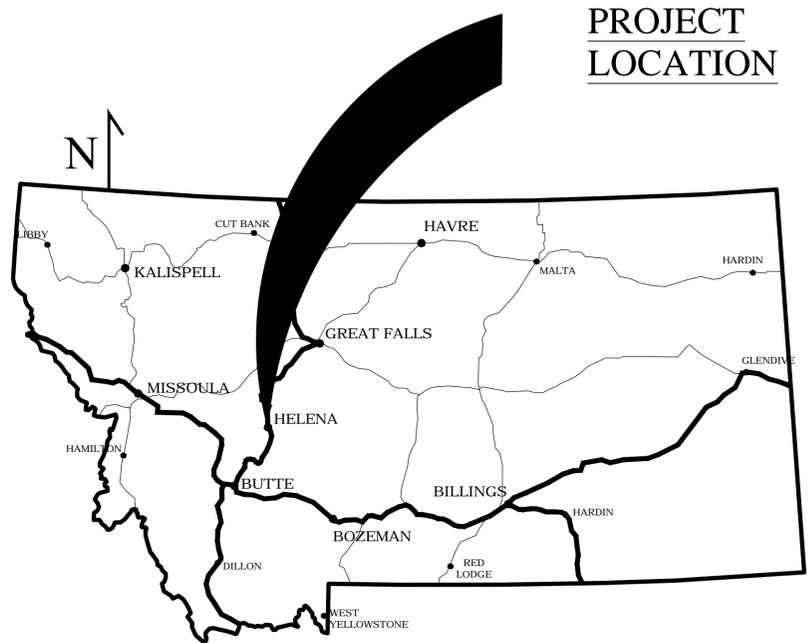
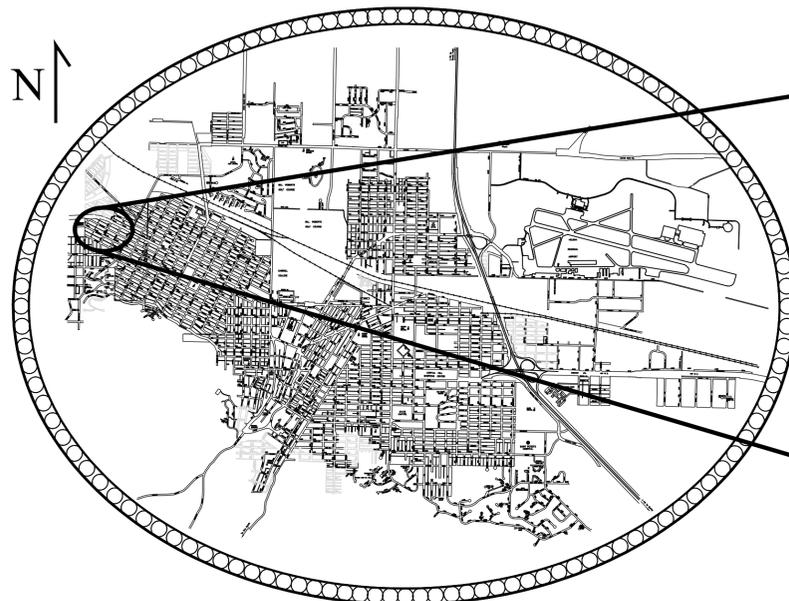


PLANS FOR  
**CITY OF HELENA PUBLIC SEWAGE SYSTEM  
 CANNON ST SEWER MAIN EXTENSION AMES ADDITION  
 CITY PROJECT #16-06**

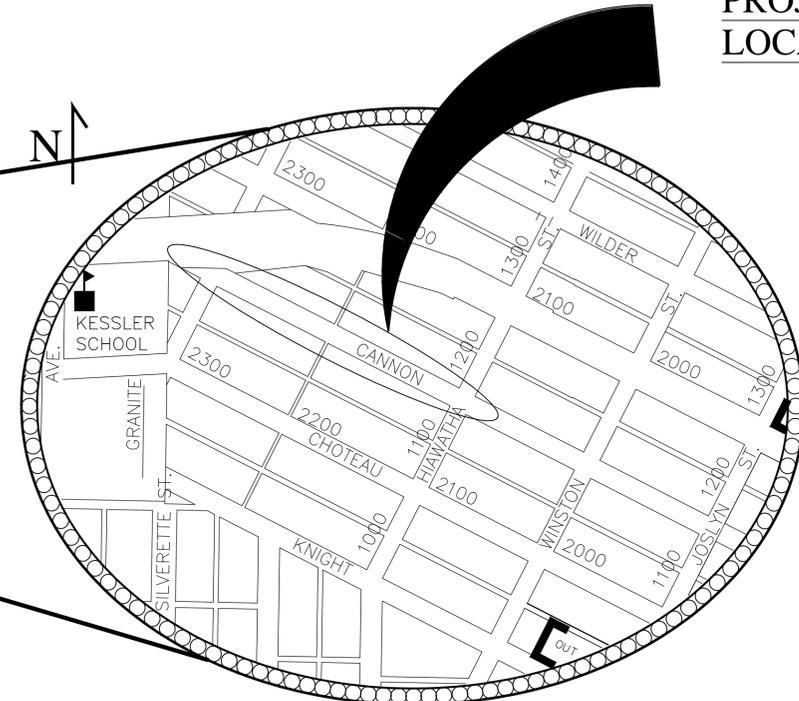


PROJECT  
LOCATION

MONTANA  
STATE MAP



CITY OF HELENA  
VICINITY MAP



PROJECT  
LOCATION

CITY OF HELENA  
PROJECT LOCATION MAP

**SEPTEMBER 2016**

APPROVED BY:  
CITY OF HELENA

\_\_\_\_\_  
CITY ENGINEER  
\_\_\_\_\_  
DIRECTOR OF PUBLIC WORKS

PREPARED BY:  
CITY ENGINEERING DIVISION

CITY OF HELENA  
316 NORTH PARK AVENUE  
HELENA, MONTANA

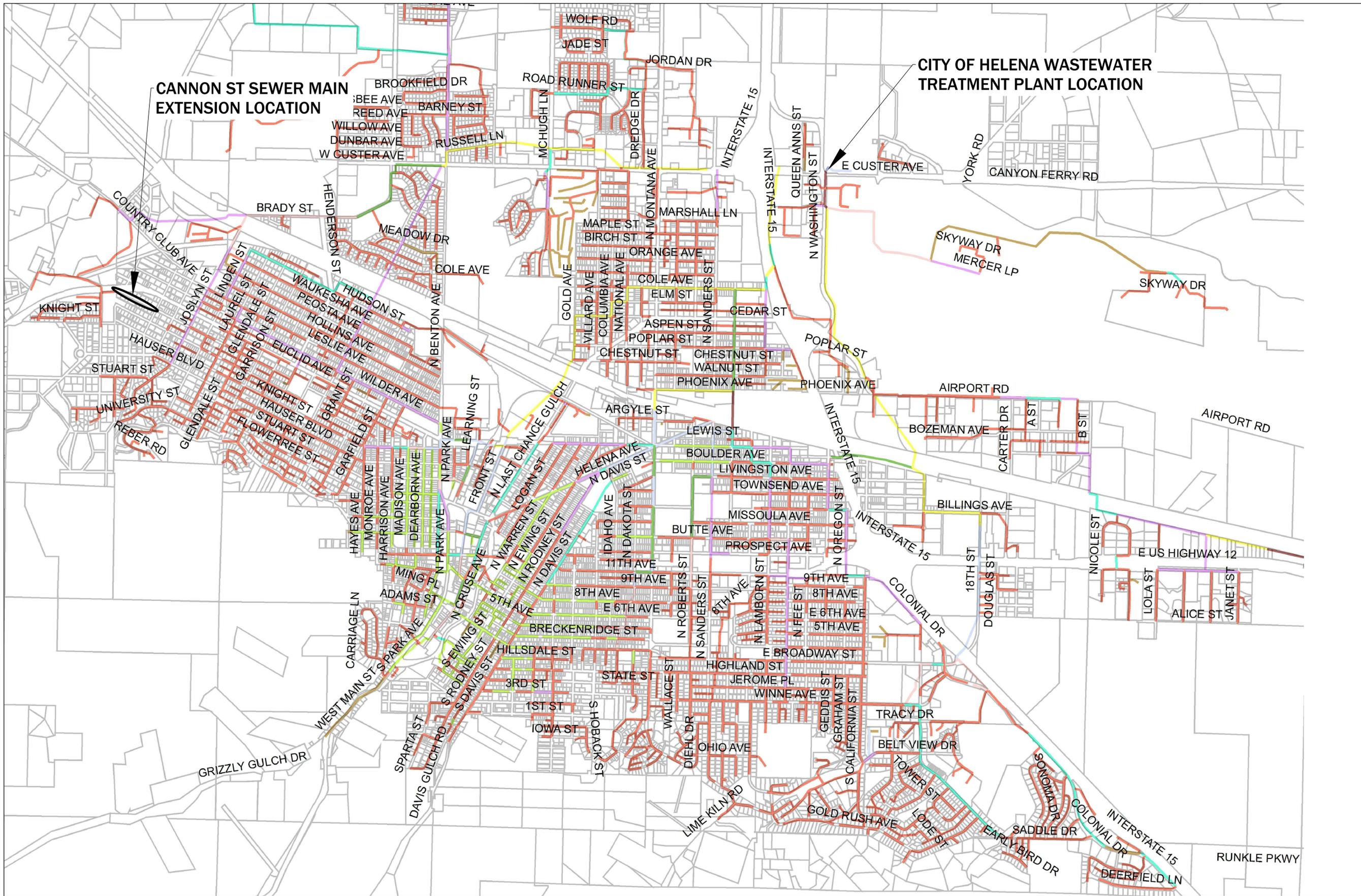


City of Helena

**INDEX OF SHEETS**

COVER SHEET	
VICINITY MAP SANITARY SEWER COLLECTION	1
SITE PLAN INDEX	2
DETAILS-LEGEND-NOTES	3
CANNON ST P-P1	4
CANNON ST P-P2	5
CANNON ST P-P3	6
CANNON ST PAVING SCHEDULE	P.1

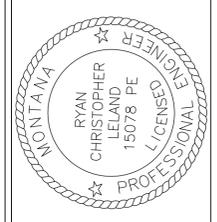
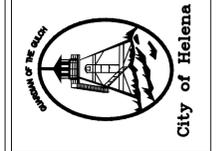
H:\ENGINEERING\PROJECT FILES\16-06 Cannon St Sewer Main Extension Ames Addition\Drawings\Cannon St Sewer Main Extension Ames Addition 16-06.dwg



**CITY OF HELENA SANITARY COLLECTION SYSTEM MAP  
NOT TO SCALE**

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT: #16-06  
 DESIGNED: T.J.L.  
 DRAWN: T.J.L.  
 CHECKED: R.C.L.  
 APPROVED: R.C.L.  
 DATE: SEPTEMBER 2016



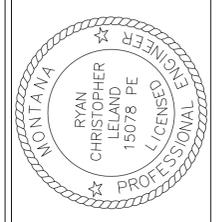
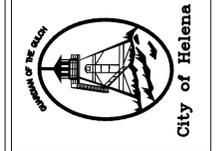
**CITY OF HELENA ENGINEERING DIVISION  
 CANNON ST SEWER MAIN EXTENSION  
 AMES ADDN #16-06  
 EXHIBIT 1 CITY OF HELENA SANITARY SEWER  
 COLLECTION SYSTEM**

H:\ENGINEERING\PROJECT FILES\16-06 Cannon St Sewer Main Extension Ames Addition\Drawings\Cannon St Sewer Main Extension Ames Addition 16-06.dwg



NO.	REVISION DESCRIPTION	BY	DATE

PROJECT: #16-06  
 DESIGNED: T.J.L.  
 DRAWN: T.J.L.  
 CHECKED: R.C.L.  
 APPROVED: R.C.L.  
 DATE: SEPTEMBER 2016



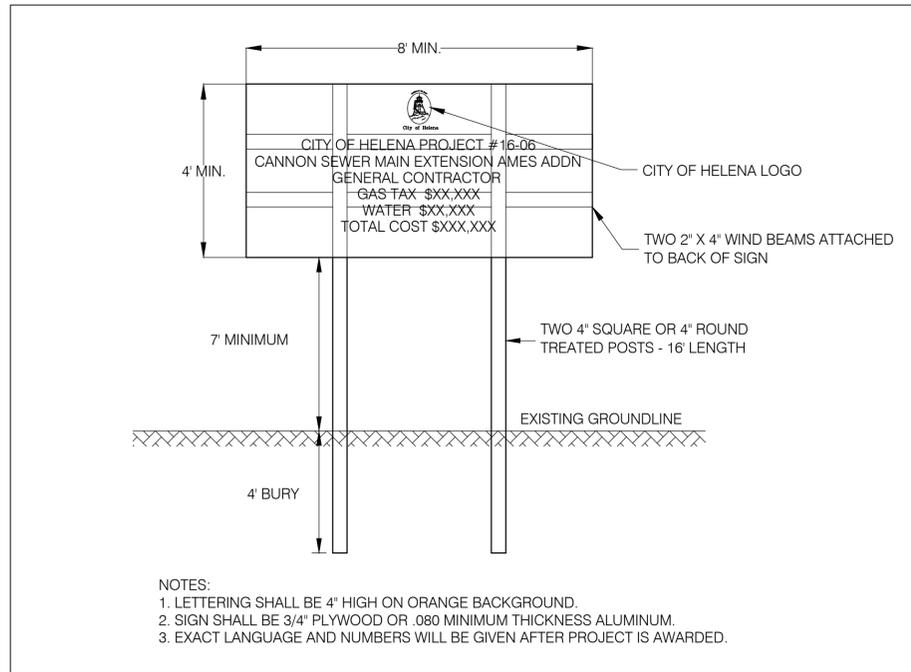
**CITY OF HELENA ENGINEERING DIVISION**  
**CANNON ST SEWER MAIN EXTENSION**  
**AMES ADDN #16-06**  
 EXHIBIT 2 SITE PLAN INDEX

**GENERAL PROJECT NOTES:**

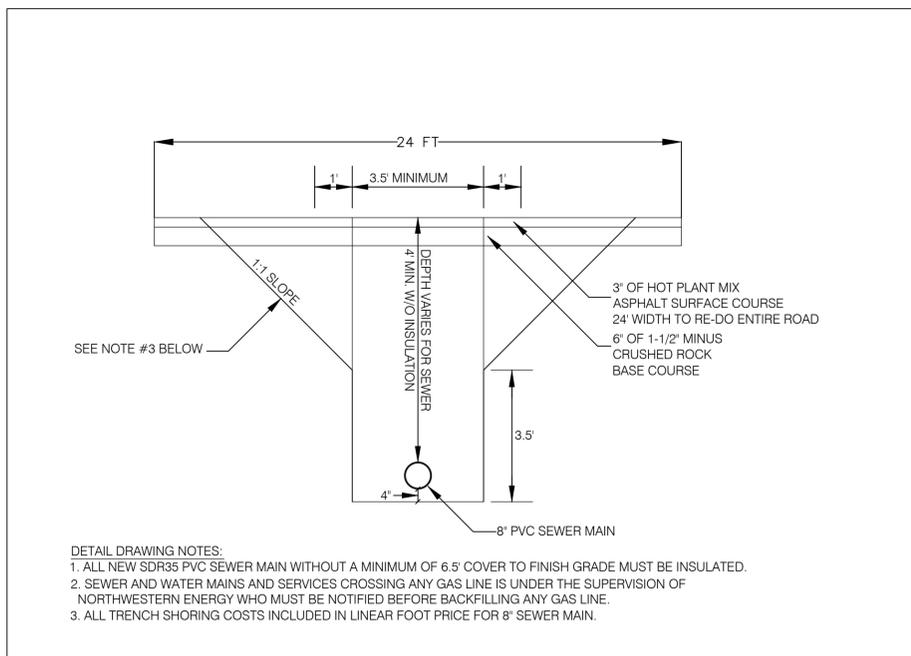
1. CONTRACTOR TO OBTAIN ALL REQUIRED PERMITS FOR CONSTRUCTION, DEWATERING AND STORMWATER DISCHARGES AT THEIR OWN EXPENSE.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR USE OF STORM WATER BEST MANAGEMENT PRACTICES (BMPs) TO CONTROL STORMWATER RUNOFF AND RUNON TO EACH PROJECT AREA. BMPs SHALL BE IMPLEMENTED FOR ANY STORMWATER COLLECTED PRIOR TO ANY DISCHARGE TO THE MUNICIPAL STORM SEWER SYSTEM.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DUST CONTROL DURING CONSTRUCTION.
4. THE LATEST EDITION OF THE CITY OF HELENA ENGINEERING AND DESIGN STANDARDS AND THE MONTANA PUBLIC WORKS STANDARDS (IN THAT ORDER) SHALL APPLY IN THE CASE OF ANY APPLICABLE CLARIFICATION OR INTERPRETATION OF THE PROJECT DRAWINGS OR SPECIFICATIONS.
5. WHEN WORKING NEAR AND/OR EXPOSING EXISTING UTILITIES AND SERVICE LINES, WORKERS SHALL UTILIZE HAND-DIGGING METHODS IN ORDER TO AVOID DAMAGE TO THOSE UTILITIES. IF DAMAGE OCCURS, THE COST OF REPAIR WILL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
6. THE OWNER AND ALL AFFECTED RESIDENTS SHALL BE NOTIFIED NO LATER THAN ONE WEEK PRIOR TO CONSTRUCTION THAT WILL IMPACT ACCESSIBILITY TO THEIR PROPERTY, PARKING OR SERVICES.
7. ALL ASPHALT, CONCRETE AND CURB AND GUTTER THAT IS DEMOLISHED OR REMOVED UNDER THIS AGREEMENT SHALL BE PROPERLY DISPOSED OF AND ALL COSTS THEREOF SHALL BE BORNE BY THE CONTRACTOR.
8. CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO DEMOLITION, INSTALLATION OR PLANTING OPERATIONS. ANY DAMAGE TO OR RESULTING FROM ENCOUNTERING UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
9. ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE RETURNED TO THEIR PRE-CONSTRUCTION CONDITION AT THE SOLE EXPENSE OF THE CONTRACTOR.
10. A PORTION OF THE PROJECT INVOLVES THE REMOVAL AND INSTALLATION OF INFRASTRUCTURE WITHIN THE TRAVELED RIGHT-OF-WAY. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL MEASURES NECESSARY TO ASSURE SAFE AND EFFICIENT FLOW OF VEHICULAR AND PEDESTRIAN TRAFFIC THROUGH THE CONSTRUCTION AREA(S).
11. A NEAT, VERTICAL SAWCUT SHALL BE MADE WHEREVER ASPHALT, CONCRETE, SIDEWALK OR CURB AND GUTTER REMOVAL ABUTS EXISTING INFRASTRUCTURE TO REMAIN.
12. DISPOSE OF ALL EXCAVATED SOIL, DEBRIS, ASPHALT, AND CONCRETE OFF THE PROJECT SITE AND IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS.

**PROJECT UTILITY NOTES:**

1. THE ENGINEER HAS OBTAINED UNDERGROUND UTILITY INFORMATION FROM OWNERS OF THE UNDERGROUND UTILITIES AND HAS INCLUDED THAT INFORMATION AS PART OF THESE PLANS. THIS UTILITY LOCATION INFORMATION IS APPROXIMATE AND MAY BE INCOMPLETE OR INACCURATE.
2. BEFORE BEGINNING ANY EXCAVATION, THE CONTRACTOR SHALL NOTIFY, THROUGH ONE-CALL NOTIFICATION CENTER, ALL OWNERS OF UNDERGROUND FACILITIES IN THE AREA OF THE PROPOSED EXCAVATION. THE PHONE NUMBER IS: **1-800-424-5555**.
3. AFTER AN OWNER OF AN UNDERGROUND FACILITY HAS LOCATED AND MARKED THE UNDERGROUND FACILITIES, THE CONTRACTOR SHALL DETERMINE IF WEATHER, TIME OR OTHER FACTORS MAY HAVE AFFECTED LOCATION MARKS, WARRANTING RELOCATION OF THE UTILITIES.
4. IF EXCAVATION HAS NOT OCCURRED WITHIN 30 DAYS OF THE LOCATE AND MARK, THE CONTRACTOR SHALL REQUEST THAT THE FACILITY BE RELOCATED AND REMARKED BEFORE EXCAVATING UNLESS OTHER ARRANGEMENTS HAVE BEEN MADE WITH THE UNDERGROUND FACILITY OWNER. THE CONTRACTOR IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH RELOCATING AND REMARKING A FACILITY THAT IS NOT EXCAVATED WITHIN 30 DAYS OF THE LOCATE AND MARK.
5. THE CONTRACTOR MAY NOT BEGIN EXCAVATION BEFORE THE LOCATING AND MARKING IS COMPLETE OR BEFORE THE CONTRACTOR IS NOTIFIED THAT LOCATING AND MARKING IS UNNECESSARY.
6. THE CONTRACTOR SHALL LOCATE AND MARK THE AREA TO BE EXCAVATED IF REQUESTED BY THE UNDERGROUND FACILITY OWNER OR THEIR REPRESENTATIVE. IF THE CONTRACTOR DISCOVERS AN UNDERGROUND FACILITY THAT HAS NOT BEEN LOCATED AND MARKED, THE CONTRACTOR SHALL STOP EXCAVATING IN THE VICINITY OF THE FACILITY AND NOTIFY THE FACILITY OWNER OR THE ONE-CALL NOTIFICATION CENTER. IF THIS OCCURS, THE CONTRACTOR SHALL PROCEED WITH OTHER ELEMENTS OF THE PROJECT, AT NO COST TO THE PROJECT OWNER, UNTIL THE UNDERGROUND FACILITY OWNER HAS NOTIFIED THE CONTRACTOR THAT EXCAVATION CAN PROCEED.



**4' X 8' PROJECT INFORMATIONAL SIGN DETAIL**  
NO SCALE



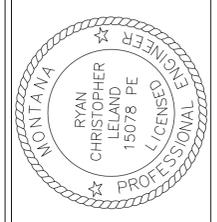
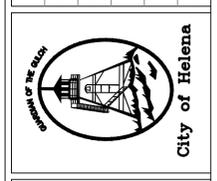
**UTILITY TRENCH DETAIL**  
NO SCALE

**PROJECT PLANS LEGEND/KEY:**

— 4235.00 —	EXISTING MAJOR TOPOGRAPHIC LINE (5' INTERVAL)
— — —	EXISTING MINOR TOPOGRAPHIC LINE (1' INTERVAL)
— OE — OE —	EXISTING OVERHEAD UTILITY
— UGE — UGE —	EXISTING UNDERGROUND ELECTRICAL
— GAS —	EXISTING 6 INCH DIAMETER DI/CI WATER MAIN
— W —	EXISTING 14 INCH DIAMETER DI WATER MAIN
WV	EXISTING WATER VALVE AND VALVE RISER BOX
⊙	EXISTING FIRE HYDRANT
WS	EXISTING WATER SERVICE
— 8SAN —	EXISTING 8 INCH SEWER MAIN
— 4SAN —	NEW 4 INCH SEWER SERVICE
⊙	EXISTING 48" DIAMETER MANHOLE TO REMAIN
— 8SAN —	NEW 8" SDR35 PVC SEWER MAIN
⊙	NEW 48" DIAMETER MANHOLE

NO.	REVISION DESCRIPTION	BY	DATE

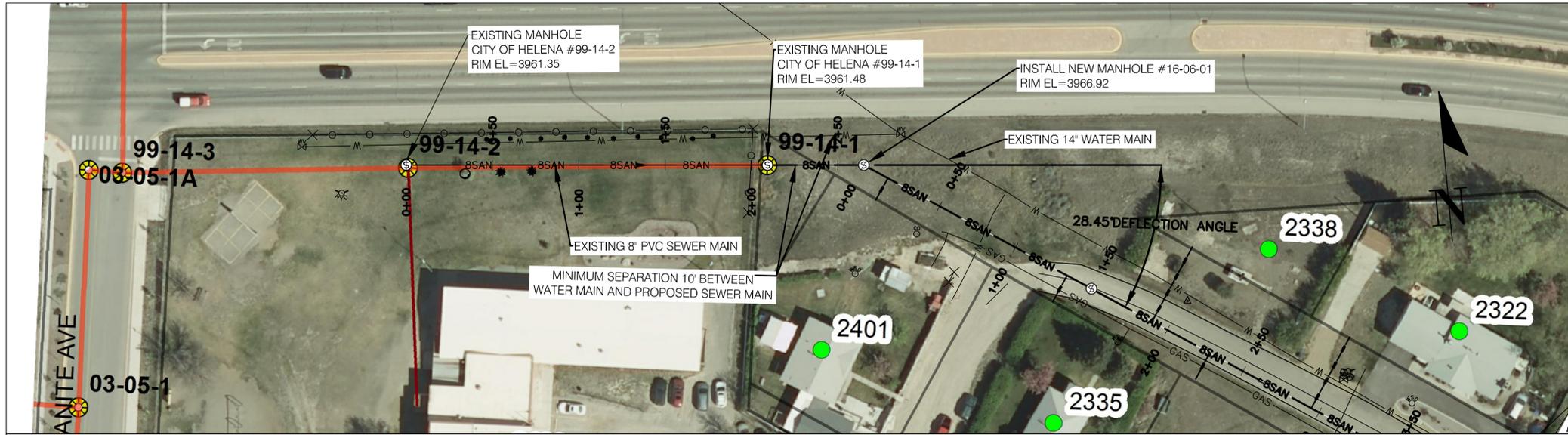
PROJECT: #15-15
DESIGNED: T.JL
DRAWN: T.JL
CHECKED: JRC
APPROVED: RCL
DATE: SEPTEMBER 2016



**CITY OF HELENA ENGINEERING DIVISION**  
**CANNON ST SEWER MAIN EXTENSION**  
**AMES ADDN #16-06**  
DETAILS-LEGEND-NOTES

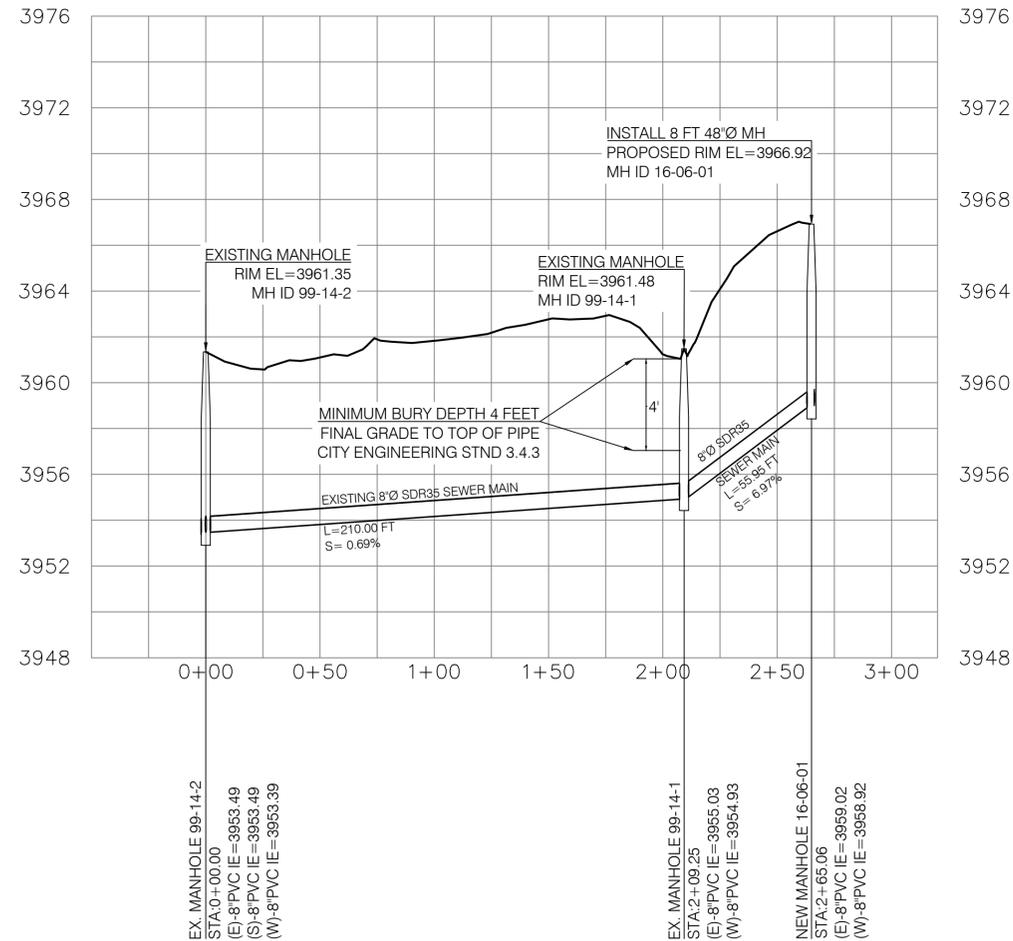
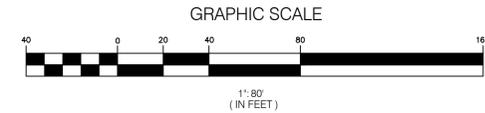
H:\ENGINEERING\PROJECT FILES\16-06 Projects\16-06 Cannon St Sewer Main Extension Ames Addition\Drawings\Cannon St Sewer Main Extension Ames Addition 16-06.dwg

# PLAN VIEW EUCLID AVE



### NOTES:

1. ALL UTILITY LOCATIONS SHOWN ARE APPROXIMATE AND ARE BASED ON LOCATIONS IDENTIFIED PREVIOUSLY BY ONE-CALL LOCATORS AND THE CITY OF HELENA. CONTRACTOR SHALL FIELD VERIFY ALL UTILITIES PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITIES.
2. DIAL BEFORE YOU DIG!! CALL ONE CALL LOCATORS. 1-800-424-5555
3. CONTRACTOR TO ENSURE A MINIMUM OF 4 FEET OF EARTH COVER IS MET ON ALL SEWER LINES.
4. ALL WORK PERFORMED SHALL CONFORM TO THE MONTANA PUBLIC WORKS STANDARD SPECIFICATIONS, 6TH EDITION, APRIL 2010 AS REVISED AND AUGMENTED BY THE SPECIFICATIONS.
5. ALL WORK PERFORMED SHALL CONFORM TO THE CITY OF HELENA ENGINEERING AND DESIGN STANDARDS, JUNE 10, 2013 EDITION.
6. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO RETURN ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES TO THEIR PRE-CONSTRUCTION STATE.

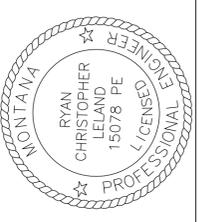


## PROFILE VIEW

HORIZONTAL SCALE 1" = 80'  
 VERTICAL SCALE 1" = 8'  
 VERTICAL EXAGGERATION = 10

NO.	REVISION DESCRIPTION	BY	DATE

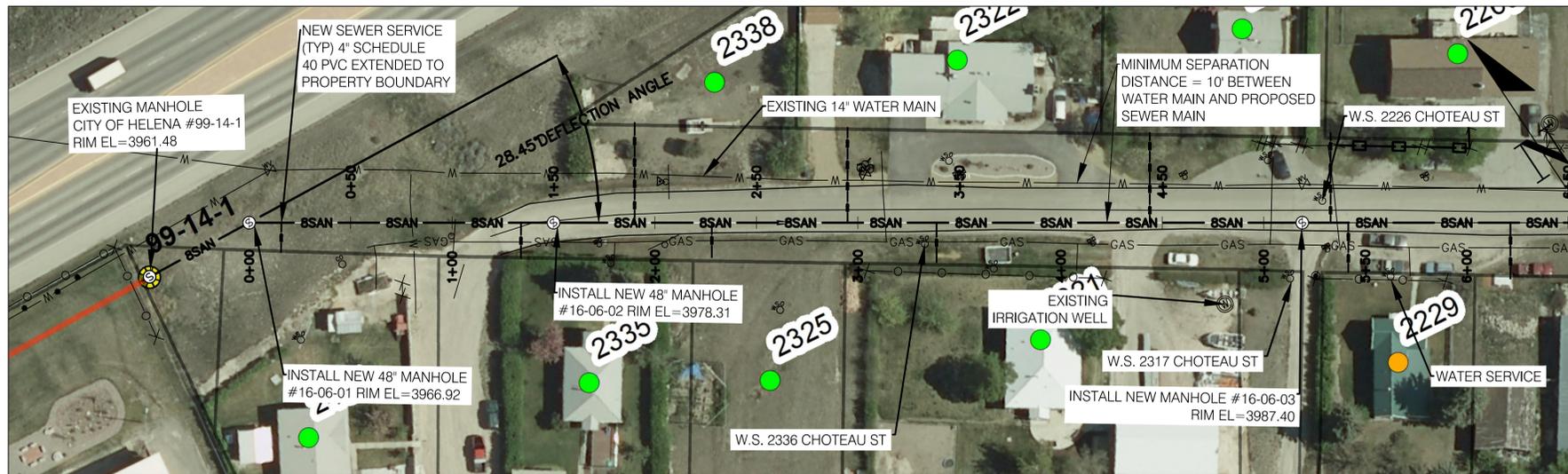
PROJECT: #16-06
DESIGNED: T.J.L
DRAWN: T.J.L
CHECKED: R.C.L
APPROVED: R.C.L
DATE: SEPTEMBER 2016



**CITY OF HELENA ENGINEERING DIVISION**  
**CANNON ST SEWER MAIN EXTENSION**  
**AMES ADDN #16-06**  
 CANNON ST P-P1

H:\ENGINEERING\PROJECT FILES\16-06 Cannon St Sewer Main Extension Ames Addition\Drawings\Cannon St Sewer Main Extension Ames Addition 16-06.dwg

# PLAN VIEW CANNON ST

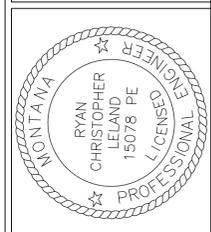
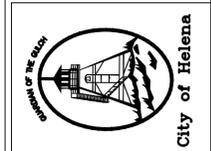


### NOTES:

- ALL UTILITY LOCATIONS SHOWN ARE APPROXIMATE AND ARE BASED ON LOCATIONS IDENTIFIED PREVIOUSLY BY ONE-CALL LOCATORS AND THE CITY OF HELENA. CONTRACTOR SHALL FIELD VERIFY ALL UTILITIES PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITIES.
- DIAL BEFORE YOU DIG!! CALL ONE CALL LOCATORS.  
1-800-424-5555
- CONTRACTOR TO ENSURE A MINIMUM OF 4 FEET OF EARTH COVER IS MET ON ALL SEWER LINES.
- ALL WORK PERFORMED SHALL CONFORM TO THE MONTANA PUBLIC WORKS STANDARD SPECIFICATIONS, 6TH EDITION, APRIL 2010 AS REVISED AND AUGMENTED BY THE SPECIFICATIONS.
- ALL WORK PERFORMED SHALL CONFORM TO THE CITY OF HELENA ENGINEERING AND DESIGN STANDARDS, JUNE 10, 2013 EDITION.
- IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO RETURN ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES TO THEIR PRE-CONSTRUCTION STATE.

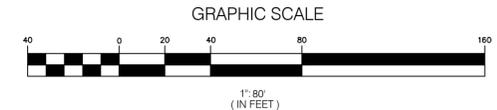
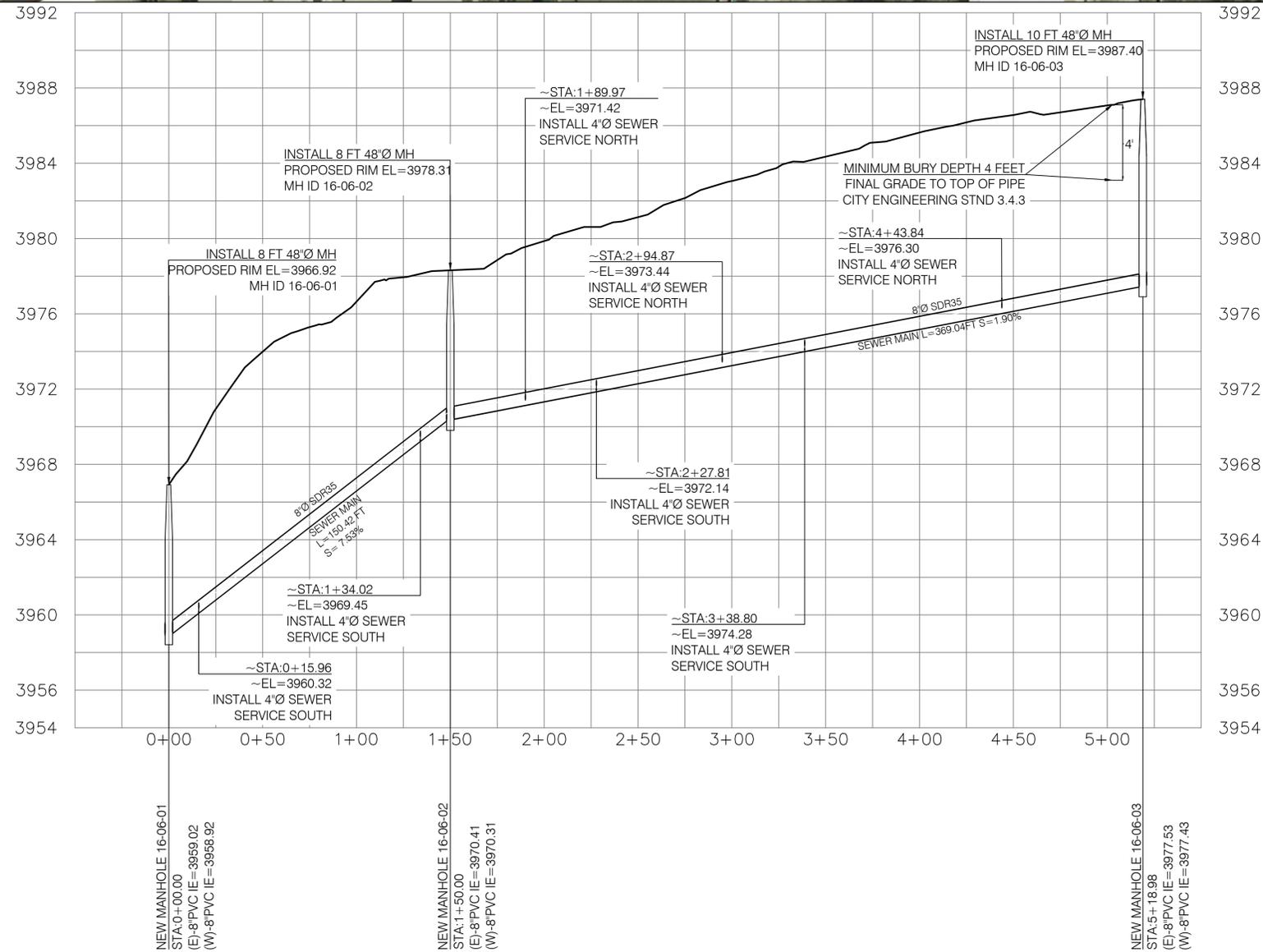
NO.	REVISION DESCRIPTION	BY	DATE

PROJECT: #16-06
DESIGNED: T.J.L
DRAWN: T.J.L
CHECKED: R.C.L
APPROVED: R.C.L
DATE: SEPTEMBER 2016



**CITY OF HELENA ENGINEERING DIVISION**  
**CANNON ST SEWER MAIN EXTENSION**  
**AMES ADDN #16-06**  
 CANNON ST P-P2

SHEET NO.  
**5**  
 OF 6

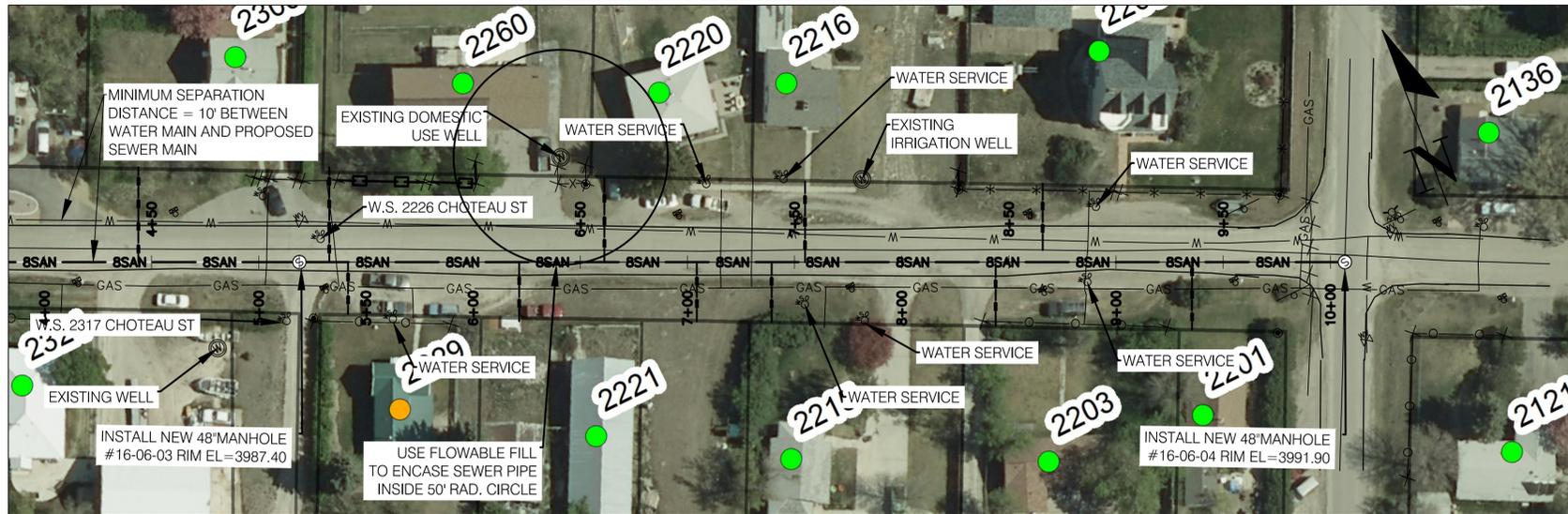


## PROFILE VIEW

HORIZONTAL SCALE 1"= 80'  
 VERTICAL SCALE 1"= 8'  
 VERTICAL EXAGGERATION = 10

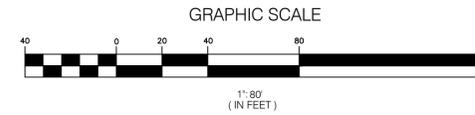
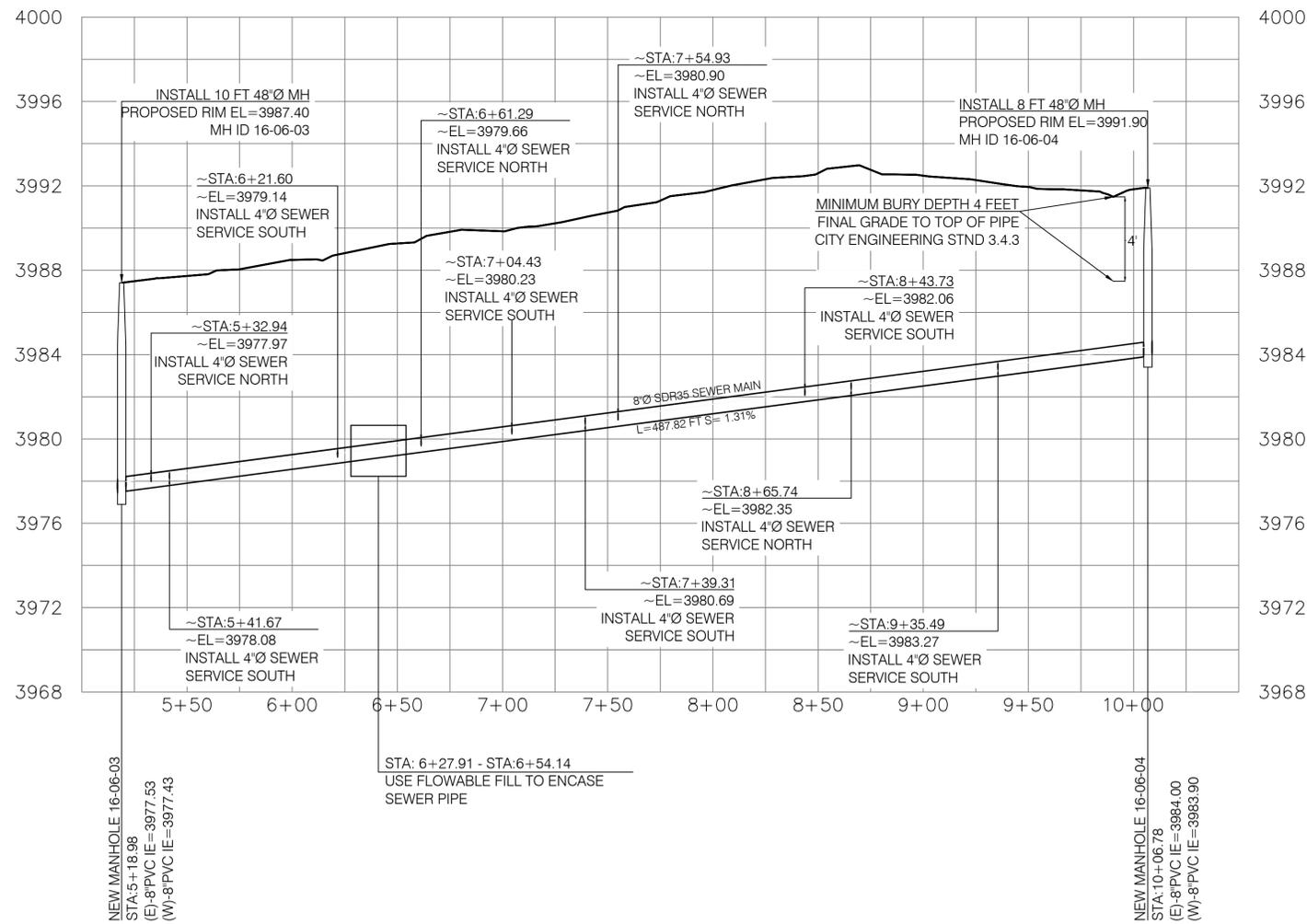
H:\ENGINEERING\PROJECT FILES\16-06 Cannon St Sewer Main Extension Ames Addition\Drawings\Cannon St Sewer Main Extension Ames Addition 16-06.dwg

# PLAN VIEW CANNON ST



### NOTES:

- ALL UTILITY LOCATIONS SHOWN ARE APPROXIMATE AND ARE BASED ON LOCATIONS IDENTIFIED PREVIOUSLY BY ONE-CALL LOCATORS AND THE CITY OF HELENA. CONTRACTOR SHALL FIELD VERIFY ALL UTILITIES PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITIES.
- DIAL BEFORE YOU DIG!! CALL ONE CALL LOCATORS.  
1-800-424-5555
- CONTRACTOR TO ENSURE A MINIMUM OF 4 FEET OF EARTH COVER IS MET ON ALL SEWER LINES.
- ALL WORK PERFORMED SHALL CONFORM TO THE MONTANA PUBLIC WORKS STANDARD SPECIFICATIONS, 6TH EDITION, APRIL 2010 AS REVISED AND AUGMENTED BY THE SPECIFICATIONS.
- ALL WORK PERFORMED SHALL CONFORM TO THE CITY OF HELENA ENGINEERING AND DESIGN STANDARDS, JUNE 10, 2013 EDITION.
- IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO RETURN ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES TO THEIR PRE-CONSTRUCTION STATE.

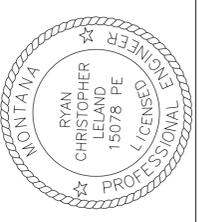
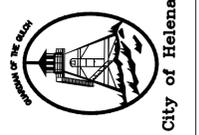


## PROFILE VIEW

HORIZONTAL SCALE 1"= 80'  
 VERTICAL SCALE 1"= 8'  
 VERTICAL EXAGGERATION = 10

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT: #16-06	DESIGNED: T.JL	DRAWN: T.JL	CHECKED: RCL	APPROVED: RCL	DATE: SEPTEMBER 2016
-----------------	----------------	-------------	--------------	---------------	----------------------

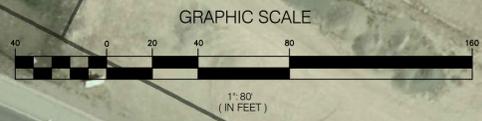


**CITY OF HELENA ENGINEERING DIVISION**  
**CANNON ST SEWER MAIN EXTENSION**  
**AMES ADDN #16-06**  
 CANNON ST P-P3

SHEET NO.  
**6**  
 OF 6

H:\ENGINEERING\PROJECT FILES\16-06 Cannon St Sewer Main Extension Ames Addition\Drawings\Cannon St Sewer Main Extension Ames Addition 16-06.dwg

**PAVING AREA FOR CANNON ST SEWER MAIN EXTENSION ~ 2,566.42 SQUARE YDS**



24 FT WIDTH OF ROAD TO BE RE-PAVED USING 3" HOT MIX A ASPHALT.

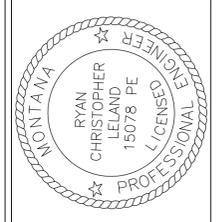
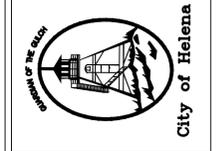
PAVEMENT IS EXPECTED TO BE UN-PATCHABLE DUE TO THIN ASPHALT LAYER EXISTING. THE ENTIRE ROAD WILL HAVE TO BE REPAIRED ACCORDINGLY AND ASPHALT PATCHING WON'T BE PERMITTED FOR THIN ASPHALT SECTIONS OF LESS THAN 3 INCHES.

CHOTEAU ST

**CITY OF HELENA WATER SYSTEM MAP  
NOT TO SCALE**

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT: #16-06  
 DESIGNED: T.J.L  
 DRAWN: T.J.L  
 CHECKED: R.C.L  
 APPROVED: R.C.L  
 DATE: MARCH 2016



**CITY OF HELENA ENGINEERING DIVISION  
 CANNON ST SEWER MAIN EXTENSION  
 AMES ADDN #16-06**

EXHIBIT 3 CITY OF HELENA WATER SYSTEM