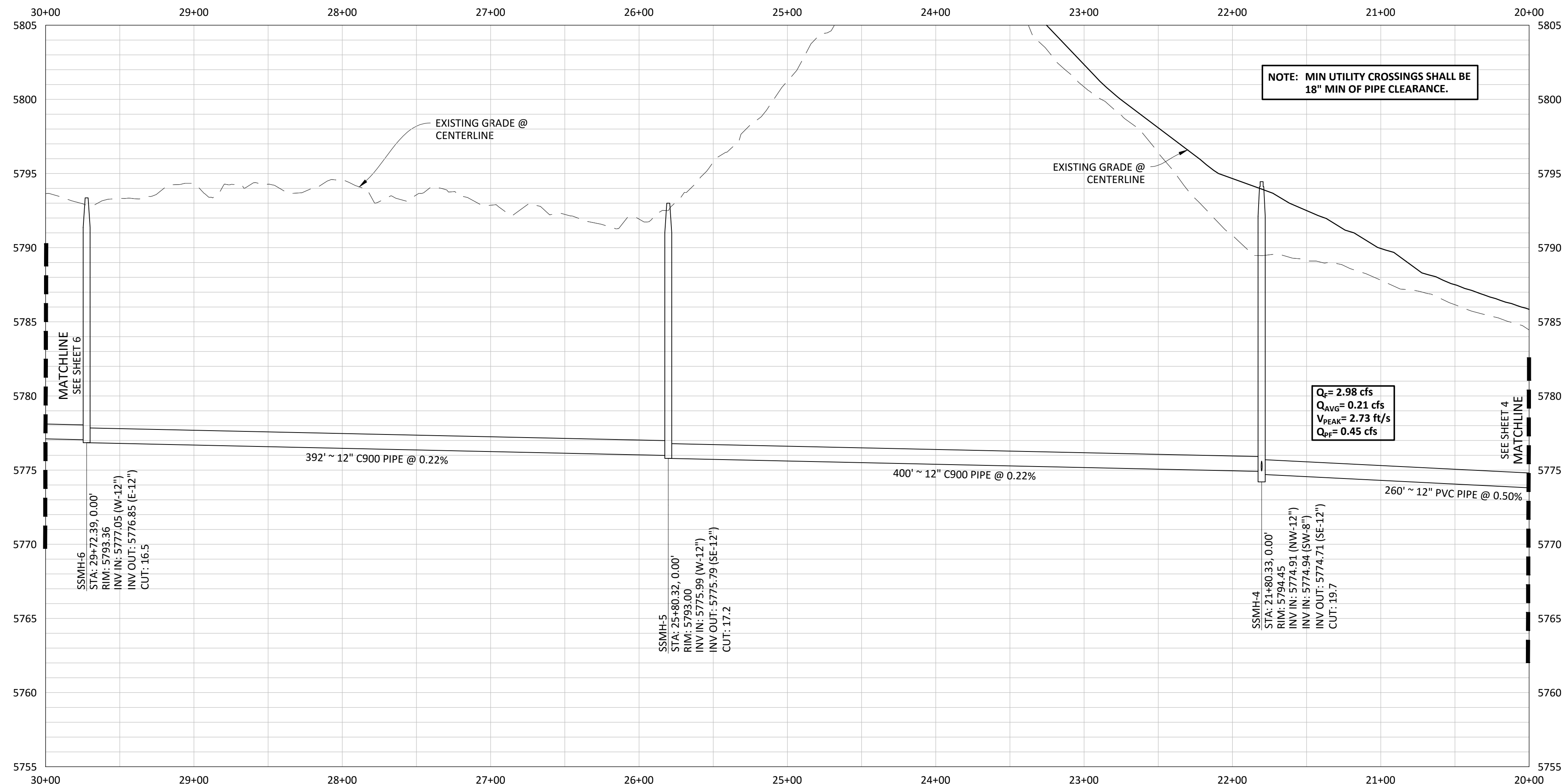
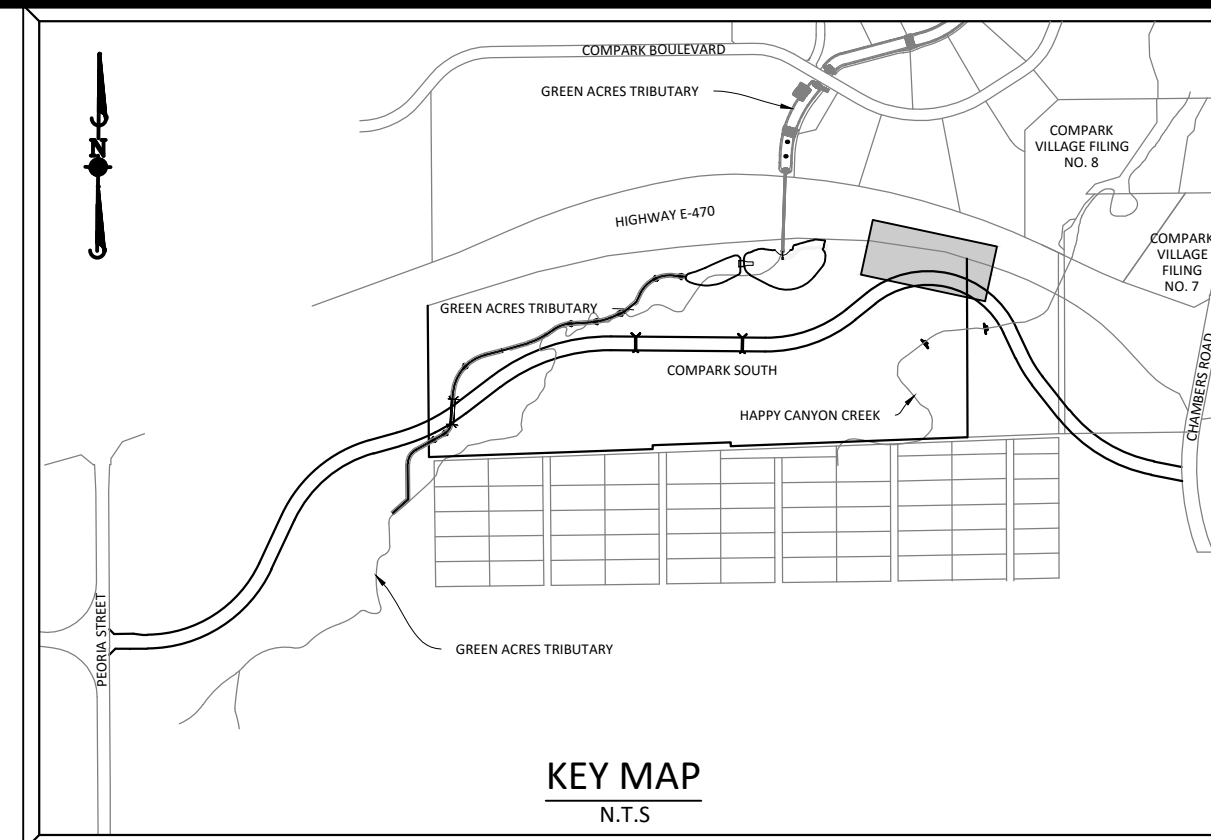


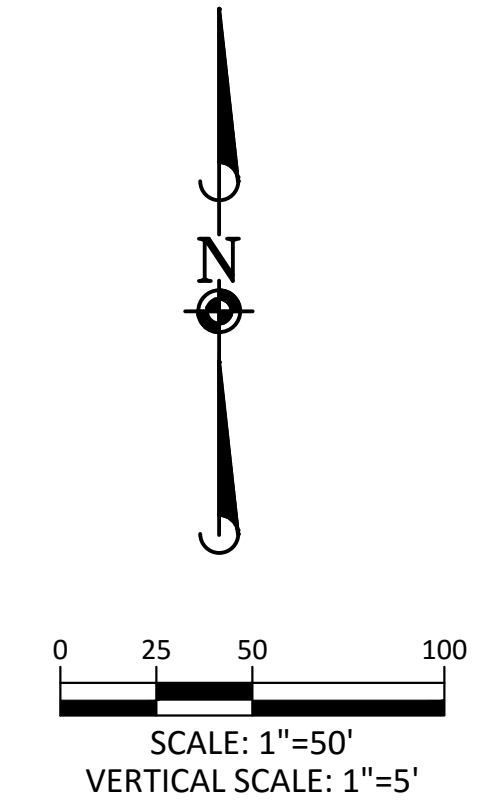
PLAN: SANITARY SEWER



PROFILE: SANITARY SEWER



SOURCE BENCHMARKS:
 DOUGLAS COUNTY BM 1.115010
 A DOUGLAS COUNTY GIS MONUMENT SET IN CONCRETE LOCATED APPROXIMATELY 130 FEET
 SOUTHWESTERLY OF THE CENTERLINE OF CHAMBERS ROAD AND 95 FEET NORTHWESTERLY OF
 THE CENTERLINE OF COMPARK BOULEVARD. ELEVATION = 5752.84 (NAVD 88)



Know what's below.
 Call before you dig.

NOTE: SET ALL MANHOLE RIMS NOT IN PAVED AREAS 6" ABOVE FINISHED GRADE AND PROVIDE CARSONITE MARKER POST AT 5' OFFSET.

DATE	REVISIONS
10/2016	REVISED PER STONEGATE 9/27/16 LETTER
06/2016	REVISED PER STONEGATE 5/17/16 LETTER
11/2015	1ST SUBMITTAL

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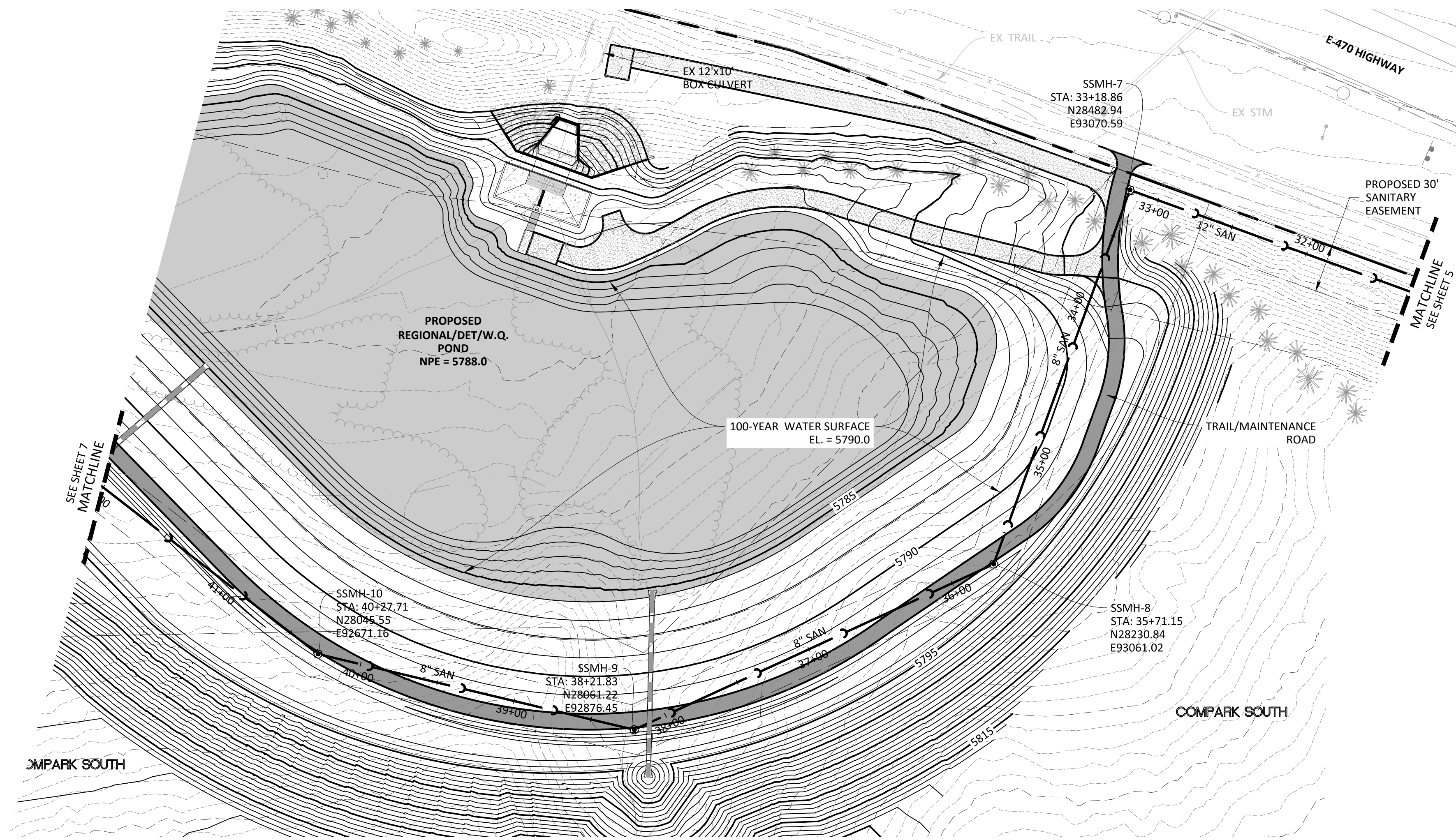
COMPARK VILLAGE SOUTH, FILING NO. 1
 TOWN OF PARKER, COLORADO
 SANITARY SEWER PLAN & PROFILE

PROJ. MGR.:	RLB
PROJ. ASSOC.:	ASD
DRAWN BY:	ETG
DATE:	11/2015
SHEET	5 OF 23
CLCPKC3	

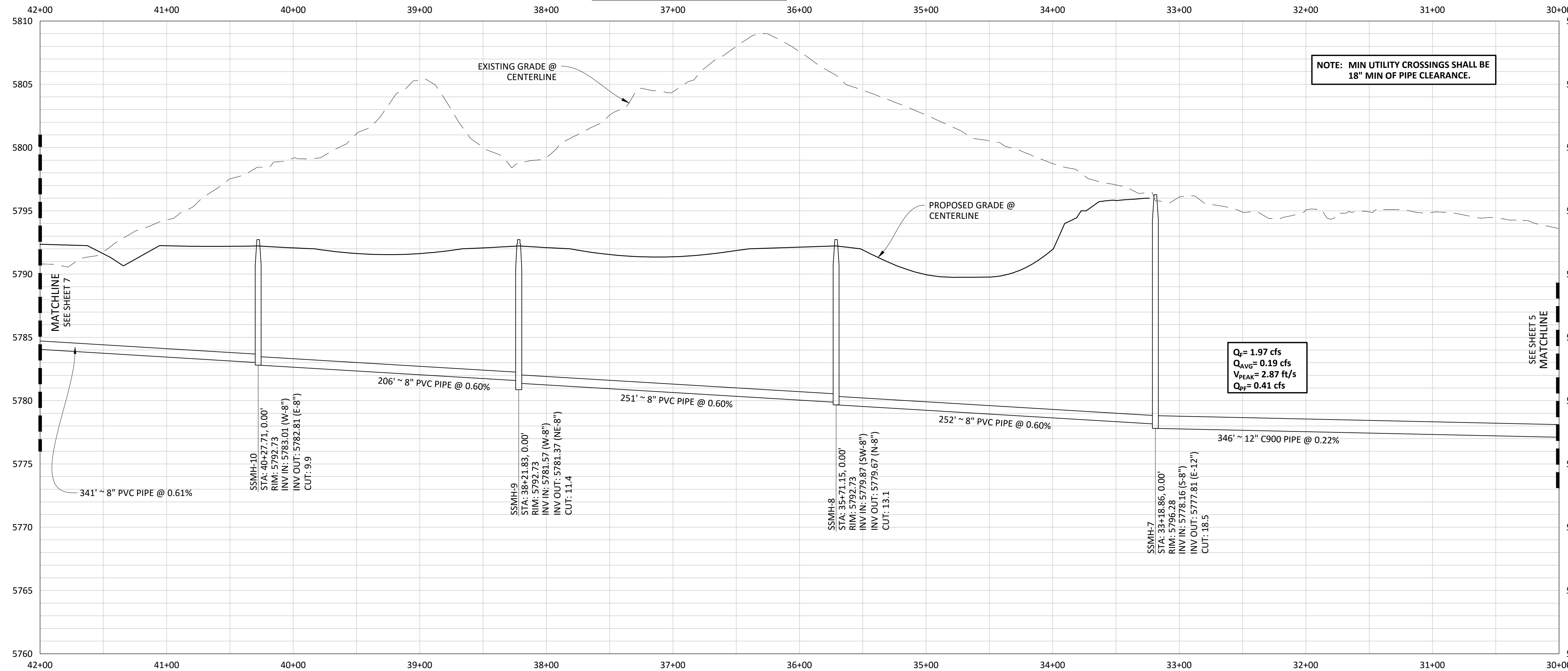
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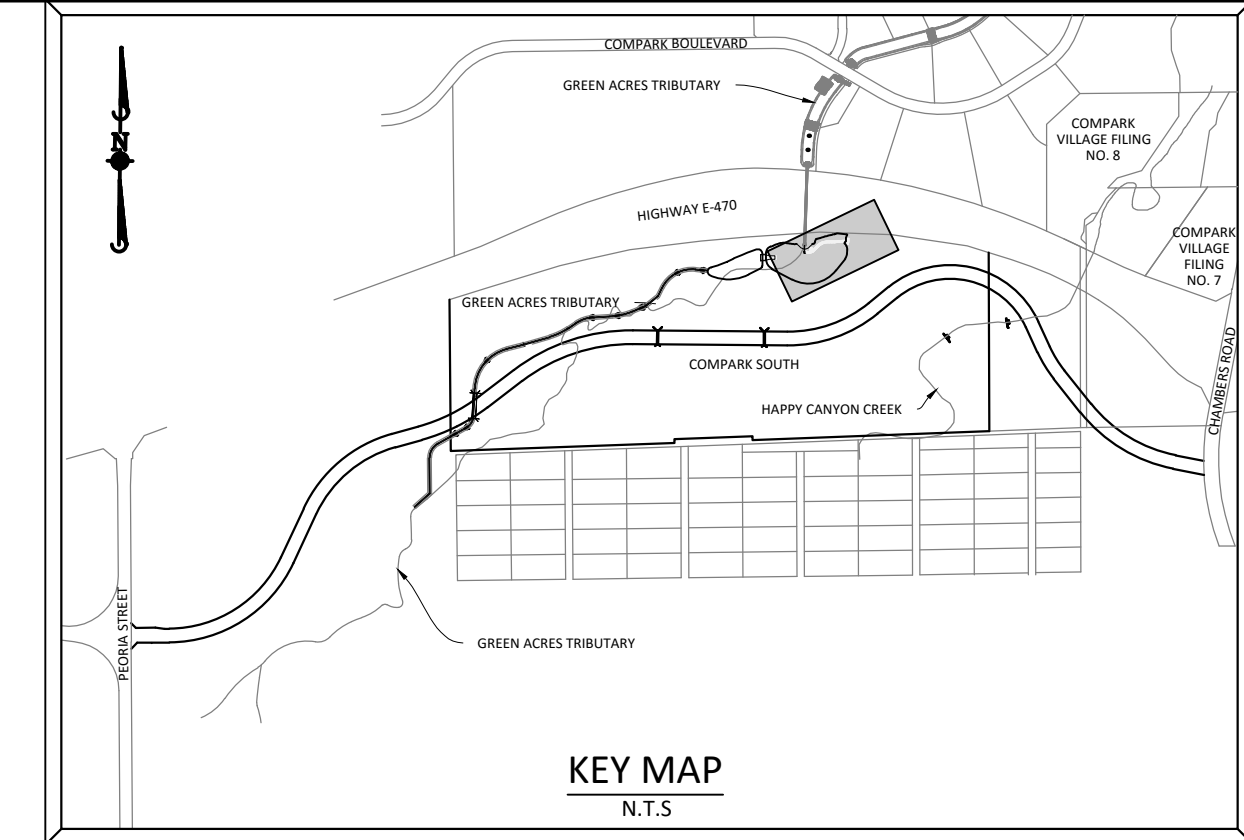
BID SET ONLY 10-7-16



PLAN: SANITARY SEWER



PROFILE: SANITARY SEWER

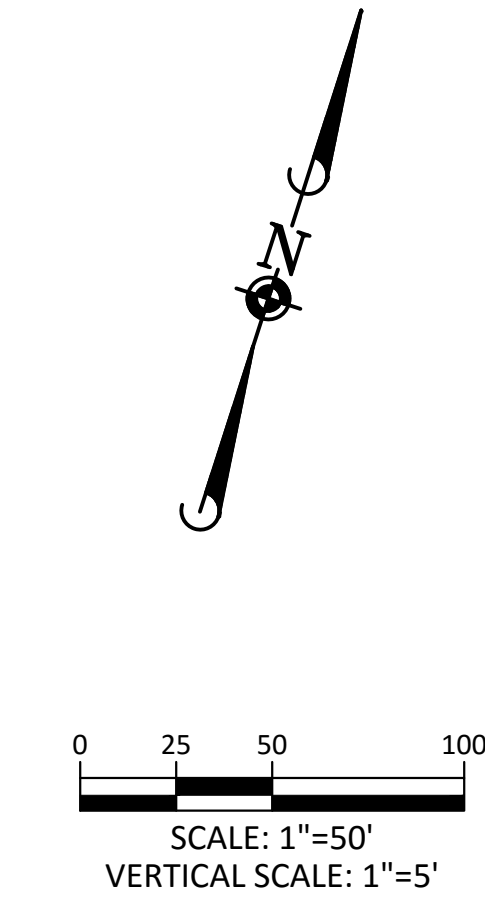


SOURCE BENCHMARKS:
DOUGLAS COUNTY BM 1.115010
A DOUGLAS COUNTY GIS MONUMENT SET IN CONCRETE LOCATED APPROXIMATELY 130 FEET
SOUTHWESTERLY OF THE CENTERLINE OF CHAMBERS ROAD AND 95 FEET NORTHWESTERLY OF
THE CENTERLINE OF COMPARK BOULEVARD. ELEVATION = 5752.84 (NAVD 88)

NO.	DATE	REVISIONS
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COMPARK VILLAGE SOUTH, FILING NO. 1
TOWN OF PARKER, COLORADO
SANITARY SEWER PLAN & PROFILE



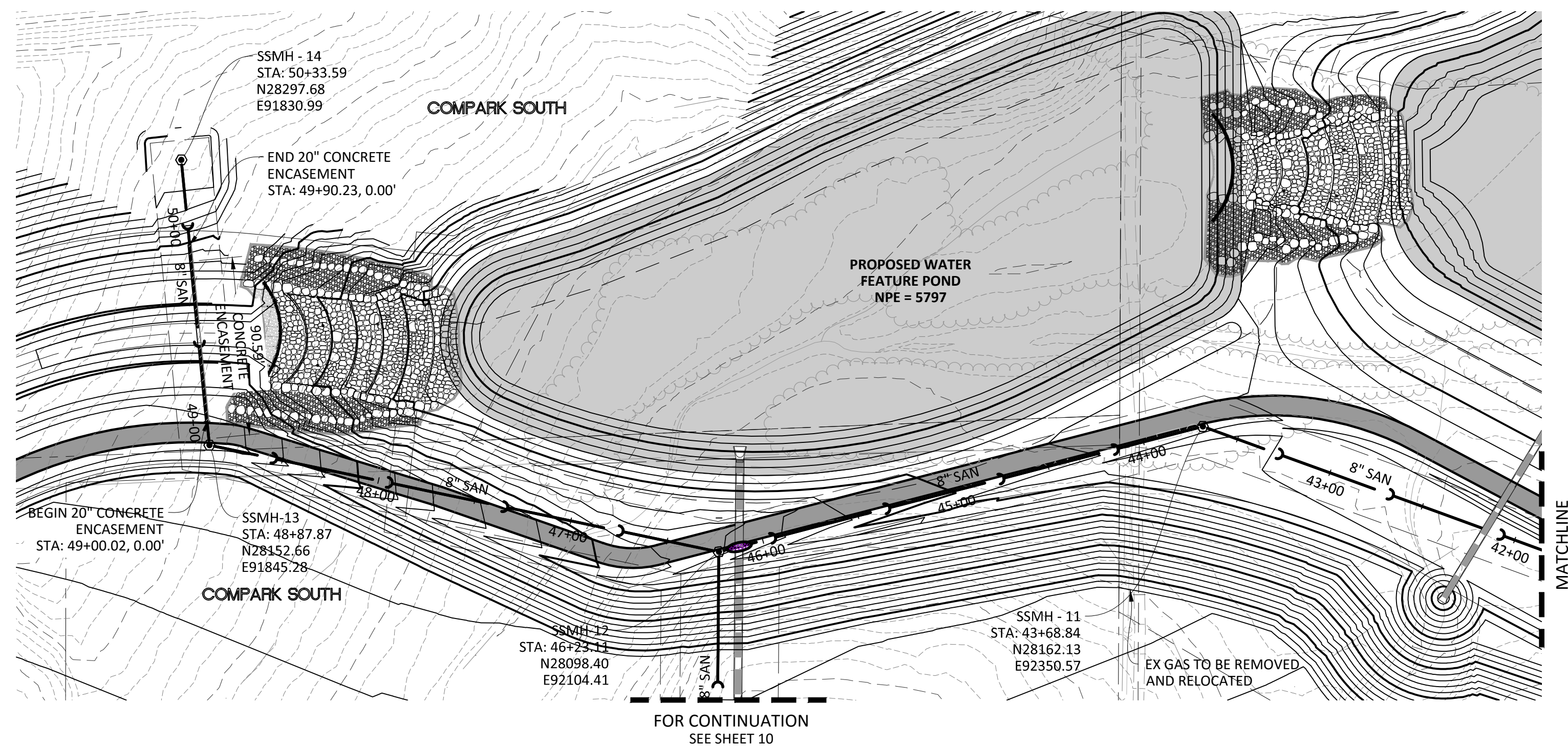
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NOTE: SET ALL MANHOLE RIMS NOT IN PAVED AREAS 6" ABOVE FINISHED GRADE AND PROVIDE CARSONITE MARKER POST AT 5' OFFSET.

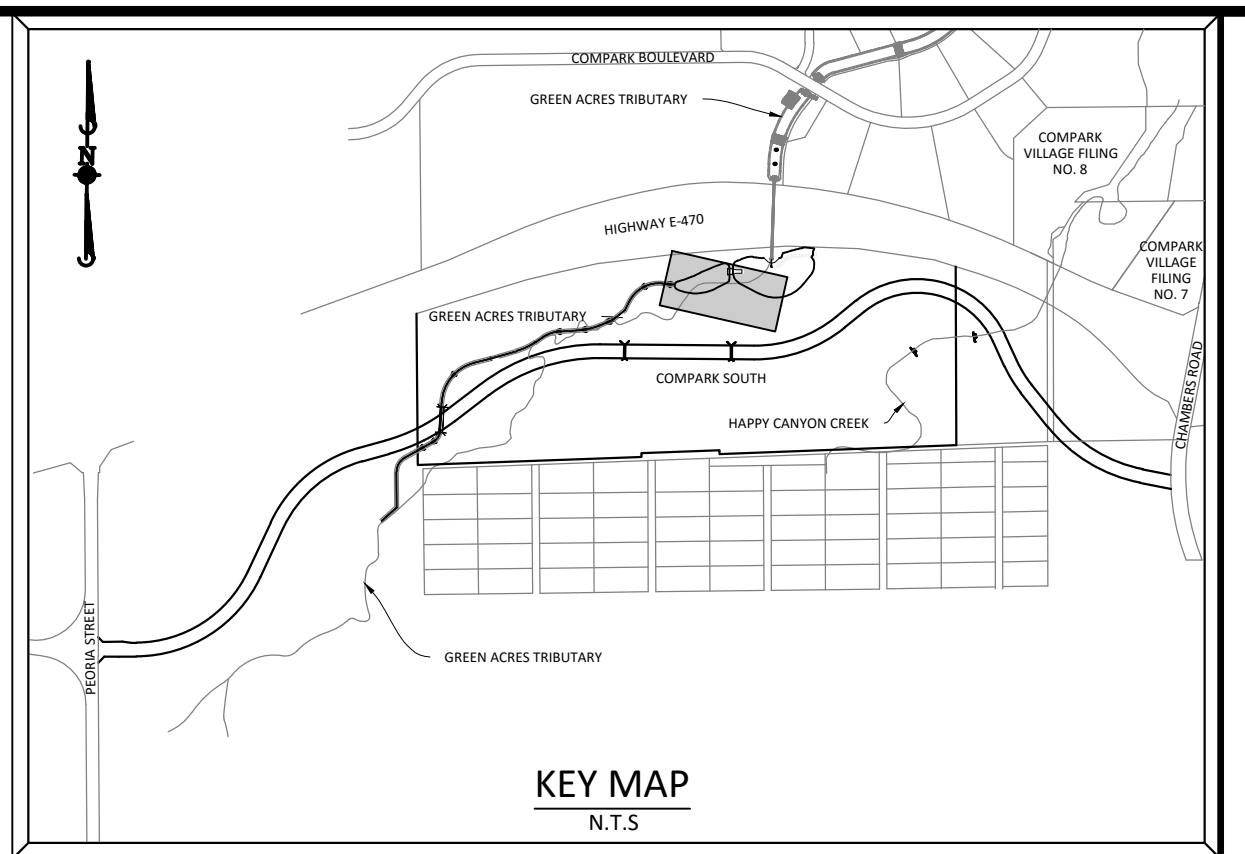
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PROJ. ASSOC.: ASD
DRAWN BY: ETG
DATE: 11/2015
SHEET
6 OF **23**
CLCPK3

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BID SET ONLY 10-7-16

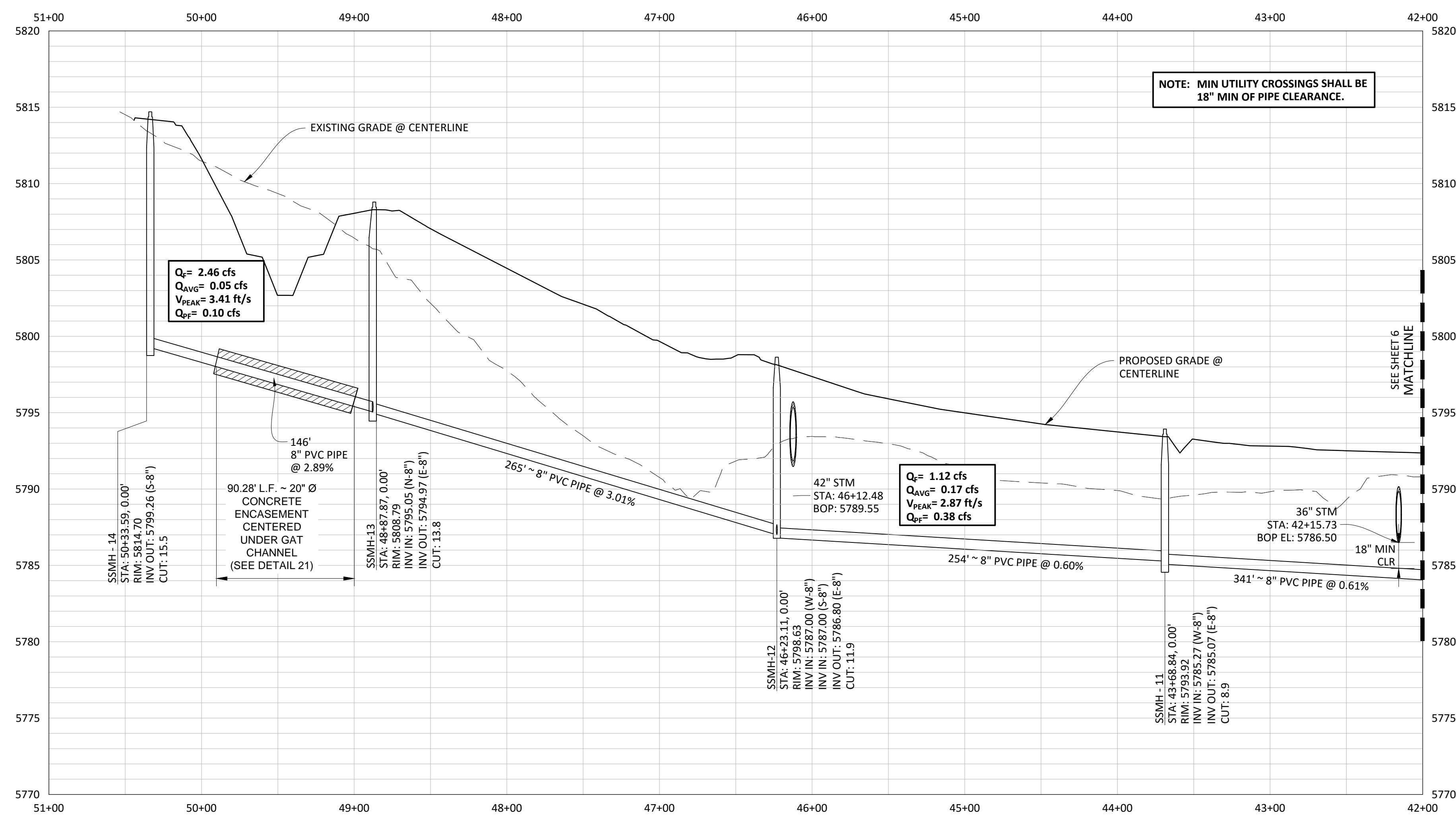


PLAN: SANITARY SEWER

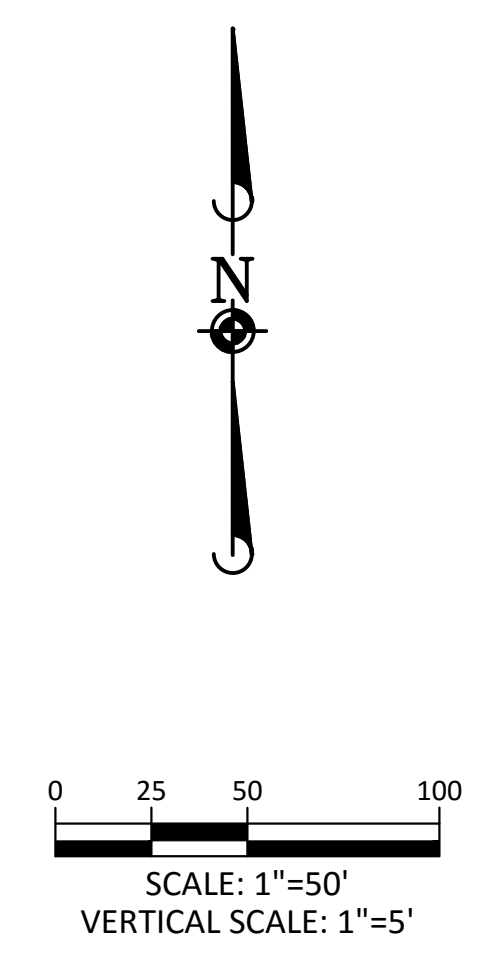


SOURCE BENCHMARKS:
 DOUGLAS COUNTY BM 1.115010
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NOTE: SET ALL MANHOLE RIMS NOT IN PAVED AREAS 6" ABOVE FINISHED GRADE AND PROVIDE CARSONITE MARKER POST AT 5' OFFSET.



PROFILE: SANITARY SEWER



NO.	DATE	REVISIONS
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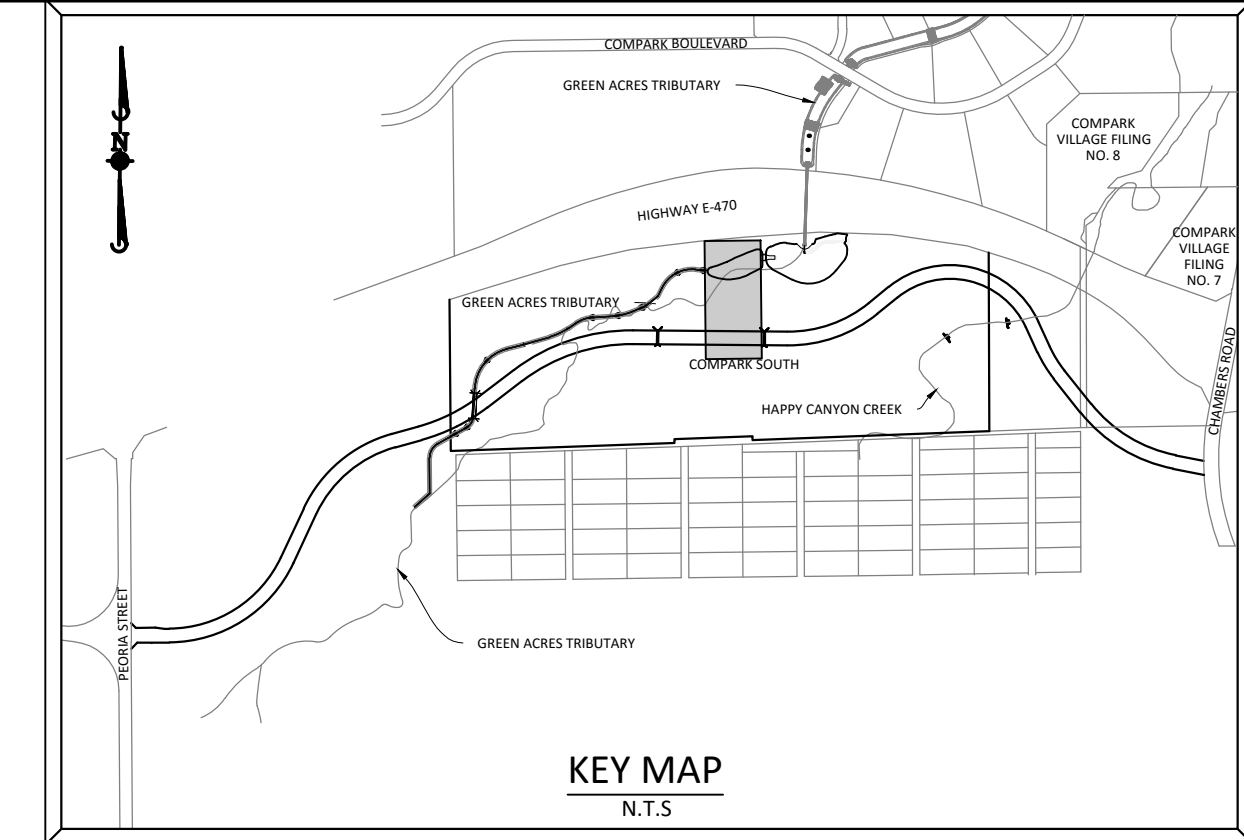
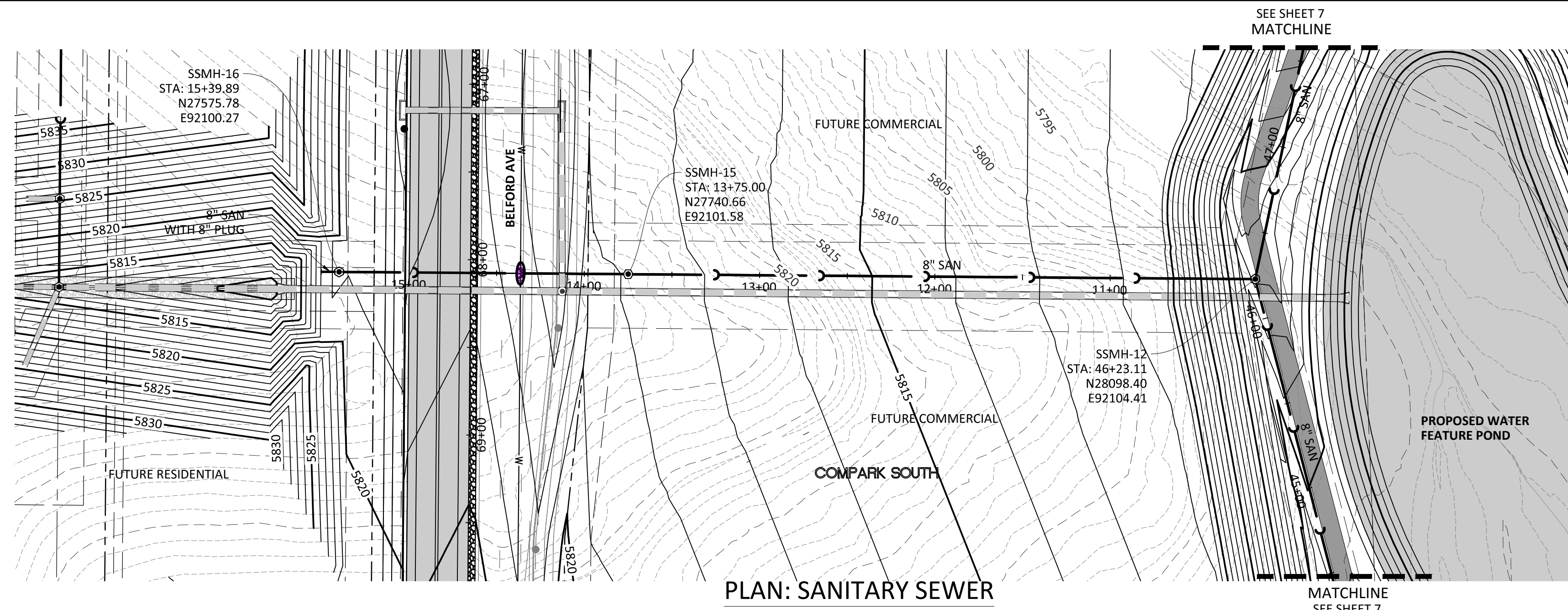
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COMPARK VILLAGE SOUTH, FILING NO. 1
 TOWN OF PARKER, COLORADO
 SANITARY SEWER PLAN & PROFILE

PROJ. MGR.:	RLB
PROJ. ASSOC.:	ASD
DRAWN BY:	ETG
DATE:	11/2015
SHEET	
7 OF 23	
CLCPKC3	

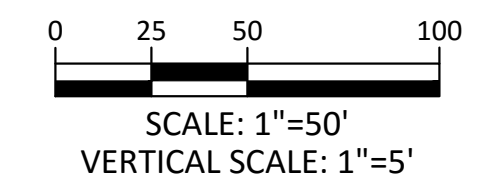
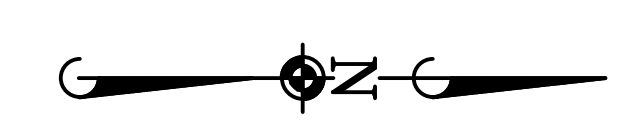
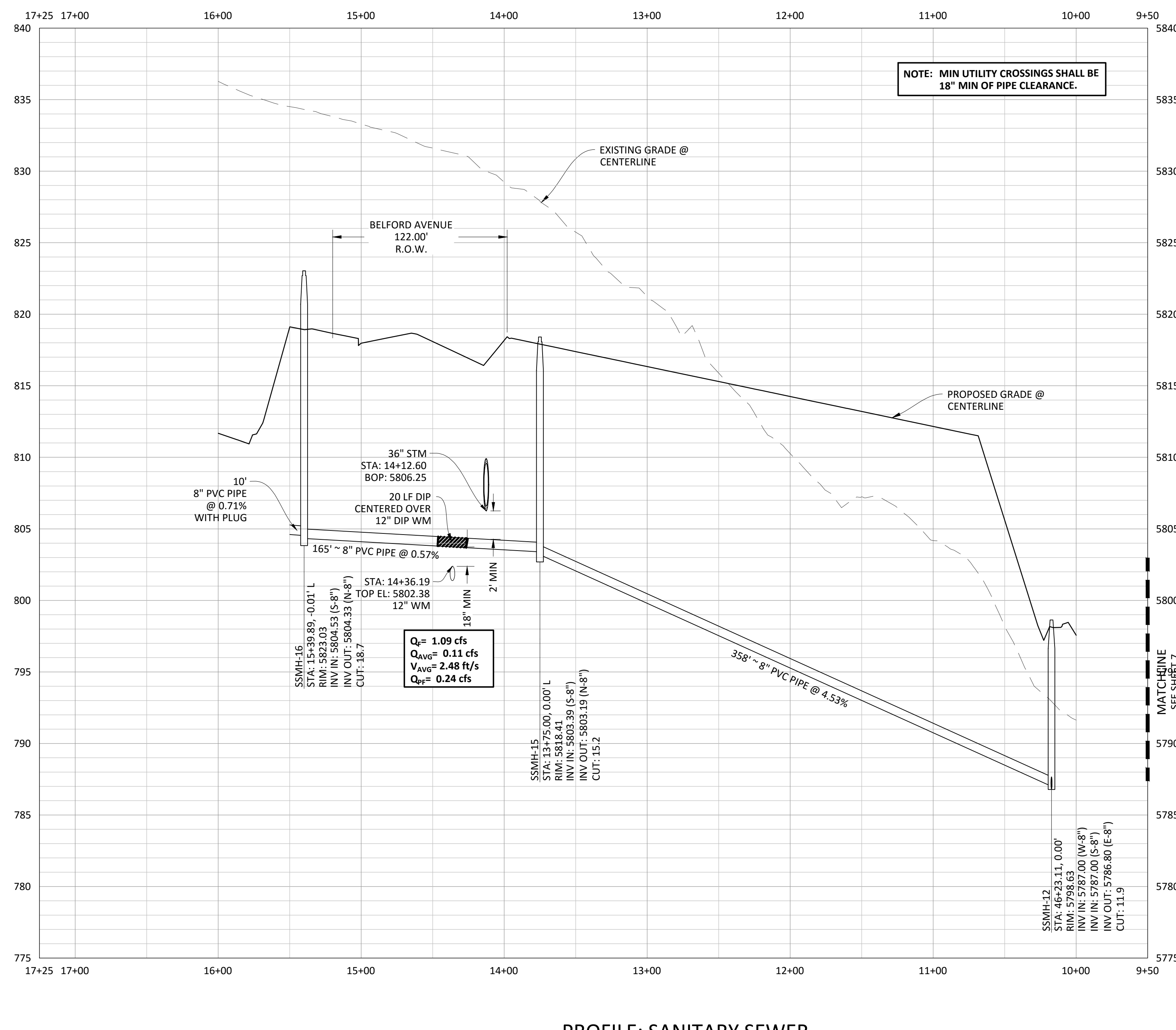
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NO.	DATE	REVISIONS
1	10/2016	REVISED PER STONEGATE 9/27/16 LETTER
2	06/2016	REVISED PER STONEGATE 6/17/16 LETTER
3	11/2015	1ST SUBMITTAL



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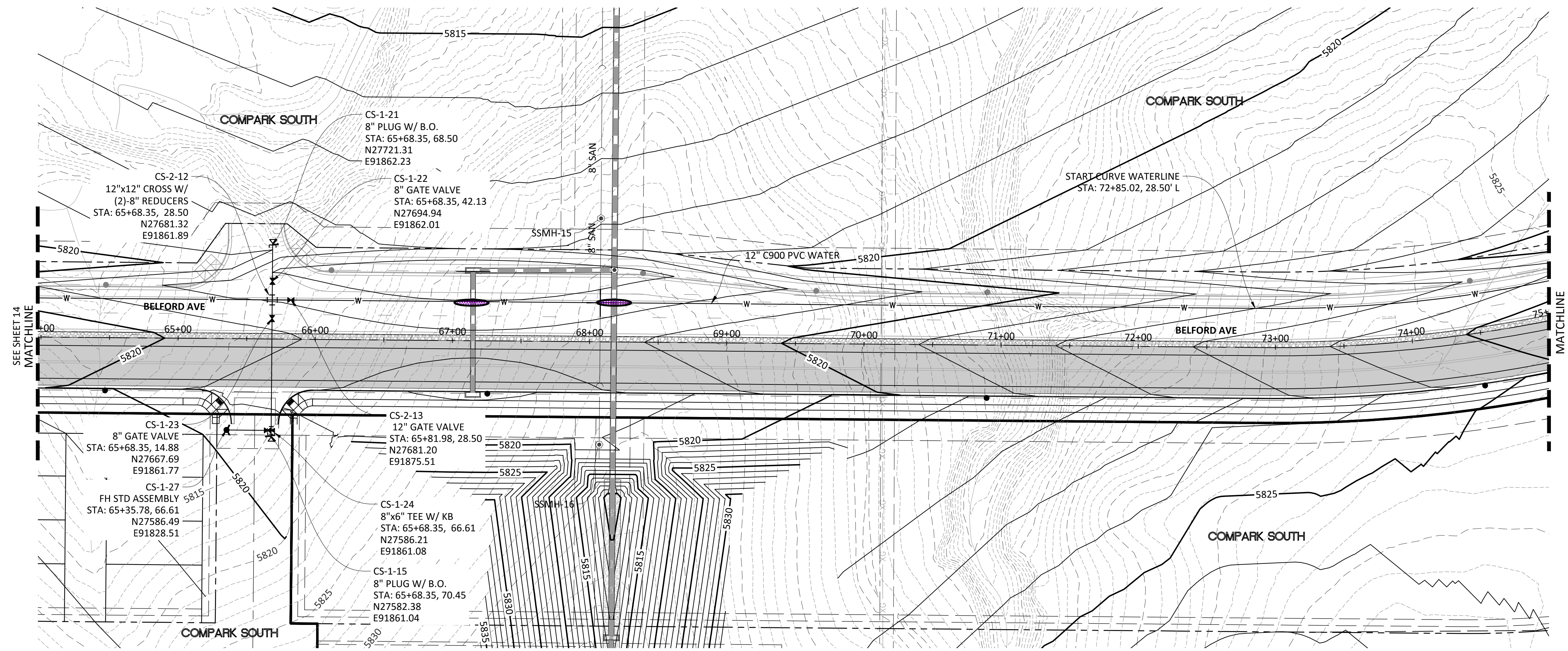
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 TOWN OF PARKER, COLORADO
 SANITARY SEWER PLAN & PROFILE

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 DATE: 11/2015

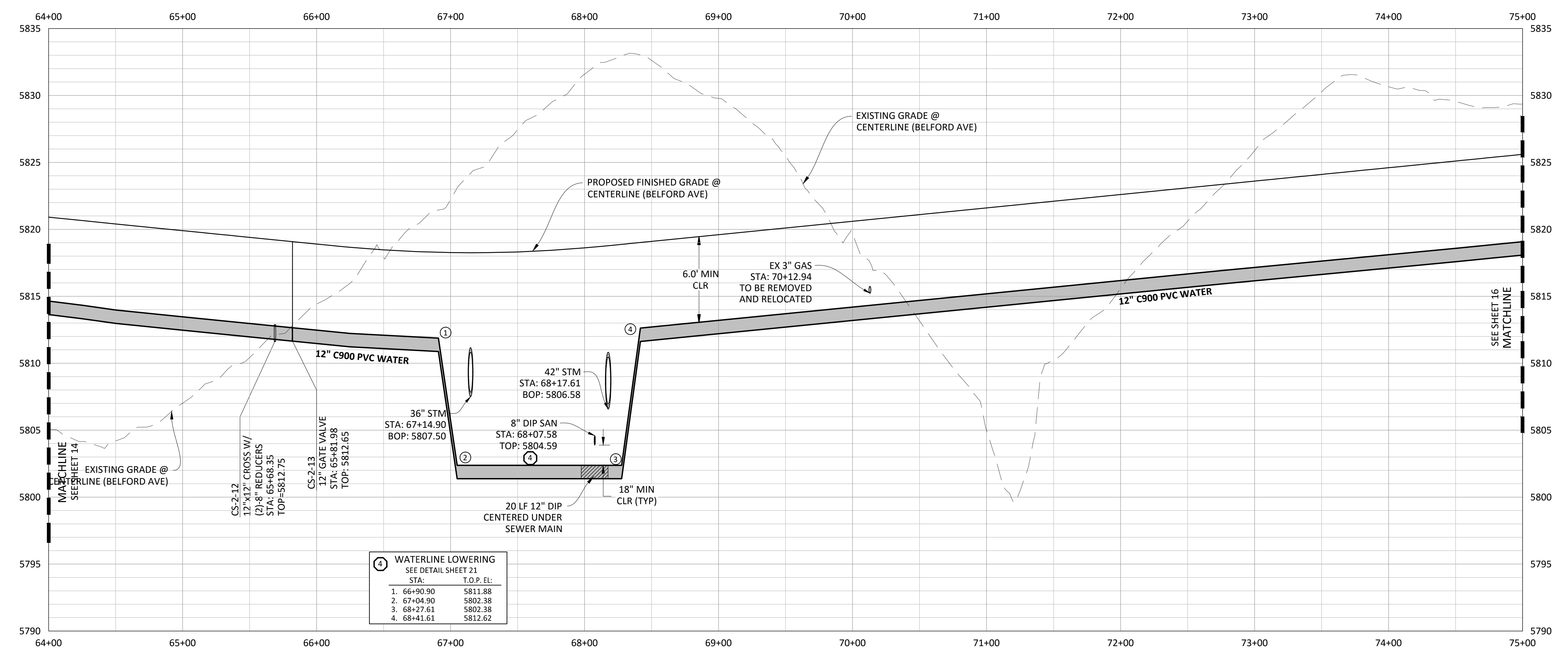
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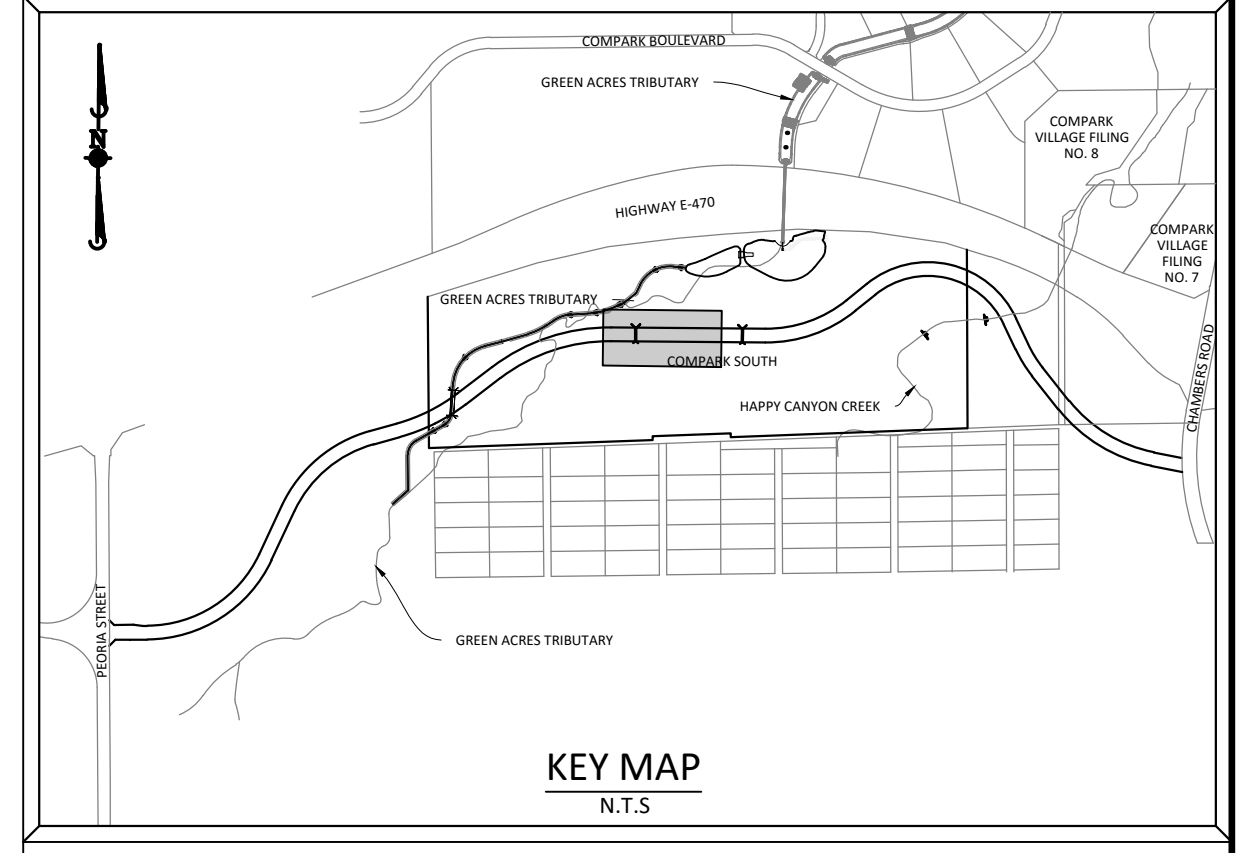
BID SET ONLY 10-7-16



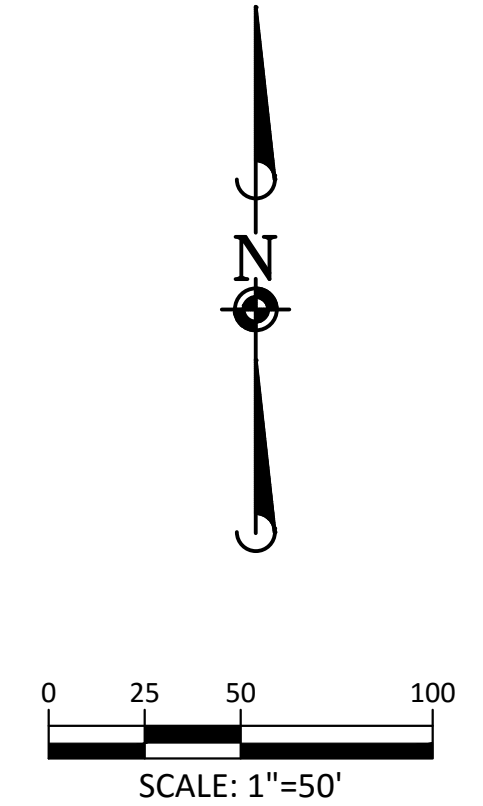
PLAN: 12" WATERLINE



PROFILE: 12" WATERLINE



SOURCE BENCHMARKS:
 DOUGLAS COUNTY BM 1.115010
 A DOUGLAS COUNTY GIS MONUMENT SET IN CONCRETE LOCATED APPROXIMATELY 130 FEET SOUTHWESTERLY OF THE CENTERLINE OF CHAMBERS ROAD AND 95 FEET NORTHWESTERLY OF THE CENTERLINE OF COMPARK BOULEVARD. ELEVATION = 5752.84 (NAVD 88)



Know what's below.
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CONTRACTOR TO FIELD VERIFY LOCATIONS/ELEVATIONS OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. NOTIFY DESIGN ENGINEER OF ANY DISCREPANCIES

WATER MAIN SHALL BE CONSTRUCTED USING MANUFACTURER SPECIFICATION AND/OR A MAXIMUM OF 1" DEFLECTION AT THE JOINT, WHICHEVER IS MORE STRICT, AND HIGH DEFLECTION COUPLING WITH A MAXIMUM DEFLECTION OF 3".
 1" DEFLECTION = 1,150' RADIUS 3" DEFLECTION = 385' RADIUS
 (ASSUMING 20' SECTION OF PIPE)

Plotted: 10/17/2016 1:17 PM. Draw Name: P:\C\proj\3\CompSouth\04\Main\San & Water\Utility\Eng\Drawings\Plan_San\Official\CLCPKC3-Offsite-Water-P&E-2.dwg. Updated By: Ricard

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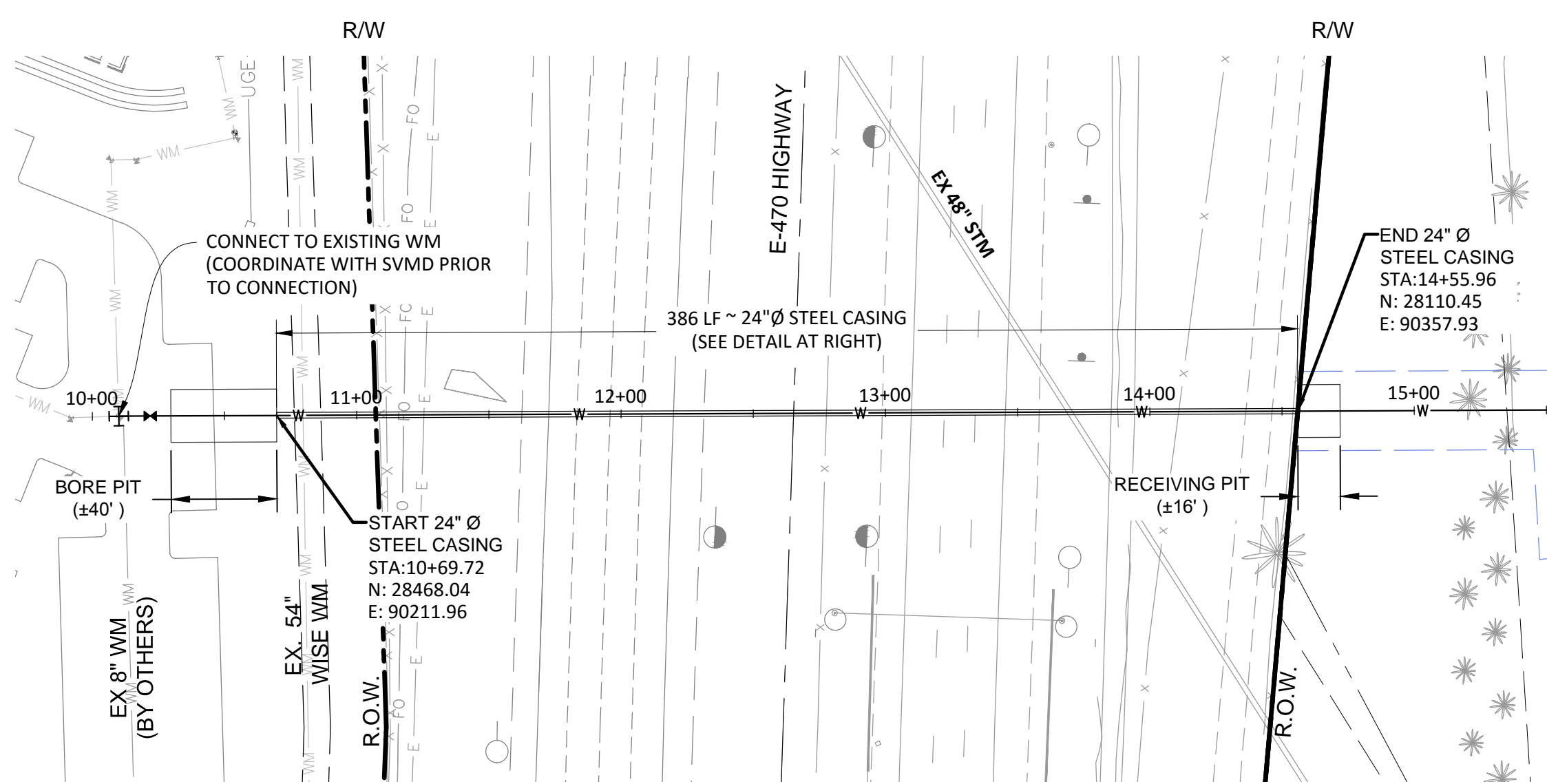
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10/20/16	REVISED PER STONEGATE 9/27/16 LETTER
06/20/16	REVISED PER STONEGATE 5/17/16 LETTER
11/20/15	1ST SUBMITTAL

COMPARK VILLAGE SOUTH, FILING NO. 1
 TOWN OF PARKER, COLORADO
 WATER PLAN & PROFILE

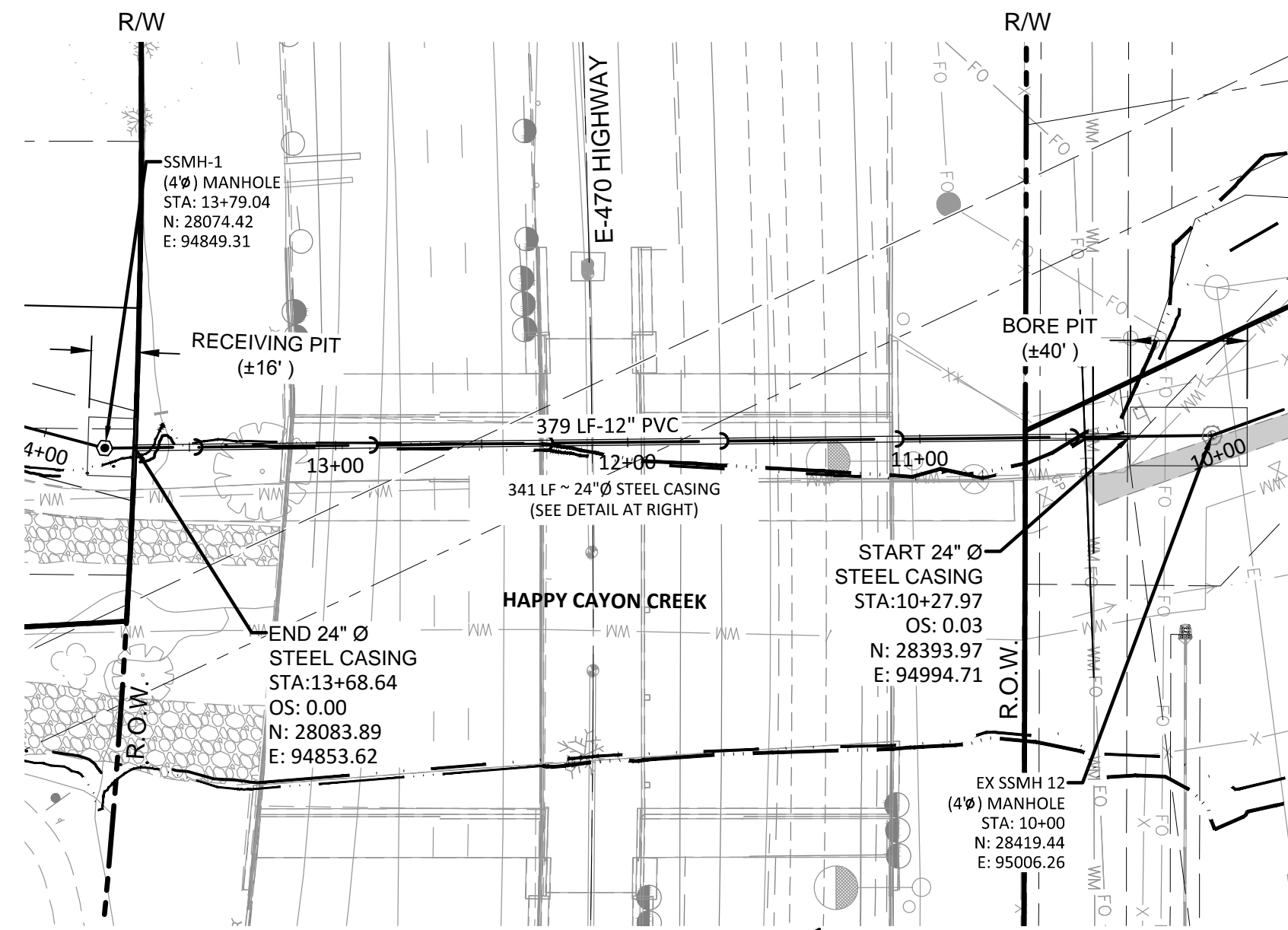
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 PROJ. ASSOC.: ASD
 DRAWN BY: ETG
 DATE: 11/2015

SHEET
15 OF **23**
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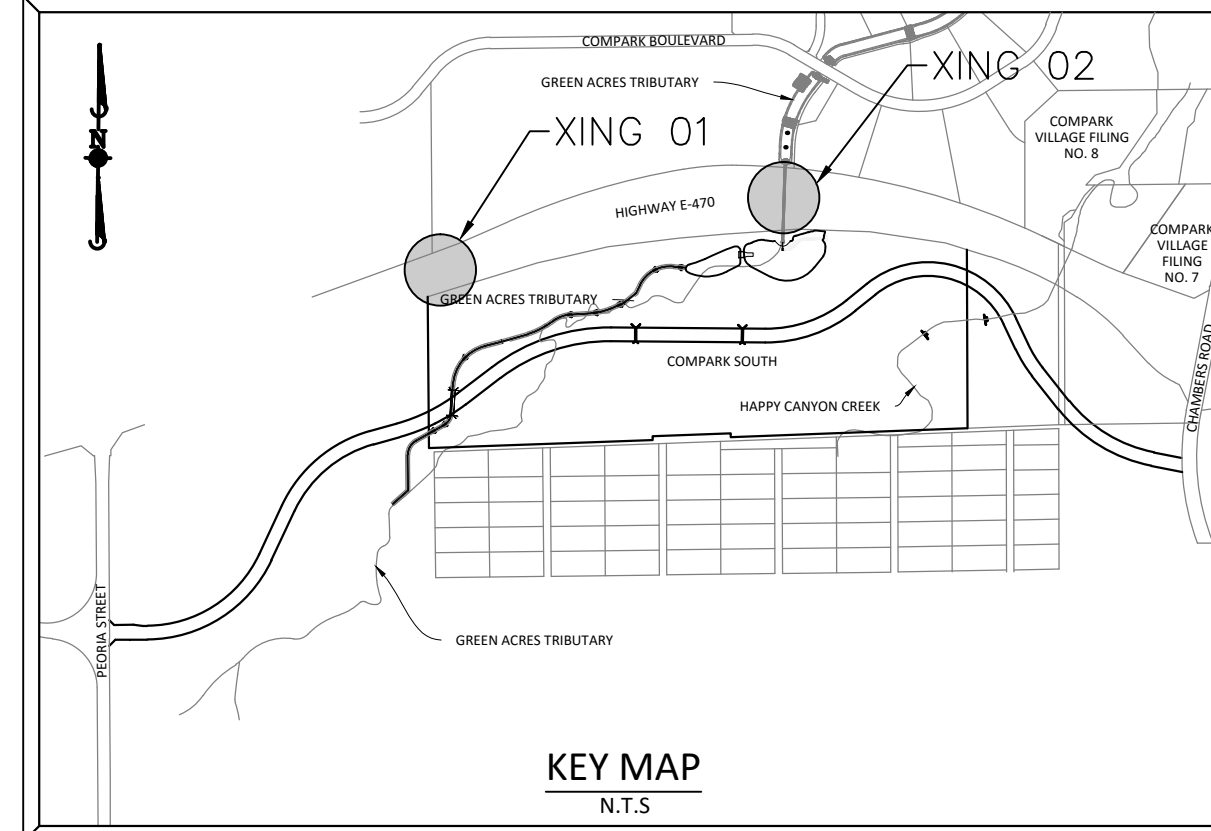
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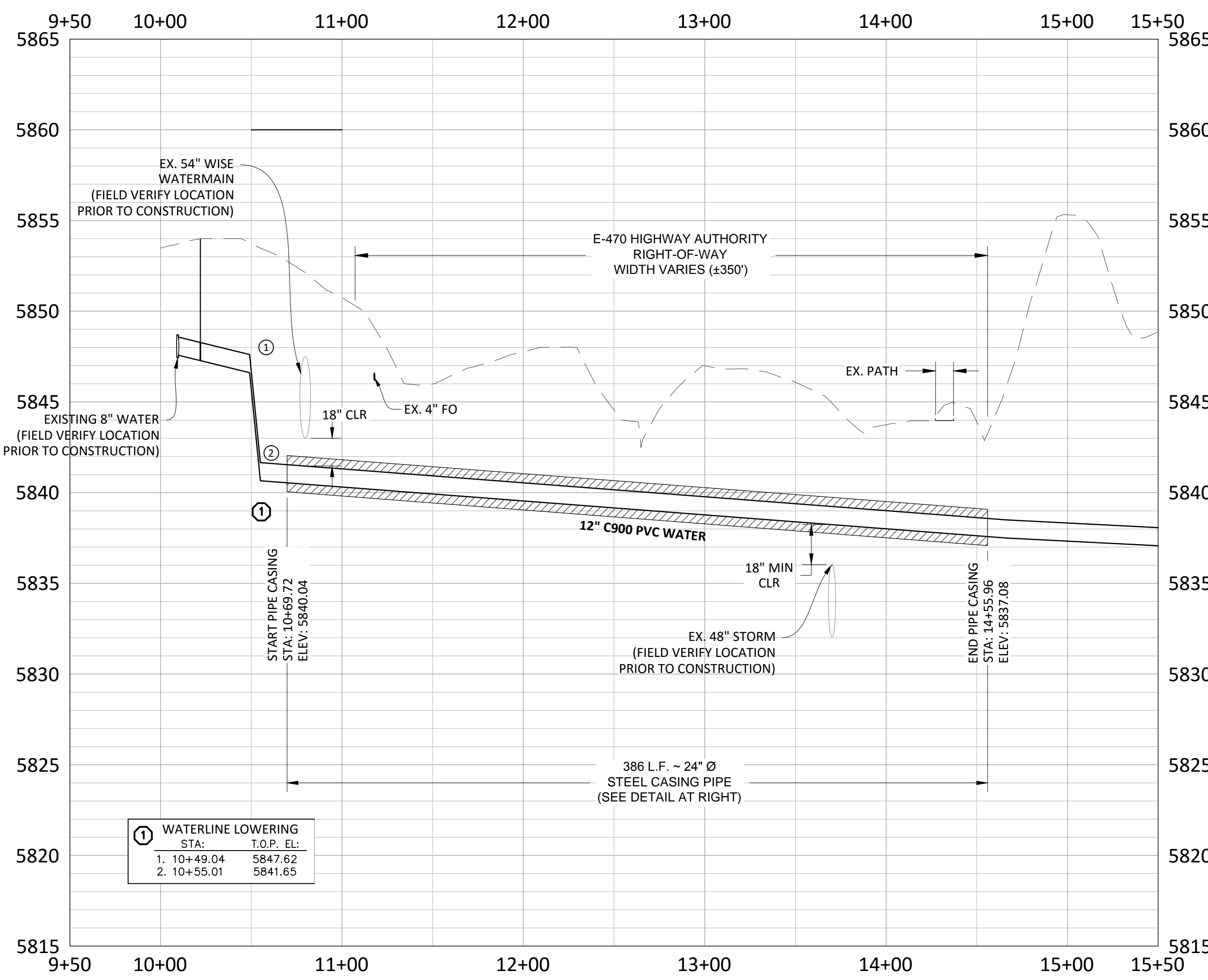
E-470 BORE CROSSING NO. 1
12" WATER MAIN
SCALE 1"=50'



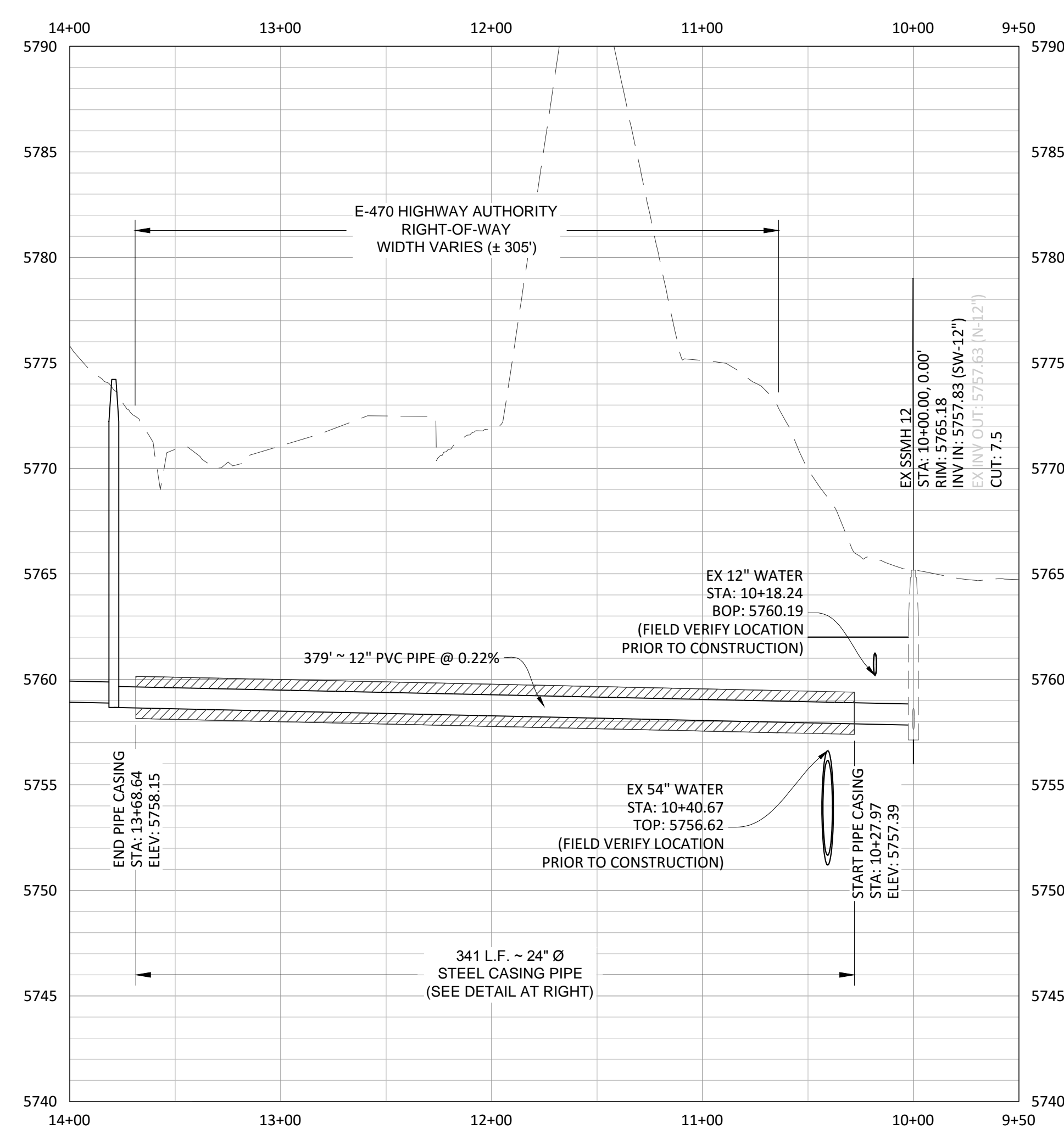
E-470 BORE CROSSING NO. 2
12" SAN. SEWER
SCALE 1"=50'



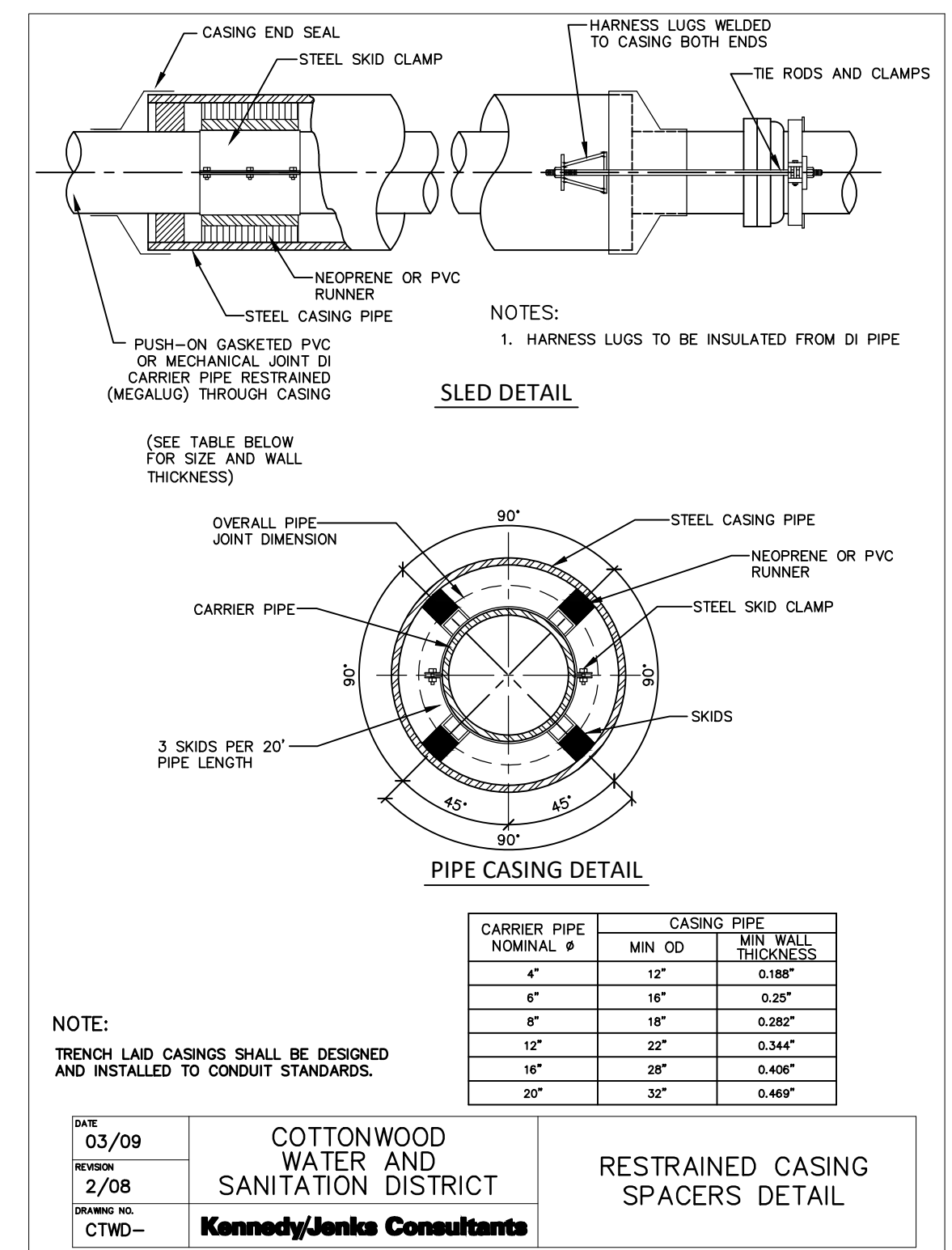
SOURCE BENCHMARKS:
DOUGLAS COUNTY BM 1.115010
A DOUGLAS COUNTY GIS MONUMENT SET IN CONCRETE LOCATED APPROXIMATELY 130 FEET SOUTHWESTERLY OF THE CENTERLINE OF CHAMBERS ROAD AND 95 FEET NORTHWESTERLY OF THE CENTERLINE OF COMPARK BOULEVARD. ELEVATION = 5752.84 (NAVD 88)



PROFILE: BORE CROSSING NO. 1
SCALE 1"=50'



PROFILE: BORE CROSSING NO. 2
SCALE 1"=50'



CONTRACTOR TO COORDINATE BORINGS WITH JURISDICTIONS PRIOR TO CONSTRUCTION.

CONTRACTOR TO FIELD VERIFY LOCATION/ELEVATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. NOTIFY DESIGN ENGINEER OF ANY DISCREPANCIES.



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11/2015	1ST SUBMITTAL
06/2016	REVISED PER STONEGATE 5/17/16 LETTER
10/2016	REVISED PER STONEGATE 9/27/16 LETTER

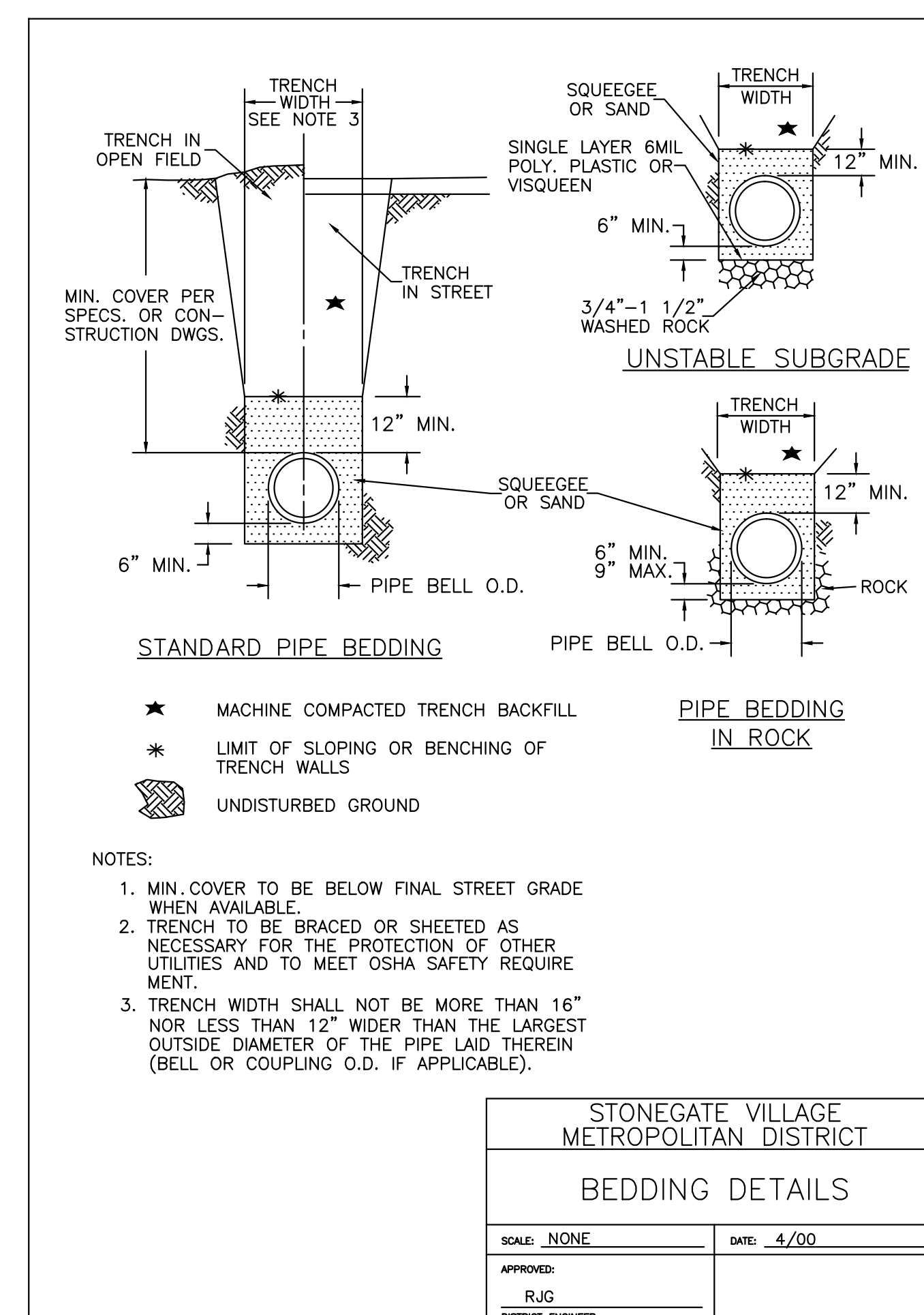
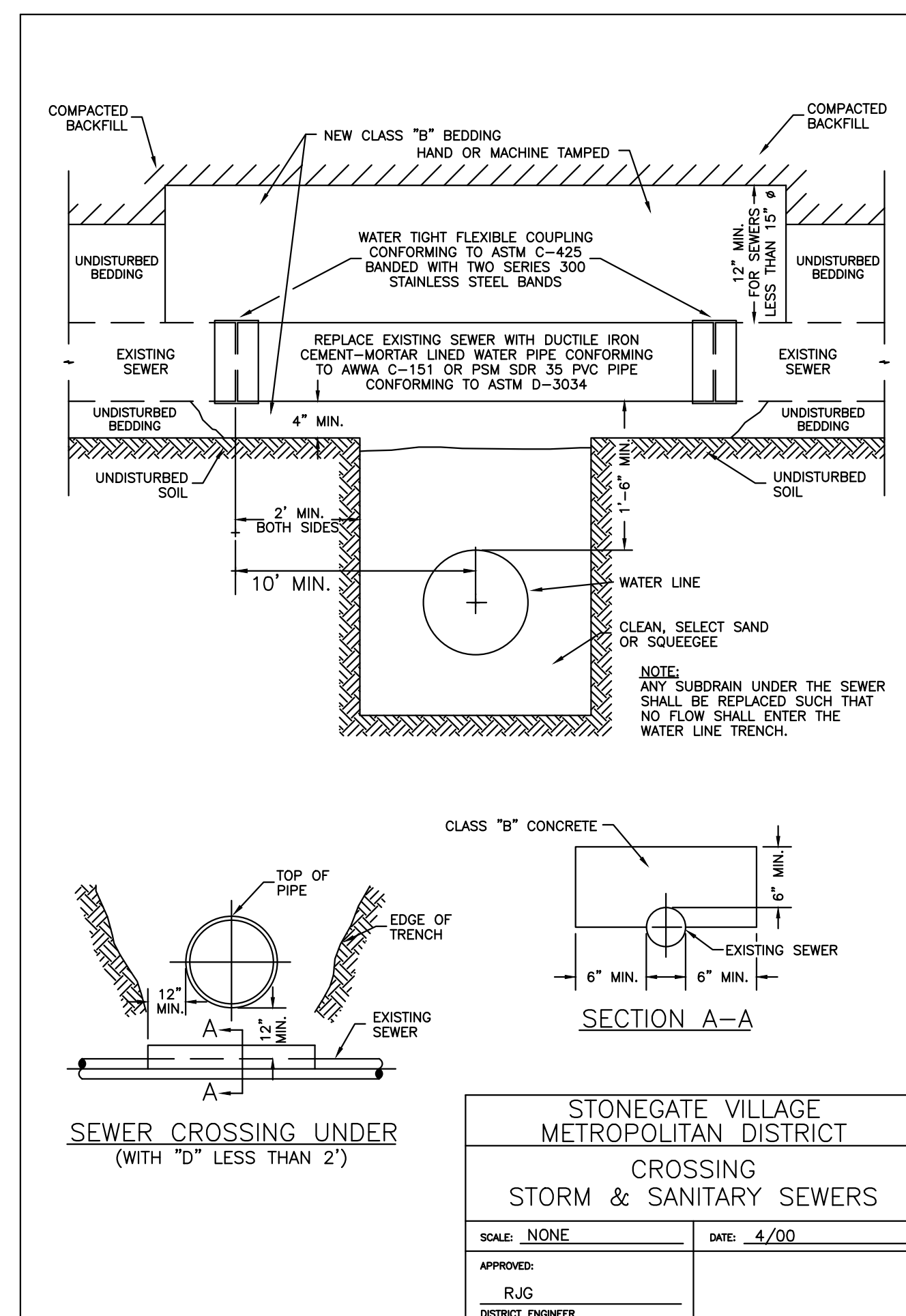
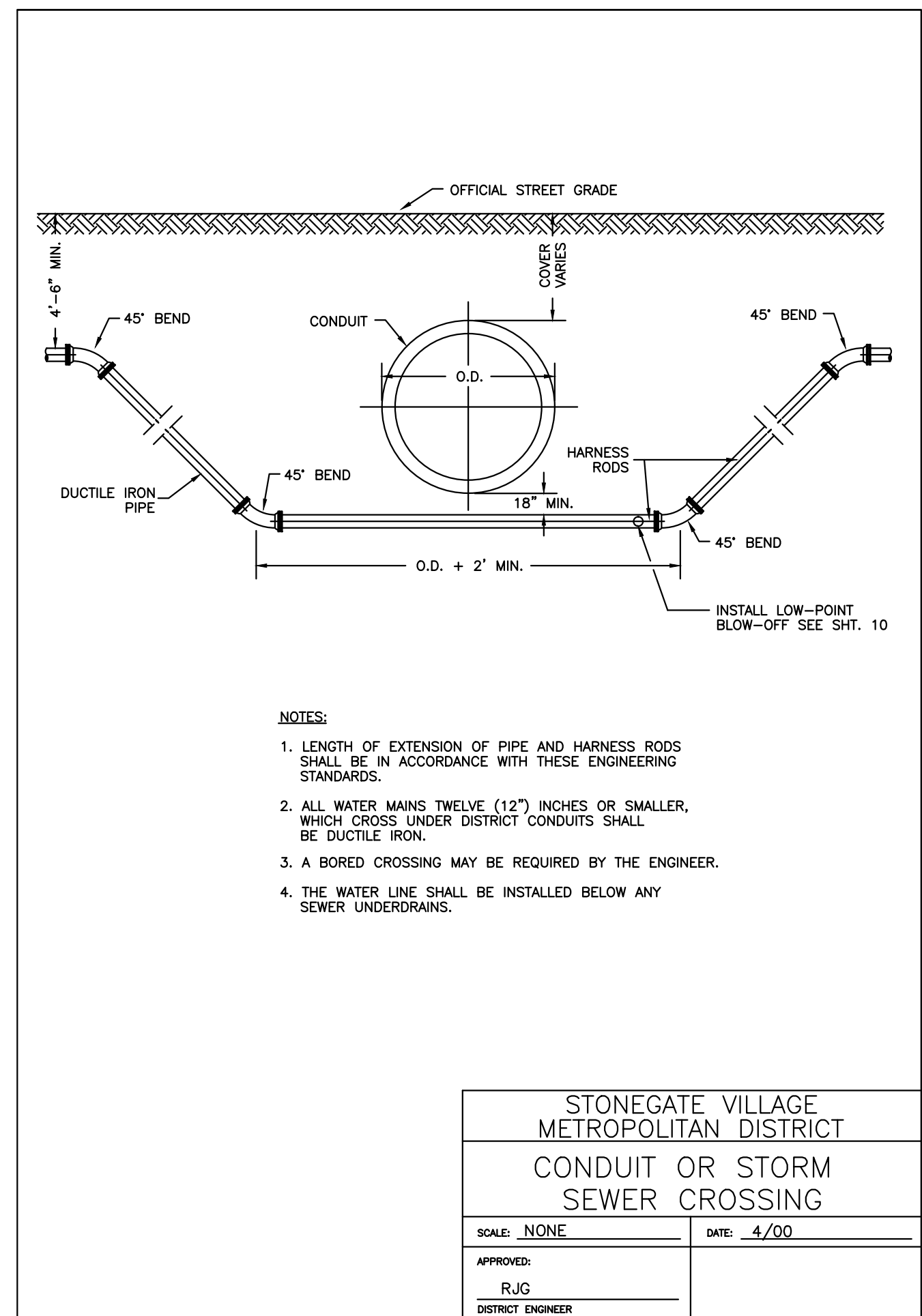
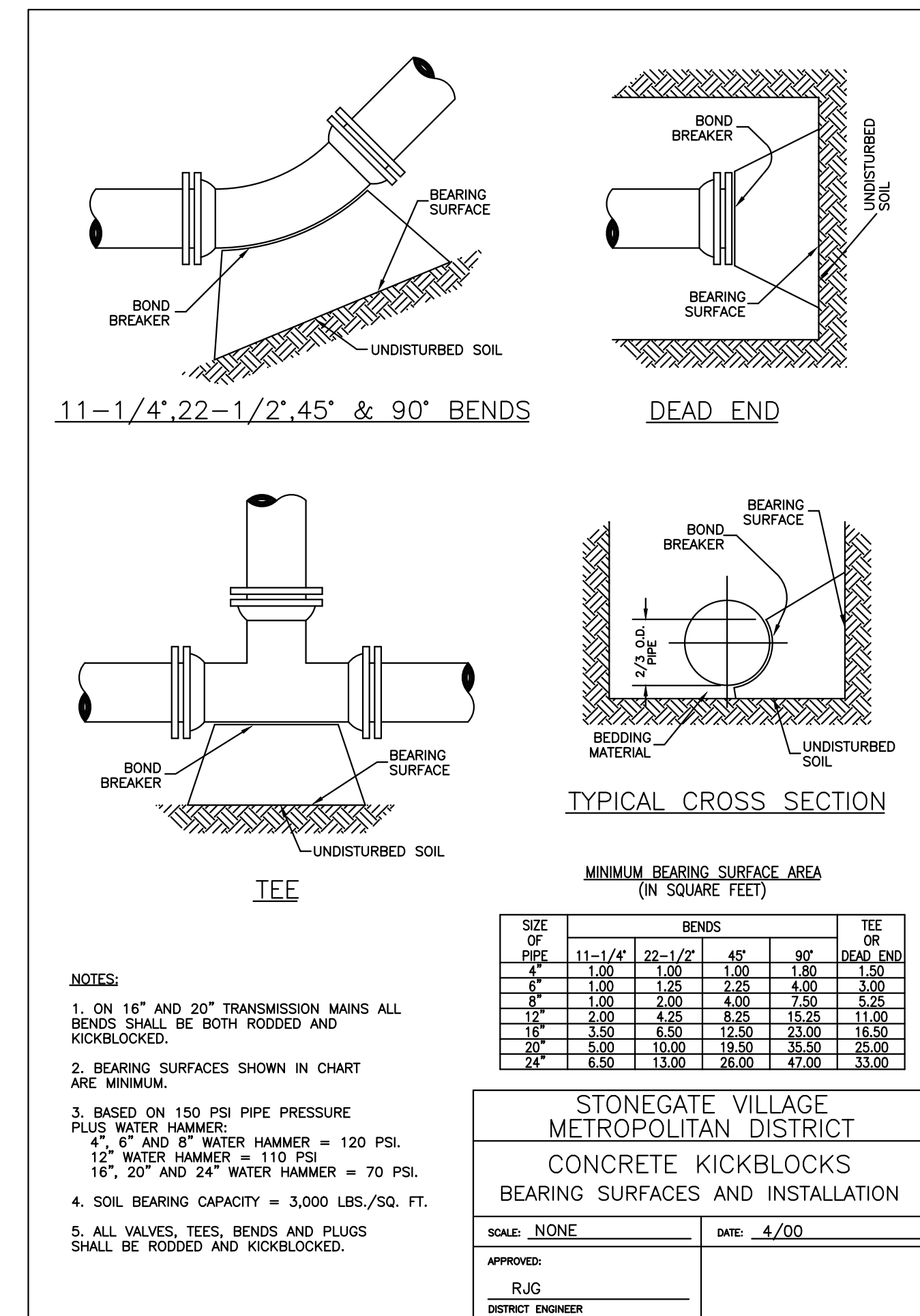
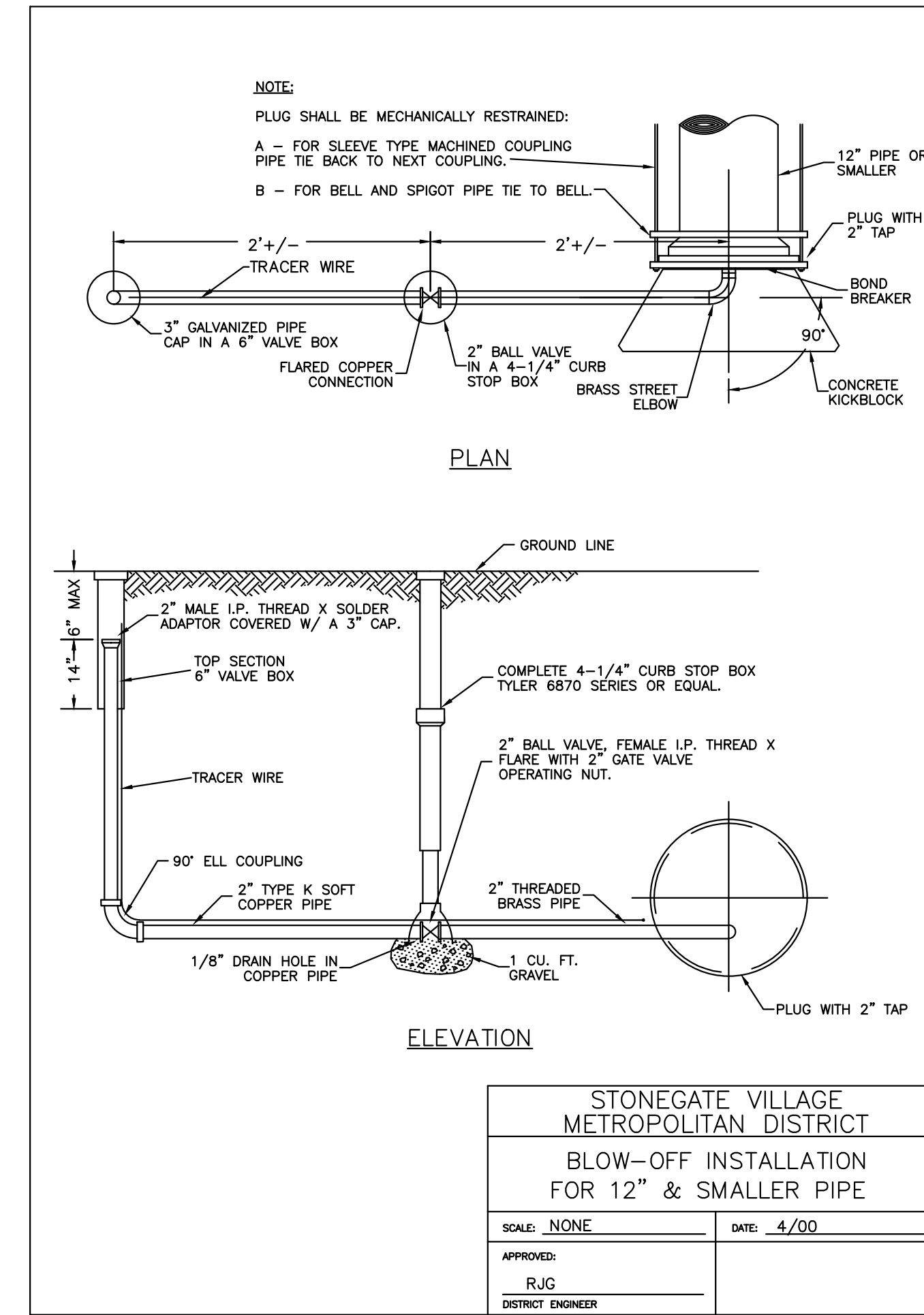
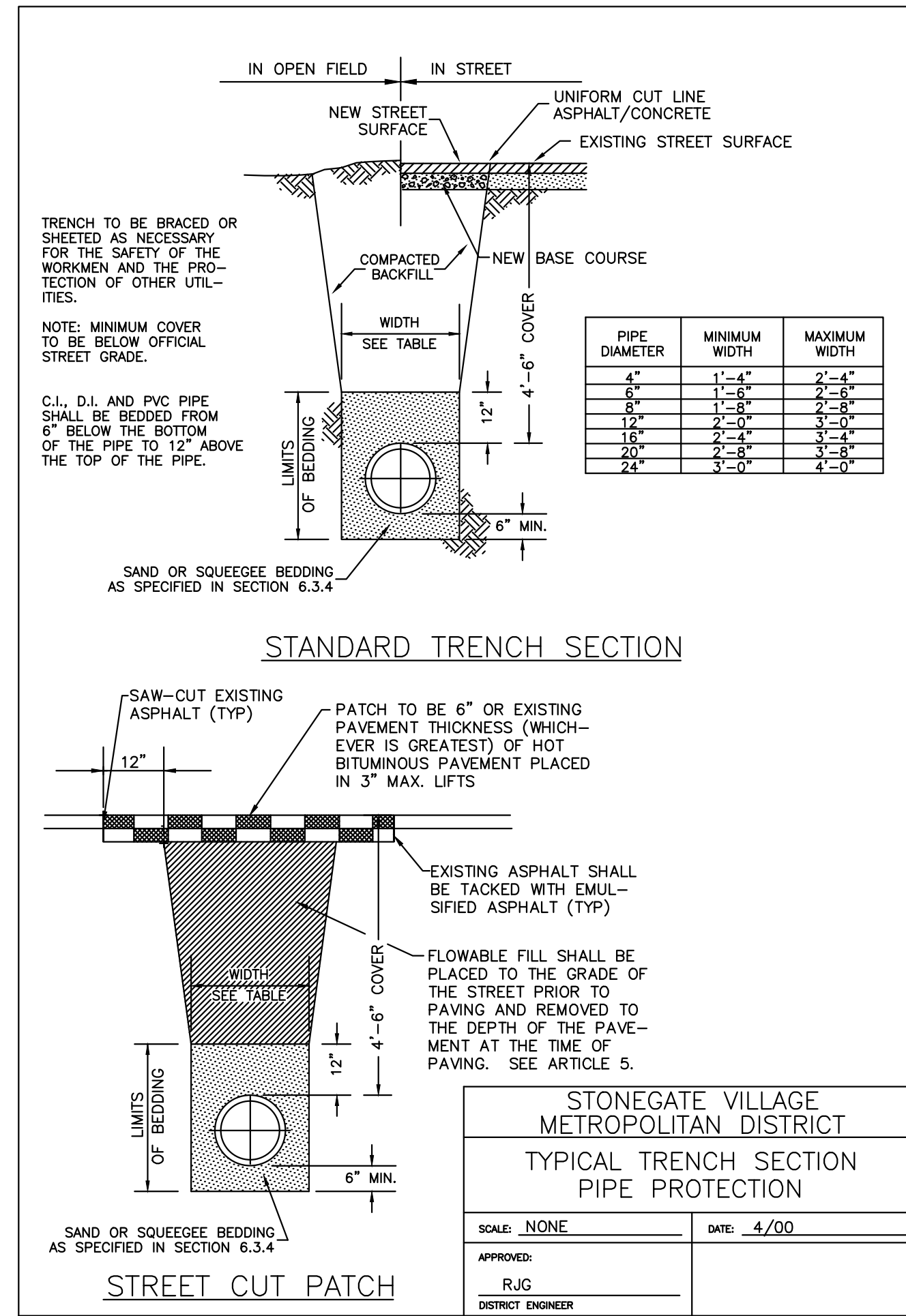
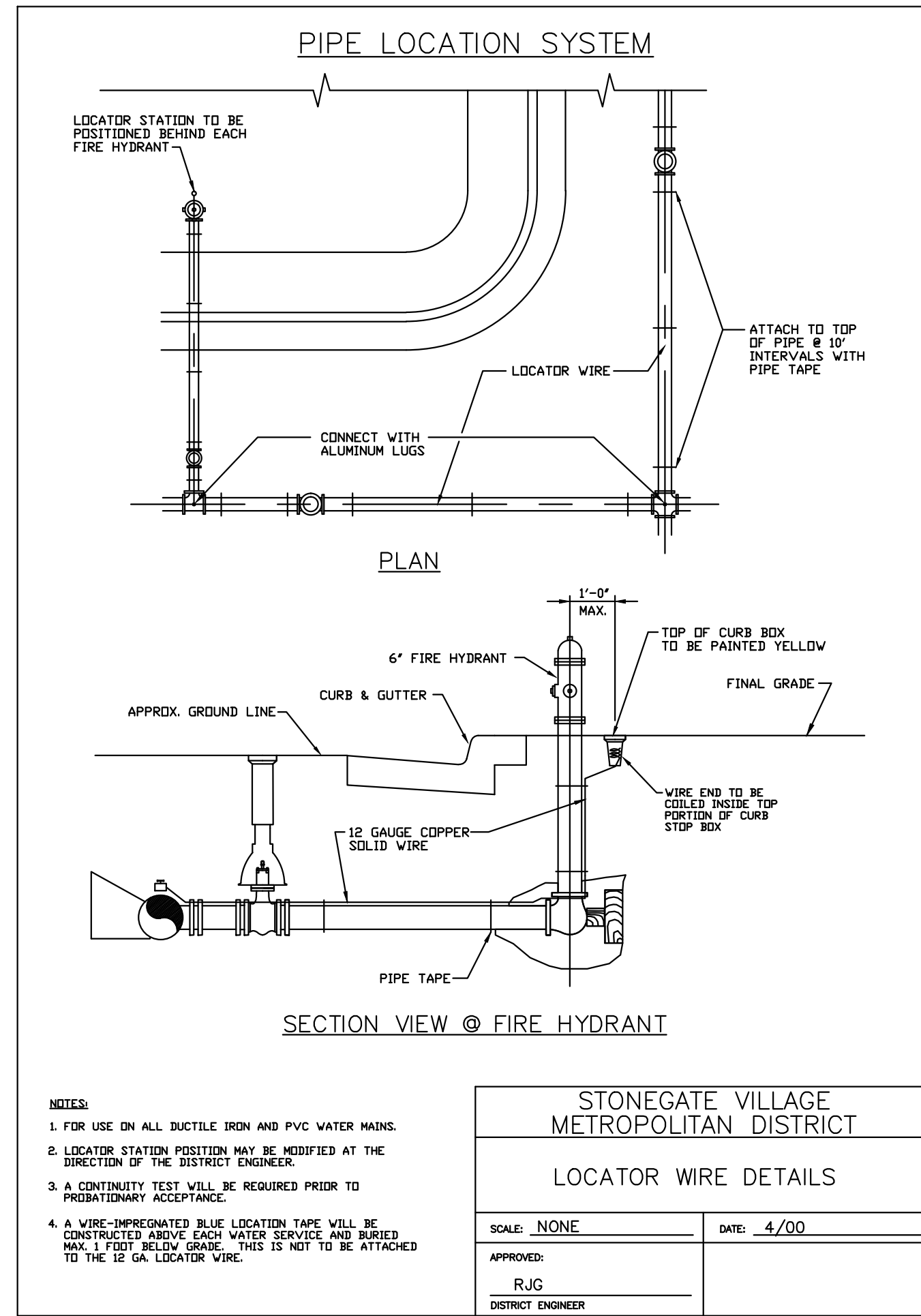
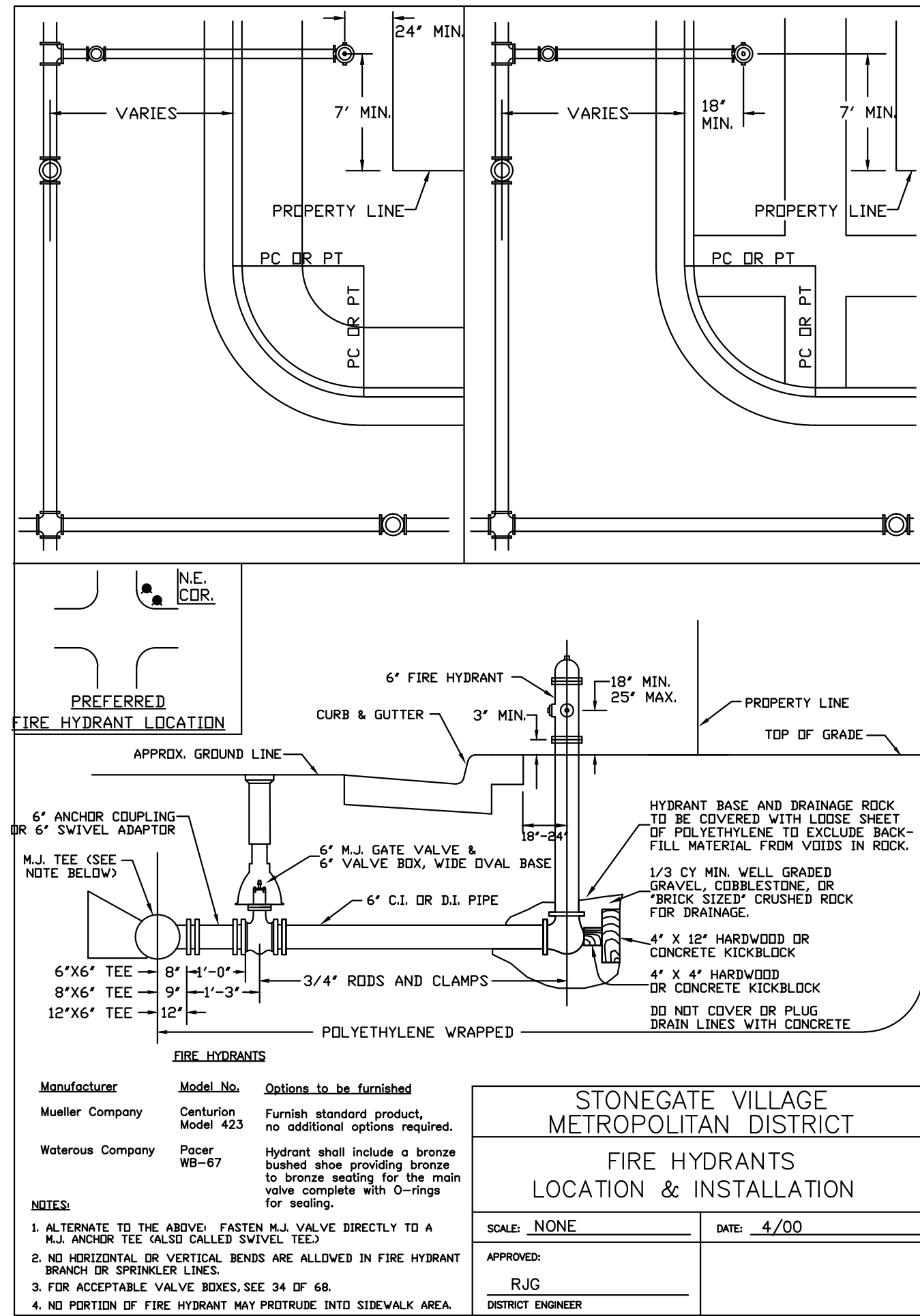
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DRAWN BY: ETG
CHECKED BY: ASD
PROJECT ASSOC.: ASD
PROJECT MGR.: RLB

COMPARK VILLAGE SOUTH, FILING NO. 1
TOWN OF PARKER, COLORADO
WATER AND SANITARY SEWER BORE CROSSING

SHEET
19 OF **23**
CLCPKC3

Plotted: 10/17/2016 1:19 PM, Draw Name: P:\C\proj33\Compark\Drawings\Plan_Sanitary\Drawings\Plan_Sanitary\Bore_Crossing.dwg, Updated By: BKZ

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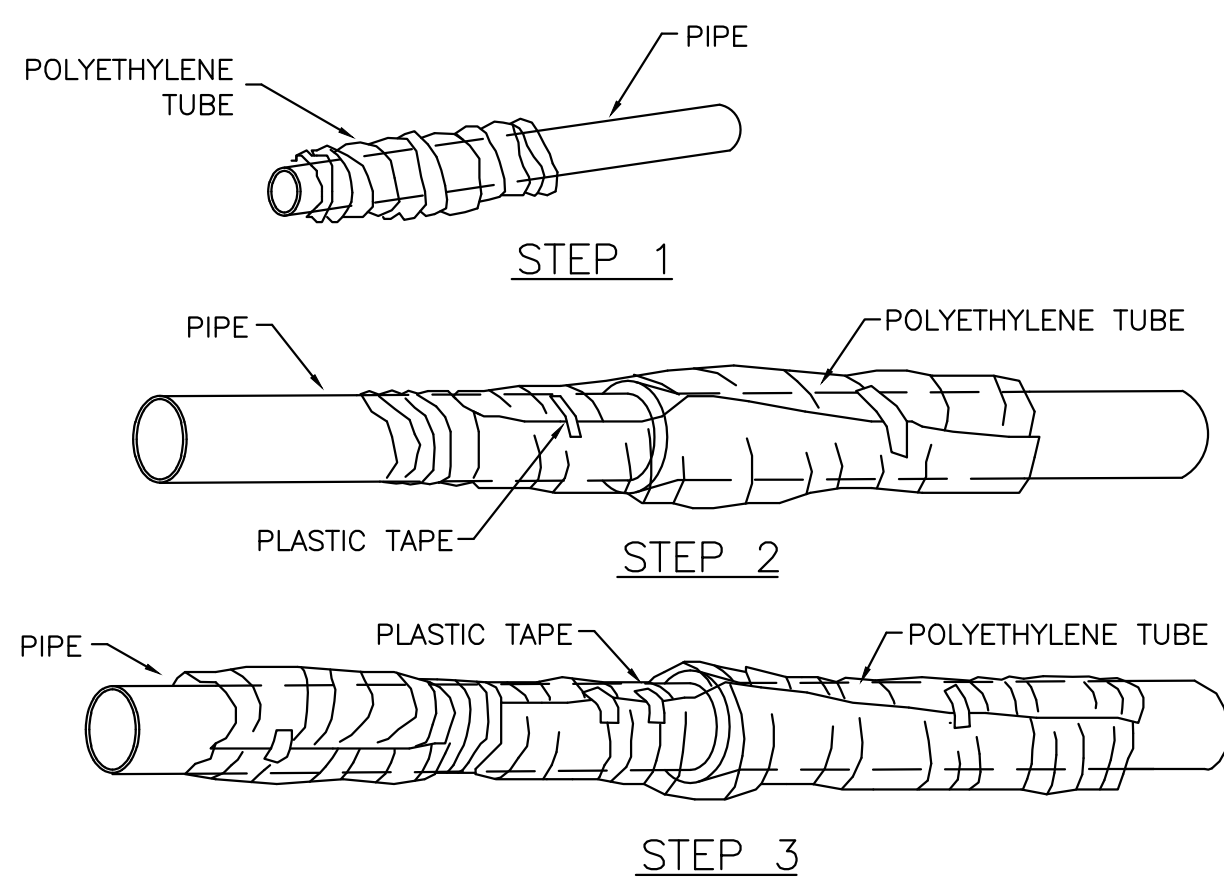
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 B. 08/2016 REVISED PER STONEGATE 5/17/16 LETTER
 A. 11/2015 1ST SUBMITTAL
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COMPARK VILLAGE SOUTH, FILING NO. 1
TOWN OF PARKER, COLORADO
WATER DETAILS

PROJ. MGR.: RLB
 PROJ. ASSOC.: ASD
 DRAWN BY: ETG
 DATE: 11/2015
 SHEET
22 OF 23
 CLCPK3

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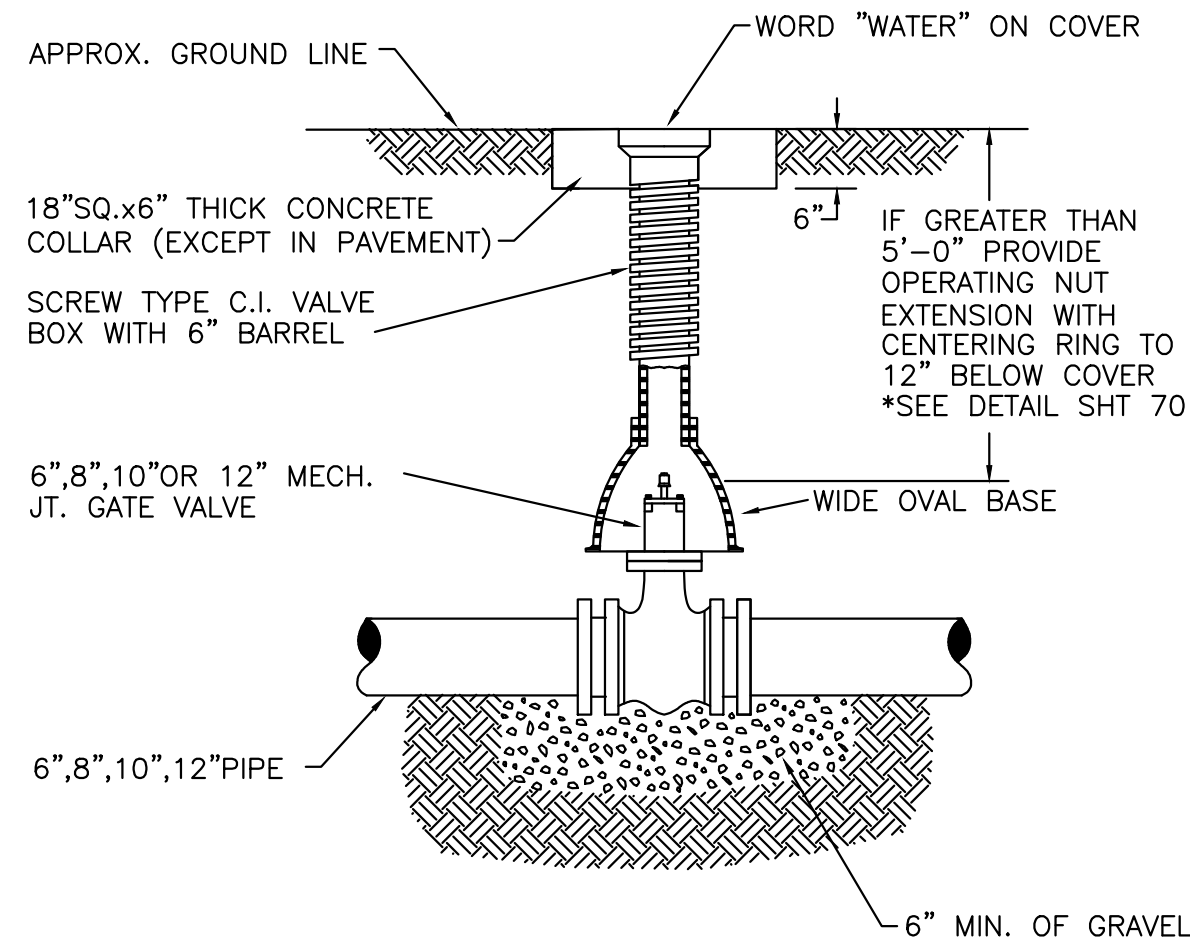
FIELD INSTALLATION – POLYETHYLENE WRAP

- STEP 1 – PLACE TUBE OF POLYETHYLENE MATERIAL ON PIPE PRIOR TO LOWERING IT INTO TRENCH.
- STEP 2 – PULL THE TUBE OVER THE LENGTH OF THE PIPE. TAPE TUBE TO PIPE AT JOINT. FOLD MATERIAL AROUND THE ADJACENT SPIGOT END AND WRAP WITH TAPE TO HOLD THE PLASTIC TUBE IN PLACE.
- STEP 3 – OVERLAP FIRST TUBE WITH ADJACENT TUBE AND SECURE WITH PLASTIC ADHESIVE TAPE. THE POLYETHYLENE TUBE MATERIAL COVERING THE PIPE SHALL BE LOOSE. EXCESS MATERIAL SHALL BE NEATLY DRAWN UP AROUND THE PIPE BARREL, FOLDED ON TOP OF PIPE AND TAPED IN PLACE.

STONEGATE VILLAGE
METROPOLITAN DISTRICT
POLYETHYLENE WRAP

SCALE: NONE DATE: 4/00

APPROVED: R/JG DISTRICT ENGINEER



6-INCH VALVE BOXES

Materials:
Valve box parts shall be made from gray cast iron, ASTM A48 Class 20A. Use of an aluminum alloy as a casting material is not acceptable.

Approved Patterns:
Valve boxes shall be the three-piece adjustable screw type and the following two patterns are acceptable.

1. Tyler screw-type 6-inch cast iron valve box assembly series 6860 with No. 160 oval base.
2. Clay and Bailey screw-type 6-inch cast iron valve box assembly No. P-108 with No. 160 large oval base.

STONEGATE VILLAGE
METROPOLITAN DISTRICT
VALVE BOX DETAIL

SCALE: NONE DATE: 4/00

APPROVED: R/JG DISTRICT ENGINEER

- INSPECTION POLICY:**
1. ALL SERVICE INSPECTIONS MUST BE SCHEDULED WITH THE DISTRICT OFFICE (303)841-2058 AT LEAST 24 HOURS IN ADVANCE OF THE REQUESTED INSPECTION.
 2. SERVICE INSPECTIONS WILL OCCUR BETWEEN 8:00 A.M. AND 3:00 P.M. SPECIFIC INSPECTION TIMES ARE NOT AVAILABLE.
 3. IF THE CONTRACTOR IS NOT READY FOR INSPECTION WHEN THE INSPECTOR ARRIVES AT THE SITE, A RE-INSPECTION WILL HAVE TO BE SCHEDULED IN ACCORDANCE WITH NOTES 1 AND 2 ABOVE.
 4. SHOULD THE SERVICE LINES BE DAMAGED BY LATER CONSTRUCTION, AN INSPECTION OF THE REPAIR WILL BE REQUIRED IN ACCORDANCE WITH NOTES 1 AND 2 ABOVE.
 5. THE CONTRACTOR SHALL LEAVE ALL PIPE AND FITTINGS EXPOSED FOR THE INSPECTOR TO OBSERVE. INSPECTORS WILL NOT ENTER ANY EXCAVATIONS TO CHECK MATERIALS. THE TOP LAYER OF BEDDING CAN BE ADDED AFTER THE INSPECTION HAS BEEN COMPLETED.
 6. ALL EXCAVATIONS SHALL BE IN ACCORDANCE WITH OSHA STANDARDS.

- INSTALLATION NOTES:**
- WATER**
1. ACCEPTABLE PIPE MATERIALS SHALL BE K-COPPER TUBING. (3/4" MIN.)
 2. APPROVED BEDDING TO BE SQUEEGEE.
 3. ONLY ONE COUPLING WILL BE ALLOWED BETWEEN THE STUB-IN AND BUILDING. A COUPLING MAY BE EITHER FLARED OR SILVER-SOLDERED. COMPRESSION COUPLINGS WILL NOT BE ALLOWED. MOVED CURB BOXES MUST BE INSPECTED BY PWS PRIOR TO BURIAL.
 4. A WATER SERVICE WHICH CROSSES A SEWER SERVICE CAN DO SO ONLY AT A 90± ANGLE MAXIMUM, 45° ANGLE MINIMUM. WATER SERVICES SHALL BE LOCATED A MINIMUM OF 18" ABOVE SEWER SERVICE.
 5. WATER SERVICE FOUNDATION PENETRATIONS SHALL BE WATERPROOFED USING MASTIC OR OTHER APPROVED METHOD.
 6. STOPBOX MUST BE PLUMB AND CENTERED OVER NUT, AND MUST BE SET AT OR, SLIGHTLY ABOVE FINISHED GRADE.
 7. STOPBOXES MUST BE SET AT BACK OF SIDEWALK ONLY (TOUCHING) NOT AT CURBS.
 8. NO CRAWLSPACE MOUNTED METERS ALLOWED.
 9. WATERLINE MUST BE ATTACHED TO A SUPPORT BOARD THAT IS MOUNTED TO THE WALL.
 10. NO VOIDS ALLOWED UNDER WATERLINES FROM STOP BOX TO FOUNDATION.
 11. METER SHOULD BE LOCATED ON SAME SIDE OF HOUSE AS CURBSTOP IF POSSIBLE.
 12. WATERLINES PASSING UNDER DRIVEWAYS NEED TO BE SLEEVED IN 4" P.V.C. AND HAVE EXPRESS PERMISSION OF THE DISTRICT.
 13. YOKES SHOULD BE MOUNTED NO GREATER THAN 6 INCHES ABOVE BOTTOM SHUTOFF. EACH SERVICE MUST INCLUDE A STOP AND WASTE VALVE AND A PRESSURE REDUCING VALVE LOCATED WITHIN THE ABOVE REFERENCED 6 INCH SPACE.
 14. NO SPLICES OR FLARED COUPLINGS ALLOWED ON WATERLINES. SILVER SOLDER JOINTS MUST BE USED IN MOVING STOPBOXES, AND SILVER SOLDER JOINT MUST BE INSPECTED BY P.W.S.D. PRIOR TO BURIAL.
 15. ONLY 3/4" (JUMPER OR CHEATER) PIPES (RESIDENCES) ARE ALLOWED. (JUMPER OR CHEATER) PIPES WILL BE REMOVED PRIOR TO METER SET DATE.
 16. ALL SERVICES WILL BE PERMANENTLY MARKED ON CURB FACE AS FOLLOWS:
"X" FOR SANITARY SEWER SERVICE
"V" FOR WATER SERVICES

STONEGATE VILLAGE
METROPOLITAN DISTRICT
DISTRICT POLICIES & INSTALLATION NOTES FOR WATER SERVICES

SCALE: NONE DATE: 4/00

APPROVED: R/JG DISTRICT ENGINEER

LENGTH OF TIED PIPE

PIPE SIZE	4"		6"		8"		12"		16"		20"		24"	
	D	L	D	L	D	L	D	L	D	L	D	L	D	L
TEE OR VALVE	3/4"	6.0'	3/4"	13.0'	3/4"	20.0'	3/4"	40.0'	3/4"	60.0'	3/4"	80.0'	3/4"	100.0'
90° BEND	3/4"	6.0'	3/4"	13.0'	3/4"	20.0'	3/4"	40.0'	3/4"	60.0'	3/4"	80.0'	3/4"	100.0'
45° BEND	3/4"	2.0'	3/4"	4.0'	3/4"	6.0'	3/4"	11.0'	3/4"	18.0'	3/4"	24.0'	3/4"	40.0'
22-1/2° BEND	3/4"	1.0'	3/4"	2.0'	3/4"	3.0'	3/4"	5.0'	3/4"	8.0'	3/4"	12.0'	3/4"	20.0'
11-1/4° BEND	3/4"	0.0'	3/4"	0.0'	3/4"	1.0'	3/4"	1.0'	3/4"	1.0'	3/4"	2.0'	3/4"	3.0'

NOTES:

1. LENGTH OF TIED PIPE MEASURED EACH WAY FROM VALVES AND BENDS.
2. CLAMPS AND RODS NOT ALLOWED FOR 24" AND LARGER PIPES.
3. D = DIAMETER, L = LENGTH, G = GRADE, M.S. = MILD STEEL, H.S. = HIGH STRENGTH
4. MINIMUM 4.5' GROUND COVER REQUIRED.
5. BASED ON 150 PSI INTERNAL PRESSURE.
6. M.S. MEANS MILD STEEL ROD A.S.T.M. STANDARD DESIGNATION A-36.
7. H.S. MEANS HIGH STRENGTH ROD A.S.T.M. STANDARD DESIGNATION A-193 GRADE B-7.
8. NUTS SHALL BE A.S.T.M. STANDARD DESIGNATION A-307 GRADE A OR B HEXAGON HEAVY SERIES.
9. SEE TIE ROD DETAIL DRAWING. ALSO, THE ROD COUPLING DETAILS, CLAMP DETAILS AND SET CLAMP DETAILS.
10. CLAMP DETAILS AND SET CLAMP DETAILS MUST BE USED TO CLAMP RODS TO THE JOINTS OF THE PIPES.
11. STAR BOLTS NOT ALLOWED ON PIPE LARGER THAN 16".
12. MINIMUM OF 4 RODS REQUIRED ON 16" PIPE IF STAR BOLTS ARE USED.
13. TEES ARE TO BE RODDED ON BRANCH ONLY.
14. ALL VALVES TO BE RODDED IN BOTH DIRECTIONS.

STONEGATE VILLAGE
METROPOLITAN DISTRICT
LENGTH OF TIED PIPE

SCALE: NONE DATE: 4/00

APPROVED: R/JG DISTRICT ENGINEER

PIPE BEDDING:

(a) **Installation of Bedding and Pipe:** After completion of the trench excavation and proper preparation of the foundation, six inches (6") of bedding material shall be placed on the trench bottom for support under the pipe. Bell holes shall be dug deep enough to provide a minimum of two inches (2") of clearance between the bell and bedding material. All pipe shall be installed in such a manner as to insure full support of the pipe barrel over its entire length. After the pipe is adjusted for line and grade, and the joint is made, the bedding material shall be carefully placed and tamped under the haunches of the pipe and in the previously dug bell holes.

Tamping is herein defined as the act of placing approved bedding material under the haunches of the pipe, paying particular attention to voids, bell holes, and sling holes. The purpose of tamping is to ensure uniform support for the pipe.

The limits of bedding shall be from six inches (6") below the bottom of the pipe to twelve inches (12") above the top of the pipe. Approved backfill may then be installed to the groundline. See Section 6 of these Standards for backfill and compaction of backfill.

Compaction of bedding is not required. The only requirement is sufficient tamping to achieve uniform support under the pipe. See Sheet 8 of the Standard Drawings for a typical trench cross section.

(b) **Bedding Material:** The bedding material shall be a clean well-graded sand or squeeze sand and shall conform to the following limits when tested by means of laboratory sieves:

Well-Graded Sand	
sieve Size	Total Percent Passing by Weight
3/8 inch	100
No. 4	95-100
No. 8	80-100
No. 16	50-85
No. 30	25-60
No. 50	10-30
No. 100	2-10
No. 200	0

Squeeze Sand	
sieve Size	Total Percent Passing by Weight
3/8 inch	100
No. 100	0-5

If approved by the District, fines form the trench walls and spoils pile may be used to provide uniform support for the pipe. No rock or stone larger than that allowed by the sieve analysis, or any other detrimental substance, shall be placed closer to the pipe than six inches (6"). Approved bedding materials shall be stockpiled on the jobsite to be used in the event natural materials become unsatisfactory. The District reserves the right to require the use of the specified bedding material at any time.

STONEGATE VILLAGE
METROPOLITAN DISTRICT
PIPE BEDDING

SCALE: NONE DATE: 4/00

APPROVED: R/JG DISTRICT ENGINEER

MECHANICAL JOINT RESTRAINT

WEDGE DETAIL

BOLT HOLE DETAIL

NOMINAL PIPE SIZE	NO. OF BOLTS	NO. OF WEDGES	K2 INCHES	J INCHES	F INCHES	M INCHES
4"	2	2				
6"	6	3	11.12	9.5	7.00	0.88
8"	6	4	13.37	11.75	9.15	1.00
10"	8	6	15.62	14.00	11.20	1.00
12"	8	8	17.88	16.25	13.30	1.25
4"	4	2				
6"	6	3	11.12	9.5	7.00	0.88
8"	6	4	13.37	11.75	9.15	1.00
10"	8	6	15.62	14.00	11.20	1.00
12"	8	8	17.88	16.25	13.30	1.25

NOTES:

1. REFER TO SHEET W-19 SECTION 6.10.
2. DIMENSIONS FOR 16" AND 20" D.I. PIPE NOT SHOWN.

STONEGATE VILLAGE
METROPOLITAN DISTRICT
MECHANICAL JOINT RESTRAINT DETAILS

SCALE: NONE DATE: 4/00

APPROVED: R/JG DISTRICT ENGINEER

Plot Date: 10/17/2016 11:20 PM
 Draw Name: P:\Clients\3\CompSouth04-Minuter_Son_&_Water\Drawn\Drawings\Plan_S\04516a\WATER_DETAILS.dwg
 Updated By: lbaltzer

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Construction Managers • Environmental Scientists • Landscaping Architects • Planners

DATE: 11/2015
 REVISIONS: 1. 11/2015 1ST SUBMITTAL
 2. 08/2016 REVISED PER STONEGATE 5/17/16 LETTER
 3. 10/2016 REVISED PER STONEGATE 9/27/16 LETTER
 4. 08/2016 REVISED PER STONEGATE 5/17/16 LETTER
 5. 08/2016 REVISED PER STONEGATE 5/17/16 LETTER
 6. 08/2016 REVISED PER STONEGATE 5/17/16 LETTER
 7. 08/2016 REVISED PER STONEGATE 5/17/16 LETTER
 8. 08/2016 REVISED PER STONEGATE 5/17/16 LETTER
 9. 08/2016 REVISED PER STONEGATE 5/17/16 LETTER
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 18. 08/2016 REVISED PER STONEGATE 5/17/16 LETTER
 19. 08/2016 REVISED PER STONEGATE 5/17/16 LETTER
 20. 08/2016 REVISED PER STONEGATE 5/17/16 LETTER

COMPARK VILLAGE SOUTH, FILING NO. 1
 TOWN OF PARKER, COLORADO
 WATER DETAILS

PROJ MGR: RLB
 PROJ ASSOC: ASD
 DRAWN BY: ETG
 DATE: 11/2015

SHEET
23 OF **23**
 CLCPK3

2000 REVISION SHEET 65

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BID SET ONLY 10-7-16