

GENERAL NOTES

- 1. Profile design lines are based on centerline, as shown, unless otherwise noted.
2. All new construction to conform to the specifications of El Paso County Planning and Community Development, Widefield Water and Sanitation District, and the Fountain Mutual Irrigation Company (FMIC). Any asphalt removed is to be replaced to meet the specifications of the El Paso County Planning and Community Development.
3. For pavement design, curb and gutter, and sidewalks see individual plan and profile sheets. Pavement design to be based on Resistance Value 'R' derived from Iriev tests and are to be approved by the Engineering Division of the El Paso County Planning and Community Development prior to work above subgrade.
4. At intersections, all curb returns will have 20-foot radius unless otherwise noted.
5. All existing utilities have been shown according to the best available information. The contractor is responsible for field location and verification prior to beginning work. If it appears that there could be a conflict with any utilities, whether indicated on the plans or not, the contractor is to notify the engineer and owner immediately. The contractor is responsible for the protection and repair (if necessary) of all utilities.
6. A Pre-Construction meeting shall be held with the El Paso County Planning and Community Development and Widefield Water and Sanitation District prior to any construction.
7. Approved plans, Engineering Criteria Manual, etc. is required to be on-site at all times during construction.
8. All necessary permits, such as SWMP, ESQP, Fugitive Dust, Access, C.O.E. 404, etc. shall be obtained prior to construction.
9. All handicap ramps to be per El Paso County Standard SD_2-40.
10. The contractor shall coordinate exact locations and layout with the El Paso County Planning and Community Development on the placement of any pedestrian ramps prior to construction of the curb. Pedestrian ramp locations are as shown on the plans.
11. Where appropriate, newly saw cut all existing concrete and asphalt. Repair/replace all disturbed existing items with like materials and thicknesses.
12. All disturbed areas shall be revegetated with native grasses within 21 days of excavation per Erosion Control Plan.
13. The prepared Erosion/Sediment Control Plan is to be considered a part of these plans and its requirements adhered to during the construction of this project.
14. All storm and sanitary sewer pipe lengths and slopes are figured from center of manhole or bend. Pipe lengths are given as a horizontal length.
15. All storm sewer bedding to be per CDOF Standards.
16. All storm sewer pipe shall be Class III B Wall unless otherwise shown on the storm sewer plan and profile sheets.
17. All manholes and manhole structures in construction of storm sewer facilities shall be factory fabricated, unless approved by the El Paso County Development Services Department.
18. Construction and materials used in all storm and sanitary sewer manholes shall be per specifications. Storm sewer radial deflections to be grouted or installed per manufacturer's recommendations.
19. Storm sewer manhole sizes as follows unless otherwise shown:
18" thru 36" use 48" I.D. manhole
42" thru 48" use 60" I.D. manhole
54" thru 60" use 72" I.D. manhole
NOTE: Manhole sizes tabulated here shall be increased, if necessary, to accommodate incoming laterals.
20. Sanitary sewer manhole sizes and facilities per Widefield Water and Sanitation District Specifications. Sanitary sewers to be installed with Class 'C' bedding. Sanitary sewers deeper than 12-feet shall require Class 'B' bedding. Pipe used for construction of sanitary sewer shall be SDR 35 unless shown otherwise on plan and profiles.
21. For additional utility notes, see Utility Plan and/or Service Plan.
22. All horizontal stationing is based on the 'Face of Curb', unless otherwise shown.
23. The vertical design and top of curb are based on the design point shown in the typical cross section.
24. The curb line design point is located at the intersection of the face and top of curb for the Type III Standard 6-inch vertical curb. See typical street section for design point locations.
25. Water and sanitary sewer service provided by Widefield Water and Sanitation District. Telephone service provided by Qwest Communications. Gas service provided by BlackHills Energy. Electric service provided by Mountain View Electric.
26. All utility construction to be conducted in conformance with the current Widefield Water and Sanitation District Specifications and/or El Paso County Specifications, whichever is greater.
27. Vertical curb to be used between curb returns (CR) and at curb inlets. Transitions from ramp to vertical curb shall be 10-feet unless otherwise approved by the El Paso County Planning and Community Development. All other curb & gutter to be ramp curb & gutter.
28. Cross pans to be 6' wide and per El Paso County Standard Detail SD_2-26.
29. Contractor responsible for meeting all Widefield Water and Sanitation District criteria when connecting to existing stubs.
30. Curb returns shall be straight graded from CR to CR unless otherwise noted.
31. Inlets are Type 'R' inlets (CDOF STD M-604-12) unless otherwise noted.
32. USPS CBU Mailboxes are to be determined by USPS.
BENCHMARK: Monument is located at the Northwest corner of the intersection of Powers Boulevard and Fontaine Street. The monument is a 3-inch aluminum cap (FIMS ID #206). Located 51.3 feet west of the west edge of asphalt of Powers Blvd and 65.5 feet north of the north edge of asphalt of Fontaine Street. Elevation=5997.89 feet (NGVD 1929, 1960 Ad.)
BASIS OF BEARINGS is based upon a portion of the Eastern boundary of the Glen at Widefield Subdivision Filing No. 9B as recorded under Record No. 20671226 in the records of the Clerk and Recorder's Office, County of El Paso, State of Colorado; said line being also a portion of the Eastern Right-of-Way Autumn Glen Avenue as described in said subdivision, being monumented at the Point of Tangency of said boundary by a found cap and rebar marked "PLSC 25968" and at the Point of Curvature of said boundary by a found rebar and cap marked "PLSC 25968". Said line bears N29°46'44"W, a distance of 1154.12 feet.

EL PASO COUNTY STANDARD NOTES

- 1. All drainage and roadway construction shall meet the standards and specifications of the City of Colorado Springs/El Paso County Drainage Criteria Manual, Volumes 1 and 2, and the El Paso County Engineering Criteria Manual.
2. Contractor shall be responsible for the notification and field notification of all existing utilities, whether shown on the plans or not, before beginning construction. Location of existing utilities shall be verified by the contractor prior to construction. Call 811 to contact the Utility Notification Center of Colorado (UNCC).
3. Contractor shall keep a copy of these approved plans, the Grading and Erosion Control Plan, the Stormwater Management Plan (SWMP), the soils and geotechnical report, and the appropriate design and construction standards and specifications at the job site at all times, including the following:
a. El Paso County Engineering Criteria Manual (ECM)
b. City of Colorado Springs/El Paso County Drainage Criteria Manual, Volumes 1 and 2
c. Colorado Department of Transportation (CDOT) Standard Specifications for Road and Bridge Construction
d. CDOT M & S Standards
4. Notwithstanding anything depicted in these plans in words or graphic representation, all design and construction related to roads, storm drainage and erosion control shall conform to the standards and requirements of the most recent adopted El Paso County standards, including the Land Development Code, the Engineering Criteria Manual, the Drainage Criteria Manual, and the Drainage Criteria Manual Volume 2. Any deviations from regulations and standards must be requested, and approved, in writing. Any modifications necessary to meet criteria after-the-fact will be entirely the developer's responsibility to rectify.
5. It is the design engineer's responsibility to accurately show existing conditions, both onsite and offsite, on the construction plans. Any modifications necessary due to conflicts, omissions, or changed conditions will be entirely the developer's responsibility to rectify.
6. Contractor shall schedule a pre-construction meeting with El Paso County Planning and Community Development (P&CDD) - Inspections, prior to starting construction.
7. It is the contractor's responsibility to understand the requirements of all jurisdictional agencies and to obtain all required permits, including but not limited to El Paso County Erosion and Stormwater Quality Control Permit (ESQP), Regional Building Floodplain Development Permit, U.S. Army Corps of Engineers-issued 401 and/or 404 permits, and county and state fugitive dust permits.
8. Contractor shall not deviate from the plans without first obtaining written approval from the design engineer and P&CDD. Contractor shall notify the design engineer immediately upon discovery of any errors or inconsistencies.
9. All storm drain pipe shall be Class III RCP unless otherwise noted and approved by P&CDD.
10. Contractor shall coordinate geotechnical testing per ECM standards. Pavement design shall be approved by El Paso County P&CDD prior to placement of curb and gutter and pavement.
11. All construction traffic must enter/exit the site at approved construction access points.
12. Sight visibility triangles as identified in the plans shall be provided at all intersections. Obstructions greater than 18 inches above flowline are not allowed within sight triangles.
13. Signing and striping shall comply with El Paso County DOT and MUTCD criteria. [If applicable, additional signing and striping notes will be provided.]
14. Contractor shall obtain any permits required by El Paso County DOT, including Work Within the Right-of-Way and Special Transport permits.
15. The limits of construction shall remain within the property line unless otherwise noted. The owner/developer shall obtain written permission and easements, where required, from adjoining property owner(s) prior to any off-site disturbance, grading, or construction.

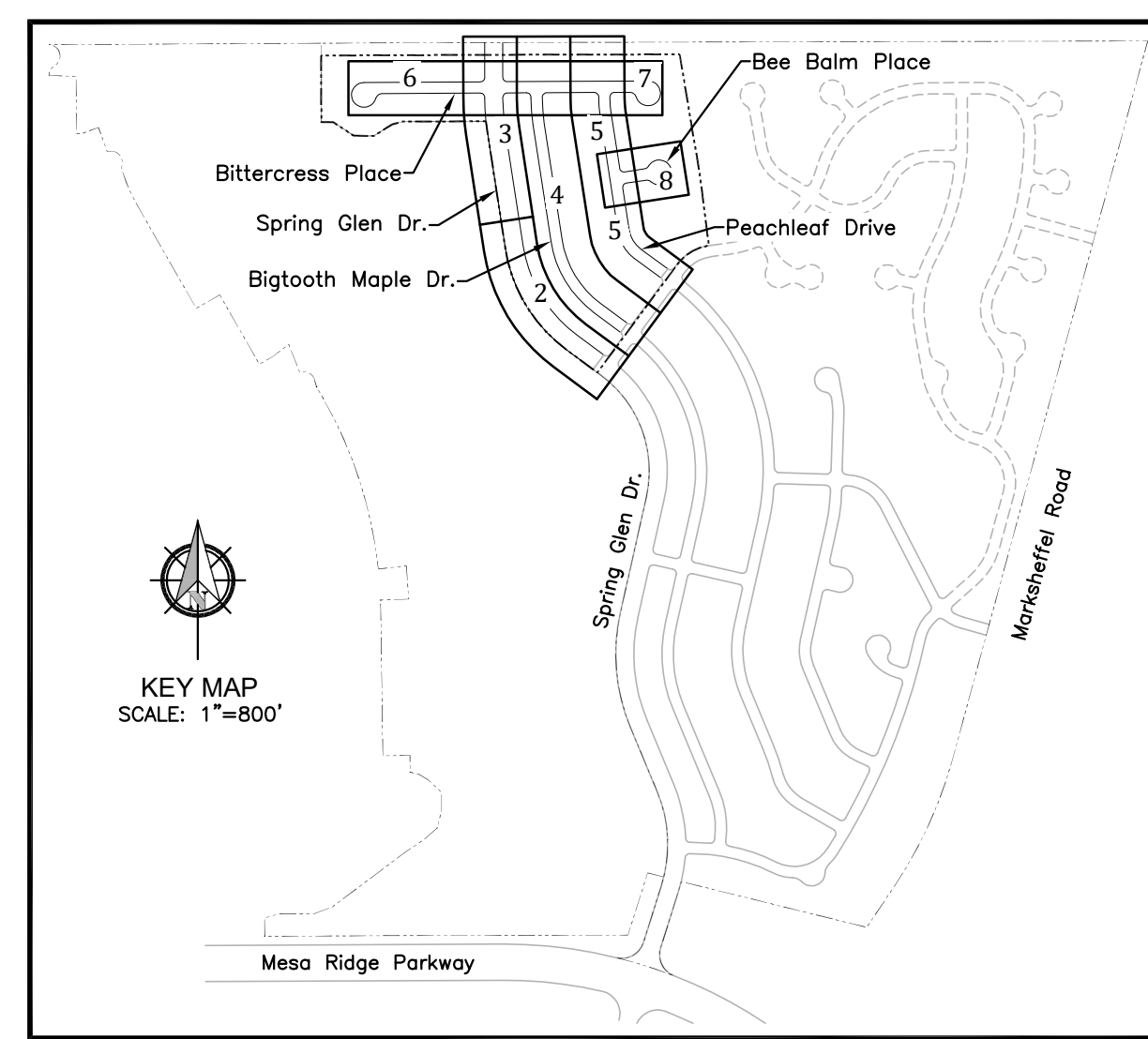
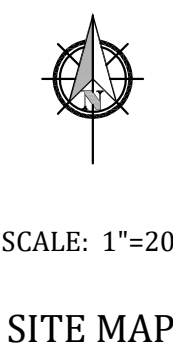
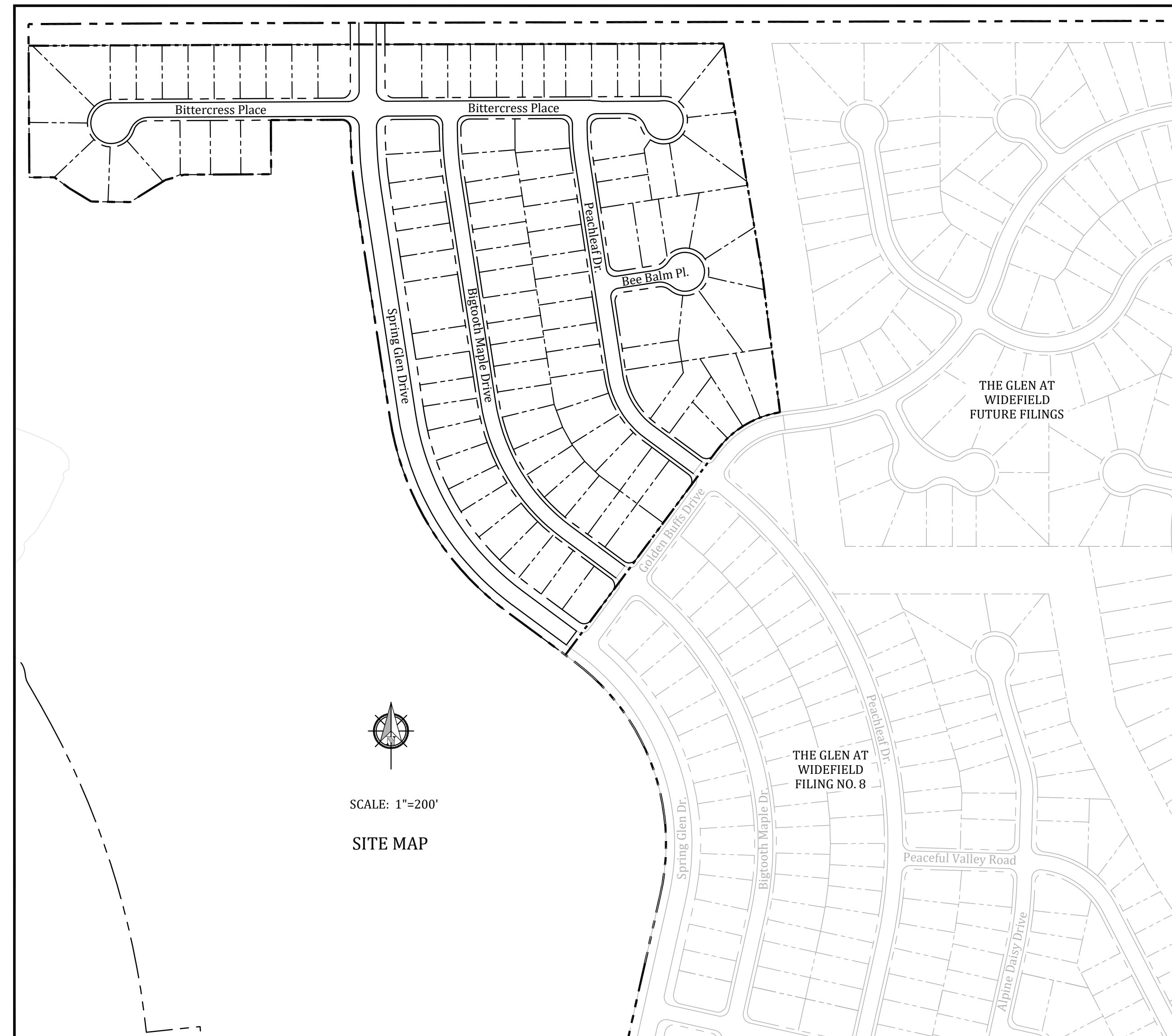
INDEX OF SHEETS

Table with 3 columns: Sheet Number, Sheet Title, and Sheet Description. Includes Cover Sheet, Storm Sewer Plan, Grading and Erosion Control Plan, Utility Plan, Water Line Lowering Details, Utility Services Plan, Detention Basin Details, Site Detail Plan, etc.

GOVERNING AGENCIES

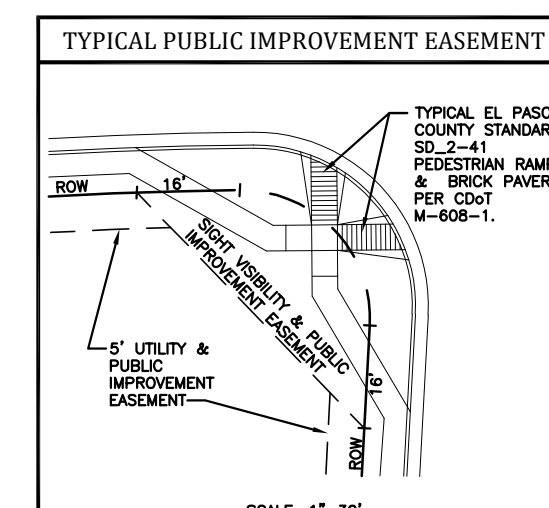
Table listing governing agencies: El Paso County Planning & Community Development Department, Widefield Water & Sanitation District, Black Hills Energy, Mountain View Electric Association, etc.

THE GLEN AT WIDEFIELD FILING NO. 9 RESIDENTIAL SUBDIVISION CONSTRUCTION DRAWINGS PREPARED FOR WIDEFIELD INVESTMENT GROUP



ABBREVIATIONS

Table of abbreviations used in the drawings, such as ASSY = ASSEMBLY, BNDY = BOUNDARY, BOP = BOTTOM OF PIPE, CL = CENTERLINE, etc.



WIDEFIELD WATER AND SANITATION DISTRICT GENERAL NOTES

- 1. All utility construction to be conducted in conformance with the current Widefield Water and Sanitation District specifications. Compaction requirements shall be 95% Standard Proctor as determined by ASTM D698, unless otherwise approved by the Widefield Water and Sanitation District or a higher standard is imposed by another agency having right-of-way jurisdiction.
2. All materials and workmanship shall be subject to inspection by the Widefield Water and Sanitation District. The Widefield Water and Sanitation District reserves the right to accept or reject any such materials and workmanship that does not conform to its standards and specifications.
3. The Developer or his Engineer has located all fire hydrants and future service stubs. Any required realignment, either horizontal or vertical, shall be at the expense of the Developer.
4. All ductile iron pipe, to include fittings, valves and fire hydrants will be wrapped with polyethylene tubing, and electrically isolated.
5. All ductile iron pipe and fittings shall be double bonded. Specifications for cathodic protection on both Dip mains and PVC mains is specified in the Standards and Specifications.
6. PVC main lines shall be installed with coated No. 12 tracer wire.
7. The Contractor is required to notify the Widefield Water and Sanitation District (390-7111) a minimum of 48 hours and a maximum of 96 hours prior to the start of construction. The Contractor shall also notify affected utility companies 48 hours prior to construction adjacent to the known utility lines.
8. The location of all utilities as shown on these drawings are approximate only. The location of all utilities shall be verified prior to construction by the Contractor.
9. The Contractor shall field excavate and verify the vertical and horizontal location of all tie-ins. Contractor shall notify the Widefield Water and Sanitation District and the Engineer of the field verified information prior to construction.
10. All bends shall be field staked prior to construction.
11. Any water utility material removed and not reused shall be returned to the Widefield Water and Sanitation District if the District so requests.
12. The Contractor shall at his expense support and protect all utility mains so that they will function continuously during construction. Should a utility main fail as a result of the Contractor's operation, it will be replaced immediately by either the Contractor or the Widefield Water and Sanitation District at full cost of labor and materials to the Contractor.
13. Any pumping or bypass operations must be reviewed and approved prior to execution by both the Widefield Water and Sanitation District and the Engineer.
14. Contractor must replace or repair any damage to all surface improvements, including but not limited to fences, curb and gutter and/or asphalt that may be caused during construction.
15. All water lines 6" and larger, and all sewer lines 8" and larger, shall have as-built plans prepared and approved prior to final acceptance by the Widefield Water and Sanitation District.
16. Prior to construction, a Pre-Construction Conference is required a minimum of 72 hours in advance of commencement of work. To set the Pre-Construction conference, contact Brandon Bernard, Water Superintendent (464-2051) and/or Mark McCormick, Wastewater Superintendent (491-0128) of the Widefield Water and Sanitation District for a time. No Pre-Construction Conference times will be set until 4 sets of signed drawings are received by the Widefield W & S District. Pre-Construction Date: / / Initials: / /

LEGEND

Legend table defining symbols for STREET R.O.W., STREET CENTER LINE, PROPOSED WATER, PROPOSED WATER HYDRANT, PROPOSED WATER VALVE, etc.

STATEMENTS

Design Engineer's Statement: These detailed plans and specifications were prepared under my direction and supervision. Said plans and specifications have been prepared according to the criteria established by the County for detailed roadway, drainage, grading and erosion control plans and specifications, and said plans and specifications are in conformity with applicable master drainage plans and master transportation plans. Said plans and specifications meet the purposes for which the particular roadway and drainage facilities are designed and are correct to the best of my knowledge and belief. I accept responsibility for any liability caused by any negligent acts, errors or omissions on my part in preparation of these detailed plans and specifications.
Richard N. Wray, P.E. #19310 Date 10/1/17
For and on behalf of Kiowa Engineering Corp.
Owner/Developer's Statement: I, the owner/developer have read and will comply with all of the requirements specified in these detailed plans and specifications.
J. Ryan Watson, President Date 9/26/2018
Glen Development Company
3 Widefield Boulevard
Colorado Springs, Colorado 80911
El Paso County: County plan review is provided only for general conformance with County Design Criteria. The County is not responsible for the accuracy and adequacy of the design, dimensions, and/or elevations which shall be confirmed at the job site. The County through the approval of this document assumes no responsibility for completeness and/or accuracy of this document.
Filed in accordance with the requirements of the El Paso County Land Development Code, Drainage Criteria Manual, and Engineering Criteria Manual as amended.
In accordance with ECM Section 1.12, these construction documents will be valid for construction for a period of 2 years from the date signed by the El Paso County Engineer. If construction has not started within those 2 years, the plans will need to be resubmitted for approval, including payment of review fees at the Planning and Community Development Directors discretion.
Approved 10/09/2018 8:09:50 AM
Jennifer Irvine, P.E. County Engineer / ECM Administrator

UTILITY APPROVALS

WATER AND SEWER MAIN EXTENSIONS
Any changes or alterations affecting the grade, alignment, elevation and/or depth of cover of any water or sewer main or other appurtenance shown on this drawing shall be the responsibility of the Owner/Developer. The Owner/Developer shall be responsible for all operational damages and defects in installation and material for mains and services from the date of approval until final acceptance is issued.
Signed: J. Ryan Watson Date: 9/26/2018
Print Name: J. Ryan Watson
DBA: GLEN DEVELOPMENT COMPANY
Address: 3 Widefield Boulevard Colorado Springs, CO 80911 (719) 392-0194
FIRE AUTHORITY APPROVAL
The number of fire hydrants and hydrant locations shown on this water installation plan are correct and adequate to satisfy the fire protection requirements as specified by the Fire District serving the property noted on the plans.
Signed: Security Fire Department Date: 10-3-18

DISTRICT APPROVALS
The Widefield Water and Sanitation District recognizes the design engineer as having responsibility for the design. The Widefield Water and Sanitation District has limited its scope of review accordingly.

WIDEFIELD WATER AND SANITATION DISTRICT WASTEWATER DESIGN APPROVAL
Date: 9/26/2018 By: [Signature]

In case of errors or omissions with the sewer design as shown on this document the standards as defined in the Rules and Regulations for Installation of Sewer Mains and Services shall rule. Approval expires 180 days from Design Approval.

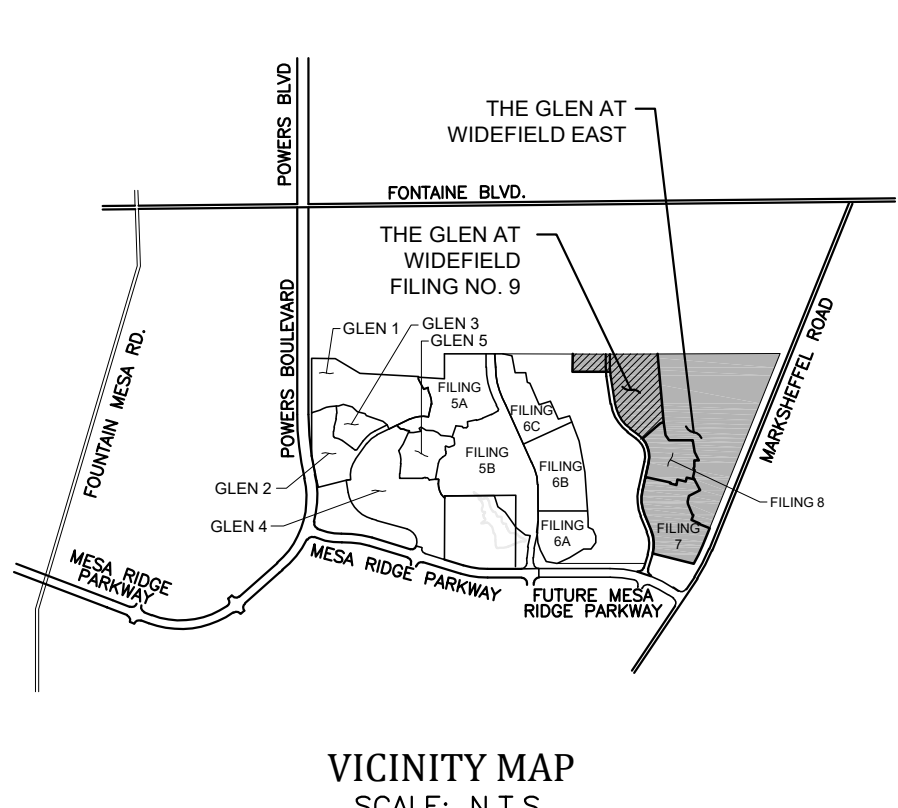
WIDEFIELD WATER AND SANITATION DISTRICT WATER DESIGN APPROVAL
Date: 9/26/2018 By: [Signature]

In case of errors or omissions with the sewer design as shown on this document the standards as defined in the Rules and Regulations for Installation of Sewer Mains and Services shall rule. Approval expires 180 days from Design Approval.

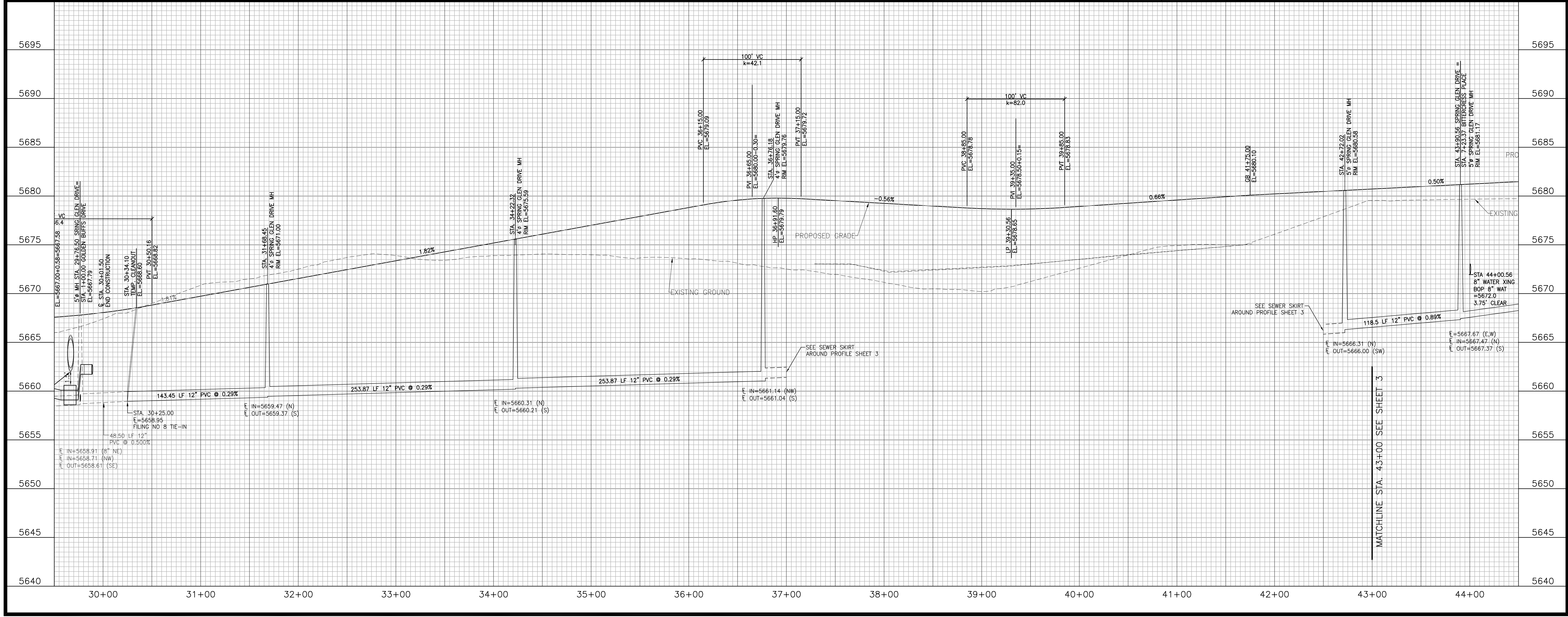
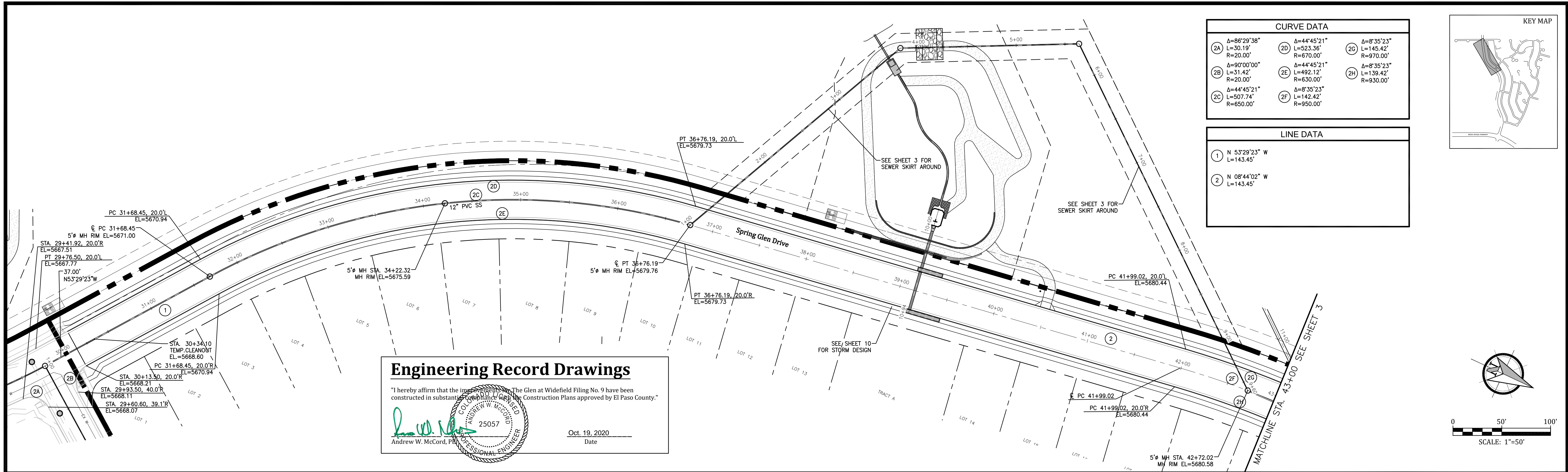
Engineering Record Drawings

I hereby affirm that the images shown on this drawing are true and correct copies of the Construction Plans approved by El Paso County.
Andrew W. McCord, Professional Engineer
Oct. 19, 2020 Date

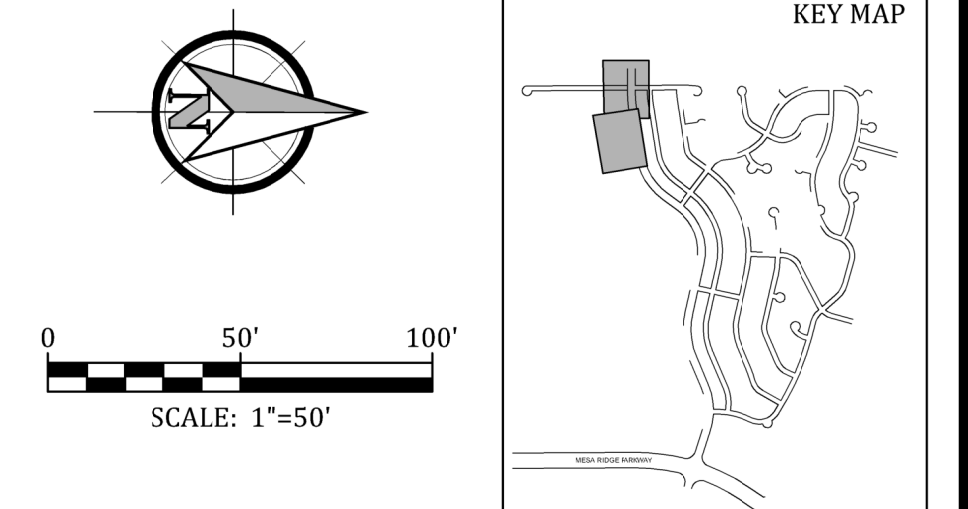
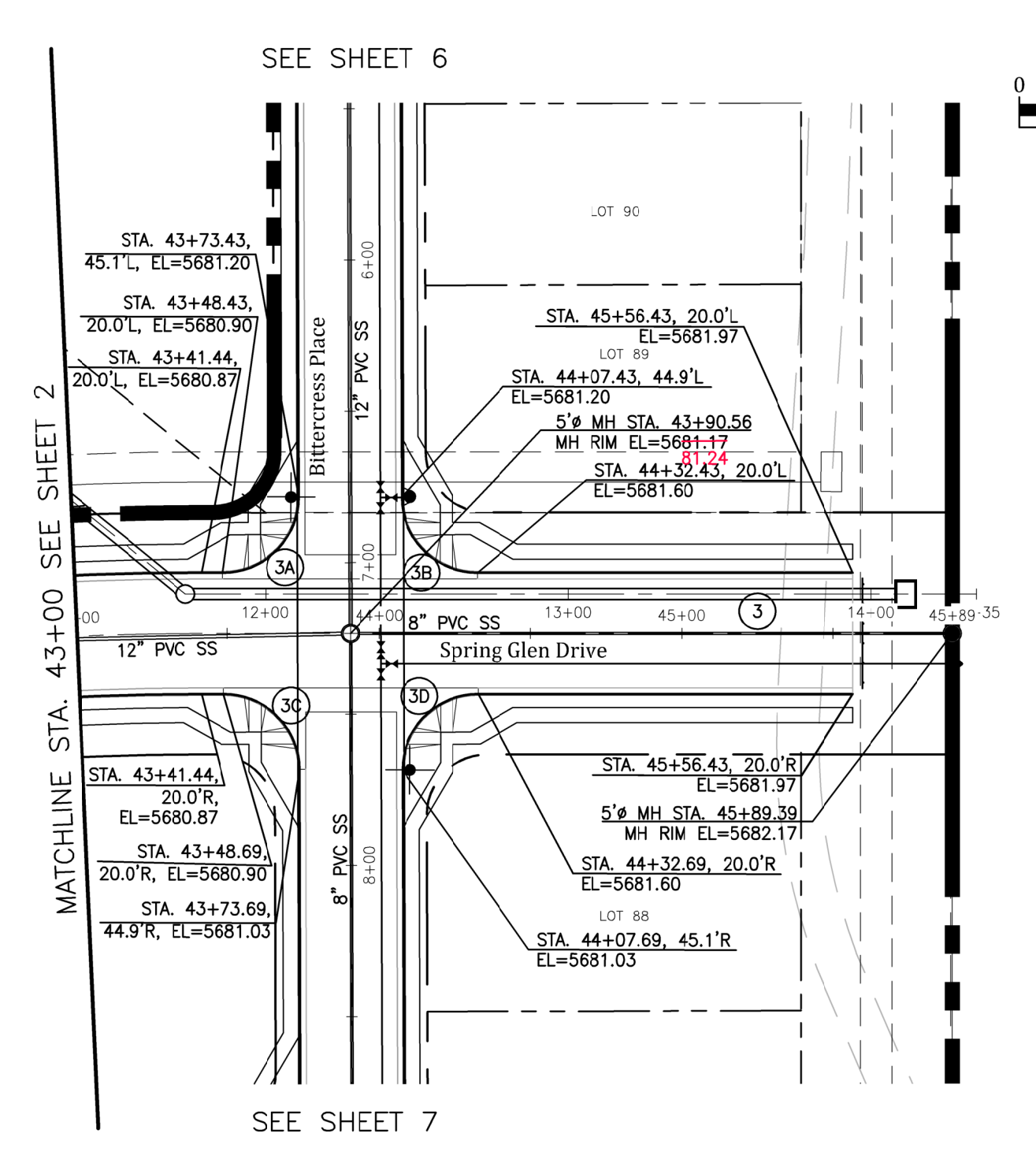
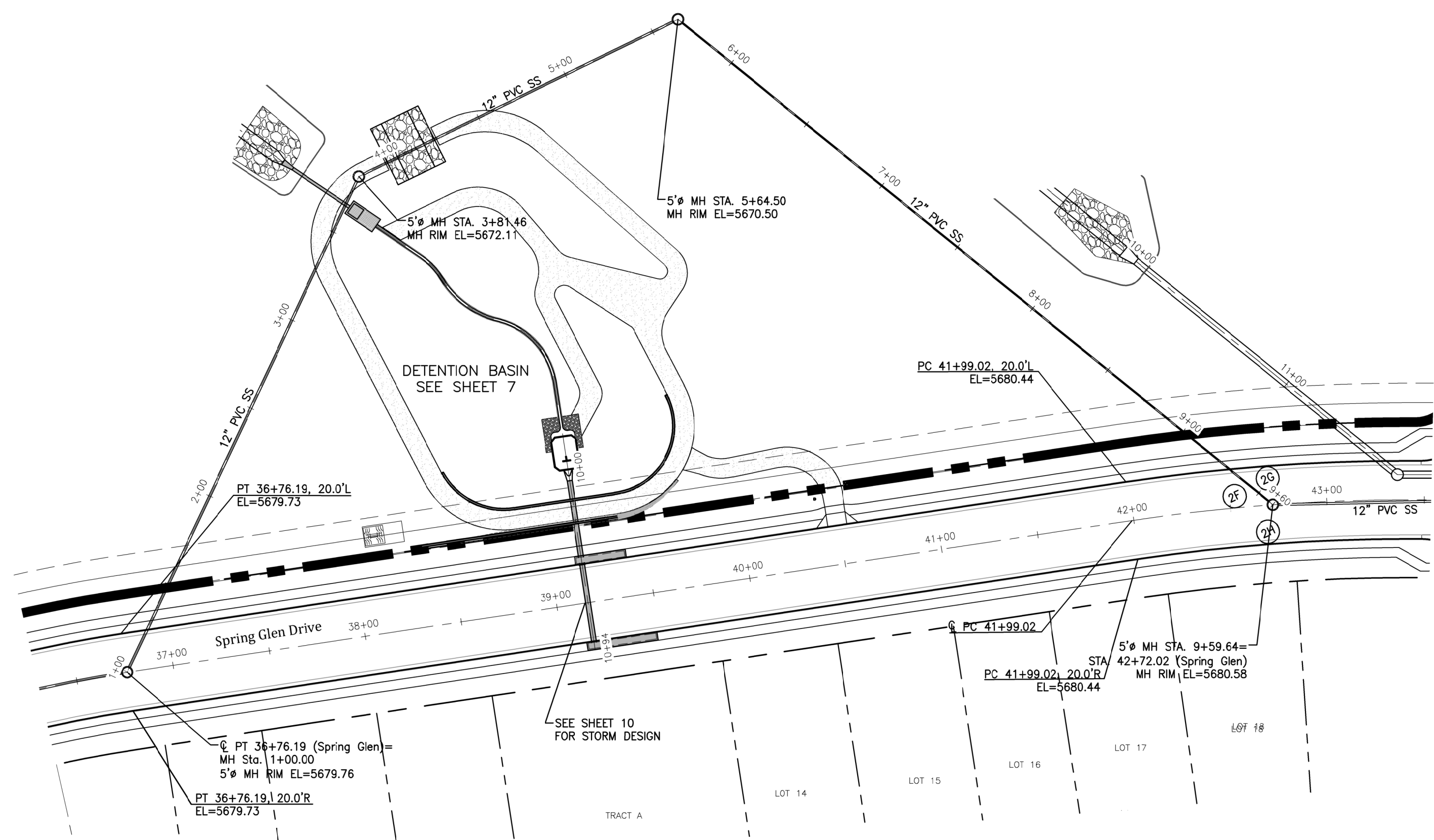
DEVELOPER: WIDEFIELD Investment Group
PREPARED BY: Kiowa Engineering Corporation
3 WIDEFIELD BOULEVARD COLORADO SPRINGS, CO 80911
1604 South 21st Street Colorado Springs, Colorado 80904 (719) 630-7342



VICINITY MAP SCALE: N.T.S.



Project No.:	17038
Date:	September 25, 2018
Design:	AWMc
Drawn:	JAK
Check:	AWMc
Revisions:	



CURVE DATA

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3B	A=90°09'59" L=39.34' R=25.00'		
3C	A=90°09'59" L=39.34' R=25.00'		

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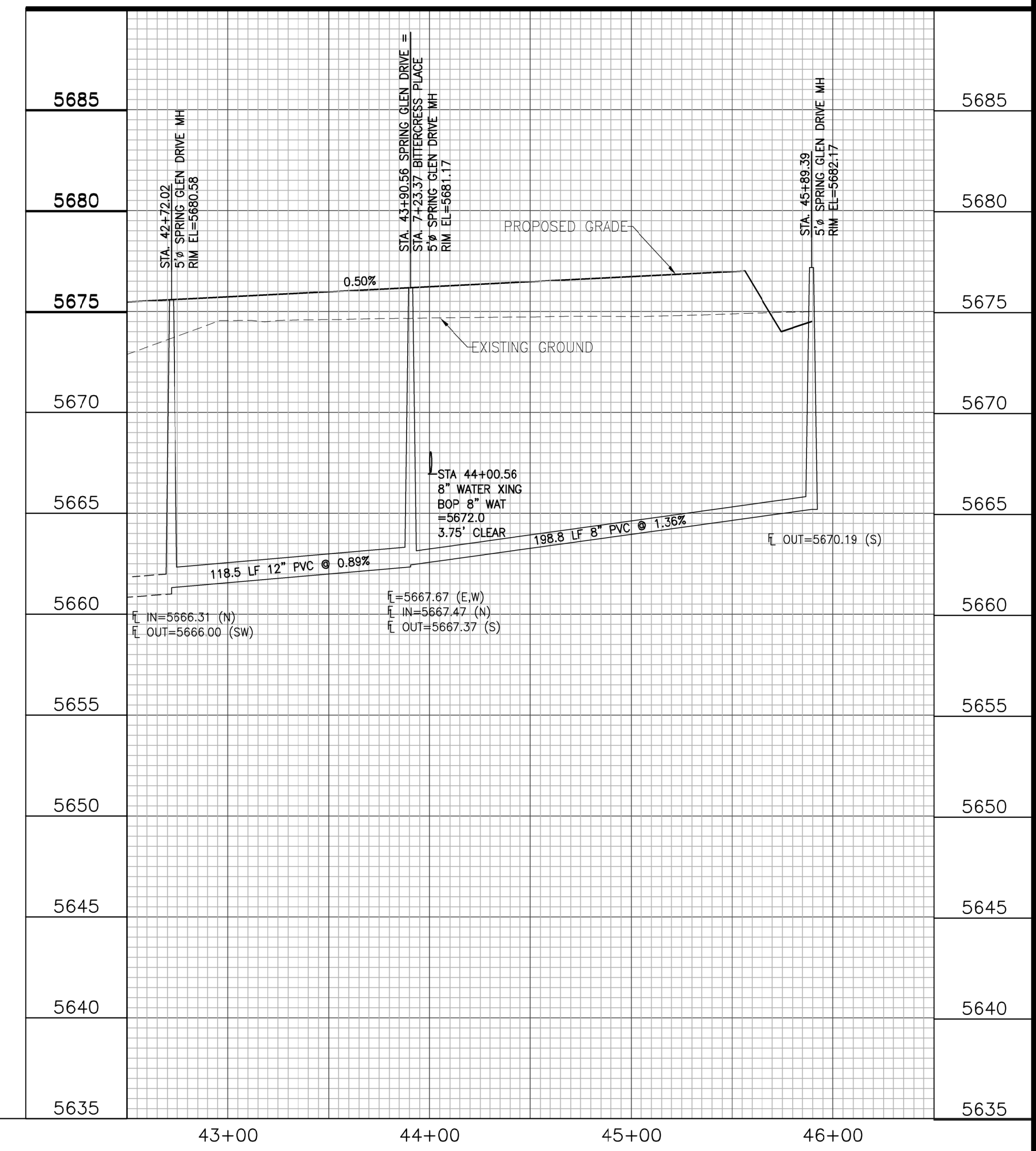
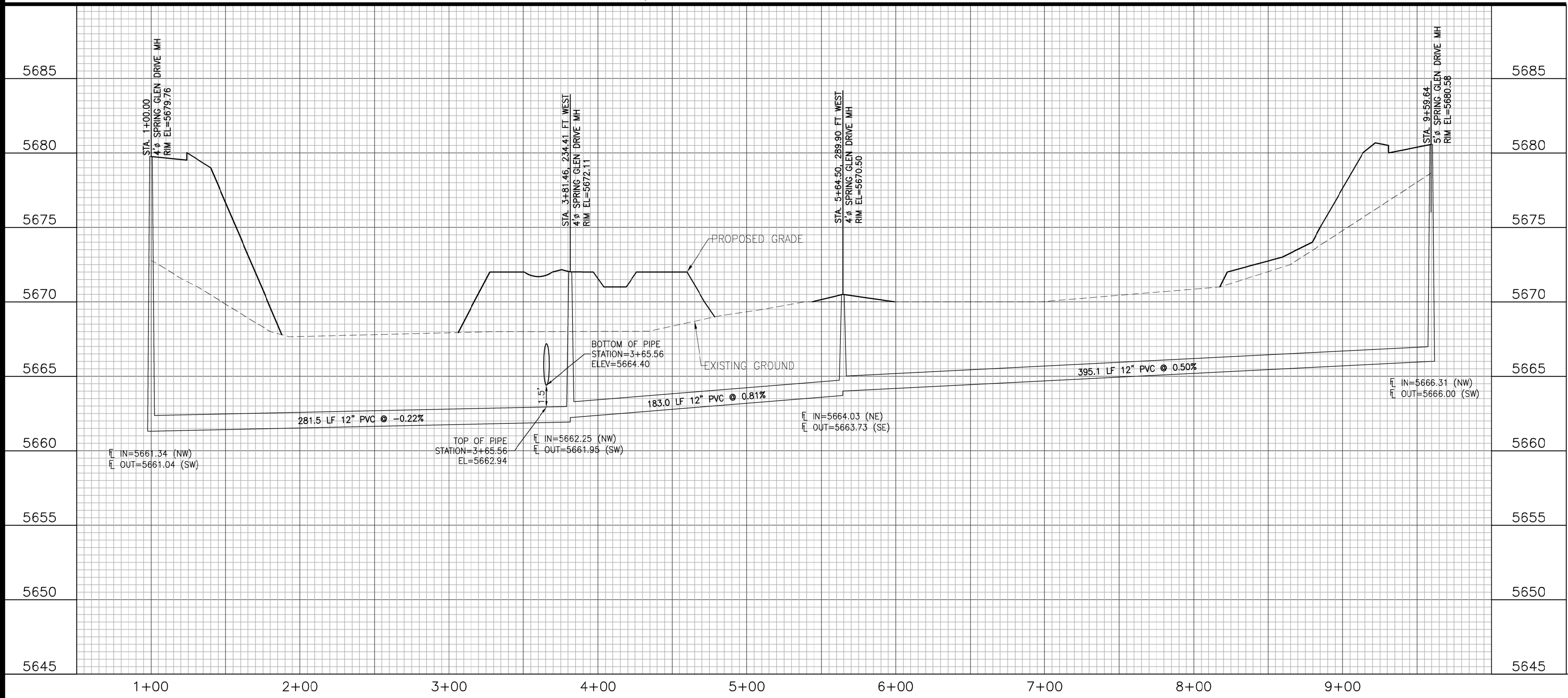
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Engineering Record Drawings

"I hereby affirm that the improvements shown on the Glen at Widefield Filing No. 9 have been constructed in substantial compliance with the Construction Plans approved by El Paso County."

Andrew W. McCord, P.E.

Oct. 19, 2020
 Date



GLEN AT WIDEFIELD FILING NO. 9
SPRING GLEN DRIVE (Sta. 43+00 to Sta. 45+89)
 PLAN AND PROFILE
 EL PASO COUNTY, COLORADO

Project No.:	17038
Date:	September 25, 2018
Design:	AWMc
Drawn:	JAK
Check:	AWMc
Revisions:	

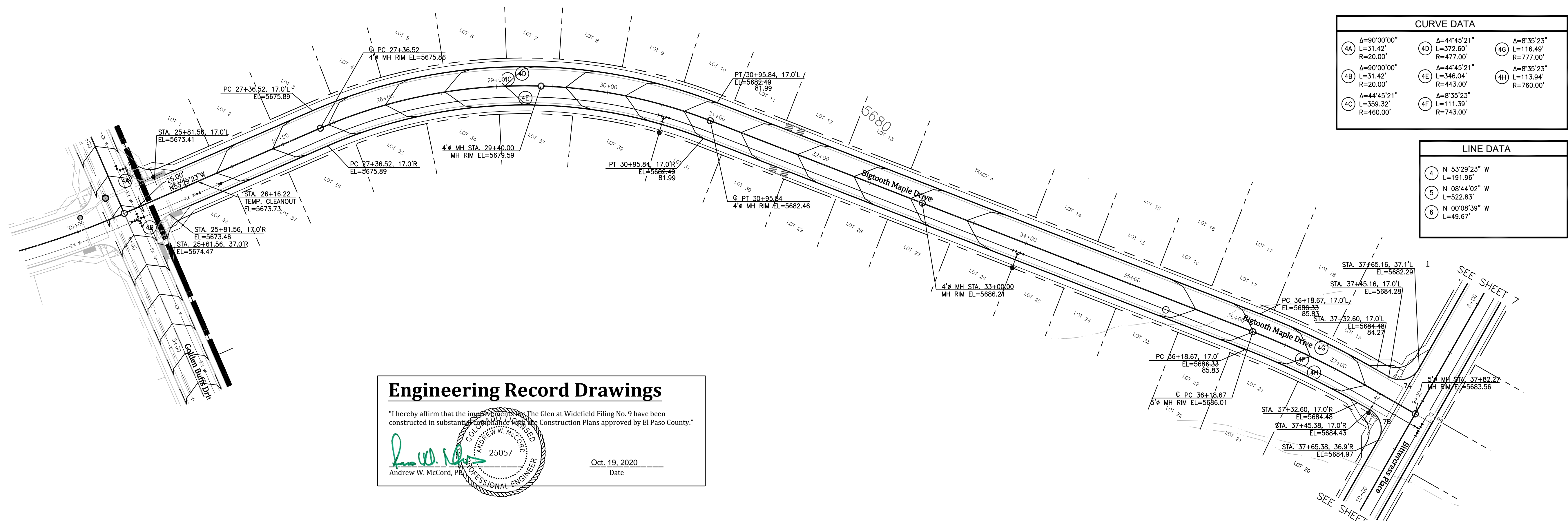
SHEET

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3 of 20 Sheets

Kiowa
 Engineering Corporation
 1604 South 21st Street
 Colorado Springs, Colorado 80904
 (719) 630-7942

W
 WIDEFIELD
 Investment Group



CURVE DATA		
4A	Δ=90°00'00" L=31.42' R=20.00'	Δ=44°45'21" L=372.60' R=477.00'
4B	Δ=90°00'00" L=31.42' R=20.00'	Δ=44°45'21" L=346.04' R=443.00'
4C	Δ=44°45'21" L=359.32' R=460.00'	Δ=8°35'23" L=111.39' R=743.00'
4D	Δ=44°45'21" L=372.60' R=477.00'	Δ=8°35'23" L=116.49' R=777.00'
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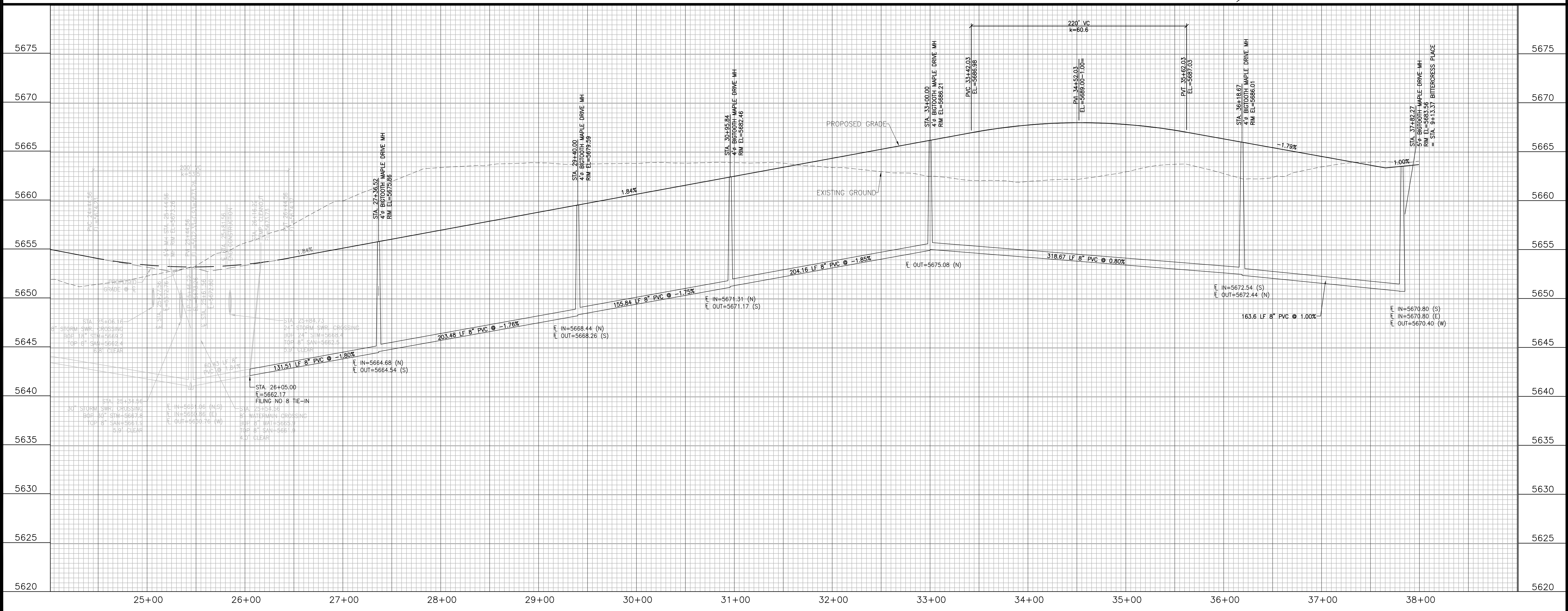
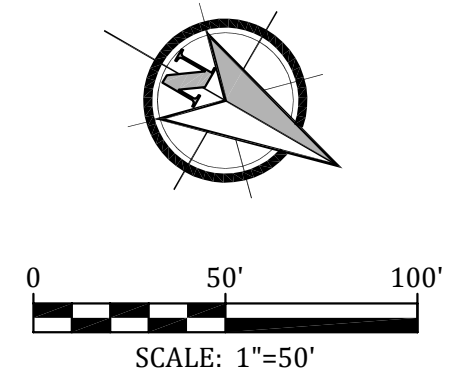
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6	N 00°08'39" W L=49.67'

Engineering Record Drawings

"I hereby affirm that the improvements shown on The Glen at Widefield Filing No. 9 have been constructed in substantial compliance with the Construction Plans approved by El Paso County."

Andrew W. McCord, P.E.
 Andrew W. McCord, P.E.
 25057
 PROFESSIONAL ENGINEER

Oct. 19, 2020
 Date



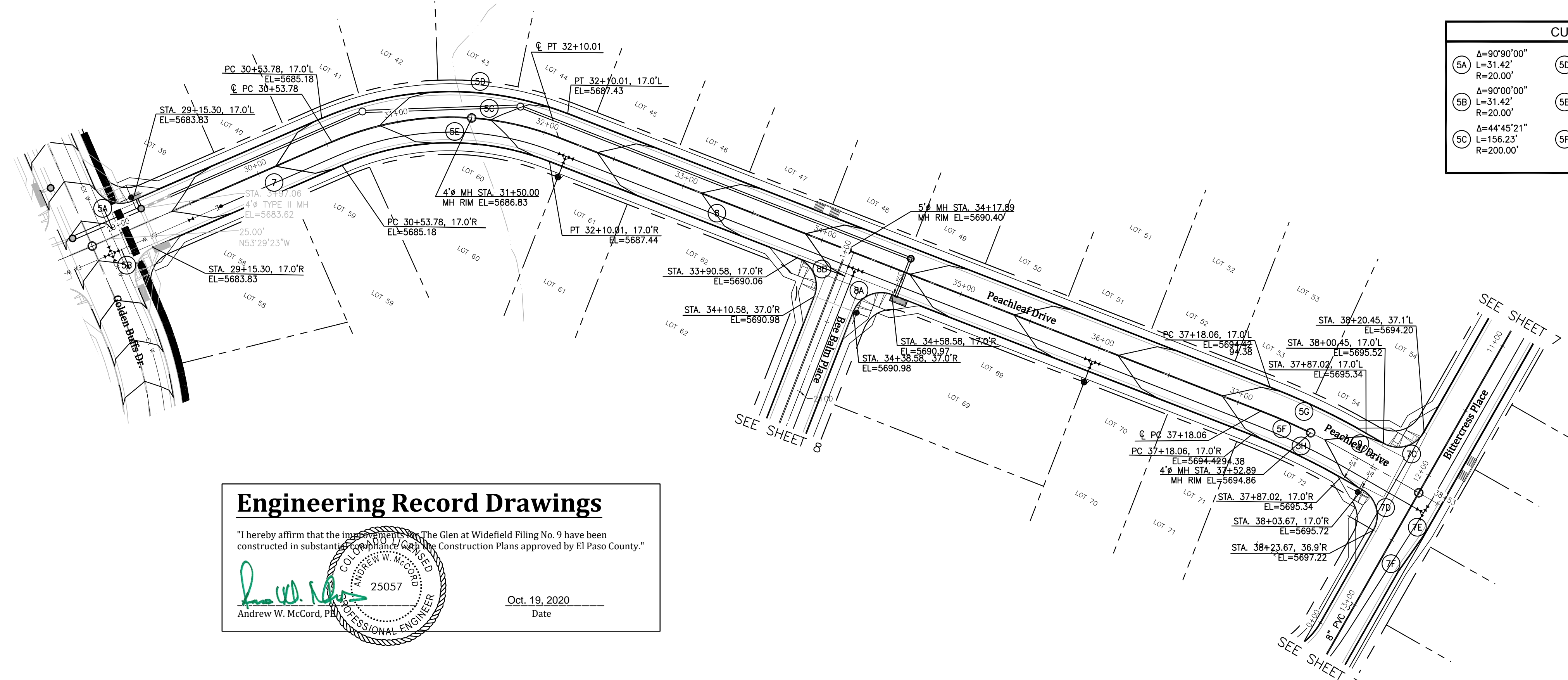
Kiowa
 Engineering Corporation
 1604 South 21st Street
 Colorado Springs, Colorado 80904
 (719) 630-7942

W
 WIDEFIELD
 Investment Group

**GLEN AT WIDEFIELD FILING NO. 9
 BIGTOOTH MAPLE DRIVE (Sta. 25+50 to Sta. 37+82)
 PLAN AND PROFILE
 EL PASO COUNTY, COLORADO**

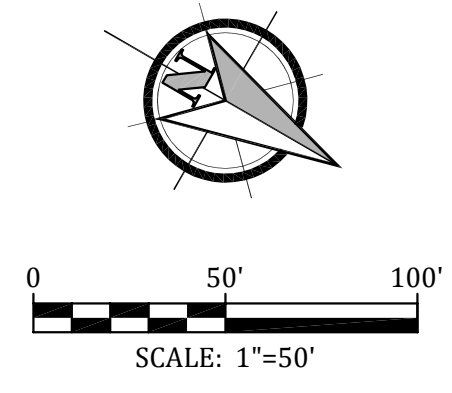
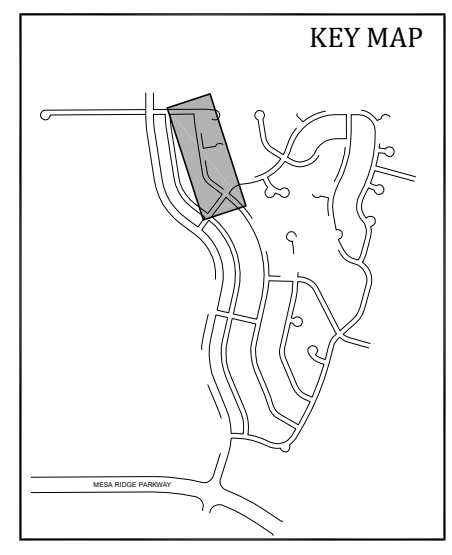
Project No.:	17038
Date:	September 25, 2018
Design:	AWMc
Drawn:	JAK
Check:	AWMc
Revisions:	

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CURVE DATA					
SA	Δ=90°00'00" L=31.42' R=20.00'	SD	Δ=44°45'21" L=169.51' R=217.00'	SC	Δ=8°35'23" L=71.51' R=477.00'
SB	Δ=90°00'00" L=31.42' R=20.00'	SE	Δ=44°45'21" L=142.95' R=183.00'	SH	Δ=8°35'23" L=66.41' R=443.00'
SC	Δ=44°45'21" L=156.23' R=200.00'	SF	Δ=8°35'23" L=68.96' R=460.00'		

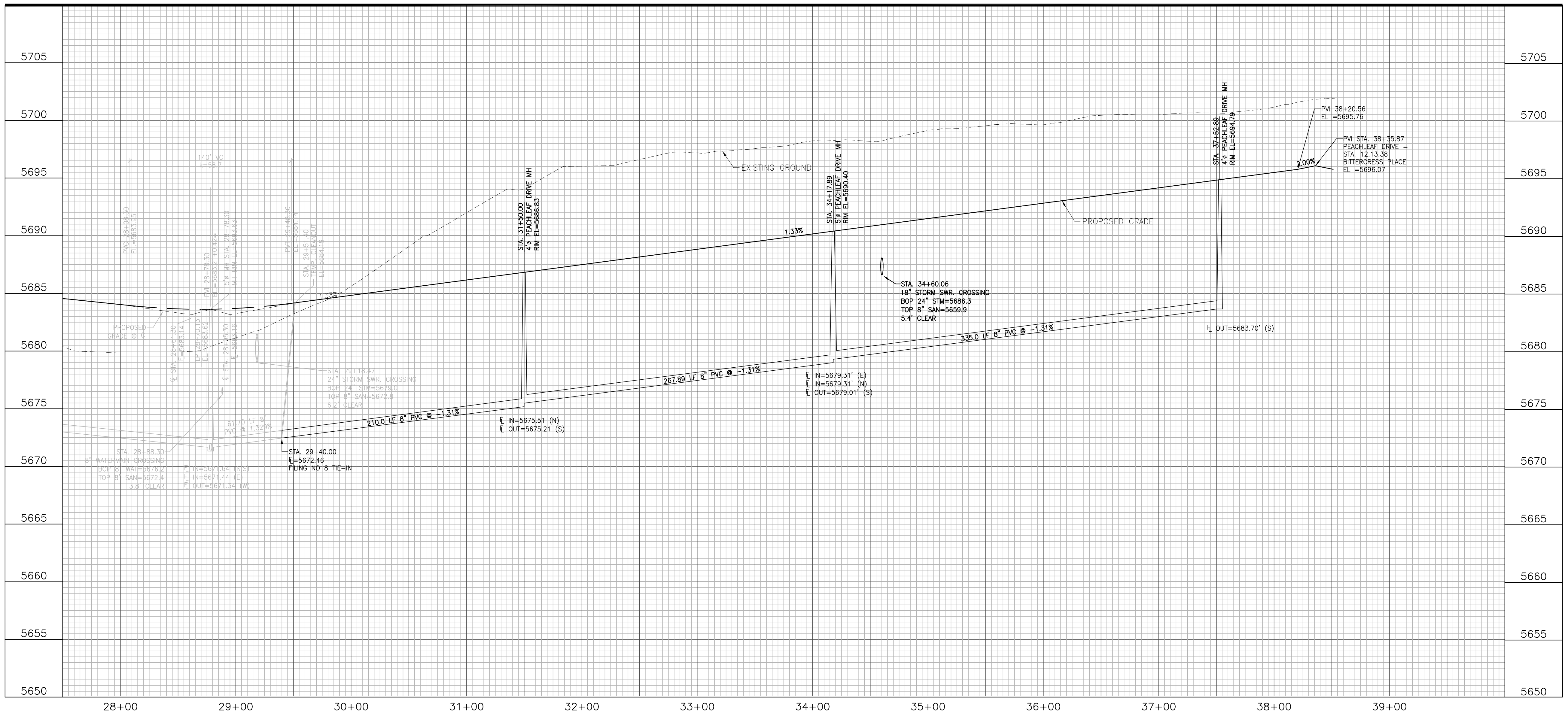
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Engineering Record Drawings

"I hereby affirm that the improvements shown on this plan at Widefield Filing No. 9 have been constructed in substantial compliance with the Construction Plans approved by El Paso County."

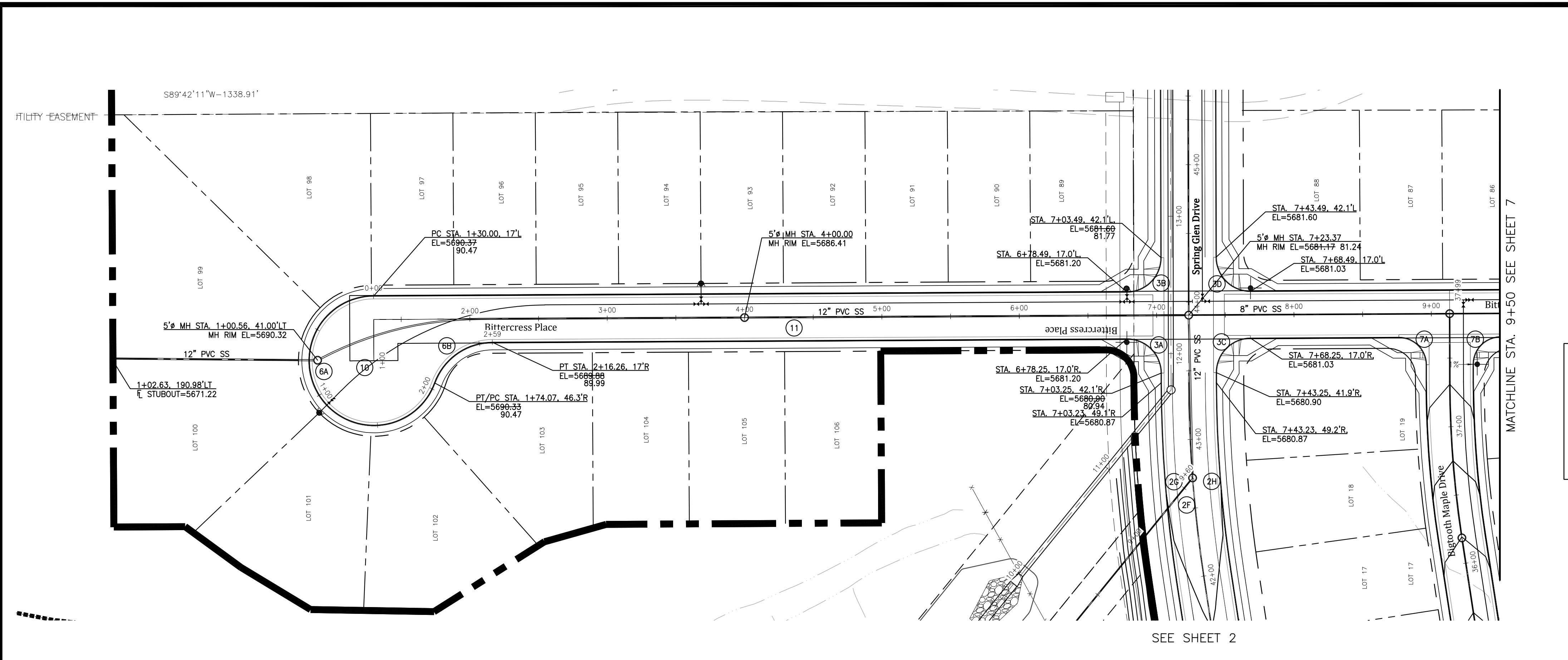
Andrew W. McCord
 Andrew W. McCord, P.E.
 25057
 PROFESSIONAL ENGINEER
 Date: Oct. 19, 2020



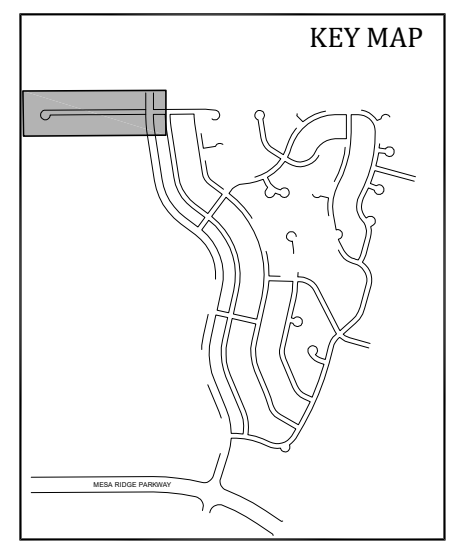
**GLEN AT WIDEFIELD FILING NO. 9
 PEACHLEAF DRIVE (Sta. 25+00 to Sta. 38+36)
 PLAN AND PROFILE
 EL PASO COUNTY, COLORADO**

Project No.:	17038
Date:	September 25, 2018
Design:	AWMc
Drawn:	JAK/MJK
Check:	AWMc
Revisions:	

SHEET
5
 5 of 20 Sheets



CURVE DATA		LINE DATA	
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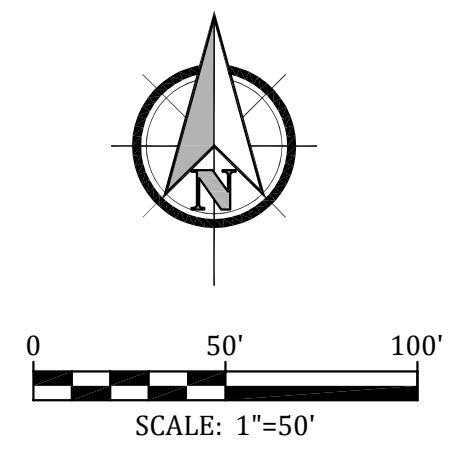


Engineering Record Drawings

"I hereby affirm that the information shown on these drawings was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer in the State of Colorado." The Glen at Widefield Filing No. 9 have been constructed in substantial compliance with the Construction Plans approved by El Paso County."

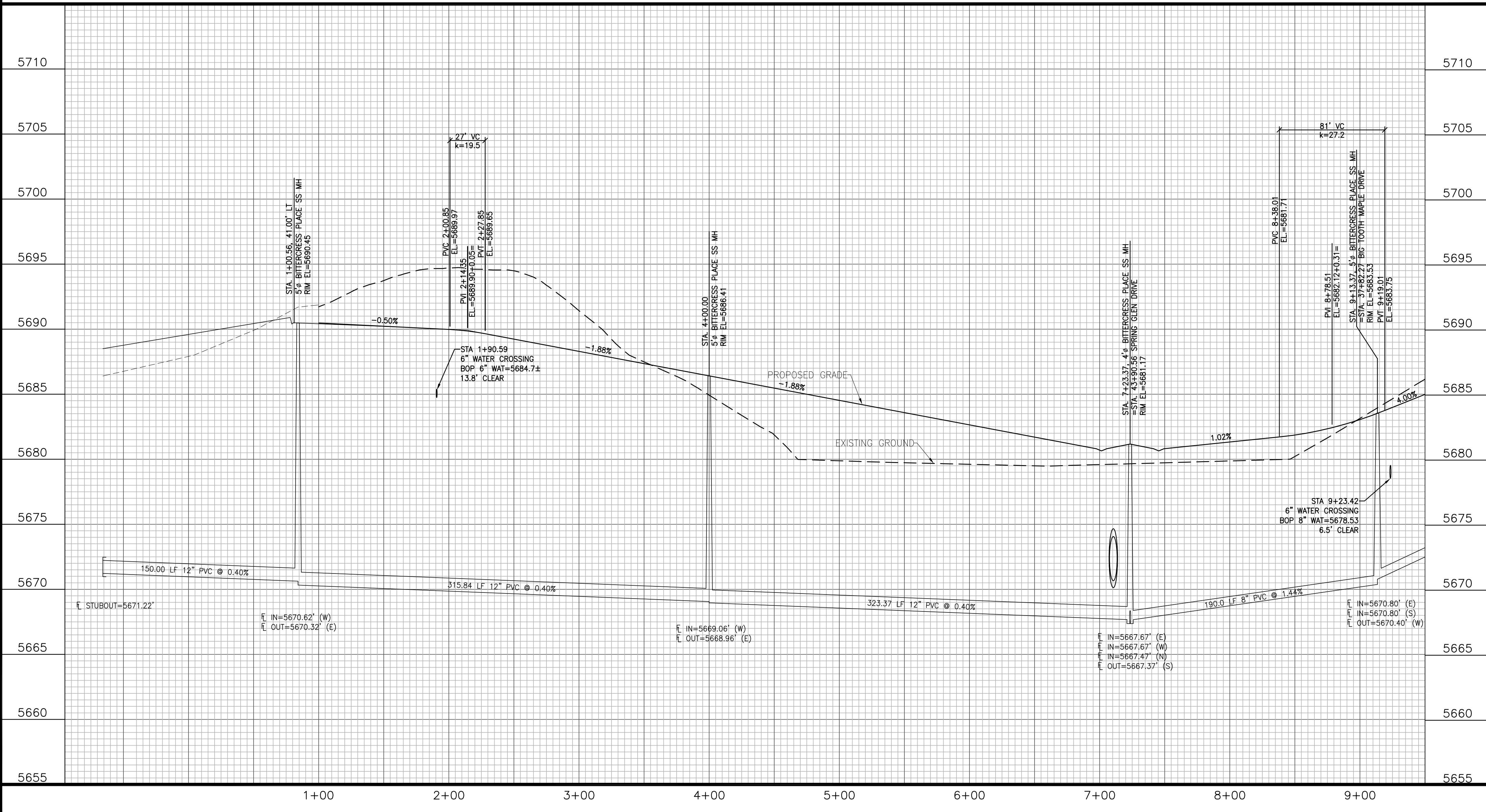
Andrew W. McCord, P.E. 25057

Oct. 19, 2020
Date

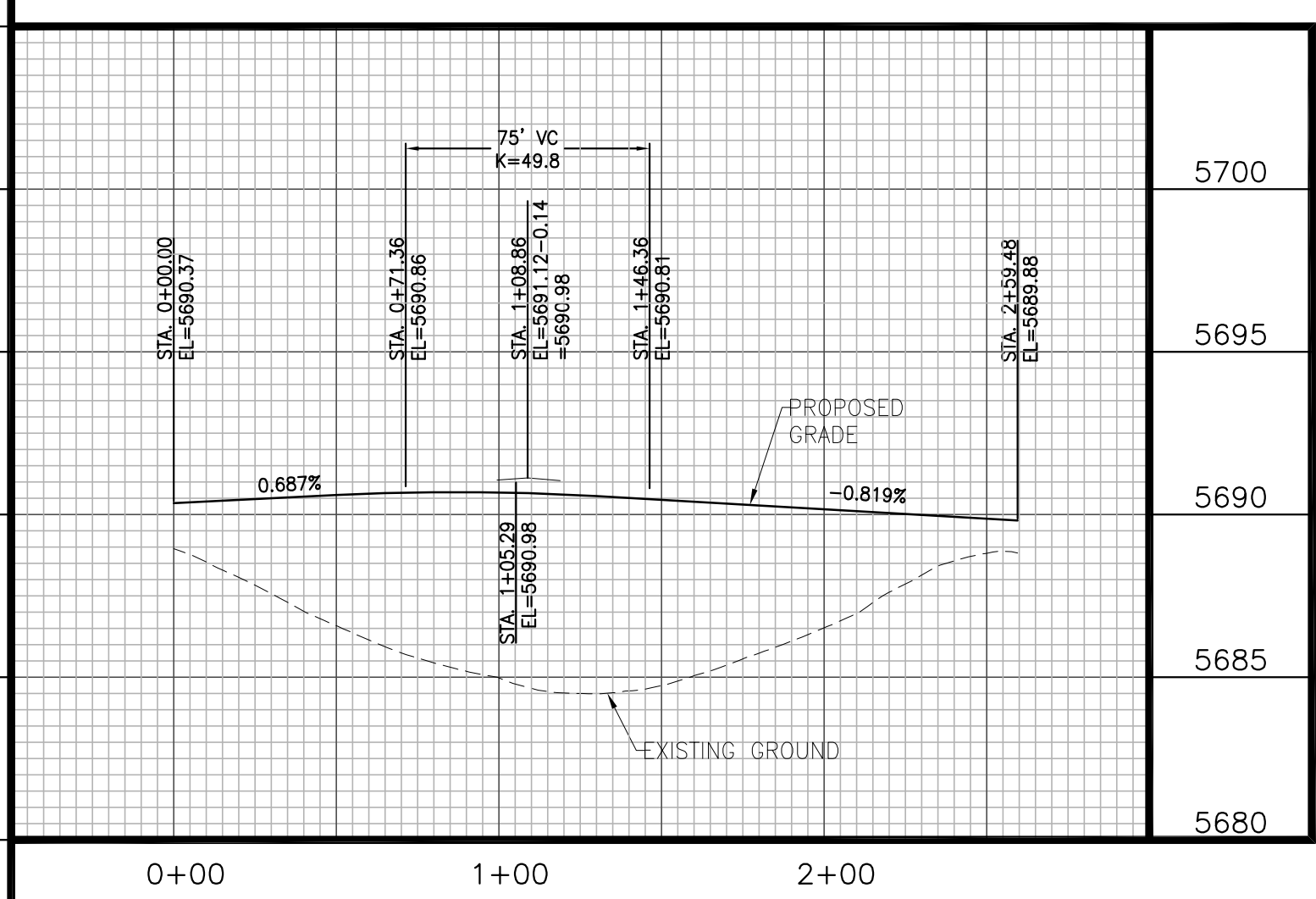


SEE SHEET 2

MATCHLINE STA. 9+50 SEE SHEET 7



CUL-DE-SAC PROFILE



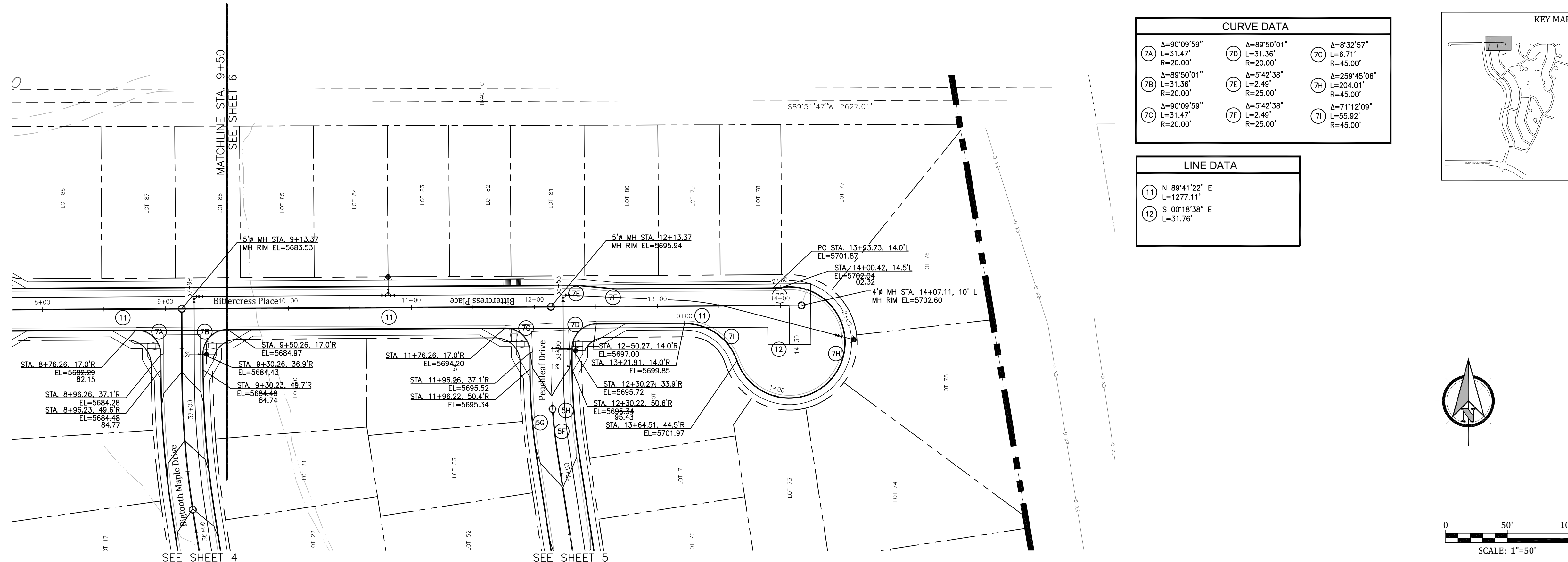
**GLEN AT WIDEFIELD FILING NO. 9
BITTERCRESS PLACE (Sta. 0+00 to Sta. 9+00)
PLAN AND PROFILE
EL PASO COUNTY, COLORADO**

Project No.:	17038
Date:	September 25, 2018
Design:	AWMc
Drawn:	JAK/MJK
Check:	AWMc
Revisions:	

SHEET

6

6 of 20 Sheets

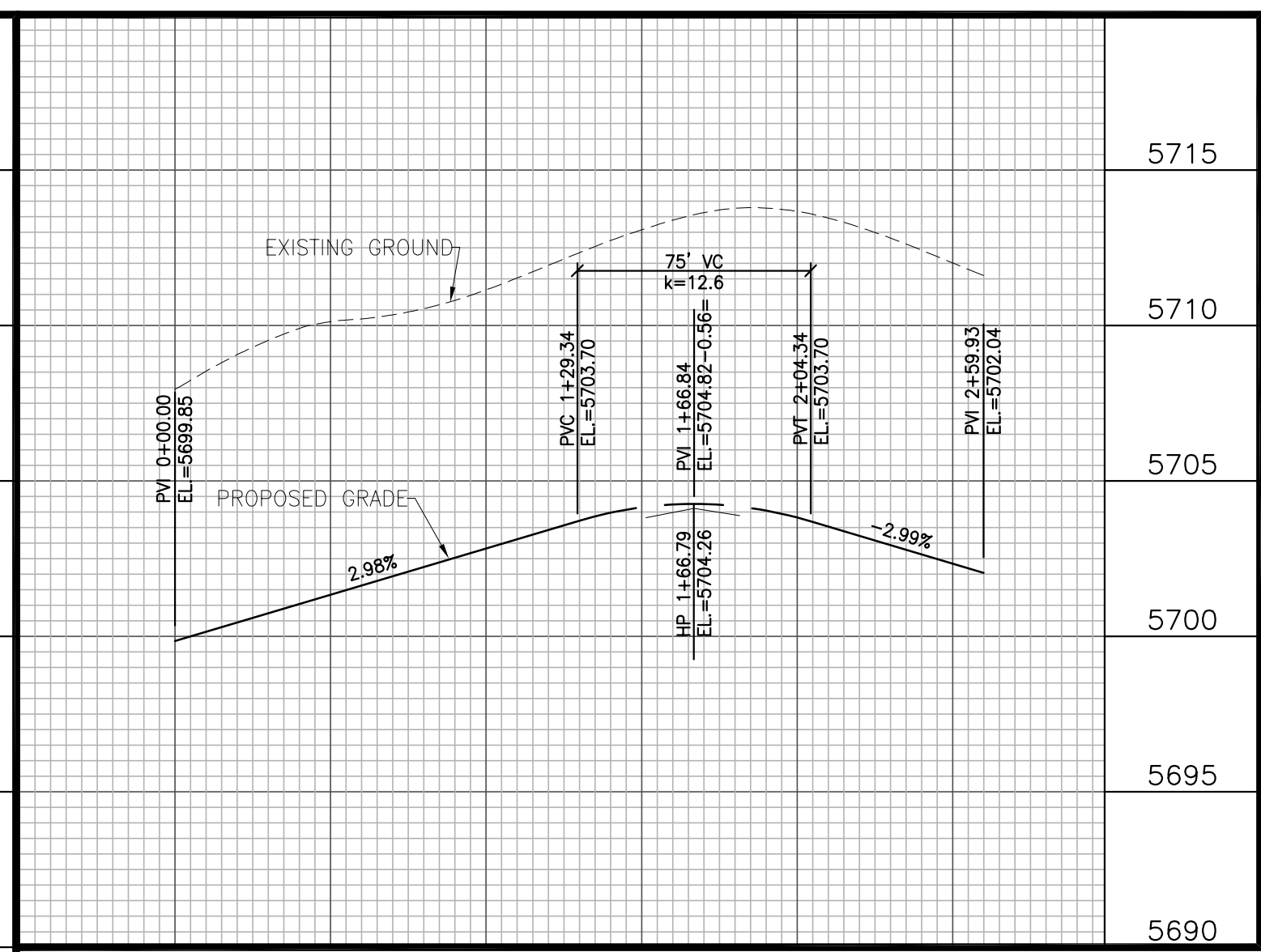
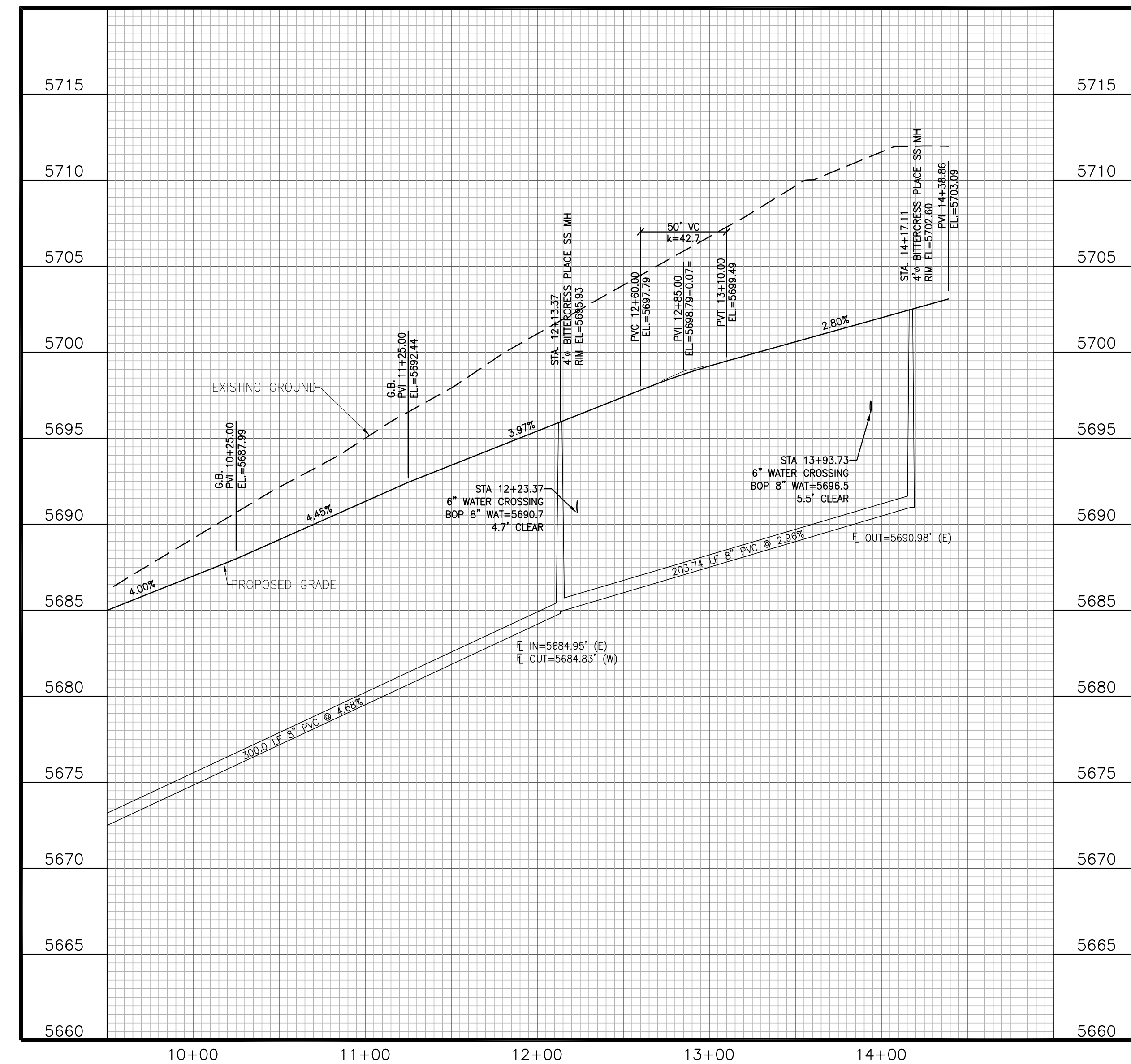


CURVE DATA

7A	Δ=90°09'59" L=31.47' R=20.00'	7D	Δ=89°50'01" L=31.36' R=20.00'	7G	Δ=8°32'57" L=6.71' R=45.00'
7B	Δ=89°50'01" L=31.36' R=20.00'	7E	Δ=5°42'38" L=2.49' R=25.00'	7H	Δ=259°45'06" L=204.01' R=45.00'
7C	Δ=90°09'59" L=31.47' R=20.00'	7F	Δ=5°42'38" L=2.49' R=25.00'	7I	Δ=71°12'09" L=55.92' R=45.00'

LINE DATA

11	N 89°41'22" E L=1277.11'
12	S 00°18'38" E L=31.76'



CUL-DE-SAC PROFILE

Engineering Record Drawings

"I hereby affirm that the information contained herein was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer in the State of Colorado. The Glen at Widefield Filing No. 9 have been constructed in substantial compliance with the Construction Plans approved by El Paso County."

Andrew W. McCord, P.E. 25057
Date: Oct. 19, 2020

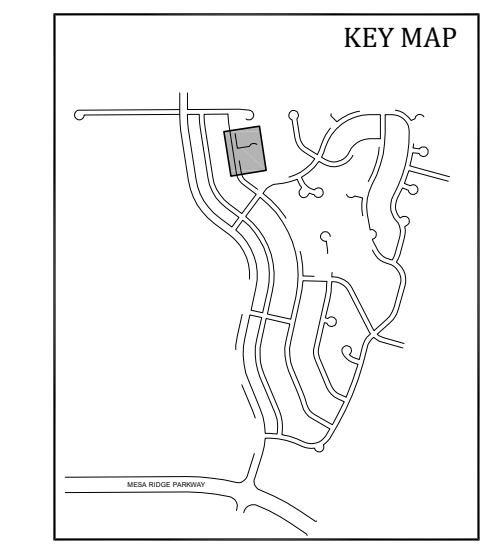
Kiowa
Engineering Corporation
1604 South 21st Street
Colorado Springs, Colorado 80904
(719) 630-7942

W
WIDEFIELD
Investment Group

**GLEN AT WIDEFIELD FILING NO. 9
BITTERCRESS PLACE (Sta. 9+00 to Sta. 14+39)
PLAN AND PROFILE
EL PASO COUNTY, COLORADO**

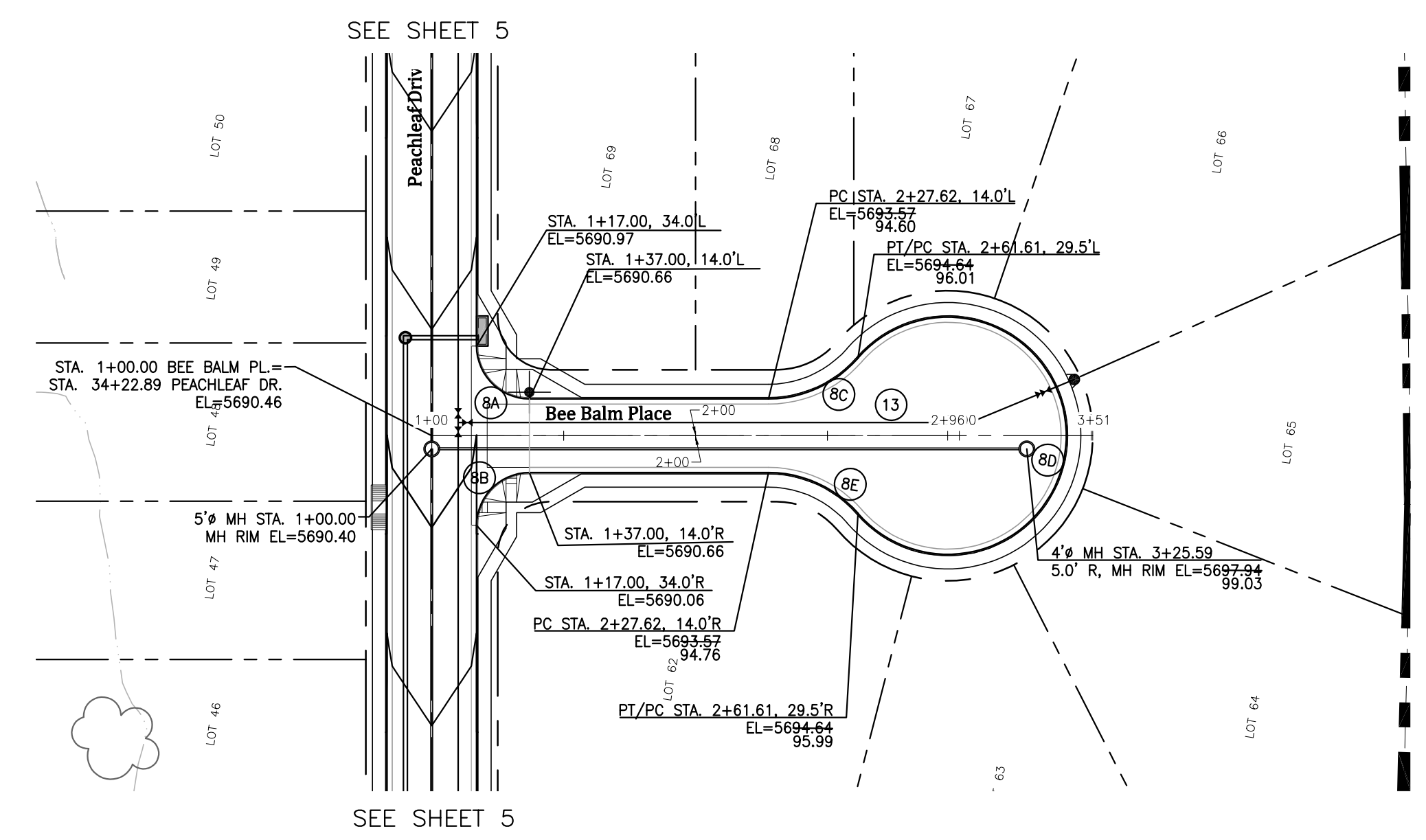
Project No.:	17038
Date:	September 25, 2018
Design:	AWMc
Drawn:	JAK
Check:	AWMc
Revisions:	

SHEET
7
7 of 20 Sheets



CURVE DATA	
8A	$\Delta=49^{\circ}02'18''$ $L=38.51'$ $R=45.00'$
8B	$\Delta=278^{\circ}04'35''$ $L=218.40'$ $R=45.00'$
8C	$\Delta=49^{\circ}02'18''$ $L=38.51'$ $R=45.00'$

LINE DATA	
13	S 81°15'58" E L=250.59'

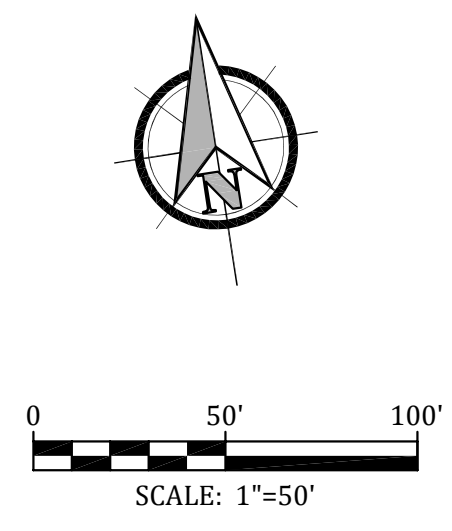


Engineering Record Drawings

I hereby affirm that the information shown on these Construction Plans approved by El Paso County, Colorado, was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer in the State of Colorado.

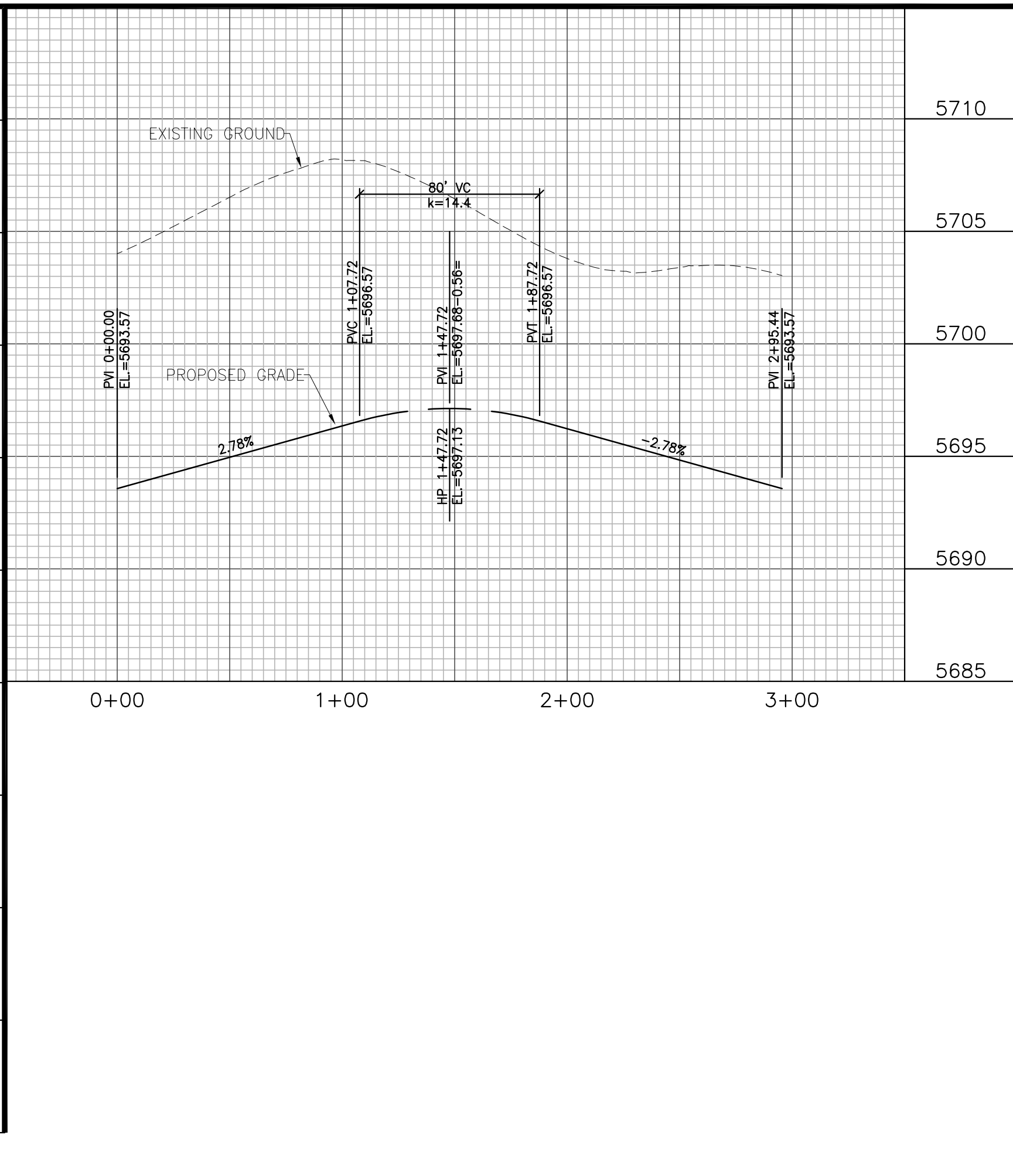
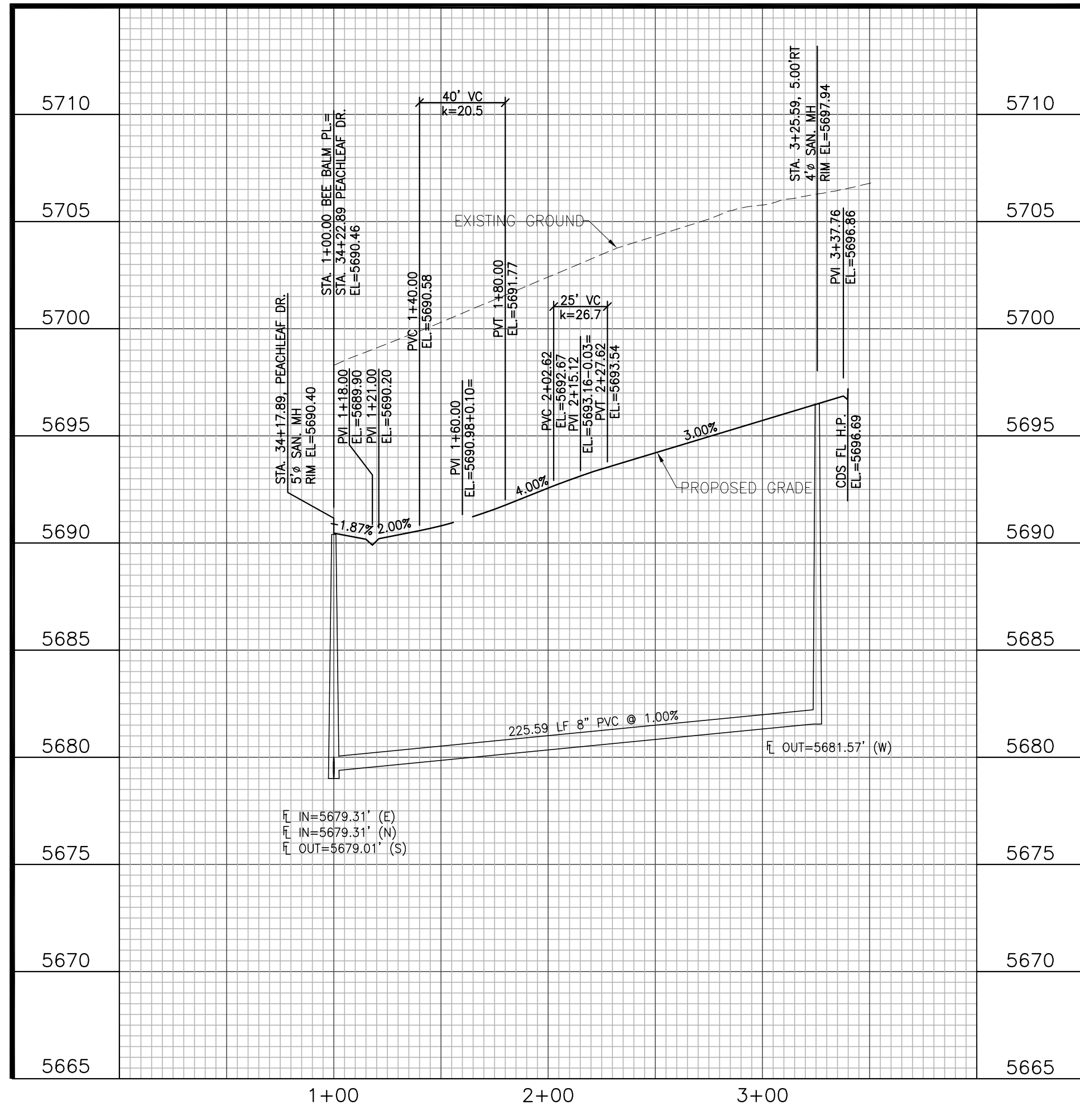
Andrew W. McCord
25057
Andrew W. McCord, P.E.
PROFESSIONAL ENGINEER

Oct. 19, 2020
Date



CENTERLINE PROFILE

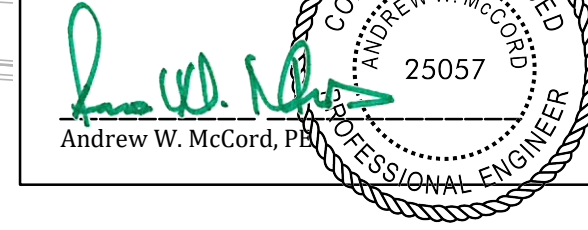
CUL-DE-SAC PROFILE



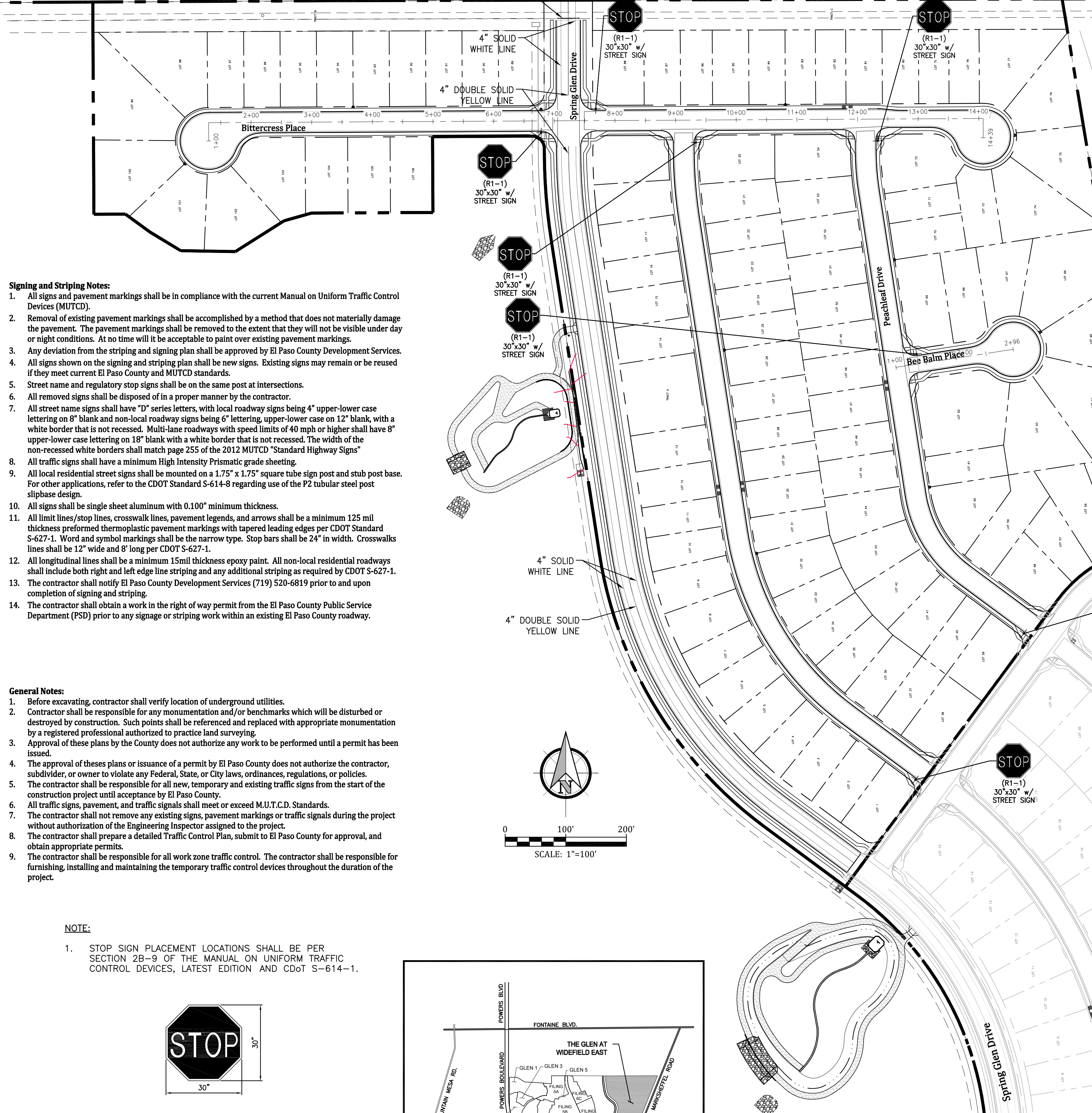
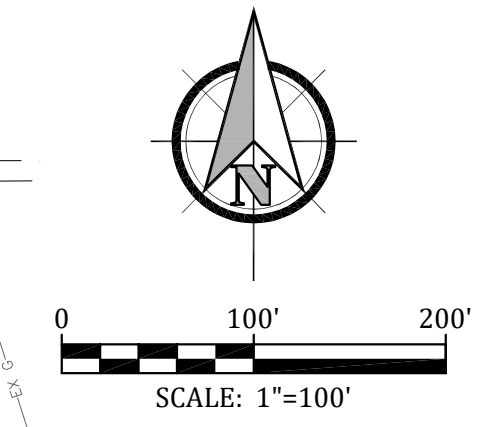
INSTALL 36" MOVABLE TYPE 3 BARRICADE
PER CDOT STD. S-630-2 w/ ROAD
CLOSED (R11-2)

Engineering Record Drawings

"I hereby affirm that the engineering of The Glen at Widefield Filing No. 9 have been constructed in substantial compliance with the Construction Plans approved by El Paso County."



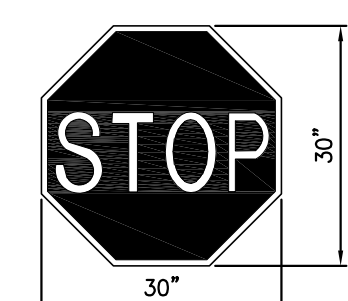
Oct. 19, 2020
Date



- Signing and Striping Notes:**
- All signs and pavement markings shall be in compliance with the current Manual on Uniform Traffic Control Devices (MUTCD).
 - Removal of existing pavement markings shall be accomplished by a method that does not materially damage the pavement. The pavement markings shall be removed to the extent that they will not be visible under dry or night conditions. At no time will it be acceptable to paint over existing pavement markings.
 - Any deviation from the striping and signing plan shall be approved by El Paso County Development Services.
 - All signs shown on the signing and striping plan shall be new signs. Existing signs may remain or be reused if they meet current El Paso County and MUTCD standards.
 - Street name and regulatory stop signs shall be on the same post at intersections.
 - All removed signs shall be disposed of in a proper manner by the contractor.
 - All street name signs shall have "D" series letters, with local roadway signs being 4" upper-lower case lettering on 8" blank and non-local roadway signs being 5" lettering, upper-lower case on 12" blank, with a white border that is not recessed. Multi-lane roadways with speed limits of 40 mph or higher shall have 8" upper-lower case lettering on 18" blank with a white border that is not recessed. The width of the non-recessed white borders shall match page 255 of the 2012 MUTCD "Standard Highway Signs".
 - All traffic signs shall have a minimum High Intensity Prismatic grade sheeting.
 - All local residential street signs shall be mounted on a 1.75" x 1.75" square tube sign post and stub post base. For other applications, refer to the CDOT Standard S-614-8 regarding use of the P2 tubular steel post slipbase design.
 - All signs shall be single sheet aluminum with 0.100" minimum thickness.
 - All limit lines/stop lines, crosswalk lines, pavement legends, and arrows shall be a minimum 125 mil thickness preformed thermoplastic pavement markings with tapered leading edges per CDOT Standard S-627-1. Word and symbol markings shall be the narrow type. Stop bars shall be 24" in width. Crosswalk lines shall be 12" wide and 8' long per CDOT S-627-1.
 - All longitudinal lines shall be a minimum 15mil thickness epoxy paint. All non-local residential roadways shall include both right and left edge line striping and any additional striping as required by CDOT S-627-1.
 - The contractor shall notify El Paso County Development Services (719) 520-6819 prior to and upon completion of signing and striping.
 - The contractor shall obtain a work in the right of way permit from the El Paso County Public Service Department (PSD) prior to any signage or striping work within an existing El Paso County roadway.

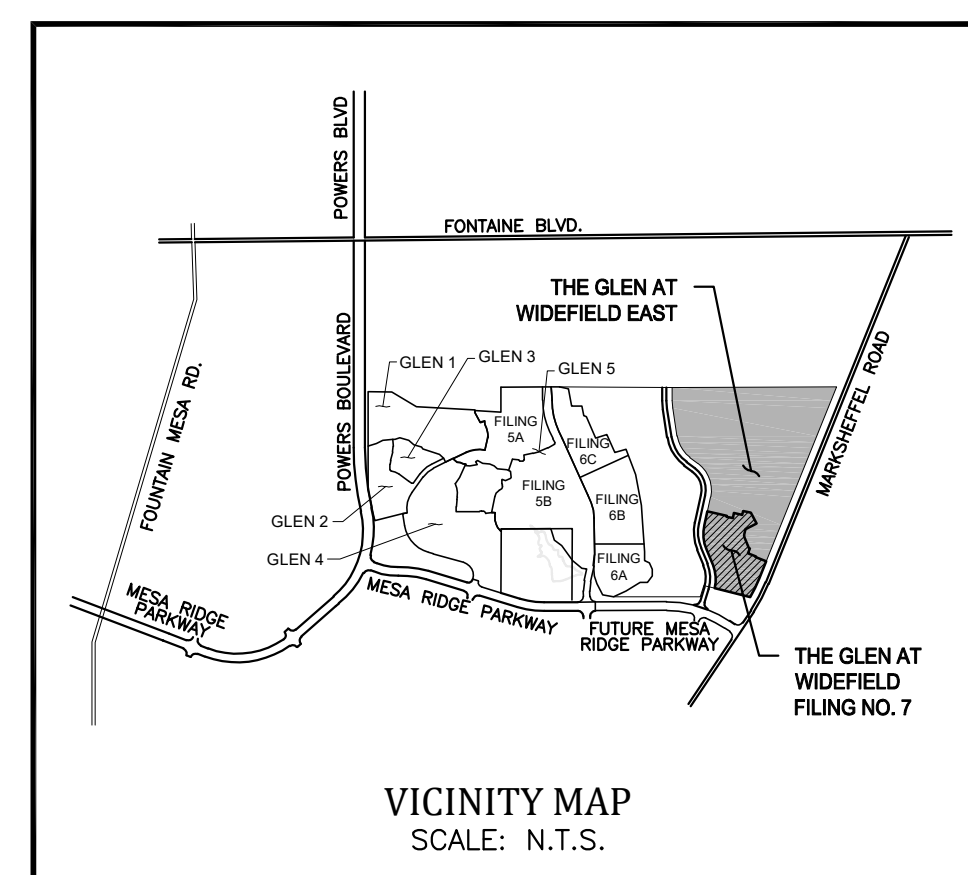
- General Notes:**
- Before excavating, contractor shall verify location of underground utilities.
 - Contractor shall be responsible for any monumentation and/or benchmarks which will be disturbed or destroyed by construction. Such points shall be referenced and replaced with appropriate monumentation by a registered professional authorized to practice land surveying.
 - Approval of these plans by the County does not authorize any work to be performed until a permit has been issued.
 - The approval of these plans or issuance of a permit by El Paso County does not authorize the contractor, subdivider, or owner to violate any Federal, State, or City laws, ordinances, regulations, or policies.
 - The contractor shall be responsible for all new, temporary and existing traffic signs from the start of the construction project until acceptance by El Paso County.
 - All traffic signs, pavement, and traffic signals shall meet or exceed M.U.T.C.D. Standards.
 - The contractor shall not remove any existing signs, pavement markings or traffic signals during the project without authorization of the Engineering Inspector assigned to the project.
 - The contractor shall prepare a detailed Traffic Control Plan, submit to El Paso County for approval, and obtain appropriate permits.
 - The contractor shall be responsible for all work zone traffic control. The contractor shall be responsible for furnishing, installing and maintaining the temporary traffic control devices throughout the duration of the project.

- NOTE:**
- STOP SIGN PLACEMENT LOCATIONS SHALL BE PER SECTION 2B-9 OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION AND CDOT S-614-1.



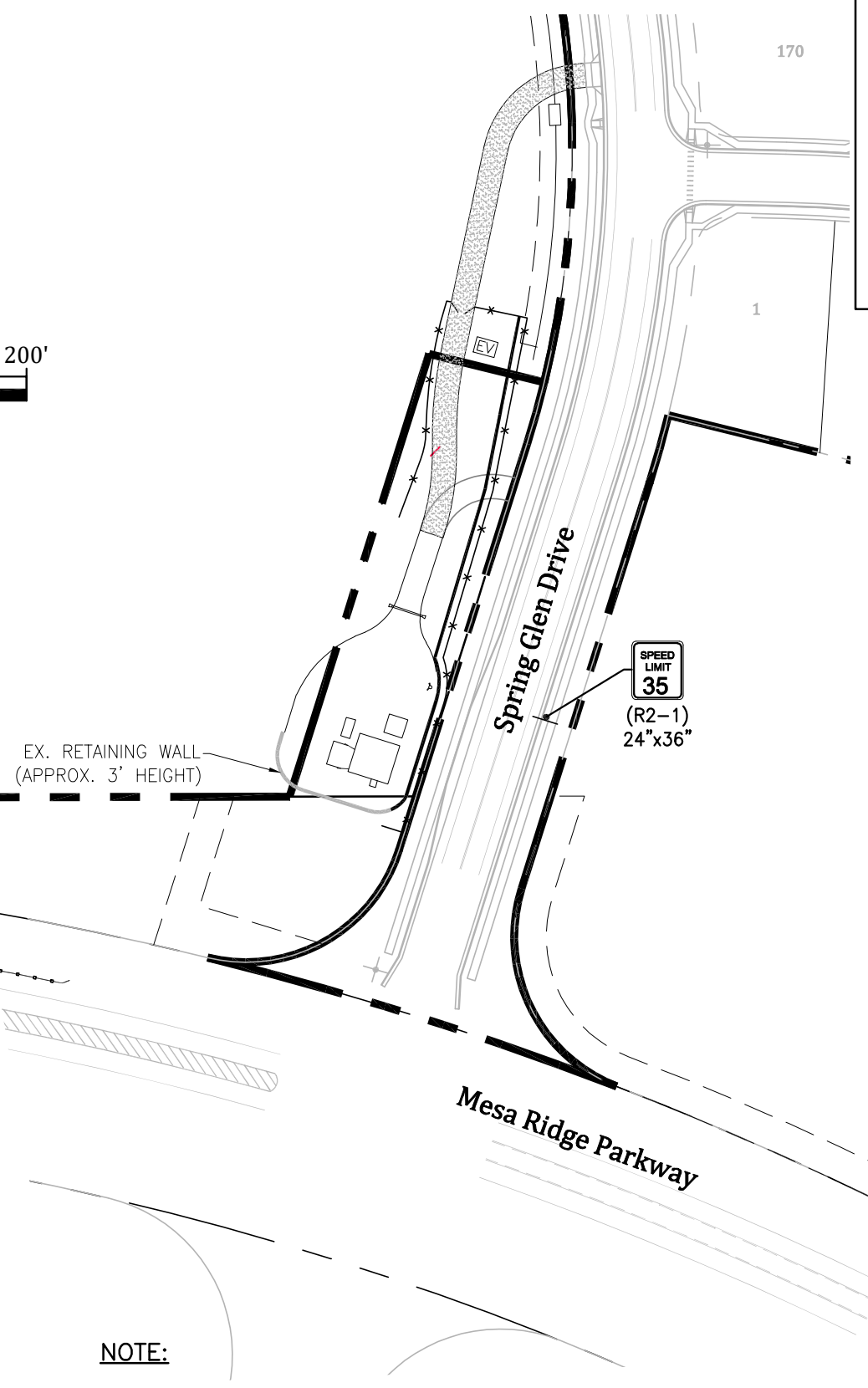
STOP SIGN
R1-1

SIGN DETAILS
SCALE: 1/4" = 1'-0"



VICINITY MAP
SCALE: N.T.S.

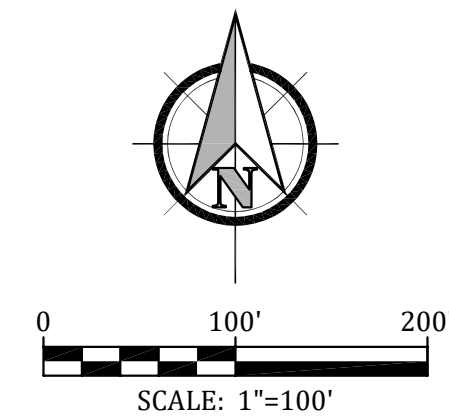
See detail this sheet for additional speed limit signage required on Spring Glen north of Mesa Ridge Parkway.



NOTE:
SPEED LIMIT SIGN WAS NOT INCLUDED FOR FILING NO. 7 & 8 ON SPRING GLEN DRIVE. INSTALL SPEED LIMIT SIGN ENTERING ON SPRING GLEN DRIVE FROM MESA RIDGE PARKWAY.

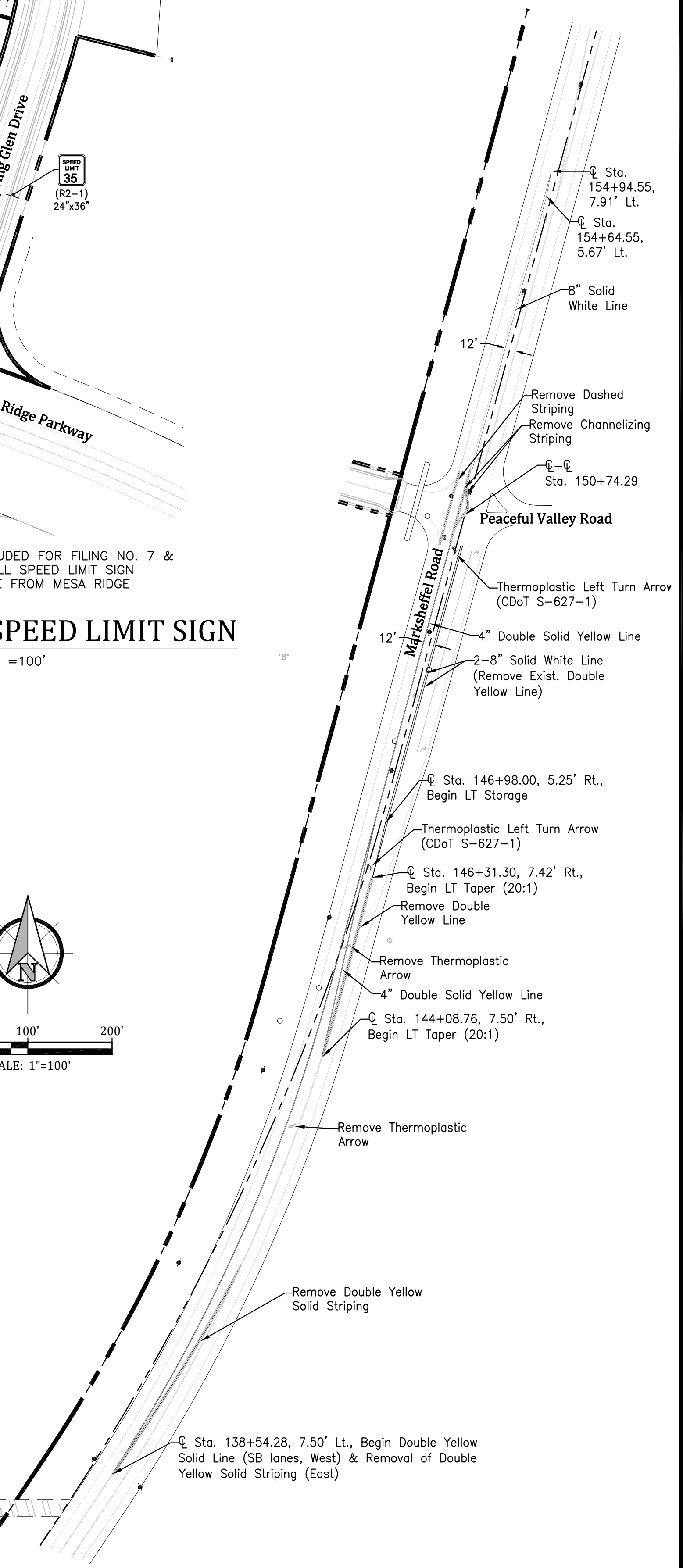
SPRING GLEN DR. SPEED LIMIT SIGN

SCALE: 1" = 100'

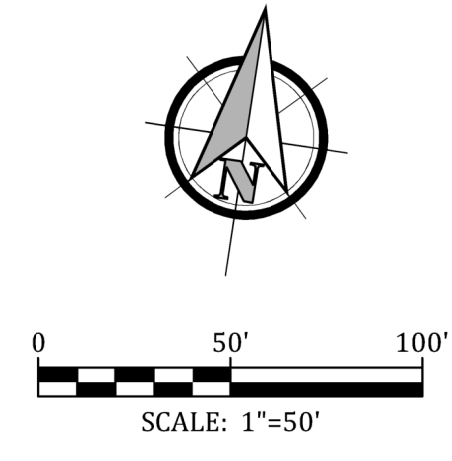


MARKSHEFFEL ROAD RESTRIPIING

SCALE: 1" = 100'



Project No.:	17038
Date:	September 25, 2018
Design:	AWMc
Drawn:	JAK
Check:	AWMc
Revisions:	

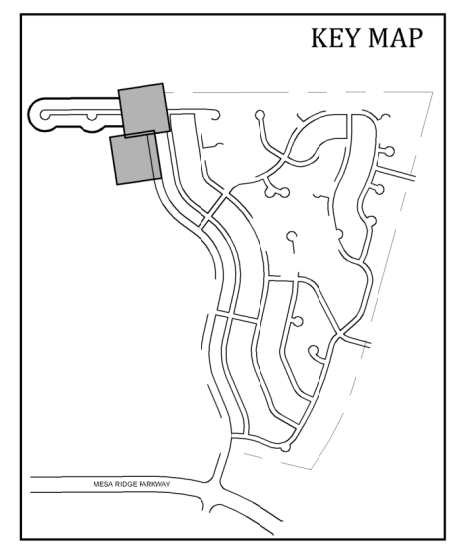
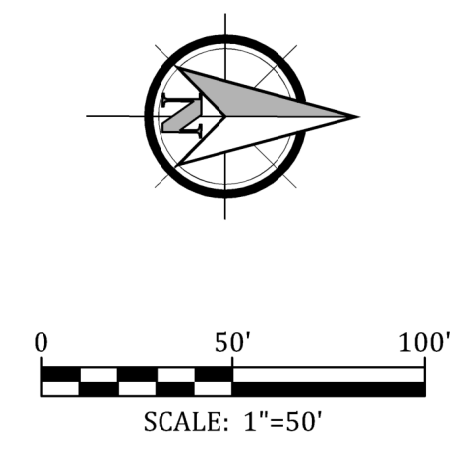


Engineering Record Drawings

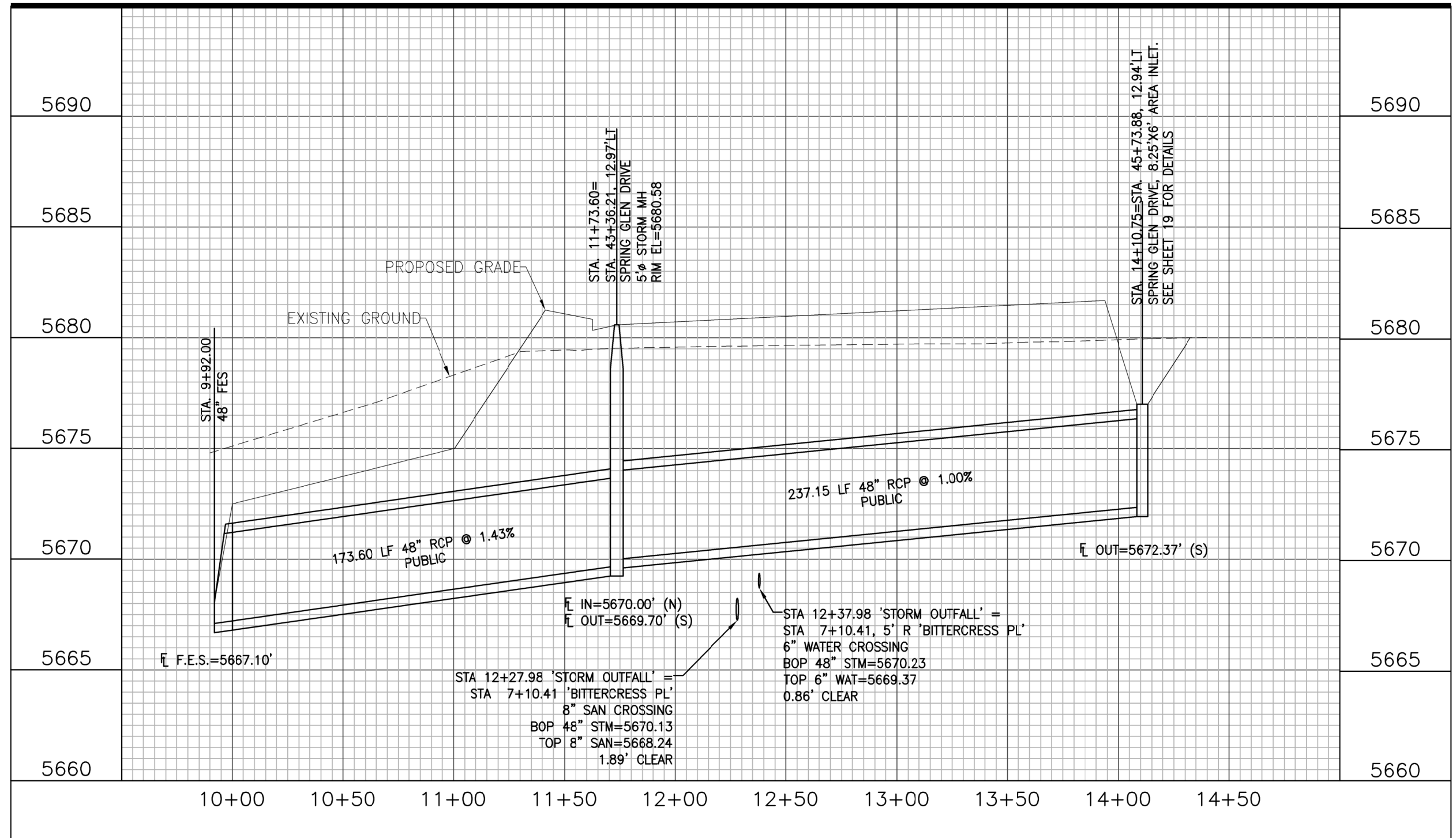
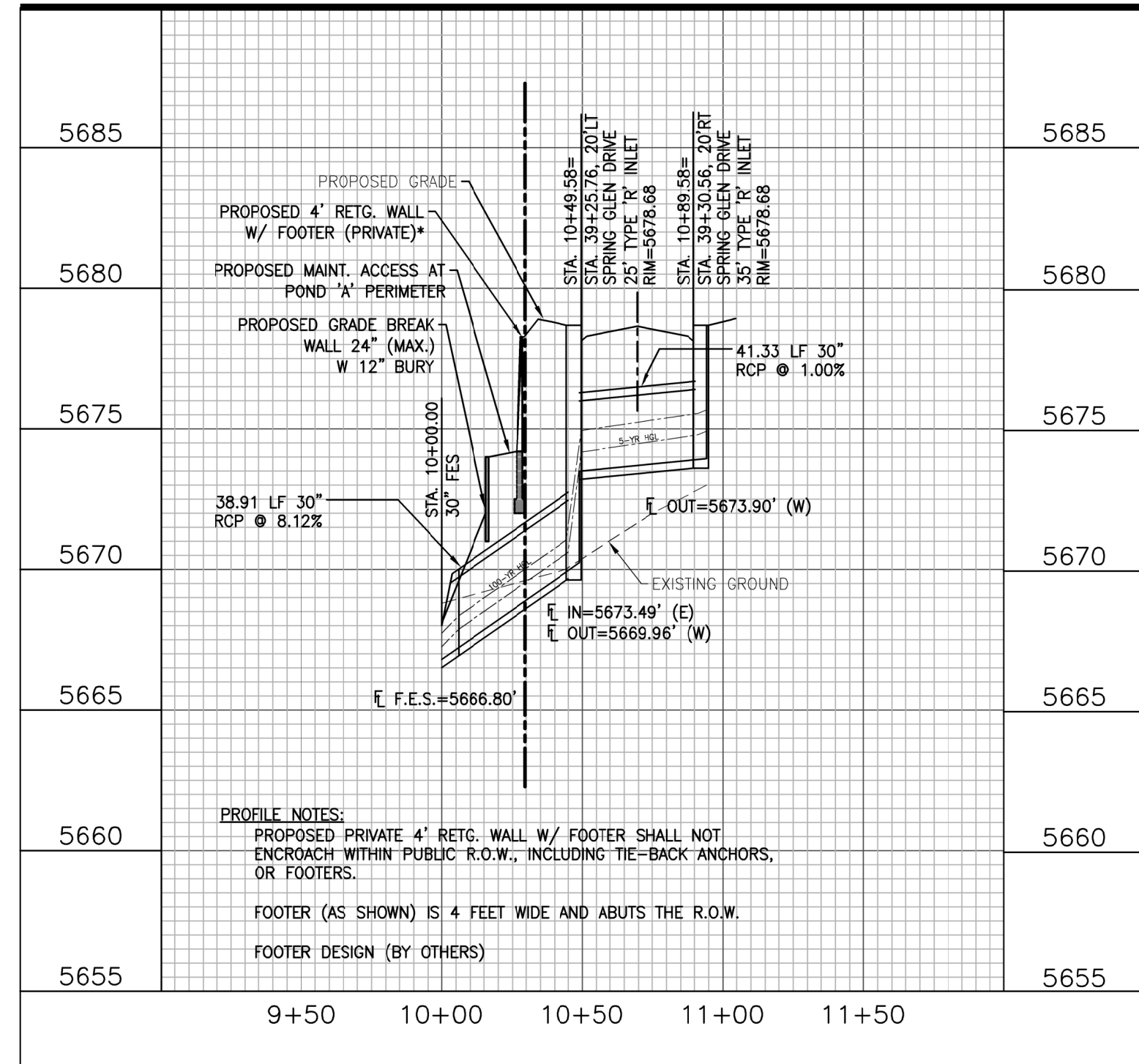
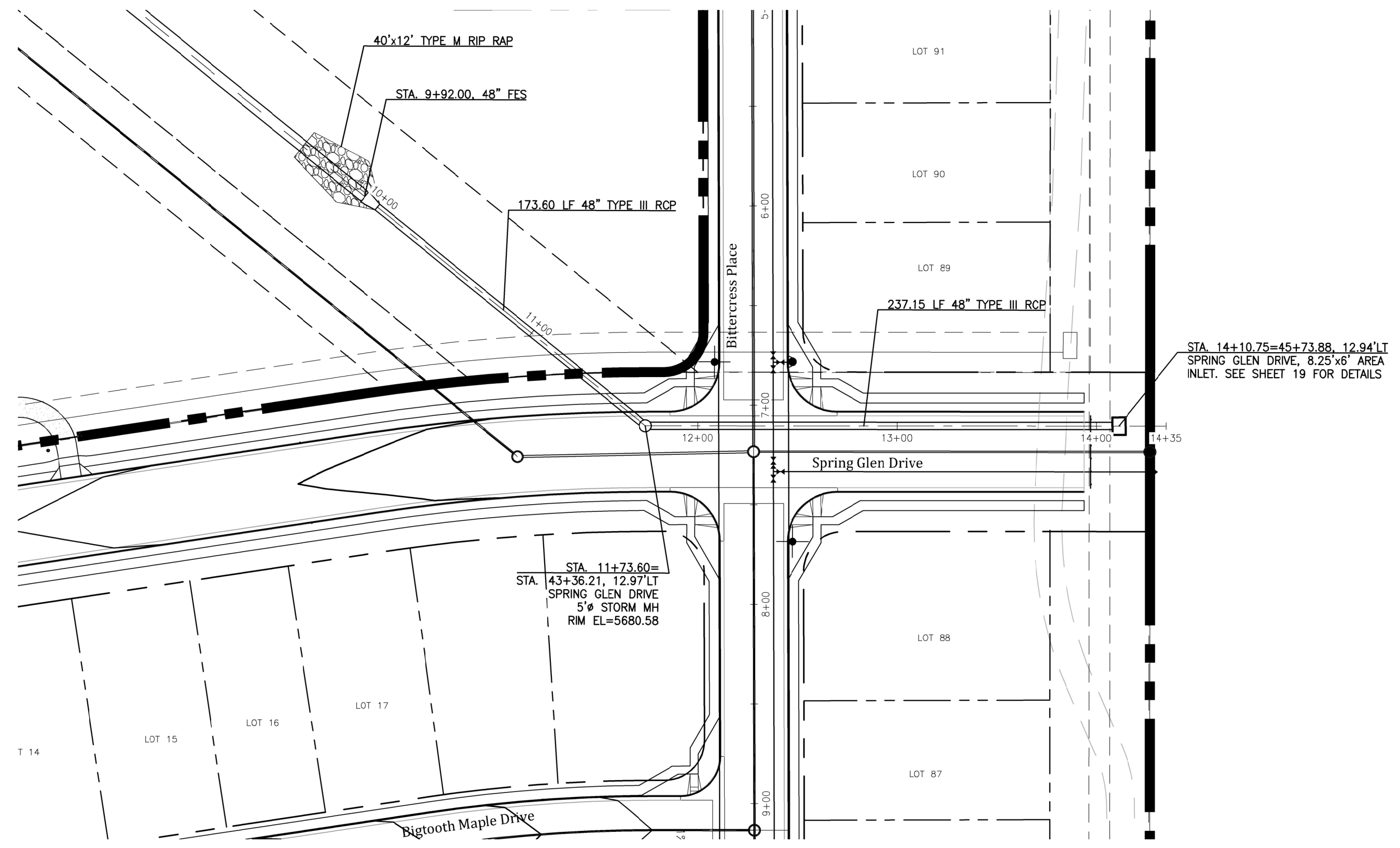
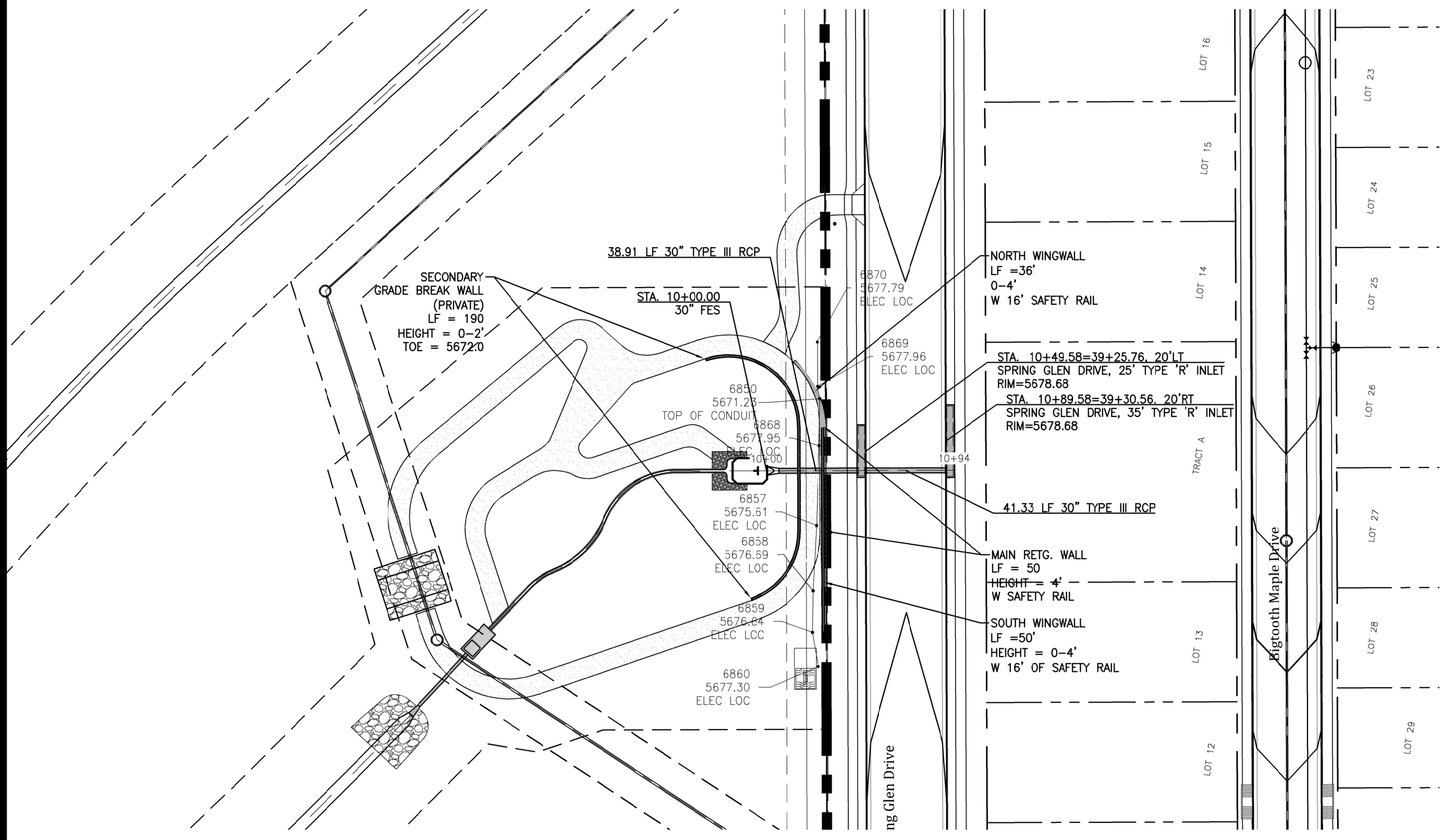
"I hereby affirm that the improvement shown on these drawings for the Glen at Widefield Filing No. 9 have been constructed in substantial compliance with the Construction Plans approved by El Paso County."

Andrew W. McCord, P.E.
25057

Oct. 19, 2020
Date



Kiowa
Engineering Corporation
1604 South 21st Street
Colorado Springs, Colorado 80904
(719) 630-7342



W
WIDEFIELD
Investment Group

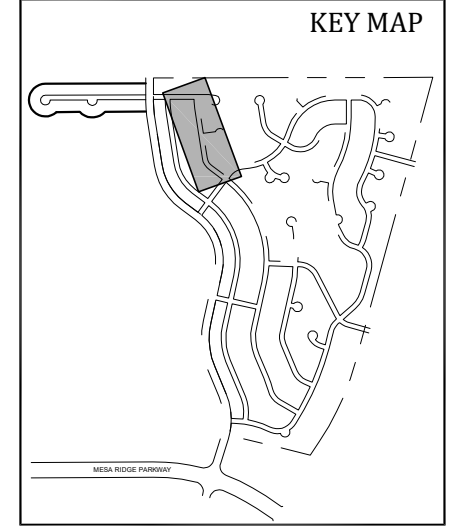
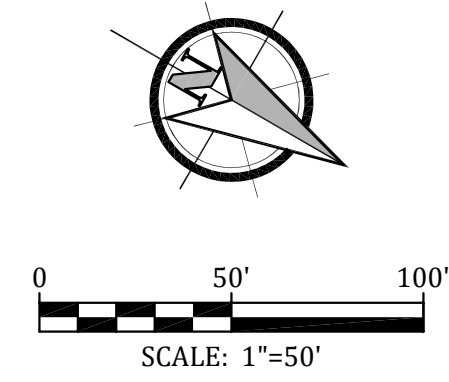
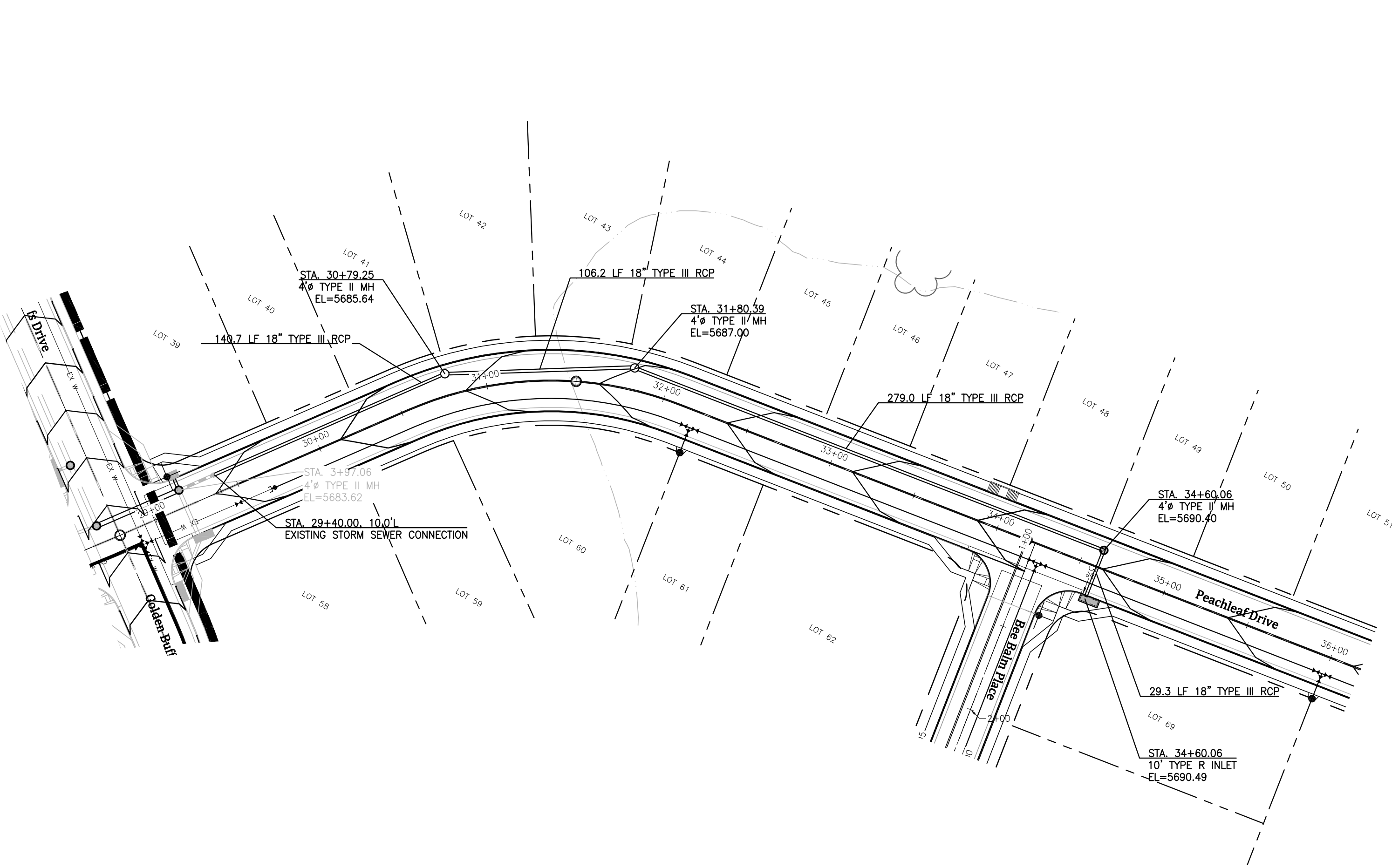
**GLEN AT WIDEFIELD FILING NO. 9
STORM SEWER PLAN (Outfall & Offsite)
PLAN AND PROFILE
EL PASO COUNTY, COLORADO**

Project No.:	17038
Date:	September 25, 2018
Design:	AWMc
Drawn:	JAK/MJK
Check:	AWMc
Revisions:	

SHEET

10

10 of 20 Sheets

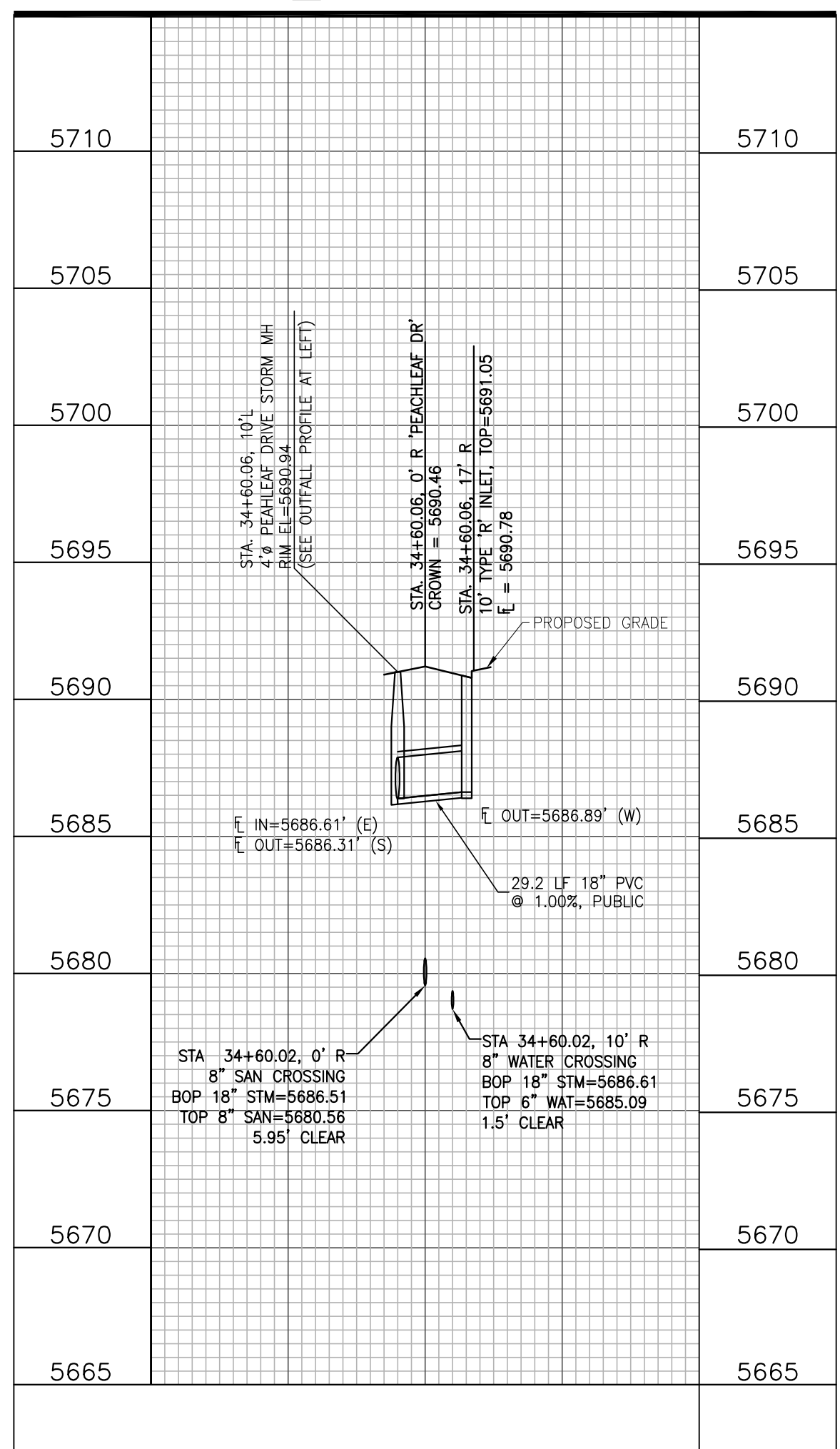
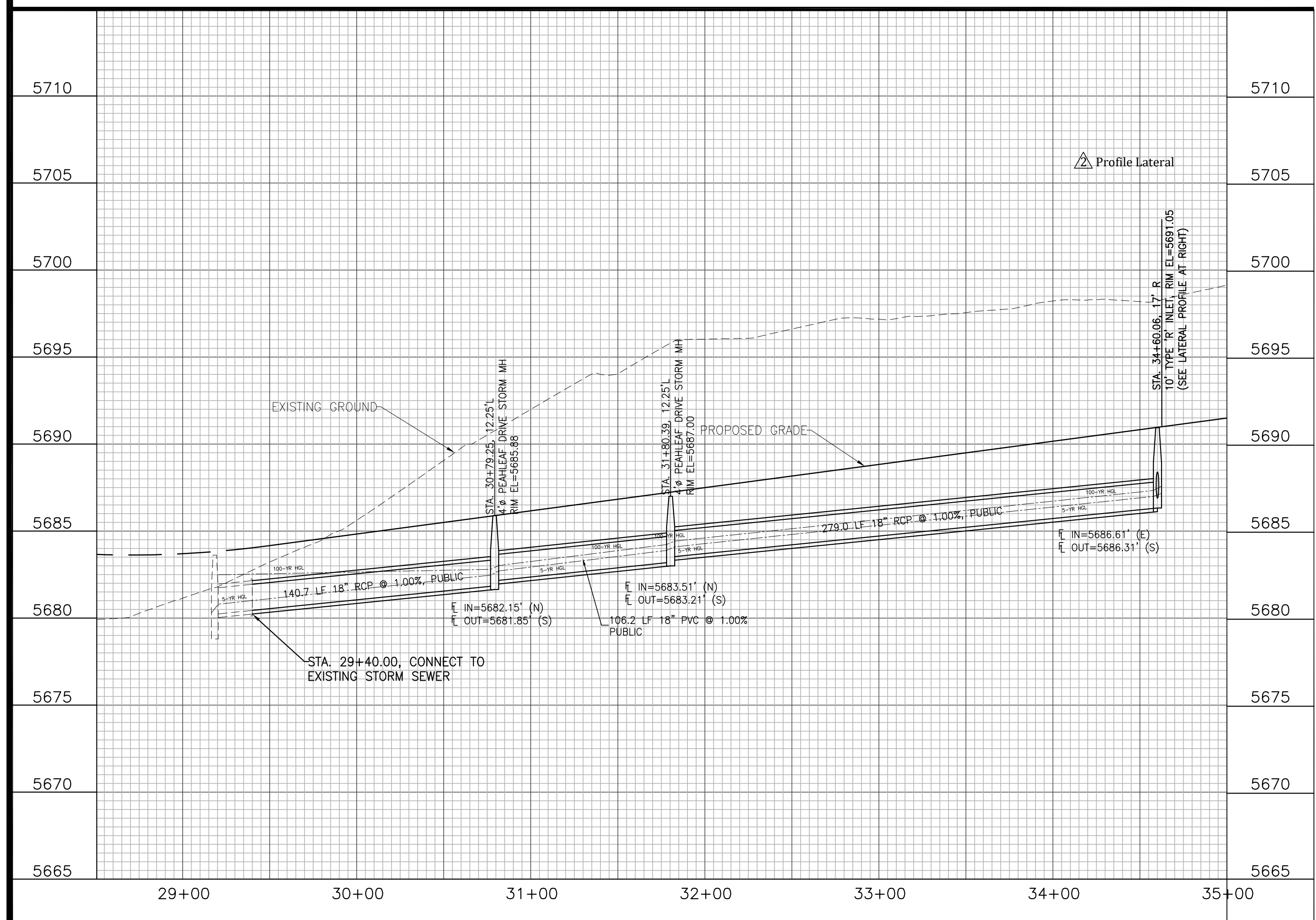


Engineering Record Drawings

"I hereby affirm that the improvements shown on The Glen at Widefield Filing No. 9 have been constructed in substantial compliance with the Construction Plans approved by El Paso County."

Andrew W. McCord
 Andrew W. McCord, P.E.
 25057
 PROFESSIONAL ENGINEER

Oct. 19, 2020
 Date



Kiowa
 Engineering Corporation
 1604 South 21st Street
 Colorado Springs, Colorado 80904
 (719) 630-7342

W
 WIDEFIELD
 Investment Group

**GLEN AT WIDEFIELD FILING NO. 9
 STORM SEWER PLAN (PEACHLEAF DRIVE)
 PLAN AND PROFILE
 EL PASO COUNTY, COLORADO**

Project No.: 17038
 Date: September 25, 2018
 Design: AWMc
 Drawn: JAK/MJK
 Check: AWMc
 Revisions:

SHEET
11
 11 of 20 Sheets

SEED MIX

AREAS DISTURBED BY THE EARTHWORK ACTIVITIES AND NOT RECEIVING OTHER TREATMENT SHALL BE PERMANENTLY REVEGETATED WITH THE FOLLOWING SEED MIX.

SPECIES	VARIETY	lbs/acre
SIDEWAYS GRAMA	<i>Zi Rano</i>	3.0
WESTERN WHEAT GRASS	<i>Barton</i>	2.5
SLENDER WHEAT GRASS	<i>Native</i>	2.0
LITTLE BLUESTEM	<i>Pastura</i>	2.0
SAND DROPSIED	<i>Native</i>	0.5
SWITCH GRASS	<i>Nebraska 28</i>	3.0
WEEPING LOVE GRASS	<i>Morpha</i>	1.0
		14.0 lbs

SEEDING APPLICATION: DRILL SEED 1/4" TO 1/2" INTO TOPSOIL. IN AREAS INACCESSIBLE TO A DRILL, HAND BROADCAST AT DOUBLE THE RATE AND RAKE 1/4" TO 1/2" INTO THE TOPSOIL. MULCHING APPLICATION: 1-1/2 TONS NATIVE HAY PER ACRE, MECHANICALLY CRIMPED INTO THE TOPSOIL.

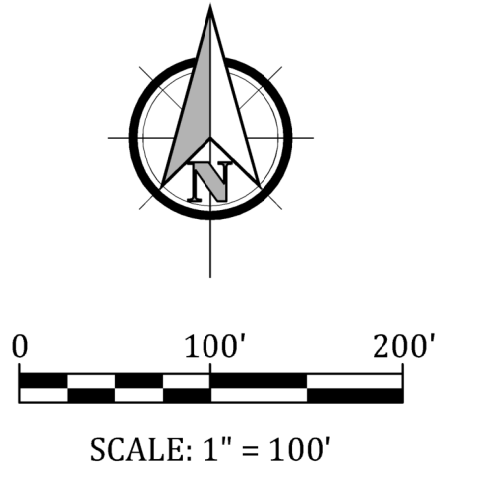
EROSION CONTROL INSPECTION AND MAINTENANCE

A THOROUGH INSPECTION OF THE EROSION CONTROL PLAN/STORMWATER MANAGEMENT SYSTEM SHALL BE PERFORMED EVERY 14 DAYS AS WELL AS AFTER ANY RAIN OR SNOWMELT EVENT THAT CAUSES SURFACE EROSION.

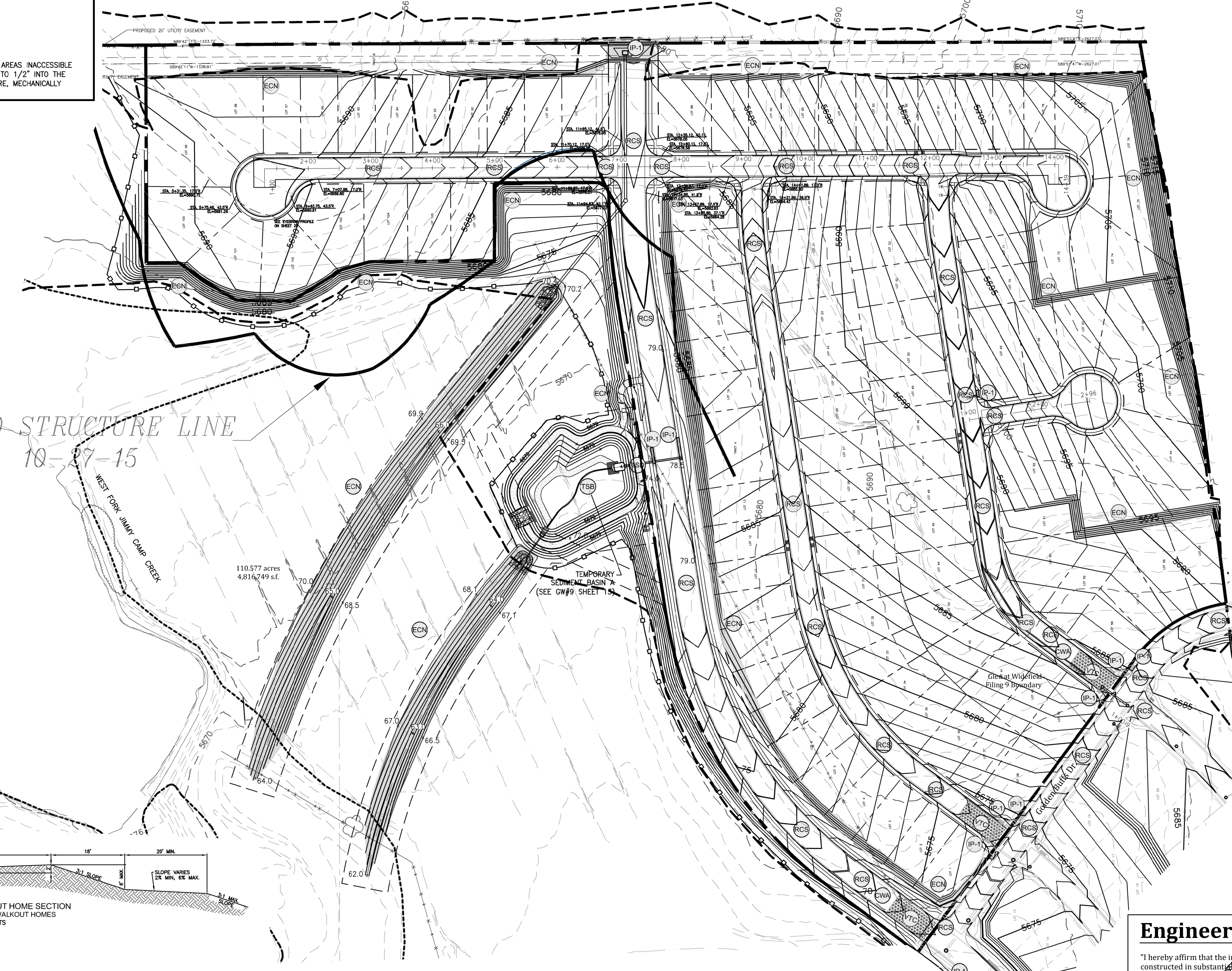
- WHEN STRAW BALE BARRIERS HAVE SILTED UP TO HALF THEIR HEIGHT, THE SILT SHALL BE REMOVED. FINAL GRADE REESTABLISHED AND SLOPES RESEDED IF NECESSARY. ANY STRAW BALES THAT HAVE SHIFTED OR DECAYED SHALL BE REPAIRED OR REPLACED.
- ANY ACCUMULATED TRASH OR DEBRIS SHALL BE REMOVED FROM OUTLETS.

AN INSPECTION AND MAINTENANCE LOG SHALL BE KEPT.

SHADED AREA DENOTES PERMANENT EROSION CONTROL BLANKET BY AMERICAN EXCELSIOR OR EQUAL SHALL BE USED.



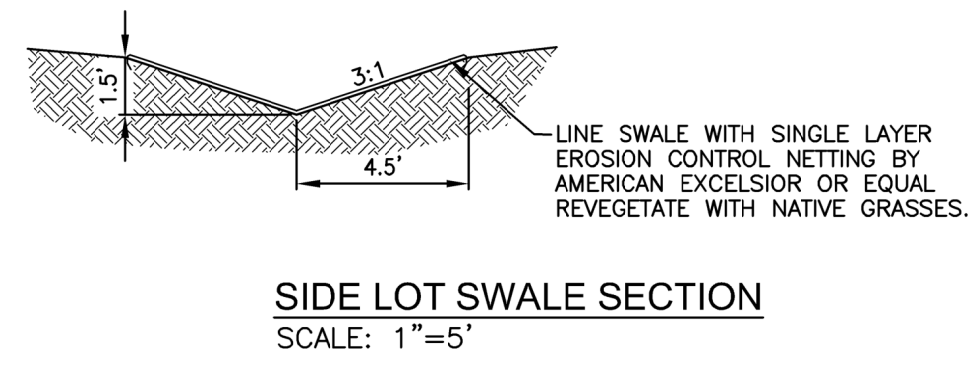
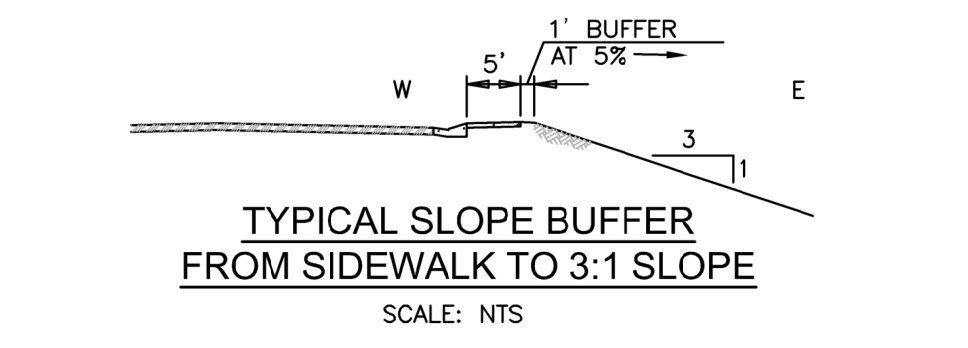
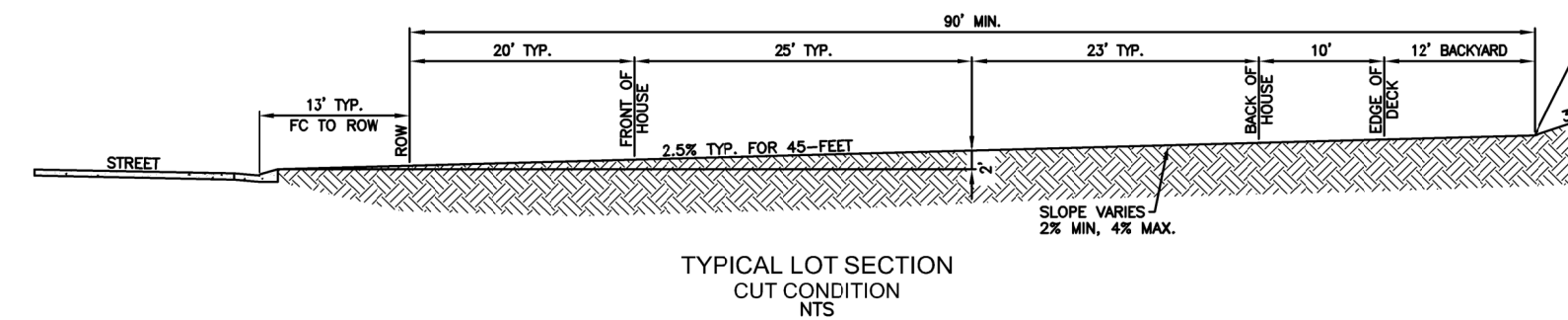
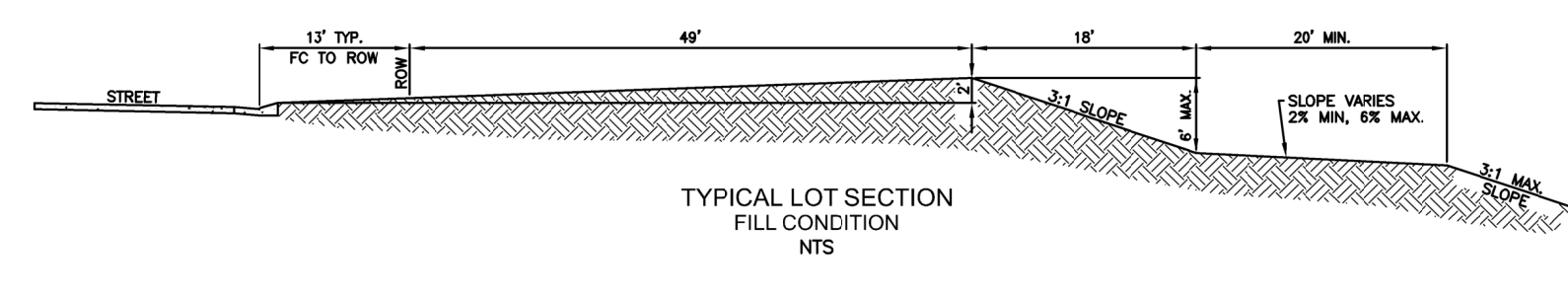
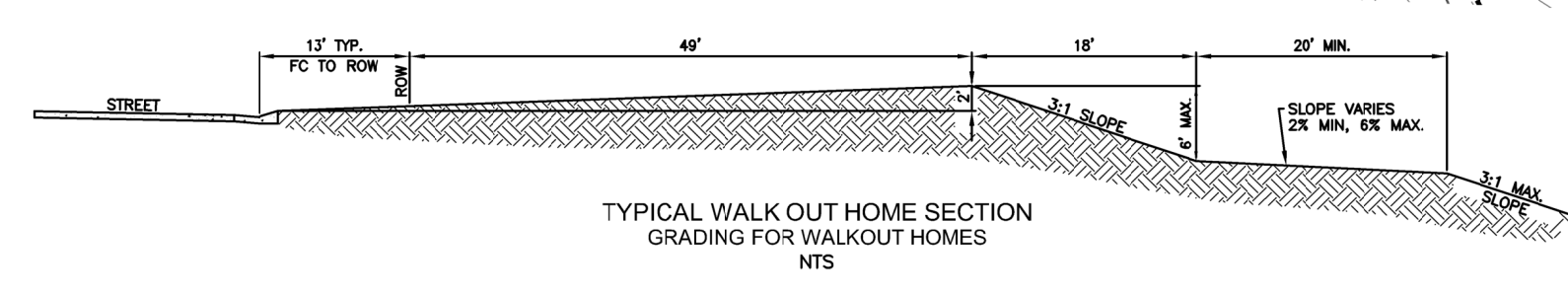
NO STRUCTURE LINE
10-19-15



- PROJECT SPECIFIC GRADING AND EROSION CONTROL NOTES**
- All earthwork required of this construction shall be completed in accordance with all applicable sections of the Project Specifications and Soil Investigation Report (Geotechnical Report).
 - Rubbish including timber, concrete rubble, trees, brush, and asphalt shall not be backfilled adjacent to any of the structures or be in the placement of any unclassified fill. The Contractor shall be responsible for the removal and hauling of such materials to a suitable spoil area. Costs associated with the removal of such materials shall be paid for as documented in the Project Specifications.
 - Excess excavation shall become the property of the Contractor and shall be disposed of at the Contractor's expense. The cost of haulage and spoiling of excess excavated materials shall be paid for as documented in the Project Specifications.
 - Water shall be used as a dust palliative as required and shall be included in the cost for earthwork items. No separate payment will be made for dust control associated with the site construction.
 - The road grades shall be cleared of vegetation and the topsoil stockpiled for later use.
 - All grading shall be in conformance with the Geotechnical Report for the area.
 - Placement of fill for roadway embankments shall be completed in conformance with the Geotechnical Report.
 - Grading contours shown on this plan are to final grade.
 - Compaction under filled areas, including roadway and detention basin embankments, shall be 95 percent of the maximum Standard Proctor Density (ASTM D998) at two (2) percent of optimum moisture content.
 - No rubble or debris shall be placed in the backfill under any of the proposed buildings, streets, curb & gutter, sidewalk and drainage structures or within five (5) feet of a building footprint. Property graded rubble may be used in some locations as specified and verified by the Geotechnical Engineer.
 - Contractor is responsible for reviewing the site prior to bidding to verify site conditions.
 - Contractor is responsible for providing erosion control measures as approved by the El Paso County DSD Engineering Division and as may be required by the El Paso County Inspector.
 - All slopes equal to or greater than 3:1 shall require anchored soil retention blanket (SRB), Geocor 700 or equal.
 - The Developer is responsible for maintaining erosion control measures until a mature stage of vegetation is established.
 - All soils used for fill must be approved by a representative of the Geotechnical Engineer.
 - All natural ground to receive fill must be properly scarified, watered and compacted prior to placing fill.
 - The Contractor is solely responsible for the design, maintenance and operation of any required dewatering system. The Contractor shall perform such independent investigation as he deems necessary to satisfy himself as to the subsurface groundwater conditions and unstable soil conditions to be encountered throughout the construction. Contractor shall coordinate the dewatering system with El Paso County when associated with public facilities.
 - No fill shall be placed, spread or rolled while it is frozen, thawing or during unfavorable weather conditions. When the work is interrupted by heavy rain, fill operations shall not be resumed until a representative of the Geotechnical Engineer indicates that the moisture content and density of the previously placed fill are as specified. Fill surfaces may be scarified and recompacted after rainfall if necessary, to obtain proper moisture density relation.
 - Additional erosion control structures and/or grading may be required at the time of construction.
 - Sediment removal for erosion control facilities shall be performed continuously for proper function.
 - Base mapping was provided by Pinnacle Land Surveying. The date of the last survey update was January 2014.
 - Proposed Construction Schedule:
Begin Construction: Autumn 2015
End Construction: Autumn 2018
Total Site Area = 292.29 Acres
 - Area to be disturbed = 172.8 Acres (est.).
Existing 100-year runoff coefficient = 0.50
Proposed 100-year runoff coefficient = 0.51
Existing Hydrologic Soil Groups: B & C
(B-Nelson-Tassal fine sandy loams; B-Stoneham sandy loam; C-Nunn clay loam)
 - Site is currently undeveloped and covered with native grasses on moderate to steep slopes (3%-18%).
 - Site is located in the West Fork Jimmy Camp Creek Drainage Basin.

OPINION OF COST FOR EROSION CONTROL REQUIREMENTS
Additional Erosion Control for Glen at Widefield Filing No. 9

ITEM	QUANTITY	UNITS	PRICE	AMOUNT
PERMANENT SEEDING	0.1	AC	\$582	\$58.20
PERMANENT E.C. BLANKET	7,655	SY	\$6	\$45,930.00
VEHICLE TRACKING CONTROL	3	EA	\$1,625	\$4,875.00
INLET PROTECTION	11	EA	\$153	\$1,683.00
CONCRETE WASHOUT BASIN	2	EA	\$776	\$1,552.00
ROUGH CUT STREET CONTROL	670	LF	\$2	\$1,340.00
SILT FENCING	2,450	LF	\$2.50	\$6,125.00
			TOTAL	\$61,563.20



LEGEND

- SILT FENCE
- VEHICLE TRACKING CONTROL
- INLET PROTECTION
- TEMPORARY SLOPE DRAIN
- EROSION CONTROL NETTING
- ROUGH-CUT STREET CONTROL
- CONCRETE WASHOUT AREA
- TEMPORARY SEDIMENT BASIN

SEE DETAILS SHEET 15

Engineering Record Drawings

"I hereby affirm that the information shown on this drawing was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer in the State of Colorado." The Glen at Widefield Filing No. 9 has been constructed in substantial compliance with the Construction Plans approved by El Paso County."

Andrew W. McCord, P.E.
25057
Date: Oct. 19, 2020

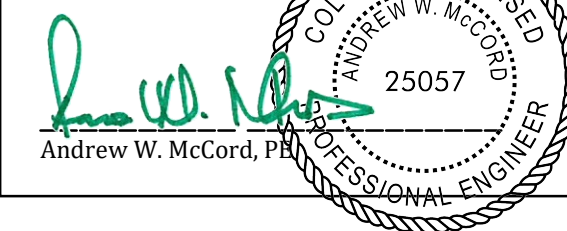


Know what's below.
Call before you dig.

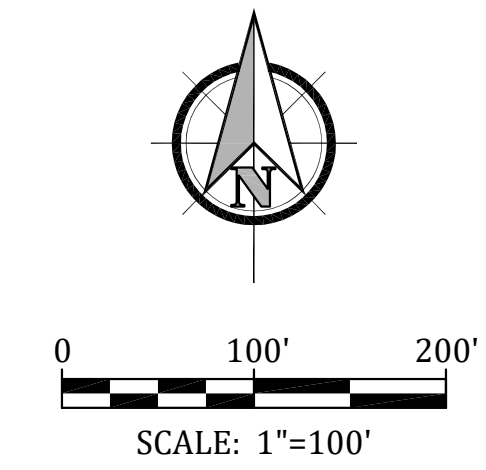
FOR STORM SEWER DESIGN
SEE SHEETS 10-11

Engineering Record Drawings

I hereby affirm that the information shown on this drawing was prepared by the Engineer at Widefield Filing No. 9 have been constructed in substantial compliance with the Construction Plans approved by El Paso County.



Oct. 19, 2020
Date



SUBSEQUENT TO STRIPPING AND GRUBBING THE FOLLOWING OVERLOT/PIPE INSTALLATION PROCEDURES ARE ANTICIPATED FOR THE SANITARY SEWER LOCATED ON PROPOSED EMBANKMENTS:

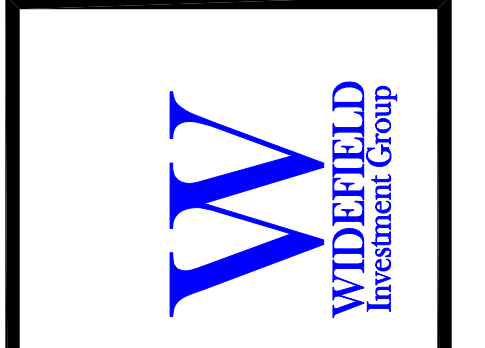
- THE REMOVAL AND REPLACEMENT OF METASTABLE SOIL.
- TESTING OF THE FILL SUBSEQUENT TO THE PENETRATION OF THE METASTABLE SOIL WILL CONTINUE UNTIL A MINIMUM OF 7 FEET OF STRUCTURAL FILL HAS BEEN PLACED ABOVE THE PROPOSED SEWER LINE ELEVATION.
- UTILITY TRENCHES SHALL BE EXCAVATED AND SANITARY SEWER LINE INSTALLED. THE PIPE SHALL BE PROPERLY BEDDED AND STRUCTURAL FILL PLACED AND TESTED TO THE PREVIOUS GRADE.
- THE REMOVAL AND EMBANKMENT FILL CAN BE COMPLETED.
- WHERE THE SANITARY SEWER IS PLACED IN EMBANKMENT FILL DURING THE OVERLOT PROCESS, STE SHALL MONITOR AND TEST ALL WORK ASSOCIATED WITH THE AFFECTED PORTIONS.

ADDITIONAL UTILITY NOTES	
GAS	- ALL GAS MAINS AND SERVICES ARE TO BE INSTALLED PER THE CITY OF COLORADO SPRINGS.
ELECTRIC	- ALL ELECTRIC SERVICES ARE TO BE INSTALLED PER THE CITY OF FOUNTAIN ELECTRIC DIVISION.
UTILITY CONTACTS	
SEWER:	WIDEFIELD W&S DISTRICT (WWSDD) 390-7111
WATER:	WIDEFIELD W&S DISTRICT (WWSDD) 390-7111
ELECTRIC:	MOUNTAIN VIEW ELECTRIC 495-2283
GAS:	PEOPLE'S NATURAL GAS 800-303-0752
PHONE:	US WEST 636-4632

LEGEND	
	PROPOSED 8" PVC WATER MAIN (DR 18) WITH MJ FITTINGS (UNLESS OTHERWISE NOTED)
	WIDEFIELD WATER & SANITATION DISTRICT STANDARD FIRE HYDRANT ASSEMBLY. INSTALL PER WIDEFIELD WATER AND SANITATION DISTRICT CONSTRUCTION SPECIFICATIONS
	8" GATE VALVE (UNLESS OTHERWISE NOTED)
	TEE w/ CONCRETE THRUST BLOCK
MINIMUM RADIUS SHOWN FOR WATER MAIN = 290' PER WWSDD SPECIFICATIONS AND EL PASO COUNTY ECM 4.3.6.A.1&2. THE MINIMUM COVER OVER WATER MAIN & SERVICES AND SANITARY SEWER MAINS & SERVICES IS 5 FEET.	

WATER AND SEWER MAIN EXTENSIONS	
Any changes or alterations affecting the grade, alignment, elevation and/or depth of cover of any water or sewer mains or other appurtenance shown on this drawing shall be the responsibility of the Owner/Developer. The Owner/Developer shall be responsible for all operational damages and defects in installation and material for mains and services from the date of approval until final acceptance is issued.	
Signed:	Date: Sep 27th 2018
Print Name: J. Ryan Watson, President	
DBA: GLEN DEVELOPMENT COMPANY	
Address: 3 Widefield Boulevard Colorado Springs, CO 80911 (719) 592-0194	
FIRE AUTHORITY APPROVAL	
The number of fire hydrants and hydrant locations shown on this water installation plan are correct and adequate to satisfy the fire protection requirements as specified by the Security Fire District.	
Security Fire Department	
Signed:	Date: 10-3-18

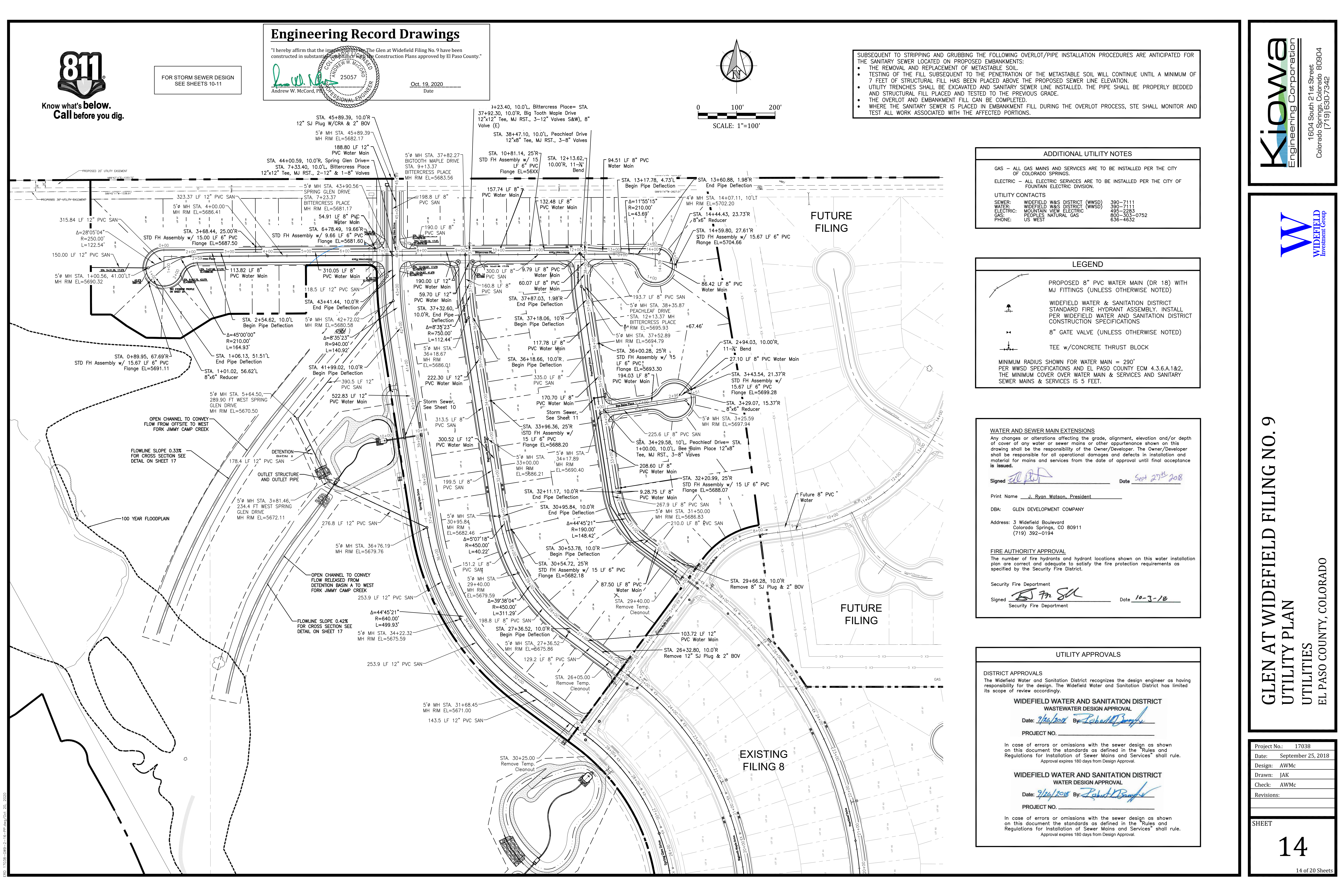
UTILITY APPROVALS	
DISTRICT APPROVALS	
The Widefield Water and Sanitation District recognizes the design engineer as having responsibility for the design. The Widefield Water and Sanitation District has limited its scope of review accordingly.	
WIDEFIELD WATER AND SANITATION DISTRICT WASTEWATER DESIGN APPROVAL	
Date: 9/26/2018	By:
PROJECT NO.	
In case of errors or omissions with the sewer design as shown on this document the standards as defined in the "Rules and Regulations for Installation of Sewer Mains and Services" shall rule. Approval expires 180 days from Design Approval.	
WIDEFIELD WATER AND SANITATION DISTRICT WATER DESIGN APPROVAL	
Date: 9/26/2018	By:
PROJECT NO.	
In case of errors or omissions with the sewer design as shown on this document the standards as defined in the "Rules and Regulations for Installation of Sewer Mains and Services" shall rule. Approval expires 180 days from Design Approval.	

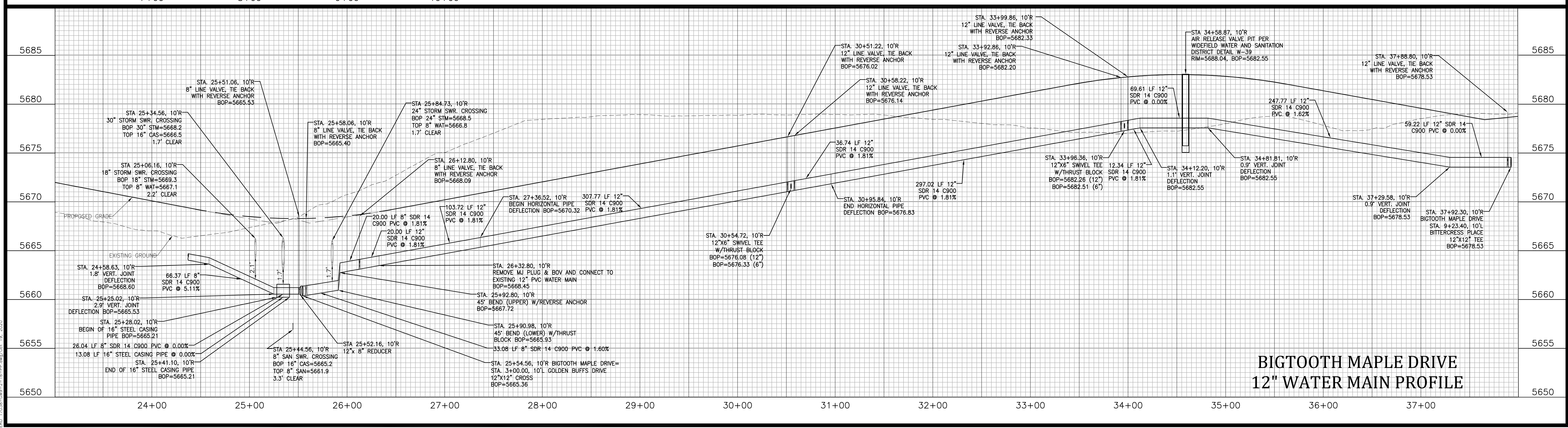
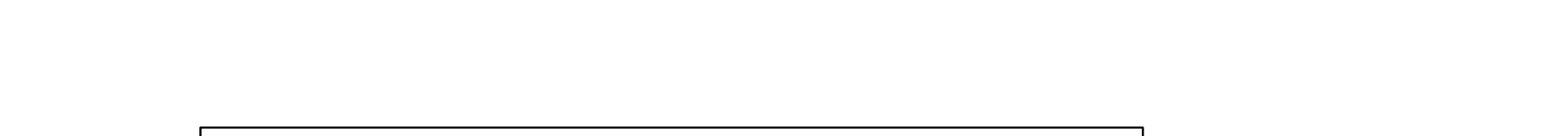
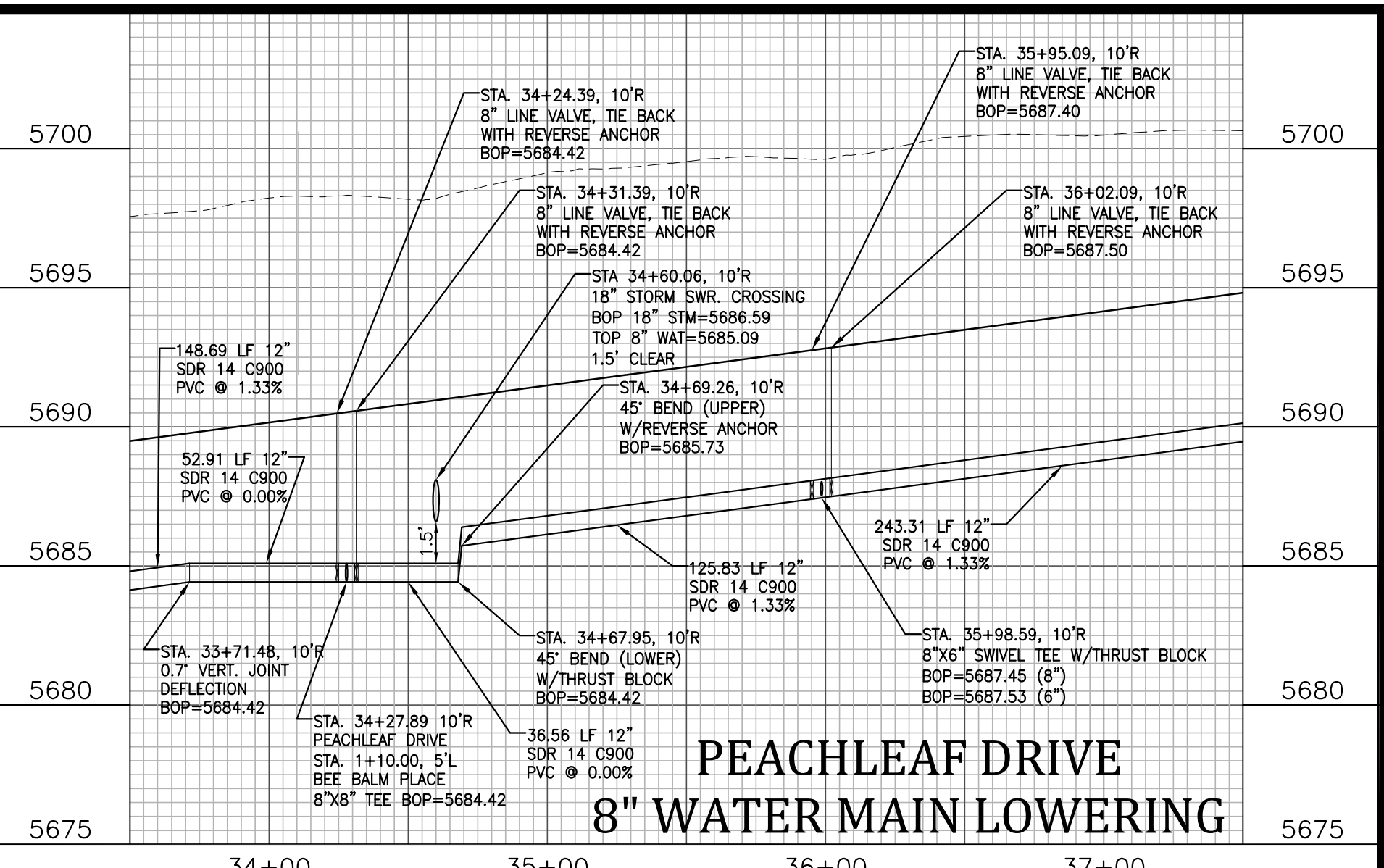
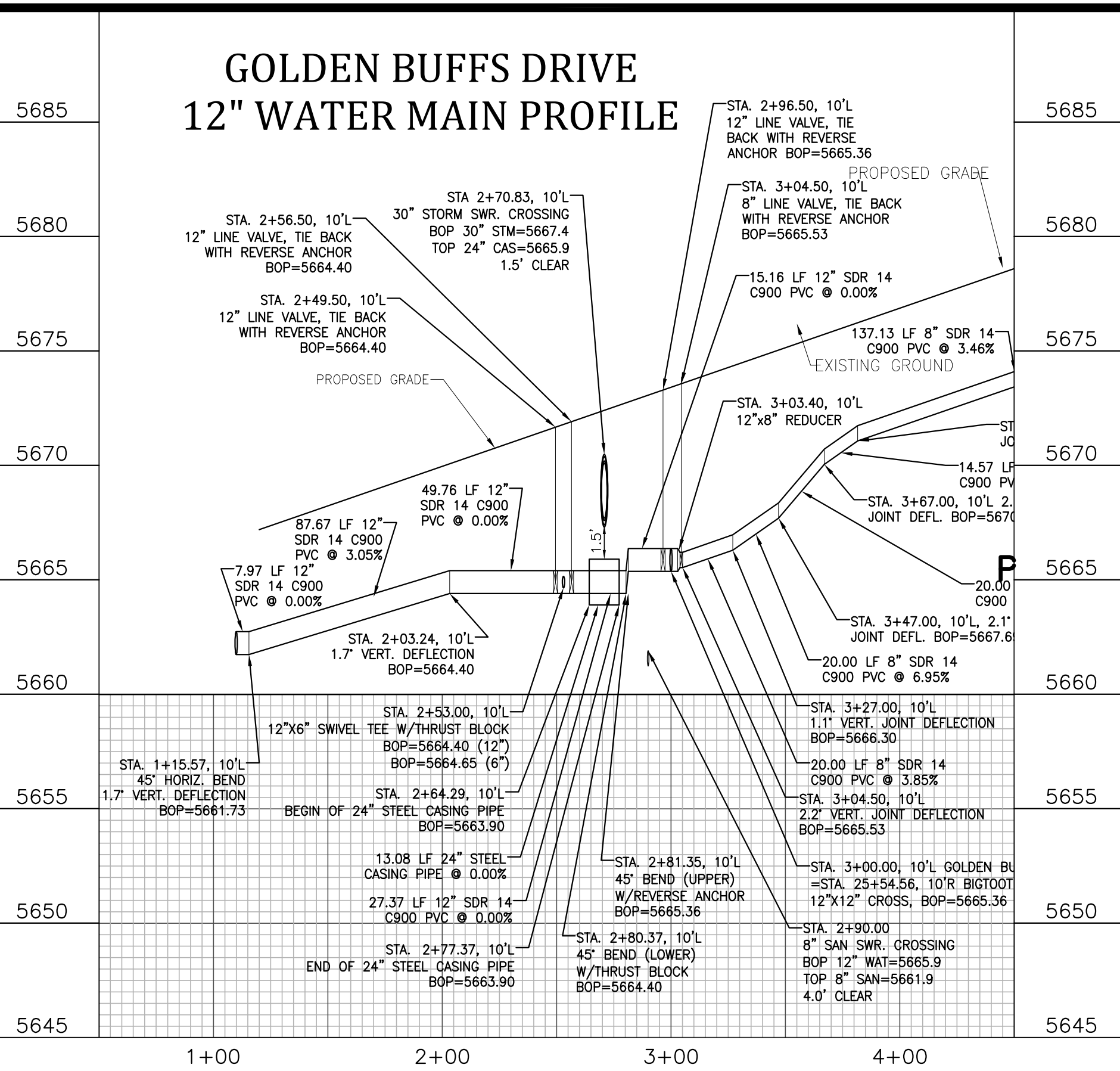
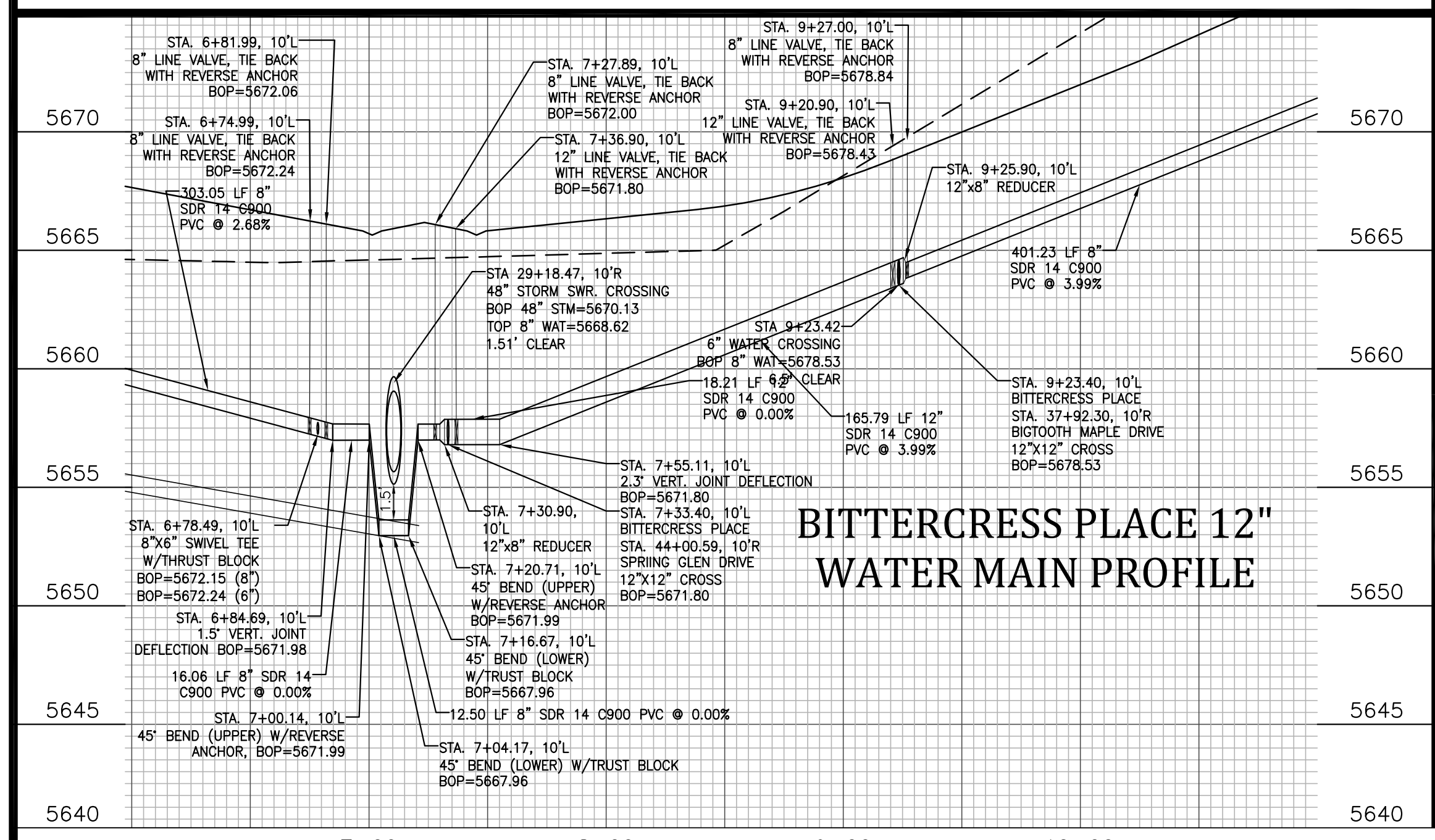
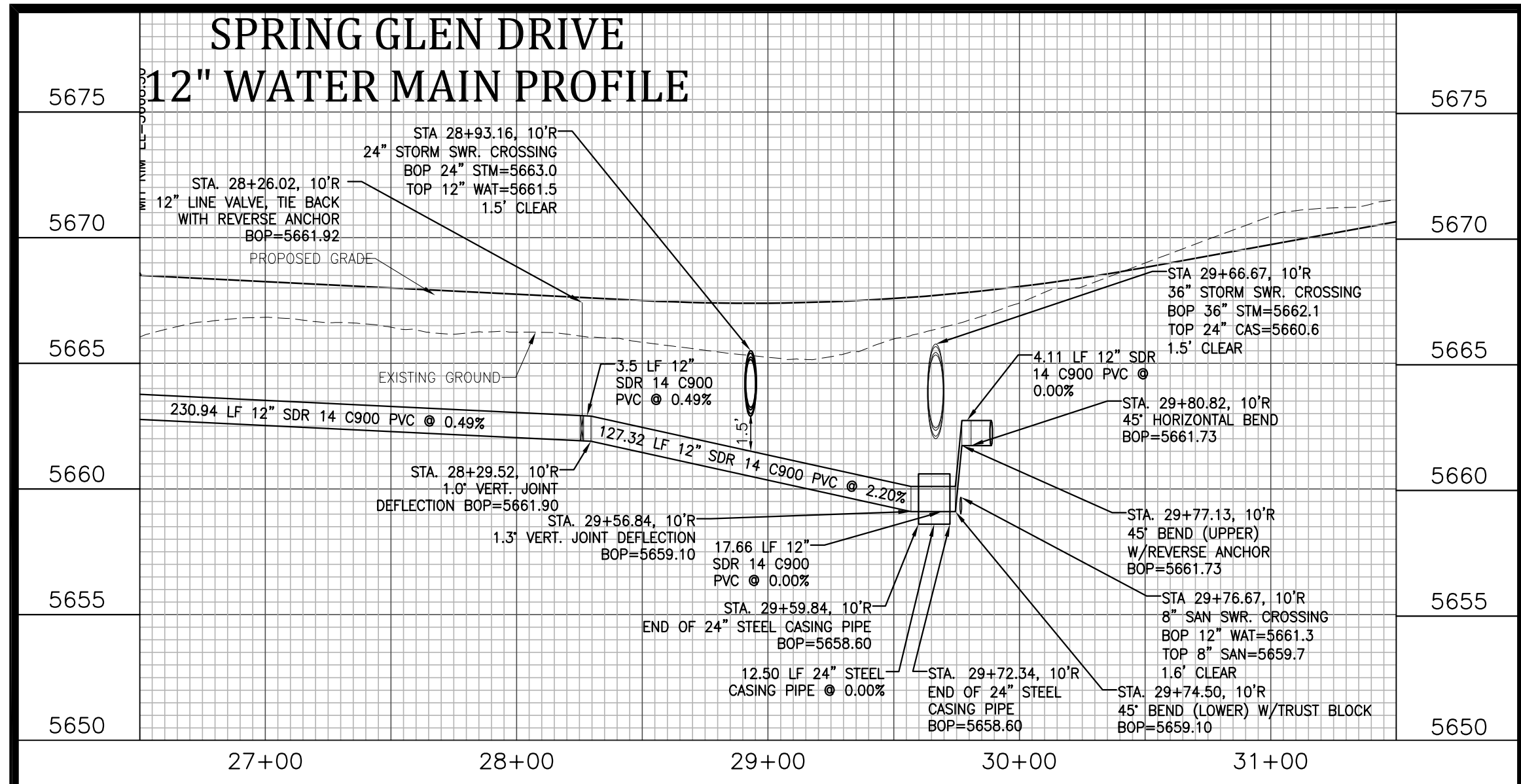


GLEN AT WIDEFIELD FILING NO. 9
UTILITY PLAN
UTILITIES
EL PASO COUNTY, COLORADO

Project No.:	17038
Date:	September 25, 2018
Design:	AWMc
Drawn:	JAK
Check:	AWMc
Revisions:	

SHEET
14
14 of 20 Sheets





Project No.:	17038
Date:	September 25, 2018
Design:	JAK
Drawn:	JAK
Check:	AWMc
Revisions:	

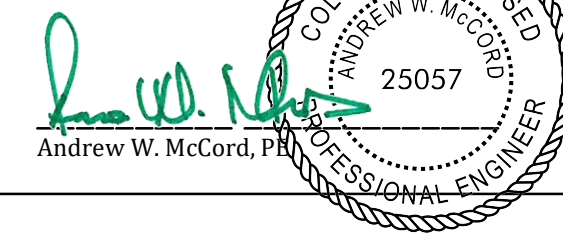


Know what's below.
Call before you dig.

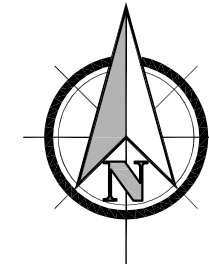
FOR STORM SEWER DESIGN
SEE SHEETS 10-11

Engineering Record Drawings

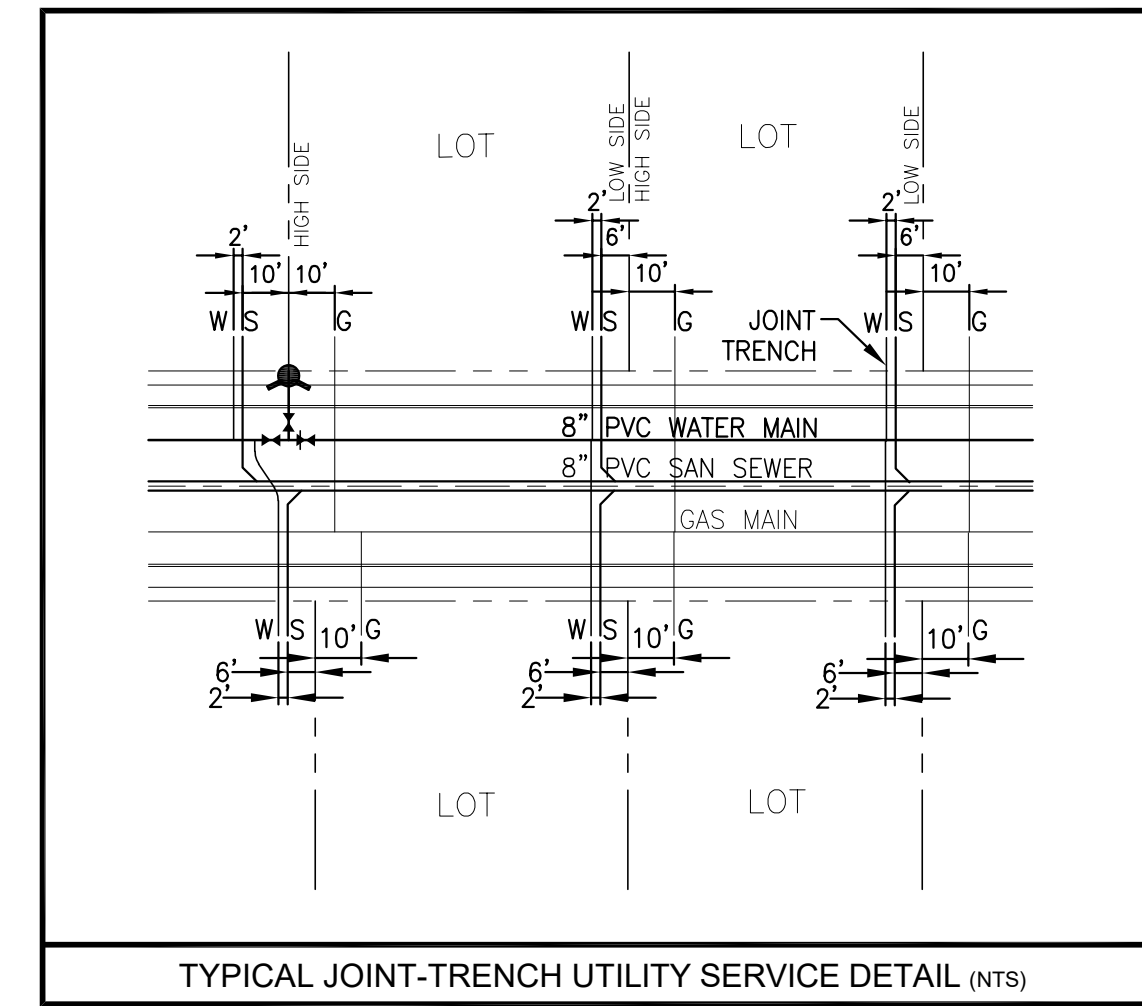
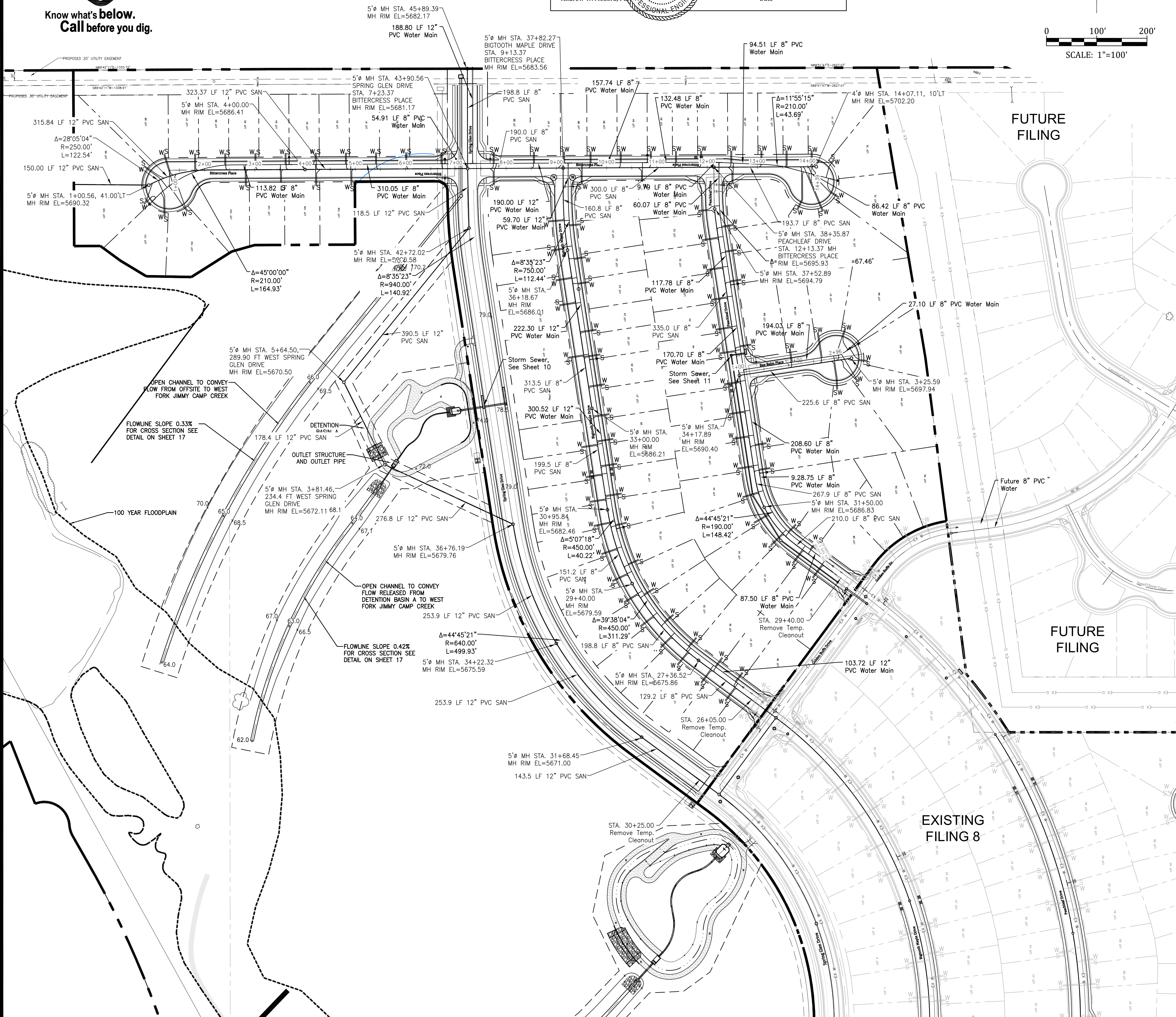
"I hereby affirm that the improvements shown on this drawing have been constructed in substantial compliance with the Construction Plans approved by El Paso County."



Oct. 19, 2020
Date



0 100' 200'
SCALE: 1"=100'



ADDITIONAL UTILITY NOTES

GAS - ALL GAS MAINS AND SERVICES ARE TO BE INSTALLED PER THE CITY OF COLORADO SPRINGS.

ELECTRIC - ALL ELECTRIC SERVICES ARE TO BE INSTALLED PER MOUNTAINVIEW ELECTRIC ASSOCIATION.

UTILITY CONTACTS

SEWER:	WIDEFIELD W&S DISTRICT (WWS)	390-7111
WATER:	WIDEFIELD W&S DISTRICT (WWS)	390-7111
ELECTRIC:	MOUNTAIN VIEW ELECTRIC	495-2281
GAS:	BLACKHILLS ENERGY	800-303-0752
PHONE:	US WEST	636-4632

LEGEND

- PROPOSED 8" PVC WATER MAIN (DR 18) WITH MJ FITTINGS (UNLESS OTHERWISE NOTED)
- WIDEFIELD WATER & SANITATION DISTRICT STANDARD FIRE HYDRANT ASSEMBLY. INSTALL PER WIDEFIELD WATER AND SANITATION DISTRICT CONSTRUCTION SPECIFICATIONS
- GATE VALVE (UNLESS OTHERWISE NOTED)
- TEE w/ CONCRETE THRUST BLOCK

MINIMUM RADIUS SHOWN FOR WATER MAIN = 290' PER WWS SPECIFICATIONS AND EL PASO COUNTY ECM 4.3.6.A.1&2. THE MINIMUM COVER OVER WATER MAIN & SERVICES AND SANITARY SEWER MAINS & SERVICES IS 5 FEET.

SUBSEQUENT TO STRIPPING AND GRUBBING THE FOLLOWING OVERLOT/PIPE INSTALLATION PROCEDURES ARE ANTICIPATED FOR THE SANITARY SEWER LOCATED ON PROPOSED EMBANKMENTS:

- THE REMOVAL AND REPLACEMENT OF METASTABLE SOIL.
- TESTING OF THE FILL SUBSEQUENT TO THE PENETRATION OF THE METASTABLE SOIL WILL CONTINUE UNTIL A MINIMUM OF 7 FEET OF STRUCTURAL FILL HAS BEEN PLACED ABOVE THE PROPOSED SEWER LINE ELEVATION.
- UTILITY TRENCHES SHALL BE EXCAVATED AND SANITARY SEWER LINE INSTALLED. THE PIPE SHALL BE PROPERLY BEDDED AND STRUCTURAL FILL PLACED AND TESTED TO THE PREVIOUS GRADE.
- THE OVERLOT AND EMBANKMENT FILL CAN BE COMPLETED.
- WHERE THE SANITARY SEWER IS PLACED IN EMBANKMENT FILL DURING THE OVERLOT PROCESS, SITE SHALL MONITOR AND TEST ALL WORK ASSOCIATED WITH THE AFFECTED PORTIONS.

UTILITY APPROVALS

DISTRICT APPROVALS

The Widefield Water and Sanitation District recognizes the design engineer as having responsibility for the design. The Widefield Water and Sanitation District has limited its scope of review accordingly.

WIDEFIELD WATER AND SANITATION DISTRICT WASTEWATER DESIGN APPROVAL

Date: 9/16/2020 By: Robert H. Bumpfee

PROJECT NO. _____

In case of errors or omissions with the sewer design as shown on this document the standards as defined in the "Rules and Regulations for Installation of Sewer Mains and Services" shall rule. Approval expires 180 days from Design Approval.

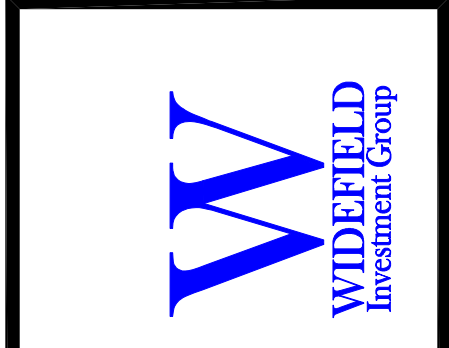
WIDEFIELD WATER AND SANITATION DISTRICT WATER DESIGN APPROVAL

Date: 9/16/2020 By: Robert H. Bumpfee

PROJECT NO. _____

In case of errors or omissions with the sewer design as shown on this document the standards as defined in the "Rules and Regulations for Installation of Sewer Mains and Services" shall rule. Approval expires 180 days from Design Approval.

Kiowa
Engineering Corporation
1604 South 21st Street
Colorado Springs, Colorado 80904
(719) 630-7942



GLEN AT WIDEFIELD FILING NO. 9
UTILITY SERVICES PLAN
UTILITY SERVICES
EL PASO COUNTY, COLORADO

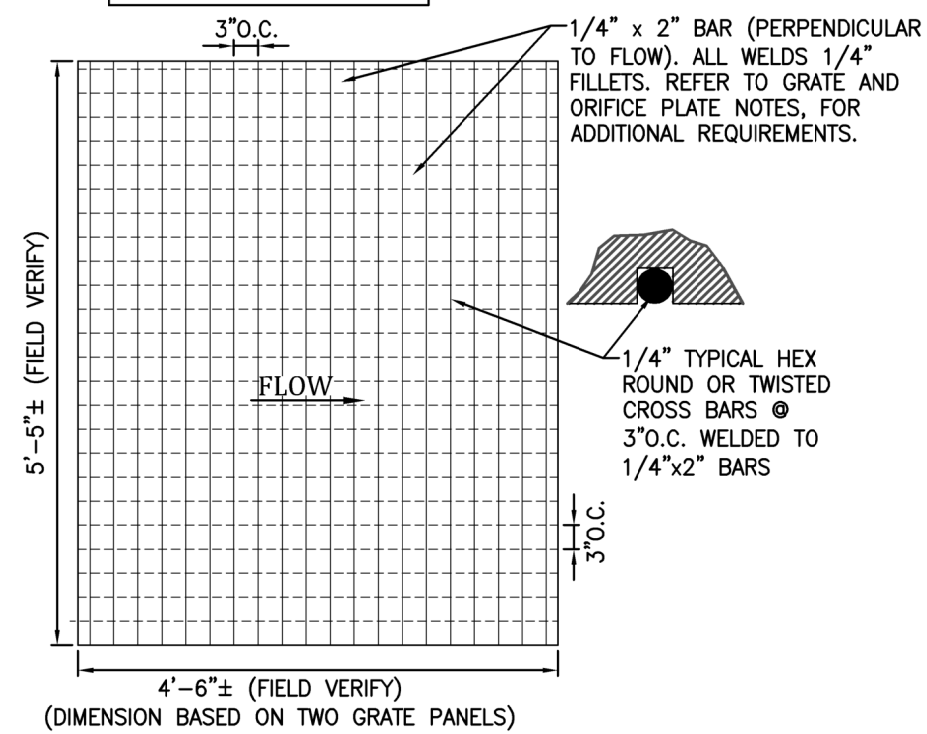
Project No.:	17038
Date:	September 25, 2018
Design:	AWMc
Drawn:	JAK
Check:	AWMc
Revisions:	

SHEET
16
16 of 20 Sheets

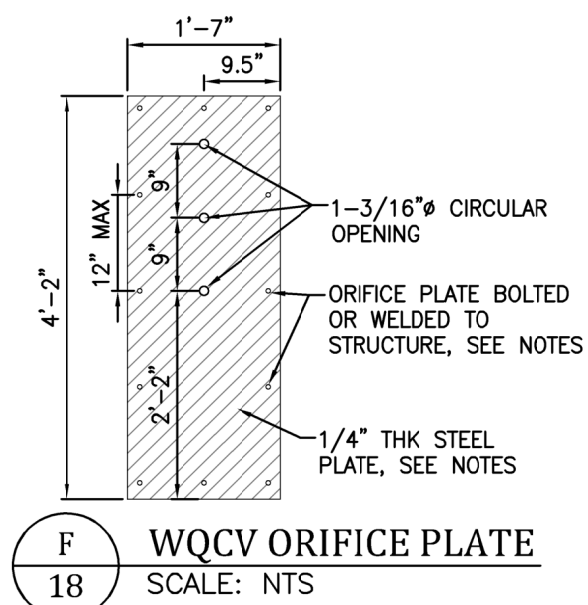
- STRUCTURE NOTES:**
- PRIOR TO CONSTRUCTION, CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR ALL COMPONENTS OF THE OUTLET STRUCTURE.
 - GRADE 60 REINFORCING STEEL REQUIRED. SEE TABLE FOR THE MINIMUM LAP SPICE LENGTH FOR REINFORCING BARS. ALL REINFORCING STEEL SHALL HAVE 2-INCH MINIMUM CLEARANCE FROM EDGE OF CONCRETE AND 3-INCH MIN CLEARANCE TO EDGE OF CONCRETE PLACED AGAINST SOIL UNLESS OTHERWISE NOTED.
 - MIN. SPICE LENGTH: #4: 1'-3", #5: 1'-7", #6: 2'-0"
 - CONCRETE FOR THE OUTLET STRUCTURE AND FOREBAYS SHALL BE CDOT CLASS D CONCRETE.
 - EXPANSION JOINT MATERIAL SHALL MEET AASHTO SPECIFICATION M-213. EXPANSION JOINT MATERIAL SHALL BE 1/2" THICK, SHALL EXTEND THE FULL DEPTH OF CONTACT SURFACE AND THE JOINT SHALL BE SEALED, REFER TO DETAILS.
 - ALL EXPOSED CONCRETE CORNERS SHALL HAVE A 3/4-INCH CHAMFER UNLESS OTHERWISE NOTED.
 - BACKFILLING AGAINST WALLS SHALL NOT COMMENCE UNTIL CONCRETE HAS OBTAINED ITS FULL SEVEN DAY STRENGTH.
 - SUBGRADE TO BE 12" THK CLEAN FILL COMPACTED TO 98% STANDARD PROCTOR DENSITY PER ASTM M696 UNDER STRUCTURES.
 - OUTLET STRUCTURE STEPS SHALL CONFORM TO AASHTO M199.
 - FOREBAY: CONSTRUCTION JOINTS SHALL BE INSTALLED AT 10' O.C. MAXIMUM. THE JOINTS SHALL BE SEALED WITH A JOINT SEALANT.

DIMENSIONS BASED ON TWO GRATE PANELS TO MINIMIZE SIZE AND WEIGHT OF INDIVIDUAL GRATE.

PROVIDE CONTINUOUS NEOPRENE GASKET BETWEEN ORIFICE PLATE AND OUTLET STRUCTURE

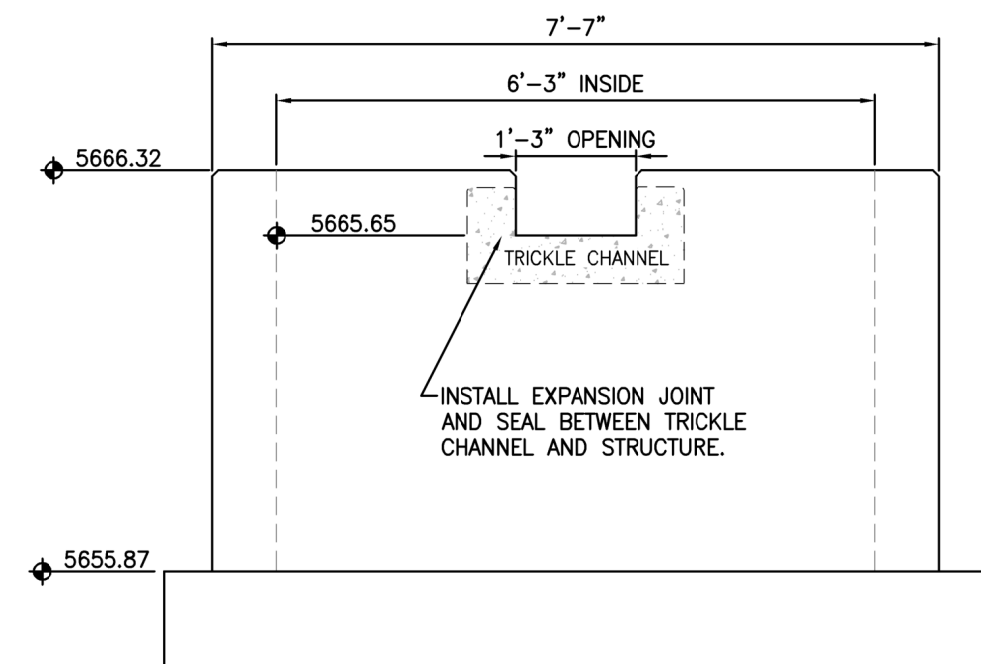


E MAJOR STORM GRATE DETAIL
SCALE: NTS

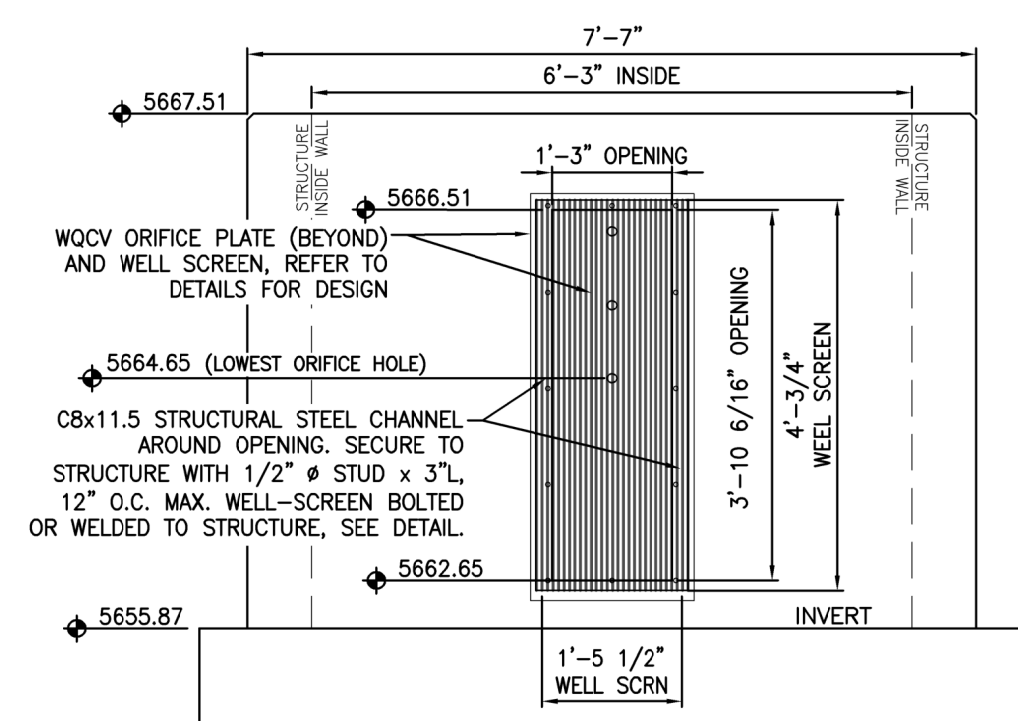


F WQCV ORIFICE PLATE
SCALE: NTS

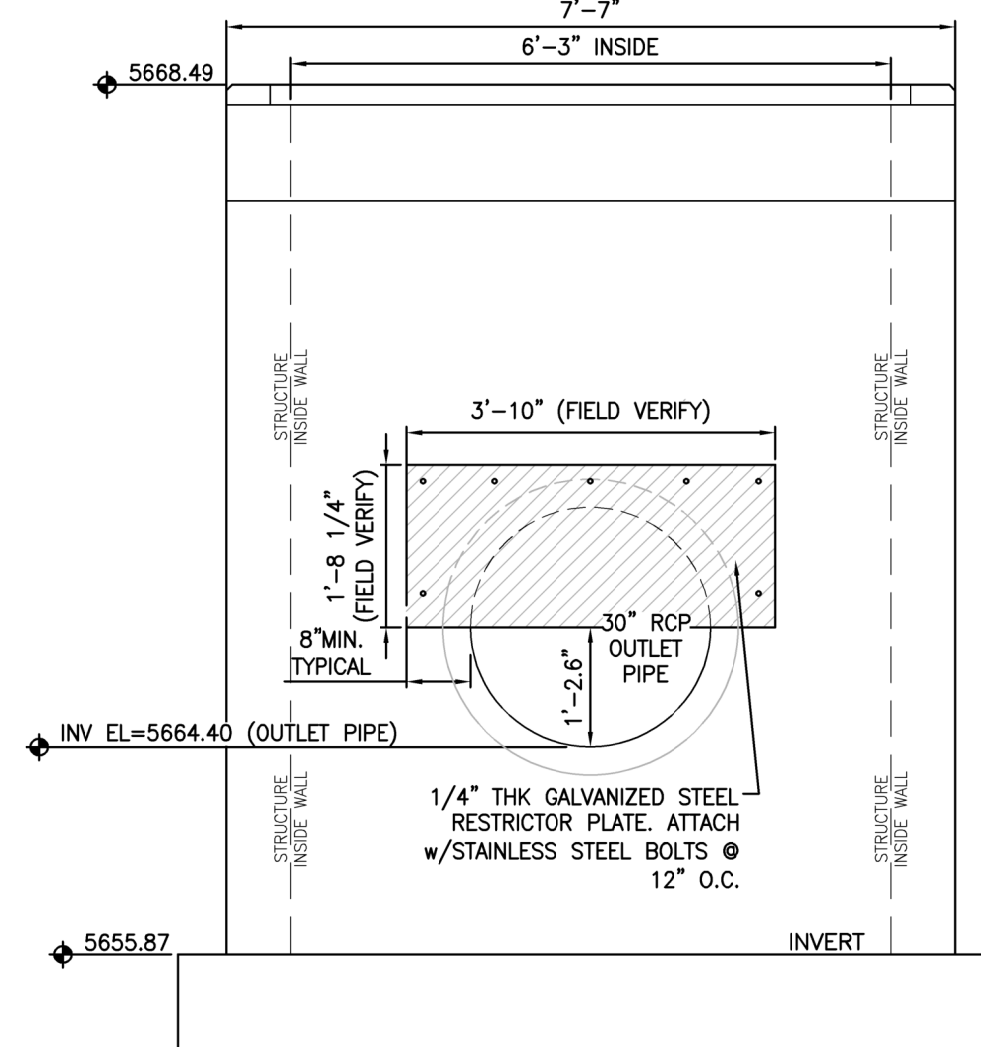
- GRATE AND ORIFICE PLATE NOTES:**
- GRATES AND ORIFICE PLATES SHALL BE MOUNTED USING STAINLESS STEEL HARDWARE. GRATES TO BE BOLTED DOWN TO OUTLET STRUCTURE 18" O.C.
 - GRATES AND ORIFICE PLATES SHALL BE STAINLESS STEEL, ALUMINUM OR STEEL. STEEL TRASH RACKS SHALL BE HOT DIP GALVANIZED AND HOT POWDER PAINTED AFTER GALVANIZED.
 - FIELD VERIFY GRATE DIMENSION PRIOR TO FABRICATION.



B SECTION B-B
SCALE: NTS

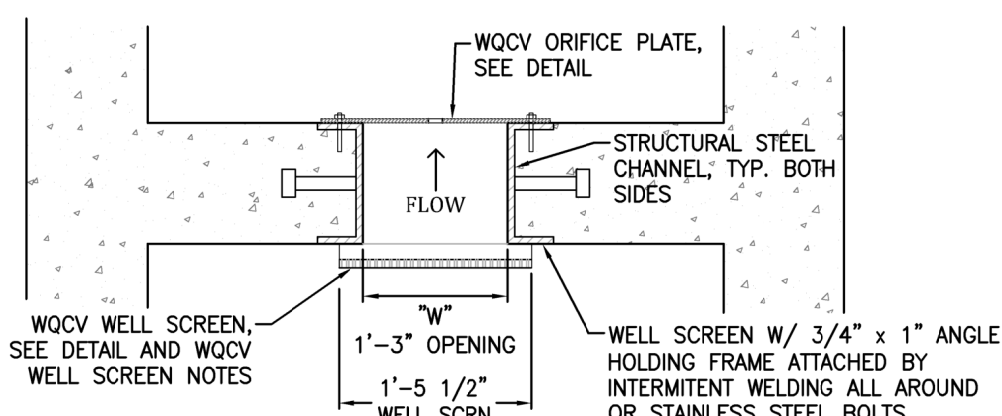


C SECTION C-C
SCALE: NTS

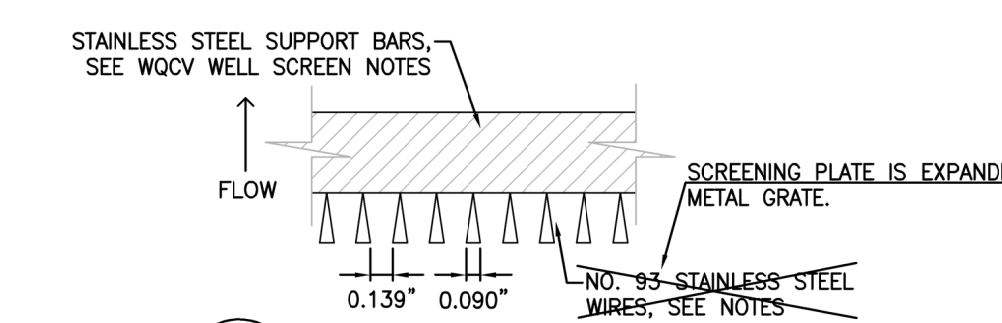


D SECTION D-D
SCALE: NTS

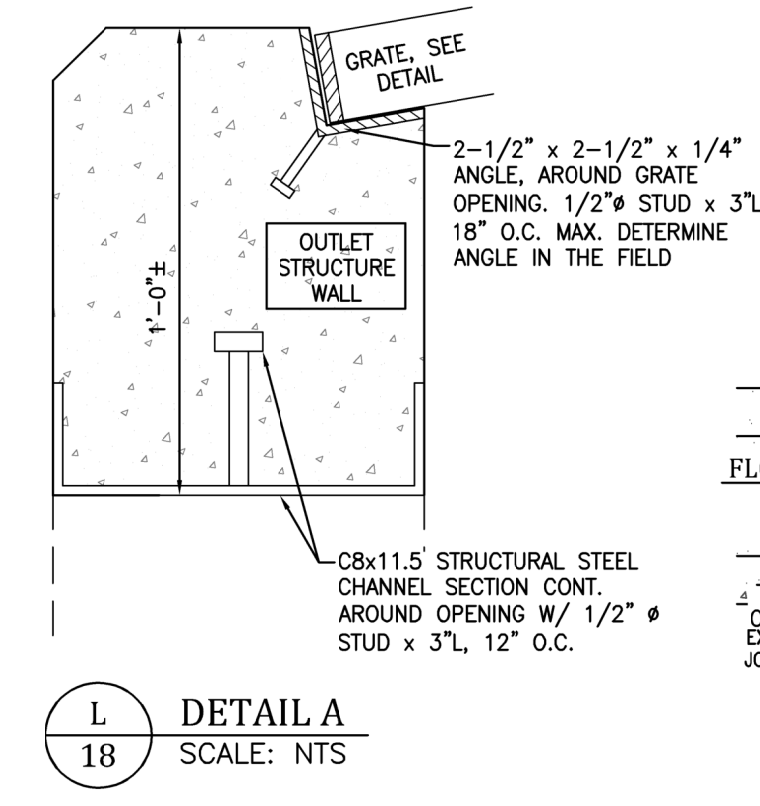
- WQCV WELL-SCREEN NOTES:**
- WELL-SCREEN SHALL BE STAINLESS STEEL AND ATTACHED BY INTERMITTANT WELDS OR STAINLESS STEEL BOLTS ALONG EDGE OF THE MOUNTING FRAME.
 - WQCV WELL SCREEN
 - TYPE OF SCREEN: STAINLESS STEEL #93 VEE WIRE (JOHNSON VEE WIRE TM STAINLESS STEEL SCREEN OR EQUIVALENT WITH 60% OPEN AREA)
 - SCREEN SLOT OPENING DIMENSION: 0.139" (SCREEN #93 VEE WIRE SLOT OPENING)
 - TYPE AND SIZE OF SUPPORT ROD: TE 0.074"x0.50"
 - SPACING OF SUPPORT ROD (O.C.): 1.0 INCH
 - TOTAL SCREEN THICKNESS: 0.655"
 - CARBON STEEL HOLDING FRAME TYPE: 3/4" x 1.0" ANGLE



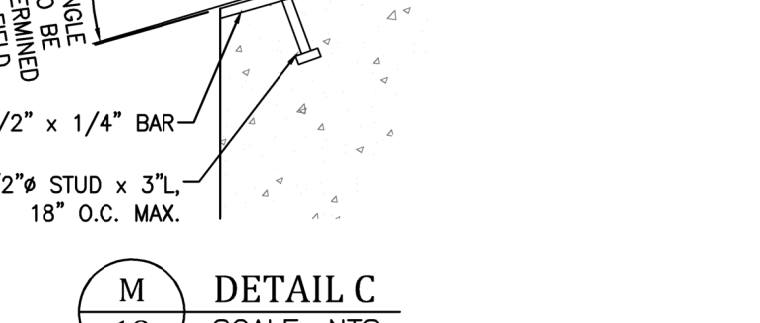
J WQCV ORIFICE PLATE AND WELL SCREEN
SCALE: NTS



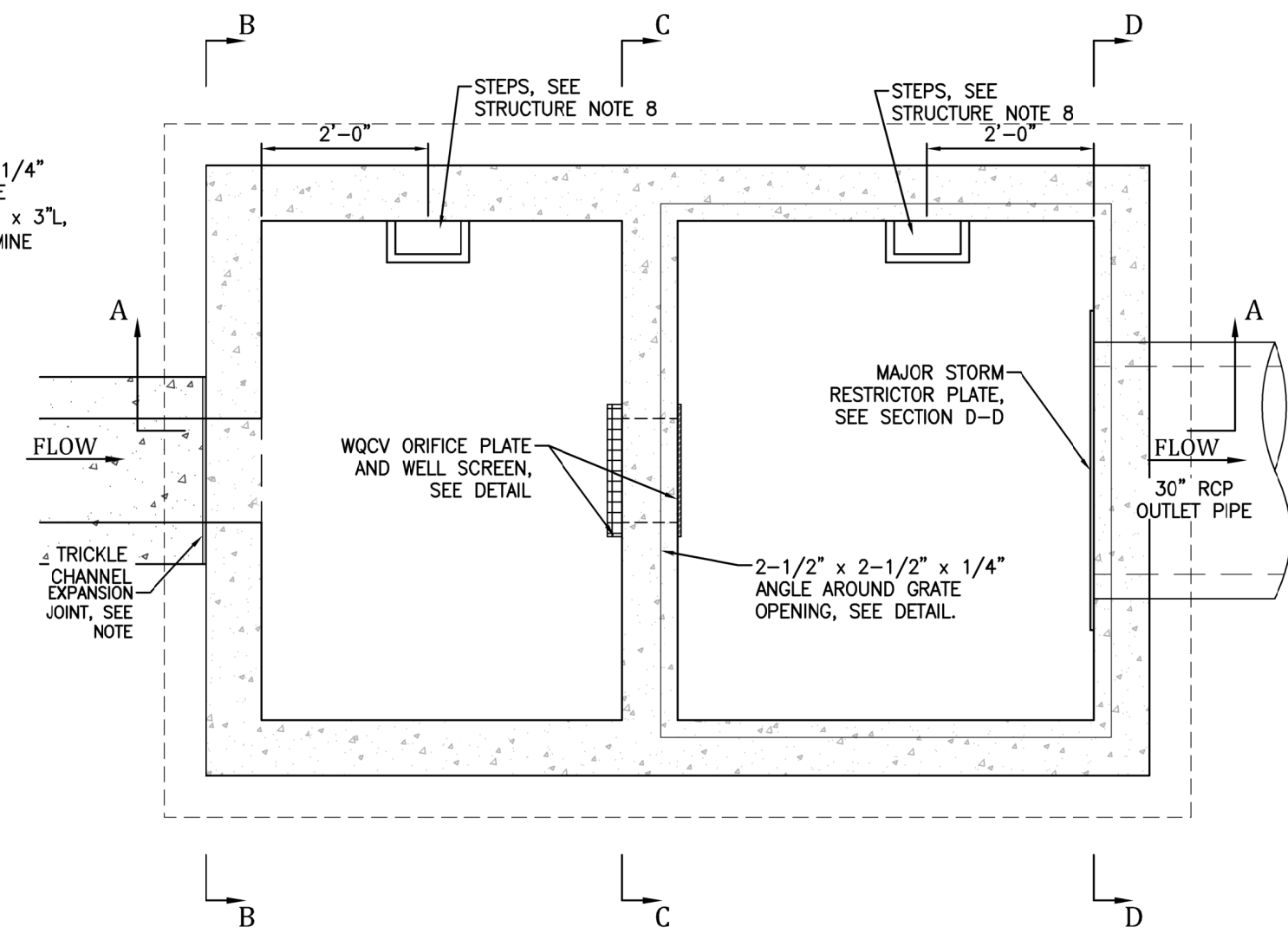
K WQCV WELL SCREEN
SCALE: NTS



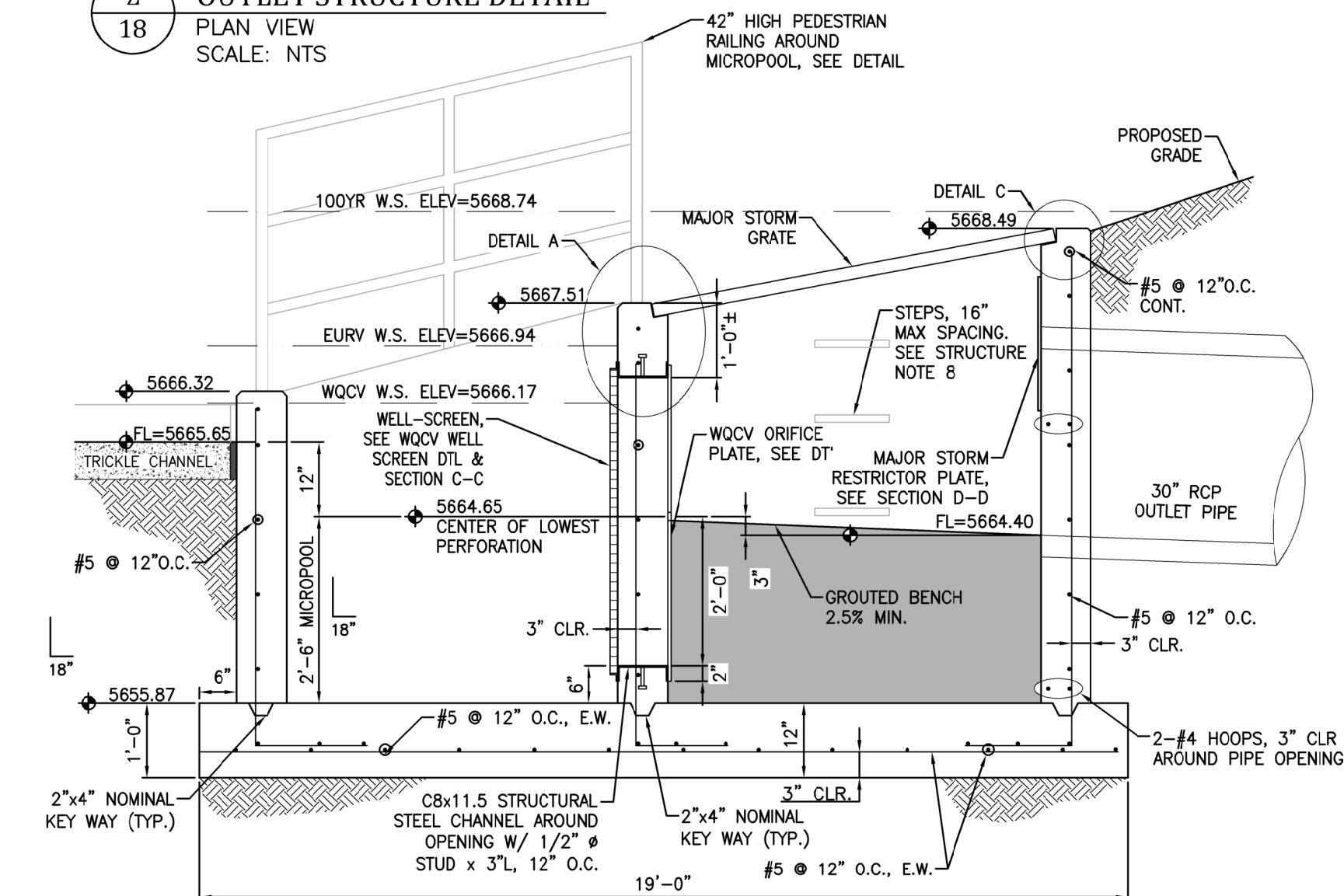
L DETAIL A
SCALE: NTS



M DETAIL C
SCALE: NTS



Z OUTLET STRUCTURE DETAIL
PLAN VIEW
SCALE: NTS

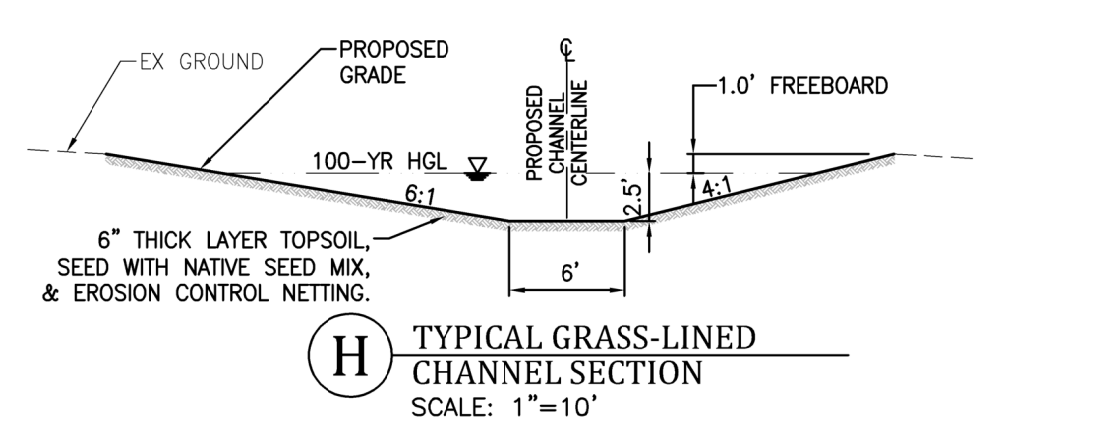


A SECTION A-A
SCALE: NTS

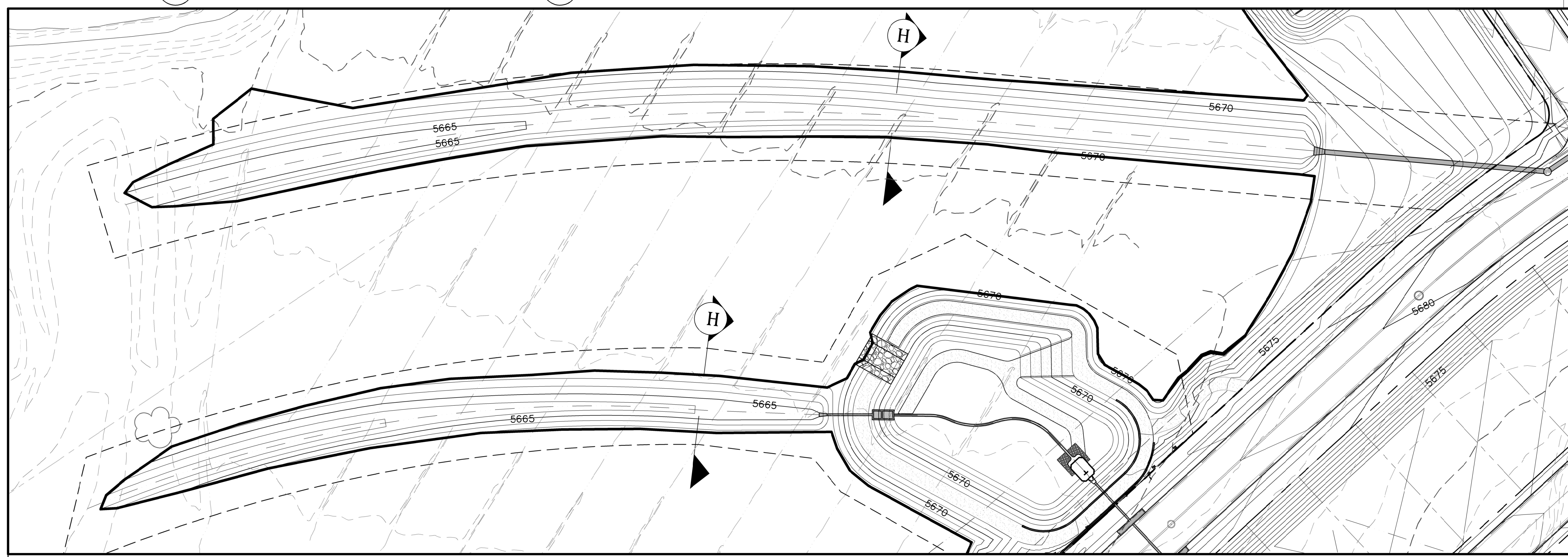
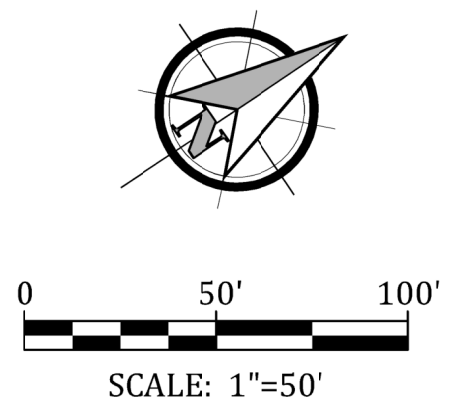
Engineering Record Drawings

"I hereby affirm that the improvements for The Glen at Widefield Filing No. 9 have been constructed in substantial compliance with the Construction Plans approved by El Paso County."

Andrew W. McCord, PE _____ Date _____

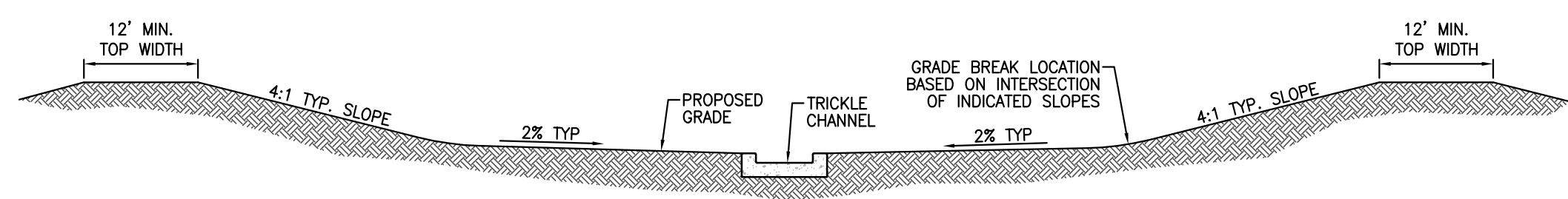


H TYPICAL GRASS-LINED CHANNEL SECTION
SCALE: 1"=10'

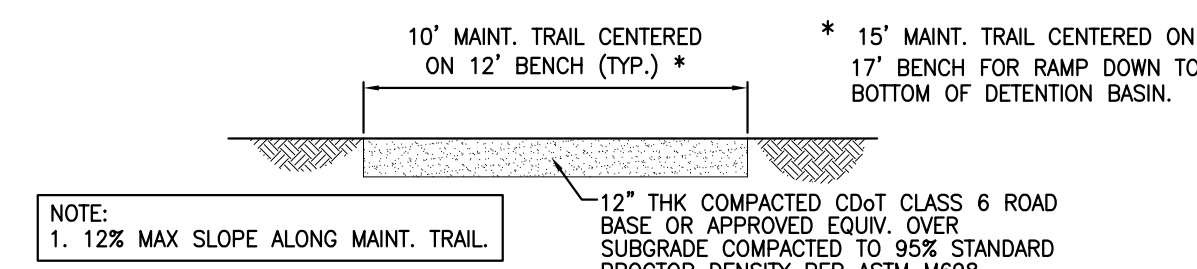


EXTENDED DETENTION BASIN 'A' AND GRASS-LINED CHANNELS TO WEST FORK JIMMY CAMP CREEK

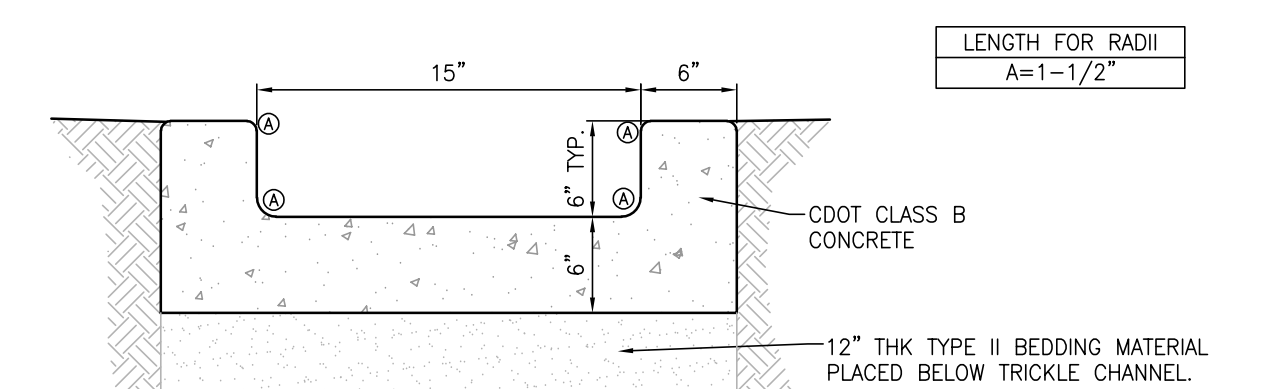
Project No:	17038
Date:	September 25, 2018
Design:	JAK
Drawn:	JAK
Check:	AWMc
Revisions:	



P 19 **DETENTION BASIN TYPICAL CROSS SECTION**
SCALE: NTS



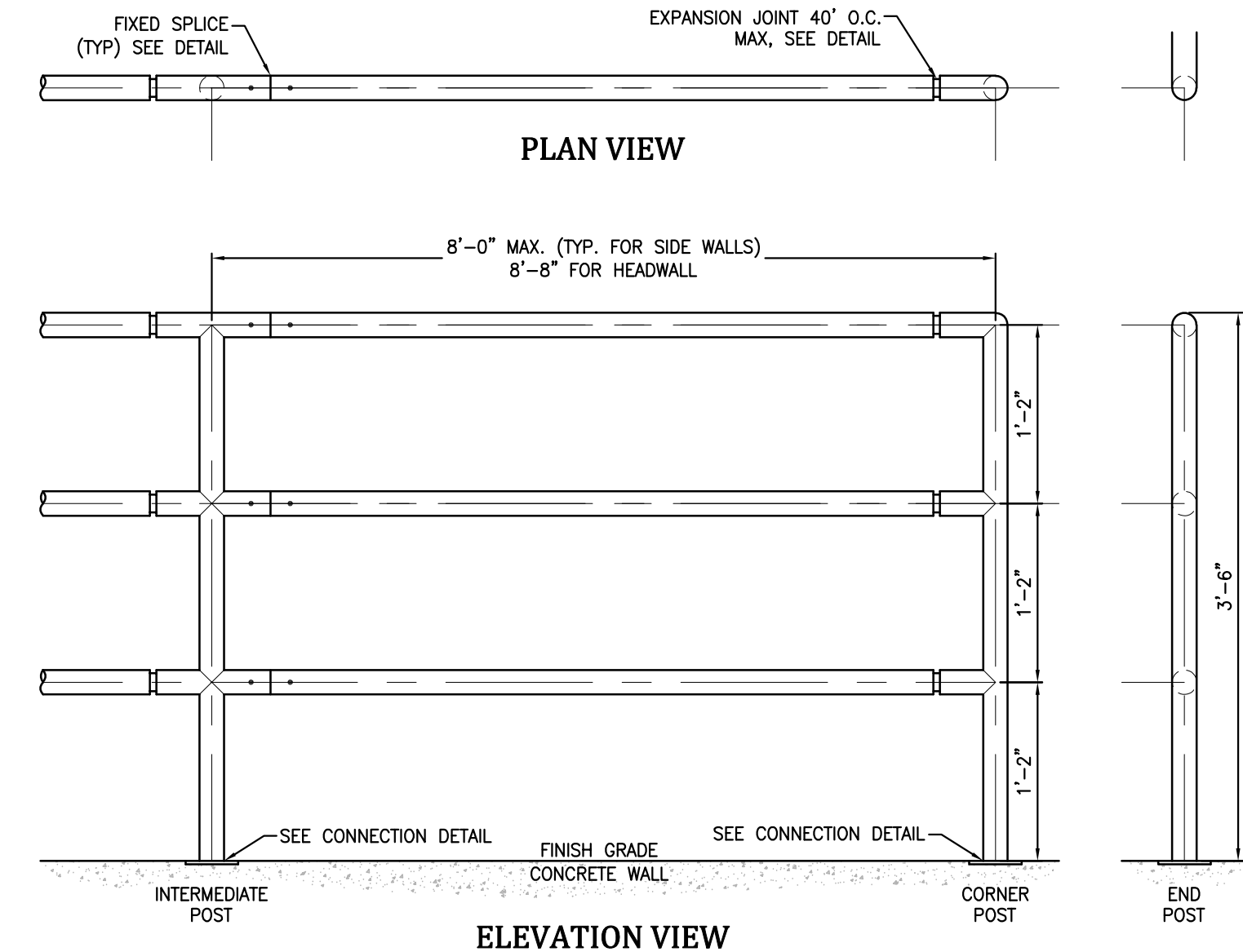
Q 19 **MAINTENANCE TRAIL SECTION**
SCALE: NTS



N 19 **TRICKLE CHANNEL**
SCALE: 1"=1'

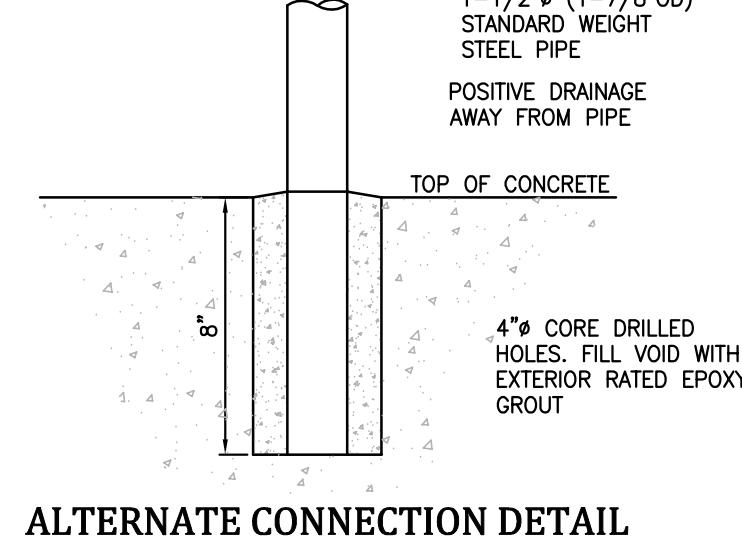
CLASSIFICATION AND GRADATION OF RIPRAP				
Rip-Rap Designation	% Smaller than Given Size by Weight	Intermediate Rock Dimension (Inches)	d_{50} (Inches)	
Type VL	70-100	12		
	50-70	9		
	35-50	6	6**	
Type L	70-100	15		
	50-70	12		
	35-50	9	9**	
Type M	70-100	21		
	50-70	18		
	35-50	12	12**	
Type L	70-100	30		
	50-70	24		
	35-50	18	18	

* d_{50} = Mean particle size (Intermediate Dimension) by weight.
 ** Mix VL, L and M Rip-rap with 35% topsoil (by volume) and bury with 4-6 inches of topsoil, all vibration compacted and revegetate.
 (Figure 8-34: Riprap and Soil Riprap Placement and Gradation, UDFCD, Drainage Criteria Manual, Volume 1)

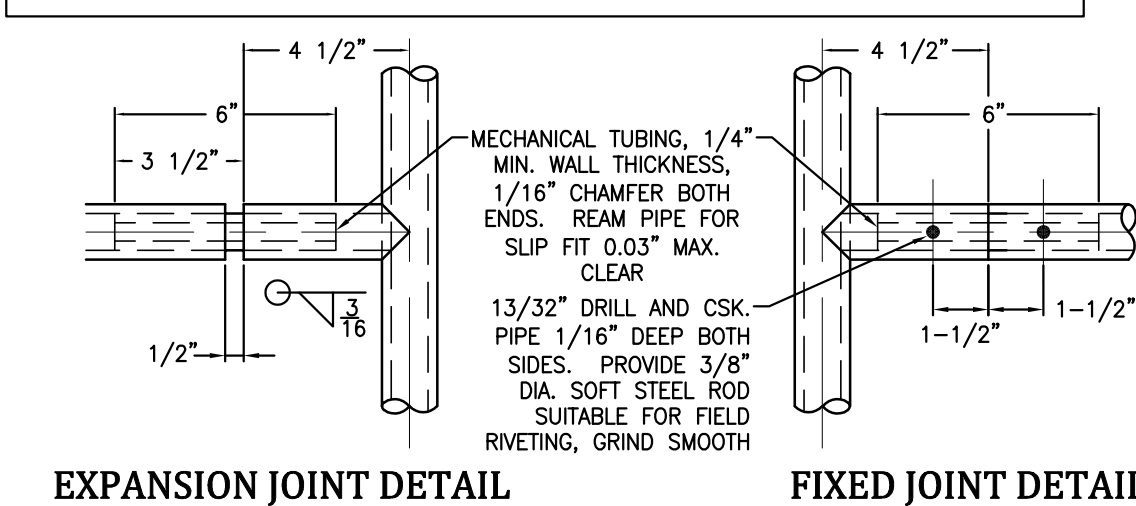


G 19 **PEDESTRIAN RAILING/HANDRAIL**
SCALE: NTS

- PEDESTRIAN RAILING/HANDRAIL NOTES:**
- ALL HANDRAIL SHALL BE FABRICATED WITH NEW 1-1/2" (1-7/8" OD) DIAMETER STANDARD WEIGHT STEEL PIPE.
 - WELD ALL PIPE JOINTS WITH 1/8" REINFORCED WELDS AND DRESS SMOOTH.
 - CORNERS AND EDGES OF ALL BARS, PLATES AND PIPE ENDS SHALL BE SANDED SMOOTH AND FREE OF BURRS.
 - ALL HANDRAIL MATERIAL REQUIRED FOR COMPLETE INSTALLATION SHALL BE PROVIDED.
 - HANDRAIL FINISH SHALL BE ONE COAT METAL PRIMER AND TWO COATS SHERWIN WILLIAMS BRIDGE GREEN. COLOR SHALL BE VERIFIED BY COUNTY.
 - CONTRACTOR TO FIELD VERIFY DIMENSIONS PRIOR TO FABRICATION.
 - RAILING BETWEEN HEADWALL AND WINGWALL SHALL BE SEPARATE OR AN EXPANSION JOINT SHALL BE PROVIDED TO ALLOW FOR DIFFERENTIAL MOVEMENT.

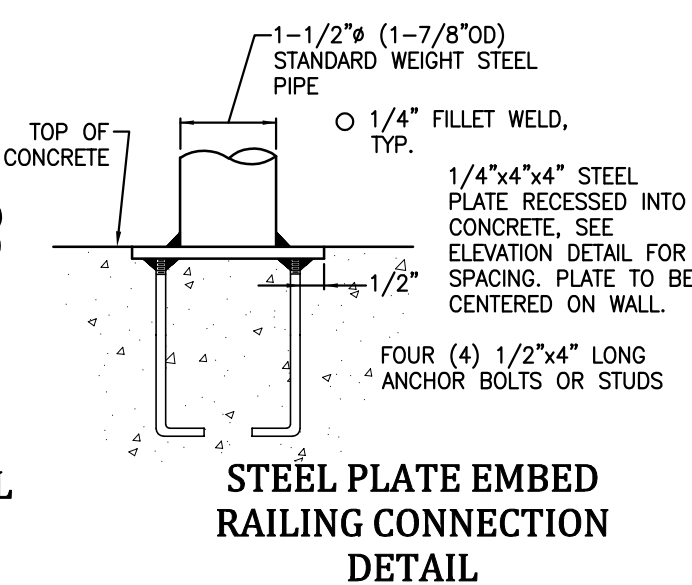


ALTERNATE CONNECTION DETAIL

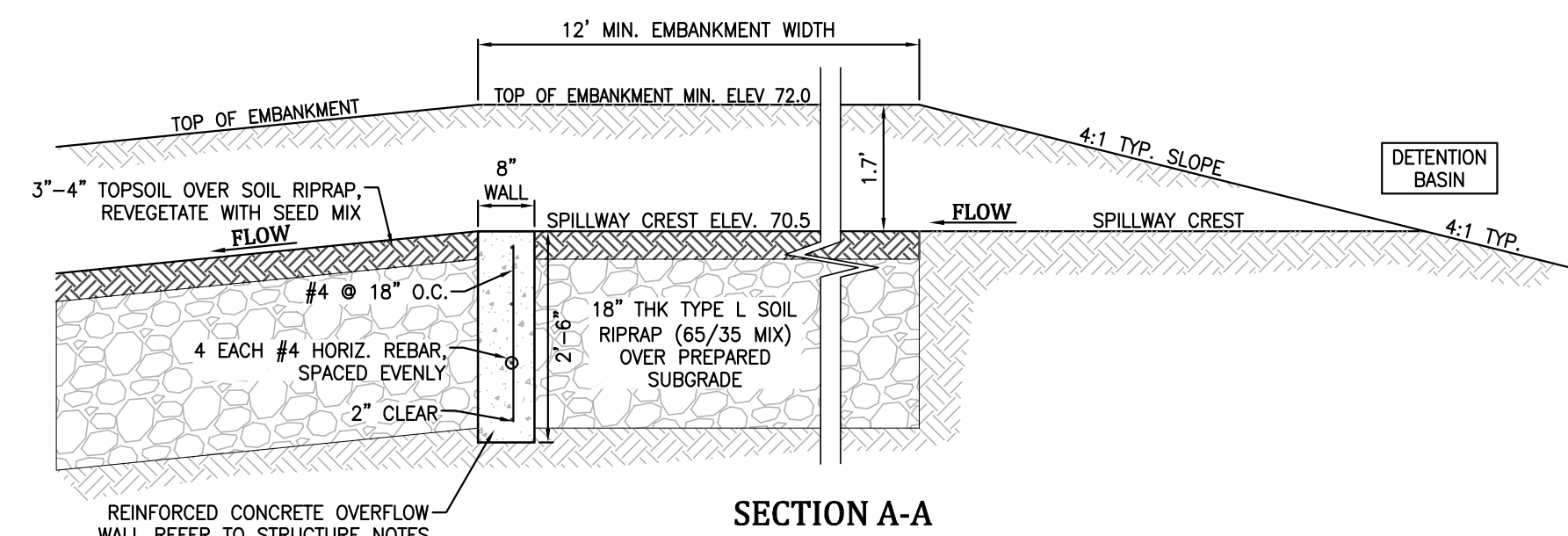


EXPANSION JOINT DETAIL

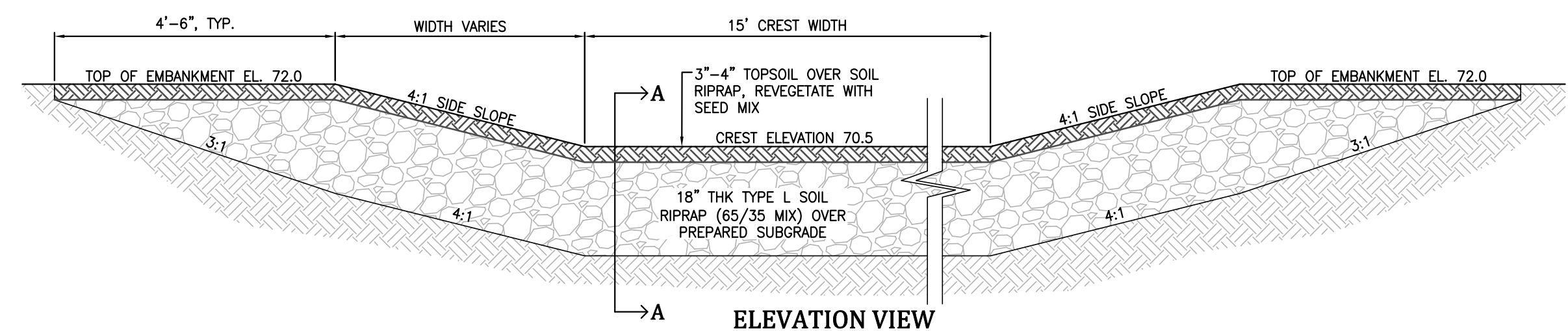
FIXED JOINT DETAIL



STEEL PLATE EMBED RAILING CONNECTION DETAIL

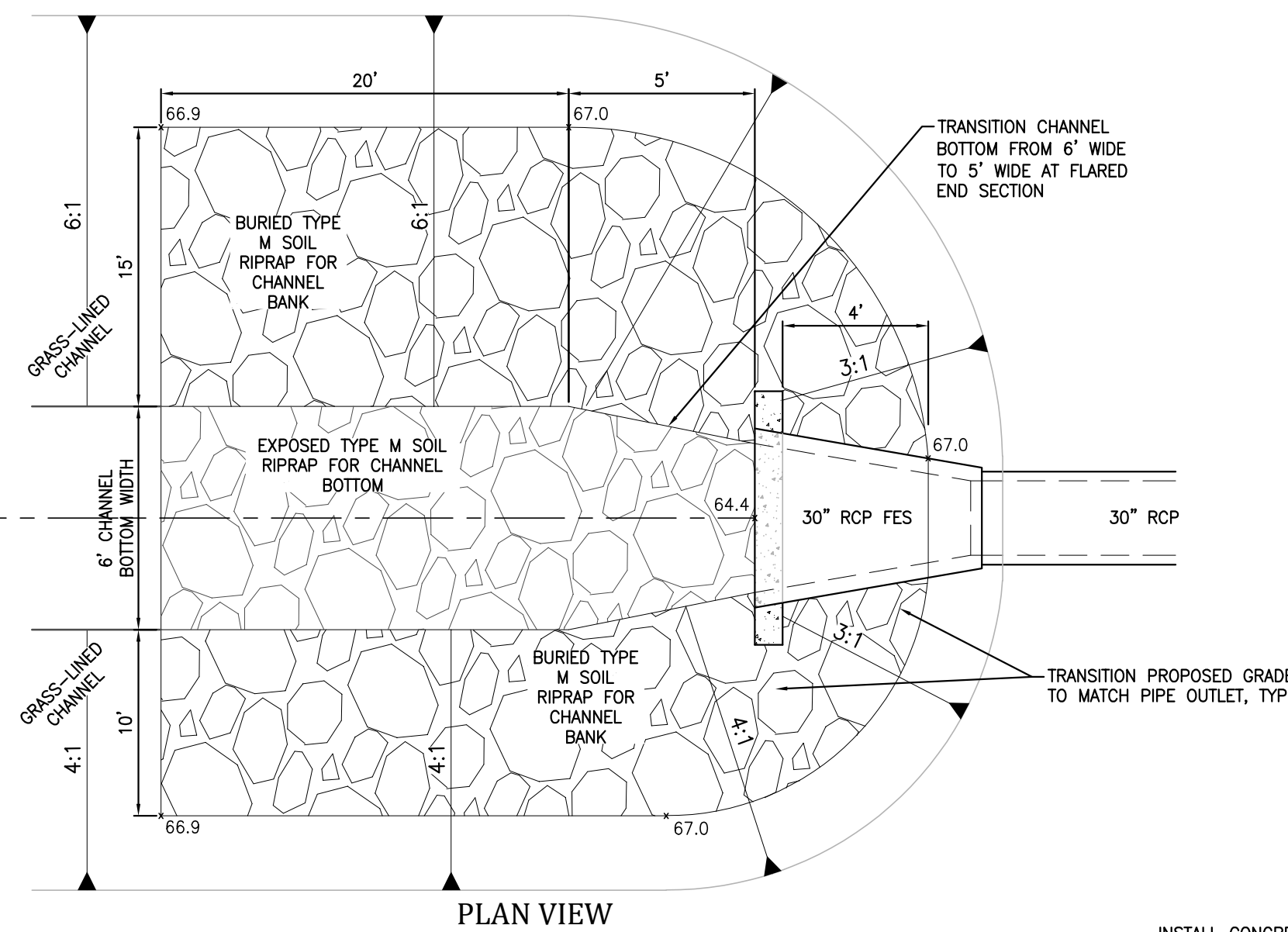


SECTION A-A



ELEVATION VIEW

O 19 **EMERGENCY SPILLWAY**
SCALE: NTS



PLAN VIEW

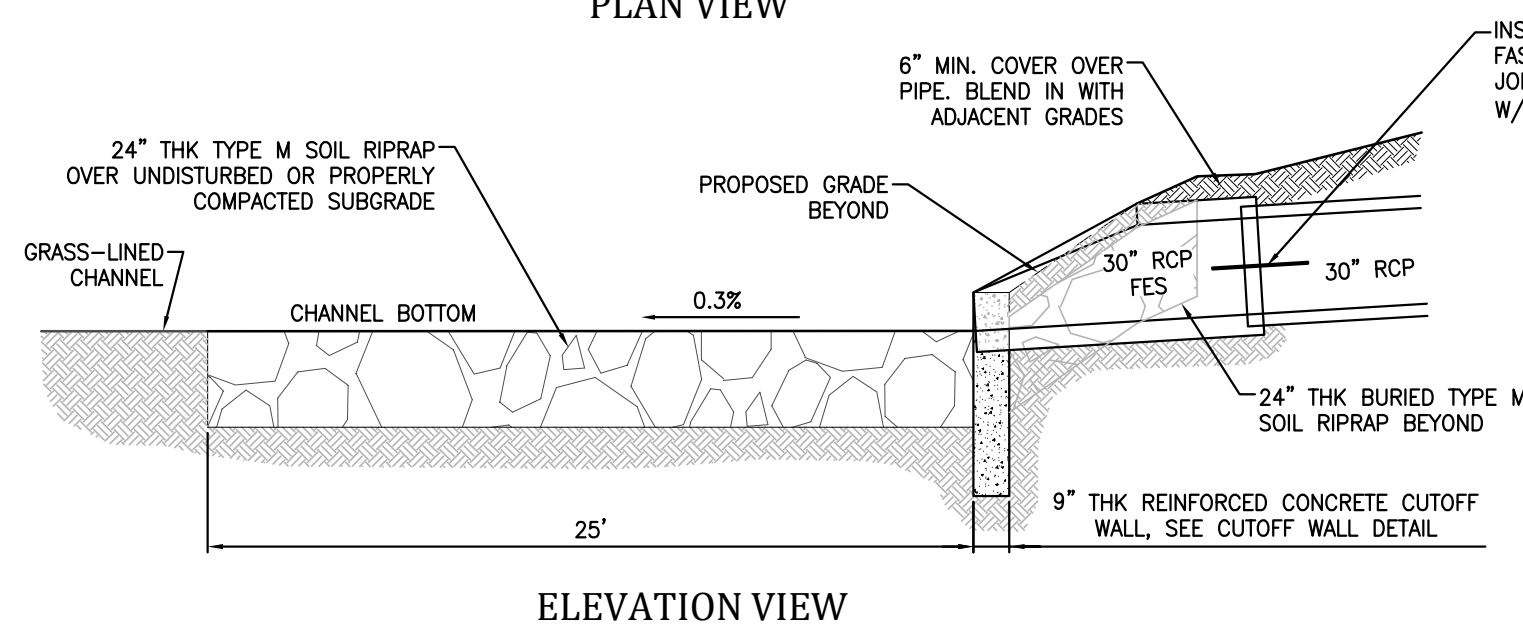
Engineering Record Drawings

"I hereby affirm that the information on these drawings for the Glen at Widefield Filing No. 9 have been constructed in substantial compliance with the Construction Plans approved by El Paso County."

Andrew W. McCord, P.E.
 25057
 PROFESSIONAL ENGINEER

Oct. 19, 2020
 Date

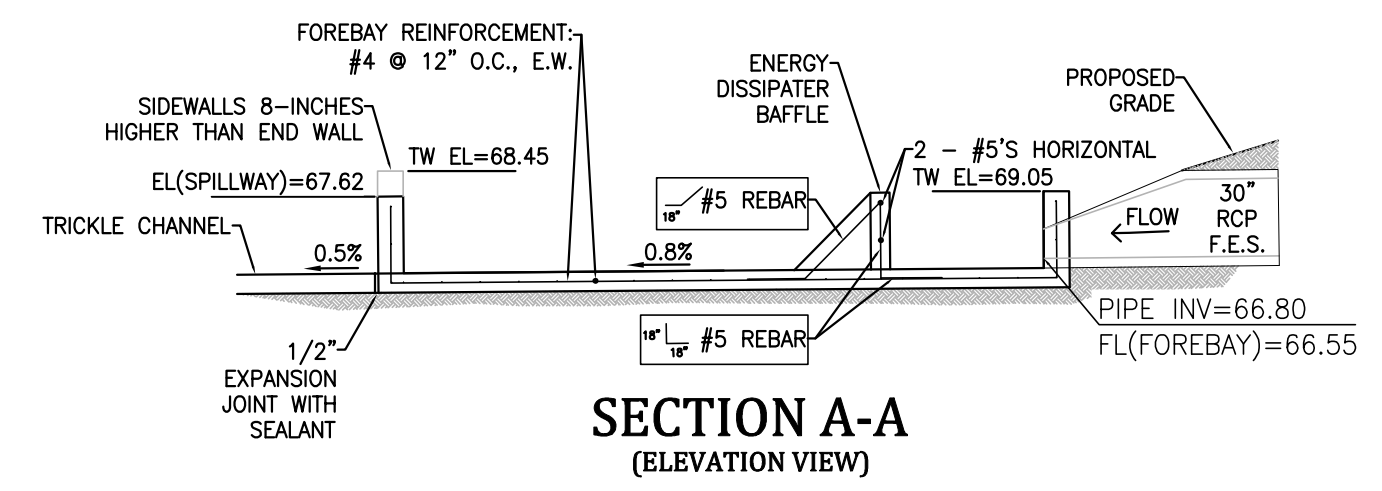
- NOTE:**
- STEEL REINFORCEMENT FOR CUTOFF WALL SHALL BE #4 BARS AT 12" O.C. EACH WAY. STEEL REINFORCEMENT CLEARANCES SHALL BE 2" TO FORMED SURFACES AND FES, AND 3" TO SOIL.



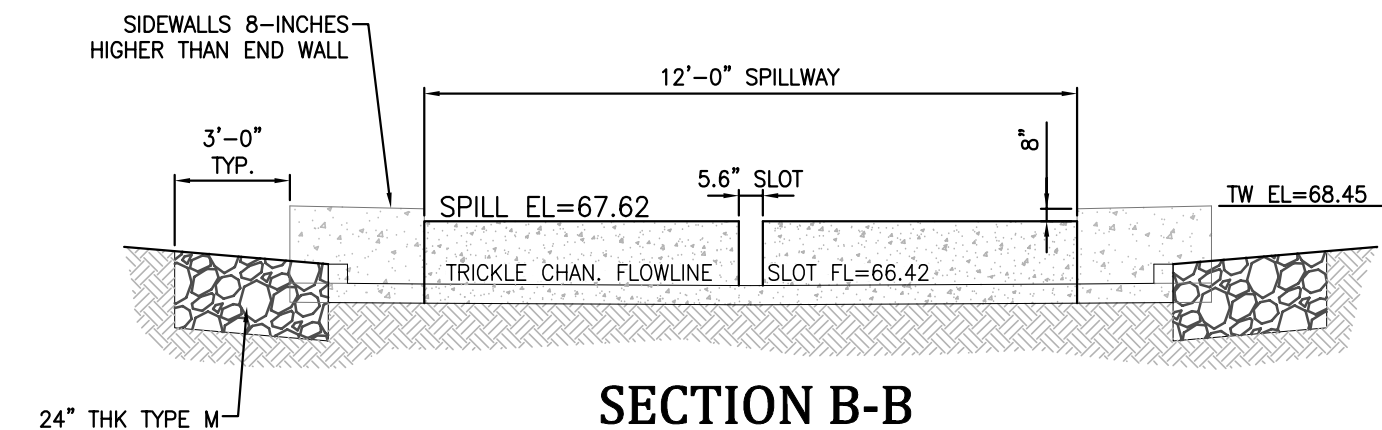
ELEVATION VIEW

D 19

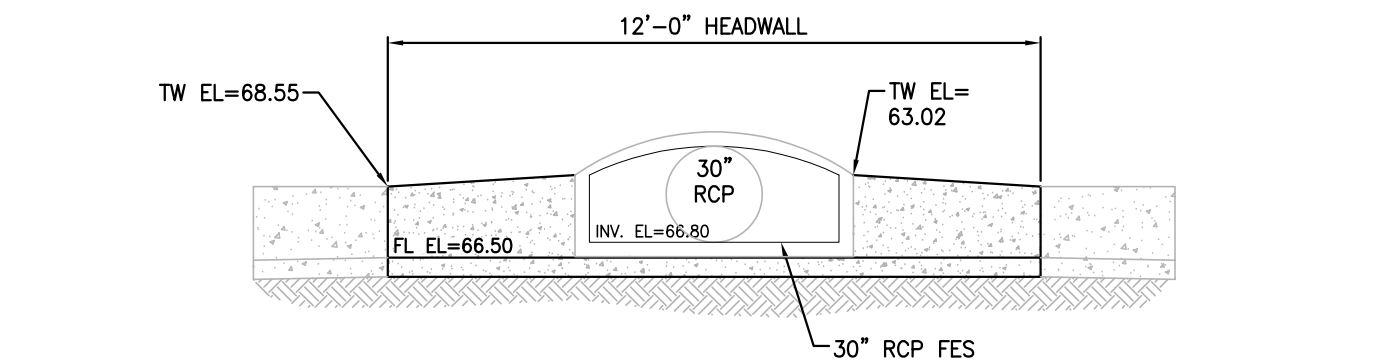
30" RCP FES PIPE OUTLET w/CONCRETE CUTOFF WALL AND JOINT RESTRAINTS
SCALE: NTS



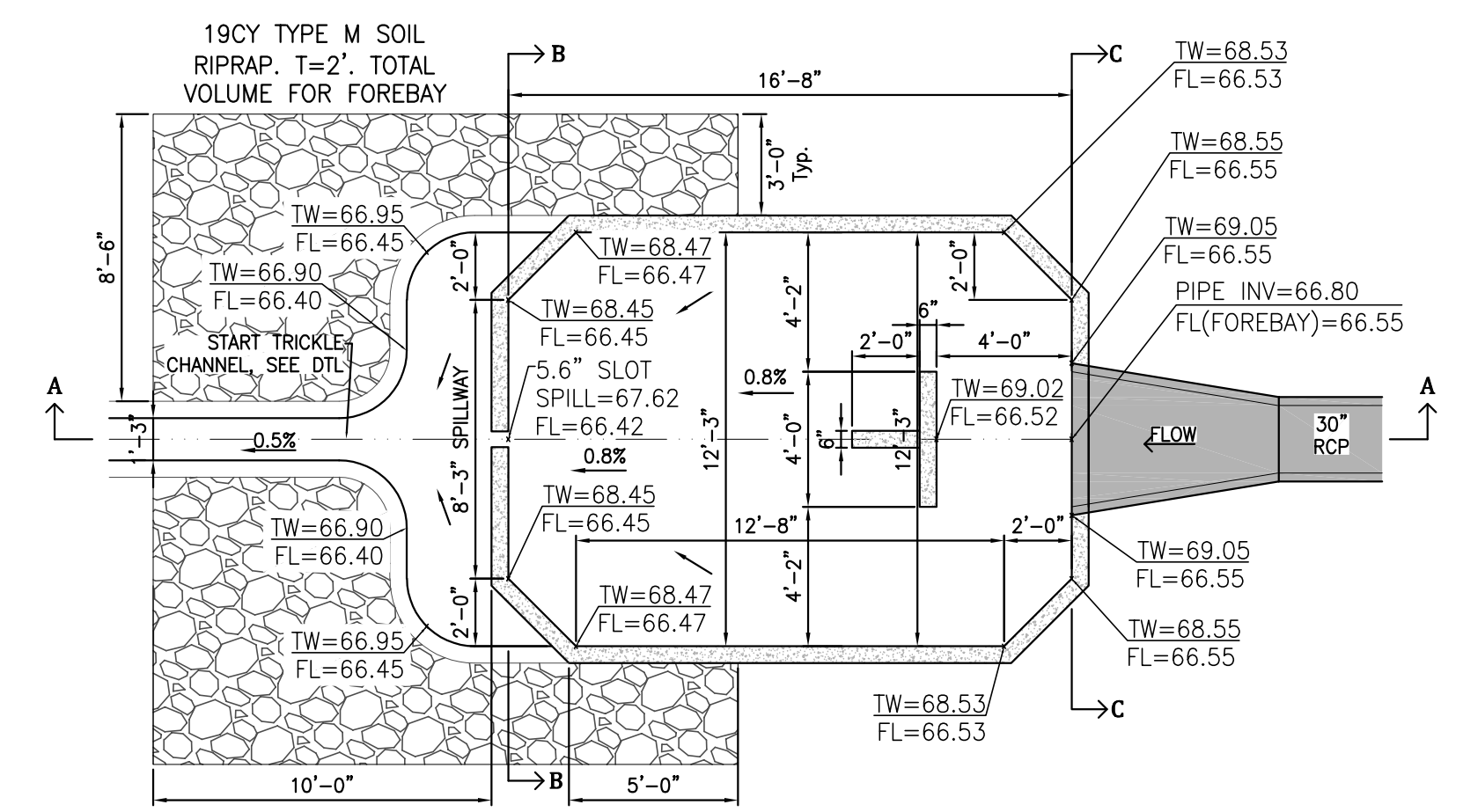
SECTION A-A (ELEVATION VIEW)



SECTION B-B



SECTION C-C



PLAN VIEW

- NOTES:**
- REFER TO "STRUCTURE NOTES" FOR REQUIREMENTS.
 - REFER TO SHEET C601 FOR "OUTLET STRUCTURE, FOREBAY AND TRICKLE CHANNEL NOTES".

R 19 **PRESEDIMENTATION FOREBAY**
SCALE: NTS

GLEN AT WIDEFIELD FILING NO. 9
SITE DETAIL PLAN
DETENTION BASIN DETAILS
EL PASO COUNTY, COLORADO

Project No.: 17038
 Date: September 25, 2018
 Design: JAK
 Drawn: JAK
 Check: AWMc
 Revisions:

SHEET

18

18 of 20 Sheets

END 17038-009-18-01.dwg/Oct. 18, 2020

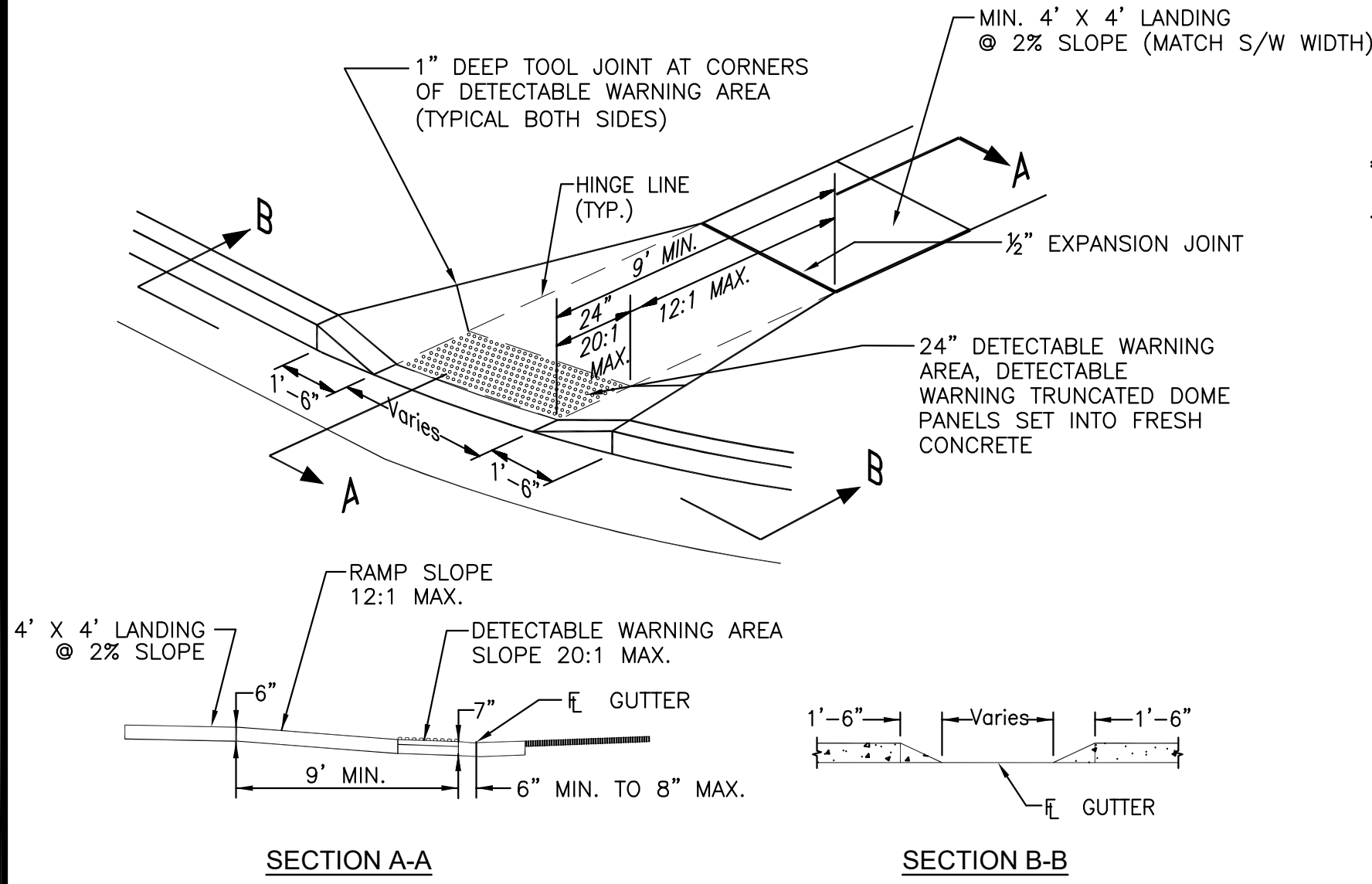
Kiowa
 Engineering Corporation
 1604 South 21st Street
 Colorado Springs, Colorado 80904
 (719) 630-7342

W
 WIDEFIELD
 Investment Group

GENERAL NOTES

▲ EXPANSION JOINTS SHALL BE INSTALLED WHEN ABUTTING EXISTING CONCRETE OR FIXED STRUCTURE. EXPANSION JOINT MATERIAL SHALL BE 1/2" THICK AND SHALL EXTEND THE FULL DEPTH OF CONTACT SURFACE.

CONCRETE SHALL BE PER EL PASO COUNTY ENGINEERING DIVISION SPECIFICATIONS.

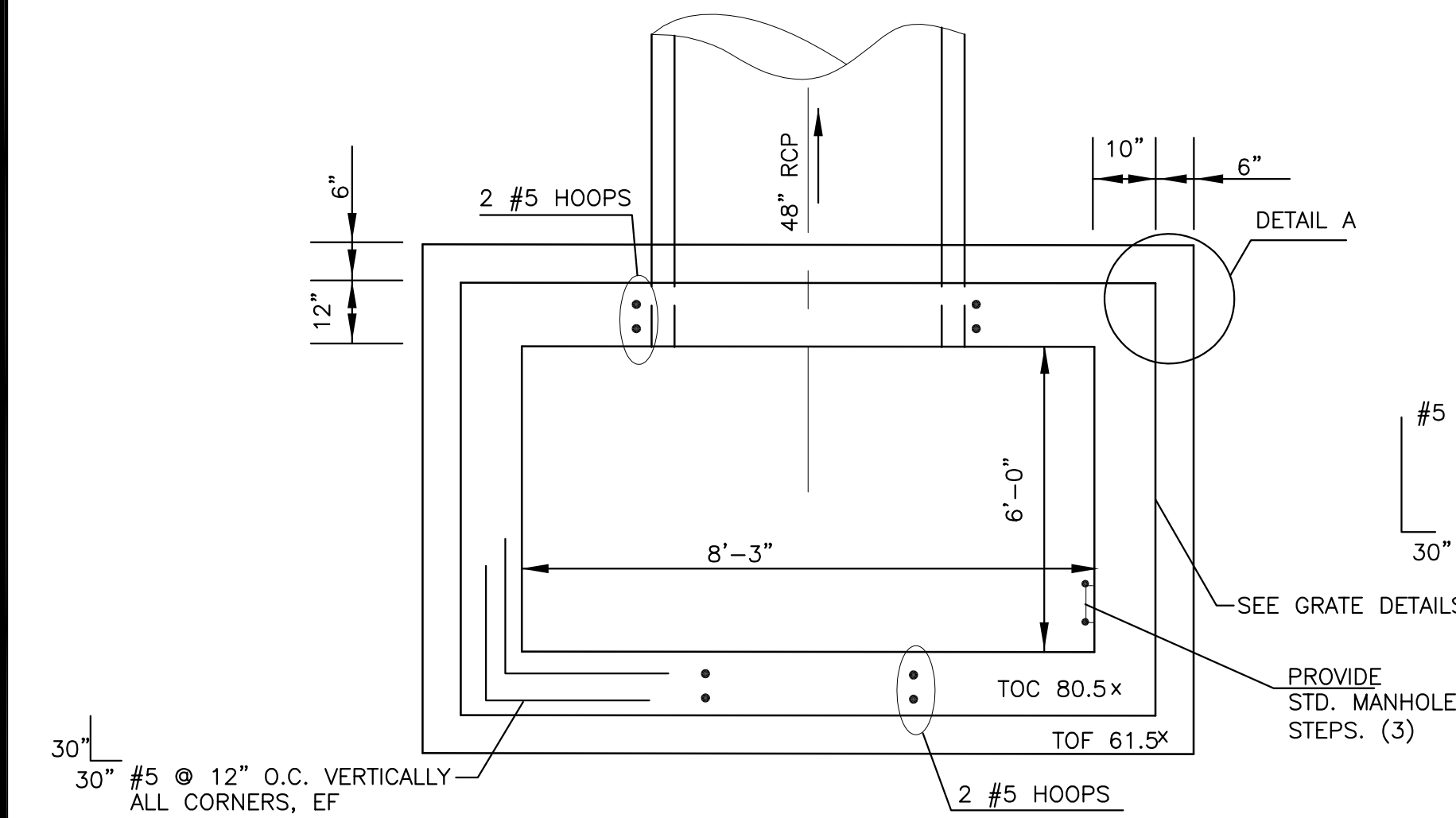


PEDESTRIAN RAMP DETAILS

EPC STD. SD_2-40
NOT TO SCALE

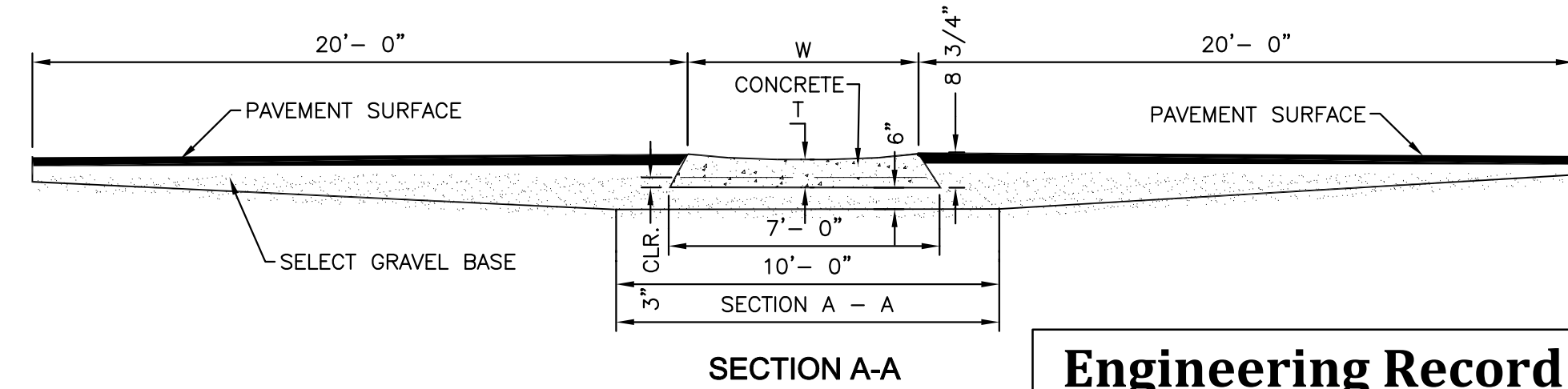
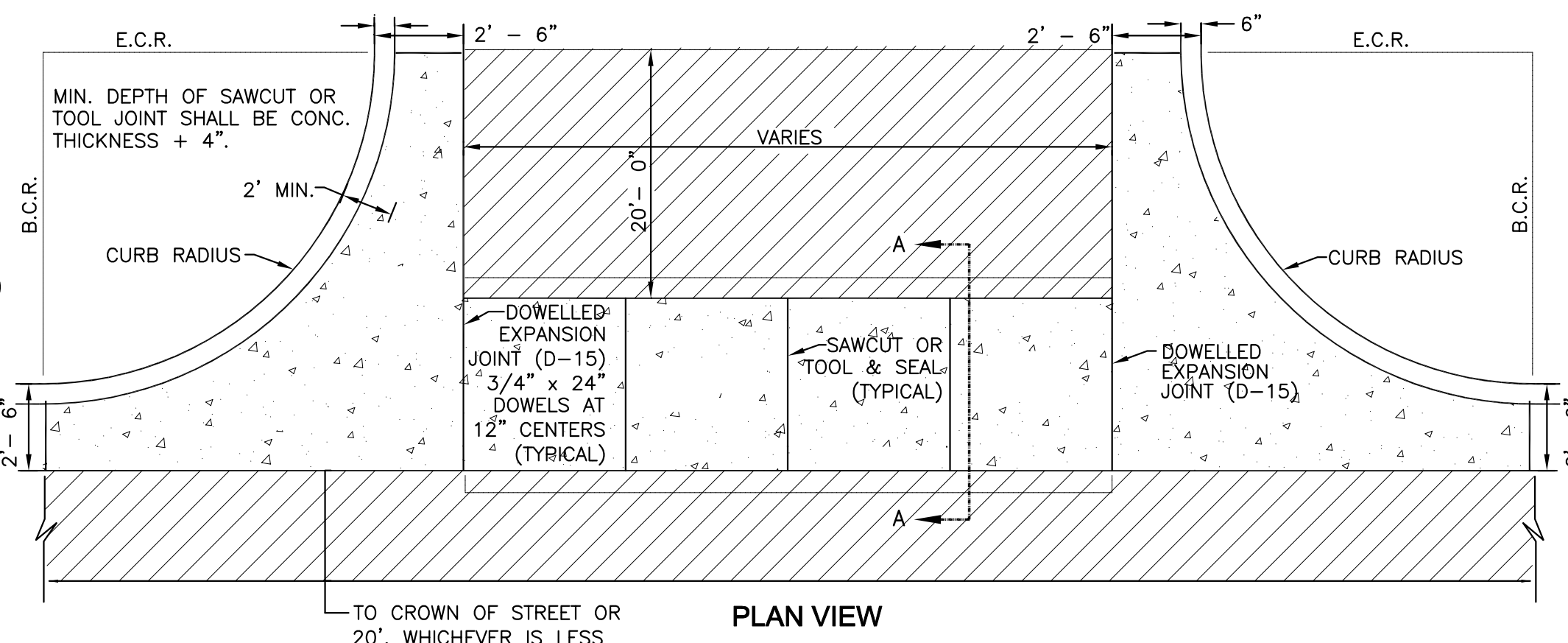
GENERAL NOTES

- All work shall be done in accordance with current Engineering Manual and ADA requirements.
- Contractor to notify Engineering Division inspection staff 48 hours prior to concrete placement.
- Pedestrian ramp construction shall be a minimum 3000 psi concrete, minimum 4" thick, non-colored, non-scored, coarse broom finish.
- Ramp location and length may require modification to maintain the 12:1 maximum running ramp slope and 20:1 detectable warning area due to street intersection grades and / or alignment.
- Detectable warning area shall start a minimum of 6" but not more than 8" from the flow line of the curb at any point.
- Detectable warning area shall be prefabricated reddish integrally colored truncated-dome surfaced thermoplastic.
- The detectable warning area shall be 24" in length and the full width of the ramp.
- Ramp width required is the same as approaching sidewalk, 4' minimum.
- All ramps will be perpendicular to traffic with the exception of mid-block or terminal ramps which may be parallel subject to approval.
- Avoid placing drainage structures, traffic signal / signage, utilities / junction boxes, or other obstructions within proposed ramp areas.
- Where the 1'-6" flared side(s) of a perpendicular curb ramp is (are) contiguous with a pedestrian or hard surface area, the flare width shall be increased to 8' minimum and the maximum flare slope shall not exceed 10:1.
- Pedestrian walkway and / or location of existing or future pedestrian ramps on opposite corners shall be reviewed before construction new ramps. New ramps shall align with existing ramps and pedestrian walkway.
- At marked pedestrian crossings, the bottom of the ramps, exclusive of the flare sides, shall be totally contained within the markings.
- Sidewalk cross-slope: 1/4"/ft.
- Concrete mix design shall conform to the requirements of the color admixture manufacturer and the following:
 - 28-day compressive strength = 4,000 PSI (min.)
 - Water/cement ratio = 0.45 (max.)
 - Cement content = 6-1/2 sacks/C.Y. (min.) (Type II cement)
 - Maximum aggregate size = 3/4"
 - Entrained air content = 6% - 10%
 - Slump = 1 inch (min.) - 4 inches (max.)



**AREA INLET STA. 14+10.75, 12.94'LT
SPRING GLEN DRIVE**

NTS

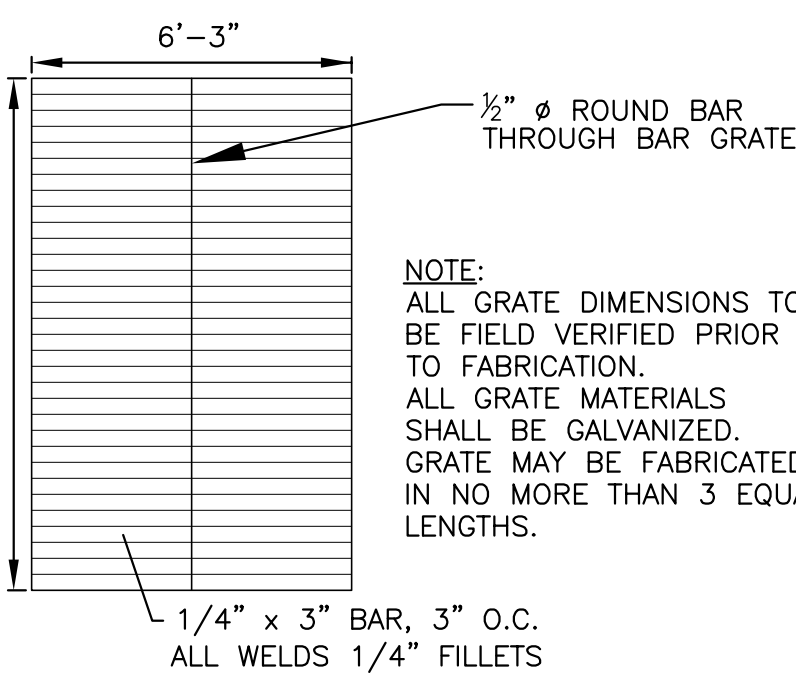
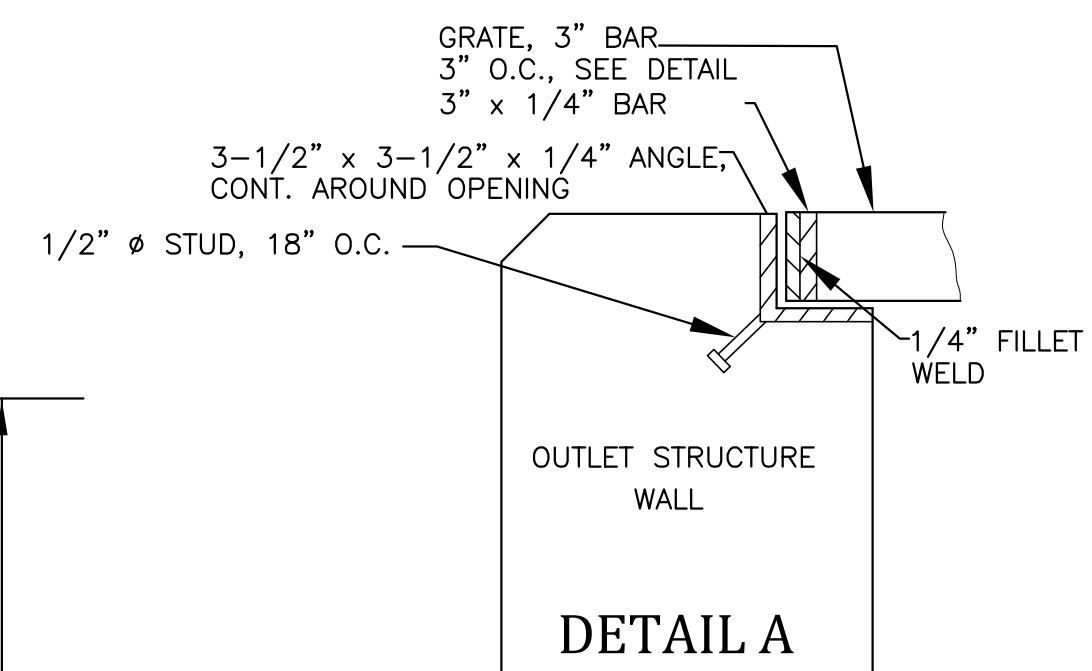


NOTES

- W - WIDTH SHALL BE 6' FOR LOCAL, 8' FOR COLLECTORS, AND 10' FOR ARTERIAL ROADS.
- T - SQUARED-OFF RETURN TO BE POURED MONOLITHIC 8" P.C.C. MINIMUM WITH 6x6 - 4.4 W.W.F. OR #4 @ 18" E.W.
- 3" MINIMUM ASPHALT DEPTH (2 LIFTS).
- DESIGN TO SPECIFY ELEVATIONS AT PI AND PCR

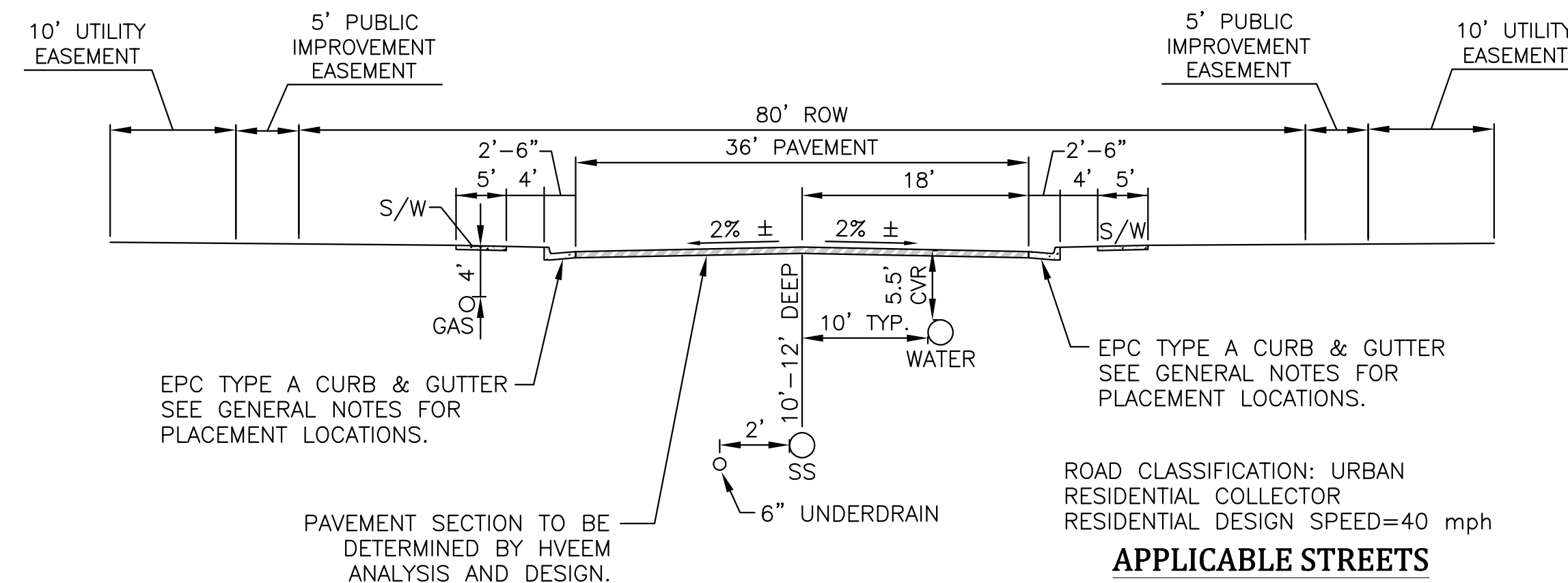
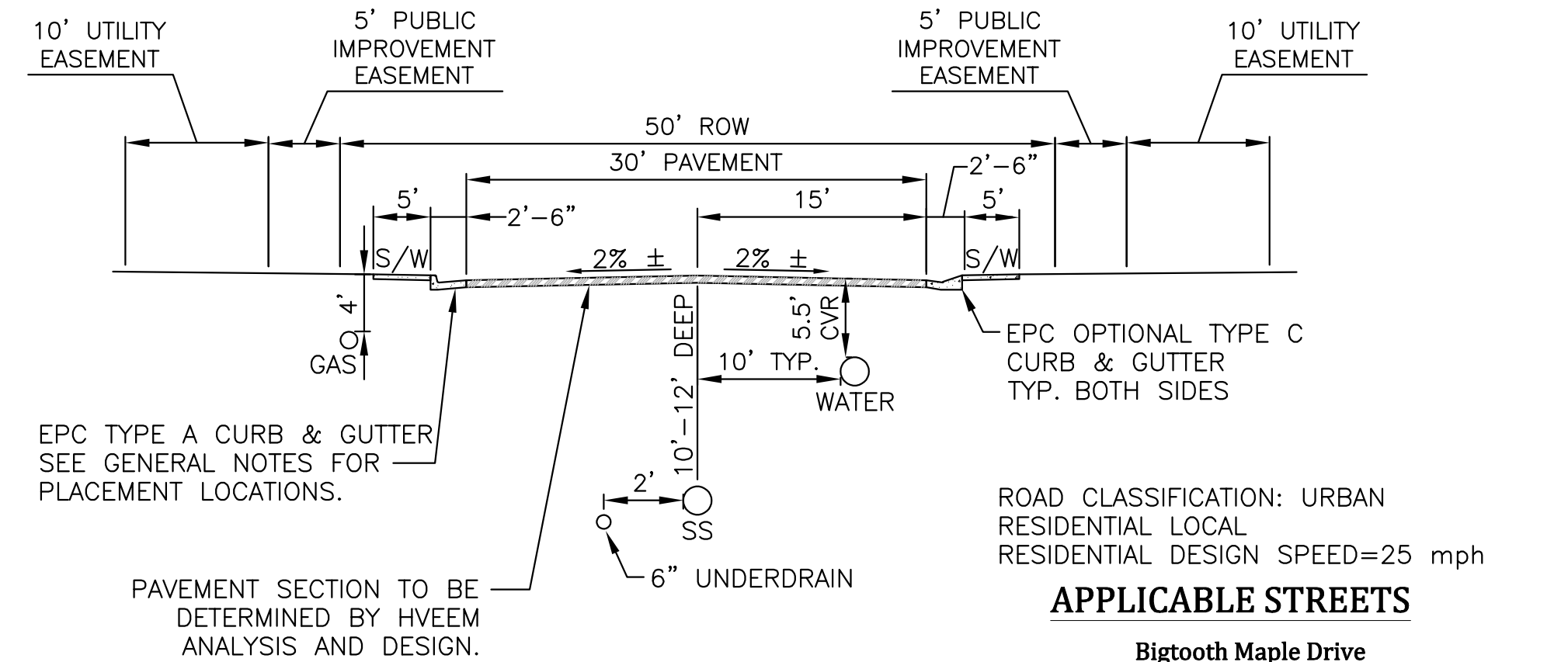
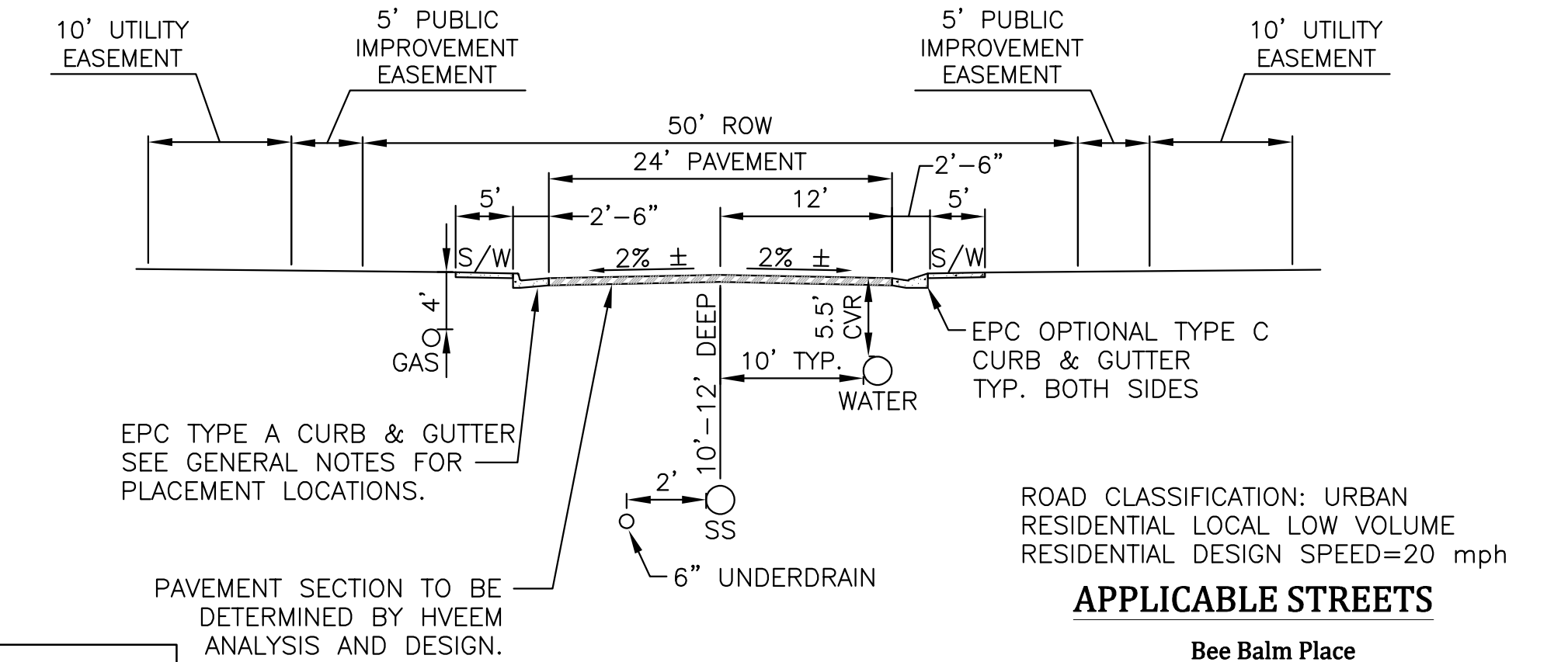
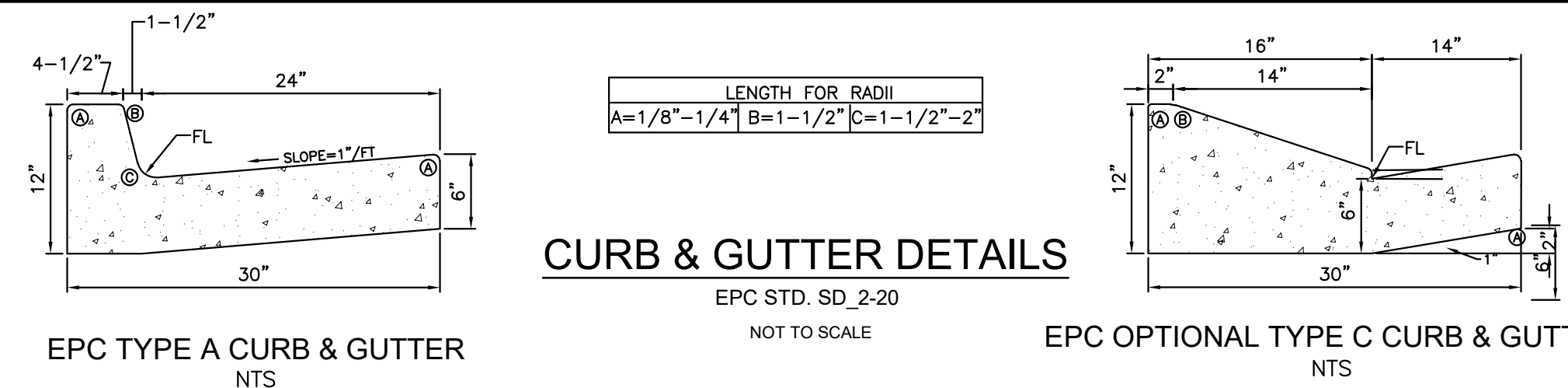
CROSS PAN DETAIL

EPC STD. SD_2-26
NOT TO SCALE



TYPICAL WALL SECTION

1"=2'



**GLEN AT WIDEFIELD FILING NO. 9
SITE DETAIL PLAN
SITE DETAILS**
EL PASO COUNTY, COLORADO

Project No.:	17038
Date:	September 25, 2018
Design:	AWMc
Drawn:	JAK
Check:	AWMc
Revisions:	

SHEET

19

19 of 20 Sheets

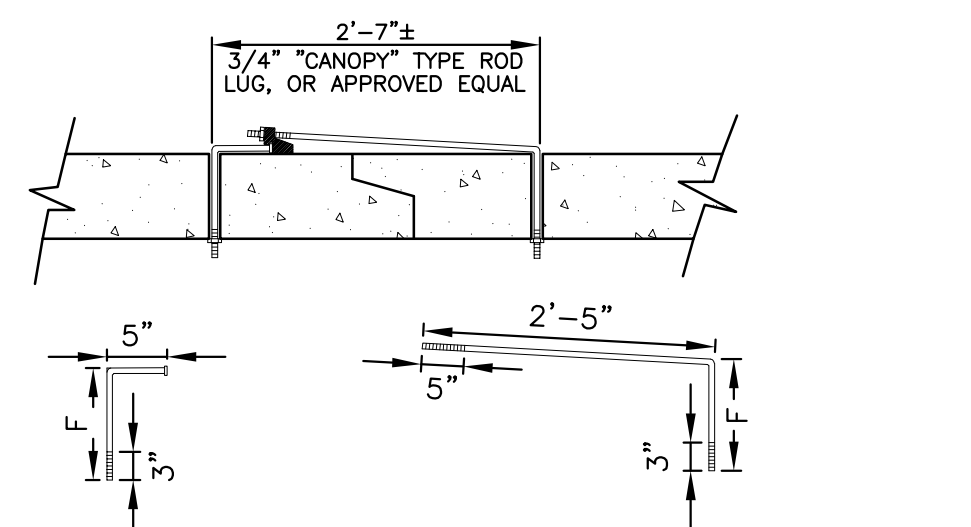
ERD 17038-GW9-19-20-DT.dwg/Oct 19, 2020

Kiowa
Engineering Corporation
1604 South 21st Street
Colorado Springs, Colorado 80904
(719) 630-7342

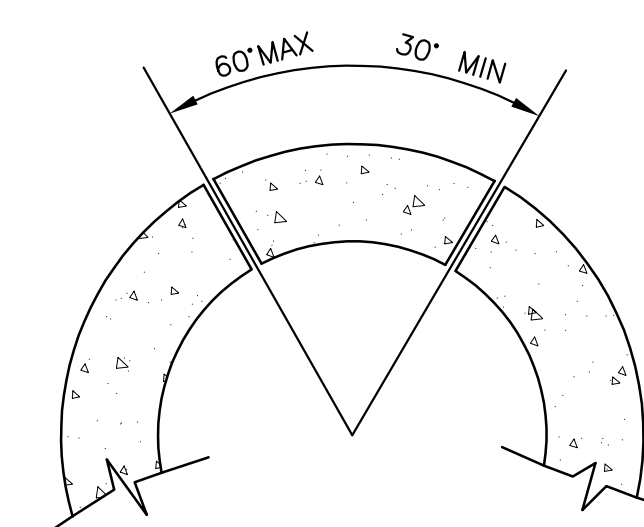
W
WIDEFIELD
Investment Group

UNDERDRAIN NOTES

1. UNDERDRAIN TO BE CONSTRUCTED WHERE INDICATED BY A DASHED LINE (---).
2. SOLID DRAIN PIPE WILL BE USED IN AREAS AS SHOWN ON THE PLANS AND AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
3. ALL UNDERDRAIN CONSTRUCTION SHALL CONFORM WITH THE LATEST CITY OF COLORADO SPRINGS STANDARDS.
4. ENGINEERING FABRIC TO HAVE A MINIMUM 12-INCH OVERLAP ABOVE UNDERDRAIN GRANULAR FILL.
5. UNDERDRAIN PIPE TO BE CONSTRUCTED WITH THE TOP OF PIPE EQUAL TO OR BELOW THE BOTTOM OF THE SANITARY SEWER PIPE.
6. GEOTECHNICAL ENGINEER TO DETERMINE EXTENT OF ACTIVE/PASSIVE UNDERDRAIN DEPENDING UPON CONDITIONS ENCOUNTERED DURING CONSTRUCTION.
7. THE CONNECTION BETWEEN THE ACTIVE AND PASSIVE PORTIONS OF THE UNDERDRAIN SYSTEM IS TO BE CONSTRUCTED WITH A NON-PERMEABLE BARRIER SO THAT ALL COLLECTED GROUNDWATER IS DIRECTED INTO THE PASSIVE PIPE SECTION.



3/4" GALVANIZED ANCHOR BOLTS, NUTS AND WASHERS, MILD STEEL, ASTM A 307, ROD LUG SHALL BE COATED WITH COAL-TAR, EPOXY PAINT OR APPROVED EQUAL.



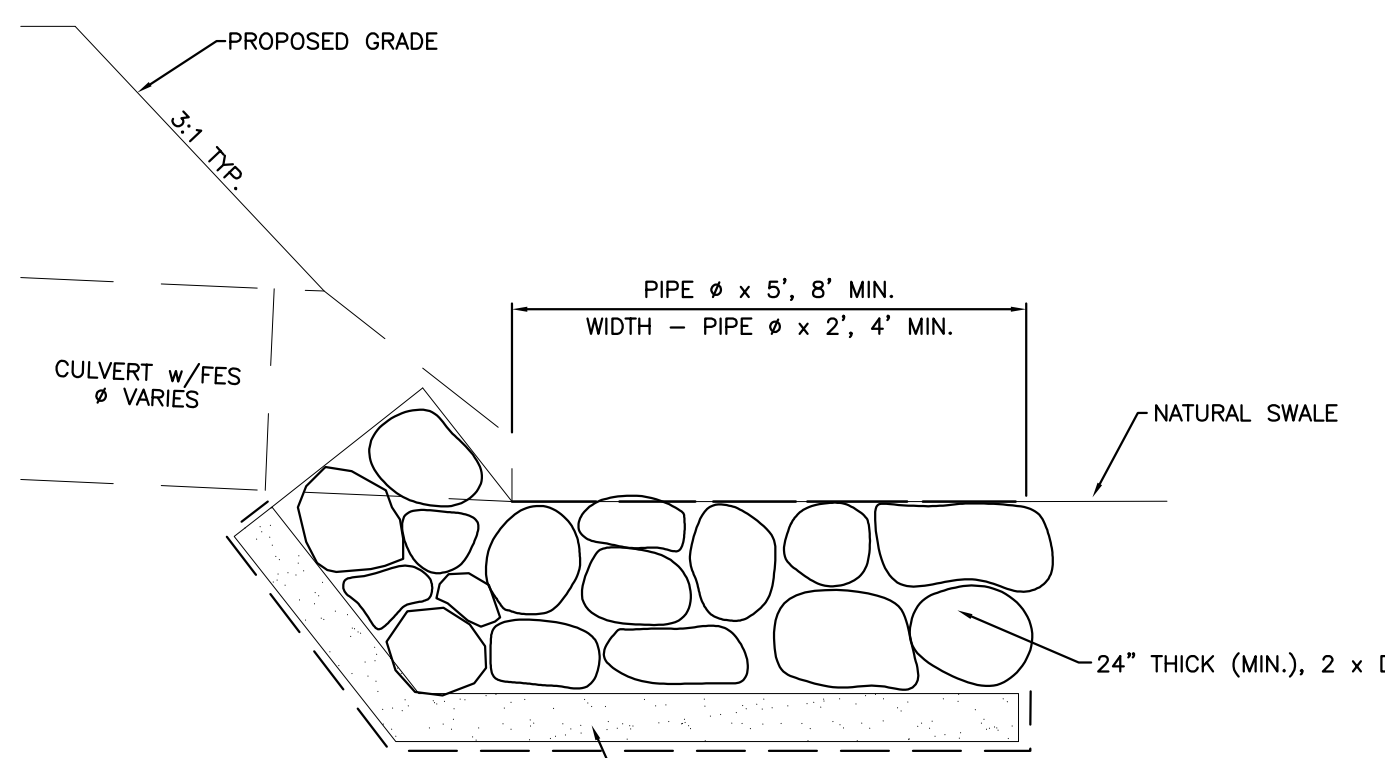
LOCATION OF 1" DIA HOLES

NOTE: CONCRETE JOINT FASTENERS REQUIRED ON THE FIRST TWO PIPE JOINTS FROM A FLARED END SECTION.

PIPE DIAMETER	F
18"-30"	5"
36"-42"	6"
48"-60"	7"
72"-84"	9"

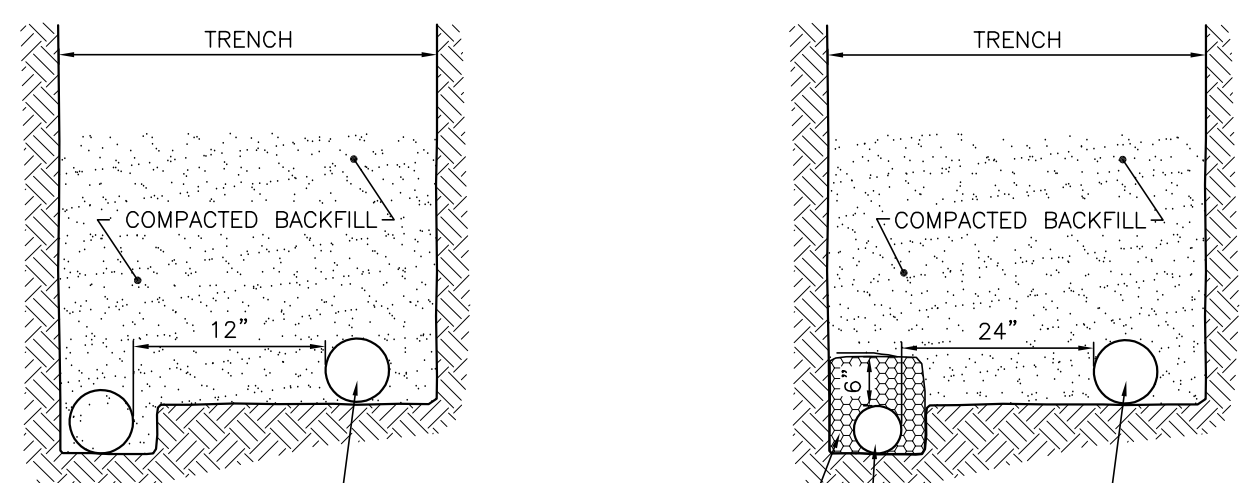
CONCRETE PIPE JOINT FASTENER DETAIL

NOT TO SCALE



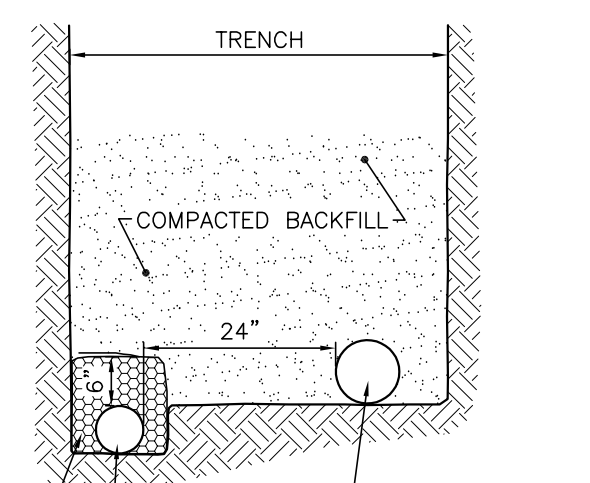
TYPICAL CULVERT OUTLET PROTECTION

NOT TO SCALE



PASSIVE UNDERDRAIN DETAIL

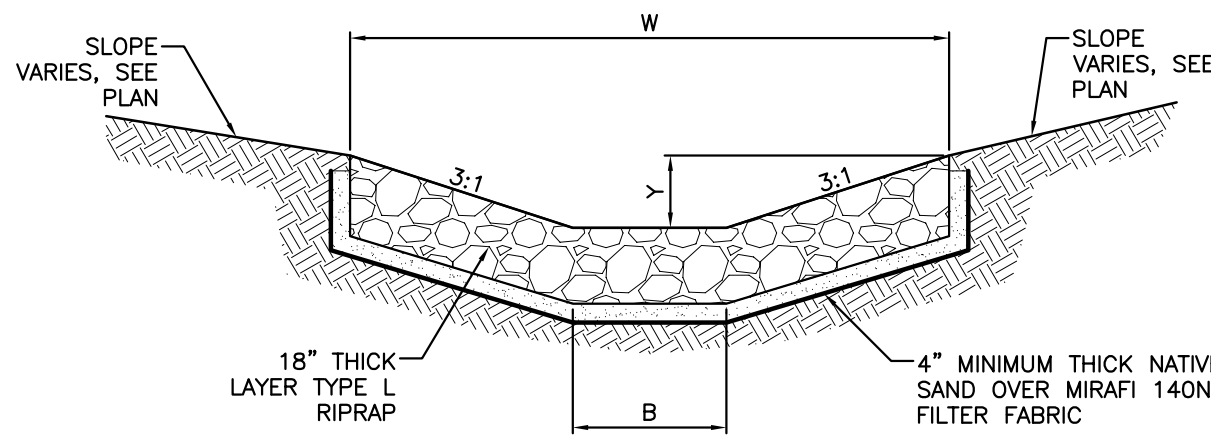
NOT TO SCALE



ACTIVE UNDERDRAIN DETAIL

NOT TO SCALE

LOCATION	B	W	Y
NORTH RUNDOWN	1'	7'	1'
SOUTH RUNDOWN	1'	7'	1'



RIPRAP RUNDOWN DETAIL - PEACEFUL VALLEY ROAD AT MARKSHEFFEL ROAD

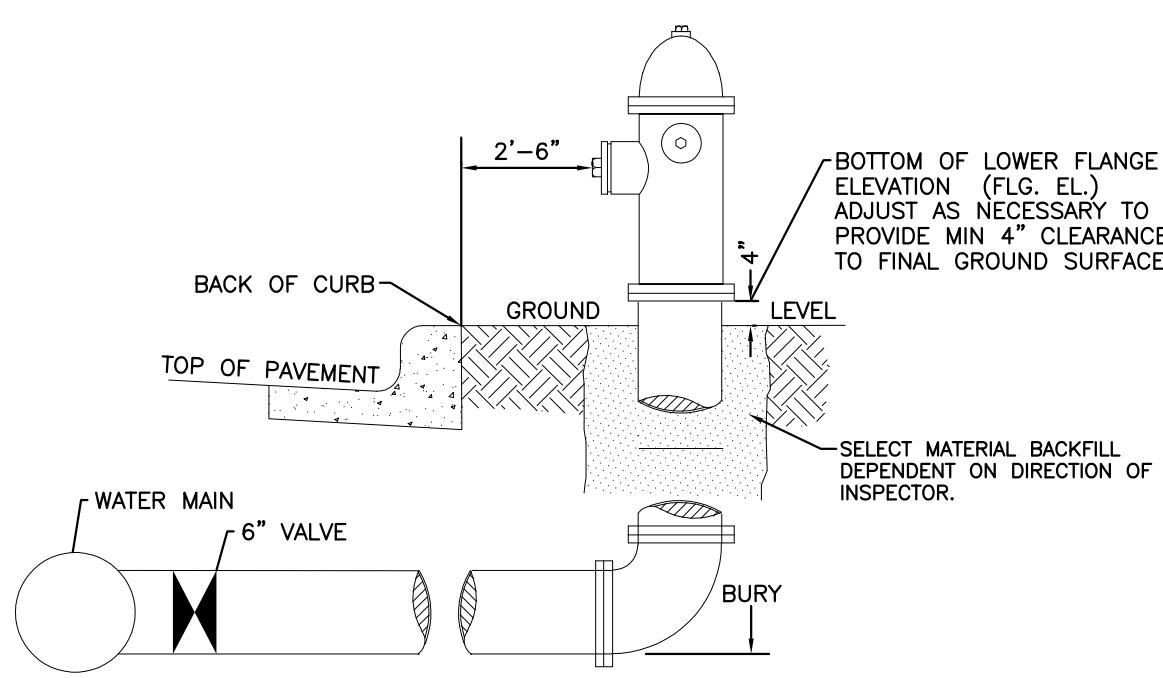
SCALE: NTS

Engineering Record Drawings

"I hereby affirm that the information shown on these drawings was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer in the State of Colorado. The Glen at Widefield Filing No. 9 have been constructed in substantial compliance with the Construction Plans approved by El Paso County."



Oct. 19, 2020
Date



GENERAL NOTES:

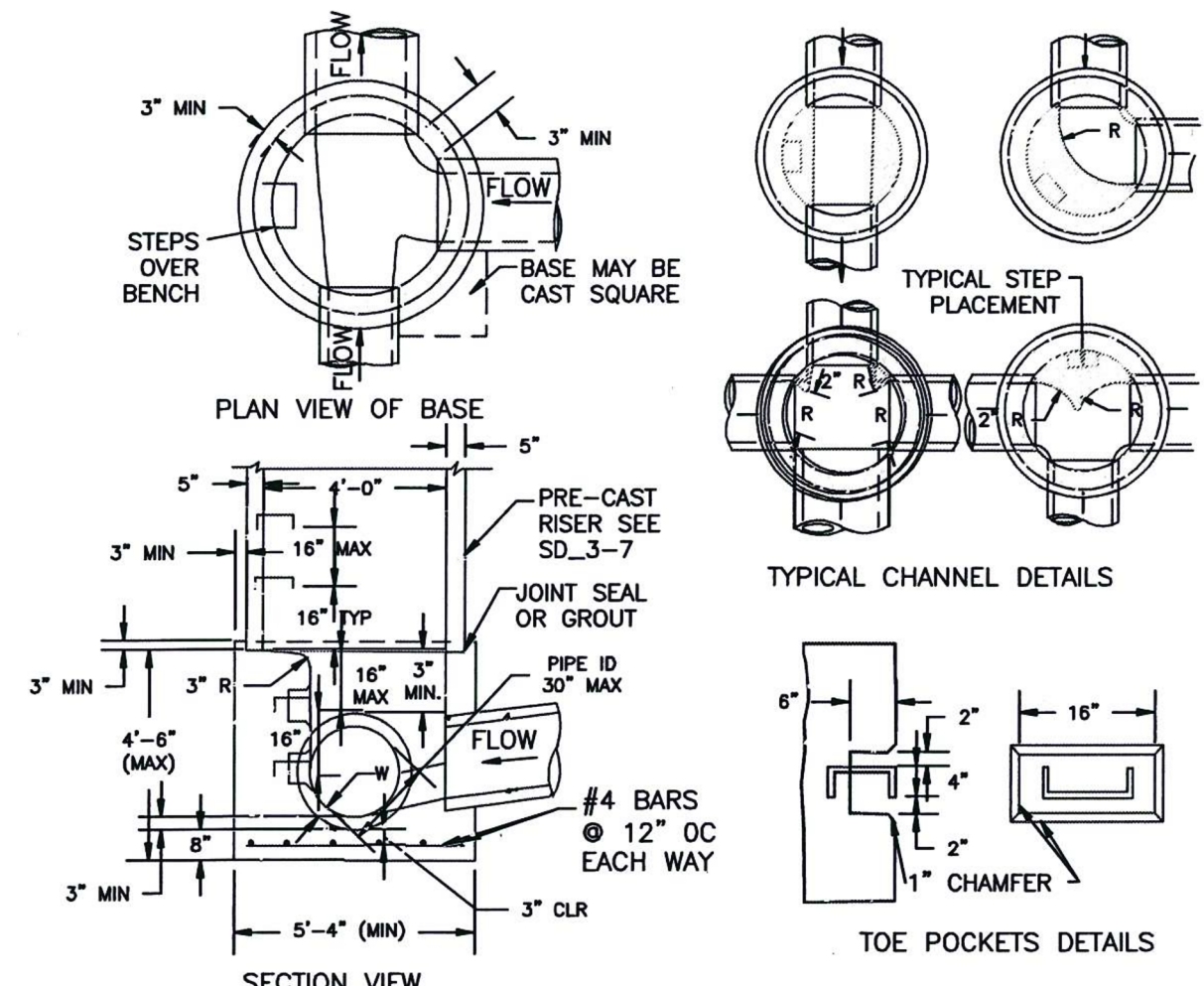
1. Hydrant nozzles shall be positioned at right angles to curb. If no curb or sidewalk exists, nozzles shall be placed at right angle to street or alley.
2. Hydrants shall be placed a minimum of 5.0 feet from any utility or drainage structure.
3. Any hydrant being installed with conditions other than those mentioned and/or detailed below will require signed approval from the Widefield Water District and Security Fire District.
4. See Site Utility Plan for hydrant locations and flange elevations.
5. The upper exposed section of the hydrant above ground shall be painted rustoleum 659 yellow or equal. The buried portion of the hydrant shall be given a bituminous coating in accordance with Section 10-8.1 of AWWA Standard C110.

FIRE HYDRANT DETAIL

NOT TO SCALE

SUBSEQUENT TO STRIPPING AND GRUBBING THE FOLLOWING OVERLOT/PIPE INSTALLATION PROCEDURES ARE ANTICIPATED FOR THE SANITARY SEWER LOCATED ON PROPOSED EMBANKMENTS:

- THE REMOVAL AND REPLACEMENT OF METASTABLE SOIL.
- TESTING OF THE FILL SUBSEQUENT TO THE PENETRATION OF THE METASTABLE SOIL WILL CONTINUE UNTIL A MINIMUM OF 7 FEET OF STRUCTURAL FILL HAS BEEN PLACED ABOVE THE PROPOSED SEWER LINE ELEVATION.
- UTILITY TRENCHES SHALL BE EXCAVATED AND SANITARY SEWER LINE INSTALLED. THE PIPE SHALL BE PROPERLY BEDDED AND STRUCTURAL FILL PLACED AND TESTED TO THE PREVIOUS GRADE.
- THE OVERLOT AND EMBANKMENT FILL CAN BE COMPLETED.
- WHERE THE SANITARY SEWER IS PLACED IN EMBANKMENT FILL DURING THE OVERLOT PROCESS, STE SHALL MONITOR AND TEST ALL WORK ASSOCIATED WITH THE AFFECTED PORTIONS.

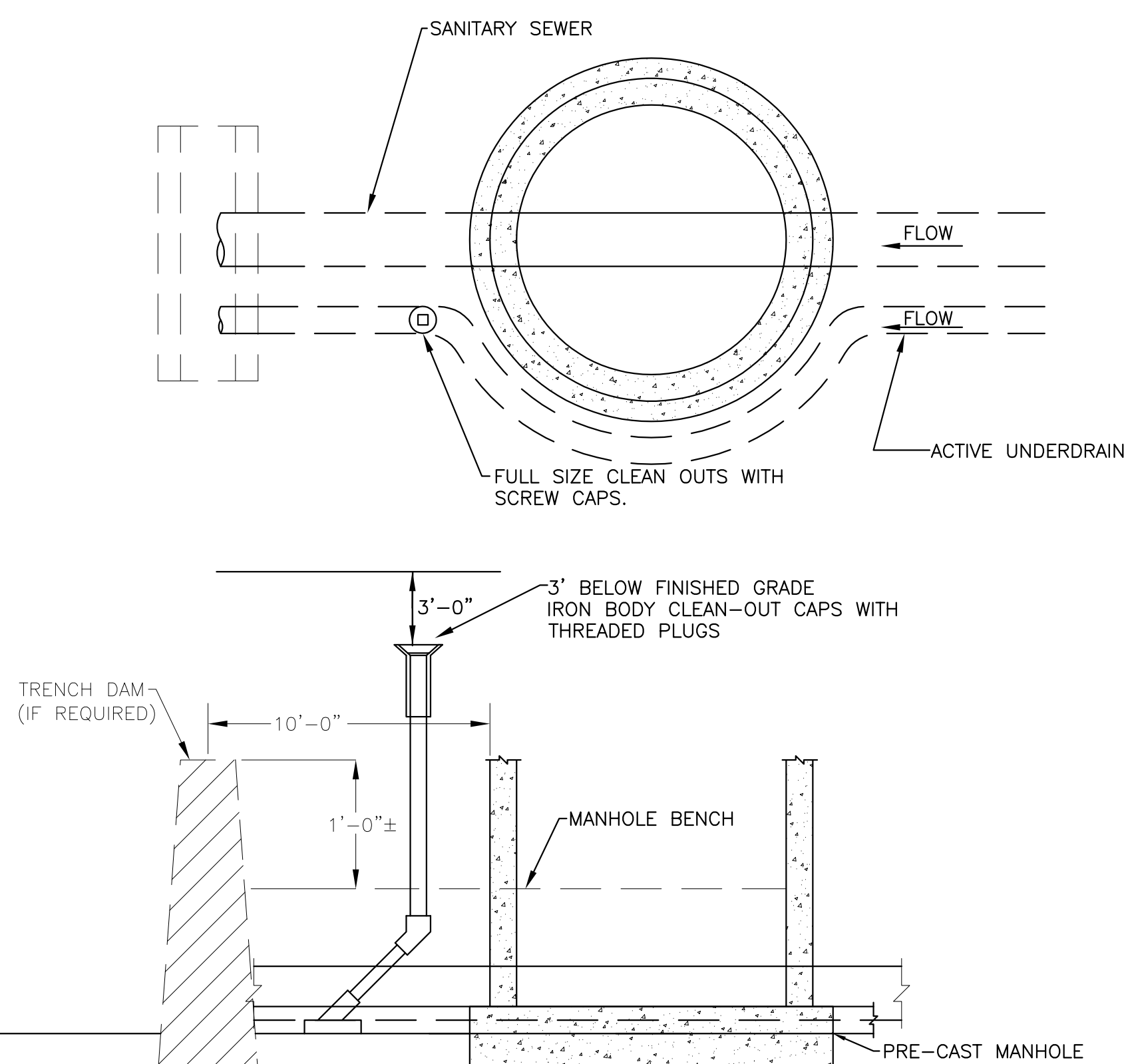


NOTES

1. TYPE II MANHOLES SHALL BE USED WHEN APPROPRIATE AND TYPICALLY WHEN THE PIPE SIZES ARE 30" OR LESS INSIDE DIAMETER.
2. VIEW AND DETAILS ARE TYPICAL. DESIGN ENGINEER SHALL DETERMINE MANHOLE BASE CONFIGURATION AND DIMENSIONS FOR PARTICULAR PIPE SIZES AND ALIGNMENT.
3. EITHER LADDER OF STEPS SHALL BE INSTALLED WHEN MANHOLE DEPTH EXCEEDS 30". STEPS IN BASE SHALL BE INSTALLED IN "TOE POCKETS" (SEE DETAIL THIS SHEET). LOWEST STEP SHALL BE A MAXIMUM OF 16" ABOVE THE FLOOR.
4. PIPES SHALL BE TRIMMED TO FINAL SHAPE AND SET BEFORE MANHOLE IS POURED.
5. BENCH SHALL BE SLOPED TOWARD CENTER OF MANHOLE BASE (4:1 MAX., 1/2" PER FOOT. MIN.).
6. FLOOR OF MANHOLE SHALL BE TROWELLED TO A SMOOTH, HARD SURFACE AND SHALL SLOPE TOWARDS THE OUTLET (8:1, 1/2" PER FT. MIN.). FLOOR SHALL BE SHAPED AND CHANNLED; SEE DETAILS THIS SHEET.

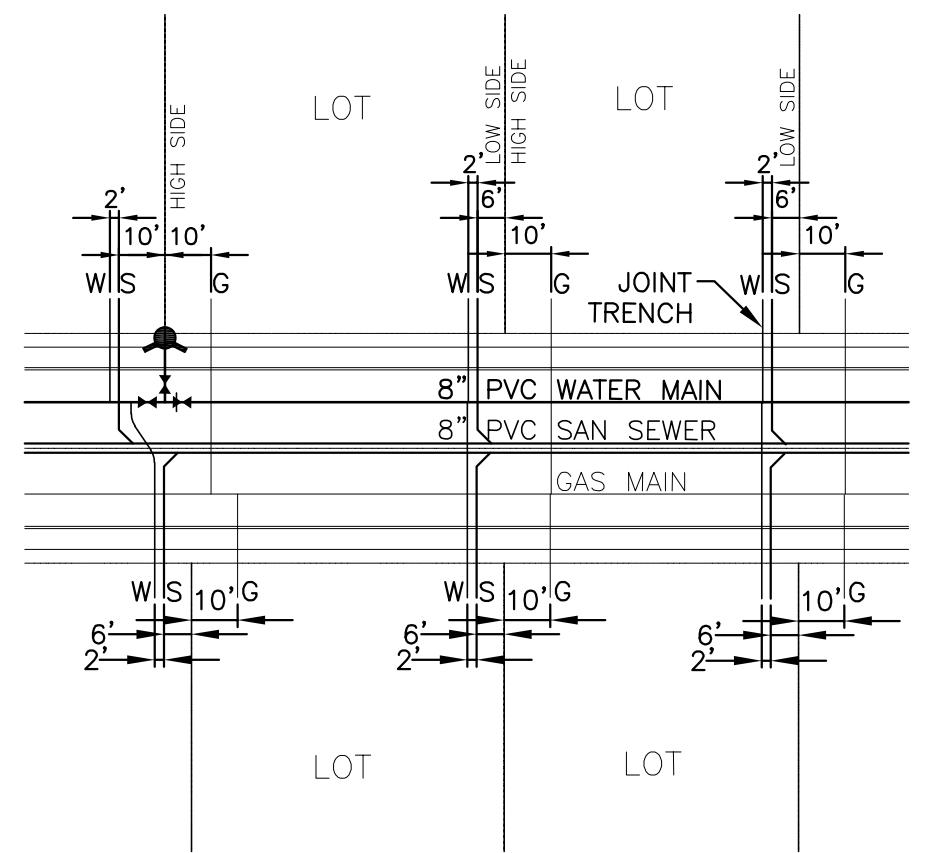
STORM SEWER MANHOLE DETAIL TYPE II

EPC STD. SD_3-2
NOT TO SCALE



GROUNDWATER UNDERDRAIN DETAIL

CLEANOUT LOCATIONS OUTSIDE MANHOLE
NOT TO SCALE



TYPICAL JOINT-TRENCH UTILITY SERVICE DETAIL

NOT TO SCALE

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