



**GENERAL NOTES:**

- ALL CONSTRUCTION SHALL COMPLY WITH STONEGATE VILLAGE METROPOLITAN DISTRICT SPECIFICATIONS.
- THE CONTRACTOR SHALL CONTACT ALL APPROPRIATE UTILITY COMPANIES, THE TOWN OF PARKER, DOUGLAS COUNTY, AND THE DISTRICT ENGINEER PRIOR TO THE BEGINNING OF ANY CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ANY EXISTING UTILITY (INCLUDING DEPTHS) WHICH MAY CONFLICT WITH THE PROPOSED CONSTRUCTION. ALL EXISTING UTILITIES SHALL BE PROTECTED FROM DAMAGE BY THE CONTRACTOR. DAMAGED UTILITIES SHALL BE REPAIRED BY THE CONTRACTOR AT HIS/HER OWN EXPENSE.  
  
ALL ITEMS SHOWN ON THE PLANS AS EXISTING ARE SHOWN IN APPROXIMATE LOCATIONS ONLY. THE ACTUAL LOCATIONS MAY VARY FROM THE PLANS, ESPECIALLY IN THE CASE OF UNDERGROUND UTILITIES. WHENEVER CONTRACTOR DISCOVERS A DISCREPANCY IN LOCATIONS, HE/SHE SHALL CONTACT THE ENGINEER IMMEDIATELY.
- THE DISTRICT ENGINEER AND OTHER APPROVING AGENCIES ARE TO BE NOTIFIED AT LEAST 48-HOURS PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL OBTAIN, AT HIS/HER EXPENSE, ALL PERMITS WHICH ARE NECESSARY TO PERFORM THE PROPOSED WORK.
- ALL CONCRETE SHALL BE A MINIMUM OF CLASS A, 6 SACK, TYPE II, 3,000-POUND COMPRESSION STRENGTH.
- THE DESIGN ENGINEER SHALL SUBMIT ONE SET OF ROLLED "AS-BUILT" BLUELINE PRINTS AND ELECTRONIC FILES TO THE DISTRICT ENGINEER FOR APPROVAL PRIOR TO PRINTING MYLAR SEPIAS FOR THE DISTRICT. AFTER APPROVAL HAS BEEN GRANTED BY THE DISTRICT ENGINEER, FULL SIZE MYLAR SEPIA PRINTS SHALL BE TRANSMITTED TO THE STONEGATE VILLAGE METROPOLITAN DISTRICT OFFICE AND AN ADDITIONAL SET OF ROLLED BLUELINE PRINTS SHALL BE TRANSMITTED TO THE DISTRICT ENGINEER'S OFFICE PRIOR TO PROBATIONARY ACCEPTANCE.
- ALL BACKFILL MATERIAL SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY. COMPACTION TESTS MUST BE SUBMITTED TO DISTRICT ENGINEER PRIOR TO PROBATIONARY ACCEPTANCE.
- TRENCHES SHALL BE EXCAVATED AND THE PIPE EXPOSED FOR THE INSPECTION AT ANY LOCATION ON THE PROJECT IF SO ORDERED BY THE INSPECTOR.
- THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR THE PROPER FUNCTIONING OF LINES (WATER AND SEWER) FOR UP TO 1-YEAR FROM THE DATE OF PROBATIONARY ACCEPTANCE OF THE LINES BY THE DISTRICT. ANY MALFUNCTION DURING THIS PERIOD OF GUARANTEE SHALL BE REMEDIED BY THE CONTRACTOR TO THE SATISFACTION OF THE DISTRICT ENGINEER AT NO EXPENSE TO THE DISTRICT.

- SURFACE GRADES ARE TO BE WITHIN PLUS OR MINUS 1-FOOT OF FINISHED GRADE AND VERIFICATION OF COMPACTION RESULTS OBTAINED PRIOR TO THE INSTALLATION OF WATER AND SEWER LINES. RESULTS MUST BE SUBMITTED TO THE DISTRICT ENGINEER.
- NO WORK SHALL BE BACKFILLED UNTIL THE CONSTRUCTION HAS BEEN INSPECTED AND APPROVED FOR BACKFILLING BY THE DISTRICT ENGINEER OR REPRESENTATIVE OF THE DISTRICT ENGINEER.
- GRADING IS REQUIRED TO BE ADVANCED TO AT LEAST SUBGRADE LEVEL PRIOR TO UTILITY INSTALLATION. SURVEYOR CONFIRMATION WILL BE REQUIRED.

**WATER MAIN NOTES**

- ALL MATERIALS AND WORKMANSHIP SHALL BE IN CONFORMANCE WITH THE STONEGATE VILLAGE METROPOLITAN DISTRICT ENGINEERING STANDARDS AND SPECIFICATIONS, LATEST REVISION. ALL WORK SHALL BE INSPECTED AND APPROVED BY PERSONNEL OF THE STONEGATE VILLAGE METROPOLITAN DISTRICT AND THE DISTRICT ENGINEER.
- ALL WATER MAINS SHALL BE CLASS 50 DUCTILE IRON PIPE (AWWA C-151-71) OR PVC 6-INCH THROUGH 12-INCH C-900 CLASS 200. ALL JOINTS AND FITTINGS SHALL BE IN ACCORDANCE WITH THE STONEGATE VILLAGE METROPOLITAN DISTRICT STANDARDS AND SPECIFICATIONS. WATER MAINS 20-INCH AND LARGER SHALL BE CLASS 51. ANY VARIATION OF THIS STANDARD SHALL BE NOTED ON THE PLANS. ALL D.I. PIPE FITTINGS SHALL BE POLYETHYLENE WRAPPED.
- ALL BENDS, PLUGS, REDUCERS, AND FIRE HYDRANTS ARE TO BE RODDED. ALL FITTINGS SHALL BE WRAPPED WITH 8-MIL MINIMUM THICKNESS POLYETHYLENE MATERIAL PER AWWA STANDARD C-105.
- THERE SHALL BE A MINIMUM COVER OF 4-1/2-FEET OVER ALL WATER MAINS.
- FIRE HYDRANTS SHALL CONFORM TO AWWA C-502 "DRY BARREL FIRE HYDRANTS" PIPE. HYDRANT ASSEMBLIES SHALL INCLUDE ALL PIPE, FITTINGS, VALVES, MATERIALS, AND LABOR NECESSARY TO INSTALL THE HYDRANT COMPLETE IN PLACE. ACCEPTABLE MODELS ARE MUELLER CENTURION MODEL 423 OR WATEROUS COMPANY PACER WB-67 MODEL WITH BRONZE BUSED SHOW AND BRONZE SHAFT COUPLING, THE 4-1/2-INCH NOZZLE TO HAVE N.S.T. THREADS.
- ALL BENDS, TEES, FIRE HYDRANTS, BLOW-OFFS AND PLUGS AT DEAD-END MAINS SHALL BE PROTECTED FROM THRUST BY USING CONCRETE THRUST BLOCKS.
- CHLORINATION AND FLUSHING: ALL WATER MAINS SHALL BE INSTALLED AND CHLORINATED PER STONEGATE VILLAGE METROPOLITAN DISTRICT STANDARDS AND SPECIFICATIONS. THE LINES SHALL BE CHLORINATED IN ACCORDANCE WITH AWWA C-601, "DISINFECTING WATER MAINS." THE PREFERRED METHOD IS TO USE SUFFICIENT CHLORINE TABLETS TO PRODUCE A 50-MG TO 1 SOLUTION. THESE TABLETS SHOULD BE ADHERED TO THE TOP OF THE PIPE SECTION WITH PERMATAX NO.1 (RED). THE CHLORINATION OF ANY FINISHED PIPELINE SHALL BE DONE PRIOR TO THE HYDROSTATIC TESTING. STERILIZATION AND FLUSHING OF ALL MAINS SHALL BE INSPECTED COPY OF THE CERTIFIED BY HEALTH DEPARTMENT HAVING JURISDICTION. ONE COPY OF THE CERTIFICATION SHALL STATE THE LOCATION OF THE MAIN, THAT THE MAIN HAS BEEN INSPECTED BY A REPRESENTATION OF THE HEALTH DEPARTMENT HAVING JURISDICTION, AND WAS FOUND TO COMPLY WITH THE PROCEDURES SET FORTH BY THAT DEPARTMENT.
- HYDROSTATIC TESTING: ALL WATER MAINS SHALL BE TESTED PER THE REQUIREMENTS OF THE STONEGATE VILLAGE METROPOLITAN DISTRICT STANDARDS AND SPECIFICATIONS. ALL PIPE SHALL BE FIELD PRESSURE-TESTED TO A MINIMUM OF 150 PSI. ALL TESTING SHALL BE DONE IN THE PRESENCE OF A STONEGATE VILLAGE METROPOLITAN DISTRICT INSPECTOR. LEAKAGE FOR EACH SECTION OF PIPE BETWEEN LINES VALVES SHALL NOT EXCEED THE LIMITS SET FORTH IN THE STONEGATE VILLAGE METROPOLITAN DISTRICT STANDARDS AND SPECIFICATIONS.

- VALVES IN STREETS ARE TO BE LOCATED AT PROPERTY LINE EXTENSIONS EXCEPT FOR TAPPING TEES, WHERE AN ADDITIONAL VALVE SHALL BE PLACED ON THE TAPPING TEE. OTHER VALVE LOCATIONS, SUCH AS WHERE CROSS-PANS EXIST, ARE SHOWN ON THE PLANS.
- WHEN NECESSARY TO LOWER OR RAISE WATER LINES AT STORM DRAINS AND OTHER UTILITY CROSSINGS, A MINIMUM CLEARANCE OF 1-1/2- FEET SHALL BE MAINTAINED BETWEEN OUTSIDE OF PIPES.
- THE CONTRACTOR SHALL HAVE IN HIS/HER POSSESSION AT ALL TIMES ONE SIGNED COPY OF THE PLANS WHICH HAVE BEEN APPROVED BY THE STONEGATE VILLAGE METROPOLITAN DISTRICT AND THE DISTRICT ENGINEER.
- THE CONTRACTOR SHALL NOTIFY THE STONEGATE VILLAGE METROPOLITAN DISTRICT AND THE DISTRICT ENGINEER AT LEAST 48-HOURS PRIOR TO ANY CONSTRUCTION. IF WORK IS SUSPENDED FOR ANY PERIOD OF TIME AFTER INITIAL START-UP, THE CONTRACTOR MUST NOTIFY THE DISTRICT ENGINEER 48-HOURS PRIOR TO RE-START.
- PIPE BEDDING SHALL BE A CLEAN, WELL-GRADED SAND OR SQUEEGEE SAND IN ACCORDANCE WITH STONEGATE VILLAGE METROPOLITAN DISTRICT STANDARDS AND SPECIFICATIONS, LATEST REVISION.
- THE CONTRACTOR SHALL NOTIFY THE PUBLIC UTILITY COMPANIES AND DETERMINE THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO PROCEEDING WITH THE EXCAVATION. ALL WORK PERFORMED IN THE AREA OF THE PUBLIC UTILITIES SHALL BE PERFORMED ACCORDING TO THE REQUIREMENTS OF THESE AGENCIES.
- COMPACTION OF ALL TRENCHES MUST BE ATTAINED IN ACCORDANCE WITH THE SOILS REPORTS AND COMPACTION TEST RESULTS SUBMITTED TO THE DISTRICT ENGINEER PRIOR TO PROBATIONARY ACCEPTANCE.
- VALVE BOXES: TYLER SCREW-TYPE 6-INCH CAST-IRON VALVE BOX ASSEMBLY SERIES 6860 WITH NO. 160 OVAL BASE. CLAY AND BAILEY SCREW-TYPE 6 INCH CAST-IRON VALVE BOX ASSEMBLY NO. P-108 WITH NO. 160 LARGE OVAL BASE.
- ALL PIPE LENGTHS ARE APPROXIMATE.
- AT LEAST 5-DAYS PRIOR TO THE START OF CONSTRUCTION, A PRE-CONSTRUCTION MEETING WILL BE HELD AT THE OFFICE OF THE DISTRICT ENGINEER AND ATTENDED BY THE CONTRACTOR AND REPRESENTATIVE OF OTHER APPROVING AGENCIES. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE DISTRICT ENGINEER.
- ALL WATER VALVES SHALL BE OPEN RIGHT.

**SANITARY SEWER NOTES**

- ALL SANITARY SEWER CONSTRUCTION SHALL CONFORM TO THE STONEGATE VILLAGE METROPOLITAN DISTRICT STANDARDS AND SPECIFICATIONS.
- ALL SEWER MAINS SHALL BE PVC, ASTM D-3034, SDR 35 OR APPROVED EQUAL. ALL SEWER MAIN SIZE IS 8-INCH IN DIAMETER UNLESS OTHERWISE NOTED.
- SEWER LINES SHALL BE INSTALLED 5- FEET SOUTH OR WEST OF HUMMINGBIRD STENTERLINE, UNLESS OTHERWISE SHOWN ON PLANS. SEWER LINES SHALL BE 10- FEET FROM WATER LINES EXCEPT WHEN CROSSING EACH OTHER. SEWER LINES WHICH CROSS LESS THAN 1-1/2- FEET VERTICALLY FROM THE WATER MAIN SHALL BE ENCASED IN CONCRETE AS PER STONEGATE VILLAGE METROPOLITAN DISTRICT STANDARDS AND SPECIFICATIONS. USE RUBBER GASKETS FOR PVC ENCASEMENT.
- SEWER RIM ELEVATIONS SHOWN ARE APPROPRIATE ONLY AND ARE NOT TO BE TAKEN AS FINAL ELEVATIONS. RING AND COVER SHALL BE SET IN CENTERED CONCRETE RINGS WITH RAM-NECK FOR ADJUSTMENT TO MATCH FINAL PAVEMENT ELEVATIONS.
- THE CONTRACTOR AND SURVEY CREW SHALL VERIFY ELEVATIONS OF EXISTING SEWER LINES AND MANHOLES TO BE TIED TO PRIOR TO CONSTRUCTION OR STAKING OF SANITARY SEWER.
- SEWER WYES SHALL BE USED RATHER THAN TEES. SEWER SERVICE WYES FOR EACH UNIT SHALL BE STAKED BY A SURVEY CREW, AND FURNISHED AND INSTALLED BY THE CONTRACTOR. THE CONTRACTOR SHALL FURNISH TO THE ENGINEER "AS BUILT" LOCATION OF WYES.
- ALL MANHOLES SHALL BE 48-INCHES IN DIAMETER WITH 24-INCH RING AND COVER, ECCENTRIC CONE, UNLESS OTHERWISE SPECIFIED.
- PIPE BEDDING SHALL BE CLASS "B" AND SHALL CONFORM TO ASTM C-33 OR D-448 GRADATION NO. 6 OR NO. 67.
- AT LEAST 5-DAYS PRIOR TO THE START OF CONSTRUCTION, A PRE-CONSTRUCTION MEETING WILL BE HELD AT THE OFFICE OF THE DISTRICT ENGINEER AND ATTENDED BY THE CONTRACTOR AND REPRESENTATIVES OF THE OTHER APPROVING AGENCIES. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE DISTRICT ENGINEER TO SCHEDULE THIS MEETING.
- ALL PIPE LENGTHS ARE APPROXIMATE.
- THE CONTRACTOR SHALL HAVE IN HIS/HER POSSESSION AT ALL TIMES ONE SIGNED COPY OF THE PLANS WHICH HAVE BEEN APPROVED BY THE STONEGATE VILLAGE METROPOLITAN DISTRICT AND THE DISTRICT ENGINEER.
- ALL MANHOLES SHALL HAVE SHAPED INVERTS.
- ALL SEWER LINES SHALL BE TESTED IN ACCORDANCE WITH THE STONEGATE VILLAGE METROPOLITAN DISTRICT STANDARDS AND SPECIFICATIONS PRIOR TO ACCEPTANCE OR ANY CONNECTION TO AN EXISTING SEWER LINE.
- PRIOR TO START WORK WHERE SEWER MAIN IS TO BE INSTALLED INTO EXISTING DISTRICT SEWER SYSTEMS, THE NEAREST MANHOLE TO THE POINT OF TIE-IN SHALL BE PLUGGED WITH A PLUMBER'S PLUG ON THE INLET SIDE BY THE CONTRACTOR. THIS PLUG SHALL REMAIN IN PLACE UNTIL FINAL ACCEPTANCE BY THE DISTRICT. ITS PURPOSE SHALL BE TO PREVENT ANY MUD, WATER OR OTHER MATERIALS FROM ENTERING THE LINE DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PUMPING AND CLEANING THESE MANHOLES AND REMOVING THE PLUG WHEN SO INSTRUCTED BY THE DISTRICT.
- PRIOR TO PROBATIONARY ACCEPTANCE WALK-THROUGH, THE CONTRACTOR/DEVELOPER SHALL JET CLEAN THE ENTIRE SANITARY SEWER SYSTEM AND PUMPOUT AT THE PLUGGED MANHOLE.
- ALL SERVICES WILL BE PERMANENTLY MARKED ON CURB FACE AS FOLLOWS:  
"X" FOR SANITARY SEWER SERVICES  
"V" FOR WATER SERVICES
- ALL WAREHOUSE BUILDING COMPANIES WITH AN SIC CODE SHALL FILL OUT AN INDUSTRIAL WASTE AND SILVER MERCURY WASTE DISCHARGE QUESTIONNAIRE PRIOR TO DISTRICT APPROVAL.

**DISTRICT ACCEPTANCE NOTE:**

- UPON COMPLETION OF SANITARY SEWER AND WATER CONSTRUCTION AND TESTING, THE DEVELOPER OR CONTRACTOR SHALL CONTACT THE DISTRICT FOR PROBATIONARY ACCEPTANCE INSPECTION. A PUNCHLIST WILL BE PROVIDED THE DEVELOPER AND CONTRACTOR UPON COMPLETION OF THE INITIAL WALK-THROUGH AND PROBATIONARY ACCEPTANCE WILL BE ISSUED FOLLOWING COMPLETION AND ACCEPTANCE OF THE WORK OUTLINED IN THE PUNCHLIST.
- THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR THE PROPER FUNCTIONING OF THE LINES FOR UP TO 1-YEAR FROM THE DATE OF PROBATIONARY ACCEPTANCE OF THE LINES BY THE DISTRICT. ANY MALFUNCTION DURING THIS PERIOD OF GUARANTEE SHALL BE REMEDIED BY THE CONTRACTOR TO THE SATISFACTION OF THE DISTRICT ENGINEER AT NO EXPENSE TO THE DISTRICT.
- THE DATE OF FINAL ACCEPTANCE WILL BE INDICATED IN THE CONDITIONS OF THE PROBATIONARY ACCEPTANCE LETTER. THE DEVELOPER SHALL BE RESPONSIBLE FOR CONTACTING THE DISTRICT FOR FINAL INSPECTION AND FINAL ACCEPTANCE.

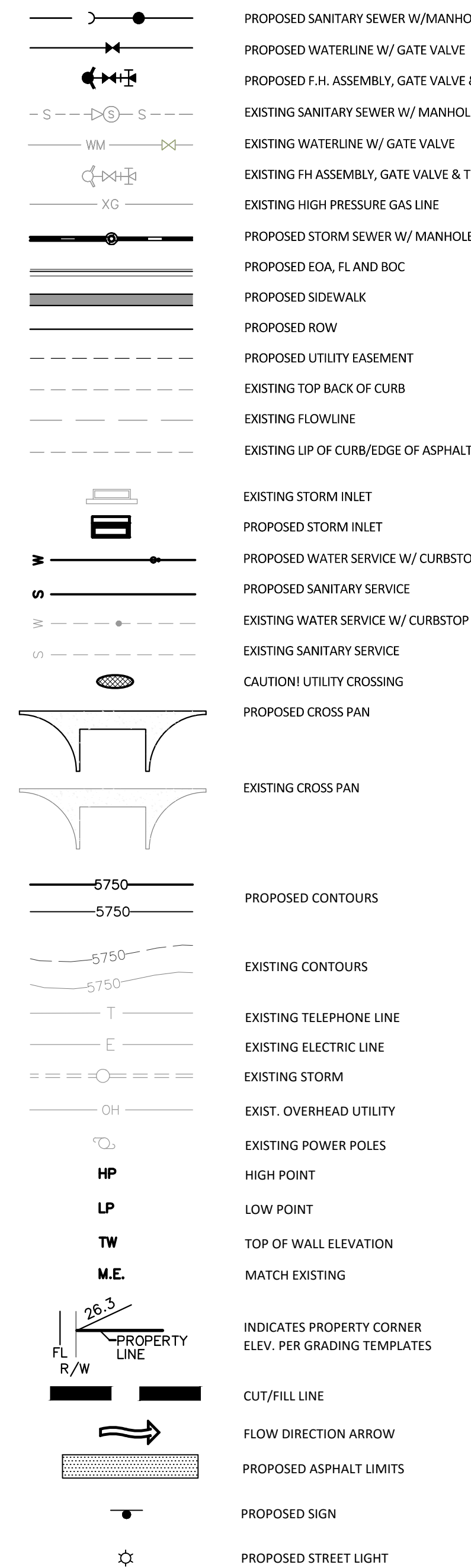
**DISTRICT POLICIES & INSTALLATION NOTES FOR SEWER SERVICES:**

- ALL SANITARY SEWER CONSTRUCTION SHALL CONFORM TO THE STONEGATE VILLAGE METROPOLITAN DISTRICT STANDARDS AND SPECIFICATIONS.
- ALL SEWER MAINS SHALL BE PVC, ASTM D-3034, SDR 35 OR APPROVED EQUAL. ALL SEWER MAIN SIZE IS 8-INCH IN DIAMETER UNLESS OTHERWISE NOTED.
- SEWER LINES SHALL BE INSTALLED 5- FEET SOUTH OR WEST OF STREET CENTERLINE, UNLESS OTHERWISE SHOWN ON PLANS. SEWER LINES SHALL BE 10- FEET FROM WATER LINES EXCEPT WHEN CROSSING EACH OTHER. SEWER LINES WHICH CROSS LESS THAN 1-1/2- FEET VERTICALLY FROM THE WATER MAIN SHALL BE ENCASED IN CONCRETE AS PER STONEGATE VILLAGE METROPOLITAN DISTRICT STANDARDS AND SPECIFICATIONS. USE RUBBER GASKETS FOR PVC ENCASEMENT.
- SEWER RIM ELEVATIONS SHOWN ARE APPROPRIATE ONLY AND ARE NOT TO BE TAKEN AS FINAL ELEVATIONS. RING AND COVER SHALL BE SET IN CENTERED CONCRETE RINGS WITH RAM-NECK FOR ADJUSTMENT TO MATCH FINAL PAVEMENT ELEVATIONS.
- THE CONTRACTOR AND SURVEY CREW SHALL VERIFY ELEVATIONS OF EXISTING SEWER LINES AND MANHOLES TO BE TIED TO PRIOR TO CONSTRUCTION OR STAKING OF SANITARY SEWER.
- GRAVEL AND/OR TILE UNDERDRAINS SHALL BE INSTALLED IN ALL SEWER MAIN TRENCHES AS SHOWN ON THE SANITARY SEWER PLAN AND PROFILE SHEETS. UNDERDRAINS SHALL BE PVC -ASTM 3034, SDR 35 INSTALLED WITHOUT GASKETS. STONEGATE VILLAGE METROPOLITAN DISTRICT IS NOT RESPONSIBLE FOR MAINTENANCE OF UNDERDRAINS. SIZE OF UNDERDRAIN SERVICES SHALL BE 3-INCH.
- SEWER WYES SHALL BE USED RATHER THAN TEES. SEWER SERVICE WYES FOR EACH UNIT SHALL BE STAKED BY A SURVEY CREW, AND FURNISHED AND INSTALLED BY THE CONTRACTOR. THE CONTRACTOR SHALL FURNISH TO THE ENGINEER "AS BUILT" LOCATION OF WYES.
- ALL MANHOLES SHALL BE 48-INCHES IN DIAMETER WITH 24-INCH RING AND COVER, ECCENTRIC CONE, UNLESS OTHERWISE SPECIFIED.
- PIPE BEDDING SHALL BE CLASS "B" AND SHALL CONFORM TO ASTM C-33 OR D-448 GRADATION NO. 6 OR NO. 67.
- AT LEAST 5-DAYS PRIOR TO THE START OF CONSTRUCTION, A PRE-CONSTRUCTION MEETING WILL BE HELD AT THE OFFICE OF THE DISTRICT ENGINEER AND ATTENDED BY THE CONTRACTOR AND REPRESENTATIVES OF THE OTHER APPROVING AGENCIES. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE DISTRICT ENGINEER TO SCHEDULE THIS MEETING.
- ALL PIPE LENGTHS ARE APPROXIMATE.
- THE CONTRACTOR SHALL HAVE IN HIS/HER POSSESSION AT ALL TIMES ONE SIGNED COPY OF THE PLANS WHICH HAVE BEEN APPROVED BY THE STONEGATE VILLAGE METROPOLITAN DISTRICT AND THE DISTRICT ENGINEER.
- ALL MANHOLES SHALL HAVE SHAPED INVERTS.
- ALL SEWER LINES SHALL BE TESTED IN ACCORDANCE WITH THE STONEGATE VILLAGE METROPOLITAN DISTRICT STANDARDS AND SPECIFICATIONS PRIOR TO ACCEPTANCE OR ANY CONNECTION TO AN EXISTING SEWER LINE.
- PRIOR TO START WORK WHERE SEWER MAIN IS TO BE INSTALLED INTO EXISTING DISTRICT SEWER SYSTEMS, THE NEAREST MANHOLE TO THE POINT OF TIE-IN SHALL BE PLUGGED WITH A PLUMBER'S PLUG ON THE INLET SIDE BY THE CONTRACTOR. THIS PLUG SHALL REMAIN IN PLACE UNTIL FINAL ACCEPTANCE BY THE DISTRICT. ITS PURPOSE SHALL BE TO PREVENT ANY MUD, WATER OR OTHER MATERIALS FROM ENTERING THE LINE DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PUMPING AND CLEANING THESE MANHOLES AND REMOVING THE PLUG WHEN SO INSTRUCTED BY THE DISTRICT.
- PRIOR TO PROBATIONARY ACCEPTANCE WALK-THROUGH, THE CONTRACTOR/DEVELOPER SHALL JET CLEAN THE ENTIRE SANITARY SEWER SYSTEM AND PUMPOUT AT THE PLUGGED MANHOLE.
- ALL SERVICES WILL BE PERMANENTLY MARKED ON CURB FACE AS FOLLOWS:  
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**DISTRICT POLICIES & INSTALLATION NOTES FOR WATER SERVICES:**

- ALL MATERIALS AND WORKMANSHIP SHALL BE IN CONFORMANCE WITH THE STONEGATE VILLAGE METROPOLITAN DISTRICT ENGINEERING STANDARDS AND SPECIFICATIONS, LATEST REVISION. ALL WORK SHALL BE INSPECTED AND APPROVED BY PERSONNEL OF THE STONEGATE VILLAGE METROPOLITAN DISTRICT AND THE DISTRICT ENGINEER.
- ALL WATER MAINS SHALL BE CLASS 50 DUCTILE IRON PIPE (AWWA C-151-71) OR PVC 6-INCH THROUGH 12-INCH C-900 CLASS 200. ALL JOINTS AND FITTINGS SHALL BE IN ACCORDANCE WITH THE STONEGATE VILLAGE METROPOLITAN DISTRICT STANDARDS AND SPECIFICATIONS. WATER MAINS 20-INCH AND LARGER SHALL BE CLASS 51. ANY VARIATION OF THIS STANDARD SHALL BE NOTED ON THE PLANS. ALL D.I. PIPE FITTINGS SHALL BE POLYETHYLENE WRAPPED.
- ALL BENDS, PLUGS, REDUCERS, AND FIRE HYDRANTS ARE TO BE RODDED. ALL FITTINGS SHALL BE WRAPPED WITH 8-MIL MINIMUM THICKNESS POLYETHYLENE MATERIAL PER AWWA STANDARD C-105.
- THERE SHALL BE A MINIMUM COVER OF 4-1/2- FEET OVER ALL WATER MAINS.
- FIRE HYDRANTS SHALL CONFORM TO AWWA C-502 "DRY BARREL FIRE HYDRANTS" PIPE. HYDRANT ASSEMBLIES SHALL INCLUDE ALL PIPE, FITTINGS, VALVES, MATERIALS, AND LABOR NECESSARY TO INSTALL THE HYDRANT COMPLETE IN PLACE. ACCEPTABLE MODELS ARE MUELLER CENTURION MODEL 423 OR WATEROUS COMPANY PACER WB-67 MODEL WITH BRONZE BUSED SHOW AND BRONZE SHAFT COUPLING, THE 4-1/2-INCH NOZZLE TO HAVE N.S.T. THREADS.
- ALL BENDS, TEES, FIRE HYDRANTS, BLOW-OFFS AND PLUGS AT DEAD-END MAINS SHALL BE PROTECTED FROM THRUST BY USING CONCRETE THRUST BLOCKS.
- CHLORINATION AND FLUSHING: ALL WATER MAINS SHALL BE INSTALLED AND CHLORINATED PER STONEGATE VILLAGE METROPOLITAN DISTRICT STANDARDS AND SPECIFICATIONS. THE LINES SHALL BE CHLORINATED IN ACCORDANCE WITH AWWA C-601, "DISINFECTING WATER MAINS." THE PREFERRED METHOD IS TO USE SUFFICIENT CHLORINE TABLETS TO PRODUCE A 50-MG TO 1 SOLUTION. THESE TABLETS SHOULD BE ADHERED TO THE TOP OF THE PIPE SECTION WITH PERMATAX NO.1 (RED). THE CHLORINATION OF ANY FINISHED PIPELINE SHALL BE DONE PRIOR TO THE HYDROSTATIC TESTING. STERILIZATION AND FLUSHING OF ALL MAINS SHALL BE INSPECTED COPY OF THE CERTIFIED BY HEALTH DEPARTMENT HAVING JURISDICTION. ONE COPY OF THE CERTIFICATION SHALL STATE THE LOCATION OF THE MAIN, THAT THE MAIN HAS BEEN INSPECTED BY A REPRESENTATION OF THE HEALTH DEPARTMENT HAVING JURISDICTION, AND WAS FOUND TO COMPLY WITH THE PROCEDURES SET FORTH BY THAT DEPARTMENT.
- HYDROSTATIC TESTING: ALL WATER MAINS SHALL BE TESTED PER THE REQUIREMENTS OF THE STONEGATE VILLAGE METROPOLITAN DISTRICT STANDARDS AND SPECIFICATIONS. ALL PIPE SHALL BE FIELD PRESSURE-TESTED TO A MINIMUM OF 150 PSI. ALL TESTING SHALL BE DONE IN THE PRESENCE OF A STONEGATE VILLAGE METROPOLITAN DISTRICT INSPECTOR. LEAKAGE FOR EACH SECTION OF PIPE BETWEEN LINES VALVES SHALL NOT EXCEED THE LIMITS SET FORTH IN THE STONEGATE VILLAGE METROPOLITAN DISTRICT STANDARDS AND SPECIFICATIONS.
- VALVES IN STREETS ARE TO BE LOCATED AT PROPERTY LINE EXTENSIONS EXCEPT FOR TAPPING TEES, WHERE AN ADDITIONAL VALVE SHALL BE PLACED ON THE TAPPING TEE. OTHER VALVE LOCATIONS, SUCH AS WHERE CROSS-PANS EXIST, ARE SHOWN ON THE PLANS.
- WHEN NECESSARY TO LOWER OR RAISE WATER LINES AT STORM DRAINS AND OTHER UTILITY CROSSINGS, A MINIMUM CLEARANCE OF 1-1/2- FEET SHALL BE MAINTAINED BETWEEN OUTSIDE OF PIPES.
- THE CONTRACTOR SHALL HAVE IN HIS/HER POSSESSION AT ALL TIMES ONE SIGNED COPY OF THE PLANS WHICH HAVE BEEN APPROVED BY THE STONEGATE VILLAGE METROPOLITAN DISTRICT AND THE DISTRICT ENGINEER.
- THE CONTRACTOR SHALL NOTIFY THE STONEGATE VILLAGE METROPOLITAN DISTRICT AND THE DISTRICT ENGINEER AT LEAST 48-HOURS PRIOR TO ANY CONSTRUCTION. IF WORK IS SUSPENDED FOR ANY PERIOD OF TIME AFTER INITIAL START-UP, THE CONTRACTOR MUST NOTIFY THE DISTRICT ENGINEER 48-HOURS PRIOR TO RE-START.
- PIPE BEDDING SHALL BE A CLEAN, WELL-GRADED SAND OR SQUEEGEE SAND IN ACCORDANCE WITH STONEGATE VILLAGE METROPOLITAN DISTRICT STANDARDS AND SPECIFICATIONS, LATEST REVISION.
- THE CONTRACTOR SHALL NOTIFY THE PUBLIC UTILITY COMPANIES AND DETERMINED THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO PROCEEDING WITH THE EXCAVATION. ALL WORK PERFORMED IN THE AREA OF THE PUBLIC UTILITIES SHALL BE PERFORMED ACCORDING TO THE REQUIREMENTS OF THESE AGENCIES.
- COMPACTION OF ALL TRENCHES MUST BE ATTAINED IN ACCORDANCE WITH THE SOILS REPORTS AND COMPACTION TEST RESULTS SUBMITTED TO THE DISTRICT ENGINEER PRIOR TO PROBATIONARY ACCEPTANCE.
- VALVE BOXES: TYLER SCREW-TYPE 6-INCH CAST-IRON VALVE BOX ASSEMBLY SERIES 6860 WITH NO. 1560 OVAL BASE. CLAY AND BAILEY SCREW-TYPE 6 INCH CAST-IRON VALVE BOX ASSEMBLY NO. P-108 WITH NO. 106 LARGE OVAL BASE.
- ALL PIPE LENGTHS ARE APPROXIMATE.
- AT LEAST 5-DAYS PRIOR TO THE START OF CONSTRUCTION, A PRE-CONSTRUCTION MEETING WILL BE HELD AT THE OFFICE OF THE DISTRICT ENGINEER AND ATTENDED BY THE CONTRACTOR AND REPRESENTATIVE OF OTHER APPROVING AGENCIES. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE DISTRICT ENGINEER.

**MASTER LEGEND**



DATE	
REVISIONS	

**Manhard CONSULTING LTD.**  
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 303.778.0000 • 303.778.0000 • manhard.com  
 Construction Managers • Environmental Scientists • Planners

**COMPARK VILLAGE SOUTH FILING NO. 2 - PHASE II**  
**TOWN OF PARKER, COLORADO**  
**GENERAL NOTES**

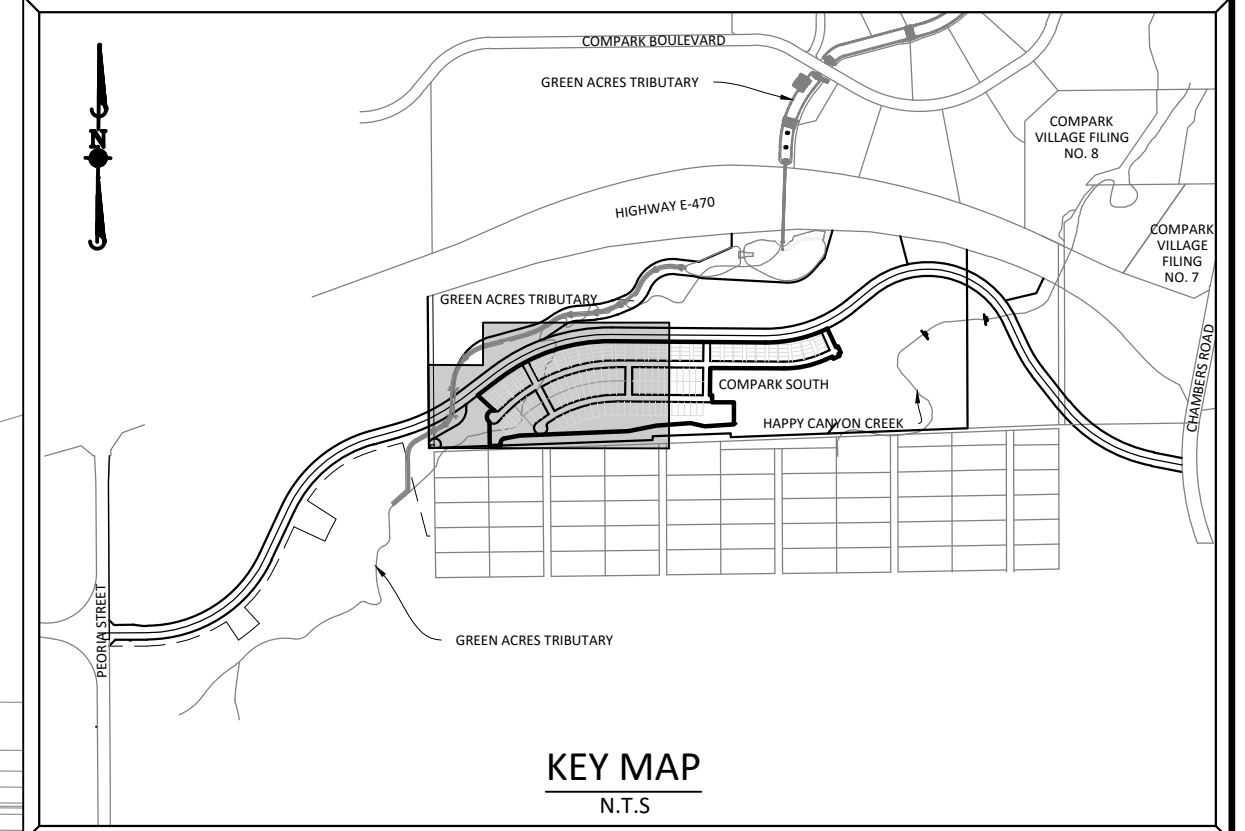
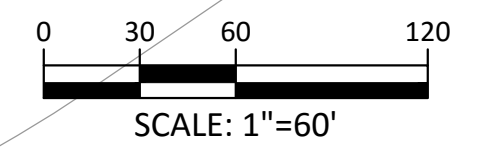
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SHEET  
**2 OF 14**  
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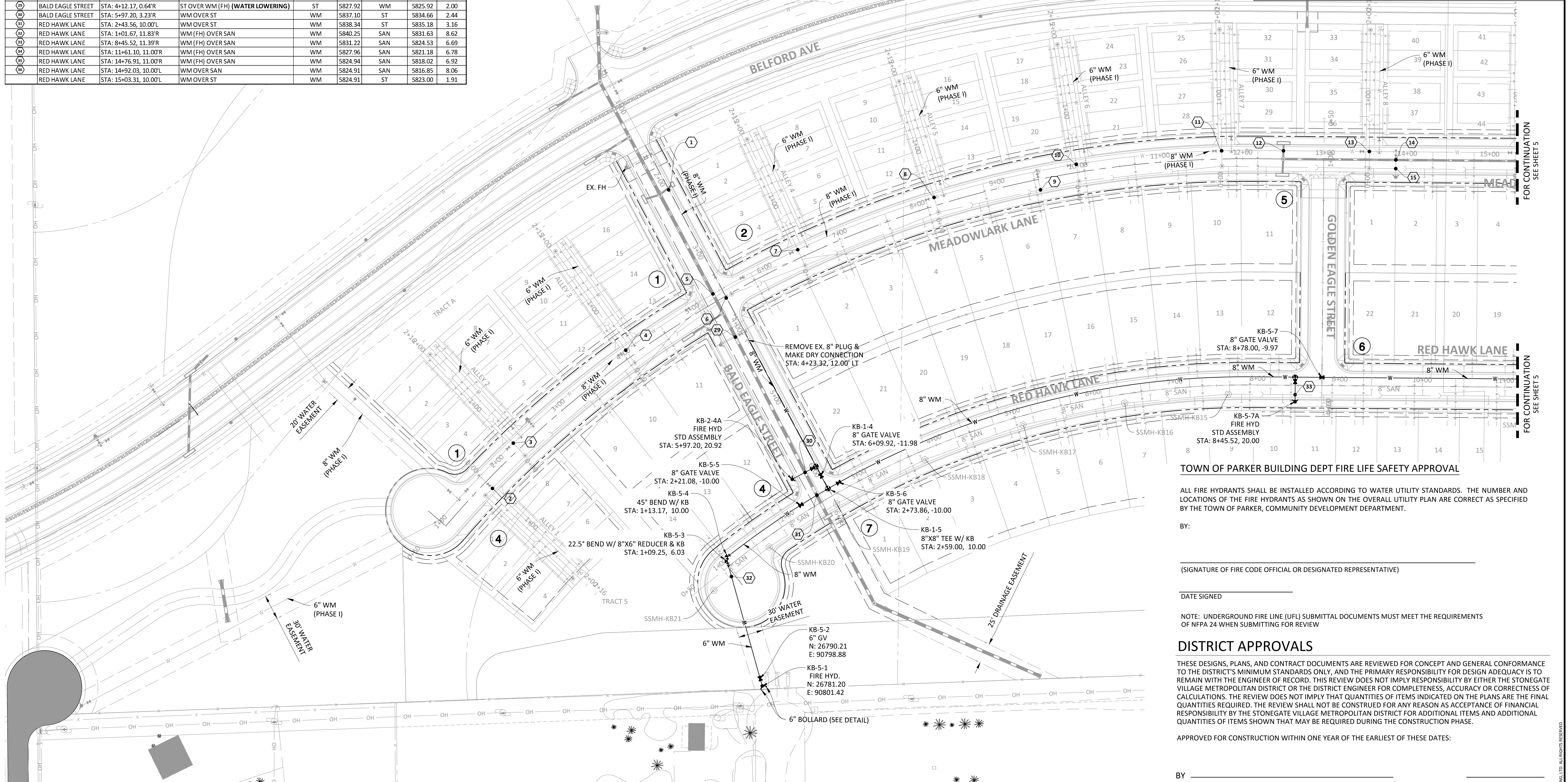
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CROSSING	STREET	STATION/OFFSET	TYPE OF CROSSING	UPPER UTILITY	B.O.P.	LOWER UTILITY	T.O.P.	CLEAR
(1)	BALD EAGLE STREET	STA: 2+16.17, 11.58'L	ST OVER WM (WATER LOWERING)	ST	5825.34	WM	5823.14	2.00
(2)	MEADOWLARK LANE	STA: 1+72.35, 11.24'R	WM OVER SAN	WM	5834.33	SAN	5827.95	6.38
(3)	MEADOWLARK LANE	STA: 2+29.06, 10.00'L	WM OVER SAN	WM	5833.48	SAN	5827.48	6.00
(4)	MEADOWLARK LANE	STA: 4+05.15, 10.00'L	WM OVER SAN	WM	5830.74	SAN	5824.96	5.78
(5)	MEADOWLARK LANE	STA: 5+30.36, 10.00'L	ST OVER WM (WATER LOWERING)	ST	5826.36	WM	5824.36	2.00
(6)	MEADOWLARK LANE	STA: 5+41.93, 2.34'R	WM OVER SAN	WM	5829.42	SAN	5823.36	6.09
(7)	MEADOWLARK LANE	STA: 6+45.71, 10.00'L	WM OVER SAN	WM	5828.07	SAN	5822.52	5.55
(8)	MEADOWLARK LANE	STA: 8+21.94, 10.00'L	WM OVER SAN	WM	5826.26	SAN	5820.55	5.71
(9)	MEADOWLARK LANE	STA: 9+49.78, 12.78'R	WM (FH) OVER SAN	WM	5824.95	SAN	5818.80	6.15
(10)	MEADOWLARK LANE	STA: 9+98.17, 10.00'L	WM OVER SAN	WM	5824.46	SAN	5818.63	5.83
(11)	MEADOWLARK LANE	STA: 11+74.40, 10.00'L	WM OVER SAN	WM	5822.65	SAN	5816.66	5.99
(12)	MEADOWLARK LANE	STA: 12+49.14, 9.96'L	ST OVER WM (WATER LOWERING)	ST	5820.82	WM	5818.82	2.00
(13)	MEADOWLARK LANE	STA: 13+53.59, 9.96'L	WM OVER SAN	WM	5820.81	SAN	5814.69	6.12
(14)	MEADOWLARK LANE	STA: 13+85.84, 0.00'R	ST OVER WM (FH) (WATER LOWERING)	ST	5818.66	WM	5816.66	2.00
(15)	MEADOWLARK LANE	STA: 13+85.81, 10.61'R	WM (FH) OVER SAN	WM	5815.99	SAN	5813.84	2.15
(16)	MEADOWLARK LANE	STA: 15+33.59, 9.97'L	WM OVER SAN	WM	5818.97	SAN	5812.69	6.28
(17)	MEADOWLARK LANE	STA: 17+89.84, 9.99'L	WM OVER SAN	WM	5816.34	SAN	5809.90	6.44
(18)	MEADOWLARK LANE	STA: 18+38.84, 0.00'L	ST OVER WM (FH) (WATER LOWERING)	ST	5812.43	WM	5810.93	1.50
(19)	MEADOWLARK LANE	STA: 18+35.84, 11.00'R	WM (FH) OVER SAN	WM	5810.26	SAN	5808.33	1.93
(20)	MEADOWLARK LANE	STA: 19+12.47, 10.00'L	WM OVER SAN	WM	5815.56	SAN	5806.28	9.28
(21)	MEADOWLARK LANE	STA: 19+23.34, 10.00'L	ST OVER WM (WATER LOWERING)	ST	5810.79	WM	5808.79	2.00
(22)	MEADOWLARK LANE	STA: 19+35.32, 4.57'R	ST OVER WM (WATER LOWERING)	ST	5812.94	WM	5810.94	2.00
(23)	MEADOWLARK LANE	STA: 19+35.32, 11.00'R	WM OVER SAN	WM	5810.27	SAN	5806.75	3.52
(24)	MEADOWLARK LANE	STA: 20+39.84, 10.00'L	WM OVER SAN	WM	5816.85	SAN	5808.11	8.74
(25)	MEADOWLARK LANE	STA: 22+19.84, 10.00'L	WM OVER SAN	WM	5820.02	SAN	5809.46	10.56
(26)	MEADOWLARK LANE	STA: 23+99.84, 10.00'L	WM OVER SAN	WM	5822.66	SAN	5810.74	11.92
(27)	MEADOWLARK LANE	STA: 25+91.77, 10.00'L	WM OVER SAN	WM	5820.85	SAN	5811.53	9.32
(28)	MEADOWLARK LANE	STA: 28+22.75, 10.00'L	WM OVER SAN	WM	5818.43	SAN	5812.41	6.02
(29)	BALD EAGLE STREET	STA: 4+12.17, 0.64'R	ST OVER WM (FH) (WATER LOWERING)	ST	5827.92	WM	5825.92	2.00
(30)	BALD EAGLE STREET	STA: 5+97.20, 3.23'R	WM OVER ST	WM	5837.30	ST	5834.66	2.64
(31)	RED HAWK LANE	STA: 2+43.56, 10.00'L	WM OVER ST	WM	5838.34	ST	5835.18	3.16
(32)	RED HAWK LANE	STA: 1+01.67, 11.83'R	WM (FH) OVER SAN	WM	5840.25	SAN	5831.63	8.62
(33)	RED HAWK LANE	STA: 8+45.52, 11.39'R	WM (FH) OVER SAN	WM	5831.22	SAN	5824.53	6.69
(34)	RED HAWK LANE	STA: 11+61.10, 11.00'R	WM (FH) OVER SAN	WM	5827.96	SAN	5821.18	6.78
(35)	RED HAWK LANE	STA: 14+76.91, 11.00'R	WM (FH) OVER SAN	WM	5824.94	SAN	5818.02	6.92
(36)	RED HAWK LANE	STA: 14+92.03, 10.00'L	WM OVER SAN	WM	5824.91	SAN	5816.85	8.06
(37)	RED HAWK LANE	STA: 15+03.31, 10.00'L	WM OVER ST	WM	5824.91	ST	5823.00	1.91



**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 COMPAK BOULEVARD. ELEVATION = 5752.84 (NAVD 88)



**TOWN OF PARKER BUILDING DEPT FIRE LIFE SAFETY APPROVAL**  
ALL FIRE HYDRANTS SHALL BE INSTALLED ACCORDING TO WATER UTILITY STANDARDS. THE NUMBER AND LOCATIONS OF THE FIRE HYDRANTS AS SHOWN ON THE OVERALL UTILITY PLAN ARE CORRECT AS SPECIFIED BY THE TOWN OF PARKER, COMMUNITY DEVELOPMENT DEPARTMENT.

BY: \_\_\_\_\_  
(SIGNATURE OF FIRE CODE OFFICIAL OR DESIGNATED REPRESENTATIVE)

DATE SIGNED \_\_\_\_\_

NOTE: UNDERGROUND FIRE LINE (UFL) SUBMITTAL DOCUMENTS MUST MEET THE REQUIREMENTS OF NFPA 24 WHEN SUBMITTING FOR REVIEW

**DISTRICT APPROVALS**  
THESE DESIGNS, PLANS, AND CONTRACT DOCUMENTS ARE REVIEWED FOR CONCEPT AND GENERAL CONFORMANCE TO THE DISTRICT'S MINIMUM STANDARDS ONLY, AND THE PRIMARY RESPONSIBILITY FOR DESIGN ADEQUACY IS TO REMAIN WITH THE ENGINEER OF RECORD. THIS REVIEW DOES NOT IMPLY RESPONSIBILITY BY EITHER THE STONEGATE VILLAGE METROPOLITAN DISTRICT OR THE DISTRICT ENGINEER FOR COMPLETENESS, ACCURACY OR CORRECTNESS OF CALCULATIONS. THE REVIEW DOES NOT IMPLY THAT QUANTITIES OF ITEMS INDICATED ON THE PLANS ARE THE FINAL QUANTITIES REQUIRED. THE REVIEW SHALL NOT BE CONSTRUED FOR ANY REASON AS ACCEPTANCE OF FINANCIAL RESPONSIBILITY BY THE STONEGATE VILLAGE METROPOLITAN DISTRICT FOR ADDITIONAL ITEMS AND ADDITIONAL QUANTITIES OF ITEMS SHOWN THAT MAY BE REQUIRED DURING THE CONSTRUCTION PHASE.

APPROVED FOR CONSTRUCTION WITHIN ONE YEAR OF THE EARLIEST OF THESE DATES:  
BY \_\_\_\_\_ STONEGATE VILLAGE METROPOLITAN DISTRICT ENGINEER DATE \_\_\_\_\_  
BY \_\_\_\_\_ STONEGATE VILLAGE METROPOLITAN DISTRICT MANAGER DATE \_\_\_\_\_

NOTE: 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)

Printed: 10/17/2016 9:07 AM, Day Name: p:\c\pk3\comsonh05\_residential.cad\Drawings\Final Drawings\Phase 2\05b-Water Plans.dwg, Updated By: RKaz

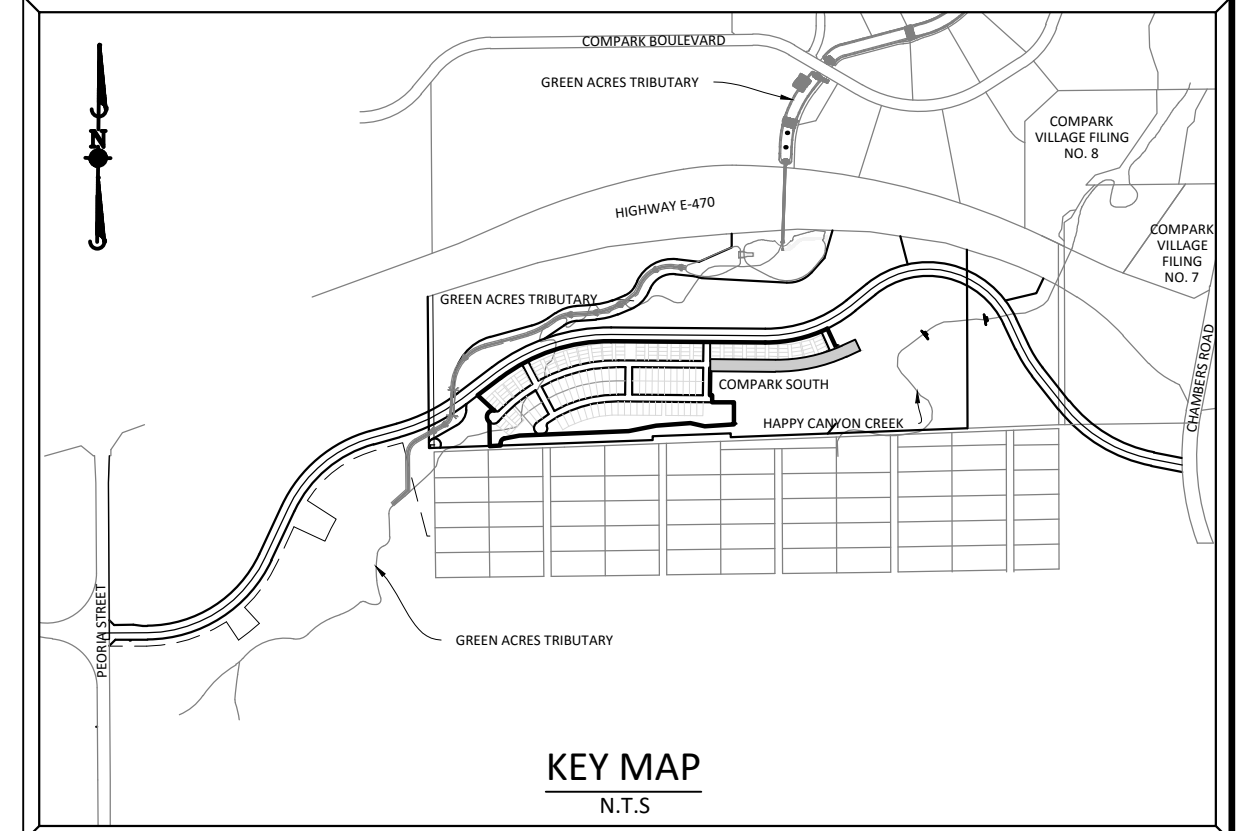
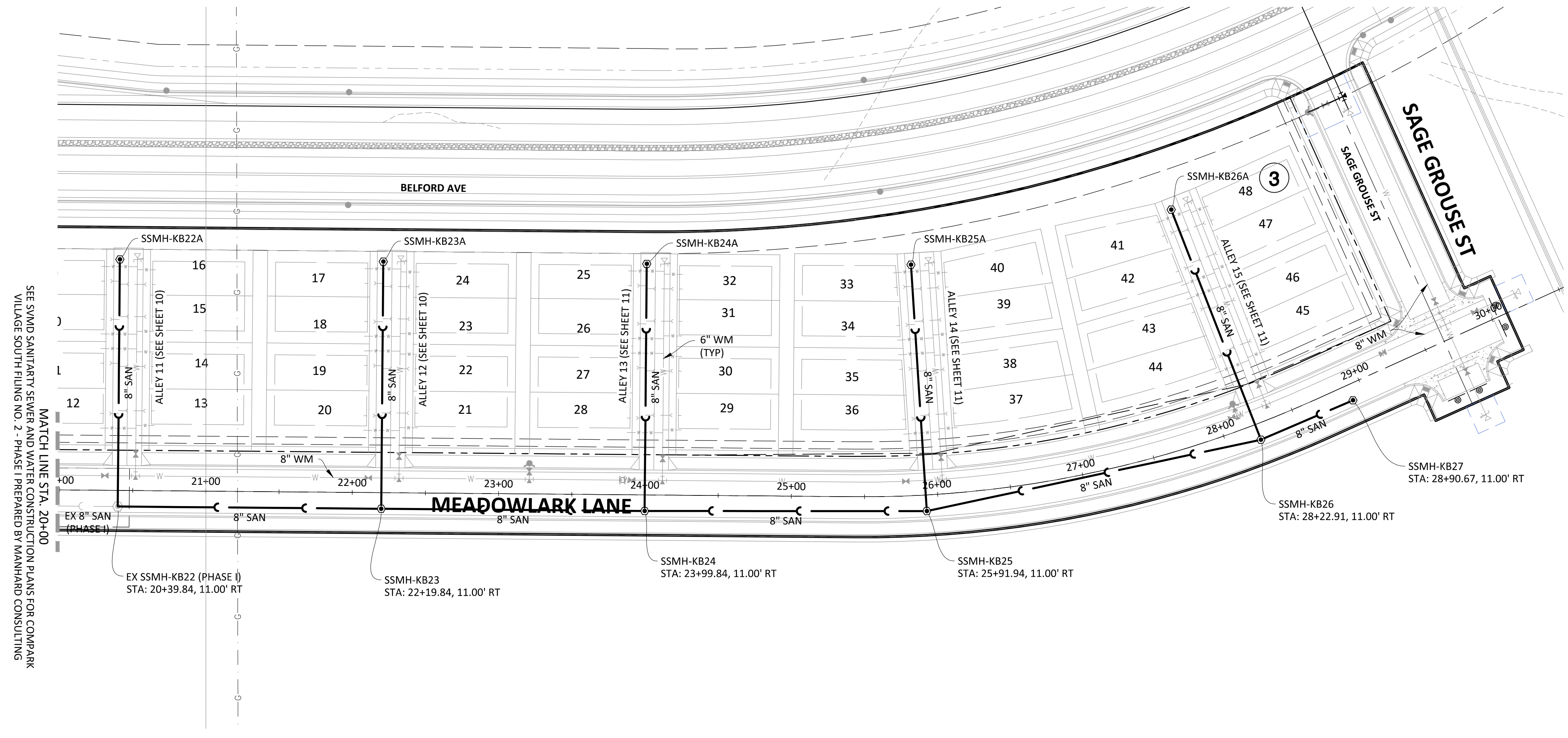
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**COMPARK VILLAGE SOUTH FILING NO. 2 - PHASE II**  
**TOWN OF PARKER, COLORADO**  
**WATER PLAN - WEST**

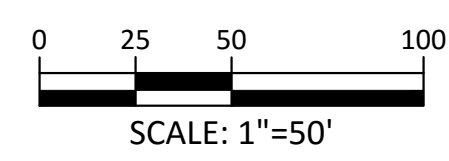
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PROJ. ASSOC.: RAK  
DRAWN BY: RAK  
DATE: 10/2016

**SHEET**  
**4 OF 14**  
CLCPKC3

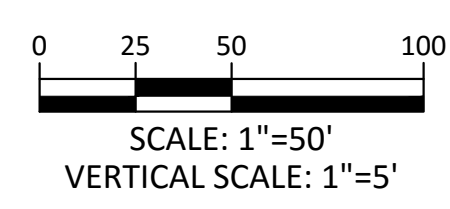
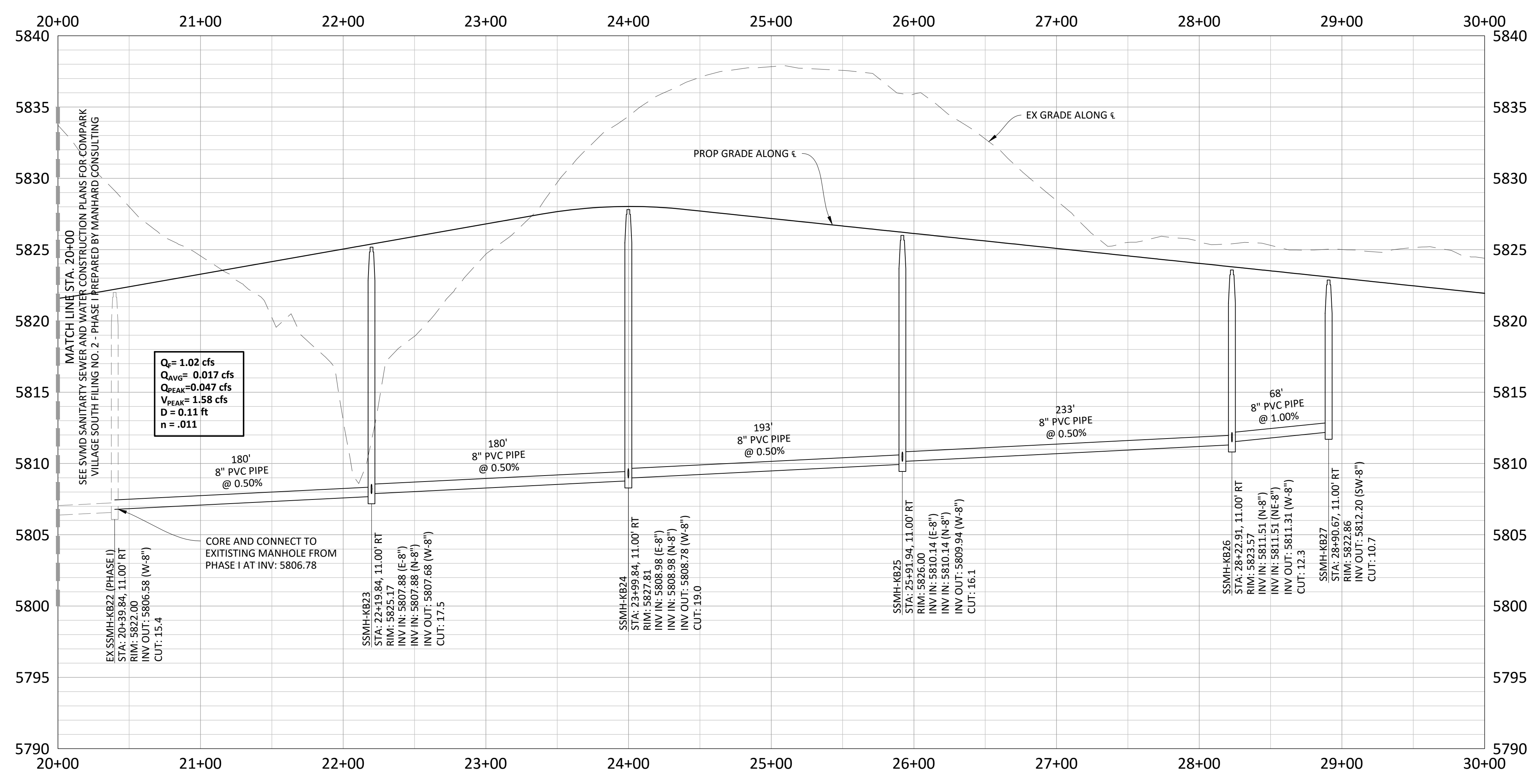




SOURCE BENCHMARKS:  
DOUGLAS COUNTY BM 1.115010  
A DOUGLAS COUNTY GIS MONUMENT SET IN CONCRETE LOCATED APPROXIMATELY 130 FEET  
SOUTHWESTERLY OF THE CENTERLINE OF CHAMBERS ROAD AND 95 FEET NORTHWESTERLY OF  
THE CENTERLINE OF COMPARK BOULEVARD. ELEVATION = 5752.84 (NAVD 88)



**MEADOWLARK LANE**



SEE SSMH-KB22 (PHASE I) STA: 20+39.84, 11.00' RT  
MATCH LINE STA. 20+00  
VILLAGE SOUTH FILING NO. 2 - PHASE I PREPARED BY MANHARD CONSULTING

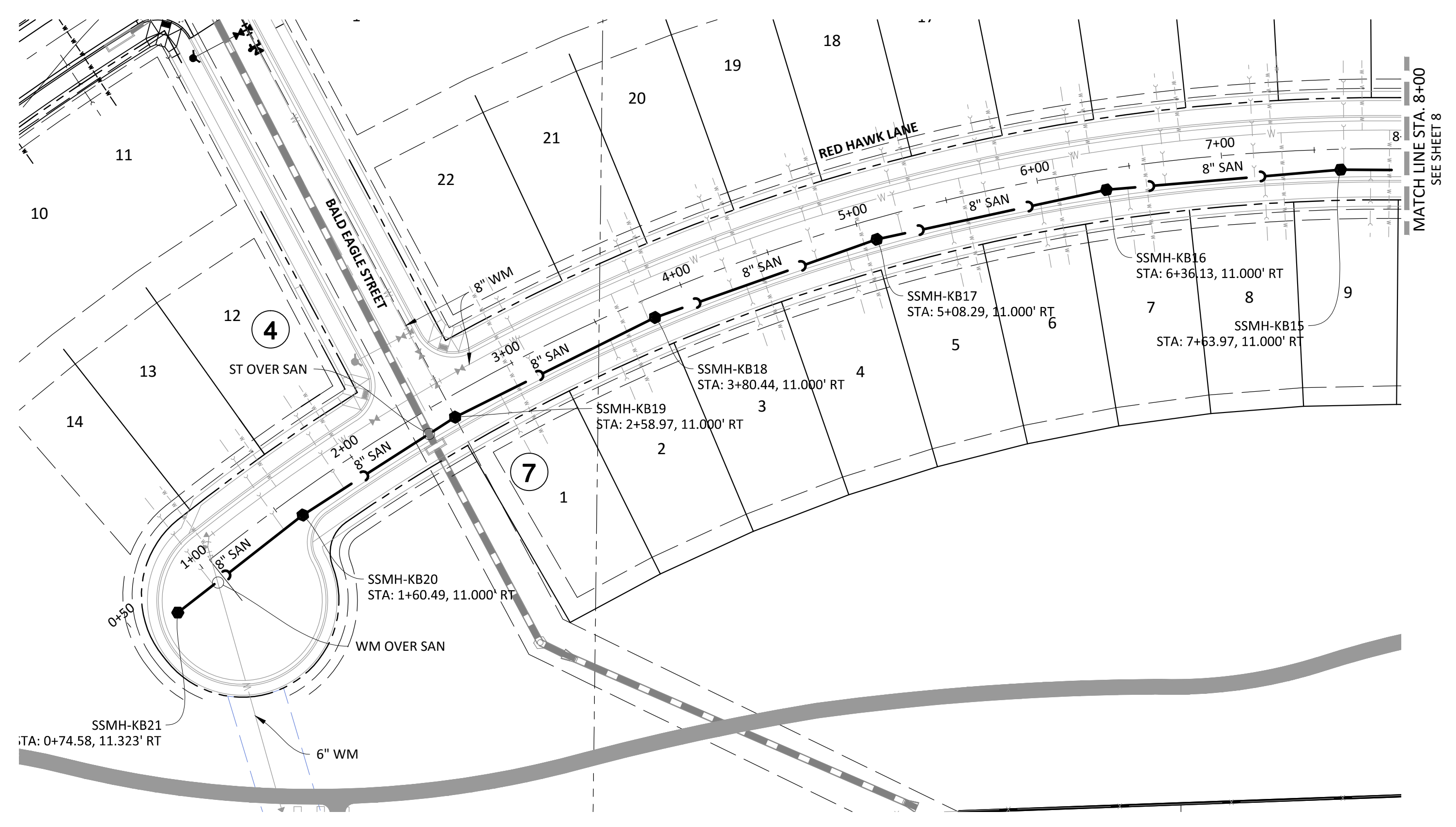
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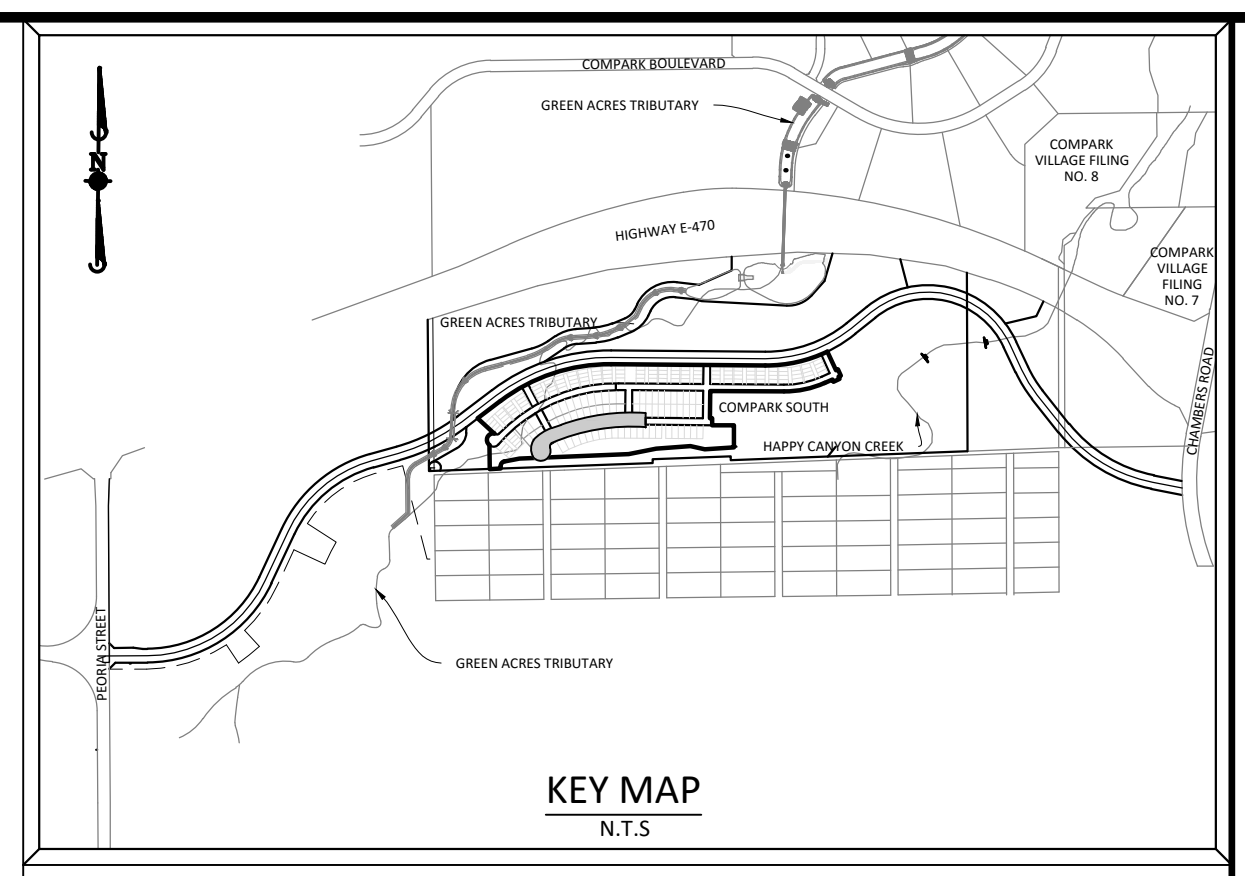
COMPARK VILLAGE SOUTH FILING NO. 2 - PHASE II  
TOWN OF PAKRER, COLORADO  
SANITARY SEWER PLAN AND PROFILE - MEADOWLARK LANE

PROJ MGR: RIM  
PROJ ASSOC: RAK  
DRAWN BY: RAK  
DATE: 10/2016

SHEET  
**6** OF **14**  
CLCPKC3

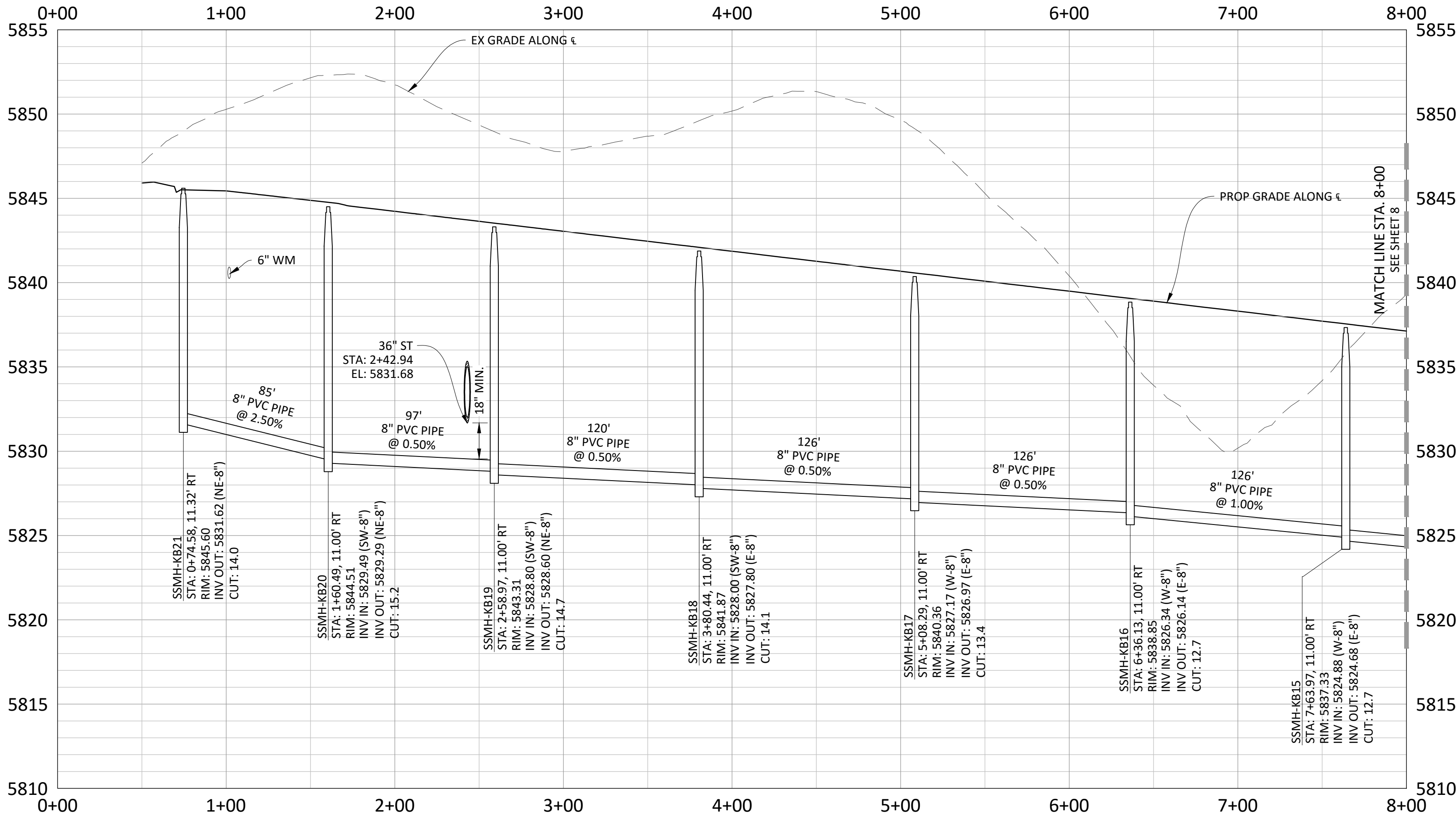


0 25 50 100  
SCALE: 1"=50'



**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)

**RED HAWK LANE**



0 25 50 100  
SCALE: 1"=50'  
VERTICAL SCALE: 1"=5'

Plotted: 10/17/2016 9:17 AM, Draw Name: p:\cprk3\comsan05\_residential.cad\Drawings\Plan\_San\District\PHASE 2\05b\_R&P\_2\_Street\_H.dwg, Updated By: BKatz

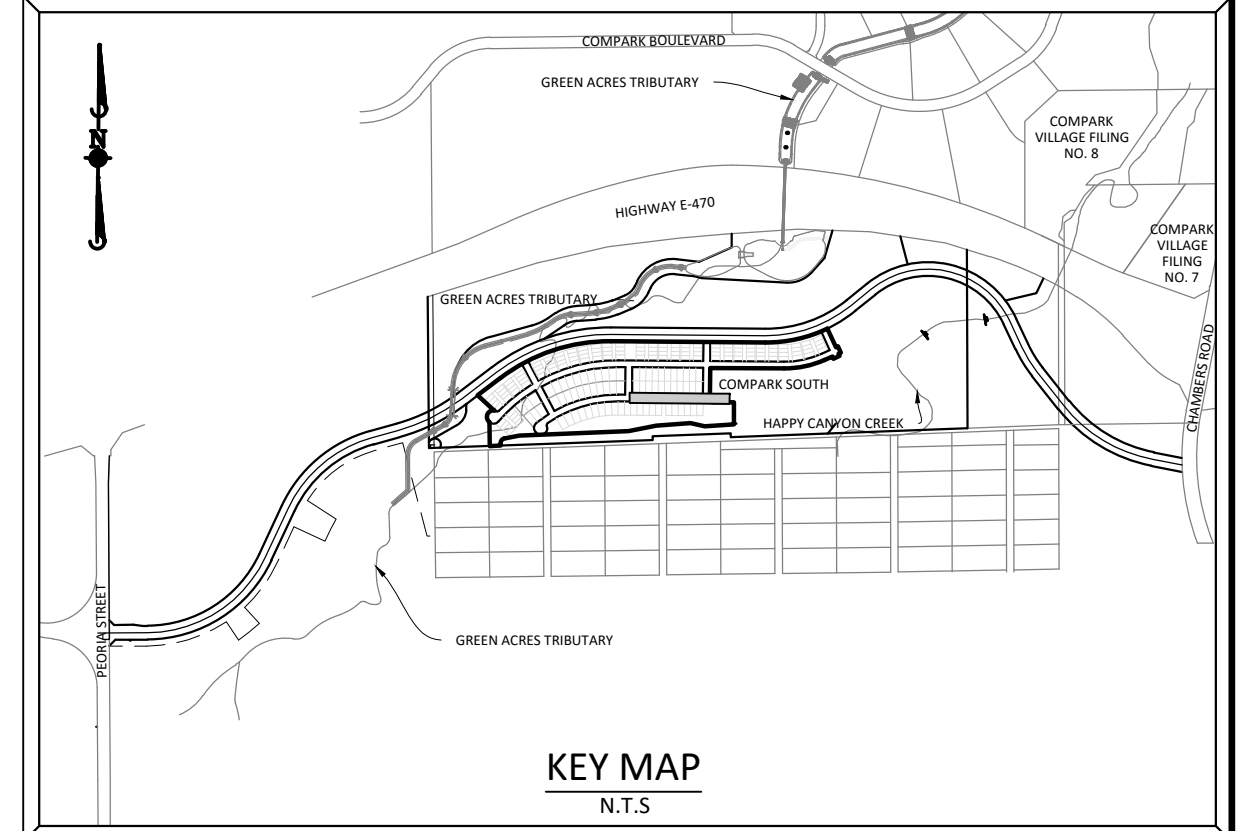
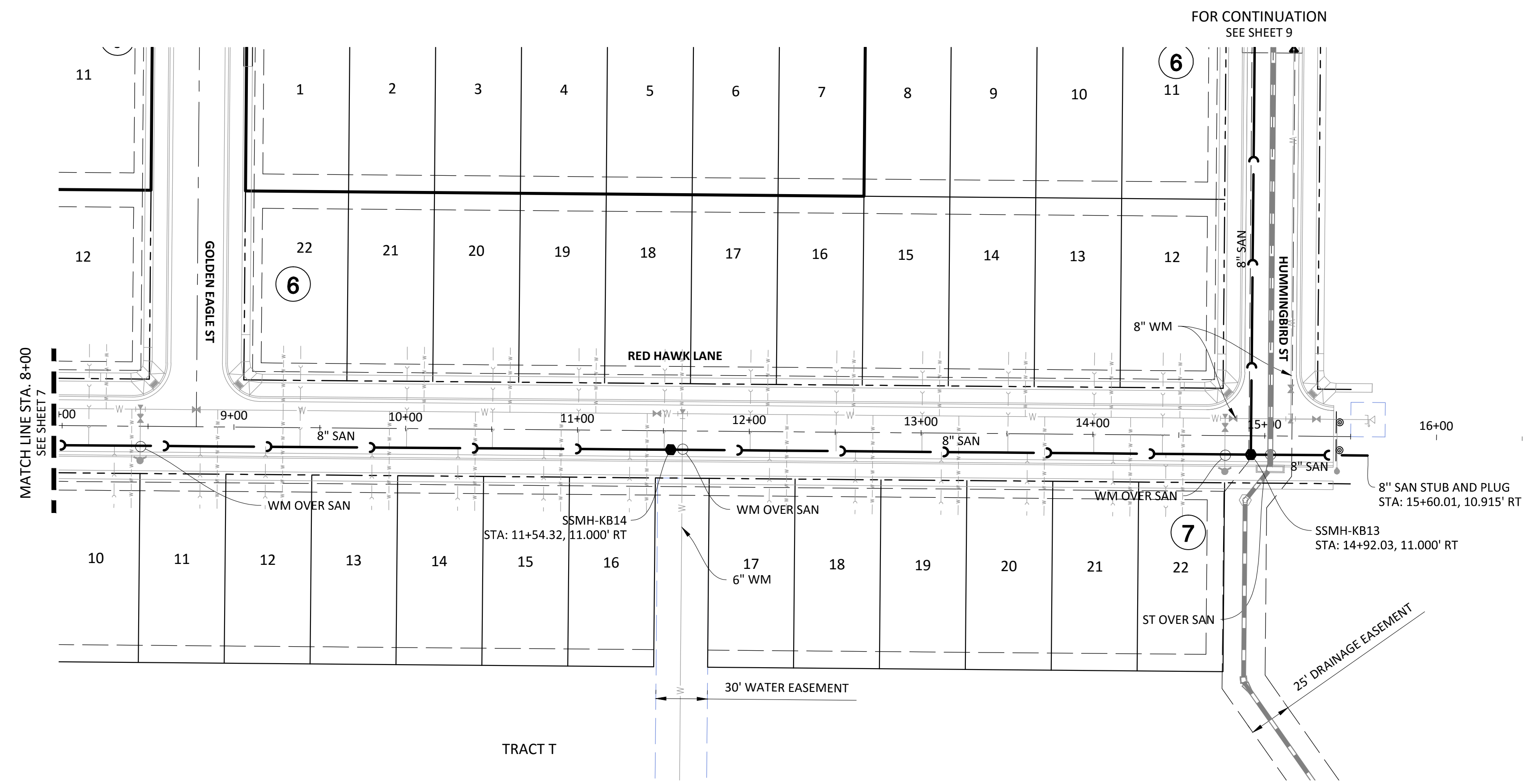
DATE	
REVISIONS	

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**COMPARK VILLAGE SOUTH FILING NO. 2 - PHASE II**  
**TOWN OF PAKRER, COLORADO**  
**SANITARY SEWER PLAN AND PROFILE - RED HAWK LANE**

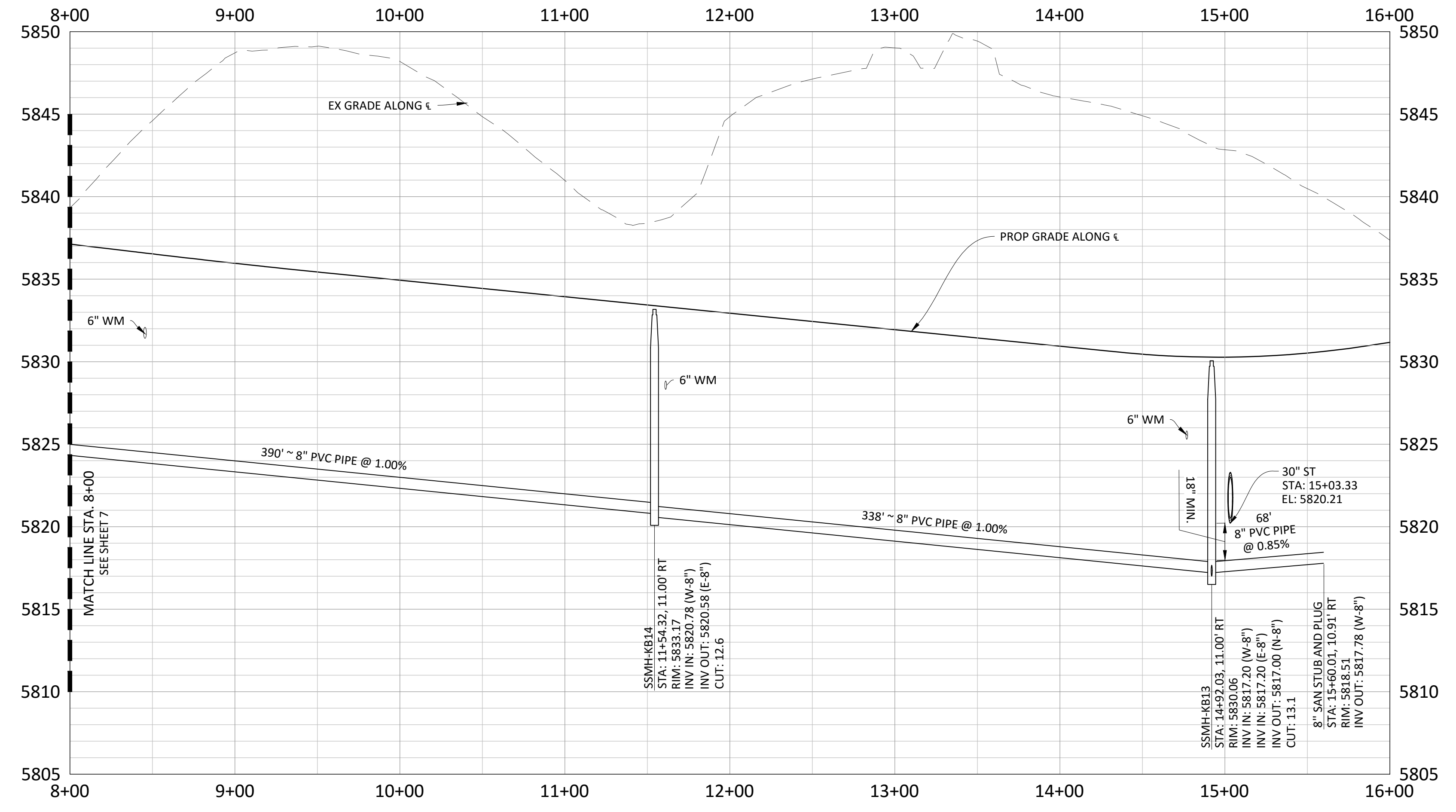
PROJ. MGR.:	RJM
PROJ. ASSOC.:	RAK
DRAWN BY:	RAK
DATE:	10/2016
SHEET	7 OF 14
CLCPKC3	

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

**RED HAWK LANE**



SCALE: 1"=50'  
 VERTICAL SCALE: 1"=5'

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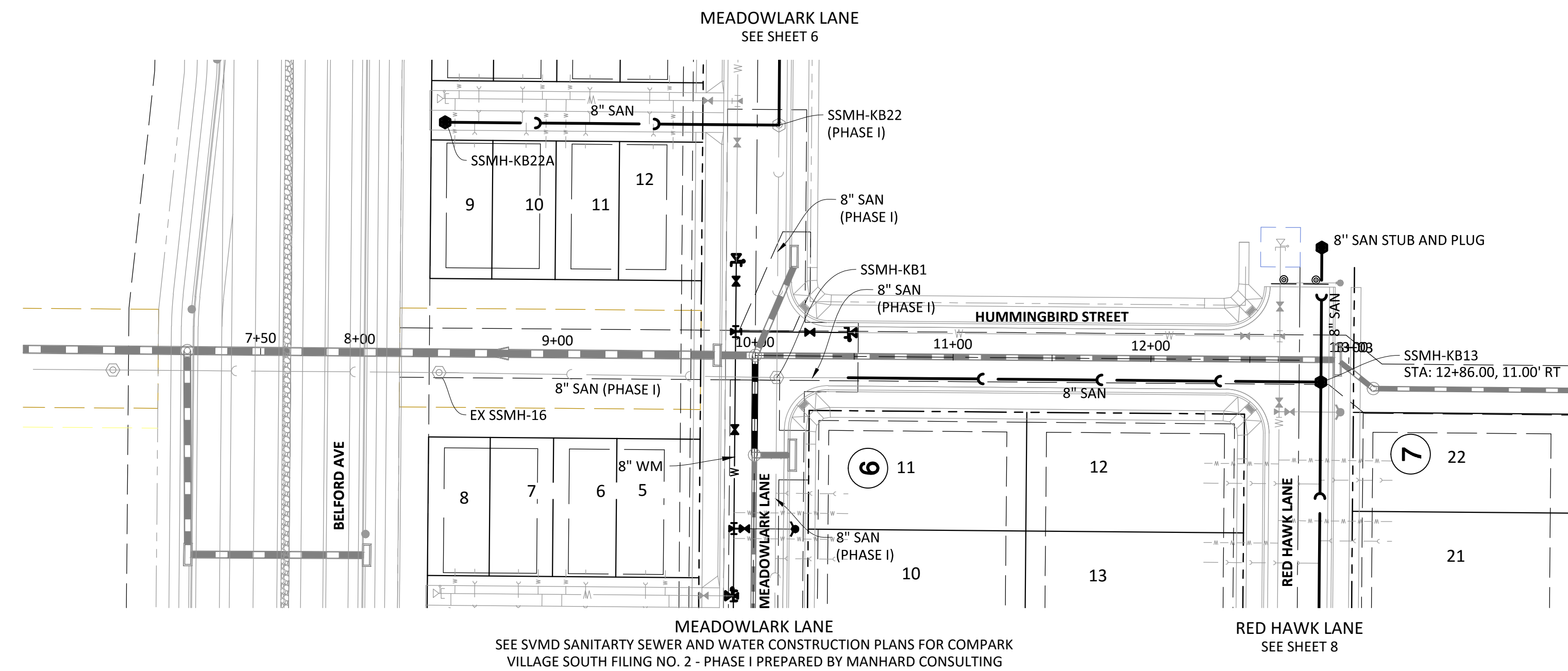
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REVISIONS	

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**COMPARK VILLAGE SOUTH FILING NO. 2 - PHASE II**  
**TOWN OF PAKRER, COLORADO**  
**SANITARY SEWER PLAN AND PROFILE - RED HAWK LANE**

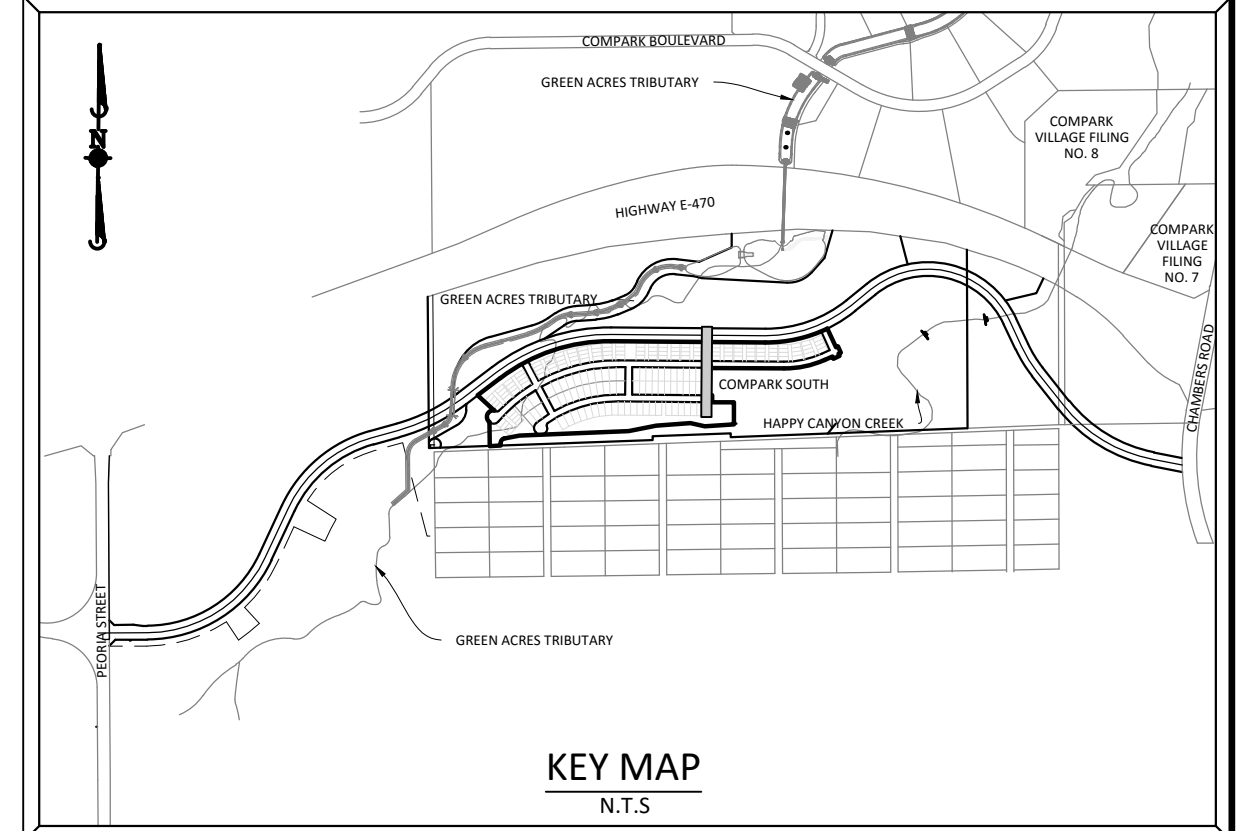
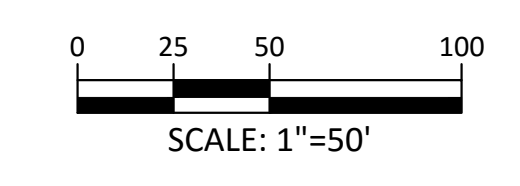
PROJ. MGR.:	RJM
PROJ. ASSOC.:	RAK
DRAWN BY:	RAK
DATE:	10/2016
SHEET	
<b>8</b> OF <b>14</b>	
CLCPKC3	

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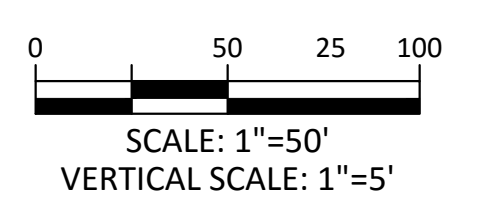
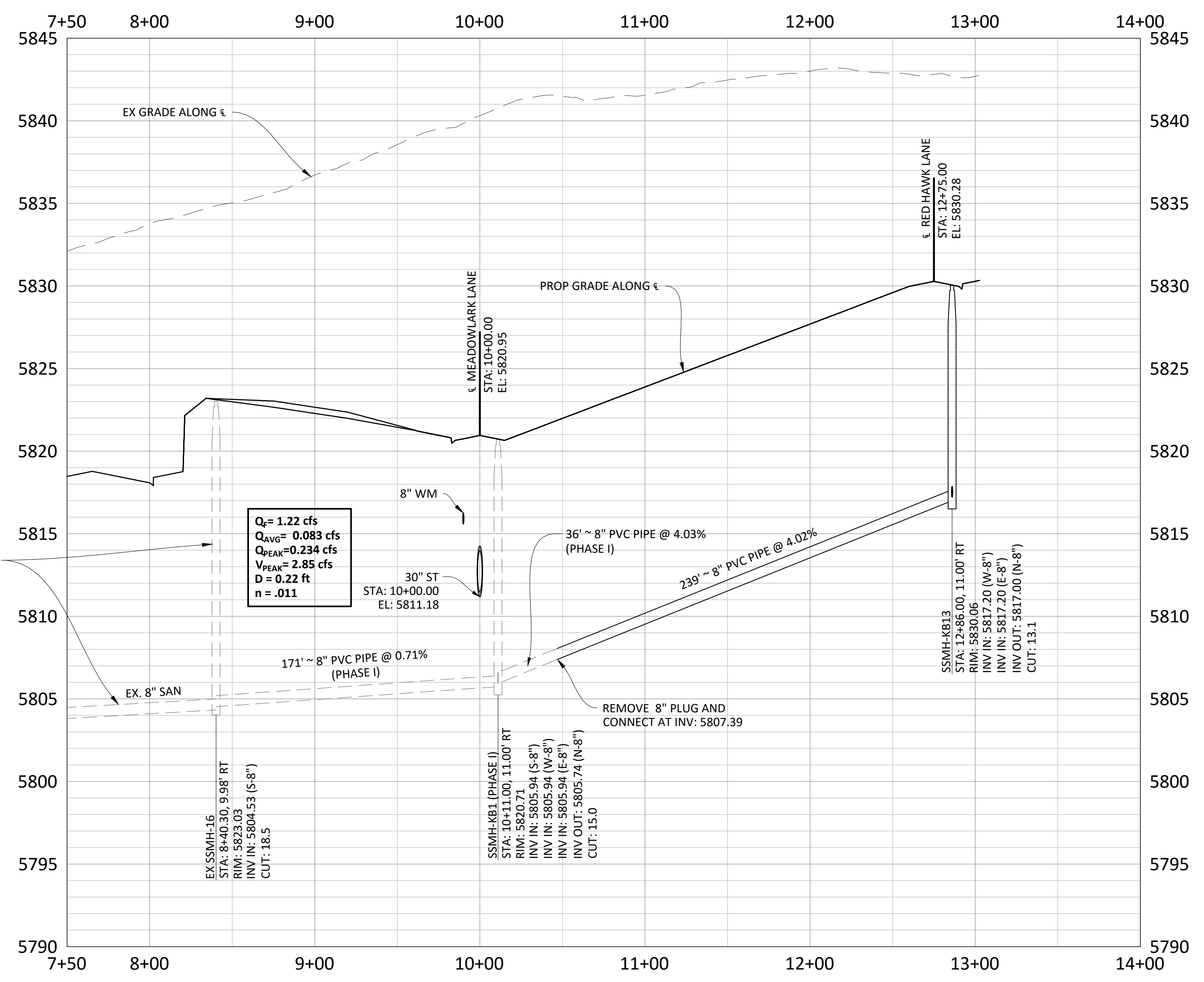
SEE SVMD SANITARY SEWER AND WATER CONSTRUCTION PLANS FOR COMPARK VILLAGE SOUTH FILING NO. 2 - PHASE I PREPARED BY MANHARD CONSULTING

### HUMMINGBIRD ST



**KEY MAP**  
N.T.S.

**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)



REFER TO COMPARK VILLAGE SOUTH FILING NO. 1 SVMD SANITARY SEWER AND WATER CONSTRUCTION PLANS PREPARED BY MANHARD CONSULTING

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 $Q_{AVG} = 0.083 \text{ cfs}$   
 $Q_{PEAK} = 2.234 \text{ cfs}$   
 $V_{PEAK} = 2.85 \text{ cfs}$   
 $D = 0.22 \text{ ft}$   
 $n = .011$

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**COMPARK VILLAGE SOUTH FILING NO. 2 - PHASE II**  
**TOWN OF PAKRER, COLORADO**  
**SANITARY SEWER PLAN AND PROFILE - HUMMINGBIRD ST**

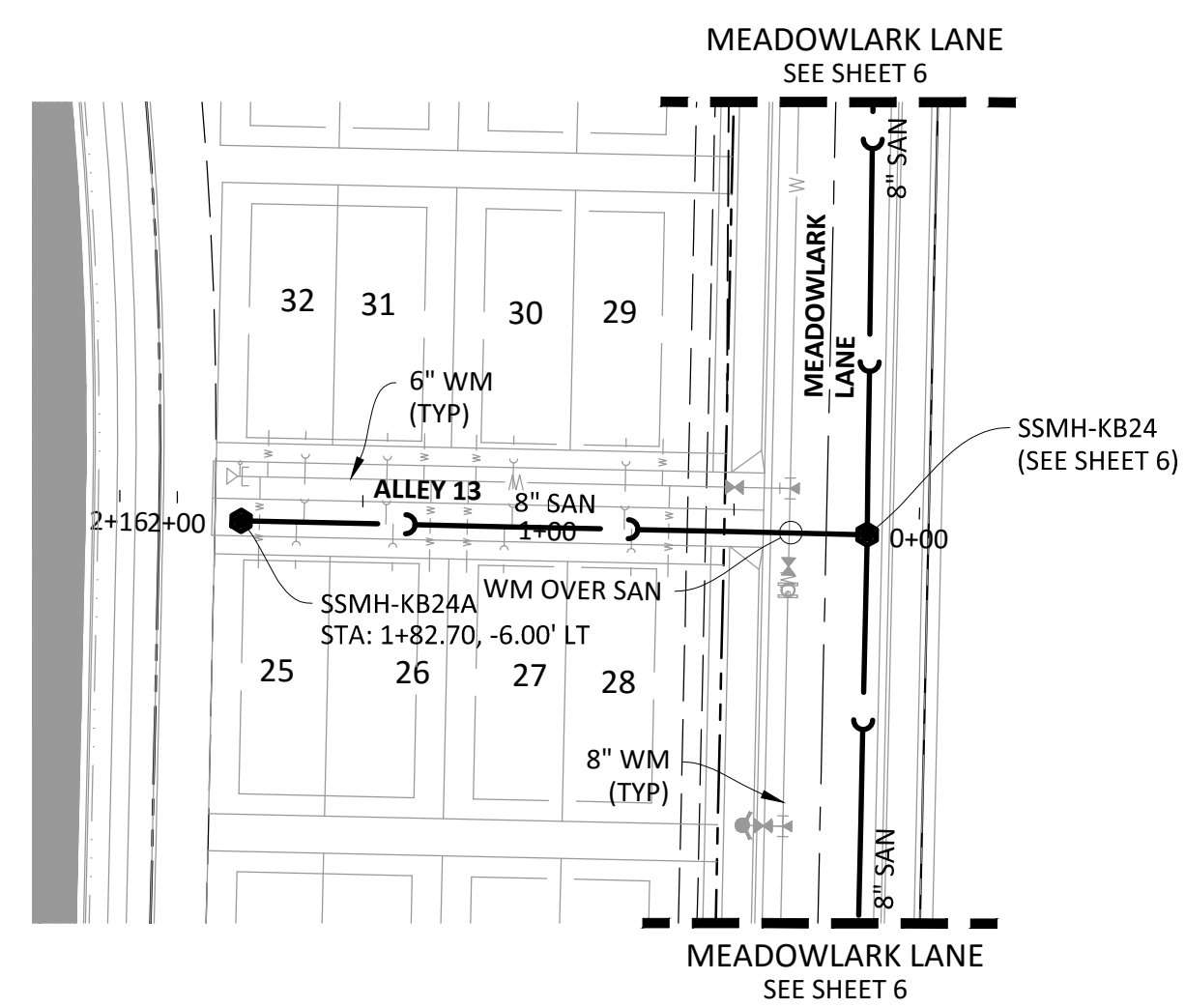
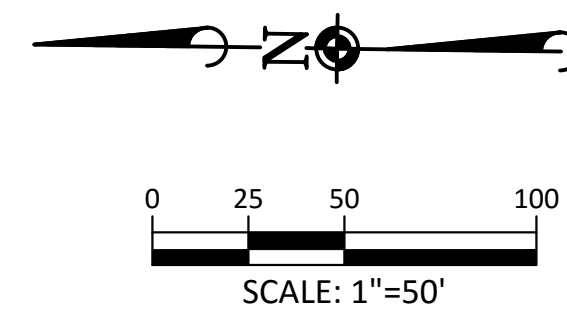
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DATE: 10/2016

SHEET  
**9** OF **14**  
CLCPKC3

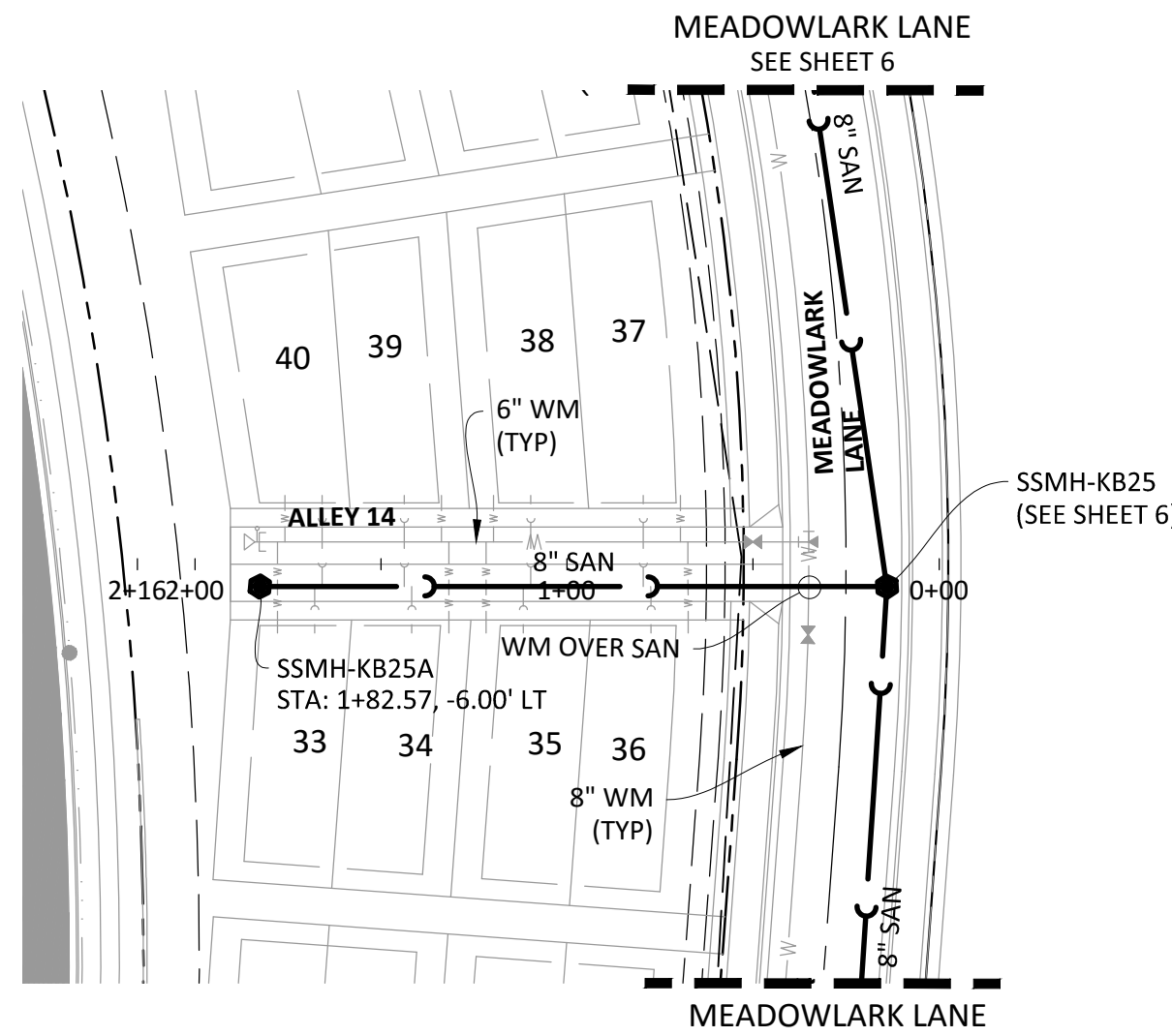
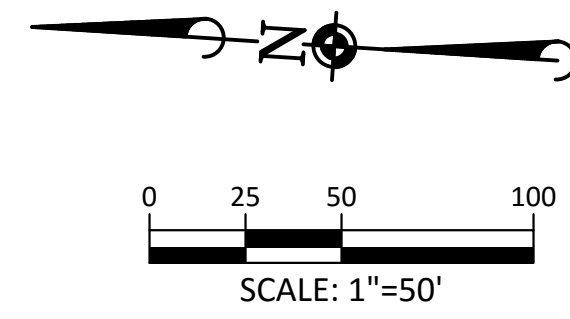
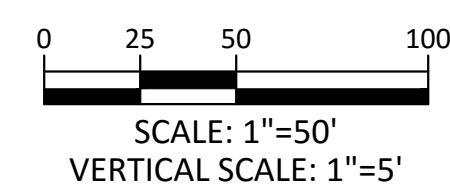
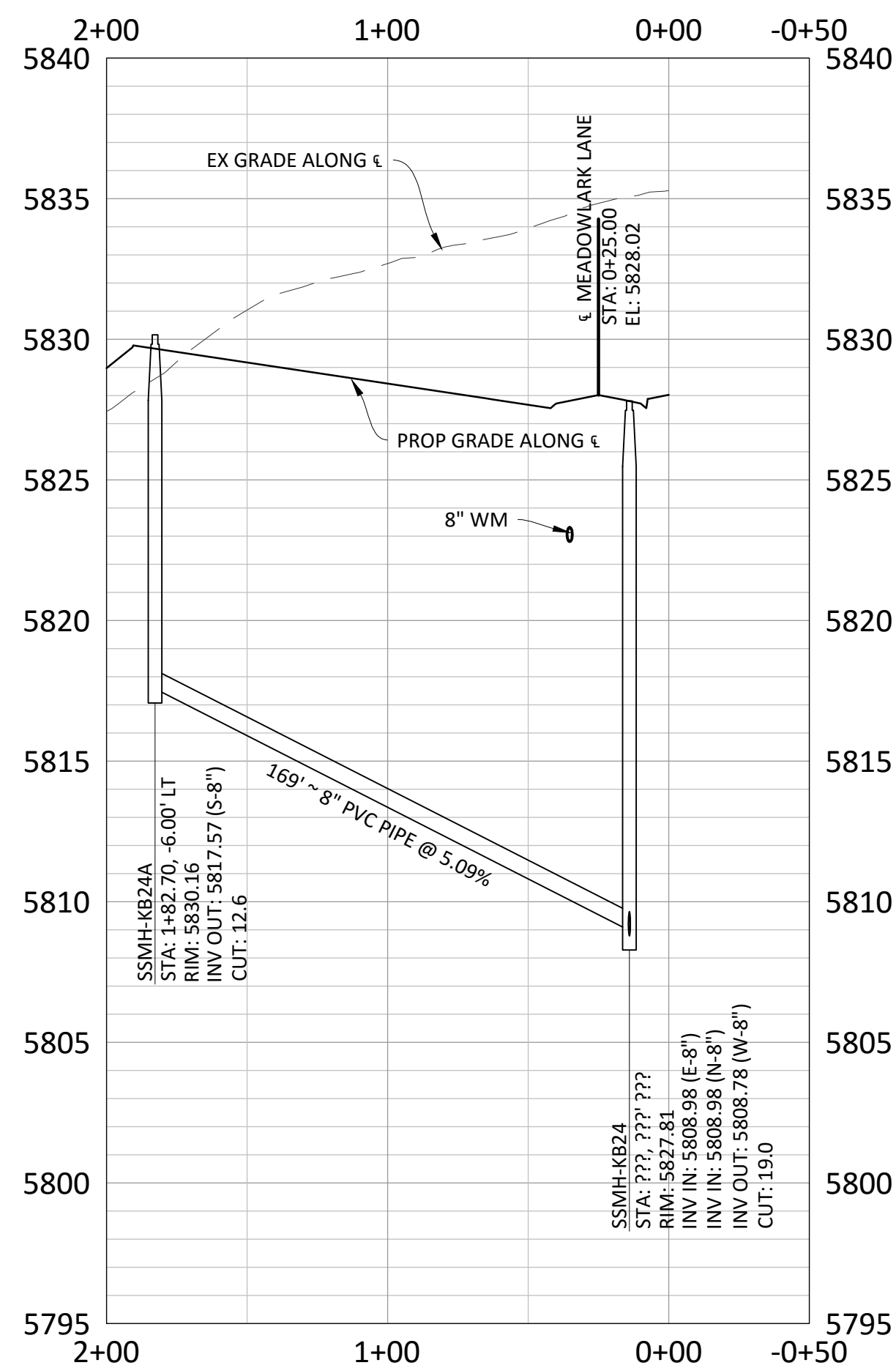
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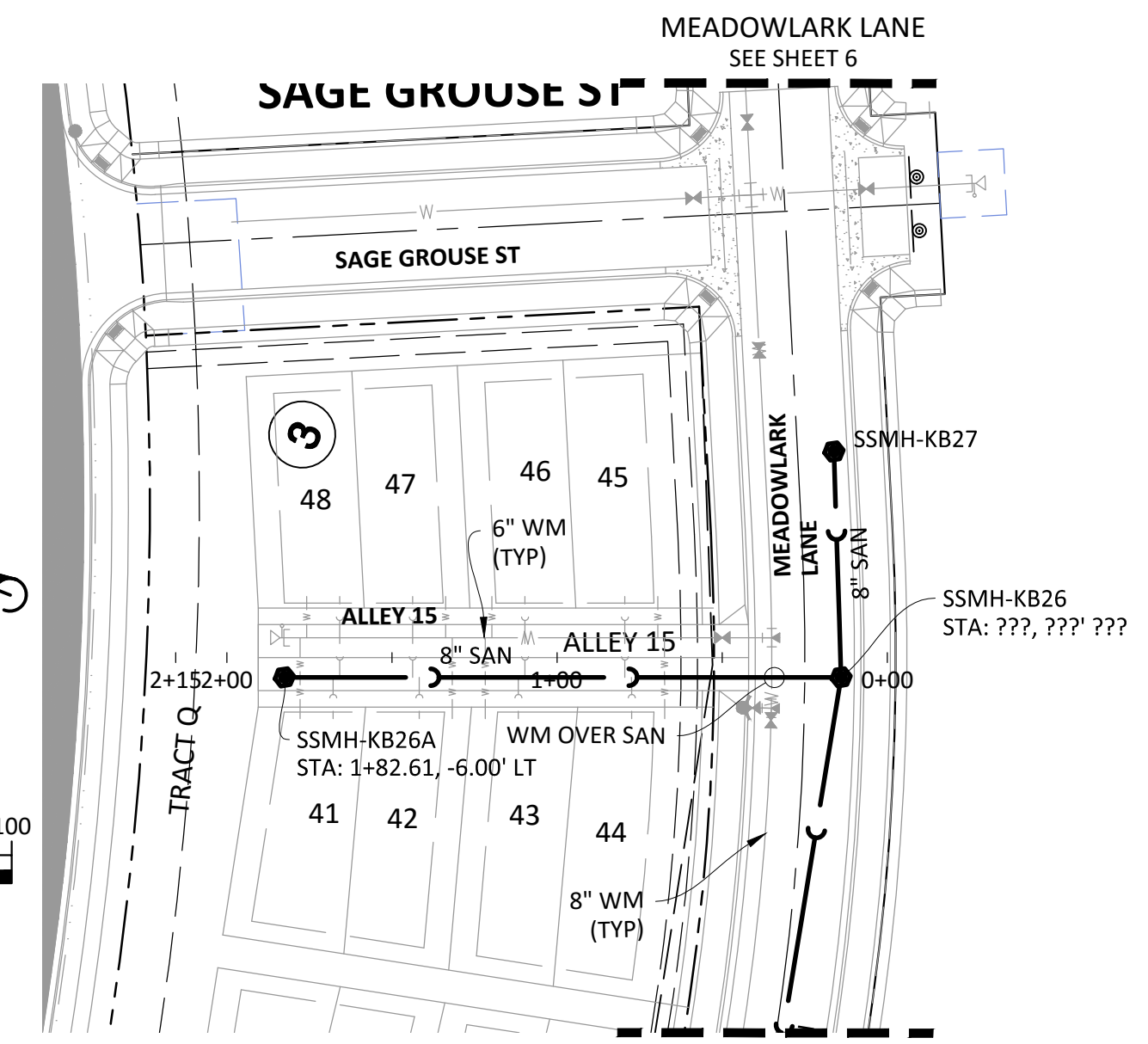
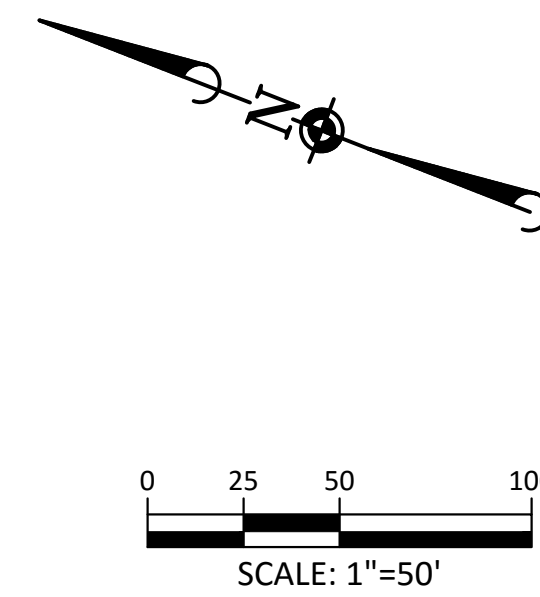
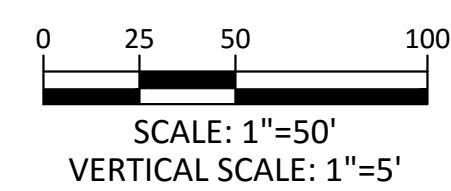
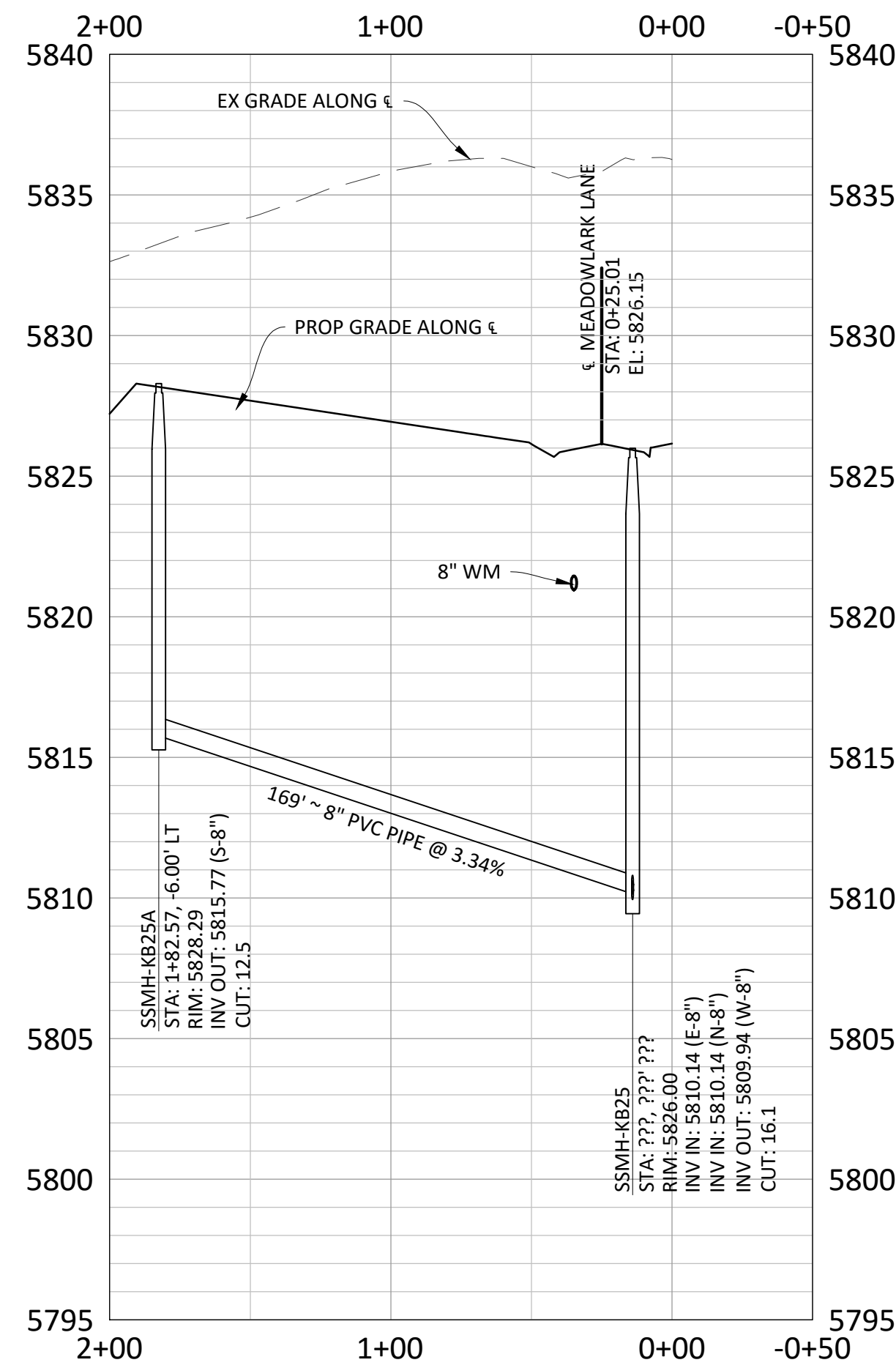




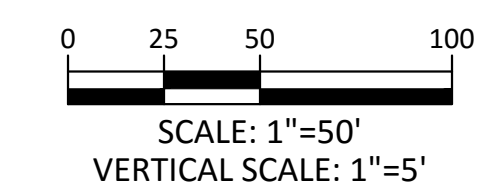
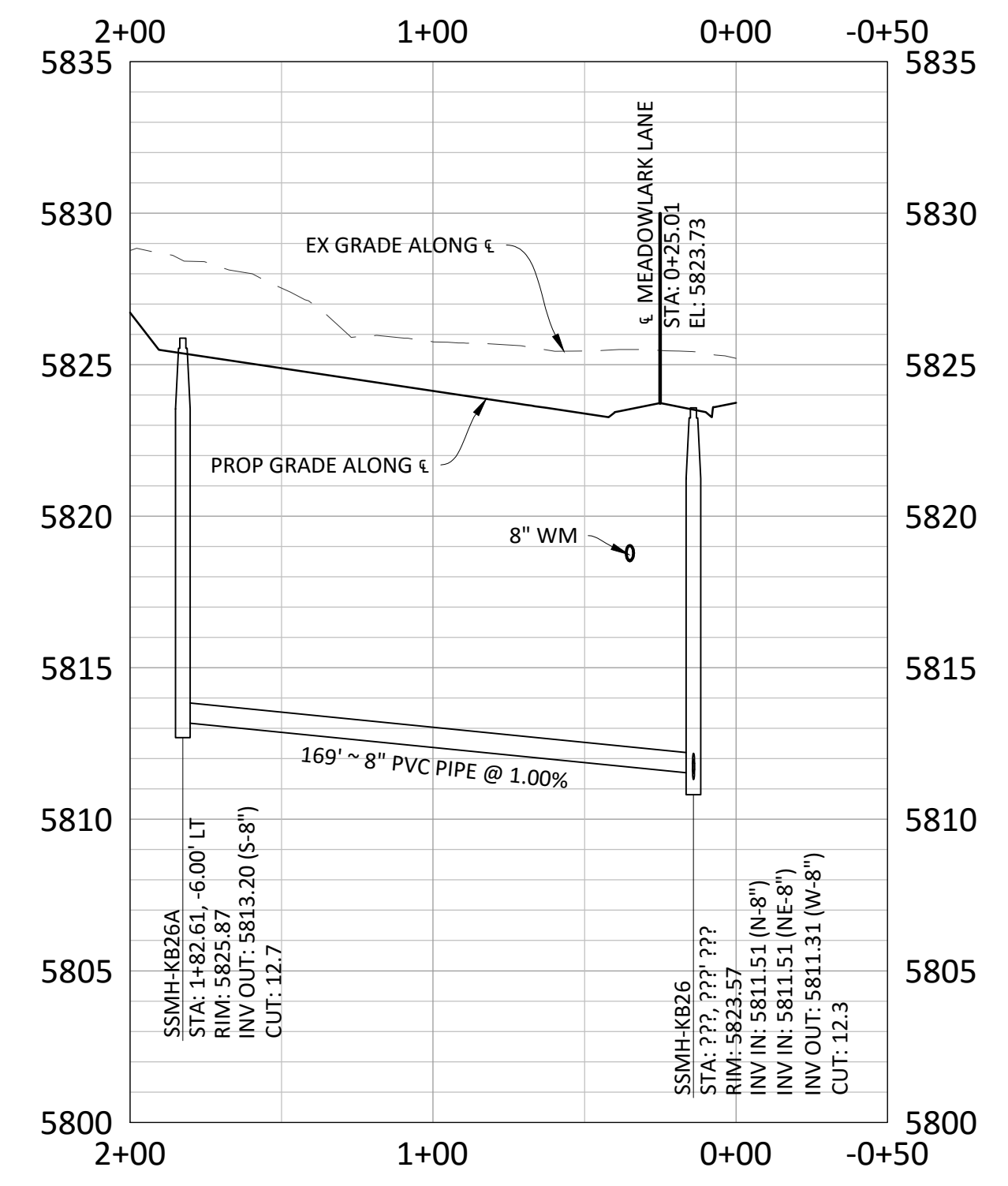
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**ALLEY 14**



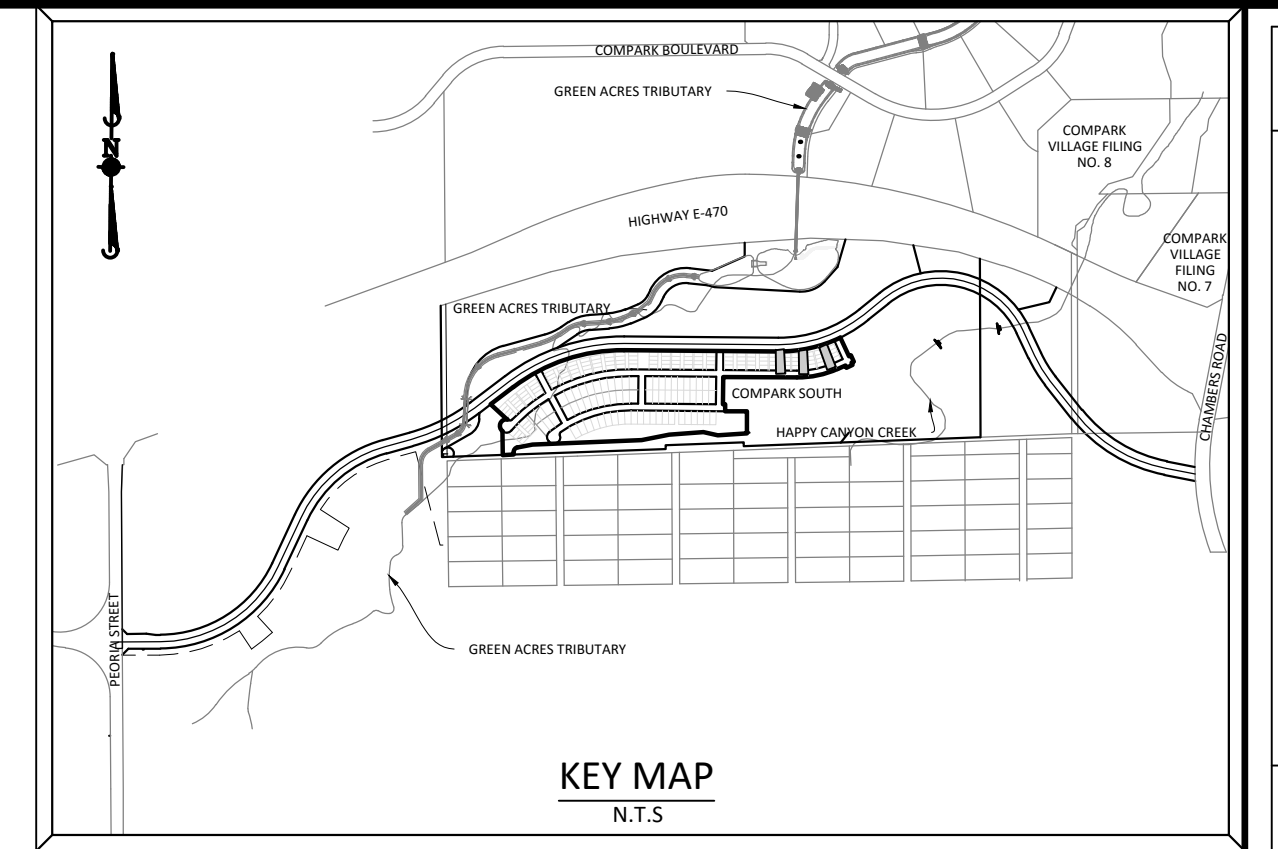
**ALLEY 15**



**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)

**KEY MAP**  
 N.T.S.



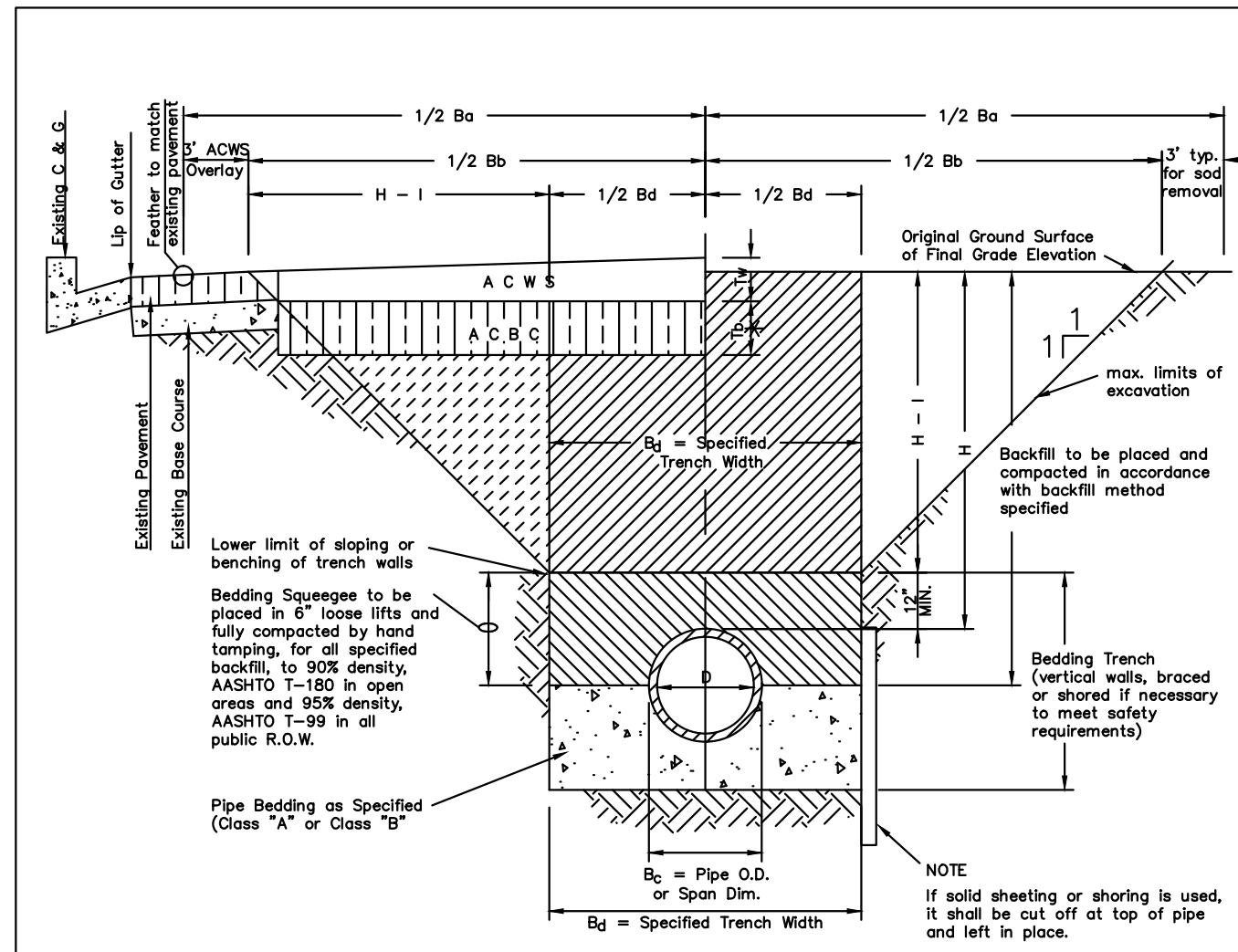
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**COMPARK VILLAGE SOUTH FILING NO. 2 - PHASE II**  
**TOWN OF PAKRER, COLORADO**  
**SANITARY SEWER PLAN AND PROFILE - ALLEY 13-15**

PROJ. MGR.: RIM  
 PROJ. ASSOC.: RAK  
 DRAWN BY: RAK  
 DATE: 10/2016

**SHEET**  
**11** OF **14**  
 CLCPKC3



**TYPICAL TRENCH DETAIL**

**NOTES:**

- Sloping or benching of trench side walls, where permitted shall be in accordance with applicable Federal, State and Local safety regulations.
- Trench shall be braced and shored as necessary to afford safe working conditions or to protect adjacent utilities, structures, etc. Unless otherwise specified on the plans, no pavement will be made for removal, replacement or relocation of curb and gutter, utilities, sidewalks, structures, etc. outside the maximum limits of excavation as shown and the contractor shall be responsible for protection of same.
- If dimension  $T_0$  is  $\leq 5'$ , then existing asphalt pavement shall be removed and replaced up to the gutter. Maximum asphalt pay width,  $B_0$  &  $B_1$  shall then be based upon this actual width.

**ASPHALT AND BASE COURSE REPLACEMENT SCHEDULE**

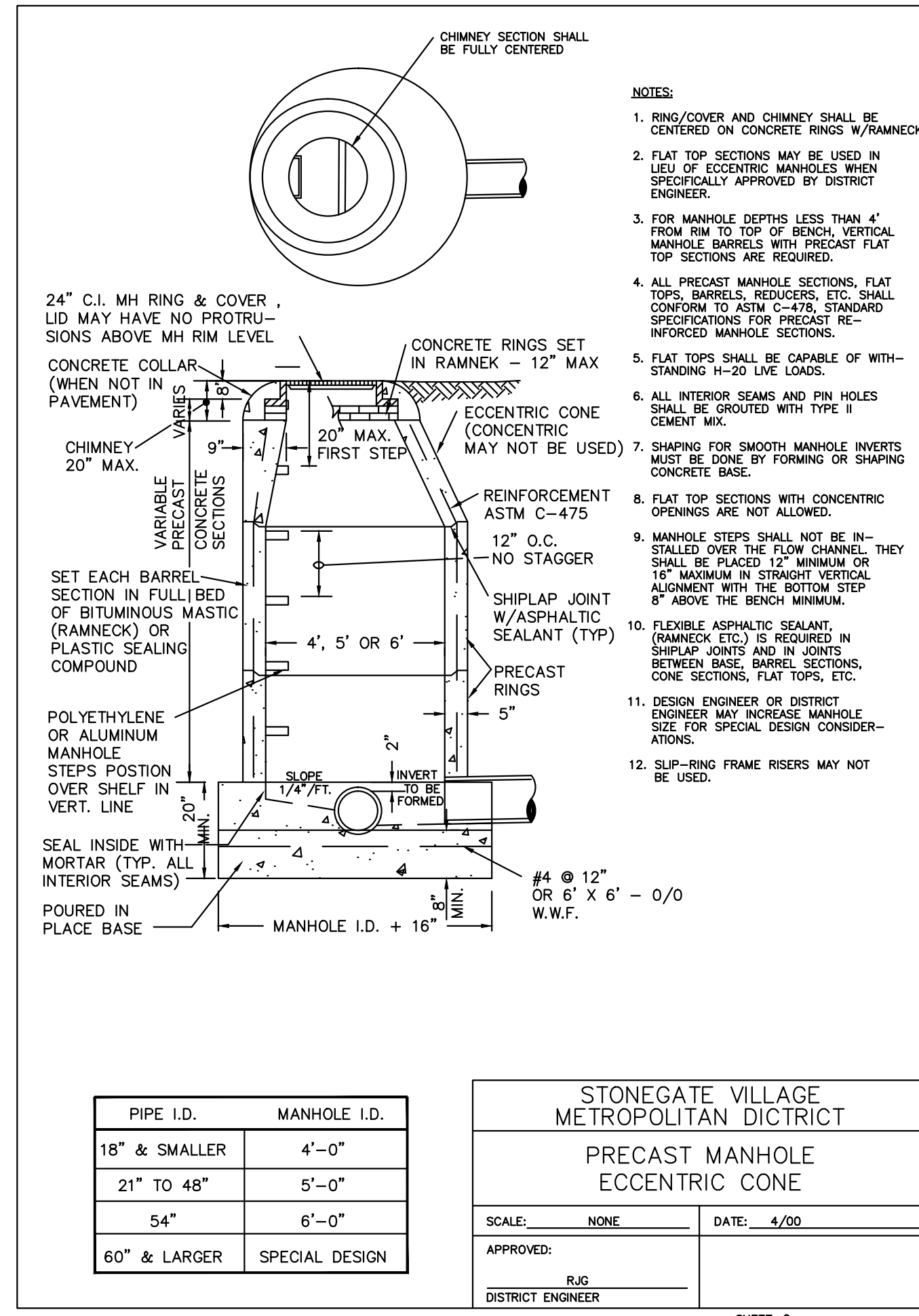
STREET WIDTH	ASPHALTIC BASE COURSE (1/2")	ASPHALTIC WEARING SURFACE (1/2")	TOTAL THICKNESS (1")
UP TO 36'	4"	2"	6"
36' TO 44'	4"	3"	7"
44' TO 48'	5"	3"	8"
WIDER THAN 48'	6"	3"	9"

**STONEGATE VILLAGE METROPOLITAN DISTRICT SEWER TRENCHING AND BEDDING DETAIL**

SCALE: NONE DATE: 4/00

APPROVED: R.J.G. DISTRICT ENGINEER

SHEET 1

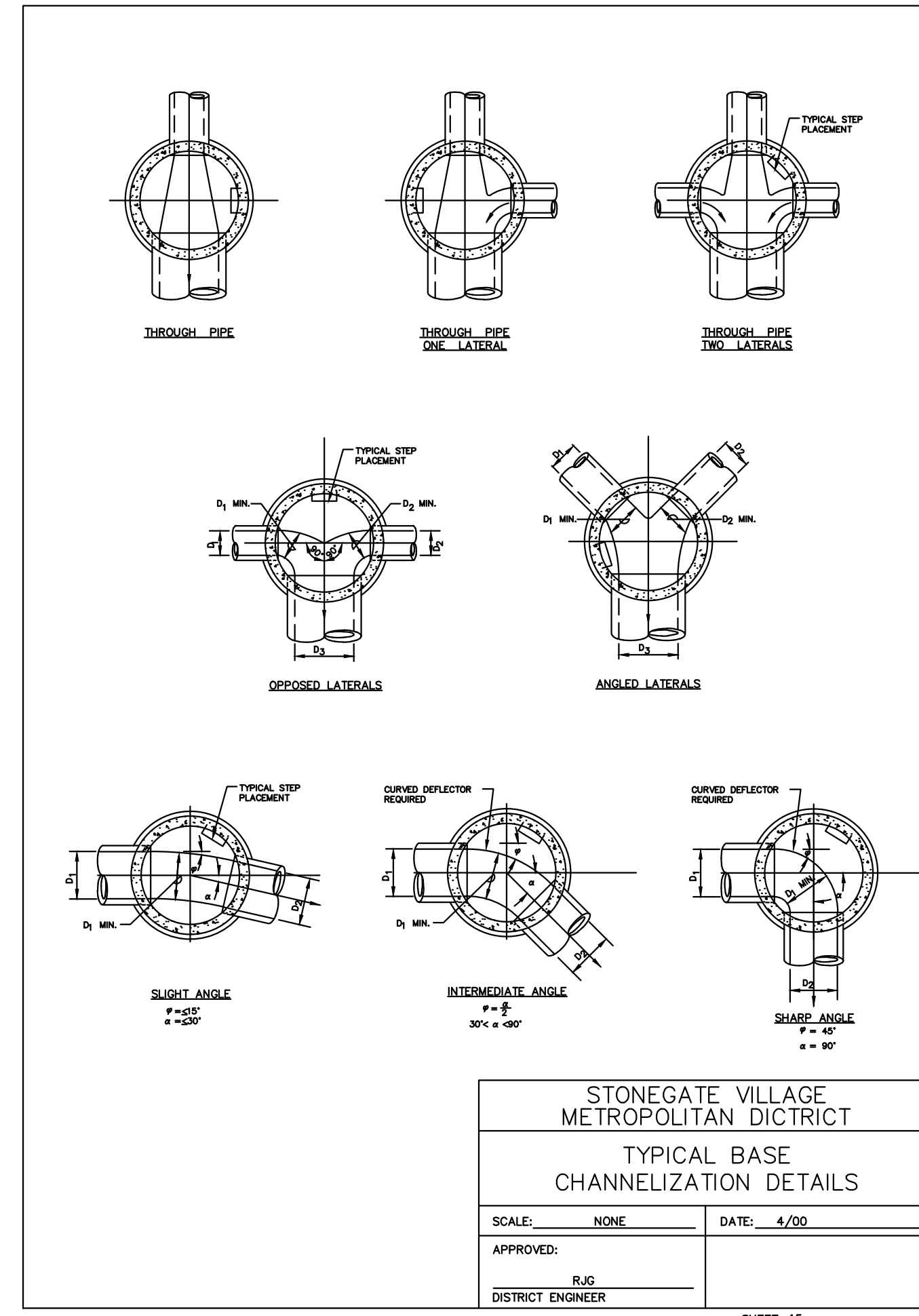


**STONEGATE VILLAGE METROPOLITAN DISTRICT PRECAST MANHOLE ECCENTRIC CONE**

SCALE: NONE DATE: 4/00

APPROVED: R.J.G. DISTRICT ENGINEER

SHEET 9

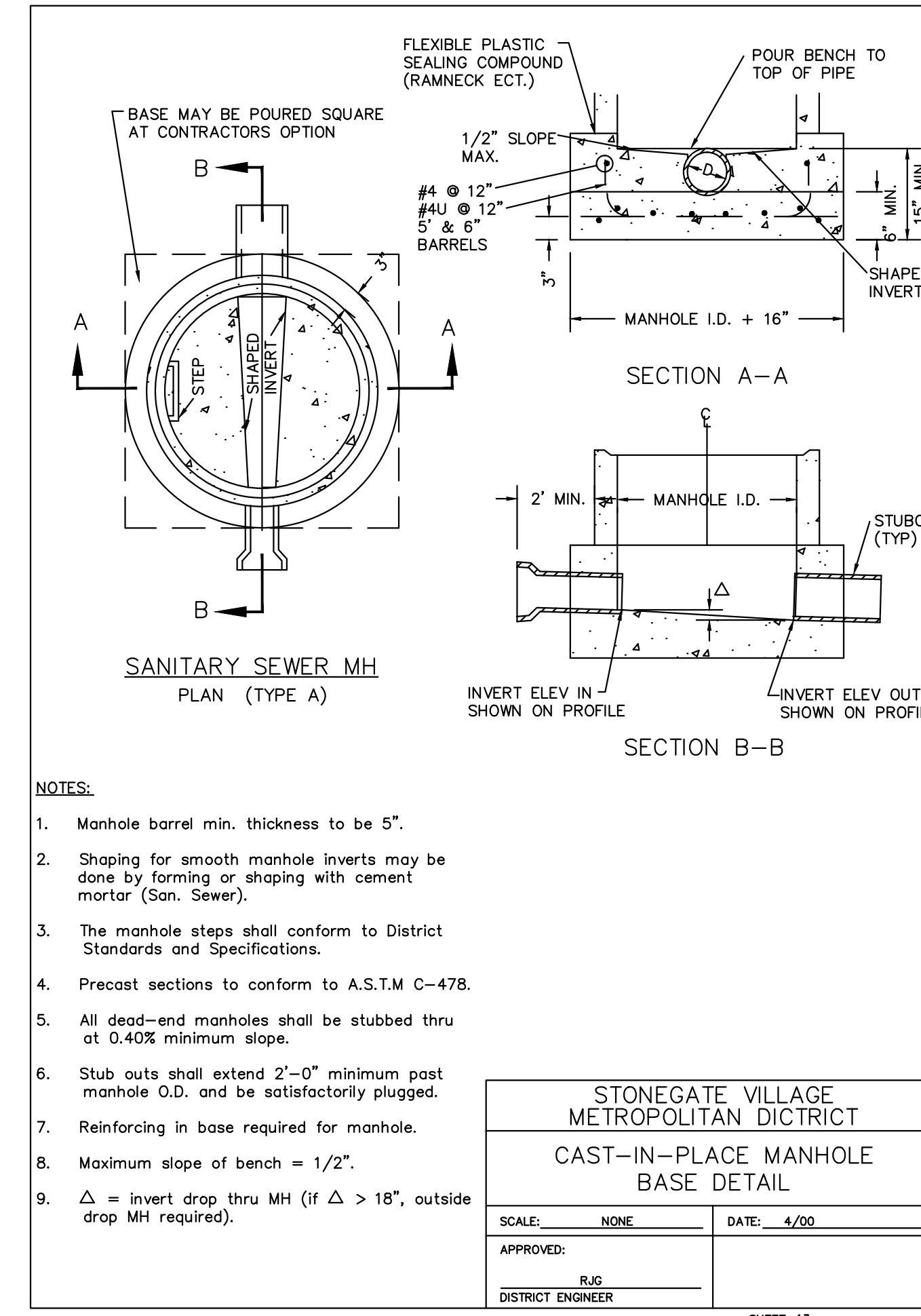


**STONEGATE VILLAGE METROPOLITAN DISTRICT TYPICAL BASE CHANNELIZATION DETAILS**

SCALE: NONE DATE: 4/00

APPROVED: R.J.G. DISTRICT ENGINEER

SHEET 15

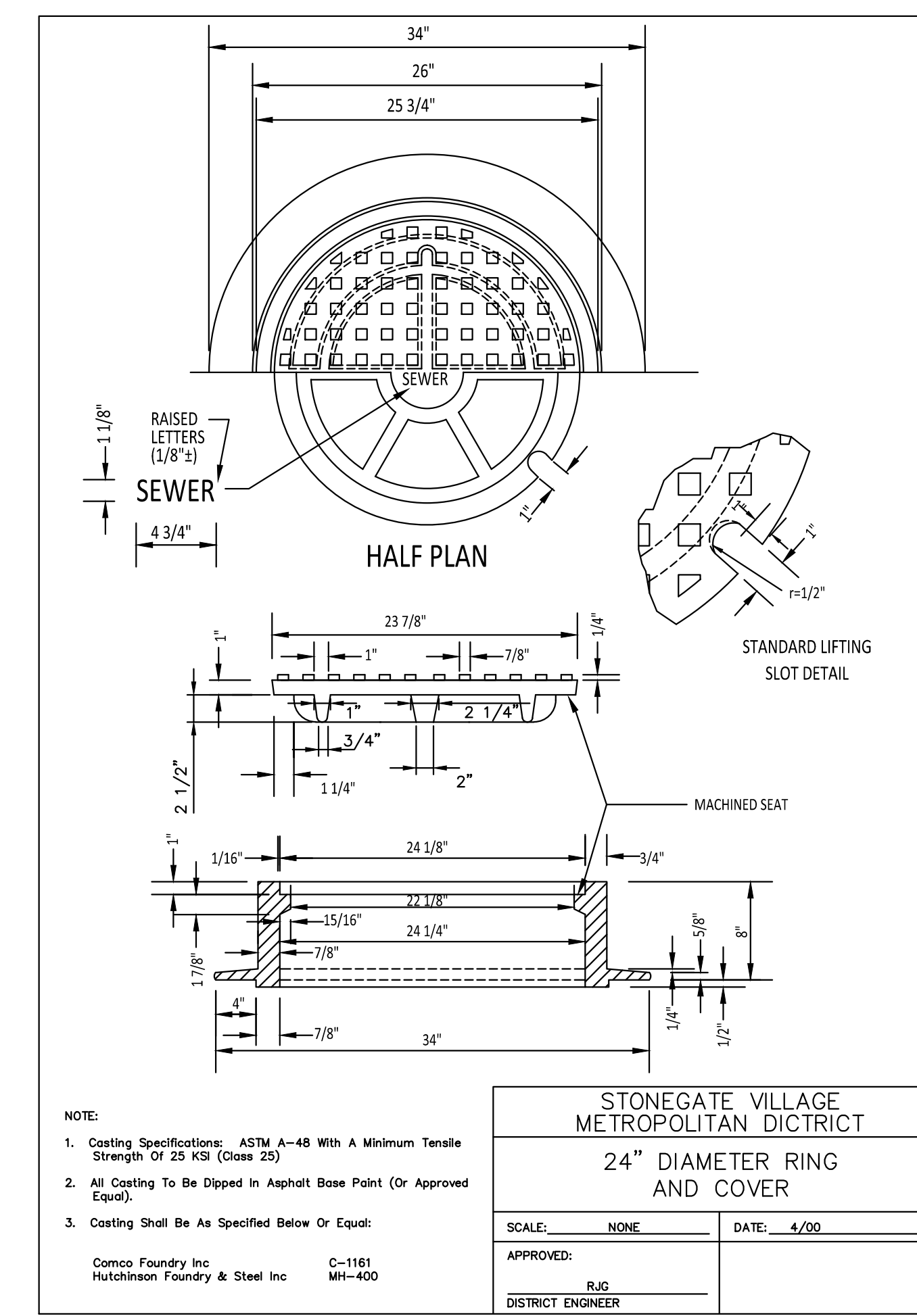


**STONEGATE VILLAGE METROPOLITAN DISTRICT CAST-IN-PLACE MANHOLE BASE DETAIL**

SCALE: NONE DATE: 4/00

APPROVED: R.J.G. DISTRICT ENGINEER

SHEET 13

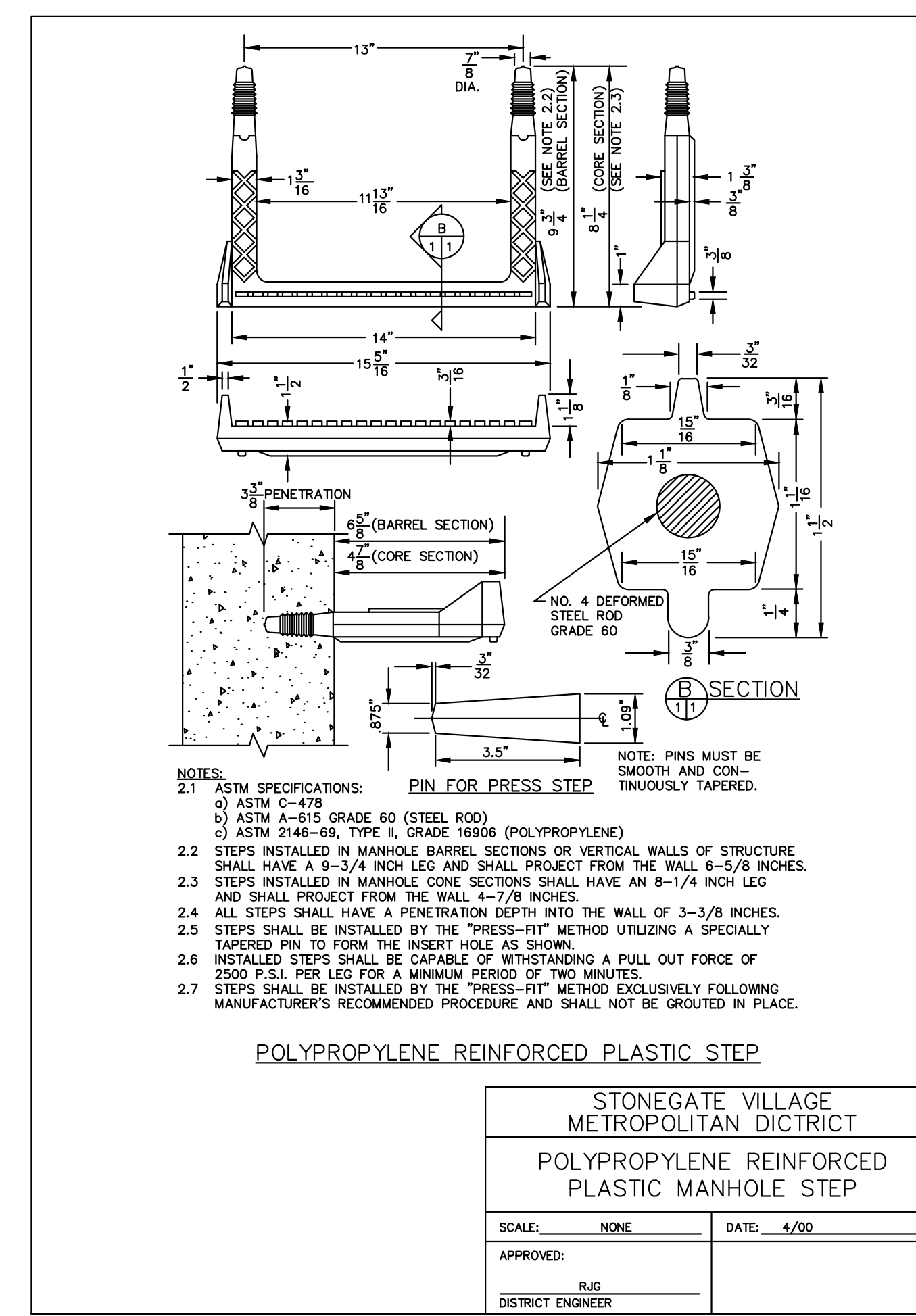


**STONEGATE VILLAGE METROPOLITAN DISTRICT 24\"/>

SCALE: NONE DATE: 4/00

APPROVED: R.J.G. DISTRICT ENGINEER

SHEET 17**

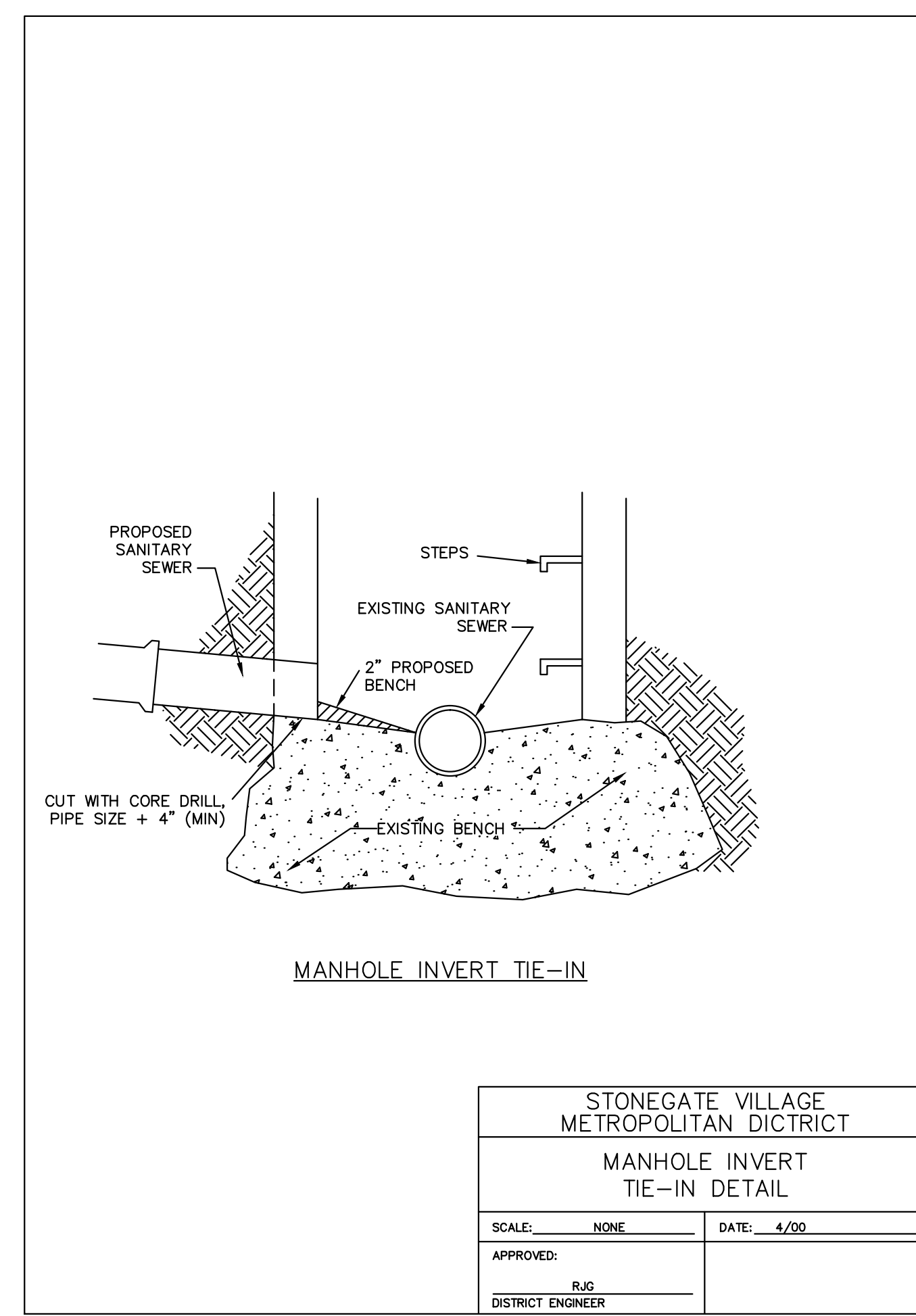


**STONEGATE VILLAGE METROPOLITAN DISTRICT POLYPROPYLENE REINFORCED PLASTIC MANHOLE STEP**

SCALE: NONE DATE: 4/00

APPROVED: R.J.G. DISTRICT ENGINEER

SHEET 20

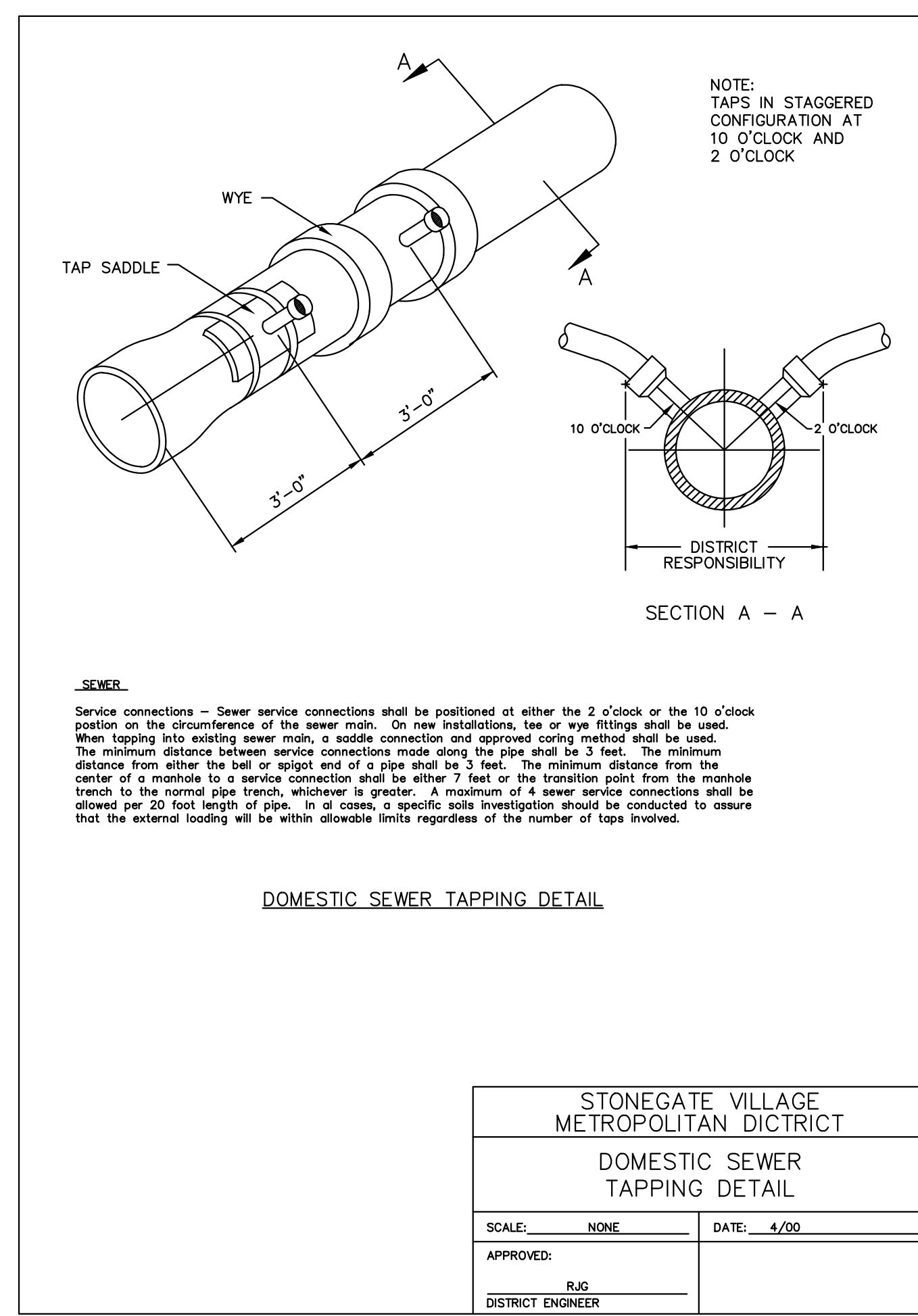


**STONEGATE VILLAGE METROPOLITAN DISTRICT MANHOLE INVERT TIE-IN DETAIL**

SCALE: NONE DATE: 4/00

APPROVED: R.J.G. DISTRICT ENGINEER

SHEET 22



**STONEGATE VILLAGE METROPOLITAN DISTRICT DOMESTIC SEWER TAPPING DETAIL**

SCALE: NONE DATE: 4/00

APPROVED: R.J.G. DISTRICT ENGINEER

SHEET 27

Project: 10/07/2016 9:10 AM, Draw Name: c:\clients\3\compau05-resident\01\_cds\dwg\Sanitary\Phase 2\SEB-SANITARY DETAILS.dwg, Uploaded By: DManbaralli

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Construction Managers • Environmental Scientists • Landscape Architects • Planners

**COMPARK VILLAGE SOUTH FILING NO. 2 - PHASE II**

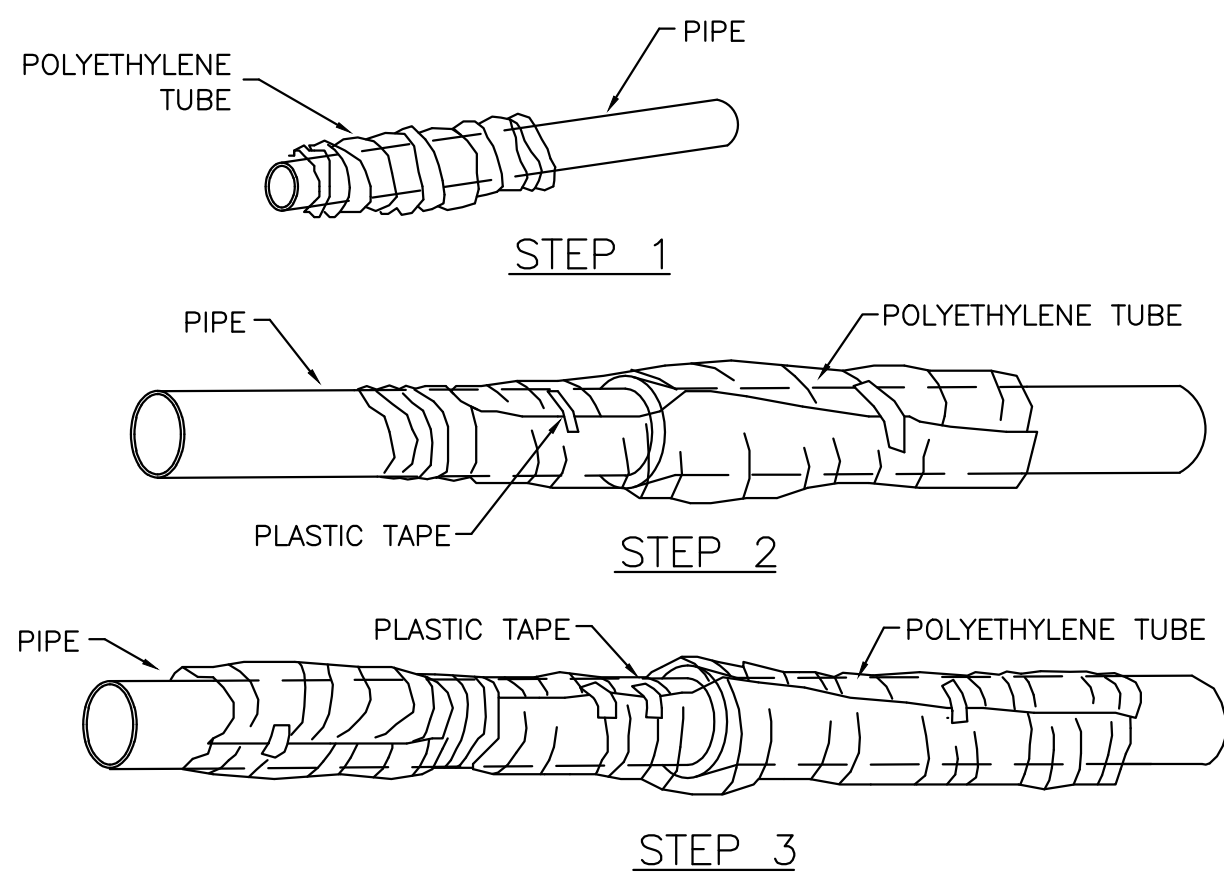
**TOWN OF PAKRER, COLORADO**

**SANITARY SEWER CONSTRUCTION DETAILS**

PROJ. MGR.: RJM  
 PROJ. ASSOC.: RAK  
 DRAWN BY: RAK  
 DATE: 10/2016

SHEET 12 OF 14  
 CLCPK3





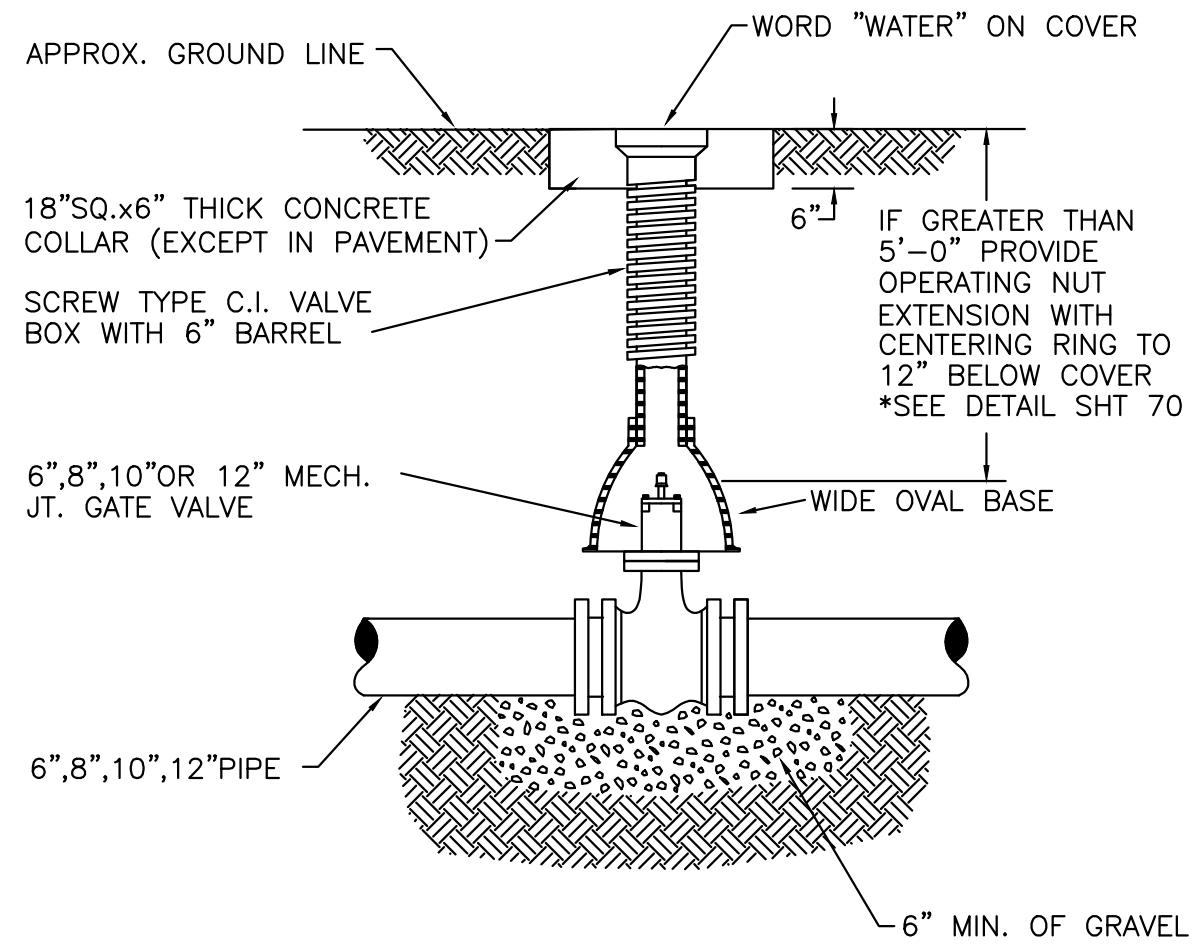
**FIELD INSTALLATION - POLYETHYLENE WRAP**

- 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.

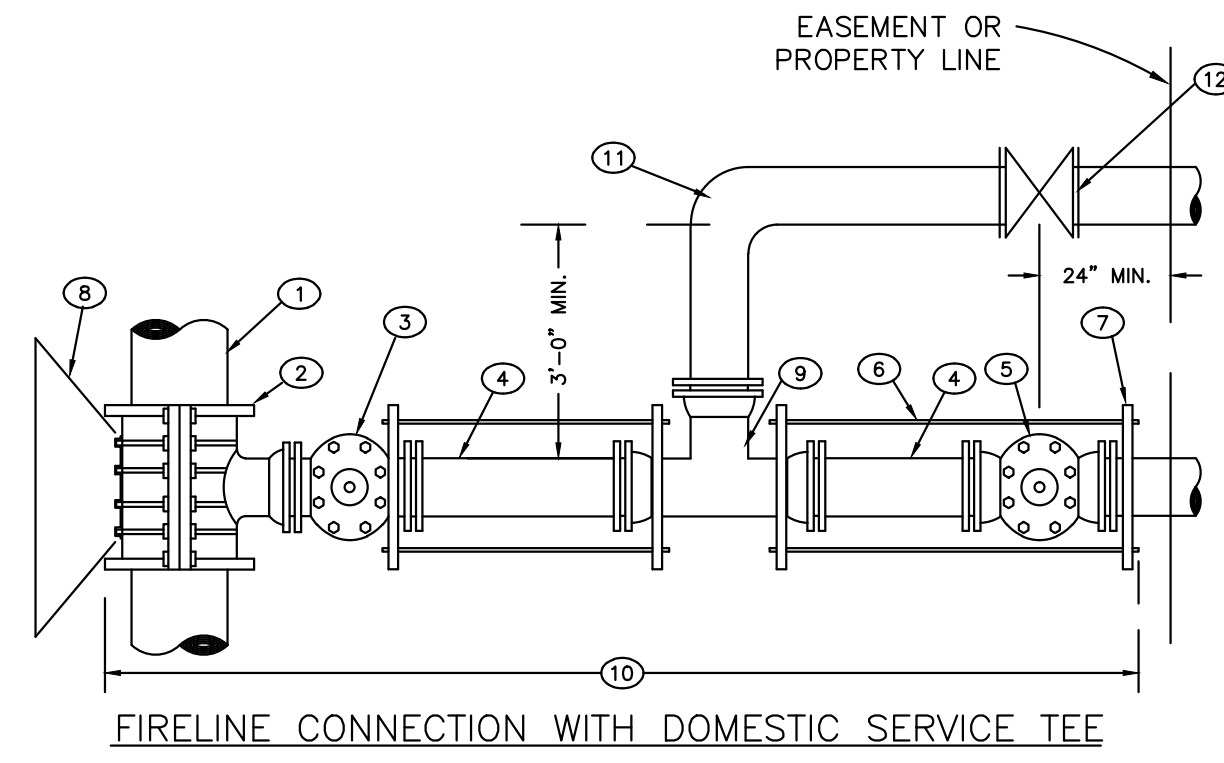
**NOTES:**

1. VALVE BOXES SHALL BE:
  - A. TYLER SCREW-TYPE 6" C.I. ASSY. SERIES 6860 W/NO.160 LARGE OVAL BASE OR
  - B. CLAY & BAILEY SCREW-TYPE 6" C.I. ASSY. NO.P-108 W/NO.160 LARGE OVAL BASE.
2. ALL C.I. SHALL BE WRAPPED WITH 8 MIL. MIN. THICKNESS POLYETHYLENE.
3. VALVE NUT SHALL BE CENTERED.
4. VALVE BOX SHALL BE PLUMB.

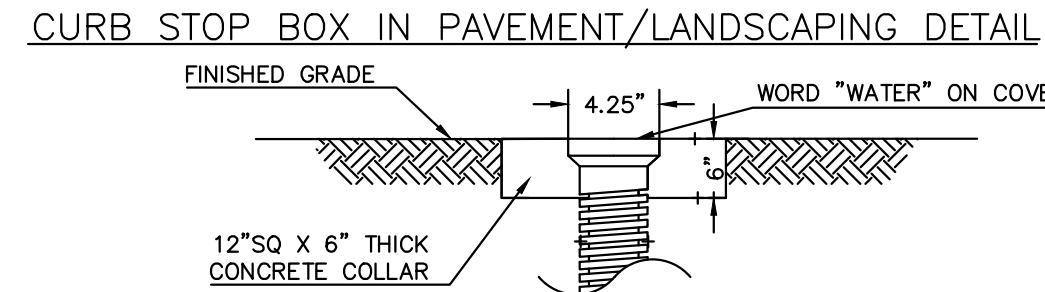
STONEGATE VILLAGE METROPOLITAN DISTRICT  
**VALVE BOX DETAIL**

SCALE: NONE DATE: 4/00

APPROVED: R/JG DISTRICT ENGINEER



**FIRELINE CONNECTION WITH DOMESTIC SERVICE TEE**



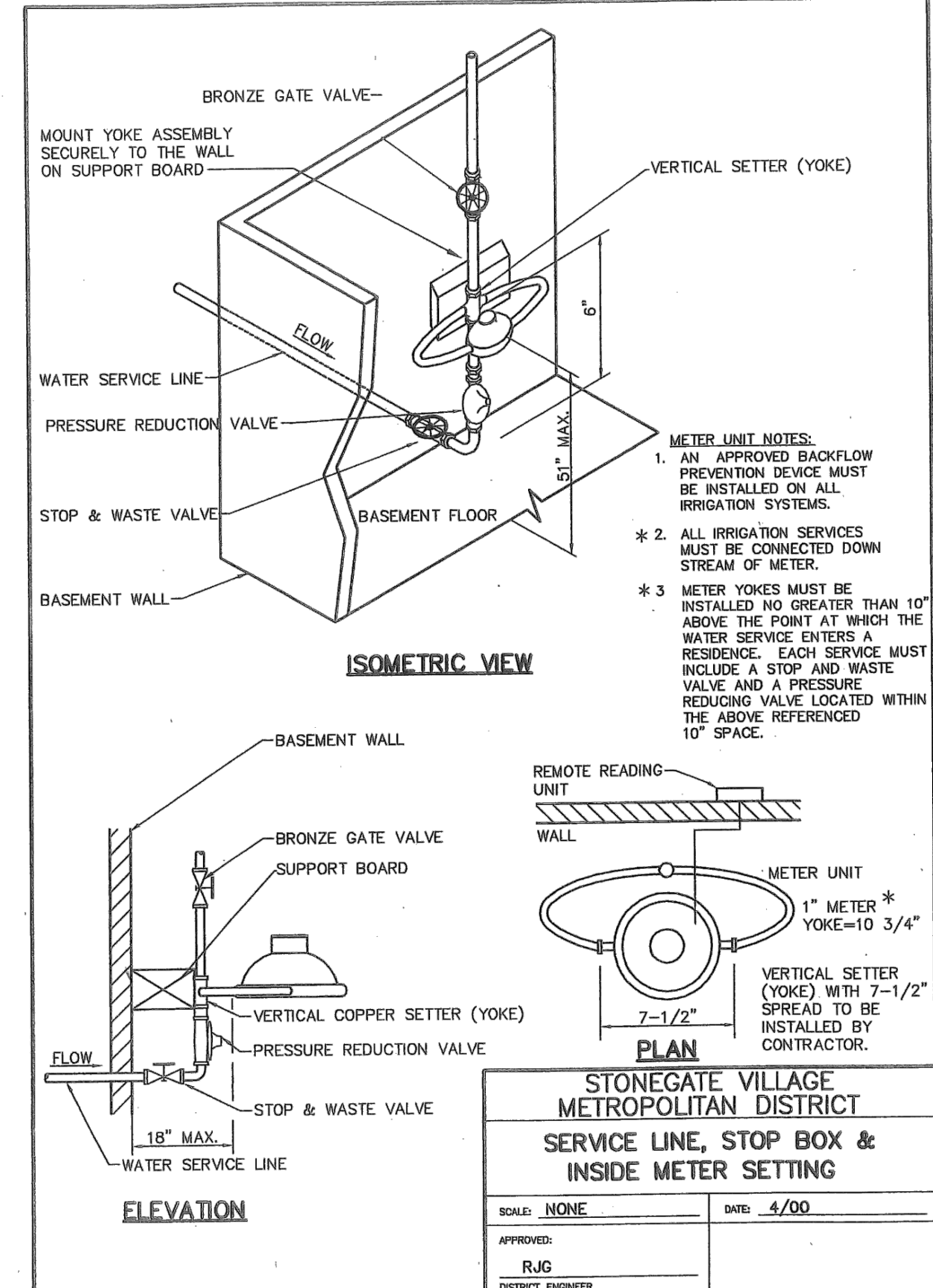
1. EXISTING MAIN
2. TAPPING SLEEVE OR M.J. ANCHORING TEE (SWIVEL TEE WHERE APPLICABLE)
3. TAPPING VALVE OR DOMESTIC SERVICE TEE OR SERVICE TAP
4. DOUBLE SPIGOT PIPE
5. PROPERTY LINE VALVE
6. THE RODS (MEGALUGS MAY BE USED IN PLACE OF RODDING)
7. PIPE CLAMP
8. CONCRETE KICKBLOCK
9. DOMESTIC SERVICE TEE OR SERVICE TAP
10. POLYETHYLENE WRAPPED
11. 90° FITTING (BEND FOR 2" & SMALLER)
12. VALVE OR CURBSTOP AS REQUIRED

**COMMERCIAL AND MULTI-FAMILY USE ONLY**

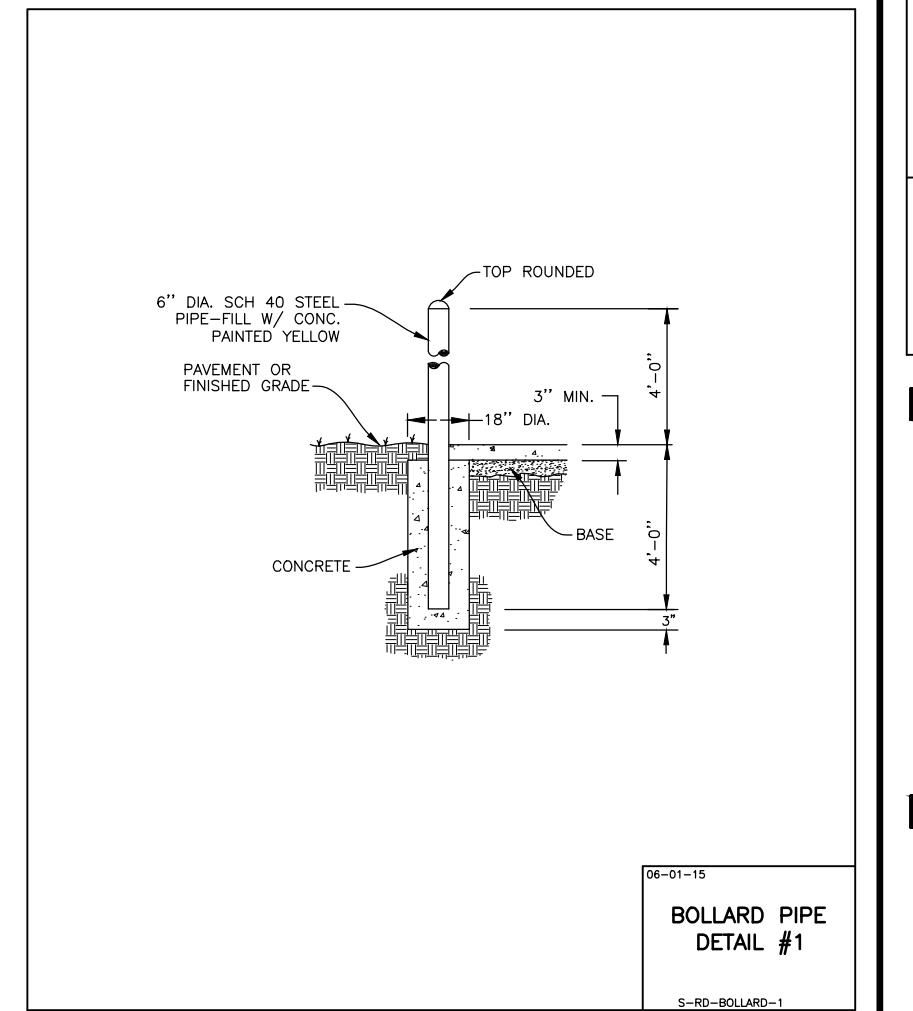
STONEGATE VILLAGE METROPOLITAN DISTRICT  
**COMBINATION FIRE/SERVICE TAP**

SCALE: NONE DATE: 4/00

APPROVED: R/JG DISTRICT ENGINEER



2000 REVISION SHEET 47



BOLLARD PIPE DETAIL #1

**LENGTH OF TIED PIPE**

PIPE SIZE	4"	6"	8"	12"	16"	20"	24"
TEE OR VALVE	3/4" 8.0'	3/4" 13.0'	3/4" 20.0'	3/4" 40.0'	3/4" 60.0'	3/4" 80.0'	3/4" 155.0'
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" 155.0'
45° BEND	3/4" 2.0'	3/4" 3.0'	3/4" 4.0'	3/4" 6.0'	3/4" 9.0'	3/4" 11.0'	3/4" 14.0'
22-1/2° BEND	3/4" 1.0'	3/4" 1.5'	3/4" 2.0'	3/4" 3.0'	3/4" 4.5'	3/4" 6.0'	3/4" 8.0'
11-1/4° BEND	3/4" 0.0'	3/4" 0.0'	3/4" 0.0'	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. A.S. DIMENSION LENGTH, G = GRADE, M.S. = MILD STEEL.
  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.
  9. CLAMP DETAILS AND SET CLAMP DETAILS.
  10. LENGTH REFERS TO THE AMOUNT OF PIPE WHICH MUST BE TIED TOGETHER AND IS NOT NECESSARILY THE LENGTH OF THE RODS.
  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. Ball holes shall be dug deep enough to provide a minimum of two inches (2") of clearance between the ball 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, the joint is made, the bedding material shall be carefully placed and tamped under the haunches of the pipe and in the previously dug ball holes.

Tamping is herein defined as the act of placing approved bedding material under the haunches of the pipe, paying particular attention to voids, ball 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 Standard Drawings for a typical trench cross section.

Composition 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 squeegee 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. 10	80-100
No. 16	50-85
No. 20	25-40
No. 50	10-30
No. 100	2-10
No. 200	0

**Squeegee Sand**

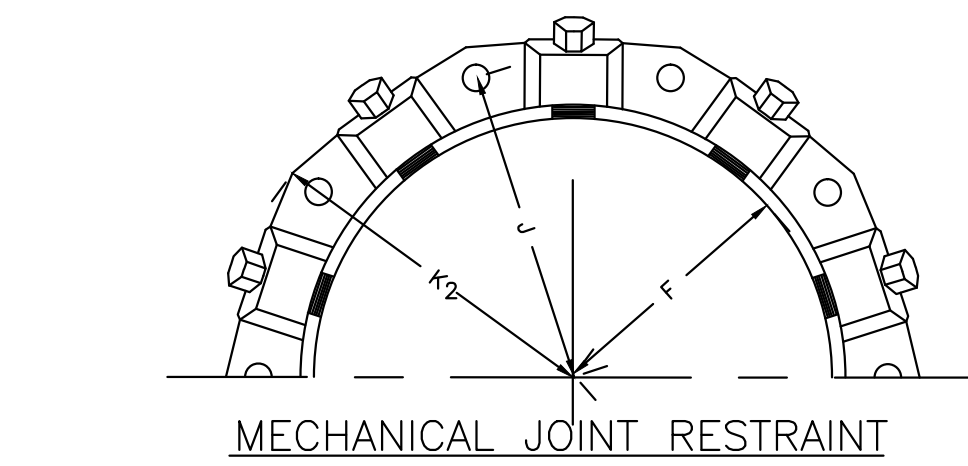
Sieve Size	Total Percent Passing by Weight
3/8 inch	100
No. 100	0-5

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.

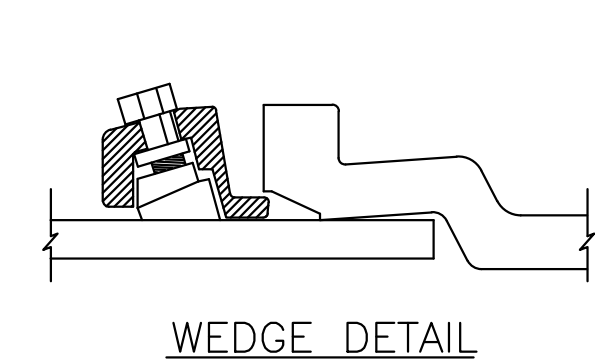
STONEGATE VILLAGE METROPOLITAN DISTRICT  
**PIPE BEDDING**

SCALE: NONE DATE: 4/00

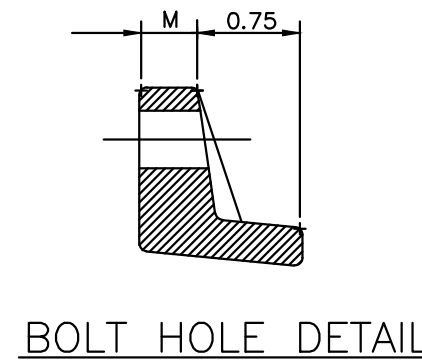
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**MECHANICAL JOINT RESTRAINT**



**WEDGE DETAIL**



**BOLT HOLE DETAIL**

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

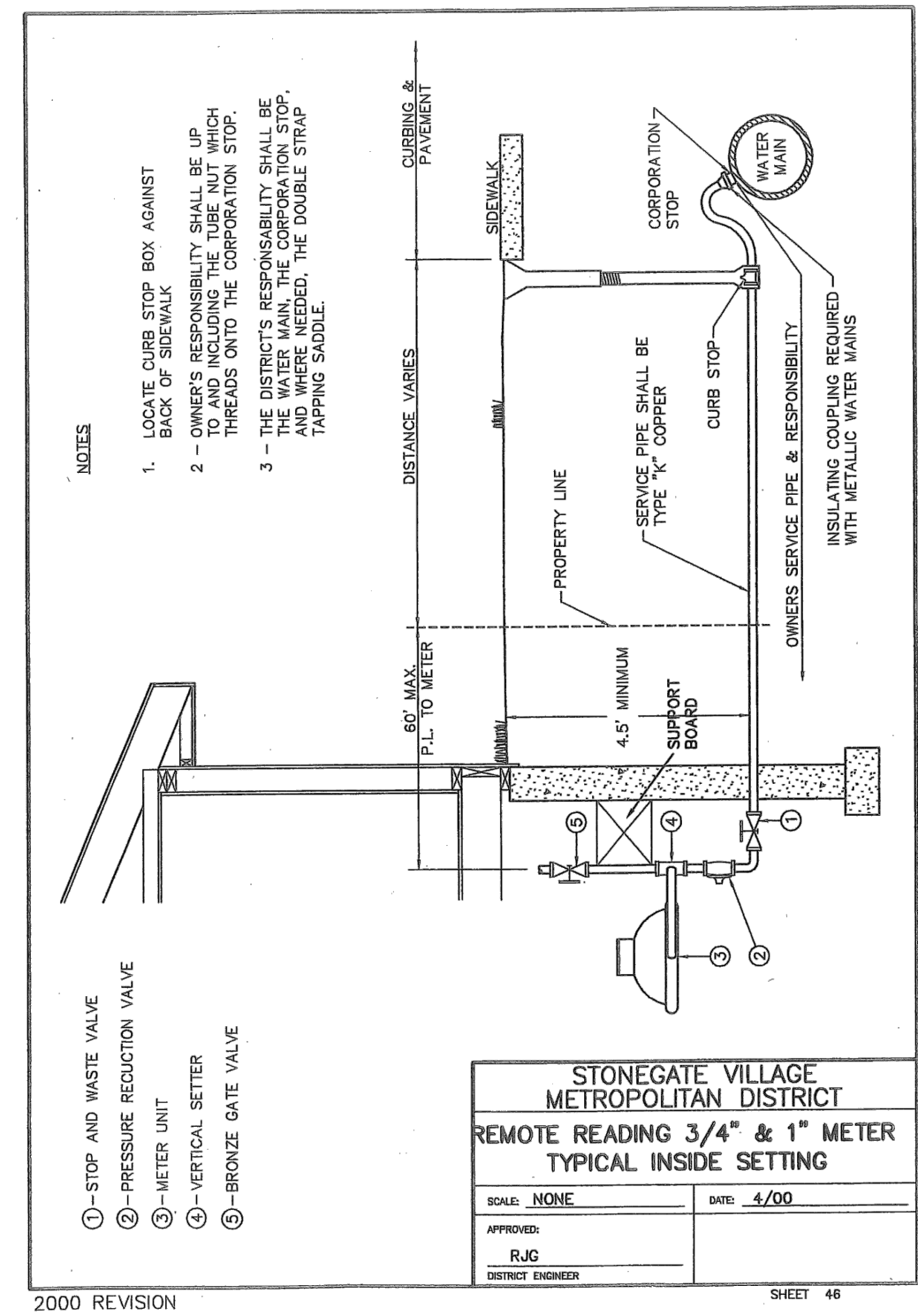
STONEGATE VILLAGE METROPOLITAN DISTRICT  
**MECHANICAL JOINT RESTRAINT DETAILS**

SCALE: NONE DATE: 4/00

APPROVED: R/JG DISTRICT ENGINEER

2000 REVISION

SHEET 65



2000 REVISION SHEET 48

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COMPARK VILLAGE SOUTH FILING NO. 2 - PHASE II  
 TOWN OF PAKRER, COLORADO  
 WATER SYSTEM CONSTRUCTION DETAILS

PROJ. MGR.: RJM  
 PROJ. ASSOC.: RAK  
 DRAWN BY: RAK  
 DATE: 10/2016