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) and Cherokeee Metropolitan District (719-597-5080) a minimum of 48 hours prior to the start of construction.

GENERAL:

1. All construction methods and materials shall meet Colorado Springs Utilities' Water Line Extension and Service Standards (Water LESS) with CHerokee Metropolitan District Exceptions.
2. The Contractor shall obtain locates prior to any excavation.
3. Cherokee Metropolitan District 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.
4. No trees or structures are permitted within fifteen feet (15') of a water main.
5. 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 and/or Cherokee Metropolitan District.
6. All field staking shall comply with the Water LESS.
7. The Contractor shall make their best effort to ensure that water service to adjacent properties is maintained during construction.
8. Corrosion protection measures shall comply with the Water LESS.
9. No service taps will be allowed until the main is extended to the next main-line valve.
10. No service taps shall be made until authorization has been granted by the Cherokee Metropolitan District Inspector.
11. All bends shall be field staked prior to construction and the stationing on the field stakes shall match the stationing on the plans.
12. 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 Cherokee Metropolitan District, as required by the Inspector.
13. Reuse or salvage of any material is left to the discretion of the Colorado Springs Utilities or Cherokee Metropolitan District Inspector.
14. A trench backfill and compaction shall be in accordance with Section 206 of the City of Colorado Springs Standard Specifications Manual.
15. All water service lines should enter the building in accordance with Cherokee Metropolitan District Std B1-9 & B1-11A. 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	
1.	■	☐	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.
2.	☐	■	A connection to an existing stub is proposed. Cherokee Metropolitan District does not guarantee the accuracy of the depths or locations of existing stubs shown on any "As-Built" drawings.
3.	☐	■	A water stub-out(s) is/are proposed. Cherokee Metropolitan District does not guarantee that the design or installation of the proposed water stub-out will meet future development needs.
4.	☐	■	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

UAP File No.: N/A

Development Plan No.: DEPN-23-0212

Approval Date.: March 4, 2024

Plat Reception No.: N/A

Tax Schedule No.: 55102-00-003

Public Utility Easement Reception No.: N/A

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

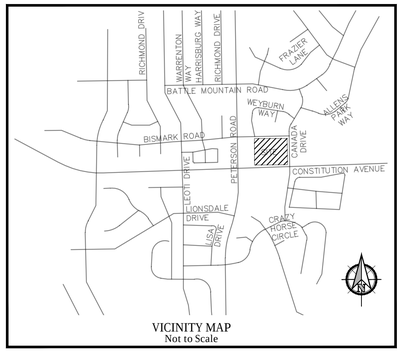
Notice of Private Water System Reception No.: N/A

GENERAL UTILITY NOTES:

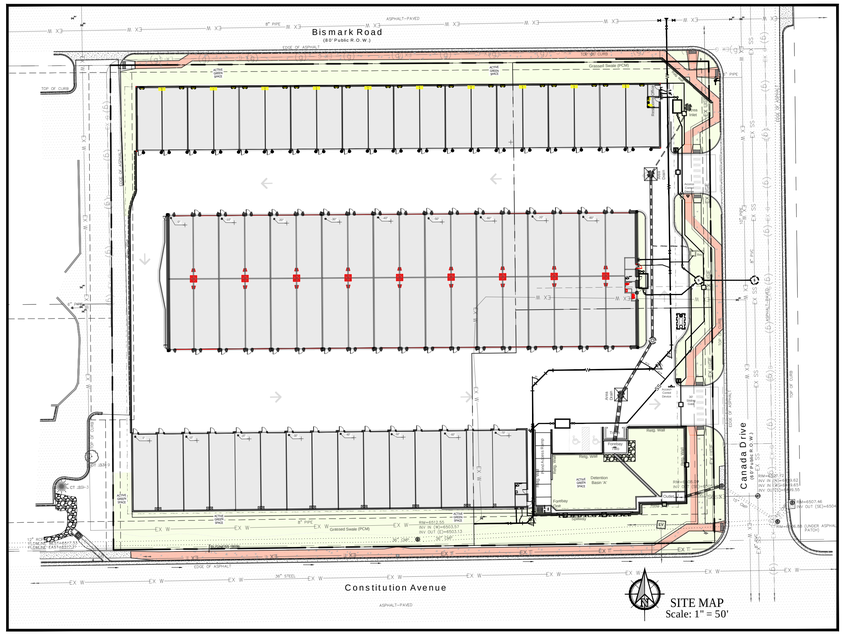
1. All water and wastewater work shall comply with the Colorado Springs Utilities Line Extensions & Service Standards, current edition and Cherokee Metropolitan District Exceptions.
2. The Contractor and survey crew shall verify elevations of any existing sanitary sewer, storm sewer, water lines and manholes to be tied to prior to construction or staking of pipe.
3. The Contractor shall be responsible for recording As-Built information on a set of record drawings.
4. The Contractor shall contact all appropriate utility companies, Colorado Springs Utilities and Cherokee Metropolitan District 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.
5. 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.
6. Pipe backfilling shall not occur until pipe has been inspected.
7. 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.
8. All sanitary sewer pipe lengths and slopes are figured from center of manhole, bens, wye and the inside wall of inlets. Pipe lengths are given as a horizontal length and are approximate.
9. All sanitary sewer pipe bedding to be Class B bedding, unless otherwise noted.
10. 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. Manholes shall have a minimum 5' Dia. See Cherokee Metropolitan District Standards for Exterior Coating & Interior Lining requirements.
11. 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.
12. 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.
13. With notification of the respective owner, adjust rims of all cleanouts, manholes and valve covers within pavement to ½ to ¼ inch below the finished grade and cross slope prior to final lift paving and adjust to match finish grade in unpaved areas.
14. 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 1960 supplementary adjustment).

Note:
1. Minimum Radius Shown For Water Main = 290'
Per WWSD 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.

2. Streetlight locations are pending and are not a part of this submittal.
3. Gas - All Gas Mains and Services are to be installed per the city Of Colorado Springs.
4. Subsequent to stripping and grubbing the following overlot/pipe installation procedures are anticipated for the sanitary sewer located on proposed embankments:
- The removal and replacement of metastable soil.
- Testing of the fill subsequent to the penetration of the metastable soil will continue until a minimum of 7 feet of structural fill has been placed above the proposed sewer line elevation.
- Utility trenches shall be excavated and sanitary sewer line installed. The pipe shall be properly bedded and structural fill placed and tested to the previous grade.
- The overlot and embankment fill can be completed.
- Where the sanitary sewer is placed in embankment fill during the overlot process, ste shall monitor and test all work associated with the affected portions.



VICINITY MAP
Not to Scale



SITE MAP
Scale: 1" = 50'

UTILITIES LEGEND

- Property Line
- Existing Sanitary Sewer
- Existing Water Main & Valve
- Existing Gas
- Channel Flowline
- Plug
- 6" Fire Line
- Valve
- 8" Main
- Tee
- Hydrant
- 1-1/2" Dom.
- 8" Main
- Bend
- Cleanout
- Manhole
- 6" Service
- Proposed Water Elements
- Proposed Sanitary Elements
- Inlet
- Out
- Plug
- Oil/Sand Separator
- 15" CMP
- 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

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-xxx

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: Sean L Edwards, mm
Owner/Developer
Date: September 30, 2024
Sean L. Edwards, Managing Member
Owner/Developer (Print Name)

DBA: K&S Development

Address: 3442 Tampa Rd., Suite B
Palm Harbor, FL. 34684

Phone: 727-242-5121

Email: Sean@leisureconstruction.com

SHEET INDEX

COLORADO 811
KNOW WHAT'S BELOW. CALL BEFORE YOU DIG.

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

NATURAL GAS	YELLOW	WATER	BLUE
ELECTRIC	RED	WASTEWATER	GREEN

CHEROKEE METROPOLITAN DISTRICT

WATER PLAN APPROVAL

THE CHEROKEE METROPOLITAN DISTRICT RECOGNIZES THE DESIGN PROFESSIONAL OF RECORD AS THE LICENSED ENGINEER HAVING RESPONSIBILITY FOR THE SUBMITTED DESIGN AND THE DISTRICT HAS LIMITED ITS SCOPE OF REVIEW ACCORDINGLY. AS SUCH, THE APPROVAL GRANTED HEREIN IS FOR THE CONSTRUCTION OF THE FACILITIES AS REPRESENTED ON THESE DOCUMENTS. APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE BELOW AND RESUBMITTAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.

APPROVED BY: _____ DATE: _____

CHEROKEE METROPOLITAN DISTRICT

WASTEWATER PLAN APPROVAL

THE CHEROKEE METROPOLITAN DISTRICT RECOGNIZES THE DESIGN PROFESSIONAL OF RECORD AS THE LICENSED ENGINEER HAVING RESPONSIBILITY FOR THE SUBMITTED DESIGN AND THE DISTRICT HAS LIMITED ITS SCOPE OF REVIEW ACCORDINGLY. AS SUCH, THE APPROVAL GRANTED HEREIN IS FOR THE CONSTRUCTION OF THE FACILITIES AS REPRESENTED ON THESE DOCUMENTS. APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE BELOW AND RESUBMITTAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.

APPROVED BY: _____ DATE: _____

COLORADO LICENSED
ANDREW W. WISORD
25057
PROFESSIONAL ENGINEER

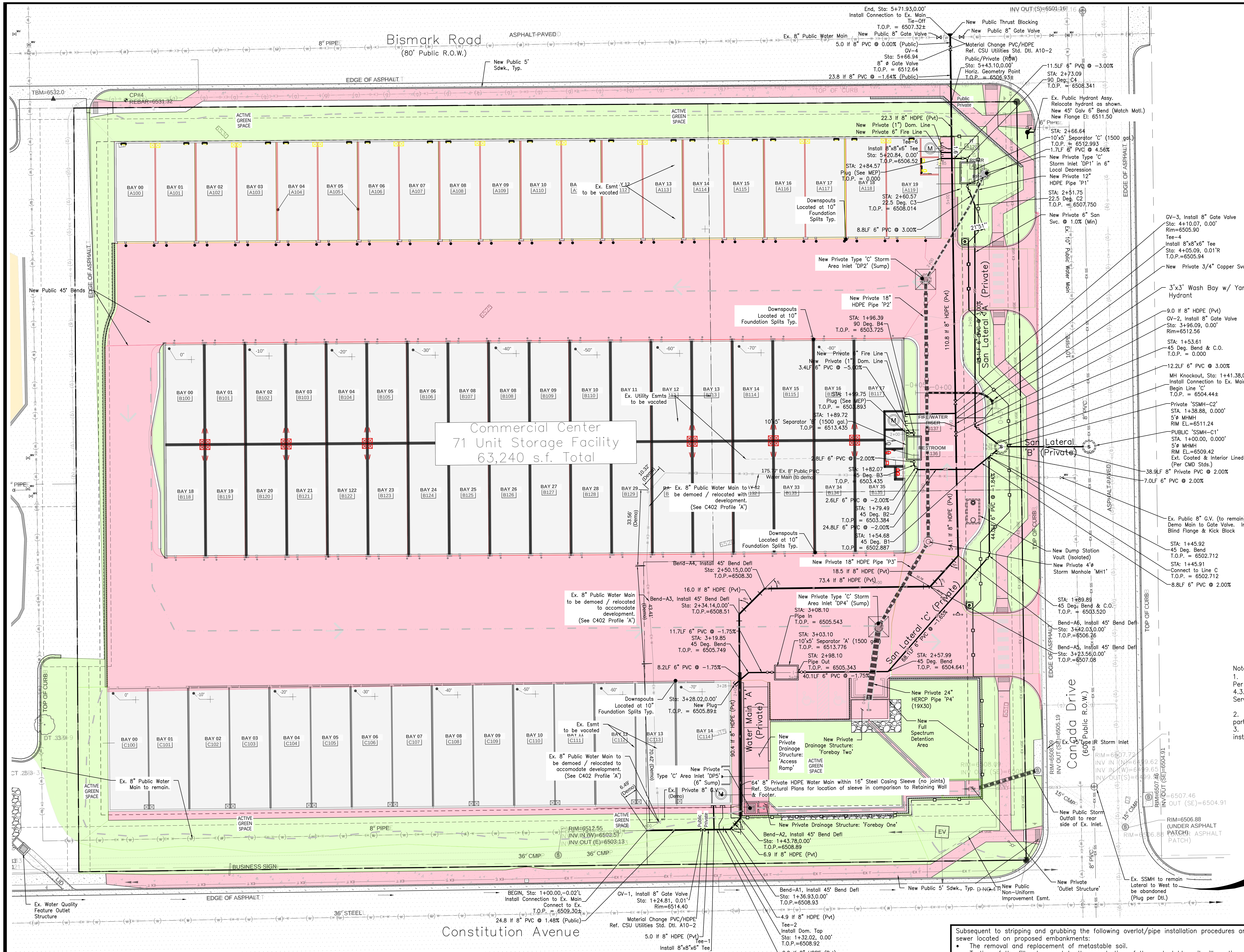
For and on Behalf of Kiowa Engineering Corp. 9/23/2024 Date

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

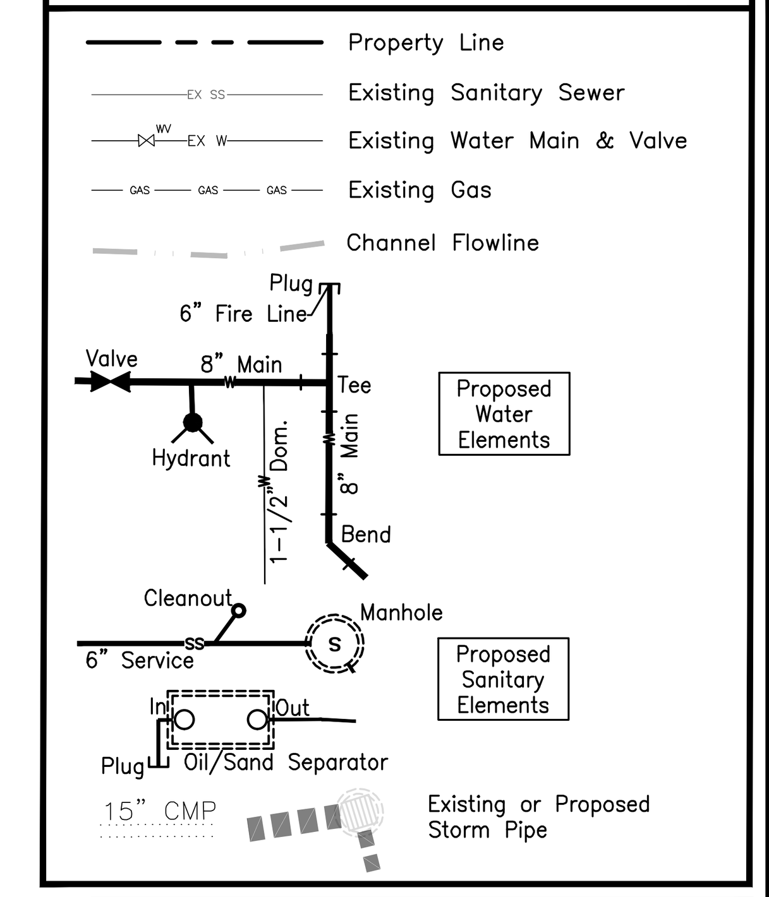
My Garage @ Northcrest
Water Plan
Cover Sheet
El Paso County, Colorado

Project No.:	23049
Date:	09/18/2024
Design:	MJK
Drawn:	MJK
Check:	AMcC
Revisions:	

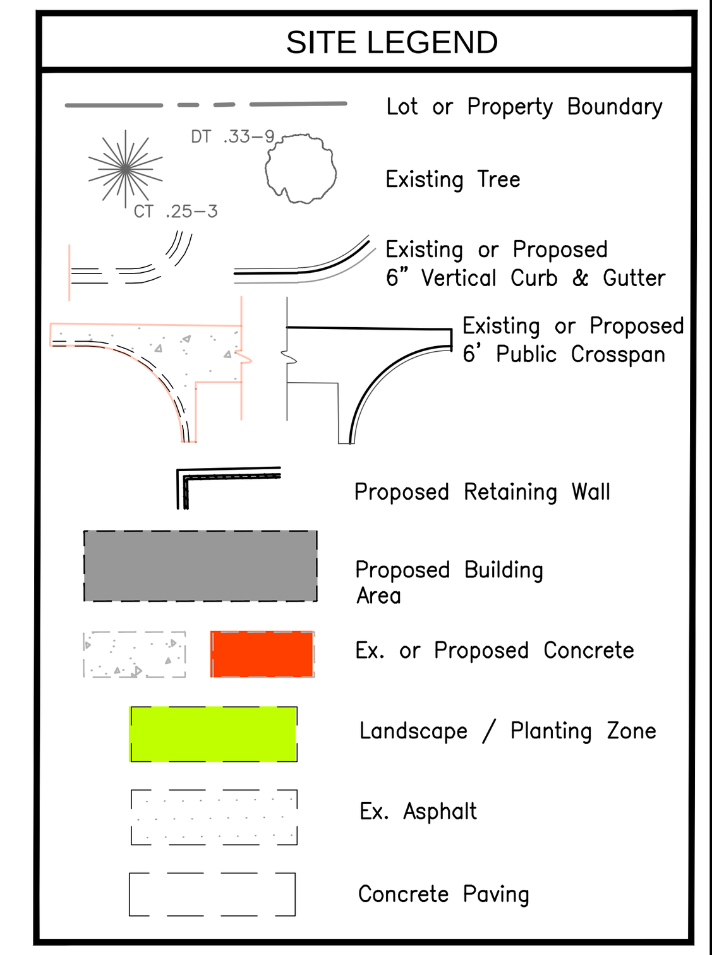
Sheet
C400
14of 22 Sheets

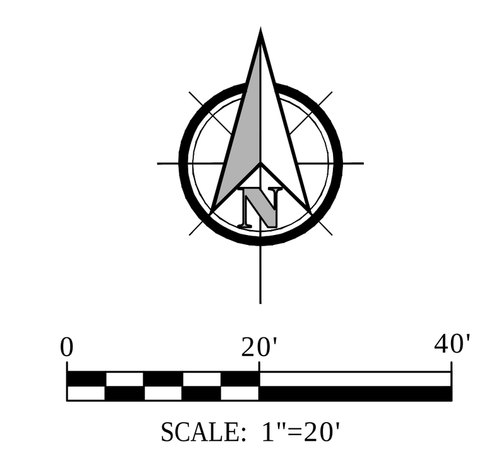


UTILITIES LEGEND



SITE LEGEND





Contractor shall ensure Water Service Lines enter buildings in accordance with Cherokee Metro District Standard Detail B1-9 & B1-11A. (The District provides and installs metering equipment.)

Note:

1. Minimum Radius Shown For Water Main = 290' Per WWSD 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.

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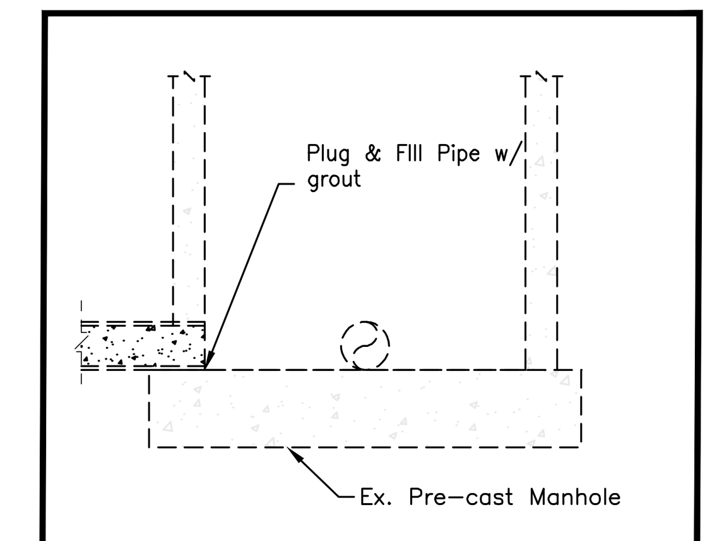


Service Line Abandonment Detail
SCALE: NTS

2.6.F.5 Removal of Unused Stub Outs
If it is determined that a previously placed stub out or tee installed by an Owner/Developer for a future connection is no longer usable or not intended to be used in the future, then the tee, valve and pipe of the stub out shall be removed by the Owner/Developer and/or Contractor, and shall be replaced with a solid piece of pipe in the remaining Water Main.

Subsequent to stripping and grubbing the following overlot/pipe installation procedures are anticipated for the sanitary sewer located on proposed embankments:

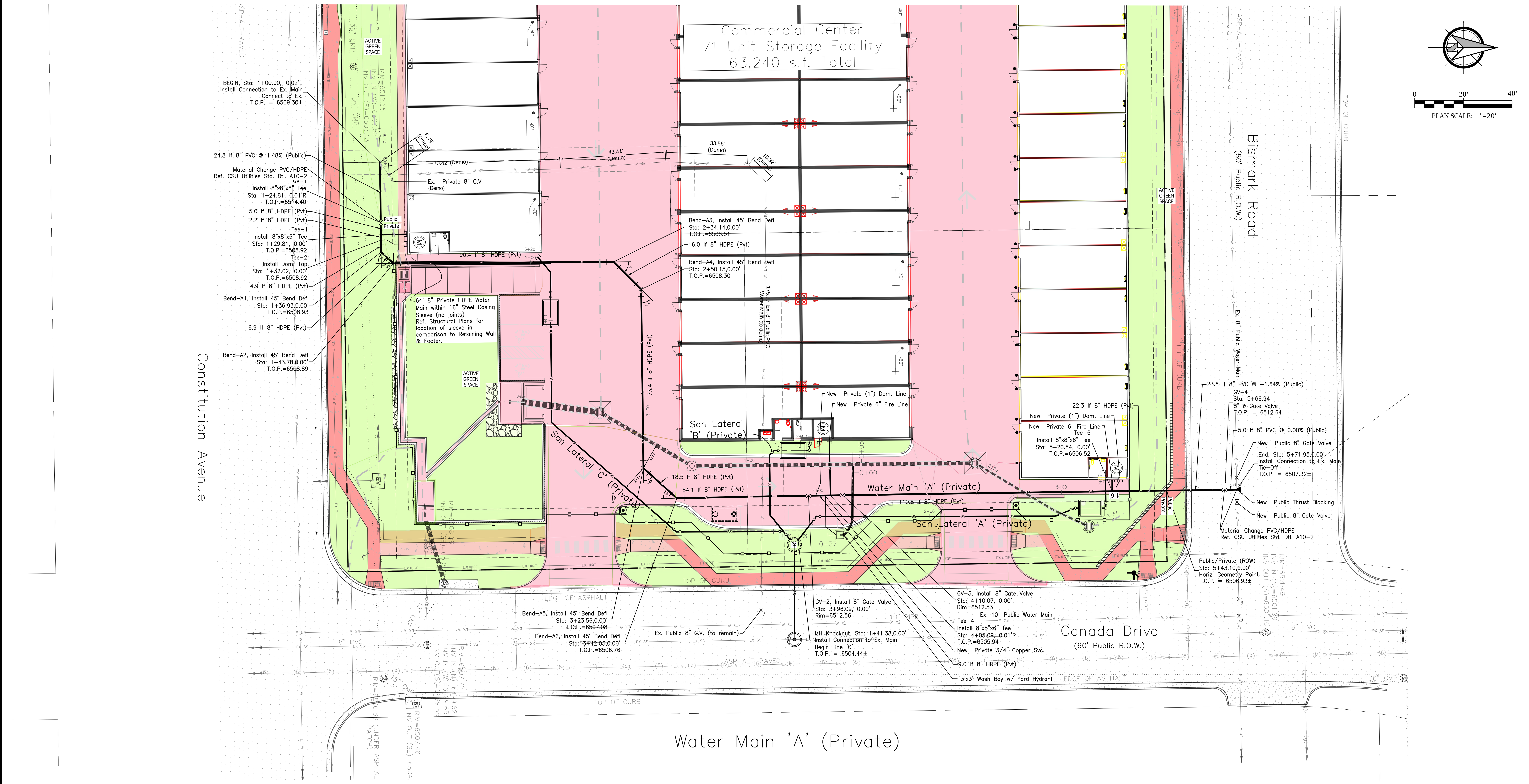
- The removal and replacement of metastable soil.
- Testing of the fill subsequent to the penetration of the metastable soil will continue until a minimum of 7 feet of structural fill has been placed above the proposed sewer line elevation.
- Utility trenches shall be excavated and sanitary sewer line installed. The pipe shall be properly bedded and structural fill placed and tested to the previous grade.
- The overlot and embankment fill can be completed.
- Where the sanitary sewer is placed in embankment fill during the overlot process, ste shall monitor and test all work associated with the affected portions.

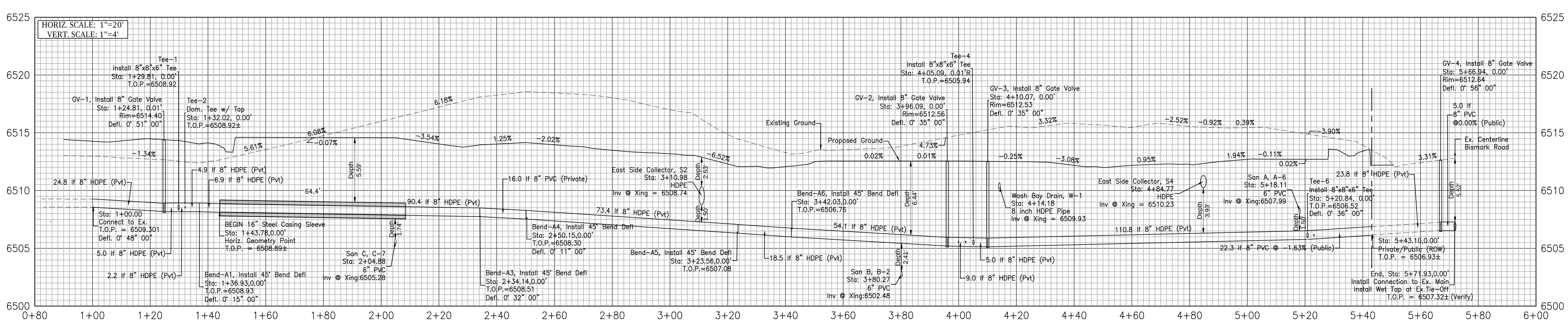
Kiowa Engineering Corporation
1604 South 21st Street
Colorado Springs, Colorado 80904
(719) 630-7342

My Garage @ Northcrest
Utility Plan
Private Water & Sanitary Sewer
El Paso County, Colorado

Project No.:	23049
Date:	09/26/2024
Design:	MJK
Drawn:	MJK
Check:	AMcC
Revisions:	

Sheet
C401





Water Main 'A' (Private)

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

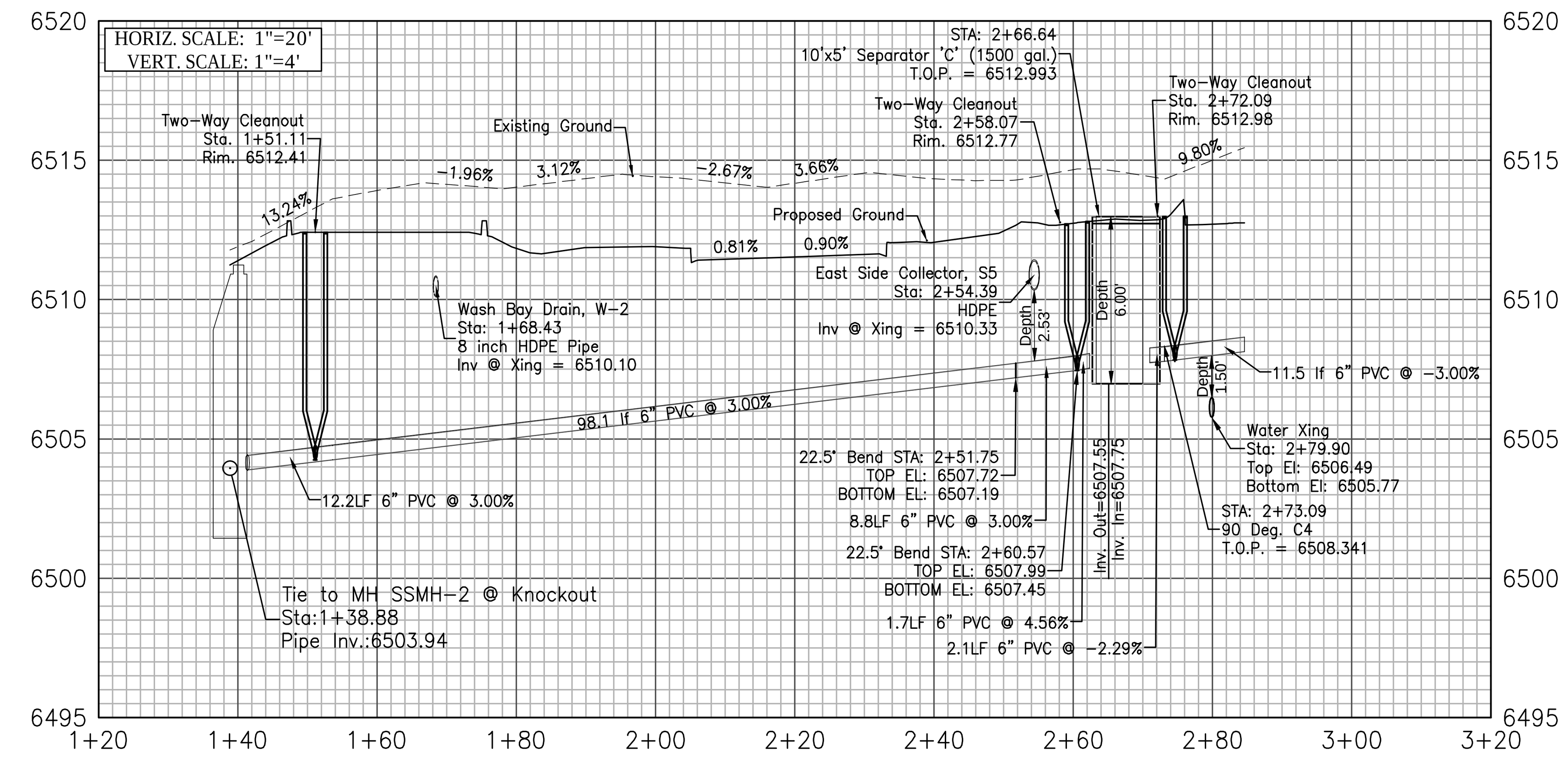
My Garage @ Northcrest
Utility Plan - Private Water Main 'A'
Plan & Profile
El Paso County, Colorado

COLORADO LICENSED PROFESSIONAL ENGINEER 25057 9/27/2024

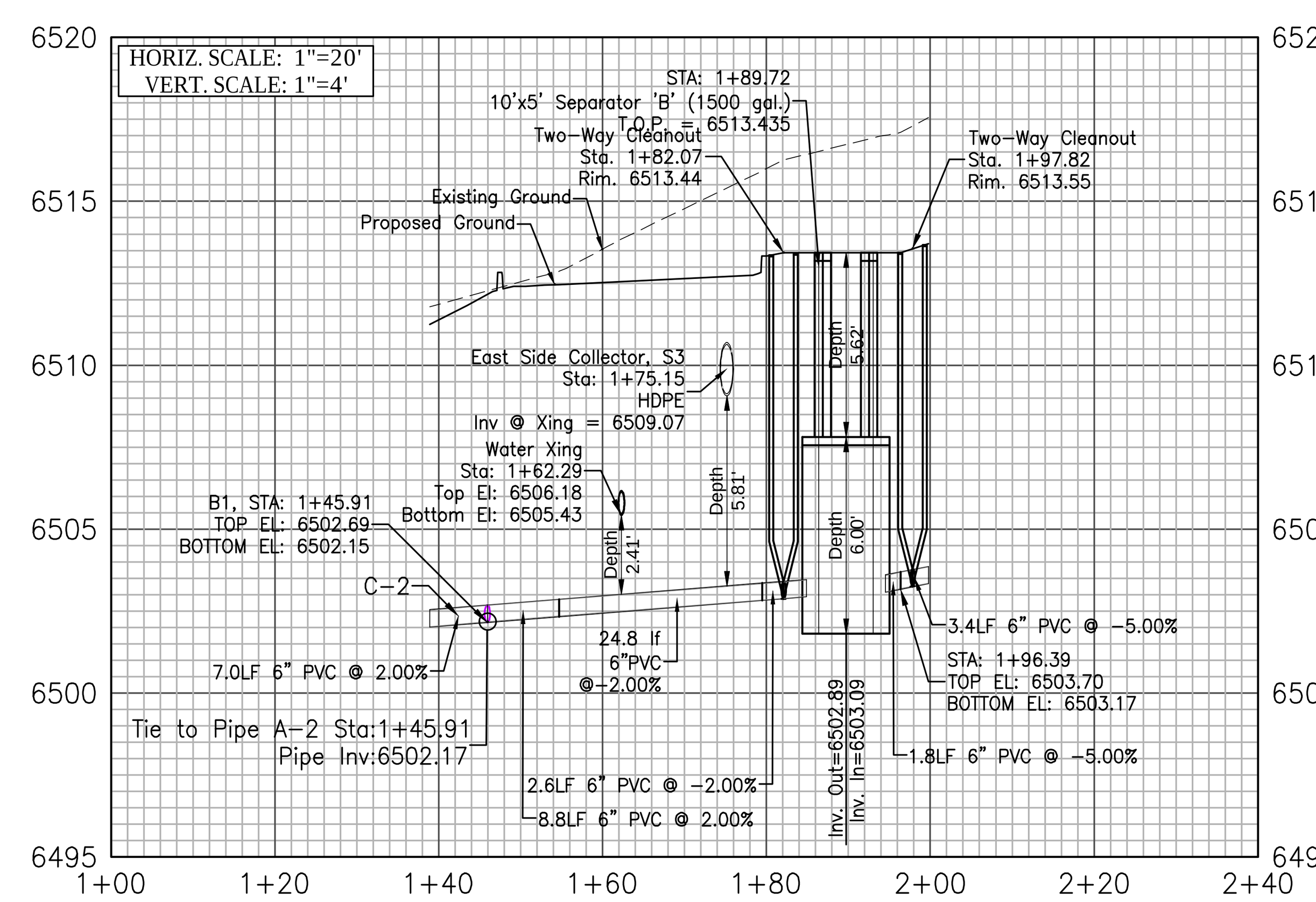
Project No.:	23049
Date:	09/26/2024
Design:	MJK
Drawn:	MJK
Check:	AMcC
Revisions:	

Sheet
C402
16of 22 Sheets

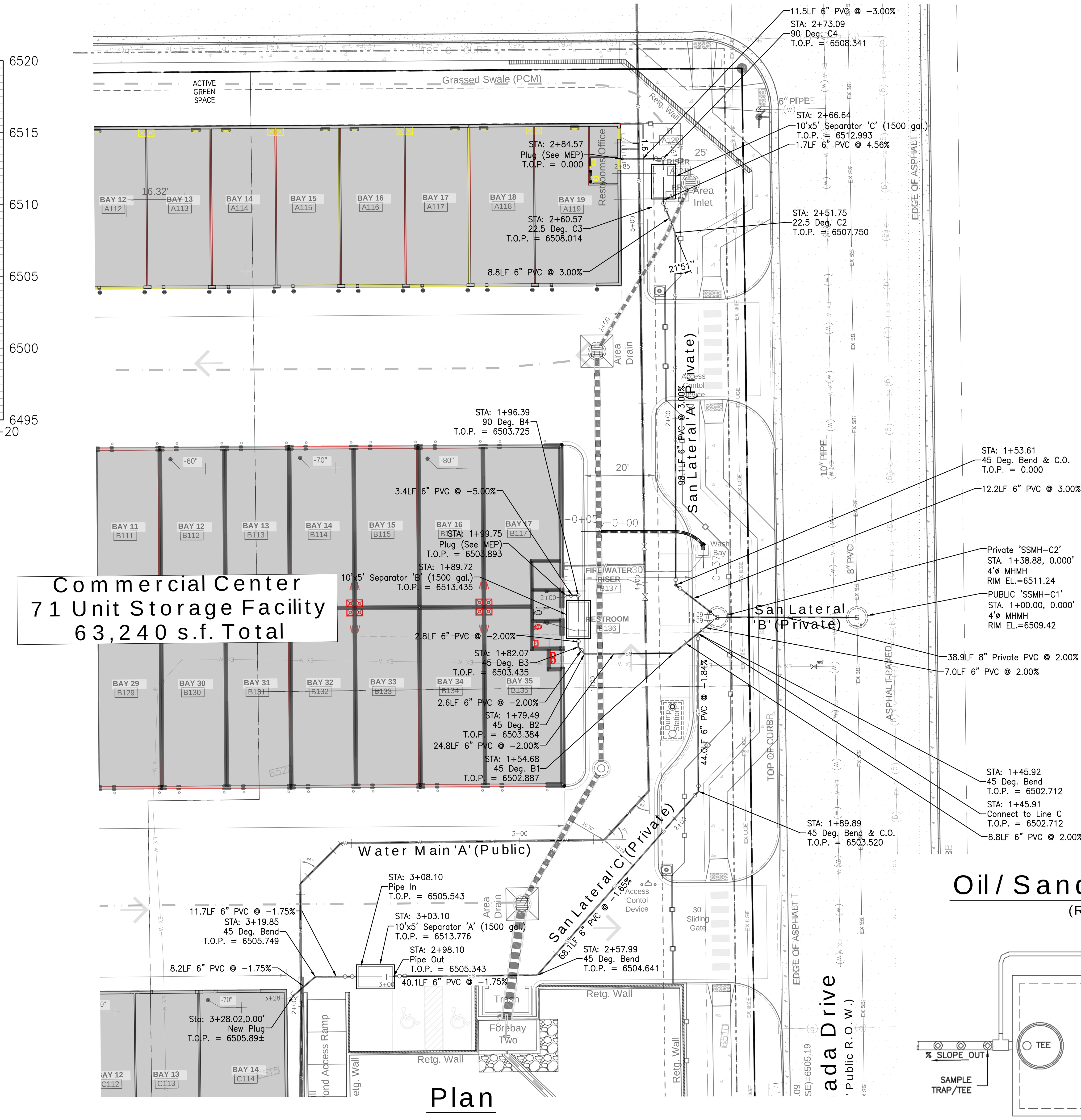
23049-Util_C402.dwg/Sep 26, 2024



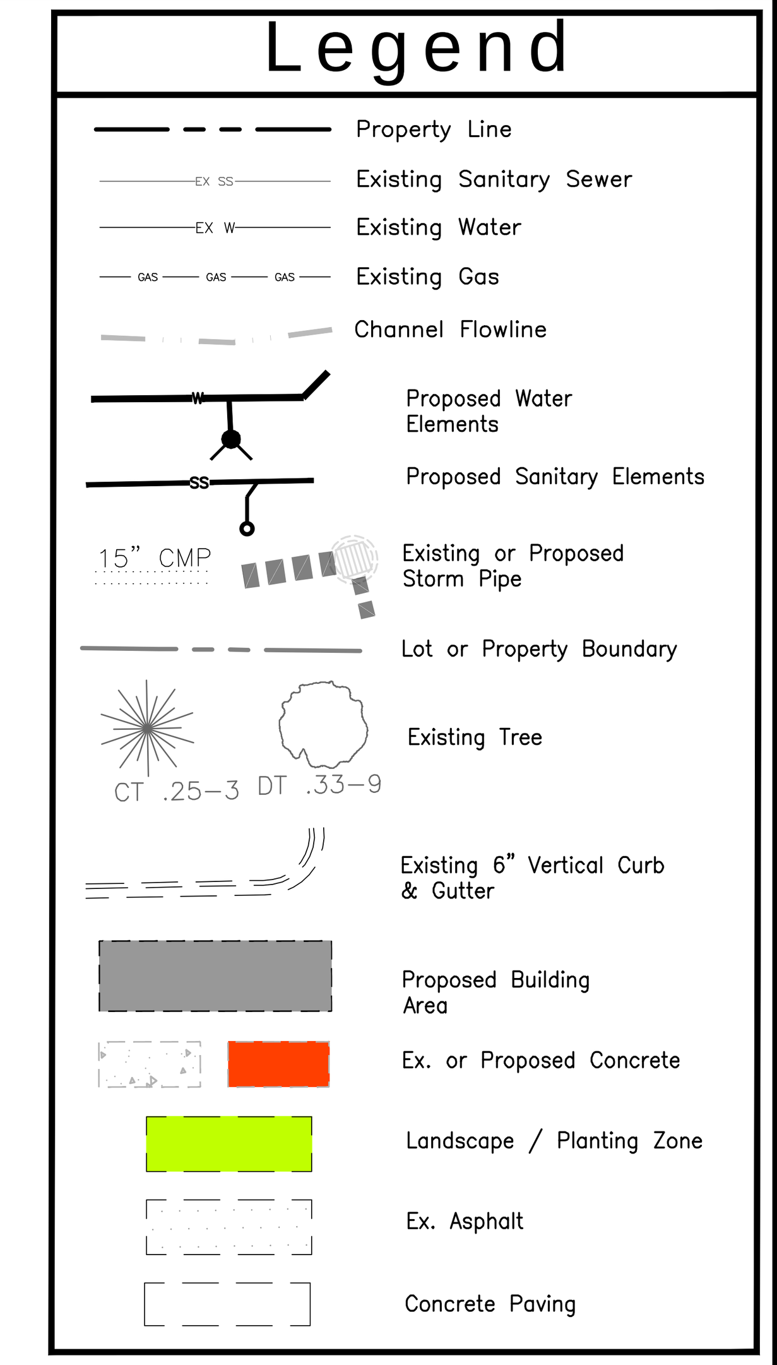
San Service 'A' (Private)



San Service 'B' (Private)



Plan

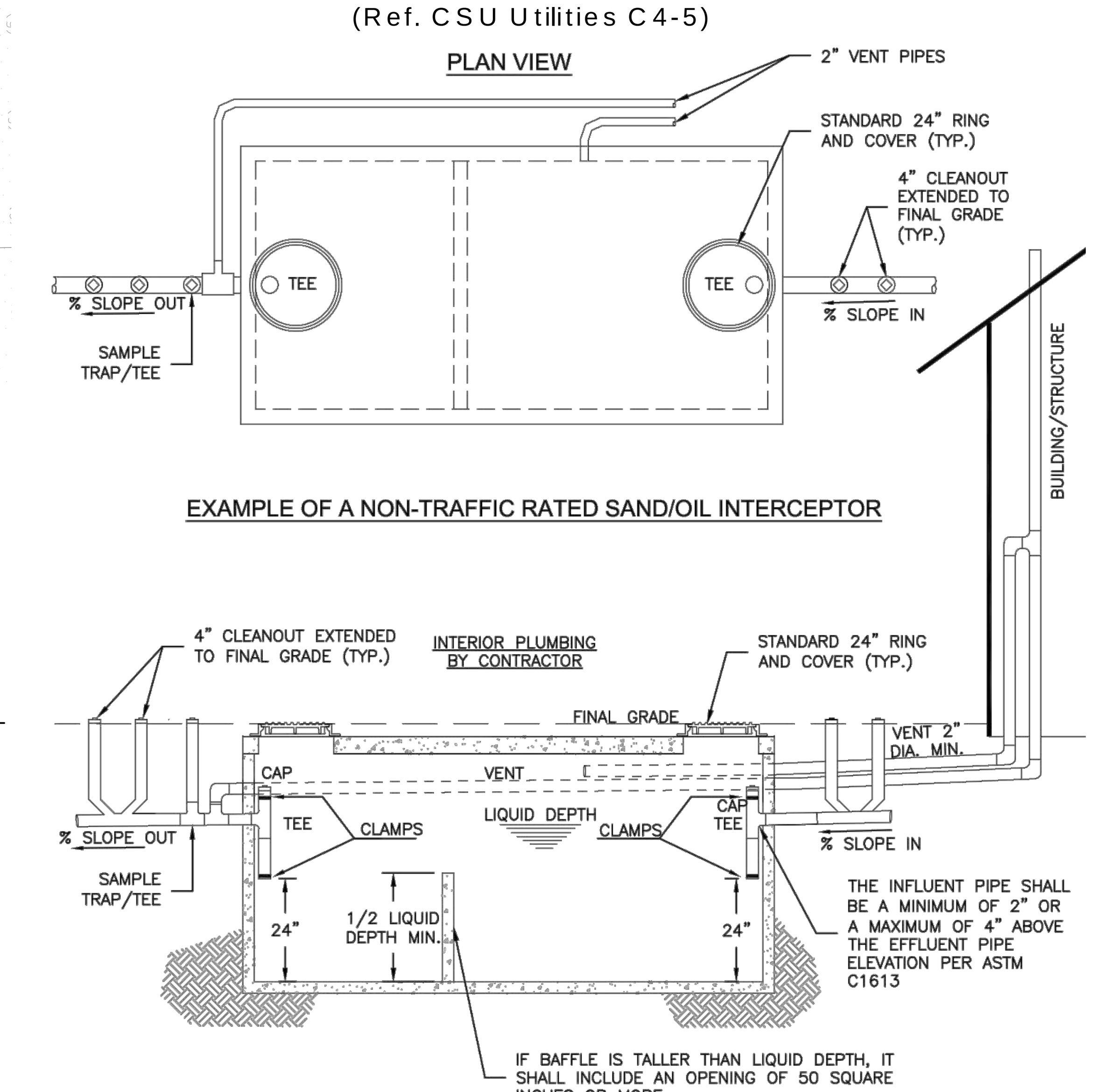


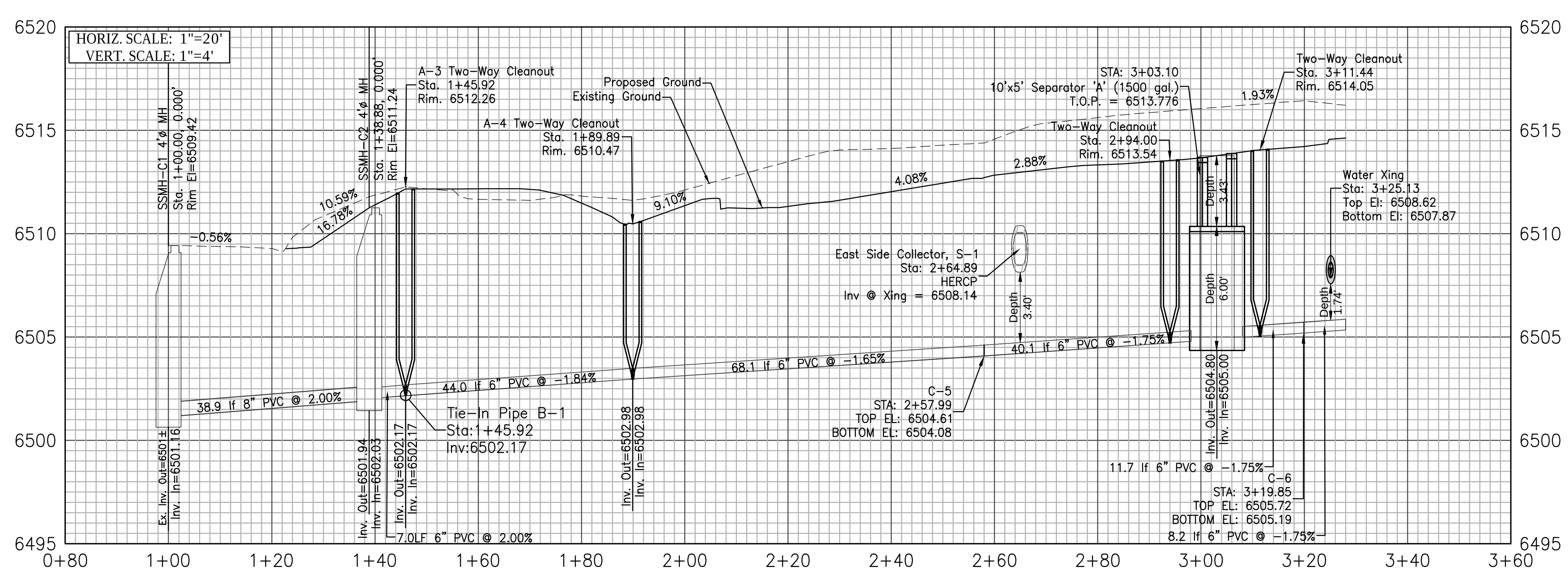
Kiowa Engineering Corporation
1604 South 21st Street
Colorado Springs, Colorado 80904
(719) 630-7342

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

Oil / Sand Separator Detail

(Ref. CSU Utilities C4-5)





San Service 'C' (Private)

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 present, is properly secured to the wall, to make sure 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 cleanout 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:

1. 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.
2. SIZE OF SAND/OIL INTERCEPTOR TO BE 1500 GALLON (MIN.) AS DETERMNINED BY CHEROKEE METRO DISTRICT.
3. INTERIOR PIPING TO BE STRAPPED AT THE BOTTOM WITH GALVANIZED CLAMPS, UNISTRUT, OR EQUAL.
4. 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.
5. VENTS SHALL BE CONSTRUCTED ON THE OUTSIDE OF THE TANK.
6. TO BE READ IN CONJUNCTION WITH CHAPTER 2 OF THE WASTEWATER LINE EXTENSION AND SERVICE STANDARDS.
7. RING AND COVER SHALL BE PROVIDED EVERY 10' FOR SAND/OIL INTERCEPTORS LONGER THAN 20'.

COLORADO LICENSED PROFESSIONAL ENGINEER 25057 9/23/2024

Project No.:	23049
Date:	09/24/2024
Design:	MJK
Drawn:	MJK
Check:	AMcC
Revisions:	

Sheet

C403