



## EXTERNAL MEMORANDUM

**To:** Town of Monument  
Planning Department  
645 Beacon Lite Rd.  
Monument, CO 80132

**From:** Nick Harris (on behalf of Forest Lakes Metropolitan District)  
Project Engineer  
RESPEC  
5540 Tech Center Drive, Suite 100  
Colorado Springs, CO 80919

**Date:** March 9, 2022

**Subject:** Falcon Commerce Center Filing No. 2 - Civil Construction Plans

We have reviewed the Falcon Commerce Center Filing No. 2 - Civil Construction Plans as they relate to potable water, sanitary sewer, and stormwater and have the following comments. Also attached are redlined Civil Construction Plans, Sheets C100, C301, C302, C501, C502, C511, C512, and C513

### POTABLE WATER

See drawing sheets for  
comment responses

/ In general, the developer may want to consider water stubs off the 12-inch in Terrazzo Dr for future adjacent property use.

/ On Sheet C501, the northern 8-inch water stub meant to connect to the Eagle Rock parcel has been removed by Eagle Rock. Consider removing that connection.

/ On sheet C501, a note at the end of the 12-inch water line refers to sheet CXXX for design. Update CXXX to the correct sheet.

/ On Sheet C511, remove the southern half of the water lowering at Station 16+92. Realign the vertical profile to provide a maximum of 0% slope going south to north up to the crossing. See attached redline drawing.

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Suite 100  
Colorado Springs, CO 80919  
719.227.0072



- / On Sheet C512, remove the southern half of the water lowering at Station 31+81. Realign the vertical profile to provide a maximum of 0% slope going south to north up to the crossing. See attached redline drawing.
- / On Sheet 512, the double water line lowering at Station 25+00 creates a high spot in the main which could collect air. Either an air relief valve needs to be installed at Station 25+30 or remove the southern half of the water lowering at Station 25+25. Realign the vertical profile to provide a maximum of 0% slope going south to north up to the crossing. See attached redline drawing.
- / On Sheet C512, Could the double lowering be converted to a larger single lowering using a 22.5° or 11.25° bend as shown in the attached redline drawings?

#### SANITARY SEWER

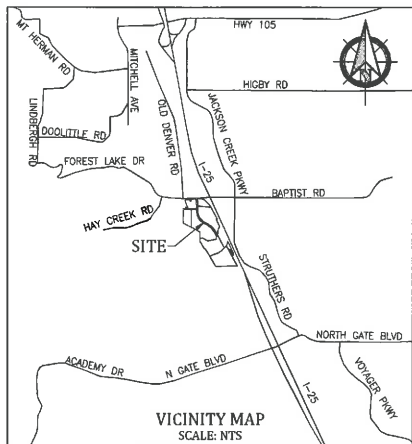
- / On Sheet C301, C302, and C513, the required drop through a sanitary sewer manhole is 0.2-feet
- / On Sheet 302, when multiple sewer pipes enter the same manhole, the crowns of the influent pipes match in elevation.
- / ON Sheet C501, the sanitary sewer connection in the cul-de-sac on the south end of Terrazzo Dr. does not match the Eagle Rock design. Coordinate with Eagle Rock to ensure both FCC and Eagle Rock designs match at the connection point between the two plan sets.

#### STORM SEWER

- / On Sheet C502, it appears that there is a significant drop through the manhole at Station 18+59. Could the drop through this manhole be reduced? This reduction could allow the depth of the water line lowering under the proposed storm sewer to be reduced as well.

JDS Comments  
3/9/22

FALCON COMMERCE CENTER FILING NO. 2  
CIVIL CONSTRUCTION PLANS  
TERRAZZO DRIVE EXTENSION AND UTILITY IMPROVEMENTS  
MONUMENT, COLORADO



INDEX OF SHEETS	
C100	COVER SHEET
C101	NOTES SHEET
C201	OVERALL EXISTING CONDITIONS/DEMOLITION PLAN
C202	CIVIL SITE PLAN
C301-C302	TERRAZZO DRIVE PLAN AND PROFILE
C303	STRIPING AND SIGNAGE PLAN
C304	DETAIL SHEETS
C400	COVER SHEET - GRADING AND EROSION CONTROL PLAN
C401-C402	GRADING AND EROSION CONTROL PLAN
C411-C413	DETAIL SHEET - EROSION CONTROL PLAN
C501	UTILITY PLAN
C502-C504	STORM SEWER PLAN AND PROFILES
C505-C506	DETAIL SHEET - DRAINAGE
C511-C512	WATERLINE PLAN & PROFILES
C513	SANITARY SEWER STUB PLAN & PROFILES
C514-C516	DETAIL SHEET - WATER AND WASTEWATER

LEGEND	
	PROPERTY OR ROW LINE
	EXISTING ROW LINE
	EXISTING EASEMENT
	PROPOSED EASEMENT
	EXISTING WATER LINE
	EXISTING SANITARY SEWER AND FLOW DIRECTION
	EXISTING STORM SEWER
	EXISTING UNDERGROUND ELECTRIC LINE
	EXISTING OVERHEAD ELECTRIC LINE
	EXISTING UNDERGROUND TELEPHONE LINE
	EXISTING FIBER OPTIC LINE
	EXISTING GAS LINE
	EXISTING 100 YEAR FLOODPLAIN
	PROPOSED CURB AND GUTTER
	PROPOSED SIDEWALK
	CURB RAMP TYPICAL - REFER TO DETAILS
	EXISTING FIRE HYDRANT
	EXISTING WATER VALVE
	EXISTING WATER METER
	EXISTING GAS VALVE
	EXISTING SANITARY SEWER MANHOLE
	EXISTING SANITARY SEWER CLEAN OUT
	EXISTING STORM SEWER MANHOLE
	EXISTING WATER MANHOLE
	PROPOSED WATER LINE OR SERVICE AND VALVE
	PROPOSED WATER LINE, THRUST BLOCK & MJ RSTNS
	PROPOSED FIRE HYDRANT
	UTILITY CAP/PLUG OR INTERFACE
	PROPOSED SANITARY SEWER AND MANHOLE
	PROPOSED STORM CURB INLET
	EXISTING FENCE
	EXISTING STREET LIGHT
	EXISTING CONTOURS
	PROPOSED CONTOURS
	EXISTING SPOT ELEVATION
	PROPOSED SPOT ELEVATION
	EXISTING FLOW DIRECTION AND SLOPE
	PROPOSED FLOW DIRECTION AND SLOPE

**TOWN OF MONUMENT ACCEPTANCE:**  
These plans have been reviewed by the Town of Monument staff and found to be in general compliance with Town of Monument and Triview standards. It is the responsibility of the site engineer and general contractor to ensure construction is in compliance with these plans and in conformance with the Town of Monument Design Criteria & Construction Specifications, Regulations, Triview Metropolitan District Design Criteria Construction Specifications, and the City of Colorado Springs Drainage Criteria manuals Volumes 1 and 2 shall prevail in any instances where these plans differ with those requirements. The Development Services department shall be notified if any changes need to be made.

Town of Monument \_\_\_\_\_ Date \_\_\_\_\_

**FOREST LAKES METROPOLITAN DISTRICT ACCEPTANCE:**  
These plans have been reviewed by Forest Lakes Metropolitan District and found to be in general compliance with the Town of Monument and Forest Lakes standards. It is the responsibility of the site engineer and general contractor to ensure construction is in compliance with these plans and specifications.

Forest Lakes Metropolitan District \_\_\_\_\_ Date \_\_\_\_\_

FALCON COMMERCE CENTER FILING NO. 2  
CIVIL CONSTRUCTION PLANS  
COVER SHEET  
MONUMENT, COLORADO

**Kiowa**  
Engineering Corporation  
1604 South 21st Street  
Colorado Springs, Colorado 80904  
(719) 630-7342

Project No: 21057  
Date: February 4, 2022  
Design: MWE/MTR  
Drawn: MTR  
Check: MWE

Revisions:  
1. \_\_\_\_\_  
2. \_\_\_\_\_  
3. \_\_\_\_\_  
4. \_\_\_\_\_  
5. \_\_\_\_\_

SHEET  
**C100**  
OF 26 SHEETS

**PRE-EXCAVATION CHECKLIST**

- ☐ GAS AND OTHER UTILITY LINES OF RECORD SHOWN ON PLANS.
- ☐ UTILITIES CENTRAL LOCATING CALLED AT LEAST 2 BUSINESS DAYS AHEAD.
- ☐ UTILITIES LOCATED AND MARKED.
- ☐ EMPLOYEES BRIEFED ON MARKING AND COLOR CODES.\*
- ☐ EMPLOYEES TRAINED ON EXCAVATION AND SAFETY PROCEDURES FOR NATURAL GAS LINES.
- ☐ WHEN EXCAVATION APPROACHES GAS LINES, EMPLOYEES EXPOSE LINES BY CAREFUL PROBING AND HAND DIGGING.

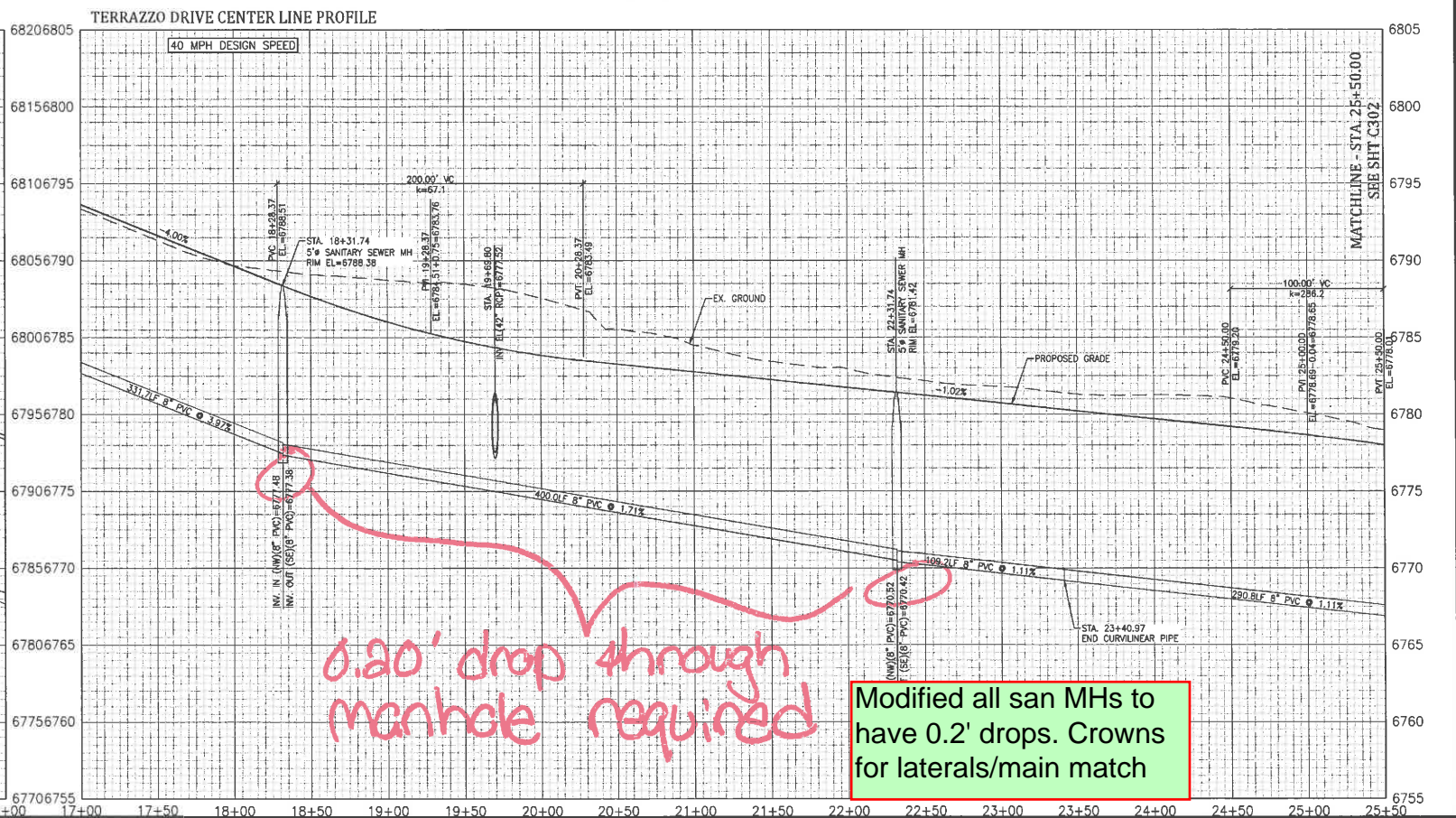
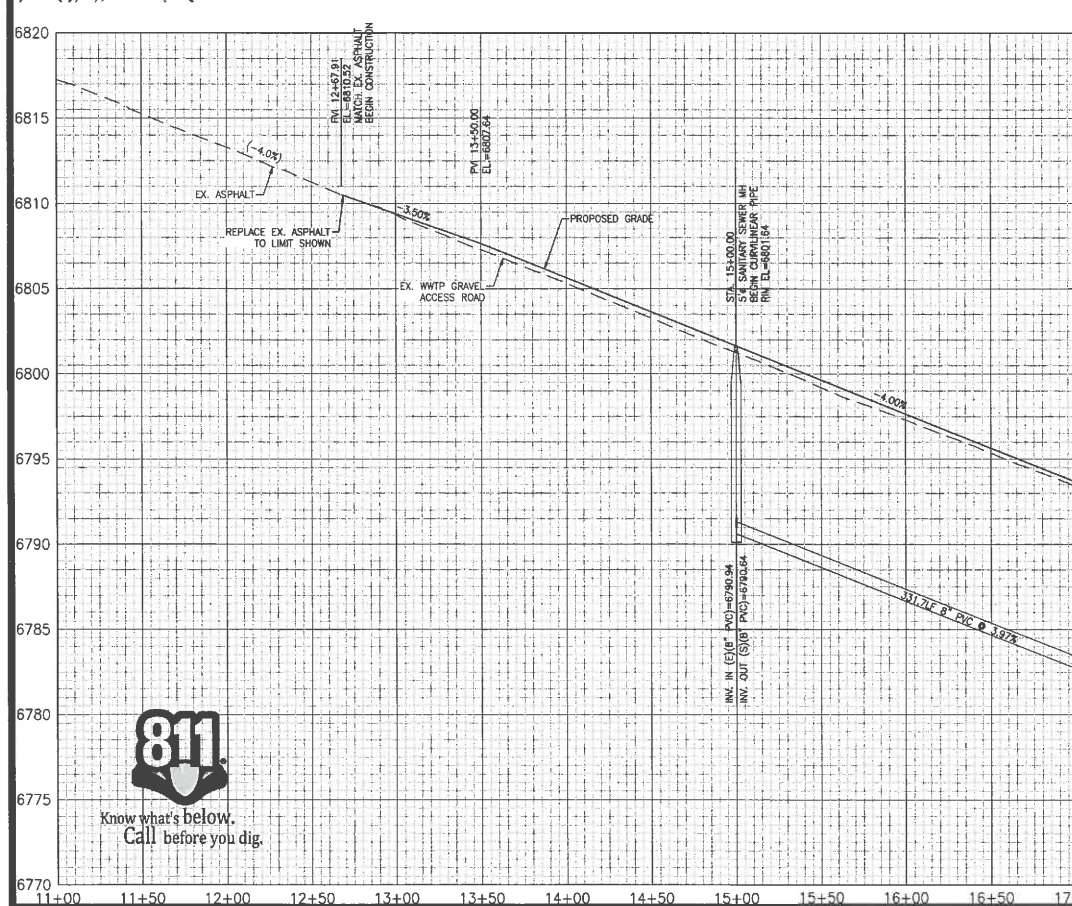
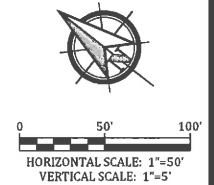
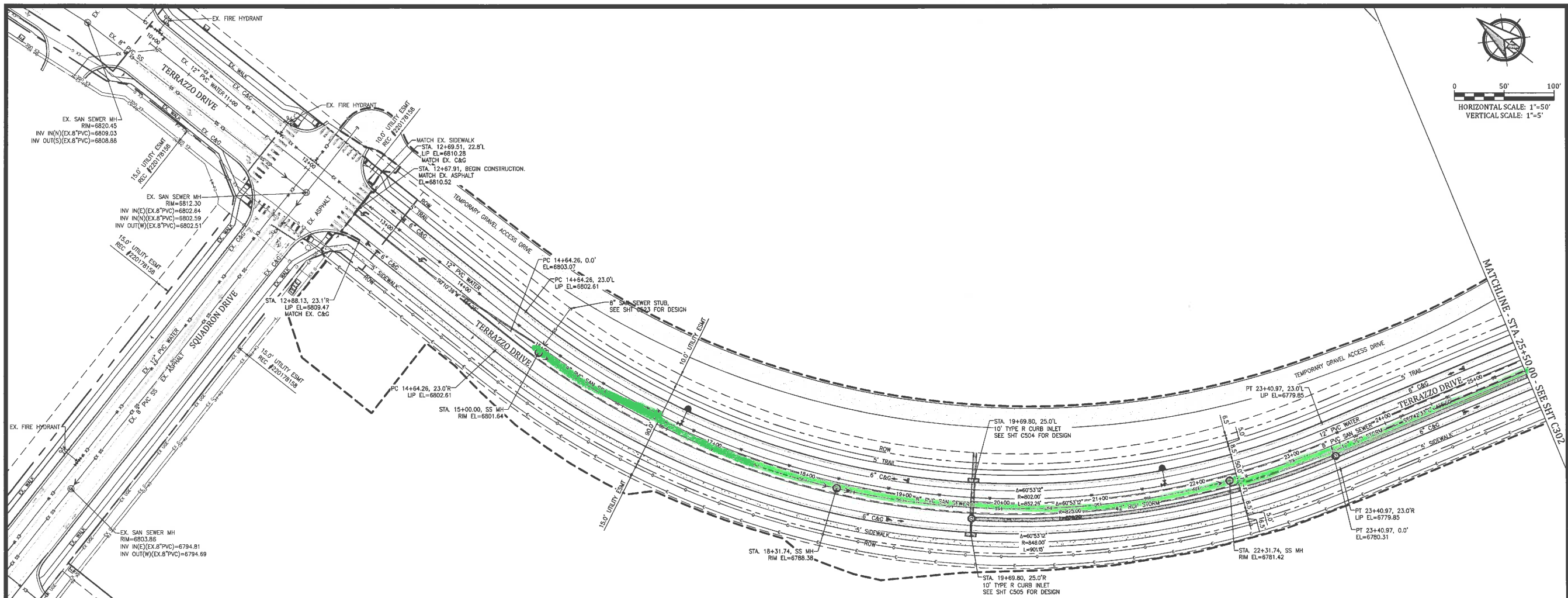
\*A.G.A./A.P.W.A. STANDARD UTILITY MARKING COLOR CODE  
NATURAL GAS YELLOW WATER BLUE  
ELECTRIC RED WASTEWATER GREEN

**811**  
Know what's below.  
Call before you dig.

ABBREVIATIONS		
ASSY = ASSEMBLY	NTS = NOT TO SCALE	
BDY = BOUNDARY	OD = OUTSIDE DIAMETER	
BOP = BOTTOM OF PIPE	PC = POINT OF HORIZONTAL CURVATURE	
C&G = CURB & GUTTER	PLBG = PLUMBING	
CL = CENTERLINE	POC = POINT OF CONNECTION	
CO = CLEAN OUT	PP = PROPOSED	
CRA = CONCRETE REVERSE ANCHOR	PRC = POINT OF REVERSE CURVE	
CR = POINT OF CURB RETURN	PROP = PROPERTY	
CS = CROSS SLOPE	PT = POINT OF HORIZONTAL TANGENCY	
CTB = CONCRETE THRUST BLOCK	PVC = POLY VINYL CHLORIDE PIPE	
DIP = DUCTILE IRON PIPE	PVC = POINT OF VERTICAL CURVATURE	
DTL = DETAIL	PVI = POINT OF VERTICAL INTERSECTION	
EL = ELEVATION	PVT = POINT OF VERTICAL TANGENCY	
EOA = EDGE OF ASPHALT	R = RADIUS	
ESMT = EASEMENT	R = RIGHT	
EX = EXISTING	RCP = REINFORCED CONCRETE PIPE	
FC = FACE OF CURB	RD = ROOF DRAIN (STORM LINE)	
FES = FLARED END SECTION	ROW = RIGHT OF WAY	
FLG = FLANGE	RT = RIGHT	
FL = FLOWLINE	QL = QUALITY LEVEL	
GB = GRADE BREAK	SH = SHEET	
GI = GREASE INTERCEPTOR	SOI = SAND OIL INTERCEPTOR	
HP = HIGH POINT	SS = SANITARY SEWER	
HORZ = HORIZONTAL	STA = STATION	
HYD = HYDRANT	STD = STANDARD	
ID = INSIDE DIAMETER	TA = TOP OF ASPHALT	
L = LEFT	TB = THRUST BLOCK	
LT = LEFT	TC = TOP OF CURB	
LF = LINEAR FEET	TGA = TOP OF ASPHALT	
LP = LOW POINT	TGC = TOP OF CONCRETE	
MAX = MAXIMUM	TOP = TOP OF PIPE	
MH = MANHOLE	TYP = TYPICAL	
MIN = MINIMUM	VC = VERTICAL CURVE	

CONTACTS		
SERVICE	ENTITY	POINT OF CONTACT
DEVELOPER/OWNER	Forest Lakes LLC	Tom Blunk 847-905-0085
CIVIL ENGINEER	Kiowa Engineering Corporation 7175 West Jefferson Ave, #2200 Lakewood, CO 80235	Matthew Erichsen, PE (303) 692-0369
COMMUNITY: DRAINAGE, STREET	Town of Monument	Tom Martinez 719-884-8036
WASTEWATER & WATER:	Forest Lakes Metro District District Engineer: JDS Hydro	Nick Harris 719-227-0072
FIRE:	Tri-Lakes Monument Fire Protection District	James Bumgarner 719-484-0911
GAS:	Black Hills Energy	Bob Swatek 719-332-5856
ELECTRIC:	Mountain View Electric Association	Les Uffers 719-494-2682
PHONE:	CenturyLink	Andrew Hekkers 719-355-7346
	Comcast	Scott Delaney 720-202-4734





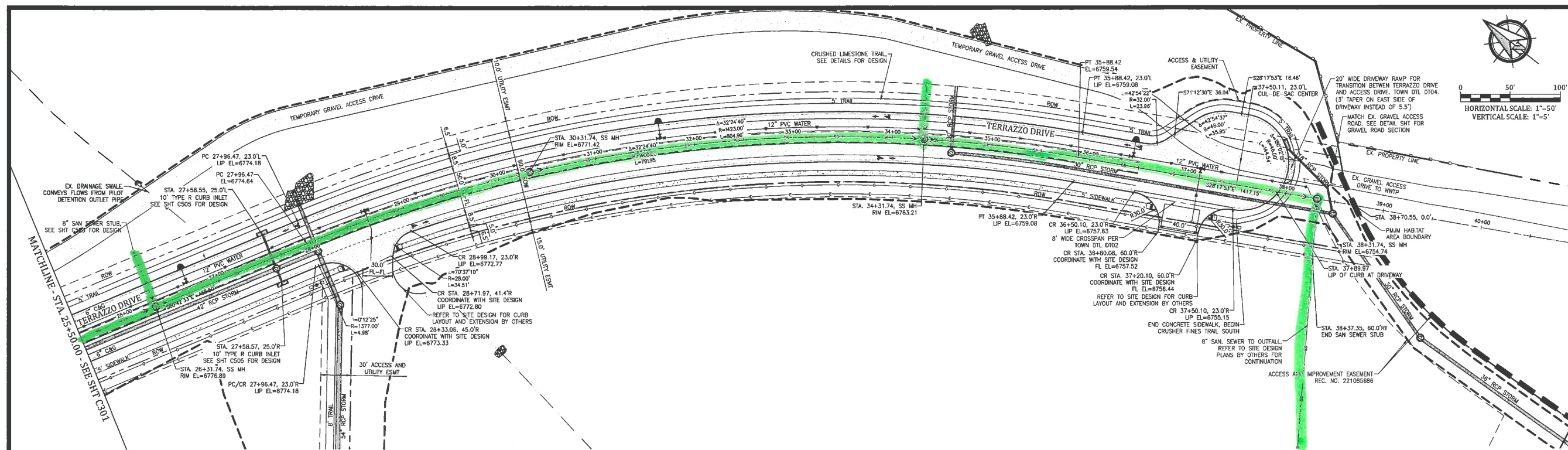
0.20' drop through manhole required

Modified all san MHs to have 0.2' drops. Crowns for laterals/main match

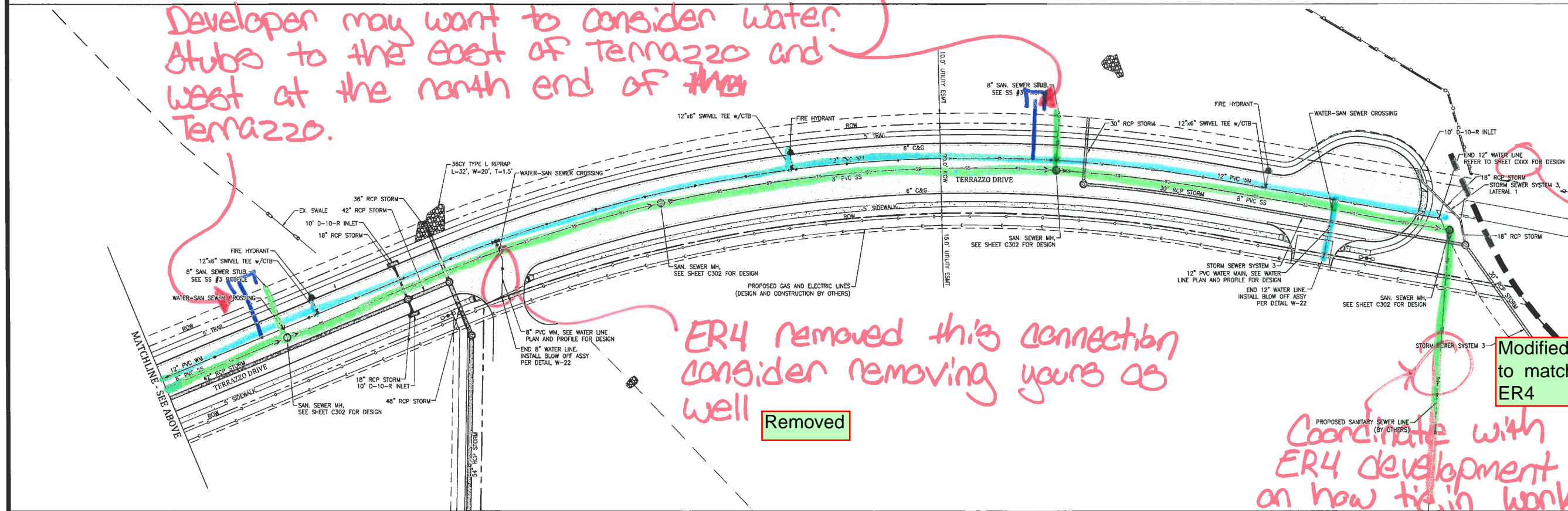
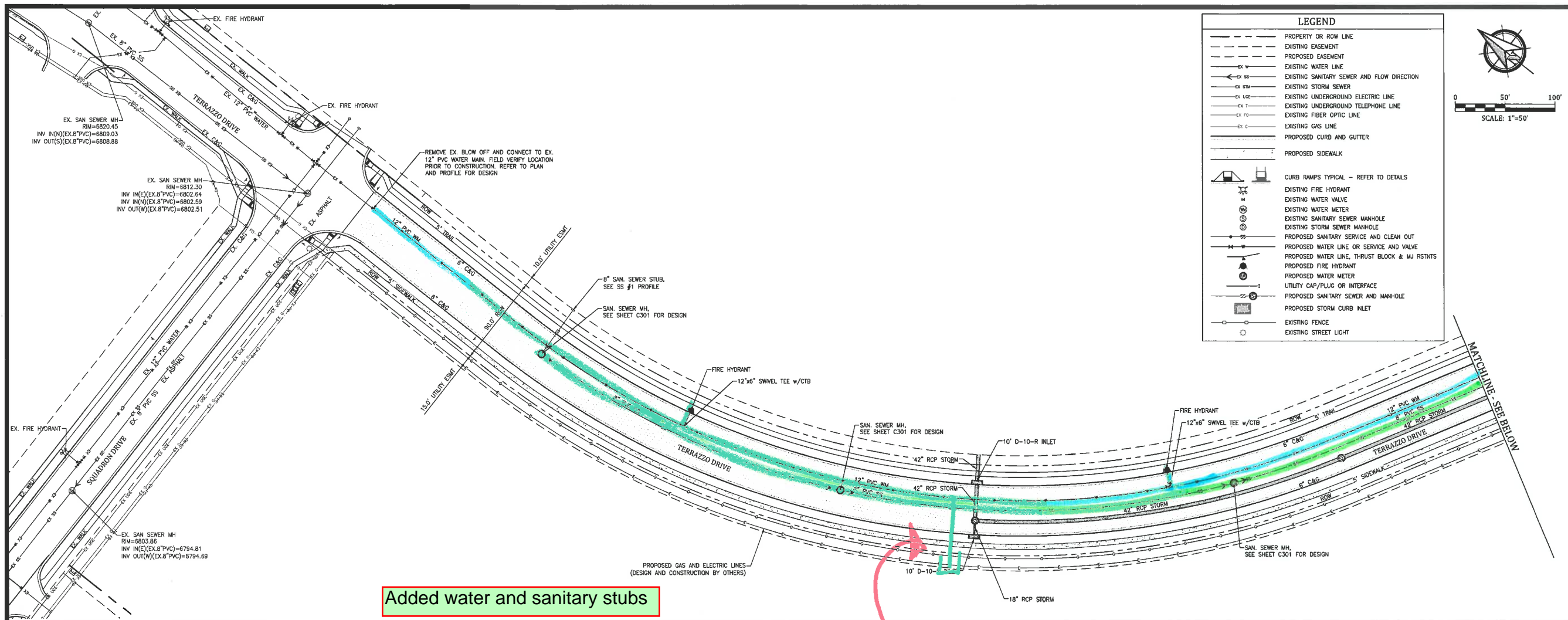
**FALCON COMMERCE CENTER FILING NO. 2**  
**CIVIL CONSTRUCTION PLANS**  
**TERRAZZO DRIVE PLAN AND PROFILE**  
MONUMENT, COLORADO

Project No: 21057  
Date: February 4, 2022  
Design: MWE/MTR  
Drawn: MTR  
Check: MWE  
Revisions:



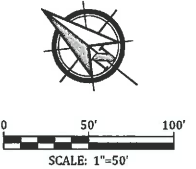






**LEGEND**

---	PROPERTY OR ROW LINE
- - - -	EXISTING EASEMENT
- - - -	PROPOSED EASEMENT
EX W	EXISTING WATER LINE
EX SS	EXISTING SANITARY SEWER AND FLOW DIRECTION
EX STM	EXISTING STORM SEWER
EX UOE	EXISTING UNDERGROUND ELECTRIC LINE
EX T	EXISTING UNDERGROUND TELEPHONE LINE
EX FO	EXISTING FIBER OPTIC LINE
EX G	EXISTING GAS LINE
---	PROPOSED CURB AND GUTTER
---	PROPOSED SIDEWALK
CURB RAMP TYPICAL - REFER TO DETAILS	
EX FHY	EXISTING FIRE HYDRANT
EX WV	EXISTING WATER VALVE
EX WM	EXISTING WATER METER
EX SMH	EXISTING SANITARY SEWER MANHOLE
EX STMH	EXISTING STORM SEWER MANHOLE
SS	PROPOSED SANITARY SERVICE AND CLEAN OUT
WV	PROPOSED WATER LINE OR SERVICE AND VALVE
W	PROPOSED WATER LINE, THRUST BLOCK & MJ RSTNTS
FHY	PROPOSED FIRE HYDRANT
WM	PROPOSED WATER METER
UOI	UTILITY CAP/PLUG OR INTERFACE
SS-MH	PROPOSED SANITARY SEWER AND MANHOLE
STMH	PROPOSED STORM CURB INLET
EX F	EXISTING FENCE
EX SL	EXISTING STREET LIGHT



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**UTILITY PLAN**  
MONUMENT, COLORADO

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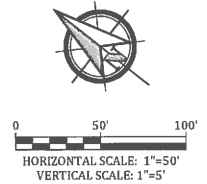
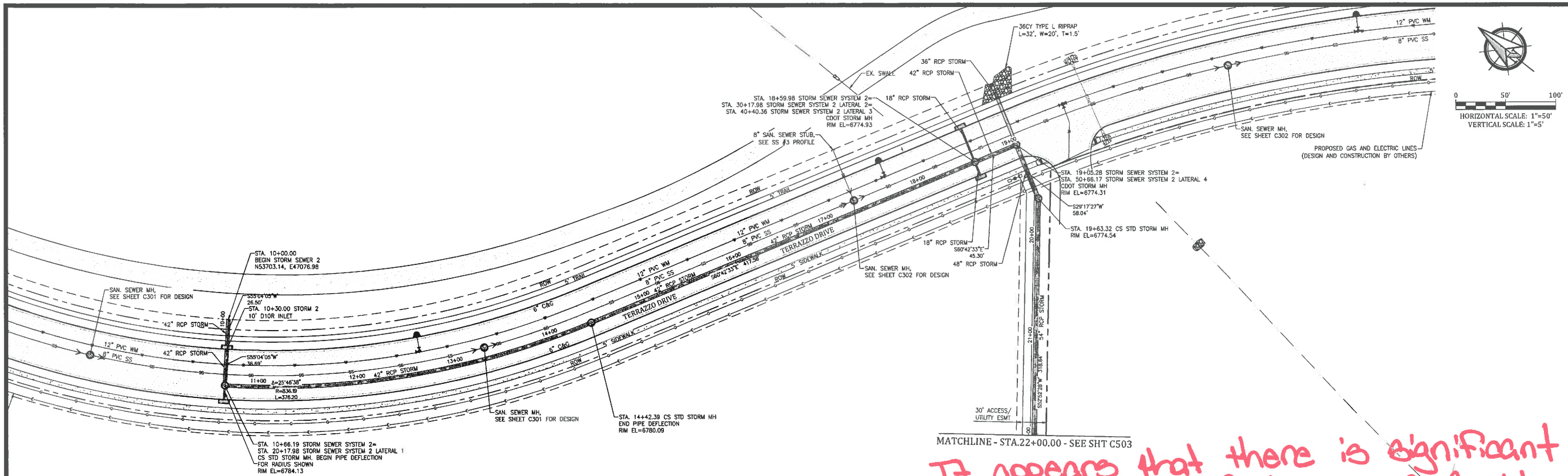
SHEET  
**C501**  
OF 26 SHEETS

Added  
What sheet

Modified  
to match  
ER4

Coordinate with  
ER4 development  
on how tie-in work  
and where it is.

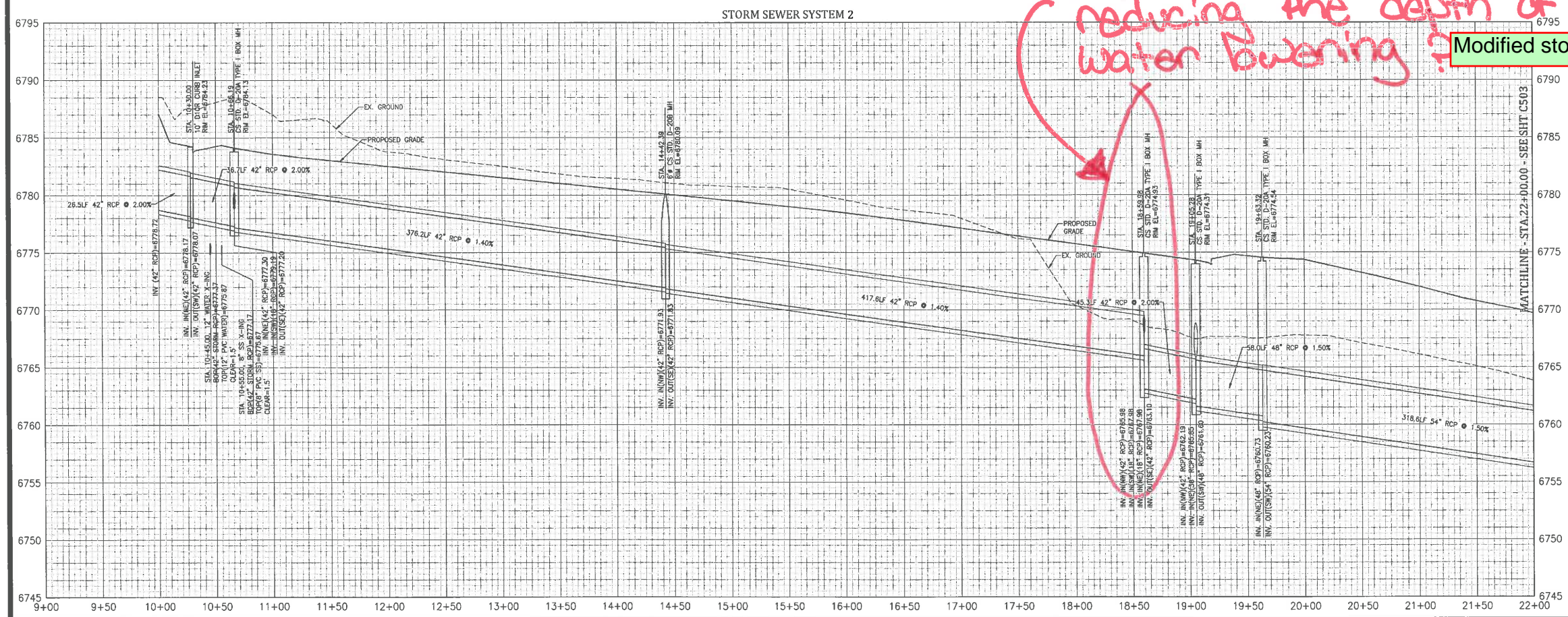




MATCHLINE - STA.22+00.00 - SEE SHT C503

It appears that there is significant fall through MH @ Sta 18+59. Could the fall be reduced to reduce the depth of the storm sewer thus reducing the depth of the required water lowering?

Modified storm depth



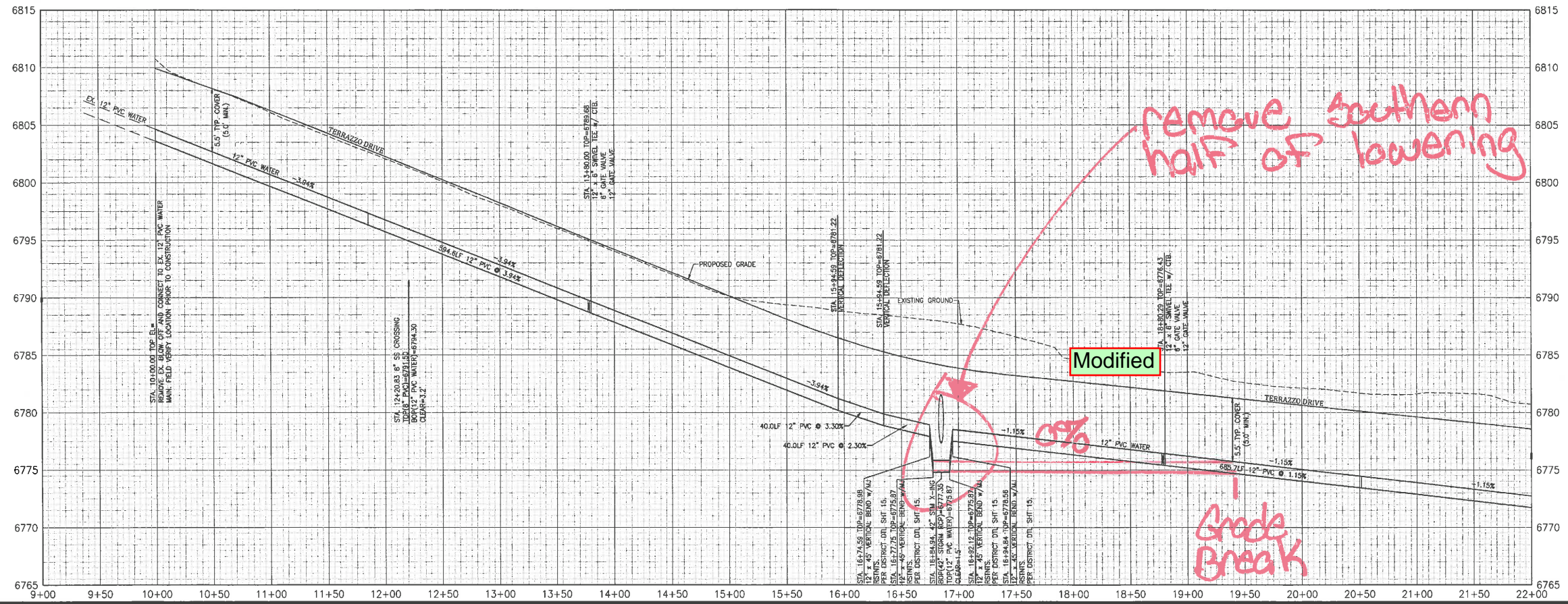
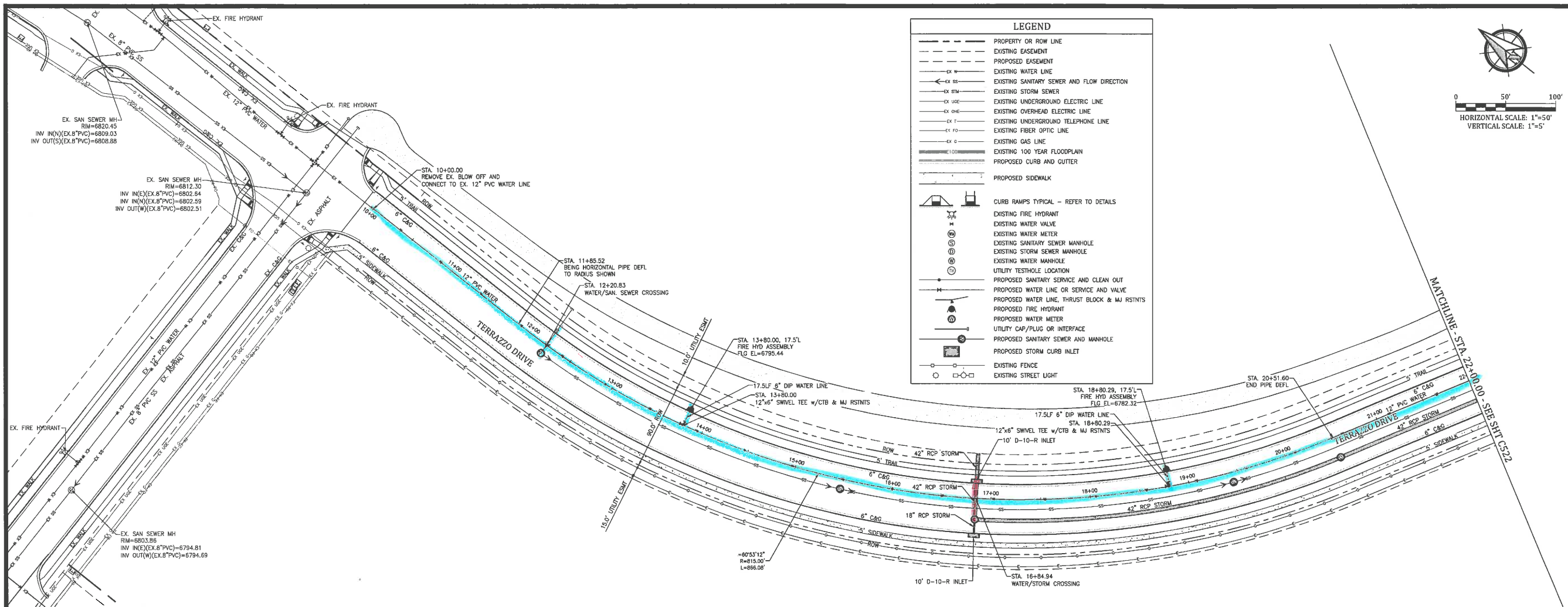
**Kiowa**  
Engineering Corporation  
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Colorado Springs, Colorado 80904  
(719) 630-7342

**FALCON COMMERCE CENTER FILING NO. 2**  
**CIVIL CONSTRUCTION PLANS**  
**STORM SEWER PLAN AND PROFILE**  
MONUMENT, COLORADO

Project No.:	21057
Date:	February 4, 2022
Design:	MWE/MTR
Drawn:	MTR
Check:	MWE
Revisions:	

SHEET  
**C502**  
OF 26 SHEETS





**FALCON COMMERCE CENTER FILING NO. 2**  
**CIVIL CONSTRUCTION PLANS**  
**WATER LINE PLAN AND PROFILE**  
**MONUMENT, COLORADO**

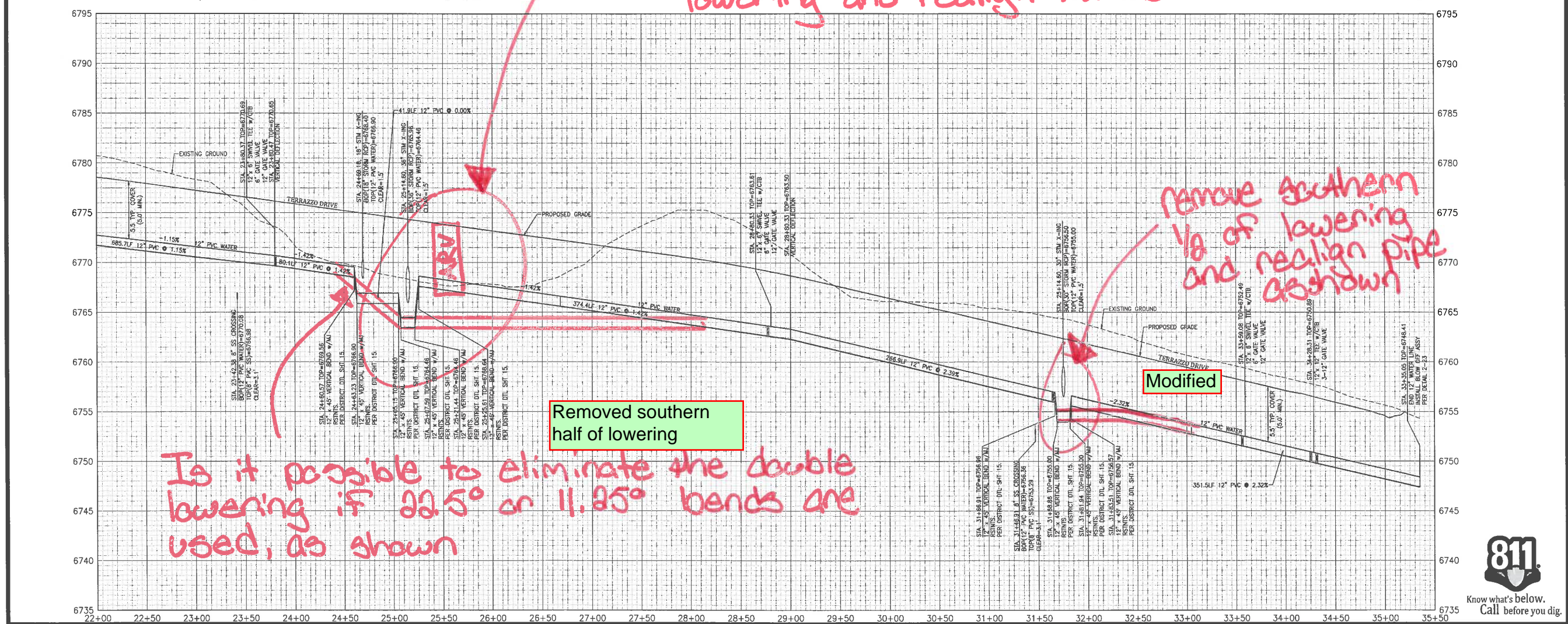
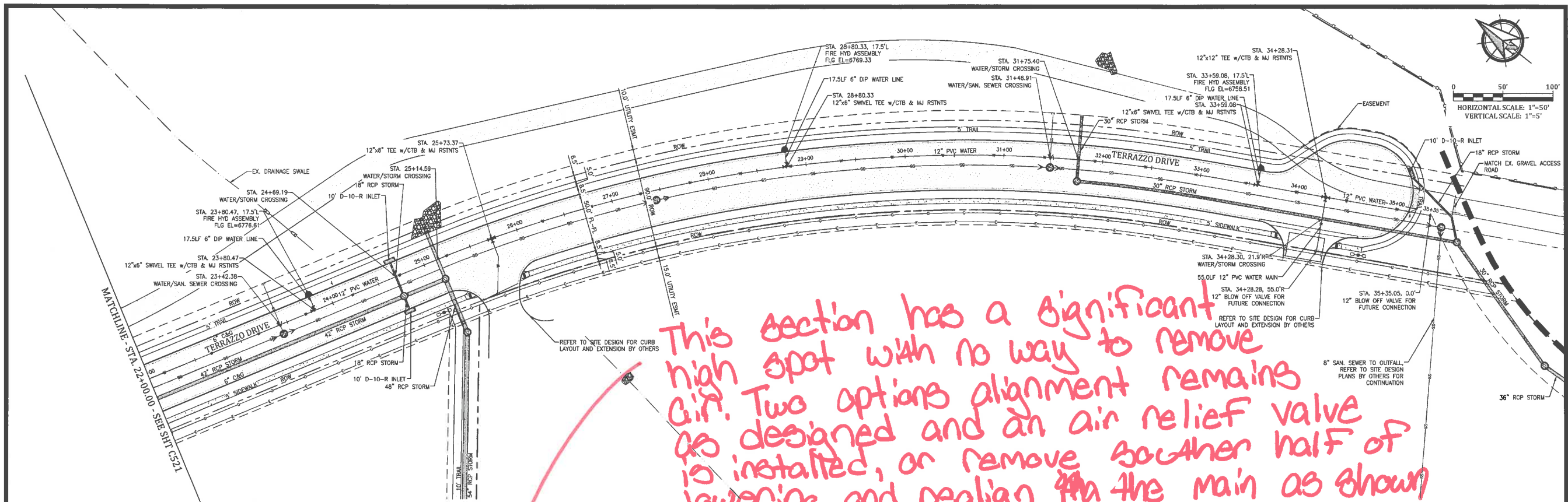
Project No: 21057  
 Date: February 4, 2022  
 Design: MWE/MTR  
 Drawn: MTR  
 Check: MWE  
 Revisions:

SHEET  
**C511**  
 OF 26 SHEETS



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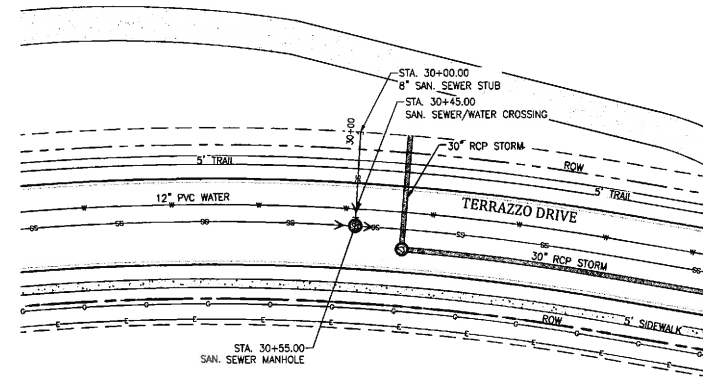
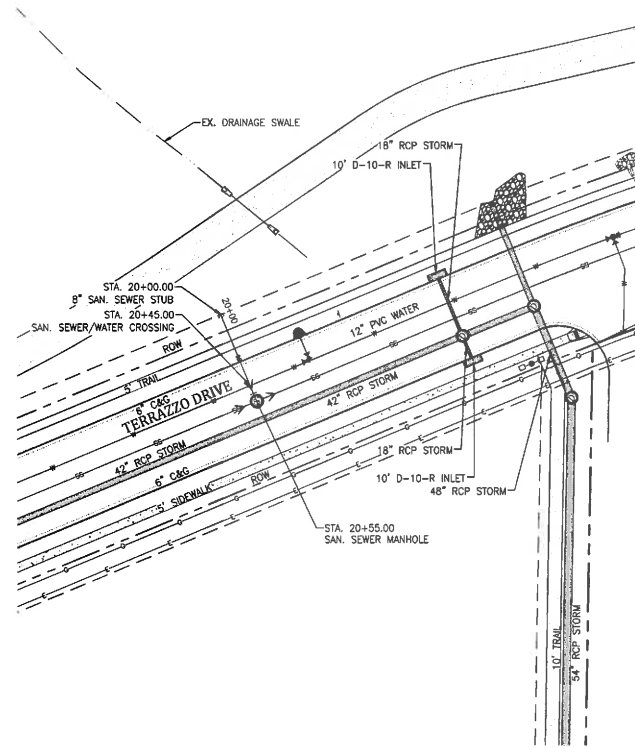
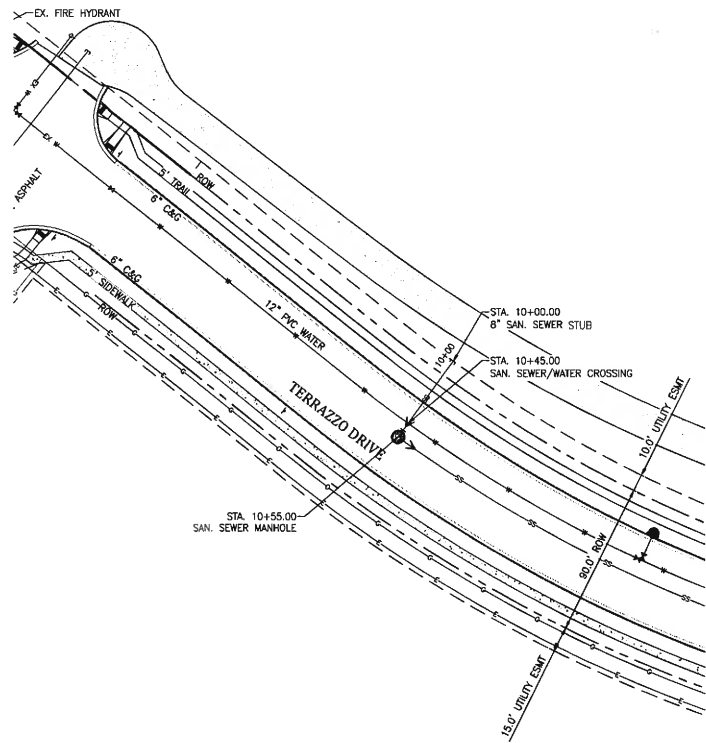


**FALCON COMMERCE CENTER FILING NO. 2**  
**CIVIL CONSTRUCTION PLANS**  
**WATER LINE PLAN AND PROFILE**  
MONUMENT, COLORADO

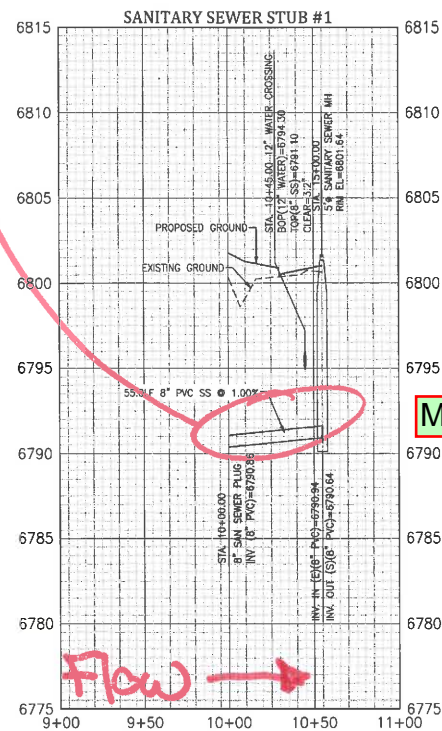
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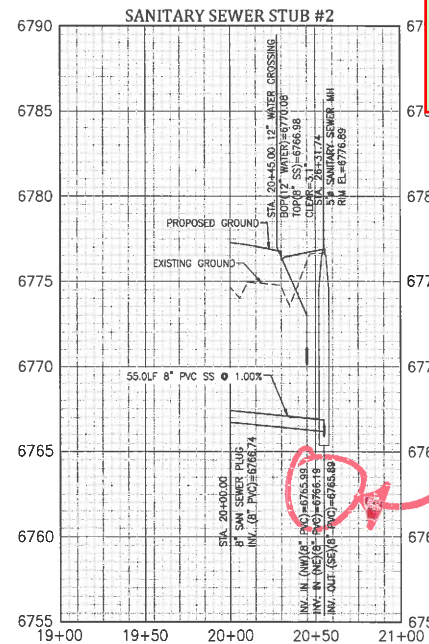




Sewer is sloped  
the wrong direction

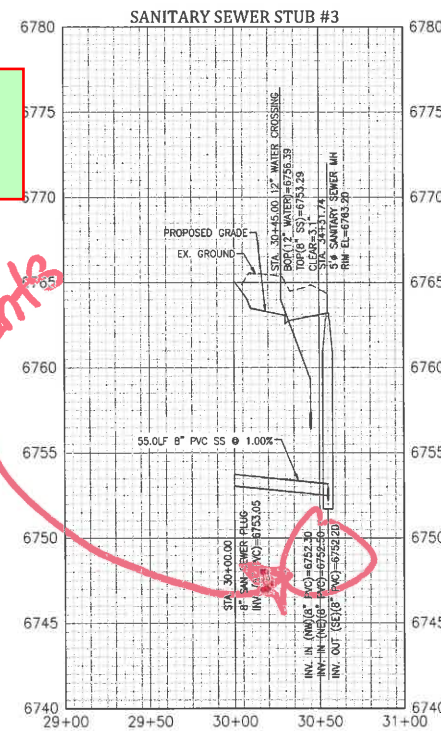


Modified



Modified all san MHs to  
have 0.2' drops. Crows  
for laterals/main match

See Previous  
invent Comments



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**FALCON COMMERCE CENTER FILING NO. 2**  
**CIVIL CONSTRUCTION PLANS**  
**SANITARY SEWER STUB PLAN AND PROFILES**  
MONUMENT, COLORADO

Project No:	21057
Date:	February 4, 2022
Design:	MWE/MTR
Drawn:	MTR
Check:	MWE
Revisions:	

SHEET

**C513**

OF 26 SHEETS