PUBLIC IMPROVEMENT CONSTRUCTION PLANS

DAWSON TRAILS BLVD OFFSITE SANITARY SEWER
LOCATED IN PORTIONS OF SECTIONS 10, 11, 15, 22, & 27, TOWNSHIP 8 SOUTH,
RANGE 66 WEST OF THE 6TH PRINCIPAL MERIDIAN, TOWN OF CASTLE ROCK, COUNTY OF DOUGLAS, STATE OF COLORADO.
TOWN OF CASTLE ROCK PROJECT NO. CD23-0002

CONTACTS

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NOTES

1. CONTRACTOR TO VERIFY LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION.
2. CONTRACTOR SHALL FIELD VERIFY THE LOCATION AND DEPTH OF ALL UTILITY CROSSINGS PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER OF ANY CONFLICTS OR DISCREPANCIES WHICH WOULD IMPACT THE CONSTRUCTION OF THE PROPOSED UTILITIES PRIOR TO THE START OF CONSTRUCTION.
3. CONTRACTOR TO VERIFY THE LOCATION OF ALL ADJACENT PROPERTY BOUNDARIES PRIOR TO CONSTRUCTION. NO IMPROVEMENTS SHALL BE PERMITTED ON ADJACENT PROPERTIES UNLESS SPECIFICALLY NOTED IN THESE PLANS WITH PROPER ENCROACHMENT DOCUMENTATION IN PLACE.

TECHNICAL CODE VARIANCES

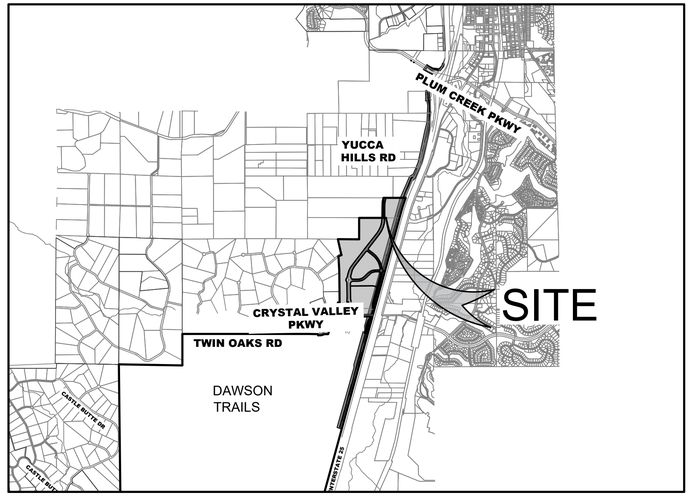
TOCR VARIANCE #TCV23-0021
TOCR WW CRITERIA MANUAL
- SECTION 4.4.8 SANITARY SEWERS AND MANHOLES GREATER THAN TWENTY FEET SECTION

DESCRIPTION:
MANHOLE DEPTH TO BE ALLOWED GREATER THAN TWENTY FEET THROUGHOUT MULTIPLE SECTIONS OF SANITARY SEWER INTERCEPTOR.

CONDITIONS OF APPROVAL: XXXX
APPROVAL DATE: XXXX

FLOODZONE NOTE

THERE ARE THREE (3) MAJOR DRAINAGEWAYS LOCATED WITHIN THE SITE, INCLUDING GAMBLE RIDGE TRIBUTARY, GAMBLE RIDGE NORTH TRIBUTARY, AND UNNAMED TRIBUTARY. THIS PORTION OF THE SITE IS IDENTIFIED AS FEMA FLOOD ZONE X, ON FIRM PANELS 08035C0282G AND 08035C0284G DATED MARCH 16, 2016. THE FLOODPLAINS SHOWN ON THE DRAINAGE MAPS ARE 100-YEAR TOWN FLOODPLAINS.



VICINITY MAP

0 1,000' 2,000'

1 inch = 1,000 ft.

FIELD CHANGE ORDER

FCO No.	SUBMITTAL DATE	DESCRIPTION	APPROVAL DATE

INDEMNIFICATION AND ADHERENCE TO STANDARDS STATEMENT

THESE PLANS HAVE BEEN REVIEWED BY THE TOWN OF CASTLE ROCK FOR CONCEPT ONLY. THE REVIEW DOES NOT IMPLY RESPONSIBILITY BY THE REVIEWING DEPARTMENT, THE TOWN ENGINEER, OR THE TOWN OF CASTLE ROCK FOR ACCURACY AND CORRECTNESS OF THE CALCULATIONS. FURTHERMORE, THE REVIEW DOES NOT IMPLY THAT QUANTITIES OF ITEMS ON THE PLANS ARE THE FINAL QUANTITIES REQUIRED. THE REVIEW SHALL NOT BE CONSTRUED FOR ANY REASON AS ACCEPTANCE OF FINANCIAL RESPONSIBILITY BY THE TOWN FOR ADDITIONAL QUANTITIES OF ITEMS SHOWN THAT MAY BE REQUIRED DURING THE CONSTRUCTION PHASE.

ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE TOWN OF CASTLE ROCK MUNICIPAL CODE, TECHNICAL MANUALS, AND/OR OTHER TOWN-APPROVED APPLICABLE STANDARDS.

JOSEPH F. FERRIS, PE #55846
CORE CONSULTANTS, INC.
3475 S. BROADWAY
ENGLEWOOD, CO 80113
PHONE (303) 730-5975

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7	DEMO PLAN (4 OF 5)
8	DEMO PLAN (5 OF 5)
9	OVERALL SANITARY PLAN
10	SANITARY P&P (1 OF 15)
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25	DETAILS (1 OF 2)
26	DETAILS (2 OF 2)

BASIS OF BEARING
BEARINGS SHOWN HEREON ARE BASED UPON THE NORTH LINE OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 22, TOWNSHIP 8 SOUTH, RANGE 67 WEST, BEARING S 89°31'22" E, FROM THE WEST SIXTEENTH CORNER OF SECTIONS 22/15, BEING MONUMENTED BY A #6 REBAR WITH A 2-1/2 INCH ALUMINUM CAP STAMPED "LS 5112 - 1994", TO THE NORTH QUARTER CORNER OF SAID SECTION 22 BEING MONUMENTED BY A #6 REBAR WITH A 2-1/2 INCH ALUMINUM CAP STAMPED "LS 38002 - 2020", WITH ALL BEARINGS CONTAINED HEREIN RELATIVE THERETO.

BENCHMARK
THE ELEVATION AND CONTOURS SHOWN HEREON ARE BASED UPON NGS STATION X 396 (PID KK1331). BEING A STANDARD NGS STEEL DEEPROD, WITH A PUNCHMARK, IN A STANDARD NGS LOGO CAP SET IN A CONCRETE SLEEVE, FLUSH TO THE GROUND. MONUMENT LIES 0.25 MI SOUTH OF THE INTERSECTION OF DOUGLAS LANE LEADING EAST, 121.1 FT EAST OF THE CENTERLINE OF THE NORTHBOUND LANES OF INTERSTATE 25, 86.6 FT SOUTH OF THE CENTER OF A PRIVATE DRIVE LEADING EAST TO A FRAME HOUSE, 38.1 FT EAST OF THE CENTERLINE OF THE EAST FRONTAGE ROAD OF INTERSTATE 25, 5.6 FT NORTH OF A UTILITY POLE, ABOUT LEVEL WITH THE HIGHWAY, AND 1 FT WEST OF A FIBERGLASS WITNESS POST AND SHEEP FENCE. PUBLISHED ELEVATION = 6355.09' NAVD88

PROFESSIONAL ENGINEER CERTIFICATION

I HEREBY AFFIRM THAT THESE FINAL CONSTRUCTION PLANS WERE PREPARED UNDER MY DIRECT SUPERVISION, IN ACCORDANCE WITH ALL APPLICABLE TOWN OF CASTLE ROCK AND STATE OF COLORADO STANDARDS AND STATUTES, RESPECTIVELY; AND THAT I AM FULLY RESPONSIBLE FOR ALL DESIGN AND REVISIONS RELATIVE TO SAID PLANS.

JOSEPH F. FERRIS
STATE OF COLORADO # 55846

TOWN APPROVAL BLOCK

TOWN OF CASTLE ROCK APPROVAL
PLANS ARE HEREBY APPROVED FOR ONE YEAR FROM DATE OF DEVELOPMENT SERVICES APPROVAL.

APPROVED BY:

DEVELOPMENT SERVICES DATE

DAWSON TRAILS BLVD OFFSITE SANITARY SEWER
CONSTRUCTION DOCUMENTS
PROJECT NO. CD23-0002

CORE CONSULTANTS, INC.
3473 S. BROADWAY
ENGLEWOOD, CO 80113
303.703.4444
LIVEYOURCORE.COM

LAND DEVELOPMENT | ENERGY | PUBLIC INFRASTUCTURE

CORE

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

#	REVISION DESCRIPTION	DATE	BY
1	1ST SUBMITTAL	12/22/22	KR
2	2ND SUBMITTAL	04/26/23	JF

DAWSON TRAILS OFFSITE SANITARY SEWER
CASTLE ROCK, COLORADO
CONSTRUCTION DOCUMENTS
COVER

WESTSIDE

DESIGNED BY: JB
DRAWN BY: MB
CHECKED BY: JF

JOB NO. 20-224

SHEET 1 OF 26

2021-09-11 (4:30 PM) X:\20-224 Dawson\Civil\CAD\Plans\Sanitary Offsite\CDs COVER SHEET & NOTES.dwg

GENERAL NOTES

1. ALL MATERIALS, WORKMANSHIP, AND CONSTRUCTION OF PUBLIC IMPROVEMENTS SHALL MEET OR EXCEED THE STANDARDS AND SPECIFICATIONS SET FORTH IN THE TOWN OF CASTLE ROCK (TCR) MUNICIPAL CODE, TCR TECHNICAL MANUALS, AND APPLICABLE STATE AND FEDERAL REGULATIONS. WHERE THERE IS CONFLICT BETWEEN THESE PLANS AND THE TECHNICAL MANUAL OR ANY APPLICABLE STANDARDS, THE MORE STRINGENT STANDARD SHALL APPLY. ALL WORK SHALL BE INSPECTED AND APPROVED BY THE TCR CONSTRUCTION INSPECTOR.

2. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE.

3. THE CONTRACTOR MUST CALL THE LOCAL UTILITY LOCATION CENTER AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF THE UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY PERTINENT LOCATIONS AND ELEVATIONS, ESPECIALLY AT CONNECTION POINTS AND AT POTENTIAL UTILITY CONFLICTS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES THAT CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS.

4. THE CONTRACTOR SHALL COORDINATE AND COOPERATE WITH THE TOWN AND ALL UTILITY COMPANIES INVOLVED WITH REGARD TO RELOCATIONS OR ADJUSTMENTS OF EXISTING UTILITIES DURING CONSTRUCTION AND TO ASSURE THAT THE WORK IS ACCOMPLISHED IN A TIMELY FASHION AND WITH A MINIMUM DISRUPTION OF SERVICE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL PARTIES AFFECTED BY ANY DISRUPTION OF ANY UTILITY SERVICE.

5. CONTRACTOR SHALL PROVIDE A MINIMUM SEVENTY-TWO (72) HOURS NOTICE TO THE ON-SITE TCR CONSTRUCTION INSPECTOR, (720) 733-2200, PRIOR TO MAKING ANY CONNECTIONS/TIE-INS TO EXISTING WATER, SANITARY SEWER, AND/OR STORM SEWER SYSTEMS PROVIDED THAT THE UTILITY TIE-IN DOES NOT DISRUPT SERVICE TO EXISTING CR WATER CUSTOMERS. IF THE TIE-IN WILL DISRUPT UTILITY SERVICE, THEN CONTRACTOR SHALL PROVIDE A MINIMUM OF THREE (3) WEEKS NOTICE TO THE TCR CONSTRUCTION INSPECTOR TO ALLOW TIME FOR CR WATER TO PROVIDE WRITTEN NOTIFICATION TO EXISTING CUSTOMERS AFFECTED BY THE TIE-IN. ALL TOWN UTILITY TIE-INS MUST BE APPROVED BY CR WATER PRIOR TO COMMENCING WORK.

6. THE CONTRACTOR SHALL HAVE ONE (1) SIGNED COPY OF THE APPROVED PLANS, ONE (1) COPY OF THE APPROPRIATE CRITERIA AND SPECIFICATIONS, AND A COPY OF ANY PERMITS AND EXTENSION AGREEMENTS NEEDED FOR THE JOB ONSITE AT ALL TIMES.

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ASPECTS OF SAFETY INCLUDING, BUT NOT LIMITED TO, EXCAVATION, TRENCHING, SHORING, TRAFFIC CONTROL, AND SECURITY.

8. IF DURING THE CONSTRUCTION PROCESS CONDITIONS ARE ENCOUNTERED WHICH COULD INDICATE A SITUATION THAT IS NOT IDENTIFIED IN THE PLANS OR SPECIFICATIONS, THE CONTRACTOR SHALL CONTACT THE TCR CONSTRUCTION INSPECTOR IMMEDIATELY.

9. ALL REFERENCES TO ANY PUBLISHED STANDARDS SHALL REFER TO THE LATEST REVISION OF SAID STANDARD UNLESS SPECIFICALLY STATED OTHERWISE.

10. THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN IN ACCORDANCE WITH MUTCD TO THE APPROPRIATE RIGHT-OF-WAY AUTHORITY (TOWN, COUNTY OR STATE) FOR APPROVAL PRIOR TO ANY CONSTRUCTION ACTIVITIES WITHIN OR AFFECTING THE RIGHT-OF-WAY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ANY AND ALL TRAFFIC CONTROL DEVICES AS MAY BE REQUIRED BY THE CONSTRUCTION ACTIVITIES.

11. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL LABOR AND MATERIALS NECESSARY FOR THE COMPLETION OF THE INTENDED IMPROVEMENTS SHOWN ON THESE DRAWINGS OR AS DESIGNATED TO BE PROVIDED, INSTALLED, OR CONSTRUCTED UNLESS SPECIFICALLY NOTED OTHERWISE.

12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RECORDING AS-BUILT INFORMATION ON A SET OF RECORD DRAWINGS KEPT ON THE CONSTRUCTION SITE AND AVAILABLE TO THE TCR CONSTRUCTION INSPECTOR AT ALL TIMES.

13. DIMENSIONS FOR LAYOUT AND CONSTRUCTION ARE NOT TO BE SCALED FROM ANY DRAWING. IF PERTINENT DIMENSIONS ARE NOT SHOWN, CONTACT THE CONSULTANT ENGINEER FOR CLARIFICATION AND ANNOTATE THE DIMENSION ON THE AS-BUILT RECORD DRAWINGS.

14. ALL INITIAL SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PER THE TEMPORARY EROSION & SEDIMENT CONTROL (TESC) PLAN PRIOR TO ANY EARTH-DISTURBING ACTIVITY. ALL EROSION AND SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED IN EFFECTIVE OPERATING CONDITION AT ALL TIMES. REMOVAL OF CONTROL MEASURES SHALL NOT OCCUR WITHOUT THE APPROVAL OF THE STORMWATER INSPECTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING ROADWAYS FREE AND CLEAR OF ALL CONSTRUCTION DEBRIS AND DIRT TRACKED FROM THE SITE. THE CONTRACTOR SHALL ALSO COMPLY WITH ALL TERMS AND CONDITIONS OF THE COLORADO CONSTRUCTION GENERAL PERMIT FOR STORMWATER DISCHARGES.

15. THE CONTRACTOR SHALL PROVIDE AN ACTION PLAN IMMEDIATELY FOLLOWING THE PRE-CONSTRUCTION MEETING DETAILING SUFFICIENT MEANS TO MITIGATE DUST ON SITE DURING OVERLOT GRADING, ROCK CRUSHING OR OTHER EARTHWORK ACTIVITIES. IF THE CONTRACTOR FAILS TO CONTROL DUST, ALL EARTH DISTURBING ACTIVITIES SHALL BE STOPPED UNTIL SUFFICIENT MEASURES ARE TAKEN TO THE TOWN'S SATISFACTION. THE CONTRACTOR SHALL ALSO COMPLY WITH ALL TERMS AND CONDITIONS OF THE COLORADO AIR QUALITY REGULATIONS FOR LAND DEVELOPMENT, AS REQUIRED.

16. THE CONTRACTOR SHALL SEQUENCE INSTALLATION OF UTILITIES IN SUCH A MANNER AS TO MINIMIZE POTENTIAL UTILITY CONFLICTS. IN GENERAL, STORM SEWER AND SANITARY SEWER SHOULD BE CONSTRUCTED PRIOR TO INSTALLATION OF THE WATER LINES AND DRY UTILITIES.

17. THERE SHALL BE NO SITE CONSTRUCTION ACTIVITIES ON SATURDAYS UNLESS SPECIFICALLY APPROVED BY THE TCR CONSTRUCTION INSPECTOR AND NO SITE CONSTRUCTION ACTIVITIES ON SUNDAYS OR HOLIDAYS UNLESS THERE IS PRIOR WRITTEN APPROVAL BY THE PUBLIC WORKS DIRECTOR.

18. NO SOLID OBJECT (EXCLUDING FIRE HYDRANTS AND TRAFFIC CONTROL DEVICES AND TRAFFIC SIGNS) EXCEEDING THIRTY(30) INCHES IN HEIGHT ABOVE THE FLOWLINE ELEVATION OF THE ADJACENT STREET, INCLUDING BUT NOT LIMITED TO BUILDINGS, UTILITY CABINETS, WALLS, FENCES,LANDSCAPE PLANTINGS, CROPS, CUT SLOPES, AND BERMS, SHALL BE PLACED WITHIN SIGHT DISTANCE LINES AND SIGHT DISTANCE EASEMENTS.

08035C0282G, 08035C0301G, 08035C0283F, 08035C0284G, AND 08035C0292F DATED MARCH 16, 2016 . PORTIONS OF THE PROPERTY ARE LOCATED WITHIN A DESIGNATED 100-YEAR FLOODPLAIN ZONE A/AE.

20. BENCHMARK PROVIDED ON COVER SHEET.

21. BASIS OF BEARING PROVIDED ON COVER SHEET.

SANITARY SEWER CONSTRUCTION NOTES

1. ALL SANITARY SEWER CONSTRUCTION IS SUBJECT TO THE GENERAL NOTES ON THE COVER SHEET OF THESE PLANS AS WELL AS THE SANITARY SEWER CONSTRUCTION NOTES LISTED HEREIN.

2. ALL SANITARY SEWER PIPELINES SHALL BE PVC, SDR-35, IN ACCORDANCE WITH ASTM D-3034, BELL AND SPIGOT WITH ELASTOMERIC SEAL.

3. ALL SANITARY SEWER PIPELINES SHALL HAVE A MINIMUM COVER OF 5 FEET AND MAXIMUM COVER OF 20 FEET.

4. ALL SANITARY SEWER PIPELINES SHALL BE BEDDED IN ACCORDANCE WITH TCR STANDARD DETAIL SS-8.

5. ALL MANHOLE RIM ELEVATIONS GIVEN ON THESE PLANS ARE CONSIDERED APPROXIMATE. THE CONTRACTOR SHALL SET THE FINAL RIM ELEVATION BASED ON THE COMPLETE FINISH SURFACE AND PER TCR STANDARD DETAIL SS-3.

6. SANITARY SEWER PIPELINE SHALL BE ALIGNED 6 FEET OFF THE SOUTH AND WEST GUTTER FLOW LINES OF PUBLIC STREETS WHEREVER POSSIBLE.

7. ALL SEWER LINES SHALL HAVE A MINIMUM HORIZONTAL SEPARATION OF 10 FEET EDGE-TO-EDGE FROM ALL WATER LINES. WHERE LINES CROSS, THERE SHALL BE A MINIMUM OF 18" CLEAR VERTICAL SEPARATION.

8. ALL SANITARY SEWER LINES MUST BE TESTED IN ACCORDANCE WITH SECTION 450.6 OF THE TOWN OF CASTLE ROCK CONSTRUCTION METHODOLOGY AND MATERIALS MANUAL IN THE PRESENCE OF A TCR CONSTRUCTION INSPECTOR.

9. ALL SANITARY SEWER LINE TRENCHES SHALL BE SLOPED OR BRACED AND SHEETED AS NECESSARY FOR THE SAFETY OF THE WORKERS AND THE PROTECTION OF OTHER UTILITIES, IN COMPLIANCE WITH ALL APPLICABLE STATE AND FEDERAL REQUIREMENTS. ALL EXCAVATION OPERATION SAFETY IS THE RESPONSIBILITY OF THE CONTRACTOR.

10. SANITARY SEWER SERVICES SHALL BE CONNECTED A MINIMUM OF 5 FEET OUTSIDE OF MANHOLES WITH A WYE CONNECTION IN ACCORDANCE WITH TCR STANDARD DETAIL SS-2.

11. MINIMUM COVER FOR SANITARY SEWER SERVICE LINES SHALL BE 5 FEET AND THE MINIMUM SLOPE SHALL BE 2.0%.

12. ALL SANITARY SEWER SERVICE LINES SHALL BE CONSTRUCTED ALONG THE SHORTEST AND STRAIGHTEST ROUTE POSSIBLE IN CONFORMANCE WITH THE TOWN OF CASTLE ROCK WASTEWATER SYSTEM DESIGN CRITERIA MANUAL.

13. THE MINIMUM HORIZONTAL SEPARATION BETWEEN UTILITY LINES CARRYING THE SAME MATERIAL (E.G.,WASTEWATER AND WASTEWATER) SHALL BE 5 FEET.

14. THE PLUM CREEK WASTEWATER AUTHORITY MUST APPROVE OIL AND GREASE INTERCEPTORS FOR COMMERCIAL INSTALLATIONS.

15. ALL MANHOLES SHALL BE PLACED ON A MINIMUM OF 1' OF ¾" WASH ROCK. IF ADDITIONAL SUBGRADE IS DISTURBED, EXCAVATION SHALL BE BACKFILLED WITH ¾" WASH ROCK OR OTHER APPROVED STRUCTURAL SOIL COMPACTED TO 95% OF ASTM D698 UNLESS OTHERWISE INSTRUCTED BY THE INSPECTOR.

TRACER WIRE INSTALLATION NOTES

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH CURRENT TOWN OF CASTLE ROCK STANDARD NOTES, DETAILS AND SPECIFICATIONS.
2. TRACER WIRE IS REQUIRED ON ALL UNDERGROUND PIPE. A MAINLINE TRACER WIRE MUST BE INSTALLED WITH ALL SERVICE LATERAL TRACER WIRES PROPERLY CONNECTED TO ENSURE FULL LOCATING CAPABILITIES FROM A SINGLE CONNECTION POINT.
3. TRACER WIRE COLORS FOR STORM SEWER, DRAIN LINES, SANITARY SEWER, AND WATER MAINS SHALL BE IN ACCORDANCE WITH AMERICAN PUBLIC WORKS ASSOCIATION (APWA) UNIFORM COLOR CODE. ALL GROUNDING WIRE SHALL BE RED OR BLACK.
4. "OPEN TRENCH" TRACER WIRE SHALL BE #8 OR #10 AWG COPPER SOLID OR #12 AWG COPPER CLAD HIGH STRENGTH WITH MINIMUM 30-MIL HDPE INSULATION THICKNESS COMPLYING WITH ASTM D-1248, AND A MINIMUM AVERAGE TENSILE BREAK LOAD OF 450 LBS.
5. TRACER WIRE SHALL BE SECURED EVERY 5 FEET TO THE TOP OF THE PIPE AND TO THE SIDES OF MANHOLES AND INLETS USING TAPE, PLASTIC TIES, OR APPROVED ADHESIVE AT 5-FOOT INTERVALS.
6. TRACER WIRE SHALL BE SECURELY BONDED TOGETHER AT ALL WIRE JOINTS WITH LOCKABLE, CORROSION PROOF, WATERTIGHT CONNECTORS SPECIFICALLY DESIGNED FOR DIRECT BURIAL, AND FILLED WITH NON-HARDENING DIELECTRIC SILICONE SEALANT.
7. ANY DAMAGE OCCURRING DURING INSTALLATION OF THE TRACER WIRE MUST BE IMMEDIATELY REPAIRED BY REMOVING THE DAMAGED WIRE AND INSTALLING A NEW SECTION OF WIRE WITH APPROVED CONNECTORS. TAPING AND/OR SPRAY COATING IS NOT ALLOWED.
8. A MINIMUM OF 2 FEET OF EXCESS/SLACK WIRE IS REQUIRED IN ALL TRACER WIRE TEST STATIONS, MANHOLES, AND INLETS AFTER MEETING FINAL ELEVATION.
9. TRACER WIRE MUST BE PROPERLY GROUNDED AT ALL DEAD ENDS (MANHOLES, INLETS, OUTFALLS, FUTURE CONNECTIONS, ETC.) USING A MAGNESIUM GROUND ROD. THE GROUND ROD WILL BE CONNECTED TO 12- OR 14-AWG COPPER-CLAD STEEL WIRE WITH 30 MIL HDPE INSULATION AND RATED FOR DIRECT BURY USE AT 30 VOLTS WITH 21% CONDUCTIVITY.
10. TEST STATIONS SHALL PROVIDE PROTECTED ACCESS FOR A DIRECT CONNECTION TO THE TRACER WIRE SYSTEM AT GROUND SURFACE.
11. TRUNK LINE TRACER WIRE SHALL BE CONTINUOUS, AND PASS AROUND THE OUTSIDE OF VALVES AND OTHER STRUCTURES ON THE NORTH OR EAST SIDE.
12. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS (EXCAVATION, CONCRETE, TRAFFIC CONTROL, ETC.) AND PROVIDE A MINIMUM TWENTY-FOUR (24) HOURS' NOTICE TO THE ON-SITE TCR CONSTRUCTION INSPECTOR, (720) 733-2200, TO REQUEST A TRACER WIRE INSPECTION.
13. ALL NEW TRACER WIRE INSTALLATIONS SHALL BE TESTED AND LOCATED PRIOR TO ACCEPTANCE. TESTING AND LOCATING SHALL BE PERFORMED BY THE TOCR CONSTRUCTION INSPECTOR AT THE COMPLETION OF ROUGH GRADING AND PRIOR TO FINAL ACCEPTANCE OF THE PROJECT. ANY DEFICIENCIES SHALL BE CORRECTED PRIOR TO FINAL ACCEPTANCE.

CORE ENGINEERING NOTES

IN ADDITION TO CITY STANDARD NOTES, THE FOLLOWING SHALL APPLY:

1. CONTRACTOR SHALL OBTAIN ALL THE MOST RECENT APPLICABLE CODES, LICENSES, STANDARDS, SPECIFICATIONS, PERMITS, BONDS WHICH ARE NECESSARY TO PERFORM THE PROPOSED WORK.

2. ALL REFERENCES TO ANY PUBLISHED STANDARDS SHALL REFER TO THE LATEST REVISION OF SAID STANDARD, UNLESS SPECIFICALLY STATED OTHERWISE.

3. WHERE THERE IS CONFLICT BETWEEN THESE PLANS AND THE SPECIFICATIONS, OR ANY APPLICABLE STANDARDS, THE HIGHER QUALITY STANDARDS SHALL APPLY.

4. ALL CONSTRUCTION IN PUBLIC RIGHT-OF-WAY SHALL COMPLY WITH THE AMERICANS WITH DISABILITIES ACT.

5. TRAFFIC AND PEDESTRIAN CONTROL SHALL COMPLY WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) (LATEST EDITION).

6. ALL TRENCHES SHALL BE ADEQUATELY SUPPORTED AND THE SAFETY OF THE WORKERS PROVIDED FOR AS REQUIRED BY THE MOST RECENT OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) "SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION." THESE REGULATIONS ARE DESCRIBED IN SUBPART P, PART 1926 OF THE CODE OF FEDERAL REGULATIONS. SHEETING AND SHORING SHALL BE UTILIZED WHERE NECESSARY TO PREVENT ANY EXCESSIVE WIDENING OR SLOUGHING OF THE TRENCH WHICH MAY BE DETRIMENTAL TO HUMAN SAFETY, TO THE PIPE BEING PLACED, TO TREES OR TO ANY EXISTING STRUCTURE WHERE EXCAVATIONS ARE MADE UNDER SEVER WATER CONDITIONS. THE CONTRACTOR MAY BE REQUIRED TO USE AN APPROVED PILING INSTEAD OF SHEETING AND SHORING.

7. THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING AND MAINTAINING EROSION AND SEDIMENT CONTROL MEASURES AT ALL TIMES DURING CONSTRUCTION. THE PLAN MAY BE MODIFIED WITH APPROPRIATE APPROVALS FROM THE MUNICIPALITY'S ENGINEERING DIVISION AS FIELD CONDITIONS WARRANT.

8. REPAIR OF ANY DAMAGE TO EXISTING IMPROVEMENTS OR LANDSCAPING IS THE RESPONSIBILITY OF THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.

9. ALL CONSTRUCTION ACTIVITIES MUST COMPLY WITH THE STATE OF COLORADO PERMITTING PROCESS FOR "STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY." FOR INFORMATION, PLEASE CONTACT COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, WATER QUALITY CONTROL DIVISION, WQCD-P-B2, 4300 CHERRY CREEK DRIVE SOUTH, DENVER, COLORADO 80246-1530. ATTENTION: PERMITS UNIT. PHONE (303) 692-3590.

10. THE CONTRACTOR SHALL REGULARLY PATROL THE PUBLIC LANDS ADJACENT TO THE DEVELOPMENT, REMOVE CONSTRUCTION DEBRIS AND KEEP THE SITE CLEAN AND SAFE.

11. CONTRACTOR SHALL REVIEW THE GEOTECHNICAL REPORT FOR THIS PROJECT FOR PAVEMENT DESIGN AND RECOMMENDATIONS REGARDING EXCAVATION, COMPACTION, EMBANKMENT, AND TOPSOIL REMOVAL AND REPLACEMENT. FINAL PAVEMENT DESIGN TO BE DETERMINED BY THE GEOTECHNICAL ENGINEER. CONTRACTOR TO COORDINATE THIS WORK. THE CONSTRUCTION METHODS FOR EXCAVATION/EMBANKMENT, COMPACTION AND SUBGRADE PREPARATION SHALL BE IN STRICT CONFORMANCE WITH THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS. ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF DISCREPANCIES BETWEEN THE GEOTECHNICAL REPORT RECOMMENDATIONS AND REQUIREMENTS OF THESE CONSTRUCTION DOCUMENTS AND SPECIFICATIONS.

12. EXISTING GRADES AND SPOT ELEVATIONS SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM BEST AVAILABLE INFORMATION AND ARE SHOWN TO THE EXTENT KNOWN. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY EXISTING GRADE CONDITIONS AT THE LIMITS OF CONSTRUCTION AND AT LOCATIONS THAT INTERFACE WITH EXISTING OR PROPOSED BUILDINGS AND NOTIFY THE CIVIL ENGINEER OF ANY DISCREPANCIES THAT CONTRADICT THE CIVIL ENGINEER'S INTENT FOR DRAINAGE PATTERNS, MAXIMUM AND MINIMUM SLOPES, AND PROPOSED ELEVATIONS AS SHOWN ON THE PLAN.

13. ANY EARTHWORK QUANTITIES ARE RAW NUMBERS AND HAVE NOT BEEN ADJUSTED TO ACCOUNT FOR SHRINK, SWELL, COMPACTION, UTILITY SPOILS, BUILDING FOUNDATION/BASEMENT ETC. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL EARTHWORK VALUES.

14. NOTICE TO BIDDERS - UNLESS APPROVAL BLOCKS ARE SIGNED AND THE PLANS ARE STAMPED BY A PROFESSIONAL ENGINEER, THESE DOCUMENTS ARE PENDING JURISDICTIONAL APPROVAL AND SUBJECT TO CHANGE.

15. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES, AS SHOWN ON THESE PLANS, IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE LOCAL UTILITY LOCATION CENTER AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF THE UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY PERTINENT LOCATIONS AND ELEVATIONS, ESPECIALLY AT CONNECTION POINTS AND AT POTENTIAL UTILITY CONFLICTS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES THAT CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS

16. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROTECT EXISTING UTILITIES FROM DAMAGE THROUGHOUT THE CONSTRUCTION OF THIS PROJECT. THE CONTRACTOR SHALL CALL THE UTILITY NOTIFICATION CENTER OF COLORADO FOR UTILITY LOCATIONS 2 WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION.

17. ALL STORM SEWER PIPE SHALL BE CLASS 3 REINFORCED CONCRETE PIPE AND UTILIZING WATER TIGHT JOINTS UNLESS OTHERWISE NOTED.

18. ALL AREAS DISTURBED BEYOND CONSTRUCTION LIMITS SHALL BE RESEEDED/MULCHED AT THE CONTRACTORS EXPENSE.

19. IF CONSTRUCTING NEW CURB AND GUTTER ADJACENT TO EXISTING ASPHALT PAVEMENT, CONTRACTOR SHALL REVIEW EXISTING PAVEMENT ELEVATIONS AND PROPOSED GRADES FOR CURB AND GUTTER AND NOTIFY ENGINEER IF MAXIMUM OR MINIMUM CROSS SLOPES ON ASPHALT PATCH ARE NOT WITHIN THE LIMITS OF CONSTRUCTION.

20. THE CONTRACTOR IS RESPONSIBLE FOR RECORDING AS-BUILT INFORMATION ON A SET OF RECORD DRAWINGS KEPT ON THE CONSTRUCTION SITE, AND AVAILABLE TO THE PUBLIC WORKS INSPECTOR AT ALL TIMES.

21. DIMENSIONS FOR LAYOUT AND CONSTRUCTION ARE NOT TO BE SCALED FROM ANY DRAWINGS. IF PERTINENT DIMENSIONS ARE NOT SHOWN, CONTACT THE CONSULTANT ENGINEER FOR CLARIFICATION, AND ANNOTATE THE DIMENSION ON THE AS-BUILT RECORD DRAWINGS.

LEGEND

BASIN DESIGNATION (X; AREA XX.X; 0.45; 0.60)
5 YEAR COEFFICIENTS
100 YEAR COEFFICIENTS
DESIGN POINT
DIRECTIONAL FLOW ARROW
EMERGENCY OVERFLOW ROUTE
SPOT ELEVATION (5150)
TOP OF FOUNDATION ELEVATION (LOT TYPE (A) TF= 5150.0)
PROPOSED DRAINAGE BASIN
EXISTING DRAINAGE BASIN
PROPOSED MAJOR CONTOUR (5280)
PROPOSED MINOR CONTOUR (5279)
EXISTING MAJOR CONTOUR (5280)
EXISTING MINOR CONTOUR (5279)
EASEMENT
RIGHT OF WAY (R.O.W.)
CENTERLINE
PROJECT BOUNDARY
SIGHT TRIANGLE
LIMITS OF CONSTRUCTION
PROPOSED CURB & GUTTER
EXISTING CURB & GUTTER
REMOVE CURB & GUTTER
FUTURE CURB & GUTTER
GUARD RAIL
RETAINING WALL
DRAINAGE SWALE
EXISTING FENCE - CHAIN LINK
EXISTING FENCE - WOOD POST
DEMO FENCE - CHAIN LINK
DEMO FENCE - WOOD POST

EXISTING / PROPOSED
STREET LIGHT POLES
STREET SIGNS
RAMPS
POWER POLES
GUY WIRE
SANITARY MANHOLES
SANITARY CLEAN OUT
WATER VALVES
BEND AND THRUST BLOCK
FIRE HYDRANTS
WATERLINE REDUCER
WATER STUB WITH BLOW OFF
AIR RELEASE VALVE MH & VENT PIPE
IRRIGATION SERVICE (I)
SANITARY SERVICE (S)
WATER SERVICE (W)
STORM MANHOLES
STORM INLETS
FES, FOREBAY, & TRICKLE CHANNEL
OUTLET STRUCTURE
PROPOSED STORM & STUB OUT
EXISTING STORM & STUB OUT
DEMO STORM & STUB OUT
FUTURE STORM & STUB OUT
STORM MAJOR HGL
STORM MINOR HGL
STORM UNDERDRAIN
100 YEAR FLOODPLAIN
WETLAND
PROPOSED IRRIGATION & STUB OUT
PROPOSED STORM & STUB OUT (SD)
PROPOSED SANITARY & STUB OUT
PROPOSED WATER & STUB OUT
EXISTING IRRIGATION & STUB OUT (IRR)
EXISTING STORM & STUB OUT (SD)
EXISTING SANITARY & STUB OUT (SS)
EXISTING WATER & STUB OUT (W)
EXISTING RAW WATER & STUB OUT (RAW)
DEMO IRRIGATION & STUB OUT (IRR)
DEMO STORM & STUB OUT (SD)
DEMO SANITARY & STUB OUT (SS)
DEMO WATER & STUB OUT (W)
FUTURE IRRIGATION & STUB OUT (IRR)
FUTURE SANITARY & STUB OUT (SS)
FUTURE STORM & STUB OUT (SD)
FUTURE WATER & STUB OUT (W)
CRUSHER FINES MAINTENANCE ACCESS
CONCRETE
RIPRAP
EXISTING GRAVEL ROAD
EXISTING ASPHALT PAVEMENT
APPROXIMATE SAWCUT LIMITS
BLOCK NUMBER (1 2 3 4)
A LOT, B LOT, WALKOUT, TRANSITION (A B W T)
INTERSTATE 25
EXISTING RAILROAD
EXISTING 100-YEAR FEMA FLOODPLAIN
EXISTING 100-YEAR FEMA FLOODPLAIN

EXISTING DRY UTILITIES

EXISTING ELECTRIC (E)
EXISTING TELEPHONE (T)
EXISTING FIBER OPTIC (FO)
EXISTING GAS (G)
EXISTING OVER HEAD ELECTRIC (OH)

ABBREVIATIONS:

Δ	DELTA
AC	AIR CONDITIONING UNIT
AD	ALGEBRAIC DIFFERENCE (IN GRADE)
AE	ACCESS EASEMENT
ASPH	ASPHALT
AVE	AVENUR
BLDG	BUILDING
BLVD	BOULEVARD
BM	BENCHMARK
BMP	BEST MANAGEMENT PRACTICE
BOP	BOTTOM OF PIPE
BOR	BOTTOM OF RAMP
BOS	BOTTOM OF STAIR
BOW	BACK OF WALK
BP	BEGIN PROFILE
BW	BOTTOM OF WALL (FG @ WALL FACE)
CAE	CROSS ACCESS EASEMENT
CCP	CITY OF CASTLE PINES
CDOT	CO. DEPT. OF TRANPORTATION
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT
COL	COLUMN
CON	CONCENTRIC
CONC	CONCRETE
COR	CORNER
CR	CURB RAMP / CURB RETURN
DE	DRAINAGE EASEMENT
DI	DUCTILE IRON
DIA	DIAMETER
DS	DOWNSPOUT
DWG	DRAWING
E	EAST / SUPERELEVATION RATE
E	ELECTICAL
EB	EASTBOUND
EAE	EMERGENCY ACCESS EASEMENT
EC	EDGE OF CONCRETE
ECC	ECCENTRIC
EG	EXISTING GRADE
EL	ELEVATION
ELEC	ELECTRIC
EM	ELECTRIC METER
ENCL	ENCLOSURE
EOA	EDGE OF ASPHALT
EOC	EDGE OF CONCRETE
EOP	EDGE OF PAVEMENT
EOW	EDGE OF WALK
ESMT	EASEMENT
EX	EXISTING
FDC	FIRE DEPARTMENT CONNECTION
FES	FLARED END SECTION
FF	FINISH FLOOR
FH	FIRE HYDRANT
FG	FINISH GRADE
FL	FLOWLINE
FO	FIBER OPTIC
FT	FEET
G	GAS
GB	GRADE BREAK
GM	GAS METER
GND	GROUND
GP	GUARD POST
GR	GRADE
GRL	GUARDRAIL
GRV	GRAVEL
GS	GARAGE SLAB
GV	GATE VALVE
HC	HANDICAP
HOR	HORIZONTAL
HP	HIGH POINT
HW	HEADWALL
IN	INCHES OR INLET
INT	INTERSECTION
INV	INVERT
IRR	IRRIGATION
JT	JOINT TRENCH
K	DIST FOR 1% CHANGE OF GRADE
L	LENGTH / LEFT
LIP	LIP OF PAN
LP	LOW POINT
LS	LANDSCAPE
LT	LEFT
MAT	MATERIAL
MAX	MAXIMUM
ME	MATCH EXISTING
MH	MANHOLE
MIN	MINIMUM
MON	MONUMENT
N	NORTH
NO	NUMBER
NTS	NOT TO SCALE
OC	ON CENTER
OH	OVERHEAD
OHE	OVERHEAD ELECTRICAL
PB	PULL BOX
PC	POINT OF CURVATURE
PCC	PORTLAND CEMENT CONCRETE
	POINT OF COMPOUND CURVATURE
PCR	POINT OF CURB RETURN
PE	PROFESSIONAL ENGINEER
PED	PEDESTAL
PGL	PROFILE GRADE LINE
PI	POINT OF INTERSECTION
PL	PROPERTY LINE
PLS	PROFESSIONAL LAND SURVEYOR
PP	POWER POLE
PR	PROPOSED
PRC	POINT OF REVERSE CURVATURE
PT	POINT OF TANGENCY
PVC	POINT OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVMT	PAVEMENT
PVT	POINT OF VERTICAL TANGENCY
RCP	REINFORCED CONCRETE PIPE
R	RADIUS / RIGHT
RD	ROAD
RE	REFERENCE
RET	RETAINING
REV	REVISION
ROW	RIGHT-OF-WAY
RT	RIGHT
RW	RAW WATER
S	SOUTH
SANS	SANITARY SEWER
SC	SURVEY CONTROL
SD	STORM DRAIN
SEC	SECTION
SS	SANITARY SEWER
ST	STREET / STORM
STA	STATION
STD	STANDARD
SV	SERVICE
SW	SIDEWALK
SWL	SWALE
T	TELEPHONE
TC	TOP OF CURB / TRAFFIC CONTROL
TBC	TOP BACK OF CURB
TELE	TELEPHONE / COMMUNICATIONS
TOB	TOP OF BANK
TOE	TOE OF SLOPE
TOF	TOP OF FOUNDATION
TOP	TOP OF PIPE
TOR	TOP OF RAMP
TOS	TOP OF STAIR
TOW	TOE OF WALL
TW	TOP OF WALL
TV	TELEVISION
TYP	TYPICAL
UE	UTILITY EASEMENT
UT	UTILITY
VC	VERTICAL CURVE
VC&G	VERTICAL CURB & GUTTER
VLT	VAULT
VERT	VERTICAL
W	WEST
WB	WEST BOUND
WLK	SIDEWALK
WM	WATER METER
WT	WATER
XC	CROSS-SECTION
Y1	SINGLE YELLOW STRIPE
Y2	DOUBLE YELLOW STRIPE

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JOSEPH F. FERRIS
STATE OF COLORADO # 55846

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APPROVED BY:

DEVELOPMENT SERVICES DATE

LAND DEVELOPMENT | ENERGY | PUBLIC INFRASTUCTURE
CORE CONSULTANTS. INC.
3473 S. BROADWAY
ENGLEWOOD, CO 80113
303.703.4444
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#	REVISION DESCRIPTION	DATE	BY
1	1ST SUBMITTAL	12/22/22	KR
2	2ND SUBMITTAL	04/26/23	JF

DAWSON TRAILS OFFSITE SANITARY SEWER
CASTLE ROCK, COLORADO

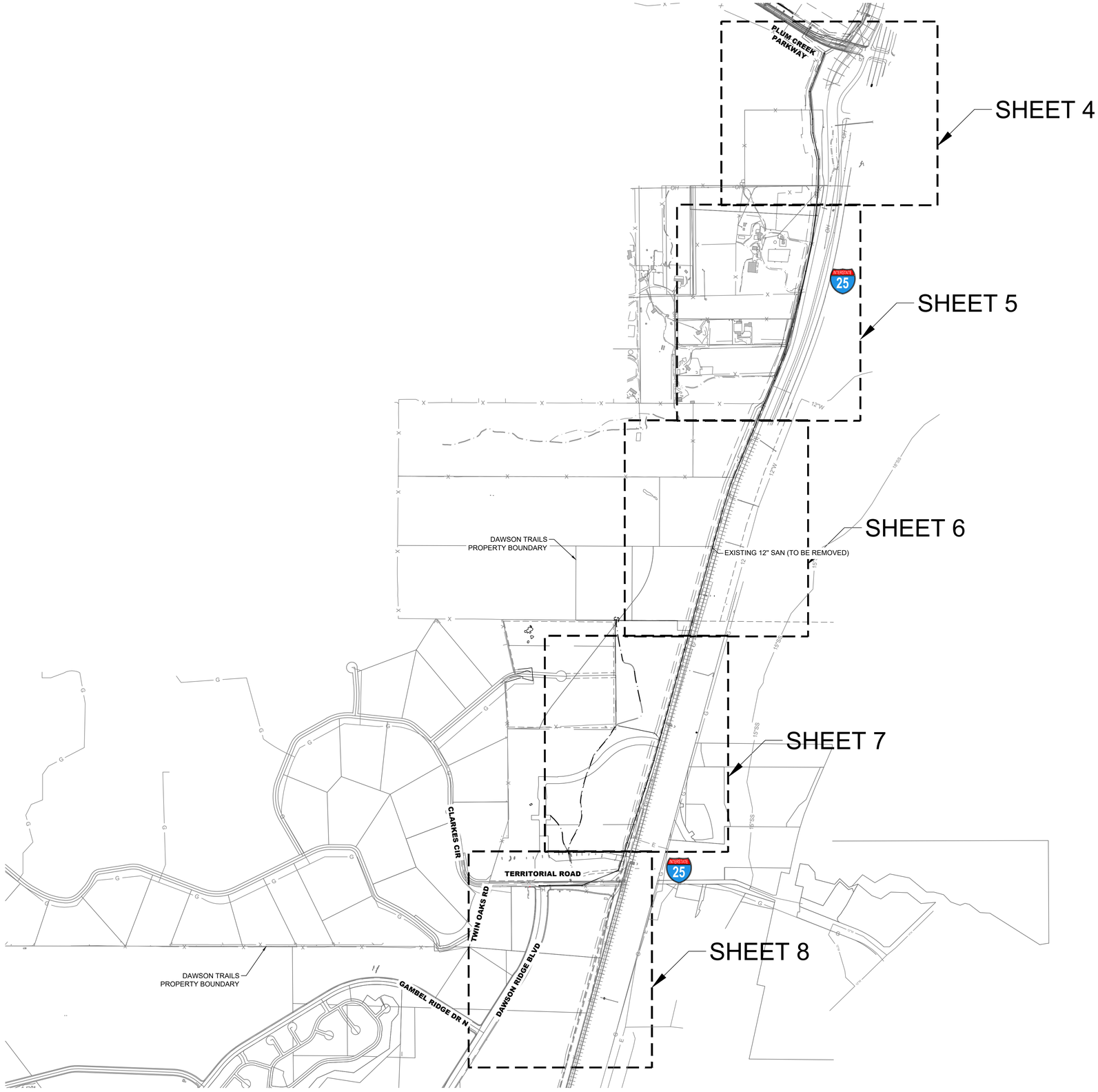
CONSTRUCTION DOCUMENTS
GENERAL NOTES

WESTSIDE

DESIGNED BY: JB
DRAWN BY: MB
CHECKED BY: JF

JOB NO. 20-224

SHEET 2 OF 26



C

0 600' 1,200'

1 inch = 600 ft.

BASIS OF BEARING

BEARINGS SHOWN HEREON ARE BASED UPON THE NORTH LINE OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 22, TOWNSHIP 8 SOUTH, RANGE 67 WEST, BEARING S 89°31'22" E, FROM THE WEST SIXTEENTH CORNER OF SECTIONS 22/15, BEING MONUMENTED BY A #6 REBAR WITH A 2-1/2 INCH ALUMINUM CAP STAMPED "LS 5112 - 1994", TO THE NORTH QUARTER CORNER OF SAID SECTION 22 BEING MONUMENTED BY A #6 REBAR WITH A 2-1/2 INCH ALUMINUM CAP STAMPED "LS 38002 - 2020", WITH ALL BEARINGS CONTAINED HEREIN RELATIVE THERETO.

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1	1ST SUBMITTAL	12/2/22	KR
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DAWSON TRAILS OFFSITE SANITARY SEWER

CASTLE ROCK, COLORADO

CONSTRUCTION DOCUMENTS
OVERALL DEMO PLAN

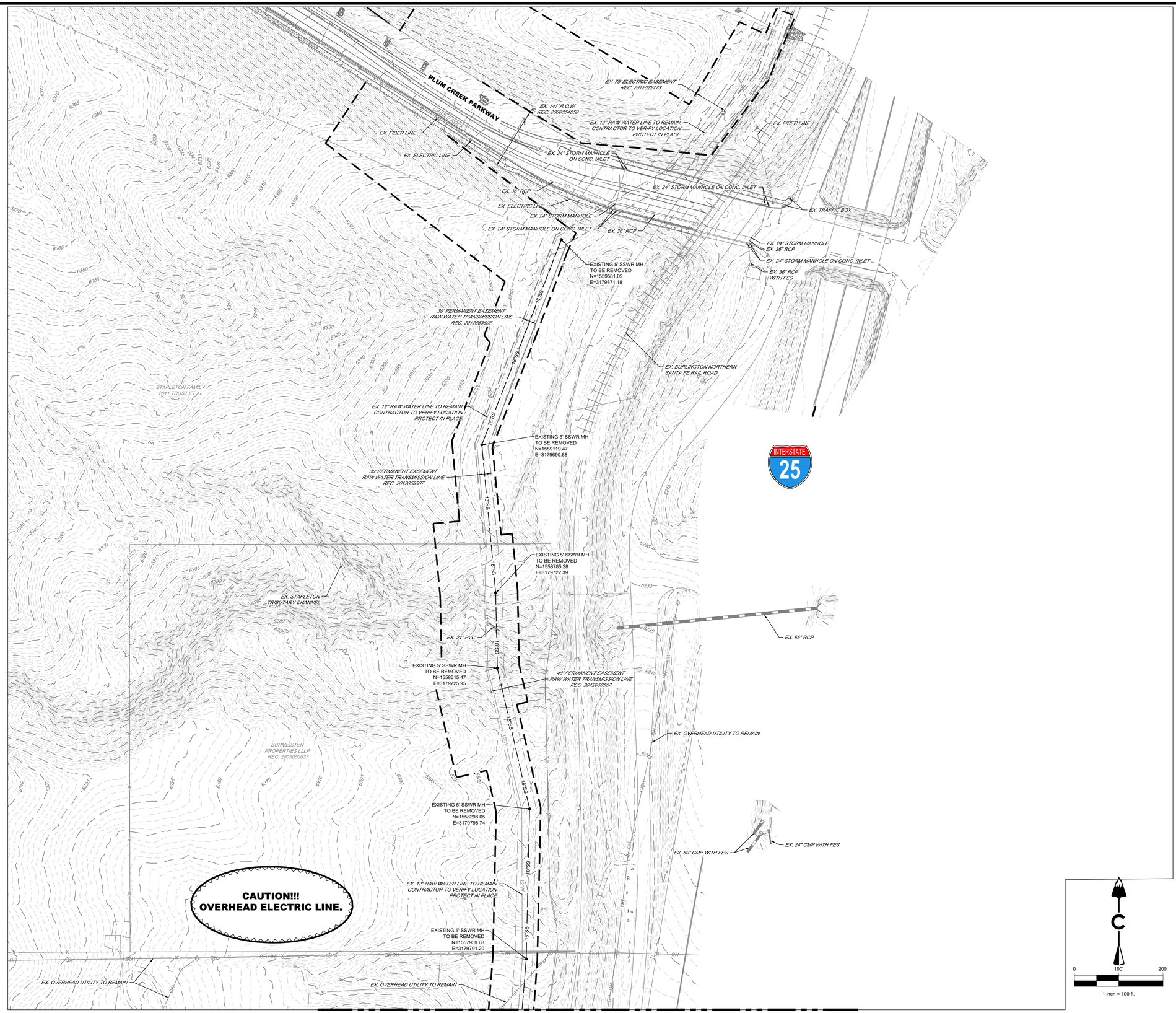
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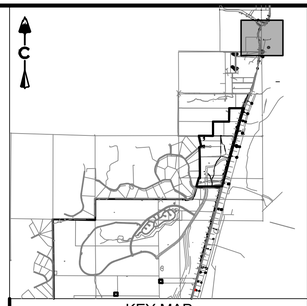
DESIGNED BY: JB
DRAWN BY: MB
CHECKED BY: JF

JOB NO. 20-224

SHEET 3 OF 26

2021-09-11 (4:30 PM) X:\20-224 Dawson\Civil\CAD\Plans\Sanitary Offsite\CDs OVERALL DEMO PLAN.dwg





KEY MAP
SCALE: 1" = 4500'

LEGEND

- EXISTING CURB & GUTTER
- DEMO CURB & GUTTER
- EXISTING STORM & STUB OUT
- DEMO STORM & STUB OUT
- EXISTING WATER & STUB OUT
- DEMO WATER & STUB OUT
- EXISTING SANITARY & STUB OUT
- DEMO STORM & STUB OUT
- EXISTING IRRIGATION & STUB OUT
- DEMO IRRIGATION & STUB OUT
- EXISTING STORM & STUB OUT
- FUTURE STORM & STUB OUT
- RETAINING WALL
- EXISTING FENCE - CHAIN LINK
- EXISTING FENCE - WOOD POST
- DEMO FENCE - CHAIN LINK
- DEMO FENCE - WOOD POST
- IRRIGATION SERVICE
- SANITARY SERVICE
- WATER SERVICE
- EXISTING ELECTRIC
- EXISTING FIBER OPTIC
- EXISTING GAS
- EXISTING OVER HEAD ELECTRIC
- CONCRETE
- EXISTING GRAVEL ROAD
- EXISTING ASPHALT ROAD
- APPROXIMATE SAWCUT LIMITS

NOTES:

1. EXISTING UTILITIES WITHIN DAWSON TRAILS PROPERTY OUTSIDE OF THE OFFSITE SANITARY SEWER BOUNDARY ARE TO BE REMOVED AS PART OF THE DAWSON TRAILS DEMOLITION (BY OTHERS).

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CASTLE ROCK, COLORADO

CONSTRUCTION DOCUMENTS
DEMO PLAN (1 OF 5)

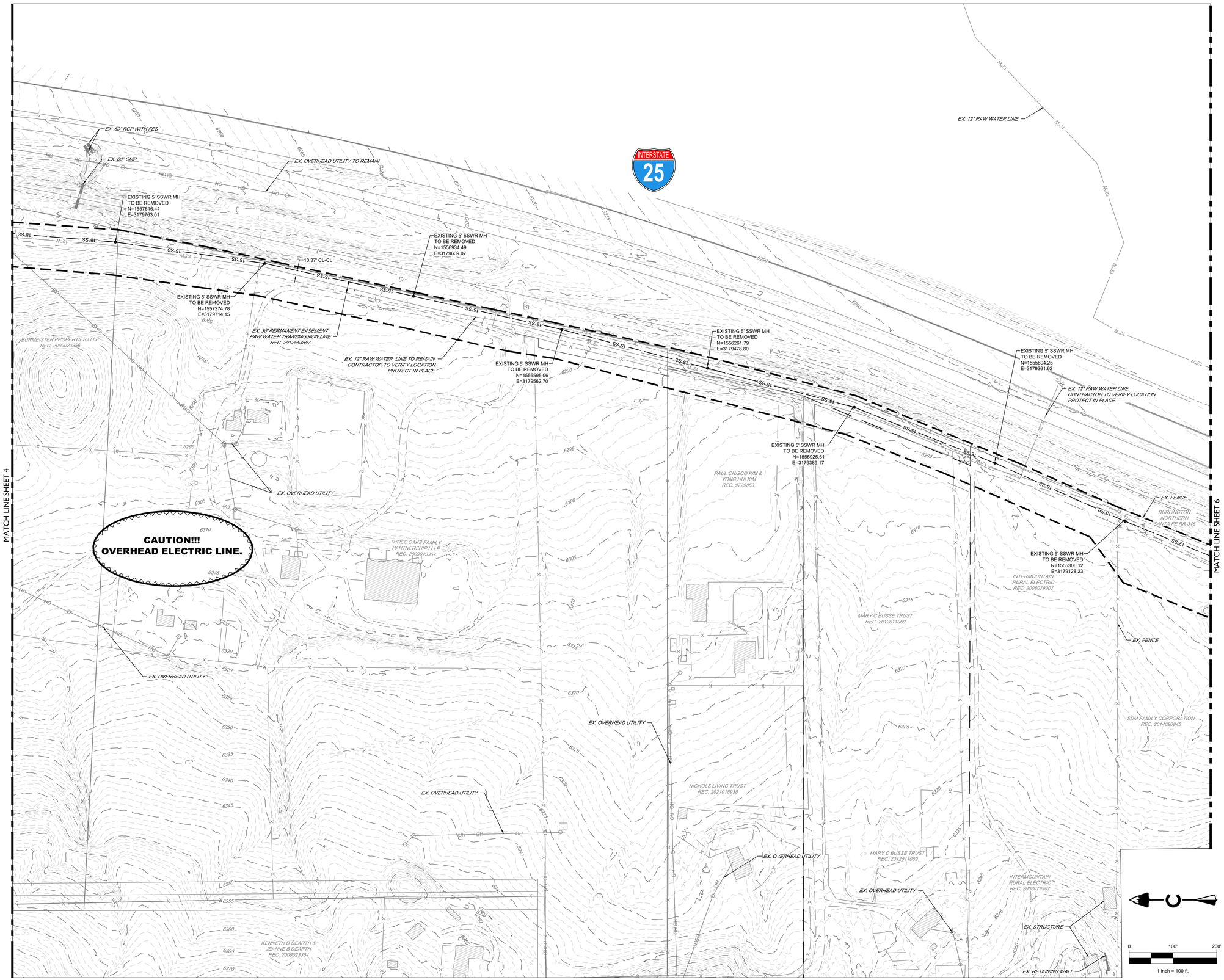
WESTSIDE

DESIGNED BY: JB
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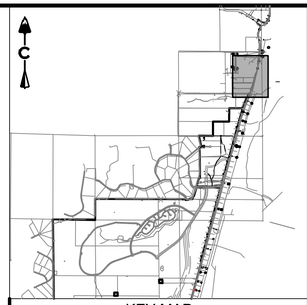
JOB NO. 20-224

SHEET 4 OF 26

2021-09-11 (4:30 PM) X:\20-224 Dawson\Civil\CAD\Plans\Sanitary Offsite\CDs Demo Plan.dwg



2021-09-11 (4:30 PM) X:\20-224 Dawson\Civil\CAD\Plans\Sanitary Offsite\CDs Demo Plan.dwg



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- DEMO STORM & STUB OUT
- W — EXISTING WATER & STUB OUT
- W — DEMO WATER & STUB OUT
- SS — EXISTING SANITARY & STUB OUT
- SD — DEMO STORM & STUB OUT
- IRR — EXISTING IRRIGATION & STUB OUT
- IRR — DEMO IRRIGATION & STUB OUT
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- SD — FUTURE STORM & STUB OUT
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TOWN APPROVAL BLOCK

TOWN OF CASTLE ROCK APPROVAL
PLANS ARE HEREBY APPROVED FOR ONE YEAR FROM DATE OF DEVELOPMENT SERVICES APPROVAL.

APPROVED BY:

DEVELOPMENT SERVICES DATE

CORE CONSULTANTS. INC.
3473 S. BROADWAY
ENGLEWOOD, CO 80113
303.703.4444
LIVEYOURCORE.COM

LAND DEVELOPMENT | ENERGY | PUBLIC INFRASTUCTURE

CORE

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

#	REVISION DESCRIPTION	DATE	BY
1	1ST SUBMITTAL	12/22/22	KR
2	2ND SUBMITTAL	04/26/23	JF

DAWSON TRAILS OFFSITE SANITARY SEWER

CASTLE ROCK, COLORADO

CONSTRUCTION DOCUMENTS
DEMO PLAN (2 OF 5)

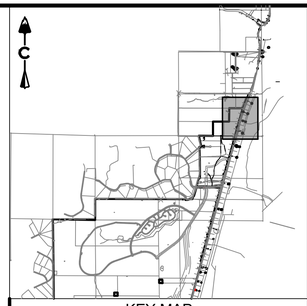
WESTSIDE

DESIGNED BY: JB
DRAWN BY: MB
CHECKED BY: JF

JOB NO. 20-224

SHEET 5 OF 26





KEY MAP
SCALE: 1" = 4500'

LEGEND

- EXISTING CURB & GUTTER
- DEMO CURB & GUTTER
- EXISTING STORM & STUB OUT
- DEMO STORM & STUB OUT
- EXISTING WATER & STUB OUT
- DEMO WATER & STUB OUT
- EXISTING SANITARY & STUB OUT
- DEMO STORM & STUB OUT
- EXISTING IRRIGATION & STUB OUT
- DEMO IRRIGATION & STUB OUT
- EXISTING STORM & STUB OUT
- FUTURE STORM & STUB OUT
- RETAINING WALL
- EXISTING FENCE - CHAIN LINK
- EXISTING FENCE - WOOD POST
- DEMO FENCE - CHAIN LINK
- DEMO FENCE - WOOD POST
- IRRIGATION SERVICE
- SANITARY SERVICE
- WATER SERVICE
- EXISTING ELECTRIC
- EXISTING FIBER OPTIC
- EXISTING GAS
- EXISTING OVER HEAD ELECTRIC
- CONCRETE
- EXISTING GRAVEL ROAD
- EXISTING ASPHALT ROAD
- APPROXIMATE SAWCUT LIMITS

NOTES:

1. EXISTING UTILITIES WITHIN DAWSON TRAILS PROPERTY OUTSIDE OF THE OFFSITE SANITARY SEWER BOUNDARY ARE TO BE REMOVED AS PART OF THE DAWSON TRAILS DEMOLITION (BY OTHERS).

BASIS OF BEARING

BEARINGS SHOWN HEREON ARE BASED UPON THE NORTH LINE OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 22, TOWNSHIP 8 SOUTH, RANGE 67 WEST, BEARING S 89°31'22" E, FROM THE WEST SIXTEENTH CORNER OF SECTIONS 22/15, BEING MONUMENTED BY A #6 REBAR WITH A 2-1/2 INCH ALUMINUM CAP STAMPED "LS 5112 - 1994", TO THE NORTH QUARTER CORNER OF SAID SECTION 22 BEING MONUMENTED BY A #6 REBAR WITH A 2-1/2 INCH ALUMINUM CAP STAMPED "LS 38002 - 2020", WITH ALL BEARINGS CONTAINED HEREIN RELATIVE THERETO.

BENCHMARK

THE ELEVATION AND CONTOURS SHOWN HEREON ARE BASED UPON NGS STATION X 396 (PID KK1331). BEING A STANDARD NGS STEEL DEEPROD, WITH A PUNCHMARK, IN A STANDARD NGS LOGO CAP SET IN A CONCRETE SLEEVE, FLUSH TO THE GROUND. MONUMENT LIES 0.25 MI SOUTH OF THE INTERSECTION OF DOUGLAS LANE LEADING EAST, 121.1 FT EAST OF THE CENTERLINE OF THE NORTHBOUND LANES OF INTERSTATE 25, 86.6 FT SOUTH OF THE CENTER OF A PRIVATE DRIVE LEADING EAST TO A FRAME HOUSE, 38.1 FT EAST OF THE CENTERLINE OF THE EAST FRONTAGE ROAD OF INTERSTATE 25, 5.6 FT NORTH OF A UTILITY POLE, ABOUT LEVEL WITH THE HIGHWAY, AND 1 FT WEST OF A FIBERGLASS WITNESS POST AND SHEEP FENCE. PUBLISHED ELEVATION = 6355.09' NAVD88

PROFESSIONAL ENGINEER CERTIFICATION

I HEREBY AFFIRM THAT THESE FINAL CONSTRUCTION PLANS WERE PREPARED UNDER MY DIRECT SUPERVISION, IN ACCORDANCE WITH ALL APPLICABLE TOWN OF CASTLE ROCK AND STATE OF COLORADO STANDARDS AND STATUTES, RESPECTIVELY; AND THAT I AM FULLY RESPONSIBLE FOR ALL DESIGN AND REVISIONS RELATIVE TO SAID PLANS.

JOSEPH F. FERRIS
STATE OF COLORADO # 55846

TOWN APPROVAL BLOCK

TOWN OF CASTLE ROCK APPROVAL
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APPROVED BY:

DEVELOPMENT SERVICES DATE

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3473 S. BROADWAY
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DAWSON TRAILS OFFSITE SANITARY SEWER

CASTLE ROCK, COLORADO

CONSTRUCTION DOCUMENTS
DEMO PLAN (3 OF 5)

WESTSIDE

DESIGNED BY: JB
DRAWN BY: MB
CHECKED BY: JF

JOB NO. 20-224

SHEET 6 OF 26

2021-09-11 (4:30 PM) X:\20-224 Dawson\Civil\CAD\Plans\Sanitary Offsite\CDs Demo Plan.dwg

MATCH LINE SHEET 6

MATCH LINE SHEET 8

EX. STORM LINE

EX. GAS LINE

EX. GAS LINE

EX. BURLINGTON NORTHERN SANTA FE RAIL ROAD

DAWSON TRAILS PROPERTY BOUNDARY

INTERSTATE 25

EX. ELECTRIC LINE

EXISTING 5' SSWR MH TO BE REMOVED N=1552330.02 E=3178162.22

EXISTING 5' SSWR MH TO BE REMOVED N=1551991.98 E=3178069.70

EXISTING 5' SSWR MH TO BE REMOVED N=1551655.57 E=3177976.51

EXISTING 5' SSWR MH TO BE REMOVED N=1551317.82 E=3177890.53

EXISTING 5' SSWR MH TO BE REMOVED N=1550981.18 E=3177793.44

EXISTING 5' SSWR MH TO BE REMOVED N=1550647.34 E=3177686.57

EXISTING 5' SSWR MH TO BE REMOVED N=1550313.31 E=3177577.97

EXISTING 5' SSWR MH TO BE REMOVED N=1549982.23 E=3177472.24

EX. UNNAMED TRIBUTARY CHANNEL

EX. GAMBEL RIDGE NORTH TRIBUTARY CHANNEL

EX. FENCE

PA F-2

PA F-2

0 100' 200'

1 inch = 100 ft.

KEY MAP

SCALE: 1" = 4500'

LEGEND

- EXISTING CURB & GUTTER
- DEMO CURB & GUTTER
- EXISTING STORM & STUB OUT
- DEMO STORM & STUB OUT
- W — EXISTING WATER & STUB OUT
- W — DEMO WATER & STUB OUT
- SS — EXISTING SANITARY & STUB OUT
- SD — DEMO STORM & STUB OUT
- IRR — EXISTING IRRIGATION & STUB OUT
- IRR — DEMO IRRIGATION & STUB OUT
- SD — EXISTING STORM & STUB OUT
- SD — FUTURE STORM & STUB OUT
- RETAINING WALL
- EXISTING FENCE - CHAIN LINK
- EXISTING FENCE - WOOD POST
- DEMO FENCE - CHAIN LINK
- DEMO FENCE - WOOD POST
- I — IRRIGATION SERVICE
- S — SANITARY SERVICE
- W — WATER SERVICE
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- FO — EXISTING FIBER OPTIC
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JOSEPH F. FERRIS

STATE OF COLORADO # 55846

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DAWSON TRAILS OFFSITE SANITARY SEWER

CASTLE ROCK, COLORADO

CONSTRUCTION DOCUMENTS
DEMO PLAN (4 OF 5)

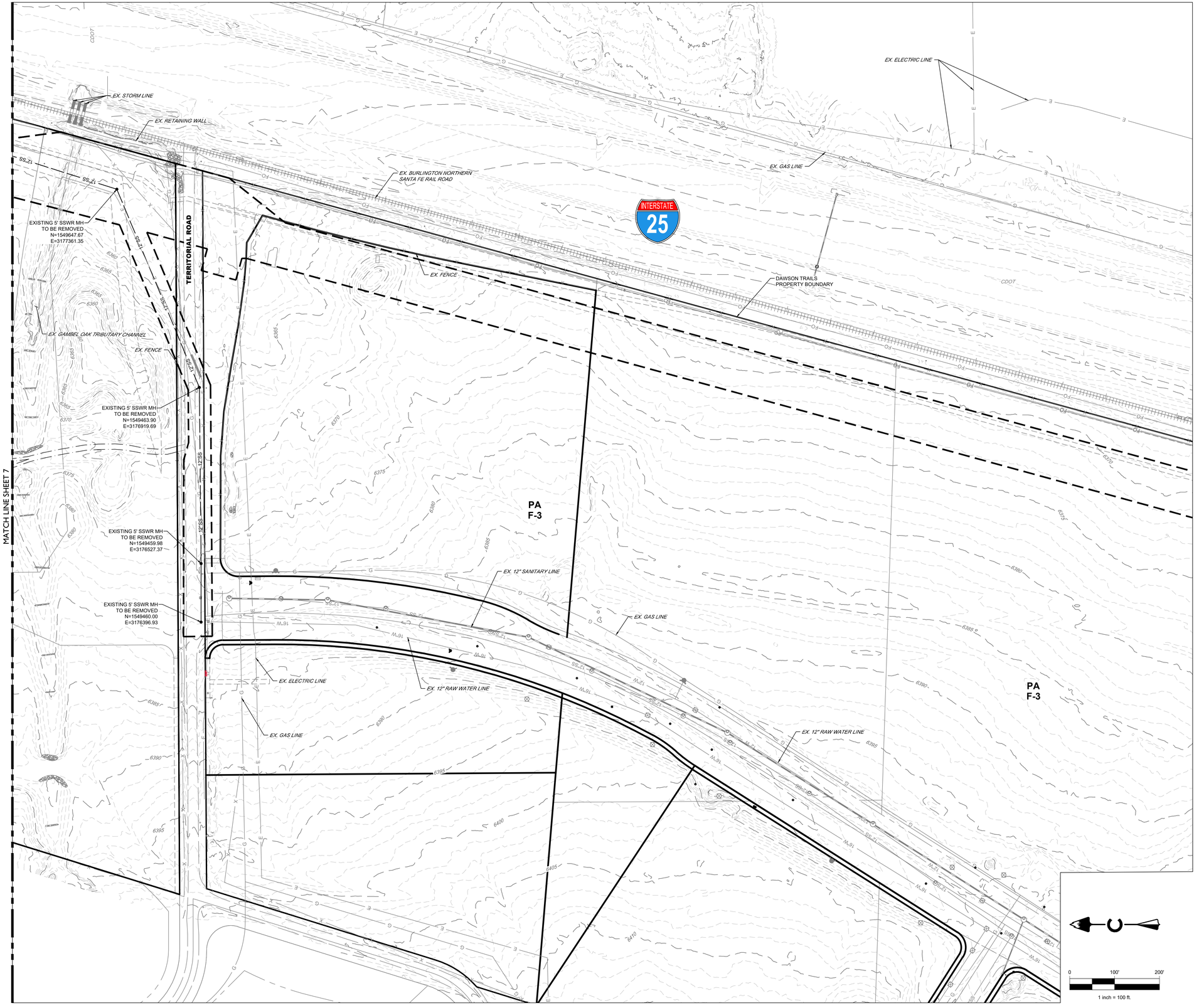
WESTSIDE

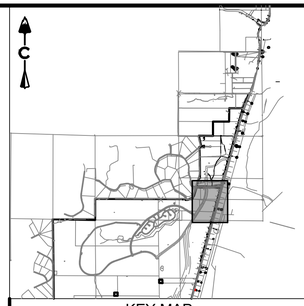
DESIGNED BY: JB
DRAWN BY: MB
CHECKED BY: JF

JOB NO. 20-224

SHEET 7 OF 26

2021-09-11 (4:30 PM) X:\20-224 Dawson\Civil\CAD\Plans\Sanitary Offsite\CDs Demo Plan.dwg





KEY MAP
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LEGEND

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JOSEPH F. FERRIS
STATE OF COLORADO # 55846

TOWN APPROVAL BLOCK

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DAWSON TRAILS OFFSITE SANITARY SEWER

CASTLE ROCK, COLORADO

CONSTRUCTION DOCUMENTS
DEMO PLAN (5 OF 5)

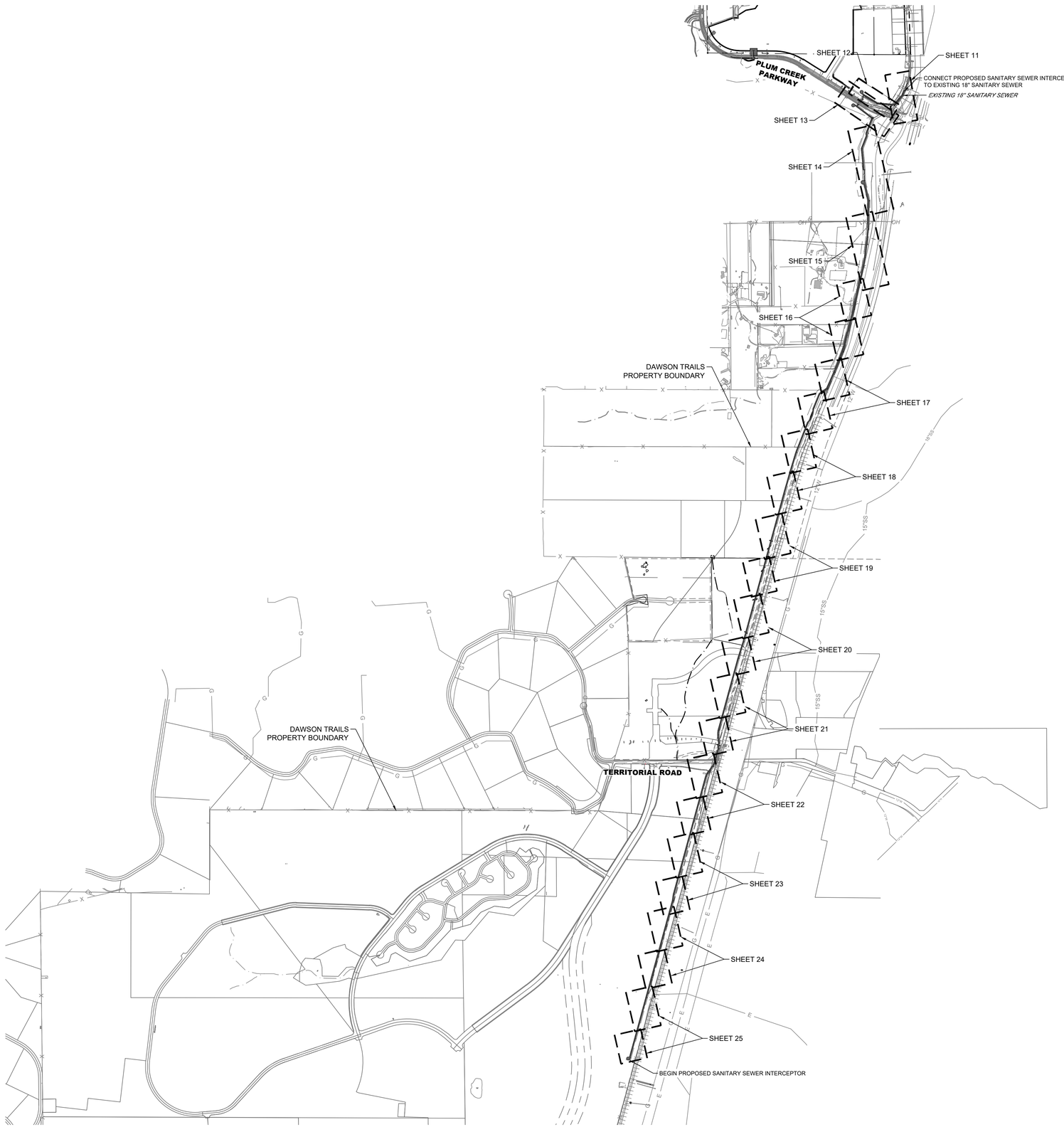
WESTSIDE

DESIGNED BY: JB
DRAWN BY: MB
CHECKED BY: JF

JOB NO. 20-224

SHEET 8 OF 26

2021-09-11 (4:30 PM) X:\20-224 Dawson\Civil\CAD\Plans\Sanitary Offsite\CDs Demo Plan.dwg



N

0 800' 1,600'

1 inch = 800 ft.

LEGEND

- EASEMENT
- RIGHT OF WAY (R.O.W.)
- CENTERLINE
- PROJECT BOUNDARY
- PROPOSED CURB & GUTTER
- PROPOSED SANITARY & STUB OUT
- EXISTING SANITARY & STUB OUT
- SANITARY SERVICE
- WATER SERVICE
- PROPOSED WATER & STUB OUT
- EXISTING WATER & STUB OUT
- PROPOSED STORM & STUB OUT
- EXISTING STORM & STUB OUT

EXISTING / PROPOSED

- SANITARY MANHOLES
- SANITARY CLEAN OUT
- CRUSHER FINES MAINTENANCE ACCESS
- BLOCK NUMBER
- LIMITS OF CONSTRUCTION (LOC)
- TOWN 100 YEAR FLOODPLAIN

NOTES:

1. CONTRACTOR TO MATCH LIMITS OF CONSTRUCTION TO EXISTING GRADE UPON PROJECT COMPLETION.
2. AT ALL INSTANCES WHERE A SANITARY SEWER MAIN CROSSES A WATER MAIN OR STORM SEWER, REGARDLESS OF VERTICAL CLEARANCE, AND WHICH PIPE CROSSES OVER THE OTHER, ONE FULL STANDARD LENGTH SECTION OF SEWER PIPE SHALL BE LOCATED SUCH THAT BOTH JOINTS WILL BE AS FAR FROM THE ~~BASIS OF BEARINGS~~ SEWER CROSSING AS POSSIBLE.

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NOTE: CONTRACTOR SHALL PROVIDE A MINIMUM SEVENTY TWO (72) HOURS' NOTICE TO THE ON-SITE TCR CONSTRUCTION INSPECTOR, (720) 733-2200, PRIOR TO MAKING ANY CONNECTIONS OR TIE-INS TO EXISTING WATER, SANITARY SEWER, AND/OR STORM SEWER SYSTEMS PROVIDED THAT THE UTILITY TIE-IN DOES NOT DISRUPT SERVICE TO EXISTING CR WATER CUSTOMERS. IF THE TIE-IN REQUIRES A LINE SHUTDOWN, OR WILL DISRUPT UTILITY SERVICE, THEN CONTRACTOR SHALL PROVIDE A MINIMUM OF THREE (3) WEEKS' NOTICE TO THE TCR CONSTRUCTION INSPECTOR TO ALLOW TIME FOR CR WATER TO PROVIDE WRITTEN NOTIFICATION TO EXISTING CUSTOMERS AFFECTED BY THE TIE-IN. ALL TOWN UTILITY TIE-INS MUST BE APPROVED BY CR WATER PRIOR TO COMMENCING WORK.

PROFESSIONAL ENGINEER CERTIFICATION

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JOSEPH F. FERRIS
STATE OF COLORADO # 55846

TOWN APPROVAL BLOCK

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DAWSON TRAILS OFFSITE SANITARY SEWER

CASTLE ROCK, COLORADO

CONSTRUCTION DOCUMENTS
OVERALL SANITARY PLAN

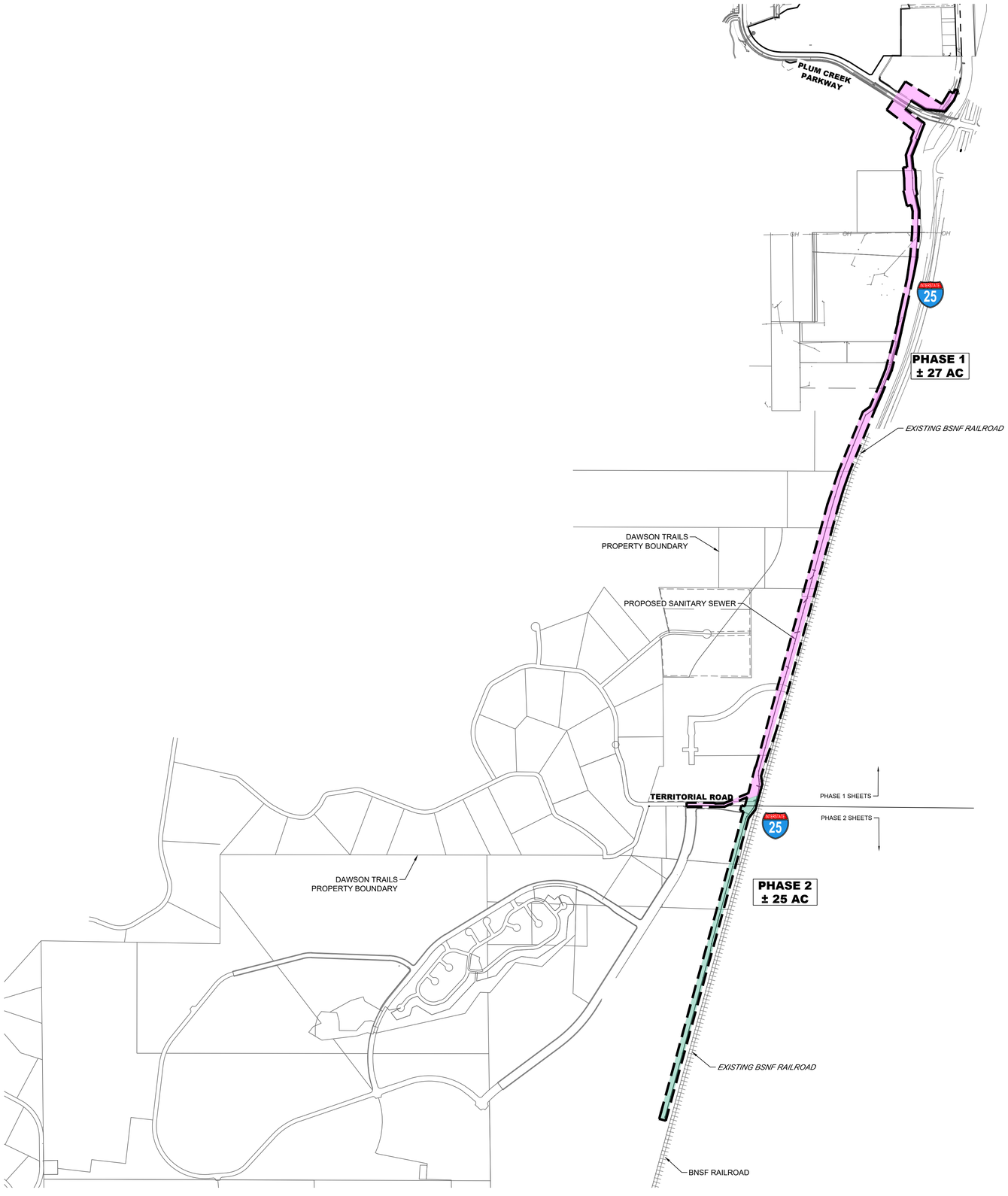
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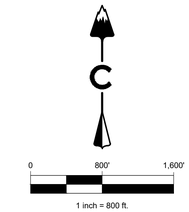
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JOB NO. 20-224

SHEET 9 OF 26

2021-09-11 (4:30 PM) X:\20-224 Dawson\Civil\CAD\Plans\Sanitary Offsite\CDs OVERALL SANITARY PLAN.dwg





LEGEND

- PHASE BOUNDARY
- PHASE 1
- PHASE 2

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THE TEMPORARY EROSION AND SEDIMENT CONTROL PLAN INCLUDED HEREIN HAS BEEN PREPARED UNDER MY DIRECT SUPERVISION IN ACCORDANCE WITH THE REQUIREMENTS OF THE GRADING, EROSION, AND SEDIMENT CONTROL (GESC) CRITERIA MANUAL OF DOUGLAS COUNTY AS AMENDED.

KEVIN ROHORBOUGH PE — DATE
STATE OF COLORADO # 48992

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JOSEPH F. FERRIS
STATE OF COLORADO # 55846

DOUGLAS COUNTY ACCEPTANCE BLOCK

ASSISTANT DIRECTOR OF DEVELOPMENT REVIEW

DATE

THESE CONSTRUCTION DRAWINGS HAVE BEEN REVIEWED BY DOUGLAS COUNTY FOR GRADING, EROSION AND SEDIMENT CONTROL IMPROVEMENTS ONLY.

ENGINEERING DIVISION ACCEPTANCE BLOCK

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CASTLE ROCK, COLORADO

CONSTRUCTION DOCUMENTS
PHASING PLAN

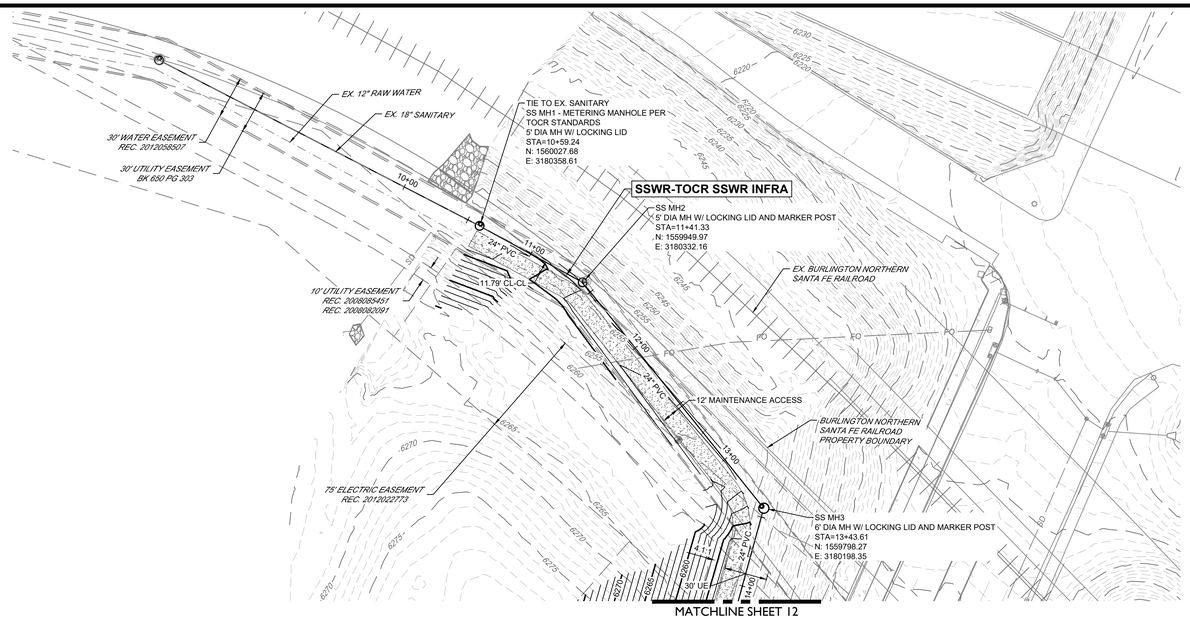
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DRAWN BY: MB
CHECKED BY: JF

JOB NO. 20-224

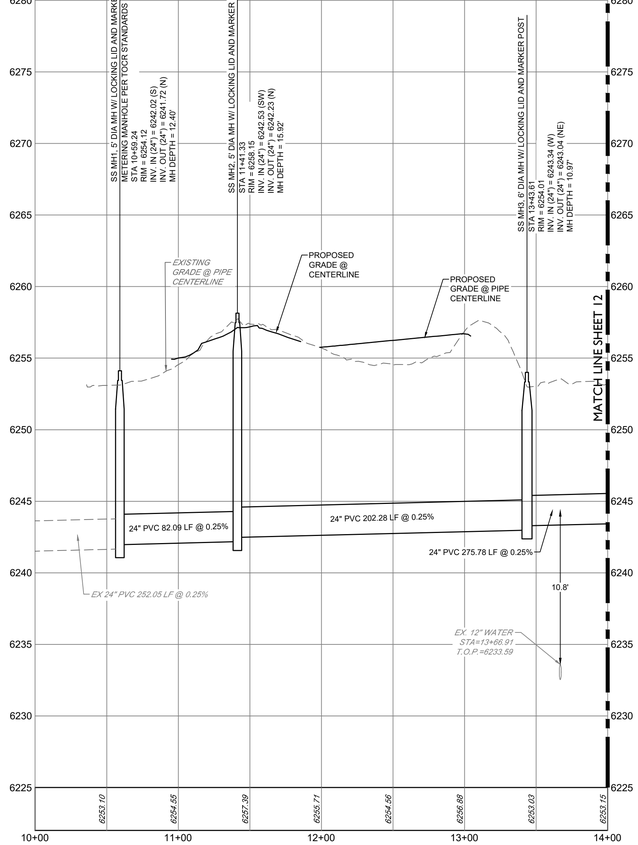
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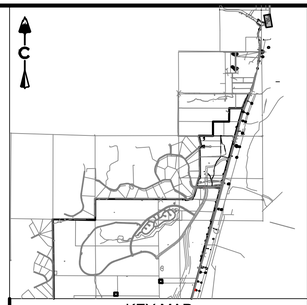


SSWR-TOCR SSWR INFRA

(10+00-14+00)



NOTE: CONTRACTOR SHALL PROVIDE A MINIMUM SEVENTY TWO (72) HOURS' NOTICE TO THE ON-SITE TCR CONSTRUCTION INSPECTOR, (720) 733-2200, PRIOR TO MAKING ANY CONNECTIONS OR TIE-INS TO EXISTING WATER, SANITARY SEWER, AND/OR STORM SEWER SYSTEMS PROVIDED THAT THE UTILITY TIE-IN DOES NOT DISRUPT SERVICE TO EXISTING CR WATER CUSTOMERS. IF THE TIE-IN REQUIRES A LINE SHUTDOWN, OR WILL DISRUPT UTILITY SERVICE, THEN CONTRACTOR SHALL PROVIDE A MINIMUM OF THREE (3) WEEKS' NOTICE TO THE TCR CONSTRUCTION INSPECTOR TO ALLOW TIME FOR CR WATER TO PROVIDE WRITTEN NOTIFICATION TO EXISTING CUSTOMERS AFFECTED BY THE TIE-IN. ALL TOWN UTILITY TIE-INS MUST BE APPROVED BY CR WATER PRIOR TO COMMENCING WORK.



KEY MAP
SCALE: 1" = 4500'

0 50' 100'
1 inch = 50 ft.

PROFILE
HORIZ: 1" = 50'
VERT: 1" = 10'

LEGEND

- EASEMENT
- RIGHT OF WAY (R.O.W.)
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- PROJECT BOUNDARY
- PROPOSED CURB & GUTTER
- PROPOSED SANITARY & STUB OUT
- EXISTING SANITARY & STUB OUT
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- SANITARY MANHOLES
- SANITARY CLEAN OUT
- CRUSHER FINES MAINTENANCE ACCESS
- BLOCK NUMBER
- LIMITS OF CONSTRUCTION (LOC)
- TOWN 100 YEAR FLOODPLAIN

NOTES:

1. CONTRACTOR TO MATCH LIMITS OF CONSTRUCTION TO EXISTING GRADE UPON PROJECT COMPLETION.
2. AT ALL INSTANCES WHERE A SANITARY SEWER MAIN CROSSES A WATER MAIN OR STORM SEWER, REGARDLESS OF VERTICAL CLEARANCE, AND WHICH PIPE CROSSES OVER THE OTHER, ONE FULL STANDARD LENGTH SECTION OF SEWER PIPE SHALL BE CENTERED ON THE CROSSING SO THAT JOINTS WILL BE AS FAR FROM THE WATER MAIN OR STORM SEWER CROSSING AS POSSIBLE.

BASIS OF BEARINGS

BEARINGS SHOWN HEREON ARE BASED UPON THE NORTH LINE OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION 22, TOWNSHIP 8 SOUTH, RANGE 67 WEST, BEARING S 89°31'22" E, FROM THE WEST SIXTEENTH CORNER OF SECTIONS 22/15, BEING MONUMENTED BY A #6 REBAR WITH A 2-1/2 INCH ALUMINUM CAP STAMPED "LS 5112 - 1994", TO THE NORTH QUARTER CORNER OF SAID SECTION 22 BEING MONUMENTED BY A #6 REBAR WITH A 2-1/2 INCH ALUMINUM CAP STAMPED "LS 38002 - 2020", WITH ALL BEARINGS CONTAINED HEREIN RELATIVE THERETO.

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JOSEPH F. FERRIS
STATE OF COLORADO # 55846

TOWN APPROVAL BLOCK

TOWN OF CASTLE ROCK APPROVAL
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APPROVED BY:

DEVELOPMENT SERVICES DATE

CORE CONSULTANTS. INC.
3473 S. BROADWAY
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303.703.4444
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LAND DEVELOPMENT
ENERGY
PUBLIC INFRASTUCTURE

CORE

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1	1ST SUBMITTAL	12/22/22	KR
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DAWSON TRAILS OFFSITE SANITARY SEWER
CASTLE ROCK, COLORADO
CONSTRUCTION DOCUMENTS
SANITARY P&P (1 OF 15)

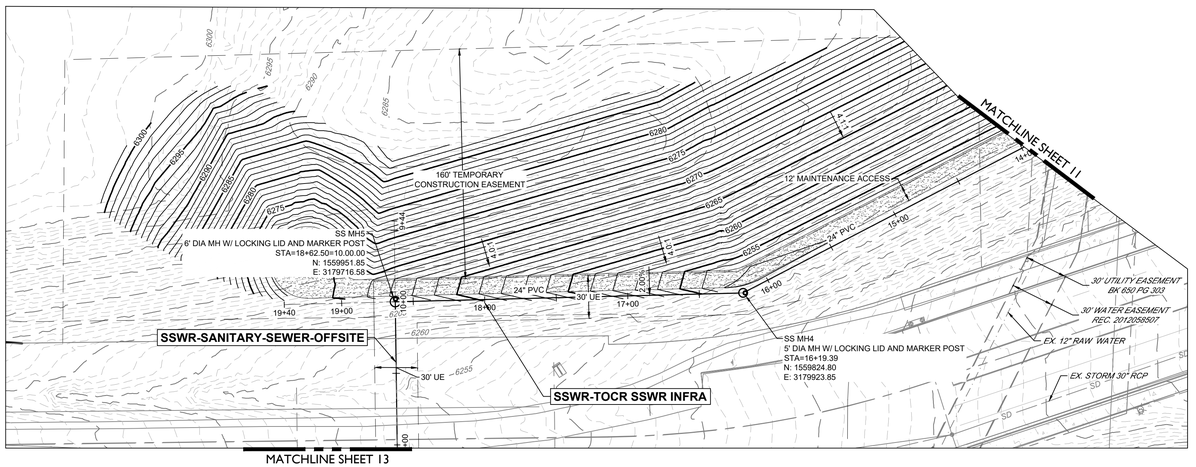
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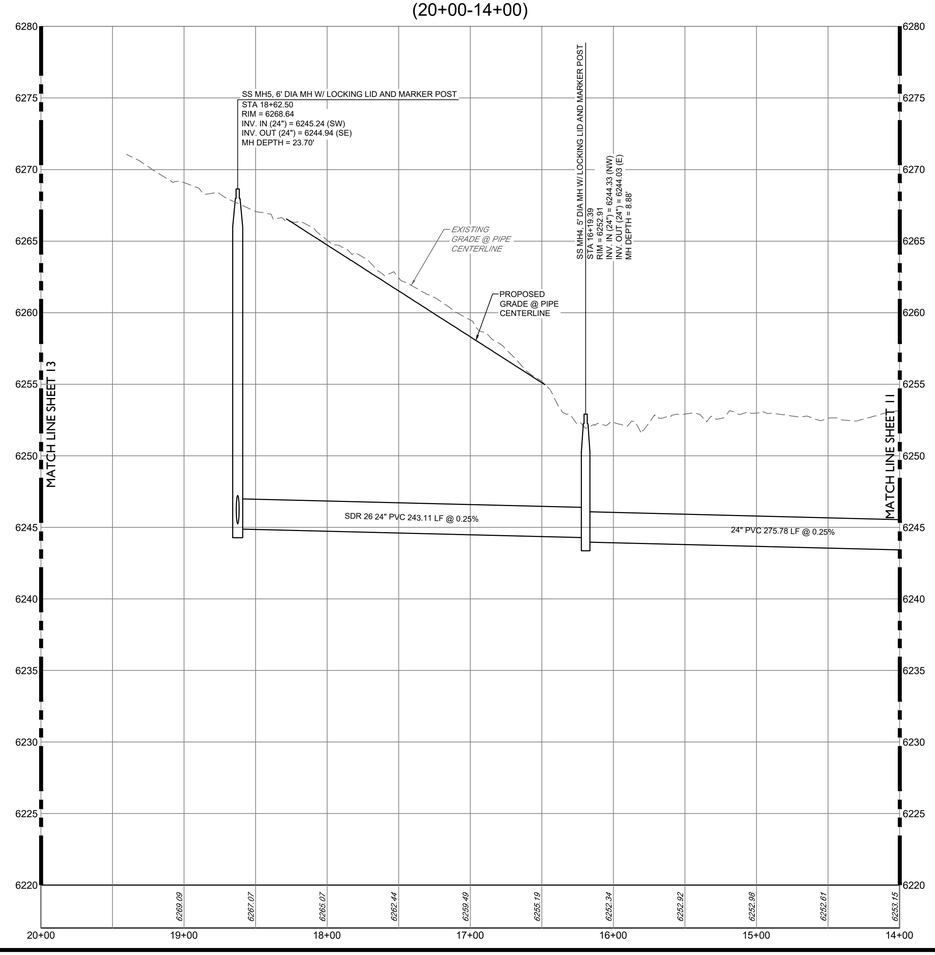
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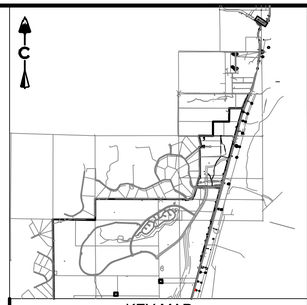
SSWR-TOCR SSWR INFRA

(20+00-14+00)



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SEE VARIANCE #TCV23-21



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JOSEPH F. FERRIS
STATE OF COLORADO # 55846

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DAWSON TRAILS OFFSITE SANITARY SEWER

CASTLE ROCK, COLORADO

CONSTRUCTION DOCUMENTS
SANITARY P&P (2 OF 15)

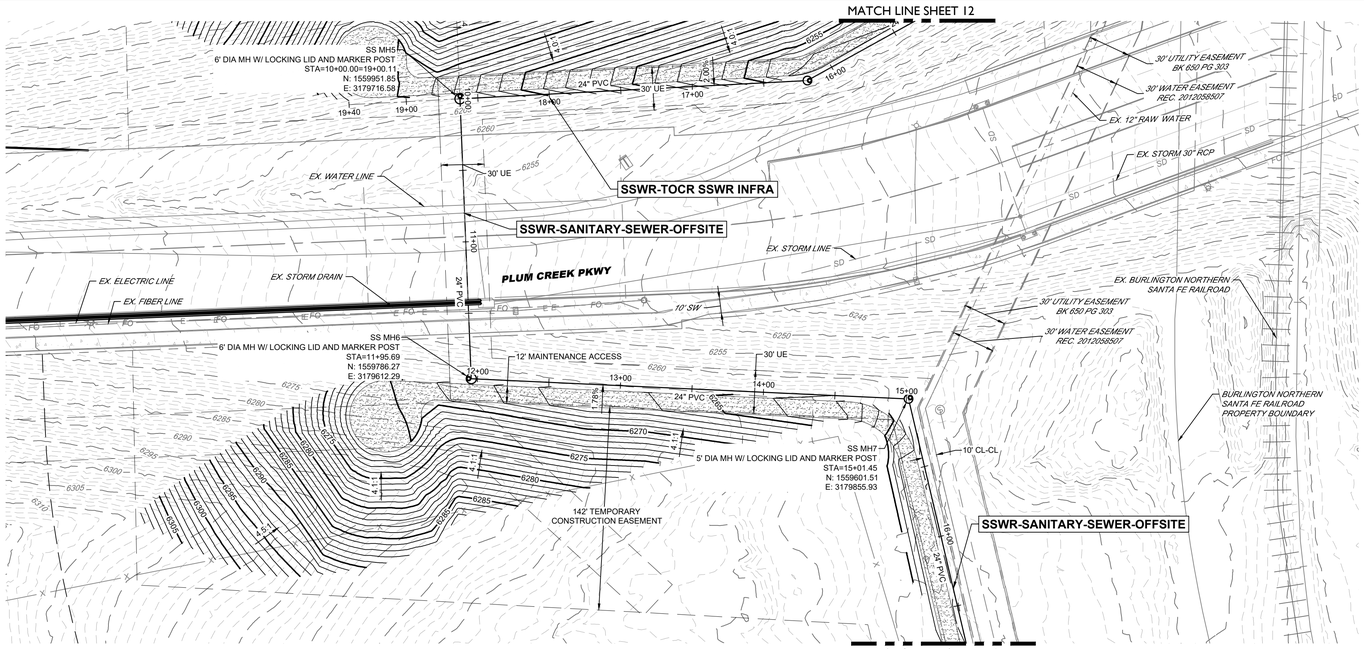
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DESIGNED BY: JB
DRAWN BY: MB
CHECKED BY: JF

JOB NO. 20-224

SHEET 12 OF 26

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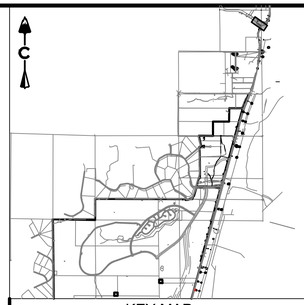


SSWR-SANITARY-SEWER-OFFSITE

(9+36-16+50)

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SEE VARIANCE #TCV23-21



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DAWSON TRAILS OFFSITE SANITARY SEWER

CASTLE ROCK, COLORADO

CONSTRUCTION DOCUMENTS
SANITARY P&P (13 OF 15)

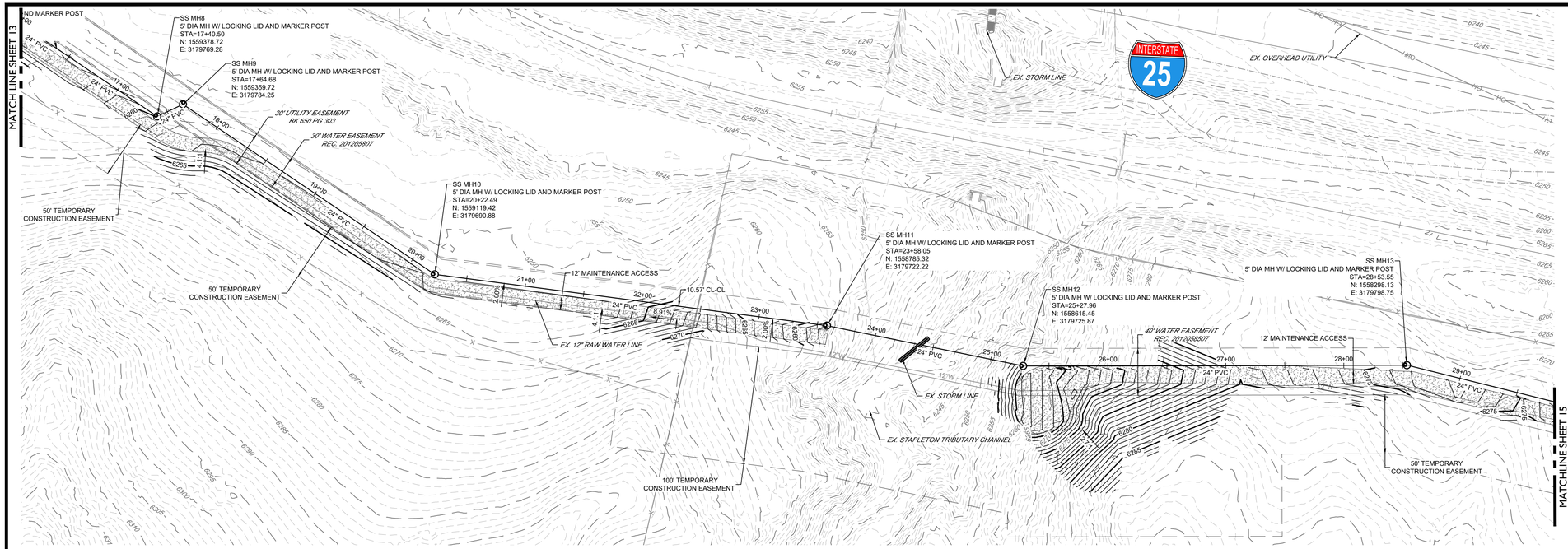
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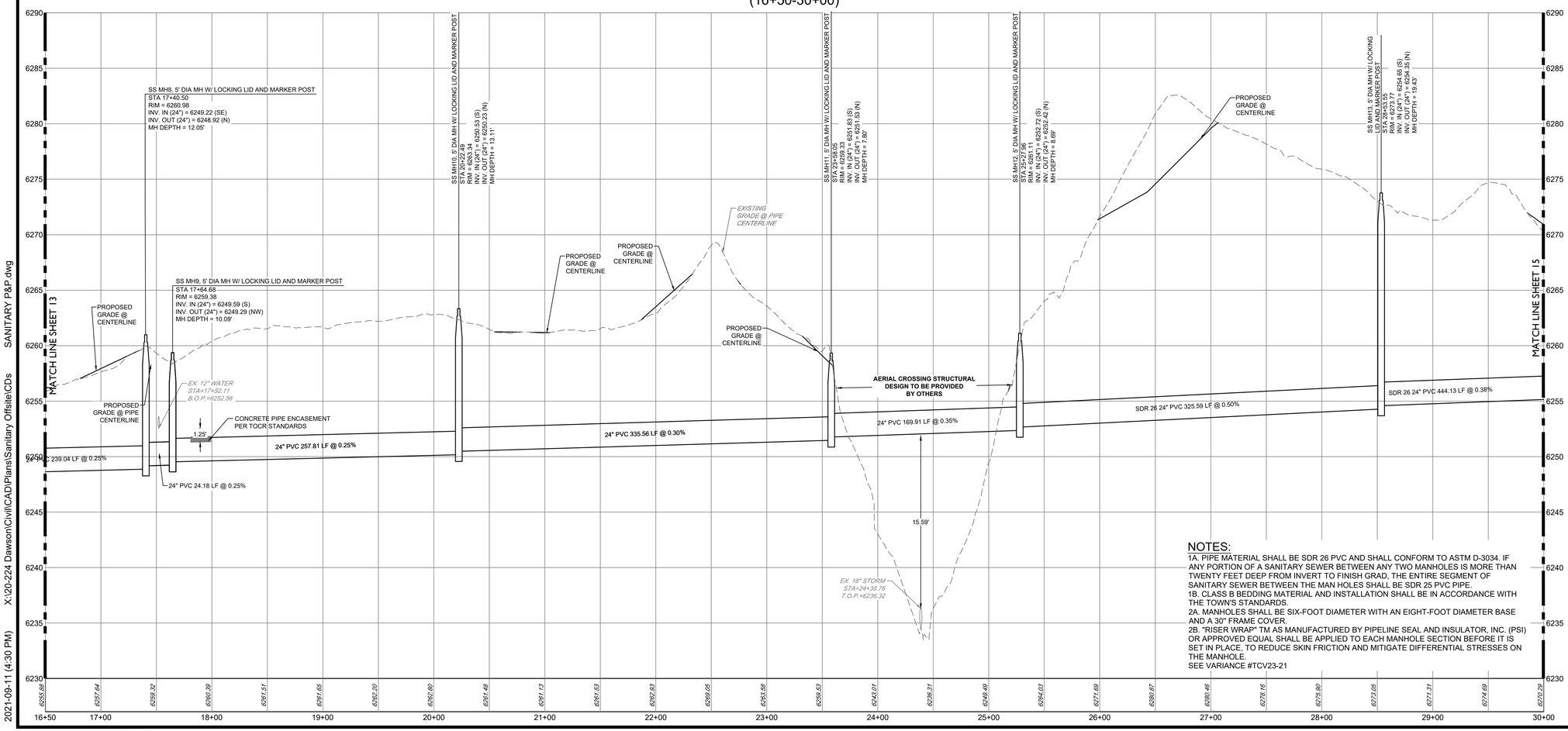
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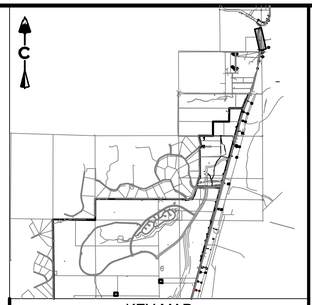


SSWR-SANITARY-SEWER-OFFSITE

(16+50-30+00)



SANITARY P&P.dwg
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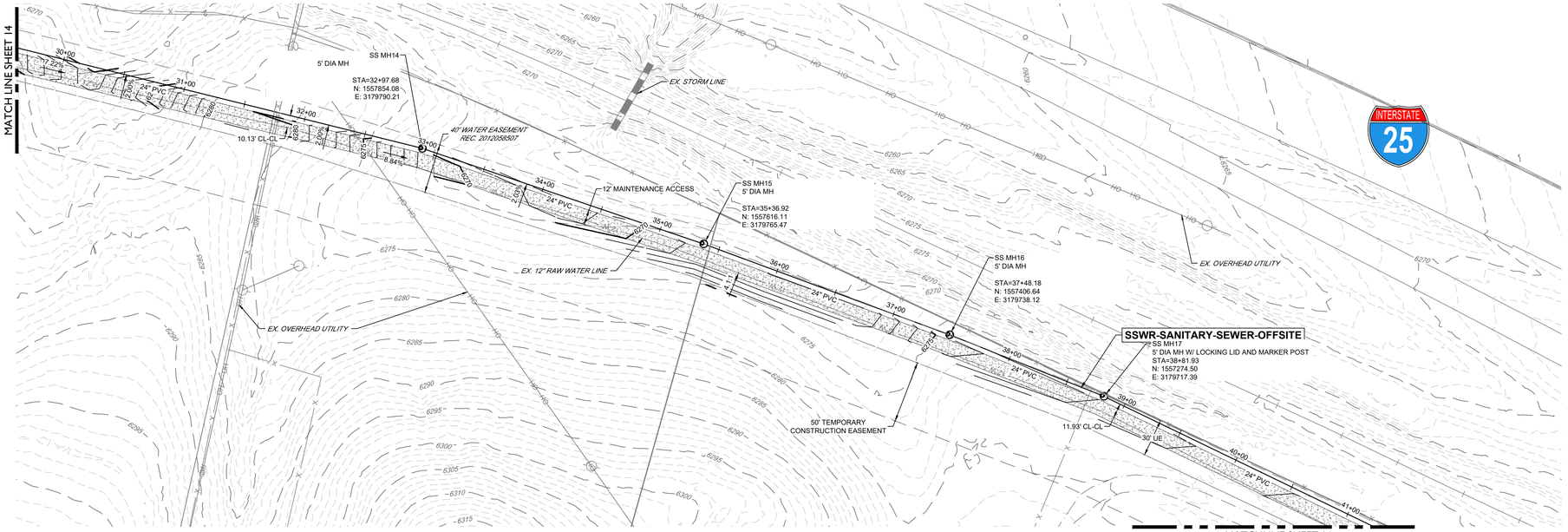
DAWSON TRAILS OFFSITE SANITARY SEWER
CASTLE ROCK, COLORADO
CONSTRUCTION DOCUMENTS
SANITARY P&P (4 OF 15)

WESTSIDE

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DRAWN BY: MB
CHECKED BY: JF

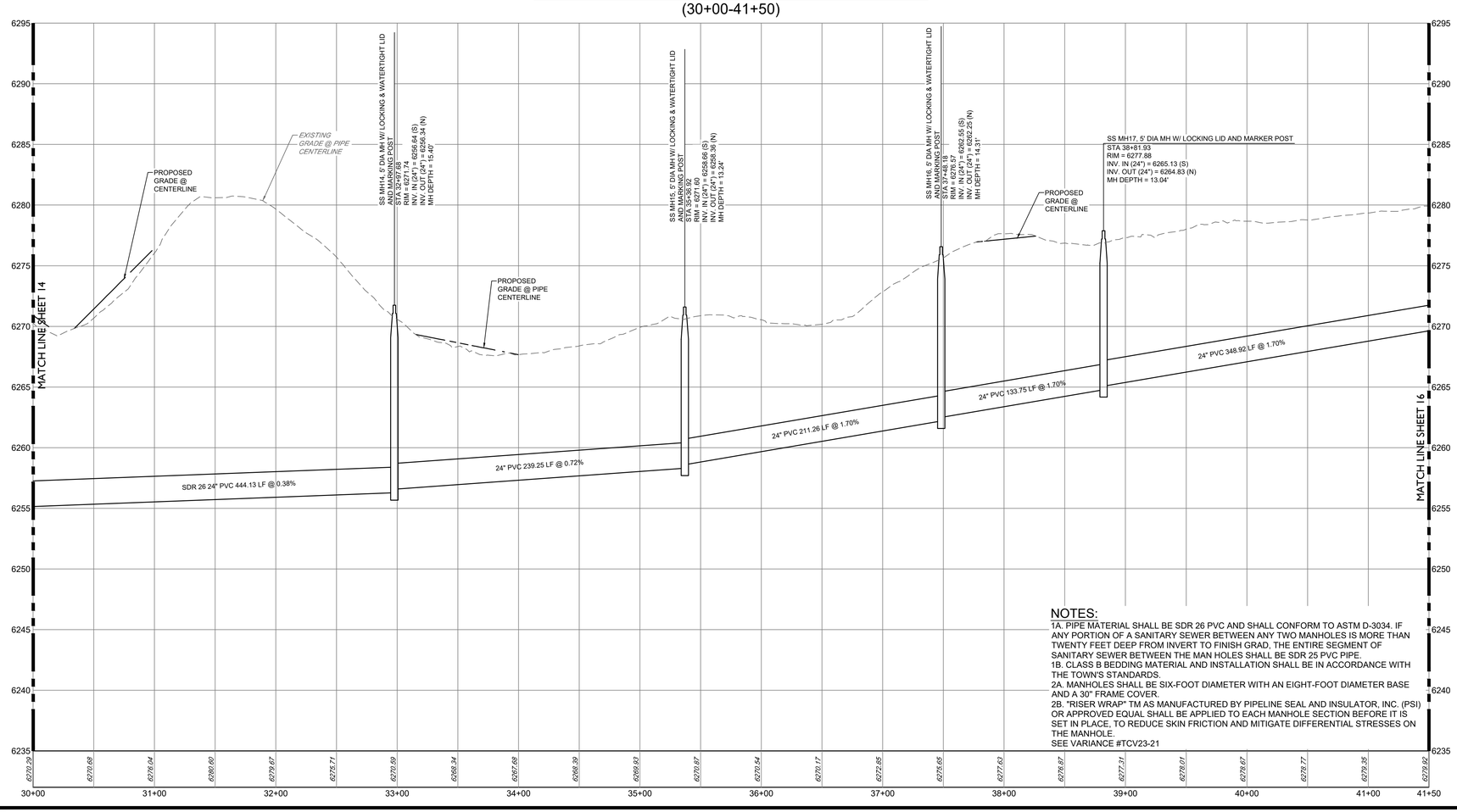
JOB NO. 20-224

SHEET 14 OF 26



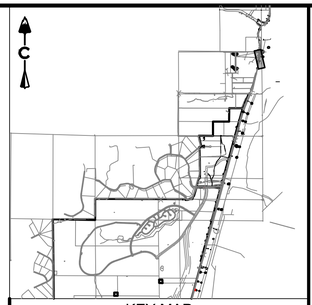
SSWR-SANITARY-SEWER-OFFSITE

(30+00-41+50)



NOTES:

1A. PIPE MATERIAL SHALL BE SDR 26 PVC AND SHALL CONFORM TO ASTM D-3034. IF ANY PORTION OF A SANITARY SEWER BETWEEN ANY TWO MANHOLES IS MORE THAN TWENTY FEET DEEP FROM INVERT TO FINISH GRAD, THE ENTIRE SEGMENT OF SANITARY SEWER BETWEEN THE MAN HOLES SHALL BE SDR 25 PVC PIPE.
1B. CLASS B BEDDING MATERIAL AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE TOWN'S STANDARDS.
2A. MANHOLES SHALL BE SIX-FOOT DIAMETER WITH AN EIGHT-FOOT DIAMETER BASE AND A 30" FRAME COVER.
2B. "RISER WRAP" TM AS MANUFACTURED BY PIPELINE SEAL AND INSULATOR, INC. (PSI) OR APPROVED EQUAL SHALL BE APPLIED TO EACH MANHOLE SECTION BEFORE IT IS SET IN PLACE, TO REDUCE SKIN FRICTION AND MITIGATE DIFFERENTIAL STRESSES ON THE MANHOLE.
SEE VARIANCE #TCV23-21



KEY MAP
SCALE: 1" = 4500'

0 50' 100'
1 inch = 50 ft.

PROFILE
HORIZ: 1" = 50'
VERT: 1" = 10'

LEGEND

- EASEMENT
- RIGHT OF WAY (R.O.W.)
- CENTERLINE
- PROJECT BOUNDARY
- PROPOSED CURB & GUTTER
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- SANITARY MANHOLES
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- CRUSHER FINES MAINTENANCE ACCESS
- BLOCK NUMBER
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NOTES:

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STATE OF COLORADO # 55846

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APPROVED BY:

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CASTLE ROCK, COLORADO

CONSTRUCTION DOCUMENTS
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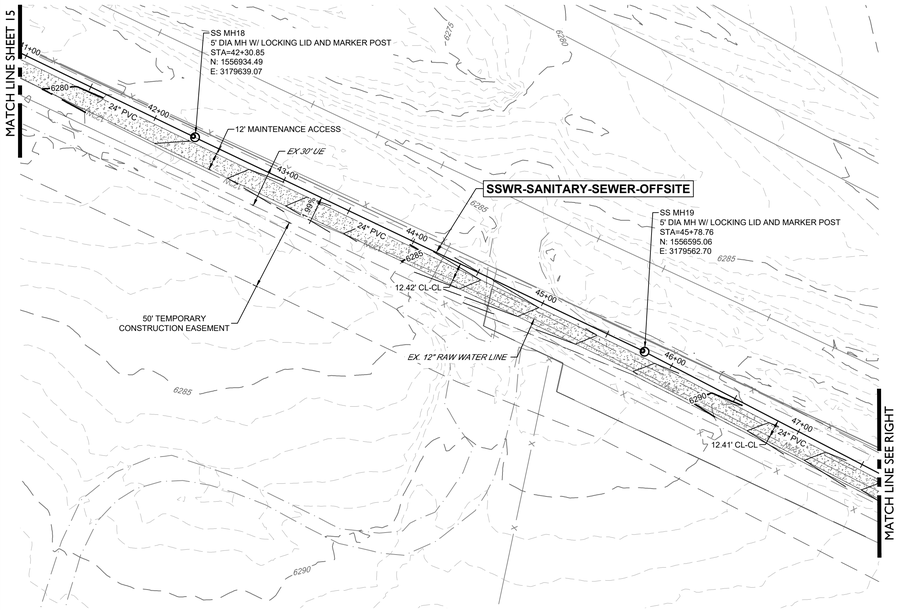
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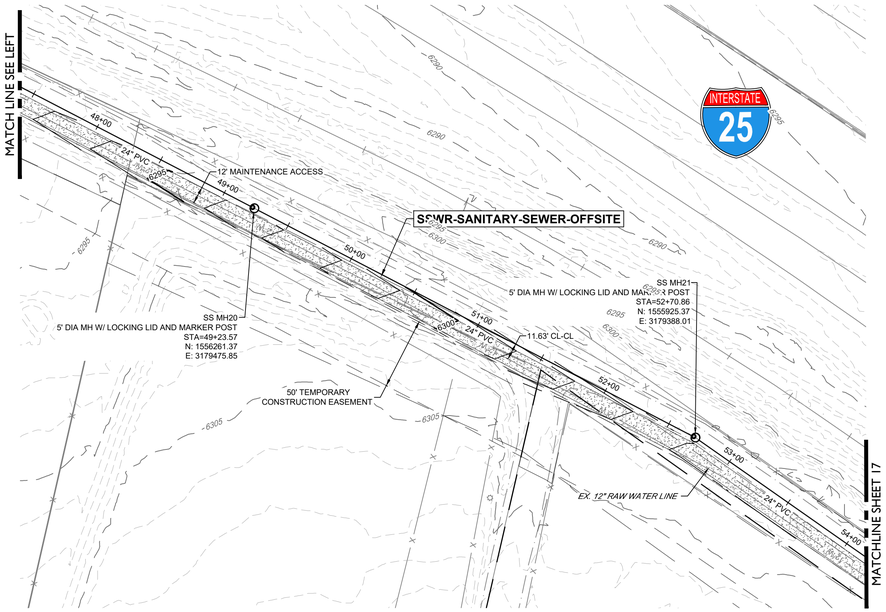
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JOB NO. 20-224

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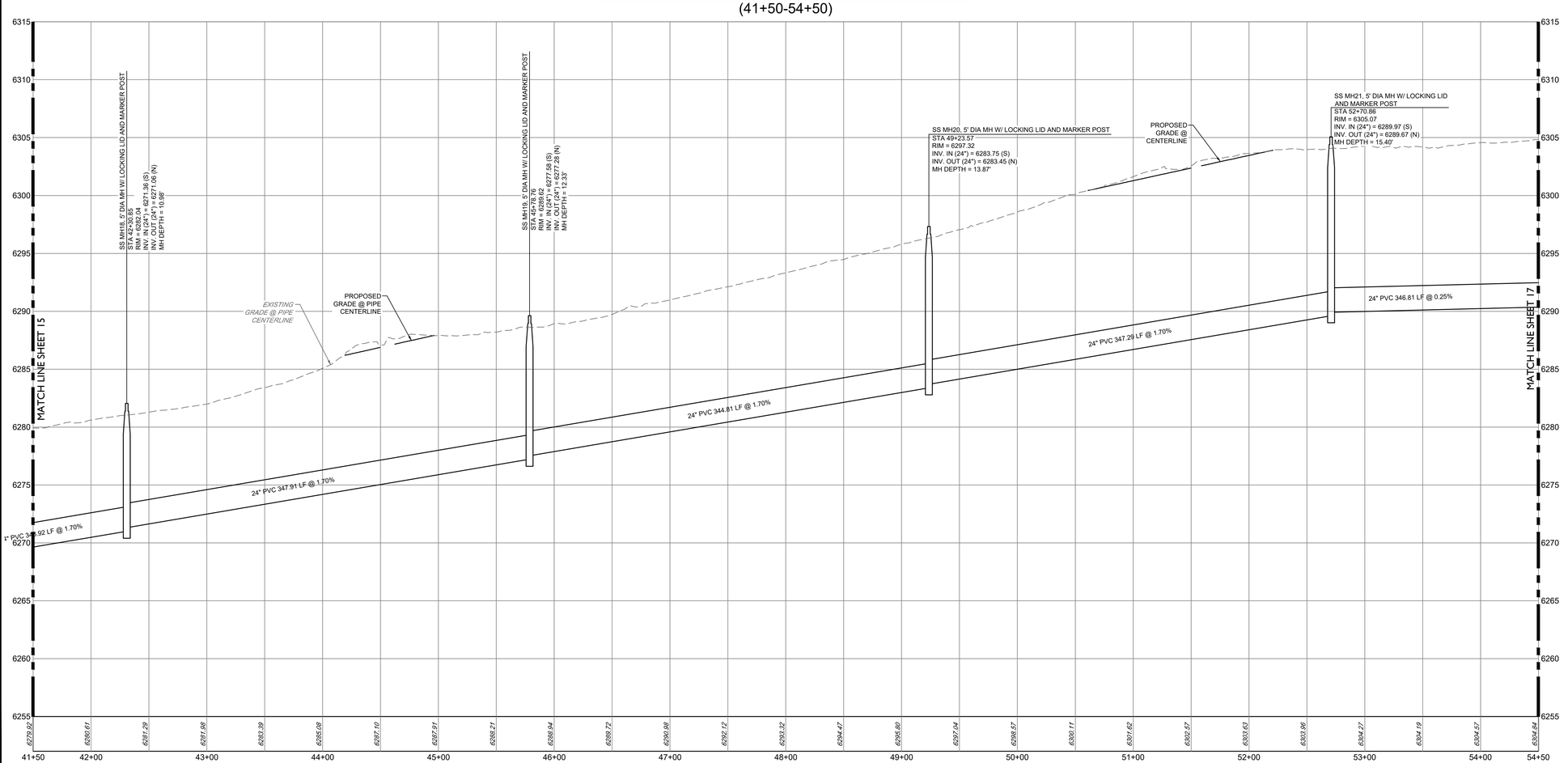
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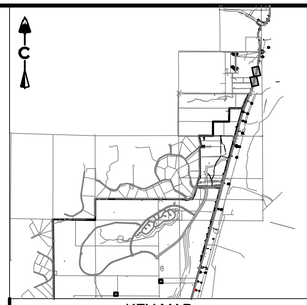




SSWR-SANITARY-SEWER-OFFSITE

(41+50-54+50)





KEY MAP

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PROFILE
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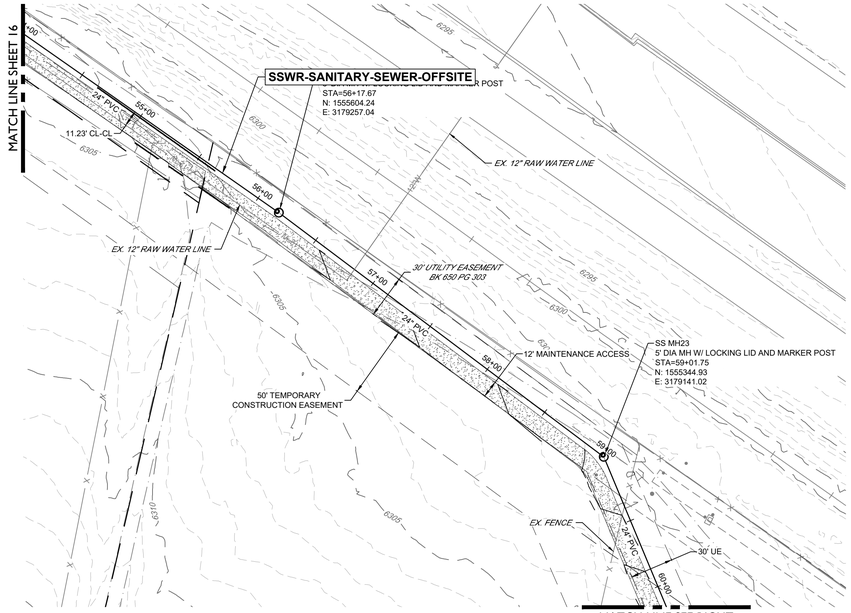
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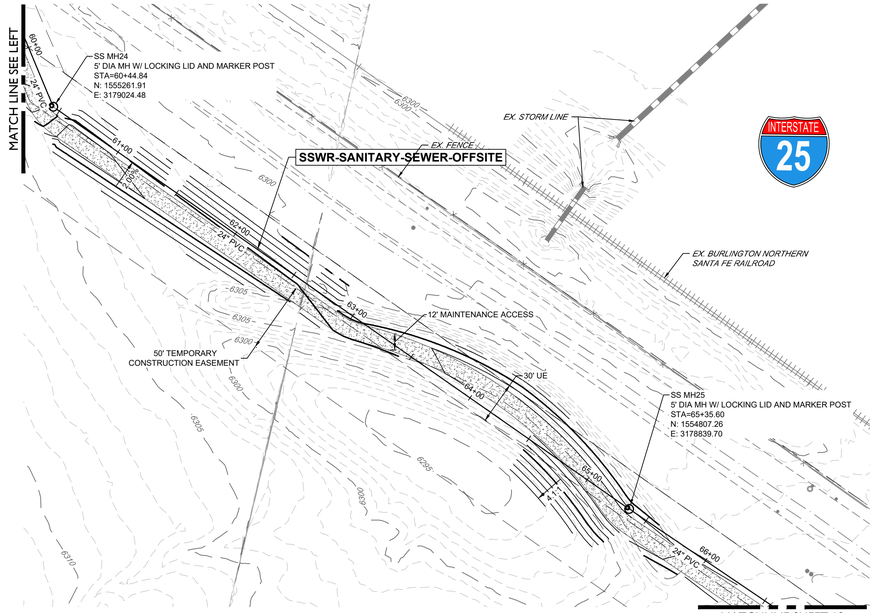
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DRAWN BY: MB
CHECKED BY: JF

JOB NO. 20-224

SHEET 16 OF 26

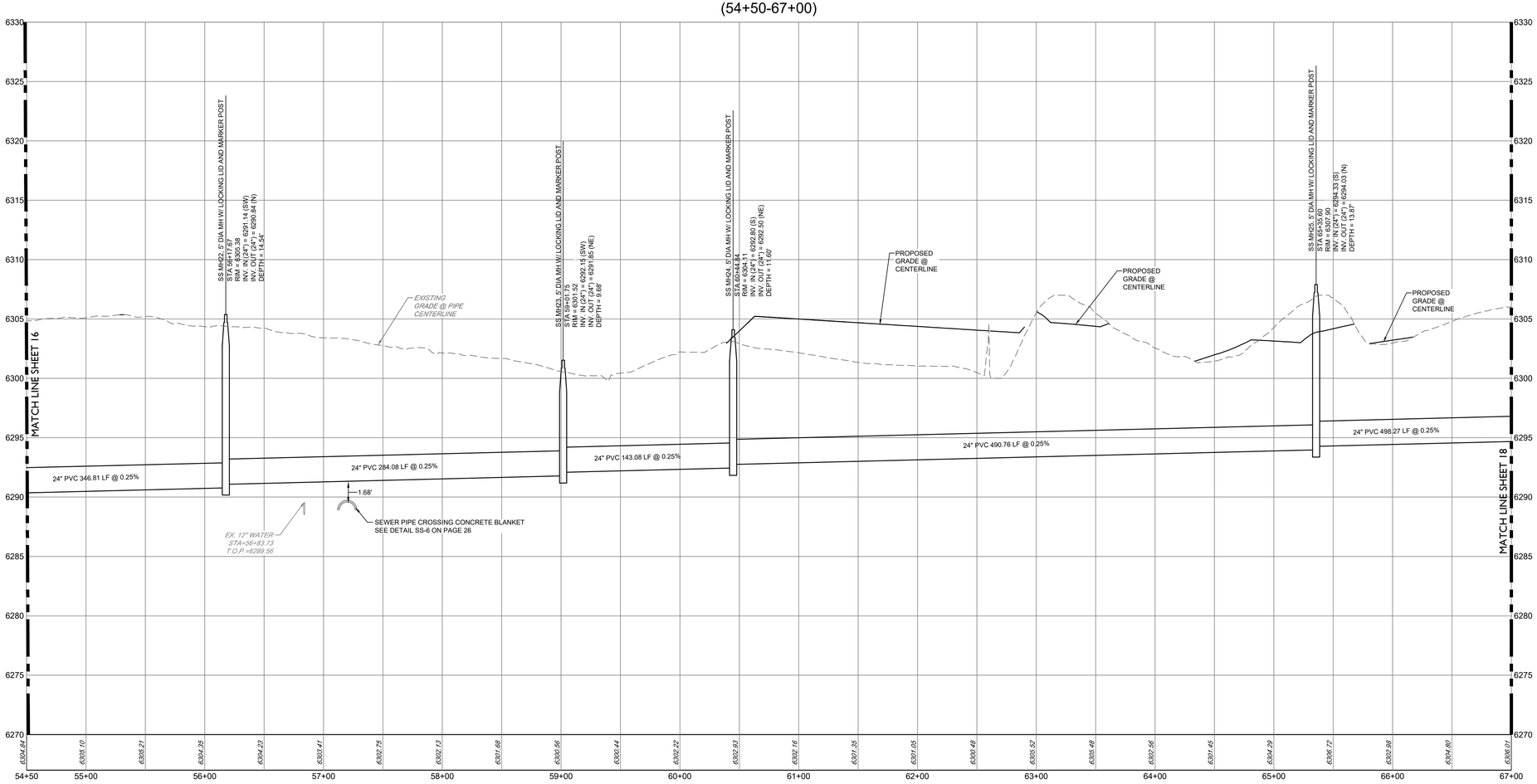
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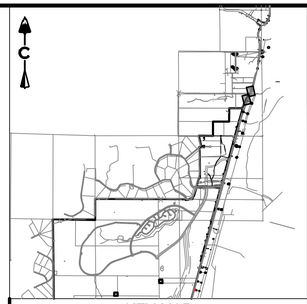




SSWR-SANITARY-SEWER-OFFSITE

(54+50-67+00)





KEY MAP
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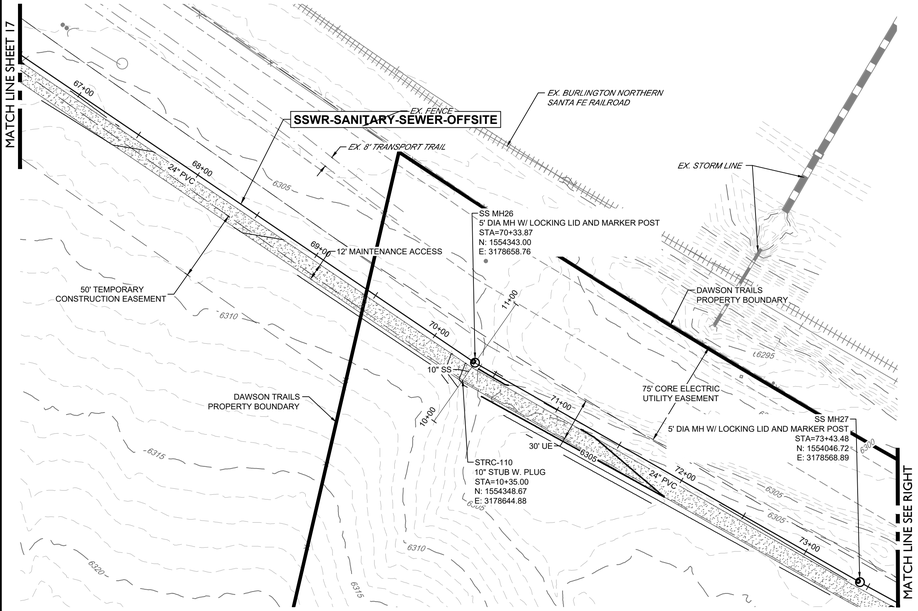
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DESIGNED BY: JB
DRAWN BY: MB
CHECKED BY: JF

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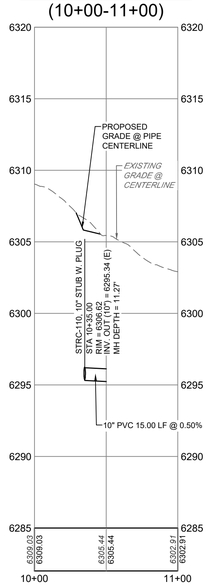
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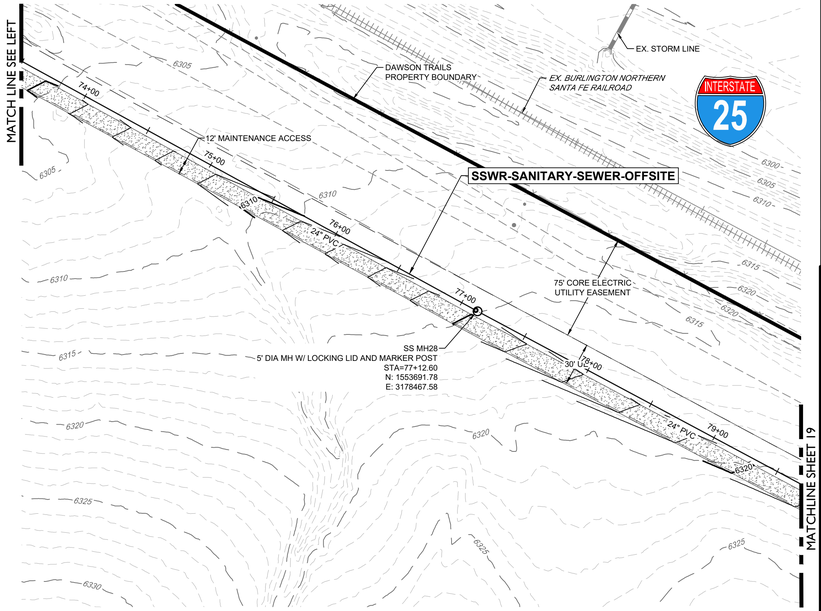
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SAN STUB A

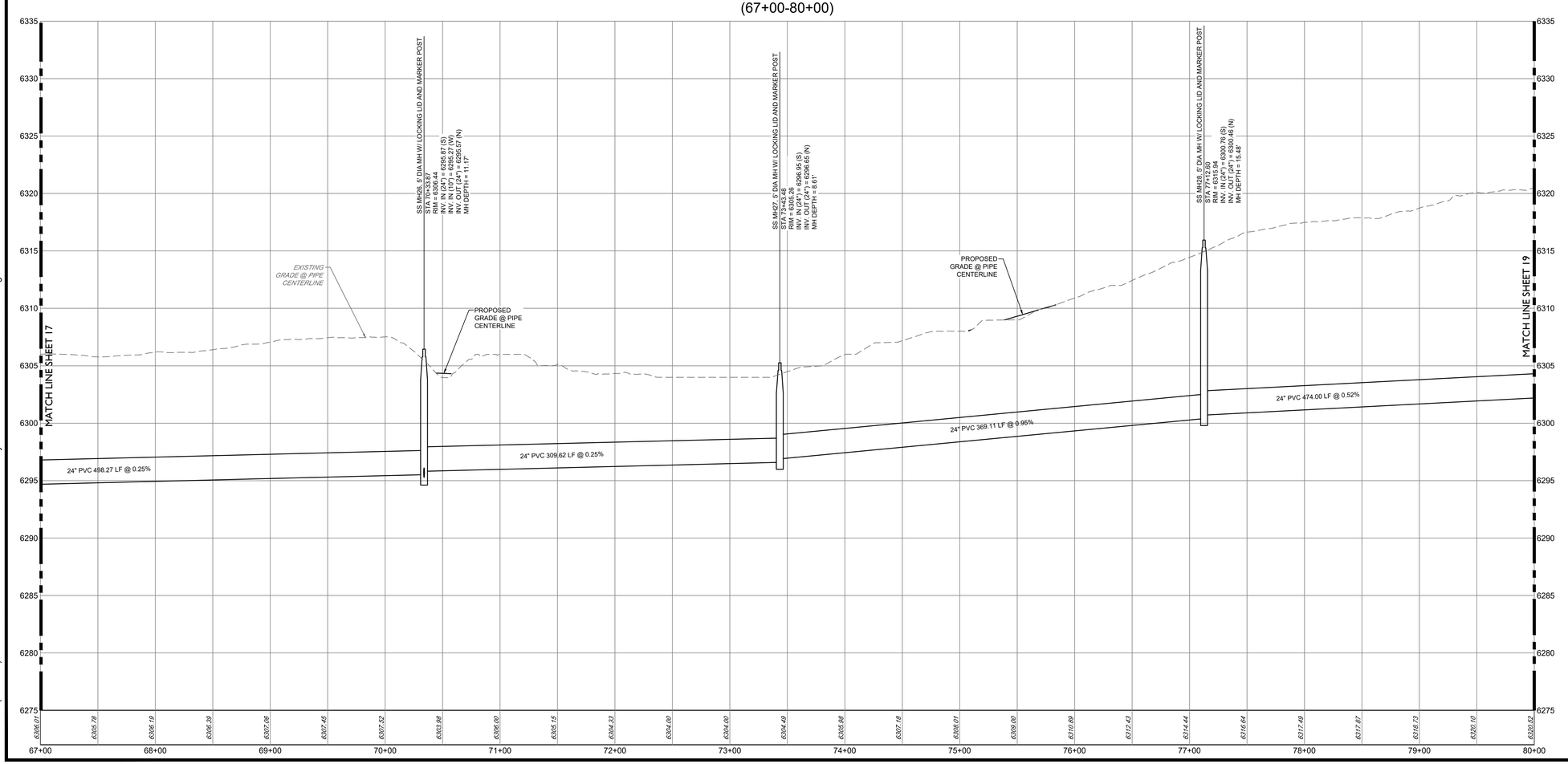
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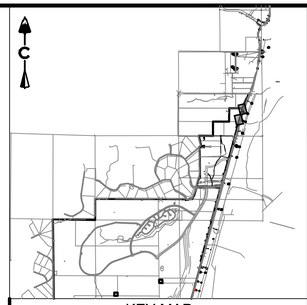




SSWR-SANITARY-SEWER-OFFSITE

(67+00-80+00)





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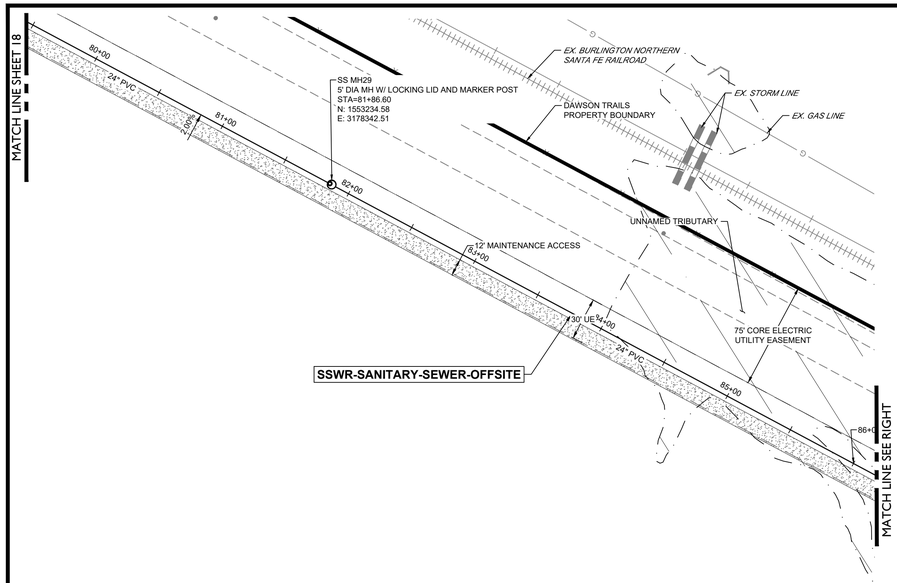
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CHECKED BY: JF

JOB NO. 20-224

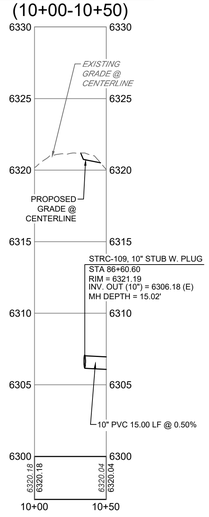
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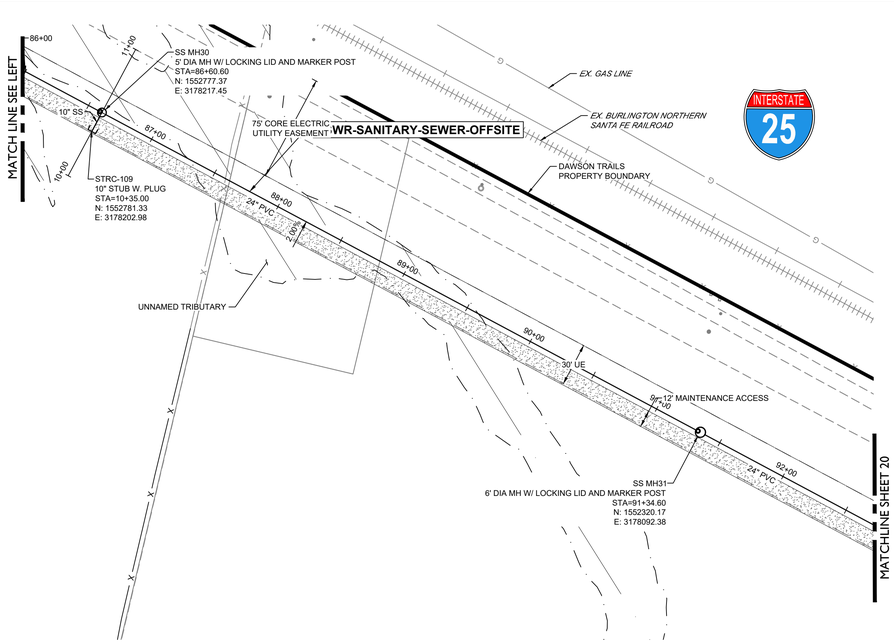
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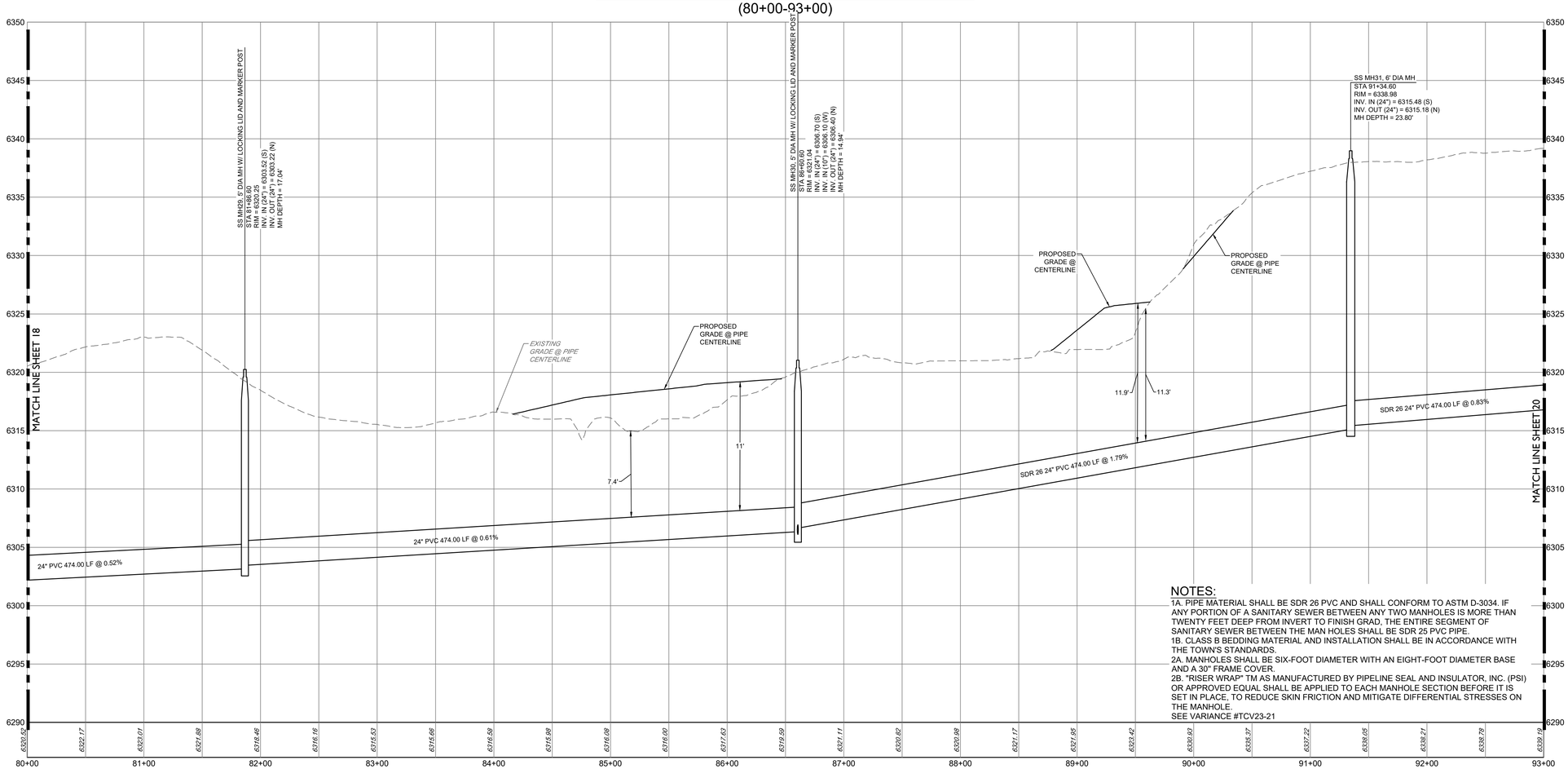
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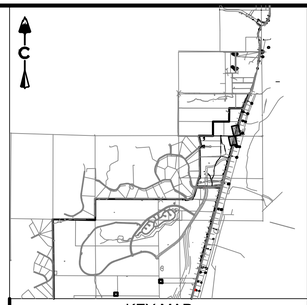
SSWR-SANITARY-SEWER-OFFSITE

(80+00-93+00)



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SEE VARIANCE #TCV23-21



KEY MAP

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- W — WATER SERVICE
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JOSEPH F. FERRIS
STATE OF COLORADO # 55846

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APPROVED BY:

DEVELOPMENT SERVICES DATE

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3473 S. BROADWAY
ENGLEWOOD, CO 80113
303.703.4444
LIVEYOURCORE.COM

LAND DEVELOPMENT | ENERGY | PUBLIC INFRASTUCTURE

CORE

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

#	DESCRIPTION	DATE	BY
1	1ST SUBMITTAL	12/22/22	KR
2	2ND SUBMITTAL	04/26/23	JF

DAWSON TRAILS OFFSITE SANITARY SEWER

CASTLE ROCK, COLORADO

CONSTRUCTION DOCUMENTS
SANITARY P&P (9 OF 15)

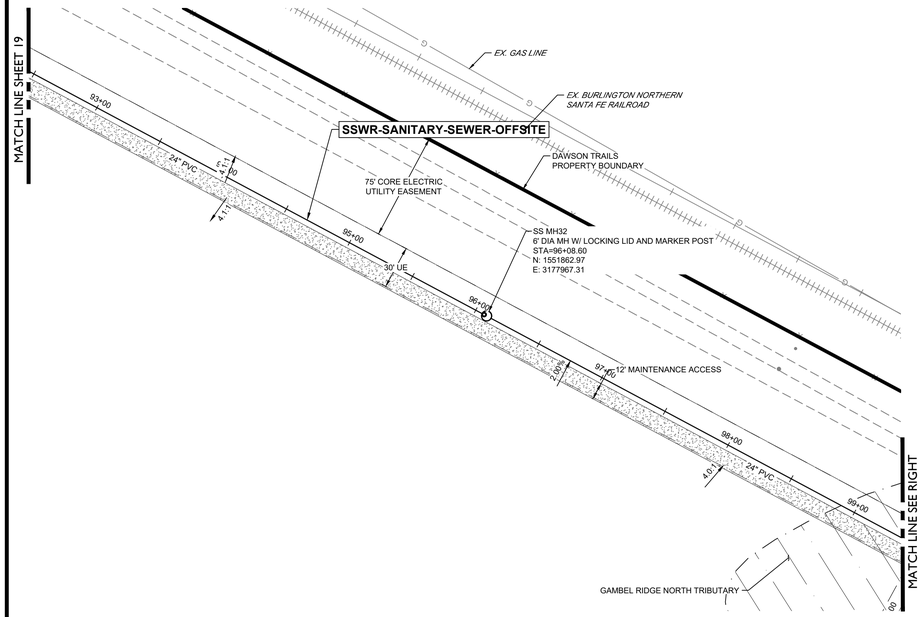
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DRAWN BY: MB
CHECKED BY: JF

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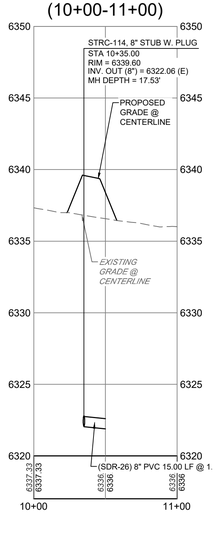
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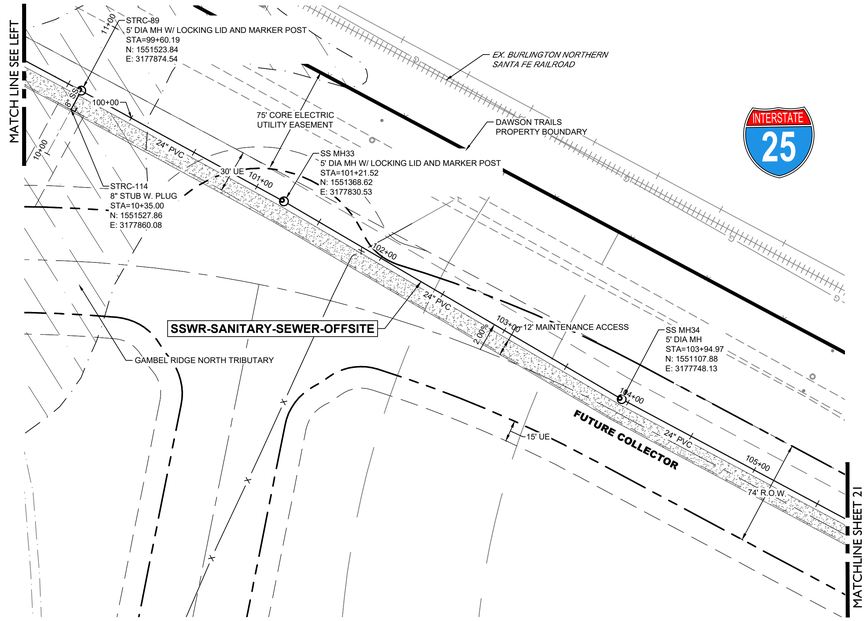
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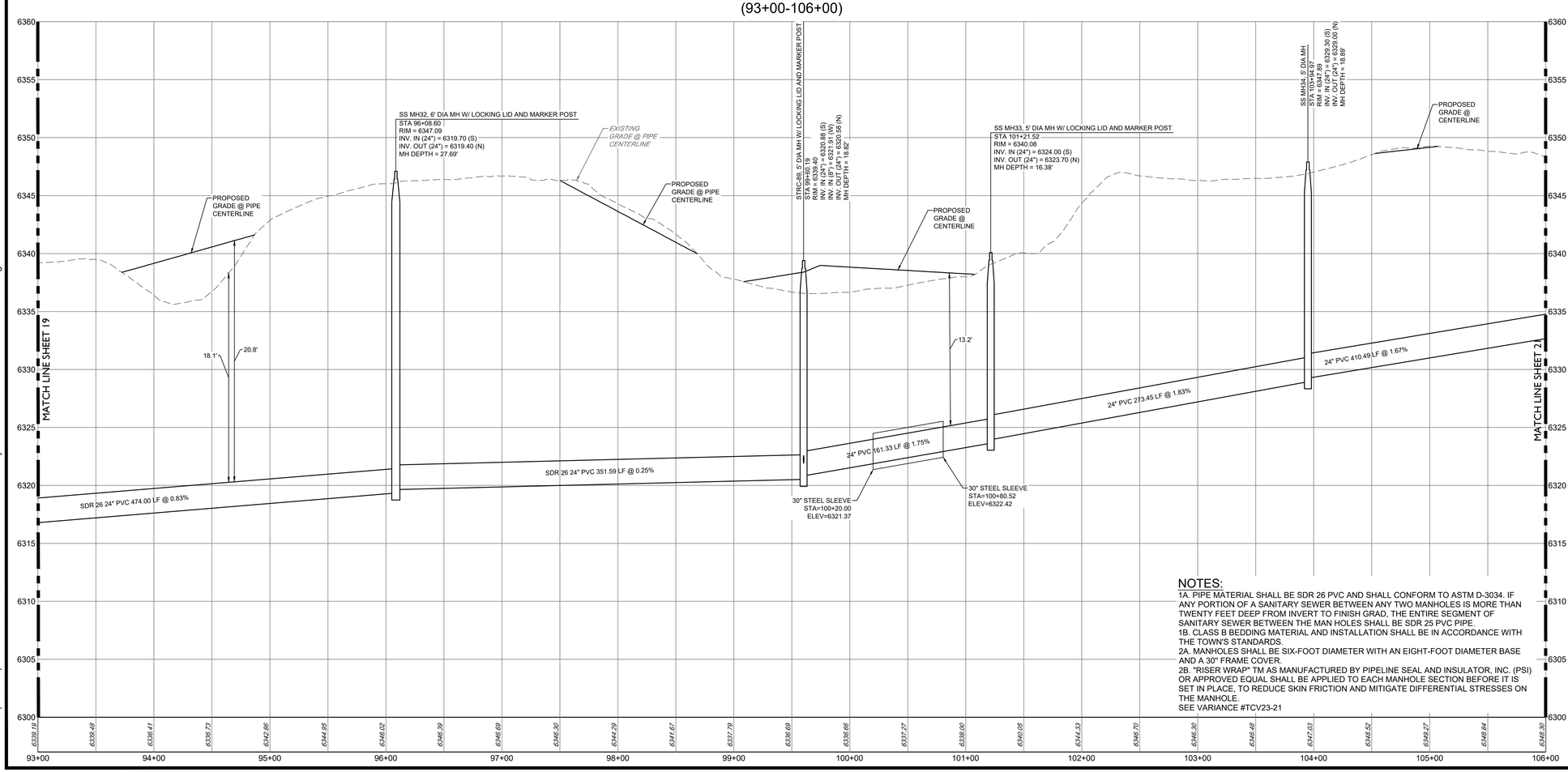
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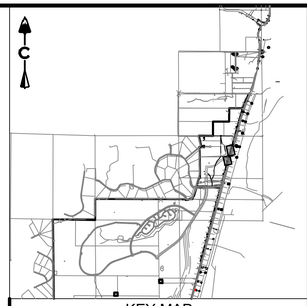
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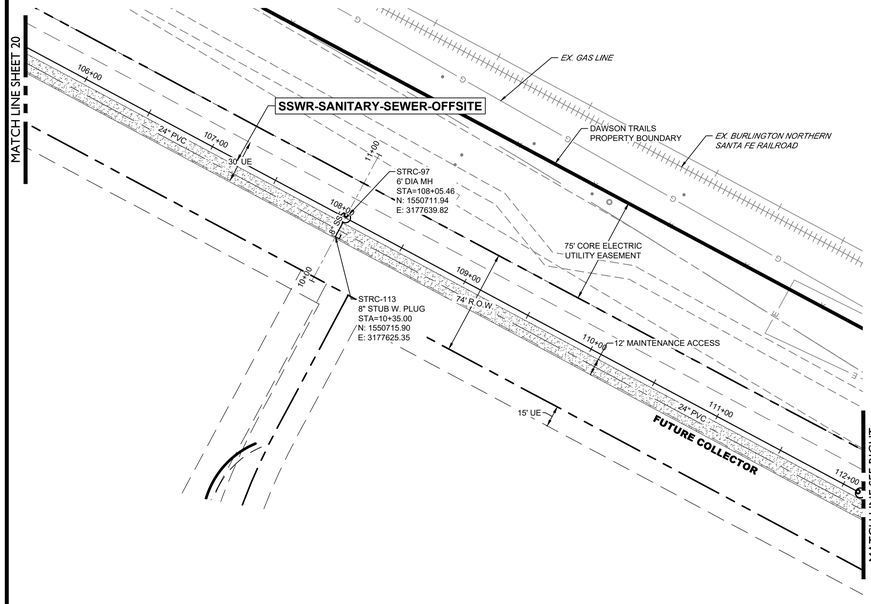
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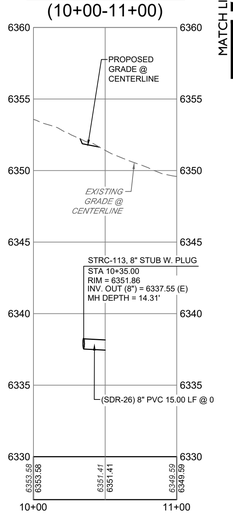
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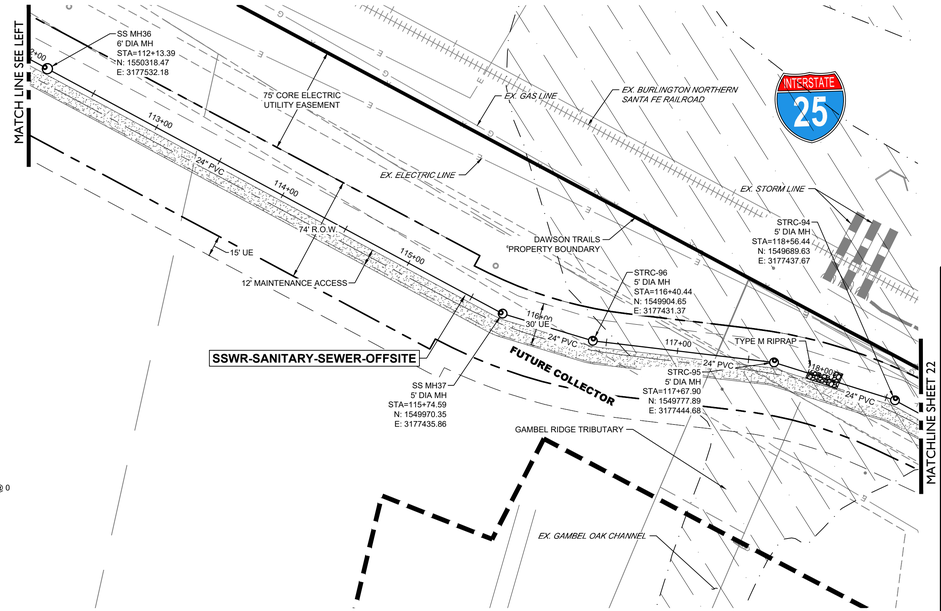
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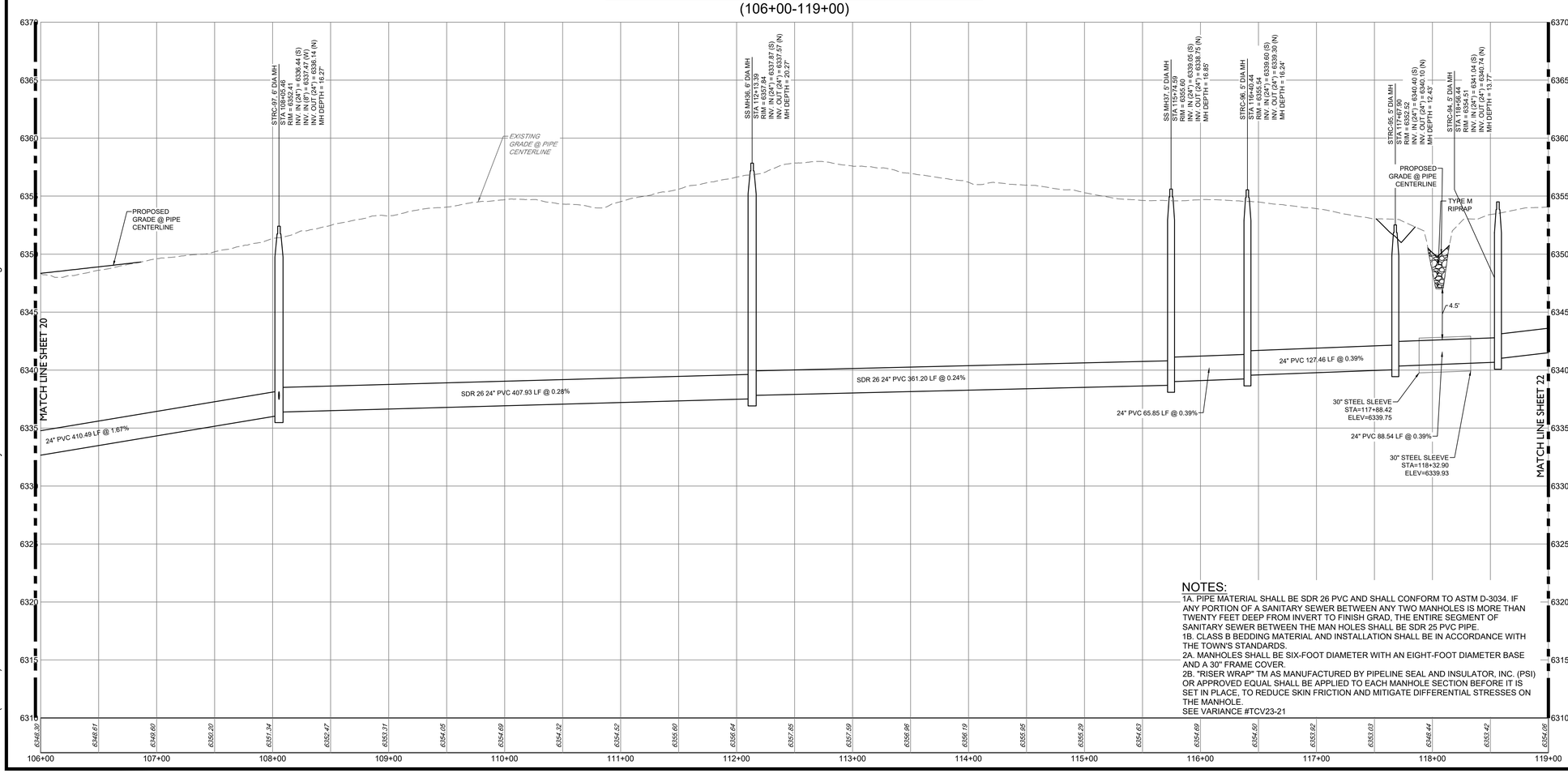


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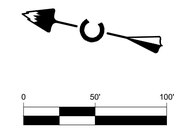
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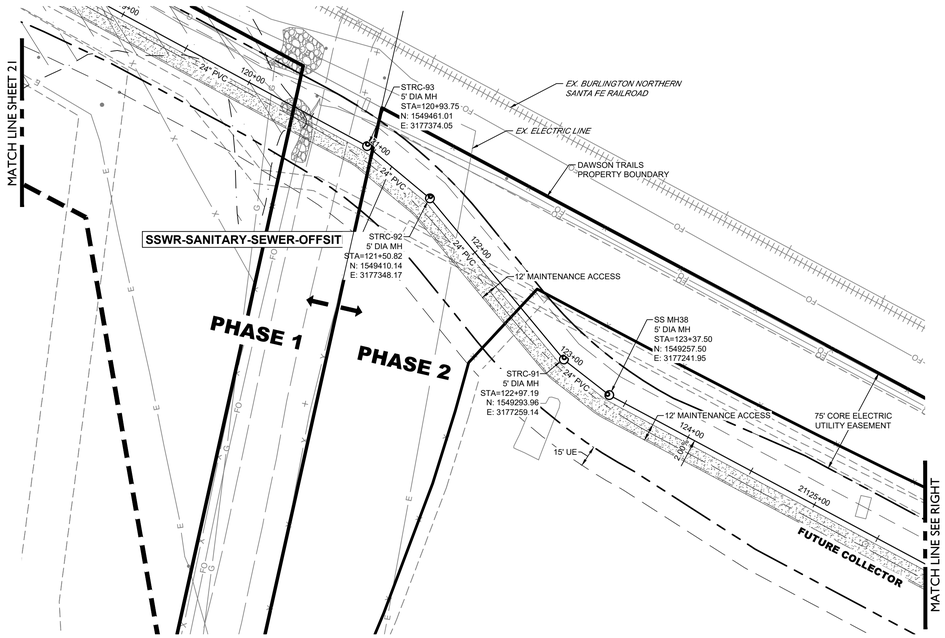
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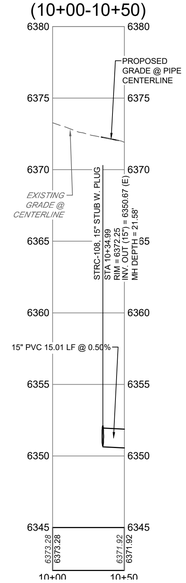
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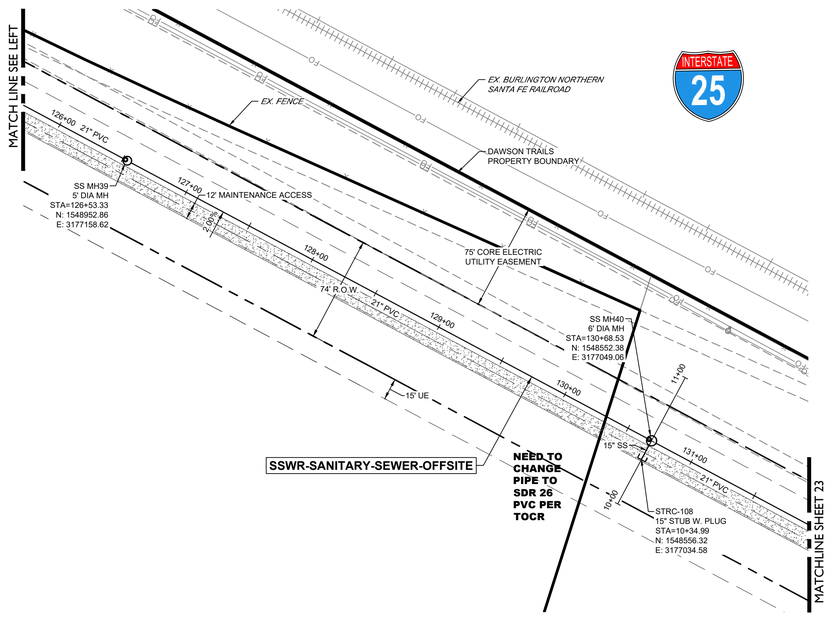
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SAN STUB C

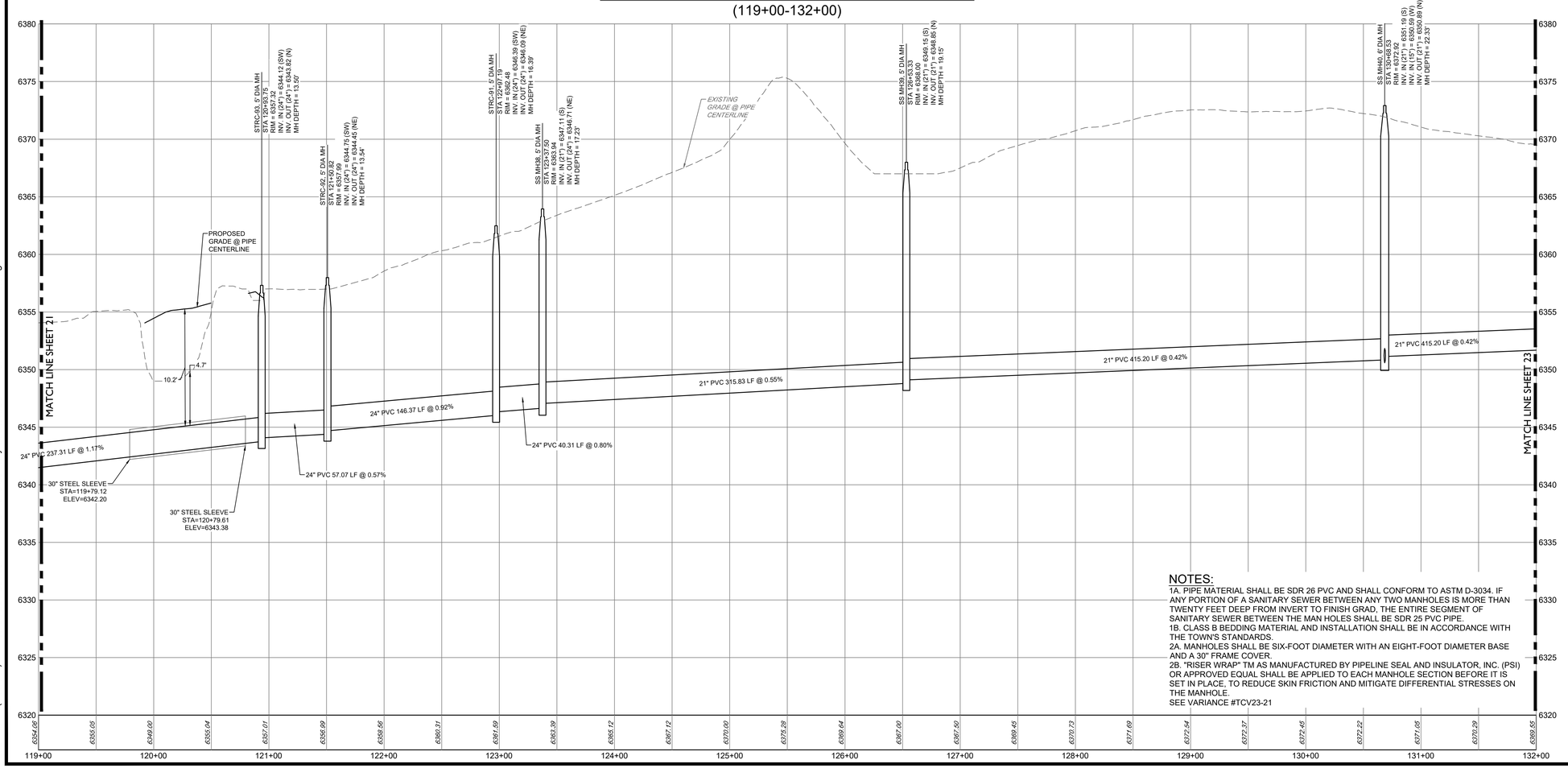
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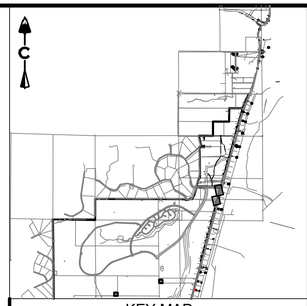
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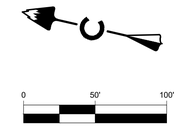


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- EASEMENT
- RIGHT OF WAY (R.O.W.)
- CENTERLINE
- PROJECT BOUNDARY
- PROPOSED CURB & GUTTER
- PROPOSED SANITARY & STUB OUT
- EXISTING SANITARY & STUB OUT
- SANITARY SERVICE
- WATER SERVICE
- PROPOSED WATER & STUB OUT
- EXISTING WATER & STUB OUT
- PROPOSED STORM & STUB OUT
- EXISTING STORM & STUB OUT

EXISTING / PROPOSED

- SANITARY MANHOLES
- SANITARY CLEAN OUT
- CRUSHER FINES MAINTENANCE ACCESS
- BLOCK NUMBER
- LIMITS OF CONSTRUCTION (LOC)
- TOWN 100 YEAR FLOODPLAIN

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JOSEPH F. FERRIS
STATE OF COLORADO # 55846

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APPROVED BY:

DEVELOPMENT SERVICES DATE

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#	REVISION DESCRIPTION	DATE	BY
1	1ST SUBMITTAL	12/22/22	KR
2	2ND SUBMITTAL	04/26/23	JF

DAWSON TRAILS OFFSITE SANITARY SEWER

CASTLE ROCK, COLORADO

CONSTRUCTION DOCUMENTS
SANITARY P&P (12 OF 15)

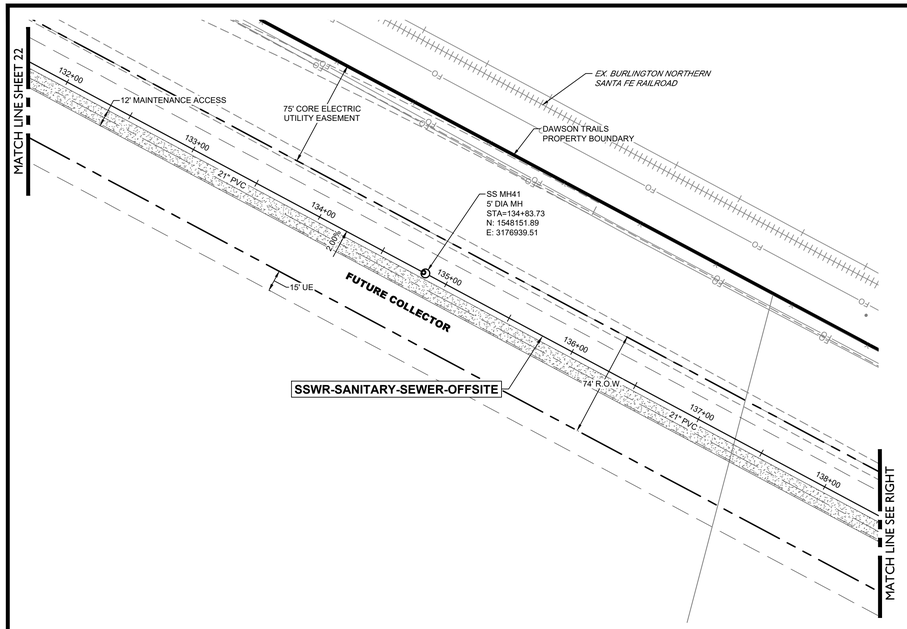
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DRAWN BY: MB
CHECKED BY: JF

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20-224

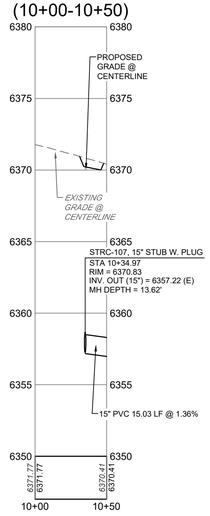
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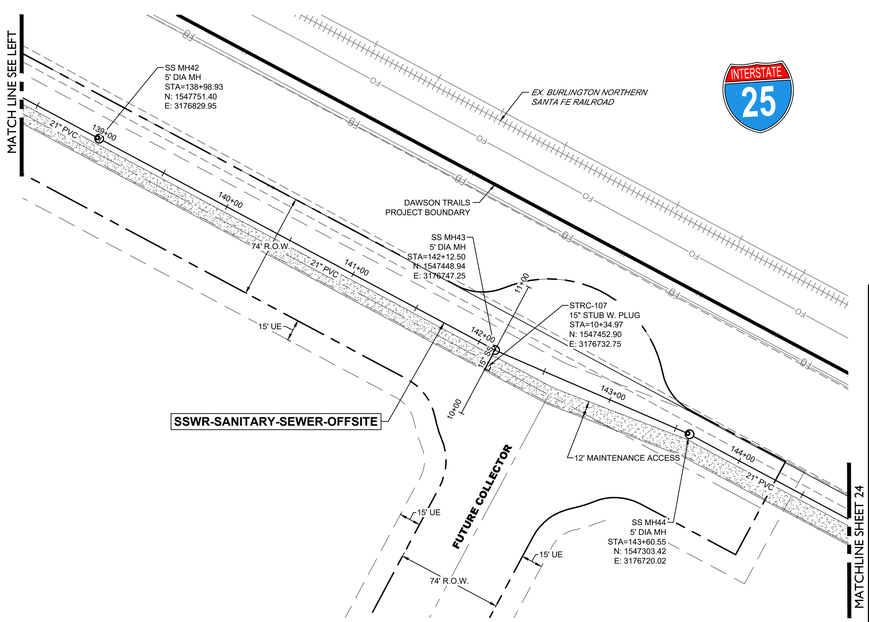
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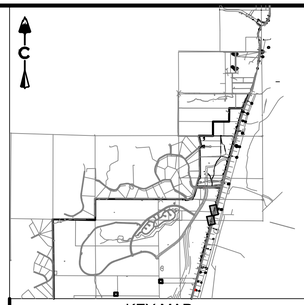


SAN STUB D

(10+00-10+50)

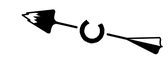






KEY MAP

SCALE: 1" = 4500'



PROFILE
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LEGEND

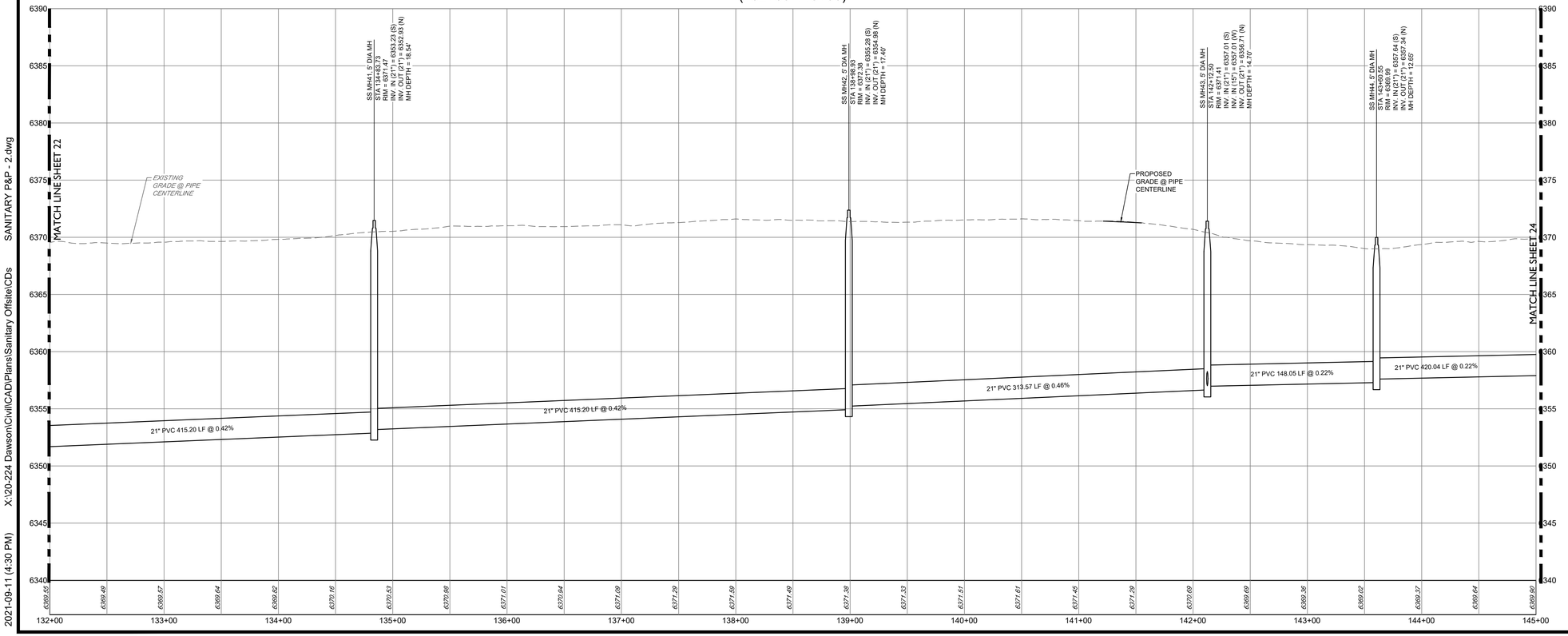
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SSWR-SANITARY-SEWER-OFFSITE

(132+00-145+00)



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DAWSON TRAILS OFFSITE SANITARY SEWER

CASTLE ROCK, COLORADO

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SANITARY P&P (13 OF 15)

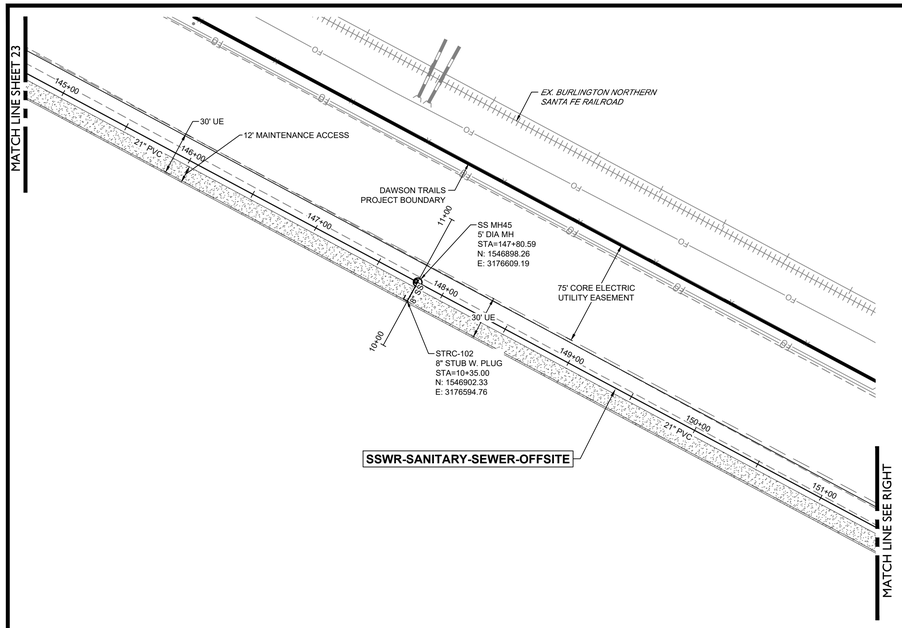
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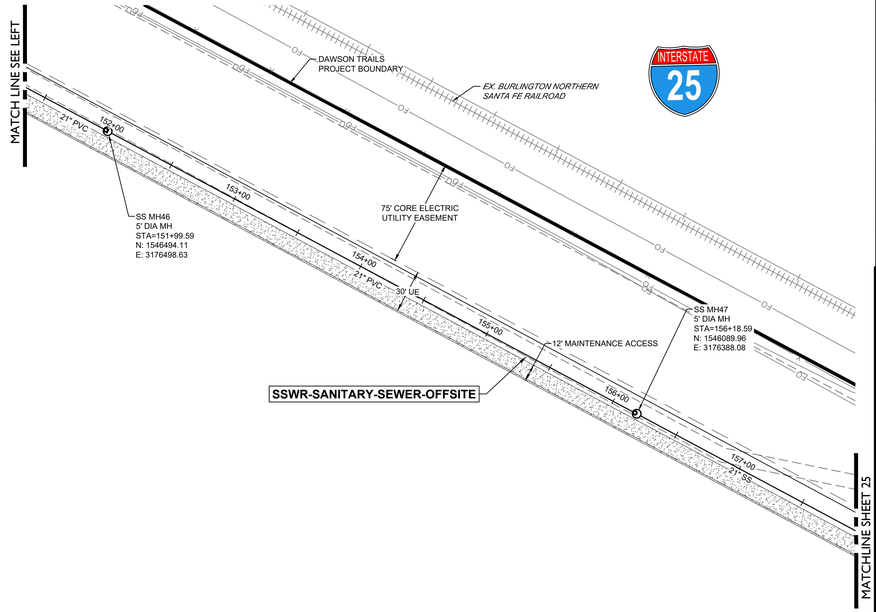
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DRAWN BY: MB
CHECKED BY: JF

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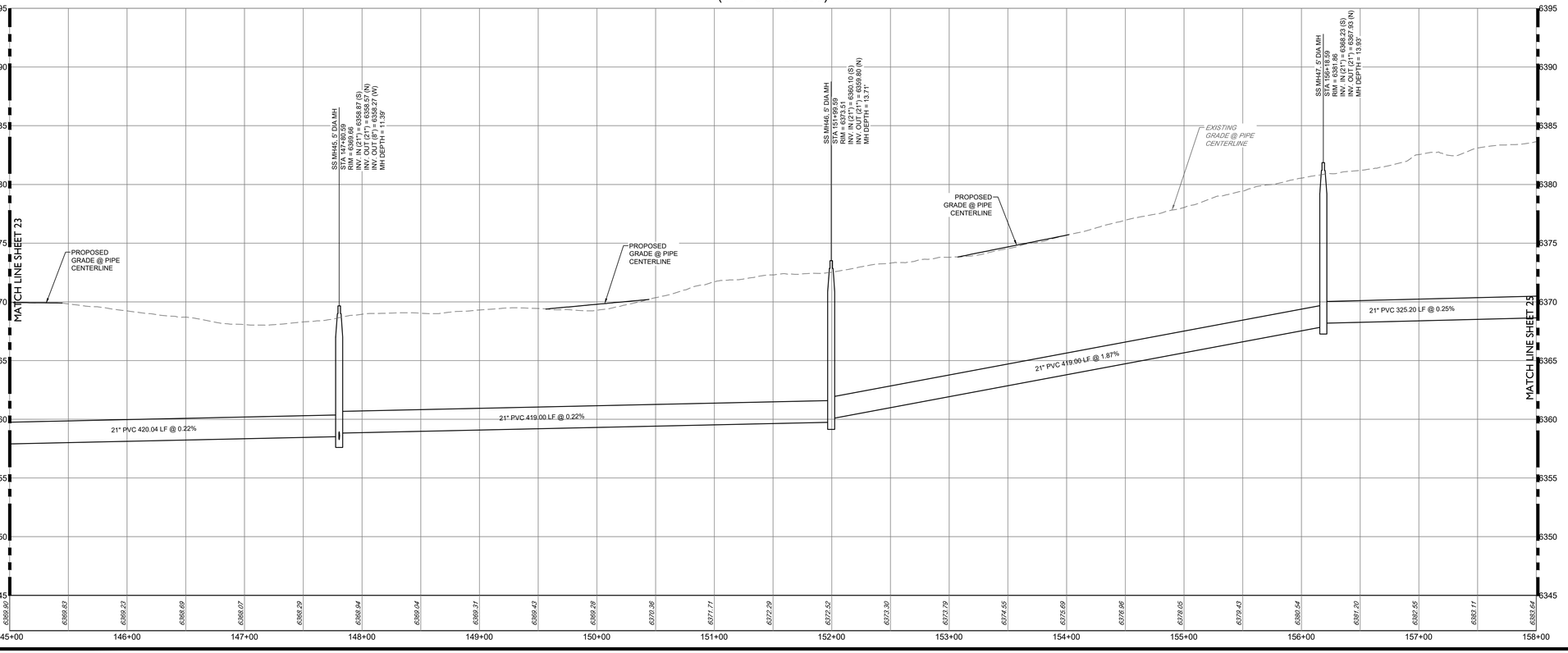
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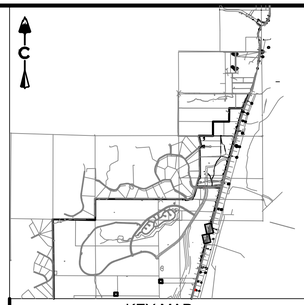




SSWR-SANITARY-SEWER-OFFSITE

(145+00-158+00)





KEY MAP

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CASTLE ROCK, COLORADO
CONSTRUCTION DOCUMENTS
SANITARY P&P (14 OF 15)

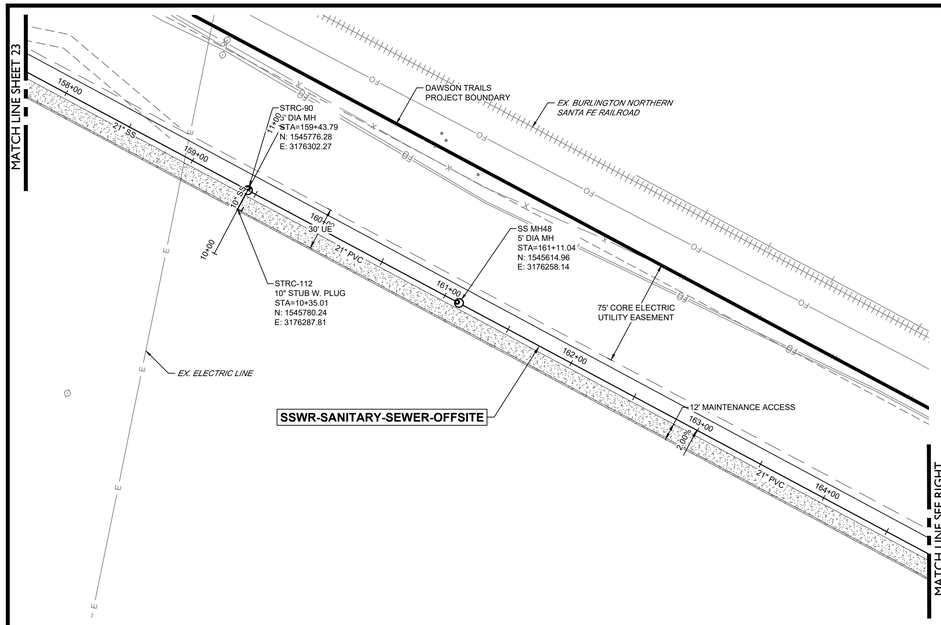
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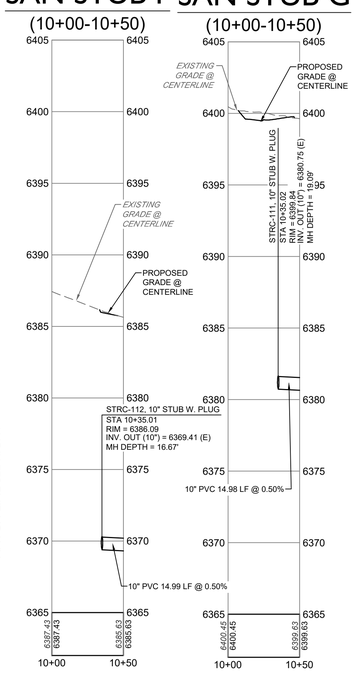
DESIGNED BY: JB
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CHECKED BY: JF

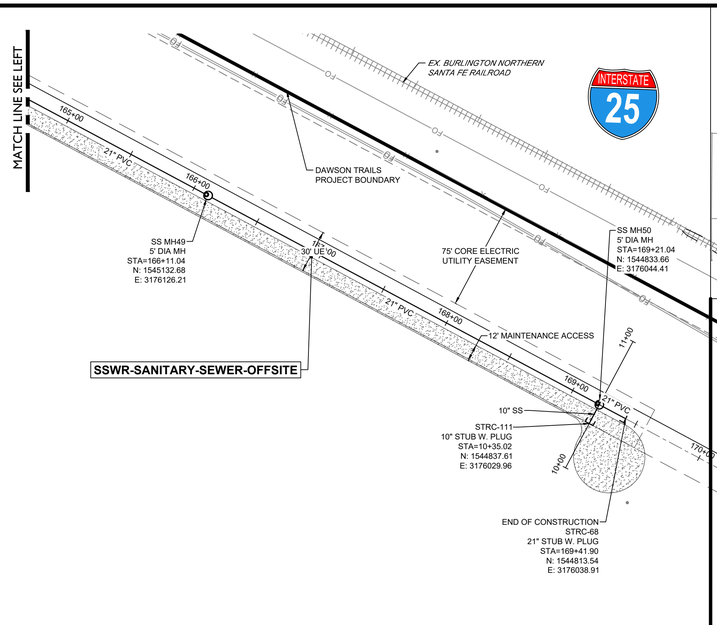
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20-224

SHEET
24 OF 26

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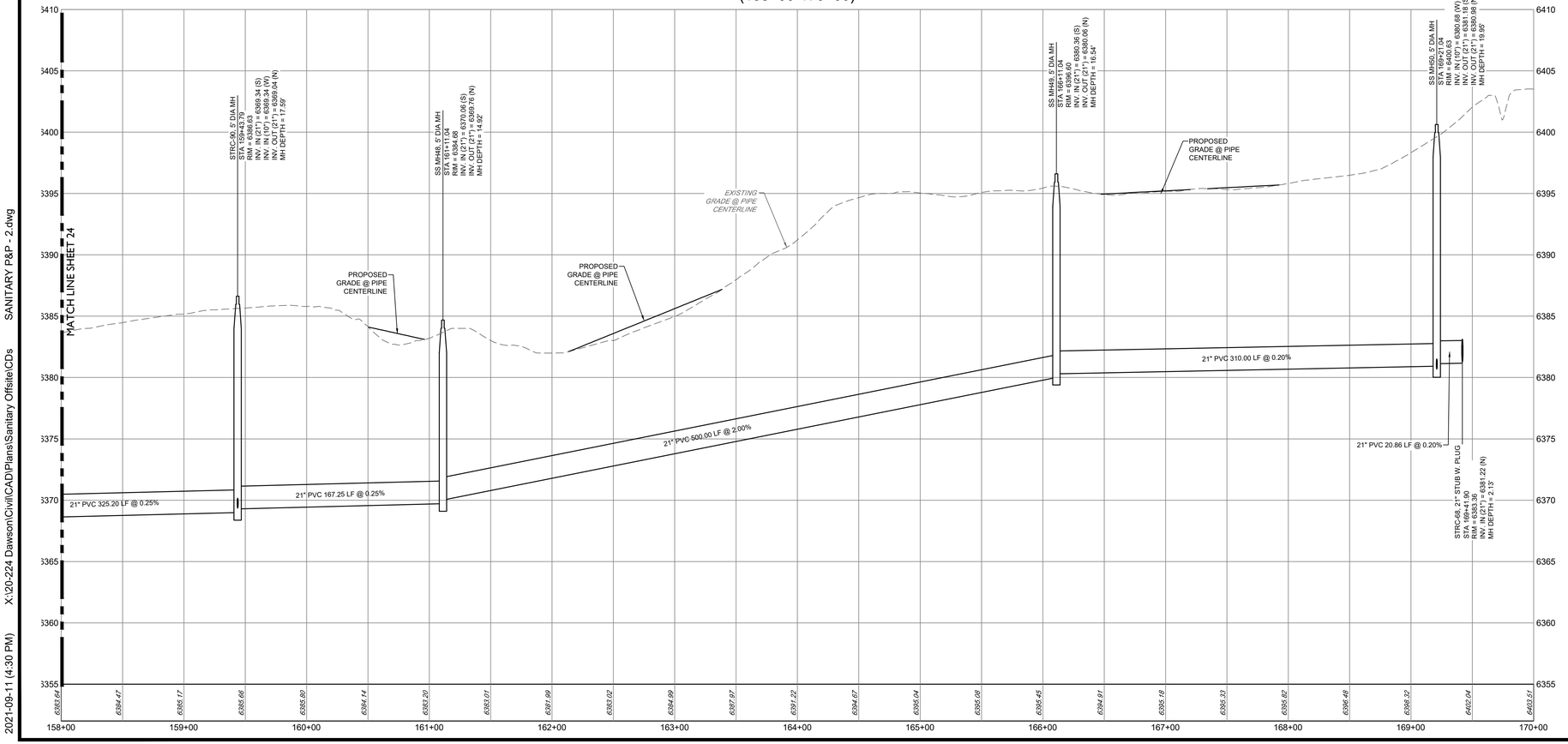


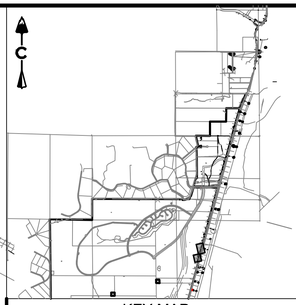




SSWR-SANITARY-SEWER-OFFSITE

(158+00-170+00)





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CASTLE ROCK, COLORADO

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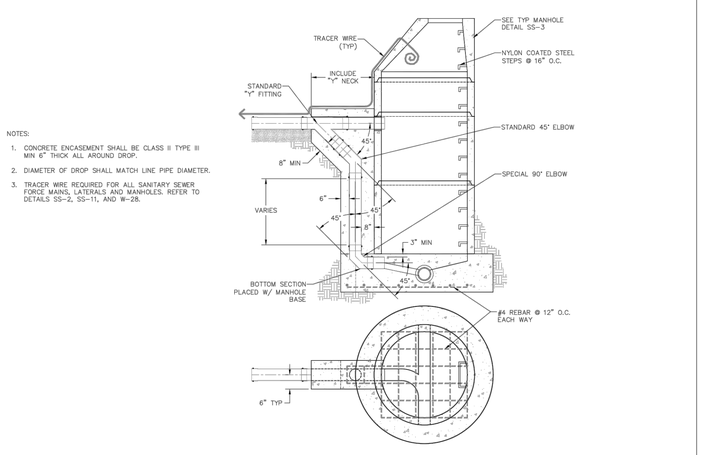
WESTSIDE

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DRAWN BY: MB
CHECKED BY: JF

JOB NO. 20-224

SHEET 25 OF 26

2021-09-11 (4:30 PM) X:\20-224 Dawson\Civil\CAD\Plans\Sanitary Offsite\CDs SANITARY P&P - 2.dwg



NOTES:

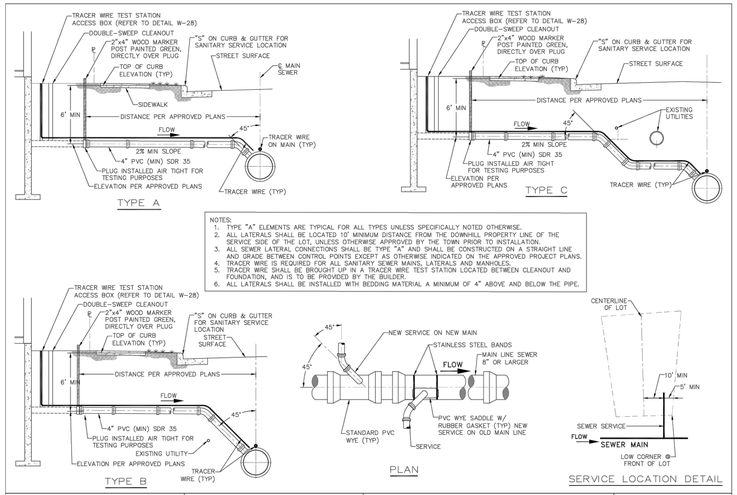
1. CONCRETE ENCASEMENT SHALL BE CLASS II TYPE III MIN 6" THICK ALL AROUND DROP.
2. DIAMETER OF DROP SHALL MATCH LINE PIPE DIAMETER.
3. TRACER WIRE REQUIRED FOR ALL SANITARY SEWER FORCE MAINS, LATERALS AND MANHOLES. REFER TO DETAILS SS-2, SS-11, AND W-28.

Sheet Revisions		
Date	Comments	
3/20	REVISED PER STAFF COMMENTS	

Town of Castle Rock
COLORADO
Development Services

Town of Castle Rock
100 N. Wilcox St.
Castle Rock, CO 80104
Phone: (720) 733-2200
Fax: (720) 733-2217

SEWER OUTSIDE DROP MANHOLE	DETAIL PLAN NO.
Issued By: Town of Castle Rock, Development Services January 1, 2023	SS-1
	Sheet 1 of 1



NOTES:

1. TYPE "A" ELEMENTS ARE TYPICAL FOR ALL TYPES UNLESS SPECIFICALLY NOTED OTHERWISE.
2. ALL LATERALS SHALL BE LOCATED 10' MINIMUM DISTANCE FROM THE DOWNHILL PROPERTY LINE OF THE SERVICE SIDE OF THE LOT, UNLESS OTHERWISE APPROVED BY THE TOWN PRIOR TO INSTALLATION.
3. ALL SEWER LATERAL CONNECTIONS SHALL BE TYPE "A" AND SHALL BE CONSTRUCTED ON A STRAIGHT LINE AND GRADE BETWEEN CONTROL POINTS EXCEPT AS OTHERWISE INDICATED ON THE APPROVED PROJECT PLANS.
4. TRACER WIRE IS REQUIRED FOR ALL SANITARY SEWER MAINS, LATERALS AND MANHOLES.
5. TRACER WIRE SHALL BE BROUGHT UP IN A TRACER WIRE TEST STATION LOCATED BETWEEN CLEANOUT AND FOUNDATION, AND IS TO BE PROVIDED BY THE BUILDER.
6. ALL LATERALS SHALL BE INSTALLED WITH BEDDING MATERIAL A MINIMUM OF 4" ABOVE AND BELOW THE PIPE.

Sheet Revisions		
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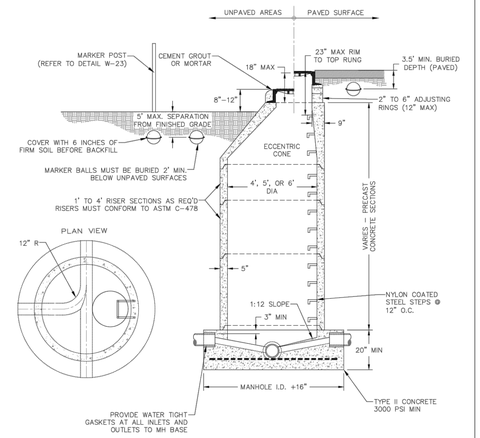
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SEWER LATERAL CONNECTIONS	DETAIL PLAN NO.
Issued By: Town of Castle Rock, Development Services January 1, 2023	SS-2
	Sheet 1 of 1

PIPE I.D.	MANHOLE I.D.
18" & SMALLER	4'-0"
21" TO 48"	5'-0"
54"	6'-0"
60" & LARGER	SPECIAL DESIGN

NOTES:

1. MANHOLE RISER MINIMUM DIAMETER SHALL CONFORM TO THE TABLE ABOVE.
2. ALL MANHOLES SHALL BE SET ON 1 FOOT OF ¾-INCH CRUSHED ROCK.
3. FLAT CONCRETE MANHOLE TOPS MAY BE USED INSTEAD OF CONE SECTIONS WHERE RIM TO INVERT IS 7'-0" OR LESS.
4. SET EACH SECTION (RISER, CONE, ADJUSTING RINGS) IN A FULL BED OF BITUMINOUS MASTIC (RAMNECK) OR PLASTIC SEALING COMPOUND.
5. MANHOLE STEPS SHALL BE POSITIONED OVER THE BENCH IN A VERTICAL LINE.
6. NO MANHOLE STEPS ARE ALLOWED IN THE ADJUSTING RINGS.
7. ON STRAIGHT THROUGH GRADES, SEWER MAINS MAY BE LAID THROUGH THE MANHOLE AND USED AS THE INVERT. THE TOP ⅓ PORTION OF THE PIPE SHALL BE CUT AWAY TO A NEAT LINE. ANY BROKEN EDGES SHALL BE PLASTERED SMOOTH WITH CONCRETE MORTAR. IF GRADE IS NOT STRAIGHT THROUGH, THE FLOWLINES AT THE BASE SHALL BE HAND FORMED WHEN THE BASE IS POURED. FLOWLINES SHALL BE GROUND SMOOTH WITH A CONCRETE FINISHING STONE.
8. MANHOLE LID SHALL BE ¼-INCH BELOW ASPHALT AND TIPPED TO CONFORM WITH PAVEMENT SLOPES.
9. PLACE MARKER BALLS EVERY 50 FEET AND AT PIPE JUNCTIONS.
10. PRESSURIZED STORM SEWER PIPES AND SANITARY SEWER FORCE MAINS REQUIRE TRACER WIRE INSTALLATION.

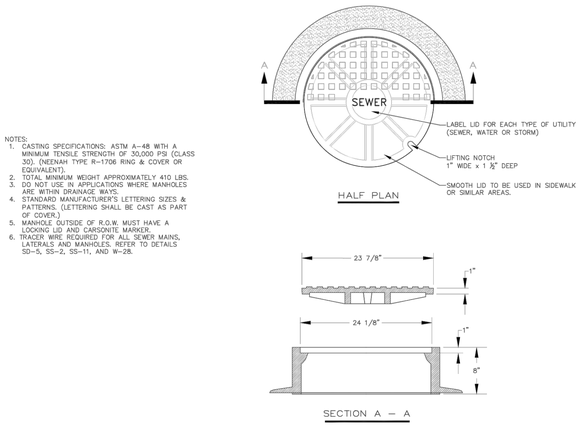


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SANITARY AND STORM SEWER MANHOLE	DETAIL PLAN NO.
Issued By: Town of Castle Rock, Development Services January 1, 2023	SS-3
	1 of 1



NOTES:

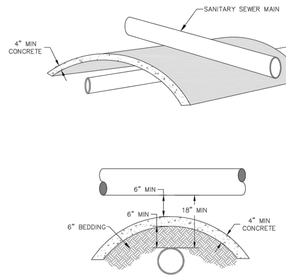
1. CASTING SPECIFICATIONS: ASTM A-48 WITH A MINIMUM TENSILE STRENGTH OF 30,000 PSI (CLASS 30). (NEENAH TYPE R-1706 RING & COVER OR EQUIVALENT).
2. TOTAL MINIMUM WEIGHT APPROXIMATELY 410 LBS.
3. DO NOT USE IN APPLICATIONS WHERE MANHOLES ARE WITHIN DRAINAGE WAYS.
4. STANDARD MANUFACTURER'S LETTERING SIZES & PATTERNS, (LETTERING SHALL BE CAST AS PART OF COVER.)
5. MANHOLE OUTSIDE OF R.O.W. MUST HAVE A LOOKING LID AND CARSONITE MARKER.
6. TRACER WIRE REQUIRED FOR ALL SEWER MAINS, LATERALS AND MANHOLES. REFER TO DETAILS SD-5, SS-2, SS-11, AND W-28.

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SEWER MANHOLE 24" RING & COVER	DETAIL PLAN NO.
Issued By: Town of Castle Rock, Development Services January 1, 2023	SS-4
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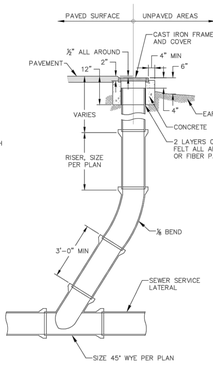


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SEWER PIPE CROSSING CONCRETE BLANKET	DETAIL PLAN NO.
Issued By: Town of Castle Rock, Development Services January 1, 2023	SS-6
	Sheet 1 of 1



NOTES:

1. CLEANOUT PIPE DIAMETER SHALL BE THE SAME SIZE AS THE SEWER LINE AT THE WYE.
2. SEWER IS NOT TO BE CONVEYED THROUGH CLEANOUT.
3. CLEANOUT IS FOR PRIVATE USE ONLY.
4. TRACER WIRE REQUIRED FOR ALL SEWER MAINS, LATERALS AND MANHOLES. REFER TO DETAILS SD-5, SS-2, SS-11, AND W-28.

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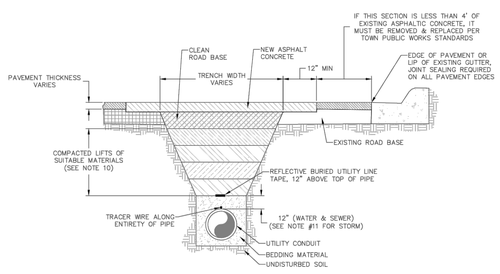
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SEWER CLEANOUT	DETAIL PLAN NO.
Issued By: Town of Castle Rock, Development Services January 1, 2023	SS-7
	Sheet 1 of 1

NOTES:

1. ALL TRENCHES SHALL BE BACKFILLED IN ACCORDANCE WITH THIS DETAIL UNLESS OTHERWISE SPECIFIED BY PUBLIC WORKS.
2. PRIOR TO PLACEMENT OF CONCRETE, ALL EDGES SHALL BE SAW CUT TO A CLEAN, STRAIGHT, AND VERTICAL EDGE.
3. PRIOR TO PLACEMENT OF ASPHALT, 1.8 INCHES OF ADJACENT ASPHALT SHALL BE MILLED TO 2 INCH DEPTH ON ALL SIDES TO MATCH EXISTING PAVEMENT. INNER SURFACE TO BE TACKED WITH HSS-1.
4. WHEN SUBSTITUTING FOR BACKFILL MATERIAL, FLOWABLE FILL SHALL CONFORM TO MGPEC CLSM STANDARDS.
5. TRENCH WIDTH SHALL NOT BE MORE THAN 16" NOR LESS THAN 12" WIDER THAN THE DIAMETER OF THE PIPE.
6. 95% OF ASTM D698 STANDARD COMPACTION EFFORT IS REQUIRED ON ALL TRENCHING ZONES, IN BOTH IMPROVED & UNIMPROVED AREAS.
7. IN UNIMPROVED AREAS, ALL DISTURBED AREAS SHALL BE REGRADED, SEEDED & MULCHED.
8. IN CONCRETE ROADWAYS, A MINIMUM OF 1/2 PANEL WIDTH OR 10' x 5' SECTION WILL BE ALLOWED TO REMAIN, OTHERWISE THE ENTIRE CONCRETE PANEL MUST BE REPLACED.
9. USE #4 REBAR AT 2' CENTERS ALONG THE PERIMETER OF CONCRETE REPLACEMENT SECTIONS.
10. 6" MAXIMUM COMPACTED LIFT THICKNESS IF FLOWABLE FILL NOT REQUIRED.
11. BEDDING MATERIAL DEPTH WHEN INSTALLING STORM SEWER SHALL BE UP TO SPRING LINE, EXCEPT IN AREAS OF UNSUITABLE BACKFILL, THEN BEDDING MATERIAL SHALL BE 12" ABOVE PIPE.
12. TRENCH WIDTHS LESS THAN 4' OR TRENCHING THAT EXPERIENCES CAVE-INS OR SLOUGHING SHALL REQUIRE FLOWABLE FILL IN ORDER TO ACHIEVE COMPACTION.

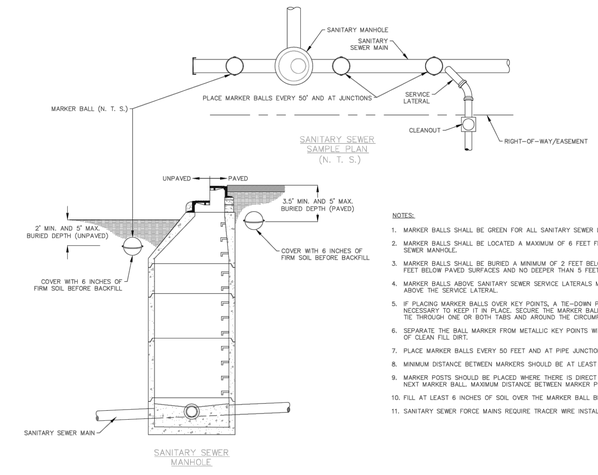


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SANITARY SEWER TRENCH DETAIL	DETAIL PLAN NO.
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NOTES:

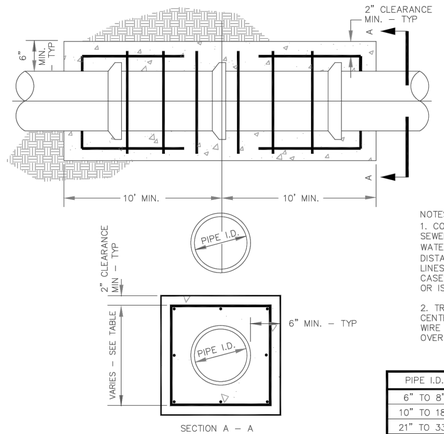
1. MARKER BALLS SHALL BE GREEN FOR ALL SANITARY SEWER LATERALS AND MANHOLES.
2. MARKER BALLS SHALL BE LOCATED A MAXIMUM OF 6 FEET FROM EVERY SANITARY SEWER MANHOLE.
3. MARKER BALLS SHALL BE BURIED A MINIMUM OF 2 FEET BELOW UNPAVED SURFACES, 3.5 FEET BELOW PAVED SURFACES AND NO DEEPER THAN 5 FEET BELOW FINISHED GRADE.
4. MARKER BALLS ABOVE SANITARY SEWER SERVICE LATERALS MUST BE LOCATED DIRECTLY ABOVE THE SERVICE LATERAL.
5. IF PLACING MARKER BALLS OVER KEY POINTS, A TIE-DOWN PROCEDURE MAY BE NECESSARY TO KEEP IT IN PLACE. SECURE THE MARKER BALL BY INSERTING A CABLE TIE THROUGH ONE OR BOTH TABS AND AROUND THE CIRCUMFERENCE OF THE PIPE.
6. SEPARATE THE BALL MARKER FROM METALLIC KEY POINTS WITH A MINIMUM OF 4 INCHES OF CLEAN FILL DIRT.
7. PLACE MARKER BALLS EVERY 50 FEET AND AT PIPE JUNCTIONS.
8. MINIMUM DISTANCE BETWEEN MARKERS SHOULD BE AT LEAST 6 FEET.
9. MARKER POSTS SHOULD BE PLACED WHERE THERE IS DIRECT LINE OF SIGHT TO THE NEXT MARKER BALL. MAXIMUM DISTANCE BETWEEN MARKER POSTS SHOULD BE 400 FEET.
10. FILL AT LEAST 6 INCHES OF SOIL OVER THE MARKER BALL BEFORE BACKFILL.
11. SANITARY SEWER FORCE MAINS REQUIRE TRACER WIRE INSTALLATION.

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MARKER BALLS FOR SANITARY SEWERS	DETAIL PLAN NO.
Issued By: Town of Castle Rock, Development Services January 1, 2023	SS-11
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NOTES:
1. CONCRETE ENCASEMENT WILL BE REQUIRED ON SEWER LINE WHEN CLEAR VERTICAL DISTANCE FROM WATER LINE IS LESS THAN 1'–6" OR HORIZONTAL DISTANCE IS LESS THAN 10' BETWEEN PARALLEL LINES. CONCRETE ENCASEMENT REQUIRED IN ALL CASES WHERE SEWER LINE IS ABOVE WATER LINE OR IS UNDER A WATERWAY CROSSING.

2. TRACER WIRE SHALL BE CONTINUOUS ON TOP CENTER OF WATER AND SEWER MAINS, PER TRACER WIRE GENERAL NOTES. CONCRETE WILL BE POURED OVER TOP OF TRACER WIRE.

PIPE I.D.	NO. OF LONGITUDINAL BARS & LOCATION	
6" TO 8"	4 – #4 BARS	1 EACH CORNER
10" TO 18"	8 – #4 BARS	3 EACH SIDE
21" TO 33"	12 – #4 BARS	4 EACH SIDE
36"	16 – #4 BARS	5 EACH SIDE

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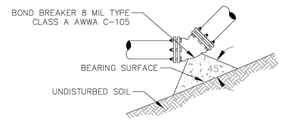
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PIPE ENCASEMENT

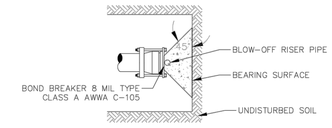
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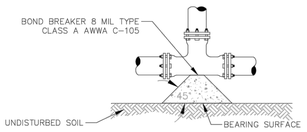
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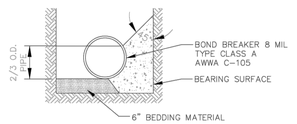
11 1/4, 22 1/2 & 45 BENDS



DEAD END



TEE



TYPICAL CROSS SECTION

NOTES:
1. BEARING AREAS SHOWN ON THE CHART ARE MINIMUM AREAS & ARE DESIGNED USING THE FOLLOWING CRITERIA:
   A. INTERNAL WORKING PRESSURE OF 150 PSI.
   B. TRANSIENT (WATER HAMMER) PRESSURE OF 120 PSI FOR 4", 6" & 8" DIAMETER LINES, 110 PSI FOR 12" LINES, & 70 PSI FOR 20" LINES.
   C. THRUSTBLOCK CONCRETE SHALL HAVE A MINIMUM STRENGTH OF 4500 PSI.
2. ALL SIZES OF BENDS, TEES & DEAD ENDS SHALL HAVE CONCRETE THRUSTBLOCKS.
3. THRUSTBLOCKS ARE NOT A SUBSTITUTE FOR JOINT RESTRAINT.

MINIMUM BEARING SURFACE AREA
(IN SQUARE FEET)

SIZE OF PIPE	BENDS				TEE OR DEAD END
	11 1/4°	22 1/2°	45°	90°	
4"	2.00	2.00	2.25	4.25	3.00
8"	2.00	2.00	4.00	8.00	5.25
12"	2.00	4.25	8.25	12.00	11.00
16"	3.50	6.50	12.50	23.00	16.50
20"	5.00	10.00	19.50	35.50	29.00

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HORIZONTAL BEND THRUSTBLOCKS

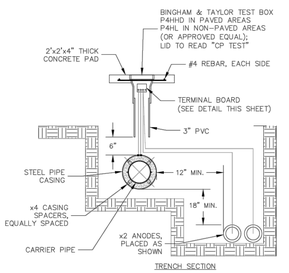
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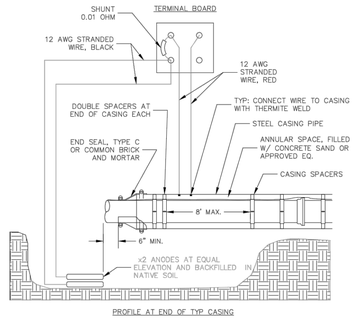
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NOTES:
1. MINIMUM ID OF CASING PIPE SHALL ACCOMMODATE MAXIMUM OD OF CARRIER PIPE JOINTS AND/OR RESTRAINTS.
2. MINIMUM CASING PIPE DIAMETER AND THICKNESS SHALL BE PER TABLE UNLESS SPECIFIED BY ENGINEER.
3. IF CARRIER PIPE RESTRAINT IS REQUIRED, RESTRAINED CASING SPACERS SHALL BE USED (E.G. FORD).
4. ANODES SHALL BE "ULTRAMAG HIGH POTENTIAL MAGNESIUM", MINIMUM 46 LBS EACH, PACKAGED READY FOR BURIAL; MODEL NO. 1703, OR APPROVED EQUAL.
5. 24" OF SURPLUS WIRE SHALL BE LEFT AT ALL CONNECTIONS
6. TERMINAL BOARD SHALL HAVE x4 TERMINALS.
7. TRACER WIRE SHALL BE INSTALLED IN ACCORDANCE WITH STANDARD NOTES AND DETAILS, AND SHALL BE DIRECTED THROUGH PIPE CASING. TRACER WIRE SHALL BE CONTINUOUS THROUGH THE CASING PIPE WITH NO SPLICE.

CARRIER PIPE DIA. (IN.)	CASING PIPE DIA. (IN)	CASING PIPE THICKNESS (IN)	NO. OF SPACERS PER 20 FT. LENGTH
4	12	0.188	3
6	16	0.250	3
8	18	0.282	3
12	22	0.344	3
16	28	0.406	3
20	32	0.469	3
24	36	0.562	3



TRENCH SECTION



PROFILE AT END OF TYP CASING

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PIPE CASING

DETAIL PLAN NO. W-25

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