

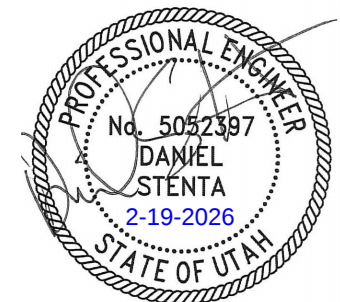
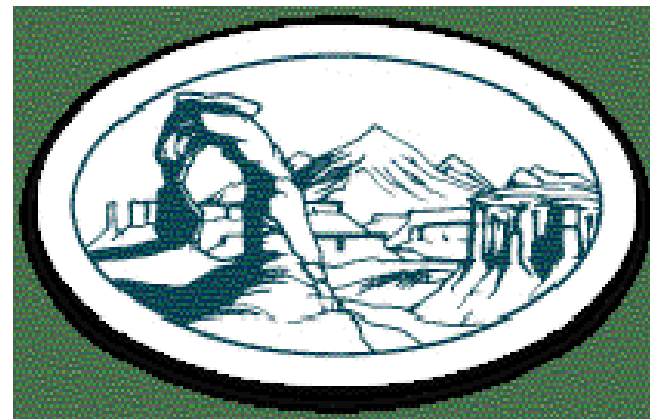
GRAND COUNTY

JACKSON STREET STORM DRAIN PROJECT

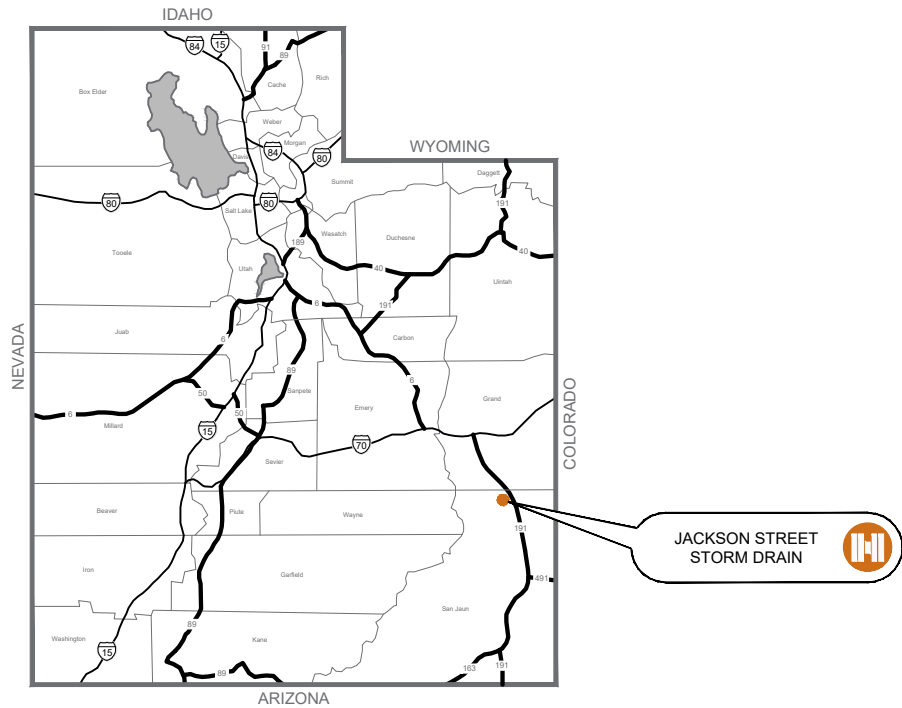
FEBRUARY 2026

GRAND COUNTY COMMISSION

BILL WINFIELD.....	COMMISSION MEMBER
BRIAN MARTINEZ.....	COMMISSION MEMBER
MIKE MCCURDY.....	COMMISSION MEMBER
MELODIE MCCANDLESS.....	COMMISSION MEMBER
MARY MCGANN.....	COMMISSION MEMBER
JACQUES HADLER.....	COMMISSION MEMBER
TRISHA HEDIN.....	COMMISSION MEMBER



STATE MAP



VICINITY MAP



INDEX OF SHEETS		
SHEET TITLE	DWG NO.	SHT NO.
GENERAL		
COVER SHEET	G-01	1
SHEET INDEX, STATE MAP, AND VICINITY MAP	G-02	2
ABBREVIATIONS, LEGEND, AND UTILITY CONTACTS	G-03	3
GENERAL NOTES	G-04	4
SHEET REFERENCE MAP	G-05	5
CITY BOUNDARIES	G-06	6
SURVEY CONTROL	SC-01 to SC-02	7 to 8
CIVIL		
PLAN AND PROFILE	C-01 to C-05	9 to 13
INTERSECTION DETAIL	D-01	14
DETAILS	D-02 to D-15	15 to 28
MANHOLE DETAILS	D-16	29



O:\Projects\Grand County General\1901 Jackson St Storm Drain\Project Data\Sheet Files\CAD\UT-0008-2001_JS_SD_COVER.dwg - G-02 - 2/19/2026 2:08 AM - Trevor Watson

REVISIONS			
REV	DATE	BY	DESCRIPTION
1	2/13/26	DS	CHANGES FOR RE-BID 2026

SCALE	
0	1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE	
HORIZONTAL:	VERTICAL:
---	---



**Horrocks.**

2162 West Grove Parkway, Suite 400, Pleasant Grove, UT 84062
801-763-5100 www.horrocksengineers.com

JACKSON STREET STORM DRAIN PROJECT

SHEET INDEX, STATE MAP, AND VICINITY MAP

DESIGN: MWC	PROJECT: UT-CV-0008-22
DRAWN: TRW	SHEET: 02 OF 29
CHECK: DHD	SHEET NO: G-02
DATE: 08/2025	

O:\Projects\Grand County General\1901 Jackson St Storm Drain\Project Data\Sheet Files\CAD\UT-0008-2001 JS SD COVER.dwg - G-03 - 2/19/2026 2:08 AM - Trevor Watson

ABBREVIATIONS

BLDG	BUILDING
BV	BUTTERFLY VALVE
CL	CENTER LINE
CLR	CLEAR
CO	CLEANOUT
CONC	CONCRETE
CONST	CONSTRUCT
C.Y.	CUBIC YARD
DIA	DIAMETER
D	DIAMETER OF PIPE
DWG	DRAWING
DIP	DUCTILE IRON PIPE
EA	EACH
EW	EACH WAY
ESMT	EASEMENT
E	EAST
EL / ELEV	ELEVATION
EX/EXIST	EXISTING
FPS	FEET PER SECOND
FL	FLOW LINE
FL / FLG	FLANGE FITTING
FT	FOOT
FM	FORCE MAIN
GV	GATE VALVE
HORIZ	HORIZONTAL
ID	INSIDE DIAMETER
" / IN	INCH(ES)
INV	INVERT
LT	LEFT
MH	MANHOLE
MFRS	MANUFACTURERS
MAX	MAXIMUM
MJ	MECHANICAL JOINT FITTING
MGD	MILLION GALLONS PER DAY
N	NORTH
N/A	NOT APPLICABLE
NTS	NOT TO SCALE
NT'D	NOTED
# / NO	NUMBER
OC	ON CENTER
OD	OUTSIDE DIAMETER
OH	OVERHEAD
PERM	PERMANENT
PVI	POINT OF VERTICAL INTERSECTION
PL	PROPERTY LINE
Q	RATE OF FLOW
REINF	REINFORCED
REQD	REQUIRED
REV	REVISION
RT	RIGHT
R/W	RIGHT OF WAY
S	SOUTH, SLOPE
ST STL	STAINLESS STEEL
STD	STANDARD
STA	STATION
TEMP	TEMPORARY
TBM	TEMPORARY BENCH MARK
TYP	TYPICAL
UG	UNDERGROUND
UNO	UNLESS NOTED OTHERWISE
UBC	UNTREATED BASE COURSE
V	VELOCITY
VERT	VERTICAL
W	WEST

PIPE ABBREVIATIONS

CIP	CAST IRON
CMP	CORRUGATED METAL
CPP	CORRUGATED POLYETHYLENE
DIP	DUCTILE IRON
HDPE	HIGH DENSITY POLYETHYLENE
POLY	POLYETHYLENE
PVC	POLYVINYL CHLORIDE PLASTIC
RCP	REINFORCED CONCRETE
VCP	VITRIFIED CLAY

UTILITY LINETYPES

EXISTING UTILITIES

CABLE TV - BURIED (bctv)	----	bctv	----	bctv	----
CABLE TV - OVERHEAD (ctv)	----	ctv	----	ctv	----
COMMUNICATIONS	----	com	----	com	----
ELECTRICAL - BURIED (bel)	----	bel	----	bel	----
ELECTRICAL - OVERHEAD (el)	----	el	----	el	----
FIBER OPTIC - BURIED (bfo)	----	bfo	----	bfo	----
FIBER OPTIC - OVERHEAD (fo)	----	fo	----	fo	----
GAS (g)	----	g	----	g	----
IRRIGATION (irr)	----	irr	----	irr	----
SEWER (ss)	----	ss	----	ss	----
STORM DRAIN (sd)	----	sd	----	sd	----
TELEPHONE - BURIED (btel)	----	btel	----	btel	----
TELEPHONE - OVERHEAD (tel)	----	tel	----	tel	----
WATER (w)	----	w	----	w	----

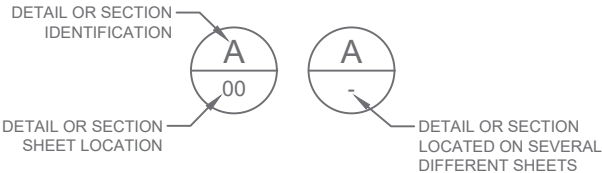
PROPOSED UTILITIES

STORM DRAIN (SD)	=====SD=====
WATER (W)	=====W=====

MISCELLANEOUS LINETYPES

CENTERLINE	-----
PROPERTY LINE	-----PL-----
EASEMENT	-----
FENCE LINE	---X---X---□---□---
CUT LINE	-----CUT-----CUT-----
GUARDRAIL	---0---0---0---0---0---0---
EXISTING R.O.W.	-----

TITLE LEGEND



SYMBOLS LEGEND

	EXISTING	PROPOSED		EXISTING	PROPOSED
BUTTERFLY VALVE			SEWER CLEAN OUT		
CAP AND PLUG			SEWER MANHOLE		
CATCH BASIN			STORM DRAIN MANHOLE		
ELECTRIC BOX			WATER METER		
FIRE HYDRANT			MAILBOX		
GAS METER					
GATE VALVE					
IRRIGATION BOX					
POWER POLE					



REVISIONS			
REV	DATE	BY	DESCRIPTION
1	2/13/26	DS	CHANGES FOR RE-BID 2026

SCALE	
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE	
HORIZONTAL: ---	VERTICAL: ---



2162 West Grove Parkway, Suite 400, Pleasant Grove, UT 84062
801-763-5100 www.horrocksengineers.com

JACKSON STREET STORM DRAIN PROJECT

ABBREVIATIONS AND LEGEND

DESIGN: MWC	PROJECT: UT-CV-0008-22
DRAWN: TRW	SHEET: 03 OF 29
CHECK: DHD	SHEET NO: G-03
DATE: 08/2025	

O:\Projects\Grand County General\1901 Jackson St Storm Drain\Project Data\Sheet Files\CAD\UT-0008-2001 JS SD COVER.dwg - G-04 - 2/19/2026 2:08 AM - Trevor Watson

GENERAL NOTES

- ALL UTILITY LOCATIONS ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING BLUE STAKES FOR LOCATIONS OF ALL UTILITIES. CALL 1-800-662-4111 BEFORE YOU DIG.
- THE CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES (WATER AND DRAINAGE SERVICES AND ACCESS ROADS, ETC.) DURING CONSTRUCTION AND ENSURE THEY REMAIN IN PLACE AND OPERATIONAL (UNLESS OTHERWISE NOTED BY PROPERTY OWNER).
- THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AS-BUILT DRAWINGS, PRIOR TO FINAL PAYMENT.
- IF EXISTING UTILITIES OR CULVERTS ARE DAMAGED DURING CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE TO REMOVE AND REPLACE THESE ITEMS.
- SAFE CONSTRUCTION PROCEDURES AND WORKING CLEARANCES ARE TO BE MAINTAINED AT ALL TIMES WHILE WORKING NEAR POWERLINES.
- THE CONTRACTOR IS TO PROTECT ALL MONUMENTS OR REPLACE IF DISTURBED.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS BEFORE STARTING WORK AND SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
- TRAFFIC CONTROL IS TO CONFORM WITH UDOT AND MUTCD STANDARDS.
- TRAFFIC CONTROL SHALL INCLUDE PROVISIONS FOR BIKES AND PEDESTRIANS.
- THE CONTRACTOR IS RESPONSIBLE TO NOTIFY EACH HOME OR BUSINESS THAT WILL BE IMPACTED AND COORDINATE WORK AS NECESSARY.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL REQUIRED WATER LINE TESTING AND NEEDED BLOW-OFFS.
- RESTORE OR PRESERVE ALL EXISTING FENCES, ROAD, AND DITCHES UNLESS OTHERWISE STATED ON THE PLANS.
- ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THESE CONTRACT DOCUMENTS, THE MOST CURRENT EDITION OF THE AMERICAN PUBLIC WORKS ASSOCIATION MANUAL OF STANDARD SPECIFICATION AND PLANS, AND UDOT STANDARDS, SPECIFICATIONS, AND DRAWINGS.
- CONTRACTOR SHALL NOTIFY ENGINEER OF ALL UTILITY CONFLICTS UPON DISCOVERY.
- ALL EXCAVATION, BACKFILLING, AND OTHER EARTHWORK OPERATIONS SHALL BE IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. STRUCTURAL FILL, BEDDING, IMPORTED BACKFILL, GRANULAR SUBBASE, AND BASE COURSE MATERIALS SHALL MEET THE REQUIREMENTS OUTLINED IN THE PROJECT SPECIFICATIONS.
- TEMPORARY TRENCH ASPHALT PATCH SHALL BE INSTALLED WITHIN 14 CALENDAR DAYS OF EXISTING ASPHALT REMOVAL WITH 2 INCHES OF COLD MIX ASPHALT ROLLED AND COMPACTED FOR THE WIDTH OF THE TRENCH CUT. CONTRACTOR SHALL REMOVE AND DISPOSE OF THE TEMPORARY TRENCH ASPHALT PATCH AND INSTALL PERMANENT ASPHALT PATCH PER PLANS BY END OF THE PROJECT.
- CONTRACTOR TO OBTAIN AN ENCROACHMENT PERMIT FOR WORK WITHIN CITY LIMITS AND/OR UDOT R/W. NO NEED TO GET A PERMIT FROM GRAND COUNTY.
- REPLACE ALL PAVEMENT PAINT AND PAVEMENT MARKINGS IN SAME LOCATION AND SAME MATERIALS.
- FOR WORK IN UDOT RIGHT OF WAY (US191) USE THE CURRENT UDOT SPECIFICATIONS AND STANDARD DRAWINGS.
- WORK IN THE UDOT RIGHT OF WAY IS MONDAY TO THURSDAY 8am TO 5pm AND FRIDAY 8am TO 3pm.
- HMA IN THE UDOT RIGHT OF WAY SHALL BE 1/2 INCH HMA (SUPERPAVE).
- ON US-191, MAINTAIN ONE LANE OPEN IN EACH DIRECTION AT ALL TIMES.
- FOR LANE CLOSURES ON US-191, CONTRACTOR TO NOTIFY ENGINEER AND UDOT AS REQUIRED IN UDOT SPECIFICATION 01554 TRAFFIC CONTROL.
- ON US-191, MAINTAIN 2 LANES OF TRAFFIC IN EACH DIRECTION ON THE FOLLOWING HOLIDAYS: NEW YEAR'S DAY, MEMORIAL DAY, INDEPENDENCE DAY, PIONEER DAY, LABOR DAY, THANKSGIVING DAY, CHRISTMAS DAY.

PIPELINE NOTES

- WATER MAINS AND WATER SERVICE LINES TO BE CONSTRUCTED IN ACCORDANCE WITH AUTHORITY HAVING JURISDICTION, MOAB CITY PUBLIC WORKS OR GRAND WATER SEWER SERVICES AGENCY (GWSSA) CONSTRUCTION STANDARDS AS APPROPRIATE.
- AT LOCATIONS WHERE WATER SERVICES CROSS OVER STORM DRAIN, PROVIDE 2" OF FOAM BOARD BETWEEN LINE AND STORM DRAIN. FOAM BOARD MUST BE 2-IN. MIN IN THICKNESS AND AT LEAST 3-FT IN LENGTH AND WIDTH.
- TRENCH EXCAVATION SHALL COMPLY WITH THE MOST CURRENT OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATIVE STANDARDS. TRENCH BACKFILL SHOULD BE PLACED IN 4 TO 6 INCH LIFTS IF HAND COMPACTED OR NO MORE THAN 8 INCH LIFTS IF POWER COMPACTED.
- PIPE LENGTHS SHOWN ON PLAN SHEETS ARE THREE-DIMENSIONAL.
- LIMIT THE LENGTH OF OPEN TRENCH TO 200 FEET IN ADVANCE OF PIPE LAYING. COMPLETE BACKFILLING AND INSTALLATION AND COMPACTION OF AGGREGATE BASE COURSE NOT MORE THAN 500 FEET IN THE REAR OF PIPE LAYING. CLOSE TRENCHES DURING NIGHTTIME CONDITIONS THROUGH THE USE OF BACKFILL, TRENCH PLATES, BARRICADES AND/OR OTHER APPROVED PROTECTION METHODS.
- ALL NEW AND RELOCATED WATER SERVICE LINES SHALL BE RUN CONTINUOUS PIPE (NO SPLICES) FROM MAIN TO METER YOKE.



REVISIONS			
REV	DATE	BY	DESCRIPTION
1	2/13/26	DS	CHANGES FOR RE-BID 2026

SCALE	
0	1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE	
HORIZONTAL:	VERTICAL:
---	---



**Horrocks.**

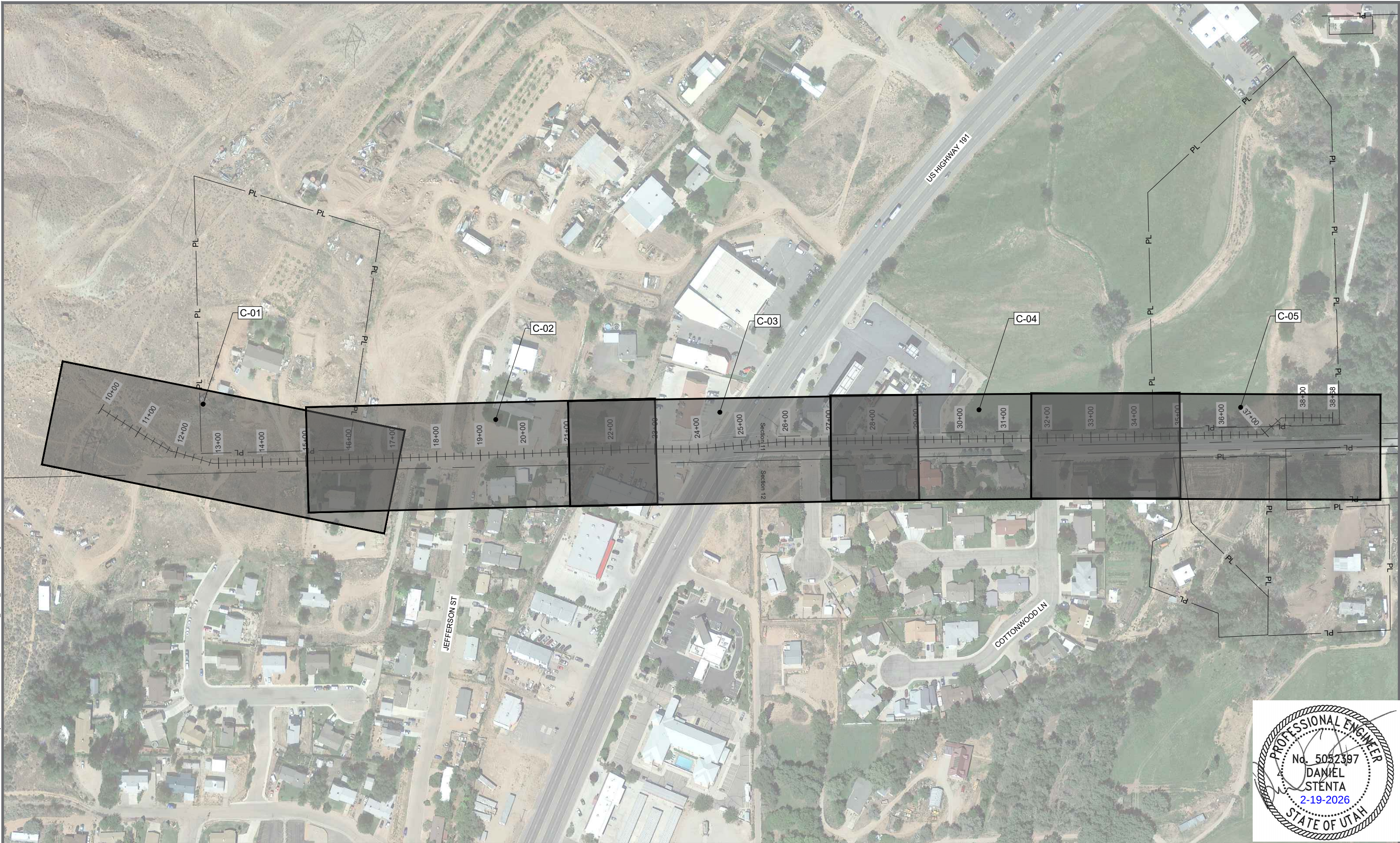
2162 West Grove Parkway, Suite 400, Pleasant Grove, UT 84062
801-763-5100 www.horrocksengineers.com

JACKSON STREET STORM DRAIN PROJECT

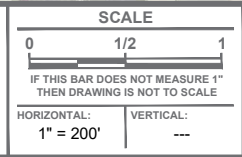
GENERAL NOTES

DESIGN: MWC	PROJECT: UT-CV-0008-22
DRAWN: TRW	SHEET: 04 OF 29
CHECK: DHD	SHEET NO: G-04
DATE: 08/2025	

O:\Projects\Grand County General\1901 Jackson St Storm Drain\Project Data\Sheet Files\CAD\UT-0008-2001 JS SD SHEET REF.dwg - G-05 - 2/19/2026 2:09 AM - trevor.watson



REVISIONS			
REV	DATE	BY	DESCRIPTION
1	2/13/26	DS	CHANGES FOR RE-BID 2026

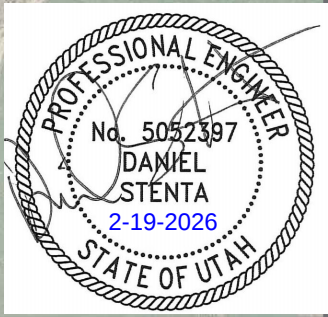


**Horrocks.**

2162 West Grove Parkway, Suite 400, Pleasant Grove, UT 84062
801-763-5100 www.horrocksengineers.com

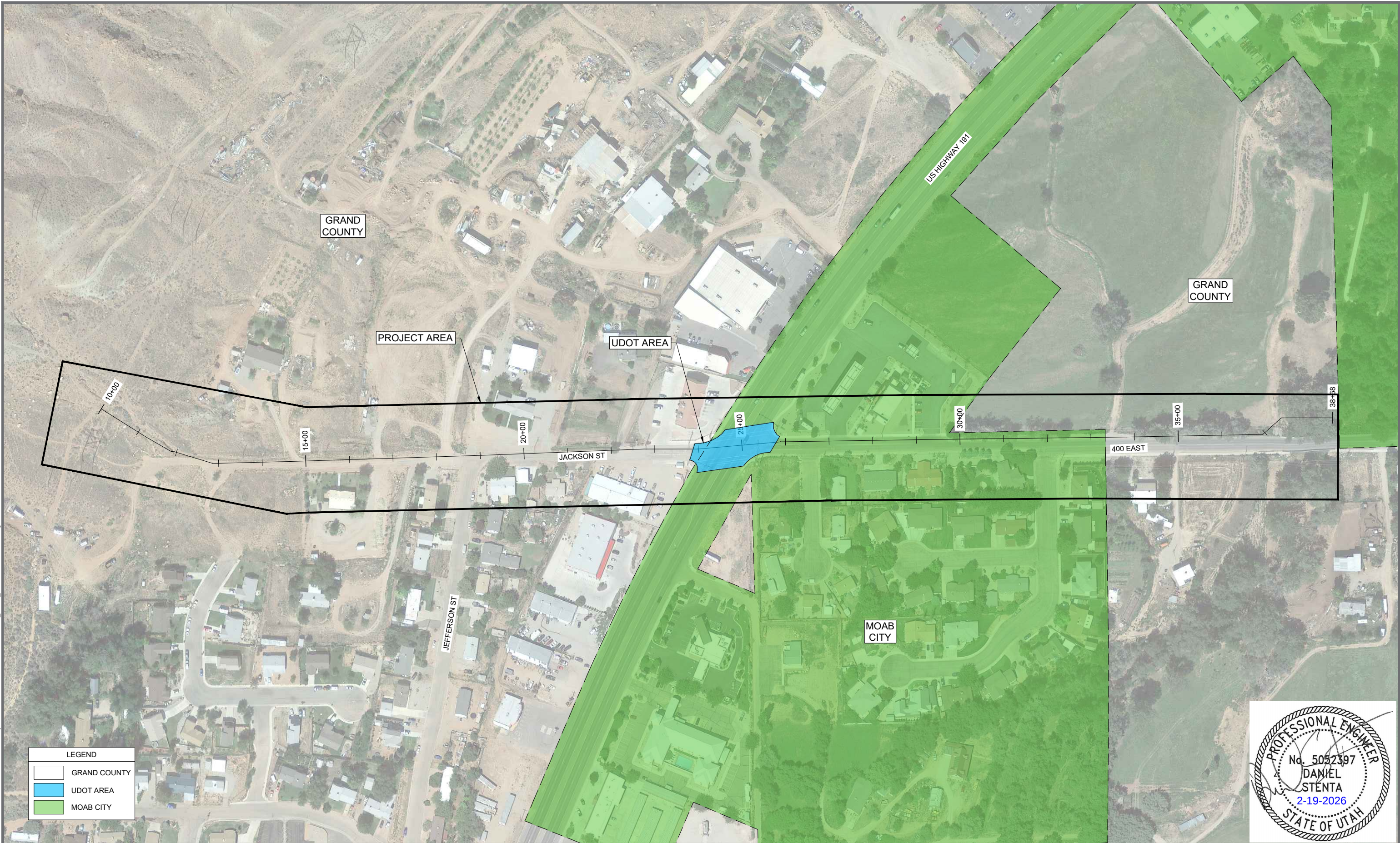
JACKSON STREET STORM DRAIN PROJECT

SHEET REFERENCE



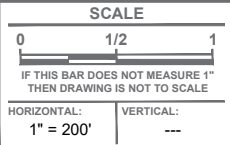
DESIGN: MWC	PROJECT: UT-CV-0008-22
DRAWN: TRW	SHEET: 05 OF 29
CHECK: DHD	SHEET NO: G-05
DATE: 08/2025	

O:\Projects\Grand County General\1901 Jackson St Storm Drain\Project Data\Sheet Files\CAD\UT-0008-2001 JS SD CITY BOUNDARIES.dwg - G-06 - 2/19/2026 2:09 AM - trevor.watson



LEGEND			
	GRAND COUNTY		
	UDOT AREA		
	MOAB CITY		

REVISIONS			
REV	DATE	BY	DESCRIPTION
1	2/13/26	DS	CHANGES FOR RE-BID 2026

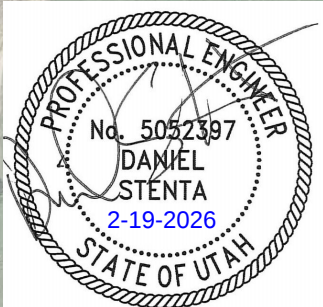


**Horrocks.**

2162 West Grove Parkway, Suite 400, Pleasant Grove, UT 84062
801-763-5100 www.horrocksengineers.com

JACKSON STREET STORM DRAIN PROJECT

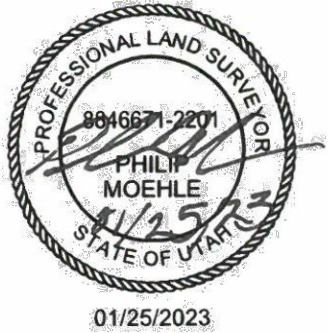
CITY BOUNDARIES



DESIGN: MWC	PROJECT: UT-CV-0008-22
DRAWN: TRW	SHEET: 06 OF 29
CHECK: DHD	SHEET NO: G-06
DATE: 08/2025	

SURVEYORS CERTIFICATE

I, PHILIP MOEHLE, DO HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR, HOLDING CERTIFICATE NUMBER 8846671-2201, AS PRESCRIBED BY THE LAWS OF THE STATE OF UTAH. I FURTHER CERTIFY THAT I HAVE PREPARED THE SURVEY CONTROL DIAGRAM REPRESENTED HEREIN AND THAT THE SAME IS AN ACCURATE REPRESENTATION OF A CONTROL SURVEY, AND WAS CONDUCTED UNDER MY DIRECT SUPERVISION.



GRAND COUNTY

PRIMARY CONTROL

POINT NUMBER	PROJECT PRIMARY GROUND COORDINATES			GEOGRAPHIC COORDINATES			STATE PLANE COORDINATES		DESCRIPTION
	NORTHING	EASTING	ELEVATION	LATITUDE	LONGITUDE	ELLIP SOID HEIGHT	NORTHING	EASTING	
101	6649888.673	2200200.677	4137.04	38°33'27.90739"N	109°32'34.89458"W	4089.95	6649635.807	2200083.927	SCP - NAIL AT CHEVRON TIP
102	6650008.724	2200505.337	4130.44	38°33'29.02766"N	109°32'31.02785"W	4083.35	6649655.851	2200388.571	SCP - NAIL AT CHEVRON TIP
103	6650542.776	2200241.334	4116.01	38°33'34.36145"N	109°32'34.20283"W	4048.93	6650189.875	2200124.582	SCP - NAIL AT CHEVRON TIP
104	6650546.943	2200495.741	4118.51	38°33'34.34760"N	109°32'31.00031"W	4051.43	6650194.042	2200378.975	SCP - NAIL AT CHEVRON TIP
105	6650238.633	2200504.504	4124.30	38°33'31.29945"N	109°32'30.97499"W	4057.27	6649885.748	2200387.738	SCP - NAIL AT CHEVRON TIP
106	6650198.662	2200755.705	4129.00	38°33'30.85016"N	109°32'27.82501"W	4081.99	6649845.779	2200638.925	SCP - NAIL AT CHEVRON TIP
107	6651345.041	2200227.304	4105.86	38°33'42.29125"N	109°32'34.15844"W	4038.88	6650992.097	2200110.552	SCP - NAIL AT CHEVRON TIP
108	6650273.862	2199564.035	4119.68	38°33'31.85082"N	109°32'42.79970"W	4052.50	6649920.975	2199447.318	SCP - NAIL AT CHEVRON TIP
109	6649780.616	2200276.169	4141.61	38°33'26.62580"N	109°32'33.97989"W	4074.55	6649407.757	2200159.415	SCP - NAIL AT CHEVRON TIP
110	6649659.678	2200825.423	4153.02	38°33'24.52161"N	109°32'27.12387"W	4086.02	6649206.829	2200708.640	SCP - NAIL AT CHEVRON TIP
111	6649215.172	2200262.038	4166.47	38°33'21.23961"N	109°32'34.30791"W	4099.49	6648862.341	2200145.284	SCP - NAIL AT CHEVRON TIP
112	6649837.342	2200543.115	4196.12	38°33'15.46959"N	109°32'30.93031"W	4129.05	6648284.542	2200426.347	SCP - NAIL AT CHEVRON TIP
2000	6650419.787	2200254.537	4119.49	38°33'33.14340"N	109°32'34.07056"W	4052.42	6650066.893	2200137.784	RBR

SECONDARY CONTROL

COORDINATE SYSTEM AND PROJECTION INFORMATION

1. HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (NAD83)
VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAV D88)
COORDINATE SYSTEM: US STATE PLANE 1983, (2011) UTAH CENTRAL ZONE 4302
EPOCH DATE: 2010
PROJECT UNITS: US SURVEY FOOT
COMBINED SCALE FACTOR: 1.0000530663
SCALE LOCATION: 0.0
FALSE NORTHING: 0
FALSE EASTING: 0
PROJECT HEIGHT: 4300.00
GEOID MODEL: GEOID12B
PROJECT BM: 2000

NOTES

2. ALL CONTROL COORDINATES ARE BASED ON THE UTAH REFERENCE NETWORK (GLOBAL POSITIONING SYSTEM (TURN GPS) AND WERE ESTABLISHED IN AUGUST 2022 USING PERMANENT TURN GPS RTK BASE STATION MOAB.
3. THE BENCHMARK FOR THIS PROJECT IS CONTROL POINT 2000.
4. PRIMARY SURVEY CONTROL CONSISTS OF EXISTING AND NEWLY ESTABLISHED SURVEY MONUMENTS.
5. PRIMARY AND SECONDARY VERTICAL CONTROL WERE ESTABLISHED WITH A SERIES OF DIFFERENTIAL LEVELS BEGINNING AT POINT NUMBER 2000. A FINAL LEAST SQUARES ADJUSTMENT WAS THEN APPLIED.
6. EXISTING TOPOGRAPHY WAS NOT REFERENCED INTO THIS SHEET TO AVOID CLUTTER.

COORDINATE CONVERSIONS:

7. PROJECT COORDINATES WERE CALCULATED BASED OFF NAD83 US STATE PLANE UTAH CENTRAL ZONE COORDINATES THEN SCALING SAID COORDINATES BY THE COMBINED SCALE FACTOR FROM 0.0.

PROJECT COORDINATES TO STATE PLANE GRID COORDINATES

STATE PLANE NORTHING = (PROJECT NORTHING) * 1.0000530663
STATE PLANE EASTING = (PROJECT EASTING) * 1.0000530663

(SCALING LATITUDE = N20°31'27.66067") OR (SCALING NORTHING = 0)
(SCALING LONGITUDE = W116°02'57.11642") OR (SCALING EASTING = 0)

POINT NUMBER	PROJECT SECONDARY GROUND COORDINATES			GEOGRAPHIC COORDINATES			STATE PLANE COORDINATES		DESCRIPTION
	NORTHING	EASTING	ELEVATION	LATITUDE	LONGITUDE	ELLIP SOID HEIGHT	NORTHING	EASTING	
500	6655540.546	2200104.385	4070.44	38°34'23.77150"N	109°32'34.54987"W	4003.22	6655187.380	2199987.640	PLUG
501	6650007.176	2200508.643	4129.81	38°33'29.01166"N	109°32'30.96668"W	4052.78	6649654.303	2200391.876	MON - CENTER LINE
502	6650541.772	2200252.951	4114.93	38°33'34.34902"N	109°32'34.05693"W	4047.86	6650188.871	2200136.198	MON - CENTER LINE
503	6653856.951	2200133.689	4075.07	38°34'07.13040"N	109°32'34.64500"W	4007.89	6653503.874	2200016.922	MON - CENTER LINE
504	6654426.390	2200123.944	4069.05	38°34'12.75884"N	109°32'34.61056"W	4001.85	6654073.283	2200007.198	MON - CENTER LINE
505	6654418.989	2200124.136	4069.30	38°34'12.68568"N	109°32'34.61019"W	4002.11	6654065.882	2200007.390	MON - CENTER LINE
506	6650001.407	2200265.335	4130.87	38°33'29.00728"N	109°32'34.04991"W	4083.83	6649648.535	2200148.581	MON - CENTER LINE
507	6649903.162	2200267.540	4136.98	38°33'28.03609"N	109°32'34.04921"W	4069.95	6649550.295	2200150.786	QC - T26S R22/21E SEC-E12
508	6655138.826	2200165.562	4074.18	38°34'19.78907"N	109°32'33.89054"W	4006.97	6654785.681	2200048.814	QC - T26S R22/21E SEC-E01
509	6652510.208	2200207.873	4088.00	38°33'53.80787"N	109°32'34.08208"W	4020.86	6652157.203	2200091.122	SC - NAIL IN CONC T26S R21/22E SEC-NE12

SUPPLEMENTAL CONTROL

POINT NUMBER	PROJECT SUPPLEMENTAL GROUND COORDINATES			GEOGRAPHIC COORDINATES			STATE PLANE COORDINATES		DESCRIPTION
	NORTHING	EASTING	ELEVATION	LATITUDE	LONGITUDE	ELLIP SOID HEIGHT	NORTHING	EASTING	
300	6650202.944	2200806.304	4129.03	38°33'30.88152"N	109°32'27.18712"W	4081.98	6649850.061	2200689.522	PL - RWC
301	6650579.370	2200565.267	4119.14	38°33'34.65295"N	109°32'30.11649"W	4052.08	6650226.467	2200448.497	PL - RWC
302	6650302.195	2200526.297	4123.47	38°33'31.92276"N	109°32'30.68324"W	4056.41	6649949.307	2200409.529	PL - RWC
303	6650183.604	2200494.016	4124.42	38°33'30.75800"N	109°32'31.12212"W	4057.36	6649830.722	2200377.250	PL - NAIL
304	6649981.154	2200485.848	4132.29	38°33'28.76380"N	109°32'31.53235"W	4085.26	6649628.283	2200349.084	PL - RWC RED DESERT
305	6649979.141	2200381.886	4132.47	38°33'28.76207"N	109°32'32.58942"W	4085.44	6649626.270	2200265.126	PL - RWC RED DESERT
306	6649886.381	2200279.742	4137.54	38°33'27.86765"N	109°32'33.90029"W	4070.51	6649533.515	2200162.987	PL - RWC RED DESERT
307	6650847.723	2200260.517	4110.16	38°33'37.37032"N	109°32'33.87745"W	4043.07	6650494.806	2200143.764	PL - NAIL IN DIRT
308	6650827.420	2200261.129	4110.05	38°33'37.16959"N	109°32'33.87534"W	4042.96	6650474.504	2200144.375	PL - RWC
309	6651397.671	2200233.388	4105.77	38°33'42.80994"N	109°32'34.06738"W	4038.66	6651044.725	2200116.636	PL - NAIL AND WASHER IN CONCRETE
310	6651610.311	2200244.780	4103.40	38°33'44.90846"N	109°32'33.86545"W	4036.29	6651257.353	2200128.027	PL - RWC
311	6650957.924	2200197.392	4107.67	38°33'38.47281"N	109°32'34.64146"W	4040.57	6650805.001	2200080.642	PL - NAIL WITH FEATHERS
312	6649420.426	2200228.875	4155.11	38°33'23.27479"N	109°32'34.66868"W	4088.09	6649067.585	2200112.123	PL - NAIL IN CONCRETE
313	6649218.063	2200233.417	4166.39	38°33'21.27437"N	109°32'34.66724"W	4099.38	6648865.232	2200116.665	PL - RWC
314	6649193.886	2200233.768	4166.67	38°33'21.03541"N	109°32'34.66949"W	4101.66	6648841.057	2200117.016	PL - RWC

REVISIONS			
REV	DATE	BY	DESCRIPTION
1	2/13/26	DS	CHANGES FOR RE-BID 2026

SCALE	
0	1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE	
HORIZONTAL:	VERTICAL:
---	---





Horrocks.

2162 West Grove Parkway, Suite 400, Pleasant Grove, UT 84062
801-763-5100 www.horrocksengineers.com

JACKSON STREET STORM DRAIN PROJECT

SURVEY CONTROL

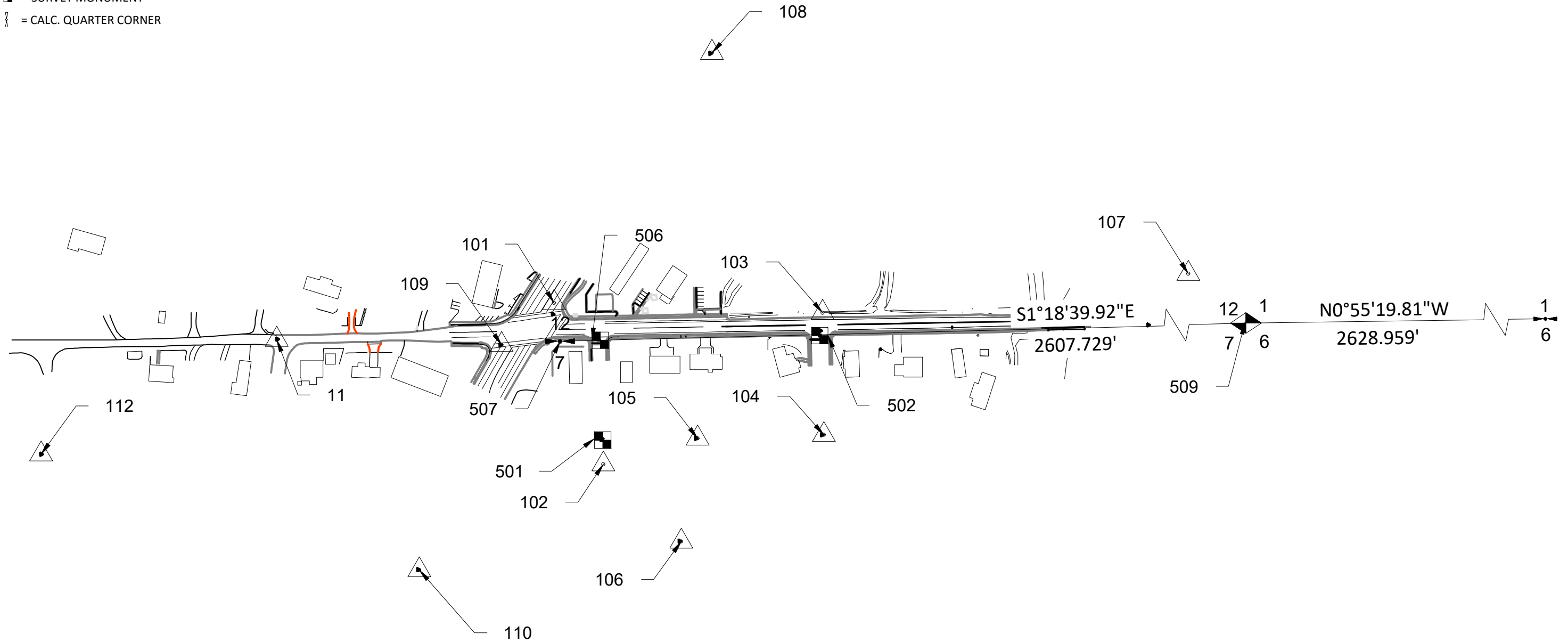
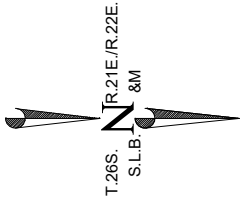
DESIGN:	PROJECT:
DRAWN:	UT-CV-0008-22
CHECK:	SHEET:
TJ	07 OF 29
TJ	SHEET NO:
DATE:	SC-01
08/2025	

O:\Projects\Grand County General\1901\Jackson St Storm Drain\Project Data\Sheet Files\CAD\UT-0008-2001_SURVEY CONTROL.dwg - SC-01 - 2/19/2026 2:09 AM - Trevor Watson

GRAND COUNTY

LEGEND

- △ = MOBILE TARGET
- ◊ = CALC. SECTION CORNER
- ◆ = SECTION CORNER
- ✂ = AERIAL TARGET
- ! = QUARTER CORNER
- = SURVEY MONUMENT
- ⋈ = CALC. QUARTER CORNER



O:\Projects\Grand County General\1901\Jackson St Storm Drain\Project Data\Sheet Files\CAD\UT-0008-2001_SURVEY CONTROL.dwg - SC-02 - 2/19/2026 2:09 AM - Trevor Watson

REVISIONS			
REV	DATE	BY	DESCRIPTION
1	2/13/26	DS	CHANGES FOR RE-BID 2026

SCALE	
0	1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE	
HORIZONTAL:	VERTICAL:
---	---



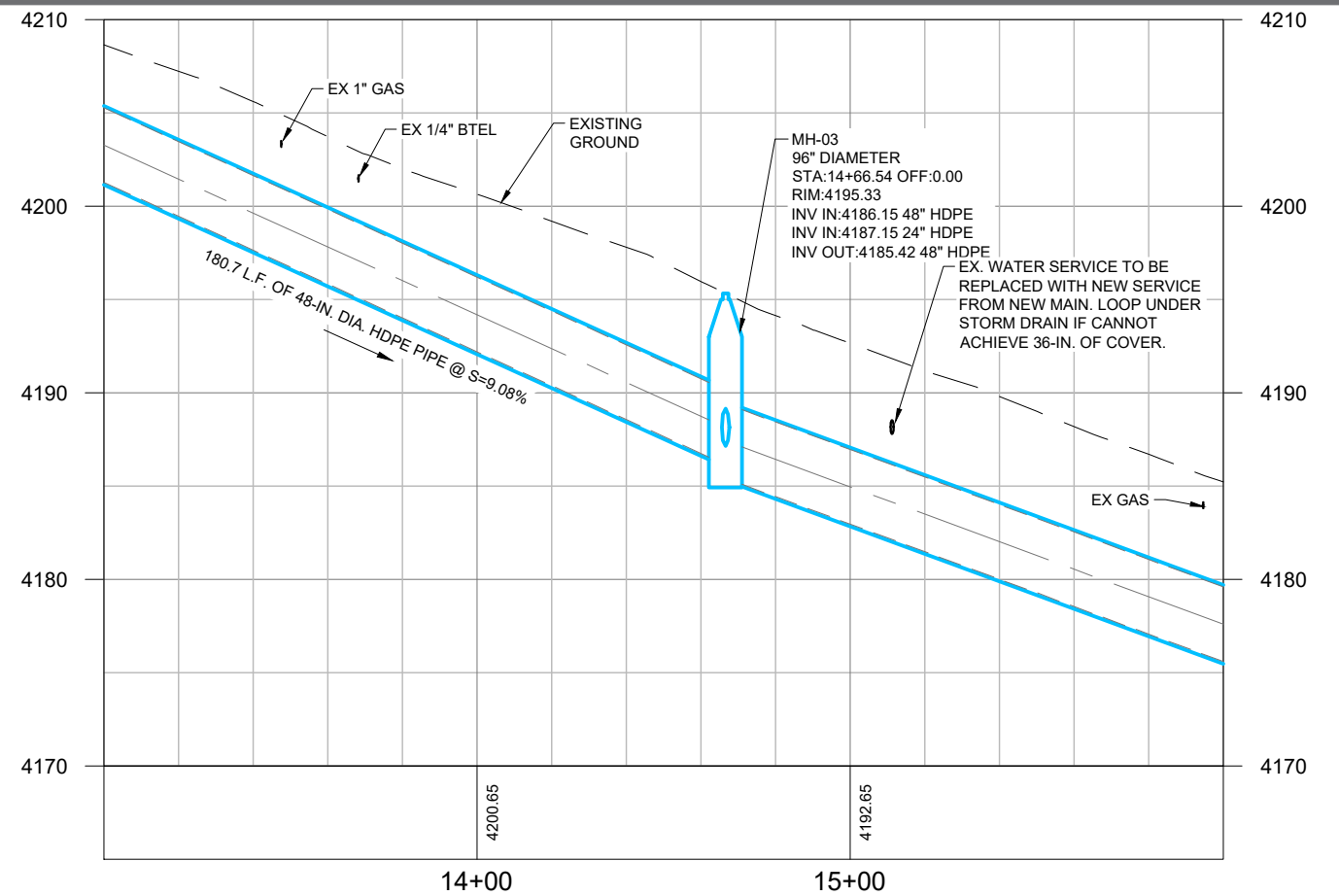
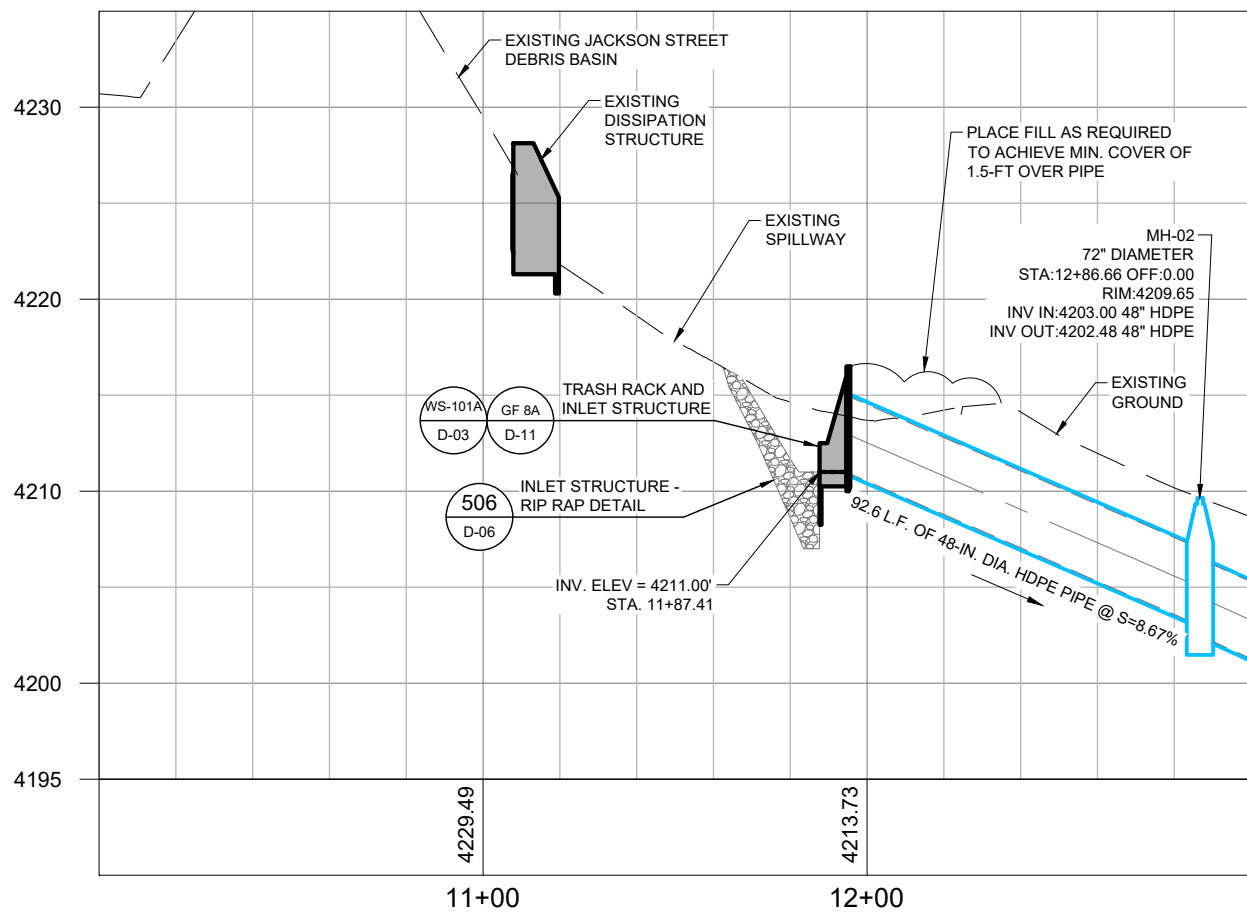
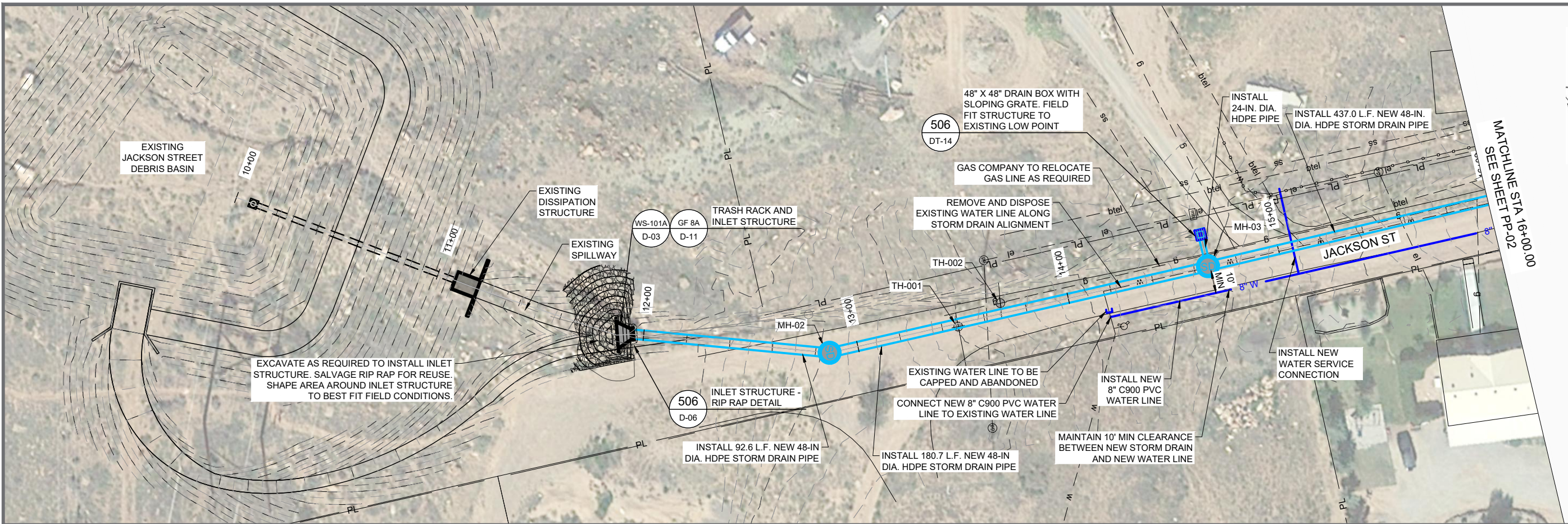
**Horrocks.**

2162 West Grove Parkway, Suite 400, Pleasant Grove, UT 84062
801-763-5100 www.horrocksengineers.com

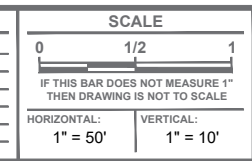
JACKSON STREET STORM DRAIN PROJECT

SURVEY CONTROL

DESIGN:	PROJECT:
DRAWN:	UT-CV-0008-22
CHECK:	SHEET:
TJ	08 OF 29
DATE:	SHEET NO:
08/2025	SC-02



REVISIONS			
REV	DATE	BY	DESCRIPTION



**Horrocks.**

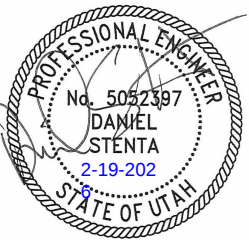
2162 West Grove Parkway, Suite 400, Pleasant Grove, UT 84062
801-763-5100 www.horrocksengineers.com

JACKSON STREET STORM DRAIN PROJECT
PLAN AND PROFILE

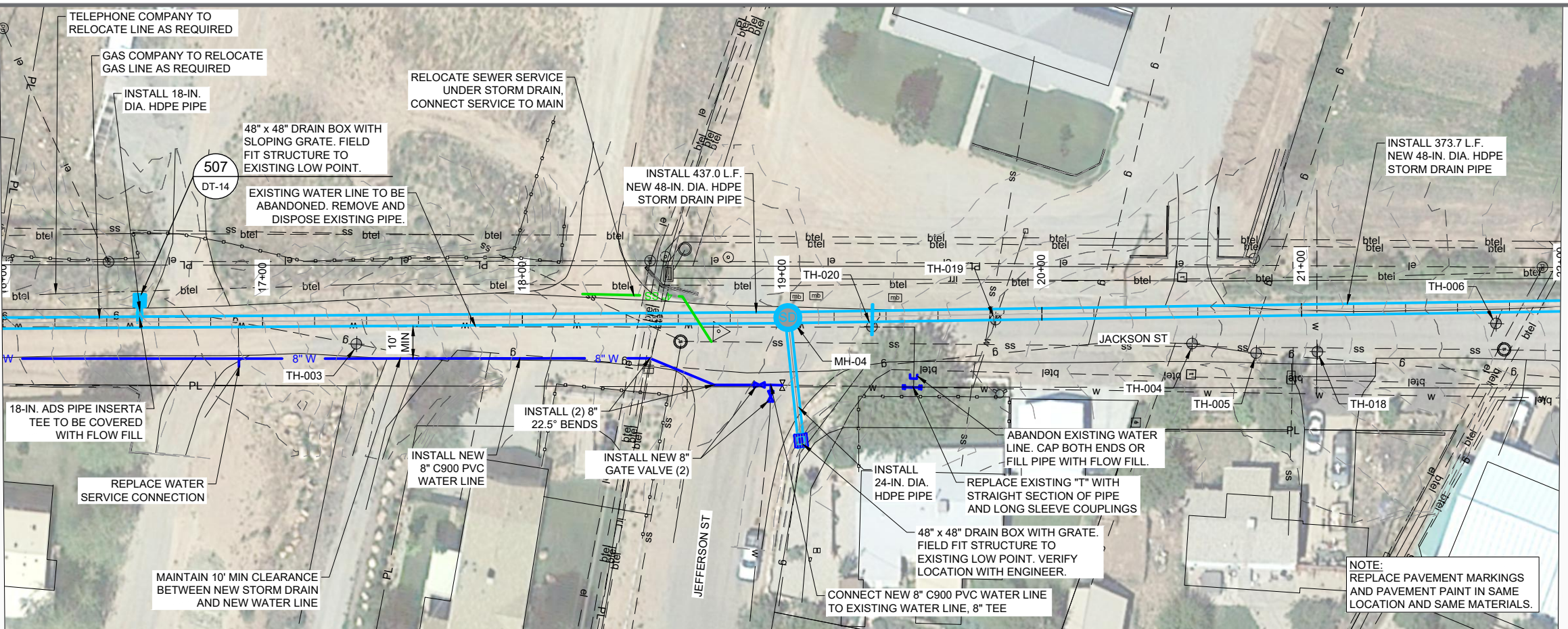
DESIGN: MWC	PROJECT: UT-CV-0008-22
DRAWN: TRW	SHEET: 09 OF 29
CHECK: DHD	SHEET NO: C-01
DATE: 08/2025	

O:\Projects\Grand County General\1901 Jackson St Storm Drain\Project Data\Sheet Files\CAD\UT-0008-2001 JS SD_PP.dwg - C-01 - 2/19/2026 2:09 AM - trevor.watson

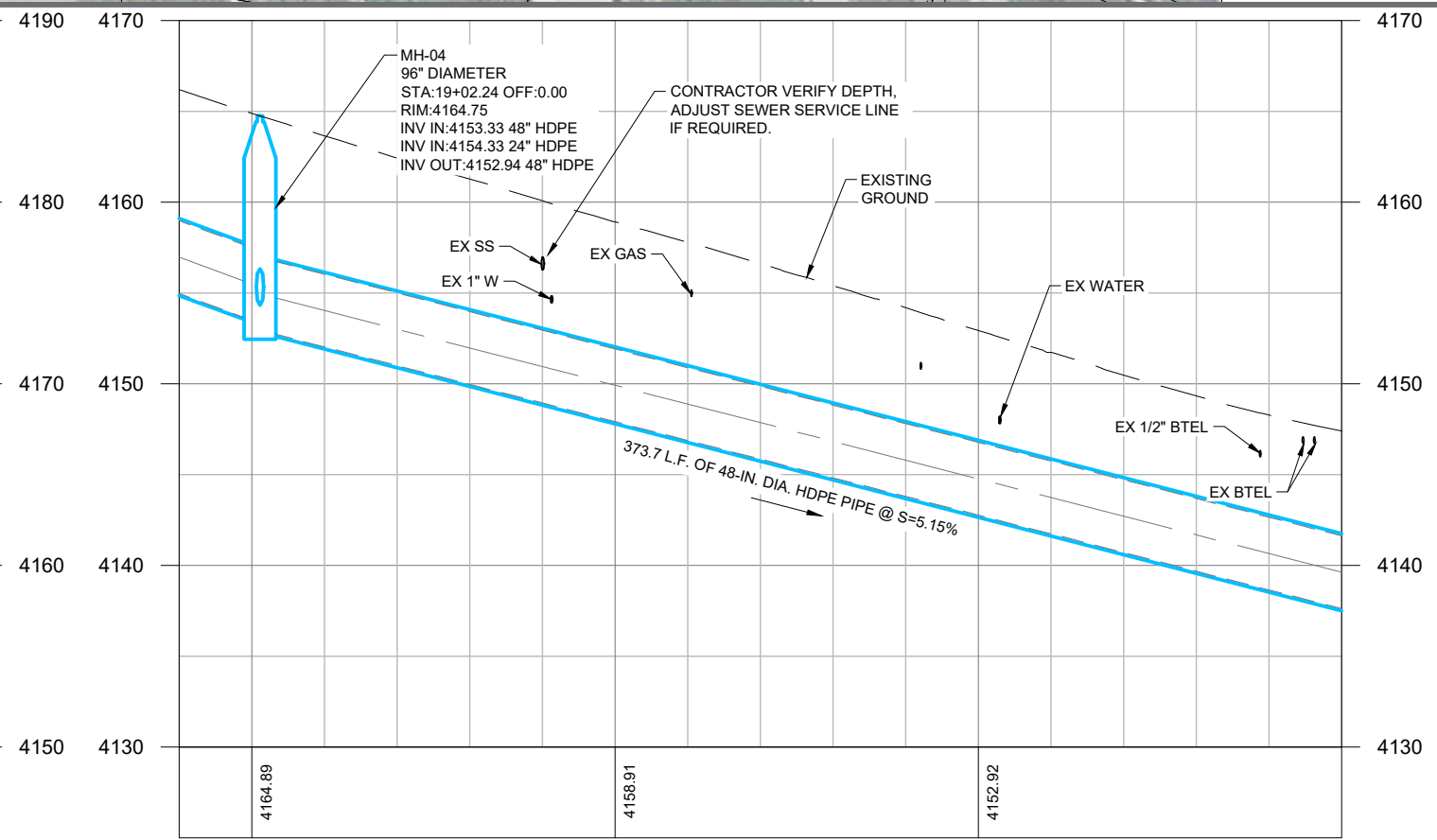
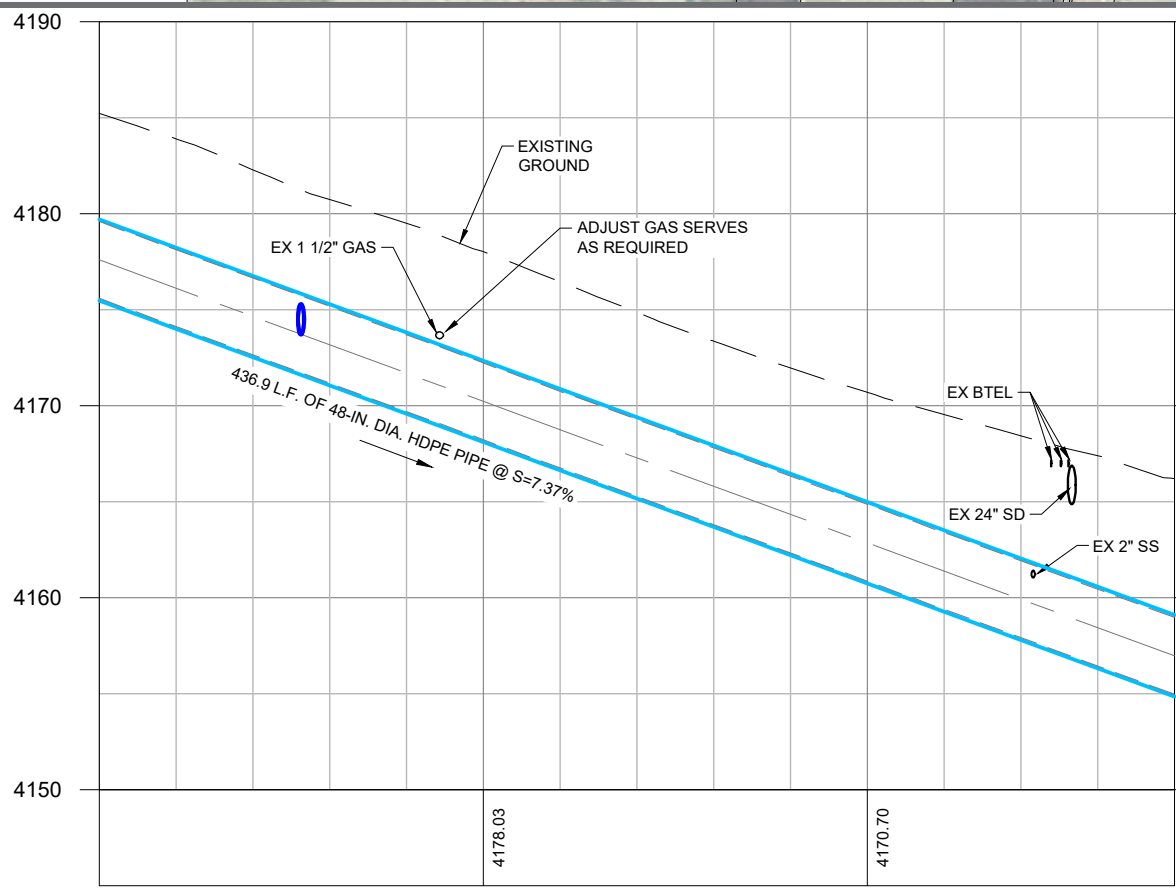
O:\Projects\Grand County General\1901 Jackson St Storm Drain\Project Data\Sheet Files\CAD\UT-0008-2001 JS SD_PP.dwg - C-02 - 2/19/2026 2:09 AM - trevor.watson



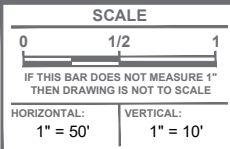
SEE SHEET PP-01
MATCHLINE STA 16+00.00



MATCHLINE STA 22+00.00
SEE SHEET PP-03



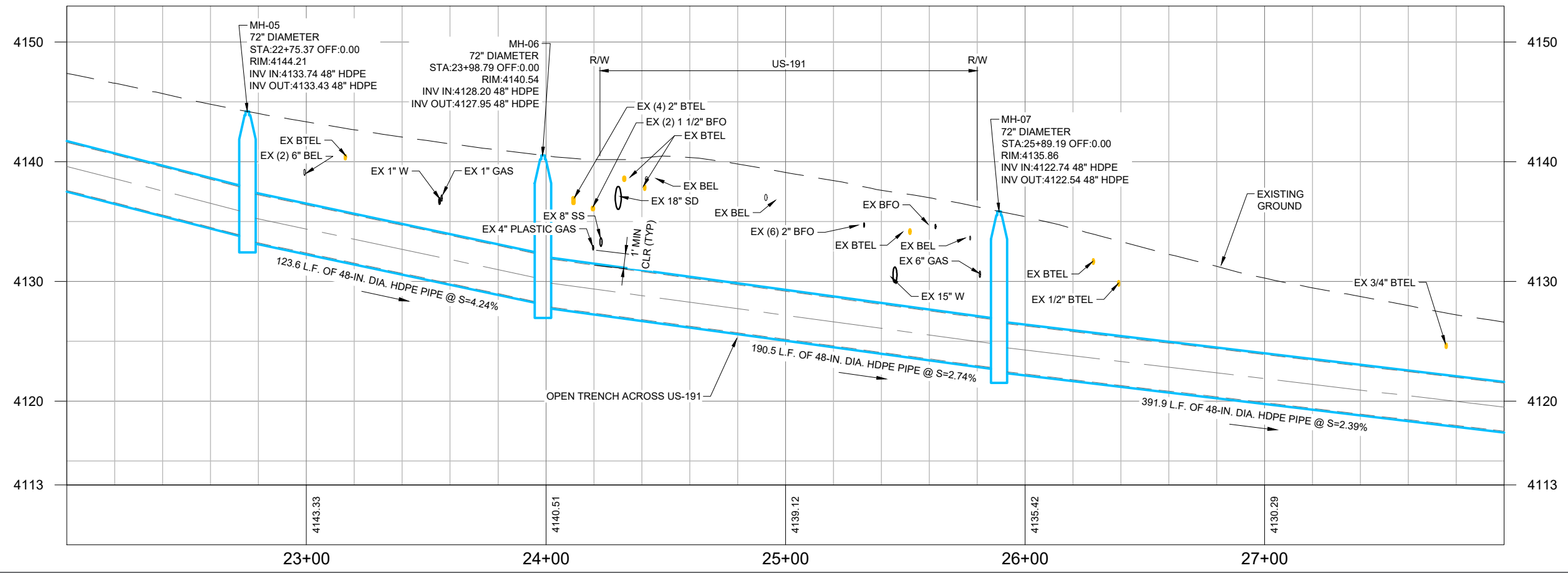
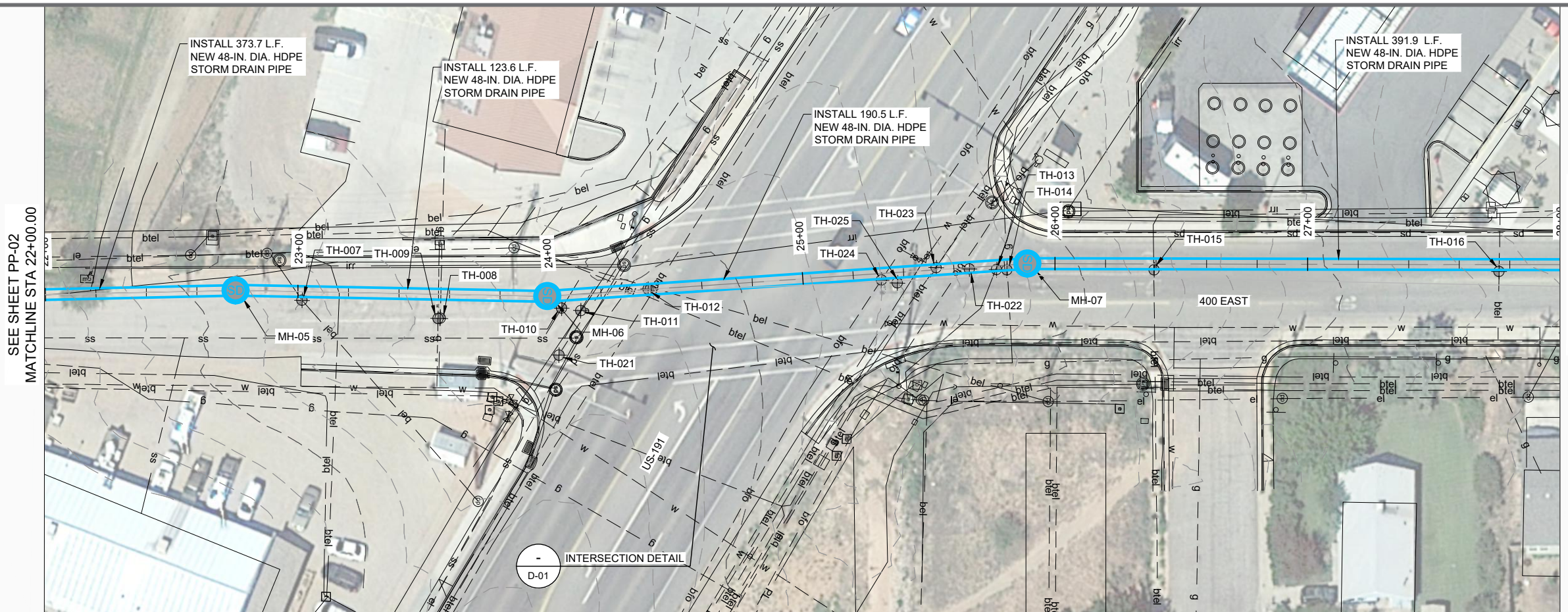
REVISIONS			
REV	DATE	BY	DESCRIPTION



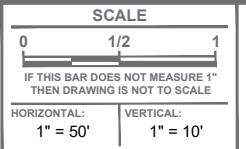
JACKSON STREET STORM DRAIN PROJECT

PLAN AND PROFILE

DESIGN: MWC	PROJECT: UT-CV-0008-22
DRAWN: TRW	SHEET: 10 OF 29
CHECK: DHD	SHEET NO: C-02
DATE: 08/2025	



REVISIONS			
REV	DATE	BY	DESCRIPTION



**Horrocks.**

2162 West Grove Parkway, Suite 400, Pleasant Grove, UT 84062
801-763-5100 www.horrocksengineers.com

JACKSON STREET STORM DRAIN PROJECT

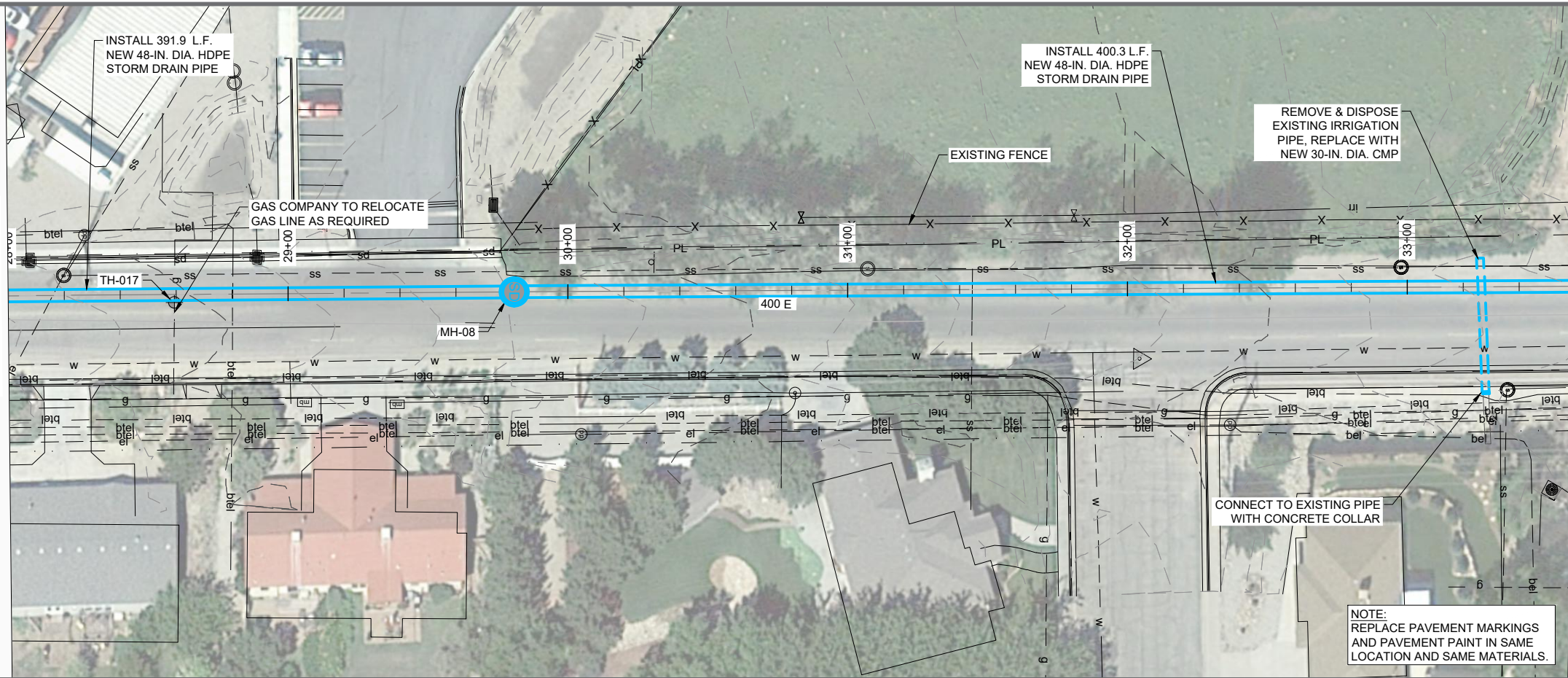
PLAN AND PROFILE

DESIGN: MWC	PROJECT: UT-CV-0008-22
DRAWN: TRW	SHEET: 11 OF 29
CHECK: DHD	SHEET NO: C-03
DATE: 08/2025	

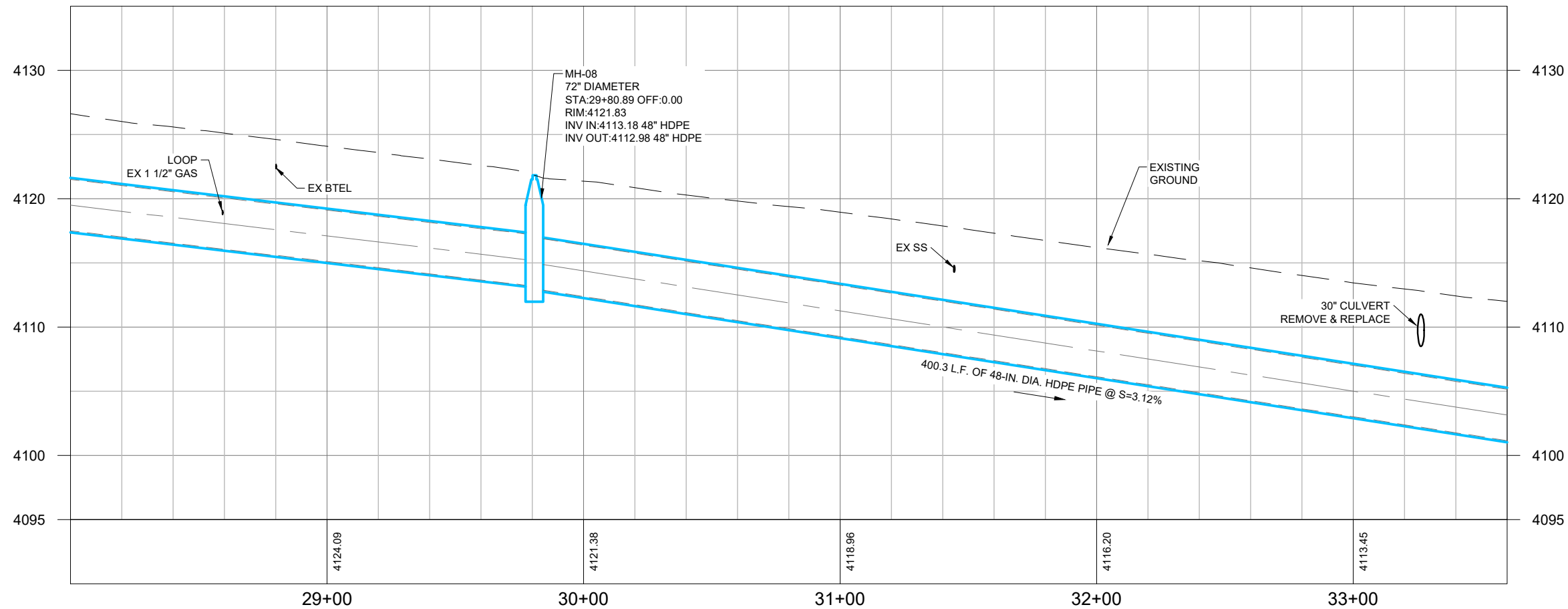
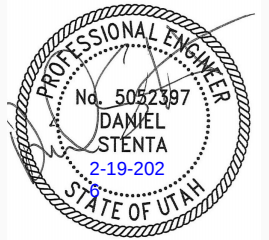
O:\Projects\Grand County General\1901 Jackson St Storm Drain\Project Data\Sheet Files\CAD\UT-0008-2001 JS SD_PP.dwg - C-03 - 2/19/2026 2:09 AM - trevor.watson

O:\Projects\Grand County General\1901 Jackson St Storm Drain\Project Data\Sheet Files\CAD\UT-0008-2001 JS SD_PP.dwg - C-04 - 2/19/2026 2:09 AM - trevor.watson

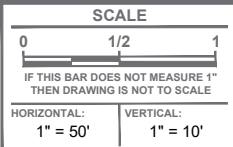
SEE SHEET PP-03
MATCHLINE STA 28+00.00



MATCHLINE STA 33+60.00
SEE SHEET PP-05



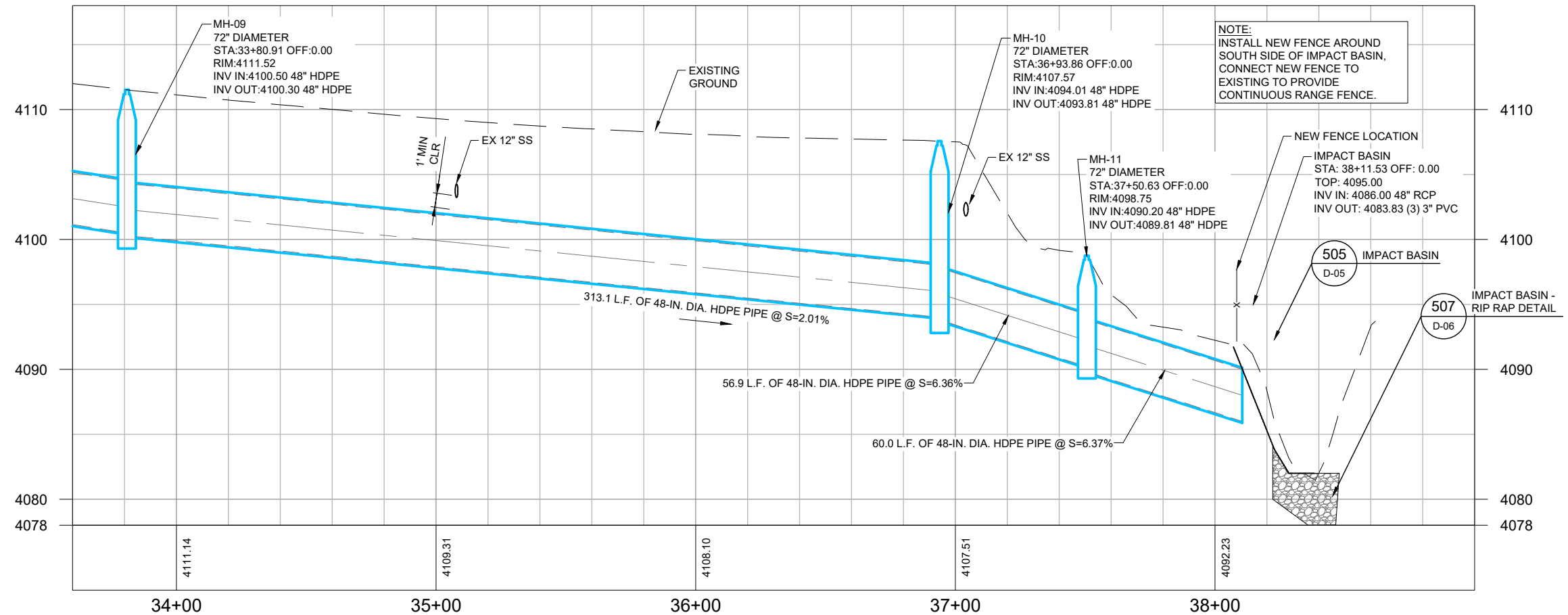
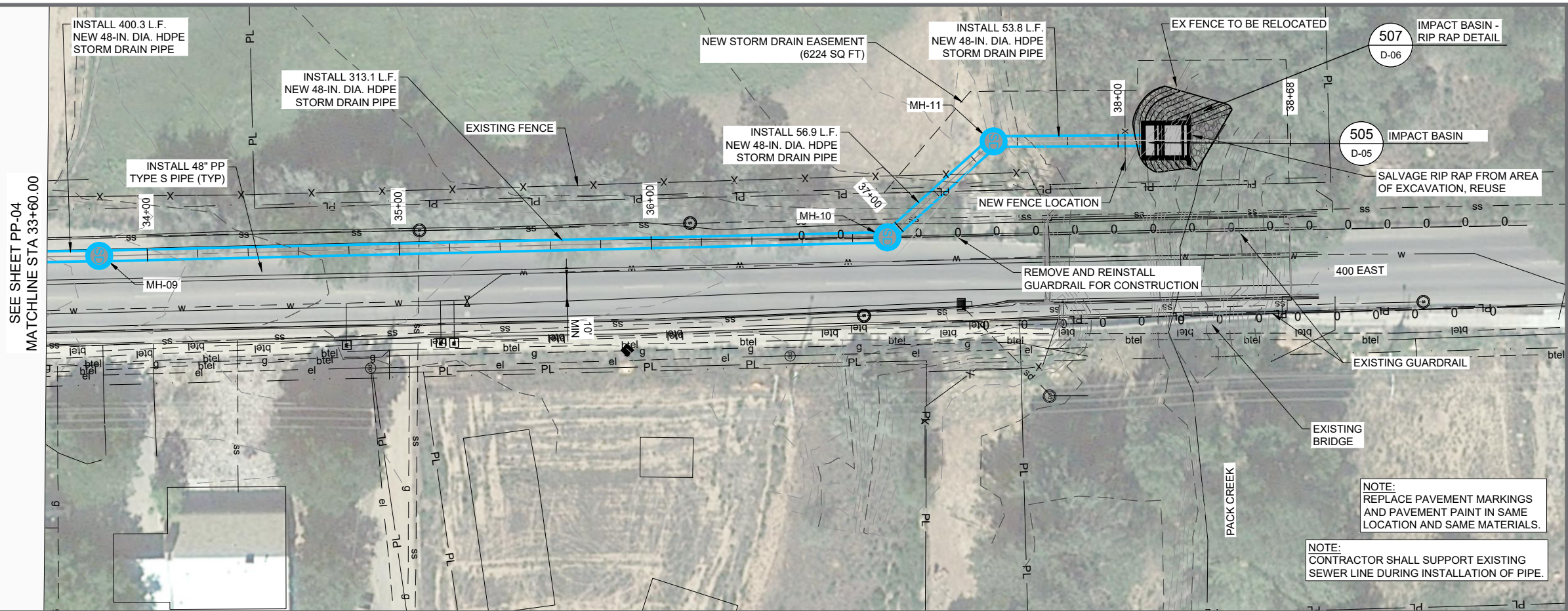
REVISIONS			
REV	DATE	BY	DESCRIPTION



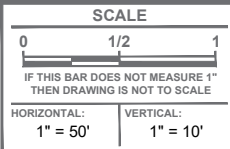
JACKSON STREET STORM DRAIN PROJECT

PLAN AND PROFILE

DESIGN: MWC	PROJECT: UT-CV-0008-22
DRAWN: TRW	SHEET: 12 OF 29
CHECK: DHD	SHEET NO: C-04
DATE: 08/2025	



REVISIONS			
REV	DATE	BY	DESCRIPTION



Horrocks.

2162 West Grove Parkway, Suite 400, Pleasant Grove, UT 84062
801-763-5100 www.horrocksengineers.com

JACKSON STREET STORM DRAIN PROJECT

PLAN AND PROFILE

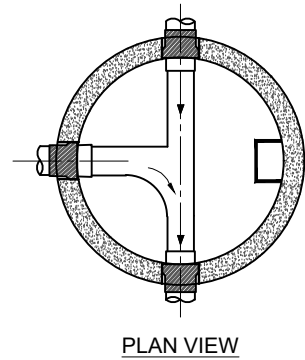
DESIGN: MWC	PROJECT: UT-CV-0008-22
DRAWN: TRW	SHEET: 13 OF 29
CHECK: DHD	SHEET NO: C-05
DATE: 08/2025	

SCALE	
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE	
HORIZONTAL:	VERTICAL:
1" = 20'	---

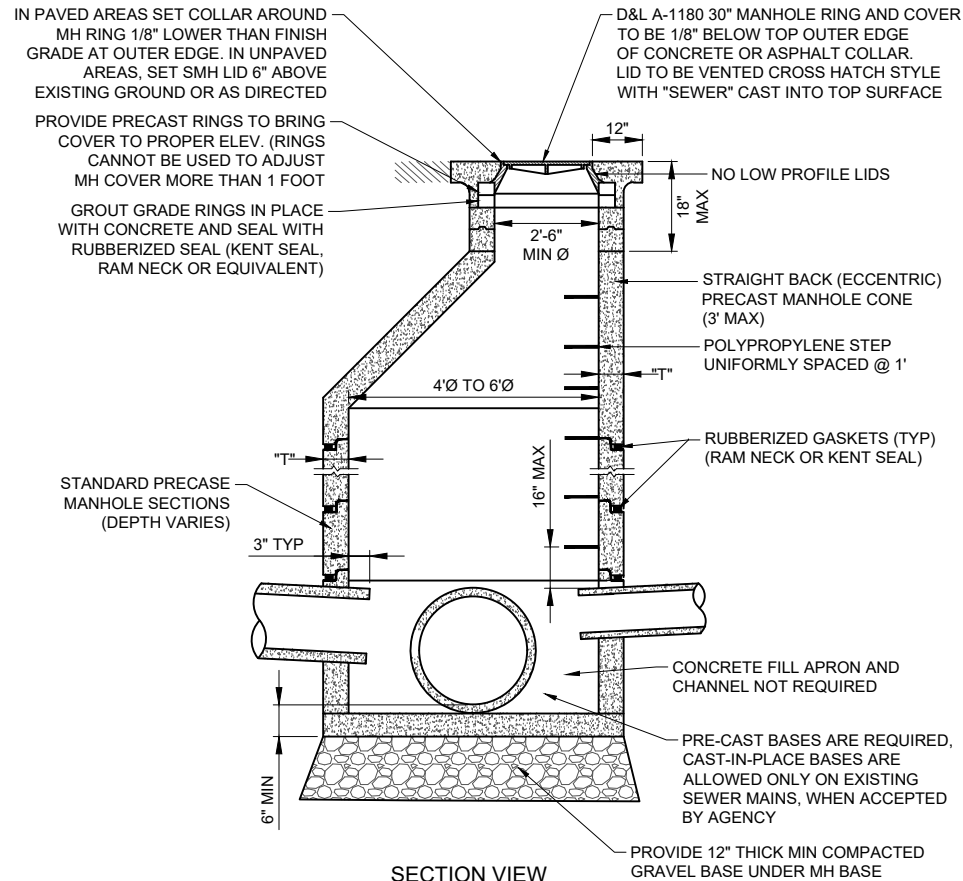


JACKSON STREET STORM DRAIN PROJECT INTERSECTION DETAIL		DESIGN: MWC DRAWN: TRW CHECK: DHD DATE: 08/2025	PROJECT: UT-CV-0008-22 SHEET: 14 OF 29 SHEET NO: D-01
--	--	---	--

O:\Projects\Grand County General\1901 Jackson St Storm Drain\Project Data\Sheet Files\CAD\UT-0008-2001 JS SD DETAILS.dwg - D-02 - 2/19/2026 2:10 AM - trevor.watson

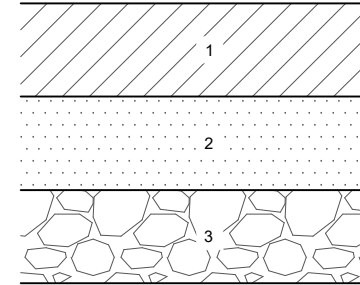
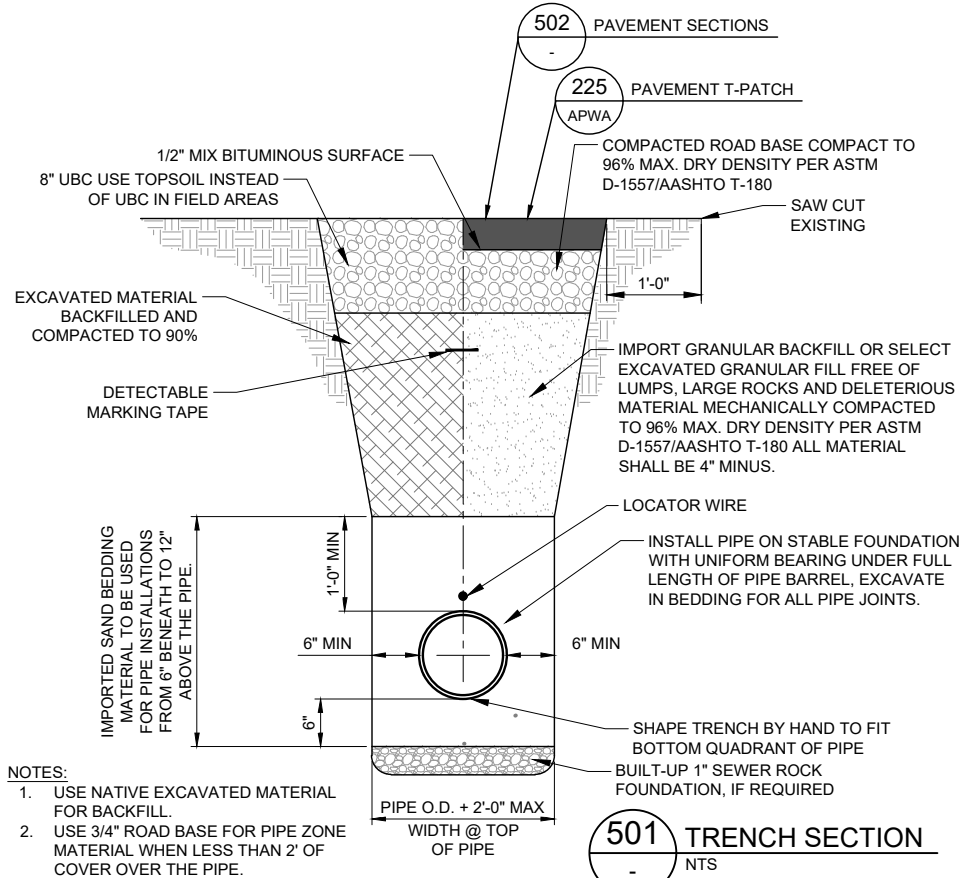


PLAN VIEW



SECTION VIEW

500 MANHOLE
- NTS



PAVEMENT LEGEND		
NO.	UDOT PER 2023 STANDARDS	OUTSIDE OF UDOT R/W
1	10" (1/2" HMA) *	HMA MATCH EXISTING OR 3" MIN
2	10" UTBC	ROADBASE MATCH EXISTING OR 6" MIN
3	12" GRANULAR BORROW	MATCH EXISTING OR 12" MIN

* AFTER COMPLETION OF THE TRENCH PATCHING ON US-191, 2-INCH MILL AND 2-INCH SMA REQUIRED. SEE SHEET D-01.

502 PAVEMENT SECTIONS
- NTS



REVISIONS			
REV	DATE	BY	DESCRIPTION
1	2/13/26	DS	CHANGES FOR RE-BID 2026

SCALE	
0	1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE	
HORIZONTAL:	VERTICAL:
---	---



 **Horrocks.**

2162 West Grove Parkway, Suite 400, Pleasant Grove, UT 84062
801-763-5100 www.horrocksengineers.com

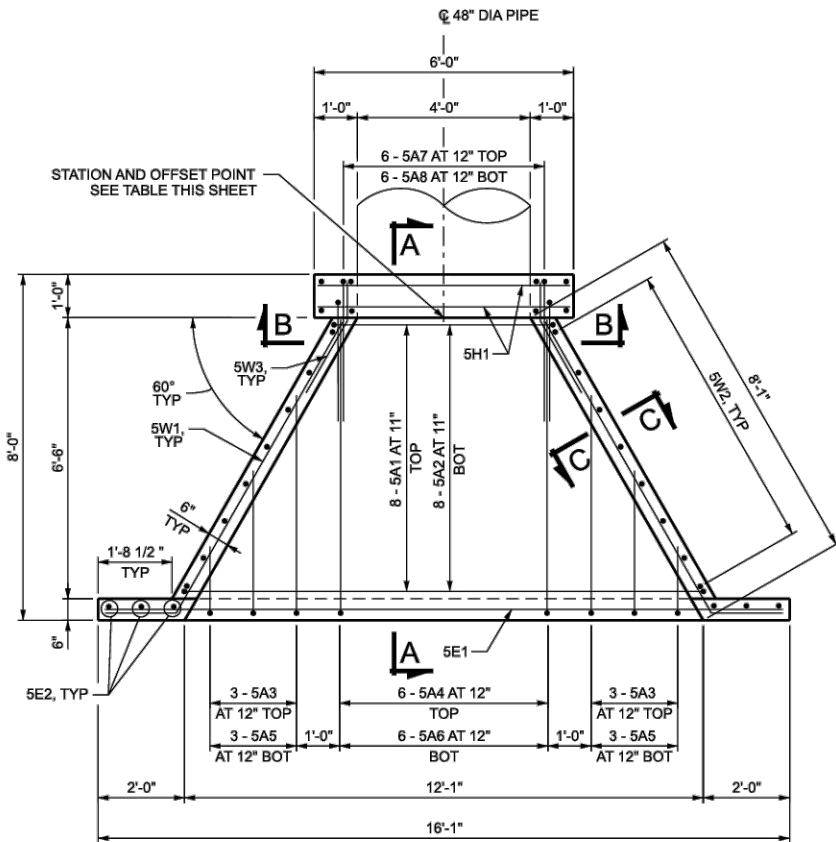
JACKSON STREET STORM DRAIN PROJECT

DETAILS

DESIGN: MWC	PROJECT: UT-CV-0008-22
DRAWN: TRW	SHEET: 15 OF 29
CHECK: DHD	SHEET NO: D-02
DATE: 08/2025	

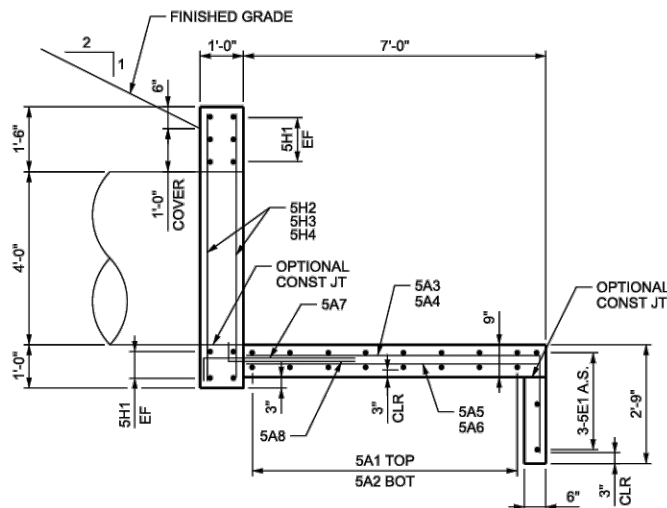
O:\Projects\Grand County General\1901 Jackson St Storm Drain\Project Data\Sheet Files\CAD\UT-0008-2001_JS_SD_DETAILS.dwg - D-03 - 2/19/2026 2:10 AM - Trevor Watson

27-SEP-2022 D:\F:\Users\paw\Autocad\Projects\1901 Jackson St Storm Drain\Project Data\Sheet Files\CAD\UT-0008-2001_JS_SD_DETAILS.dwg - D-03 - 2/19/2026 2:10 AM - Trevor Watson

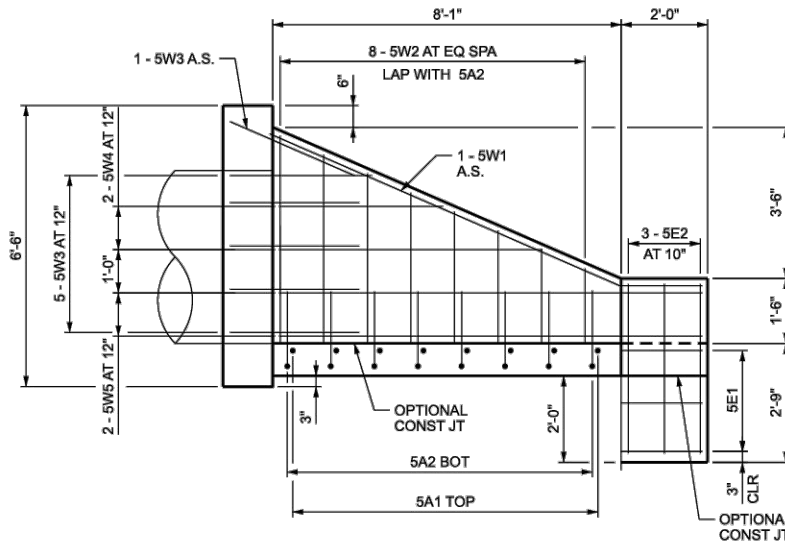


PLAN

STATION	OFFSET	NORTHING	EASTING
11+94.54	0.00	6648537.97	2200247.84

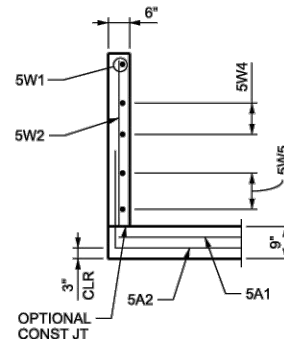


SECTION A-A



DEVELOPED WINGWALL ELEVATION

HEADWALL REINFORCING STEEL NOT SHOWN FOR CLARITY



SECTION C-C

GENERAL NOTES

- USE COATED DEFORMED-CARBON REINFORCING STEEL BARS CONFORMING TO ASTM A 775 OR ASTM A 767 AND AASHTO M31 GRADE 60, RESPECTIVELY.
- CHAMFER ALL EXPOSED CONCRETE CORNERS 3/4 INCH EXCEPT WHERE NOTED OTHERWISE.
- PROVIDE 2 INCH CONCRETE COVER TO REINFORCING STEEL EXCEPT WHERE NOTED OTHERWISE.
- USE CLASS AA(AE) CAST-IN-PLACE CONCRETE EXCEPT WHERE SPECIFIED OTHERWISE.
- REINFORCING STEEL AND CONCRETE QUANTITIES ARE FOR INFORMATION ONLY AND ARE FOR ONE HEADWALL.

DESIGN DATA

CURRENT AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS AND INTERIM SPECIFICATIONS.

CAST-IN-PLACE CONCRETE: $f_c = 4,000$ PSI; f_y (REINF) = 60,000 PSI; CLASS AA (AE) $n = 8$

ITEM	LOCATION	EST QTY	UNIT
48 INCH REINFORCED CONCRETE HEADWALL (EST STRUCTURAL CONCRETE QTY: 4.4 CY)	11+94.54	1	EACH

UTAH DEPARTMENT
OF
TRANSPORTATION
STRUCTURES DIVISION

PROJECT NAME	STRUCTURE NAME	PROJECT NUMBER	PIN	XXXXX
48 INCH HEADWALL DETAILS				

STATEWIDE COUNTY	SDDM STRUCTURE NUMBER	WS-101A DRAWING NUMBER
SHEET XX OF XX		

REV	DATE	BY	DESCRIPTION
1	2/13/26	DS	CHANGES FOR RE-BID 2026

SCALE
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE
HORIZONTAL: ---
VERTICAL: ---



Horrocks.

2162 West Grove Parkway, Suite 400, Pleasant Grove, UT 84062
801-763-5100 www.horrocksengineers.com

JACKSON STREET STORM DRAIN PROJECT

DETAILS

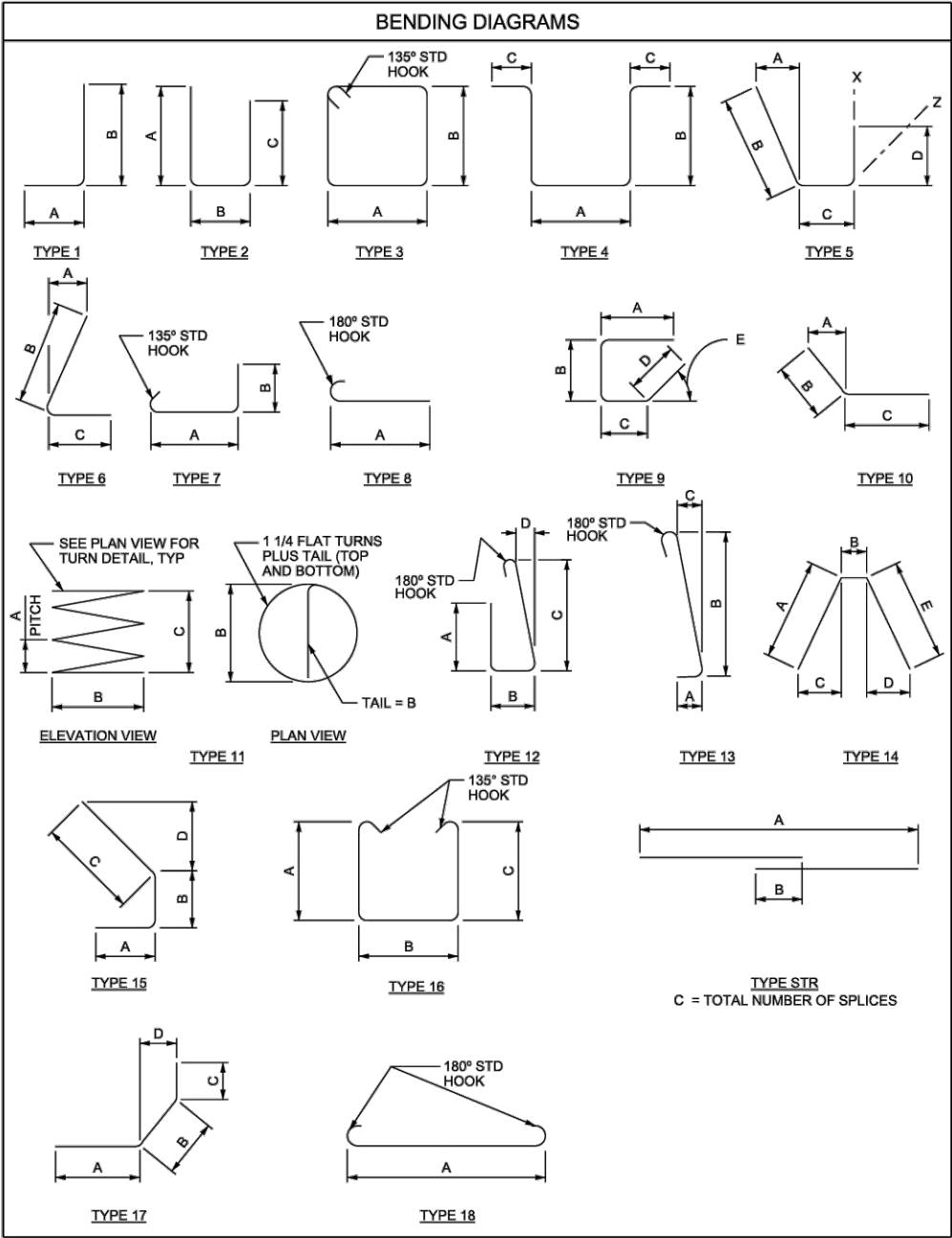
DESIGN: MWC	PROJECT: UT-CV-0008-22
DRAWN: TRW	SHEET: 16 OF 29
CHECK: DHD	SHEET NO: D-03
DATE: 08/2025	

O:\Projects\Grand County General\1901 Jackson St Storm Drain\Project Data\Sheet Files\CAD\UT-0008-2001 JS SD DETAILS.dwg - D-04 - 2/19/2026 2:10 AM - trevor.watson

4/26/2022 c:\pwworking\west01\adp5383\45-182\48 Inch Headwall Reinforcing Steel Schedule.28210720.dgn

MARK	LOCATION	SIZE	NO. BARS	TYPE	LENGTH	TOTAL LENGTH	DIMENSIONS				SERIES INC	REMARKS
							A	B	C	D		
A1	APRON	5	1 SER OF 8	STR	4'-10" TO 11'-10"	66'-8"	4'-10" TO 11'-10"				1'-0"	
A2	APRON	5	1 SER OF 8	2	7'-6" TO 14'-6"	88'-0"	1'-4"	4'-10" TO 11'-10"	1'-4"		1'-0"	
A3	APRON	5	2 SER OF 3	1	3'-9" TO 7'-1"	32'-6"	2'-3"	1'-6" TO 4'-10"			1'-8"	
A4	APRON	5	6	1	9'-0"	54'-0"	2'-3"	6'-8"				
A5	APRON	5	2 SER OF 3	STR	1'-6" TO 4'-10"	19'-0"	1'-6" TO 4'-10"				1'-8"	
A6	APRON	5	6	STR	6'-9"	40'-6"	6'-9"					
A7	APRON	5	6	1	3'-5"	20'-6"	0'-7"	2'-10"				
A8	APRON	5	6	1	2'-5"	14'-6"	0'-3"	2'-2"				
W1	WINGWALL	5	2	10	10'-2"	20'-4"	0'-10"	1'-8"	8'-6"			
W2	WINGWALL	5	2 SER OF 8	STR	1'-10" TO 4'-9"	52'-8"	1'-10" TO 4'-9"				0'-5"	
W3	WINGWALL	5	12	10	2'-10"	34'-0"	0'-9"	0'-10"	2'-0"			
W4	WINGWALL	5	2 SER OF 2	STR	3'-3" TO 5'-6"	17'-6"	3'-3" TO 5'-6"				2'-3"	
W5	WINGWALL	5	4	10	9'-5"	37'-8"	0'-10"	1'-8"	7'-9"			
E1	CUT OFF WALL	5	3	STR	15'-8"	47'-0"	15'-8"					
E2	CUT OFF WALL	5	6	STR	3'-10"	23'-0"	3'-10"					
H1	HEADWALL	5	10	STR	5'-8"	56'-8"	5'-8"					
H2	HEADWALL	5	8	STR	6'-1"	48'-8"	6'-1"					
H3	HEADWALL	5	8	STR	1'-10"	14'-8"	1'-10"					
H4	HEADWALL	5	8	STR	3'-10"	30'-8"	3'-10"					

SUMMARY OF COATED BARS
718'-6" OF NUMBER 5 BARS AT 1.043 LBS/FT = 750 LBS
TOTAL = 750 LBS



- NOTES**
- ALL BARS ARE COATED.
 - BAR SIZES ARE U.S. UNITS.
 - REINFORCING STEEL DIMENSIONS ARE OUT TO OUT OF BARS UNLESS OTHERWISE NOTED.
 - TYPE 'STR' INDICATES A STRAIGHT BAR. TYPE 'SER OF' INDICATES SERIES (CUT SET) BARS AND COLUMN TITLE 'SERIES INC' IS ABBREVIATED FOR 'SERIES INCREMENT'.
 - SERIES BARS - EACH BAR VARIES BY TABULATED AMOUNT.
 - SPLICES MAY BE OMITTED AT FABRICATOR'S OPTION. HOWEVER, IN SUCH CASE, FABRICATOR ASSUMES RESPONSIBILITY FOR FIT.
 - USE THE CRSI MANUAL OF PRACTICE, LATEST EDITION FOR ALL HOOKS, BENDS AND FABRICATION OF REINFORCING STEEL UNLESS NOTED OTHERWISE.

UTAH DEPARTMENT OF TRANSPORTATION		STRUCTURES DIVISION	
PROJECT NAME	STRUCTURE NAME	PROJECT NUMBER	PIN XXXX
48 INCH HEADWALL REINFORCING STEEL SCHEDULE		PROJECT NUMBER	XXXX
STATEWIDE COUNTY		SDDM STRUCTURE NUMBER	
WS-102A		DRAWING NUMBER	
SHEET XX OF XX		SHEET NO.	

REVISIONS			
REV	DATE	BY	DESCRIPTION
1	2/13/26	DS	CHANGES FOR RE-BID 2026

SCALE	
0	1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE	
HORIZONTAL:	VERTICAL:
---	---



Horrocks.

2162 West Grove Parkway, Suite 400, Pleasant Grove, UT 84062
801-763-5100 www.horrocksengineers.com

JACKSON STREET STORM DRAIN PROJECT

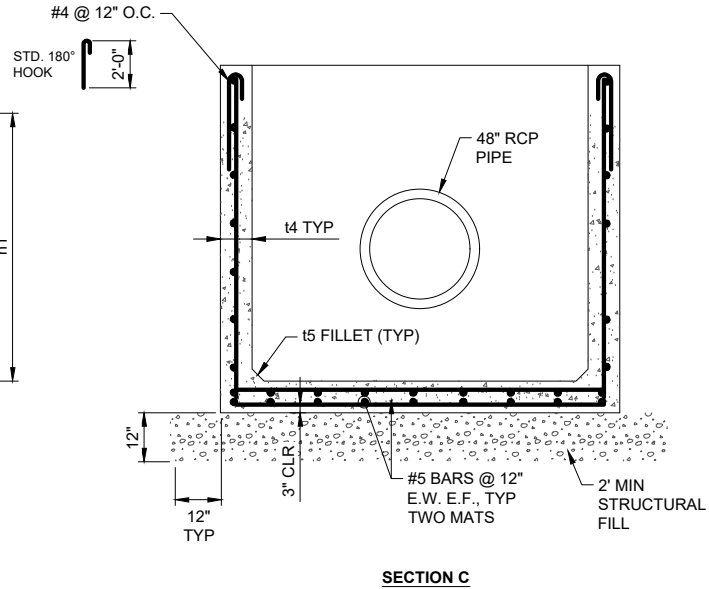
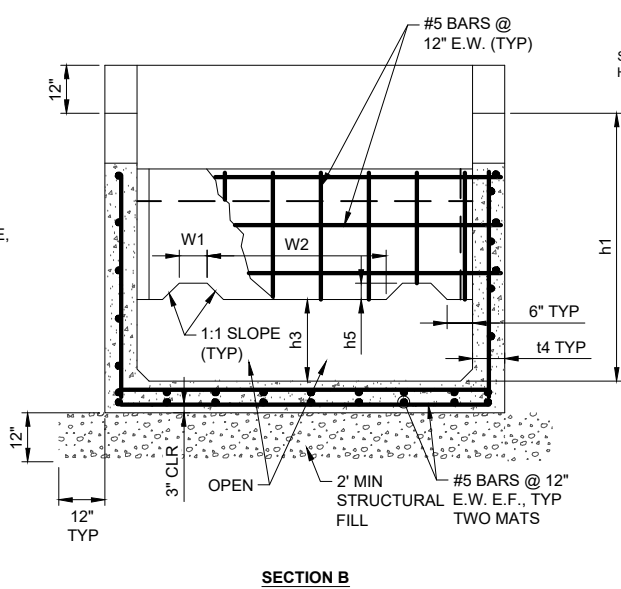
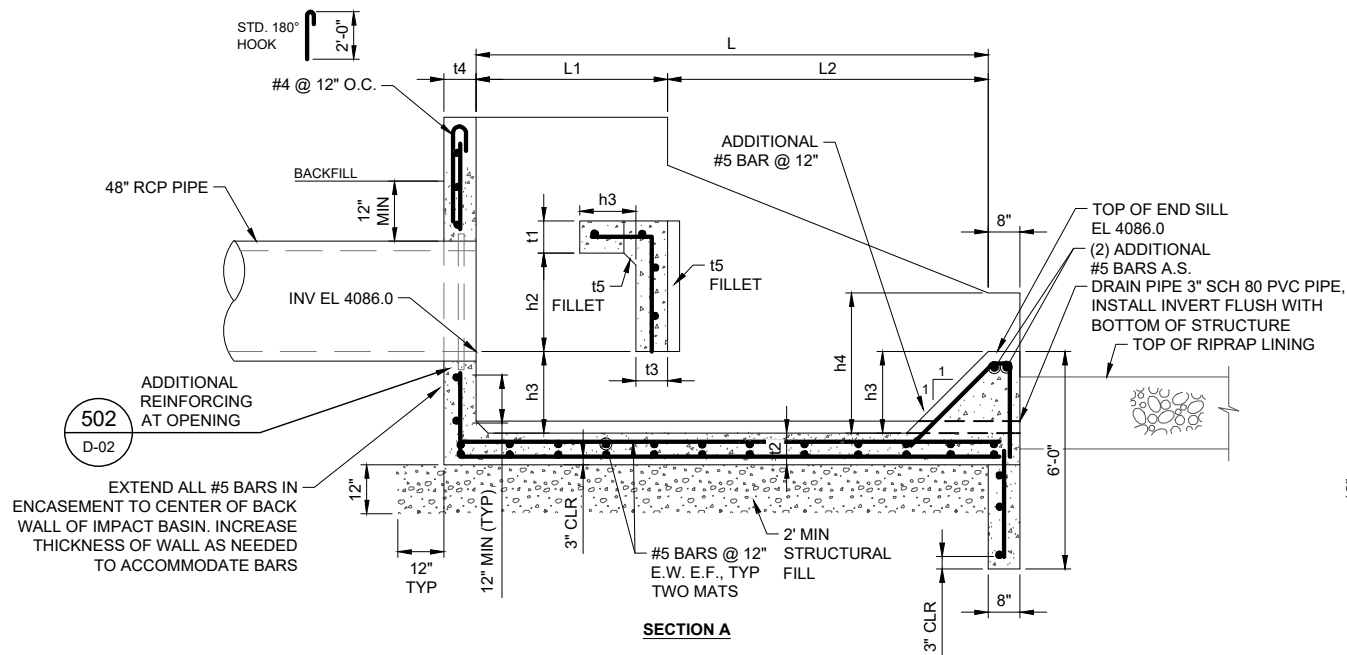
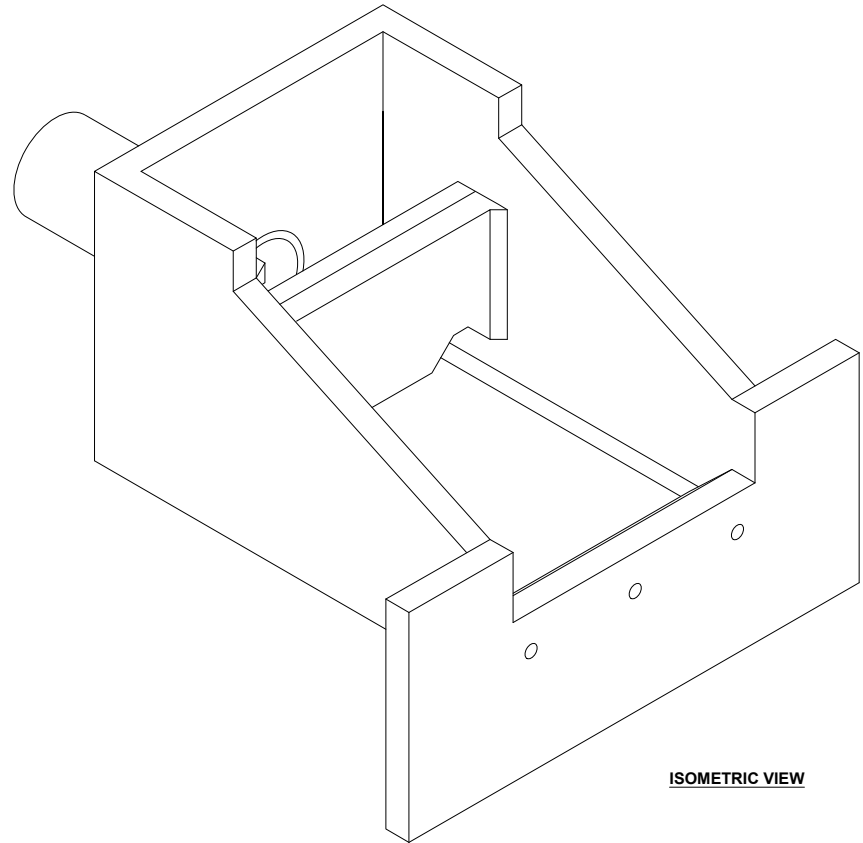
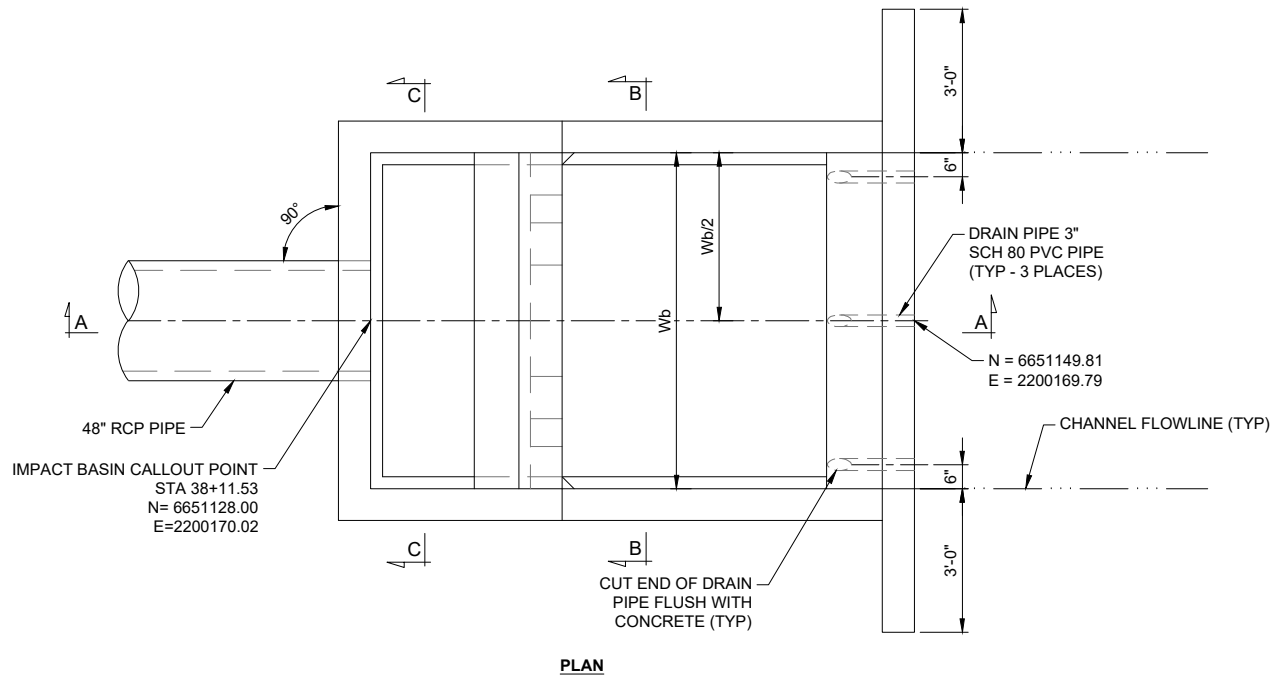
DETAILS

DESIGN: MWC	PROJECT: UT-CV-0008-22
DRAWN: TRW	SHEET: 17 OF 29
CHECK: DHD	SHEET NO: D-04
DATE: 08/2025	

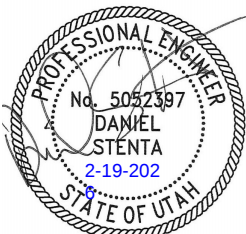
NOTES:

- SEE DETAIL 502, SHEET D-02 FOR REINFORCING STEEL DETAILS AND NOTES.
- SUBMIT SHOP DRAWINGS TO ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION.
- USE DEFORMED CARBON-STEEL BARS CONFORMING TO ASTM A615 GRADE 60, FOR ALL REINFORCING STEEL.
- USE CLASS AA (AE) CAST-IN-PLACE CONCRETE EXCEPT WHERE NOTED OTHERWISE.
- USE TYPE V CEMENT (HIGH SULFATE RESISTANCE).
- PROVIDE 2" MINIMUM CONCRETE COVER TO REINFORCING STEEL UNLESS OTHERWISE NOTED.
- CHAMFER ALL OUTSIDE EDGES 3/4" OR PROVIDE TOOLED EDGES.
- USE #5 REINFORCING BARS AT 12" O.C. MAXIMUM EACH WAY, IN ALL SLABS AND WALLS UNLESS NOTED OTHERWISE.
- DO NOT SCALE DRAWINGS.
- USE THE CRSI MANUAL OF PRACTICE, LATEST EDITION FOR ALL HOOKS, BENDS, AND FABRICATION OF REINFORCING STEEL.
- USE 2'-6" SPLICE LENGTHS.
- LAP SPLICES MAY BE ADDED AT THE OPTION OF THE CONTRACTOR AS APPROVED BY THE ENGINEER.
- COAT OR GALVANIZE ALL MISCELLANEOUS STEEL PLACED IN STRUCTURAL CONCRETE UNLESS NOTED OTHERWISE.

IMPACT BASIN DIMENSIONS															
Wb	h1	h2	h3	h4	h5	L	L1	L2	W1	W2	t1	t2	t3	t4	t5
13'-0"	10'-2"	4'-11"	2'-2"	5'-5"	1'-8"	17'-4"	7'-5"	10'-0"	1'-0"	3'-0"	8"	11"	10"	10"	4"



505 IMPACT BASIN
- NTS



REVISIONS			
REV	DATE	BY	DESCRIPTION
1	2/13/26	DS	CHANGES FOR RE-BID 2026

SCALE	
0	1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE	
HORIZONTAL:	VERTICAL:
---	---



Horrocks.

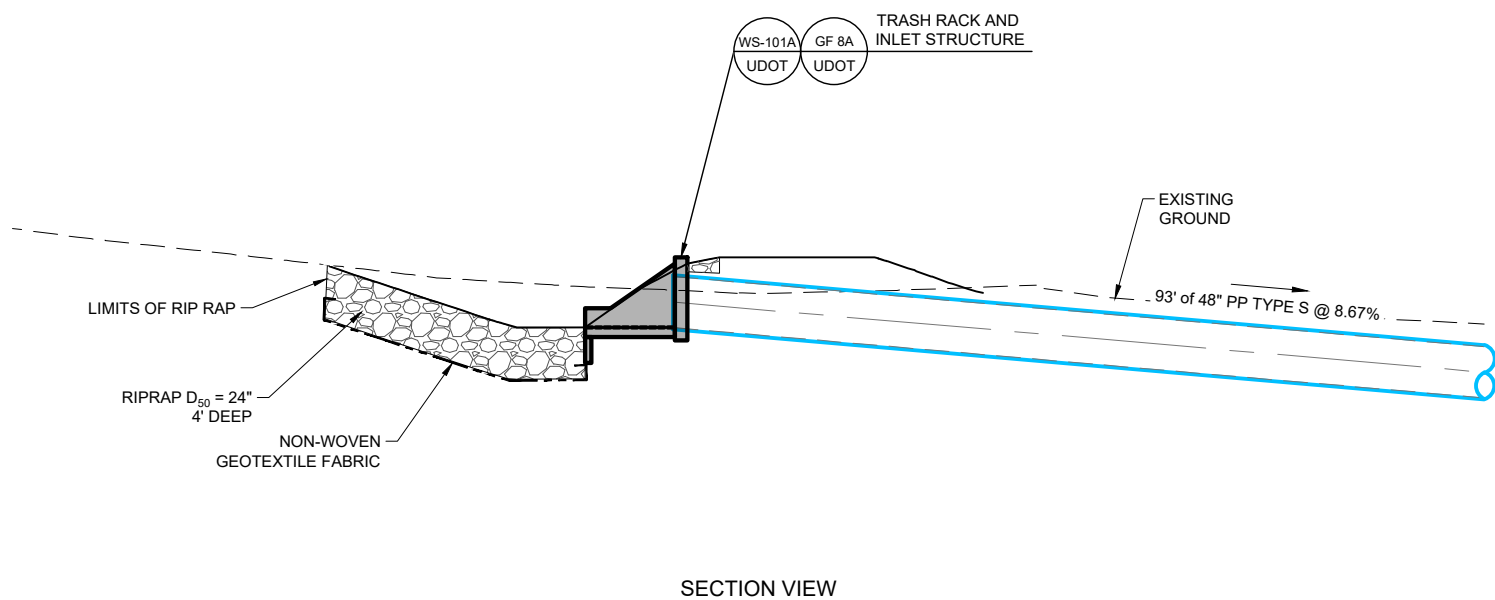
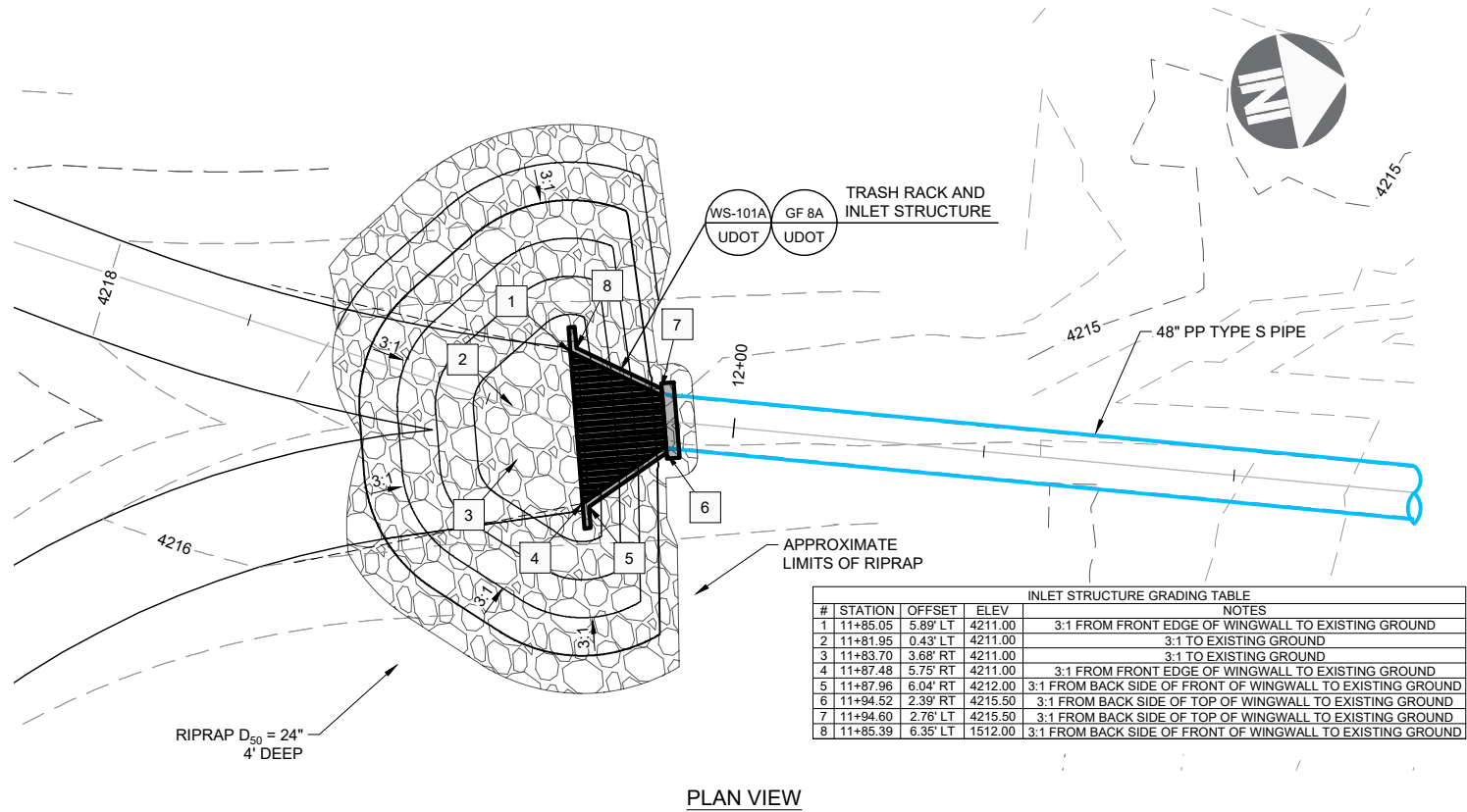
2162 West Grove Parkway, Suite 400, Pleasant Grove, UT 84062
801-763-5100 www.horrocksengineers.com

JACKSON STREET STORM DRAIN PROJECT

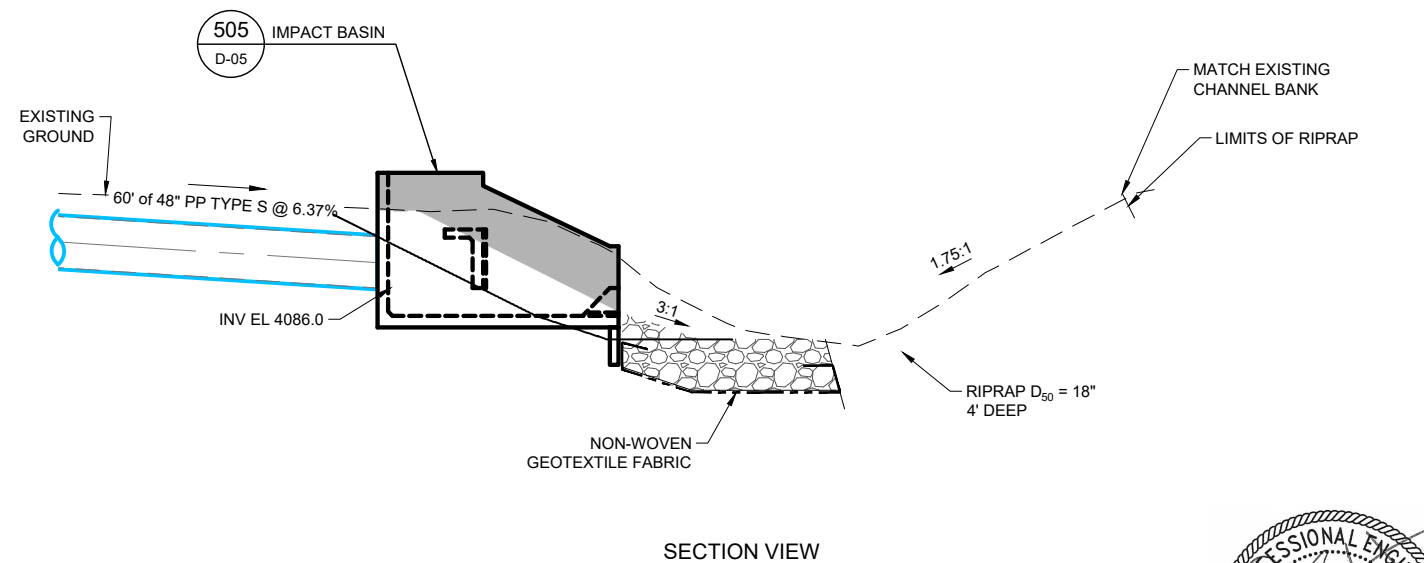
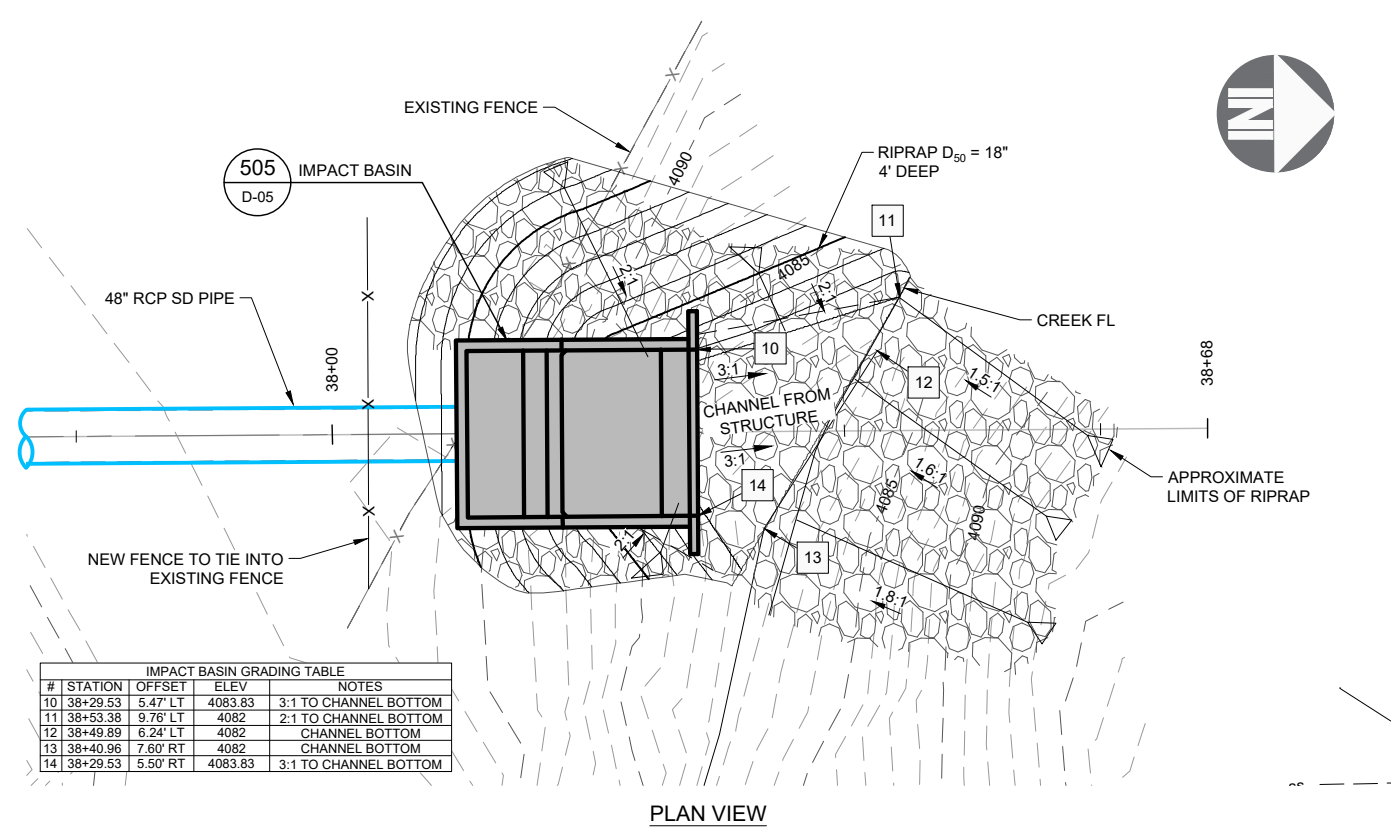
DETAILS

DESIGN: MWC	PROJECT: UT-CV-0008-22
DRAWN: TRW	SHEET: 18 OF 29
CHECK: DHD	SHEET NO: D-05
DATE: 08/2025	

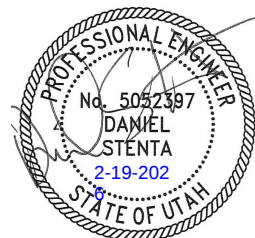
O:\Projects\Grand County General\1901 Jackson St Storm Drain\Project Data\Sheet Files\CAD\UT-0008-2001 JS SD DETAILS STR.dwg - D-06 - 2/19/2026 2:10 AM - trevor.watson



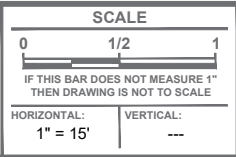
506 INLET STRUCTURE - RIP RAP DETAIL



507 IMPACT BASIN - RIP RAP DETAIL



REVISIONS			
REV	DATE	BY	DESCRIPTION
1	2/13/26	DS	CHANGES FOR RE-BID 2026



Horrocks.

2162 West Grove Parkway, Suite 400, Pleasant Grove, UT 84062
801-763-5100 www.horrocksengineers.com

JACKSON STREET STORM DRAIN PROJECT

DETAILS

DESIGN: MWC	PROJECT: UT-CV-0008-22
DRAWN: TRW	SHEET: 19 OF 29
CHECK: DHD	SHEET NO: D-06
DATE: 08/2025	

Bituminous pavement T-patch

1. GENERAL

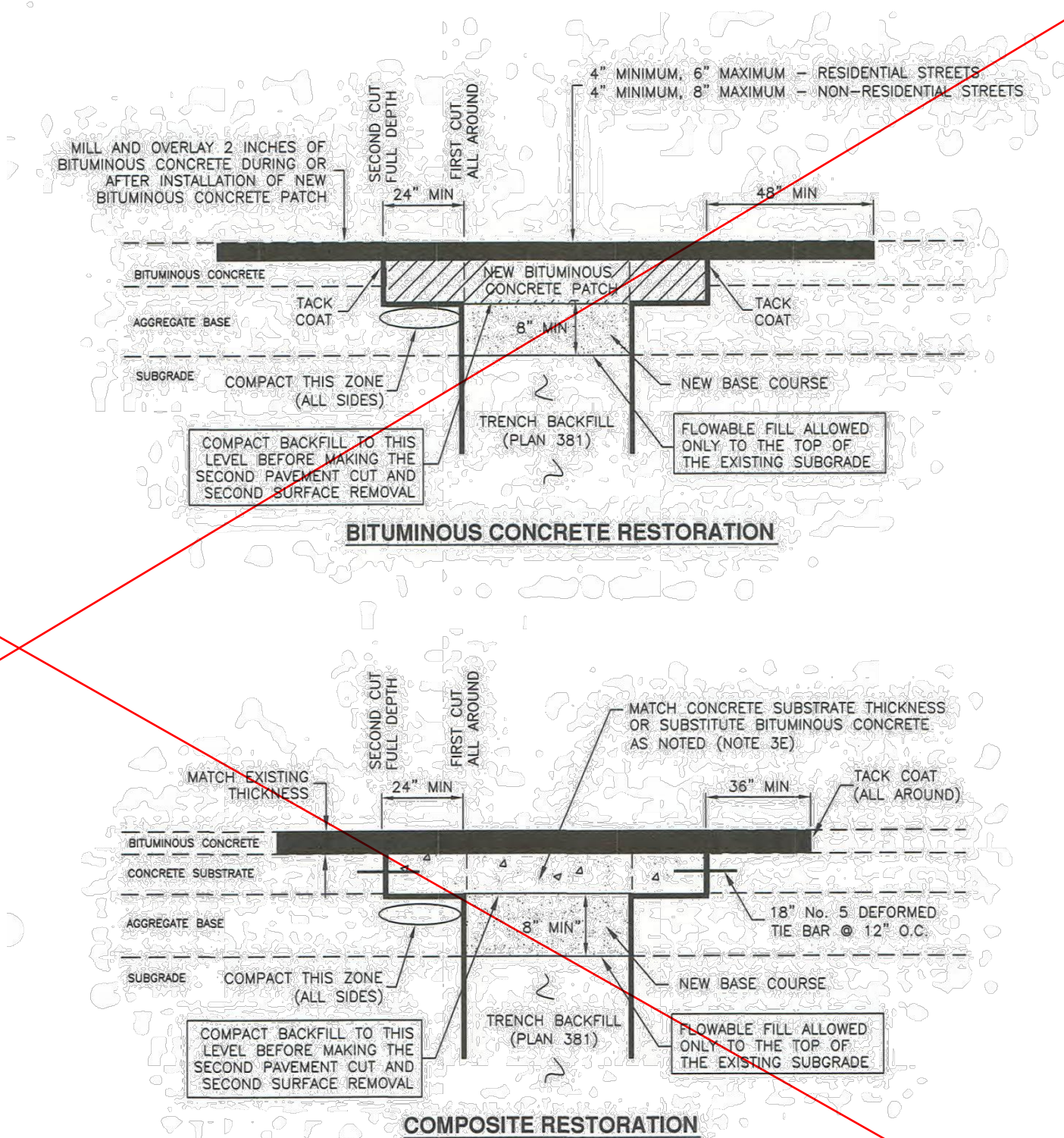
- A. Vertical cuts in bituminous pavement may be done by saw or pavement zipping. If cuts greater than 6 inches are necessary to prevent pavement "break off" consult ENGINEER for directions on handling additional costs.
- B. Repair a T-patch restoration if any of the following conditions occur prior to final payment or at the end of the one year correction period.
- 1) Pavement surface distortion exceeds 1/4-inch deviation in 10 feet. Repair option - plane off surface distortions. coat planed surface with a cationic or anionic mulslon that complies with APWA Section 32 12 03..
 - 2) Separation appears at a connection to an existing pavement or any Street Fixture. Repair option - blow separation clean and apply joint sealant, Plan 265.
 - 3) Cracks at least 1-foot long and 1/4-inch wide occur more often than 1 in 10 square feet. Repair option - blow clean and apply crack seal, Plan 265.
 - 4) Pavement raveling is greater than 1 square foot per 100 square feet. Repair option - Mill and inlay, APWA Sections 32 01 16.71 and 32 12 05.

2. PRODUCTS

- A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
- B. Flowable Fill: Target is 60 psi in 28 days with 90 psi maximum in 28 days, APWA Section 31 05 15. It must flow easily requiring no vibration for consolidation.
- C. Reinforcement. No. 5, galvanized or epoxy coated, deformed, 60 ksi yield grade steel, ASTM A615.
- D. Concrete: Class 4000, APWA Section 03 30 04.
- E. Tack Coat: APWA Section 32 12 13.13.
- F. Bituminous Concrete. APWA Section 32 12 05.
- 1) Warm Weather Patch: PG64-22-DM-1/2, unless indicated otherwise.
 - 2) Cold Weather Patch: Modified MC-250-FM-1 as indicated in APWA Section 33 05 25.

3. EXECUTION

- A. Base Course Placement: APWA Section 32 05 10. Maximum lift thickness before compaction is 8-inches when using riding equipment or 6-inches when using hand held equipment. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26.
- B. Flowable Fill: Cure to initial set before placing aggregate base or bituminous pavement. Use in excavations that are too narrow to receive compaction equipment.
- C. Tack Coat. Clean all horizontal and vertical surfaces. Apply full coverage all surfaces.
- D. Pavement Placement: Follow APWA Section 32 12 16.13. Unless indicated otherwise, lift thickness is 3-inches minimum after compaction. Compact to 94 percent of ASTM D2041 (Rice density) plus or minus 2 percent.
- E. Bituminous Concrete Substitution. If bituminous concrete is substituted for Portland cement concrete substrate, omit rebar and provide 1.25 inches of bituminous concrete for each 1 inch of Portland cement concrete. Follow paragraph E requirements.
- F. Reinforcement. Required if thickness of existing Portland-cement concrete substrate is 6-inches or greater. Not required if 1) less than 6-inches thick, 2) if existing concrete is deteriorating, 3) if excavation is less than 3 feet square, or 4) if bituminous pavement is substituted for Portland-cement concrete substrate.
- G. Concrete Substrate. Cure to initial set before placing new bituminous concrete patch.



USE DIMENSIONS FROM DETAIL 501
FOUND ON SHEET D-02

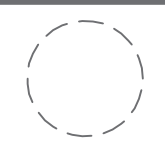
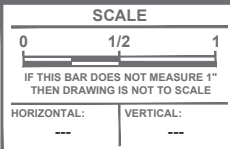
255



Bituminous pavement T-patch

Plan
255
November 2015

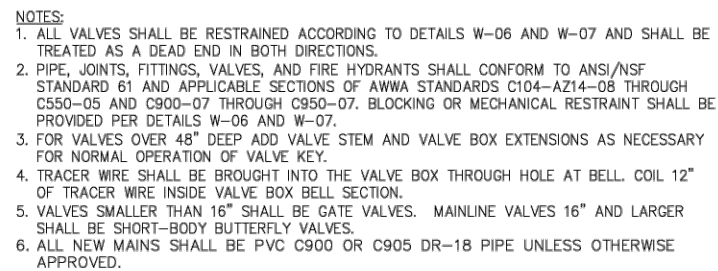
REVISIONS			
REV	DATE	BY	DESCRIPTION
1	2/13/26	DS	CHANGES FOR RE-BID 2026



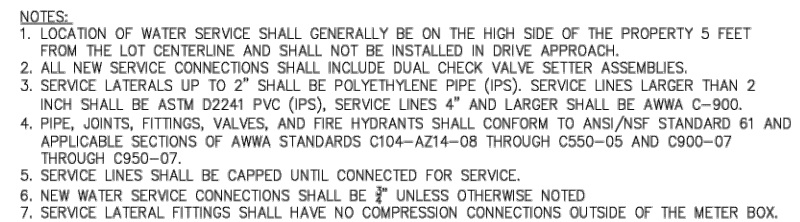
JACKSON STREET STORM DRAIN PROJECT

DETAILS

DESIGN: MWC	PROJECT: UT-CV-0008-22
DRAWN: TRW	SHEET: 20 OF 29
CHECK: DHD	SHEET NO: D-07
DATE: 08/2025	



REV NO.	COMMENT	DATE	 SUNRISE ENGINEERING 25 EAST 500 NORTH FILLMORE, UTAH 84631 TEL 435.743.6151 • FAX 435.743.7900 www.sunrise-eng.com	Grand Water & Sewer Service Agency				
				STANDARD DETAILS				
				WATER - GATE VALVE				
				DATE	DESIGNED	DRAWN	CHECKED	SHEET NO.
				6-9-2020	DJS	TRB	RWW	W-02



REV NO.	COMMENT	DATE	 SUNRISE ENGINEERING 25 EAST 500 NORTH FILLMORE, UTAH 84631 TEL 435.743.6191 - FAX 435.743.7900 www.sunrise-eng.com	Grand Water & Sewer Service Agency				
				STANDARD DETAILS				
				WATER - NEW WATER SERVICE CONNECTION				
				DATE:	DESIGNED	DRAWN	CHECKED	SHEET NO.
				6-9-2020	DJS	TRB	RWW	W-05



Horrocks.

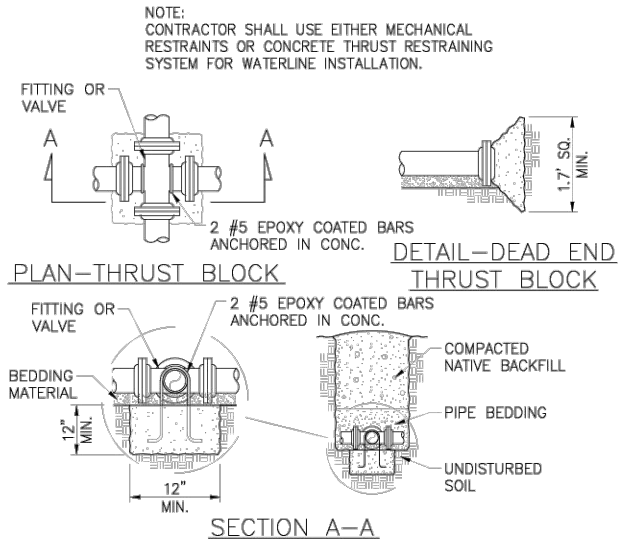
2162 West Grove Parkway, Suite 400, Pleasant Grove, UT 84062
 801-763-5100 www.horrocksengineers.com

DESIGN: MWC	PROJECT: UT-CV-0008-22
DRAWN: TRW	SHEET: 21 OF 29
CHECK: DHD	SHEET NO: D-08
DATE: 08/2025	

O:\Projects\Grand County General\1901 Jackson St Storm Drain\Project Data\Sheet Files\CAD\UT-0008-2001 JS SD DETAILS.dwg - D-09 - 2/19/2026 2:10 AM - trevor.watson

C:\Users\aliova\appdata\local\Temp\AcP\utilen_19872\Standard Drawings April 2020.dwg Jun 08, 2020 3:04pm atake

CONCRETE THRUST BLOCK RESTRAINING SYSTEM DETAILS



THRUST BLOCK BEARING AREA IN SQ. FT.									
PIPE SIZE	CROSS	TEE	WYE	DEAD END	VALVE	90° BEND	45° BEND	22.5° BEND	11.25° BEND
4	2.4	1.7	1.7	1.7	—	2.4	1.3	1.0	1.0
6	5.4	3.8	3.8	3.8	—	5.4	2.9	1.5	1.0
8	9.6	6.8	6.8	6.8	—	9.6	5.2	2.7	1.4
10	15.0	10.6	10.6	10.6	—	15.0	8.1	4.2	2.1
12	21.5	15.2	15.2	15.2	15.2	21.5	11.7	6.0	3.0
14	29.3	20.7	20.7	20.7	20.7	29.3	15.9	8.1	4.1
16	38.2	27.0	27.0	27.0	27.0	38.2	20.7	10.6	5.3
18	48.4	34.2	34.2	34.2	34.2	48.4	26.2	13.4	6.7
20	59.7	42.2	42.2	42.2	42.2	59.7	32.3	16.5	8.3
24	85.9	60.8	60.8	60.8	60.8	85.9	46.5	23.7	11.9
REDUCER									
D1/D2	6	8	10	12	14	16	18	20	24
4	2.1	5.1	8.8	13.4	—	—	—	—	—
6	—	3.0	6.7	11.3	16.8	23.1	—	—	—
8	—	—	3.8	8.4	13.8	20.1	27.2	—	—
10	—	—	—	4.6	10.1	16.3	23.5	31.4	—
12	—	—	—	—	5.5	11.7	18.8	26.8	45.2
14	—	—	—	—	—	6.3	13.4	21.3	39.8
16	—	—	—	—	—	—	7.1	15.1	33.5
18	—	—	—	—	—	—	—	8.0	26.3
20	—	—	—	—	—	—	—	—	18.4

NOTES:

- ALL THRUST BLOCK BEARING FACES SHALL BE PLACED AGAINST UNDISTURBED SOIL OR APPROVED COMPACTED BACKFILL.
- SQUARE ALL EDGES TO RECEIVE CONCRETE.
- CONCRETE SHALL BE CLASS C.
- CALCULATED ON 200 PSI TEST PRESSURE AND ALLOWABLE BEARING PRESSURE OF 1500 LBS. PER SQ. FT.
- IN POORER SOILS SPECIAL DESIGN IS REQUIRED.
- ALL FITTINGS AND VALVES SHALL BE ANCHORED WITH TWO EPOXY COATED #5 REBAR. ONLY ONE REQ'D FOR REDUCER
- CENTER ALL FITTINGS OVER THRUST BLOCKS.

REV. NO.	COMMENT	DATE



Grand Water & Sewer Service Agency

STANDARD DETAILS

WATER - CONCRETE THRUST BLOCKS

DATE	DESIGNED	DRAWN	CHECKED	SHEET NO.
6-9-2020	DJS	TRB	RWW	W-06

MECHANICAL THRUST RESTRAINING SYSTEM DETAILS

* CALCULATIONS DERIVED FROM EBAA IRON SALES

PVC VERTICLE BEND RESTRAINED LENGTHS IN FT. (L ₁ —BEFORE CONNECTION/L ₂ AFTER CONNECTION)										
BEND ANGLE	PIPE SIZE									
	4	6	8	10	12	14	16	18	20	24
11.25	4/1	5/2	7/2	9/3	10/3	12/4	13/4	15/5	16/5	19/6
22.5	8/3	11/4	15/5	17/6	21/7	24/8	27/9	30/9	33/10	38/12
45	16/5	23/8	30/10	36/12	43/14	49/16	56/18	62/20	68/21	79/25

CALCULATIONS BASED ON THE ELEVATION OF THE PIPE REMAINING CONSTANT WITH THE CONTOUR OF THE GROUND.
FOR TWO WAY FLOW, SUCH AS FOUND IN DISTRIBUTION SYSTEMS, USE L₁ ON BOTH SIDES OF FITTING.

PVC HORIZONTAL BEND RESTRAINED LENGTHS L, IN FT.										
BEND ANGLE	PIPE SIZE									
	4	6	8	10	12	14	16	18	20	24
11.25	1	2	2	3	3	4	4	5	5	6
22.5	3	4	5	6	7	8	9	9	10	12
45	5	8	10	12	14	16	18	20	21	25
90	13	18	24	29	34	38	43	47	52	60

1. ALL JOINTS WITHIN THE "L" DISTANCE SHALL BE RESTRAINED

PVC TEE RESTRAINED LENGTHS L, IN FT.										
BRANCH SIZE DIA.	RUN SIZE DIAMETER									
	4	6	8	10	12	14	16	18	20	24
4	*	*	*	*	*	*	*	*	*	*
6	—	*	*	*	*	*	*	*	*	*
8	—	—	*	*	*	*	*	*	*	*
10	—	—	—	*	*	*	*	*	*	*
12	—	—	—	—	*	*	*	*	*	*
14	—	—	—	—	—	*	*	*	*	*
16	—	—	—	—	—	—	7	*	*	*
18	—	—	—	—	—	—	—	20	4	*
20	—	—	—	—	—	—	—	—	34	3
24	—	—	—	—	—	—	—	—	—	60

* = FOR THIS CONDITION NEED ONLY RESTRAIN THE OUTLETS OF TEE

NOTES:

- RESTRAIN THE THREE MECHANICAL JOINTS ON THE TEE.
- ALL JOINTS WITHIN THE "L" DISTANCE ON THE BRANCH SIDE OF TEE SHALL BE RESTRAINED AND ALL JOINTS WITHIN 18' ON THE RUN SIDE OF THE TEE SHALL BE RESTRAINED.

PVC REDUCER RESTRAINED LENGTHS L, IN FT. (SMALL SIDE/LARGE SIDE)										
D1/D2	6	8	10	12	14	16	18	20	24	
4	42/29	100/52	171/71	258/90	—	—	—	—	—	—
6	—	40/31	88/54	147/75	217/95	297/113	—	—	—	—
8	—	—	37/29	82/55	135/77	197/98	266/117	—	—	—
10	—	—	—	36/30	79/56	128/80	183/100	244/120	—	—
12	—	—	—	—	36/30	77/57	123/80	174/102	293/142	—
14	—	—	—	—	—	35/30	74/57	118/81	219/124	—
16	—	—	—	—	—	—	34/30	73/57	161/104	—
18	—	—	—	—	—	—	—	34/30	111/82	—
20	—	—	—	—	—	—	—	—	70/57	—

1. ALL JOINTS WITHIN THE "L" DISTANCE SHALL BE RESTRAINED

PVC DEAD END RESTRAINED LENGTHS L, IN FT.										
PIPE SIZE										
	4	6	8	10	12	14	16	18	20	24
39	55	73	88	104	119	134	149	163	192	

1. ALL JOINTS WITHIN THE "L" DISTANCE SHALL BE RESTRAINED

REV. NO.	COMMENT	DATE

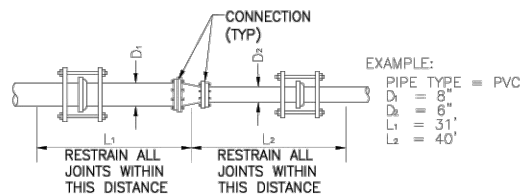
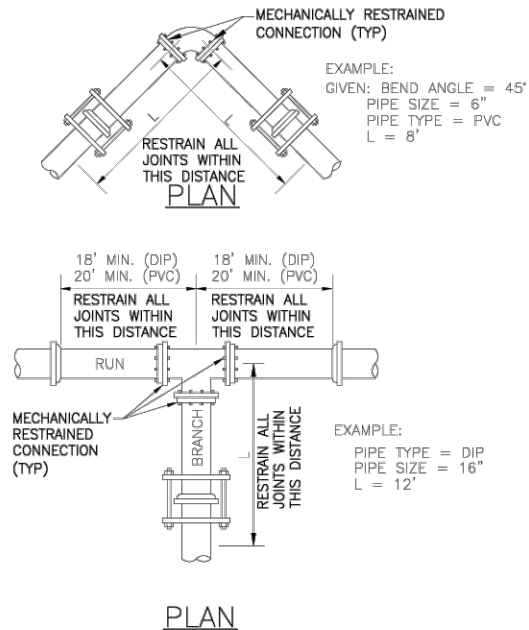
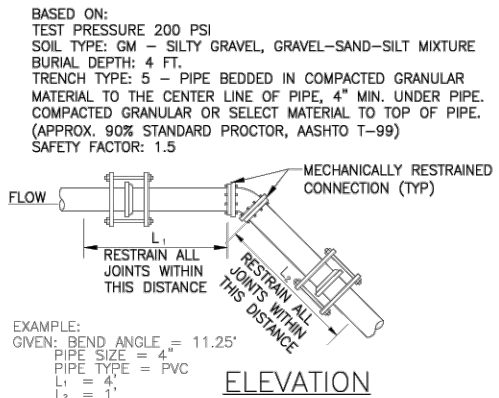


Grand Water & Sewer Service Agency

STANDARD DETAILS

WATER - MECHANICAL RESTRAINING SYSTEM (PVC PIPE)

DATE	DESIGNED	DRAWN	CHECKED	SHEET NO.
8-27-2020	DJS	TRB	RWW	W-07



REVISIONS			
REV	DATE	BY	DESCRIPTION
1	2/13/26	DS	CHANGES FOR RE-BID 2026

SCALE	
0	1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE	
HORIZONTAL:	VERTICAL:
---	---



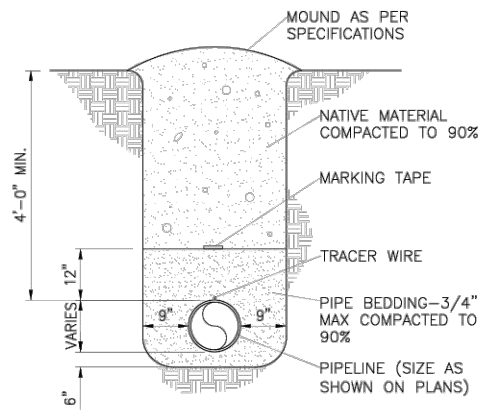
JACKSON STREET STORM DRAIN PROJECT

DETAILS

DESIGN: MWC	PROJECT: UT-CV-0008-22
DRAWN: TRW	SHEET: 22 OF 29
CHECK: DHD	SHEET NO: D-09
DATE: 08/2025	

O:\Projects\Grand County General\1901 Jackson St Storm Drain\Project Data\Sheet Files\CAD\UT-0008-2001 JS SD DETAILS.dwg - D-10 - 2/19/2026 2:10 AM - trevor.watson

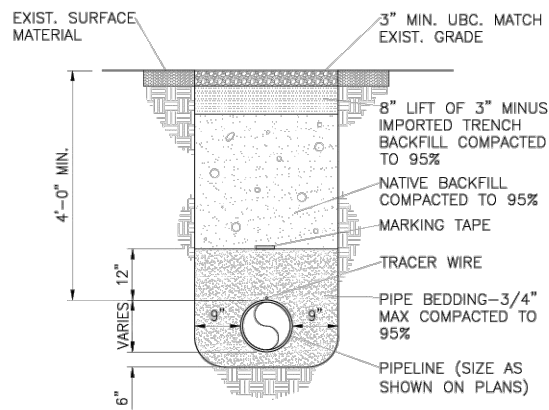
C:\Users\office\appdata\local\temp\temp\Public\15672\Standard Drawings April 2020.dwg Jun 09, 2020 3:04pm cfile



NOTE:
TRENCH DETAIL OUTSIDE OF TRAVELED ROADWAY
OR DESIGNATED ROAD RIGHT-OF-WAY.

DETAIL - TYPICAL TRENCH

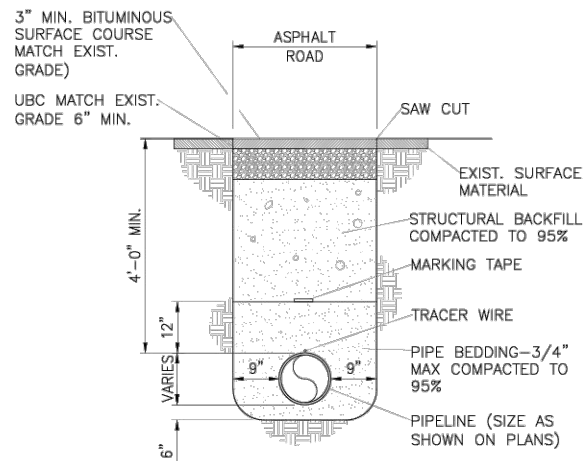
N.T.S.



NOTE:
TRENCH DETAIL INSIDE OF GRAVEL ROADWAYS.

DETAIL - UNPAVED ROADWAY TRENCH

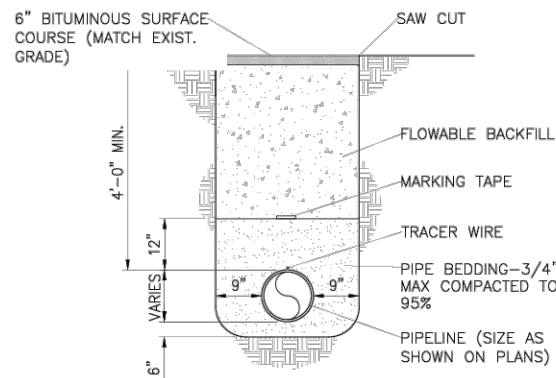
N.T.S.



NOTES:
1. TRENCH DETAILS INSIDE OF ROADWAYS
ASPHALT/GRAVEL ROADS.
2. ASPHALT ROADS SHALL BE SAW CUT.
3. MAX PAY WIDTH SHALL BE 5'-0".

DETAIL - PAVED ROADWAY TRENCH

N.T.S.



NOTE:
THIS SHALL BE USED ON ALL COUNTY AND STATE HIGHWAY CROSSINGS
AND WHERE SPECIFICALLY CALLED FOR, CONTRACTOR SHALL OBTAIN
PERMIT FROM UDOT OR COUNTY PRIOR TO CONSTRUCTION

DETAIL - TRENCH W/ FLOWABLE BACKFILL

N.T.S.

REV NO.	COMMENT	DATE					



**SUNRISE
ENGINEERING**

25 EAST 500 NORTH
FILLMORE, UTAH 84631
TEL 435.743.6151 • FAX 435.743.7900
www.sunrise-eng.com

Grand Water & Sewer Service Agency					
STANDARD DETAILS					
ROADWAY - TRENCH DETAILS					
DATE	DESIGNED	DRAWN	CHECKED	SHEET NO.	
6-9-2020	DJS	TRB	RWW	.	R-01

REVISIONS			
REV	DATE	BY	DESCRIPTION
1	2/13/26	DS	CHANGES FOR RE-BID 2026

SCALE	
0	1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE	
HORIZONTAL:	VERTICAL:
---	---





Horrocks.

2162 West Grove Parkway, Suite 400, Pleasant Grove, UT 84062
801-763-5100 www.horrocksengineers.com

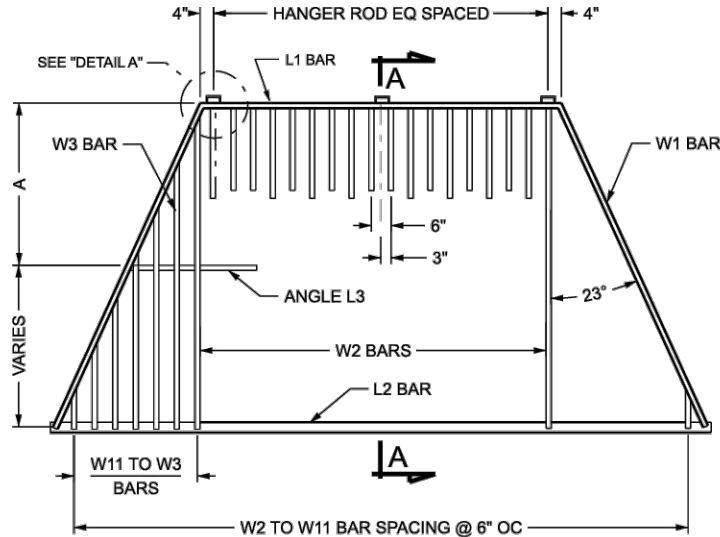
JACKSON STREET STORM DRAIN PROJECT

DETAILS

DESIGN: MWC	PROJECT: UT-CV-0008-22
DRAWN: TRW	SHEET: 23 OF 29
CHECK: DHD	SHEET NO: D-10
DATE: 08/2025	

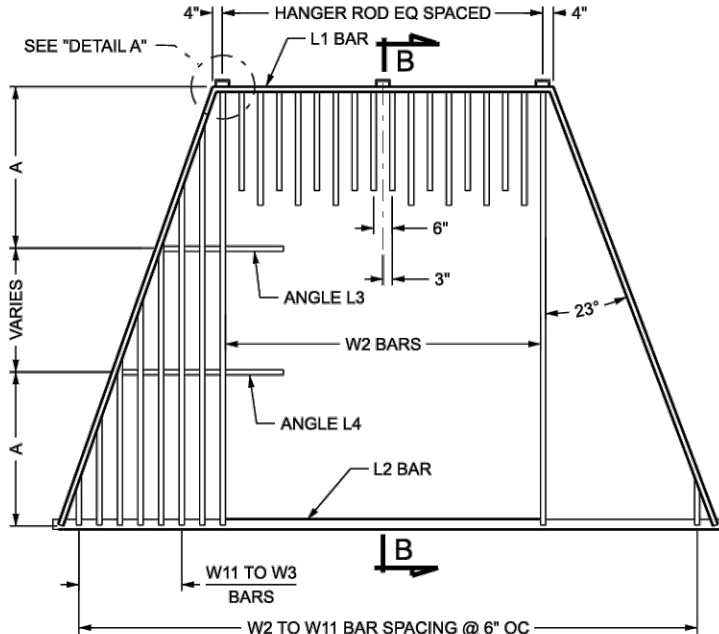
O:\Projects\Grand County General\1901 Jackson St Storm Drain\Project Data\Sheet Files\CAD\UT-0008-2001 JS SD DETAILS.dwg - D-11 - 2/19/2026 2:10 AM - trevor.watson

DDN F:\Users\DS\Standard\Spec\Section\2024 Standards\pub\Spring 2023\Electronic Books\Master Drawings\GRW\NDS\GF8A.dgn 5-APR-2023



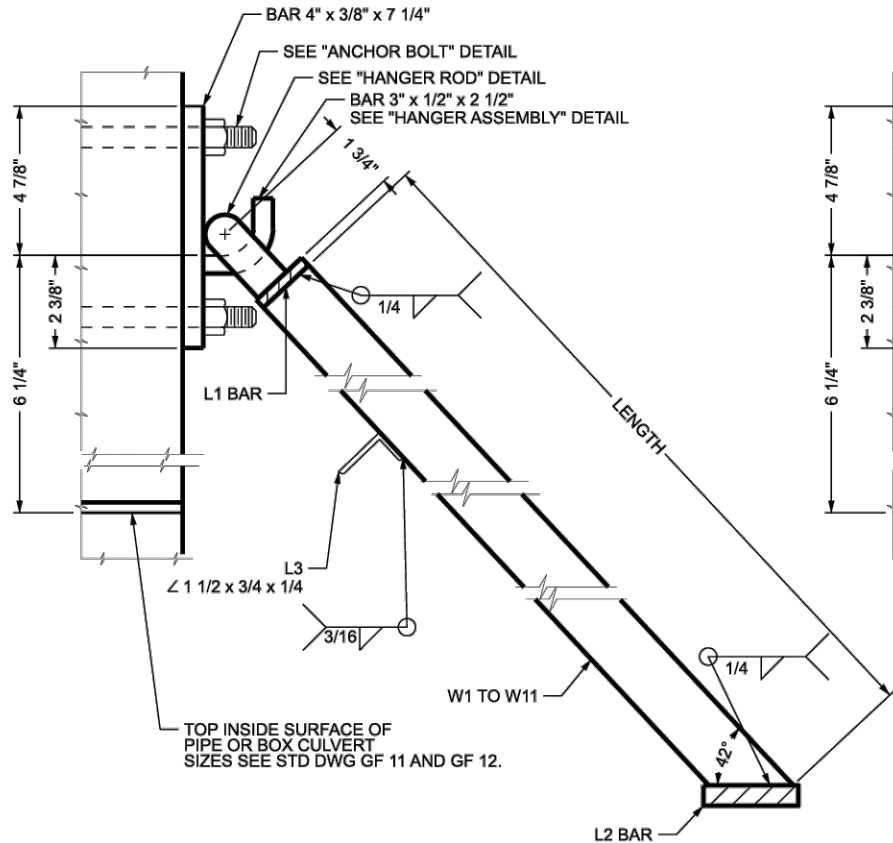
STEEL GRATING

SEE STD DWG GF 11 & GF 12 FOR LINES 1 THRU 48

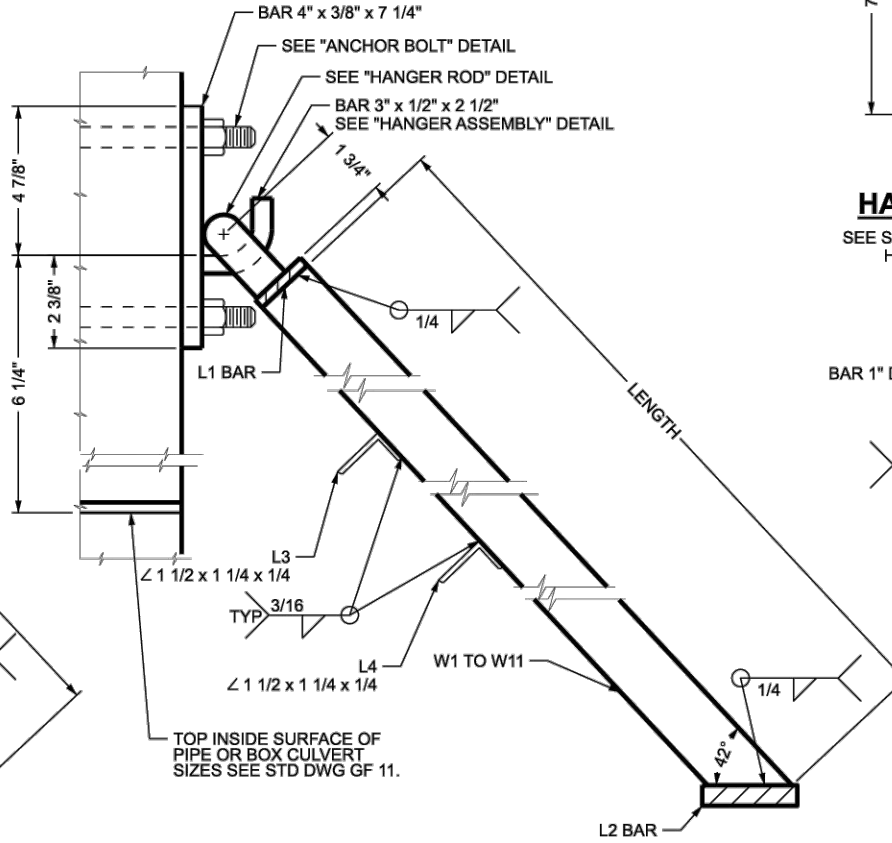


STEEL GRATING

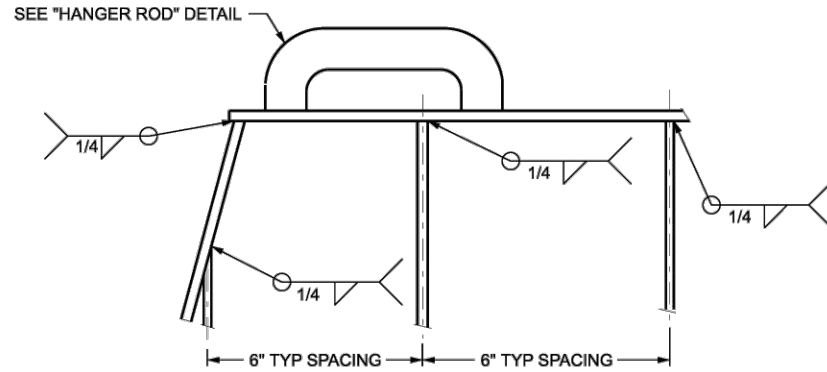
SEE STD DWG GF 12 FOR LINES 48 THRU 90



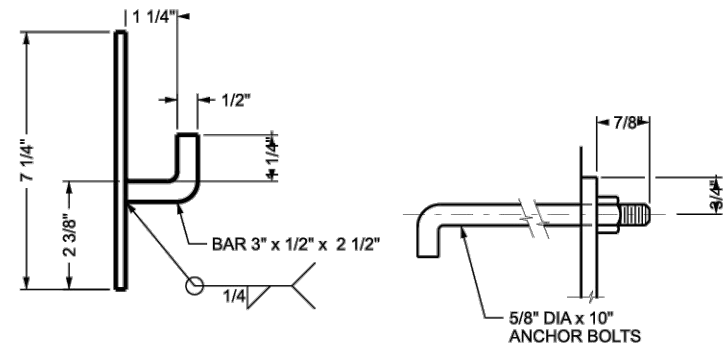
SECTION A-A



SECTION B-B



DETAIL A

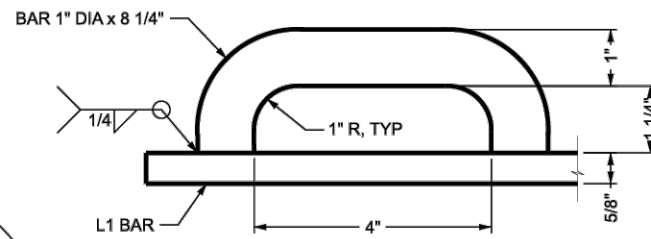


HANGER ASSEMBLY

SEE STD DWG GF 11 FOR "ALTERNATE HANGER ASSEMBLY" DETAIL

ANCHOR BOLT

TWO ANCHOR BOLTS PER HANGER (WEIGHT FOR BOLT & NUT 0.97 LB)



HANGER ROD

SEE STD DWG GF 11 FOR "ALTERNATE HANGER ROD" DETAIL (WEIGHT OF HANGER RODS 1.84 LB EACH)

DESIGN DATA

STRUCTURAL STEEL: $F_y = 36,000$ psi

UTAH DEPARTMENT OF TRANSPORTATION
STANDARD DRAWINGS FOR ROAD AND BRIDGE CONSTRUCTION
SALT LAKE CITY, UTAH

STANDARD DRAWING EDITION

2024 Standard Drawing

STANDARD TRASH RACKS
90 DEGREE CROSSING
ANGLE

STANDARD DRAWING TITLE

STD. DWG. NO.
GF 8A

REVISIONS

REV	DATE	BY	DESCRIPTION
1	2/13/26	DS	CHANGES FOR RE-BID 2026

SCALE

0	1/2	1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE		
HORIZONTAL:	---	---
VERTICAL:	---	---



2162 West Grove Parkway, Suite 400, Pleasant Grove, UT 84062
801-763-5100 www.horrocksengineers.com

JACKSON STREET STORM DRAIN PROJECT

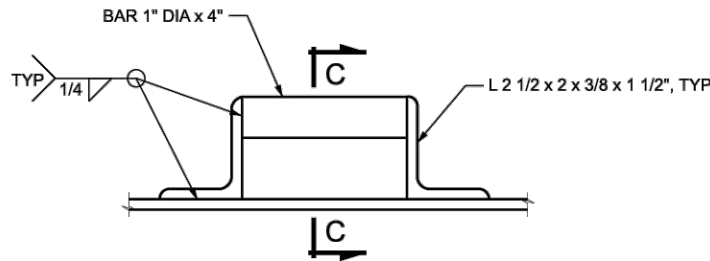
DETAILS

DESIGN: MWC	PROJECT: UT-CV-0008-22
DRAWN: TRW	SHEET: 24 OF 29
CHECK: DHD	SHEET NO: D-11
DATE: 08/2025	

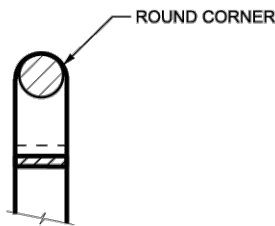
O:\Projects\Grand County General\1901 Jackson St Storm Drain\Project Data\Sheet Files\CAD\UT-0008-2001_JS_SD_DETAILS.dwg - D-12 - 2/19/2026 2:10 AM - trevor.watson

DDN File D:\S\Standards\Spec\Section\2024_Standards\pub_Spec\2023\Electronic Books\Measure Drawings\DRM\NCS\GP\8B.dgn 5-APR-2023

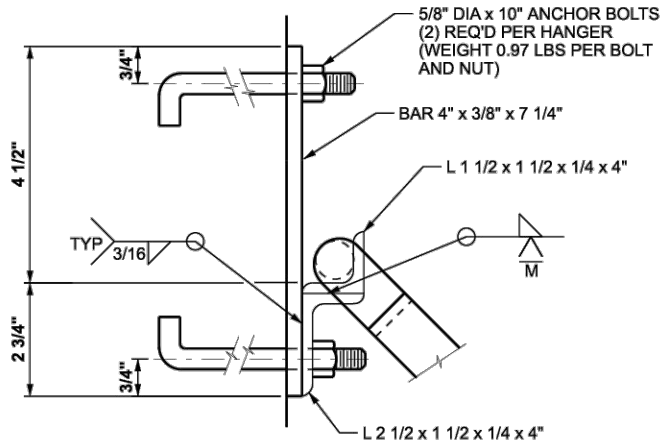
TO BE USED FOR (NOM.SIZE)							TRANSVERSE BARS								MAIN BARS														NO. OF HANGER ASSEMBLY AND HANGER ROD	WEIGHT OF STRUCT STL				
LINE	BOX CULVERTS	CORRUGATED METAL PIPES	CORRUGATED PIPE ARCHES	CONCRETE PIPE	MULTI-PLATE ELLIPSES	MULTI-PLATE PIPE ARCHES	A	1- EACH REQUIRED								2- EACH	2-EACH REQUIRED											W1 TO W11						
								L1			L2			L3	L4	W1	W2		W3	W4	W5	W6	W7	W8	W9	W10	W11	THICK		WIDTH				
								LENGTH	THICK	WIDTH	LENGTH	THICK	WIDTH	LENGTH	LENGTH	LENGTH	LENGTH	NO	LENGTH	LENGTH	LENGTH	LENGTH	LENGTH	LENGTH	LENGTH	LENGTH	LENGTH				LENGTH			
1		18"	29" x 18"	18"			1'- 5"	1'- 5"	½"	1 ¼"	3'- 11 ¾"	½"	1 ⅝"	2'- 8"	0	3'- 2 ¾"	2'- 11 ⅝"	2	2'- 10 ⅞"	1'- 8 ⅞"	0'- 6 ⅞"									¼"	1 ¼"	2	55.8	
2							1'- 5"	2'- 4"	↑	↑	4'- 10 ⅝"	↑	↑	3'- 7"	↑	3'- 2 ¾"	2'- 11 ⅝"	4	2'- 9"	1'- 7"	0'- 5"								↑	↑	↑	67.5		
3		21"		21"			1'- 7"	1'- 8"			4'- 6 ½"			3'- 1"		3'- 7 ⅞"	3'- 4 ⅞"	4	2'- 4 ¼"	1'- 2 ¼"												64.5		
4		24"		24"			1'- 10"	1'- 11"			5'- 1 ¼"			3'- 6"		4'- 0 ⅛"	3'- 8 ⅝"	4	3'- 0 ¼"	1'- 10 ¼"	0'- 8 ¼"											74.5		
5			36" x 22"				1'- 10"	2'- 11"			5'- 10 ¾"			4'- 6"		3'- 9 ¼"	3'- 5 ⅜"	6	2'- 9 ¼"	1'- 7 ¼"	0'- 5 ¼"											84.4		
6				27"			2'- 0"	2'- 2"			5'- 8 ⅞"			3'- 11"		4'- 5 ½"	4'- 1 ⅛"	4	3'- 8 ¼"	2'- 6 ¼"	1'- 4 ¼"											84.4		
7			43" x 27"				2'- 0"	3'- 6"			7'- 0 ⅝"			5'- 3"		4'- 5 ½"	4'- 1 ⅛"	6	4'- 0 ⅞"	2'- 10 ⅞"	1'- 8 ⅞"	0'- 6 ⅞"										105.7		
8			50" x 31"				2'- 3"	4'- 1"			8'- 0 ⅜"			6'- 0"		5'- 0"	4'- 7 ¼"	8	4'- 1"	2'- 11"	1'- 9"	0'- 7"										125.9		
9	24" x 24"						1'- 10"	1'- 11"			5'- 1 ⅜"			3'- 6"		4'- 0 ⅛"	3'- 8 ⅝"	4	3'- 0 ¼"	1'- 10 ¼"	0'- 8 ¼"											74.5		
10		30"		30"			2'- 2"	2'- 5"			6'- 3"			4'- 4"		4'- 10 ⅜"	4'- 5 ⅜"	4	4'- 4 ¼"	3'- 2 ¼"	2'- 0 ¼"	0'- 10 ¼"										96.2		
11	36" x 24"						1'- 10"	2'- 11"			6'- 1 ⅜"			4'- 6"		4'- 0 ½"	3'- 8 ⅝"	6	3'- 0 ¼"	1'- 10 ¼"	0'- 8 ¼"											89.0		
12	48" x 24"						1'- 10"	3'- 11"			7'- 1 ⅜"			5'- 6"		4'- 0 ½"	3'- 8 ⅝"	8	3'- 0 ¼"	1'- 10 ¼"	0'- 8 ¼"											103.6		
13	60" x 24"						1'- 10"	4'- 11"			8'- 1 ⅜"			6'- 6"		4'- 0 ½"	3'- 8 ⅝"	10	3'- 0 ¼"	1'- 10 ¼"	0'- 8 ¼"											118.1		
14	72" x 24"						1'- 10"	5'- 11"			9'- 1 ⅜"			7'- 6"		4'- 0 ½"	3'- 8 ⅝"	12	3'- 0 ¼"	1'- 10 ¼"	0'- 8 ¼"											2	132.7	
15	84" x 24"						1'- 10"	6'- 11"			10'- 1 ⅜"			8'- 6"		4'- 0 ½"	3'- 8 ⅝"	14	3'- 0 ¼"	1'- 10 ¼"	0'- 8 ¼"											3	153.1	
16	96" x 24"						1'- 10"	7'- 11"	↓		11'- 1 ¾"			9'- 6"		4'- 0 ½"	3'- 8 ⅝"	16	3'- 0 ¼"	1'- 10 ¼"	0'- 8 ¼"											3	167.6	
17				33"			2'- 5"	2'- 8"	¼"		6'- 9 ⅞"			4'- 9"		5'- 3 ¼"	4'- 10 ⅞"	6	3'- 10 ¼"	2'- 8 ¼"	1'- 6 ¼"											3	113.0	
18		36"		36"			2'- 7"	2'- 11"	⅝"		7'- 4 ½"			5'- 2"		5'- 7 ⅞"	5'- 2 ⅜"	6	4'- 5 ⅞"	3'- 3 ⅞"	2'- 1 ⅞"	0'- 11 ⅞"										2	121.4	
19			58" x 36"				2'- 7"	4'- 9"	↑		9'- 2 ½"			7'- 0"		5'- 7 ⅞"	5'- 2 ⅜"	10	4'- 3 ⅝"	3'- 1 ⅝"	1'- 11 ⅝"	0'- 9 ⅞"									↑	155.4		
20	36" x 36"						2'- 7"	2'- 11"			7'- 4 ½"			5'- 2"		5'- 7 ⅞"	5'- 6 ½"	6	4'- 5 ⅞"	3'- 3 ½"	2'- 1 ⅞"	0'- 11 ⅞"											121.4	
21				39"			2'- 9"	3'- 2"			7'- 11 ⅞"			5'- 7"		6'- 0 ¾"	5'- 11 ⅞"	6	5'- 2"	4'- 0"	2'- 10"	1'- 8"	0'- 6"										135.0	
22		42"		42"			2'- 11"	3'- 5"			8'- 6 ¼"			5'- 11"		6'- 5 ½"	5'- 2 ⅜"	6	5'- 9 ⅞"	4'- 7 ½"	3'- 5 ⅝"	2'- 3 ½"	1'- 1 ⅞"										148.5	
23	48" x 36"						2'- 7"	3'- 11"			8'- 4 ½"			6'- 2"		5'- 7 ⅞"	5'- 2 ⅜"	8	4'- 5 ⅞"	3'- 3 ⅞"	2'- 1 ⅞"	0'- 11 ⅞"											139.8	
24	60" x 36"						2'- 7"	4'- 11"			9'- 4 ½"			7'- 2"		5'- 7 ⅞"	5'- 8 ⅝"	10	4'- 5 ⅞"	3'- 3 ⅞"	2'- 1 ⅞"	0'- 11 ⅞"									↓	158.2		
25			65" x 40"				2'- 10"	5'- 4"			10'- 2 ¾"			7'- 9"		6'- 2 ⅜"	5'- 2 ⅜"	10	5'- 5 ¾"	4'- 3 ¼"	3'- 1 ¾"	1'- 11 ¾"	0'- 9 ¾"									2	180.1	
26	72" x 36"						2'- 7"	5'- 11"			10'- 4 ½"			8'- 2"		5'- 7 ⅞"	5'- 2 ⅜"	12	4'- 6"	3'- 4"	2'- 2"	1'- 0"										3	182.5	
27			72" x 44"				3'- 1"	5'- 11"			11'- 2 ⅞"			8'- 7"		6'- 8 ⅜"	5'- 2 ⅜"	12	5'- 5 ⅞"	4'- 3 ⅞"	2'- 1 ⅞"	0'- 11 ⅞"	0'- 9 ⅞"								↑	212.4		
28	84" x 36"						2'- 7"	6'- 11"			11'- 4 ½"			9'- 2"		5'- 7 ⅞"	5'- 2 ⅜"	14	4'- 5 ⅞"	3'- 3 ⅞"	2'- 1 ⅞"	0'- 11 ⅞"											200.8	
29	96" x 36"						2'- 7"	7'- 11"			12'- 4 ½"			10'- 2"		5'- 7 ⅞"	5'- 2 ⅜"	16	4'- 5 ⅞"	3'- 3 ⅞"	2'- 1 ⅞"	0'- 11 ⅞"											219.3	
30	108" x 36"						2'- 7"	8'- 11"			13'- 4 ½"			11'- 2"		5'- 7 ⅞"	5'- 2 ⅜"	18	4'- 5 ⅞"	3'- 3 ⅞"	2'- 1 ⅞"	0'- 11 ⅞"									↓	237.7		
31	120" x 36"						2'- 7"	9'- 11"			14'- 4 ½"			12'- 2"		5'- 7 ⅞"	5'- 2 ⅜"	20	4'- 5 ⅞"	3'- 3 ⅞"	2'- 1 ⅞"	0'- 11 ⅞"										3	258.4	
32	132" x 36"						2'- 7"	10'- 11"			15'- 4 ½"			13'- 2"		5'- 7 ⅞"	5'- 2 ⅜"	22	4'- 5 ⅞"	3'- 3 ⅞"	2'- 1 ⅞"	0'- 11 ⅞"										4	280.3	
33	144" x 36"						2'- 7"	11'- 11"	⅜"	1 ¼"	16'- 4 ½"		1 ⅝"	14'- 2"		5'- 7 ⅞"	5'- 2 ⅜"	24	4'- 5 ⅞"	3'- 3 ⅞"	2'- 1 ⅞"	0'- 11 ⅞"										4	298.7	
34		48"		48"			3'- 4"	3'- 11"	¼"	1 ½"	9'- 8 ⅞"		2"	6'- 10"		7'- 3 ⅜"	6'- 8 ¾"	8	6'- 0 ⅝"	4'- 10 ⅝"	3'- 8 ½"	2'- 6 ⅝"	1'- 4 ⅝"							↓		4	196.0	
35	48" x 48"						3'- 4"	3'- 11"	↑	↑	9'- 8 ½"		↑	6'- 10"		7'- 3 ⅜"	6'- 8 ¾"	8	6'- 0 ⅝"	4'- 10 ⅝"	3'- 8 ½"	2'- 6 ⅝"	1'- 4 ⅝"							1 ¼"		5	201.8	
36		54"		54"			3'- 8"	4'- 5"		↑	10'- 9 ⅞"			7'- 7"		8'- 1 ⅝"	7'- 5 ¾"	8	7'- 4 ¼"	6'- 2 ¼"	3'- 0 ¼"	3'- 10 ¼"	2'- 8 ¼"	1'- 6 ¼"						1 ½"		2	246.3	
37	60" x 48"						3'- 4"	4'- 11"		↑	10'- 8 ⅞"			7'- 10"		7'- 3 ⅝"	6'- 8 ¾"	10	6'- 0 ⅝"	4'- 10 ⅝"	3'- 8 ½"	2'- 6 ⅝"	1'- 4 ⅝"							1 ¼"		2	206.6	
38	72" x 48"						↑	5'- 11"			11'- 8 ½"			8'- 10"		↑		12		↑													2	228.7
39	84" x 48"							6'- 11"			12'- 8 ½"			9'- 10"				14			↑												2	250.9
40	96" x 48"							7'- 11"			13'- 8 ½"			10'- 10"				16															3	278.9
41	108" x 48"							8'- 11"			14'- 8 ½"			11'- 10"				18															3	301.1
42	120" x 48"							9'- 11"			15'- 8 ½"			12'- 10"				20															3	323.2
43	132" x 48"						↓	10'- 11"	↓	↓	16'- 8 ½"	↓	↓	13'- 10"	↓	↓		22	↓	↓	↓	↓	↓						↓	↓		4	351.2	
44	144" x 48"						3'- 4"	11'- 11"	¼"	1 ½"	17'- 8 ½"	½"	2"	14'- 10"	0	7'- 3 ⅝"	6'- 8 ¾"	24	6'- 0 ⅝"	4'- 10 ⅝"	3'- 8 ½"	2'- 6 ⅝"	1'- 4 ⅝"							¼"	1 ¼"	4	373.4	



ALTERNATE HANGER ROD



SECTION C-C



ALTERNATE HANGER ASSEMBLY

UTAH DEPARTMENT OF TRANSPORTATION
STANDARD DRAWINGS FOR ROAD AND BRIDGE CONSTRUCTION
SALT LAKE CITY, UTAH

STANDARD DRAWING EDITION

2024 Standard Drawing

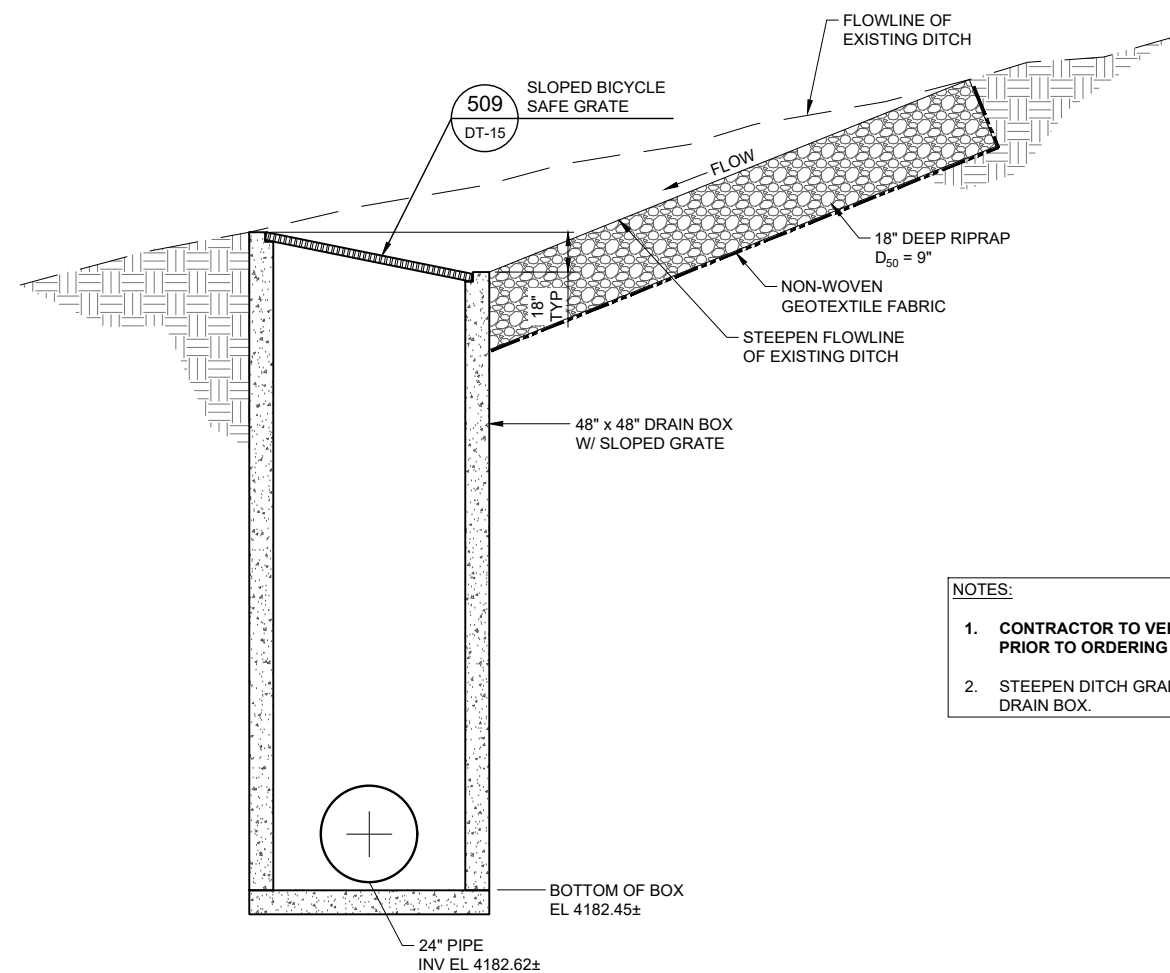
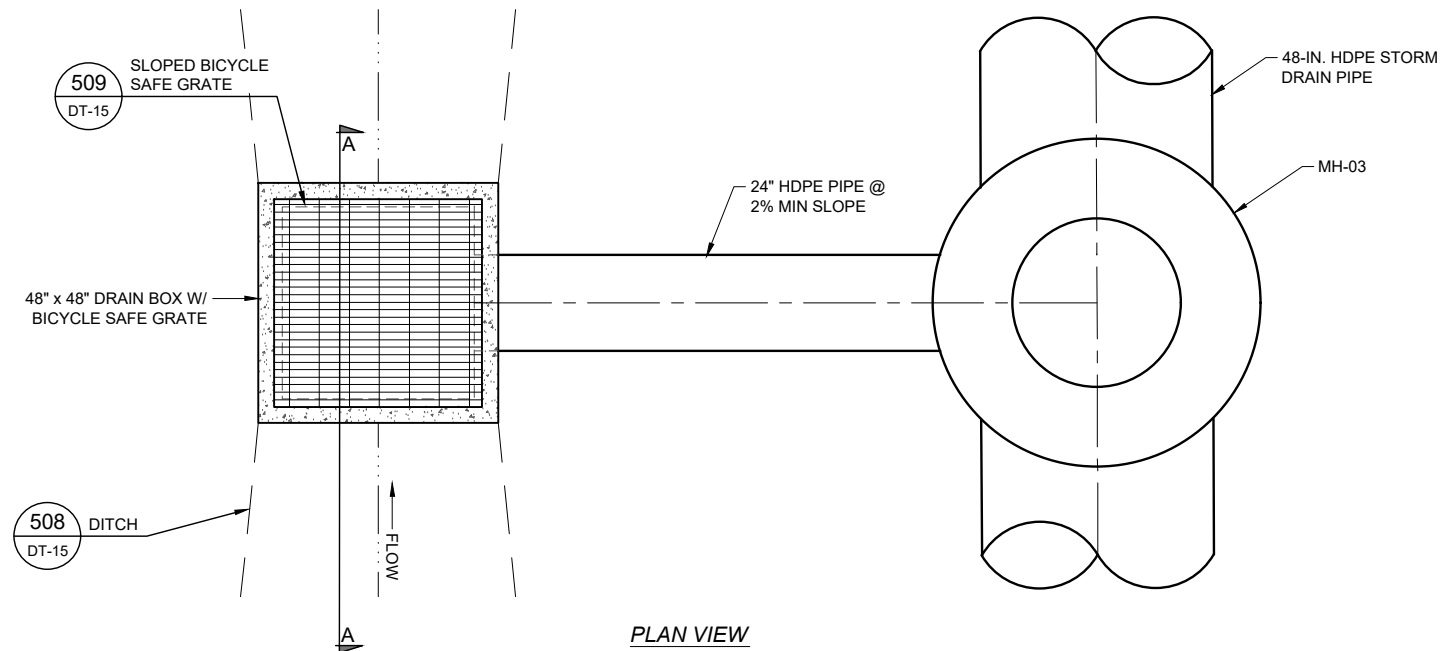
STANDARD
TRASH RACKS

STANDARD DRAWING TITLE

[illegible]

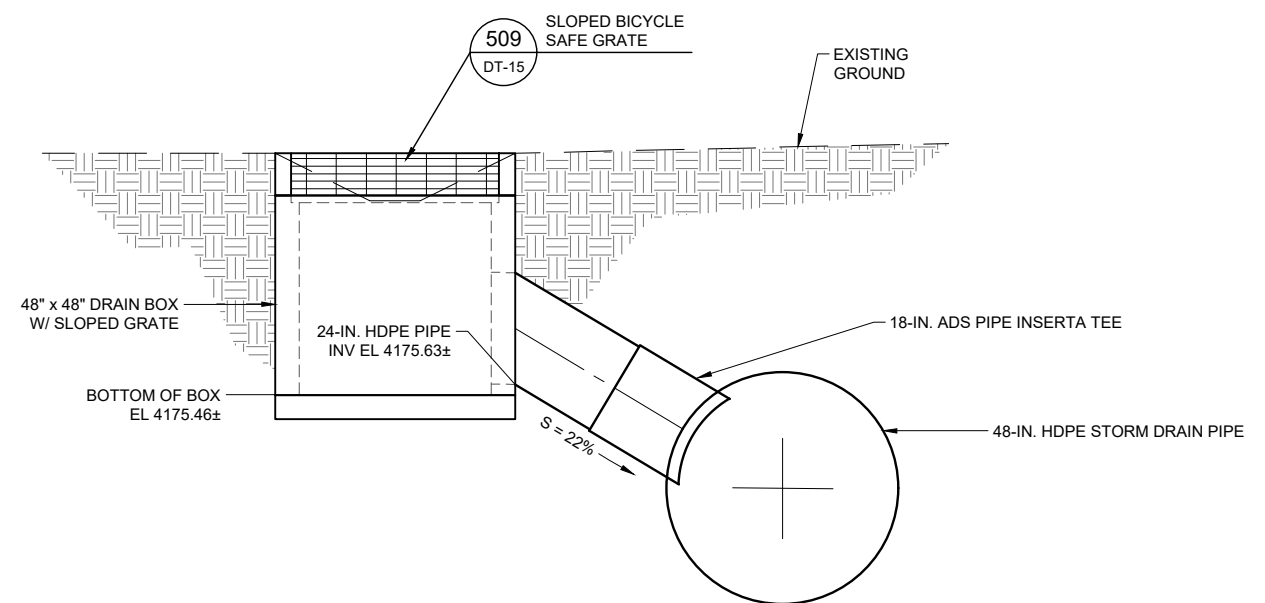
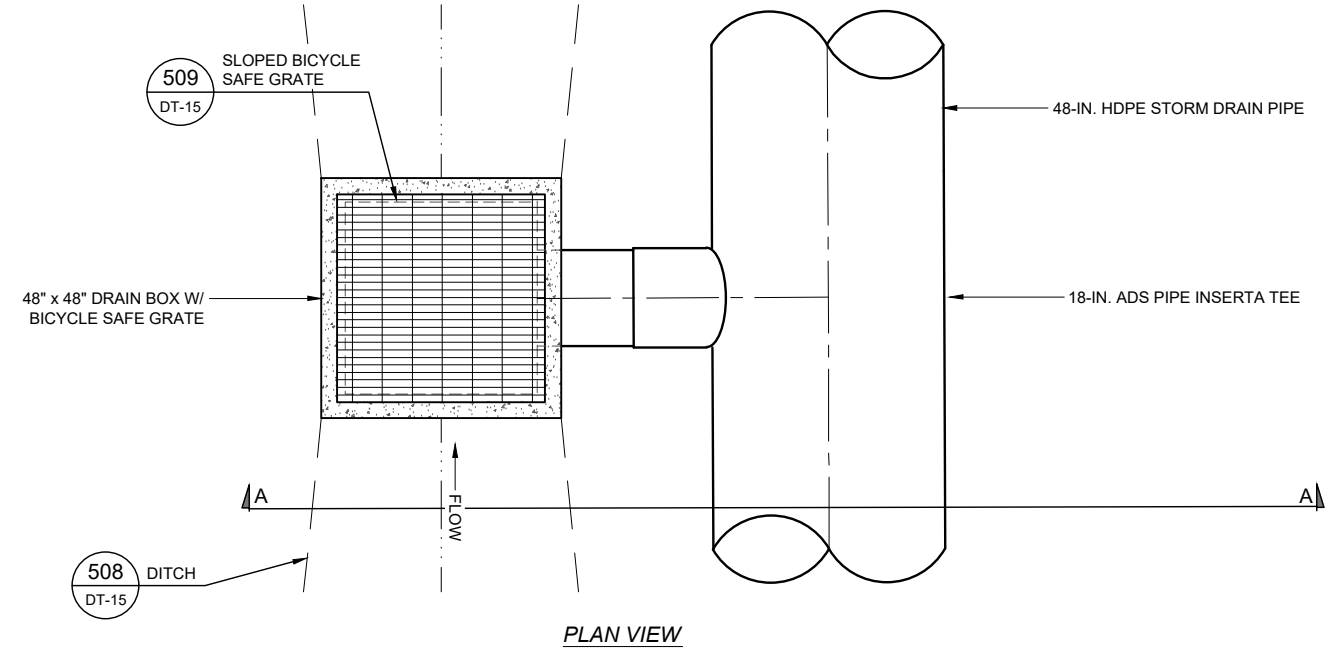
DESIGN: MWC	PROJECT: UT-CV-0008-22
DRAWN: TRW	SHEET: 26 OF 29
CHECK: DHD	SHEET NO: D-13
DATE: 08/2025	

O:\Projects\Grand County General\1901 Jackson St Storm Drain\Project Data\Sheet Files\CAD\UT-0008-2001 JS SD DETAILS.dwg - D-14 - 2/19/2026 2:10 AM - trevor.watson



- NOTES:
1. CONTRACTOR TO VERIFY ELEVATIONS PRIOR TO ORDERING MATERIAL.
 2. STEEPEN DITCH GRADE PRIOR TO DRAIN BOX.

506 48" x 48" DRAIN BOX STA 15+58



- NOTES:
1. CONTRACTOR TO VERIFY ELEVATIONS PRIOR TO ORDERING MATERIAL.
 2. STEEPEN DITCH GRADE PRIOR TO DRAIN BOX.

507 48" x 48" DRAIN BOX STA 16+53



REVISIONS			
REV	DATE	BY	DESCRIPTION
1	2/13/26	DS	CHANGES FOR RE-BID 2026

SCALE	
0	1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE	
HORIZONTAL:	VERTICAL:
1" = 4'	---



 **Horrocks.**

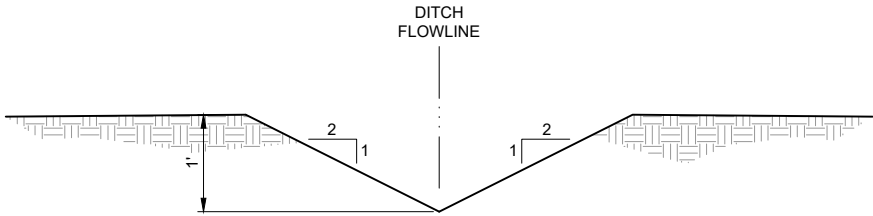
2162 West Grove Parkway, Suite 400, Pleasant Grove, UT 84062
801-763-5100 www.horrocksengineers.com

JACKSON STREET STORM DRAIN PROJECT

DETAILS

DESIGN: MWC	PROJECT: UT-CV-0008-22
DRAWN: TRW	SHEET: 27 OF 29
CHECK: DHD	SHEET NO: D-14
DATE: 08/2025	

O:\Projects\Grand County General\1901 Jackson St Storm Drain\Project Data\Sheet Files\CAD\UT-0008-2001 JS SD DETAILS.dwg - D-15 - 2/19/2026 2:10 AM - trevor.watson



NOTE:
DITCH BOTTOM WIDTH VARIES 0 TO 4' AT MOUTH OF
4' x 4' DRAIN BOX WITH GRATE.

508 TYPICAL DITCH SECTION
- NTS



REVISIONS			
REV	DATE	BY	DESCRIPTION
1	2/13/26	DS	CHANGES FOR RE-BID 2026

SCALE	
0	1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE	
HORIZONTAL:	VERTICAL:
---	---





Horrocks.

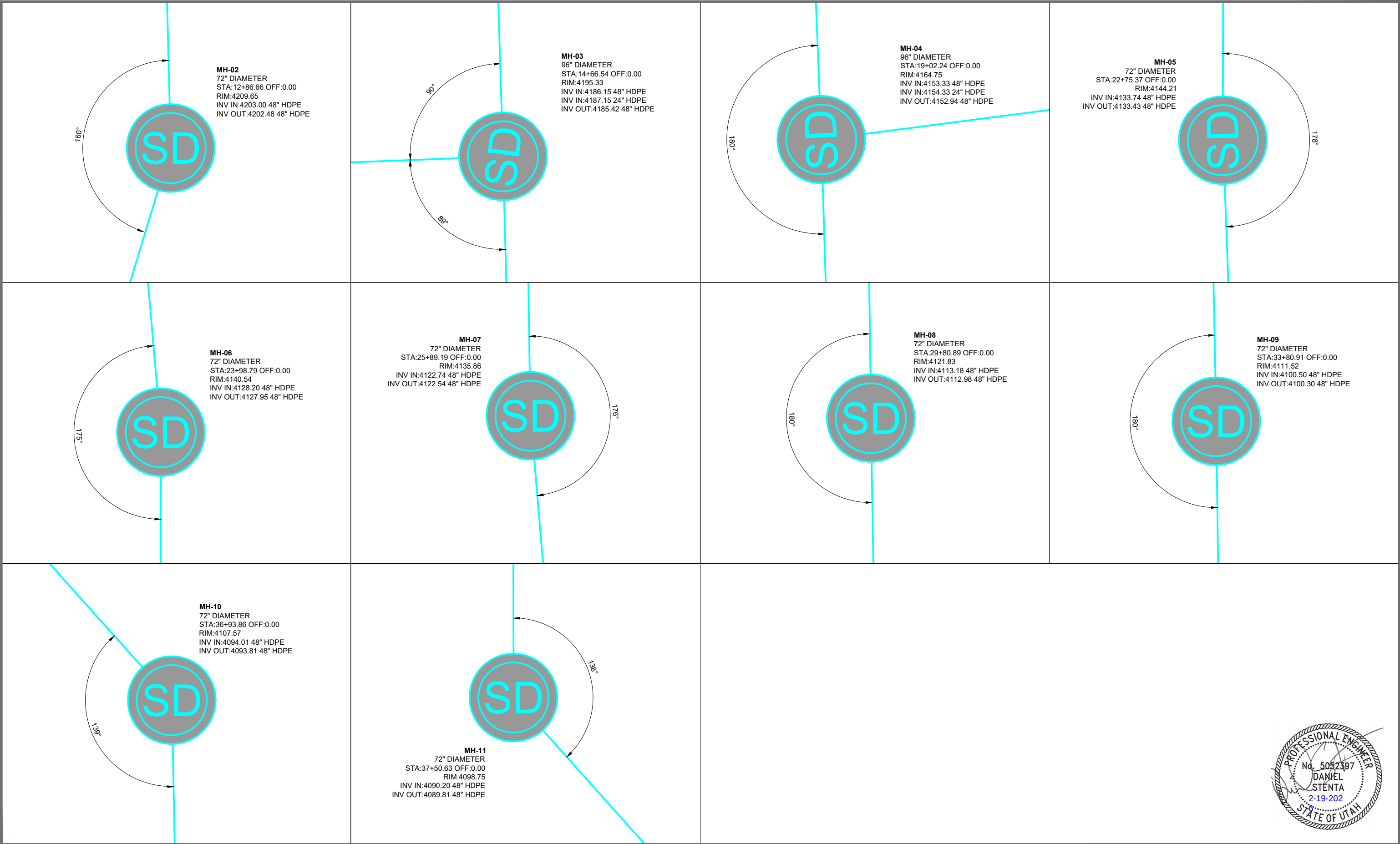
2162 West Grove Parkway, Suite 400, Pleasant Grove, UT 84062
801-763-5100 www.horrocksengineers.com

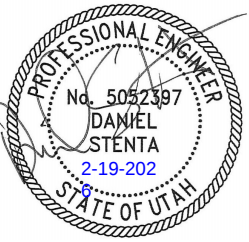
JACKSON STREET STORM DRAIN PROJECT

DETAILS

DESIGN: MWC	PROJECT: UT-CV-0008-22
DRAWN: TRW	SHEET: 28 OF 29
CHECK: DHD	SHEET NO: D-15
DATE: 08/2025	

O:\Projects\Grand County General\1901 Jackson St Storm Drain\Project Data\Sheet Files\CAD\UT-0008-2001_JS_SD_DETAILS MH.dwg - D-16 - 2/19/2026 2:10 AM - trevor.watson



<table><tr><th>REV</th><th>DATE</th><th>BY</th><th>DESCRIPTION</th></tr><tr><td>1</td><td>2/13/26</td><td>DS</td><td>CHANGES FOR RE-BID 2026</td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr></table>				REV	DATE	BY	DESCRIPTION	1	2/13/26	DS	CHANGES FOR RE-BID 2026																	<table><tr><th colspan="2">SCALE</th></tr><tr><td>0</td><td>1/2 1</td></tr><tr><td colspan="2">IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE</td></tr><tr><td>HORIZONTAL: ---</td><td>VERTICAL: ---</td></tr></table>		SCALE		0	1/2 1	IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE		HORIZONTAL: ---	VERTICAL: ---	 2162 West Grove Parkway, Suite 400, Pleasant Grove, UT 84062 801-763-5100 www.horrocksengineers.com		JACKSON STREET STORM DRAIN PROJECT MANHOLE DETAILS		<table><tr><td>DESIGN: MWC</td><td>PROJECT: UT-CV-0008-22</td></tr><tr><td>DRAWN: TRW</td><td>SHEET: 29 OF 29</td></tr><tr><td>CHECK: DHD</td><td>SHEET NO: D-16</td></tr><tr><td>DATE: 08/2025</td><td> </td></tr></table>		DESIGN: MWC	PROJECT: UT-CV-0008-22	DRAWN: TRW	SHEET: 29 OF 29	CHECK: DHD	SHEET NO: D-16	DATE: 08/2025	
REV	DATE	BY	DESCRIPTION																																																
1	2/13/26	DS	CHANGES FOR RE-BID 2026																																																
SCALE																																																			
0	1/2 1																																																		
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE																																																			
HORIZONTAL: ---	VERTICAL: ---																																																		
DESIGN: MWC	PROJECT: UT-CV-0008-22																																																		
DRAWN: TRW	SHEET: 29 OF 29																																																		
CHECK: DHD	SHEET NO: D-16																																																		
DATE: 08/2025																																																			