

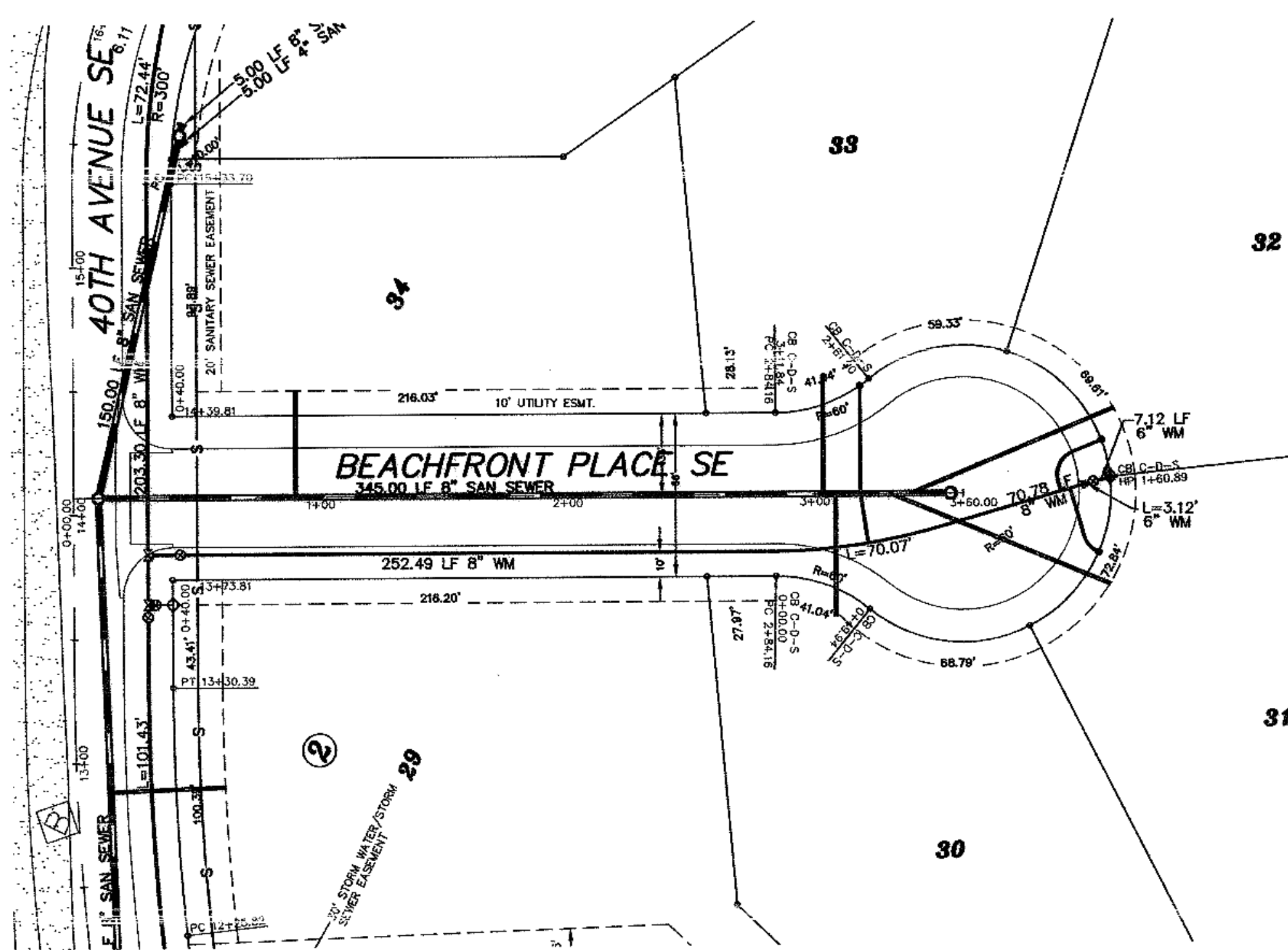
CONSTRUCTION NOTES (THIS SHEET)

- BACKFILL SHALL BE CLASS 'A'.
- THE PROFILE SHOWS THE EXISTING GROUND CENTERLINE OF THE STREETS. THE PLAN VIEW SHOWS THE EXISTING GROUND CONTOURS. THIS WILL BE THE CONDITION AT THE TIME OF CONSTRUCTION. UPON COMPLETION OF THE CONSTRUCTION OF THE WATER/SEWER THE EARTHWORK CONTRACTOR WILL BUILD THE STREETS UP TO THE PROPOSED CURB GRADES.
- THE CONTRACTOR SHALL VERIFY THE ELEVATION OF THE GROUND WATER AT THE TIME OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL DEWATERING OR SOIL STABILIZATION (OTHER THAN USING SUBCUT GRAVEL) OF THE CONSTRUCTION SITE AS REQUIRED TO INSTALL THE PROPOSED UTILITIES. IT IS EXPECTED THAT DEWATERING WILL BE REQUIRED TO STABILIZE THE TRENCH FOR THE CONSTRUCTION OF THE DEEPER PORTIONS OF THE SEWERMAINS.
- THE STORM SEWER IS NOT PART OF THIS CONTRACT.
- PROTECT ALL SURVEY MONUMENTS. MONUMENTS DISTURBED OR DESTROYED SHALL BE REPLACED BY THE OWNER'S REPRESENTATIVE AT THE CONTRACTOR'S EXPENSE.
- ALL HYDRANTS SHALL HAVE 8.5' BURY DEPTH AND THE HYDRANT NOZZLE SHALL BE 18" ABOVE THE FINAL PLAN GROUND ELEVATION.
- THERE ARE A NUMBER OF CROSSINGS OF THE EXISTING 6" SANITARY SEWER FORCEMAIN. PROVIDE ADDITIONAL CAUTION NOT TO DAMAGE THIS LINE.

SCALE - 1"=50'

Sta. 0+10.00 CL
San. Sewer Sta. 0+00 Ahd
Manhole No. 11

Sta. 3+55.00 CL
San. Sewer Sta. 3+45.00 Bk.
Manhole No. 16



APPROXIMATE WYE LOCATIONS

STATION	DIRECTION	LOT	BLOCK
FROM MANHOLE NO. 6 TO MANHOLE NO. 7			
0+80	NE	34	2
2+93	SW	30	2
3+20	SE	31	2
3+29	SE	32	2

Manhole Number	16
Casting Elev.	42.00
Top P.C. Section	40.96
Invert Elev. (a)	34.91
Invert Elev. (b)	
Length P.C. Section	6.05

Lot	Block	8" Sewer Service	4" 22 1/2" Bend	4" 45" Bend	8" x 4" Wye Branch	6" Sewer Service Invert	At The Curb	Water Connection	Water Service Pipe	1" Ball Valve	1" 1/2" Box	Water Service Invert	At The Curb
34	2	43.0	1	1	34.58								
30	2	42.7	1	1	35.49	63.9	1	1				33.80	
31	2	42.3	1	1	35.50								
32	2	42.3	1	1	36.20	31.3	1	1				34.40	
TOTAL		325.6	2	3	5	124.5	3	3					

Sta. 0+30.00
8" x 8" Tee

Sta. 0+43.00
8" Gate Valve
& Box

Sta. 4+19.66 6.33' Lt.
6" Hydrant

Sta. 4+12.82 4.36' Lt.
6" Gate Valve
& Box

Sta. 4+09.82 3.50' Lt.
8" x 6" Reducer

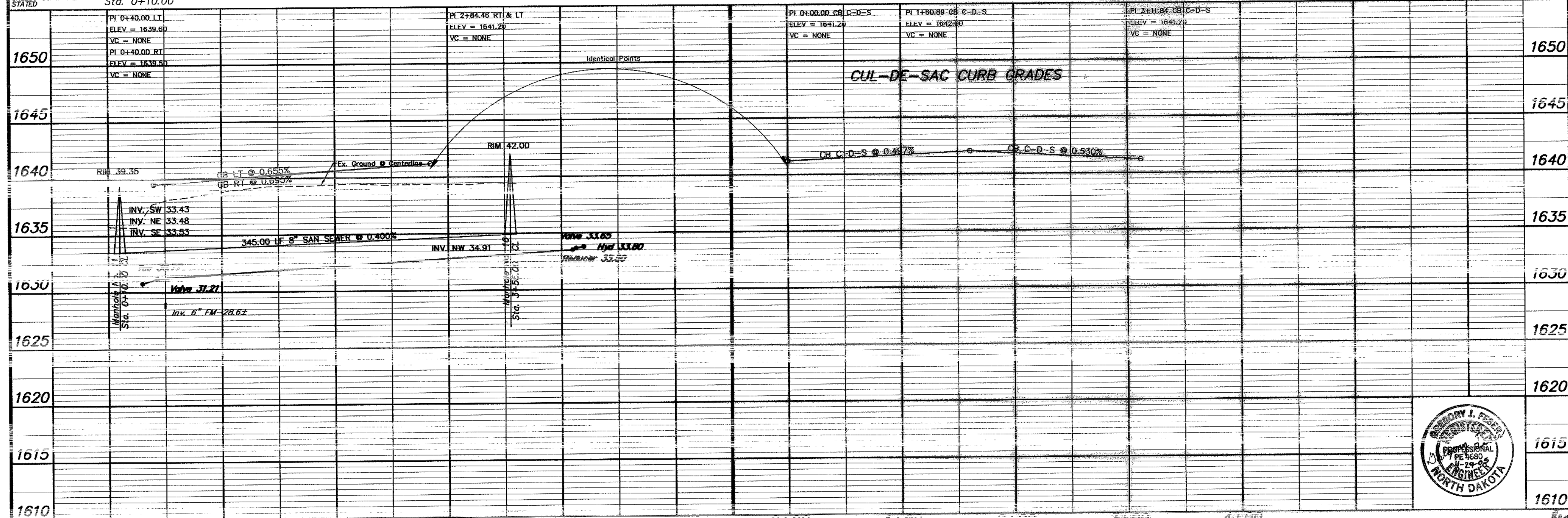
Begin Watermain Quantities
Sta. 0+30.00

Begin San. Sewer Quantities
Sta. 0+10.00

End Watermain Quantities
Sta. 4+19.66 6.33' Lt.

End San. Sewer Quantities
Sta. 3+55.00

NOTE:
ALL WATER MAINS
IS 24"00" RIGHT
OF CENTERLINE
UNLESS OTHERWISE
STATED



APPROXIMATE QUANTITIES

San. Sewer Items	Quantity
8" Sanitary Sewer	345 LF
8" x 4" Wye Branch	5 EA
Concrete Manhole	1 EA
4" Sewer Service Pipe	326 LF
4" 45" Bend	3 EA
4" 22 1/2" Bend	2 EA

Watermain Items

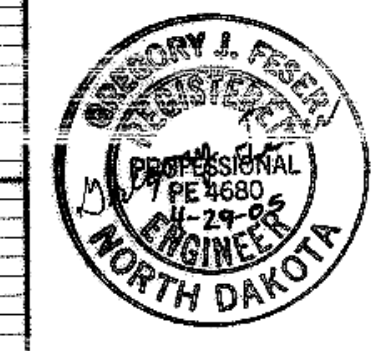
Watermain Items	Quantity
8" PVC Watermain	383 LF
6" PVC Watermain	10 LF
6" Hydrant	1 EA
6" Gate Valve & Box	1 EA
8" Gate Valve & Box	1 EA
Ductile Iron Fittings	(incidental)
1" Water Copper Serv. Pipe	125 LF
1" Water Serv. Connection	3 EA
1" Ball Valve Curb Stop	3 EA
And 1 1/2" Box	

SWENSON, HAGEN & COMPANY P.C.

909 Basin Avenue P.O. Box 1135
Bismarck, North Dakota 58504

Surveys
Photogrammetry
Land Planning
Civil Engineering
Landscape & Site Design
Construction Management

Phone (701) 223-2600
Fax (701) 223-2606



BEACHFRONT PLACE SE
FROM THE INTERSECTION OF 40TH AVE SE
EAST TO THE CUL-DE-SAC

WATER AND SEWER IMPROVEMENT PROJECT 2005-17
SHEET NO. 8 OF 8
MANDAN, ND APRIL 22, 2005