Triview Northern Delivery System (October 2022)

Biological Assessment

Prepared using IPaC

Generated by Sarah Itz (sarahitz@jdshydro.com)

October 18, 2022

The purpose of this Biological Assessment (BA) is to assess the effects of the proposed project and determine whether the project may affect any Federally threatened, endangered, proposed or candidate species. This BA is prepared in accordance with legal requirements set forth under Section 7 of the Endangered Species Act (16 U.S.C. 1536 (c)).

In this document, any data provided by U.S. Fish and Wildlife Service is based on data as of April 21, 2022.

Prepared using IPaC version 6.82.0-rc4

Triview Northern Delivery System (October 2022) Biological Assessment

Table Of Contents

1 Description Of The Action

1.1 Project Name

Triview Northern Delivery System (October 2022)

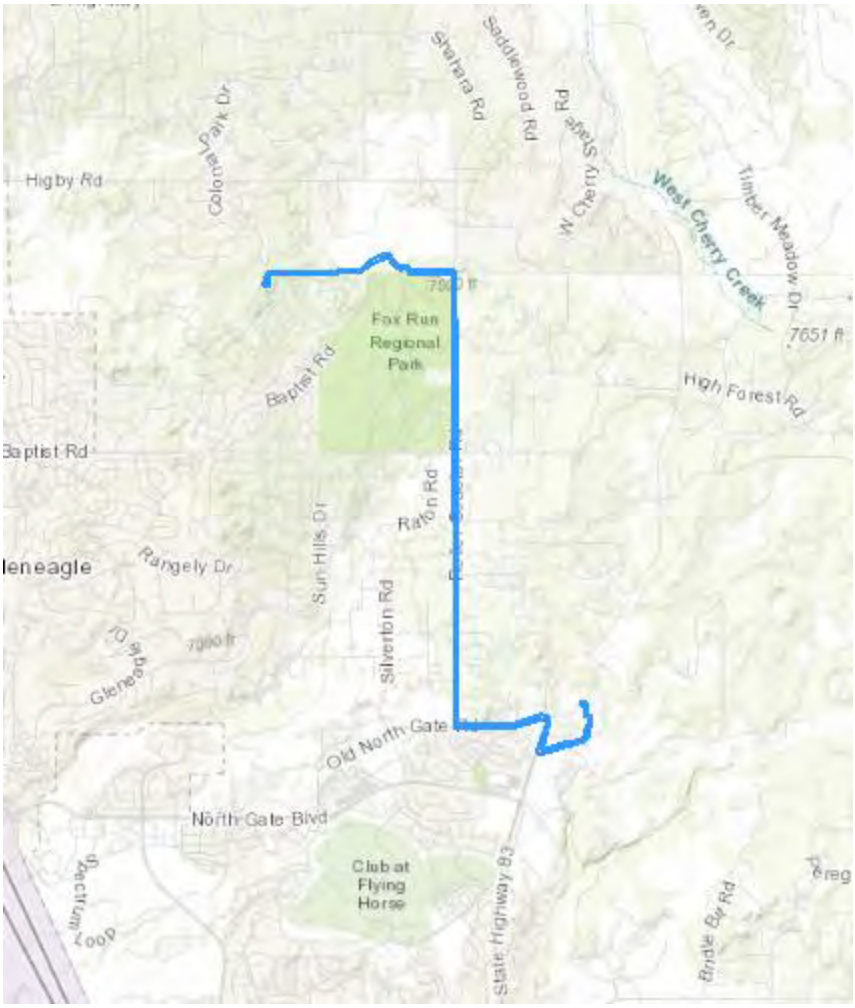
1.2 Executive Summary

The Northern Delivery System (NDS) is proposed to bring renewable water to northern El Paso County municipal customers. Existing infrastructure will be utilized to capture, treat, and convey water to the north end of Colorado Springs Utilities (CSU) at a location known as the CSU Highway 83 Storage Tank. The proposed NDS project will convey water from the CSU Highway 83 Storage Tank through a pump station and transmission main at which point it will be delivered to existing District storage for distribution to customers. The booster pump station will be constructed on land owned by the City of Colorado Springs and is located east of the intersection of Old Northgate Road and Highway 83. The proposed pipeline route begins at the booster pump station and proceeds west across private property and then continues west within the Old Northgate Road right of way, north within the Rollercoaster Road right of way, west within the Baptist Road right of way and private property until it reaches land within the Town of Monument jurisdiction. The project is proposed for construction by Triview Metropolitan District and Forest Lakes Metropolitan District, but the infrastructure will be sized to serve additional water suppliers in northern El Paso County that may choose to partner with the project in the future. The design flowrate for the booster pump station and 16" transmission pipeline is 4 MGD. Project Need: Triview Metropolitan District and other water suppliers in northern El Paso County are reliant on Denver Basin water. The static water level in the Denver Basin has been dropping with increased use. Additionally, there are water quality concerns as radionuclides are somewhat common in the Denver Basin in northern El Paso County. Because of these factors, the District has pursued other means of water supply. The water conveyed by the NDS will be renewable and will take pressure off of the Denver Basin. The NDS will allow water suppliers in northern El Paso County to supply water to both existing and proposed development now and into the future.

Effect determination summary

1.3 Project Description

1.3.1 Location



LOCATION
El Paso County, Colorado

1.3.2 Description of project habitat

The northern portion of the proposed waterline runs along a hiking trail with ponderosa pine (*Pinus ponderosa*) overstory and sparse grass/herbaceous understory. For the vast majority of project, the waterline would be constructed underneath the Baptist Road and Rollercoaster Road pavement. It also runs under Old North Gate Road for approximately 1,755 feet, then along the northern edge of Old North Gate Road and crosses under SH 83. The waterline then turns south and runs along the eastern edge of US 83. The proposed waterline then heads east/northeast across a mostly open grassy area to its terminus at a proposed pump station. Preliminary plans for the pump station are not yet available; however, 70% design plans for the waterline are attached. There is also a proposed 8-inch waterline connecting a new fire hydrant to the pump station for the property owner's residence located north of the existing CSU water tank and proposed pump station. There is critical habitat for the Preble's meadow jumping mouse immediately east of the proposed waterline terminus, pump station, and 8-inch waterline; however, no project construction would encroach upon the critical habitat.

Relevant documentation

- UPDATED PIPELINE 70 REVISION 1 - OCTOBER 22
- UPDATED Segment_AB_70Design

1.3.3 Project proponent information

Provide information regarding who is proposing to conduct the project, and their contact information. Please provide details on whether there is a Federal nexus.

Requesting Agency
JDS Hydro Consultants

FULL NAME
Sarah Itz

STREET ADDRESS
5540 Tech Center Dr., Suite 100

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Colorado Springs, CO 80919

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sarahitz@jdshydro.com

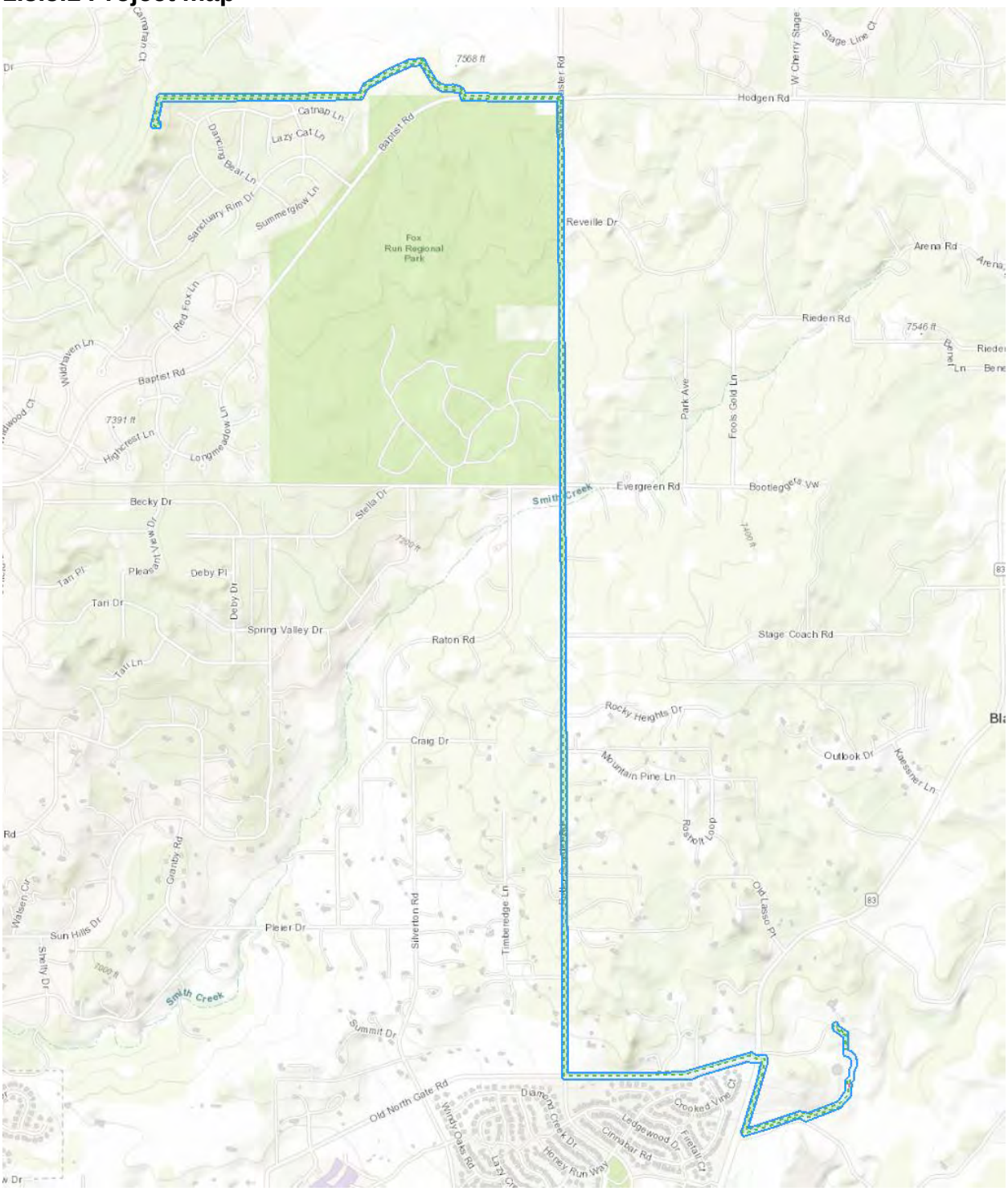
1.3.4 Project purpose

The purpose of the project is to bring renewable water to northern areas of El Paso County which will reduce reliance on non-renewable groundwater that is decreasing in quantity and quality. The project will ultimately improve water quality by providing clean, renewable treated water It will also improve fire protection for areas along the waterline route including Fox Run Regional Park.

1.3.5 Project type and deconstruction

This project is a proposed underground waterline project.

1.3.5.1 Project map



LEGEND

Project footprint

Proposed booster pump station: New pump station

Proposed waterline: Install below-ground pipeline

1.3.5.2 install below-ground pipeline

Activity start date
January 02, 2023

Activity end date
December 31, 2025

Stressors

PLANT FEATURES

- Change in vegetation structure

ENVIRONMENTAL PROCESSES

- Change in hydrology

Description
Impacts to the areas surrounding the proposed waterline are largely limited to temporary impacts during construction. The waterline route was designed to avoid as many trees as possible, but some may need to be removed along the northern-most stretch of the project. Re-vegetation with a native grass seed mix will be done on the areas that are open-cut.

1.3.5.3 new pump station

Activity start date
January 02, 2023

Activity end date
December 31, 2025

Stressors

HUMAN FEATURES

- Increase in human structures

Description
The proposed pump station will be located on CSU property adjacent to the Highway 83 Storage Tank. This parcel is situated outside of the City of Colorado Springs. The pump station will be sized to convey up to 4 MGD or 2,778 gpm and deliver water at the pressures needed by Triview and other potential partners. The footprint of the pump station is approximately 1,500 square feet.

1.3.6 Anticipated environmental stressors

Describe the anticipated effects of your proposed project on the aspects of the land, air and water that will occur due to the activities above. These should be based on the activity deconstructions done in the previous section and will be used to inform the action area.

1.3.6.1 Plant Features

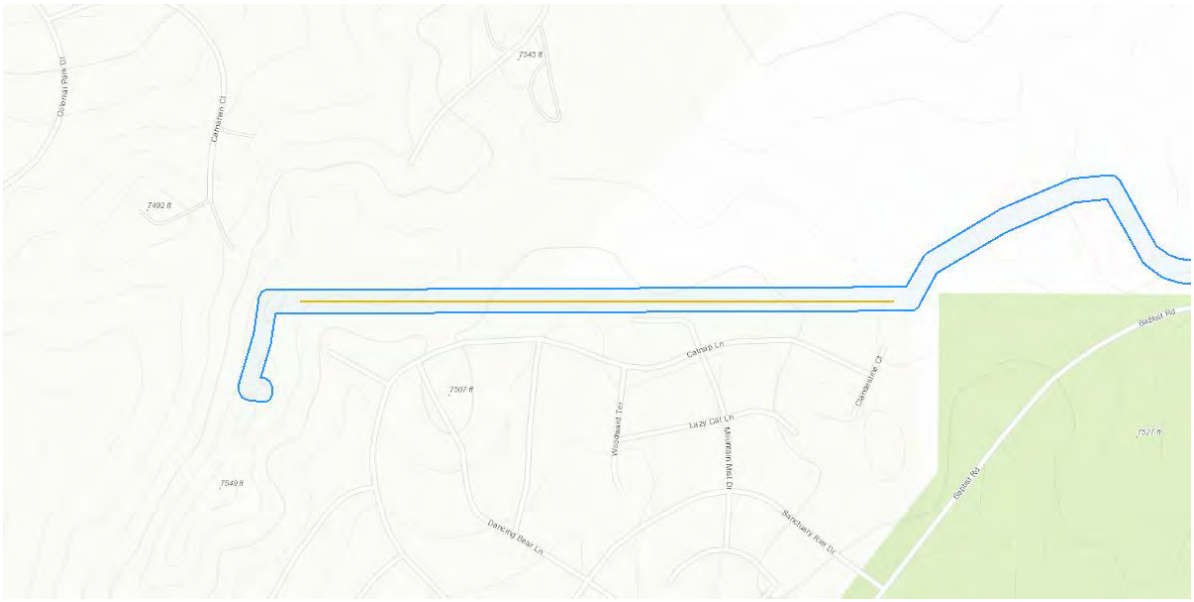
Individuals from the Plantae kingdom, such as trees, shrubs, herbs, grasses, ferns, and mosses. This feature also includes products of plants (e.g., nectar, flowers, seeds, etc.).

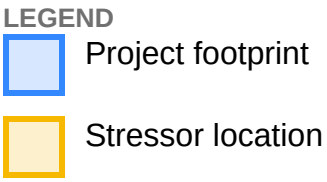
1.3.6.1.1 Change in vegetation structure

ANTICIPATED MAGNITUDE

Most of the proposed waterline will be installed under Baptist Road, Rollercoaster Road, and Old North Gate Road. No trees would be affected through this stretch of the project. In the other areas, the waterline was designed to avoid as many trees as possible. Several ponderosa pine trees may need to be removed in the northern section of the project. However, these trees are not unique to the area; there are many more that will remain unaffected.

STRESSOR LOCATION




LEGEND
Project footprint
Stressor location

CONSERVATION MEASURES

- Mature tree avoidance

STRUCTURES AND ACTIVITIES

- Install below-ground pipeline

1.3.6.2 Aquatic Features

Bodies of water on the landscape, such as streams, rivers, ponds, wetlands, etc., and their physical characteristics (e.g., depth, current, etc.). This feature includes the groundwater and its characteristics. Water quality attributes (e.g., turbidity, pH, temperature, DO, nutrients, etc.) should be placed in the Environmental Quality Features.

1.3.6.3 Human Features

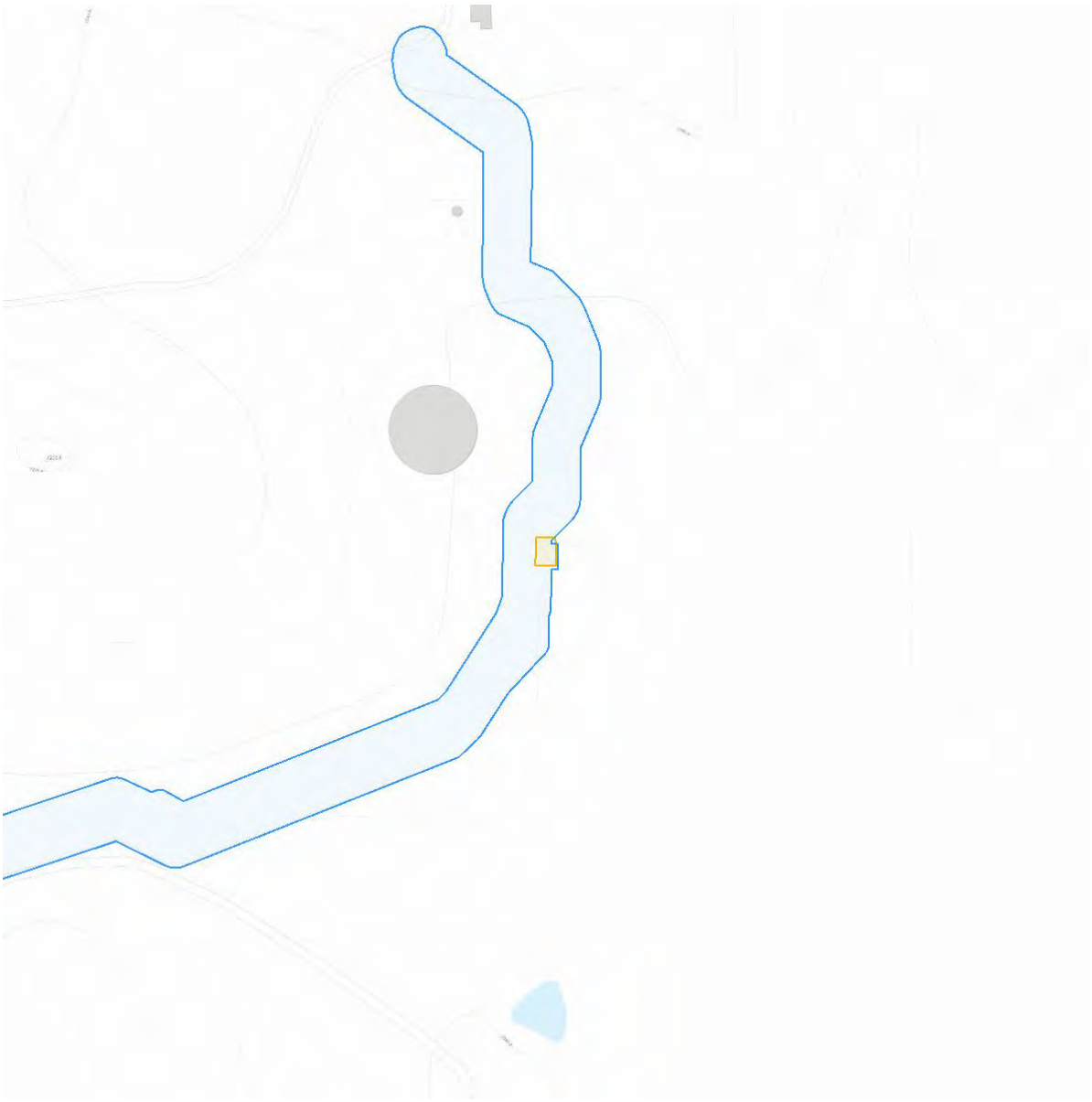
Man-made Structures on the landscape (e.g., roads, trails, buildings, bridges, farm fields, etc.).

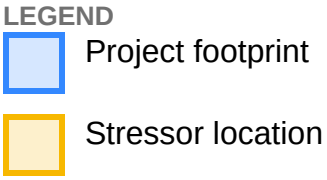
1.3.6.3.1 Increase in human structures

ANTICIPATED MAGNITUDE

The proposed pump station will be located on CSU property adjacent to the Highway 83 Storage Tank. This parcel is situated outside of the City of Colorado Springs. The pump station will be sized to convey up to 4 MGD or 2,778 gpm and deliver water at the pressures needed by Triview and other potential partners. The footprint of the pump station is approximately 1,500 square feet.

STRESSOR LOCATION




LEGEND
Project footprint
Stressor location

CONSERVATION MEASURES

No conservation measures for this stressor

STRUCTURES AND ACTIVITIES

- New pump station

1.3.6.4 Environmental Processes

Abiotic processes that occur in the natural environment (e.g., erosion, precipitation, flood frequency, photoperiod, etc.).

1.3.6.4.1 Change in hydrology

ANTICIPATED MAGNITUDE

This stressor is not expected to occur; the following explanation has been provided:

The proposed waterline crosses an unnamed tributary to Smith Creek and Smith Creek; however, at these locations, the waterline would be constructed under Rollercoaster Road. On either side of Rollercoaster Road, these two waters do not contain Ordinary High Water Marks (OHWM) and appear to be swales.

Some of the proposed waterline would be constructed via boring, resulting in very little impacts to existing conditions. Some of the proposed waterline would be constructed via open trench, which would temporarily impact up to 20 feet to either side of the waterline. These impacted areas would be returned to their pre-existing topographies/elevations after construction is complete. No change in surface hydrology is expected.

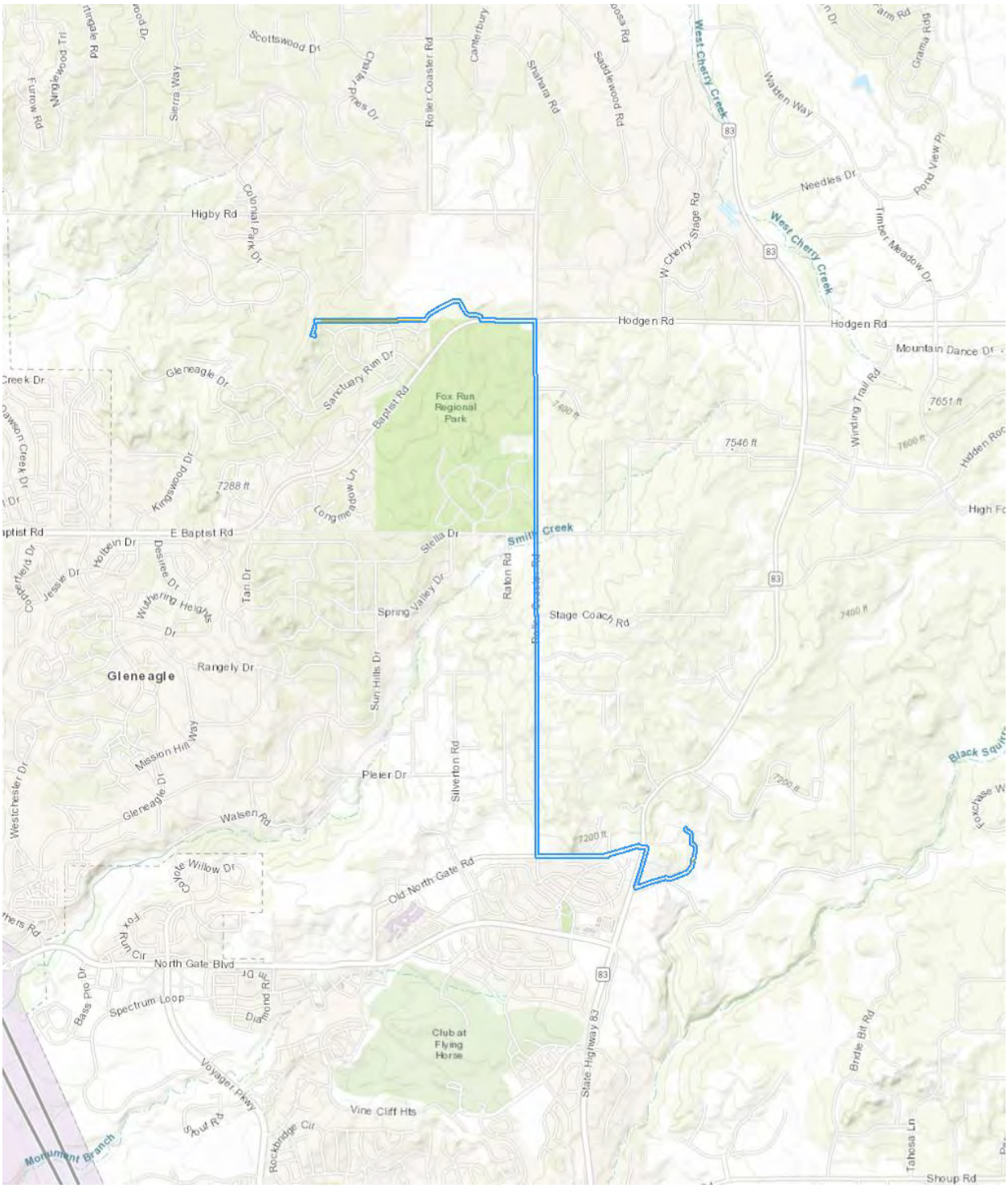
CONSERVATION MEASURES

- Return impacted areas to pre-construction topographies

STRUCTURES AND ACTIVITIES

- Install below-ground pipeline

1.4 Action Area



1.5 Conservation Measures

1.5.1 mature tree avoidance

Description

The northwestern portion of the proposed waterline runs along an existing hike/bike trail, bends to the northeast, then to the southeast before running under Baptist Road. This route was designed to minimize impacts to mature trees as much as possible. A combination of boring and open trenching would be used along this stretch due to hilly topography and to avoid impacting trees. The remainder of the line would be installed either under existing roadways or through open grassy areas.

Stressors

- Change in vegetation structure

1.5.2 re-vegetate with native grass seed mix

Description

The El Paso County Conservation District native seed mix will be used to re-vegetate disturbed areas. This includes big bluestem (20%), blue grama grass (10%), green needlegrass (10%), western wheatgrass (20%), sideoats grama grass (10%), switchgrass (10%), prairie sandreed (10%), and yellow indiangrass (10%).

Resource needs

- grass (Percent ground cover that is preferred by the PMJM is close to 100%. Densely vegetated areas of grasses, forbs, and shrubs is needed for foraging.)

1.5.3 return impacted areas to pre-construction topographies

Description

Most of the project lies within existing roadways. In the remaining areas, disturbed areas will be returned to pre-construction topographies.

Stressors

- Change in hydrology

1.6 Prior Consultation History

No previous USFWS consultation for this project has been completed.

1.7 Other Agency Partners And Interested Parties

We are preparing a 1041 Application for El Paso County approval:

El Paso County Planning and Community Development Kevin Mastin, Interim Executive Director 2880 International Circle, Suite 110 Colorado Springs, CO 80910 (719) 520-6300 plnweb@elpasoco.com (mailto:plnweb@elpasoco.com)

The pipeline will be added to Triview Metropolitan District's Water System Monitoring plan, which is reviewed and regulated by the Colorado Department of Public Health & Environment (CDPHE) but no formal design review is required by them.

1.8 Other Reports And Helpful Information

Please see attached overview map of the project.

Relevant documentation

- Triview overview map

2 Species Effects Analysis

This section describes, species by species, the effects of the proposed action on listed, proposed, and candidate species, and the habitat on which they depend. In this document, effects are broken down as direct interactions (something happening directly to the species) or indirect interactions (something happening to the environment on which a species depends that could then result in effects to the species).

These interactions encompass effects that occur both during project construction and those which could be ongoing after the project is finished. All effects, however, should be considered, including effects from direct and indirect interactions and cumulative effects.

2.1 Eastern Black Rail

This species has been excluded from analysis in this environmental review document.

Relevant documentation

Sarah Itz, JDS Hydro biologist, completed a habitat assessment along the waterline route in October 2021 and April 2022.

Justification for exclusion

Eastern Black Rails nest in marshes and wet meadows across North America, including riparian marshes, coastal prairies, saltmarshes, and impounded wetlands. All of its habitats have stable shallow water, usually just 1.2 inches deep at most.This habitat type is not present along the proposed waterline route. No marshes or wetlands, or stable shallow water areas were identified during the field investigations.

2.2 Gray Wolf

This species has been excluded from analysis in this environmental review document.

Relevant documentation

Sarah Itz, JDS Hydro biologist, performed a habitat assessment along the proposed waterline route in October 2021 and April 2022.

Justification for exclusion

The gray wolf inhabits wilderness and remote areas. The proposed waterline is located within an urban area of El Paso County. This species is not expected to occur in the project area and would not be affected by the project.

2.3 Greenback Cutthroat Trout

This species has been excluded from analysis in this environmental review document.

Relevant documentation

Sarah Itz, JDS Hydro biologist, performed a habitat assessment along the proposed waterline route in October 2021 and April 2022.

Justification for exclusion

No habitat for this species exists in the project area. The proposed waterline crosses Smith Creek and an unnamed tributary of Smith Creek; however, both are ephemeral and do not regularly contain flowing water. Additionally, at the crossings of Smith Creek and its tributary, the waterline would be constructed underneath Rollercoaster Road. No effects to this species would occur.

2.4 Monarch Butterfly

2.4.1 Status of the species

This section should provide information on the species' background, its biology and life history that is relevant to the proposed project within the action area that will inform the effects analysis.

2.4.1.1 Legal status

The Monarch Butterfly is federally listed as 'Candidate' and additional information regarding its legal status can be found on the ECOS species profile.

2.4.1.2 Recovery plans

Available recovery plans for the Monarch Butterfly can be found on the ECOS species profile.

2.4.1.3 Life history information

Note - the monarch is a candidate species and not yet listed or proposed for listing. Consultation with U.S. Fish and Wildlife Service under section 7 of the Endangered Species Act is not required for candidate species, like the monarch. We encourage agencies, however, to take advantage of any opportunity they may have to conserve the species.

For information on monarch conservation, visit https://www.fws.gov/savethemonarch/, http://www.mafwa.org/?page_id=2347, and, for the West, https://wafwa.org/committees-working-groups/monarch-working-group/.

Adult monarch butterflies are large and conspicuous, with bright orange wings surrounded by a black border and covered with black veins. The black border has a double row of white spots, present on the upper side of the wings. Adult monarchs are sexually dimorphic, with males having narrower wing venation and scent patches. The bright coloring of a monarch serves as a warning to predators that eating them can be toxic.

During the breeding season, monarchs lay their eggs on their obligate milkweed host plant (primarily Asclepias spp.), and larvae emerge after two to five days. Larvae develop through five larval instars (intervals between molts) over a period of 9 to 18 days, feeding on milkweed and sequestering toxic chemicals (cardenolides) as a defense against predators. The larva then pupates into a chrysalis before emerging 6 to 14 days later as an adult butterfly. There are multiple generations of monarchs produced during the breeding season, with most adult butterflies living approximately two to five weeks; overwintering adults enter into reproductive diapause (suspended reproduction) and live six to nine months.

In many regions where monarchs are present, monarchs breed year-round. Individual monarchs in temperate climates, such as eastern and western North America, undergo long-distance migration, and live for an extended period of time. In the fall, in both eastern and western North America, monarchs begin migrating to their respective overwintering sites. This migration can take monarchs distances of over 3,000 km and last for over two months. In early spring (February-March), surviving monarchs break diapause and mate at the overwintering sites before dispersing. The same individuals that undertook the initial southward migration begin flying back through the breeding grounds and their offspring start the cycle of generational migration over again.

Identified resource needs

Nectar

Nectar from any blooming flower

2.4.1.4 Conservation needs

Milkweed is an essential feature of quality monarch habitat. Not only does native milkweed offer a food source for monarch larvae, but it provides nectar for a variety of other pollinators and also provides habitat for many other organisms. Unlike larvae that rely only on milkweed to survive, adult monarchs use diverse nectar sources for food. Nectar plants are a key component to prime habitat for monarchs and other pollinators.

Environmentally friendly management practices are important for successful monarch conservation. These land management activities can help to reduce the effects of habitat disruption and can promote native growth in a habitat. Replacing non-native species with native species encourages a healthy diversity of plants and animals in an ecosystem and provides more ecological benefits. Some management strategies important to monarch habitat conservation include prescribed burning, timely mowing, native seed collection, native planting, and exotic species control.

2.4.2 Environmental baseline

The environmental baseline describes the species' health ***within the action area only*** *at the time of the consultation, and does not include the effects of the action under review. Unlike the species information provided above, the environmental baseline is at the scale of the Action area.*

2.4.2.1 Species presence and use

Most of the proposed project lies within paved roadways (Baptist Road and Roller Coaster Road). However, in the southern portion of the project, the waterline would run below mowed/maintained right-of-way areas and an open grassy area near its terminus at the existing water tank site. These areas will likely contain blooming wildflowers in the summer and could provide foraging habitat for the monarch butterfly. In the northern portion of the project, the understory under the ponderosa pine trees is sparse and would not likely contain many blooming flowers. During construction of the project, monarch butterflies would likely flee from construction activities and noise. It is assumed that the project may affect, but is unlikely to adversely affect this species.

Relevant documentation

2.4.2.2 Species conservation needs within the action area

Species conservation needs for survival and recovery of the Monarch butterfly within the action area are minimal. A 40-foot-wide area along the proposed waterline would be temporarily impacted, but would eventually re-establish with wildflowers. As the Monarch butterfly is a candidate species, no recovery plan is available.

2.4.2.3 Habitat condition (general)

nectar (Nectar from any blooming flower)
Scattered wildflowers were observed within the grassy areas of the project action area. The quantity of wildflowers is relatively low compared to the grasses they grow among, though their quality is good. Flowering species such as asters, dandelions, mullien, and daisies were observed in the project action area.

2.4.2.4 Influences
Much of the action area is developed into roadway and hike/bike trail facilities that have reduced native vegetation areas. Due to climate change, Colorado is becoming drier and may not have as many wildflowers as previous years.

2.4.2.5 Additional baseline information
No additional baseline information

2.4.3 Effects of the action
This section considers and discusses all effects on the listed species that are caused by the proposed action and are reasonably certain to occur, including the effects of other activities that would not occur but for the proposed action.

2.4.3.1 Indirect interactions

RESOURCE NEED	STRESSORS	CONSERVATION MEASURES	AMOUNT OF RESOURCE IMPACTED	INDIVIDUALS AFFECTED
Nectar (nectar from any blooming flower)	Increase in human structures		There are likely wildflowers in the area to be developed into a pump station. However, that area is mostly grass, so the amount of wildflowers lost would be considered minimal.	***No individuals will be affected*** Monarch butterflies would forage elsewhere for nectar.

2.4.3.2 Direct interactions

DIRECT IMPACT	CONSERVATION MEASURES	INDIVIDUALS IMPACTED	IMPACT EXPLANATION
Displacement		Yes	Adult monarch butterflies that would normally feed on the nectar from the wildflowers in the direct construction area of the waterlines and pump station would be minimally displaced to other areas to feed.

2.4.4 Cumulative effects

The Triview Northern Delivery System will provide water to new areas of northeastern Colorado Springs that are to be developed into residential neighborboods. Areas that currently contain foraging habitat for the Monarch butterfly would be converted to residential use. This is a cumulative impact to the species.

2.4.5 Discussion and conclusion

Determination: NLAA

Compensation measures

After installation of the waterlines, all disturbed areas will be re-seeded with native grasses. Wildflowers are expected to re-establish naturally in disturbed areas, thus restoring those areas back to potential Monarch butterfly foraging habitat.

2.5 Pallid Sturgeon

This species has been excluded from analysis in this environmental review document.

Relevant documentation

Sarah Itz, JDS Hydro biologist, performed a habitat assessment along the proposed waterline route in October 2021 and April 2022.

Justification for exclusion

No habitat for this species exists in the project area. The only surface water resources along the proposed waterline are ephemeral. No effects to this species would occur.

2.6 Piping Plover

This species has been excluded from analysis in this environmental review document.

Relevant documentation

Sarah Itz, JDS Hydro biologist, performed a habitat assessment along the proposed waterline route in October 2021 and April 2022.

Justification for exclusion

Piping plover habitat includes sandy lakeshore beaches, sandbars within riverbeds or even sandy wetland pastures. An important aspect of this habitat is that of sparse vegetation. No such habitat exists in the project area. This project will not affect this species.

2.7 Preble's Meadow Jumping Mouse

2.7.1 Status of the species

This section should provide information on the species' background, its biology and life history that is relevant to the proposed project within the action area that will inform the effects analysis.

2.7.1.1 Legal status

The Preble's Meadow Jumping Mouse is federally listed as 'Threatened' and additional information regarding its legal status can be found on the ECOS species profile.

2.7.1.2 Recovery plans

Available recovery plans for the Preble's Meadow Jumping Mouse can be found on the ECOS species profile.

2.7.1.3 Life history information

The Preble's meadow jumping mouse (Preble's or PMJM) is a small mammal approximately 9 inches in length with large hind feet adapted for jumping, a long bicolored tail (which accounts for 60% of its length), and a distinct dark stripe down the middle of its back which is bordered on either side by gray to orange-brown fur. To evade predators, the mouse can jump up to three feet.

Identified resource needs

Canopy cover

Tree and shrub cover is needed for hiding from predators. size of cover needed by the PMJM is assumed to be variable. quality and quantity of cover is likely to be variable as well. location of cover needed is along the drainages/creeks in the front range.

Grass

Percent ground cover that is preferred by the PMJM is close to 100%. densely vegetated areas of grasses, forbs, and shrubs is needed for foraging.

Streams

The PMJM appears to prefer to stay within 10 yards of a water source, typically a river, stream, or tributary. perennial waters are important for this species.

2.7.1.4 Conservation needs

Conservation needs of the Preble's meadow jumping mouse includes conservation of suitable habitat for the mouse, and especially critical habitat for the mouse. More information on the conservation needs can be found in the Recovery Plan for the Preble's meadown jumping mouse dated August 28, 2018 (https://ecos.fws.gov/docs/recovery_plan/Final_Draftpreblesrecoveryplan_10032018_signed.pdf) (https://ecos.fws.gov/docs/recovery_plan/Final_Draftpreblesrecoveryplan_10032018_signed.pdf) .

2.7.2 Environmental baseline

The environmental baseline describes the species' health ***within the action area only*** *at the time of the consultation, and does not include the effects of the action under review. Unlike the species information provided above, the environmental baseline is at the scale of the Action area.*

2.7.2.1 Species presence and use

Habitat for this species exists at the southern end of the proposed waterline. There is critical habitat for the Preble's meadow jumping mouse immediately east of the southern terminus of the waterline along two unnamed tributaries to Black Squirrel Creek. The proposed waterline and 20-foot construction impact area on either side of the proposed waterline remain outside the critical habitat area. However, it is possible that the Preble's meadow jumping mouse could forage outside of the critical habitat at times. It is currently unknown when construction of this portion of the waterline would occur. If it needs to be in the winter months when the Preble's meadow jumping mouse is hibernating, coordination between the owner of the project (Triview Metropolitan District), the project biologist, and project engineers will be conducted to determine if that is feasible. It is assumed that the project may affect, but is unlikely to adversely affect this species.

Relevant documentation

2.7.2.2 Species conservation needs within the action area

The southern end of the action area crosses open, grassy areas that could provide foraging habitat for the Preble's meadow jumping mouse. However, at the nearest, the action area is approximately 150 yards west of the presumably occupied riparian corridor along the Black Squirrel Creek tributary. It is unlikely that the action area contains species-specific conservation needs for survival and recovery. Impacts to the action area would be temporary (with the exception of the proposed pump station), and all temporarily disturbed areas would be re-seeded with native grasses, thus returning it to potentially suitable foraging habitat for the mouse.

2.7.2.3 Habitat condition (general)

grass (Percent ground cover that is preferred by the PMJM is close to 100%. Densely vegetated areas of grasses, forbs, and shrubs is needed for foraging.)

The action area east of SH 83 contains nearly 100% grass and herbaceous cover. Species such as grama grass, yucca, curly mesquite, dandelion, aster, mullein, bluestem, western ragweed, and smooth brome were observed in this area.

Supporting documentation

- UPDATED Triview waters map for IPaC
- UPDATED Triview crit hab map - zoomed in
- UPDATED Triview crit hab map
- IMG_5402
- IMG_5400

2.7.2.4 Influences

According to the Recovery Plan (2018), Preble’s mouse populations face continued threats due to loss and fragmentation of their habitat from human land uses, including urban, suburban, and recreational development; highway and bridge construction; water development; instream changes due to increased runoff and flood control efforts; higher peak and sustained flows in urban areas leading to channel incision; sand and gravel mining; and overgrazing. These human land use activities affect the Preble’s mouse by directly destroying its protective cover, nests, food resources, and hibernation sites; disrupting behavior; or acting as a barrier to movement. Most of these activities have occured in the past and are currently occuring in and near areas of suitable Preble's mouse habitat, especially in north and eastern Colorado Springs.

Additionally, Colorado and Wyoming are becoming drier over the years due to climate change which would likely affect streams along the Front Range. This may in turn affect the Preble's mouse, as they require perennial waterbodies.

2.7.2.5 Additional baseline information

None

2.7.3 Effects of the action

This section considers and discusses all effects on the listed species that are caused by the proposed action and are reasonably certain to occur, including the effects of other activities that would not occur but for the proposed action.

2.7.3.1 Indirect interactions

RESOURCE NEED	STRESSORS	CONSERVATION MEASURES	AMOUNT OF RESOURCE IMPACTED	INDIVIDUALS AFFECTED
Canopy cover (tree and shrub cover is needed for hiding from predators. size of cover needed by the PMJM is assumed to be variable. quality and quantity of cover is likely to be variable as well. location of cover needed is along the drainages/creeks in the front range.)			***This resource is not present in the action area*** The action area does not contain riparian habitat that the Preble's meadow jumping mouse needs to hide from predators. The closest riparian corridor is along the Black Squirrel Creek tributary approximately 150 yards east of the southern terminus of the project. Smith Creek and its tributary do not	***There will be no impacts to this resource, so no individuals will be affected.***

RESOURCE NEED	STRESSORS	CONSERVATION MEASURES	AMOUNT OF RESOURCE IMPACTED	INDIVIDUALS AFFECTED
			contain riparian vegetation in the action area.	
Grass (percent ground cover that is preferred by the PMJM is close to 100%. densely vegetated areas of grasses, forbs, and shrubs is needed for foraging.)	Change in vegetation structure	Re-vegetate with native grass seed mix	Temporary impacts to grasses during construction of the project. Disturbed areas will be re-seeded with native gass seed mix.	If Preble's meadow jumping mouse is present in the action when construction begins, it might be harmed or killed. However, it would likely flee the area when it hears machinery and humans in the vicinity. Additionally, the mouse is largely noctural and construction would be done during the day, therefore detrimental incidents would be unlikely.
Streams (the PMJM appears to prefer to stay within 10 yards of a water source, typically a river, stream, or tributary. perennial waters are important for this species.)			***This resource is not present in the action area*** No perennial waterbodies are located in the action area. Smith Creek and its unnamed tributary are ephemeral. The unnamed tributary to Black Squirrel Creek lies east of the action area and will not be affected by the project.	***There will be no impacts to this resource, so no individuals will be affected.***

2.7.3.2 Direct interactions

DIRECT IMPACT	CONSERVATION MEASURES	INDIVIDUALS IMPACTED	IMPACT EXPLANATION
Crushing		Yes	It is unlikely that any Preble's meadow jumping mouse would be crushed by machinery, however it could happen if individuals are in the action area when construction begins. Mice will likely flee from noise and construction/ human activities. Additionally, construction would occur during the day when the mouse is sleeping (this species is nocturnal).
Disturbance		Yes	Foraging behavior of Preble's meadown jumping mouse may be affected during construction of the project. The mice will likely forage elsewhere, away from construction noise and activities.

DIRECT IMPACT	CONSERVATION MEASURES	INDIVIDUALS IMPACTED	IMPACT EXPLANATION
Injury		Yes	It is unlikely that any Preble's meadow jumping mouse would be injured by machinery, however it could happen if individuals are in the action area when construction begins. Mice will likely flee from noise and construction/ human activities.
Stress		Yes	Nearby construction noise could be stressful to any nearby Preble's meadow jumping mice. It may cause them to alter normal activities or move away from the noise.

2.7.4 Cumulative effects

The Triview Northern Delivery System will provide water to new areas of northeastern Colorado Springs that are to be developed into residential neighborboods. Increased development and impervious cover could detrimentally impact the Preble's meadow jumping mouse. Foraging areas alongside streams could be converted into urban uses. Flow regime in local streams and tributaries may change as a result of increased impervious cover. The addition of new roads and streets could fragment mouse habitat. These would be considered cumulative impacts to the species.

2.7.5 Discussion and conclusion

Determination: NLAA

Compensation measures
The contractor will be made aware of the possible presence of Preble's meadow jumping mouse in the vicinity of the southern end of the proposed waterlines and pump station, and to avoid impacts to the mouse if seen. As this species is mostly noctural, it is unlikely that the mouse would occur in the action area during daylight hours when construction is occuring.

Relevant documentation

- UPDATED Triview crit hab map - zoomed in

2.8 Ute Ladies'-Tresses

This species has been excluded from analysis in this environmental review document.

Relevant documentation

Sarah Itz, JDS Hydro biologist, performed a habitat assessment along the proposed waterline route in October 2021 and April 2022.

Justification for exclusion

Ute ladies'-tresses occur along riparian edges, gravel bars, old oxbows, high flow channels, and moist to wet meadows along perennial streams. It typically occurs in stable wetland and seepy areas associated with old landscape features within historical floodplains of major rivers. Also found in wetland and seepy areas near freshwater lakes or springs. No such habitat exists in the project area. Therefore, the project will not affect this species.

2.9 Western Prairie Fringed Orchid

This species has been excluded from analysis in this environmental review document.

Relevant documentation

Sarah Itz, JDS Hydro biologist, performed a habitat assessment along the proposed waterline route in October 2021 and April 2022.

Justification for exclusion

This species grows in moist tallgrass prairies and sedge meadows. These habitat assemblages do not exist in the project area. Therefore, the project will not affect this species.

2.10 Whooping Crane

This species has been excluded from analysis in this environmental review document.

Relevant documentation

Habitat assessments of the proposed project area were conducted in October 2021 and April 2022 by Sarah Itz, JDS Hydro biologist.

Justification for exclusion

Whooping Cranes have been known to migrate through Colorado on their way to nesting areas in Canada in the summer and on their way back to the Gulf Coast in the winter. Stopover habitat includes shallow water wetlands, ponds, lakes, and rivers. No such habitat exists in the action area for this project. No effects to the Whooping Crane would occur as a result of the project.

3 Critical Habitat Effects Analysis

3.1 Preble's Meadow Jumping Mouse Critical Habitat

3.1.1 Critical habitat description

Critical habitat has been designated for the **'Preble's Meadow Jumping Mouse'**, the final rule can be found at ECOS species profile. The rule outlines required physical and biological features needed for critical habitat to be present.

3.1.2 Environmental baseline

The environmental baseline describes the condition of the critical habitat within the action area only at the time of the consultation, and does not include the effects of the action under review.

3.1.2.1 Condition of physical and biological features

You indicated that Preble's Meadow Jumping Mouse critical habitat is present in your action area it in the following manner.

There is no riparian vegetation in the action area. However, there is nearly 100% good quality grass/herbaceous cover that could be used as foraging habitat in the southern portion of the project. Please see the attached map for a zoomed-in view of the proposed project near the critical habitat.

Relevant documentation

- Triview crit hab map - zoomed in
- Triview crit hab map

3.1.2.2 Conservation needs of physical and biological features

No special management or protection needs of the physical and biological features of Preble's Meadow Jumping Mouse within the action area were identified. The grassy areas that would be disturbed by construction will be re-seeded with native grass seed mix and are expected to return to foraging habitat in subsequent years.

3.1.2.3 Influences

Influences on Preble's mouse critical habitat are similar to influences on the Preble's mouse itself: threats due to loss and fragmentation from human land uses, including urban, suburban, and recreational development; highway and bridge construction; water development; instream changes due to increased runoff and flood control efforts; higher peak and sustained flows in urban areas leading to channel incision; sand and gravel mining; and overgrazing. These human land use activities affect the Preble's mouse critical habitat by directly destroying its protective cover, nests, food resources, and hibernation sites; disrupting Preble's mouse behavior; or acting as a barrier to movement. Most of these activities have occured in the past and are currently occuring in and near critical habitat areas, especially in north and eastern Colorado Springs and Monument.

Additionally, Colorado and Wyoming are becoming drier over the years due to climate change which would likely affect streams along the Front Range. This may in turn affect the Preble's mouse critical habitat, as perennial waterbodies and riparian vegetation are important components.

3.1.2.4 Additional baseline information

None

3.1.3 Effects of the action

No stressors are expected to impact Preble's Meadow Jumping Mouse critical habitat.

3.1.4 Cumulative effects

The Triview Northern Delivery System will provide water to new areas of northeastern Colorado Springs that are to be developed into residential neighborboods. Increased development and impervious cover could detrimentally impact Preble's meadow jumping mouse critical habitat. Some developers may not know that critical habitat is protected by law and inadvertly impact it while developing adjacent properties. Flow regime in local streams and tributaries may change as a result of increased impervious cover. The addition of new roads and streets could fragment critical habitat.

3.1.5 Discussion and conclusion

Determination: NLAA

Relevant documentation

- UPDATED Triview crit hab map - zoomed in

4 Summary Discussion, Conclusion, And Effect Determinations

4.1 Effect Determination Summary

SPECIES (COMMON NAME) OR CRITICAL HABITAT	SCIENTIFIC NAME	LISTING STATUS	PRESENT IN ACTION AREA	EFFECT DETERMINATION
Eastern Black Rail	Laterallus jamaicensis ssp. jamaicensis	Threatened	No	NE
Gray Wolf	Canis lupus	Endangered	No	NE
Greenback Cutthroat Trout	Oncorhynchus clarkii stomias	Threatened	No	NE
Monarch Butterfly	Danaus plexippus	Candidate	Yes	NLAA
Pallid Sturgeon	Scaphirhynchus albus	Endangered	No	NE
Piping Plover	Charadrius melodus	Threatened	No	NE
Preble's Meadow Jumping Mouse	Zapus hudsonius preblei	Threatened	Yes	NLAA
Ute Ladies'-tresses	Spiranthes diluvialis	Threatened	No	NE
Western Prairie Fringed Orchid	Platanthera praeclara	Threatened	No	NE
Whooping Crane	Grus americana	Endangered	No	NE
Preble's Meadow Jumping Mouse critical habitat	Zapus hudsonius preblei	Final	Yes	NLAA

4.2 Summary Discussion

The proposed Triview Northern Delivery System project may affect, but is unlikely to adversely affect the Monarch butterfly, Preble's meadow jumping mouse, and critical habitat for the Preble's meadow jumping mouse. It is not expected to affect any of the other species listed on the IPaC list for the action area.

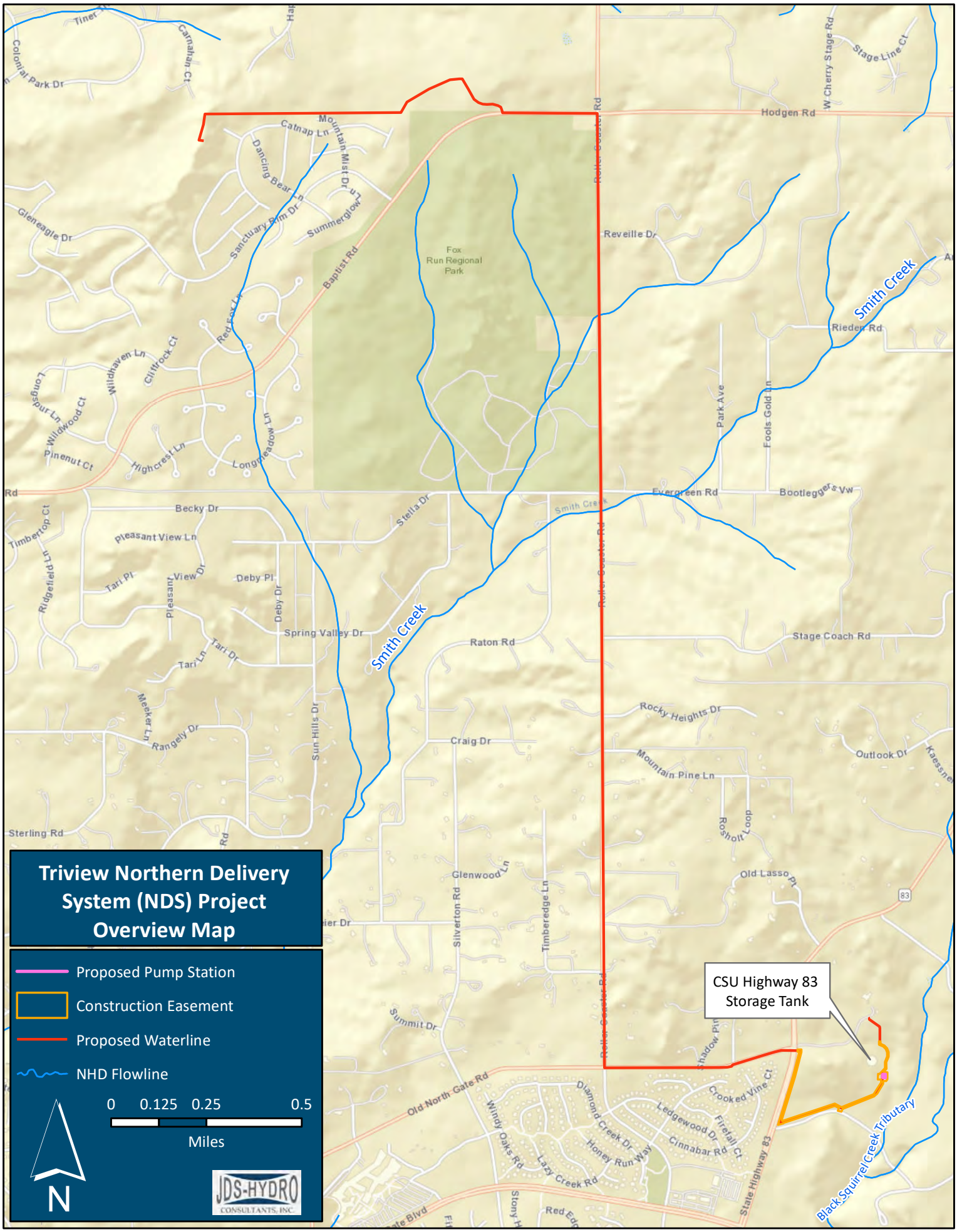
The action area contains wildflowers that could provide Monarch butterflies with a food source when the butterflies are present in central Colorado. After the project is complete, the disturbed areas will be re-seeded with native grasses and wildflowers are expected to re-establish naturally, thus returning the action area into suitable foraging habitat for Monarch butterflies.

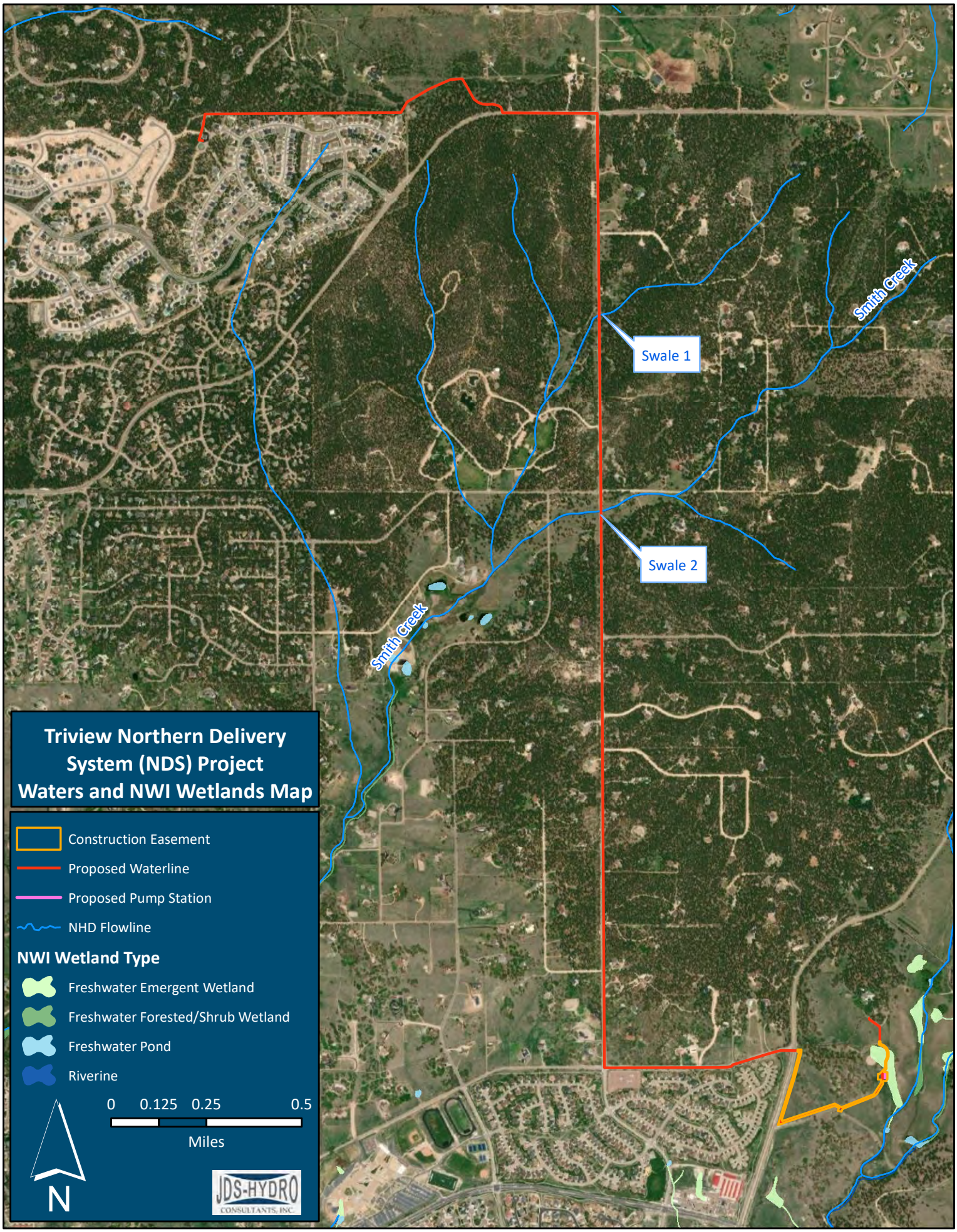
Preble's meadow jumping mice could potentially use the southern portion of the action area as foraging habitat. However, as this species is primarily nocturnal and construction would be completed during the day, individual mice are not expected to be harmed by construction equipment. After the project is complete, the disturbed areas will be re-seeded with native grasses, thus returning the action area into suitable foraging habitat for Preble's meadow jumping mouse.

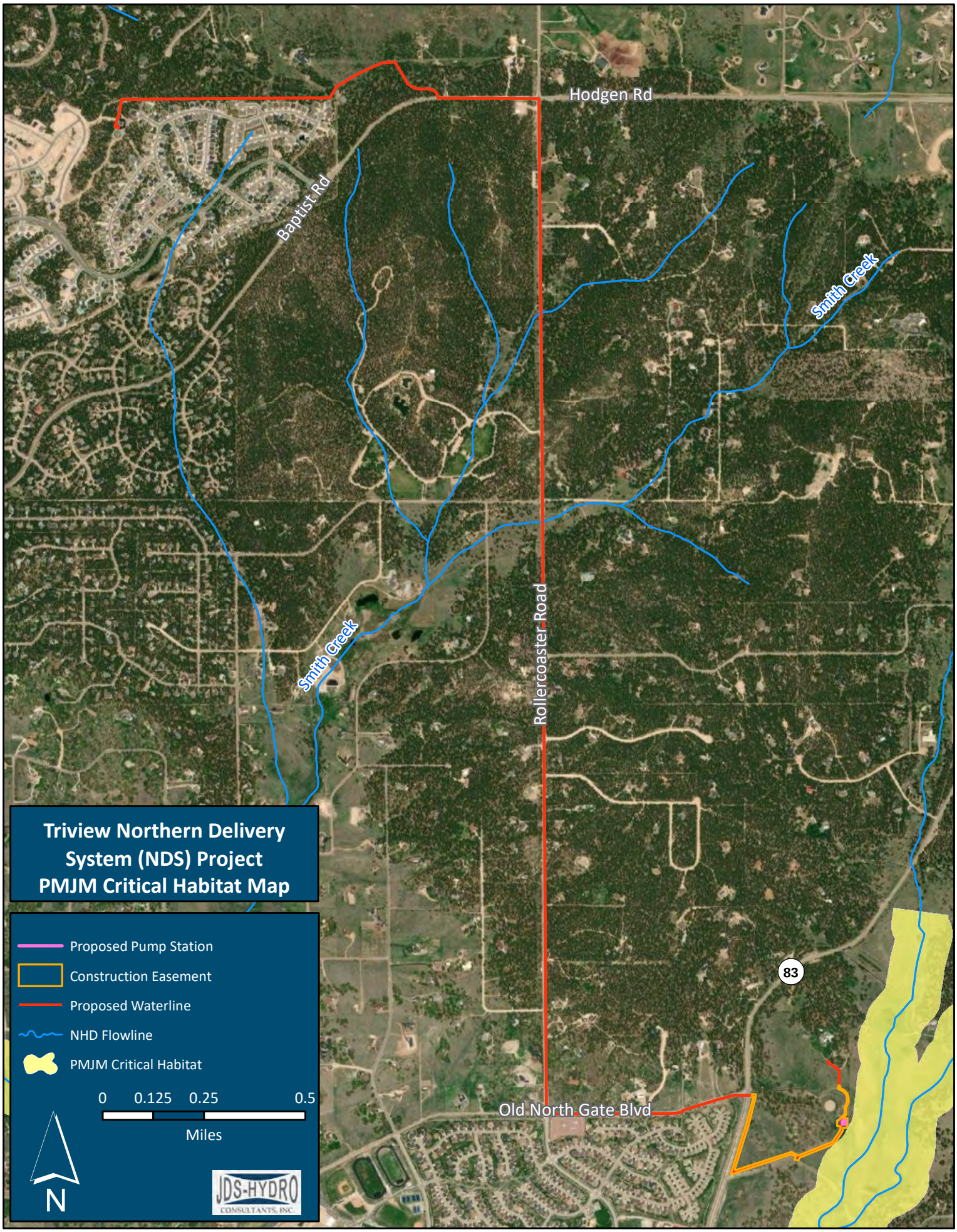
The construction footprint does not extend into critical habitat. The edge of the construction easement lies approximately 4 feet from the edge of the critical habitat. The edge of the pump station lies approximately 45 feet from the edge of critical habitat. However, there may be some temporary indirect effects to the critical habitat from construction, such as increased noise and dust in the immediate vicinity. Therefore, it is anticipated that the project may affect, but is unlikely to adversely affect critical habitat.

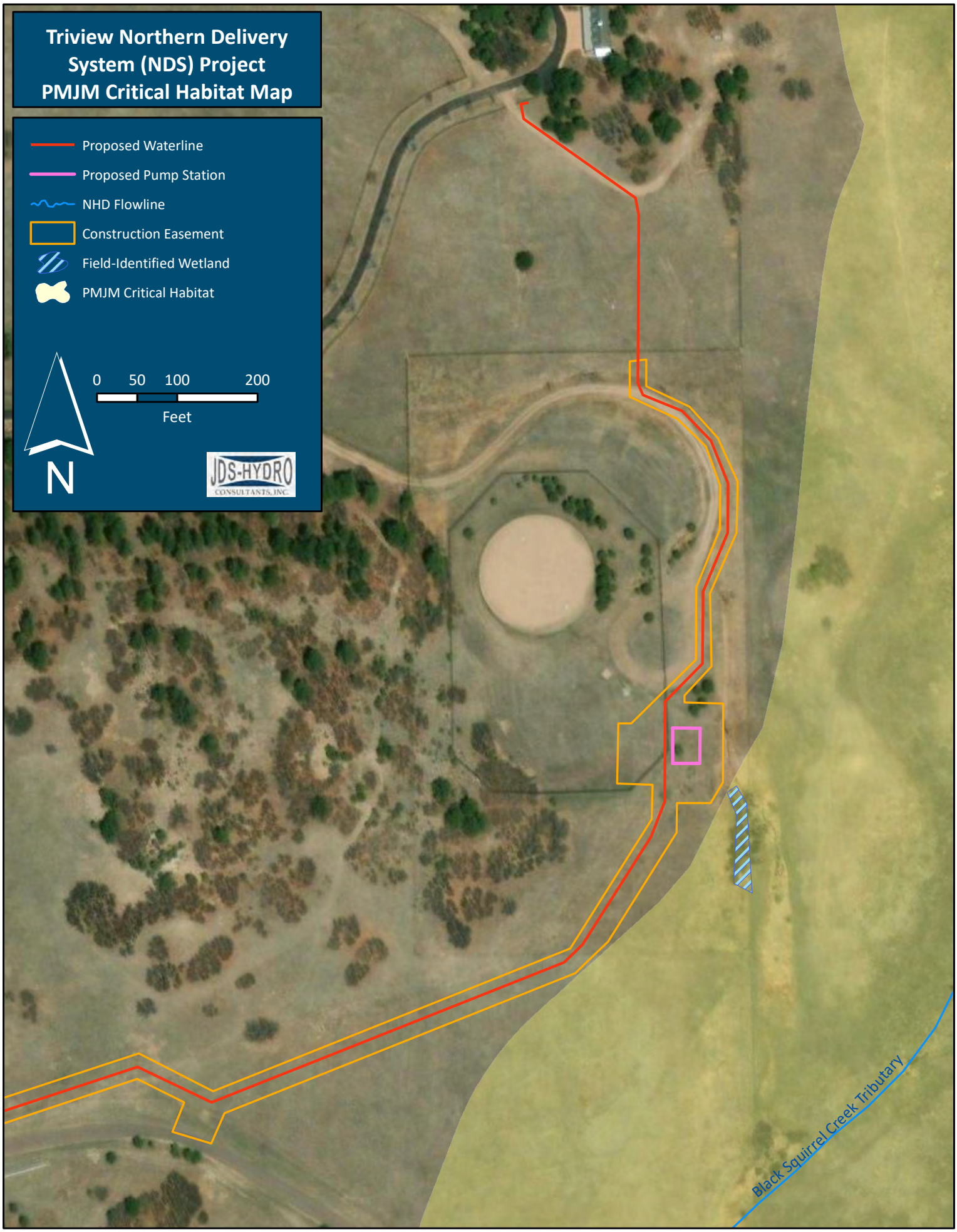
4.3 Conclusion

The proposed Triview Northern Delivery System project may affect, but is unlikely to adversely affect the Monarch butterfly, Preble's meadow jumping mouse, and critical habitat for the Preble's meadow jumping mouse. It is not expected to affect any of the other species listed on the IPaC list for the action area.


Triview Northern Delivery System (NDS) Project Overview Map
Proposed Pump Station
Construction Easement
Proposed Waterline
NHD Flowline
0 0.125 0.25 0.5
Miles
N
JDS-HYDRO CONSULTANTS, INC.
CSU Highway 83 Storage Tank
Fox Run Regional Park
Smith Creek
Black Squirrel Creek Tributary
Hodgen Rd
Reveille Dr
Rieden Rd
Evergreen Rd
Bootleggers Vw
Stage Coach Rd
Raton Rd
Spring Valley Dr
Becky Dr
Pleasant View Ln
Deby Pl
Tari Pl
Tari Ln
Rangely Dr
Sterling Rd
Craig Dr
Rocky Heights Dr
Mountain Pine Ln
Outlook Dr
Old Lasso Pl
Glenwood Ln
Silverton Rd
Timberedge Ln
Summit Dr
Old North Gate Rd
Windy Oaks Rd
Diamond Creek Dr
Honey Run Way
Lazy Creek Rd
Ledgewood Dr
Cinnabar Rd
Crooked Vine Ct
Fireball Ct
State Highway 83
Baptist Rd
Roller Coaster Rd
Park Ave
Fools Gold Ln
Stella Dr
Deby Dr
Sun Hills Dr
Pleasant View Dr
Ridgefield Ln
Timbertop Ct
Wildwood Ct
Wildhaven Ln
Cliffrock Ct
Pinenut Ct
Highcrest Ln
Longspeak Ln
Red Fox Ln
Sanctuary Pines Dr
Dancing Bear Ln
Catnap Ln
Mountain Mist Dr
Summerglow Ln
Gleneagle Dr
Colonial Park Dr
Carnahan Ct
Tiner
Stage Line Ct
W Cherry Stage Rd
Roshott Loop
Kaessner


Swale 1
Swale 2
Smith Creek
Smith Creek
Triview Northern Delivery System (NDS) Project Waters and NWI Wetlands Map
Construction Easement
Proposed Waterline
Proposed Pump Station
NHD Flowline
NWI Wetland Type
Freshwater Emergent Wetland
Freshwater Forested/Shrub Wetland
Freshwater Pond
Riverine
0 0.125 0.25 0.5
Miles
N
JDS-HYDRO
CONSULTANTS, INC.


Hodgen Rd
Baptist Rd
Smith Creek
Smith Creek
Rollercoaster Road
Old North Gate Blvd
83
Triview Northern Delivery System (NDS) Project
PMJM Critical Habitat Map
Proposed Pump Station
Construction Easement
Proposed Waterline
NHD Flowline
PMJM Critical Habitat
0
0.125
0.25
0.5
Miles
N
JDS-HYDRO
CONSULTANTS, INC.


Triview Northern Delivery System (NDS) Project
PMJM Critical Habitat Map
Proposed Waterline
Proposed Pump Station
NHD Flowline
Construction Easement
Field-Identified Wetland
PMJM Critical Habitat
0 50 100 200
Feet
N
JDS-HYDRO
CONSULTANTS, INC.
Black Squirrel Creek Tributary

TRIVIEW METROPOLITAN DISTRICT

NORTHERN DELIVERY SYSTEM - BOOSTER PUMP STATION

MONUMENT, CO

SEPTEMBER 2022

CODE STATEMENT

I. APPLICABLE CODES INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING:

A. PIKES PEAK REGIONAL BUILDING CODE (2017)
B. INTERNATIONAL BUILDING CODE (2015)
C. INTERNATIONAL ENERGY CONSERVATION CODE (2015)
D. INTERNATIONAL MECHANICAL CODE (2015)
E. INTERNATIONAL FUEL GAS CODE (2015)
F. INTERNATIONAL PLUMBING CODE (2018)
G. NATIONAL ELECTRICAL CODE (2020)
H. ICC/ANSI A117.1 ACCESSIBILITY STANDARD (2009)

II. CODE ABSTRACT:

A. SCOPE
THE PURPOSE OF THIS PROJECT IS TO CONSTRUCT A PUMP STATION FOR THE TRIVIEW METROPOLITAN DISTRICT. THE BUILDING WILL HOUSE A PUMPING SYSTEM, PIPING, ELECTRICAL AND CONTROLS EQUIPMENT. ASSOCIATED APPURTENANCES INCLUDE UNDERGROUND SERVICE PIPING.

II. CODE ABSTRACT (CONT.)

B. GENERAL PROPERTY INFORMATION
- –LOCATION: EL PASO COUNTY
- –LEGAL DESCRIPTION: SEC 03–12–66
- –EPC PARCEL SCHED #: 6203000002
- –ZONING: RR–5
- –LAND USE: POLITICAL SUBDIVISION
- –OWNER: CITY OF COLORADO SPRINGS
- –TAX STATUS: POLITICAL/EXEMPT

C. BUILDING CONSTRUCTION
- –TOTAL BUILDING AREA: 1,496 SF
- –BUILDING HEIGHT: 20 FT
- –# OF LEVELS: 2

D. BUILDING CODE ANALYSIS
- –CONSTRUCTION TYPE: TYPE II–B
- –O.C. CLASSIFICATION: U
- –USE: UTILITY
- –ALLOWABLE HEIGHT: 30 FT

E. EGRESS REQUIREMENTS:
- –OC. LOAD CALCULATION
  TOTAL BUILDING: 1,496 SF x 1/100 = 14.96 SF
- –TOTAL EXITS PROVIDED: 1
- –EXITS REQUIRED: 1

LEGEND

- PROPERTY LINE
- EASEMENT/LEASE AGREEMENT AREA
- EX FENCE
- EX WATER LINE
- EX UG ELECTRIC LINE
- EX ELEC POWER POLE
- EX FIRE HYDRANT
- EX TREE (SIZE VARIES)
- 7385 EX CONTOURS–MAJOR
- EX CONTOURS–MINOR
- 7385 PP CONTOURS–MAJOR
- 7386 PP CONTOURS–MINOR
- UGE PP UG ELECTRIC LINE
- W PP WATER LINE
- PP FIRE HYDRANT
- PP FENCE (BARBED WIRE)
- PP FENCE (SPLIT RAIL)
- PP STAGING AREA (INITIAL)
- PP CONCRETE WASHOUT (INITIAL)
- PP VEHICLE TRAFFIC CIRCULATION PATH

SURVEY DATA

TOPOGRAPHY SURVEY CENTENNIAL LAND SURVEYING, LLC. SEE SURVEY FOR ESTABLISHED CONTROL. THE FOLLOWING COORDINATE SYSTEM AND DATUM RECORD IS AS FOLLOWS:

HORIZONTAL DATUM: HORIZONTAL COORDINATES ARE MODIFIED COLORADO STATE PLANE CENTRAL BASED UPON THE FOLLOWING: COORDINATES ARE SCALED FROM CONTROL POINT 5052 BEING A 2–INCH ALUMINUM CAP STAMPED AZTEC CP 52 SET AT THE TOP OF A DIRT BANK ALONG THE EAST SIDE OF GLEN EAGLE DR. APPROXIMATELY 380+– FEET NORTHERLY OF ST. LAWRENCE WAY. VALUES ARE BASED UPON A STATIC SURVEY SESSION WITH THE FOLLOWING RESULTS:
LATITUDE: 39–04–05916N; LONGITUDE: 104–49–24.82486 W
STATE PLANE NORTHING: 1,450,401.759; STATE PLANE EASTING: 3,192,049.712
SCALE FACTOR: 1.0004063250
TRUNCATE NORTHING: 1,000,000.00; TRUNCATE EASTING: 3,000,000.00
PROJECT NORTHING: 450,401.759; PROJECT EASTING: 192,049.712

VERTICAL DATUM: NAVD 88 WITH GEOID G18US; BENCHMARK: CP 5052 EL: 7213.70
BENCHMARK: NGS CS110/DM9842 EL: 6843.25; BENCHMARK: NGS S294/KK0272 EL: 7116.72

70% DESIGN

VICINITY MAP
N.T.S.

PRE–EXCAVATION CHECKLIST

- Gas and Other Utility Lines Shown on Construction Plans
- Utility Notification Center of Colorado (UNCC)–Call at Least Two (2) Business Days Ahead–1–800–922–1987
- Utilities Located & Marked on the Ground
- Employees Briefed on Marking and Color Codes*
- Employees Trained on Excavation and Safety Procedures for Natural Gas Lines
- When Excavation Approaches Gas Lines, Employees Must Expose Lines by Careful Probing and Hand–Digging

COLOR CODE FOR MARKING UNDERGROUND UTILITY LINES

WHITE	PROPOSED EXCAVATION
MAGENTA	TEMPORARY SURVEY MARKINGS
RED	ELECTRIC
YELLOW	GAS, OIL, STEAM
ORANGE	COMMUNICATION, CATV
BLUE	POTABLE WATER
PURPLE	IRRIGATION, RECLAIMED WATER, SLURRY LINES
GREEN	SEWER

COLORADO 811 — Always Call Before You Dig 811 or (800) 922-1987

JDS-HYDRO a Division of RESPEC
5540 TECH CENTER DR., SUITE 100
COLORADO SPRINGS, COLORADO 80919
(719) 227-0072

THE PARTIES RESPONSIBLE FOR THIS PLAN HAVE FAMILIARIZED THEMSELVES WITH ALL CURRENT ACCESSIBILITY CRITERIA AND SPECIFICATION AND THE PROPOSED PLAN REFLECTS ALL SITE ELEMENTS REQUIRED BY THE APPLICABLE ADA DESIGN STANDARDS AND GUIDELINES AS PUBLISHED BY THE UNITED STATES DEPARTMENT OF JUSTICE. APPROVAL OF THIS PLAN BY TRIVIEW METROPOLITAN DISTRICT DOES NOT ASSURE COMPLIANCE WITH THE ADA OR ANY OTHER FEDERAL OR STATE ACCESSIBILITY LAWS OR ANY REGULATIONS OR GUIDELINES ENACTED OR PROMULGATED UNDER OR WITH RESPECT TO SUCH LAWS.

SHEET INDEX

PARTICIPANTS

OWNER
TRIVIEW METROPOLITAN DISTRICT
16055 OLD FOREST POINT
STE 302
MONUMENT, CO 80132
CONTACT: JIM MCGRADY
PHONE: (719) 488–6868

CONSULTING/DESIGN ENGINEER
JDS–HYDRO CONSULTANTS,
A DIVISION OF RESPEC
5540 TECH CENTER DR
STE 100
COLORADO SPRINGS, CO 80919
CONTACT: GWEN DALL, PE
PHONE: (719) 402–0014

DRAINAGE ENGINEER
RESPEC
121 S TEJON ST
STE 1110
COLORADO SPRINGS, CO 80903
CONTACT: RICH GALLEGOS, PE
PHONE: (719) 266–5212

SIGNATURE BLOCKS

DISTRICT APPROVALS
THE TRIVIEW METROPOLITAN DISTRICT RECOGNIZES THE DESIGN ENGINEER AS HAVING RESPONSIBILITY FOR THE DESIGN. THE TRIVIEW METROPOLITAN DISTRICT HAS LIMITED ITS SCOPE OF REVIEW ACCORDINGLY.

TRIVIEW METROPOLITAN DISTRICT DESIGN APPROVAL

BY: JIM MCGRADY, DISTRICT MANAGER DATE:

PROJ NO. W0224.21029

IN CASE OF ERRORS OR OMISSIONS WITH THE WATER DESIGN AS SHOWN ON THIS DOCUMENT, THE STANDARDS AS DEFINED IN THE "RULES AND REGULATIONS FOR INSTALLATION OF WATER MAINS AND SERVICES" SHALL RULE. APPROVAL EXPIRES 180 DAYS FROM DESIGN APPROVAL.

ENGINEER'S STATEMENT:
THESE DETAILED PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECTION AND SUPERVISION. SAID DETAILS AND SPECIFICATIONS HAVE BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE APPLICABLE GOVERNING AGENCIES.

MARIO DIPASQUALE, P.E. #41667 DATE W224.21029 PROJECT NO.
JDS–HYDRO CONSULTANTS, A DIVISION OF RESPEC

PCD FILE NO. _____

TRIVIEW METRO DISTRICT GENERAL NOTES:

1. ALL MATERIALS, WORKMANSHIP, AND CONSTRUCTION OF SITE IMPROVEMENTS SHALL MEET OR EXCEED THE SITE WORK STANDARDS AND SPECIFICATIONS, THE STANDARDS AND SPECIFICATIONS SET FORTH IN THE TRIVIEW METROPOLITAN DISTRICT DESIGN CRITERIA & CONSTRUCTION SPECIFICATIONS, AND APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS. WHERE THERE IS CONFLICT BETWEEN THESE PLANS AND SPECIFICATIONS, OR ANY APPLICABLE STANDARDS, THE HIGHER QUALITY STANDARD SHALL APPLY. ALL WORK WITHIN PUBLIC R.O.W. OR EASEMENTS SHALL BE INSPECTED AND APPROVED BY TRIVIEW METROPOLITAN DISTRICT. THE DISTRICTS WILL ALSO INSPECT ALL WORK ON PRIVATE PROPERTY.

2. THE TRIVIEW METROPOLITAN DISTRICT DESIGN CRITERIA & CONSTRUCTION SPECIFICATIONS MANUALS ARE CONSIDERED PART OF THIS CONSTRUCTION DRAWING SET. THIS DESIGN AND PLAN SET IS INCOMPLETE WITHOUT THESE SPECIFICATIONS MANUALS. THE CONTRACTOR SHALL OBTAIN A COPY OF THESE MANUALS AND BE FAMILIAR WITH THEM FOR ALL CONSTRUCTION ACTIVITIES.

3. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO ACTUAL CONSTRUCTION. ALL EXISTING UTILITIES SHOWN ARE BASED ON INFORMATION OF RECORD. THE CONTRACTOR IS RESPONSIBLE FOR TAKING PRECAUTIONARY MEASURES TO PROTECT THE EXISTING UTILITIES SHOWN HEREON AND ANY OTHER EXISTING UTILITIES NOT OF RECORD OR NOT SHOWN ON THESE PLANS AND AGREES TO ACCEPT FULL RESPONSIBILITY FOR FAILURE TO LOCATE AND PRESERVE ANY EXISTING UTILITIES. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES, AS SHOWN ON THESE PLANS, IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE LOCAL UTILITY LOCATION CENTER AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF THE UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY PERTINENT LOCATIONS AND ELEVATIONS, ESPECIALLY AT THE CONNECTION POINTS AND AT POTENTIAL UTILITY CONFLICTS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES THAT CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS.

4. THE CONTRACTOR SHALL COORDINATE AND COOPERATE WITH THE TRIVIEW METROPOLITAN DISTRICT AND ALL UTILITY COMPANIES INVOLVED WITH REGARD TO RELOCATIONS OR ADJUSTMENTS OF EXISTING UTILITIES DURING CONSTRUCTION AND TO ASSURE THAT THE WORK IS ACCOMPLISHED IN A TIMELY FASHION AND WITH THE MINIMUM DISRUPTION OF SERVICE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL PARTIES AFFECTED BY ANY DISRUPTION OF ANY UTILITY SERVICE.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM ALL APPLICABLE AGENCIES. THE CONTRACTOR SHALL NOTIFY THE TRIVIEW METROPOLITAN DISTRICT INSPECTORS AT LEAST 48 HOURS PRIOR TO THE START OF ANY EARTH DISTURBING ACTIVITY, OR CONSTRUCTION ON ANY AND ALL PUBLIC IMPROVEMENTS.

6. THE CONTRACTOR SHALL HAVE ONE (1) SIGNED COPY OF THE APPROVED PLANS, ONE (1) COPY OF THE APPROPRIATE STANDARDS AND SPECIFICATIONS, AND A COPY OF ALL PERMITS NEEDED FOR THE JOB, ON-SITE AT ALL TIMES.

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ASPECTS OF SAFETY INCLUDING, BUT NOT LIMITED TO, EXCAVATION, TRENCHING, SHORING, TRAFFIC CONTROL, AND SECURITY.

8. IF, DURING THE CONSTRUCTION PROCESS, CONDITIONS ARE ENCOUNTERED WHICH COULD INDICATE A SITUATION THAT IS NOT IDENTIFIED IN THE PLANS OR SPECIFICATIONS, THE CONTRACTOR SHALL CONTACT THE ENGINEER OF RECORD AND THE TRIVIEW METROPOLITAN DISTRICT INSPECTORS IMMEDIATELY.

9. ALL REFERENCES TO ANY PUBLISHED STANDARDS SHALL REFER TO THE LATEST REVISION OF SAID STANDARD, UNLESS SPECIFICALLY STATED OTHERWISE.

10. THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN, IN ACCORDANCE WITH M.U.T.C.D. TO THE TOWN OF MONUMENT FOR APPROVAL, PRIOR TO ANY CONSTRUCTION ACTIVITIES WITHIN, OR AFFECTING, THE RIGHT-OF-WAY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ANY AND ALL TRAFFIC CONTROL DEVICES AS MAY BE REQUIRED BY THE CONSTRUCTION ACTIVITIES.

11. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL LABOR AND MATERIALS NECESSARY FOR THE COMPLETION OF THE INTENDED IMPROVEMENTS SHOWN ON THESE DRAWINGS OR DESIGNATED TO BE PROVIDED, INSTALLED, OR CONSTRUCTED, UNLESS SPECIFICALLY NOTED OTHERWISE.

12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING ROADWAYS FREE AND CLEAR OF ALL CONSTRUCTION DEBRIS AND DIRT TRACKED FROM THE SITE.

13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RECORDING AS-BUILT INFORMATION ON THE SET OF RECORD DRAWINGS KEPT AT THE CONSTRUCTION SITE, WHICH SHALL BE AVAILABLE TO THE TRIVIEW METROPOLITAN DISTRICT INSPECTORS AT ALL TIMES. A REPRODUCIBLE SET OF AS-BUILT DRAWINGS MUST BE FURNISHED TO TRIVIEW METROPOLITAN DISTRICT AT THE COMPLETION OF THE PROJECT, PRIOR TO FINAL APPROVAL BY THE TRIVIEW METROPOLITAN DISTRICT.

14. DIMENSIONS FOR LAYOUT AND CONSTRUCTION ARE NOT TO BE SCALED FROM ANY DRAWING. IF PERTINENT DIMENSIONS ARE NOT SHOWN, CONTACT THE ENGINEER-OF-RECORD FOR CLARIFICATION, AND ANNOTATE THE DIMENSION ON THE AS-BUILT RECORD DRAWINGS.

15. ALL STRUCTURAL EROSION CONTROL MEASUREMENTS SHALL BE INSTALLED, AT THE LIMITS OF CONSTRUCTION, PRIOR TO ANY OTHER GROUND DISTURBING ACTIVITY. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED IN GOOD REPAIR BE THE CONTRACTOR, UNTIL SUCH TIME AS THE ENTIRE DISTURBED AREAS ARE STABILIZED WITH HARD SURFACE OR LANDSCAPING.

16. THE CONTRACTOR SHALL SEQUENCE THE INSTALLATION OF UTILITIES IN SUCH A MANNER AS TO MINIMIZE POTENTIAL UTILITY CONFLICTS. IN GENERAL, STORM SEWER AND SANITARY SEWER SHOULD BE CONSTRUCTED PRIOR TO INSTALLATION OF WATER LINES AND DRY UTILITIES.

17. NO SITE-RELATED IMPROVEMENTS MAY COMMENCE UNTIL A PRE-CONSTRUCTION MEETING IS HELD WITH THE THE TRIVIEW METROPOLITAN DISTRICT AND ALL APPLICABLE PERMITS ARE OBTAINED.

18. THE CONTRACTOR MUST IDENTIFY TO THE TRIVIEW METROPOLITAN DISTRICT, PRIOR TO THE START OF ANY WORK, A QUALIFIED PLAN PERSON RESPONSIBLE FOR REVIEWING AND MONITORING ALL OPERATIONS IN ORDER TO PREVENT OR MINIMIZE THE IMPACT OF VIBRATION, NOISE, DUST, DRAINAGE, AND EROSION DAMAGE, AND OTHER FORMS OF POLLUTION ON NEARBY PROPERTY AND THE PUBLIC AS A WHOLE. THE DEVELOPER MUST WRITE TO THE OWNERS/OCCUPANTS OF PROPERTIES WITHIN AT LEAST 100 YARDS OF THE LIMITS OF THE WORKSITE, INFORMING THEM OF THE NATURE AND TIMING OF THE PROJECT AND PROVIDING CONTACT DETAILS FOR COMPLAINTS.

GENERAL CONSTRUCTION NOTES:

1. THE HORIZONTAL AND VERTICAL LOCATION OF EXISTING IMPROVEMENTS TO BE MET BY THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS SHALL BE CONFIRMED BY FIELD MEASUREMENTS PRIOR TO CONSTRUCTION. ANY SIGNIFICANT DISCREPANCIES FOUND BETWEEN THIS PLAN SET AND ACTUAL FIELD CONDITIONS SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER OF RECORD FOR APPROPRIATE ACTION.

2. THE CONTRACTOR IS ADVISED THAT ALL EXISTING CONDITIONS OUTSIDE THE AREA OF WORK SHALL BE PROTECTED, IF DAMAGE OCCURS DURING CONSTRUCTION, IT WILL BE REPLACED IN THE ORIGINAL, EXISTING CONDITION AT THE CONTRACTOR'S EXPENSE.

3. CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL AND ROUTING DURING CONSTRUCTION, IF REQUIRED. TWO-WAY TRAFFIC SHALL BE MAINTAINED THROUGH THE WORK AREA AT ALL TIMES.

4. ALL DISTURBED AREAS THAT ARE TO REMAIN UNCOVERED FOR A PERIOD GREATER THAN 2 MONTHS SHALL BE RESEEDED AND WATERED UNTIL STABLE VEGETATION IS ESTABLISHED.

5. AT LEAST ONE SIGNED AND STAMPED SET OF THESE CONSTRUCTION DRAWINGS SHALL BE KEPT ON-SITE AT ALL TIMES.

6. ALL PLANS ON THE JOB SITE SHALL BE SIGNED BY THE TRIVIEW METROPOLITAN DISTRICT, AND THE DISTRICTS' ENGINEERS. ANY REVISION OF THE PLANS SHALL BE SO NOTED, WITH THE OLD DRAWINGS MARKED NOT VALID.

7. ALL STATIONING IS CENTER LINE UNLESS OTHERWISE NOTED. ALL ELEVATIONS ARE CENTER LINE UNLESS OTHERWISE NOTED.

8. ALL BURIED DUCTILE IRON PIPE, INCLUDING FITTINGS, VALVES AND FIRE HYDRANTS, SHALL BE WRAPPED WITH POLYETHYLENE TUBING, DOUBLE BONDED AT EACH JOINT AND ELECTRICALLY ISOLATED.

9. ALL DUCTILE IRON PIPE LESS THAN 12 INCHES AND FITTINGS SHALL HAVE CATHODIC PROTECTION USING TWO NO. 6 WIRE WITH 17 LB. MAGNESIUM ANODES EVERY 400 FEET AND 9 LB. MAGNESIUM ANODES AT EACH FITTING.

10. ALL MAIN LINES (PVC & DUCTILE IRON) SHALL BE INSTALLED WITH TRACER WIRE WITH TEST STATIONS EVERY 500 FT (UNLESS VALVE BOXES CAN BE USED AT INTERSECTIONS AND SERVICE STUBS).

11. ALL PIPE MATERIAL, BACKFILL AND INSTALLATION SHALL CONFORM TO THE APPLICABLE SPECIFICATIONS OF THE CITY OF COLORADO SPRINGS, COLORADO DEPARTMENT OF TRANSPORTATION, EL PASO COUNTY DEPARTMENT OF TRANSPORTATION, COLORADO SPRINGS UTILITIES AND THE GEOTECHNICAL ENGINEER.

12. COMPACTION TESTS SHALL BE 95% STANDARD PROCTOR AS DETERMINED BY ASTM D698, UNLESS OTHERWISE APPROVED BY THE DISTRICT OR HIGHER STANDARD AS IMPOSED BY ANOTHER AGENCY HAVING RIGHT-OF-WAY JURISDICTION. THIS SHALL INCLUDE ALL VALVES, FIRE HYDRANT RUNS, WATER & SEWER SERVICE LINES AND MANHOLES. ALL REPORTS SHALL BE SUBMITTED TO THE TRIVIEW METROPOLITAN DISTRICT FOR REVIEW AND APPROVAL.

13. ALL BENDS SHALL BE STAKED PRIOR TO THE START OF CONSTRUCTION.

14. ALL UNUSED SALVAGED WATER UTILITY MATERIAL SHALL BE RETURNED TO THE TRIVIEW METROPOLITAN DISTRICT AS REQUESTED.

15. AT THE CONTRACTOR'S EXPENSE ALL UTILITY MAINS SHALL BE SUPPORTED AND PROTECTED SUCH THAT THEY FUNCTION CONTINUOUSLY DURING CONSTRUCTION OPERATIONS. SHOULD A UTILITY MAIN FAIL AS A RESULT OF THE CONTRACTOR'S OPERATION, IT SHALL BE REPLACED IMMEDIATELY BY THE CONTRACTOR OR THE METROPOLITAN DISTRICTS AT FULL COST OF LABOR AND MATERIALS TO THE CONTRACTOR/DEVELOPER.

16. THE CONTRACTOR SHALL REPLACE OR REPAIR DAMAGE TO ALL SURFACE IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO FENCES, LANDSCAPING, CURB AND GUTTER AND/OR ASPHALT THAT MAY BE CAUSED DURING CONSTRUCTION.

17. ALL CONTRACTORS WORKING ON OR NEAR A WATER OR SEWER FACILITY (TO INCLUDE SERVICE LINES) SHALL HAVE LIABILITY INSURANCE NAMING THE TRIVIEW METROPOLITAN DISTRICT AS ADDITIONAL INSURERS AND SHALL PROVIDE A CURRENT COPY OF WORKERS COMPENSATION INSURANCE ON FILE WITH THE DISTRICTS. NO WORK CAN PROCEED WITHOUT CURRENT CERTIFICATES ON FILE AT THE DISTRICT OFFICE.

18. THE CONTRACTOR SHALL NOTIFY THE TRIVIEW METROPOLITAN DISTRICT (488-6868), AND ALL AFFECTED UTILITY COMPANIES ADJACENT TO THE PROPOSED UTILITY CONSTRUCTION A MINIMUM OF 48 HOURS AND A MAXIMUM OF 96 HOURS PRIOR TO THE START OF CONSTRUCTION. A WEEKLY CONSTRUCTION MEETING SHALL BE REQUIRED WITH THE CONTRACTOR, DISTRICT ENGINEERS AND ALL OTHER PARTIES AS DEEMED NECESSARY BY THE DISTRICTS.

19. COMMENCEMENT OF CONSTRUCTION OF WATER/SEWER SYSTEMS WITHIN DISTRICTS:

19.1. PRIOR TO THE START OF CONSTRUCTION, A PRE-CONSTRUCTION MEETING IS REQUIRED A MINIMUM OF 48 HOURS IN ADVANCE OF COMMENCEMENT OF WORK. A REPRESENTATIVE OF THE OWNER OR DEVELOPER, A REPRESENTATIVE OF THE CONTRACTOR, AND THE DESIGN ENGINEER ARE REQUIRED TO ATTEND. CONTACT THE TRIVIEW METROPOLITAN DISTRICT (488-6868) TO SCHEDULE THE PRE-CONSTRUCTION MEETING. NO PRE-CONSTRUCTION MEETING CAN BE SCHEDULED UNTIL THREE (3) SIGNED/APPROVED PLAN SETS ARE RECEIVED BY THE METROPOLITAN DISTRICTS.

19.2. THE CONTRACTOR IS REQUIRED TO NOTIFY THE TRIVIEW METROPOLITAN DISTRICT (488-6868) A MINIMUM OF 48 HOURS AND A MAXIMUM OF 2 WEEKS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL ALSO NOTIFY AFFECTED UTILITY COMPANIES AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION ADJACENT TO THE KNOWN UTILITY LINES.

20. PRESSURE TESTING OF FACILITIES:

20.1. THE CONTRACTOR SHALL NOTIFY THE TRIVIEW METROPOLITAN DISTRICT (488-6868) A MINIMUM OF 48 HOURS AND A MAXIMUM OF 96 HOURS PRIOR TO THE START OF ANY TESTING.

20.2. ALL SECTIONS OF WATER LINE ARE TO MEET THE FOLLOWING PRESSURE TESTING REQUIREMENTS

20.2.1. TEST 100% OF ALL LINES.

20.2.2. MUST PASS PRESSURE TEST TO 200 PSI FOR TWO HOURS (UNLESS OTHERWISE APPROVED ON THE PLANS)

21. DISINFECTION OF FACILITIES:

21.1. THE CONTRACTOR SHALL DISINFECT ALL DOMESTIC WATERLINES ACCORDING TO AWWA STANDARDS B-300 AND C-601, INCLUDING PRELIMINARY FLUSHING, CHLORINATION, AND FINAL FLUSHING.

21.2. THE CONTRACTOR SHALL COLLECT SAMPLES FROM END OF PIPELINE AFTER FINAL FLUSHING AND PRIOR TO PLACING WATERLINES IN SERVICE AND TEST FOR COLIFORM ORGANISMS. THE NUMBER AND FREQUENCY OF SAMPLES SHALL CONFORM WITH THE REQUIREMENTS OF THE PUBLIC HEALTH AUTHORITY HAVING JURISDICTION. THE CONTRACTOR SHALL PAY FOR THE SERVICES OF AN INDEPENDENT TESTING LABORATORY TO PERFORM SAMPLING AND TESTING AS REQUIRED.

21.3. REPEAT DISINFECTION UNTIL SATISFACTORY SAMPLES HAVE BEEN OBTAINED IF INITIAL OR SUBSEQUENT DISINFECTION FAILS TO PRODUCE SATISFACTORY SAMPLES.

22. COMMENCEMENT OF USE OF WATER LINES AND/OR SYSTEMS:

22.1. NO WATER FACILITY SHALL BE PLACED IN SERVICE UNTIL AFTER THE COMPLETION OF ALL PRESSURE TESTING, FLUSHING, DISINFECTION, BAC-T TESTING, AND COMPACTION TESTING, AND UNTIL AS-BUILT DRAWINGS ARE SUBMITTED AND APPROVED BY THE DISTRICT.

22.2. NO WATER FACILITY SHALL BE PLACED IN SERVICE UNTIL ALL SERVICE LINES ARE COMPLETED AND THE FIRST LIFT OF ASPHALT IS COMPLETED OVER THE LINE. IN THE CASE WHERE NO ASPHALT IS TO BE PLACED OVER THE LINE, SURFACE IMPROVEMENTS SHALL BE COMPLETED PRIOR TO THE USE OF THE FACILITY.

22.3. NO WATER FACILITY SHALL BE PLACED IN SERVICE UNTIL ALL EASEMENTS (PLATTED OR DEEDED) ARE DEDICATED, EXECUTED BY THE DISTRICTS, AND RECORDED.

23. ALL WATER LINES SHALL HAVE "AS BUILT" PLANS PREPARED AND APPROVED PRIOR TO PRELIMINARY ACCEPTANCE BY THE DISTRICT.

24. SUBSURFACE UTILITY ENGINEERING

24.1. UTILITIES ARE DEPICTED ON THESE PLANS IN ACCORDANCE WITH THEIR ACHIEVED "QUALITY LEVELS" AS DEFINED IN THE AMERICAN SOCIETY OF CIVIL ENGINEER'S DOCUMENT ASCE 38, "STANDARD GUIDELINE FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."

24.2. RELIANCE UPON THESE DATA FOR RISK MANAGEMENT PURPOSES DURING BIDDING DOES NOT RELIEVE THE EXCAVATOR OR UTILITY OWNER FROM FOLLOWING ALL APPLICABLE UTILITY DAMAGE PREVENTION STATUTES, POLICIES, AND/OR PROCEDURES DURING EXCAVATION. IT IS IMPORTANT THAT THE CONTRACTOR INVESTIGATES AND UNDERSTANDS THE SCOPE OF WORK BETWEEN THE PROJECT OWNER AND THEIR ENGINEER REGARDING THE SCOPE AND LIMITS OF THE UTILITY INVESTIGATIONS LEADING TO THESE UTILITY DEPICTIONS.

JDS-HYDRO a Division of RESPEC
5540 TECH CENTER DR., SUITE 100
COLORADO SPRINGS, COLORADO 80919
(719) 227-0072

TRIVIEW METROPOLITAN DISTRICT

NORTHERN DELIVERY SYSTEM - BOOSTER PUMP STATION

GENERAL NOTES

REVISIONS

NO.	DESCRIPTION	BY	APP.	DATE
1				
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70% DESIGN

Project No.: W224.21029
Date: 09/12/22
Design: MLD
Drawn: AMY
Check: MLD

G1

SHEET ----OF

NOTE:
SEE FIRM 08041C0285G (12/07/08)
REVISIONS PER FEMA.GOV

BOOSTER PUMP STATION SITE (APPROXIMATE)

PLEIER DR
TIMBEREDGE LN
RTON RD
OLD NORTHGATE RD
DIAMOND CREEK DR
LEDGEWOOD DR
WINDY OAKS RD
LAZY CREEK RD
HONEY RUN WAY
CINNABAR RD
NORTH GATE BLVD
REDBANK HTS
SILVER ROSE DR
TURNBULL HTS
BENT CREEK VIEW
RAINBOWS END PT
COYOTE CREST VIEW
Monument Branch
BAROSSA VALLEY RD
FLYING HORSE CLUB DR
INE CLIFF HTS
ABERT WAY
OAK CLIFF WAY
Black Squirrel Creek
CITY OF COLORADO SPRINGS / EL PASO COUNTY

COUNTY
RATED AREAS
059

CITY OF COLORADO SPRINGS
080060

EL PASO COUNTY
UNINCORPORATED AREAS
080059

ZONE A

3
4
9
10

MAP PANEL 08041C0295G

LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAS) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

Floodplain boundary

Floodway boundary

FLOODWAY AREAS IN ZONE AE

MAP SCALE 1" = 1000'

500 0 1000 2000 FEET

300 0 300 600 METERS

PANEL 0295G

NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

EL PASO COUNTY, COLORADO AND INCORPORATED AREAS

PANEL 295 OF 1300

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
COLORADO SPRINGS, CITY OF	080060	0295	G
EL PASO COUNTY	080059	0295	G

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

MAP NUMBER 08041C0295G

MAP REVISED DECEMBER 7, 2018

Federal Emergency Management Agency

JDS-HYDRO a Division of RESPEC
5540 TECH CENTER DR., SUITE 100
COLORADO SPRINGS, COLORADO 80919
(719) 227-0072

TRIVIEW METROPOLITAN DISTRICT
NORTHERN DELIVERY SYSTEM – BOOSTER PUMP STATION
FEMA FLOODPLAIN MAP

REVISIONS				
NO.	DESCRIPTION	BY	APP.	DATE
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Project No.: W224.21029
Date: 09/12/22
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Drawn: AMY
Check: MLD

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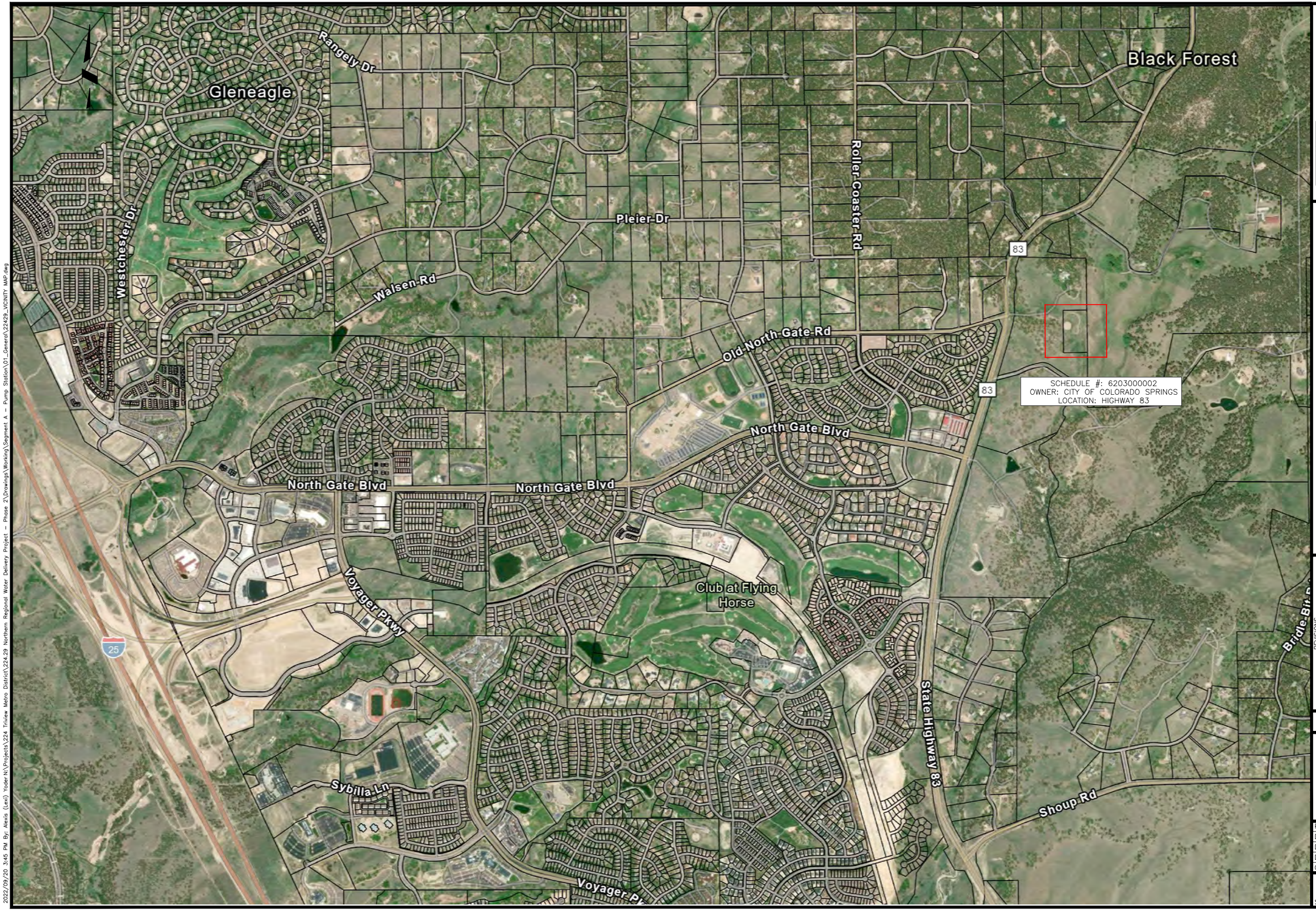

JDS-HYDRO CONSULTANTS, INC.
5540 TECH CENTER DR., SUITE 100
COLORADO SPRINGS, COLORADO 80919
(719) 227-0072

TRIVIEW METROPOLITAN DISTRICT

NORTHERN DELIVERY SYSTEM - BOOSTER PUMP STATION

VICINITY MAP

REVISIONS			
NO.	DESCRIPTION	BY	APP.	DATE
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Check:	MLD

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A101
CHLORINE RESIDUAL
ANALYZER
AMPEROMETRIC
NO REAGENTS REQUIRED
CLT10SC

F101
ELECTROMAGNETIC
FLOW METER 8"
BADGER M-2000

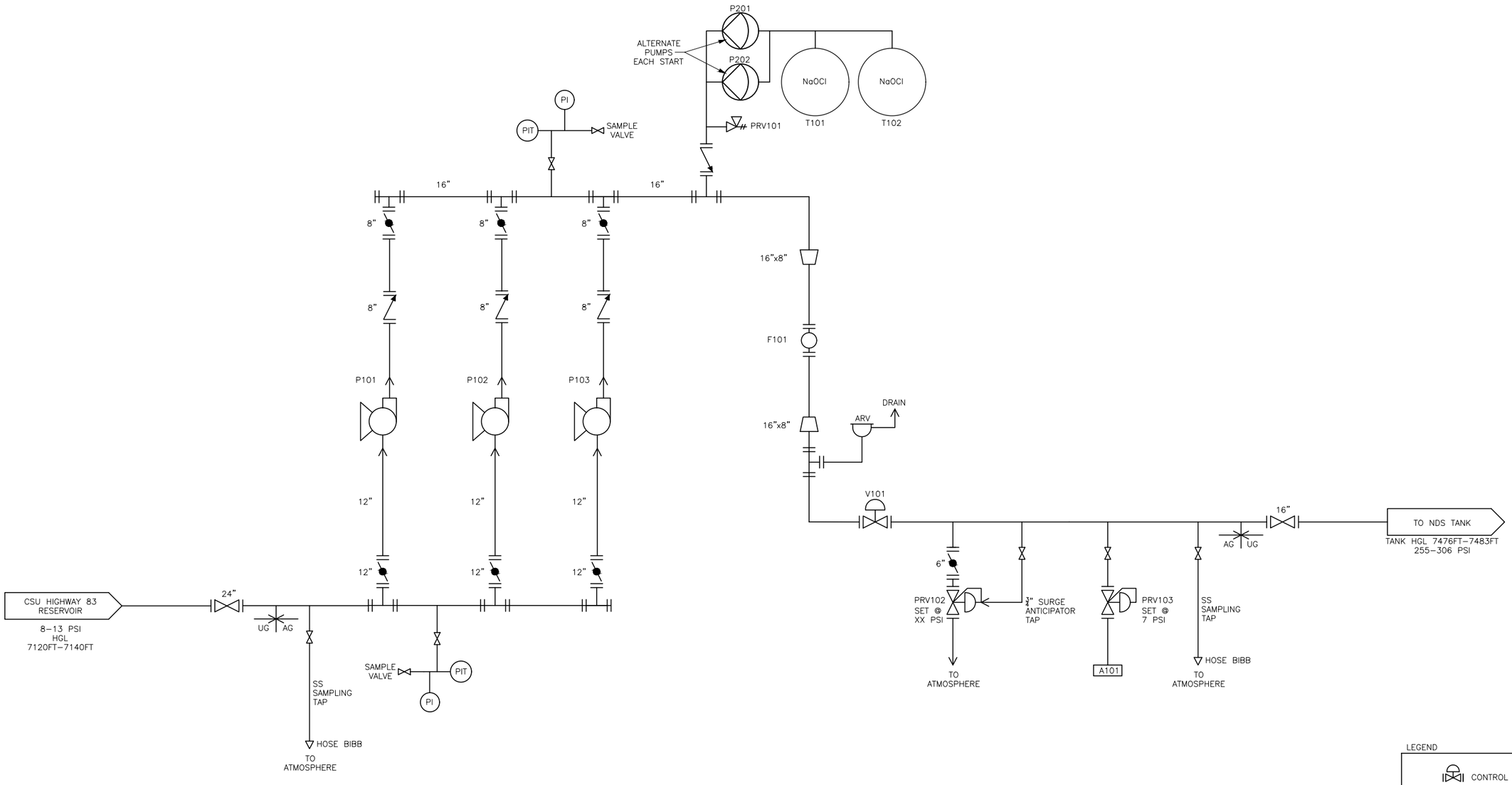
T101, 102
CHLORINE STORAGE TANK
HIGH-DENSITY CROSS-LINKED
POLYETHYLENE (XLPE)
DOUBLE WALLED
250 GALLON

P101, 102, 103
8-STAGE VERTICAL TURBINE
PEERLESS 15MA/LC
350 HP
TDH: 590 FT
FLOWRATE: 1500 GPM
460V, 390A
1770 RPM

P201, 202
PERISTALTIC PUMP
M324-SNDR
0.67 GPH

PRV102
SURGE VALVE
6" CLA-VAL 52-03

V101
ELECTRICAL CONTROL VALVE
WORKING PRESSURE: 175 PSI
LEAD FREE
16" CLA-VAL 131-66



NOTE: ALL PARTS IN CONTACT WITH POTABLE WATER TO BE STAINLESS STEEL, PVC ON NSF-61 APPROVED AND LEAD FREE

LEGEND
- CONTROL VALVE
- BUTTERFLY VALVE
- CHECK VALVE
- GATE VALVE

JDS-HYDRO a Division of RESPEC
5540 TECH CENTER DR., SUITE 100
COLORADO SPRINGS, COLORADO 80919
(719) 227-0072

TRIVIEW METROPOLITAN DISTRICT
NORTHERN DELIVERY SYSTEM - BOOSTER PUMP STATION
PROCESS FLOW DIAGRAM

REVISIONS

NO.	DESCRIPTION	BY	APP.	DATE
1				
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Project No.:	W224.21029
Date:	09/12/22
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Drawn:	AMY
Check:	MLD

G4
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NOTES:
1. THE PARTIES RESPONSIBLE FOR THIS PLAN HAVE FAMILIARIZED THEMSELVES WITH ALL CURRENT ACCESSIBILITY CRITERIA AND SPECIFICATION AND THE PROPOSED PLAN REFLECTS ALL SITE ELEMENTS REQUIRED BY THE APPLICABLE ADA DESIGN STANDARDS AND GUIDELINES AS PUBLISHED BY THE UNITED STATES DEPARTMENT OF JUSTICE. APPROVAL OF THIS PLAN BY EL PASO COUNTY DOES NOT ASSURE COMPLIANCE WITH THE ADA OR ANY OTHER FEDERAL OR STATE ACCESSIBILITY LAWS OR ANY REGULATIONS OR GUIDELINES ENACTED OR PROMULGATED UNDER OR WITH RESPECT TO SUCH LAWS.
2. FEMA 100-YR FLOODPLAIN NOT WITHIN SITE BOUNDARIES.
3. UTILITY LOCATIONS SHOWN ARE APPROXIMATE AND MANY NOT BE ALL INCLUSIVE. CONTRACTOR TO VERIFY.
4. SEE GEC DRAWINGS FOR GRADING AND EROSION CONTROL DETAILS.

LEGAL DESCRIPTION:

PROPERTY
TR OF LAND IN SEC 03-12-66 DESC AS FOLS: COM AT SW COR OF SD SEC 3, TH N 00<52'30" W 2644.43 FT TO W4 COR OF SEC 3, S 89<24'29" E 1317.41 FT TO NE COR OF NW4SW4 OF SEC 3 FOR POB, TH S 00<49'41" E 350.25 FT, S 89<10'19" W 420.0 FT, N 00<49'38" W 750.0 FT, N 89<10'19" E 420.0 FT, S 00<49'31" E 399.75 FT TO POB

EASEMENT/LEASE AGREEMENT AREA
TO BE DETERMINED

0' 100' 200'
SCALE 11x17: 1" = 200'
SCALE 24x36: 1" = 100'

LEGEND
- PROPERTY LINE
- EASEMENT/LEASE AGREEMENT AREA
- EX FENCE
- EX WATER LINE
- EX UG ELECTRIC LINE
- EX ELEC POWER POLE
- EX FIRE HYDRANT
- EX TREE (SIZE VARIES)
- EX CONTOURS-MAJOR
- EX CONTOURS-MINOR
- PP CONTOURS-MAJOR
- PP CONTOURS-MINOR
- PP UG ELECTRIC LINE
- PP WATER LINE
- PP FIRE HYDRANT
- PP FENCE (BARBED WIRE)
- PP FENCE (SPLIT RAIL)
- PP STAGING AREA (INITIAL)
- PP CONCRETE WASHOUT (INITIAL)
- PP VEHICLE TRAFFIC CIRCULATION PATH

VICINITY MAP
SCALE: N.T.S.

PARCEL SCHED #: 6203000002
OWNER: CITY OF COLORADO SPRINGS
MAILING ADDRESS: PO BOX 1575
COS, CO 80901
CONTACT: JIM MCGRADY
719-488-6868
jmcgrady@triviewmetro.com
TAX STATUS: EXEMPT
ZONING: RR-5
PLAT: N/A
LAND USE: POLITICAL SUBDIVISION
AREA: 314,939 SF (7.23 AC)

ADJACENT PROPERTY (E)
6200000695
263.96 AC
SHAMROCK SS LLC
ZONING: RR-5

ADJACENT PROPERTY (N,W, S)
6203000001
54.9 AC
DEAN A STOECKER TRUST
14065 HIGHWAY 83
ZONING: RR-5

FLYING HORSE SUBDIVISION

SHAMROCK SS LLC
6200000592

JBS FAMILY ENTERPRISES LLLP
6200000724

OLD NORTH GATE RD
HWY 83
FIRE HYDRANT SEE WATERLINE PLANS
10013 7140.475 MON RC PLS24986
420.00' S88° 48' 51"W
10000 7135.275 MON RC PLS30130
PROPERTY LINE
EX TANK
CONTROL POINT
9000 7114.979 CP
FUTURE TANK
750.00' S1° 11' 04"E
N1° 11' 04"W 750.00'
NDS BOOSTER PUMP STATION EASEMENT/LEASE AREA
BOOSTER PUMP STATION 34' x 44' x 20' H 1,496 SF FF EL=7114.2'
SITE ACCES GATE (15'± W). SEE SITE DEV. PLAN
10001 7139.535 MON RC PLS24986
N88° 48' 51"E 420.00'
50' EX EASEMENT REC NO. 00225431
30' TEMP CONSTRUCTION EASEMENT
30' UTILITY EASEMENT B. 6116, PG. 909
20' MVEA ELECTRIC EASEMENT
GATE ONTO CSU PROPERTY (16' W COMMERCIAL GRADE STEEL SQUARE BARRIER GATE)
CRITICAL MOUSE HABITAT
GATE ONTO STOECKER PROPERTY (16' W COMMERCIAL GRADE STEEL SQUARE BARRIER GATE)
EX SPLIT RAIL/EX WIRE FENCE
FIRE HYDRANT SEE WATERLINE PLANS
EX AUTOMATIC GATE (70'± W)
FIRE HYDRANT SEE WATERLINE PLANS

PCD File No. PPR-XX-XXX

JDS-HYDRO a Division of RESPEC
5540 TECH CENTER DR., SUITE 100
COLORADO SPRINGS, COLORADO 80919
(719) 227-0072

TRIVIEW METROPOLITAN DISTRICT
NORTHERN DELIVERY SYSTEM - BOOSTER PUMP STATION
OVERALL SITE PLAN

REVISIONS			
NO.	DESCRIPTION	BY	APP.	DATE
1				
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70% DESIGN

Project No.:	W224.21029
Date:	09/12/22
Design:	MLD
Drawn:	GGM
Check:	MLD

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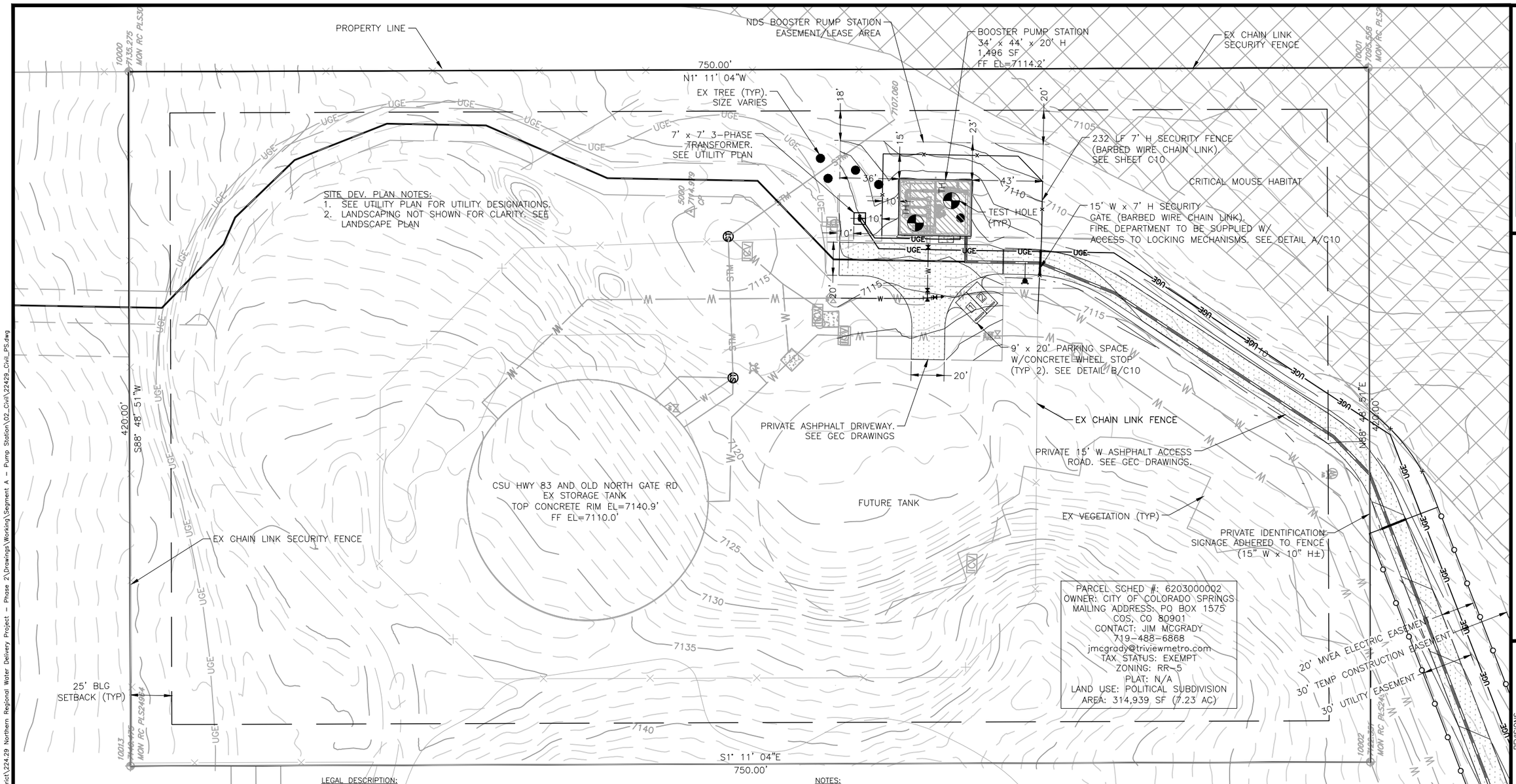
SHEET ----OF



LEGAL DESCRIPTION:

PROPERTY
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EASEMENT/LEASE AGREEMENT AREA
TO BE DETERMINED

LEGEND

PROPERTY LINE	PP CONTOURS-MAJOR
EASEMENT/LEASE AGREEMENT AREA	PP CONTOURS-MINOR
EX FENCE	PP UG ELECTRIC LINE
EX WATER LINE	PP WATER LINE
EX UG ELECTRIC LINE	PP FIRE HYDRANT
EX OH ELECTRIC LINE	PP FENCE (BARBED WIRE)
EX TELEPHONE LINE	PP FENCE (SPLIT RAIL)
EX ELEC POWER POLE	PP STAGING AREA (INITIAL)
EX FIRE HYDRANT	PP CONCRETE WASHOUT (INITIAL)
EX TREE (SIZE VARIES)	PP VEHICLE TRAFFIC CIRCULATION PATH
EX CONTOURS-MAJOR	
EX CONTOURS-MINOR	

NOTES:
1. THE PARTIES RESPONSIBLE FOR THIS PLAN HAVE FAMILIARIZED THEMSELVES WITH ALL CURRENT ACCESSIBILITY CRITERIA AND SPECIFICATION AND THE PROPOSED PLAN REFLECTS ALL SITE ELEMENTS REQUIRED BY THE APPLICABLE ADA DESIGN STANDARDS AND GUIDELINES AS PUBLISHED BY THE UNITED STATES DEPARTMENT OF JUSTICE. APPROVAL OF THIS PLAN BY EL PASO COUNTY DOES NOT ASSURE COMPLIANCE WITH THE ADA OR ANY OTHER FEDERAL OR STATE ACCESSIBILITY LAWS OR ANY REGULATIONS OR GUIDELINES ENACTED OR PROMULGATED UNDER OR WITH RESPECT TO SUCH LAWS.
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3. UTILITY LOCATIONS SHOWN ARE APPROXIMATE AND MANY NOT BE ALL INCLUSIVE. CONTRACTOR TO VERIFY.
4. SEE GEC DRAWINGS FOR GRADING AND EROSION CONTROL DETAILS.
5. SEE OVERALL SITE PLAN FOR ADJACENT PROPERTY OWNERSHIP.

PARKING COVERAGE:				
USE	RATIO	REQUIRED	PROVIDED	ADA
INDUSTRIAL	1 PER 750 SF	2	2	N/A

COVERAGE:	SF	%
PARCEL (REDUCED)	0	
STRUCTURES (PUMP STATION, TANKS)	0	0.00%
DRIVEWAY, PARKING, PADS	0	0.00%
LANDSCAPED AREA INCL. DISTURBED RE-SEED (PHASE 2)	0	0.00%
UNDISTURBED	0	0.00%
DENSITY		0.00%

APPLICANT/PLAN PREPARER:
JDS-HYDRO CONSULTANTS,
A DIVISION OF RESPEC
CONTACT: MARIO DIPASQUALE, P.E.:
719-227-0072
mdipasquale@jdshydro.com

PCD File No. PPR-XX-XXX

JDS-HYDRO a Division of RESPEC
5540 TECH CENTER DR., SUITE 100
COLORADO SPRINGS, COLORADO 80919
(719) 227-0072

TRIVIEW METROPOLITAN DISTRICT

NORTHERN DELIVERY SYSTEM - BOOSTER PUMP STATION

SITE DEVELOPMENT PLAN AND ACCESS ROAD

REVISIONS

NO.	DESCRIPTION	BY	APP.	DATE
1				
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70% DESIGN

Project No.: W224.21029
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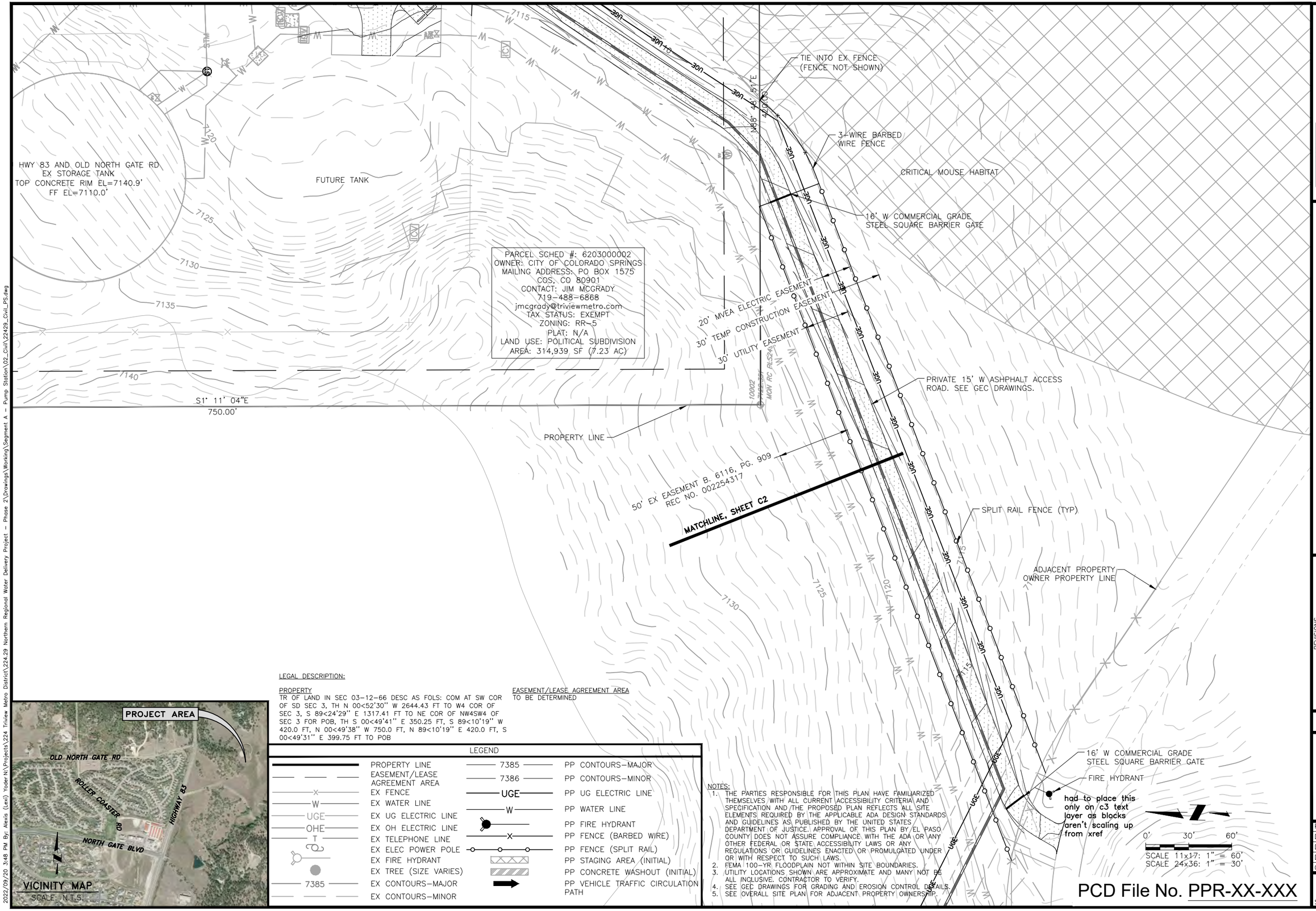
Drawn: GGM
Check: MLD

SHEET C2 OF ----

2022/09/20 3:47 PM By: Alexis (Lexi) Yoder N:\Projects\224 Triview Metro District\224.29 Northern Regional Water Delivery Project - Phase 2\Drawings\Working\Segment A - Pump Station\02_Civil\22429_Civil_PS.dwg



LEGAL DESCRIPTION:

PROPERTY
TR OF LAND IN SEC 03-12-66 DESC AS FOLS: COM AT SW COR OF SD SEC 3, TH N 00<52'30" W 2644.43 FT TO W4 COR OF SEC 3, S 89<24'29" E 1317.41 FT TO NE COR OF NW4SW4 OF SEC 3 FOR POB, TH S 00<49'41" E 350.25 FT, S 89<10'19" W 420.0 FT, N 00<49'38" W 750.0 FT, N 89<10'19" E 420.0 FT, S 00<49'31" E 399.75 FT TO POB

EASEMENT/LEASE AGREEMENT AREA
TO BE DETERMINED

LEGEND

PROPERTY LINE	PP CONTOURS-MAJOR
EASEMENT/LEASE AGREEMENT AREA	PP CONTOURS-MINOR
EX FENCE	PP UG ELECTRIC LINE
EX WATER LINE	PP WATER LINE
EX UG ELECTRIC LINE	PP FIRE HYDRANT
EX OH ELECTRIC LINE	PP FENCE (BARBED WIRE)
EX TELEPHONE LINE	PP FENCE (SPLIT RAIL)
EX ELEC POWER POLE	PP STAGING AREA (INITIAL)
EX FIRE HYDRANT	PP CONCRETE WASHOUT (INITIAL)
EX TREE (SIZE VARIES)	PP VEHICLE TRAFFIC CIRCULATION PATH
EX CONTOURS-MAJOR	
EX CONTOURS-MINOR	

NOTES:
1. THE PARTIES RESPONSIBLE FOR THIS PLAN HAVE FAMILIARIZED THEMSELVES WITH ALL CURRENT ACCESSIBILITY CRITERIA AND SPECIFICATION AND THE PROPOSED PLAN REFLECTS ALL SITE ELEMENTS REQUIRED BY THE APPLICABLE ADA DESIGN STANDARDS AND GUIDELINES AS PUBLISHED BY THE UNITED STATES DEPARTMENT OF JUSTICE. APPROVAL OF THIS PLAN BY EL PASO COUNTY DOES NOT ASSURE COMPLIANCE WITH THE ADA OR ANY OTHER FEDERAL OR STATE ACCESSIBILITY LAWS OR ANY REGULATIONS OR GUIDELINES ENACTED OR PROMULGATED UNDER OR WITH RESPECT TO SUCH LAWS.
2. FEMA 100-YR FLOODPLAIN NOT WITHIN SITE BOUNDARIES.
3. UTILITY LOCATIONS SHOWN ARE APPROXIMATE AND MANY NOT BE ALL INCLUSIVE. CONTRACTOR TO VERIFY.
4. SEE GEC DRAWINGS FOR GRADING AND EROSION CONTROL DETAILS.
5. SEE OVERALL SITE PLAN FOR ADJACENT PROPERTY OWNERSHIP.

PCD File No. PPR-XX-XXX

JDS-HYDRO a Division of RESPEC
5540 TECH CENTER DR., SUITE 100
COLORADO SPRINGS, COLORADO 80919
(719) 227-0072

TRIVIEW METROPOLITAN DISTRICT

NORTHERN DELIVERY SYSTEM - BOOSTER PUMP STATION

SITE DEVELOPMENT PLAN AND ACCESS ROAD

REVISIONS				
NO.	DESCRIPTION	BY	APP.	DATE
1				
2				
3				
4				
5				
6				
7				

70% DESIGN

Project No.:	W224.21029
Date:	09/12/22
Design:	MLD
Drawn:	GGM
Check:	MLD

C3
SHEET ----OF

INSTALL 8" C900 PVC WATER MAIN

PROPERTY LINE

EX CSU ELECTRIC SERVICE

PP 3-PHASE TRANSFORMER

NDS BOOSTER PUMP STATION EASEMENT/LEASE AREA

BOOSTER PUMP STATION
34' x 44' x 20' H
1,496 SF
FF EL=7114.2'

750.00'
N1° 11' 04"W

EX ELECTRICAL TRANSFORMER AND METER (NOT TO SCALE)

EX 18" OUTFALL

EX 24" CULVERT

CRITICAL MOUSE HABITAT

INSTALL 16" TRASMISSION MAIN

PP 3-PHASE UGE (MVEA)

UTILITY PLAN NOTE:
1. SEE OVERALL SITE PLAN FOR NEAREST FIRE HYDRANT LOCATIONS
2. SEE INSET DETAIL BELOW FOR NUMERIC REFERENCES

EX 24" DIP OUTLET WATERLINE

FIRE HYDRANT

EX 24" B.F. VALVE

EX 16" DIP

EX 24" STEEL INLET WATERLINE

EX 6" SUMP OUTFALL

EX 8" UNDERDRAIN

EX 12" DRAIN

EX 24" STEEL INLET WATERLINE

EX 8" UNDERDRAIN

CSU HWY 83 AND OLD NORTH GATE RD
EX STORAGE TANK
TOP CONCRETE RIM EL=7140.9'
FF EL=7110.0'

EX 18" OVERFLOW

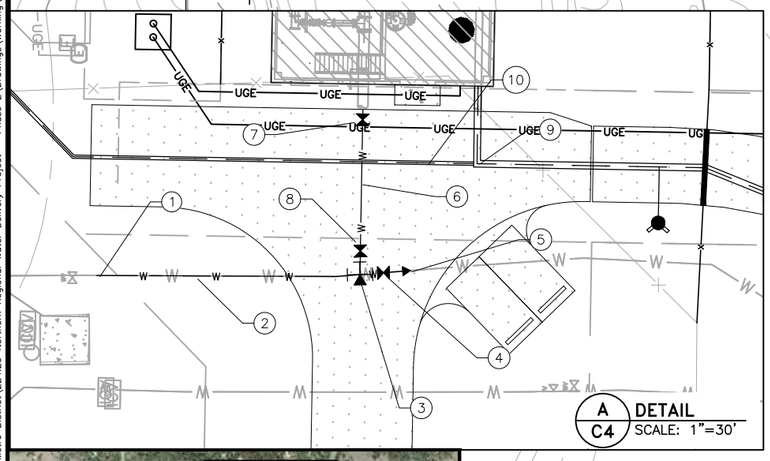
FUTURE TANK

420.00'
S88° 48' 51"W

420.00'
N88° 48' 51"E

S1° 11' 04"E
750.00'

PARCEL SCHED #: 6203000002
OWNER: CITY OF COLORADO SPRINGS
MAILING ADDRESS: PO BOX 1575
COS, CO 80901
CONTACT: JIM MCGRADY
719-488-6868
jmcgrady@triviewmetro.com
TAX STATUS: EXEMPT
ZONING: RR-5
PLAT: N/A
LAND USE: POLITICAL SUBDIVISION
AREA: 314,939 SF (7.23 AC)



A C4 DETAIL
SCALE: 1"=30'

1. REMOVE EX 24"x16" REDUCER. INSTALL 24" MJ COUPLING
2. REMOVE 62 LF EX 16" DIP AND REPLACE W/24" DIP
3. INSTALL 24"x24" MJ TEE
4. INSTALL 24" MJ BUTTERFLY VALVE
5. INSTALL 24"x16" MJ REDUCER
6. INSTALL 33 LF 24" DIP
7. INSTALL 24" MJ BUTTERFLY VALVE
8. INSTALL 24" MJ BUTTERFLY VALVE
9. INSTALL 16"x16" MJ TEE. SEE WATERLINE PLANS
10. INSTALL 16"x8" REDUCER. SEE WATERLINE PLANS

VICINITY MAP
SCALE: N.T.S.

LEGEND

PROPERTY LINE	PP CONTOURS-MAJOR
EASEMENT/LEASE AGREEMENT AREA	PP CONTOURS-MINOR
EX FENCE	PP UG ELECTRIC LINE
EX WATER LINE	PP WATER LINE
EX UG ELECTRIC LINE	PP FIRE HYDRANT
EX OH ELECTRIC LINE	PP FENCE (BARBED WIRE)
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EX ELEC POWER POLE	PP STAGING AREA (INITIAL)
EX FIRE HYDRANT	PP CONCRETE WASHOUT (INITIAL)
EX TREE (SIZE VARIES)	PP VEHICLE TRAFFIC CIRCULATION PATH
EX CONTOURS-MAJOR	
EX CONTOURS-MINOR	

NOTES:
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4. SEE GEC DRAWINGS FOR GRADING AND EROSION CONTROL DETAILS.
5. SEE OVERALL SITE PLAN FOR ADJACENT PROPERTY OWNERSHIP.

0' 30' 60'
SCALE 11x17: 1" = 60'
SCALE 24x36: 1" = 30'

PCD File No. PPR-XX-XXX

JDS-HYDRO a Division of RESPEC
5540 TECH CENTER DR., SUITE 100
COLORADO SPRINGS, COLORADO 80919
(719) 227-0072

TRIVIEW METROPOLITAN DISTRICT

NORTHERN DELIVERY SYSTEM - BOOSTER PUMP STATION

UTILITY PLAN

REVISIONS

NO.	DESCRIPTION	BY	APP.	DATE
1				
2				
3				
4				
5				
6				
7				

70% DESIGN

Project No.: W224.21029
Date: 09/12/22
Design: MLD
Drawn: GGM
Check: MLD

C4
SHEET ____ OF

2022/09/20 3:50 PM By: Alexis (Lexi) Yoder N:\Projects\224 Triview Metro District\224.29 Northern Regional Water Delivery Project - Phase 2\Drawings\Working\Segment A - Pump Station\02_Civil\22429_Civil_PS.dwg

NDS BOOSTER PUMP STATION EASEMENT/LEASE AREA

BOOSTER PUMP STATION
34' x 44' x 20' H
1,496 SF
FF EL=7114.2'

750.00'
N1° 11' 04"W

EX TREE (TYP)
SIZE VARIES

ALTENATE LANDSCAPE:
(INTERNAL)
(1) (2)

CRITICAL MOUSE HABITAT
15' W x 7' H SECURITY
GATE (BARBED WIRE CHAIN LINK).
FIRE DEPARTMENT TO BE SUPPLIED W/
ACCESS TO LOCKING MECHANISMS. SEE SHEET X

LANDSCAPE NOTE:
1. SEE LANDSCAPE DETAIL SHEETS FOR CORRESPONDING LEGEND, COVERAGE TABLE, DETAILS, AND NOTES

PRIVATE 15' W ASHPHALT ACCESS ROAD. SEE GEC DRAWINGS.

PRIVATE ASHPHALT DRIVEWAY. SEE GEC DRAWINGS

232 LF 7' H SECURITY FENCE
(BARBED WIRE CHAIN LINK).
SEE SHEET X

APPLY SEED MIX TO AREAS OF DISTURBANCE. SEE GEC PLANS

CSU HWY 83 AND OLD NORTH GATE RD
EX STORAGE TANK
TOP CONCRETE RIM EL=7140.9'
FF EL=7110.0'

FUTURE TANK

EX VEGETATION (TYP)

EX CHAIN LINK SECURITY FENCE

420.00'
S88° 48' 51"W

S1° 11' 04"E
750.00'

N88° 48' 51"E
420.00'

PARCEL SCHED #: 6203000002
OWNER: CITY OF COLORADO SPRINGS
MAILING ADDRESS: PO BOX 1575
COS, CO 80901
CONTACT: JIM MCGRADY
719-488-6868
jmcgrady@triviewmetro.com
TAX STATUS: EXEMPT
ZONING: RR-5
PLAT: N/A
LAND USE: POLITICAL SUBDIVISION
AREA: 314,939 SF (7.23 AC)

LEGEND

	PROPERTY LINE	7385	PP CONTOURS–MAJOR
	EASEMENT/LEASE AGREEMENT AREA	7386	PP CONTOURS–MINOR
X	EX FENCE	UGE	PP UG ELECTRIC LINE
W	EX WATER LINE	W	PP WATER LINE
UGE	EX UG ELECTRIC LINE		PP FIRE HYDRANT
OHE	EX OH ELECTRIC LINE	X	PP FENCE (BARBED WIRE)
T	EX TELEPHONE LINE		PP FENCE (SPLIT RAIL)
	EX ELEC POWER POLE		PP STAGING AREA (INITIAL)
	EX FIRE HYDRANT		PP CONCRETE WASHOUT (INITIAL)
	EX TREE (SIZE VARIES)		PP VEHICLE TRAFFIC CIRCULATION PATH
7385	EX CONTOURS–MAJOR		
	EX CONTOURS–MINOR		

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0' 30' 60'
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SCALE 24x36: 1" = 30'

PCD File No. PPR-XX-XXX

JDS-HYDRO a Division of RESPEC
5540 TECH CENTER DR., SUITE 100
COLORADO SPRINGS, COLORADO 80919
(719) 227-0072

TRIVIEW METROPOLITAN DISTRICT

NORTHERN DELIVERY SYSTEM – BOOSTER PUMP STATION

LANDSCAPE PLAN

REVISIONS

NO.	DESCRIPTION	BY	APP.	DATE
1				
2				
3				
4				
5				
6				
7				

70% DESIGN

Project No.: W224.21029
Date: 09/12/22
Design: MLD
Drawn: GGM
Check: MLD

C7
SHEET ----OF

2022/09/20 3:51 PM By: Alexis (Lexi) Yoder N:\Projects\224 Triview Metro District\224.29 Northern Regional Water Delivery Project – Phase 2\Drawings\Working\Segment A – Pump Station\02_Civil\22429_Civil_PS.dwg

TRIVIEW METROPOLITAN DISTRICT

NORTHERN DELIVERY SYSTEM

REVISION 1 - OCTOBER 2022

LEGEND

EX PROPERTY LINE	PP SANITARY SEWER LINE ALIGNMENT
EX RIGHT-OF-WAY	PP WATER LINE ALIGNMENT
EX FENCE	PP WATER METER & SERVICE
EX WATER LINE	PP CONTOURS-MAJOR
EX SANITARY SEWER LINE	PP CONTOURS-MINOR
EX O.H. ELECTRIC	PP FENCE
EX U.G. ELECTRIC LINE	PP U.G. ELECTRIC LINE
EX U.G. GAS LINE	PP EROSION CONTROL SILT FENCE
EX U.G. TELEPHONE LINE	PP EROSION CONTROL BALES
EX U.G. CABLE LINE	PP EROSION CONTROL LOG
EX CONTOURS-MAJOR	PP FIRE HYDRANT
EX CONTOURS-MINOR	PP WATER LINE FITTING
EX FIRE HYDRANT	PP WATER VALVE
EX WATER VALVE	PP WELL
EX WATER MANHOLE	PP SPOT ELEVATION
EX SANITARY SEWER MANHOLE	
EX LIGHT POLE	
EX UTILITY POLE	
EX OVERHANGING LIGHT POLE	
EX SIGN	
EX VEGETATION (SIZE VARIES)	

PRE-EXCAVATION CHECKLIST

- Gas and Other Utility Lines Shown on Construction Plans
- Utility Notification Center of Colorado (UNCC)-Call at Least Two (2) Business Days Ahead-1-800-922-1987
- Utilities Located & Marked on the Ground
- Employees Briefed on Marking and Color Codes*
- Employees Trained on Excavation and Safety Procedures for Natural Gas Lines
- When Excavation Approaches Gas Lines, Employees Must Expose Lines by Careful Probing and Hand-Digging

COLOR CODE FOR MARKING UNDERGROUND UTILITY LINES

WHITE	PROPOSED EXCAVATION
MAGENTA	TEMPORARY SURVEY MARKINGS
RED	ELECTRIC
YELLOW	GAS, OIL, STEAM
ORANGE	COMMUNICATION, CATV
BLUE	POTABLE WATER
PURPLE	IRRIGATION, RECLAIMED WATER, SLURRY LINES
GREEN	SEWER

COLORADO 811 — Always Call Before You Dig 811 or (800) 922-1987

SURVEY DATA

HORIZONTAL DATUM: HORIZONTAL COORDINATES ARE MODIFIED COLORADO STATE PLANE CENTRAL BASED UPON THE FOLLOWING:
COORDINATES ARE SCALED FROM CONTROL POINT 5052 BEING A 2-INCH ALUMINUM CAP STAMPED AZTEC CP 52 SET AT THE TOP OF A DIRT BANK ALONG THE EAST SIDE OF GLEN EAGLE DR. APPROXIMATELY 380+/- FEET NORTHERLY OF ST. LAWRENCE WAY. VALUES ARE BASED UPON A STATIC SURVEY SESSION WITH THE FOLLOWING RESULTS:
LATITUDE: 39-04-05916N
LONGITUDE: 104-49-24.82486 W
STATE PLANE NORTHING: 1,450,401.759
STATE PLANE EASTING: 3,192,049.712
SCALE FACTOR 1.0004063250
TRUNCATE NORTHING 1,000,000.00
TRUNCATE EASTING 3,000,000.00
PROJECT NORTHING: 450,401.759
PROJECT EASTING: 192,049.712

VERTICAL DATUM: NAVD 88 WITH GEOID G18US
BENCHMARK: CP 5052 EL: 7213.70
BENCHMARK: NGS CS 110 / DM9842 EL: 6843.25
Benchmark NGS S294/KK0272 EL: 7116.72

UTILITIES SHOWN WITHIN THE SURVEY HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION, EXISTING DRAWINGS AND/OR UTILITY LOCATE MARKINGS. THE SURVEYOR NOR ENGINEER MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR AND ENGINEER FURTHER DO NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE.

70% DESIGN

VICINITY MAP
N.T.S.

JDS-HYDRO a Division of RESPEC
5540 TECH CENTER DR., SUITE 100
COLORADO SPRINGS, COLORADO 80919
(719) 227-0072

THE PARTIES RESPONSIBLE FOR THIS PLAN HAVE FAMILIARIZED THEMSELVES WITH ALL CURRENT ACCESSIBILITY CRITERIA AND SPECIFICATION AND THE PROPOSED PLAN REFLECTS ALL SITE ELEMENTS REQUIRED BY THE APPLICABLE ADA DESIGN STANDARDS AND GUIDELINES AS PUBLISHED BY THE UNITED STATES DEPARTMENT OF JUSTICE. APPROVAL OF THIS PLAN BY THE CITY OF FOUNTAIN DOES NOT ASSURE COMPLIANCE WITH THE ADA OR ANY OTHER FEDERAL OR STATE ACCESSIBILITY LAWS OR ANY REGULATIONS OR GUIDELINES ENACTED OR PROMULGATED UNDER OR WITH RESPECT TO SUCH LAWS.

SHEET INDEX

GEC PLANS PROVIDED AS A SEPARATE SET

PARTICIPANTS

OWNER
TRIVIEW METROPOLITAIN DISTRICT
16055 OLD FOREST POINT #300
MONUMENT, CO 80132
CONTACT: JIM MCGRADY
PHONE: (719) 488-6868

CONSULTING/DESIGN ENGINEER
JDS-HYDRO CONSULTANTS
A DIVISION OF RESPEC
5540 TECH CENTER DR, STE 100
COLORADO SPRINGS, CO 80903
CONTACT: MARIO DIPASQUALE, PE
PHONE: (719) 227-0072

SIGNATURE BLOCKS

TRIVIEW METROPOLITAN DISTRICT APPROVAL:
THE TRIVIEW METROPOLITAN DISTRICT RECOGNIZES THE DESIGN ENGINEER AS HAVING RESPONSIBILITY FOR THE DESIGN. THE TRIVIEW METROPOLITAN DISTRICT HAS LIMITED ITS SCOPE OF REVIEW ACCORDINGLY.

DISTRICT MANAGER _____ DATE _____

224.29
PROJECT NO.

IN CASE OF ERRORS OR OMISSIONS WITH THE WATER DESIGN AS SHOWN ON THIS DOCUMENT, THE STANDARDS AS DEFINED IN THE "WATER UTILITY POLICIES AND STANDARDS" SHALL RULE. IT IS THE RESPONSIBILITY OF THE SITE ENGINEER AND GENERAL CONTRACTOR TO ENSURE CONSTRUCTION IS IN COMPLIANCE.

ENGINEER'S STATEMENT
THESE DETAILED PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECTION AND SUPERVISION. SAID DETAILS AND SPECIFICATIONS HAVE BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE TRIVIEW METROPOLITAN DISTRICT.

MARIO L. DIPASQUALE, P.E. #41667 DATE _____

TRIVIEW METRO DISTRICT GENERAL NOTES:

1. ALL MATERIALS, WORKMANSHIP, AND CONSTRUCTION OF SITE IMPROVEMENTS SHALL MEET OR EXCEED THE SITE WORK STANDARDS AND SPECIFICATIONS, THE STANDARDS AND SPECIFICATIONS SET FORTH IN THE TRIVIEW METROPOLITAN DISTRICT DESIGN CRITERIA & CONSTRUCTION SPECIFICATIONS, AND APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS. WHERE THERE IS CONFLICT BETWEEN THESE PLANS AND SPECIFICATIONS, OR ANY APPLICABLE STANDARDS, THE HIGHER QUALITY STANDARD SHALL APPLY. ALL WORK WITHIN PUBLIC R.O.W. OR EASEMENTS SHALL BE INSPECTED AND APPROVED BY TRIVIEW METROPOLITAN DISTRICT. THE DISTRICTS WILL ALSO INSPECT ALL WORK ON PRIVATE PROPERTY.

2. THE TRIVIEW METROPOLITAN DISTRICT DESIGN CRITERIA & CONSTRUCTION SPECIFICATIONS MANUALS ARE CONSIDERED PART OF THIS CONSTRUCTION DRAWING SET. THIS DESIGN AND PLAN SET IS INCOMPLETE WITHOUT THESE SPECIFICATIONS MANUALS. THE CONTRACTOR SHALL OBTAIN A COPY OF THESE MANUALS AND BE FAMILIAR WITH THEM FOR ALL CONSTRUCTION ACTIVITIES.

3. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO ACTUAL CONSTRUCTION. ALL EXISTING UTILITIES SHOWN ARE BASED ON INFORMATION OF RECORD. THE CONTRACTOR IS RESPONSIBLE FOR TAKING PRECAUTIONARY MEASURES TO PROTECT THE EXISTING UTILITIES SHOWN HEREON AND ANY OTHER EXISTING UTILITIES NOT OF RECORD OR NOT SHOWN ON THESE PLANS AND AGREES TO ACCEPT FULL RESPONSIBILITY FOR FAILURE TO LOCATE AND PRESERVE ANY EXISTING UTILITIES. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES, AS SHOWN ON THESE PLANS, IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE LOCAL UTILITY LOCATION CENTER AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF THE UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY PERTINENT LOCATIONS AND ELEVATIONS, ESPECIALLY AT THE CONNECTION POINTS AND AT POTENTIAL UTILITY CONFLICTS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES THAT CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS.

4. THE CONTRACTOR SHALL COORDINATE AND COOPERATE WITH THE TRIVIEW METROPOLITAN DISTRICT AND ALL UTILITY COMPANIES INVOLVED WITH REGARD TO RELOCATIONS OR ADJUSTMENTS OF EXISTING UTILITIES DURING CONSTRUCTION AND TO ASSURE THAT THE WORK IS ACCOMPLISHED IN A TIMELY FASHION AND WITH THE MINIMUM DISRUPTION OF SERVICE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL PARTIES AFFECTED BY ANY DISRUPTION OF ANY UTILITY SERVICE.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM ALL APPLICABLE AGENCIES. THE CONTRACTOR SHALL NOTIFY THE TRIVIEW METROPOLITAN DISTRICT INSPECTORS AT LEAST 48 HOURS PRIOR TO THE START OF ANY EARTH DISTURBING ACTIVITY, OR CONSTRUCTION ON ANY AND ALL PUBLIC IMPROVEMENTS.

6. THE CONTRACTOR SHALL HAVE ONE (1) SIGNED COPY OF THE APPROVED PLANS, ONE (1) COPY OF THE APPROPRIATE STANDARDS AND SPECIFICATIONS, AND A COPY OF ALL PERMITS NEEDED FOR THE JOB, ON-SITE AT ALL TIMES.

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ASPECTS OF SAFETY INCLUDING, BUT NOT LIMITED TO, EXCAVATION, TRENCHING, SHORING, TRAFFIC CONTROL, AND SECURITY.

8. IF, DURING THE CONSTRUCTION PROCESS, CONDITIONS ARE ENCOUNTERED WHICH COULD INDICATE A SITUATION THAT IS NOT IDENTIFIED IN THE PLANS OR SPECIFICATIONS, THE CONTRACTOR SHALL CONTACT THE ENGINEER OF RECORD AND THE TRIVIEW METROPOLITAN DISTRICT INSPECTORS IMMEDIATELY.

9. ALL REFERENCES TO ANY PUBLISHED STANDARDS SHALL REFER TO THE LATEST REVISION OF SAID STANDARD, UNLESS SPECIFICALLY STATED OTHERWISE.

10. THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN, IN ACCORDANCE WITH M.U.T.C.D. TO THE TOWN OF MONUMENT FOR APPROVAL, PRIOR TO ANY CONSTRUCTION ACTIVITIES WITHIN, OR AFFECTING, THE RIGHT-OF-WAY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ANY AND ALL TRAFFIC CONTROL DEVICES AS MAY BE REQUIRED BY THE CONSTRUCTION ACTIVITIES.

11. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL LABOR AND MATERIALS NECESSARY FOR THE COMPLETION OF THE INTENDED IMPROVEMENTS SHOWN ON THESE DRAWINGS OR DESIGNATED TO BE PROVIDED, INSTALLED, OR CONSTRUCTED, UNLESS SPECIFICALLY NOTED OTHERWISE.

12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING ROADWAYS FREE AND CLEAR OF ALL CONSTRUCTION DEBRIS AND DIRT TRACKED FROM THE SITE.

13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RECORDING AS-BUILT INFORMATION ON THE SET OF RECORD DRAWINGS KEPT AT THE CONSTRUCTION SITE, WHICH SHALL BE AVAILABLE TO THE TRIVIEW METROPOLITAN DISTRICT INSPECTORS AT ALL TIMES. A REPRODUCIBLE SET OF AS-BUILT DRAWINGS MUST BE FURNISHED TO TRIVIEW METROPOLITAN DISTRICT AT THE COMPLETION OF THE PROJECT, PRIOR TO FINAL APPROVAL BY THE TRIVIEW METROPOLITAN DISTRICT.

14. DIMENSIONS FOR LAYOUT AND CONSTRUCTION ARE NOT TO BE SCALED FROM ANY DRAWING. IF PERTINENT DIMENSIONS ARE NOT SHOWN, CONTACT THE ENGINEER-OF-RECORD FOR CLARIFICATION, AND ANNOTATE THE DIMENSION ON THE AS-BUILT RECORD DRAWINGS.

15. ALL STRUCTURAL EROSION CONTROL MEASUREMENTS SHALL BE INSTALLED, AT THE LIMITS OF CONSTRUCTION, PRIOR TO ANY OTHER GROUND DISTURBING ACTIVITY. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED IN GOOD REPAIR BE THE CONTRACTOR, UNTIL SUCH TIME AS THE ENTIRE DISTURBED AREAS ARE STABILIZED WITH HARD SURFACE OR LANDSCAPING.

16. THE CONTRACTOR SHALL SEQUENCE THE INSTALLATION OF UTILITIES IN SUCH A MANNER AS TO MINIMIZE POTENTIAL UTILITY CONFLICTS. IN GENERAL, STORM SEWER AND SANITARY SEWER SHOULD BE CONSTRUCTED PRIOR TO INSTALLATION OF WATER LINES AND DRY UTILITIES.

17. NO SITE-RELATED IMPROVEMENTS MAY COMMENCE UNTIL A PRE-CONSTRUCTION MEETING IS HELD WITH THE THE TRIVIEW METROPOLITAN DISTRICT AND ALL APPLICABLE PERMITS ARE OBTAINED.

18. THE CONTRACTOR MUST IDENTIFY TO THE TRIVIEW METROPOLITAN DISTRICT, PRIOR TO THE START OF ANY WORK, A QUALIFIED PLAN PERSON RESPONSIBLE FOR REVIEWING AND MONITORING ALL OPERATIONS IN ORDER TO PREVENT OR MINIMIZE THE IMPACT OF VIBRATION, NOISE, DUST, DRAINAGE, AND EROSION DAMAGE, AND OTHER FORMS OF POLLUTION ON NEARBY PROPERTY AND THE PUBLIC AS A WHOLE. THE DEVELOPER MUST WRITE TO THE OWNERS/OCCUPANTS OF PROPERTIES WITHIN AT LEAST 100 YARDS OF THE LIMITS OF THE WORKSITE, INFORMING THEM OF THE NATURE AND TIMING OF THE PROJECT AND PROVIDING CONTACT DETAILS FOR COMPLAINTS.

GENERAL CONSTRUCTION NOTES:

1. THE HORIZONTAL AND VERTICAL LOCATION OF EXISTING IMPROVEMENTS TO BE MET BY THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS SHALL BE CONFIRMED BY FIELD MEASUREMENTS PRIOR TO CONSTRUCTION. ANY SIGNIFICANT DISCREPANCIES FOUND BETWEEN THIS PLAN SET AND ACTUAL FIELD CONDITIONS SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER OF RECORD FOR APPROPRIATE ACTION.

2. THE CONTRACTOR IS ADVISED THAT ALL EXISTING CONDITIONS OUTSIDE THE AREA OF WORK SHALL BE PROTECTED, IF DAMAGE OCCURS DURING CONSTRUCTION, IT WILL BE REPLACED IN THE ORIGINAL, EXISTING CONDITION AT THE CONTRACTOR'S EXPENSE.

3. CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL AND ROUTING DURING CONSTRUCTION, IF REQUIRED. TWO-WAY TRAFFIC SHALL BE MAINTAINED THROUGH THE WORK AREA AT ALL TIMES.

4. ALL DISTURBED AREAS THAT ARE TO REMAIN UNCOVERED FOR A PERIOD GREATER THAN 2 MONTHS SHALL BE RESEEDED AND WATERED UNTIL STABLE VEGETATION IS ESTABLISHED.

5. AT LEAST ONE SIGNED AND STAMPED SET OF THESE CONSTRUCTION DRAWINGS SHALL BE KEPT ON-SITE AT ALL TIMES.

6. ALL PLANS ON THE JOB SITE SHALL BE SIGNED BY THE TRIVIEW METROPOLITAN DISTRICT, AND THE DISTRICTS' ENGINEERS. ANY REVISION OF THE PLANS SHALL BE SO NOTED, WITH THE OLD DRAWINGS MARKED NOT VALID.

7. ALL STATIONING IS CENTER LINE UNLESS OTHERWISE NOTED. ALL ELEVATIONS ARE CENTER LINE UNLESS OTHERWISE NOTED.

8. ALL BURIED DUCTILE IRON PIPE, INCLUDING FITTINGS, VALVES AND FIRE HYDRANTS, SHALL BE WRAPPED WITH POLYETHYLENE TUBING, DOUBLE BONDED AT EACH JOINT AND ELECTRICALLY ISOLATED.

9. ALL DUCTILE IRON PIPE LESS THAN 12 INCHES AND FITTINGS SHALL HAVE CATHODIC PROTECTION USING TWO NO. 6 WIRE WITH 17 LB. MAGNESIUM ANODES EVERY 400 FEET AND 9 LB. MAGNESIUM ANODES AT EACH FITTING.

10. ALL MAIN LINES (PVC & DUCTILE IRON) SHALL BE INSTALLED WITH TRACER WIRE WITH TEST STATIONS EVERY 500 FT (UNLESS VALVE BOXES CAN BE USED AT INTERSECTIONS AND SERVICE STUBS).

11. ALL PIPE MATERIAL, BACKFILL AND INSTALLATION SHALL CONFORM TO THE APPLICABLE SPECIFICATIONS OF THE CITY OF COLORADO SPRINGS, COLORADO DEPARTMENT OF TRANSPORTATION, EL PASO COUNTY DEPARTMENT OF TRANSPORTATION, COLORADO SPRINGS UTILITIES AND THE GEOTECHNICAL ENGINEER.

12. COMPACTION TESTS SHALL BE 95% STANDARD PROCTOR AS DETERMINED BY ASTM D698, UNLESS OTHERWISE APPROVED BY THE DISTRICT OR HIGHER STANDARD AS IMPOSED BY ANOTHER AGENCY HAVING RIGHT-OF-WAY JURISDICTION. THIS SHALL INCLUDE ALL VALVES, FIRE HYDRANT RUNS, WATER & SEWER SERVICE LINES AND MANHOLES. ALL REPORTS SHALL BE SUBMITTED TO THE TRIVIEW METROPOLITAN DISTRICT FOR REVIEW AND APPROVAL.

13. ALL BENDS SHALL BE STAKED PRIOR TO THE START OF CONSTRUCTION.

14. ALL UNUSED SALVAGED WATER UTILITY MATERIAL SHALL BE RETURNED TO THE TRIVIEW METROPOLITAN DISTRICT AS REQUESTED.

15. AT THE CONTRACTOR'S EXPENSE ALL UTILITY MAINS SHALL BE SUPPORTED AND PROTECTED SUCH THAT THEY FUNCTION CONTINUOUSLY DURING CONSTRUCTION OPERATIONS. SHOULD A UTILITY MAIN FAIL AS A RESULT OF THE CONTRACTOR'S OPERATION, IT SHALL BE REPLACED IMMEDIATELY BY THE CONTRACTOR OR THE METROPOLITAN DISTRICTS AT FULL COST OF LABOR AND MATERIALS TO THE CONTRACTOR/DEVELOPER.

16. THE CONTRACTOR SHALL REPLACE OR REPAIR DAMAGE TO ALL SURFACE IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO FENCES, LANDSCAPING, CURB AND GUTTER AND/OR ASPHALT THAT MAY BE CAUSED DURING CONSTRUCTION.

17. ALL CONTRACTORS WORKING ON OR NEAR A WATER OR SEWER FACILITY (TO INCLUDE SERVICE LINES) SHALL HAVE LIABILITY INSURANCE NAMING THE TRIVIEW METROPOLITAN DISTRICT AS ADDITIONAL INSURERS AND SHALL PROVIDE A CURRENT COPY OF WORKERS COMPENSATION INSURANCE ON FILE WITH THE DISTRICTS. NO WORK CAN PROCEED WITHOUT CURRENT CERTIFICATES ON FILE AT THE DISTRICT OFFICE.

18. THE CONTRACTOR SHALL NOTIFY THE TRIVIEW METROPOLITAN DISTRICT (488-6868), AND ALL AFFECTED UTILITY COMPANIES ADJACENT TO THE PROPOSED UTILITY CONSTRUCTION A MINIMUM OF 48 HOURS AND A MAXIMUM OF 96 HOURS PRIOR TO THE START OF CONSTRUCTION. A WEEKLY CONSTRUCTION MEETING SHALL BE REQUIRED WITH THE CONTRACTOR, DISTRICT ENGINEERS AND ALL OTHER PARTIES AS DEEMED NECESSARY BY THE DISTRICTS.

19. COMMENCEMENT OF CONSTRUCTION OF WATER/SEWER SYSTEMS WITHIN DISTRICTS:

19.1. PRIOR TO THE START OF CONSTRUCTION, A PRE-CONSTRUCTION MEETING IS REQUIRED A MINIMUM OF 48 HOURS IN ADVANCE OF COMMENCEMENT OF WORK. A REPRESENTATIVE OF THE OWNER OR DEVELOPER, A REPRESENTATIVE OF THE CONTRACTOR, AND THE DESIGN ENGINEER ARE REQUIRED TO ATTEND. CONTACT THE TRIVIEW METROPOLITAN DISTRICT (488-6868) TO SCHEDULE THE PRE-CONSTRUCTION MEETING. NO PRE-CONSTRUCTION MEETING CAN BE SCHEDULED UNTIL THREE (3) SIGNED/APPROVED PLAN SETS ARE RECEIVED BY THE METROPOLITAN DISTRICTS.

19.2. THE CONTRACTOR IS REQUIRED TO NOTIFY THE TRIVIEW METROPOLITAN DISTRICT (488-6868) A MINIMUM OF 48 HOURS AND A MAXIMUM OF 2 WEEKS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL ALSO NOTIFY AFFECTED UTILITY COMPANIES AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION ADJACENT TO THE KNOWN UTILITY LINES.

20. PRESSURE TESTING OF FACILITIES:

20.1. THE CONTRACTOR SHALL NOTIFY THE TRIVIEW METROPOLITAN DISTRICT (488-6868) A MINIMUM OF 48 HOURS AND A MAXIMUM OF 96 HOURS PRIOR TO THE START OF ANY TESTING.

20.2. ALL SECTIONS OF WATER LINE ARE TO MEET THE FOLLOWING PRESSURE TESTING REQUIREMENTS

20.2.1. TEST 100% OF ALL LINES.

20.2.2. MUST PASS PRESSURE TEST TO 200 PSI FOR TWO HOURS (UNLESS OTHERWISE APPROVED ON THE PLANS)

21. DISINFECTION OF FACILITIES:

21.1. THE CONTRACTOR SHALL DISINFECT ALL DOMESTIC WATERLINES ACCORDING TO AWWA STANDARDS B-300 AND C-601, INCLUDING PRELIMINARY FLUSHING, CHLORINATION, AND FINAL FLUSHING.

21.2. THE CONTRACTOR SHALL COLLECT SAMPLES FROM END OF PIPELINE AFTER FINAL FLUSHING AND PRIOR TO PLACING WATERLINES IN SERVICE AND TEST FOR COLIFORM ORGANISMS. THE NUMBER AND FREQUENCY OF SAMPLES SHALL CONFORM WITH THE REQUIREMENTS OF THE PUBLIC HEALTH AUTHORITY HAVING JURISDICTION. THE CONTRACTOR SHALL PAY FOR THE SERVICES OF AN INDEPENDENT TESTING LABORATORY TO PERFORM SAMPLING AND TESTING AS REQUIRED.

21.3. REPEAT DISINFECTION UNTIL SATISFACTORY SAMPLES HAVE BEEN OBTAINED IF INITIAL OR SUBSEQUENT DISINFECTION FAILS TO PRODUCE SATISFACTORY SAMPLES.

22. COMMENCEMENT OF USE OF WATER LINES AND/OR SYSTEMS:

22.1. NO WATER FACILITY SHALL BE PLACED IN SERVICE UNTIL AFTER THE COMPLETION OF ALL PRESSURE TESTING, FLUSHING, DISINFECTION, BAC-T TESTING, AND COMPACTION TESTING, AND UNTIL AS-BUILT DRAWINGS ARE SUBMITTED AND APPROVED BY THE DISTRICT.

22.2. NO WATER FACILITY SHALL BE PLACED IN SERVICE UNTIL ALL SERVICE LINES ARE COMPLETED AND THE FIRST LIFT OF ASPHALT IS COMPLETED OVER THE LINE. IN THE CASE WHERE NO ASPHALT IS TO BE PLACED OVER THE LINE, SURFACE IMPROVEMENTS SHALL BE COMPLETED PRIOR TO THE USE OF THE FACILITY.

22.3. NO WATER FACILITY SHALL BE PLACED IN SERVICE UNTIL ALL EASEMENTS (PLATTED OR DEEDED) ARE DEDICATED, EXECUTED BY THE DISTRICTS, AND RECORDED.

23. ALL WATER LINES SHALL HAVE "AS BUILT" PLANS PREPARED AND APPROVED PRIOR TO PRELIMINARY ACCEPTANCE BY THE DISTRICT.

24. SUBSURFACE UTILITY ENGINEERING

24.1. UTILITIES ARE DEPICTED ON THESE PLANS IN ACCORDANCE WITH THEIR ACHIEVED "QUALITY LEVELS" AS DEFINED IN THE AMERICAN SOCIETY OF CIVIL ENGINEER'S DOCUMENT ASCE 38, "STANDARD GUIDELINE FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."

24.2. RELIANCE UPON THESE DATA FOR RISK MANAGEMENT PURPOSES DURING BIDDING DOES NOT RELIEVE THE EXCAVATOR OR UTILITY OWNER FROM FOLLOWING ALL APPLICABLE UTILITY DAMAGE PREVENTION STATUTES, POLICIES, AND/OR PROCEDURES DURING EXCAVATION. IT IS IMPORTANT THAT THE CONTRACTOR INVESTIGATES AND UNDERSTANDS THE SCOPE OF WORK BETWEEN THE PROJECT OWNER AND THEIR ENGINEER REGARDING THE SCOPE AND LIMITS OF THE UTILITY INVESTIGATIONS LEADING TO THESE UTILITY DEPICTIONS.

JDS-HYDRO a Division of RESPEC
5540 TECH CENTER DR., SUITE 100
COLORADO SPRINGS, COLORADO 80919
(719) 227-0072

TRIVIEW METROPOLITAN DISTRICT

NORTHERN DELIVERY SYSTEM

GENERAL NOTES

REVISIONS

NO.	DESCRIPTION	BY	APP.	DATE
1				
2				
3				
4				
5				
6				
7				

70% DESIGN

Project No.: 224.29
Date: 06/03/22
Design: MLD
Drawn: SNW
Check: MLD

G1

SHEET ---OF

SANCTUARY POINTE STORAGE TANK

DONALA TANK

TRIVIEW B-PLANT TANK

CSU TANK

Leather Chaps Dr

Baptist Rd

Roller Coaster Rd

Hodgen Rd

Timber Meadow Dr

Mountain Dance Dr

Forest Light Dr

Hidden Rock Rd

Fox Run Regional Park

Park Ave

W Baptist Rd

E Baptist Rd

Becky Dr

Stella Dr

Jessie Dr

Rangely Dr

Raton Rd

Gleneagle

Black Forest

Struthers Rd

Sterling Rd

Westchester Dr

Sun Hills Dr

Pleier Dr

Walsen Rd

Silverton Rd

Old North Gate Rd

83

N

W E

S

Legend

A1 A2 A3 A4 A B1 B2 B3 B4 Tanks

Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA

NORTHERN DELIVERY SYSTEM

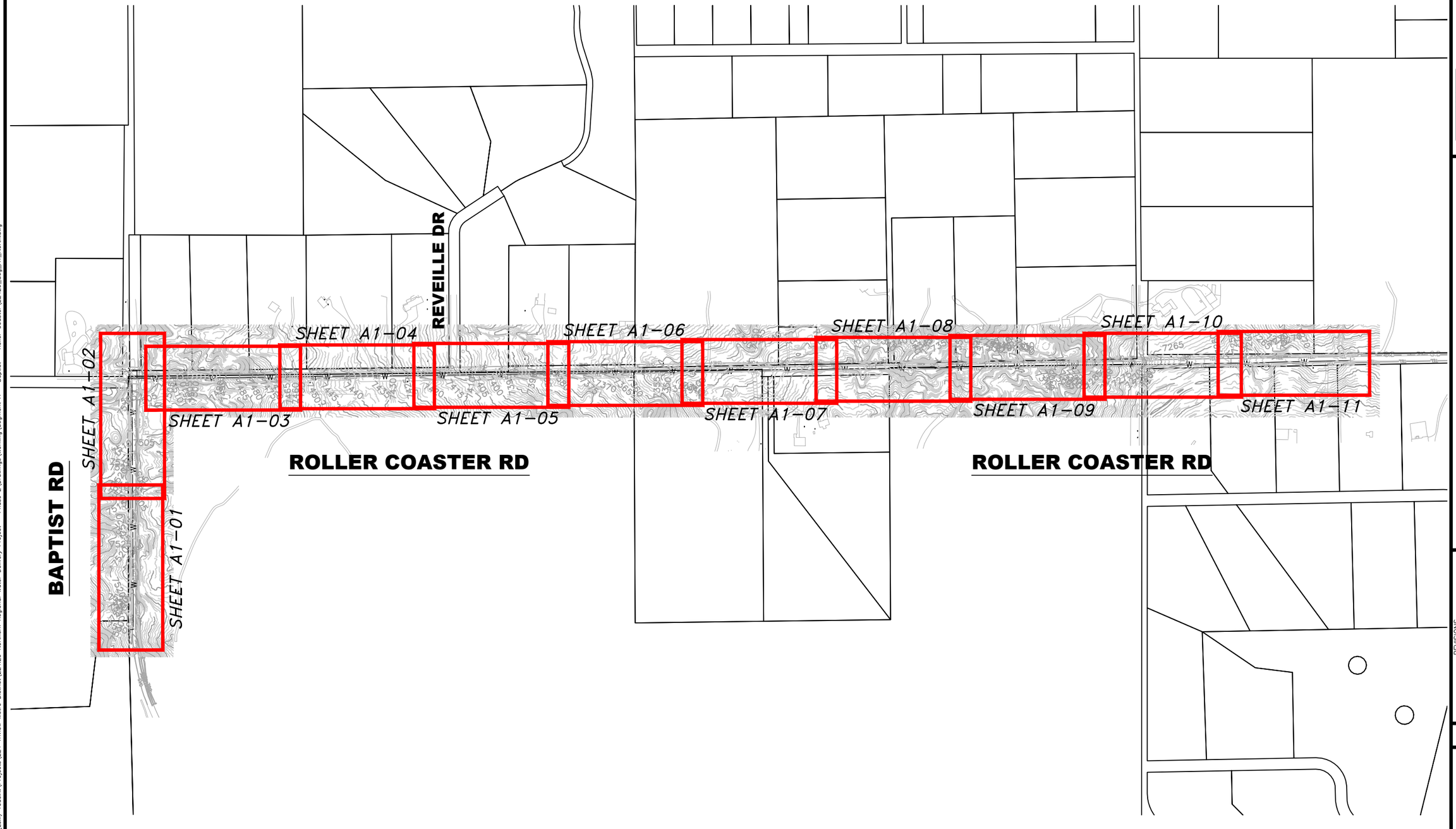
KEY MAP

Triview Metropolitan District

JDS-HYDRO CONSULTANTS, INC.

a Division of RESPEC Company LLC

10/13/2022



JDS-HYDRO a Division of RESPEC
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COLORADO SPRINGS, COLORADO 80919
(719) 227-0072

TRIVIEW METROPOLITAN DISTRICT

NORTHERN DELIVERY SYSTEM

SEGMENT A1 KEY MAP

REVISIONS			
NO.	DESCRIPTION	BY	APP.	DATE
1				
2				
3				
4				
5				
6				
7				

70% DESIGN

Project No.:	224.29
Date:	06/03/22
Design:	GJD
Drawn:	JLB
Check:	MLD

SHEET ----OF

ALL UTILITIES DEPICTED AS QL B UNLESS NOTED OTHERWISE.

QLB DATA SUMMARY:

TH50A – GAS (HYD. LATERAL)
- DEPTH: TBD
- NORTHING: 451557.35
- EASTING: 202298.74

TH51 – XX" STORM PIPE
- DEPTH: TBD
- NORTHING: 451547.46
- EASTING: 201999.19

TH52 – XX" GAS LINE
- DEPTH: TBD
- NORTHING: 451550.80
- EASTING: 201672.01

0' 30' 60'
SCALE 11x17: 1" = 60'
SCALE 24x36: 1" = 30'

1920 BAPTIST RD

2222 BAPTIST RD

MATCHLINE STA 152+40–B4

MATCHLINE STA 200+00–A1

MATCHLINE STA 207+00

PROPERTY LINE

CAUTION:
STA=200+00.01
TH–53
STRM CROSSING

(15.23')
PROPOSED 16" PVC

CAUTION:
STA=200+10.23
TH–52
GAS CROSSING

STA=200+15.23
N=451545.80
E=201672.01
INSTALL 90° BEND W/CTRB

CAUTION:
STA=203+42.41
TH–51
STRM CROSSING

(626.72')
PROPOSED 16" PVC

CAUTION:
TH–50A
HYDRANT LATERAL
GAS CROSSING

(13.79')
PROPOSED 6" PVC

STA=206+41.95
N=451548.99
E=202298.72
INSTALL HYDRANT ASSEMBLY &
16" BUTTERFLY VALVE

(58.05')
PROPOSED 16" PVC

CAUTION:
STA=207+29.09
TH–50
STRM CROSSING

SEE SHEET 2
FOR INFORMATION

EOP

EL PASO COUNTY
FOX RUN REGIONAL PARK

BAPTIST RD

PROFILE SCALE
HORZ.–1"=60'
VERT.–1"=5'

CAUTION:
STA:200+10.23, ELEV:7517.72
TH–52
PROPOSED 16" W.L. CROSSES
UNDER GAS; DEPTH:UNK
MAINTAIN MIN. 18" SEPARATION

EXISTING GRADE

352.4' OF 16" DR 18
C900 PVC @ –2.5%

DEPTH=5.1'

STA:200+15.23, ELEV:7517.59
INSTALL 90° BEND W/CTRB
& MJ RSTNTS.
MIN. BSA=9.50, APPROX. VOL.=0.50 YDS

MATCHLINE STA 152+40 – B4

MATCHLINE STA 200+00 – A1

BEGIN CONSTRUCTION:
STA:200+00.00, ELEV:7517.97
TIE INTO 16" PVC FROM
SEGMENT B2 PIPELINE

CAUTION:
TH–53
STRM CROSSING IN THE
VICINITY OF EXCAVATION
DEPTH:UNK
MAINTAIN 18" MIN. SEPARATION

CAUTION:
STA:203+42.41, ELEV:7509.50
TH–51
PROPOSED 16" W.L. CROSSES
UNDER STRM; DEPTH:UNK
MAINTAIN MIN. 18" SEPARATION

STA=203+52.34
BOP ELEV=7509.26
GRADE BREAK

DEPTH=6.06'

EXISTING GRADE

402.9' OF 16" DR 18
C900 PVC @ –1.7%

STA:206+41.95, ELEV:7504.20
INSTALL 16"x6" HYD. TEE W/CTRB, & 1–16
BUTTERFLY VALVE, 1–6" MJ VALVE W/MJ RSTNTS.
MIN. BSA=9.50, APPROX. VOL.=0.50 YDS
CONTINUE (N) OF HYD. TEE 13.79 LF OF 6" PVC
AND INSTALL FH ASSMBY W/CTRB & MJ RSTNTS.
FL EL.=6XXX.XX, PSI=XXX, GPM=XXXX

CAUTION:
TH–50A
PROPOSED 6" HYD. LATERAL
CROSSES UNDER GAS; DEPTH:UNK
MAINTAIN MIN. 18" SEPARATION

MATCHLINE STA 207+00

SEE SHEET 2
FOR INFORMATION

EXISTING

DEPTH=5.76'

STA=207+55.18
BOP ELEV=7502.22
GRADE BREAK

CAUTION:
STA:207+29.09, ELEV
TH–50
PROPOSED 16" W.L.
UNDER STRM; DEPTH:
MAINTAIN MIN. 18" SE

SEE SHEET 2
FOR INFORMATION

7530
7520
7510
7500
7490
7480

200+00 201+00 202+00 203+00 204+00 205+00 206+00 207+00

JDS-HYDRO a Division of RESPEC
5540 TECH CENTER DR., SUITE 100
COLORADO SPRINGS, COLORADO 80919
(719) 227-0072

TRIVIEW METROPOLITAN DISTRICT

NORTHERN DELIVERY SYSTEM

SEGMENT A1 – PLAN AND PROFILE

STATION 200+00 TO 207+00

REVISIONS				
NO.	DESCRIPTION	BY	APP.	DATE
1	REVISIONS 1	JLB		10/05/22
2				
3				
4				
5				
6				
7				

70% DESIGN

Project No.: 224.29
Date: 06/03/22
Design: MLD
Drawn: SNW
Check: MLD

A1–01
SHEET ----OF

ALL UTILITIES DEPICTED AS QL B UNLESS NOTED OTHERWISE.

QLB DATA SUMMARY:
TH44 – (2) UNDERGROUND COMMUNICATIONS
- DEPTH: TBD
- NORTHING: 451501.33
- EASTING: 202985.10

TH45 – UNDERGROUND COMMUNICATIONS
- DEPTH: TBD
- NORTHING: 451552.45
- EASTING: 202977.88

TH46 – UNDERGROUND COMMUNICATIONS
- DEPTH: TBD
- NORTHING: 451552.34
- EASTING: 202956.50

TH47 – (4) UNDERGROUND ELECTRIC
- DEPTH: TBD
- NORTHING: 451552.15
- EASTING: 202918.45

TH48 – XX" STORM PIPE
- DEPTH: TBD
- NORTHING: 451552.12
- EASTING: 202912.66

TH49 – XX" STORM PIPE
- DEPTH: TBD
- NORTHING: 451550.54
- EASTING: 202602.88

TH50 – XX" STORM PIPE
- DEPTH: TBD
- NORTHING: 451549.43
- EASTING: 202385.87

SEE SHEET 1
FOR INFORMATION

206+41.95
451548.99
202298.72
SEMBLY &
FLY VALVE

(58.05')
PROPOSED 16" PVC

SEE SHEET 1
FOR INFORMATION

MATCHLINE STA 207+00

PROPERTY LINE

206+00 207+00 208+00 209+00 210+00 211+00 212+00 213+00

EOP

31.0'

EOP

(628.13')
PROPOSED 16" PVC

35.0'

EOP

CAUTION:
STA=207+29.09
TH-50
STRM CROSSING

CAUTION:
STA=209+46.11
TH-49
STRM CROSSING

CAUTION:
STA=213+21.13
TH-45
TELE CROSSING

CAUTION:
STA=212+99.73
TH-46
TELE CROSSING

CAUTION:
STA=212+95.48
OHE CROSSING

CAUTION:
STA=212+61.68
TH-47
(4)UGE CROSSING

CAUTION:
STA=212+55.90
TH-48
STRM CROSSING

CAUTION:
STA=213+63.47
UGE CROSSING

CAUTION:
STA=213+79.28
TH-44
(2)TELE CROSSING

2222 BAPTIST RD

EL PASO COUNTY
FOX RUN REGIONAL PARK

EL PASO COUNTY PUBLIC WORKS
FOX RUN YARD

BAPTIST RD

ROLLER COASTER RD

HODGEN RD

PROPERTY LINE

OHE

STA=213+28.13
N=451552.48
E=202985.05
INSTALL 90° BEND W/CTRB

(25.98')
PROPOSED 16" PVC

STA=213+54.11
N=451526.51
E=202985.00
INSTALL 16"X12" TEE W/CTRB

(10.00')
PROPOSED 12" PVC

(45.86')
PROPOSED 16" PVC

MATCHLINE STA 214+00

(102.10')
PROPOSED 16" PVC

0' 30' 60'
SCALE 11x17: 1" = 60'
SCALE 24x36: 1" = 30'

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COLORADO SPRINGS, COLORADO 80919
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TRIVIEW METROPOLITAN DISTRICT

NORTHERN DELIVERY SYSTEM

SEGMENT A1 – PLAN AND PROFILE

STATION 207+00 TO 214+00

STA=212+57.09, BOP ELEV=7497.28
GRADE BREAK

EXISTING GRADE

STA=209+46.11
ELE=7511.54

EXISTING GRADE

STA=213+21.13
ELE=7507.27

501.9' OF 16" DR 18
C900 PVC @ -1.0%

DEPTH=5.76'

DEPTH=6.42'

190.6' OF 16" DR 18
C900 PVC @ -2.7%

DEPTH=5.76'

7510
7500
7490
7480
7470
7460

207+00 208+00 209+00 210+00 211+00 212+00 213+00 214+00

MATCHLINE STA 207+00

MATCHLINE STA 214+00

STA=207+55.18
BOP ELEV=7502.22
GRADE BREAK

CAUTION:
STA:207+29.09, ELEV:7502.68
TH-50
PROPOSED 16" W.L. CROSSES
UNDER STRM; DEPTH:UNK
MAINTAIN MIN. 18" SEPARATION

CAUTION:
STA:212+55.98, ELEV:7497.29
TH-48
PROPOSED 16" W.L. CROSSES
UNDER STRM; DEPTH:UNK
MAINTAIN MIN. 18" SEPARATION

CAUTION:
STA:212+95.48,
OHE CROSSING

CAUTION:
STA:213+79.28,
ELEV:7494.01
TH-44
PROPOSED 16" W.L.
CROSSES UNDER (2)TELE;
DEPTH:UNK
MAINTAIN MIN. 18"
SEPARATION

CAUTION:
STA:212+61.68, ELEV:7497.16
TH-47
PROPOSED 16" W.L. CROSSES
UNDER (4)ELEC; DEPTH:UNK
MAINTAIN MIN. 18" SEPARATION

CAUTION:
STA:212+99.73, ELEV:7496.14
TH-46
PROPOSED 16" W.L. CROSSES
UNDER TELE; DEPTH:UNK
MAINTAIN MIN. 18" SEPARATION

CAUTION:
STA:213+21.13, ELEV:7495.57
TH-45
PROPOSED 16" W.L. CROSSES
UNDER ELEC; DEPTH:UNK
MAINTAIN MIN. 18" SEPARATION

STA=213+28.13, INV. ELEV=7495.38
INSTALL 90° BEND W/CTRB
& MJ RSTNTS

STA:213+54.11, ELEV:7494.69
INSTALL 16"x12" TEE W/CTRB, 1-12"
MJ VALVE W/MJ RSTNTS.
MIN. BSA=23.50, APPROX. VOL.=1.00 YDS
CONTINUE (E) OF TEE 10.00 LF OF 12" PVC
AND INSTALL A PLUG.

SEE SHEET 3
FOR INFORMATION

PROFILE SCALE
HORZ.-1"=60'
VERT.-1"=5'

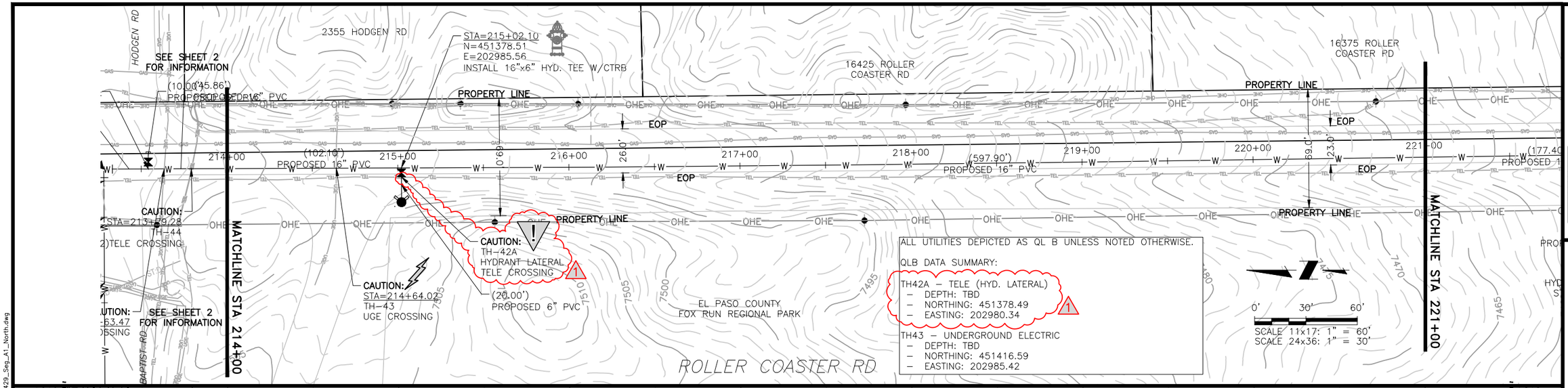
REVISIONS			
NO.	DESCRIPTION	BY	APP.	DATE
1				
2				
3				
4				
5				
6				
7				

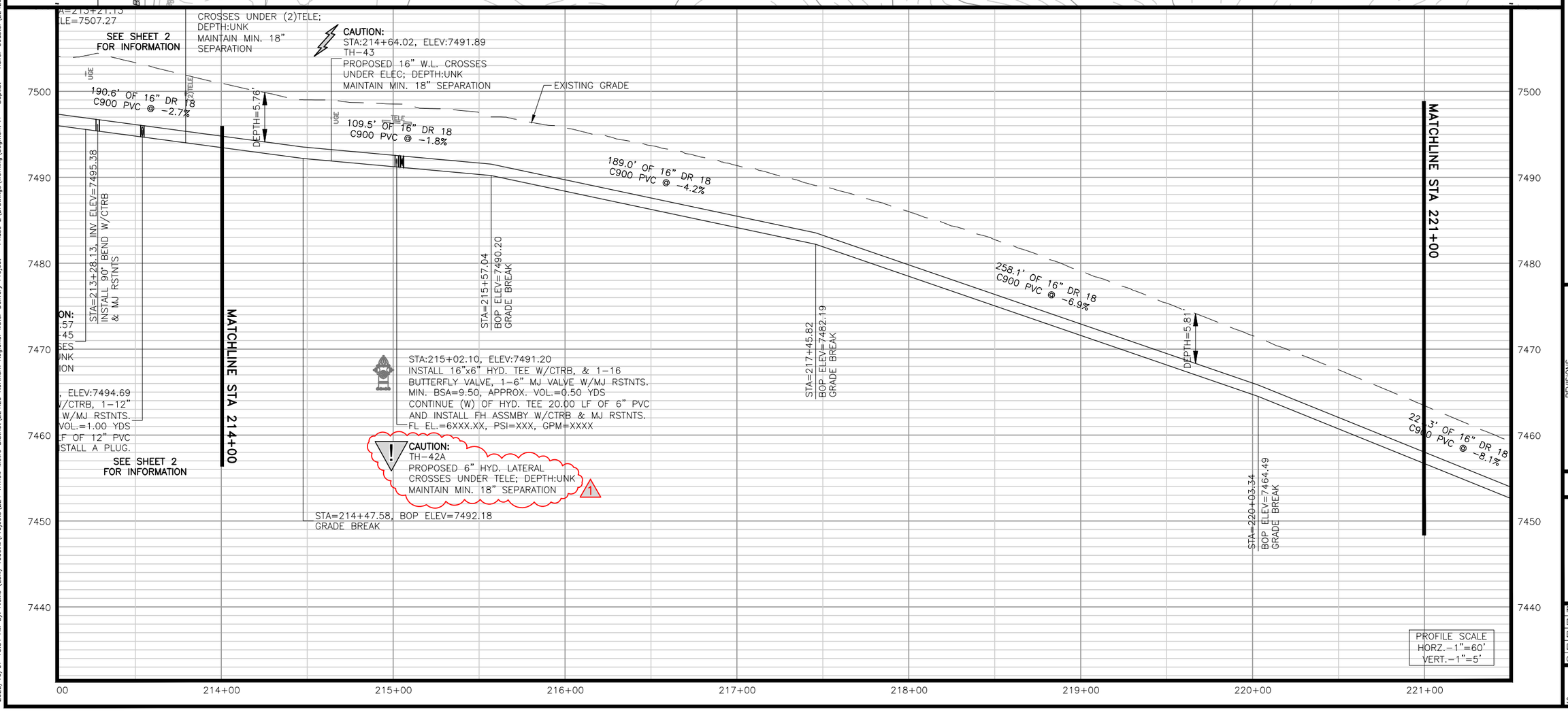
70% DESIGN

Project No.:	224.29
Date:	06/03/22
Design:	MLD
Drawn:	SNW
Check:	MLD

A1-02
SHEET ----OF

2022/10/07 10:31 AM By: Alexis (Lexi) Yodet\\Projects\224 Triview Metro District\224.29 Northern Regional Water Delivery Project – Phase 2\Drawings\Working\Segment A – Baptist – Roller Coaster\224.29_Seg_A1_North.dwg





JDS-HYDRO a Division of RESPEC
5540 TECH CENTER DR., SUITE 100
COLORADO SPRINGS, COLORADO 80919
(719) 227-0072

TRIVIEW METROPOLITAN DISTRICT

NORTHERN DELIVERY SYSTEM

SEGMENT A1 – PLAN AND PROFILE

STATION 214+00 TO 221+00

REVISIONS

NO.	DESCRIPTION	BY	APP.	DATE
1	REVISIONS 1	JLB		10/05/22
2				
3				
4				
5				
6				
7				

70% DESIGN

Project No.:	224.29
Date:	06/03/22
Design:	MLD
Drawn:	SNW
Check:	MLD

A1-03

SHEET ----OF

16375 ROLLER COASTER RD

16325 ROLLER COASTER RD

16265 ROLLER COASTER RD

PROPERTY LINE

EOP

STA=222+77.04
N=450603.63
E=202994.56
INSTALL 16"x6" HYD. TEE W/CTRB

(9.33')
PROPOSED 16" PVC

STA=222+86.38
N=450594.30, E=202994.71
INSTALL 16"X8" TEE W/CTRB

CAUTION:
STA=223+48.45
TH-42
UGE CROSSING

(177.40')
PROPOSED 16" PVC

(513.62')
PROPOSED 16" PVC

CAUTION:
TH-42C
HYDRANT LATERAL
TELE CROSSING

CAUTION:
TH-42A
8" PVC LATERAL
TELE CROSSING

(17.00')
PROPOSED 6" PVC

(20.00')
PROPOSED 8" PVC

CAUTION:
TH-42D
HYDRANT LATERAL
STRM CROSSING

CAUTION:
TH-42B
8" PVC LATERAL
STRM CROSSING

FOX RUN REGIONAL PARK TRAILHEAD AND PARKING

ROLLER COASTER RD

MATCHLINE STA 221+00

MATCHLINE STA 228+00

SCALE 11x17: 1" = 60'
SCALE 24x36: 1" = 30'

ALL UTILITIES DEPICTED AS QL B UNLESS NOTED OTHERWISE.

QLB DATA SUMMARY:

TH42 – UNDERGROUND ELECTRIC
- DEPTH: TBD
- NORTHING: 450532.23
- EASTING: 202995.44

TH42A – TELE (8" PVC LATERAL)
- DEPTH: TBD
- NORTHING: 450594.17
- EASTING: 202987.13

TH42B – STRM (8" PVC LATERAL)
- DEPTH: TBD
- NORTHING: 450594.09
- EASTING: 202981.95

TH42C – TELE (HYD. LATERAL)
- DEPTH: TBD
- NORTHING: 450603.50
- EASTING: 202986.95

TH42D – STRM (HYD. LATERAL)
- DEPTH: TBD
- NORTHING: 450603.42
- EASTING: 202981.71

221.3' OF 16" DR 18 C900 PVC @ -8.1%

EXISTING GRADE

DEPTH=5.34'

TELE 18"CMP

163.1' OF 16" DR 18 C900 PVC @ -6.2%

UGE

CAUTION:
STA:223+48.45, ELEV:7438.97
TH-45
PROPOSED 16" W.L. CROSSES UNDER ELEC; DEPTH:UNK
MAINTAIN MIN. 18" SEPARATION

317.9' OF 16" DR 18 C900 PVC @ -4.6%

DEPTH=6.08'

EXISTING GRADE

STA=222+23.87
BOP ELEV=7446.67
GRADE BREAK

STA=223+86.71
BOP ELEV=7436.61
GRADE BREAK

STA=227+04.24
BOP ELEV=7421.95
GRADE BREAK

STA:222+77.04, ELEV:7443.39
INSTALL 16"x6" HYD. TEE W/CTRB, & 1-16 BUTTERFLY VALVE, 1-6" MJ VALVE W/MJ RSTNTS. MIN. BSA=9.50, APPROX. VOL.=0.50 YDS CONTINUE (W) OF HYD. TEE 13.79 LF OF 6" PVC AND INSTALL FH ASSMBY W/CTRB & MJ RSTNTS. FL EL.=6XXX.XX, PSI=XXX, GPM=XXXX

STA:222+86.38, ELEV:7442.81
INSTALL 16"x8" TEE W/CTRB, 1-8" MJ VALVE W/MJ RSTNTS. MIN. BSA=23.50, APPROX. VOL.=1.00 YDS CONTINUE (W) OF TEE 10.00 LF OF 8" PVC AND INSTALL A PLUG.

CAUTION:
TH-42C
PROPOSED 6" HYD. LATERAL CROSSES UNDER TELE; DEPTH:UNK MAINTAIN MIN. 18" SEPARATION

CAUTION:
TH-42D
PROPOSED 6" HYD. LATERAL CROSSES UNDER STRM; DEPTH:UNK MAINTAIN MIN. 18" SEPARATION

CAUTION:
TH-42A
PROPOSED 8" PVC LATERAL CROSSES UNDER TELE; DEPTH:UNK MAINTAIN MIN. 18" SEPARATION

CAUTION:
TH-42B
PROPOSED 8" PVC LATERAL CROSSES UNDER STRM; DEPTH:UNK MAINTAIN MIN. 18" SEPARATION

PROFILE SCALE
HORZ.-1"=60'
VERT.-1"=5'

7470 7460 7450 7440 7430 7420 7410 7400

221+00 222+00 223+00 224+00 225+00 226+00 227+00 228+00

JDS-HYDRO a Division of RESPEC
5540 TECH CENTER DR., SUITE 100
COLORADO SPRINGS, COLORADO 80919
(719) 227-0072

TRIVIEW METROPOLITAN DISTRICT

NORTHERN DELIVERY SYSTEM

SEGMENT A1 – PLAN AND PROFILE

STATION 221+00 TO 228+00

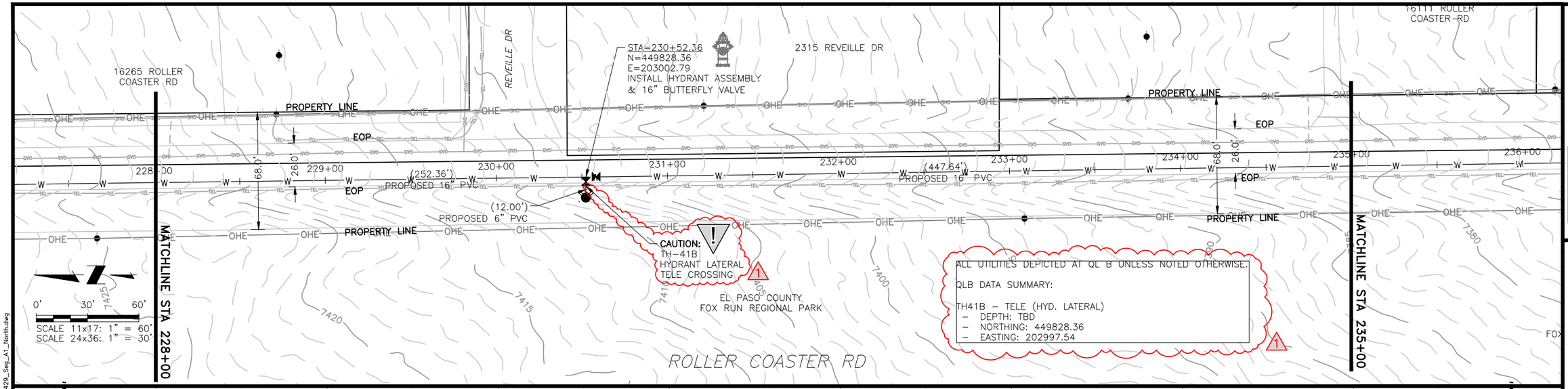
REVISIONS

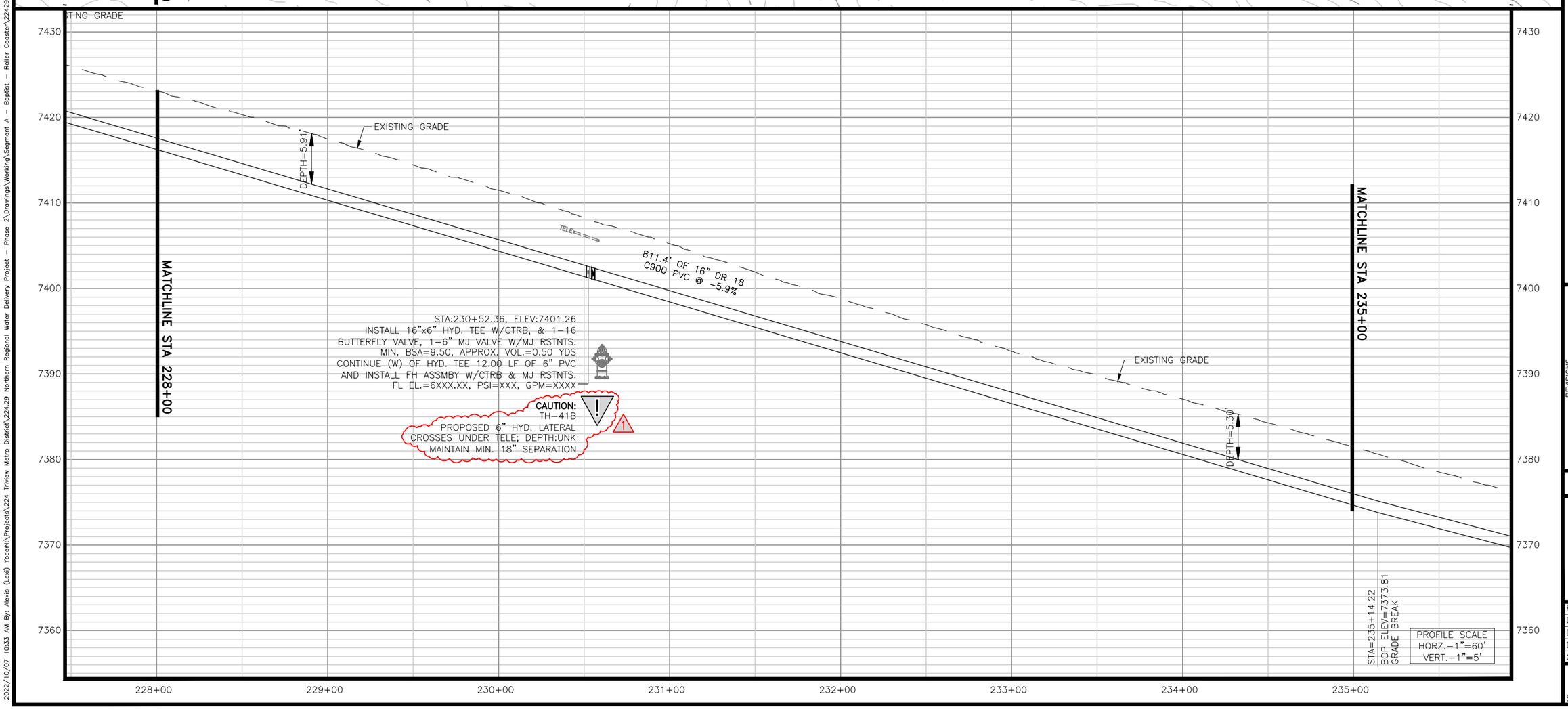
NO.	DESCRIPTION	BY	APP.	DATE
1	REVISIONS 1		JLB	10/05/22
2				
3				
4				
5				
6				
7				

70% DESIGN

Project No.: 224.29
Date: 06/03/22
Design: MLD
Drawn: SNW
Check: MLD

A1-04
SHEET ----OF





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COLORADO SPRINGS, COLORADO 80919
(719) 227-0072

DISCLAIMER: THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY ERRORS OR OMISSIONS SHALL BE REPORTED TO THE ENGINEER BEFORE PROCEEDING. ENGINEER ASSUMES NO LIABILITY FOR UNAUTHORIZED CHANGES AND/OR REVISIONS MADE TO PLANS.

TRIVIEW METROPOLITAN DISTRICT

NORTHERN DELIVERY SYSTEM

SEGMENT A1 – PLAN AND PROFILE

STATION 228+00 TO 235+00

REVISIONS			
NO.	DESCRIPTION	BY	APP.	DATE
1	REVISIONS 1	JLB		10/05/22
2				
3				
4				
5				
6				
7				

70% DESIGN

Project No.: 224.29
Date: 06/03/22
Design: MLD
Drawn: SNW
Check: MLD

A1-05
SHEET ----OF

2022/10/07 10:33 AM By: Alexis (Lexi) Yodelis\Projects\224 Triview Metro District\224.29 Northern Regional Water Delivery Project – Phase 2\Drawings\Working\Segment A – Baptist – Roller Coaster\22429_Seg_A1_North.dwg

0' 30' 60'
SCALE 1/1x17: 1" = 60'
SCALE 24x36: 1" = 30'

16111 ROLLER COASTER RD
16065 ROLLER COASTER RD
15935 ROLLER COASTER RD
15980 ROLLER COASTER RD
EL PASO COUNTY FOX RUN REGIONAL PARK
ROLLER COASTER RD

PROPERTY LINE
EOP
MATCHLINE STA 235+00
MATCHLINE STA 242+00

STA=239+52.36
N=448928.46
E=203016.29
INSTALL HYDRANT ASSEMBLY

(452.36') PROPOSED 16" PVC
(12.00') PROPOSED 6" PVC
(247.64') PROPOSED 16" PVC

CAUTION:
TH-41A
HYDRANT LATERAL
TELE CROSSING

ALL UTILITIES DEPICTED AT QL B UNLESS NOTED OTHERWISE.

QLB DATA SUMMARY:

TH41A – TELE (HYD. LATERAL)
- DEPTH: TBD
- NORTHING: 448928.46
- EASTING: 203008.11

EXISTING GRADE
458.2' OF 16" DR 18 C900 PVC @ -5.3%
DEPTH=5.14'
STA=239+14.22
BOP ELEV=7373.81
GRADE BREAK
STA=239+71.77
BOP ELEV=7349.72
GRADE BREAK
TELE
210.1' OF 16" DR 18 C900 PVC @ -3.9%
DEPTH=5.34'
STA=241+81.72
BOP ELEV=7341.47
GRADE BREAK
EXISTING

STA:239+52.36, ELEV:7350.74
INSTALL 16"x6" HYD. TEE W/CTRB, 1-6" MJ VALVE W/MJ RSTNTS.
MIN. BSA=9.50, APPROX. VOL.=0.50 YDS
CONTINUE (W) OF HYD. TEE 12.00 LF OF 6" PVC AND INSTALL FH ASSMBY W/CTRB & MJ RSTNTS.
FL EL.=6XXX.XX, PSI=XXX, GPM=XXXX

CAUTION:
TH-41A
PROPOSED 6" HYD. LATERAL CROSSES UNDER TELE; DEPTH:UNK
MAINTAIN MIN. 18" SEPARATION

PROFILE SCALE
HORZ.-1"=60'
VERT.-1"=5'

7380 7370 7360 7350 7340
235+00 236+00 237+00 238+00 239+00 240+00 241+00 242+00

JDS-HYDRO a Division of RESPEC
5540 TECH CENTER DR., SUITE 100
COLORADO SPRINGS, COLORADO 80919
(719) 227-0072

TRIVIEW METROPOLITAN DISTRICT

NORTHERN DELIVERY SYSTEM

SEGMENT A1 – PLAN AND PROFILE

STATION 235+00 TO 242+00

REVISIONS				
NO.	DESCRIPTION	BY	APP.	DATE
1	REVISIONS 1	JLB		10/05/22
2				
3				
4				
5				
6				
7				

70% DESIGN

Project No.: 224.29
Date: 06/03/22
Design: MLD
Drawn: SNW
Check: MLD

A1-06
SHEET ----OF

SCALE 11x17: 1" = 60'
SCALE 24x36: 1" = 30'

ALL UTILITIES DEPICTED AT QL B UNLESS NOTED OTHERWISE.

QLB DATA SUMMARY:
TH39 – XX" GAS SERVICE LINE
- DEPTH: TBD
- NORTHING: 447950.31
- EASTING: 203031.61

TH40 – XX" STORM LINE
- DEPTH: TBD
- NORTHING: 447995.53
- EASTING: 203031.25

TH41 – UNDERGROUND COMMUNICATIONS
- DEPTH: TBD
- NORTHING: 448000.34
- EASTING: 203031.23

15935 ROLLER COASTER RD
15980 ROLLER COASTER RD
15845 ROLLER COASTER RD
15870 ROLLER COASTER RD
16840 ROLLER COASTER RD

PROPERTY LINE
EOP
MATCHLINE STA 242+00
MATCHLINE STA 249+00
ROLLER COASTER RD

(700.00')
PROPOSED 16" PVC

(2.36')
PROPOSED 16" PVC
STA=249+02.36
N=447978.60
E=203031.30
INSTALL HYDRANT A

(12.00')
PROPOSED 6" PVC

CAUTION:
STA=248+80.62
TH-41
TELE CROSSING

CAUTION:
STA=249+30.64
TH-39
GAS SVC CROSS

CAUTION:
STA=248+85.42
TH-40
STRM CROSSING

CAUTION:
TH-39A
HYDRANT LA
TELE CROSS

SEE SHEET 8
FOR INFORMATION

SEE SHEET 6
FOR INFORMATION

SEE SHEET 8
FOR INFORMATION
CAUTION:
STA:249+3
TH-39
PROPOSED
UNDER GA
MAINTAIN M

SEE SHEET 8
FOR INFORMATION
STA:249+02.36, ELE
INSTALL 16"x6" HYD
VALVE W/MJ RSTNTS
MIN. BSA=9.50, APP
CONTINUE (W) OF H
6" PVC AND INSTALL
& MJ RSTNTS.
FL EL.=6XXX.XX, PS

CAUTION:
STA:248+85.42, ELEV:7318.60
TH-40
PROPOSED 16" PVC CROSSES
UNDER STRM; DEPTH:UNK
MAINTAIN MIN. 18" SEPARATION

CAUTION:
STA:248+80.62, ELEV:7318.72
TH-41
PROPOSED 16" PVC CROSSES
UNDER TELE; DEPTH:UNK
MAINTAIN MIN. 18" SEPARATION

CAUTION:
TH-39A

EXISTING GRADE

DEPTH=5.34'
DEPTH=5.55'
DEPTH=5.25'

253.2' OF 16" DR 18
C900 PVC @ -2.5%

155.1' OF 16" DR 18
C900 PVC @ -3.0%

232.7' OF 16" DR 18
C900 PVC @ -4.4%

77.6' OF 16" DR 18
C900 PVC @ -2.5%

155.3'
C900

STA=244+34.84
BOP ELEV=7335.05
GRADE BREAK

STA=245+89.89
BOP ELEV=7330.37
GRADE BREAK

STA=248+22.41
BOP ELEV=7320.19
GRADE BREAK

PROFILE SCALE
HORZ.-1"=60'
VERT.-1"=5'

7350
7340
7330
7320
7310

242+00
243+00
244+00
245+00
246+00
247+00
248+00
249+00

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COLORADO SPRINGS, COLORADO 80919
(719) 227-0072

TRIVIEW METROPOLITAN DISTRICT

NORTHERN DELIVERY SYSTEM

SEGMENT A1 – PLAN AND PROFILE

STATION 242+00 TO 249+00

REVISIONS			
NO.	DESCRIPTION	BY	APP.	DATE
1				
2				
3				
4				
5				
6				
7				

70% DESIGN

Project No.:	224.29
Date:	06/03/22
Design:	MLD
Drawn:	SNW
Check:	MLD

A1-07
SHEET ----OF

ALL UTILITIES DEPICTED AT QL B UNLESS NOTED OTHERWISE.

QLB DATA SUMMARY:

H38B – TELE (HYD. LATERAL)
- DEPTH: TBD
- NORTHING: 447330.89
- EASTING: 203033.11

TH39 – XX" GAS SERVICE LINE
- DEPTH: TBD
- NORTHING: 447950.31
- EASTING: 203031.61

TH39A – TELE (HYD. LATERAL)
- DEPTH: TBD
- NORTHING: 447978.60
- EASTING: 203024.95

1

0' 30' 60'
SCALE 11x17: 1" = 60'
SCALE 24x36: 1" = 30'

15845 ROLLER COASTER RD

SEE SHEET 7 FOR INFORMATION

CAUTION:
STA=248+80.62
TH-41
TELE CROSSING

CAUTION:
STA=248+85.42
TH-40
STRM CROSSING

SEE SHEET 7 FOR INFORMATION

MATCHLINE STA 249+00

(2.36') PROPOSED 16" PVC

STA=249+02.36
N=447978.60
E=203031.30
INSTALL HYDRANT ASSEMBLY

CAUTION:
STA=249+30.64
TH-39
GAS SVC CROSSING

CAUTION:
TH-39A
HYDRANT LATERAL
TELE CROSSING

(12.00') PROPOSED 6" PVC

15775 ROLLER COASTER RD

15745 ROLLER COASTER RD

15715 ROLLER COASTER RD

STA=255+49.97
N=447331.06
E=203039.71
INSTALL HYDRANT ASSEMBLY

STA=255+23.21
N=447357.80
E=203038.73
INSTALL 6' Ø AIR/VAC VAULT

(100.03') PROPOSED 16" PVC

MATCHLINE STA 256+50

PROPERTY LINE
EOP
OHE
TEL
SVC
W

(603.84') PROPOSED 16" PVC

STA=255+06.19
N=447374.82, E=203038.48
INSTALL 16" BUTTERFLY VALVE W/MJ RSTNTS

(17.02') PROPOSED 16" PVC

(14.86') PROPOSED 16" PVC

STA=255+38.06
N=447342.95, E=203039.28
INSTALL 16" BUTTERFLY VALVE W/MJ RSTNTS

CAUTION:
TH-38B
HYDRANT LATERAL
TELE CROSSING

(12.00') PROPOSED 6" PVC

15810 ROLLER COASTER RD

2108 STELLA DR

ROLLER COASTER RD

16" PVC CROSSES STRM; DEPTH:UNK ... 18" SEPARATION

CAUTION:
...2, ELEV:7318.72
TH-41
...6" PVC CROSSES TELE; DEPTH:UNK ... 18" SEPARATION

SEE SHEET 7 FOR INFORMATION

EXISTING GRADE

CAUTION:
STA:249+30.64, ELEV:7318.22
TH-39
PROPOSED 16" PVC CROSSES UNDER GAS SVC; DEPTH:UNK
MAINTAIN MIN. 18" SEPARATION

77.6' OF 16" DR 18 C900 PVC @ -2.5%

155.3' OF 16" DR 18 C900 PVC @ -0.0%

DEPTH=5.5'

180.8' OF 16" DR 18 C900 PVC @ 3.1%

153.1' OF 16" DR 18 C900 PVC @ 4.4%

91.4' OF 16" DR 18 C900 PVC @ 3.1%

42.9' OF 16" DR 18 C900 PVC @ -0.1%

DEPTH=5.5'

125.7' OF 16" DR 18 C900 PVC @ -0.1%

STA:249+02.36, ELEV:7318.23
INSTALL 16"x6" HYD. TEE W/CTRB, 1-6" MJ VALVE W/MJ RSTNTS.
MIN. BSA=9.50, APPROX. VOL.=0.50 YDS
CONTINUE (W) OF HYD. TEE 12.00 LF OF 6" PVC AND INSTALL FH ASSMBY W/CTRB & MJ RSTNTS.
FL EL.=6XXX.XX, PSI=XXX, GPM=XXXX

STA=250+55.28
BOP ELEV=7318.18
GRADE BREAK

STA=252+35.97
BOP ELEV=7323.77
GRADE BREAK

STA=253+88.89
BOP ELEV=7330.49
GRADE BREAK

STA:255+06.19, ELEV:7333.28
INSTALL 16" BUTTERFLY VALVE W/MJ RSTNTS.

STA:255+23.21, ELEV:7333.26
INSTALL AIR-VAC VAULT

STA:255+38.06, ELEV:7333.24
INSTALL 16" BUTTERFLY VALVE W/MJ RSTNTS.

STA:255+50.00, ELEV:7333.23
INSTALL 16"x6" HYD. TEE W/CTRB, 1-6" MJ VALVE W/MJ RSTNTS.
MIN. BSA=9.50, APPROX. VOL.=0.50 YDS
CONTINUE (W) OF HYD. TEE 12.00 LF OF 6" PVC AND INSTALL FH ASSMBY W/CTRB & MJ RSTNTS.
FL EL.=6XXX.XX, PSI=XXX, GPM=XXXX

STA=256+48.97
BOP ELEV=7333.09
GRADE BREAK

CAUTION:
TH-39A
PROPOSED 6" HYD. LATERAL CROSSES UNDER TELE; DEPTH:UNK
MAINTAIN MIN. 18" SEPARATION

CAUTION:
TH-38B
PROPOSED 6" HYD. LATERAL CROSSES UNDER TELE; DEPTH:UNK
MAINTAIN MIN. 18" SEPARATION

PROFILE SCALE
HORZ.-1"=60'
VERT.-1"=5'

7340 7330 7320 7310 7300

249+00 250+00 251+00 252+00 253+00 254+00 255+00 256+00

JDS-HYDRO a Division of RESPEC
5540 TECH CENTER DR., SUITE 100
COLORADO SPRINGS, COLORADO 80919
(719) 227-0072

TRIVIEW METROPOLITAN DISTRICT

NORTHERN DELIVERY SYSTEM

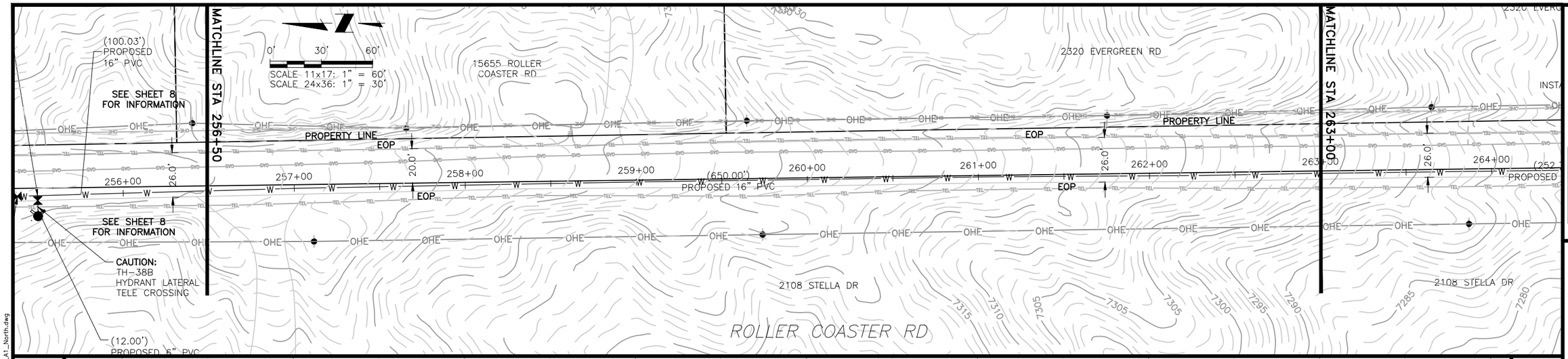
SEGMENT A1 – PLAN AND PROFILE
STATION 249+00 TO 256+50

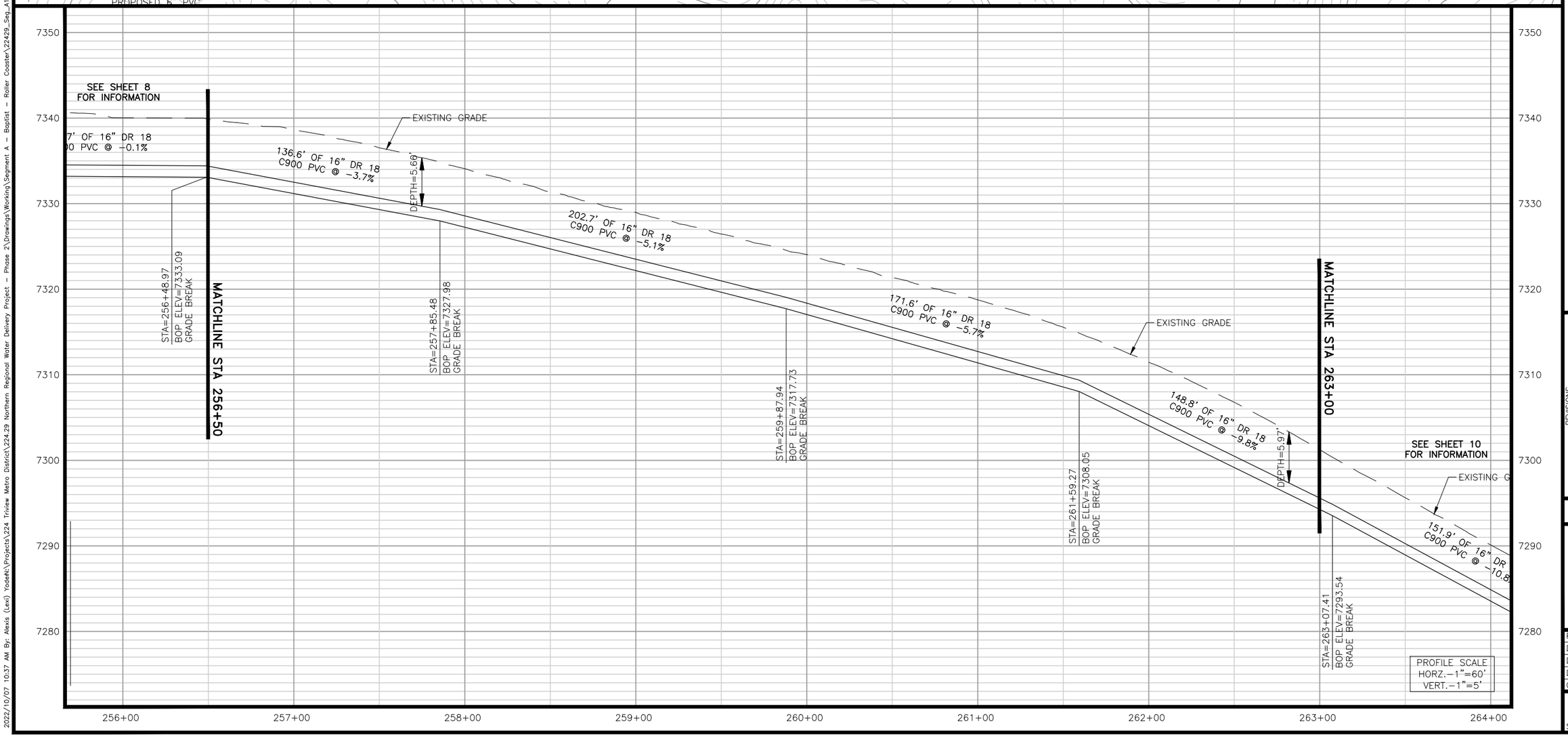
REVISIONS			
NO.	DESCRIPTION	BY	APP.	DATE
1	REVISIONS 1	JLB		10/05/22
2				
3				
4				
5				
6				
7				

70% DESIGN

Project No.:	224.29
Date:	06/03/22
Design:	MLD
Drawn:	SNW
Check:	MLD

A1-08
SHEET ----OF





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TRIVIEW METROPOLITAN DISTRICT

NORTHERN DELIVERY SYSTEM

SEGMENT A1 – PLAN AND PROFILE

STATION 256+50 TO 263+00

REVISIONS			
NO.	DESCRIPTION	BY	APP.	DATE
1				
2				
3				
4				
5				
6				
7				

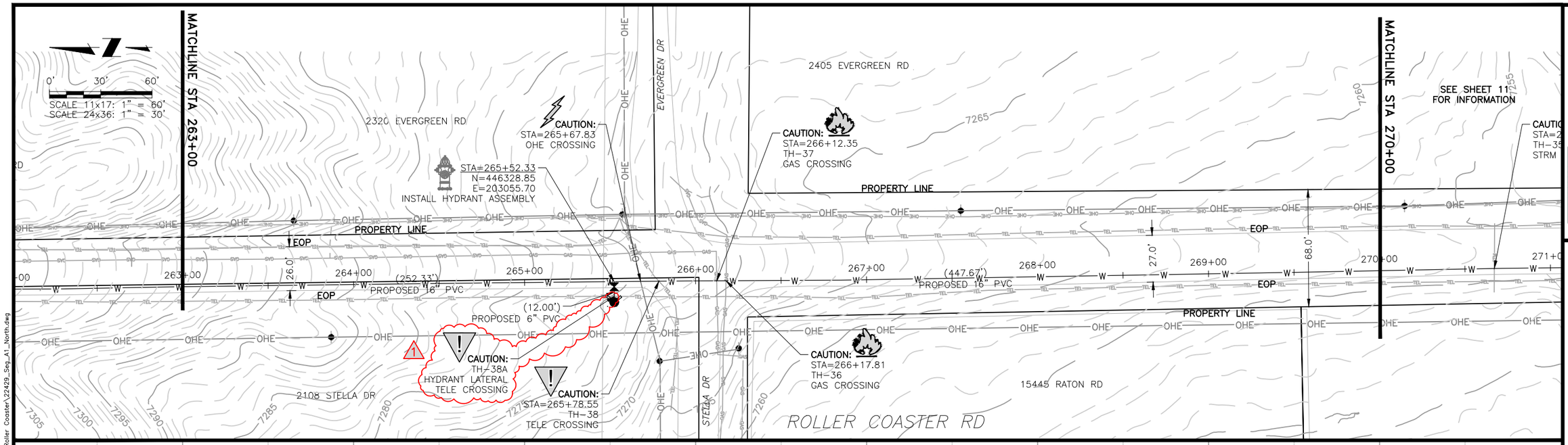
70% DESIGN

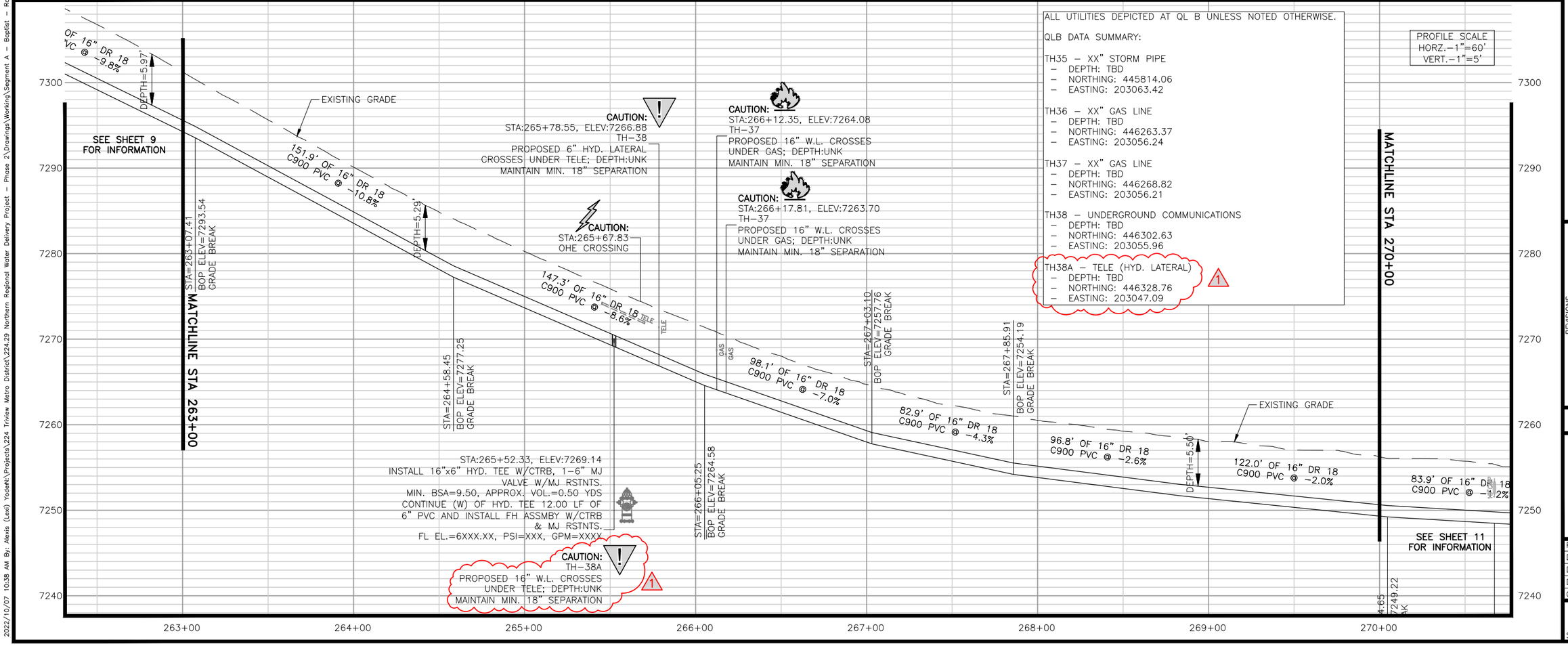
Project No.:	224.29
Date:	06/03/22
Design:	MLD
Drawn:	SNW
Check:	MLD

A1-09

SHEET ----OF

2022/10/07 10:37 AM By: Alexis (Lexi) Yodet K:\Projects\224 Triview Metro District\224.29 Northern Regional Water Delivery Project – Phase 2\Drawings\Working\Segment A – Baptist – Roller Coaster\224.29_Seg_A1_North.dwg





ALL UTILITIES DEPICTED AT QL B UNLESS NOTED OTHERWISE.

QLB DATA SUMMARY:

TH35 – XX" STORM PIPE
- DEPTH: TBD
- NORTHING: 445814.06
- EASTING: 203063.42

TH36 – XX" GAS LINE
- DEPTH: TBD
- NORTHING: 446263.37
- EASTING: 203056.24

TH37 – XX" GAS LINE
- DEPTH: TBD
- NORTHING: 446268.82
- EASTING: 203056.21

TH38 – UNDERGROUND COMMUNICATIONS
- DEPTH: TBD
- NORTHING: 446302.63
- EASTING: 203055.96

TH38A – TELE (HYD. LATERAL)
- DEPTH: TBD
- NORTHING: 446328.76
- EASTING: 203047.09

PROFILE SCALE
HORZ.–1"=60'
VERT.–1"=5'

JDS-HYDRO a Division of RESPEC
5540 TECH CENTER DR., SUITE 100
COLORADO SPRINGS, COLORADO 80919
(719) 227-0072

TRIVIEW METROPOLITAN DISTRICT

NORTHERN DELIVERY SYSTEM

SEGMENT A1 – PLAN AND PROFILE

STATION 263+00 TO 270+00

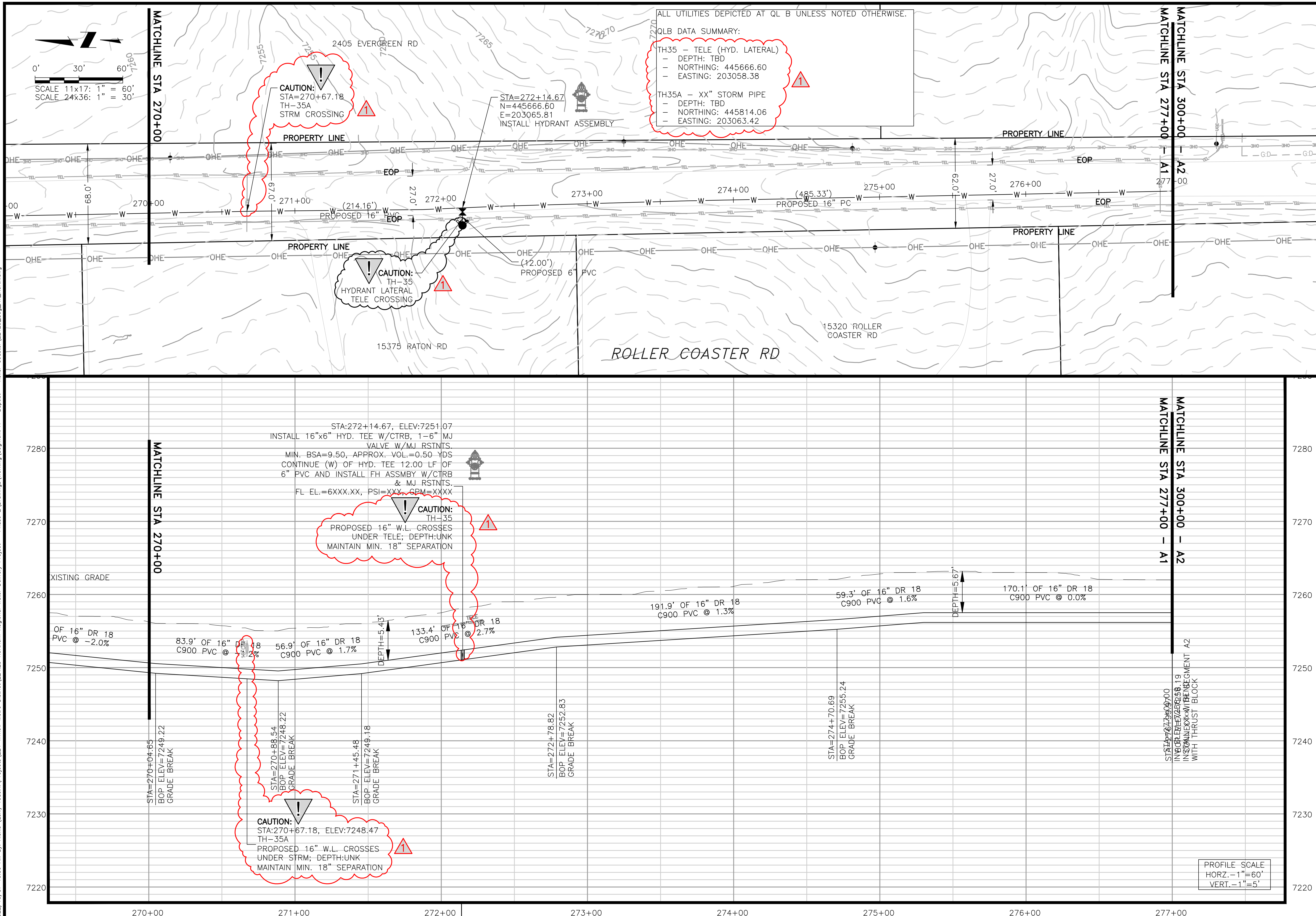
REVISIONS			
NO.	DESCRIPTION	BY	APP.	DATE
1	REVISIONS 1	JLB		10/05/22
2				
3				
4				
5				
6				
7				

70% DESIGN

Project No.:	224.29
Date:	06/03/22
Design:	MLD
Drawn:	SNW
Check:	MLD

A1–10

SHEET ----OF



0' 30' 60'
SCALE 11x17: 1" = 60'
SCALE 24x36: 1" = 30'
MATCHLINE STA 270+00
2405 EVERGREEN RD
CAUTION:
STA=270+67.18
TH-35A
STRM CROSSING
STA=272+14.67
N=445666.60
E=203065.81
INSTALL HYDRANT ASSEMBLY
ALL UTILITIES DEPICTED AT QL B UNLESS NOTED OTHERWISE.
QLB DATA SUMMARY:
TH35 – TELE (HYD. LATERAL)
– DEPTH: TBD
– NORTHING: 445666.60
– EASTING: 203058.38
TH35A – XX" STORM PIPE
– DEPTH: TBD
– NORTHING: 445814.06
– EASTING: 203063.42
MATCHLINE STA 277+00 – A1
MATCHLINE STA 300+00 – A2
PROPERTY LINE
EOP
(214.16')
PROPOSED 16" PVC
(485.33')
PROPOSED 16" PC
(12.00')
PROPOSED 6" PVC
CAUTION:
TH-35
HYDRANT LATERAL
TELE CROSSING
15375 RATON RD
15320 ROLLER COASTER RD
ROLLER COASTER RD
STA:272+14.67, ELEV:7251.07
INSTALL 16"x6" HYD. TEE W/CTRB, 1-6" MJ VALVE W/MJ RSTNTS.
MIN. BSA=9.50, APPROX. VOL.=0.50 YDS
CONTINUE (W) OF HYD. TEE 12.00 LF OF 6" PVC AND INSTALL FH ASSMBY W/CTRB & MJ RSTNTS.
FL EL.=6XXX.XX, PSI=XXX, GPM=XXXX
CAUTION:
TH-35
PROPOSED 16" W.L. CROSSES UNDER TELE; DEPTH:UNK
MAINTAIN MIN. 18" SEPARATION
EXISTING GRADE
OF 16" DR 18 PVC @ -2.0%
83.9' OF 16" DR 18 C900 PVC @ -1.2%
56.9' OF 16" DR 18 C900 PVC @ 1.7%
DEPTH=5.43'
133.4' OF 16" DR 18 C900 PVC @ 2.7%
191.9' OF 16" DR 18 C900 PVC @ 1.3%
59.3' OF 16" DR 18 C900 PVC @ 1.6%
DEPTH=5.67'
170.1' OF 16" DR 18 C900 PVC @ 0.0%
STA=270+04.65 BOP ELEV=7249.22 GRADE BREAK
STA=270+88.54 BOP ELEV=7248.22 GRADE BREAK
STA=271+45.48 BOP ELEV=7249.18 GRADE BREAK
STA=272+78.82 BOP ELEV=7252.83 GRADE BREAK
STA=274+70.69 BOP ELEV=7255.24 GRADE BREAK
CAUTION:
STA:270+67.18, ELEV:7248.47
TH-35A
PROPOSED 16" W.L. CROSSES UNDER STRM; DEPTH:UNK
MAINTAIN MIN. 18" SEPARATION
PROFILE SCALE
HORZ.-1"=60'
VERT.-1"=5'

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(719) 227-0072

DISCLAIMER: THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ANY ERRORS OR OMISSIONS SHALL BE REPORTED TO JDS-HYDRO, A DIVISION OF RESPEC. JDS-HYDRO ASSUMES NO LIABILITY FOR UNAUTHORIZED CHANGES AND/OR REVISIONS MADE TO PLANS.

TRIVIEW METROPOLITAN DISTRICT

NORTHERN DELIVERY SYSTEM

SEGMENT A1 – PLAN AND PROFILE
STATION 270+00 277+00

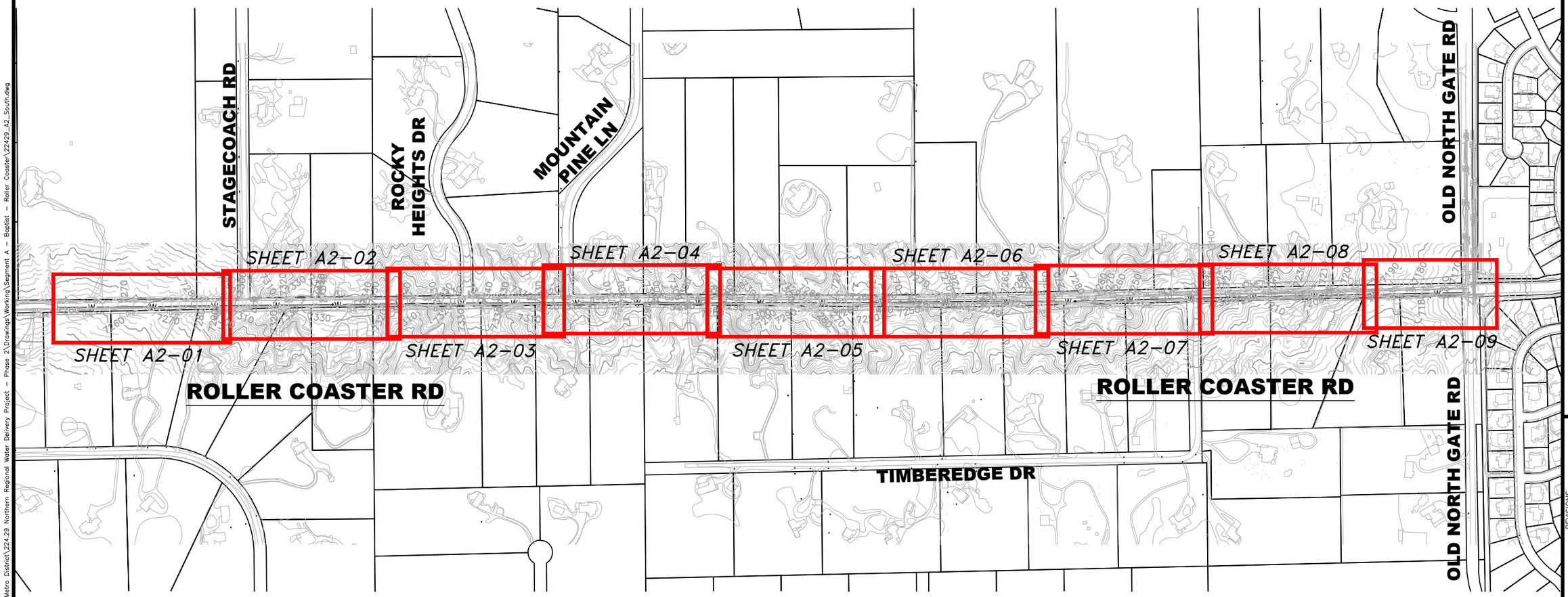
NO.	DESCRIPTION	BY	APP.	DATE
1	REVISIONS 1	JLB		10/05/22
2				
3				
4				
5				
6				
7				

70% DESIGN

Project No.: 224.29
Date: 06/03/22
Design: MLD
Drawn: SNW
Check: MLD

A1–11
SHEET ----OF

2022/10/07 10:39 AM By: Alexis (Lexi) YodeN\Projects\224 Triview Metro District\224.29 Northern Regional Water Delivery Project – Phase 2\Drawings\Working\Segment A – Baptist – Roller Coaster\22429_Seg_A1_North.dwg



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TRIVIEW METROPOLITAN DISTRICT

NORTHERN DELIVERY SYSTEM

SEGMENT A2 KEY MAP

REVISIONS				
NO.	DESCRIPTION	BY	APP.	DATE
1				
2				
3				
4				
5				
6				
7				

70% DESIGN

Project No.:	224.29
Date:	06/03/22
Design:	GJD
Drawn:	JLB
Check:	MLD

SHEET ----OF

2022/10/07 10:40 AM By: Alexis (Lexi) Yoder\\Projects\224 Triview Metro District\224.29 Northern Regional Water Delivery Project – Phase 2\Drawings\Working\Segment A – Baptist – Roller Coaster\22429_A2_South.dwg

ALL UTILITIES DEPICTED AT QL B UNLESS NOTED OTHERWISE.

QLB DATA SUMMARY

TH1 – XX" STORM PIPE
- DEPTH: TBD
- NORTHING: 444512.94
- EASTING: 203084.50

TH1A – TELE (HYD. LATERAL)
- DEPTH: TBD
- NORTHING: 444865.63
- EASTING: 203071.92

SCALE 11x17: 1" = 60'
SCALE 24x36: 1" = 30'

STA=303+15.81
N=444865.65
E=203080.68
INSTALL HYDRANT ASSEMBLY

MATCHLINE STA 277+00 – A1

MATCHLINE STA 300+00 – A2

(315.81') PROPOSED 16" PVC

(11.62') PROPOSED 6" PVC

(482.20') PROPOSED 16" PVC

CAUTION:
TH–1A
HYDRANT LATERAL
TELE CROSSING

CAUTION:
STA=306+68.54
TH–1
STRM CROSSING

15245 RATON RD

15215 RATON RD

15235 ROLLER COASTER RD

2420 STAGECOACH RD

ROLLER COASTER RD

MATCHLINE STA 308+00

EXISTING GRADE

BEGIN CONSTRUCTION:
STA:300+00.00, ELEV:7253.67
TIE–IN TO EXISTING 16" WL

DEPTH=5.61'

194.2' OF 16" DR 18 C900 PVC @ 1.2%

STA=301+94.89
BOP ELEV=7255.95
GRADE BREAK

321.8' OF 16" DR 18 C900 PVC @ 2.8%

DEPTH=5.51'

STA:303+15.81, ELEV:7259.34
INSTALL 16"x6" HYD. TEE W/CTRB, & 1–6" MJ VALVE W/MJ RSTNTS.
MIN. BSA=9.50, APPROX. VOL.=0.50 YDS
CONTINUE (W) OF HYD. TEE 11.62 LF OF 6" PVC AND INSTALL FH ASSEMBY W/CTRB & MJ RSTNTS.
FL EL.=6XXX.XX, PSI=XXX, GPM=XXXX

CAUTION:
TH–1A
PROPOSED 6" HYD. LATERAL
CROSSES UNDER TELE; DEPTH:UNK
MAINTAIN MIN. 18" SEPARATION

STA=305+17.47
BOP ELEV=7265.01
GRADE BREAK

106.4' OF 16" DR 18 C900 PVC @ 5.8%

123.9' OF 16" DR 18 C900 PVC @ 1.9%

STA=306+24.23
BOP ELEV=7271.23
GRADE BREAK

DEPTH=5.87'

CAUTION:
STA:306+68.54, ELEV:7274.72
TH–1
PROPOSED 16" W.L. CROSSES UNDER STRM; DEPTH:UNK
MAINTAIN MIN. 18" SEPARATION

STA=307+48.32
BOP ELEV=7281.00
GRADE BREAK

MATCHLINE STA 300+00 – A2

MATCHLINE STA 308+00

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NORTHERN DELIVERY SYSTEM

SEGMENT A2 – PLAN AND PROFILE

STATION 300+00 TO 308+00

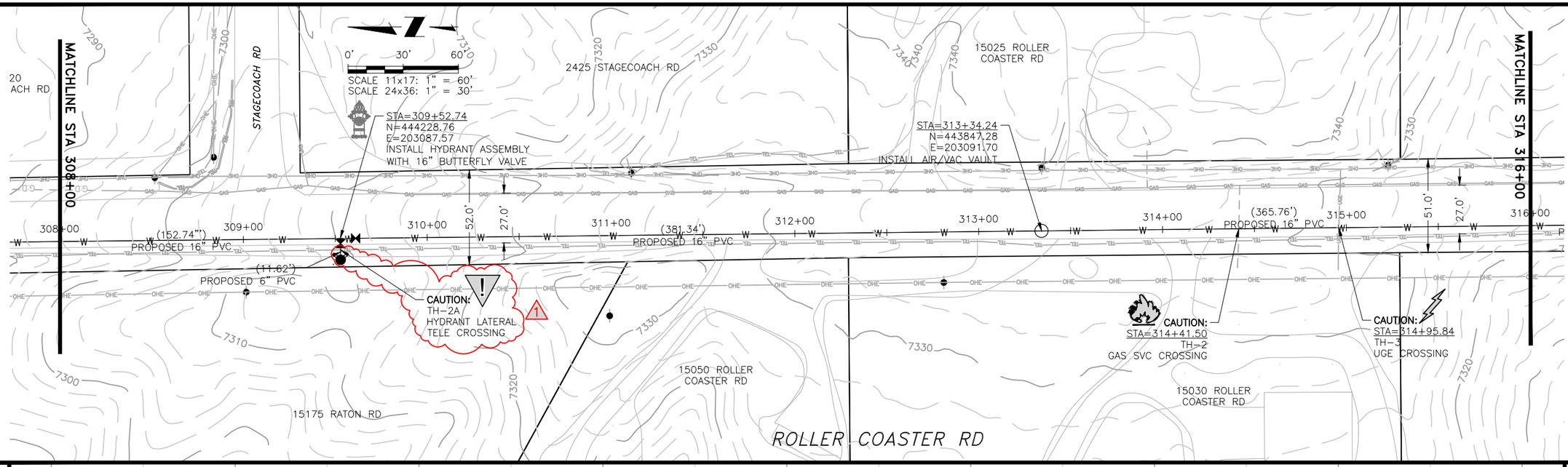
REVISIONS				
NO.	DESCRIPTION	BY	APP.	DATE
1	REVISIONS 1	JLB		10/05/22
2				
3				
4				
5				
6				
7				

70% DESIGN

Project No.:	224.29
Date:	06/03/22
Design:	MLD
Drawn:	SNW
Check:	MLD

A2–01

SHEET ----OF



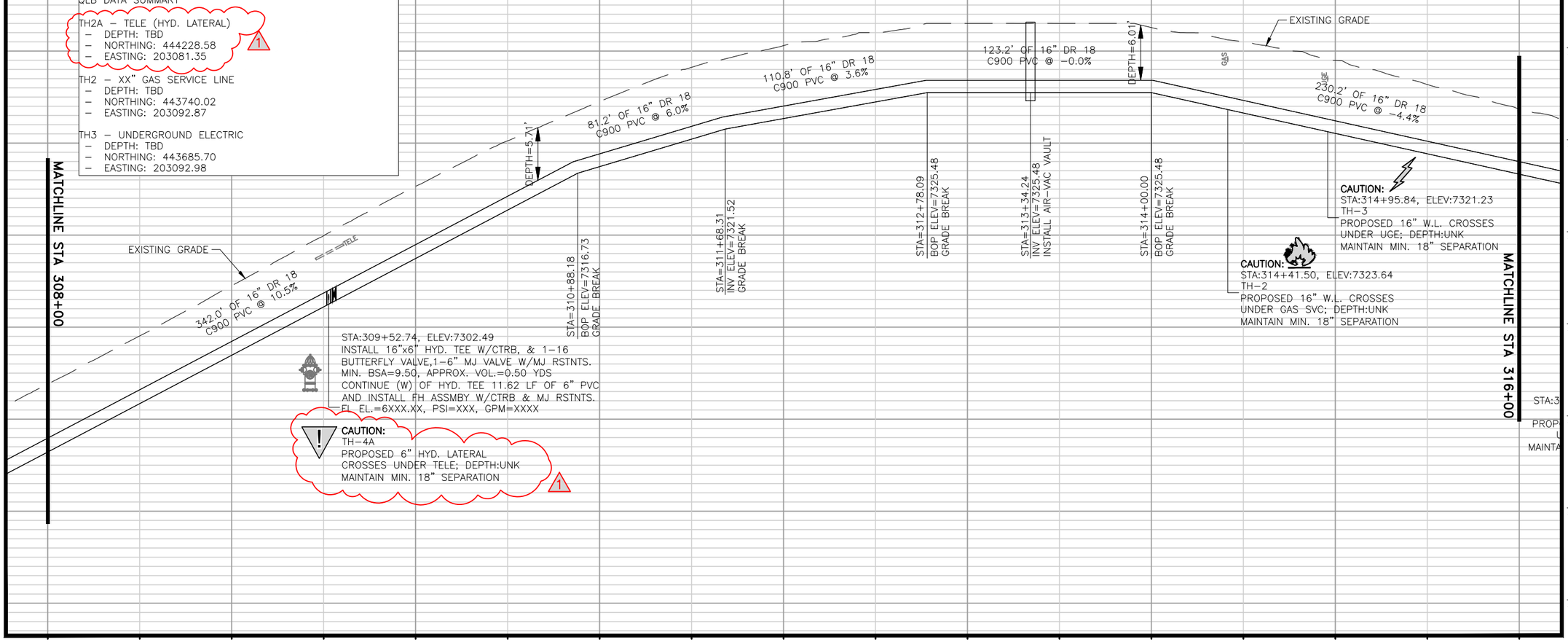
ALL UTILITIES DEPICTED AT QL B UNLESS NOTED OTHERWISE.

QLB DATA SUMMARY

TH2A – TELE (HYD. LATERAL)
- DEPTH: TBD
- NORTHING: 444228.58
- EASTING: 203081.35

TH2 – XX" GAS SERVICE LINE
- DEPTH: TBD
- NORTHING: 443740.02
- EASTING: 203092.87

TH3 – UNDERGROUND ELECTRIC
- DEPTH: TBD
- NORTHING: 443685.70
- EASTING: 203092.98



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TRIVIEW METROPOLITAN DISTRICT

NORTHERN DELIVERY SYSTEM

SEGMENT A2 – PLAN AND PROFILE

STATION 308+00 TO 316+00

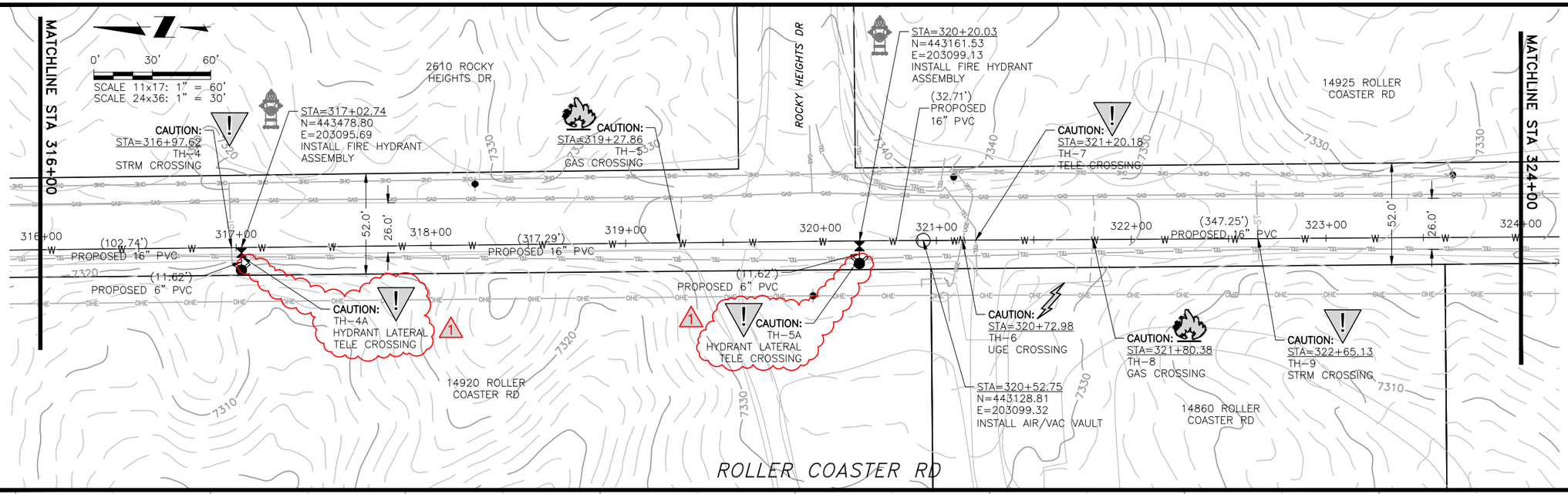
REVISIONS				
NO.	DESCRIPTION	BY	APP.	DATE
1	REVISIONS 1	JLB		10/05/22
2				
3				
4				
5				
6				
7				

70% DESIGN

Project No.:	224.29
Date:	06/03/22
Design:	MLD
Drawn:	SNW
Check:	MLD

A2-02

SHEET ____OF



ALL UTILITIES DEPICTED AT QL B UNLESS NOTED OTHERWISE.

QLB DATA SUMMARY

TH4 – XX" STORM PIPE
- DEPTH: TBD
- NORTHING: 443483.91
- EASTING: 203095.48

TH4A – TELE (HYD. CROSSING)
- DEPTH: TBD
- NORTHING: 443478.61
- EASTING: 203091.01

TH5 – XX" GAS SERVICE LINE
- DEPTH: TBD
- NORTHING: 443253.69
- EASTING: 203098.27

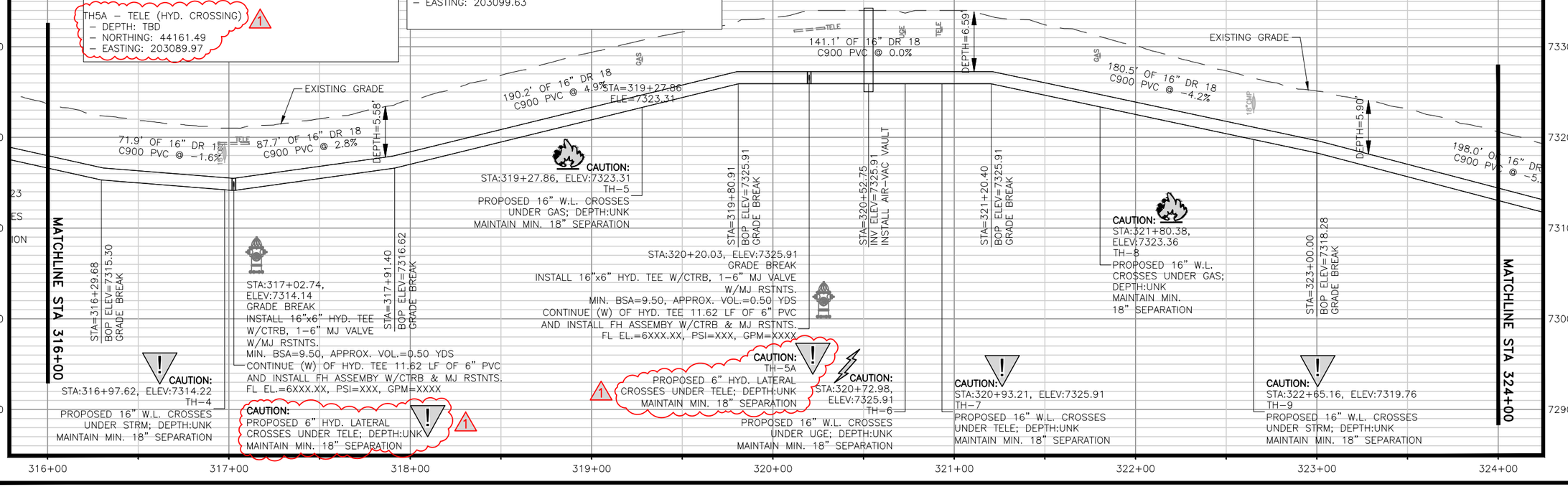
TH5A – TELE (HYD. CROSSING)
- DEPTH: TBD
- NORTHING: 44161.49
- EASTING: 203089.97

TH6 – UNDERGROUND ELECTRIC
- DEPTH: TBD
- NORTHING: 443108.58
- EASTING: 203099.44

TH7 – UNDERGROUND COMMUNICATIONS
- DEPTH: TBD
- NORTHING: 443101.85
- EASTING: 203099.47

TH8 – XX" GAS SERVICE LINE
- DEPTH: TBD
- NORTHING: 443041.65
- EASTING: 203099.82

TH9 – XX" STORM PIPE
- DEPTH: TBD
- NORTHING: 442956.88
- EASTING: 203099.63



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TRIVIEW METROPOLITAN DISTRICT

NORTHERN DELIVERY SYSTEM

SEGMENT A2 – PLAN AND PROFILE

STATION 316+00 TO 324+00

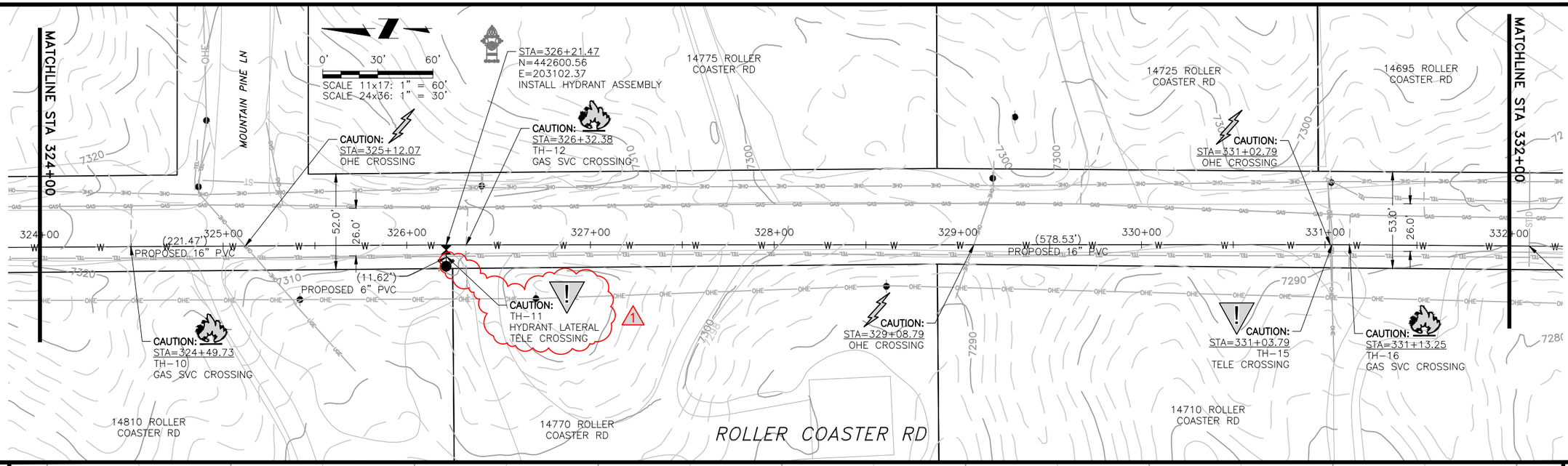
REVISIONS				
NO.	DESCRIPTION	BY	APP.	DATE
1	REVISIONS 1	JLB		10/05/22
2				
3				
4				
5				
6				
7				

70% DESIGN

Project No.:	224.29
Date:	06/03/22
Design:	MLD
Drawn:	SNW
Check:	MLD

A2-03

SHEET ----OF



ALL UTILITIES DEPICTED AT QL B UNLESS NOTED OTHERWISE.

QLB DATA SUMMARY

TH10 – XX" GAS SERVICE LINE
- DEPTH: TBD
- NORTHING: 442772.30
- EASTING: 203101.38

TH11 – TELE (HYD. LATERAL)
- DEPTH: TBD
- NORTHING: 442600.51
- EASTING: 203096.14

TH12 – XX" GAS SERVICE LINE
- DEPTH: TBD
- NORTHING: 442589.65
- EASTING: 203102.44

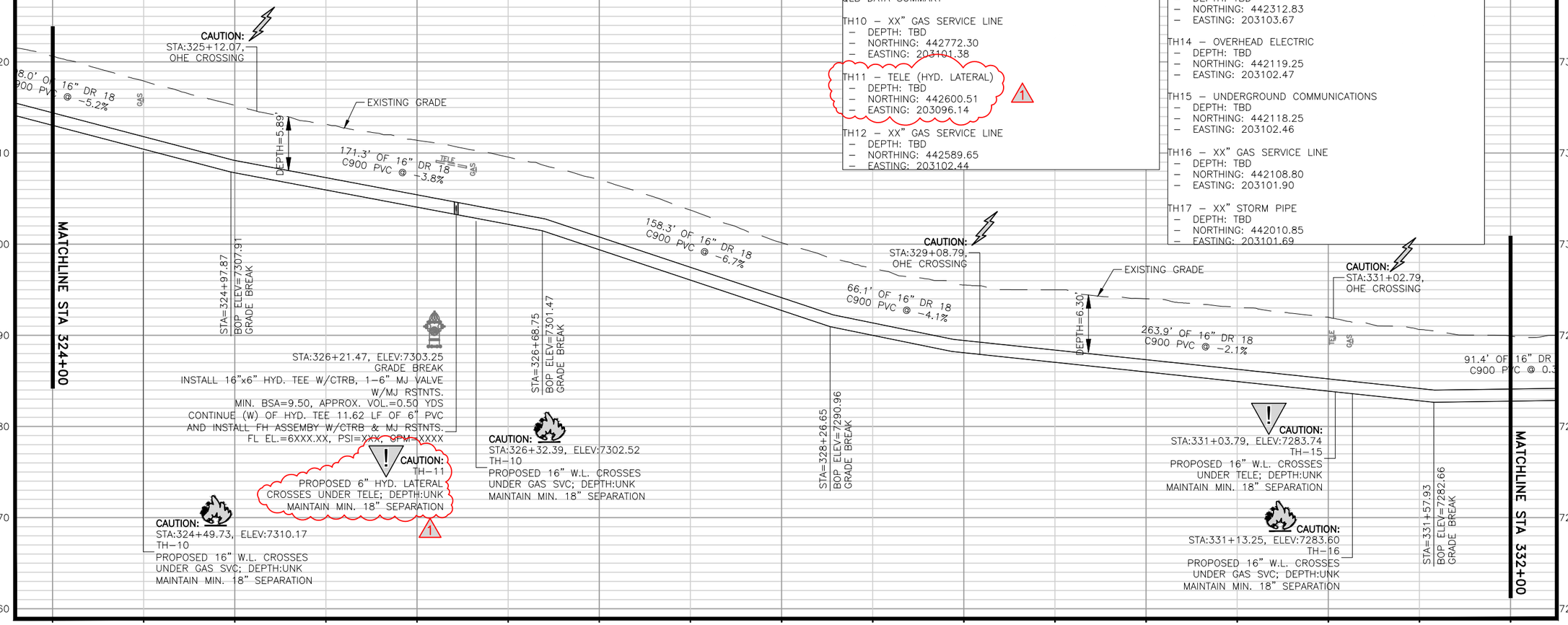
TH13 – OVERHEAD ELECTRIC
- DEPTH: TBD
- NORTHING: 442312.83
- EASTING: 203103.67

TH14 – OVERHEAD ELECTRIC
- DEPTH: TBD
- NORTHING: 442119.25
- EASTING: 203102.47

TH15 – UNDERGROUND COMMUNICATIONS
- DEPTH: TBD
- NORTHING: 442118.25
- EASTING: 203102.46

TH16 – XX" GAS SERVICE LINE
- DEPTH: TBD
- NORTHING: 442108.80
- EASTING: 203101.90

TH17 – XX" STORM PIPE
- DEPTH: TBD
- NORTHING: 442010.85
- EASTING: 203101.69



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TRIVIEW METROPOLITAN DISTRICT

NORTHERN DELIVERY SYSTEM

SEGMENT A2 – PLAN AND PROFILE

STATION 324+00 TO 332+00

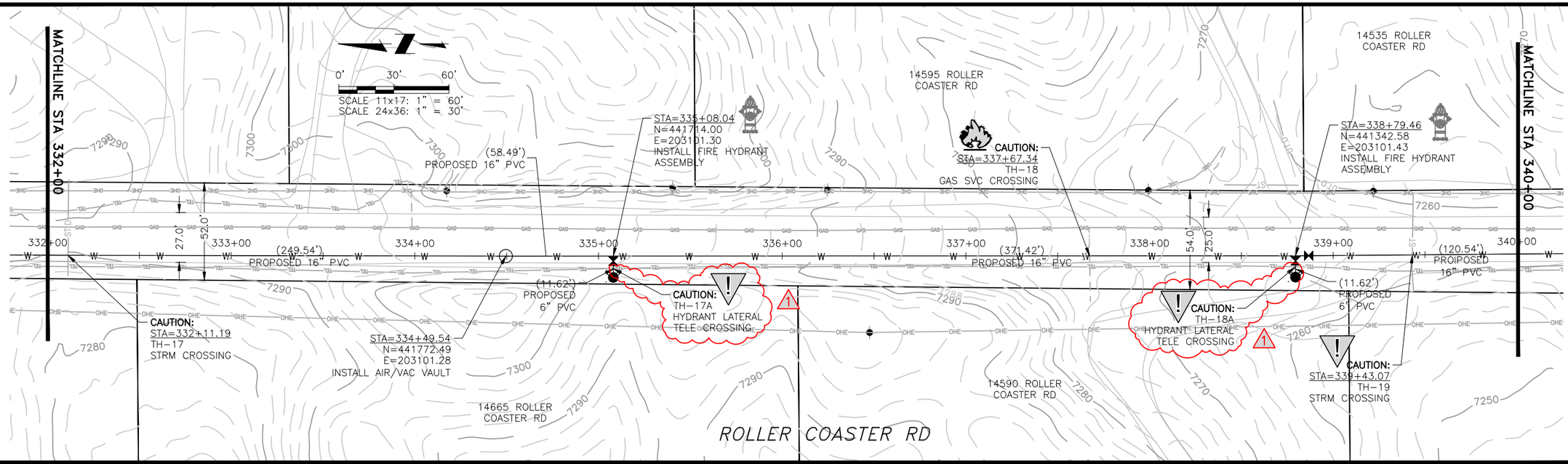
REVISIONS			
NO.	DESCRIPTION	BY	APP.	DATE
1	REVISIONS 1	JLB		10/05/22
2				
3				
4				
5				
6				
7				

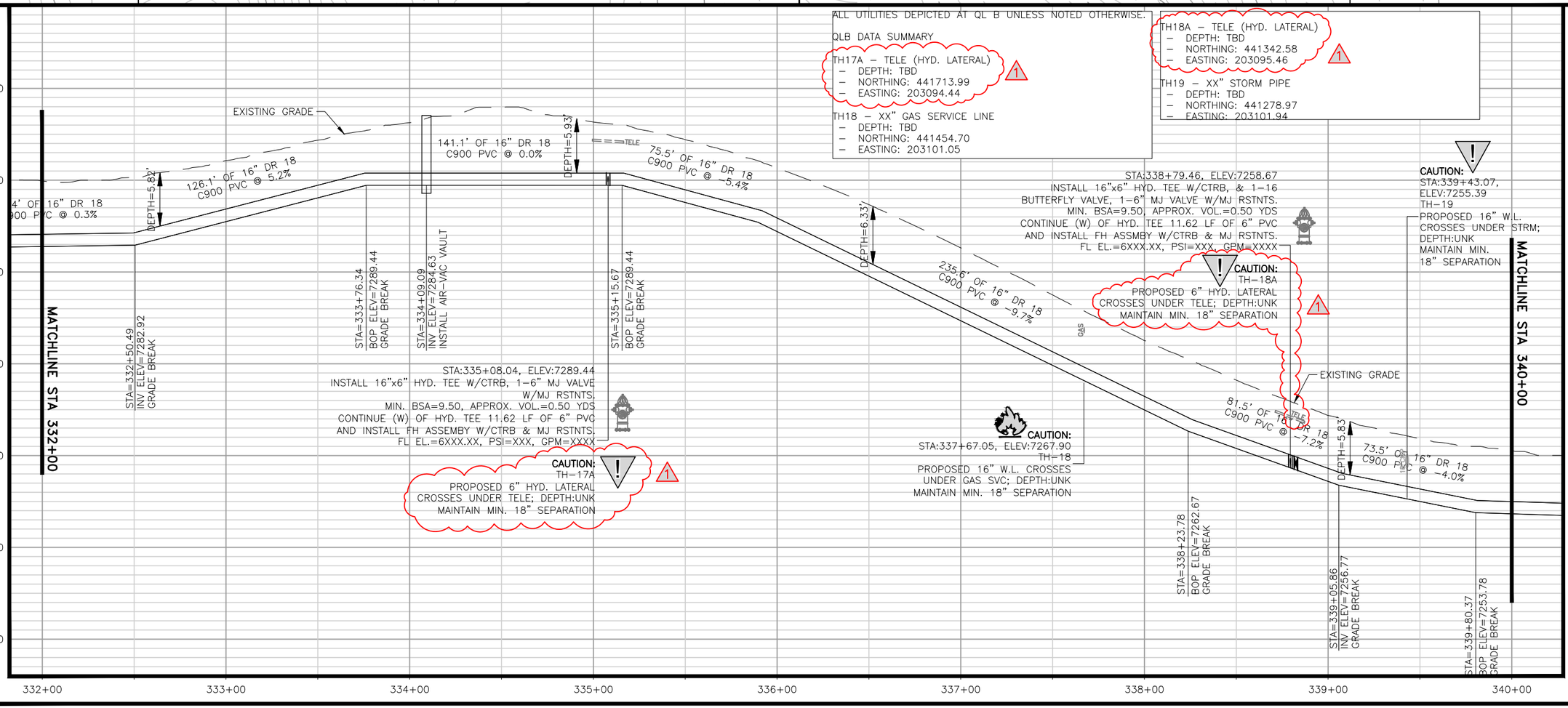
70% DESIGN

Project No.:	224.29
Date:	06/03/22
Design:	MLD
Drawn:	SNW
Check:	MLD

A2-04

SHEET ----OF





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TRIVIEW METROPOLITAN DISTRICT

NORTHERN DELIVERY SYSTEM

SEGMENT A2 – PLAN AND PROFILE

STATION 332+00 TO 340+00

REVISIONS

NO.	DESCRIPTION	BY	APP.	DATE
1	REVISIONS 1	JLB		10/05/22
2				
3				
4				
5				
6				
7				

70% DESIGN

Project No.:	224.29
Date:	06/03/22
Design:	MLD
Drawn:	SNW
Check:	MLD

A2-05

SHEET ----OF

0' 30' 60'
SCALE 11x17: 1" = 60'
SCALE 24x36: 1" = 30'

MATCHLINE STA 340+00

MATCHLINE STA 348+00

14535 ROLLER COASTER RD

14485 ROLLER COASTER RD

14455 ROLLER COASTER RD

14535 ROLLER COASTER RD

14425 TIMBEREDGE LN

14405 TIMBEREDGE LN

ROLLER COASTER RD

ALL UTILITIES DEPICTED AT QL B UNLESS NOTED OTHERWISE.

QLB DATA SUMMARY

TH20 – TELE (HYD. LATERAL)
– NORTHING: 440586.33
– EASTING: 203098.47

1

STA=346+35.74
N=440586.32
E=203107.51
INSTALL HYDRANT ASSEMBLY

CAUTION:
STA=346+36.65
OHE CROSSING

CAUTION:
TH–20
HYDRANT LATERAL
TELE CROSSING

1

59.0'

25.0'

64.00'

23.0'

340+00 341+00 342+00 343+00 344+00 345+00 346+00 347+00 348+00

(635.74')
PROPOSED 16" PVC

(11.62')
PROPOSED 6" PVC

(164.26')
PROPOSED 16" PVC

7280 7270 7260 7250 7240

STA:346+35.74, ELEV:7244.43
INSTALL 16"x6" HYD. TEE W/CTRB, 1–6" MJ VALVE W/MJ RSTNTS.
MIN. BSA=9.50, APPROX. VOL.=0.50 YDS
CONTINUE (W) OF HYD. TEE 11.62 LF OF 6" PVC AND INSTALL FH ASSEMBY W/CTRB & MJ RSTNTS.
FL EL.=6XXX.XX, PSI=XXX, GPM=XXXX

CAUTION:
TH–20
PROPOSED 6" HYD. LATERAL
CROSSES UNDER TELE; DEPTH:UNK
MAINTAIN MIN. 18" SEPARATION

1

CAUTION:
STA:346+36.65,
OHE CROSSING

EXISTING GRADE

DEPTH=5.67'

419.8' OF 16" DR 18
C900 PVC @ –0.6%

158.2' OF 16" DR 18
C900 PVC @ –4.4%

DEPTH=5.55'

44.9' OF 16" DR 18
C900 PVC @ –0.7%

100.7' OF 16" DR 18
C900 PVC @ 1.6%

178.9' OF 16" DR 18
C900 PVC @ 4.3%

BOP ELEV=7253.76
GRADE BREAK

STA=344+00.13
BOP ELEV=7251.12
GRADE BREAK

STA=345+58.22
BOP ELEV=7244.23
GRADE BREAK

STA=346+04.15
INV ELEV=7243.93
GRADE BREAK

STA=347+05.67
BOP ELEV=7245.53
GRADE BREAK

7280 7270 7260 7250 7240 7230 7220 7210

340+00 341+00 342+00 343+00 344+00 345+00 346+00 347+00 348+00

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TRIVIEW METROPOLITAN DISTRICT

NORTHERN DELIVERY SYSTEM

SEGMENT A2 – PLAN AND PROFILE

STATION 340+00 TO 348+00

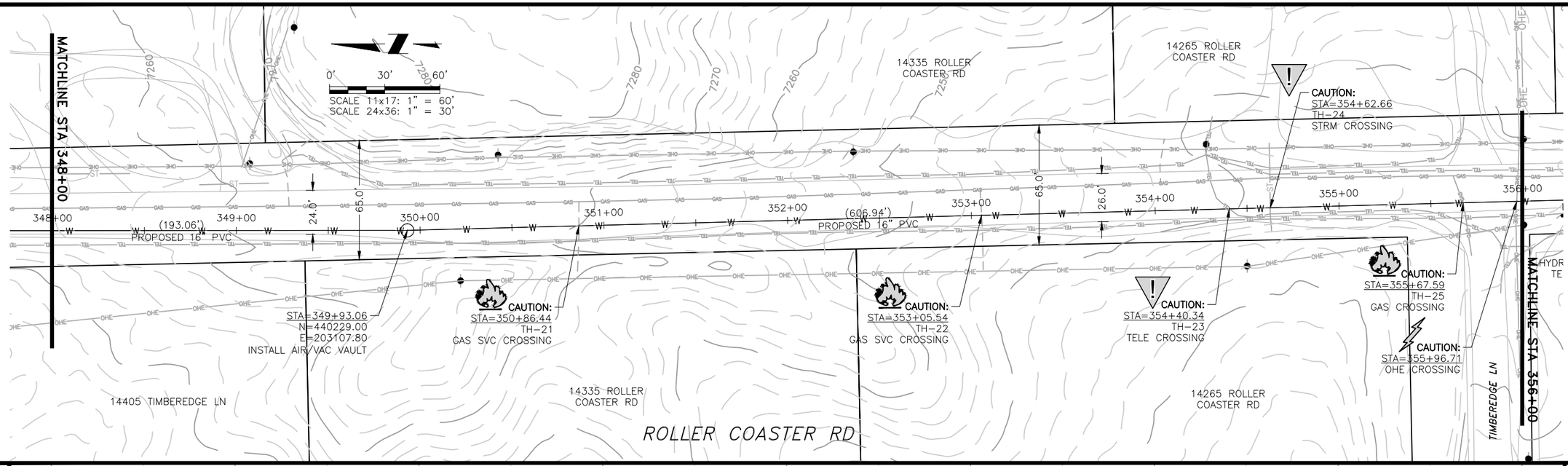
REVISIONS

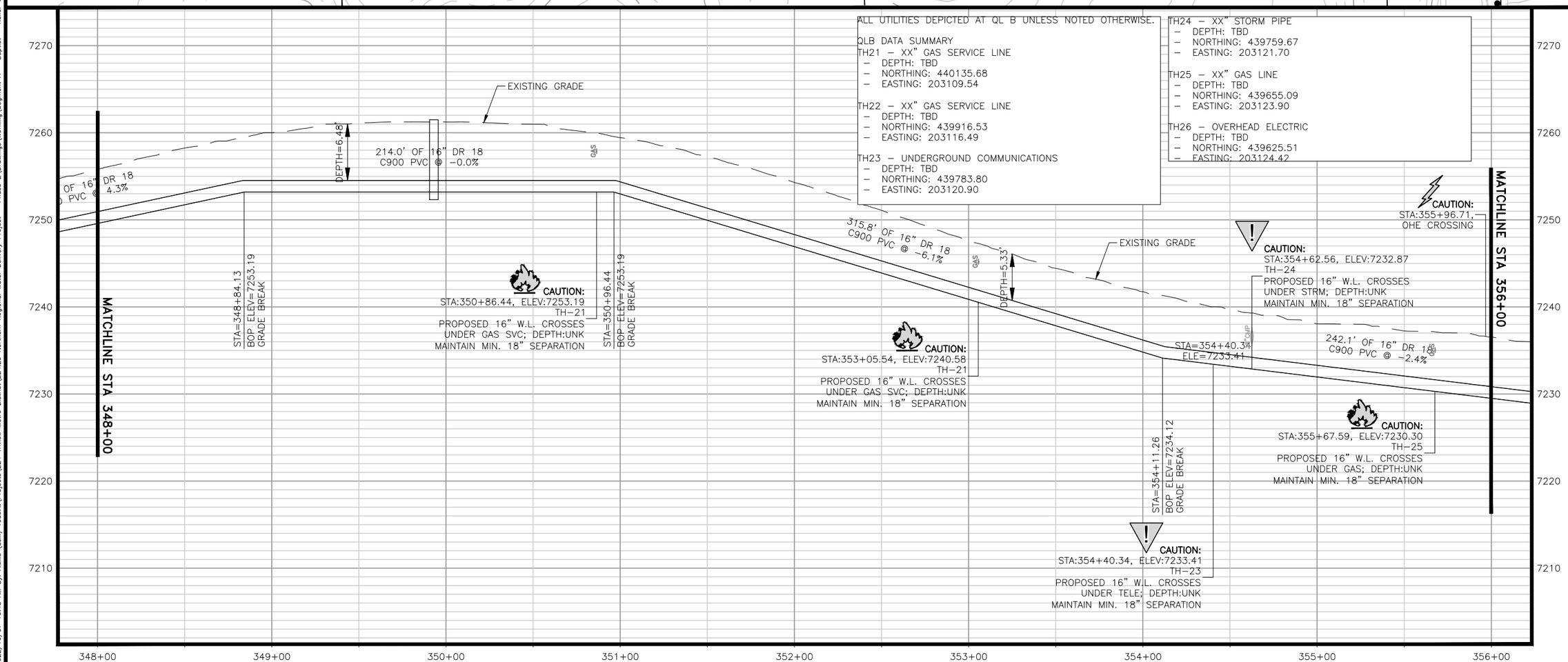
NO.	DESCRIPTION	BY	APP.	DATE
1	REVISIONS 1	JLB		10/05/22
2				
3				
4				
5				
6				
7				

70% DESIGN

Project No.: 224.29
Date: 06/03/22
Design: MLD
Drawn: SNW
Check: MLD

A2–06
SHEET ----OF





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TRIVIEW METROPOLITAN DISTRICT

NORTHERN DELIVERY SYSTEM

SEGMENT A2 – PLAN AND PROFILE

STATION 348+00 TO 356+00

REVISIONS

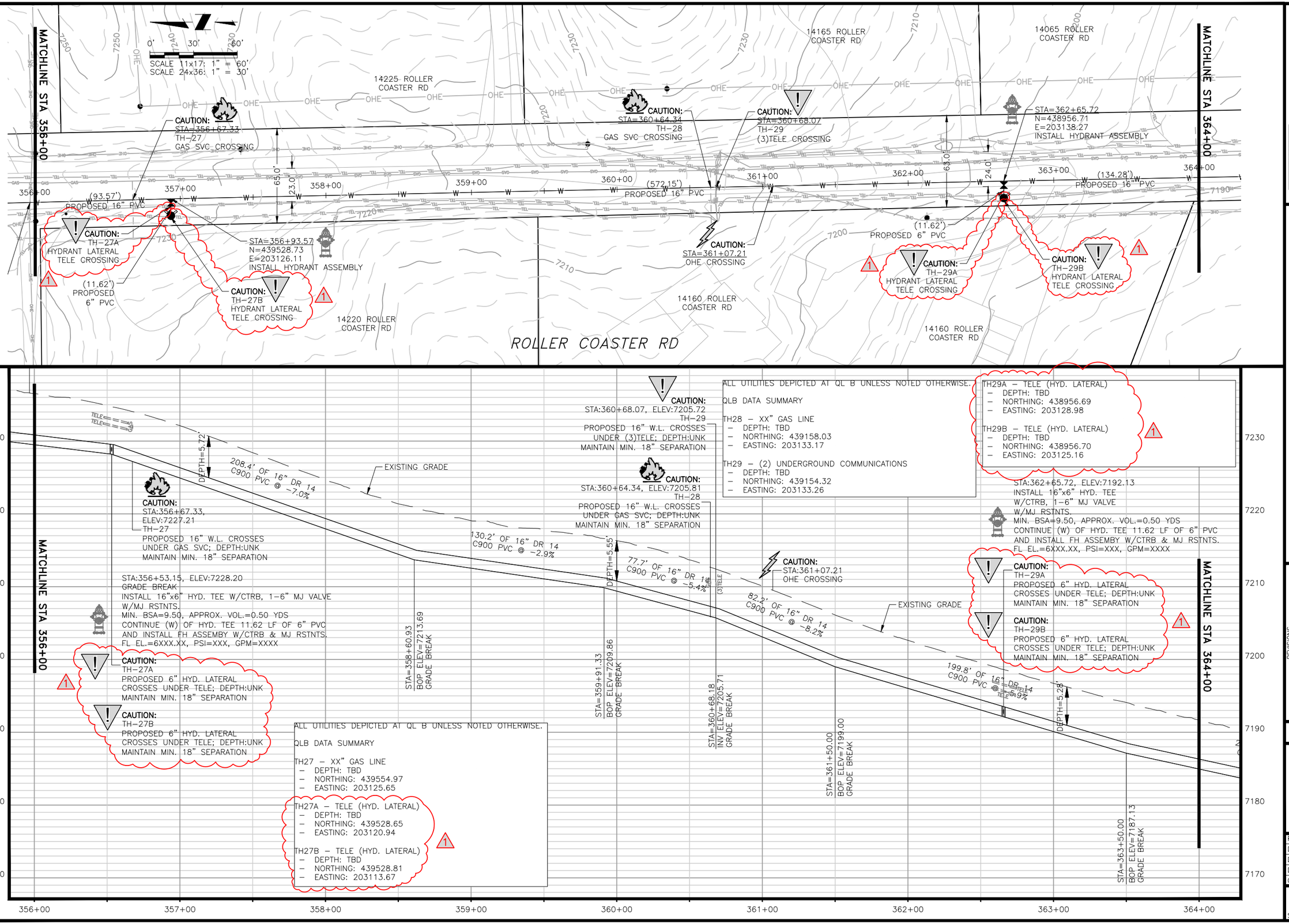
NO.	DESCRIPTION	BY	APP.	DATE
1				
2				
3				
4				
5				
6				
7				

70% DESIGN

Project No.:	224.29
Date:	06/03/22
Design:	MLD
Drawn:	SNW
Check:	MLD

A2–07

SHEET ____OF



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TRIVIEW METROPOLITAN DISTRICT

NORTHERN DELIVERY SYSTEM

SEGMENT A2 - PLAN AND PROFILE

STATION 356+00 TO 364+00

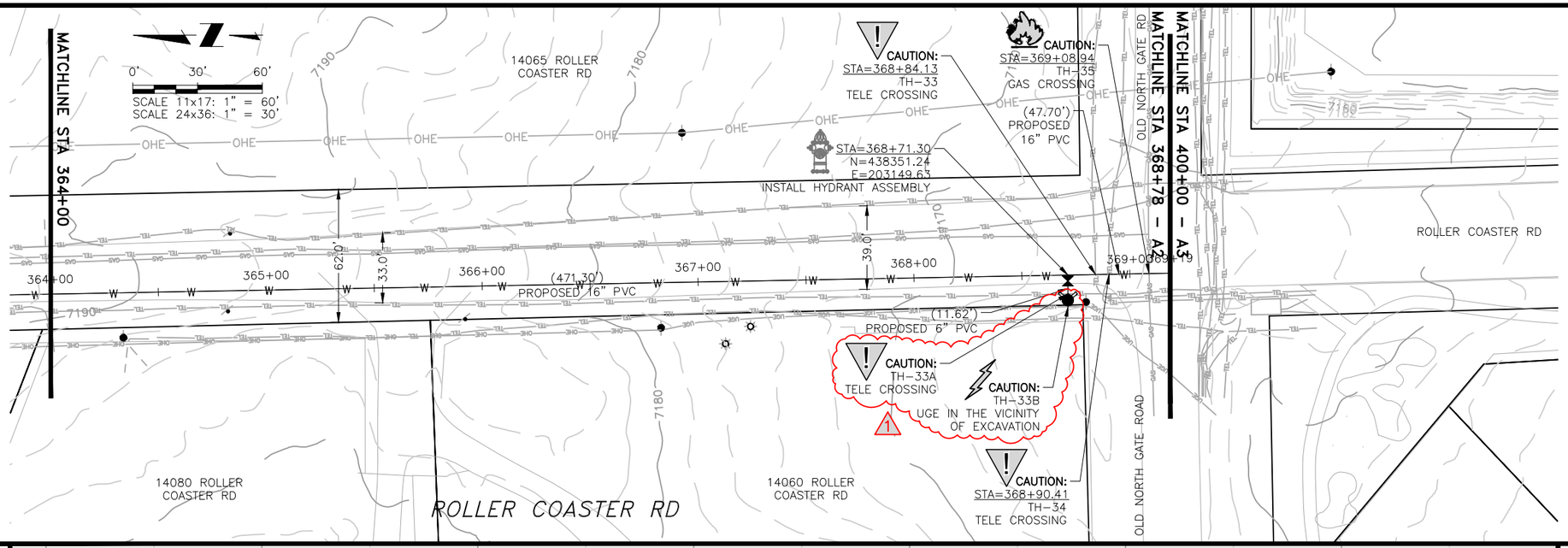
REVISIONS				
NO.	DESCRIPTION	BY	APP.	DATE
1	REVISIONS 1	JLB		10/05/22
2				
3				
4				
5				
6				
7				

70% DESIGN

Project No.:	224.29
Date:	06/03/22
Design:	MLD
Drawn:	SNW
Check:	MLD

A2-08

SHEET ----OF



ALL UTILITIES DEPICTED AT QL B UNLESS NOTED OTHERWISE.

QLB DATA SUMMARY

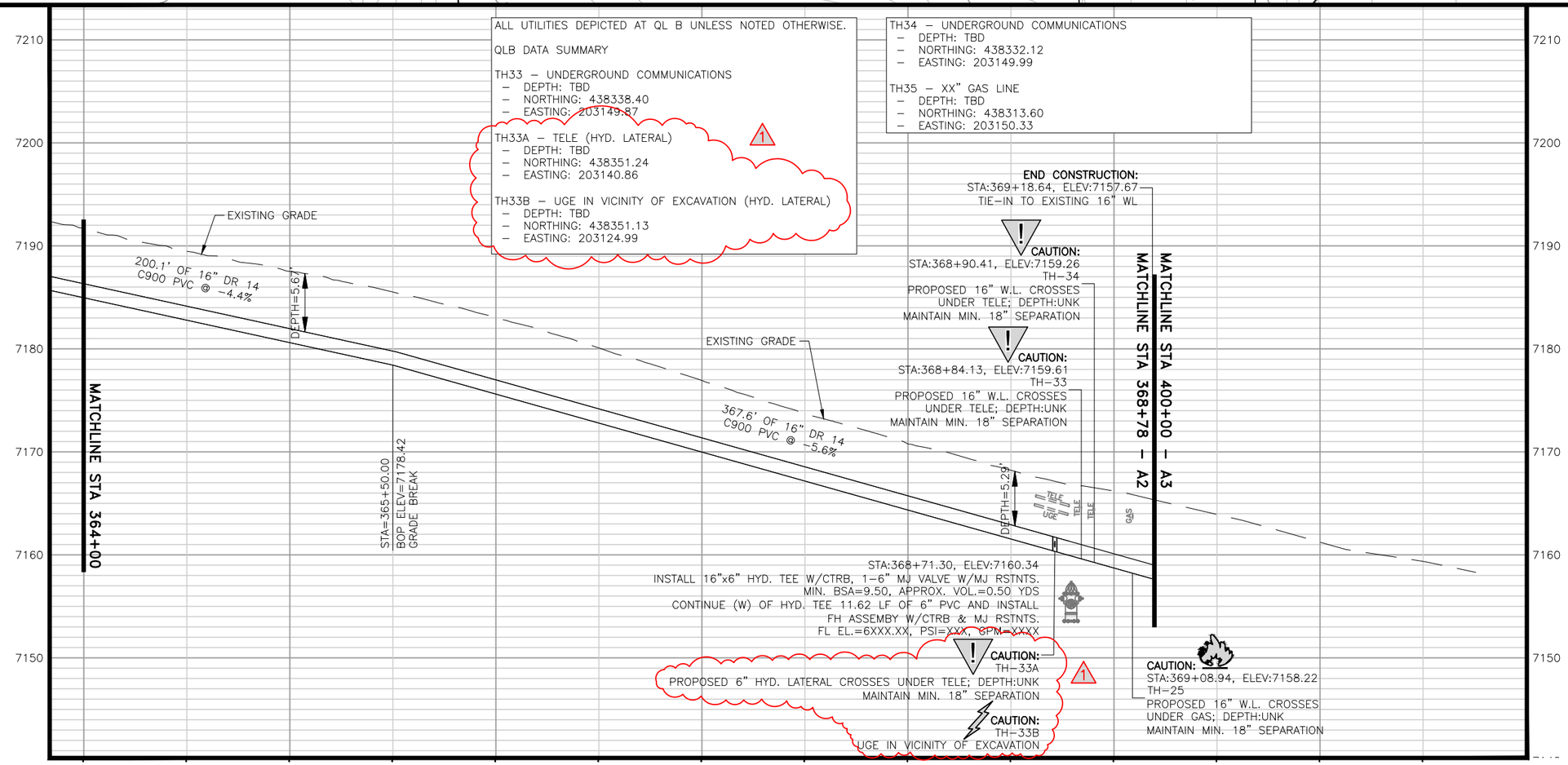
TH33 – UNDERGROUND COMMUNICATIONS
- DEPTH: TBD
- NORTHING: 438338.40
- EASTING: 203149.87

TH33A – TELE (HYD. LATERAL)
- DEPTH: TBD
- NORTHING: 438351.24
- EASTING: 203140.86

TH33B – UGE IN VICINITY OF EXCAVATION (HYD. LATERAL)
- DEPTH: TBD
- NORTHING: 438351.13
- EASTING: 203124.99

TH34 – UNDERGROUND COMMUNICATIONS
- DEPTH: TBD
- NORTHING: 438332.12
- EASTING: 203149.99

TH35 – XX" GAS LINE
- DEPTH: TBD
- NORTHING: 438313.60
- EASTING: 203150.33



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TRIVIEW METROPOLITAN DISTRICT

NORTHERN DELIVERY SYSTEM

SEGMENT A2 – PLAN AND PROFILE

STATION 364+00 TO 368+79

REVISIONS

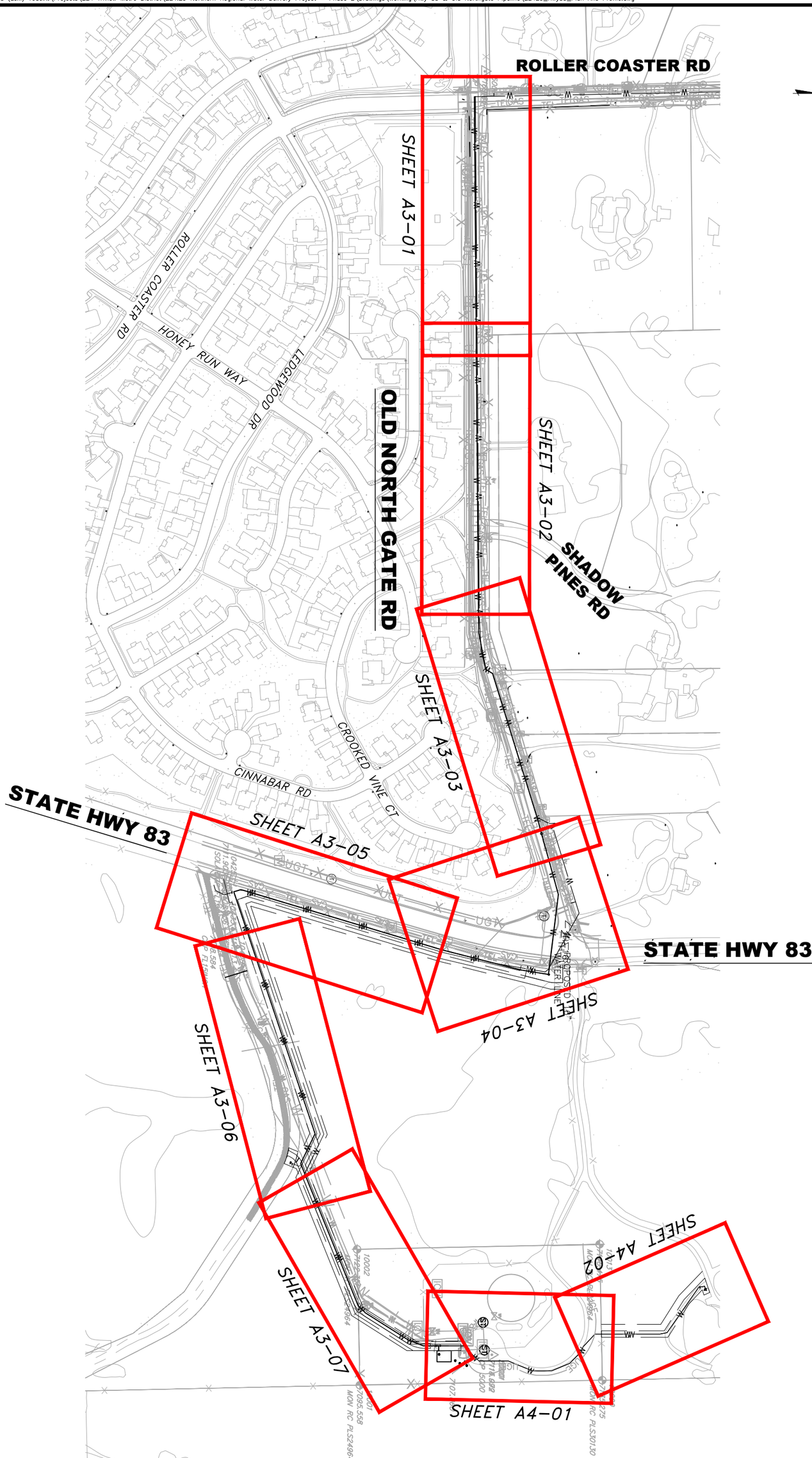
NO.	DESCRIPTION	BY	APP.	DATE
1	REVISIONS 1	JLB		10/05/22
2				
3				
4				
5				
6				
7				

70% DESIGN

Project No.:	224.29
Date:	06/03/22
Design:	MLD
Drawn:	SNW
Check:	MLD

A2-09

SHEET ----OF



SHEET	Project No.: 224.29
----OF	Date: 05/31/22
	Design: GJD
	Drawn: JLB
	Check: MLD

70% DESIGN

REVISIONS

NO.	DESCRIPTION	BY	APP.	DATE
1	----			
2				
3				
4				
5				
6				
7				

TRIVIEW METROPOLITAN DISTRICT

NORTHERN DELIVERY SYSTEM

SEGMENT A3 KEY MAP

JDS-HYDRO a Division of RESPEC
5540 TECH CENTER DR., SUITE 100
COLORADO SPRINGS, COLORADO 80919
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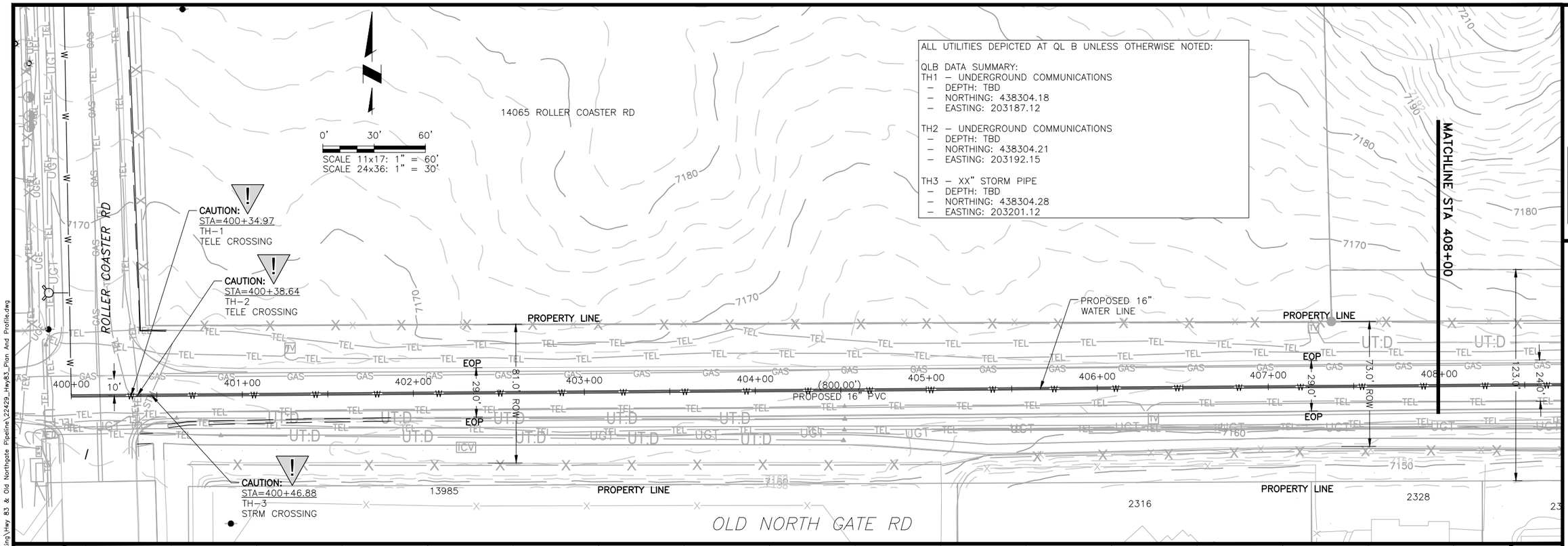

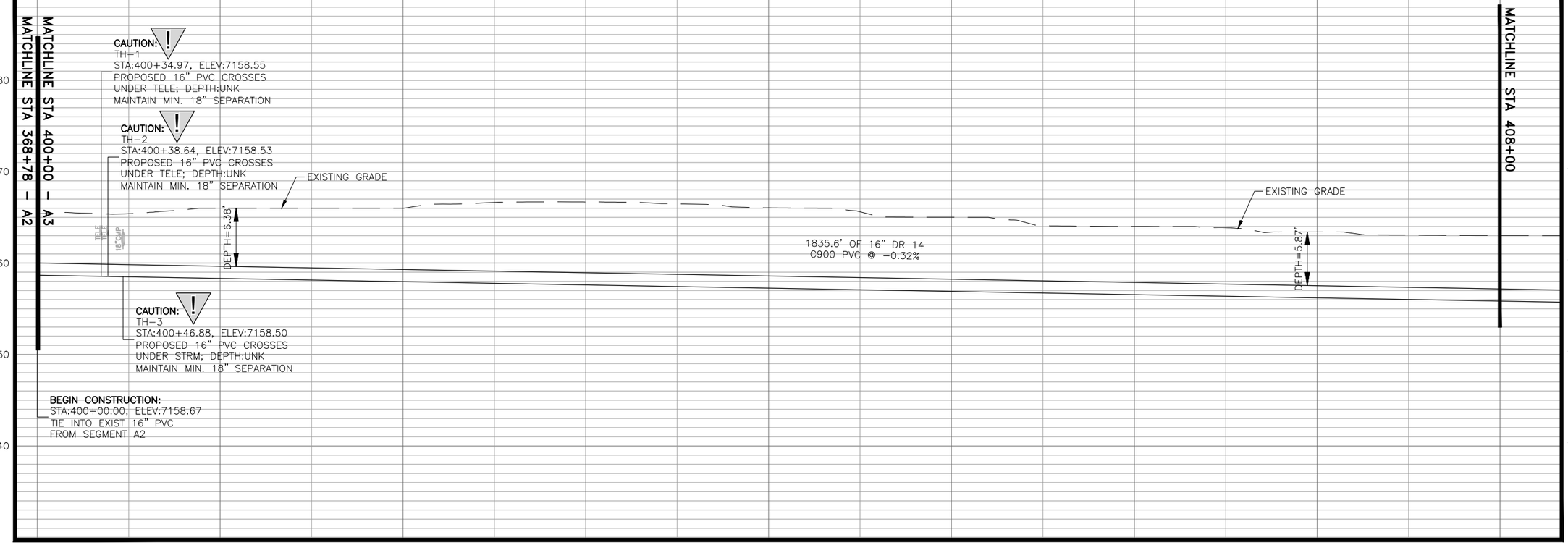

JDS-HYDRO a Division of RESPEC
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TRIVIEW METROPOLITAN DISTRICT

NORTHERN DELIVERY SYSTEM

SEGMENT A3 PLAN AND PROFILE
STATION 400+00 TO 408+00

REVISIONS

NO.	DESCRIPTION	BY	APP.	DATE
1				
2				
3				
4				
5				
6				
7				

70% DESIGN

Project No.:	224.29
Date:	05/31/22
Design:	MLD
Drawn:	SNW
Check:	MLD

A3–01
SHEET ----OF

2022/10/07 10:49 AM By: Alexis (Lexi) Yodet\\Projects\224 Triview Metro District\224.29 Northern Regional Water Delivery Project – Phase 2\Drawings\Working\Vwy 83 & Old Northgate Pipeline\22429_Hwy83_Plan And Profile.dwg

ALL UTILITIES DEPICTED AT QL B UNLESS OTHERWISE NOTED:

QLB DATA SUMMARY:

TH3A – GAS (HYD. LATERAL)
- DEPTH: TBD
- NORTHING: 438304.18
- EASTING: 203187.12

TH3B – TELE (HYD. LATERAL)
- DEPTH: TBD
- NORTHING: 438304.21
- EASTING: 203192.15

0' 30' 60'
SCALE 11x17: 1" = 60'
SCALE 24x36: 1" = 30'

2520 OLD NORTH GATE RD

SHADOW PINES RD

14025 SHADOW PINES RD

MATCHLINE STA 408+00

MATCHLINE STA 416+00

PROPERTY LINE

EOP

(13.79') PROPOSED 6" PVC

CAUTION: TH–3B HYDRANT LATERAL TELE CROSSING

CAUTION: TH–3A HYDRANT LATERAL GAS CROSSING

(254.03') PROPOSED 16" PVC

(545.97') PROPOSED 16" PVC

STA=410+54.03
N=438311.86
E=204204.50
INSTALL HYDRANT ASSEMBLY & 16" BUTTERFLY VALVE

CAUTION: STA=417+14.00 TH–4 TELE CROSSING

OLD NORTH GATE RD

2328 2340 2352 2364 2376 13287

EXISTING GRADE

DEPTH=5.71'

DEPTH=4.97'

DEPTH=5.17'

1835.6' OF 16" DR 14 C900 PVC @ –0.32%

STA:410+53.85, ELEV:7154.94
INSTALL 16"x6" HYD. TEE W/CTRB, & 1–16 BUTTERFLY VALVE, 1–6" MJ VALVE W/MJ RSTNTS.
MIN. BSA=9.50, APPROX. VOL.=0.50 YDS
CONTINUE (N) OF HYD. TEE 20.00 LF OF 6" PVC AND INSTALL FH ASSMBY W/CTRB & MJ RSTNTS.
FL EL.=6XXX.XX, PSI=XXX, GPM=XXXX

CAUTION: TH–3A PROPOSED 6" HYD. LATERAL CROSSES UNDER GAS; DEPTH:UNK MAINTAIN MIN. 18" SEPARATION

CAUTION: TH–3B PROPOSED 6" HYD. LATERAL CROSSES UNDER TELE; DEPTH:UNK MAINTAIN MIN. 18" SEPARATION

408+00 409+00 410+00 411+00 412+00 413+00 414+00 415+00 416+00

7180 7170 7160 7150 7140 7130

JDS-HYDRO a Division of RESPEC
5540 TECH CENTER DR., SUITE 100
COLORADO SPRINGS, COLORADO 80919
(719) 227-0072

TRIVIEW METROPOLITAN DISTRICT

NORTHERN DELIVERY SYSTEM

SEGMENT A3 PLAN AND PROFILE

STATION 408+00 TO 416+00

REVISIONS				
NO.	DESCRIPTION	BY	APP.	DATE
1	REVISIONS 1	JLB		10/05/22
2				
3				
4				
5				
6				
7				

70% DESIGN

Project No.:	224.29
Date:	05/31/22
Design:	MLD
Drawn:	SNW
Check:	MLD

A3–02
SHEET ----OF

2022/10/07 10:49 AM By: Alexis (Lexi) Yodet\Projects\224 Triview Metro District\224.29 Northern Regional Water Delivery Project – Phase 2\Drawings\Working\Hwy 83 & Old Northgate Pipeline\22429_Hwy83_Plan And Profile.dwg

MATCHLINE STA 416+00

MATCHLINE STA 424+00

SCALE 11x17: 1" = 60'
SCALE 24x36: 1" = 30'

14025 SHADOW PINES RD

14025 SHADOW PINES RD

EXISTING FENCE

2660 OLD NORTH GATE RD

OLD NORTH GATE RD

SEE SHEET 4
FOR INFORMATION

CAUTION:
STA=417+14.00
TH-4
TELE CROSSING

CAUTION:
STA=418+78.50
TH-6
(2)TELE CROSSING

CAUTION:
STA=418+51.72
TH-5
STRM CROSSING

CAUTION:
STA=419+96.44
TH-9
TELE CROSSING

CAUTION:
TH-12
HYDRANT LATERAL
TELE CROSSING

CAUTION:
TH-11
HYDRANT LATERAL
GAS CROSSING

CAUTION:
TH-10
HYDRANT LATERAL
(4)TELE CROSSING

STA=417+96.76
N=438360.06
E=204933.26
INSTALL 16"x45° BEND
W/CTRB

STA=422+09.60
N=438481.93
E=205327.69
INSTALL HYDRANT ASSEMBLY

(16.00')
PROPOSED 6" PVC

PROPOSED 16" PVC

STA=423+14.39
N=438511.39
E=205428.25
INSTALL AIR-VAC VAULT

STA=416+56.08
N=438316.98
E=204806.54
INSTALL 16"x11.25° BEND
W/CTRB

STA=417+72.51
N=438339.24
E=204920.82
INSTALL 16"x45° BEND
W/CTRB

CAUTION:
STA=419+19.48
TH-7
UGE CROSSING

CAUTION:
STA=419+60.73
TH-8
UGE CROSSING

UGE BY OTHERS
DESIGN AND LOCATION
PER MVEA

UGE BY OTHERS
DESIGN AND LOCATION
PER MVEA

ALL UTILITIES DEPICTED AT QL B UNLESS OTHERWISE NOTED:

QLB DATA SUMMARY:
TH4 – UNDERGROUND COMMUNICATIONS
- DEPTH: TBD
- NORTHING: 438325.63
- EASTING: 204866.82

TH5 – XX" STORM LINE
- DEPTH: TBD
- NORTHING: 438378.11
- EASTING: 204991.68

TH6 – (2) UNDERGROUND COMMUNICATION
- DEPTH: TBD
- NORTHING: 438385.00
- EASTING: 205013.99

TH7 – UNDERGROUND ELECTRIC
- DEPTH: TBD
- NORTHING: 438397.15
- EASTING: 205053.29

TH8 – UNDERGROUND COMMUNICATION
- DEPTH: TBD
- NORTHING: 438411.46
- EASTING: 205099.63

TH9 – UNDERGROUND COMMUNICATION
- DEPTH: TBD
- NORTHING: 438420.22
- EASTING: 205127.98

TH10 – (4) UNDERGROUND COMMUNICATION (HYD. LATERAL)
- DEPTH: TBD
- NORTHING: 438503.78
- EASTING: 205381.18

TH11 – XX" GAS LINE
- DEPTH: TBD
- NORTHING: 438510.33
- EASTING: 205384.53

TH12 – TELE (HYD. LATERAL)
- DEPTH: TBD
- NORTHING: 438517.18
- EASTING: 205388.03

EXISTING GRADE

CAUTION:
STA:417+14.00, ELEV:7152.60
TH-4
PROPOSED 16" PVC CROSSES
UNDER TELE; DEPTH:UNK
MAINTAIN MIN. 18" SEPARATION

1835.6' OF 16" DR 14
C900 PVC @ -0.32%

DEPTH=5.85'

STA:416+56.08, ELEV:7152.81
INSTALL 16"x11.25° BEND W/CTRB
& MJ RSTNTS.
MIN. BSA=8.00, APPROX. VOL.=0.50 YDS

STA:417+72.51, ELEV:7152.40
INSTALL 16"x45° BEND W/CTRB
& MJ RSTNTS.
MIN. BSA=31.00, APPROX. VOL.=1.75 YDS

STA:417+96.76, ELEV:7152.31
INSTALL 16"x45° BEND W/CTRB
& MJ RSTNTS.
MIN. BSA=31.00, APPROX. VOL.=1.75 YDS

STA:418+36.21, ELEV:7152.17
GRADE BREAK – VERTICAL

CAUTION:
STA:418+51.72, ELEV:7152.60
TH-5
PROPOSED 16" PVC CROSSES
UNDER STRM; DEPTH:UNK
MAINTAIN MIN. 18" SEPARATION

CAUTION:
STA:419+60.73, ELEV:7155.63
TH-8
PROPOSED 16" PVC CROSSES
UNDER UGE; DEPTH:UNK
MAINTAIN MIN. 18" SEPARATION

425.5' OF 16" DR 14
C900 PVC @ 2.8%

CAUTION:
STA:419+96.44, ELEV:7156.63
TH-9
PROPOSED 16" PVC CROSSES
UNDER TELE; DEPTH:UNK
MAINTAIN MIN. 18" SEPARATION

CAUTION:
STA:419+19.48, ELEV:7154.49
TH-7
PROPOSED 16" PVC CROSSES
UNDER UGE; DEPTH:UNK
MAINTAIN MIN. 18" SEPARATION

CAUTION:
STA:418+78.50, ELEV:7153.35
TH-6
PROPOSED 16" PVC CROSSES
UNDER (2)TELE; DEPTH:UNK
MAINTAIN MIN. 18" SEPARATION

STA:421+92.32, ELEV:7162.08
GRADE BREAK – VERTICAL

DEPTH=5.74'

STA:422+09.60, ELEV:7162.56
INSTALL 16"x6" HYD. TEE W/CTRB, 1-6" MJ VALVE
W/MJ RSTNTS.
MIN. BSA=9.50, APPROX. VOL.=0.50 YDS
CONTINUE (N) OF HYD. TEE 16.00 LF OF 6" PVC
AND INSTALL FH ASSMBY W/CTRB & MJ RSTNTS.
FL EL.=6XXX.XX, PSI=XXX, GPM=XXXX

STA:423+67.40, ELEV:7164.00
GRADE BREAK – VERTICAL

106.7' OF 16" DR 14
C900 PVC @ -0.0%

STA:423+14.39,
ELEV:7164.00
INSTALL AIR-VAC VAULT

CAUTION:
TH-10
PROPOSED 6" HYD. LATERAL
CROSSES UNDER (4)TELE; DEPTH:UNK
MAINTAIN MIN. 18" SEPARATION

CAUTION:
TH-11
PROPOSED 6" HYD. LATERAL
CROSSES UNDER GAS; DEPTH:UNK
MAINTAIN MIN. 18" SEPARATION

CAUTION:
TH-12
PROPOSED 6" HYD. LATERAL
CROSSES UNDER TELE; DEPTH:UNK
MAINTAIN MIN. 18" SEPARATION

PROPOSED
SEE SHEET 4
FOR INFORMATION

416+00 417+00 418+00 419+00 420+00 421+00 422+00 423+00 424+00

7190 7180 7170 7160 7150 7140

JDS-HYDRO a Division of RESPEC
5540 TECH CENTER DR., SUITE 100
COLORADO SPRINGS, COLORADO 80919
(719) 227-0072

TRIVIEW METROPOLITAN DISTRICT
NORTHERN DELIVERY SYSTEM
SEGMENT A3 PLAN AND PROFILE
STATION 416+00 TO 424+00

REVISIONS				
NO.	DESCRIPTION	BY	APP.	DATE
1	added AV vault	JLB		10/05/22
2				
3				
4				
5				
6				
7				

70% DESIGN

Project No.: 224.29
Date: 05/31/22
Design: MLD
Drawn: SNW
Check: MLD

A3-03
SHEET ---OF

SCALE 11x17: 1" = 60'
SCALE 24x36: 1" = 30'
0' 30' 60'

FIRE HYDRANT LOCATION
N: 438559.91, E: 205867.54

CAUTION:
TH-21A
GAS SVC LINE IN THE VICINITY OF EXCAVATION

(25.00')
PROPOSED 6" PVC

STA=427+58.35
N=438532.75, E=205863.24
INSTALL 16"x16" TEE W/CTRB, 16" BUTTERFLY VALVE AND 16"x6" REDUCER (N)

STA=427+45.91
N=438534.28, E=205850.90
END 30" STEEL CASING

CAUTION:
STA=427+39.39
TH-21
GAS SVC CROSSING

EXISTING FENCE
CONTRACTOR TO REPLACE

14065 HWY 85

(85.72')
PROPOSED 16" PVC

PROPOSED 16"
WATER LINE

CAUTION:
STA=427+29.66
TH-20
TELE CROSSING

TH-17

CAUTION:
STA=426+30.58
TH-18
TELE CROSSING

TH-16

CAUTION:
STA=427+26.62
TH-19
TELE CROSSING

STA=428+44.07
N=438448.13, E=205849.50
INSTALL 16"x11.25° BEND W/CTRB

(248.98')
PROPOSED 16" PVC

(211.11')
PROPOSED 30" STEEL CASING

2750 OLD NORTH GATE RD

PROPOSED 20'
MVEA EASEMENT

(251.31')
PROPOSED 16" PVC

PROPOSED 30'
UTILITY EASEMENT

STA=425+34.80
N=438560.28, E=205641.40
BEGIN 30" STEEL CASING

CAUTION:
STA=425+72.51
TH-17
STRM CROSSING

STA=425+09.37
N=438563.42, E=205616.15
INSTALL 16x22.5° BEND W/CTRB

CAUTION:
STA=425+57.24
TH-16
STRM CROSSING

CAUTION:
STA=424+97.77
TH-15
GAS CROSSING

UGE BY OTHERS
DESIGN AND LOCATION
PER MVEA

(109.37')
PROPOSED 16" PVC

HWY 83

STA=430+95.38
N=438204.60, E=205787.44
2° HORIZ. DEFLEC.

MATCHLINE STA 424+00

OLD NORTH GATE RD

MATCHLINE STA 431+00

(4.62')
PROPOSED 16" PVC

UGE BY OTHERS.
DESIGN AND LOCATION
PER MVEA

ALL UTILITIES DEPICTED AT QL B UNLESS OTHERWISE NOTED:

QLB DATA SUMMARY:
TH15 – XX" GAS LINE
- DEPTH: TBD
- NORTHING: 438560.32
- EASTING: 205604.98

TH16 – XX" STORM PIPE
- DEPTH: TBD
- NORTHING: 438557.52
- EASTING: 205663.66

TH17 – XX" STORM PIPE
- DEPTH: TBD
- NORTHING: 438555.64
- EASTING: 205678.81

TH18 – UNDERGROUND COMMUNICATIONS
- DEPTH: TBD
- NORTHING: 438548.49
- EASTING: 205736.44

TH19 – UNDERGROUND COMMUNICATIONS
- DEPTH: TBD
- NORTHING: 438536.66
- EASTING: 205831.76

TH20 – UNDERGROUND COMMUNICATIONS
- DEPTH: TBD
- NORTHING: 438536.27
- EASTING: 205834.77

TH21 – XX" GAS SERVICE LINE
- DEPTH: TBD
- NORTHING: 438534.50
- EASTING: 205849.11

TH21A – XX" GAS SERVICE LINE (HYDRANT)
- DEPTH: TBD
- NORTHING: 438559.91
- EASTING: 205867.54

JDS-HYDRO a Division of RESPEC
5540 TECH CENTER DR., SUITE 100
COLORADO SPRINGS, COLORADO 80919
(719) 227-0072

TRIVIEW METROPOLITAN DISTRICT

NORTHERN DELIVERY SYSTEM

SEGMENT A3 PLAN AND PROFILE

STATION 424+00 TO 431+00

REVISIONS			
NO.	DESCRIPTION	BY	APP.	DATE
1	REVISIONS 1	JLB		10/05/22
2				
3				
4				
5				
6				
7				

70% DESIGN

Project No.:	224.29
Date:	05/31/22
Design:	MLD
Drawn:	SNW
Check:	MLD

A3-04
SHEET ----OF

CAUTION:
STA:425+72.51, ELEV:7160.76
TH-17
PROPOSED 16" PVC CROSSES UNDER STRM; DEPTH:UNK
MAINTAIN MIN. 18" SEPARATION

STA:425+34.81, ELEV:7161.36
BEGIN 30" STEEL CASING

DEPTH=8.18'

EXISTING GRADE

STA:427+45.91, ELEV:7158.03
END 30" STEEL CASING

STA:427+58.35, ELEV:7157.83
INSTALL 16"x16" HYD. TEE W/CTRB, & 1-16" BUTTERFLY VALVE, 16"x6" LEB RED., 1-6" MJ VALVE W/MJ RSTNTS.
MIN. BSA=59.50, APPROX. VOL.=6.50 YDS
CONTINUE (N) OF HYD. TEE 25 LF OF 6" PVC AND INSTALL FH ASSMBY W/CTRB & MJ RSTNTS.
FL EL.=6XXX.XX, PSI=XXX, GPM=XXXX

DEPTH=10.42'

541.6' OF 16" DR 14 C900 PVC @ -1.6%

PROPOSED 30" STEEL CASING @ -1.6%

CAUTION:
STA:424+97.77, ELEV:7161.94
TH-15
PROPOSED 16" PVC CROSSES UNDER GAS; DEPTH:UNK
MAINTAIN MIN. 18" SEPARATION

CAUTION:
STA:426+30.58, ELEV:7159.85
TH-18
PROPOSED 16" PVC CROSSES UNDER TELE; DEPTH:UNK
MAINTAIN MIN. 18" SEPARATION

CAUTION:
STA:427+29.66, ELEV:7158.29
TH-20
PROPOSED 16" PVC CROSSES UNDER TELE; DEPTH:UNK
MAINTAIN MIN. 18" SEPARATION

STA:429+07.78, ELEV:7155.48
GRADE BREAK - VERTICAL

178.8' OF 16" DR 14 C900 PVC @ -6.9%

DEPTH=4.98'

STA:430+85.75, ELEV:7143.17
GRADE BREAK - VERTICAL

SEE SHEET 3
FOR INFORMATION

SEE SHEET 5
FOR INFORMATION

MATCHLINE STA 424+00

MATCHLINE STA 431+00

STA:425+09.37, ELEV:7161.76
INSTALL 16"x22.5° BEND W/CTRB & MJ RSTNTS.
MIN. BSA=16.00,
APPROX. VOL.=0.75 YDS

CAUTION:
STA:425+57.59, ELEV:7161.00
TH-16
PROPOSED 16" PVC CROSSES UNDER STRM; DEPTH:UNK
MAINTAIN MIN. 18" SEPARATION

CAUTION:
STA:427+26.62, ELEV:7158.33
TH-19
PROPOSED 16" PVC CROSSES UNDER TELE; DEPTH:UNK
MAINTAIN MIN. 18" SEPARATION

7180
7170
7160
7150
7140

424+00 425+00 426+00 427+00 428+00 429+00 430+00 431+00

SCALE 11x17: 1" = 60'
SCALE 24x36: 1" = 30'

ALL UTILITIES DEPICTED AT QL B UNLESS OTHERWISE NOTED:

QLB DATA SUMMARY:

TH21B – XX" GAS SVC LINE (HYD. LATERAL)
- DEPTH: TBD
- NORTHING: 437524.85
- EASTING: 205614.47

H21C – XX" WAT (HYD. LATERAL)
- DEPTH: TBD
- NORTHING: 437517.40
- EASTING: 205610.59

14065 HWY 83

MATCHLINE STA 431+00

MATCHLINE STA 439+00

UGE BY OTHERS. DESIGN AND LOCATION PER MVEA

20' MVEA EASEMENT

PROPOSED 30' UTILITY EASEMENT

(638.00') PROPOSED 16" PVC

(132.08') PROPOSED 16" PVC

STA=437+67.92
N=437560.04, E=205607.96
INSTALL 16" TEE W/CTRB
(1) HYDRANT ASSEMBLY
(2) 16" BUTTERFLY VALVES
(1) 16"x8" REDUCER

STA=422+
TH-21B
HYDRANT LATERAL
GAS SVC LINE CROSSING

STA=421+
TH-21B
HYDRANT LATERAL
GAS SVC LINE CROSSING

16"x6" REDUCER

(30.38') PROPOSED 6" PVC

(31.19') PROPOSED 6" PVC

FIRE HYDRANT LOCATION
N: 437493.88
E: 205573.68

STA=437+38.38
N=437588.65, E=205602.93
INSTALL 11.25° BEND W/CTRB

(19.72') PROPOSED 16" PVC

INSTALL 6"x45° BEND W/CTRB
N=437503.50
E=205603.35

(9.83') PRPOSED 16" PVC

STA=437+48.20
N=437578.86, E=205602.06
INSTALL 22.5° BEND W/CTRB

INSTALL 6"x45° BEND W/CTRB
N=437530.44, E=205617.39

(31.04') PROPOSED 6" PVC

(4.62') PROPOSED 16" PVC

STA=430+95.38
.60, E=205787.44
2° HORIZ. DEFLEC.

SEE SHEET 4 FOR INFORMATION

HWY 83 RIGHT-OF-WAY

7150 7140 7130 7120 7110 7100 7090

EXISTING GRADE

214.3' OF 16" DR 14 C900 PVC @ -3.9%

DEPTH=5.64'

STA:433+00.01, ELEV:7134.72
GRADE BREAK – VERTICAL

455.4' OF 16" DR 14 C900 PVC @ -6.4%

DEPTH=5.85'

STA:437+38.38, ELEV:7106.74
INSTALL 16"x11.25° BEND W/CTRB & MJ RSTNTS.
MIN. BSA=11.75, APPROX. VOL.=0.50 YDS

STA:437+48.20, ELEV:7106.12
INSTALL 16"x22.5° BEND W/CTRB & MJ RSTNTS.
MIN. BSA=13.50, APPROX. VOL.=0.50 YDS

STA:437+55.26, ELEV:7105.67
GRADE BREAK – VERTICAL

143.2' OF 16" DR 14 C900 PVC @ 0.7%

STA:437+67.93, ELEV:7105.75
INSTALL 16"x16" HYD. TEE W/CTRB, & 2-16" BUTTERFLY VALVES, 16"x6" LEB RED., 1-6" MJ VALVE W/MJ RSTNTS.
MIN. BSA=59.50, APPROX. VOL.=6.50 YDS
CONTINUE (S) OF HYD. TEE 31.04 LF OF 6" PVC AND INSTALL 6"x45° BEND W/CTRB & MJ RSTNTS.
MIN. BSA=7.25, APPROX. VOL.=0.25YDS
CONTINUE (SW) OF BEND 30.38 LF OF 6" PVC AND INSTALL 6"x45° BEND W/CTRB & MJ RSTNTS.
MIN. BSA=7.25, APPROX. VOL.=0.25YDS
CONTINUE (SW) OF BEND 31.19 LF OF 6" PVC AND INSTALL FH ASSMBY W/CTRB & MJ RSTNTS.
FL EL.=XXXX.XX, PSI=XXX, GPM=XXXX

CAUTION: TH-21B
PROPOSED 6" HYD. LATERAL CROSSES UNDER GAS SVC; DEPTH:UNK
MAINTAIN MIN. 18" SEPARATION

CAUTION: TH-21C
PROPOSED 6" HYD. LATERAL CROSSES UNDER WAT; DEPTH:UNK
MAINTAIN MIN. 18" SEPARATION

EXISTING GRADE

SEE SHEET 6 FOR INFORMATION

431+00 432+00 433+00 434+00 435+00 436+00 437+00 438+00 439+00

JDS-HYDRO a Division of RESPEC
5540 TECH CENTER DR., SUITE 100
COLORADO SPRINGS, COLORADO 80919
(719) 227-0072

TRIVIEW METROPOLITAN DISTRICT

NORTHERN DELIVERY SYSTEM

SEGMENT A3 PLAN AND PROFILE
STATION 431+00 TO 439+00

REVISIONS				
NO.	DESCRIPTION	BY	APP.	DATE
1	REVISIONS 1	JLB		10/05/22
2				
3				
4				
5				
6				
7				

70% DESIGN

Project No.: 224.29
Date: 05/31/22
Design: MLD
Drawn: SNW
Check: MLD

A3-05
SHEET ---OF

N:\Projects\224 Triview Metro District\224.29 Northern Regional Water Delivery Project – Phase 2\Drawings\Working\Hwy 83 & Old Northgate Pipeline\224.29_Hwy83_Plan And Profile.dwg
2022/10/14 2:49 PM By: Jeffrey Bray

ALL UTILITIES DEPICTED AT QL B UNLESS OTHERWISE NOTED:

QLB DATA SUMMARY:
TH22 – XX" CSU WATER LINE
- DEPTH: TBD
- NORTHING: 437791.67
- EASTING: 206396.21

TH23 – XX" CSU WATER LINE
- DEPTH: TBD
- NORTHING: 437785.68
- EASTING: 206408.64

SCALE 11x17: 1" = 60'
SCALE 24x36: 1" = 30'

14065 HWY 83

SEE SHEET 5 FOR INFORMATION

STA=437+67.92
N=437560.04, E=205607.96
INSTALL 16"x6" TEE W/CTRB
(1) PROPOSED 6" PVC
(2) 16" BUTTERFLY VALVES

UGE BY OTHERS. DESIGN AND LOCATION PER MVEA

(359.52') PROPOSED 16" PVC

PROPOSED 30' UTILITY EASEMENT

20' MVEA EASEMENT

STA=442+59.52
N=437716.66
E=206073.94
INSTALL AIR-VAC VAULT

AUTOMATIC GATE

(297.06') PROPOSED 16" PVC

CSU PIPELINE EASEMENT

STA=445+56.58
N=437811.30, E=206355.52
INSTALL 45° BEND W/CTRB

(102.52') PROPOSED 16" PVC

CAUTION:
STA=446+01.76
TH-22
CSU WAT CROSSING

(102.52') PROPOSED 16" PVC

INSTALL GATE

PROPOSED ACCESS ROAD

5' STUB W/ PLUG AND 2" BLOWOFF ASSEBLY

(8.71') PROPOSED 6" PVC

INSTALL 6"x45° BEND W/CTRB
N=437760.57, E=206455.76

(27.58') PROPOSED 6" PVC

(35.90') PROPOSED 16" PVC

STA=446+64.10
N=437768.64, E=206452.49
INSTALL 16"x6" HYD. TEE W/CTRB & 16" BUTTERFLY VALVE

(5.00') PROPOSED 16" PVC

STA=446+59.10
N=437766.76, E=206447.86
INSTALL 45° BEND W/CTRB

CAUTION:
STA=446+15.55
TH-23
CSU WAT CROSSING

MATCHLINE STA 439+00

MATCHLINE STA 447+00

STA=421+95.14
TH-21B

SEE SHEET 5 FOR INFORMATION

STA:446+59.10, ELEV:7106.35
INSTALL 16"x45° BEND W/CTRB & MJ RSTNTS.
MIN. BSA=31.00, APPROX. VOL.=1.75 YDS

CAUTION:
STA:446+01.76, ELEV:7108.34
TH-22
PROPOSED 16" PVC CROSSES UNDER CSU WAT; DEPTH:UNK
MAINTAIN MIN. 18" SEPARATION

STA:445+63.64, ELEV:7109.67
GRADE BREAK – VERTICAL

EXISTING GRADE

185.7' OF 16" DR 14 C900 PVC @ 3.0%

DEPTH=5.40'

146.9' OF 16" DR 14 C900 PVC @ 1.0%

55.6' OF 16" DR 14 C900 PVC @ -0.0%

113.1' OF 16" DR 14 C900 PVC @ -2.6%

DEPTH=5.86'

163.8' OF 16" DR 14 C900 PVC @ -0.6%

105.4' OF 16" DR 14 C900 PVC @ -3.5%

STA:440+85.68, ELEV:7112.20
GRADE BREAK – VERTICAL

STA:442+32.09, ELEV:7113.67
GRADE BREAK – VERTICAL

STA:442+87.06, ELEV:7113.65
GRADE BREAK – VERTICAL

STA:442+59.52,
ELEV:7113.66
INSTALL AIR-VAC VAULT

STA:444+00.01, ELEV:7110.67
GRADE BREAK – VERTICAL

STA:445+56.58, ELEV:7109.71
INSTALL 16"x45° BEND W/CTRB & MJ RSTNTS.
MIN. BSA=31.00, APPROX. VOL.=1.75 YDS

CAUTION:
STA:446+15.55, ELEV:7107.87
TH-23
PROPOSED 16" PVC CROSSES UNDER CSU WAT; DEPTH:UNK
MAINTAIN MIN. 18" SEPARATION

STA:446+64.10, ELEV:7106.07
INSTALL 16"x6" HYD. TEE W/CTRB, & 1-16" BUTTERFLY VALVE, 1-6" MJ VALVE W/MJ RSTNTS.
MIN. BSA=9.50, APPROX. VOL.=0.50 YDS
CONTINUE (S) OF HYD. TEE 8.71 LF OF 6" PVC AND INSTALL 6"x45° BEND W/CTRB & MJ RSTNTS.
MIN. BSA=7.25, APPROX. VOL.=0.25YDS
CONTINUE (SW) OF BEND 27.58 LF OF 6" PVC AND INSTALL FH ASSEMBY W/CTRB & MJ RSTNTS.
FL EL.=6XXX.XX, PSI=XXX, GPM=XXXX

STA:439+00.01, ELEV:7106.67
GRADE BREAK – VERTICAL

MATCHLINE STA 439+00

MATCHLINE STA 447+00

439+00 440+00 441+00 442+00 443+00 444+00 445+00 446+00 447+00

7140 7130 7120 7110 7100 7090

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TRIVIEW METROPOLITAN DISTRICT

NORTHERN DELIVERY SYSTEM

SEGMENT A3 PLAN AND PROFILE

STATION 439+00 TO 447+00

NO.	DESCRIPTION	BY	APP.	DATE
1	REVISIONS 1	JLB		10/05/22
2				
3				
4				
5				
6				
7				

REVISIONS

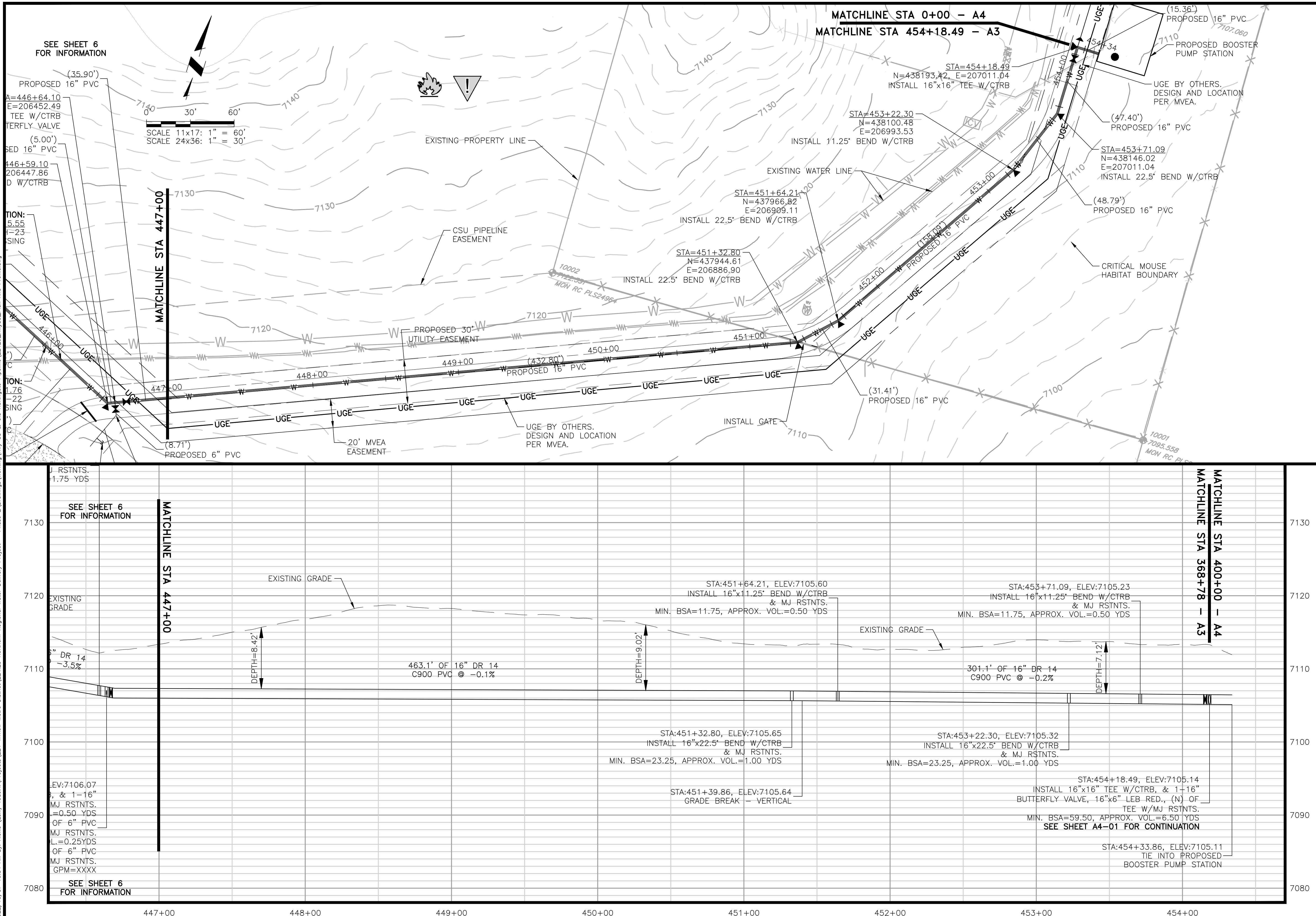
70% DESIGN

Project No.:	224.29
Date:	05/31/22
Design:	MLD
Drawn:	SNW
Check:	MLD

A3-06

SHEET ----OF

2022/10/07 10:53 AM By: Alexis (Lexi) Yodet:\Projects\224 Triview Metro District\224.29 Northern Regional Water Delivery Project – Phase 2\Drawings\Working\Hwy 83 & Old Northgate Pipeline\224.29_Hwy83_Plan And Profile.dwg



SEE SHEET 6 FOR INFORMATION
MATCHLINE STA 0+00 – A4
MATCHLINE STA 454+18.49 – A3
SCALE 11x17: 1" = 60'
SCALE 24x36: 1" = 30'
MATCHLINE STA 447+00
(35.90') PROPOSED 16" PVC
(15.36') PROPOSED 16" PVC
PROPOSED BOOSTER PUMP STATION
STA=454+18.49 N=438193.42, E=207011.04 INSTALL 16"x16" TEE W/CTRB
UGE BY OTHERS. DESIGN AND LOCATION PER MVEA.
STA=453+22.30 N=438100.48 E=206993.53 INSTALL 11.25° BEND W/CTRB
(47.40') PROPOSED 16" PVC
STA=453+71.09 N=438146.02 E=207011.04 INSTALL 22.5° BEND W/CTRB
EXISTING PROPERTY LINE
EXISTING WATER LINE
STA=451+64.21 N=437966.82 E=206909.11 INSTALL 22.5° BEND W/CTRB
(48.79') PROPOSED 16" PVC
CSU PIPELINE EASEMENT
STA=451+32.80 N=437944.61 E=206886.90 INSTALL 22.5° BEND W/CTRB
CRITICAL MOUSE HABITAT BOUNDARY
(158.09') PROPOSED 16" PVC
PROPOSED 30' UTILITY EASEMENT
(432.80') PROPOSED 16" PVC
(31.41') PROPOSED 16" PVC
INSTALL GATE
20' MVEA EASEMENT
UGE BY OTHERS. DESIGN AND LOCATION PER MVEA.
(8.71') PROPOSED 6" PVC
EXISTING GRADE
STA:451+64.21, ELEV:7105.60 INSTALL 16"x11.25° BEND W/CTRB & MJ RSTNTS. MIN. BSA=11.75, APPROX. VOL.=0.50 YDS
STA:453+71.09, ELEV:7105.23 INSTALL 16"x11.25° BEND W/CTRB & MJ RSTNTS. MIN. BSA=11.75, APPROX. VOL.=0.50 YDS
MATCHLINE STA 400+00 – A4
MATCHLINE STA 368+78 – A3
DEPTH=8.42'
DEPTH=9.02'
DEPTH=7.12'
463.1' OF 16" DR 14 C900 PVC @ –0.1%
301.1' OF 16" DR 14 C900 PVC @ –0.2%
STA:451+32.80, ELEV:7105.65 INSTALL 16"x22.5° BEND W/CTRB & MJ RSTNTS. MIN. BSA=23.25, APPROX. VOL.=1.00 YDS
STA:453+22.30, ELEV:7105.32 INSTALL 16"x22.5° BEND W/CTRB & MJ RSTNTS. MIN. BSA=23.25, APPROX. VOL.=1.00 YDS
STA:451+39.86, ELEV:7105.64 GRADE BREAK – VERTICAL
STA:454+18.49, ELEV:7105.14 INSTALL 16"x16" TEE W/CTRB, & 1–16" BUTTERFLY VALVE, 16"x6" LEB RED., (N) OF TEE W/MJ RSTNTS. MIN. BSA=59.50, APPROX. VOL.=6.50 YDS
SEE SHEET A4–01 FOR CONTINUATION
STA:454+33.86, ELEV:7105.11 TIE INTO PROPOSED BOOSTER PUMP STATION
7130 7120 7110 7100 7090 7080
447+00 448+00 449+00 450+00 451+00 452+00 453+00 454+00

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5540 TECH CENTER DR., SUITE 100
COLORADO SPRINGS, COLORADO 80919
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DISCLAIMER: THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY ERRORS OR OMISSIONS SHALL BE REPORTED TO JDS-HYDRO, A DIVISION OF RESPEC. JDS-HYDRO ASSUMES NO LIABILITY FOR UNAUTHORIZED CHANGES AND/OR REVISIONS MADE TO PLANS.

TRIVIEW METROPOLITAN DISTRICT
NORTHERN DELIVERY SYSTEM
SEGMENT A3 PLAN AND PROFILE
STATION 447+00 TO 454+33.86

REVISIONS			
NO.	DESCRIPTION	BY	APP.	DATE
1				
2				
3				
4				
5				
6				
7				

70% DESIGN

Project No.: 224.29
Date: 05/31/22
Design: MLD
Drawn: SNW
Check: MLD

A3–07
SHEET ----OF

2022/10/07 10:54 AM By: Alexis (Lexi) YodeN:\Projects\224 Triview Metro District\224.29 Northern Regional Water Delivery Project – Phase 2\Drawings\Working\Hwy 83 & Old Northgate Pipeline\22429_Hwy83_Plan And Profile.dwg

ALL UTILITIES DEPICTED AT QL B UNLESS OTHERWISE NOTED:

QLB DATA SUMMARY:

TH24 – STRM
- DEPTH: TBD
- NORTHING: 438305.36
- EASTING: 207045.30

SCHEDULE: 6203000002
OWNER: CITY OF COLORADO SPRINGS

SCALE 11x17: 1" = 40'
SCALE 24x36: 1" = 20'

STA=0+77.68
N=438271.10, E=207011.04
INSTALL 8"x45° BEND W/CTRB

CAUTION:
STA=1+26.13
TH–24
STRM CROSSING

STA=1+43.71
N=438317.79, E=207057.74
INSTALL 8"x45° BEND W/CTRB

STA=2+34.64
N=438408.72, E=207057.74
INSTALL 8"x22.5° BEND W/CTRB

STA=3+14.64
N=438482.63, E=207088.35
INSTALL 8"x22.5° BEND W/CTRB

STA=3+74.64
N=438542.63, E=207088.35
INSTALL 8"x22.5° BEND W/CTRB

STA=4+34.64
N=438598.06, E=207065.39
INSTALL 8"x22.5° BEND W/CTRB

STA=4+84.64
N=438633.42, E=207030.03
INSTALL 8"x22.5° BEND W/CTRB

STA=5+02.30
N=438640.17, E=207013.72
INSTALL 8"x22.5° BEND W/CTRB

(53.56')
PROPOSED 8" PVC

CAUTION:
STA=5+53.96
TH–25
UGE CROSSING

(2.30')
PROPOSED 8" PVC

UGE BY OTHERS.
DESIGN AND LOCATION
PER MVEA.

PROPOSED BOOSTER
PUMP STATION

EXISTING UNDERGROUND
ELECTRIC

EXISTING FENCE

MATCHLINE STA 0+00 – A4
MATCHLINE STA 454+18.49 – A3

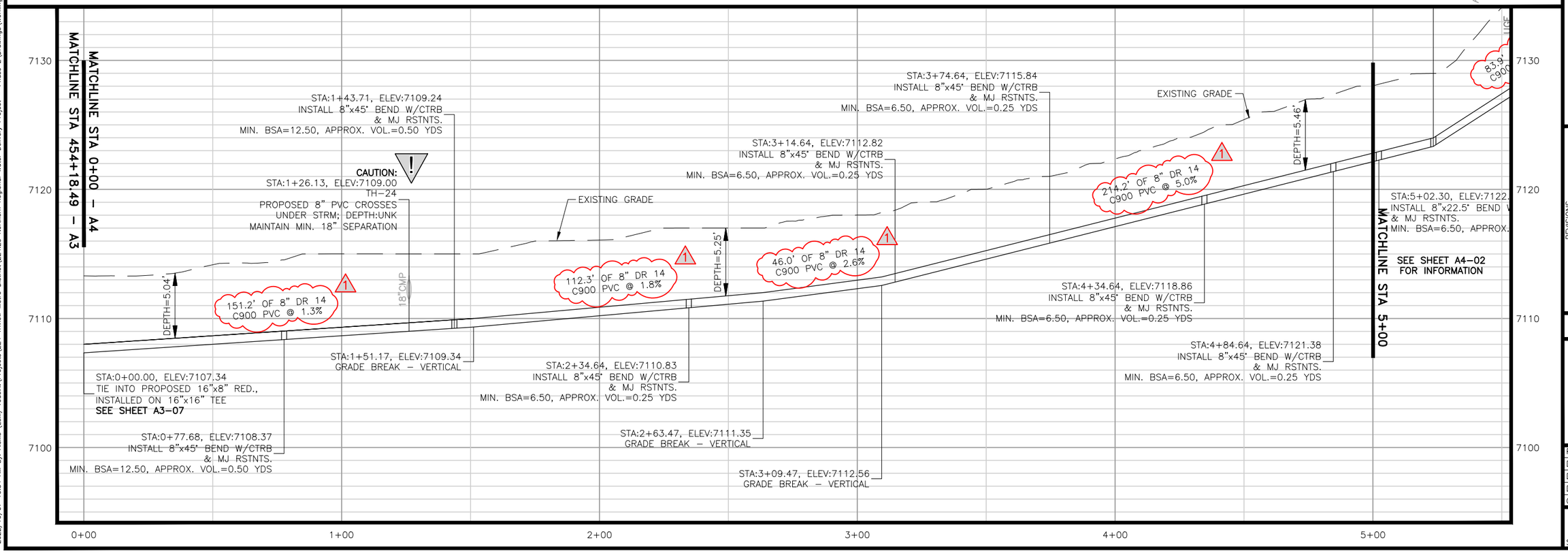
MATCHLINE STA 5+00

CSU TANK SITE

STEOCKER PROPERTY

RC PLS30130
7135.275
10000

INSTALL 8"x45° BE



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COLORADO SPRINGS, COLORADO 80919
(719) 227-0072

DISCLAIMER: THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS. ANY ERRORS OR OMISSIONS SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY. ENGINEER ASSUMES NO LIABILITY FOR UNAUTHORIZED CHANGES AND/OR REVISIONS MADE TO PLANS.

TRIVIEW METROPOLITAN DISTRICT

NORTHERN DELIVERY SYSTEM

SEGMENT A4 PLAN AND PROFILE
STATION 0+00 TO 5+00

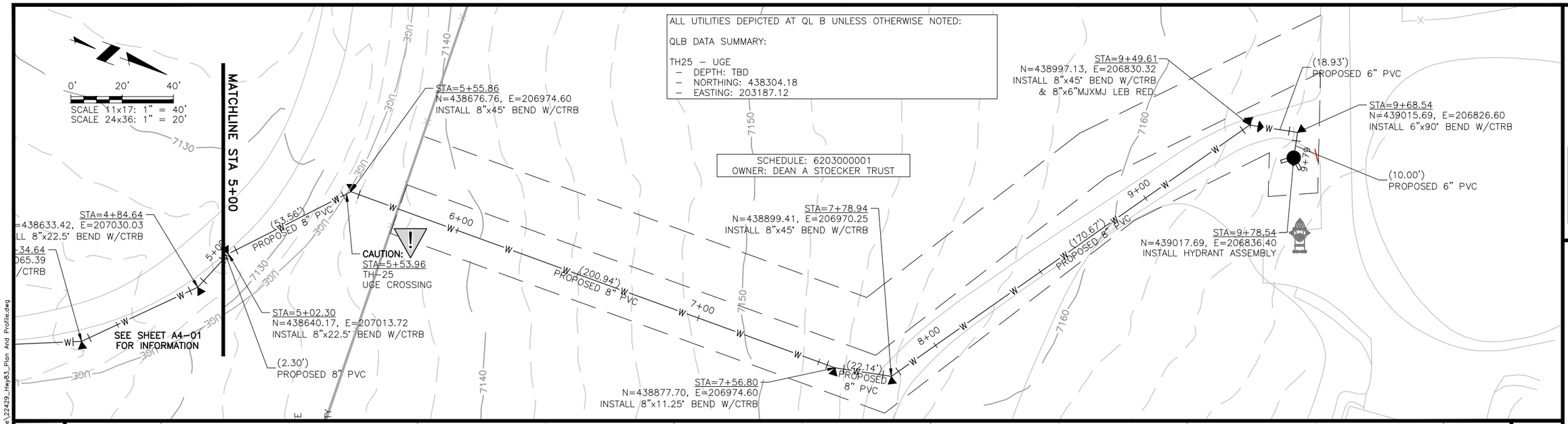
REVISIONS				
NO.	DESCRIPTION	BY	APP.	DATE
1	changed 16" to 8"	JLB		10/05/22
2				
3				
4				
5				
6				
7				

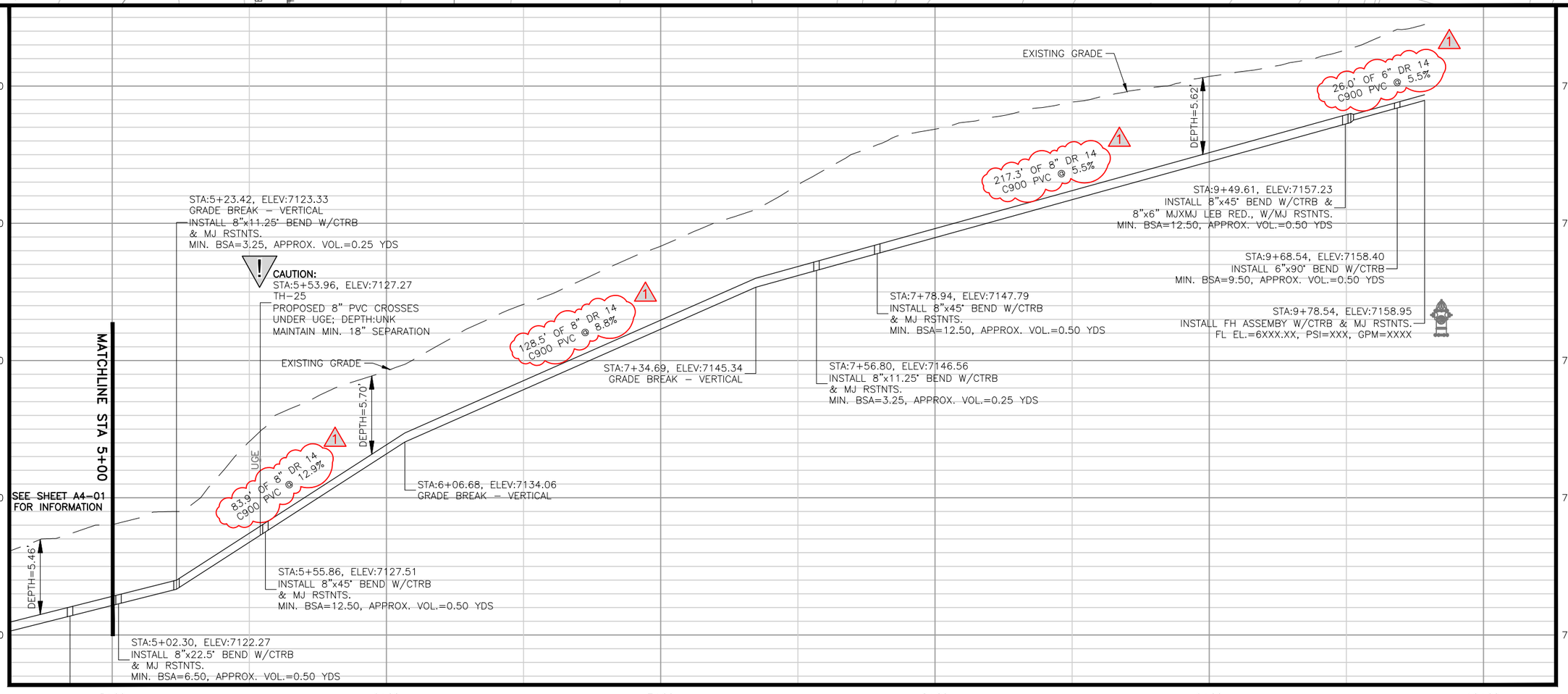
70% DESIGN

Project No.:	224.29
Date:	05/31/22
Design:	MLD
Drawn:	SNW
Check:	MLD

A4–01
SHEET ----OF

2022/10/07 10:54 AM By: Alexis (Lexi) Yodet\\Projects\224 Triview Metro District\224.29 Northern Regional Water Delivery Project – Phase 2\Drawings\Working\Hwy 83 & Old Northgate Pipeline\224.29_Hwy83_Plan And Profile.dwg





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TRIVIEW METROPOLITAN DISTRICT

NORTHERN DELIVERY SYSTEM

SEGMENT A4 PLAN AND PROFILE

STATION 5+00 TO 9+79

REVISIONS				
NO.	DESCRIPTION	BY	APP.	DATE
1	change 16" to 8"	JLB		10/05/22
2				
3				
4				
5				
6				
7				

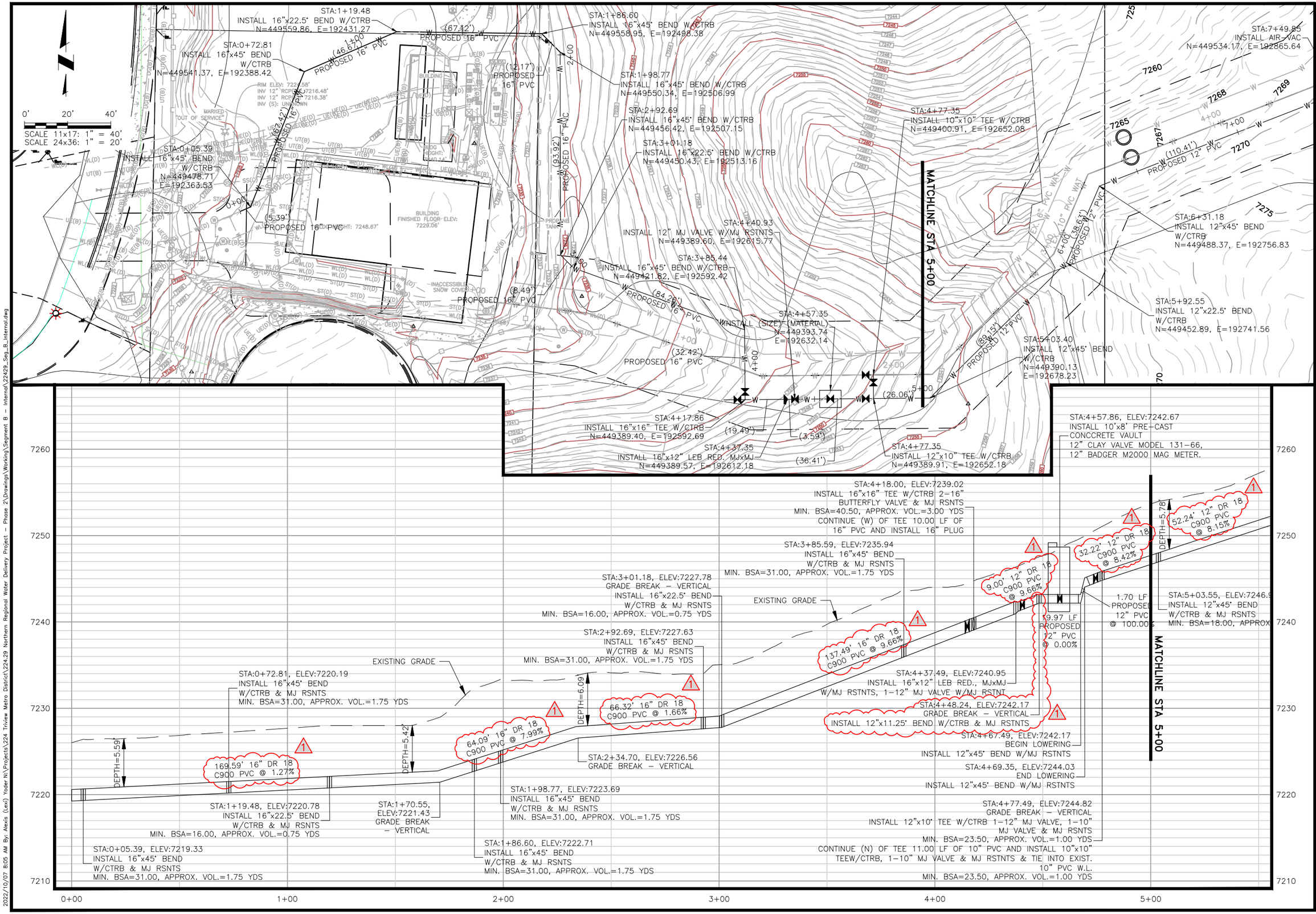
70% DESIGN

Project No.:	224.29
Date:	05/31/22
Design:	MLD
Drawn:	SNW
Check:	MLD

A4-02

SHEET ---OF

2022/10/07 10:54 AM By: Alexis (Lexi) Yoder\\Projects\224 Triview Metro District\224.29 Northern Regional Water Delivery Project – Phase 2\Drawings\Working\Hwy 83 & Old Northgate Pipeline\224.29_Hwy83_Plan And Profile.dwg



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TRIVIEW METROPOLITAN DISTRICT

NORTHERN DELIVERY SYSTEM

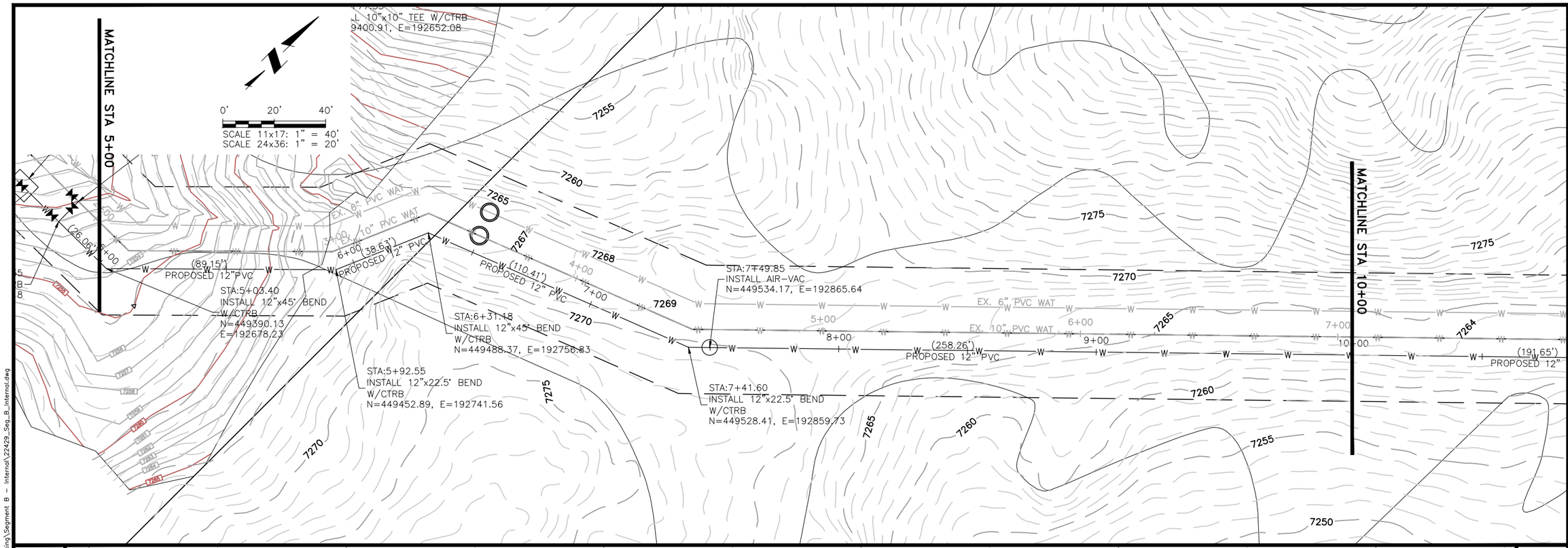
SEGMENT B1 - PLAN AND PROFILE
STATION 0+00 TO 5+00

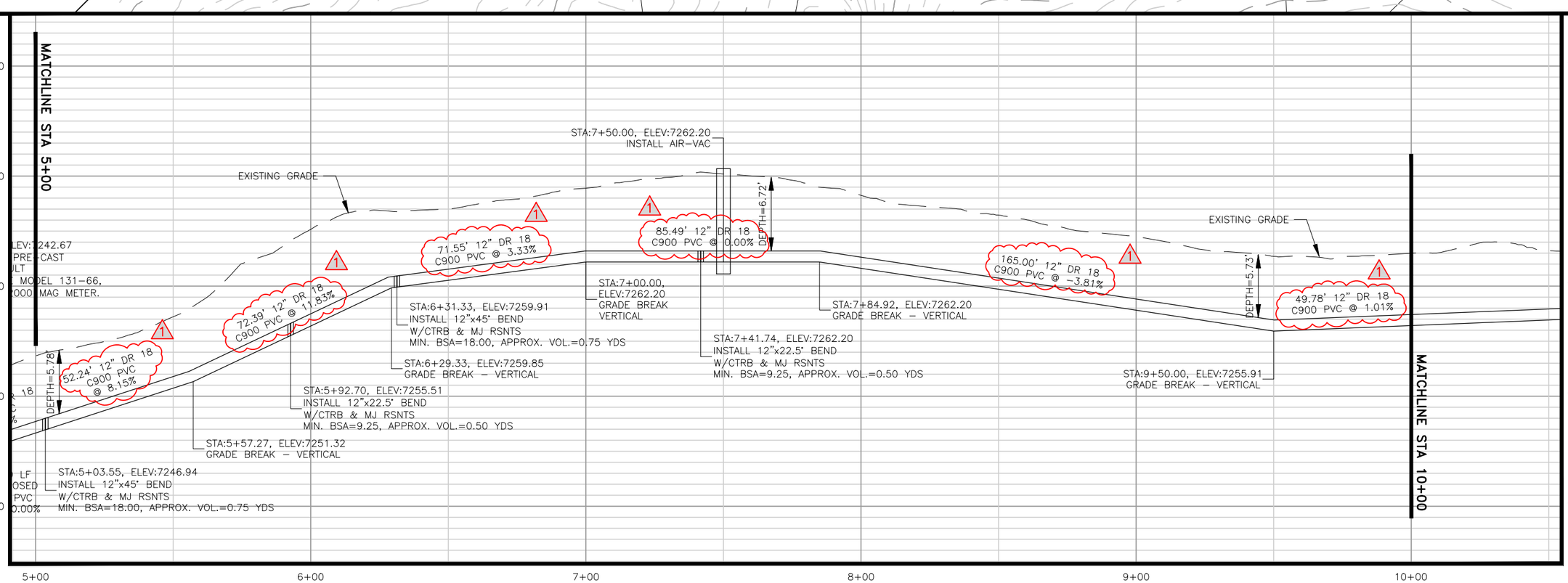
REVISIONS			
NO.	DESCRIPTION	BY	APP. DATE
1	REVISIONS 1	JLB	09/02/22
2			
3			
4			
5			
6			
7			

70% DESIGN

Project No.:	224.29
Date:	09/07/22
Design:	MLD
Drawn:	SNW
Check:	MLD

B1-1
SHEET ----OF





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TRIVIEW METROPOLITAN DISTRICT

NORTHERN DELIVERY SYSTEM

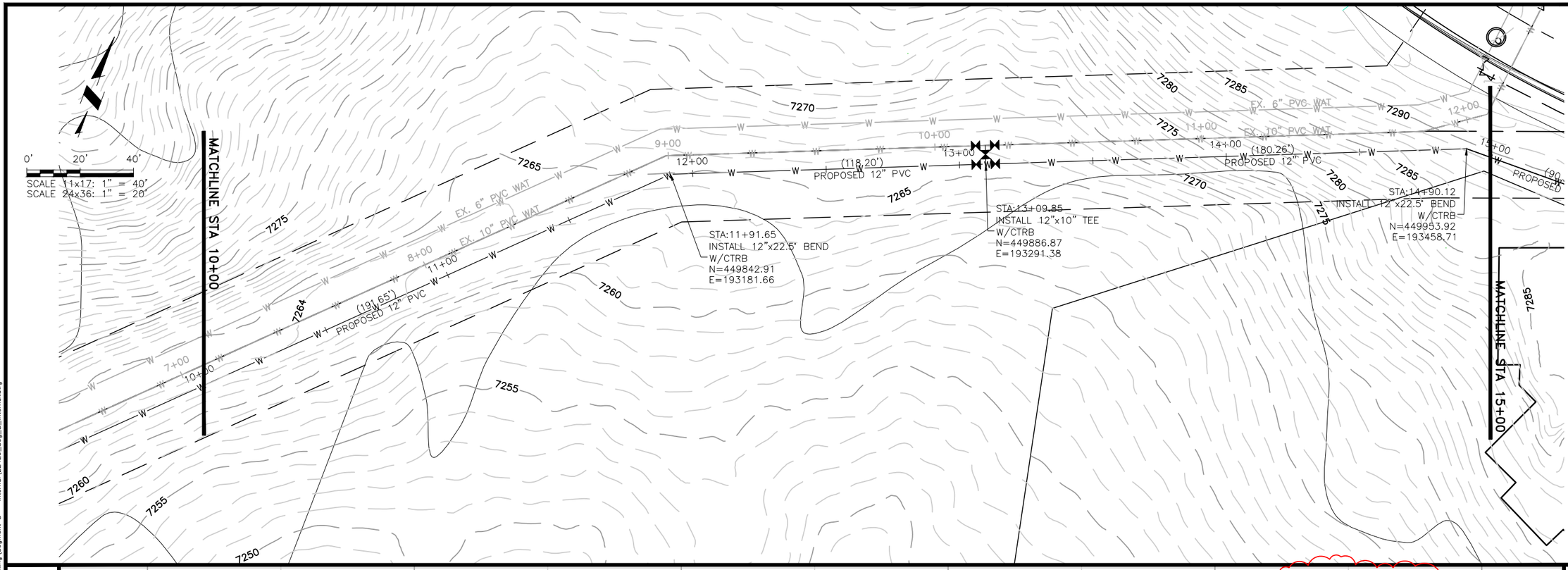
SEGMENT B1 - PLAN AND PROFILE
STATION 5+00 TO 10+00

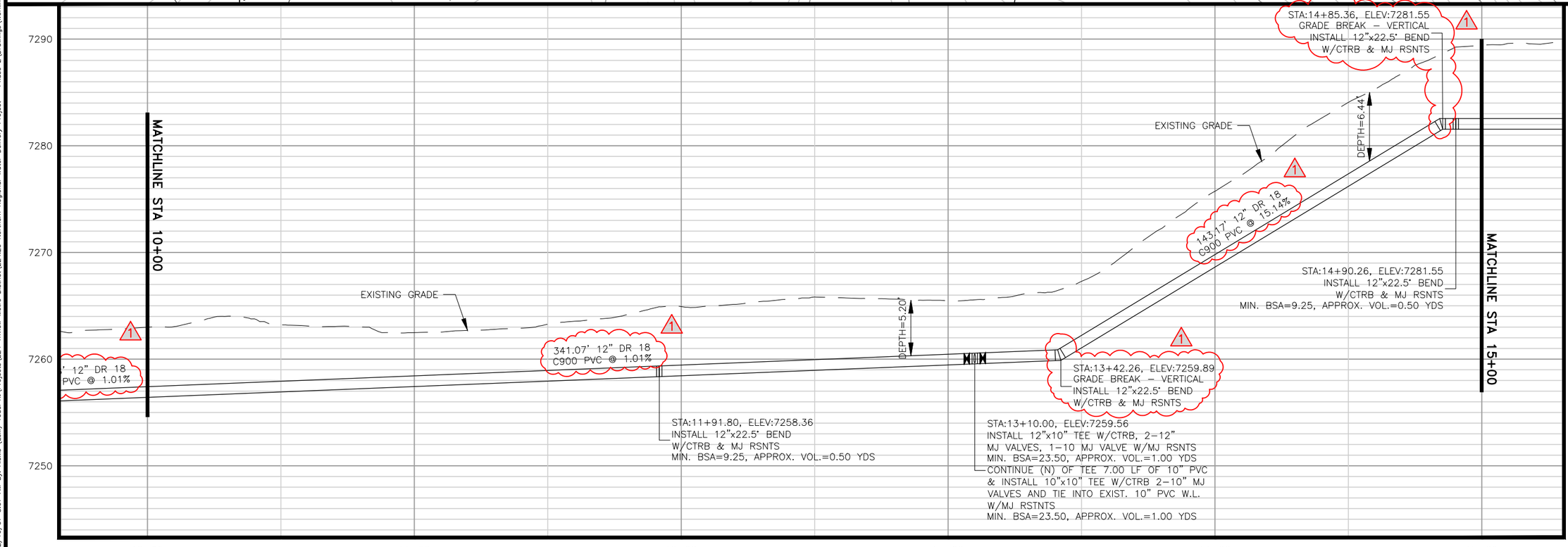
REVISIONS			
NO.	DESCRIPTION	BY	APP. DATE
1	REVISIONS 1	JLB	05/22
2			
3			
4			
5			
6			
7			

70% DESIGN

Project No.:	224.29
Date:	09/07/22
Design:	MLD
Drawn:	SNW
Check:	MLD

B1-2
SHEET ----OF





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TRIVIEW METROPOLITAN DISTRICT

NORTHERN DELIVERY SYSTEM

SEGMENT B1 - PLAN AND PROFILE

STATION 10+00 TO 15+00

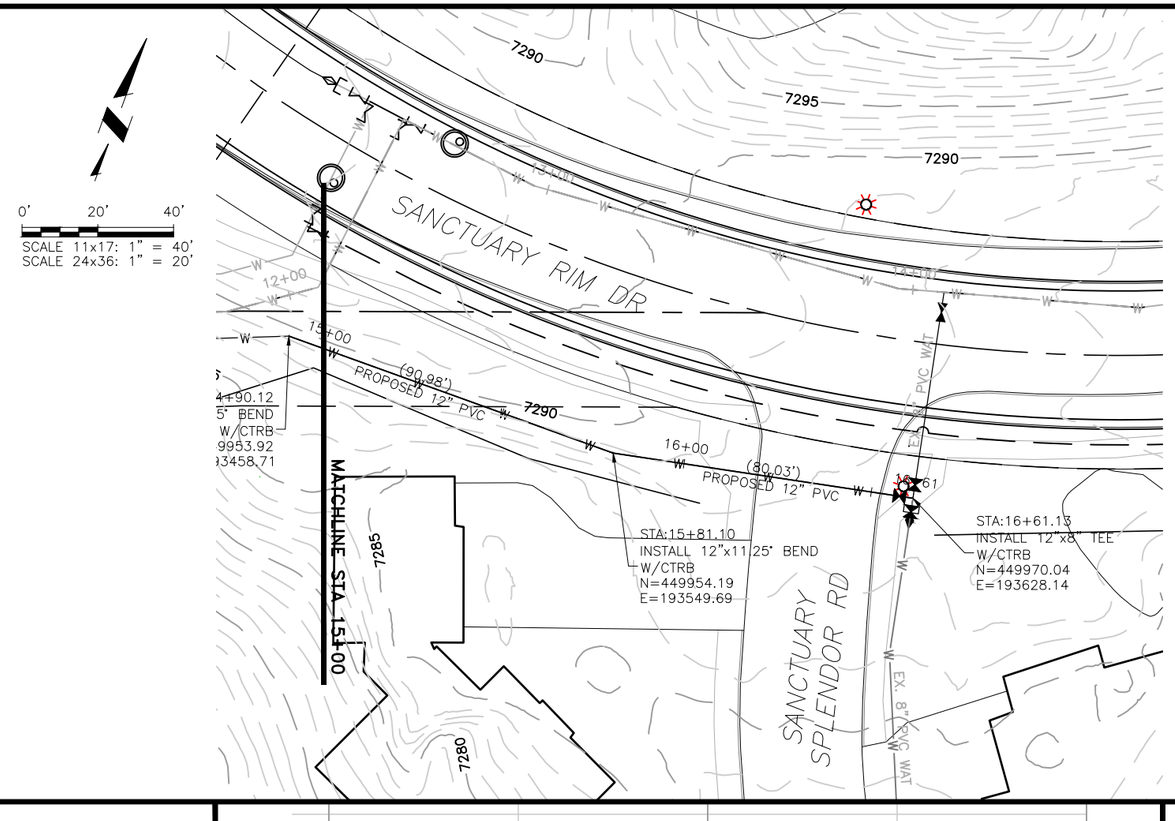
REVISIONS			
NO.	DESCRIPTION	BY	APP.	DATE
1	REVISIONS 1	JLB		10/05/22
2				
3				
4				
5				
6				
7				

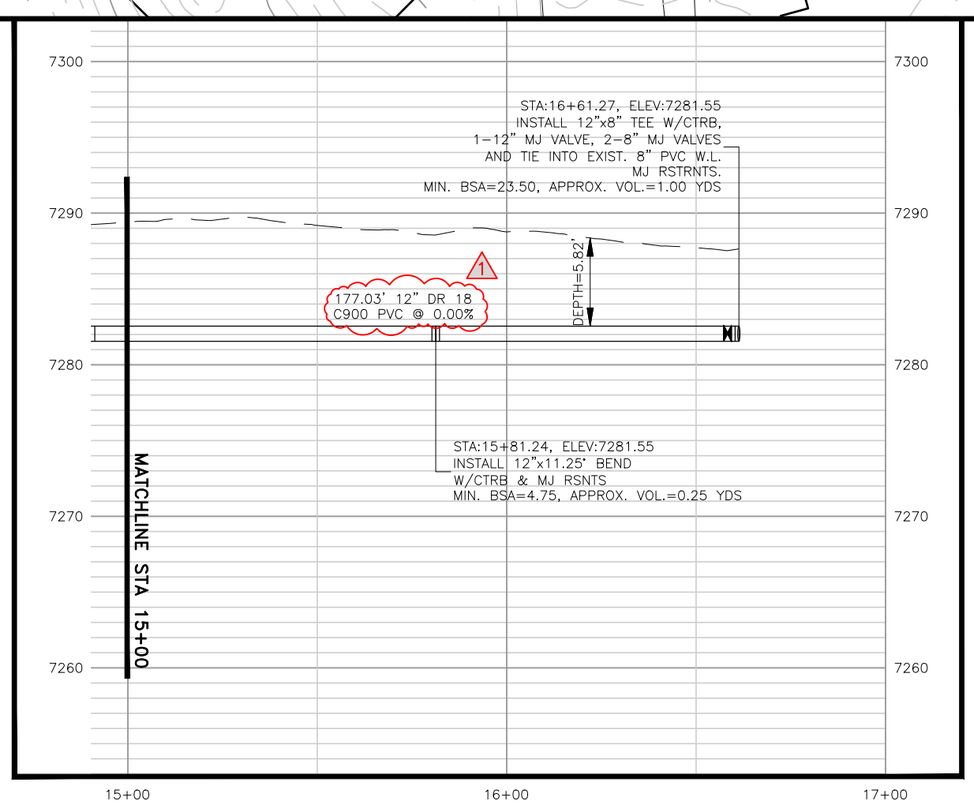
70% DESIGN

Project No.:	224.29
Date:	09/07/22
Design:	MLD
Drawn:	SNW
Check:	MLD

B1-3

SHEET ----OF





0' 20' 40'
SCALE 11x17: 1" = 40'
SCALE 24x36: 1" = 20'

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TRIVIEW METROPOLITAN DISTRICT

NORTHERN DELIVERY SYSTEM

SEGMENT B1 – PLAN AND PROFILE

STATION 15+00 TO 16+61

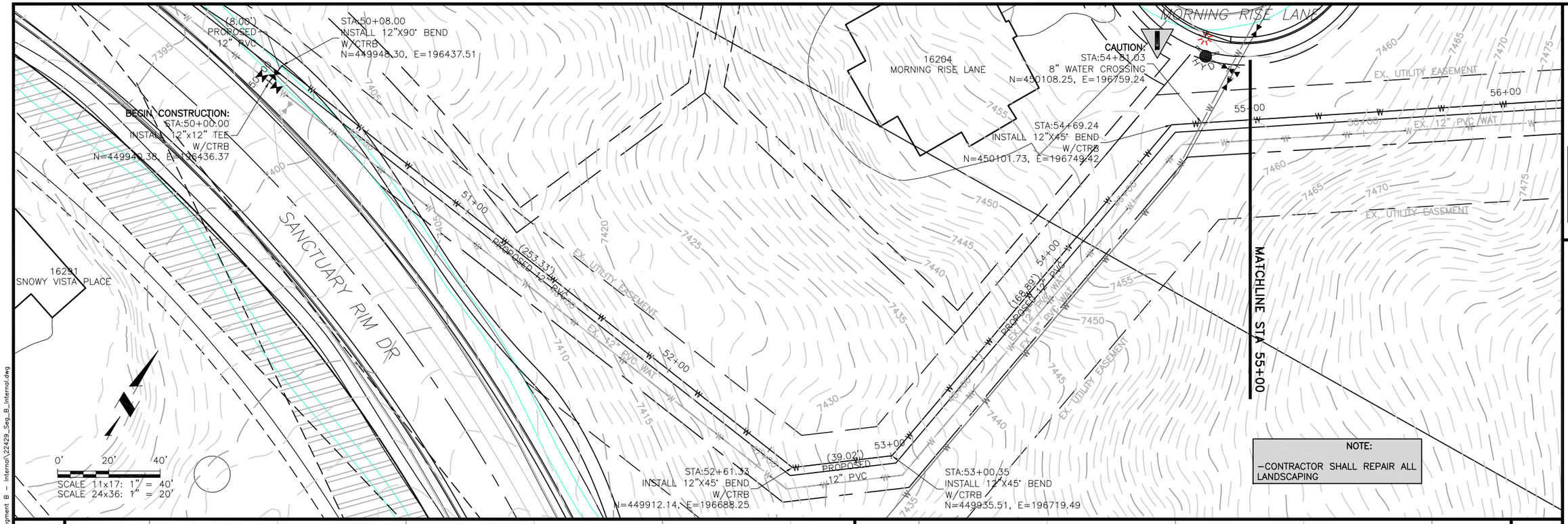
REVISIONS			
NO.	DESCRIPTION	BY	APP.	DATE
1	REVISIONS 1	JLB		10/05/22
2				
3				
4				
5				
6				
7				

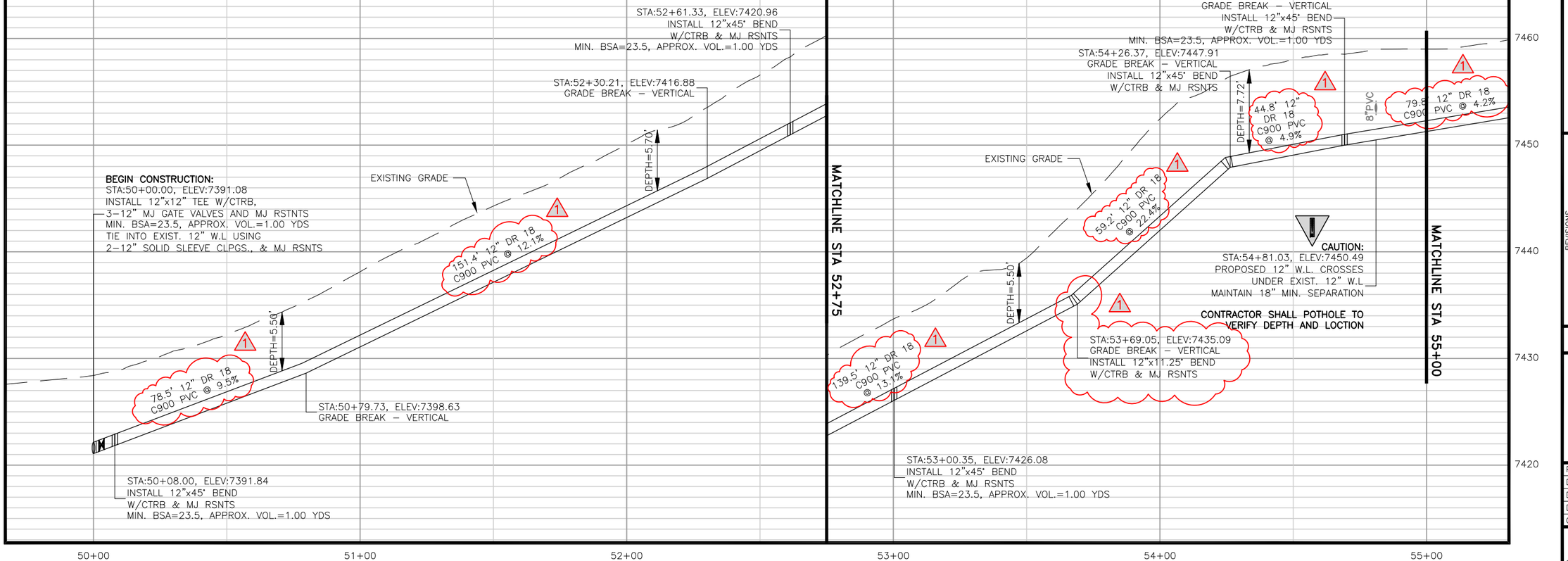
70% DESIGN

Project No.:	224.29
Date:	09/07/22
Design:	MLD
Drawn:	SNW
Check:	MLD

B1-4

SHEET ----OF





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TRIVIEW METROPOLITAN DISTRICT

NORTHERN DELIVERY SYSTEM

SEGMENT B2 - PLAN AND PROFILE

STATION 50+00 TO 55+00

REVISIONS				
NO.	DESCRIPTION	BY	APP.	DATE
1	REVISIONS 1	JLB		10/05/22
2				
3				
4				
5				
6				
7				

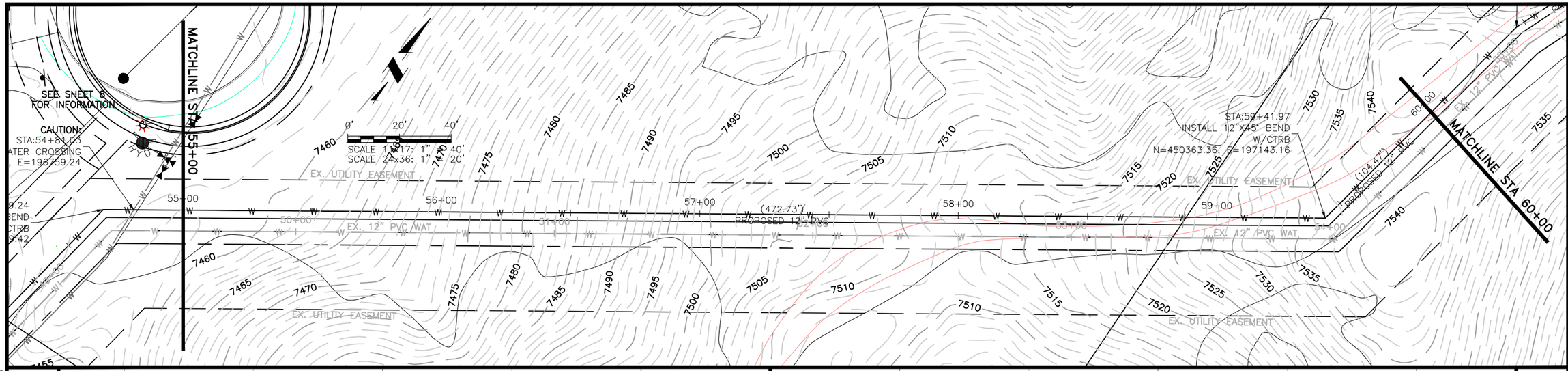
70% DESIGN

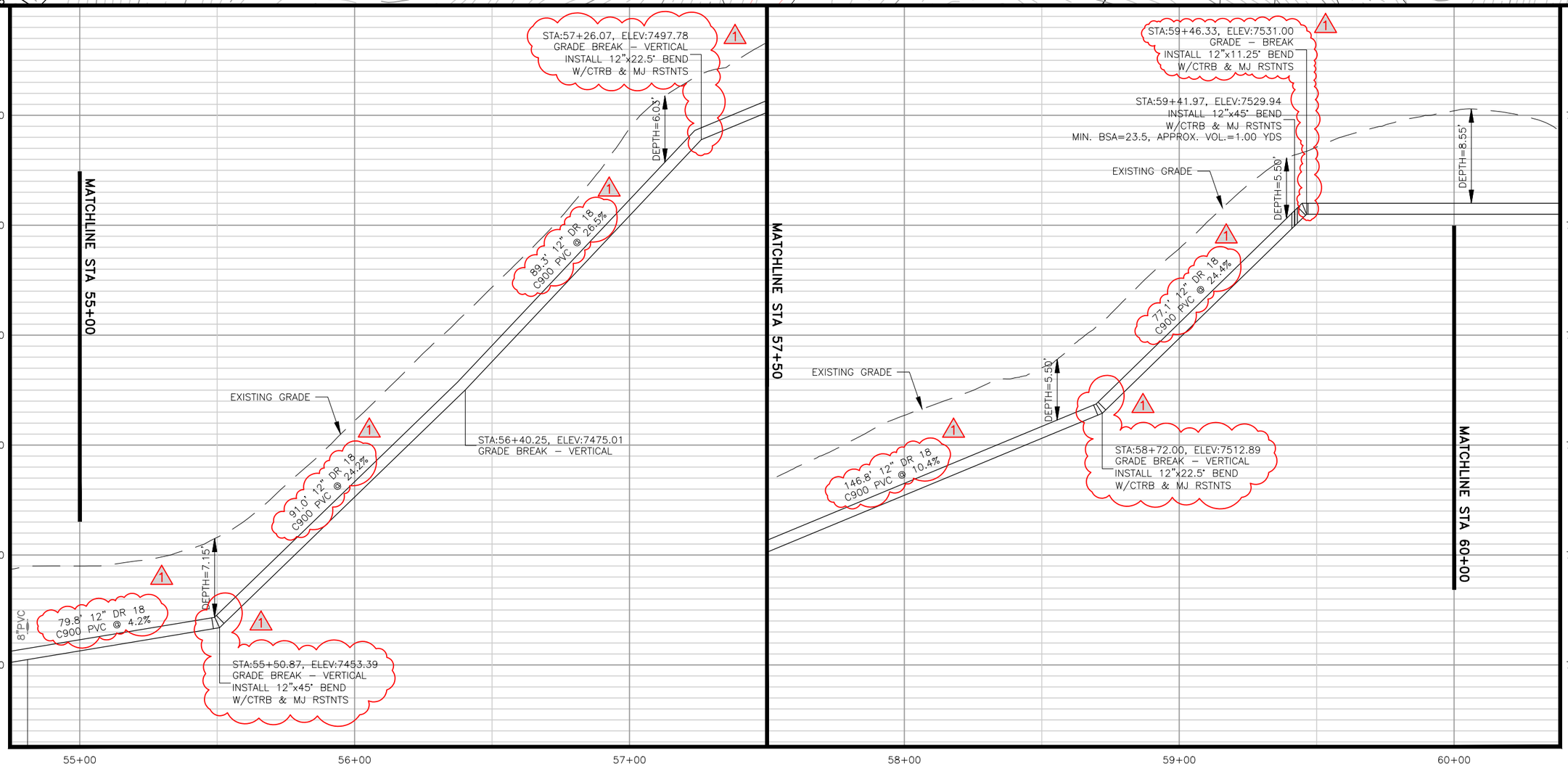
Project No.:	224.29
Date:	09/07/22
Design:	MLD
Drawn:	SNW
Check:	MLD

B2-1

SHEET ---OF

2022/10/14 3:11 PM By: Jeffrey Bray N:\Projects\224 Triview Metro District\224.29 Northern Regional Water Delivery Project - Phase 2\Drawings\Working\Segment B - Internal\22429_Seg_B_Internal.dwg





JDS-HYDRO a Division of RESPEC
5540 TECH CENTER DR., SUITE 100
COLORADO SPRINGS, COLORADO 80919
(719) 227-0072

TRIVIEW METROPOLITAN DISTRICT

NORTHERN DELIVERY SYSTEM

SEGMENT B2 – PLAN AND PROFILE

STATION 55+00 TO 60+00

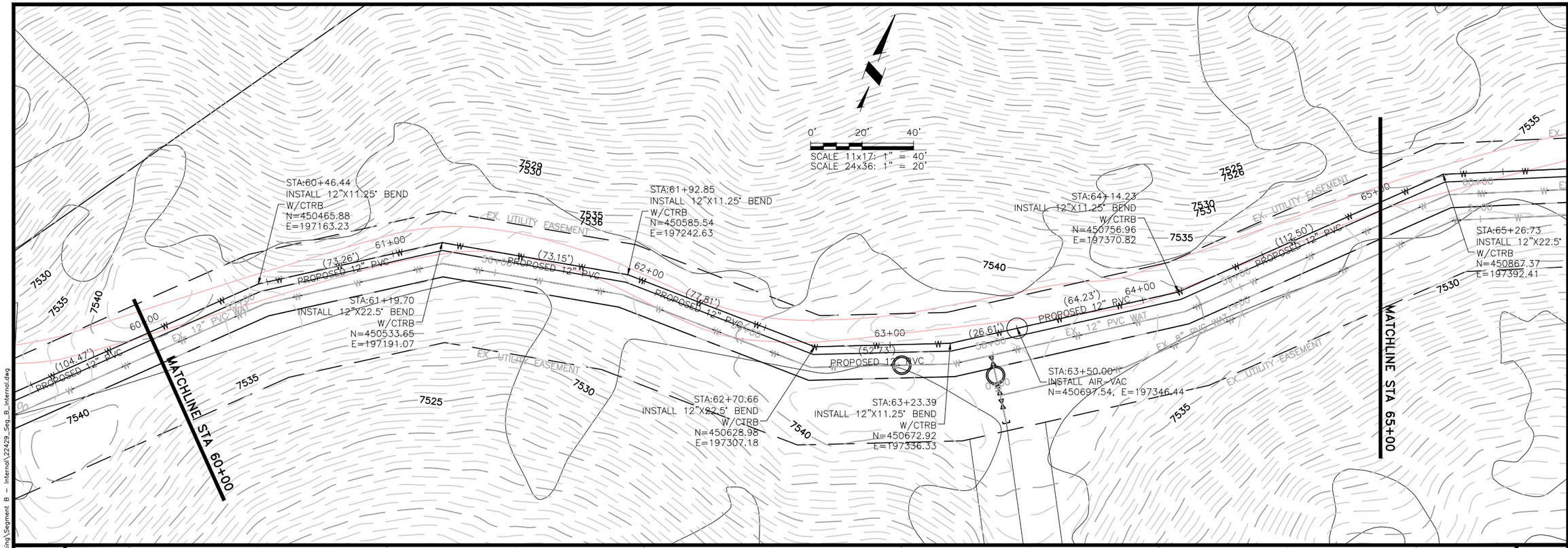
REVISIONS				
NO.	DESCRIPTION	BY	APP.	DATE
1	REVISIONS 1	JLB		10/05/22
2				
3				
4				
5				
6				
7				

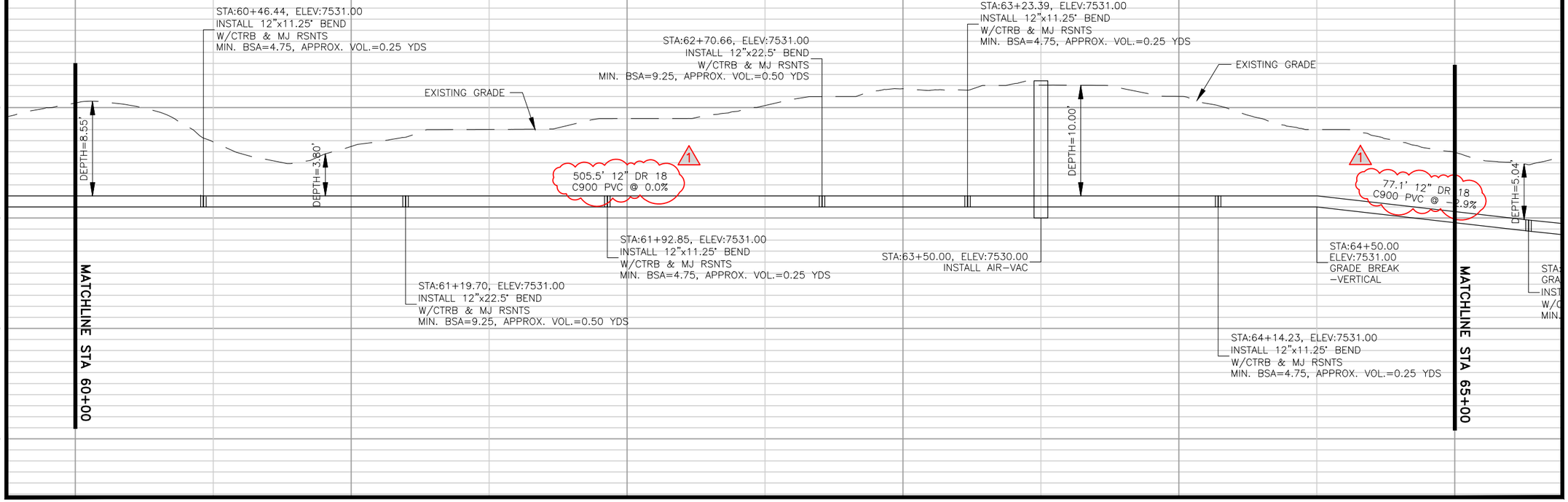
70% DESIGN

Project No.:	224.29
Date:	09/07/22
Design:	MLD
Drawn:	SNW
Check:	MLD

B2–2

SHEET ____OF





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COLORADO SPRINGS, COLORADO 80919
(719) 227-0072

TRIVIEW METROPOLITAN DISTRICT

NORTHERN DELIVERY SYSTEM

SEGMENT B2 - PLAN AND PROFILE

STATION 60+00 TO 65+00

NO.	DESCRIPTION	BY	APP.	DATE
1	REVISIONS 1	JLB		10/05/22
2				
3				
4				
5				
6				
7				

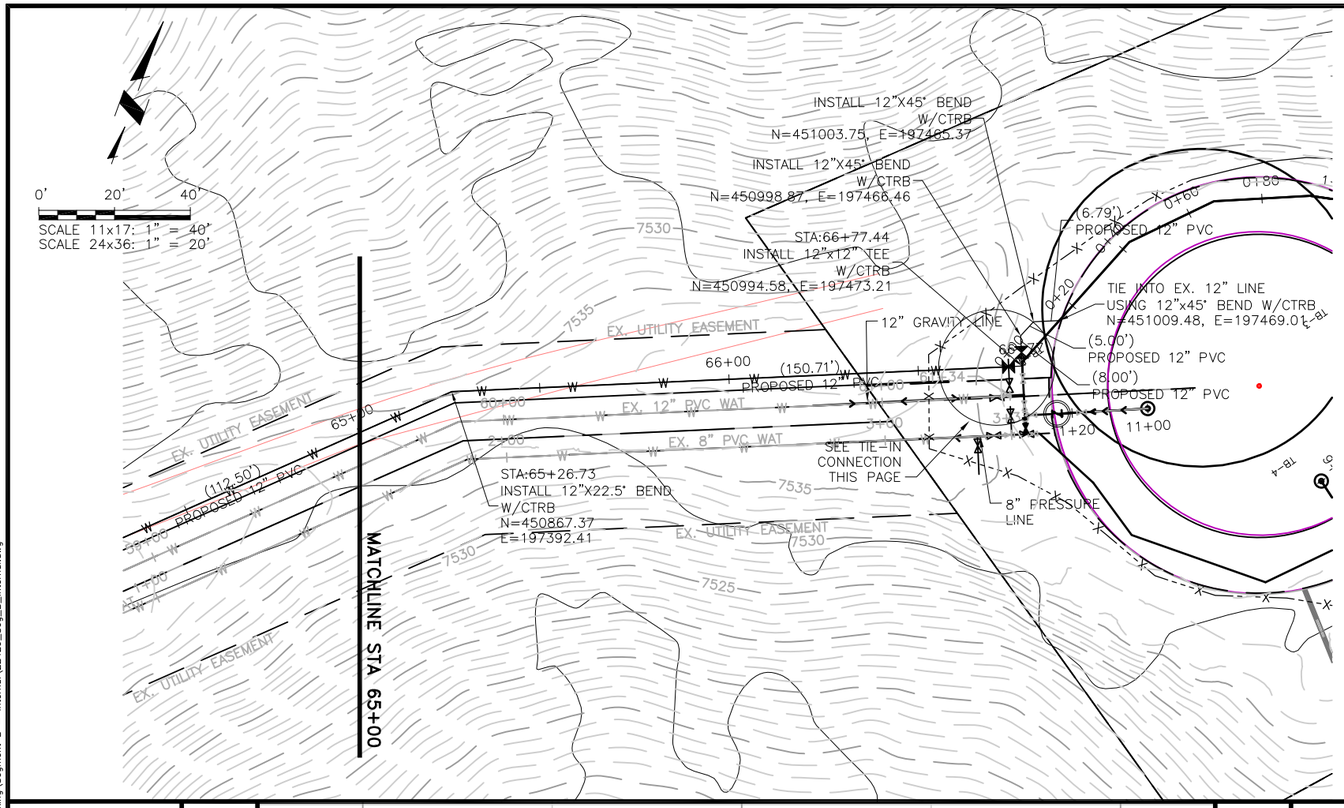
REVISIONS

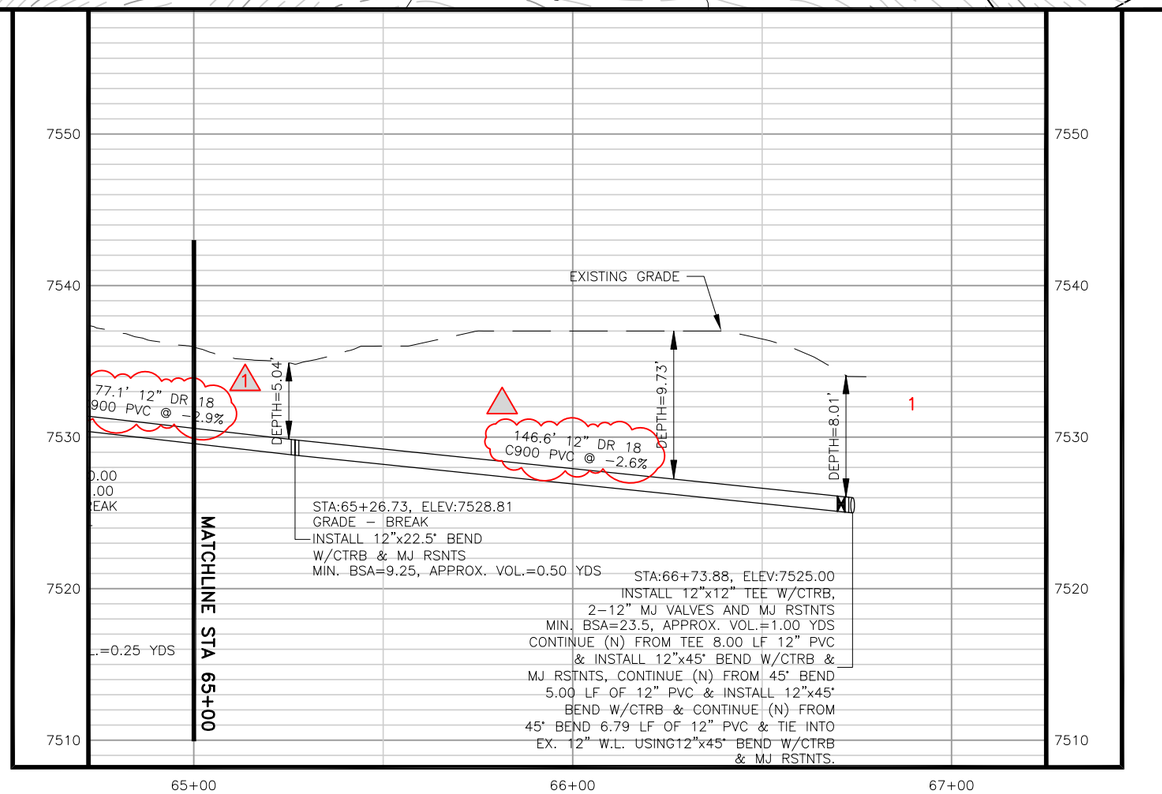
70% DESIGN

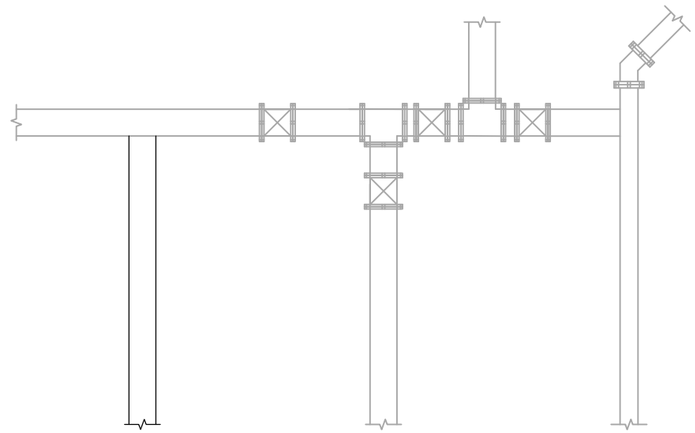
Project No.:	224.29
Date:	09/07/22
Design:	MLD
Drawn:	SNW
Check:	MLD

B2-3

SHEET ----OF







A B2-4 TIE-IN CONNECTION
SCALE: N.T.S.

JDS-HYDRO a Division of RESPEC
5540 TECH CENTER DR., SUITE 100
COLORADO SPRINGS, COLORADO 80919
(719) 227-0072

TRIVIEW METROPOLITAN DISTRICT

NORTHERN DELIVERY SYSTEM

SEGMENT B2 – PLAN AND PROFILE

STATION 65+00 TO 66+77

REVISIONS

NO.	DESCRIPTION	BY	APP.	DATE
1	REVISION 1	JLB		10/05/22
2				
3				
4				
5				
6				
7				

70% DESIGN

Project No.: 224.29
Date: 09/07/22
Design: MLD
Drawn: SNW
Check: MLD

B2-4

SHEET ----OF

STA=104+19.00
N=451458.38, E=197567.65
INSTALL 16"x22.5° BEND
W/CTRB

STA=104+96.56
N=451493.86, E=197636.61
INSTALL 16"x11.25° BEND
W/CTRB

STA=103+09.46
N=451365.10,E=197514.32
INSTALL 16"x22.5° BEND
W/CTRB

STA=105+47.99
N=451508.20, E=197686.00
INSTALL 16"x11.25° BEND
W/CTRB

STA=102+19.20
N=451275.19, E=197522.24
INSTALL 16"x11.25° MJ BEND
W/CTRB

STA=103+60.75
N=451413.95, E=197529.99
INSTALL 16"x22.5° BEND
W/CTRB

STA=102+02.42
N=451258.92, E=197526.33
INSTALL 16"x22.5° MJ BEND
W/CTRB

STA=101+64.19
N=451228.25, E=197549.15
INSTALL 16"x45° MJ BEND
W/CTRB

STA=101+26.21
N=451222.73, E=197586.73
INSTALL 5' Ø VAULT
SEE DETAIL X/X

STA=100+00.00
N=451145.08
E=197555.97
TIE INTO EXISTING 12" WATER MAIN,
INSTALL 12"x16" MJ TEE W/
MJ COUPLER AND CTRB
(2) 12" MJ GATE VALVES,
(1) 16" MJ B.F. VALVE

STA=101+18.50
N=451221.61, E=197594.36
INSTALL 16"x45° MJ BEND
W/CTRB

STA=101+08.42
N=451213.52, E=197600.38
INSTALL 16"x45° MJ BEND
W/CTRB

STA=100+83.14
N=451188.52, E=197596.65
INSTALL 5' Ø VAULT
SEE DETAIL X/X

STA=100+34.04
N=451139.92, E=197589.62
INSTALL 16"x90° MJ BEND W/CTRB

STA=100+48.21
N=451153.94, E=197591.66
INSTALL 5' Ø VAULT
SEE DETAIL X/X

STA=107+60.59
N=451518.43, E=197898.36
2.2° HORIZ. GRADE BREAK

STA=107+79.88
N=451518.61, E=197917.65
END 16-IN C900 DR18
FUSIBLE PVC HDD BORE

MATCHLINE STA 107+50

EL PASO COUNTY
TOWN OF MONUMENT

VANDERWOLF CT

GRAVITY LINE

0' 30' 60'
SCALE 11x17: 1" = 60'
SCALE 24x36: 1" = 30'

STA:101+26.21, ELEV:7525.10
INSTALL 5' DIA. VAULT

STA:101+18.50, ELEV:7525.10
INSTALL 16"x45° BEND
W/CTRB & MJ RSNTS
MIN. BSA=59.50, APPROX. VOL.=6.50 YDS

STA:103+60.75, ELEV:7525.25
INSTALL 16"x22.5° BEND
W/CTRB & MJ RSNTS
MIN. BSA=23.25, APPROX. VOL.=1.00 YDS

STA:102+02.42, ELEV:7525.15
INSTALL 16"x22.5° BEND
W/CTRB & MJ RSNTS
MIN. BSA=23.25, APPROX. VOL.=1.00 YDS

STA:104+19.00, ELEV:7525.29
INSTALL 16"x22.5° BEND
W/CTRB & MJ RSNTS
MIN. BSA=23.25, APPROX. VOL.=1.00 YDS

EXISTING GRADE

DEPTH=5.60'

548.0' OF 16" DR 18
C900 PVC @ 0.1%

DEPTH=9.75'

91.2' OF 16" DR 18
C900 PVC @ -4.4%

47.9' OF 16" DR 18
C900 PVC @ -19.6%

93.7' OF 16" DR 18
C900 PVC @ -0.4%

DEPTH=11.36'

MATCHLINE STA 107+50

SEE SHEET B3-02
FOR INFORMATION

STA:107+79.86,
INSTALL 16"x22.5°
W/CTRB & MJ R
MIN. BSA=23.25,

STA:103+09.46, ELEV:7525.22
INSTALL 16"x22.5° BEND
W/CTRB & MJ RSNTS
MIN. BSA=23.25, APPROX. VOL.=1.00 YDS

STA:102+19.20, ELEV:7525.16
INSTALL 16"x11.25° BEND
W/CTRB & MJ RSNTS
MIN. BSA=11.75, APPROX. VOL.=0.50 YDS

STA:104+96.56, ELEV:7525.34
INSTALL 16"x11.25° BEND
W/CTRB & MJ RSNTS
MIN. BSA=11.75, APPROX. VOL.=0.50 YDS

STA:101+64.19, ELEV:7525.13
INSTALL 16"x45° BEND
W/CTRB & MJ RSNTS
MIN. BSA=45.50, APPROX. VOL.=4.00 YDS

STA:105+47.99, ELEV:7525.37
GRADE BREAK - VERTICAL
INSTALL 16"x11.25° BEND
W/CTRB & MJ RSNTS
MIN. BSA=11.75, APPROX. VOL.=0.50 YDS

STA:101+08.42, ELEV:7525.09
INSTALL 16"x45° BEND
W/CTRB & MJ RSNTS
MIN. BSA=45.50, APPROX. VOL.=4.00 YDS

STA:106+39.12, ELEV:7521.35
GRADE BREAK - VERTICAL
INSTALL 16"x11.25° BEND
W/CTRB & MJ RSNTS
MIN. BSA=11.75, APPROX. VOL.=0.50 YDS

STA:100+83.14, ELEV:7525.07
INSTALL 5' DIA. VAULT

STA:100+48.21, ELEV:7525.05
INSTALL 5' DIA. VAULT

STA:106+86.14, ELEV:7512.12
GRADE BREAK - VERTICAL
INSTALL 16"x22.5° BEND
W/CTRB & MJ RSNTS
MIN. BSA=23.25, APPROX. VOL.=1.00 YDS

STA:100+34.04, ELEV:7525.04
INSTALL 16"x90° BEND
W/CTRB & MJ RSNTS
MIN. BSA=59.50, APPROX. VOL.=6.50 YDS

PROFILE SCALE
HORZ.-1"=60'
VERT.-1"=15'

7540 7530 7520 7510 7500 7490 7480

100+00 101+00 102+00 103+00 104+00 105+00 106+00 107+00 108+00

JDS-HYDRO a Division of RESPEC
5540 TECH CENTER DR., SUITE 100
COLORADO SPRINGS, COLORADO 80919
(719) 227-0072

TRIVIEW METROPOLITAN DISTRICT

NORTHERN DELIVERY SYSTEM

SEGMENT B3 - PLAN AND PROFILE

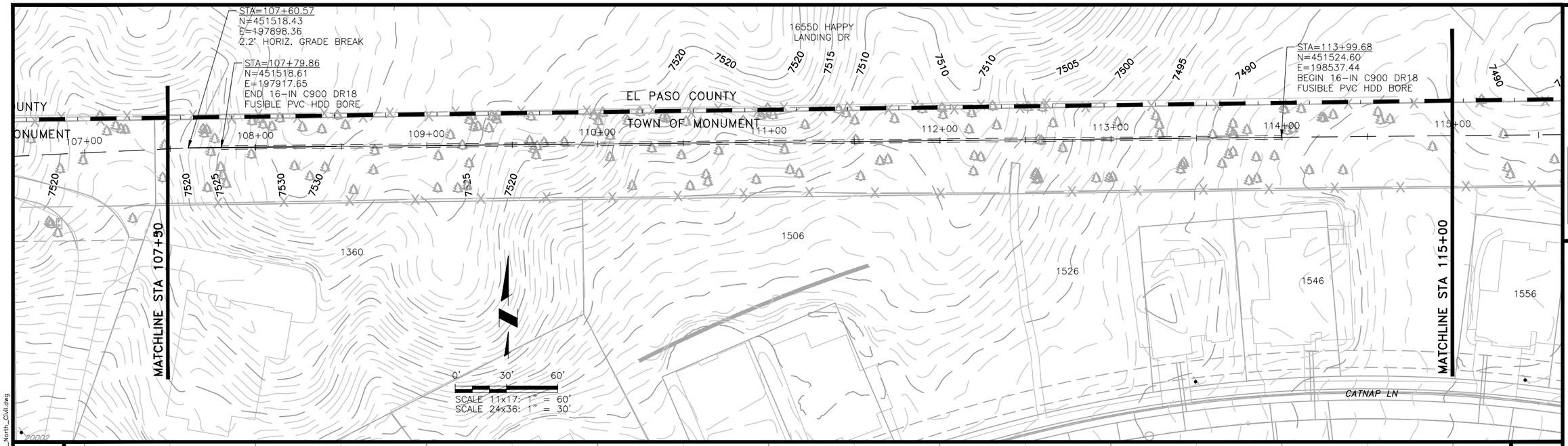
STA. 100+00 TO 107+50

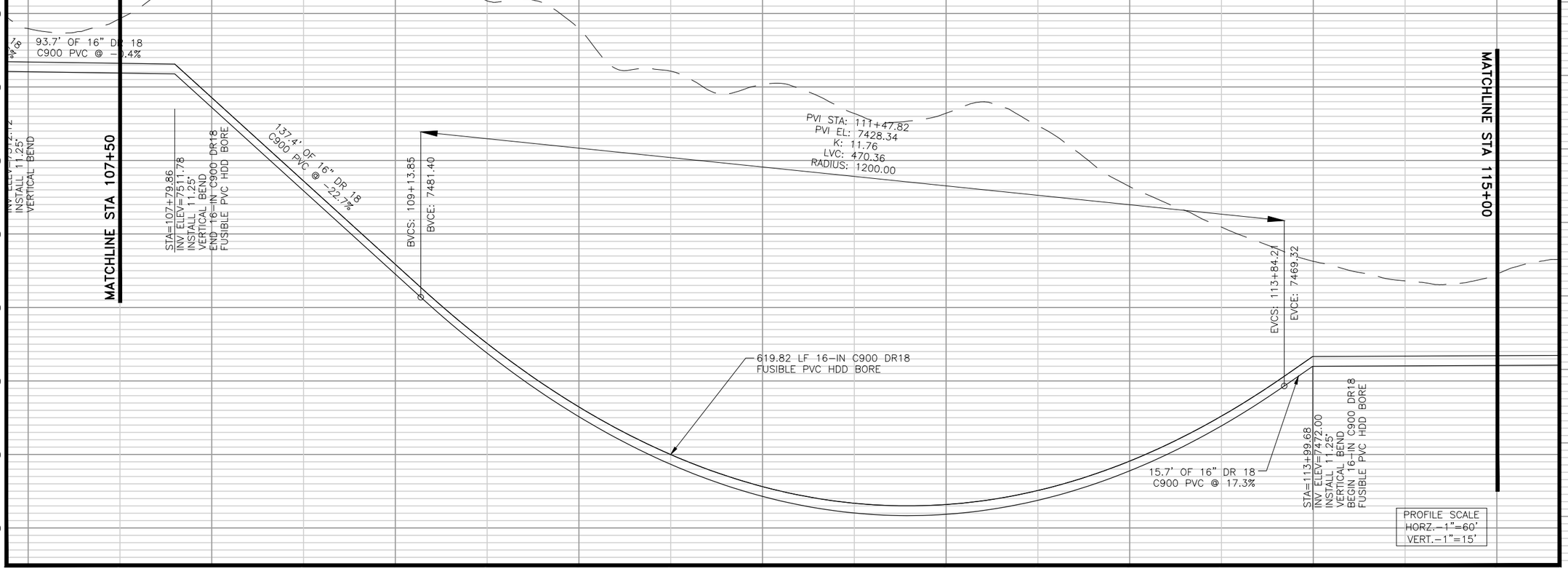
REVISIONS			
NO.	DESCRIPTION	BY	APP.	DATE
1				
2				
3				
4				
5				
6				
7				

70% DESIGN

Project No.:	22429
Date:	7/28/22
Design:	MLD
Drawn:	SNW
Check:	MLD

B3-01
SHEET ----OF





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(719) 227-0072

TRIVIEW METROPOLITAN DISTRICT

NORTHERN DELIVERY SYSTEM

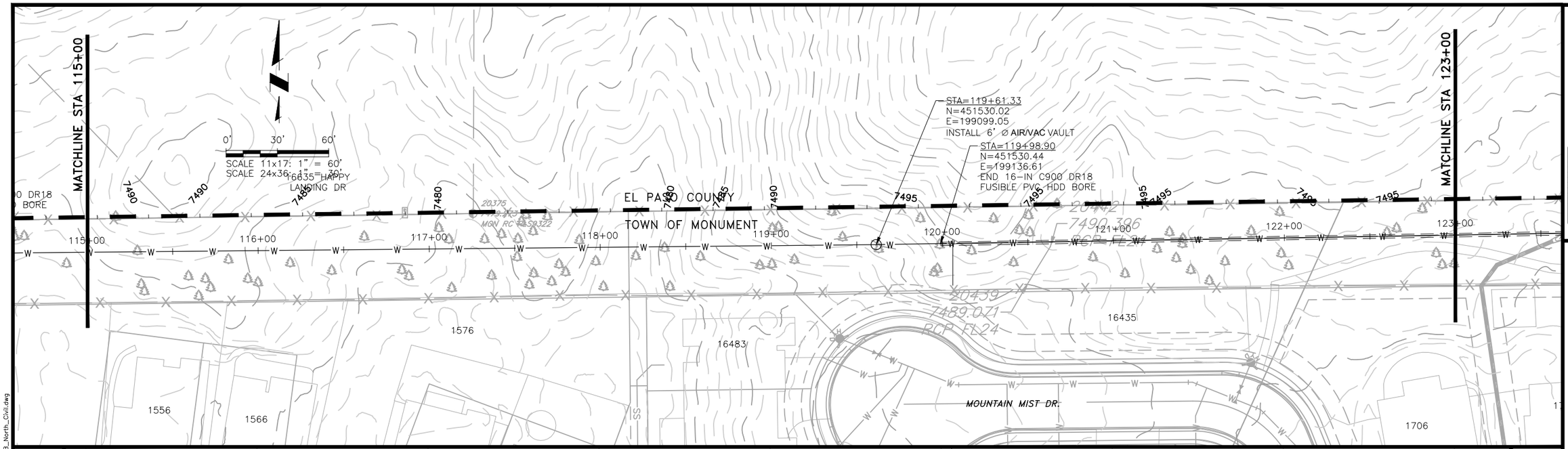
SEGMENT B3 – PLAN AND PROFILE
STATION 107+50 TO 115+00

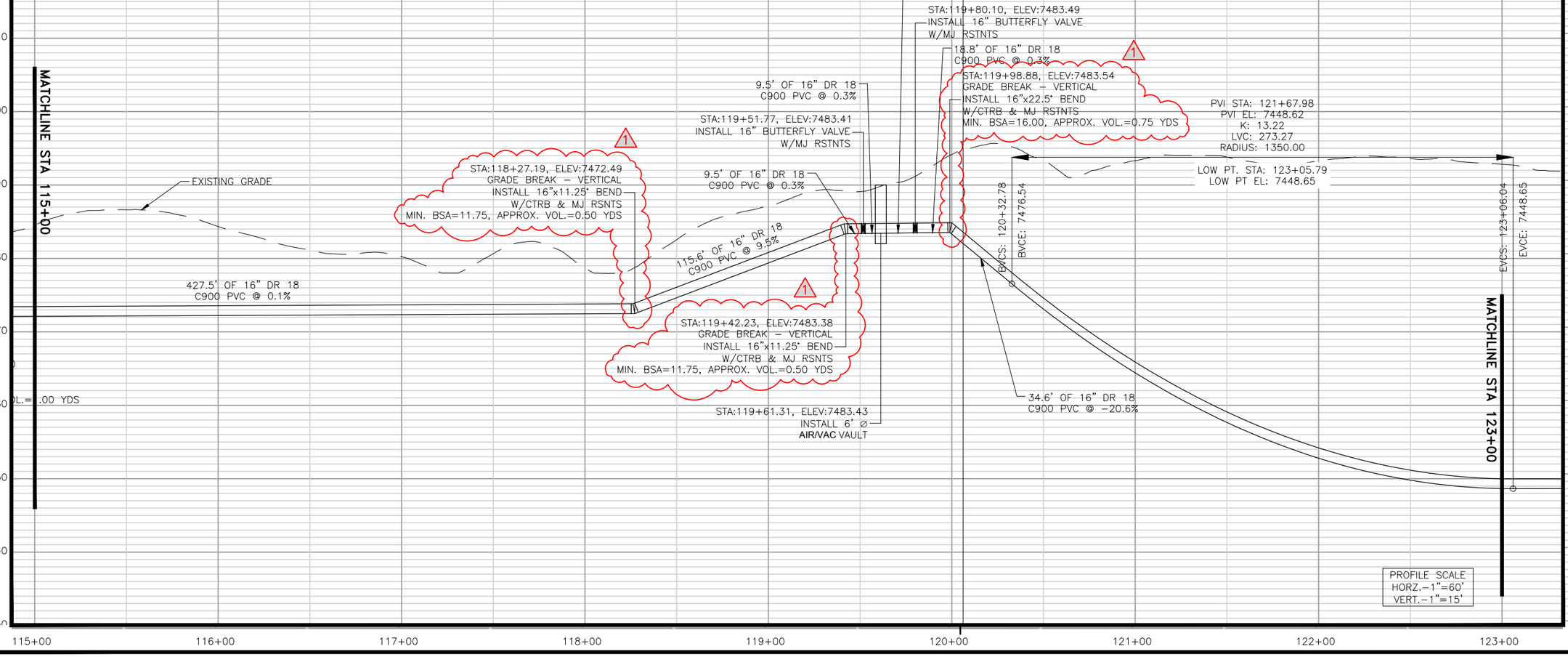
REVISIONS				
NO.	DESCRIPTION	BY	APP.	DATE
1				
2				
3				
4				
5				
6				
7				

70% DESIGN

Project No.:	22429
Date:	7/28/22
Design:	MLD
Drawn:	SNW
Check:	MLD

B3-02
SHEET ----OF





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TRIVIEW METROPOLITAN DISTRICT

NORTHERN DELIVERY SYSTEM

SEGMENT B3 – PLAN AND PROFILE

STATION 115+00 TO 123+00

REVISIONS

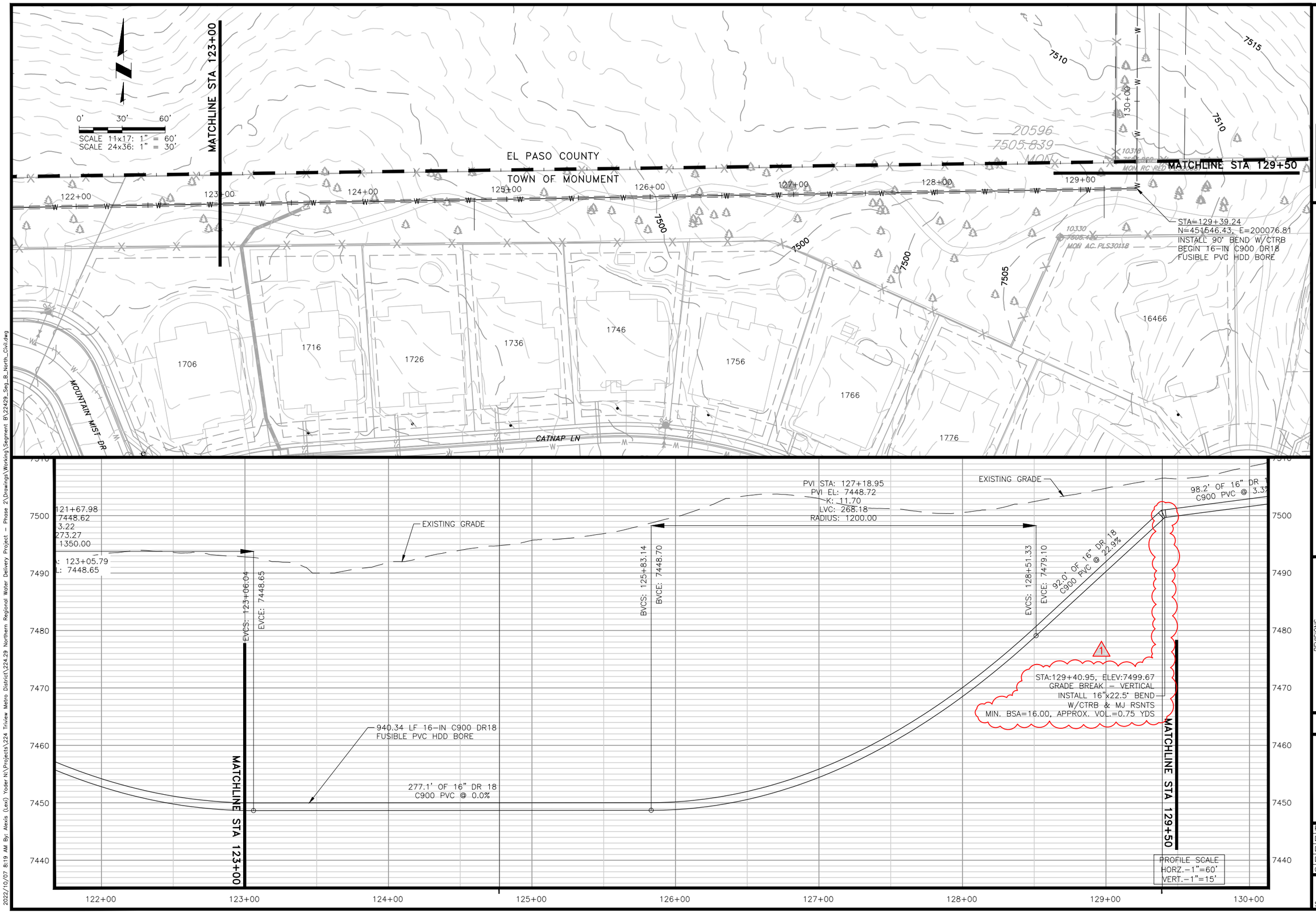
NO.	DESCRIPTION	BY	APP.	DATE
1	REVISIONS 1	JLB		10/05/22
2				
3				
4				
5				
6				
7				

70% DESIGN

Project No.: 22429
Date: 7/28/22
Design: MLD
Drawn: SNW
Check: MLD

B3–03

SHEET ----OF



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TRIVIEW METROPOLITAN DISTRICT

NORTHERN DELIVERY SYSTEM

SEGMNET B3 – PLAN AND PROFILE

STATION 123+00 TO 129+50

REVISIONS

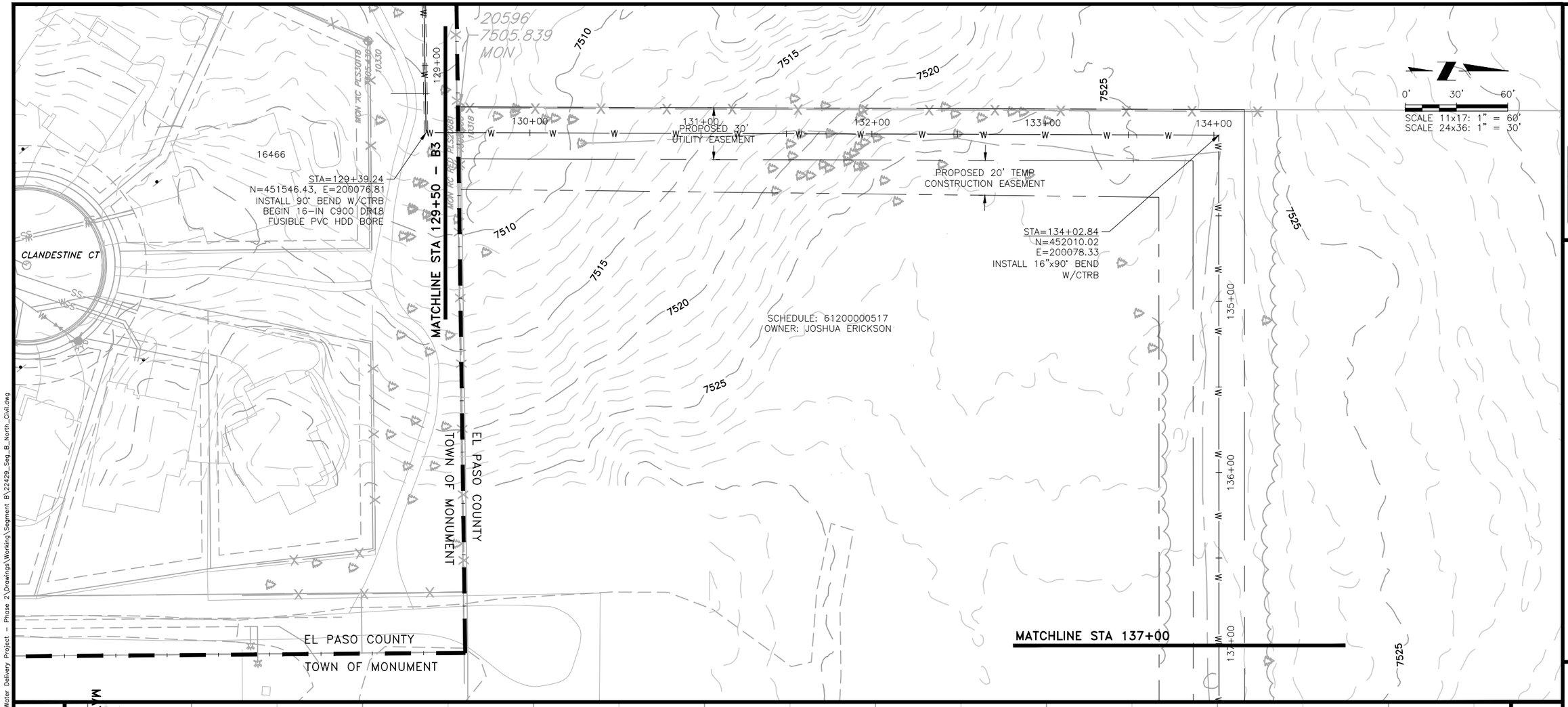
NO.	DESCRIPTION	BY	APP.	DATE
1	REVISIONS 1	JLB		10/05/22
2				
3				
4				
5				
6				
7				

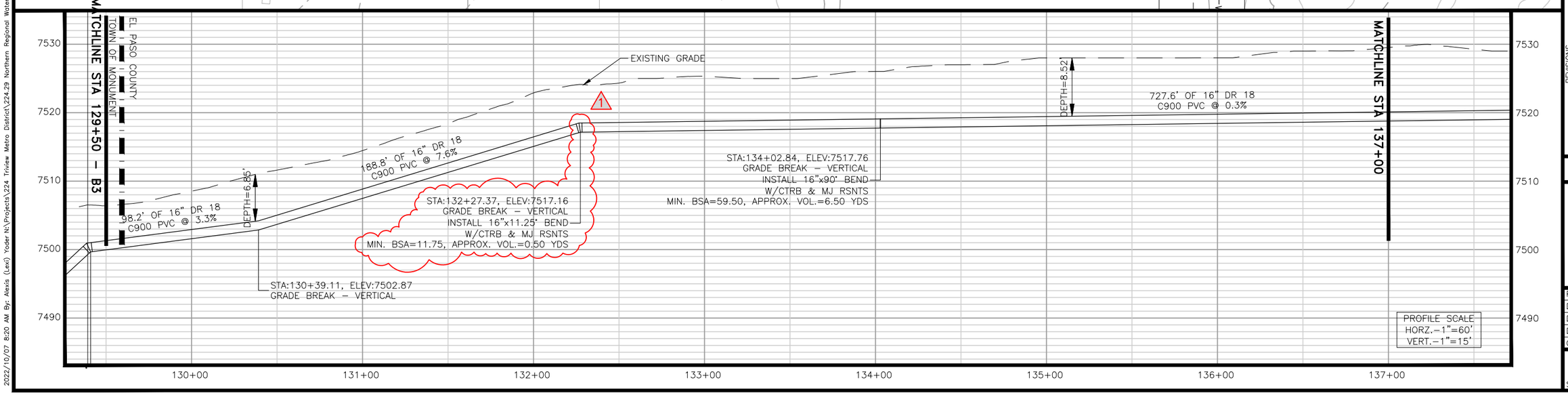
70% DESIGN

Project No.:	22429
Date:	7/28/22
Design:	MLD
Drawn:	SNW
Check:	MLD

B3-04

SHEET ----OF





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(719) 227-0072

TRIVIEW METROPOLITAN DISTRICT

NORTHERN DELIVERY SYSTEM

SEGMENT B4 – PLAN AND PROFILE

STATION 129+50 TO 137+00

REVISIONS				
NO.	DESCRIPTION	BY	APP.	DATE
1	REVISIONS 1		JLB	10/05/22
2				
3				
4				
5				
6				
7				

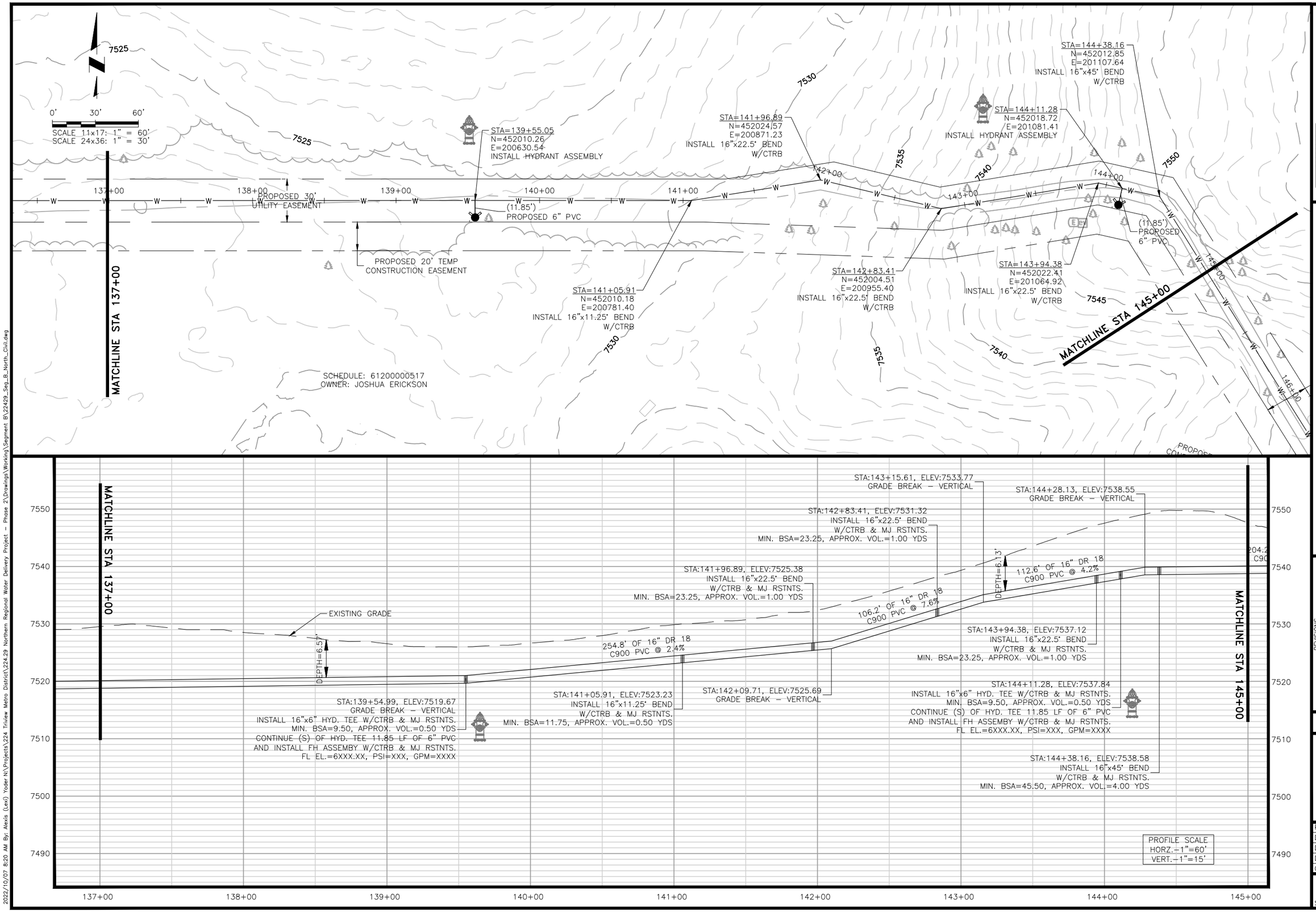
70% DESIGN

Project No.:	22429
Date:	7/28/22
Design:	MLD
Drawn:	SNW
Check:	MLD

B4–01

SHEET ----OF

2022/10/07 8:20 AM By: Alexis (Lexi) Yoder N:\Projects\224 Triview Metro District\224.29 Northern Regional Water Delivery Project – Phase 2\Drawings\Working\Segment B\22429_Seg_B_North_Civil.dwg



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TRIVIEW METROPOLITAN DISTRICT

NORTHERN DELIVERY SYSTEM

SEGMENT B4 – PLAN AND PROFILE

STATION 137+00 TO 145+00

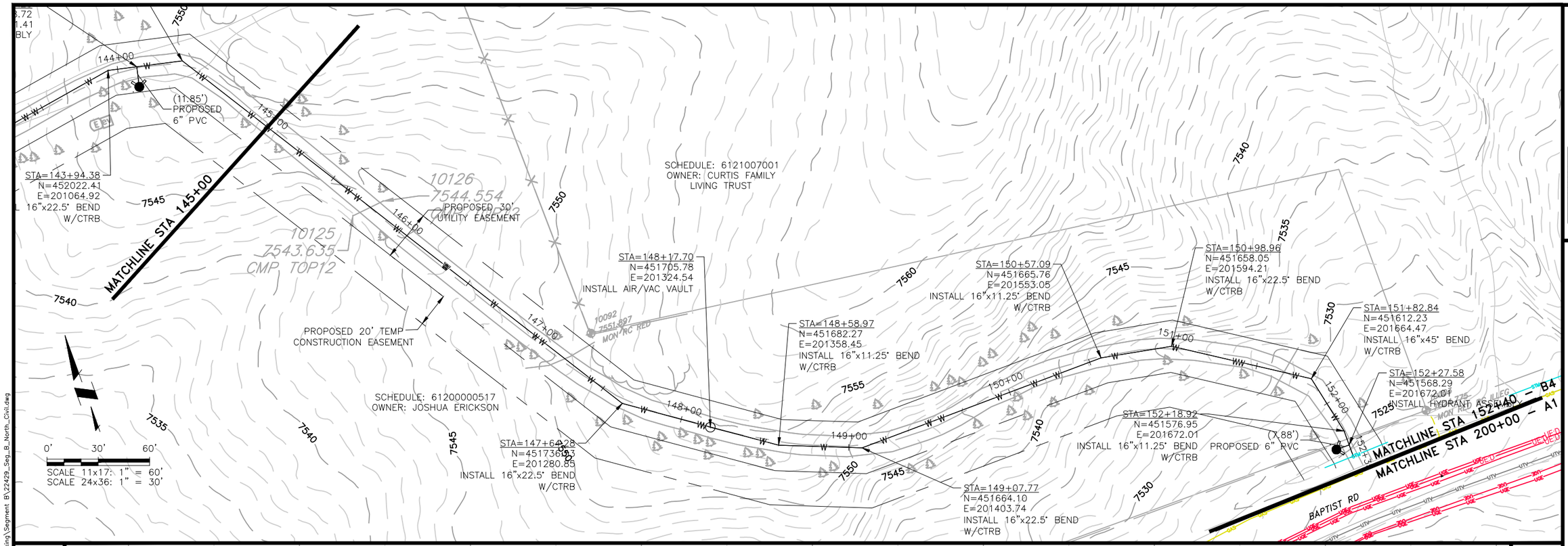
REVISIONS			
NO.	DESCRIPTION	BY	APP.	DATE
1				
2				
3				
4				
5				
6				
7				

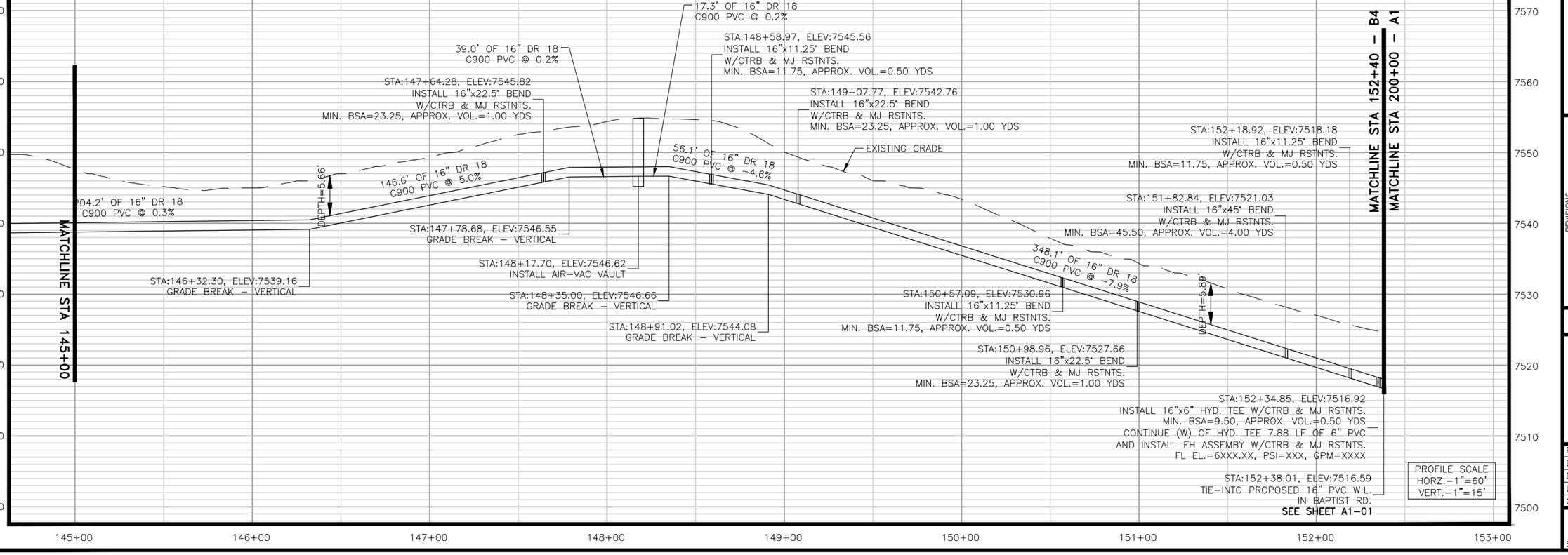
70% DESIGN

Project No.:	22429
Date:	7/28/22
Design:	MLD
Drawn:	SNW
Check:	MLD

B4–02

SHEET ----OF





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(719) 227-0072

TRIVIEW METROPOLITAN DISTRICT

NORTHERN DELIVERY SYSTEM

SEGMENT B4 – PLAN AND PROFILE

STATION 145+00 TO 152+40

REVISIONS			
NO.	DESCRIPTION	BY	APP.	DATE
1				
2				
3				
4				
5				
6				
7				

70% DESIGN

Project No.:	22429
Date:	7/28/22
Design:	MLD
Drawn:	SNW
Check:	MLD

B4-03

SHEET ----OF