

SOUTH DURANGO SANITATION DISTRICT

THREE SPRINGS CROSSING REPLACEMENT

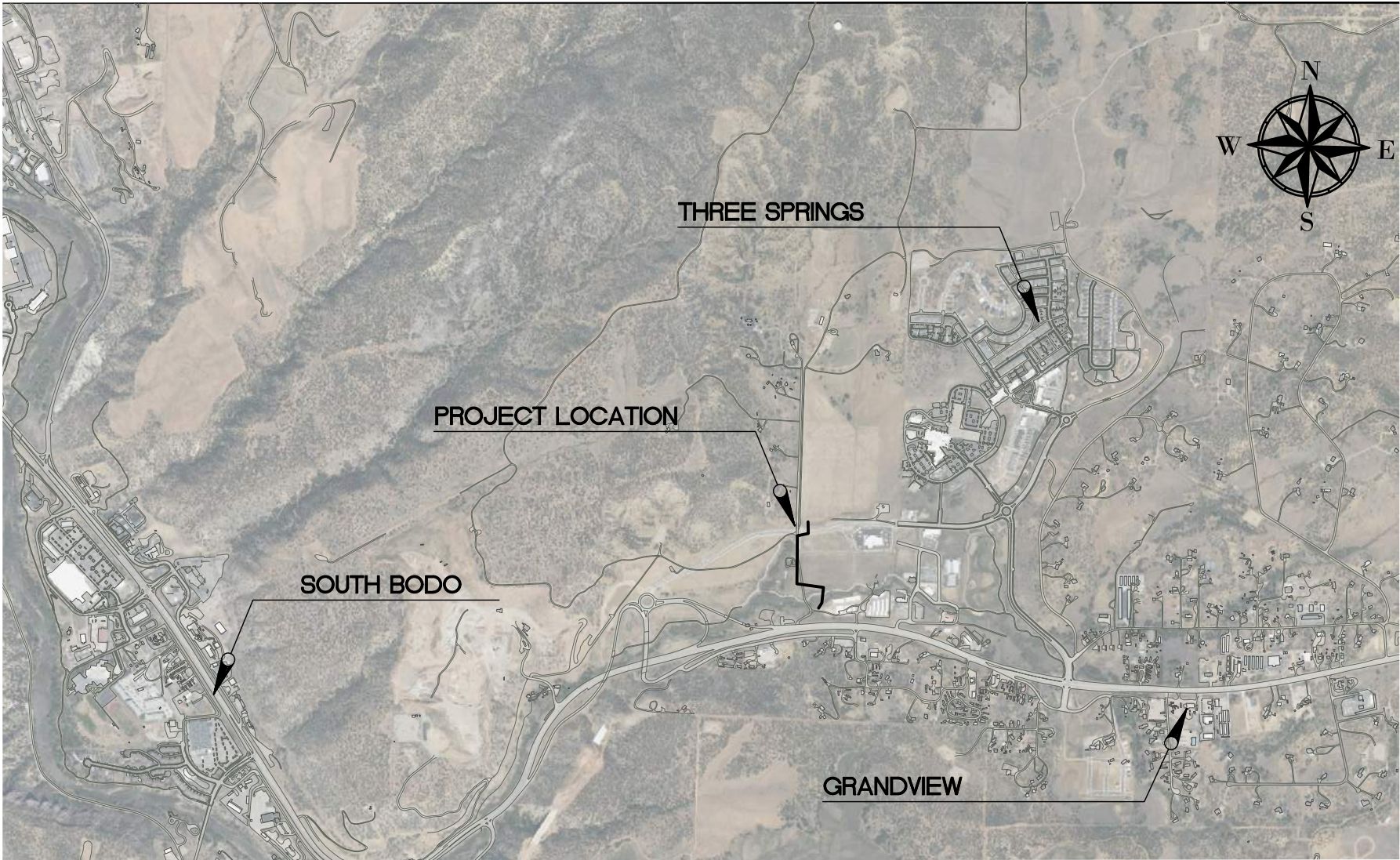
FEBRUARY 2025

**South Durango
Sanitation District**

SJE
SAN JUAN ENGINEERING



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VICINITY MAP

SCALE: 1"=2000'

SYMBOLS LEGEND

	EXISTING ELECTRIC PEDESTAL/TRANSFORMER		6330	EXISTING MAJOR CONTOUR
	EXISTING ROADWAY SIGN			EXISTING MINOR CONTOUR
	EXISTING TREE		6330	PROPOSED MAJOR CONTOUR
	CONTROL MONUMENTS			PROPOSED MINOR CONTOUR
	SOIL BORING LOCATION			EXISTING UNDERGROUND ELECTRIC
	CUT PIPE			EXISTING FIBER OPTIC LINE
	CONCRETE			EXISTING NATURAL GAS LINE
	GROUT			EXISTING OVERHEAD ELECTRIC LINE
	EARTH			EXISTING 8" WATER MAIN
	ROCK/GRAVEL			EXISTING 12" WATER MAIN
				EXISTING PRODUCED WATER
				EXISTING 8" SANITARY SEWER PIPE
				EXISTING 24" STORM DRAIN PIPE
				EXISTING SANITARY SEWER EASEMENT
				PROPERTY LINE

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	SS-2	7 of 15	SEWER PLAN & PROFILE STA: 0+00 - 3+50
	SS-3	8 of 15	SEWER PLAN & PROFILE STA: 3+50 - 7+25
	SS-4	9 of 15	SEWER PLAN & PROFILE STA: 7+25 - 11+75
	SS-5	10 of 15	SEWER PLAN & PROFILE STA: 11+75 - 15+87
	CD1	11 of 15	STANDARD MANHOLE DETAILS
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	CD5	15 of 15	CIVIL DETAILS

SUMMARY OF QUANTITIES

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY
1	REMOVE & DISPOSE OF EX 4' DIA MANHOLE BASES	EA	7
2	REMOVE & DISPOSE OF EX 10" SEWER PIPE	LF	1555
3	BEDDED 15" PVC SDR 35 SEWER MAIN	LF	1555
4	NEW STANDARD 4' DIAMETER MANHOLE BASES	EA	7
5	CORE EX 4' DIA MANHOLES	EA	2
6	REMOVE AND RE-INSTALL EX MANHOLE BARRELS, CONES, RINGS, AND COVERS	LS	1
7	8" SEWER MAIN RECONNECTION	EA	2
8	FLOWFILL ABOVE PIPE BEDDING WITHIN CITY OF DURANGO STREET - WILSON GULCH DRIVE ***	CY	250
9	FLOWFILL ABOVE PIPE BEDDING WITHIN CITY OF DURANGO STREET - HIGH LLAMA LANE ***	CY	800
10	HAUL AND DISPOSAL OF EXCESS CUT MATERIAL FOR TRENCHING FILLED WITH FLOWFILL *	CY	1050
11	REMOVE AND RE-INSTALL SEWER PIPE IN STEEL CASING OVER WILSON GULCH COMPLETE	LF	100
12	REMOVE AND RESET EX 24" RCP STORM PIPE **	EA	2
13	REMOVE AND REPLACE EX CONC BIKE PATH - NEAR WILSON GULCH	LS	1
14	REPLACE EX GRAVEL ROAD - HIGH LLAMA LANE	LS	1
15	REMOVE AND REPLACE EX CURB & GUTTER, SIDEWALK AND ASPHALT - HIGH LLAMA LANE	LS	1
16	REMOVE AND REPLACE EX CURB & GUTTER, SIDEWALK AND ASPHALT - WILSON GULCH DRIVE	LS	1
17	REMOVE AND RESET EX DRAINAGE RIP-RAP - PROJECT WIDE	LS	1
18	EX UTILITY HYDROVAC POTHOLING	LS	1
19	LANDSCAPING ALLOWANCE - CITY R.O.W.	LS	1
20	SILT FENCE	LF	2700
21	EROSION LOGS	LF	130
22	FILTER SOCKS AT ALL CURB INLETS	LS	1
23	PROTECTION BARRIERS AT STORM WATER INLETS	LS	1
24	ROCK SOCKS IN GUTTER FLOWLINE	LS	1
25	SEEDING/REVEGETATION	ACRE	0.65

* HAUL AND DISPOSAL OF EXCESS CUT MATERIAL QUANTITY CAN VARY SIGNIFICANTLY DEPENDANT ON CONTRACTOR'S TRENCHING METHODS. CONTRACTOR SHALL PAY FOR REMOVAL AND DISPOSAL OF ALL EXCESS CUT MATERIAL RESULTING FROM TRENCHING METHODS.

** REMOVE AND RESET EX 24" RCP STORM PIPE QUANTITY CAN VARY SIGNIFICANTLY DEPENDANT ON CONTRACTOR'S TRENCHING METHODS. CONTRACTOR SHALL PAY FOR THIS QUANTITY RESULTING FROM CONSTRUCTION METHODS.

*** QUANTITIES SHOWN ARE ESTIMATED VALUES, ACTUAL QUANTITIES CAN VARY SIGNIFICANTLY DEPENDANT ON CONTRACTOR'S TRENCHING METHODS, SHORING, AND BENCHING PLAN

DATE:	1/31/2025	REV.	DATE	DESCRIPTION
DESIGNED BY:	MATT M.		2/6/25	BID SET
DRAWN BY:	MATT M.			
CHECKED BY:	RICK J.			
PROJECT NO.:	1000-253			
CAD FILE:	PIPE NETWORK			



SAN JUAN ENGINEERING



South Durango
Sanitation District

SOUTH DURANGO SANITATION DISTRICT	
THREE SPRINGS CROSSING REPLACEMENT	
VICINITY MAP & SHEET INDEX	

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GENERAL NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS PRIOR TO THE COMMENCEMENT OF ANY WORK ON THE PROJECT.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE OWNER OF ANY PROBLEMS IN CONFORMING TO THE APPROVED PLANS FOR ANY ELEMENT OF THE PROPOSED IMPROVEMENTS PRIOR TO ITS CONSTRUCTION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A DRAFT COPY OF RECORD DRAWINGS TO THE ENGINEER IN AUTOCAD FORMAT PRIOR TO SUBSTANTIAL COMPLETION OF WORK. FINAL RECORD DRAWINGS IN AN AUTOCAD FORMAT SHALL BE PROVIDED TO THE OWNER PRIOR TO FINAL ACCEPTANCE OF WORK.
4. THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE PARTIES AT LEAST 48 HOURS PRIOR TO DESIRED OBSERVATIONS.
5. THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS AT AND ADJACENT TO THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.
6. THE CONTRACTOR SHALL LIMIT STAGING AND STOCKPILING OF MATERIALS TO THE PROJECT SITES UNLESS OTHERWISE APPROVED BY DISTRICT IN WRITING. ALL DEBRIS, TRASH, SLASH AND EXCESS MATERIAL SHALL BE IMMEDIATELY REMOVED FROM THE PROJECT SITE, AND EITHER TRANSPORTED TO OTHER DISTRICT PROPERTY AS DIRECTED AND APPROVED BY OWNER, OR DISPOSED OF AS REQUIRED BY COUNTY CODES AND REGULATIONS.
7. THE CONTRACTOR SHALL PROVIDE ALL LIGHTS, SIGNS, BARRICADES, FLAGMEN OR OTHER DEVICES NECESSARY TO PROVIDE FOR PUBLIC SAFETY IN ACCORDANCE WITH THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
8. ALL MATERIALS OR EQUIPMENT TO BE REMOVED AND OR SALVAGED AS PER THE PLANS, SHALL BE LOADED, HAULED, AND SALVAGED BY THE CONTRACTOR AT THE DIRECTION OF THE OWNER AND ENGINEER.
9. ALL SECTIONS OF THE DISTRICTS CODES AND STANDARDS AND RULES AND REGULATIONS SHALL BE BY THIS REFERENCE PART OF THE PROJECT SPECIFICATIONS.
- 10.THE CONTRACTOR SHALL COORDINATE WITH THE OWNER FOR YARD FACILITIES AND CONSTRUCTION STAGING AREA LOCATIONS. THE PROJECT CONSTRUCTION ZONE SHALL BE LIMITED TO WITHIN THE EXISTING 30’ SEWER EASEMENT OR DEDICATED STAGING AREAS AS SHOWN ON THE PLANS, UNLESS OTHERWISE APPROVED BY THE PROJECT ENGINEER. ALL CONSTRUCTION ACCESS SHALL BE DIRECTED THROUGH THIS CORRIDOR.
- 11.THE CONTRACTOR SHALL PROVIDE INGRESS AND EGRESS TO LOCAL BUSINESSES AND RESIDENCES FOR THE DURATION OF THE PROJECT. THE CONTRACTOR SHALL ADVISE OF AND SCHEDULE ACCESS CLOSURES, AT LEAST 24 HOURS IN ADVANCE, WITH PROPERTY OWNERS, AND OWNER.
- 12.THE CONTRACTOR SHALL DEVELOP A PROJECT SPECIFIC HEALTH AND SAFETY PLAN TO BE SUBMITTED TO THE ENGINEER PRIOR TO STARTING WORK ON THE PROJECT. THE PLAN SHALL ADDRESS ALL ISSUES RELATED TO WORKING IN DEEP TRENCH CONDITIONS, CONFINED SPACE ENTRY, AND WORK AROUND SANITARY WASTE AND POTENTIAL BLOOD BORNE PATHOGEN CONTAMINATION. THE PLAN SHALL ADDRESS ALL RELEVANT CONCERNS OUTLINED IN 29 CFR FEDERAL HEALTH AND SAFETY REGULATIONS. THE CONTRACTOR SHALL CONDUCT REGULAR HEALTH AND SAFETY MEETINGS AS REQUIRED BY THE PLAN.
- 13.THE PROJECT INCLUDES SECTIONS OF DEEP TRENCHING WHICH SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE OSHA SAFETY STANDARDS. TRENCH SAFETY IS THE RESPONSIBILITY OF THE CONTRACTOR. DEEP TRENCHING METHODS SHALL BE DETERMINED BY THE CONTRACTOR TO MEET OSHA STANDARDS

EXISTING UTILITY NOTES:

1. THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND AND OTHER UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR SHALL CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO 811 FOR THE MARKING OF UNDERGROUND UTILITIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATIONS AS TO THE TYPE AND LOCATION OF UNDERGROUND AND OTHER UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR THE PROTECTION OF UTILITIES AFFECTED BY THE PROSECUTION OF THIS CONTRACT. THE CONTRACTOR SHALL COORDINATE THE SCHEDULING OF WORK WITH THE RESPECTIVE UTILITY COMPANIES. THE FOLLOWING IS A LIST OF THE KNOWN UTILITY COMPANIES WITH KNOWN INFRASTRUCTURE IN THE AREA:
 - ATMOS ENERGY – STERLING BALLINGER – (970)–759–9485
 - ENDURING RESOURCES – JONATHAN ARCHULETA – (505)–419–7024
 - LA PLATA ELECTRIC ASSOCIATION, INC. – GENERAL MENU – (970)–247–5786 OPTION 6
 - SOUTH DURANGO SANITATION DISTRICT – ANDREW ARAGON – (970)–238–6438
 - CITY OF DURANGO (WATER UTILITY) – (970)–759–4354
2. IN ADVANCE OF SEWER LINE REPLACEMENT CONSTRUCTION, THE CONTRACTOR IS REQUIRED TO POTHOLE ALL EXISTING UTILITIES WHICH ARE GOING TO BE CROSSED. ONCE EXPOSED, THE CONTRACTOR SHALL VERIFY THE VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DIFFERENCES BETWEEN ACTUAL LOCATIONS AND LOCATIONS GIVEN ON THESE PLANS. NO CONTRACTOR CLAIMS FOR EXTRA COMPENSATION WILL BE GRANTED FOR PROJECT DELAYS ASSOCIATED WITH REDESIGN NECESSITATED BY CHANGES IN ACTUAL LOCATIONS BASED ON FIELD VERIFICATION. IF THE CONTRACTOR HAS TO REDO CONSTRUCTION TO AVOID UTILITY CONFLICTS DUE TO HIS FAILURE TO POTHOLE EXISTING STRUCTURES IN ADVANCE OF SEWER LINE REPLACEMENT CONSTRUCTION, NO EXTRA COMPENSATION WILL BE GRANTED.
3. EXISTING UTILITY TRACER WIRE SHALL REMAIN INTACT. DAMAGED OR BROKEN TRACER WIRE SHALL BE REPAIRED AT THE DISCRETION OF THE UTILITY OWNER. THE CONTRACTOR SHALL PERFORM CONTINUITY TESTS OF ALL TRACER WIRE UPON COMPLETION OF THE PROJECT TO INSURE CONDUCTIVITY FOR FUTURE LOCATES.

STREET CONSTRUCTION NOTES:

1. PORTIONS OF HIGH LLAMA LANE AND WILSON GULCH DRIVE ARE CITY OF DURANGO PUBLIC STREETS. THE CITY OF DURANGO SHALL BE CONTACTED TO COORDINATE WORK IN THESE AREAS. THE CONTRACTOR WILL NEED AN ACTIVE CITY OF DURANGO BUSINESS LICENSE AS WELL AS A \$5,000.00 EXCAVATORS’ BOND FOR EXCAVATING IN THE CITY ROW. THE CONTRACTOR WILL NEED TO APPLY FOR A CITY OF DURANGO RIGHT-OF-WAY CONSTRUCTION AND EXCAVATION PERMIT WHICH CAN BE OBTAINED THROUGH THE CITY OF DURANGO WEBSITE / PORTAL. A TRAFFIC CONTROL PLAN FOR WORK WITHIN BOTH ROADWAYS SHALL BE SUBMITTED TO BOTH THE ENGINEER AND THE CITY OF DURANGO FOR APPROVAL AT LEASE 14 DAYS PRIOR TO WORKING WITHIN THE CITY OF DURANGO RIGHT OF WAY. NO WORK SHALL PROCEED WITHIN THE RIGHT OF WAY WITHOUT THIS APPROVAL.
2. ALL WORK SHALL PROCEED IN ACCORDANCE WITH CITY OF DURANGO STANDARDS SPECIFICATIONS AND DETAILS.
3. FLOWFILL IS REQUIRED AS BACKFILL ABOVE PIPE BEDDING IN ARES OF EXISTING STREET PAVEMENT. SEE TECHNICAL SPECIFICATIONS FOR FLOWFILL REQUIREMENTS.
4. WHERE CONSTRUCTION OCCURS IN OR ACROSS ASPHALT OR CONCRETE PAVEMENT, THE CONTRACTOR SHALL SAW CUT THE PAVEMENT FOR A CLEAN AND STRAIGHT EDGE 6” OUTSIDE THE TRENCH LIMITS TO ALLOW CLEAN REMOVAL AND A GOOD SURFACE FOR PROPER PATCHING.
5. IMMEDIATELY PRIOR TO ASPHALT PATCHBACK, THE CONTRACTOR SHALL REMOVE THE TOP THICKNESS EQUAL TO ASPHALT DEPTH OF CLASS 6 A.B.C. ON THE TRENCH AND RECONDITION THE BACKFILL AS NECESSARY TO MEET CITY PAVING STANDARDS. COMPACTION TESTS SHALL BE TAKEN BY THE OWNERS GEOTECHNICAL TESTING LABORATORY AND SUBMITTED TO THE CITY OF DURANGO. ALL DAMAGED EDGES OF PAVEMENT OR SOFT SHOULDERS SHALL BE SAW CUT AND REMOVED AND THE BASE COMPACTED.
6. THE OPEN CUT OF BOTH STREETS SHALL BE COMPLETED IN STAGES AND AS PER THE APPROVED TRAFFIC CONTROL PLANS. ANY DETOUR OF EITHER STREET SHALL BE AT THE DISCRETION OF THE CITY OF DURANGO APPROVAL AND SHALL BE INCLUDED IN SUCH TRAFFIC CONTROL PLAN. ALL OPEN TRENCHING SHALL BE COMPLETED AS PER THE TRENCHING DETAILS INCLUDED IN THIS PLAN SET. ALL CURB, SIDEWALK, LANDSCAPING, IRRIGATION LINES, PULL BOXES SHALL BE REPLACED AS PER DETAILS AND CITY OF DURANGO STANDARDS.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF ALL EXISTING ASPHALT AND CONCRETE FROM CONSTRUCTION EQUIPMENT. DAMAGED ASPHALT AND CONCRETE SHALL BE REPLACED BY THE CONTRACTOR AT THE CONTRACTORS’ EXPENSE.
8. THE CITY OF DURANGO WATER DEPARTMENT SHALL BE CONTACTED BEFORE WORKING NEAR WATER FACILITIES. THE CONTRACTOR SHALL COORDINATE WITH CITY WATER PERSONNEL TO OPERATE VALVES AND MONITOR WORK NEAR ANY WATER FACILITIES AS NECESSARY. WHERE INDIVIDUAL WATER SERVICE LINES ARE ENCOUNTERED AND NEED TO BE TAKEN OUT OF SERVICE, CITY WATER PERSONNEL SHALL BE CONTACTED TO COORDINATE THE INSTALLATION OF TEMPORARY "DAISY CHAIN" SERVICE FROM AN ADJACENT SERVICE.
9. THE LIMITS OF WORK WITHIN THE CITY OF DURANGO RIGHT OF WAY SHALL BE LIMITED TO 15 FEET ON EITHER SIDE OF THE SEWER PIPE ALIGNMENT. IT IS ANTICIPATED THAT SIGNIFICANT SUBSURFACE UTILITIES WILL BE ENCOUNTERED. EXISTING UTILITIES SHALL BE SURVEYED TO VERIFY ALL LOCATIONS AND DEPTH TO EXISTING UTILITIES. ALL AREAS OUTSIDE PAVED AREAS SHALL BE RE-GRADED AND RE-VEGETATED AS PER THE PROJECT SPECIFICATIONS. ALL AFFECTED FACILITIES SHALL BE REPLACED TO MATCH OR EXCEED EXISTING CONDITION. CITY OF DURANGO DETAILS FOR CURB, GUTTER, STORM DRAIN FACILITIES, ETC. ARE REFERENCED IN THIS PLAN SET AND SHALL BE CONSIDERED PART OF THE WORK WITHIN THE CITY OF DURANGO RIGHT OF WAY. THIS WORK IS MORE SPECIFICALLY DESCRIBED AS FOLLOWS:

PAVEMENT – ALL PAVEMENT PATCHES MUST BE A MIN. OF TWO (2) 2.5” CITY APPROVED HOT MIX ASPHALT LIFTS OR MATCH THE EXITING PAVEMENT THICKNESS IF THE PAVEMENT THICKNESS IS GREATER THAN 5” PER SECTION 200 OF THE CITY OF DURANGO STANDARDS AND SPECIFICATIONS. THE ASPHALT PATCH SHOULD EXTEND 6–INCHES WIDER THAN THE TRENCH WIDTH AS SHOWN IN SPECIFIC DETAILS OF THESE PLANS.

CONCRETE INCLUDING CURB AND GUTTER – ALL CONCRETE FACILITIES SHALL BE REPLACED EXACTLY AS THEY EXIST PRIOR TO CONSTRUCTION. CURB AND GUTTER SHALL CONFORM TO SECTION 300 OF THE CITY OF DURANGO’S CONSTRUCTION SPECIFICATION. CEMENT USED SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR PORTLAND CEMENT, TYPE I, IA, II OR IIA.. ALL CONCRETE SHALL BE CDOT CLASS D AND SHALL HAVE A 28 DAY COMPRESSIVE STRENGTH OF 4,500 PSI. BASE COURSE MATERIAL SHALL EXTEND UNDER CURB AND GUTTER. 1/2” EXPANSION JOINTS SHALL BE PLACED AND SEALED WHERE SIDEWALKS MEET CURBS, INLETS, STRUCTURES, OR OTHER BARRIERS. CONSTRUCTION JOINTS SHALL BE TOOLED OR CUT AND SEALED TO ¼ OF SLAB DEPTH AND EVERY 5 FEET ON WALKS LESS THAN 5 FEET WIDE, AND EVERY 8 FEET ON WALKS GREATER THAN 5 FEET WIDE, AND 12 FEET ON CENTER FOR CURB GUTTERS AND PANS. ALL JOINTS SHALL BE AS PER CITY OF DURANGO STANDARDS SECTION 300.


STORM DRAIN STRUCTURES – ALL STORM DRAIN STRUCTURES SHALL BE PROTECTED AND REMOVED ONLY WHEN ABSOLUTELY NECESSARY. AS NECESSARY STRUCTURES SHALL BE CAREFULLY REMOVED AND STORED ON SITE. THE STRUCTURES SHALL BE REASSEMBLED UTILIZING NEW GASKETS AND SEALS AS NECESSARY, AND PLACED IN THEIR ORIGINAL LOCATIONS AND ORIENTATIONS ON A MINIMUM OF 12” OF 3/4” A.B.C. COMPACTED TO 95% STANDARD PROCTOR DENSITY.

STORM DRAIN PIPING – STORM DRAIN PIPE SHALL BE REMOVED AND REPLACED AS NECESSARY. EXISTING CLASS V REINFORCED CONCRETE PIPE (RCP) SHALL BE CAREFULLY REMOVED AND STOCKPILED ON SITE. RCP SHALL BE RELAYED TO THE EXISTING LINES AND GRADES. JOINTS SHALL BE REASSEMBLED ACCORDING TO MANUFACTURERS RECOMMENDATIONS. CONTRACTOR SHALL PROVIDE ALL NEW GASKETS. IF PIPE IS DAMAGED NEW SECTIONS SHALL BE PROVIDED. PIPE AND GASKETS SHALL BE CLASS V – RCP AS PROVIDED BY GRAND JUNCTION PIPE AND SUPPLY. PIPE SHALL BE BEDDED AS PER EXISTING CONDITION.

PIPING AND MANHOLE NOTES:

1. THE CONTRACTOR SHALL INFORM THE OWNER 48 HOURS IN ADVANCE WHEN TRENCH WILL BE READY FOR BEDDING MATERIAL AND PRIOR TO LAYING OF THE PIPE IN DITCH. NOTICE SHALL ALSO BE GIVEN PRIOR TO ANY BACKFILL OF THE PIPE. THE CONTRACTOR SHALL COORDINATE WITH THE OWNERS GEOTECHNICAL TESTING LABORATORY TO PERFORM ALL REQUIRED TESTS AS REQUIRED BY PROJECT SPECIFICATIONS.
2. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY PUBLIC OR PRIVATE IMPROVEMENTS IN KIND INCLUDING BUT NOT LIMITED TO: RESIDENTIAL SERVICES, WATER LINES, SEWER LINES, STORM DRAINS, ETC., THAT WERE REMOVED OR DAMAGED DURING CONSTRUCTION.
3. THE NEW SEWER MAIN SHALL BE 15” SDR 35 GRAVITY SEWER PIPE IN ACCORDANCE WITH TECHNICAL SPECIFICATION.
4. PRIOR TO COMMENCEMENT OF WORK, THE CONTRACTOR SHALL EVALUATE ALL OF THE EXISTING MANHOLE CONFIGURATIONS TO DETERMINE THE CORRECT MANHOLE BASE REPLACEMENT. THE CONTRACTOR SHALL VERIFY THAT THE INTENDED RE–USE OF EXISTING BARREL SECTIONS, CONES, AND RISERS WILL STACK TO PLACE THE RIM ELEVATIONS AT THE EXISTING ELEVATIONS.
5. ALL MANHOLE BARRELS, CONES, RINGS, AND RIMS ARE TO BE RE–USED. THE CONTRACTOR SHALL TAKE EXTRA CARE TO STORE THE SAID MATERIALS SUCH THAT THEY CAN BE RE–USED. ANY DAMAGED MATERIAL SHALL BE REPLACED BY THE CONTRACTOR WITH NO COMPENSATION.
6. ALL NEW SEWER PIPE SHALL BE LAID SUCH THAT THE EXISTING INVERT ELEVATIONS AND SLOPES ARE MAINTAINED, EXCEPT THE PIPE SECTIONS UPSTREAM AND DOWNSTREAM OF MANHOLE MH–GB2 WHICH WHERE MODIFIED TO IMPROVE PIPE FLOW CAPACITY.
7. ALL NEW PIPE SHALL BE LAID, BEDDED, AND BACKFILLED ACCORDING TO THESE PLANS AND THE PROJECTS TECHNICAL SPECIFICATIONS.
8. ALL SEWER MAIN LENGTHS ARE MEASURED FROM CENTER OF DOWNSTREAM MANHOLE TO CENTER OF UPSTREAM MANHOLE IN PLAN VIEW AND LABELED LENGTHS DO NOT CONSIDER PIPE SLOPE. ALL SEWER MAIN LENGTHS IN PROFILE VIEW ARE MEASURED FROM INSIDE FACE OF DOWNSTREAM MANHOLE TO INSIDE FACE OF UPSTREAM MANHOLE AND LABELED LENGTHS REPRESENT THE TRUE LENGTH OF PIPE CONSIDERING SLOPE.
9. SEWER PIPELINE STATIONING IN PLAN VIEW IS ALONG THE CENTERLINE OF THE NEW SEWER PIPE.
- 10.THE SEWER MAIN FROM MH–GB2 TO MH–GA43 IS FLOWING LIVE SEWER. BY–PASS OF EXISTING SEWER FLOWS TO BE PROVIDED BY CONTRACTOR. ALL SEWAGE TO REMAIN CONTAINED IN SUITABLE ENCLOSED PIPING. OVERNIGHT OPERATION OF BY–PASSES SHALL BE AVOIDED, BUT SHALL BE ACCOMMODATED IF ABSOLUTELY NECESSARY. BY–PASS PUMPING SHALL BE MANNED AT ALL TIMES OF OPERATION. A SECOND EMERGENCY PUMP SHALL BE ON–SITE AND OPERATIONAL AT ALL TIMES. THE CONTRACTOR SHALL SUBMIT A BY–PASS PUMPING PLAN WITH EMERGENCY CONTINGENCIES TO THE ENGINEER FOR APPROVAL AT LEAST 14 DAYS PRIOR TO STARTING CONSTRUCTION OF SAID SECTION.
- 11.UPON COMPLETION OF THE NEW SEWER MAIN CONSTRUCTION, THE CONTRACTOR SHALL RETURN THE CONSTRUCTION ZONE TO THE APPROXIMATE GRADES ENCOUNTERED PRIOR TO THE START OF CONSTRUCTION, UNLESS OTHERWISE APPROVED BY THE PROJECT ENGINEER. THE CONTRACTOR SHALL REPAIR AND/OR REPLACE ALL EXISTING LANDSCAPING, FENCES, SIGNS, ETC., IN KIND THAT WERE REMOVED OR DAMAGED SPECIFICALLY FOR SEWER MAIN CONSTRUCTION, UNLESS OTHERWISE APPROVED BY THE PROJECT ENGINEER. THE CONTRACTOR SHALL GUARANTEE ANY REQUIRED LANDSCAPING FOR ONE YEAR AFTER THE COMPLETION OF CONSTRUCTION.
- 12.ALL TRENCHES MUST BE FILLED BY THE END OF EACH CONSTRUCTION DAY. METAL PLATES MAY BE USED TO COVER THE END OF A TRENCH OVERNIGHT.
- 13.THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL AND DISPOSAL OF OLD MANHOLE BASES AND OLD SEWER PIPE, AS WELL AS, ANY EXTRA DITCH SPOIL OR ASPHALT/CONCRETE WASTE FROM THE PROJECT. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO EXECUTE ANY REQUIRED PERMITTING BY GOVERNING AGENCY RELATING TO THE DISPOSAL OF REMOVED MATERIALS.

DATE:	1/31/2025	REV.	DATE	DESCRIPTION
DESIGNED BY:	MATT M.		2/6/25	BID SET
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South Durango

Sanitation District

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THREE SPRINGS CROSSING REPLACEMENT

GENERAL NOTES

SHEET

G3

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STORMWATER / EROSION CONTROL NOTES:

1. A WATER TRUCK, IF CALLED FOR, BY THE DISTRICT, WILL BE PROVIDED BY THE CONTRACTOR TO KEEP WIND EROSION IN CHECK.

2. ANY SETTLEMENT OR SOIL ACCUMULATIONS BEYOND THE EASEMENT LIMITS DUE TO GRADING OR EROSION SHALL BE REPAIRED IMMEDIATELY BY THE CONTRACTOR.

3. ANY CONSTRUCTION DEBRIS OR MUD TRACKING ON PUBLIC ROADWAYS OR ANY PRIVATE DRIVES AND PARKING AREAS SHALL BE REMOVED IMMEDIATELY BY THE CONTRACTOR. THE CONTRACTOR SHALL IMMEDIATELY FIX ANY EXCAVATIONS OR EXCESSIVE PAVEMENT FAILURES CAUSED BY THE WORK AND SHALL PROPERLY BARRICADE THE SITE UNTIL CONSTRUCTION IS COMPLETE. FAILURE BY THE CONTRACTOR TO CORRECT ANY OF THE ABOVE WITHIN 48 HOURS OF WRITTEN NOTICE BY THE DISTRICT SHALL CAUSE THE DISTRICT TO ISSUE A STOP WORK ORDER AND/OR DO THE WORK AND MAKE A CLAIM AGAINST THE LETTER OF CREDIT OR BOND FOR ANY COST INCURRED BY THE DISTRICT.

4. AREAS BEING DISTURBED BY THE GRADING SHALL BE RE-SEEDED AND MULCHED WITH AN APPROVED SEED MIX AND STRAW OR HYDRO MULCH AS PER PROJECT SPECIFICATIONS.
5. THE PROJECT SITE IS VERY TIGHT AND WILL REQUIRE PLANNING AND EXTRA WORK TO PROVIDE FOR EARTHWORK. ALL EXCESS SITE GENERATED MATERIAL SHALL BE MOVED AND/OR SPREAD ON SITE AS MUCH AS POSSIBLE. ANY EXCESS THAT CANNOT BE DISPOSED OF ON-SITE, SHALL BE HAULED AND DISPOSED OF AT LOCATIONS DESIGNATED BY THE DISTRICT AND AS PER THE PROJECT SPECIFICATIONS AND THE BID SCHEDULE.

6. THE CONTRACTOR SHALL SEGREGATE TOP SOIL MATERIAL, STORE AND SPREAD PRIOR TO RE-SEEDING AS PER THE SPECIFICATIONS. GENERALLY ROCK FREE MATERIAL SUITABLE FOR ON-SITE FILL SHALL BE STORED ON SITE.

7. SEDIMENTATION CONTROL MEASURES SHALL BE IMPLEMENTED IN COMPLIANCE WITH THE NPDES PERMIT PROGRAM, AND A SWAMP PLAN SHALL BE DEVELOPED BY THE CONTRACTOR FOR THE PROJECT. OBTAINING ALL REQUIRED PERMITTING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

8. APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO SOIL DISTURBANCE. MEASURES SHALL BE TAKEN TO CONTROL EROSION WITHIN THE PROJECT AREA. SEDIMENT IN RUNOFF WATER SHALL BE TRAPPED AND RETAINED WITHIN THE PROJECT AREA.
9. INSTALL AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS AND GOOD ENGINEERING PRACTICES.

10. PROTECT AND MANAGE ON-SITE MATERIAL STORAGE AREAS (OVERBURDEN AND STOCKPILES OF DIRT, BORROW AREAS, OR OTHER AREAS USED SOLELY BY THE PERMITTED PROJECT ARE CONSIDERED A PART OF THE PROJECT).

11. COMPLY WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS AND REGULATIONS INCLUDING WASTE DISPOSAL, SANITARY SEWER OR SEPTIC SYSTEM REGULATIONS, AND AIR QUALITY REQUIREMENTS, INCLUDING DUST CONTROL.

12. SEDIMENT SHALL BE REMOVED ONCE THE VOLUME REACHES ¼ TO ½ THE HEIGHT OF THE EROSION CONTROL DEVICE. SEDIMENT SHALL BE REMOVED FROM SILT FENCE PRIOR TO REACHING THE LOAD-BEARING CAPACITY OF THE SILT FENCE WHICH MAY BE LOWER THAN ¼ TO ½ THE HEIGHT.

13. SEDIMENT FROM SEDIMENT TRAPS OR SEDIMENTATION PONDS SHALL BE REMOVED WHEN DESIGN CAPACITY HAS BEEN REDUCED BY 50 PERCENT.

14. SOIL STOCK PILES, IF NECESSARY, SHALL HAVE SIDE SLOPES NO GREATER THAN 2:1. ALL STOCK PILES SHALL BE SURROUNDED BY SEDIMENT CONTROLS.
15. TEMPORARY SEDIMENT TRAPPING DEVICES MUST NOT BE REMOVED UNTIL PERMANENT STABILIZATION IS ESTABLISHED IN ALL CONTRIBUTORY DRAINAGE AREAS.

16. PROPERLY MANAGE ON-SITE CONSTRUCTION AND WASTE MATERIALS.

17. DUST SHALL BE CONTROLLED AT THE SITE.

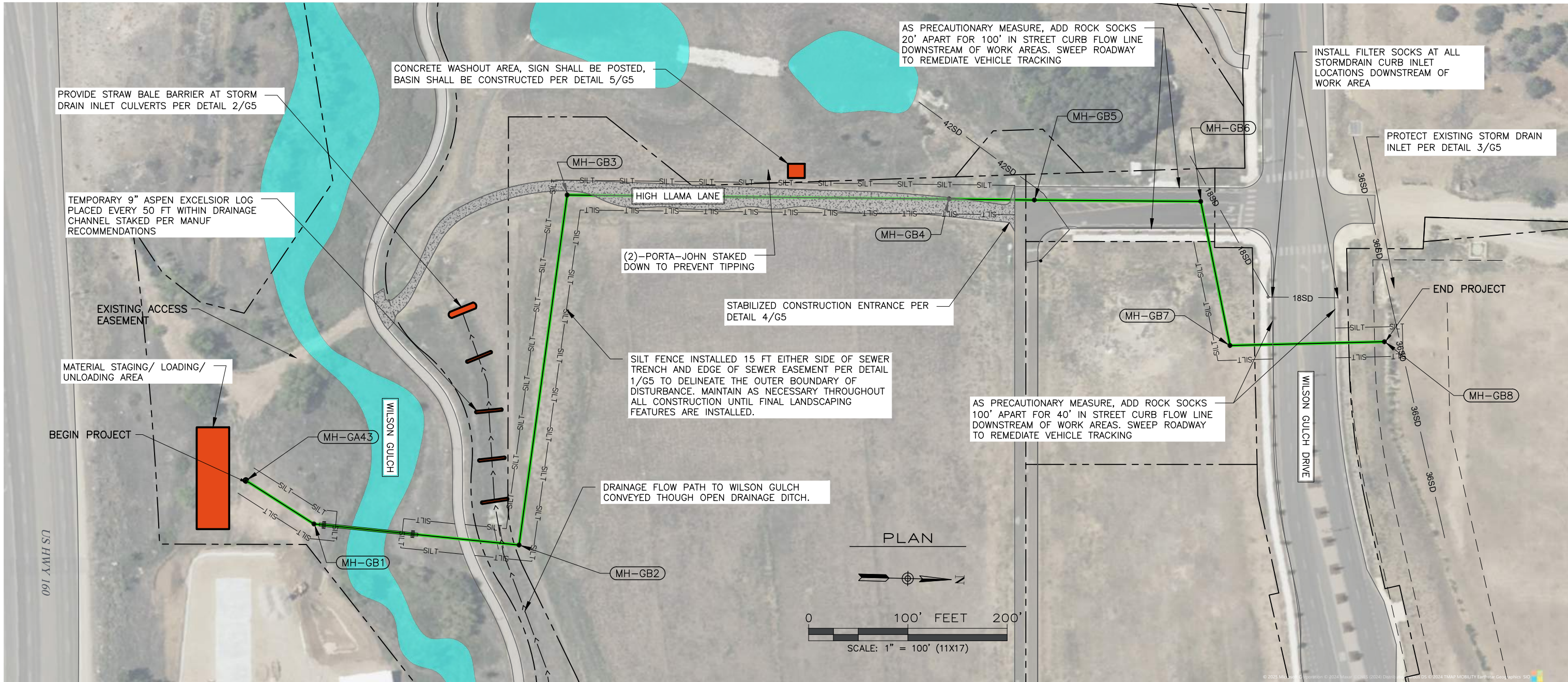
18. IF WORK IS HALTED OVER WINTER MONTHS THE CONTRACTOR SHALL BE RESPONSIBLE FOR STABILIZING THE AREA THROUGH GROUNDCOVER PRACTICES.

19. ALL EROSION CONTROL MEASURES SHALL BE INSPECTED AFTER ALL STORM EVENTS. ANY EROSION CONTROL MEASURES WHICH ARE DAMAGED PRIOR TO RE-ESTABLISHMENT OF VEGETATIVE COVER SHALL BE REPLACED IMMEDIATELY.

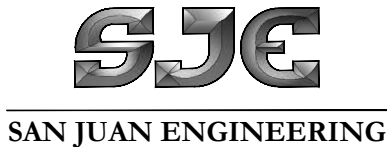
20. SILT FENCE SHALL BE PLACED 15 FT EITHER SIDE OF THE SEWER LINE / EDGE OF THE 30 FT WIDE SEWER EASEMENT AS SHOWN TO DELINEATE THE PROJECT BOUNDARIES.

21. NO GROUND WATER IS ANTICIPATED FOR THE SITE AND DE-WATERING SHALL NOT BE ALLOWED UNLESS APPROVED BY THE ENGINEER AND PERMIT IS APPROVED BY THE STATE OF COLORADO WATER RESOURCES.

22. ALL STAGING / LOADING / UNLOADING SHALL BE KEPT TO WITHIN THE EXTENTS OF THE 30 FT WIDE SEWER EASEMENT EXCEPT AS SHOWN ON THE SOUTH END OF THE PROJECT.



DATE:	1/31/2025	REV.	DATE	DESCRIPTION
DESIGNED BY:	MATT M.		2/6/25	BID SET
DRAWN BY:	MATT M.			
CHECKED BY:	RICK J.			
PROJECT NO.:	1000-253			
CAD FILE:	PIPE NETWORK			



South Durango
Sanitation District

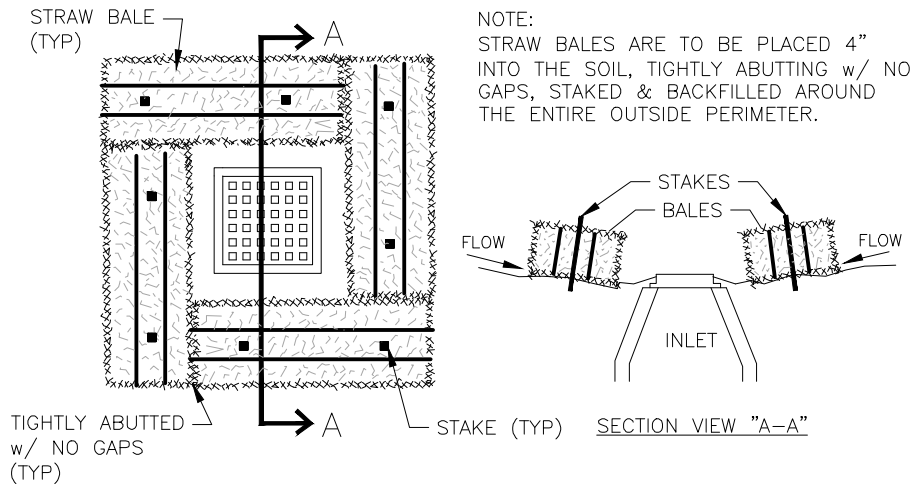
SOUTH DURANGO SANITATION DISTRICT
THREE SPRINGS CROSSING REPLACEMENT

EROSION CRONTROL PLAN

SHEET

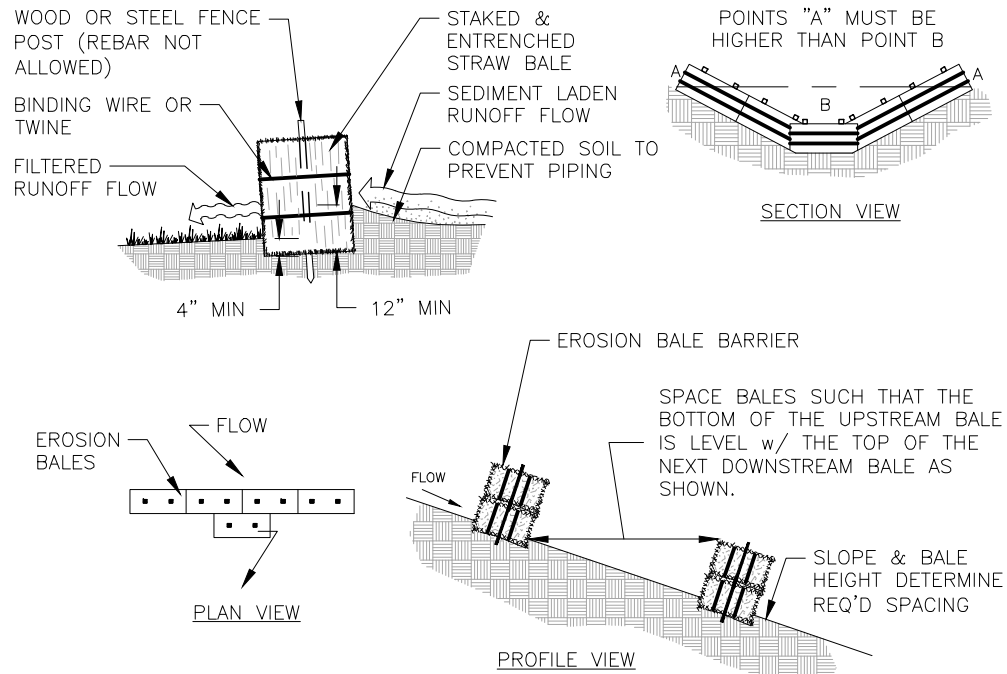
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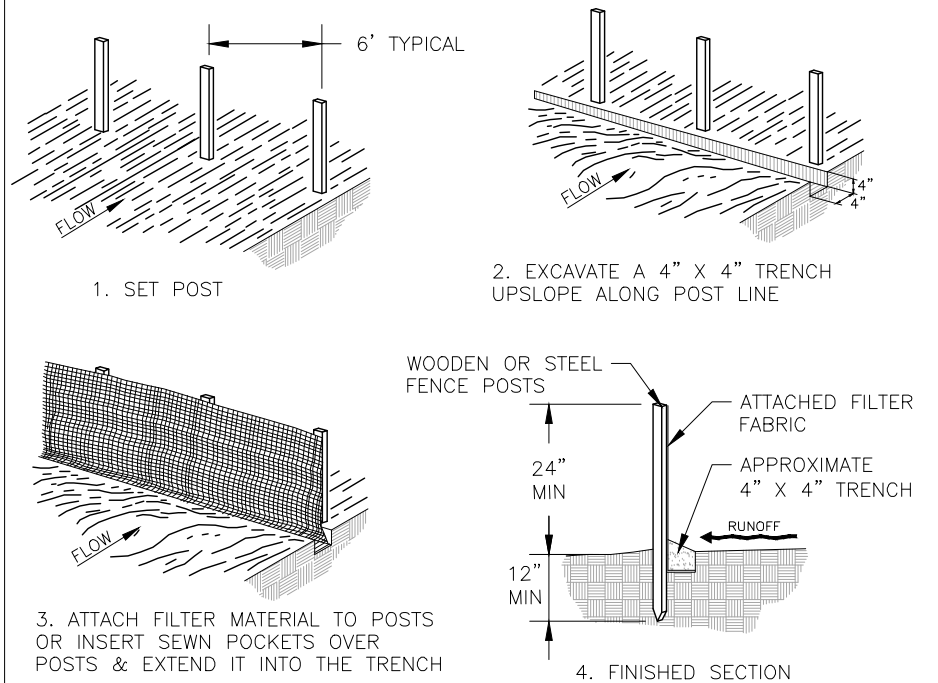
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G5

STRAW BALE SEDIMENT CONTROL AT INLETS
N.T.S.



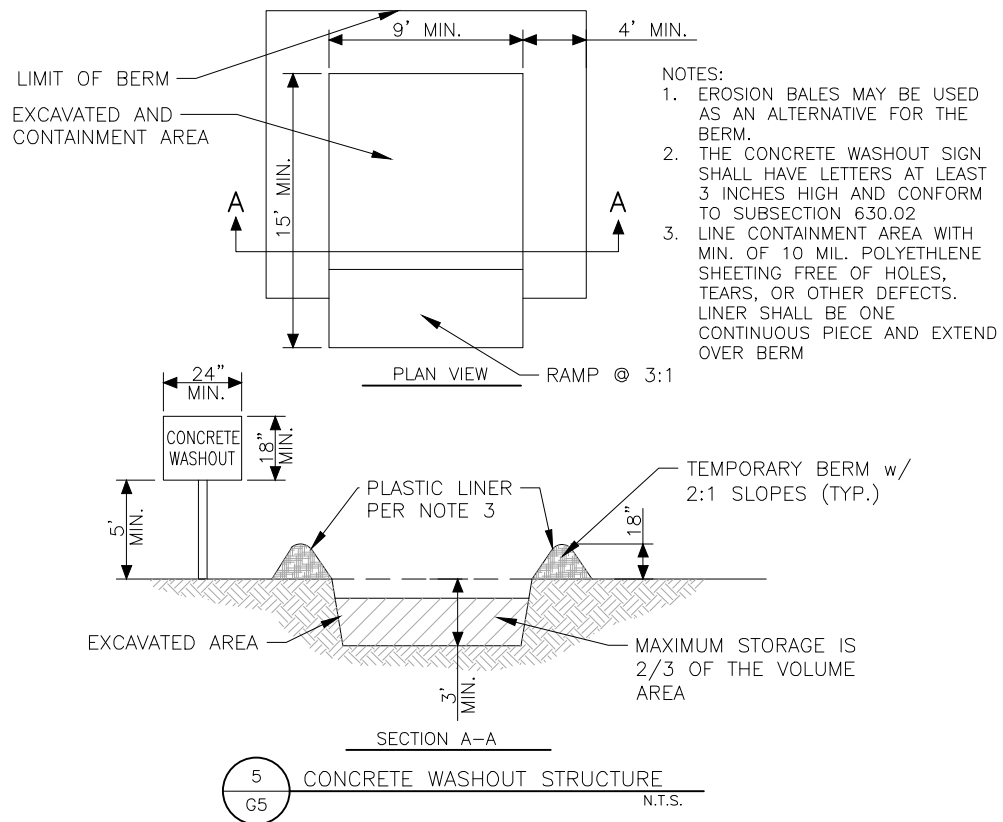
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G5

STRAW BALE BARRIER DETAIL
N.T.S.



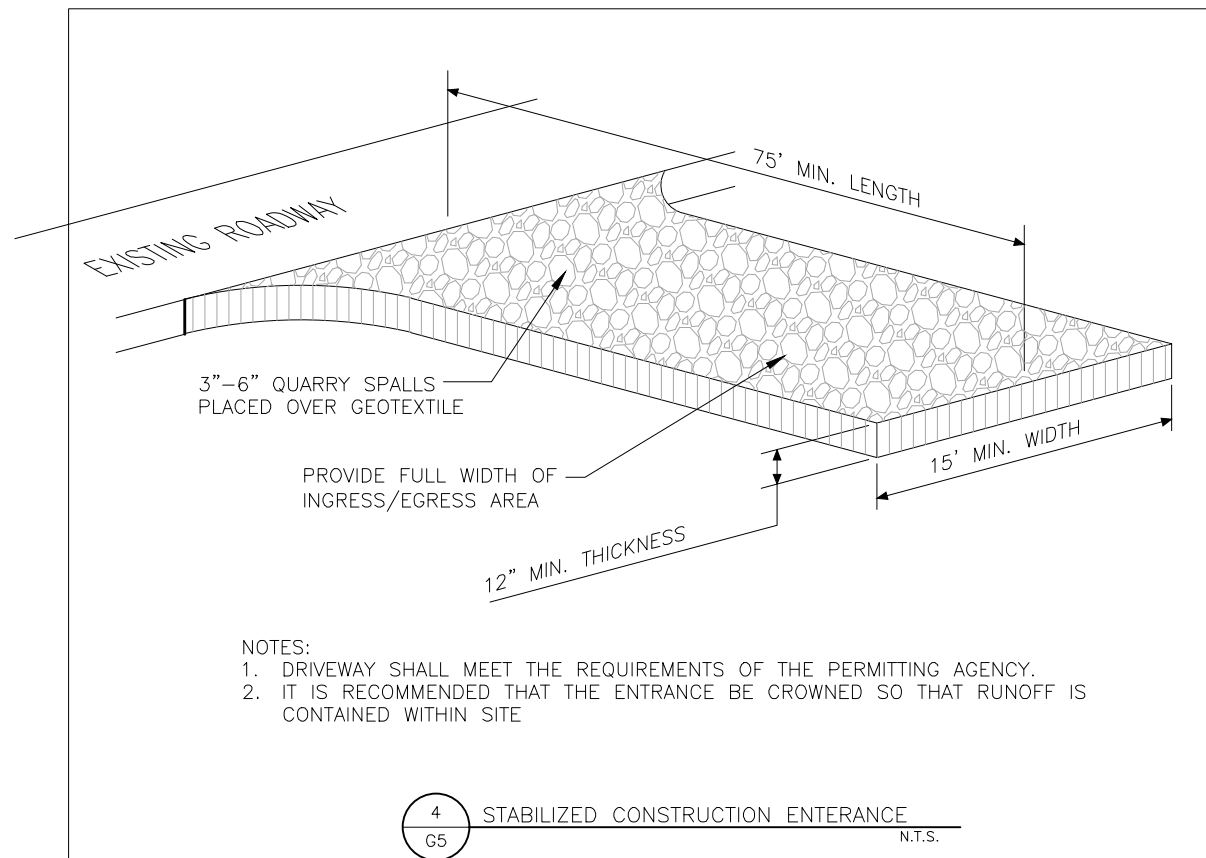
1
G5

SILT FENCE INSTALLATION DETAIL
N.T.S.



5
G5

CONCRETE WASHOUT STRUCTURE
N.T.S.



4
G5

STABILIZED CONSTRUCTION ENTERANCE
N.T.S.

DATE:	1/31/2025	REV.	DATE	DESCRIPTION
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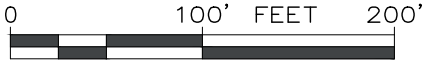
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TRENCHING TYPE SCHEDULE

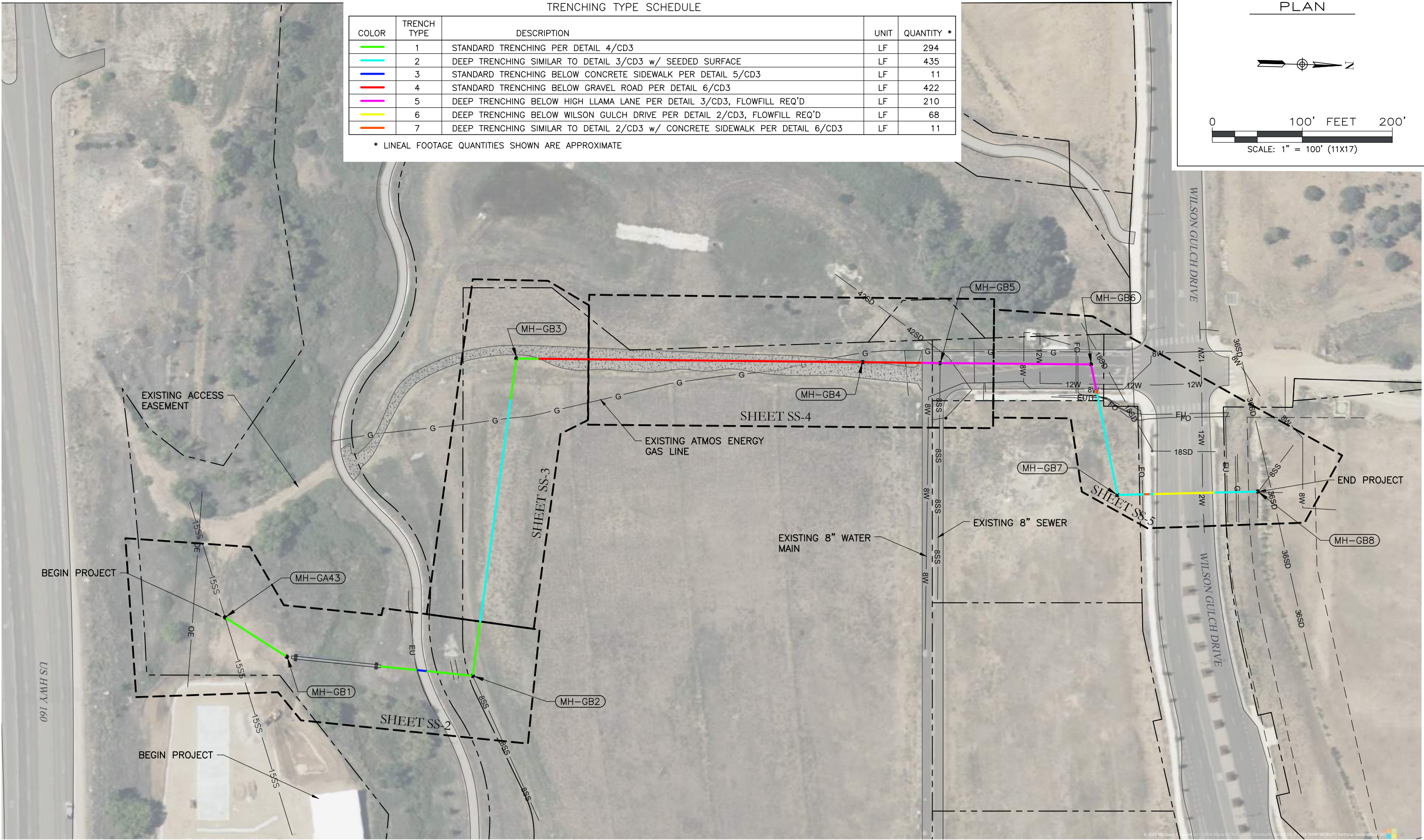
COLOR	TRENCH TYPE	DESCRIPTION	UNIT	QUANTITY *
GREEN	1	STANDARD TRENCHING PER DETAIL 4/CD3	LF	294
CYAN	2	DEEP TRENCHING SIMILAR TO DETAIL 3/CD3 w/ SEEDED SURFACE	LF	435
BLUE	3	STANDARD TRENCHING BELOW CONCRETE SIDEWALK PER DETAIL 5/CD3	LF	11
RED	4	STANDARD TRENCHING BELOW GRAVEL ROAD PER DETAIL 6/CD3	LF	422
MAGENTA	5	DEEP TRENCHING BELOW HIGH LLAMA LANE PER DETAIL 3/CD3, FLOWFILL REQ'D	LF	210
YELLOW	6	DEEP TRENCHING BELOW WILSON GULCH DRIVE PER DETAIL 2/CD3, FLOWFILL REQ'D	LF	68
ORANGE	7	DEEP TRENCHING SIMILAR TO DETAIL 2/CD3 w/ CONCRETE SIDEWALK PER DETAIL 6/CD3	LF	11

* LINEAL FOOTAGE QUANTITIES SHOWN ARE APPROXIMATE


PLAN




SCALE: 1" = 100' (11X17)



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SAN JUAN ENGINEERING



**South Durango
Sanitation District**

SOUTH DURANGO SANITATION DISTRICT

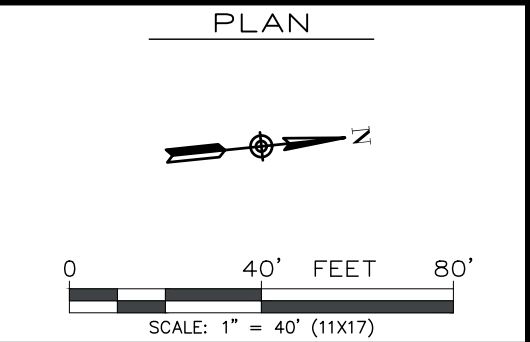
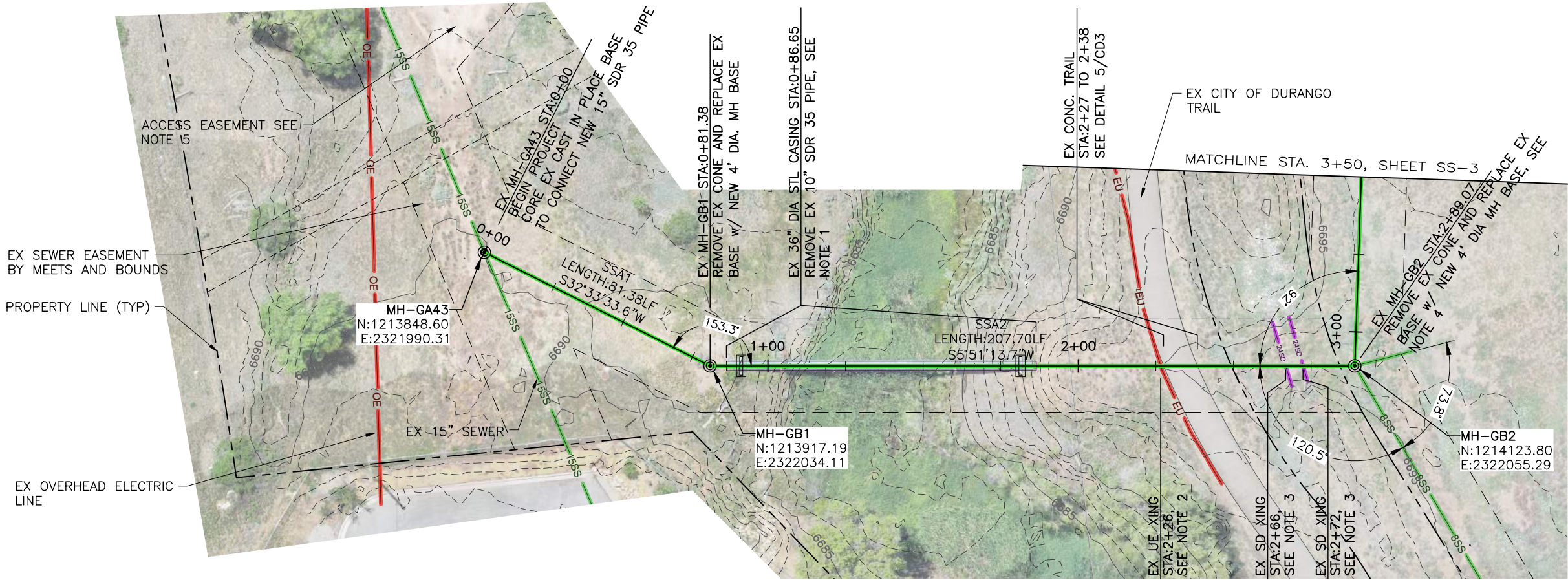
THREE SPRINGS CROSSING REPLACEMENT

SEWER INDEX PLAN

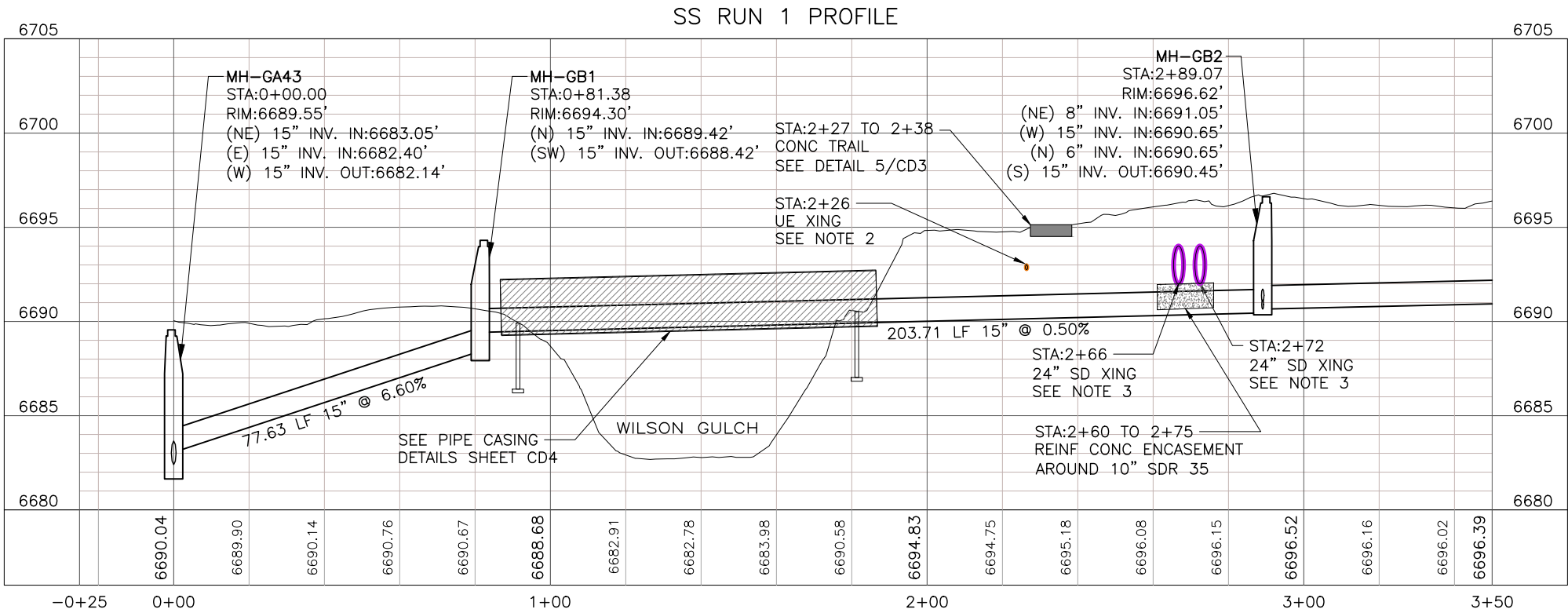
SHEET

SS-1

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- NOTES
1. REMOVE EX 10" SDR 35 w/ PIPE SPACERS AND JOINT RESTRAINTS. INSTALL NEW 15" SDR 35 w/ NEW SPACERS AND JOINT RESTRAINT PER SHEET CD4
 2. CITY OF DURANGO TRAIL LIGHTING POWER DEPTH AND CONDITION OF EX UE UNKNOWN.
 3. REMOVE & REPLACE EX 24" RCP SD PIPE AND APPURTENANCES AT EX INV ELEV. REMOVE EX 10" SDR 35 PIPE ENCASED IN REINF CONC, LENGTH OF ENCASEMENT UNKNOWN
 4. PROVIDE SOLID SLEEVE REPAIR COUPLING FOR EX 8" SDR 35 AND MAINTAIN EX INV. DIG UP AND REPLACE EX 6" SDR 35 SERVICE TO NEW INV. PROVIDE NEW 12" BARREL SECTION AND 24" CONE
 5. ACCESS TO SOUTH SIDE OF WILSON GULCH ALONG OLD HIGH LLAMA GRAVEL ROAD WHICH CONNECTS NEAR MH-GB3.
 6. PLAN LENGTH IS FROM CENTER TO CENTER OF MANHOLE, PROFILE LENGTH IS FROM INSIDE FACE TO INSIDE FACE OF MANHOLE IN THREE DIMENSION LENGTH
 7. THE HORIZONTAL AND VERTICAL LOCATIONS OF THE EXISTING KNOWN UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO EXCAVATION. ADDITIONAL UN-KNOWN UTILITIES MAY BE ENCOUNTERED DURING CONSTRUCTION. THE OWNER AND ENGINEER SHALL NOT BE LIABLE FOR ANY UN-KNOWN UTILITIES THAT MAY EXIST. IT IS THE CONTRACTORS RESPONSIBILITY FOR CROSSING BOTH KNOWN AND UN-KNOWN UTILITIES AND THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR THE PROTECTION AND RESULT OF ANY DAMAGE TO SUCH UTILITY CROSSINGS.



CALL UTILITY NOTIFICATION
CENTER OF COLORADO
811
CALL 2 BUSINESS DAYS IN ADVANCE
BEFORE YOU DIG, GRADE OR EXCAVATE
FOR THE MARKING OF UNDERGROUND
MEMBER UTILITIES.

PROFILE
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 8'

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CAD FILE:	PIPE NETWORK			

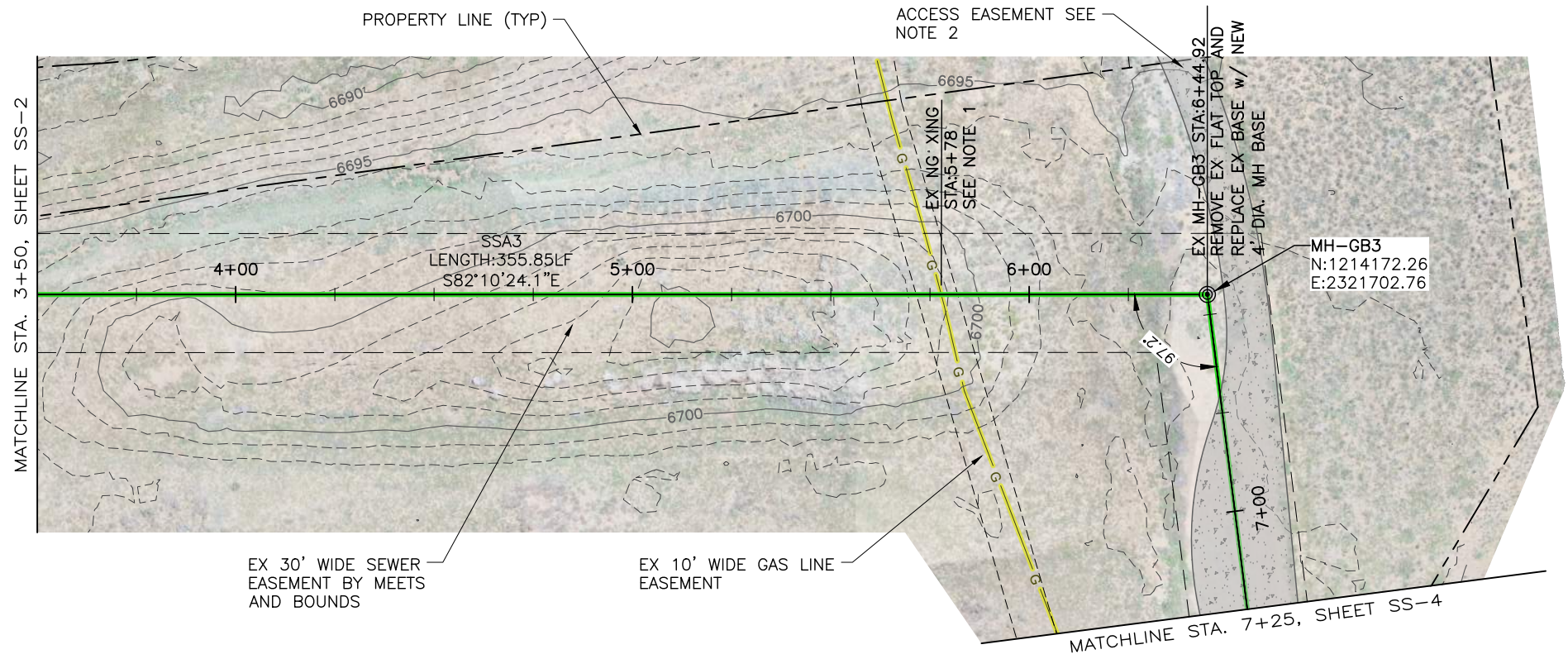


SOUTH DURANGO SANITATION DISTRICT
THREE SPRINGS CROSSING REPLACEMENT
SEWER RUN 1 PLAN & PROFILE
STA 0+00 TO 3+50

SHEET

SS-2

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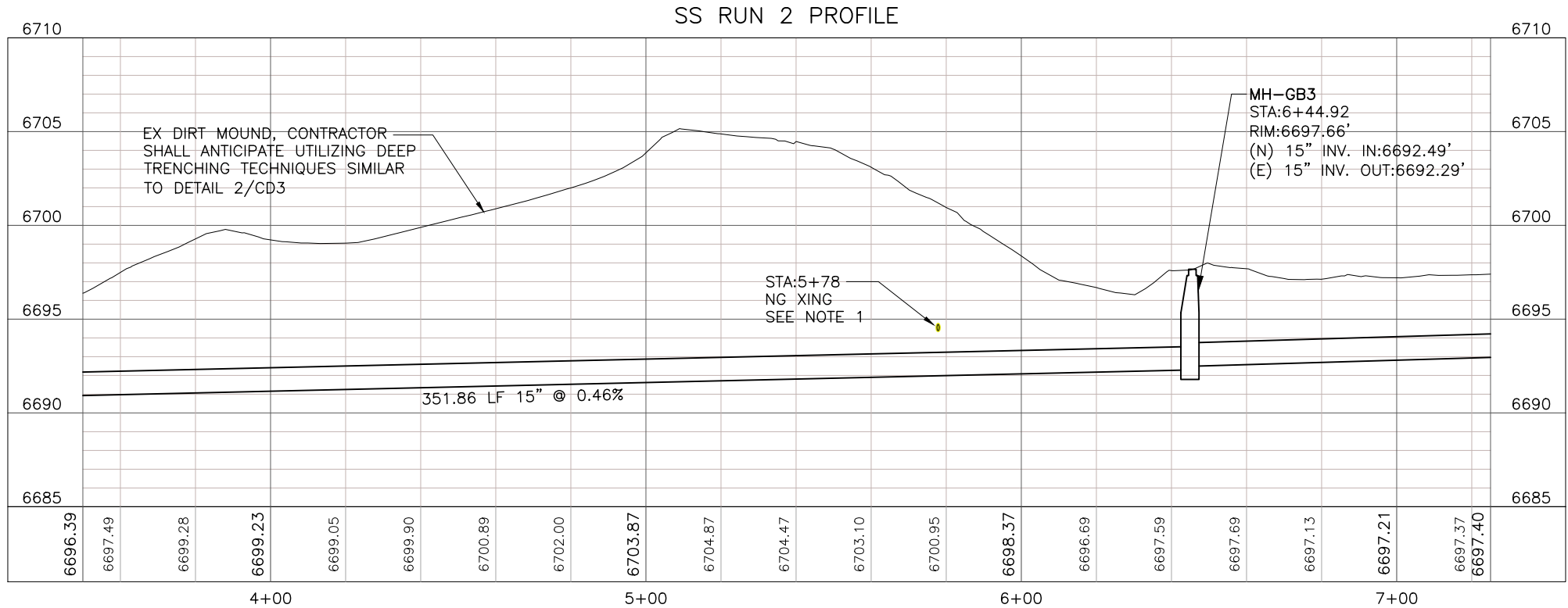
PLAN

0 40' FEET 80'

SCALE: 1" = 40' (11X17)

NOTES

1. ATMOS ENERGY UNDERGROUND NATURAL GAS LINE CROSSING. SIZE, CONDITION, AND DEPTH UNKNOWN
2. ACCESS TO SOUTH SIDE OF WILSON GULCH ALONG OLD HIGH LLAMA GRAVEL ROAD
3. PLAN LENGTH IS FROM CENTER TO CENTER OF MANHOLE, PROFILE LENGTH IS FROM INSIDE FACE TO INSIDE FACE OF MANHOLE IN THREE DIMENSION LENGTH
4. THE HORIZONTAL AND VERTICAL LOCATIONS OF THE EXISTING KNOWN UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO EXCAVATION. ADDITIONAL UN-KNOWN UTILITIES MAY BE ENCOUNTERED DURING CONSTRUCTION. THE OWNER AND ENGINEER SHALL NOT BE LIABLE FOR ANY UN-KNOWN UTILITIES THAT MAY EXIST. IT IS THE CONTRACTORS RESPONSIBILITY FOR CROSSING BOTH KNOWN AND UN-KNOWN UTILITIES AND THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR THE PROTECTION AND RESULT OF ANY DAMAGE TO SUCH UTILITY CROSSINGS.



CALL UTILITY NOTIFICATION
CENTER OF COLORADO

811

CALL 2 BUSINESS DAYS IN ADVANCE
BEFORE YOU DIG, GRADE OR EXCAVATE
FOR THE MARKING OF UNDERGROUND
MEMBER UTILITIES.

PROFILE

HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 8'

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CAD FILE:	PIPE NETWORK			

SAN JUAN ENGINEERING

**South Durango
Sanitation District**

SOUTH DURANGO SANITATION DISTRICT

THREE SPRINGS CROSSING REPLACEMENT

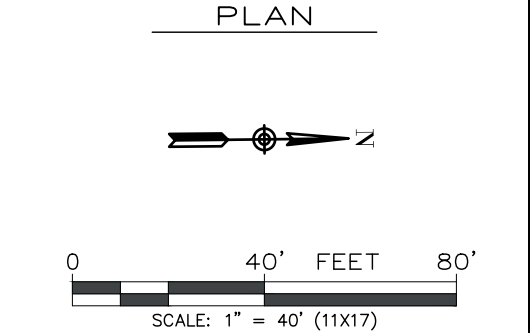
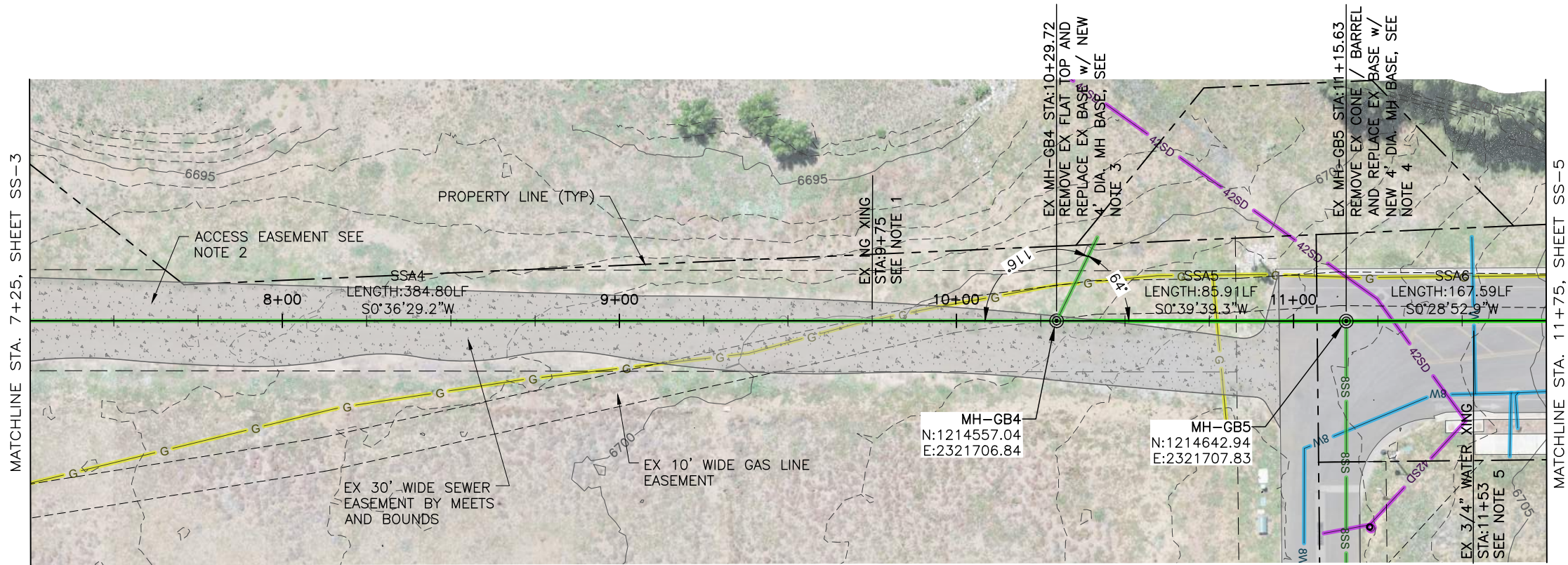
SEWER RUN 2 PLAN & PROFILE

STA 3+50 TO 7+25

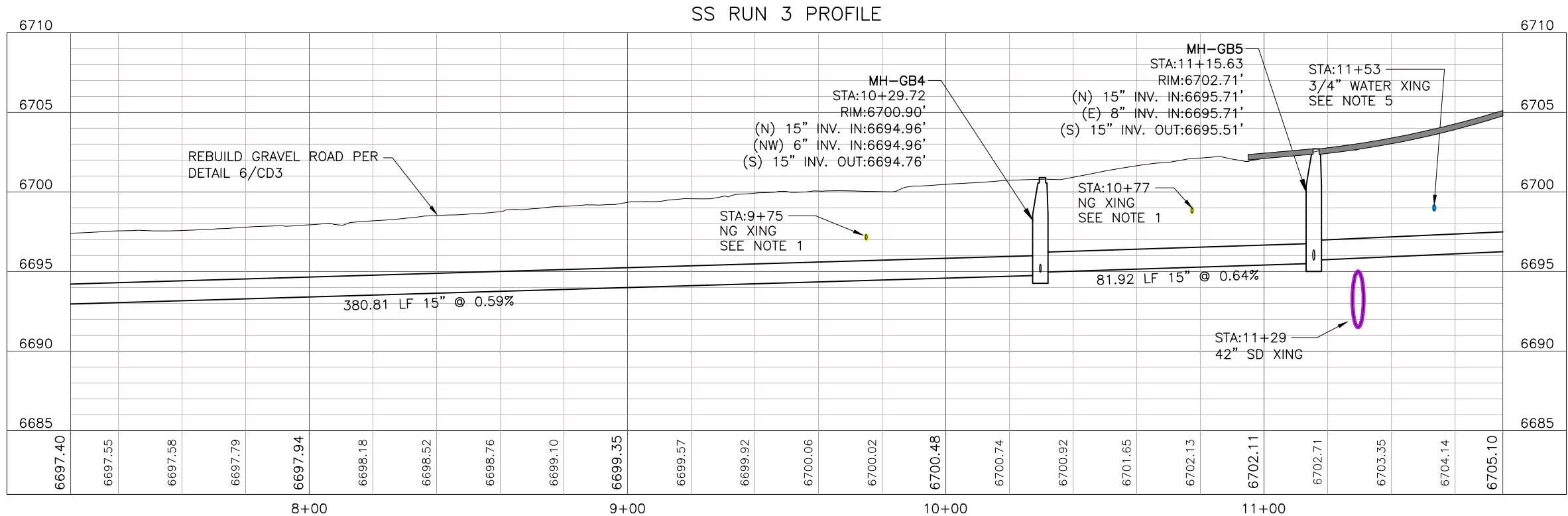
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SS-3

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- NOTES
1. ATMOS ENERGY UNDERGROUND NATURAL GAS LINE CROSSING. SIZE, CONDITION, AND DEPTH UNKNOWN
 2. ACCESS TO SOUTH SIDE OF WILSON GULCH ALONG OLD HIGH LLAMA GRAVEL ROAD
 3. PROVIDE 6" SOLID SLEEVE REPAIR COUPLING TO CONNECT EX 6" SERVICE CONNECTION
 4. PROVIDE 8" SOLID SLEEVE REPAIR COUPLING TO CONNECT EX 8" MAIN
 5. CITY OF DURANGO UNDERGROUND WATER SERVICE CROSSING. 3/4" COPPER LINE, DEPTH UNKNOWN
 6. PLAN LENGTH IS FROM CENTER TO CENTER OF MANHOLE, PROFILE LENGTH IS FROM INSIDE FACE TO INSIDE FACE OF MANHOLE IN THREE DIMENSION LENGTH
 7. THE HORIZONTAL AND VERTICAL LOCATIONS OF THE EXISTING KNOWN UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO EXCAVATION. ADDITIONAL UN-KNOWN UTILITIES MAY BE ENCOUNTERED DURING CONSTRUCTION. THE OWNER AND ENGINEER SHALL NOT BE LIABLE FOR ANY UN-KNOWN UTILITIES THAT MAY EXIST. IT IS THE CONTRACTORS RESPONSIBILITY FOR CROSSING BOTH KNOWN AND UN-KNOWN UTILITIES AND THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR THE PROTECTION AND RESULT OF ANY DAMAGE TO SUCH UTILITY CROSSINGS.



CALL UTILITY NOTIFICATION
CENTER OF COLORADO
811
CALL 2 BUSINESS DAYS IN ADVANCE
BEFORE YOU DIG, GRADE OR EXCAVATE
FOR THE MARKING OF UNDERGROUND
MEMBER UTILITIES.

PROFILE
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 8'

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CAD FILE:	PIPE NETWORK			

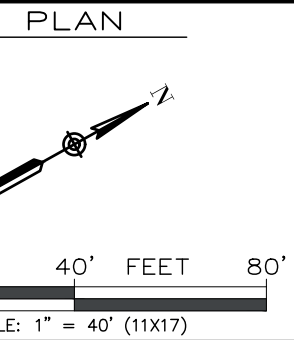


South Durango
Sanitation District

SOUTH DURANGO SANITATION DISTRICT
THREE SPRINGS CROSSING REPLACEMENT
SEWER RUN 3 PLAN & PROFILE
STA 7+25 TO 11+75

SHEET

SS-4



- ## NOTES
1. ENDURING RESOURCES UNDERGROUND 6" STEEL NATURAL GAS LINE & 3" POLY PRODUCED WATER LINE CROSSING. CONDITION, AND DEPTH UNKNOWN
 2. EX UNDERGROUND POWER LINE, DEPTH UNKNOWN, CONTACT LPEA FOR CROSSING REQUIREMENTS
 3. CITY OF DURANGO UNDERGROUND WATER MAIN CROSSING. 12" PVC LINE, DEPTH UNKNOWN
 4. CITY OF DURANGO UNDERGROUND WATER MAIN CROSSING. 8" PVC LINE, DEPTH UNKNOWN
 5. EX UNDERGROUND FIBER OPTIC LINE, DEPTH & OWNER UNKNOWN
 6. PLAN LENGTH IS FROM CENTER TO CENTER OF MANHOLE, PROFILE LENGTH IS FROM INSIDE FACE TO INSIDE FACE OF MANHOLE IN THREE DIMENSION LENGTH
 7. THE HORIZONTAL AND VERTICAL LOCATIONS OF THE EXISTING KNOWN UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO EXCAVATION. ADDITIONAL UN-KNOWN UTILITIES MAY BE ENCOUNTERED DURING CONSTRUCTION. THE OWNER AND ENGINEER SHALL NOT BE LIABLE FOR ANY UN-KNOWN UTILITIES THAT MAY EXIST. IT IS THE CONTRACTORS RESPONSIBILITY FOR CROSSING BOTH KNOWN AND UN-KNOWN UTILITIES AND THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR THE PROTECTION AND RESULT OF ANY DAMAGE TO SUCH UTILITY CROSSINGS.

CALL UTILITY NOTIFICATION
CENTER OF COLORADO
811
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BEFORE YOU DIG, GRADE OR EXCAVATE
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PROFILE

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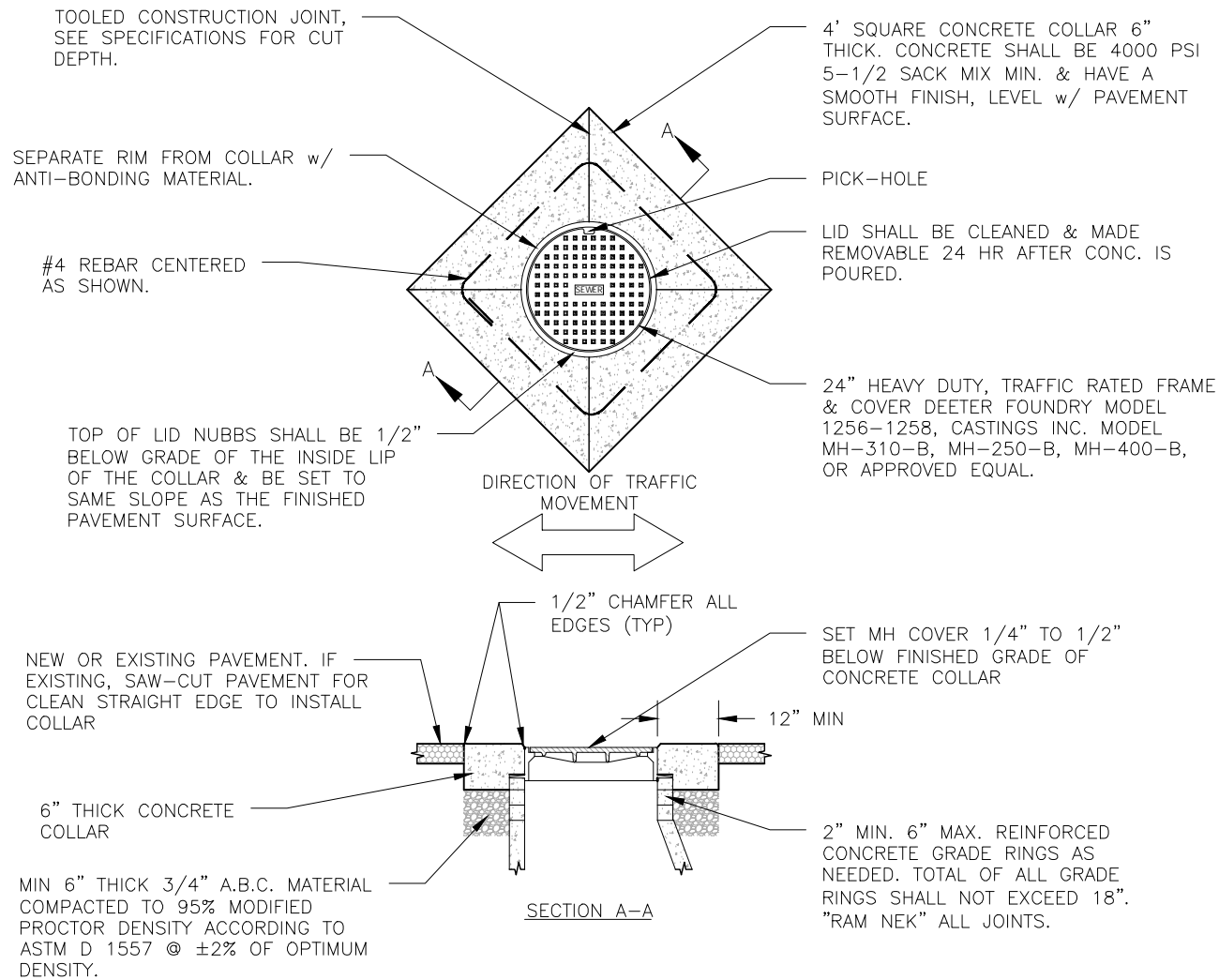


SOUTH DURANGO SANITATION DISTRICT
THREE SPRINGS CROSSING REPLACEMENT
SEWER RUN 3 PLAN & PROFILE
STA 11+75 TO 15+87

SHEET

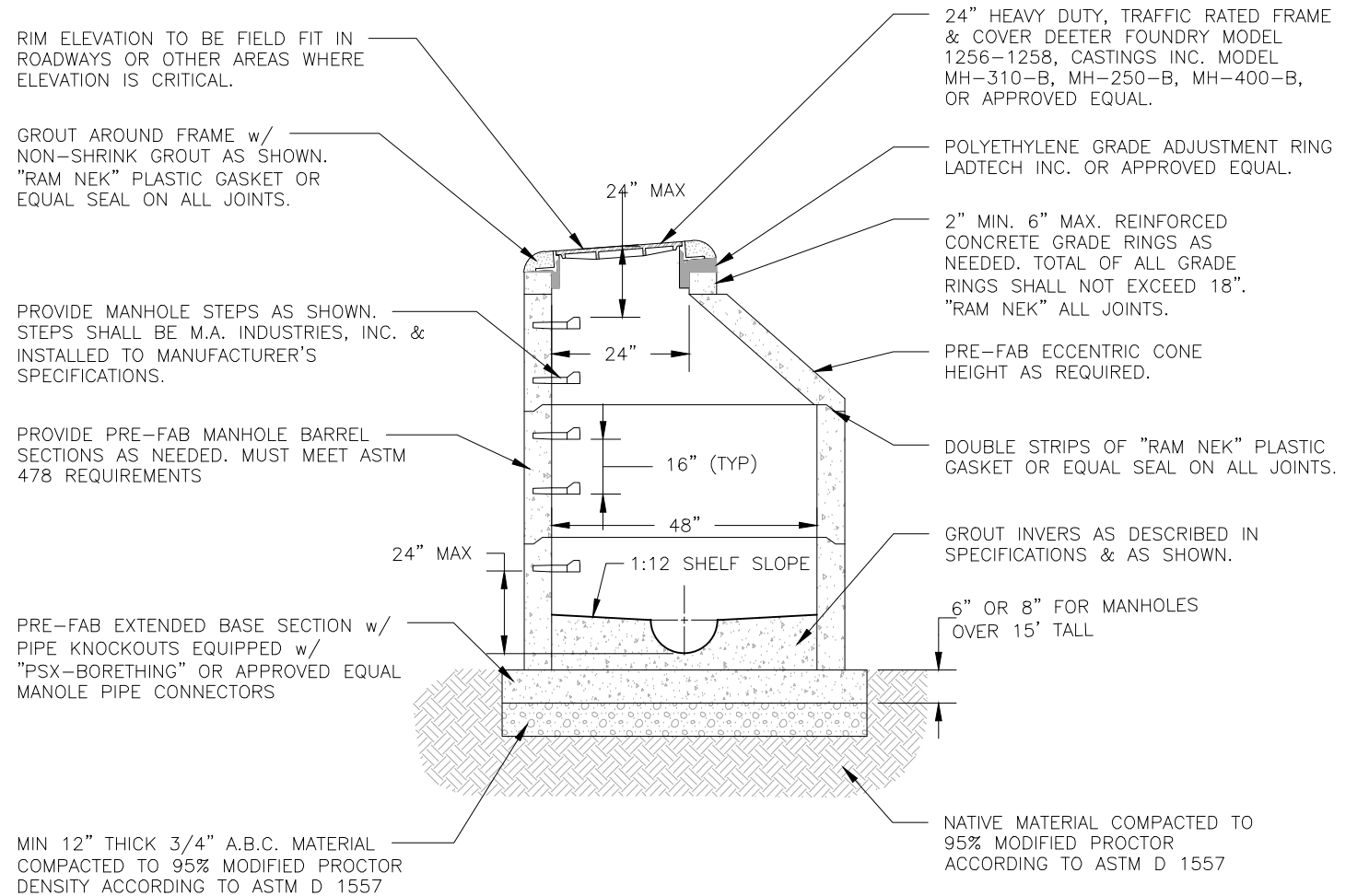
SS-5

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- NOTES:
1. USE POLYETHYLENE GRADE ADJUSTMENT RING TO MATCH MANHOLE RIM WITH ROAD SURFACE GRADE PRIOR TO POURING CONCRETE COLLAR.
 2. COVER SHALL BE CENTERED INSIDE SQUARE COLLAR.

2 MANHOLE COLLAR DETAILS
CD1 N.T.S.



- NOTES:
1. 4'-0" MANHOLES SHALL BE USED FOR PIPES UP TO 18" DIAMETER.
 2. 5'-0" MANHOLES SHALL BE USED FOR PIPES FROM 18"-36" DIAMETER.
 3. SPECIAL MANHOLES SHALL BE USED FOR PIPES LARGER THAN 36" DIAMETER.
 4. MANHOLES LESS THAN OR EQUAL TO 5' FROM TOP OF CASTING TO INVERT SHALL HAVE FLAT TOPS w/ CONCENTRIC OPENING. ALL ADJUSTING RINGS, CASTINGS, INVERTS, BOTTOMS, ETC. SHALL BE SIMILAR TO SHOWN MANHOLE.
 5. IF MAN HOLE BASE SECTION IS TO BE PLACED ON NON-SUITABLE SOILS AS DESCRIBED IN THE SPECIFICATIONS, OR IN HIGH GROUNDWATER CONDITIONS, OR AT THE DISCRETION OF THE ENGINEER. OVER EXCAVATION MAY BE REQ'D AS DESCRIBED IN THE SPECIFICATIONS.
 6. MANHOLES DEEPER THAN 20 FT SHALL REQUIRE SPECIAL DESIGN REVIEW BY THE DISTRICT.

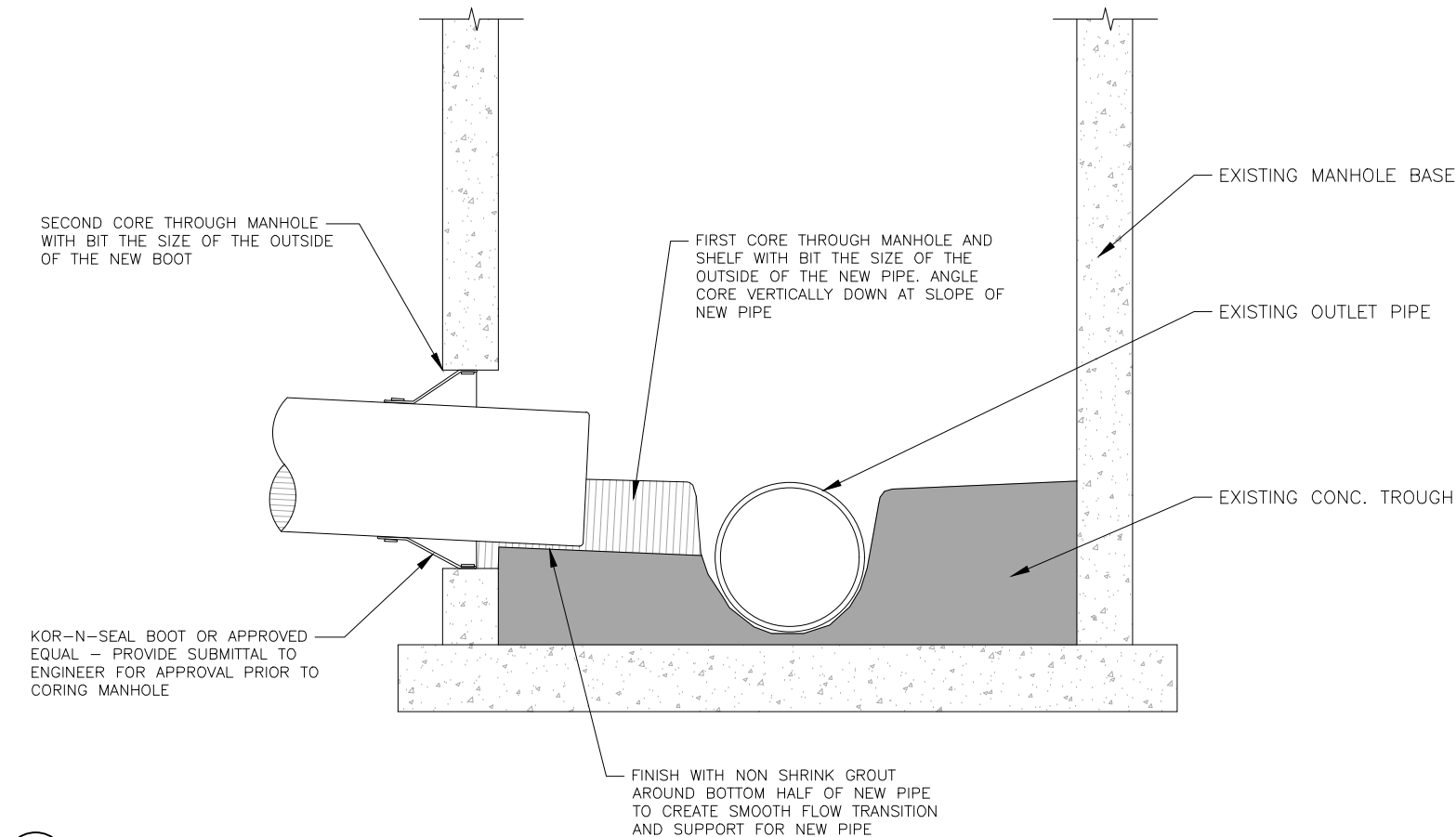
1 STANDARD SEWER MANHOLE
CD1 N.T.S.

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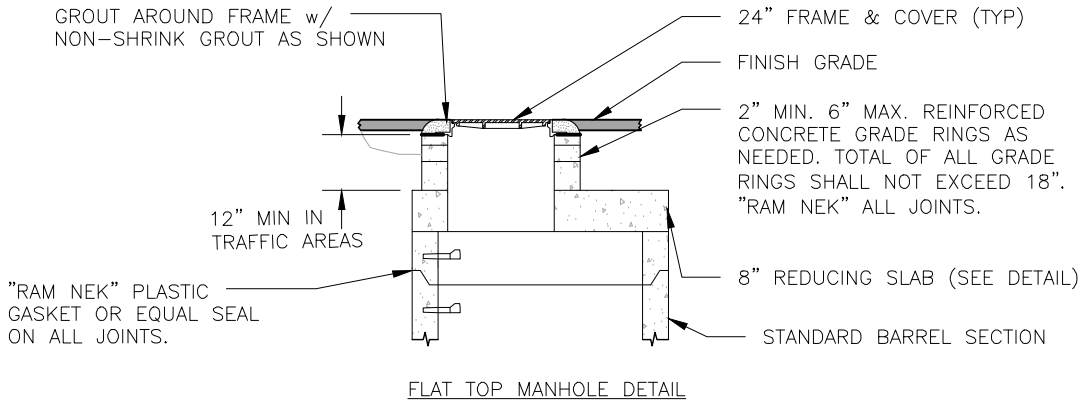
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CONSTRUCTION NOTES:

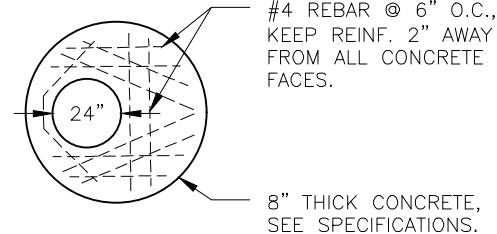
1. THE CONTRACTOR SHALL CONTACT THE OWNER A MINIMUM OF 2 WEEKS PRIOR TO START OF WORK AND A PROVIDE SUBMITTAL FOR THE KOR-N-SEAL BOOT AS WELL AS CONFIRMATION OF THE AVAILABILITY OF THE CORE BIT SIZES AS REQUIRED.
2. THE GOAL OF THE CORING PROCESS IS TO FIRST CORE A HOLE EQUAL TO THE OUTSIDE DIAMETER OF THE PROPOSED NEW PIPE THROUGH THE WALL OF THE MANHOLE AND EXTENDING THROUGH THE INTERIOR SHELF ALL THE WAY TO THE EXISTING MAIN TROUGH. THIS CORE SHOULD BE ANGLED VERTICALLY DOWN AT SLOPE TO MATCH NEW PIPE TOWARD THE CENTER OF THE MANHOLE. THIS FIRST CORE THROUGH THE EXISTING GROUT SHELF SHOULD BE ALIGNED AND COMPLETED TO CREATE A NEW FLOW CHANNEL THROUGH THE SHELF FROM THE NEW PIPE TO MAIN FLOW CHANNEL. A SECOND CORE EQUAL TO THE OUTSIDE DIAMETER OF THE KOR-N-SEAL BOOT SHALL THEN PENETRATE JUST THE OUTSIDE WALL TO COMPLETE THE CORING PROCESS.
3. PRIOR TO STARTING WORK, CONTRACTOR SHALL EXPOSE THE OUTSIDE FACE OF THE MANHOLE AND MARK THE PROPOSED DESIGN ELEVATION OF THE INVERT OF NEW PIPE AND PROPOSED CENTER OF CORE AS PER THE DESIGN PLANS. THE OPTIMUM CENTER OF THE CORE HOLES SHALL THEN BE ESTABLISHED AT THE SPRING LINE OF THE EXISTING OUTLET PIPE PLUS 1/2 OF THE NEW PIPE DIAMETER PLUS 0.2 FEET. CONTRACTOR SHALL CAREFULLY MEASURE INSIDE AND OUTSIDE OF THE MANHOLE TO ESTABLISH AND MARK THE OPTIMUM CENTER OF CORE LOCATION.
4. THE OWNER SHALL WITNESS ALL CORING OPERATIONS AND SHALL BE NOTIFIED 48 HOURS PRIOR TO STARTING WORK. THE OWNER SHALL WORK WITH THE CONTRACTOR AN HOUR BEFORE CORING BEGINS TO REVIEW THE DESIGN AND OPTIMUM CORE ELEVATIONS AND DETERMINE THE FINAL CENTER OF CORE LOCATION.
5. THE CONTRACTOR SHALL ENSURE COUPONS ARE REMOVED AND HAVE METHODS AND PERSONNEL INSIDE THE MANHOLE DURING THE CORING PROCESS TO ENSURE NO CONCRETE DEBRIS ENTERS THE FLOW STREAM AND / OR EXITS DOWNSTREAM OF THE EXISTING PIPE IN THE MANHOLE.
6. THE COR-N-SEAL BOOT SHALL BE INSTALLED AS PER MANUFACTURERS RECOMMENDATIONS AND ALL VOIDS AROUND THE BOTTOM OF THE NEW PIPE AND AS NECESSARY TO CREATE A SMOOTH NEW FLOW CHANNEL SHALL BE FILLED WITH NON-SHRINK GROUT.



1 EXISTING MANHOLE PENETRATION DETAIL
CD2 N.T.S.



3 FLAT TOP MANHOLE DETAIL
CD2 N.T.S.



REDUCING SLAB DETAIL

2 REDUCING SLAB DETAIL
CD2 N.T.S.

- NOTES:
1. 4' MANHOLES SHALL BE USED FOR PIPES UP TO 24" DIAMETER.
 2. 5' MANHOLES SHALL BE USED FOR PIPES FROM 27"-36" DIAMETER.
 3. SPECIAL MANHOLES SHALL BE USED FOR PIPES LARGER THAN 36" DIAMETER.
 4. MANHOLES LESS THAN OR EQUAL TO 6' FROM TOP OF CASTING TO INVERT, SHALL HAVE FLAT TOPS w/ CONCENTRIC OPENING. ALL ADJUSTING RINGS, CASTINGS, INVERTS, BOTTOMS, ETC., SHALL BE SIMILAR TO DETAILS.
 5. DROP MANHOLE SHALL BE PROVIDED WHERE SEWER ENTERS M.H. 2'-0" OR MORE ABOVE LOWEST INVERT OF MANHOLE (TYPE "A"). MANHOLES GREATER THAN 5' DEEP MEASURED FROM INVERT TO TOP OF RIM SHALL USE ECCENTRIC CONICAL TOP SECTION (TYPE "B").
 6. POSITION INCOMING SEWER PENETRATIONS @ A MINIMUM DISTANCE OF 12" FROM MANHOLE STEPS.

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CAD FILE:	PIPE NETWORK			



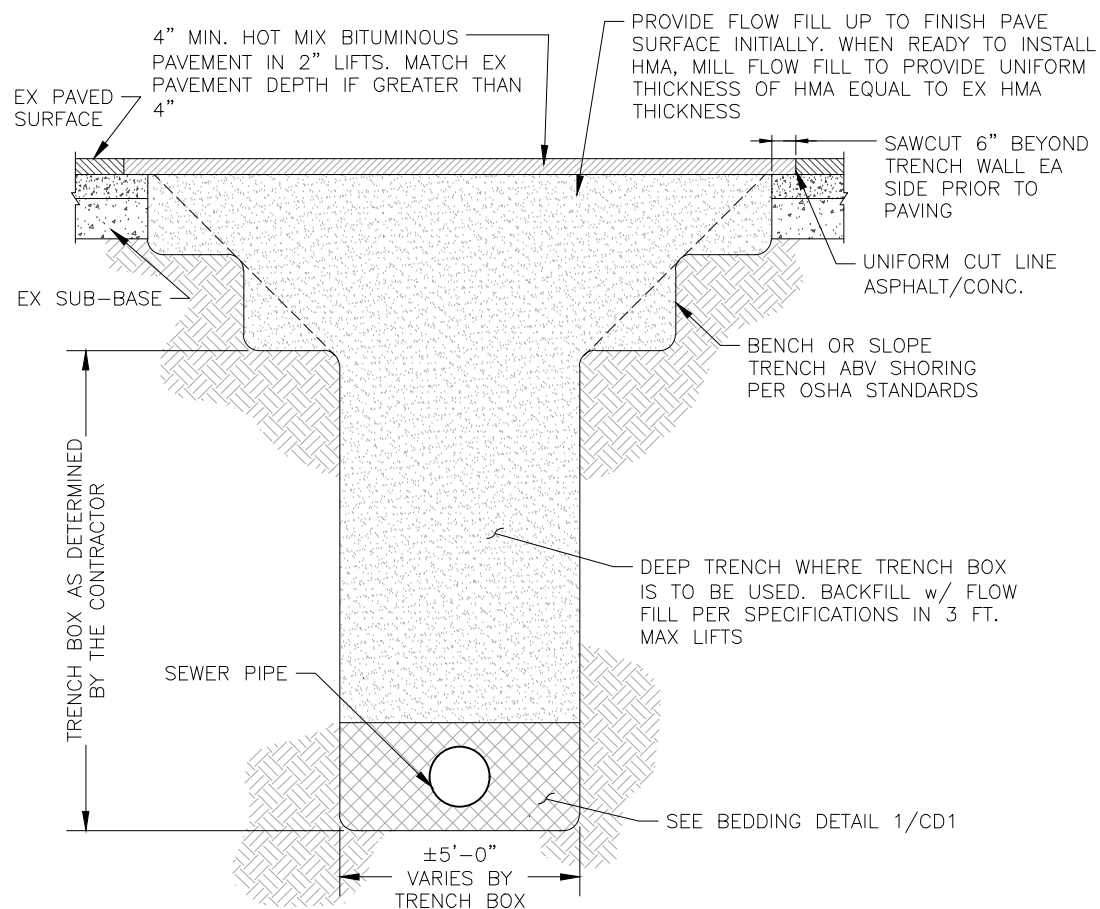
South Durango
Sanitation District

SOUTH DURANGO SANITATION DISTRICT
THREE SPRINGS CROSSING REPLACEMENT

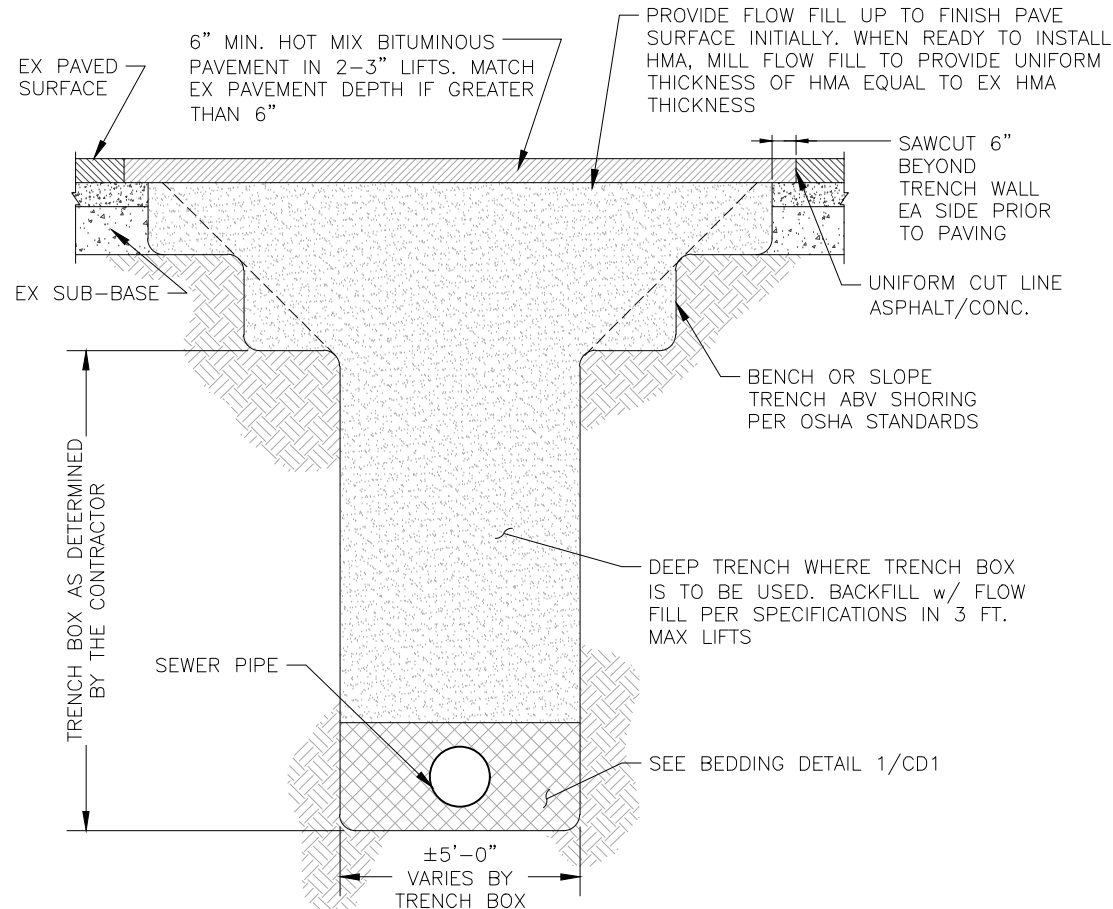
MANHOLE CORING DETAILS

SHEET

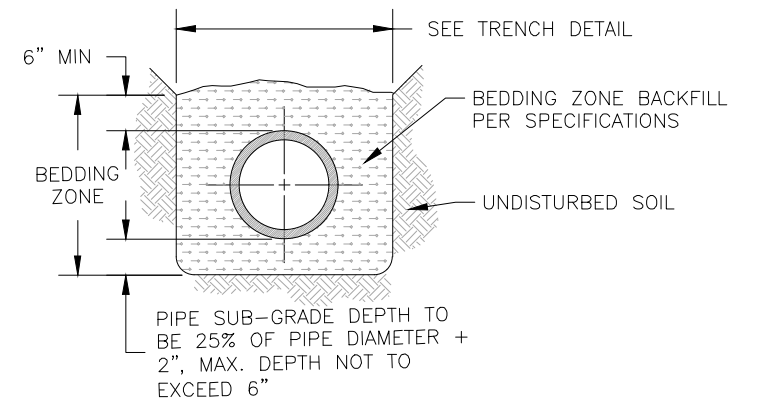
CD2



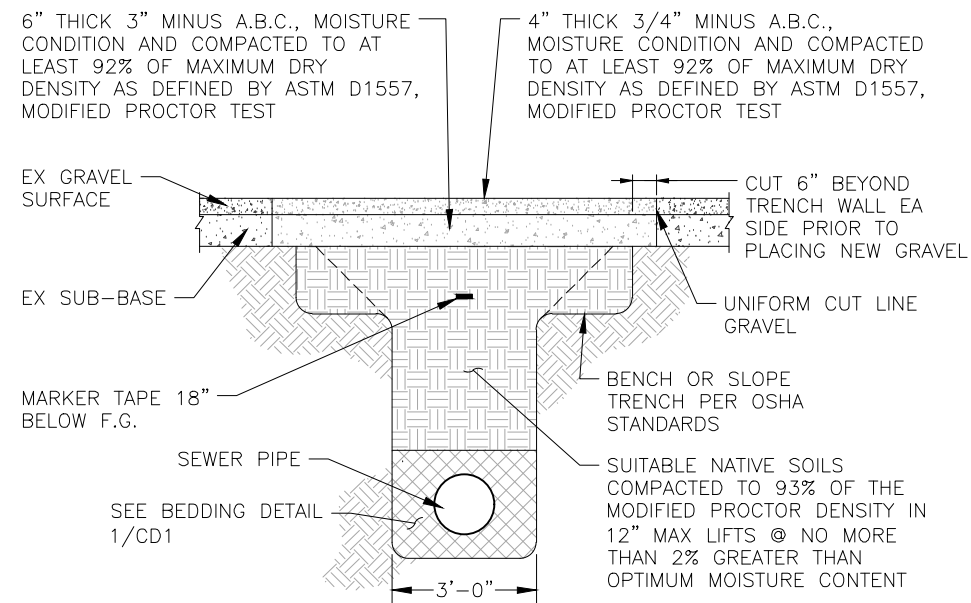
3 TYP. DEEP TRENCH SECTION BELOW HIGH LLAMA LANE
CD3 N.T.S.



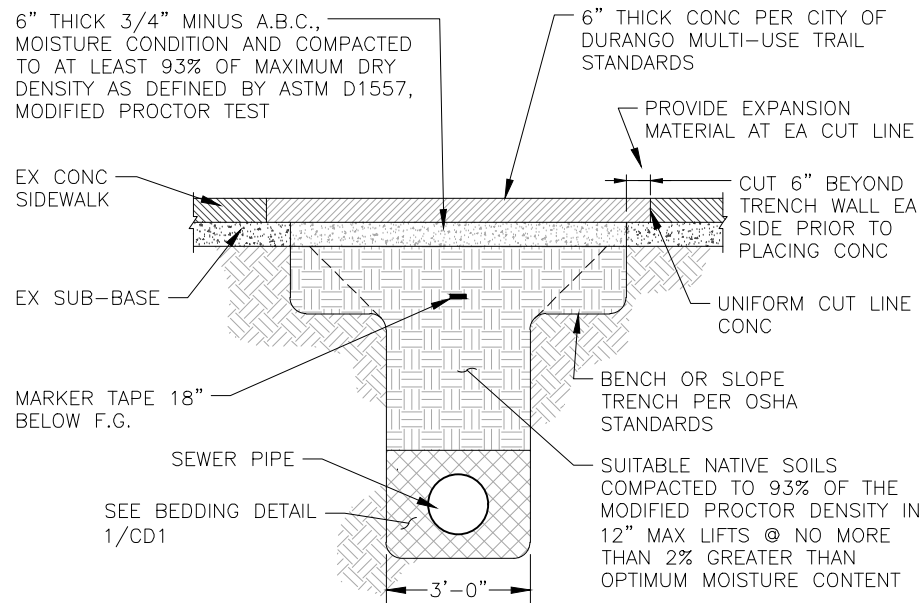
2 TYP. DEEP TRENCH SECTION BELOW WILSON GULCH ROAD
CD3 N.T.S.



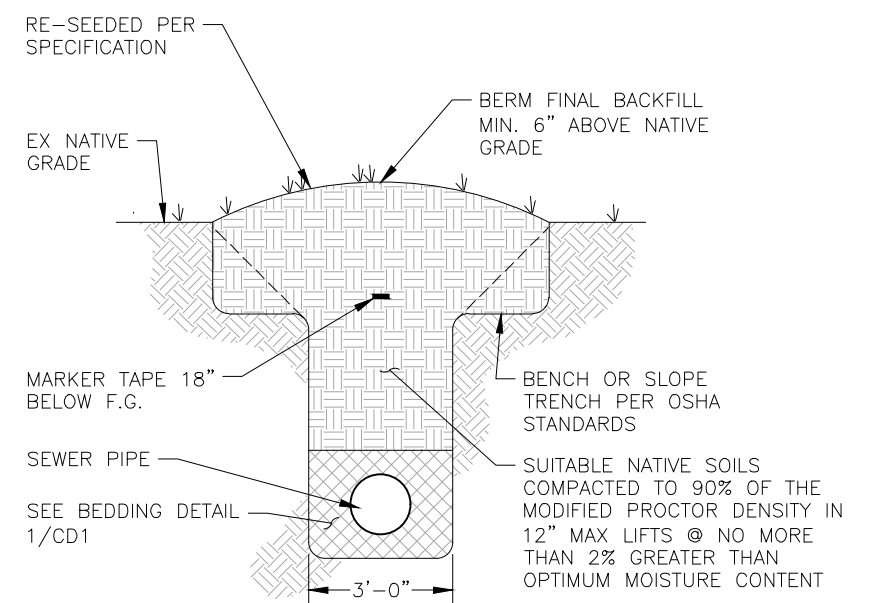
1 STANDARD PIPE BEDDING DETAIL
CD3 N.T.S.



6 TYP. STD TRENCH SECTION BELOW GRAVEL ROAD
CD3 N.T.S.

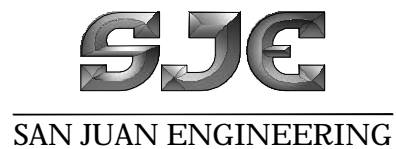


5 TYP. STD TRENCH SECTION BELOW CONCRETE SIDEWALK
CD3 N.T.S.



4 TYP. STD TRENCH SECTION
CD3 N.T.S.

DATE:	1/31/2025	REV.	DATE	DESCRIPTION
DESIGNED BY:	MATT M.		2/6/25	BID SET
DRAWN BY:	MATT M.			
CHECKED BY:	RICK J.			
PROJECT NO.:	1000-253			
CAD FILE:	PIPE NETWORK			



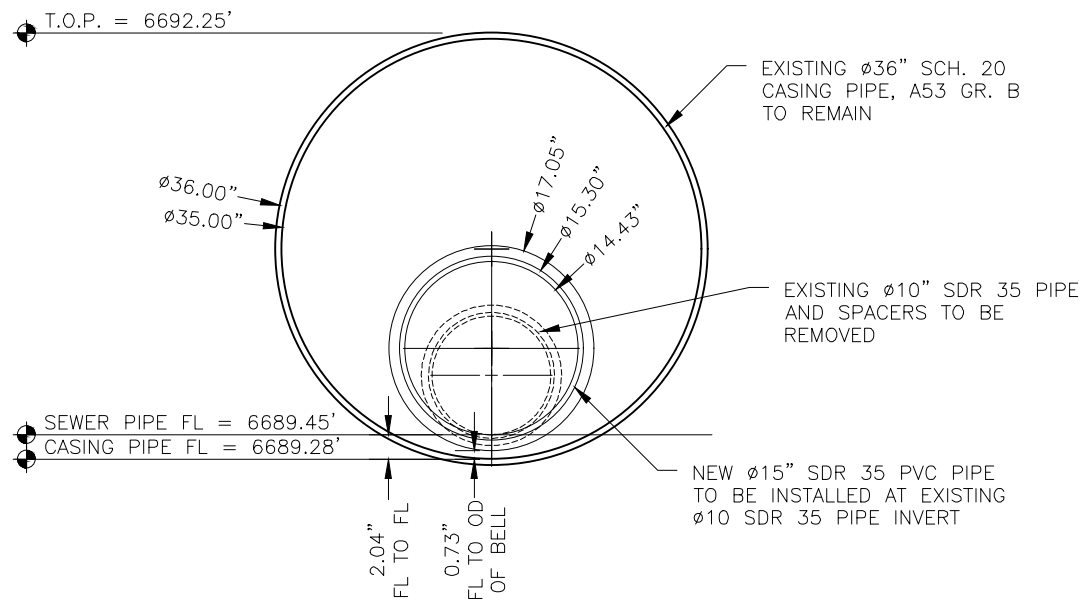
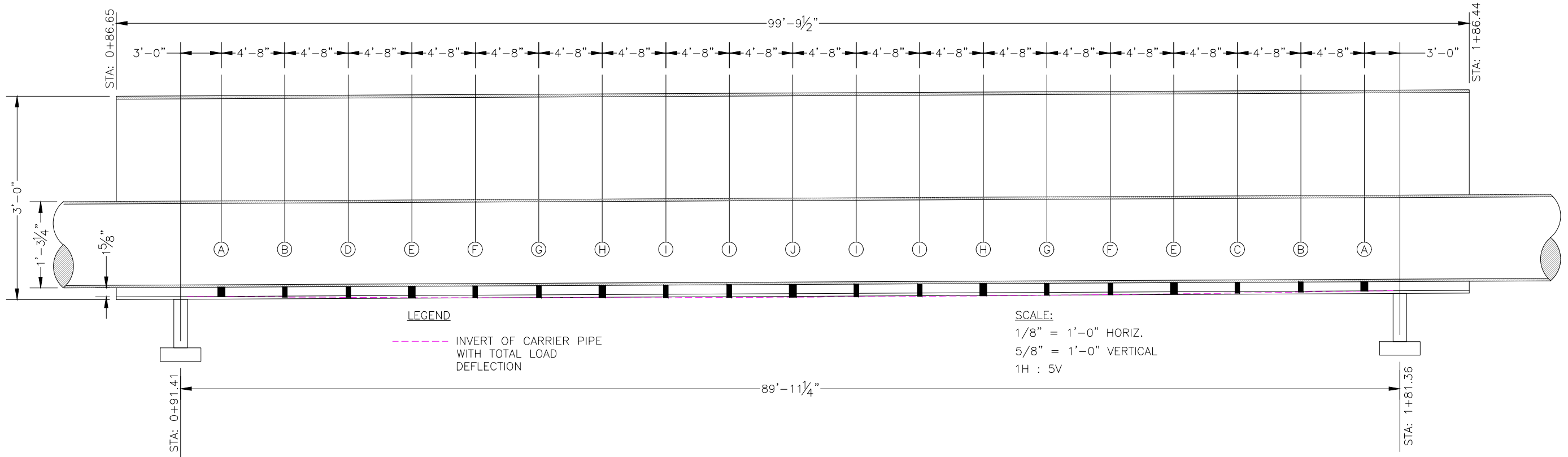
South Durango
Sanitation District

SOUTH DURANGO SANITATION DISTRICT
THREE SPRINGS CROSSING REPLACEMENT
TYP. BEDDING & TRENCHING DETAILS

SHEET

CD3

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2 CARRIER PIPE SECTION DETAILS
CD4 N.T.S.

PIPE SPACER TABLE				
LABEL	ID OF CARRIER TO OD OF 15" SEWER LINE (IN)	ID OF CARRIER TO OD OF 15" SEWER LINE (IN)	QTY	*TYPE
A	1 11/16	1.6875	2	CCS-JR
B	1 13/16	1.8125	2	CCS
C	1 7/8	1.8750	1	CCS
D	1 15/16	1.9375	1	CCS
E	2	2.0000	2	CCS-JR
F	2 1/16	2.0625	2	CCS
G	2 1/8	2.1250	2	CCS
H	2 3/16	2.1875	2	CCS-JR
I	2 1/4	2.2500	4	CCS
J	2 1/4	2.2500	1	CCS-JR

* SPACERS AND MECHANICAL SPACERS SHALL BE CASCADE WATERWORKS MFG or APPROVED EQUAL

1 CARRIER PIPE PROFILE VIEW
CD4

GENERAL NOTES

- CASING PIPE CROSS SECTION DETAIL PER 2/CD4
- EXHIBIT IS FOR THE SOLE PURPOSE OF CORRECTLY INSTALLING CASCADE SPACERS (CCS AND CCS-JR)
- MECHANICAL SPACER DIMENSION SHOWN ACCOUNT FOR THE ANTICIPATED TOTAL LOAD DEFLECTION OF THE CARRIER PIPE
- THE CONTRACTOR SHALL VERIFY THE INVERT ELEVATION OF THE CARRIER PIPE AND THE PROPOSED NEW SLOPE OF THE 15" SDR 35 SEWER PIPE AND ENSURE THERE IS ADEQUATE SPACE SUCH THAT THE BELLS DO NOT TOUCH THE CASING PIPE.
- THE CONTRACTOR SHALL COORDINATE WITH CASCADE WATERWORKS TO DETERMINE THE APPROPRIATE SPACERS FOR THE NEW PIPE INSTALLATION AND SHALL PROVIDE THE OWNER WITH SHOP DRAWING OF THE PROPOSED PIPE SPACER PLAN FOR APPROVAL PRIOR TO ORDERING SPACERS.
- THE EXISTING STEEL ANGLE GUIDES INSTALLED IN THE CARRIER PIPE MAY NEED TO BE REMOVED AND RE-LOCATED WITHIN THE CARRIER PIPE DEPENDING ON THE NEW PIPE SPACER CONFIGURATIONS. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER PRIOR TO ANY MODIFICATIONS TO THE ANGLE GUIDES AND OR ANY WELDING WITHIN THE CARRIER PIPE. IF SUCH MODIFICATIONS ARE NECESSARY, THE CONTRACTOR SHALL DEVELOP A PLAN FOR WORKING WITHIN A CONFINED SPACE AND MUST MEET ALL OSHA REQUIREMENTS AND SHALL BE APPROVED BY THE OWNER.
- THE CONTRACTOR SHALL INSTALL NEW CARRIER PIPE BOOTS AT EACH END OF THE CARRIER PIPE PER TECHNICAL SPECIFICATIONS. ADDITIONAL SOIL SHALL BE PLACED SUCH THAT THE NEW BOOTS ARE NOT EXPOSED TO UV LIGHT IN THE FINAL CONFIGURATION.

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South Durango
Sanitation District

SOUTH DURANGO SANITATION DISTRICT
THREE SPRINGS CROSSING REPLACEMENT

CIVIL DETAILS

SHEET

CD4