

## GENERAL NOTES

- Profile design lines are based on centerline, as shown, unless otherwise noted.
- 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.
- 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 Hveem tests and are to be approved by the Engineering Division of the El Paso County Planning and Community Development prior to work above subgrade.
- At intersections, all curb returns will have 20-foot radius unless otherwise noted.
- 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.
- 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.
- Approved plans, Engineering Criteria Manual, etc. is required to be on-site at all times during construction.
- All necessary permits, such as SWMP, ESQCP, Fugitive Dust, Access, C.O.E. 404, etc. shall be obtained prior to construction.
- All handicap ramps to be per El Paso County Standard SD-2-40.
- 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.
- Where appropriate, neatly saw cut all existing concrete and asphalt. Repair/replace all disturbed existing items with like materials and thicknesses.
- All disturbed areas shall be revegetated with native grasses within 21 days of excavation per Erosion Control Plan.
- 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.
- 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.
- All storm sewer bedding to be per CDOT Standards.
- All storm sewer pipe shall be Class III B Wall unless otherwise shown on the storm sewer plan and profile sheets.
- All eyes and bends used in construction of storm sewer facilities shall be factory fabricated, unless approved by the El Paso County Development Services Department.
- 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.
- Storm sewer manholes 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.
- 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.
- For additional utility notes, see Utility Plan and/or Service Plan.
- All horizontal stationing is based on the 'Face of Curb', unless otherwise shown.
- All vertical design and top of curb are based on the design point shown in the typical design section.
- 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.
- Water and sanitary sewer service provided by Widefield Water and Sanitation District. Telephone service provided by Qwest Communications. Gas service provided by Black Hills Energy. Electric service provided by Mountain View Electric.
- 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.
- 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.
- Cross pans to be 6' wide and per El Paso County Standard Detail SD-2-26.
- Contractor responsible for meeting all Widefield Water and Sanitation District criteria when connecting to existing stubs.
- Curb returns shall be the straight grade from CR to CR unless otherwise noted.
- Inlets are Type 'R' inlets (CDOT STD M-604-12) unless otherwise noted.
- 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=5897.89 feet (NGVD 1929, 1960 ADJ).

**BASIS OF BEARINGS** is based upon a portion of the Easterly boundary of the Glen at Widefield Subdivision Filing No. 5B as recorded under Reception 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 Easterly 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

- 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.
- 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).
- Contractor shall keep a copy of these approved plans, the Grading and Erosion Control Plan, the Stormwater Management Plan (SWMP), the soils and geotechnical report, and the appropriate design and construction standards and specifications at the job site at all times, including the following:
  - El Paso County Engineering Criteria Manual (ECM)
  - City of Colorado Springs/El Paso County Drainage Criteria Manual, Volumes 1 and 2
  - Colorado Department of Transportation (CDOT) Standard Specifications for Road and Bridge Construction
  - CDOT M & S Standards
- Notwithstanding anything depicted in these plans in words or graphic representation, all design and construction related to roads, storm drainage and erosion control shall conform to the standards and requirements of the most recent version of the 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.
- 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.
- Contractor shall schedule a pre-construction meeting with El Paso County Planning and Community Development (P&CDD) - Inspections, prior to starting construction.
- It is the contractor's responsibility to understand the requirements of all jurisdictional agencies and to obtain all required permits, including but not limited to El Paso County Erosion and Stormwater Quality Control Permit (ESQCP), Regional Building Floodplain Development Permit, U.S. Army Corps of Engineers-issued 401 and/or 404 permits, and county and state fugitive dust permits.
- 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.
- All storm drain pipe shall be Class III RCP unless otherwise noted and approved by P&CDD.
- 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.
- All construction traffic must enter/exit the site at approved construction access points.
- 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.
- Signing and striping shall comply with El Paso County DOT and MUTCD criteria. [If applicable, additional signing and striping notes will be provided.]
- Contractor shall obtain any permits required by El Paso County DOT, including Work Within the Right-of-Way and Special Transport permits.
- 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

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2	Plan and Profile - Peaceful Valley Road Revised (05+60.00 to Marksheffel Rd) (Sidewalks and Pedestrian Ramps Only)	11	Storm Sewer Sedimentation Basin Plan (Basin D)
3	Plan and Profile - Pennycress Drive (13+81.16 to 21+00)	12	Storm Sewer Basin D Outlet Structure
4	Plan and Profile - Pennycress Drive (21+00 to 29+19.91)	13	Sedimentation Basin Details
5	Plan and Profile - Buffalo Bur Trail (0+00 to 3+44)	14	Site Details
6	Overall Signage and Striping Plan	15	Utility Details
7	Grading and Erosion Control Plan		
8	Grading and Erosion Control Details		
9	Utility Plan		

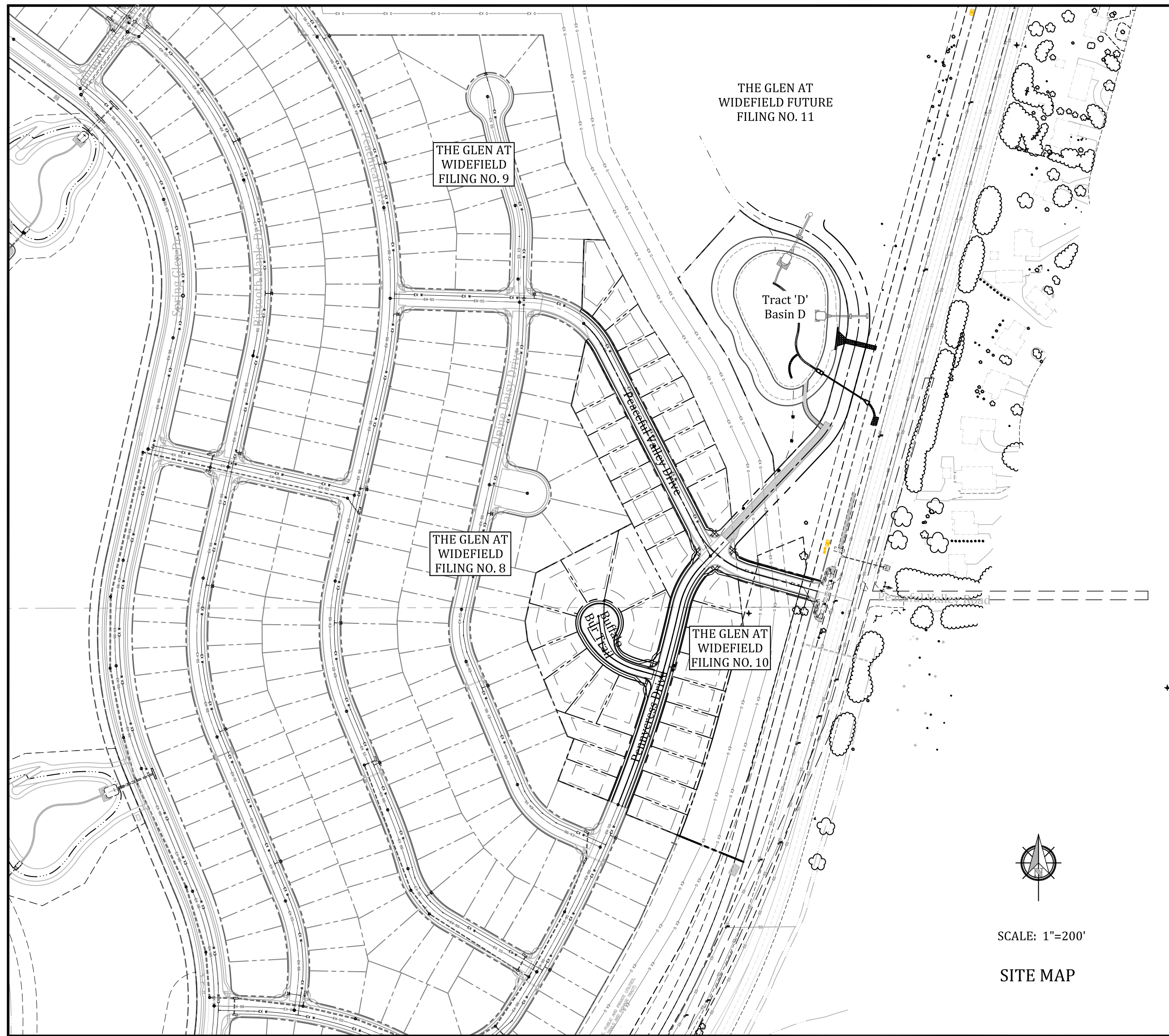


Know what's below.  
Call before you dig.

# THE GLEN AT WIDEFIELD FILING NO. 10

## RESIDENTIAL SUBDIVISION CONSTRUCTION DRAWINGS

### PREPARED FOR WIDEFIELD INVESTMENT GROUP

WIDEFIELD WATER AND SANITATION DISTRICT  
GENERAL NOTES

- 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.
- 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.
- 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.
- All ductile iron pipe, to include fittings, valves and fire hydrants will be wrapped with polyethylene tubing, and electrically isolated.
- 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.
- PVC main lines shall be installed with coated No. 12 tracer wire.
- 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.
- 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.
- 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.
- All bends shall be field staked prior to construction.
- Any water utility material removed and not reused shall be returned to the Widefield Water and Sanitation District if the District so requests.
- 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.
- Any pumping or bypass operations must be reviewed and approved prior to execution by both the Widefield Water and Sanitation District and the Engineer.
- 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.
- All water lines 6" and larger, and all sewer lines 8" and larger, shall have as "As-Built" plans prepared and approved prior to final acceptance by the Widefield Water and Sanitation District.
- 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: \_\_\_\_\_

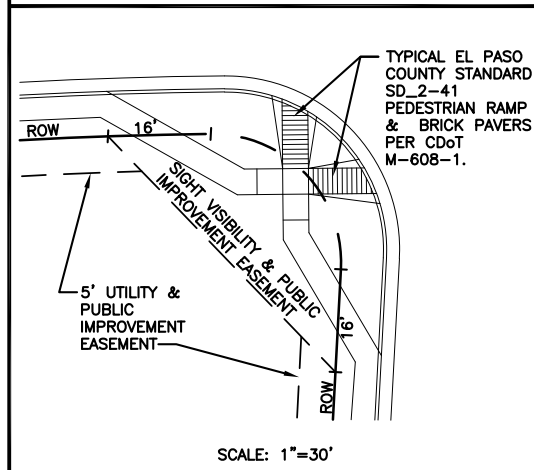
## LEGEND

STREET R.O.W.	CURB & GUTTER (CURB SECTION AS SHOWN ON PLANS)
STREET CENTER LINE	FM EXISTING FORCE MAIN
PROPOSED WATER	W EXISTING WATER
PROPOSED WATER HYDRANT	WV EXISTING WATER VALVE
PROPOSED WATER VALVE	WV EXISTING WATER VALVE
PROPOSED SANITARY MH	OS EXISTING SANITARY MH
PROPOSED SANITARY SEWER	OS EXISTING SANITARY SEWER
PROPOSED STORM SEWER	OS EXISTING STORM SEWER
PROPOSED STORM INLET	OS EXISTING STORM INLET
PROPOSED STORM MH	OS EXISTING STORM MH
PROPOSED STORM FES	OS EXISTING STORM FES
PROPOSED BOXBASE MH	OS EXISTING STORM FES

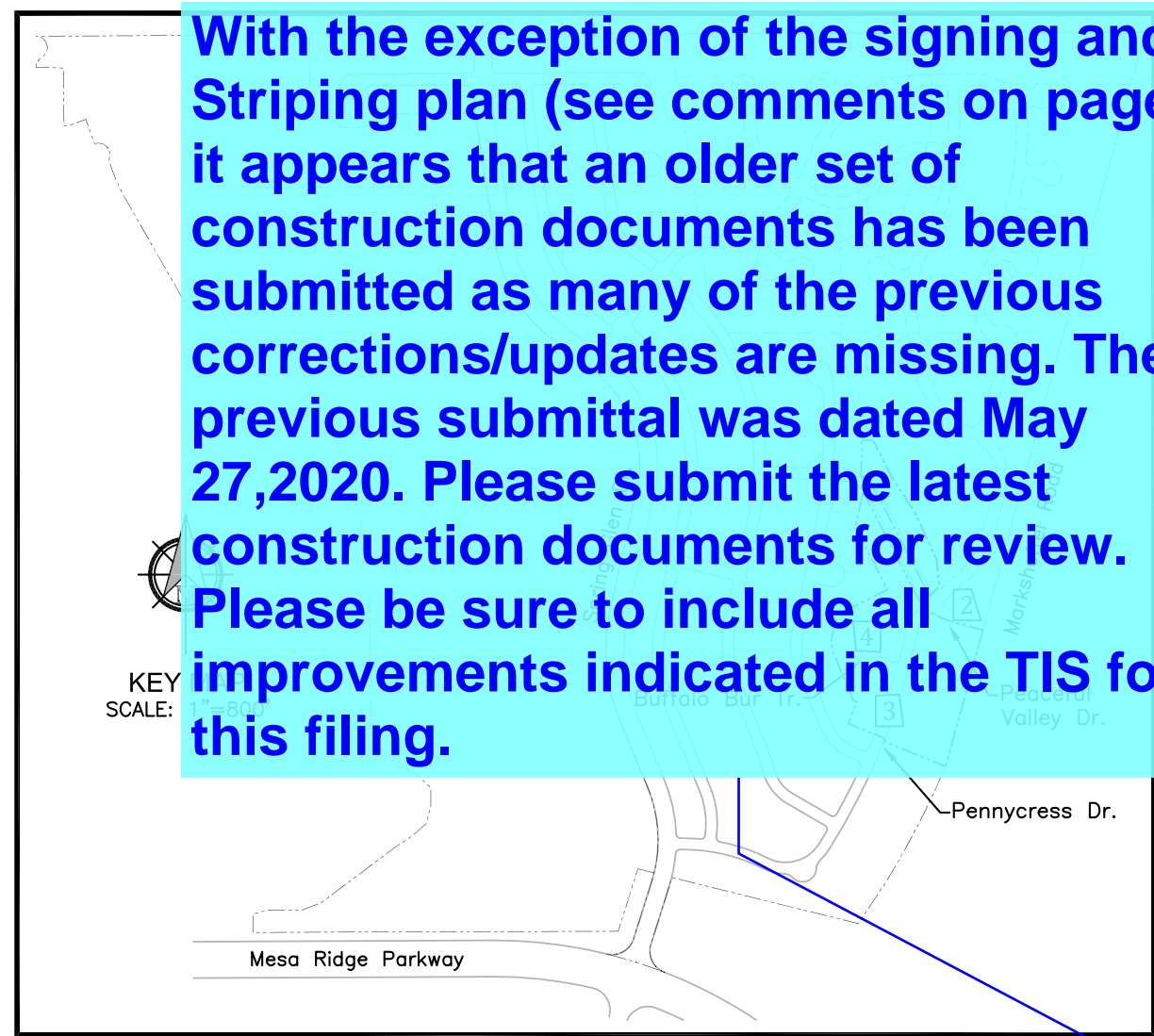
## ABBREVIATIONS

ASSY = ASSEMBLY	NTS = NOT TO SCALE
BNDY = BOUNDARY	OD = OUTSIDE DIAMETER
BOP = BOTTOM OF PIPE	PC = POINT OF HORIZONTAL CURVATURE
CL = CENTERLINE	PP = PROPOSED
CRA = CONCRETE REVERSE ANCHOR	PT = POINT OF HORIZONTAL TANGENCY
CTRB = CONCRETE THRUST BLOCK	PVC = POLY VINYL CHLORIDE PIPE
CR = POINT OF CURB RETURN	PVC = POINT OF VERTICAL CURVATURE
DIP = DUCTILE IRON PIPE	PVI = POINT OF VERTICAL INTERSECTION
EL = ELEVATION	PVT = POINT OF VERTICAL TANGENCY
ESMT = EASEMENT	RCB = REINFORCED CONCRETE BOX
EX = EXISTING	RCP = REINFORCED CONCRETE PIPE
FC = FACE OF CURB	ROW = RIGHT OF WAY
FES = FLARED END SECTION	RT = RIGHT
FLG = FLANGE	SHT = SHEET
FL = FLOWLINE	SS = SANITARY SEWER
GB = GRADE BREAK	STA = STATION
HP = HIGH POINT	STD = STANDARD
HORIZ = HORIZONTAL	TA = TOP OF ASPHALT
HYD = HYDRANT	TC = TOP OF CURB
I.D. = INSIDE DIAMETER	LT = LEFT
LP = LOW POINT	TOP = TOP OF PIPE
LF = LINEAR FEET	TYP = TYPICAL
LP = LOW POINT	VC = VERTICAL CURVE
MAX = MAXIMUM	VERT = VERTICAL
MH = MANHOLE	

## TYPICAL PUBLIC IMPROVEMENT EASEMENT



With the exception of the signing and Striping plan (see comments on page 6) it appears that an older set of construction documents has been submitted as many of the previous corrections/updates are missing. The previous submittal was dated May 27, 2020. Please submit the latest construction documents for review. Please be sure to include all improvements indicated in the TIS for this filing.



Kiowa Project No. 19006  
September 27, 2019

Revised: 1.

## 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 the best of my 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: \_\_\_\_\_

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: \_\_\_\_\_

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.

Jennifer Irvine, P.E. Date: \_\_\_\_\_  
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 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: \_\_\_\_\_

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.

Security Fire Department

Signed: \_\_\_\_\_ Security Fire Department Date: \_\_\_\_\_

## 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: \_\_\_\_\_ By: \_\_\_\_\_

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: \_\_\_\_\_ By: \_\_\_\_\_

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.

## GOVERNING AGENCIES

El Paso County Planning & Community  
Development Department  
2880 International Circle Suite 110  
Colorado Springs Colorado  
(719) 520-6300

Widefield Water & Sanitation District  
37 Widefield Blvd.  
Colorado Springs, Colorado  
(719) 390-7111

## DEVELOPER:

W  
WIDEFIELD  
Investment Group

3 WIDEFIELD BOULEVARD  
COLORADO SPRINGS, CO 80911

## PREPARED BY:

Kiowa  
Engineering Corporation

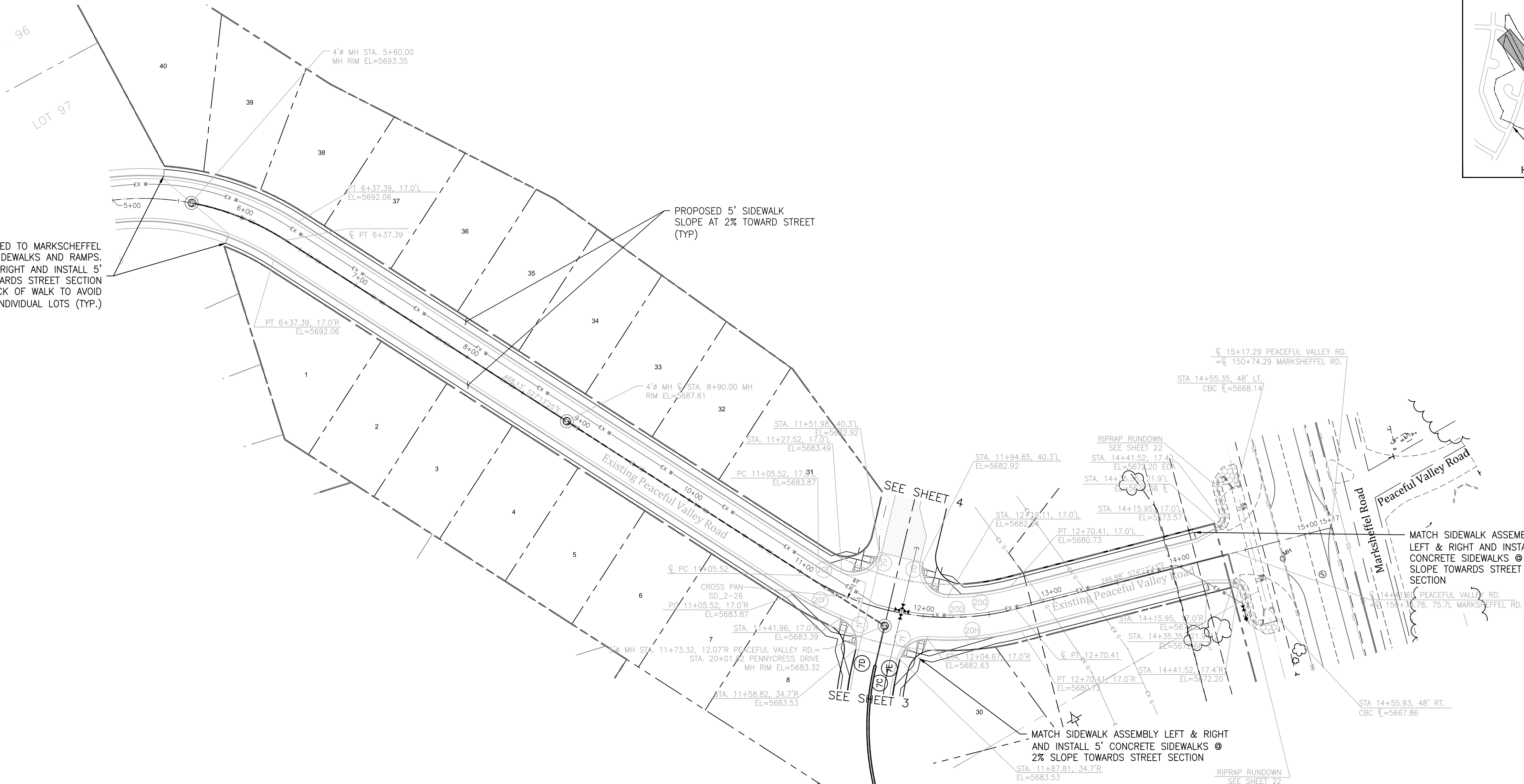
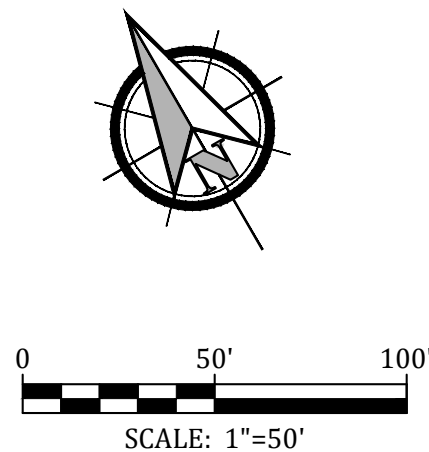
1604 South 21st Street  
Colorado Springs, Colorado 80904  
(719) 630-7342

PCD File No. SF-19-\_\_\_\_\_

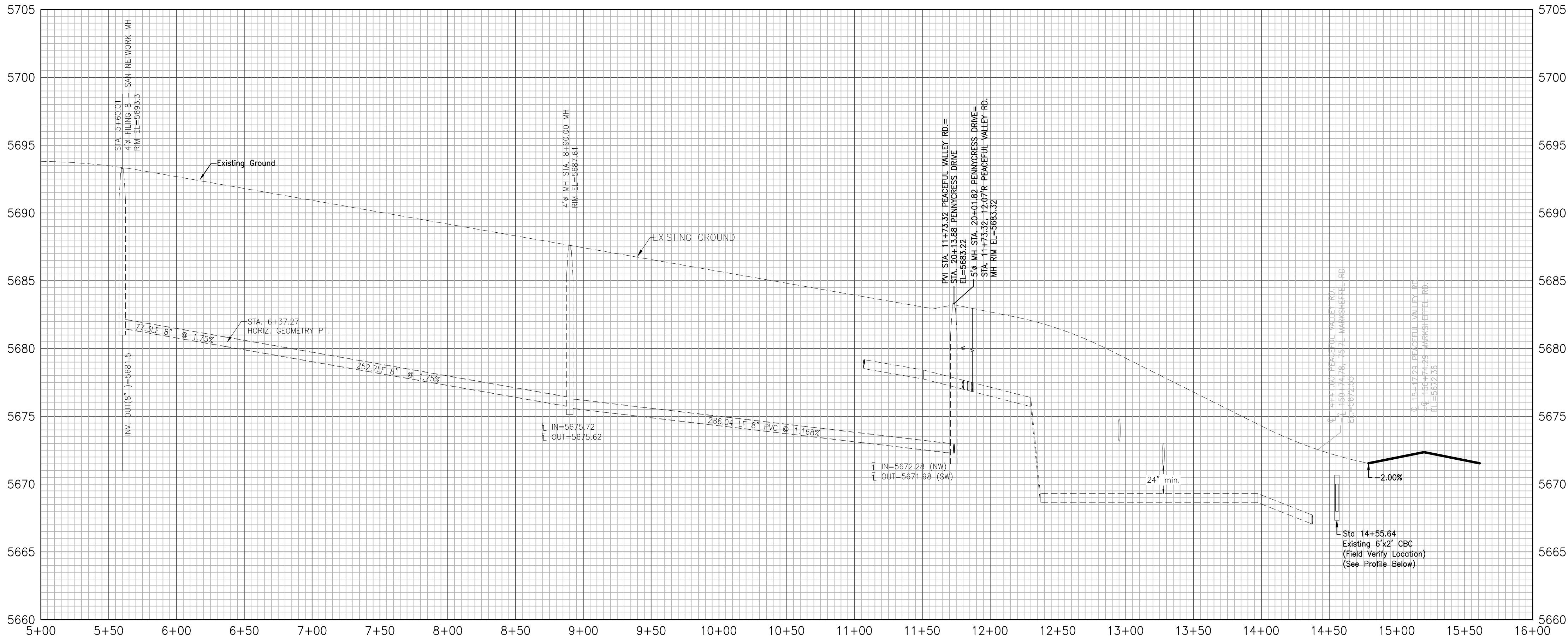


CURVE DATA	
7F	Δ=81°01'06" L=28.28' R=20.00'
7G	Δ=103°07'13" L=36.00' R=20.00'
20C	Δ=6°18'07" L=20.13' R=183.00'
20F	Δ=10°26'25" L=39.54' R=217.00'
20G	Δ=14°41'46" L=46.94' R=183.00'
20H	Δ=18°50'05" L=71.33' R=217.00'
20I	Δ=90°20'56" L=31.54' R=20.00'
20J	Δ=89°57'21" L=31.40' R=20.00'

EXISTING PEACEFUL VALLEY ROAD IS INSTALLED TO MARKSHEFFEL ROAD, BUT WITHOUT SIDEWALKS AND RAMPS. MATCH SIDEWALK ASSEMBLY LEFT & RIGHT AND INSTALL 5' CONCRETE SIDEWALKS @ 2% SLOPE TOWARDS STREET SECTION FEATHER GRADING AT OVERLOT AREAS TO BACK OF WALK TO AVOID RETAINING STORMWATER ON INDIVIDUAL LOTS (TYP.)



PROFILE VIEW OF PEACEFUL VALLEY ROAD



GLEN AT WIDEFIELD NO. 10

Plan and Profile - Peaceful Valley Road

(Sidewalks & Pedestrian Ramps Only) Sta: (05+60.00 to Marksheffel Rd)

EL PASO, COUNTY, COLORADO

Kiowa

Engineering Corporation

1604 South 21st Street

Colorado Springs, Colorado 80904

(719) 630-7342

W

WIDEFIELD

Investment Group

GLEN AT WIDEFIELD NO. 10

Plan and Profile - Peaceful Valley Road

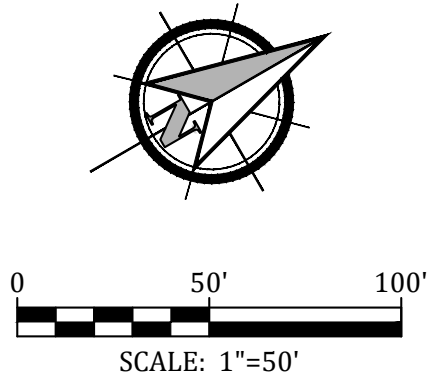
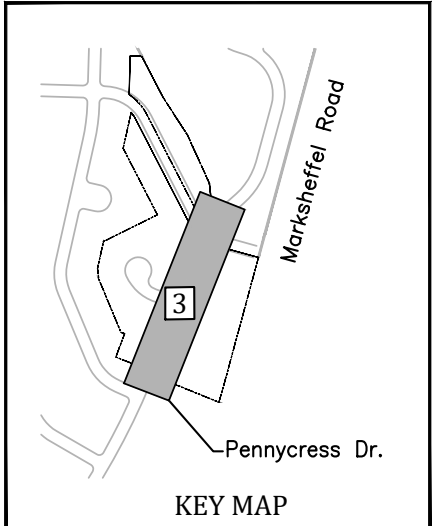
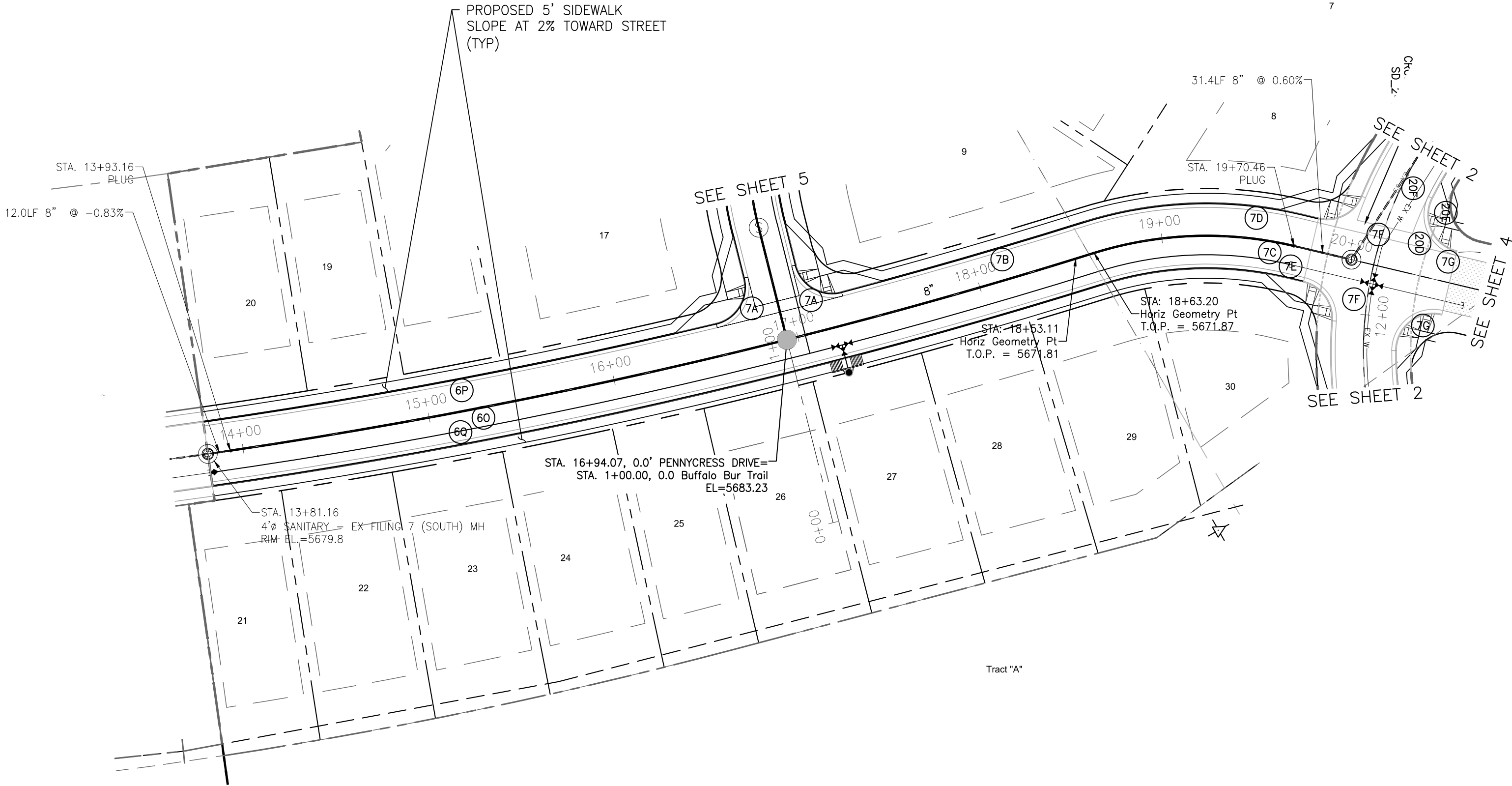
(Sidewalks & Pedestrian Ramps Only) Sta: (05+60.00 to Marksheffel Rd)

EL PASO, COUNTY, COLORADO

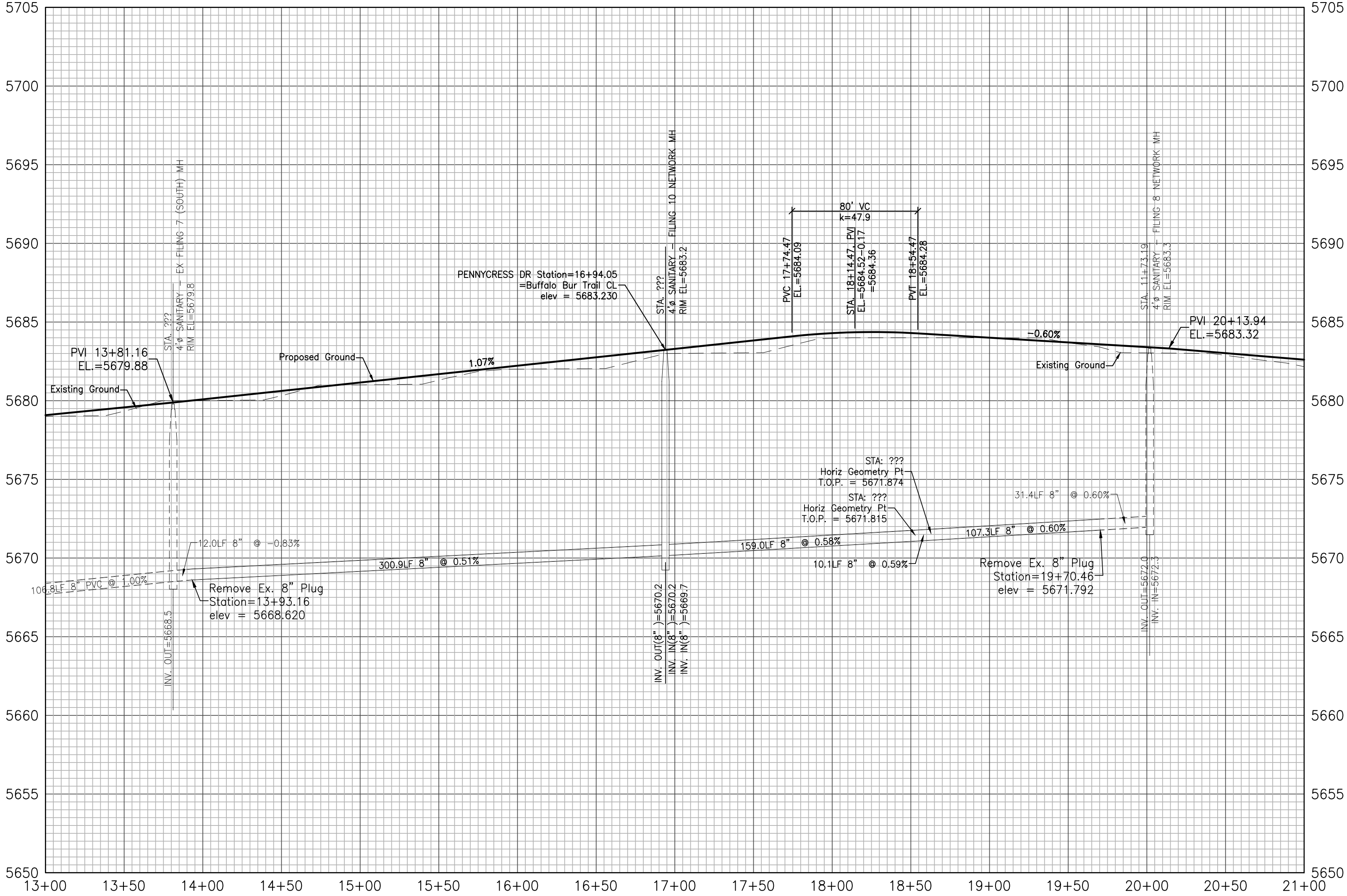
Project No.:	19016
Date:	September 27, 2019
Design:	MK
Drawn:	MJK
Check:	AWMc
Revisions:	
SHEET	
2	
2 of 15 Sheets	



CURVE DATA	
6N	Δ=99°42'56" L=31.87' R=20.00'
6O	Δ=19°32'06" L=1022.84' R=3000.00'
6P	Δ=6°38'34" L=345.85' R=2983.00'
6Q	Δ=19°32'06" L=1028.64' R=3017.00'
7A	Δ=90°39'27" L=31.65' R=20.00'
7B	Δ=2°34'35" L=134.13' R=2983.00'
7C	Δ=35°47'51" L=124.96' R=200.00'
7D	Δ=35°47'51" L=135.58' R=217.00'
7E	Δ=35°47'51" L=114.34' R=183.00'
7F	Δ=81°01'06" L=28.28' R=20.00'
7G	Δ=103°07'13" L=36.00' R=20.00'
20D	Δ=47°14'18" L=164.89' R=200.00'
20E	Δ=1°14'12" L=3.95' R=183.00'
20F	Δ=5°22'31" L=20.36' R=217.00'



PROFILE VIEW OF PENNYCRESS DRIVE



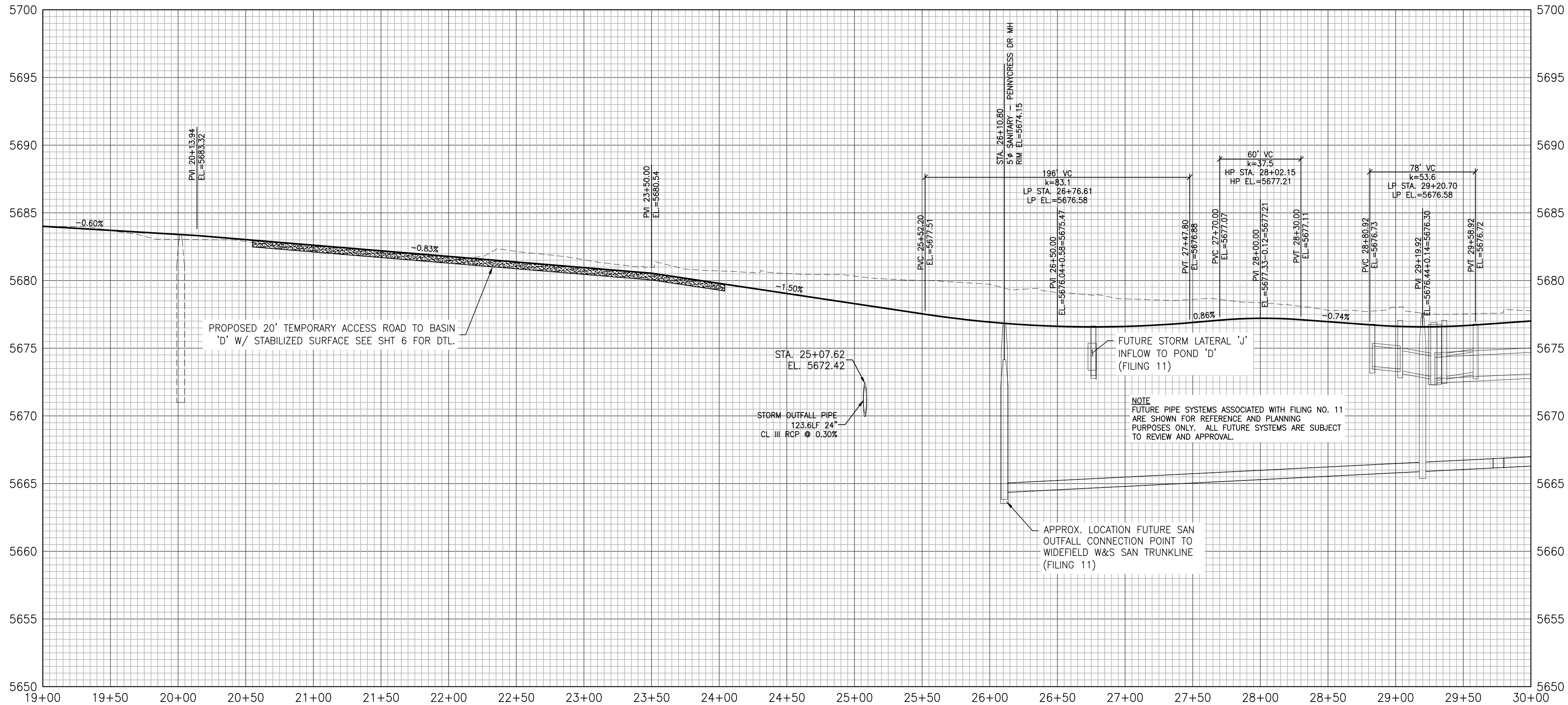
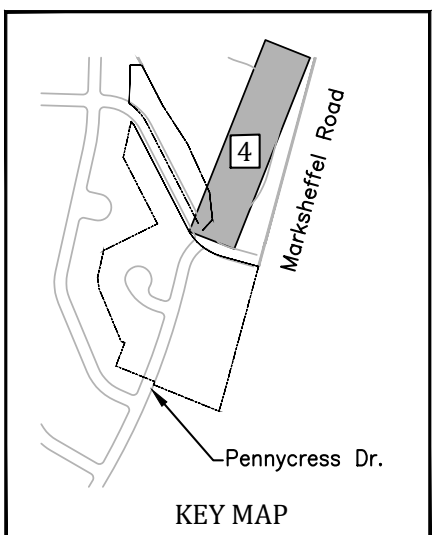
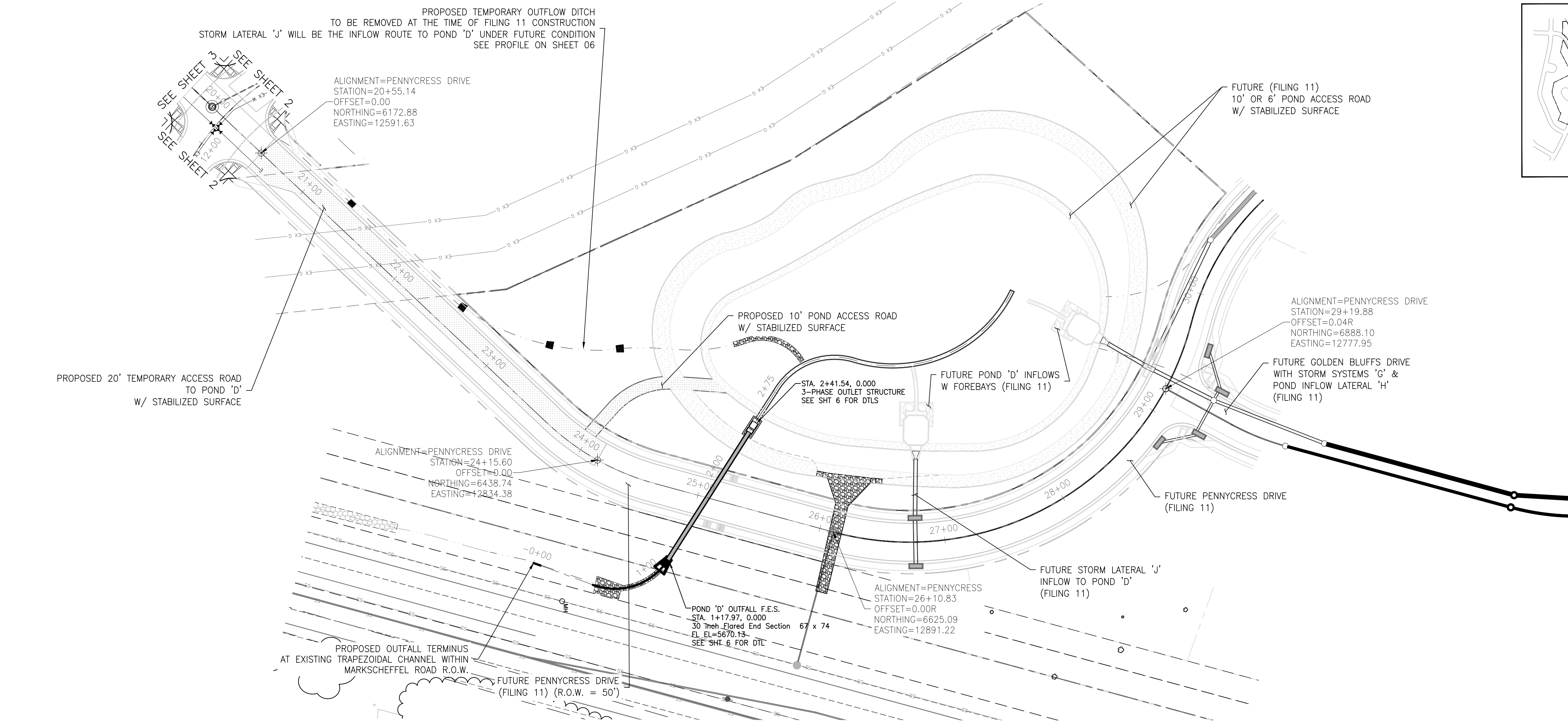
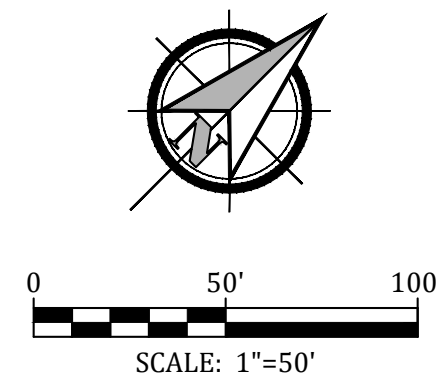
GLEN AT WIDEFIELD NO. 10  
Plan and Profile - Pennycress  
Sta: (13+81.16 to 21+00.00)  
EL PASO, COUNTY, COLORADO

Project No.:	19016
Date:	September 27, 2019
Design:	MK
Drawn:	MJK
Check:	AWMc
Revisions:	

SHEET

3





## GLEN AT WIDEFIELD NO. 9

Plan and Profile - Future Pennycress Drive  
Sta: (21+00.00 to 29+19.91) For Reference & Coordination  
EL PASO, COUNTY, COLORADO

Project No.:	19016
Date:	September 27, 2019
Design:	MK
Drawn:	MJK
Check:	AWMc
Revisions:	

SHEET

4

4 of 15 Sheets

19016-GW10-04-PP.dwg/Sep 25, 2019





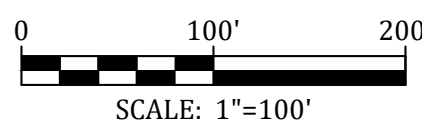


1. All signs and pavement markings shall be in compliance with the current Manual on Uniform Traffic Control Devices (MUTCD).
2. Removal of existing pavement markings shall be accomplished by a method that does not materially damage the pavement. The pavement markings shall be removed to the extent that they will not be visible under day or night conditions. At no time will it be acceptable to paint over existing pavement markings.
3. Any deviation from the striping and signing plan shall be approved by El Paso County Planning and Community Development.
4. 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.
5. Street name and regulatory stop signs shall be on the same post at intersections.
6. All removed signs shall be disposed of in a proper manner by the contractor.
7. 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 6" 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"
8. All traffic signs shall have a minimum High Intensity Prismatic grade sheeting.
9. All local residential street signs shall be mounted on a 1.75" x 1.75" square tube sign post and stub post bases. For other applications, refer to the CDOT Standard S-614-8 regarding use of the P2 tubular steel post signpost design.
10. All signs shall be single sheet aluminum with 0.100" minimum thickness.
11. 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.
12. 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.
13. The contractor shall notify El Paso County Planning & Community Development (719) 520-6819 prior to and upon completion of signing and striping.
14. The contractor shall obtain a work in the right of way permit from the El Paso County Department of Public Works (DPW) prior to any signage or striping work within an existing El Paso County roadway.

1. Before excavating, contractor shall verify location of underground utilities.
2. 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.
3. Approval of these plans by the County does not authorize any work to be performed until a permit has been issued.
4. The approval of these plans or issuance of a permit by El Paso County does not authorize the contractor, subcontractor, or owner to violate any Federal, State, or City laws, ordinances, regulations, or policies.
5. 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.
6. All traffic signs, pavement, and traffic signals shall meet or exceed M.U.T.C.D. Standards.
7. 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.
8. The contractor shall prepare a detailed Traffic Control Plan, submit to El Paso County for approval, and obtain appropriate permits.
9. 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.

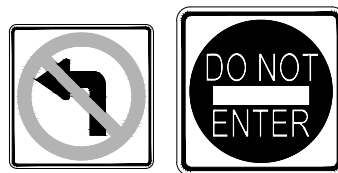
Note  
Roadway Classification is 'Urban Residential/Local  
Residential'. The Design Speed=25 mph  
Roadway has a design speed of 25 mph. The  
Postmaster's authorized representative has approved both  
the location and the type of mailboxes

signed	date
--------	------



The TIS indicates a right turn deceleration lane at this intersection. Provide the appropriate signing/striping. Additionally provide the appropriate construction documents needed for these improvements for review. Please coordinate with the traffic engineer regarding other improvements indicated in the TIS. See comments in the TIS.

Review 4: The TIS indicates a right turn deceleration lane. Please add this turn lane to the construction documents.



R3-2 Left Turn Prohibited - Face South  
R5-1 'DO NOT ENTER' - Face East  
OM3-C Face - North (Underneath)  
'PEACEFUL VALLEY Rd' - Face North

- Ex. 24" Stop Bar  
(CDoT Std.  
S-627-1)
- Install Raised Median Island  
(EPC Curb Type 'B'). See  
blow-up detail at right.

- The existing right-in / right-out movement at Marksheffel Road & Peaceful Valley Road Intersection supports the expected Level Of Service for fully-built conditions.  
Refer to Traffic Engineer's Filing No. 10 Memo.

-New 4" White Striping as shown hereon.  
(Restore to previous condition.)

- New 4" Dual Yellow Striping as shown hereon. (Restore to previous condition).

R3-5R & R1-  
Demo 4" White & 4"  
Dual Yellow Striping (Not  
Shown for Clarity) as  
re-stripe shown hereon.  
(Restore to previous  
condition).

Install street indicator signage  
per El Paso County Std.  
'Buffalo Bur Tr'  
'Pennycrest Dr'

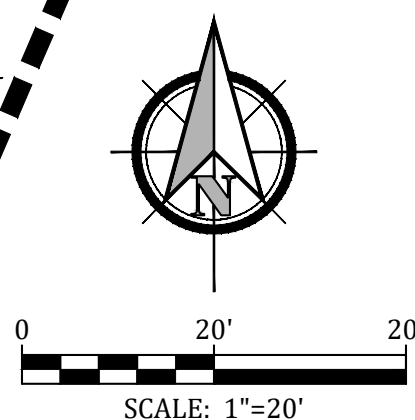
Glen at Widefield  
Filing 7 Boundary

OPEN SPACE, PUBLIC AND PRIVATE UTILITIES  
DRAINAGE, TRAILS AND SIGNAGE TRACT

—Demo 4" Dual Yellow Striping  
(Not shown for clarity) and  
re-stripe as shown hereon.

## Raised Island Detail (Public ROW)

SCALE: 1" = 20'



1. 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.



R4-7R,  
KEEP RIGHT OF MEDIAN  
(24"x30")

R3-5R. 18"X24'

(R3-2)  
24" x 24"

(R5-1)  
30" x 30"

## SIGN DETAILS

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

# GLEN AT WIDFIELD NO. 10 SIGNING & STRIPING PLAN

EL PASO, COUNTY

Project No. : 19016

Date: May 27, 202

Design: MK

Drawn: MJK

Check:

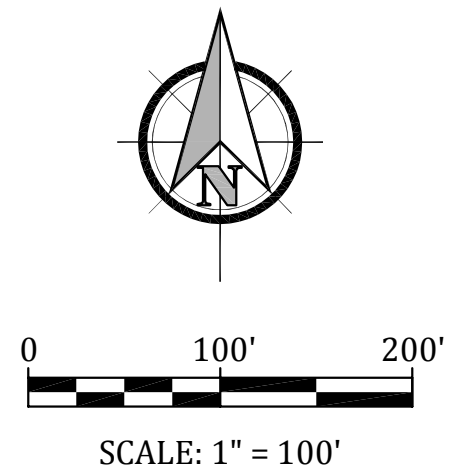
SHEET

6

6 of 15 Sheets

19016-GW10-06-SP.dwg/Oct 09, 202





EXISTING PEACEFUL VALLEY ROAD IS INSTALLED TO MARKSCHEFFEL ROAD, BUT WITHOUT SIDEWALKS AND RAMPS. MATCH SIDEWALK ASSEMBLY LEFT & RIGHT AND INSTALL 5' CONCRETE SIDEWALKS @ 2% SLOPE TOWARDS STREET SECTION FEATHER GRADING AT OVERLOT AREAS TO BACK OF WALK TO AVOID RETAINING STORMWATER ON INDIVIDUAL LOTS (TYP.) SEE SHEET 2 FOR STREET PLAN & PROFILE DESIGN DATA

#### SEED MIX

AREAS DISTURBED BY THE EARTHWORK ACTIVITIES AND NOT RECEIVING OTHER TREATMENT SHALL BE PERMANENTLY REVEGETATED WITH THE FOLLOWING SEED MIX.		
SPECIES	VARIETY	pls./acre
SIDEWALKS GRAMA	<i>El Reno</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 DROPSIDE	<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 RE-ESTABLISHED 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 BLANKET. CURLEX HEAVY DUTY EROSION CONTROL BLANKET BY AMERICAN EXCELSIOR OR EQUAL SHALL BE USED.

#### LEGEND

	SILT FENCE
	VEHICLE TRACKING CONTROL
	INLET PROTECTION
	TEMPORARY SLOPE DRAIN
	EROSION CONTROL NETTING
	ROUGH-CUT STREET CONTROL INITIAL CONDITION ONLY
	CONCRETE WASHOUT AREA
	TEMPORARY SEDIMENT BASIN
	ROCK SOCK(S) (COUNT)

#### OPINION OF COST FOR EROSION CONTROL REQUIREMENTS Additional Erosion Control for Glen at Widefield Filing No. 10

ITEM	QUANTITY	UNITS	PRICE	AMOUNT
PERMANENT SEEDING	1.0	AC	\$800	\$800.00
PERMANENT E.C. BLANKET	526	SY	\$30	\$2,580.00
VEHICLE TRACKING CONTROL	2	EA	\$2,370	\$4,740.00
INLET PROTECTION	1	EA	\$167	\$167.00
CONCRETE WASHOUT BASIN	1	EA	\$900	\$900.00
ROUGH CUT STREET CONTROL	1,170	LF	\$2	\$2,340.00
SILT FENCING	2,012	LF	\$2.50	\$5,030.00
TOTAL				\$16,557

PERFORM MINOR RE-GRADING AT CUL-DE-SAC LOTS TO MATCH THE CURB ASSEMBLY AS SHOWN

MINOR RE-GRADING AT LOTS MATCH STREET ASSEMBLY BOTH SIDES

STORMWATER INFLOW TO FUTURE POND 'D' IS PLANNED AT THE TIME OF FILING 11 DEVELOPMENT (2 LOCATIONS)

INSTALL TEMPORARY SLOPE DRAIN FOR OVERLOT AREAS ASSOCIATED WITH FILING NO. 11 (GOLDEN BUFFS & PENNYCRESS DR ROUGH-CUT CORRIDORS)

INSTALL SILT FENCE AT TOP EDGE OF SLOPE OF THE EXISTING SEDIMENTATION BASIN AS SHOWN HEREON

EXTENSION OF PENNYCRESS DRIVE NORTH IS PLANNED AT THE TIME OF FILING 11 DEVELOPMENT

SEE SHEET 6 FOR DETAIL AT SPILLWAY FINAL POND IMPROVEMENTS (POND D) ARE PLANNED AT THE TIME OF FILING 11 DEVELOPMENT

PROVIDE EROSION CONTROL NETTING AS SHOWN HEREON

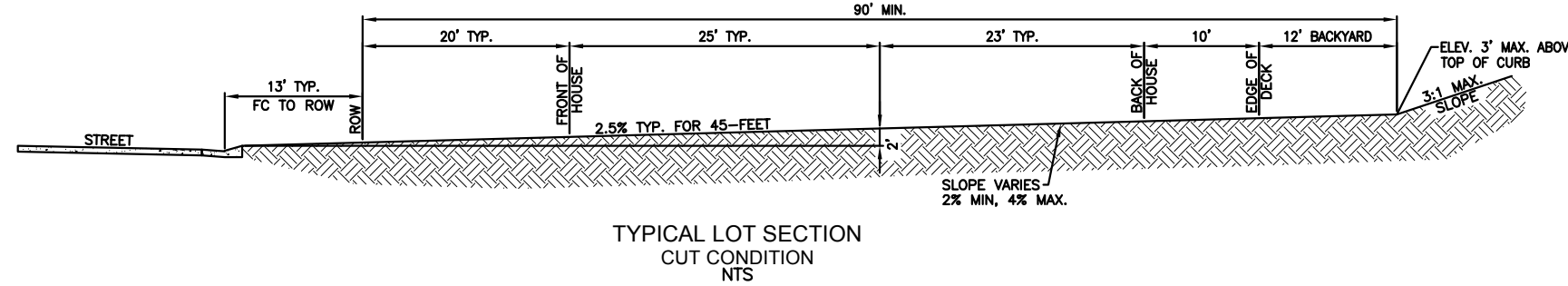
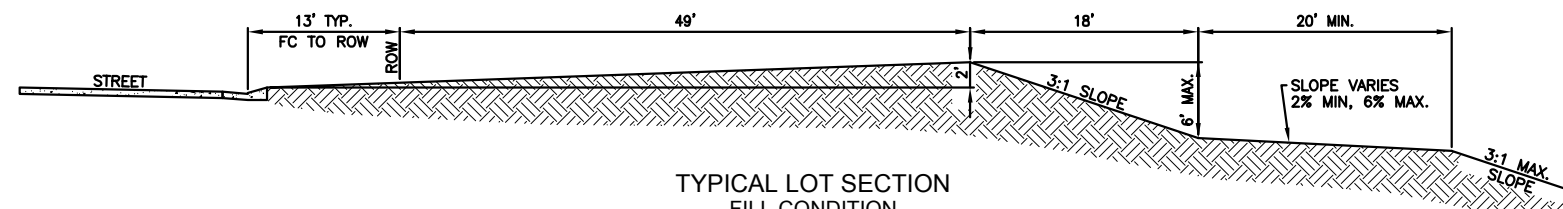
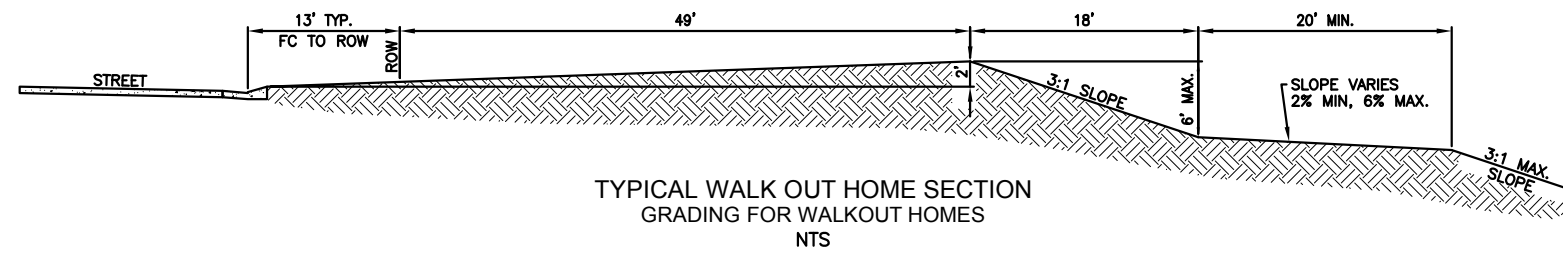
SEE SHEET 6 FOR DETAILS: -POND OUTFALL STRUCTURES -POND MAINT/ACCESS TRAIL & TEMPORARY OUTFLOW DITCH FROM FILING 10

MATCH SIDEWALK ASSEMBLY LEFT & RIGHT AND INSTALL 5' CONCRETE SIDEWALKS @ 2% SLOPE TOWARDS STREET SECTION

MATCH ROADWAY ASSEMBLY LEFT & RIGHT CONNECT / EXTEND PENNYCRESS DRIVE TO PEACEFUL VALLEY RD SEE SHEET 4 FOR STREET PLAN & PROFILE DESIGN DATA

#### PROJECT SPECIFIC GRADING AND EROSION CONTROL NOTES

- Stormwater discharges from construction sites shall not cause or threaten to cause pollution, contamination, or degradation of State Waters. All work and earth disturbance shall be done in a manner that minimizes pollution of any on-site or off-site waters, including wetlands.
- Notwithstanding anything depicted in these plans in words or graphic representation, all design and construction related to roads, storm drainage and erosion control shall conform to the standards and requirements of the most recent version of the relevant adopted El Paso County standards, including the Land Development Code, the Engineering Criteria Manual, the Drainage Criteria Manual, and the Drainage Criteria Manual Volume 2. Any deviations from regulations and standards must be requested, and approved, in writing.
- A separate Stormwater Management Plan (SWMP) for this project shall be completed and an Erosion and Stormwater Quality Control Permit (ESQCP) issued prior to commencing construction. Management of the SWMP during construction is the responsibility of the designated Qualified Stormwater Manager or Certified Erosion Control Inspector. The SWMP shall be located on site at all times during construction and shall be kept up to date with work progress and changes in the field.
- Once the ESQCP is approved and a "Notice to Proceed" has been issued, the contractor may install the initial stage erosion and sediment control measures as indicated on the approved GEC. A Preconstruction Meeting between the contractor, engineer, and El Paso County will be held prior to any construction. It is the responsibility of the applicant to coordinate the meeting time and place with County staff.
- Control measures must be installed prior to commencement of activities that could contribute pollutants to stormwater. Control measures for all slopes, channels, ditches, and disturbed land areas shall be installed immediately upon completion of the disturbance.
- All temporary sediment and erosion control measures shall be maintained and remain in effective operating condition until permanent soil erosion control measures are implemented and final stabilization is established. All persons engaged in land disturbance activities shall assess the adequacy of control measures at the site and identify if changes to those control measures are needed to ensure the continued effective performance of the control measures. All changes to temporary sediment and erosion control measures must be incorporated into the Stormwater Management Plan.
- Temporary stabilization shall be implemented on disturbed areas and stockpiles where ground disturbing construction activity has permanently ceased or temporarily ceased for longer than 14 days.
- Final stabilization must be implemented at all applicable construction sites. Final stabilization is achieved when all ground disturbing activities are complete and all disturbed areas either have a uniform vegetative cover with individual plant density of 70 percent of pre-disturbance levels established or equivalent permanent alternative stabilization method is implemented. All temporary sediment and erosion control measures shall be removed upon final stabilization and permit closure.
- All permanent stormwater management facilities shall be installed as designed in the approved plans. Any proposed changes that affect the design or function of permanent stormwater management structures must be approved by the ECM Administrator prior to implementation.
- Earth disturbances shall be conducted in such a manner so as to effectively minimize accelerated soil erosion and resulting sedimentation. All disturbances shall be designed, constructed, and completed so that the exposed area of any disturbed land shall be limited to the shortest practical period of time. Pre-existing vegetation shall be protected and maintained within 50 horizontal feet of a waters of the state unless shown to be infeasible and specifically requested and approved.
- Compaction of soil must be prevented in areas designated for infiltration control measures or where final stabilization will be achieved by vegetative cover. Areas designated for infiltration control measures shall also be protected from sedimentation during construction until final stabilization is achieved. If compaction prevention is not feasible due to site constraints, all areas designated for infiltration control measures must be loosened prior to installation of the control measure(s).
- Any temporary or permanent facility designed and constructed for the conveyance of stormwater around, through, or from the earth disturbance area shall be a stabilized conveyance designed to minimize erosion and the discharge of sediment off site.
- Concrete wash water shall be contained and disposed of in accordance with the SWMP. No wash water shall be discharged to or allowed to enter State Waters, including any surface or subsurface storm drainage system or facilities. Concrete washouts shall not be located in an area where shallow groundwater may be present, or within 50 feet of a surface water body, creek or stream.
- During dewatering operations of uncontaminated ground water may be discharged on site, but shall not leave the site in the form of surface runoff unless an approved State dewatering permit is in place.
- Erosion control blanketing or other protective covering shall be used on slopes steeper than 3:1.
- Contractor shall be responsible for the removal of all wastes from the construction site for disposal in accordance with local and State regulatory requirements. No construction debris, tree slash, building material wastes or unused building materials shall be buried, dumped, or discharged at the site.
- Waste materials shall not be temporarily placed or stored in the street, alley, or other public way, unless in accordance with an approved Traffic Control Plan. Control measures may be required by El Paso County Engineering if deemed necessary, based on specific conditions and circumstances.
- Tracking of soils and construction debris off-site shall be minimized. Materials tracked off-site shall be cleaned up and properly disposed of immediately.
- The owner/developer shall be responsible for the removal of all construction debris, dirt, trash, rock, sediment, soil, and sand that may accumulate in roads, storm drains and other drainage conveyance systems and stormwater appurtenances as a result of site development.
- The quantity of materials stored on the project site shall be limited, as much as practical, to that quantity required to perform the work in an orderly sequence. All materials stored on-site shall be stored in a neat, orderly manner, in their original containers, with original manufacturer's labels.
- No chemical(s) having the potential to be released in stormwater are to be stored or used onsite unless permission for the use of such chemical(s) is granted in writing by the ECM Administrator. In granting approval for the use of such chemical(s), special conditions and monitoring may be required.
- Bulk storage of allowed petroleum products or other allowed liquid chemicals in excess of 55 gallons shall require adequate secondary containment protection to contain all spills onsite and to prevent any spilled materials from entering State Waters, any surface or subsurface storm drainage system or other facilities.
- No person shall cause the impediment of stormwater flow in the curb and gutter or ditch except with approved sediment control measures.
- Owner/developer and their agents shall comply with the "Colorado Water Quality Control Act" (Title 25, Article 8, CRS), and the "Clean Water Act" (33 USC 1344), in addition to the requirements of the Land Development Code, DCM Volume II and the ECM Appendix I. All appropriate permits must be obtained by the contractor prior to construction (1041, NPDES, Floodplain, 404, fugitive dust, etc.). In the event of conflicts between these requirements and other laws, rules, or regulations of other Federal, State, local, or County agencies, the most restrictive laws, rules, or regulations shall apply.
- All construction traffic must enter/exit the site only at approved construction access points.
- Prior to construction the permittee shall verify the location of existing utilities.
- A water source shall be available on site during earthwork operations and shall be utilized as required to minimize dust from earthwork equipment and wind.
- The soils report for this site has been prepared by \_\_\_\_\_ and shall be considered a part of these plans.
- At least ten (10) days prior to the anticipated start of construction, for projects that will disturb one (1) acre or more, the owner or operator of construction activity shall submit a permit application for stormwater discharge to the Colorado Department of Public Health and Environment, Water Quality Division. The application contains certification of completion of a stormwater management plan (SWMP), of which this Grading and Erosion Control Plan may be a part. For information or application materials contact: Colorado Department of Public Health and Environment  
Water Quality Control Division  
WQCD - Permits  
4500 Cherry Creek Drive South  
Denver, CO 80246-1530  
Attn: Permits Unit
- Base mapping was provided by Pinnacle Land Surveying. The date of the last survey update was May 2019.
- Proposed Construction Schedule:  
Begin Construction: Spring 2020  
End Construction: Autumn 2020  
Total Site Area = 292.29 Acres
- Area to be disturbed = 172.6 Acres (est.).  
Existing 100-year runoff coefficient = 0.50  
Proposed 100-year runoff coefficient = 0.51  
Existing Hydrologic Soil Groups: B & C  
(B-Nelson-Tassel 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.



#### TYPICAL LOT CROSS SECTIONS

## GLEN AT WIDEFIELD NO. 10 GRADING AND EROSION CONTROL PLAN GRADING AND EROSION CONTROL EL PASO, COUNTY

Project No.:	19016
Date:	September 27, 2019
Design:	MK
Drawn:	MJK
Check:	AWMc
Revisions:	

SHEET

7

7 of 15 Sheets

19016-GW10-07-EC.dwg/Sep 27, 2019



STAKING PATTERNS BY SLOPE

STAKING PATTERNS BY ECB TYPE

ECB-3. OUTSIDE OF DRAINAGEWAY

STAKING PATTERNS BY SLOPE

EROSION CONTROL BLANKET

NTS

TEMPORARY SEDIMENT BASIN "A"

A. 0.38 ac-ft REQUIRED TO SPILLWAY CREST.

B. 8" PVC PERFORATED RISER PIPE, PERFORATIONS VERTICALLY SPACED 4" APART, 1 COLUMN OF 5 2 1/2" Ø HOLES.

C. 8" LONG SPILLWAY, 1" DEPTH, LINED WITH 24" THICK TYPE "W" RIPRAP TO TOE OF SLOPE.

EROSION CONTROL BLANKET

ECB

ROUGH-CUT STREET CONTROL

RCS

ROUGH-CUT STREET CONTROL

NTS

CONCRETE WASHOUT AREA

CWA

NTS

STANDARD EPC GRADING AND EROSION CONTROL NOTES

1. Construction may not commence until a Construction Permit is obtained from Development Services and a Preconstruction Conference is held with Development Services Inspectors.

2. Stormwater discharges from construction sites shall not cause or threaten to cause pollution, contamination, or degradation of State Waters. All work and earth disturbance shall be done in a manner that minimizes pollution of any on-site or off site waters, including wetlands.

3. Notwithstanding anything depicted in these plans in words or graphic representation, all design and construction related to erosion control shall conform to the standards and requirements of the most recent version of the relevant adopted El Paso County standards, including the Land Development Code, the Engineering Criteria Manual, the Drainage Criteria Manual, and the Drainage Criteria Manual Volume 2. Any deviations to regulations and standards must be requested, and approved in writing.

4. A separate Stormwater Management Plan (SWMP) for this project shall be completed and an Erosion and Stormwater Quality Control Permit (ESQCP) issued prior to commencing construction. During construction the SWMP is the responsibility of the designated Stormwater Manager. The SWMP shall be located on site at all times and shall be kept up to date with work progress and changes in the field.

5. Once the ESQCP has been issued, the contractor may install the initial stage erosion and sediment control BMPs as indicated on the GEC. A preconstruction meeting between the contractor, engineer, and El Paso County will be held prior to any construction. It is the responsibility of the applicant to coordinate the meeting time and place with County DSD inspections staff.

6. Soil erosion control measures for all slopes, channels, ditches, or any disturbed land area shall be completed within 21 calendar days after final grading, or earth disturbance, has been completed. Disturbed areas and stockpiles, which are not at final grade but will remain dormant for longer than 30 days, shall also be mulched within 21 days after interim grading. And area that is going to remain an interim for more than 60 days shall also be seeded. All temporary soil erosion control measures and BMPs shall be maintained until permanent soil erosion control measures are implemented and established.

7. Temporary soil erosion control facilities shall be removed and earth disturbance areas graded and stabilized with permanent soil erosion control measures pursuant to standards and specification prescribed in the DCM Volume II and the Engineering Criteria Manual (ECM) appendix I.

8. All persons engaged wit heath disturbance shall implement and maintain acceptable soil erosion and sediment control measures including BMPs in conformance with the erosion control technical standards of the Drainage Criteria Manual (DCM) Volume II and in accordance with the Stormwater Management Plan (SWMP).

9. All temporary erosion control facilities including BMPs and all permanent facilities intended to control erosion of any earth disturbance operations shall be installed as defined in the approved plans, the SWMP and the DCM Volume II and maintained throughout the duration of the earth disturbance operation.

10. Any earth disturbance shall be conducted in such a manner so as to effectively reduce accelerated soil erosion and resulting sedimentation. All disturbances shall be designed, constructed, and completed so that the exposed area of any disturbed land shall be limited to the shortest practical period of time.

11. Any temporary or permanent facility designed and constructed for the conveyance of stormwater around, through, or from the earth disturbance area shall be designed to limit the discharge to a non-erosive velocity.

12. Concrete wash water shall be contained and disposed of in accordance with the SWMP. No wash water shall be discharged to or allowed to runoff to State Waters, including any surface or subsurface storm drainage system or facilities.

13. Erosion control blanketing is to be used on slopes steeper than 3:1.

14. Building, construction, excavation, or other waste materials shall not be temporarily placed or stored in the street, alley, or other in public way, in accordance with the Traffic Control Plan. BMPs may be required by El Paso County Engineering if deemed necessary, based on specific conditions and circumstances.

15. Vehicle tracking of soils and construction debris off-site shall be minimized. Materials tracked offsite shall be cleaned up and properly disposed of immediately.

16. Contractor shall be responsible for the removal of all wastes from the construction site for disposal in accordance with local and State regulatory requirements. No construction debris, tree slash, building material wastes or unused building materials shall be buried, dumped, or discharged at the site.

17. The owner, site developer, contractor, and/or their authorized agents shall be responsible for the removal of all constructions debris, dirt, trash, rock, sediment, and sand that may accumulate in the storm sewer or other drainage conveyance and stormwater appurtenances as a result of site development.

18. The quantity of materials stored on the project site shall be limited, as much as practical, to that quantity required to perform the work in an orderly sequence. All materials stored on-site shall be stored in a neat, orderly manner, in their original containers, with original manufacturer's labels.

19. No chemicals are to be used by the contractor, which have the potential to be released in stormwater unless permission for the use of a specific chemical is granted in writing by the ECM Administrator. In granting the use of such chemicals, special conditions and monitoring may be required.

20. Bulk storage structures for petroleum products and other chemicals shall have adequate protection so as to contain all spills and prevent any spilled material from entering State Waters, including any surface or subsurface storm drainage system or facilities.

21. No person shall cause the impediment of stormwater flow in the flow line of the curb and gutter or in the ditchline.

22. Individuals shall comply with the "Colorado Water Quality Control Act" (Title 25, Article 8, CRS), and the Clean Water Act" (33 USC 1344), in addition to the requirements included in the DCM Volume II and the ECM Appendix I. All appropriate permits must be obtained by the Contractor prior to the construction (NPDES, Floodplain, 404, fugitive dust, etc.). In the event of conflicts between these requirements and laws, rules, or regulations of other Federal, State, or County Agencies, the more restrictive laws, rules, or regulations shall apply.

23. All construction traffic must enter/exit the site at approved construction access points.

24. Prior to actual construction the permittee shall verify the location of existing utilities.

25. A water source shall be available on site during earthwork operations and utilized as required to minimize dust from earthwork equipment and wind.

26. The soils report for this site entitled *Subsurface Soil Investigation The Glen at Widefield, Filing #5, Widefield, Colorado* has been prepared by Soil Testing and Engineering, Inc. and shall be considered a part of these plans.

27. At least ten days prior to the anticipated start of construction, for projects that will disturb 1 acre or more, the owner or operator of construction activity shall submit an application for stormwater discharge to the Colorado Department of Public Health and Environment, Water Quality Division. The application contains certification of completion of a stormwater management plan (SWMP), of which this grading and erosion control plan may be a part. For information or application materials contact: Colorado Department of Public Health and Environment Water Quality Control Division WQCD - Permits 4300 Cherry Creek Drive South Denver, Colorado 80246-1530 Attn: Permits Unit

TEMPORARY SEDIMENT BASIN

NTS

INLET PROTECTION

IP-1

NTS

TEMPORARY SLOPE DRAIN

NTS

SILT FENCE DETAIL

NTS

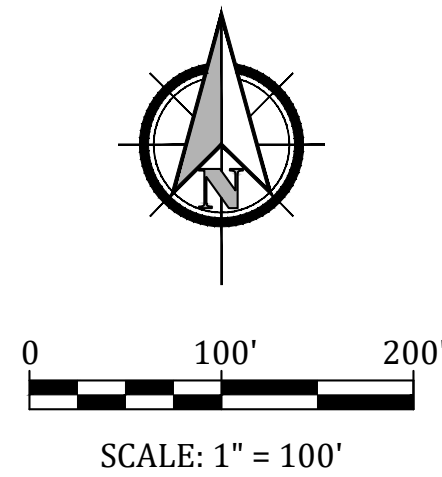
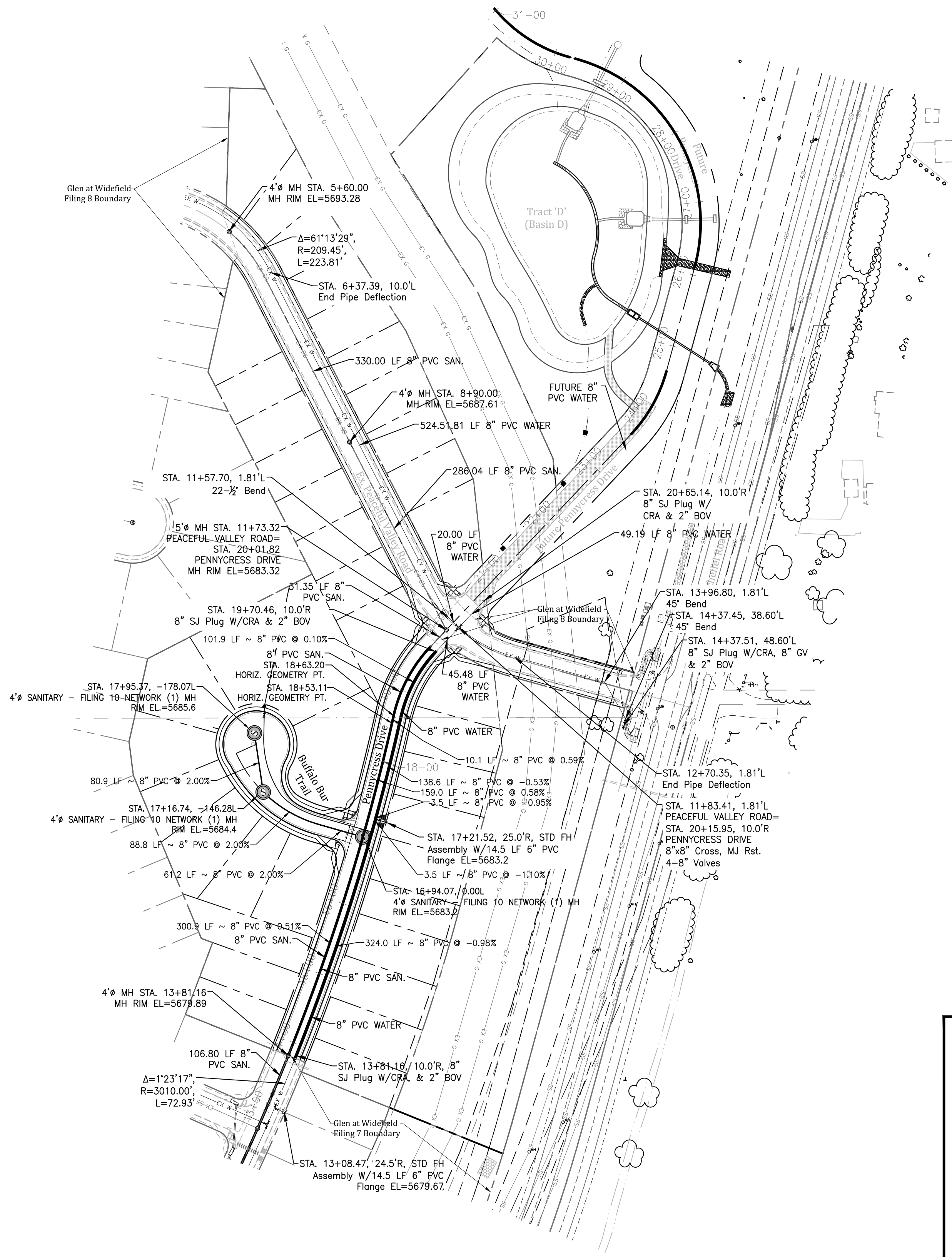
19016-0W10-08-EC.dwg/Sep 22, 2019





Know what's below.  
Call before you dig.

FOR STORM SEWER DESIGN  
SEE SHEET 6



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.

#### 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 (WWSO) 390-7111  
WATER: WIDEFIELD W&S DISTRICT (WWSO) 390-7111  
ELECTRIC: MOUNTAIN VIEW ELECTRIC 445-2283  
GAS: PEOPLES NATURAL GAS 800-363-0752  
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 WWSO 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 \_\_\_\_\_

Print Name J. Mark Watson, President

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 Security Fire District.

Security Fire Department

Signed \_\_\_\_\_ Date \_\_\_\_\_  
Security Fire Department

#### 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: \_\_\_\_\_ By: \_\_\_\_\_

PROJECT NO. \_\_\_\_\_

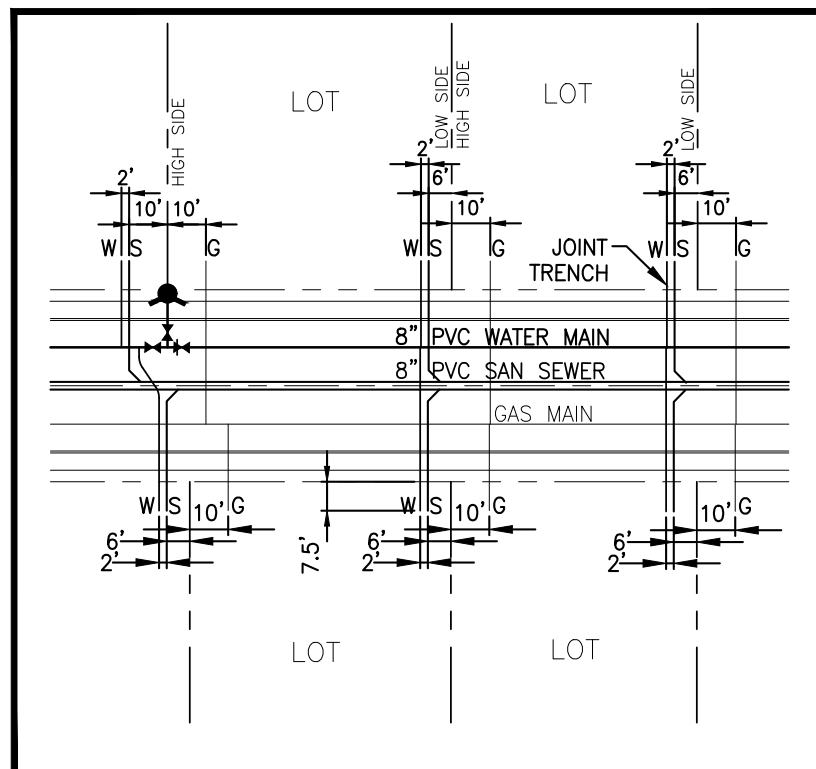
In case of errors or omissions with the sewer design as shown on this document the standards as defined in the "Rules and Regulations for Installation of Sewer Mains and Services" shall rule. Approval expires 180 days from Design Approval.

WIDEFIELD WATER AND SANITATION DISTRICT  
WATER DESIGN APPROVAL

Date: \_\_\_\_\_ By: \_\_\_\_\_

PROJECT NO. \_\_\_\_\_

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WATER AND SEWER SERVICE EXTENSIONS  
TYPICAL CONNECTION EXAMPLES

## GLEN AT WIDEFIELD NO. 10 UTILITY PLAN WATER & WASTEWATER MAIN EL PASO, COUNTY

Project No.: 19016  
Date: September 27, 2019  
Design: MK  
Drawn: MJK  
Check: AWMc  
Revisions:

SHEET

9

9 of 15 Sheets

19016-GW10-09-UT.dwg/Sep 26, 2019

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

**W**  
WIDEFIELD  
Investment Group



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.

#### ADDITIONAL UTILITY NOTES

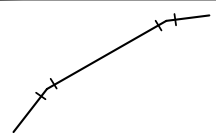
GAS - ALL GAS MAINS AND SERVICES ARE TO BE INSTALLED PER THE CITY OF COLORADO SPRINGS.

ELECTRIC - ALL ELECTRIC SERVICES ARE TO BE INSTALLED PER THE CITY OF FOUNTAIN ELECTRIC DIVISION.

#### UTILITY CONTACTS

SEWER: WIDEFIELD W&S DISTRICT (WWSO) 390-7111  
WATER: WIDEFIELD W&S DISTRICT (WWSO) 390-7111  
ELECTRIC: MOUNTAIN VIEW ELECTRIC 445-2283  
GAS: PEOPLES NATURAL GAS 800-363-0752  
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 WWSO 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.

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Print Name J. Mark Watson, President

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Signed \_\_\_\_\_ Date \_\_\_\_\_  
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#### UTILITY APPROVALS

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WIDEFIELD WATER AND SANITATION DISTRICT  
WASTEWATER DESIGN APPROVAL

Date: \_\_\_\_\_ By: \_\_\_\_\_

PROJECT NO. \_\_\_\_\_

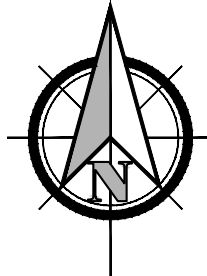
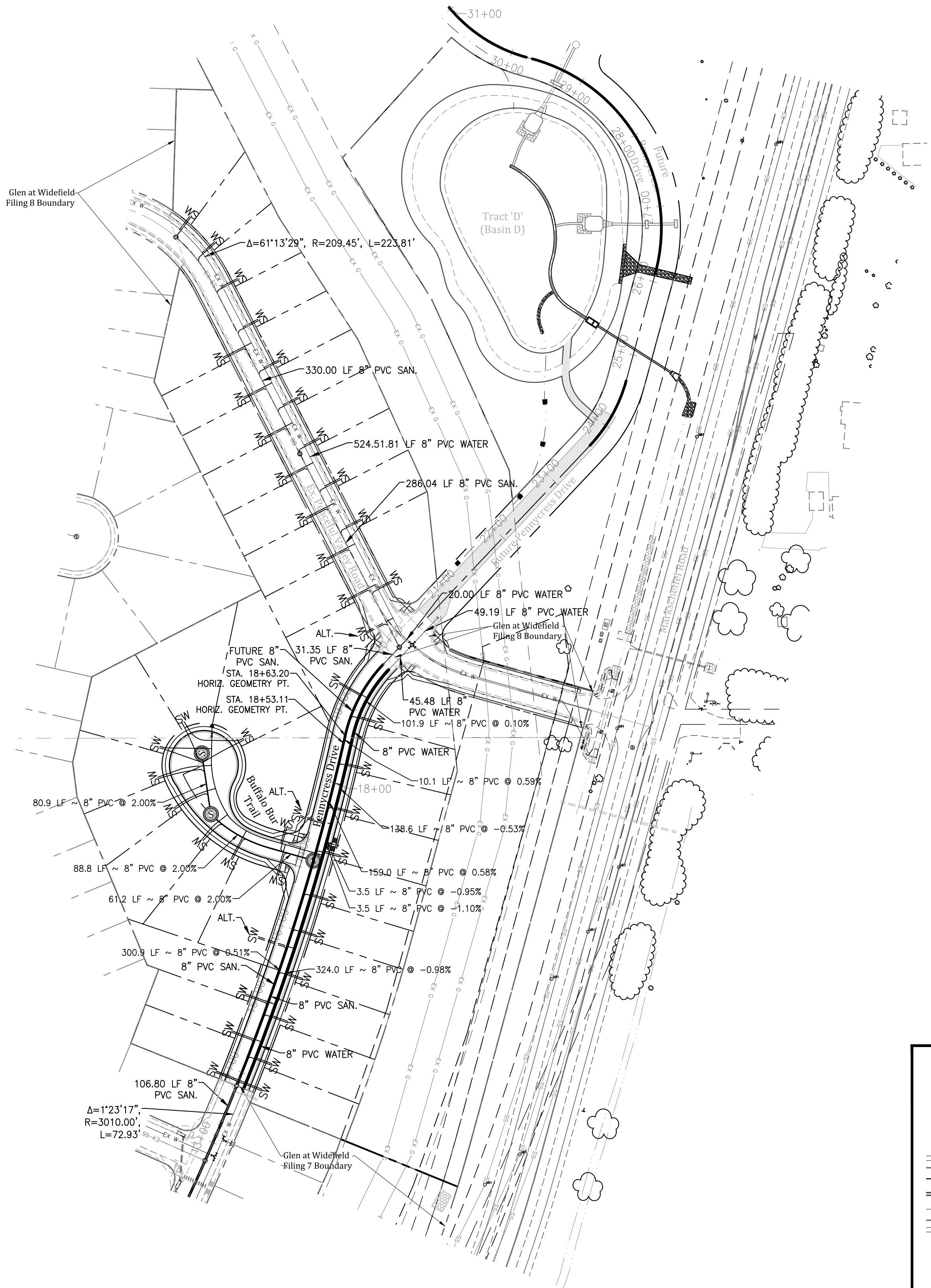
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WIDEFIELD WATER AND SANITATION DISTRICT  
WATER DESIGN APPROVAL

Date: \_\_\_\_\_ By: \_\_\_\_\_

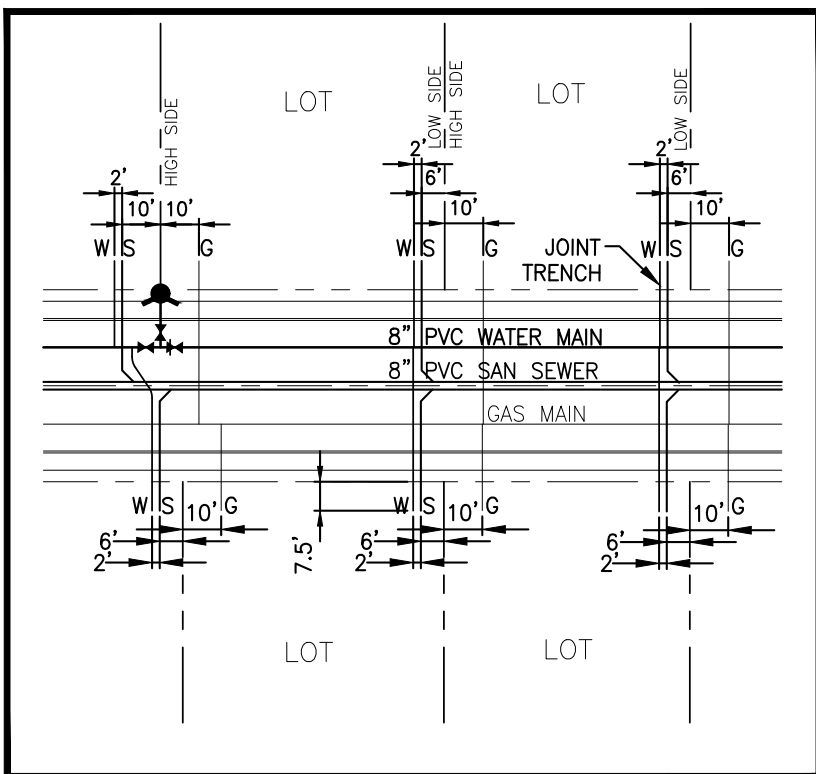
PROJECT NO. \_\_\_\_\_

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0 100' 200'

SCALE: 1" = 100'



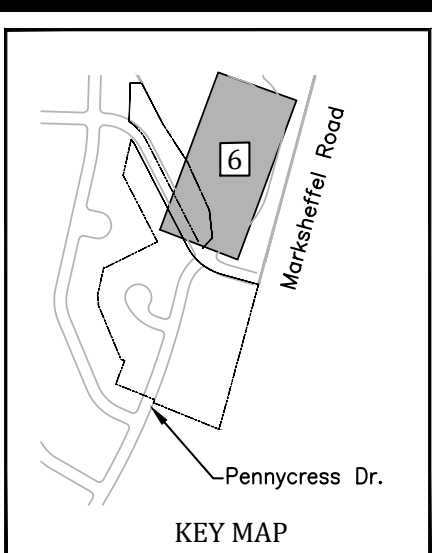
WATER AND SEWER SERVICE EXTENSIONS  
TYPICAL CONNECTION EXAMPLES



Know what's below.  
Call before you dig.

FOR STORM SEWER DESIGN  
SEE SHEET 6

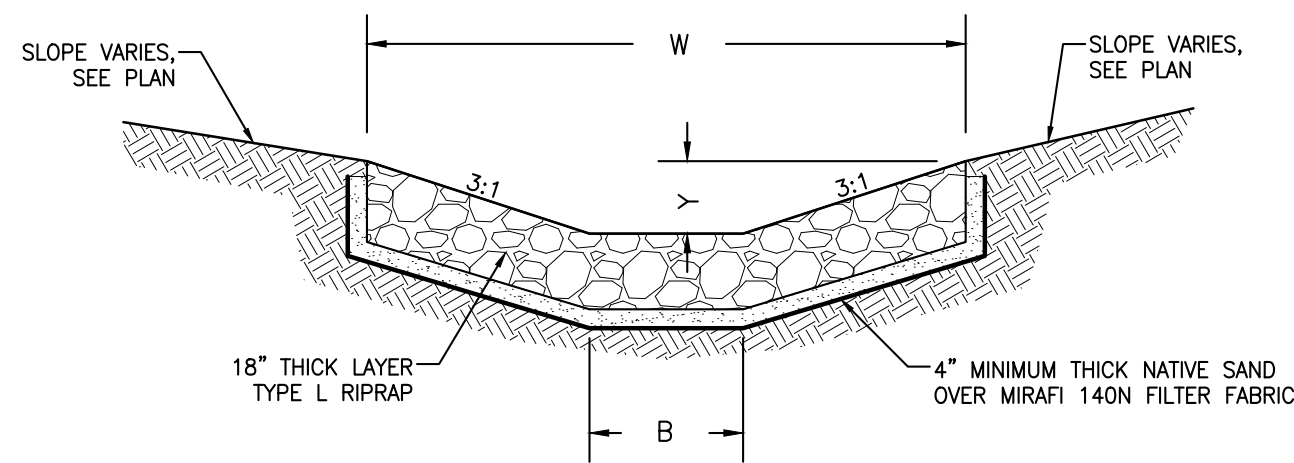




CLASSIFICATION AND GRADATION OF RIPRAP			
RIPRAP DESIGNATION	% SMALLER THAN GIVEN SIZE	INTERMEDIATE ROCK DIMENSION (INCHES)	d50* (INCHES)
TYPE VL	70-100	12	6**
	50-70	9	
	35-50	6	
	2-10	2	
TYPE L	70-100	15	9**
	50-70	12	
	35-50	9	
	2-10	3	
TYPE M	70-100	18	12**
	50-70	21	
	35-50	12	
	2-10	4	

\* d50=MEAN PARTICLE SIZE (INTERMEDIATE DIMENSION) BY WEIGHT.  
 \*\* MIX VL, L AND M WITH 55% TOPSAIL (BY VOLUME) AND BURY WITH 4-INCHES OF TOPSAIL. ALL VARIATION COMPACTED & REVEGETATE.  
 (TABLE MD-7; CLASSIFICATION AND GRADATION OF ORDINARY RIPRAP.  
 UDFCD, DRAINAGE CRITERIA MANUAL, VOL. 1)

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



RIPRAP RUNDOWN DETAIL -  
STORM OUTFALL AT MARKSHEFFEL ROAD  
SCALE: NTS

Profile view of a proposed road section. The horizontal axis represents stationing from -0+50 to 5+50. The vertical axis represents elevation in feet, ranging from 5660 to 5700. The profile shows the existing ground (dashed line) and the proposed ground (solid line). Key features include:

- Grade Breaks:**
  - STA = 0+00.42, ELEV = 5682.500
  - STA = 1+05.46, ELEV = 5681.971
  - STA = 1+98.45, ELEV = 5679.646
  - STA = 2+75.00, ELEV = 5678.880
  - STA = 3+30.32, ELEV = 5678.327
  - STA = 4+25.00, ELEV = 5673.399
- Grades:**
  - 0.50% (from STA 0+00.42 to 1+05.46)
  - 2.50% (from STA 1+05.46 to 1+98.45)
  - 1.00% (from STA 1+98.45 to 2+75.00)
  - 1.00% (from STA 2+75.00 to 3+30.32)
  - 5.20% (from STA 3+30.32 to 4+25.00)
- Existing Features:**
  - EX. C.I.G. GAS MAIN (30") (located between STA 1+00 and 1+50)
  - EX. C.I.G. GAS MAIN (30") (located between STA 1+50 and 2+00)
- Proposed Features:**
  - PROPOSED RIPRAP 12" BURY DEPTH TYPE 'L' 450=6-9" (TYP.) (located between STA 0+50 and 1+00)
  - Filing No. 10 Proposed Ground at 'TEMP. OUTFLOW DITCH' (located near STA 2+50)
  - Filing No. 11 Proposed Ground at 'Pond 'D'' (located near STA 3+50)

INSTALLATION REQUIREMENTS:	MAINTENANCE REQUIREMENTS:
1. SEDIMENT BASINS SHALL BE INSTALLED BEFORE ANY CLEARING AND/OR GRADING IS UNDERTAKEN.	1. CONTRACTOR SHALL INSPECT SEDIMENT BASINS AFTER EACH RAINFALL, AT LEAST DAILY DURING PROLONGED RAINFALL, AND WEEKLY DURING PERIODS OF NO RAINFALL.
2. THE AREA UNDER WHICH THE EMBANKMENT IS TO BE INSTALLED SHALL BE CLEARED, GRUBBED, AND STRIPPED OF ALL VEGETATION AND ROOT MAT.	2. SEDIMENT BASINS SHALL BE CLEANED OUT BEFORE SEDIMENT HAS FILLED HALF THE VOLUME OF THE BASIN.
3. THE OUTLET OF THE BASIN SHALL BE DESIGNED TO DRAIN IT'S VOLUME IN 40 HOURS.	3. SEDIMENT BASINS SHALL REMAIN OPERATIONAL AND PROPERLY MAINTAINED UNTIL THE SITE AREA IS PERMANENTLY STABILIZED WITH ADEQUATE VEGETATIVE COVER AND/OR OTHER PERMANENT STRUCTURE AS APPROVED BY EL PASO COUNTY.
4. THE OUTLET IS TO BE LOCATED AT THE FURTHEST DISTANCE FROM THE INLET OF THE BASIN. BAFFLES MAY BE NEEDED TO INCREASE THE FLOW LENGTH AND SETTLING TIME.	
5. EMBANKMENT MATERIAL SHALL CONSIST OF SOIL WITH A MINIMUM OF 15% PASSING A #200 SIEVE. EXCAVATED SOIL CAN BE USED IF IT MEETS THIS REQUIREMENT.	
6. EMBANKMENT IS TO BE COMPACTED TO AT LEAST 90% OF MAX DENSITY AND WITHIN 2% OF OPTIMUM MOISTURE CONTENT ACCORDING TO ASTM D 699.	
7. WHEN A BASIN IS INSTALLED NEAR A RESIDENTIAL AREA, FOR SAFETY REASONS, A SIGN SHALL BE POSTED AND THE AREA SECURED WITH A FENCE.	

**GLEN AT WIDEFIELD NO. 10**  
**Proposed Basin 'D'**  
**Filing 10 Portions Only**  
**EL PASO, COUNTY, COLORADO**

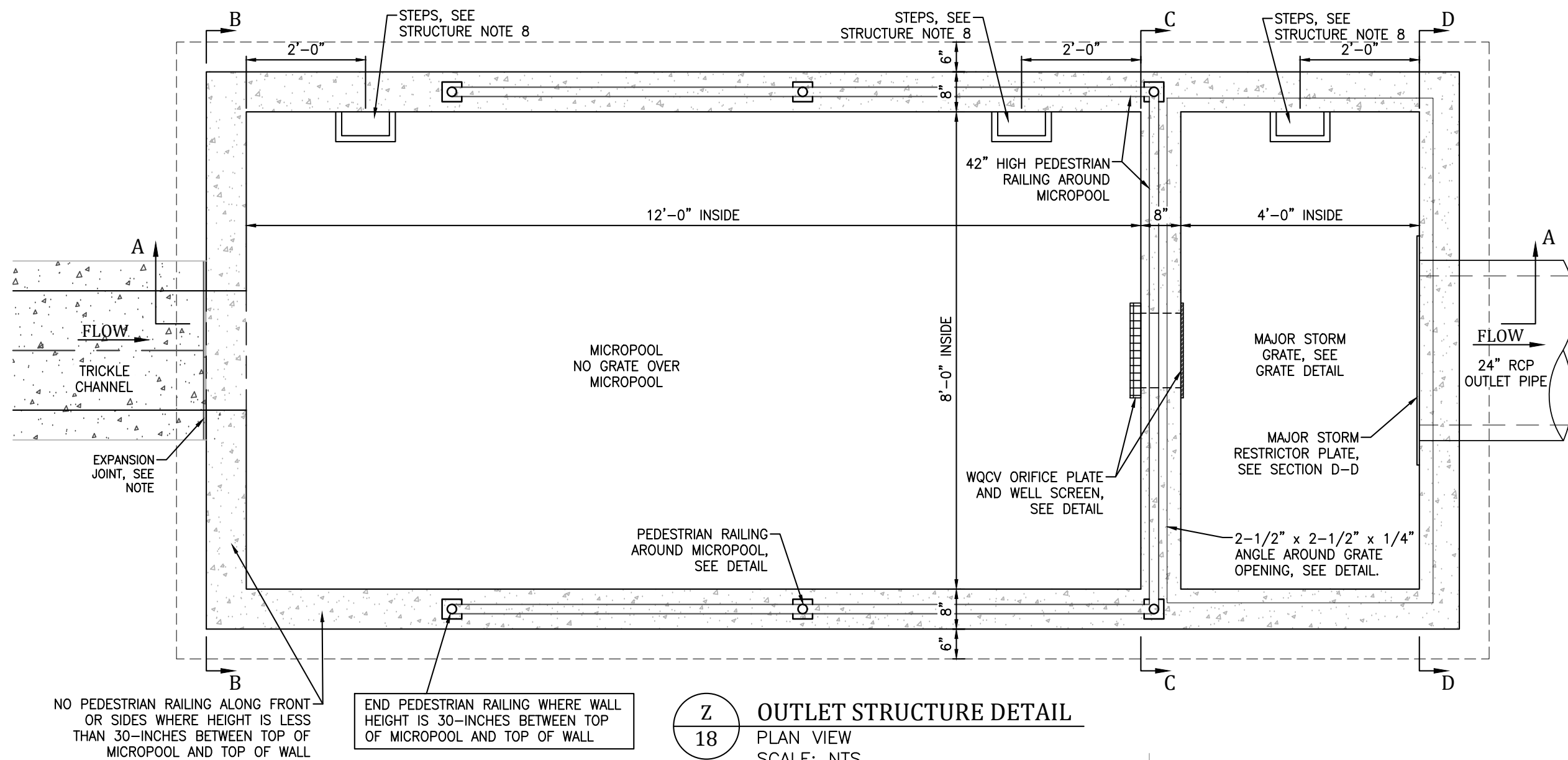
Project No.:	19016
Date:	September 27, 2019
Design:	MK
Drawn:	MJK
Check:	AWMc
Revisions:	

SHEET

11

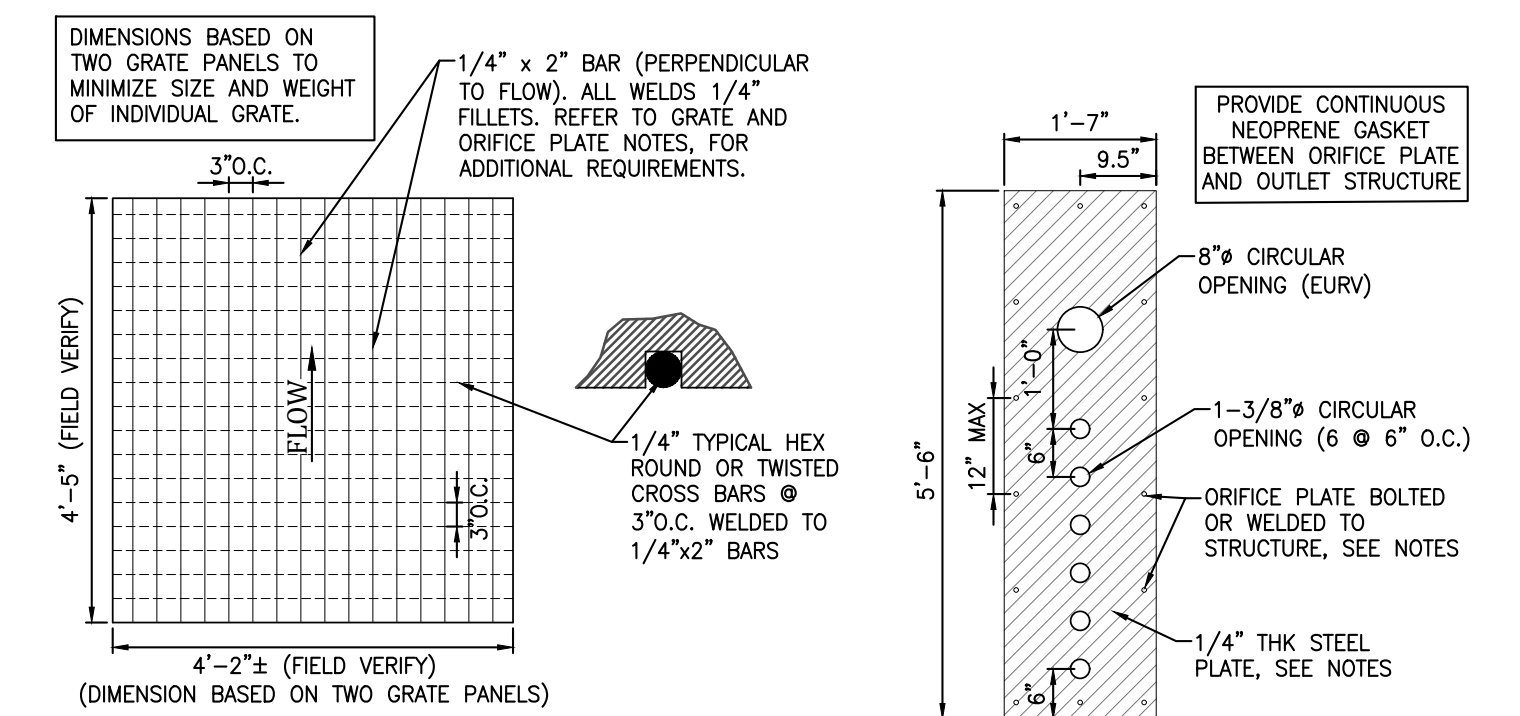
11 of 15 Sheets





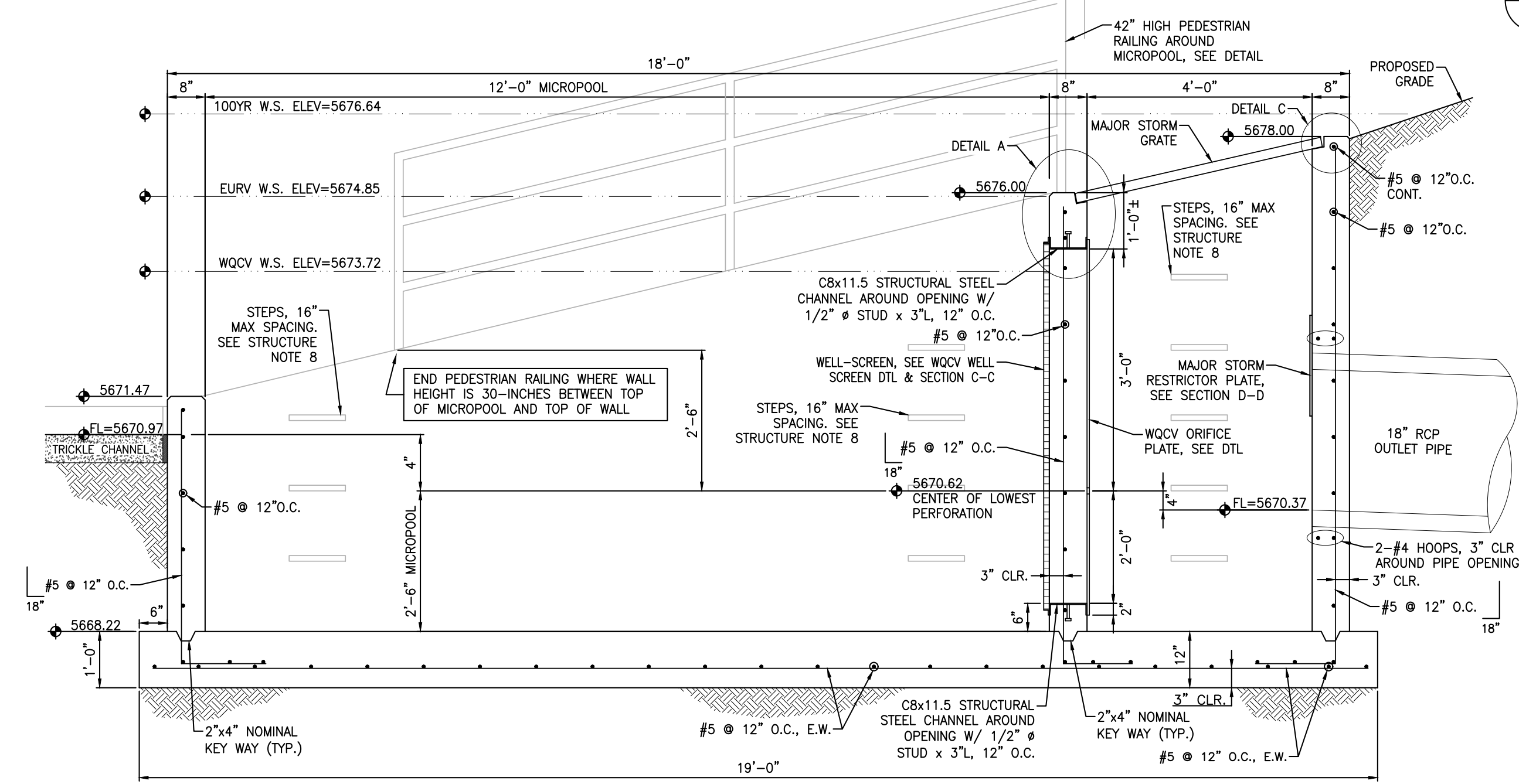
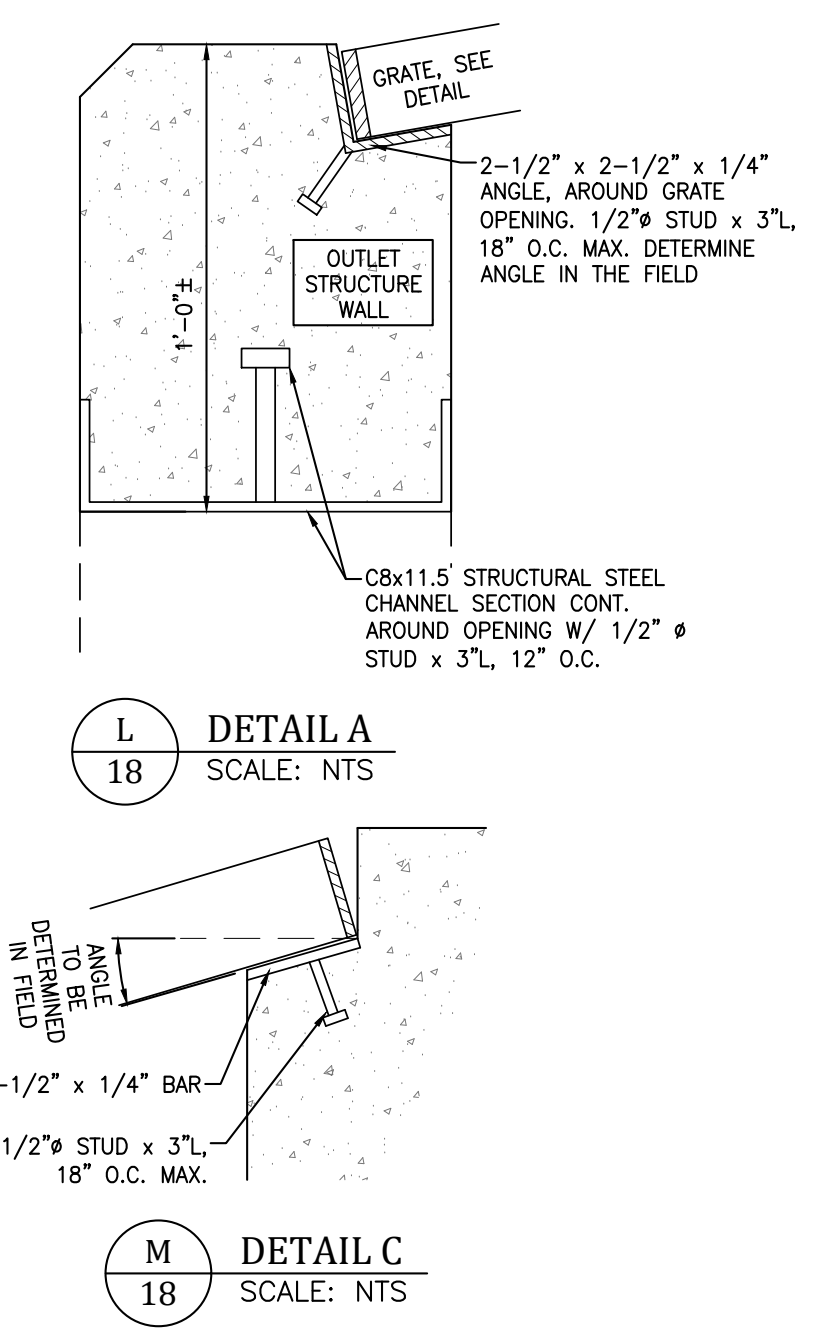
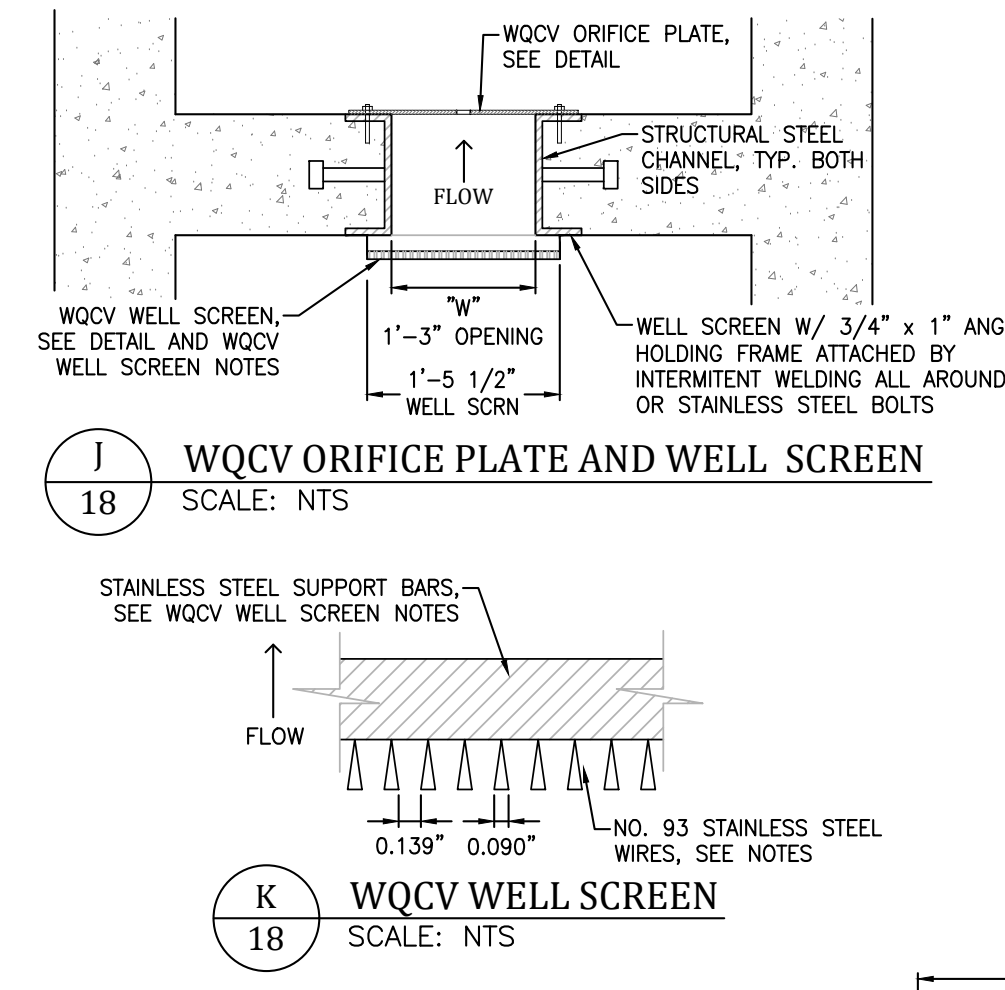
**STRUCTURE NOTES:**

1. PRIOR TO CONSTRUCTION, CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR ALL COMPONENTS OF THE OUTLET STRUCTURE.
2. GRADE 60 REINFORCING STEEL REQUIRED. SEE TABLE FOR THE MINIMUM LAP SPLICE 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.
3. MIN. SPLICE LENGTH: #4: 1'-3", #5: 1'-7", #6: 2'-0"
4. CONCRETE FOR THE OUTLET STRUCTURE AND FOREBAYS SHALL BE CDOT CLASS D CONCRETE.
5. 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.
6. ALL EXPOSED CONCRETE CORNERS SHALL HAVE A 3/4-INCH CHAMFER UNLESS OTHERWISE NOTED.
7. BACKFILLING AGAINST WALLS SHALL NOT COMMENCE UNTIL CONCRETE HAS OBTAINED ITS FULL SEVEN DAY STRENGTH.
8. SUBGRADE TO BE 12" THK CLEAN FILL COMPACTED TO 95% STANDARD PROCTOR DENSITY PER ASTM M698 UNDER STRUCTURES.
9. OUTLET STRUCTURE STEPS SHALL CONFORM TO AASHTO M199.
10. FOREBAY: CONSTRUCTION JOINTS SHALL BE INSTALLED AT 10' O.C. MAXIMUM. THE JOINTS SHALL BE SEALED WITH A JOINT SEALANT.



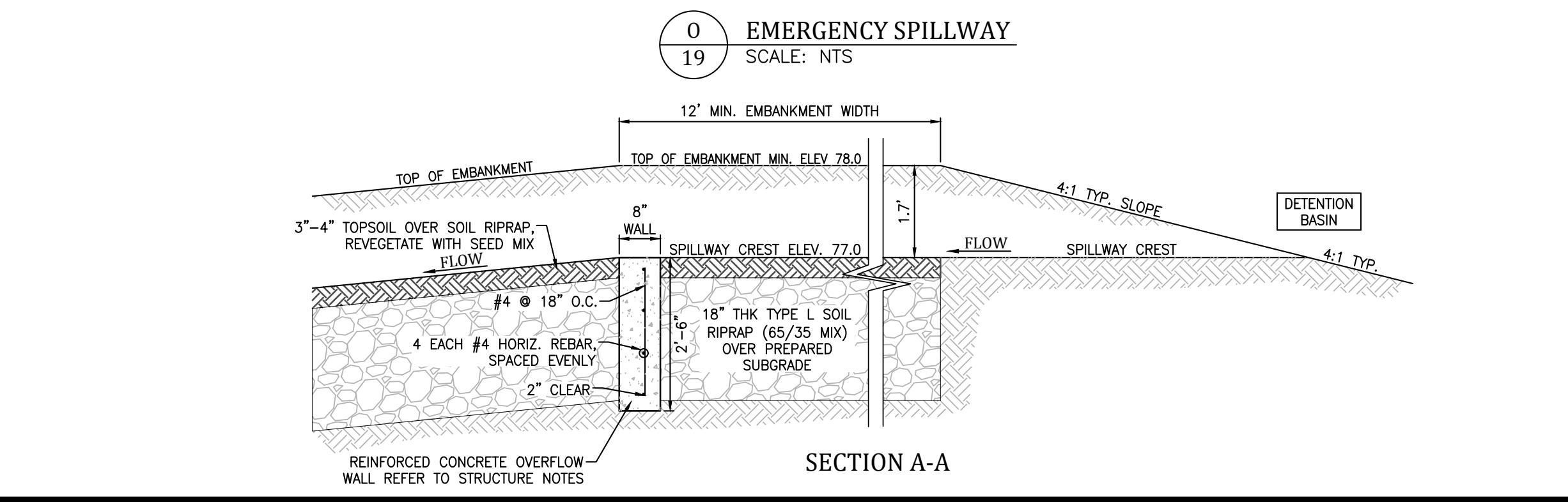
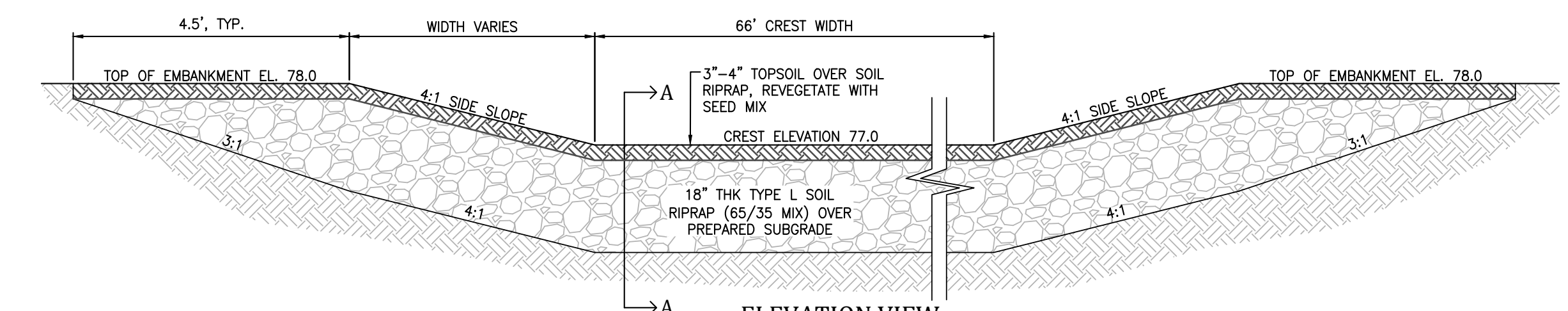
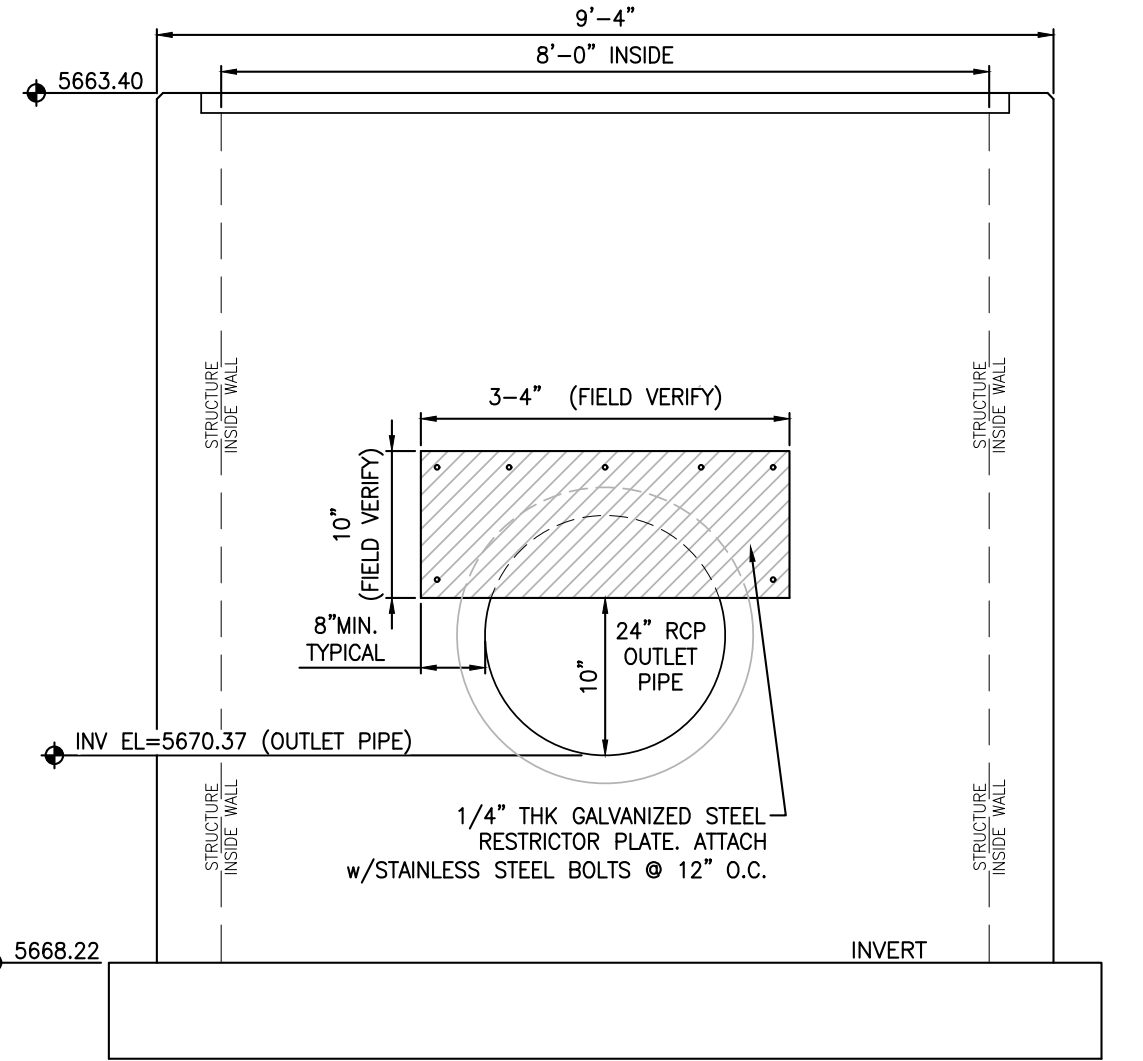
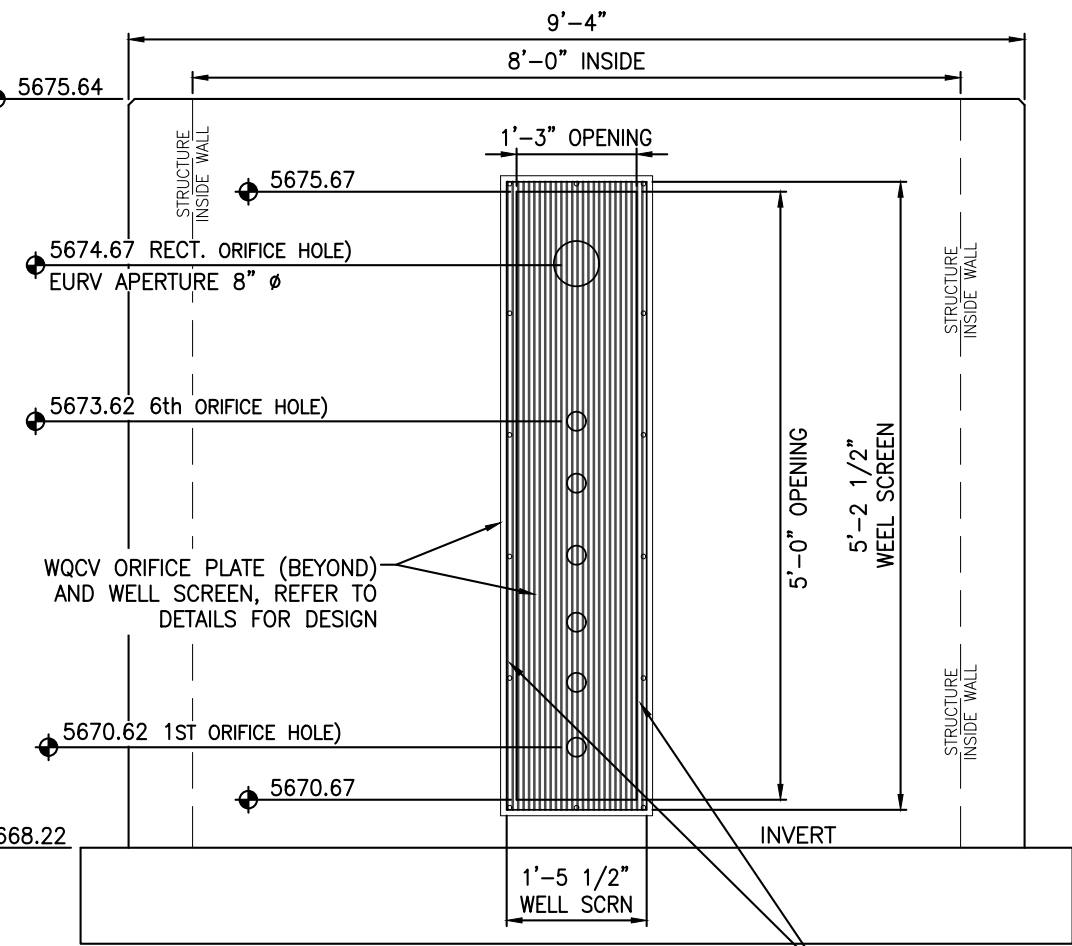
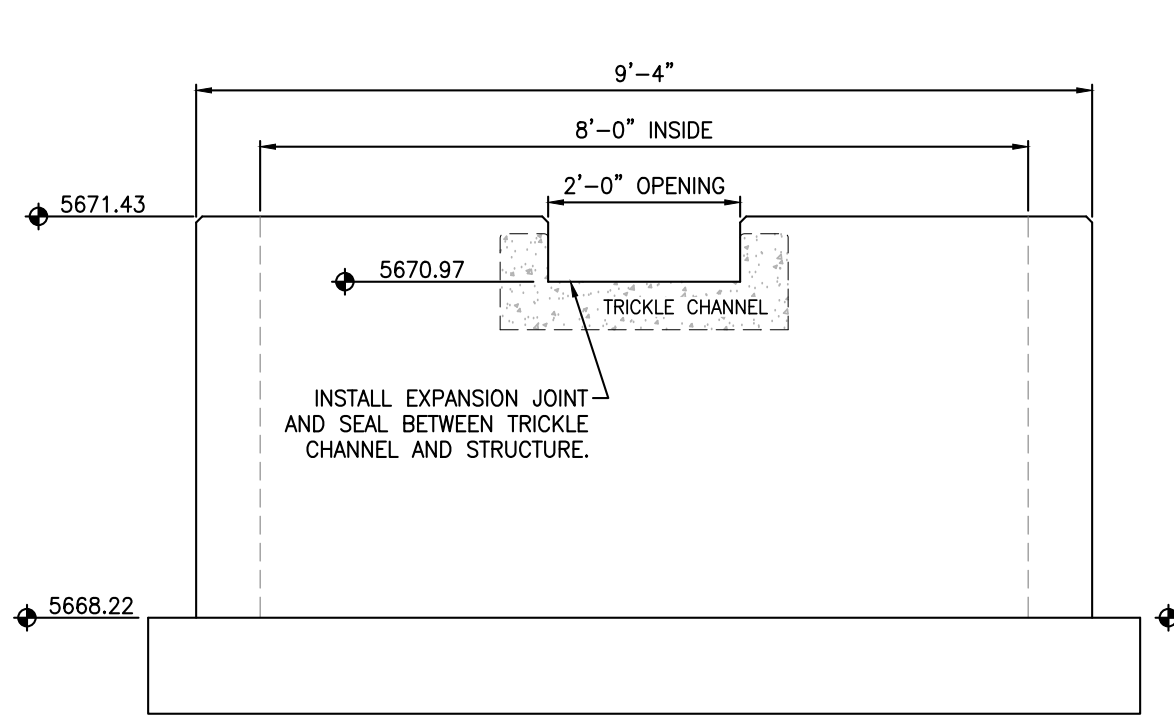
**WQCV WELL-SCREEN NOTES:**

1. WELL-SCREEN SHALL BE STAINLESS STEEL AND ATTACHED BY INTERMITTANT WELDS OR STAINLESS STEEL BOLTS ALONG EDGE OF THE MOUNTING FRAME.
2. 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

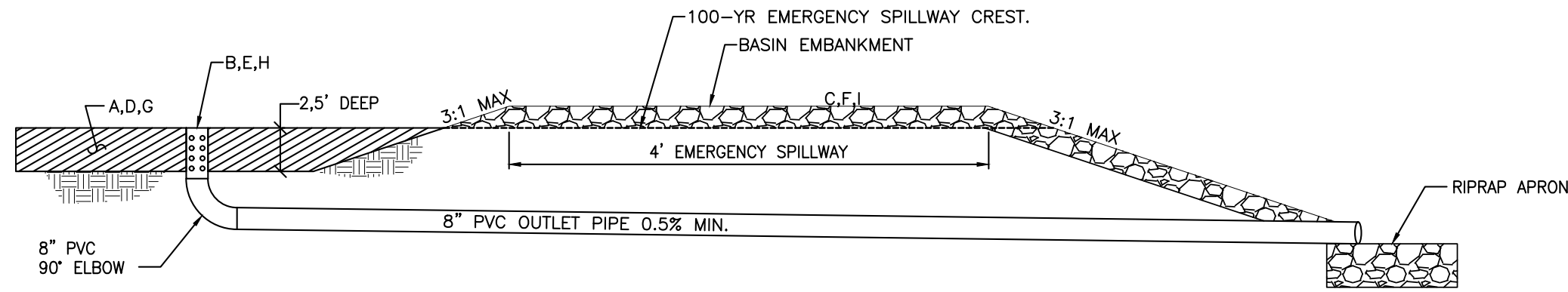


**GRATE AND ORIFICE PLATE NOTES:**

1. GRATES AND ORIFICE PLATES SHALL BE MOUNTED USING STAINLESS STEEL HARDWARE. GRATES TO BE BOLTED DOWN TO OUTLET STRUCTURE 18" O.C.
2. 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.
3. FIELD VERIFY GRATE DIMENSION PRIOR TO FABRICATION.



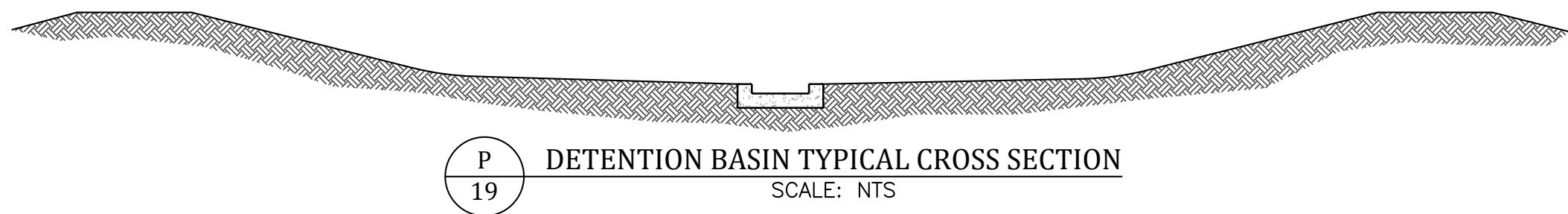




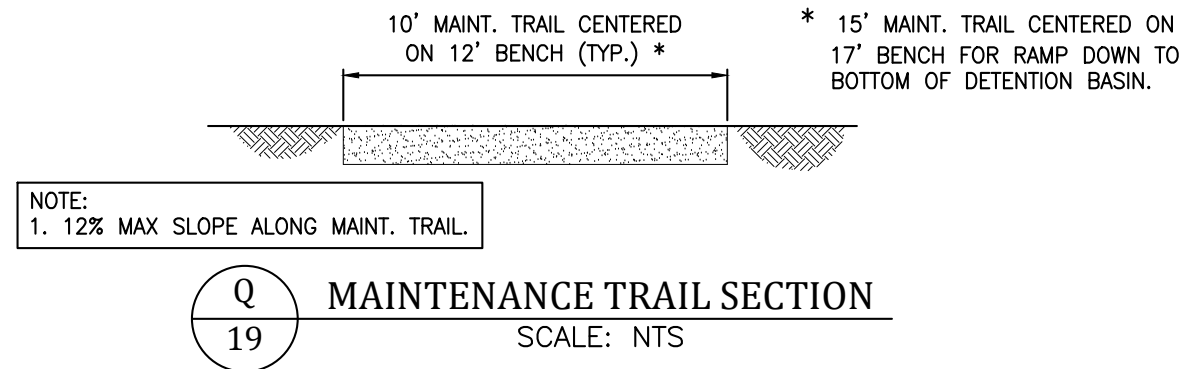
- |   |  |   |   |
|---|--|---|---|
| <b>TEMPORARY<br/>SEDIMENT BASIN "A"</b>   | <b>TEMPORARY<br/>SEDIMENT BASIN "B"</b>  | <b>TEMPORARY<br/>SEDIMENT BASIN "C"</b>   | <b>TEMPORARY<br/>SEDIMENT BASIN "D"</b>   |
| A. 0.38 ac-ft REQUIRED TO SPILLWAY CREST.   | D. 2.62 ac-ft REQUIRED TO SPILLWAY CREST.  | G. 4.32 ac-ft REQUIRED TO SPILLWAY CREST.   | J. 5.12 ac-ft REQUIRED TO SPILLWAY CREST.   |
| B. 8" PVC PERFORATED RISER PIPE, PERFORATIONS VERTICALLY SPACED 4" APART, 1 COLUMN OF 5 1/2" Ø HOLES. | E. 8" PVC PERFORATED RISER PIPE, PERFORATIONS VERTICALLY SPACED 4" APART, 1 COLUMN OF 5 1 1/4" DIA. HOLES. | H. 8" PVC PERFORATED RISER PIPE, PERFORATIONS VERTICALLY SPACED 4" APART, 3 COLUMNS OF 1 1/4" DIA. HOLES. | K. 8" PVC PERFORATED RISER PIPE, PERFORATIONS VERTICALLY SPACED 4" APART, 3 COLUMNS OF 1 1/4" DIA. HOLES. |
| C. 8' LONG SPILLWAY, 1' DEPTH, LINED WITH 24" THICK TYPE "M" RIPRAP TO TOE OF SLOPE.                  | F. 28' LONG SPILLWAY, 1' DEPTH, LINED WITH 24" THICK TYPE "M" RIPRAP TO TOE OF SLOPE.                      | I. 40' LONG SPILLWAY, 2' DEPTH, LINED WITH 24" THICK TYPE "M" RIPRAP TO TOE OF SLOPE.                     | L. 45' LONG SPILLWAY, 1' DEPTH, LINED WITH 24" THICK TYPE "M" RIPRAP TO TOE OF SLOPE.                     |

TEMPORARY SEDIMENT BASIN  
SCALE: NTS

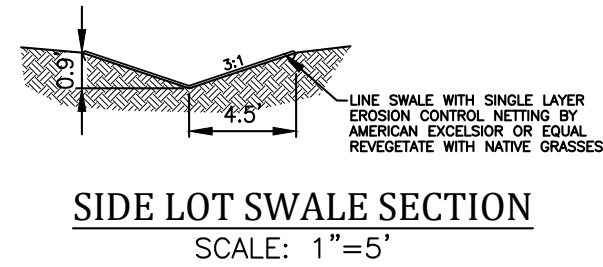
- SEDIMENT BASIN GENERAL NOTES**
- INSTALLATION REQUIREMENTS:
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  - EMBANKMENT IS TO BE COMPACTED TO AT LEAST 90% OF MAX DENSITY AND WITHIN 2% OF OPTIMUM MOISTURE CONTENT ACCORDING TO ASTM D 689.
  - WHEN A BASIN IS INSTALLED NEAR A RESIDENTIAL AREA, FOR SAFETY REASONS, A SIGN SHALL BE POSTED AND THE AREA SECURED WITH A FENCE.
- MAINTENANCE REQUIREMENTS:
- CONTRACTOR SHALL INSPECT SEDIMENT BASINS AFTER EACH RAINFALL, AT LEAST DAILY DURING PROLONGED RAINFALL, AND WEEKLY DURING PERIODS OF NO RAINFALL.
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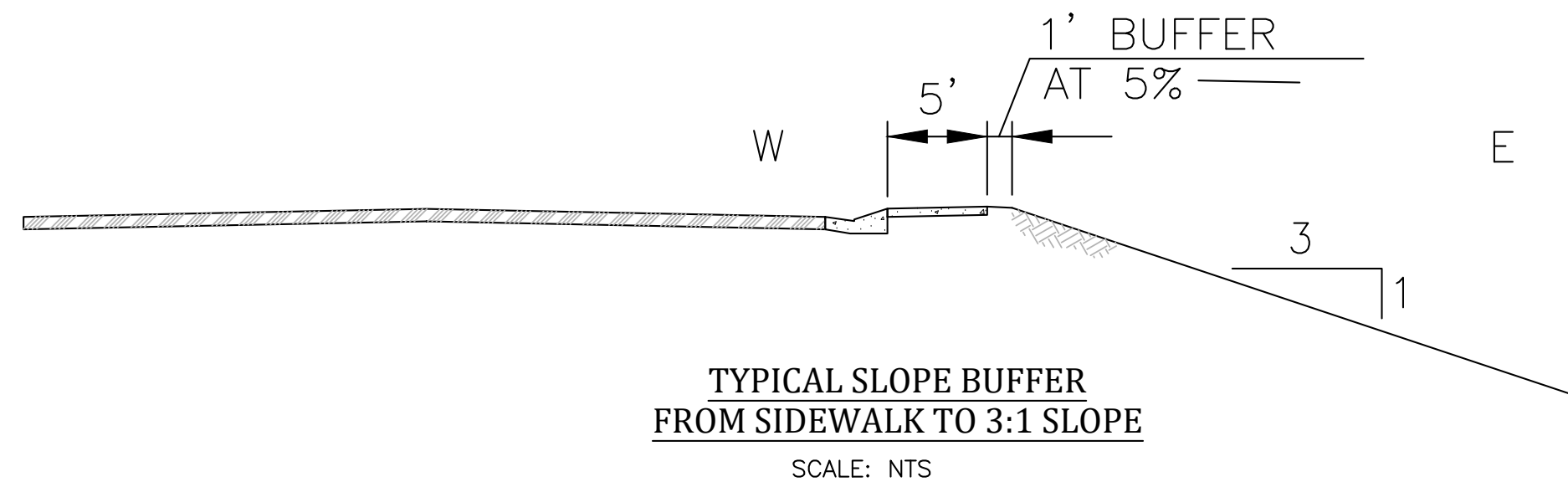
P 19 DETENTION BASIN TYPICAL CROSS SECTION  
SCALE: NTS



Q 19 MAINTENANCE TRAIL SECTION  
SCALE: NTS



R 19 SIDE LOT SWALE SECTION  
SCALE: 1"=5'



TYPICAL SLOPE BUFFER  
FROM SIDEWALK TO 3:1 SLOPE  
SCALE: NTS

GLEN AT WIDEFIELD NO. 10  
DETENTION BASIN & MISC DETAILS  
BASIN D  
EL PASO, COUNTY

Project No.:	19016
Date:	September 27, 2019
Design:	MK
Drawn:	MJK
Check:	AWMc
Revisions:	

SHEET

13

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19016-GW10-13-ST.dwg/Sep 26, 2019




▲ — 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.

MIN. 4' X 4' LANDING  
@ 2% SLOPE (MATCH S/W WIDTH)



EPC STD. SD\_2-40  
NOT TO SCALE



1. W - WIDTH SHALL BE 6' FOR LOCAL, 8' FOR COLLECTORS, AND 10' FOR ARTERIAL RAODS.
2. 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.  = 3" MINIMUM ASPHALT DEPTH (2 LIFTS).
4. DESIGN TO SPECIFY ELEVATIONS AT PI AND PCR

## EPC STD. SD\_2-26


NOT TO SCALE

1. All work shall be done in accordance with current Engineering Manual and ADA requirements.
2. Contractor to notify Engineering Division inspection staff 48 hours prior to concrete placement.
3. Pedestrian ramp construction shall be a minimum 3000 psi concrete, minimum 4" thick, non-colored, non-scored, coarse broom finish.
4. 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.
5. Detectable warning area shall start a minimum of 6" but not more than 8" from the flow line of the curb at any point.
6. Detectable warning area shall be prefabricated reddish integrally colored truncated-dome surfaced thermoplastic.
7. The detectable warning area shall be 24" in length and the full width of the ramp.
8. Ramp width required is the same as approaching sidewalk, 4' minimum.
9. all ramps will be perpendicular to traffic with the exception of mid-block or terminal ramps which may be parallel subject to approval.
10. Avoid policing drainage structures, traffic signal / signage, utilities / junction boxes, or other obstructions within proposed ramp areas.
11. 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.
12. 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.
13. At marked pedestrian crossings, the bottom of the ramps, exclusive of the flare sides, shall be totally contained within the markings.
14. Sidewalk cross-slope: 1/4"/ft.
15. Concrete mix design shall conform to the requirements of the color admixture manufacturer and the following:
  - 1) 28-day compressive strength = 4,000 PSI (min.)
  - 2) Water/cement ratio = 0.45 (max.)
  - 3) Cement content = 6-1/2 sacks/C.Y. (min.) (Type II cement)
  - 4) Maximum aggregate size = 3/4"
  - 5) Entrained air content = 6% - 10%
  - 6) Slump = 1 inch (min.) - 4 inches (max.)



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 "YOE" POKETTES (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., ½" PER FOOT. MIN.).
6. FLOOR OF MANHOLE SHALL BE TROWELED TO A SMOOTH, HARD SURFACE AND SHALL SLOPE TOWARDS THE OUTLET (8:1, ¾" PER FT. MIN.). FLOOR SHALL BE SHAPED AND CHANNELED; SEE DETAILS THIS SHEET.

SCALE: NOT TO SCALE

DATE APPROVED:  André P. Brackin  DEPARTMENT OF TRANSPORTATION	Storm Sewer Manhole Detail Type II Standard Drawing	
	REVISION DATE: 11/10/04	FILE NAME: SD 3-2



EPC STD. SD\_2-20  
NOT TO SCALE



NOT TO SCALE

ROAD CLASSIFICATION: URBAN  
RESIDENTIAL LOCAL LOW VOLUME  
RESIDENTIAL DESIGN SPEED=20 mph

Buffalo Bur Trail  
Pennycress Drive

# GLEN AT WIDEFIELD NO. 10

## SITE DETAILS

EL PASO, COUNTY

**Kiowa**  
Engineering Corporation

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



Project No.:	19016
Date:	September 27, 2019
Design:	MK
Drawn:	MJK
Check:	AWMc
Revisions:	

SHEET

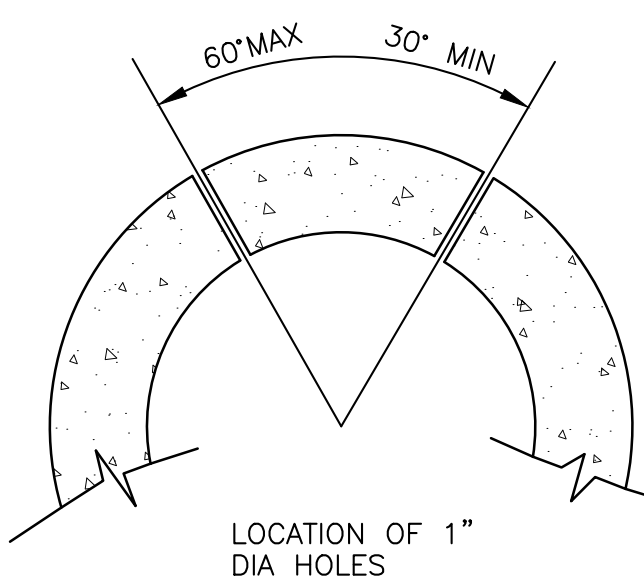
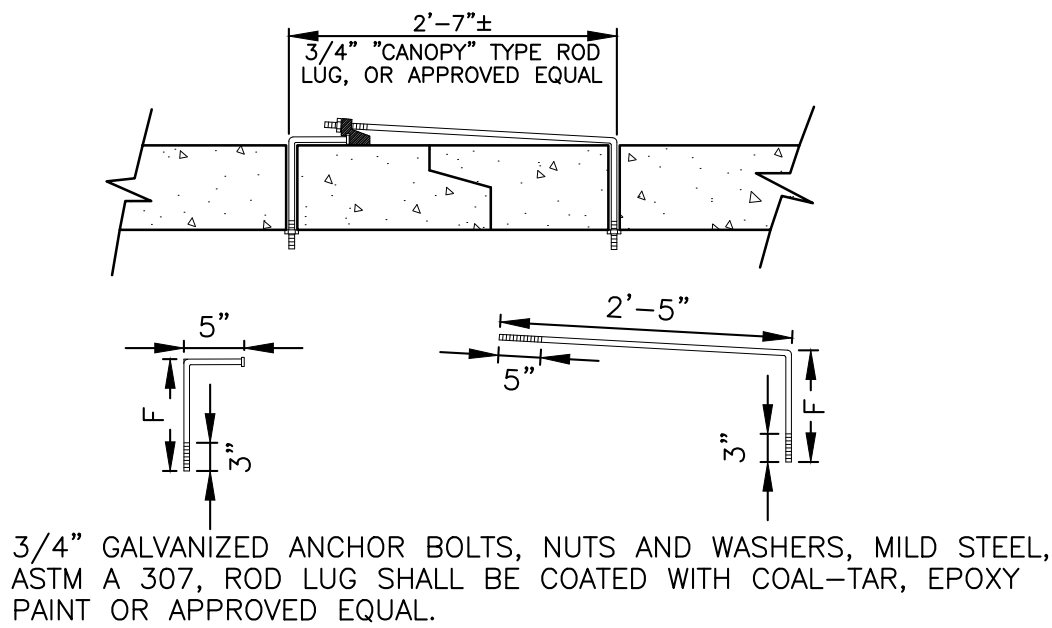
14

14 of 15 Sheets



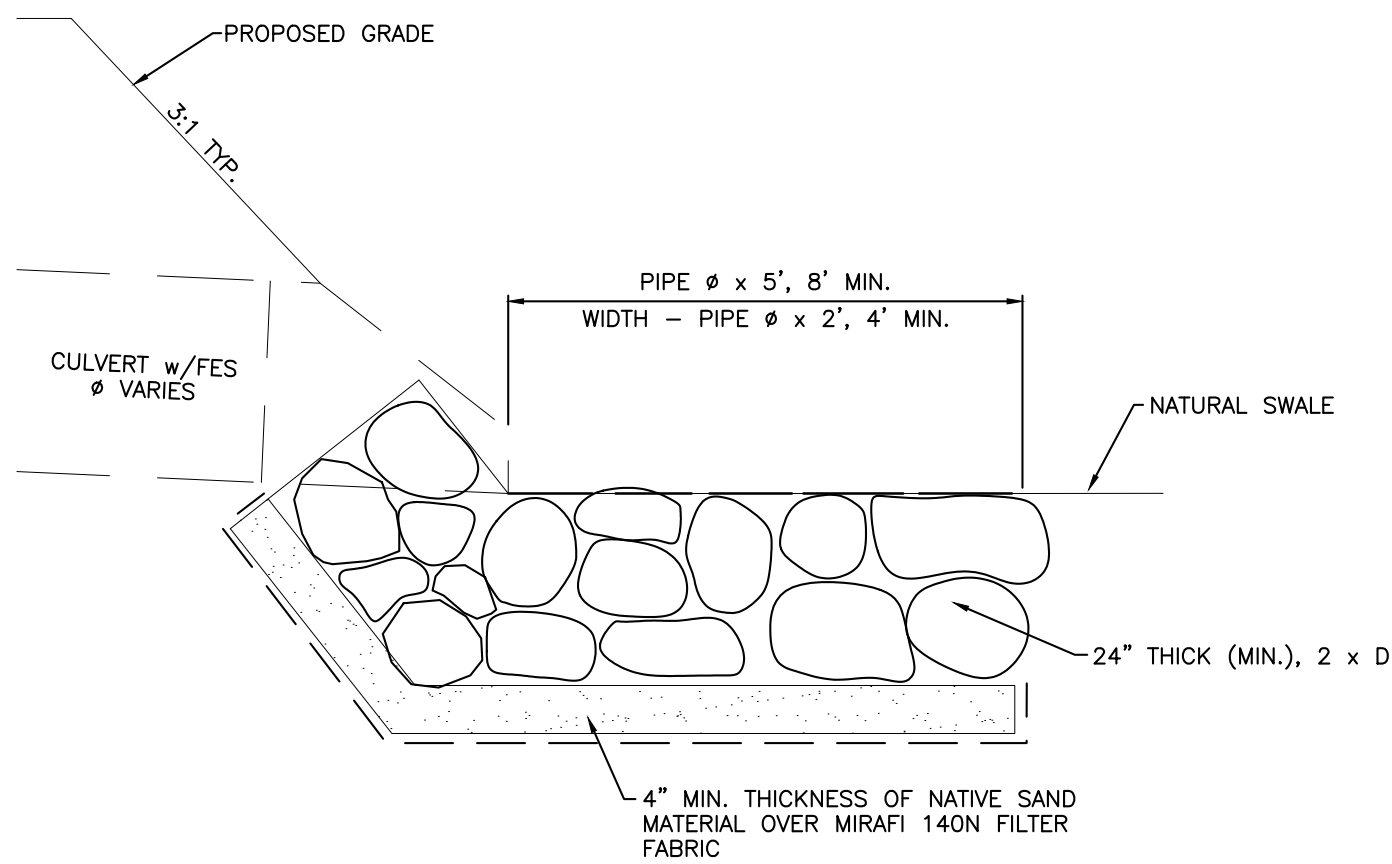
UNDERDRAIN NOTES

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.

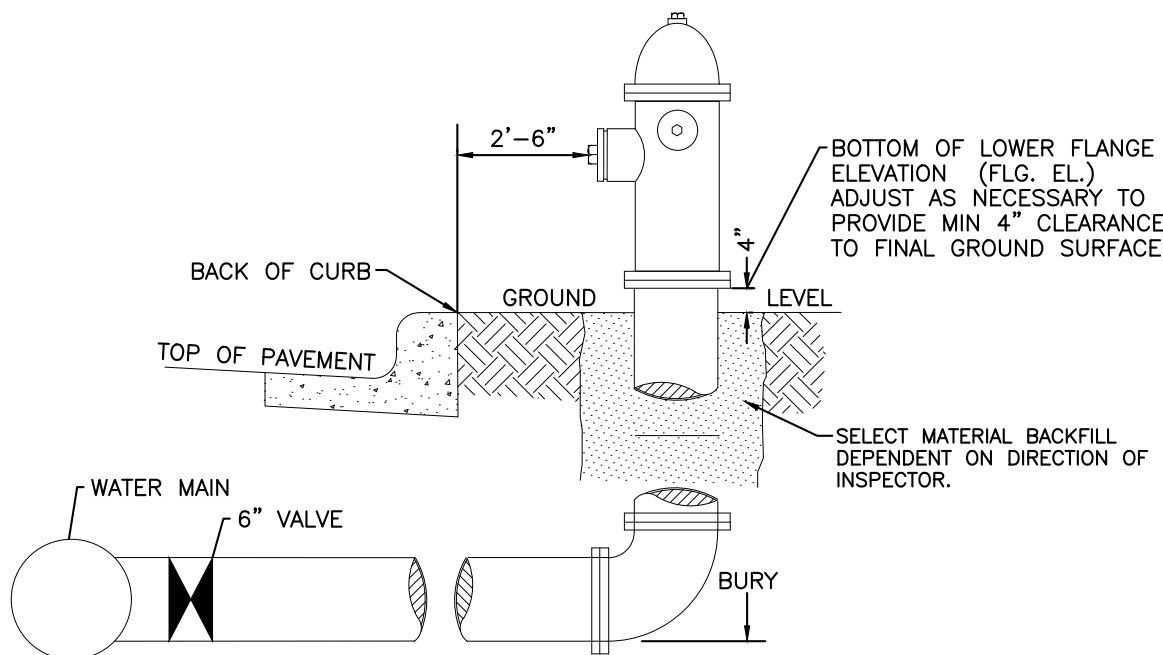


NOTE:  
CONCRETE JOINT FASTENERS REQUIRED  
ON THE FIRST TWO PIPE JOINTS FROM  
A FLARED END SECTION.

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



TYPICAL CULVERT OUTLET PROTECTION  
NOT TO SCALE



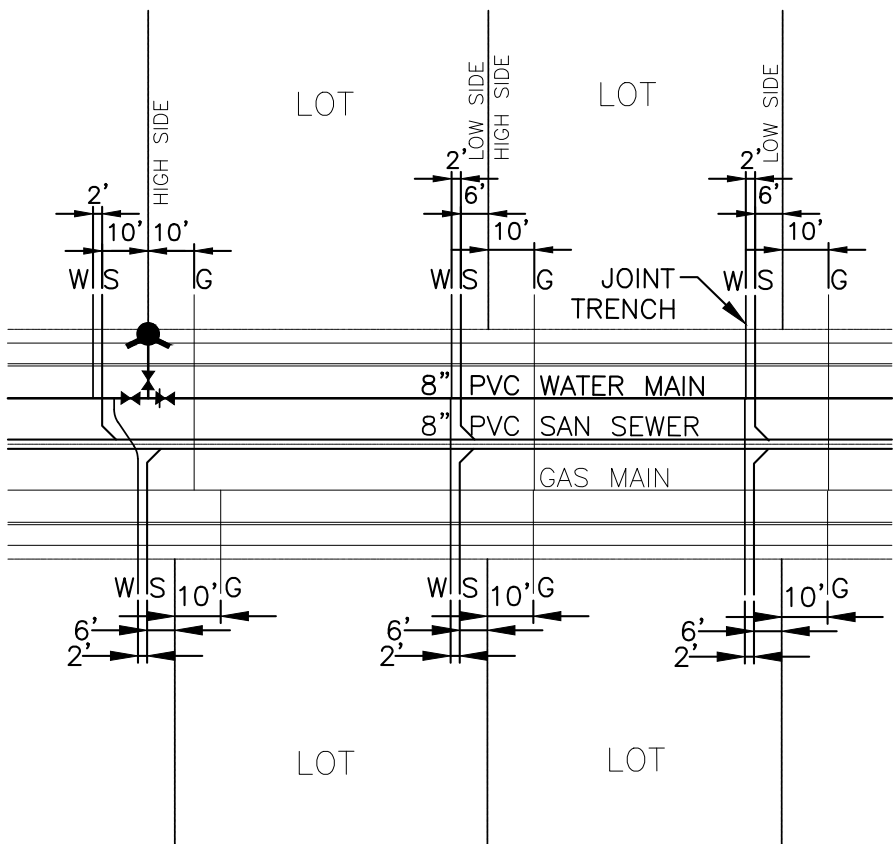
GENERAL NOTES:

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.

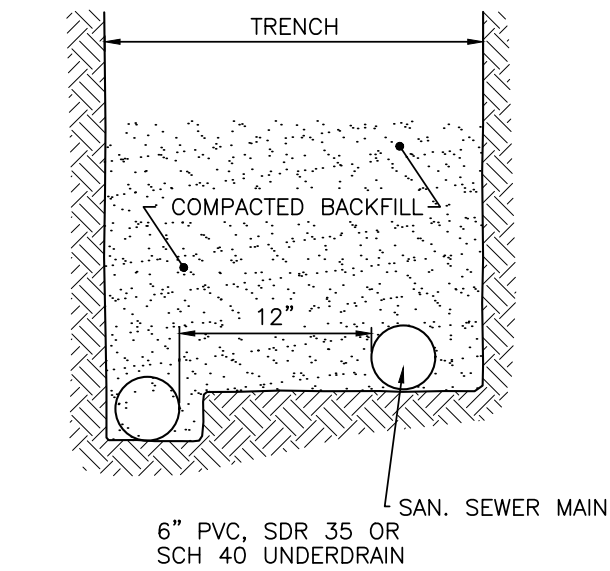
FIRE HYDRANT DETAIL  
NOT TO SCALE

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

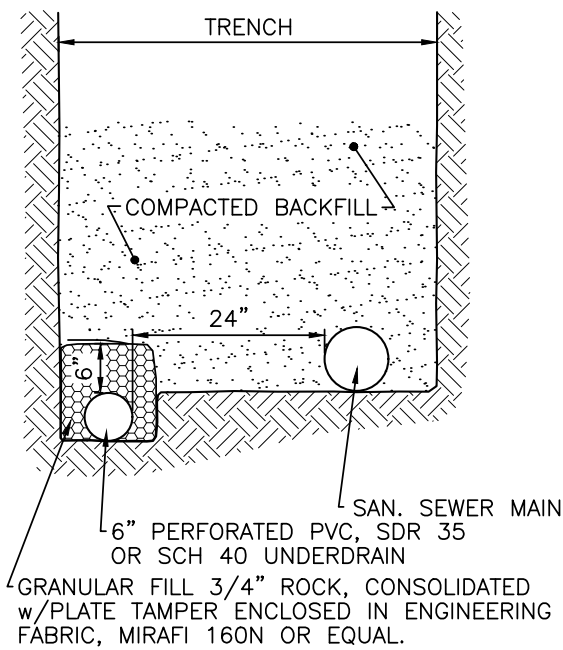
- THE REMOVAL AND REPLACEMENT OF METASTABLE SOIL.
- TESTING OF THE FILL SUBSEQUENT TO THE PENETRATION OF THE METASTABLE SOIL WILL CONTINUE UNTIL A MINIMUM OF 7 FEET OF STRUCTURAL FILL HAS BEEN PLACED ABOVE THE PROPOSED SEWER LINE ELEVATION.
- UTILITY TRENCHES SHALL BE EXCAVATED AND SANITARY SEWER LINE 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.



TYPICAL JOINT-TRENCH UTILITY SERVICE DETAIL  
NOT TO SCALE



PASSIVE UNDERDRAIN DETAIL  
NOT TO SCALE



ACTIVE UNDERDRAIN DETAIL  
NOT TO SCALE

GLEN AT WIDEFIELD NO. 10  
UTILITY DETAILS  
BASIN 'D' OUTLET STRUCTURE DETAILS  
EL PASO, COUNTY

Project No.:	19016
Date:	September 27, 2019
Design:	MK
Drawn:	MJK
Check:	AWMc
Revisions:	

SHEET

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15 of 20 Sheets

19016-GW10-15-D1.dwg/Sep. 25, 2019