

UTILITY DISTRICT GENERAL NOTES

(ALL GENERAL NOTES MAY NOT BE APPLICABLE TO THIS PROJECT)

GENERAL NOTES:

- ALL UTILITY CONSTRUCTION TO BE CONDUCTED IN CONFORMANCE WITH THE CURRENT WOODMEN HILLS METROPOLITAN DISTRICT (WHMD, THE DISTRICT) SPECIFICATIONS.
- ALL PLANS ON THE JOB SITE SHALL BE SIGNED BY THE DISTRICT AND THE DISTRICT'S ENGINEER. ANY REVISION TO THE PLANS SHALL BE SO NOTED WITH THE OLD DRAWING MARKED NOT VALID.
- ALL STATIONING IS CENTERLINE UNLESS OTHERWISE NOTED. ALL ELEVATIONS ARE CENTERLINE UNLESS OTHERWISE NOTED.
- ALL MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION BY THE DISTRICT. THE DISTRICT RESERVES THE RIGHT TO ACCEPT OR REJECT ANY SUCH MATERIALS AND WORKMANSHIP THAT DOES NOT CONFORM TO ITS STANDARDS AND SPECIFICATIONS.
- ALL OVER-LOT GRADING MUST BE COMPLETED TO WITHIN ONE (1) FOOT OF FINAL GRADE PRIOR TO INSTALLATION OF WATER AND WASTEWATER INFRASTRUCTURE.
- ALL WATER AND SEWER SERVICE LOCATIONS SHALL BE CLEARLY MARKED ON EITHER THE CURB HEAD OR THE FACE OF THE CURB, WITH AN 'S' FOR SEWER AND A 'W' FOR WATER.
- DUCTILE IRON PIPES, INCLUDING FITTINGS, VALVES, AND FIRE HYDRANTS, SHALL BE WRAPPED WITH POLYETHYLENE TUBING, DOUBLE BONDED AT EACH JOINT, AND ELECTRICALLY ISOLATED. BONDING AND ANODE CONNECTIONS SHALL BE THOROUGHLY COATED WITH BITUMINOUS COATINGS.
- ALL DUCTILE IRON PIPE LESS THAN TWELVE INCHES (12") AND FITTINGS SHALL HAVE CATHODIC PROTECTION USING TWO (2) NO. 6 WIRES WITH 17 LB. MAGNESIUM ANODES EVERY 400 FEET AND 9 LB. MAGNESIUM ANODES AT EACH FITTING. ALL DUCTILE IRON PIPE TWELVE INCHES (12") AND GREATER AND FITTINGS SHALL HAVE CATHODIC PROTECTION USING TWO (2) NO. 6 WIRES WITH 17 LB. MAGNESIUM ANODES EVERY 300 FEET AND 9 LB. MAGNESIUM ANODES AT EACH FITTING.
- ALL PIPE MATERIAL, BACKFILL, AND INSTALLATION SHALL CONFORM TO THE APPLICABLE SPECIFICATIONS OF THE DISTRICT, COLORADO DEPARTMENT OF TRANSPORTATION, EL PASO COUNTY DEPARTMENT OF TRANSPORTATION, COLORADO SPRINGS UTILITIES, AND THE GEOTECHNICAL ENGINEER.
- COMPACTION TESTS SHALL BE 95% STANDARD PROCTOR AS DETERMINED BY ASTM D698, UNLESS OTHERWISE APPROVED BY THE DISTRICT OR HIGHER STANDARD AS IMPOSED BY ANOTHER AGENCIES HAVING RIGHT-OF-WAY JURISDICTION. THIS SHALL INCLUDE ALL VALVES, FIRE HYDRANT RUNS, WATER & SEWER SERVICE LINES, AND MANHOLES. ALL REPORTS SHALL BE SUBMITTED TO THE DISTRICT FOR REVIEW AND APPROVAL.
- THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THE DRAWINGS ARE APPROXIMATE ONLY. THE LOCATION OF ALL UTILITIES SHALL BE FIELD VERIFIED PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES. THE DISTRICT SHALL BE NOTIFIED OF ANY DEVIATIONS TO THE LINE AND/OR GRADE AS DEPICTED ON THE PLANS. CONTRACTOR SHALL SUBMIT TO THE DISTRICT AND THE ENGINEER OF RECORD A REPORT OF THE FIELD-VERIFIED INFORMATION PRIOR TO THE START OF CONSTRUCTION.
- ALL BENDS SHALL BE FIELD STAKED PRIOR TO THE START OF CONSTRUCTION.
- BENDS, DEFLECTION, AND CUT PIPE LENGTHS SHALL BE USED TO HOLD HORIZONTAL ALIGNMENT OF SEWER AND WATER LINES TO NO MORE THAN 0.5' FROM THE DESIGNED ALIGNMENT. CONSTRUCTION STAKES TO BE AT TWENTY-FIVE FEET (25') INTERVALS ALONG CURVES TO ENSURE LOCATION OF PIPELINE CONSTRUCTION.
- AT ALL LOCATIONS WHERE CAP AND STUB IS NOTED ON DRAWINGS, PROVIDE A PLUG AT THE END OF THE PIPE JOINT NEAREST THE SPECIFIED STATION. PROVIDE A REVERSE ANCHOR AT ALL WATER LINE PLUGS.
- ALL UNUSED, SALVAGED WATER UTILITY MATERIAL SHALL BE RETURNED TO THE METROPOLITAN DISTRICT AS REQUESTED.
- AT THE CONTRACTOR'S EXPENSE, ALL UTILITY MAINS SHALL BE SUPPORTED AND PROTECTED SUCH THAT THEY SHALL FUNCTION CONTINUOUSLY DURING CONSTRUCTION OPERATIONS. SHOULD A UTILITY MAIN FAIL AS A RESULT OF THE CONTRACTOR'S OPERATION, IT SHALL BE REPLACED IMMEDIATELY BY THE CONTRACTOR OR BY THE DISTRICT AT FULL COST OF LABOR AND MATERIALS TO THE CONTRACTOR/DEVELOPER.
- PUMPING OR BYPASS OPERATIONS SHALL BE REVIEWED AND APPROVED BY BOTH THE DISTRICT AND THE DISTRICT ENGINEER PRIOR TO EXECUTION.
- THE CONTRACTOR SHALL REPAIR OR REPLACE ALL SURFACE IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO FENCES, LANDSCAPING, CURB AND GUTTER, AND/OR ASPHALT THAT MAY BE CAUSED DURING CONSTRUCTION.
- ALL CONTRACTORS WORKING ON OR NEAR A WATER OR SEWER FACILITY (TO INCLUDE SERVICE LINES) SHALL HAVE LIABILITY INSURANCE NAMING THE DISTRICT AS AN ADDITIONAL INSURED AND SHALL PROVIDE A CURRENT COPY OF WORKERS COMPENSATION INSURANCE ON FILE WITH THE DISTRICT. NO WORK CAN PROCEED WITHOUT CURRENT CERTIFICATES ON FILE AT THE DISTRICTS' OFFICE.
- THE CONTRACTOR SHALL NOTIFY THE DISTRICT AND ALL AFFECTED UTILITY COMPANIES ADJACENT TO THE PROPOSED UTILITY CONSTRUCTION A MINIMUM OF 48 HOURS AND A MAXIMUM OF 96 HOURS PRIOR TO THE START OF CONSTRUCTION. A WEEKLY CONSTRUCTION MEETING SHALL BE REQUIRED WITH THE CONTRACTOR, DISTRICT ENGINEER AND ALL OTHER PARTIES AS DEEMED NECESSARY BY THE DISTRICT.
- COMMENCEMENT OF CONSTRUCTION OF WATER/SEWER SYSTEMS WITHIN METROPOLITAN DISTRICT:
  - PRIOR TO THE START OF CONSTRUCTION, A PRECONSTRUCTION MEETING IS REQUIRED A MINIMUM OF 48 HOURS IN ADVANCE OF COMMENCEMENT OF WORK. A REPRESENTATIVE OF THE OWNER OR DEVELOPER, A REPRESENTATIVE OF THE DISTRICT, AND DESIGN ENGINEER ARE REQUIRED TO ATTEND. CONTACT THE DISTRICT TO SCHEDULE THE PRECONSTRUCTION MEETING. NO PRECONSTRUCTION MEETING CAN BE SCHEDULED BEFORE FOUR (4) SIGNED/APPROVED PLAN SETS ARE RECEIVED BY THE DISTRICT.
  - THE CONTRACTOR IS REQUIRED TO NOTIFY THE DISTRICT A MINIMUM OF 48 HOURS AND A MAXIMUM OF 2 WEEKS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL ALSO NOTIFY AFFECTED UTILITY COMPANIES AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION ADJACENT TO THE KNOWN UTILITY LINES.
- TESTING OF FACILITIES:
  - THE CONTRACTOR SHALL NOTIFY THE DISTRICT A MINIMUM OF 48 HOURS AND A MAXIMUM OF 96 HOURS PRIOR TO THE START OF ANY TESTING.
  - ALL SECTIONS OF WATER LINE ARE TO MEET THE FOLLOWING PRESSURE TESTING REQUIREMENTS
    - TEST 100' OF WATER LINE SHALL BE PRESSURE TESTED WITH DISTRICT STAFF PRESENT PRIOR TO CCTV INSPECTION.
    - MUST PASS PRESSURE TEST TO 200 PSI FOR TWO HOURS (UNLESS OTHERWISE APPROVED ON THE PLANS).
  - ALL SANITARY SEWER FACILITIES ARE TO MEET THE FOLLOWING TESTING REQUIREMENTS:
    - ALL LINES SHALL BE JET CLEANED PRIOR TO VACUUM OR PRESSURE TESTING.
    - ALL MANHOLES SHALL BE VACUUM TESTED WITH DISTRICT STAFF PRESENT PRIOR TO CCTV INSPECTION.
    - SEWER MAINS TO BE PRESSURE TESTED PRIOR TO CCTV INSPECTION.
  - ALL LINES SHALL BE CCTV INSPECTED AND VIDEO SHALL BE SUBMITTED TO THE DISTRICT FOR REVIEW AND APPROVAL.
- PRELIMINARY ACCEPTANCE SHALL BE DEFINED AS THE POINT IN TIME THAT THE DISTRICT ACCEPTS THE FACILITY FOR USE. ALL SURFACE IMPROVEMENTS AND RESTORATION SHALL BE COMPLETED WITHIN 30 DAYS OF COMMENCEMENT. SHOULD THE CONTRACTOR FAIL TO COMPLETE ALL SURFACE IMPROVEMENTS AND RESTORATION WITHIN 30 DAYS OF COMMENCEMENT OF SERVICE, THE DISTRICT, AT THEIR DISCRETION, MAY ELECT TO COMPLETE THE IMPROVEMENTS AT THE CONTRACTOR'S COST.
- FINAL ACCEPTANCE BY THE DISTRICT OF ANY LINE OR SYSTEM SHALL NOT OCCUR UNTIL COMPLETION OF FINAL ASPHALT LAYERS AND/OR FINAL COMPLETION AND/OR RESTORATION OF ALL SURFACE IMPROVEMENTS. THE WARRANTY PERIOD FOR ALL FACILITIES PRIOR TO FINAL ACCEPTANCE SHALL BE 24 MONTHS COMMENCING AFTER PRELIMINARY ACCEPTANCE.
- ACCEPTANCE:
  - THE DISTRICT MAY GIVE PRELIMINARY ACCEPTANCE ONCE ALL OF THE TESTS ON ALL THE LINES HAVE BEEN COMPLETED AND A WALK-THROUGH HAS OCCURRED.
  - A SECOND ACCEPTANCE MAY OCCUR ONCE THE FIRST LIFT OF ASPHALT GOES DOWN AND A SECOND WALK-THROUGH OF THE SYSTEM OCCURS. IF ALL FACILITIES ARE CLEAN AND ACCESSIBLE, FINAL ACCEPTANCE MAY OCCUR (THE DISTRICT MAY REQUIRE CLEANING AND RE-VIDEO OF THE SYSTEM, DEPENDING ON THE SEVERITY OF THE CONTAMINATION).
- ALL WATER AND SEWER MAINS, INCLUDING SERVICE LINES, SHALL HAVE "AS-BUILT" DRAWINGS PREPARED AND APPROVED PRIOR TO PRELIMINARY ACCEPTANCE BY THE DISTRICT.
- ALL COMMERCIAL/BUSINESS DEVELOPMENTS SHALL HAVE AN EIGHT INCH (MIN.) WATER MAIN LOOPED THROUGH THE PROPOSED PROPERTY WITH GATE VALVES LOCATED WHERE THE MAIN ENTERS THE PROPERTY LINE. AN EIGHT-INCH SEWER MAIN SHALL BE INSTALLED FOR SERVICE TO COMMERCIAL/BUSINESS DEVELOPMENTS, AND A MANHOLE SHALL BE LOCATED WHERE THE MAIN ENTERS THE PROPERTY. THE END OF THE MAINS SHALL BE MARKED WITH THE APPROPRIATE COLORED CARBONITE MARKER ALONG WITH TRACER WIRE.
- AFTER REVIEW AND APPROVAL OF PLANS FOR THE EXTENSION OF LINES, FACILITIES, AND/OR SERVICES, CONSTRUCTION MUST HAVE COMMENCED WITHIN 18 MONTHS FOR RESIDENTIAL SUBDIVISIONS AND 12 MONTHS FOR ANY COMMERCIAL INSTALLATIONS.
- INSPECTION FEES: CALL THE DISTRICT (719-495-2500) FOR FEE SCHEDULE.

WATER SYSTEM INSTALLATION NOTES:

- ALL WATER AND FORCE MAIN PIPE SHALL BE AWWA C900 PVC, OR APPROVED EQUAL, PRESSURE CLASS 200. ALL WATER AND FORCE MAIN FITTINGS SHALL HAVE MECHANICAL RESTRAINTS AND THRUST BLOCKS. ALL WATER AND FORCE MAIN PIPE SHALL HAVE A MINIMUM COVER DEPTH OF FIVE-AND-ONE-HALF (5.5) FEET.
- ALL WATER VALVES ASSOCIATED WITH THE POTABLE WATER SYSTEM SHALL BE OPEN CLOCKWISE. ALL VALVES INSTALLED IN LANDSCAPED AREAS AND/OR NOT WITHIN PAVED STREETS SHALL BE MARKED WITH CARBONITE MARKERS. ALL VALVES ASSOCIATED WITH THE RAW WATER SYSTEM SHALL BE OPEN COUNTERCLOCKWISE AND MARKED WITH CARBONITE MARKERS AS APPLICABLE.
- THE DEVELOPER OR HIS ENGINEER SHALL LOCATE ALL FIRE HYDRANTS AND SERVICE STUB-OUTS FOR FUTURE DEVELOPMENT. ANY REQUIRED REALIGNMENT, HORIZONTAL OR VERTICAL, SHALL BE AT THE EXPENSE OF THE DEVELOPER. FIRE HYDRANT LOCATION SHALL BE REVIEWED AND APPROVED BY THE APPLICABLE FIRE AUTHORITY.
- FIRE HYDRANTS SHALL BE OPEN RIGHT WITH 7/8" X 7/8" SQUARE TAPERED ALONG WITH SERVICE CAPS. LUBRICATION TYPE: GREASE. ACCEPTABLE BRAND IS KENNEDY GUARDIAN (KBID, KBIA, AND KBIAM). EACH FIRE HYDRANT LOCATION SHALL ALSO BE USED AS TEST STATION.
- ALL MAIN LINES (PVC & DUCTILE IRON) SHALL BE INSTALLED WITH COATED #12 TRACER WIRE WITH TEST STATIONS AT INTERVALS NO GREATER THAN FIVE HUNDRED FEET (500') (VALVE BOXES CAN BE USED AT INTERSECTIONS AND SERVICE STUBS).
- CONTRACTOR SHALL MAKE CONNECTIONS TO EXISTING WATER LINE WITHOUT SHUTDOWN, OR ELSE NOTIFY THE DISTRICT OF ANY SERVICE SHUTDOWNS NECESSARY TO CONNECT TO EXISTING LINES.
- IRRIGATION SERVICES SHALL HAVE A STOP-AND-WASTE CURB STOP VALVE INSTALLED ALONG WITH TRACER WIRE EXTENDING BACK TO THE MAIN LINE.
- COMMENCEMENT OF USE OF WATER LINES AND/OR SYSTEMS:
  - NO WATER FACILITY SHALL BE PLACED IN SERVICE UNTIL AFTER THE COMPLETION OF ALL PRESSURE TESTING, FLUSHING, BAC-T TESTING, AND COMPACTION TESTING, AND AS-BUILT DRAWINGS ARE SUBMITTED AND APPROVED BY THE DISTRICT.
  - NO WATER FACILITY SHALL BE PLACED IN SERVICE UNTIL ALL SERVICE LINES ARE COMPLETED AND THE FIRST LIFT OF ASPHALT IS COMPLETED OVER THE LINE. IN THE CASE WHERE NO ASPHALT IS TO BE PLACED OVER THE LINE, SURFACE IMPROVEMENTS SHALL BE COMPLETED PRIOR TO USE OF THE FACILITY.
  - ALL NECESSARY EASEMENTS (PLATTED OR DEEDED) ARE DEDICATED, EXECUTED BY THE DISTRICT, AND RECORDED.

WASTEWATER SYSTEM INSTALLATION NOTES:

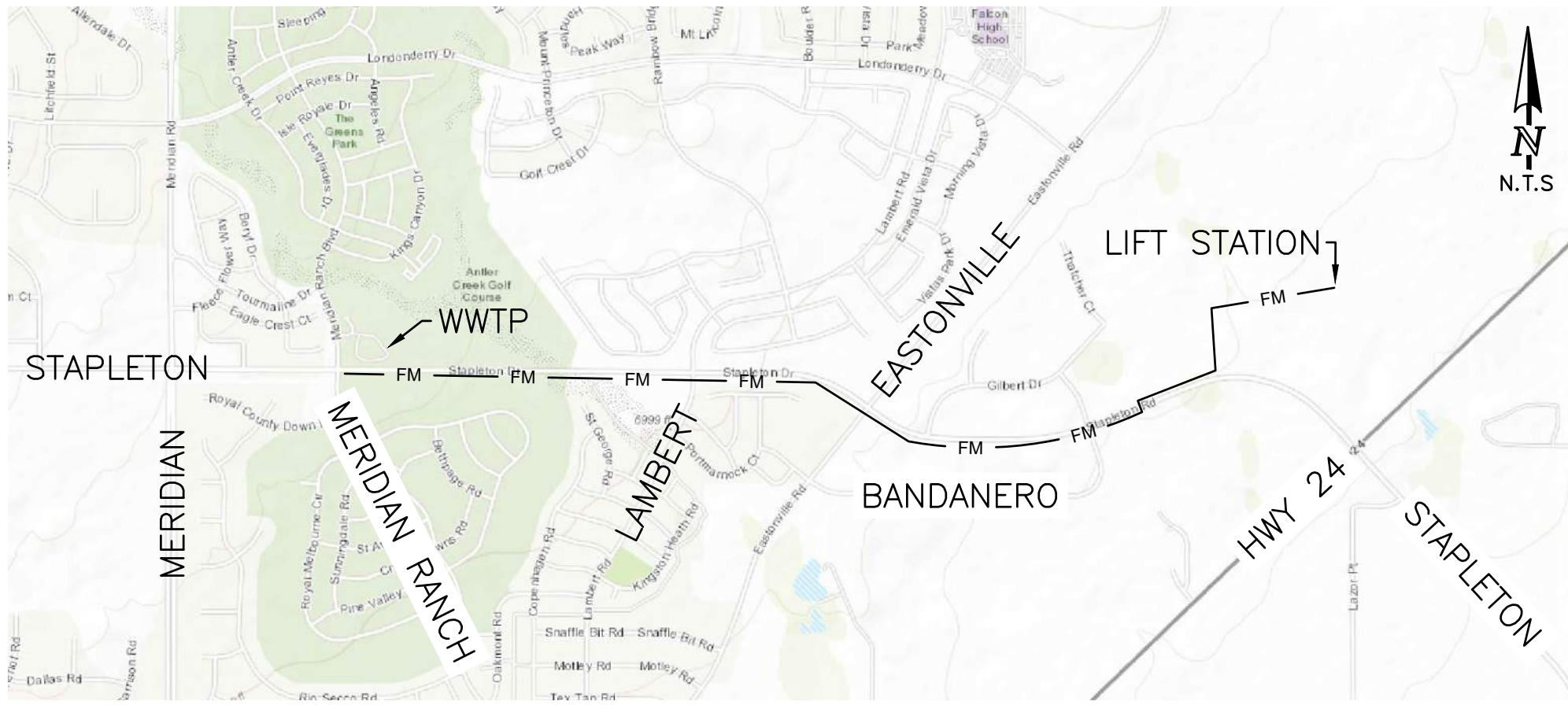
- SANITARY SEWER LENGTHS ARE MH CENTER - MH CENTER. ALL SANITARY SEWER PIPES SHALL BE SDR 35 PVC OR APPROVED EQUAL. SEWER LINES MAY NOT EXCEED 7% GRADE FOR ANY SIZE WITHOUT PRIOR APPROVAL OF THE DISTRICT. ALL NEWLY CONSTRUCTED RESIDENTIAL SANITARY SEWER TAPS SHALL USE PRE-MANUFACTURED, IN-LINE PVC PUSH-IN WYES. SINGLE SADDLE TAP ALLOWED ON EXISTING MAINS. MULTIPLE SADDLE TAPS ON EXISTING MAINS MUST BE APPROVED BY THE DISTRICT ON A CASE BY CASE BASIS.
- ALL SANITARY SEWER MANHOLES SHALL BE WRAPPED WITH RU116 - RUBR-NEK JOINT WRAP, OR APPROVED EQUAL, AND COATED.
- ALL SEWER LINES MUST BE BEDDED WITH SQUEEGEE OR 3/4" CRUSHED ROCK.
- COMMENCEMENT OF USE OF SEWER LINES AND/OR SYSTEMS:
  - NO SANITARY SEWER FACILITY SHALL BE PLACED IN SERVICE UNTIL THE COMPLETION OF ALL JET CLEANING, PRESSURE TESTING, VACUUM TESTING, CCTV INSPECTION, AND COMPACTION TESTING, AND AS-BUILT DRAWINGS ARE SUBMITTED AND APPROVED BY THE DISTRICT.
  - NO SANITARY SEWER FACILITY SHALL BE PLACED IN SERVICE UNTIL ALL SERVICE LINES ARE COMPLETED AND THE FIRST LIFT OF ASPHALT IS COMPLETED OVER THE LINE. IN THE CASE WHERE NO ASPHALT IS TO BE PLACED OVER THE LINE, ANY REQUIRED SURFACE IMPROVEMENTS SHALL BE COMPLETED PRIOR TO USE OF THE FACILITY.
  - ALL NECESSARY EASEMENTS (PLATTED OR DEEDED) ARE DEDICATED, EXECUTED BY THE DISTRICT, AND RECORDED.
  - DOWNSTREAM PLUG CAN BE REMOVED ONCE THE FIRST LIFT OF ASPHALT IS DOWN AND THE ABOVE REQUIREMENTS ARE MET.

# WATERBURY SANITARY FORCE MAIN

## EL PASO COUNTY, CO

# UTILITY CONSTRUCTION SET

## JULY 2026



VICINITY MAP

NOTES

- ALL EXISTING UNDERGROUND AND ABOVE GROUND UTILITY LOCATIONS, INVERTS AND SIZES ARE APPROXIMATE ONLY AND MUST BE FIELD VERIFIED PRIOR TO CONSTRUCTION. THE IN POINTS CROSSINGS SHALL BE POTHOLED AND LOCATIONS, INVERTS, AND SIZES SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
- THESE PLANS ARE FOR THE SANITARY FORCE MAIN THAT LEAVES THE LIFT STATION. THE DESIGN OF THE LIFT STATION ITSELF IS NOT INCLUDED (SEE SEPARATE PLANS).
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE AND LOCATION OF ALL UNDERGROUND UTILITIES ALONG THE SITE. THE OMISSION FROM OR THE INCLUSION OF UTILITY LOCATIONS ON THE PLANS IS NOT TO BE CONSIDERED AS THE NON-EXISTENCE OF OR A DEFINITE LOCATION OF EXISTING UNDERGROUND UTILITIES.
- THE CONTRACTOR WILL TAKE THE NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES, BUILDINGS, FENCES, AND ROADWAYS FROM DAMAGE DUE TO THIS OPERATION. ANY DAMAGE TO THE ABOVE WILL BE REPAIRED AT THE CONTRACTOR'S EXPENSE, AND ANY SERVICE DISRUPTION WILL BE SETTLED BY THE CONTRACTOR.
- THERE ARE AS-BUILT PLANS FOR THE INTERSECTION OF STAPLETON DRIVE AND MERIDIAN RANCH BLVD UNDER MERIDIAN RANCH FILING 1, PHASE 1 ON EDARP. THESE PLANS ARE ON A DIFFERENT VERTICAL DATUM THAN THIS PLAN SET.
- PER HR GREEN REFERENCES IN CALLOUTS REFER TO PRELIMINARY PLANS PREPARED BY HR GREEN, TITLED GRANDVIEW RESERVE DUAL FORCE MAINS CONSTRUCTION DOCUMENTS, 06/07/2024.
- THE EXISTING GROUND SURFACE CONTOURS ARE LIDAR DATA FROM DATASET: 2018 3DEP EAST CO EL PASO, COLLECTED IN 2018, COORDINATE SYSTEM STATE PLANE 1983 (NAD83). THE LIDAR CONTOURS ARE SHOWN IN 2' INTERVALS BROWN LINES. THESE CONTOURS DO NOT LINE UP EXACTLY WITH THE WATERBURY SURVEYS OR SITE PLAN AND ARE APPROXIMATE.
- CONTRACTOR TO OBTAIN WORK IN THE ROW PERMIT FROM EL PASO COUNTY PRIOR TO CONSTRUCTION.
- NO CLEAN CUTS OR TRACER TEST STATIONS SHALL BE INSTALLED IN CURB AND GUTTER OR CROSS PANS. THE PROPOSED LOCATIONS SHOWN ARE APPROXIMATE.
- FORCE MAIN SPECIFIC NOTES:
  - FOLLOW WHMD STANDARD SPECIFICATIONS, UNLESS OTHERWISE NOTED ON THESE PLANS.
  - PIPE MATERIAL WILL BE C900 DR 14 PVC.
  - ALL FITTINGS SHALL BE DUCTILE IRON. PROVIDE PE WRAP AND CATHODIC PROTECTION AT EACH FITTING.
  - INSTALL BEDDING PER "TYPICAL TRENCH DETAIL" ON SHEET 16.
  - INSTALL CASING PIPE PER "CASING PIPE DETAIL" ON SHEET 16.
  - TRACER TEST STATIONS SHALL BE AT GRADE. USE OF METAL TEST STATION (OR SIMILAR) WITH LOCKING LIDS. TEST STATIONS CAN ALSO BE PLACED IN OTHER FORCE MAIN STRUCTURES AT THE SAME LOCATION (SUCH AS VAULTS). SET UTILITY MARKER POSTS AT TEST STATIONS IN OVERLAND SECTIONS.
  - INSTALL CLEAN CUTS PER DETAIL ON SHEET 15.
  - WHMD DOES NOT ALLOW HIGH DEFLECTION COUPLINGS.
  - ALL PIPE IN LOWERINGS SHALL BE FULLY RESTRAINED.
  - IF GROUNDWATER IS ENCOUNTERED IN THE TRENCH, WHMD REQUIRES 3/4" ROCK BEDDING 12" BELOW AND 6" ABOVE THE SANITARY PIPE. WHMD DOES NOT ALLOW FLOW FILL BACKFILL OF TRENCHES.
- THE FOLLOWING PERMITS ARE EXPECTED TO BE REQUIRED FOR CONSTRUCTION (NOT ALL INCLUSIVE): WETLAND/NATION WIDE PERMIT, ESOPC, APPROVAL FRO CDPH, NPDES AND DRAINAGE PERMITS, EPC REVIEW AND CONSTRUCTION PERMITS, EPC REVIEW AND CONSTRUCTION PERMITS, EPC REVIEW AND CONSTRUCTION PERMITS.
- TRAFFIC CONTROL: A TRAFFIC CONTROL PLAN WILL BE REQUIRED FOR CONSTRUCTION. CONTRACTOR TO CONTACT EPC AT LEAST 2 WEEKS PRIOR TO THE START OF CONSTRUCTION TO ALLOW PUBLIC NOTIFICATION OF ROAD CLOSURES.
- THE TRENCH ALIGNMENT CROSSES NUMEROUS PUBLIC USE AREAS SUCH AS TRAILS, ACCESS ROADS, AND PARKING AREAS. THESE PUBLIC USE AREAS SHOULD BE KEPT OPEN AS MUCH AS FEASIBLE DURING CONSTRUCTION.
- AS-BUILT PLANS OF THE CONSTRUCTED FORCE MAIN ARE REQUIRED. COPIES SHALL BE PROVIDED TO THE WOODMEN HILLS METRO DISTRICT AND WATERBURY METRO DISTRICT.
- COUNTY NOTES: THE OPEN CUT SHALL NOT EXCEED 250 LF PER DAY. THE DEVELOPER CAN NOT OPEN GROUND IF THEY CAN NOT BACK FILL IT AT THE END OF THE SAME DAY AND MAKE IT SAFE TO THE PUBLIC (NO OPEN CUT TO REMAIN OPEN AFTER WORKING HOURS).
- ACCESS WILL BE PROVIDED TO ALL PARCELS ABUTTING THE OPEN CUT TO THE PROPOSED FM AND THE CONTRACTOR MUST PERFORM THIS COORDINATION WITH EACH PARCEL OWNER.
- THIS IS A UTILITY PLAN, WITH AN ATTACHED EROSION CONTROL PLAN. STREET DESIGN IS NOT INCLUDED IN THESE PLANS OR SCOPE OF WORK.

REMOVALS AND REPLACEMENT NOTES

- ALL ITEMS NOTED FOR REMOVAL AND REPLACEMENT SHALL BE REPLACED IN KIND. CONTRACTOR SHALL FIELD VERIFY. CONTRACTOR SHALL COORDINATE AND CONFIRM WITH RESPECTIVE ENTITIES IF EXISTING CONDITIONS WOULD ALLOW FOR SALVAGE AND RESET.
- DAMAGED PAVEMENT FROM CONSTRUCTION ACTIVITIES SHALL BE REMEDIED TO ROAD OWNER'S APPROVAL.
- ROADWAY REPLACEMENT/PATCHING/CONSTRUCTION SHALL COMPLY TO SPECIFICATIONS OF EPC, CDOT, OR RESPECTIVE AGENCY/OWNER WITH JURISDICTION OVER THE ROAD.
- PAVEMENT/ROADWAY TYPICAL SECTIONS FOR RESTORATION - CONTRACTOR SHALL FIELD VERIFY, IF EXISTING SECTION DIFFERS FROM BELOW, MATCH EXISTING.
  - STAPLETON RD FROM JUDGE ORR TO HWY 24: 6.5" HMA (IN MULTIPLE LIFTS NO THICKER THAN 3") OVER 12" THICK CLASS 6 BASE COURSE; MIN. 2% CROSS SLOPE FROM CROWN; 4" TOP SOIL ON SIDE SLOPES.
  - STAPLETON RD FROM HWY 24 TO EASTONVILLE RD: 8" HMA (IN MULTIPLE LIFTS NO THICKER THAN 3") OVER PREPARED SUBGRADE; MIN 2% CROSS SLOPE FROM CROWN; MATCH EXISTING DEPTH OF TOP SOIL ON SIDE SLOPES.
  - STAPLETON RD FROM EASTONVILLE RD TO MERIDIAN RANCH BLVD: 6.5" HMA (IN MULTIPLE LIFTS NO THICKER THAN 3") OVER 12" THICK CLASS 6 BASE COURSE; MIN 2% CROSS SLOPE FROM CROWN; 4" TOP SOIL ON SIDE SLOPES.
  - EASTONVILLE RD CROSSING: 5" HMA OVER 10" ABC CLASS 6.
  - OTHER ROAD CROSSINGS: MATCH EXISTING SECTION.

BENCHMARKS

- THE TOP OF A 1-1-1/2" ALUMINUM SURVEYORS CAP STAMPED JR LD PLS 31161, AT THE MOST EASTERLY CORNER OF LOT 36 AS PLATED IN 4-WAY RANCH FILING NO. 1 RECORDED UNDER RECEPTION NO. 206712416 RECORDS OF EL PASO COUNTY, COLORADO ELEV= 6931.92
- THE TOP OF A 1-1-1/2" ALUMINUM SURVEYORS CAP STAMPED JR LD PLS 82820, AT THE MOST NORTHERLY CORNER OF LOT 42 AS PLATED IN 4-WAY RANCH FILING NO. 1 RECORDED UNDER RECEPTION NO. 206712416 RECORDS OF EL PASO COUNTY, COLORADO ELEV= 6973.99

BASIS OF BEARING

THE NORTH LINE OF SECTION 28, TOWNSHIP 12 SOUTH, RANGE 64 WEST OF THE SIXTH PRINCIPAL MERIDIAN, EL PASO COUNTY, COLORADO BEING MONUMENTED AT EACH END BY A 3-1/4" ALUMINUM SURVEYOR'S CAP STAMPED "PNSC LS 30087 AND ASSUMED TO BEAR S89°47'04"E A DISTANCE OF 5,285.07 FEET

CONTACT INFORMATION:

|                             |                                                                                                                                                                      |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| OWNER:                      | ACM ALF VII JV SUB II LLC<br>8350 EAST CRESCENT PARKWAY, SUITE 200,<br>GREENWOOD, CO 80111<br>JASON POCK (303) 984-9800 EXT 107                                      |
| CIVIL ENGINEER:             | TERRA NOVA ENGINEERING, INC.<br>721 S. 23RD STREET<br>COLORADO SPRINGS, COLORADO 80904<br>QUENTIN ARMUJO, P.E., (719) 635-6422                                       |
| COUNTY ENGINEERING DIVISION | EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS<br>JALAL SALEH P.E. (719) 520-6300 JALALSALEH@ELPASOCO.COM<br>ZACHARY JANNUSCH (719) 500-3170 ZACHARYJANNUSCH@ELPASOCO.COM |
| METRO DISTRICT              | WATERBURY METROPOLITAN DISTRICT #1<br>ADAM NOEL (719)-447-1777                                                                                                       |
|                             | WOODMEN HILLS METROPOLITAN DISTRICT<br>8046 EASTONVILLE RD,<br>PEYTON, CO 80831<br>CODY RITTER (719) 495-2500                                                        |
| GAS DEPARMENT               | BLACK HILLS ENERGY<br>GEORGE PETERSON (719) 393-6625                                                                                                                 |
| ELECTRIC DEPARTMENT         | MOUNTAIN VIEW ELECTRIC ASSOCIATION<br>DARYL EDWARDS (719) 495-2283                                                                                                   |
| FIRE DEPARTMENT             | FALCON FIRE STATION 3 / HEADQUARERS<br>(719) 495-4050                                                                                                                |
| TELEPHONE COMPANY           | A.T.&T.<br>LOCATORS (719) 635-3674                                                                                                                                   |
|                             | CENTURY LINK<br>LOCATORS 811                                                                                                                                         |

SHEET INDEX

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APPROVALS:

ENGINEER'S STATEMENT:

THESE DETAILED PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECTION AND SUPERVISION. SAID PLANS AND SPECIFICATIONS HAVE BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR DETAILED ROADWAY, DRAINAGE, GRADING AND EROSION CONTROL PLANS AND SPECIFICATIONS, AND SAID PLANS AND SPECIFICATIONS ARE IN CONFORMITY WITH APPLICABLE MASTER DRAINAGE PLANS AND MASTER TRANSPORTATION PLANS. SAID PLANS AND SPECIFICATIONS MEET THE PURPOSES FOR WHICH THE PARTICULAR ROADWAY, AND DRAINAGE FACILITIES ARE DESIGNED AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARATION OF THESE DETAILED PLANS AND SPECIFICATIONS.

QUENTIN ARMUJO, COLORADO P.E. #37170  
FOR AND ON THE BEHALF OF TERRA NOVA ENGINEERING, INC.

DATE

OWNER'S STATEMENT:

I, THE OWNER/DEVELOPER, HAVE READ AND WILL COMPLY WITH THE REQUIREMENTS OF THE GRADING AND EROSION CONTROL PLAN AND ALL OF THE REQUIREMENTS SPECIFIED IN THESE DETAILED PLANS AND SPECIFICATIONS.

ANDREW R. KLEIN AUTHORIZED REPRESENTATIVE  
ACM ALF VII JV SUB II LLC  
8350 EAST CRESCENT PARKWAY, SUITE 200,  
GREENWOOD, CO 80111

DATE

WATERBURY METROPOLITAN DISTRICT NO. 1

THESE CONSTRUCTION DOCUMENTS HAVE BEEN REVIEWED AND APPROVED FOR SANITARY SEWER, WATER MAIN AND ASSOCIATED UTILITY SERVICE CONSTRUCTION.

FOR AND ON BEHALF OF THE WATERBURY METRO. DISTRICT NO. 1

DATE

WOODMEN HILLS METROPOLITAN DISTRICT  
WASTEWATER DESIGN APPROVAL

DATE: \_\_\_\_\_ BY: \_\_\_\_\_

PROJECT NO: \_\_\_\_\_

IN CASE OF ERRORS OR OMISSIONS WITH THE WATER DESIGN AS SHOWN ON THIS DOCUMENT THE STANDARDS AS DEFINED IN THE RULES AND REGULATIONS FOR INSTALLATION OF WASTEWATER MAINS AND SERVICES SHALL RULE.

APPROVAL EXPIRES 180 DAYS FROM DESIGN APPROVAL.

EL PASO COUNTY

EL PASO COUNTY:

COUNTY PLAN REVIEW IS PROVIDED ONLY FOR GENERAL CONFORMANCE WITH COUNTY DESIGN CRITERIA. THE COUNTY IS NOT RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF THE DESIGN, DIMENSIONS, AND/OR ELEVATIONS WHICH SHALL BE CONFIRMED AT THE JOB SITE. THE COUNTY THROUGH THE APPROVAL OF THIS DOCUMENT ASSUMES NO RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THIS DOCUMENT.

FILED IN ACCORDANCE WITH THE REQUIREMENTS OF THE EL PASO COUNTY LAND DEVELOPMENT CODE, DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2, AND ENGINEERING CRITERIA MANUAL AS AMENDED.

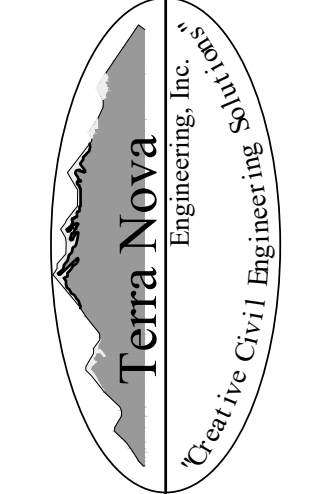
IN ACCORDANCE WITH EGM SECTION 1.12, THESE CONSTRUCTION DOCUMENTS WILL BE VALID FOR CONSTRUCTION FOR A PERIOD OF 2 YEARS FROM THE DATE SIGNED BY THE EL PASO COUNTY ENGINEER. IF CONSTRUCTION HAS NOT STARTED WITHIN THOSE 2 YEARS, THE PLANS WILL NEED TO BE RESUBMITTED FOR APPROVAL, INCLUDING PAYMENT OF REVIEW FEES AT THE PLANNING AND COMMUNITY DEVELOPMENT DIRECTORS DISCRETION.

JOSHUA J. PALMER  
COUNTY ENGINEER / EGM ADMINISTRATOR

DATE

| REVISIONS                                                                                                                                                                          | NO. | DESCRIPTION | DATE |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-------------|------|
| UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE DISTRICT ENGINEER, TERRA NOVA ENGINEERING, INC. APPROVES THEIR USE ONLY FOR THE PROJECT AUTHORIZED BY WRITTEN AUTHORIZATION. |     |             |      |

PREPARED FOR:  
ACM ALF VII JV SUB II LLC  
ATTN: JASON POCK  
8350 E CRESCENT PKWY, #200,  
GREENWOOD, CO 80111  
303-984-9800



721 S. 23RD STREET  
COLORADO SPRINGS, CO 80904  
OFFICE: 719-635-6422  
FAX: 719-635-6426  
www.tnecinc.com

WATERBURY SANITARY FORCE MAIN

UTILITY CONSTRUCTION SET  
COVER SHEET

|             |          |
|-------------|----------|
| DESIGNED BY | DLF      |
| DRAWN BY    | DLF      |
| CHECKED BY  | QNA      |
| H-SCALE     | AS SHOWN |
| V-SCALE     | N/A      |
| JOB NO.     | 2604.00  |
| DATE ISSUED | 07/13/26 |
| SHEET NO.   | 1 OF 36  |

CDR264

STANDARD NOTES FOR EL PASO COUNTY CONSTRUCTION PLANS

1. ALL DRAINAGE AND ROADWAY CONSTRUCTION SHALL MEET THE STANDARDS AND SPECIFICATIONS OF THE CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2, AND THE EL PASO COUNTY ENGINEERING CRITERIA MANUAL.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR THE NOTIFICATION AND FIELD NOTIFICATION OF ALL EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, BEFORE BEGINNING CONSTRUCTION. LOCATION OF EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CALL 811 TO CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO (UNCC).
3. CONTRACTOR SHALL KEEP A COPY OF THESE APPROVED PLANS, THE GRADING AND EROSION CONTROL PLAN, THE STORMWATER MANAGEMENT PLAN (SWMP), THE SOILS AND GEOTECHNICAL REPORT, AND THE APPROPRIATE DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS AT THE JOB SITE AT ALL TIMES, INCLUDING THE FOLLOWING:
- EL PASO COUNTY ENGINEERING CRITERIA MANUAL (ECM)
  - CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2
  - COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION
  - CDOT M & S STANDARDS
4. NOTWITHSTANDING ANYTHING DEPICTED IN THESE PLANS IN WORDS OR GRAPHIC REPRESENTATION, ALL DESIGN AND CONSTRUCTION RELATED TO ROADS, STORM DRAINAGE AND EROSION CONTROL SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE MOST RECENT VERSION OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE LAND DEVELOPMENT CODE, THE ENGINEERING CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS FROM REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING. ANY MODIFICATIONS NECESSARY TO MEET CRITERIA AFTER-THE-FACT WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.
5. IT IS THE DESIGN ENGINEER'S RESPONSIBILITY TO ACCURATELY SHOW EXISTING CONDITIONS, BOTH ONSITE AND OFFSITE, ON THE CONSTRUCTION PLANS. ANY MODIFICATIONS NECESSARY DUE TO CONFLICTS, OMISSIONS, OR CHANGED CONDITIONS WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.
6. CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT (PCD) -INSPECTIONS, PRIOR TO STARTING CONSTRUCTION.
7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO UNDERSTAND THE REQUIREMENTS OF ALL JURISDICTIONAL AGENCIES AND TO OBTAIN ALL REQUIRED PERMITS, INCLUDING BUT NOT LIMITED TO EL PASO COUNTY EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP), REGIONAL BUILDING FLOODPLAIN DEVELOPMENT PERMIT, U.S. ARMY CORPS OF ENGINEERS-ISSUED 401 AND/OR 404 PERMITS, AND COUNTY AND STATE FUGITIVE DUST PERMITS.
8. CONTRACTOR SHALL NOT DEVIATE FROM THE PLANS WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM THE DESIGN ENGINEER AND PCD. CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY ERRORS OR INCONSISTENCIES.
9. ALL STORM DRAIN PIPE SHALL BE CLASS III RCP UNLESS OTHERWISE NOTED AND APPROVED BY PCD.
10. CONTRACTOR SHALL COORDINATE GEOTECHNICAL TESTING PER ECM STANDARDS. PAVEMENT DESIGN SHALL BE APPROVED BY EL PASO COUNTY PCD PRIOR TO PLACEMENT OF CURB AND GUTTER AND PAVEMENT.
11. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.
12. SIGHT VISIBILITY TRIANGLES AS IDENTIFIED IN THE PLANS SHALL BE PROVIDED AT ALL INTERSECTIONS. OBSTRUCTIONS GREATER THAN 18 INCHES ABOVE FLOWLINE ARE NOT ALLOWED WITHIN SIGHT TRIANGLES.
13. SIGNING AND STRIPING SHALL COMPLY WITH EL PASO COUNTY DOT AND MUTCD CRITERIA.
14. CONTRACTOR SHALL OBTAIN ANY PERMITS REQUIRED BY EL PASO COUNTY DOT, INCLUDING WORK WITHIN THE RIGHT-OF-WAY AND SPECIAL TRANSPORT PERMITS.
15. THE LIMITS OF CONSTRUCTION SHALL REMAIN WITHIN THE PROPERTY LINE UNLESS OTHERWISE NOTED. THE OWNER/DEVELOPER SHALL OBTAIN WRITTEN PERMISSION AND EASEMENTS, WHERE REQUIRED, FROM ADJOINING PROPERTY OWNER(S) PRIOR TO ANY OFF-SITE DISTURBANCE, GRADING, OR CONSTRUCTION.
16. EL PASO COUNTY DOES NOT OWN AND IS NOT RESPONSIBLE FOR THE UNDERDRAINS OR GROUNDWATER DISCHARGE SYSTEMS SHOWN ON THESE PLANS AND ASSUMES NO LIABILITY FOR WATER RIGHTS ADMINISTRATION BY APPROVING THESE PLANS. MAINTENANCE AND WATER RIGHTS ARE THE RESPONSIBILITY OF THE DEVELOPER AND METROPOLITAN DISTRICT.

EROSION CONTROL LEGEND

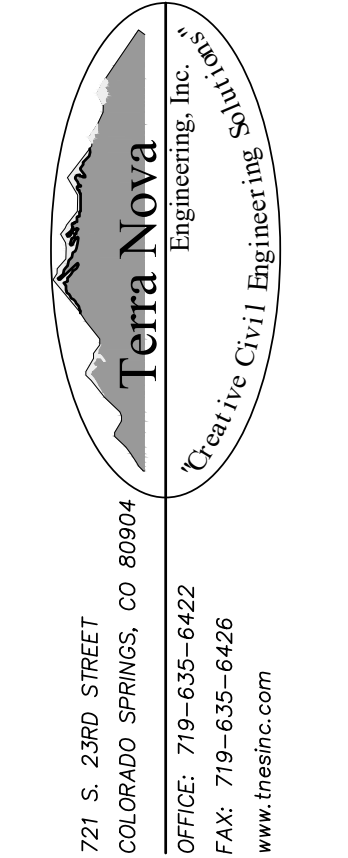
| KEY | TITLE                                                                                                                                                                                                                 | SYMBOL | IMPLEMENTATION PHASE |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|----------------------|
| Ⓢⓕ  | SILT FENCE                                                                                                                                                                                                            | — SF — | INITIAL              |
| ⓈⓈⓐ | STABILIZED STAGING AREA                                                                                                                                                                                               |        | INITIAL              |
| ⓈⓈⓐ | VEHICLE TRACKING CONTROL                                                                                                                                                                                              |        | INITIAL              |
| ⓈⓈⓐ | STOCKPILE MANAGEMENT WITH PROTECTION                                                                                                                                                                                  |        | INITIAL              |
| ⓈⓈⓐ | CONCRETE WASHOUT AREA                                                                                                                                                                                                 |        | INITIAL              |
| ⓈⓈⓐ | SURFACE ROUGHENING                                                                                                                                                                                                    |        | INITIAL              |
| ⓈⓈⓐ | TEMPORARY SEDIMENT BASIN                                                                                                                                                                                              | NONE   | INITIAL              |
| ⓈⓈⓐ | PORTABLE TOILET                                                                                                                                                                                                       | NONE   | INITIAL              |
| ⓈⓈⓐ | INLET PROTECTION                                                                                                                                                                                                      |        | INTERIM              |
| ⓈⓈⓐ | PERMANENT SEEDING AND MULCHING<br>PS - DRILL SEED, HAND SEED, OR HYDROSEED;<br>SEED MIX PER COLORADO SPRINGS STORMWATER CONSTRUCTION MANUAL (DECEMBER 2020), TABLE 5-2<br>MU - MECHANICALLY CRIMP MULCH OR HYDROMULCH |        | FINAL                |
| ⓈⓈⓐ | DEWATERING OPERATIONS                                                                                                                                                                                                 |        | AS NEEDED            |

LEGEND

|                                              |  |
|----------------------------------------------|--|
| EXISTING CONTOUR - 2' LIDAR                  |  |
| EXISTING CONTOUR - 2' WATERBURY FIL 1 DESIGN |  |
| LIMITS OF DISTURBANCE/ CONSTRUCTION BOUNDARY |  |
| PROPERTY LINES                               |  |
| EASEMENT BOUNDARY                            |  |
| DIRECTION OF SURFACE FLOW                    |  |
| 100-Y FEMA FLOODPLAIN                        |  |
| EXISTING WETLANDS                            |  |
| EXISTING ASPHALT IN STREET                   |  |
| POSSIBLE ULTIMATE BUILD OUT ASPHALT          |  |
| WATER LINE                                   |  |
| SANITARY FORCE MAIN                          |  |
| GRAVITY SANITARY SEWER LINE                  |  |
| GAS LINE                                     |  |
| UNDERGROUND ELECTRICAL LINE                  |  |
| DATA LINE                                    |  |
| FIBER OPTIC LINE                             |  |
| STORM SEWER LINE                             |  |
| EXISTING FENCE                               |  |
| PROPOSED                                     |  |
| EXISTING                                     |  |
| TRACER TEST STATION                          |  |
| FORCE MAIN CLEANOUT                          |  |
| FORCE MAIN AIR/VAC VALVE                     |  |

| REVISIONS                                                                                                                                                                          | NO. | DESCRIPTION | DATE |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-------------|------|
| UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE ENGINEER, THE DESIGNER, OR THE OWNER, NO PART OF THESE DRAWINGS SHALL BE USED FOR THE PROJECT WITHOUT WRITTEN AUTHORIZATION. |     |             |      |

PREPARED FOR:  
ACM ALF VII JV SUB II LLC  
ATTN: JASON POCK  
8350 E CRESCENT PKWY, #200,  
GREENWOOD, CO 80111  
303-984-9800



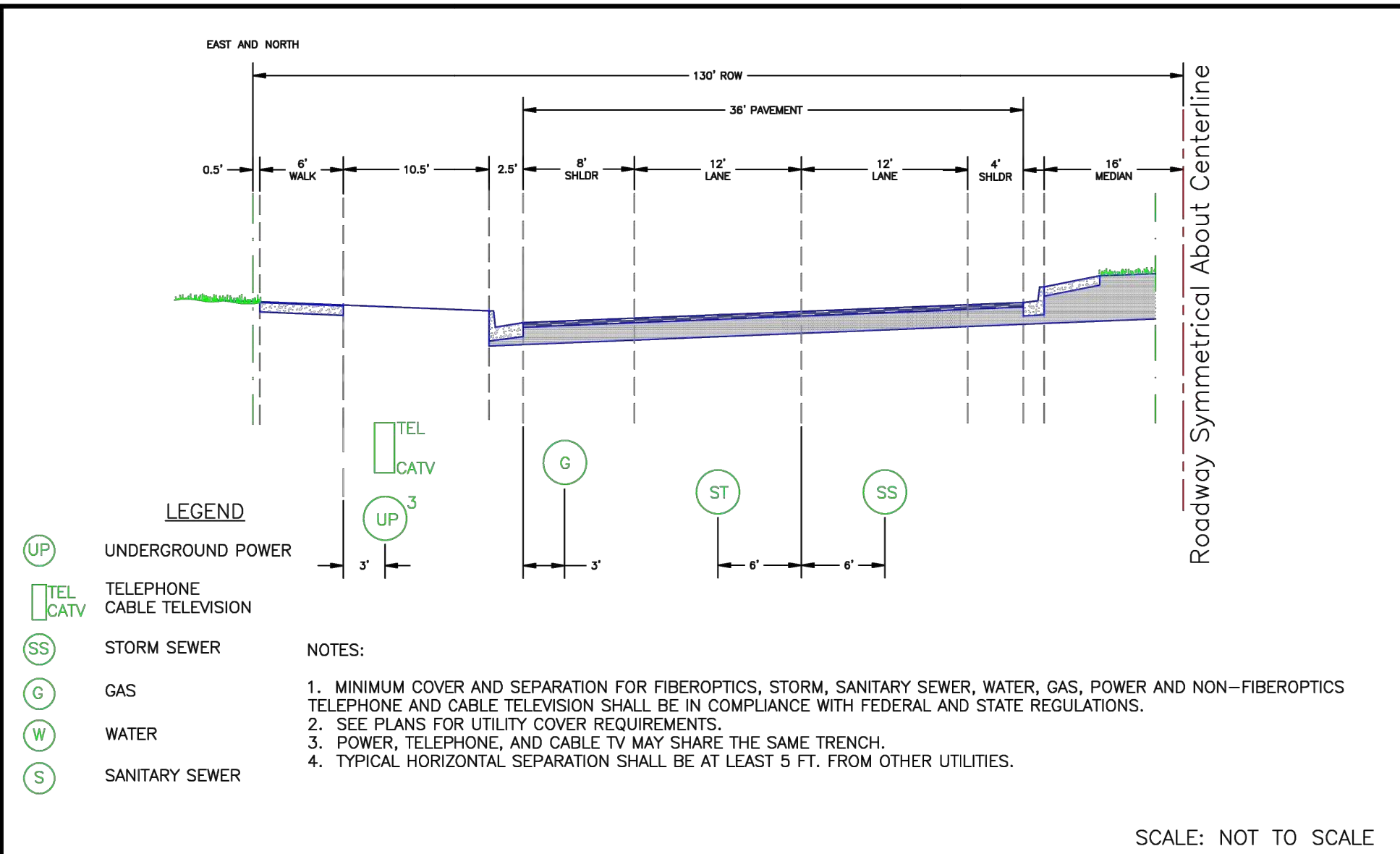
WATERBURY SANITARY FORCE MAIN

UTILITY CONSTRUCTION SET  
LEGEND SHEET

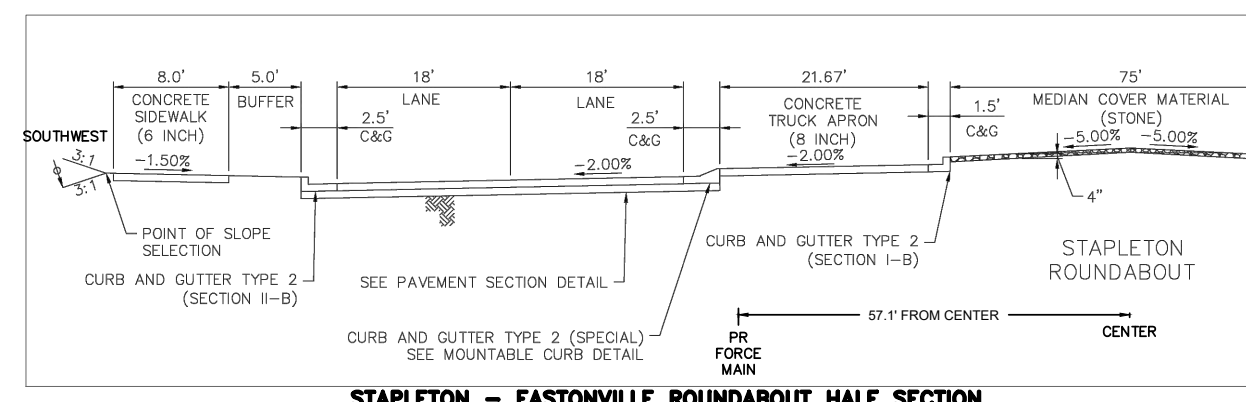
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|----------------------|
| DESIGNED BY DLF      |
| DRAWN BY DLF         |
| CHECKED BY QNA       |
| H-SCALE AS SHOWN     |
| V-SCALE N/A          |
| JOB NO. 2604.00      |
| DATE ISSUED 07/13/26 |
| SHEET NO. 2 OF 36    |

THIS DESIGN WAS PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF TERRA NOVA ENGINEERING, INC.

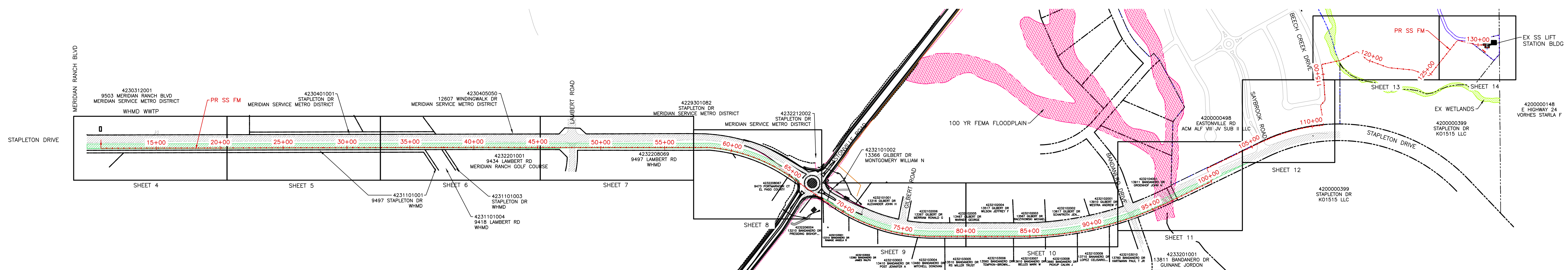
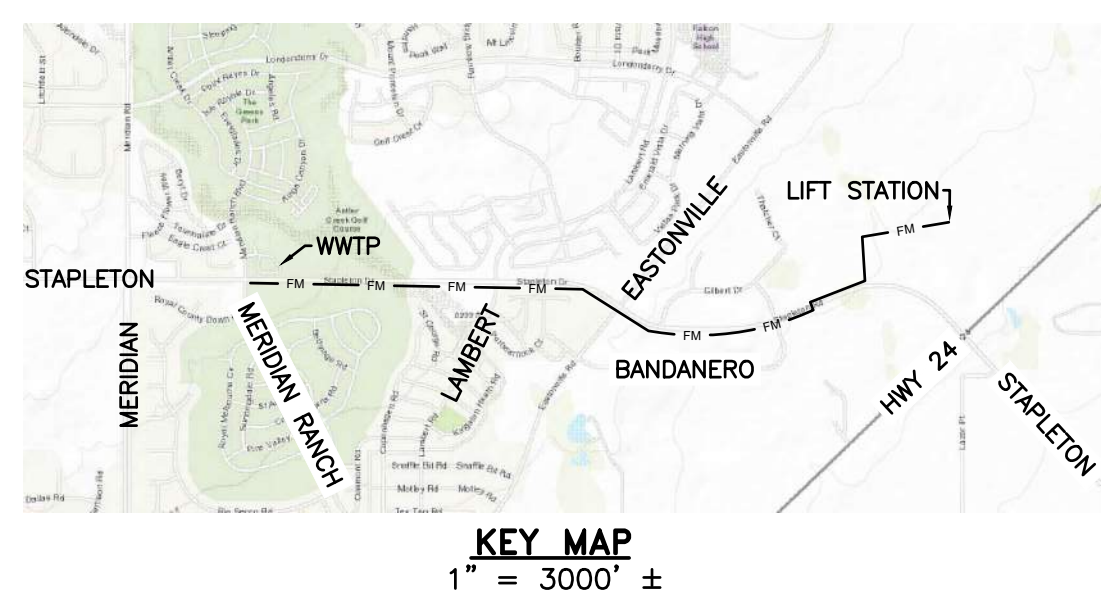
QUENTIN ARMIJO  
COLORADO P.E. NO. 37170



|                                                                    |                                                                                                      |                      |
|--------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|----------------------|
| 8/11/11                                                            | Urban Principal 4-Lane Arterial<br>Roadway East/North Bound Lanes<br>Utility Placement Cross Section |                      |
| DATE APPROVED:<br>André P. Brackin<br>DEPARTMENT OF TRANSPORTATION | REVISION DATE:<br>9/16/10                                                                            | FILE NAME:<br>SD_4-6 |



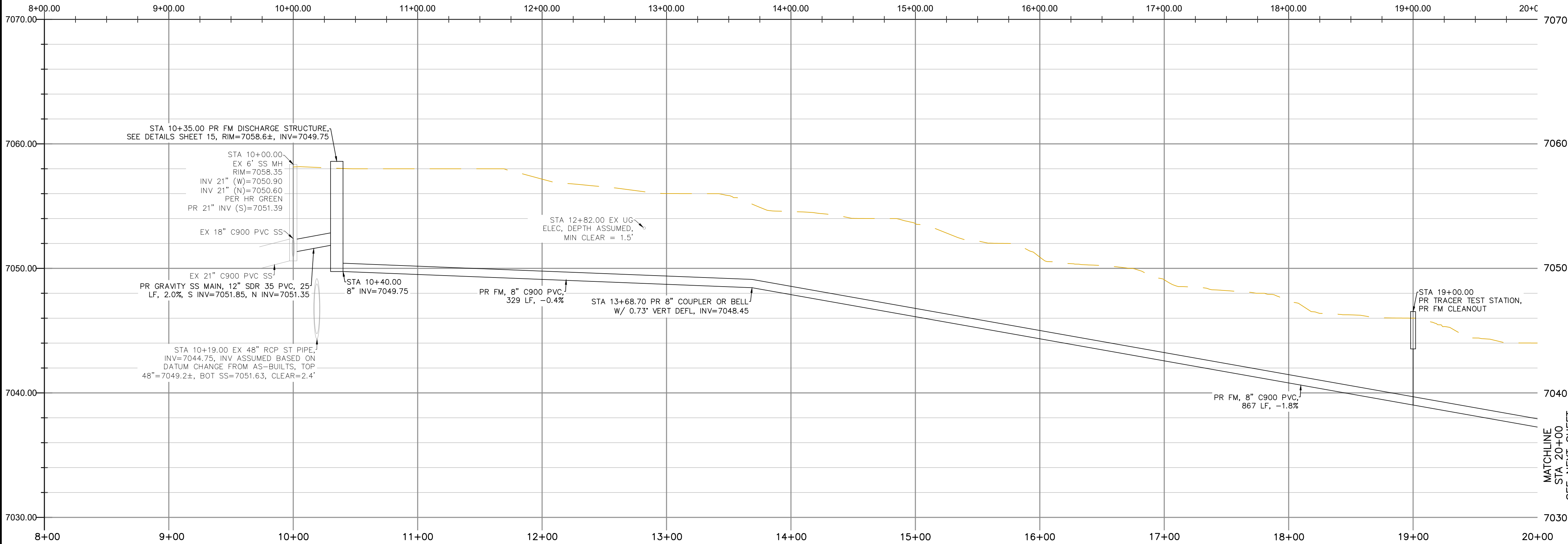
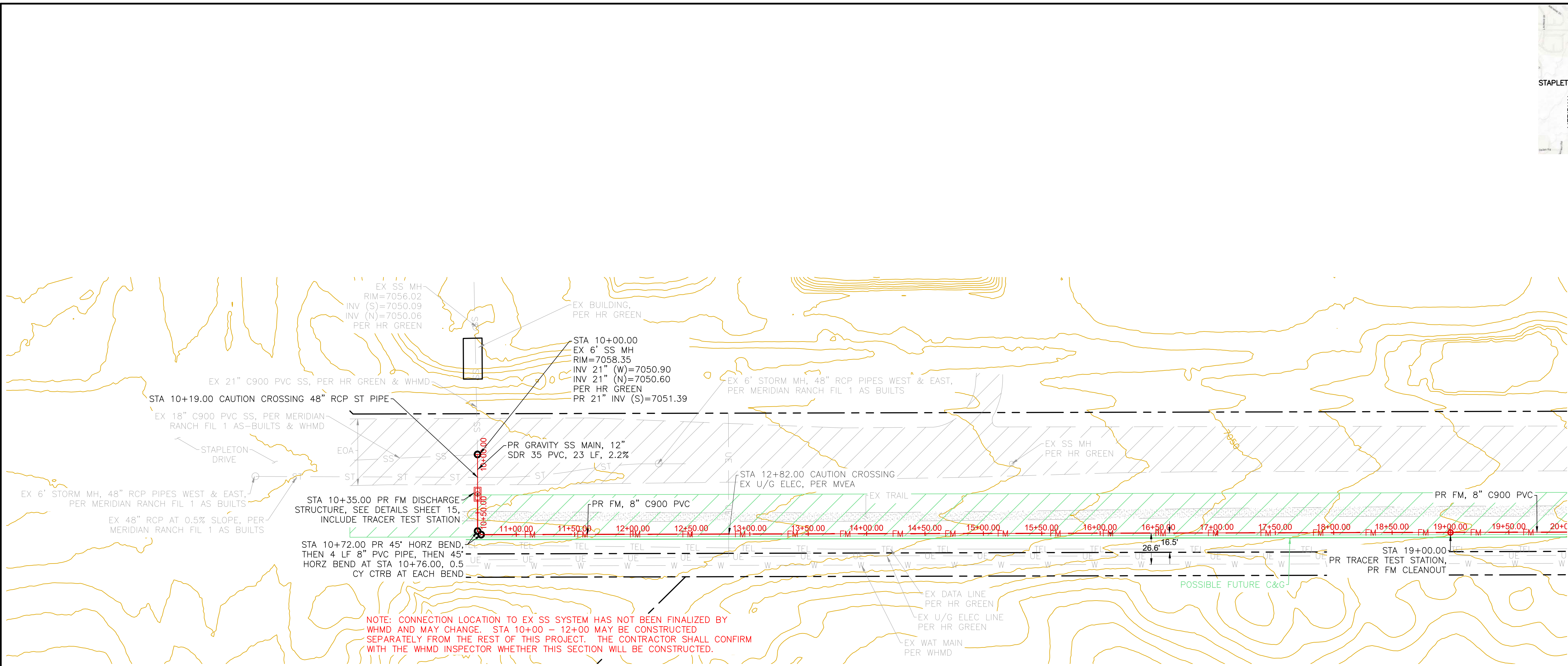
Please show and label the Center Line CL for the Street for all sections shown above and all plans on all sheets.



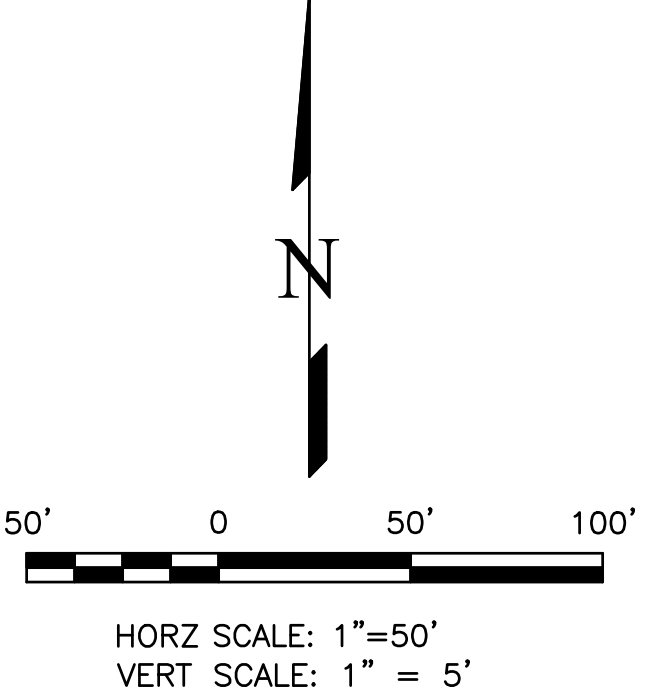
THIS DESIGN WAS PREPARED UNDER MY DIRECT SUPERVISION  
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QUENTIN ARMIJO  
COLORADO P.E. NO. 37170

|                      |          |
|----------------------|----------|
| DESIGNED BY          | DLF      |
| DRAWN BY             | DLF      |
| CHECKED BY           | QNA      |
| H-SCALE              | AS SHOWN |
| V-SCALE              | N/A      |
| JOB NO. 2604.00      |          |
| DATE ISSUED 07/13/26 |          |
| SHEET NO. 3          | OF 36    |

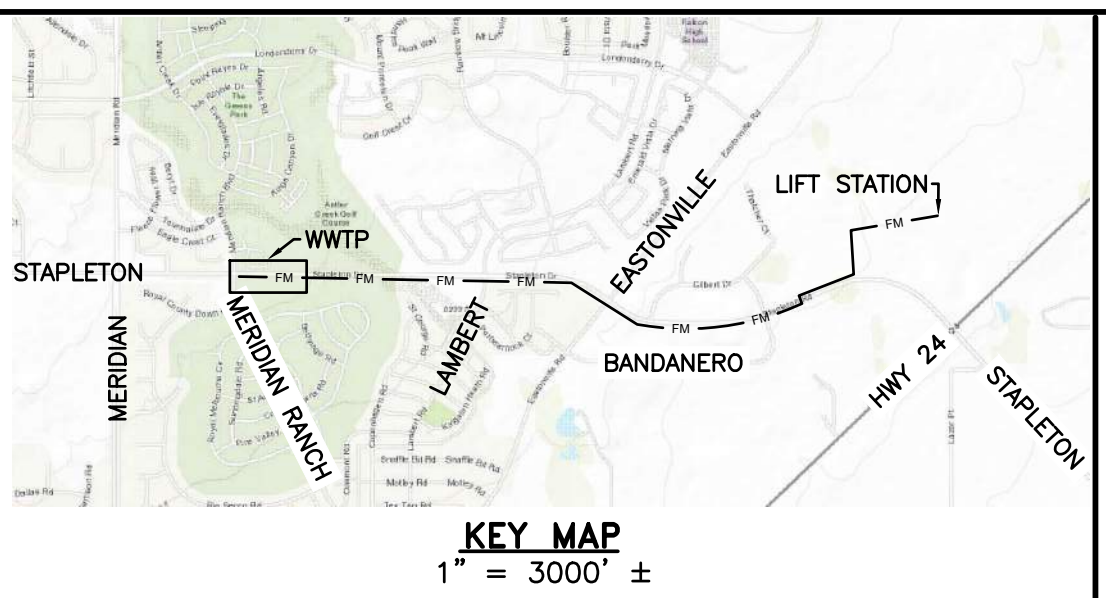


- GENERAL NOTES:**
1. NO UNRESTRAINED JOINTS WITHIN 16' OF FITTINGS, ALL DIRECTIONS.
  2. CONTRACTOR TO SUPPORT ALL EXPOSED UTILITIES DURING CONSTRUCTION.
  3. ANY PAVEMENT REMOVED SHALL BE REPLACED IN KIND.
  4. ANY TRAIL REMOVED SHALL BE REPLACED IN KIND.
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QUENTIN ARMUJO  
COLORADO P.E. NO. 37170



| REVISIONS |             |
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| NO.       | DESCRIPTION |
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UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, TERRA NOVA ENGINEERING, INC. APPROVES THEIR USE ONLY FOR THE PROJECTS AUTHORIZED BY WRITTEN AUTHORIZATION.

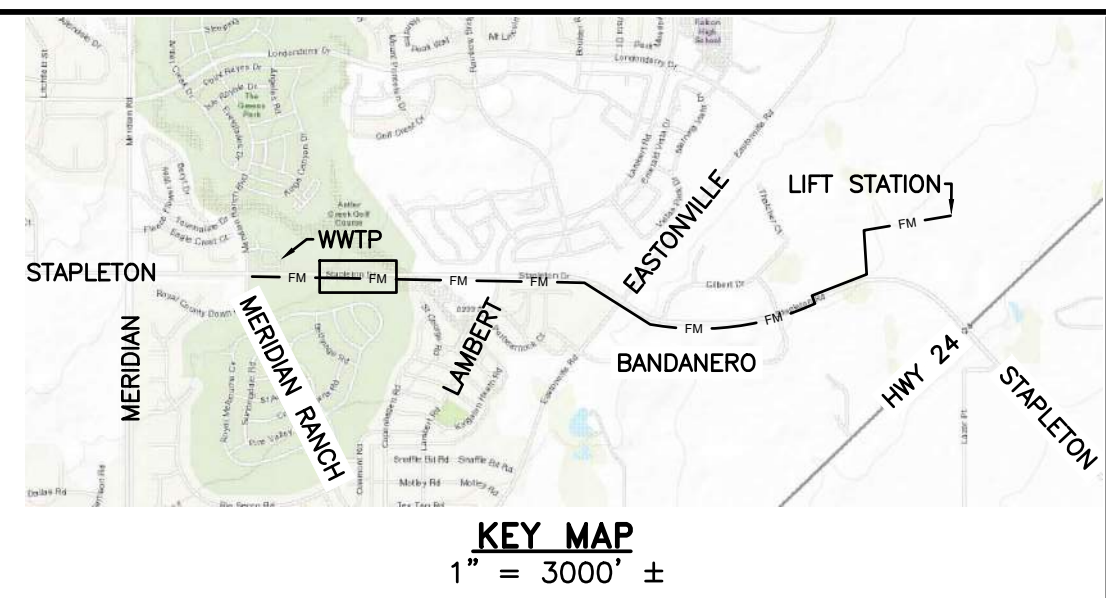
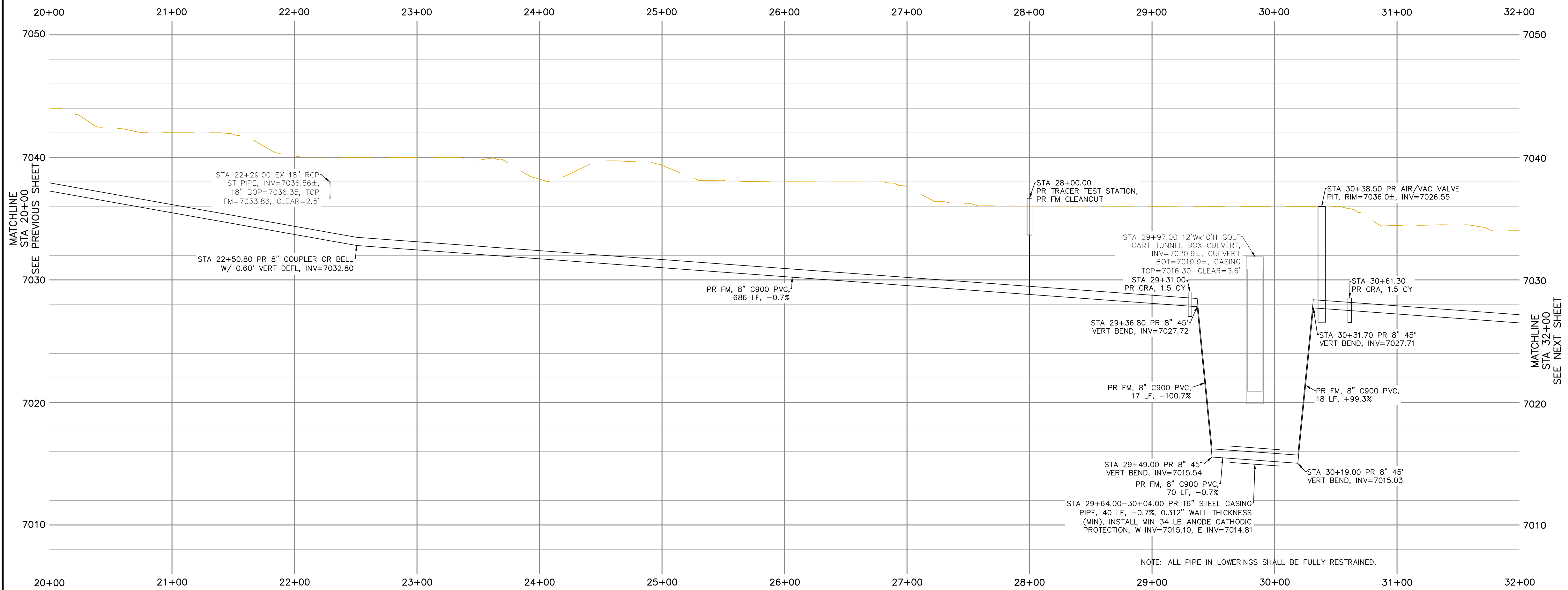
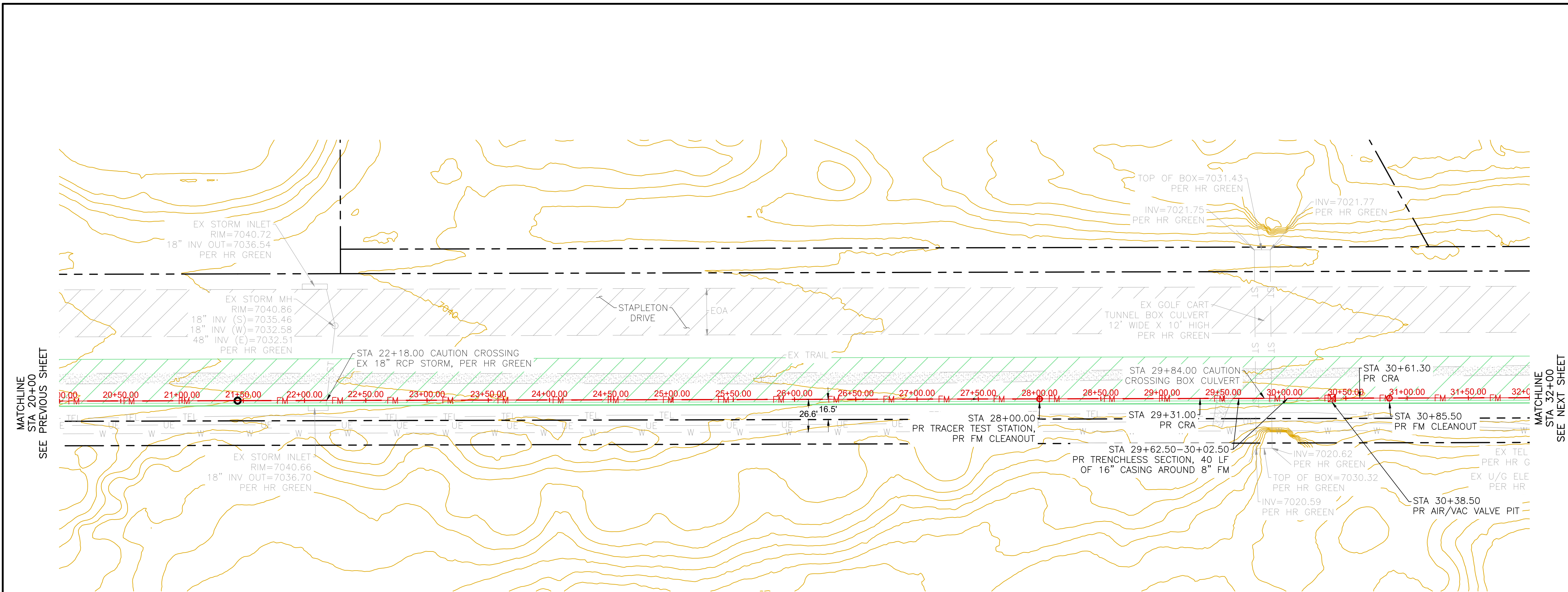
PREPARED FOR:  
**ACM ALF VIL JV SUB II LLC**  
ATTN: JASON POCK  
8350 E CRESCENT PKWY, #200,  
GREENWOOD, CO 80111  
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Terra Nova  
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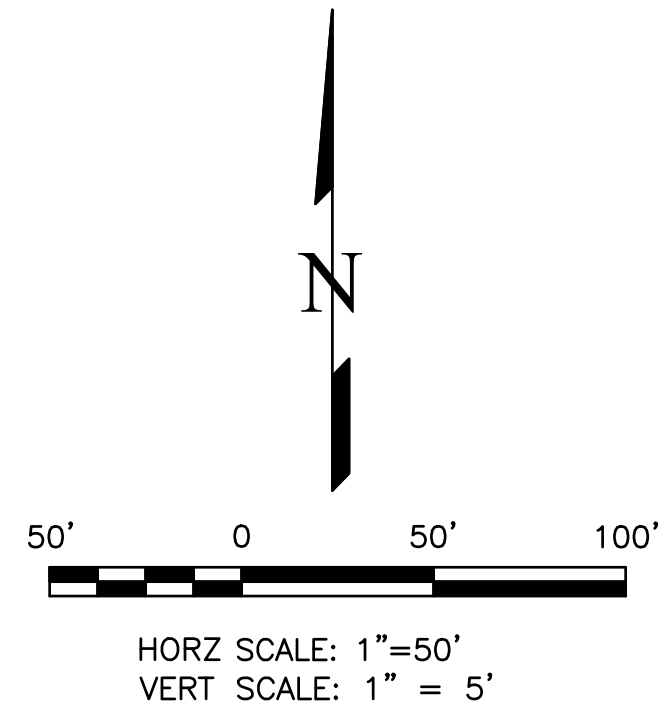
**WATERBURY SANITARY FORCE MAIN**

UTILITY CONSTRUCTION SET  
SANITARY FORCE MAIN PLAN & PROFILE

|             |          |
|-------------|----------|
| DESIGNED BY | DLF      |
| DRAWN BY    | DLF      |
| CHECKED BY  | QNA      |
| H-SCALE     | AS SHOWN |
| V-SCALE     | N/A      |
| JOB NO.     | 2604.00  |
| DATE ISSUED | 07/13/26 |
| SHEET NO.   | 4 OF 36  |



- GENERAL NOTES:**
1. NO UNRESTRAINED JOINTS WITHIN 16' OF FITTINGS, ALL DIRECTIONS.
  2. CONTRACTOR TO SUPPORT ALL EXPOSED UTILITIES DURING CONSTRUCTION.
  3. ANY PAVEMENT REMOVED SHALL BE REPLACED IN KIND.
  4. ANY TRAIL REMOVED SHALL BE REPLACED IN KIND.
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THIS DESIGN WAS PREPARED UNDER MY DIRECT SUPERVISION  
FOR AND ON BEHALF OF TERRA NOVA ENGINEERING, INC.

QUENTIN ARMUJO  
COLORADO P.E. NO. 37170

| REVISIONS |             |
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| NO.       | DESCRIPTION |
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UNTIL SUCH TIME AS THESE  
DRAWINGS ARE APPROVED  
BY THE APPROPRIATE  
REVIEWING AGENCIES  
TERRA NOVA ENGINEERING,  
INC. APPROVES THEIR USE  
ONLY FOR THE PROJECT  
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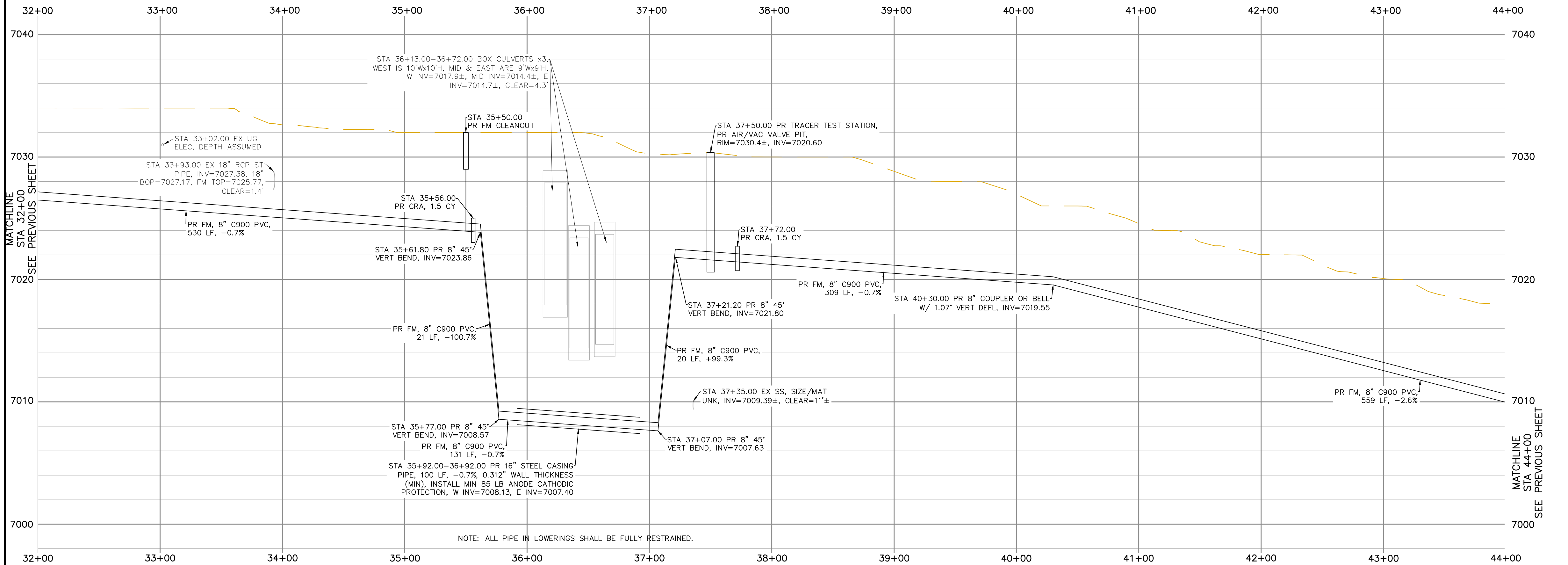
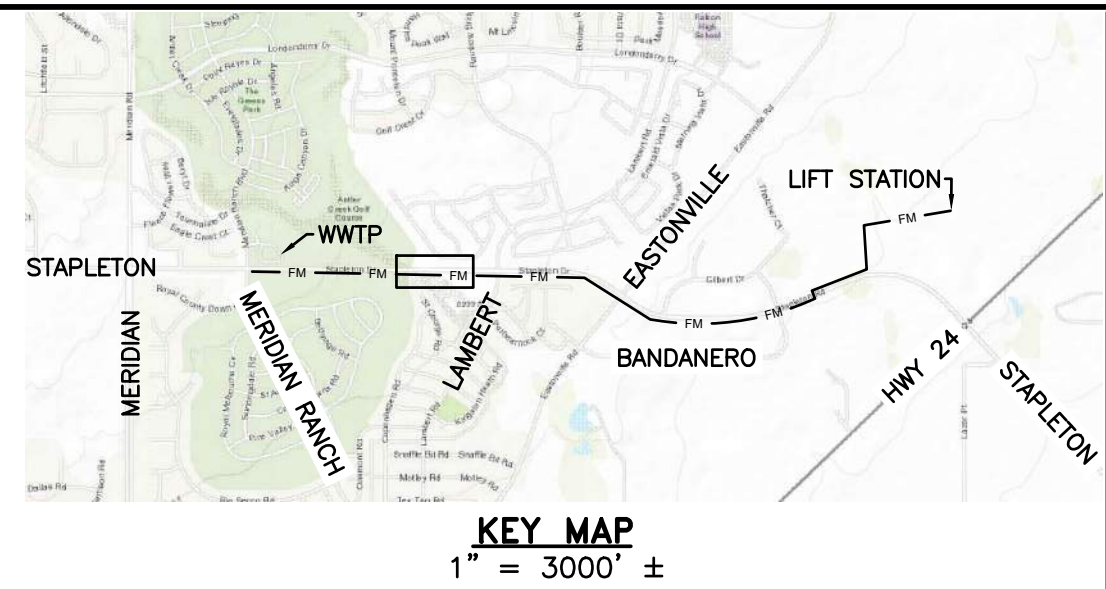
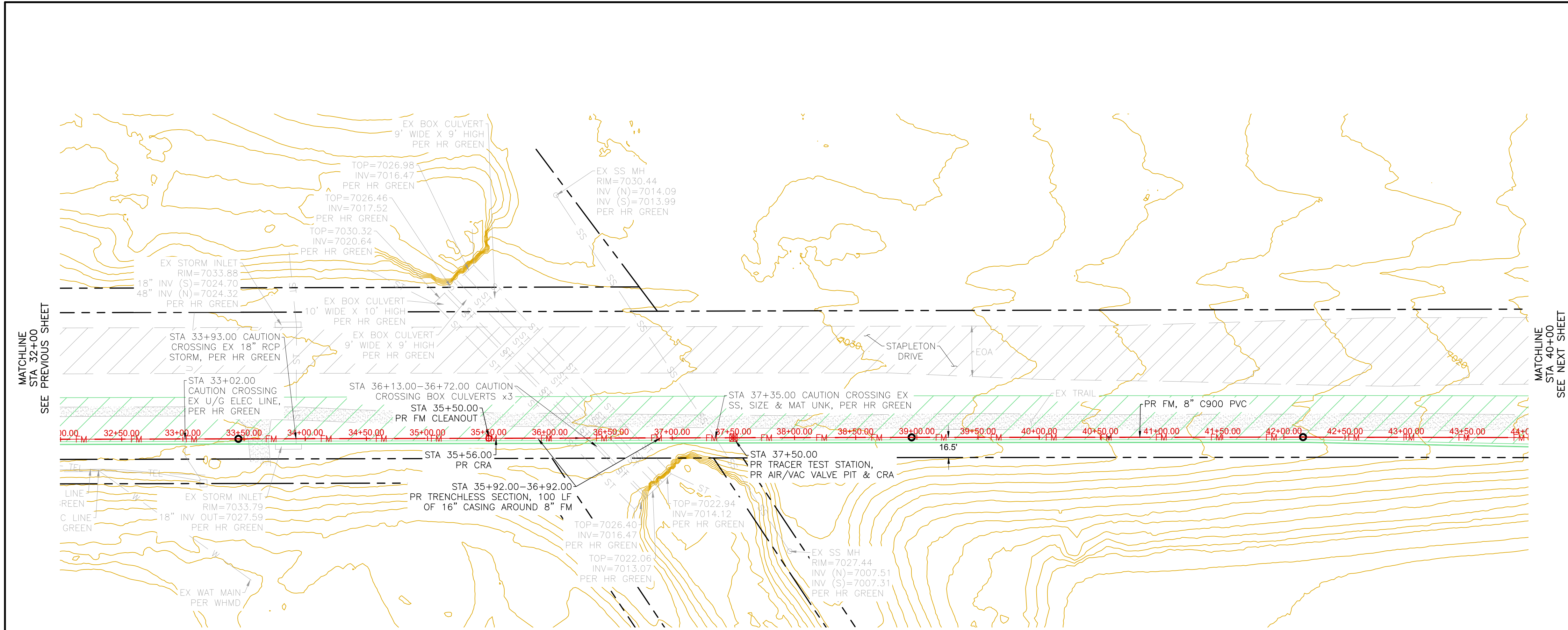
PREPARED FOR:  
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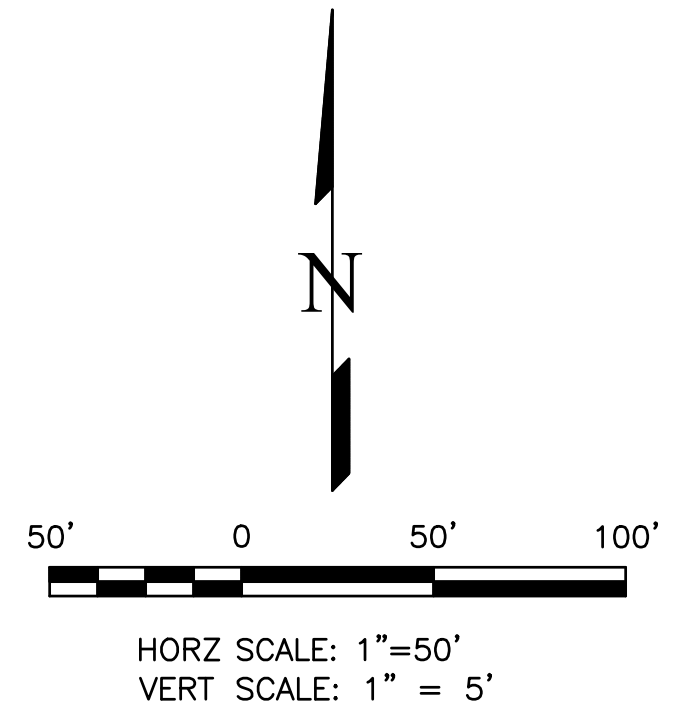
**WATERBURY SANITARY FORCE MAIN**

UTILITY CONSTRUCTION SET  
SANITARY FORCE MAIN PLAN & PROFILE

|             |          |
|-------------|----------|
| DESIGNED BY | DLF      |
| DRAWN BY    | DLF      |
| CHECKED BY  | QNA      |
| H-SCALE     | AS SHOWN |
| V-SCALE     | N/A      |
| JOB NO.     | 2604.00  |
| DATE ISSUED | 07/13/26 |
| SHEET NO.   | 5 OF 36  |



- GENERAL NOTES:**
1. NO UNRESTRAINED JOINTS WITHIN 16' OF FITTINGS, ALL DIRECTIONS.
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QUENTIN ARMUJO  
COLORADO P.E. NO. 37170

| REVISIONS |             |
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| NO.       | DESCRIPTION |
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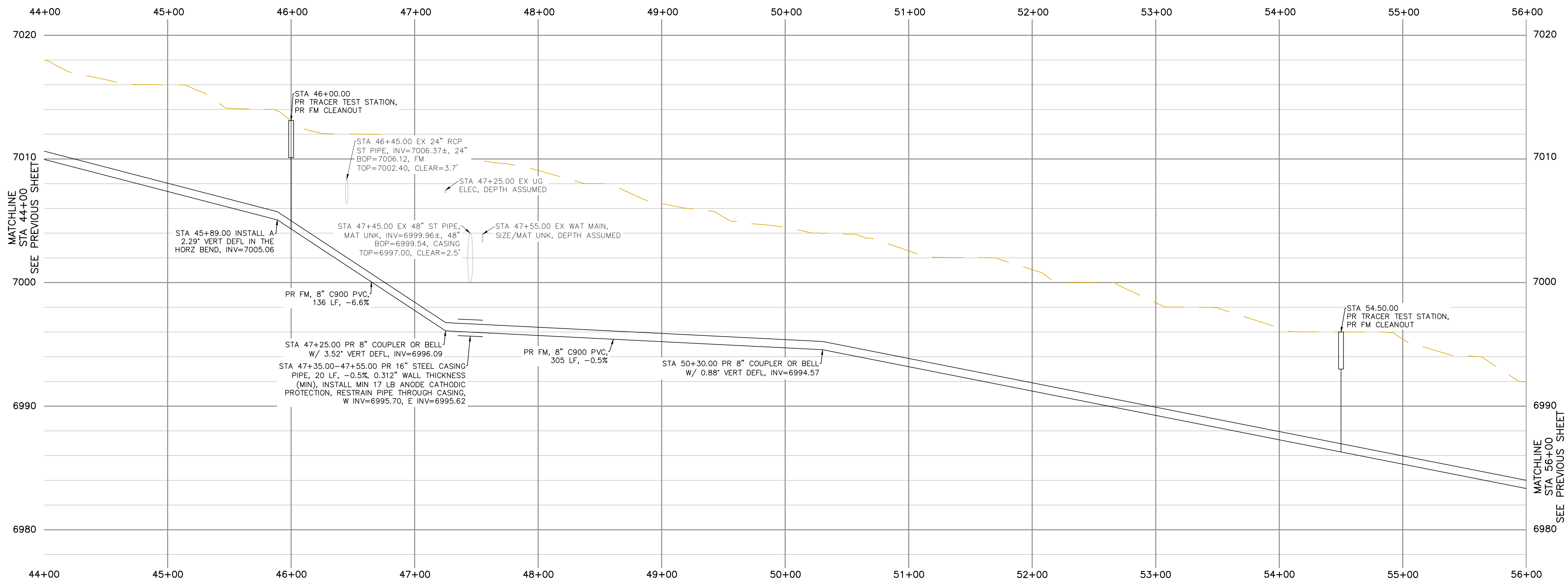
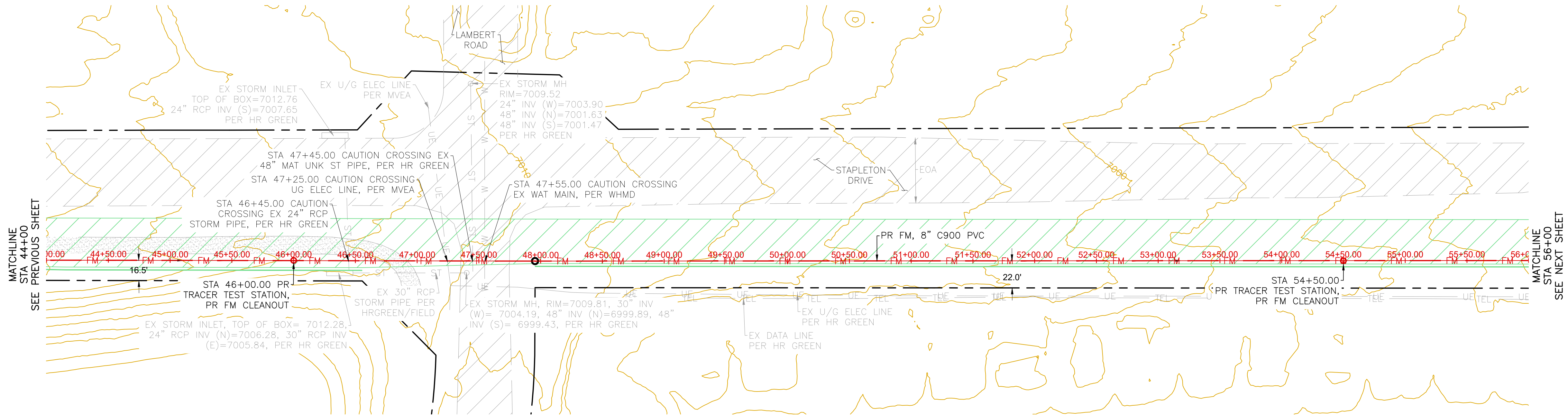
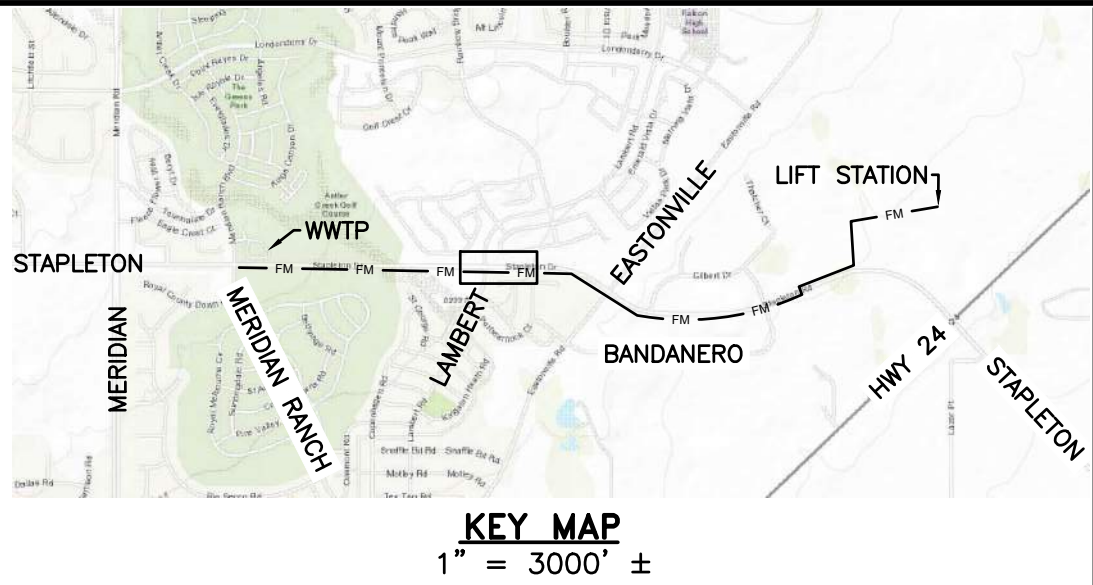
PREPARED FOR:  
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**WATERBURY SANITARY FORCE MAIN**

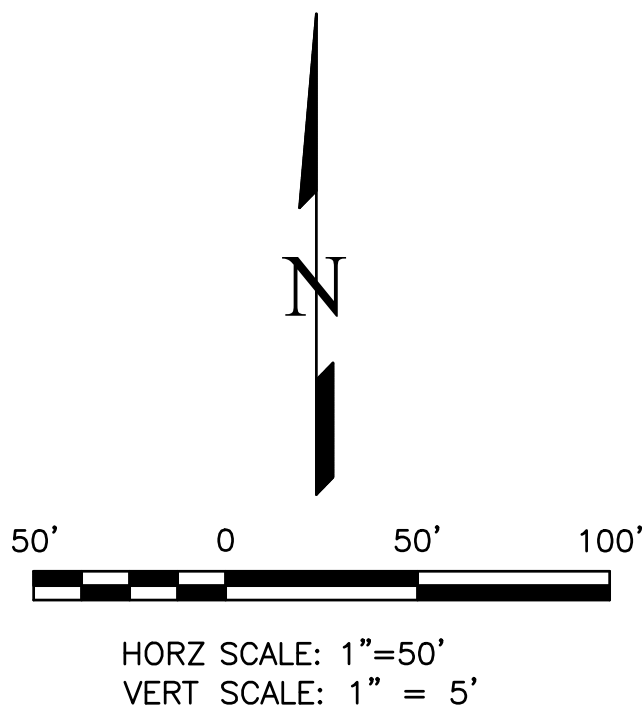
UTILITY CONSTRUCTION SET  
SANITARY FORCE MAIN PLAN & PROFILE

|             |          |
|-------------|----------|
| DESIGNED BY | DLF      |
| DRAWN BY    | DLF      |
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| H-SCALE     | AS SHOWN |
| V-SCALE     | N/A      |
| JOB NO.     | 2604.00  |
| DATE ISSUED | 07/13/26 |
| SHEET NO.   | 6 OF 36  |



GENERAL NOTES:

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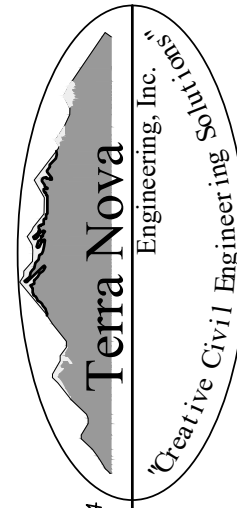
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QUENTIN ARMUJO  
COLORADO P.E. NO. 37170

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| REVISIONS | NO. | DESCRIPTION | DATE |
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UNTIL SUCH TIME AS THESE  
DRAWINGS ARE APPROVED  
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REVIEWING AGENCY.  
TERRA NOVA ENGINEERING,  
INC. APPROVES THEIR USE  
ONLY FOR THE PROJECT  
SPECIFICALLY IDENTIFIED BY  
WRITTEN AUTHORIZATION.

PREPARED FOR:  
ACM ALF VIII JV SUB II LLC  
ATTN: JASON POCK  
8350 E CRESCENT PKWY, #200,  
GREENWOOD, CO 80111  
303-984-9800

  
Terra Nova  
Engineering, Inc.  
Civil Engineering

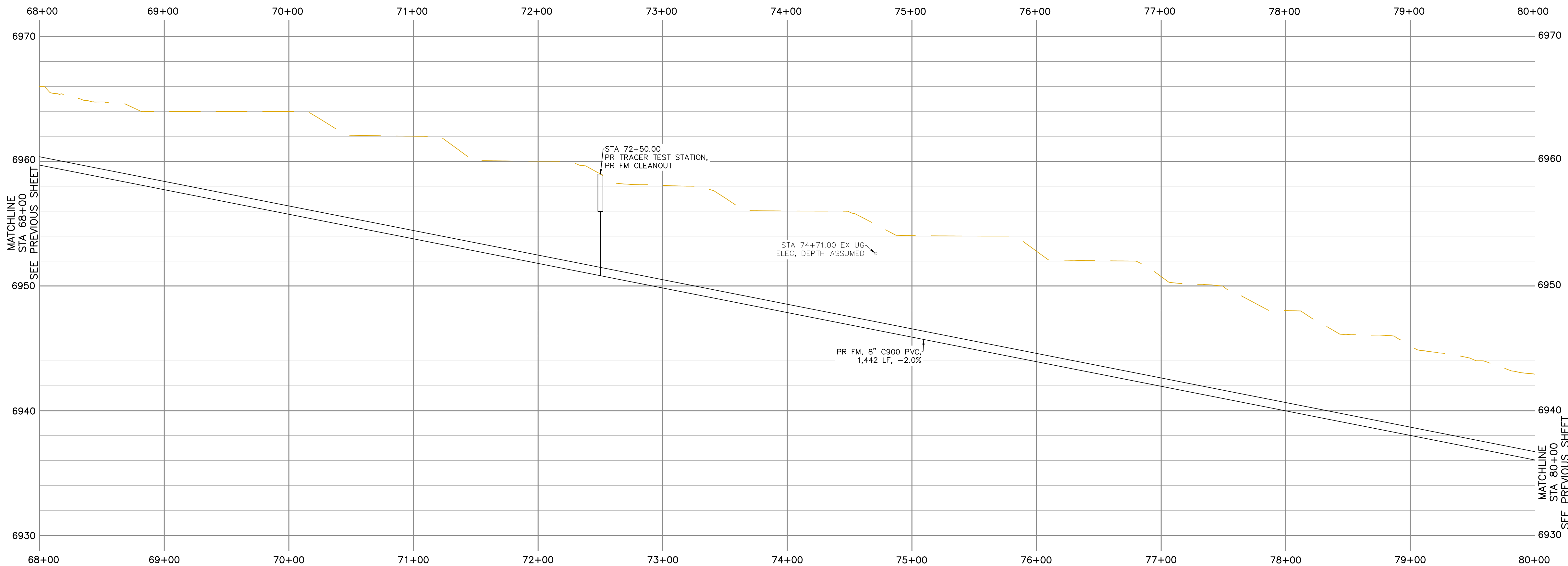
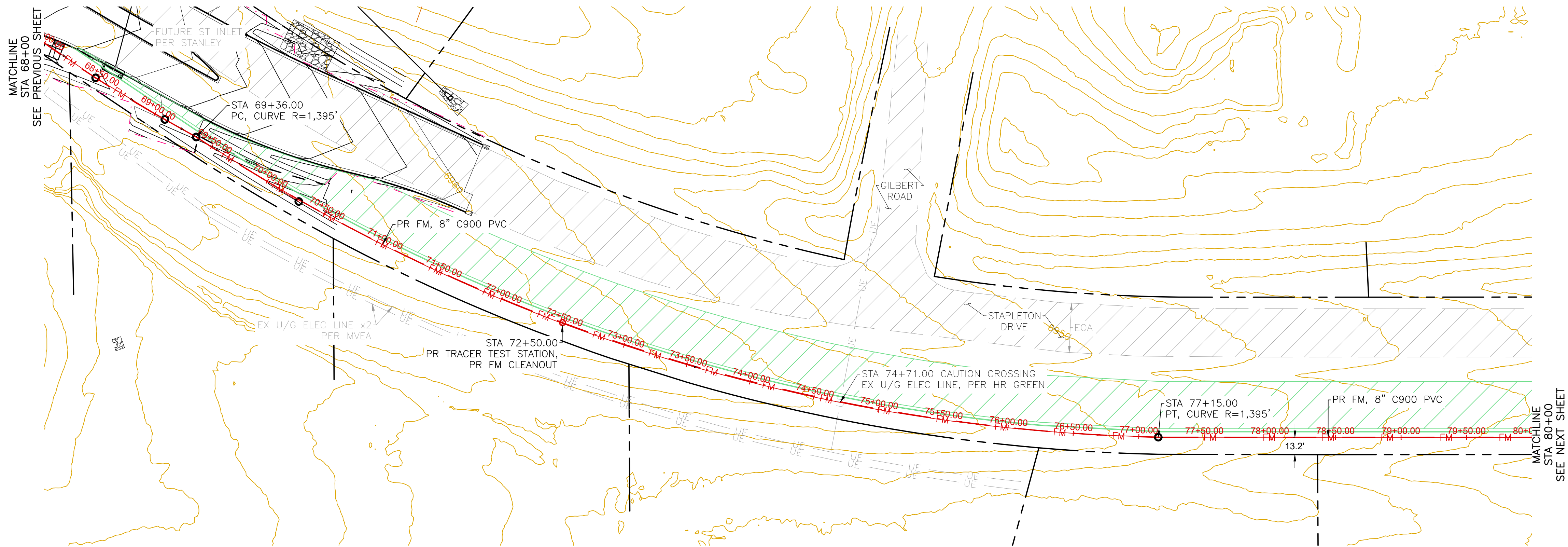
721 S. 23RD STREET  
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WATERBURY SANITARY FORCE MAIN

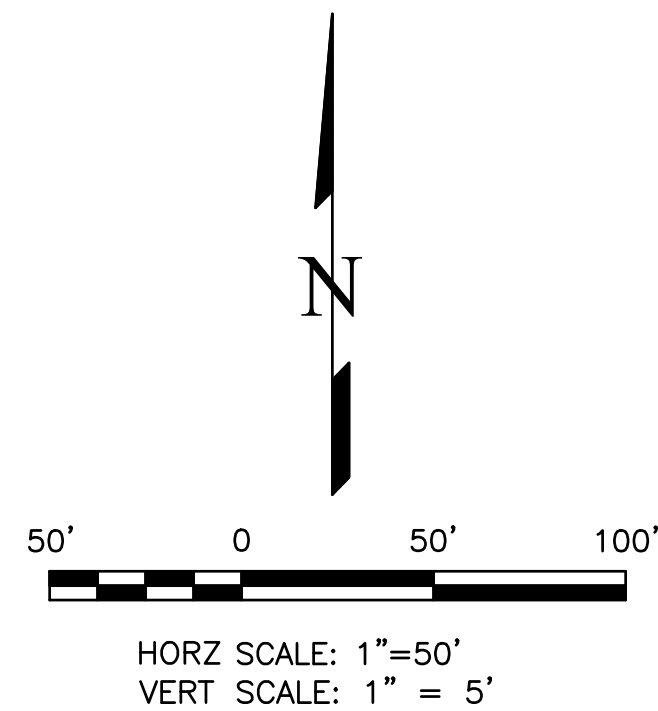
UTILITY CONSTRUCTION SET  
SANITARY FORCE MAIN PLAN & PROFILE

|             |          |
|-------------|----------|
| DESIGNED BY | DLF      |
| DRAWN BY    | DLF      |
| CHECKED BY  | QNA      |
| H-SCALE     | AS SHOWN |
| V-SCALE     | N/A      |
| JOB NO.     | 2604.00  |
| DATE ISSUED | 07/13/26 |
| SHEET NO.   | 7 OF 36  |



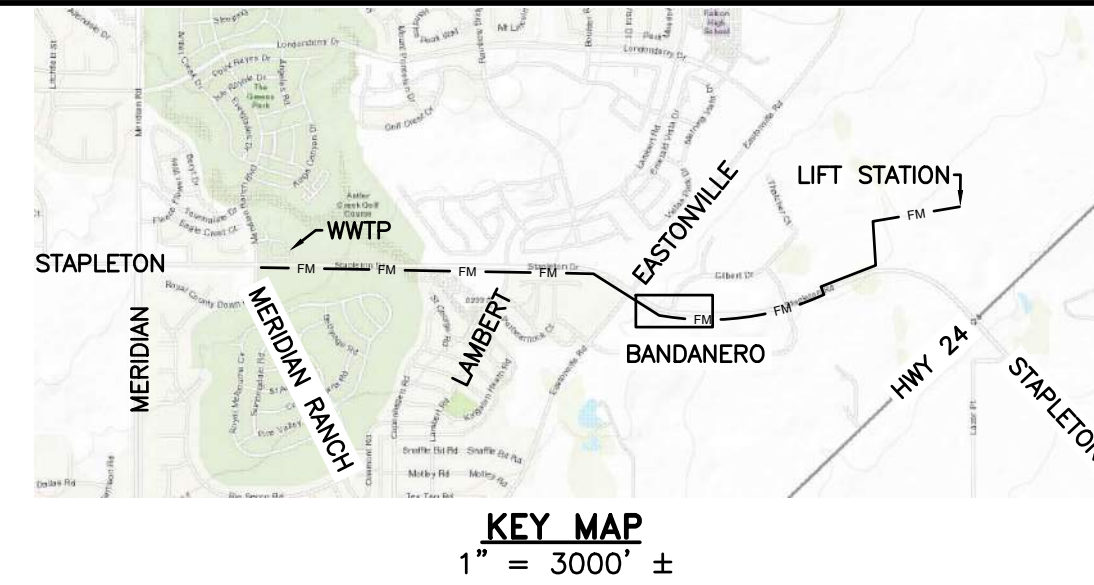


- GENERAL NOTES:**
1. NO UNRESTRAINED JOINTS WITHIN 16' OF FITTINGS, ALL DIRECTIONS.
  2. CONTRACTOR TO SUPPORT ALL EXPOSED UTILITIES DURING CONSTRUCTION.
  3. ANY PAVEMENT REMOVED SHALL BE REPLACED IN KIND.
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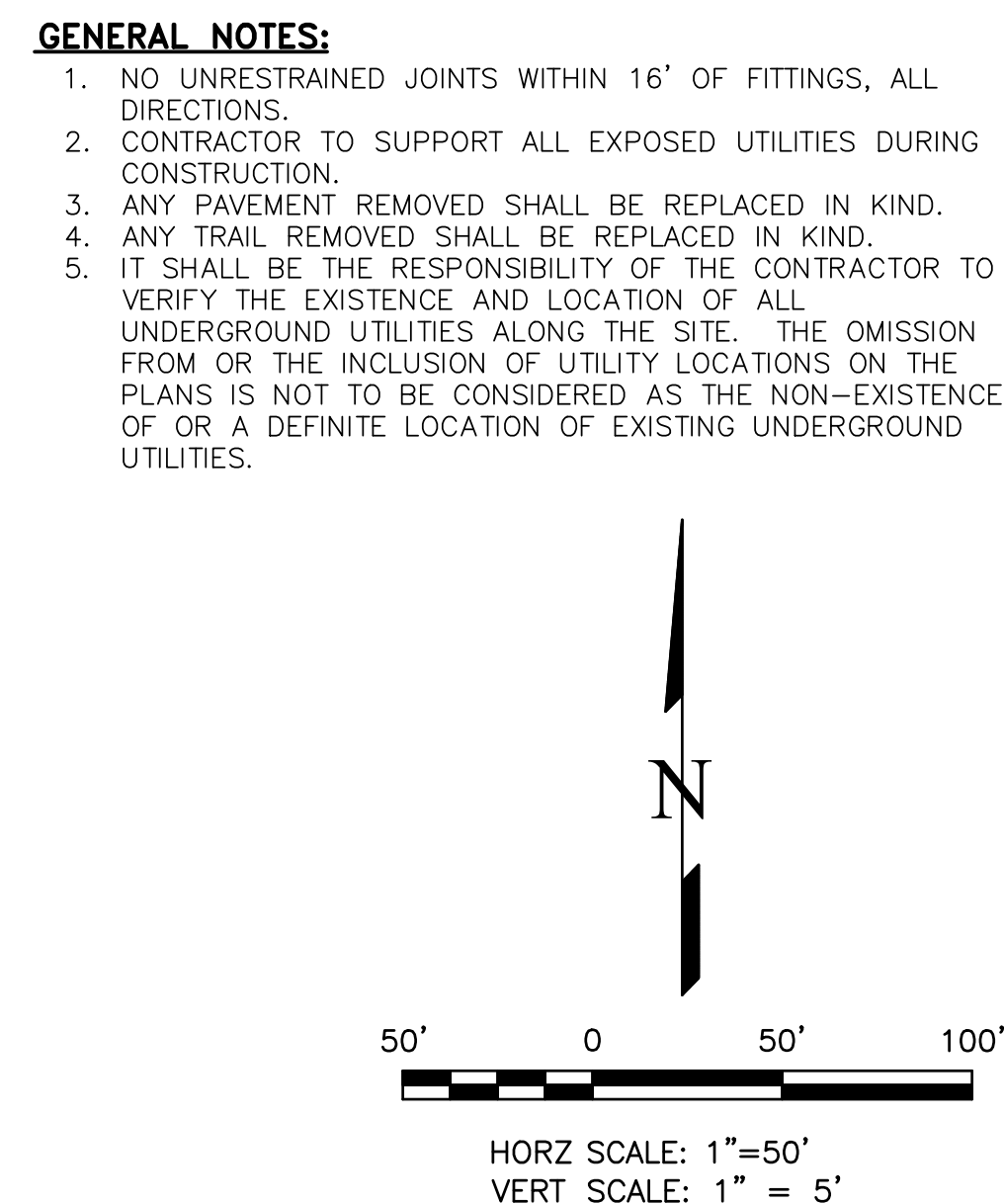
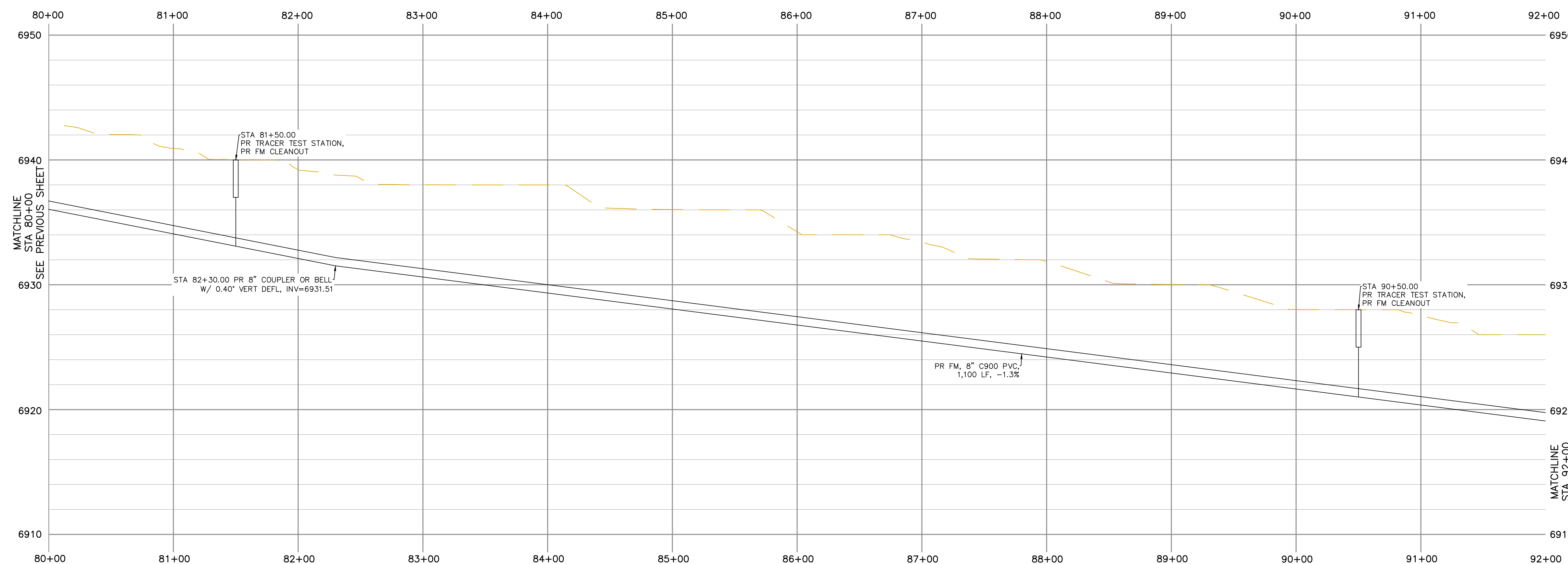


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QUENTIN ARMUJO  
COLORADO P.E. NO. 37170



|                      |  |                                                                                                                                                                                   |  |             |  |
|----------------------|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------|--|
| DESIGNED BY DLF      |  | UNTL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE REVIEWING AGENCY, TERRA NOVA ENGINEERING, INC. APPROVES THEIR USE ONLY FOR THE PROJECTS AUTHORIZED BY WRITTEN AUTHORIZATION. |  | REVISIONS   |  |
| DRAWN BY DLF         |  | PREPARED FOR:                                                                                                                                                                     |  | NO.         |  |
| CHECKED BY QNA       |  | ACM ALF VIII JV SUB II LLC                                                                                                                                                        |  | DESCRIPTION |  |
| H-SCALE AS SHOWN     |  | ATTN: JASON POCK                                                                                                                                                                  |  | DATE        |  |
| V-SCALE N/A          |  | 8350 E CRESCENT PKWY, #200,                                                                                                                                                       |  |             |  |
| JOB NO. 2604.00      |  | GREENWOOD, CO 80111                                                                                                                                                               |  |             |  |
| DATE ISSUED 07/13/26 |  | 303-984-9800                                                                                                                                                                      |  |             |  |
| SHEET NO. 9 OF 36    |  |                                                                                                                                                                                   |  |             |  |

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PREPARED FOR:  
ACM ALF VIII JV SUB II LLC  
ATTN: JASON POCK  
350 E CRESCENT PKWY, #200,  
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303-984-9800



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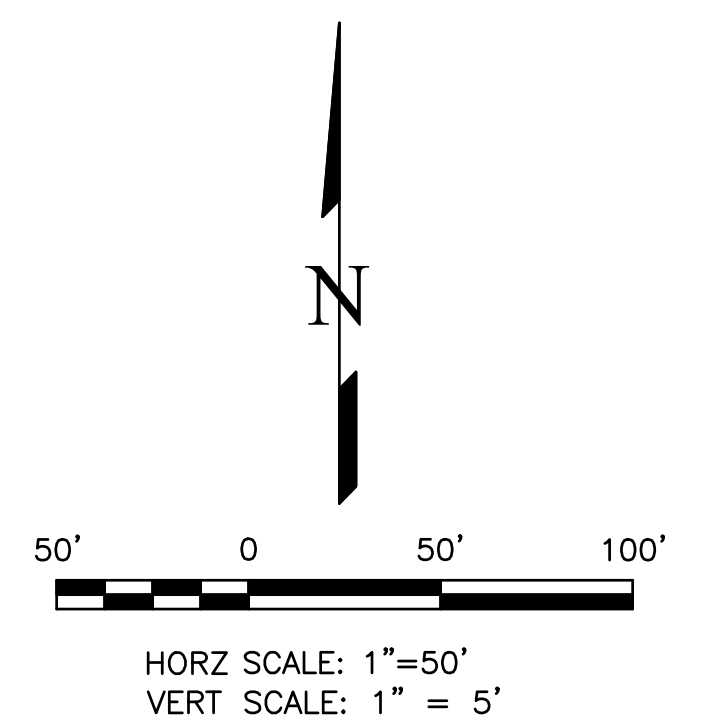
## WATERBURY SANITARY FORCE MAIN

UTILITY CONSTRUCTION SET  
SANITARY FORCE MAIN PLAN & PROFILE

|                      |          |
|----------------------|----------|
| DESIGNED BY          | DLF      |
| DRAWN BY             | DLF      |
| CHECKED BY           | QNA      |
| 1-SCALE              | AS SHOWN |
| 2-SCALE              | N/A      |
| JOB NO. 2604.00      |          |
| DATE ISSUED 07/13/26 |          |
| SHEET NO. 11 OF 36   |          |

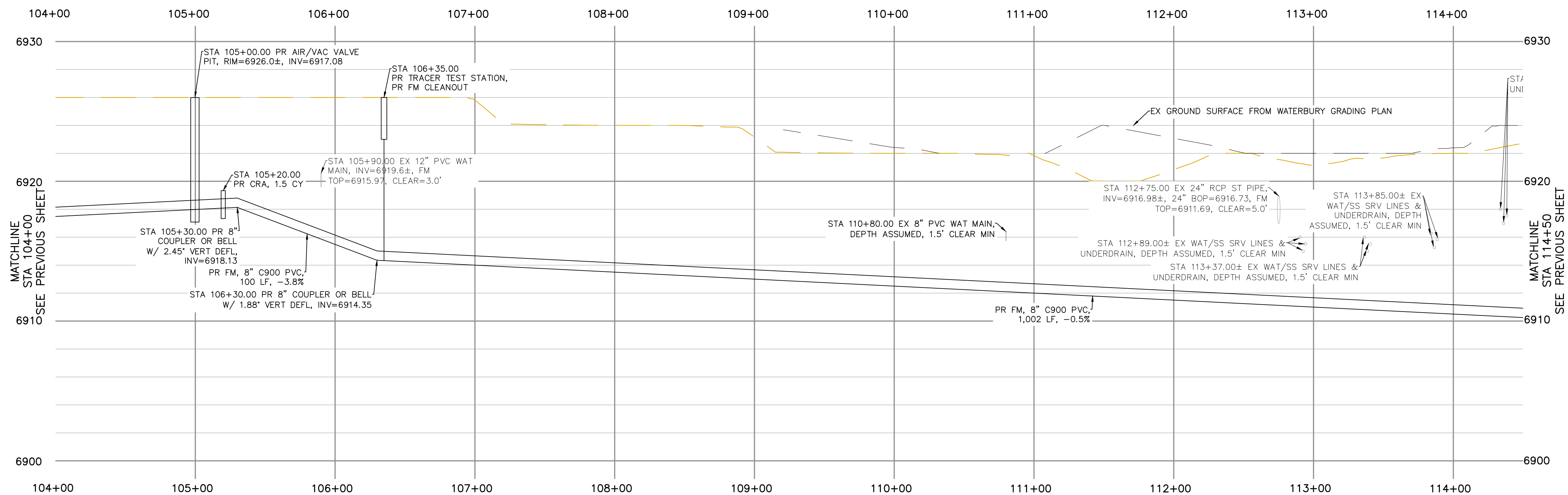
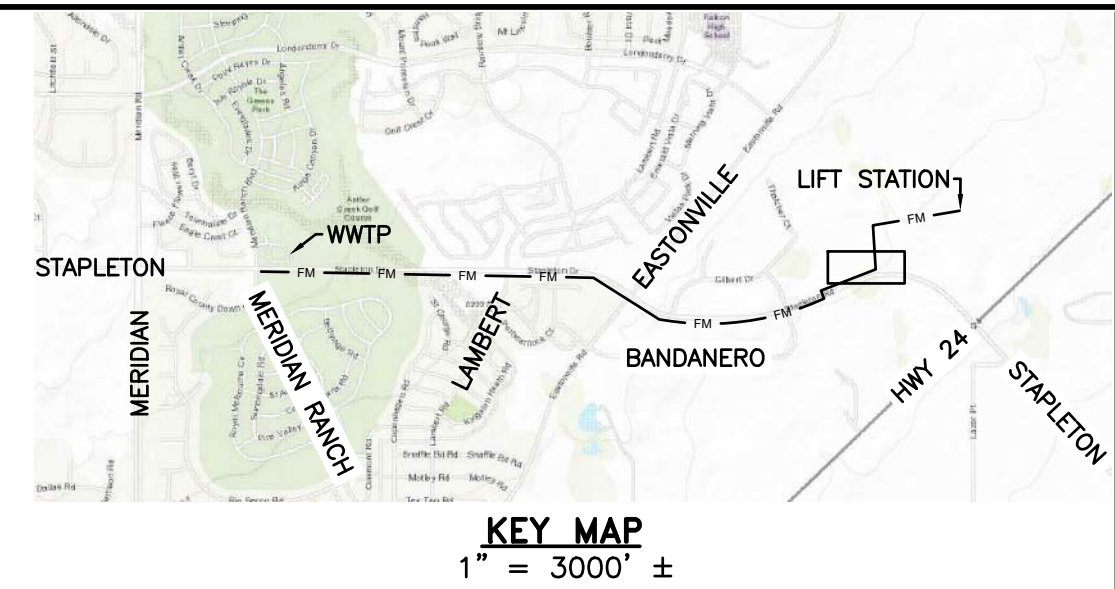
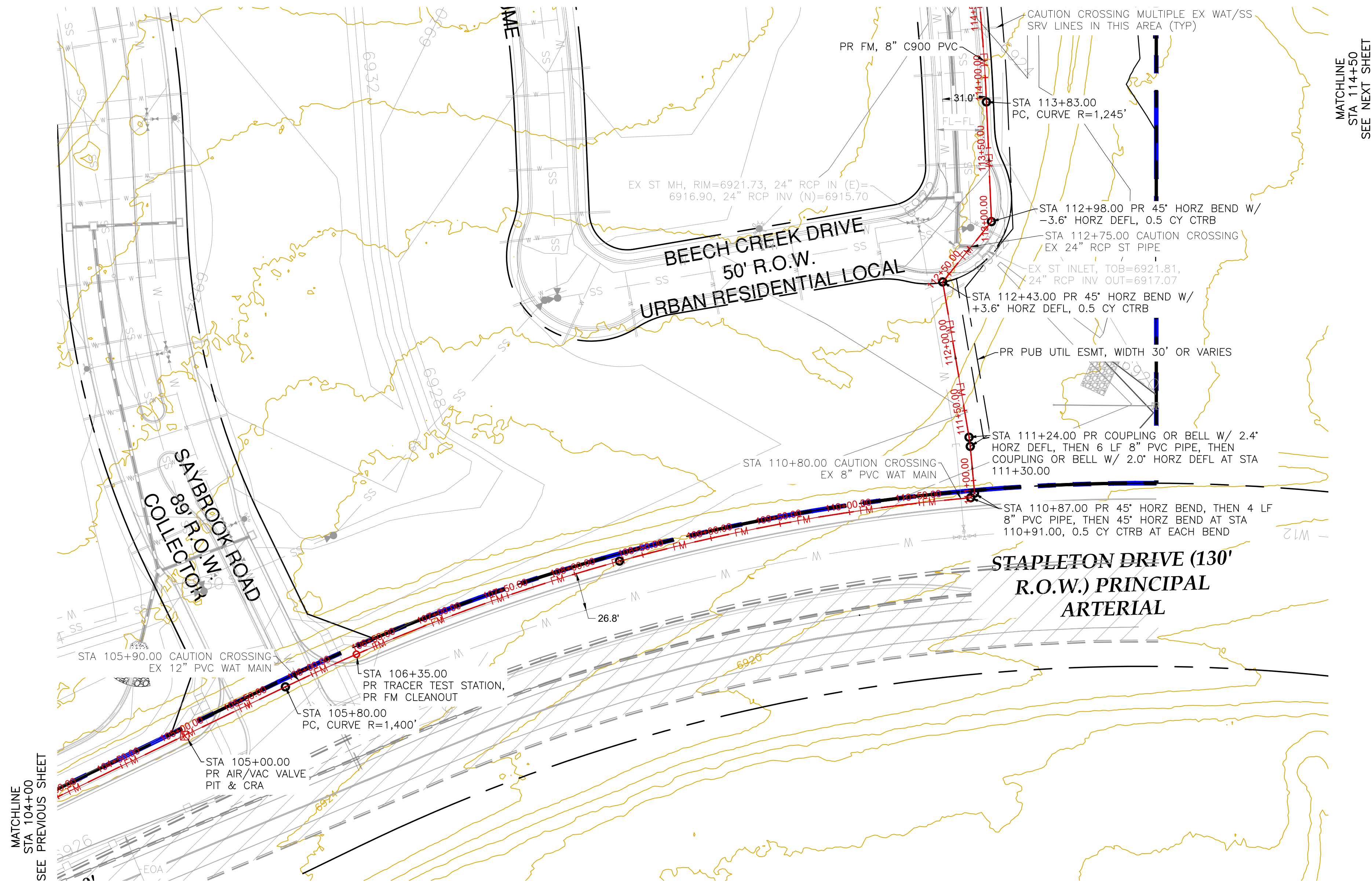
GENERAL NOTES:

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2. CONTRACTOR TO SUPPORT ALL EXPOSED UTILITIES DURING CONSTRUCTION.
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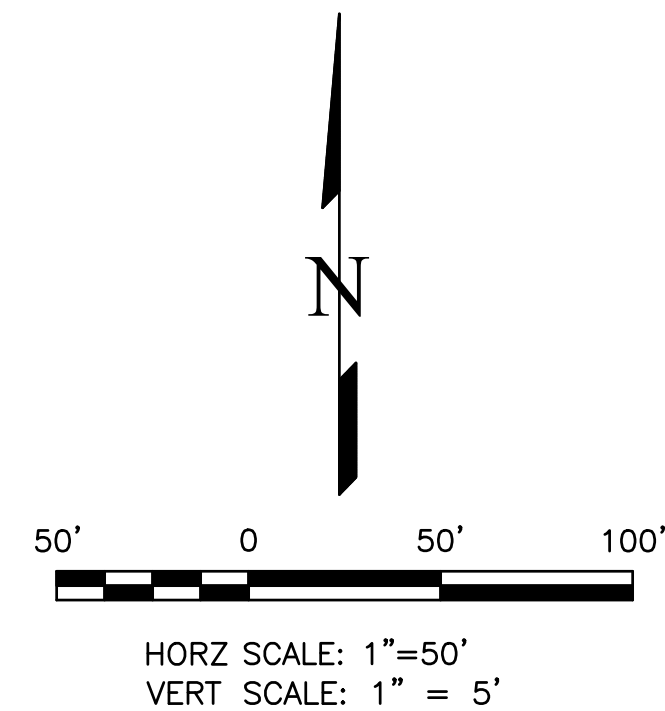


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FOR AND ON BEHALF OF TERRA NOVA ENGINEERING, INC.

QUENTIN ARMIJO  
COLORADO P.E. NO. 37170



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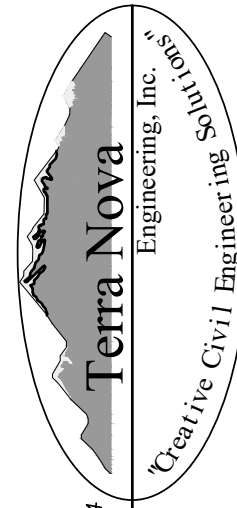
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COLORADO P.E. NO. 37170

| REVISIONS | NO. | DESCRIPTION | DATE |
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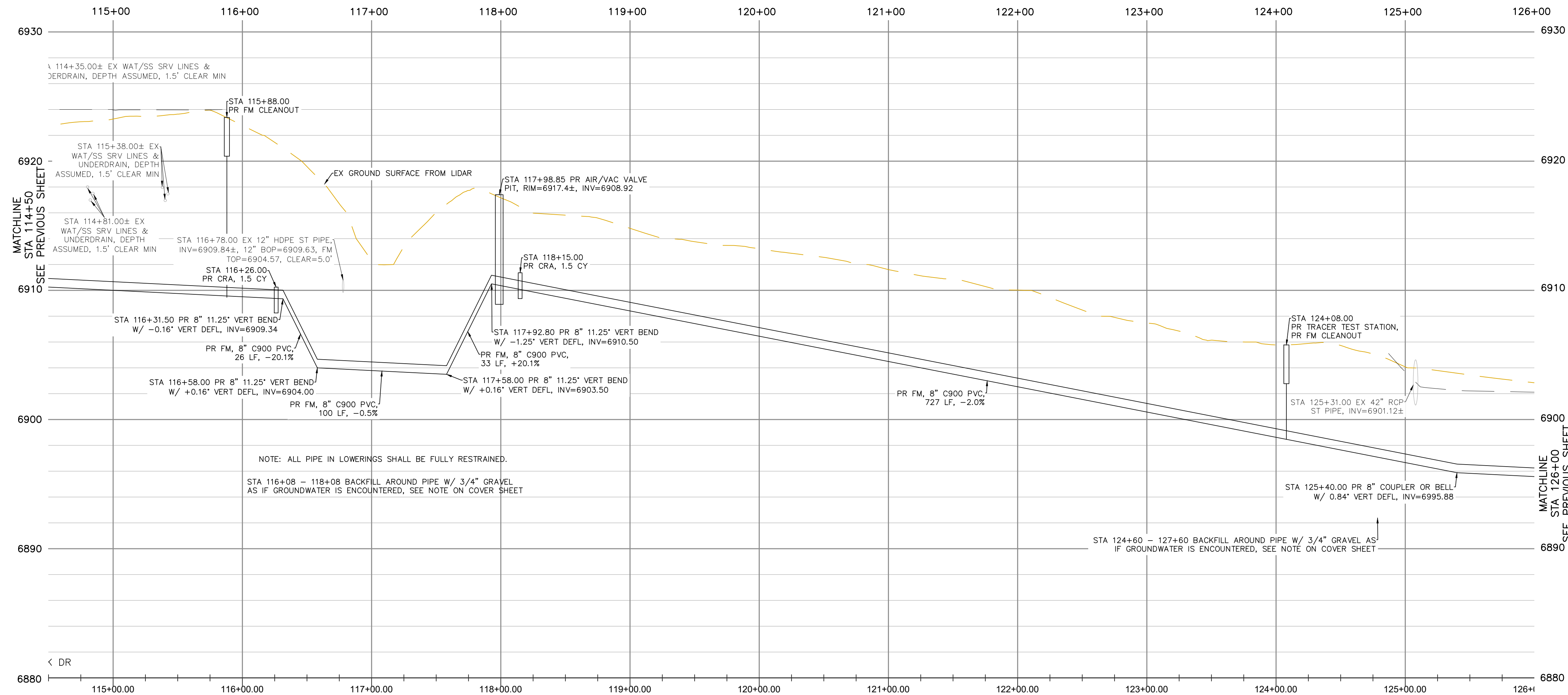
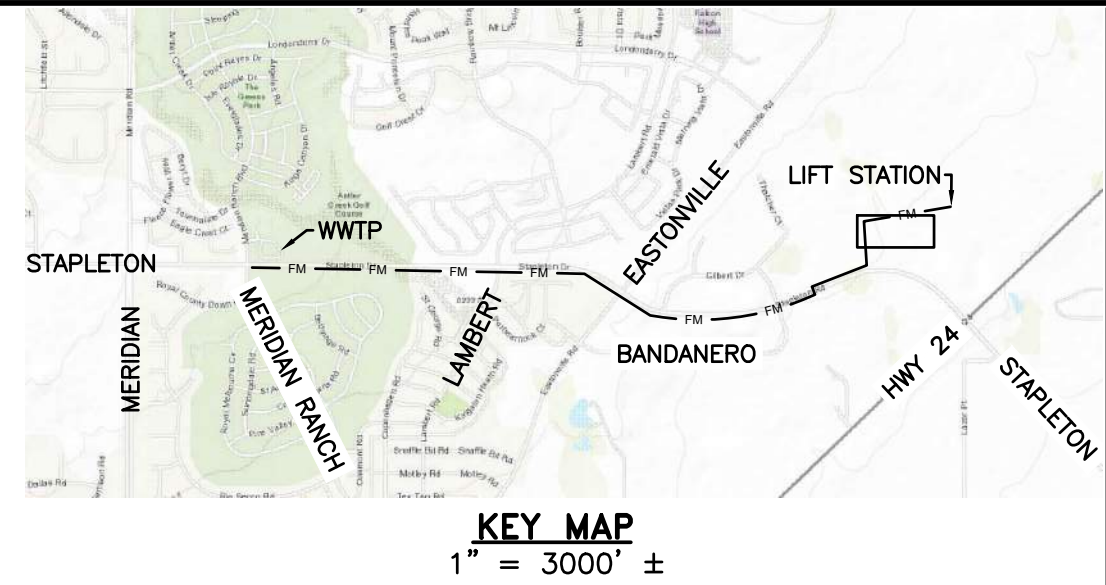
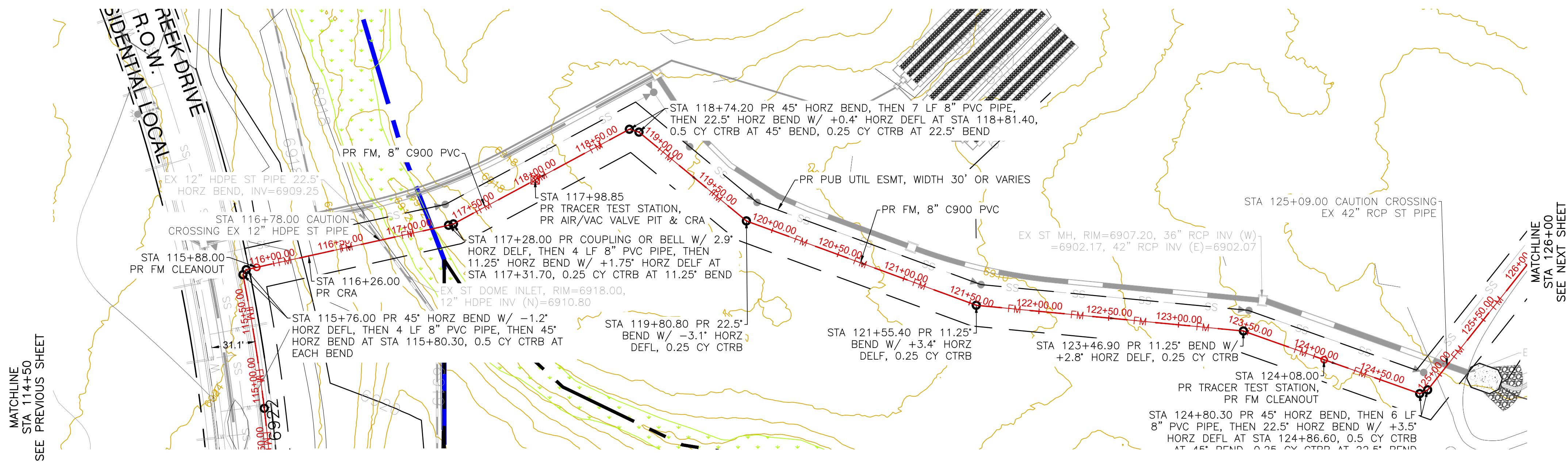
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|---------------------------------------------------------------------------------------------------------------------------------------------|
| PREPARED FOR:<br><b>ACM ALF VIII JV SUB II LLC</b><br>ATTN: JASON POCK<br>8350 E CRESCENT PKWY, #200<br>GREENWOOD, CO 80111<br>303-984-9800 |
|---------------------------------------------------------------------------------------------------------------------------------------------|



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COLORADO SPRINGS, CO 80904  
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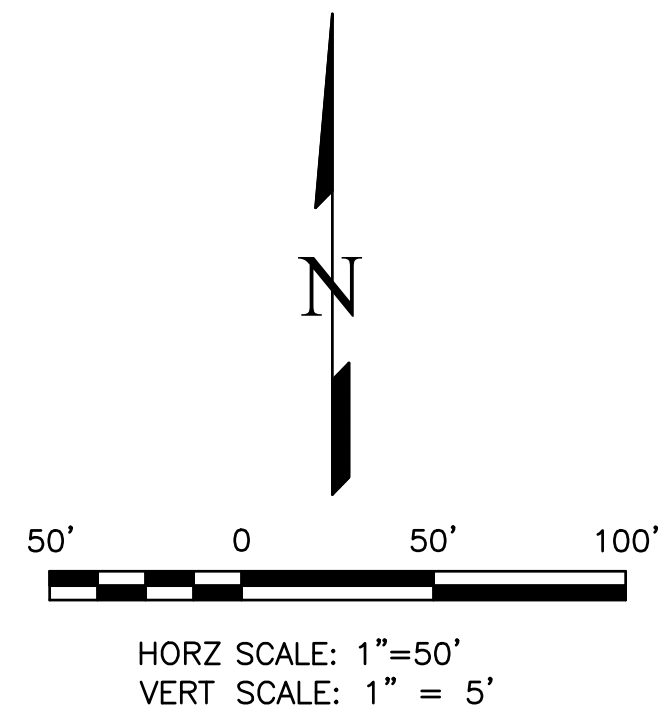
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| <b>WATERBURY SANITARY FORCE MAIN</b> |
| UTILITY CONSTRUCTION SET             |
| SANITARY FORCE MAIN PLAN & PROFILE   |

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| DESIGNED BY DLF      |
| DRAWN BY DLF         |
| CHECKED BY QNA       |
| H-SCALE AS SHOWN     |
| V-SCALE N/A          |
| JOB NO. 2604.00      |
| DATE ISSUED 07/13/26 |
| SHEET NO. 12 OF 36   |



**GENERAL NOTES:**

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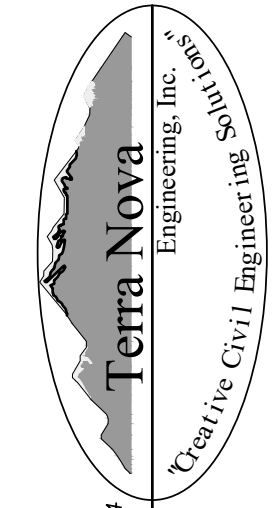
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FOR AND ON BEHALF OF TERRA NOVA ENGINEERING, INC.

QUENTIN ARMUJO  
COLORADO P.E. NO. 37170

| REVISIONS |             |
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| NO.       | DESCRIPTION |
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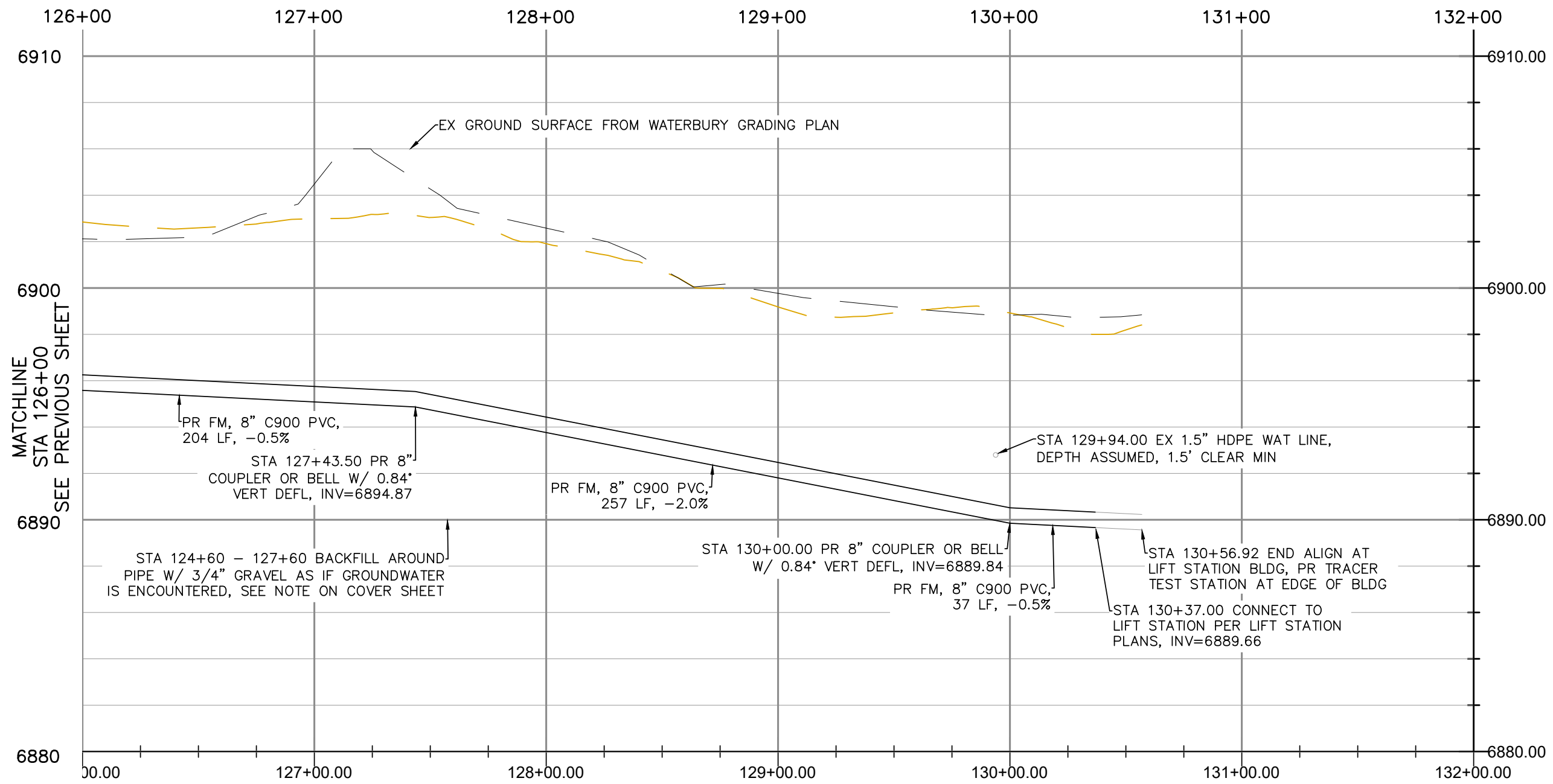
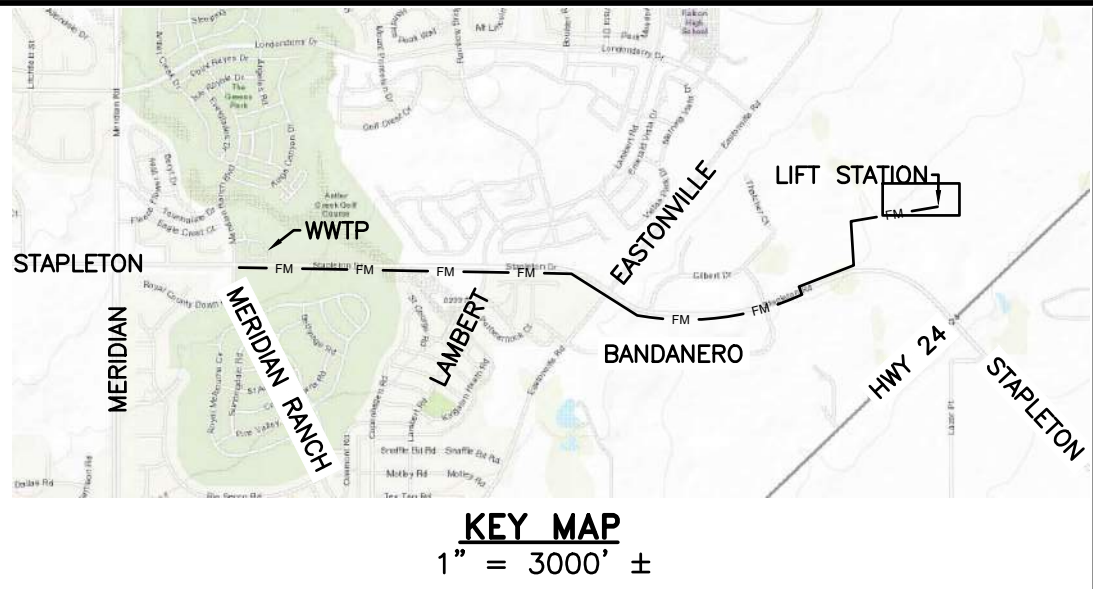
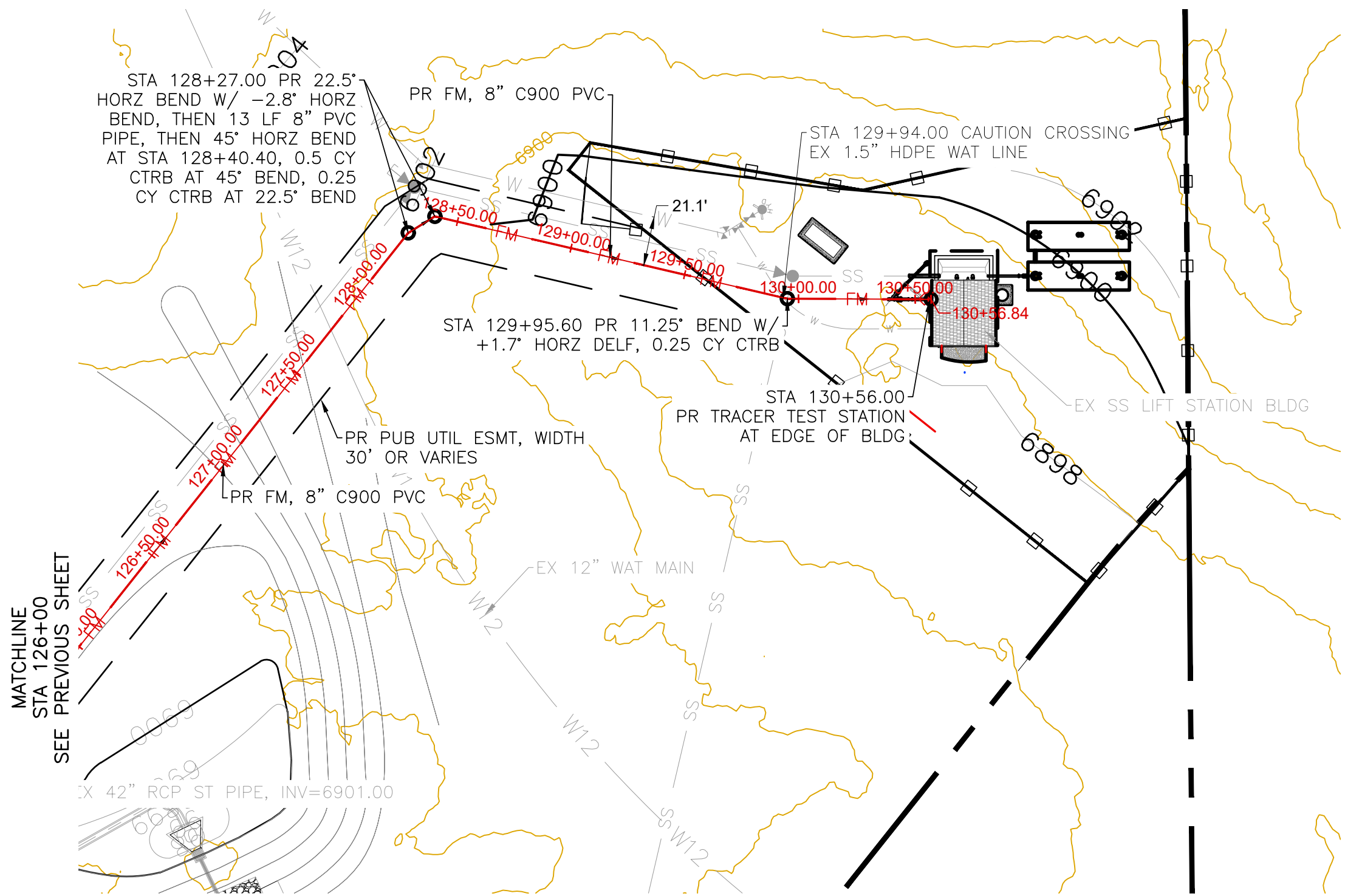
PREPARED FOR:  
**ACM ALF VIII JV SUB II LLC**  
ATTN: JASON POCK  
8350 E CRESCENT PKWY, #200  
GREENWOOD, CO 80111  
303-984-9800



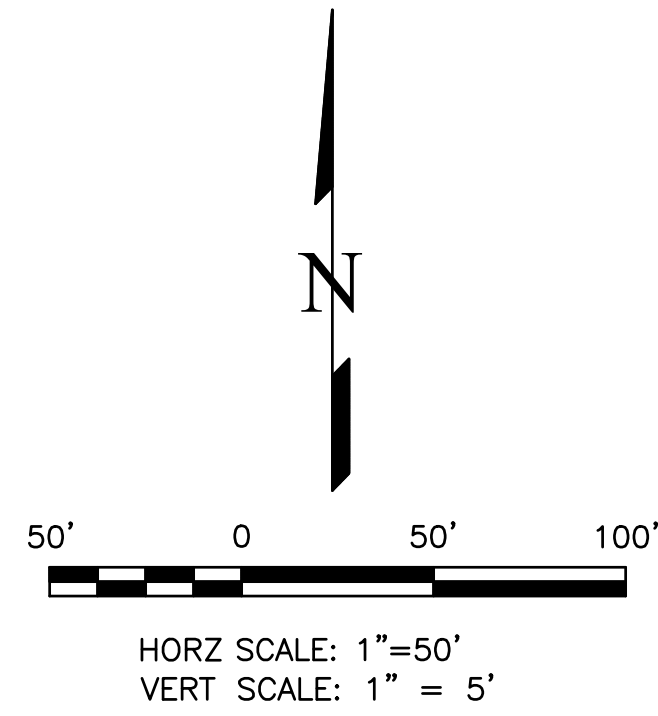
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| <b>WATERBURY SANITARY FORCE MAIN</b> |
| UTILITY CONSTRUCTION SET             |
| SANITARY FORCE MAIN PLAN & PROFILE   |

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| DESIGNED BY DLF      |
| DRAWN BY DLF         |
| CHECKED BY QNA       |
| H-SCALE AS SHOWN     |
| V-SCALE N/A          |
| JOB NO. 2604.00      |
| DATE ISSUED 07/13/26 |
| SHEET NO. 13 OF 36   |



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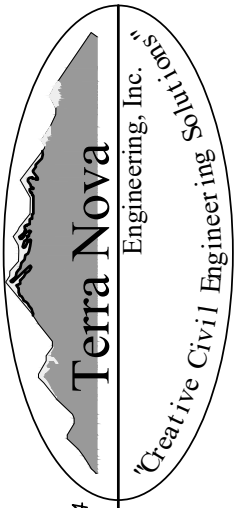
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QUENTIN ARMIJO  
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|           |     |             |      |
|-----------|-----|-------------|------|
| REVISIONS | NO. | DESCRIPTION | DATE |
|           |     |             |      |

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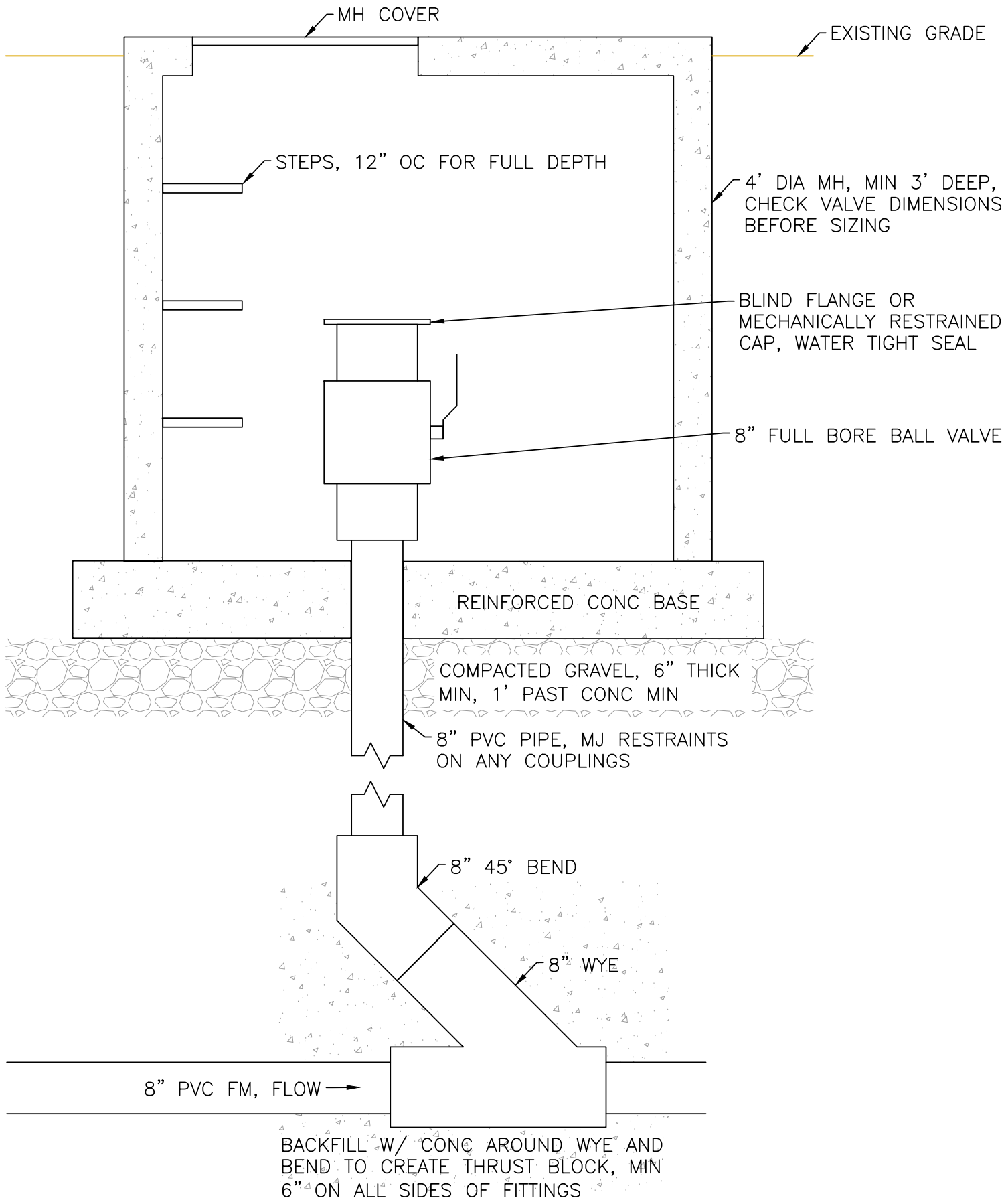
PREPARED FOR:  
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**WATERBURY SANITARY FORCE MAIN**

UTILITY CONSTRUCTION SET  
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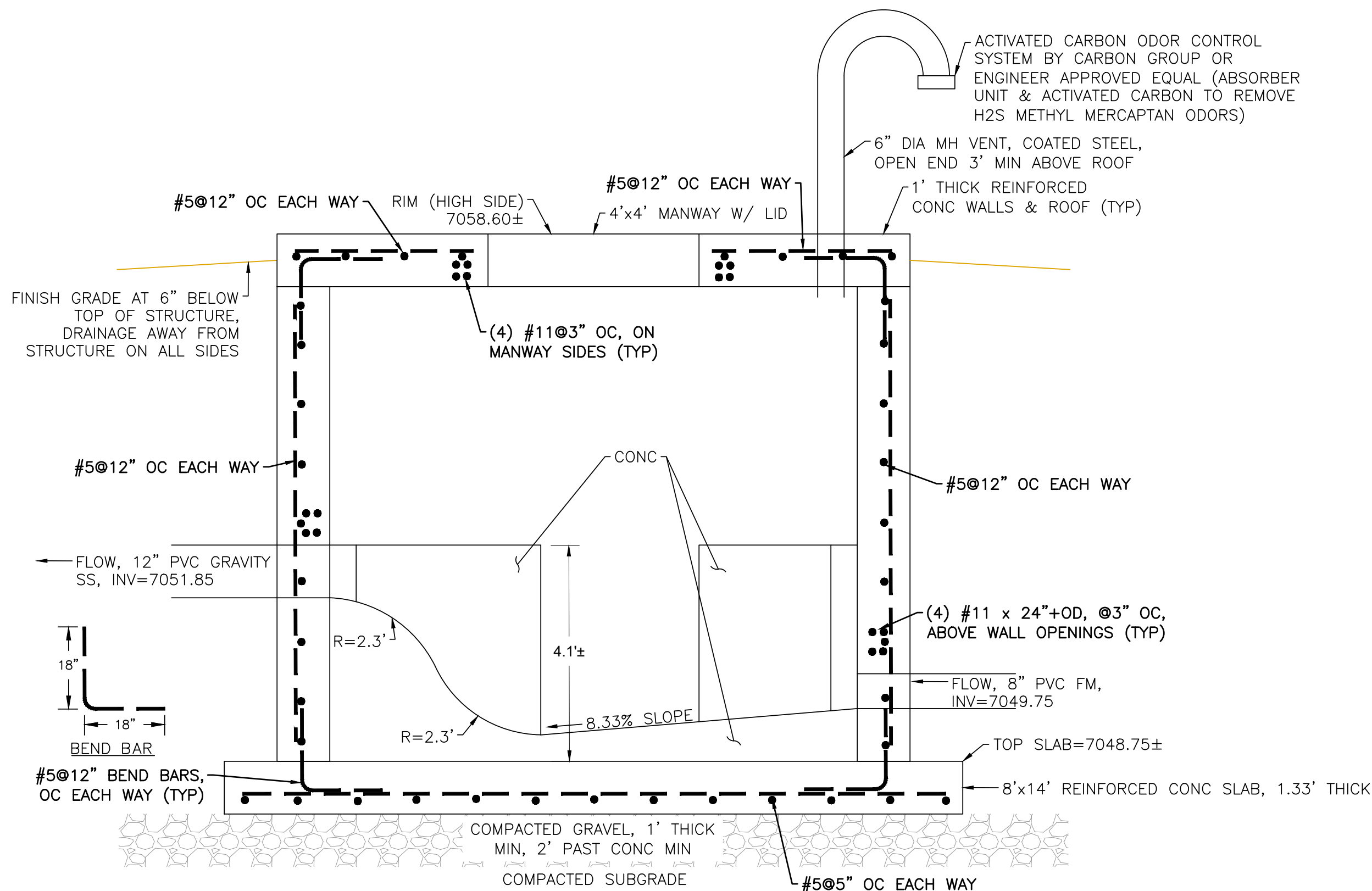
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| CHECKED BY QNA       |
| H-SCALE AS SHOWN     |
| V-SCALE N/A          |
| JOB NO. 2604.00      |
| DATE ISSUED 07/13/26 |
| SHEET NO. 14 OF 36   |



- NOTES
1. MANHOLE SHALL BE TRAFFIC RATED FOR HS-20 LOADING.
  2. SEE WHMD STANDARD SPECIFICATIONS WW-2 FOR REFERENCE. NOT ALL INFO ON REFERENCE WILL APPLY.
  3. INSTALL PIPE SUPPORTS OR RESTRAINTS ON VALVE IF NEEDED.
  4. ALL FITTINGS SHALL HAVE MJ RESTRAINTS.
  5. ADDITIONAL FITTINGS MAY BE REQUIRED TO GET RISER TO VERTICAL DEPENDING ON FORCE MAIN SLOPE.

### FORCE MAIN CLEANOUT DETAIL

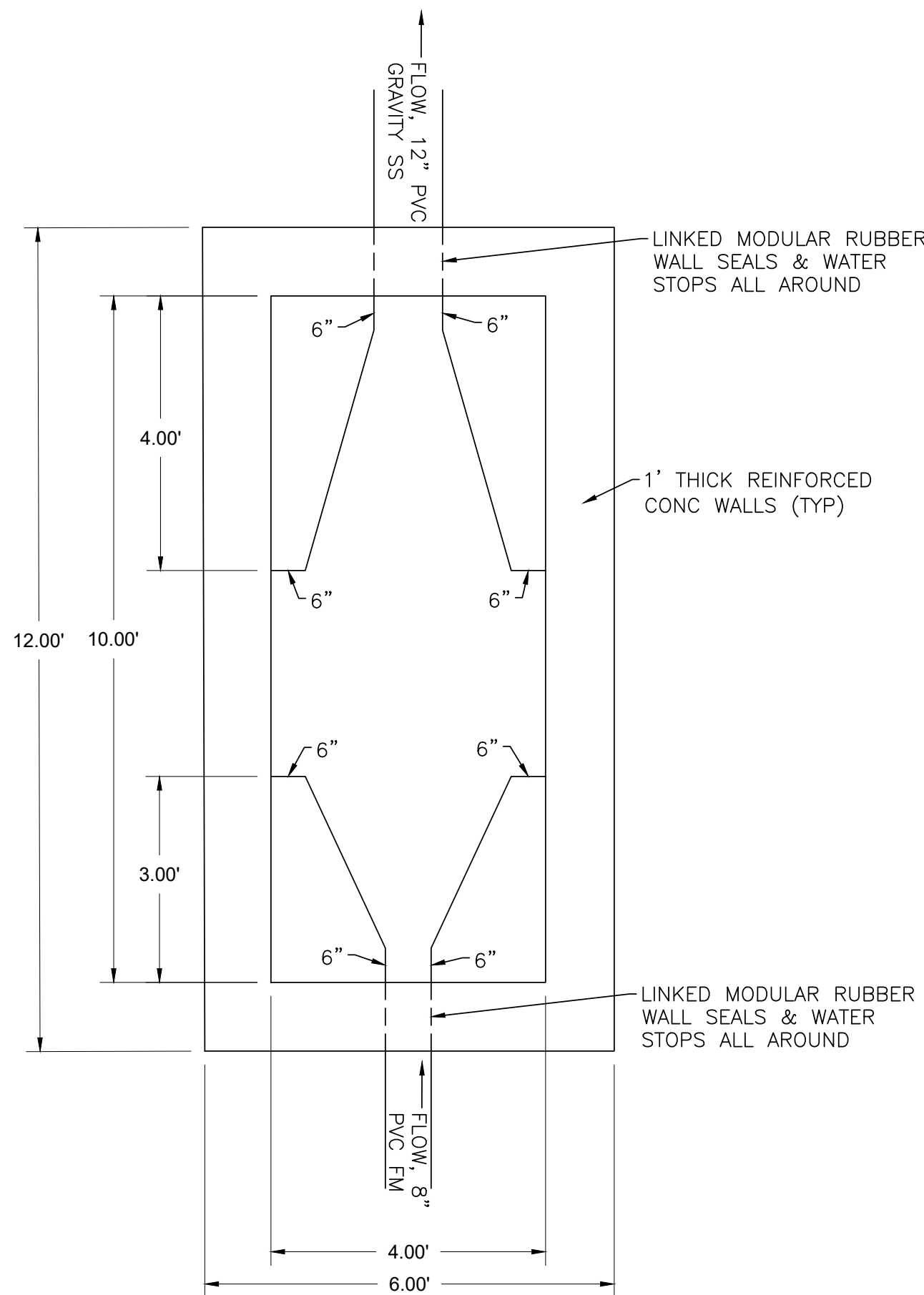
NOT TO SCALE



- NOTES
1. MIN CONC COVER OVER REBAR SHALL BE 2.5".

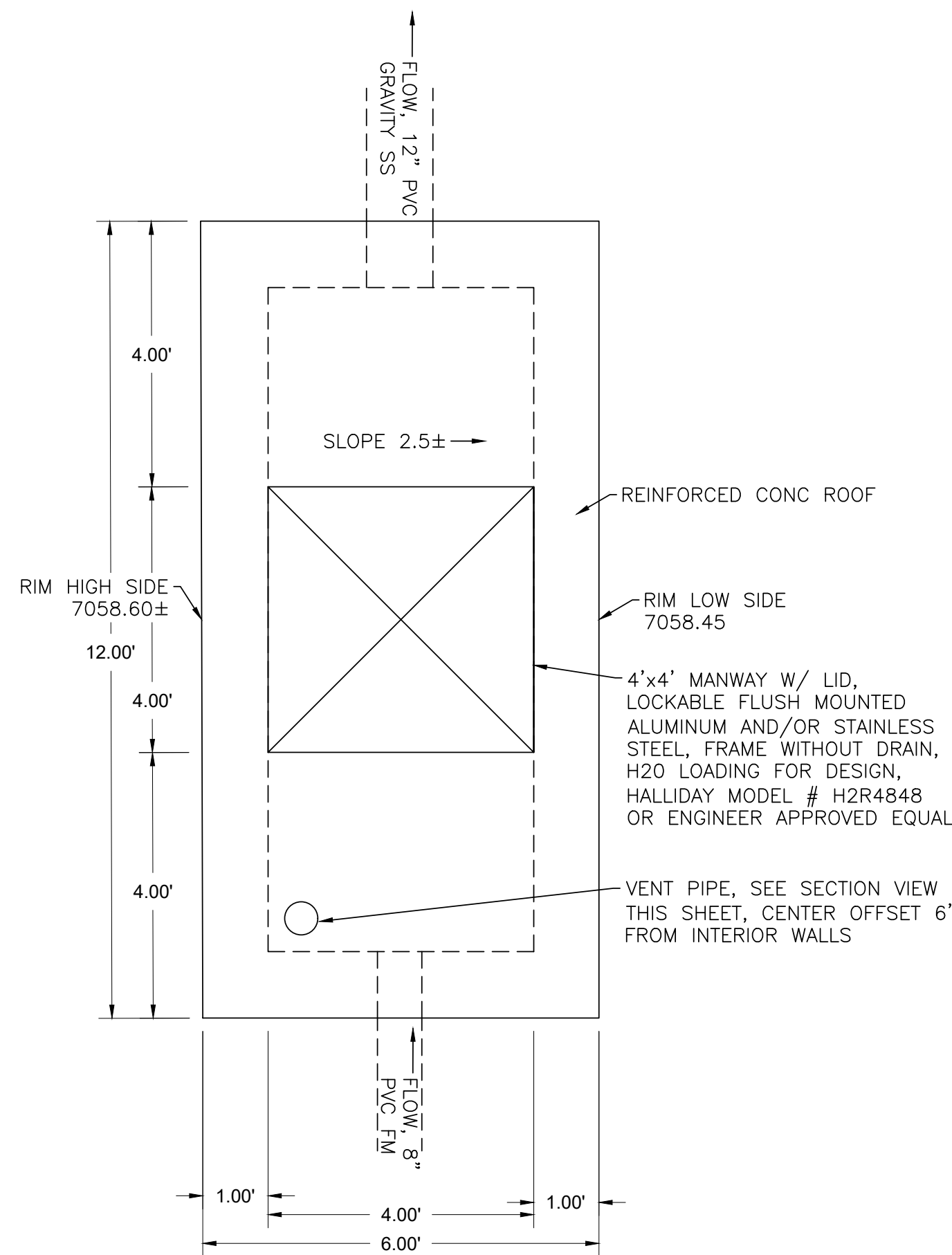
### FORCE MAIN STILLING STRUCTURE SECTION VIEW

NOT TO SCALE



### FORCE MAIN STILLING STRUCTURE PLAN VIEW

NOT TO SCALE



### FORCE MAIN STILLING STRUCTURE ROOF PLAN

NOT TO SCALE

### FORCE MAIN STILLING STRUCTURE NOTES

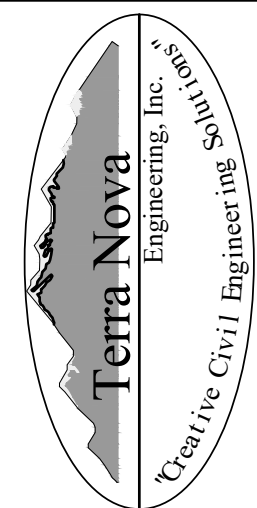
1. STRUCTURE SHALL BE PRECAST FOR BEST WATERTIGHTNESS. FLOW LINES, BENCHING, AND FILLETS MAY BE CAST IN PLACE.
2. ALL INTERIOR SURFACES SHALL BE LINED, EXCEPT MANWAY LID. SEE CORROSION PROTECTIVE LINING REQUIREMENTS.
3. HS20 LOADING REQUIRED.
4. PRIOR TO BACKFILLING AND INSTALLING ROOF, PERFORM VISUAL ONLY WATERTIGHTNESS TEST TO A MAX WATER LEVEL OF 7057'±. HOLD FOR THREE DAY AND REPAIR ANY LEAKS UNTIL EXTERIOR OF STRUCTURE REMAINS DRY.

### CORROSION PROTECTIVE LINING SPECIFICATIONS - EPOXY LINER

- A. QUALITY ASSURANCE
- A.A. ALL COATINGS SHALL CONFORM TO OSHA REQUIREMENTS FOR ALLOWABLE EXPOSURE TO LEAD AND OTHER HAZARDOUS SUBSTANCES.
- A.B. MANUFACTURER SHALL BE A COMPANY THAT SPECIALIZES IN PRODUCING HIGH QUALITY INDUSTRIAL COATING MATERIALS.
- A.C. APPLICATOR: COMPANY THAT HAS SUCCESSFULLY COMPLETED COATING SYSTEMS APPLICATIONS SIMILAR IN MATERIAL AND EXTENT TO THOSE INDICATED. APPLICATOR SHALL BE ABLE TO SUPPLY SUITABLE EQUIPMENT TO PREPARE THE SURFACES AND APPLY THE PROTECTIVE COATING SYSTEM SPECIFIED WITHIN THIS ARTICLE.
- A.D. SINGLE SOURCE RESPONSIBILITY: PROVIDE COATING MATERIAL AND THINNERS PRODUCED BY THE SAME MANUFACTURER FOR EACH SYSTEM ON ALL SURFACES OF THE MANHOLE BENCH.
- A.E. FIELD PAINTING PRE-APPLICATION MEETING: HOLD A PRE-APPLICATION MEETING BEFORE THE START OF FIELD SURFACE PREPARATION AND COATINGS APPLICATION. REQUIRE ATTENDANCE OF PARTIES DIRECTLY AFFECTING WORK OF THIS SPECIAL PROVISION, INCLUDING THE ENGINEER, APPLICATOR, INSPECTOR, AND COATING MANUFACTURER'S REPRESENTATIVE. REVIEW THE SPECIFICATIONS TO INSURE EACH PARTY'S RESPONSIBILITIES ARE UNDERSTOOD. SUBJECTS TO BE DISCUSSED ARE: ENVIRONMENTAL REQUIREMENTS, PROTECTION OF SURFACES NOT SCHEDULED TO BE COATED, SURFACE PREPARATION, APPLICATION, REPAIR, FIELD QUALITY CONTROL, CLEANING, PROTECTION OF COATING SYSTEMS, COORDINATION WITH OTHER WORK, AND ANY OTHER AREAS OF CONCERN EXPRESSED AT THE MEETING.
- A.F. DUST AND CONTAMINANTS: SCHEDULE COATING WORK TO AVOID EXCESSIVE DUST AND AIRBORNE CONTAMINANTS. PROTECT WORK AREA FROM EXCESSIVE DUST AND AIRBORNE CONTAMINANTS DURING COATING APPLICATION AND CURING.
- B. WARRANTY: FULL WARRANTY AGAINST DEFECTS IN MATERIALS AND WORKMANSHIP FOR TWO YEARS AFTER SUBSTANTIAL COMPLETION, INCLUDING ALL PARTS, LABOR, AND EXPENSES.
- C. PRODUCTS
- C.A. MANUFACTURERS: ITW POLYMER COATINGS, MAINSTAY, RAVEN, SAUERISEN, OR APPROVED EQUAL.
- C.B. GENERAL:
- C.B.A. APPLICATION METHOD SHALL BE DESIGNED AND INSTALLED USING TECHNIQUE RECOMMENDED BY THE MANUFACTURER.
- C.B.B. COLORS SHALL BE PER INSPECTOR (WHITE, GRAY, OR TAN EXPECTED).
- C.B.C. UNLESS OTHERWISE NOTED, ITW POLYMERS COATINGS PRODUCTS ARE IDENTIFIED IN THIS EPOXY LINER SYSTEM TO ESTABLISH QUALITY AND TYPE DESIRED.
- C.B.D. SYSTEM THICKNESS OR COVERAGE RATE IS RECOMMENDED BY ITW POLYMERS COATINGS. IF OTHER MANUFACTURERS ARE USED, MANUFACTURER REQUIREMENTS SHALL BE FOLLOWED, BUT IN NO CASE SHALL THICKNESS OR COVERAGE RATE BE LESS THAN ITW POLYMERS COATINGS.
- C.C. PROPERTIES - MEET THE FOLLOWING:
- | PROPERTY             | TEST METHOD | PERFORMANCE |
|----------------------|-------------|-------------|
| COMPRESSIVE STRENGTH | ASTM C579   | 12,870 PSI  |
| TENSILE STRENGTH     | ASTM D637   | 6,890 PSI   |
| FLEXURAL STRENGTH    | ASTM D580   | 12,443 PSI  |
| BOND STRENGTH        | ASTM D4541  | 450 PSI     |
- C.C.A. VOLUME OF SOLIDS: 100%
- C.D. SURFACE PREPARATION
- C.D.A. CONCRETE SURFACES SHALL BE ABRASIVE BLASTED IN ACCORDANCE WITH SSPC-SP13 TO PRODUCE A CLEAN AND ROUGHENED SURFACE FINISH. ALTERNATIVE SURFACE PREPARATION METHODS INCLUDE WET GRIT BLASTING AND HIGH OR ULTRA-HIGH PRESSURE WATER JETTING.
- C.D.B. ALL LOOSE SURFACE CONTAMINATION SHALL BE COMPLETELY REMOVED BY VACUUMING OR HIGH PRESSURE WATER WASHING. THE SUBSTRATE MUST BE VISIBLY DRY BEFORE PROCEEDING. ANY SPECIFIC AREA THAT IS NOT VISIBLY DRY OR IS EXPERIENCING WATER PENETRATION (I.E. GROUND WATER SEEPAGE) SHALL BE SURFACE DRIED UTILIZING FORCED AIR HEATING OR DEHUMIDIFICATION UNITS. MOISTURE VAPOR TRANSMISSION SHOULD BE THREE POUNDS OR LESS PER 1,000 SQUARE FEET OVER A 24 HOUR PERIOD, AS CONFIRMED THROUGH A CALCIUM CHLORIDE TEST PER ASTM E-1907. QUANTITATIVE RELATIVE HUMIDITY (RH) TESTING, ASTM F-2170, SHOULD CONFIRM CONCRETE RH RESULTS BELOW 75%.
- C.D.C. PROVIDE A SURFACE PROFILE OF ICRI SCP-3 TO ICRI CSP-5.
- C.E. SYSTEM
- C.E.A. CONCRETE RESURFACING: ROUGH CONCRETE, SPALLED CONCRETE, OR CONCRETE SURFACES WITH VOIDS AND/OR BUG HOLES MUST BE RESURFACED IN ACCORDANCE WITH MANUFACTURE'S RECOMMENDATION.
- C.E.B. PRIMER COAT: 1 COAT, 125 TO 175 SQUARE FEET PER GALLON (SFPG) "POLYSPEC MMP PRIMER, TRANSPARENT AMBER" BY ITW POLYMERS COATINGS, OR APPROVED EQUAL.
- C.E.C. INTERMEDIATE COAT: 1 COAT, 40.0 TO 60.0 DRY FILM THICKNESS (MILS/COAT) "TUFFREZ 240, GRAY" BY ITW POLYMERS COATINGS, OR APPROVED EQUAL.
- C.E.D. TOP COAT: 1 COAT, 40.0 TO 60.0 DRY FILM THICKNESS (MILS/COAT) "TUFFREZ 240, GRAY" BY ITW POLYMERS COATINGS, OR APPROVED EQUAL.
- C.F. THINNING AND MIXING
- C.F.A. EPOXY LINER MATERIALS SHALL BE MIXED WITH A POWER MIXER OF SUFFICIENT SIZE TO ENSURE COMPLETE DISPERSION OF PIGMENTS AND BLENDING OF REACTIVE COMPONENTS.
- C.F.B. EPOXY LINER MATERIALS SHALL NOT BE THINNED UNLESS SPECIFICALLY ALLOWED BY THE MANUFACTURER'S RECOMMENDATIONS.
- C.G. EPOXY INSTALLATION
- C.G.A. EXAMINATION
- C.G.A.A. EXAMINE AREAS AND CONDITIONS UNDER WHICH THE EPOXY LINER SYSTEM IS TO BE APPLIED. NOTIFY CONTRACTOR AND ENGINEER OF AREAS OR CONDITIONS THAT ARE NOT ACCEPTABLE. NO NOT BEGIN SURFACE PREPARATION OR APPLICATION UNTIL UNACCEPTABLE AREAS OR CONDITIONS HAVE BEEN CORRECTED.
- C.G.A.B. PROTECT SURROUNDING AREAS AND SURFACES NOT SCHEDULED TO BE COATED FROM DAMAGE DURING SURFACE PREPARATION AND APPLICATION OF EPOXY LINER SYSTEM. IMMEDIATELY REMOVED EPOXY LINER SYSTEM THAT FALL ON SURROUNDING AREAS AND SURFACES NOT SCHEDULED TO BE COATED.
- C.G.A.C. ALL EPOXY LINER MATERIALS SHALL BE MIXED AND APPLIED AT TEMPERATURES IN ACCORDANCE WITH THESE SPECIFICATIONS AND THE MANUFACTURER'S RECOMMENDATIONS.
- C.G.A.C.A. EPOXY LINER MATERIALS SHALL NOT BE APPLIED IN INCLEMENT WEATHER CONDITIONS. RELATIVE HUMIDITY MUST BE BELOW 85%.
- C.G.A.C.C. THE MINIMUM SUBSTRATE TEMPERATURE AT THE TIME OF APPLICATION SHALL BE 45°F. THE MAXIMUM SUBSTRATE TEMPERATURE AT THE TIME OF APPLICATION SHALL BE 100°F.
- C.G.A.C.D. AT THE TIME OF APPLICATION, THE SUBSTRATE TEMPERATURE MUST BE AT LEAST 5°F ABOVE THE DEW POINT.
- C.G.A.C.E. DURING APPLICATION, THE SUBSTRATE TEMPERATURE MUST BE DECLINING.
- C.G.A.D. ADEQUATE LIGHTING SHALL BE PROVIDED TO SUFFICIENTLY LIGHT UP ALL AREAS TO BE WORKED ON WITHOUT INCLUSION OF SHADOW AREAS. ADEQUATE LIGHTING SHALL BE CONSIDERED A MINIMUM OF 20 FOOT CANDLES IN ALL AREAS IN WHICH WORK OR INSPECTION PROCESSING ARE OCCURRING.
- C.G.A.E. EPOXY LINER MATERIALS SHALL NOT BE APPLIED IN WINDY CONDITIONS. CONTRACTOR SHALL ENSURE WINDBLOWN MATTER IS PREVENTED FROM CONTAMINATED FRESHLY COATED SURFACES.
- C.G.A.F. KEEP CONTAINERS CLOSED WHEN NOT IN USE TO AVOID CONTAMINATION.
- C.G.A.G. DON NOT USE MIXED EPOXY LINER MATERIALS BEYOND POT LIFE LIMITS.
- C.G.A.H. APPLY MULTIPLE COATS WITHIN MANUFACTURER'S RECOMMENDED RECOAT TIMEFRAME.
- C.G.A.I. USE APPLICATION EQUIPMENT, TOOLS, PRESSURE SETTINGS, AND TECHNIQUES IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- C.G.A.J. UNIFORMLY APPLY EPOXY LINER MATERIALS AT SPREADING RATE REQUIRED TO ACHIEVE SPECIFIED DFT.
- C.G.A.K. APPLY EPOXY LINER MATERIALS TO BE FREE OF FILM DEFECTS THAT WOULD ADVERSELY AFFECT PERFORMANCE OF THE LINE SYSTEM.
- C.G.B. REPAIRS
- C.G.B.A. DAMAGED MATERIALS: REPAIR OR REPLACE DAMAGED MATERIALS AND SURFACES NOT SCHEDULED TO BE COATED.
- C.G.B.B. DAMAGED LINER SYSTEM: REPAIR DAMAGED EPOXY LINER MATERIALS.
- C.G.B.B.A. REPAIRS SHALL BE MADE WITH THE EPOXY LINER SYSTEM, SURFACE PREPARATION, AND COAT THICKNESS SPECIFIED IN ARTICLE 120141A.02, A.
- C.G.B.B.B. COMPLETE REPLACEMENT OF THE EPOXY LINER MAY BE REQUIRED BY ENGINEER OR INSPECTOR IF THE DAMAGED OR UNSATISFACTORY AREA EXCEEDS 2% OF THE TOTAL COATED SURFACE AREA.
- C.G.B.B.C. PRIOR TO ANY REPAIR WORK, THE SURFACE SHALL BE CLEANED IN ACCORDANCE WITH SSPC-SP 1.
- C.G.B.B.D. INTACT AREAS AROUND THE DAMAGED AREA SHALL BE FEATHERED BY EITHER HAND SANDING, POWER TOOL CLEANING, OR ABRASIVE BLAST CLEANING PRIOR TO THE APPLICATION OF THE EPOXY LINER.
- C.G.B.C. LINER SYSTEM DEFECTS: COMPLETELY REPLACE THE DEFECTIVE EPOXY LINER WITH THE EPOXY LINER SYSTEM, SURFACE PREPARATION, AND COAT THICKNESS SPECIFIED IN ARTICLE 120141A.01, A.
- C.H. TESTING EQUIPMENT AND PROCEDURES
- C.H.A. PROVIDE ON THE PROJECT SITE, THE TESTING EQUIPMENT NECESSARY TO TEST THE FOLLOWING. EQUIPMENT SHALL BE IN CALIBRATION AND PROPER WORKING ORDER. EQUIPMENT SHALL BE USED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS OR AS DIRECTED BY THE ENGINEER OR INSPECTOR. THE INSPECTOR SHALL BE NOTIFIED OF THE TIME OF TESTING SO THAT THE MIGHT BE PRESENT TO WITNESS TESTING. KEEP A DAILY LOG OF ENVIRONMENTAL CONDITIONS, WORK SCHEDULE, AND ANY OTHER PERTINENT INFORMATION. THE LOG SHALL BE TURNED OVER TO THE INSPECTOR AT THE END OF THE PROJECT TO BE INCLUDED IN THE PERMANENT RECORD. PROVIDE QUALIFIED PERSONNEL TO PERFORM THE FOLLOWING TESTING:
- C.H.A.A. MONITORING AMBIENT TEMPERATURE.
- C.H.A.B. DETECTING OIL OR WATER IN COMPRESSED AIR.
- C.H.A.C. DETERMINING DEGREE OF CLEANLINESS FOR BLAST CLEANED SURFACES.
- C.H.A.D. MEASURING NON-VISIBLE CONTAMINANTS ON CONCRETE SURFACES.
- C.H.A.E. MEASURING CONCRETE SURFACE PROFILE.
- C.H.A.F. MONITORING THE MIXING AND THINNING OF EPOXY LINER MATERIALS.
- C.H.A.G. MEASURING WET FILM THICKNESS OF EPOXY LINER MATERIALS.
- C.H.A.H. MEASURING EPOXY LINER MATERIAL ADHESION USING PORTABLE ADHESION TESTERS (DESTRUCTIVE TEST TO BE PERFORMED ONLY WHEN REQUIRED).
- C.H.A.I. DISCONTINUITY OR HOLIDAY TESTING OF EPOXY LINER MATERIALS.
- C.H.A.J. TESTING FOR CURE OF EPOXY LINER MATERIALS.

THIS DESIGN WAS PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF TERRA NOVA ENGINEERING, INC.

QUENTIN ARMJO  
COLORADO P.E. NO. 37170

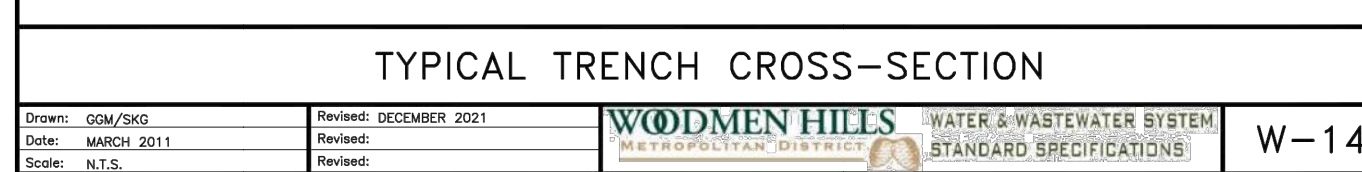
|                                                                                                               |  |                                                                                                                                                             |  |                                                                                                                                                                              |  |                          |  |           |                                                                                                                                                                 |  |
|---------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------|--|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <div>WATERBURY SANITARY FORCE MAIN</div> <div>UTILITY CONSTRUCTION SET</div> <div>UTILITY DETAILS SHEET</div> |  | <div>721 S. 23RD STREET</div> <div>COLORADO SPRINGS, CO 80904</div> <div>OFFICE: 719-635-6422</div> <div>FAX: 719-635-6426</div> <div>www.tnecinc.com</div> |  | <div></div> <div>Terra Nova Engineering, Inc.</div> <div>Trusted Civil Engineering</div> |  | UNTIL SUCH TIME AS THESE |  | REVISIONS | DRAWINGS ARE APPROVED<br>BY THE ENGINEER, TERRA<br>NOVA ENGINEERING,<br>INC. APPROVES THEIR USE<br>ONLY FOR THE PROJECTS<br>LISTED BY WRITTEN<br>AUTHORIZATION. |  |
|                                                                                                               |  |                                                                                                                                                             |  |                                                                                                                                                                              |  | DRAWINGS ARE APPROVED    |  |           |                                                                                                                                                                 |  |
|                                                                                                               |  |                                                                                                                                                             |  |                                                                                                                                                                              |  | BY THE ENGINEER, TERRA   |  |           |                                                                                                                                                                 |  |
|                                                                                                               |  |                                                                                                                                                             |  |                                                                                                                                                                              |  | NOVA ENGINEERING,        |  |           |                                                                                                                                                                 |  |
|                                                                                                               |  |                                                                                                                                                             |  |                                                                                                                                                                              |  | INC. APPROVES THEIR USE  |  |           |                                                                                                                                                                 |  |
|                                                                                                               |  |                                                                                                                                                             |  |                                                                                                                                                                              |  | ONLY FOR THE PROJECTS    |  |           |                                                                                                                                                                 |  |
|                                                                                                               |  |                                                                                                                                                             |  |                                                                                                                                                                              |  | LISTED BY WRITTEN        |  |           |                                                                                                                                                                 |  |
|                                                                                                               |  |                                                                                                                                                             |  |                                                                                                                                                                              |  | AUTHORIZATION.           |  |           |                                                                                                                                                                 |  |
|                                                                                                               |  |                                                                                                                                                             |  |                                                                                                                                                                              |  | NO.                      |  |           |                                                                                                                                                                 |  |

|                            |  |
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| PREPARED FOR:              |  |
| ACM ALF VIII JV SUB II LLC |  |
| ATTN: JASON POCK           |  |
| 8350 E CRESCENT PKWY, #200 |  |
| GREENWOOD, CO 80111        |  |
| 303-984-9800               |  |

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|----------------------|
| DESIGNED BY DLF      |
| DRAWN BY DLF         |
| CHECKED BY QNA       |
| H-SCALE AS SHOWN     |
| V-SCALE N/A          |
| JOB NO. 2604.00      |
| DATE ISSUED 07/13/26 |
| SHEET NO. 15 OF 36   |

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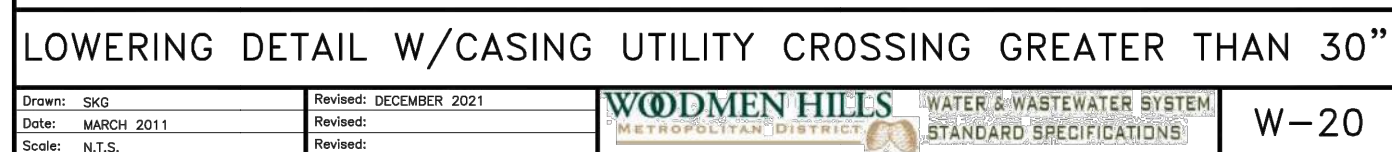
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|----------------------------------------------------------------------|-----------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|-------------|
| <h2 style="margin: 0;">THRUST BLOCK DATA</h2>                        |                                                                       |  | <b>WOODMEN HILLS</b><br>METROPOLITAN DISTRICT<br>WATER & WASTEWATER SYSTEM<br>STANDARD SPECIFICATIONS | <b>W-11</b> |
| Drawn: <b>SWD</b><br>Date: <b>MARCH 2011</b><br>Scale: <b>N.T.S.</b> | Revised: <b>DECEMBER 2021</b><br><br>Revised: _____<br>Revised: _____ |                                                                                     |                                                                                                       |             |



**NOTES:**

1. THE MINIMUM BEARING SURFACE AREAS SHOWN ARE BASED ON A MAX. STAT. STIP. PRESSURE OF 170,000/250 PSI PER SQUARE INCH PLUS A FACTOR OF 1.5. AND AN ALLOWABLE SOIL BEARING CAPACITY OF 1,500 POUNDS PER SQUARE FOOT. FOR HORIZONTAL SURFACES, THE DESIGN ENGINEER SHALL INCLUDE A MAX. 50°F TEMPERATURE CHANGE AND A POISSON RATIO THAT IS 0.45. REFERENCE ANNA M-23, M-41, AND M-25.
2. THE DESIGN ENGINEER SHALL PROVIDE A SPECIFIC DESIGN FOR EACH SURFACE. THE DESIGN SHALL BE IN ACCORDANCE WITH ANNA M-23, PAVE DESIGN AND ANNA M-25, AND ANNA M-26. THE DESIGN SHALL BE BASED ON THE ASSUMPTIONS, THE DESIGN ENGINEER SHALL PROVIDE A SPECIFIC DESIGN THAT SHALL BE IN ACCORDANCE WITH ANNA M-23, PAVE DESIGN AND ANNA M-25, AND ANNA M-26. THE DESIGN SHALL BE BASED ON THE ASSUMPTIONS, THE DESIGN ENGINEER SHALL PROVIDE A SPECIFIC DESIGN THAT SHALL BE IN ACCORDANCE WITH ANNA M-23, PAVE DESIGN AND ANNA M-25, AND ANNA M-26.
3. THE DESIGN ENGINEER SHALL PROVIDE A SPECIFIC DESIGN THAT SHALL BE IN ACCORDANCE WITH ANNA M-23, PAVE DESIGN AND ANNA M-25, AND ANNA M-26. THE DESIGN SHALL BE BASED ON THE ASSUMPTIONS, THE DESIGN ENGINEER SHALL PROVIDE A SPECIFIC DESIGN THAT SHALL BE IN ACCORDANCE WITH ANNA M-23, PAVE DESIGN AND ANNA M-25, AND ANNA M-26.
4. THE DESIGN ENGINEER SHALL PROVIDE A SPECIFIC DESIGN THAT SHALL BE IN ACCORDANCE WITH ANNA M-23, PAVE DESIGN AND ANNA M-25, AND ANNA M-26. THE DESIGN SHALL BE BASED ON THE ASSUMPTIONS, THE DESIGN ENGINEER SHALL PROVIDE A SPECIFIC DESIGN THAT SHALL BE IN ACCORDANCE WITH ANNA M-23, PAVE DESIGN AND ANNA M-25, AND ANNA M-26.
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|                                                        |                        |                                                                                     |     |
|--------------------------------------------------------|------------------------|-------------------------------------------------------------------------------------|-----|
| CONCRETE REVERSE ANCHOR FOR MECHANICAL JOINT RESTRAINT |                        |                                                                                     |     |
| Drawn: GDA/SBG                                         | Revised: DECEMBER 2021 |  | W - |
| Date: MARCH 2011                                       | Revised:               |                                                                                     |     |
| Scale: N.T.S.                                          | Revised:               |                                                                                     |     |



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| DESIGNED BY DLF      |
| DRAWN BY DLF         |
| CHECKED BY QNA       |
| H-SCALE AS SHOWN     |
| V-SCALE N/A          |
| JOB NO. 2604.00      |
| DATE ISSUED 07/13/20 |
| SHEET NO. 16 OF 3    |

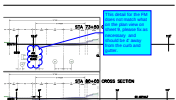


# V4 CD\_comments.pdf Markup Summary

Jalal Saleh (4)

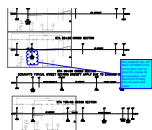


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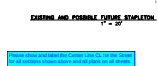
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This detail for the FM does not match what on the plan view on sheet 9, please fix as necessary and should be 4' away from the curb and gutter.



**Subject:** Cloud+  
**Page Label:** [1] 3 OVERVIEW  
**Author:** Jalal Saleh  
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This detail for the FM does not match what on the plan view on sheet 10, please fix as necessary and should be 4' away from the curb and gutter.



**Subject:** Text Box  
**Page Label:** [1] 3 OVERVIEW  
**Author:** Jalal Saleh  
**Date:** 7/17/2026 3:18:54 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

Please show and label the Center Line CL for the Street for all sections shown above and all plans on all sheets.