AGENDA
ANACONDA-DEER LODGE COUNTY
SPECIAL COMMISSION MEETING
6 PM THURSDAY, AUGUST 20, 2020
WEBEX CONFERENCE

Everyone is respectfully asked to follow these few Commission Rules of Procedure:

- **Please turn off or silence all cell phones and electronic devices that you are not using for this meeting.**
- **Please mute microphones unless you are speaking to eliminate background noise.**
- Call in users will be on mute until discussion or public comment
- **Please address all comments to the Commissioners and state your full name and address**
- Be courteous to all participants, allow one speaker to speak at a time
- **If able please use the raise the virtual hand when appropriate to speak and then un-raise your hand**
- If you can use the chat box, please send in questions and comments.
- **Be Mindful that all participants will be able to hear and see everything, and the meetings are recorded**

Webex Meeting
Meeting Number: 925464969
Meeting password: ADLC0420
Join by phone: +1-855-797-9485 US Toll free (Will require Meeting Number listed above)
Join from a video system or application:
Dial 925464969@montana.webex.com
You can also dial 173.243.2.68 and enter your meeting number
Join using Microsoft Lync or Microsoft Skype for Business:
Dial 925464969.montana@lync.webex.com

I. Unfinished Business

A. Union Avenue Construction, Request to Advertise for Bids.

At this time the Commission could take action to approve the Request to Advertise for Bids for Union Avenue Construction.

B. Miscellaneous

- Commissioner Mike Huotte:
- Commissioner Steve Gates:
- Commissioner Paul Smith
- Commissioner Terry Vermeire:
- Commissioner Kevin Hart:
- CEO Bill Everett:

- CA Ben Krakowka:

C. **Public Comment** – This is the time for members of the public to comment on items **NOT** appearing on this agenda that **fall within the Commission's jurisdiction.**

D. **ADLC Public Meeting Dates**

E. **Adjournment**

2020
Anaconda-Deer Lodge County Public Meetings

PHASE II: Boards are to limit group size (less than 50) and maintain social distance.
Board Vacancies can be viewed on the A-DLC website: https://adlc.us

August 20, 2020 - 6 p.m. Special Commission Meeting
Webex
For more information on how to obtain a direct link phone the CEO office at 563-4000 or email your request to lsturm@adlc.us
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August 20, 2020 - – 7:00 p.m. Wise River Fire District
Wise River Fire Hall

August 24, 2020 – 3:00 p.m. Historic Resource Board
Third Floor Conference

August 25, 2020 - 6 p.m. Commission Work Session
Webex

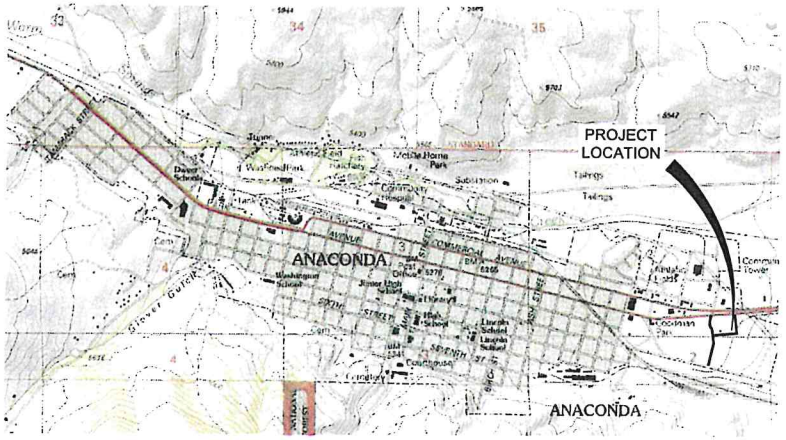
August 26, 2020 - 7 a.m. Airport Board Meeting
Bowman Field

August 27, 2020 - 5:00 p.m. Board of Health Meeting
Community Service Center – 118 E. 7th St.

August 27, 2020 - 6 p.m. Potential Special Commission Meeting
Webex

ADLC Union Ave. and Fillmore St.
Estimate of Probable Costs (DRAFT)

Item No.	Description	Estimated Quantity	Unit	Unit Price	Estimated Total
101	Mobilization-Demobilization	1	LS	$ 32,316.00	$ 32,316.00
102	Taxes, Bonds, and Insurance	1	LS	$ 40,395.00	$ 40,395.00
103	General Requirements	1	EA	$ 40,395.00	$ 40,395.00
104	Alt-Exploration - Extra Work	1	LS	$ 30,000.00	$ 30,000.00
105	Remove Concrete Curb and Gutter	84	LF	$ 30.00	$ 2,520.00
106	Street Excavation	1	LS	$ 9,965.00	$ 9,965.00
107	Install 8-inch PVC Water Main	1,556	LF	$ 52.00	$ 80,912.00
108	Install New 6-inch Gate Valves for Hydrants	3	EA	$ 1,420.00	$ 4,260.00
109	Install 8-inch Gate Valve	3	EA	$ 1,755.00	$ 5,265.00
110	Install 8-inch Fittings (bends, reducers, etc.)	6	EA	$ 750.00	$ 4,500.00
111	Install 8 X 6-inch Tee	3	EA	$ 1,100.00	$ 3,300.00
112	Install New 6-inch Fire Hydrant Assembly	3	EA	$ 5,050.00	$ 15,150.00
113	Install Domestic Service Line	5	EA	$ 2,500.00	$ 12,500.00
114	Install Fire Water Service Line	5	EA	$ 3,500.00	$ 17,500.00
115	Connect to Existing 6-inch Water Main	1	EA	$ 1,400.00	$ 1,400.00
116	Install 12-inch HDPE Storm Drain	166	LF	$ 39.50	$ 6,557.00
117	Install 18-inch HDPE Storm Drain	729	LF	$ 78.50	$ 57,218.65
118	Install 24-inch HDPE Storm Drain	470	LF	$ 92.00	$ 43,240.00
119	Install 36" Storm Drain Drop Inlet	5	EA	$ 2,900.00	$ 14,500.00
120	Install 48" Storm Drain Manhole	2	EA	$ 3,000.00	$ 6,000.00
121	Install 60" Storm Drain Manhole	4	EA	$ 5,000.00	$ 20,000.00
122	Construct Stormwater Ditch	1,321	LF	$ 28.00	$ 36,988.00
123	Install 6-inch Sewer Main	20	LF	$ 55.00	$ 1,100.00
124	Install 8-inch Sewer Main	787	LF	$ 60.00	$ 47,238.00
125	Install 48-inch Sewer Manholes	5	EA	$ 3,500.00	$ 17,500.00
126	Connect to Existing Sewer Main	0	EA	$ 6,775.00	$ -
127	Rigid Insulation Board	200	LF	$ 27.00	$ 5,400.00
128	Imported Backfill Material	2,409	CY	$ 27.50	$ 66,247.50
129	Crushed Base Course	7,420	SY	$ 6.40	$ 47,488.00
130	Asphalt Pavement	5,315	SY	$ 32.50	$ 172,737.50
131	Concrete Curb and Gutter	2,342	LF	$ 28.00	$ 65,576.00
132	Concrete Sidewalk	328	SY	$ 86.00	$ 28,208.00
133	Install ADA Ramp	2	EA	$ 2,100.00	$ 4,200.00
134	Pavment Markings	1	LS	$ 1,500.00	$ 1,500.00
135	Curb Painting	160	LF	$ 2.00	$ 320.00
136	Install Street Sign	1	EA	$ 1,500.00	$ 1,500.00
137	Topsoil and Seeding	1	LS	$ 5,000.00	$ 5,000.00
138	Utility Crossing	1	EA	$ 688.00	$ 688.00
139	Pothole Existing Utility	4	EA	$ 356.00	$ 1,424.00
140	Water Quality Control	1	EA	$ 7,700.00	$ 7,700.00
141	Traffic Control	1	LS	$ 5,000.00	$ 5,000.00
	Subtotal of Water Items				$ 152,487.00
	Subtotal of Sewer Items				$ 65,838.00
	Subtotal of Unit Price Items				$ 807,902.65
	Total Cost				***$ 963,709***



ANACONDA DEER LODGE COUNTY
UNION AVE. & FILLMORE ST. IMPROVEMENTS
ANACONDA, MT

LEGEND

EXISTING

- EXISTING CONTOUR
- PROPOSED CONTOUR
- CURB & GUTTER
- EDGE OF ASPHALT
- EDGE OF GRAVEL
- FENCE
- RAILROAD TRACKS
- STRUCTURE
- SIGN
- GAS LINE
- FIBER OPTIC LINE
- TREE

EXISTING

- TELE/COMMUNICATION LINE
- OVERHEAD POWER
- BURIED POWER
- UTILITY POLE
- UTILITY ANCHOR
- LIGHT POLE
- STORM MAIN
- STORM MANHOLE
- SANITARY SEWER MAIN
- SANITARY SEWER MANHOLE
- WATER MAIN
- GATE VALVE

EXISTING

- FIRE HYDRANT
- CURB STOP
- RR ROW
- ENGINEER'S CONTROL POINT
- BOREHOLE LOCATION

NEW

- WATERLINE
- WATER SERVICE
- 6" FIRE HYDRANT ASSEMBLY
- VALVE
- TEE, CROSS, BEND
- STORM DRAIN INLET
- STORM DRAIN MANHOLE
- ASPHALT SURFACE RESTORATION AREA
- ADA RAMP

GENERAL NOTES

1. THE LOCATION OF EXISTING UTILITIES SHOWN IS APPROXIMATE AND THE CONTRACTOR SHALL FIELD VERIFY PRIOR TO CONSTRUCTION. THE CONTRACTOR IS REQUIRED TO TAKE ALL PRECAUTIONARY MEANS TO PROTECT EXISTING UTILITIES.
2. WHERE CONDITIONS ARE ENCOUNTERED WHICH APPEAR DIFFERENT FROM THOSE INDICATED ON THE PLANS OR IN THE SPECIFICATIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO THE PERFORMANCE OF WORK.
3. ALL WORK AND MATERIALS SHALL CONFORM TO THE 6TH EDITION OF THE "MONTANA PUBLIC WORKS STANDARD SPECIFICATIONS" AND MODIFICATIONS THERETO. IN CASE OF A CONFLICT BETWEEN REGULATORY OR STANDARD SPECIFICATIONS, THE MORE STRINGENT REQUIREMENT WILL PREVAIL.
4. CONSTRUCTION SAFETY AND SANITATION FACILITIES SHALL BE PROVIDED BY THE CONTRACTOR AND MAINTAINED PER THE REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION.
5. THE CONTRACTOR SHALL PROTECT ADJACENT PRIVATE AND PUBLIC PROPERTY FROM DAMAGE DURING CONSTRUCTION.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ANY AND ALL UTILITIES IN THE AREA PRIOR TO BEGINNING ANY WORK ON THIS PROJECT.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL, INCLUDING BUT NOT LIMITED TO DETOURS, SIGNAGE AND FLAGGING PERSONNEL. THE CONTRACTOR SHALL SUBMIT TRAFFIC CONTROL PLANS IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
8. THE CONTRACTOR SHALL REPLACE EXISTING FENCING AND ROADSIDE APPURTENANCES DISPLACED OR DAMAGED BY CONSTRUCTION. THIS WORK SHALL BE CONSIDERED INCIDENTAL.
9. WATER MAIN AND STORM DRAIN PIPE MATERIAL SHALL BE AS INDICATED ON THE PLAN SHEETS AND AS DESCRIBED IN THE SPECIFICATIONS.
10. WATER MAIN FITTINGS SHALL BE MECHANICAL JOINT WITH MEGALUG RESTRAINTS, AS DESCRIBED IN THE SPECIFICATIONS
11. VALVES AND MATERIALS IDENTIFIED ON THE PLAN SHEETS TO BE REUSED SHALL BE REPLACED BY THE CONTRACTOR IF THEY ARE FOUND TO BE IN DISREPAIR OR DO NOT FUNCTION PROPERLY.
12. EXISTING FIRE HYDRANTS TO BE MAINTAINED SHALL HAVE A MINIMUM 6" DIAMETER PIPE LEAD, AND IF NOT, SHALL BE REPLACED BY THE CONTRACTOR.
13. CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL ABANDONED FACILITIES THAT ARE A RESULT OF THESE IMPROVEMENTS AS DESCRIBED HERE AND IN THE SPECIFICATIONS UNLESS OTHERWISE NOTED ON THE PLANS. CONTRACTOR SHALL REMOVE ANY PREVIOUSLY ABANDONED FACILITIES ENCOUNTERED DURING CONSTRUCTION. THIS SHALL INCLUDE ALL PIPE MATERIALS WITHIN THE EXCAVATION LIMITS OF THE PIPE TRENCH, ALL CURB AND GUTTER, SIDEWALK, ASPHALT, ETC., ALL MANHOLES (COMPLETE), VALVE BOXES (FOR VALVE BOXES THAT ARE ABANDONED IN PLACE, REMOVE THE TOP 2-FT SECTION MINIMUM - FILL REMAINDER WITH GRAVEL MATERIALS). WHERE EXISTING PIPE IS TO BE ABANDONED IN PLACE, THE EXPOSED END OF THE PIPE SHALL BE PLUGGED WITH CONCRETE. THIS WORK SHALL BE CONSIDERED INCIDENTAL.
14. MAINTAIN A MINIMUM OF 6.5 FEET OF COVER OVER THE WATER MAINS AT ALL TIMES. WHERE COVER CANNOT BE MAINTAINED, 2 INCH THICK BY 4 FEET WIDE RIGID BOARD INSULATION SHALL BE USED. IF COVER IS LESS THAN 5 FEET, 4 INCH BY 4 FEET WIDE INSULATION SHALL BE USED.
15. NEW WATER MAINS SHALL BE PRESSURE TESTED AND DISINFECTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. DISINFECTED WATER SHALL BE DISCHARGED IN ACCORDANCE WITH STATE LAW.
16. CONTRACTOR SHALL PROCURE THE NECESSARY DISCHARGE PERMITS AND STORMWATER CONTROL PERMITS (SEE SECTION 01060 OF THE SPECIFICATIONS.)
17. ALL CAST IRON OR DUCTILE IRON PIPE AND FITTINGS, INCLUDING HYDRANTS, VALVES, AND CURB BOXES, SHALL BE DOUBLE WRAPPED IN POLYETHYLENE.
18. TRANSITIONS TO MATCH EXISTING WATER MAINS MAY REQUIRE SPOOLS, COUPLINGS, OR OTHER FITTINGS TO COMPLETE THE CONNECTIONS. EXISTING WATER MAINS ARE DUCTILE IRON OR KALAMINE (STEEL) PIPE. UNLESS OTHERWISE NOTED. CONTRACTOR SHALL BE PREPARED TO PROVIDE THE APPROPRIATE COUPLINGS TO ACCOMMODATE THE RESPECTIVE CONNECTION REQUIREMENTS.
19. RESTRAINED JOINT PIPE REQUIRED EACH SIDE OF BENDS, FITTINGS AND VALVES. ALL CROSS ST. CONNECTIONS SHALL BE FULLY RESTRAINED FROM POINT OF CONNECTION TO EXISTING MAIN TO THE NEW WATER MAINS, AND/OR AS INDICATED ON PLANS. HYDRANTS SHALL BE FULLY RESTRAINED FROM TEE TO HYDRANT.
20. EXISTING ASPHALT THICKNESS MAY VARY.
21. EXISTING CURB AND GUTTER TO BE PROTECTED IN PLACE UNLESS NOTED OTHERWISE.

PREPARED FOR:

800 Main Street
Anaconda, MT 59711
(406) 563-2700

APPROVED BY:

MIKE JOHNSON, PE 16457
PROJECT MANAGER

SHEET INDEX

NO.	SHEET DESCRIPTION
G.1	COVER, LEGEND AND GENERAL NOTES
G.2	KEY SHEET, BOREHOLE AND CONTROL MAP
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P.2	UNION AVENUE PLAN AND PROFILE STA: 15+00 - 20+50
P.3	UNION AVENUE PLAN AND PROFILE STA: 20+50 - 26+00
P.4	FILLMORE STREET PLAN AND PROFILE STA: 30+00 - 35+00
P.5	FILLMORE STREET PLAN AND PROFILE STA: 35+00 - 38+00
P.6	STORM DRAIN PLAN AND PROFILE STA: 126+00 - 131+00
P.7	STORM DRAIN PLAN AND PROFILE STA: 131+00 - 136+50
P.8	STORM DRAIN PLAN AND PROFILE STA: 136+50 - 140+00
D.1	ROAD SECTIONS
D.2	GENERAL DETAILS
D.3	GENERAL DETAILS
D.4	TRACER WIRE DETAILS
D.5	ADA DETAILS

PREPARED BY: Copper Environmental Consulting
A PRISM SPECTRUM COMPANY
406 East Park Ave. Suite 2
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SHEET
G.1

FILENAME: 195322-G100-GC.dwg
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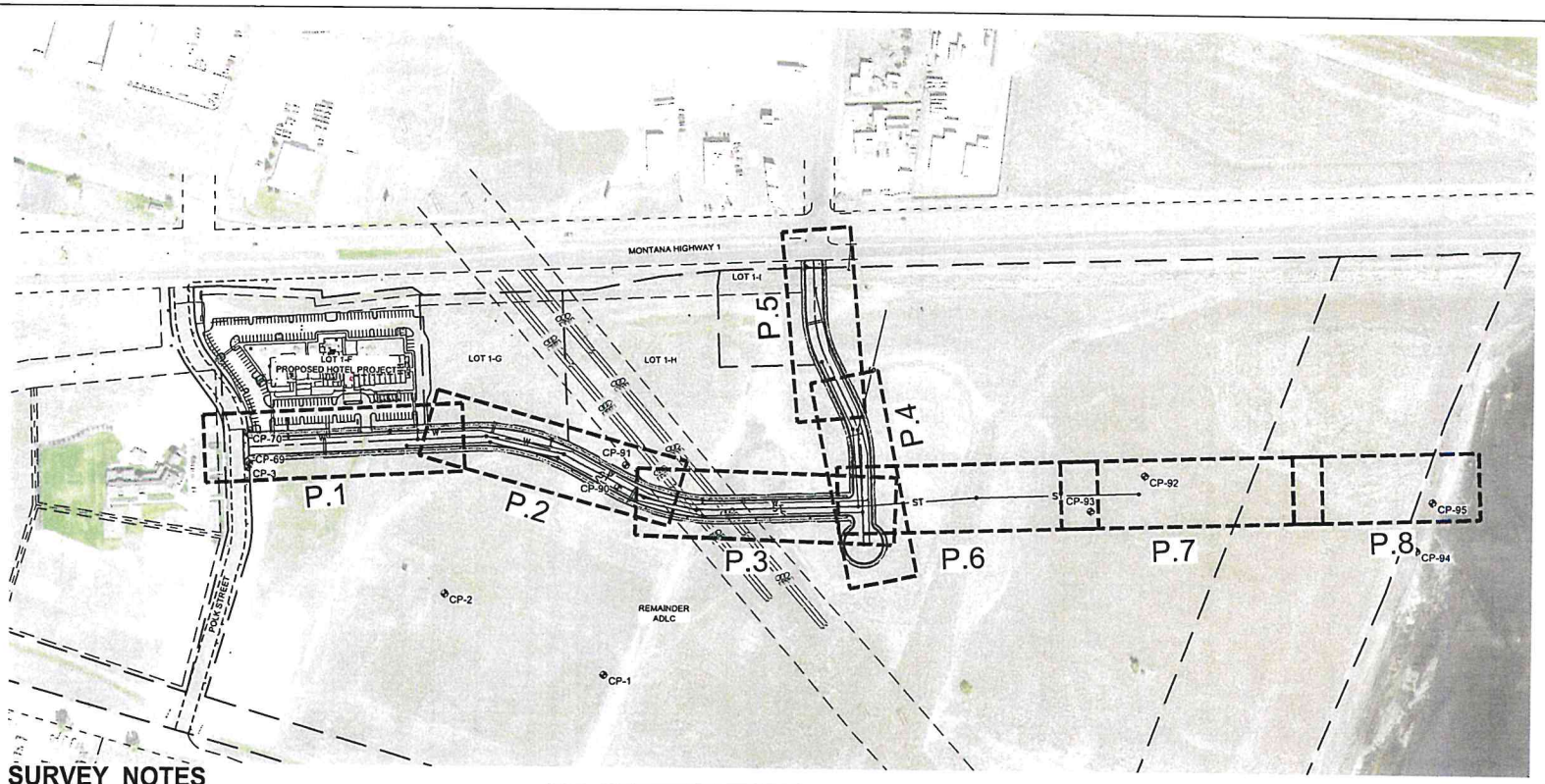

SURVEY NOTES

1. SURVEY WAS PERFORMED IN THE SUMMER AND FALL OF 2020 BY JACKOLA ENGINEERING & ARCHITECTURE AND COPPER ENVIRONMENTAL CONSULTING.
2. DISTANCES SHOWN ON THESE PLANS ARE SURFACE DISTANCES IN INTERNATIONAL FEET.
3. SEE TABLE FOR CONTROL POINT INFORMATION

CONTROL POINT TABLE

CONTROL POINT	ELEVATION	NORTHING	EASTING
CP-1	5197.34	702105.96	1100910.39
CP-2	5203.54	702305.65	1100516.36
CP-3	5209.45	702615.56	1100028.95
CP-69	5209.26	702625.20	1100031.99
CP-70	5209.61	702701.42	1100028.07
CP-90	5198.48	702571.35	1100941.67
CP-91	5198.35	702628.42	1100960.52
CP-92	5191.78	702613.46	1102239.48
CP-93	5192.30	702523.67	1102107.25
CP-94	5191.40	702434.56	1102905.74
CP-95	5190.35	702555.51	1102944.21

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0	08/07/20			MJ	REVIEW SET

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ADLC - UNION AVE AND FILLMORE ST IMPROVEMENTS

KEY SHEET, BOREHOLE AND CONTROL MAP

SHEET G.2

FILENAME: 195522-G100-CC.dwg

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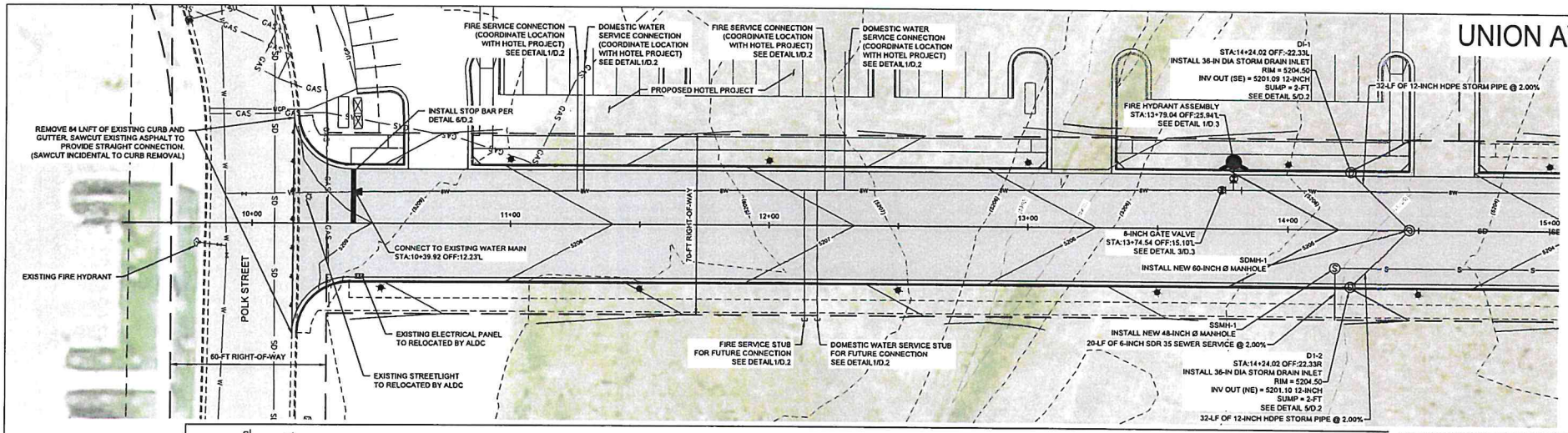
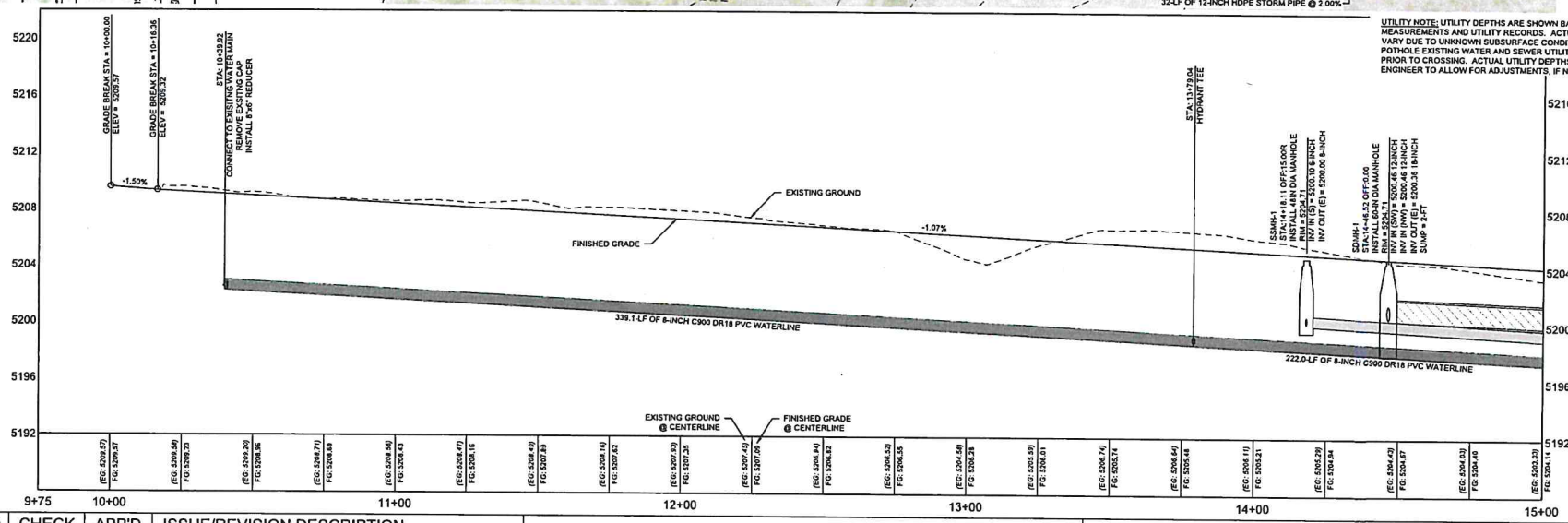
UNION AVENUE





UTILITY NOTE: UTILITY DEPTHS ARE SHOWN BASED ON SURFACE MEASUREMENTS AND UTILITY RECORDS. ACTUAL UTILITY DEPTH MAY VARY DUE TO UNKNOWN SUBSURFACE CONDITIONS. CONTRACTOR TO POTHOLE EXISTING WATER AND SEWER UTILITIES AT LEAST ONE WEEK PRIOR TO CROSSING. ACTUAL UTILITY DEPTHS TO BE REPORTED TO ENGINEER TO ALLOW FOR ADJUSTMENTS, IF NECESSARY.

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ADLC - UNION AVE AND FILLMORE ST IMPROVEMENTS

UNION AVENUE PLAN AND PROFILE STA: 10+00 - 15+00

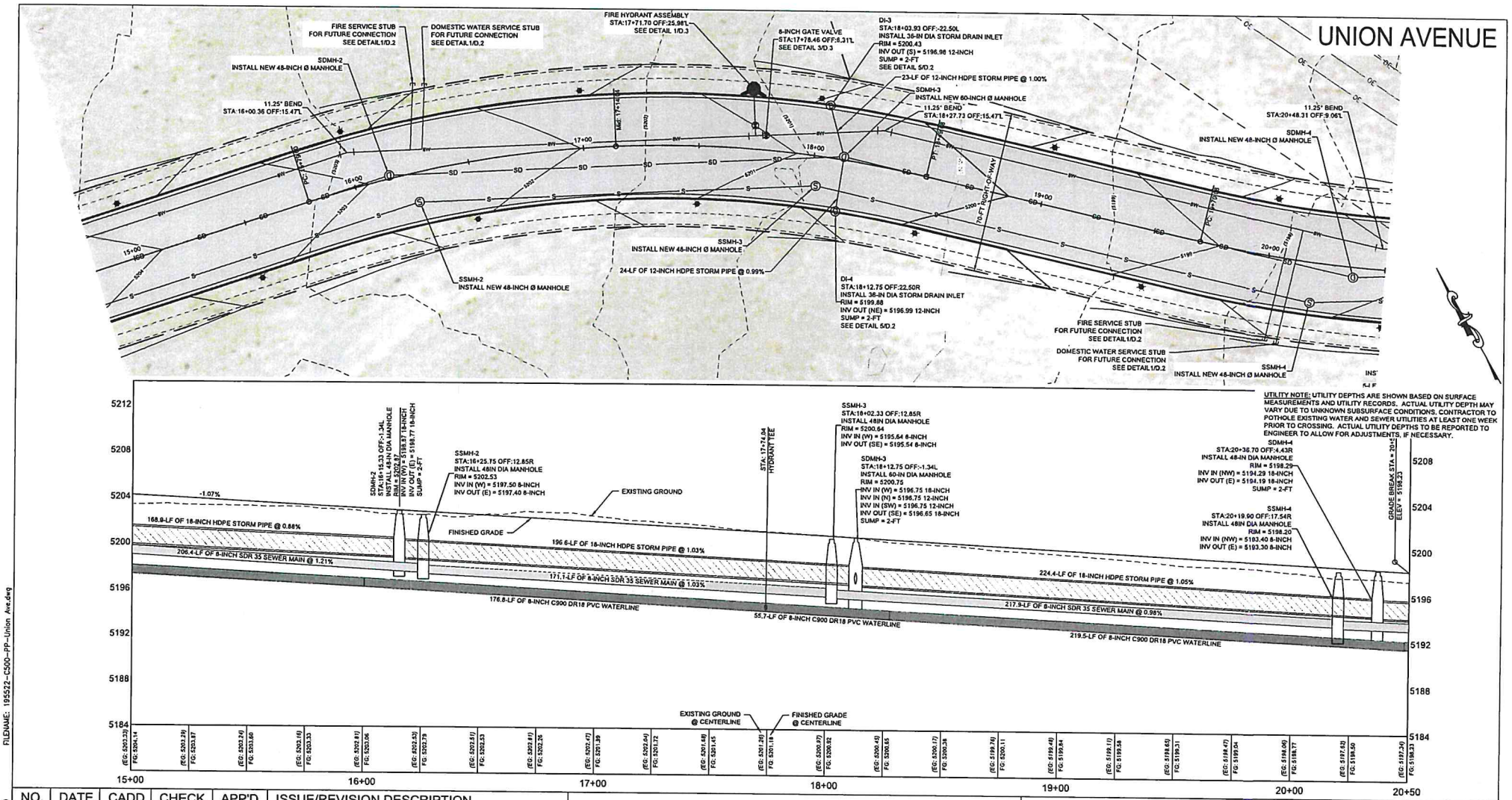
CONTOUR INTERVAL = 1'

SHEET P.1

FILENAME: 195522-C500-PP-Union Ave.dwg

PRINTED: 8/17/2020

UNION AVENUE



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ADLC - UNION AVE AND FILLMORE ST IMPROVEMENTS

UNION AVENUE PLAN AND PROFILE STA: 15+00 - 20+50

CONTOUR INTERVAL = 1'

SHEET P.2

FILENAME: 195522-C500-PP-Union Ave.dwg

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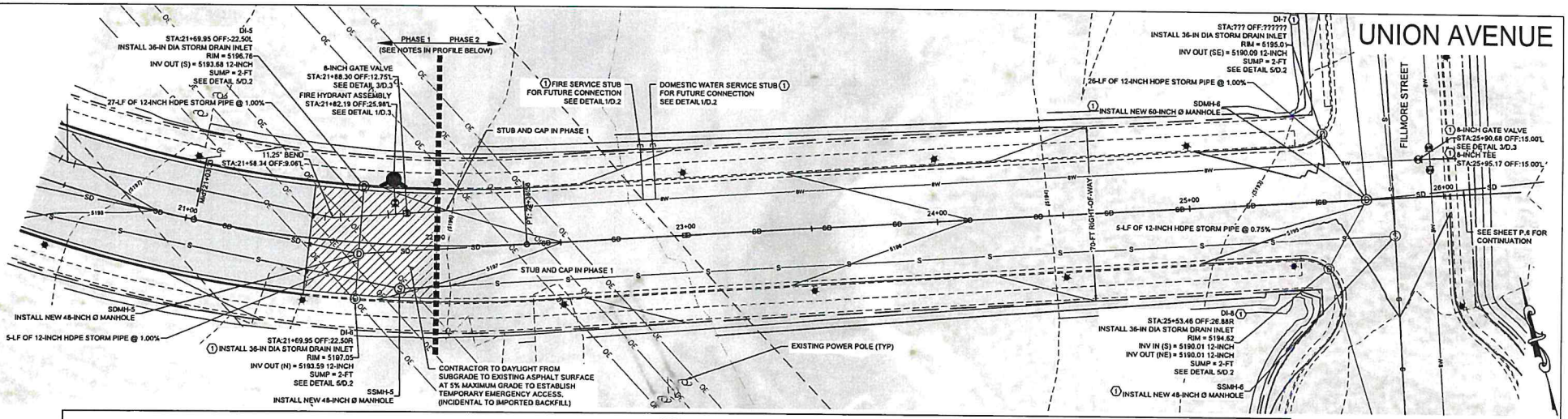
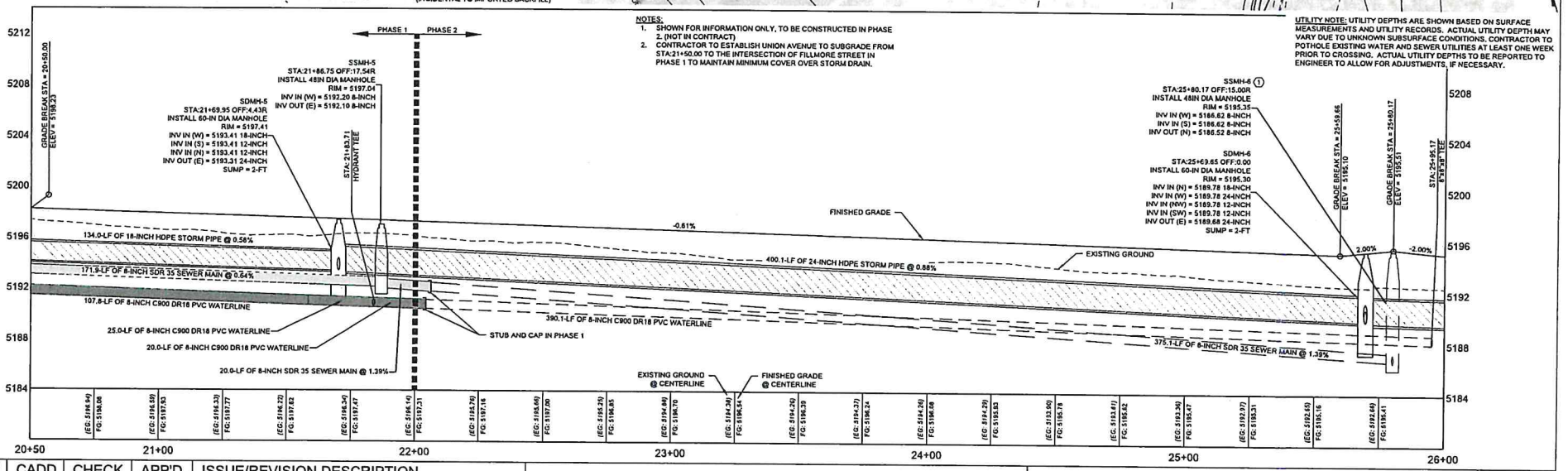
UNION AVENUE



NOTES:
1. SHOWN FOR INFORMATION ONLY, TO BE CONSTRUCTED IN PHASE 2. (NOT IN CONTRACT)
2. CONTRACTOR TO ESTABLISH UNION AVENUE TO SUBGRADE FROM STA:21+50.00 TO THE INTERSECTION OF FILLMORE STREET IN PHASE 1 TO MAINTAIN MINIMUM COVER OVER STORM DRAIN.

UTILITY NOTE: UTILITY DEPTHS ARE SHOWN BASED ON SURFACE MEASUREMENTS AND UTILITY RECORDS. ACTUAL UTILITY DEPTH MAY VARY DUE TO UNKNOWN SUBSURFACE CONDITIONS. CONTRACTOR TO POTHOLE EXISTING WATER AND SEWER UTILITIES AT LEAST ONE WEEK PRIOR TO CROSSING. ACTUAL UTILITY DEPTHS TO BE REPORTED TO ENGINEER TO ALLOW FOR ADJUSTMENTS, IF NECESSARY.



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ADLC - UNION AVE AND FILLMORE ST IMPROVEMENTS

UNION AVENUE PLAN AND PROFILE STA: 20+50 - 26+00

0 20' 40'
CONTOUR INTERVAL = 1'

SHEET P.3

FILENAME: 195522-C500-PP-Union Ave.dwg

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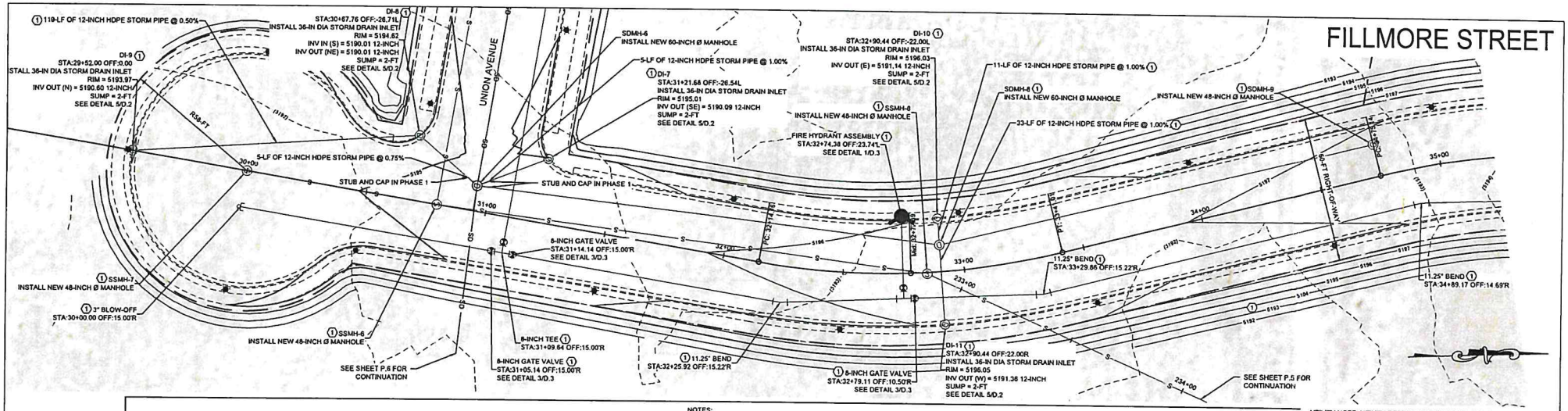
FILLMORE STREET



NOTES:
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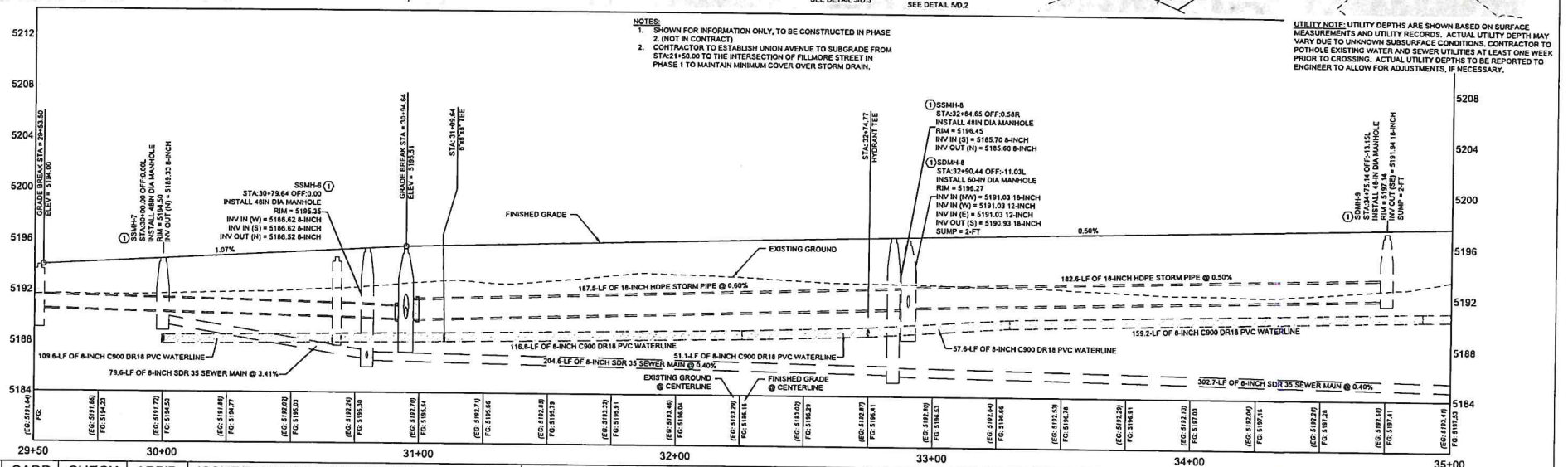

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ADLC - UNION AVE AND FILLMORE ST IMPROVEMENTS

FILLMORE STREET PLAN AND PROFILE STA: 30+00 - 35+00

SHEET P.4

FILENAME: 195522-C501-PP-Fillmore St.dwg

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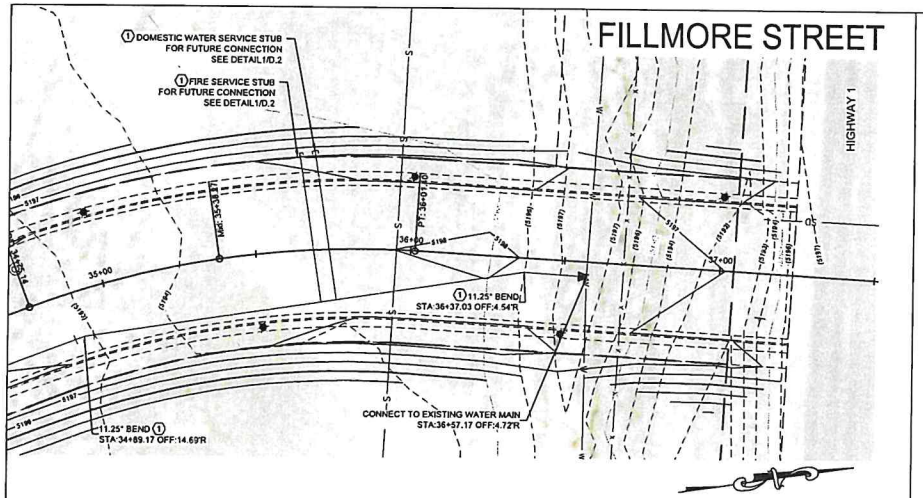

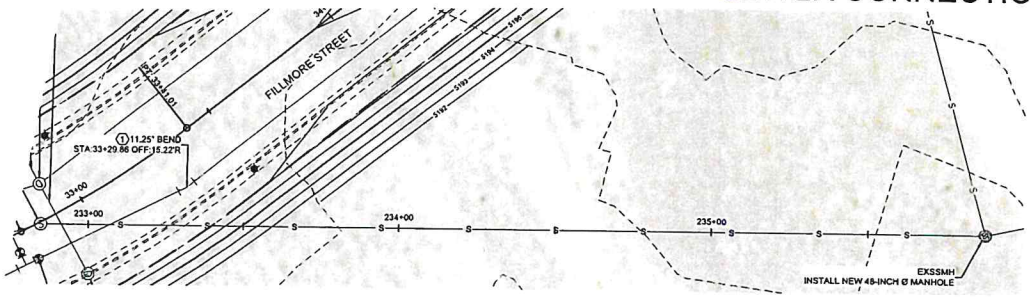

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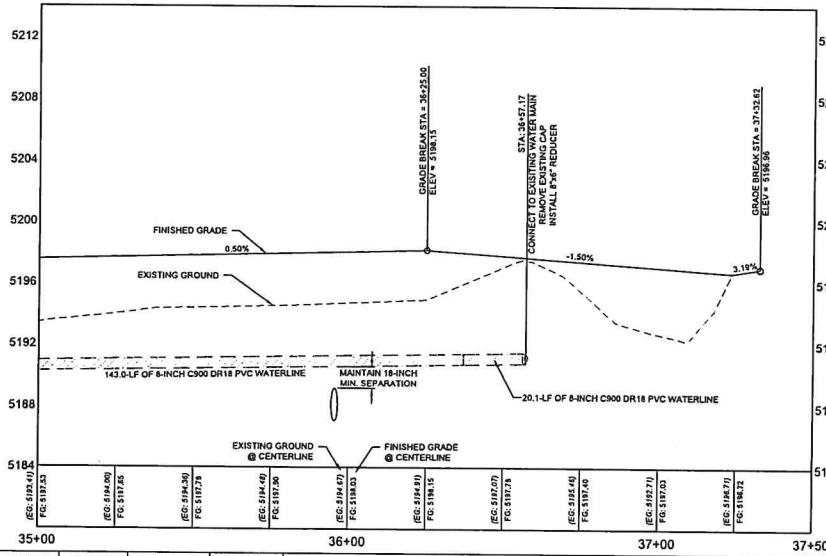

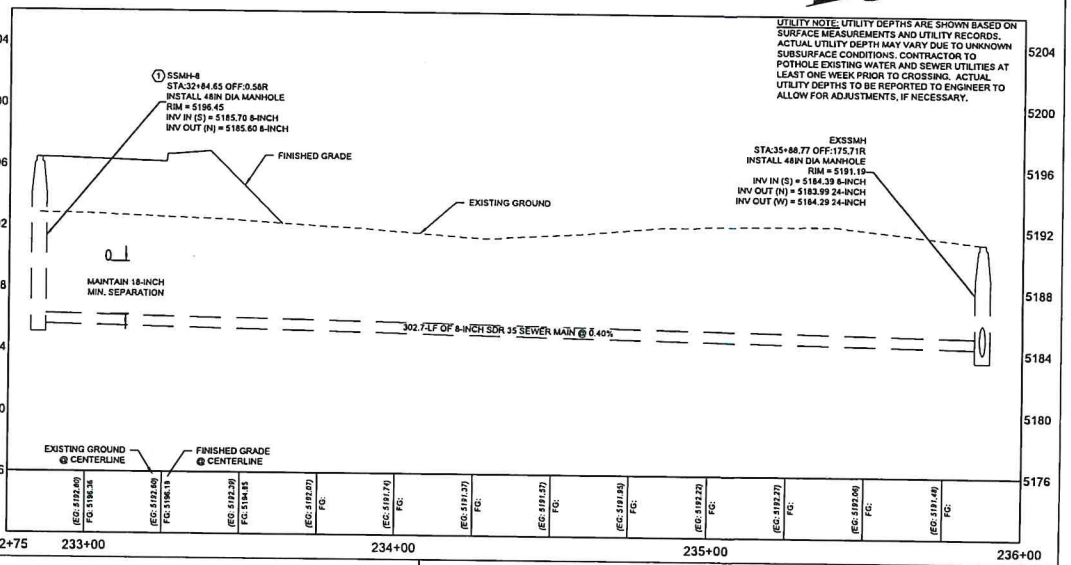

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ADLC - UNION AVE AND FILLMORE ST IMPROVEMENTS

FILLMORE STREET PLAN AND PROFILE STA: 35+00 - 38+00

SHEET P.5

FILENAME: 195522-C501-PP-Fillmore St.dwg

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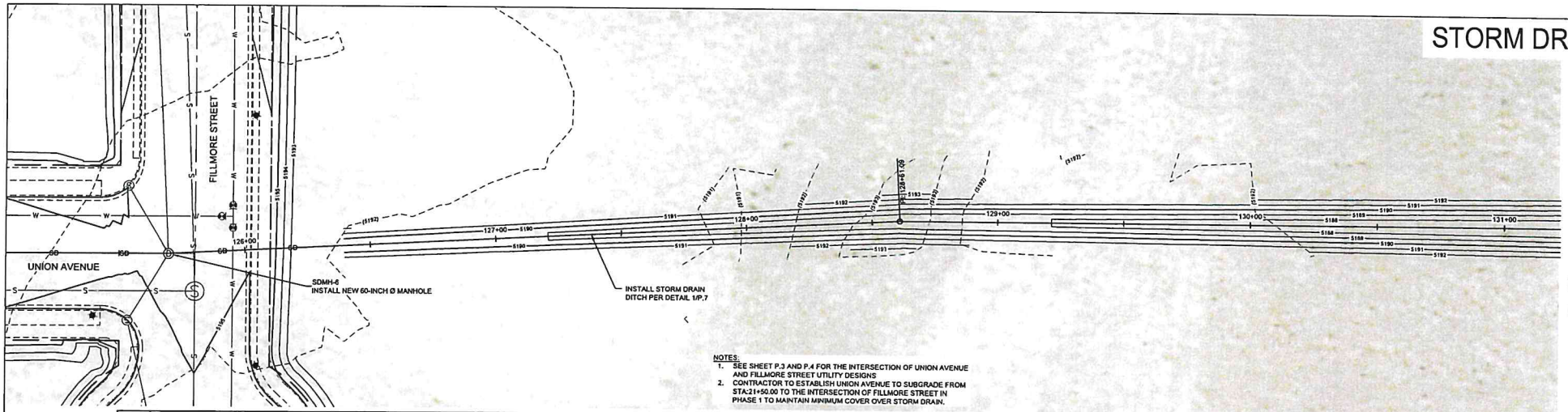
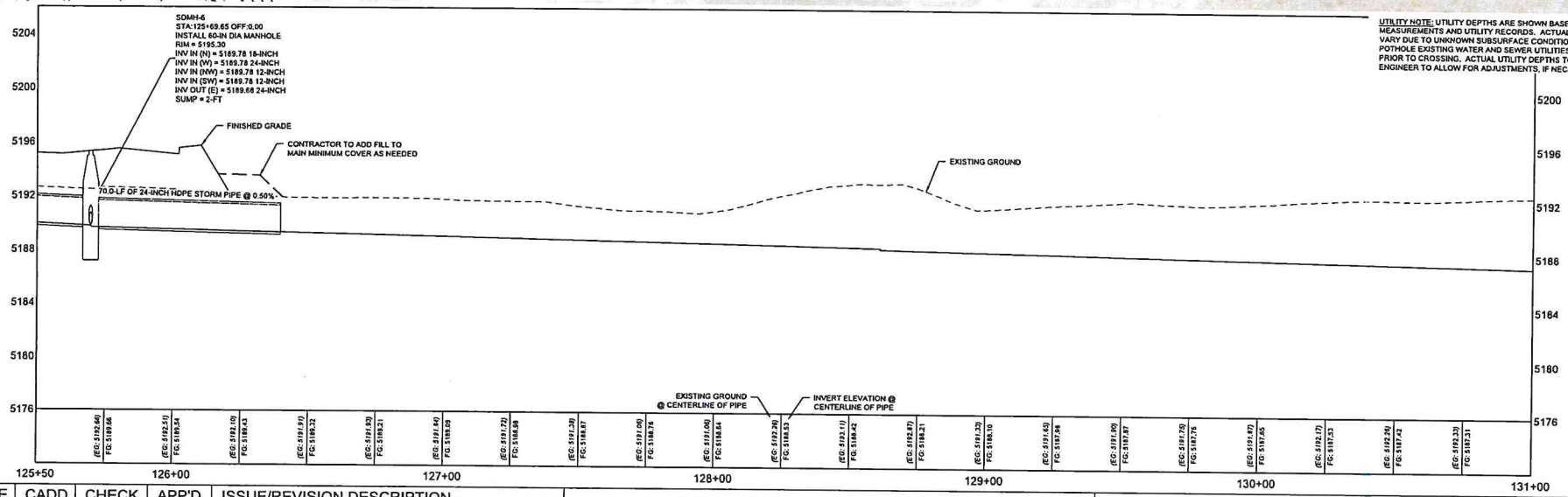
STORM DRAIN



NOTES:
1. SEE SHEET P.3 AND P.4 FOR THE INTERSECTION OF UNION AVENUE AND FILLMORE STREET UTILITY DESIGNS
2. CONTRACTOR TO ESTABLISH UNION AVENUE TO SUBGRADE FROM STA:21+50.00 TO THE INTERSECTION OF FILLMORE STREET IN PHASE 1 TO MAINTAIN MINIMUM COVER OVER STORM DRAIN.

UTILITY NOTE: UTILITY DEPTHS ARE SHOWN BASED ON SURFACE MEASUREMENTS AND UTILITY RECORDS. ACTUAL UTILITY DEPTH MAY VARY DUE TO UNKNOWN SUBSURFACE CONDITIONS. CONTRACTOR TO POTHOLE EXISTING WATER AND SEWER UTILITIES AT LEAST ONE WEEK PRIOR TO CROSSING. ACTUAL UTILITY DEPTHS TO BE REPORTED TO ENGINEER TO ALLOW FOR ADJUSTMENTS, IF NECESSARY.



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ADLC - UNION AVE AND FILLMORE ST IMPROVEMENTS

STORM DRAIN PLAN AND PROFILE STA: 126+00 - 131+00

SHEET P.6

FILENAME: 195522-C502-PP-Storm Drain.dwg

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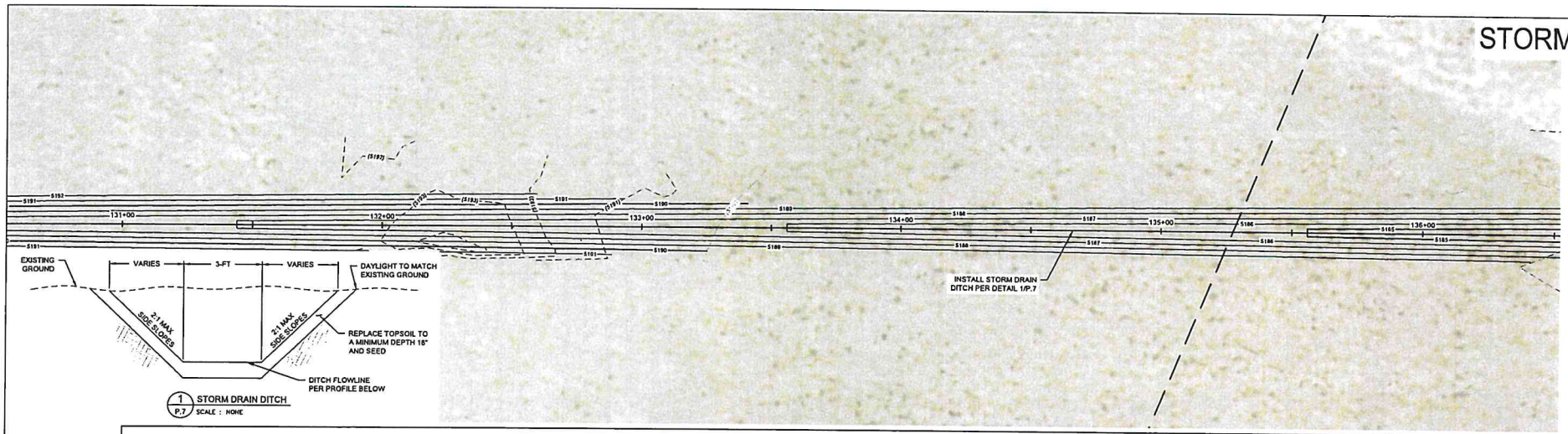
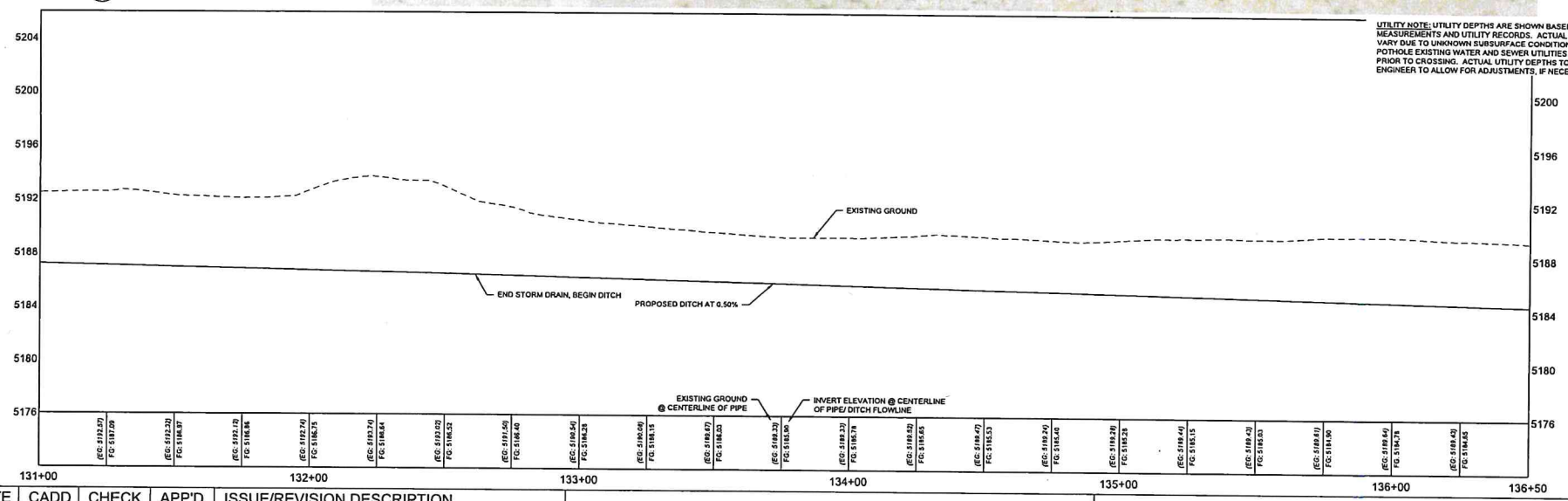
STORM DRAIN



1 P.7 STORM DRAIN DITCH
SCALE : NONE

UTILITY NOTE: UTILITY DEPTHS ARE SHOWN BASED ON SURFACE MEASUREMENTS AND UTILITY RECORDS. ACTUAL UTILITY DEPTH MAY VARY DUE TO UNKNOWN SUBSURFACE CONDITIONS. CONTRACTOR TO POTHOLE EXISTING WATER AND SEWER UTILITIES AT LEAST ONE WEEK PRIOR TO CROSSING. ACTUAL UTILITY DEPTHS TO BE REPORTED TO ENGINEER TO ALLOW FOR ADJUSTMENTS, IF NECESSARY.



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STORM DRAIN PLAN AND PROFILE STA: 131+00 - 136+50

0 20' 40'

SHEET P.7

FILENAME: 195522-C502-PP-Storm Drain.dwg

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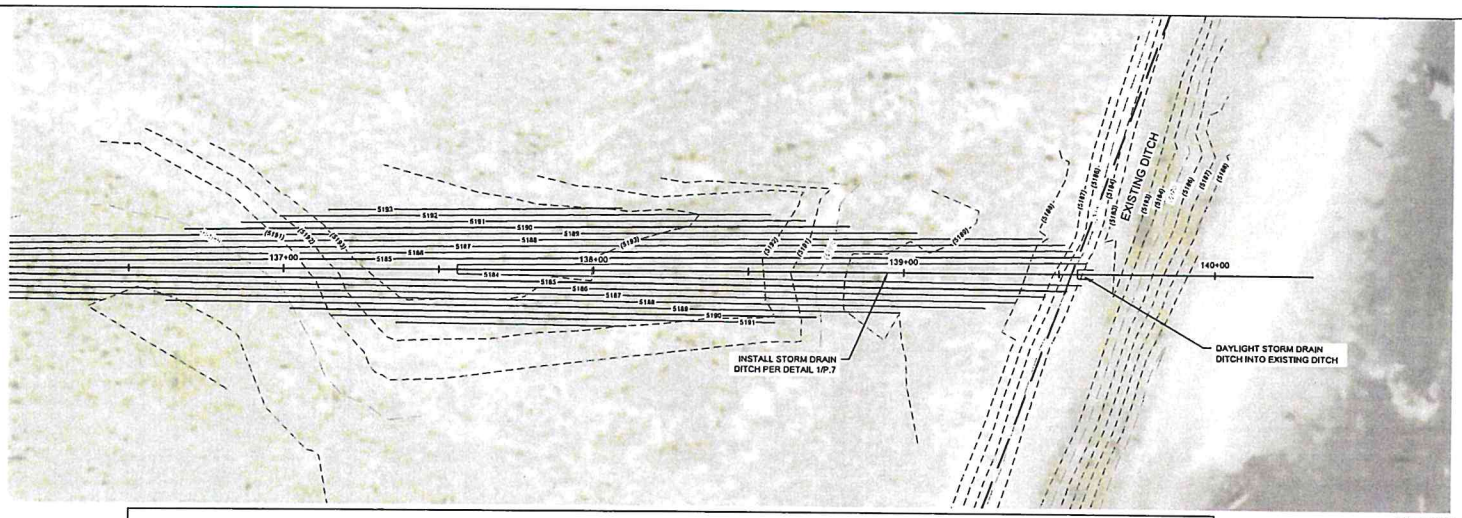
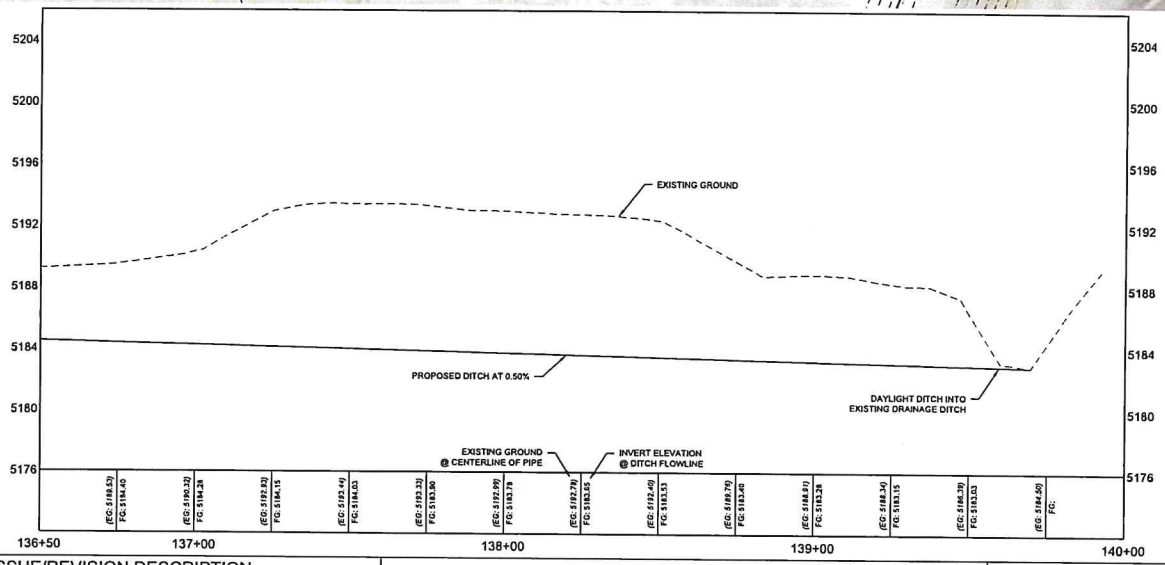
STORM DRAIN





UTILITY NOTE: UTILITY DEPTHS ARE SHOWN BASED ON SURFACE MEASUREMENTS AND UTILITY RECORDS. ACTUAL UTILITY DEPTH MAY VARY DUE TO UNKNOWN SUBSURFACE CONDITIONS. CONTRACTOR TO POTHOLE EXISTING WATER AND SEWER UTILITIES AT LEAST ONE WEEK PRIOR TO CROSSING. ACTUAL UTILITY DEPTHS TO BE REPORTED TO ENGINEER TO ALLOW FOR ADJUSTMENTS, IF NECESSARY.

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STORM DRAIN PLAN AND PROFILE STA: 136+50 - 140+00

SHEET P.8

FILENAME: 195522-C502-PP-Storm Drain.dwg

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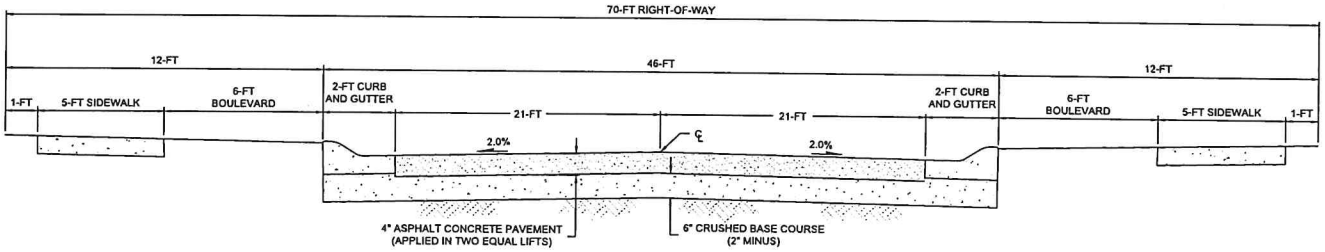
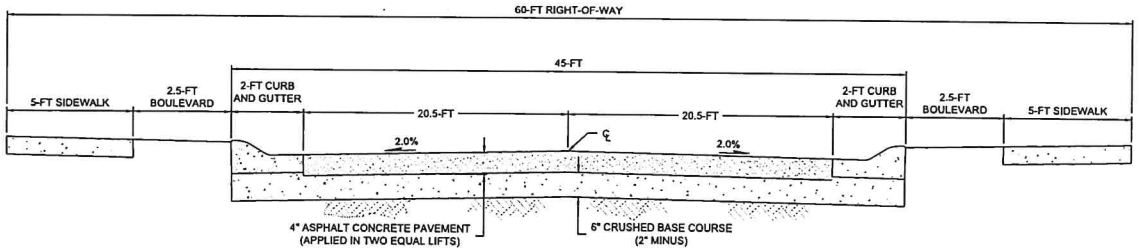


1 / D.1 TYPICAL SECTION NO.1
UNION AVENUE
SCALE : NONE

NOTE:
ASPHALT SHALL HAVE SINGLE SEAM AT CENTERLINE.



2 / D.1 TYPICAL SECTION NO.2
FILLMORE STREET
SCALE : NONE

NOTE:
ASPHALT SHALL HAVE SINGLE SEAM AT CENTERLINE.

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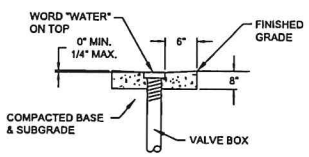
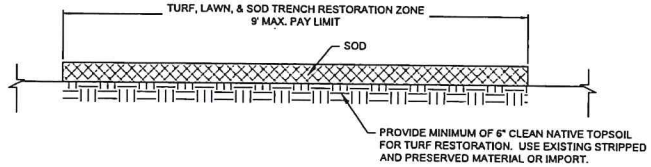
ROAD SECTIONS

SHEET
D.1

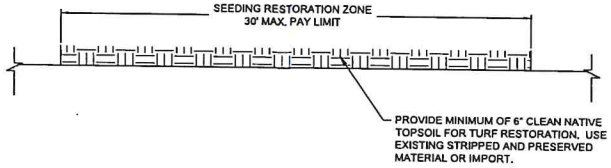


NOTES:
1. CONCRETE SHALL BE INSTALLED AROUND VALVE BOX IF BOX IS INSTALLED IN GRAVEL OR DIRT AREAS, VERIFY CONCRETE INSTALLATIONS WITH OWNER.
2. ADJUST WATER VALVES UPWARD OR DOWNWARD AS REQUIRED.
3. FINAL ADJUSTMENT SHALL BE MADE BEFORE POURING CONCRETE.
4. NO PAYMENT SHALL BE MADE FOR ADJUSTMENT OF NEW VALVES TO FINAL GRADE.
5. NO PAYMENT SHALL BE MADE FOR CONCRETE APRONS. THEY SHALL BE INCIDENTAL TO VALVE OR SERVICE LINE INSTALLATION.

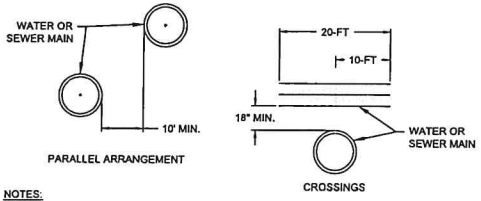
1 / D.2 DETAIL - WATER SERVICE CURB BOX AND GATE VALVE BOX IN CONCRETE
SCALE : NONE



2 / D.2 DETAIL - SOD SURFACE
SCALE: NONE

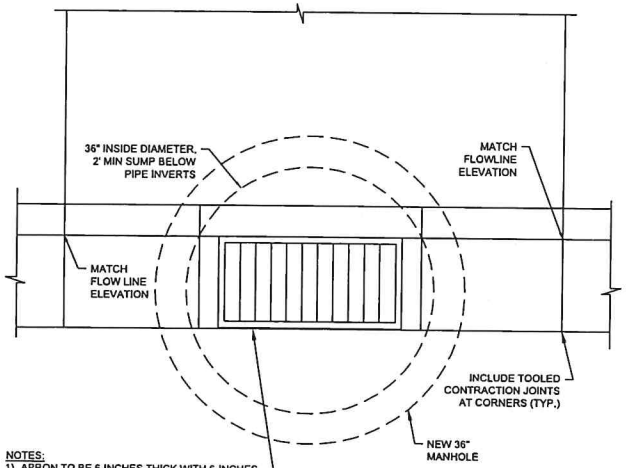


3 / D.2 DETAIL - INDIGENOUS TURF SURFACE RESTORATION
SCALE: NONE



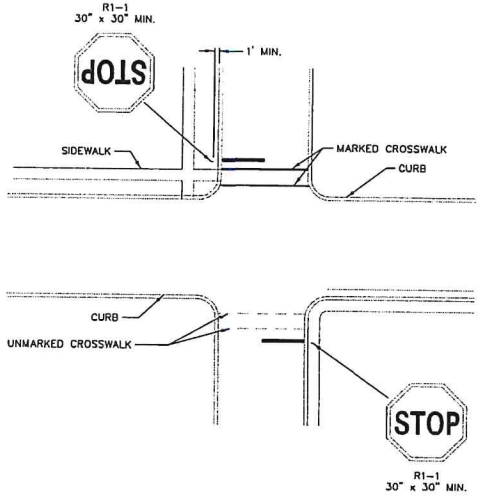
NOTES:
1. SPECIFIC MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY APPROVAL IS REQUIRED FOR A HORIZONTAL SEPARATION DISTANCE LESS THAN 10 FEET AND FOR A VERTICAL SEPARATION DISTANCE OF LESS THAN 1.5 FEET BETWEEN WATER MAIN AND GRAVITY STORM OR SANITARY SEWER MAIN.
2. ALL CROSSINGS SHALL BE ARRANGED SO THAT THE SEWER MAIN JOINTS WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE WATER MAIN BEING CROSSED.
3. ADEQUATE STRUCTURAL SUPPORT FOR PIPES AT CROSSINGS SHALL BE PROVIDED.

4 / D.2 DETAIL - WATER & SEWER MAIN SEPARATION
SCALE: NONE



NOTES:
1) APRON TO BE 6-INCHES THICK WITH 6-INCHES OF CRUSHED AGGREGATE COURSE.
2) ALL GRATES MUST BE CHECKED AFTER CONCRETE APRONS ARE FINISHED TO ENSURE THAT THEY CAN BE FREELY REMOVED AND ARE NOT CEMENTED CLOSED.
3) MANHOLE TO INCLUDE 2' SUMP BELOW INVERT ELEVATION.

5 / D.2 DETAIL - STORM DRAIN INLET APRON
SCALE : NONE



6 / D.2 DETAIL - STOP SIGN LAYOUT
SCALE : NONE

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SHEET D.2

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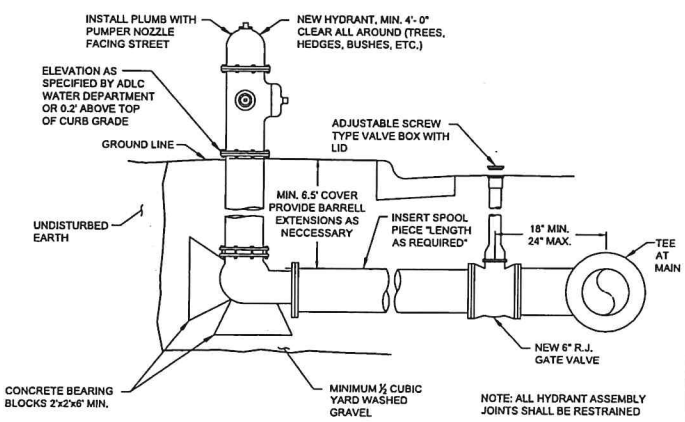
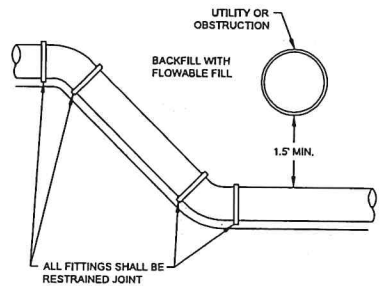
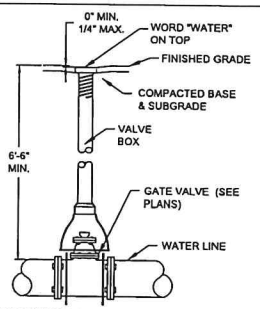


1 / D.3 DETAIL - NEW FIRE HYDRANT ASSEMBLY
SCALE : NONE



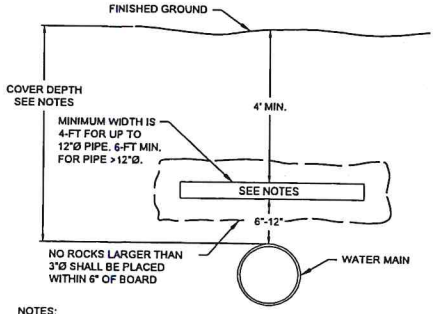
NOTE:
SEE PLAN AND PROFILE SHEETS FOR FITTING CALLOUTS AND LENGTH OF RESTRAINED JOINT PIPE.

2 / D.3 ADJUST WATER MAIN
SCALE : NONE



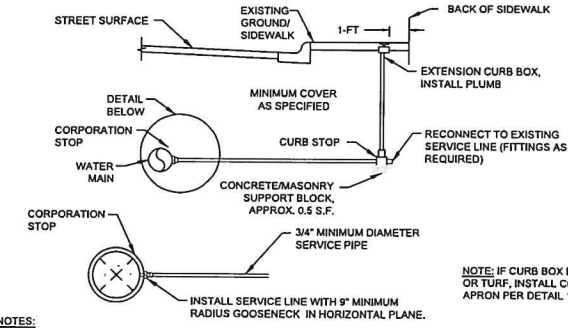
NOTES:
1. ADJUST WATER VALVES UPWARD OR DOWNWARD AS REQUIRED.
2. FINAL ADJUSTMENT SHALL BE MADE BEFORE PAVING.
3. NO PAYMENT SHALL BE MADE FOR ADJUSTMENT OF NEW VALVES TO FINAL GRADE.
4. SEE PLANS FOR VALVE LOCATIONS.

3 / D.3 DETAIL - NEW WATER MAIN GATE VALVE & BOX
SCALE : NONE



NOTES:
1. INSULATION BOARD SHALL BE STYROFOAM HI BRAND, OR AN APPROVED EQUAL AND SHALL COMPLY WITH AASHTO M230.
2. FOR COVER DEPTHS < 6.5-FT BUT > 5.0-FT US 2-INCH INSULATION THICKNESS.
3. FOR COVER DEPTHS < 5.0-FT BUT > 3.5-FT USE 4-INCH INSULATION THICKNESS.
4. COVER DEPTHS LESS THAN 3.5 FEET NOT PERMITTED.

4 / D.3 DETAIL - INSULATION BOARD
SCALE : NONE



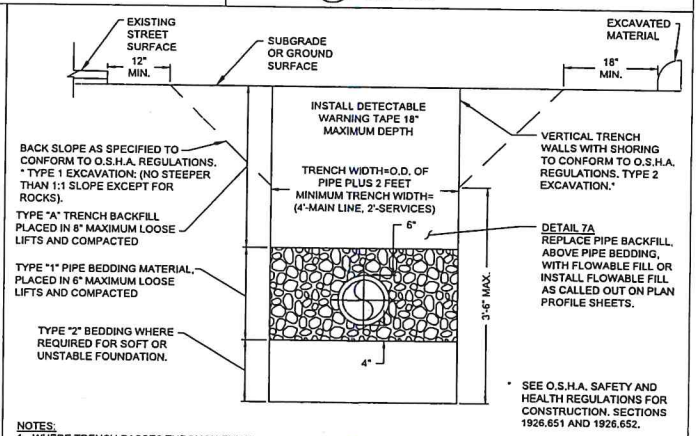
NOTE: IF CURB BOX IS IN GRAVEL OR TURF, INSTALL CONCRETE APRON PER DETAIL 1/D.1

NOTES:
1. MINIMUM COVER FOR SERVICE LINES SHALL BE MEASURED FROM EXISTING GROUND LINE WHEN GROUND IS LEVEL OR FALLING AWAY FROM STREET, AND MEASURED FROM TOP OF STREET CURB WHEN GROUND IS RISING AWAY FROM STREET.
2. WATER SERVICE LINES SHALL BE INSTALLED WHERE SHOWN ON THE DRAWINGS OR AS SPECIFIED.
3. BEDDING SHALL BE 1 INCH DIAMETER MAXIMUM WITHIN 6" OF SERVICE PIPE.
4. IF SERVICES ARE LESS THAN 12 INCHES APART HORIZONTALLY, CONTRACTOR TO STAGGER MAIN CONNECTION VERTICALLY TO PREVENT SPLITTING OF THE MAIN IN BETWEEN SERVICES.
5. ENSURE SERVICE PIPE IS DEBURRED ROUND AND NOT CREASED WHERE IT ENTERS CONNECTION FITTINGS (SEE SPECIFICATIONS).
6. QUANTITIES ASSUME THAT 6-FT OF CURB, 6-FT OF SIDEWALK (5-FT WIDE) AND ONE (1) SQUARE YARD OF SOD WILL BE REQUIRED TO BE REPLACED AT EACH SERVICE LINE LOCATION. ACTUAL CONCRETE AND SOD RESTORATION REQUIREMENTS WILL BE IDENTIFIED IN THE FIELD BY THE OWNER, CONTRACTOR, AND RPR ON A PER SERVICE BASIS.

5 / D.3 DETAIL - WATER SERVICE CONNECTION
SCALE : NONE

Fitting Type	Bury Depth	Diameter	Restraint Length (ft)
11.25 Bend	6	6	2
22.5 Bend			3
45 Bend			6
90 Bend			13
6x6 Tee			39
Dead End			39
8x6 Reducer		8	22
11.25 Bend			2
22.5 Bend			4
45 Bend			7
90 Bend			17
Tee			39
Dead End			51
11.25 Bend	4	6	2
22.5 Bend			4
45 Bend			8
90 Bend			19
Tee			57
Dead End			57
6x6 Reducer		8	32
11.25 Bend			3
22.5 Bend			5
45 Bend			10
90 Bend			24
Tee			57
Dead End			75

6 / D.3 RESTRAINED LENGTH TABLE
SCALE : NONE



* SEE O.S.H.A. SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION. SECTIONS 1926.651 AND 1926.652.

NOTES:
1. WHERE TRENCH PASSES THROUGH EXISTING PAVEMENT, THE PAVEMENT SHALL BE CUT ALONG A NEAT VERTICAL LINE A MINIMUM OF 12" FROM THE EDGE OF THE TRENCH OPENING. WHERE NEAT LINE IS LESS THAN 3 FEET FROM THE EDGE OF EXISTING PAVEMENT OR CURB AND GUTTER SECTION, REMOVE AND REPLACE ENTIRE PAVEMENT SECTION BETWEEN TRENCH AND EDGE OF PAVEMENT.
2. WHEN IN UNSTABLE OR SOFT MATERIAL, TRENCH WALLS SHALL BE BACK SLOPED FROM THE BOTTOM OF THE TRENCH. (TYPE 1 EXCAVATION). *

7 / D.3 DETAIL - TYPICAL UTILITY TRENCH
SCALE: NONE

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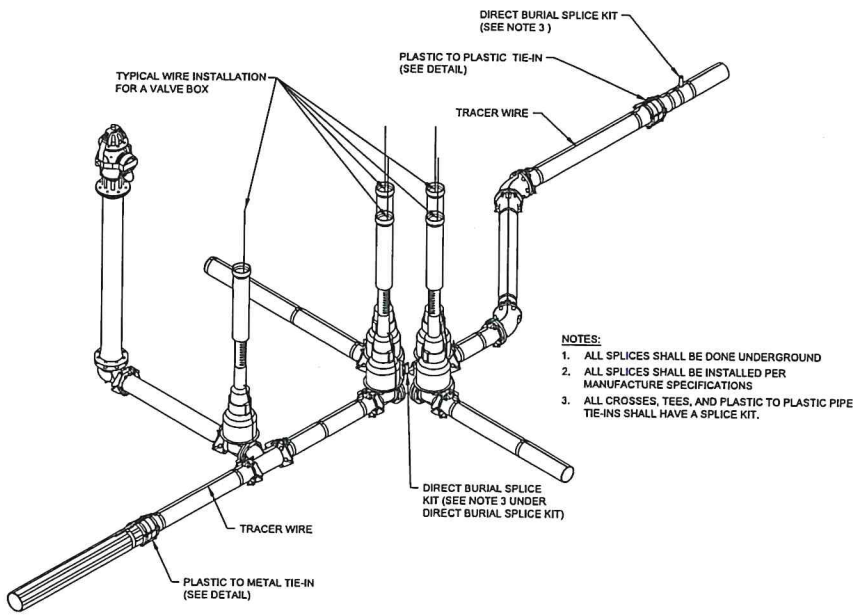
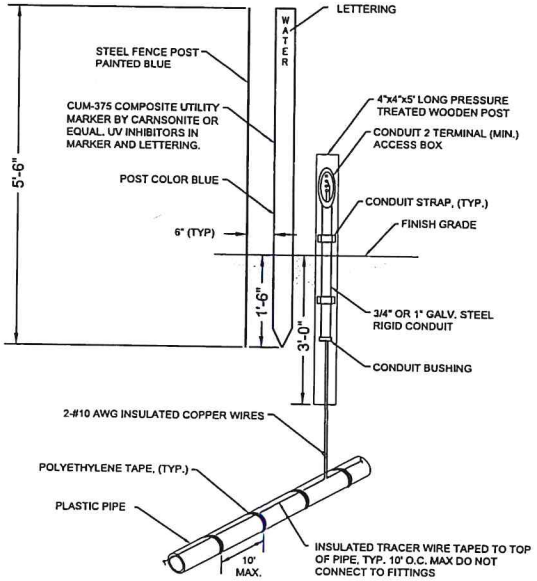
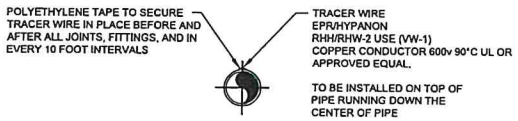


NOTES:

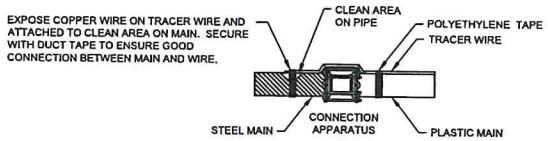
1. ALL SPLICES SHALL BE DONE UNDERGROUND
2. ALL SPLICES SHALL BE INSTALLED PER MANUFACTURE SPECIFICATIONS
3. ALL CROSSES, TEES, AND PLASTIC TO PLASTIC PIPE TIE-INS SHALL HAVE A SPLICE KIT.



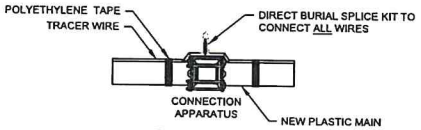
NOTE: UTILIZE WHERE NO PIPE APPURTENANCES AVAILABLE FOR TERMINATION.



TYPICAL TRACER WIRE INSTALLATION



PLASTIC TO METAL



PLASTIC TO PLASTIC

DIRECT BURIAL SPLICE KIT

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TRACER WIRE DETAILS

SHEET D.4

FILENAME: 195522=6601=DT.dwg

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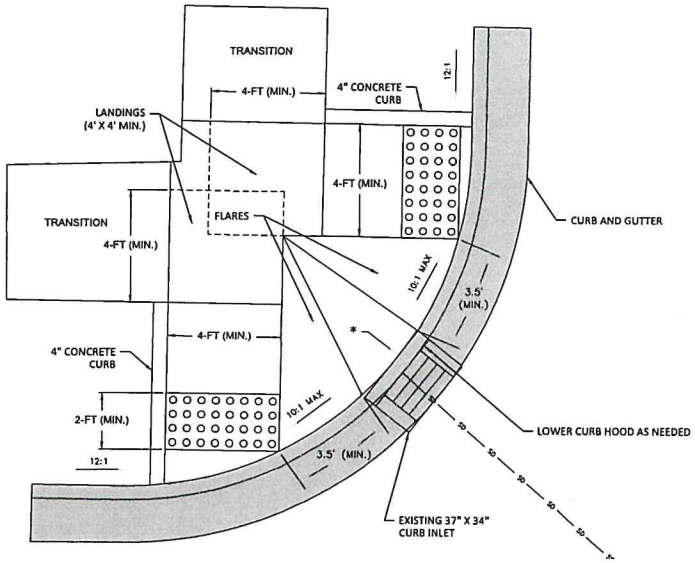
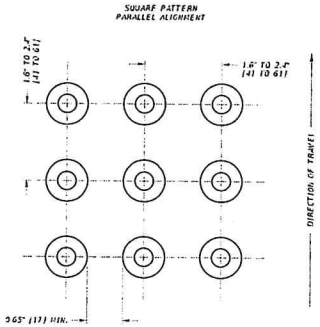
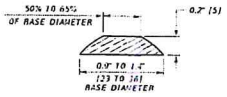


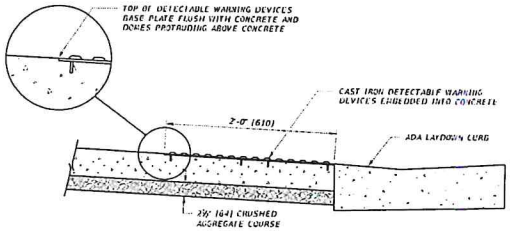
1 / D.5 DETAIL - CURB RAMP
SCALE : NONE



DETECTABLE WARNING DEVICES ALIGNMENT AND PATTERN



DOME PROFILE



SIDE VIEW

CONSTRUCTION REQUIREMENTS:

1. INSTALL DETECTABLE WARNING DEVICES THAT EXTEND THE FULL WIDTH OF THE RAMP, 2 FEET (610) IN DEPTH.
2. INSTALL THE DETECTABLE WARNING DEVICES ADJACENT TO THE BACK OF CURB UNLESS OTHERWISE SHOWN IN THE PLANS.
3. EMBED THE DETECTABLE WARNING DEVICES DIRECTLY INTO THE CONCRETE, SO THE TOP OF THE BASE PLATE IS FLUSH WITH THE CONCRETE AND THE DOMES PROTRUDE ABOVE THE ADJACENT CONCRETE SURFACE.
5. USE CAST IRON DETECTABLE WARNING DEVICES FROM THE DEPARTMENT'S QUALIFIED PRODUCTS LIST (QPL)
4. ENSURE A UNIFORM GRADE ON THE DETECTABLE WARNING DEVICES FREE OF SAGS AND IRREGULAR EDGES.
6. USE DETECTABLE WARNING DEVICES THAT VISUALLY CONTRAST WITH ADJACENT WALKWAY SURFACES.
7. ENSURE THE ALIGNMENT AND PATTERN OF THE DOMES IS CONTINUED ACROSS ANY JOINTS BETWEEN DETECTABLE WARNING DEVICES BASE PLATE.
8. DETECTABLE WARNING DEVICES SHALL BE CAST IN PLACE AND SHALL BE CAST IRON.

UNITS SHOWN IN BRACKETS [] ARE METRIC AND ARE IN MILLIMETERS (mm) UNLESS OTHER UNITS ARE SHOWN

--REVISED--
APRIL 2019

DETAILED DRAWING

REFERENCE STANDARD SPEC. SECTION 608	DWG. NO. 608-40

DETECTABLE WARNING DEVICES

EFFECTIVE: SEPTEMBER 2014

MDT MONTANA DEPARTMENT OF TRANSPORTATION

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ADA DETAILS

SHEET D.5