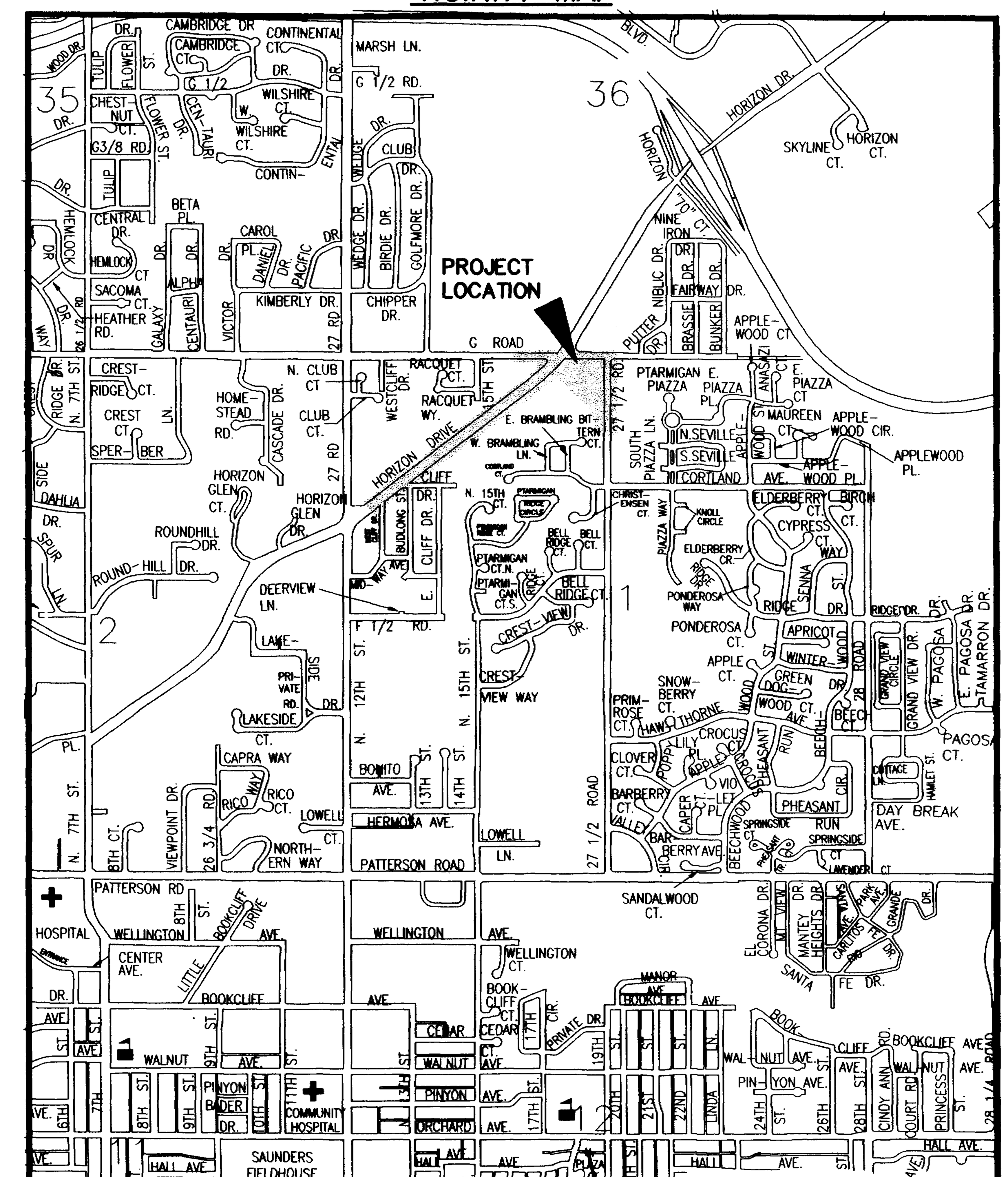
27 1/2 ROAD RECONSTRUCTION PHASE 3, STA 54+15 TO 66+50 AND HORIZON DRIVE RECONSTRUCTION 12th STREET TO G ROAD ROADWAY, STORM DRAIN, AND SANITARY SEWER PLANS

(SEE PROJECT SPECIFICATIONS, APPENDIX "B" FOR STANDARD WATER LINE AND SANITARY SEWER DETAILS)

VICINITY MAP



N.T.S.

△1 - REALIGN INTERCEPTOR STREET 2-17-00
△2 - RAISE SAN AND STORM SEWER IN 27 1/2 ROAD 3-29-00
△3 - REMOVE TWO INTERSECTIONS & DECELL LANES NORTH SIDE OF HORIZON DR. 4-6-00

City of Grand Junction, Colorado

ASBUILT

Department of Public Works & Utilities *Engineering Division*

27 1/2 ROAD RECONSTRUCTION PHASE 3, STA 54+15 TO 66+50 & HORIZON DRIVE RECONSTRUCTION 12th ST TO G Rd., JANUARY, 2000

02099501

PROJECT NO. 2011-F01700

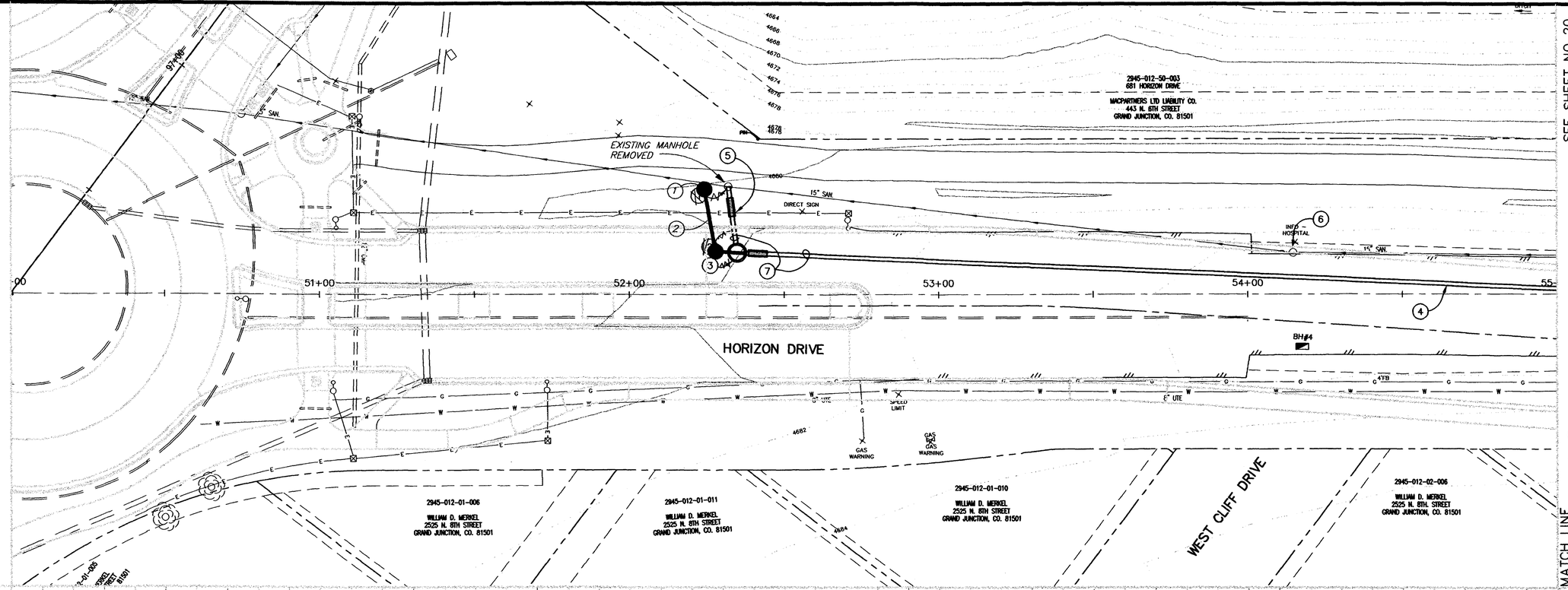
GRAPHIC SCALE

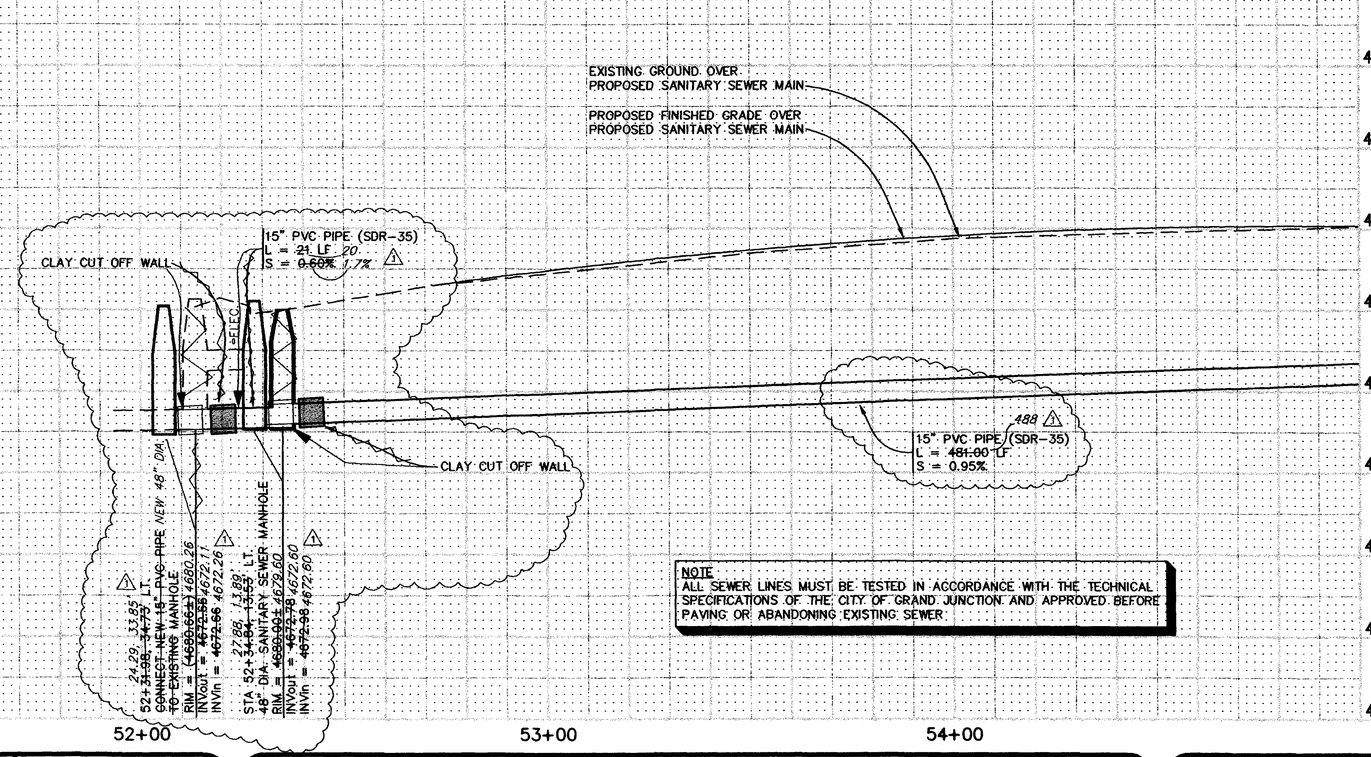
10 0 20 60

(IN FEET)
1 inch = 20 ft

SEE SHEET NO 20

MATCH LINE





NOTE
ALL SEWER LINES MUST BE TESTED IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS OF THE CITY OF GRAND JUNCTION AND APPROVED BEFORE PAVING OR ABANDONING EXISTING SEWER

CONSTRUCTION NOTES

(1) 210.00 52+~~31.98, 34.73~~' LT. (N 48~~463.33~~, E 94880.18)
~~CONNECT NEW 15" PVC PIPE TO EXISTING MANHOLE BY CORING THE EXISTING MH TO ALLOW NEW PVC PIPE TO BE INSTALLED AT PROPOSED INVERT ELEV. PER CITY OF GRAND JUNCTION STANDARD SANITARY SEWER DETAILS. IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND THE WORK TO A DOWNSTREAM MANHOLE. SEWAGE FLOW IS ESTIMATED TO BE 500 TO 700 gpm. THE CONTRACTOR SHALL PROVIDE ADEQUATE PUMPS TO MAINTAIN THE EXISTING FLOWS. BACK UP PUMPS SHALL BE REQUIRED IN THE EVENT OF A PUMP FAILURE. PEAK FLOWS MAY EXCEED 700 GPM AND ARE TYPICALLY AROUND THE HOURS OF 6:00 AM TO 8:00 AM AND 4:30 PM TO 7:30 PM. NEW INLET SHALL BE FITTED WITH A PSX GASKET. RETAIN THE EXISTING 15" CONC. INLET FROM THE NORTH EAST TEMPORARILY TO PROVIDE SEWER SERVICE THROUGH THE EXISTING SEWER LINE WHILE THE NEW SEWER LINE IS BEING CONSTRUCTED.~~
⚠1 104.2C *NEW 48" DIA. SAN SEWER MANHOLE W/PSX GASKETS*
CLAY CUT OFF WALL SHALL BE PLACED 10' UPSTREAM OF MH. CUT OFF WALL SHALL EXTEND FROM 6" BELOW TO 6" ABOVE GRANULAR BACKFILL MATERIAL FOR THE FULL WIDTH OF THE TRENCH. IF NATIVE MATERIAL IS NOT SUITABLE, THE CONTRACTOR SHALL IMPORT MATERIAL APPROVED BY THE PROJECT ENGINEER.

FILL THE ABANDON NORTHEAST INVERT AND PIPE WITH CONCRETE AND PROVIDE A SMOOTH NEW WEST TO SOUTHWEST INVERT.

(2) 102.9a 15" PVC PIPE (SDR-35) (L = ~~21~~ *20* LF) ⚠
BACKFILL TRENCH WITH NATIVE MATERIALS MEETING CITY SPECIFICATION 103.14 AND 103.16.

(3) 102.11 *27.88, 13.89'* STA 52+~~34.84, 13.53~~' LT. (N 48~~448.17~~, E 94895.27) *4.25* *89.51*
⚠1 104.2.C (TO CENTER OF MH)
48" DIA. SANITARY SEWER MANHOLE (ALL INLETS AND OUTLETS TO BE FITTED WITH PSX GASKETS)

CLAY CUT OFF WALL SHALL BE PLACED 10' UPSTREAM OF NEW MH. CUT OFF WALL SHALL EXTEND FROM 6" BELOW TO 6" ABOVE GRANULAR BACKFILL MATERIAL FOR THE FULL WIDTH OF THE TRENCH. IF NATIVE MATERIAL IN NOT SUITABLE, THE CONTRACTOR SHALL IMPORT MATERIAL APPROVED BY THE PROJECT ENGINEER.

(4) 102.9a *488* 15" PVC PIPE (SDR-35) (L = ~~454.00~~ LF) ⚠1
BACKFILL TRENCH WITH NATIVE MATERIALS MEETING CITY SPECIFICATION 103.14 AND 103.16.

(5) NOTIFY PUBLIC SERVICE COMPANY 48 HOURS PRIOR TO EXCAVATIONS THAT WILL EXPOSE EXISTING ELEC. LINES. PUBLIC SERVICE COMPANY AND UTE WATER WILL BE INSTALLING NEW LINES AS A PART OF THE ROAD RECONSTRUCTION, CONTRACTOR SHALL COORDINATE WORK ACCORDINGLY.

(6) 202.00 AFTER THE NEW INTERCEPTOR SEWER LINE IS TESTED, APPROVED, AND IN PLACE, ABANDON EXISTING SEWER BY PLUGING INLET AND OUTLET PIPES WITH CONCRETE. (1± CY) (ALLOW CONCRETE PLUG TO CURE 8± HOURS PRIOR TO FILLING M.H. BASE)
FILL THE MANHOLE WITH COMPACTED SOIL OR FLOW FILL AND REMOVE AND DISPOSE OF TOP CONE SECTION, RING, AND COVER.

(7) 105.00 THE NEW INTERCEPTOR SEWER LINE SHALL BE TESTED AND APPROVED PRIOR TO CONNECTING TO THE EXISTING SYSTEM.

ASBUILT

DESCRIPTION	DATE
REVISION ⚠ *ASBUILT PER CONST SURVEYORS NOTES*	*11-00*
REVISION ⚠	
REVISION ⚠	
REVISION ⚠	

D:\Land Projects 97\27-S III\dwg\PLIII\SANSEW\HORIZON\50005500.dwg 11/15/2000 03:06:40 PM MST

DRAWN BY	JCS	DATE	1-24-00
DESIGNED BY	JCS/SBG	DATE	1-24-00
CHECKED BY	SBG	DATE	1-24-00
APPROVED BY		DATE	

SCALE
PLAN HORIZ. 1"=20'
PROFILE HORIZ. 1"=20'
PROFILE VERT. 1"=5'

DEPARTMENT OF PUBLIC WORKS AND UTILITIES
ENGINEERING AND TECHNICAL SERVICES DIVISIONS
CITY OF GRAND JUNCTION, COLORADO

HORIZON DR. SANITARY SEWER PLAN AND PROFILES
STA 50+00 TO STA 55+00

19

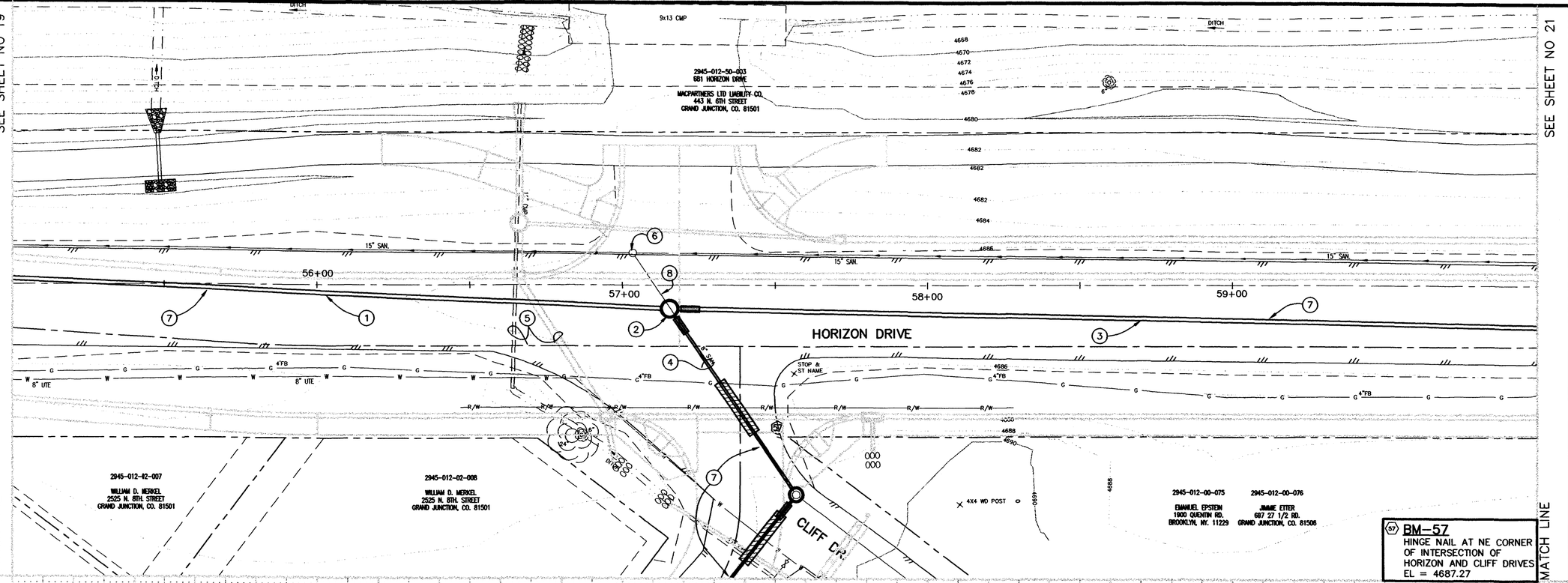
02099519

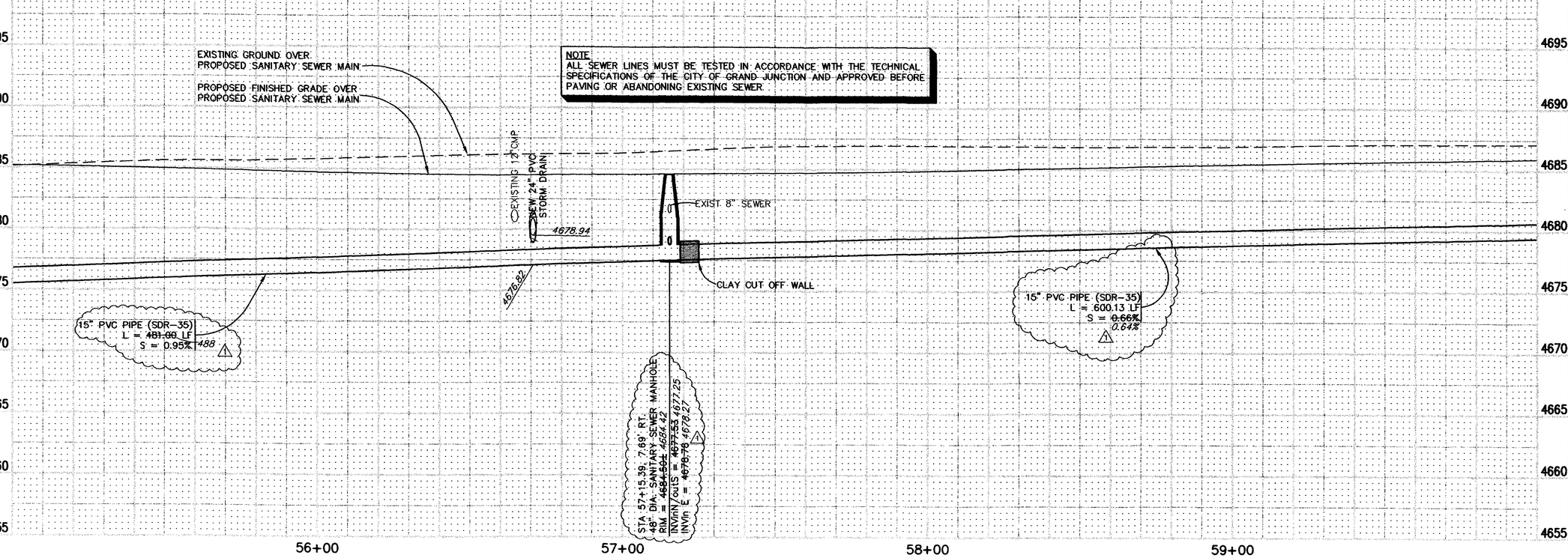
SEE SHEET NO 19

MATCH LINE

SEE SHEET NO 21

MATCH LINE





PROJECT NO. 2011-F01700

GRAPHIC SCALE

10 0 20 60

(IN FEET)
1 inch = 20 ft.

CONSTRUCTION NOTES

(1) 102.10b 15" PVC PIPE (SDR-35) (L = 481.00 LF)
BACKFILL TRENCH WITH MATERIALS MEETING CITY SPECIFICATION 103.14 AND 103.16.

(2) 102.11 STA 57+15.39, 7.69' RT. (N 48722.33, E 95290.48)
104.2c (TO CENTER OF MH)
48" DIA. SANITARY SEWER MANHOLE (ALL INLETS AND OUTLETS TO BE FITTED WITH PSX GASKETS) DURING NEW MANHOLE AND SANITARY SEWER INSTALLATION SOUTHEAST IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND THE WORK TO EXISTING MANHOLE AT STA 57+03.35, 10.5' LT.

CLAY CUT OFF WALL SHALL BE PLACED 10' UPSTREAM OF NEW MH. CUT OFF WALL SHALL EXTEND FROM 6" BELOW TO 6" ABOVE GRANULAR BACKFILL MATERIAL FOR THE FULL WIDTH OF THE TRENCH. IF NATIVE MATERIAL IS NOT SUITABLE, THE CONTRACTOR SHALL IMPORT MATERIAL APPROVED BY THE PROJECT ENGINEER.

THE PVC PIPE IS TO BE LAID THROUGH THIS MANHOLE OR THE INFLOW AND OUTFLOW PIPES ARE TO BE BUTTED TOGETHER TO PROVIDE A SMOOTH PVC INVERT THROUGH THE MANHOLE.

(3) 102.9a 15" PVC PIPE (SDR-35) (L = 600.13 LF)
BACKFILL TRENCH WITH NATIVE MATERIALS MEETING CITY SPECIFICATION 103.14 AND 103.16.

(4) SEE SANITARY SEWER PLAN AND PROFILE SHEET 24 FOR RECONSTRUCTION OF SEWER MAIN EAST AND SOUTH ON BUDLONG ST.

(5) SEE STORM DRAIN PLAN AND PROFILE SHEETS 15 & 16 FOR RECONSTRUCTION OF STORM DRAIN.

(6) 202.00 AFTER THE NEW INTERCEPTOR SEWER LINE IS TESTED, APPROVED, AND IN PLACE, ABANDON EXISTING SEWER BY PLUGGING INLET AND OUTLET PIPES WITH CONCRETE. (1± CY) (ALLOW CONCRETE PLUG TO CURE 8± HOURS PRIOR TO FILLING M.H. BASE)
FILL THE MANHOLE WITH COMPACTED SOIL OR FLOW FILL AND REMOVE AND DISPOSE OF TOP CONE SECTION, RING, AND COVER.

(7) 105.00 THE NEW INTERCEPTOR SEWER LINE SHALL BE TESTED AND APPROVED PRIOR TO CONNECTING TO THE EXISTING SYSTEM.

(8) 202.00 REMOVE EXIST. 8" PVC SEWER PIPE
TO INSTALL NEW SANITARY SEWER MAIN (80± LF)
PUMP/DIVERT EXISTING SEWER FLOWS COMING FROM CLIFF DRIVE AND BUDLONG ST. TO EXIST SEWER MANHOLE AT STA 57+03.35, 10.5' LT.

ASBUILT

DESCRIPTION	DATE
REVISION 1 ASBUILT PER CONST SURVEYORS NOTES	11-00
REVISION 2	
REVISION 3	
REVISION 4	

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DRAWN BY	JCS	DATE	1-24-00
DESIGNED BY	JCS/SBG	DATE	1-24-00
CHECKED BY	SBG	DATE	1-24-00
APPROVED BY		DATE	

SCALE

PLAN	PROFILE
HORIZ. 1"=20'	HORIZ. 1"=20'
	VERT. 1"=5'

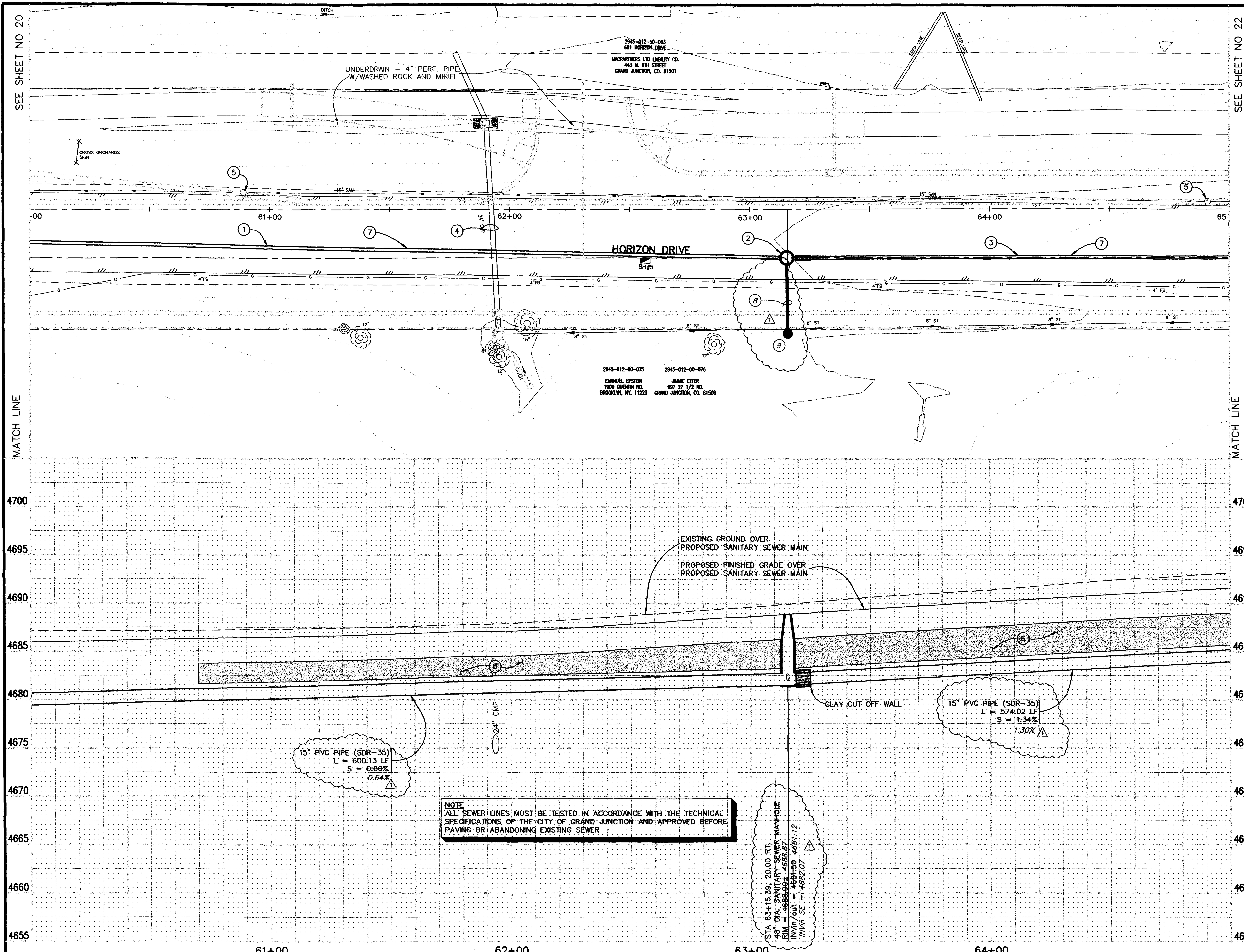
DEPARTMENT OF PUBLIC WORKS AND UTILITIES
ENGINEERING AND TECHNICAL SERVICES DIVISIONS
CITY OF GRAND JUNCTION, COLORADO

HORIZON DR. SANITARY SEWER PLAN AND PROFILES
STA 55+00 TO STA 60+00

20

02099520

PROJECT NO. 2011-F01700



GRAPHIC SCALE

(IN FEET)
1 inch = 20 ft.

CONSTRUCTION NOTES

(1) 102.9a 15" PVC PIPE (SDR-35) (L = 600.13 LF) BACKFILL TRENCH WITH PIT RUN (IF NEEDED/NATIVE MATERIALS TO THE LIMITS SHOWN MEETING CITY SPECIFICATION 103.14 & 103.16.

(2) 102.11 104.2c STA 63+15.39, 20.00 RT. (N 49075.96 E 95775.35) (TO CENTER OF MH) 48" DIA. SANITARY SEWER MANHOLE (ALL INLETS AND OUTLETS TO BE FITTED WITH PSX GASKETS)

CLAY CUT OFF WALL SHALL BE PLACED 10' UPSTREAM OF NEW MH. CUT OFF WALL SHALL EXTEND FROM 6"BELOW TO 6" ABOVE GRANULAR BACKFILL MATERIAL FOR THE FULL WIDTH OF THE TRENCH. IF NATIVE MATERIAL IN NOT SUITABLE, THE CONTRACTOR SHALL IMPORT MATERIAL APPROVED BY THE PROJECT ENGINEER.

THE PVC PIPE IS TO BE LAID THROUGH THIS MANHOLE OR THE INFLOW AND OUTFLOW PIPES ARE TO BE BUTTED TOGETHER TO PROVIDE A SMOOTH PVC INVERT THROUGH THE MANHOLE.

(3) 102.9a 15" PVC PIPE (SDR-35) (L = 574.02 LF) BACKFILL TRENCH WITH NATIVE MATERIALS MEETING CITY SPECIFICATION 103.14 & 103.16.

(4) SEE STORM DRAIN PLAN AND PROFILE SHEET 17 FOR RECONSTRUCTION OF STORM DRAIN.

(5) 202.00 AFTER THE NEW INTERCEPTOR SEWER LINE IS TESTED, APPROVED, AND IN PLACE, ABANDON EXISTING SEWER BY PLUGGING INLET AND OUTLET PIPES WITH CONCRETE. (1± CY) (ALLOW CONCRETE PLUG TO CURE 8± HOURS PRIOR TO FILLING M.H. BASE) FILL THE MANHOLE WITH COMPACTED SOIL OR FLOW FILL AND REMOVE AND DISPOSE OF TOP CONE SECTION, RING, AND COVER.

(6) IT IS ANTICIPATED THAT SOME IMPORT MATERIALS MAY BE REQUIRED FOR BACKFILL OF THE TRENCH IN THE AREA SHOWN. IF NEEDED PIT RUN WILL BE PLACED FROM THE HAUNCHING MATERIAL TO SUBGRADE OF THE NEW ROAD SECTION. SCALE TICKETS FOR ANY IMPORT MATERIAL SHALL BE PROVIDED FOR THE CITY INSPECTOR AS TRUCKS ARRIVE. GOOD NATIVE MATERIAL IS TO BE USED ABOVE THE PIT RUN.

(7) 105.00 THE NEW INTERCEPTOR SEWER LINE SHALL BE TESTED AND APPROVED PRIOR TO CONNECTING TO THE EXISTING SYSTEM.

(8) 102.9a *8" PVC PIPE (SDR-35) (L = 31LF) (S = 4.16%) TRENCH BACKFILLED WITH NATIVE MATERIALS MEETING CITY SPECIFICATION 103.14 & 103.16.*

(9) 104.2c *STA 63+15.81, 51.44' RT. (N 49051.19 E 95794.73) (TO CENTER OF NEW MANHOLE) 48" DIA. SANITARY SEWER MANHOLE MANHOLE HAS A PRECAST BASE WITHOUT AN INVERT. THE MANHOLE OUTLET HAS BEEN FITTED WITH A PSX GASKET. RIM=4687.06 INVout=4683.36*

ASBUILT

DESCRIPTION	DATE
REVISION △ ASBUILT PER CONST SURVEYORS NOTES	11-00
REVISION △	
REVISION △	
REVISION △	

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DRAWN BY	JCS	DATE	1-24-00
DESIGNED BY	JCS/SBG	DATE	1-24-00
CHECKED BY	SBG	DATE	1-24-00
APPROVED BY		DATE	

SCALE

	PLAN		PROFILE
HORIZ.	1"=20'	HORIZ.	1"=20'
		VERT.	1"=5'

DEPARTMENT OF PUBLIC WORKS AND UTILITIES
ENGINEERING AND TECHNICAL SERVICES DIVISIONS
CITY OF GRAND JUNCTION, COLORADO

HORIZON DR. SANITARY SEWER PLAN AND PROFILES
STA 60+00 TO STA 65+00

21

02099521

SEE SHEET NO 21

SEE SHEET NO 23

MATCH LINE

MATCH LINE

681 HORIZON DRIVE
MACPARTNERS LTD LIABILITY CO.
443 N. 6TH STREET
GRAND JUNCTION, CO. 81501

2945-012-00-071
EMANUEL EPSTEIN
1900 QUENTIN RD.
BROOKLYN, NY. 11229

2945-012-00-072
JIMMIE ETTER
697 27 1/2 RD.
GRAND JUNCTION, CO. 81506

2945-012-00-075
EMANUEL EPSTEIN
1900 QUENTIN RD.
BROOKLYN, NY. 11229

2945-012-00-076
JIMMIE ETTER
697 27 1/2 RD.
GRAND JUNCTION, CO. 81506

2945-012-00-073
EMANUEL EPSTEIN
1900 QUENTIN RD.
BROOKLYN, NY. 11229

2945-012-00-074
JIMMIE ETTER
697 27 1/2 RD.
GRAND JUNCTION, CO. 81506

10' CONC. BIKE PATH

HORIZON DRIVE

8" UTE

8" ST

4"FB

15" SAN

15" CAN

66+00

67+00

68+00

69+00

CP-66

⚠ CP-66
STA 66+45.24, 0.5' RT.
N 49291.25
E 96025.98
EL = 4693.97
PK NAIL

EXISTING GROUND OVER PROPOSED SANITARY SEWER MAIN

PROPOSED FINISHED GRADE OVER PROPOSED SANITARY SEWER MAIN

8" UTE WATER

15" PVC PIPE (SDR-35)
⚠ L = 574.02 LF
S = ~~1.34%~~
1.30%

NOTE
ALL SEWER LINES MUST BE TESTED IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS OF THE CITY OF GRAND JUNCTION AND APPROVED BEFORE PAVING OR ABANDONING EXISTING SEWER

4687.72

4685.95

NEW 12" STORM

CLAY CUT OFF WALL

15" PVC PIPE (SDR-35)
L = 410.12 LF
S = ~~0.99%~~
1.09%

STA 68+89.41, 20.00' RT.
48" DIA. SANITARY SEWER MANHOLE
RIM = ~~4694.69~~ 4694.58
INVinN/outS = ~~4688.17~~ 4688.57
INVin. E = ~~4690.32~~ 4689.78

4700
4695
4690
4685
4680
4675
4670
4665
4660
4655

PROJECT NO. 2011-F01700

GRAPHIC SCALE
10 0 20 60
(IN FEET)
1 inch = 20 ft.

CONSTRUCTION NOTES

(1) 102.9a 15" PVC PIPE (SDR-35) (L = 574.02 LF)
BACKFILL TRENCH WITH NATIVE MATERIALS MEETING CITY SPECIFICATION 103.14 AND 103.16.

(2) 102.11 STA 68+89.41, 20.00' RT. (N 49423.65, E 96232.09)
104.2c (TO CENTER OF MH)
48" DIA. SANITARY SEWER MANHOLE (ALL INLETS AND OUTLETS TO BE FITTED WITH PSX GASKETS)

CLAY CUT OFF WALL SHALL BE PLACED 10' UPSTREAM OF NEW MH. CUT OFF WALL SHALL EXTEND FROM 6"BELOW TO 6" ABOVE GRANULAR BACKFILL MATERIAL FOR THE FULL WIDTH OF THE TRENCH. IF NATIVE MATERIAL IN NOT SUITABLE, THE CONTRACTOR SHALL IMPORT MATERIAL APPROVED BY THE PROJECT ENGINEER.

THE PVC PIPE IS TO BE LAID THROUGH THIS MANHOLE OR THE INFLOW AND OUTFLOW PIPES ARE TO BE BUTTED TOGETHER TO PROVIDE A SMOOTH PVC INVERT THROUGH THE MANHOLE.

(3) 102.9a 15" PVC PIPE (SDR-35) (L = 410.12 LF)
BACKFILL TRENCH WITH NATIVE MATERIALS MEETING CITY SPECIFICATION 103.14 AND 103.16.

(4) SEE SANITARY SEWER PLAN AND PROFILE SHEET 25 FOR CONSTRUCTION OF THIS SEWER LINE.

(5) ABANDONED UTE WATER MAIN. NOTIFY UTE WATER 48 HOURS PRIOR TO EXCAVATIONS THAT WILL EXPOSE/DISTURB WATER LINE.

(6) SEE STORM SEWER PLAN AND PROFILE SHEET 18 FOR CONSTRUCTION OF STORM DRAIN.

(7) 202.00 AFTER THE NEW INTERCEPTOR SEWER LINE IS TESTED, APPROVED, AND IN PLACE, ABANDON EXISTING SEWER BY PLUGGING INLET AND OUTLET PIPES WITH CONCRETE. (1± CY) (ALLOW CONCRETE PLUG TO CURE 8± HOURS PRIOR TO FILLING M.H. BASE)
FILL THE MANHOLE WITH COMPACTED SOIL OR FLOW FILL AND REMOVE AND DISPOSE OF TOP CONE SECTION, RING, AND COVER.

(8) IT IS ANTICIPATED THAT SOME IMPORT MATERIALS MAY BE REQUIRED FOR BACKFILL OF THE TRENCH IN THE AREA SHOWN. IF NEEDED PIT RUN WILL BE PLACED FROM THE HAUNCHING MATERIAL TO SUBGRADE OF THE NEW ROAD SECTION. SCALE TICKETS FOR ANY IMPORT MATERIAL SHALL BE PROVIDED FOR THE CITY INSPECTOR AS TRUCKS ARRIVE. GOOD NATIVE MATERIAL IS TO BE USED ABOVE THE PIT RUN.

(9) 105.00 THE NEW INTERCEPTOR SEWER LINE SHALL BE TESTED AND APPROVED PRIOR TO CONNECTING TO THE EXISTING SYSTEM.

ASBUILT

DESCRIPTION		DATE
REVISION ⚠	ASBUILT PER CONST SURVEYORS NOTES	11-00
REVISION ⚠		
REVISION ⚠		
REVISION ⚠		

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DRAWN BY	JCS	DATE	1-24-00
DESIGNED BY	JCS/SBG	DATE	1-24-00
CHECKED BY	SBG	DATE	1-24-00
APPROVED BY		DATE	

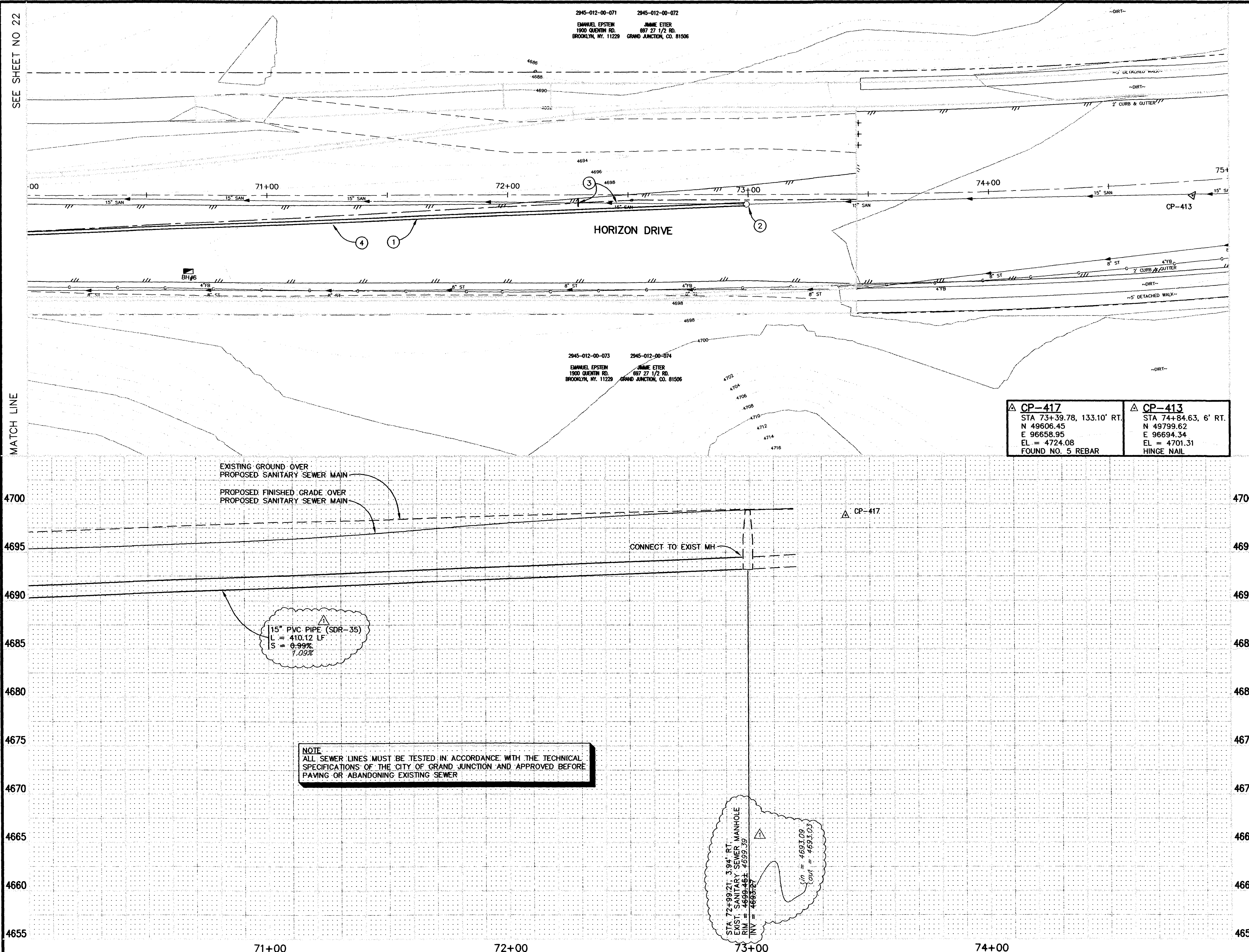
SCALE
PLAN HORIZ. 1"=20'
PROFILE HORIZ. 1"=20' VERT. 1"=5'

DEPARTMENT OF PUBLIC WORKS AND UTILITIES
ENGINEERING AND TECHNICAL SERVICES DIVISIONS
CITY OF GRAND JUNCTION, COLORADO

HORIZON DR. SANITARY SEWER PLAN AND PROFILES
STA 65+00 TO STA 70+00

22

02099522



PROJECT NO. 2011-F01700

GRAPHIC SCALE

(IN FEET)
1 inch = 20 ft.

CONSTRUCTION NOTES

1. 102.9a 15" PVC PIPE (SDR-35) (L = 410.12 LF) BACKFILL TRENCH WITH NATIVE MATERIALS MEETING CITY SPECIFICATION 103.14 AND 103.16.

2. 210.00 STA 72+99.21, 3.94' RT. (N 49684.64 E 96548.44) CONNECT NEW 15" PVC PIPE TO EXISTING MANHOLE BY REMOVING THE EXISTING CONCRETE PIPE OUTLET AND INSTALLING THE NEW PVC PIPE IN THE SAME OUTLET. GROUT INVERT AND AROUND NEW PVC PIPE OUTLET MEETING CITY SPECIFICATIONS. IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND THE WORK TO A DOWNSTREAM MANHOLE. SEWAGE FLOW IS ESTIMATED TO BE 500 TO 700 gpm. THE CONTRACTOR SHALL PROVIDE ADEQUATE PUMPS TO MAINTAIN THE EXISTING FLOWS. BACK UP PUMPS SHALL BE REQUIRED IN THE EVENT OF A PUMP FAILURE. PEAK FLOWS MAY EXCEED 700 GPM AND ARE TYPICALLY AROUND THE HOURS OF 6:00 AM TO 8:00 AM AND 4:30 PM TO 7:30 PM. NEW OUTLET SHALL BE FITTED WITH A PSX GASKET.

3. 202.00 REMOVE EXIST. 15" CONCRETE SEWER PIPE AS NEEDED TO INSTALL NEW SANITARY SEWER (70± LF) ABANDON EXIST. CONCRETE SEWER LINE BY FILLING END OF 15" PIPE WITH CONCRETE. (1± CY)

4. 105.00 THE NEW INTERCEPTOR SEWER LINE SHALL BE TESTED AND APPROVED PRIOR TO CONNECTING TO THE EXISTING SYSTEM.

ASBUILT

DESCRIPTION	DATE
REVISION 1 ASBUILT PER CONST SURVEYORS NOTES	11-00
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY	JCS	DATE	1-24-00
DESIGNED BY	JCS/SBG	DATE	1-24-00
CHECKED BY	SBG	DATE	1-24-00
APPROVED BY		DATE	

SCALE	
PLAN	PROFILE
HORIZ. 1"=20'	HORIZ. 1"=20'
	VERT. 1"=5'

DEPARTMENT OF PUBLIC WORKS AND UTILITIES
ENGINEERING AND TECHNICAL SERVICES DIVISIONS
CITY OF GRAND JUNCTION, COLORADO

HORIZON DR. SANITARY SEWER PLAN AND PROFILES
STA 70+00 TO STA 75+00

23

020995223

PROJECT NO. 2011-F01700

GRAPHIC SCALE

10 0 20 60

(IN FEET)
1 inch = 20 ft.

CONSTRUCTION NOTES

(1) 102.11 STA 57+15.39, 7.69' RT. (N 48722.33, E 95290.48) (TO CENTER OF MH) 48" DIA. SANITARY SEWER MANHOLE (ALL INLETS AND OUTLETS TO BE FITTED WITH PSX GASKETS)

CLAY CUT OFF WALL SHALL BE PLACED 10' UPSTREAM OF NEW MH. CUT OFF WALL SHALL EXTEND FROM 6" BELOW TO 6" ABOVE GRANULAR BACKFILL MATERIAL FOR THE FULL WIDTH OF THE TRENCH. IF NATIVE MATERIAL IS NOT SUITABLE, THE CONTRACTOR SHALL IMPORT MATERIAL APPROVED BY THE PROJECT ENGINEER.

(2) 102.10b 8" PVC PIPE (SDR-35) INCLUDES REMOVAL OF EXIST. SEWER PIPE. (L = ~~73.43~~ LF) *74.82* ⚠ BACKFILL TRENCH WITH NATIVE MATERIALS MEETING CITY SPECIFICATION 103.14 AND 103.16.

(3) 102.13 STA 10+~~98.65, 18.42~~ *02, 19.66'* ⚠ *.27* *1.66* RT. (N ~~48699.19~~, E ~~95360.17~~) (TO CENTER OF MH) 48" DIA. SANITARY SEWER MANHOLE WITH DROP CONNECTION (ALL INLETS AND OUTLETS TO BE FITTED WITH PSX GASKETS) DURING NEW MANHOLE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND THE WORK TO EXISTING MANHOLE AT STA 57+03.35, 10.5' LT. PRIOR TO ALLOWING SANITARY SEWER FLOWS TO ENTER AND FLOW THROUGH NEW SEWER MAIN, SEWER MAIN SHALL BE TESTED AND APPROVED MEETING CITY SPECIFICATION 105.

CLAY CUT OFF WALL SHALL BE PLACED 10' UPSTREAM OF NEW MH. CUT OFF WALL SHALL EXTEND FROM 6" BELOW TO 6" ABOVE GRANULAR BACKFILL MATERIAL FOR THE FULL WIDTH OF THE TRENCH. IF NATIVE MATERIAL IS NOT SUITABLE, THE CONTRACTOR SHALL IMPORT MATERIAL APPROVED BY THE PROJECT ENGINEER.

(4) 102.10b 8" PVC PIPE (SDR-35) INCLUDES REMOVAL OF EXIST. SEWER PIPE. (L = 82.19 LF) BACKFILL TRENCH WITH NATIVE MATERIALS MEETING CITY SPECIFICATION 103.14 AND 103.16.

(5) 102.13 STA 10+25, 1.33' RT. (N 48617.01, E 95358.74) (TO CENTER OF MH) 48" DIA. SANITARY SEWER MANHOLE (ALL INLETS AND OUTLETS TO BE FITTED WITH PSX GASKETS) DURING NEW MANHOLE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND THE WORK TO A DOWNSTREAM MANHOLE

(6) NOTIFY PUBLIC SERVICE COMPANY AND UTE WATER 48 HOURS PRIOR TO EXCAVATIONS THAT WILL EXPOSE EXISTING GAS LINE AND WATER LINES.

(7) SEE STORM DRAIN PLAN AND PROFILE SHEETS 15 & 16 FOR RECONSTRUCTION OF STORM DRAIN.

(8) 202.00 REMOVE EXISTING PIPE. REMOVE EXISTING PIPE AS NEEDED TO INSTALL NEW SANITARY SEWER.

(9) 102.9 SERVICE LINE CONNECTION TO THE NEW PVC SEWER MAIN SHALL BE ACCOMPLISHED WITH FULL BODY PVC WYE FITTINGS AND 45° BENDS. TAPPING SADDLES WILL NOT BE ALLOWED. POTHOLE THE EXISTING 4" SERVICE STUB LOCATION TO ENSURE THAT THE NEW 4" SERVICE LINE IS INSTALLED WITH THE STUB MATCHING THE EXISTING STUB DEPTH. INSTALL THE 4" SERVICE ON A STRAIGHT LINE GRADE FROM THE NEW TAP TO THE EXISTING STUB ELEVATION. INSTALL GLUE CAPPED END FOR AIR TESTING PURPOSES. (25 LF)

(10) INSTALL CONCRETE CAP ON SEWER LINE MEETING CITY SPECIFICATION 104.4. (20 LF) (2 EA)

ASBUILT

(57) BM-57
HINGE NAIL AT NE CORNER OF INTERSECTION OF HORIZON AND CLIFF DRIVES
EL = 4687.27

BUDLONG STREET

HORIZON DRIVE

NOTE
ALL SEWER LINES MUST BE TESTED IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS OF THE CITY OF GRAND JUNCTION AND APPROVED BEFORE PAVING OR ABANDONING EXISTING SEWER

EXISTING GROUND OVER PROPOSED SANITARY SEWER MAIN

PROPOSED FINISHED GRADE OVER PROPOSED SANITARY SEWER MAIN

TIE TO EXIST. 8" PVC SEWER.

CONCRETE CAP

CLAY CUT OFF WALL

8" PVC PIPE (SDR-35)
L = 82.19 LF
S = ~~6.33%~~ ⚠ *6.23%*

8" PVC PIPE (SDR-35)
L = ~~73.43~~ LF *74.82*
S = ~~0.40%~~ ⚠ *1.10%*

STA 10+25, 1.33' RT.
48" DIA. SANITARY SEWER MANHOLE
RIM = 4688.30± 4688.23
INVin = (~~4684.48~~) 4684.34 ⚠

STA 10+~~98.65, 18.42~~ *02, 19.66'* RT.
48" DIA. DROP SANITARY SEWER MANHOLE
RIM = ~~4685.30±~~ 4685.27
INVout W = ~~4679.07~~ 4679.09
INVin = ~~4679.27~~ 4679.22
INVin E = ~~4683.58~~ (DROP = 4679.27)

STA 57+15.39, 7.69' RT. (HOR. DR. STA'ING)
48" DIA. SANITARY SEWER MANHOLE
RIM = ~~4684.56±~~ 4684.42
INV N/S = ~~4677.33~~ 4677.26
INVin = ~~4678.78~~ 4678.27

DESCRIPTION	DATE
REVISION ⚠ *ASBUILT PER CONST SURVEYORS NOTES*	*11-00*
REVISION ⚠	
REVISION ⚠	
REVISION ⚠	

D:\Land Projects\82\27-5-11\dwg\PLOT\SANSEWER\budlong\1000end.dwg 11/15/2000 05:01:05 PM MST

DRAWN BY JCS DATE 1-24-00
DESIGNED BY JCS/SBG DATE 1-24-00
CHECKED BY SBG DATE 1-24-00
APPROVED BY ____ DATE ____

SCALE: PLAN HORIZ. 1"=20' VERT. ____ PROFILE HORIZ. 1"=20' VERT. 1"=5'

DEPARTMENT OF PUBLIC WORKS AND UTILITIES
ENGINEERING AND TECHNICAL SERVICES DIVISIONS
CITY OF GRAND JUNCTION, COLORADO

BUDLONG ST. SANITARY SEWER PLAN AND PROFILES
STA 10+00 TO STA 11+47.15

24

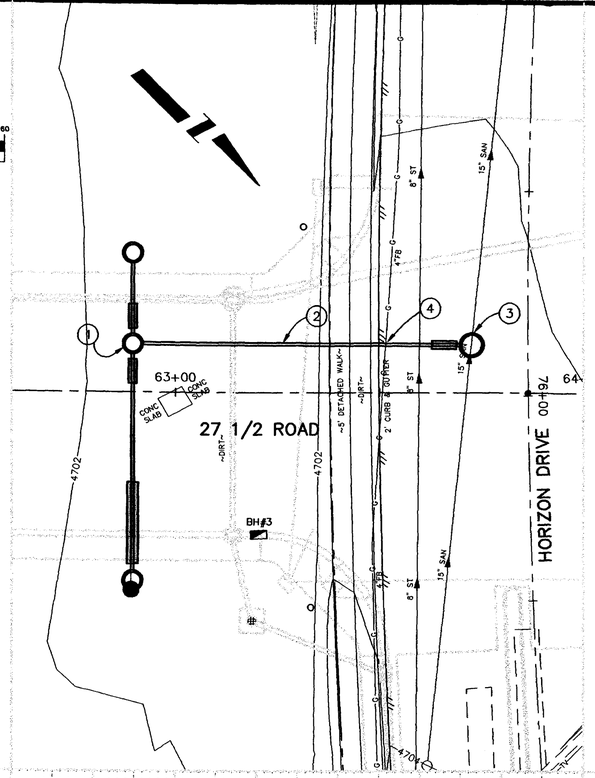
020995224

PROJECT NO. 2011-F01700

GRAPHIC SCALE

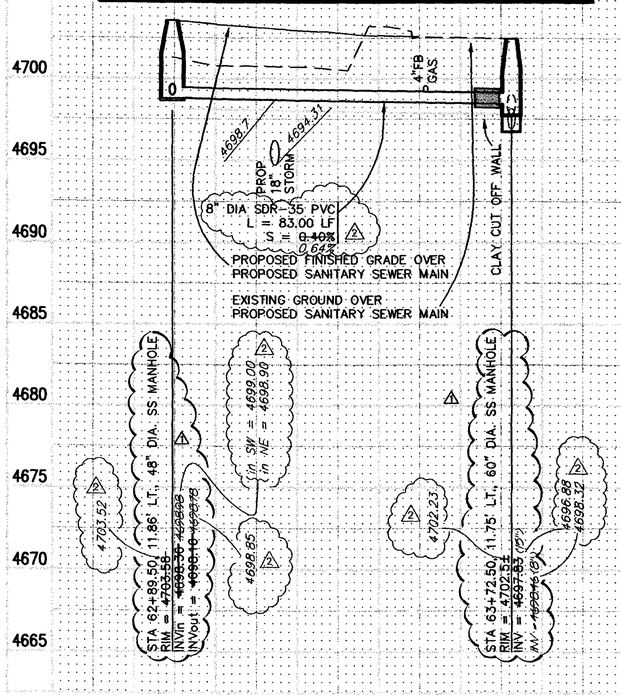
10 0 20 60

(IN FEET)
1 inch = 20 ft.

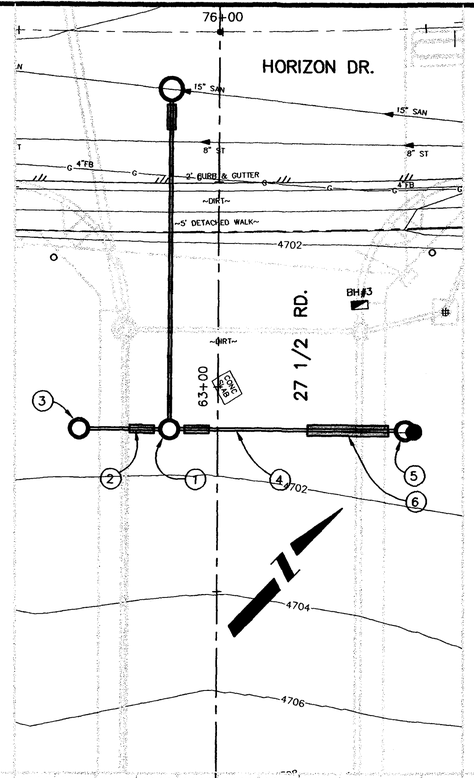


(SANITARY SEWER PLAN & PROFILE NO.1)

NOTE
ALL SEWER LINES MUST BE TESTED IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS OF THE CITY OF GRAND JUNCTION AND APPROVED BEFORE PAVING.

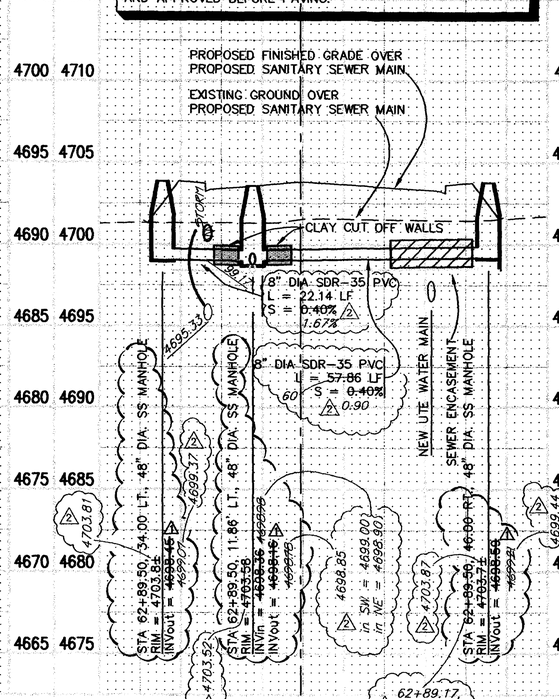


63+00

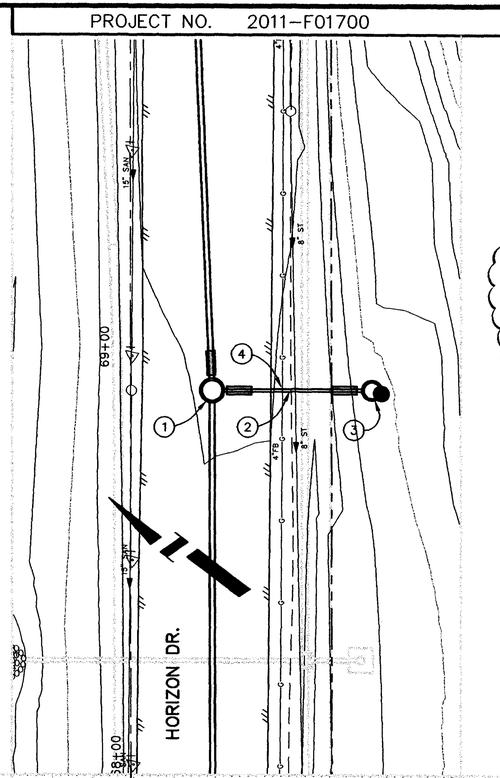


(SANITARY SEWER PLAN & PROFILE NO.2)

NOTE
ALL SEWER LINES MUST BE TESTED IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS OF THE CITY OF GRAND JUNCTION AND APPROVED BEFORE PAVING.

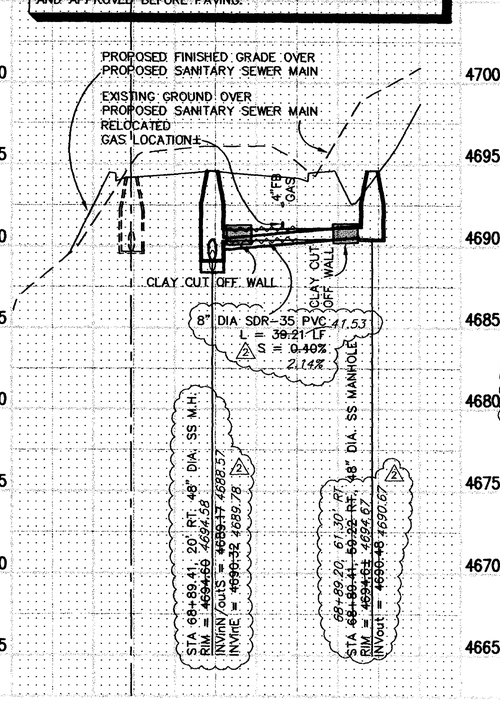


62+89.50



(SANITARY SEWER PLAN & PROFILE NO.3)

NOTE
ALL SEWER LINES MUST BE TESTED IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS OF THE CITY OF GRAND JUNCTION AND APPROVED BEFORE PAVING.



68+89.41

CONSTRUCTION NOTES (SANITARY SEWER PLAN & PROFILE NO.1)

1. 102.11 STA 62+89.50, 11.86 LT. (N 49805.11, E 96833.07)
   (TO CENTER OF MH)
   48" DIA. SANITARY SEWER MANHOLE (ALL INLETS AND OUTLETS TO BE FITTED WITH PSX GASKETS)
   102.11 CLAY CUT OFF WALL SHALL BE PLACED 10' UPSTREAM OF NEW MH. CUT OFF WALL SHALL EXTEND FROM 6" BELOW TO 6" ABOVE GRANULAR BACKFILL MATERIAL FOR THE FULL WIDTH OF THE TRENCH. IF NATIVE MATERIAL IS NOT SUITABLE, THE CONTRACTOR SHALL IMPORT MATERIAL APPROVED BY THE PROJECT ENGINEER.
2. 102.10b 8" DIA. PVC (SDR-35) (L = 83.00 L.F.)
   BACKFILL TRENCH WITH NATIVE MATERIAL
   PER CITY SPECIFICATION 103.14 AND 103.16.
3. 102.11 STA 63+72.50, 11.75 LT. (N 49864.57, E 96775.16)
   (TO CENTER OF MH)
   60" ~~48"~~ DIA. SANITARY SEWER MANHOLE
   THE CONTRACTOR SHALL EXCAVATE TO A DEPTH OF 14" BELOW THE FLOW LINE OF THE EXISTING SEWER MAIN AND PROVIDE WEDGES OR OTHER APPROVED SUPPORT OF THE EXISTING SEWER LINE. AFTER THE EXISTING SEWERLINE HAS BEEN ADEQUATELY SUPPORTED, THE TOP HALF OF THE PIPE SHOULD BE CUT OUT TO SPRING LINE AND NOTCHED TO ACCOMMODATE THE NEW INVERT-IN. THE CONTRACTOR MAY ELECT TO POUR THE NEW BASE AND INVERT PRIOR TO CUTTING THE EXISTING SEWERLINE TO ACCOMMODATE THE NEW INVERT. ⚠
   102.11 CLAY CUT OFF WALL SHALL BE PLACED 10' UPSTREAM OF NEW MH. CUT OFF WALL SHALL EXTEND FROM 6" BELOW TO 6" ABOVE GRANULAR BACKFILL MATERIAL FOR THE FULL WIDTH OF THE TRENCH. IF NATIVE MATERIAL IN NOT SUITABLE, THE CONTRACTOR SHALL IMPORT MATERIAL APPROVED BY THE PROJECT ENGINEER.
4. NOTIFY PUBLIC SERVICE COMPANY 48 HOURS PRIOR TO EXCAVATIONS THAT WILL EXPOSE THE GAS LINES.

CONSTRUCTION NOTES (SANITARY SEWER PLAN & PROFILE NO.2)

1. 102.11 STA 62+89.50, 11.86 LT. (N 49805.11, E 96833.07)
   (TO CENTER OF MH)
   48" DIA. SANITARY SEWER MANHOLE (ALL INLETS AND OUTLETS TO BE FITTED WITH PSX GASKETS)
   102.11 CLAY CUT OFF WALL SHALL BE PLACED 10' UPSTREAM OF NEW MH. CUT OFF WALL SHALL EXTEND FROM 6" BELOW TO 6" ABOVE GRANULAR BACKFILL MATERIAL FOR THE FULL WIDTH OF THE TRENCH. IF NATIVE MATERIAL IS NOT SUITABLE, THE CONTRACTOR SHALL IMPORT MATERIAL APPROVED BY THE PROJECT ENGINEER.
2. 102.10b 8" DIA. PVC (SDR-35) (L = 22.14 L.F.)
   BACKFILL TRENCH WITH NATIVE MATERIAL
   PER CITY SPECIFICATION 103.14 AND 103.16.
3. 102.11 STA 62+89.50, 34.00 LT. (N 49789.64, E 96817.23)
   (TO CENTER OF MH)
   48" DIA. SANITARY SEWER MANHOLE
   MANHOLE SHALL HAVE A PRECAST BASE WITH OUT AN INVERT. THE OUTLET OF THE MANHOLE SHALL BE FITTED WITH A PSX GASKET. DO NOT GROUT AROUND PIPE.
4. 102.10b 8" DIA. PVC (SDR-35) (L = ~~57.86~~ 60 L.F.)
   BACKFILL TRENCH WITH NATIVE MATERIAL
   PER CITY SPECIFICATION 103.14 AND 103.16 ⚠
   62+89.17, 48.22 6.85 6.28
5. 102.11 STA ~~62+89.50, 46.00~~ RT. (N 49845.54, E 96874.46)
   (TO CENTER OF MH)
   48" DIA. SANITARY SEWER MANHOLE
   MANHOLE SHALL HAVE A PRECAST BASE WITH OUT AN INVERT. THE OUTLET OF THE MANHOLE SHALL BE FITTED WITH A PSX GASKET. DO NOT GROUT AROUND PIPE.
6. ENCASE SANITARY SEWER MAIN 10' EITHER SIDE OF WATER LINE CROSSING (20 LF) MEETING CITY SPECIFICATION 104.4. COORDINATE CONSTRUCTION WITH UTE WATER.

CONSTRUCTION NOTES (SANITARY SEWER PLAN & PROFILE NO.3)

1. 102.13 STA 68+89.41, 20.00' RT. (N 49423.65, E 96232.09)
   (TO CENTER OF MH)
   48" DIA. SANITARY SEWER MANHOLE (ALL INLETS AND OUTLETS TO BE FITTED WITH PSX GASKETS)
   102.11 CLAY CUT OFF WALL SHALL BE PLACED 10' UPSTREAM OF NEW MH. CUT OFF WALL SHALL EXTEND FROM 6" BELOW TO 6" ABOVE GRANULAR BACKFILL MATERIAL FOR THE FULL WIDTH OF THE TRENCH. IF NATIVE MATERIAL IN NOT SUITABLE, THE CONTRACTOR SHALL IMPORT MATERIAL APPROVED BY THE PROJECT ENGINEER.
2. 102.10b 8" DIA. PVC (SDR-35) (L=~~39.21~~ 41.53 LF)
   BACKFILL TRENCH WITH NATIVE MATERIAL ⚠
   PER CITY SPECIFICATION 103.14 AND 103.16.
   68+89.20, 61.31' 0.16 6.66
3. 102.11 STA 68+89.41, 59.22 RT. (N 49392.45, E 96255.84)
   (TO CENTER OF MH)
   48" DIA. SANITARY SEWER MANHOLE
   MANHOLE SHALL HAVE A PRECAST BASE WITH OUT AN INVERT. THE OUTLET OF THE MANHOLE SHALL BE FITTED WITH A PSX GASKET. DO NOT GROUT AROUND PIPE.
   102.11 CLAY CUT OFF WALL SHALL BE PLACED 5' DOWNSTREAM OF NEW MH. CUT OFF WALL SHALL EXTEND FROM 6" BELOW TO 6" ABOVE GRANULAR BACKFILL MATERIAL FOR THE FULL WIDTH OF THE TRENCH. IF NATIVE MATERIAL IS NOT SUITABLE, THE CONTRACTOR SHALL IMPORT MATERIAL APPROVED BY THE PROJECT ENGINEER.
4. NOTIFY PUBLIC SERVICE COMPANY 48 HOURS PRIOR TO EXCAVATIONS THAT WILL EXPOSE THE GAS LINES.

ASBUILT

DESCRIPTION	DATE
REVISION ⚠ RAISE SAN SEWER & STORM SEWER IN 27 1/2 RD.	3-29-00
REVISION ⚠ ASBUILT PER CONST SURVEYORS NOTES	11-00
REVISION ⚠	
REVISION ⚠	

D:\Land Projects R2\27-5-III\dwg\PLOT\SANSEWER\SANITARYREV.dwg 11/15/2000 05:03:29 PM MST

DRAWN BY	JCS	DATE	1-24-00
DESIGNED BY	JCS/SBG	DATE	1-24-00
CHECKED BY	SBG	DATE	1-24-00
APPROVED BY		DATE	

SCALE

PLAN	PROFILE
HORIZ. 1"=20'	HORIZ. 1"=20'
	VERT. 1"=5'

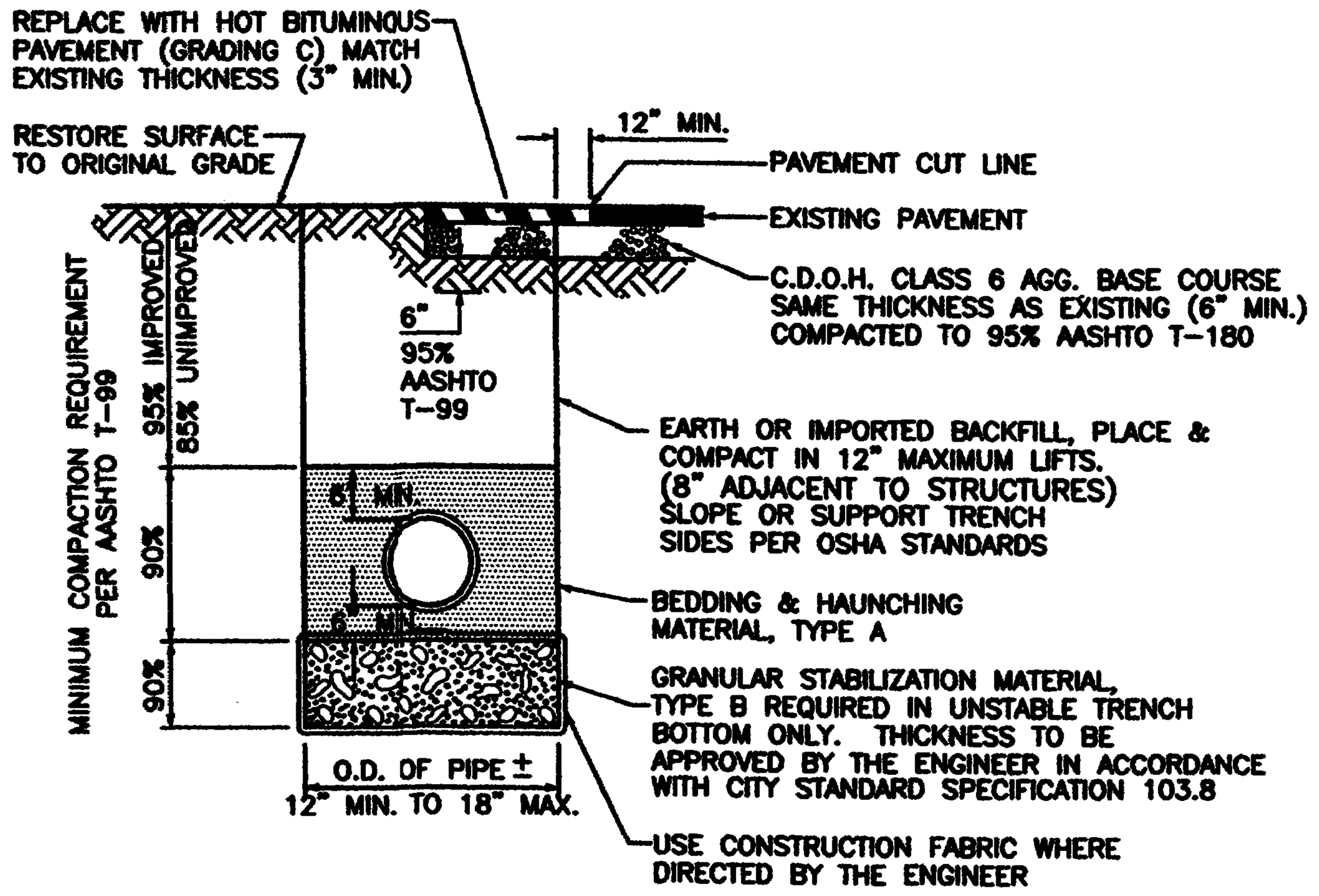
DEPARTMENT OF PUBLIC WORKS AND UTILITIES
ENGINEERING AND TECHNICAL SERVICES DIVISIONS
CITY OF GRAND JUNCTION, COLORADO

SANITARY SEWER PLAN AND PROFILES
27 1/2 ROAD AND 27 1/2 ROAD
CROSSING AT STA 62+89.50 AND
HORIZON DRIVE CROSSING AT 68+89.41

25

020995225

PROJECT NO. 2011-61115-F01700



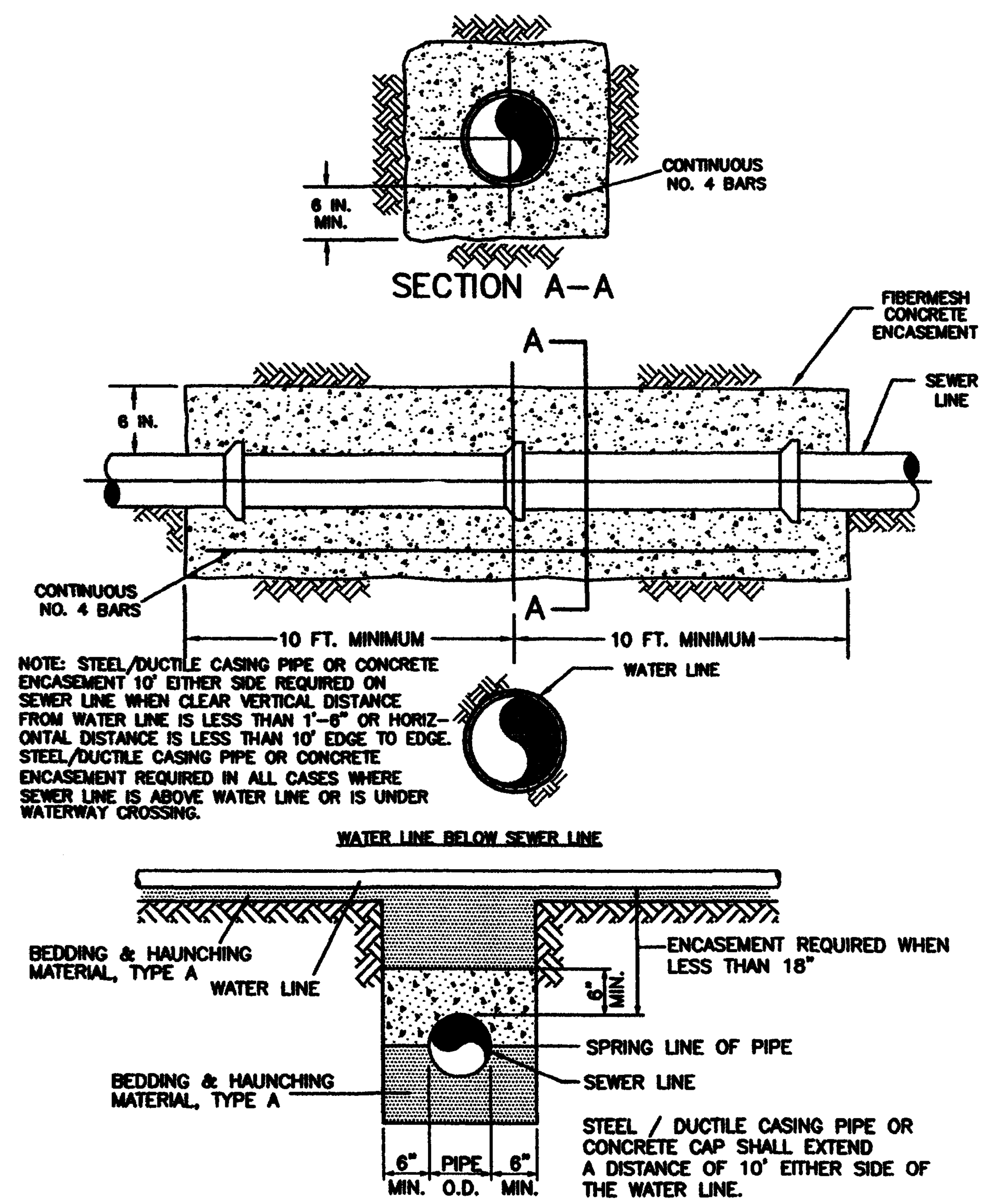
SIEVE SIZE	MAXIMUM PERCENT BY WEIGHT PASSING SQUARE MESH SIEVES		
	PIPE BEDDING & HAUNCHING MATERIAL (TYPE A)	GRANULAR STABILIZATION MATERIAL (SCREENED OR CRUSHED ROCK TYPE B)	IMPORTED MATERIAL (TO BE USED WHERE SPECIFIED OR DIRECTED BY THE ENGINEER
12 INCH	---	---	100
2 INCH	---	100	---
1 INCH	100	---	---
NO 4	---	15 MAX	---
NO 200	20 MAX	---	3% – 20%

IMPORTED MATERIAL SHALL ALSO MEET HAZEN UNIFORMITY COEF. (C_u) > 6 AND COEFFICIENT OF CURVATURE (C_c) 1 TO 8 AND PLASTICITY INDEX (PI) MAXIMUM OF 7.

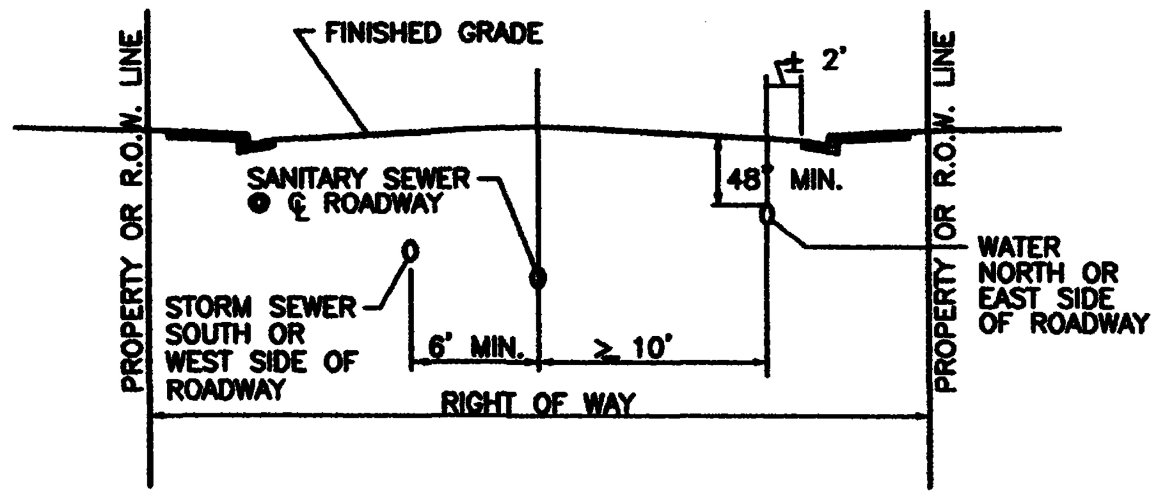
ALL BACKFILL MATERIAL SHALL BE PLACED FULL WIDTH IN 12" MAX. LIFTS AND COMPACTED TO THE MIN. RELATIVE DENSITIES SHOWN.

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

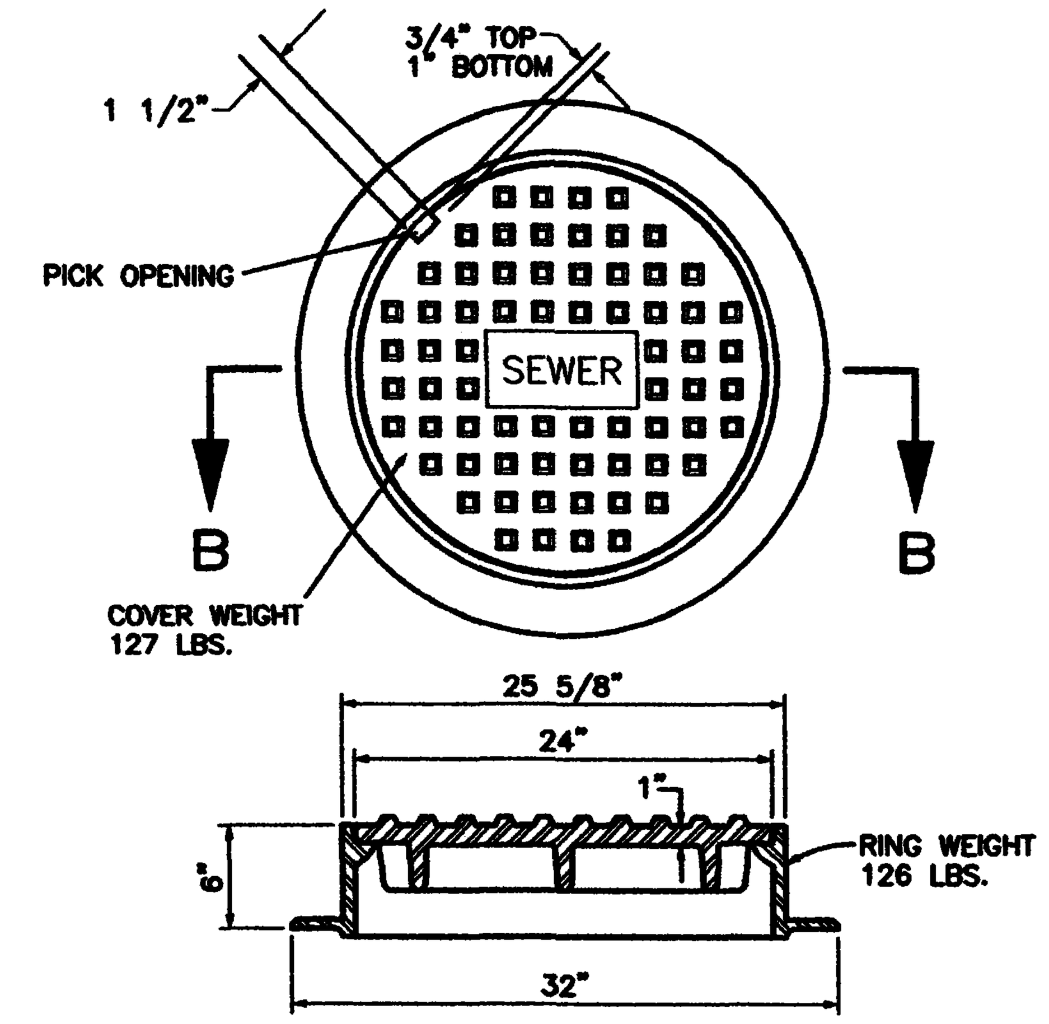
TYPICAL TRENCH DETAIL



TYPICAL WATER AND SEWER LINE CROSSINGS



TYPICAL STREET CROSS SECTION



IN SIDEWALK USE CASTING–MH–400–24–A OR APPROVED EQUAL

STANDARD CAST IRON MANHOLE RING AND COVER

GENERAL SEWER NOTES

A. CONTRACTOR SHALL HAVE ONE SIGNED COPY OF PLANS AND A COPY OF THE CITY OF GRAND JUNCTION'S STANDARD SPECIFICATIONS AT THE JOB SITE AT ALL TIMES.

B. ALL SEWER MAINS SHALL BE PVC SDR 35 (ASTM 3034) UNLESS OTHERWISE NOTED.

C. ALL SEWER MAINS SHALL BE LAID TO GRADE UTILIZING A PIPE LASER.

D. ALL SERVICE LINE CONNECTIONS TO NEW MAINS SHALL BE ACCOMPLISHED WITH FULL BODY WYES OR TEES. TAPPING SADDLES WILL NOT BE ALLOWED.

E. SERVICE LINE CONNECTIONS TO EXISTING NON-PVC MAINS SHALL BE ACCOMPLISHED USING "INSERTA TEES" MANUFACTURED BY FOWLER MANUFACTURING COMPANY OF HILLSBORO, OREGON. FOR EXISTING PVC MAINS, TAPPING SADDLES SHALL BE USED.

F. NO 4 INCH SERVICES SHALL BE CONNECTED DIRECTLY INTO MANHOLES. ALL 6 INCH SERVICES SHALL BE ACCOMPLISHED INSIDE OF A MANHOLE.

G. THE CONTRACTOR SHALL NOTIFY THE CITY INSPECTION 48 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION.

H. THE CONTRACTOR IS RESPONSIBLE FOR ALL REQUIRED SEWER LINE TESTING TO BE COMPLETED IN THE PRESENCE OF THE CITY INSPECTOR. PRESSURE TESTING WILL BE PERFORMED AFTER INSTALLATION OF DRY UTILITIES,AFTER ALL COMPACTION OF STREET SUBGRADE AND PRIOR TO STREET PAVING. FINAL LAMPING WILL ALSO BE ACCOMPLISHED AFTER PAVING IS COMPLETED. THESE TESTS SHALL BE THE MINIMUM BASIS OF ACCEPTANCE OF THE SEWER LINE EXTENSION.

I. THE CONTRACTOR SHALL OBTAIN CITY OF GRAND JUNCTION STREET CUT PERMIT FOR ALL WORK WITHIN EXISTING CITY RIGHT-OF-WAY PRIOR TO CONSTRUCTION.

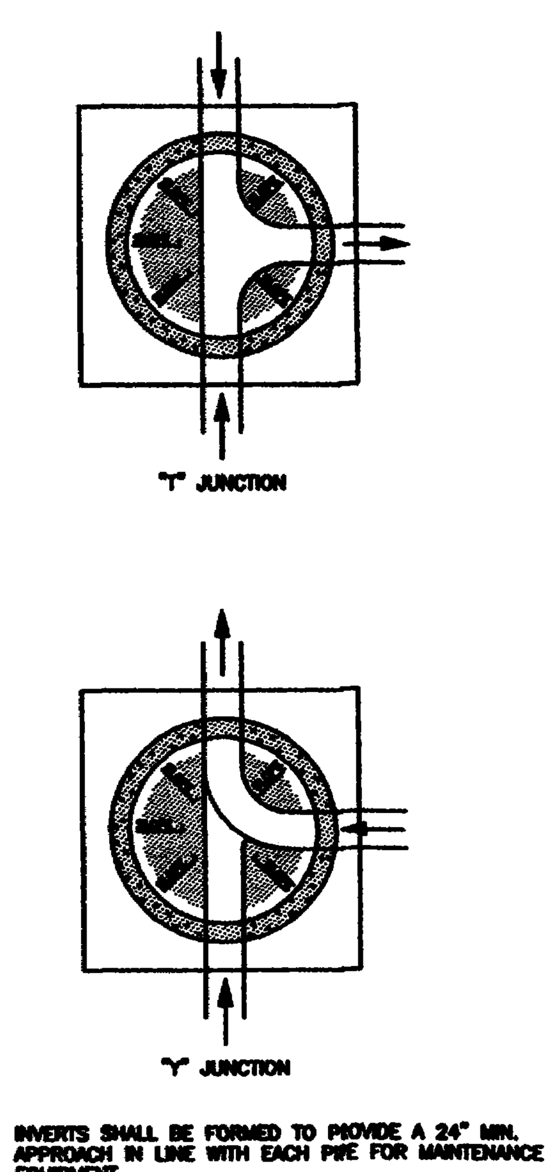
J. A CLAY CUT-OFF WALL SHALL BE PLACED 10 FEET UPSTREAM FROM ALL NEW MANHOLES UNLESS OTHERWISE NOTED. THE CUT-OFF WALL SHALL EXTEND FROM 6 INCHES BELOW TO 6 INCHES ABOVE GRANULAR BACKFILL MATERIAL AND SHALL BE 2 FEET WIDE. IF NATIVE MATERIAL IS NOT SUITABLE, THE CONTRACTOR SHALL IMPORT MATERIAL APPROVED BY THE ENGINEER.

K. SEWER SERVICE STUB OUTS SHALL BE CAPPED AND PLUGGED. STUB OUT SHALL BE MARKED WITH A 4X4 INCH POST PAINTED GREEN BURIED 3 FEET ABOVE GRADE. AS-BUILT SURVEYING FOR VERTICAL GRADE OF STUB OUT REQUIRED PRIOR TO BACKFILL.

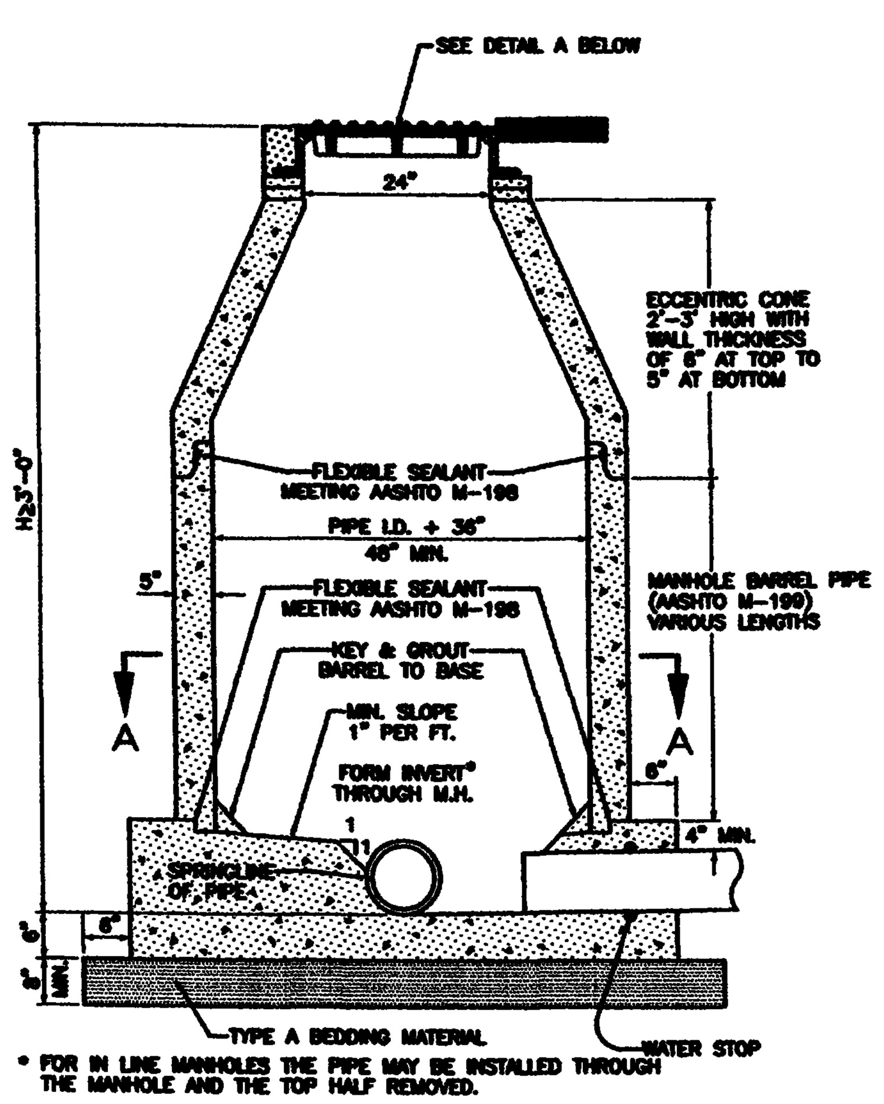
L. RED LINE AS-BUILTS SHALL BE SUBMITTED TO THE CITY UTILITY ENGINEER AT LEAST 72 HOURS PRIOR TO PAVING FOR REVIEW.

MANHOLE NOTES

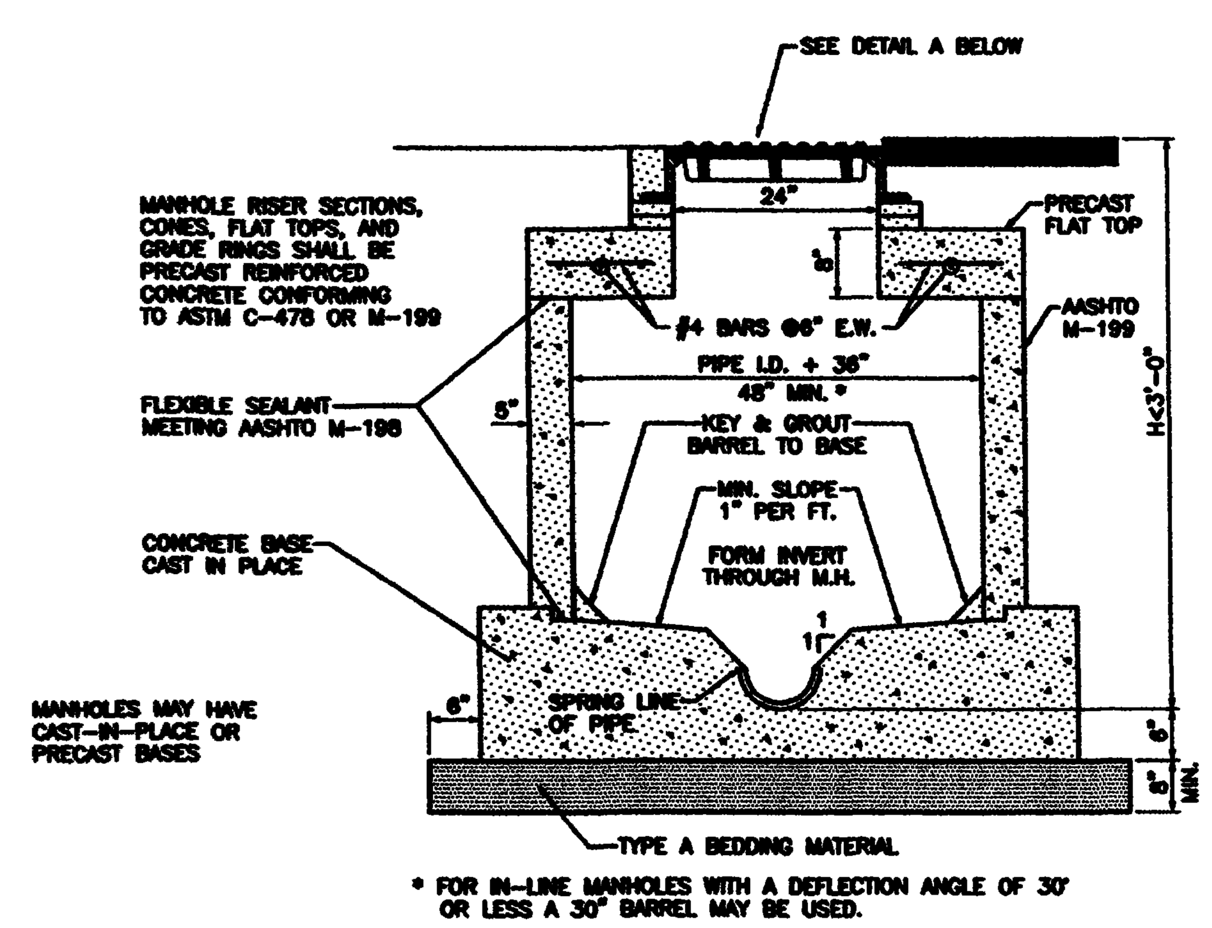
1. CONCRETE SHALL BE COLORADO DEPARTMENT OF TRANSPORTATION CLASS "B" (SECTION 601.02)
2. ALL CEMENT USED IN MORTAR, CONCRETE BASES, GRADE RINGS, RISER SECTIONS, CONES, AND FLAT TOPS, FOR SANITARY SEWER MANHOLES, SHALL BE TYPE V OR MODIFIED TYPE II PORTLAND CEMENT WITH LESS THAN 5% TRICALCIUM ALUMINATE.
3. MANHOLE RISER SECTIONS, CONES, FLAT TOPS, AND GRADE RINGS SHALL BE PRECAST REINFORCED CONCRETE CONFORMING TO ASTM C-478 OR AASHTO M-199.
4. BACKFILL AROUND MAHHOLES AND OTHER STRUCTURES SHALL BE PLACED IN 8" MAX. LIFTS AND COMPACTED TO 95% AASHTO T-99.
5. ALL WORK SHALL BE IN ACCORDANCE WITH APPROVED PLANS AND CITY SPECIFICATION.
6. MANHOLE CONE AND FLAT TOP SECTIONS SHALL BE POSITIONED SUCH THAT THE MANHOLE RING AND COVER IS CENTERED ON THE UPSTREAM FLOW LINE. IF THE CONE IS FURNISHED WITH STEPS, THE MANHOLE RING AND COVER WILL BE SHIFTED SO THAT THE STEPS ARE INSTALLED AT A 12" OFFSET FROM THE INLET PIPE.
7. IF THE MANHOLE SECTIONS ARE FURNISHED WITH STEPS THEY SHALL BE INSTALLED AT A 12" OFFSET FROM THE INLET PIPE TO FACILITATE CLEANING AND TV EQUIPMENT.
8. MANHOLE RING AND COVER SHALL BE SET TO FINISH GRADE USING RAPID ROAD REPAIR (OR APPROVED EQUAL) GROUT TO ADJUST RIM ELEVATION. GROUT SHALL NOT EXCEED 0.10 FT. THICKNESS. GROUT SHALL BE PLACED BETWEEN TOP OF CONCRETE GRADE RING AND RING AND COVER. STEEL PAVING RINGS ARE NOT ALLOWED FOR GRADE ADJUSTMENT UNLESS OTHERWISE APPROVED BY THE ENGINEER.



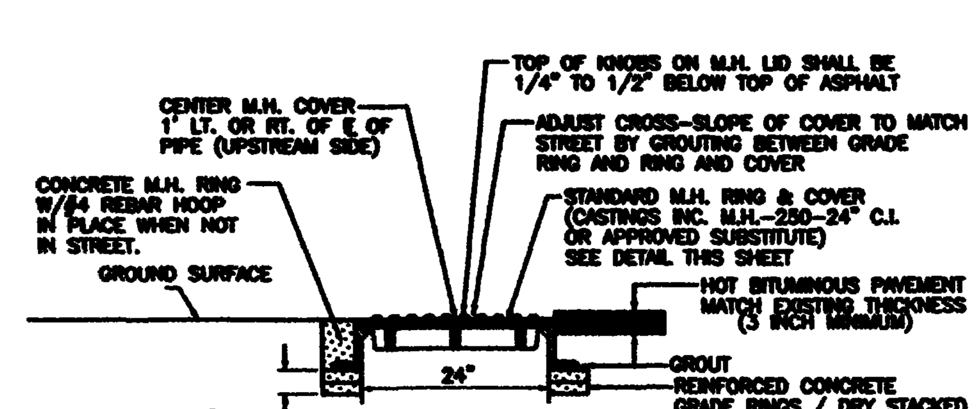
SECTION A–A



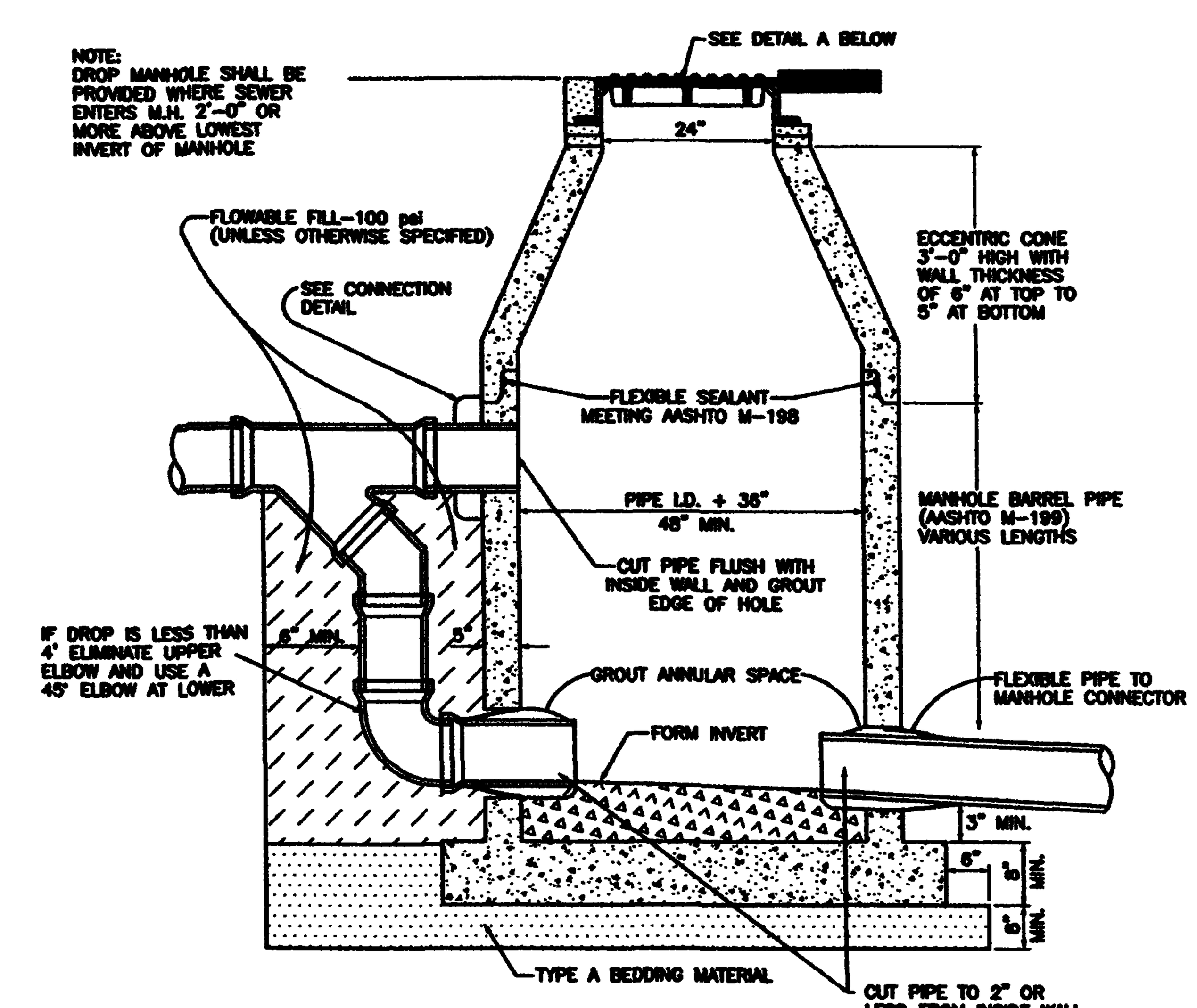
STANDARD MANHOLE – CAST IN PLACE BASE



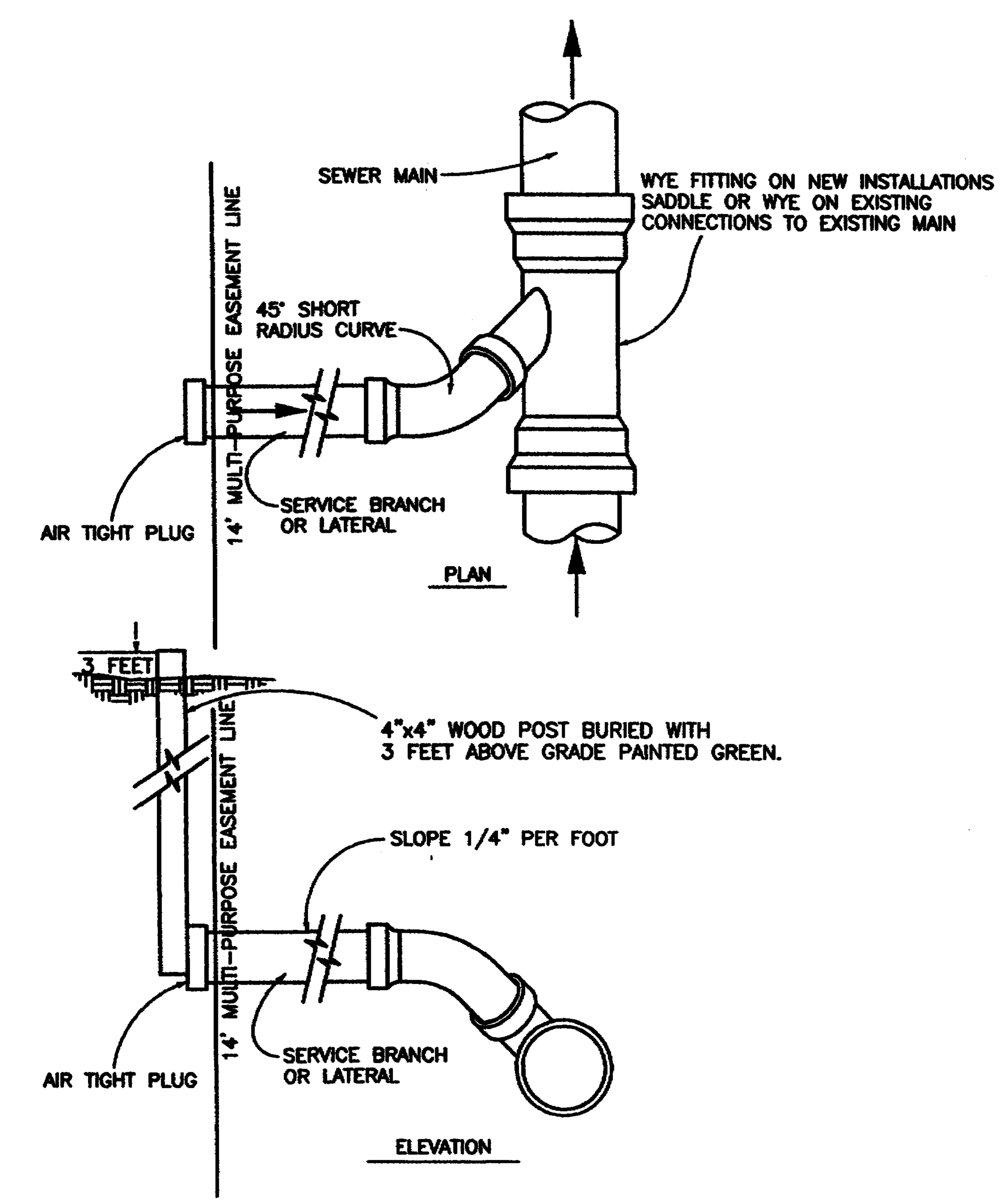
STANDARD SHALLOW MANHOLE – CAST IN PLACE BASE



DETAIL A



DROP MANHOLE



TYPICAL SERVICE "Y" CONNECTION

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY ______ DATE ______
DESIGNED BY ______ DATE ______
CHECKED BY ______ DATE ______
APPROVED BY ______ DATE ______

SCALE
PLAN — PROFILE
HORIZ. ______ HORIZ. ______
VERT. ______

DEPARTMENT OF PUBLIC WORKS AND UTILITIES
ENGINEERING AND TECHNICAL SERVICES DIVISIONS
CITY OF GRAND JUNCTION, COLORADO

STANDARD SANITARY SEWER DETAILS

50

02099550