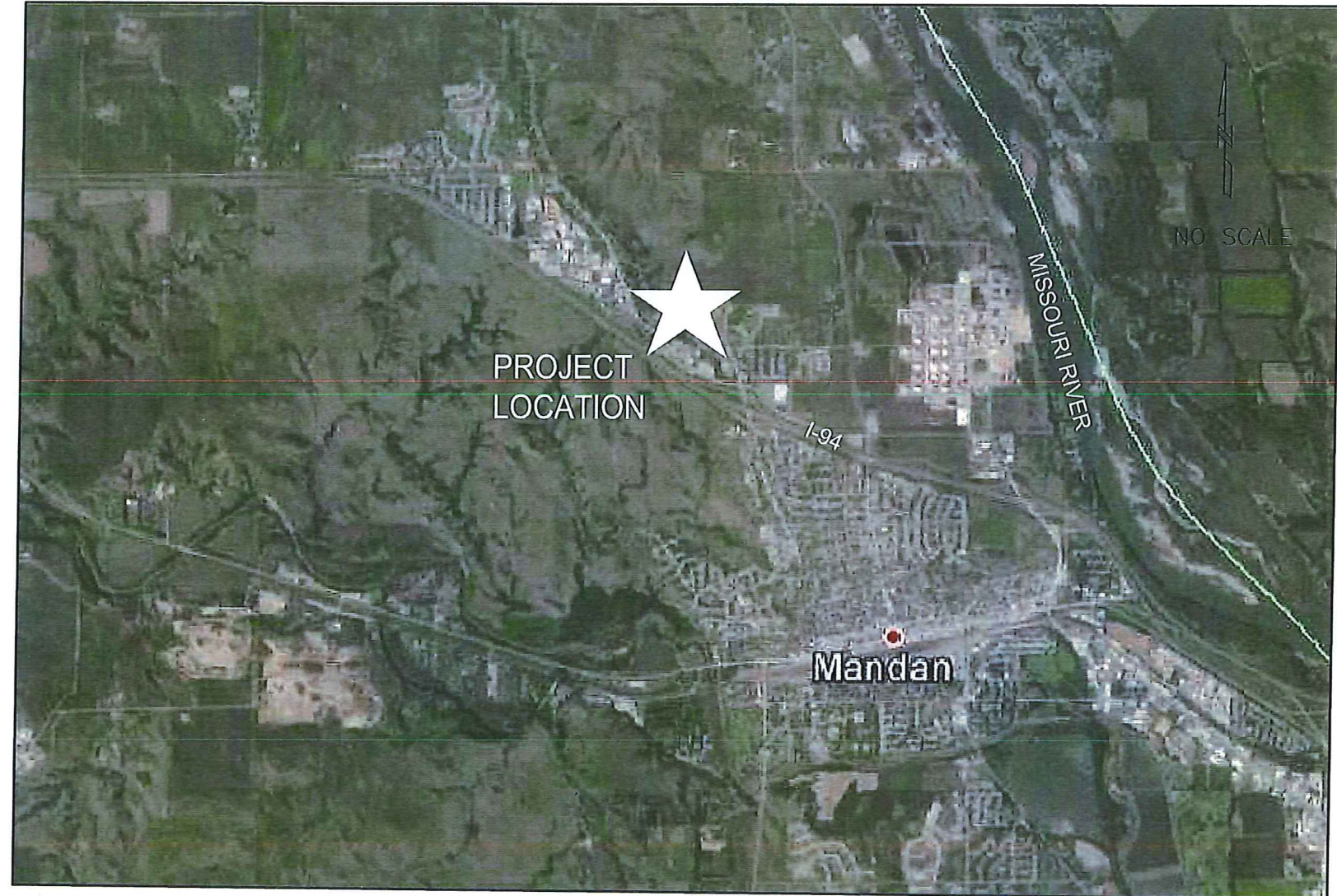


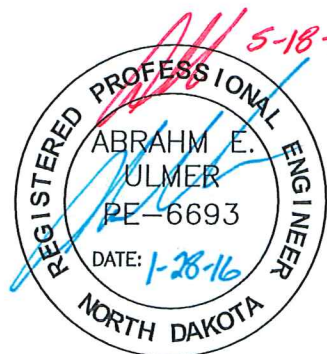
**BIG SKY ESTATES ADDITION  
SANITARY SEWER EXTENSION  
CITY PROJECT NO. 2015-18  
MANDAN, NORTH DAKOTA**

**INDEX OF DRAWINGS**

SHT NO	TITLE
1	TITLE SHEET
2	PROJECT LAYOUT
3	SANITARY SEWER
4	DETAILS



DESIGN ENGINEER'S CERTIFICATE  
I, ABRAHM E. ULMER, A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF NORTH DAKOTA, HEREBY CERTIFY THAT THE PLANS FOR THE SANITARY SEWER MODIFICATION IN BIG SKY ESTATES ADDITION, MANDAN, NORTH DAKOTA WERE PREPARED UNDER MY SUPERVISION AND ARE COMPLETE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.



ABRAHM E. ULMER, P.E.  
REGISTERED PROFESSIONAL ENGINEER  
NORTH DAKOTA REGISTRATION NO. 6693

Contractor:  
**Weisz & Sons Inc.**  
3310 Hamilton St.  
Bismarck, ND 58502  
(701) 258-9770

**AS-BUILT**



**\*CAUTION\***  
UTILITY LOCATIONS ARE APPROXIMATE. CONTRACTOR IS RESPONSIBLE FOR VERIFYING LOCATION PRIOR TO EXCAVATION



SANITARY SEWER EXTENSION  
BIG SKY ESTATES ADDITION  
MANDAN, NORTH DAKOTA

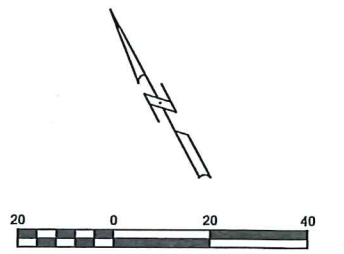
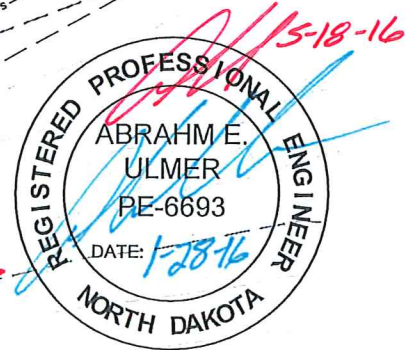
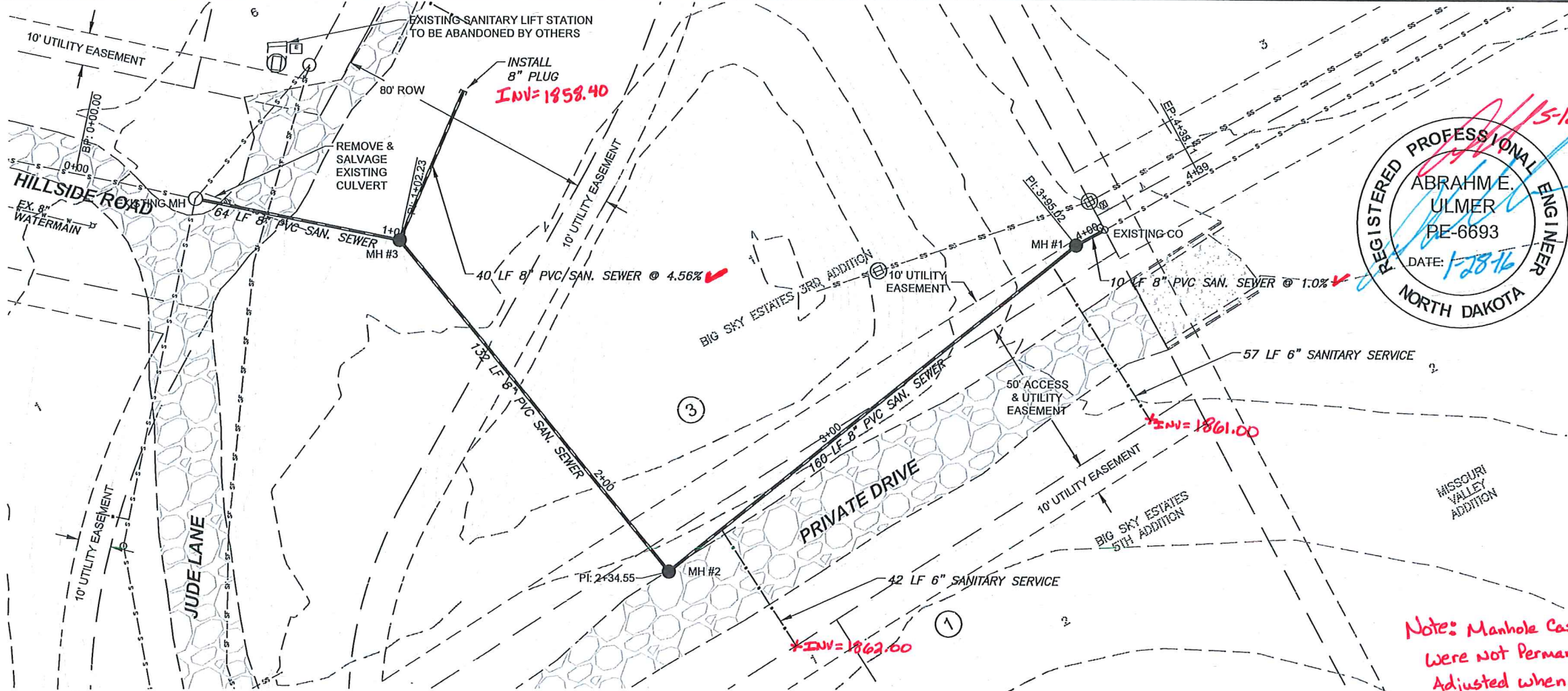
CITY OF MANDAN PROJECT NO. 2015-18

SHEET 1 OF 4

JANUARY, 2016

**TITLE SHEET**





VERT. DATUM: NAVD88  
HORIZ DATUM: 1983 STATE PLANE, ND SOUTH (3302)

- EXISTING SANITARY LIFT STATION AND VALVE PIT WILL BE REMOVED BY OTHERS AFTER PROJECT IS COMPLETED.
- BACKFILL SHALL BE CLASS 'A' PER CITY OF MANDAN SPECIFICATIONS. MOISTURE REQUIREMENTS SHALL BE NO MORE THAN 3% ABOVE OR 2% BELOW OPTIMUM MOISTURE AS DETERMINED BY ASTM-D-1557.
- REMOVAL AND REPLACEMENT OF EXISTING GRAVEL AND TOPSOIL SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.
- CONTRACTOR SHALL CORE INTO EXISTING MANHOLE AND RECONSTRUCT THE INVERT FOR POSITIVE FLOW. THIS SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.
- CONTRACTOR SHALL PLUG THE EXISTING PIPE THAT FLOWS TO THE LIFT STATION OUTSIDE OF THE EXISTING MANHOLE. THIS SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.
- INSULATION SHALL BE INSTALLED FROM STA 1+70 TO STA 1+90 IN THE LOW AREA WHERE A MINIMUM COVER OF 4' CANNOT BE OBTAINED. THIS SHALL BE INSTALLED PER PLAN DETAIL AND PAID FOR AS PER PRICE BID "INSULATE SANITARY SEWER".
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING SANITARY SERVICE TO ALL RESIDENTS DURING CONSTRUCTION. PLUGGING AND PUMPING THE EXISTING SANITARY SEWER SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.
- EXISTING SANITARY FORCEMAIN SHOWN IS APPROXIMATE. CONTRACTOR SHALL VERIFY LOCATION & ELEVATION FOR CONSTRUCTION OF THE NEW SANITARY SEWER. (INCIDENTAL)
- TRAFFIC CONTROL SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.

Note: Manhole Castings were not permanently adjusted when As-built Survey was performed.

Begin Sanitary Sewermain Quantities  
Sta 0+37.95

Sta 0+37.95  
Connect to Existing Manhole & Pour New Invert (Incidental)

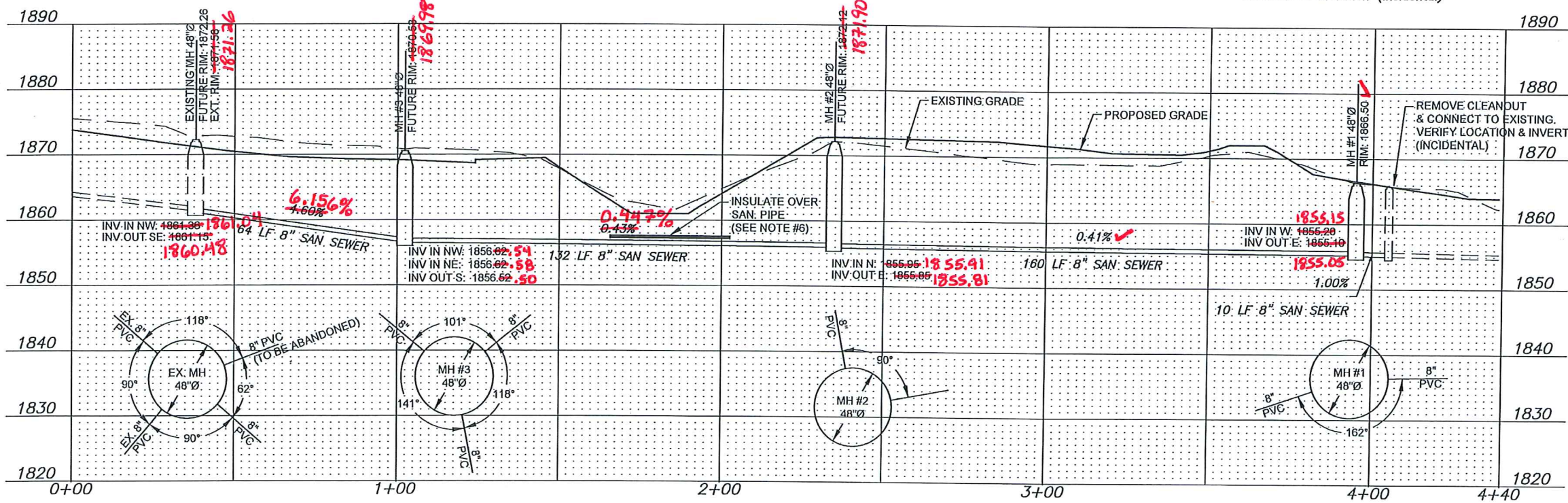
Sta 1+02.23  
Install Manhole #3

Sta 2+34.55  
Install Manhole #2

# AS-BUILT

Sta 3+95.02  
Install Manhole #1

Sta 4+05.12  
Remove Cleanout & Connect to Existing San. Sewer. Verify Location & Elevation (Incidental)



## APPROXIMATE QUANTITIES

Spec No.	Sanitary Sewermain Items	Quantity
801-4.2	8" Sanitary Sewermain	406 LF
801-4.51	8"x6" Wye Branch	2 Ea
801-4.60	Bedding Material	120 Ton
1205-4.1	Manhole	3 Ea
1209-4.2	6" Sanitary Sewer Pipe	99 LF
1209-4.7	6" - 45° Bend	2 Ea
SP #8	Insulate Sanitary Sewer	20 LF

\*CAUTION\*  
UTILITY LOCATIONS ARE APPROXIMATE.  
CONTRACTOR IS RESPONSIBLE FOR  
VERIFYING LOCATION PRIOR TO  
EXCAVATION

**TOMAN ENGINEERING**  
501 1st Street NW, Mandan, ND 58554  
Phone: 701-663-6483 \* Fax: 701-663-0923  
COPYRIGHT 2015 TOMAN ENGINEERING COMPANY

**SANITARY SEWER EXTENSION**  
BIG SKY ESTATES ADDITION  
MANDAN, NORTH DAKOTA

CITY OF MANDAN PROJECT NO. 2015-18

