



CASPER AREA
METROPOLITAN PLANNING ORGANIZATION
Casper - Mills - Evansdale - Bar Nunn - Natrona County



CITY OF MILLS
EST. 1991



ROBERTSON ROAD TO MILLS TRAIL EXTENSION PLAN



SEPTEMBER 30, 2021

TABLE OF CONTENTS

1.0 EXECUTIVE SUMMARY	3
2.0 PROJECT OVERVIEW	4
2.1 Project History	4
2.2 Project Description & Location	4
2.3 Existing Conditions	4
2.4 Project Goals	4
3.0 ALIGNMENT ANALYSIS	5
3.1 Safety	5
3.2 User Experience	5
3.3 Recreational Opportunities	5
3.4 Grades & ADA Compliance	6
3.5 Easements & Rights-of-Way	6
3.6 Utilities	6
3.7 Environmental Considerations	6
3.8 Constructability	6
4.0 ALIGNMENT OPTIONS	7
4.1 Alignment Descriptions	7
4.2 Connection to Existing Pathways	9
5.0 PUBLIC INVOLVEMENT	11
5.1 Outreach Events	11
5.2 Public Response	11
6.0 PREFERRED ALIGNMENT	12
6.1 Preliminary Design Plans & Amenities	12
6.2 Final Design Considerations	12
6.3 Cost Estimate	16
6.4 Potential Funding Sources	17
7.0 PROJECT IMPLEMENTATION PLAN	20
8.0 REFERENCES	21
LIST OF FIGURES & MAPS	
Figure 1: Alignment A	7
Figure 2: Alignment B	8
Figure 3: Alignment C	9
Map 1: Trail Conceptual Plan	44
Map 2: WAPA Corridor Concept Plan	45
LIST OF TABLES	16
Table 1: Preliminary Engineers Estimate of Probable Construction Costs	
APPENDICES	
Appendix A – Public Outreach Summary	22
Appendix B – Preliminary Design Drawings and Exhibits	27
Appendix C – Amenity Illustrations & Cost Reference	43

1.0 EXECUTIVE SUMMARY

The Robertson Road to Mills Trail Extension Plan and feasibility study was conducted to determine the feasibility of construction of a pathway through the town of Mills between Robertson Road and Wyoming Boulevard near City Hall. The Mills Comprehensive Plan identified opportunities to improve connectivity between existing trails within Mills. The Plan also noted a need to expand the trail system to the west to connect to newly developed neighborhoods. The following is a summation of those efforts.

1.1 PROJECT PURPOSE & NEED

Founded in 1921, the City of Mills has a rich history including being part of the Oregon and Mormon Trails. Two of the many routes used by early settlers heading west came through Mills using the Child’s route and Poison Spider route. The Child’s route, or Child’s Cutoff, was a leg of the Oregon Trail which opened in 1850. This new route allowed emigrants to follow along the north bank of the North Platte River to avoid crossing at Fort Laramie. This cutoff lead emigrants right into what is now Mills, Wyoming.

Today Mills connects to a regional network of approximately 45 miles of trails spanning the entire Casper area. Within the existing Mills city limits, there are approximately four miles of pathways connecting to the Platte River Parkway. Mills residents can access the Platte River Parkway at First Street Park and at SW Wyoming Boulevard near First Street. The City of Mills and the Casper Area MPO want to connect this system with the Robertson Hills neighborhood and other newer residential developments within the City.



1.2 PROCESS

Community engagement and public outreach was performed to inform the communities of the planning process and intent of the Study, gather and document public input, and better understand the needs of the Mills community and visitors. Public input was collected in person at two events in Summer 2021, online and during a 30-day comment period for the draft document. Input was evaluated for consideration in the final plan document.

1.3 PREFERRED ALIGNMENT

Multiple alignments were explored and evaluated for their ability to best meet the project goals. Evaluation factors included: safety, grades and ADA compliance, user experience, recreational opportunities, utilities, land ownership, easements and right-of-way, constructability and environmental constraints.

The preferred alignment meets all the project goals, and all affected landowners have indicated preliminary support for the alignment. The trail location will be constructable and implementable while still providing opportunity for a great user experience and a safe pathway.



2.0 PROJECT OVERVIEW

2.1 PROJECT HISTORY

The economy of Mills continues to cycle through the boom and busts of the extractive industry and the town continues to expand services and amenities. The current population is approximately 4,500 people. The City is generally bordered by the US 20/26 Bypass in the northeast, Salt Creek Highway and the North Platte River to the east, River Crossing and Boles Roads to the south, and Robertson and Poison Spider Roads to the west.

Multiple studies and plans have been completed for the City of Mills and the Casper Area MPO regarding long term goals, and potential improvements to the area:

- The Mills Main Street Corridor Study goal was to explore the future implementation of a Downtown Riverfront District, and to provide corridor improvement recommendations and redesign concepts of SW Wyoming Boulevard with the objectives of enhancing connectivity, safety, placemaking, and economic opportunity.
- The Mills Comprehensive Plan established the vision and future character to guide the growth and development of Mills.
- The River Front Property Programming Study assessed the development potential along the riverfront property where this project's proposed pathway would end.

2.2 PROJECT DESCRIPTION & LOCATION

The Robertson Road to Mills Trail Extension Plan assesses the feasibility, and guides the development, of the construction of a pathway beginning at Robertson Road near the westerly city limits of Mills and connecting to the existing Platte River Trails corridor near the Platte River/ Wyoming Blvd. bridge. This trail would be a paved walking/biking, non-motorized use, multi-modal improvement trail.

2.3 EXISTING CONDITIONS

Multiple field visits were conducted to review the existing conditions throughout the study area in consideration of a potential pathway. The pathway alignment would pass through varying conditions ranging from open land areas to city streets and neighborhoods. Multiple existing utility easement corridors exist through the area, notably the Western Area Power Administration (WAPA) overhead power lines and multiple underground gas lines.



2.4 PROJECT GOALS

The primary goal of the project is to evaluate the feasibility of constructing a shared-use pathway to provide a bicyclist and pedestrian friendly pathway with connectivity between existing and developing neighborhoods, future developments, and the existing Platte River Parkway Trail system.

With safety concerns for runners, bicyclists, and walkers along Robertson Road and Poison Spider Road, the City of Mills and the Casper Area MPO are seeking a dedicated pathway for pedestrians to use for overall community enhancements while also improving safety concerns. With the increase in recreational opportunities, the pathway would provide a safe means to participate in some form of exercise to benefit their health. The pathway would create a family-friendly recreational corridor through the Mills community, improving the community's overall quality of life.

3.0 ALIGNMENT ANALYSIS

Multiple alignment options exist within the project corridor between Robertson Road and the existing pathway infrastructure east of the bridge at Wyoming Boulevard. A primary goal of this study is to evaluate these options, identify issues and overall feasibility, and ultimately identify a preferred alternative that would serve as the basis for moving the project forward toward construction in the future. Many factors were considered while evaluating potential alignment options. Primary criteria included the following:

3.1 SAFETY

Safety is of utmost importance for a project of this type. The construction of a shared-use pathway would need to meet the connectivity and user goals while at the same time minimizing the potential for vehicular and bicycle/ pedestrian incidents and improving the overall pedestrian safety along the corridor. The preferred alignment will have sufficient signage indicating its pedestrian use. Signage will help indicate direction of travel, trail length and difficulty, prohibited activities, upcoming hazards or risks, and refuge areas. Multiple at-grade crossing would be required to cross existing streets. Each at grade crossing would need to evaluate site conditions and identify engineering controls for both pathway and vehicle traffic.



3.2 USER EXPERIENCE

The preferred alignment should consider the overall experience of the pathway user and incorporate opportunities for recreation and other future amenities. Separation from established roadways, maximizing scenic viewsheds, and utilizing open spaces where possible are all seen as advantageous. Impacts to users due to weather, primarily wind, should also be taken into consideration.



3.3 RECREATIONAL OPPORTUNITIES

In addition to accommodating traditional direct trail uses such as cycling, walking and running, trails can support more diverse user groups by considering supplemental amenities. Features such as nature-play, soft-surface trails, bike skills loops, exercise stations and public art displays can be incorporated along the corridor as funding allows. Co-locating these amenities adjacent to developed park, open space or trail heads increases use and ease of maintenance.



3.4 GRADES & ADA COMPLIANCE

The preferred alignment option would consider limitations of all potential users. Existing topography and grades play a large role in being able to comply with the requirements of the Americans with Disabilities Act (ADA) to ensure it is accessible and usable by individuals with disabilities. If Federal funding sources were to be used for construction, pathway designs would be required to meet current ADA Standards for Accessible Design (ADA, 2010). Circumstances exist where it may be possible to seek a design exception, however for the purposes of this study alignments were evaluated on the assumption that pathway would remain ADA compliant with maximum 2% cross slopes and maximum 5% running slopes. While ADA criteria allow steeper longitudinal grades if landings and handrails are provided, we did not consider this an option when evaluating alignments. Amenities at trailheads and waysides shall also be compliant with ADA, to include seating, signage and other features.



challenging slopes adjacent to wyoming boulevard

3.5 EASEMENTS & RIGHTS-OF-WAY

Existing land ownership plays a large factor when evaluating the feasibility of pathway alignments throughout the corridor. Any part of the proposed pathway alignment or potential construction disturbance located on private lands would require negotiations with each effected landowner for easement acquisition, land purchase, or other right of way acquisition strategies. Temporary construction easements would be required in areas where additional room is needed during construction. Once construction is complete or the term expires, the temporary easement would be terminated.

Multiple large utility corridors exist in the area that could be utilized as potential pathway locations. The utility easements limit current uses and future development potential in these areas, which could make right of way negotiations easier. City of Mills also owns multiple parcels throughout the area, many of which were acquired specifically with this project in mind. Taking advantage of City owned property will undoubtedly reduce costs and project time frames.

3.6 UTILITIES

As mentioned above, multiple buried and overhead utilities exist along the proposed alignment, including natural gas, overhead power, underground telephone, water, sewer, and cable. Pathway alignments should avoid direct conflict with utilities whenever possible to minimize utility relocation costs and limit potential future costs due to utility repair or maintenance work.



electrical equipment along alignment

3.7 ENVIRONMENTAL

Potential alignments also need to consider impacts to existing wetlands, wildlife, historical or cultural impacts, and vegetation. Conflicts with environmental factors could result in unexpected delays and increased costs to the project.

3.8 CONSTRUCTABILITY

Consideration of adjacent drainage patterns, conflicts with existing development (landscaping, retaining walls, etc.), fencing and access control, and other detailed design considerations were also evaluated when evaluating alignment alternatives.

4.0 ALIGNMENT OPTIONS

While the area within the project corridor is relatively large, multiple constraints exist that limit the potential locations for a pathway. The location of the Mobil Concrete pit and the boundary of the southerly City limits in the western half of the project area make a southerly route impractical. More options exist through the developed portion of Mills between 6th Ave. and Falcon Ave, however most of the potential routes through here would rely on following existing street corridors. Options through the eastern portion of the project are somewhat limited by the larger industrial properties that exist in this area.

4.1 ALIGNMENT DESCRIPTIONS

City of Mills staff had performed preliminary work identifying a potential alignment corridor prior to the onset of this project, including preliminary conversations with affected landowners. The initial alignment identified by Mills was used as a starting point in our evaluation. Two variants of this alignment were also evaluated, with the differences primarily being in the middle half of the project area. The east and west portions of the alignment identified by Mills make the most sense, and few other alternatives exist in these areas. The three alignment options evaluated in detail can be seen in below:

ALIGNMENT A

This is the initial option identified by City of Mills staff and is 2.93 miles or 15,490 linear feet. A primary advantage of this route from a user perspective is utilization of open space and separation from existing streets. The existing Western Area Power Administration (WAPA) corridor and multiple underground gas line easements were utilized, allowing the pathway to traverse through adjacent development while not restricting future development or being confined to existing street corridors. This option



Figure 1: Alignment A

increases user safety by minimizing potential conflicts with traffic and provides exceptional views of the Platte River Valley, Casper Mountain, and surrounding areas. This alignment also incorporates several parcels of City owned property, reducing the amount of right of way acquisitions required.

This alignment crosses a large swath of property owned by Mobile Concrete, at both their active pit and office/equipment yard locations. City staff had discussed the potential of a pathway with the owners of Mobil Concrete prior to initiation of this study, and consensus at the time was that they were generally in support of the project. WWC presented the potential alignment to Mobile Concrete and discussed the project in more detail during this study. The owners are in support of the overall project but expressed concerns of safety and liability related to operations at their pit and where the pathway would need to cross existing pit access roads. They have similar concerns for the portion of the alignment that crosses their yard near Wyoming Blvd, but the biggest concerns were related to the pit property. Potential measures that might address these concerns such as engineering controls, signage, easement language, and property acquisition were discussed. As of this time, the landowner is not supportive of this alignment due to its location across the pit property.

4.2 CONNECTION TO EXISTING PATHWAYS

The proposed pathway will connect two existing pathways, one on the western end of the alignment, and the other on the eastern end.

WEST CONNECTION

The connection on the western end of the proposed alignment is straight forward. The existing pathway which runs along Robertson Road ends at the intersection with River Heights Drive. The proposed pathway would begin at the north side of this intersection and extend through the newly developed residential area. Between River Heights Drive and Stillwater Way the pathway would be attached to the adjacent curb and gutter along Robertson Road. North of Stillwater Way the alignment will deviate from Robertson Road, traveling northeast just outside the Robertson Hills Subdivision.



west connection



looking south along Robertson Road

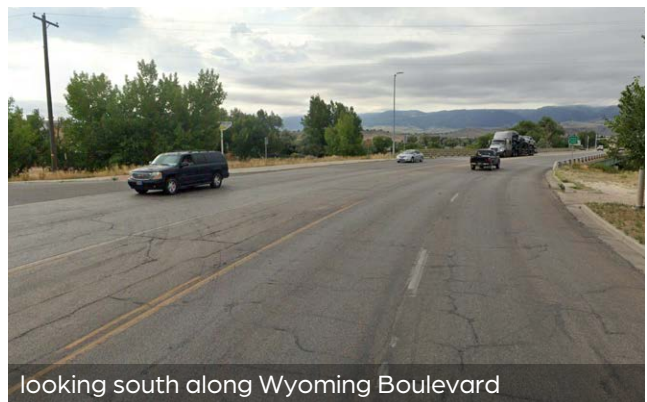
EAST CONNECTION

The connection on the eastern end of the proposed alignment will require careful planning and realistic pedestrian movements. A defined goal of the proposed pathway is to coincide with future development of the Riverfront property owned by the City near the Wyoming Boulevard bridge over the North Platte River, with a connection to the existing Platte River Parkway trail system at the northeast corner of the bridge. The pathway alignment near the river has been laid out with the previous Riverfront Comprehensive Plan and Concept Development in mind. Ideally the pathway is incorporated into any future development along the river by the City of Mills.



looking south at Riverfront property site

From a safety standpoint, the pathway crossing at Wyoming Boulevard will be a critical concern. With the high traffic volumes along the road, it poses a potential safety concern with pedestrians. The simple solution would be an at-grade crossing of Wyoming Blvd near the bridge.



looking south along Wyoming Boulevard



High traffic volumes and limited sight distance around the curve would create a serious safety hazard, eliminating this crossing as a viable option. Other alternatives considered to for providing connectivity across Wyoming Boulevard include:

UTILIZE EXISTING BRIDGE AT WYOMING BLVD

At first glance, utilizing the existing bridge seems like a simple solution. However, there is not enough vertical clearance over the river to allow a pedestrian underpass which rules out that option. Addition of a widened sidewalk along the west side of the bridge to allow use of the existing underpass south of the river would be possible, but would require widening and modification of the bridge deck which may be cost prohibitive compared to other alternatives.

PEDESTRIAN BRIDGE OVER THE RIVER

Another way to utilize the existing underpass south of the river would be to install a separate pedestrian bridge over the Platte River to the west of the existing traffic bridge. Pathway users could then utilize the existing pathway tunnel beneath Wyoming Boulevard to then cross back over the traffic bridge with the existing sidewalk and make the connection to the pathways north of the river. While still expensive, this option would likely cost less than widening the existing roadway bridge. The primary concern we have with the option is

the additional distance this route would require. Pedestrians may view this as an unnecessary detour and consider crossing Wyoming Boulevard in an undesignated location, which as discussed previously would be a safety concern.

SIGNALIZED AT GRADE CROSSING

As indicated in the Mills Main Street Corridor Study, our recommendation would be to utilize a signalized crossing to cross Wyoming Boulevard. A rectangular rapid flashing beacon (RRFB) could be installed at the 4th street intersection as indicated in the Corridor Study to align with future development and access control.

If the crossing were moved west from the bridge and into the tangent section of the roadway, engineering controls such as signalization, signage, pavement markings, and pedestrian refuge islands could be incorporated into a safe at-grade crossing design. Our recommendation would be to install an at-grade cross over Wyoming Boulevard near 4th St. This would allow the crossing to be 500' from the curve and providing maximum site lines for vehicles and pedestrians. The pathway would then follow the sidewalk on the north side of Wyoming Boulevard and connecting to the existing pedestrian pathways near the river. This location would also coincide with future development plans for the adjacent Riverfront property. WYDOT would need to be approve this crossing design. Preliminary conversations indicate they are not opposed to the concept, but it may require installation of a traffic signal at this intersection. If this crossing could be done in conjunction with adjacent development of the Riverfront area, this option appears to be the most feasible. However the cost of this crossing by itself may be cost prohibitive if a traffic signal were to be required and costs could not be distributed between the pathway and future development infrastructure.

5.0 PUBLIC INVOLVEMENT

5.1 OUTREACH EVENTS

Community engagement and public outreach was performed to inform the communities of the planning process and intent of the Study, gather and document public input, and better understand the needs of the Mills community and visitors.

Our team conducted two public outreach events during the course of the study. On June 12th, 2021 an informational booth was displayed during the City of Mills 100th Anniversary Summerfest event. Project goals and intent were conveyed, along with an opportunity to provide feedback on pathway usage and preferred features and amenities. On August 17th, 2021 an informational booth was manned during the bi-weekly farmers market at the David Street Station. The three alignment options were presented along with a summation of feedback received from the first outreach. Attendees were encouraged to ask any questions they had and provide any comments or feedback to the team.

In addition to the two public outreach events, individual contact was made with each affected private landowner who might be affected or impacted by the pathway. The goal of these contacts was to share an overview of the project and identify any landowner concerns that might impact the feasibility of a particular alignment or impact the potential of being able to secure easements in the future. A summary of input collected during the outreach process is included in Appendix A.



public outreach #1 participants

5.2 PUBLIC RESPONSE

The response received during the public involvement process was overwhelmingly positive. Everyone that provided feedback was in support of the overall project concept and were excited about the prospect of adding additional pathways to the existing network. The two concerns we heard about most during our outreach conversations were safety and connectivity.

SAFETY

Vehicular collisions are generally the most dangerous and damaging accidents for pedestrians and bicyclists to due to the sheer size and speed of automobiles. Current pedestrians and bicyclists must use Robertson Road, Poison Spider Road, and various connection streets within the Mills area, all of which are significantly more dangerous than a dedicated multi-use pathway. There is currently no signage or designated areas pedestrians and cyclists along the roadway save for a few locations of sidewalk. The pathway would provide a much safer route for walkers, runners, and bicyclists. This was the most discussed topic during our individual conversations with affected landowners.

CONNECTIVITY

The City of Mills recently has seen an expansion and growth of residential areas west of town near the Robertson Road area. This pathway would allow for the city of Mills to be connected through transportation alternatives other than automobiles. The pathway would allow children and adults of all ages to travel independently between various residential areas of the city. Ensuring that the selected route would provide connectivity and access to surrounding neighborhoods, future development, and existing trail systems was a frequent topic of conversation during the public involvement process.

6.0 PREFERRED ALIGNMENT

Considering the numerous factors described in Sections 3 and 4 above, and after careful evaluation of each alignment we believe that Alignment A as originally identified by the City of Mills is the best option from purely a pathway design perspective. It is the most scenic, provides the most open space, and has the least potential for traffic conflicts compared to the other two alignment options. However, based on recent conversations with the landowner we do not see it being feasible to obtain needed easements or right of way acquisition at this time. Based on that, the recommendation is to move forward with Alignment B as the most feasible alternative (see Figure 2 and Map 1). This alignment meets all the project goals, and all affected landowners have indicated preliminary support for this alignment. While it may not contain all of the same advantages as Alignment A, Alignment B avoids areas of significant landowner concern while still providing opportunity for a great user experience and a safe pathway.

6.1 PRELIMINARY DESIGN PLANS & AMENITIES

Conceptual designs were developed for the alignment following design criteria found in the following guidance documents:

- American Association of State Highway and Transportation Officials (AASHTO) guideline "Guide for the Development of Bicycle Facilities" (AASHTO 2012)
- AASHTO "Guide for the Planning, Design, and Operation of Pedestrian Facilities (AASHTO, 2004), and
- 2010 ADA Standards for Accessible Design (ADA, 2010).

A pathway width of 10-ft is recommended, though sections of the path may need to be narrowed in order to fit within the available Right of Way corridor. The preliminary design comprises major design elements including the current estimated ROW, the pathway alignment in plan and profile, typical sections, and design feature locations. ROW widths, potential easement acquisitions, ADA compliance and slope, construction costs, and pathway materials were all considerations during design. The preliminary design drawings are provided in Appendix B.

In addition to the preliminary design plans along the preferred alignment, illustrations depicting potential amenities that could be incorporated along the alignment are shown in Appendix C.

6.2 FINAL DESIGN CONSIDERATIONS

In order to move the project to final design and construction, additional effort will be required in the several areas. Primary considerations are described in more detail below:

RIGHT OF WAY & EASEMENT ACQUISITION

Easements from seven individual landowners will be required in order to secure the necessary Right of Way to move forward with construction. While we made initial contact with all landowners along the preferred alignment, additional negotiations will be required to discuss and negotiate the terms and conditions of the easements. Legal descriptions and exhibits will need to be prepared that define the easement areas, which will require a boundary survey in some instances.

DESIGN CONSTRAINTS

While there will be many specific design details to be worked out during final design, there are four notable areas that warrant identification:

- South of Robertson Hills 2 just west of the CWRWS Water Tank (Station 33+50 to 36+00 ±) there is a small area of very steep topography that will be difficult to design to ADA complaint grades.



- Approximately 700 feet of fence would be required to limit access onto the Mobile Concrete Pit property (Station 87+00 to 93+00 ±).



- A very narrow corridor exists at the east end of the Buffalo Meadows subdivision (Station 126+00 to 129+75 ±) that the pathway would have to fit inside. This area was reserved during negotiations between the City and the developer specifically for this pathway. The

available easement width is just over 10-foot wide, with existing 6-foot chain link fence on the north side and subdivision barrier fencing proposed along the south side it may not be possible to construct an 8-foot wide pathway though this reach. While it will function, the narrow corridor will be detrimental to user experience through this area.



- The entire portion of the pathway across the Mobile Concrete Office and yard property (Station 140+00 to 152+00 ±) will need to be fenced to prevent access to the adjacent property. Depending on the type of fencing installed and the negotiated easement width, this could result in a similar “narrow hallway” feel as chain link fencing currently exists along the north side. The existing electrical service (Station 149+00±) to the Mobile Concrete property will likely need to be relocated as a condition of the landowner in order to eliminate conflicts with the pathway.



ENVIRONMENTAL

The level of effort required for environmental clearances will likely be determined by the funding sources used for the project. If Federal funds are used, the project will be required to conform with the National Environmental Policy Act (NEPA) rules and regulations. NEPA requires that prior to funding, authorizing, or implementing an action, agencies consider the effects that their proposed action may have on the environment and the related social and economic effects, as early as possible in any given decision-making process. Federal agencies comply with NEPA for an activity or action by evaluating the environmental impacts of the action in one of three levels of analysis: Categorical Exclusion (CATEX), Environmental Assessment (EA), or Environmental Impact Statement (EIS). The NEPA action for the proposed pathway is likely a CATEX.

The following are the primary steps to be completed for the CATEX:

- Prepare scoping letters with details on the proposed scope of the project,
- Send scoping letters to the Wyoming Game and Fish Department, U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, State Historic Preservation Office, and other applicable agencies depending on project specifics,
- Complete design plans to 35% to determine proposed impacts,
- Complete a Class III Cultural Survey,
- Determine if existing wetlands are impacted,
- Complete a biological review and review of Threatened and Endangered Species
- Summarize findings and documentation of CATEX determination.

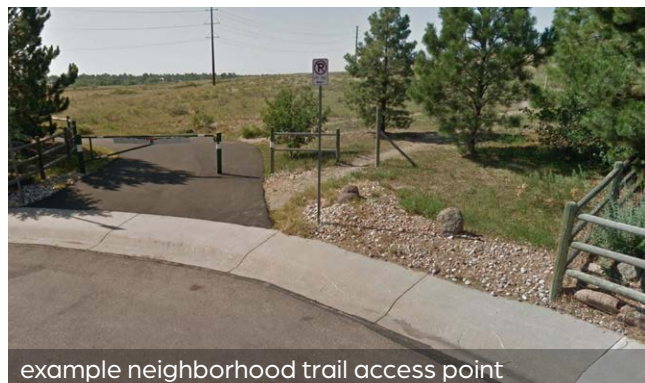
Conversely, if the project were to be funded with local or private funds, it may not be required to follow the NEPA process.

ENVIRONMENTAL REVIEW

As part of this study, a preliminary review of data in the public record was reviewed to determine the potential for any known environmental concerns along this corridor. The National Wetlands Inventory (NWI) database of known wetland areas was reviewed, along with limits of defined floodplains. The area near the North Platte River contains previously delineated wetlands along the banks, though the proposed alignment does not impact any of them. The entire area along Wyoming Boulevard south of Mobile Concrete property is located inside the delineated floodplain, though no restrictions exist for pathways being located inside a floodplain. Other databases of previously contaminated sites with Wyoming Department of Environmental Quality and EPA were reviewed but did not identify any potential issues. While this brief review is no guarantee that no environmental concerns exist, we do not anticipate any significant environmental impacts delaying or impeding this project.

PARKING & PATHWAY ACCESS

While the pathway would be easily accessible by local residents and pedestrians and bicyclists using it as a connection from adjacent trails, the addition of trailheads and designated parking areas for users is worth consideration. The ability for residents to drive to a parking lot and utilize the pathway is a great way to increase access and overall pathway use. It can also serve as



example neighborhood trail access point

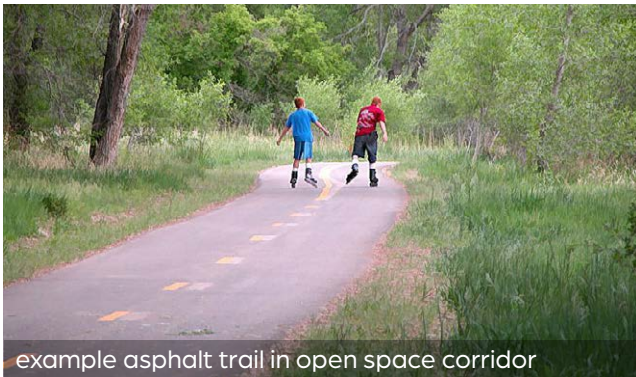
a great location for integration of trail system maps or the addition of other amenities. The vacant lot inside the WAPA corridor near the intersection of Pontiac Street and 3rd Avenue could be a potential location for future parking area and trailhead, as would the area just north of the intersection of Stillwater Way and Robertson Road.



potential on-street parking access along WAPA

SURFACING TYPE

Two options exist for pathway surfacing material, asphalt or concrete. Concrete Pathways are common in urban settings and can have a greater life expectancy. However, initial construction costs can be higher when compared to asphalt. Asphalt paths are frequently used in undeveloped, open space corridors. Either material is a viable option, cost and long term maintenance should be evaluated along with stakeholder preference.



example asphalt trail in open space corridor

Our recommendation would be to consider a concrete pathway in locations adjacent to existing streets and developed areas (along Robertson Road and Poison Spider Road), while considering asphalt through the undeveloped open spaces (WAPA corridor).

A granite sands or stabilized crusher fines shoulder could also be added in areas through park and open spaces to allow an alternative surface for trail runners and gravel cyclists.



example of stabilized crusher fines shoulder

6.3 COST ESTIMATE

A preliminary cost estimate for final design, permitting, and pathway construction is provided in Table 1. The cost estimate will provide the City of Mills and Casper Area MPO an estimated breakdown of costs for each component of the Project to assist in identifying and securing funding for future phases.

BASE PATHWAY

ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
Mobilization & Bonds	LS	1	\$100,000	\$100,000
Right-of-Way Acquisitions	LS	1	\$50,000	\$50,000
Traffic Control	LS	1	\$10,000	\$10,000
Unclassified Excavation	CY	6000	\$40	\$240,000
Embankment	CY	2500	\$50	\$125,000
6" Concrete Pathway & 4" Crushed Base	SY	6500	\$70	\$455,000
3" Asphalt Pathway & 5" Crushed Base	SY	12500	\$50	\$625,000
Signage	LS	1	\$15,000	\$15,000
Fencing	FT	2500	\$50	\$125,000
Erosion & Sedimentation Control	LS	1	\$10,000	\$10,000
Re-seeding	LS	1	\$25,000	\$25,000
Construction Estimate				\$1,780,000
Contingency (10%)				\$178,000
<u>Final Design & Construction Administration</u>				<u>\$195,800</u>
TOTAL				\$2,153,800

OPTIONAL PATHWAY AMENITIES

ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
Trees (shade and windbreak)	EA	100	\$500	\$50,000
Trailheads & Access Points	Allow	1	\$75,000	\$75,000
Waysides/Overlooks	EA	2	\$7,500	\$15,000
Soft Surface Bike Loop	Allow	1	\$10,000	\$10,000
Natural Play Node	EA	1	\$10,000	\$10,000
Construction Estimate				\$160,000
Contingency (10%)				\$16,000
<u>Final Design & Construction Administration</u>				<u>\$17,600</u>
TOTAL				\$193,600

NOTES

1. Does not include escalation for inflation – assume 5% per year
2. Does not include tap or permitting fees.
3. Does not include power, utility POC's or sleeving.
4. Costs are based on date of estimate only and subject to fluctuation.
5. Does not include detailed design or engineering fees if required.

6.4 POTENTIAL FUNDING SOURCES

Project funding may be provided through a variety of sources including grants, loans, or private contributions. Numerous grants and loans are available at the local, state, and federal level to assist with funding for the future design, permitting, and construction of the pathway. Securing funding from key project stakeholders in addition to solicitation of local donations is advisable to create matching dollars, which will increase the likelihood of securing funding through state and federal programs. The City of Mills may choose to show their commitment for the Project through providing financial support for certain elements, such as final engineering design and permitting. This commitment of funds would be important to include on grant and loan requests to show the communities' support.

LOCAL CONTRIBUTIONS

The contributions from the City of Mills will be important for funding aspects of the final pathway design, construction oversight, construction costs, and other Project expenses. The funds contributed would serve as leverage to obtain additional grant and loan funding, as it is typically important to show support from the local municipality.

GRANTS

Grants provide an opportunity for various entities to administer funds for project design and construction with no obligation of repayment. Because grants do not require repayment, the process of obtaining the funding is often more competitive than similar loan programs. The Wyoming Office of State Lands and Investments (SLIB) administers several grants, as do entities such as the Wyoming Business Council (WBC) and WYDOT. Other grant programs exist at the local, state, and federal level with various requirements and monetary values.

MINERAL ROYALTY GRANT (MRG)

Similar to the CWC Grant, MRG applicants may be applied for by towns, counties, and joint powers boards. The MRG funds are awarded with approximately 87.5% of the available funds allocated to projects where the MRG funding does not exceed 50% of the eligible project costs. To demonstrate eligibility for the MRG program, the project must alleviate an emergency situation of health, safety, or welfare, promote compliance with a federal or state mandate, or provide an essential public service. The pathway would increase the safety for pedestrians traveling the corridor, promoting the safety of citizens. The MRG funds are available for construction costs in addition to engineering fees (including design, inspection, and contract administration) up to 20% of the project's construction cost. A statement of feasibility from an Engineer is required during the application process in addition to providing other funding sources expected to be utilized for the project. The MRG applications are considered with criteria including funding matches, financial need of the applicant, and the percentage of the applicant's population served by the project.

TRANSPORTATION ENTERPRISE ACCOUNT (TEA)

The TEA has grants and loans awarded by SLIB to Wyoming counties, municipal corporations, and others for the purpose of enhancing transportation in Wyoming. The TEA application includes information on project scope and other funding sources expected to be utilized. After applications are reviewed by WYDOT and a legislative committee, SLIB prioritizes applications based on criteria including project funding expectations, urgency, and the percentage of the applicant's population directly served. The funds from the TEA may be applied to applicable project costs including professional services.

TRANSPORTATION ALTERNATIVES PROGRAM (TAP)

TAP consists of federal funds administered by WYDOT. The purpose of the TAP funds is to expand travel choices and enhance transportation. To be eligible, a project must relate to surface transportation through at least one eligible activity, with the pathway eligible as a pedestrian and bicycle facility and safe route for non-drivers, and potentially under other activities. The TAP funding is approximately \$2.1 million throughout Wyoming every year with a competitive application program. The pathway may have grant allocations from the TAP with opportunities improved based on the public involvement, planning, and design completed through this Study. The TAP funds operate on an 80% TAP to 20% local cash match, meaning alternative funds will be required for matching purposes.

SAFE ROUTES TO SCHOOL (SRTS)

The SRTS program was created for the encouragement of children to safely walk and bicycle to school. The SRTS program is administered by WYDOT and funds programs at schools or school districts in addition to infrastructure projects within a two-mile radius of targeted schools. A portion of the pathway is within a 2-mile radius of the Oregon Trail Elementary School. If the pathway is considered completely eligible or partially eligible and ultimately selected for funding under the SRTS program, the associated federal funds are available with no match required. Eligible applicants include school districts, state agencies, counties, municipalities, and nonprofit organizations. The SRTS application requires project information including a detailed cost estimate and are scored upon recommendations of a committee with final award by the Wyoming Transportation Commission.

Wyoming Business Council (WBC)

The WBC administers many grants including the Rural Development – Community Development grant to assist rural communities in making improvements to the quality of life for citizens,

enhance visitor experience, and encourages others to come live in the community. Grants up to \$2,500 are available through the Rural Development Community Development Grant program. Additional grants with maximum allocations of \$500,000 or more are available under the Business Ready Communities (BRC) Grants. These grants are intended for projects that will promote economic development within communities and applicants that can demonstrate economic expansion of the local economy directly associated with the project are more likely to be funded.

WYOMING RECREATION TRAILS PROGRAM (RTP) GRANTS

RTP grants are administered by the Wyoming State Parks, Historic Sites and Trails (SPHST) with funds derived from the federal gas tax paid on non-highway recreation fuel used by off-highway vehicles. The funds are available for local, state and federal agencies in addition to non-profits. The typical annual fund allocations are approximately \$1.5 million with approximately \$400,000 allocated to non-motorized trails. The grant amounts administered through the RTP for non-motorized trails range from \$10,000 to \$50,000 and may be exceeded in special conditions with additional approval of SPHST management and others. The utilization of the RTP grants requires additional requirements including Buy America requirements for iron and steel, System for Award Management (SAM) registration, and various requirements for agreements on the project and monitoring and reporting the grant allocation. A non-motorized RTP may be applied to planning, engineering, and design work not to exceed 15% of the project's total cost and landscaping along the pathway is not eligible unless it is required as a screen between adjacent landowners. During the application and prioritization process for RTP grants a priority multiplier is applied to projects scores, with hard-surfaced community trails having the minimum multiplier of 1.0, the maximum multiplier being a 1.5 for maintenance or restoration of trails.

LOANS

Various loans are available through SLIB for infrastructure projects including Capital Construction Loans and loans through the TEA program. The TEA loan requirements are the same as the grant requirements. Loans through SLIB are often low interest with favorable loan terms.

CAPITAL CONSTRUCTION LOAN

Similar to the grant programs available through SLIB, the Capital Construction Loan may be granted to a town or county. Eligible projects for the Capital Construction Loan include purchase of land, renovating or upgrading existing infrastructure, and planning and construction for street and road projects. Additional requirements for the Capital Construction Loan include development and implementation of a maintenance plan through the duration of the loan, an Engineer's feasibility statement, and commitment letters from other funding sources. The Capital Construction Loan's interest rate is calculated as 1% plus 0.75% for each year of the loan term in excess of 5 years with the maximum loan term being 25 years. The Capital Construction Loan applications are considered based on several criteria including the project's contribution to health, safety and welfare of citizens, project and financial need, and the applicant's ability to repay the loan. The pathway may not be classified as a "street or road project" and further clarification should take place with SLIB prior to applying for the Capital Construction Loan.

7.0 PROJECT IMPLEMENTATION PLAN

Successful implementation of the Project includes the following steps: identifying and securing funding, complete the design and permitting, construction activities, and O&M of the constructed pathway.

FUNDING

Development of a funding program by the Committee is an essential first step towards completion of the Project. The Committee should research all potential funding sources and develop a comprehensive funding program for the Project. The funding program should consider planning options including:

- Identification of multiple funding sources and their specific requirements,
- Phased pathway construction alternatives,

Additionally, individual funding sources should be consulted to discuss options and determine the best paths forward. Meeting funding application deadlines and securing grant matching funds is vital for Project completion. Once constructed, a sustainable, long-term program for funding pathway O&M is essential to ensure a safe and viable pathway system for future generations.

DESIGN

The intent of this Study is to identify a preliminary pathway alignment, identify potential regulatory requirements, development of preliminary designs and estimated costs, and provide a clear path forward to move towards a constructed Project. As such, additional design, permitting, potential easement acquisition, and other associated tasks are necessary to advance the Project to bidding and construction. The cost estimate provided in Table 1 was developed to provide the detail necessary for the Committee to secure Project funding, and to move towards a final design.

CONSTRUCTION

A competitive bidding environment is advantageous in that it allows the opportunity for multiple contractors to bid projects, generally resulting in fair and equitable construction costs. Final design and permitting for the Project should be completed and timed to allow for late fall/winter bidding to maximize contractor turnout and ensure competitive costs for spring/summer construction.

MAINTENANCE

An O&M manual should be developed to ensure the entity responsible for the pathway follows established maintenance procedures and safety inspections to maintain the pathway as a successful, long-term community asset.

8.0 REFERENCES

Mills River Front Concept Development, River Front Property Programming & Feasibility Study to Provide Recommendations for Undeveloped Land in the Town of Mills, Wyoming, 2016

Uniquely Mills, Comprehensive Plan, 2017, Town of Mills

Nelson Nygaard., 2020, Mills Main Street Corridor Study

American Association of State Highway and Transportation Officials, 2004, Guide for the Planning, Design, and Operation of Pedestrian Facilities. Available for purchase on the Internet as of March 2021: <https://www.transportation.org/>

_____, 2012, Guide for the Development of Bicycle Facilities, Fourth Edition. Available for purchase on the Internet as of March 2021: <https://www.transportation.org/>

Miller, Kirk A., 2003, Peak-Flow Characteristics of Wyoming Streams, Water-Resources Investigations Report 03-4107. Available on the Internet as of March 2021: <https://pubs.usgs.gov/wri/wri034107/pdf/wri034107.pdf>

United States Department of Justice, Civil Rights Division, 2010, 2010 ADA Standards for Accessible Design. Available on the Internet as of March 2021: https://www.ada.gov/2010ADASTandards_index.htm

United States Department of Transportation, Federal Highway Administration, 2021, Uniform Easement Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended. Available on the Internet as of March 2021: <https://www.fhwa.dot.gov/hep/guidance/>

[Wyoming Department of Transportation, 2020, Highway Safety Segment Crash History Report, Year 2015-2019, LRS Route: ML 37 B US14, From RM:82.8 to RM 88.4. Electronic copy only, available on request from WYDOT.](#)

_____, 2018, Programmatic Agreement Between the Federal Highway Administration, Wyoming Division and the Wyoming Department of Transportation Regarding the Processing of Actions Classified as Categorical Exclusions for Federal-Aid Highway Projects. Available on the Internet as of March 2021: http://www.dot.state.wy.us/files/live/sites/wydot/files/shared/Environmental_Services/Documents/Programmatic%20CE%20Agreement%20with%20FHWA%202018.pdf

APPENDIX A – PUBLIC OUTREACH SUMMARY

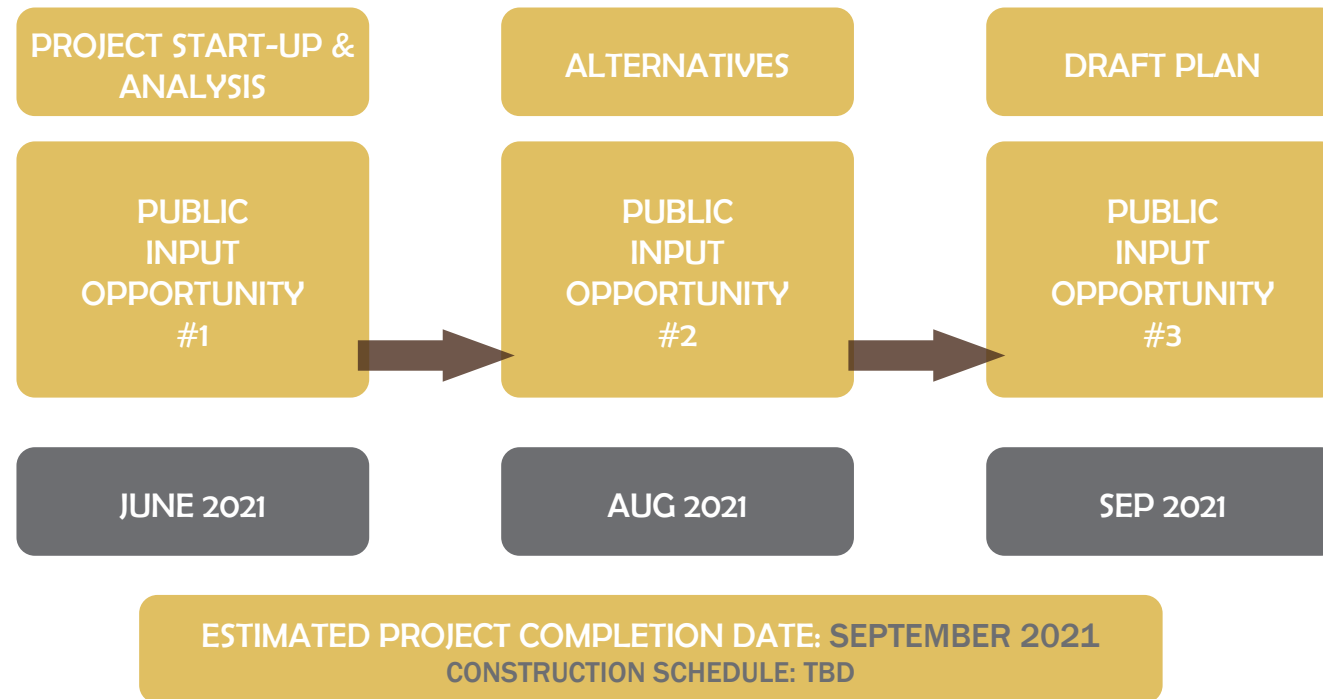
ROBERTSON ROAD TO MILLS TRAIL EXTENSION PLAN

PROJECT OVERVIEW

The project will assess the feasibility and guide the development of the construction of a multi-modal trail from Robertson Road to the existing Platte River Trail corridor.

This study would help meet the goals set forth in the most recent update of the Long Range Transportation Plan: Connecting Crossroads including, increasing transportation options for all modes and improving the safety and health for all residents.

PROJECT SCHEDULE



PROJECT STUDY CORRIDOR



FOR MORE INFORMATION VISIT:

casperareampo.org

WHAT WE HEARD

Public input is an important aspect of the Robertson Road to Mills Trail Extension Plan.

The following is a summary of what we heard from our open house booth at Mills' 2021 Summerfest and 100 Year Anniversary Celebration.

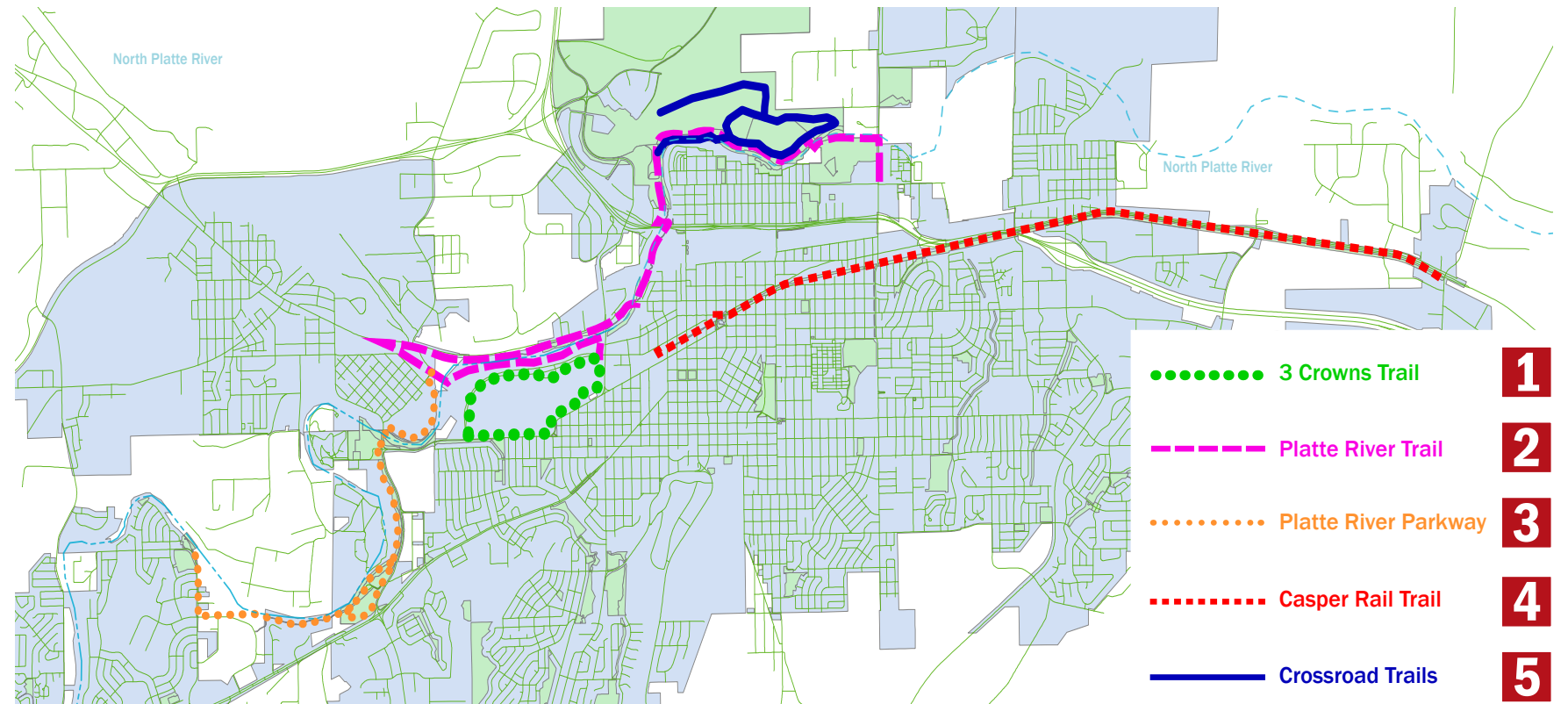
Trail alignments shown were also reviewed with adjacent landowners for feasibility prior to determining a preferred alignment.

Thanks to all who have participated in this process!

PUBLIC OUTREACH #1 SUMMARY

TRAIL USAGE

1 = most frequently used, 5 = least frequently used



TRAIL USAGE

How you will use the trail, 1 = highest number of users, 5 = lowest number of users



ROBERTSON ROAD TO MILLS TRAIL EXTENSION PLAN

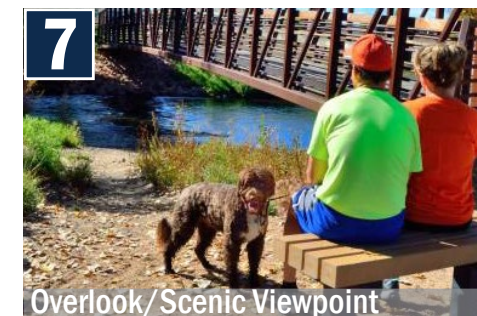
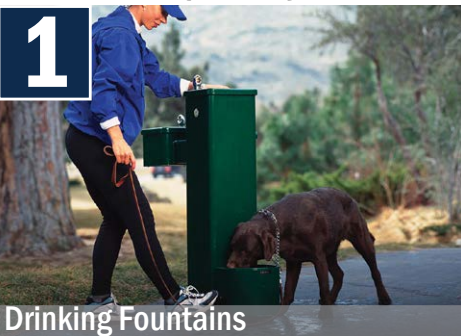
TRAIL FEATURES

1 = highest priority features, 5 = lowest priority features



TRAIL AMENITIES

1 = highest priority amenities, 5 = lowest priority amenities



ROBERTSON ROAD TO MILLS TRAIL EXTENSION PLAN



- | | | | |
|--|---------------------------------|--|---------------------------------------|
| | PREFERRED TRAIL ALIGNMENT | | PLATTE RIVER PARKWAY |
| | ALTERNATE ALIGNMENT A* | | PLATTE RIVER TRAIL |
| | ALTERNATE ALIGNMENT B* | | RESIDENTIAL DEVELOPMENT AREA |
| | PROPOSED TRAILHEAD/ACCESS POINT | | POTENTIAL RIVERFRONT DEVELOPMENT AREA |
| | PROPOSED WAYSIDE OR OVERLOOK | | EXISTING PARK |
| | PROPOSED SOFT SURFACE BIKE LOOP | | FUTURE PARK |
| | PROPOSED NATURAL PLAY NODE | | |

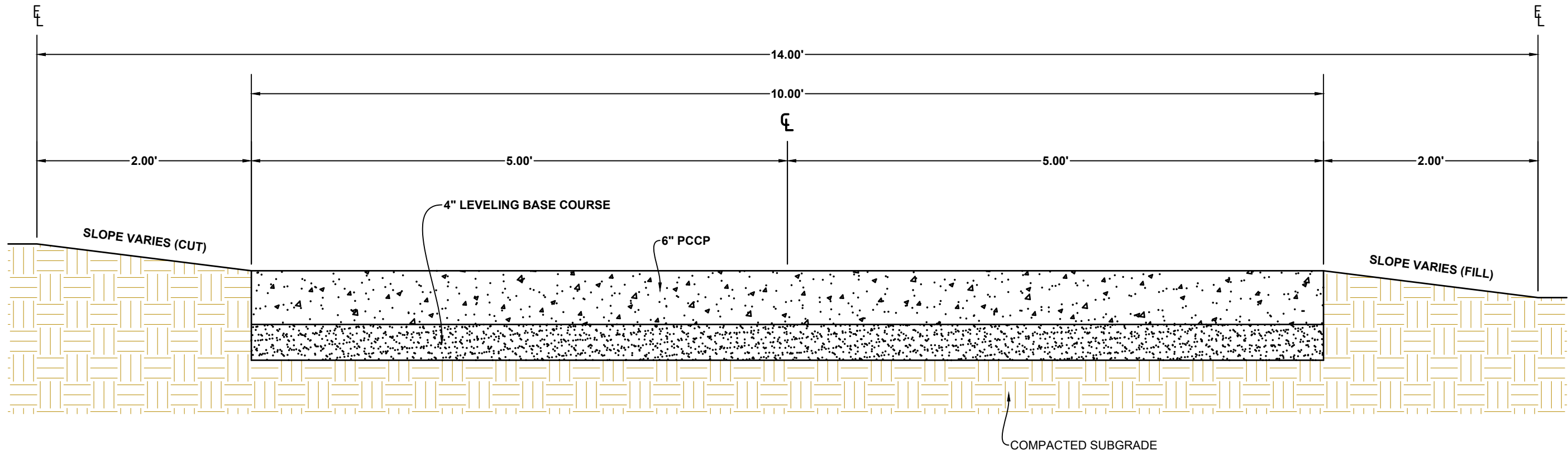
*ALTERNATE ALIGNMENTS ARE SHOWN FOR REFERENCE ONLY AND WERE NOT SELECTED BASED ON ABILITY TO SECURE AGREEMENTS WITH ADJACENT LANDOWNERS AND INCREASED SAFETY CONCERNS ALONG THESE ALIGNMENTS.

NOTES:

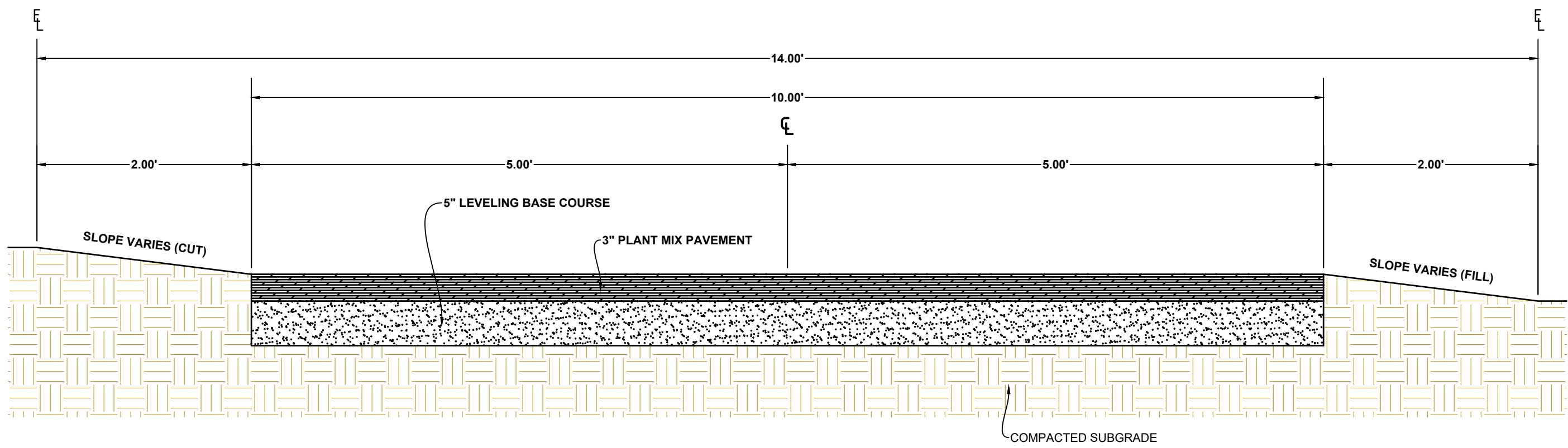
1. TRAILHEADS MAY INCLUDE BENCHES/SEATING, SMALL SHADE STRUCTURES, TRAIL MAPS, DOG WASTE STATIONS, BIKE PARKING OR PUBLIC ART.
2. TRAIL WAYSIDES AND OVERLOOKS MAY INCLUDE SEATING OR TABLES.
3. TRAIL DISTANCE MARKERS AND WAYFINDING SHALL BE PLACED CONTINUOUSLY ALONG THE TRAIL CORRIDOR.
4. SOFT SURFACE SHOULDERS MAY BE ADDED TO PORTIONS OF THE TRAIL WHERE FEASIBLE AND COMPATIBLE WITH ADJACENT USES AND GRADES.
5. LIGHTING, DRINKING FOUNTAINS AND OTHER ELEMENTS DEPENDENT ON AVAILABILITY OF UTILITIES TO BE LOCATED AS FEASIBLE AT TRAILHEADS AND MAJOR TRAIL ACCESS POINTS.
6. PLANTED WIND SCREENS WILL REQUIRE IRRIGATION WATER TO BE MOST SUCCESSFUL AND WILL ALSO NEED ACCESS TO UTILITIES.
7. TRAIL CORRIDOR LOCATION SHOWN IS CONCEPTUAL AND SUBJECT TO OUTCOME OF LAND OWNER NEGOTIATIONS. WIDTH MAY VARY DEPENDING ON ADJACENT CONDITIONS.

CONCEPTUAL TRAIL ALIGNMENT

K:\Casper\City of Casper\2021182 Robertson Road to Mills Trail extension\05CAD\Sheets\2021182-RRTM-TE-00.dwg DETAILS 8/25/2021 3:59:01 PM



**NEW PATHWAY CONSTRUCTION - STANDARD CONCRETE SECTION
N.T.S.**



**NEW PATHWAY CONSTRUCTION - STANDARD ASPHALT SECTION
N.T.S.**

NO.	REVISION	BY	DATE

PREPARED BY
WWC ENGINEERING
 5880 ENTERPRISE DR., SUITE 600
 CASPER, WY 82609
 (307) 473-2707
 www.wwcengineering.com

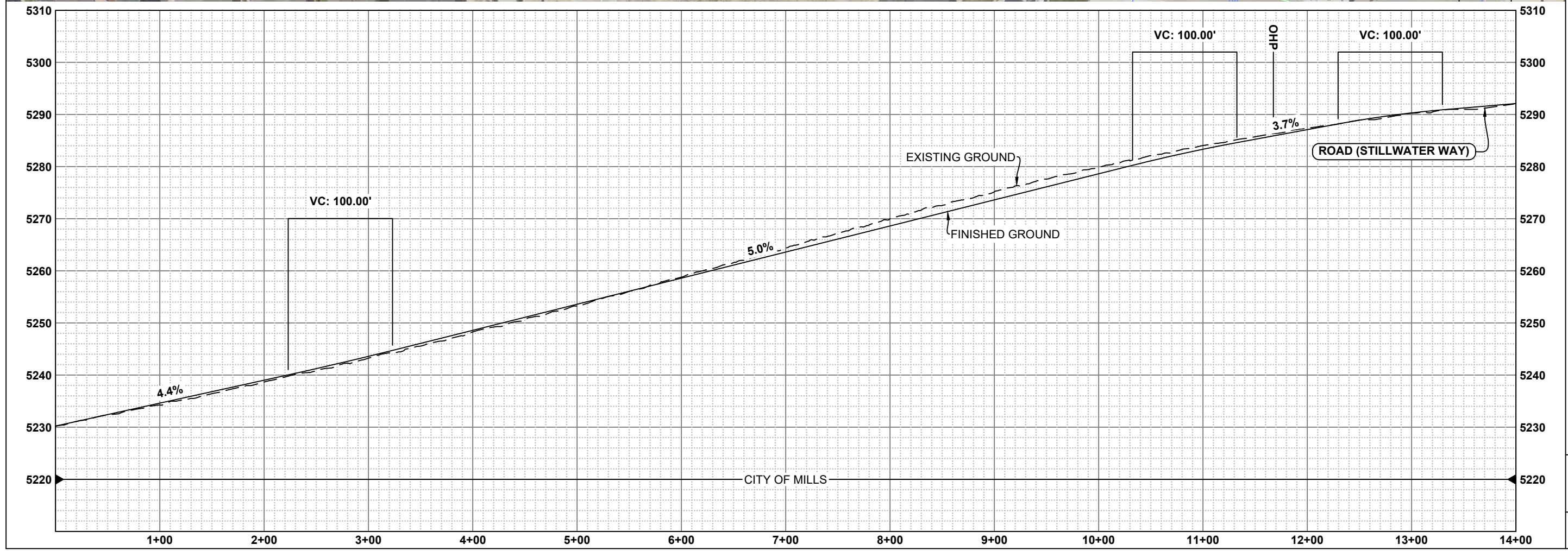
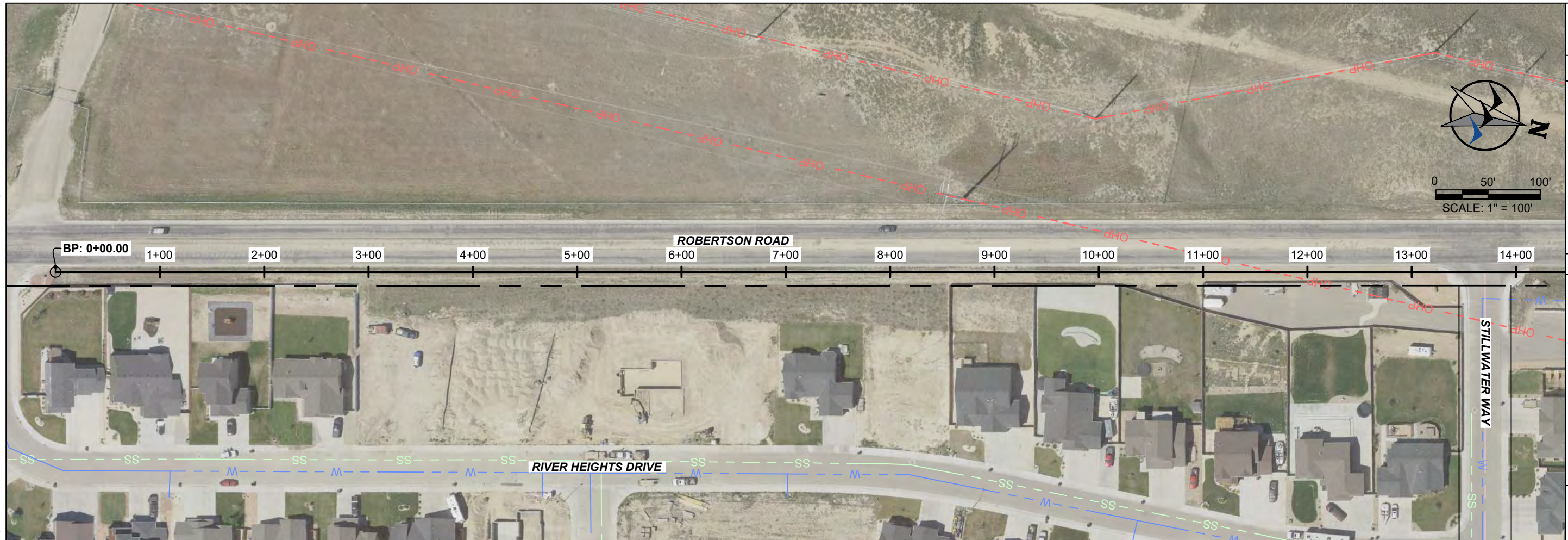
METROPOLITAN PLANNING ORGANIZATION
ROBERTSON ROAD TO MILLS TRAIL EXTENSION PLAN
DETAILS
 CITY OF MILLS, NATRONA COUNTY, WYOMING

DESIGNED BY: WWC
 DRAWN BY: SWC
 CHECKED BY: DAT
 DATE: 8/20/2021

SHEET
D1

PROJECT NO. 2021182

K:\Casper\City of Casper\2021182 Robertson Road to Mills Trail extension\05CAD\Sheets\2021182-RRTM-TE-01.dwg STA. 0+00.00 TO STA. 14+00.00 8/25/2021 4:07:01 PM



NO.	REVISION	BY	DATE

PREPARED BY
WWC ENGINEERING
 5880 ENTERPRISE DR., SUITE 600
 CASPER, WY 82609
 (307) 473-2707
 www.wwcengineering.com

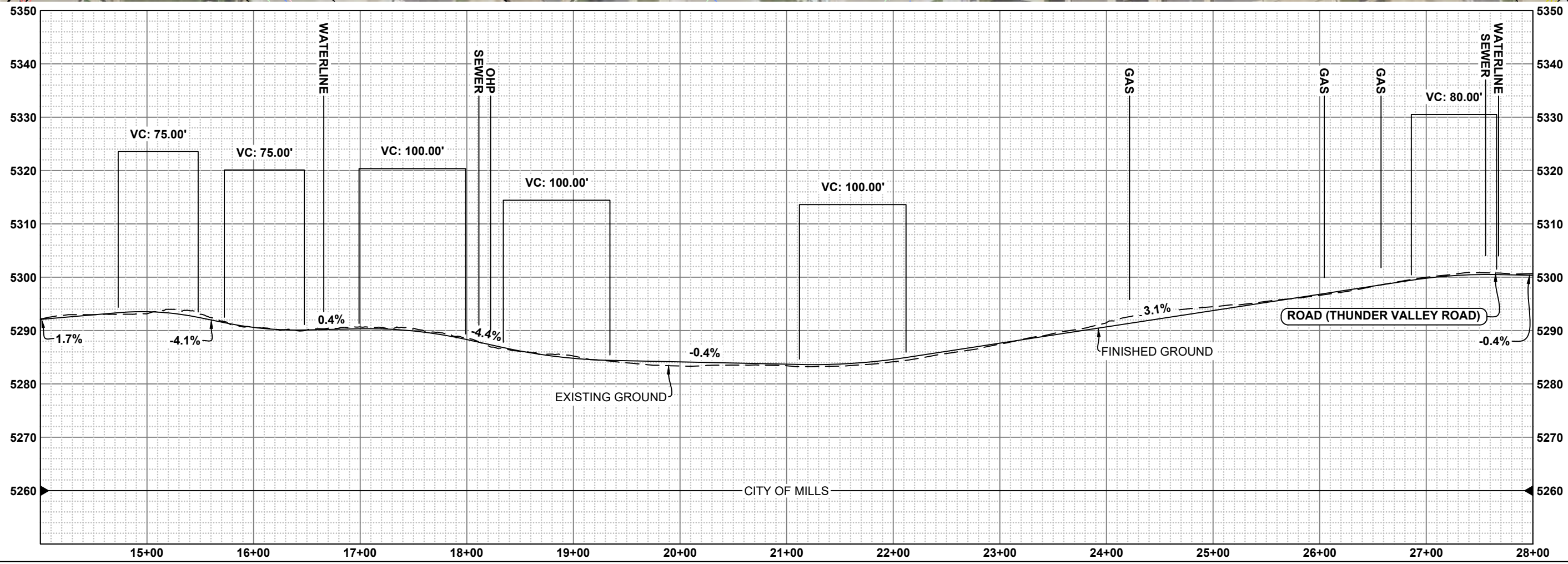
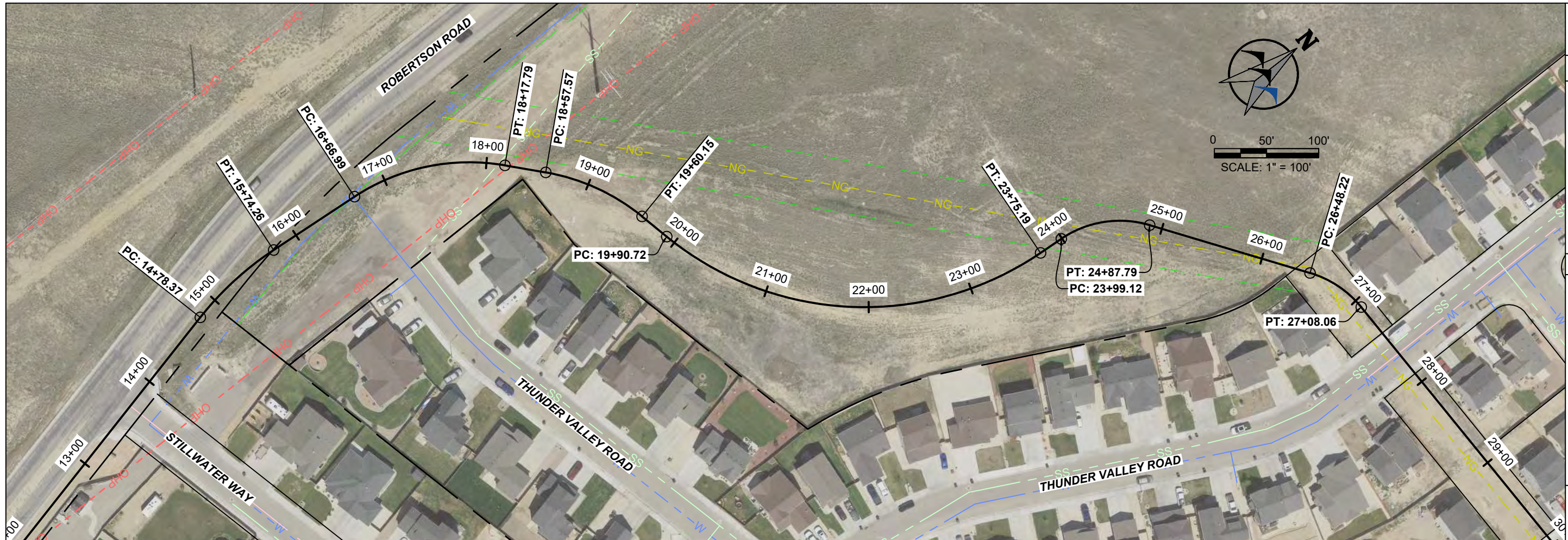
METROPOLITAN PLANNING ORGANIZATION
ROBERTSON ROAD TO MILLS TRAIL EXTENSION PLAN
STA. 0+00.00 TO STA. 14+00.00
 CITY OF MILLS, NATRONA COUNTY, WYOMING

DESIGNED BY: WWC
 DRAWN BY: SWC
 CHECKED BY: DAT
 DATE: 8/20/2021

SHEET
1

PROJECT NO. 2021182

K:\Casper\City of Casper\2021182 Robertson Road to Mills Trail extension\05CAD\Sheets\2021182-RRTM-TE-01.dwg STA. 14+00.00 TO STA. 28+00.00 8/25/2021 4:07:01 PM



NO.	REVISION	BY	DATE

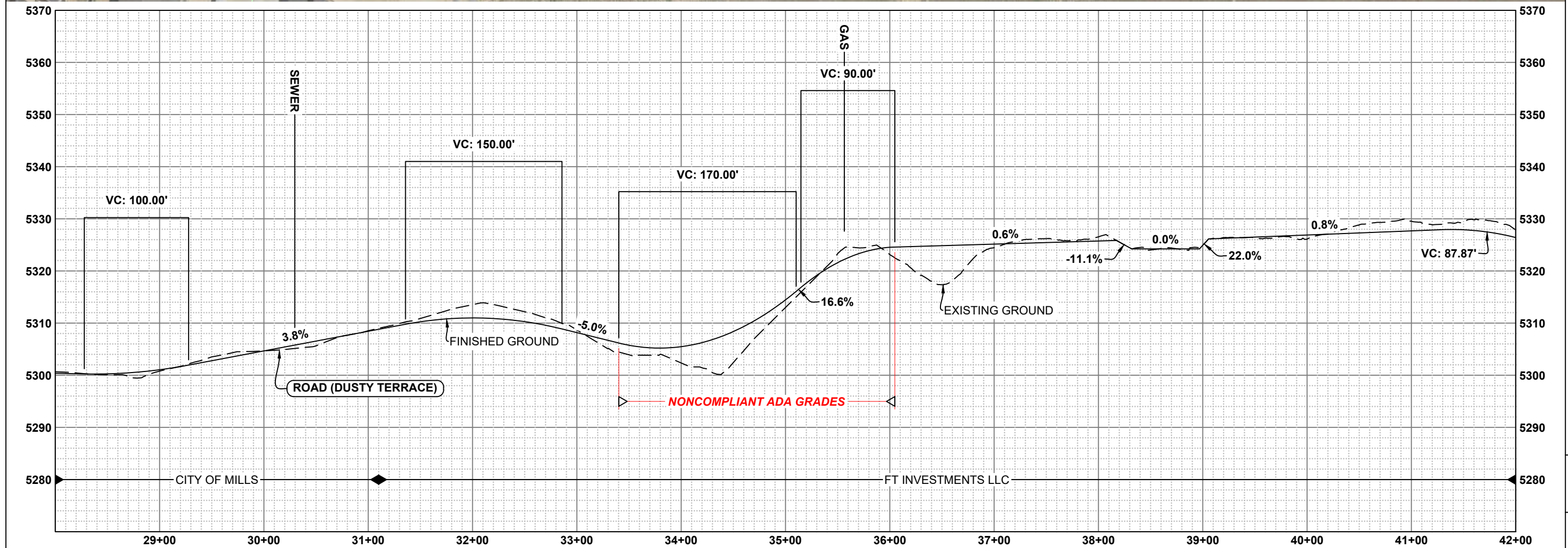
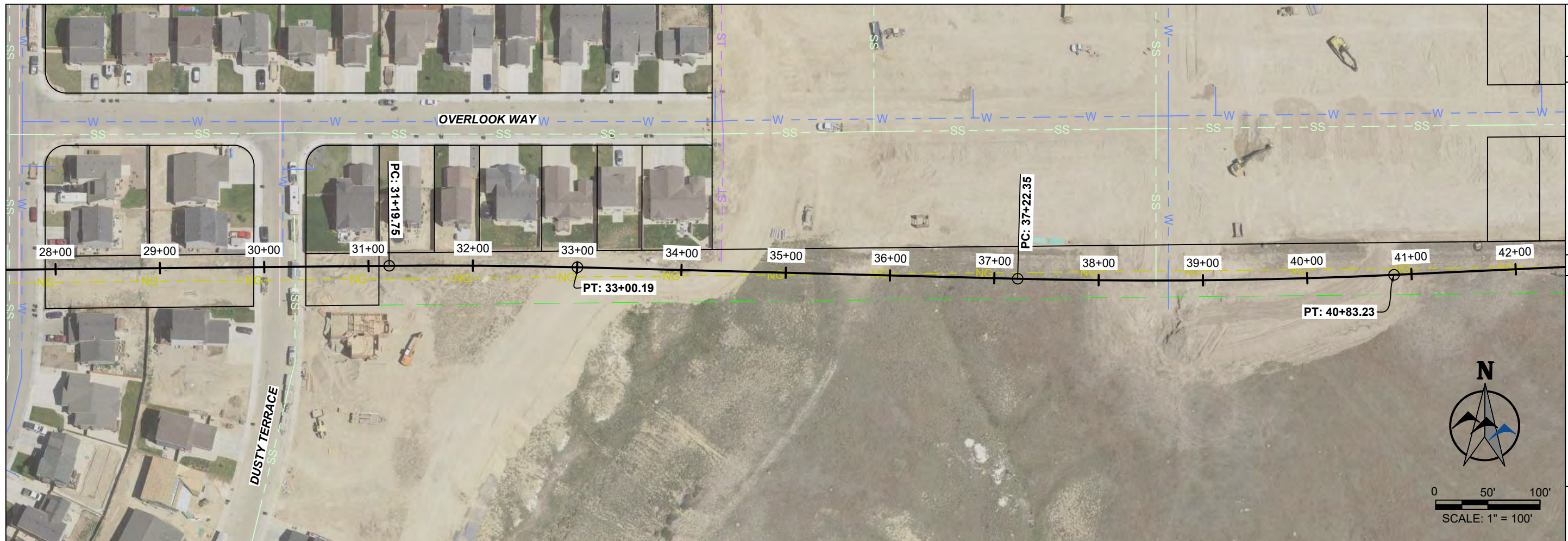
PROJECT NO. 2021182
 PREPARED BY: **WWC** ENGINEERING
 5880 ENTERPRISE DR., SUITE 600
 CASPER, WY 82609
 (307) 473-2707
 www.wwcengineering.com

METROPOLITAN PLANNING ORGANIZATION
ROBERTSON ROAD TO MILLS TRAIL EXTENSION PLAN
STA. 14+00.00 TO STA. 28+00.00
 CITY OF MILLS, NATRONA COUNTY, WYOMING

DESIGNED BY: WWC
DRAWN BY: SWC
CHECKED BY: DAT
DATE: 8/20/2021

SHEET
2

K:\Casper\City of Casper\2021182 Robertson Road to Mills Trail extension\05CAD\Sheets\2021182-RRTM-TE-01.dwg STA. 28+00.00 TO STA. 42+00.00 8/25/2021 4:07:01 PM



NO.	REVISION	BY	DATE

PREPARED BY
WWC ENGINEERING
 5880 ENTERPRISE DR., SUITE 600
 CASPER, WY 82609
 (307) 473-2707
 www.wwcengineering.com

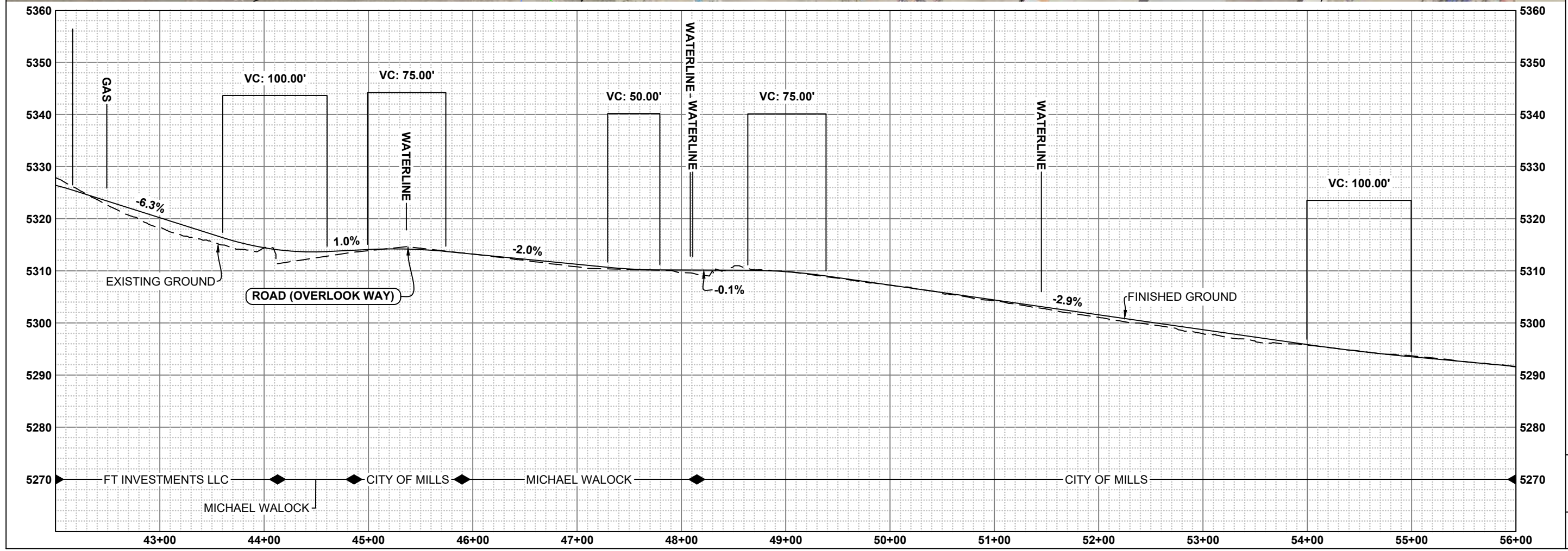
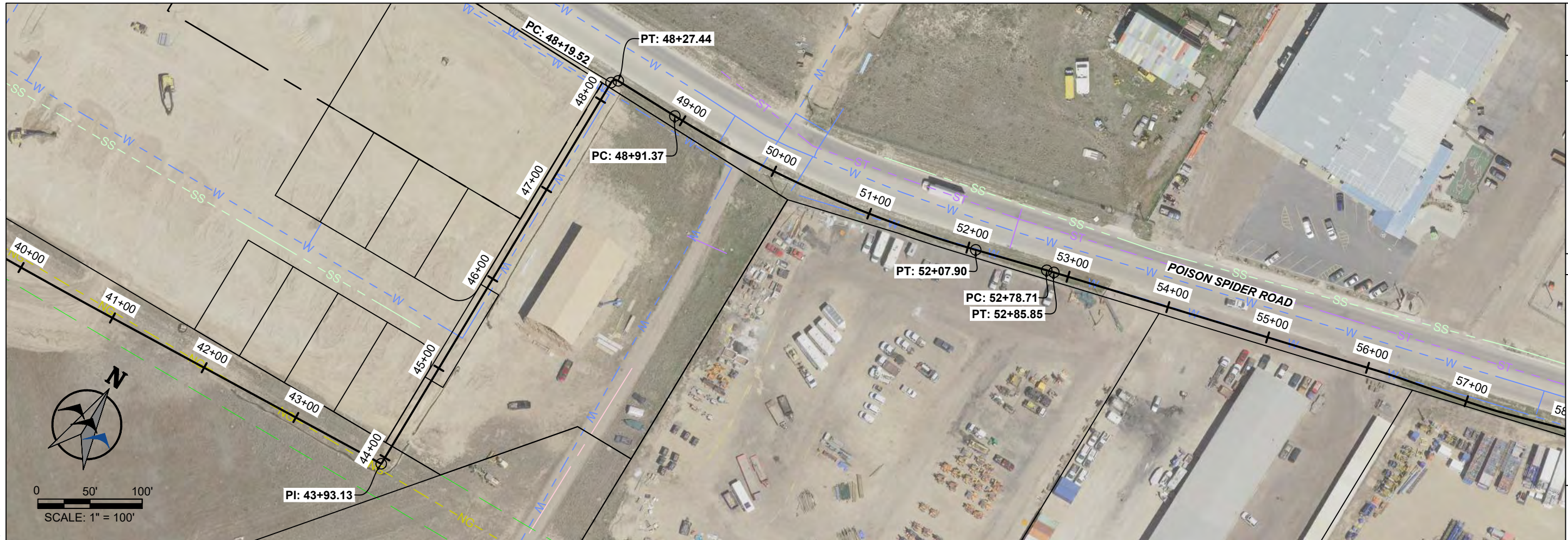
METROPOLITAN PLANNING ORGANIZATION
 ROBERTSON ROAD TO MILLS TRAIL EXTENSION PLAN
STA. 28+00.00 TO STA. 42+00.00
 CITY OF MILLS, NATRONA COUNTY, WYOMING

DESIGNED BY: WWC
 DRAWN BY: SWC
 CHECKED BY: DAT
 DATE: 8/20/2021

SHEET
3

PROJECT NO. 2021182

K:\Casper\City of Casper\2021182 Robertson Road to Mills Trail extension\05CAD\Sheets\2021182-RRTM-TE-01.dwg STA. 42+00.00 TO STA. 56+00.00 8/25/2021 4:07:01 PM



NO.	REVISION	BY	DATE

PREPARED BY: **WWC** ENGINEERING
 5880 ENTERPRISE DR., SUITE 600
 CASPER, WY 82609
 (307) 473-2707
 www.wwcengineering.com

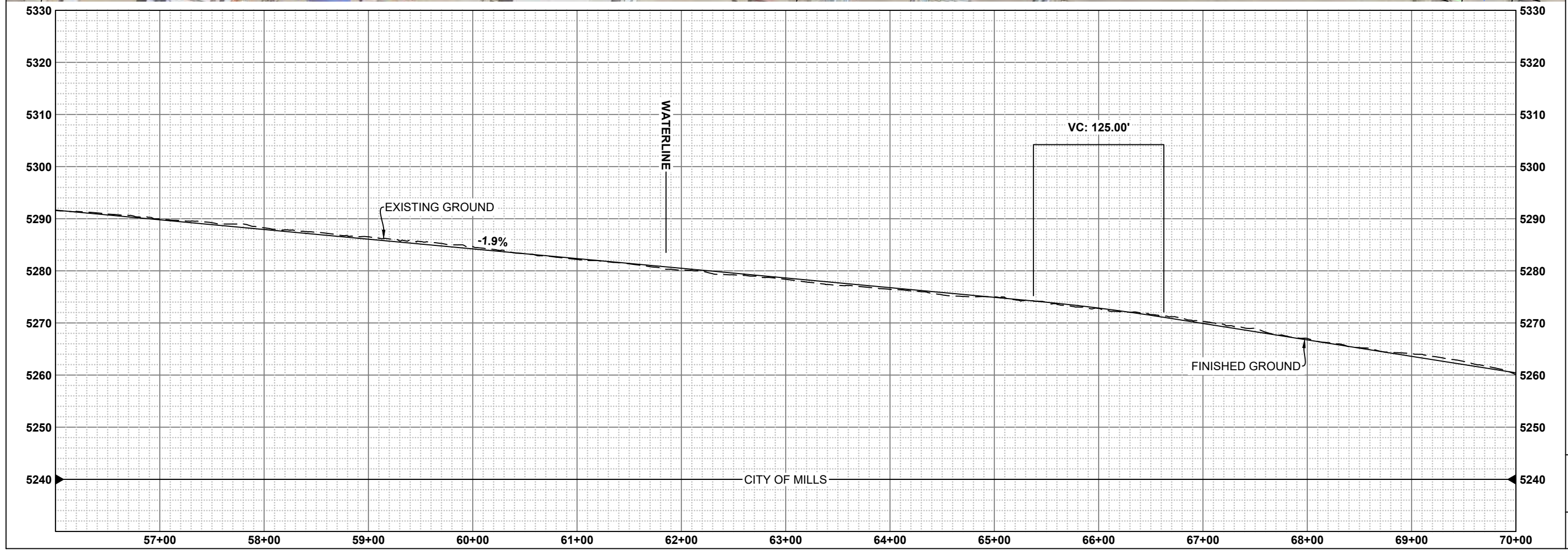
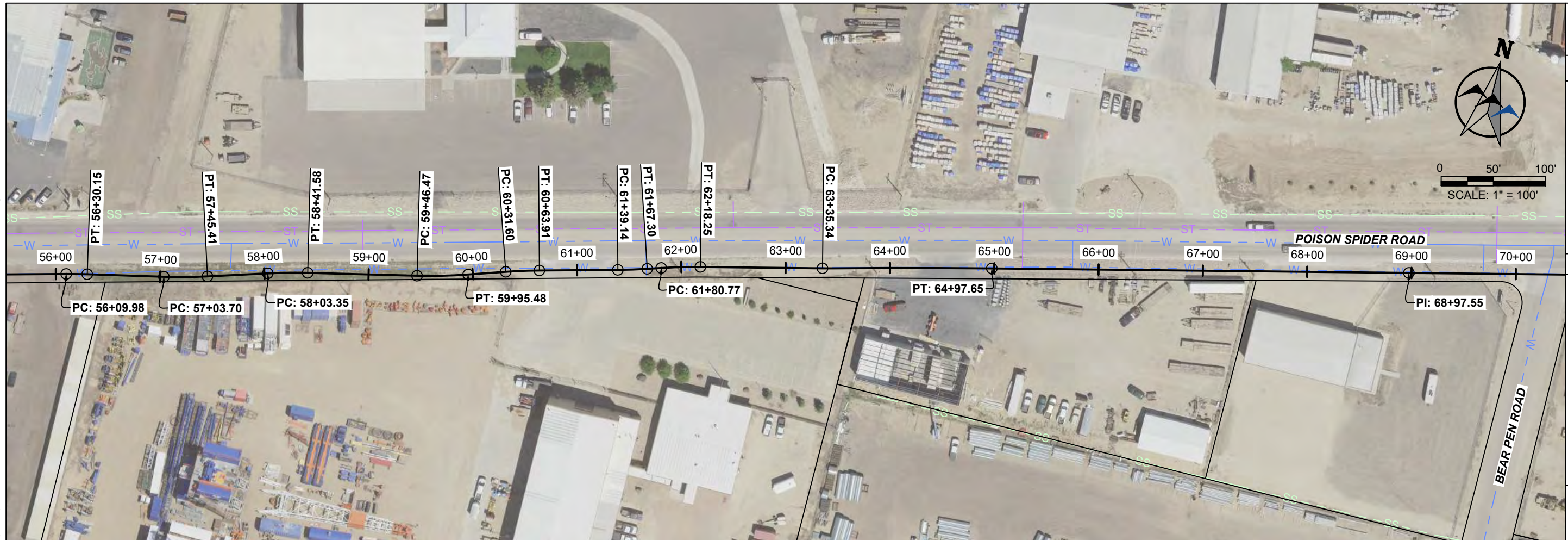
METROPOLITAN PLANNING ORGANIZATION
ROBERTSON ROAD TO MILLS TRAIL EXTENSION PLAN
STA. 42+00.00 TO STA. 56+00.00
 CITY OF MILLS, NATRONA COUNTY, WYOMING

DESIGNED BY: WWC
 DRAWN BY: SWC
 CHECKED BY: DAT
 DATE: 8/20/2021

SHEET
4

PROJECT NO. 2021182

K:\Casper\City of Casper\2021182 Robertson Road to Mills Trail extension\05CAD\Sheets\2021182-RRTM-TE-01.dwg STA. 56+00.00 TO STA. 70+00.00 8/25/2021 4:07:01 PM



NO.	REVISION	BY	DATE

PREPARED BY
WWC ENGINEERING
 5880 ENTERPRISE DR., SUITE 600
 CASPER, WY 82609
 (307) 473-2707
 www.wwcengineering.com

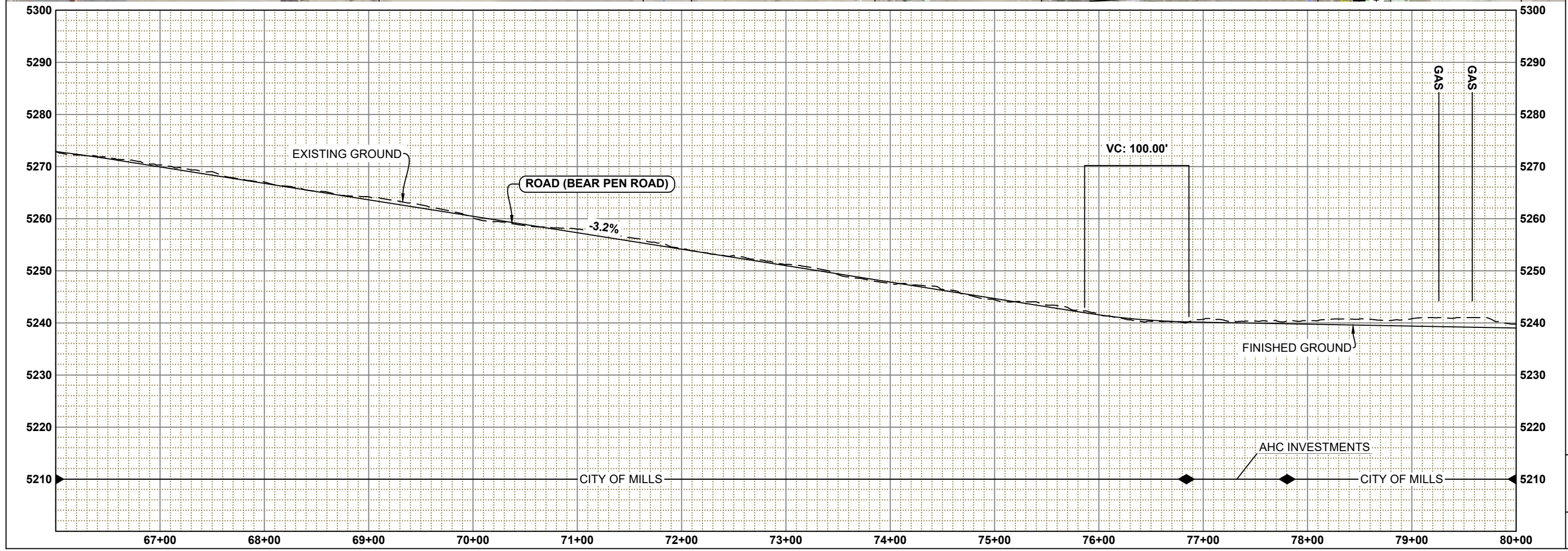
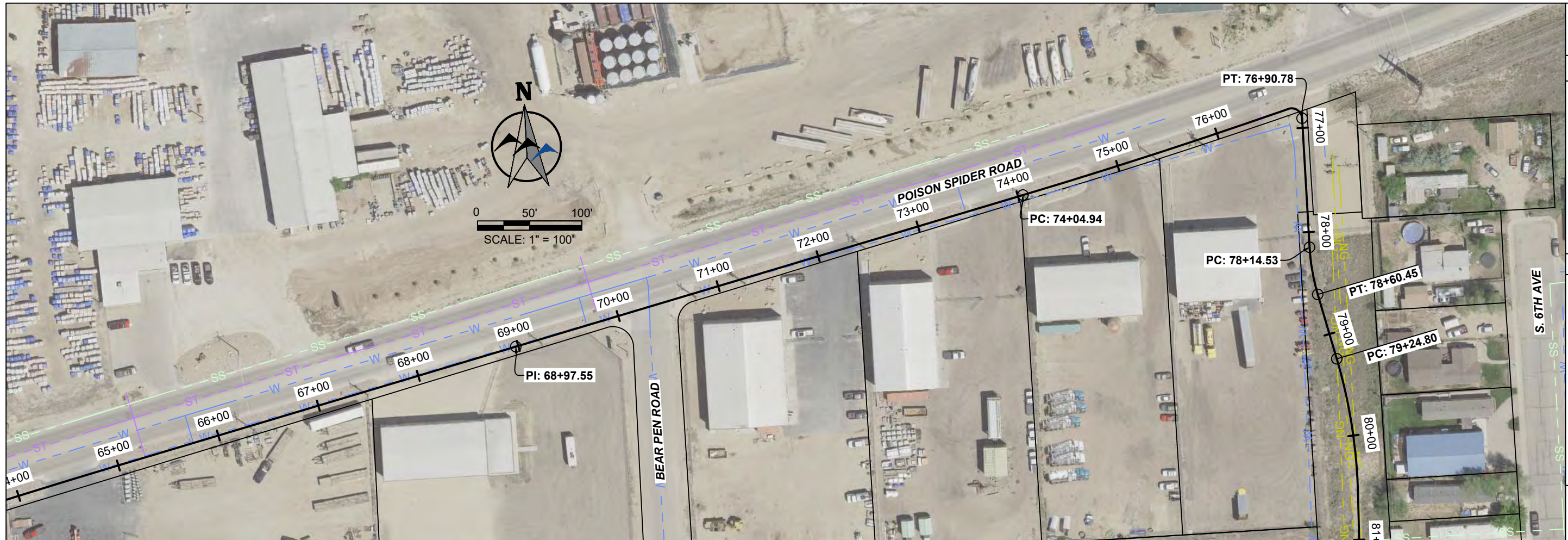
METROPOLITAN PLANNING ORGANIZATION
 ROBERTSON ROAD TO MILLS TRAIL EXTENSION PLAN
STA. 56+00.00 TO STA. 70+00.00
 CITY OF MILLS, NATRONA COUNTY, WYOMING

DESIGNED BY: WWC
 DRAWN BY: SWC
 CHECKED BY: DAT
 DATE: 8/20/2021

SHEET
5

PROJECT NO. 2021182

K:\Casper\City of Casper\2021182 Robertson Road to Mills Trail extension\05CAD\Sheets\2021182-RRTM-TE-02.dwg STA. 66+00.00 TO STA. 80+00.00 8/25/2021 4:05:58 PM



NO.	REVISION	BY	DATE

PREPARED BY: **WWC** ENGINEERING
 5880 ENTERPRISE DR., SUITE 600
 CASPER, WY 82609
 (307) 473-2707
 www.wwcengineering.com

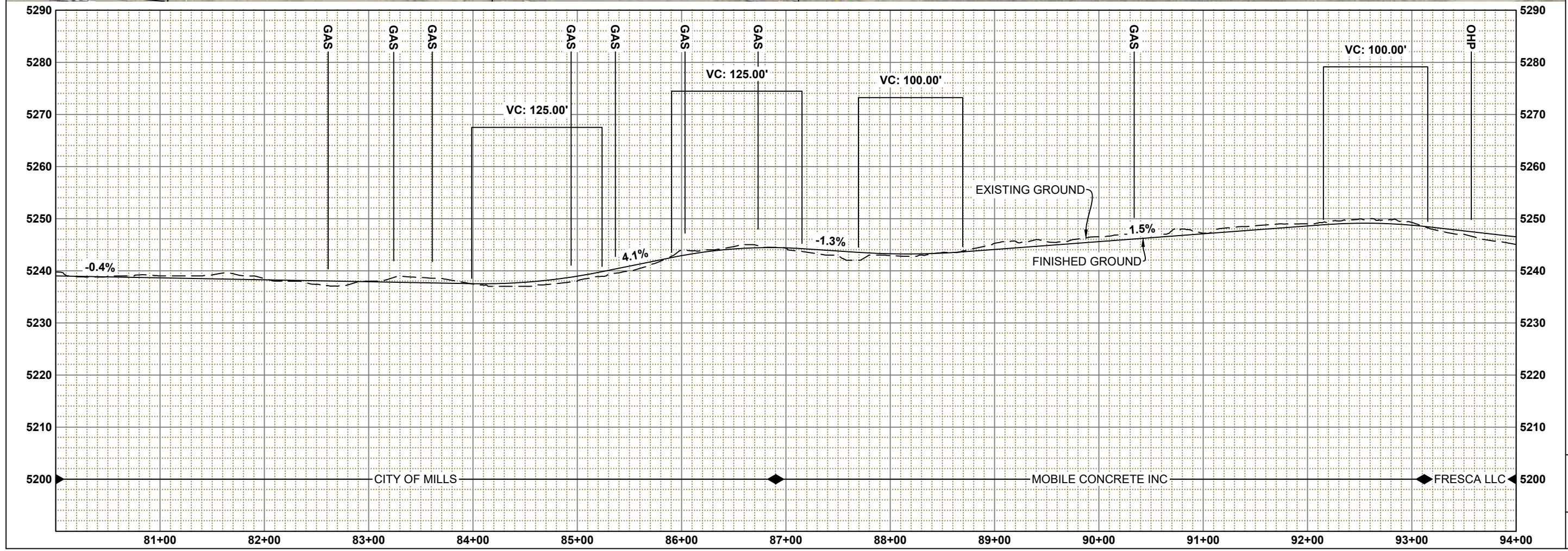
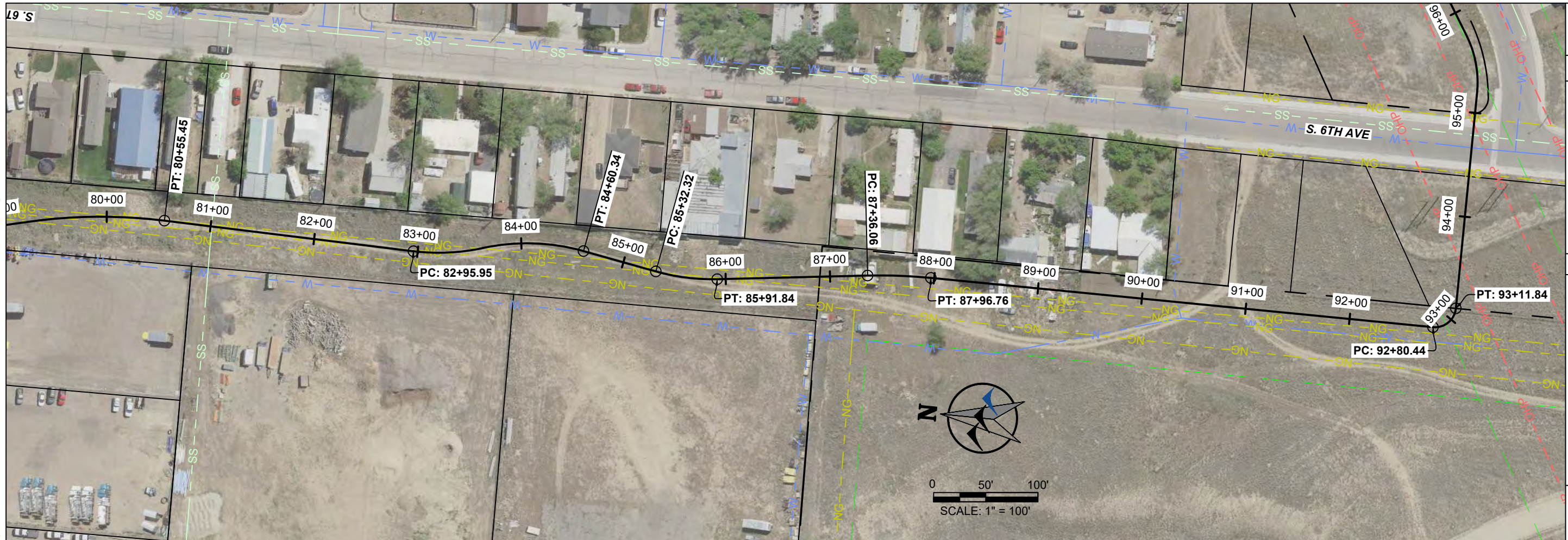
METROPOLITAN PLANNING ORGANIZATION
 ROBERTSON ROAD TO MILLS TRAIL EXTENSION PLAN
STA. 66+00.00 TO STA. 80+00.00
 CITY OF MILLS, NATRONA COUNTY, WYOMING

DESIGNED BY: WWC
 DRAWN BY: SWC
 CHECKED BY: DAT
 DATE: 8/20/2021

SHEET
6

PROJECT NO. 2021182

K:\Casper\City of Casper\2021182 Robertson Road to Mills Trail extension\05CAD\Sheets\2021182-RRTM-TE-02.dwg STA. 80+00.00 TO STA. 94+00.00 8/25/2021 4:05:58 PM



NO.	REVISION	BY	DATE

PREPARED BY
WWC ENGINEERING
 5880 ENTERPRISE DR., SUITE 600
 CASPER, WY 82609
 (307) 473-2707
 www.wwcengineering.com

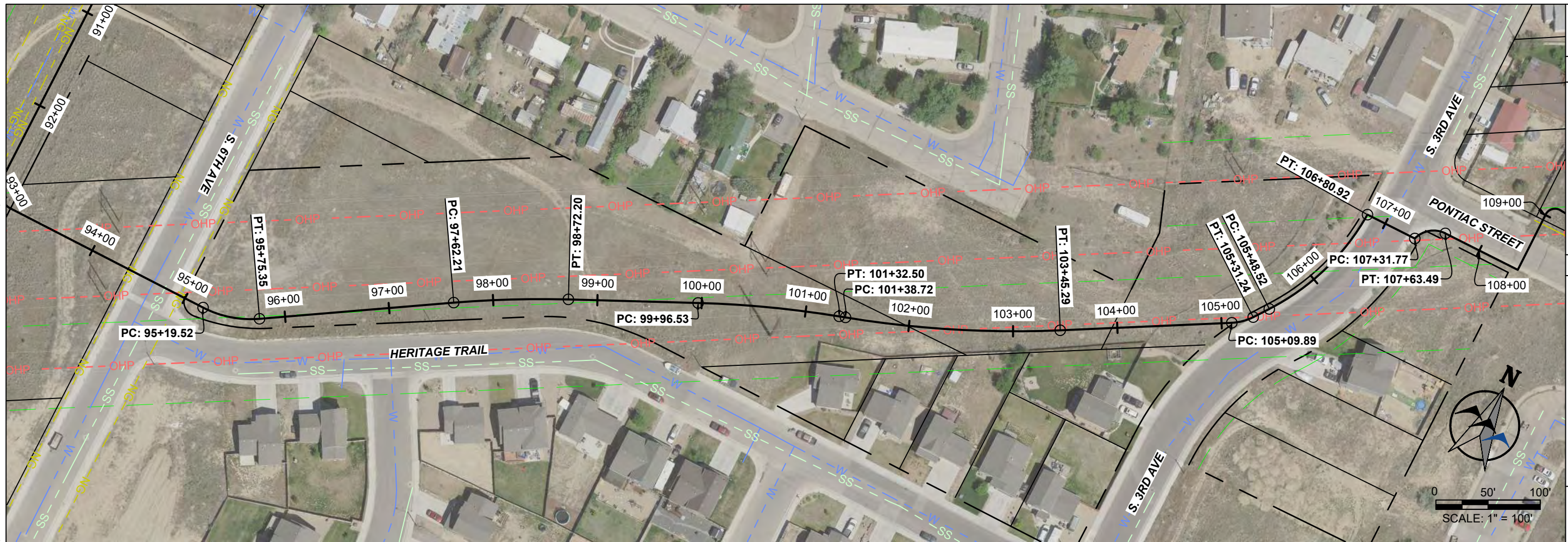
METROPOLITAN PLANNING ORGANIZATION
 ROBERTSON ROAD TO MILLS TRAIL EXTENSION PLAN
STA. 80+00.00 TO STA. 94+00.00
 CITY OF MILLS, NATRONA COUNTY, WYOMING

DESIGNED BY: WWC
 DRAWN BY: SWC
 CHECKED BY: DAT
 DATE: 8/20/2021

SHEET
7

PROJECT NO. 2021182

K:\Casper\City of Casper\2021\182\Robertson Road to Mills Trail extension\05\CAD\Sheets\2021182-RRM-TE-02.dwg STA. 94+00.00 TO STA. 108+00.00 8/25/2021 4:05:58 PM



PREPARED BY
WWC ENGINEERING
 5880 ENTERPRISE DR., SUITE 600
 CASPER, WY 82609
 (307) 473-2707
 www.wwcengineering.com

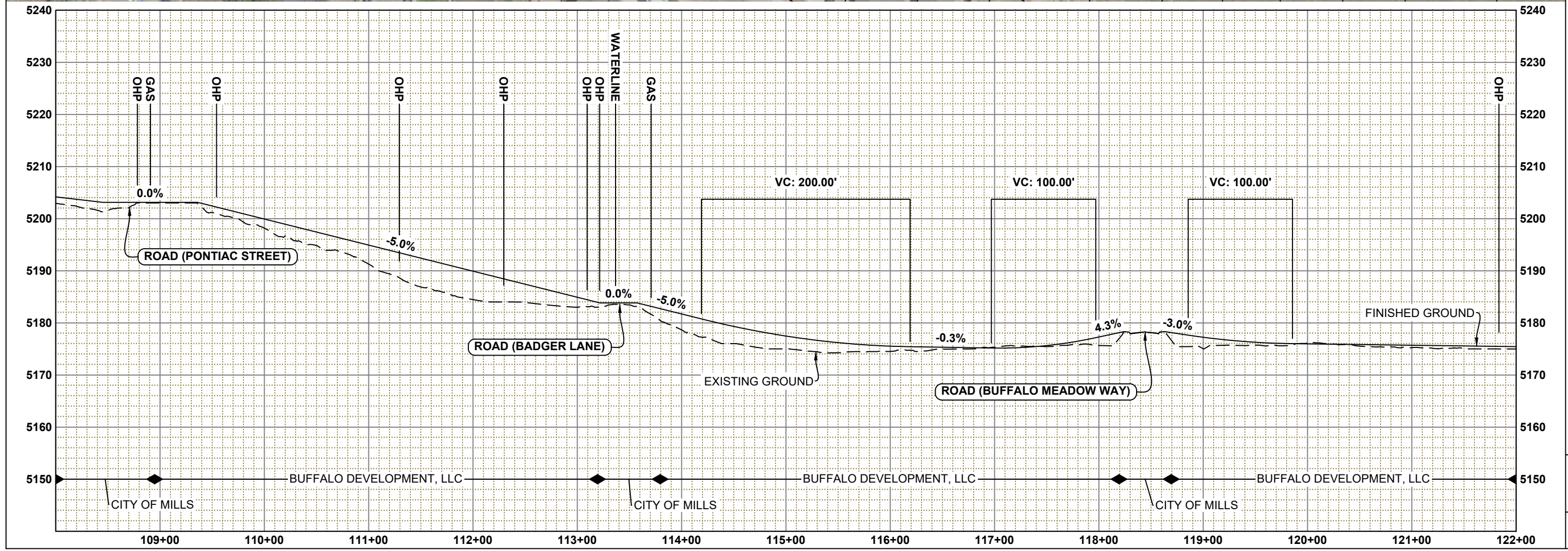
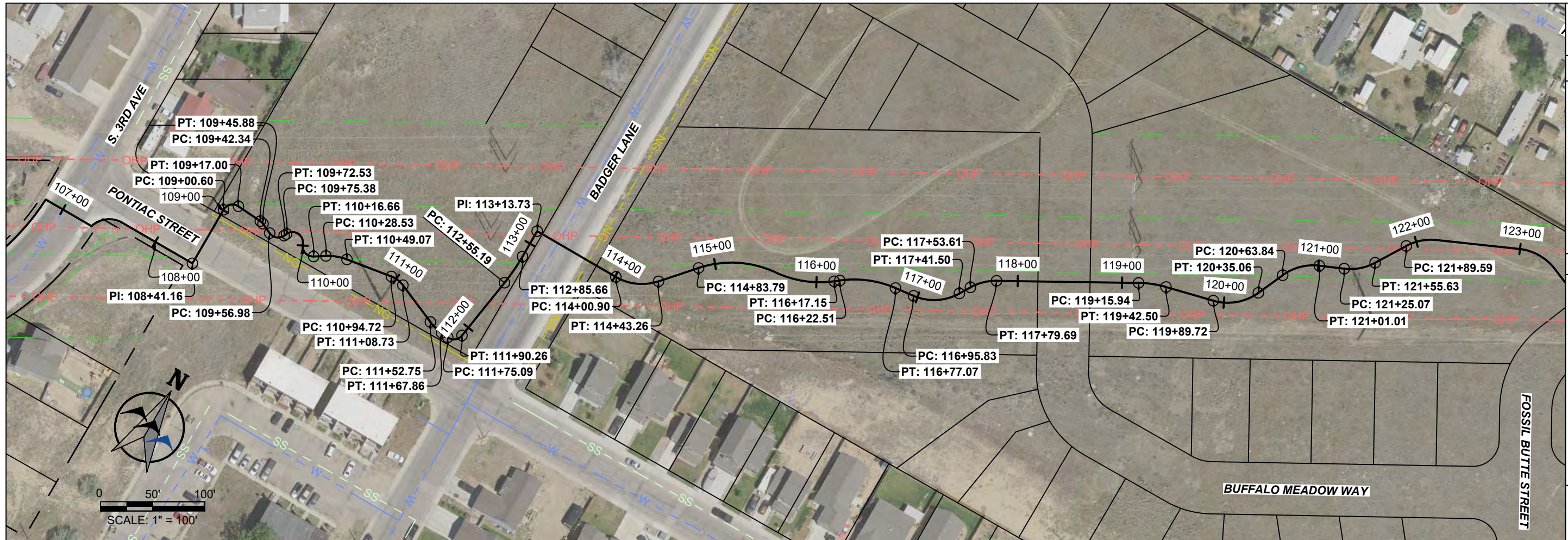
METROPOLITAN PLANNING ORGANIZATION
ROBERTSON ROAD TO MILLS TRAIL EXTENSION PLAN
STA. 94+00.00 TO STA. 108+00.00
 CITY OF MILLS, NATRONA COUNTY, WYOMING

DESIGNED BY: WWC
 DRAWN BY: SWC
 CHECKED BY: DAT
 DATE: 8/20/2021

SHEET
8

PROJECT NO. 2021182

K:\Casper\City of Casper\2021182 Robertson Road to Mills Trail extension\05CAD\Sheets\2021182-RTM-TE-02.dwg STA. 108+00.00 TO STA. 122+00.00 8/25/2021 4:05:58 PM



NO.	REVISION	BY	DATE

PROJECT NO. 2021182

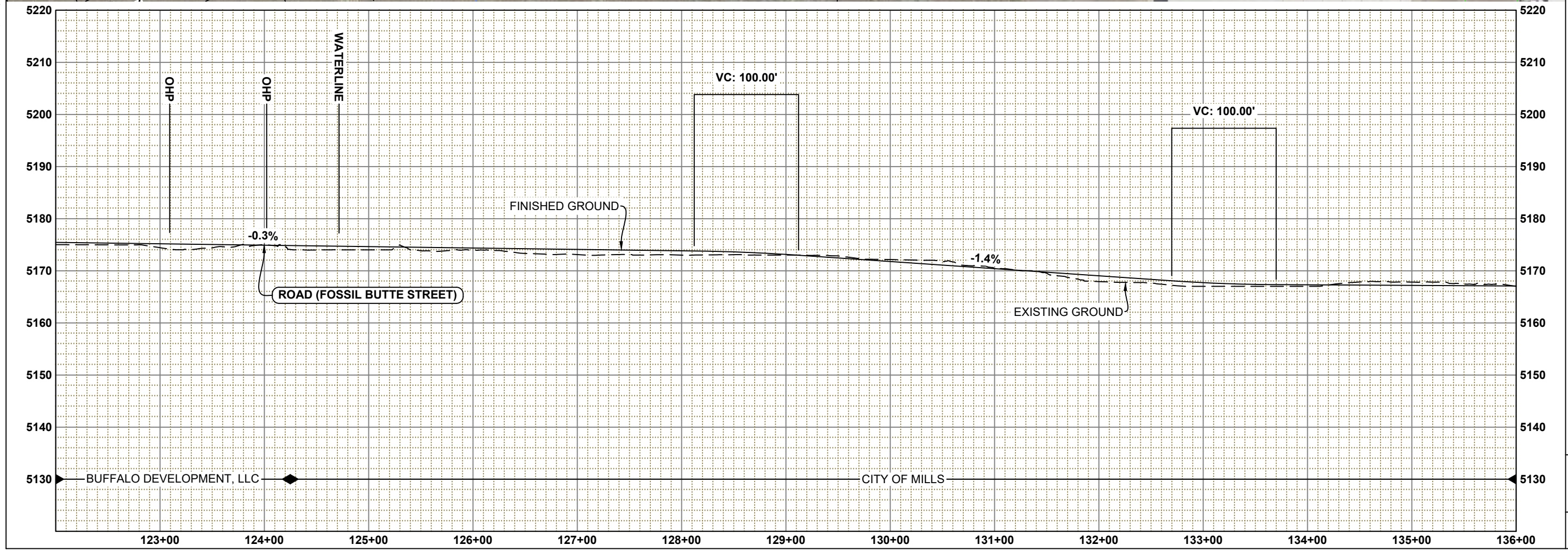
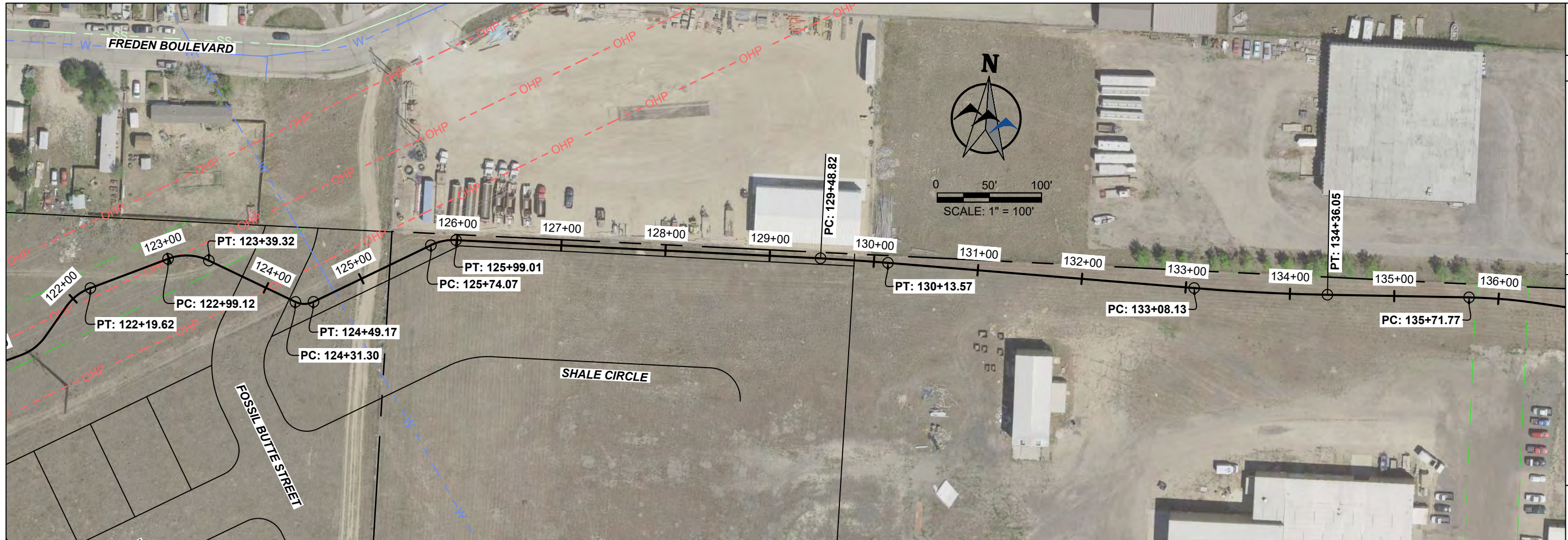
PREPARED BY
WWC ENGINEERING
 5880 ENTERPRISE DR., SUITE 600
 CASPER, WY 82609
 (307) 473-2707
 www.wwcengineering.com

METROPOLITAN PLANNING ORGANIZATION
ROBERTSON ROAD TO MILLS TRAIL EXTENSION PLAN
STA. 108+00.00 TO STA. 122+00.00
 CITY OF MILLS, NATRONA COUNTY, WYOMING

DESIGNED BY: WWC
 DRAWN BY: SWC
 CHECKED BY: DAT
 DATE: 8/20/2021

SHEET
9

K:\Casper\City of Casper\2021182 Robertson Road to Mills Trail extension\05CAD\Sheets\2021182-RRTM-TE-02.dwg STA. 122+00.00 TO STA. 136+00.00 8/25/2021 4:05:58 PM



NO.	REVISION	BY	DATE

WWC ENGINEERING
 5880 ENTERPRISE DR., SUITE 600
 CASPER, WY 82609
 (307) 473-2707
 www.wwcengineering.com

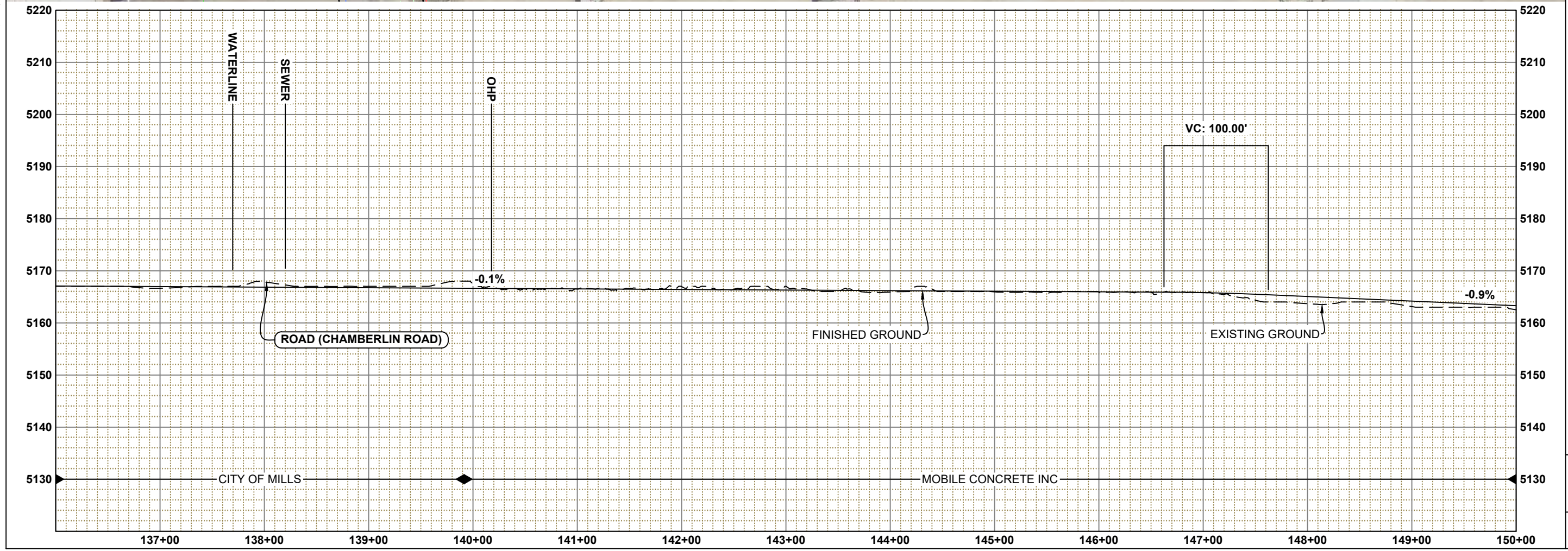
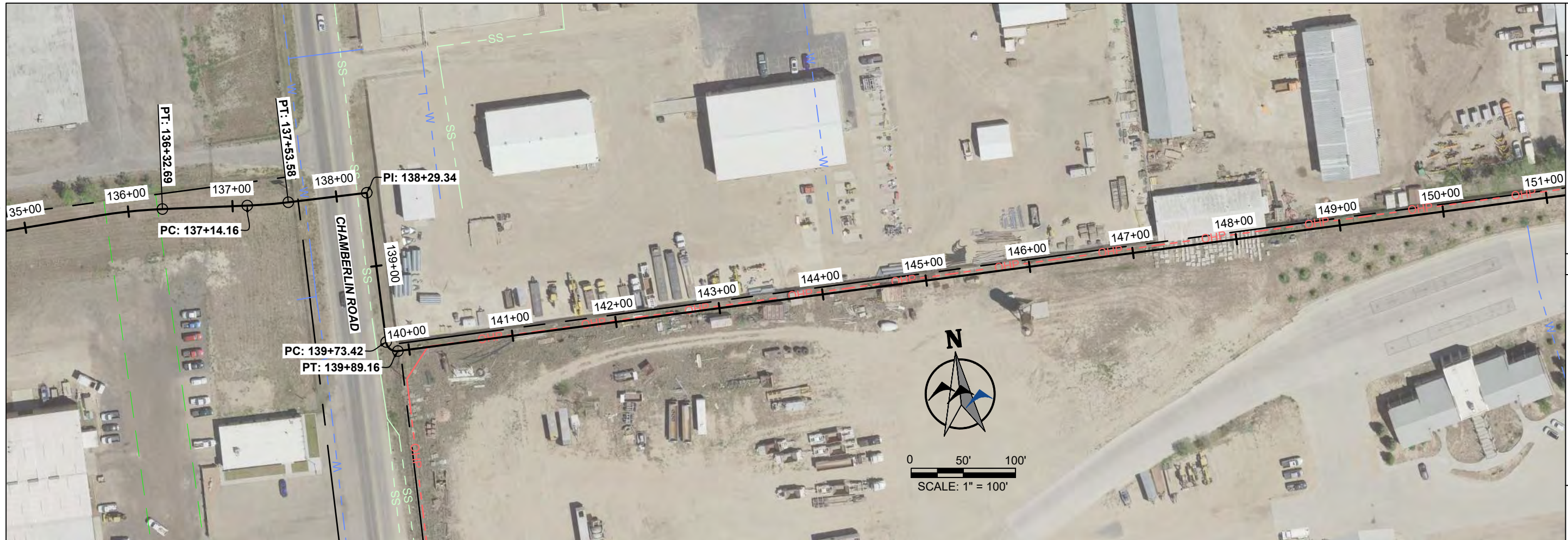
METROPOLITAN PLANNING ORGANIZATION
 ROBERTSON ROAD TO MILLS TRAIL EXTENSION PLAN
STA. 122+00.00 TO STA. 136+00.00
 CITY OF MILLS, NATRONA COUNTY, WYOMING

DESIGNED BY: WWC
 DRAWN BY: SWC
 CHECKED BY: DAT
 DATE: 8/20/2021

SHEET
10

PROJECT NO. 2021182

K:\Casper\City of Casper\2021182 Robertson Road to Mills Trail extension\05CAD\Sheets\2021182-RRTM-TE-02.dwg STA. 136+00.00 TO STA. 150+00.00 8/25/2021 4:05:58 PM



NO.	REVISION	BY	DATE

PREPARED BY
WWC ENGINEERING
 5880 ENTERPRISE DR., SUITE 600
 CASPER, WY 82609
 (307) 473-2707
 www.wwcengineering.com

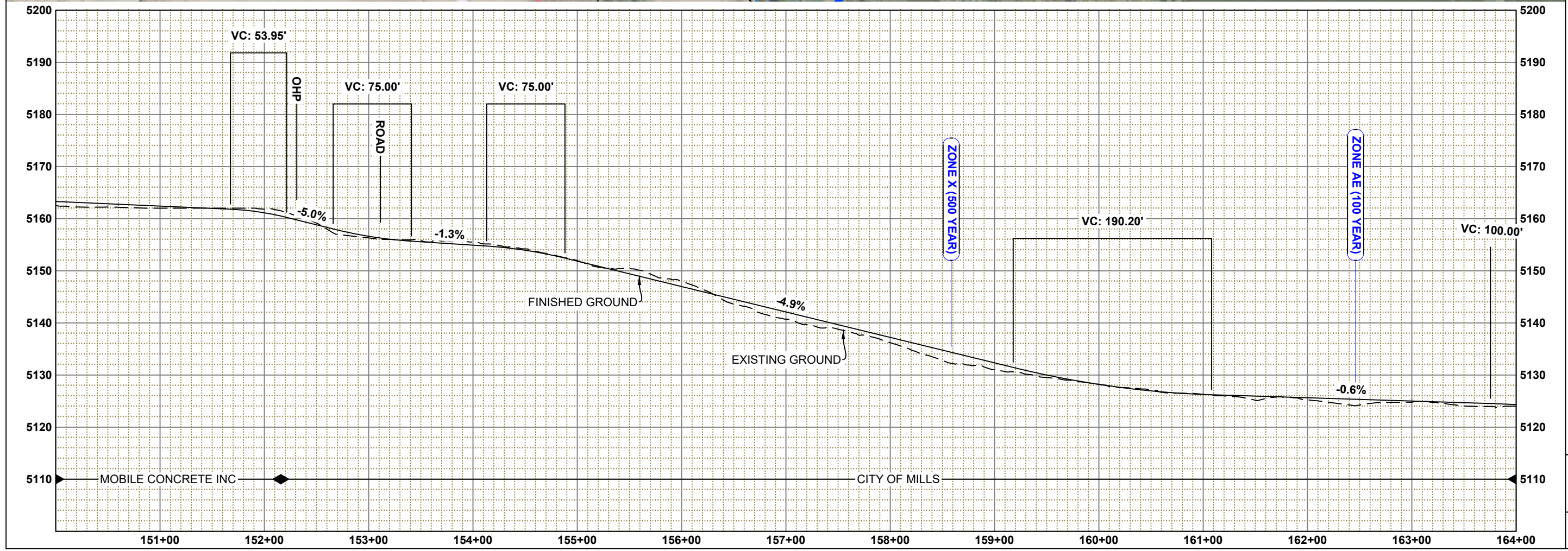
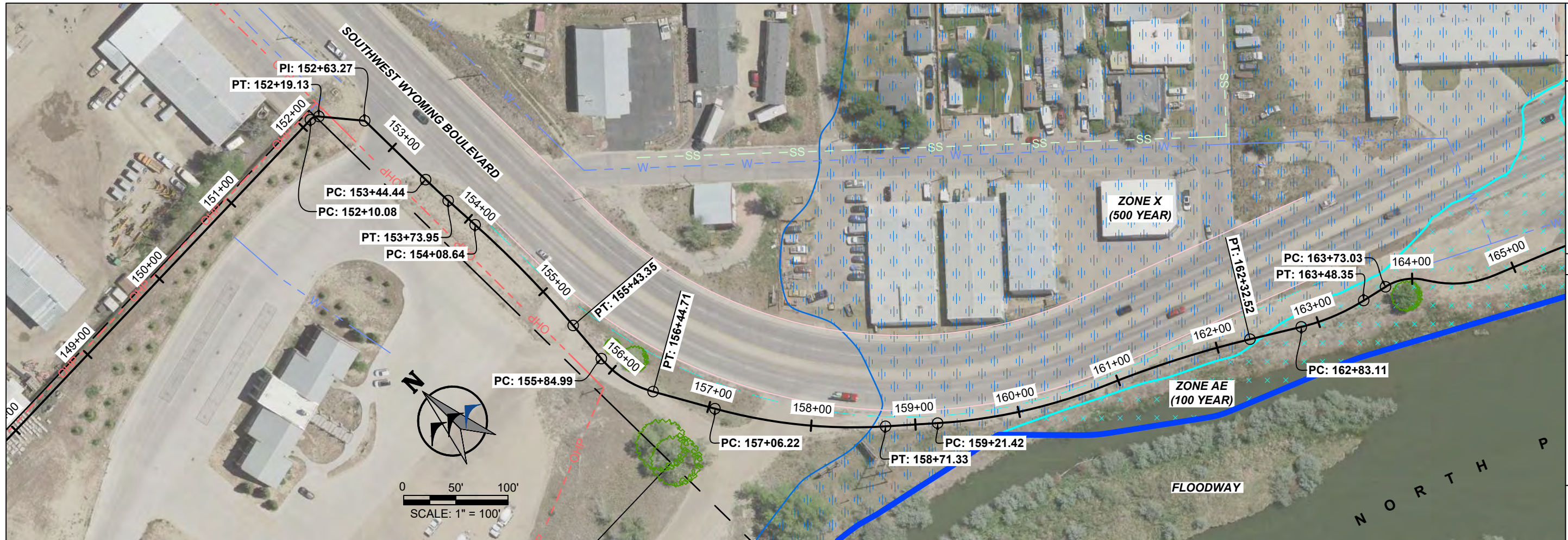
METROPOLITAN PLANNING ORGANIZATION
ROBERTSON ROAD TO MILLS TRAIL EXTENSION PLAN
STA. 136+00.00 TO STA. 150+00.00
 CITY OF MILLS, NATRONA COUNTY, WYOMING

DESIGNED BY: WWC
 DRAWN BY: SWC
 CHECKED BY: DAT
 DATE: 8/20/2021

SHEET
11

PROJECT NO. 2021182

K:\Casper\City of Casper\2021182 Robertson Road to Mills Trail extension\05\CAD\Sheets\2021182-RRTM-TE-02.dwg STA. 150+00.00 TO STA. 164+00.00 8/25/2021 4:05:58 PM



NO.	REVISION	BY	DATE

PREPARED BY **WWC ENGINEERING**
 5880 ENTERPRISE DR., SUITE 600
 CASPER, WY 82609
 (307) 473-2707
 www.wwcengineering.com

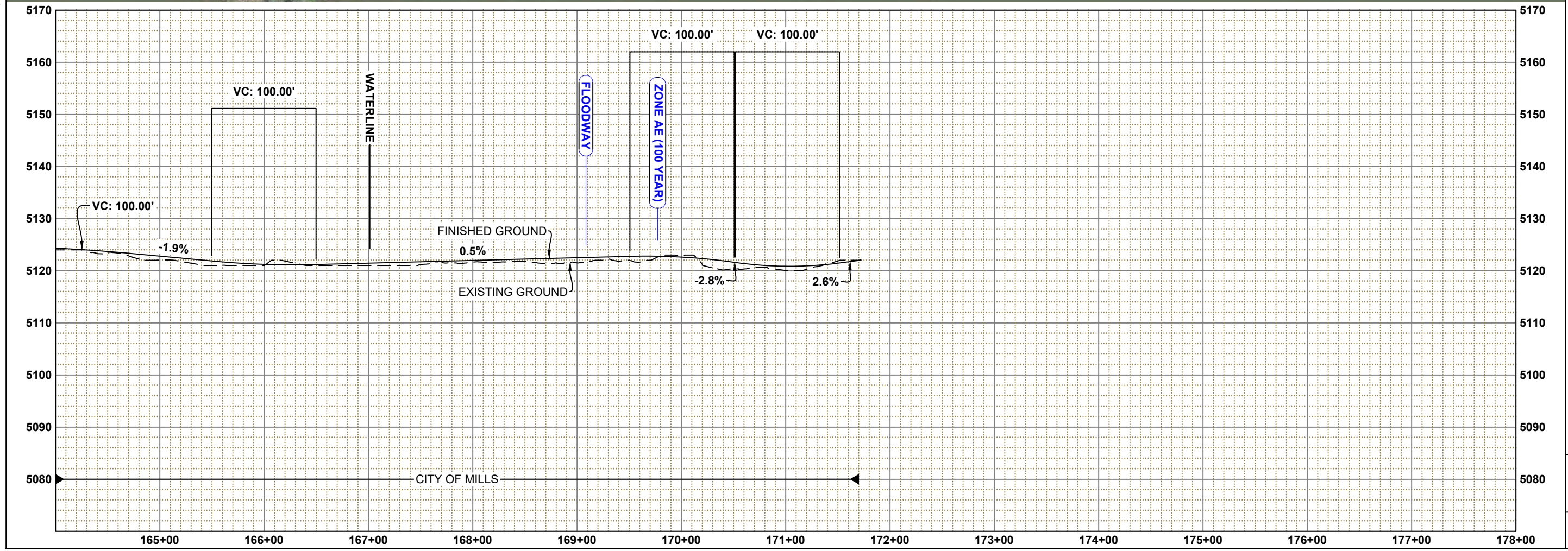
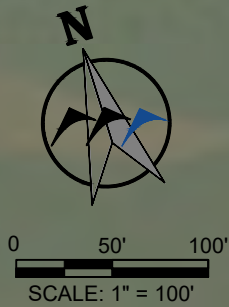
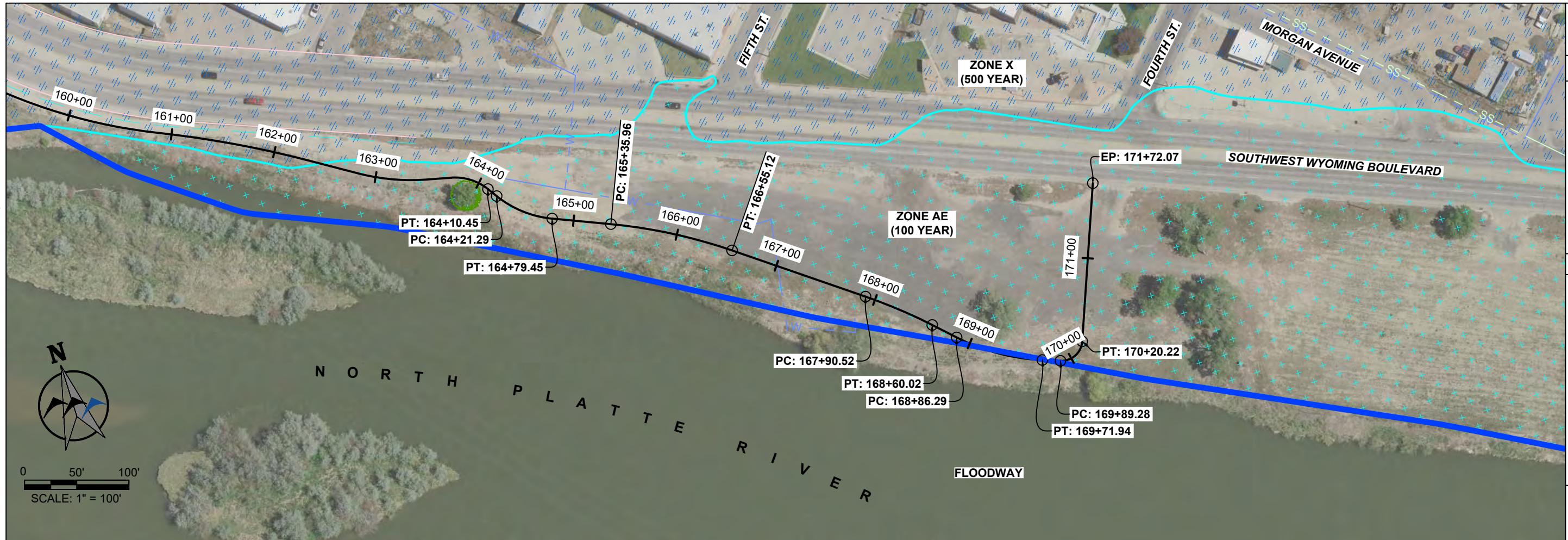
PROJECT NO. 2021182

METROPOLITAN PLANNING ORGANIZATION
ROBERTSON ROAD TO MILLS TRAIL EXTENSION PLAN
STA. 150+00.00 TO STA. 164+00.00
 CITY OF MILLS, NATRONA COUNTY, WYOMING

DESIGNED BY: WWC
 DRAWN BY: SWC
 CHECKED BY: DAT
 DATE: 8/20/2021

SHEET
12

K:\Casper\City of Casper\2021182 Robertson Road to Mills Trail extension\05CAD\Sheets\2021182-RRTM-TE-02.dwg STA. 164+00.00 TO STA. 171+72.07 8/25/2021 4:05:58 PM



NO.	REVISION	BY	DATE

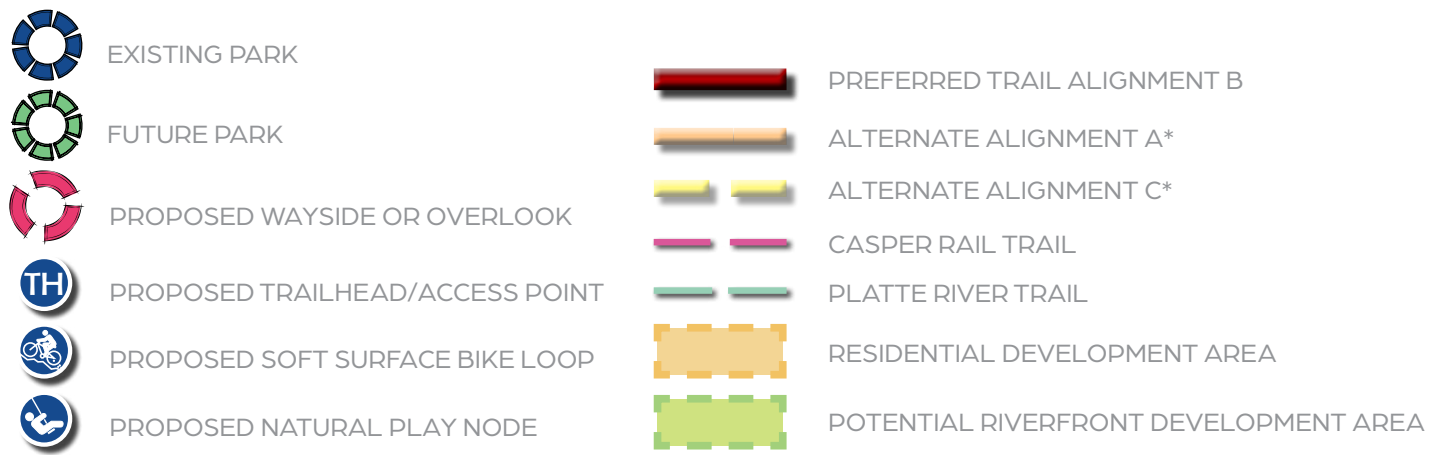
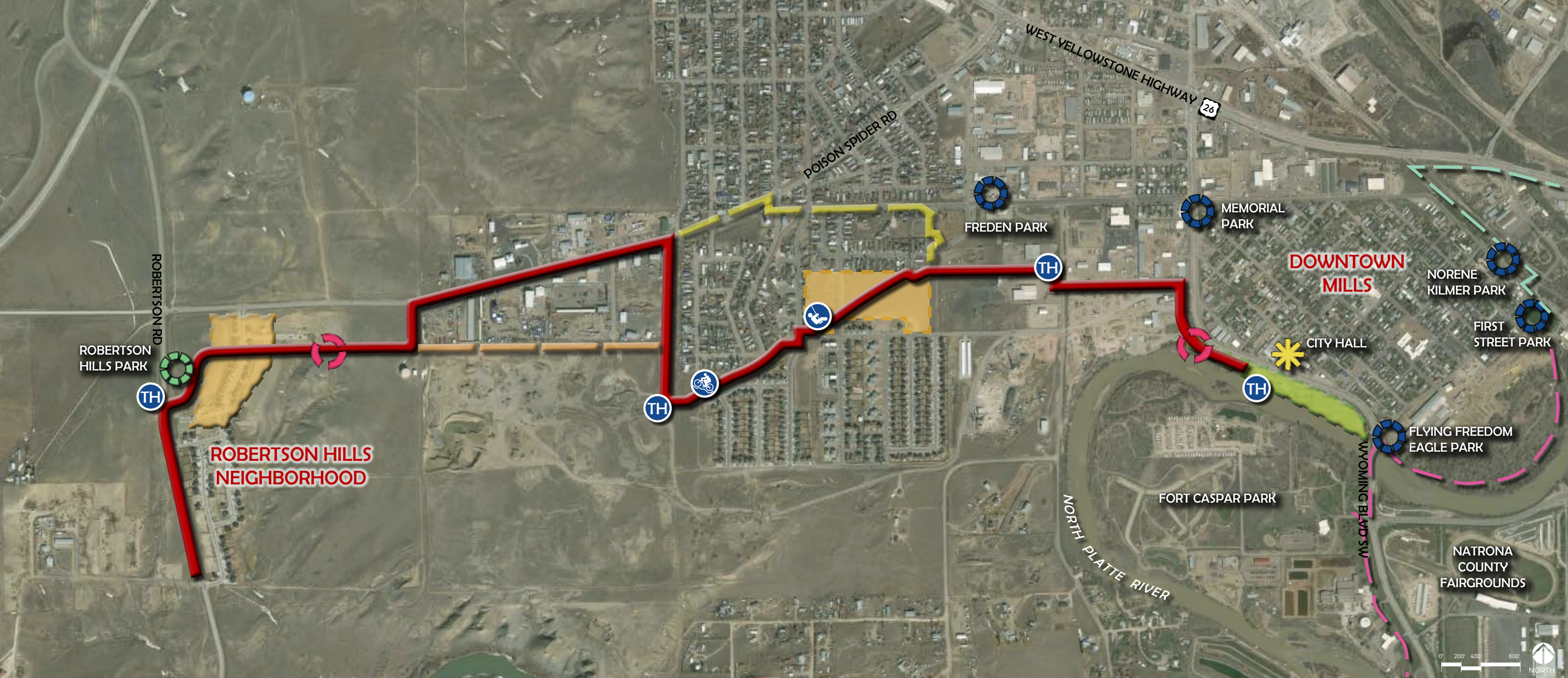
PROJECT NO. 2021182

PREPARED BY **WWC ENGINEERING**
 5880 ENTERPRISE DR., SUITE 600
 CASPER, WY 82609
 (307) 473-2707
 www.wwcengineering.com

METROPOLITAN PLANNING ORGANIZATION
ROBERTSON ROAD TO MILLS TRAIL EXTENSION PLAN
STA. 164+00.00 TO STA. 171+72.07
 CITY OF MILLS, NATRONA COUNTY, WYOMING

DESIGNED BY: WWC
 DRAWN BY: SWC
 CHECKED BY: DAT
 DATE: 8/20/2021













SHEET
13



*Alternate alignments are shown for reference only and were not selected based on ability to secure agreements with adjacent landowners and increased safety concerns along these alignments.

- Notes:
- Trailheads may include benches/seating, small shade structures, trail maps, dog waste stations, bike parking or public art.
 - Trail waysides and overlooks may include seating or tables.
 - Trail distance markers and wayfinding shall be placed continuously along the trail corridor.
 - Soft surface shoulders may be added to portions of the trail where feasible and compatible with adjacent uses and grades.
 - Lighting, drinking fountains and other elements dependent on availability of utilities to be located as feasible at trailheads and major trail access points.
 - Planted wind screens will require irrigation water to be most successful and will also need access to utilities.
 - Trail corridor location shown is conceptual and subject to outcome of land owner negotiations. Width may vary depending on adjacent conditions.



-  CROSSING/SAFETY ENHANCEMENTS
-  PROPOSED WAYSIDE OR OVERLOOK
-  PROPOSED TRAILHEAD/ACCESS POINT
-  PROPOSED SOFT SURFACE BIKE LOOP
-  PROPOSED NATURE PLAY AREA
-  PROPOSED ON-STREET PARKING
-  PREFERRED TRAIL ALIGNMENT B
-  POTENTIAL FUTURE SOFT SURFACE TRAIL
-  RESIDENTIAL DEVELOPMENT AREA
-  POTENTIAL ENHANCED/RESTORED OPEN SPACE AREA
-  POTENTIAL VEGETATIVE BUFFER/SCREEN
-  POTENTIAL FENCING/BARRIER

Notes:

- Trailheads may include benches/seating, small shade structures, trail maps, dog waste stations, bike parking or public art.
- Trail waysides and overlooks may include seating or tables.
- Trail distance markers and wayfinding shall be placed continuously along the trail corridor.
- Soft surface shoulders may be added to portions of the trail where feasible and compatible with adjacent uses and grades.
- Lighting, drinking fountains and other elements dependent on availability of utilities to be located as feasible at trailheads and major trail access points.
- Planted wind screens will require irrigation water to be most successful and will also need access to utilities.
- Trail corridor location shown is conceptual and subject to outcome of land owner negotiations. Width may vary depending on adjacent conditions.
- All potential and future amenities shown are conceptual and subject to available funding and coordination with easements, topography and other constraints.



- 1 PRIMARY TRAIL
- 2 SECONDARY TRAIL LOOP
- 3 SIGNED BIKE/PED CROSSING
- 4 EVERGREEN WINDBREAK/BUFFER
- 5 SHADE/SMALL DECIDUOUS TREES
- 6 NATIVE GRASSES
- 7 SHRUB/PERENNIAL PLANTINGS
- 8 NATURE PLAY NODE
- 9 NATURE PLAYGROUND
- 10 SHADE SHELTER
- 11 ACCESSIBLE SEATING

NOTE: Features shown are conceptual and subject to change. Design to be coordinated with final topography and power lines and poles. Trees and other features shown under power lines shall meet height restriction and other requirements.

EAST OPEN SPACE CONCEPT - PLAN



WEST OPEN SPACE CONCEPT - PLAN

- 1 PRIMARY TRAIL
- 2 BIKE SKILLS LOOP
- 3 SIGNED BIKE/PED CROSSING
- 4 EVERGREEN WINDBREAK/BUFFER
- 5 SHADE/SMALL DECIDUOUS TREES
- 6 NATIVE GRASSES
- 7 SHRUB/PERENNIAL PLANTINGS
- 8 TRAILHEAD AMENITIES
- 9 OVERLOOK
- 10 SHADE SHELTER
- 11 ACCESSIBLE SEATING
- 11 SOFT SURFACE SHOULDER

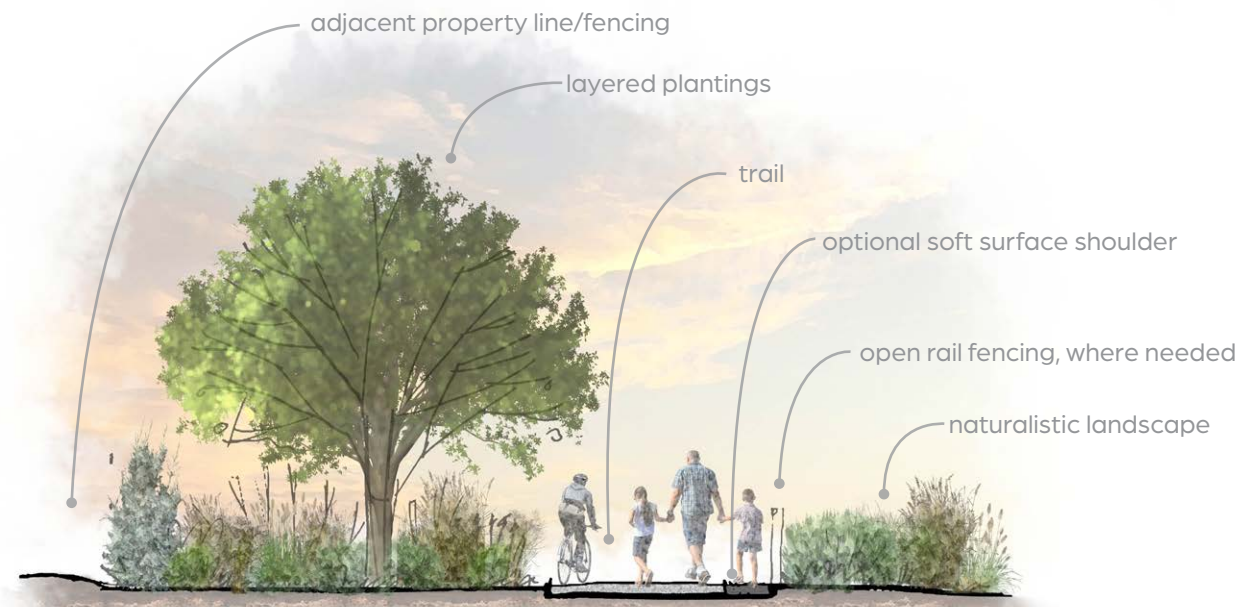
NOTE: Features shown are conceptual and subject to change. Design to be coordinated with final topography and power lines and poles. Trees and other features shown under power lines shall meet height restriction and other requirements.



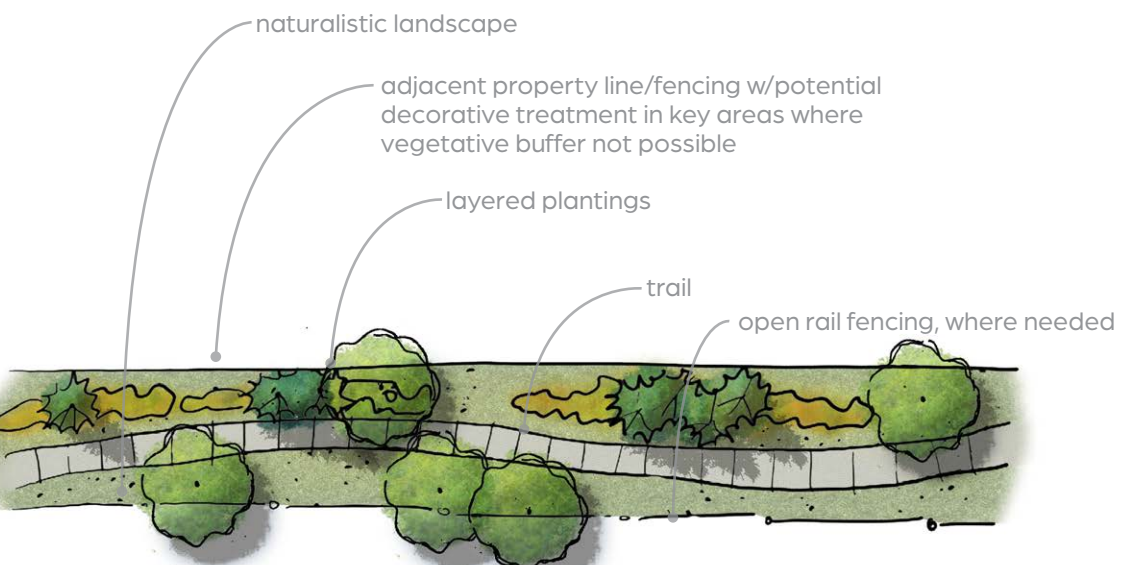
WEST OPEN SPACE CONCEPT - PERSPECTIVE VIEW



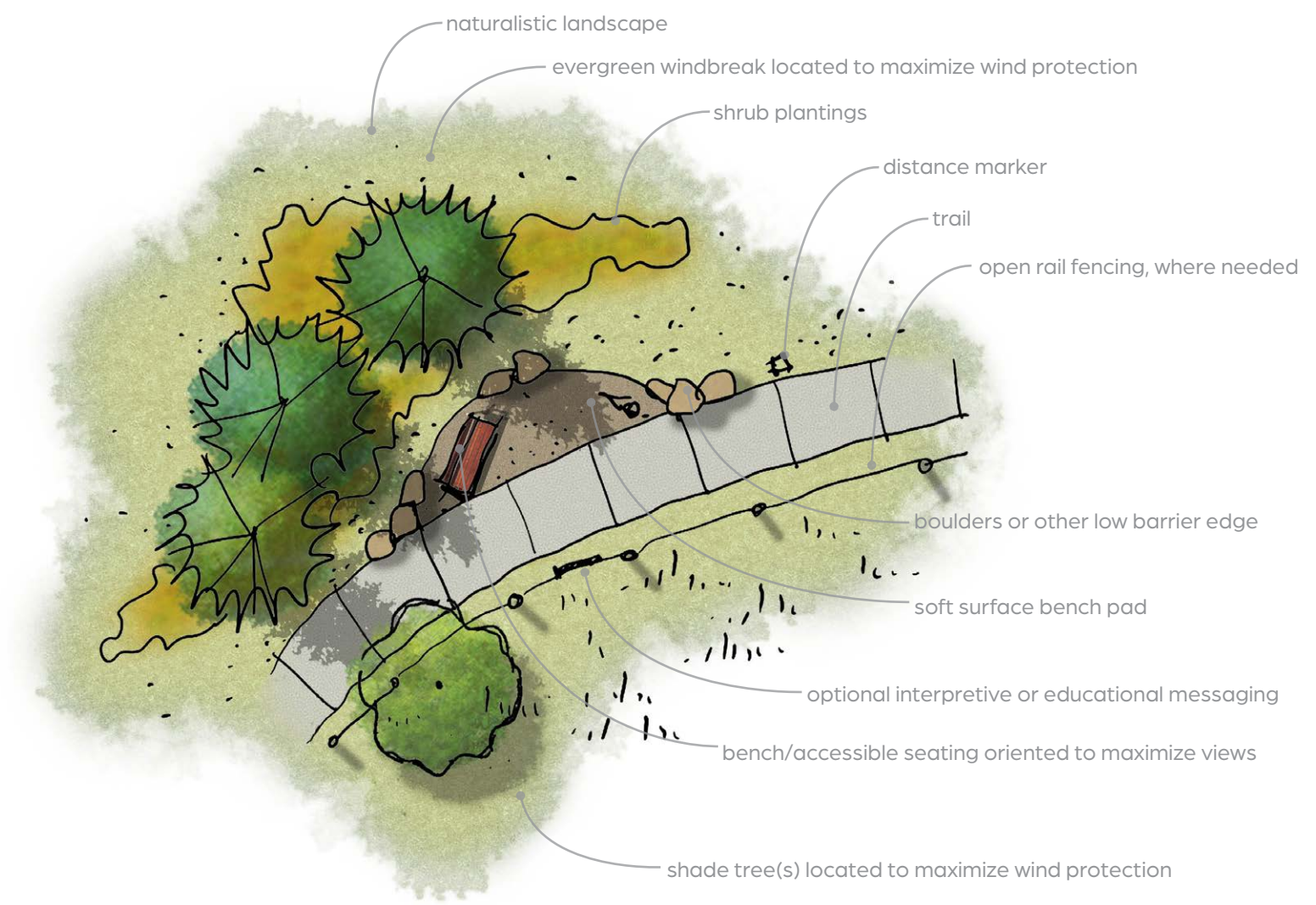
EXISTING CONDITIONS



BUFFERING CONCEPT - SECTION



BUFFERING CONCEPT - PLAN



TRAIL WAYDSIDE CONCEPT - PLAN

ESTIMATED CONSTRUCTION COSTS

ROBERTSON ROAD TO MILLS TRAIL

Feature Unit Costs



August 20, 2021

Item	Unit	Cost	Notes
SITE WORK			
Crusher Fines Paving	SF	\$2.50	4" depth w/ fabric and stabilizer
LANDSCAPE			
Deciduous Tree - 2" cal.	EA	\$550.00	
Deciduous Tree - 3.5" cal.	EA	\$700.00	
Ornamental Tree - 1.5" cal	EA	\$500.00	
Evergreen Tree - 6' ht	EA	\$600.00	
Deciduous Shrub	EA	\$35.00	5 gal
Evergreen Shrub	EA	\$45.00	5 gal
Ornamental Grass	EA	\$25.00	1 gal
Perennials	EA	\$20.00	1 gal
Mulch - Wood	SF	\$0.75	
Mulch - Rock	SF	\$1.25	
Landscape Boulders	EA	\$500.00	
Soil Prep + Fine Grading	SF	\$0.22	
Soil Amendment/Topsoil Placement	SF	\$1.50	
Sod	SF	\$0.35	
Hydromulch	SF	\$0.25	
Native Seed	SF	\$0.20	
Metal Landscape Edger	LF	\$6.00	
IRRIGATION			
Small Radius Sprays (≤15')	SF	\$1.75	for seed establishment
Large Radius Rotors (≥20')	SF	\$1.25	for seed establishment
Drip - Trees in seed	EA	\$200.00	
SITE FURNISHINGS			
Bench - 6'	EA	\$2,500.00	
Picnic Table	EA	\$2,500.00	
Trash Receptacle	EA	\$750.00	
Recycling Receptacle	EA	\$750.00	
Bike Rack - Single	EA	\$1,000.00	
SIGNAGE & FENCING			
Vehicular Wayfinding	EA	\$500.00	
Pedestrian Wayfinding	EA	\$750.00	
Distance Markers	EA	\$500.00	
Interpretive Signs	EA	\$1,500.00	does not include panel design
Misc Regulatory Signage	EA	\$500.00	
Open Rail Fence	LF	\$45.00	
STRUCTURES			
16 x 16 pavilion	EA	\$25,000.00	
SITE LIGHTING, ELECTRICAL, COMMUNICATIONS			
LED Area Light and Pole	EA	\$6,500.00	
LED Bollard	EA	\$1,200.00	

NOTES

1. Does not include escalation for inflation - assume 5% per year
2. Does not include tap or permitting fees.
3. Does not include power, utility POC's or sleeving.
4. Costs are based on date of estimate only and subject to fluctuation.
5. Does not include detailed design or engineering fees if required.

ESTIMATED CONSTRUCTION COSTS

ROBERTSON ROAD TO MILLS TRAIL

Feature Costs



August 20, 2021

Item	Unit	Cost	Notes
AMENITIES			
Natural Play Node	EA	\$10,000.00	assumes 500 SF, includes natural materials equipment, safety rated fall surface, edge containment system
Trail Wayside	EA	\$700.00	assumes 200 SF, crusher fines surfacing, one bench, 6 boulders, one interpretive sign
Neighborhood Trailhead	EA	\$40,000.00	includes ADA curb ramp, kiosk sign, 16x16 shelter, regulatory signage
Neighborhood Trail Access	EA	\$10,000.00	includes ADA curb ramp, trail map, regulatory signage

NOTES

1. Does not include escalation for inflation - assume 5% per year
2. Does not include tap or permitting fees.
3. Does not include power, utility POC's or sleeving.
4. Costs are based on date of estimate only and subject to fluctuation.
5. Does not include detailed design or engineering fees if required.