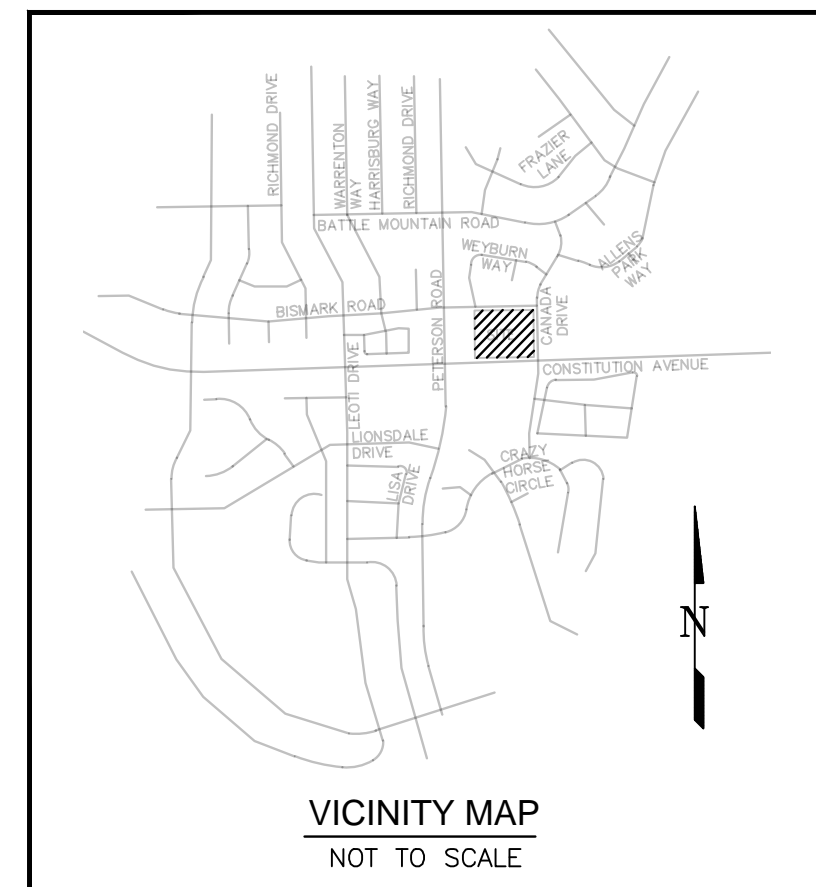


MY GARAGE @ NORTHCREST

COMMERCIAL CONSTRUCTION DRAWINGS

PREPARED FOR K&S DEVELOPMENT, LLC

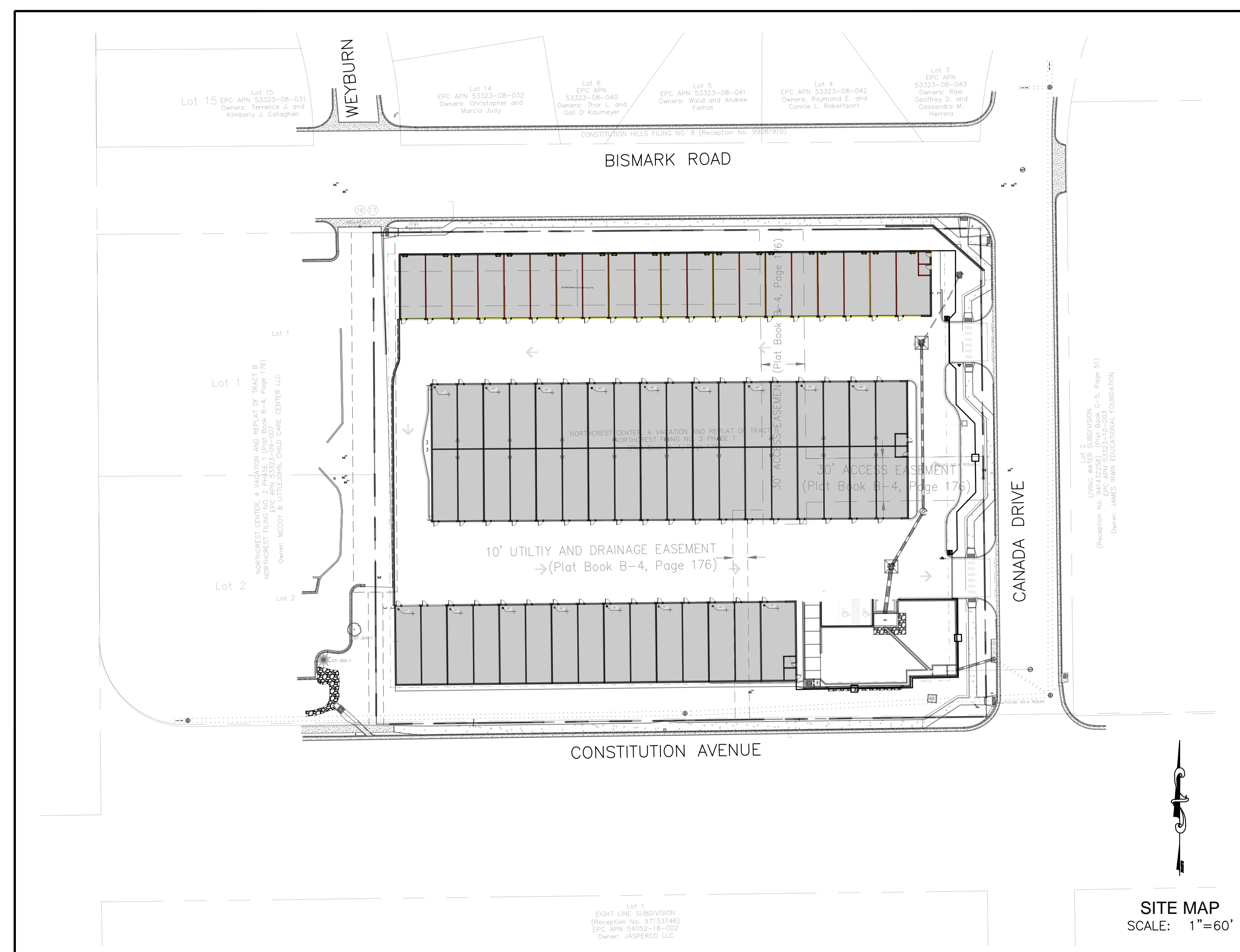
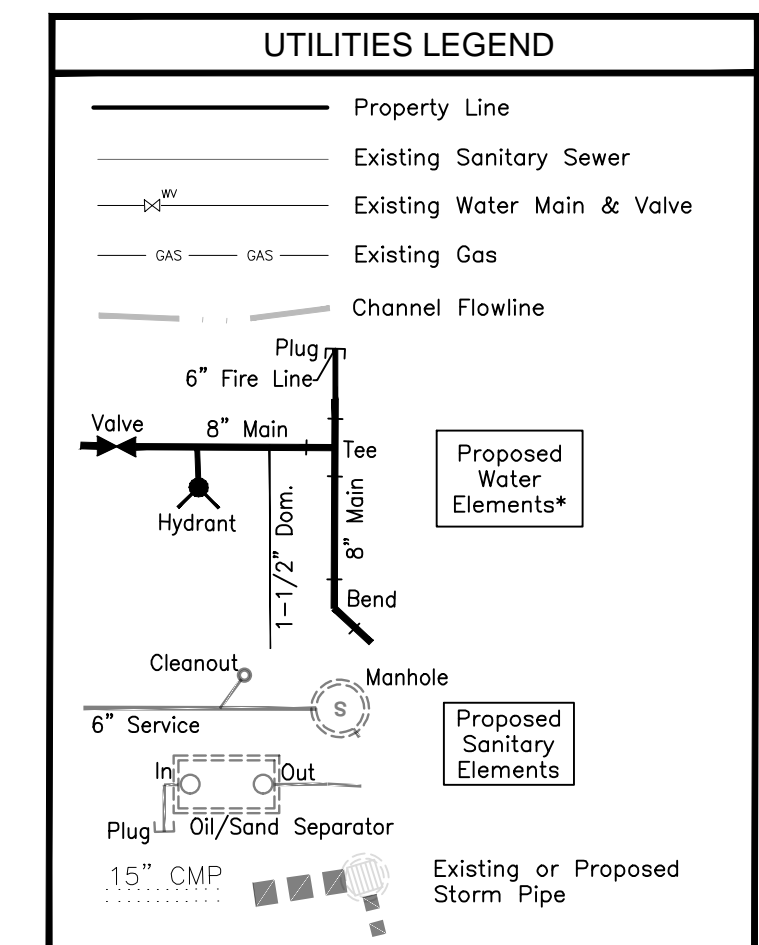
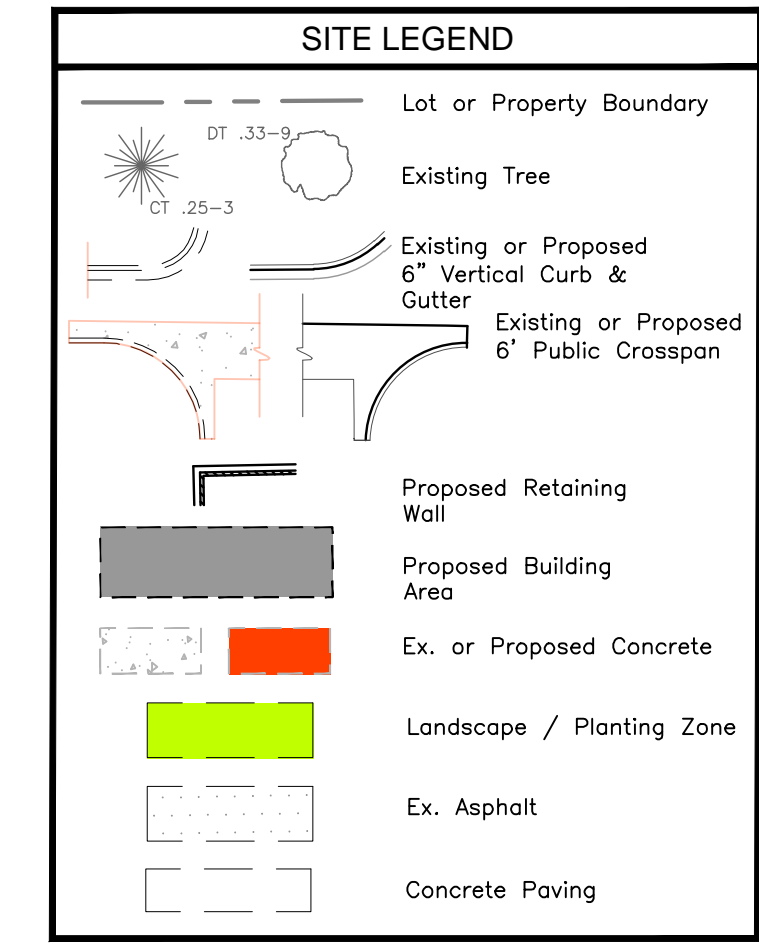
- STANDARD NOTES EL PASO COUNTY CONSTRUCTION PLANS
- All drainage and roadway construction shall meet the standards and specifications of the City of Colorado Springs/El Paso County Drainage Criteria Manual, Volumes 1 and 2, and the El Paso County Engineering Criteria Manual.
 - Contractor shall be responsible 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 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. 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 (PCD) - 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 PCD. Contractor shall notify the design engineer immediately upon discovery of any errors or inconsistencies.
 - All public storm drain pipe shall be Class III RCP unless otherwise noted and approved by PCD.
 - Contractor shall coordinate geotechnical testing per ECM standards. Pavement design shall be approved by El Paso County PCD prior to placement of curb and gutter and pavement.
 - All construction traffic must enter/exit the site at approved construction access points.
 - Signaling and striping shall comply with El Paso County DOT and MUTCD criteria. [If applicable, additional signaling 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

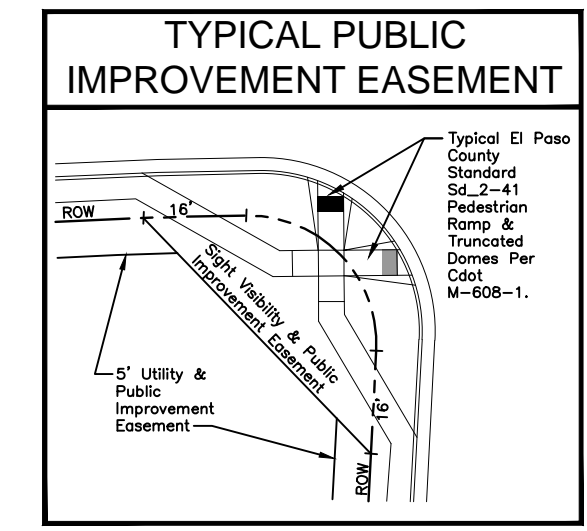
My Garage @ Northcrest

C100	Cover Sheet
C300	Grading and Erosion Control Cover Sheet
C301	Grading and Erosion Control Initial Conditions
C302	Grading and Erosion Control Interim Conditions
C303	Grading and Erosion Control Final Conditions
C304	Grading and Erosion Control Details
C305	Grading and Erosion Control Details
C306	Grading and Erosion Control Details
C307	Grading Area Plan Grading Area Detail 'A' thru 'D'
C308	Grading Area Plan Grading Area Detail 'A'
C309	Grading Area Plan Grading Area Detail 'B'
C310	Grading Area Plan Grading Area Detail 'C'
C311	Grading Area Plan Grading Area Detail 'D'
C400	Utility Plan - Cover Sheet
C401	Utility Plan - Water and Sanitary Sewer
C402	Utility Plan - Water Main 'A'
C403	Utility Plan - Sanitary Sewer 'A' thru 'C'
C601	Site Detail Plan - Site Details
C602	Site Detail Plan - Site Details
C603	Stormwater Plan - Detention Facility
C604	Stormwater Plan - Details



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 Thru 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	TGP	= Top Of Pipe
LT	= Left	TYC	= Typical
LF	= Linear Feet	VC	= Vertical Curve
LP	= Low Point	VERT	= Vertical
MAX	= Maximum		
MH	= Manhole		



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. The 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 of any part in preparation of these detailed plans and specifications.

Andrew W. McColl, P.E. #25057 Date: 8/2/24

For and on behalf of: *Signature* PROFESSIONAL ENGINEER

Owner/Developer's Statement:

I, the owner/developer have read and will comply with all of the requirements of the grading and erosion control plan and all the requirements specified in these detailed plans and specifications.

Signature Sean Edwards, President Date: 8/2/24

Sean Edwards, President
Leisure Construction, LLC
3442 Tampa Road, Suite B
Palm Harbor, FL 34684

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.

Josh Palmer, 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: _____
Cimarron Hills Fire Department

Print Name: _____
Fire Department

DBA: LEISURE CONSTRUCTION

Address: LEISURE CONSTRUCTION, LLC
3442 Tampa Road, Suite B
Palm Harbor, FL 34684
Ph: (727) 242-5121

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.

Cimarron Hills Fire Department

Signed: _____ Date: _____

DISTRICT APPROVALS

The Cheyenne Metro District recognizes the design engineer as having responsibility for the design. The Cheyenne Metro District has limited its scope of review accordingly.

CHEROKEE WATER AND SANITATION METRO 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.

CHEROKEE WATER AND SANITATION METRO 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	Black Hills Energy 18965 Bas Camp Road Unit A7 Monument, Colorado (719) 359-0586
Cherokee Metro District 6250 Palmer Park Blvd. Colorado Springs, Colorado (719) 597-5080	Mountain View Electric Association 11140 East Woodmen Road Falcon, Colorado (719) 495-2283

PREPARED BY:

1604 South 21st Street
Colorado Springs, Colorado 80904
(719) 630-7342
PCD File No. SF-22-024

DEVELOPER:
LEISURE CONSTRUCTION, LLC
3442 Tampa Road, Suite B
Palm Harbor, FL 34684
(727) 242-5121

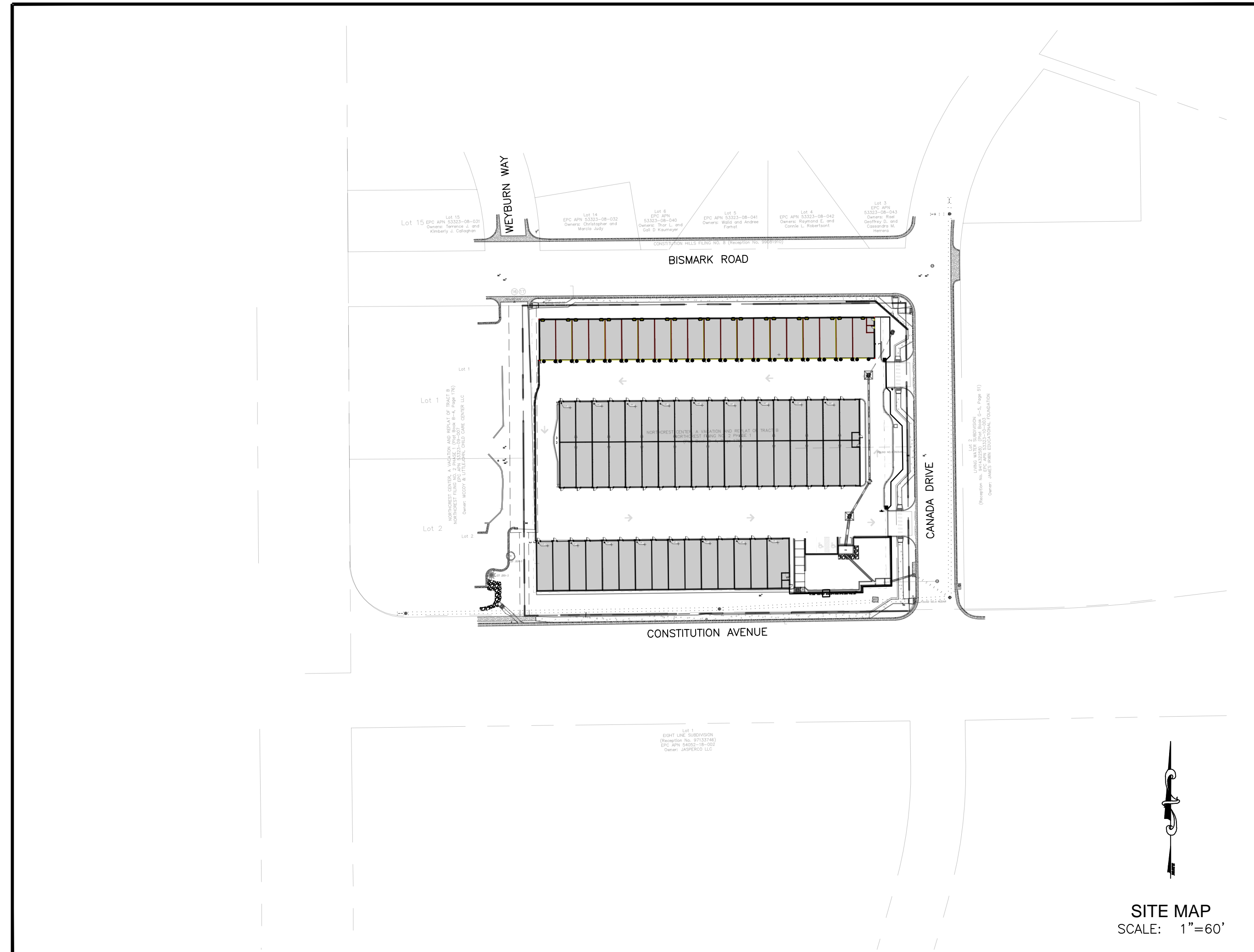
Know what's below.
Call before you dig.

Kiowa Project No. 23049
August 2nd, 2024

MY GARAGE @ NORTHCREST GRADING AND EROSION CONTROL PLANS PREPARED FOR K&S DEVELOPMENT, LLC

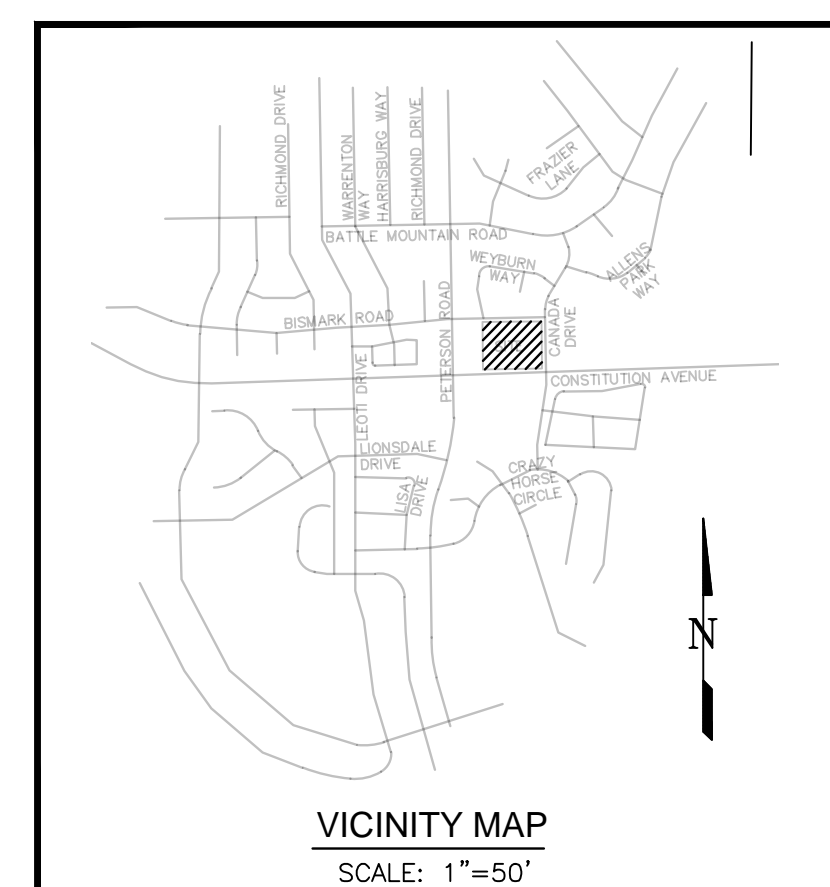
PROJECT SPECIFIC GRADING AND EROSION CONTROL NOTES

- 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 before 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 infiltration and vegetation 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 RMG Engineers/Architects, Inc (Dated: March 11, 2024) 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
4300 Cherry Creek Drive South
Denver, CO 80246-1530
Attn: Permits Unit
- Base mapping was provided by Land Development Consultants. The date of the last survey update was July 27, 2021.
- Proposed Construction Schedule:
Begin Construction: Summer 2024
End Construction: Winter 2024
Total Site Area = 3.25 Acres
Area to be disturbed = 3.26 Acres.
Existing 100-year runoff coefficient = 0.37
Proposed 100-year runoff coefficient = 0.70
Existing Hydrologic Soil Groups: A
(A-1-Truck sandy loam)
- Site is currently undeveloped and covered with native grasses on moderate to steep slopes (2%-25%).
- Site is located in the Sand Creek Drainage Basin.
- No Asphalt Batch Plants will be utilized at the site.



STANDARD NOTES FOR EL PASO COUNTY CONSTRUCTION PLANS

- 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:
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
- 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. 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 (PCD) - 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 PCD. Contractor shall notify the design engineer immediately upon discovery of any errors or inconsistencies.
- All public storm drain pipe shall be Class III RCP unless otherwise noted and approved by PCD.
- Contractor shall coordinate geotechnical testing per ECM standards. Pavement design shall be approved by El Paso County PCD prior to placement of curb and gutter and pavement.
- All construction traffic must enter/exit the site at approved construction access points.
- 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.



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 Silt Fences have silted up to half their height, the silt shall be removed, final grade re-established and slopes re-seeded, if necessary. Any silt fence that has 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.

INDEX OF SHEETS

C300	COVER SHEET
C301	INITIAL CONDITIONS
C302	INTERIM CONDITIONS
C303	FINAL CONDITIONS
C304	GEC DETAILS
C305	GEC DETAILS
C306	GEC DETAILS
C601	POND CONSTRUCTION
C602	POND DETAILS
C603	POND DETAILS
C604	POND DETAILS

SEED MIX

SPECIES	VARIETY	lbs/acre
AREAS DISTURBED BY THE EARTHWORK ACTIVITIES AND NOT RECEIVING OTHER TREATMENT SHALL BE PERMANENTLY REVEGETATED WITH THE FOLLOWING SEED MIX.		
SUDGRASS GRAMA	El Reno	3.0
WESTERN WHEAT GRASS	Barton	2.5
SLENDER WHEAT GRASS	Native	2.0
LITTLE BLUESTEM	Pastura	2.0
SAND DROPSPEED	Native	0.5
SWITCH GRASS	Nebraska 28	3.0
WEEPING LOVE GRASS	Morpha	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.

OPINION OF COST FOR EROSION CONTROL REQUIREMENTS

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
VEHICLE TRACKING CONTROL	2	EA	\$3,085.00	\$6,170.00
SILT FENCE	6,320	LF	\$3.00	\$18,960.00
STRAW BALES	18	EA	\$33.00	\$594.00
INLET PROTECTION	6	EA	\$217.00	\$1,302.00
CONCRETE WASH OUT	2	EA	\$1,172.00	\$2,344.00
ROCK SOCKS	100	EA	\$24.00	\$2,400.00
SURFACE ROUGHENING	1.0	AC	\$269.00	\$269.00
TEMPORARY SEEDING AND MULCH	0.5	AC	\$1,753.00	\$876.50
MAINTENANCE (25% OF EROSION CONTROL)	1	LS	\$8,323.50	\$8,175.00
TOTAL				\$41,023.50

El Paso County (standalone GEC Plan):
 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 Manuals Volumes 1 and 2, 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 Director's discretion.

County Engineer/ECM Administrator _____ Date _____
 Joshua Palmer, P.E.

Engineer of Record:
 The Grading and Erosion Control Plan was prepared under my direction and supervision and is complete and correct to the best of my knowledge and belief. Said Plan has been prepared according to the criteria established by the County for Grading and Erosion Control Plans.

Sean Edwards
 Engineer of Record Signature _____ 25057 _____ Date 8/2/24
 ANDREW W. McCORD P.E., 25057

Owner's Statement:
 I, the owner/developer have read and will comply with the requirements of the Grading and Erosion Control Plan.

Sean Edwards, Pres. _____ Date 8/2/24
 Sean Edwards, President
 ADDRESS: LEISURE CONSTRUCTION
 3442 Tampa Road, Suite B
 Palm Harbor, FL 34684

Review Engineer:
 The Grading and Erosion Control Plan was reviewed and found to meet the checklist requirements except where otherwise noted or allowed by an approved deviation request.

 Review Engineer _____ Date _____

DEVELOPER:
 Leisure Construction, LLC
 3442 Tampa Road, Suite B
 Palm Harbor, FL 34684
 (727) 242-5121

PREPARED BY:
Kiowa
 Engineering Corporation

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

"A.G.A./A.P.W.A. STANDARD UTILITY MARKING COLOR CODE

NATURAL GAS	YELLOW
ELECTRIC	RED
WATER	BLUE
WASTEWATER	GREEN

CALL BEFORE YOU DIG...
 48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS FOR LOCATING AND MARKING GAS, ELECTRIC, WATER AND WASTEWATER

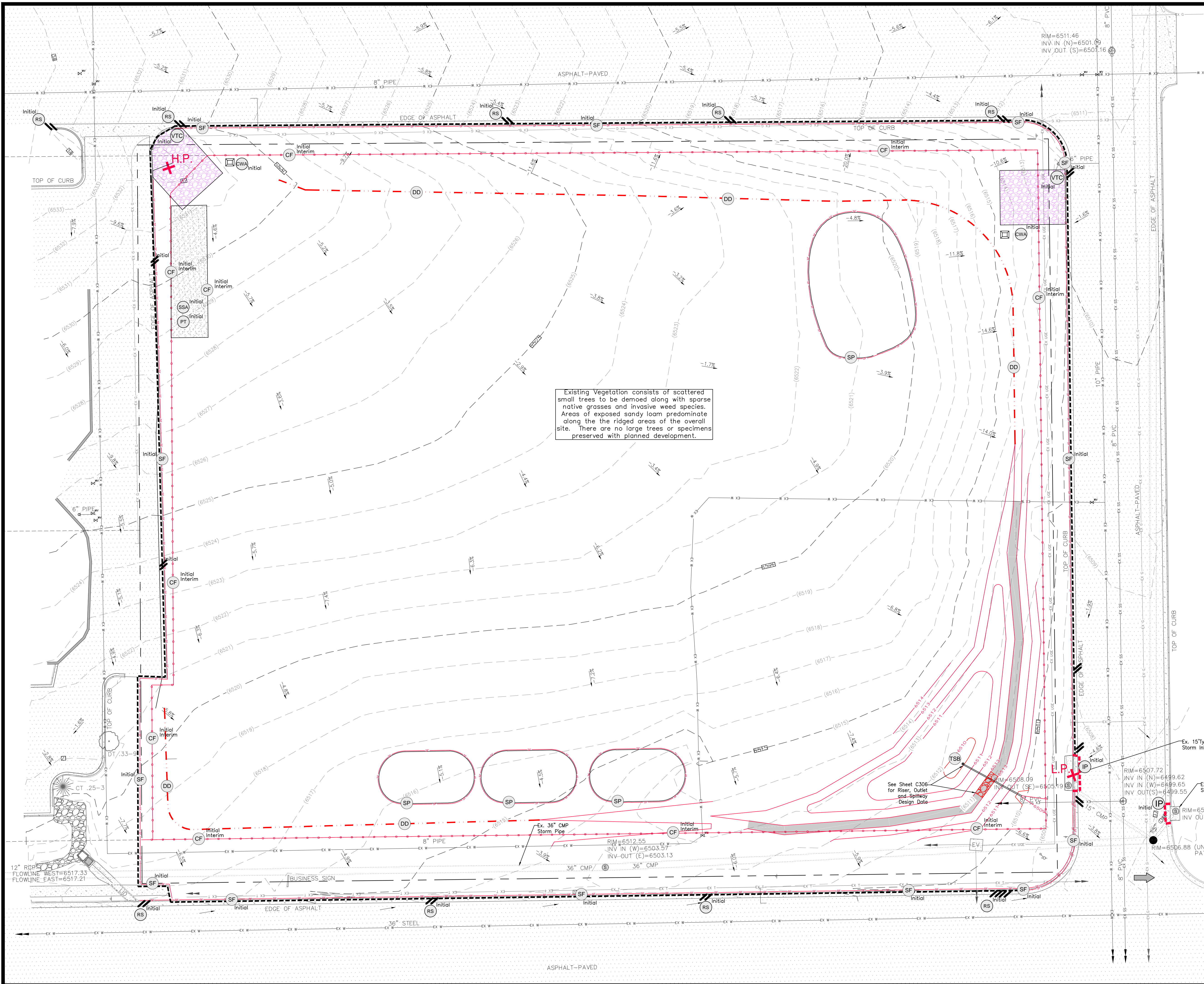
1-800-922-1987

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

My Garage @ Northcrest
 Grading Erosion Control Plan
 COVER SHEET
 El Paso County, Colorado

Project No.: 23049
 Date: 08/02/2024
 Design: MK
 Drawn: MK
 Check: AMcC
 Revisions:

Sheet PCD File No. PPR2412
C300
 2 of 21 Sheets



Existing Vegetation consists of scattered small trees to be demoed along with sparse native grasses and invasive weed species. Areas of exposed sandy loam predominate along the ridged areas of the overall site. There are no large trees or specimens preserved with planned development.

INITIAL GRADING LEGEND

- Ex. Flow Direction Arrow And Slope
- SP Stockpile With Double Silt Fence Perimeter
- CF Initial Interim Const. Fence
- SF Initial Interim Silt Fence Or Wattles
- VTC Initial Interim Vehicle Tracking Control
- IP Initial Inlet Protection
- RCS Initial Rough-cut Street Control Initial Condition Only
- CWA Initial Concrete Washout Area
- RS Initial Rock Sock(s) (count)
- SSA Initial Stabilized Staging Area
- PT Initial Portable Toilet
- SP Initial Stock Pile Management
- Riprap Stabilization
- IP-2 Initial Inlet Protection 2 (Vinyl)
- Limits Of Soil Disturbance/ Limits Of Construction
- Property Line
- 5925 Existing Contour
- Initial Emergency Overflow Path
- Existing Storm
- Existing Sanitary Sewer
- Existing Water
- Existing Gas
- TSB Temporary Sediment Basin
- DD Temporary Diversion Ditch

EROSION CONTROL INSPECTION AND MAINTENANCE

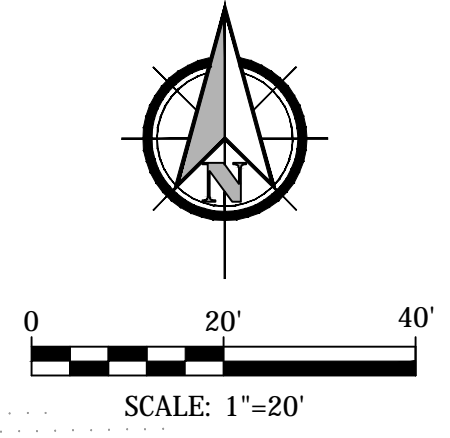
A Thorough inspection of the Erosion Control Plan/Stormwater Management System shall be performed every 14 days as well as after any rain or snowmelt event that causes Surface Erosion:

- When Silt Fences have silted up to half their height, the silt shall be removed, final grade re-established and slopes re-seeded, if necessary. Any silt fence that has 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.

TEMPORARY SEDIMENT BASIN "A"

- 0.029 ac-ft Required to Spillway Crest
- Use 8" PVC Perforated Riser Pipe: Perforations Vertically Spaced 3" Apart, 1 Column of 3/8" Holes.
- 12' Long Spillway: 1' Depth, Lined With 12" Thick Type 'L' Riprap to toe of slope.
- Basin Bottom Width = 28'
- Depth = 2.0'



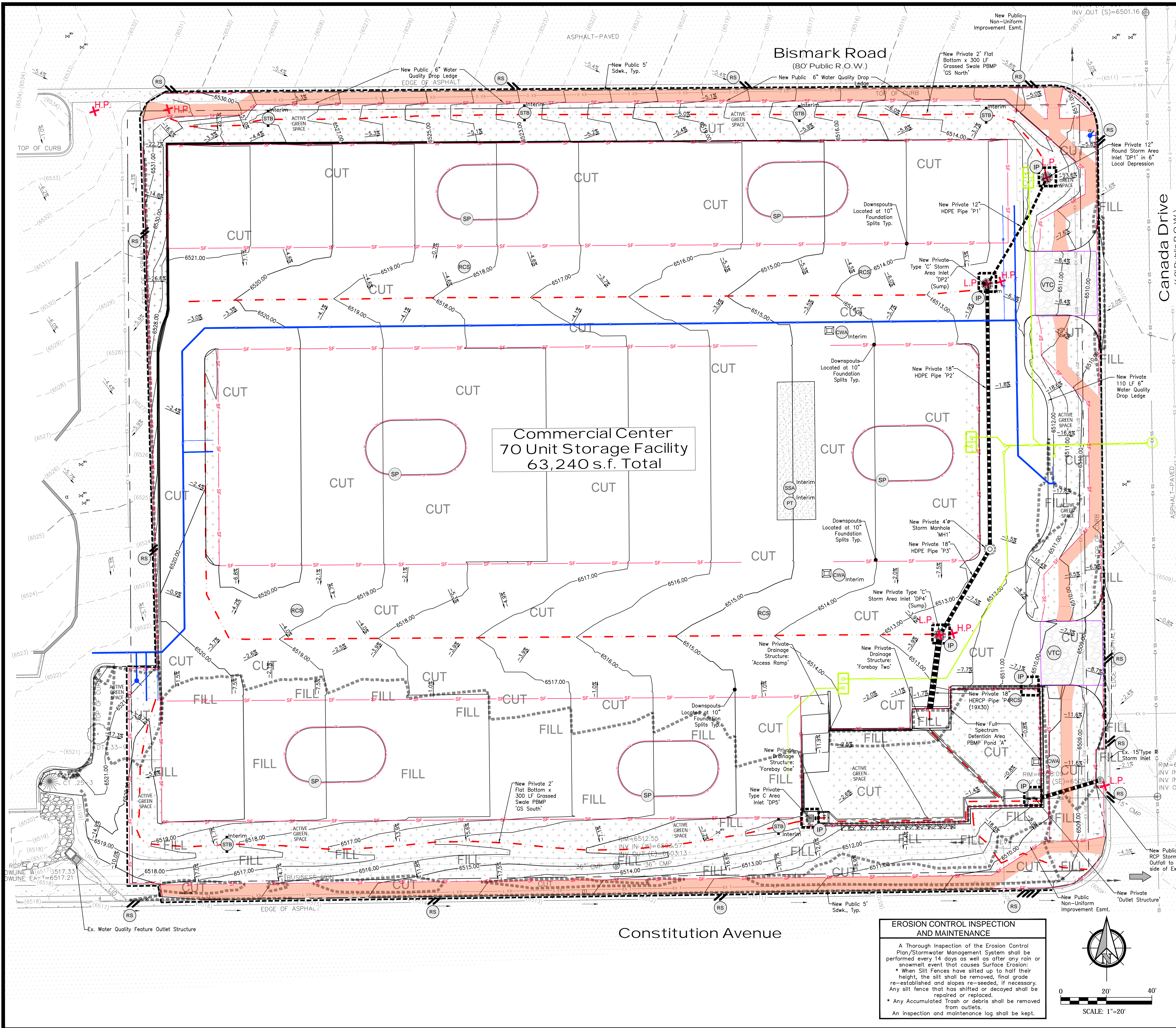
My Garage @ Northcrest

Grading Erosion Control Plan

Initial Conditions Plan

El Paso County, Colorado

Project No.:	23049
Date:	08/02/2024
Design:	MJK
Drawn:	MJK
Check:	AMC
Revisions:	



**Commercial Center
70 Unit Storage Facility
63,240 s.f. Total**

INTERIM GRADING LEGEND

CUT --- Cut/fill Delineation
FILL --- Cut/fill Delineation

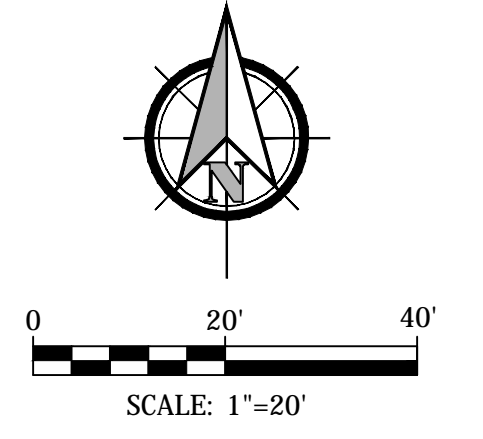
- CF Initial Interim Const. Fence
- SP Stockpile With Double Silt Fence Perimeter
- SF Initial Interim Silt Fence Or Approved Alt.
- VTC Initial Interim Vehicle Tracking Control
- IP Initial Interim Inlet Protection
- STB Initial Interim Straw Bale Barrier / Dyke
- CWA Initial Interim Concrete Washout Area
- RS Initial Interim Rock Sock(s) (count)
- SSA Initial Interim Stabilized Staging Area
- PT Initial Interim Portable Toilet
- SP Initial Interim Stock Pile Management
- RCS Initial Interim Rough-cut Street Control Interim Condition Only
- Final Permanent Seeding And Landscaping
- Limits Of Soil Disturbance/ Limits Of Construction
- Property Line
- 5925 Existing Contour
- 5925 Proposed Contour
- Emergency Overflow Path
- Existing Sanitary Sewer
- Existing Water
- Existing Gas
- Channel Flowline
- Proposed Water Elements
- Proposed Sanitary Elements
- 15" CMP Existing or Proposed Storm Pipe
- Spot Elev. High Point
- Spot Elev. Low Point
- Ex. or Proposed Flow Direction
- Lot or Property Boundary
- Existing Intermediate Contour
- Existing Index Contour
- Existing Intermediate Contour
- Existing Index Contour
- Existing Tree
- Existing 6" Vertical Curb
- Proposed Building Area
- Ex. or Proposed Concrete
- Ex. Asphalt
- Concrete Paving

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:

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- Any Accumulated Trash or debris shall be removed from outlets.

An inspection and maintenance log shall be kept.



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
SIDEOTS GRAMA	El Reno	3.0
WESTERN WHEAT GRASS	Barton	2.5
SLENDER WHEAT GRASS	Native	2.0
LITTLE BLUESTEM	Pasture	2.0
SAND DROPSEED	Native	0.5
SWITCH GRASS	Nebraska 28	3.0
WEeping LOVE GRASS	Morpria	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.

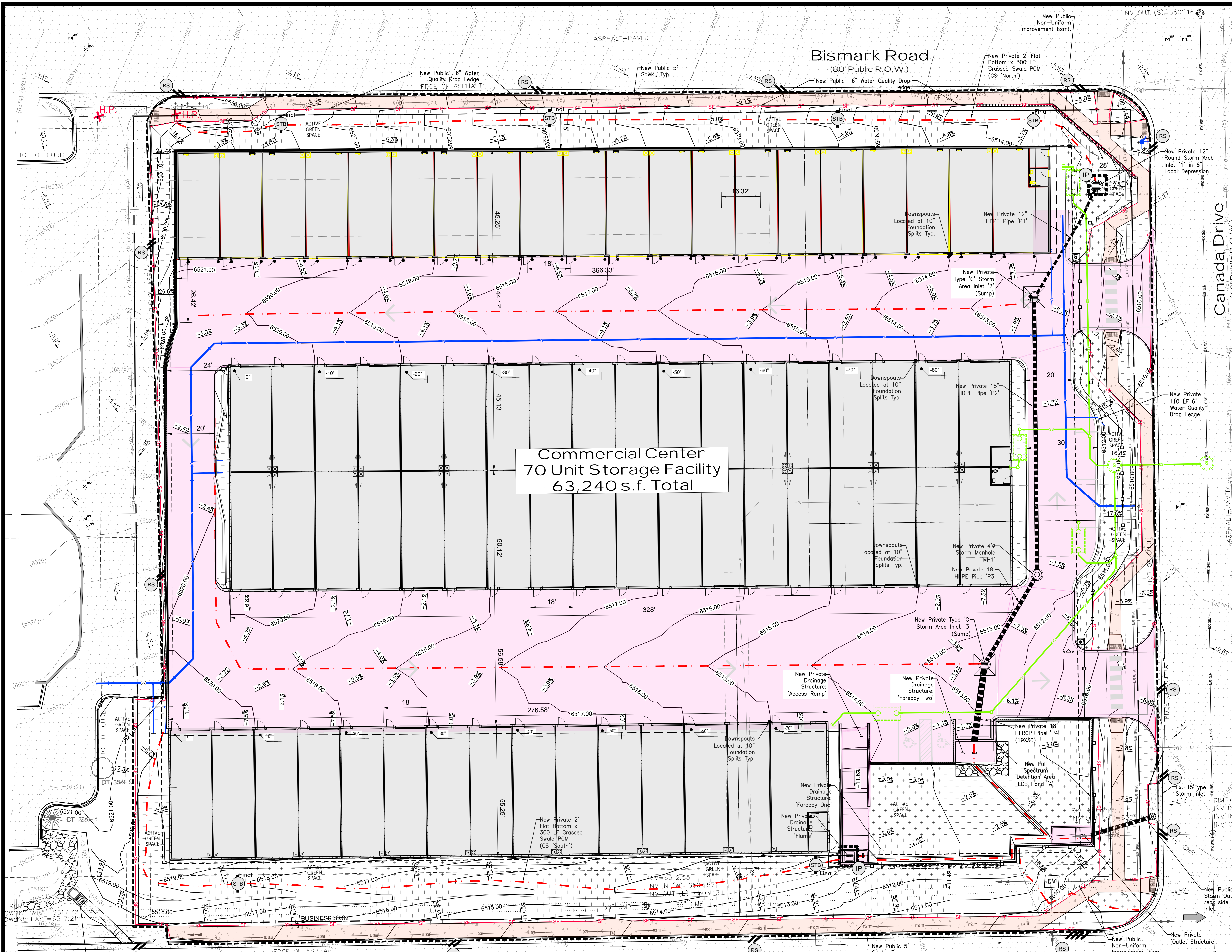


Kiowa
Engineering Corporation
1604 South 21st Street
Colorado Springs, Colorado 80904
(719) 630-7342

My Garage @ Northcrest
Grading Erosion Control Plan
Interim Conditions Plan
El Paso County, Colorado

Project No.: 23049
 Date: 06/14/2024
 Design: MKJ
 Drawn: MKJ
 Check: AMcC
 Revisions:

Sheet
C302
4 of 21 Sheets



**Commercial Center
70 Unit Storage Facility
63,240 s.f. Total**

FINAL GRADING LEGEND

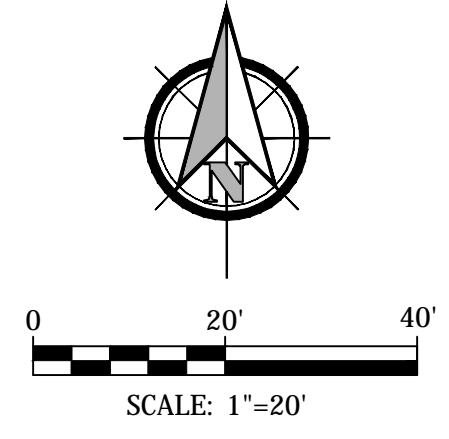
- IP Interim/Final Inlet Protection
- RS Interim/Final Rock Sock(s) (count)
- STB Interim/Final Straw Bale Barrier / Dyke
- Final Permanent Seeding And Landscaping
- Limits Of Soil Disturbance/ Limits Of Construction
- - - Property Line
- 5925 Existing Contour
- 5925 Proposed Contour
- Emergency Overflow Path
- Existing Sanitary Sewer
- Existing Water
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- Channel Flowline
- Proposed Water Elements
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- 15" CMP Existing or Proposed Storm Pipe
- Spot Elev. High Point
- Spot Elev. Low Point
- Ex. or Proposed Flow Direction
- - - Lot or Property Boundary
- - - Existing Intermediate Contour
- (6220) Existing Index Contour
- 6219 Existing Intermediate Contour
- 6220 Existing Index Contour
- Existing Tree
- CT .25-3 DT .33-9
- Existing 6" Vertical Curb & Gutter
- Proposed Building Area
- Ex. or Proposed Conc Sdkw
- Concrete Paving
- Seeding & Mulching

EROSION CONTROL INSPECTION AND MAINTENANCE

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SWITCH GRASS	Nebraska 28	3.0
WEeping LOVE GRASS	Morpria	1.0
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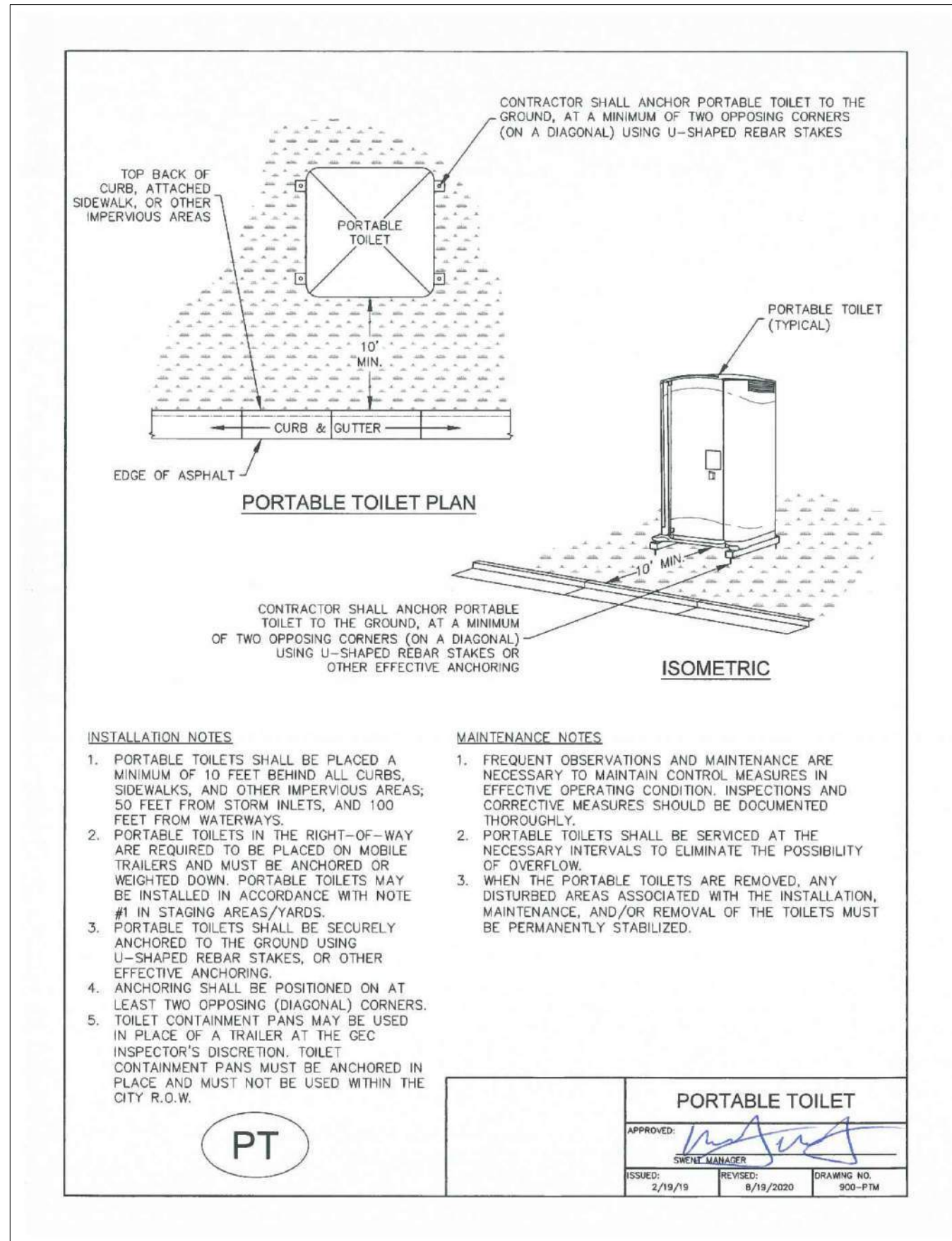
My Garage @ Northcrest
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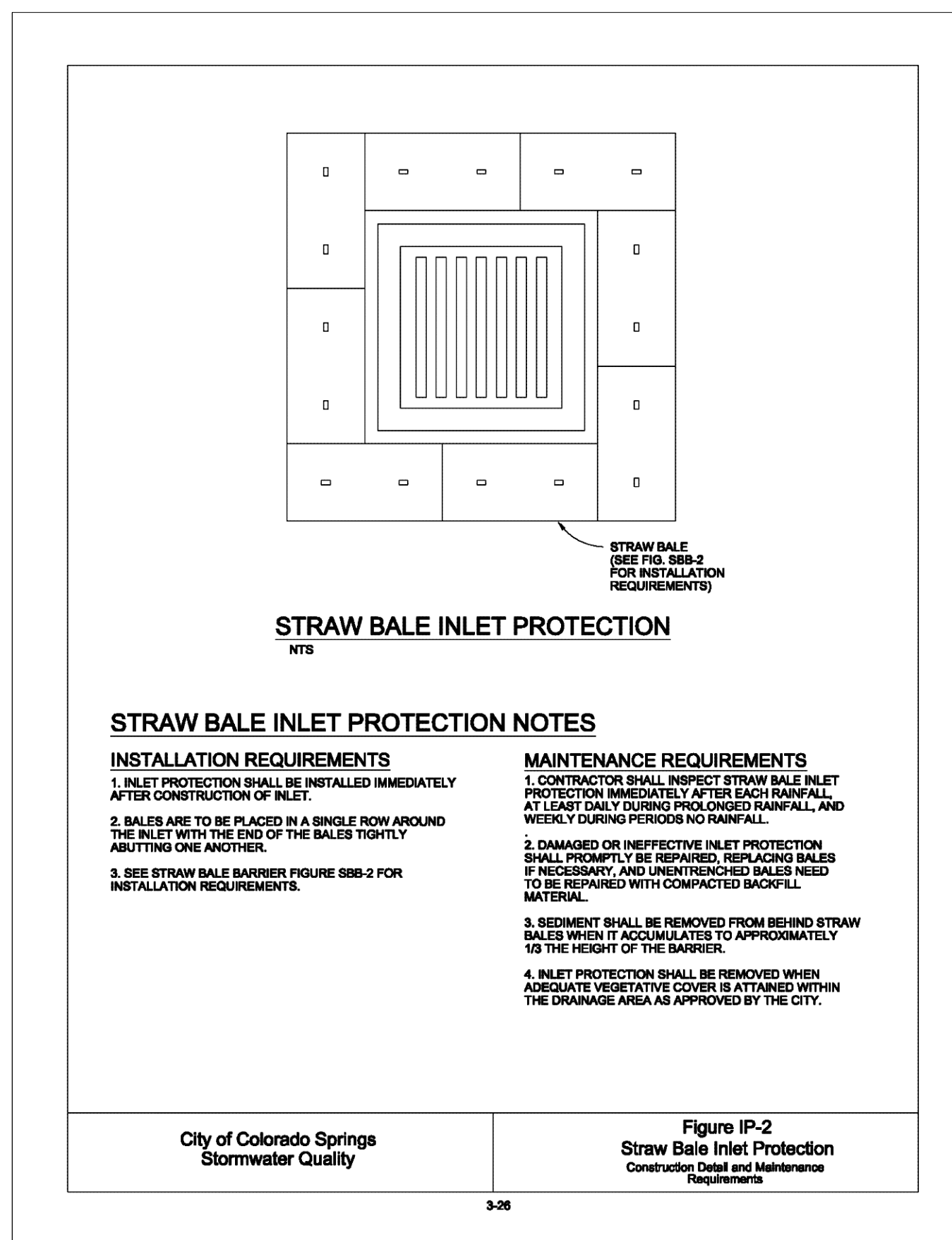
Sheet
C303
4 of 6 Sheets

23049-ERC_Final_C303.dwg/Aug 01, 2024

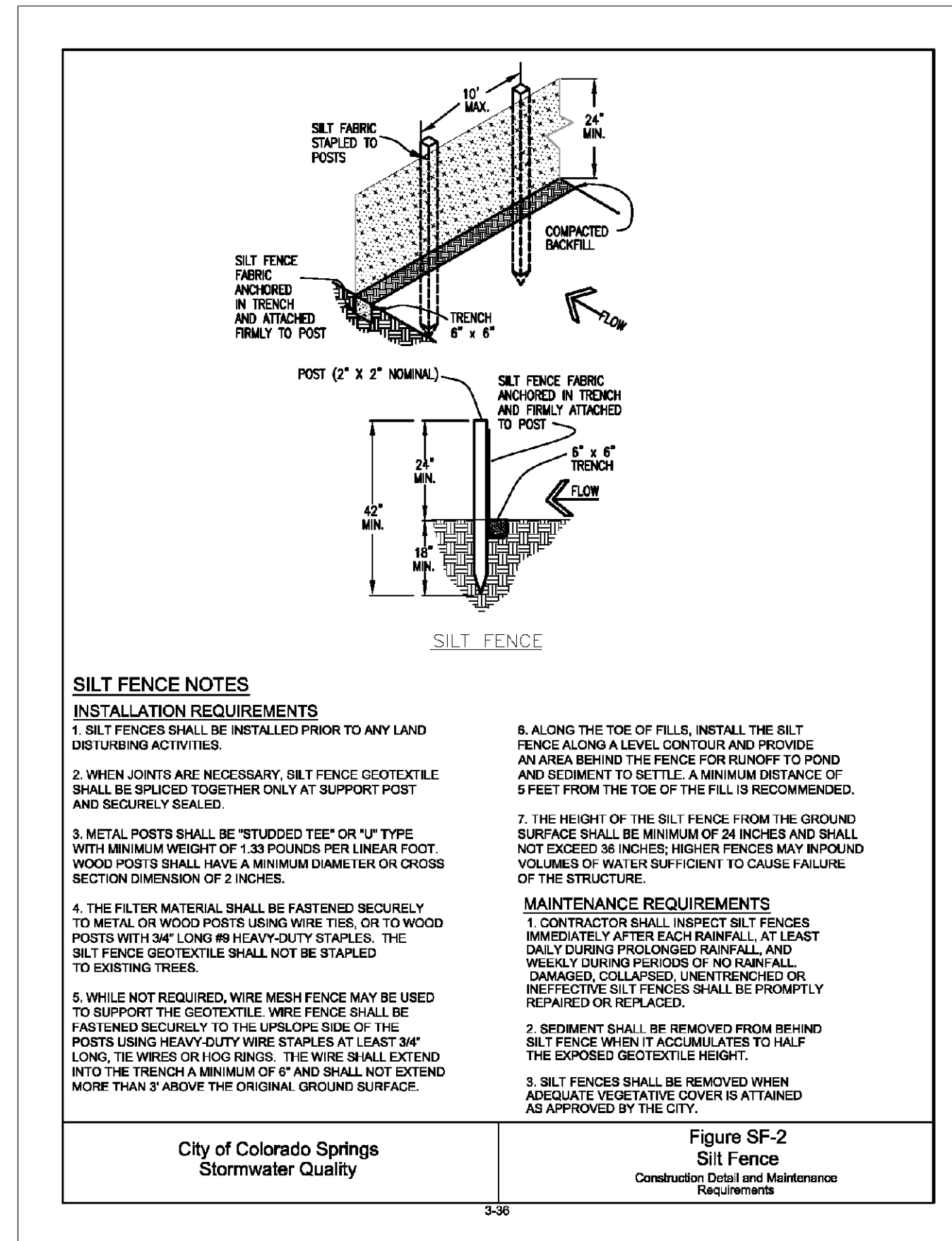
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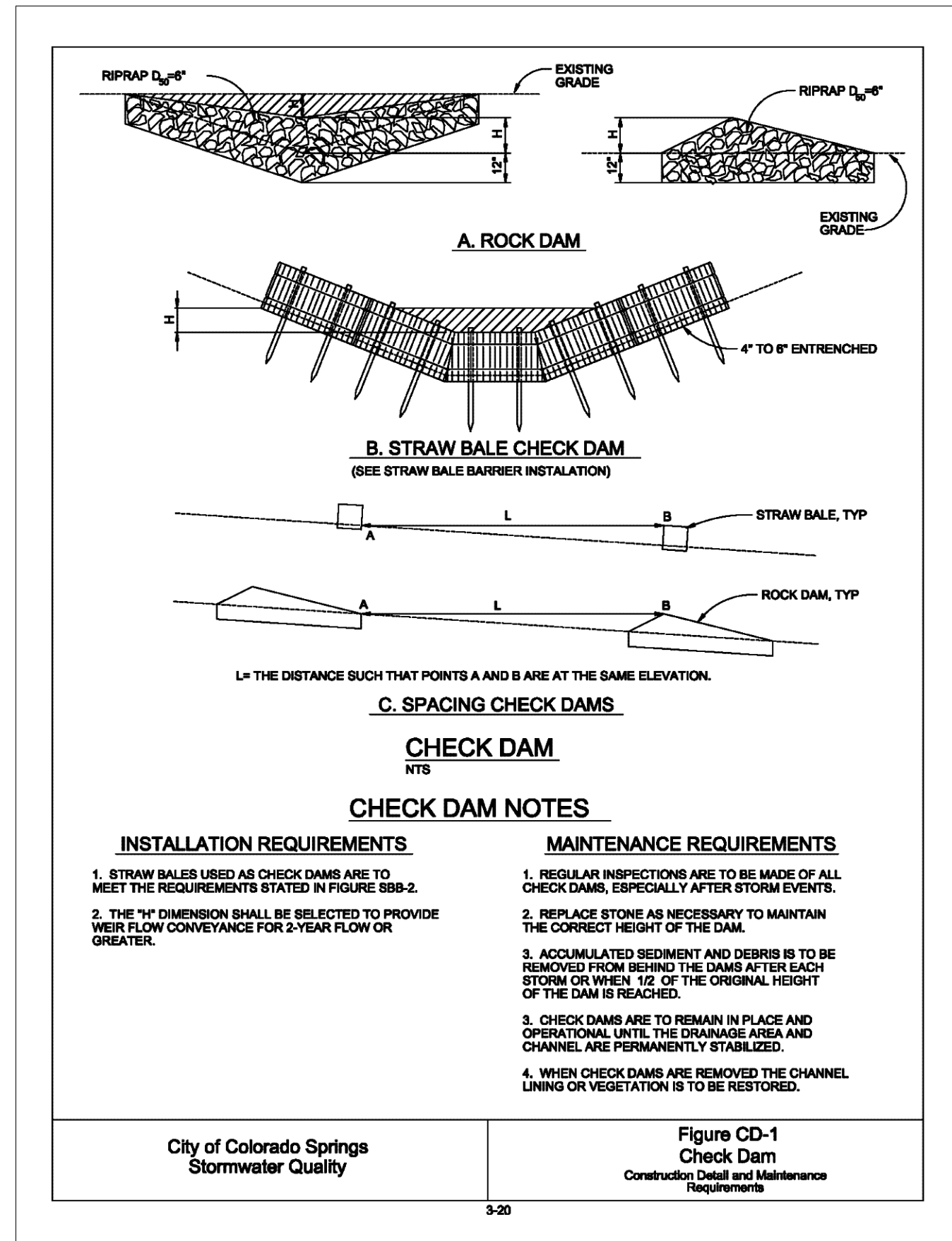
PORTABLE TOILET (PT)
NOT TO SCALE



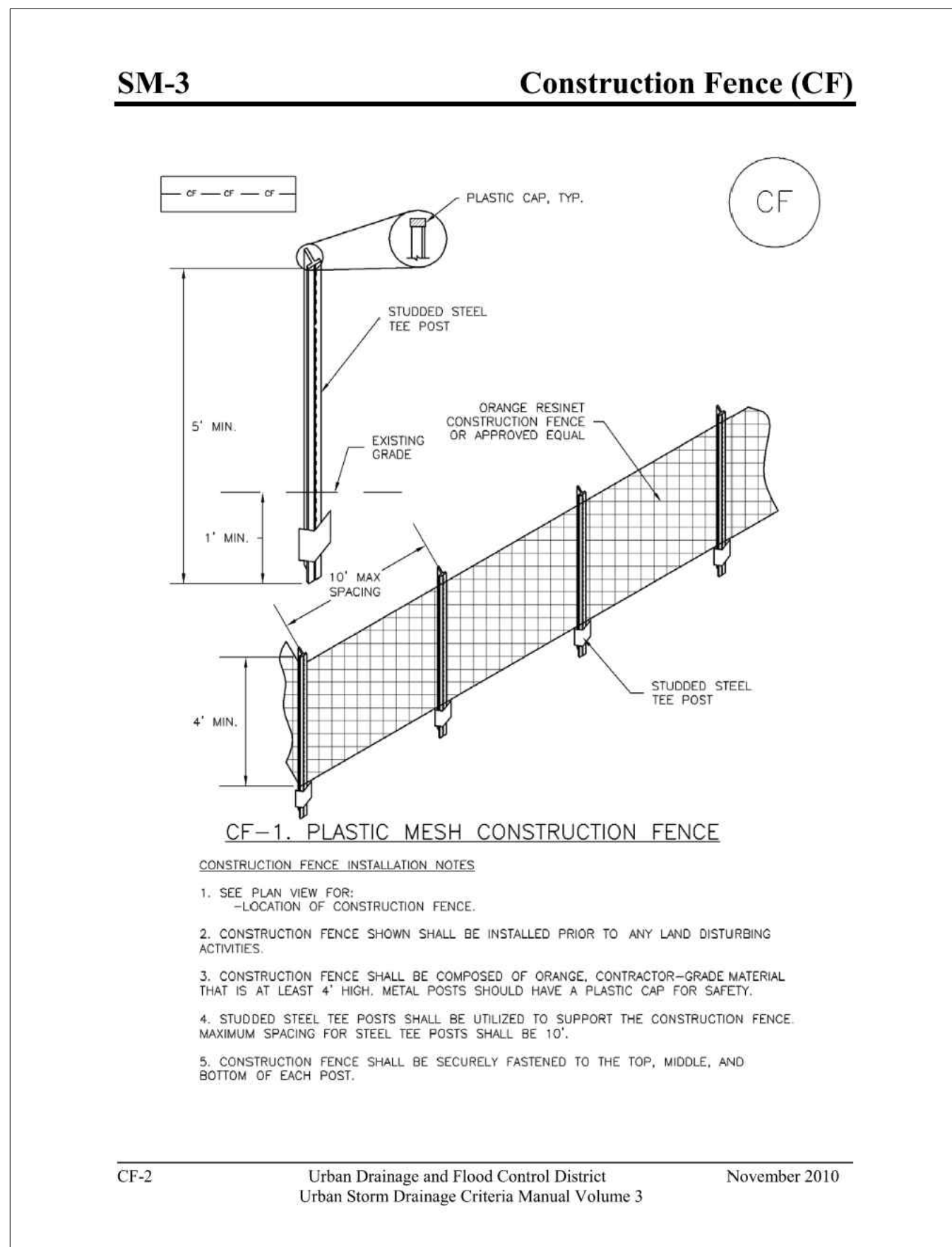
INLET PROTECTION - 2 (IP-2)
NOT TO SCALE



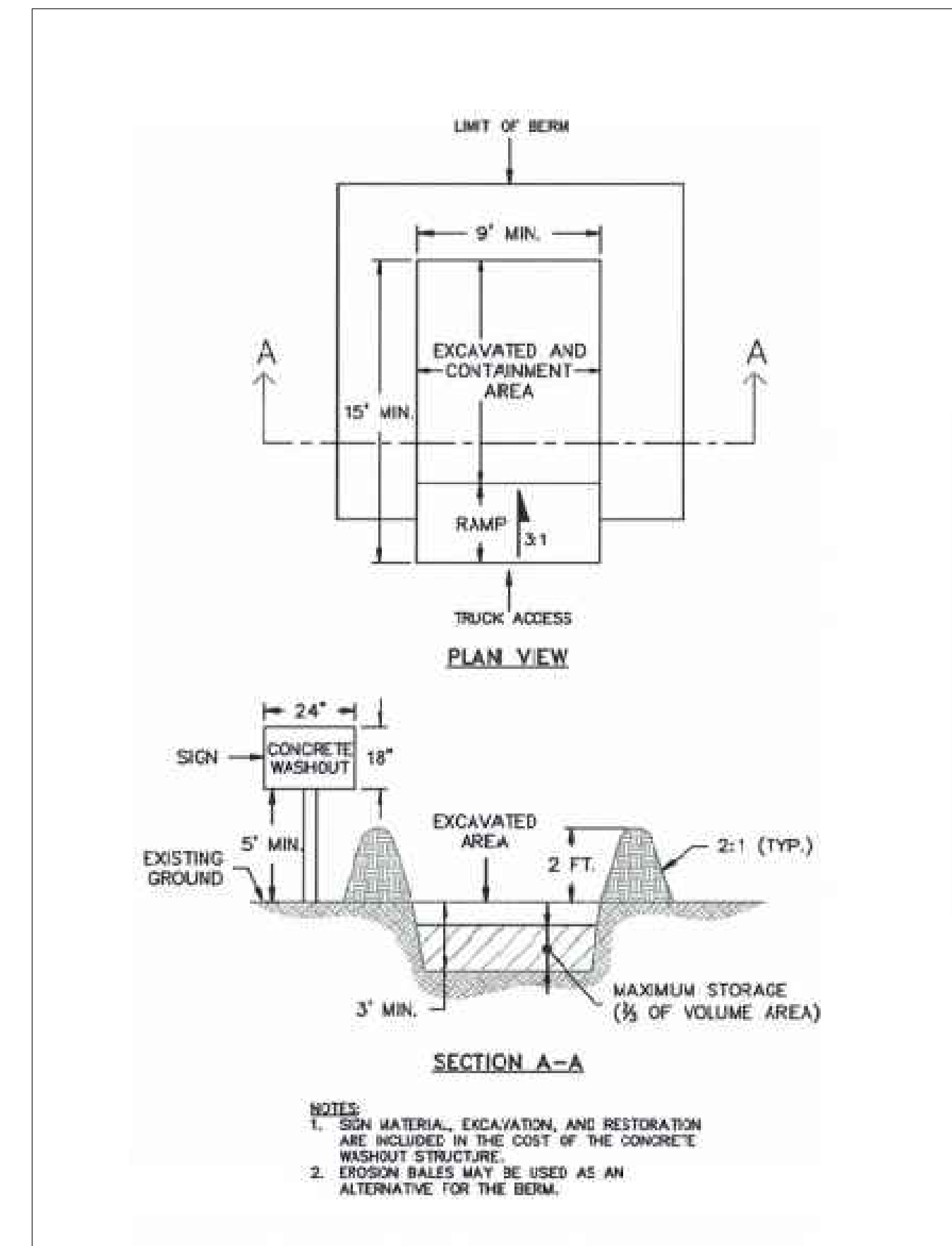
SILT FENCE (SF)
NOT TO SCALE



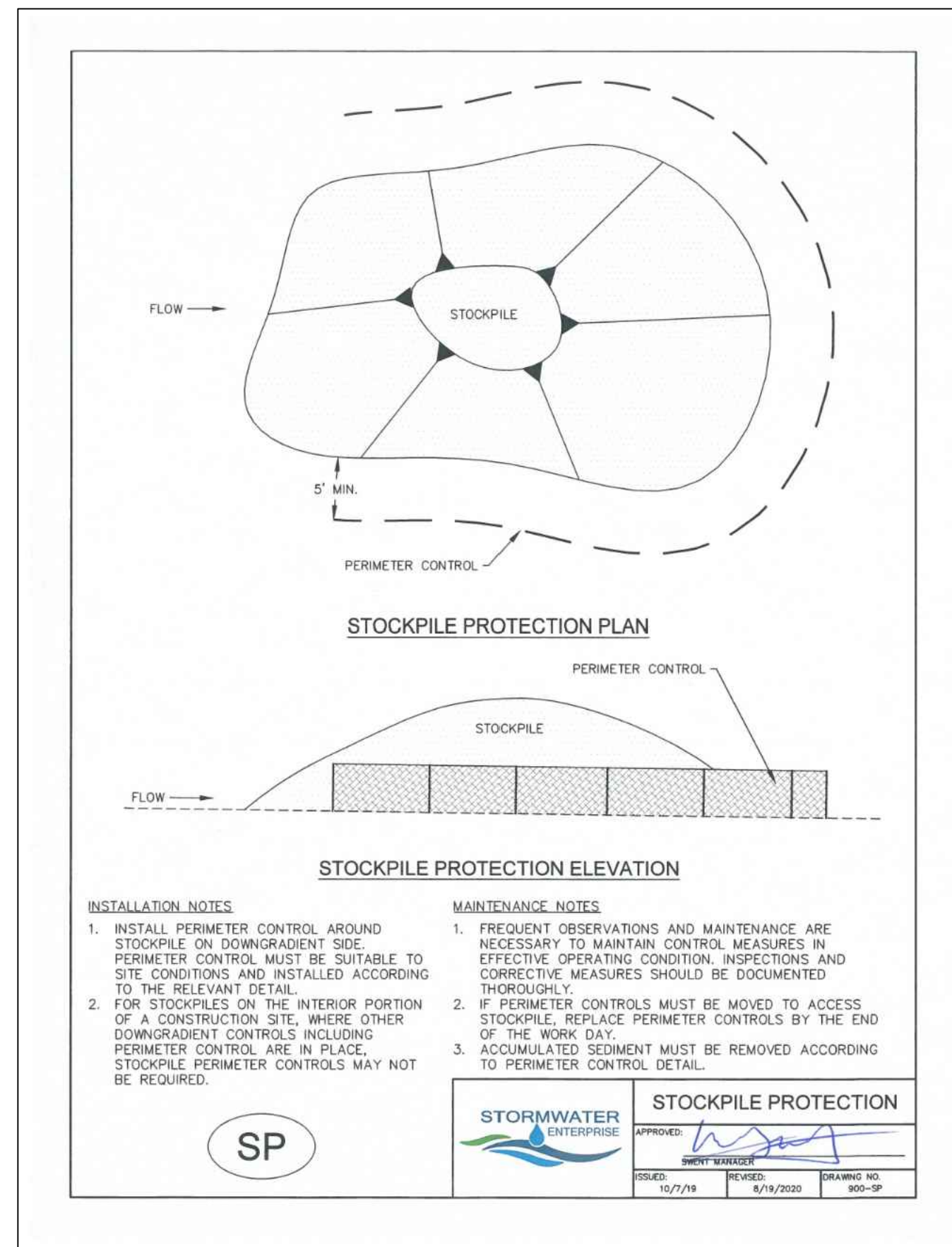
CHECK DAM (CD1)
NOT TO SCALE



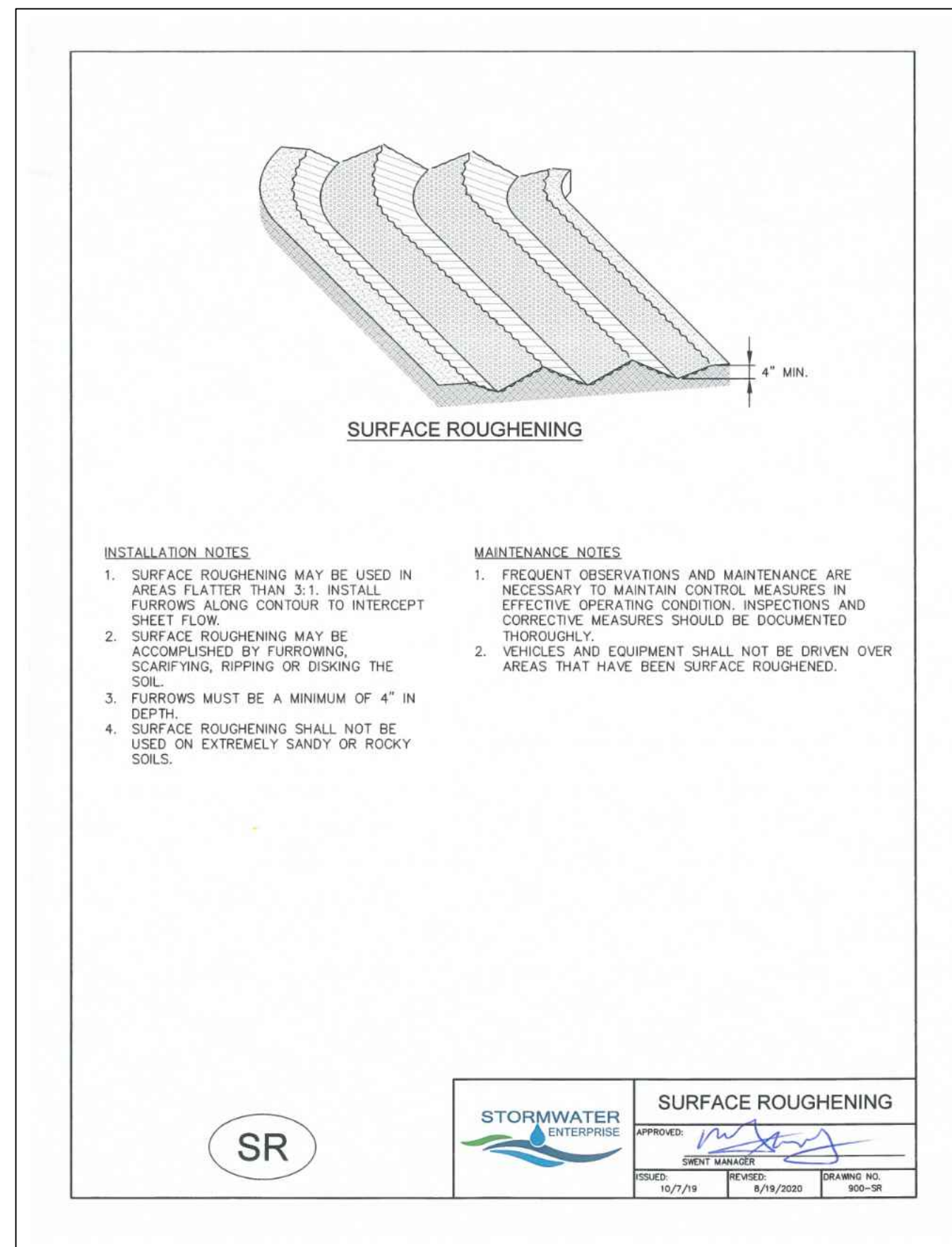
CONSTRUCTION FENCE (CF)
NOT TO SCALE



CONCRETE WASHOUT AREA (CWA)
NOT TO SCALE



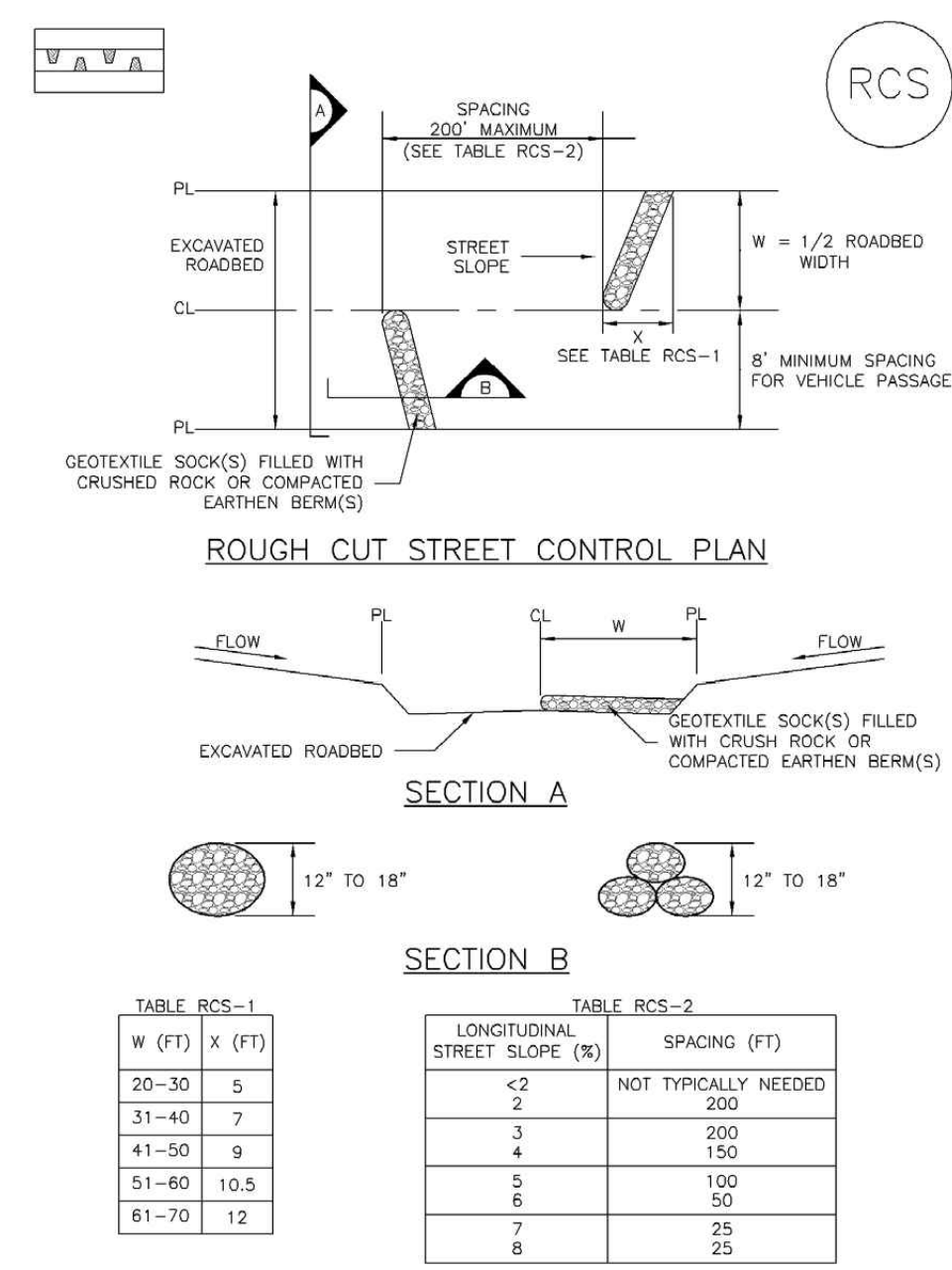
STOCKPILE PROTECTION (SP)
NOT TO SCALE



SURFACE ROUGHENING (SR)
NOT TO SCALE



EC-9 Rough Cut Street Control (RCS)



RCS-2 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010

ROUGH-CUT STREET CONTROL (RCS)
NOT TO SCALE

Rough Cut Street Control (RCS) EC-9

ROUGH CUT STREET CONTROL INSTALLATION NOTES

- SEE PLAN VIEW FOR LOCATION OF ROUGH CUT STREET CONTROL MEASURES.
- ROUGH CUT STREET CONTROL SHALL BE INSTALLED AFTER A ROAD HAS BEEN CUT IN AND WILL NOT BE PAVED FOR MORE THAN 14 DAYS OR FOR TEMPORARY CONSTRUCTION ROADS THAT HAVE NOT RECEIVED ROAD BASE.

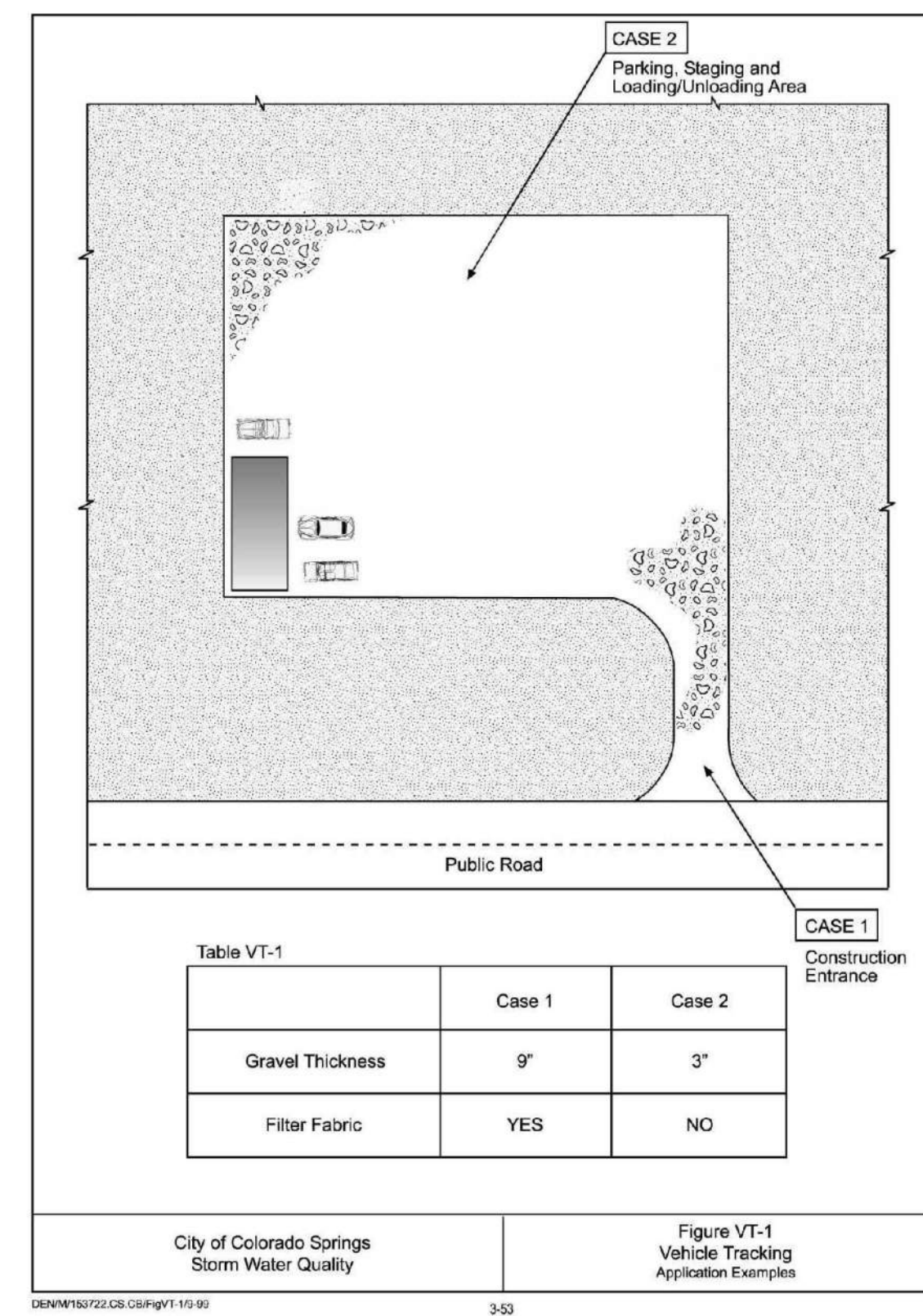
ROUGH CUT STREET CONTROL INSPECTION AND MAINTENANCE NOTES

- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

(DETAILS ADAPTED FROM AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD)

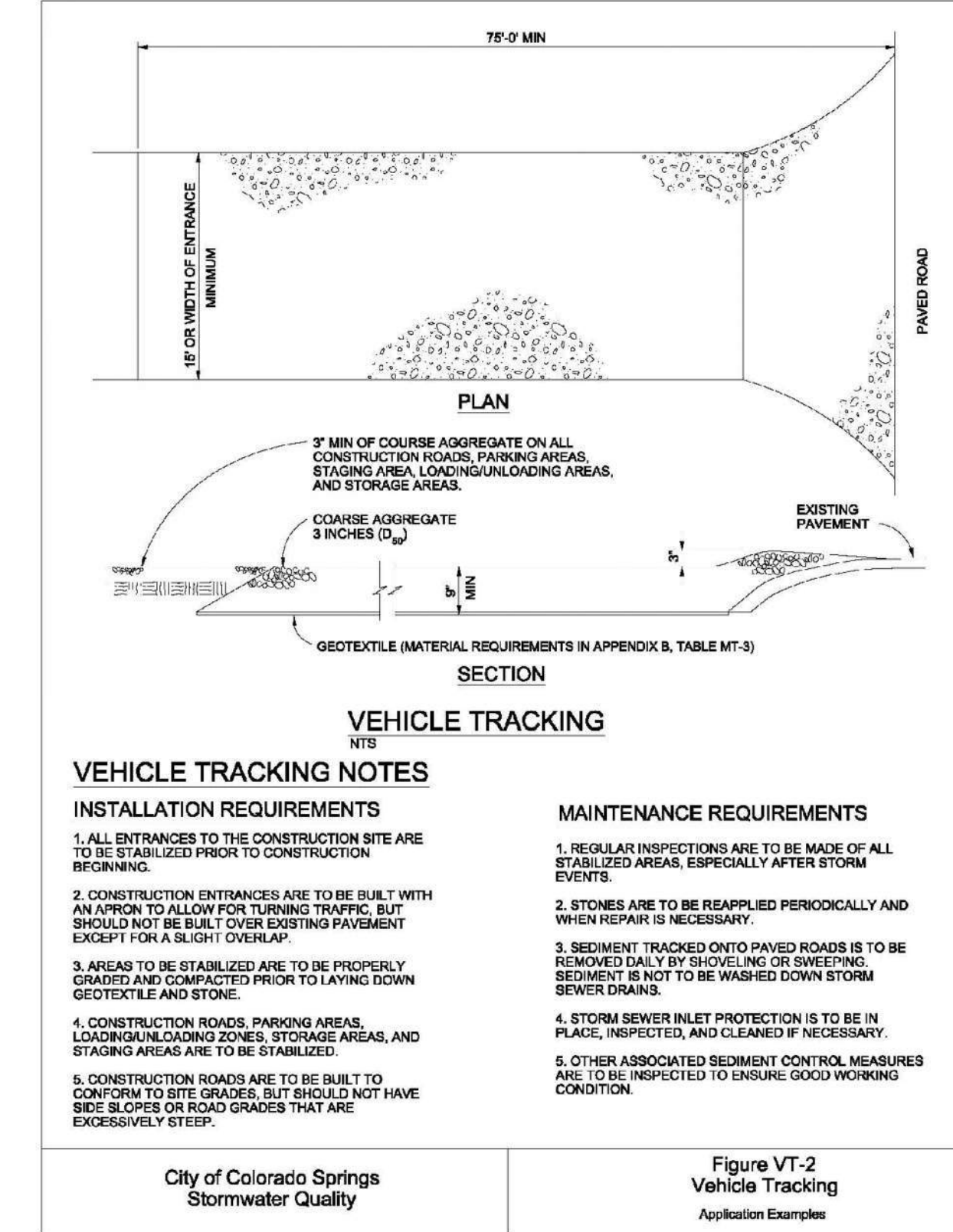
NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 RCS-3



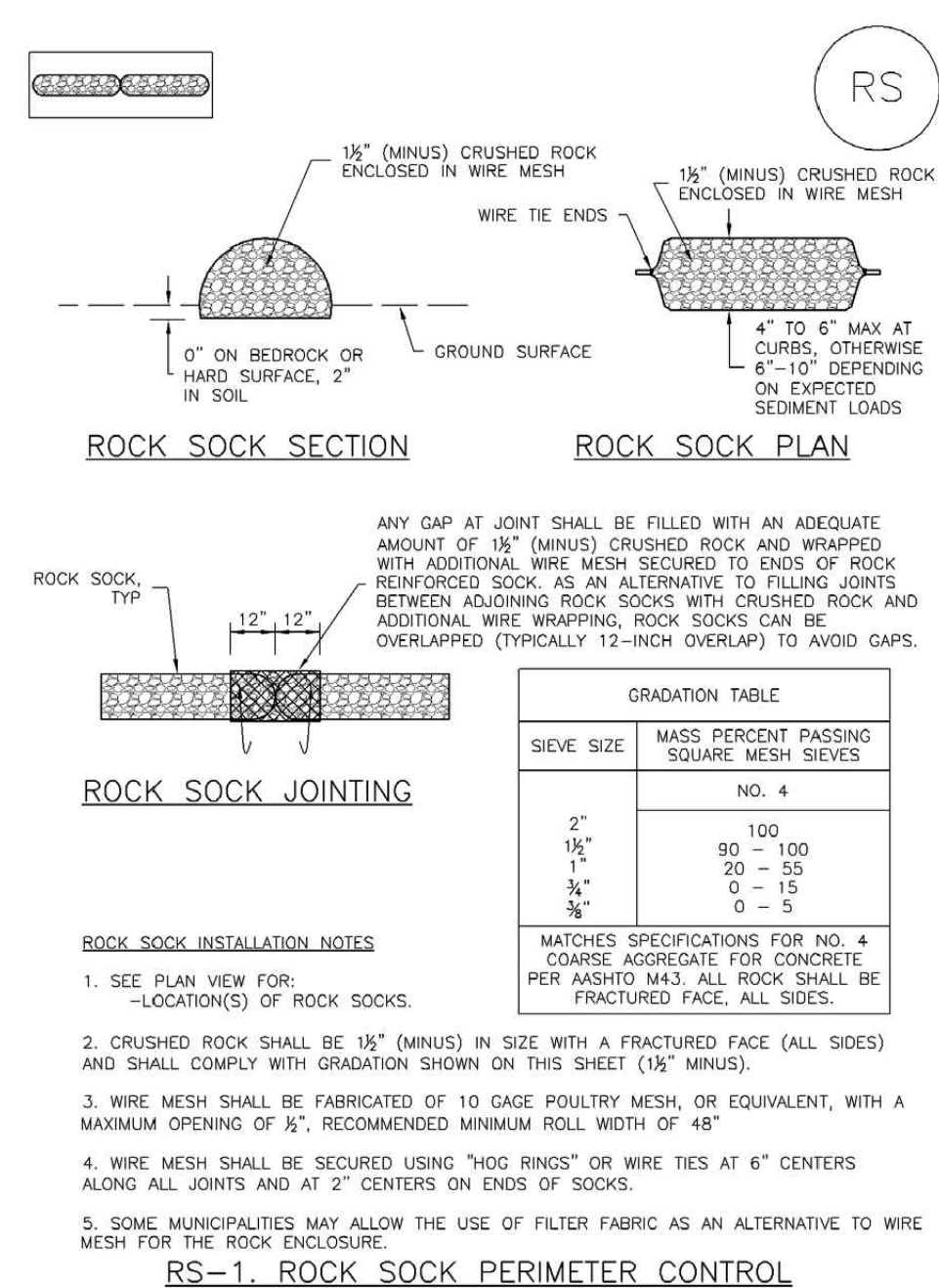
City of Colorado Springs Storm Water Quality Figure VT-1 Vehicle Tracking Application Examples

VEHICLE TRACKING CONTROL (VTC)
NOT TO SCALE



City of Colorado Springs Stormwater Quality Figure VT-2 Vehicle Tracking Application Examples

SC-5 Rock Sock (RS)



RS-2 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010

ROCK SOCK (RS)
NOT TO SCALE

Rock Sock (RS) SC-5

ROCK SOCK MAINTENANCE NOTES

- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
- ROCK SOCKS SHALL BE REPLACED IF THEY BECOME HEAVILY SOILED, OR DAMAGED BEYOND REPAIR.
- SEDIMENT ACCUMULATED UPSTREAM OF ROCK SOCKS SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP. TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 1/2 OF THE HEIGHT OF THE ROCK SOCK.
- ROCK SOCKS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.
- WHEN ROCK SOCKS ARE REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

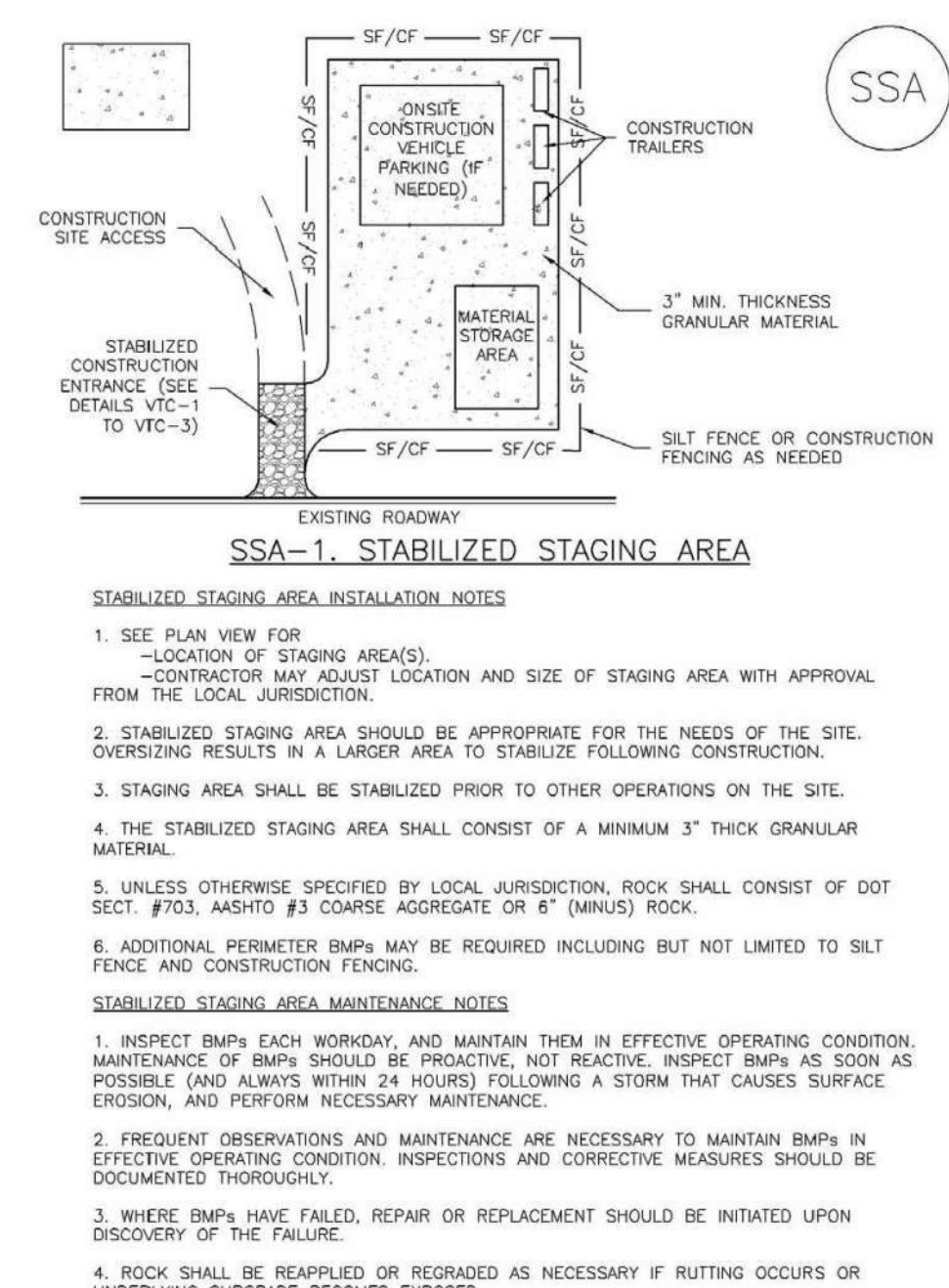
(DETAILS ADAPTED FROM TOWN OF PARKER, COLORADO AND CITY OF AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

NOTE: THE DETAILS INCLUDED WITH THIS FACT SHEET SHOW COMMONLY USED CONVENTIONAL METHODS OF ROCK SOCK INSTALLATION IN THE DENVER METROPOLITAN AREA. THERE ARE MANY OTHER SIMILAR PROPRIETARY PRODUCTS ON THE MARKET. UFCD NEITHER ENDORSES NOR DISCOURAGES USE OF PROPRIETARY PROTECTION PRODUCTS; HOWEVER, IN THE EVENT PROPRIETARY METHODS ARE USED, THE APPROPRIATE DETAIL FROM THE MANUFACTURER MUST BE INCLUDED IN THE SWMP AND THE BMP MUST BE INSTALLED AND MAINTAINED AS SHOWN IN THE MANUFACTURER'S DETAILS.

November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 RS-3

Stabilized Staging Area (SSA) SM-6



November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 SSA-3

STABILIZED STAGING AREA (SSA)
NOT TO SCALE

SM-6 Stabilized Staging Area (SSA)

STABILIZED STAGING AREA MAINTENANCE NOTES

- STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING/LOADING OPERATIONS.
- THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE GRANULAR MATERIAL SHALL BE REMOVED OR, IF APPROVED BY THE LOCAL JURISDICTION, USED ON SITE, AND THE AREA COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY LOCAL JURISDICTION.

NOTE: MANY MUNICIPALITIES PROHIBIT THE USE OF RECYCLED CONCRETE AS GRANULAR MATERIAL FOR STABILIZED STAGING AREAS DUE TO DIFFICULTIES WITH RE-ESTABLISHMENT OF VEGETATION IN AREAS WHERE RECYCLED CONCRETE WAS PLACED.

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

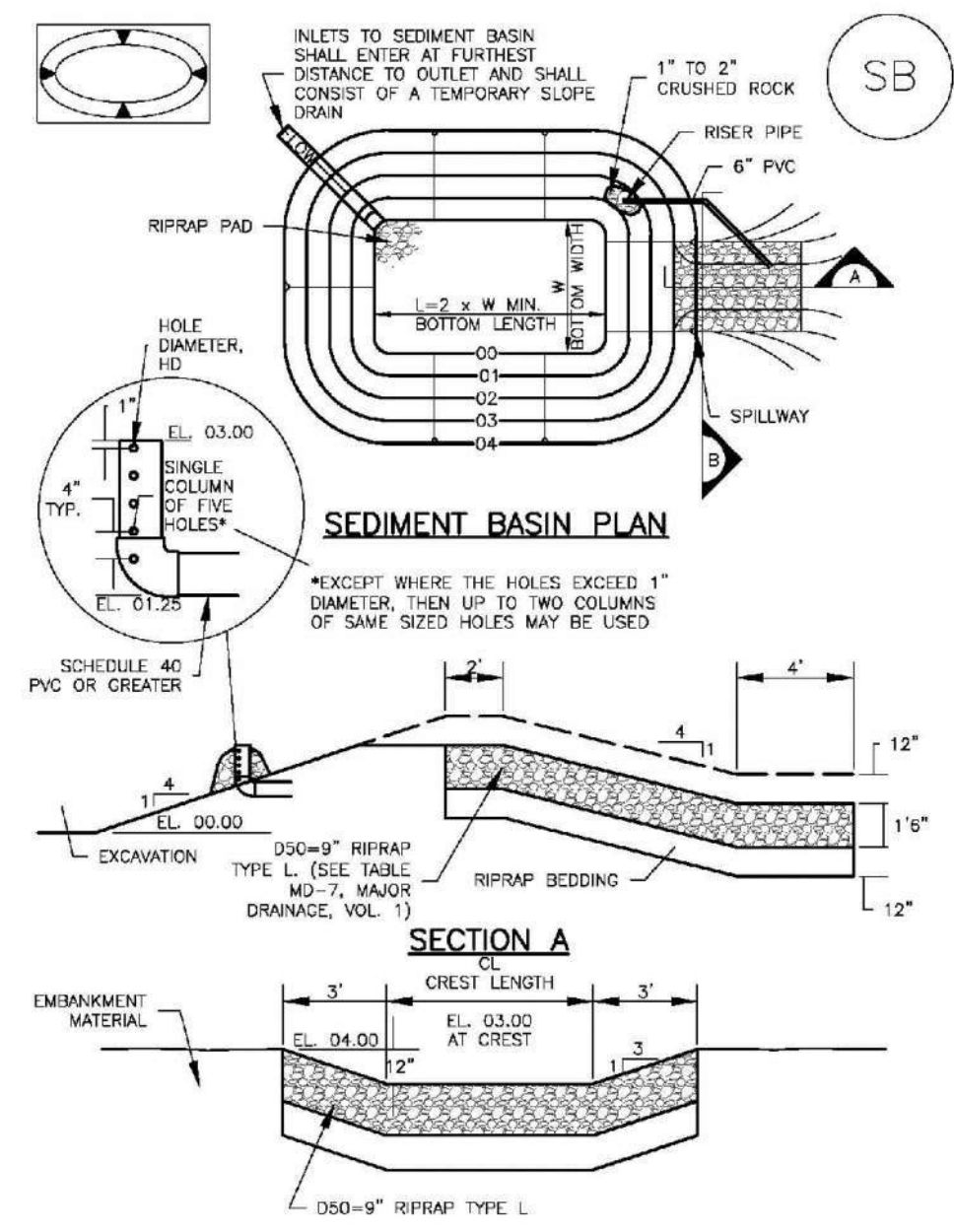
(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)

SSA-4 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010



Sediment Basin (SB)

SC-7



August 2013 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 SD-5

SC-7

Sediment Basin (SB)

TABLE SB-1. SIZING INFORMATION FOR STANDARD SEDIMENT BASIN

Upstream Drainage Area (rounded to nearest acre), (ac)	Basin Bottom Width (W), (ft)	Spillway Crest Length (CL), (ft)	Hole Diameter (HD), (in)
1	12 1/2	2	3/4
2	21	3	1 1/4
3	28	4	1 3/4
4	33 1/2	5	1 7/8
5	38 1/2	6	2 1/8
6	43	7	2 1/4
7	47 1/2	8	2 3/8
8	51	9	2 1/2
9	55	10	2 7/8
10	61	11	3
11	64	12	3 1/4
12	67 1/2	13	3 1/2
13	70 1/2	14	3 3/4
14	73 1/2	15	3 7/8
15	73 1/2	22	4

- SEDIMENT BASIN INSTALLATION NOTES**
- SEE PLAN VIEW FOR:
 - LOCATION OF SEDIMENT BASIN.
 - TYPE OF BASIN (STANDARD BASIN OR NONSTANDARD BASIN).
 - FOR STANDARD BASIN, BOTTOM WIDTH W, CREST LENGTH CL, AND HOLE DIAMETER, HD.
 - FOR NONSTANDARD BASIN, SEE CONSTRUCTION DRAWINGS FOR DESIGN OF BASIN INCLUDING RISER HEIGHT H, NUMBER OF COLUMNS N, HOLE DIAMETER HD AND PIPE DIAMETER D.
 - FOR STANDARD BASIN, BOTTOM DIMENSION MAY BE MODIFIED AS LONG AS BOTTOM AREA IS NOT REDUCED.
 - SEDIMENT BASINS SHALL BE INSTALLED PRIOR TO ANY OTHER LAND-DISTURBING ACTIVITY THAT RELIES ON ON BASINS AS A STORMWATER CONTROL.
 - EMBANKMENT MATERIAL SHALL CONSIST OF SOIL FREE OF DEBRIS, ORGANIC MATERIAL, AND ROCKS OR CONCRETE GREATER THAN 3 INCHES AND SHALL HAVE A MINIMUM OF 15 PERCENT BY WEIGHT PASSING THE NO. 200 SIEVE.
 - EMBANKMENT MATERIAL SHALL BE COMPACTED TO AT LEAST 95 PERCENT OF MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D698.
 - PIPE SCH 40 OR GREATER SHALL BE USED.
 - THE DETAILS SHOWN ON THESE SHEETS PERTAIN TO STANDARD SEDIMENT BASINS FOR DRAINAGE AREAS LESS THAN 15 ACRES. SEE CONSTRUCTION DRAWINGS FOR EMBANKMENT, STORAGE VOLUME, SPILLWAY, OUTLET, AND OUTLET PROTECTION DETAILS FOR ANY SEDIMENT BASINS THAT HAVE BEEN INDIVIDUALLY DESIGNED FOR DRAINAGE AREAS LARGER THAN 15 ACRES.

SB-6 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 August 2013

TEMPORARY SEDIMENT BASIN (TSB) 'A'
NOT TO SCALE

Sediment Basin (SB)

SC-7

- SEDIMENT BASIN MAINTENANCE NOTES**
- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
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 - WHEN BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
 - SEDIMENT ACCUMULATED IN BASIN SHALL BE REMOVED AS NEEDED TO MAINTAIN BMP EFFECTIVENESS, TYPICALLY WHEN SEDIMENT DEPTH REACHES ONE FOOT (I.E. TWO FEET BELOW THE SPILLWAY CREST).
 - SEDIMENT BASINS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS ACCEPTED BY THE LOCAL JURISDICTION.
 - WHEN SEDIMENT BASINS ARE REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.
- (DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO)
- NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

August 2013 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 SB-7

SEEDING & MULCHING

- ALL SOIL TESTING, SOILS AMENDMENT AND FERTILIZER DOCUMENTATION, AND SEED LOAD AND BAG TICKETS MUST BE ADDED TO THE CSWMP.
- SOIL PREPARATION**
- IN AREAS TO BE SEEDDED, THE UPPER 6 INCHES OF THE SOIL MUST NOT BE HEAVILY COMPACTED, AND SHOULD BE IN FRIABLE CONDITION. LESS THAN 80% STANDARD PROCTOR DENSITY IS ACCEPTABLE. AREAS OF COMPACTION OR GENERAL CONSTRUCTION ACTIVITY MUST BE SCARIFIED TO A DEPTH OF 6 TO 12 INCHES PRIOR TO SPREADING TOPSOIL. TO BREAK UP COMPACTED LAYERS AND PROVIDE A BLENDING ZONE BETWEEN DIFFERENT SOIL LAYERS.
 - AREAS TO BE PLANTED SHALL HAVE AT LEAST 4 INCHES OF TOPSOIL SUITABLE TO SUPPORT PLANT GROWTH.
 - THE CITY RECOMMENDS THAT EXISTING AND/OR IMPORTED TOPSOIL BE TESTED TO IDENTIFY SOIL DEFICIENCIES AND ANY SOIL AMENDMENTS NECESSARY TO ADDRESS THESE DEFICIENCIES. SOIL AMENDMENTS AND/OR FERTILIZERS SHOULD BE ADDED TO CORRECT TOPSOIL DEFICIENCIES BASED ON SOIL TESTING RESULTS.
 - TOPSOIL SHALL BE PROTECTED DURING THE CONSTRUCTION PERIOD TO RETAIN ITS STRUCTURE. AVOID COMPACTION, AND TO PREVENT EROSION AND CONTAMINATION, STRIPPED TOPSOIL MUST BE STORED IN AN AREA AWAY FROM MACHINERY AND CONSTRUCTION OPERATIONS, AND CARE MUST BE TAKEN TO PROTECT THE TOPSOIL AS A VALUABLE COMMODITY. TOPSOIL MUST NOT BE STRIPPED DURING UNDESIRABLE WORKING CONDITIONS (E.G. DURING WET WEATHER OR WHEN SOILS ARE SATURATED). TOPSOIL SHALL NOT BE STORED IN SWALES OR IN AREAS WITH POOR DRAINAGE.
- SEEDING**
- ALLOWABLE SEED MIXES ARE INCLUDED IN THE CITY OF COLORADO SPRINGS STORMWATER CONSTRUCTION MANUAL. ALTERNATIVE SEED MIXES ARE ACCEPTABLE IF INCLUDED IN AN APPROVED LANDSCAPING PLAN.
 - SEED SHOULD BE DRILL-SEEDED WHENEVER POSSIBLE.
 - SEED DEPTH MUST BE 3/8 TO 1/2 INCHES WHEN DRILL-SEEDING IS USED.
 - BROADCAST SEEDING OR HYDRO-SEEDING WITH TACKIFIER MAY BE SUBSTITUTED ON SLOPES STEEPER THAN 3:1 OR ON OTHER AREAS NOT PRACTICAL TO DRILL SEED.
 - SEEDING RATES MUST BE DOUBLED FOR BROADCAST SEEDING OR INCREASED BY 50% IF USING A BRILLIANT DRILL OR HYDRO-SEEDING.
 - BROADCAST SEEDING MUST BE LIGHTLY HAND-RAKED INTO THE SOIL.
- MULCHING**
- MULCHING SHOULD BE COMPLETED AS SOON AS PRACTICABLE AFTER SEEDING, HOWEVER PLANTED AREAS MUST BE MULCHED NO LATER THAN 14 DAYS AFTER PLANTING.
 - MULCHING REQUIREMENTS INCLUDE:
 - HAY OR STRAW MULCH
 - ONLY CERTIFIED WEED-FREE AND CERTIFIED SEED-FREE MULCH MAY BE USED. MULCH MUST BE APPLIED AT 2 TONS/ACRE AND ADEQUATELY SECURED BY CRIMPING AND/OR TACKIFIER.
 - CRIMPING MUST NOT BE USED ON SLOPES GREATER THAN 3:1 AND MULCH FIBERS MUST BE TUCKED INTO THE SOIL TO A DEPTH OF 3 TO 4 INCHES.
 - TACKIFIER MUST BE USED IN PLACE OF CRIMPING ON SLOPES STEEPER THAN 3:1.
 - HYDRAULIC MULCHING
 - HYDRAULIC MULCHING IS AN OPTION ON STEEP SLOPES OR WHERE ACCESS IS LIMITED.
 - IF HYDRO-SEEDING IS USED, MULCHING MUST BE APPLIED AS A SEPARATE, SECOND OPERATION.
 - WOOD CELLULOSE FIBERS MIXED WITH WATER MUST BE APPLIED AT A RATE OF 2,000 TO 2,500 POUNDS/ACRE, AND TACKIFIER MUST BE APPLIED AT A RATE OF 100 POUNDS/ACRE.
 - EROSION CONTROL BLANKET
 - EROSION CONTROL BLANKET MAY BE USED IN PLACE OF TRADITIONAL MULCHING METHODS.

SM

STORMWATER ENTERPRISE

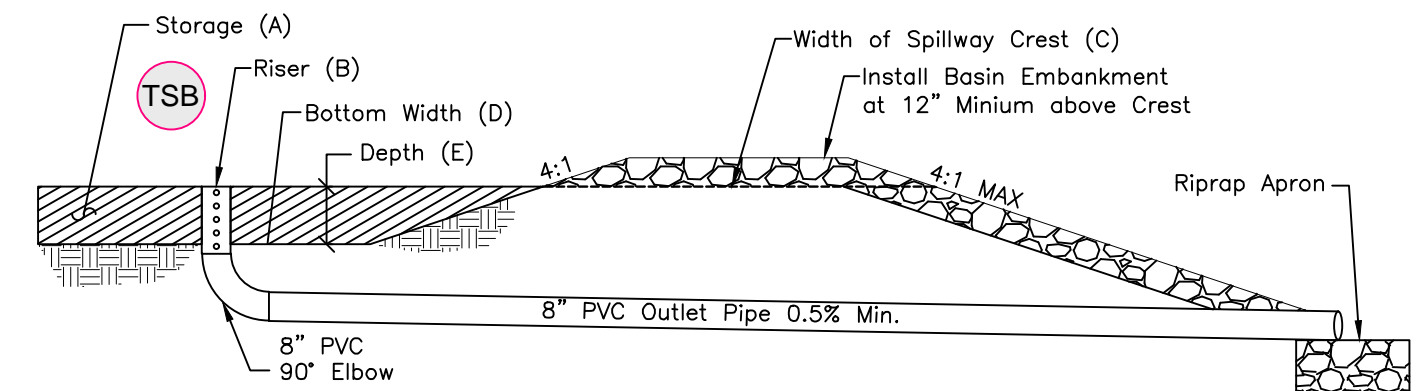
SEEDING & MULCHING

APPROVED: [Signature]

DESIGN MANAGER: [Signature]

ISSUED: 10/7/19 REVISED: 8/15/2020 DRAWING NO: 900-54

SEEDING & MULCHING (SM)
NOT TO SCALE



- TEMPORARY SEDIMENT BASIN "A"**
- 0.029 ac-ft Required to Spillway Crest
 - Use 6" PVC Perforated Riser Pipe: Perforations Vertically Spaced 3" Apart, 1 Column of 4 1/2" ø Holes.
 - 5' Long Spillway: 1" Depth, Lined With 12" Thick Type 'L' Riprap to toe of slope.
 - Basin Bottom Width = 28'
 - Depth = 2.0'

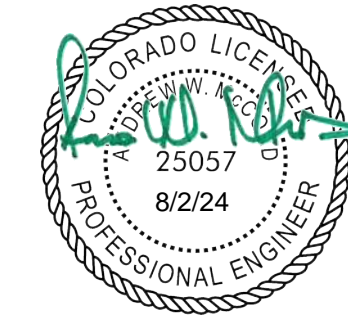
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NTS

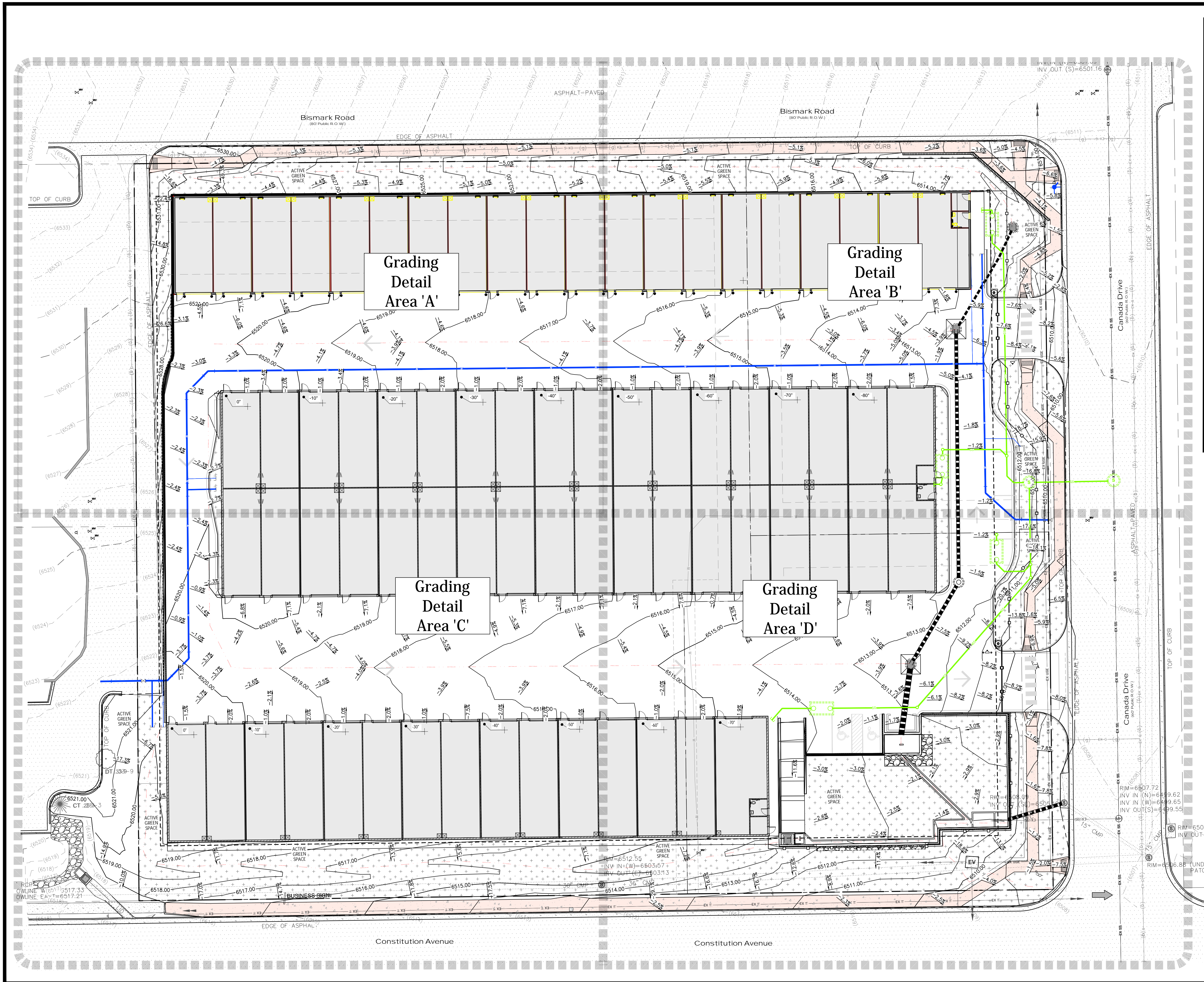
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Date:	08/02/2024
Design:	MJK
Drawn:	MJK
Check:	AMcC
Revisions:	

Sheet

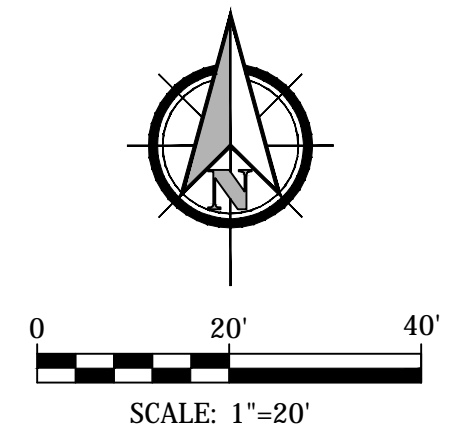
C306

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FINAL GRADING LEGEND	
	Limits Of Soil Disturbance/ Limits Of Construction
	Property Line
	5925 Existing Contour
	5925 Proposed Contour
	Existing Sanitary Sewer
	Existing Water
	Existing Gas
	Channel Flowline
	Proposed Water Elements
	Proposed Sanitary Elements
	Existing or Proposed Storm Pipe
	Ex. or Proposed Flow Direction
	Lot or Property Boundary
	Existing Intermediate Contour
	(6220) Existing Index Contour
	6219 Existing Intermediate Contour
	6220 Existing Index Contour
	Existing Tree
	Existing 6" Vertical Curb & Gutter
	Proposed Building Area
	Ex. or Proposed Concrete
	Ex. Asphalt
	Concrete Paving



My Garage @ Northcrest
Grading Area Plan
 Grading Area Detail Areas 'A' thru 'D'
 El Paso County, Colorado

Project No.:	23049
Date:	08/02/2024
Design:	MJK
Drawn:	MJK
Check:	AMC
Revisions:	

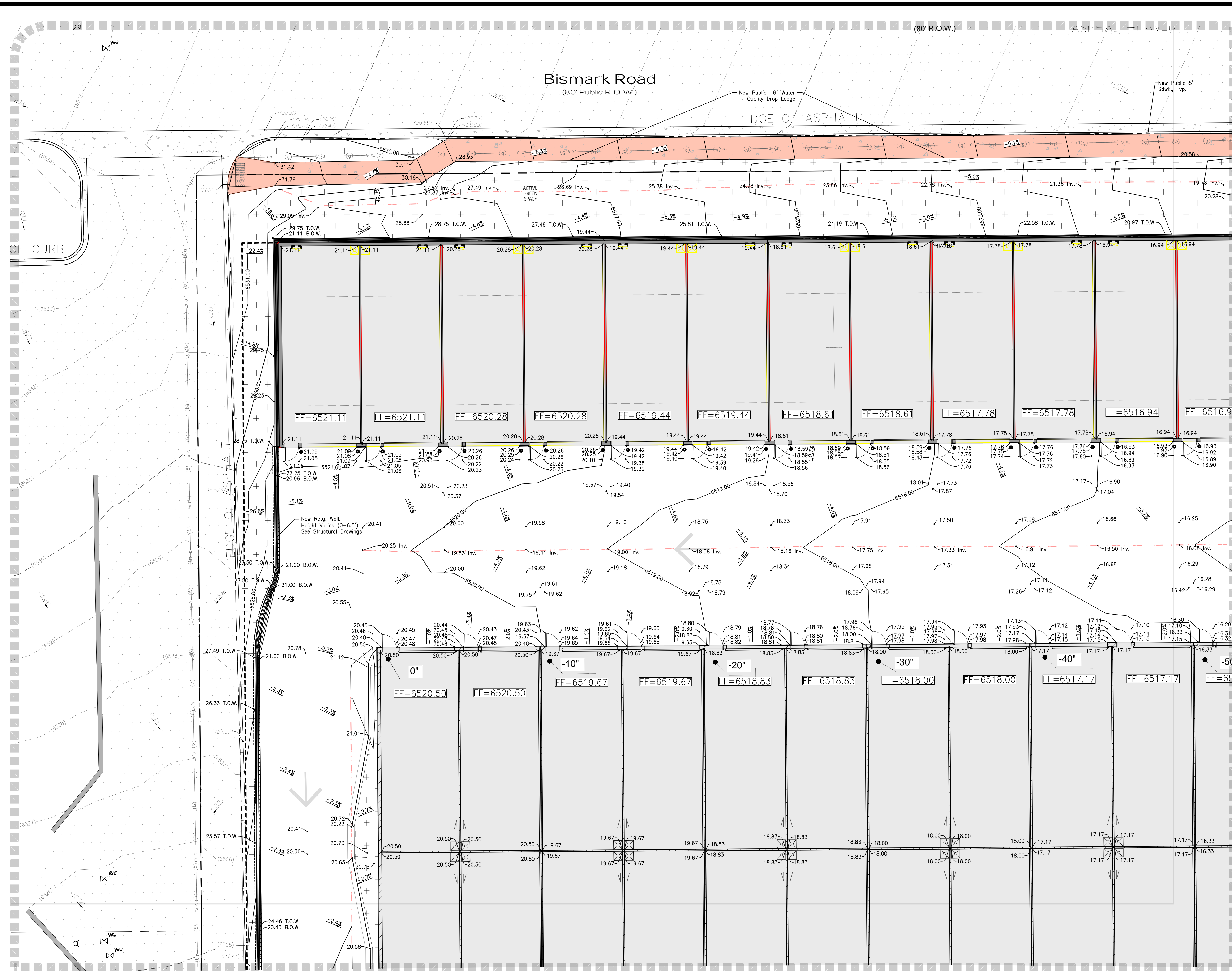
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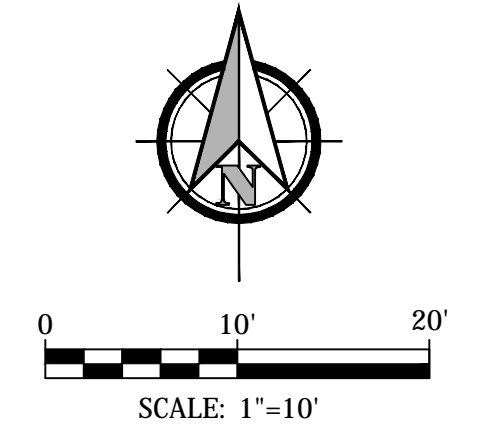


Kiowa
 Engineering Corporation
 1604 South 21st Street
 Colorado Springs, Colorado 80904
 (719) 630-7342



FINAL GRADING LEGEND

- Limits Of Soil Disturbance/ Limits Of Construction
- Property Line
- 5925 Existing Contour
- 5925 Proposed Contour
- Existing Sanitary Sewer
- Existing Water
- Existing Gas
- Channel Flowline
- Ex. or Proposed Flow Direction
- Lot or Property Boundary
- Existing Intermediate Contour
- (6220) Existing Index Contour
- 6219 Existing Intermediate Contour
- 6220 Existing Index Contour
- ☼ Existing Tree
- CT .25-3 DT .33-9 Existing 6" Vertical Curb & Gutter
- Proposed Building Area
- Ex. Asphalt
- Ex. or Proposed Concrete
- Concrete Paving
- FF=6516.68 Proposed Finish Floor Elevation
- 16.44 Proposed Finish Grade Elevation

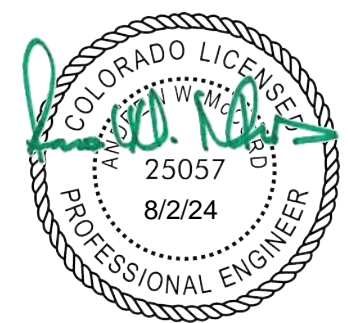


Area 'A' Spot Elevations

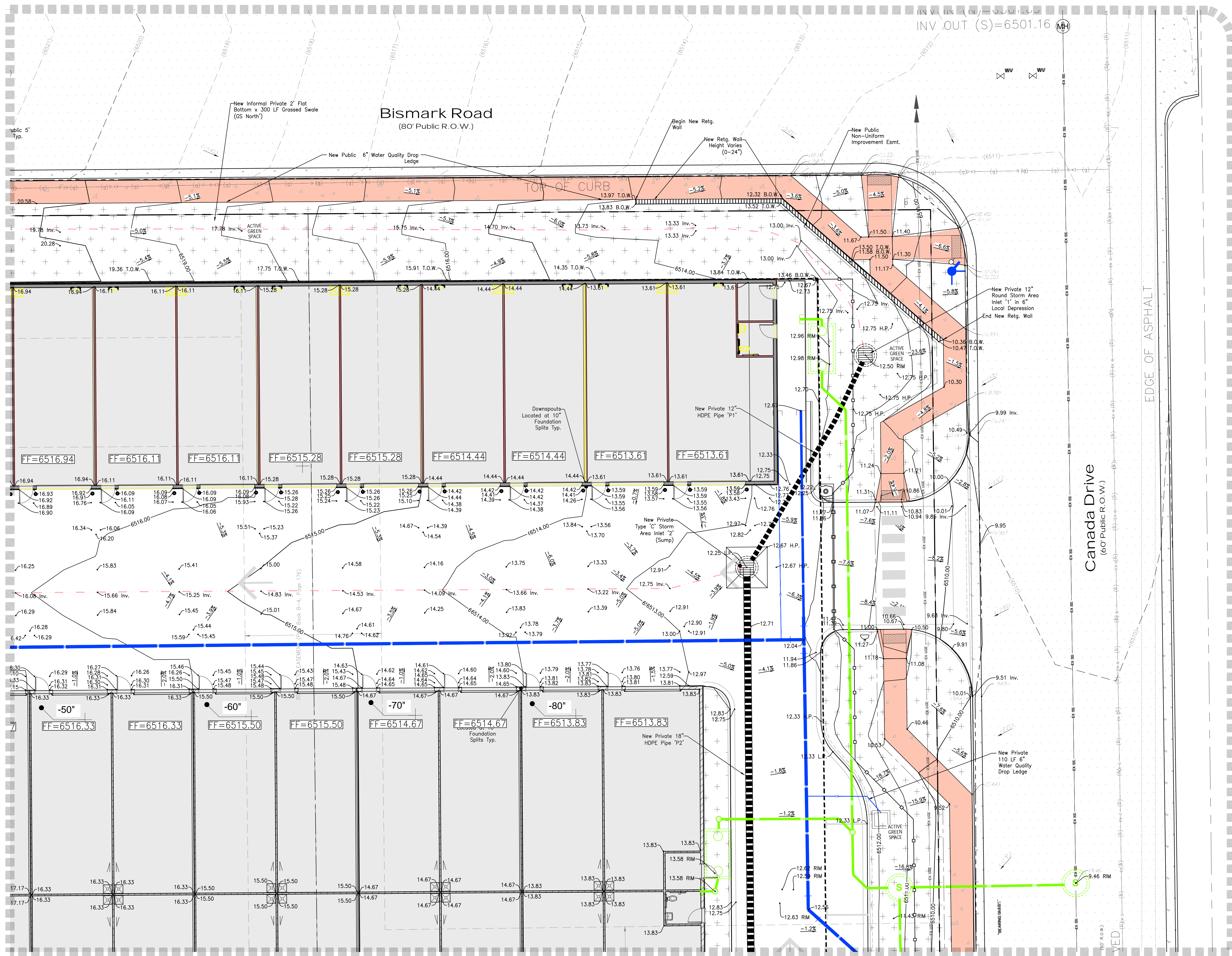
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Colorado Springs, Colorado 80904
(719) 630-7342

My Garage @ Northcrest
Grading Area Detail
Area 'A' Spot Elevations
El Paso County, Colorado

Project No.:	23049
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Design:	MJK
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Check:	AMC
Revisions:	

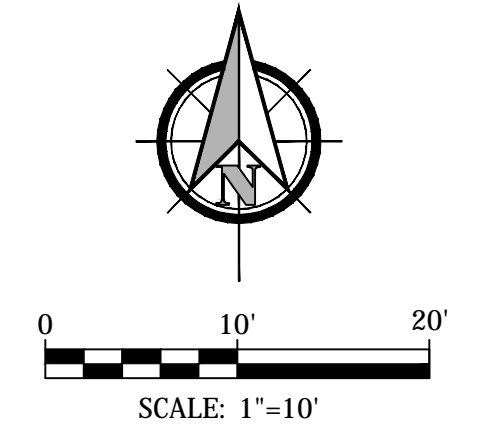


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FINAL GRADING LEGEND

- Limits Of Soil Disturbance/ Limits Of Construction
- - - Property Line
- - - 5925 Existing Contour
- - - 5925 Proposed Contour
- Existing Sanitary Sewer
- Existing Water
- Existing Gas
- Channel Flowline
- Ex. or Proposed Flow Direction
- - - Lot or Property Boundary
- - - Existing Intermediate Contour
- - - (6220) Existing Index Contour
- - - 6219 Existing Intermediate Contour
- - - 6220 Existing Index Contour
- ☼ Existing Tree
- CT .25-3 DT .33-9
- Existing 6" Vertical Curb & Gutter
- Proposed Building Area
- Ex. Asphalt
- Ex. or Proposed Concrete
- Concrete Paving
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- Proposed Finish Grade Elevation



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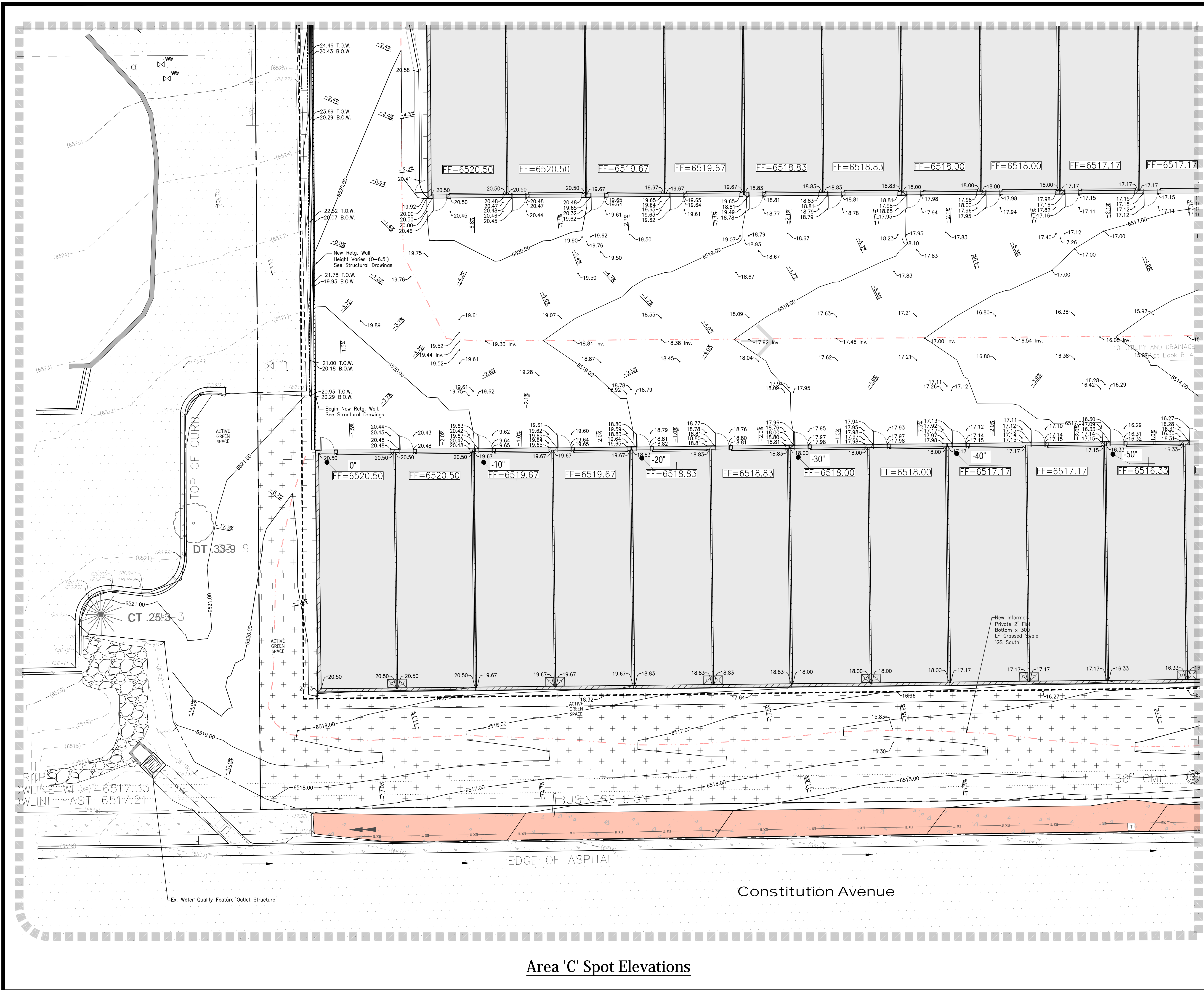
My Garage @ Northcrest
Grading Area Detail
Area 'B' Spot Elevations
El Paso County, Colorado

Project No.:	23049
Date:	08/02/2024
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Drawn:	MJK
Check:	AMC
Revisions:	



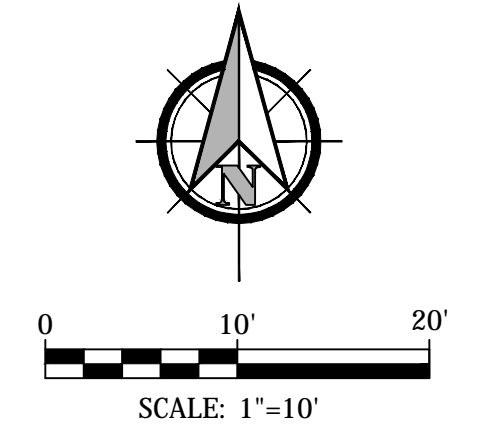
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Area 'B' Spot Elevations



FINAL GRADING LEGEND

- Limits Of Soil Disturbance/ Limits Of Construction
- - - Property Line
- - - 5925 Existing Contour
- - - 5925 Proposed Contour
- - - Existing Sanitary Sewer
- - - Existing Water
- - - Existing Gas
- - - Channel Flowline
- - - Ex. or Proposed Flow Direction
- - - Lot or Property Boundary
- - - Existing Intermediate Contour
- - - (6220) Existing Index Contour
- - - 6219 Existing Intermediate Contour
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- Existing 6" Vertical Curb & Gutter
- Proposed Building Area
- Ex. Asphalt
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- Concrete Paving
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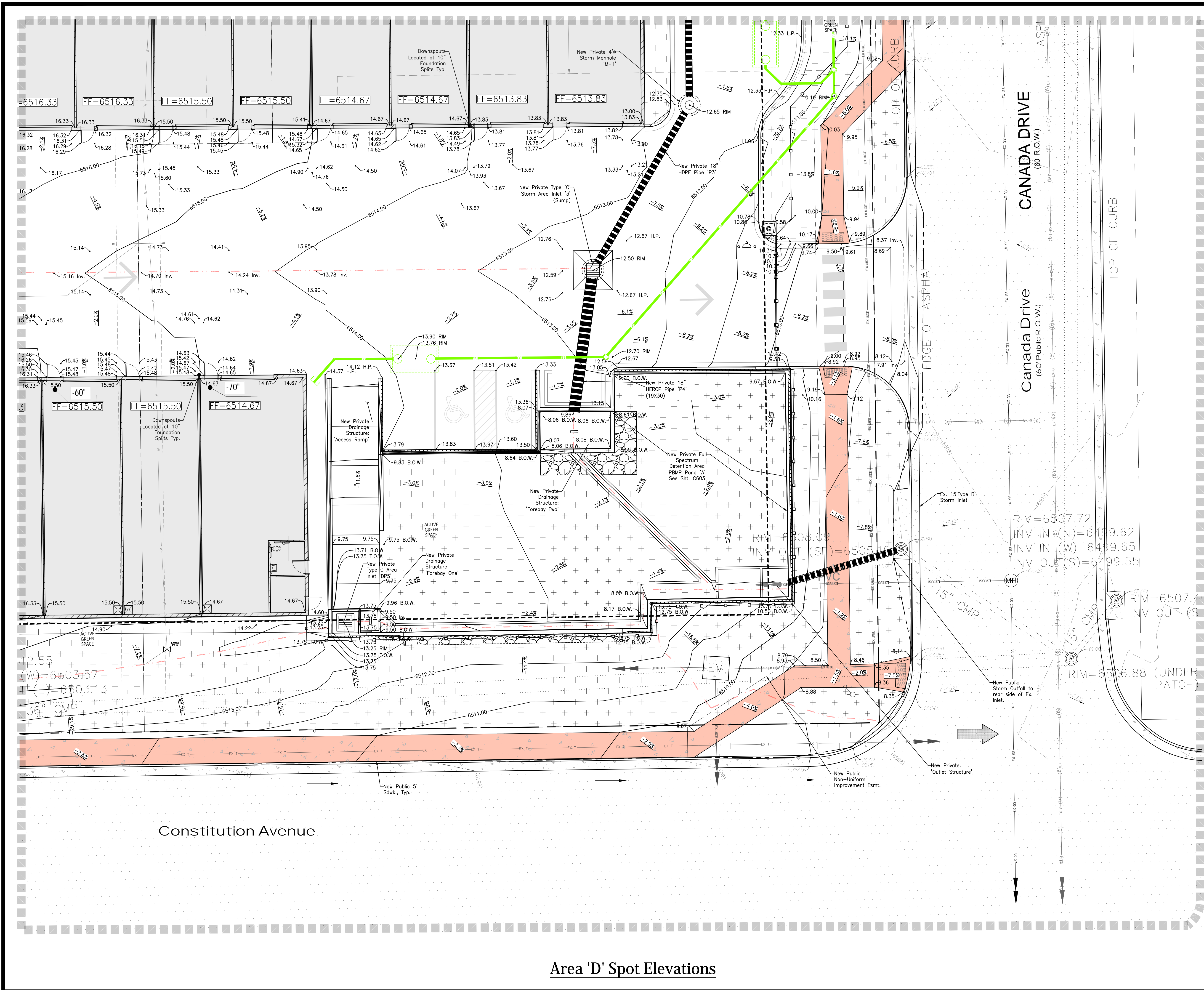
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My Garage @ Northcrest
Grading Area Detail
Area 'C' Spot Elevations
El Paso County, Colorado

Project No.: 23049
Date: 08/02/2024
Design: MJK
Drawn: MJK
Check: AMcC
Revisions:

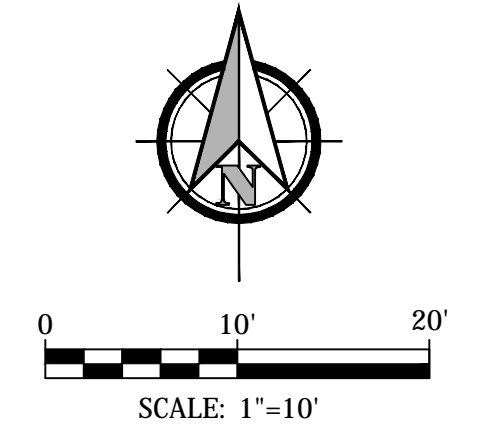


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FINAL GRADING LEGEND

- Limits Of Soil Disturbance/ Limits Of Construction
- - - Property Line
- - - 5925 Existing Contour
- - - 5925 Proposed Contour
- - - Ex SS Existing Sanitary Sewer
- - - Ex W Existing Water
- - - GAS Existing Gas
- - - Channel Flowline
- - - Ex. or Proposed Flow Direction
- - - Lot or Property Boundary
- - - Existing Intermediate Contour
- - - (6220) Existing Index Contour
- - - 6219 Existing Intermediate Contour
- - - 6220 Existing Index Contour
- ☼ Existing Tree
- CT .25-3 DT .33-9 Existing 6" Vertical Curb & Gutter
- Proposed Building Area
- Ex. Asphalt
- Ex. or Proposed Concrete
- Concrete Paving
- FF=6516.68 Proposed Finish Floor Elevation
- 16.44 Proposed Finish Grade Elevation



My Garage @ Northcrest
Grading Area Detail
Area 'D' Spot Elevations
 El Paso County, Colorado

Project No.: 23049
 Date: 08/02/2024
 Design: MKJ
 Drawn: MKJ
 Check: AMcC
 Revisions:



Sheet
C311
 13 of 21 Sheets

MY GARAGE @ NORTHCREST

WATER PLAN

NORTHWEST CORNER OF CANADA DRIVE AND CONSTITUTION AVENUE

CSU WATER NOTES:

The Contractor shall notify Colorado Springs Utilities' Inspections office (719-668-4658) a minimum of 48 hours prior to the start of construction.

GENERAL:

- All construction methods and materials shall meet Colorado Springs Utilities' Water Line Extension and Service Standards (Water LESS).
- The Contractor shall obtain locates prior to any excavation.
- Colorado Springs Utilities does not guarantee the accuracy of locations of existing pipelines, hydrants, valves and service lines. If field conditions are found to be different than shown on the plans, the Contractor shall notify the Inspector and the Engineer of Record immediately.
- No trees or structures are permitted within fifteen feet (15') of a water main.
- The Contractor is responsible for any damage to any utility facilities as a result of his actions. The Contractor shall make all the required repairs immediately to the satisfaction of Colorado Springs Utilities.
- All field staking shall comply with the Water LESS.
- The Contractor shall make their best effort to ensure that water service to adjacent properties is maintained during construction.
- Corrosion protection measures shall comply with the Water LESS.
- No service taps will be allowed until the main is extended to the next main-line valve.
- No service taps shall be made until authorization has been granted by the Colorado Springs Utilities Inspector.
- All bends shall be field staked prior to construction and the stationing on the field stakes shall match the stationing on the plans.
- Field modifications to a fire service line or fire hydrant design or location may need to be approved by the Design Engineer, Colorado Springs Fire Department and Colorado Springs Utilities, as required by the Inspector.
- Reuse or salvage of any material is left to the discretion of the Colorado Springs Utilities Inspector.
- A trench backfill and compaction shall be in accordance with Section 206 of the City of Colorado Springs Standard Specifications Manual.
- All water service lines should enter the building within 3 feet of an exterior wall. Exposed water plumbing shall be minimized inside the building prior to the water meter and/or approved backflow prevention assembly or method.

WATER PROJECT SPECIFIC NOTES:

APPLICABLE NOT-APPLICABLE

- Any existing stubs and appurtenances that will not be used shall be removed and replaced with an acceptable section of main at the expense of the Contractor.
- A connection to an existing stub is proposed. Colorado Springs Utilities does not guarantee the accuracy of the depths or locations of existing stubs shown on any "As-Built" drawings.
- A water stub-out(s) is/are proposed. Colorado Springs Utilities does not guarantee that the design or installation of the proposed water stub-out will meet future development needs.
- A Water Quality Plan has been approved for this project.

PLAN INFORMATION BLOCK:

FIMS Map Number: T-43

Pressure Zone: Lowline

Max. Static Pressure: 105psi (CCMD), 181psi (CSU)

Utility Design CAD File No.: CF20243376

Development Plan No.: DEPN-23-0212

Plat Reception No.: N/A

Public Utility Easement Reception No.: N/A

Notice of Private Wastewater System Reception No.: N/A

Notice of Private Water System Reception No.: N/A

UAP File No.: N/A

Approval Date: March 4, 2024

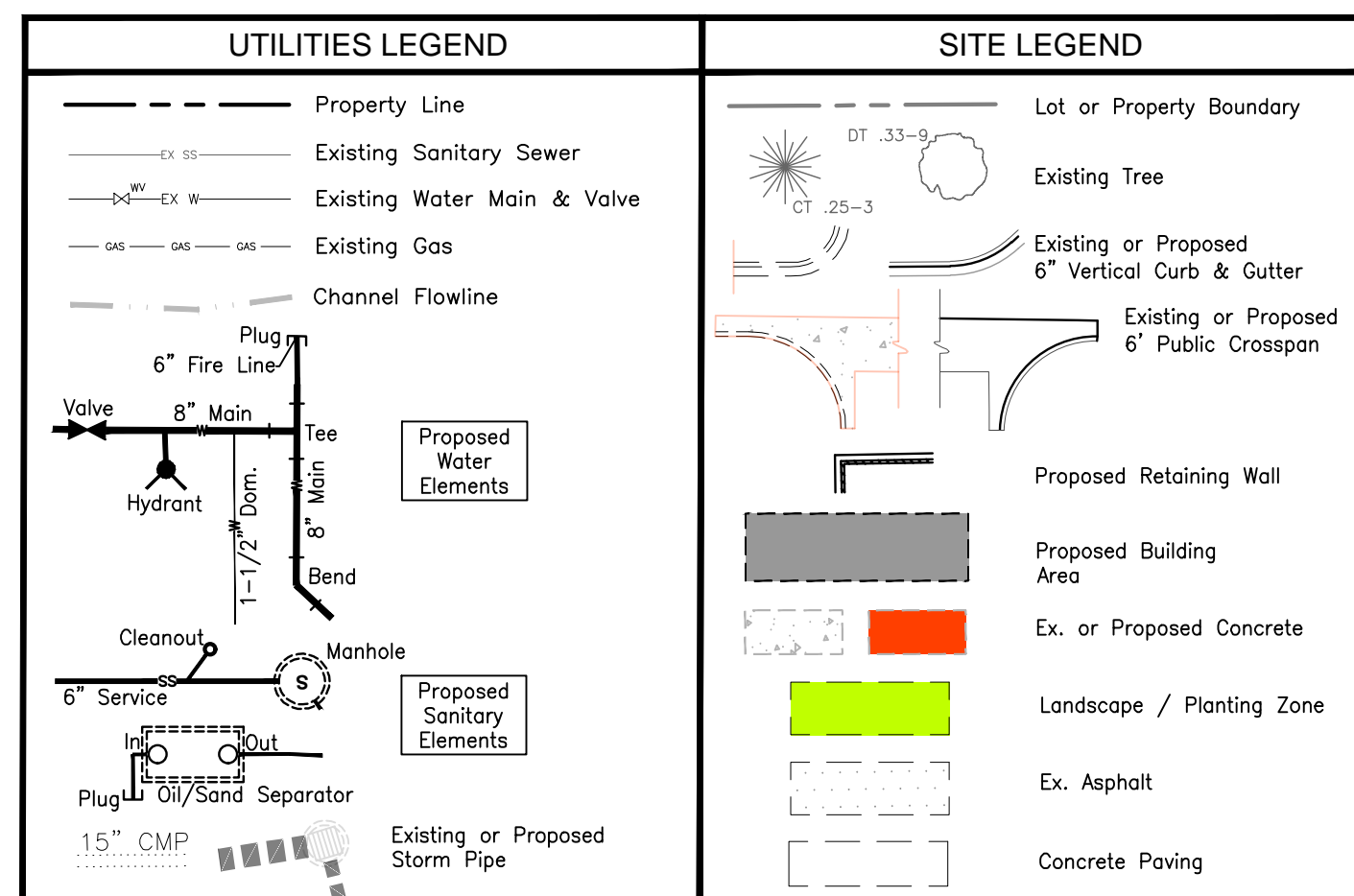
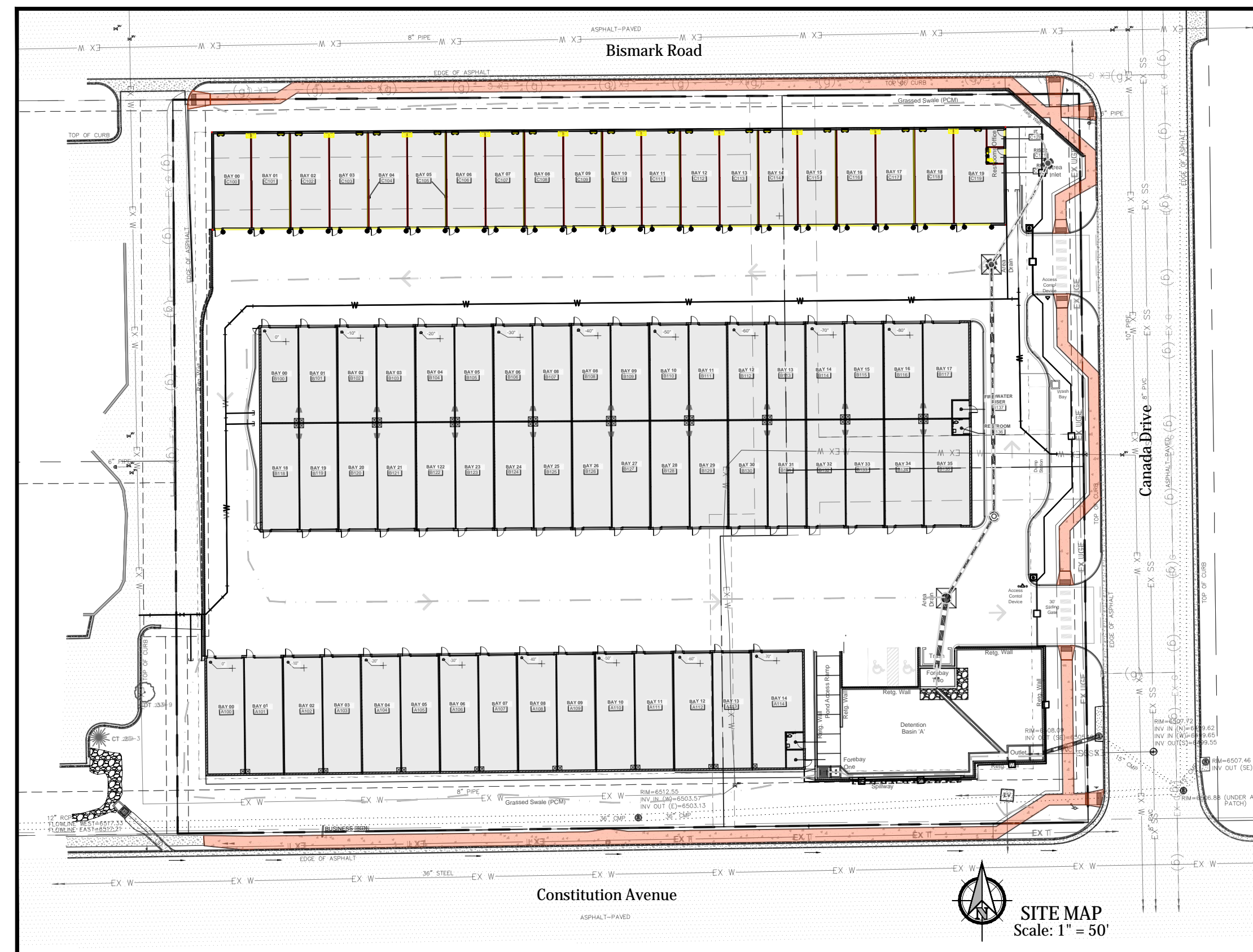
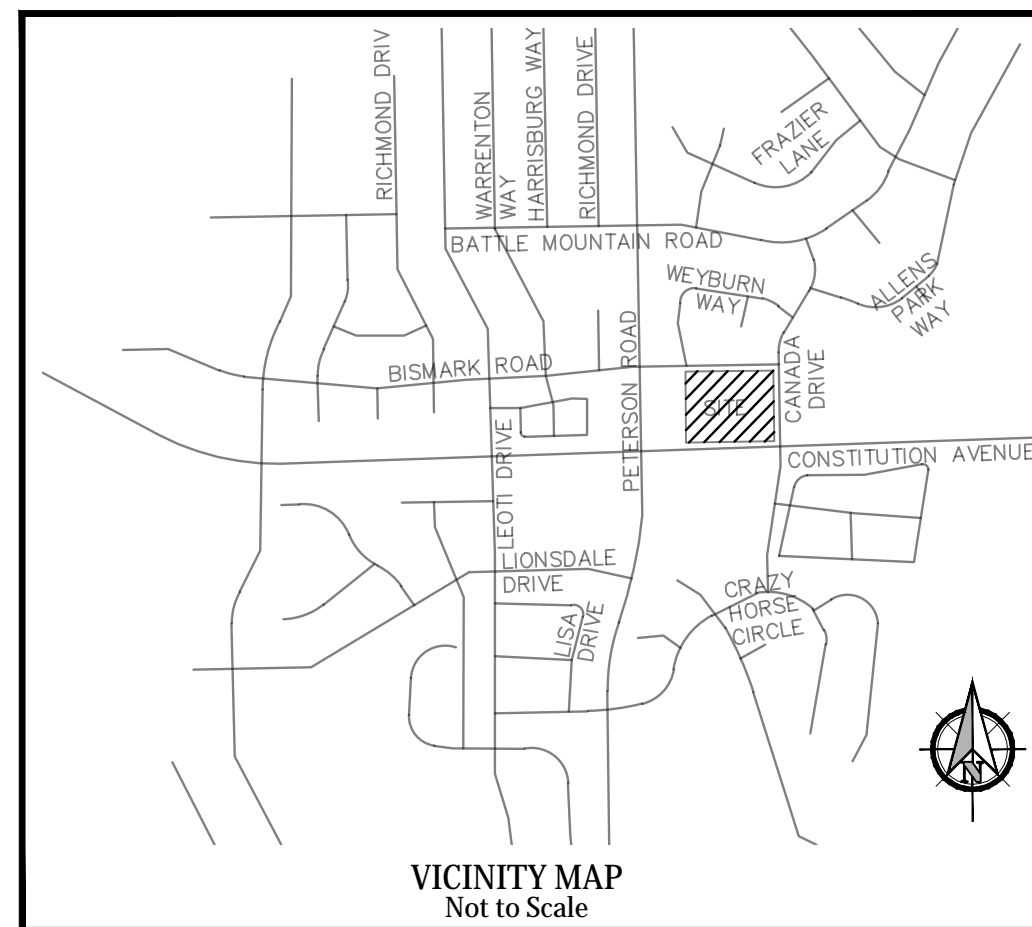
Tax Schedule No.: 55102-00-003

GENERAL UTILITY NOTES:

- All water and wastewater work shall comply with the Colorado Springs Utilities Line Extensions & Service Standards, current edition.
- The Contractor and survey crew shall verify elevations of any existing sanitary sewer, storm sewer, water lines and manholes to be tied to prior to construction or staking of pipe.
- The Contractor shall be responsible for recording As-Built information on a set of record drawings.
- The Contractor shall contact all appropriate utility companies, Colorado Springs Utilities and the City prior to the beginning of any construction. Contractor shall be responsible for locating any existing utility (including depths) which are within the proposed construction area. All existing utilities shall be protected from damage by the contractor. Damaged utilities shall be repaired by the Contractor at his own expense.
- The locations of existing utilities are based upon the best available information, are shown in an approximate way only, and have not been independently verified by the Owner or its representative. The Contractor shall determine the exact location of all existing utilities before commencing work, and agrees to be fully responsible for any and all damages which might be occasioned by the Contractor's failure to exactly locate and preserve any and all utilities.
- Pipe backfilling shall not occur until pipe has been inspected.
- Begin laying pipe at the lowest point, with the bells uphill. Lay the pipe in accordance with the manufacturers specifications and recommendations. Lay pipe true to line and grade as shown on the drawings.
- All sanitary sewer pipe lengths and slopes are figured from center of manhole, bends, wye and the inside wall of inlets. Pipe lengths are given as a horizontal length and are approximate.
- All sanitary sewer pipe bedding to be Class B bedding, unless otherwise noted.
- Manhole rim elevations are approximate only and are not to be taken as final elevations. Ring and cover to be set in centered concrete rings with ram-neck for adjustment to match final pavement elevation.
- Where appropriate, neatly saw cut all existing concrete and asphalt. The placement of additional paving shall be done to a neat work line, saw cutting a minimum of one (1) foot. Saw cutting will not be paid for separately but will be considered incidental to the work. Repair/replace all disturbed existing items with like materials and thicknesses. Any asphalt removed is to be replaced to meet the specifications of the Colorado Dept. of Transportation. Existing concrete pavement shall be scored then broken at joint to create a rough surface for the construction joint.
- All asphalt work requiring patching will be performed to a neat work line. The existing asphalt shall be saw cut. All asphalt patch work shall be at least 2' wide after the completion of work. New curb can be placed flush with the existing asphalt if it is to a neat work line.
- With notification of the respective owner, adjust rinds of all cleanouts, manholes and valve covers within pavement to 1/4 to 1/2 inch below the finished grade and cross slope prior to final lift paving and adjust to match finish grade in unpaved areas.
- BENCHMARK, Colorado Springs Utilities Facilities Information Management System (FIMS) Monument PW01, FIMS Monument PW01 is a 2-inch diameter aluminum FIMS cap stamped "CSU FIMS Control PW01" on the north side of the concrete base of the 6th light pole south of Dublin Boulevard in the median of North Powers Boulevard (light pole number D275B), in line with the centerline of Templeton Gap Road extended from the southwest. Elevation=6795.579 (National Geodetic Vertical Datum, 1929 and the 1986 supplementary adjustment).

Note:
1. Minimum Radius Shown For Water Main = 290'
Per WWSO Specifications and El Paso County ECM 4.3.6.a.1&2. The Minimum Cover for Water Main & Services and Sanitary Sewer Mains & Services is 5 feet.

- Streetlight locations are pending and are not a part of this submittal.
- Gas - All Gas Mains and Services are to be installed per the City of Colorado Springs.
- 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.



SHEET INDEX

C-400	Water Plan - Cover Sheet
C-401	Fire Station #25 Fire Line Plan and Profile
C-402	Commercial Utility Service Plan - Cover Sheet
C-403	Commercial Utility Service Plan

PRE-EXCAVATION CHECKLIST

- GAS AND OTHER UTILITY LINES OF RECORD SHOWN ON PLANS
- UTILITIES CENTRAL LOCATING CALLED AT LEAST 2 BUSINESS DAYS AHEAD.
- UTILITIES LOCATED AND MARKED.
- EMPLOYEES BRIEFED ON MARKING AND COLOR CODES.
- EMPLOYEES TRAINED ON EXCAVATION AND SAFETY PROCEDURES FOR NATURAL GAS LINES.
- WHEN EXCAVATION APPROACHES GAS LINES, EMPLOYEES EXPOSE LINES BY CAREFUL PROBING AND HAND DIGGING.

*A.G.A./P.W.A. STANDARD UTILITY MARKING COLOR CODE

NATURAL GAS	YELLOW	WATER	BLUE
ELECTRIC	RED	WASTEWATER	GREEN

BUILDING DATA:

BUILDING: My Garage @ Northcrest Center
LARGEST BUILDING SQUARE FOOTAGE: 31,265 s.f.
REQ. MIN. NUMBER HYDRANTS: 2
MAX. HOSE LAY DIST.: 250'
AREA SEPARATION/FIRE WALLS: Yes

TYPE OF CONSTRUCTION: V-B
REQ. GPM FIRE FLOW: (50% REDUCTION): 1,500 gpm
AVG. DIST. BETWEEN HYD.: 500'
BUILDING SPRINKLED: Yes
Tax Schedule No.: xxxxx-xx-xxxx

FIRE FLOW:

According to calculations reviewed by Colorado Springs Utilities, the theoretical available fire flow at each hydrant node under maximum day demand conditions with a 20psi residual is as follows: (actual fire flow may vary due to various parameters):

HYDRANT NODE	FIRE FLOW (GPM)	PSI @ MDD
Node __ (CMD)	_____ gpm	_____ psi
Node __ (CMD)	_____ gpm	_____ psi

CSFD ACCEPTANCE

All fire hydrants shall be installed according to Colorado Springs Utilities Water Line Extension and Service Standards.
The number of hydrants and hydrant locations as shown on this water plan are correct and adequate to satisfy the fire protection requirements as specified by the City of Colorado Springs Fire Department.
Signed: _____ Date: _____
CSFD, Division of the Fire Marshal
CSFD Plan Review No.: FCS-C-FH-_____

NOTICE OF FIRE SERVICE LINE INTEGRITY TEST:

Prior to acceptance of any fire service line by the Colorado Springs Fire Department:
All fire service lines shall be hydrostatically tested and flushed per Colorado Springs Fire Department requirements.
All acceptance testing of water supply systems for fire protection shall be witnessed by an approved Colorado Springs Fire Department representative.

PRESSURE TEST

Pressurize the fire service line from the point of connection at the main to the point of connection to the sprinkler system at 200 psi, or 50 psi above static pressure for a minimum of 2 hours. This test is best performed before completely backfilling so that all joints are exposed.

FLUSH TEST

The fire service line shall be flushed at per NFPA 24 "Standard for the Installation of Private Fire Service Mains and Their Appurtenances"

OWNER/DEVELOPER PLAN APPROVAL

The undersigned Owner/Developer agrees that they shall, at their expense, be solely responsible for 1) the installation of the proposed utility infrastructure in accordance with these plans, and 2) all damages and defects arising from, or related to, the installation, maintenance or operation of the Public utility infrastructure from the date of preliminary acceptance for a period of two years, or until final acceptance, whichever is later.
The undersigned understands that all private utility infrastructure, as indicated on these plans, shall remain the property of the Owner and shall be maintained by the Owner, as required by Colorado Springs Utilities' Line Extension and Service Standards.

g Public Water Main Proposed c Public Wastewater Main Proposed c Private Water Service Line (-4") and/or Private Wastewater Service Line (-8")
g Private Water Main Proposed c Private Wastewater Main Proposed

Signed: _____ Date: _____
Owner/Developer (Print Name)
DBA: _____
Address: _____
Phone: _____
Email: _____

For and on Behalf of Kiowa Engineering Corporation
Date: 8/2/2024

COLORADO SPRINGS UTILITIES WATER MAIN DESIGN APPROVAL

PROJECT NUMBER: ____2024-W____
WORK ORDER NUMBER: _____
CSU SHEET ____ OF ____

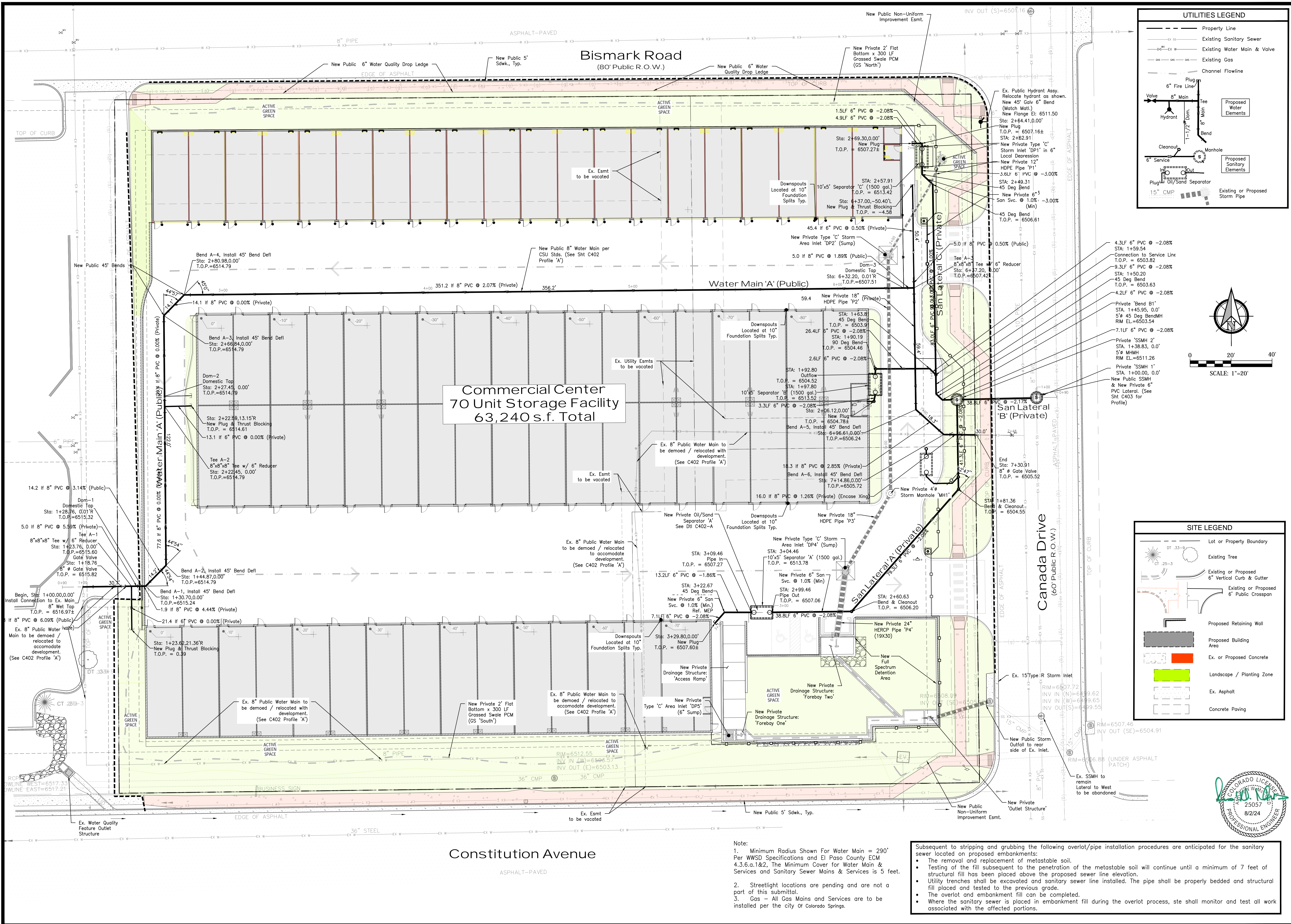
APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE ABOVE AND RESUBMITAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.

My Garage @ Northcrest
Water Plan
Cover Sheet
El Paso County, Colorado

Project No.:	23049
Date:	08/02/2024
Design:	MJK
Drawn:	MJK
Check:	AMcC
Revisions:	

Sheet
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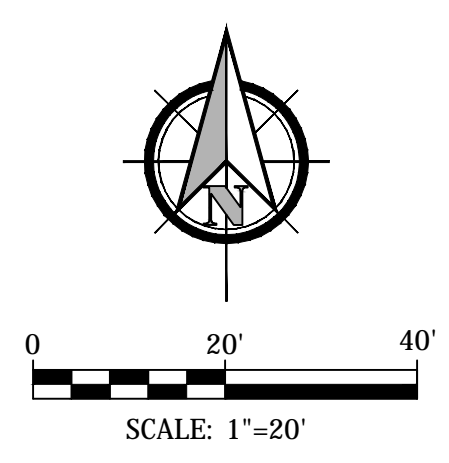


UTILITIES LEGEND

- Property Line
- Existing Sanitary Sewer
- Existing Water Main & Valve
- Existing Gas
- Channel Flowline
- Proposed Water Elements
- Proposed Sanitary Elements
- Existing or Proposed Storm Pipe

SITE LEGEND

- Lot or Property Boundary
- Existing Tree
- Existing or Proposed 6" Vertical Curb & Gutter
- Existing or Proposed 6" Public Crosspan
- Proposed Retaining Wall
- Proposed Building Area
- Ex. or Proposed Concrete
- Landscape / Planting Zone
- Ex. Asphalt
- Concrete Paving



Kiowa

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

My Garage @ Northcrest

Utility Plan

Water & Sanitary Sewer

El Paso County, Colorado

Project No.:	23049
Date:	08/02/2024
Design:	MJK
Drawn:	MJK
Check:	AMC
Revisions:	

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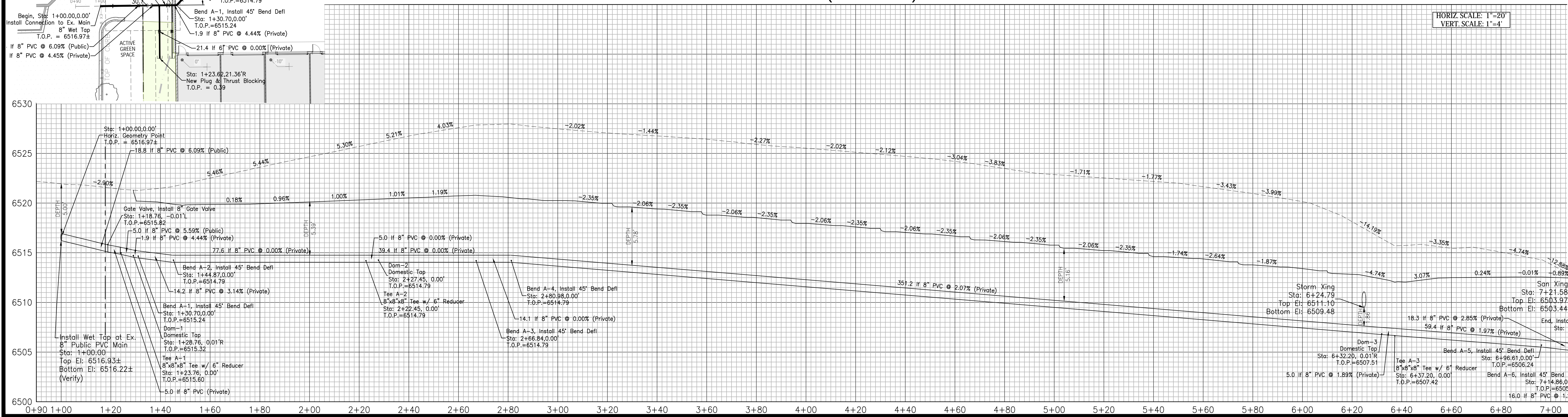
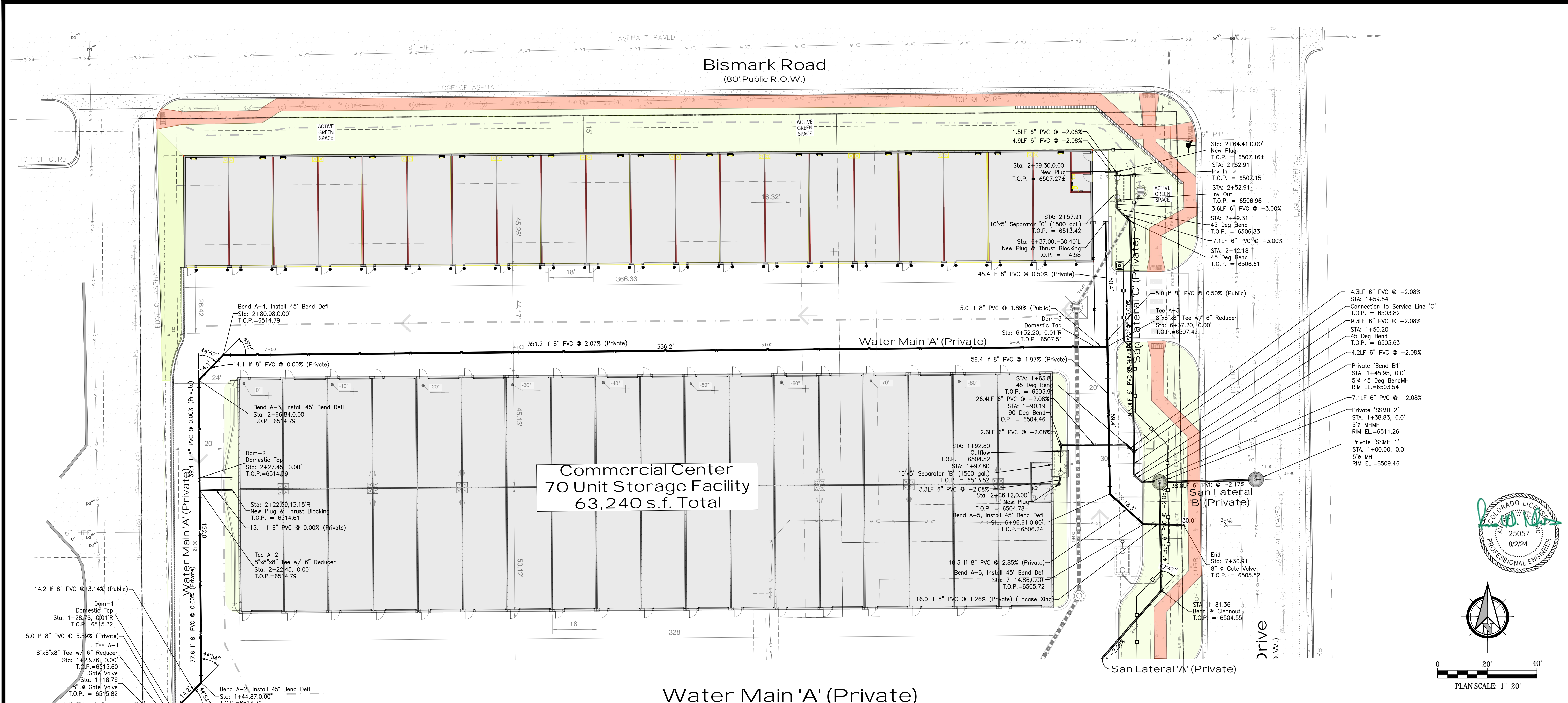
C401

15 of 21 Sheets



Note:
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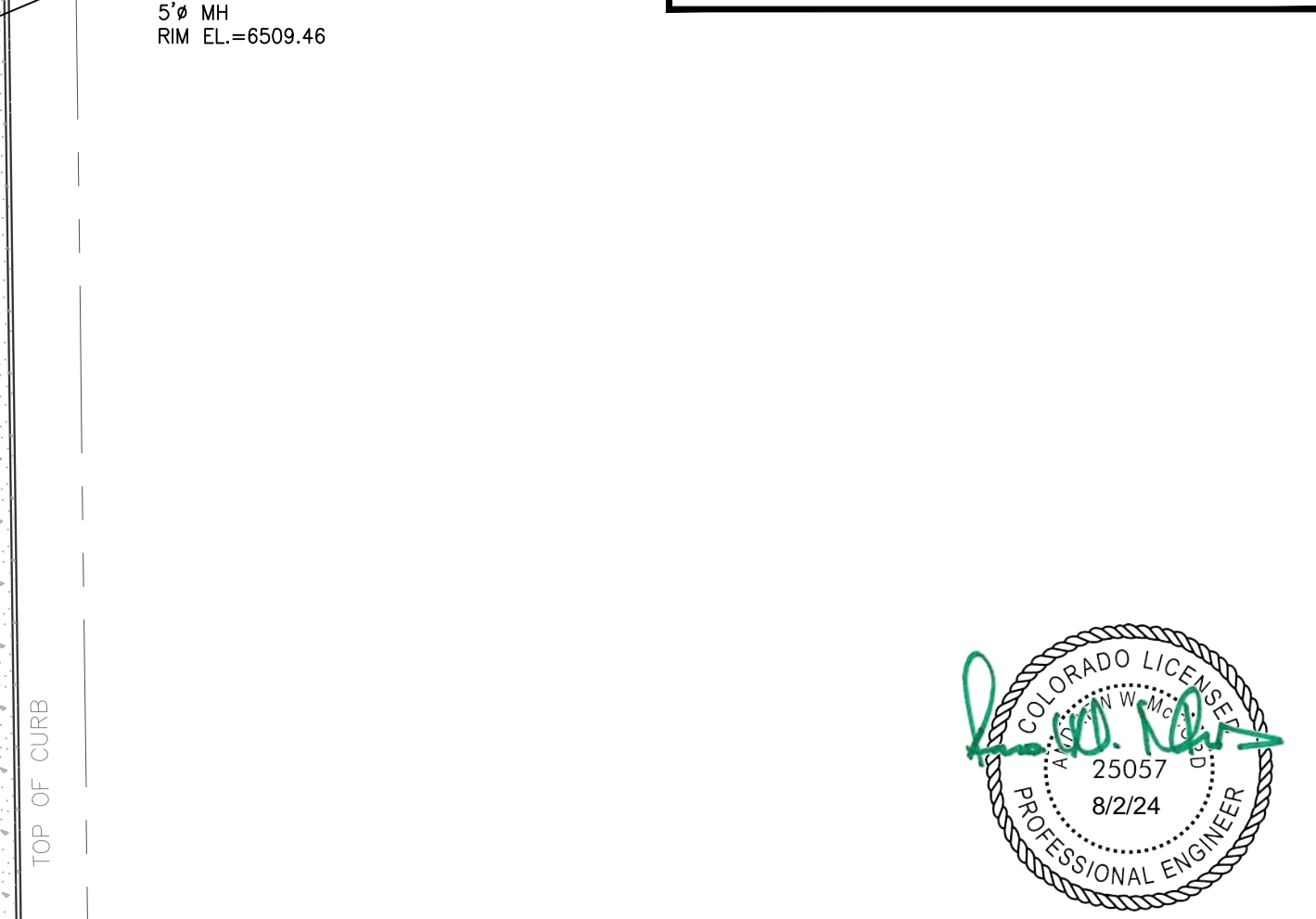
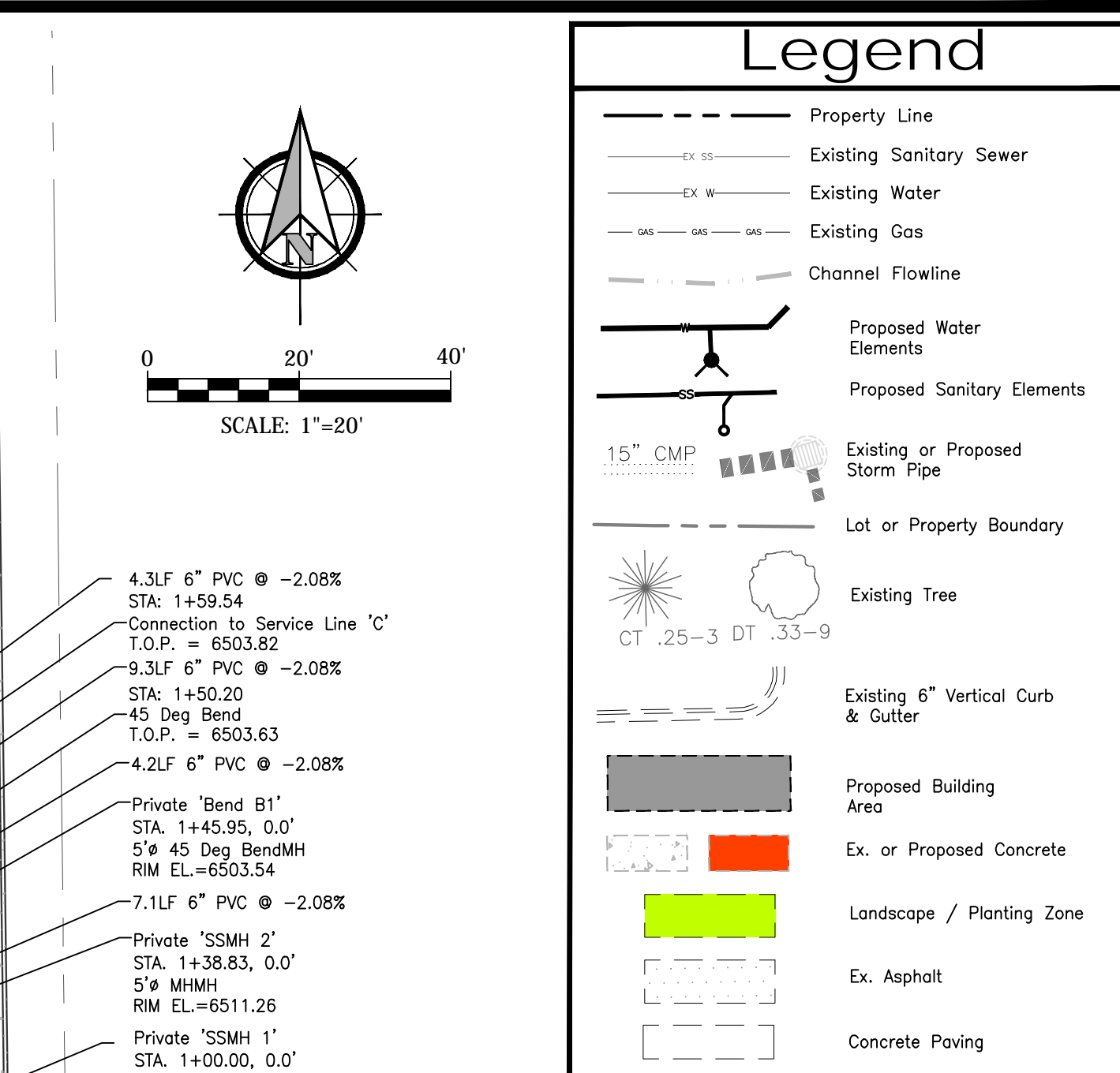
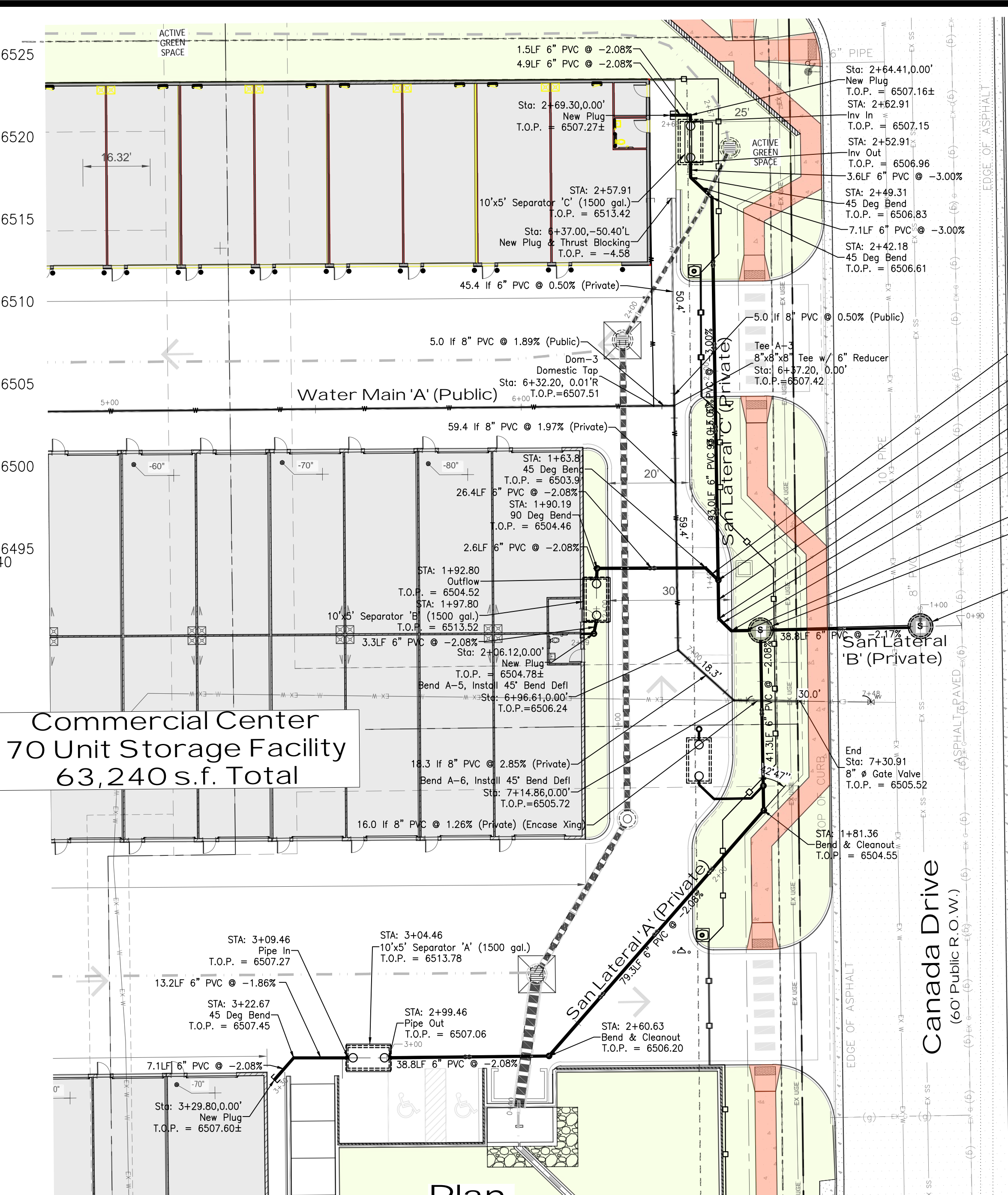
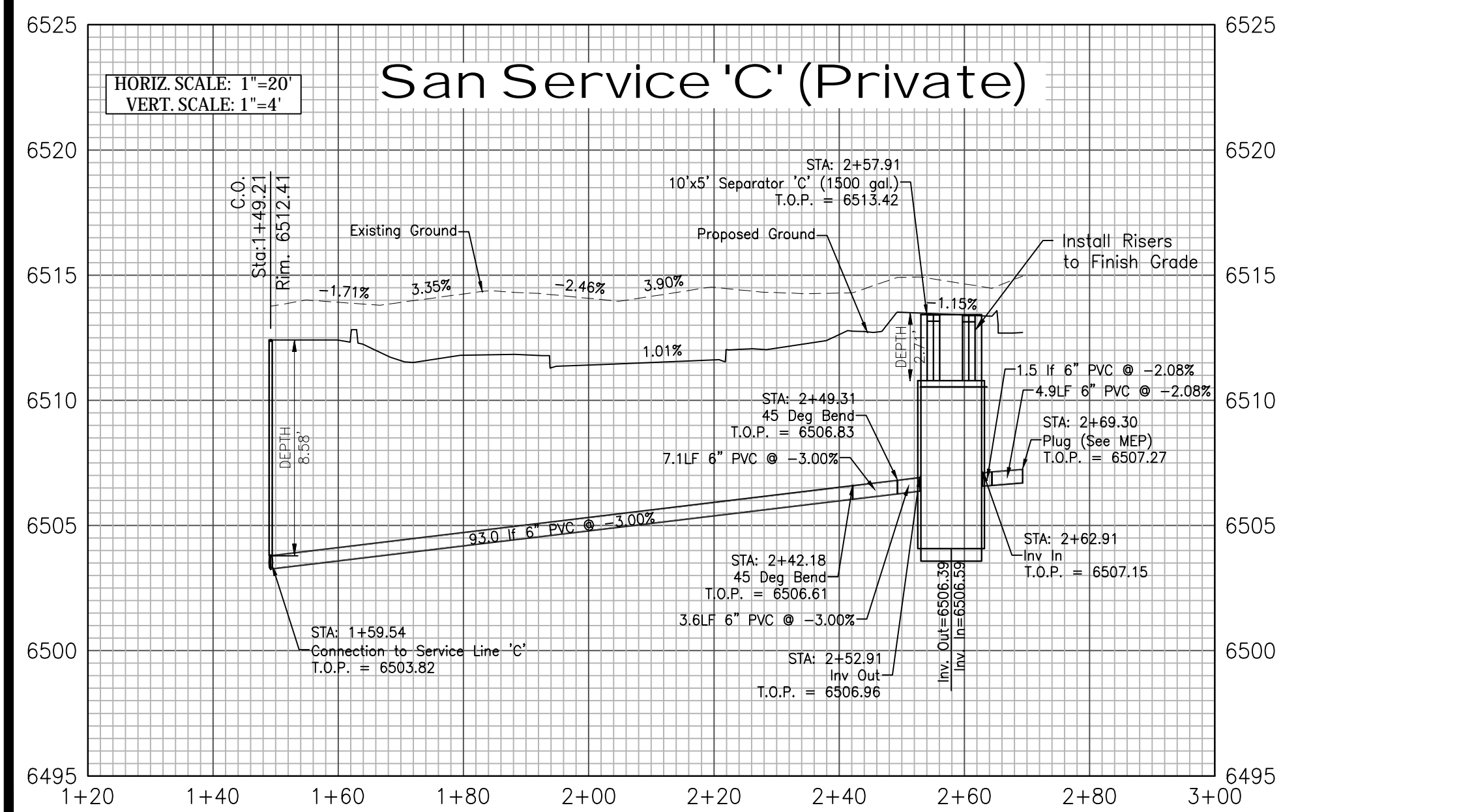
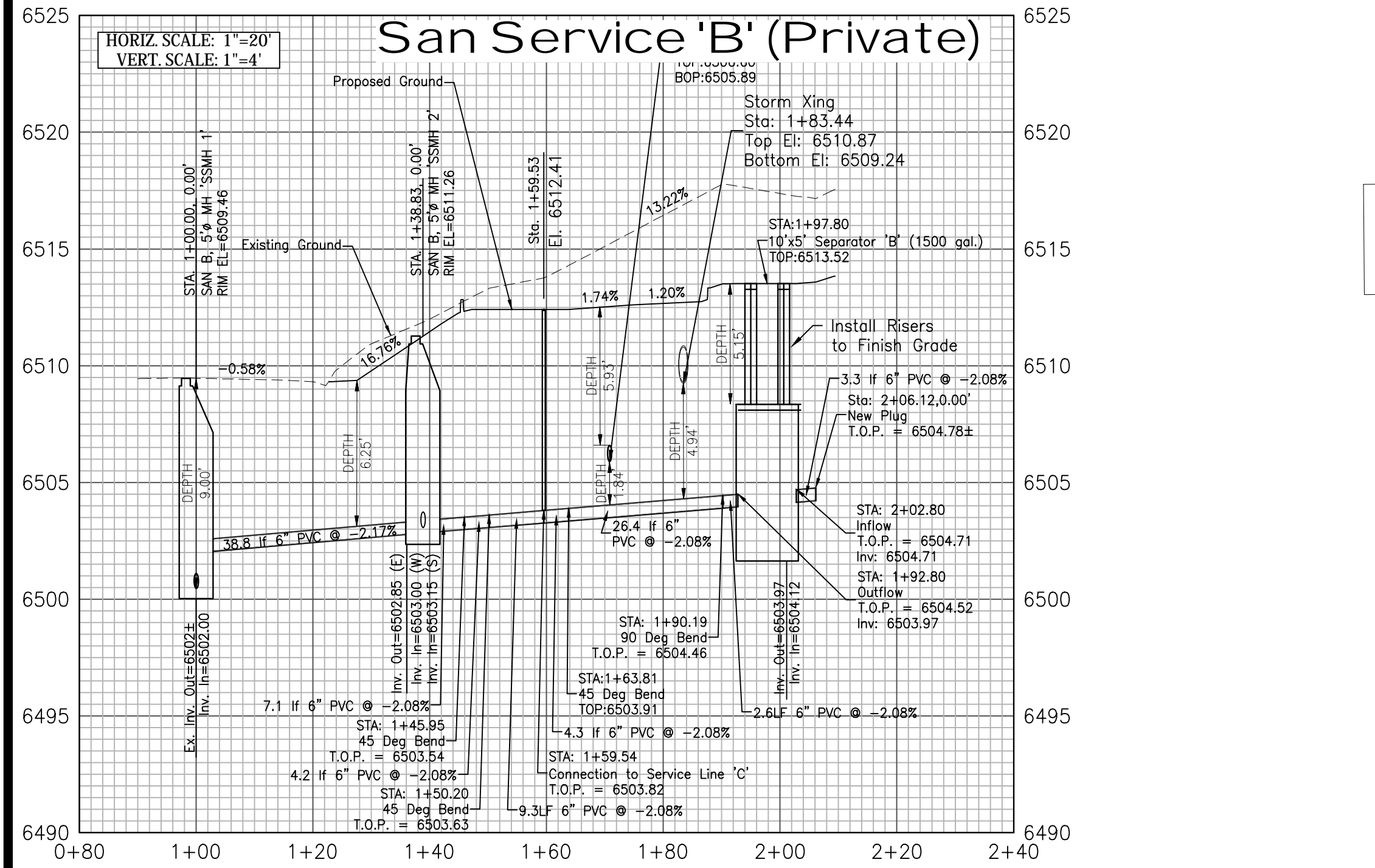
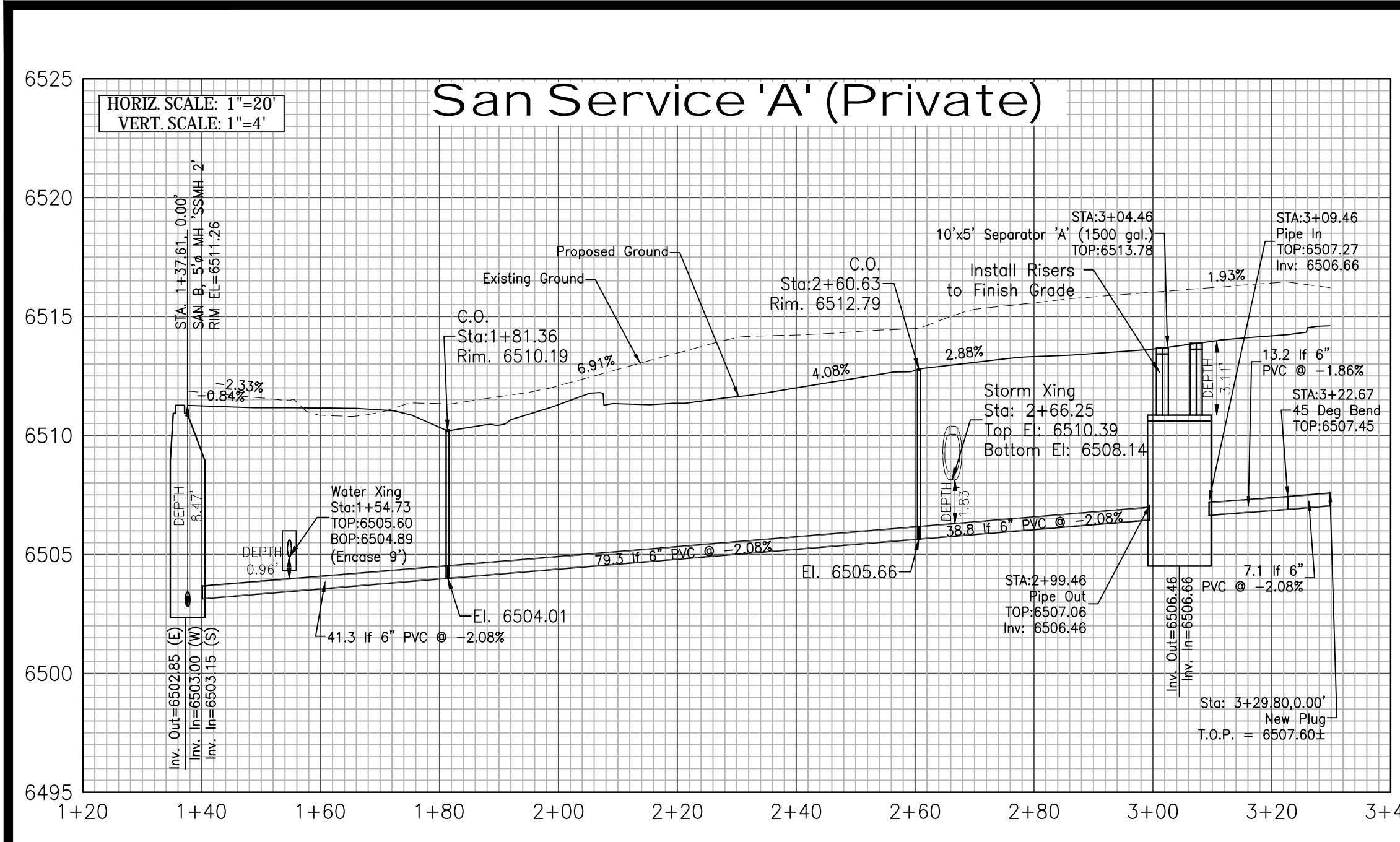
Subsequent to stripping and grubbing the following overlot/pipe installation procedures are anticipated for the sanitary sewer located on proposed embankments:
 • The removal and replacement of metastable soil.
 • Testing of the fill subsequent to the penetration of the metastable soil will continue 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, the contractor shall monitor and test all work associated with the affected portions.



My Garage @ Northcrest
Utility Plan - Water Main 'A'
El Paso County, Colorado

Project No.:	23049
Date:	08/02/2024
Design:	MJK
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Revisions:	

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C402
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Oil/Sand Separator Notes

Inspect and log your sand/oil separator inspections monthly to assure that it is pumped as needed to keep prohibited wastes out of the City's wastewater system.

Immediately following pumping, make sure the "tee" on the outlet pipe of the sand/oil separator is properly secured to the wall, to make sure that the tank is not just being bypassed. The primary purpose of the "tee" is to trap floating materials and keep them from exiting the tank.

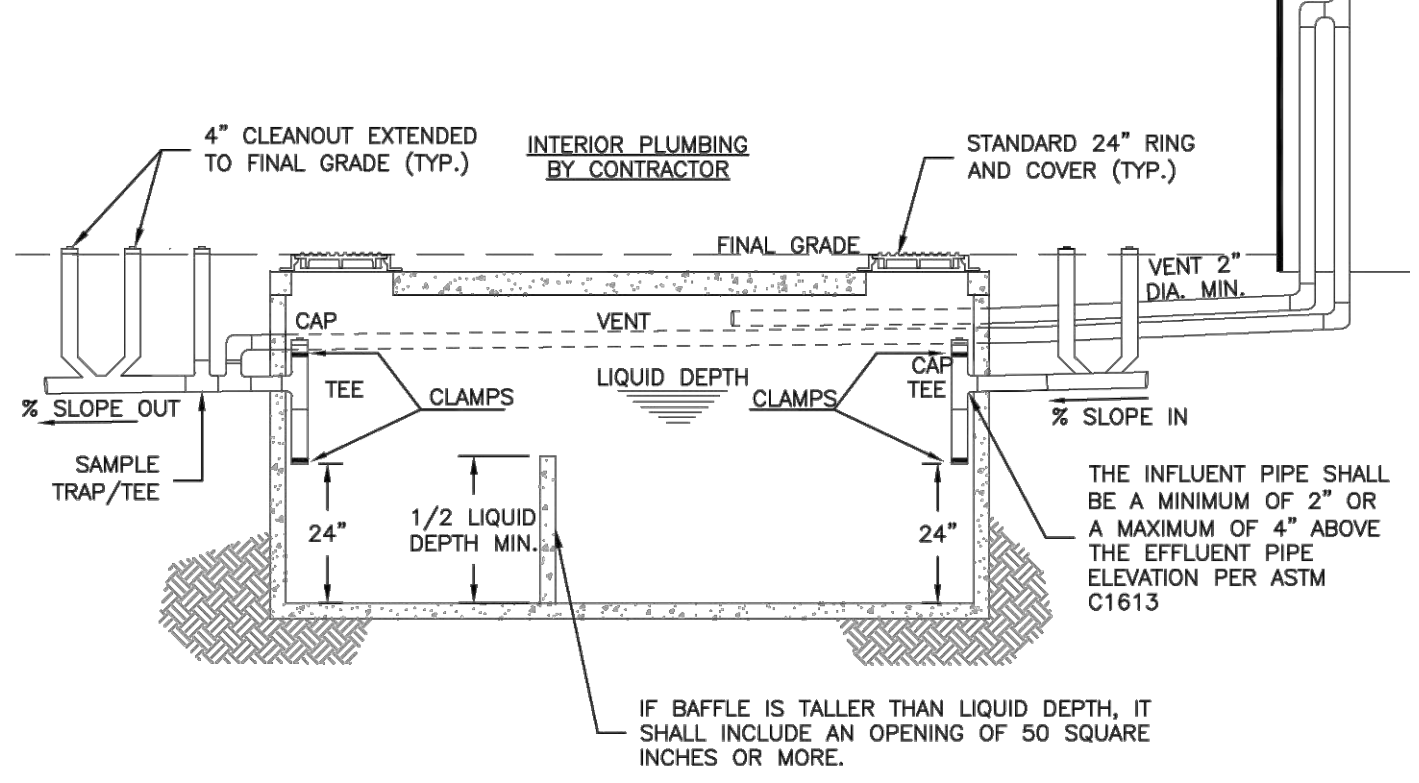
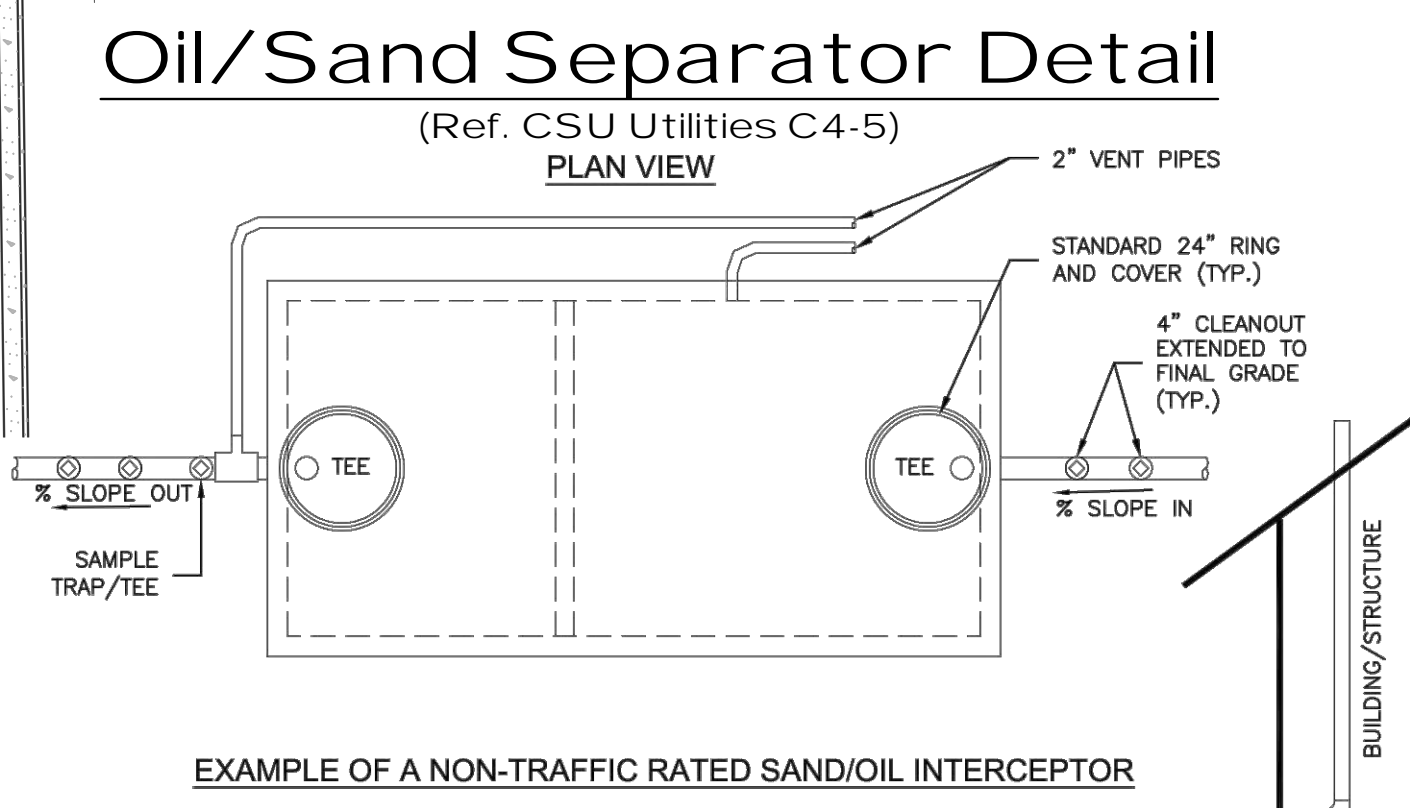
All cleanup of sand/oil separators must be performed by a contracted company. This company must be a reliable and trustworthy hauler authorized to pump out sand/oil separators and permitted to properly dispose of the waste.

The contracted company will be responsible for the collection and analysis of oily liquid from the separator. Typically this involves using on-site qualitative procedures, and when those indicate that the tested materials may be classified as hazardous waste, a verification sample will be collected and a verification test shall be performed by an accredited laboratory. Avoid using any chemicals that have hazardous characteristics.

The separator must be cleaned when the total accumulation of surface oil and settled solids reaches twenty-five percent (25%) of the sand/oil separator's overall liquid depth. The chart below provides you with different vertical distances from the bottom of the outlet "tee" (same as water level), to the floor of the sand/oil separator. If the bottom of your outlet "tee" is 24 inches from the floor of the interceptor then, the bottom sludge layer or the floating materials layer shall not occupy a depth within six (6) inches from the bottom of the "tee".

Don't wash spills into the sand/oil separator. Instead, use dry clean-up methods.

- Wash vehicles and engines less often.
- Filter solids out of the sand/oil separator using grates and screens over floor drains.
- Use reusable absorbent pads that absorb only floating oil and grease. Once saturated, squeeze the oil into your used oil drum.
- The use of any product that facilitates the bypass of the separator to the wastewater mainline is strictly prohibited.
- Post signage near floor drains to remind employees to follow BMP's.
- Chemicals should not be stored or used near the sand/oil separator's floor drains.
- Contain leaks or spills if it can be done so safely, report any significant spill into the sanitary sewer.



- NOTES:**
- IF THE TOP OF THE SAND & OIL INTERCEPTOR IS MORE THAN 12" BELOW FINISHED GRADE, A 4" DIAMETER MANHOLE BARREL SECTION(S) WILL BE REQUIRED TO BRING RING AND COVER TO GRADE.
 - SIZE OF SAND/OIL INTERCEPTOR TO BE DETERMINED BY THE DESIGN ENGINEER AND APPROVED BY COLORADO SPRINGS UTILITIES.
 - INTERIOR PIPING TO BE STRAPPED AT THE BOTTOM WITH GALVANIZED CLAMPS, UNISTRUT, OR EQUAL.
 - WHENEVER PRACTICAL, THE TWO VENTS SHALL BE RUN UNDER GROUND TO THE BUILDING AND UP THROUGH THE ROOF. VENTS SHALL BE LOCATED AWAY FROM BUILDING AIR INTAKE.
 - VENTS SHALL BE CONSTRUCTED ON THE OUTSIDE OF THE TANK.
 - TO BE READ IN CONJUNCTION WITH CHAPTER 2 OF THE WASTEWATER LINE EXTENSION AND SERVICE STANDARDS.
 - RING AND COVER SHALL BE PROVIDED EVERY 10' FOR SAND/OIL INTERCEPTORS LONGER THAN 20'.

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

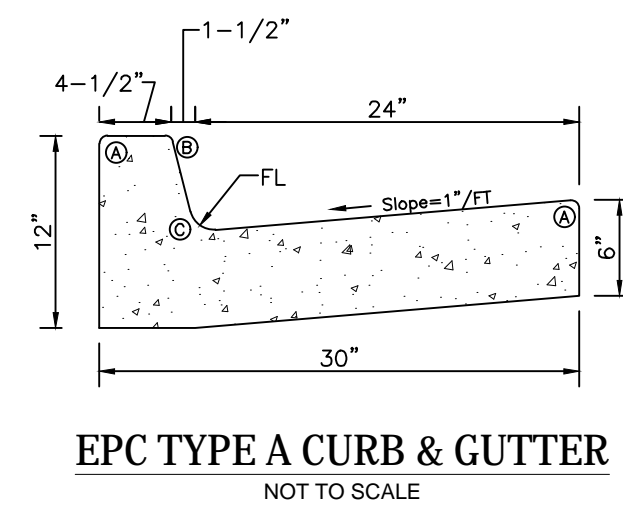
My Garage @ Northcrest
Utility Plan - Sanitary Sewer 'A thru C'
El Paso County, Colorado

Project No.:	23049
Date:	08/02/2024
Design:	MJK
Drawn:	MJK
Check:	AMcC
Revisions:	

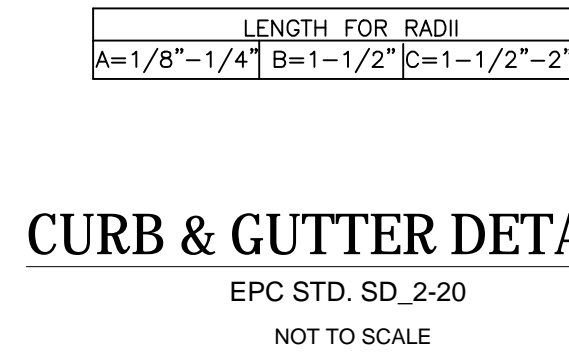
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GENERAL NOTES

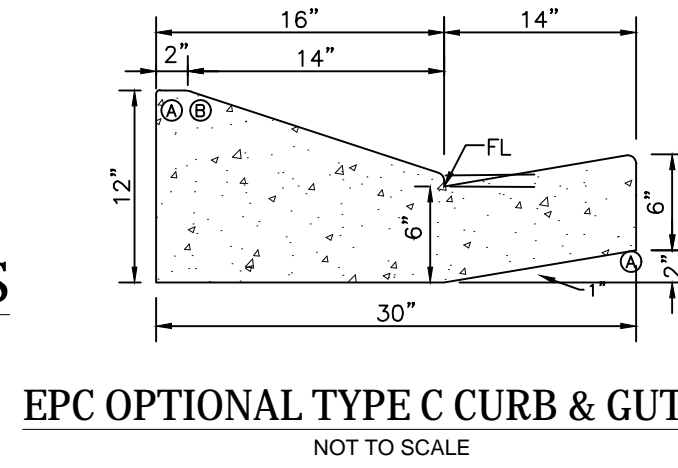
- All work shall be done in accordance with current Engineering Manual and ADA requirements.
- Contractor to notify Engineering Division inspection staff 48 hours prior to concrete placement.
- Pedestrian ramp construction shall be a minimum 4,500 psi concrete, minimum 4" thick, non-colored, non-scored, 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 palcing 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 = 4,500 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.)



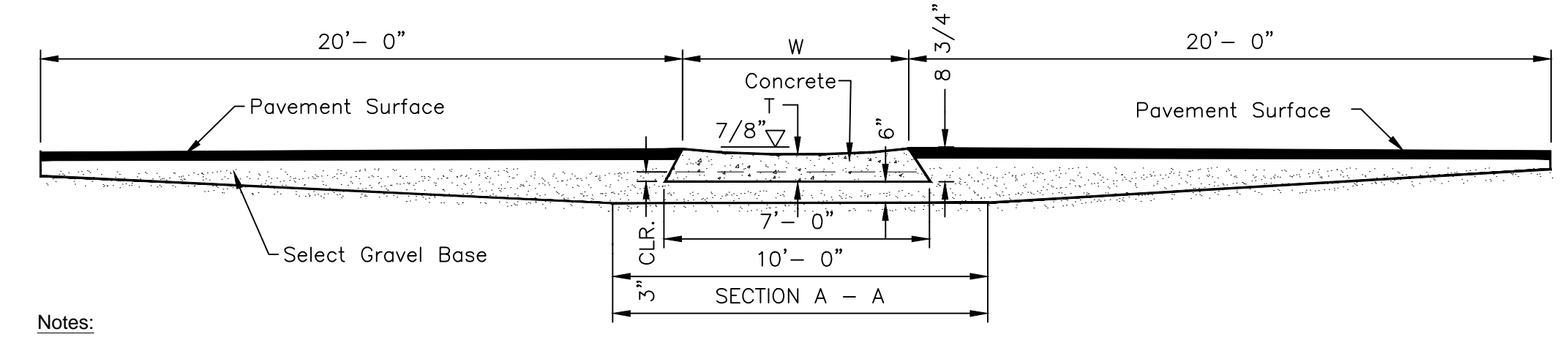
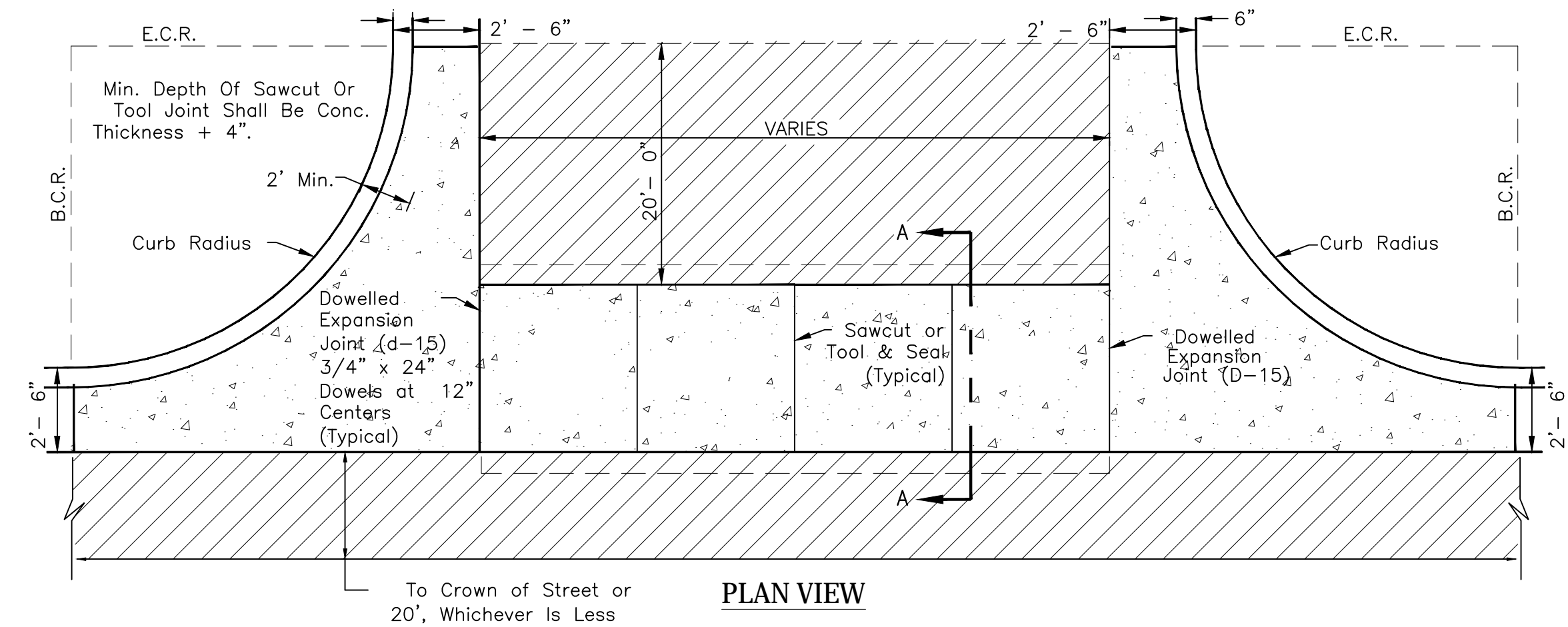
EPC TYPE A CURB & GUTTER
NOT TO SCALE



CURB & GUTTER DETAILS
EPC STD. SD. 2-20
NOT TO SCALE

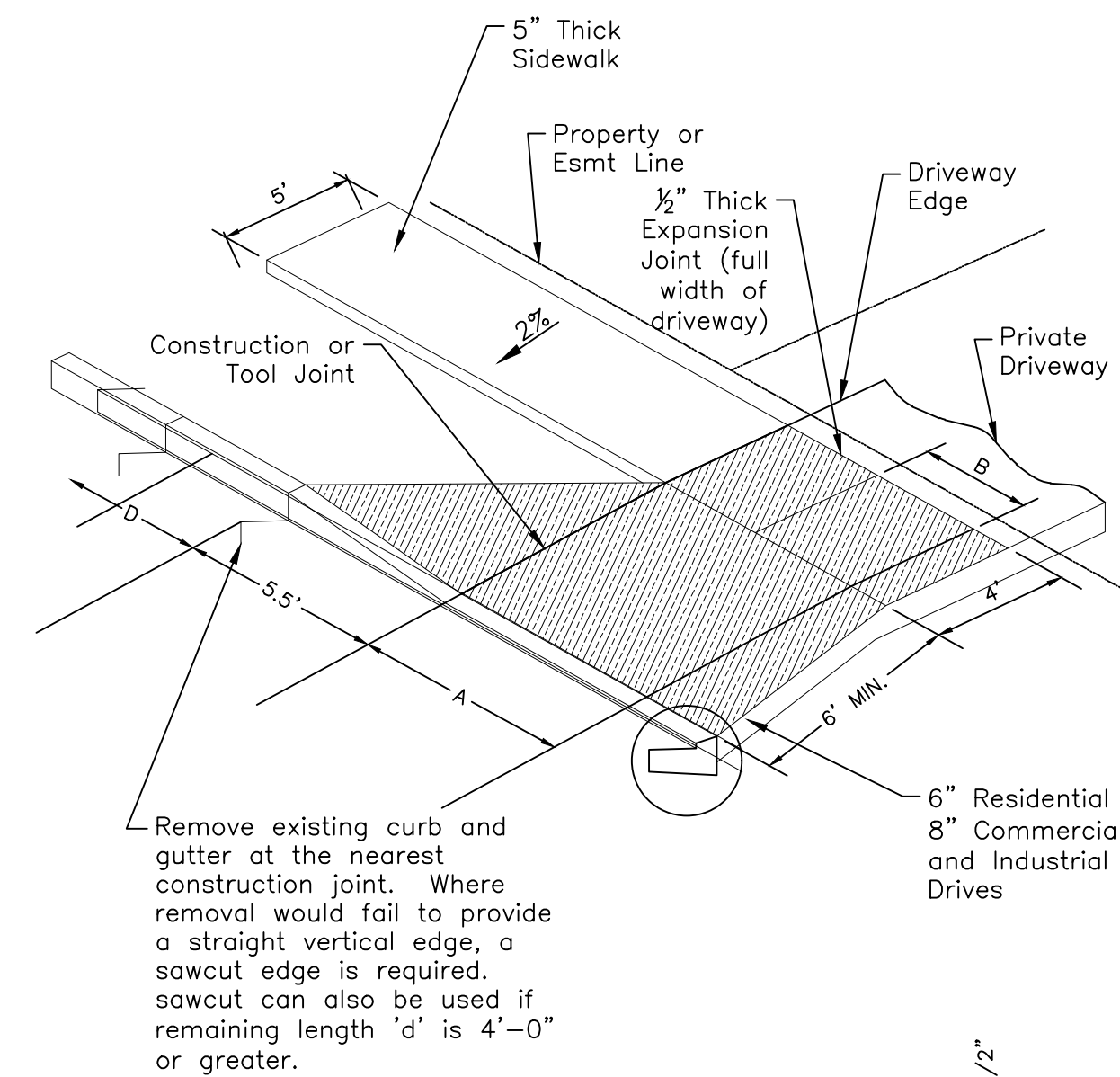


EPC OPTIONAL TYPE C CURB & GUTTER
NOT TO SCALE



- 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
 - Flow Capture Depth (Depression) shall be 7/8" for Local, 1-1/8" for Collectors, And 1-1/2" for arterial roads.
 - Flowline Grade shall be minimum 0.5%

CROSS PAN DETAIL
EPC STD. SD. 2-26
NOT TO SCALE



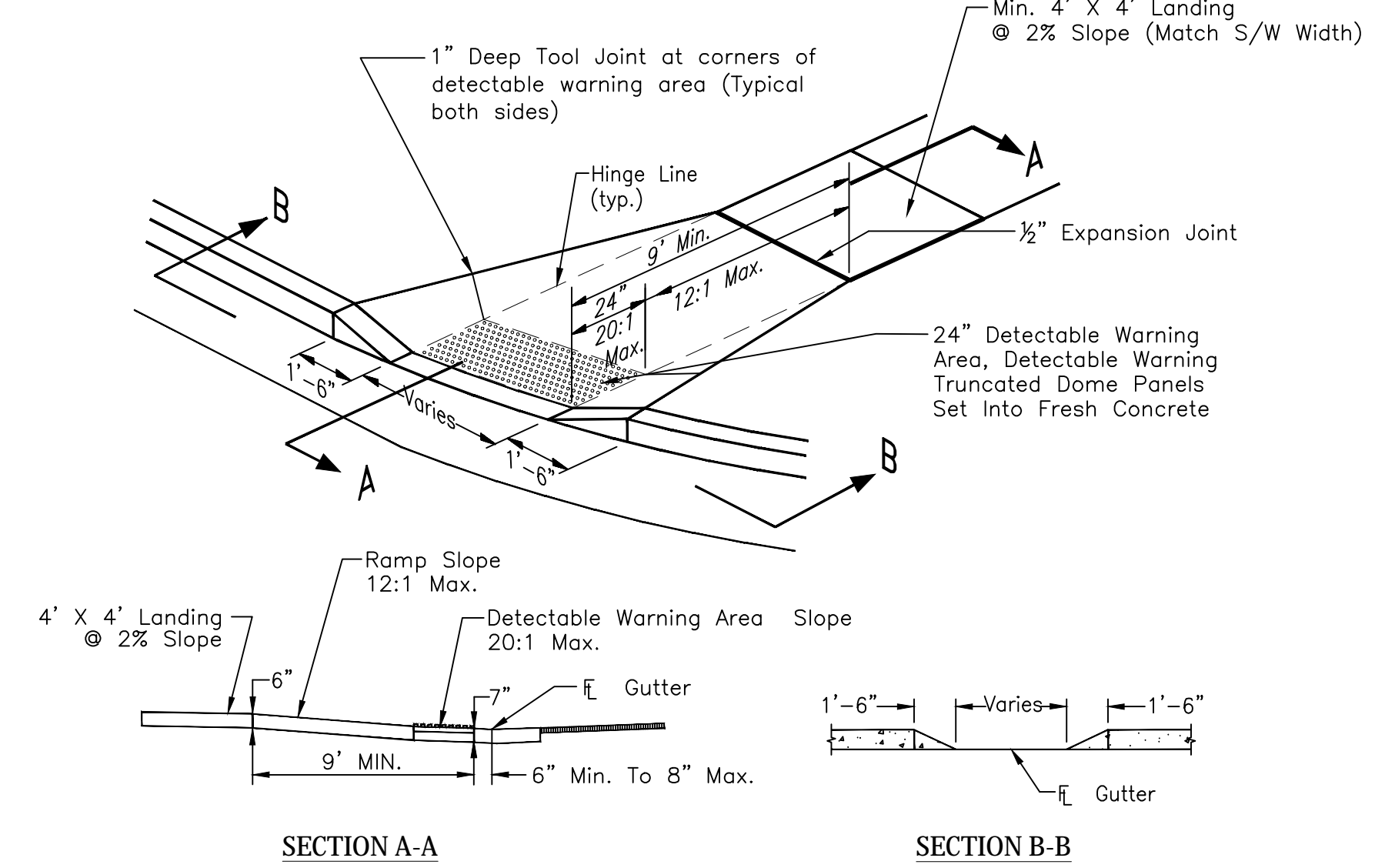
DRIVEWAY WIDTH	A	B
12'	6'	3'
14'	7'	3'-6"
16'	8'	4'
18'	9'	4'-6"
20'	10'	5'
22'	11'	5'-6"
24'	8'	4'
26'	8'-8"	4'-4"
28'	9'-4"	4'-8"
30'	10'	5'

DRIVEWAY DETAIL WITH DETACHED SIDEWALK
EPC STD. SD. 2-25
NOT TO SCALE

- Notes:**
- Provide Centerline Construction or tool joint when driveway width (edge to edge) is 14' or greater.
 - All Tool Joints shall be a minimum of 1-1/2" deep.
 - When replacing existing curb and gutter with new driveway, entire curb and gutter section shall be removed and replaced with curb and gutter (variable-curb-height) as shown. Do not break curb from gutter section.
 - Flared portion of driveway shall be poured monolithic with main rectangular portion of driveway.
 - Where there is more than one driveway on a lot, the spacing of the driveways shall meet requirements in ECM.
 - Where an existing sidewalk is in place, and its thickness is less than 6" (residential) or 8" (commercial and industrial) the sidewalk through the driveway shall be removed and replaced with Portland Cement Concrete at the required thickness.
 - When a driveway is to be taken out of service, the entire length of curb and gutter shall be removed and replaced with new curb and gutter matching the abutting sections.
 - All Provisions in the Land Development Code shall be met, with regard to minimum setback from intersection and side property lines, minimum spacing, maximum width, etc.

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.



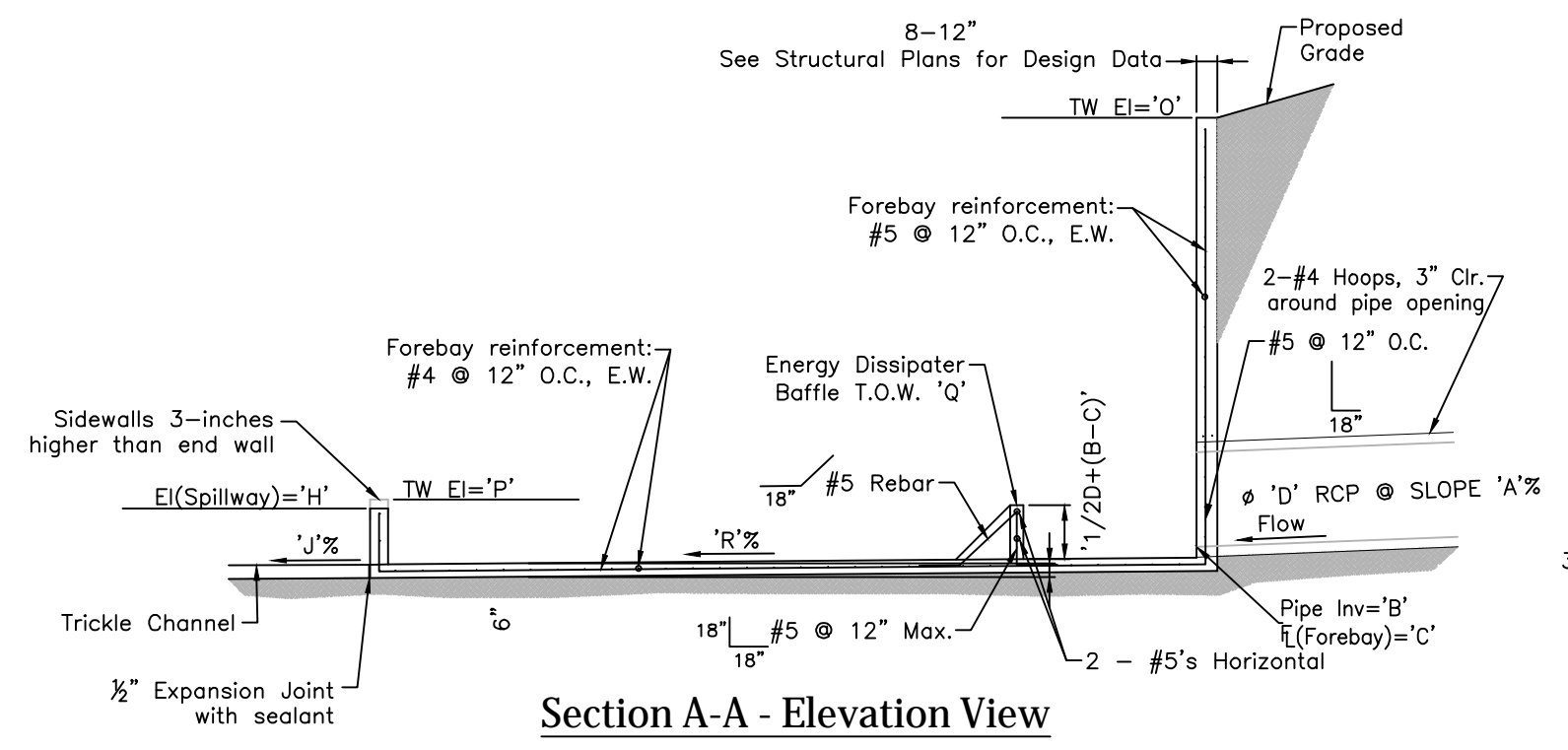
PEDESTRIAN RAMP DETAILS
EPC STD. SD. 2-40
NOT TO SCALE



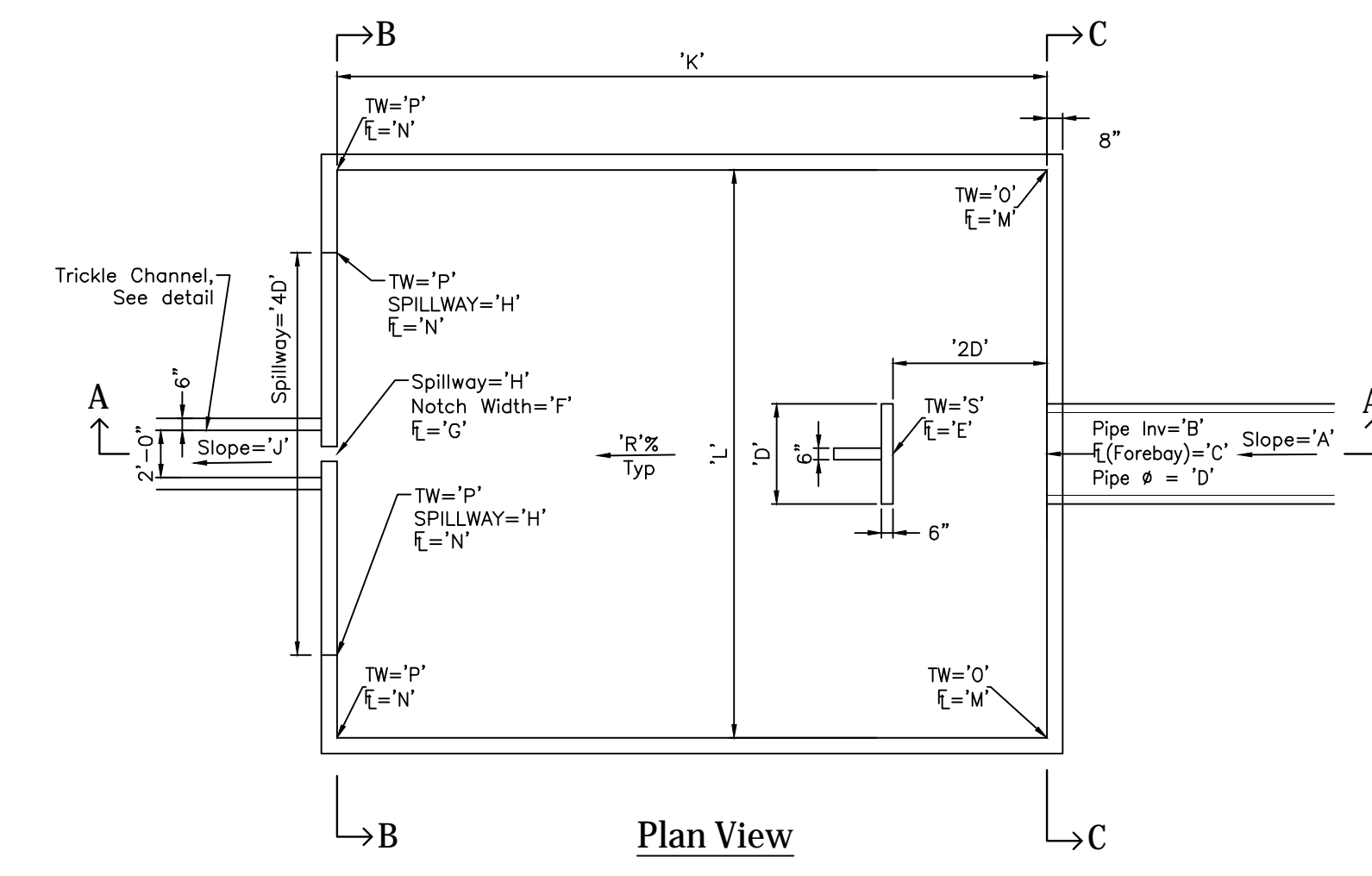
My Garage @ Northcrest
Site Detail Plan
Site Details
El Paso County, Colorado

Project No.:	23049
Date:	06/14/2024
Design:	MJK
Drawn:	MJK
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Revisions:	

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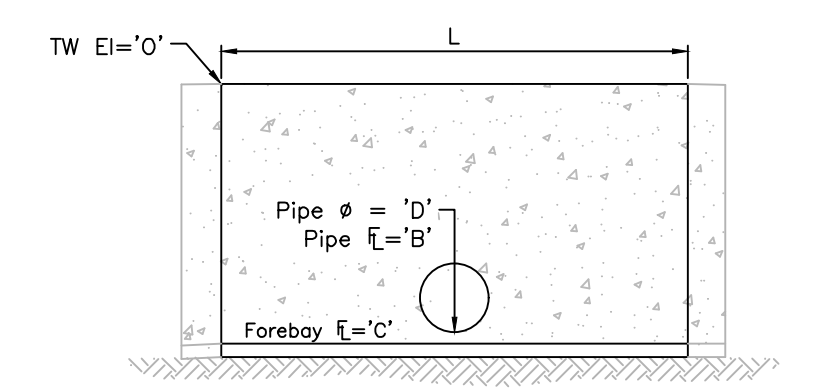


Section A-A - Elevation View

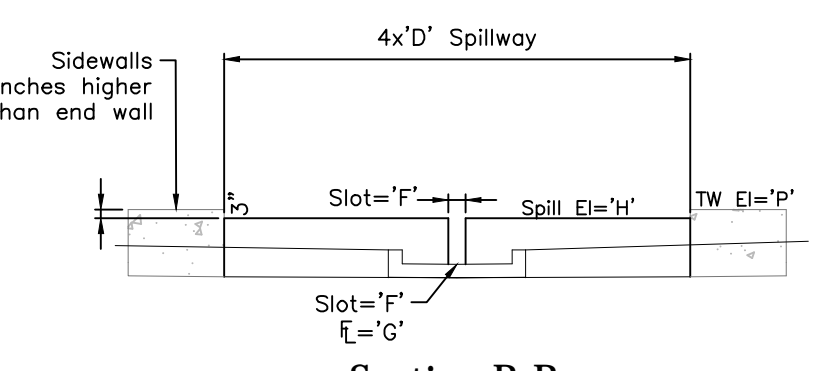


Plan View

1 Forebay Details
C602 NOT TO SCALE



Section C-C

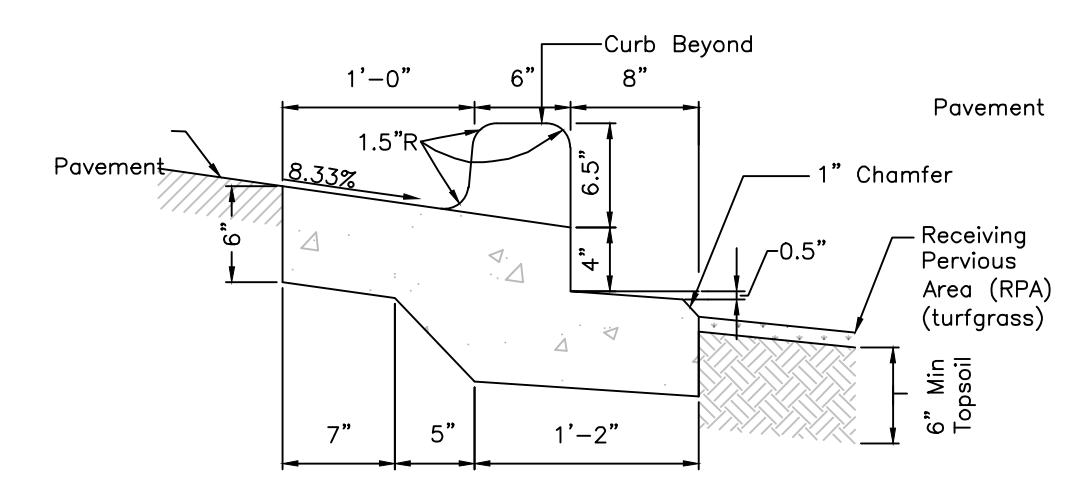


Section B-B

STRUCTURE NOTES:

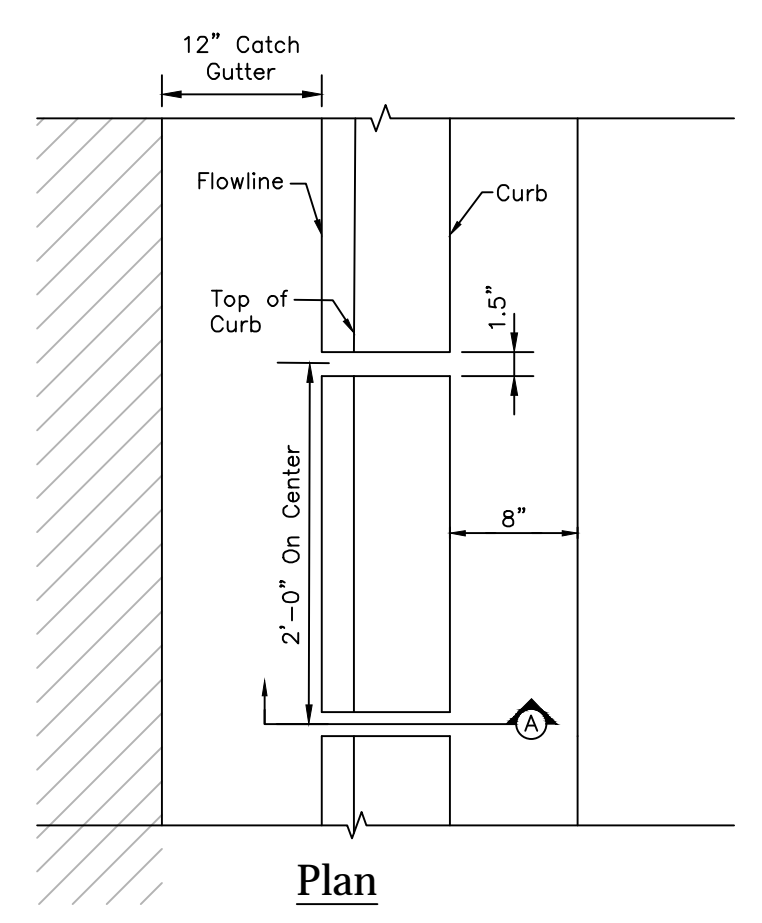
- Prior to construction, Contractor to provide Shop Drawings for all components of outlet structure, forebays and overflow wall.
- Grade 60 reinforcing steel required. See table for the minimum lap splice length for reinforcing bars. All reinforcing steel shall have 2-inch minimum clearance from edge of concrete and 3-inch min. clearance to the edge of concrete placed against soil, unless otherwise noted.
- Concrete for the outlet structure and forebays shall be C01 Class D Concrete.
- Expansion joint material shall meet AASHTO specification M-213. Expansion joint material shall be 1/2\"/>

Variable	Pre-determination	Inflow	
		One (D5)	Two (D6)
A	Pipe Slope%	2.00	0.60
B	Pipe Inv In	6510.00	6508.40
C	Forebay Inv In	6509.50	6508.07
D	Pipe Size (ft)	0.67	2.00
E	Baffle Face Inv	6509.49	6508.03
F	Slot Width	2.50	3.00
G	Forebay Inv Out	6509.46	6508.00
H	Spillway Inv	6510.21	6508.75
I	Spillway Top	6513.46	6509.00
J	Trickle Pan Slope	2.00	0.55
K	Forebay Length	4.00	8.50
L	Forebay Width	4.50	8.50
M	Toe of Wall	6509.50	6508.07
N	Toe of Wall	6509.46	6508.00
O	Top of Wall	6513.75	6513.83
P	Top of Wall	6510.46	6509.00
Q	Baffle Wall Top	6513.50	6513.58
R	Forebay Slope %	1.00	0.60

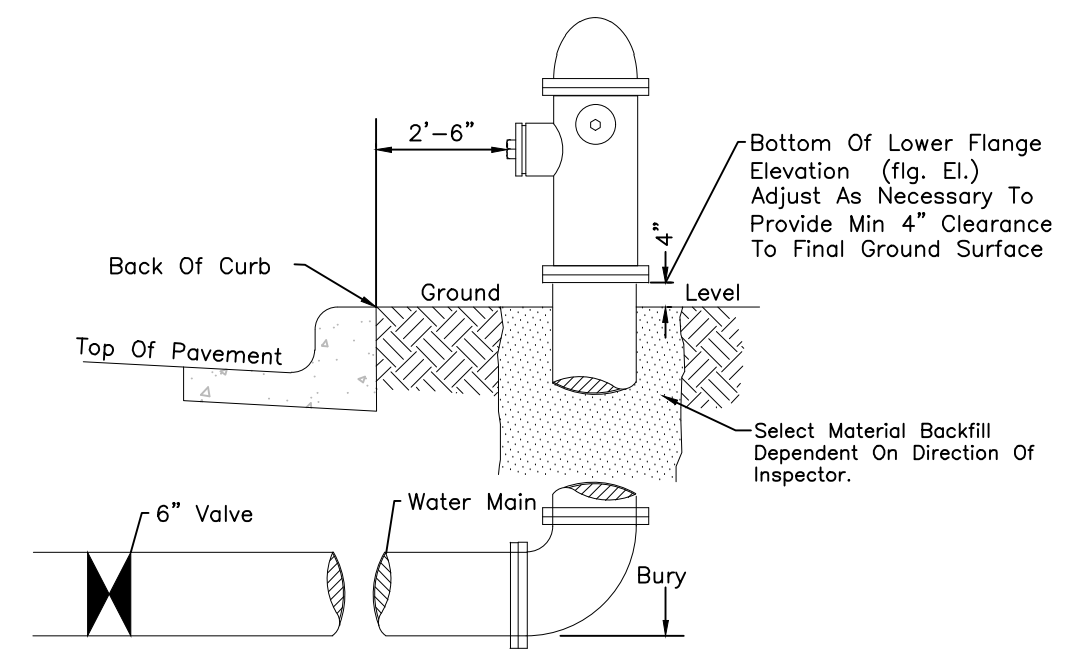


Section

2 Slotted Curb
C602 NOT TO SCALE



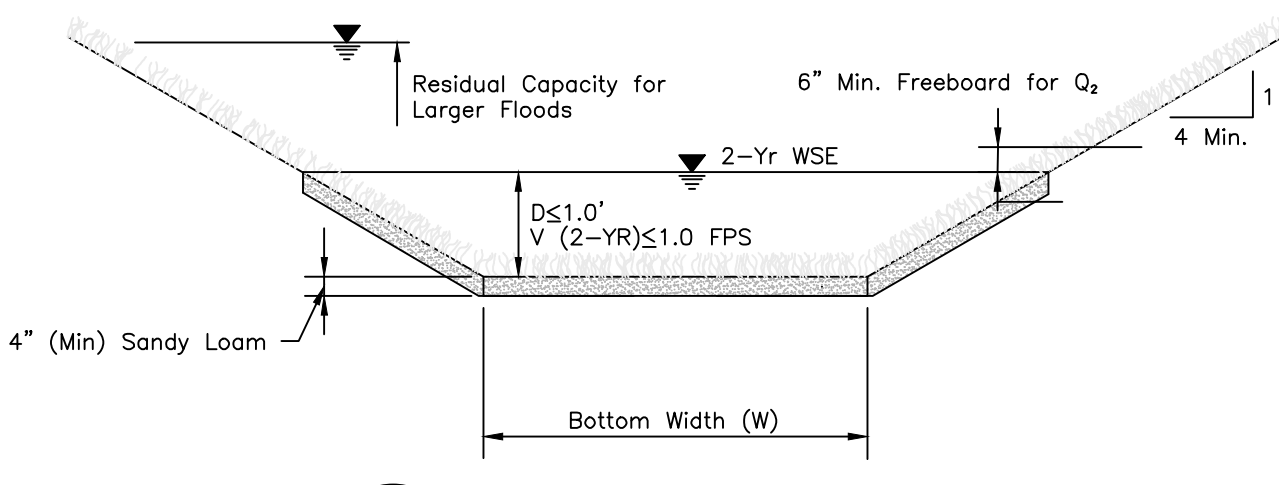
3 Slotted Curb
C602 NOT TO SCALE



Fire Hydrant Detail
NOT TO SCALE

GENERAL NOTES:

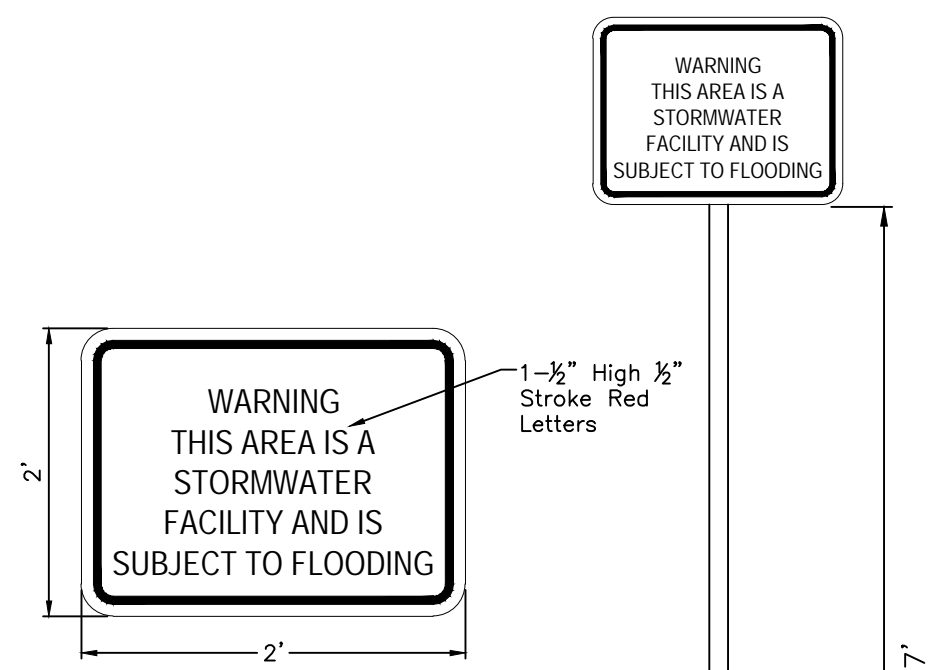
- Hydrant nozzles shall be positioned at right angles to curb. If no curb or sidewalk exists, nozzles shall be placed at right angle to street or alley.
- Hydrants shall be placed a minimum of 5.0 feet from any utility or drainage structure.
- Any hydrant being installed with conditions other than those mentioned and/or detailed below will require signed approval from the Widefield Water District and Security Fire District.
- See Site Utility Plan for hydrant locations and flange elevations.
- 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.



6 Trapezoidal Typical Swale Section
C602 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, Site Shall Monitor and Test All Work Associated with the Affected Portions.



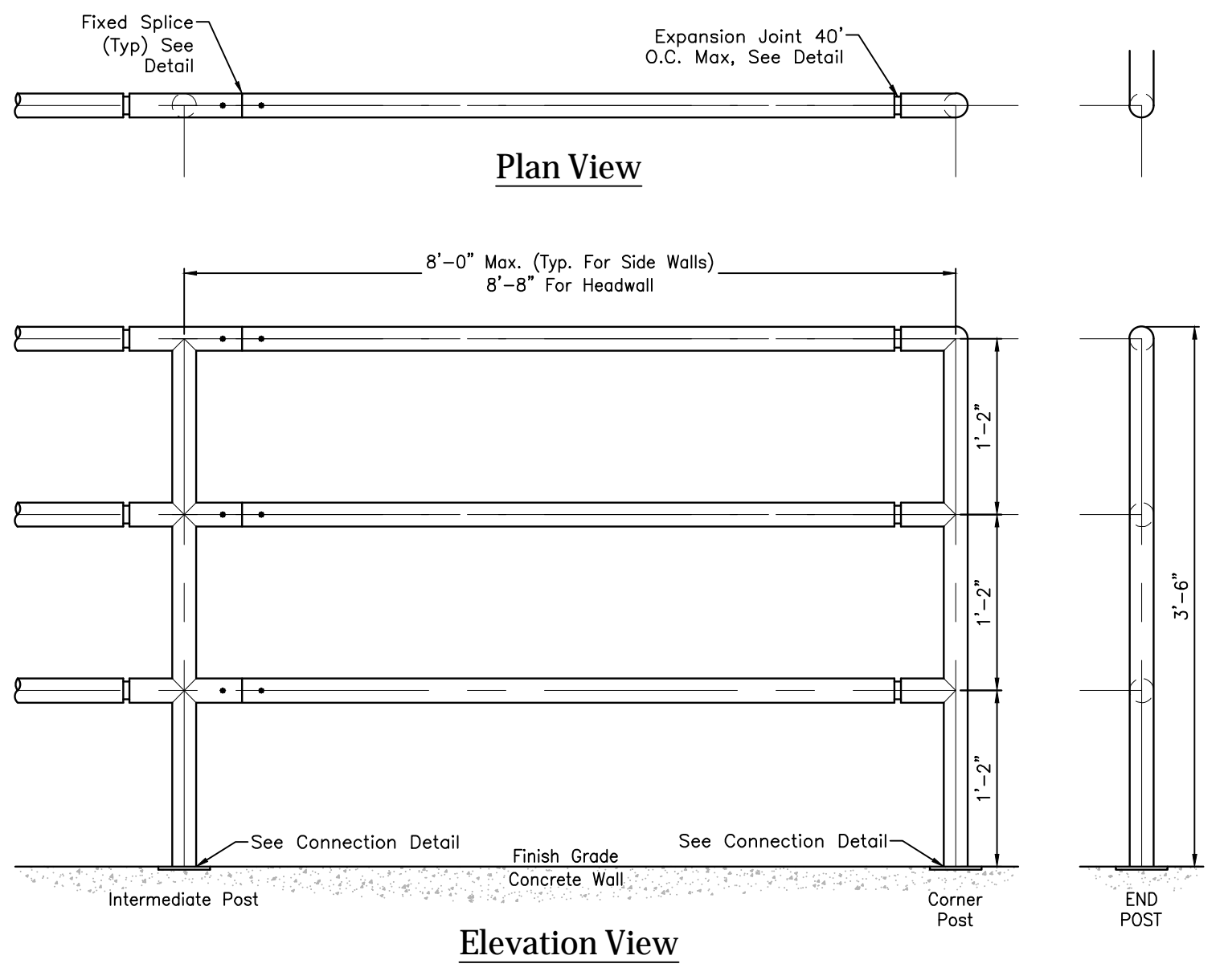
Warning Sign

Sign posts shall be installed with a minimum of 1-3/4\"/>

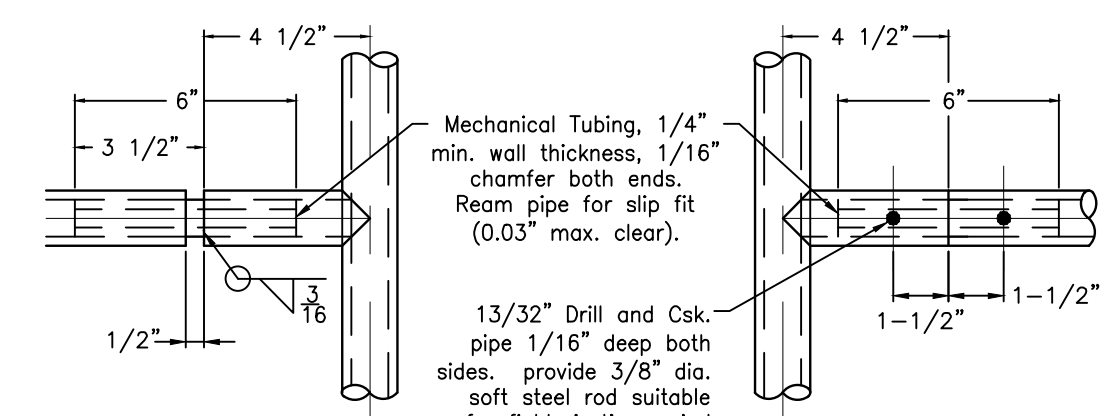
4 Detention Warning Sign
C602 NOT TO SCALE

Pedestrian Railing/Handrail Notes:

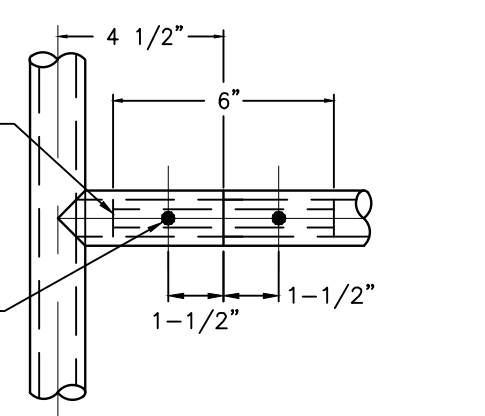
- All handrail shall be fabricated with new 1-1/2\"/>



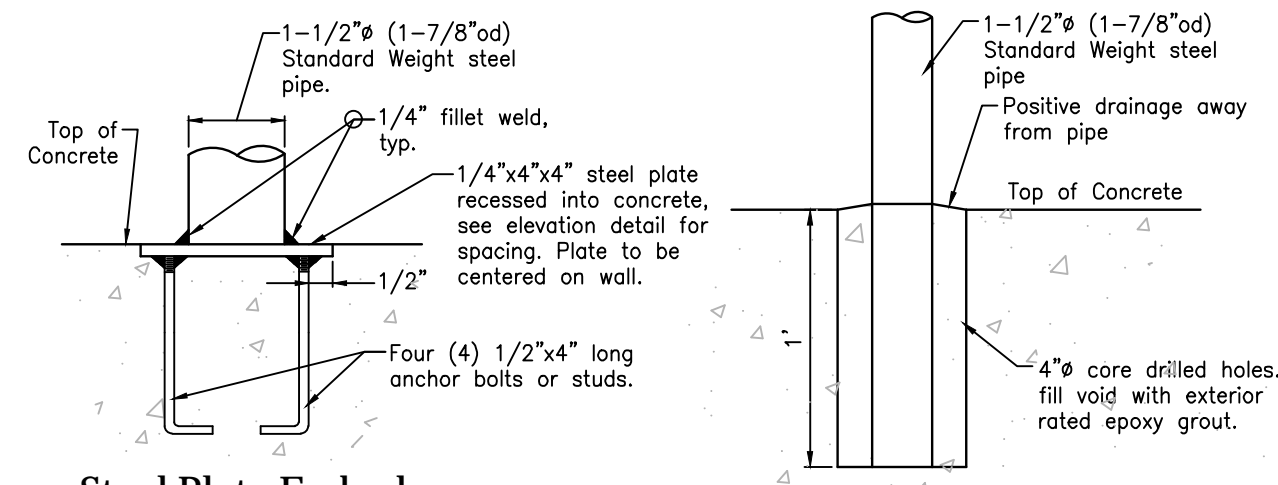
5 Pedestrian Railing/Handrail
602 NOT TO SCALE



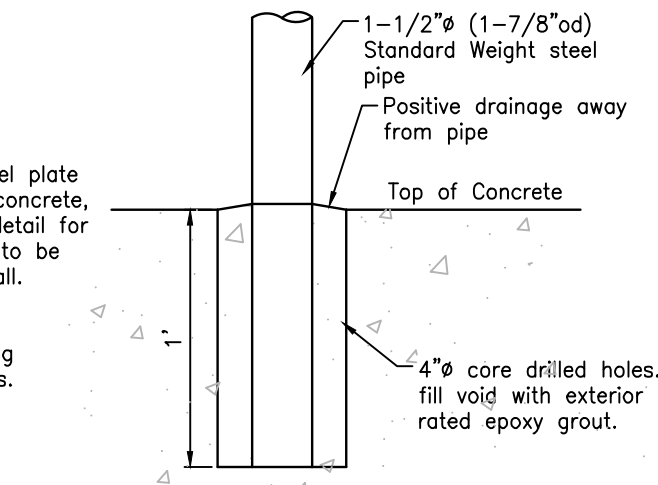
Expansion Joint Detail



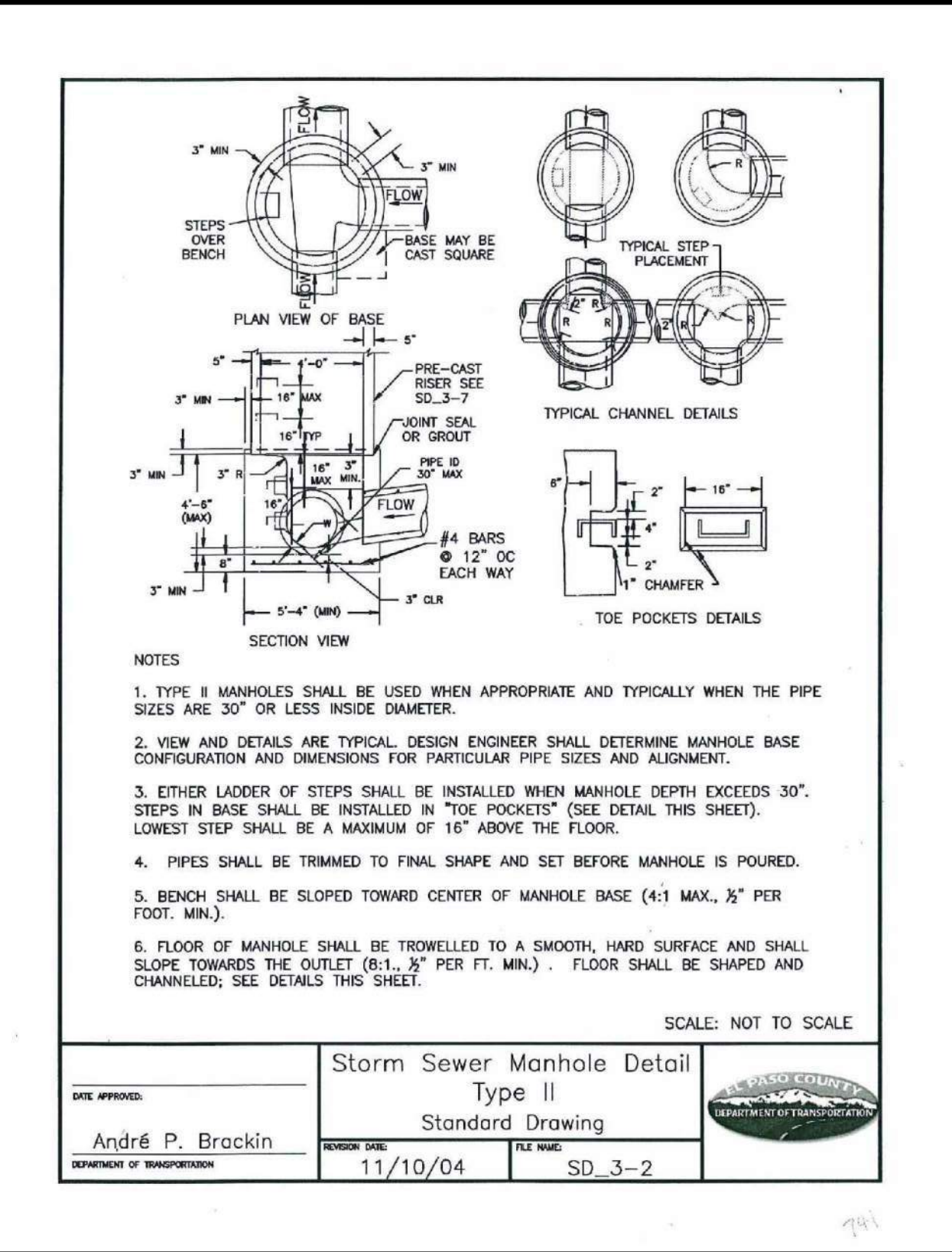
Fixed Joint Detail



Steel Plate Embed Railing Connection Detail



Alternate Connection Detail



7 Storm Sewer Manhole Detail Type II
C602 NOT TO SCALE

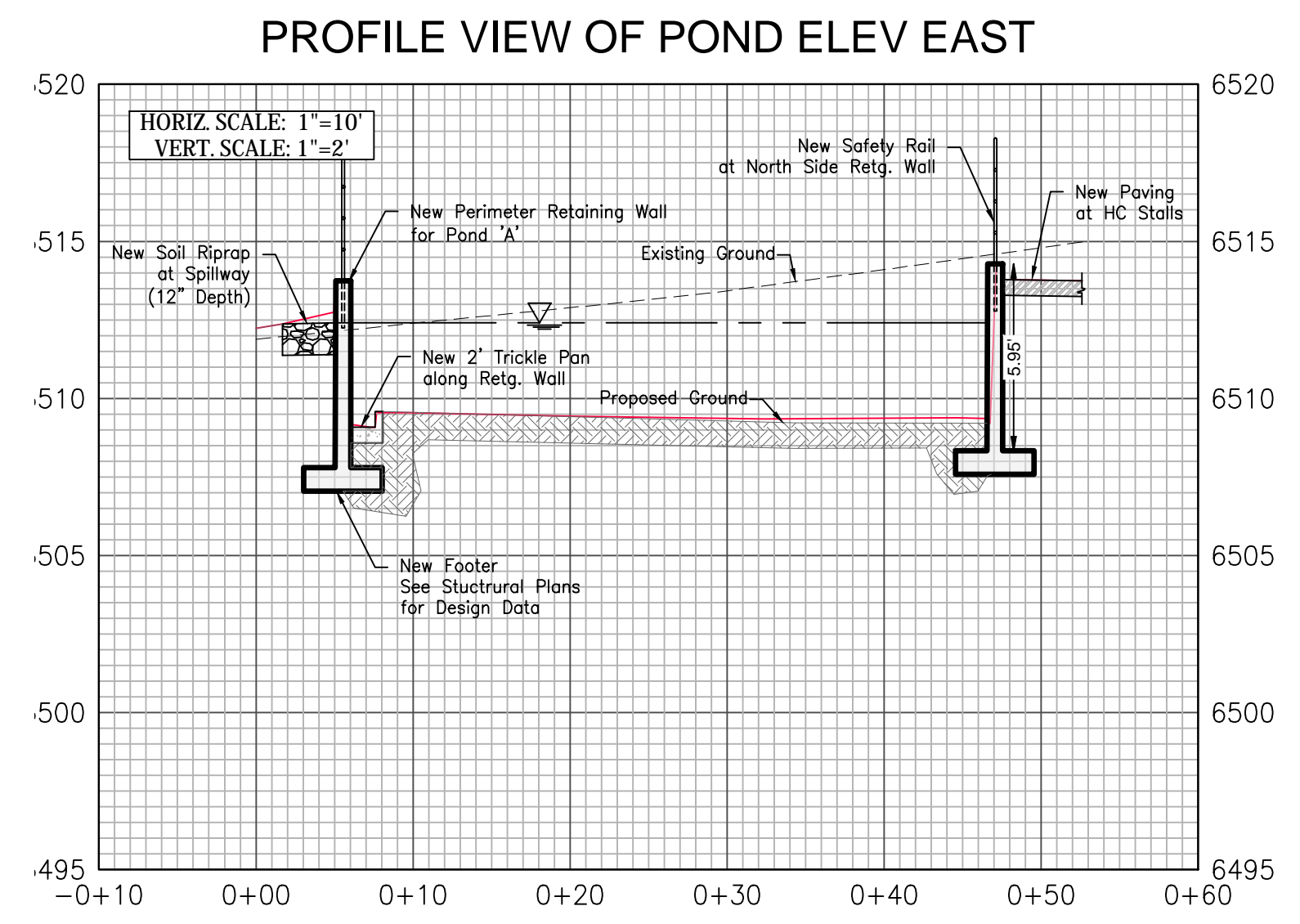
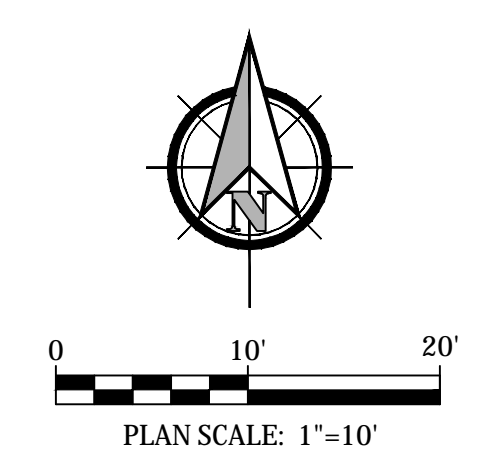
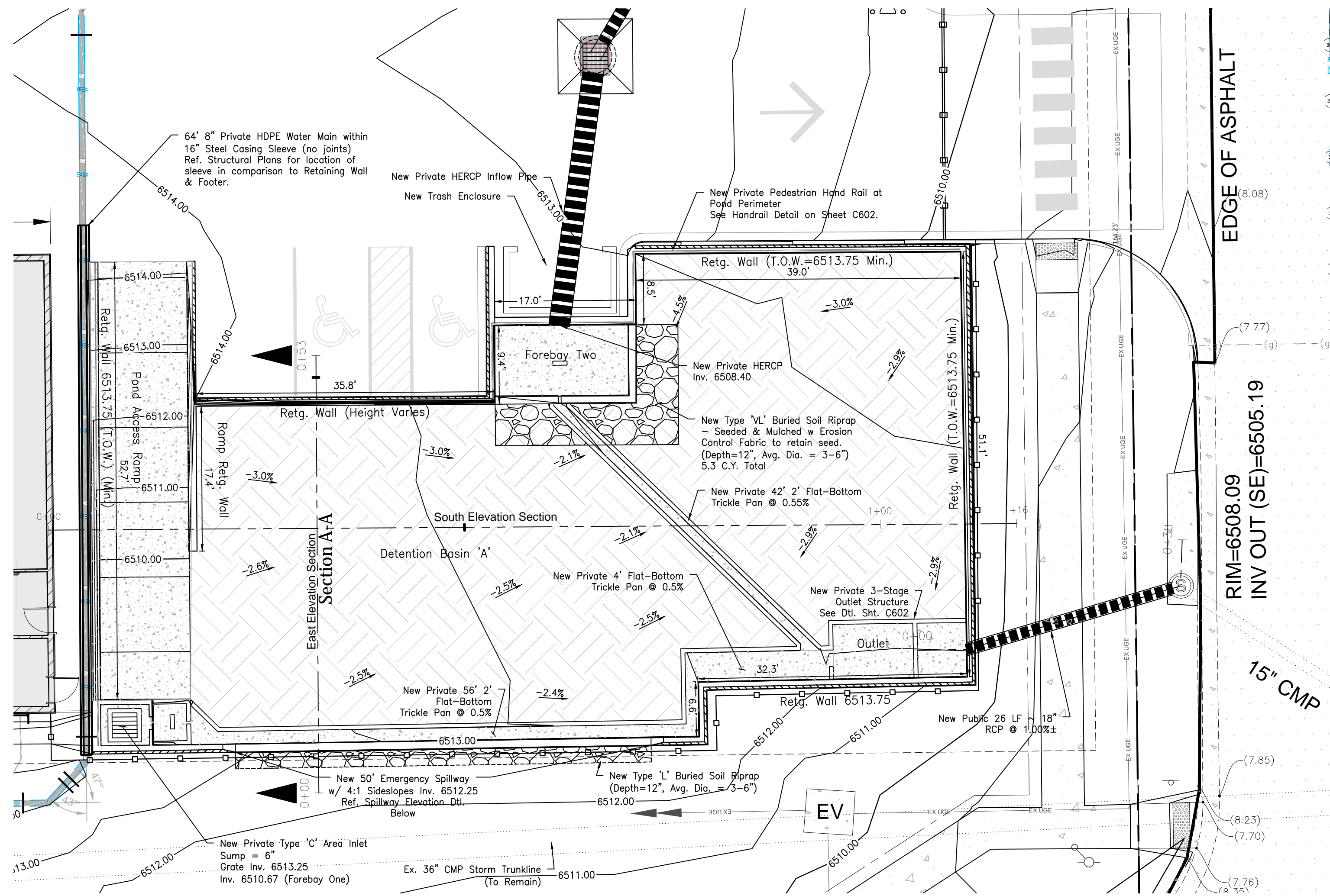


My Garage @ Northcrest
Site Detail Plan
Site Details
El Paso County, Colorado

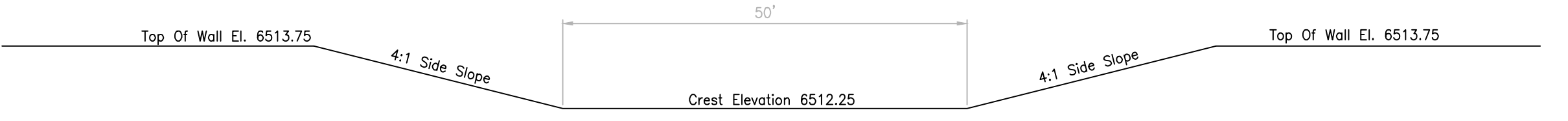
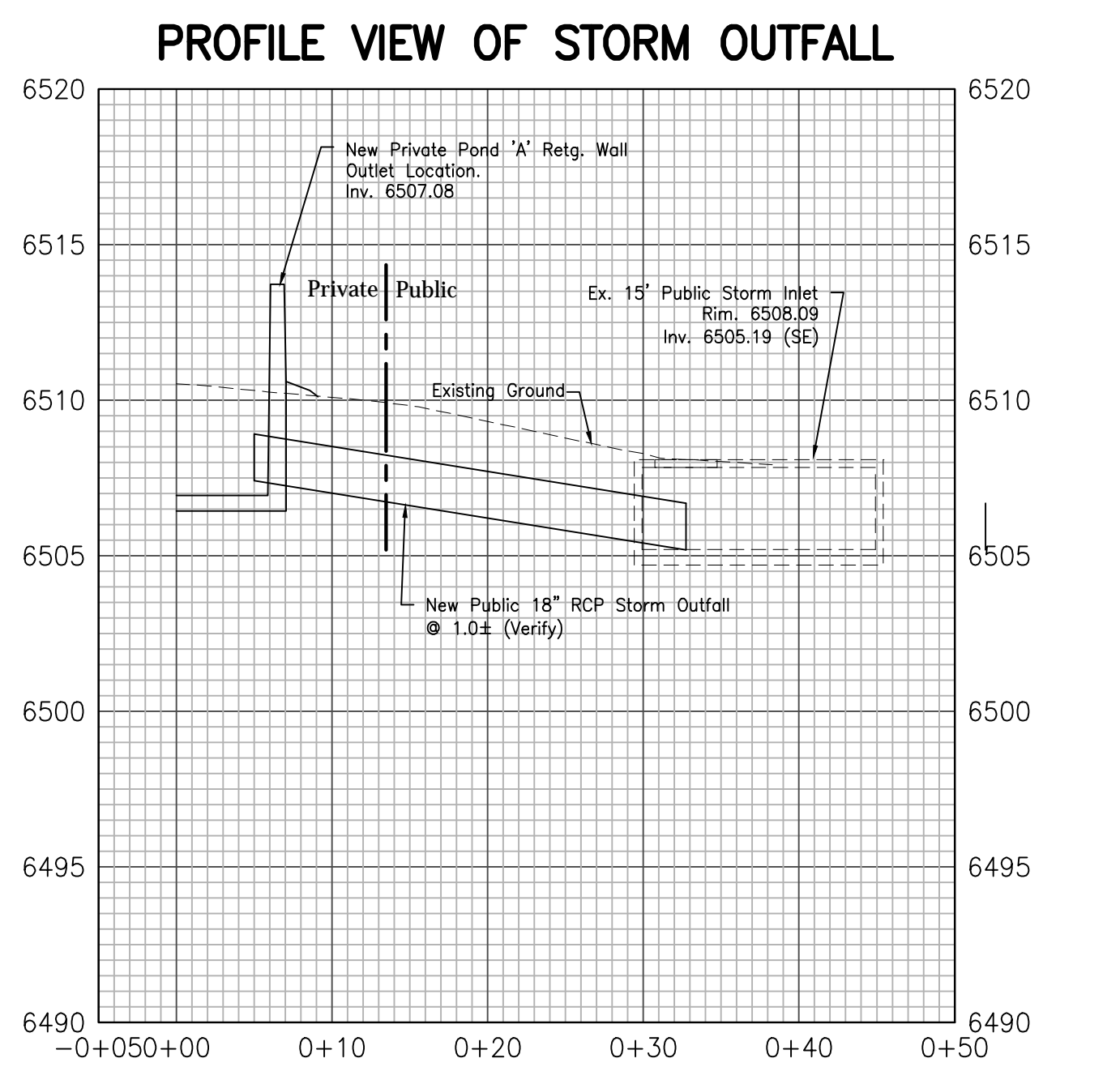
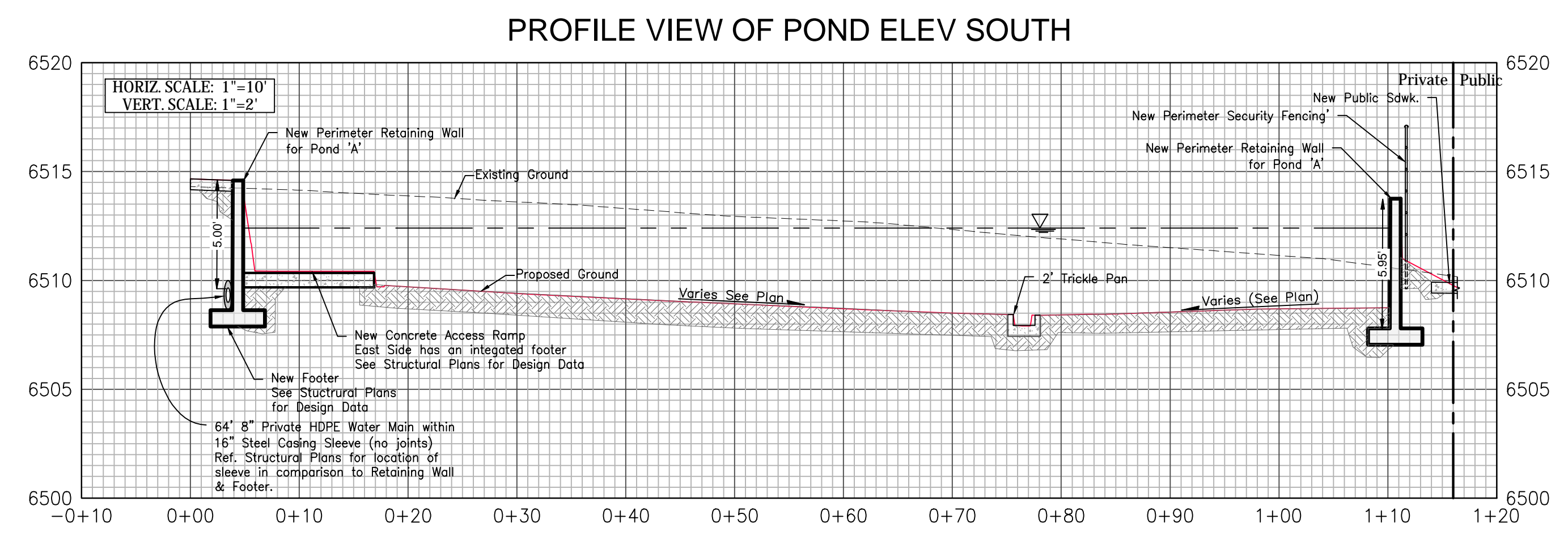
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Colorado Springs, Colorado 80904
(719) 630-7342

Project No.: 23049
Date: 08/02/2024
Design: MKK
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Revisions:

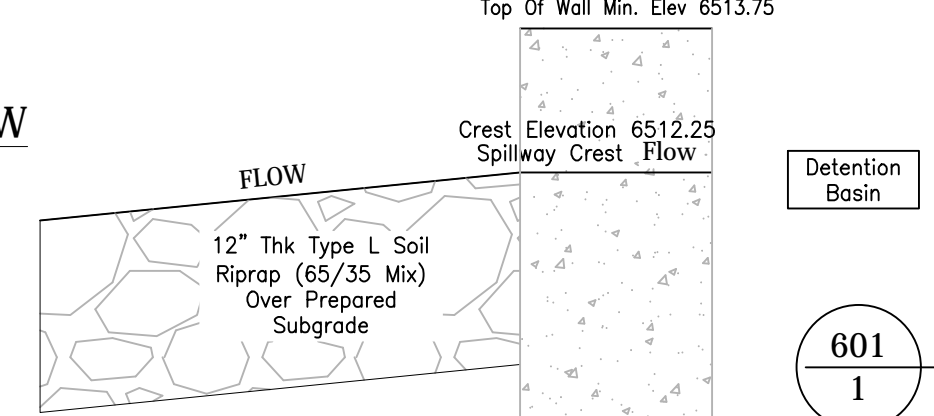
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1 Detention Basin Cross Sections
C601 NOT TO SCALE



SPILLWAY ELEVATION VIEW



601 Emergency Spillway
1 NOT TO SCALE

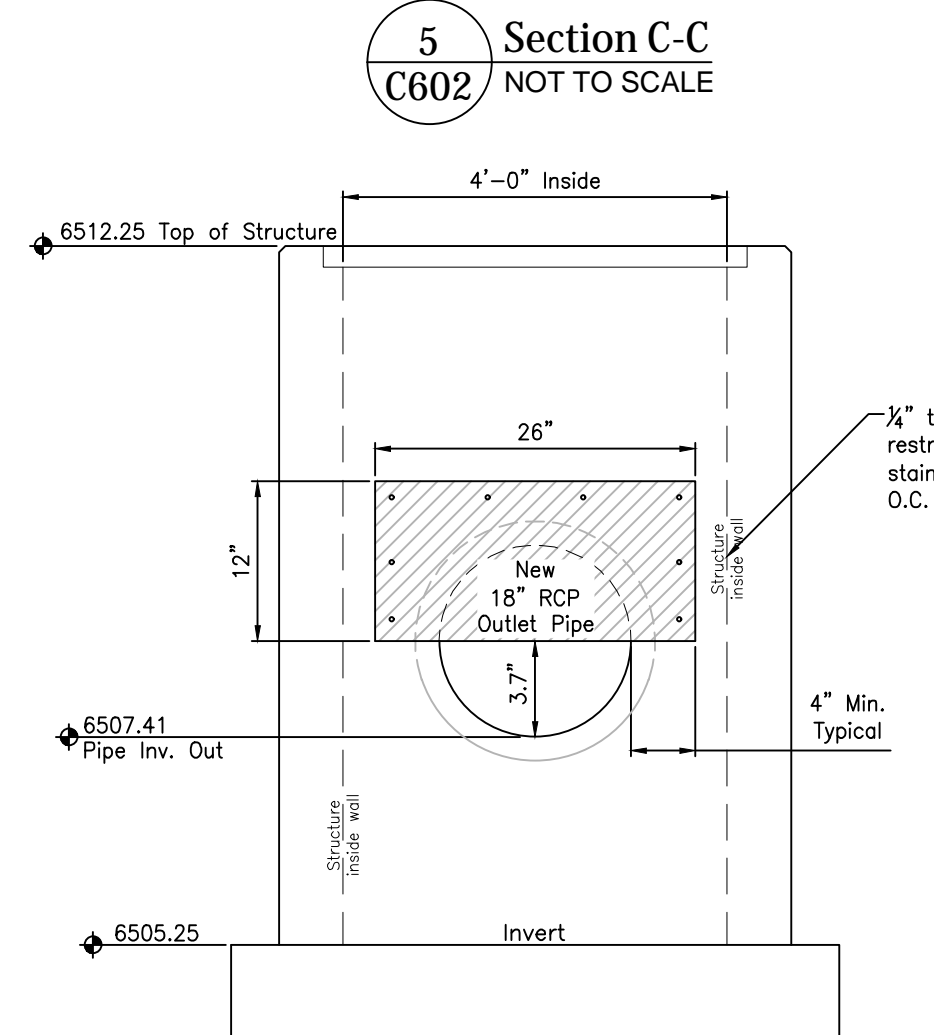
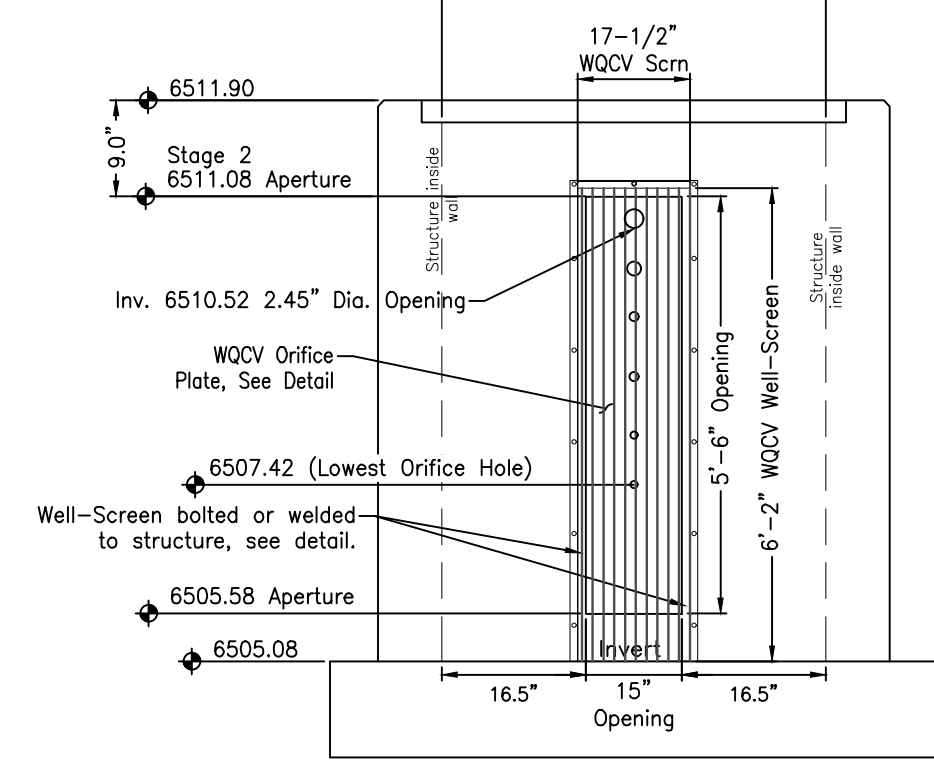
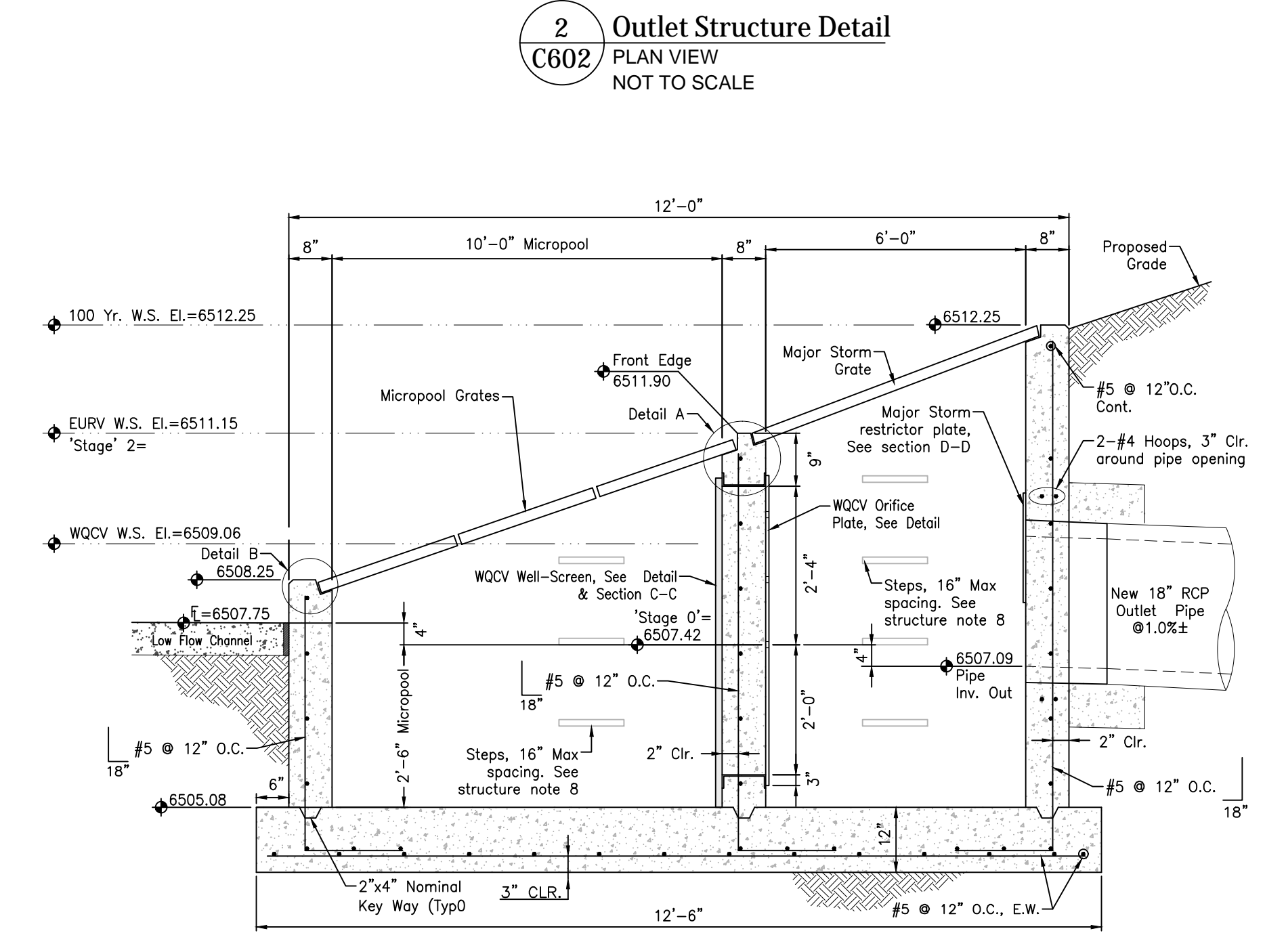
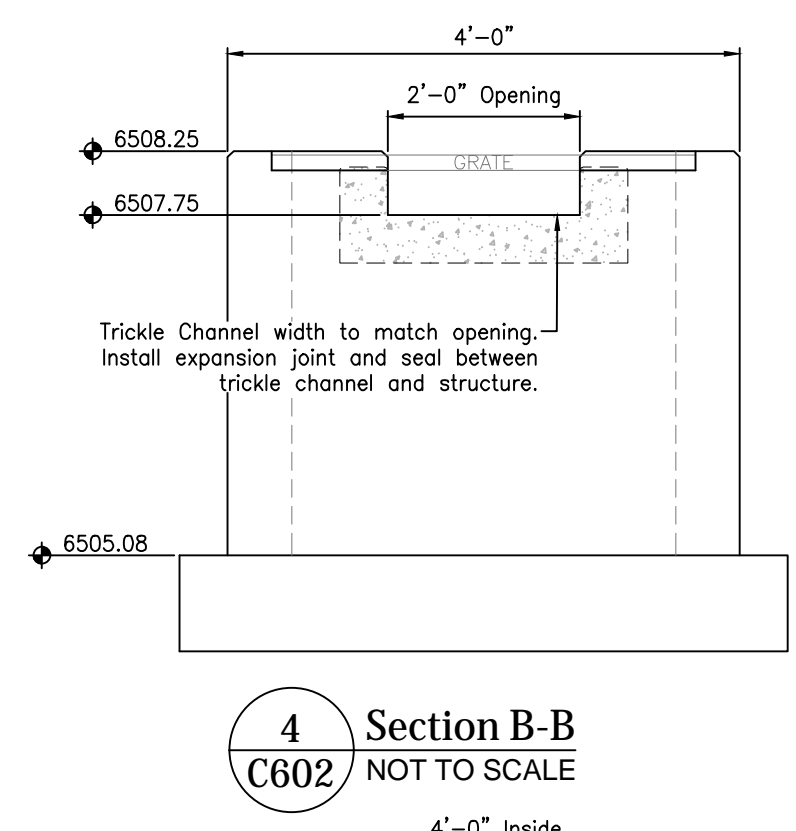
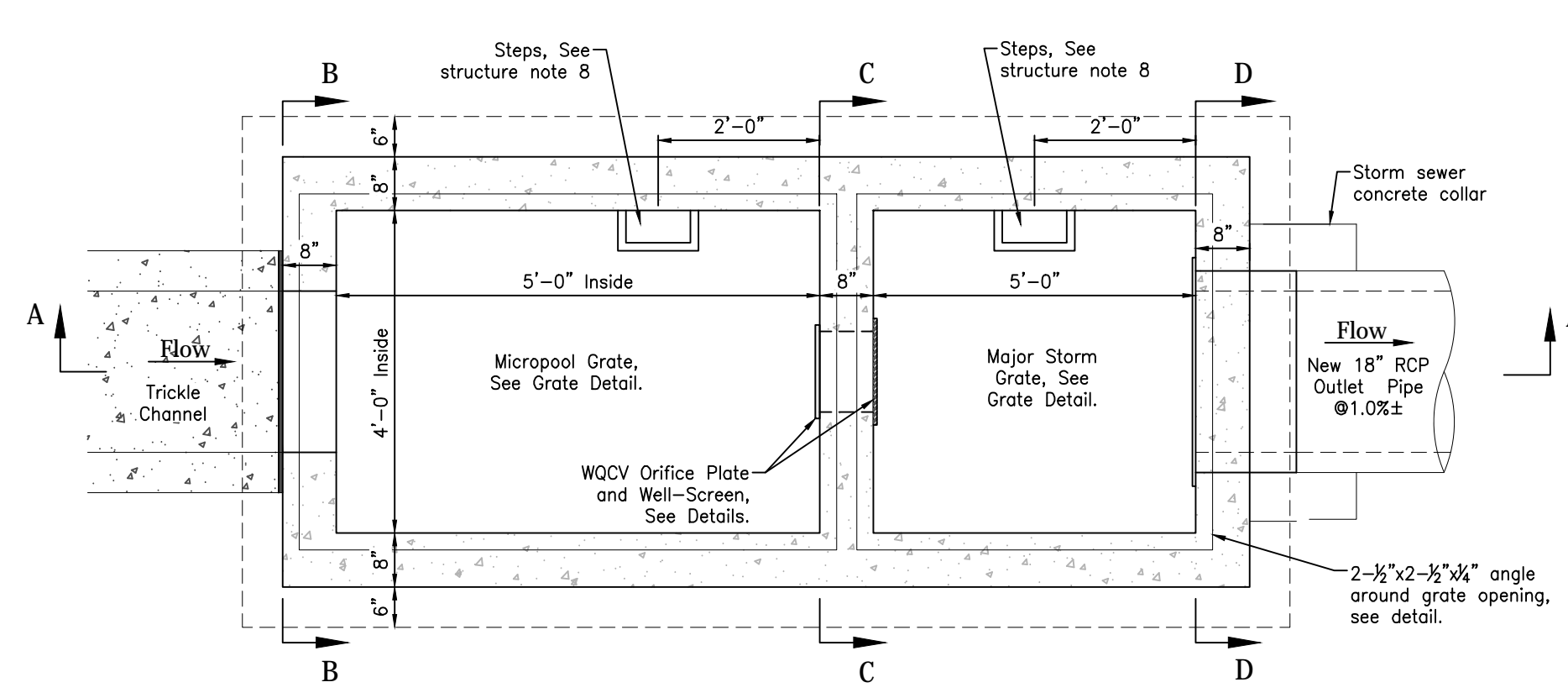
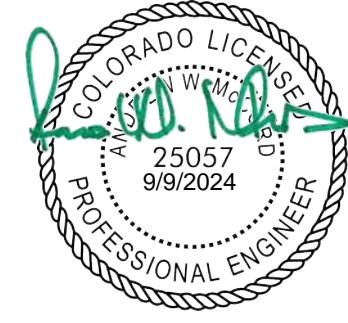
Ref: SECTION A-A

Project No.:	23049
Date:	09/09/2024
Design:	MJK
Drawn:	MJK
Check:	AMcC
Revisions:	

Sheet

C603



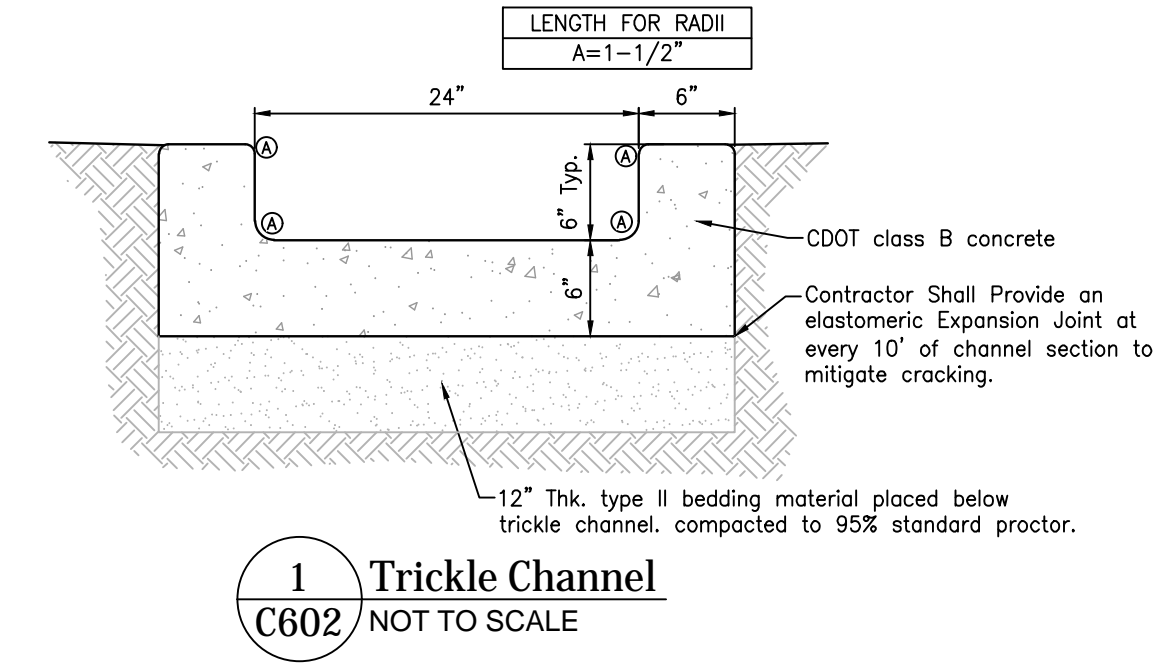


CLASSIFICATION AND GRADATION OF RIPRAP		
Riprap Designation	% Smaller than Given Size by Weight	Intermediate Rock Dimension (Inches)
Type VL	70-100 50-70 35-50 2-10	12 9 6 2
Type L	70-100 50-70 35-50 2-10	15 12 9 3
Type M	70-100 50-70 35-50 2-10	21 18 12 4

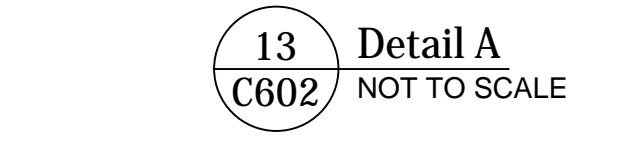
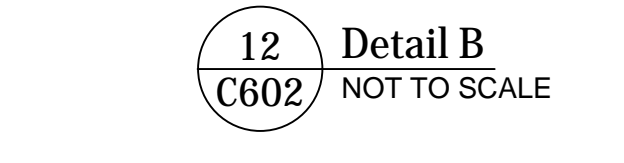
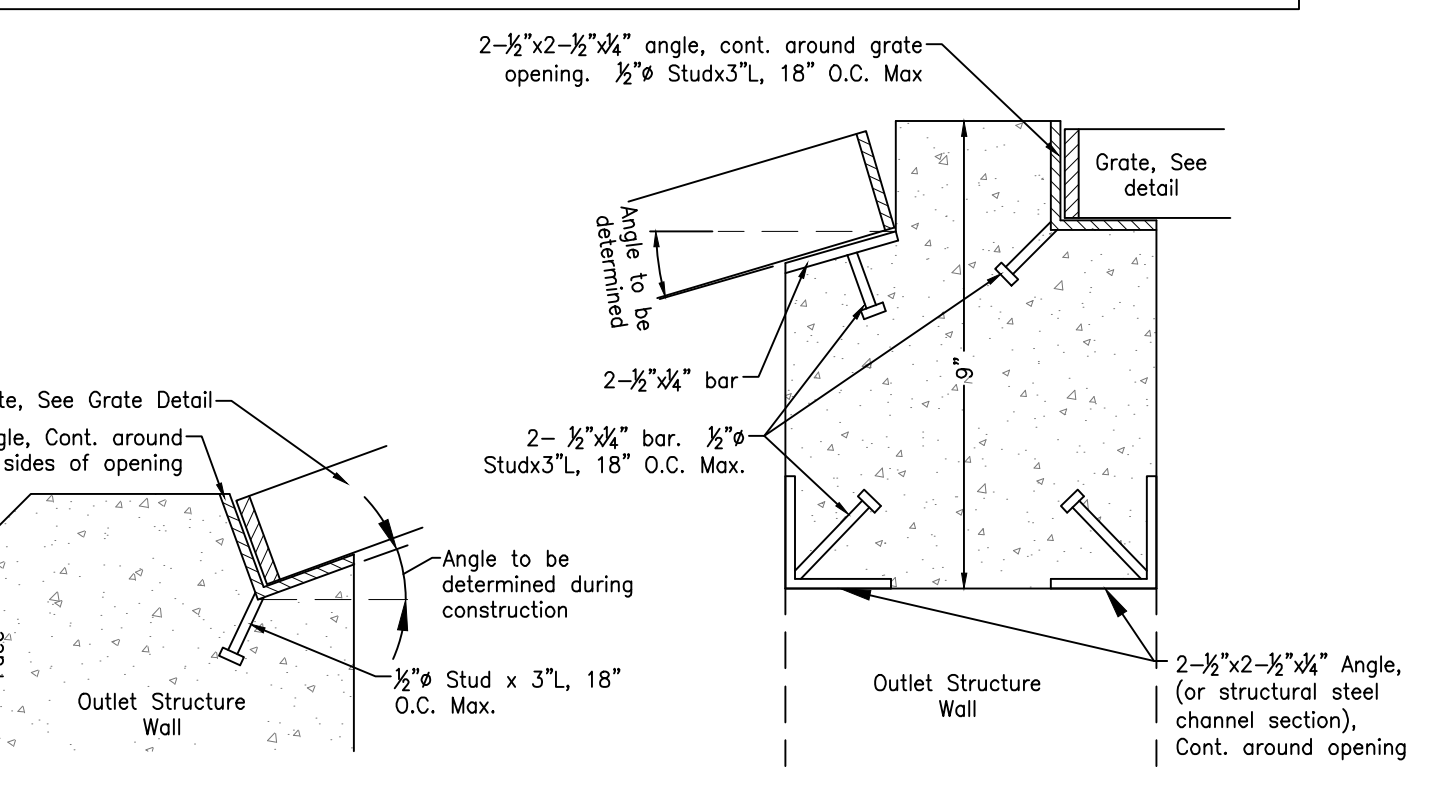
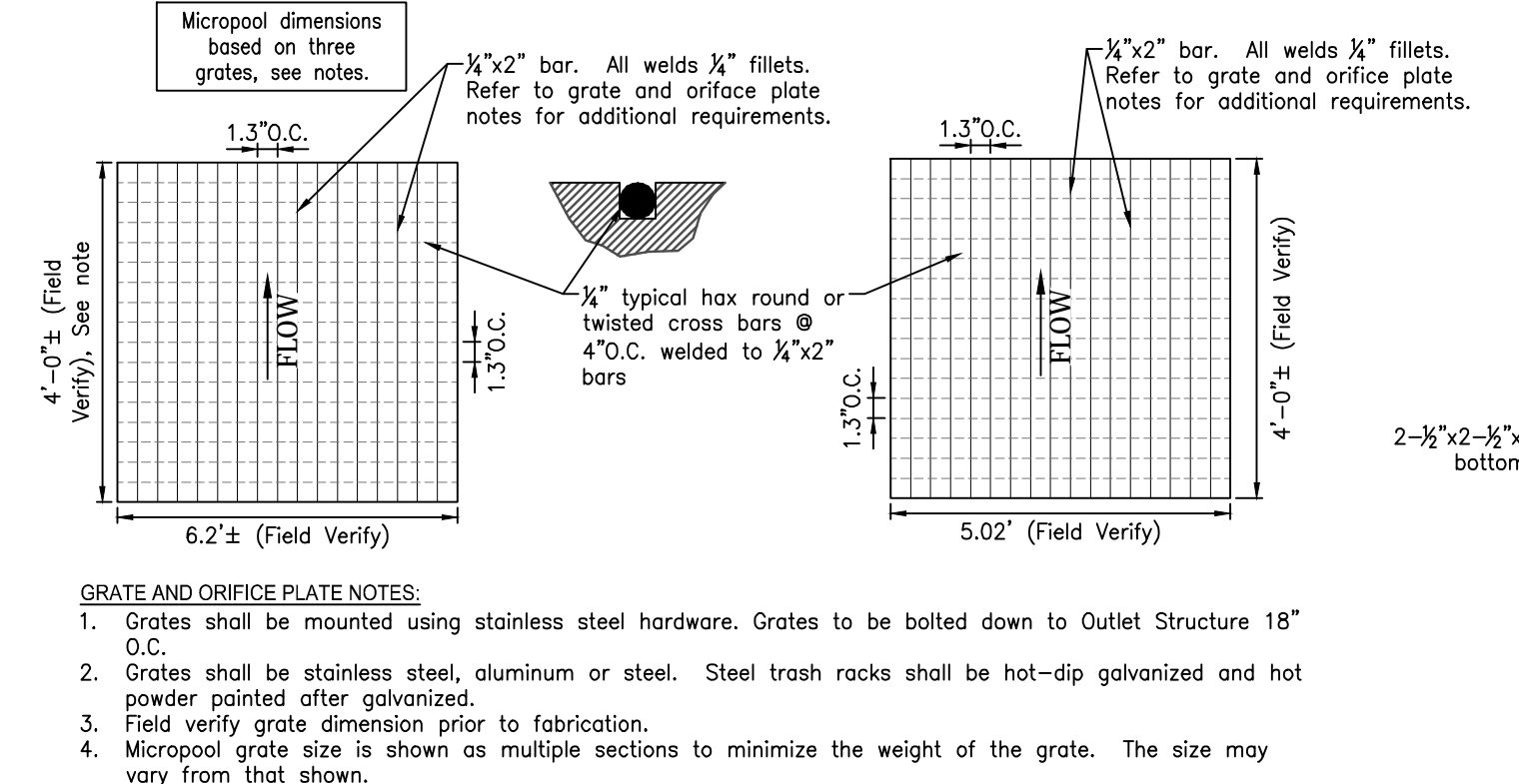
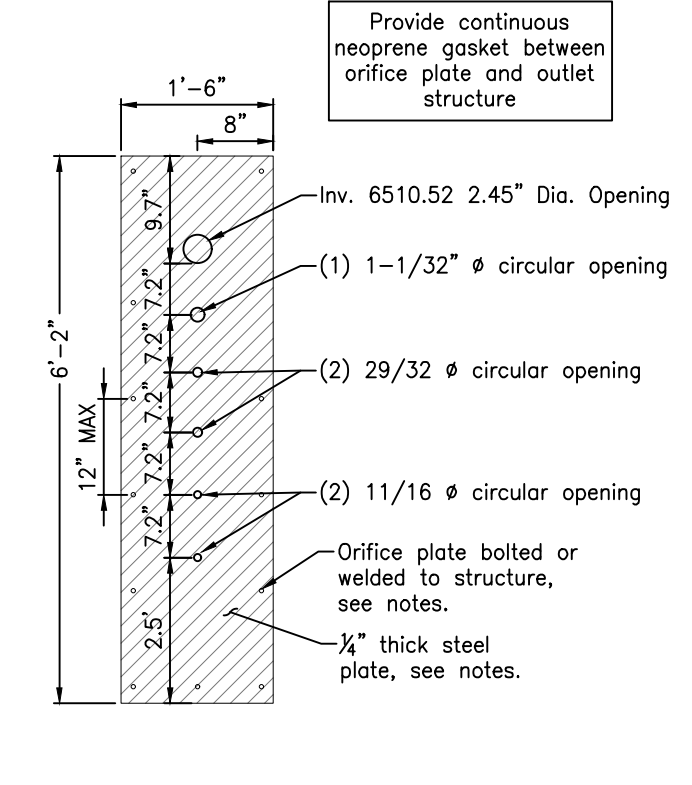
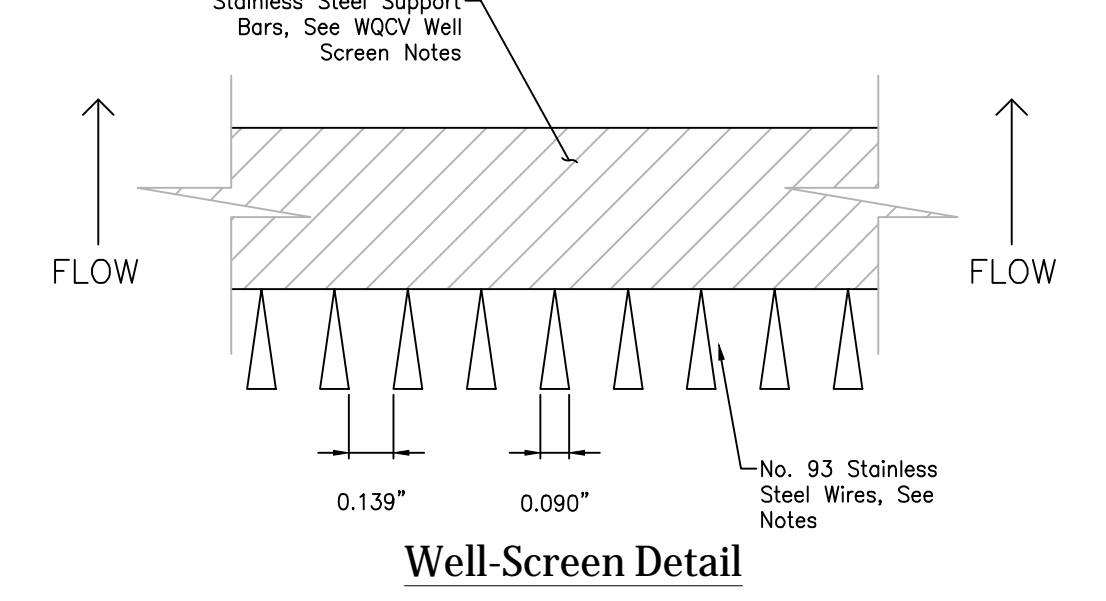
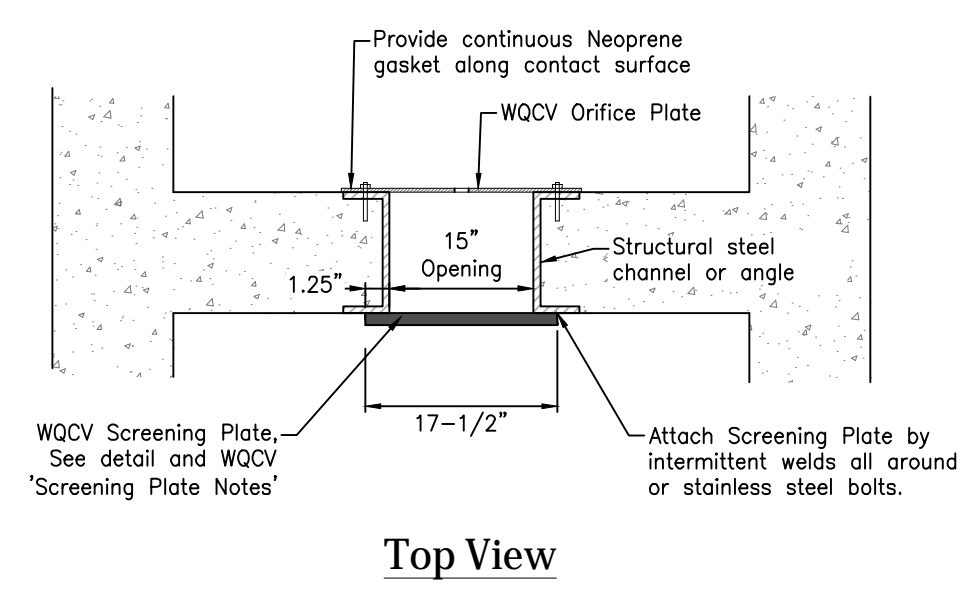
* 45g = Mean Particle Size (Intermediate Dimension) by weight. 12**
** Mix VL, L AND M Riprap with 35% Topsoil (by Volume) and bury with 4-6 Inches of Topsoil, all vibration compacted & revegetate.
(Table MD-7: Classification and Gradation of Ordinary Riprap. UDFCD, Drainage Criteria Manual, Vol. 1)

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 splice length for reinforcing bars. All reinforcing steel shall have 2-inch minimum clearance from edge of concrete and 3-inch min. clearance to the edge of concrete placed against soil, unless otherwise noted.
- 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" chamfer, unless otherwise noted.
- Backfilling against walls shall not commence until concrete has obtained its full seven day strength.
- Subgrade to be 12" thick clean fill compacted to 95% Standard Proctor Density per ASTM M698 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.



- WQCV Well-Screen Notes:**
- Well-Screen shall be stainless steel and attached by intermittent 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



SOIL RIPRAP:

- The soil material shall be native or topsoil and mixed with Sixty-Five Percent (65%) riprap and Thirty-Five Percent (35%) soil by volume. Soil Riprap shall consist of a uniform mixture of soil and riprap without voids.
- Contractor shall cooperate with Engineer in obtaining and providing samples of all specified materials.
- Contractor shall submit certified laboratory test certificates for all items required for Soil Riprap.
- Riprap used shall be the type designated on the drawings and shall conform to the Table shown.
- The riprap designation and total thickness of riprap shall be as shown on the drawings. The maximum stone size shall not be larger than the thickness of the riprap.
- Neither width nor thickness of a single stone of riprap shall be less than One-Third (1/3) of its length.
- The specific gravity of the riprap shall be two and one-half (2.5) or greater.
- Minimum density for acceptable riprap shall be One-Hundred and Sixty-Five (165) pounds per cubic foot.
- Riprap specific gravity shall be according to the Bulk-Saturated, Surface-Dry basis, in accordance with AASHTO T85.
- The riprap shall have a percentage loss of not more than Forty Percent (40%) after Five-Hundred (500) revolutions when tested in accordance with AASHTO T96.
- The riprap shall have a percentage loss of not more than Ten (10%) after Five (5) cycles when tested in accordance with AASHTO T104 for Ledge rock using sodium sulfate.
- The riprap shall have a percentage loss of not more than Ten Percent (10%) after Twelve (12) cycles of freezing and thawing when tested in accordance with AASHTO T103 for Ledge rock, Procedure A. Rock shall be free from calcite intrusions.
- Gradation:** Each load of riprap shall be reasonably well-graded from the smallest to the largest size specified.
- Stones smaller than the Two to Ten Percent (2%-10%) size will not be permitted in an amount exceeding Ten Percent (10%) by weight of each load.
- Control of gradation shall be by visual inspection. However in the event the Engineer determines the riprap to be unacceptable, he Engineer shall pick Two (2) random truckloads to be dumped and checked for gradation. Mechanical equipment and labor needed to assist in checking gradation shall be provided by the Contractor at no additional cost.

Project No.: 23049
Date: 09/09/2024
Design: MKJ
Drawn: MKJ
Check: AMcC
Revisions: