

**WARRANTY/DISCLAIMER**  
 THE DESIGNS REPRESENTED IN THESE PLANS ARE IN ACCORDANCE WITH ESTABLISHED PRACTICES OF CIVIL ENGINEERING. HOWEVER, NEITHER SWENSON, HAGEN & CO. NOR ITS PERSONNEL CAN OR DO WE WARRANT THESE PLANS AS CONSTRUCTED EXCEPT IN THE SPECIFIC CASES WHERE SWENSON, HAGEN & CO. PERSONNEL INSPECT AND CONTROL THE PHYSICAL CONSTRUCTION ON A FULL TIME BASIS.

**SAFETY NOTICE TO CONTRACTOR**  
 IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL BUSINESS HOURS.

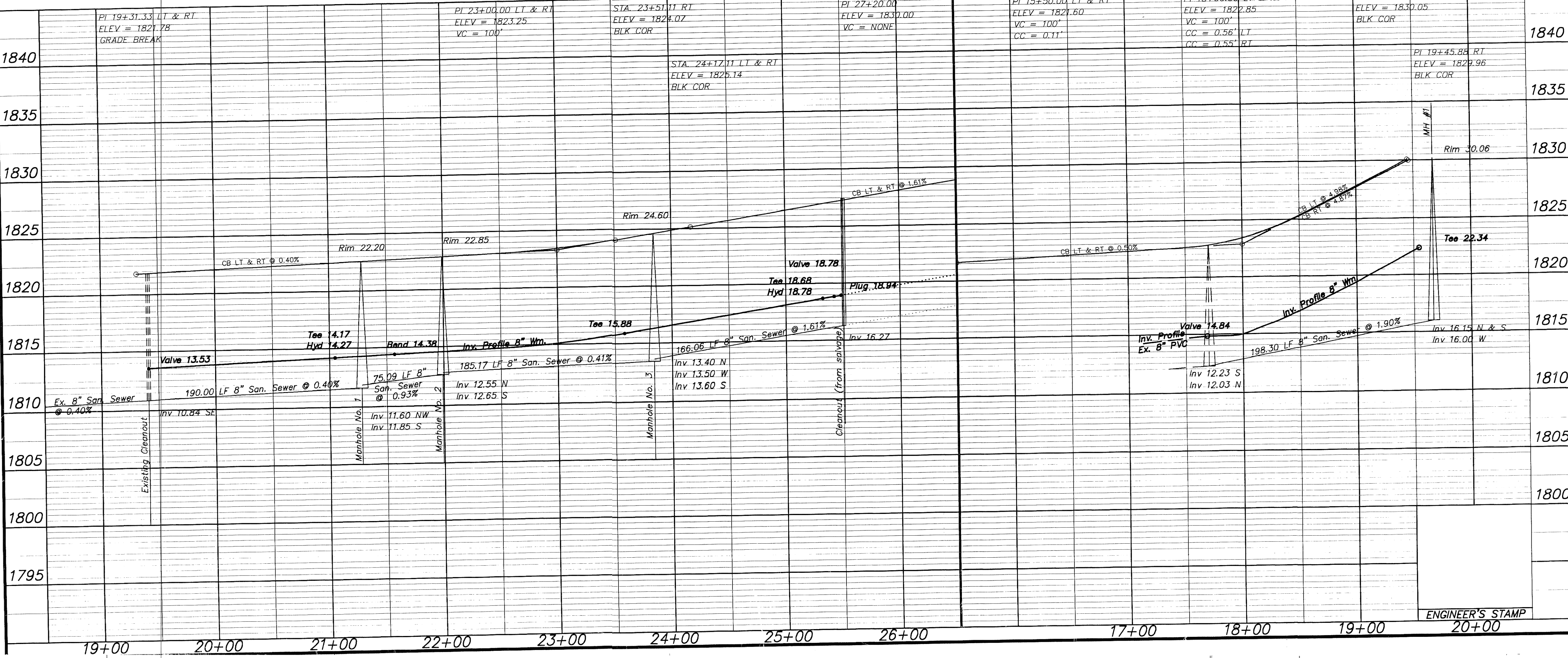
**UTILITY NOTICE TO CONTRACTOR**  
 THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVES. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. UNDERGROUND LOCATES CAN BE MADE BY USING THE "ONE CALL" NUMBER 1-800-795-0555.

**APPROXIMATE WYE LOCATIONS**

Station	Direction	Lot	Block
<b>EX. CLEANOUT TO MANHOLE # 1</b>			
0+40	SW	1	2
0+45	NE	1	2
1+21	SW	2	1
1+21	NE	2	1
1+83	NE	3	1
<b>MANHOLE # 1 TO MANHOLE # 2</b>			
0+29	E	4	1
0+65	W	3	2
<b>MANHOLE # 2 TO MANHOLE # 3</b>			
0+18	E	5	1
0+90	E	6	4
1+10	W	4	2
1+62	W	7	1
<b>MANHOLE # 3 TO CLEANOUT</b>			
0+45	E	8	1
0+67	W	1	3
1+14	E	9	1

**CONSTRUCTION NOTES**

- PHASE I IS SCHEDULED TO BE CONSTRUCTED IN THE SUMMER OF 2001. PHASE II IS SCHEDULED TO BE CONSTRUCTED IN THE SPRING/SUMMER OF 2002.
- DANGER OVERHEAD POWER LINES EXIST.
- GRADING SHALL BE DONE BY OTHERS PRIOR TO CONSTRUCTION.
- ALL REMOVAL OR REPLACEMENT OF SOILS, AND ALL HAULING AND OR GRADING TO RESTORE THE FINISH GROUND TO THE ORIGINAL SECTION SHALL BE CONSIDERED INCIDENTAL.
- BACKFILL SHALL BE CLASS "A".
- INSTALL CURB STOPS AND HYDRANTS ON PROPERTY LINE.
- ALL COST ASSOCIATED WITH CONNECTION TO EXISTING WATER & SEWER MAINS SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEMS.
- REMOVE FROM SITE ALL CONCRETE AND ASPHALT AS NECESSARY FOR CONNECTIONS. NO REPLACEMENT OF CONCRETE OR ASPHALT IS NECESSARY. ALL COST ASSOCIATED WITH REMOVING CONCRETE OR ASPHALT SHALL BE CONSIDERED INCIDENTAL.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS INCIDENTAL TO OTHER BID ITEMS.
- THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL SURVEY MONUMENTS. SURVEY MONUMENTS DISTURBED BY THE CONTRACTOR SHALL BE RE-SET BY A LICENSED PROFESSIONAL SURVEYOR AT THE CONTRACTOR'S EXPENSE.
- VALVES ON HYDRANT LEADS SHALL BE RESTRAINED TO THE HYDRANT TEE.
- ALL 6" WATERMAIN (HYDRANT LEADS) SHALL BE CONSIDERED INCIDENTAL TO THE 6" GATE VALVE, ROD & BOX BID ITEM.



**APPROXIMATE QUANTITIES PHASE II ONLY**

San. Sewer Items	Quantity
Pitrun Gravel	150 TON
Subcut Gravel	5 TON
Rock Excavation	25 CY
8" San. Sewer	616.3 LF
4" Sewer Service Pipe	452.5 LF
8" x 4" Wye Branch	14 EA
Concrete Manhole	3 EA
Cleanout (from salvage)	1 EA
<b>Water Items</b>	
Pitrun Gravel	210 TON
Subcut Gravel	5 TON
Rock Excavation	25 CY
8" Watermain	587.7 LF
8" Hydrant (from salvage)	1 EA
6" Hydrant	2 EA
8" Gate Valve, Rod & Box	2 EA
6" Gate Valve, Rod & Box	2 EA
Ductile Iron Fittings (incidental)	
1" Copper Water Service	497.1 LF
1" Water Service Connection	9 EA
1" Curb Stop, Rod & Box	9 EA

**SWENSON, HAGEN & CO. P.C.**  
 PLANNING CIVIL ENGINEERING SURVEYING  
 SITE DESIGN CONSTRUCTION MANAGEMENT  
 909 BASIN AVE P.O. BOX 1135 (701) 223-2600  
 BISMARCK, N.D. 58504 FAX (701) 223-2606  
 E-mail: msuenson@swensonhagen.com

**9TH AVENUE S.E.**  
 FROM THE WEST ADDITION LINE OF PLAINVIEW HEIGHTS 5TH ADDITION TO PLAINVIEW HEIGHTS DRIVE

**10TH AVENUE S.E.**  
 FROM THE ADDITION LINE BETWEEN PLAINVIEW HEIGHTS 6TH & 7TH ADDITION TO THE SOUTH ADDITION LINE

WATER AND SEWER IMPROVEMENT PROJECT 02-09  
 SHEET NO. 2 OF 3  
 MANDAN, ND JUNE 28, 2002

ENGINEER'S STAMP  
 20+00  
 FINAL