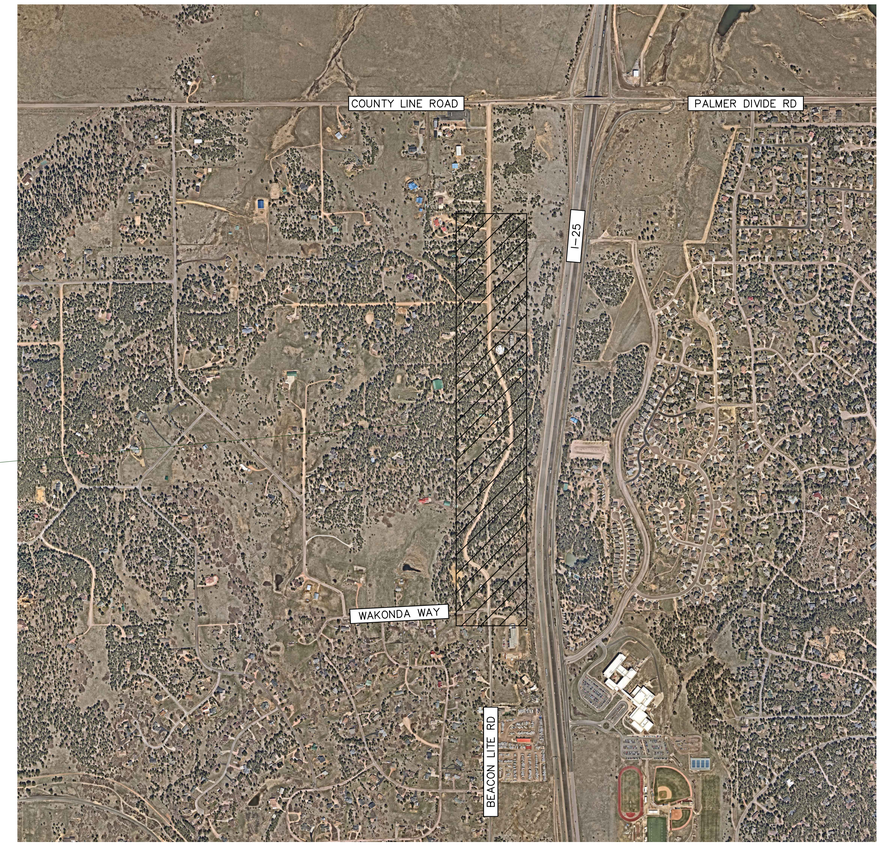
# BUC-EE'S #87 EL PASO COUNTY OFFSITE SEWER
# 100% DESIGN DOCUMENTS

EL PASO COUNTY, STATE OF
COLORADO

| SHEET INDEX | |
|---|---|
| Sheet # | SHEET TITLE |
| C0.0 | COVER SHEET |
| C0.1 | GENERAL NOTES |
| C1.0 | FORCE MAIN [1+00 – 8+00] |
| C1.1 | FORCE MAIN [8+00 – END] |
| C2.0 | SANITARY SEWER [1+00 – 9+00] |
| C2.1 | SANITARY SEWER [9+00 – 16+00] |
| C2.2 | SANITARY SEWER [16+00 – 24+00] |
| C2.3 | SANITARY SEWER [24+00 – END] |
| C3.0 | CIVIL DETAILS I |
| C3.1 | CIVIL DETAILS II |

Please add the force main and sewer line alignments (unique symbol to be used)




VICINITY MAP
1" = 1'

Add
- County signature block
- Design engineer statement
- Owner/Developer Statement
- District Approval Block

## BENCHMARK

NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88). VERTICAL CONTROL BASED UPON COLORADO DEPARTMENT OF TRANSPORTATION BENCHMARK NO. V395 (KK1315), ELEVATION = 7346.61. STAINLESS STEEL ROD IN MONUMENT BOX..

## BASIS OF BEARINGS

PROJECT COORDINATES ARE BASED ON THE COLORADO DEPARTMENT OF TRANSPORTATION LOCAL COORDINATE SYSTEM BASED ON THE FOLLOWING PUBLISHED INFORMATION DERIVED FROM A MODIFIED NAD 83 (2011) COLORADO STATE PLANE CENTRAL ZONE (0502) IN US SURVEY FEET:

PROJECTION: TRANSVERSE MERCATOR PROJECTION
POINT OF ORIGIN: U396 (KK1328)

NORTHING: 1,000,000 FT

EASTING: 3,000,000 FT

PROJECT/SCALE FACTOR HEIGHT: 6604.141 FT (NAVD 88)

SCALE FACTOR: 1.0003689763

ALL EXISTING UTILITIES, SURFACES AND OTHER EXISTING SURVEY ITEMS ALONG BEACON LITE ROAD WERE SURVEYED AS PART OF THE EL PASO COUNTY BEACON LITE ROAD AND COUNTY LINE ROAD IMPROVEMENTS PROJECT BY FARNSWORTH GROUP. REFER TO SHEET 29 WITHIN THE BEACON LITE ROAD IMPROVEMENTS IFC DATED JUNE 2023.

## SITE LOCATION

PROJECT SITE IS LOCATED WITHIN SECTION 02, TOWNSHIP 11 SOUTH, RANGE 67 WEST 6TH PRINCIPAL MERIDIAN, EL PASO COUNTY, COLORADO.

## AGENCIES

| | |
|---|---|
| CIVIL ENGINEER: | KIMLEY–HORN AND ASSOCIATES, INC.<br>6200 SOUTH SYRACUSE WAY, SUITE 300<br>GREENWOOD VILLAGE, CO 80111<br>ANDREW DIXON, P.E: (303) 228–2300 |
| OWNER: | MONUMENT RIDGE WEST, LLC<br>6275 LAKE SHORE CT<br>COLORADO SPRINGS, CO 80915<br>DONALD CANNELLA |
| SURVEYOR: | KIMLEY–HORN<br>6200 SOUTH SYRACUSE WAY, SUITE 300<br>GREENWOOD VILLAGE, CO 80111<br>DARREN WOLTERSTORFF, PLS: (303) 228–2300 |
| GRAVITY SEWER OWNER: | MONUMENT SANITATION DISTRICT<br>130 2ND STREET<br>MONUMENT CO 80132<br>MARK PARKER: (719) 481–4886 |

Include other agencies: Gas, Electric, Fire, Phone & Water

PPR26-28

Know what's below. Call before you dig.

| DATE | BY | DESCRIPTION | |
|---|---|---|---|
| | | | 1 |

Kimley»Horn
KIMLEY–HORN AND ASSOCIATES, INC.
6200 South Syracuse Way, Suite 300
Greenwood Village, Colorado 80111 (303) 228–2300
©2025 KIMLEY–HORN AND ASSOCIATES, INC.

DESIGNED BY: ARD
DRAWN BY: ZMT
CHECKED BY: ARD
DATE: 9/11/2026

BUC-EE'S #87 EL PASO COUNTY OFFSITE SEWER
COVER SHEET

PRELIMINARY
FOR REVIEW ONLY
NOT FOR CONSTRUCTION
Kimley»Horn
Kimley-Horn and Associates, Inc.

SHEET
C0.0

THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY KIMLEY–HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY–HORN AND ASSOCIATES, INC.

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## GENERAL NOTES

1. PROJECT CONTROL/BENCHMARK: (SEE COVER SHEET). ALL ELEVATIONS SHOWN ON THESE PLANS ARE REFERENCED TO THE PROJECT BENCHMARK. HORIZONTAL CONTROL, INCLUDING THE BASIS OF BEARING, SHALL BE IN ACCORDANCE WITH THE FINAL SUBDIVISION PLAT FOR THIS PROJECT.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SAFEGUARDING THE PROJECT BENCHMARK AND OTHER SURVEY MONUMENTS AND SHALL HAVE A REGISTERED LAND SURVEYOR TIE OUT AND RESET ANY PROPERTY CORNERS OR SECTION CORNERS PLANNED TO BE DISTURBED BY CONSTRUCTION OF THIS PROJECT. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR ANY INADVERTENTLY DISTURBED OR DAMAGED MONUMENTS AND SHALL HAVE THEM REESTABLISHED AND REPLACED BY A REGISTERED LAND SURVEYOR.
3. THE CONTRACTOR SHALL COMPLY, AND PERFORM WORK IN ACCORDANCE, WITH THE REQUIREMENTS OF THE GEOTECHNICAL (SOILS) REPORT(S) PREPARED FOR THIS PROJECT. GEOTECHNICAL INFORMATION FOR THIS PROJECT IS BASED ON THE PRELIMINARY GEOTECHNICAL INVESTIGATION PREPARED BY TERRACON ON JANUARY 31, 2024. IN THE EVENT OF A DISCREPANCY BETWEEN THE GEOTECHNICAL REQUIREMENTS AND JURISDICTIONAL REQUIREMENTS, THE MORE STRINGENT REQUIREMENT SHALL BE FOLLOWED. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND GEOTECHNICAL ENGINEER IN THE EVENT THAT A DISCREPANCY OCCURS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE SERVICES OF A QUALIFIED TESTING LABORATORY TO PERFORM ALL COMPACTION TESTING, ASPHALT TESTING, CONCRETE TESTING, AND ANY OTHER TESTING AS MAY BE REQUIRED TO COMPLETE THE WORK. TESTING RESULTS MUST BE SUBMITTED FOR ALL PHASES OF THIS PROJECT PER THE APPLICABLE GOVERNING AGENCIES REQUIREMENTS. TESTING RESULTS SHOULD BE SUBMITTED TO THE ENGINEER AND OWNER.
5. THE CONTRACTOR SHALL MAINTAIN AT LEAST ONE (1) SET OF "REDLINED" PRINTS OF THE CONSTRUCTION THE "REDLINED" PRINTS SHALL BE KEPT CURRENT TO ACCURATELY REPRESENT THE DIMENSIONS AND LOCATIONS OF ALL WORK PERFORMED BY THE CONTRACTOR. THE CONTRACTOR MUST PRESENT THE "REDLINED" PRINTS TO THE ENGINEER (KIMLEY-HORN) TIMELY UPON COMPLETION OF EACH PHASE OF THE WORK.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROMPTLY NOTIFYING THE ENGINEER OF ANY PROBLEMS OR POTENTIAL PROBLEMS IN CONFORMING TO THE DESIGN LINE AND GRADE FOR ANY ELEMENT OF THE CONSTRUCTION. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROMPTLY NOTIFYING THE ENGINEER OF SITE CONDITIONS THAT DIFFER FROM THOSE SHOWN ON THE APPROVED PLANS.
7. IN THE EVENT THE CONTRACTOR ALLOWS, AUTHORIZES, APPROVES OR CONSTRUCTS ITEMS THAT DIFFER FROM THE APPROVED PLANS, SPECIFICATIONS OR OTHER CONTRACT DOCUMENTS, WITHOUT WRITTEN APPROVAL BY THE ENGINEER, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY LIABILITY ARISING FROM SUCH CHANGES.
8. THE CONTRACTOR SHALL PERFORM ALL WORK ACCORDING TO ALL LOCAL, COUNTY, STATE, AND FEDERAL SAFETY AND HEALTH REGULATIONS. IN PARTICULAR, THE TRENCHING AND OPEN EXCAVATION OPERATIONS SHALL COMPLY WITH ALL CURRENT O.S.H.A. REGULATORY REQUIREMENTS.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SAFEGUARDS, SAFETY DEVICES, PROTECTIVE EQUIPMENT, AND ANY OTHER NEEDED ACTION TO PROTECT THE LIFE, HEALTH AND SAFETY OF THE PUBLIC AND TO PROTECT PROPERTY IN CONNECTION WITH THE PERFORMANCE OF WORK COVERED BY THE CONTRACTOR.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE JOB SITE CONDITIONS THROUGHOUT THE DURATION OF CONSTRUCTION, INCLUDING SAFETY OF ALL PERSONS AND PROTECTION OF PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED ONLY TO WORKING HOURS. THE CONTRACTOR SHALL DEFEND INDEMNIFY AND HOLD THE OWNER, THE ENGINEER AND THE GOVERNING JURISDICTION HARMLESS FOR ANY AND ALL LIABILITY, IN CONNECTION WITH THE PERFORMANCE OF WORK, EXCEPT FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER, THE ENGINEER OR THE GOVERNING JURISDICTION.
11. THE TYPE, SIZE, LOCATION, AND NUMBER OF UNDERGROUND UTILITIES ARE APPROXIMATE WHERE SHOWN ON THE PLANS AND WERE TAKEN FROM RECORDS OF THE CONTROLLING AGENCIES AND/OR FROM MARKINGS IN THE FIELD BY AN AGENCY AND/OR UTILITY LOCATING CONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THEIR COMPLETENESS OR ACCURACY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE AND LOCATION OF ALL UNDERGROUND UTILITIES ALONG THE ROUTE OF THE WORK AND PARTICIPATE IN THE RESOLUTION OF ANY CONFLICTS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
12. THE CONTRACTOR SHALL CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO FOR THE LOCATION OF UNDERGROUND GAS, ELECTRIC AND COMMUNICATION UTILITIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION (CALL 811). THE CONTRACTOR SHALL ALSO NOTIFY OTHER APPLICABLE UTILITY COMPANIES TO OBTAIN FIELD LOCATES OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
13. THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES TO COORDINATE SCHEDULES PRIOR TO THE COMMENCEMENT OF CONSTRUCTION AND SHALL BE RESPONSIBLE FOR COORDINATION OF ALL NECESSARY UTILITY RELOCATIONS WITH THE APPROPRIATE UTILITY COMPANY.
14. TEMPORARY EROSION CONTROL MEASURES SHALL BE PROVIDED BY THE CONTRACTOR DURING CONSTRUCTION AS IDENTIFIED IN THE EROSION CONTROL AND/OR STORMWATER MANAGEMENT PLANS BY EL PASO COUNTY. MAINTENANCE OF ONSITE DRAINAGE AND EROSION CONTROL FACILITIES DURING CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE REMOVAL OF TEMPORARY EROSION CONTROL MEASURES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. HOWEVER, REMOVALS SHALL NOT OCCUR UNTIL THE GOVERNING JURISDICTION HAS GIVEN APPROVAL TO REMOVE ANY OF THE MEASURES.
15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING NEARBY PUBLIC OR PRIVATE STREETS OF MUD AND DEBRIS, DUE TO CONSTRUCTION ACTIVITIES, ON A DAILY BASIS OR AS DIRECTED BY GOVERNING JURISDICTION PERSONNEL.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR AND/OR REPLACEMENT OF ANY DAMAGED EXISTING IMPROVEMENTS INCLUDING, BUT NOT LIMITED TO, PAVEMENT, CURB AND GUTTER, SIDEWALK, LANDSCAPING, IRRIGATION, SIGNAGE, STRIPING, AND UTILITIES.
17. IF DEWATERING IS TO BE USED TO INSTALL UTILITIES OR CONSTRUCT IMPROVEMENTS, A STATE CONSTRUCTION DEWATERING DISCHARGE PERMIT IS REQUIRED IF DISCHARGE IS INTO A STORM SEWER, CHANNEL, IRRIGATION DITCH, OR ANY WATERS OF THE UNITED STATES.
18. THE CONTRACTOR SHALL HAVE IN HIS POSSESSION AT ALL TIMES THE APPROPRIATE EDITION OF THE GOVERNING JURISDICTION DESIGN AND CONSTRUCTION STANDARDS, ONE SET OF APPROVED CONSTRUCTION PLANS, THE STORMWATER MANAGEMENT PLAN BY EL PASO COUNTY, AND ALL REQUIRED PERMITS.
19. ALL SANITARY SEWER AND FORCE MAIN CONSTRUCTION SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE APPLICABLE GOVERNING LOCAL AGENCY (MONUMENT SANITATION DISTRICT) CURRENT AT THE DATE OF CONSTRUCTION PLAN APPROVAL. FOR ELEMENTS OF WORK NOT COVERED BY LOCAL AGENCY STANDARDS AND SPECIFICATIONS, ALL CONSTRUCTION SHALL CONFORM TO THE APPROPRIATE EDITION OF THE STANDARDS AND SPECIFICATIONS OF INDUSTRY STANDARDS AS APPLICABLE. REQUIREMENTS OF THE COLORADO DEPARTMENT OF PUBLIC HEALTH & ENVIRONMENT, THE ENVIRONMENTAL PROTECTION AGENCY AND THE U.S. ARMY CORPS OF ENGINEERS, SHALL ALSO BE FOLLOWED AS THEY RELATE TO THE WORK.
20. CONTRACTOR TO MAINTAIN THE FOLLOWING MINIMUM HORIZONTAL SEPARATION DISTANCES BETWEEN SEWER AND ADJACENT UTILITIES EXCEPT WHERE SHOWN IN THE PLANS:
    - 20.1. SANITARY SEWER – 5 FEET
    - 20.2. STORM SEWER – 5 FEET
    - 20.3. WATER DISTRIBUTION – 10 FEET
    - 20.4. ELECTRIC/DRY UTILITIES – 5 FEET
21. CONTRACTOR TO MAINTAIN 18 INCH MINIMUM VERTICAL SEPARATION DISTANCES BETWEEN SEWER AND WATER DISTRIBUTION UTILITIES UNLESS OTHERWISE NOTED WITHIN THE PLANS.
22. THE CONTRACTOR SHALL PROVIDE AND IMPLEMENT A "TRAFFIC CONTROL PLAN" RELATED TO ALL CONSTRUCTION ACTIVITIES FOR THIS PROJECT. ALL TRAFFIC CONTROL DEVICES, STRIPING, AND SIGNING SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
23. ALL STATIONING IS ON CENTERLINE UNLESS OTHERWISE NOTED. CENTERLINE, RIGHTS-OF-WAY (R.O.W.), PROPERTY LINE, AND EASEMENT DIMENSIONS ARE FOR REFERENCE ONLY. REFER TO THE FINAL SUBDIVISION PLAT FOR PROJECT HORIZONTAL CONTROL.
24. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM ALL APPLICABLE AGENCIES.
25. ALL REFERENCES TO ANY PUBLISHED STANDARDS SHALL REFER TO THE LATEST REVISION OF SAID STANDARD, UNLESS SPECIFICALLY STATED OTHERWISE.
26. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL LABOR AND MATERIALS NECESSARY FOR THE COMPLETION OF THE INTENDED IMPROVEMENTS SHOWN ON THESE DRAWINGS OR DESIGNATED TO BE PROVIDED, INSTALLED, CONSTRUCTED, REMOVED AND RELOCATED UNLESS SPECIFICALLY NOTED OTHERWISE.
27. 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 WATER LINES AND DRY UTILITIES.
28. ALL OPERATIONS CONDUCTED ON THE PREMISES, INCLUDING THE WARMING UP, REPAIR, ARRIVAL, DEPARTURE OR RUNNING OF TRUCKS, EARTH MOVING EQUIPMENT, CONSTRUCTION EQUIPMENT AND ANY OTHER ASSOCIATED EQUIPMENT SHALL GENERALLY BE LIMITED TO THE PERIOD BETWEEN 7:00 A.M. AND 9:00 P.M. ON WEEKDAYS AND BETWEEN 8:00 A.M. AND 6:00 P.M. ON WEEKENDS UNLESS OTHERWISE APPROVED BY THE OWNER AND EL PASO COUNTY.
29. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE ALL UTILITY RELOCATIONS CONSISTENT WITH THE CONTRACTOR'S SCHEDULE FOR THIS PROJECT, WHETHER SHOWN OR NOT SHOWN AS IT RELATES TO THE CONSTRUCTION ACTIVITIES CONTEMPLATED IN THESE PLANS.
30. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL TEMPORARY POWER, TELEPHONE AND WATER TO THE SITE, PAYING ALL FEES EXCLUDING TAP FEES AND SYSTEM DEVELOPMENT FEES.
31. CONTRACTOR TO MAINTAIN ALL SHRUB AND GROUND COVER AREAS FREE FROM WEEDS AND UNDESIRABLE VEGETATION THROUGH MAINTENANCE PERIOD.
32. ABBREVIATIONS USED THROUGHOUT THESE PLANS ARE AS FOLLOWS:
    - 32.1. HDPE: HIGH-DENSITY POLYETHYLENE PIPE
    - 32.2. DIP: DUCTILE IRON PIPE
    - 32.3. ELEV: ELEVATION
    - 32.4. STA: STATION
    - 32.5. CL: CENTERLINE
    - 32.6. INV: INVERT
33. ALL PLANS, SPECIFICATIONS AND SUPPORTING DOCUMENTS SHALL BE PREPARED BY OR UNDER THE DIRECT SUPERVISION OF A PROFESSIONAL ENGINEERING LICENSED TO PRACTICE IN THE STATE OF COLORADO. ALL PLANS AND SPECIFICATIONS SHALL BEAR THE SEAL AND SIGNATURE OF SAID LICENSED PROFESSIONAL ENGINEER.
34. ALL EXISTING UTILITIES, SURFACES, AND OTHER EXISTING SURVEY ITEMS ALONG BEACON LITE ROAD WERE SURVEYED AS PART OF THE EL PASO COUNTY BEACON LITE ROAD AND COUNTY LINE ROAD IMPROVEMENTS PROJECT BY FARNSWORTH GROUP. REFER TO SHEET 29 WITHIN THE BEACON LITE ROAD IMPROVEMENTS IFC DATED JUNE 2023.

## ENGINEERING GENERAL CONSTRUCTION NOTES

1. ALL DISTANCES AND DATA SHALL BE CHECKED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. IN THE CASE OF ANY CONFLICTS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY SO THAT CLARIFICATION MAY BE MADE PRIOR TO THE START OF WORK.
2. THE CONTRACTOR SHALL PROTECT IN PLACE ALL EXISTING LANDSCAPING, TREES, DITCHES CULVERTS, SIGNS, MAILBOXES, UTILITIES, SIDEWALKS AND ANY OTHER MISCELLANEOUS ITEMS ONSITE. ANY DAMAGE TO THESE ITEMS BY THE CONTRACTOR SHALL BE REPAIRED TO THE SATISFACTION OF THE PRIVATE OWNER WITHOUT ANY EXPENSE TO THE OWNERS.
3. WHERE WORK IS PERFORMED ON EASEMENTS, THE CONTRACTOR SHALL TAKE EVERY PRECAUTION TO ELIMINATE ANY ADVERSE IMPACTS TO THE ADJACENT PROPERTY AND RESTORE THE EASEMENT TO ITS ORIGINAL CONDITION. ALL BACKFILL SHALL BE COMPACTED TO 95% OF MAX DENSITY AS DETERMINED BY THE STANDARD PROCTOR COMPACTION TEST (ASTM D698).
4. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL WATER REQUIRED FOR DUST ABATEMENT, COMPACTION ETC. THROUGH THE COMPLETION OF THE PROJECT.
5. APPROXIMATE LOCATIONS OF EXISTING UTILITIES HAVE BEEN SHOWN ON THE PROJECT PLANS. THEY ARE TO BE USED FOR GENERAL INFORMATION ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE APPROPRIATE UTILITIES PRIOR TO THE START OF ANY CONSTRUCTION. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO HAVE THE UTILITIES MARKED/LOCATED IN THE FIELD BY THE APPROPRIATE AGENCIES PRIOR TO THE START OF WORK. CONTACT "DIG-LINE" AT 811. ANY DAMAGE OR DISTURBANCE OF EXISTING UTILITIES AND THE COST FOR IMPACTS AND RESTORATION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. ANY CONFLICTS OR DISCREPANCIES WITH EXISTING UTILITIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING SOURCES FOR GRANULAR MATERIALS, WATER, WASTE SITES, AND ANY OTHER MATERIALS SOURCES AS REQUIRED FOR PROJECT COMPLETION.
7. THE CONTRACTOR SHALL TAKE PRECAUTIONS TO ASSURE ADEQUATE INFORMATION ON SUBSURFACE CONDITIONS PRIOR TO BIDDING THE PROJECT AND SHALL CONDUCT WHATEVER SUBSURFACE INVESTIGATIONS ARE NECESSARY.
8. ANY WORK DONE WITHIN A PUBLIC RIGHT-OF-WAY SHALL BE COORDINATED WITH THE APPROPRIATE TRANSPORTATION AGENCY AND SHALL MEET THE REQUIREMENTS OF THAT AGENCY AND THE REQUIREMENTS OF ANY RIGHT-OF-WAY OR SPECIAL USE PERMITS.
9. THE CONTRACTOR IS RESPONSIBLE FOR DUST ABATEMENT AND ANY LIABILITY ISSUES RELATED TO DUST AT ANY LOCATION WHICH MAY BE CAUSED BY THIS PROJECT.
10. ALL CONSTRUCTION ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH THE COLORADO DEPARTMENT OF PUBLIC HEALTH & ENVIRONMENT STANDARDS.
11. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER AND WITH THE ENGINEER FOR ALL NECESSARY INSPECTIONS PRIOR TO BACKFILLING.
12. THE CONTRACTOR SHALL COORDINATE ALL INSPECTIONS WITH MONUMENT SANITATION DISTRICT, EL PASO COUNTY, AND THE COLORADO DEPARTMENT OF PUBLIC HEALTH & ENVIRONMENT.
13. ACCEPTANCE OF ALL IMPROVEMENTS BY THE OWNER SHALL CONSTITUTE SUBSTANTIAL COMPLETION OF THIS PROJECT.
14. ALL PIPE CUTTING EQUIPMENT AND PIPE CUTS MUST BE APPROVED BY THE MONUMENT SANITATION DISTRICT.

## GRAVITY SEWER GENERAL NOTES

1. THE FOLLOWING SEWER LINE NOTES ARE INTENDED FOR GENERAL SANITARY SEWER STANDARDS ONLY AND ARE NOT ALL INCLUSIVE.
2. ALL WORK SHALL CONFORM TO APPLICABLE LOCAL, STATE, AND FEDERAL STANDARDS AND SPECIFICATIONS AS REFERENCED BY THE PROJECT ENGINEER.
3. JOINTS SHALL BE MADE TIGHT BY THE USE OF KENT-SEAL OR EQUAL AND THE INTERNAL PERIPHERY OF ALL JOINTS SHALL SHOW EVIDENCE OF 100 PERCENT SEAL AROUND THE JOINT.
4. CAST-IN-PLACE CONCRETE CEMENT SHALL BE TYPE II OR TYPE IILA COMPLYING WITH ASTM C-150.
5. COARSE AGGREGATES SHALL CONFORM TO ASTM C-33 USING 3/4-INCH COARSE AGGREGATE SIZE AND 3/8-INCH MINUS FINE AGGREGATE SIZE.
6. AIR ENTRAINING AGENT SHALL CONFORM TO ASTM C-260 AND ADDED AT THE MIXER.
7. CONCRETE MIX SHALL BE 6 SACKS PER CUBIC YARD, 3000 PSI 28-DAY COMPRESSIVE STRENGTH, 2-INCH MAXIMUM SLUMP AND 5 TO 6.5 PERCENT AIR ENTRAINMENT.
8. INSTALL A TIGHT-FITTING PNEUMATIC OR MECHANICAL PLUG IN THE PIPE THAT CONNECTS TO THE IN-SERVICE MAIN LINE AND KEEP THIS PLUG IN PLACE UNTIL ALL CONSTRUCTION, CLEANING, VIDEO AND PRESSURE TESTING OPERATIONS HAVE BEEN COMPLETED.
9. IMMEDIATELY AFTER PLACEMENT, THOROUGHLY CLEAN PIPE LENGTHS OF ALL DEBRIS.
10. AT THE END OF THE DAY'S WORK, OR AT ANY TIME THE WORK IS CLOSED DOWN FOR ANY PERIOD OF TIME, THE PIPE MUST BE PROTECTED TO PREVENT FOREIGN MATERIAL OF ANY KIND FROM ENTERING THE PIPE.
11. AFTER ALL PIPING IN A SECTION IS LAID, THOROUGHLY CLEAN, FLUSH AND VACUUM ALL DEBRIS FROM THE NEW SEWER MAINS.
12. IMPROPER LATERAL INSTALLATION, WIDE JOINTS, WATER POOLING GRATER THAN ONE-INCH DEPTH OR ANY NOTICEABLE BULGES IN THE PIPE WALL SHALL BE CAUSE FOR THE SECTION TO BE EXCAVATED, RE-BEDDED AND RE-INSPECTED BY VIDEO AT THE CONTRACTOR'S EXPENSE.
13. MANHOLE TO MANHOLE SEGMENTS SHALL BE PRESSURE TESTED IN ACCORDANCE WITH THE ASTM F 1417 STANDARD TO ENSURE THE INTEGRITY OF MAIN LINE JOINTS AND LATERAL CONNECTIONS AND A REPORT OF THIS TESTING WILL BE PROVIDED TO THE OWNER AND ENGINEER..
14. ALL SEWER LINES AND SERVICE LINES SHALL MAINTAIN A MINIMUM COVER OF 5.0'. WHERE 5.0' OF COVER CANNOT BE ACHIEVED, 4" RIGID INSULATION SHALL BE INSTALLED.
15. MANHOLE RING ADJUSTMENT SHALL BE ACCOMPLISHED IN A TWO-STEP PROCESS PRIOR TO PLACEMENT OF PAVEMENT. THE MANHOLE RING SHALL BE CONSTRUCTED 0.5 FEET BELOW FINISHED PAVEMENT SURFACE ELEVATION. FOLLOWING COMPLETION OF PAVING BY OTHERS, THE SANITARY SEWER MANHOLE RINGS WILL BE RAISED BY THE CONTRACTOR TO FINISHED GRADE IN ACCORDANCE WITH MONUMENT SANITATION DISTRICT SPECIFICATIONS.
16. TRACER WIRE SHALL BE INSTALLED ALONG THE FULL LENGTH OF ALL GRAVITY SANITARY SEWER. THE WIRE SHALL BE PLACED ALONG THE TOP OF THE PIPE AND SECURED EVERY 10 FEET TO ENSURE IT REMAINS IN PLACE DURING BACKFILL OPERATIONS. THE TRACER WIRE INSULATION COLOR SHALL BE GREEN. TRACER WIRE ACCESS POINTS SHALL BE PROVIDED AT ALL SANITARY SEWER MANHOLES. TRACER WIRE TEST BOXES SHALL BE SPACED AT A MAXIMUM OF 400 FOOT INTERVALS.
17. TRACER WIRE SHALL BE TERMINATED AT ALL MANHOLES. TRACER WIRE IS TO BE INSTALLED ON THE OUTSIDE WALL OF ALL MANHOLES AND ENTER THE STRUCTURE BETWEEN THE ADJUSTING RINGS OR RING ASSEMBLY. CONTRACTOR SHALL LEAVE 3 FEET OF EXCESS TRACER WIRE IN MANHOLE AND WIND UP AND HANG WIRE TO MANHOLE WALL WITH STAINLESS STEEL HARDWARE.
18. WARNING TAPE SHALL BE INSTALLED ALONG THE FULL LENGTH OF ALL GRAVITY SANITARY SEWER AND FORCE MAINS AT A DISTANCE 12 INCHES ABOVE THE PIPE. WARNING TAPE SHALL COLORED GREEN AND BE MADE OF DETECTABLE HIGH-VISIBILITY POLYETHYLENE MATERIAL. THE MINIMUM WIDTH OF TAPE SHALL BE 3 INCHES WIDE.

identify diameter of sewer line

## FORCE MAIN NOTES

1. PIPE SHALL BE CLASSIFIED AS LISTED BELOW AND DESIGNED AND INSTALLED ACCORDING TO THE METHODS INDICATED IN THE FOLLOWING:
    - 1.1. HIGH DENSITY POLYETHYLENE PIPE: PE 4710 HDPE DR 11 IN ACCORDANCE WITH ASTM D3350-02, ASTM F894.
2. HDPE PIPE MARKINGS SHALL BE IN ACCORDANCE WITH ASTM D3350-02. PIPE MARKINGS SHALL BE AS FOLLOWS:
    - 2.1. MANUFACTURER'S NAME OR TRADEMARK AND PRODUCTION RECORD.
    - 2.2. APPROPRIATE ASTM DESIGNATION.
    - 2.3. APPROPRIATE DIMENSION RATIO (DR).
    - 2.4. MARKED WITH "GREEN STRIPE" DESIGNATING WASTEWATER PIPELINE.
3. HDPE PIPE DEFLECTIONS SHALL BE ACHIEVED BY BENDING THE PIPE USING A MINIMUM BEND RADIUS OF 1.5 TIMES THE MANUFACTURER'S RECOMMENDATION. IF 1.5 TIMES MANUFACTURER'S BEND RADIUS CANNOT BE ACCOMMODATED, AN HDPE BEND MUST BE USED TO ACHIEVE DEFLECTION UNLESS OTHERWISE NOTED IN THE PLANS.
4. THRUST AT BENDS, TEES, PLUGS OR OTHER FITTINGS SHALL BE MECHANICALLY RESTRAINED JOINTS IN ACCORDANCE WITH AWWA M55 AND WHEN REQUIRED BY THE DRAWINGS.
5. RESTRAINED JOINTS, WHEN REQUIRED PER THE DRAWINGS, SHALL BE USED FOR A SUFFICIENT DISTANCE FROM EACH SIDE OF THE BEND, TEE, PLUG, OR OTHER FITTING TO RESIST THRUST AND INSTALLED. RESTRAINED JOINTS SHALL MEET THE DESIGN PRESSURE RATING AS INDICATED ON THE DRAWINGS.
6. MECHANICAL JOINTS WITH MECHANICAL RESTRAINT SHALL COMPLY WITH AWWA/ANSI C111/A21.11 AND APPLICABLE PARTS OF ANSI/AWWA C110/A21.10.
7. BUTT FUSION FITTINGS SHALL COMPLY WITH THE REQUIREMENTS OF ASTM D3350-02. FABRICATED BENDS, TEES, AND CAPS SHALL MEET THE REQUIREMENTS OF ASTM F2206.
8. ELECTROFUSION FITTINGS SHALL ONLY BE USED WHERE SPECIFIED ON THE PLANS OR WITH PRIOR OWNER OR ENGINEER APPROVAL. FITTINGS SHALL BE MANUFACTURED PER STANDARD ASTM F1055 AND HAVE AWWA APPROVAL.
9. MECHANICAL FITTINGS SHALL ONLY BE USED WHERE SPECIFIED ON THE PLANS OR WITH PRIOR OWNER OR ENGINEER APPROVAL. MECHANICAL FITTINGS SHALL BE DESIGNED AND BE COMPATIBLE WITH HDPE PIPE, IF HDPE PIPE IS TO BE USED.
10. CAST-IN-PLACE CONCRETE FOR THRUST BLOCKS SHALL BE MINIMUM 3,000 PSI STRENGTH.
11. PROVIDE FULL MIX DESIGN FOR ANY CAST-IN-PLACE CONCRETE DURING SHOP DRAWING SUBMITTAL.
12. HYDROSTATIC TESTING ON THE ENTIRETY OF THE FORCE MAIN AND VAULT PIPING SHALL BE PERFORMED IN ACCORDANCE WITH AWWA STANDARD SPECIFICATIONS FOR DUCTILE IRON, HDPE AND/OR PVC PIPE.
13. ALL PIPING MATERIAL DUCTILE IRON OR HDPE PIPE SHALL NOT BE WHITE UNLESS UTILIZING SCHEDULE 40 PVC. AT THE TIME OF THE PREPARATION OF THESE SPECIFICATIONS, THE PREDOMINANT PIPE COLOR IS GREEN. ANY DEVIATION FROM THE USE OF GREEN PIPE MUST BE APPROVED. BLACK HDPE PIPE WITH GREEN BANDS OR GREEN MARKER TAPE MAY BE UTILIZED.
14. TRACER WIRE SHALL BE INSTALLED ALONG THE FULL LENGTH OF ALL FORCE MAINS. THE WIRE SHALL BE PLACED ALONG THE TOP OF THE PIPE AND SECURED EVERY 10 FEET TO ENSURE IT REMAINS IN PLACE DURING BACKFILL OPERATIONS. THE TRACER WIRE INSULATION COLOR SHALL BE GREEN. TRACER WIRE TEST BOXES SHALL BE SPACED AT A MAXIMUM OF 400 FOOT INTERVALS AND AT ALL CLEANOUTS AND MANHOLES.
15. TRACER WIRE FOR FORCE MAIN SHALL UTILIZE CARSONITE TEST BOXES (USA BLUEBOOK ITEM NO. 70426). CARSONITE TEST BOXES SHALL BE LOCATED OFFSET AT ALL HORIZONTAL BENDS, OR OTHERWSE SPACED AT A MAXIMUM INTERVAL OF 400 FEET. CARSONITE TEST BOXES ARE TO BE INSTALLED WEST OF BEACON LITE ROAD WITHIN THE RIGHT-OF-WAY AND A MINIMUM OF 2.5 FEET OUTSIDE OF EDGE OF ASPHALT.
16. WARNING TAPE SHALL BE INSTALLED ALONG THE FULL LENGTH OF ALL GRAVITY SANITARY SEWER AND FORCE MAINS AT A DISTANCE 12 INCHES ABOVE THE PIPE. WARNING TAPE SHALL COLORED GREEN AND BE MADE OF DETECTABLE HIGH-VISIBILITY POLYETHYLENE MATERIAL. THE MINIMUM WIDTH OF TAPE SHALL BE 3 INCHES WIDE.

identify diameter of Force main

### UTILITY CONTACTS

| COMPANY | TYPE | CONTACT | PHONE | EMAIL |
|---|---|---|---|---|
| BLACK HILLS ENERGY | GAS | BOB SWATEK | (719) 332-5856 | BOB.SWATEK@BLACKHILLSCORP.COM |
| COMCAST | FIBER | TOD BELL | (719) 313-1567 | TOD_BELL@COMCAST.COM |
| CENTURY LINK | FIBER | LARRY GURULE | (719) 369-5259 | LARRY.GURULE@LUMEN.COM |
| CORE ELECTRIC COOPERATIVE | ELECTRIC | SHANNON KASPER | (720) 733-5484 | SKASPER@CORE.COOP |
| MOUNTAIN VIEW ELECTRIC | ELECTRIC | LES ULFERS | (719) 494-2682 | LES.U@MVEA.COOP |
| TOWN OF MONUMENT WATER | WATER | TOM THARNISH | (719) 884-8039 | TTHARNISH@TOMGOV.ORG |
| MONUMENT SANITATION DIST. | SEWER | MARK PARKER | (719) 481-4886 | PARKER@MSAN.CO |
| ZAYO | FIBER | JAMES BLACK | (719) 216-8505 | JAMESR.BLACK@ZAYO.COM |

Provide typical road section with general utility locations

Include EPC General Construction Notes

Please provide capacity and area (SFE) this is projected to serve

Know what's below. Call before you dig.

| DESCRIPTION | BY | DATE |
|---|---|---|
| | | |

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DRAWN BY: ZMT
CHECKED BY: ARD
DATE: 9/11/2026

# BUC-EE'S #87 EL PASO COUNTY OFFSITE SEWER

GENERAL NOTES

PRELIMINARY

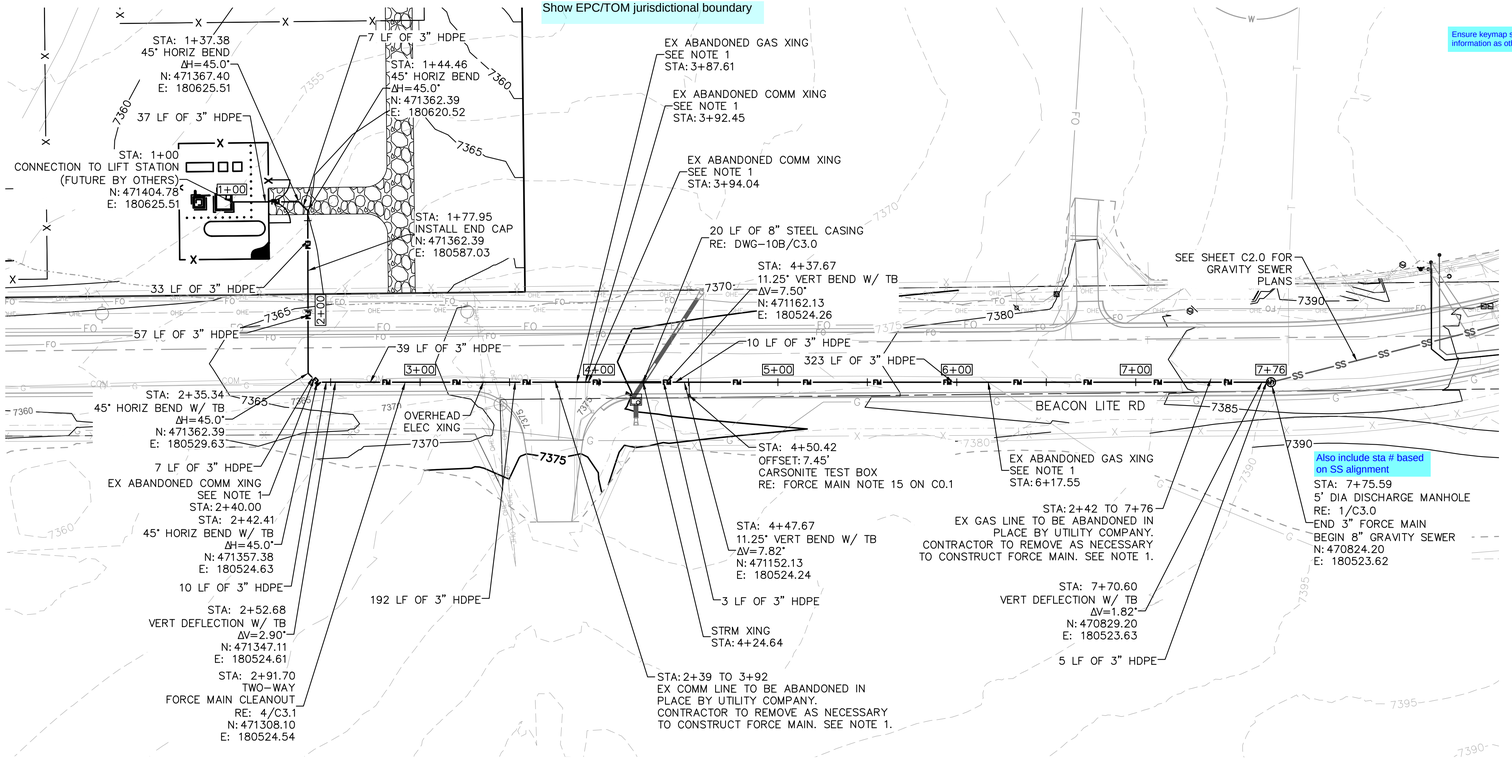
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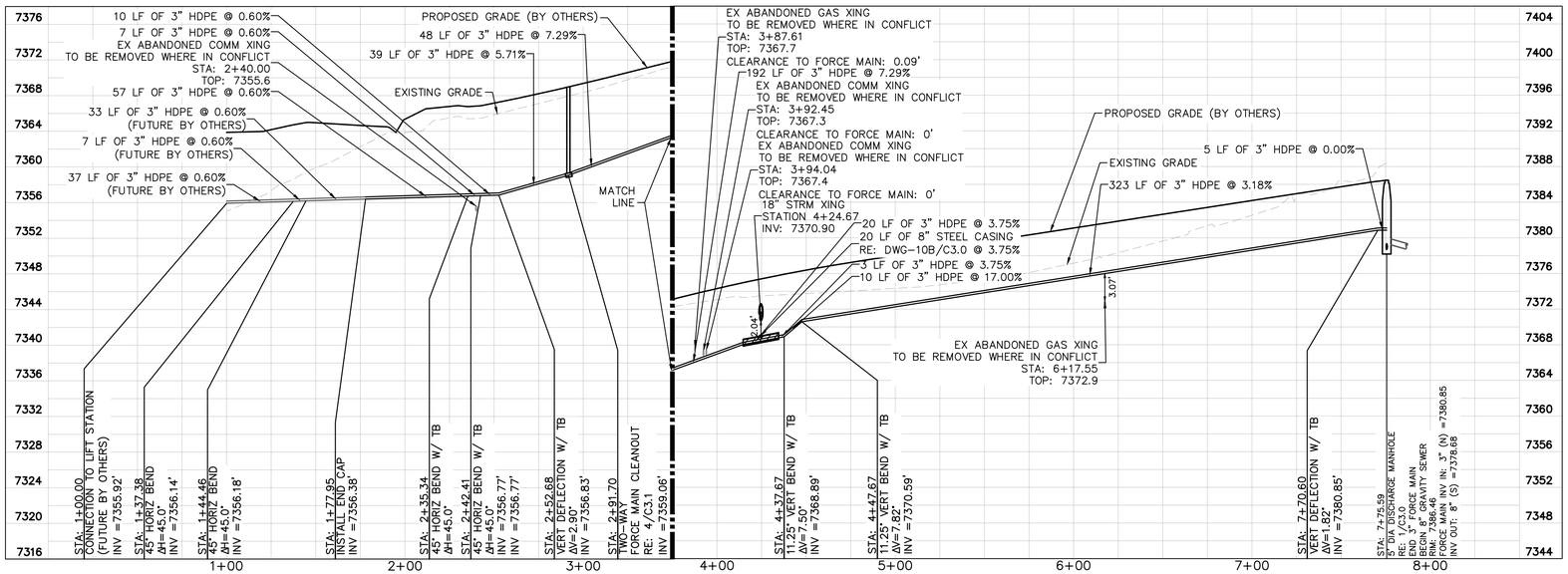
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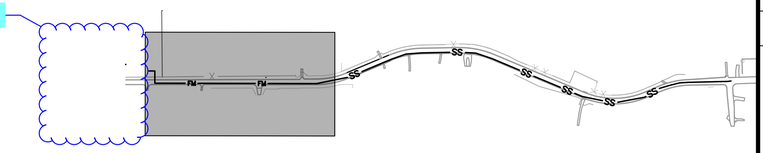
Show EPC/TOM jurisdictional boundary




# FORCE MAIN STA 1+00 – END
# PLAN & PROFILE




Ensure keymap shows same information as other sheets



Label Key map and include scale and north arrow (all sheets)

Label adjacent property owners

Show and label ROW

Ensure all easements are shown and labeled

Also include sta # based on SS alignment

## LEGEND

- SECTION LINE
- PROPERTY LINE
- EXISTING ROAD RIGHT-OF-WAY
- PROPOSED ROAD RIGHT-OF-WAY
- W — EXISTING WATER LINE
- SS — EXISTING SEWER LINE
- EXISTING SEWER MANHOLE
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- FM — PROPOSED FORCE MAIN
- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- FUTURE MINOR CONTOUR
- FUTURE MAJOR CONTOUR
- TO BE REMOVED

## NOTES:

1. ABANDONED UTILITIES ARE TO BE REMOVED IF IN CONFLICT WITH CONSTRUCTION OF THE SANITARY SEWER. PRIOR TO REMOVAL OF ANY EXISTING UTILITIES, CONTRACTOR TO COORDINATE AND CONFIRM WITH THE UTILITY OWNER THAT REMOVAL OF THE EXISTING LINE IS ACCEPTABLE AND THE LINE IS ABANDONED AND NOT IN USE.

## UTILITY NOTE:

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ELECTRICAL: 3.5 FEET
TELECOM/FIBER: 3.5 FEET
GAS: 3 FEET
WATER: 5 FEET

VERTICAL 16 8 4 0
NORTH
GRAPHIC SCALE IN FEET 0 20 40 80
HORIZONTAL

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

| DATE | BY | DESCRIPTION | Δ |
|---|---|---|---|
| | | | |

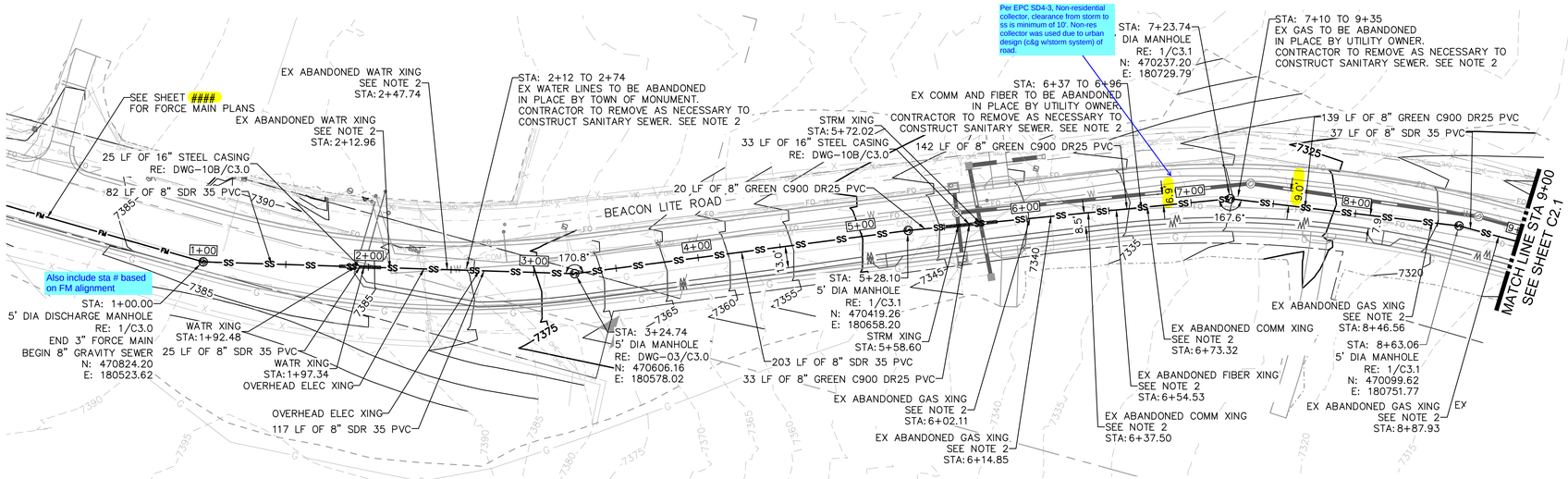
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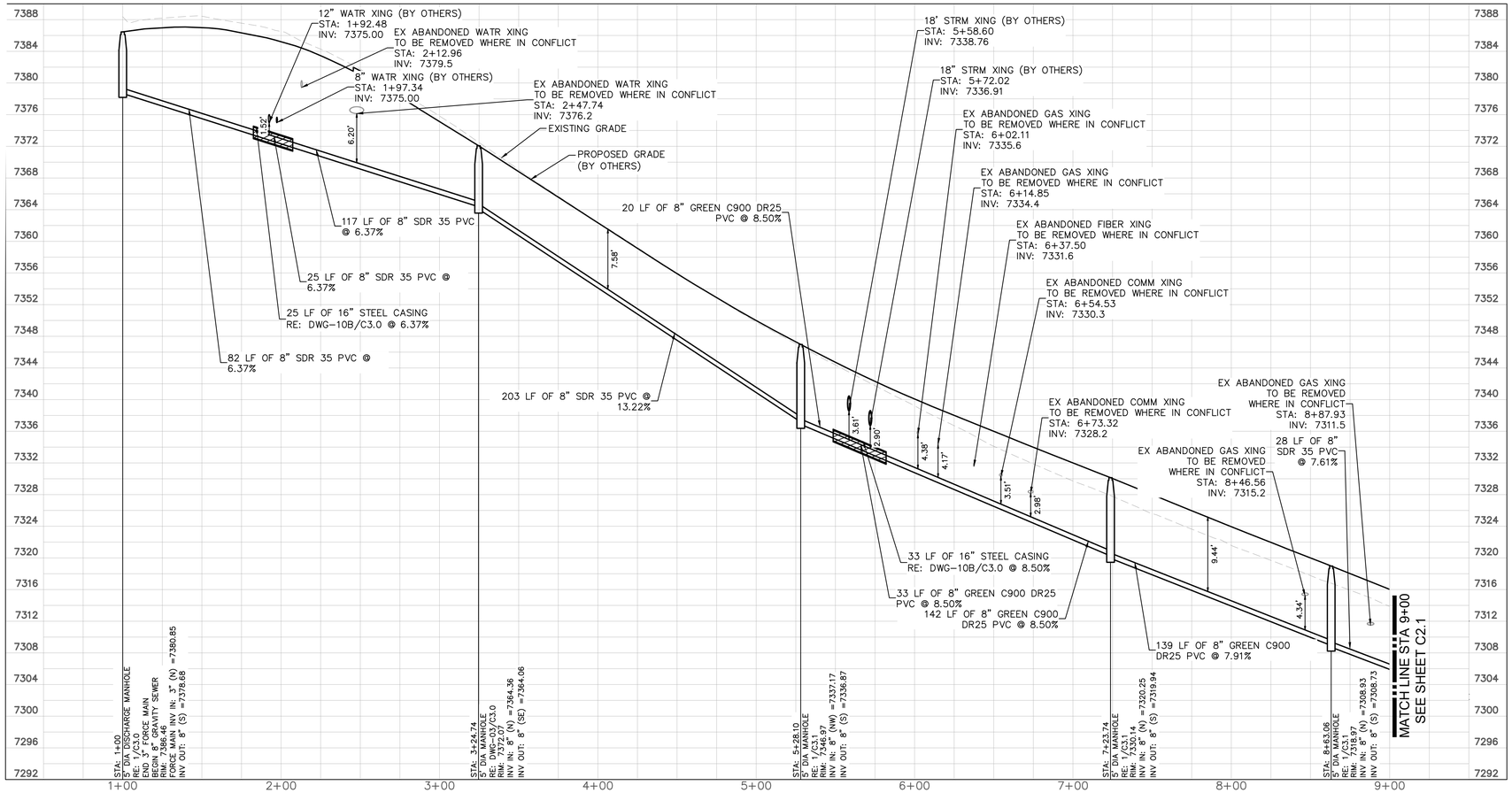
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OFFSITE SEWER
FORCE MAIN [8+00 - END]

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# SANITARY SEWER STA 1+00 – 9+00 (Gravity)
# PLAN & PROFILE




## LEGEND

- SECTION LINE
- PROPERTY LINE
- EXISTING ROAD RIGHT-OF-WAY
- PROPOSED ROAD RIGHT-OF-WAY
- W — EXISTING WATER LINE
- SS — EXISTING SEWER LINE
- EXISTING SEWER MANHOLE
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## NOTES:

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GAS: 3 FEET
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VERTICAL 16 8 4 0
NORTH
GRAPHIC SCALE IN FEET
0 20 40 80
HORIZONTAL

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| DATE | BY | DESCRIPTION |
|---|---|---|
| | | |

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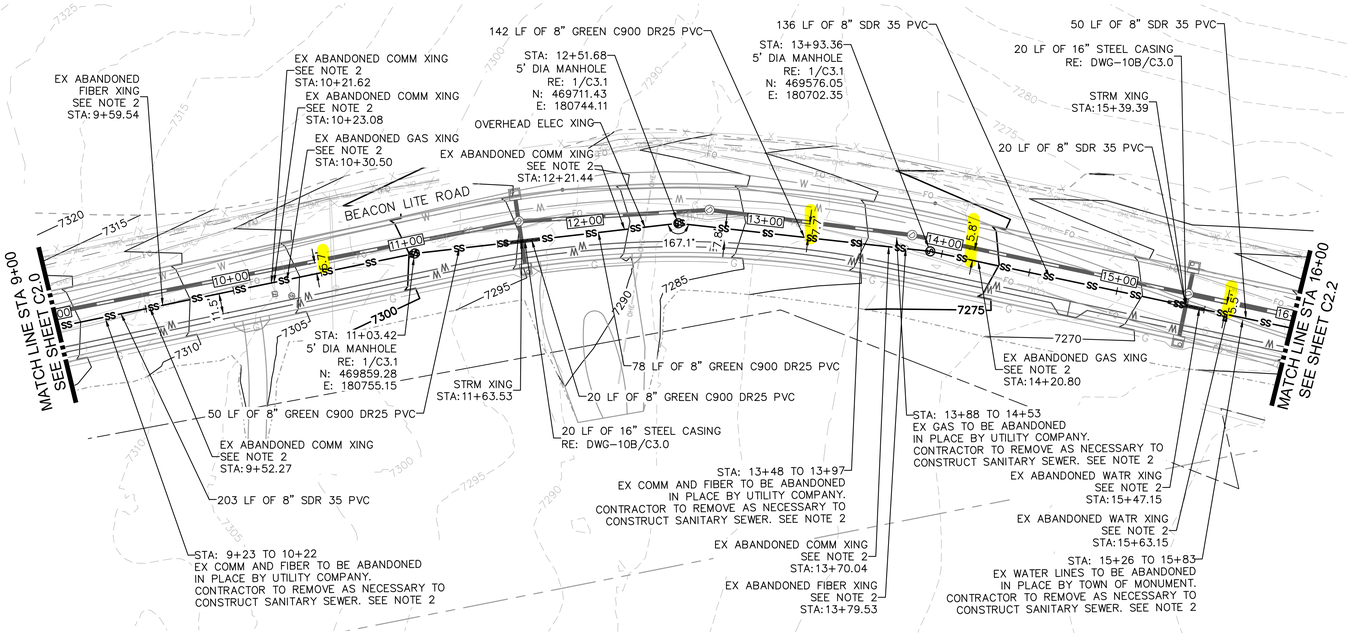
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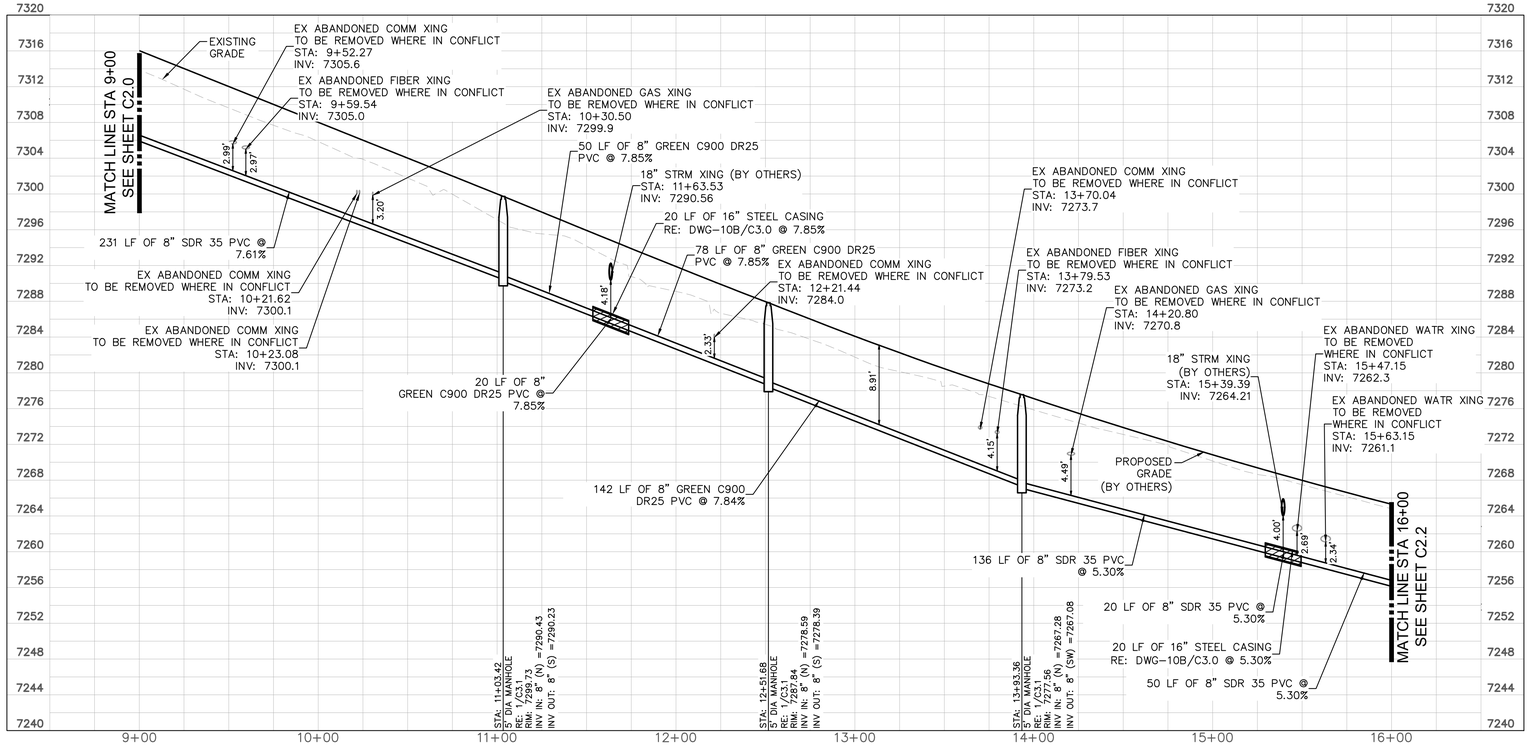
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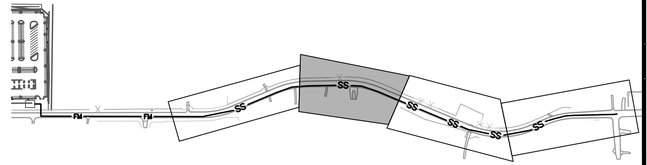
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# SANITARY SEWER STA 9+00 – 16+00
## PLAN & PROFILE



See comments from previous sheets

## LEGEND

- SECTION LINE
- PROPERTY LINE
- EXISTING ROAD RIGHT-OF-WAY
- PROPOSED ROAD RIGHT-OF-WAY
- W — EXISTING WATER LINE
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- FUTURE MAJOR CONTOUR
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## NOTES:

1. PIPE LENGTHS INDICATED ARE MEASURED FROM CENTER OF MANHOLE TO CENTER OF MANHOLE.
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## UTILITY NOTE:

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ELECTRICAL: 3.5 FEET
TELECOM/FIBER: 3.5 FEET
GAS: 3 FEET
WATER: 5 FEET

VERTICAL 16 8 4 0
NORTH
GRAPHIC SCALE IN FEET
0 20 40 80
HORIZONTAL

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

| DATE | BY | DESCRIPTION | |
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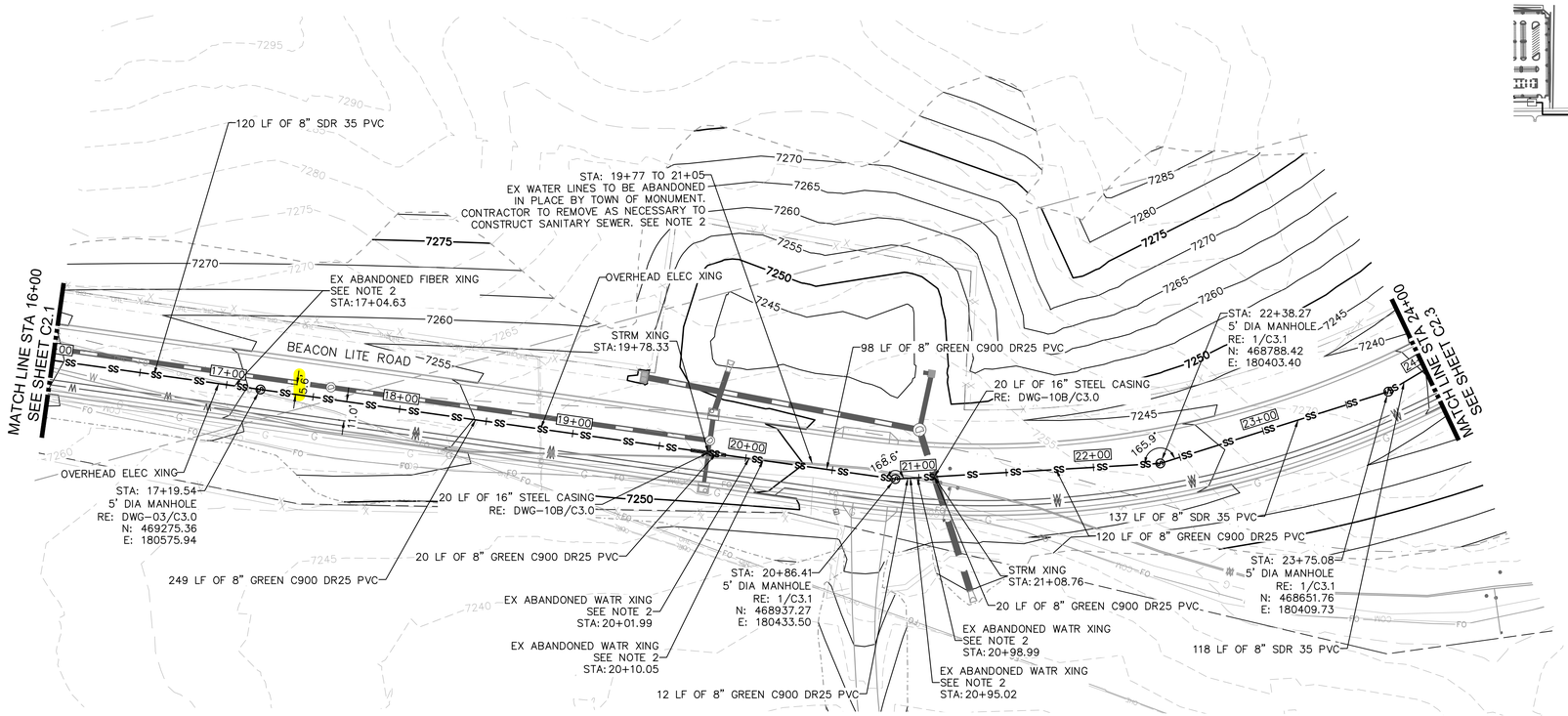
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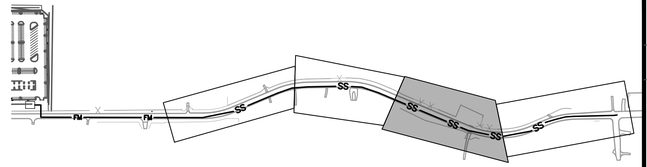
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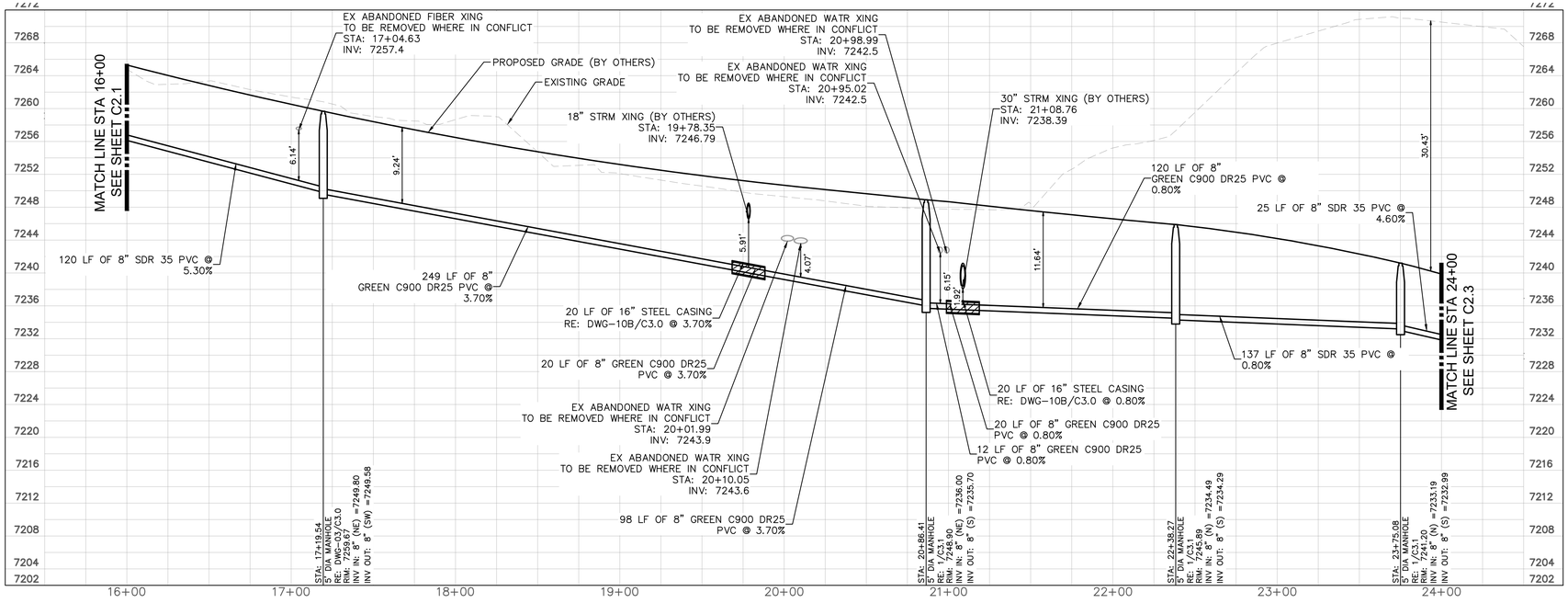
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See comments from previous sheets

# SANITARY SEWER STA 16+00 – 24+00
## PLAN & PROFILE




## LEGEND

- SECTION LINE
- PROPERTY LINE
- EXISTING ROAD RIGHT-OF-WAY
- PROPOSED ROAD RIGHT-OF-WAY
- W — EXISTING WATER LINE
- SS — EXISTING SEWER LINE
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- FUTURE MAJOR CONTOUR
- TO BE REMOVED

## NOTES:

1. PIPE LENGTHS INDICATED ARE MEASURED FROM CENTER OF MANHOLE TO CENTER OF MANHOLE.
2. ABANDONED UTILITIES ARE TO BE REMOVED IF IN CONFLICT WITH CONSTRUCTION OF THE SANITARY SEWER. PRIOR TO REMOVAL OF ANY EXISTING UTILITIES, CONTRACTOR TO COORDINATE AND CONFIRM WITH THE UTILITY OWNER THAT REMOVAL OF THE EXISTING LINE IS ACCEPTABLE AND THE LINE IS ABANDONED AND NOT IN USE.

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GAS: 3 FEET
WATER: 5 FEET

VERTICAL 16 8 4 0
NORTH
GRAPHIC SCALE IN FEET
0 20 40 80
HORIZONTAL

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| DATE | BY | DESCRIPTION | |
|---|---|---|---|
| | | | |

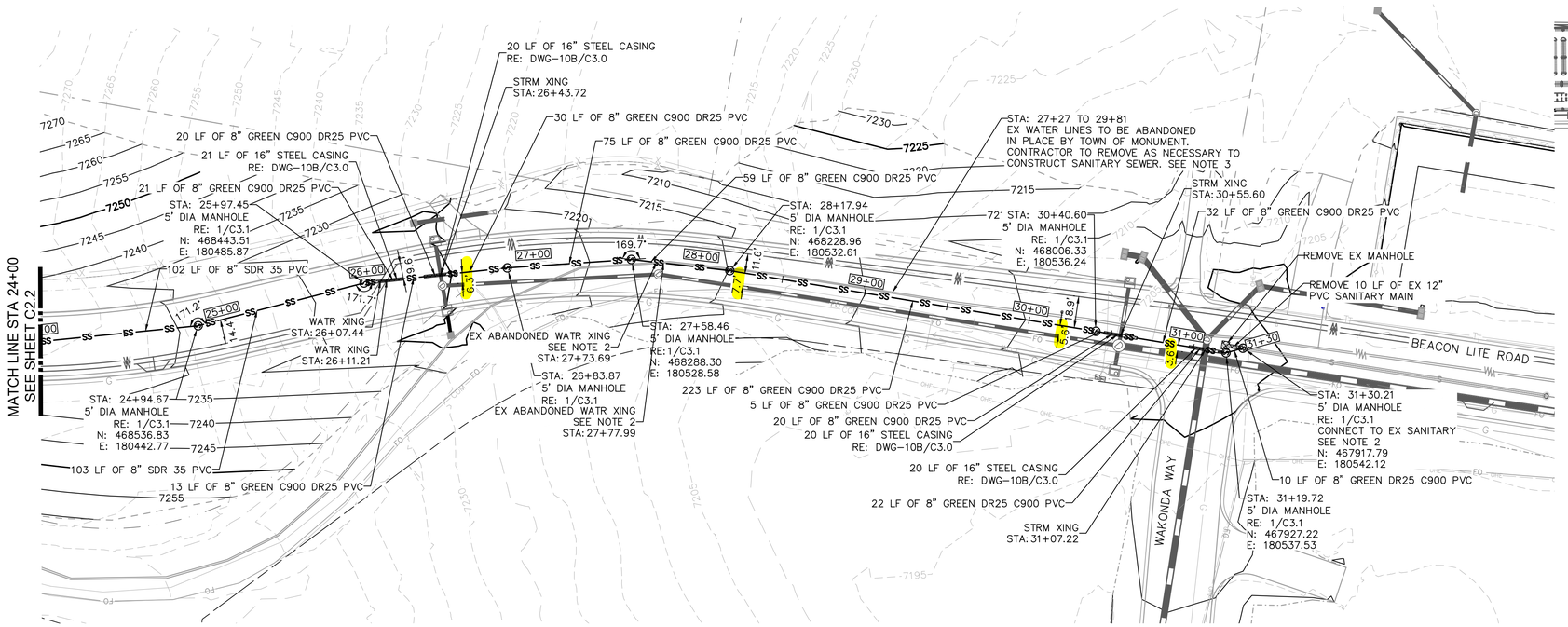
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Greenwood Village, Colorado 80111 (303) 228-2300

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DATE: 9/11/2026

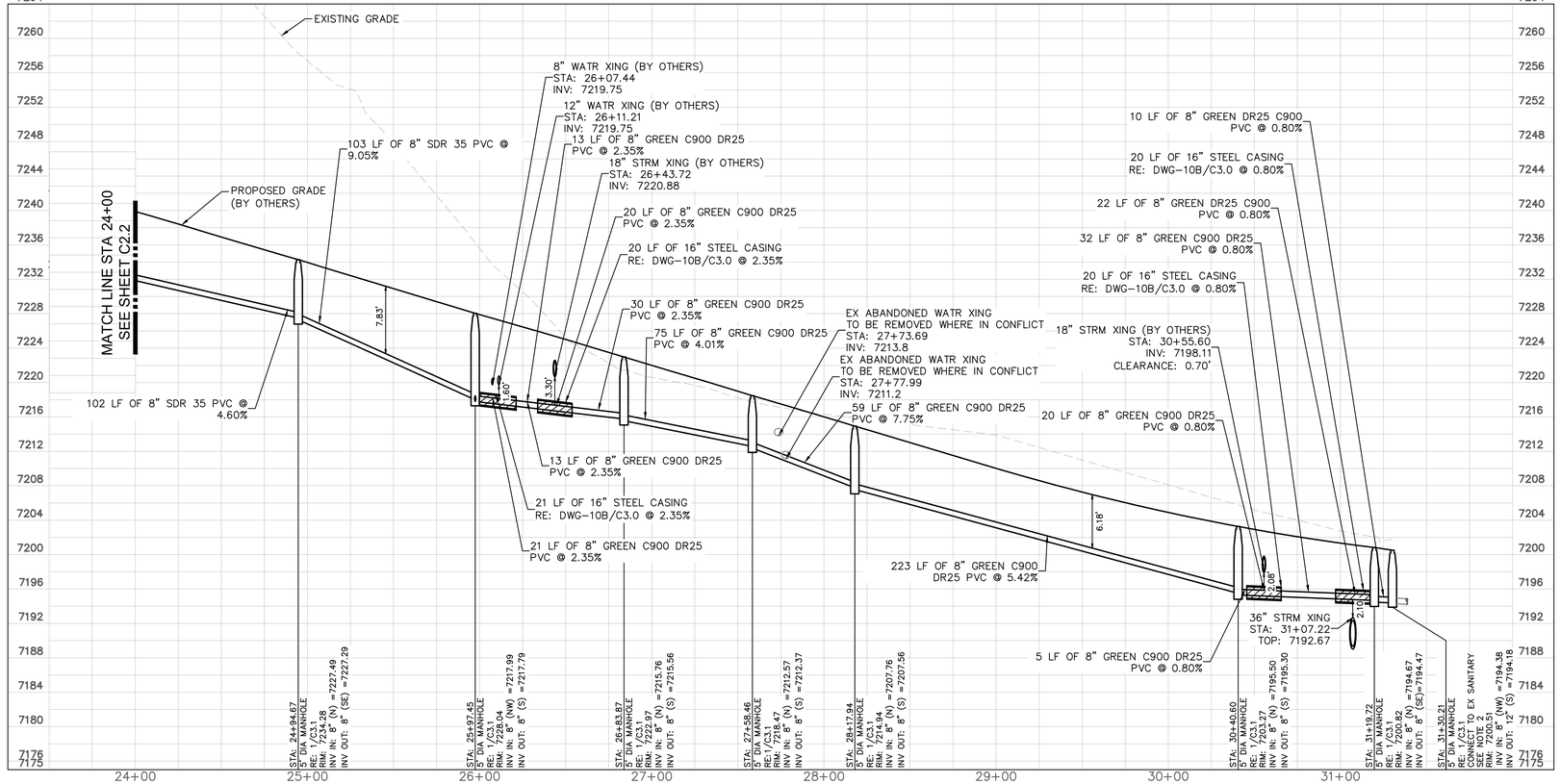
BUC-EE'S #87 EL PASO COUNTY
OFFSITE SEWER
SANITARY SEWER [16+00 - 24+00]

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C2.2




# SANITARY SEWER STA 24+00 – END
## PLAN & PROFILE




See comments from previous sheets

## LEGEND

- SECTION LINE
- PROPERTY LINE
- EXISTING ROAD RIGHT-OF-WAY
- PROPOSED ROAD RIGHT-OF-WAY
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- EXISTING MAJOR CONTOUR
- FUTURE MINOR CONTOUR
- FUTURE MAJOR CONTOUR
- TO BE REMOVED

## NOTES:

1. PIPE LENGTHS INDICATED ARE MEASURED FROM CENTER OF MANHOLE TO CENTER OF MANHOLE.
2. MANHOLE TO BE INSTALLED ON EXISTING 12" SANITARY MAIN. CONTRACTOR TO VERIFY SIZE AND ELEVATION AT POINT OF CONNECTION PRIOR TO CONSTRUCTION.
3. ABANDONED UTILITIES ARE TO BE REMOVED IF IN CONFLICT WITH CONSTRUCTION OF THE SANITARY SEWER. PRIOR TO REMOVAL OF ANY EXISTING UTILITIES, CONTRACTOR TO COORDINATE AND CONFIRM WITH THE UTILITY OWNER THAT REMOVAL OF THE EXISTING LINE IS ACCEPTABLE AND THE LINE IS ABANDONED AND NOT IN USE.

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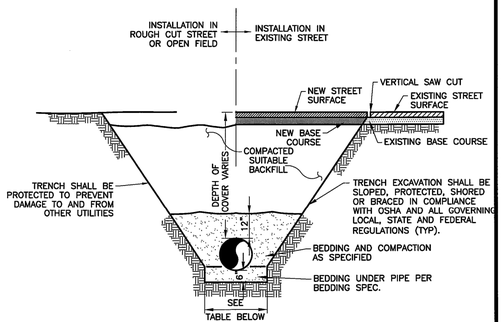
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C2.3

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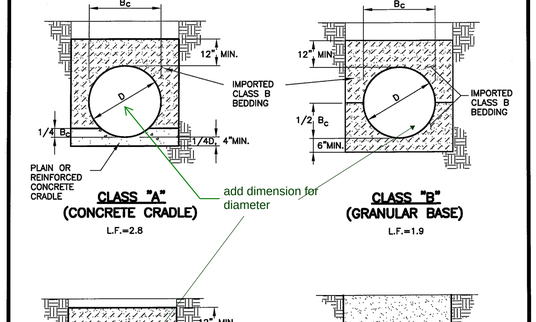



| BOTTOM OF TRENCH WIDTH | | |
|---|---|---|
| PIPE DIAMETER | MINIMUM WIDTH | MAXIMUM WIDTH |
| 4" | 1'-5" | 3'-9" |
| 6" | 1'-7" | 3'-11" |
| 8" | 1'-9" | 4'-1" |
| 12" | 2'-1" | 4'-5" |
| 16" | 2'-6" | 4'-9" |
| 20" | 2'-10" | 5'-2" |
| 24" | 3'-2" | 5'-6" |

1. ALL PIPE EMBEDMENT SHALL BE IMPORTED CLASS B BEDDING UNLESS OTHERWISE DIRECTED.
2. AN OVER EXCAVATED TRENCH SHALL BE REFILLED AND THOROUGHLY COMPACTED UNDER THE DIRECTION OF THE MONUMENT SANITATION DISTRICT.
3. UNDER NO CIRCUMSTANCES WILL PIPE BE LAID IN A PROPOSED FILL AREA PRIOR TO IT BEING COMPLETELY FILLED. THE FILL WILL BE PLACED FIRST TO THE PROPOSED GRADE AND COMPACTED AS REQUIRED. A TRENCH THEN WILL BE EXCAVATED AND THE PIPE INSTALLED IN THE USUAL MANNER.
4. REFER TO STANDARD SPECIFICATIONS FOR LIMITATIONS AND CONDITIONS FOR THE DEPTH OF COVER.

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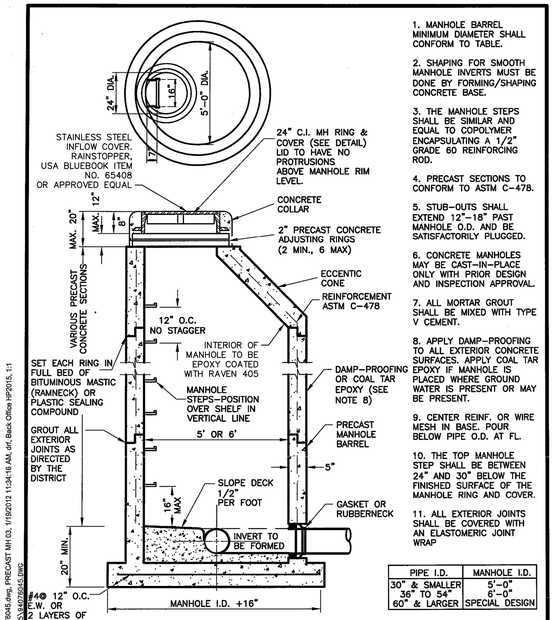
| MONUMENT SANITATION DISTRICT | TYPICAL TRENCH CROSS SECTION | | |
|---|---|---|---|
| | DRAWN: SDS | REVISED: 12/28/00 BEDDING DEPTH/DESCR. | DWG–02 |
| | DATE: JAN. 2000 | REVISED: 01/12/12 ADDED NOTE 4. | |
| | SCALE: NONE | REVISED: | |




NOTES:
1. FOR ROCK OR OTHER INCOMPRESSIBLE MATERIALS, THE TRENCH SHALL BE OVEREXCAVATED A MINUMUM OF 6" AND REFILLED WITH GRANULAR BEDDING MATERIAL AS DEFINED BY CLASS "B" BEDDING.
2. L.F. = LOADFACTOR
3. CLASS "C" BEDDING ONLY AS DIRECTED BY THE DISTRICT.
4. CLASS "D" BEDDING WILL NOT BE ACCEPTABLE UNDER ANY CONDITION.
5. MINIMUM DENSITY FOR CAREFULLY COMPACTED SELECT BACKFILL SHALL BE 95% OF STD. PROCTOR DENSITY OR AS SPECIFIED FOR THE TRENCH BACKFILL, WHICHEVER IS GREATER.

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| MONUMENT SANITATION DISTRICT | PIPE BEDDING | | |
|---|---|---|---|
| | DRAWN: SDS | REVISED: 12/28/00 BEDDING DESCRIPTION | DWG–01 |
| | DATE: JAN. 2000 | REVISED: 11/03/11 REVISIONS | |
| | SCALE: NONE | REVISED: 01/12/12 UPDATED | |

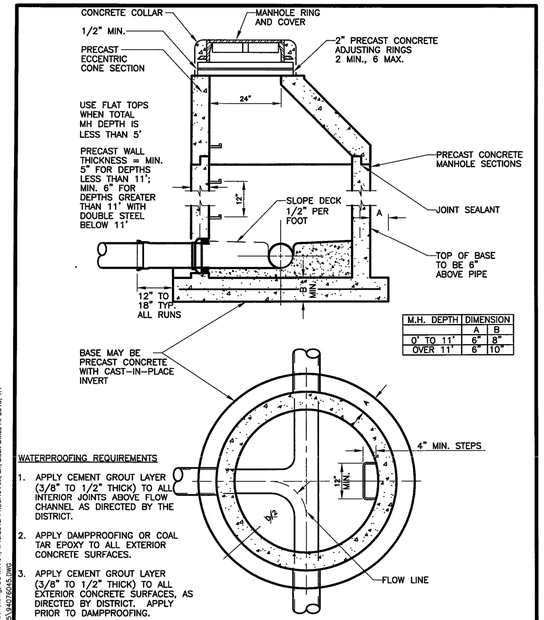



1. MANHOLE BARREL MINIMUM DIAMETER SHALL CONFORM TO TABLE.
2. SHAPING FOR SMOOTH MANHOLE INVERTS MUST BE DONE BY FORMING/SHAPING CONCRETE BASE.
3. THE MANHOLE STEPS SHALL BE SIMILAR AND EQUAL TO COPOLYMER ENCAPSULATING A 1/2" GRADE 60 REINFORCING ROD.
4. PRECAST SECTIONS TO CONFORM TO ASTM C-478.
5. STUB-OUTS SHALL EXTEND 12"-18" PAST MANHOLE O.D. AND BE SATISFACTORILY PLUGGED.
6. CONCRETE MANHOLES MAY BE CAST-IN-PLACE ONLY WITH PRIOR DESIGN AND INSPECTION APPROVAL.
7. ALL MORTAR GROUT SHALL BE MIXED WITH TYPE V CEMENT.
8. APPLY DAMP-PROOFING TO ALL EXTERIOR CONCRETE SURFACES. APPLY COAL TAR EPOXY IF MANHOLE IS PLACED WHERE GROUND WATER IS PRESENT OR MAY BE PRESENT.
9. CENTER REINF. OR WIRE MESH IN BASE. POUR BELOW PIPE O.D. AT FL.
10. THE TOP MANHOLE STEP SHALL BE BETWEEN 24" AND 30" BELOW THE FINISHED SURFACE OF THE MANHOLE RING AND COVER.
11. ALL EXTERIOR JOINTS SHALL BE COVERED WITH AN ELASTOMERIC JOINT WRAP

| PIPE I.D. | MANHOLE I.D. |
|---|---|
| 30" & SMALLER | 5'–0" |
| 36" TO 54" | 6'–0" |
| 60" & LARGER | SPECIAL DESIGN |

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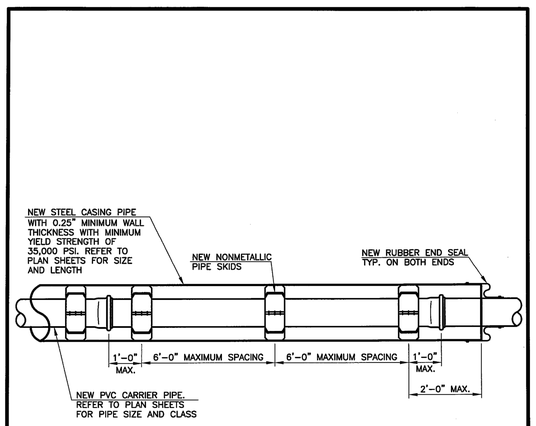
| MONUMENT SANITATION DISTRICT | PRECAST MANHOLE | | |
|---|---|---|---|
| | DRAWN: DRF | REVISED: | DWG–03 |
| | DATE: JAN. 2012 | REVISED: | |
| | SCALE: NONE | REVISED: | |



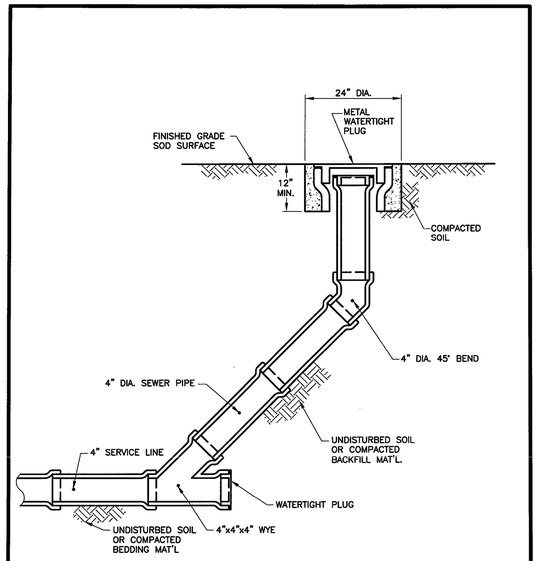

| M.H. DEPTH | DIMENSION | |
|---|---|---|
| | A | B |
| 0' TO 11' | 6" | 8" |
| OVER 11' | 6" | 10" |

WATERPROOFING REQUIREMENTS
1. APPLY CEMENT GROUT LAYER (3/8" TO 1/2" THICK) TO ALL INTERIOR JOINTS ABOVE FLOW CHANNEL AS DIRECTED BY THE DISTRICT.
2. APPLY DAMPPROOFING OR COAL TAR EPOXY TO ALL EXTERIOR CONCRETE SURFACES.
3. APPLY CEMENT GROUT LAYER (3/8" TO 1/2" THICK) TO ALL EXTERIOR CONCRETE SURFACES, AS DIRECTED BY DISTRICT. APPLY PRIOR TO DAMPPROOFING.
4. ALL EXTERIOR JOINTS SHALL BE COVERED WITH AN ELASTOMERIC JOINT WRAP.

| MONUMENT SANITATION DISTRICT | SANITARY SEWER MANHOLE | | |
|---|---|---|---|
| | DRAWN: DRF | REVISED: | DWG–04 |
| | DATE: JAN. 2012 | REVISED: | |
| | SCALE: NONE | REVISED: | |



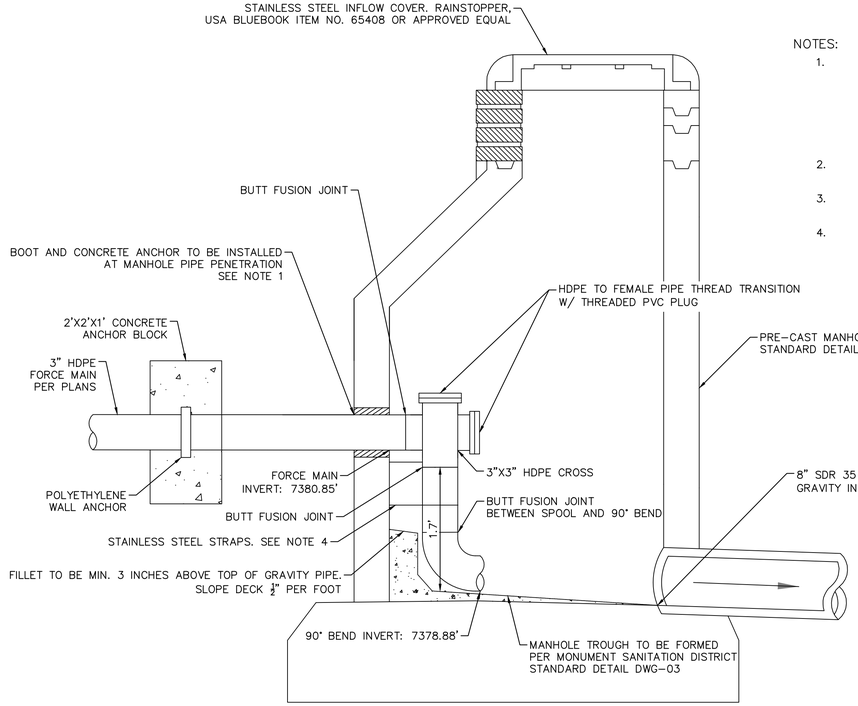

| MONUMENT SANITATION DISTRICT | CASING PIPE DETAIL | | |
|---|---|---|---|
| | DRAWN: DRF | REVISED: | DWG–10B |
| | DATE: JAN. 2012 | REVISED: | |
| | SCALE: NONE | REVISED: | |




NOTE:
SERVICE LINE CLEANOUTS SHALL BE PLACED 2" BELOW GRADE WITH A 10" LONG (MIN.) METAL RISER BOX PLACED AT GRADE WITH "SEWER" CAST IN THE LID.

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| MONUMENT SANITATION DISTRICT | 4" SERVICE LINE CLEANOUT DETAIL | | |
|---|---|---|---|
| | DRAWN: DRF | REVISED: | DWG–08A |
| | DATE: JUNE 2009 | REVISED: | |
| | SCALE: NONE | REVISED: | |




NOTES:
1. PIPES ENTERING AND EXITING THE MANHOLE SHALL BE EQUIPPED WITH A MANHOLE GASKET PLACED AROUND THE PIPE AND CAST IN THE BASE. IF A PRECAST BASE IS USED, A WATERTIGHT SEAL SHALL BE OBTAINED WITH A KOR-N-SEAL BOOT.
2. DISCHARGE OUTLET SHALL NEVER BE BELOW CROWN OF DOWNSTREAM PIPE.
3. INTERIOR OF MANHOLE TO BE EPOXY COATED WITH RAVEN 405.
4. PIPE SHALL BE SECURED TO THE INTERIOR MANHOLE WALL USING 3-INCH STAINLESS STEEL STRAPS AND 1/4-INCH STAINLESS STEEL EXPANSION ANCHORS (MIN. 2) OR APPROVED EQUAL.

1 DISCHARGE MANHOLE DETAIL
SCALE: N.T.S.

| DATE | BY | DESCRIPTION |
|---|---|---|
| | | |

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Greenwood Village, Colorado 80111 (303) 228-2300

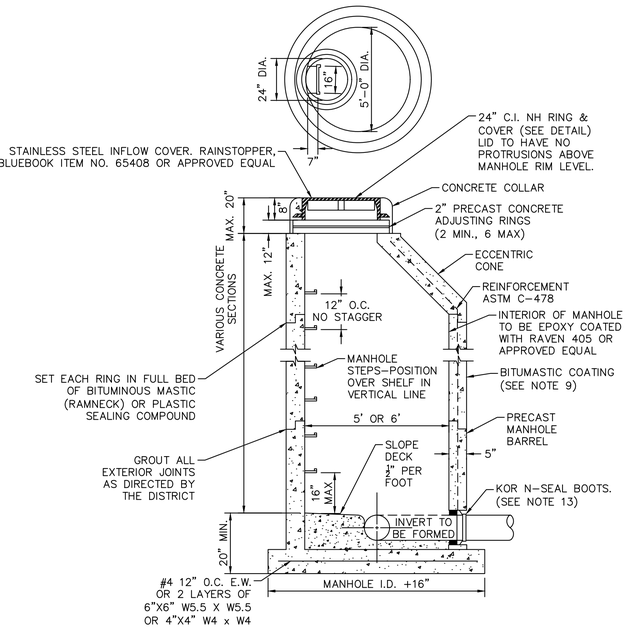
DESIGNED BY: ARD
DRAWN BY: ZMT
CHECKED BY: ARD
DATE: 9/11/2026

BUC-EE'S #87 EL PASO COUNTY
OFFSITE SEWER
CIVIL DETAILS I

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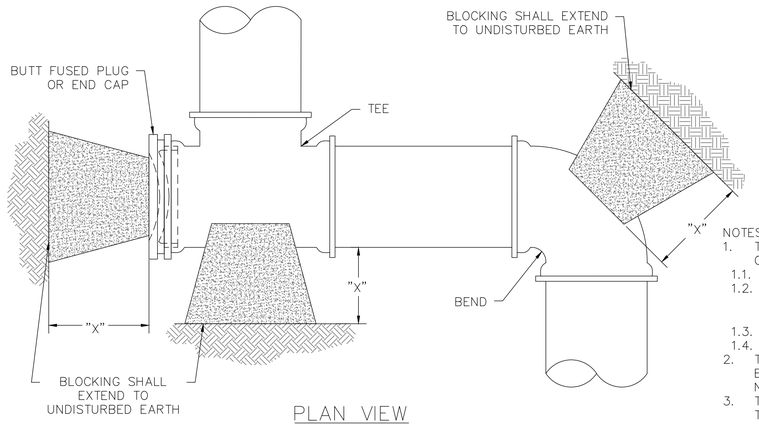



1. MANHOLE DETAIL TO BE USED WHEN SEPARATION BETWEEN OUTSIDE OF MANHOLE AND OUTSIDE OF WATER INFRASTRUCTURE IS WITHIN 10 FEET OR STORM SEWER INFRASTRUCTURE IS WITHIN 5 FEET.
2. MANHOLE BARREL MINIMUM METER SHALL CONFORM TO TABLE.
3. SHAPING FOR SMOOTH MANHOLE INVERTS MUST BE DONE BY FORMING/SHAPING CONCRETE BASE.
4. THE MANHOLE STEPS SHALL BE SIMILAR AND EQUAL TO COPOLYMER ENCAPSULATING A ½" GRADE 60 REINFORCING ROD.
5. PRECAST SECTIONS TO CONFORM TO C-478.
6. STUB-OUTS SHALL EXTEND 12"-18" PAST MANHOLE O.D. AND BE SATISFACTORILY PLUGGED.
7. CONCRETE MANHOLES MAY BE CAST-IN-PLACE ONLY WITH PRIOR DESIGN AND INSPECTION APPROVAL.
8. ALL MORTAR GROUT SHALL BE MIXED WITH TYPE V CEMENT.
9. APPLY BITUMASTIC COATING TO ALL EXTERIOR CONCRETE SURFACES. PIPE PENETRATION FITTINGS SHALL NOT BE COATED AND SHALL BE PROTECTED DURING COATING.
10. CENTER REINF. OR WIRE MESH IN BASE. POUR BELOW PIPE O.D. AT FL.
11. THE TOP MANHOLE STEP SHALL BE BETWEEN 24" AND 30" BELOW THE FINISHED SURFACE OF THE MANHOLE RING AND COVER.
12. ALL EXTERIOR JOINTS SHALL BE COVERED WITH AN ELASTOMERIC JOINT WRAP
13. KOR N-SEAL BOOTS ARE TO BE INSTALLED ON ALL PIPE PENETRATIONS WITHIN MANHOLE. ANNULAR AREA ON THE INSIDE OF THE KOR N-SEAL BOOT SHALL BE FILLED WITH HYDROGEN SULFIDE RESISTANT NON-SHRINK CEMENT GROUT..
14. MANHOLES SHALL BE VACUUM TESTED PRIOR TO BACKFILLING.

| PIPE I.D. | MANHOLE I.D. |
|---|---|
| 30" & SMALLER | 5'-0" |
| 36" TO 54" | 6'-0" |
| 60" & LARGER | SPECIAL DESIGN |

## 1 PRE-CAST MANHOLES WITHIN SEPARATION REQUIREMENTS DETAIL

SCALE: N.T.S.




PLAN VIEW

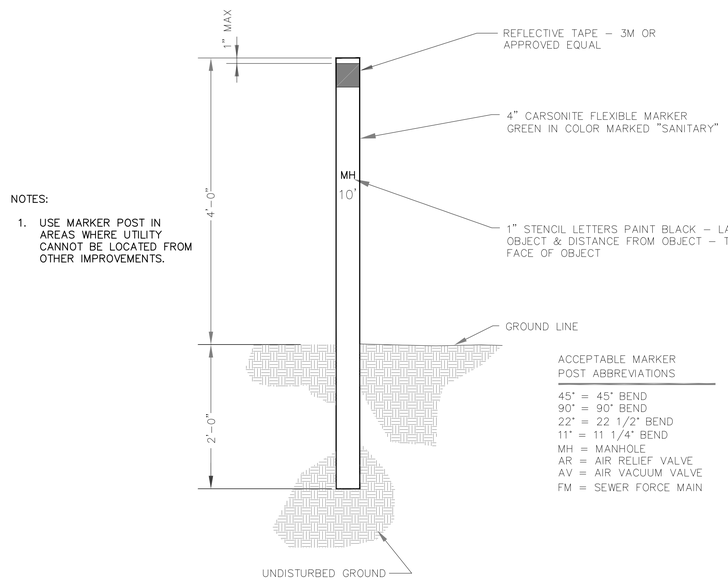
| HORIZONTAL THRUST BLOCKING TABLE | | | | | | |
|---|---|---|---|---|---|---|
| PIPE SIZE | "X" DIM.** | PLUGS, TEES, DEAD-ENDS | 90° BENDS | 45° BENDS | 22.5° BENDS | 11.25° BENDS |
| | | MIN. AREA (SF) | MIN. AREA (SF) | MIN. AREA (SF) | MIN. AREA (SF) | MIN. AREA (SF) |
| 3" | 2'-0" | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |

*MINIMUM THRUST BLOCKING SURFACE AREA SHALL BE 4 SQUARE FEET.
**DIMENSION "X" TO BE A MINIMUM OF ONE FOOT AND SIX INCHES, BUT IS TO BE INCREASED WHERE NECESSARY TO PROVIDE BEARING AGAINST UNDISTURBED TRENCH WALL.

NOTES:
1. THRUST BLOCKING AREAS SHOWN ARE BASED ON:
   1.1. 200 PSI STATIC WORKING PRESSURE
   1.2. 2,500 PSF HORIZONTAL OR LATERAL BEARING PRESSURE FOR ACCEPTABLE SOILS.
   1.3. MINIMUM COVER OF 5'.
   1.4. A SAFETY FACTOR OF 1.5.
2. THE ENGINEER SHALL PROVIDE A SEPARATE BLOCKING TABLE WHEN THE CONDITIONS DO NOT MEET THE ABOVE ASSUMPTIONS.
3. THE CONTRACTOR IS REQUIRED TO PROVIDE THRUST RESTRAINT BY MEANS OF THRUST BLOCKING FOR ALL PIPES. THIS ITEM SHALL BE CONSIDERED SUBSIDIARY TO THE VARIOUS ITEMS BID.
4. ALL MJ FITTINGS SHALL BE ADDITIONALLY RESTRAINED WITH RETAINER GLANDS.

## 2 THRUST BLOCK DETAIL

SCALE: N.T.S.




NOTES:

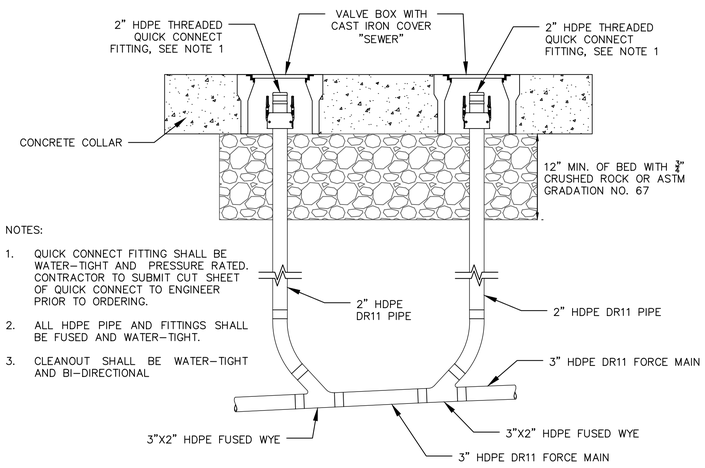
1. USE MARKER POST IN AREAS WHERE UTILITY CANNOT BE LOCATED FROM OTHER IMPROVEMENTS.

ACCEPTABLE MARKER POST ABBREVIATIONS

45° = 45° BEND
90° = 90° BEND
22° = 22 1/2° BEND
11° = 11 1/4° BEND
MH = MANHOLE
AR = AIR RELIEF VALVE
AV = AIR VACUUM VALVE
FM = SEWER FORCE MAIN

## 3 CARSONITE MARKER DETAIL

SCALE: N.T.S.




NOTES:

1. QUICK CONNECT FITTING SHALL BE WATER-TIGHT AND PRESSURE RATED. CONTRACTOR TO SUBMIT CUT SHEET OF QUICK CONNECT TO ENGINEER PRIOR TO ORDERING.
2. ALL HDPE PIPE AND FITTINGS SHALL BE FUSED AND WATER-TIGHT.
3. CLEANOUT SHALL BE WATER-TIGHT AND BI-DIRECTIONAL

## 4 HDPE TWO-WAY CLEANOUT DETAIL

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Greenwood Village, Colorado 80111 (303) 228-2300

DESIGNED BY: ARD
DRAWN BY: ZMT
CHECKED BY: ARD
DATE: 9/11/2026

# BUC-EE'S #87 EL PASO COUNTY OFFSITE SEWER

CIVIL DETAILS II

PRELIMINARY

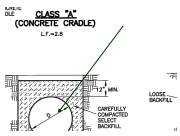
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SHEET
C3.1

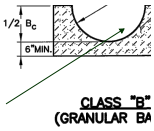
# V1_Offsite Sewer.pdf Markup Summary

## Arrow (2)




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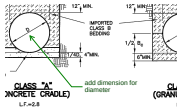
## Callout (3)



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Per EPC SD4-3, Non-residential collector, clearance from storm to ss is minimum of 10'. Non-res collector was used due to urban design (c&g w/storm system) of road.

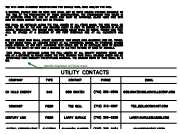
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**Subject:** Callout
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add dimension for diameter

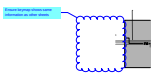
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**Page Label:** [2] C0.1 GENERAL NOTES
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identify diameter of Force main

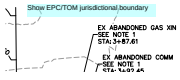
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Ensure keymap shows same information as other sheets

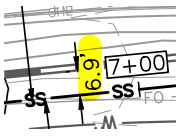
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Show EPC/TOM jurisdictional boundary

Highlight (12)




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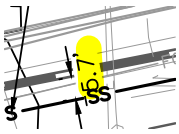

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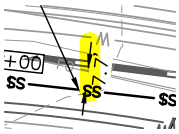

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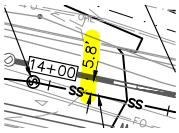

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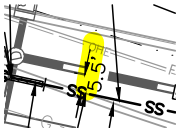

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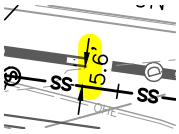

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**Space:**

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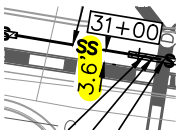



**Subject:** Highlight
**Page Label:** [5] C2.1 SANITARY SEWER (9+00 - 16+00)
**Status:**
**Color:**
**Layer:**
**Space:**

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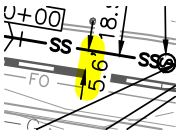



**Subject:** Highlight
**Page Label:** [6] C2.2 SANITARY SEWER (16+00 - 24+00)
**Status:**
**Color:**
**Layer:**
**Space:**



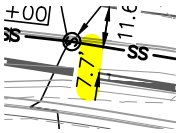

**Subject:** Highlight
**Page Label:** [7] C2.3 SANITARY SEWER (24+00 - END)
**Status:**
**Color:**
**Layer:**
**Space:**

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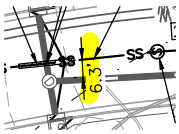

**Subject:** Highlight
**Page Label:** [7] C2.3 SANITARY SEWER (24+00 - END)
**Status:**
**Color:**
**Layer:**
**Space:**

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**Subject:** Highlight
**Page Label:** [7] C2.3 SANITARY SEWER (24+00 - END)
**Status:**
**Color:**
**Layer:**
**Space:**

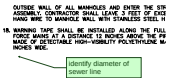
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**Subject:** Highlight
**Page Label:** [7] C2.3 SANITARY SEWER (24+00 - END)
**Status:**
**Color:**
**Layer:**
**Space:**

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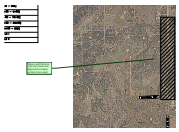
## Planner (3)




**Subject:** Planner
**Page Label:** [2] C0.1 GENERAL NOTES
**Status:**
**Color:**
**Layer:**
**Space:**

identify diameter of sewer line

---



**Subject:** Planner
**Page Label:** [1] C0.0 COVER SHEET
**Status:**
**Color:**
**Layer:**
**Space:**

Please add the force main and sewer line alignments (unique symbol to be used)

---



**Subject:** Planner
**Page Label:** [2] C0.1 GENERAL NOTES
**Status:**
**Color:**
**Layer:**
**Space:**

Please provide capacity and area (SFE) this is projected to serve

## Text Box (16)




**Subject:** Text Box
**Page Label:** [1] C0.0 COVER SHEET
**Status:**
**Color:**
**Layer:**
**Space:**

Add

- County signature block

- Design engineer statement

- Owner/Developer Statement

- District Approval Block

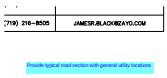
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**Subject:** Text Box
**Page Label:** [1] C0.0 COVER SHEET
**Status:**
**Color:**
**Layer:**
**Space:**

Include other agencies: Gas, Electric, Fire, Phone & Water

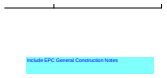
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**Subject:** Text Box
**Page Label:** [2] C0.1 GENERAL NOTES
**Status:**
**Color:**
**Layer:**
**Space:**

Provide typical road section with general utility locations

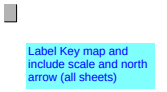
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**Subject:** Text Box
**Page Label:** [2] C0.1 GENERAL NOTES
**Status:**
**Color:**
**Layer:**
**Space:**

Include EPC General Construction Notes

---




**Subject:** Text Box
**Page Label:** [3] C1.0 FORCE MAIN (8+00 - END)
**Status:**
**Color:**
**Layer:**
**Space:**

Label Key map and include scale and north arrow (all sheets)

---




**Subject:** Text Box
**Page Label:** [3] C1.0 FORCE MAIN (8+00 - END)
**Status:**
**Color:**
**Layer:**
**Space:**

Label adjacent property owners

---




**Subject:** Text Box
**Page Label:** [3] C1.0 FORCE MAIN (8+00 - END)
**Status:**
**Color:**
**Layer:**
**Space:**

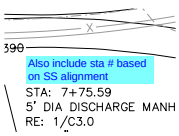
Show and label ROW

---




**Subject:** Text Box
**Page Label:** [3] C1.0 FORCE MAIN (8+00 - END)
**Status:**
**Color:**
**Layer:**
**Space:**

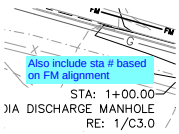
Ensure all easements are shown and labeled




**Subject:** Text Box
**Page Label:** [3] C1.0 FORCE MAIN (8+00 - END)
**Status:**
**Color:**
**Layer:**
**Space:**

Also include sta # based on SS alignment

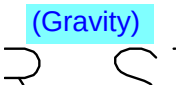
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**Subject:** Text Box
**Page Label:** [4] C2.0 SANITARY SEWER (1+00 - 9+00)
**Status:**
**Color:**
**Layer:**
**Space:**

Also include sta # based on FM alignment

---




**Subject:** Text Box
**Page Label:** [4] C2.0 SANITARY SEWER (1+00 - 9+00)
**Status:**
**Color:**
**Layer:**
**Space:**

(Gravity)

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**Subject:** Text Box
**Page Label:** [4] C2.0 SANITARY SEWER (1+00 - 9+00)
**Status:**
**Color:**
**Layer:**
**Space:**

See comments from previous sheets

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**Subject:** Text Box
**Page Label:** [5] C2.1 SANITARY SEWER (9+00 - 16+00)
**Status:**
**Color:**
**Layer:**
**Space:**

See comments from previous sheets

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**Subject:** Text Box
**Page Label:** [6] C2.2 SANITARY SEWER (16+00 - 24+00)
**Status:**
**Color:**
**Layer:**
**Space:**

See comments from previous sheets

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**Subject:** Text Box
**Page Label:** [7] C2.3 SANITARY SEWER (24+00 - END)
**Status:**
**Color:**
**Layer:**
**Space:**

See comments from previous sheets

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**Subject:** Text Box
**Page Label:** [1] C0.0 COVER SHEET
**Status:**
**Color:**
**Layer:**
**Space:**

PPR26-28