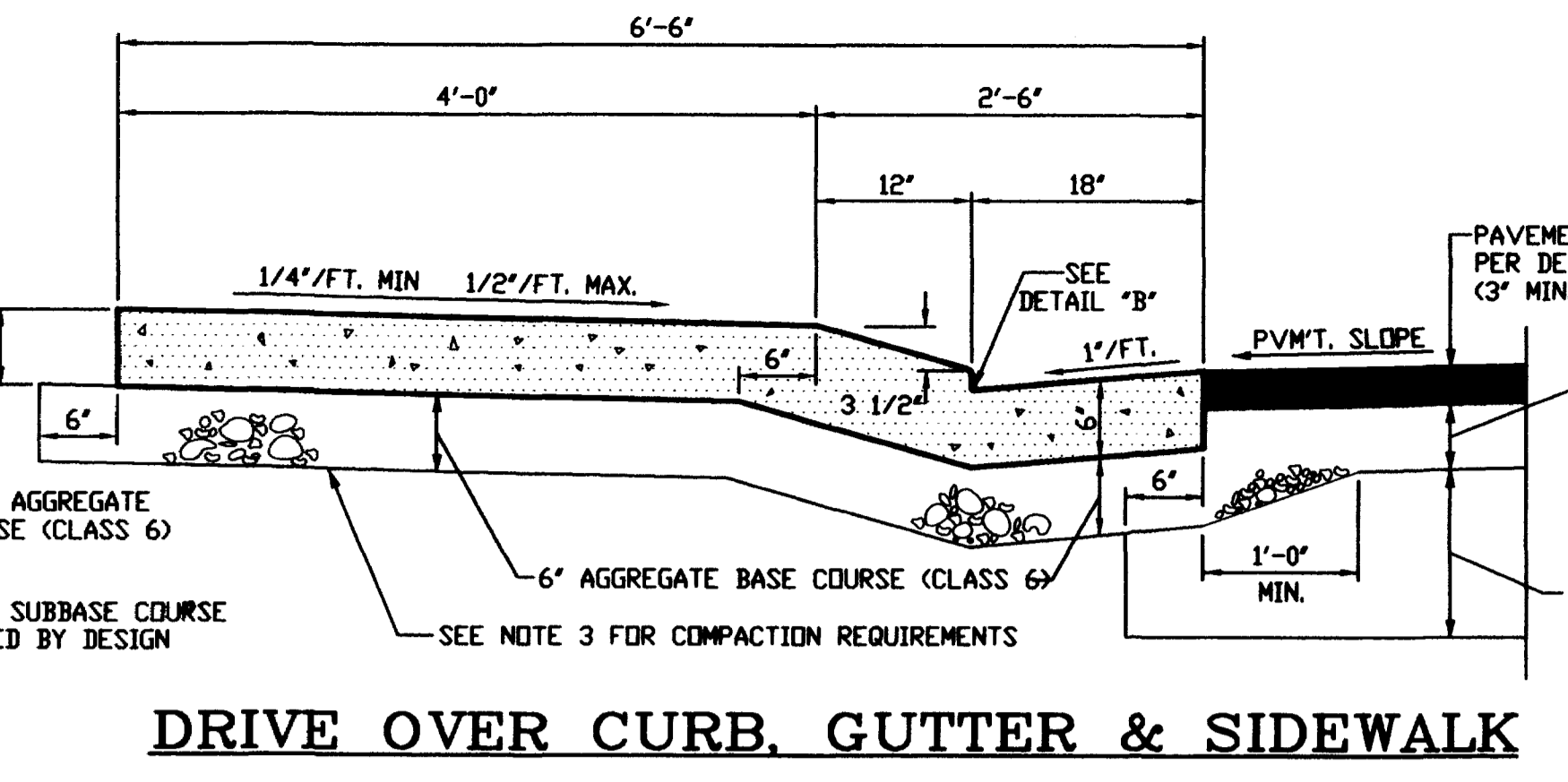
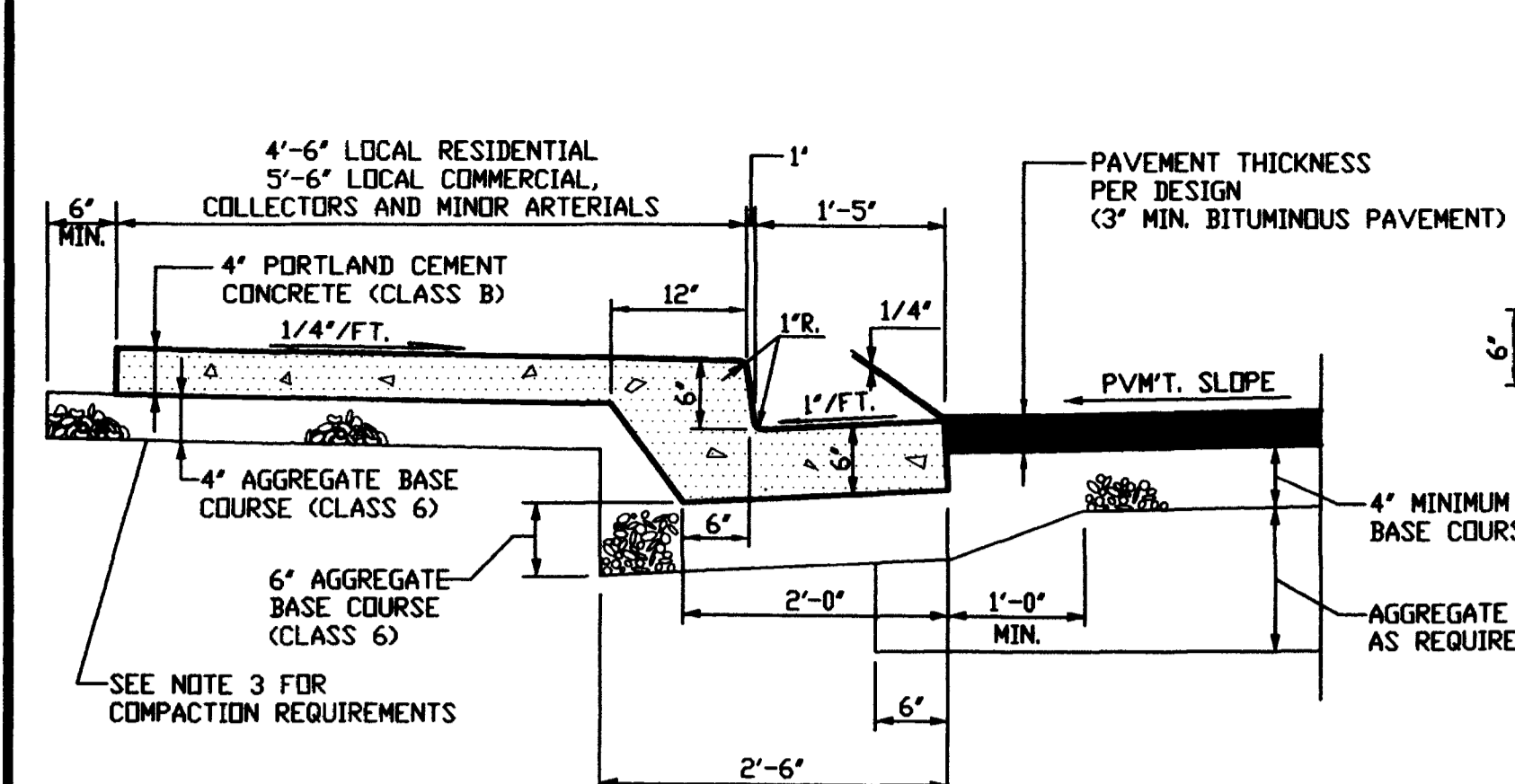
WILLIAMS ENGINEERING
 1231 19 ROAD, FRUITA, COLORADO 81521-9689
 (970) 858-1014 PHONE (970) 858-1007 FAX

1996 SEWERLINE REPLACEMENTS
COLLECTOR SEWERS
 20th, Orchard-Walnut & 18th, Hall-Orchard

SHEET 9
 FILENAME
 96SLR-9.DWG

GENERAL NOTES

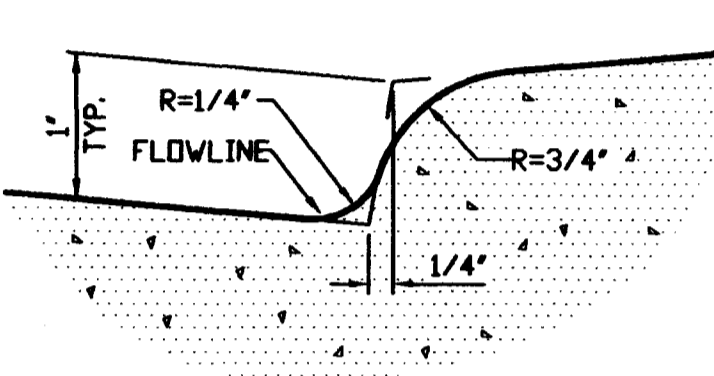
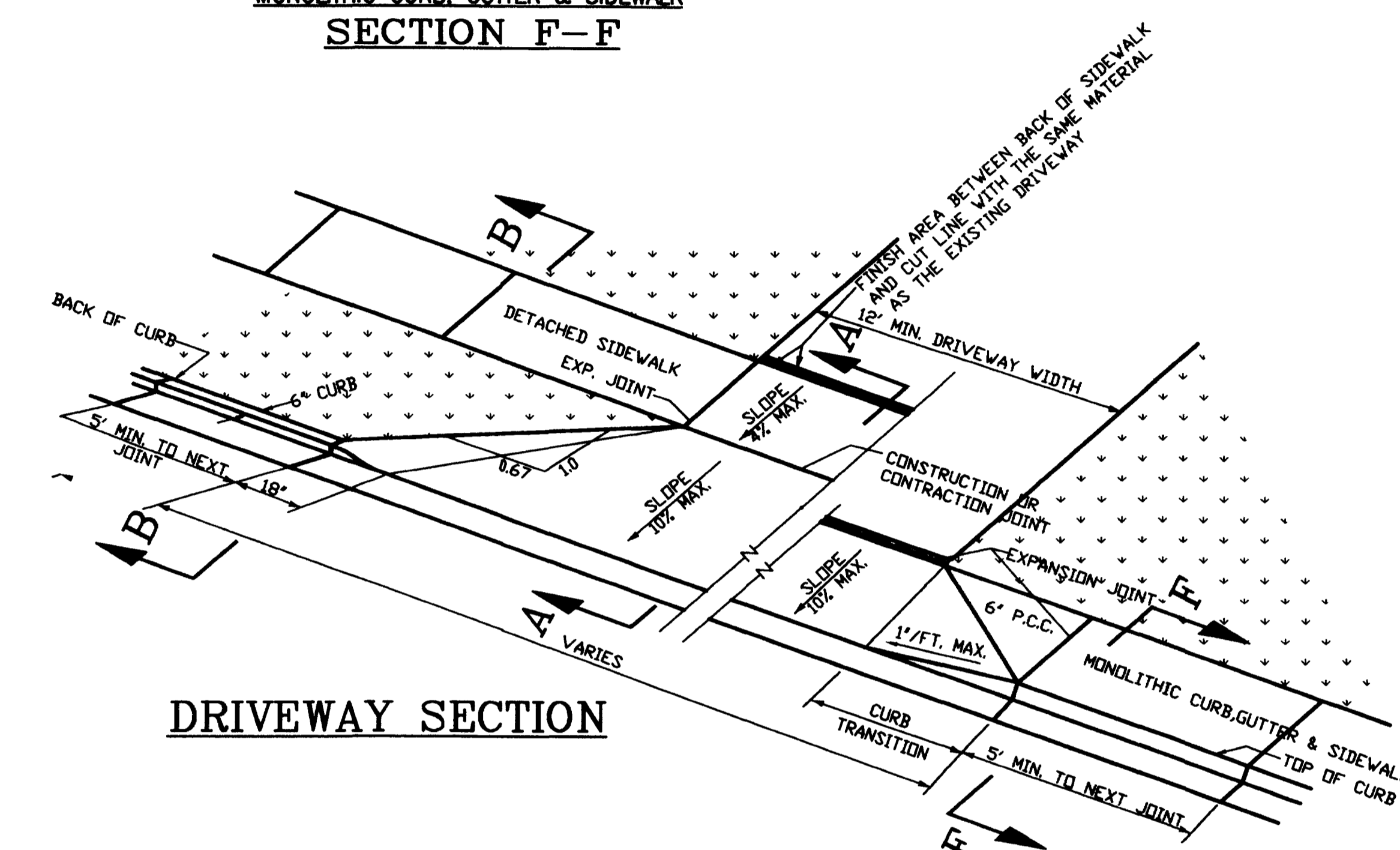
1. ALL PORTLAND CEMENT CONCRETE SHALL BE COLORADO DIVISION OF HIGHWAY CLASS "B". ALL CONCRETE SHALL BE MIXED, PLACED, CURED AND TESTED IN ACCORDANCE WITH CITY OF GRAND JUNCTION STREET CONSTRUCTION SPECIFICATIONS.
2. ALL CONCRETE WORK WITHIN PUBLIC RIGHT-OF-WAY SHALL BE PERFORMED BY A LICENSED CURB, GUTTER & SIDEWALK CONTRACTOR. A PERMIT IS REQUIRED AT EACH LOCATION WHERE CONCRETE IS REMOVED, ALTERED OR PLACED.
3. ALL CURBS, GUTTERS, SIDEWALKS, DRIVEWAYS, DRAINAGE PANS AND OTHER CONCRETE WORK SHALL BE UNDERLAID WITH AGGREGATE BASE COURSE (CLASS 6) COMPACTED TO AT LEAST 90% OF AASHTO T-180 MAXIMUM DENSITY. SEE DETAILS FOR BASE THICKNESS. THE TOP 6 INCHES OF SUBGRADE UNDER ALL CONCRETE SHALL BE COMPACTED TO AT LEAST 90% OF AASHTO T-99 MAXIMUM DENSITY. ALL SATURATED OR UNSUITABLE SUBGRADE MATERIAL SHALL BE REMOVED AND REPLACED.
4. ALL EXISTING PAVEMENT NOT DESIGNATED FOR REMOVAL WHICH IS DAMAGED BY CONSTRUCTION SHALL BE REPLACED IN-KIND BY CONTRACTOR.
5. ALL DRIVEWAY CONCRETE (APRON AND SIDEWALK CROSSING) SHALL BE 6 INCHES THICK (MIN) FOR RESIDENTIAL USES AND 8" THICK (MIN) FOR ALL OTHER USES.
6. TRANSVERSE EXPANSION JOINTS SHALL BE PROVIDED IN ALL CURBS, GUTTERS, SIDEWALKS, V-PANS, ETC., AT ENDS OF HORIZONTAL CURVES, AT EDGES OF DRIVEWAY SECTIONS AND AT MAXIMUM SPACING OF 100'. TRANSVERSE CONTRACTION JOINTS SHALL BE PROVIDED AT 10' SPACING.
7. VEHICULAR TRAFFIC SHALL BE KEPT OFF NEW CONCRETE FOR A MINIMUM OF FIVE DAYS UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
8. AN APPROVED CURING/SEALING COMPOUND SHALL BE APPLIED TO ALL EXPOSED CONCRETE IMMEDIATELY AFTER FINISHING.
9. ALL CONCRETE SHALL BE PROTECTED FROM FREEZING FOR 5 DAYS AFTER BEING PLACED. NO CONCRETE SHALL BE PLACED ON FROZEN GROUND.
10. UNDER NO CIRCUMSTANCES SHALL WATER BE ADDED TO CONCRETE SURFACES DURING FINISHING OPERATIONS.
11. HANDICAP RAMPS SHALL BE INSTALLED AT EACH CORNER OF ALL STREET INTERSECTIONS. SEE EXHIBIT "G" FOR DETAILS.



MONOLITHIC CURB, GUTTER & SIDEWALK SECTION F-F

DRIVE OVER CURB, GUTTER & SIDEWALK (RESIDENTIAL STREETS ONLY)

CURB & GUTTER

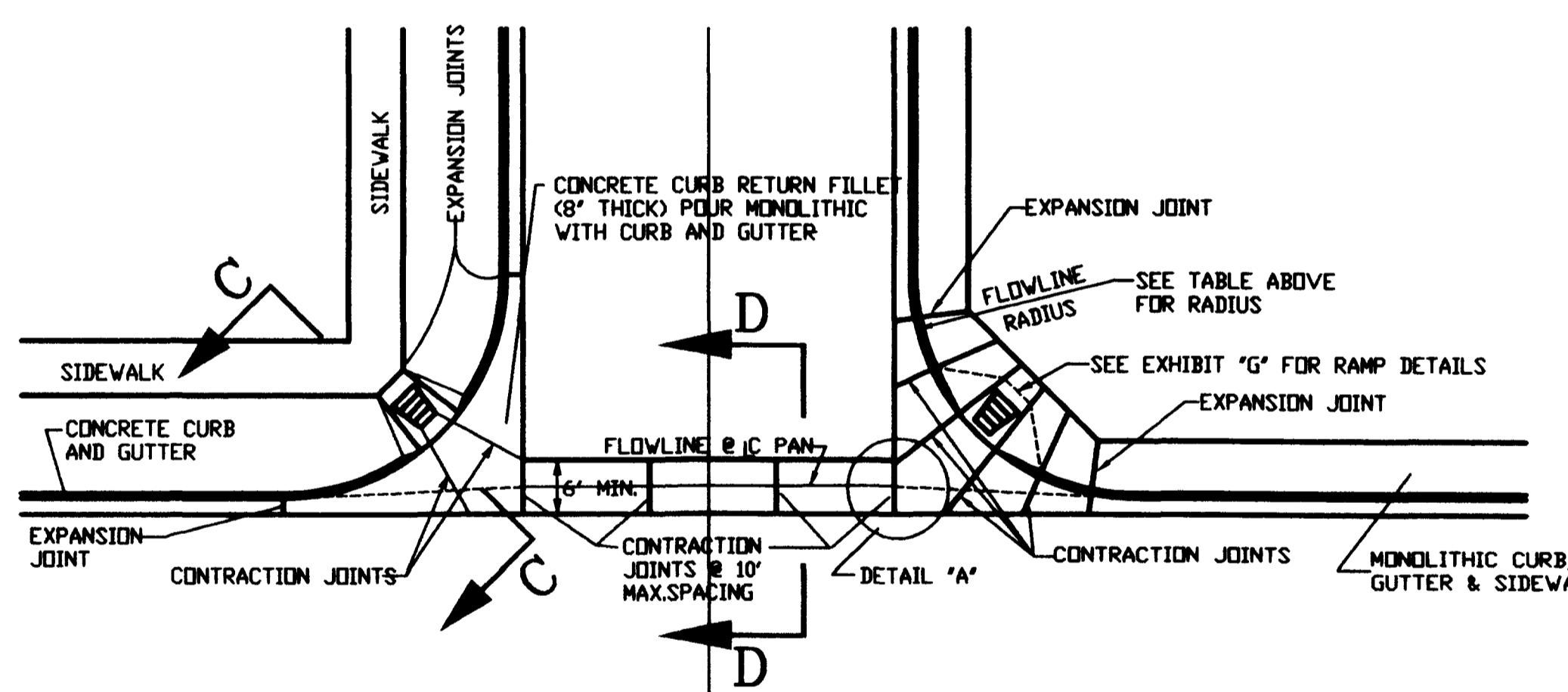


DETAIL "B"

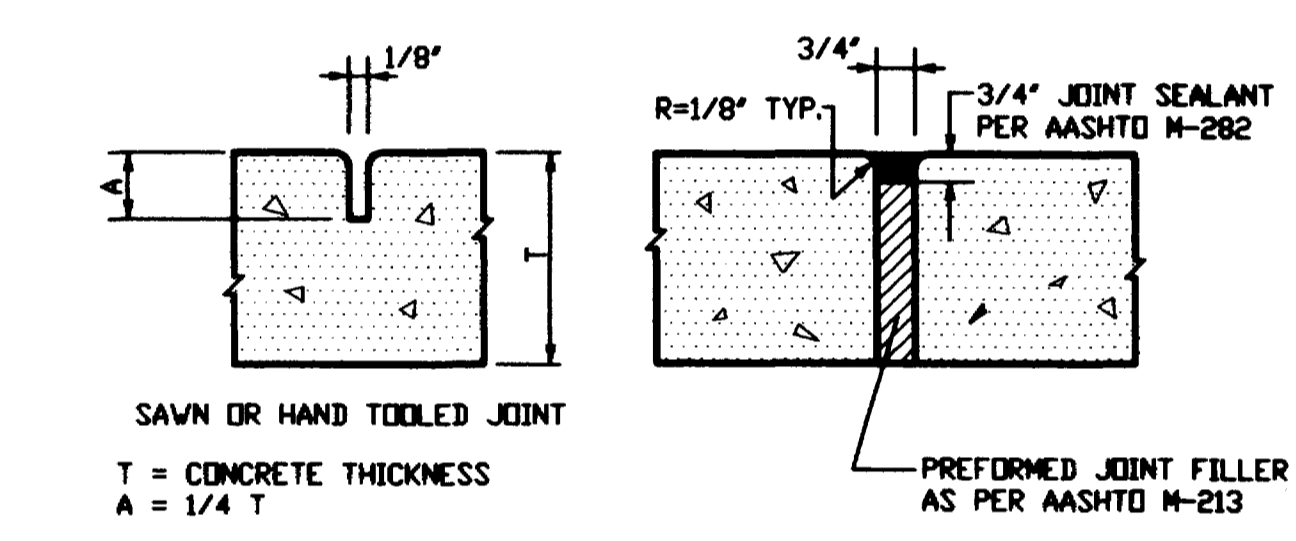
MINIMUM INTERSECTION RADII TO FLOWLINE OF GUTTER INTERSECTING STREET

THROUGH STREET	ARTERIAL	COLLECTOR	LOCAL RESIDENTIAL	LOCAL COMMERCIAL	LOCAL INDUSTRIAL
ARTERIAL	30'	30'	30'	30'	*
COLLECTOR	-	30'	25'	30'	*
LOCAL RESIDENTIAL	-	-	20'	-	-
LOCAL COMMERCIAL	-	-	20'	30'	*
LOCAL INDUSTRIAL	-	-	20'	-	*

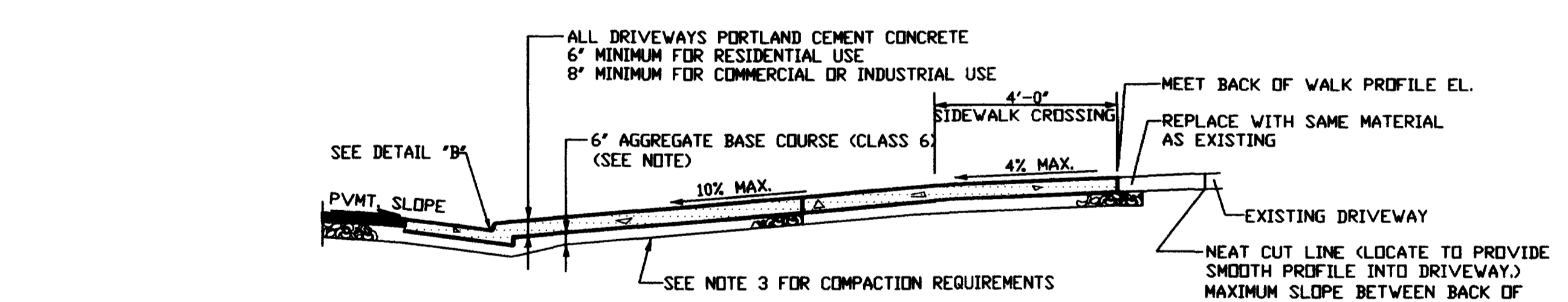
* RADII AT INTERSECTIONS WITH INDUSTRIAL STREETS SHALL BE INDIVIDUALLY DESIGNED BASED ON TURNING REQUIREMENTS FOR WB-50 TRUCKS.



STREET INTERSECTION AND DRAINAGE PAN DETAILS

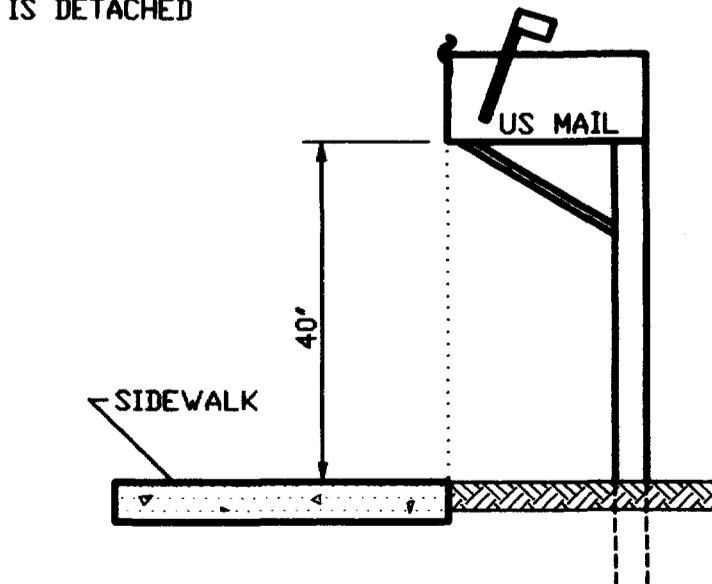


CONCRETE JOINT DETAILS

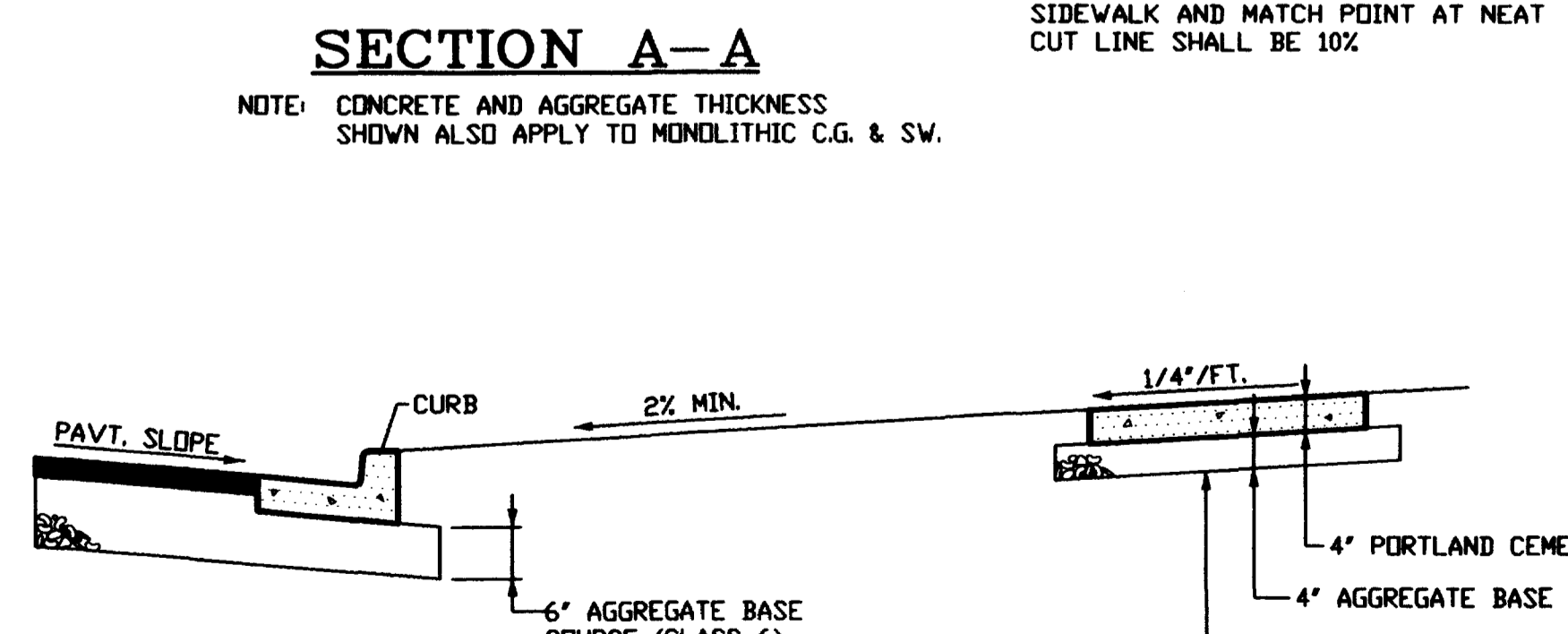


SECTION A-A

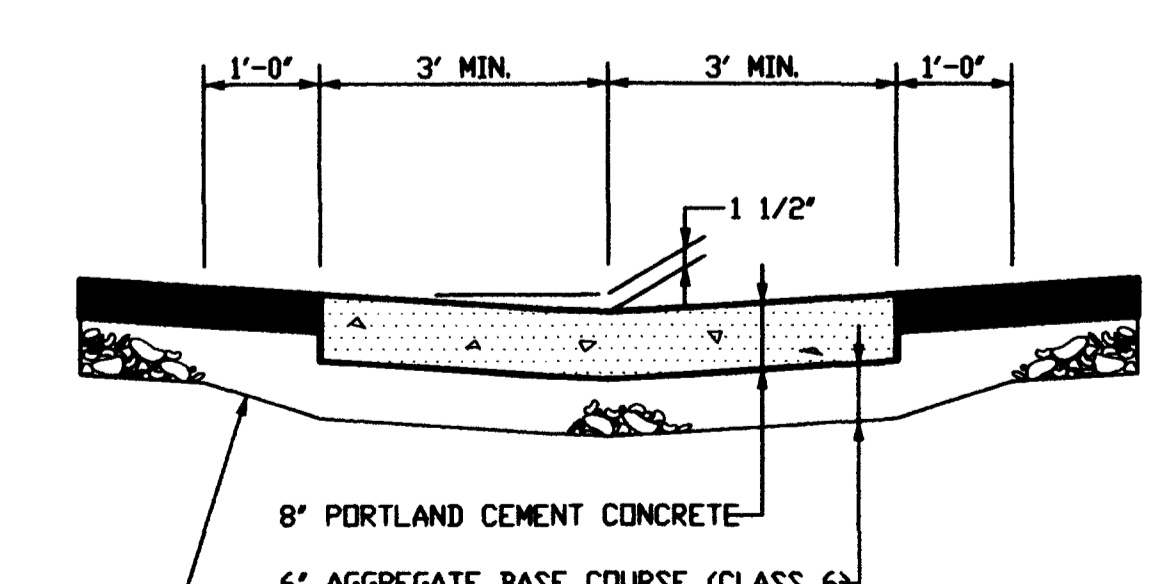
FRONT OF MAIL BOX = BACK OF WALK OR 1' BACK OF CURB WHERE SIDEWALK IS DETACHED



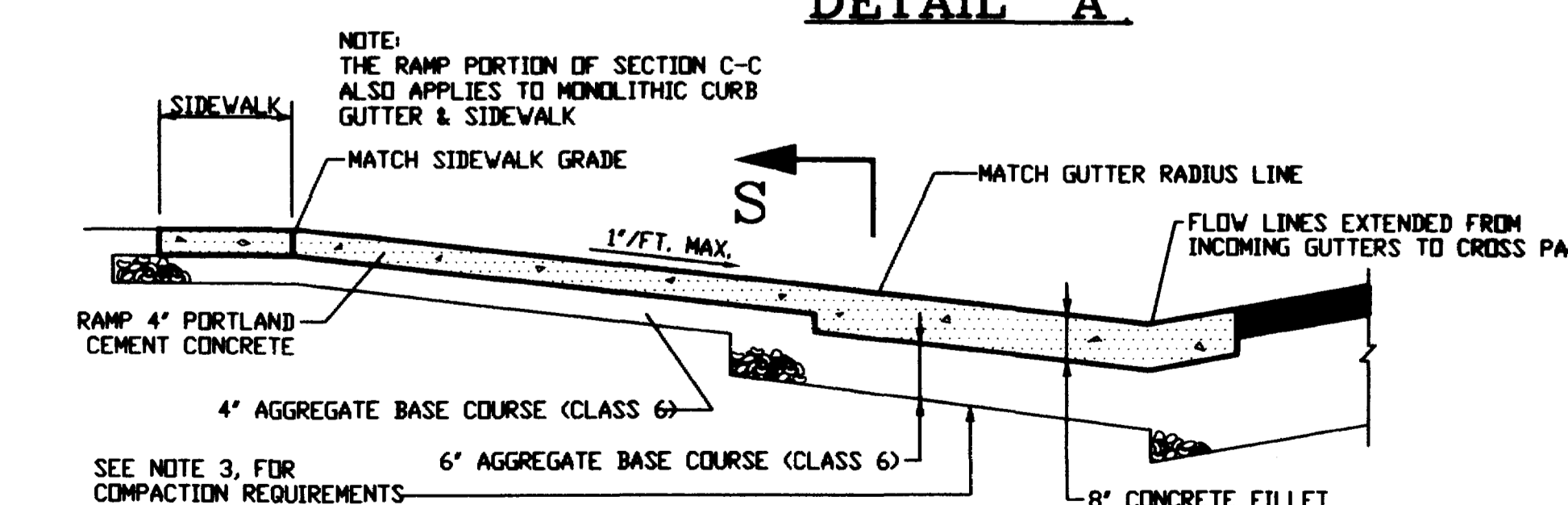
MAIL BOX INSTALLATION



SECTION B-B



SECTION D-D



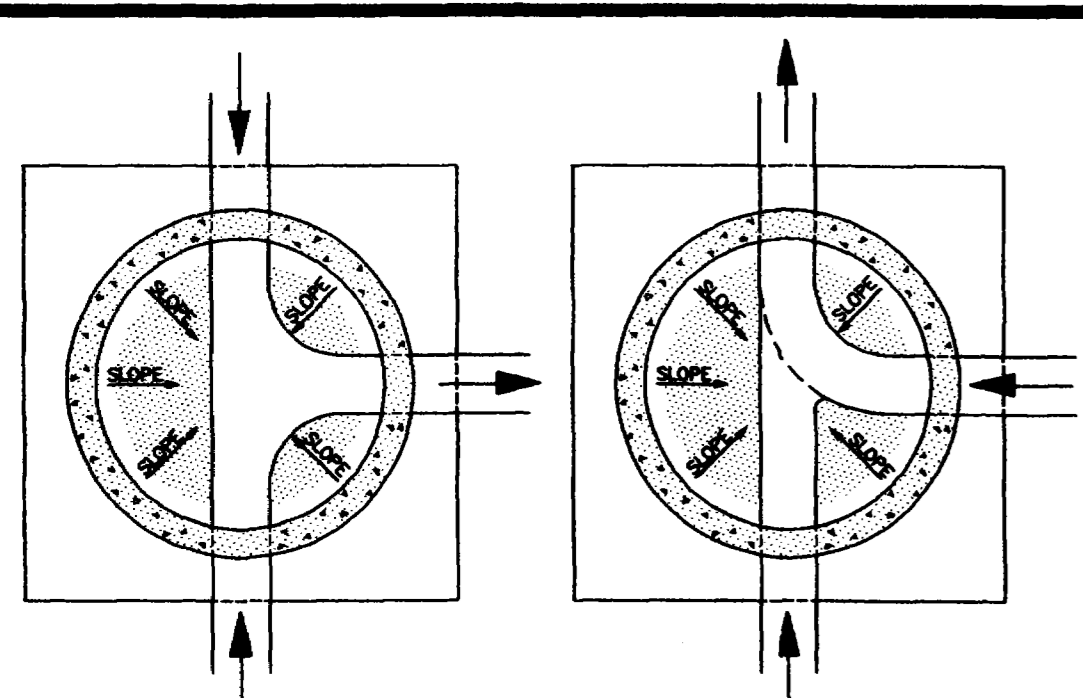
SECTION C-C

DEPARTMENT OF PUBLIC WORKS AND UTILITIES
ENGINEERING DIVISION 244-1554
CITY OF GRAND JUNCTION, COLORADO

EXHIBIT "E"
STANDARD CONCRETE DETAILS

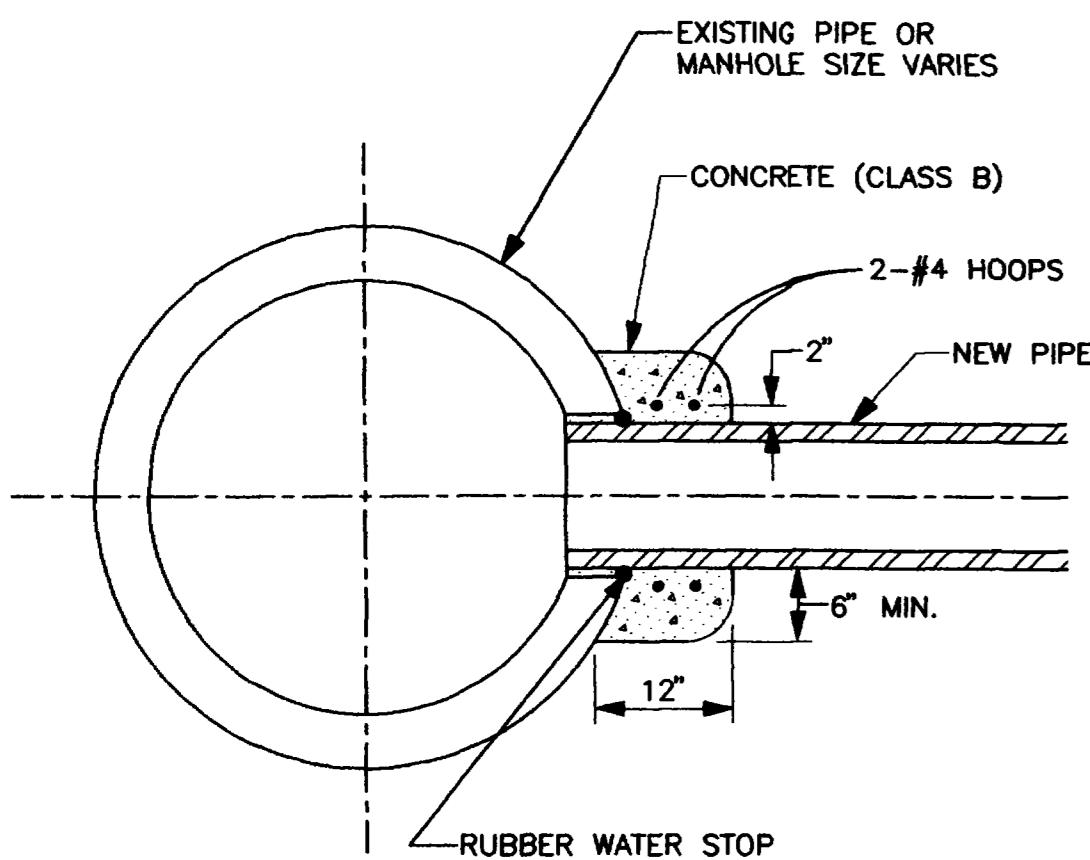
DESCRIPTION	DATE	DRAWN BY	DATE	SCALE
ADOPTED BY CITY COUNCIL RESOLUTION	7/1/92	N.D.P.	6/29/92	PLAN
REVISION BY CITY COUNCIL RESOLUTION	6/15/94	T.A.B.	6/29/92	PROFILE
REVISION		J.D.N.	6/29/92	HORIZ. N.T.S.
REVISION				HORIZ. _____
				VERT. _____

SHEET NO.	10
OF	11
FILE NO.	EX-E-94.DWG



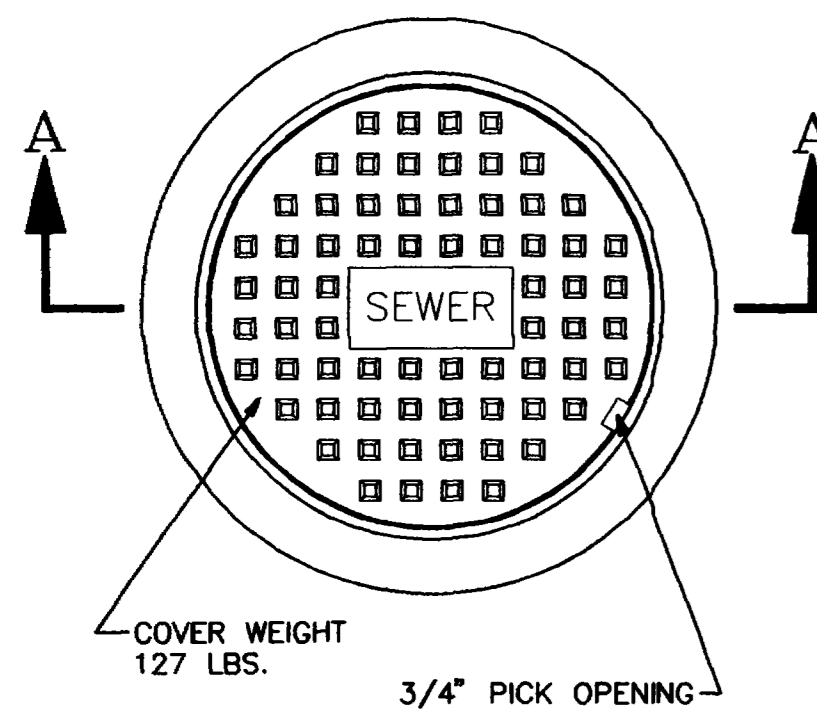
"T" JUNCTION
"Y" JUNCTION
INVERTS SHALL BE FORMED TO PROVIDE A 24" MIN. APPROACH IN LINE WITH EACH PIPE FOR MAINTENANCE EQUIPMENT.

SECTION B-B

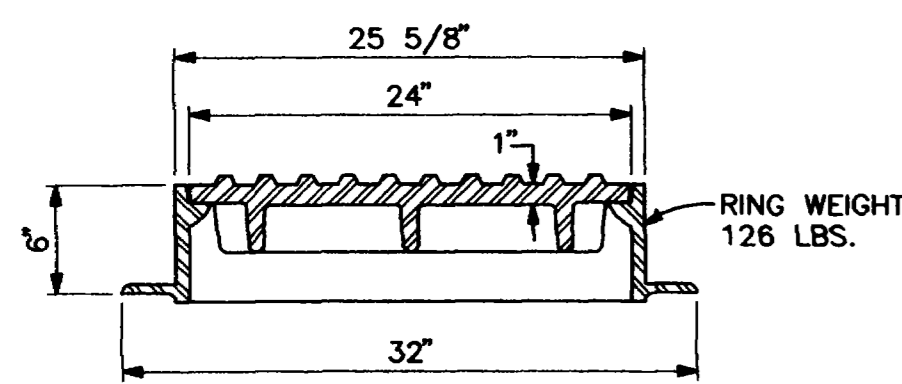


NOTE: IF THE HOLE IN THE EXISTING PIPE OR MANHOLE IS CORED, THE CONNECTION CAN BE MADE BY INSTALLING A FLEXIBLE PIPE TO MANHOLE CONNECTOR ("BOOT") AND THE CONCRETE ENCASUREMENT ELIMINATED.

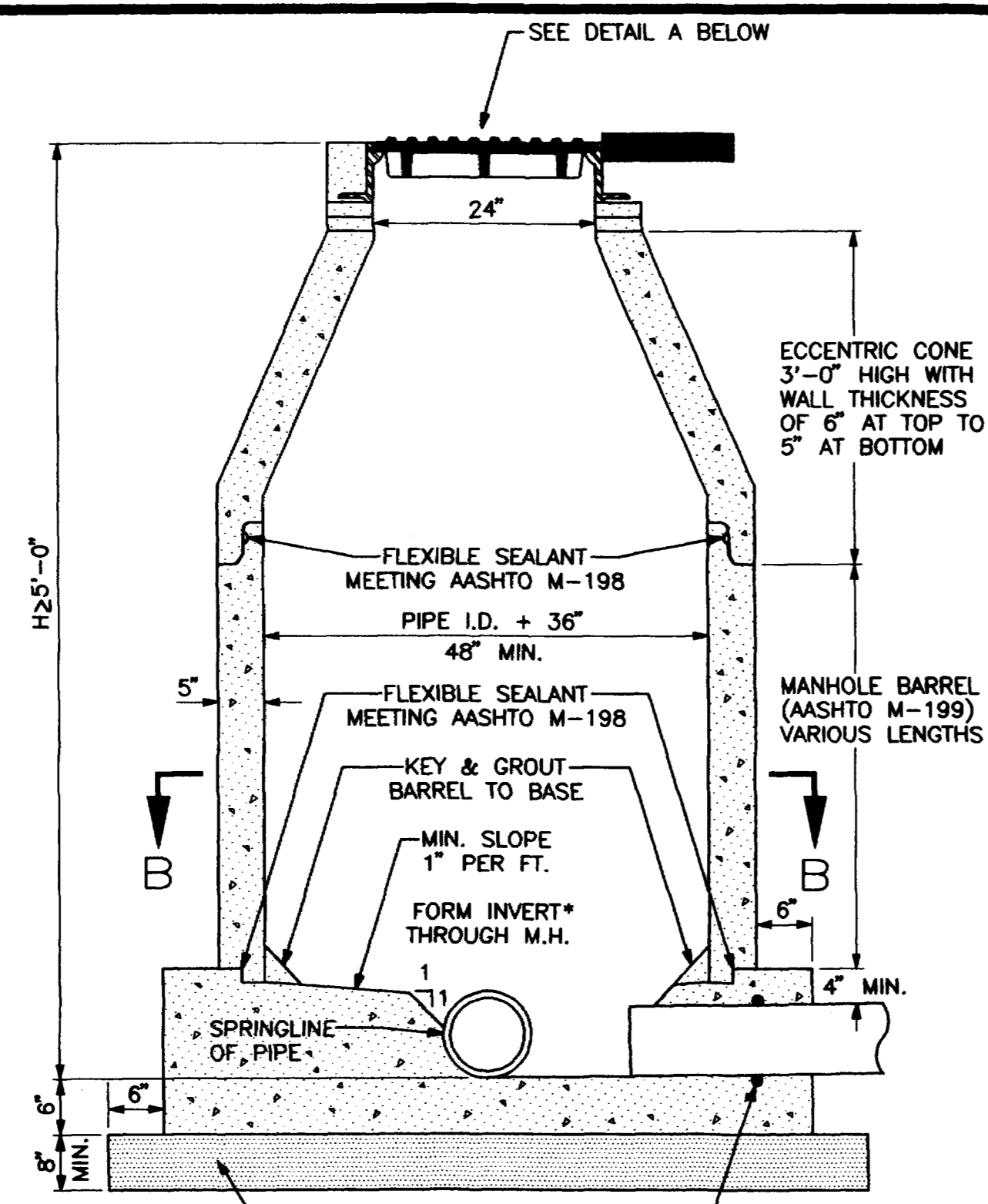
CONNECTION TO EXISTING MANHOLE OR INLET BOX



STANDARD CAST IRON MANHOLE RING & COVER

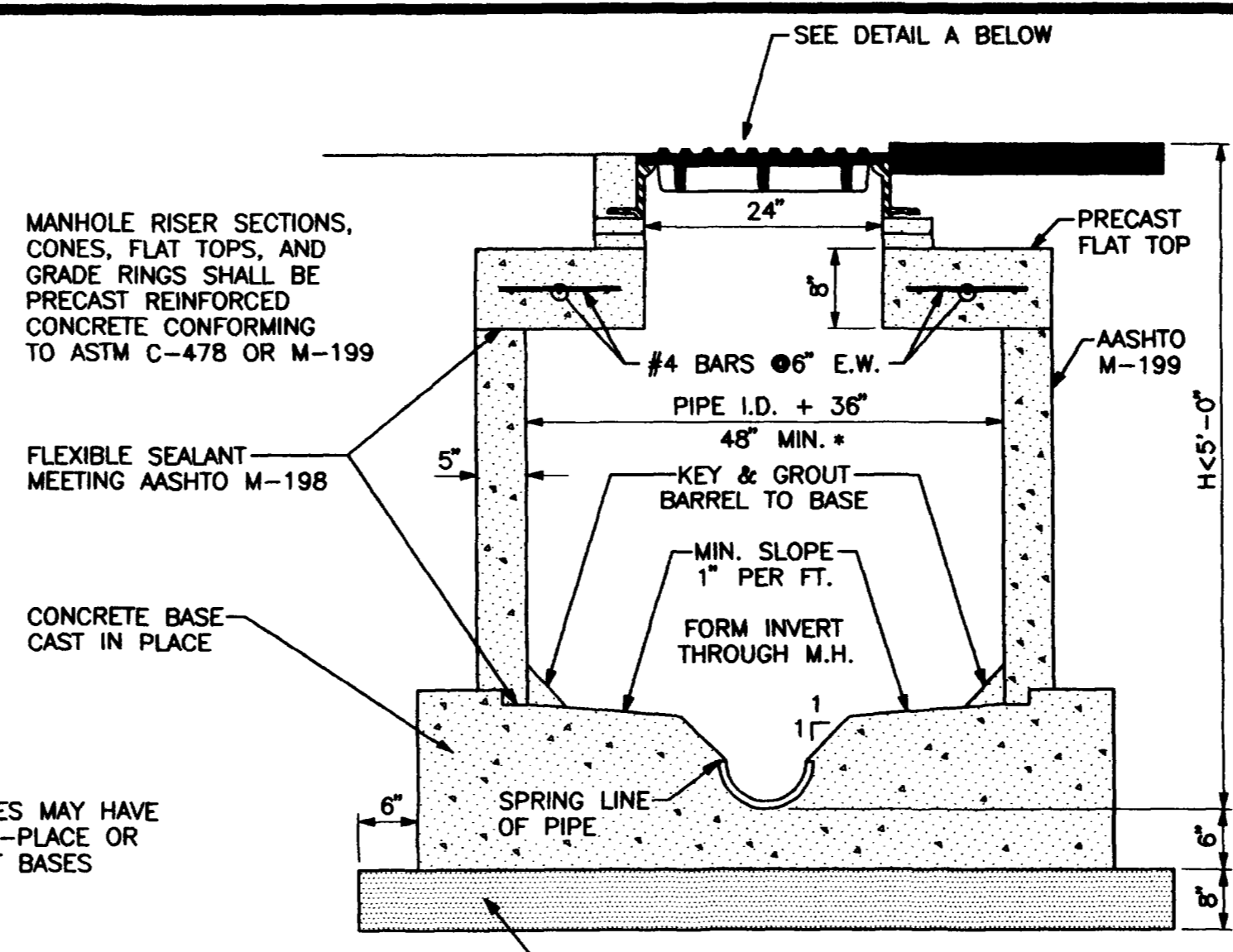


SECTION A-A



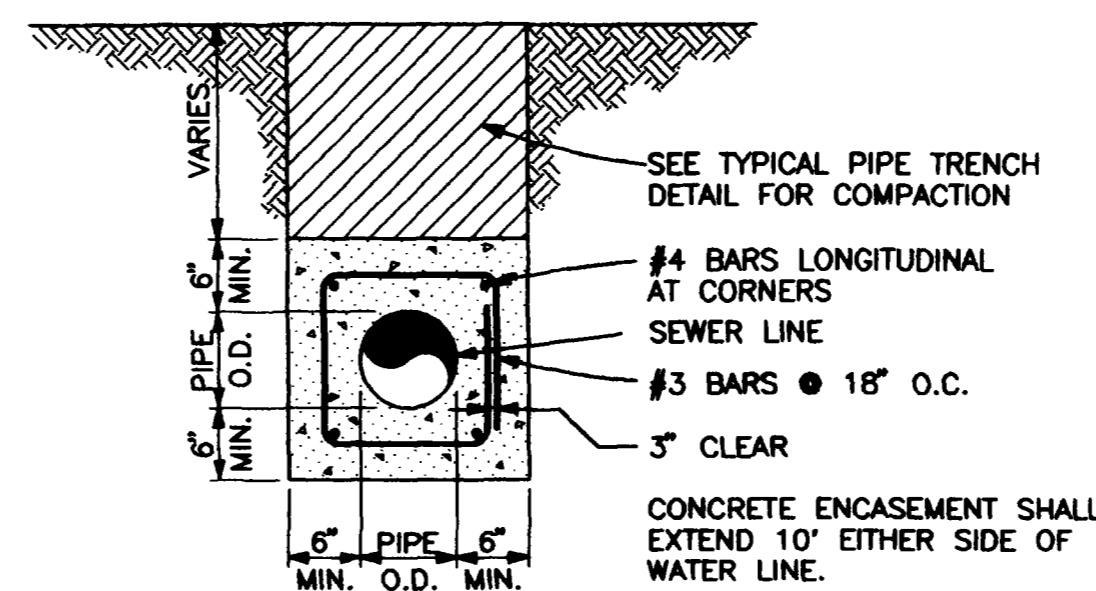
* FOR IN LINE MANHOLES THE PIPE MAY BE INSTALLED THROUGH THE MANHOLE AND THE TOP HALF REMOVED.

STANDARD MANHOLE CAST-IN-PLACE BASE

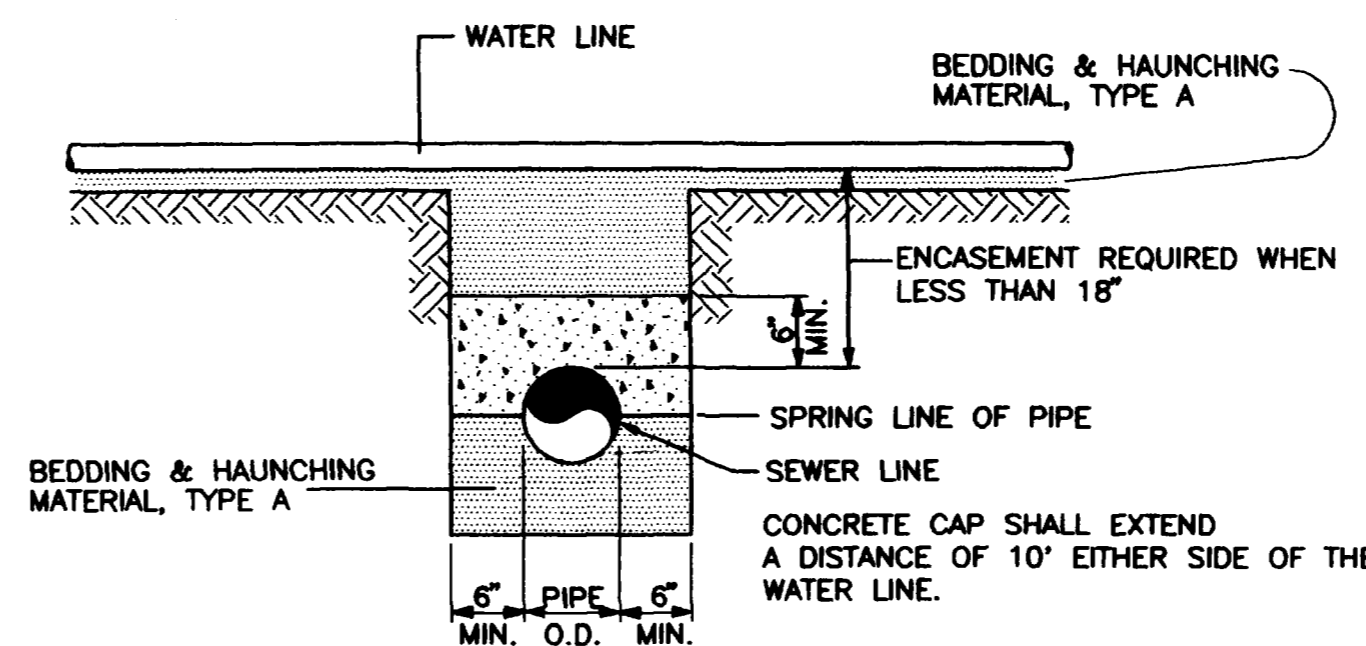


STANDARD SHALLOW MANHOLE CAST-IN-PLACE BASE

* FOR IN-LINE MANHOLES WITH A DEFLECTION ANGLE OF 30° OR LESS A 30" BARREL MAY BE USED.

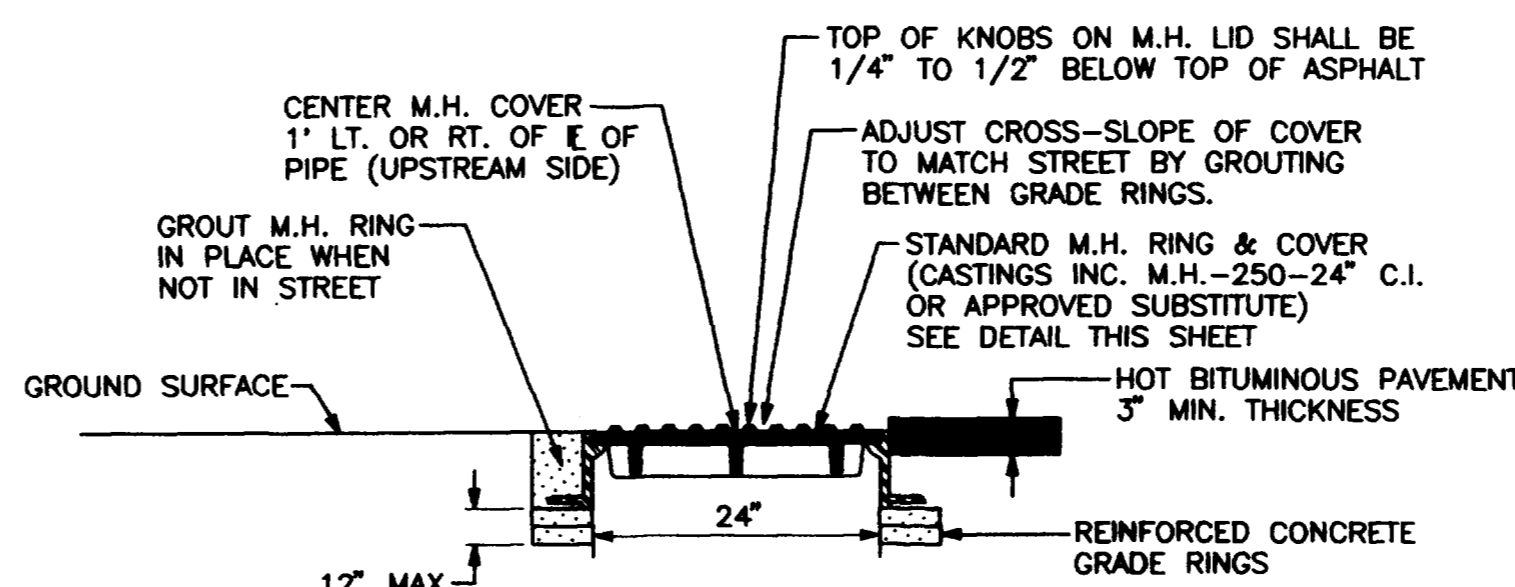


WATER LINE BELOW SEWER LINE



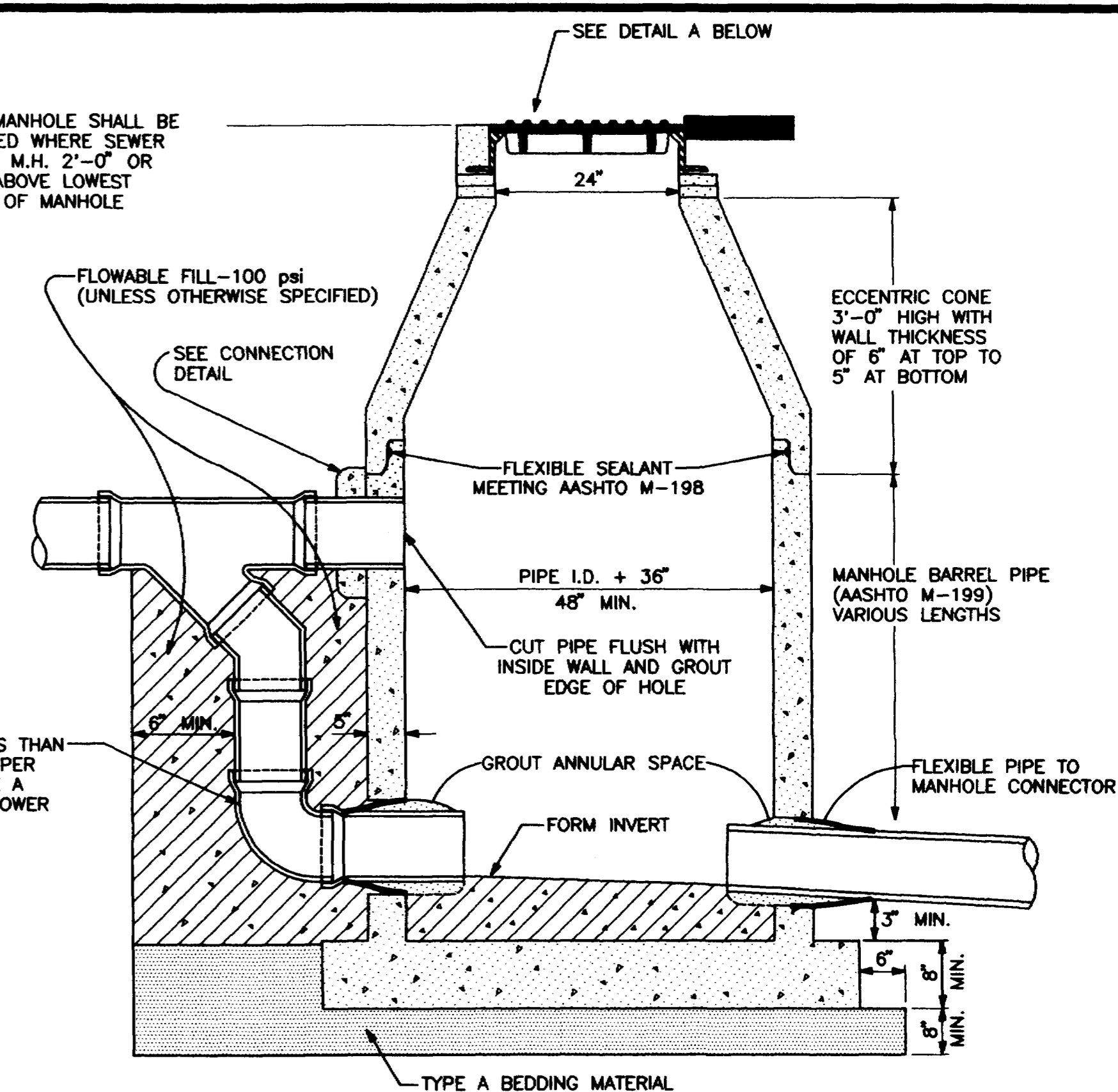
WATER LINE ABOVE SEWER LINE

CONCRETE ENCASUREMENT DETAILS

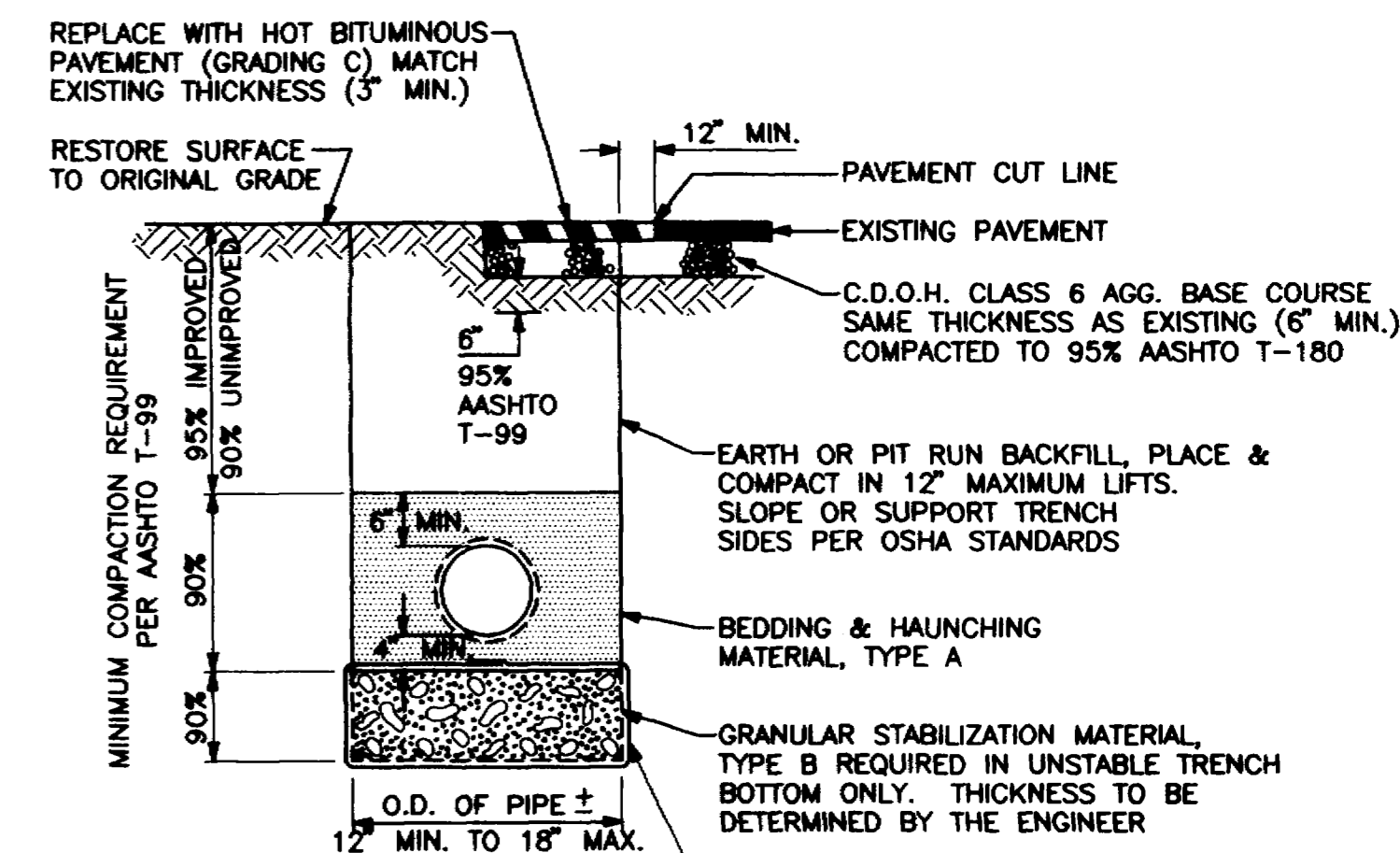


DETAIL A

NOTE: DROP MANHOLE SHALL BE PROVIDED WHERE SEWER ENTERS M.H. 2'-0" OR MORE ABOVE LOWEST INVERT OF MANHOLE



DROP MANHOLE PRECAST BASE



TYPICAL TRENCH DETAIL

SIEVE SIZE	PERCENT BY WEIGHT PASSING SQUARE MESH SIEVES		
	PIPE BEDDING & HAUNCHING MATERIAL (TYPE A)	GRANULAR STABILIZATION MATERIAL (SCREENED OR CRUSHED ROCK TYPE B)	PIT RUN AGGREGATE (TO BE USED WHERE SPECIFIED OR DIRECTED BY THE ENGINEER)
8 INCH	---	---	100
2 INCH	---	100	---
1 INCH	100	---	---
NO 4	---	15 MAX	30 MAX
NO 200	20 MAX	---	---

ALL BACKFILL MATERIAL SHALL BE PLACED FULL WIDTH IN 12" MAX. LIFTS AND COMPACTED TO THE MIN. RELATIVE DENSITIES SHOWN

NOTE: NATIVE MATERIAL MAY BE USED IN LIEU OF GRANULAR BEDDING & HAUNCHING MATERIAL IF APPROVED BY THE CITY ENGINEER AND THE NATIVE MATERIAL IS IN COMPLIANCE WITH SIZE REQUIREMENTS FOR "TYPE A".

GENERAL NOTES:

- CONCRETE SHALL BE COLORADO DIVISION OF HIGHWAYS CLASS "B" (SECTION 601.02)
- ALL CEMENT USED IN MORTAR, CONCRETE BASES, GRADE RINGS, RISER SECTIONS, CONES, AND FLAT TOPS, FOR SANITARY SEWER MANHOLES, SHALL BE TYPE V OR MODIFIED TYPE II PORTLAND CEMENT WITH LESS THAN 5% TRICALCIUM ALUMINATE.
- MANHOLE RISER SECTIONS, CONES, FLAT TOPS, AND GRADE RINGS SHALL BE PRECAST REINFORCED CONCRETE CONFORMING TO ASTM C-478 OR AASHTO M-199.
- BACKFILL AROUND MANHOLES AND OTHER STRUCTURES SHALL BE PLACED IN 8" MAX. LIFTS AND COMPACTED TO 95% AASHTO T-99.
- ALL WORK SHALL BE IN ACCORDANCE WITH APPROVED PLANS AND CITY SPECIFICATION.
- MANHOLE CONE AND FLAT TOP SECTIONS SHALL BE POSITIONED SUCH THAT THE MANHOLE RING AND COVER IS CENTERED 1' LEFT OR RIGHT OF THE UPSTREAM FLOW LINE.
- IF THE MANHOLE SECTIONS ARE FURNISHED WITH STEPS THEY SHALL BE INSTALLED IN VERTICAL ALIGNMENT WITH THE RING AND COVER.

DESCRIPTION	DATE	DRAWN BY	N.O.P.	DATE	SCALE
ADOPTED BY CITY COUNCIL RESOLUTION	7/1/92			6/27/92	
REVISION BY CITY COUNCIL RESOLUTION	6/15/94			6/27/92	
REVISION				6/27/92	
REVISION					

PLAN	PROFILE
HORIZ. N.T.S.	HORIZ. _____
VERT. _____	VERT. _____

DEPARTMENT OF PUBLIC WORKS AND UTILITIES
ENGINEERING DIVISION 244-1554
CITY OF GRAND JUNCTION, COLORADO

EXHIBIT "I"
STANDARD SANITARY SEWER DETAILS

SHEET NO. 11
OF 11
FILE NO. EX-1-94.DWG