



**NOTICE OF AWARD**

Date: May 16, 2019  
Company: Sorter Construction, Inc.  
Project: Riverside Park Improvements and Bike Path IFB-4621-19-DH

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You have been awarded the City of Grand Junction Riverside Park Improvements and Bike Path IFB-4621-19-DH for a total price of **\$787,257.00**.

Please notify Brendan Hines, City of Grand Junction Project Engineer 970-256-4038 for project scheduling and return to the City Purchasing Division an acknowledged copy of this Notice of Award, signed Contract, Payment & Performance Bonds, and Insurance Certificate, as per the solicitation documents.

CITY OF GRAND JUNCTION, COLORADO

DocuSigned by:  
*Duane Hoff Jr., Senior Buyer - City of Grand Junction*  
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Duane Hoff Jr., Senior Buyer

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**SUPPLIER ACKNOWLEDGEMENT**

Receipt of this Notice to Award is hereby acknowledged:

Company: Sorter Construction Inc

By: DocuSigned by:  
*William R. Ogle, President - Sorter Construction*  
7881A43116754AF... William R. Ogle, President - Sorter Constr

Title: president

Date: 5/16/2019 | 19:44 MDT



CITY OF GRAND JUNCTION, COLORADO

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**CONTRACT**

This CONTRACT made and entered into this 16<sup>th</sup> day of May, 2019 by and between the **Grand Junction, Colorado**, a government entity in the County of Mesa, State of Colorado, hereinafter in the Contract Documents referred to as the "Owner" and **Sorter Construction, Inc.** hereinafter in the Contract Documents referred to as the "Contractor."

WITNESSETH:

WHEREAS, the Owner advertised that sealed Bids would be received for furnishing all labor, tools, supplies, equipment, materials, and everything necessary and required for the Project described by the Contract Documents and known as **Riverside Park Improvements and Bike Path IFB-4621-19-DH.**

WHEREAS, the Contract has been awarded to the above named Contractor by the Owner, and said Contractor is now ready, willing and able to perform the Work specified in the Notice of Award, in accordance with the Contract Documents;

NOW, THEREFORE, in consideration of the compensation to be paid the Contractor, the mutual covenants hereinafter set forth and subject to the terms hereinafter stated, it is mutually covenanted and agreed as follows:

ARTICLE 1

**Contract Documents:** It is agreed by the parties hereto that the following list of instruments, drawings, and documents which are attached hereto, bound herewith, or incorporated herein by reference constitute and shall be referred to either as the "Contract Documents" or the "Contract", and all of said instruments, drawings, and documents taken together as a whole constitute the Contract between the parties hereto, and they are fully a part of this agreement as if they were set out verbatim and in full herein:

The order of contract document governance shall be as follows:

- a. The body of this contract agreement
- b. Solicitation Documents for the Project; **Riverside Park Improvements and Bike Path;**
- c. Notice of Award
- d. Contractors Response to the Solicitation
- e. Work Change Requests (directing that changed work be performed);

- f. Field Orders
- g. Change Orders.

## ARTICLE 2

Definitions: The clauses provided in the Solicitation apply to the terms used in the Contract and all the Contract Documents.

## ARTICLE 3

Contract Work: The Contractor agrees to furnish all labor, tools, supplies, equipment, materials, and all that is necessary and required to complete the tasks associated with the Work described, set forth, shown, and included in the Contract Documents as indicated in the Solicitation Document.

## ARTICLE 4

Contract Time and Liquidated Damages: Time is of the essence with respect to this Contract. The Contractor hereby agrees to commence Work under the Contract on or before the date specified in the Solicitation from the Owner, and to achieve Substantial Completion and Final Completion of the Work within the time or times specified in the Solicitation. In the event the Work is not completed in the times set forth and as agreed upon, the Contractor further agrees to pay Liquidated Damages to the Owner as set forth in the Solicitation. The Contractor acknowledges and recognizes the delays, expenses and difficulties involved in proving in a legal proceeding the actual losses suffered by the Owner if the work is not completed on time. Accordingly, instead of requiring any such proof, the Owner and the Contractor agree that as Liquidated Damages for delay, but not as a penalty, the Contractor shall pay to the Owner the amounts specified in the Solicitation.

## ARTICLE 5

Contract Price and Payment Procedures: The Contractor shall accept as full and complete compensation for the performance and completion of all of the Work specified in the Contract Documents, the sum of **Seven Hundred Eighty-Seven Thousand Two Hundred Fifty-Seven and 00/100 Dollars (\$787,257.00)**. If this Contract contains unit price pay items, the Contract Price shall be adjusted in accordance with the actual quantities of items completed and accepted by the Owner at the unit prices quoted in the Solicitation Response. The amount of the Contract Price is and has heretofore been appropriated by the Grand Junction City Council for the use and benefit of this Project. The Contract Price shall not be modified except by Change Order or other written directive of the Owner. The Owner shall not issue a Change Order or other written directive which requires additional work to be performed, which work causes the aggregate amount payable under this Contract to exceed the amount appropriated for this Project, unless and until the Owner provides Contractor written assurance that lawful appropriations to cover the costs of the additional work have been made.

Unless otherwise provided in the Solicitation, monthly partial payments shall be made as the Work progresses. Applications for partial and Final Payment shall be prepared by the Contractor and approved by the Owner in accordance with the Solicitation.

Upon Final Completion of the Work under the Contract and before the Contractor shall receive final payment, the Owner shall publish at least twice in a newspaper of general circulation published in the County a notice that: 1. the Owner has accepted such Work as completed according to the Contract Documents; 2. the Contractor is entitled to final payment therefore; 3. thirty days after the first publication, specifying the exact date, the Owner shall pay the full balance due under the Contract; and 4. persons having claims for labor, materials, team hire, sustenance, provisions, provender, or other supplies used or consumed by the Contractor or a subcontractor shall file a verified statement of the amount due and unpaid on account of such claim prior to the date specified for such payment. Nothing herein shall be construed as relieving the Contractor and the Sureties on the Contractor's Bonds from any claim or claims for work or labor done or materials or supplies furnished in the execution of the Contract.

#### ARTICLE 6

Bonds: The Contractor shall furnish currently herewith the Bonds required by the Contract Documents, such Bonds being attached hereto. The Performance Bond shall be in an amount not less than one hundred percent (100%) of the Contract Price set forth in Article 5. The Payment Bond shall be in an amount not less than one hundred (100%) of the Contract Price set forth in Article 5.

#### ARTICLE 7

Contract Binding: The Owner and the Contractor each binds itself, its partners, successors, assigns and legal representatives to the other party hereto in respect to all covenants, agreements and obligations contained in the Contract Documents. The Contract Documents constitute the entire agreement between the Owner and Contractor and may only be altered, amended or repealed by a duly executed written instrument. Neither the Owner nor the Contractor shall, without the prior written consent of the other, assign or sublet in whole or in part its interest under any of the Contract Documents and specifically, the Contractor shall not assign any moneys due or to become due without the prior written consent of the Owner.

#### ARTICLE 8

Severability: If any part, portion or provision of the Contract shall be found or declared null, void or unenforceable for any reason whatsoever by any court of competent jurisdiction or any governmental agency having the authority thereover, only such part, portion or provision shall be effected thereby and all other parts, portions and provisions of the Contract shall remain in full force and effect.

IN WITNESS WHEREOF, City of Grand Junction, Colorado, has caused this Contract to be subscribed and sealed and attested in its behalf; and the Contractor has signed this Contract the day and the year first mentioned herein.

The Contract is executed in two counterparts.





**Purchasing Division**

## **Invitation for Bid**

**IFB-4621-19-DH  
Riverside Park Improvements and Bike Path**

### **Responses Due:**

**April 17, 2019 prior to 3:30 pm**

**Accepting Electronic Responses Only**

**Responses Only Submitted Through the Rocky Mountain E-Purchasing System (RMEPS)**

**<https://www.rockymountainbidsystem.com/default.asp>**

**(Purchasing Representative does not have access or control of the vendor side of RMEPS. If website or other problems arise during response submission, vendor MUST contact RMEPS to resolve issue prior to the response deadline. 800-835-4603)**

### **Purchasing Representative:**

**Duane Hoff Jr., Senior Buyer**

**[duaneh@gjcity.org](mailto:duaneh@gjcity.org)**

**970-244-1545**

This document has been developed specifically to solicit competitive responses for this solicitation, and may not be the same as previous City of Grand Junction solicitations. All vendors are urged to thoroughly review this solicitation prior to responding. Submittal by **FAX, EMAIL or HARD COPY IS NOT ACCEPTABLE** for this solicitation.

# **Invitation for Bids**

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# **1. Instructions to Bidders**

- 1.1. **Purpose:** The City of Grand Junction is soliciting competitive bids from qualified and interested companies for all labor, equipment, and materials required to construct the Riverside Park Improvements and Bike Path. All dimensions and scope of work should be verified by Contractors prior to submission of bids.

**Note: This project shall be constructed in accordance with the current Davis Bacon Wage Rate Determination (Refer to Appendix D).**

**IFB Questions:**

Duane Hoff Jr., Senior Buyer

[duaneh@gjcity.org](mailto:duaneh@gjcity.org)

The City would like to remind all Contractors, Sub-Contractors, Vendors, Suppliers, Manufacturers, Service Providers, etc. that (with the exception of Pre-Bid or Site Visit Meetings) all questions, inquiries, comments, or communication pertaining to any formal solicitation (whether process, specifications, scope, etc.) must be directed (in writing) to the Purchasing Agent assigned to the project, or Purchasing Division. Direct communication with the City assigned Project Managers/Engineers is not appropriate for public procurement, and may result in disqualification.

- 1.2. **Mandatory Pre-Bid Meeting:** **Prospective bidders are required to attend a mandatory pre-bid meeting on March 28, 2019 at 10:00 am.** Meeting location shall be in the City Hall Auditorium, located at 250 North 5th Street. The purpose of this visit will be to inspect and to clarify the contents of this Invitation for Bids (IFB).
- 1.3. **The Owner:** The Owner is the City of Grand Junction, Colorado and is referred to throughout this Solicitation. The term Owner means the Owner or his authorized representative.
- 1.4. **Submission:** **Each bid shall be submitted in electronic format only, and only through the Rocky Mountain E-Purchasing website (<https://www.rockymountainbidsystem.com/default.asp>).** *This site offers both “free” and “paying” registration options that allow for full access of the Owner’s documents and for electronic submission of proposals. (Note: “free” registration may take up to 24 hours to process. Please Plan accordingly.)* Please view our “**Electronic Vendor Registration Guide**” at <http://www.gjcity.org/business-and-economic-development/bids/> for details. (Purchasing Representative does not have access or control of the vendor side of RMEPS. If website or other problems arise during response submission, vendor **MUST** contact RMEPS to resolve issue prior to the response deadline. **800-835-4603**)
- 1.5. **Modification and Withdrawal of Bids Before Opening.** Bids may be modified or withdrawn by an appropriate document stating such, duly executed and submitted to the place where Bids are to be submitted at any time prior to Bid Opening.



- 1.6. Printed Form for Price Bid:** All Price Bids must be made upon the Price Bid Schedule attached, and should give the amounts both in words and in figures, and must be signed and acknowledged by the bidder.

The Offeror shall specify a unit price in figures for each pay item for which a quantity is given and shall provide the products (in numbers) of the respective unit prices and quantities in the Extended Amount column. The total Bid price shall be equal to the sum of all extended amount prices. When an item in the Price Bid Schedule provides a choice to be made by the Offeror, Offeror's choice shall be indicated in accordance with the specifications for that particular item and thereafter no further choice shall be permitted.

Where the unit of a pay item is lump sum, the lump sum amount shall be shown in the "extended amount" column and included in the summation of the total Bid.

All blank spaces in the Price Bid Schedule must be properly filled out.

Bids by corporations must be executed in the corporate name by the president or vice president or other corporate office accompanied by evidence of authority to sign. The corporate address and state of incorporation shall be shown below the signature.

Bids by partnerships must be executed in the partnership name and signed by a partner whose title must appear under the signature and the official address of the partnership must be shown below the signature.

All names must be typed or printed below the signature.

The Offeror's Bid shall contain an acknowledgement of receipt of all Addenda, the numbers of which shall be filled in on the Contractor's Bid Form.

The contact information to which communications regarding the Bid are to be directed must be shown.

- 1.7. Exclusions:** No oral, telephonic, emailed, or facsimile bid will be considered
- 1.8. Contract Documents:** The complete IFB and bidder's response compose the Contract Documents. Copies of bid documents can be obtained from the City Purchasing website, <http://www.gjcity.org/business-and-economic-development/bids/> .
- 1.9. Additional Documents:** The July 2010 edition of the "City Standard Contract Documents for Capital Improvements Construction", Plans, Specifications and other Bid Documents are available for review or download on the Public Works & Planning/Engineering page at [www.gjcity.org](http://www.gjcity.org). Electronic copies may be obtained on a CD format at the Department of Public Works and Planning at City Hall.
- 1.10. Definitions and Terms:** See Article I, Section 3 of the General Contract Conditions in the *Standard Contract Documents for Capital Improvements Construction*.
- 1.11. Examination of Specifications:** Bidders shall thoroughly examine and be familiar with the project Statement of Work. The failure or omission of any Offeror to receive or

examine any form, addendum, or other document shall in no way relieve any Offeror from any obligation with respect to his bid. The submission of a bid shall be taken as evidence of compliance with this section. Prior to submitting a bid, each Offeror shall, at a minimum:

- a. Examine the *Contract Documents* thoroughly;
- b. Visit the site to familiarize themselves with local conditions that may in any manner affect cost, progress, or performance of the Work;
- c. Become familiar with federal, state, and local laws, ordinances, rules, and regulations that may in any manner affect cost, progress or performance of the Work;
- d. Study and carefully correlate Bidder's observations with the *Contract Documents*, and;
- e. Notify the Engineer of all conflicts, errors, ambiguities or discrepancies in or among the *Contract Documents*

On request, the Owner will provide each Offeror access to the site to conduct such investigations and tests as each Bidder deems necessary for submission of a Bid. It shall be the Offeror's responsibility to make or obtain any additional examinations, investigations, explorations, tests and studies and obtain any additional information and data which pertain to the physical conditions (including without limitation, surface, subsurface and underground utilities) at or contiguous to the site or otherwise which may affect cost, progress or performance of the work and which the Offeror deems necessary to determine its Bid for performing the work in accordance with the time, price and other terms and conditions of the *Contract Documents*. Location of any excavation or boring made by Offeror shall be subject to prior approval of Owner and applicable agencies. Offeror shall fill all holes, restore all pavements to match the existing structural section and shall clean up and restore the site to its former condition upon completion of such exploration. The Owner reserves the right to require the Offeror to execute an access agreement with the Owner prior to accessing the site.

The lands upon which the Work is to be performed, rights of way, and access thereto, and other lands designated for use by Contractor in performing the Work, are identified on the Drawings.

Information and data reflected in the *Contract Documents* with respect to underground utilities at or contiguous to the site are based upon information and data furnished to the Owner and the Engineer by the owners of such underground utilities or others, and the Owner does not assume responsibility for the accuracy or completeness thereof, unless it is expressly provided otherwise in the *Contract Documents*.

By submission of a Bid, the Offeror shall be conclusively presumed to represent that the Offeror has complied with every requirement of these Instructions to Bidders, that the *Contract Documents* are not ambiguous and are sufficient in scope and detail to

indicate and convey understanding of all terms and conditions for performance of the Work.

- 1.12. **Questions Regarding Statement of Work:** Any information relative to interpretation of Scope of Work or specifications shall be requested of the Purchasing Representative, in writing, in ample time prior to the response time.
- 1.13. **Addenda & Interpretations:** If it becomes necessary to revise any part of this solicitation, a written addendum will be posted electronically on the City's website at <http://www.gjcity.org/business-and-economic-development/bids/>. The Owner is not bound by any oral representations, clarifications, or changes made in the written specifications by Owner, unless such clarification or change is provided in written addendum form from the City Purchasing Representative.
- 1.14. **Taxes:** The Owner is exempt from State retail and Federal tax. The bid price must be net, exclusive of taxes.
- 1.15. **Sales and Use Taxes:** The Contractor and all Subcontractors are required to obtain exemption certificates from the Colorado Department of Revenue for sales and use taxes in accordance with the provisions of the General Contract Conditions. Bids shall reflect this method of accounting for sales and use taxes on materials, fixtures and equipment.
- 1.16. **Offers Binding 60 Days:** Unless additional time is required by the Owner, or otherwise specified, all formal offers submitted shall be binding for sixty (60) calendar days following opening date, unless the Bidder, upon request of the Purchasing Representative, agrees to an extension.
- 1.17. **Collusion Clause:** Each bidder by submitting a bid certifies that it is not party to any collusive action or any action that may be in violation of the Sherman Antitrust Act. Any and all bids shall be rejected if there is evidence or reason for believing that collusion exists among bidders. The Owner may, or may not, accept future bids for the same services or commodities from participants in such collusion.
- 1.18. **Disqualification of Bidders:** A Bid will not be accepted from, nor shall a Contract be awarded to, any person, firm, or corporation that is in arrears to the Owner, upon debt or contract, or that has defaulted, as surety or otherwise, upon any obligation to the Owner, or that is deemed irresponsible or unreliable.

Bidders may be required to submit satisfactory evidence that they are responsible, have a practical knowledge of the project bid upon and that they have the necessary financial and other resources to complete the proposed Work.

Either of the following reasons, without limitation, shall be considered sufficient to disqualify a Bidder and Bid:

- a. More than one Bid is submitted for the same Work from an individual, firm, or corporation under the same or different name; and
- b. Evidence of collusion among Bidders. Any participant in such collusion shall

not receive recognition as a Bidder for any future work of the Owner until such participant has been reinstated as a qualified bidder.

- 1.19. Public Disclosure Record:** If the bidder has knowledge of their employee(s) or sub-contractors having an immediate family relationship with a City/County employee or elected official, the bidder must provide the Purchasing Representative with the name(s) of these individuals. These individuals are required to file an acceptable "Public Disclosure Record", a statement of financial interest, before conducting business with the City/County.

## **2. General Contract Conditions for Construction Projects**

- 2.1. The Contract:** This Invitation for Bid, submitted documents, and any negotiations, when properly accepted by the City/County, shall constitute a contract equally binding between the City/County and Contractor. The contract represents the entire and integrated agreement between the parties hereto and supersedes all prior negotiations, representations, or agreements, either written or oral. The contract may be amended or modified with Change Orders, Field Orders, or Addendums.
- 2.2. The Work:** The term Work includes all labor necessary to produce the construction required by the Contract Documents, and all materials and equipment incorporated or to be incorporated in such construction.
- 2.3. Execution, Correlation, Intent, and Interpretations:** The Contract Documents shall be signed in not less than triplicate by the Owner (City/County) and Contractor. City/County will provide the contract. By executing the contract, the Contractor represents that he/she has visited the site, familiarized himself with the local conditions under which the Work is to be performed, and correlated his observations with the requirements of the Contract Documents. The Contract Documents are complementary, and what is required by any one, shall be as binding as if required by all. The intention of the documents is to include all labor, materials, equipment and other items necessary for the proper execution and completion of the scope of work as defined in the technical specifications and drawings contained herein. All drawings, specifications and copies furnished by the City/County are, and shall remain, City/County property. They are not to be used on any other project, and with the exception of one contract set for each party to the contract, are to be returned to the owner on request at the completion of the work.
- 2.4. The Owner:** The Owner is the City of Grand Junction, Colorado and is referred to throughout the Contract Documents. The term Owner means the Owner or his authorized representative. The Owner shall, at all times, have access to the work wherever it is in preparation and progress. The Contractor shall provide facilities for such access. The Owner will make periodic visits to the site to familiarize himself generally with the progress and quality of work and to determine, in general, if the work is proceeding in accordance with the contract documents. Based on such observations and the Contractor's Application for Payment, the Owner will determine the amounts owing to the Contractor and will issue Certificates for Payment in such amounts, as provided in the contract. The Owner will have authority to reject work which does not conform to the Contract documents. Whenever, in his reasonable opinion, he considers

it necessary or advisable to insure the proper implementation of the intent of the Contract Documents, he will have authority to require the Contractor to stop the work or any portion, or to require special inspection or testing of the work, whether or not such work can be fabricated, installed, or completed. The Owner will not be responsible for the acts or omissions of the Contractor, and sub-Contractor, or any of their agents or employees, or any other persons performing any of the work.

- 2.5. Contractor:** The Contractor is the person or organization identified as such in the Agreement and is referred to throughout the Contract Documents. The term Contractor means the Contractor or his authorized representative. The Contractor shall carefully study and compare the General Contract Conditions of the Contract, Specification and Drawings, Scope of Work, Addenda and Modifications and shall at once report to the Owner any error, inconsistency or omission he may discover. Contractor shall not be liable to the Owner for any damage resulting from such errors, inconsistencies or omissions. The Contractor shall not commence work without clarifying Drawings, Specifications, or Interpretations.
- 2.6. Sub-Contractors:** A sub-contractor is a person or organization who has a direct contract with the Contractor to perform any of the work at the site. The term sub-contractor is referred to throughout the contract documents and means a sub-contractor or his authorized representative.
- 2.7. Award of Sub-Contractors & Other Contracts for Portions of the Work:** Contractor shall submit with their bid response to the Owner, in writing for acceptance, a list of the names of the sub-contractors or other persons or organizations proposed for such portions of the work as may be designated in the proposal requirements, or, if none is so designated, the names of the sub-contractors proposed for the principal portions of the work. Prior to the award of the contract, the Owner shall notify the successful Contractor in writing if, after due investigation, has reasonable objection to any person or organization on such list. If, prior to the award of the contract, the Owner has a reasonable and substantial objection to any person or organization on such list, and refuses in writing to accept such person or organization, the successful Contractor may, prior to the award, withdraw their proposal without forfeiture of proposal security. If the successful Contractor submits an acceptable substitute with an increase in the proposed price to cover the difference in cost occasioned by the substitution, the Owner may, at their discretion, accept the increased proposal or may disqualify the Contractor. If, after the award, the Owner refuses to accept any person or organization on such list, the Contractor shall submit an acceptable substitute and the contract sum shall be increased or decreased by the difference in cost occasioned by such substitution and an appropriate Change Order shall be issued. However, no increase in the contract sum shall be allowed for any such substitution unless the Contractor has acted promptly and responsively in submitting a name with respect thereto prior to the award.
- 2.8. Quantities of Work and Unit Price:** Materials or quantities stated as unit price items in the Bid are supplied only to give an indication of the general scope of the Work, and are as such, estimates only. The Owner does not expressly or by implication agree that the actual amount of Work or material will correspond therewith, and reserves the right after award to increase or decrease the quantity of any unit item of the Work without a change in the unit price except as set forth in Article VIII, Section 70 of the *General Contract*

*Conditions.* The City also reserves the right to make changes in the Work (including the right to delete any bid item in its entirety or add additional bid items) as set forth in Article VIII, Sections 69 through 71 of the *General Contract Conditions*.

- 2.9. Substitutions:** The materials, products and equipment described in the *Solicitation Documents* shall be regarded as establishing a standard of required performance, function, dimension, appearance, or quality to be met by any proposed substitution. No substitution will be considered prior to receipt of Bids unless the Offeror submits a written request for approval to the City Purchasing Division at least ten (10) days prior to the date for receipt of Bids. Such requests for approval shall include the name of the material or equipment for which substitution is sought and a complete description of the proposed substitution including drawings, performance and test data, and other information necessary for evaluation, including samples if requested. The Offeror shall set forth changes in other materials, equipment, or other portions of the Work including changes of the work of other contracts, which incorporation of the proposed substitution would require to be included. The Owner's decision of approval or disapproval of a proposed substitution shall be final. If the Owner approves a proposed substitution before receipt of Bids, such approval will be set forth in an Addendum. Offerors shall not rely upon approvals made in any other manner.
- 2.10. Supervision and Construction Procedures:** The Contractor shall supervise and direct the work, using his best skill and attention. He shall be solely responsible for all construction means, methods, techniques, sequences and procedures and for coordinating all portions of the work under the contract.
- 2.11. Warranty:** The Contractor warrants to the Owner that all materials and equipment furnished under this contract will be new unless otherwise specified, and that all work will be of good quality, free from faults and defects and in conformance with the Contract Documents. All work not so conforming to these standards may be considered defective. If required by Owner, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment. If within ten (10) days after written notice to the Contractor requesting such repairs or replacement, the Contractor should neglect to make or undertake with due diligence to the same, the City may make such repairs or replacements. All indirect and direct costs of such correction or removal or replacement shall be at the Contractor's expense. The Contractor will also bear the expenses of making good all work of others destroyed or damaged by the correction, removal or replacement of his defective work.
- 2.12. Permits, Fees, & Notices:** The Contractor shall secure and pay for all permits, governmental fees and licenses necessary for the proper execution and completion of the work. The Contractor shall give all notices and comply with all laws, ordinances, rules, regulations and orders of any public authority bearing on the performance of the work. If the Contractor observes that any of the Contract Documents are at variance in any respect, he shall promptly notify the Owner in writing, and any necessary changes shall be adjusted by approximate modification. If the Contractor performs any work knowing it to be contrary to such laws, ordinances, rules and regulations, and without such notice to the Owner, he shall assume full responsibility and shall bear all costs attributable.

- 2.13. Responsibility for Those Performing the Work:** The Contractor shall be responsible to the Owner for the acts and omissions of all his employees and all sub-contractors, their agents and employees, and all other persons performing any of the work under a contract with the Contractor.
- 2.14. Use of the Site:** The Contractor shall confine operations at the site to areas permitted by law, ordinances, permits and the Contract Documents, and shall not unreasonably encumber the site with any materials or equipment.
- 2.15. Cleanup:** The Contractor at all times shall keep the premises free from accumulation of waste materials or rubbish caused by his operations. At the completion of work, he shall remove all his waste materials and rubbish from and about the project, as well as all his tools, construction equipment, machinery and surplus materials.
- 2.16. Insurance:** The Contractor shall secure and maintain such insurance policies as will provide the coverage and contain other provisions specified in the General Contract Conditions, or as modified in the Special Contract Conditions.

The Contractor shall file a copy of the policies or Certificates of Insurance acceptable to the City with the Engineer within ten (10) Calendar Days after issuance of the Notice of Award. These Certificates of Insurance shall contain a provision that coverage afforded under the policies shall not be canceled unless at least thirty (30) Calendar Days prior written notice has been given to the City.

- 2.17. Indemnification:** The Contractor shall defend, indemnify and save harmless the Owner, and all its officers, employees, insurers, and self-insurance pool, from and against all liability, suits, actions, or other claims of any character, name and description brought for or on account of any injuries or damages received or sustained by any person, persons, or property on account of any negligent act or fault of the Contractor, or of any Contractor's agent, employee, sub-contractor or supplier in the execution of, or performance under, any contract which may result from proposal award. Contractor shall pay any judgment with cost which may be obtained against the Owner growing out of such injury or damages.
- 2.18. Miscellaneous Conditions:** **Material Availability:** Contractors must accept responsibility for verification of material availability, production schedules, and other pertinent data prior to submission of bid. It is the responsibility of the bidder to notify the Owner immediately if materials specified are discontinued, replaced, or not available for an extended period of time. **OSHA Standards:** All bidders agree and warrant that services performed in response to this invitation shall conform to the standards declared by the US Department of Labor under the Occupational Safety and Health Act of 1970 (OSHA). In the event the services do not conform to OSHA standards, the Owner may require the services to be redone at no additional expense to the Owner.
- 2.19. Time:** Time is of the essence with respect to the time of completion of the Project and any other milestones or deadline which are part of the Contract. It will be necessary for each Bidder to satisfy the City of its ability to complete the Work within the Contract Time set forth in the Contract Documents. The Contract Time is the period of time allotted in the Contract Documents for completion of the work. The date of commencement of the

work is the date established in a Notice to Proceed. If there is no Notice to Proceed, it shall be the date of the Contract or such other date as may be established therein, or as established as entered on the Bid Form. The Date of Substantial Completion of the work or designated portions thereof is the date certified by the Owner when construction is sufficiently complete, in accordance with the Contract Documents.

- 2.20. Progress & Completion:** The Contractor shall begin work on the date of commencement as defined in the Contract, and shall carry the work forward expeditiously with adequate forces and shall complete it within the contract time.
- 2.21. Payment & Completion:** The Contract Sum is stated in the Contract and is the total amount payable by the Owner to the Contractor for the performance of the work under the Contract Documents. Upon receipt of written notice that the work is ready for final inspection and acceptance and upon receipt of application for payment, the Owner's Project Manager will promptly make such inspection and, when he finds the work acceptable under the Contract Documents and the Contract fully performed, the Owner shall make payment in the manner provided in the Contract Documents.
- 2.22. Bid Bond:** Each Bid shall as a guaranty of good faith on the part of the Bidder be accompanied by a Bid Guaranty consisting of: a certified or cashier's check drawn on an approved national bank or trust company in the state of Colorado, and made payable without condition to the City; or a **Bid Bond** written by an approved corporate surety in favor of the City. The amount of the Bid Guaranty shall not be less than 5% of the total Bid amount. Once a Bid is accepted and a Contract is awarded, the apparent successful bidder has ten calendar days to enter into a contractor in the form prescribed and to furnish the bonds with a legally responsible and approved surety. Failure to do so will result in forfeiture of the Bid Guaranty to the City as Liquidated Damages.

Each bidder shall guaranty its total bid price for a period of sixty (60) Calendar Days from the date of the bid opening.

- 2.23. Performance & Payment Bonds:** Contractor shall furnish a Performance and a Payment Bond, each in an amount at least equal to that specified for the contract amount as security for the faithful performance and payment of all Contractor's obligations under the Contract Documents. These bonds shall remain in effect for the duration of the Warranty Period (as specified in the Special Conditions). Contractor shall also furnish other bonds that may be required by the Special Conditions. All bonds shall be in the forms prescribed by the Contract Documents and be executed by such sureties as (1) are licensed to conduct business in the State of Colorado and (2) are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Audit Staff, Bureau of Accounts, U.S. Treasury Department. All bonds signed by an agent must be accompanied by a certified copy of the Authority Act. If the surety on any bond furnished by the Contractor is declared bankrupt, or becomes insolvent, or its rights to do business in Colorado are terminated, or it ceases to meet the requirements of clauses (1) and (2) of this section, Contractor shall within five (5) days thereafter substitute another bond and surety, both of which shall be acceptable to the City.



- 2.24. Retention:** The Owner will deduct money from the partial payments in amounts considered necessary to protect the interest of the Owner and will retain this money until after completion of the entire contract. The amount to be retained from partial payments will be five (5) percent of the value of the completed work, and not greater than five (5) percent of the amount of the Contract. When the retainage has reached five (5) percent of the amount of the Contract no further retainage will be made and this amount will be retained until such time as final payment is made.
- 2.25. Liquidated Damages for Failure to Enter Into Contract: CITY ONLY** Should the Successful Bidder fail or refuse to enter into the Contract within ten Calendar Days from the issuance of the Notice of Award, the City shall be entitled to collect the amount of such Bidder's Bid Guaranty as Liquidated Damages, not as a penalty but in consideration of the mutual release by the City and the Successful Bidder of all claims arising from the City's issuance of the Notice of Award and the Successful Bidder's failure to enter into the Contract and the costs to award the Contract to any other Bidder, to re-advertise, or otherwise dispose of the Work as the City may determine best serves its interest.
- 2.26. Liquidated Damages for Failure to Meet Project Completion Schedule: CITY ONLY** If the Contractor does not achieve Final Completion by the required date, whether by neglect, refusal or any other reason, the parties agree and stipulate that the Contractor shall pay liquidated damages to the City for each such day that final completion is late. As provided elsewhere, this provision does not apply for delays caused by the City. The date for Final Completion may be extended in writing by the Owner.

The Contractor agrees that as a part of the consideration for the City's awarding of this Contract liquidated damages in the daily amount of **\$800.00** is reasonable and necessary to pay for the actual damages resulting from such delay. The parties agree that the real costs and injury to the City for such delay include hard to quantify items such as: additional engineering, inspection and oversight by the City and its agents; additional contract administration; inability to apply the efforts of those employees to the other work of the City; perceived inefficiency of the City; citizens having to deal with the construction and the Work, rather than having the benefit of a completed Work, on time; inconvenience to the public; loss of reputation and community standing for the City during times when such things are very important and very difficult to maintain.

The Contractor must complete the Work and achieve final completion included under the Bid Schedule in the number of consecutive calendar days after the City gives is written Notice to Proceed. When the Contractor considers the entire Work ready for its intended use, Contractor shall certify in writing that the Work is substantially complete. In addition to the Work being substantially complete, Final Completion date is the date by which the Contractor shall have fully completed all clean-up, and all items that were identified by the City in the inspection for final completion. Unless otherwise stated in the Special Conditions, for purposes of this liquidated damages clause, the Work shall not be finished and the Contract time shall continue to accrue until the City gives its written Final Acceptance.

If the Contractor shall fail to pay said liquidated damages promptly upon demand thereof after having failed to achieve Final Completion on time, the City shall first look to any retainage or other funds from which to pay said liquidated damages; if retainage or other

liquid funds are not available to pay said liquidated damages amounts, the Surety on the Contractor's Performance Bond and Payment Bond shall pay such liquidated damages. In addition, the City may withhold all, or any part of, such liquidated damages from any payment otherwise due the Contractor.

Liquidated damages as provided do not include any sums to reimburse the City for extra costs which the City may become obligated to pay on other contracts which were delayed or extended because of the Contractor's failure to complete the Work within the Contract Time. Should the City incur additional costs because of delays or extensions to other contracts resulting from the Contractor's failure of timely performance, the Contractor agrees to pay these costs that the City incurs because of the Contractor's delay, and these payments are separate from and in addition to any liquidated damages.

The Contractor agrees that the City may use its own forces or hire other parties to obtain Substantial or Final Completion of the work if the time of completion has elapsed and the Contractor is not diligently pursuing completion. In addition to the Liquidated Damages provided for, the Contractor agrees to reimburse the City for all expenses thus incurred.

- 2.27. Contingency/Force Account:** Contingency/Force Account work will be authorized by the Owner's Project Manager and is defined as minor expenses to cover miscellaneous or unforeseen expenses related to the project. The expenses are not included in the Drawings, Specifications, or Scope of Work and are necessary to accomplish the scope of this contract. Contingency/Force Account Authorization will be directed by the Owner through an approved form. Contingency/Force Account funds are the property of the Owner and any Contingency/Force Account funds, not required for project completion, shall remain the property of the Owner. Contractor is not entitled to any Contingency/Force Account funds, that are not authorized by Owner or Owner's Project Manager.
- 2.28. Protection of Persons & Property:** The Contractor shall comply with all applicable laws, ordinances, rules, regulations and orders of any public authority having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss. Contractor shall erect and maintain, as required by existing safeguards for safety and protection, and all reasonable precautions, including posting danger signs or other warnings against hazards promulgating safety regulations and notifying owners and users of adjacent utilities. When or where any direct or indirect damage or injury is done to public or private property by or on account of any act, omission, neglect, or misconduct by the Contractor in the execution of the work, or in consequence of the non-execution thereof by the Contractor, he shall restore, at his own expense, such property to a condition similar or equal to that existing before such damage or injury was done, by repairing, rebuilding, or otherwise restoring as may be directed, or it shall make good such damage or injury in an acceptable manner.
- 2.29. Changes in the Work:** The Owner, without invalidating the contract, may order changes in the work within the general scope of the contract consisting of additions, deletions or other revisions, the contract sum and the contract time being adjusted accordingly. All such changes in the work shall be authorized by Change Order and shall be executed under the applicable conditions of the contract documents. A Change Order is a written order to the Contractor signed by the Owner issued after the execution of the contract,

authorizing a change in the work or an adjustment in the contract sum or the contract time. The contract sum and the contract time may be changed only by Change Order.

- 2.30. Claims for Additional Cost or Time:** If the Contractor wishes to make a claim for an increase in the contract sum or an extension in the contract time, he shall give the Owner written notice thereof within a reasonable time after the occurrence of the event giving rise to such claim. This notice shall be given by the Contractor before proceeding to execute the work, except in an emergency endangering life or property in which case the Contractor shall precede in accordance with the regulations on safety. No such claim shall be valid unless so made. Any change in the contract sum or contract time resulting from such claim shall be authorized by Change Order.
- 2.31. Minor Changes in the Work:** The Owner shall have authority to order minor changes in the work not involving an adjustment in the contract sum or an extension of the contract time and not inconsistent with the intent of the contract documents.
- 2.32. Field Orders:** The Owner may issue written Field Orders which interpret the Contract Documents in accordance with the specifications, or which order minor changes in the work in accordance with the agreement, without change in the contract sum or time. The Contractor shall carry out such Field Orders promptly.
- 2.33. Uncovering & Correction of Work:** The Contractor shall promptly correct all work rejected by the Owner as defective or as failing to conform to the contract documents whether observed before or after substantial completion and whether or not fabricated installed or completed. The Contractor shall bear all costs of correcting such rejected work, including the cost of the Owner's additional services thereby made necessary. If within one (1) year after the date of completion or within such longer period of time as may be prescribed by law or by the terms of any applicable special guarantee required by the contract documents, any of the work found to be defective or not in accordance with the contract documents, the Contractor shall correct it promptly after receipt of a written notice from the Owner to do so unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discover of condition. All such defective or non-conforming work under the above paragraphs shall be removed from the site where necessary and the work shall be corrected to comply with the contract documents without cost to the Owner. The Contractor shall bear the cost of making good all work of separate Contractors destroyed or damaged by such removal or correction. If the Owner prefers to accept defective or non-conforming work, he may do so instead of requiring its removal and correction, in which case a Change Order will be issued to reflect an appropriate reduction in the payment or contract sum, or, if the amount is determined after final payment, it shall be paid by the Contractor.
- 2.34. Amendment:** No oral statement of any person shall modify or otherwise change, or affect the terms, conditions or specifications stated in the resulting contract. All amendments to the contract shall be made in writing by the Owner.
- 2.35. Assignment:** The Contractor shall not sell, assign, transfer or convey any contract resulting from this IFB, in whole or in part, without the prior written approval from the Owner.

- 2.36. Compliance with Laws:** Bids must comply with all Federal, State, County and local laws governing or covering this type of service and the fulfillment of all ADA (Americans with Disabilities Act) requirements.
- 2.37. Confidentiality:** All information disclosed by the Owner to the Contractor for the purpose of the work to be done or information that comes to the attention of the Contractor during the course of performing such work is to be kept strictly confidential.
- 2.38. Conflict of Interest:** No public official and/or City/County employee shall have interest in any contract resulting from this IFB.
- 2.39. Contract Termination:** This contract shall remain in effect until any of the following occurs: (1) contract expires; (2) completion of services; (3) acceptance of services or, (4) for convenience terminated by either party with a written *Notice of Cancellation* stating therein the reasons for such cancellation and the effective date of cancellation.
- 2.40. Employment Discrimination:** During the performance of any services per agreement with the Owner, the Contractor, by submitting a Bid, agrees to the following conditions:
- 2.40.1.** The Contractor shall not discriminate against any employee or applicant for employment because of race, religion, color, sex, age, handicap, or national origin except when such condition is a legitimate occupational qualification reasonably necessary for the normal operations of the Contractor. The Contractor agrees to post in conspicuous places, visible to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.
- 2.40.2.** The Contractor, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, shall state that such Contractor is an Equal Opportunity Employer.
- 2.40.3.** Notices, advertisements, and solicitations placed in accordance with federal law, rule, or regulation shall be deemed sufficient for the purpose of meeting the requirements of this section.
- 2.41. Affirmative Action:** In executing a Contract with the City, the Contractor agrees to comply with Affirmative Action and Equal Employment Opportunity regulations presented in the General Contract Conditions.
- 2.42. Immigration Reform and Control Act of 1986 and Immigration Compliance:** The Offeror certifies that it does not and will not during the performance of the contract employ illegal alien workers or otherwise violate the provisions of the Federal Immigration Reform and Control Act of 1986 and/or the immigration compliance requirements of State of Colorado C.R.S. § 8-17.5-101, *et seq.* (House Bill 06-1343).
- 2.43. Ethics:** The Contractor shall not accept or offer gifts or anything of value nor enter into any business arrangement with any employee, official, or agent of the Owner.

- 2.44. Failure to Deliver:** In the event of failure of the Contractor to deliver services in accordance with the contract terms and conditions, the Owner, after due oral or written notice, may procure the services from other sources and hold the Contractor responsible for any costs resulting in additional purchase and administrative services. This remedy shall be in addition to any other remedies that the Owner may have.
- 2.45. Failure to Enforce:** Failure by the Owner at any time to enforce the provisions of the contract shall not be construed as a waiver of any such provisions. Such failure to enforce shall not affect the validity of the contract or any part thereof or the right of the Owner to enforce any provision at any time in accordance with its terms.
- 2.46. Force Majeure:** The Contractor shall not be held responsible for failure to perform the duties and responsibilities imposed by the contract due to legal strikes, fires, riots, rebellions, and acts of God beyond the control of the Contractor, unless otherwise specified in the contract.
- 2.47. Independent Contractor:** The Contractor shall be legally considered an Independent Contractor and neither the Contractor nor its employees shall, under any circumstances, be considered servants or agents of the Owner. The Owner shall be at no time legally responsible for any negligence or other wrongdoing by the Contractor, its servants, or agents. The Owner shall not withhold from the contract payments to the Contractor any federal or state unemployment taxes, federal or state income taxes, Social Security Tax or any other amounts for benefits to the Contractor. Further, the Owner shall not provide to the Contractor any insurance coverage or other benefits, including Workers' Compensation, normally provided by the Owner for its employees.
- 2.48. Nonconforming Terms and Conditions:** A bid that includes terms and conditions that do not conform to the terms and conditions of this Invitation for Bid is subject to rejection as non-responsive. The Owner reserves the right to permit the Contractor to withdraw nonconforming terms and conditions from its bid prior to a determination by the Owner of non-responsiveness based on the submission of nonconforming terms and conditions.

Items for non-responsiveness may include, but not be limited to:

- a. Submission of the Bid on forms other than those supplied by the City;
- b. Alteration, interlineation, erasure, or partial detachment of any part of the forms which are supplied herein;
- c. Inclusion of unauthorized additions conditional or alternate Bids or irregularities of any kind which may tend to make the Bid incomplete, indefinite, or ambiguous as to its meaning;
- d. Failure to acknowledge receipt of any or all issued Addenda;
- e. Failure to provide a unit price or a lump sum price, as appropriate, for each pay item listed except in the case of authorized alternative pay items;

- f. Failure to list the names of Subcontractors used in the Bid preparation as may be required in the Solicitation Documents;
- g. Submission of a Bid that, in the opinion of the Owner, is unbalanced so that each item does not reasonably carry its own proportion of cost or which contains inadequate or unreasonable prices for any item;
- h. Tying of the Bid with any other bid or contract; and
- i. Failure to calculate Bid prices as described herein.

**2.49. Evaluation of Bids and Offerors:** The Owner reserves the right to:

- reject any and all Bids,
- waive any and all informalities,
- negotiate final terms with the Successful Bidder, and
- disregard any and all nonconforming, nonresponsive or conditional Bids.

Discrepancies between words and figures will be resolved in favor of words. Discrepancies between Unit Prices and Extended Prices will be resolved in favor of the Unit Prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum. The corrected extensions and totals will be shown in the tabulation of Bids.

The Owner may consider the qualifications and experience of Subcontractors and other persons and organizations (including those who are to furnish the principal items of material or equipment) proposed for those portions of the work as to which the identity of Subcontractors and other persons and organizations must be submitted. Operating costs, maintenance considerations performance data, and guarantees of materials and equipment may also be considered by the Owner.

The Owner will conduct such investigations as deemed necessary to assist in the evaluation of any Bid and to establish the responsibility, qualifications and financial ability of the Offeror, proposed Subcontractors and other persons and organizations to do the Work in accordance with the *Contract Documents* to the City's satisfaction within the Contract Time.

The Offeror shall furnish the Owner all information and data requested by the Owner to determine the ability of the Offeror to perform the Work. The Owner reserves the right to reject the Bid if the evidence submitted by, or investigation of such Offeror fails to satisfy the Owner that such Offeror is properly qualified to carry out the obligations of the Contract and to complete the Work contemplated therein.

By submitting a Bid, each Offeror authorizes the Owner to perform such investigation of the Offeror as the Owner deems necessary to establish the responsibility, qualifications and financial ability of the Offeror and, by its signature thereon, authorizes the Owner to obtain reference information concerning the Offeror and releases the party providing such information and the Owner from any and all liability to the Offeror as a result of such reference information so provided.

The Owner reserves the right to reject the Bid of any Offeror who does not pass any evaluation to the Owner's satisfaction.

If the Contract is to be awarded, it will be awarded to the Offeror who, by evaluation, the Owner determines will best meet the Owner's interests.

The Owner reserves the right to accept or reject the Work contained in any of the Price Bid Schedules or alternates, either in whole or in part.

**2.50. Award of Contract:** Unless otherwise indicated, a single award will be made for all the bid items in an individual bid schedule. In the event that the Work is contained in more than one Bid Schedule, the City may award Schedules individually or in combination. In the case of two Bid Schedules which are alternative to each other, only one of such alternative Schedules will be awarded. Within forty-five (45) Calendar Days of Bid Opening, the City will issue a Notice of Award to the Successful Bidder which will be accompanied by four (4) unsigned copies of the Contract and the Performance and Payment Bond forms. Within ten (10) Calendar Days thereafter, the Successful Bidder shall sign and deliver four (4) copies of the Contract, Performance Bond, Payment Bond and Certificates of Insurance to the City. Within ten (10) Calendar Days thereafter, the City will deliver two (2) fully executed counterparts of the Contract to the Contractor. No contract shall exist between the Successful Bidder and the City and the Successful Bidder shall have no rights at law or in equity until the Contract has been duly executed by the City.

The Successful Bidder's failure to sign and submit a Contract and other documents set forth in this Paragraph within the prescribed time shall be just cause of annulment of the award, and forfeiture of the Bid Guaranty. The award of Contract may then be made to the next qualified Bidder in the same manner as previously prescribed.

**2.51. Ownership:** All plans, prints, designs, concepts, etc., shall become the property of the Owner.

**2.52. Oral Statements:** No oral statement of any person shall modify or otherwise affect the terms, conditions, or specifications stated in this document and/or resulting agreement. All modifications to this request and any agreement must be made in writing by the Owner.

**2.53. Patents/Copyrights:** The Contractor agrees to protect the Owner from any claims involving infringements of patents and/or copyrights. In no event shall the Owner be liable to the Contractor for any/all suits arising on the grounds of patent(s)/copyright(s) infringement. Patent/copyright infringement shall null and void any agreement resulting from response to this IFB.

**2.54. Remedies:** The Contractor and Owner agree that both parties have all rights, duties, and remedies available as stated in the Uniform Commercial Code.

**2.55. Venue:** Any agreement as a result of responding to this IFB shall be deemed to have been made in, and shall be construed and interpreted in accordance with, the laws of the City of Grand Junction, Mesa County, Colorado.

- 2.56. Expenses:** Expenses incurred in preparation, submission and presentation of this IFB are the responsibility of the company and cannot be charged to the Owner.
- 2.57. Sovereign Immunity:** The Owner specifically reserves its right to sovereign immunity pursuant to Colorado State Law as a defense to any action arising in conjunction to this agreement.
- 2.58. Non-Appropriation of Funds:** The contractual obligation of the Owner under this contract is contingent upon the availability of appropriated funds from this fiscal year budget as approved by the City Council or Board of County Commissioners from this fiscal year only. State of Colorado Statutes prohibit obligation of public funds beyond the fiscal year for which the budget was approved. Anticipated expenditures/obligations beyond the end of the current Owner's fiscal year budget shall be subject to budget approval. Any contract will be subject to and must contain a governmental non-appropriation of funds clause.
- 2.59. Cooperative Purchasing:** Purchases as a result of this solicitation are primarily for the City/County. Other governmental entities may be extended the opportunity to utilize the resultant contract award with the agreement of the successful provider and the participating agencies. All participating entities will be required to abide by the specifications, terms, conditions and pricings established in this Bid. The quantities furnished in this bid document are for only the City/County. It does not include quantities for any other jurisdiction. The City or County will be responsible only for the award for its jurisdiction. Other participating entities will place their own awards on their respective Purchase Orders through their purchasing office or use their purchasing card for purchase/payment as authorized or agreed upon between the provider and the individual entity. The City/County accepts no liability for payment of orders placed by other participating jurisdictions that choose to piggy-back on our solicitation. Orders placed by participating jurisdictions under the terms of this solicitation will indicate their specific delivery and invoicing instructions.
- 2.60. Keep Jobs in Colorado Act:** Contractor shall be responsible for ensuring compliance with Article 17 of Title 8, Colorado Revised Statutes requiring 80% Colorado labor to be employed on public works. Contractor shall, upon reasonable notice provided by the Owner, permit the Owner to inspect documentation of identification and residency required by C.R.S. §8-17-101(2)(a). If Contractor claims it is entitled to a waiver pursuant to C.R.S. §8-17-101(1), Contractor shall state that there is insufficient Colorado labor to perform the work such that compliance with Article 17 would create an undue burden that would substantially prevent a project from proceeding to completion, and shall include evidence demonstrating the insufficiency and undue burden in its response.

Unless expressly granted a waiver by the Owner pursuant to C.R.S. §8-17-101(1), Contractor shall be responsible for ensuring compliance with Article 17 of Title 8, Colorado Revised Statutes requiring 80% Colorado labor to be employed on public works. Contractor shall, upon reasonable notice provided by the Owner, permit the Owner to inspect documentation of identification and residency required by C.R.S. §8-17-101(2)(a).



**2.60.1.** "Public project" is defined as:

- (a) any construction, alteration, repair, demolition, or improvement of any land, building, structure, facility, road, highway, bridge, or other public improvement suitable for and intended for use in the promotion of the public health, welfare, or safety and any maintenance programs for the upkeep of such projects
- (b) for which appropriate or expenditure of moneys may be reasonably expected to be \$500,000.00 or more in the aggregate for any fiscal year
- (c) except any project that receives federal moneys.

### **3. Statement of Work**

**3.1. GENERAL:** The City of Grand Junction is soliciting competitive bids from qualified and interested companies for all labor, equipment, and materials required to perform concrete, asphalt, utility installation and all other work associated with the Riverside Park Improvements and Bike Path. All dimensions and scope of work should be verified by Contractors prior to submission of bids.

**NOTE: Site electrical plan set, specifications and bid schedule will be issued in Addendum No. 1. This work shall include, but may not be limited to approximately 17 pedestrian and 1 street light poles, foundations, luminaires, conduit, wiring, pull-boxes and all appurtenances associated to complete said work.**

**NOTE:** The descriptions of the pay items listed in the Price Bid Schedule for this Project may not agree with those listed in the Standard Specifications. Payment for all Work performed, as required in the Contract Documents, will be in accordance with the items and units listed in the Price Bid Schedule.

The performance of the Work for this Project shall conform to the General Contract conditions presented in the City of Grand Junction's Standard Contract Documents for Capital Improvements Construction, revised July 2010, except as specifically modified or supplemented herein or on the Construction Drawings.

**3.2. PROJECT DESCRIPTION:** (Refer to Plan Set)

**3.3. SPECIAL CONDITIONS:**

**3.3.1 Mandatory Pre-Bid Meeting:** **Prospective bidders are required to attend a mandatory pre-bid meeting on March 28, 2019 at 10:00 am. Meeting location shall be in the City Hall Auditorium, located at 250 North 5th Street.** The purpose of this visit will be to inspect and to clarify the contents of this Invitation for Bids (IFB).

**3.3.2 QUESTIONS REGARDING SOLICIATION PROCESS/SCOPE OF WORK:**

Duane Hoff Jr., Senior Buyer  
City of Grand Junction  
(970) 244-1545  
[duaneh@gjcity.org](mailto:duaneh@gjcity.org)

**3.3.3 Project Manager:** Brendan Hines, Project Manager, who can be reached at (970)256-4038. During Construction, all notices, letters, submittals, and other communications directed to the City shall be addressed and mailed or delivered to:

City of Grand Junction  
Department of Public Works  
Attn: Brendan Hines, Project Manager  
333 W. Avenue, Building C  
Grand Junction, CO 81501

**3.3.4 Affirmative Action:** Refer to Appendix D.

**3.3.5 Pricing:** Pricing shall be all inclusive to include but not be limited to: all labor, equipment, supplies, materials, freight (F.O.B. Destination – Freight Pre-paid and Allowed to each site), travel, mobilization costs, fuel, set-up and take down costs, and full-time inspection costs, and all other costs related to the successful completion of the project.

The Owner shall not pay nor be liable for any other additional costs including but not limited to: taxes, shipping charges, insurance, interest, penalties, termination payments, attorney fees, liquidated damages, etc.

**3.3.6 Freight/Shipping:** All freight/shipping shall be F.O.B. Destination – Freight Pre-Paid and Allowed to the project site(s), Grand Junction, CO.

Contractor must meet all federal, state, and local rules, regulations, and requirements for providing such services.

**3.3.7 Contract:** A binding contract shall consist of: (1) the IFB and any amendments thereto, (2) the bidder's response (bid) to the IFB, (3) clarification of the bid, if any, and (4) the City's Purchasing Department's acceptance of the bid by "Notice of Award" or by "Purchase Order". All Exhibits and Attachments included In the IFB shall be incorporated into the contract by reference.

A. The contract expresses the complete agreement of the parties and, performance shall be governed solely by the specifications and requirements contained therein.

B. Any change to the contract, whether by modification and/or supplementation, must be accomplished by a formal contract amendment signed and approved by and between the duly authorized representative of the bidder and the City Purchasing Division or by a modified Purchase Order prior to the effective date of such modification. The bidder expressly and explicitly understands and agrees that no other method and/or no other document, including acts and oral communications by or from any person, shall be used or construed as an amendment or modification to the contract.

**3.3.8 Time of Completion:** The scheduled time of Completion for the Project is 120

**Calendar Days** from the starting date specified in the Notice to Proceed.

Completion is achieved when site cleanup and all punch list items (resulting from the final inspection) have been completed. Completion shall have the meaning set forth in Article I, Section 3 (Definitions and Terms) of the General Contract Conditions.

**3.3.9 Working Days and Hours:** The working days and hours shall be as stated in the General Contract Conditions or as mutually agreed upon in the preconstruction meeting with the following exception:

All work shall be performed between the hours of 7:00 AM to 5:00 PM.

**3.3.10 Licenses and Permits:** Contractor is responsible for obtaining all necessary licenses and permits required for Construction, at Contractors expense. See Section 2.12. Contractor shall supply to Owner all copies of finalized permits.

**3.3.11 Permits:** The following permits is required for the Project and will be obtained by the City at no cost to the Contractor. Permit will be transfer to the contractor once construction has commenced.

- CDPHE Construction Storm Water Permit

The following permits are required for the Project and shall be obtained and paid for by the Contractor, with the costs included in the total bid price for the Project.

- 521 Drainage Authority Construction Storm Water Permit

**3.3.12 Project Sign:** Project signs, if any, will be furnished and installed by the City.

**3.3.13 Authorized Representatives of the City:** Those authorized to represent the City shall include Purchasing Agent, Engineers, and Inspectors employed by the City and may include an independent 3<sup>rd</sup> party testing firm.

**3.3.14 Stockpiling Materials and Equipment:** All stockpiling/storage shall be in accordance with General Contract Condition Section 51.

**3.3.15 Traffic Control:** The Contractor shall provide and maintain traffic control in accordance with the approved Traffic Control Plan and the Manual on Uniform Traffic Control Devices. A Traffic Control Plan shall be prepared by the Contractor and reviewed by the City two days prior to the pre-construction meeting.

**3.3.16 Clean-Up:** The Contractor is responsible for cleaning up all loose materials that have been deposited or swept into gutters, and onto sidewalks and driveways as a result of sidewalk operations. The costs for all clean-up work shall be considered incidental and will not be paid for separately.

**3.3.17 Schedule of Submittals:** Contractor shall deliver these submittals at least two days prior to the pre-construction meeting:

- See Appendix A

**3.3.18 Fugitive Petroleum or Other Contamination:** It is anticipated that soil contamination from fugitive petroleum or other contaminants will not be encountered with the Project.

**3.3.19 Existing Utilities and Structures:** Utilities were not potholed during design of this project. The location of existing utilities and structures shown on the Plans is approximate with the information gathered during design. It is the responsibility of the Contractor to pothole/locate and protect all structures and utilities in accordance with General Contract Condition Section 37.

**3.3.20 Incidental Items:** Any item of work not specifically identified or paid for directly, but which is necessary for the satisfactory completion of any paid items of work, will be considered as incidental to those items, and will be included in the cost of those items.

**3.3.21 Existing Concrete Sidewalks, Pans, Fillets, Curbs and Gutters:** The existing sidewalks, pans, fillets, curb and gutter are in good serviceable condition. In most instances the installation of new sidewalk and pavement will be adjacent to existing concrete. The Contractor will need to protect all concrete adjacent to construction. If the concrete is damaged during construction the Contractor will be responsible for its replacement at no cost to the City. The Contractor, the City Project Inspector, and/or the City Project Manager will walk and record any concrete that is deemed to be damaged before construction has started.

**3.3.22 ACI Concrete and Flatwork Finisher and Technician:** Hand finishing concrete will be permitted only when performed under the direct supervision of a craftsman holding the following certificate: ACI Concrete Flatwork Finisher and Technician (ACICFFT) or other Flatwork Finisher certification program approved by the City Engineering Manager.

**3.3.23 Discrepancy between Bid Schedule and Construction Notes:** In the event of a discrepancy between a Pay Item description in the Bid Schedule and the description for the same Pay Item in the drawings/construction notes; the language in the Bid Schedule shall govern or supersede that found elsewhere.

**3.3.24 Quality Control Testing:** The Contractor, at their own discretion, may elect to forgo the soils Quality Control (QC) field testing (in-place soils density) for placement of Overlot, Embankment, and Trench backfill. Quality Assurance (QA) testing for these items will be performed by the City, and laboratory testing results for submittal purposes will be provided by the contractor. However, if a sufficient number of failed test results are observed by the City and/or its QA testing representatives, written notification will be provided to the contractor, and back payment to the City for failed location re-tests will be required.

**3.3.25 Uranium Mill Tailings:** Radioactive mill tailings are not anticipated to be encountered on this Project but in accordance with deed restrictions and the history of the site the Contractor shall adhere to the Uranium Mill Tailings Management Plan throughout all phases of construction supplied in Appendix C.

**3.4. SCOPE OF WORK:** The Project generally consists of the removal and re-route of

approximately 1,500 LF of existing asphalt roadway from Riverside Park Drive, the removal and reconfiguration of approximately 275 LF of existing asphalt roadway of Park Avenue, that includes additional parking. Improvements include the removal of approximately 300 LF of existing asphalt roadway along the existing alley on the east side of Riverside Park, which will be replaced with a new concrete alleyway for southbound traffic. Improvements also include the reconfiguration and expansion to Riverside Park, with the addition of new concrete curb, gutter, parking and updates to the internal sidewalks within park, including an additional shelter structure and a larger basketball court. Replacing the existing Riverside Park Drive, on the west side of the park, adjacent to the river, approximately 1,600 LF of a new 12-foot, multi-use concrete path will be installed, creating continuity to the riverfront trail. Following the alignment of the new 12-foot concrete path, there will be new pedestrian lighting installed, which will terminate at the intersection with Hale Avenue. Refer to Plan Set for further details.

**3.5. Attachments:**

- Appendix A: Project Submittal Form
- Appendix B: Project Special Provisions
- Appendix C: Uranium Mill Tailings Management Plan
- Appendix D: Bidder Certifications/ Supplemental Conditions for Block Grants/ Federal Labor Standards/ Davis Bacon Wage Rate Determination

**3.6. Contractor Bid Documents:** For Contractor’s convenience, the following is a list of forms/items to be submitted with the Contractor’s bid response. However, should a form/item not be listed in this section, but required in the solicitation documents, it is the Contractor’s responsibility to ensure all forms/items are submitted.

- **Contractor’s Bid Form**
- **Price Bid Schedule**
- **References**

**3.7. IFB TENTATIVE TIME SCHEDULE:**

Invitation for Bids available	March 13, 2019
Mandatory Pre-Bid Meeting	March 28, 2019
Inquiry deadline, no questions after this date	April 3, 2019
Addendum Posted	April 9, 2019
Submittal deadline for proposals	April 17, 2019
City Council or Board of Commissioners Approval	May 1, 2019
Notice of Award & Contract execution	May 6, 2019
Bonding & Insurance Cert due	May 10, 2019
Preconstruction meeting	May 10, 2019
Work begins no later than	TBD
Final Completion	120 Calendar Days From Notice to Proceed
Holidays:	May 27, 2019 (Memorial Day) July 4, 2019 (Independence Day)

## 4. Contractor's Bid Form

**Bid Date:** \_\_\_\_\_

**Project:** IFB-4621-19-DH "Riverside Park Improvements and Bike Path"

**Bidding Company:** \_\_\_\_\_

**Name of Authorized Agent:** \_\_\_\_\_

**Email** \_\_\_\_\_

**Telephone** \_\_\_\_\_ **Address** \_\_\_\_\_

**City** \_\_\_\_\_ **State** \_\_\_\_\_ **Zip** \_\_\_\_\_

The undersigned Bidder, in compliance with the Invitation for Bids, having examined the Instruction to Bidders, General Contract Conditions, Statement of Work, Specifications, and any and all Addenda thereto, having investigated the location of, and conditions affecting the proposed work, hereby proposes to furnish all labor, materials and supplies, and to perform all work for the Project in accordance with Contract Documents, within the time set forth and at the prices stated below. These prices are to cover all expenses incurred in performing the work required under the Contract Documents, of which this Contractor's Bid Form is a part.

The undersigned Contractor does hereby declare and stipulate that this offer is made in good faith without collusion or connection to any person(s) providing an offer for the same work, and that it is made in pursuance of, and subject to, all terms and conditions of the Instructions to Bidders, the Specifications, and all other Solicitation Documents, all of which have been examined by the undersigned.

The Contractor also agrees that if awarded the Contract, to provide insurance certificates within ten (10) working days of the date of Notification of Award. Submittal of this offer will be taken by the Owner as a binding covenant that the Contractor will be prepared to complete the project in its entirety.

The Owner reserves the right to make the award on the basis of the offer deemed most favorable, to waive any formalities or technicalities and to reject any or all offers. It is further agreed that this offer may not be withdrawn for a period of sixty (60) calendar days after closing time. Submission of clarifications and revised offers automatically establish a new thirty day (30) period.

Prices in the bid proposal have not knowingly been disclosed with another provider and will not be prior to award.

- Prices in this bid proposal have been arrived at independently, without consultation, communication or agreement for the purpose of restricting competition.
- No attempt has been made nor will be to induce any other person or firm to submit a bid proposal for the purpose of restricting competition.
- The individual signing this bid proposal certifies they are a legal agent of the offeror, authorized to represent the offeror and is legally responsible for the offer with regard to supporting documentation and prices provided.
- Direct purchases by the City of Grand Junction are tax exempt from Colorado Sales or Use Tax. Tax exempt No. 98-903544. The undersigned certifies that no Federal, State, County or Municipal tax will be added to the above quoted prices.
- City of Grand Junction payment terms shall be Net 30 days.
- Prompt payment discount of \_\_\_\_\_ percent of the net dollar will be offered to the Owner if the invoice is paid within \_\_\_\_\_ days after the receipt of the invoice.

RECEIPT OF ADDENDA: the undersigned Contractor acknowledges receipt of Addenda to the Solicitation, Specifications, and other Contract Documents.

State number of Addenda received: \_\_\_\_\_.

It is the responsibility of the Bidder to ensure all Addenda have been received and acknowledged.

*By signing below, the Undersigned agree to comply with all terms and conditions contained herein.*

**Company:** \_\_\_\_\_

**Authorized Signature:** \_\_\_\_\_

**Title:** \_\_\_\_\_

## Bid Schedule: Riverside Park Improvements and Bike Path

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
1	108.2	6" Storm Drain (C-900 PVC)	132.	LF	_____	_____
2	108.2	12" Water Pipe (C-900 PVC)	380.	LF	_____	_____
3	108.2	12" Storm Drain Pipe	26.	LF	_____	_____
4	108.2	18" Storm Drain Pipe	41.	LF	_____	_____
5	108.5	Manhole Barrel Section (D>5')(48" I.D.)	3.	VLF	_____	_____
6	108.5	Storm Sewer Basic Manhole (48"	2.	EA	_____	_____
7	108.5	ADS Inlets or engineer approved	3.	EA	_____	_____
8	108.6	Special Small Storm Drain Area Inlet (see plan details)	1.	EA	_____	_____
9	108.6	Large Area Inlet (24"x36")	7.	EA	_____	_____
10	202	Removal of Asphalt (full depth)	6,825.	SY	_____	_____
11	202	Removal of Concrete (all concrete features noted as being removed on the plans)	285.	SY	_____	_____
12	202	Removal of Ground Sign-Contractor Shall Remove Sign and Post and Return to The Traffic Department at City Shops. Contractor to Provide Temporary Stop Signs, and Regulatory Signs Per the M.U.T.C.D.	11.	EA	_____	_____
13	108.7	Granular Stabilization Material (Type B)	100.	TON	_____	_____
14	203	Excavation	2,100.	CY	_____	_____
15	208	Erosion Control (Complete in Place)	Lump	SUM	---	_____
16	208	Stabilized Construction Entrance	2.	EA	_____	_____
17	209	Dust Abatement	90.	DAYS	_____	_____
18	210	Adjust MH Rim to Finished Grade	15.	EA	_____	_____
19	210	Replace Vertical Curb Intlet Frame and Grate with Area Inlet Frame and Grate and adjust to Final Grade	1.	SY	_____	_____
20	304	Subgrade Stabilization - Aggregate Base Course (Class 3) (12" Thick)	400.	SY	_____	_____
21	304	Aggregate Base Course Shoulder (Class 6) (4" Thick)	610.	SY	_____	_____
22	306	Reconditioning (12" Deep)	3,100.	SY	_____	_____
23	304	Aggregate Base Course (below HMA) (Class 6) (13" Thick)	1,800.	SY	_____	_____
24	401	Hot Mix Asphalt (5" thick) (Grading SX 75, Binder Grade 64-22)	500.	TON	_____	_____
25	420	Geosynthetics - Mirafi RS580i or approved equal	400.	SY	_____	_____
26	608	Concrete Curb and Gutter (2' Wide) to include 6" of Class 6 Aggregate Base Course.	900.	LF	_____	_____

## Bid Schedule: Riverside Park Improvements and Bike Path

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
27	608	Concrete Curb and Gutter (1.5' Wide) to include 6" of Class 6 Aggregate Base Course.	800.	LF	_____	_____
28	608	Concrete Sidewalk (6" Thick) to include 6" of Class 6 Aggregate Base Course.	3,111.	SY	_____	_____
29	608	Concrete Pavement (Parking & Alley) (8" Thick) to include 6" of Class 6 Aggregate Base Course.	900.	SY	_____	_____
30	608	Concrete Driveway Section (8" thick) includes 6" CL6 ABC	100.	SY	_____	_____
31	608	Concrete Corner Fillet to include 6" of Class 6 Aggregate Base Course.	15.	SY	_____	_____
32	608	Concrete Curb Ramp to include 6" of Class 6 Aggregate Base Course.	28.	SY	_____	_____
33	608	Post Tension Basketball Court Concrete Slab (45' x 75') to include all appurtenances. Contractor to provide shop drawing stamped by Professional Engineer	3,375.	LF	_____	_____
34	608	Detectable Warning (Cast Iron, Wet Set) (2'x2)	9.	EA	_____	_____
35	620	Sanitary Facility	1.	EA	_____	_____
36	625	Construction Surveying	Lump	SUM	---	_____
37	626	Mobilization	Lump	SUM	---	_____
38	627	Preformed Thermoplastic Pavement Marking (4" White Solid)	660.	LF	_____	_____
39	627	Preformed Thermoplastic Pavement Marking (Handicap Symbol)	4.	EA	_____	_____
40	630	Traffic Control (Complete In Place)	Lump	SUM	---	_____
41	630	Traffic Control Plan	Lump	SUM	---	_____
42	SP-1	Site Lighting - Estimated 17 Ped Lights and 1 Street light, to include Light Standard and Luminaire, Light Standard Foundation, conduit, pull boxes and wiring.	Lump	SUM	---	_____
MCR		Minor Contract Revisions	---	---	---	\$ 40,000.00

**Bid Amount:** \$ \_\_\_\_\_

**Bid Amount:**

dollars

<b>Contractor Name:</b>
<b>Contractor Address:</b>
<b>Contractor Phone #:</b>



The undersigned Bidder proposes to subcontract the following portion of Work:

<u>Name &amp; address of Sub-Contractor</u>	<u>Description of work to be performed</u>	<u>% of Contract</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

The undersigned Bidder acknowledges the right of the City to reject any and all Bids submitted and to waive informalities and irregularities therein in the City's sole discretion.

By submission of the Bid, each Bidder certifies, and in the case of a joint Bid each party thereto certifies as to his own organization, that this Bid has been arrived at independently, without collusion, consultation, communication, or agreement as to any matter relating to this Bid with any other Bidder or with any competitor.

# Appendix A

## Project Submittal Form

## PROJECT SUBMITTAL FORM

PROJECT: Riverside Park Improvements and Bike Path

CONTRACTOR: \_\_\_\_\_

PROJECT MANAGER: Brendan Hines

Description	Date Received	Resubmittal Requested	Resubmittal Received	Date Accepted
-------------	---------------	-----------------------	----------------------	---------------

### STREET CONSTRUCTION

Pavement mix design				
Base course gradation, Proctor curve				
Sub-base course gradation, Proctor curve				
Concrete mix design, Class D				
Class 3 Pit Run				

### STORM DRAINAGE CONSTRUCTION

Pipe				
Bedding gradation				
Backfill gradation, Proctor curve, plasticity index (PI)				
Manhole				
Ring and cover				
Inlet box				
Grate & frame				
Flared End Section				
Pipe to manhole / inlet connection				
Outlet Structure – Water Quality Pond				
Small Area Inlets				

Description	Date Received	Resubmittal Requested	Resubmittal Received	Date Accepted
-------------	---------------	-----------------------	----------------------	---------------

**SEWER CONSTRUCTION**

Pipe				
Connectors				
Bedding gradation				
Backfill gradation, Proctor curve, plasticity index (PI)				
48" Manhole				
Ring and cover				
Pipe to manhole connection				
Sewer Service Tap (Full Body Wye)				
Clean Out Appurtenances				

**WATER CONSTRUCTION**

Pipe				
2" HDPE				
Fittings				
Valves				
Tracing Wire				
Tapping Saddle and Corp Stop.				
Ring and Cover				
Bedding Gradation				
Backfill Gradation, Procter Curve, Plasticity Index (PI)				
Valve Box				
Yard Hydrant				
Fire Hydrant				

**EROSION CONTROL / STORMWATER MANAGEMENT**

Description	Date Received	Resubmittal Requested	Resubmittal Received	Date Accepted
5-2-1 Storm Water Permit				
Construction Entrance				
Inlet Protection				
Concrete Washout				
Straw Bale				
Erosion Log				

**PERMITS, PLANS, OTHER**

Traffic Control Plan				
Dewatering Permit				
ACI Flatwork Finisher and Technician				
Geotextile (Pond Liner) (40 mil)				
Batten Bar				
Construction Schedule				
Thermoplastic				
Large Splice Box (Quasite)				
Irrigation Pull Box (Large)				
Detectable Warning				
Geosynthetics – Mirafi or equivalent				
Topsoil				
Import Fill				
Reinforcing Steel (epoxy coated)				
Steel Hand Rail				
6' Black Vinyl Coated Chain Link				
EPDM (Pour In Place)				

## Appendix B

### Project Special Provisions

## **SPECIAL PROVISIONS**

### **GENERAL:**

The descriptions of the pay items listed in the Bid Schedule for this Project may not agree with those listed in the Standard Specifications. Payment for all Work performed, as required in the Contract Documents, will be in accordance with the items and units listed in the Bid Schedule.

### **STANDARD SPECIFICATIONS FOR CONSTRUCTION OF WATER LINES, SANITARY SEWERS, STORM DRAINS, UNDERDRAINS AND IRRIGATION SYSTEMS**

The City of Grand Junction *Standard Specifications for Construction of Water Lines, Sanitary Sewers, Storm Drains, Underdrains and Irrigation Systems* are hereby modified for this Project as follows:

### **SP- 1 SECTION 103 – REMOVALS, EXCAVATION, BACKFILL AND RESTORATION:**

Add the following:

#### **103.4 Bracing and Sheeting of Trenches**

Add the following:

Trench wall support will be required when installing all new pipeline included in this project. The Contractor shall provide trench boxes, sheet piles and bracing, or other approved method of supporting trench walls that will limit the top width of any trench to a maximum of six (6) feet. Payment for trench bracing by the Contractors chosen method shall be included in the lineal foot pipe price for all pipe installed in this contract. Bracing required for manhole installation shall be included in the price of the manhole.

#### **103.10 Cutoff Walls.**

Add the following:

Payment for this work will not be measured or paid for separately and will be considered incidental to the installation of the storm sewer pipe. Refer to Section 108.13 for a list of Incidental Construction Items.

#### **103.16 Earth Backfill Material (Imported Trench Backfill).**

Add the following:

Material excavated on site shall not be used in the trench backfill if determined to be unsuitable by the Engineer or his representative. The excavated material shall **NOT** be hauled off, rather stockpiled on site in designated location approved by the Project Engineer. Imported Trench Backfill shall be pitrun or other approved material meeting the requirements of Section 103.16. During placement of imported backfill over the initial backfill material (Type A) that extends to 6 inches above the top of the

pipe, the Contractor shall not place any rocks over 4 inches in diameter within the first 12 inches above the initial backfill material to protect the pipe from damage.

### **STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION:**

The *City of Grand Junction Standard Specifications for Road and Bridge Construction* are hereby modified or supplemented for this Project by the following modifications to *The Standard Specifications for Road and Bridge Construction*, State Department of Highways, Division of Highways, State of Colorado:

### **SP-2 SECTION 202- REMOVAL OF STRUCTURES AND OBSTRUCTIONS:**

Section 202 of the Standard Specifications for Road and Bridge Construction is hereby revised for this Project as follows:

Subsection 202.07, shall include the following:

**Excess Material.** Excavated material generated on site shall remain on site and is to be stockpiled in designated area(s). Materials may only leave the site when directed by the City of Grand Junction. Prior from being removed from the site, materials must first undergo testing for radioactivity. Any/all materials over or under radioactivity limits that are directed to be removed from the site shall be delivered to a licensed disposal facility or to the interim storage facility to be defined by the City of Grand Junction and as described in the Uranium Mill Tailings Management Plan (UMTMP) provided in Appendix B. A log of these actions must be kept.

The current Uranium Mill Tailings Management Plan shall be adhered to during all construction activities. The most current version can be found at the State of Colorado's website [https://www.colorado.gov/pacific/sites/default/files/HM\\_umilltail-mgt-plan.pdf](https://www.colorado.gov/pacific/sites/default/files/HM_umilltail-mgt-plan.pdf). All contractors and trades working on this project shall become familiar with this and related documents.

### **SP-3 SECTION 203 – EXCAVATION AND EMBANKMENT**

Section 203 of the Standard Specifications is hereby revised for this project as follows:

Subsections 203.1 General, shall include the following:

Excavated material generated during construction phases such as, but not limited to roadway construction, bike path construction, utility installation, and any other work that is deemed suitable for embankment shall be placed per plan at identified fill areas. Stockpiled material on site shall be included as part of said work. Material shall be screened onsite as necessary to ensure a maximum partial dimension no greater than 8" and all embankment material be free of trash and organic materials.

The material that classify as cohesive materials per ASTM shall be placed in maximum 9-Inch loose lifts, moisture conditioned, and compacted at a minimum of 95% of the



standard Proctor maximum dry density, within +/-2% of optimum moisture content as determined by ASTM D-698 or 95% of the modified Proctor ASTM D-1557 for materials that classify non-cohesive.

**203.14 Basis of Payment.**

Add the following:

Payment for work shall be made under Excavation and Embankment and will be measured by cubic yard of placed and compacted material per plan. Unsuitable material generated from utility construction will not be measured or paid for separately and shall be stockpiled on site in designated area. Material placed and compacted is be quantified by survey following completion of work.

<b>Pay Item</b>	<b>Pay Unit</b>
Excavation and Embankment	CY

**SP-4 SECTION 207- TOPSOIL**

Areas identified per plan shall receive a minimum of 6" of clean import material that meets specifications or is to be amended on site.

Soil Amendment  
Materials

50% Ground well-aged cow, chicken, sheep or horse manure, 50% finely ground and aged wood chip, with a proven analysis to verify organic content, PH, electro-conductivity, nitrogen, potassium, and phosphorus content. **A sample of the material will be supplied to the Landscape Architect with an analysis.** Material to be composted a minimum of 3 months.

Execution

Soil Amendment is to be incorporated with fertilizer by tilling at the rate of 6 cu. yds per 1000 square feet. over all planted areas., discing or rototilling, the soil to a depth of 6". After this has been done, all rocks bigger than 1" shall be picked up and removed from the site. Soil amendment is to be used in planting procedures as detailed.

<b>Pay Item</b>	<b>Pay Unit</b>
Topsoil (6" Thick)	SY

**SP-5 SECTION 601 – STRUCTURAL CONCRETE**

Section 601 of the Standard Specifications is hereby revised for this project as follows:

Subsection 601.02, Classification:

CONCRETE SHALL MEET THE FOLLOWING REQUIREMENTS:

- 4,500 PSI Compressive at 28 Days
- 6% air  $\pm$ 1.5%
- Slump 4", Loads exceeding 4 1/2" shall be rejected
- Maximum Water Cement Ratio no greater than 0.45.

Subsection 601.06, Batching:

This CDOT Specification has been added to this Project:

The Contractor shall furnish a batch ticket (delivery ticket) with each load for all concrete. Concrete delivered without a batch ticket containing complete information as specified shall be rejected. The Contractor shall collect and complete the batch ticket at the placement site and deliver all batch tickets to the Engineer or his representative at the end of each day. The Engineer or his representative shall have access to the batch tickets at any time during the placement. The following information shall be provided on each ticket:

1. Suppliers name and date
2. Truck number
3. Project name and location
4. Concrete class and designation number
5. Cubic yards batched
6. Type brand and amount of each admixture
7. Type, brand, and amount of cement and fly ash
8. Weights of fine and course aggregates
9. Moisture of fine and course aggregates
10. Gallons of batch water

The contractor shall add the following information to the batch ticket at time of placement:

1. Gallons of water added by the truck operator.
2. Number of revolutions of the drum for mixing
3. Discharge time

### **SP-6 SECTION 608 – CURBS, GUTTERS, SIDEWALKS, AND TRAILS**

Section 608 of the Standard Specifications is hereby revised for this project as follows:

Subsections 608.06, Basis of Payment shall include the following:

The Contract Unit Price for the various concrete items shall be full compensation for all equipment, labor, materials, and incidentals required for the complete installation. Incidental items include excavation, subgrade compaction, cutting and removal of asphalt and concrete in areas where new concrete will be installed; disposal of excavated and removed materials; furnishing, placement and compaction of Aggregate Base Course; forming, furnishing and placement, finishing, curing and protection of the concrete; reinforcing steel, jointing (tool or saw cut) and joint filler.

Concrete walk greater than 7' in width shall be saw cut longitudinally at w/2.

## Appendix C

### Uranium Mill Tailings Management Plan

# **URANIUM MILL TAILINGS MANAGEMENT PLAN**

**FOR MANAGING TITLE I URANIUM MILL  
TAILINGS  
ENCOUNTERED DURING CONSTRUCTION  
ACTIVITIES IN WESTERN COLORADO**

**UPDATED May 2015**



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**Colorado Department  
of Public Health  
and Environment**

# **URANIUM MILL TAILINGS MANAGEMENT PLAN**

## **FOR MANAGING TITLE I URANIUM MILL TAILINGS ENCOUNTERED DURING CONSTRUCTION ACTIVITIES IN WESTERN COLORADO**

**UPDATED MAY 2015**



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**Colorado Department  
of Public Health  
and Environment**

For Information or Assistance Contact:

Colorado Department of Public Health and Environment  
222 South 6<sup>th</sup> Street, Room 232  
Grand Junction, Colorado 81501

Michael Cosby  
(970) 248-7171

Kate Elsberry  
(970) 248-7164

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# INTRODUCTION

## PURPOSE

In 1978 the U.S. Congress passed the Uranium Mill Tailings Radiation Control Act (UMTRCA Public Law 95-604 ) which tasked the U.S. Department of Energy with stabilizing, disposing, and controlling uranium mill tailings and other contaminated material at 24 inactive uranium processing (mill) sites located in ten different states, where uranium was processed for sale to a federal agency. Nine of the inactive uranium processing sites are located in Colorado. These Title I sites (referred to as “Title I” because the sites were listed in Title I of the law) were located in Grand Junction, Gunnison, Rifle (2), Durango, Maybell, Naturita and Slick Rock (2). While the active cleanup required by UMTRCA has been completed, residual uranium mill tailings remain in the nine affected communities. These residual tailings deposits are referred to as “UMTRA Title I uranium mill tailings” throughout this plan, in order to clearly delineate that this plan pertains only to radioactive materials that originated from UMTRA Title I mill sites.

The Colorado Department of Public Health and Environment is authorized by Colorado Revised Statutes (C.R.S. 25-11-301 et. seq.) to assist local governments in the identification and management of uranium mill tailings remaining in western Colorado communities. Because tailings deposits are often associated with utility rights-of-ways and private property, this plan is also designed to assist utilities and private parties in the identification, proper handling and disposal of uranium mill tailings.

The purpose of this plan is to describe responsibilities and procedures for managing UMTRA Title I uranium mill tailings encountered or disturbed during construction activities in the nine UMTRA communities in western Colorado. All work procedures are designed to minimize worker contact with radioactive materials and comply with the ALARA principle, keeping radiation exposures As Low As Reasonably Achievable. All work will be performed in accordance with *Colorado Rules and Regulations Pertaining to Radiation Control*, (Regulations) 6CCR-100-7, current version.

## HISTORY

Beginning around the turn of the century, exploration for ore deposits bearing radioactive elements began in the United States. Western Colorado and adjoining states in the Four Corners area, being rich in these deposits, were heavily prospected. Radium was the primary radioactive element of interest produced by the early mines and mills, followed by exploration for, and production of vanadium, which occurs in the same geologic ores. Then, in the 1940s, the demand for uranium rapidly grew as research progressed for development of atomic weapons and energy. After World War II, the continued research,

nuclear reactor use and the arms race accelerated the demand for uranium, which produced a uranium boom lasting through the 1950s and into the 1960s.

Many hundreds of mines were explored and often developed for ores. Many mill pilot plants, and later operating mill sites, were built to crush ore and separate uranium compounds from the waste materials. The mills produced a uranium product called “yellowcake” and waste tailings sands. These tailings contained most of the original natural radioactivity of the ore, since only one of the radioactive constituents was recovered in the milling process.

The waste tailings were piled at the mills, but erosion from wind and water invariably spread the tailings to adjacent areas. In addition, tailings from many of the mills were transported off site and used for construction or as fill materials. As the mills fell into disuse and obsolescence, and as the uranium boom faded, more of the tailings were eroded away or removed for construction.

The Public Health Service and the Colorado Department of Health conducted studies that demonstrated the magnitude of the health-related issues caused by the presence of uranium mill tailings in residential areas. Health effects result from exposure to gamma radiation, inhalation of radioactive particles and from radon gas, produced by natural radioactive breakdown of radium contained in the tailings. In places where uranium mill tailings were used for construction, radon can seep into buildings (homes, offices, schools) and can build up to high concentrations. Many research studies have demonstrated that people breathing air containing elevated levels of radon are at greater risk of lung cancer.

The Public Health Service documented the association between elevated radon and lung cancer during uranium mine studies conducted in the 1950s. In the 1960s, the Colorado Department of Health and the Public Health Service expanded the studies to include areas around mill sites. The studies concluded that excessive radiation exposure could result from indiscriminate use of tailings and that persons were at increased risk due to the presence of the uranium mill tailings. By this time, thousands of tons of tailings from the uranium mills had been used in residential areas for construction. In Grand Junction, Colorado, mill tailings from the former Climax Mill Site, which had been spread throughout the community, were identified as a health risk and the Colorado Department of Health soon issued an order to cease the use of tailings in construction.

Because of the availability and many possible uses of the sandy uranium mill tailings as a building material, the dispersal and misuse was widespread. Some examples of uranium mill tailings use were: soil attenuation, concrete mix, bedding for concrete and utilities, stucco, and brick production.

Experience has shown that as construction and demolition activities occur, new uranium mill tailings deposits will be discovered and disturbance of known deposits will occur. New construction close to such deposits increases potential public exposure to gamma radiation and radon.



## **GRAND JUNCTION REMEDIAL ACTION PROGRAM**

Concerns about health risks and property values grew as the extent of the uranium mill tailings misuse became public. Nationwide publicity announced and often exaggerated the problem. Congressional hearings were conducted, and in 1972, Public Law 92-314 created the Grand Junction Remedial Action Program to reduce radiation exposures inside structures affected by uranium tailings in the Grand Junction community. The U.S. Surgeon General published cleanup guidelines for the voluntary project. During the 15-year program, 594 structures in Mesa County underwent remedial action, where the radioactive material was removed by government contractors.

## **URANIUM MILL TAILINGS REMEDIAL ACTION PROGRAM**

From the late 1960s, it was known that the misuse of uranium tailings was not unique to the Grand Junction, Mesa County area. In 1978, the U.S. Congress passed Public Law 95-604, the Uranium Mill Tailings Radiation Control Act (UMTRCA). This law enabled the creation of the Uranium Mill Tailings Remedial Action Project and required the U.S. Environmental Protection Agency to develop cleanup standards. The U.S. Department of Energy was responsible for stabilizing, disposing, and controlling uranium mill tailings and other contaminated material in cooperation with States and Tribes. The project extended the assessment and cleanup of uranium tailings nationwide for both structure interiors and exterior deposits. By the conclusion of the Uranium Mill Tailings Remedial Action Program in 1998, approximately 5,000 properties and nine uranium mill sites had been cleaned up in Colorado. In Colorado alone, approximately 15 million cubic yards of uranium tailings were removed to controlled disposal sites.

Nine uranium mill sites in western Colorado qualified for remedial action under Title I of the Uranium Mill Tailings Remedial Action Program. These Title I sites were located in Grand Junction, Gunnison, Rifle (2), Durango, Maybell, Naturita and Slick Rock (2). These were inactive or abandoned sites, which had sold uranium to the U.S. Atomic Energy Commission exclusively. The Department of Energy performed site assessments and environmental impact studies and developed options for permanent, environmentally safe disposal of the radioactively contaminated materials.

Disposal cells were designed and constructed to comply with strict criteria regarding ground water protection, seismology, erosion protection, settlement and infiltration. The cells were designed to last for 200 to 1,000 years. Therefore, erosion resistant, natural materials were used in the construction of the cells. The typical cell was excavated into low permeability bedrock and filled with compacted uranium mill tailings. A very low permeability layer was added on top of the uranium mill tailings as a cover to contain the radon gas and limit the entry of water. An erosion resistant rock layer capped the cells.

All of the Colorado Title I disposal cells, except for the Maybell site in Moffat County, were located away from the mill sites to situate the tailings out of floodplains and away from shallow ground water. The Maybell tailings pile was reengineered and reworked to provide compaction and erosion protection and capped in place. All of the disposal cells will be monitored and maintained under the Long Term Surveillance and Maintenance Program managed by the Department of Energy.

The Title I disposal cell for Mesa County, known as the Grand Junction Disposal Facility (GJDF) at 4800 Hwy 50 Whitewater, CO will remain open to receive tailings from all UMTRA Title I communities until at least 2023. (The GJDF was formerly known as the Cheney Disposal Site or Cell.) Recognizing the need for long term management and storage of the remaining uncontrolled tailings, Congress revised the Uranium Mill Tailings Radiation Control Act in 1996 to allow for continued use of the GJDF. The Department of Energy will continue to maintain, operate and fund the GJDF cell. The GJDF cell is the only Uranium Mill Tailings Remedial Action Program site remaining open and available to receive uranium tailings.

# **MANAGEMENT OF UNCONTROLLED TITLE I URANIUM MILL TAILINGS**

## **UNCONTROLLED TITLE I URANIUM MILL TAILINGS**

Despite widespread publicity, two cleanup programs extending over 25 years, and thousands of property investigations, Title I uranium mill tailings remain in several western Colorado communities. It is suspected that up to half a million cubic yards of tailings remain outside of the controlled disposal cells.

Over 70,000 properties have been surveyed in Colorado for uranium mill tailings. Because of the voluntary nature of the project and difficulty in finding hidden, shielded deposits such as those beneath soils or under foundations, not all properties were investigated and not all deposits were found. Also, in some circumstances an owner refused to participate in the cleanup project after tailings were found on their property.

In addition to tailings that were never detected, or those where the owner refused cleanup, there were several other situations where tailings were left in place, including 1) Tailings excluded from exterior removals; 2) Tailings excluded from interior removals and 3) Supplemental Standards areas. All of these situations, explained in detail below, represent potential instances where tailings may be uncovered and require safe management in the future.

### **TAILINGS EXCLUDED FROM EXTERIOR REMOVALS**

The Environmental Protection Agency standards for exteriors allowed measurements of radiation exposure to be averaged over 100 square meters. Thus, a small area of elevated contamination was often averaged with uncontaminated areas, resulting in small quantities of uranium mill tailings being left in place. The Colorado Department of Public Health and Environment now advises/recommends that all areas of elevated concentrations (also known as "hot spots") be removed from the construction footprint plus a ten-foot buffer area, in order to minimize future exposure to the hot spot and/or further spreading of the tailings material during future construction activities.

### **TAILINGS EXCLUDED FROM INTERIOR REMOVALS**

The Environmental Protection Agency standards for interiors addressed the interior average gamma exposure rate and the annual average radon levels. Contaminated structural materials, such as foundations or tailings under slabs, were often left in place if the interior radiation levels were below the standards. The State advises removal of all tailings from under slabs or structures.

## **SUPPLEMENTAL STANDARDS**

The Environmental Protection Agency cleanup standards allowed for a variance from meeting standards in certain situations. This variance was called “supplemental standards.” The most common use of supplemental standards was in situations where the cost of tailings removal was greater than the health risks associated with leaving the tailings deposit in place. The use of supplemental standards resulted in tailings being left in place. Approval of supplemental standards by the Colorado Department of Public Health and Environment and the Nuclear Regulatory Commission required that the deposit was in such an area that current and future land use would result in minimal radiation exposures to the public. Often, when Supplemental Standards were used, some partial removal would take place to remove surface contamination, but leave uranium mill tailings at depth. Records of Supplemental Standards applications are available from the Colorado Department of Public Health and Environment.

Examples of areas containing uranium mill tailings left in place through the application of supplemental standards include railroad tracks, city streets and curb/gutter, steep slopes, river islands, basements, patios, currently uninhabited structures, and utility lines. Grand Junction, Colorado, has the greatest number of supplemental standards areas, but supplemental standards deposits also exist in the Maybell, Durango, Rifle, Gunnison, Naturita and Slick Rock communities.

## **TAILINGS MANAGEMENT PLAN**

The laws and regulations pertaining to UMTRA Title I materials did not anticipate the impacts on new construction projects or changes in land use when residual tailings were left in place after the remediation projects were completed. Thus, there is a need for a long-term management plan to help guide persons who may contact residual Title I tailings materials. This management plan is designed to be relatively simple and easy to use. The main elements of the management plan include:

- 1) the availability of an interim storage facility, useable by local governments, utilities and private parties on short notice,
- 2) the assignment of responsibilities,
- 3) health and safety concerns, including procedures to limit radiation exposure
- 4) training requirements and responsibilities,
- 5) procedures for excavation and transportation, and
- 6) the availability of a long-term disposal site.

These elements are addressed in the following sections.

The general process related to uncontrolled tailings is outlined as follows, and discussed in greater detail in the following sections. A property owner, owner’s representative or realtor requests information about a property from the Colorado Department of Public Health and Environment, either for a property transaction or a building permit application. Available records are provided to the property owner at that time. If no records exist, or if there is a question about whether or not tailings may be present, the Colorado Department

of Public Health and Environment may send an inspector to the property to conduct a gamma radiation survey. If tailings are present on the property, the Colorado Department of Public Health and Environment will provide a recommendation and information regarding the procedures for removing the material, following this plan. The removal of the material may be conducted by the property owner (referred to later in this plan as “private citizen”) or through the use a contractor. Local governments may also conduct tailings removals. The tailings are removed from the property, following the procedures outlined in this plan, and hauled to the Interim Storage Facility. Once the materials are safely stored and the vehicle and personnel have been decontaminated and released by the Colorado Department of Public Health and Environment, the materials are stored until the Grand Junction Disposal Facility is opened to accept material. The material is then hauled to the Disposal Facility by the City of Grand Junction. The Department of Energy requires compliance with the Waste Acceptance Criteria for the Grand Junction Disposal Site (most recent version).

## **INTERIM STORAGE FACILITY**



### **THE FACILITY**

The Interim Storage Facility (ISF) is a temporary holding area for uranium mill tailings. The facility is owned by the City of Grand Junction and operated in coordination with the Colorado Department of Public Health and Environment. The facility is located at 333 West Avenue, Grand Junction, Colorado.

The ISF provides a temporary, secure, and safe storage for uranium mill tailings excavated during construction activities in Colorado communities. Access to the ISF is facilitated through the Colorado Department of Public Health and Environment or the City of Grand Junction. The tailings will ultimately be transported to the Grand Junction Disposal Facility (GJSF) south of Grand Junction, Colorado. This transfer is normally scheduled on an annual basis.

The interim storage facility consists of an abandoned sewage treatment plant clarifier that is 75 feet in diameter and surrounded by concrete walls approximately 10 feet high. The bottom is a concrete slab, sloping to the center for drainage. A slot has been cut through the walls wide enough to admit a dump truck. A concrete ramp provides access to the entrance. A lockable gate protects the entrance. All holes in the bottom were sealed to make a water-tight storage area.

The facility also includes a shed for storage of records regarding materials brought to the ISF. The City provides a water line extension for decontamination spray or dust control upon request.

The Colorado Department of Public Health and Environment is responsible for access control, decontamination, and maintenance of records regarding materials brought to the

ISF. If Department personnel are not available, such as during an emergency water main break, the City of Grand Junction may assume these duties. Prior to accessing the ISF, the Colorado Department of Public Health and Environment will arrange for someone to meet the truck and provide a radiation meter for frisking and decontamination. Supervision of unloading, decontamination of vehicles and personnel after Colorado Department of Public Health and Environment working hours is the responsibility of the City of Grand Junction, which is the only entity authorized to access the facility after hours.

## **UNLOADING**

The hauling truck will back into the facility to place the load as close as possible to the back wall or near already placed material. The driver should prevent tires from coming in contact with contaminated materials in order to reduce the need for decontamination. Material brought to the interim storage facility must be sized as small as possible to allow for compaction at the Grand Junction Disposal Facility site. No debris may exceed 3 feet cubed or 10 feet in any dimension. Waste brought to the ISF should be in compliance with the Department of Energy's Waste Acceptance Criteria for the Grand Junction Disposal Site (most recent version). No uncovered loads may be brought to the ISF unless all transported contamination is in a solid form; such as bound in concrete (see Hauling).

## **DECONTAMINATION**

The truck bed will be inspected for visible uranium mill tailings contamination, soil and debris remaining after dumping. Material that did not dislodge will be pushed out with shovels or brooms. The truck will then proceed to the entrance for inspection of tires and undercarriage. All visible or measureable contamination will be removed from the tires and undercarriage.

Any use of the interim storage facility will be recorded. . The logbook will be kept in the facility shed. Logbook records will be transferred to the Colorado Department of Public Health and Environment office quarterly for permanent storage. The following information is required for every load brought to the ISF:

- Date
- Origin of contamination (street address)
- Estimated cubic yardage
- Name of driver/Company
- Truck identification (license number)
- Inspection for hazardous wastes
- High gamma meter reading of the material
- Time in and out of the facility
- Decontamination status/notes/information

The truck tires and tailgate will undergo frisking according to the frisking procedure in Appendix B. If the tailgate or tires will not pass the frisking limits, the water hose will be

used to further decontaminate the vehicle. If material cannot be dislodged from the bed, it can also be sprayed out at this point. After washing, the tires and tailgate will again be frisked. All water or dislodged material will drain into the interim storage facility. No uranium mill tailings contamination shall be allowed to escape containment within the facility walls.

Individuals that have had physical contact with the uranium mill tailings will have all visible contamination removed by sweeping. The individual will undergo a full body frisk with the frisking meter. If the frisking limits are exceeded, further sweeping or washing will occur, followed by another frisking. If clothing will not decontaminate visibly or pass the frisking survey, the clothing will be changed out in the storage shed. Contaminated clothing will be left at the ISF for disposal.

Once decontamination is deemed complete by the Colorado Department of Public Health and Environment, and the logbook has been filled out, the truck and users may leave the interim storage facility access area. All materials used in decontamination will be returned to the shed. The gate and shed will be locked. The final determination that all procedures, including decontamination, have been completed according to the protocols is the responsibility of the Colorado Department of Public Health and Environment.

## RESPONSIBILITIES

# COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT



Colorado Department  
of Public Health  
and Environment

The Colorado Department of Public Health and Environment is responsible for the overall oversight of the Title I Uranium Mill Tailings Management Plan. The Department has more than 30 years experience in the management of uranium mill tailings, including expertise in radiation protection, clean up programs, record keeping, public information and health physics.

Colorado Department of Public Health and Environment's responsibilities include:

- 1) Maintaining, updating and sharing records and documentation
- 2) Conducting inspections
- 3) Conducting excavation control
- 4) Providing technical expertise
- 5) Overseeing use of the ISF
- 6) Providing instrumentation

## **PUBLIC RECORDS AND DOCUMENTATION**

The Uranium Mill Tailings Management Plan will be used for technical information and field guidance. The Colorado Department of Public Health and Environment is responsible for the maintenance, distribution and revision of this plan.

The Colorado Department of Public Health and Environment will maintain and update uranium mill tailings records available to the general public and local government agencies. The Colorado Department of Public Health and Environment will produce or update property records as the conditions change due to excavation of the uranium mill tailings. The Colorado Department of Public Health and Environment will provide personnel to interpret records and give health risk information to the public regarding the presence of uranium mill tailings on properties.

The Colorado Department of Public Health and Environment will keep records of Title I uranium mill tailings excavated, received at the interim storage facility, and transported to Grand Junction Disposal Facility. The Colorado Department of Public Health and Environment will maintain records for decontamination of personnel and equipment.

For the UMTRA Title I communities outside of Grand Junction/Mesa County, the Colorado Department of Public Health and Environment will provide general information about uranium mill tailings to the public and local governments.

## **INSPECTIONS**

The Colorado Department of Public Health and Environment will provide inspections of new building areas and demolition sites and inform the appropriate City and County Planning agencies for all pertinent building permits in Mesa County. All properties in Mesa County are to be monitored for the presence of mill tailings by the Colorado Department of Public Health and Environment, and if any are detected they are to be removed from all building sites before new construction commences.

For the UMTRA Title I communities outside of Grand Junction/Mesa County, the Colorado Department of Public Health and Environment will keep available Title I uranium mill tailings records and coordinate inspections of new construction in other communities as time permits and as requested.

## **EXCAVATION CONTROL**

The Colorado Department of Public Health and Environment will provide excavation control for uranium mill tailings removals by private parties, contactors and government agencies by request.

Tailings co-mingled with other wastes cannot be hauled to the ISF or to the GJDF, as these materials are not in compliance with the Department of Energy's Waste Acceptance



Criteria for the Grand Junction Disposal Site. The Colorado Department of Public Health and Environment will conduct inspections prior to tailings removal for the presence of hazardous wastes that could be commingled with uranium mill tailings. The Colorado Department of Public Health and Environment will provide expertise on segregation, testing and storage of commingled waste. The Colorado Department of Public Health and Environment will provide documentation to the Department of Energy that materials transported to the Grand Junction Disposal Facility do not contain commingled waste.

### **TECHNICAL EXPERTISE**

The Colorado Department of Public Health and Environment will provide technical expertise to communities, local governments or private parties in identifying, handling and management of Title I uranium mill tailings.

### **INTERIM STORAGE FACILITY**

The Colorado Department of Public Health and Environment will routinely manage operations and record keeping at the interim storage facility. The Colorado Department of Public Health and Environment will conduct radiological surveys of the interim storage facility to insure its proper operation and containment of material. Spot checks will occur during heavy use, high winds or rain.

### **RADIOLOGICAL SURVEY INSTRUMENTS**

The Colorado Department of Public Health and Environment will provide radiological survey instruments on loan to local governments and private parties on an as-needed basis. The Colorado Department of Public Health and Environment will maintain and calibrate the instruments annually as budgets allow and provide training in the use of the instruments.

### **TRAINING**

The Colorado Department of Public Health and Environment will provide training to workers excavating tailings and will provide on-site safety briefings as needed. The Colorado Department of Public Health and Environment will be available to explain technical problems, options, radiation health risks or any part of the Uranium Mill Tailings Management Plan. The “Training” section of this plan describes the safety training in more detail.

## **LOCAL GOVERNMENTS AND PUBLIC UTILITIES**



The local governments and public utilities are responsible for following the procedures in this plan, designed to locate residual uranium mill tailings in construction areas, and to excavate and transport contaminated material while minimizing impact and radiation exposure. The local governments and utilities recognize that cooperation and coordination between the Colorado Department of Public Health and Environment, the Department of Energy, utilities, and local governments is paramount. All parties recognize and understand that some inconvenience and costs are involved in the proper handling and disposal of residual uranium mill tailings.

### **TRAINING**

Local governments and utilities will require and assign radiation training as required under this plan for workers potentially exposed to ionizing radiation from uranium mill tailings. Training requirements are described later in this document.

### **COSTS**

The costs of excavation, handling and transporting of uranium mill tailings by local governments and public utilities will be borne by these entities. Local governments may apply for grants to cover these costs in accordance with HB 97-1248, through the Colorado Department of Local Affairs and the Associated Governments of Northwest Colorado.

### **ENFORCEMENT OF PROCEDURES**

Local governments and public utilities will be responsible for monitoring and enforcing the procedures for workers under their direct control. Supervisors will observe operations and enforce the written procedures of the Uranium Mill Tailings Management Plan, and the Colorado Rules and Regulations Pertaining to Radiation Control.

### **POINT OF CONTACT**

Local governments and public utilities will identify personnel responsible for contact and coordination with Colorado Department of Public Health and Environment.

### **INSTRUMENTS**

Local governments and public utilities will maintain the radiological detection instruments provided on loan by the Colorado Department of Public Health and Environment in good working order. The instruments are expensive and require proper care and usage. The instruments will be kept on hand for ease of checking potentially contaminated areas. The

instruments will be returned to the Colorado Department of Public Health and Environment annually for an operations check.

Surveys must be performed in accordance with Appendix D and Colorado Department of Public Health and Environment training.

## **HAZARDOUS WASTE**

Local governments and public utilities will notify the Colorado Department of Public Health and Environment of unusual coloration, smells, or materials such as car batteries or transformers discovered in excavations. Coordination with the Colorado Department of Public Health and Environment shall be made prior to the removal of such materials or soils, as they may contain hazardous wastes substances like asbestos which require special storage, handling or treatment if excavated. A certified asbestos inspector should be used to determine the presence or absence of asbestos contamination if it is suspected. If hazardous material is suspected it should be analyzed by a qualified inspector. Hazardous material may not be taken to the interim storage facility. If hazardous material is taken to the interim storage facility by any local government or public utility, that entity will be responsible for removing the hazardous waste and associated tailings within 30 days of being so notified and manage the material in accordance with all federal, state and local requirements. The Hazardous Materials and Waste Management Division technical assistance line (303) 692-3320 is available to provide instructions on how to manage the waste. All materials brought to the ISF must comply with the Department of Energy's Waste Acceptance Criteria for the Grand Junction Disposal Site (most recent version.)

## **RECORDS CHECK**

Local governments and public utilities are responsible for checking available records or maps prior to a planned excavation activity. Up-front knowledge of tailings locations will enable subcontractors to more accurately bid projects. The Colorado Department of Public Health and Environment has copies of the supplemental standards database to assist in locating tailings deposits. The Colorado Department of Public Health and Environment also will retain the records of several thousand properties assessed or cleaned up in Uranium Mill Tailings Remedial Action Program communities.

## **PERMITS**

Construction activities in public right-of-ways are controlled by local governments through the issuance of permits. Work permitted in an area of known tailings involvement will have the statement "tailings procedures in effect" written on the work order and will include a requirement for coordination with the Colorado Department of Public Health and Environment.

## **EXCAVATION CONTROL**

The local governments and public utilities supervising excavations into deposits of uranium mill tailings will minimize over-excavation. Over-excavation is the removal of uncontaminated materials or mixing of uncontaminated materials with uranium tailings for transport to the interim storage facility. Over-excavation is controlled by radiological surveys and segregation of contaminated and uncontaminated material. In most cases, tailings deposits are small and localized. For such situations, a small excavator is the appropriate equipment for this type of removal. In general, the size and capacity of the excavator should match the size of the job. The excavation tool should fit the job to prevent over excavation.

## **INTERIM STORAGE FACILITY**

The City of Grand Junction will be responsible for providing and maintaining the infrastructure necessary for operation of the interim storage facility (ISF), including an operating water line. The City will provide a gate and lock for security of the ISF and equipment shed. The City will also consolidate stockpiles within the ISF as requested by the Colorado Department of Public Health and Environment. No material will enter the ISF without proper documentation completed and stored in the ISF shed. All non-city generated material will be cleared through the Grand Junction UMTRA CDPHE office prior to placement in the ISF.

## **TRANSPORT TO THE GRAND JUNCTION DISPOSAL FACILITY**

The City of Grand Junction will be responsible for transport of the uranium mill tailings to the Department of Energy disposal site from the interim storage facility. All training and procedures required by the Department of Energy for entering the Grand Junction Disposal Facility site (GJDF) will be adhered to. In cases of large quantities, the Colorado Department of Public Health and Environment may arrange for direct transport of the material from the excavation to the GJDF cell. In these cases, the property owner is responsible for transportation. Transportation must meet the requirements of the Colorado Rules and Regulations Pertaining to Radiation Control Part 17 and Colorado Department of Transportation requirements. In addition, all material hauled to the GJDF must be cleared by the CDPHE and meet the Waste Acceptance Criteria for the Grand Junction Disposal Site, as established by the Department of Energy.

## **UNITED STATES DEPARTMENT OF ENERGY**

### **OPERATION OF THE GRAND JUNCTION DISPOSAL FACILITY**

The Department of Energy is responsible for providing resources and coordination necessary to receive uranium mill tailings at the GJDF disposal cell periodically from the

stockpile at the interim storage facility. Currently, it is projected that materials will be trucked from the interim storage facility to the GJDF at least once a year for a two-to-three-week period. This frequency will vary as needed.

The Department of Energy is responsible for providing resources and coordination necessary to receive uranium mill tailings at the GJDF during large planned construction projects, such as sewer line replacement in a supplemental standards area. Planned disturbance of large quantities of uranium mill tailings may be trucked directly to the GJDF without using the interim storage facility, if approved by the Department of Energy.

The Department of Energy is also responsible for developing and maintaining the Waste Acceptance Criteria for the Grand Junction Disposal Site and for assuring that any changes to the criteria are communicated to the Colorado Department of Public Health and Environment.

### **LONG TERM SURVEILLANCE AND MAINTENANCE**

The Department of Energy is responsible for the long-term surveillance and maintenance of the Grand Junction Disposal Facility disposal cell. All costs associated with the operation and maintenance of Grand Junction Disposal Facility is at Department of Energy expense.

### **CONTACT PERSON**

The Department of Energy shall provide a point of contact for coordinating and planning between local governments, utilities and the Colorado Department of Public Health and Environment. The point of contact will receive any reports that the Department of Energy requires.

### **MAPS**

The Department of Energy will provide maps delineating supplemental standards areas to the Colorado Department of Public Health and Environment and local governments.

### **PRIVATE PROPERTY OWNERS**

In Mesa County, private parties or their contractors will notify the Colorado Department of Public Health and Environment of a request for a building or demolition permit through the Mesa County Planning Department. The owners or contractors will follow the recommendations issued to the Planning Department by the Colorado Department of Public Health and Environment through the Building Permit Survey Program.



In Title I uranium mill tailings impacted communities, property owners bear the costs of excavating, stockpiling, and transporting of uranium mill tailings contaminated materials to the interim storage facility, a licensed disposal facility, or to the GJDF. Prior to moving material to the facility, the owner must coordinate with the Colorado Department of Public Health and Environment

The private parties or their contractors will follow the ALARA principle throughout all work with uranium mill tailings. See the ALARA section.

# HEALTH AND SAFETY

## IONIZING RADIATION EXPOSURE CONCERNS



Uranium mill tailings consist of sand-like wastes generated from the milling of uranium ores to extract “yellowcake,” a uranium oxide compound. These tailings contain most of the original radioactivity found in the unprocessed ores. Radioactive radium, thorium, lead and other elements in tailings are unstable and decay by ejecting alpha and beta particles from the nucleus and by releasing excess energy as radiation. The radiation from the decaying tailings atoms has the potential to cause cancer in living tissues.

The main radiation exposures from uranium mill tailings are from direct exposure to gamma radiation, inhalation of radon, and inhalation of airborne radioactive particles.

Based on a human health risk assessment conducted by the Department of Energy (DOE, 1989) gamma radiation exposure to the public from residual uranium mill tailings is expected to be below the 100 millirem per year exposure limit for the general public.

Radon is formed when the radium in the tailings decays. Radon decays by ejecting alpha and beta particles and forms a series of short-lived radioactive products. The particles ejected by radon and its products cannot travel very far in air and cannot penetrate skin, thus are not an external hazard. However, if inhaled, these particles can cause damage to the lungs that could eventually result in lung cancer. Radon is found naturally in air in small amounts. Exposure to radon becomes a health hazard when it accumulates in buildings or mines to higher levels and is inhaled for extended periods. .

A third potential source of radiation exposure is radioactive particles (dust) associated with the tailings that can become airborne. Once airborne, these particles can be inhaled, with subsequent exposure to the respiratory tract. Airborne particulate contamination is routinely controlled to negligible concentrations by the application of water mists or sprays to equipment or tailings releasing dust. Dust masks can also be worn to control this exposure for workers.

The radiation exposures to utility workers excavating uranium mill tailings are greatest in trenches. Radon is heavier than air, and before dispersal occurs, will be at higher levels at the bottom of the trench. The radon levels would probably be greatest when the trench is opened up and lessen somewhat later due to mixing with air. Gamma radiation exposure is also more likely in a contaminated trench. There may be pure tailings in the bedding of the utility line and tailings mixed with the soils in the walls of the trench. The result is radiation exposure to workers from the sides as well as the bottom of the trench.

## **RADIATION RISK ANALYSIS**

The limit for radiation exposure from uranium mill tailings for non-radiation workers is 100 millirem per year in the Regulations, Part 4.14.1, Radiation Dose Limits for Individual Members of the Public. This is a “total dose limit” which includes both internal and external exposure, rather than only external exposure to gamma radiation. The Environmental Protection Agency is currently considering lowering this limit to 15 millirem per year, while the Nuclear Regulatory Commission believes that 25 millirem per year should be used (as applied in the decommissioning of facilities). The allowable exposure for radiation workers is 5,000 millirem per year. Radiation workers are carefully and continuously scrutinized in a radiation workers health monitoring program.

The Department of Energy prepared a health risk analysis in 1989 for utility workers entering trenches that contain uranium mill tailings. The analysis calculated potential worst-case exposures to workers in trenches and compared them to the regulatory limit, (100 millirem per year above background for non-radiation workers, required by the Code of Federal Regulations (CFR), Title 10, Part 20). In the Colorado, background radiation varies from 350 to 650 millirems per year.

The analysis was based on a series of hypothetical projects to remove uranium mill tailings surrounding buried utilities. Water line repairs were estimated to last 39 hours. It was assumed that an individual worker would be in the trench only 25 percent of the time due to scheduling rotations. Thus, 10 hours per year of exposure was allotted to water line repairs.

Approximately eight hours of exposure was allotted to sewer line work with an individual spending only 10 percent of the time in a contaminated trench. Extra exposures were added to account for potential manhole repair. Therefore, two hours of exposure was used in the calculation for sewer line work.

Twelve total hours (10 for water lines and 2 for sewer lines) of yearly potential exposure at the highest, worst-case radiation levels detected in trenches gives an estimated exposure of 9.6 millirem to a utility worker, or 1/10 of the 100 millirem limit.

No exposure limit or regulation exists for radon in outside air, except for uranium and thorium mill tailings disposal cells. The radon limit for miners is four working level months per year. The Environmental Protection Agency has set a voluntary suggested indoor action level at 0.02 Working Levels (WL). This equates to about one working level month per year. The highest radon levels encountered in trenches during the analysis were 0.058 WL. The potential annual working level months-per-year after exposure to 0.058 working levels for 12 hours is 0.004 working level months-per-year, which is below the Environmental Protection Agency indoor action level.

The conclusion of the Department of Energy health risk analysis is that based upon these presumptions, “there is no clear present or future health risk to utility workers in Mesa



County due to potential gamma or radon exposure, even based upon the worst-case scenarios.”

## **AS LOW AS REASONABLY ACHIEVABLE (ALARA)**

Even though the Department of Energy’s risk assessment demonstrated that risk to utility workers in trenches containing uranium mill tailings is expected to remain below regulatory limits, the Tailings Management Plan supports adherence to the ALARA philosophy, as stated in Part 4.5 of the Regulations, to limit exposure to levels less than the regulatory requirement.

ALARA is an approach to radiation protection to manage and control exposures (both individual and collective to the work force and the general public) and release of radioactive materials to the environment at levels as low as is practical below the regulatory requirement, taking into account social, technical, economic, practical and public policy considerations. As used in this context, ALARA is not a dose limit but a process, which has the objective of attaining doses as far below the applicable controlling limits as is reasonably achievable.

The ALARA principle will be the primary philosophy and tool used for controlling radiation exposures during all activities of managing uranium mill tailings. The ALARA principle will be implemented by use of the following requirements to control exposure:

- The upper limit of gamma exposure allowed will be 15 millirem per year. Supervisors of local government and utility workers should maintain records regarding the number of hours of exposure for their employees who work near uranium mill tailings. If badges are not used to track actual exposures, the exposures can be roughly estimated. Using the average tailings activity, approximately 300 hours of trench work is allowable per year under this exposure limit. The local government or public utility and the Colorado Department of Public Health and Environment may consider additional rotations out of trench work when any individual worker has accumulated 100 hours of work in contaminated trenches in any given year, in order to ensure worker protection.
- When possible, the local government or public utility should consider establishing a control area around exposed tailings. Only trained personnel should be allowed into the controlled area. Individuals entering the controlled area will limit the amount of time spent within the controlled area. Individuals will position their work as far from the contaminated areas as possible. Only necessary equipment or tools will be allowed into the controlled area. Uranium mill tailings contaminated areas will be fenced off from the public during non work hours. No unauthorized entry into the controlled areas is allowed by the public.
- No visible dust is allowed to leave the controlled area. Dust will be controlled through the use of water sprays. However, spraying should be limited to the

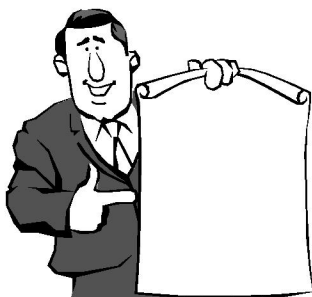
amount necessary to keep the excavation dust-free, but should not create runoff from the excavation.

- No eating, drinking, chewing, or smoking is allowed in the controlled area.
- All equipment and personnel in contact with tailings will be surveyed with a radiation meter. If contamination is present, they must undergo decontamination. Haul trucks and contaminated personnel will be frisked with a radiation meter to verify decontamination. Surface meter readings should be under 18  $\mu$  R/hr (microRem [Rem = roentgen equivalent man] per hour) or equivalent.
- Haul trucks will be covered with a tarp to prevent windblown transportation. . If the tailings are wet or have the potential of leaking out, a plastic sheet should be positioned in the tailgate to contain tailings.
- If a spill occurs, the spill procedures must be followed (see “Transport of Tailings”).
- Tailings deposits excavated from the top three feet of an excavation should not be replaced into the excavation. These tailings should be removed and transported to a controlled onsite stockpile or to the interim storage facility. Clean fill should replace tailings deposits for up to three feet from the ground surface. If this is not readily performable, a cap of 6 inches in non traffic areas and 18 inches in high traffic areas should be placed over the tailings at a minimum. This should be placed over stockpiled material as well and a tactifyer such as magnesium chloride should be applied to minimize weathering. This tactifyer should be applied to all temporary stockpiled tailings if stored over 30 days or if weather conditions indicate that tailings may be spread from the stockpile.

# TRAINING

## COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

The Colorado Department of Public Health and Environment employees responsible for implementing the Uranium Mill Tailings Management Plan, and employees who may receive radiological exposures in the work place, will be provided with training and be proficient in the following areas:



40 Hour Hazardous Waste Training  
8-hr Refresher Training

Radiological Worker Training  
Radiological Refresher Training

The Department will develop and update the curriculum for training of local government and public utilities workers or private owners and agents. The curriculum will include:

Basic Health Physics  
Radiation Exposure Limits and Monitoring  
Excavation and Transport Procedures  
Survey Meter Operation  
The ALARA Principle  
Decontamination Procedures

## LOCAL GOVERNMENTS AND PUBLIC UTILITIES

It is recommended that local governments and public utilities workers who may potentially be exposed to uranium mill tailings will receive training in the following areas:

Radiological Worker Training  
Radiological Refresher Training

The workers for these agencies will attend on-site briefings to review uranium mill tailings management procedures before beginning work in an area known to contain uranium mill tailings. The Colorado Department of Public Health and Environment or the local government/public utility supervisors will conduct the briefings.

# EXCAVATION PROCEDURES

## RADIATION SURVEY

A gamma radiation survey instrument will be accessible to excavation crews working in areas known to be contaminated with uranium mill tailings. The instrument will be provided on loan by the Colorado Department of Public Health and Environment and will be capable of detecting uranium mill tailings in the range of 0-1000 micro Roentgen per hour ( $\mu\text{R/h}$ ).

A field operations check on the instrument will be performed before surveying for uranium tailings contamination.

Refer to Appendix D – Generic Survey Procedures for more detailed procedures.

## IDENTIFYING CONTAMINATED MATERIAL

For purposes of this plan, residual uranium mill tailings will be identified based on a reading of 30 percent above the normal background gamma radiation. A reading of fourteen  $\mu\text{R/h}$  is generally considered the average for western Colorado soils. As such, the background gamma plus 30 percent results in a value of 18  $\mu\text{R/h}$ . Any reading of 18  $\mu\text{R/hr}$  will be considered contaminated with uranium tailings. In non-habitable areas (and non-habitable in the future), a reading of 20  $\mu\text{R/h}$  is allowable. Every area with contamination is to be evaluated and handled individually based on consultation with the Colorado Department of Public Health and Environment. For purposes of this Uranium Mill Tailings Management Plan, and in adherence to the ALARA principle, hot spots will be removed and area averaging is not allowed.

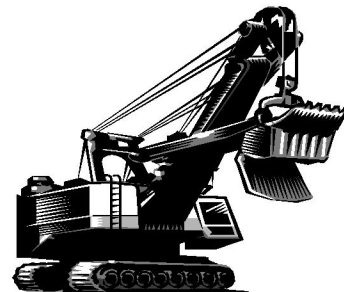
Uranium mill tailings contamination may be in surface deposits or buried, especially in utility trenches. Where applicable, the Department of Energy supplemental standards maps may be used to generally indicate potential areas of contamination. Prior to surface penetration, a check shall be made with a scintillometer. After a trench is excavated, the meter shall be lowered for spot checks along the length of the excavation. Any suspicious gray or purple sands should be particularly checked.

Tailings are often mixed with soils are indistinguishable and appear to be normal dirt.

## EXCAVATION

### CONTROLLED AREAS

If tailings are identified, a controlled area shall be established, extending 10 feet from the edge of the deposit. Once tailings are identified,



tailings excavation procedures and ALARA principles immediately become effective. The supervisor/property owner is responsible for enforcement of the procedures.

## **HAZARDOUS WASTES**

Uranium mill tailings contaminated areas shall be inspected for asbestos, visible discoloration, odd smells, or for materials such as car batteries or transformers. Mixing of hazardous wastes with the tailings will probably cause the deposit to be considered a commingled waste. Commingled wastes, if above regulatory limits, and untreated, cannot be hauled to the Grand Junction Disposal Facility disposal site. Material hauled to the Grand Junction Disposal Facility must meet the Department of Energy's Waste Acceptance Criteria.

Co-mingled wastes are regulated with specific handling and storage requirements. The Colorado Department of Public Health and Environment shall be notified immediately upon suspicion of such wastes. These deposits shall not be excavated unless necessary and then shall be segregated and stored separately from the other non-commingled tailings and clean soils. The local government or public utility will be responsible for managing commingled wastes in accordance with applicable hazardous waste regulations.

## **AVOIDING OVER EXCAVATION**

If uranium mill tailings need to be excavated, the amount of material disturbed or removed should be minimized. Over excavation causes extra handling costs and fills the limited permanent storage room available in the Grand Junction Disposal Facility disposal cell. Appropriately sized equipment should be used based on the size of the deposit to be excavated. If the tailings cannot be directly loaded onto transportation, stockpiled tailings should be placed onto concrete or plastic sheeting to delineate and separate from the clean soil below it.

Uncontaminated overburden shall be removed and segregated from uranium mill tailings below. Only uranium mill tailings contaminated materials shall be transported to the interim storage facility or Grand Junction Disposal Facility. Care shall be taken to avoid mixing contaminated soils with uncontaminated soils. The radiation meter shall be used to identify soils in question.

The uranium mill tailings contaminated areas considered for removal will be visibly marked for the machine operator. This is to segregate the contaminated material and avoid mixing. Spray paint, colored flags or fencing are appropriate to delineate the uranium mill tailings contaminated areas.

No trash, wood, tires or other non-contaminated solid waste shall be shipped to the interim storage facility or GJDF. Such materials may be decontaminated and disposed of as solid waste. Care shall be taken to segregate uncontaminated concrete from contaminated concrete (It has been our experience that uncontaminated concrete is the material that most

often is improperly brought to the interim storage facility). Contaminated concrete or asphalt shall be sized properly to allow compaction at Grand Junction Disposal Facility. No debris shall be larger than 3 feet in any dimension. No pipe shall be longer than 10 feet in length. All materials shall be sized in accordance with the Department of Energy's Waste Acceptance Criteria for the Grand Junction Disposal Site.

Proper disposal of tailings is always the best means of dealing with tailings. It is the ultimate final termination of the contamination. However, in some cases, particularly in Title I communities outside of the Grand Junction area, transportation to the ISF or GJDF is just not feasible. In these situations, uranium mill tailings can be re-buried on site provided that the following conditions are met:

- 1) A discussion with CDPHE about disposal options prior to any excavation activities must be conducted.
- 2) Tailings may be returned to the original excavation, in a last out-first in order.
- 3) The tailings should be re-buried under a minimum of 6 inches of clean soil in low exposure/traffic areas and 18 inches in high exposure/traffic areas and no deeper than a foot above the vadose (ground-water capillary) zone. 18 inches of clean cover should be used in areas with high erosion potential.
- 4) Contaminated surface deposits must be re-buried beneath clean fill material as listed in 2).
- 5) A written record that indicates the approximate volume of material that was re-buried, the meter reading for the material, the approximate depth of burial and the burial location, shall be submitted to CDPHE. These records shall also be maintained in perpetuity by the property owner, provided to any subsequent owner and to any contractors performing work on the property.

## **STOCKPILING**

Stockpiling of uranium mill tailings contaminated material should be avoided whenever possible. Stockpiling may cause concerns to property owners, and may present an exposure hazard. Stockpiling on the same property that the tailings came from is allowable, but not advisable. Tailings may not be removed from the original property except to be taken to a licensed disposal facility, the interim disposal facility at the City of Grand Junction's yard, or the Grand Junction Disposal Facility in Whitewater, CO. Stockpiled material should be fenced from public access, and must be covered or a tacktifier applied to prevent wind and water erosion. Stockpiles should not be left in place longer than 60 days. If it is necessary to leave them longer than that, or if inclement weather is emanate, they must be properly covered or sealed.

## **ASPHALT**

When working with asphalt placed over uranium mill tailings contaminated soils, care shall be taken to not penetrate into the tailings and/or mix the tailings with the asphalt. If tailings are mixed with the asphalt, the asphalt should be inspected with a meter. If the

mixture shows a meter reading of 30 percent above the radiological background (a reading of 18 uR/hr or greater), it is considered contaminated.

Asphalt removed in chunks over uranium mill tailings contaminated soils should be inspected on the underside with the survey meter. If excavation into the bedding material is necessary, care must be taken to segregate contaminated and uncontaminated materials.

## **WATER MAIN BREAKS**

If uranium mill tailings are washing away due to a water line break, sediment dams shall be established to halt the spread of contamination. Following repair of the break, a meter survey should be conducted downstream to insure that any contaminated materials spread by the break are identified and are cleaned up. Any material exceeding 30 percent above background (18  $\mu$ R/hr) should be returned to the excavation or taken to the interim storage facility.

## **DECONTAMINATION**

All equipment used for excavation or hauling of tailings shall be inspected and decontaminated. Visible tailings shall be swept or sprayed away and placed in the ISF.

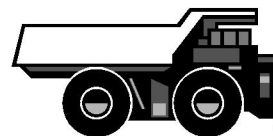
Workers in contact with tailings shall be decontaminated. Visible tailings shall be swept or washed away. These workers shall be frisked with the beta-gamma meter for verification of decontamination (See Appendix B). If clothing will not pass the frisk, the workers shall change into clean clothing. Contaminated clothing and contaminated decontamination materials shall be taken to the interim storage facility for further decontamination and frisking or disposal. The Colorado Department of Public Health and Environment will be available to assist in these operations.

## **CEASE WORK**

Work shall cease when the project supervisor or the Colorado Department of Public Health and Environment determines that the procedures have not or cannot be followed. Examples include: high winds making it impossible to control dust, a truck that leaks tailings or non-cooperation of workers. Work may be resumed when the supervisor and the CDPHE determines that the procedures issue has been resolved and it is safe to resume work.

# TRANSPORT OF TAILINGS

## REGULATIONS



Transportation of radioactive material over public roads in Colorado is regulated under the Code of Federal Regulations (CFR) Title 49, Parts 171-178 and 390-397, and Part 17 of the Colorado Regulations, which mirror 49 CFR. Generally, uranium decay series material is low specific activity as defined by the International Atomic Energy Agency and U.S. Department of Transportation.

The Department of Transportation defines a concentration of radioactivity above which material like uranium mill tailings is considered radioactive for purposes of the transportation regulations. At present, the Department of Transportation defines any material with radioactivity greater than 70 Becquerel per gram (B/g) as radioactive for transport purposes. For uranium mill tailings, 70 B/gm total activity is calculated to be less than approximately 174 pCi/g radium-226. Therefore, if a truckload of tailings material averages overall below less than 174 pCi/g radium-226, it is not considered radioactive material for purposes of transportation under 49 CFR and Part 17 of the Regulations. From our experience in the Uranium Mill Tailings Remedial Action Program, tailings excavated from streets or other properties are usually mixed with clean soil and do not exceed 174 pCi/g radium-226.

## HAULING

The ALARA principle will be followed during transportation of tailings. This will be insured by covering and not overfilling loads to prevent dust or spillage. If very wet or fine-grained material is to be loaded, a plastic sheet diaper will be placed in the rear of the truck bed in a manner to exclude leaking out the tailgate. Loads should not be piled any higher than the sidewall of the truck. The most direct route possible with no off-road stops will be used to transport tailings to the interim storage facility. All loads will be covered to ensure that no tailings are blown out during transport.

## SPILL PROCEDURE

When transporting mill tailings, if a spill from the haul truck occurs, the supervisor and the Colorado Department of Public Health and Environment will be notified as soon as possible. The spill will be isolated and protected from further dispersal. Traffic cones and flagmen will be used as necessary for traffic safety. The truck should pull off the road if possible. If there has been an accident, the driver should call the state patrol or 911 as necessary. Drivers should also call their supervisor and the Colorado Department of Public Health and Environment in responding to the spill. Traffic safety has priority over isolating or recovering the spill



The spill will be swept up and put into a closed container appropriate to its volume and transported to the interim storage facility for disposal. The area is considered clean if no contamination is seen or detected. If the spill was onto a dirt road, the radiation survey meter will be used to verify the spill cleanup. If no readings above 18  $\mu\text{R/h}$  are noted on the gamma survey meter, the area is considered clean.

## APPENDIX A

# DEFINITIONS

**Access Control:** A designated entrance/exit point to a controlled area.

**ALARA:** Acronym for “As Low as Reasonably Achievable,” a basic concept of radiation protection that specifies that radioactive discharges from nuclear plants and radiation exposures to personnel be kept as far below regulatory limits as feasible.

**Alpha Particle:** A positively charged particle ejected spontaneously from the nucleus of some radioactive elements. It is identical to a helium nucleus and has a mass number of 4 and an electrostatic charge of +2. It has low penetrating power and short range. The most energetic alpha particle will generally fail to penetrate the skin. Alphas are hazardous when an alpha-emitting isotope is introduced into the body.

**Beta Particle:** A charged particle emitted from a nucleus during radioactive decay. A negatively charged beta is identical to an electron. A positively charged beta particle is called a positron. Large amounts of beta radiation may cause skin burns. Beta emitters are harmful if they enter the body. A thin sheet of metal or plastic easily stops beta particles.

**Grand Junction Disposal Facility (GJDF):** The Uranium Mill Tailings Remedial Action Program disposal cell, operated by Department of Energy, located about 15 miles south of Grand Junction on U.S. Highway 50, will remain open until the year 2023 or until filled. This will be the only permanent (program) disposal cell available to uranium mill tailings disturbed by construction activities after 1998. This cell was previously known as the Cheney Disposal Cell and was renamed in 2012.

**Contamination:** Unwanted radioactive materials (uranium mill tailings) that are present on/in a particular object or area. It can also refer to other contaminants such as asbestos.

**Controlled Area:** Any area to which access is managed in order to protect individuals from exposure to radiation and/or radioactive material. Individuals who enter a controlled area are not expected to receive a total effective dose equivalent of more than 100 millirem in one year.

**Decontamination:** The reduction or removal of contaminating radioactive material from a structure, area, object or person.

**Frisk:** A radiological survey of personnel or equipment utilizing a portable radiation detector.

**Gamma Ray:** High-energy, short wavelength electromagnetic radiation (a packet of energy) emitted from the nucleus of an unstable atom. It is very penetrating and is best stopped by dense materials such as lead. They are similar to x-rays but are usually more energetic.

**Interim Storage Facility:** The facility located in Grand Junction available for temporary storage of uranium mill tailings disturbed during construction activities. The interim storage facility is located on the City of Grand Junction property at 333 West Avenue, Grand Junction, Co. and managed by the Colorado Department of Public Health and Environment.

**Radiation:** Particles (alpha, beta or neutrons), or photons (gamma) emitted from the nucleus of an unstable (radioactive) atom as a result of radioactive decay.

**Radioactive:** Exhibiting radioactivity or pertaining to radioactivity.

**Radioactivity:** The spontaneous emission of radiation, generally alpha or beta particles often accompanied by gamma rays, from the nucleus of an unstable atom.

**Uranium Mill Tailings:** Radioactive residues from the processing of uranium ore into yellowcake in a mill. Although the milling process recovers about 93 percent of the uranium, the residues, or tailings, contain several radioactive elements, including uranium, thorium, radium and polonium.

**Yellowcake:** A product of uranium milling process, yellowcake is a solid uranium oxide compound (U<sub>3</sub>O<sub>8</sub>) that takes its name from its color and texture. Yellowcake is the feed material for fuel enrichment and fuel pellet fabrication.

## **APPENDIX B**

# **FRISKING AND DECONTAMINATION PROCEDURE**

## **FRISKING**

### **PURPOSE**

This procedure establishes the requirements for decontamination frisking prior to exiting the controlled area of the interim storage facility. Frisking for contamination will limit exposure of the workers and the general public to radioactive material and prevent the spread of contamination beyond controlled areas.

### **APPLICABILITY**

This procedure applies to all people entering and exiting the controlled area of the interim storage facility.

### **PRECAUTIONS**

All personnel who enter a controlled area (the interim storage facility or an excavation into tailings) are expected to keep their exposures to radiation and radioactive materials as low as reasonably achievable (ALARA).

Personnel or equipment may not leave the interim storage facility with any detectable radioactive contamination.

### **FRISKING SURVEY METER**

A portable monitor, such as the Ludlum Model 44-9, pancake GM beta-gamma detector, or equivalent, shall be used for frisking. The frisking instrument shall have a valid calibration and be functionally checked before using this procedure.

### **EQUIPMENT FOR FRISKING AND DECONTAMINATION**

Frisking Meter	Broom
Sturdy Brush	Wash Tub
Mild Soap	Laundry Soap
Garden Hose	Frisking Log

## **FRISKING PROCEDURE**

Personnel shall frisk using the techniques defined. Personal items such as flashlights, notebooks or hats shall be subject to the same frisking requirements as the person carrying them.

Verify the instrument is in service, set to the proper scale, and the audio output can be heard during frisking.

Hold the probe less than half an inch from the surface being surveyed.

Move the probe slowly over the surface, approximately two inches per second.

If the count rate increases during frisking, pause for 5 to 10 seconds over the area to provide adequate time for instrument response.

If the count rate increases beyond background, the area shall be decontaminated and frisked again.

## **PERSONNEL FRISKING ORDER**

Frisk the hands before picking up the probe.

Frisk in the following order:

- Head (pause at the mouth and nose for five seconds)
- Neck
- Arms (pause at the elbows)
- Chest and abdomen
- Back, hips and seat of pants
- Legs (pause at the knees and cuffs)
- Shoes
- Shoe bottoms
- Personal items (hat, gloves)

# **DECONTAMINATION**

## **PERSONNEL DECONTAMINATION**

Skin contamination may be removed by washing with lukewarm water and mild soap. Personnel may flush ears/eyes with cool, clear water to decontaminate those areas. If flushing is not successful, qualified medical personnel shall direct additional decontamination efforts.

Clothing and shoes may be brushed clean. If clothing will not decontaminate with brushing, it shall be removed and exchanged with the supplied coveralls in the access shed. Contaminated shoes may be brushed and washed without removing and re-frisked.

## **EQUIPMENT AND TRUCK DECONTAMINATION**

Prior to frisking a truck, the vehicle engine will be shut off, placed in 1<sup>st</sup> gear and have the wheels chocked. No person shall physically go beneath a piece of equipment to perform inspections or decontamination.

All visible contamination shall be swept or washed into the interim storage facility. Tailgate areas and tires will be frisked with the probe at two inches per second and with the probe half inch from the surface. If the instrument rate count registers above background, further brushing and washing will be performed until it is deemed acceptable.

## **EXITING THE INTERIM STORAGE FACILITY**

Return the frisk probe to its holder. The probe shall be placed face up to allow the next person to monitor his/her hands before holding the probe.

After decontamination of equipment and personnel and successful frisking, personnel may leave the controlled area, sign out on the access/frisking log, secure the gate and shed and exit the area.

## **APPENDIX C**

# **BUILDING PERMIT SURVEYS**

### **BUILDING PERMIT SURVEY HISTORY**

In 1971, the Colorado Department of Public Health and Environment, formerly the Colorado Department of Health, began a cooperative program with the Mesa County Planning Department to conduct radiation surveys at new construction sites. The radiation surveys were integrated into the building permit process, and it was therefore called the Building Permit Survey Program.

As discussed in the History section of the Uranium Mill Tailings Management Plan, radioactive tailings were used in Mesa County and other uranium mill towns for building materials and fill dirt. Many structures were modified or built over tailings. Therefore, potential health risks were being created due to the increased gamma radiation and radon exposure.

Surveys are performed by the Colorado Department of Public Health and Environment before a building permit is issued. The surveys include the footprint of the proposed building, plus 10 feet extra around the perimeter. After the survey, an inspection form is filled out indicating that no radioactive materials were found or with recommendations for removal, or other options, if tailings are found. The form is given to the owner (or contractor) with a copy entered into the Colorado Department of Public Health and Environment database. If tailings are found, a map is drawn indicating the areas of concern.

When tailings are removed from a building site, another form and map is filled out declaring the removal of the contamination, which allows the issuance of the building permit. Copies of the information are entered into the Colorado Department of Public Health and Environment database for reference and documentation.

The survey is considered valid for six months, after which another survey may be necessary if the structure hasn't been constructed. This is because, within six months, the site could have been re-contaminated.

The surveys include all structures that could possibly be converted into living spaces. During the oil shale boom, people were known to live in sheds or any space available. Thus, sheds and garages, as well as business sites and houses, are inspected. Areas such as patios, carports and porches are also inspected as these are often enclosed later as part of the living space.

Currently, the Colorado Department of Public Health and Environment surveys demolition

sites and building sites in Mesa County. Procedures now concentrate the surveys on properties or areas with a known history of tailings. Much of the construction activity currently in Mesa County is new subdivisions in former fields, where tailings are unlikely to be encountered.

## **PROCEDURES FOR THE REQUIREMENT OF A BUILDING PERMIT SURVEY**

Upon receiving a request for a building permit survey, a record review will be performed by the Colorado Department of Public Health and Environment to ascertain the need for a field survey. The review will include the CDPHE gamma table, and, if necessary, the Department of Energy microfiche records for the location.

The following criteria will result in the execution of a field survey:

1. Records indicate the presence of historic tailings or ore. . Historic tailings properties will always be surveyed, even if remedial action took place. Remedial actions did not always find or completely remove tailings.
2. Tailings have been found on an adjacent property. Adjacent properties will be surveyed if it is in an area where extensive tailings were used.
3. For information: Information surveys are in areas where previous surveys were not performed. The inspector will perform surveys on several properties in the new area (subdivisions) and determine from visual observations which properties in the area may need surveys when they are requested, due to radiation readings, fill areas, geography, or previous structures.

If it is determined that a survey is not to be performed, the program assistant will fill out a Building Permit Records card, print out a form in duplicate, sign the form and give one copy to the requestor. The other copy is filed and entered into the database. The Building Permit Records form indicates, "No field survey is required based upon a record review of the vicinity of the building site. No tailings deposits were identified from available records that would affect the construction site."

In communities outside of Mesa County, the Colorado Department of Public Health and Environment will provide assistance to monitor construction and demolition sites with a history of tailings involvement, if requested. The Colorado Department of Public Health and Environment data and files may be used to determine if a site needs a radiation survey. The Department may perform site visits to conduct the surveys if the data base information is inconclusive.



## **APPENDIX D**

# **GAMMA RADIATION SURVEY PROCEDURES**

## **GAMMA RADIATION SURVEYS**

### **OBJECTIVES OF GAMMA SURVEYS**

The objective of a gamma survey is to determine if radioactive materials, especially uranium mill tailings, are present on individual properties, to acquire sufficient data to evaluate the gamma levels and health risks, and to document the location and conditions of radioactive materials. Uranium mill tailings are the primary radioactive materials being surveyed, due to their radium content and potential to cause elevated radon gas in structures. The gamma surveys may locate natural soils, rocks or ores that have elevated gamma radiation and have the potential to increase indoor radon levels. The gamma survey may also locate and identify other radioactive sources such as ore or petrified wood, which may not have a potential to increase radon, but increases health risks through gamma exposure.

### **BACKGROUND GAMMA RADIATION**

Background radiation is the natural radioactivity of an area. Background radiation varies due to the influence of natural mineral deposits, building materials and elevation. The most common outside background levels in Mesa County are 10 to 14 micro roentgens per hour ( $\mu\text{R/h}$ ). Fourteen  $\mu\text{R/h}$  shall be considered background in Mesa County, Colorado. A meter reading 30 percent higher than the local background level (18  $\mu\text{R/h}$ ) is significant and requires investigation.

### **NON-TAILINGS GAMMA SOURCES**

There are many different radioactive materials besides uranium mill tailings that may be encountered during a gamma survey. Luminous-dial compasses, clocks, aircraft instruments, propane tanks, petrified wood, dinosaur bones and ore samples may emit gamma radiation levels above 20  $\mu\text{R/h}$ . Natural outcroppings of granite rocks may demonstrate elevated gamma radiation. These objects may act as point sources, as the gamma field drops off rapidly when the survey meter is moved away. Coal ash and shale may also cause meter readings above 20  $\mu\text{R/h}$ , but seldom appear as point sources. Brick may cause readings of 22  $\mu\text{R/h}$  due to the materials used in their manufacture. Some granite countertops exhibit meter readings far in excess of 20  $\mu\text{R/h}$  as well.

## **INTERPRETATION OF READINGS**

### **SHINE**

Radiation detected that is from a source some distance away is called shine. Shine will make it more difficult to determine the levels of radiation from nearby objects. The meter readings are higher than if the shine radiation did not exist. An example of a shine source is a large pile of radioactive tailings or large radioactive ore pile. Shine fields are also created by strong local radioactive sources such as density gauges or metal weld x-ray devices.

To check for shine, the meter reading can be compared at ground level, waist level and overhead. If a shine field is present, the meter will detect about the same radiation levels at waist and surface levels.

Lead shielding can be used to help interpret meter readings in a shine field. A lead shield may be wrapped around the sides of the meter to block the shine.

A comparison of shielded meter readings and unshielded readings, called a differential, may help distinguish localized elevated gamma levels from shine. A sheet of lead is placed between the instrument and the suspected area, and a meter reading is taken. The shield is removed, and a second meter reading is taken. The difference between the shielded and unshielded reading is the differential. The differential should not be greater than six, which is about 30 percent, for background radiation areas around 14  $\mu\text{R}/\text{h}$ . If the differential is greater than six, the area under the shielding may be contaminated with a radioactive source. This technique loses accuracy when higher gamma fields are encountered.

The Colorado Department of Public Health and Environment will provide assistance if a shine field is suspected and the meter readings are difficult to interpret.

### **GEOMETRY**

A meter reading in a hole or trench may indicate higher radiation levels than a flat surface. The meter receives gamma radiation from many directions in a hole, while a surface reading mainly detects the area directly beneath it.

### **SHIELDING**

Dense materials shield gamma radiation from detection. Examples are rock road base, asphalt, concrete and hard packed soils. The amount of shielding depends upon the thickness. Radiation surveys over asphalt or concrete need to be performed more slowly so that the technician can observe small fluctuations on the meter. While normal soils reading 14  $\mu\text{R}/\text{h}$  usually indicate no contamination, this reading on asphalt or concrete may indicate a shielded radioactive deposit.

## **STANDARD GAMMA SURVEY PROCEDURE**

### **SURVEY INSTRUMENTS**

The survey instruments used by the Colorado Department of Public Health and Environment and loaned to local governments, public utilities, and private parties are adequate to locate uranium mill tailings situated close to the ground surface. If a deposit is heavily shielded, the meter may not indicate any change from background radiation. The meters are calibrated yearly and should be given an operations check before use. Many of the instruments have been calibrated and electronically modified to give a fast response time. Instruments with an audio device are the easiest to use as one can notice the faster change in the sound (clicking speed), which is an indication of a radioactive source. The instruments are designed to give a meter reading in micro roentgen per hour. If the surveyor's meter shows 18  $\mu\text{R}/\text{h}$  on the scale, this is considered 30 percent above background of 14  $\mu\text{R}/\text{h}$  and that tailings contamination is present.

### **PERMISSION TO SURVEY**

Permission to access private property must be obtained before a survey is undertaken. The owner or owner representative may give a verbal or written permission to enter a property. The surveyor should identify himself to residents on the property and state the purpose of the survey.

### **HEALTH AND SAFETY**

Performing a gamma radiation survey is not entirely risk free. The major hazards are potential physical injuries due to falling or being trapped in a confined space. The surveyor should comply with Occupational Safety and Health Administration (OSHA)-confined space entry requirements. Prior to entering any crawlspace, the surveyor should notify a coworker of the location and intent to survey. Some crawlspaces are too tight to enter safely. If such areas must be checked for a radiation source, an extension pole attached to a meter with audio capability would allow limited probing into the tight areas.

No hole or trench deeper than 4 feet or with sides steeper than a 45-degree angle should be entered unless the sidewall stability conforms to OSHA standards. These areas, as well as vertical cliffs, can be surveyed by lowering the meter on a rope and listening to the audio or observing the meter face with binoculars.

Head injuries can be avoided by not watching the meter while walking. Tree limbs, air conditioners, pipes and other extending objects are commonly at head level around houses. Using meters with the audio capability and watching the path of the survey will avoid injury.

Dogs are potentially a risk when surveying. Always ask the residents if there are dogs present and to place them indoors or tie them up in an area not needed to be surveyed. Personnel should always be watching for dogs when entering a property.

Exposure to gamma radiation is a potential health risk to the surveyor. During the many years that the Colorado Department of Public Health and Environment has conducted gamma surveys, it is rare that the monitoring badges worn by surveyors record any exposures above background. It would be possible to receive limited gamma exposure if uranium ore samples were carried around in a vehicle. If ore is transported, it should be placed as far away from occupants as possible and removed from the vehicle and properly disposed of as soon as possible.

If the surveyor detects a radiation source above 1,000 micro roentgen per hour (one milliroentgen), and the source is not obviously ore or uranium mill tailings, the surveyor should immediately leave the area and notify the Colorado Department Of Public Health And Environment, Radiation Control Program. Such sources could be radium sources or instruments, such as moisture density gauges.

The surveyor is expected to adhere to the ALARA principle and keep all radiation exposures As Low As Reasonably Achievable.

## **GENERIC SURVEY PROCEDURES**

All gamma surveys will use generic procedures that address situations commonly encountered. These are centered on the readiness of the survey meter; interpretation of findings and investigating shielded radiation sources.

The survey meter must be checked for operation before use. The meter battery level and meter scales can be compared with historical levels by using known radioactive sources. If the instrument is in the field, and no radioactive check source is available, the meter can be placed on the ground and comparisons made between the different scales and background level.

Before surveying, the area background must be determined. Background is the normal radiation level in an uncontaminated area. Radiological contamination may be assumed if the meter registers 30 percent above background. However, holes or trenches may register 30 percent above background and not be contaminated due to the geometry. Interpretation of meter readings in trenches and holes is difficult and usually requires experience and a judgment call. It is not unusual for a water meter pit to read 20  $\mu\text{R}/\text{h}$  on the survey meter and not be contaminated. If a water meter pit reads over 20  $\mu\text{R}/\text{h}$  on the survey meter, one should be suspicious of possible uranium tailings.

The survey should be conducted at a slow walk, using an established grid pattern. Specific spots may be checked by hesitating, placing the meter on the ground and noting the reading. The meter should be carried no more than one to four inches from the surface

when walking with no wide arcing swings. The meter is placed in fast response mode on the lower scale with the audio switch on.

When surveying areas with tall vegetation (weeds), the meter will have to be alternately lifted and lowered rather than maintaining a constant one to four inches from the surface.

Shielding will hide radioactive sources from detection. The survey may detect borderline elevated readings. These areas should be explored by removing some of the shielding. Dirt or gravel may be kicked aside or shoveled away. Asphalt and concrete may be checked from the edge where an inspection hole can be dug. Woodpiles and debris may be moved to find a spot to lower the meter to the ground. Water meter pits and manholes can be inspected by removing the cover and lowering the meter. Large manhole covers are heavy and may need a shovel or crowbar to pry it off and therefore may not be accessible. At no time will the Colorado Department Of Public Health And Environment conduct a survey where personnel safety may be compromised.

## **SPECIFIC SURVEY PROCEDURES**

### **BUILDING PERMIT SURVEY (NEW STRUCTURE)**

In Mesa County, a cooperative program exists between the Colorado Department of Public Health and Environment and the City/County Planning Department to screen proposed building sites for uranium mill tailings. The generic survey procedures apply. Three-foot survey grids extending an extra 10 feet beyond the site footprint are adequate to screen for radioactive materials.

The Colorado Department of Public Health and Environment requires that the builder stake out the site footprint. If the site is not staked or marked at the time of the survey, the requester may mark it out and reschedule the survey. The property must be clear of hindrances or restrictions so that a valid survey can be completed. Dirt/gravel piles must be removed as well as any obstructions for a survey. Colorado Department Of Public Health And Environment requires any proposed building site be officially addressed by the City/County Planning Department before any field gamma screening are preformed or Building Permit Survey forms are issued.

If no unusual gamma radiation above background is detected, the Building Permit Survey form is completed, signed and given to the builder for inclusion with paperwork submitted to the Planning Department for a building permit.

If elevated gamma radiation is detected, the surveyor will explore the area to determine the source. The elevated gamma area may be checked by digging out shovel scoops. This method often determines that the source of elevated gamma is a small ore rock or that the source is not extensive.

If an extensive gamma source is discovered that cannot be removed by a few shovel scoops, the Building Permit Survey form is filled out to reflect the finding, a map is drawn to locate and document the area and the builder notified.

The Colorado Department of Public Health and Environment presents options to owners to mitigate radiation sources discovered on building sites. The main concern is mitigation of potential radon sources inside the structure. The secondary concern is mitigation of gamma radiation exposure through the floors of the structure. The optimum solution is the complete removal of the source of radiation.

### **BUILDING PERMIT SURVEY (DEMOLITION)**

Structures being demolished in Mesa County are controlled through the permit system of the County Planning Department. Structures planned for destruction should be surveyed to locate any potential uranium mill tailings contamination in the building materials.

The lower levels and all floors made from concrete should be scanned using 5-foot grids. The inspection should also include closets, bathrooms and kitchens.

Areas to survey include the following:

Lower Level Floors	Cinder Blocks
Foundations	Stucco
Brick and Mortar	Sidewalks
Driveways	Rock Walls/Fences
Sandboxes	Rock Gardens
Planters	Patios
Garages	Carports

If radioactive sources are discovered, the survey form is filled out, and the owner or contractor is notified. Options are discussed to separate radioactive contaminated materials from other debris. The radioactive materials can be located by the survey meter and marked with paint. Contaminated materials should be segregated and stockpiled or taken to the interim storage facility. Items transported to the interim storage facility shall comply with the Department of Energy's Waste Acceptance Criteria for the Grand Junction Disposal Site.

These procedures are in addition to the State of Colorado Demolition permit processes.

### **GAMMA RADIATION SURVEY FOR INFORMATION**

The Colorado Department of Public Health and Environment has a vast database documents the radiological conditions on thousands of properties in western Colorado. However, many properties were never surveyed, and no information is available. Thus, the

Department will occasionally conduct a gamma survey on a property for information purposes.

Surveys on an entire property present a problem because of the size of the area. The grids for survey must be appropriate to the area. If the area is no larger than two acres, 10-foot grids are used. . For very large areas, grids as large as 50 feet may be used.

The larger the grid size, the greater the chance of overlooking a radiation source. In the case of very large properties, the areas one inspects, like a potential building site may be more important than walking the entire site on grids. Disturbed areas, likely dump areas, roads and gates should be inspected. Any structures should be checked using the techniques for demolition sites. Lawns, gardens, and septic systems should be checked. All concrete, metal debris, hoses, and fiberglass panels should be inspected.

If a linear pattern of elevated gamma readings is detected, it may indicate a buried utility line packed in uranium mill tailings. The Colorado Department of Public Health and Environment may assist in conducting large-area surveys, but the responsibility for a complete (non-building permit) survey on any property is that of the owner. A survey meter may be checked out (borrowed) from the Colorado Department of Public Health and Environment, or a consulting company/contractor may be hired by the property owner. However, Colorado Department of Public Health and Environment will conduct complete surveys on building sites.

## **STREETS, ALLEYS, AND UTILITY LINE CONSTRUCTION**

Prior to construction involving streets, alleys or utility lines, the contractors should consult Department of Energy maps delineating supplemental standard areas. City workers or their contractors using instruments on loan from the Colorado Department of Public Health and Environment can survey the areas. Identified uranium mill tailings contaminated areas can be marked with paint. As trenches and excavations are opened, the meter can be lowered down to better determine if the subsurface material is contaminated. If the contamination is to be removed, it must be segregated from other materials and transported to the interim storage facility.

Surveys over concrete or asphalt should be conducted at a slow walk to give the meter time to respond. The meter must be in the fast response mode. Concrete and asphalt shields radioactive materials below, and meter changes may be only slightly higher than background when measured through them.

## **PRIVATE REMOVALS**

Private removals are remedial actions performed by property owners or their contractors to clear an area, or entire property, of radioactive uranium mill tailings. The material may have been identified by the Building Permit Survey, by an information survey or street/utility line construction.

For private parties, the Colorado Department of Public Health and Environment will identify and delineate uranium mill tailings for removal. The identified contamination will be excavated by the owner and segregated from clean material by stockpiling on site or removal from the property to the interim storage facility with Colorado Department of Public Health and Environment approval. A meter may be checked out by the private party.

For private parties, the removals of uranium mill tailings will be monitored by the Colorado Department of Public Health and Environment to guide and document the excavation. The Department will perform excavation control, provide health and safety guidance and operate the interim storage facility. The Department will document the results of the removal.



## **DOCUMENTATION MAPS**

In Mesa County, maps are generally required for the documentation of radioactive contamination discovered or removed during a Building Permit Survey, information survey or private removal. The Colorado Department of Public Health and Environment will map and document any uranium tailings discovered, disturbed or removed from the communities in western Colorado that were not already mapped., as appropriate.

The map will include the following information in the upper right corner:

Location Number (assigned by the Department)  
Street Address, Date, and Name of Surveyor

The map will include a legend with an arrow indicating north. Permanent and semi-permanent reference points, such as structures, streets, driveways, streets, power poles or irrigation ditches, will be drawn on the map.

Shading with cross marking or other appropriate indicators should show areas of radiation contamination. The meter readings for the contamination should be written in the contaminated area. If the area is too small to write in, the meter reading should be indicated by an arrow drawn to the contaminated area.

If a private removal of radioactive contamination occurs, the documentation may include a map showing the conditions of the area after excavation. If the area is large, a range of readings will be shown. The gamma reading and an arrow pointing to the spot will identify areas still demonstrating elevated gamma readings.

## Appendix D

- Bidder Certifications
- Supplemental Conditions for Projects Funded in Whole or Part by Community Development Block Grants
  - Federal Labor Standards Provisions
  - Davis Bacon Wage Rate Determination

## **BIDDER CERTIFICATIONS**

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- A. Equal Employment Opportunity – Executive Order 11246
- B. Section 3 and Segregated Facilities Certification
- C. Noncollusion Affidavit of Prime Contractor

**CERTIFICATE OF BIDDER  
REGARDING EQUAL EMPLOYMENT OPPORTUNITY**

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**INSTRUCTIONS:**

This certification is required pursuant to Executive Order 11246 (30 F.R. 12319-25). The implementing rules and regulations provide that any bidder or prospective contractor, or any of their proposed subcontractors, shall state as an initial part of the bid or negotiations of the contract whether it has participated in any previous contract or subcontract subject to the equal opportunity clause; and, if so, whether it has filed all compliance reports due under applicable instructions.

If the certification indicates that the bidder has not filed a compliance report due under applicable instructions, such bidder shall be required to submit a compliance report within seven calendar days after the bid opening. No contract will be awarded unless such a report is submitted.

---

**CERTIFICATE OF BIDDER**

Name and address of bidder (including zip code):

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

1. Bidder has participated in a previous contract or subcontract subject to Equal Opportunity Clause.  
 Yes     No
  
2. Compliance reports were required to be filed in connection with such a contract or subcontract.  
 Yes     No     Not applicable
  
3. Bidder has filed all compliance reports due under applicable instructions, including SF-100.  
 Yes     No     Not applicable
  
4. Have you ever been or are you being considered for sanction due to violation of Executive Order 11246, as amended?  
 Yes     No

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

Title: \_\_\_\_\_

Signature: \_\_\_\_\_

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

**CERTIFICATE OF BIDDER  
REGARDING SECTION 3 AND SEGREGATED FACILITIES**

---

Project Name: \_\_\_\_\_

Bidder: \_\_\_\_\_

The undersigned hereby certifies that:

- a. The provisions of Section 3 of the Housing and Urban Development Act of 1968, which requires opportunities for training and employment of lower-income persons and opportunities for contracting for local firms, will be included in the contract and all subcontracts.
  
- b. No segregated facilities will be maintained as required by Title VI of the Civil Rights Act of 1964

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

Title: \_\_\_\_\_

Signature: \_\_\_\_\_

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

## NONCOLLUSION AFFIDAVIT OF PRIME CONTRACTOR

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State of \_\_\_\_\_ )  
County of \_\_\_\_\_ ) ss.

\_\_\_\_\_ being first duly sworn, deposes and says that:

1. He is the \_\_\_\_\_ of \_\_\_\_\_, the bidder that has submitted the attached bid;
2. He is fully informed respecting the preparation and contents of the attached bid and of all pertinent circumstances respecting such bid;
3. Such bid is genuine and is not a collusive or sham bid;
4. Neither the said bidder nor any of its officers, partners, owners, agents, representatives, employees or parties of interest, including this affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly with another bidder, firm or person to submit a collusive or sham bid in connection with the Contract for which the attached bid has been submitted or to refrain from bidding in connection with such Contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other bidder, firm or person to fix the price or prices in the attached bid or the bid of any other bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the City of Grand Junction or any person interested in the proposed Contract; and
5. The price or prices quoted in the attached bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the bidder or any of its agents, representatives, owners, employees, or parties of interest, including the affiant.

Signed: \_\_\_\_\_

Title: \_\_\_\_\_

Subscribed and sworn to me this \_\_\_\_\_ day of \_\_\_\_\_,

By: \_\_\_\_\_  
Notary Public

My commission expires: \_\_\_\_\_

**REQUIRED FORMS FOR PROJECTS FUNDED IN WHOLE OR IN PART  
BY COMMUNITY DEVELOPMENT BLOCK GRANT MONIES**

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The work to be performed in this project is being funded, in whole or part, using Federal Community Development Block Grant (CDBG) monies. Federal procurement regulations require that the following items must be completed and submitted with your bid for consideration for contract award:

- A. Forms for Section 3 of the Housing and Urban Development Act of 1968:
  - Preliminary Statement of Work Force Needs
  - Affirmative Action Plan for Use of Project Area Businesses
  - Statement of Actual Work Force Needs
  
- B. Solicitation of Minority and Women Owned Business
  
- C. Contractor Ownership Information
  
- D. Subcontractor Ownership Information

Your completed forms shall be evaluated in assisting the City in determining responsiveness to federal regulatory compliance and may be used to determine whether or not the Contractor is responsible for the purposes of awarding the bid.

**CITY OF GRAND JUNCTION  
COMMUNITY DEVELOPMENT BLOCK GRANT**

**PRELIMINARY STATEMENT OF WORK FORCE NEEDS  
AND GOALS FOR USING LOWER INCOME RESIDENTS**

Project: \_\_\_\_\_

NOTE: Contractors shall, to the greatest extent possible, give lower income residents (individuals residing in the City having an annual family income not exceeding \$30,320) opportunities for employment and training on CDBG projects.

Please fill out the following employee information.

	CURRENT EMPLOYEES	CURRENT MINORITY EMPLOYEES	CURRENT FEMALE EMPLOYEES	ESTIMATED EMPLOYEES NEEDED FOR PROJECT	GOALS FOR RECRUITING LOWER- INCOME RESIDENTS
SKILLED					
SEMI-SKILLED					
UNSKILLED					
TRAINEE					

Methods to be used to achieve these goals: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(ATTACH ADDITIONAL PAGES IF NECESSARY)

SUBMITTED BY: \_\_\_\_\_

TITLE: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_

COMPANY NAME: \_\_\_\_\_

DATE: \_\_\_\_\_





**CITY OF GRAND JUNCTION  
COMMUNITY DEVELOPMENT BLOCK GRANT**

**STATEMENT OF ACTUAL WORK FORCE NEEDS  
AND GOALS FOR USING LOWER INCOME RESIDENTS**

Project: \_\_\_\_\_

NOTE: Contractors shall, to the greatest extent possible, give lower income residents (individuals residing in the City having an annual family income not exceeding\$30,320) opportunities for employment and training on CDBG projects.

Please fill out the following employee information.

	CURRENT EMPLOYEES	CURRENT MINORITY EMPLOYEES	CURRENT FEMALE EMPLOYEES	ESTIMATED EMPLOYEES NEEDED FOR PROJECT	GOALS FOR RECRUITING LOWER- INCOME RESIDENTS
SKILLED					
SEMI-SKILLED					
UNSKILLED					
TRAINEE					

Methods to be used to achieve these goals: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(ATTACH ADDITIONAL PAGES IF NECESSARY)

SUBMITTED BY: \_\_\_\_\_

TITLE: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_

COMPANY NAME: \_\_\_\_\_

DATE: \_\_\_\_\_

NOTE: This form is to be submitted to the City's Engineer fifteen (15) days after start of construction.

**CITY OF GRAND JUNCTION  
COMMUNITY DEVELOPMENT BLOCK GRANT**

**SOLICITATION OF MINORITY AND WOMEN OWNED BUSINESSES**

Indicate below actions taken to solicit minority and women-owned businesses where subcontractors are used in completing the project.

Solicited the following Minority/Female Businesses:

_____ Contractor Name	_____ Phone
_____ Individual Contacted	_____ Date
_____ Contractor Name	_____ Phone
_____ Individual Contacted	_____ Date
_____ Contractor Name	_____ Phone
_____ Individual Contacted	_____ Date
_____ Contractor Name	_____ Phone
_____ Individual Contacted	_____ Date
_____ Contractor Name	_____ Phone
_____ Individual Contacted	_____ Date

SUBMITTED BY: \_\_\_\_\_

TITLE: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_

COMPANY NAME: \_\_\_\_\_

DATE: \_\_\_\_\_

**CITY OF GRAND JUNCTION  
COMMUNITY DEVELOPMENT BLOCK GRANT**

**CONTRACTOR OWNERSHIP INFORMATION**

Project Name: \_\_\_\_\_

Complete the following information below:

1. Legal Business Name:

\_\_\_\_\_

2. Legal Business Address, including Zip Code

\_\_\_\_\_  
\_\_\_\_\_

1. 9 + digit Federal ID # of Business (or SS No. of Principle Owner)

\_\_\_\_\_

**Name, Title, and Address of the owner, partners and/or officers**

<u>Name</u>	<u>Title</u>	<u>Address</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Indicate the Ethnicity or Race of the Principle Ownership of the Contractor:

\_\_\_\_\_ White \_\_\_\_\_ Black \_\_\_\_\_ Hispanic \_\_\_\_\_ Asian \_\_\_\_\_ Native American

Is the Contractor a Woman-Owned Business Enterprise? \_\_\_\_\_ Yes \_\_\_\_\_ No

The undersigned certify that the above information is true to the best of their knowledge.

\_\_\_\_\_  
Name of Owner or Authorized Representative

\_\_\_\_\_  
Date

**CITY OF GRAND JUNCTION  
COMMUNITY DEVELOPMENT BLOCK GRANT**

**SUBCONTRACTOR OWNERSHIP INFORMATION**

Project Name: \_\_\_\_\_

Complete the following information below:

1. Legal Business Name:

\_\_\_\_\_

2. Legal Business Address, including Zip Code

\_\_\_\_\_  
\_\_\_\_\_

3. 9 + digit Federal ID # of Business (or SS No. of Principle Owner)

\_\_\_\_\_

Name, Title, and Address of the owner, partners and/or officers

<u>Name</u>	<u>Title</u>	<u>Address</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Indicate the Ethnicity or Race of the Principle Ownership of the Contractor:

\_\_\_\_\_ White \_\_\_\_\_ Black \_\_\_\_\_ Hispanic \_\_\_\_\_ Asian \_\_\_\_\_ Native American

Is the Contractor a Woman-Owned Business Enterprise? \_\_\_\_\_ Yes \_\_\_\_\_ No

The undersigned certify that the above information is true to the best of their knowledge.

\_\_\_\_\_  
Name of Owner or Authorized Representative

\_\_\_\_\_  
Date

**SUPPLEMENTAL CONDITIONS  
FOR PROJECTS FUNDED IN WHOLE OR PART BY  
COMMUNITY DEVELOPMENT BLOCK GRANTS**

## **ITEM F, PART I - FEDERAL REQUIREMENTS**

The Contractor shall at all times during the execution of the project strictly adhere to, and comply with, all applicable federal, state and local laws, and their implementing regulations, as they currently exist and may hereafter be amended, which are incorporated herein by this reference as terms and conditions of the project and/or contract. The Contractor shall also comply with and require compliance with these statutes and regulations in sub-agreements permitted with sub-contractors. A listing of some of the federal laws that may be applicable to the Work include:

- A. Executive Order 11246 of September 24, 1965 entitled "Equal Employment Opportunity," as amended by Executive Order 11375 of October 13, 1967 and as supplemented in Department of Labor regulations (41 CFR Chapter 60).
- B. The Copeland "Anti-Kickback" Act (18 U.S.C. 874) as supplemented in Department of Labor regulations (29 CFR Part 3).
- C. The Davis-Bacon Act (40 U.S.C. 276a to a-7) as supplemented by Department of Labor regulations (29 CFR Part 5).
- D. Sections 103 and 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 327-330) as supplemented by Department of Labor regulations (29 CFR Part 5)
- E. Standards, orders, or requirements issued under Section 306 of the Clean Air Act (42 U.S.C. 1857(h), Section 508 of the Clean Water Act (33 U.S.C. 1368). Executive Order 11738, and Environmental Protection Agency regulations (40 CFR Part 15).
- F. Mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (Pub. L. 94-163).
- G. Office of Management and Budget Circulars A-87, A-21 or A-122, and A-102 or A-110, whichever is applicable, in accordance with U.S.C. and/or CFR.
- H. The Hatch Act (5 U.S.C. 1501-1508) and Public Law 95-454 Section 4728. These statutes state that federal funds cannot be used for partisan political purposes of any kind by any person or organization involved in the administration of federally assisted programs.
- I. 42 USC 6101 et.seq. 42 USC 2000d, 29 USC 794, and implementing regulation, 45 CFR Part 80 et.seq. These acts require that no person shall, on the grounds of race, color, national origin, age, or handicap, be excluded from participation in or be subjected to discrimination in any program or activity funded, in whole or part, by federal funds.
- J. The Americans with Disabilities Act (Public Law 101-336; 42 USC 12101, 12102, 12111-12117, 12131-12134, 12141-12150, 12161-12165, 12181-12189, 12201-12213 47 USC 225 and 47 USC 611
- K. Drug-Free Workplace Act (Public Law 100-690 Title V, subtitle D, 41 USC 701 et. seq.).

- L. The Age Discrimination Act of 1975 and its implementing regulation, 24 CFR Part 146.
- M. Section 504 of the Rehabilitation Act of 1973, 29 U.S.C. 794 as amended, and implementing regulation 45 CFR Part 84.
- N. Architectural Barriers Act, 42 U.S.C. 4151-4157; 24 CFR Parts 40 and 41.
- O. 24 CFR Part 85, concerning “Records retention, access to records, breach of contract and termination and bonding and insurance, Debarred contractors, and minority owned businesses”.
- P. Title VI of the Civil Rights Act of 1964 and implementing regulations.
- Q. 24 CFR Part 570; specifically including but not limited to 570.502, 503, 506 and 570.600 et. seq., sub-part K as applicable.
- R. 24 CFR Part 87 concerning “Lobbying.”

The Contractor shall include the foregoing provisions in any and all subcontract(s) and shall furthermore furnish certification/evidence of compliance to the City of its and any subcontractor’s compliance when requested by the City. Sanctions for non-compliance include but are not limited to withholding of payment and/or cancellation, termination, or suspension of the contract in whole or in part.



## **ITEM F, PART II -FEDERAL STATUTORY AND REGULATORY PROVISIONS**

PURPOSE: The work to be performed under this Agreement is one an activity funded all or in part with federal Community Development Block Grant (CDBG) funds and is subject to applicable federal laws and regulations. This part contains the federal laws and regulations with which the CONTRACTOR/ SUBCONTRACTOR(S) is/are required to comply in the performance of the work. The contractual provisions of Special Provisions Item F Part II are made a part of the contract, and are hereby incorporated into this Agreement by this reference. In the event of any conflict in the provisions of this Part II and any other provisions not found in Part II, without specific statement of supersedure, the provisions of this Part II shall apply.

### **2. ACTIVITY RECORDS.**

- a. Records to be Kept and Retention Period. Activity records shall be created and maintained by the CONTRACTOR, with respect to all matters covered by this Contract. Said records shall include, but are not limited to, accounting, purchasing, property, personnel, employment and fiscal matters relating to the project. Said records shall also include, but not be limited to, applicant, beneficiary, and employee information on race, age, sex, disability and familial status, if any. Such records concerning applicant and beneficiaries shall, in addition, include verifiable information on family address, family income (housing activities shall retain household income data which shall include income from all family members and other nonrelated members living in the household), and household size. All project records shall be retained by the CONTRACTOR for a period of three years after its receipt of the final payment of after all pending matters are closed, whichever date is later.
- b. Source Documentation. ALL CONTRACTOR costs, expenditures and obligations hereunder must be supported by such source documentation as cancelled checks, paid bills, payrolls, time and attendance records, contract and subcontract award documents or other documents showing in detail the nature of such costs and obligations.
- c. Record Accessibility. Any pertinent books, documents, papers, or other records pertaining in whole or in part to this contract on the project shall be clearly identified and be made readily accessible to the CITY, HUD, and Comptroller General of the U.S., or any of their duly authorized representatives, upon request therefore, for the purpose of making audits, reviews, evaluations, excerpts and transcriptions. At such times and in such

Form as may be required, the CONTRACTOR shall furnish to the CITY, HUD, or the Comptroller General of the U.S. any of the records, reports, data, information or other documents enumerated in this paragraph. The CONTRACTOR shall furnish such information at no cost.

### **3. ACCOUNTING AND FINANCIAL MANAGEMENT.**

- a. Bonding Requirements. For all agreements involving construction work exceeding \$100,000, in addition to CITY requirements, the following items shall be required as a minimum to be submitted by the CONTRACTOR/SUBGRANTEE to the CITY as a condition of the

execution of this Agreement, a bid guarantee equivalent to five percent of the bid price, a performance bond for 100 percent of the agreement price, and a payment bond for 100 percent of the agreement price.

- b. Indirect Costs Prohibition. All costs to be reimbursed by the CITY to the CONTRACTOR shall be direct costs. Such direct costs shall be identified in an Activity Budget spelling out in detail the specific sources and uses of any funds to be expended under this Agreement. No indirect costs (activities that are incurred for a common or joint purpose benefiting more than one cost objective and not readily assignable to the cost objectives specifically benefited, without effort disproportionate to the results achieved shall be eligible for reimbursement, unless the CONTRACTOR/SUBGRANTEE already has a cost allocation plan meeting the Office of Management and Budget Circular, A-87 requirements, incorporated herein by reference and written documentation that the plan has been approved by HUD which shall also be incorporated herein by reference.
  
- c. Administrative Requirements and Cost Principles. CONTRACTOR, which is not governmental entities, shall comply with the requirements and standards of OMB Circular No. A-122, "Cost Principles for Non Profit Organizations", OMB Circular No. A-21 "Cost Principles for Educational Institutions," or 48 CFR Part 31 for for-profit organizations, and with the Attachment to OMB Circular No. A-110, as applicable.

## **FEDERAL LABOR STANDARDS PROVISIONS**

U.S. Department of Housing Office of Labor Relations  
**Federal Labor Standards Provisions and Urban Development**  
Form HUD-4010 (07/2003)  
Previous edition is obsolete Ref. Handbook 1344.1

**Applicability**

The Project or Program to which the construction work covered by this contract pertains is being assisted by the United States of America and the following Federal Labor Standards Provisions are included in this Contract pursuant to the provisions applicable to such Federal assistance.

A. 1. (i) **Minimum Wages.** All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR Part 3), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of 29 CFR 5.5(a)(1)(iv); also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under 29 CFR 5.5(a)(1)(ii) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible, place where it can be easily seen by the workers.

(ii) (a) Any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. HUD shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

- (1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and
- (2) The classification is utilized in the area by the construction industry; and
- (3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(b) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and HUD or its designee agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by HUD or its designee to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, D.C. 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB control number 12150140.)

(c) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and HUD or its designee do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), HUD or its designee shall refer the questions, including the views of all interested parties and the recommendation of HUD or its designee, to the Administrator for determination.

The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB Control Number 12150140.)

(d) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (1)(ii)(b) or (c) of this paragraph, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

2. **Withholding.** HUD or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime

contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee or helper, employed or working on the site of the work, all or part of the wages required by the contract, HUD or its designee may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased. HUD or its designee may, after written notice to the contractor, disburse such amounts withheld for and on account of the contractor or subcontractor to the respective employees to whom they are due. The Comptroller General shall make such disbursements in the case of direct Davis-Bacon Act contracts.

3. (i) **Payrolls and basic records.** Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in Section I(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5 (a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section I(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs. (Approved by the Office of Management and Budget under OMB Control Numbers 1215-0140 and 1215-0017.)

(ii) (a) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant sponsor, or owner, as the case may be, for transmission to HUD or its designee. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i). This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal Stock Number 029-005-00014-1), U.S. Government Printing Office, Washington, DC 20402. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. (Approved by the Office of Management and Budget under OMB Control Number 1215-0149.)

(b) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) That the payroll for the payroll period contains the information required to be maintained under 29 CFR 5.5 (a)(3)(i) and that such information is correct and complete;

(2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 CFR Part 3;

(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(c) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by subparagraph A.3.(ii)(b).

(d) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under subparagraph A.3.(i) available for inspection, copying, or transcription by authorized representatives of HUD or its designee or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, HUD or its designee may, after written notice to the contractor, sponsor, applicant or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. **Apprentices and Trainees.** (i) **Apprentices.** Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be

paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) **Trainees.** Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) **Equal employment opportunity.** The utilization of apprentices, trainees and journeymen under 29 CFR Part 5 shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

**5. Compliance with Copeland Act requirements.** The contractor shall comply with the requirements of 29 CFR Part 3 which are incorporated by reference in this contract.

**6. Subcontracts.** The contractor or subcontractor will insert in any subcontracts the clauses contained in subparagraphs 1 through 11 of this paragraph A and such other clauses as HUD or its designee may by appropriate instructions require, and a copy of the applicable prevailing wage decision, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this paragraph.

**7. Contract termination; debarment.** A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

**8. Compliance with Davis-Bacon and Related Act Requirements.** All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this contract

**9. Disputes concerning labor standards.** Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and HUD or its designee, the U.S. Department of Labor, or the employees or their representatives.

**10. (i) Certification of Eligibility.** By entering into this contract the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001. Additionally, U.S. Criminal Code, Section 1010, Title 18, U.S.C., "Federal Housing Administration transactions", provides in part: Whoever, for the purpose of . . . influencing in any way the action of such Administration... makes, utters or publishes any statement knowing the same to be false... shall be fined not more than \$5,000 or imprisoned not more than two years, or both."

**11. Complaints, Proceedings, or Testimony by Employees.**

No laborer or mechanic to whom the wage, salary, or other labor standards provisions of this Contract are applicable shall be discharged or in any other manner discriminated against by the Contractor or any subcontractor because such employee has filed any complaint or instituted or caused to be instituted any proceeding or has testified or is about to testify in any proceeding under or relating to the labor standards applicable under this Contract to his employer.

**B. Contract Work Hours and Safety Standards Act.** The provisions of this paragraph B are applicable only where the amount of the prime contract exceeds \$100,000. As used in this paragraph, the terms "laborers" and "mechanics" include watchmen and guards.

(1) **Overtime requirements.** No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of 40 hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of 40 hours in such workweek.

(2) **Violation; liability for unpaid wages; liquidated damages.** In the event of any violation of the clause set forth in subparagraph (1) of this paragraph, the contractor and any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a

territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in subparagraph (1) of this paragraph, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of 40 hours without payment of the overtime wages required by the clause set forth in subparagraph (1) of this paragraph.

(3) Withholding for unpaid wages and liquidated damages. HUD or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act which is held by the same prime contractor such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in subparagraph (2) of this paragraph.

(4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in subparagraph (1) through (4) of this paragraph and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in subparagraphs (1) through (4) of this paragraph.

C. Health and Safety. The provisions of this paragraph C are applicable only where the amount of the prime contract exceeds \$100,000.

(1) No laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his health and safety as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation.

(2) The Contractor shall comply with all regulations issued by the Secretary of Labor pursuant to Title 29 Part 1926 and failure to comply may result in imposition of sanctions pursuant to the Contract Work Hours and Safety Standards Act, 40 USC 3701 et seq.

(3) The Contractor shall include the provisions of this paragraph in every subcontract so that such provisions will be binding on each subcontractor. The Contractor shall take such action with respect to any subcontract as the Secretary of Housing and Urban Development or the Secretary of Labor shall direct as a means of enforcing such provisions.

# DAVIS BACON WAGE RATE DETERMINATION



General Decision Number: CO190014 01/04/2019 CO14  
 Superseded General Decision Number: CO20180024  
 State: Colorado  
 Construction Type: Highway  
 Counties: Larimer, Mesa and Weld Counties in Colorado.

**HIGHWAY CONSTRUCTION PROJECTS:** Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.60 for calendar year 2019 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.60 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2019. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at [www.dol.gov/whd/govcontracts](http://www.dol.gov/whd/govcontracts).

Modification Number	Publication Date
0	01/04/2019

\* ENGI0009-012 05/01/2017

	Rates	Fringes
<b>POWER EQUIPMENT OPERATOR:</b>		
(3)- Drill Rig Caisson (smaller than Watson 2500 and similar).....	\$ 27.60	10.10
(4)-Oiler Weld County.....	\$ 26.84	10.10
(5)-Drill Rig Caisson (Watson 2500 similar or larger).....	\$ 27.92	10.10

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 SUCO2011-009 09/15/2011

	Rates	Fringes
<b>CARPENTER</b>		
Excludes Form Work.....	\$ 20.72	5.34
Form Work Only		
Larimer, Mesa.....	\$ 18.79	3.67
Weld.....	\$ 16.54	3.90
<b>CEMENT MASON/CONCRETE FINISHER</b>		
Larimer.....	\$ 16.05	3.00
Mesa.....	\$ 17.53	3.00

Weld.....	\$ 17.48	3.00
<b>ELECTRICIAN</b>		
Excludes Traffic Signalization		
Weld.....	\$ 33.45	7.58
Traffic Signalization		
Weld.....	\$ 25.84	6.66
<b>FENCE ERECTOR</b>		
Weld.....	\$ 17.46	3.47
<b>GUARDRAIL INSTALLER</b>		
Larmer, Weld.....	\$ 12.89	3.39
<b>HIGHWAY/PARKING LOT STRIPING:Painter</b>		
Larimer.....	\$ 14.79	3.98
Mesa.....	\$ 14.75	3.21
Weld.....	\$ 14.66	3.21
<b>IRONWORKER, REINFORCING (Excludes Guardrail Installation)</b>		
Larimer, Weld.....	\$ 16.69	5.45
<b>IRONWORKER, STRUCTURAL (Excludes Guardrail Installation)</b>		
Larimer, Weld.....	\$ 18.22	6.01
<b>LABORER</b>		
Asphalt Raker		
Larimer.....	\$ 18.66	4.66
Weld.....	\$ 16.72	4.25
Asphalt Shoveler.....	\$ 21.21	4.25
Asphalt Spreader.....	\$ 18.58	4.65
Common or General.....	\$ 16.29	4.25
Concrete Saw (Hand Held)....	\$ 16.29	6.14
Landscape and Irrigation....	\$ 12.26	3.16
Mason Tender-		
Cement/Concrete.....	\$ 16.29	4.25
Pipelayer		
Larimer.....	\$ 17.27	3.83
Mesa, Weld.....	\$ 16.23	3.36
Traffic Control (Flagger)...	\$ 9.55	3.05
Traffic Control (Sets Up/Moves Barrels, Cones,		

Install Signs, Arrow  
Boards and Place  
Stationary Flags)(Excludes  
Flaggers)

Larimer, Weld..... \$ 12.43 3.22

PAINTER (Spray Only)..... \$ 16.99 2.87

**POWER EQUIPMENT OPERATOR:**

Asphalt Laydown

Larimer..... \$ 26.75 5.39

Mesa,Weld..... \$ 23.93 7.72

Asphalt Paver..... \$ 21.50 3.50

Asphalt Roller

Larimer..... \$ 23.57 3.50

Mesa..... \$ 24.25 3.50

Weld..... \$ 27.23 3.50

Asphalt Spreader

Larimer..... \$ 25.88 6.80

Mesa, Weld..... \$ 23.66 7.36

Backhoe/Trackhoe

Larimer..... \$ 21.46 4.85

Mesa..... \$ 19.81 6.34

Weld..... \$ 20.98 6.33

Bobcat/Skid Loader

Larimer..... \$ 17.13 4.46

Mesa, Weld..... \$ 15.37 4.28

Boom..... \$ 22.67 8.72

Broom/Sweeper

Larimer..... \$ 23.55 6.20

Mesa..... \$ 23.38 6.58

Weld..... \$ 23.23 6.89

Bulldozer

Larimer, Weld..... \$ 22.05 6.23

Mesa..... \$ 22.67 8.72

Crane..... \$ 26.75 6.16

Drill

Larimer, Weld..... \$ 31.39 0.00

Mesa..... \$ 35.06 0.00

Forklift..... \$ 15.91 4.68

Grader/Blade

Larimer..... \$ 24.82 5.75

Mesa..... \$ 23.42 9.22

Weld..... \$ 24.53 6.15

Guardrail/Post Driver..... \$ 16.07 4.41

Loader (Front End)

Larimer..... \$ 20.45 3.50

Mesa..... \$ 22.44 9.22

Weld.....	\$ 23.92	6.67
Mechanic		
Larimer.....	\$ 27.68	4.57
Mesa.....	\$ 25.50	5.38
Weld.....	\$ 24.67	5.68
Oiler		
Larimer.....	\$ 24.16	8.35
Mesa.....	\$ 23.93	9.22
Roller/Compactor (Dirt and Grade Compaction)		
Mesa, Weld.....	\$ 21.33	6.99
Roller/Compactor (Dirt and Grade Compaction)		
Larimer.....	\$ 23.67	8.22
Rotomill		
Larimer.....	\$ 18.59	4.41
Weld.....	\$ 16.22	4.41
Scraper		
Larimer.....	\$ 21.33	3.50
Mesa.....	\$ 24.06	4.13
Weld.....	\$ 30.14	1.40
Screed		
Larimer.....	\$ 27.20	5.52
Mesa.....	\$ 27.24	5.04
Weld.....	\$ 27.95	3.50
Tractor.....	\$ 13.13	2.95

TRAFFIC SIGNALIZATION:

Groundsman		
Larimer.....	\$ 11.44	2.84
Mesa.....	\$ 16.00	5.85
Weld.....	\$ 16.93	3.58

TRUCK DRIVER

Distributor		
Larimer.....	\$ 19.28	4.89
Mesa.....	\$ 19.17	4.84
Weld.....	\$ 20.61	5.27
Dump Truck		
Larimer.....	\$ 18.86	3.50
Mesa.....	\$ 15.27	4.28
Weld.....	\$ 15.27	5.27
Lowboy Truck		
Larimer.....	\$ 18.96	5.30
Mesa,Weld.....	\$ 18.84	5.17
Mechanic.....	\$ 26.48	3.50
Multi-Purpose Specialty & Hoisting Truck		

Larimer, Mesa.....	\$ 16.65	5.46
Weld.....	\$ 16.87	5.56
Pickup and Pilot Car.....	\$ 13.93	3.68
Semi/Trailer Truck.....	\$ 18.39	4.13
Truck Mounted Attenuator....	\$ 12.43	3.22
Water Truck		
Larimer.....	\$ 19.14	4.99
Mesa.....	\$ 15.96	5.27
Weld.....	\$ 19.28	5.04

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**WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.**  
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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at [www.dol.gov/whd/govcontracts](http://www.dol.gov/whd/govcontracts). Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

-----  
 The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

**Union Rate Identifiers.** A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014. Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

**Survey Rate Identifiers.** Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example,

is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier. Survey wage rates are not updated and remain in effect until a new survey is conducted.

**Union Average Rate Identifiers.** Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier. A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

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#### WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- \* an existing published wage determination
- \* a survey underlying a wage determination
- \* a Wage and Hour Division letter setting forth a position on a wage determination matter
- \* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations  
Wage and Hour Division  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

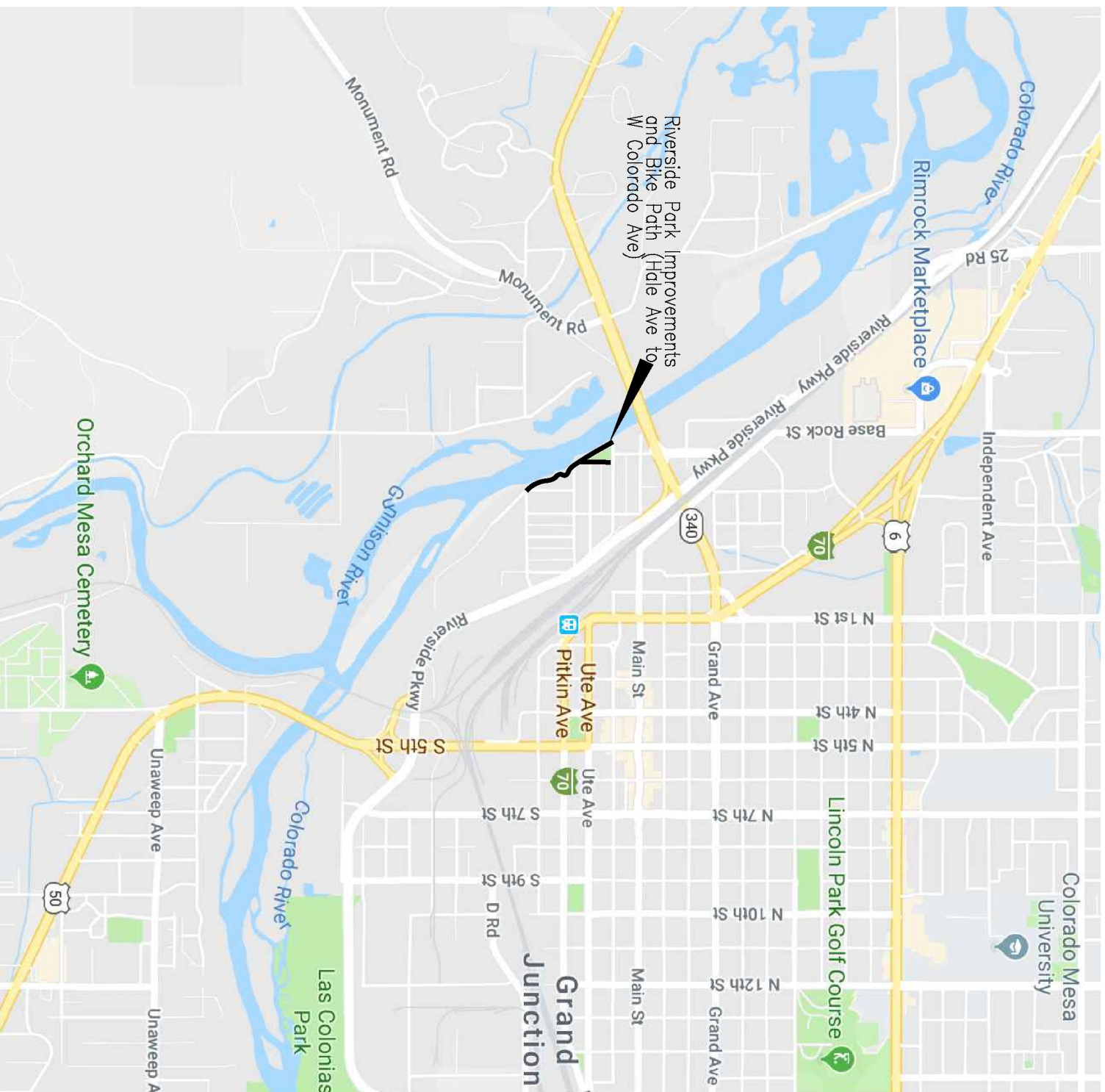
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END OF GENERAL DECISION

# RIVERSIDE PARK IMPROVEMENTS AND BIKE PATH

## From Hale Avenue to W Colorado Avenue

### MARCH 2019



- 1 Cover Sheet
- 2 Control Plan
- 3-5 Storm Drain Plan and Profile
- 6-8 Removal Plan
- 9-11 Improvement Plan
- 12-26 Staking Plans
- 27-33 Tenth Foot Contour Plans
- 34-40 Cross Sections
- 41-43 Storm Water Management Plan
- 44-45 Striping Plan



NOTE: NOTIFY AFFECTED UTILITY VENDOR 48 HOURS PRIOR TO EXCAVATIONS THAT WILL EXPOSE UTILITY LINES. THE UTILITY PLAN WILL HAVE A LISTING OF UTILITY VENDORS AND TELEPHONE NUMBERS.

REVISION	DESCRIPTION	DATE
REVISION		
REVISION		
REVISION		

SCALE	PLAN & PROFILE
0 NA	0 NA
0 NA	0 NA
0 NA	0 NA

**Grand Junction**  
CITY OF GRAND JUNCTION, COLORADO  
PUBLIC WORKS ENGINEERING DIVISION

**COVER SHEET**



REVISION	DESCRIPTION	DATE	DRAWN BY	DATE
REVISION		2017	JCS	2017
REVISION		2017	JCS	2017
REVISION		2017	JCS	2017

DATE	DESIGNED BY	CHECKED BY	APPROVED BY
2017	JCS	TOP	TOP

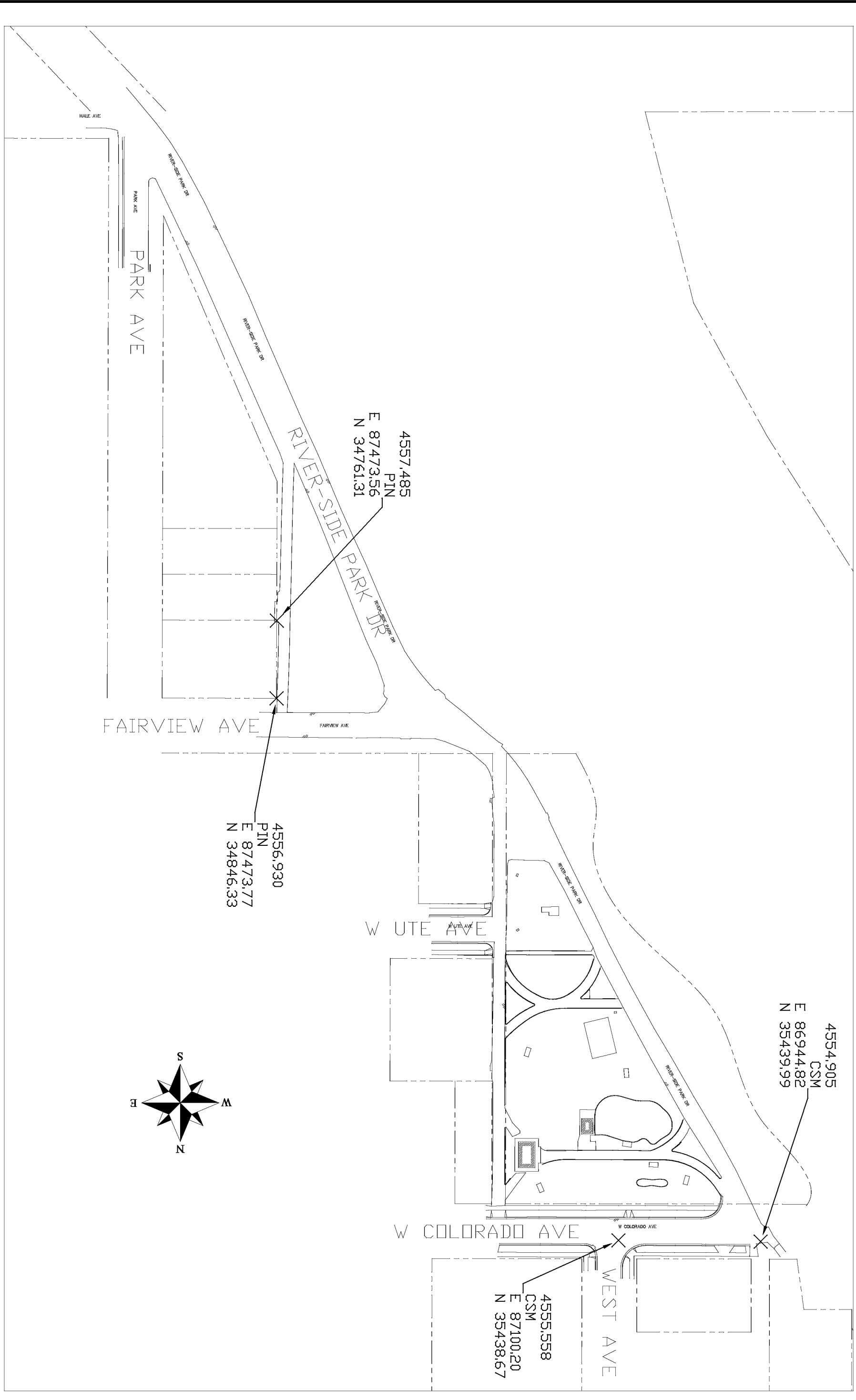
  

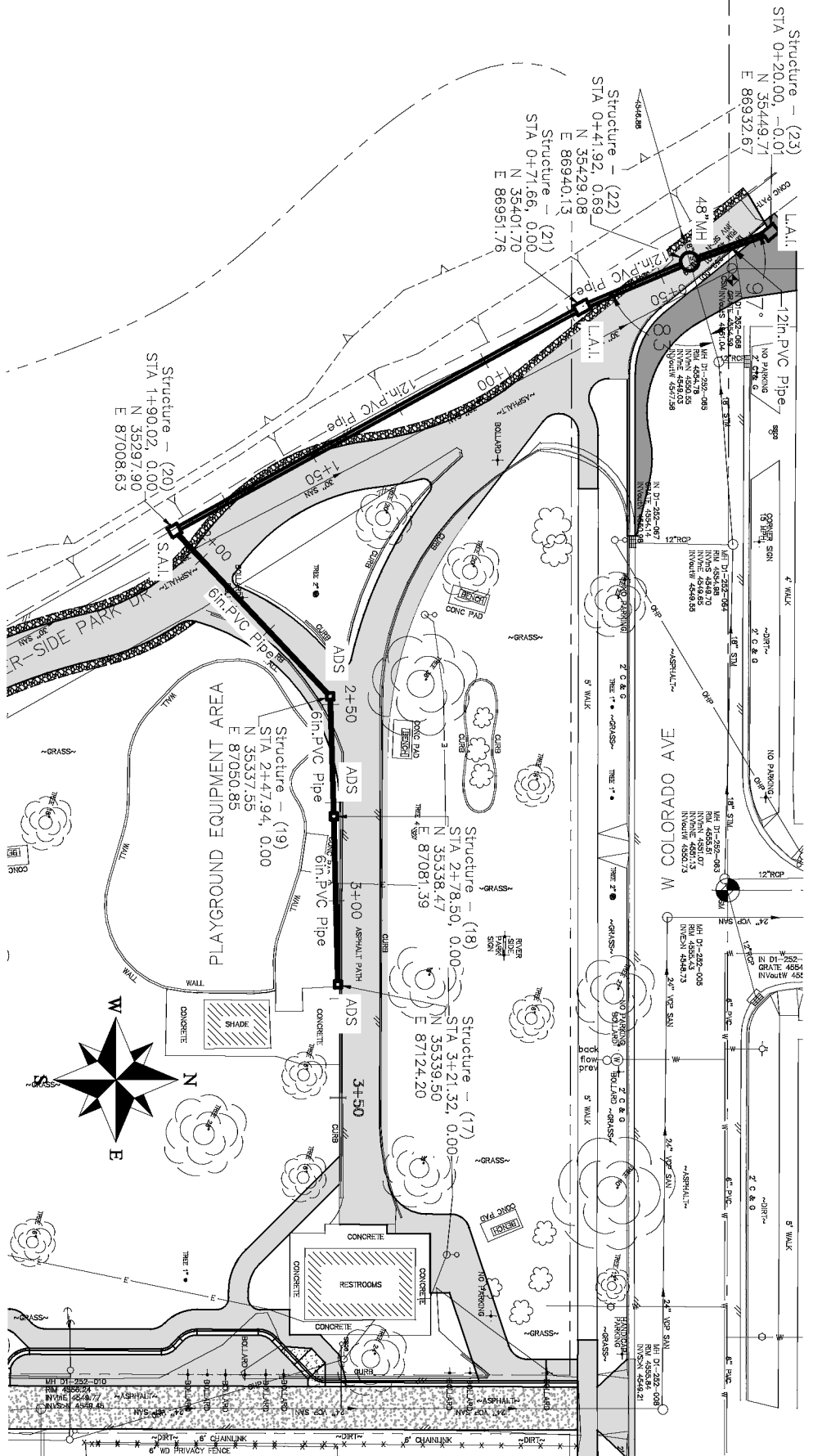
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50	5000'
100	10000'



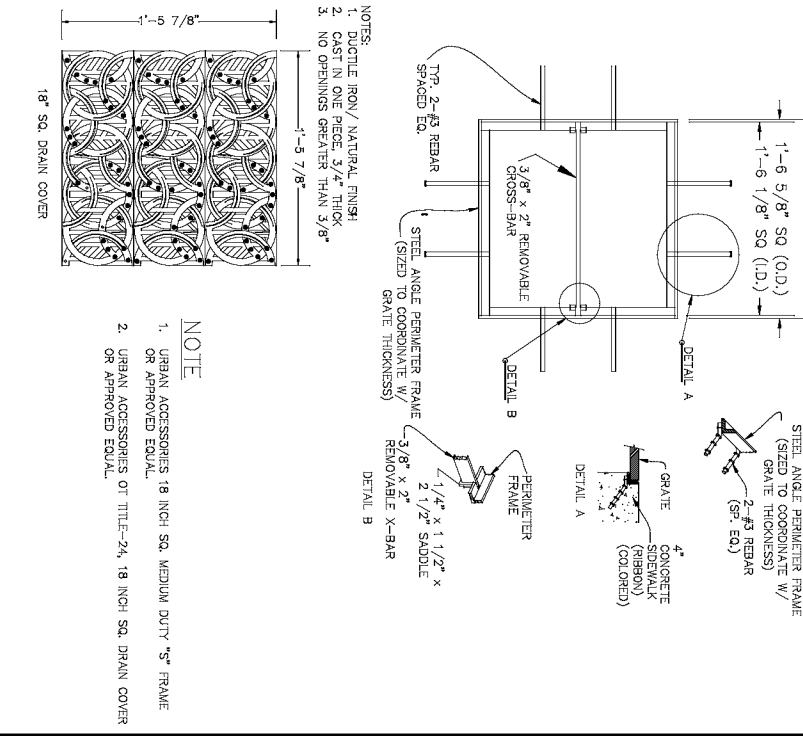
PUBLIC WORKS  
ENGINEERING DIVISION

RIVERSIDE PARK IMPROVEMENTS AND BIKE PATH  
CONTROL PLAN





Station	Structure	STA	RIM	DEPTH	Notes
4575	Structure - (23)	0+20.00	4554.8±	2.8	
4570	Structure - (22)	0+41.92	4555.3±	8.0	
4565	Structure - (21)	0+71.66	4555.1±	3.1	
4560	Structure - (20)	1+90.02	4555.6±	2.3	
4555	Structure - (19)	2+47.94	4555.9±	1.8	
4550	Structure - (18)	2+78.50	4556.2±	1.9	
4545	Structure - (17)	3+21.32	4556.0±	1.5	
4540	Structure - (16)	3+50.00	4556.0±	1.5	
4535	Structure - (15)	3+78.50	4556.0±	1.5	
4530	Structure - (14)	4+07.00	4556.0±	1.5	
4525	Structure - (13)	4+35.50	4556.0±	1.5	
4520	Structure - (12)	4+64.00	4556.0±	1.5	
4515	Structure - (11)	4+92.50	4556.0±	1.5	
4510	Structure - (10)	5+21.00	4556.0±	1.5	
4505	Structure - (9)	5+49.50	4556.0±	1.5	
4500	Structure - (8)	5+78.00	4556.0±	1.5	
4495	Structure - (7)	6+06.50	4556.0±	1.5	
4490	Structure - (6)	6+35.00	4556.0±	1.5	
4485	Structure - (5)	6+63.50	4556.0±	1.5	
4480	Structure - (4)	6+92.00	4556.0±	1.5	
4475	Structure - (3)	7+20.50	4556.0±	1.5	
4470	Structure - (2)	7+49.00	4556.0±	1.5	
4465	Structure - (1)	7+77.50	4556.0±	1.5	



NOTES:

ALL NEW STORM DRAIN MANHOLES (MH) SHALL BE SIZED AS NOTED AND INCLUDES CONNECTION OF ADJACENT STORM SEWER LINES, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL D-03).

INLETS SHALL BE SIZED AS NOTED AND EITHER BE LARGE AREA INLETS (CITY STD 24X36 I.D.) "L.A.I." OR SPECIAL AREA INLET (DETAIL HEREON, 14" I.D. "S.A.I." OR ADS MANUFACTURED INLETS (12X12 I.D. OR ENGINEER APPROVED EQUAL) "ADS".

ALL PIPES THIS SHEET SHALL BE C-900 PVC PIPE SIZED AS NOTED. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.

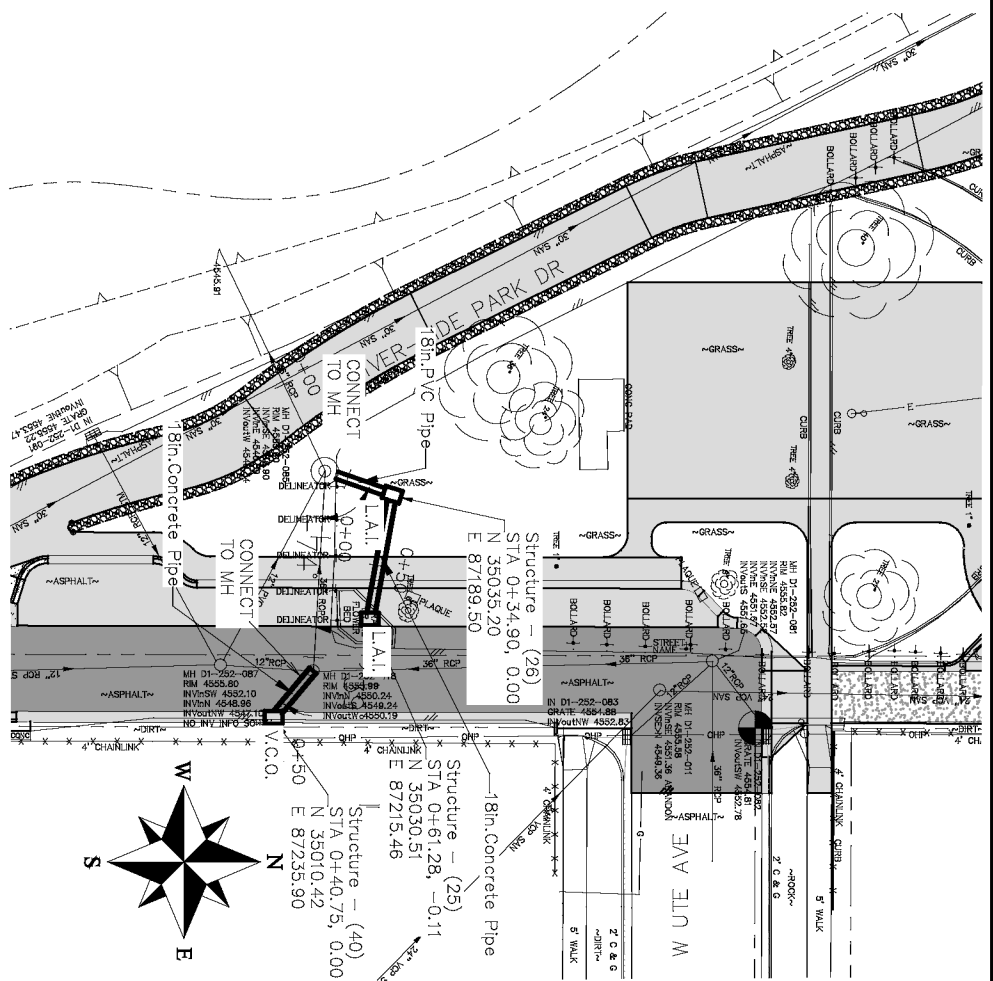
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REVISION			JCS	2017	
REVISION			JCS	2017	
REVISION			JCS	2017	

DESIGNED BY JCS DATE 2017  
CHECKED BY TOP DATE 2017  
APPROVED BY TOP DATE 2017

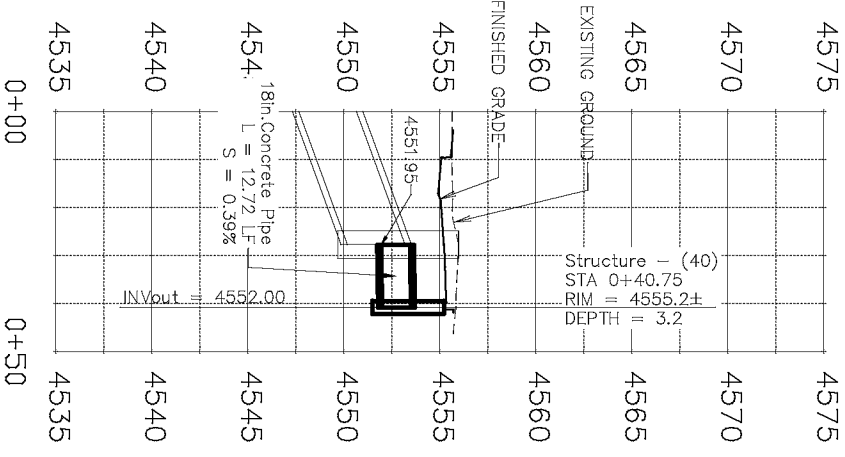
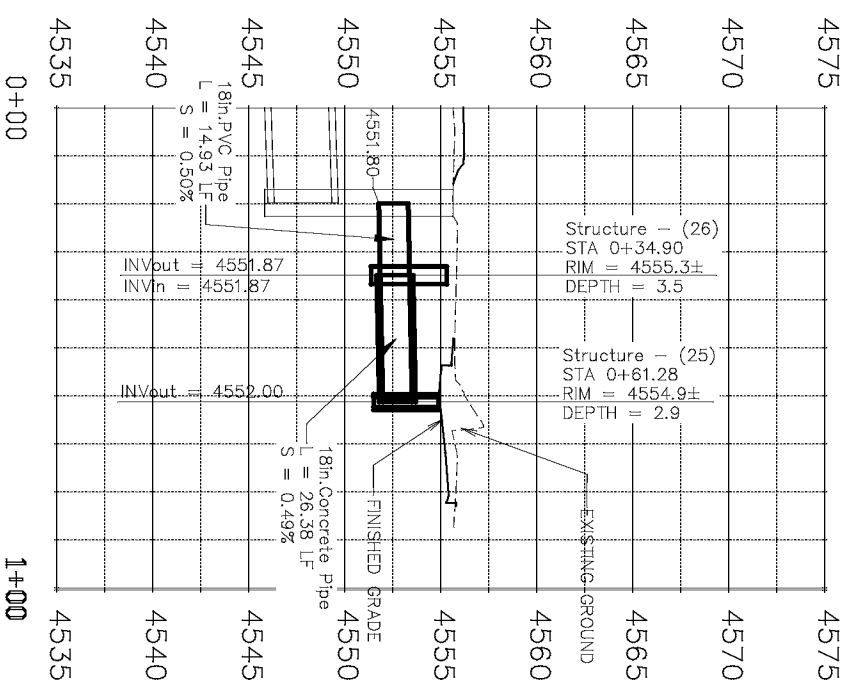
**CITY OF Grand Junction**  
PUBLIC WORKS ENGINEERING DIVISION

**RIVERSIDE PARK IMPROVEMENTS AND BIKE PATH STORM DRAIN PLAN AND PROFILE**

3



NOTES:  
 ALL NEW STORM DRAIN MANHOLES (MH) SHALL BE SIZED AS NOTED AND INCLUDES CONNECTION OF ADJACENT STORM SEWER LINES, FORMING INVERTS AND ADJUSTING TO FINAL GRADE. (SEE CITY OF GRAND JUNCTION STANDARD DETAIL D-03).  
 INLETS SHALL BE LARGE AREA INLETS "L.A.I." OR STORM DRAIN INLETS WITH VERTICAL CURB OPENING "V.C.O." (BOTH TYPES CITY STD 24X36 I.D.)  
 ALL STORM DRAIN PIPE SHALL BE SIZED AS NOTED AND EITHER BE REINFORCED CONCRETE PIPE OR C-900 PVC PIPE AS NOTED. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.



REVISION	DESCRIPTION	DATE
REVISION		
REVISION		
REVISION		

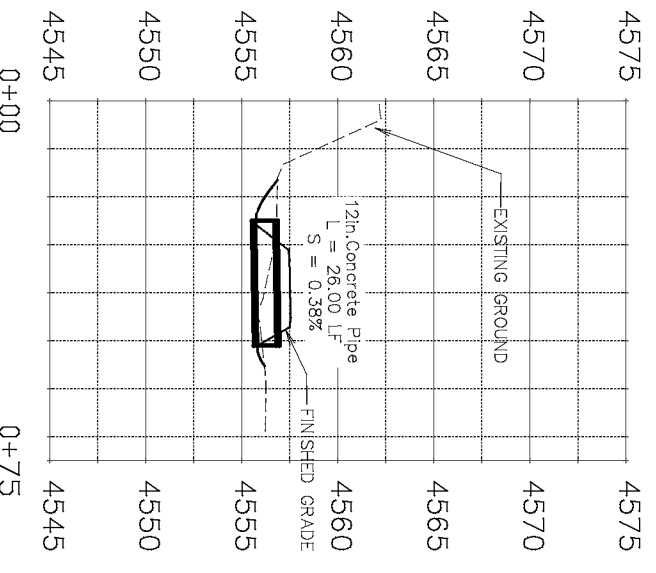
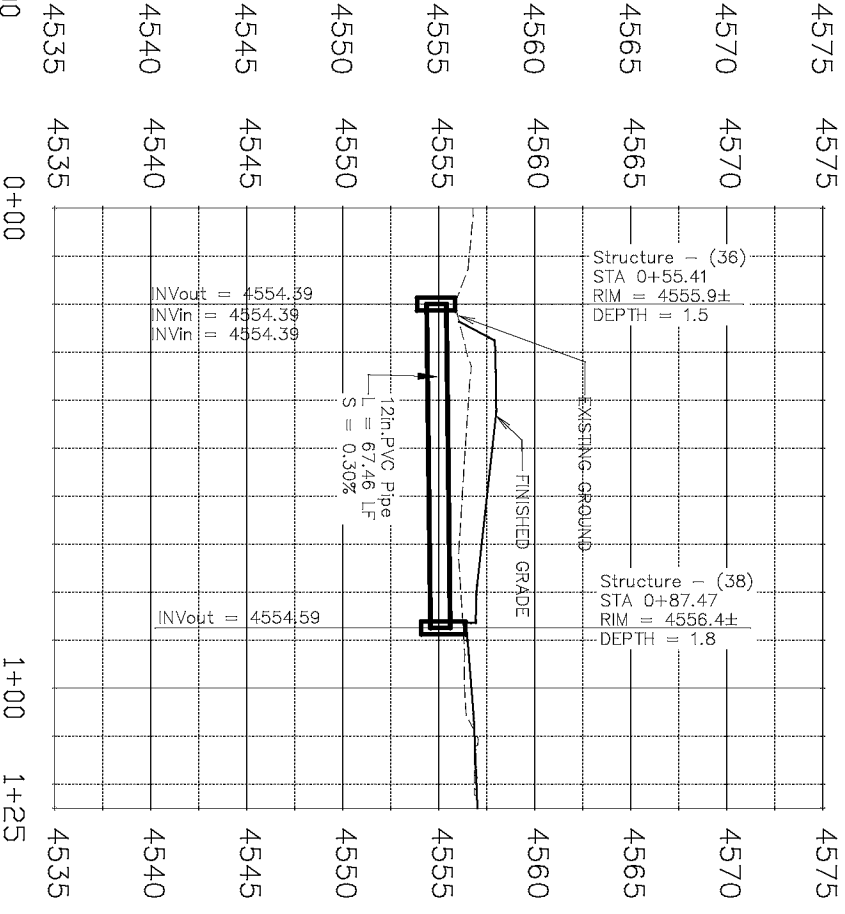
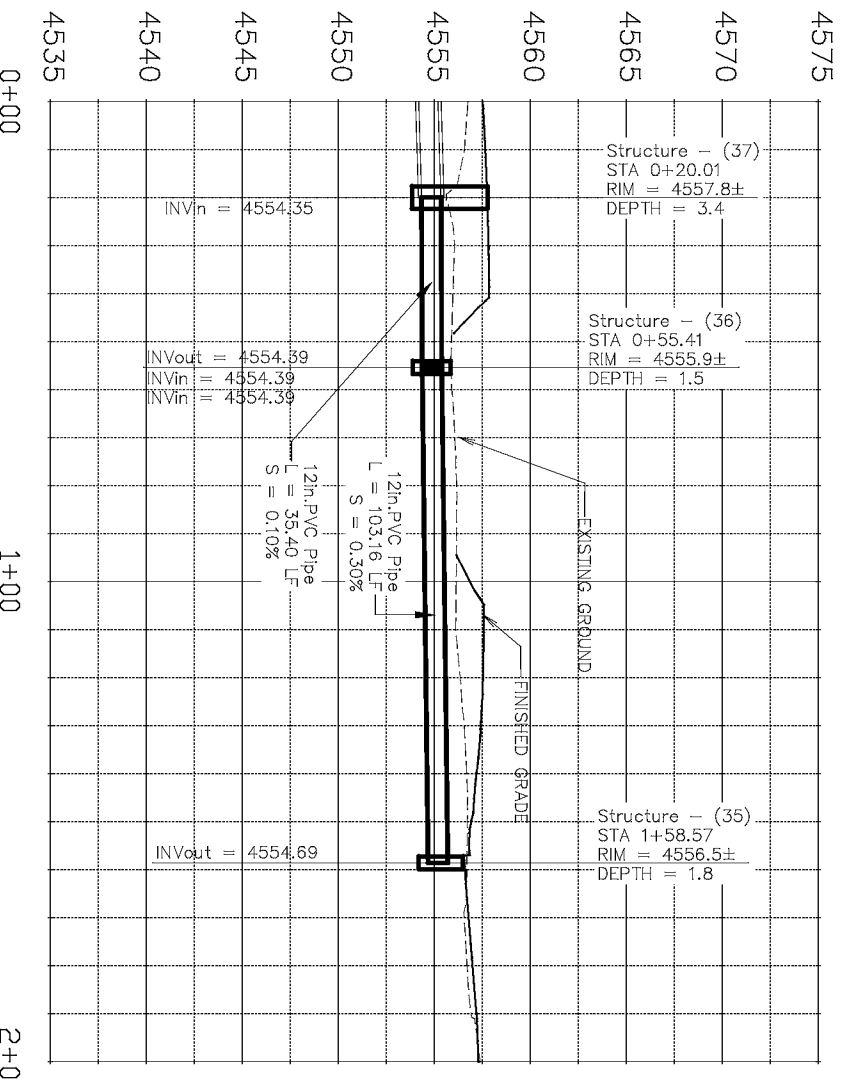
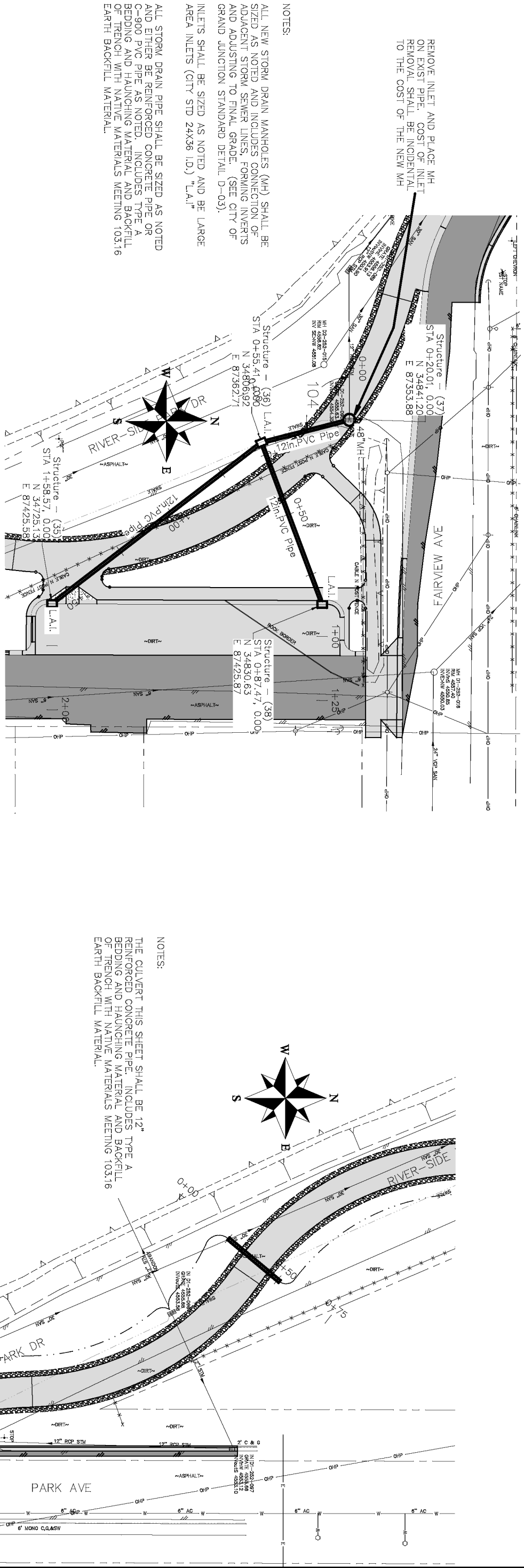
  

SCALE	PLAN & PROFILE
0	10
10	20
20	40
40	80
80	160

**Grand Junction**  
 CITY OF  
 GRAND JUNCTION  
 COLORADO

**PUBLIC WORKS**  
 ENGINEERING DIVISION

**RIVERSIDE PARK IMPROVEMENTS AND BIKE PATH**  
 STORM DRAIN PLAN AND PROFILE



REVISION	DESCRIPTION	DATE
REVISION		
REVISION		
REVISION		

SCALE	PLAN & PROFILE
0" = 25'	1" = 40'

**Grand Junction**  
CITY OF GRAND JUNCTION  
PUBLIC WORKS  
ENGINEERING DIVISION

RIVERSIDE PARK IMPROVEMENTS AND BIKE PATH  
STORM DRAIN PLAN AND PROFILE

REVISION	DESCRIPTION	DATE	DRAWN BY	DATE
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REVISION 2		2017	JCS	2017
REVISION 3		2017	JCS	2017
REVISION 4		2017	JCS	2017

REVISION	DESCRIPTION	DATE	DESIGNED BY	DATE
REVISION 1		2017	JCS	2017
REVISION 2		2017	JCS	2017
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REVISION 4		2017	JCS	2017

REVISION	DESCRIPTION	DATE	CHECKED BY	DATE
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REVISION 4		2017	JCS	2017

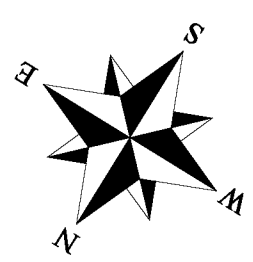
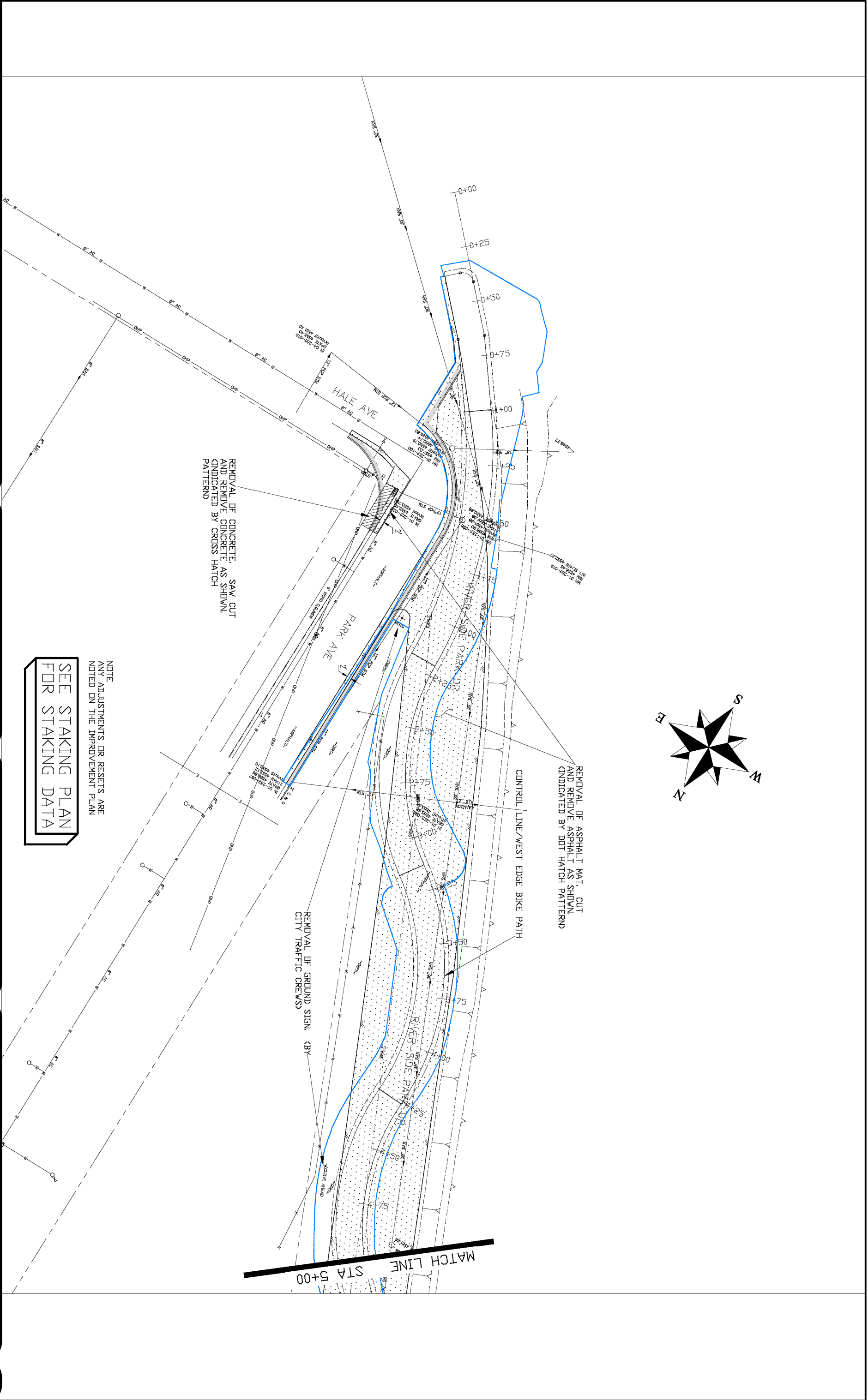
  

REVISION	DESCRIPTION	DATE	APPROVED BY	DATE
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REVISION 2		2017	JCS	2017
REVISION 3		2017	JCS	2017
REVISION 4		2017	JCS	2017

**Grand Junction**  
CITY OF  
COLORADO

**PUBLIC WORKS**  
ENGINEERING DIVISION

**RIVERSIDE PARK IMPROVEMENTS AND BIKE PATH**  
REMOVAL PLAN



NOTE  
ANY ADJUSTMENTS OR RESETS ARE  
NOTED ON THE IMPROVEMENT PLAN

SEE STAKING PLAN  
FOR STAKING DATA

REVISION	DESCRIPTION	DATE

DESCRIPTION	DATE
DRAWN BY JCS	DATE 2017
DESIGNED BY JCS	DATE 2017
CHECKED BY JCS	DATE 2017
APPROVED BY JCS	DATE 2017

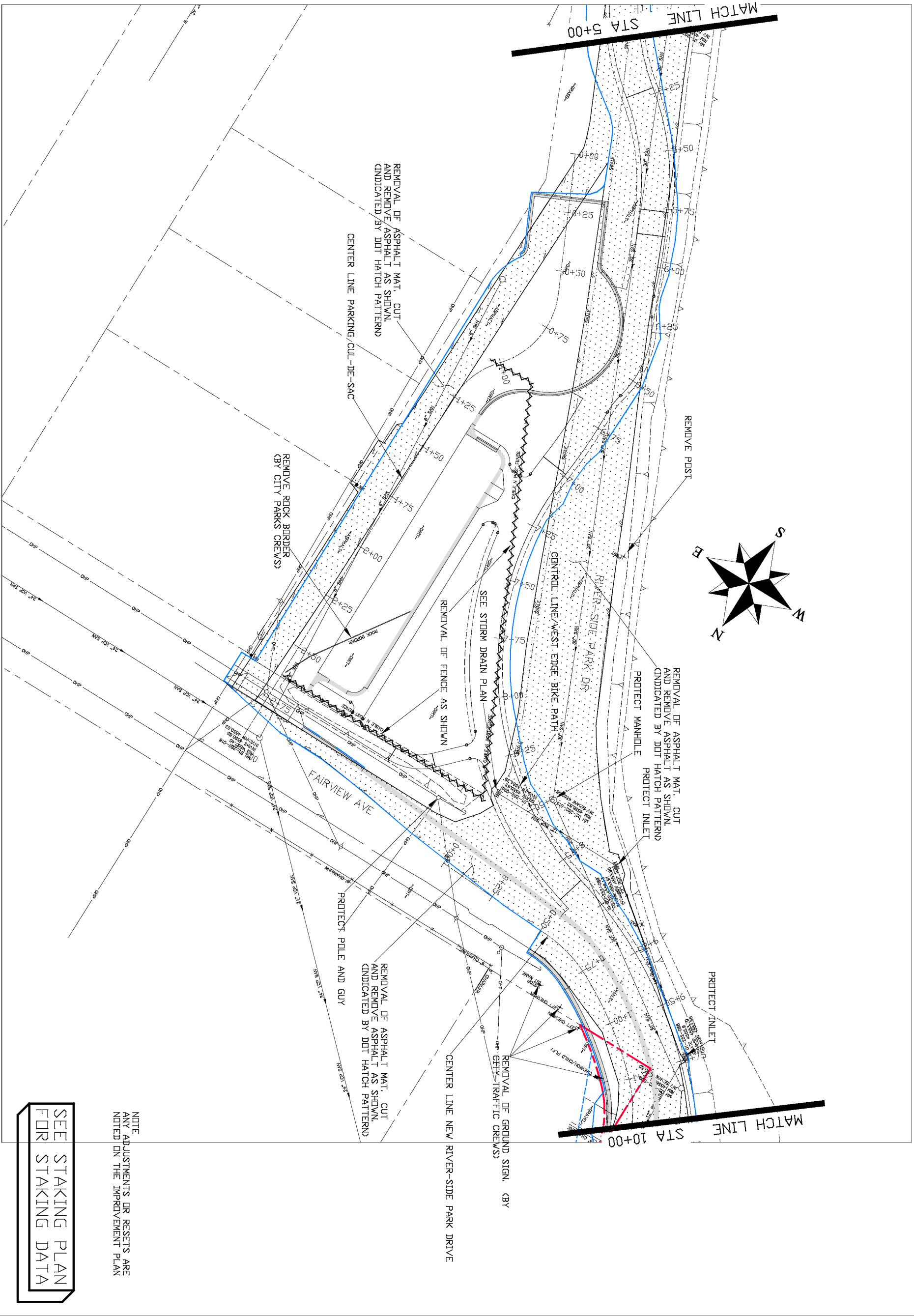
  

SCALES:
PLAN & PROFILE 1" = 20'
SECTION 1" = 10'
VERTICAL 1" = 10'



PUBLIC WORKS  
ENGINEERING DIVISION

RIVERSIDE PARK IMPROVEMENTS AND BIKE PATH  
REMOVAL PLAN



SEE STAKING PLAN  
FOR STAKING DATA

REVISION	DESCRIPTION	DATE
REVISION 1		
REVISION 2		
REVISION 3		

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APPROVED BY	TGP	DATE	2017

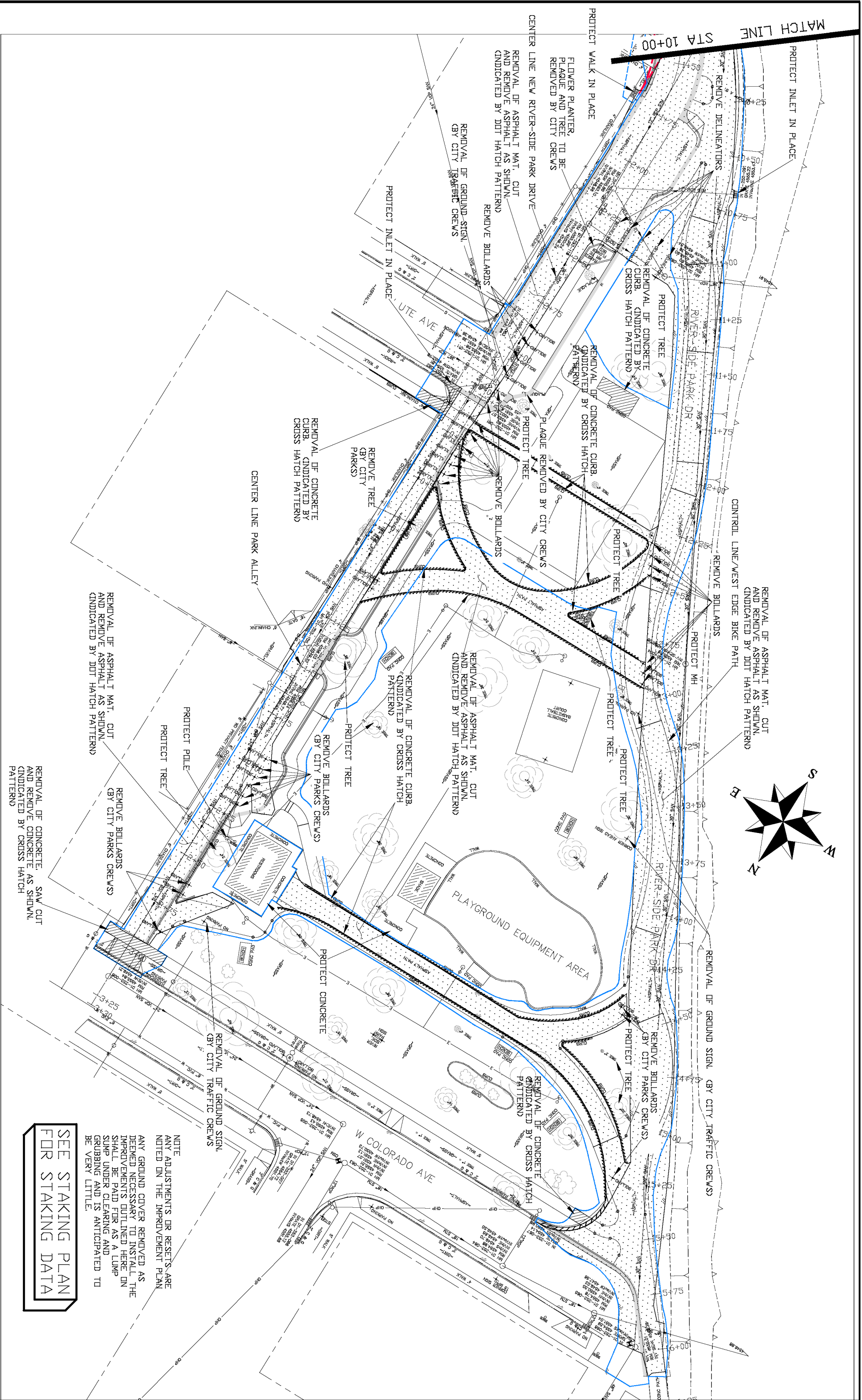
  

SCALES
PLAN & PROFILE
9" = 10'
1" = 20'
3" = 40'



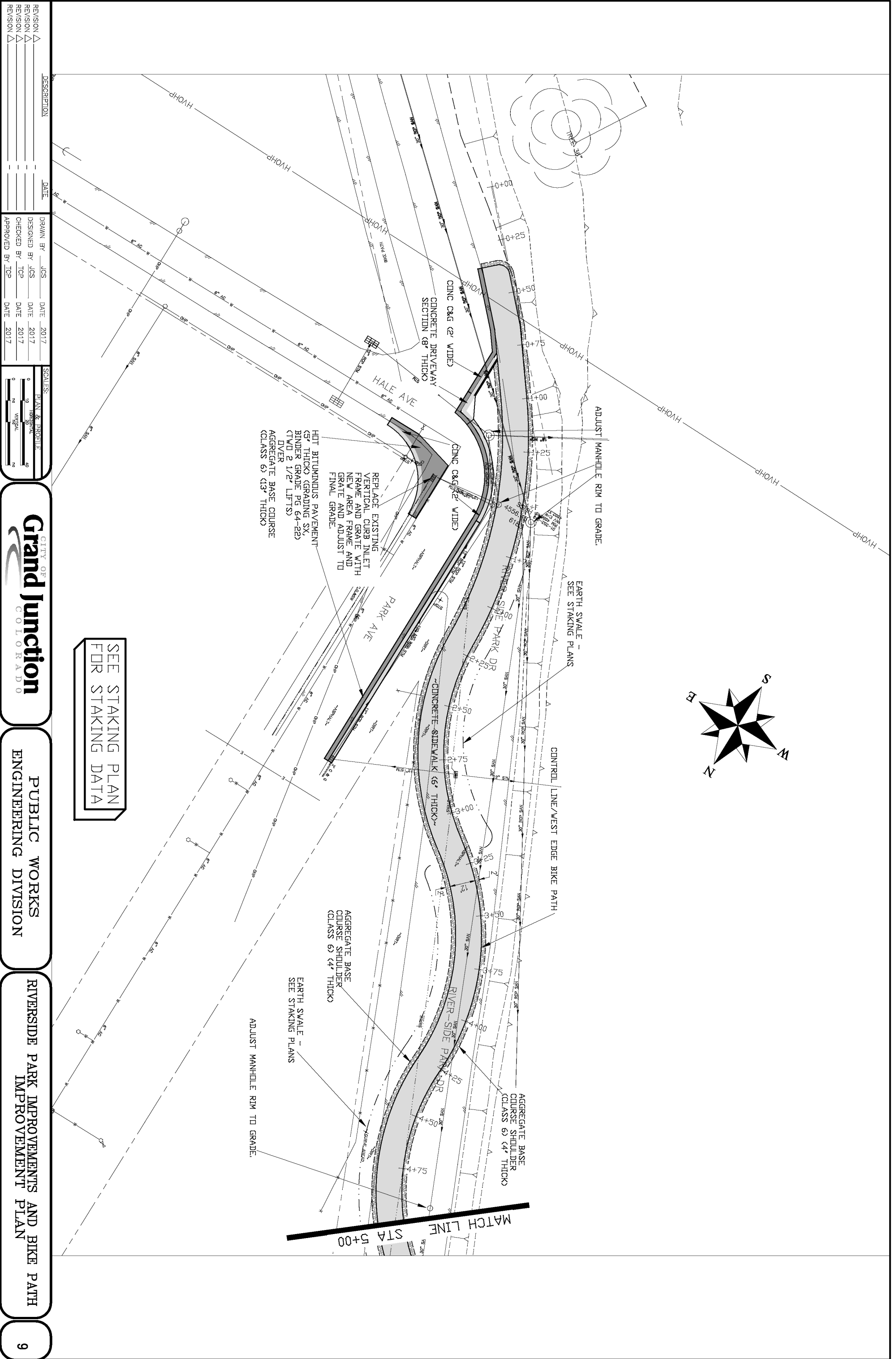
**PUBLIC WORKS**  
ENGINEERING DIVISION

**RIVERSIDE PARK IMPROVEMENTS AND BIKE PATH**  
REMOVAL PLAN



SEE STAKING PLAN  
FOR STAKING DATA

NOTE  
ANY ADJUSTMENTS OR RESETS ARE NOTED ON THE IMPROVEMENT PLAN  
ANY GROUND COVER REMOVED AS DEEMED NECESSARY TO INSTALL THE IMPROVEMENTS OUTLINED HERE ON SHALL BE PAID FOR AS A LUMP SUM UNDER CLEARING AND GRUBBING AND IS ANTICIPATED TO BE VERY LITTLE.



REVISION	DESCRIPTION	DATE
REVISION		
REVISION		
REVISION		

DRAWN BY	JCS	DATE	2017
DESIGNED BY	JCS	DATE	2017
CHECKED BY	TCP	DATE	2017
APPROVED BY	TCP	DATE	2017

SCALES:	PLAN & PROFILE
	1" = 10'
	1" = 20'
	1" = 40'

**Grand Junction**  
CITY OF  
COLORADO

**PUBLIC WORKS**  
ENGINEERING DIVISION

**RIVERSIDE PARK IMPROVEMENTS AND BIKE PATH**  
IMPROVEMENT PLAN



REVISION	DESCRIPTION	DATE

DESCRIPTION	DATE
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CHECKED BY TGP	2017
APPROVED BY TGP	2017

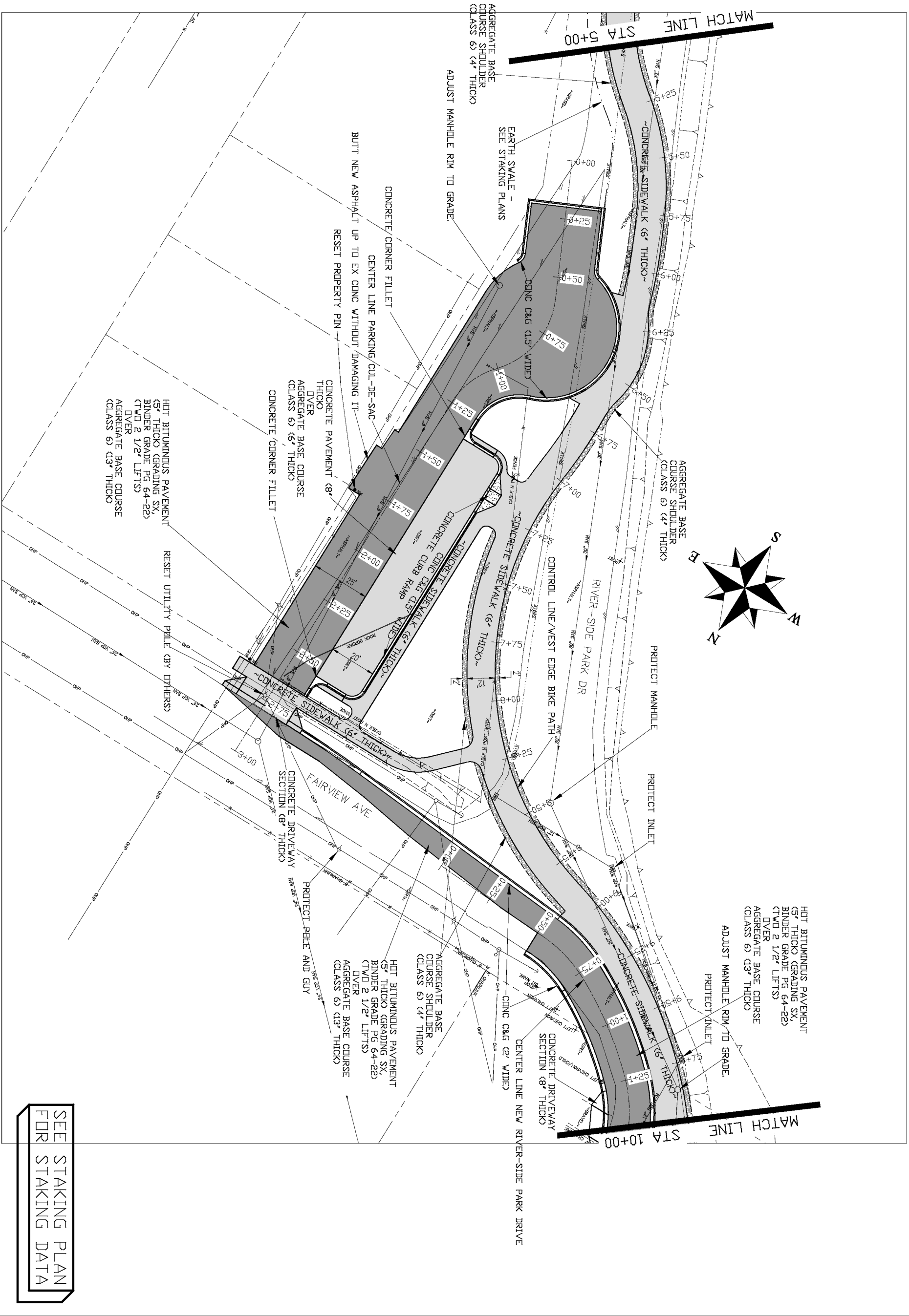
  

SCALES
PLAN & PROFILE
1" = 20'
1" = 10'
1" = 5'
1" = 2.5'
1" = 1.25'
1" = 0.625'



**PUBLIC WORKS  
ENGINEERING DIVISION**

**RIVERSIDE PARK IMPROVEMENTS AND BIKE PATH  
IMPROVEMENT PLAN**



SEE STAKING PLAN  
FOR STAKING DATA

REVISION	DESCRIPTION	DATE

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DESIGNED BY	JCS	DATE	2017
CHECKED BY	TGP	DATE	2017
APPROVED BY	TGP	DATE	2017

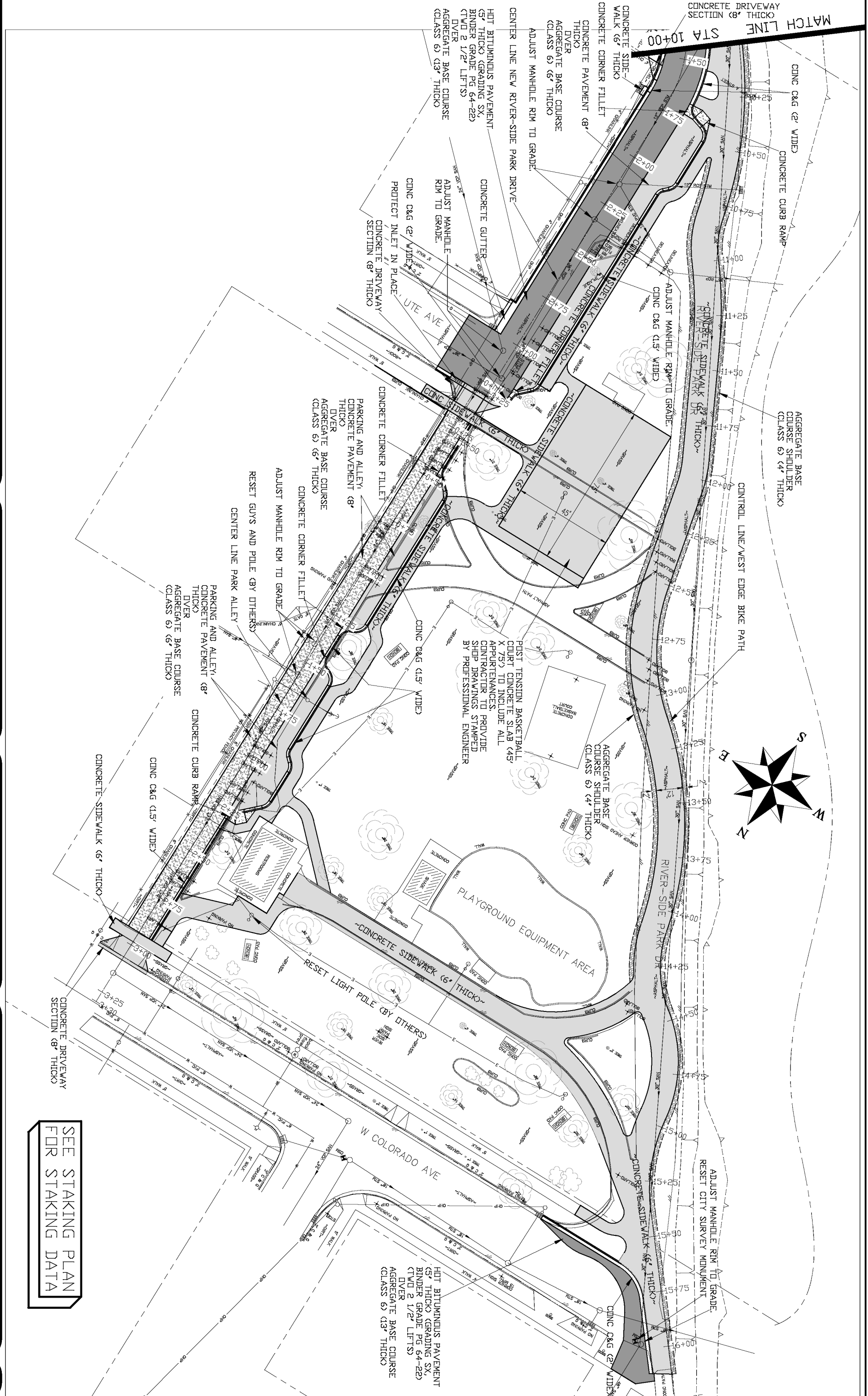
  

SCALES
PLAN & PROFILE
9" = 10' HORIZONTAL
9" = 10' VERTICAL



PUBLIC WORKS  
ENGINEERING DIVISION

RIVERSIDE PARK IMPROVEMENTS AND BIKE PATH  
IMPROVEMENT PLAN



SEE STAKING PLAN  
FOR STAKING DATA

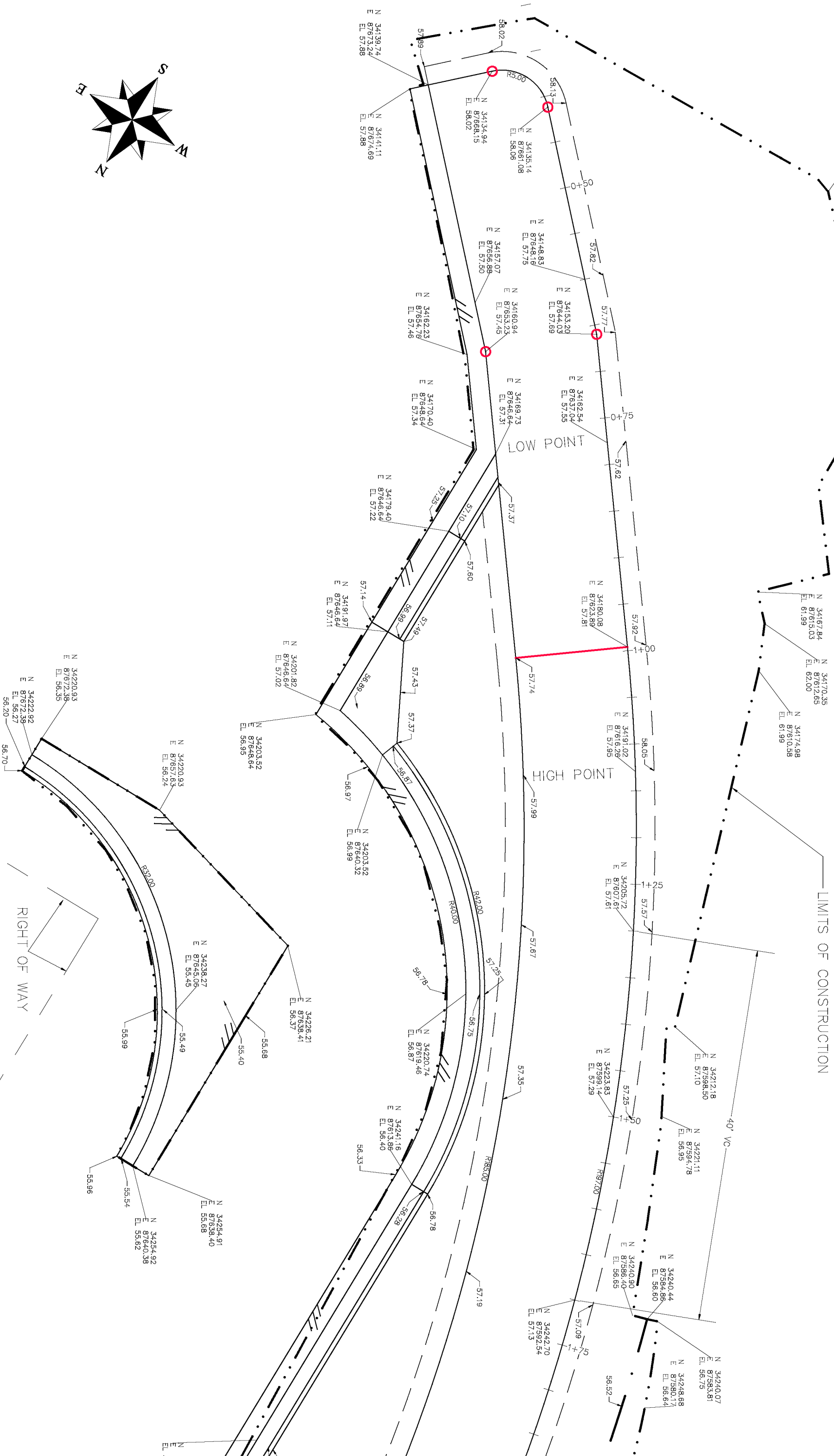
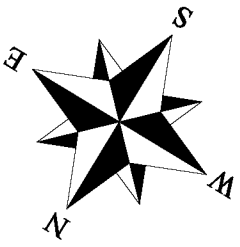
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REVISION		

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APPROVED BY	TOP	DATE	2019

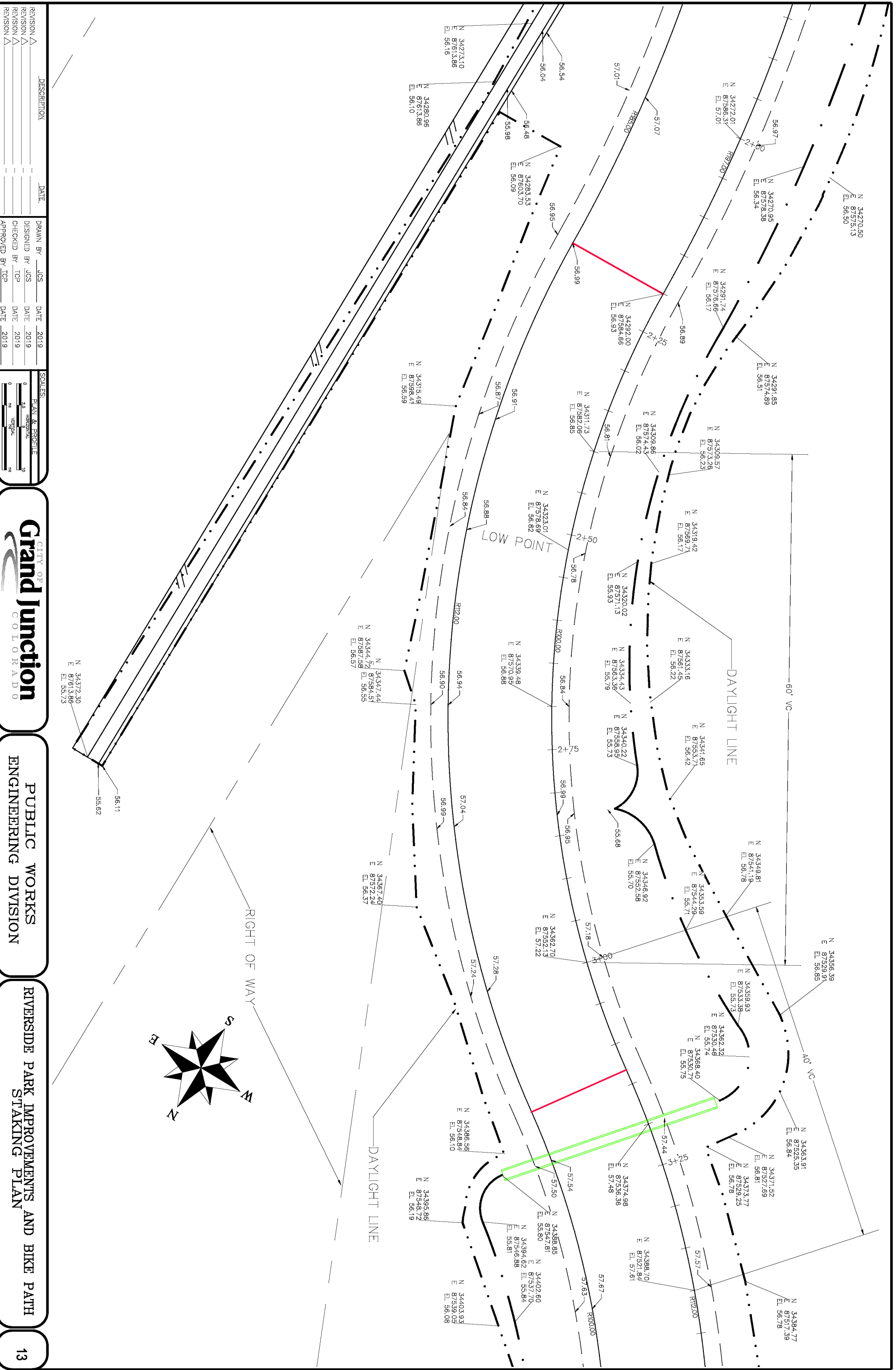
  

SCALE	PLAN & PROFILE
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2.5	PROFILE
0	VERTICAL
10	VERTICAL



PUBLIC WORKS  
ENGINEERING DIVISION

RIVERSIDE PARK IMPROVEMENTS AND BIKE PATH  
STAKING PLAN



REVISION	DATE	DESCRIPTION

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2019	2019	2019
2019	2019	2019

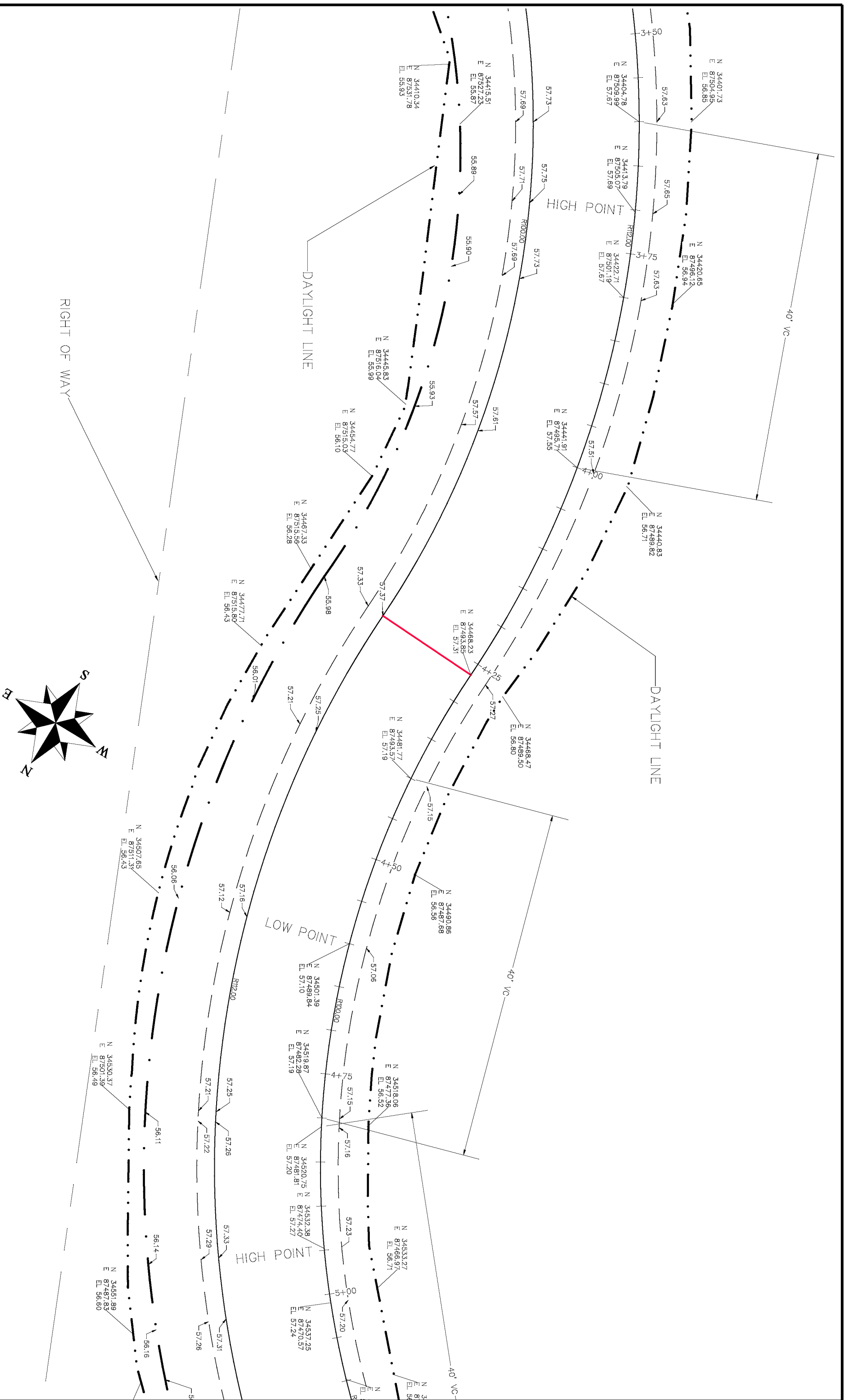
  

DATE	DATE	DATE
2019	2019	2019
2019	2019	2019
2019	2019	2019

CITY OF **Grand Junction**
  
 COLORADO

**PUBLIC WORKS**
  
**ENGINEERING DIVISION**

**RIVERSIDE PARK IMPROVEMENTS AND BIKE PATH**
  
**STAKING PLAN**



REVISION	DESCRIPTION	DATE
REVISION		
REVISION		
REVISION		

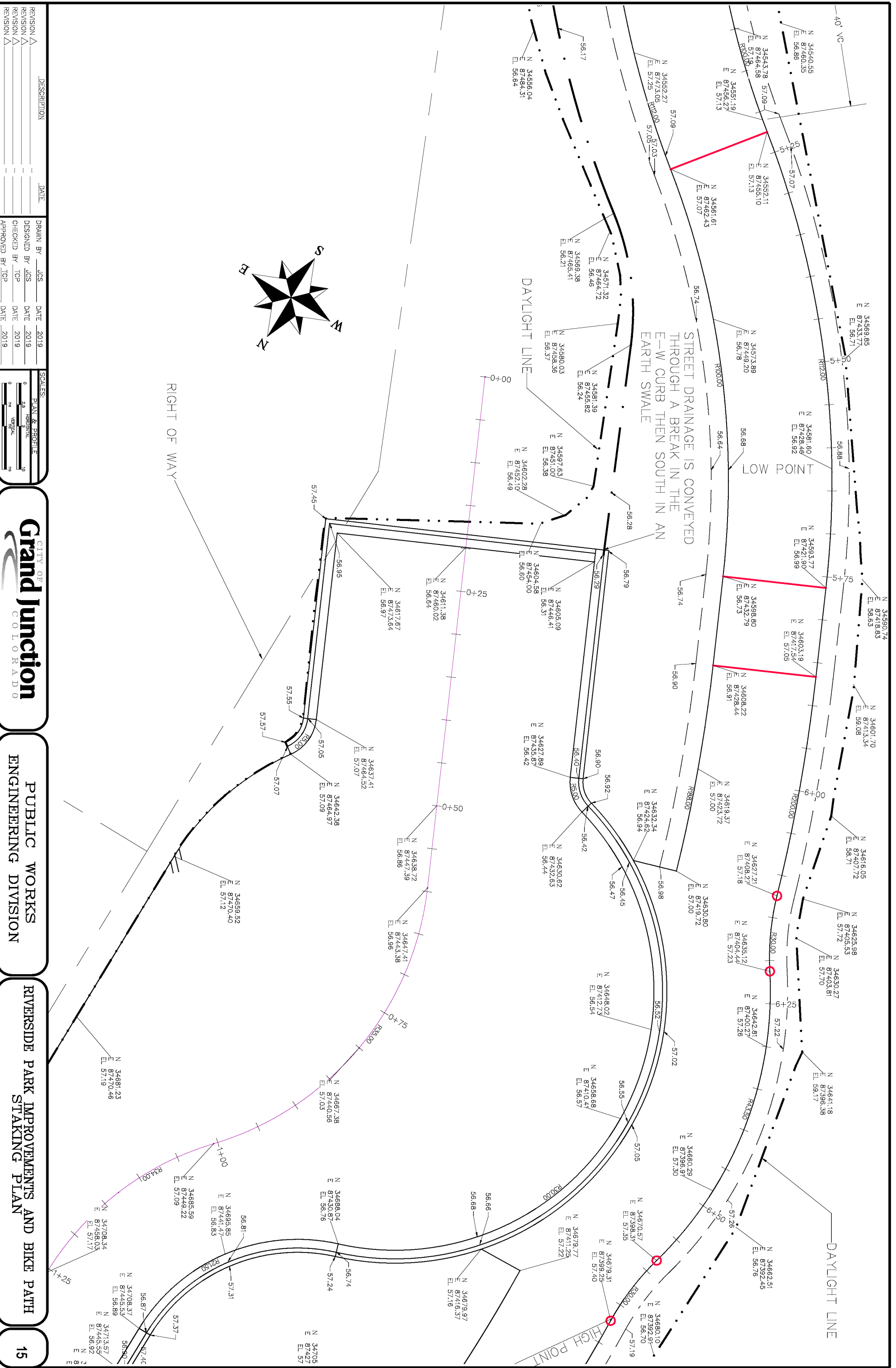
  

DESIGNED BY	JCS	DATE	2019
CHECKED BY	TCP	DATE	2019
APPROVED BY	TOP	DATE	2019

**CITY OF Grand Junction**  
COLORADO

**PUBLIC WORKS ENGINEERING DIVISION**

**RIVERSIDE PARK IMPROVEMENTS AND BIKE PATH STAKING PLAN**



REVISION	DESCRIPTION	DATE
REVISION		
REVISION		
REVISION		

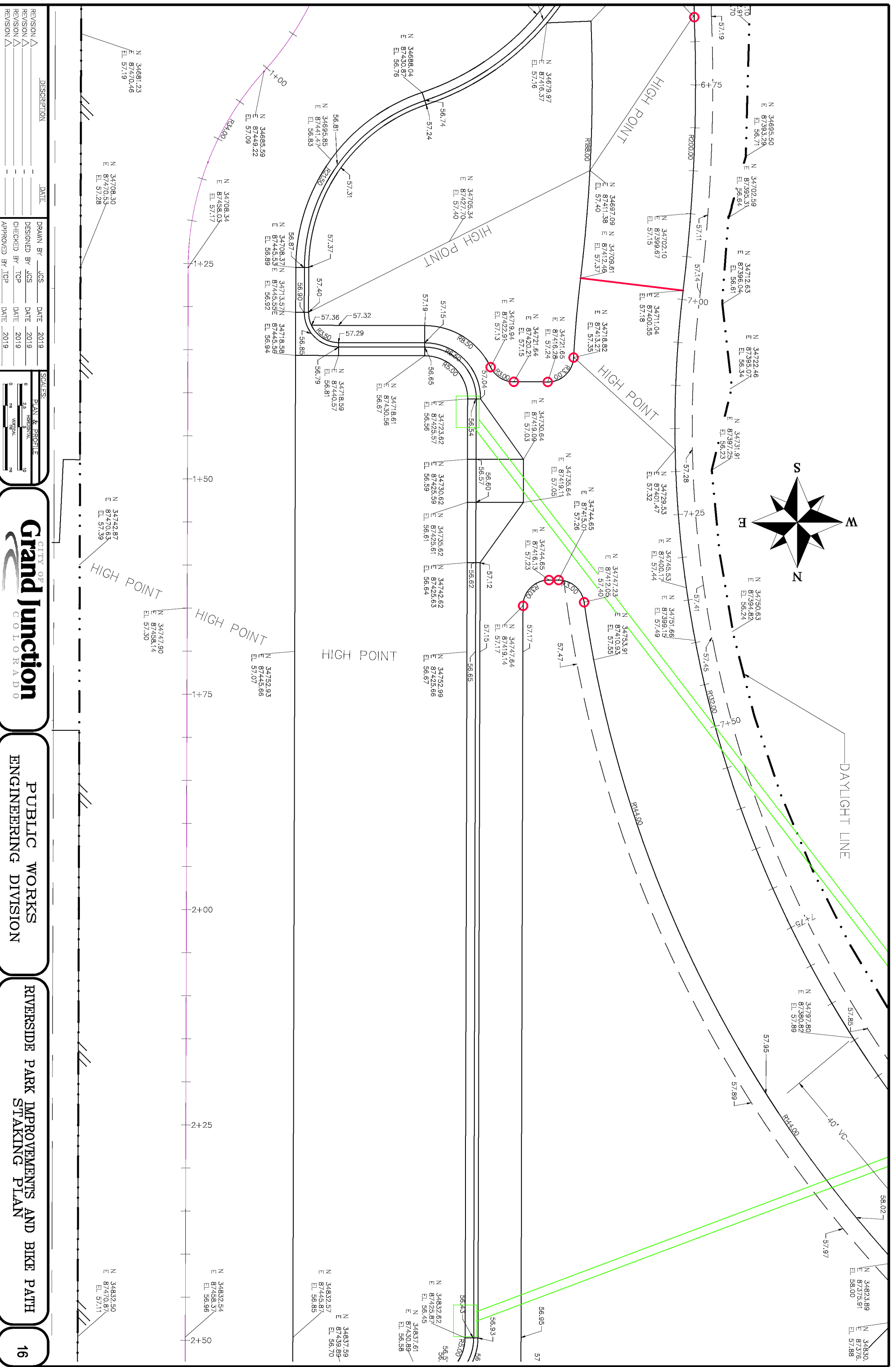
DESIGNED BY	DATE	SCALE
JCS	2019	PLAN & PROFILE
JCS	2019	2" = 40'
JCS	2019	1" = 20'
JCS	2019	1" = 10'

**CITY OF Grand Junction**  
C O L O R A D O

**PUBLIC WORKS ENGINEERING DIVISION**

**RIVERSIDE PARK IMPROVEMENTS AND BIKE PATH STAKING PLAN**

**15**



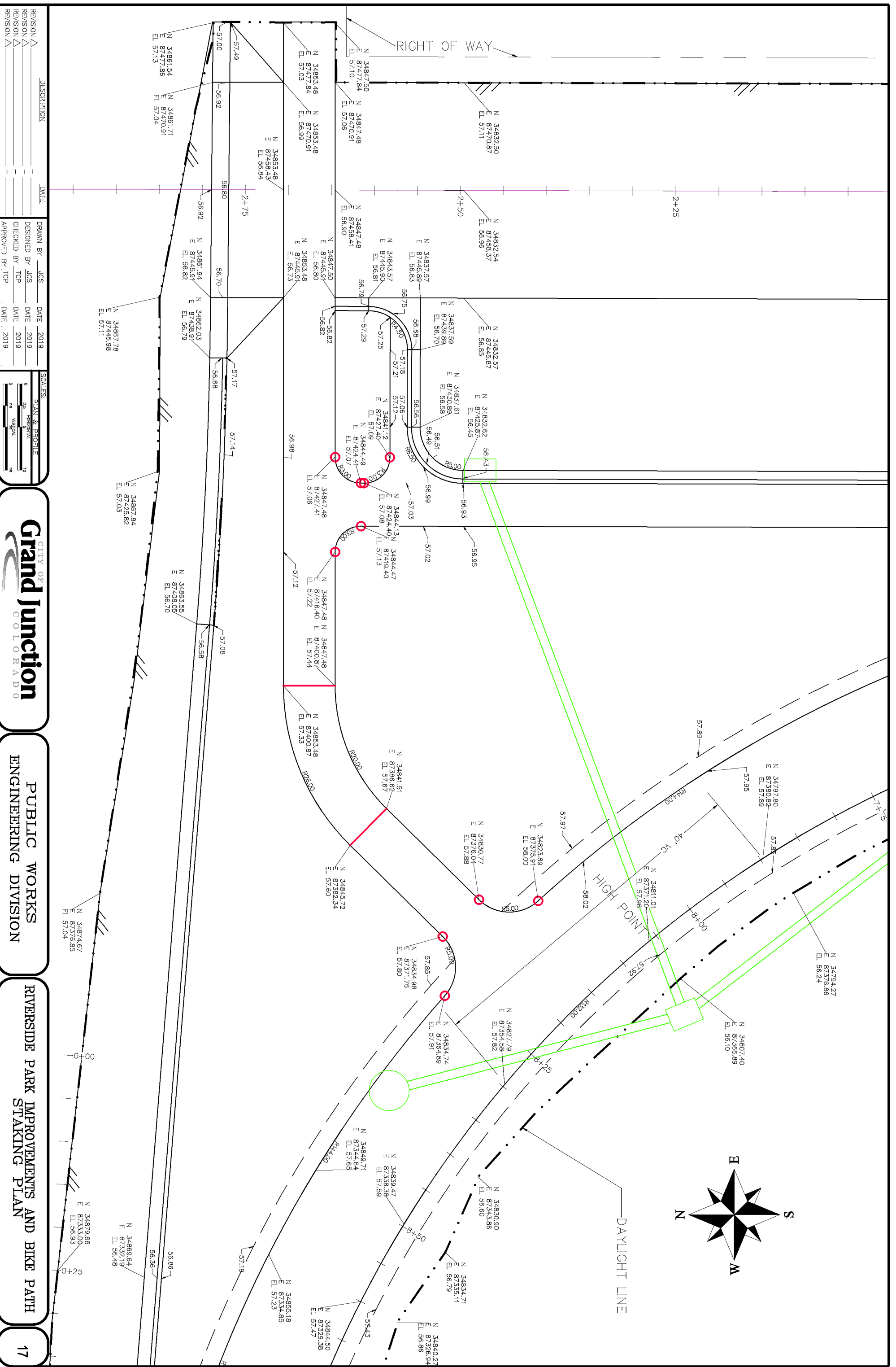
REVISION	DESCRIPTION	DATE
REVISION		
REVISION		
REVISION		

SCALE	DATE
PLAN & PROFILE	2019
PLAN	2019
PROFILE	2019

**Grand Junction**  
CITY OF GRAND JUNCTION  
COLORADO

**PUBLIC WORKS ENGINEERING DIVISION**

**RIVERSIDE PARK IMPROVEMENTS AND BIKE PATH STAKING PLAN**



REVISION	DESCRIPTION	DATE
REVISION		
REVISION		
REVISION		

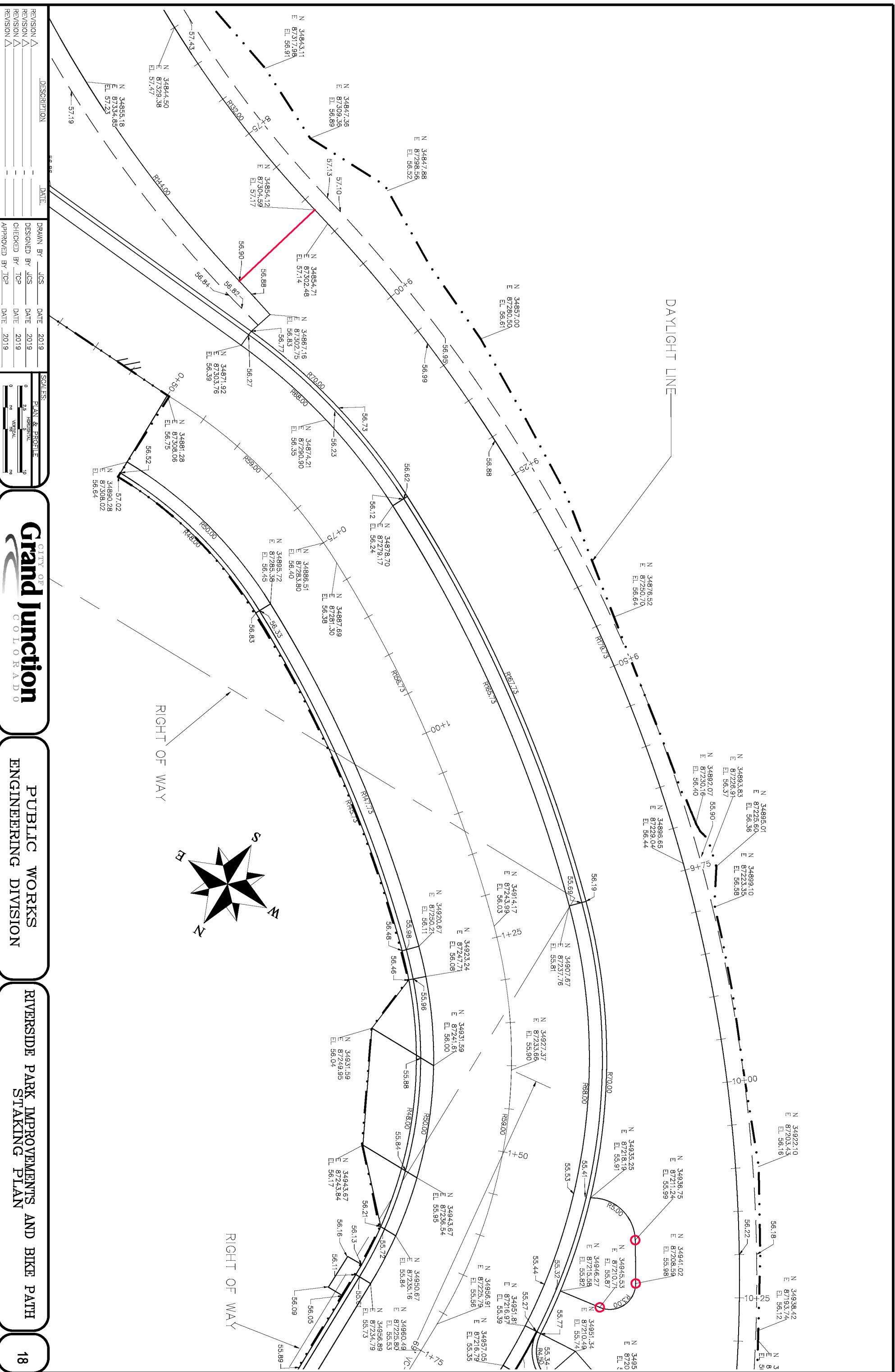
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CHECKED BY	TOP	DATE	2019
APPROVED BY	TOP	DATE	2019



**PUBLIC WORKS**  
ENGINEERING DIVISION

**RIVERSIDE PARK IMPROVEMENTS AND BIKE PATH**  
STAKING PLAN





REVISION	DESCRIPTION	DATE
REVISION		
REVISION		
REVISION		

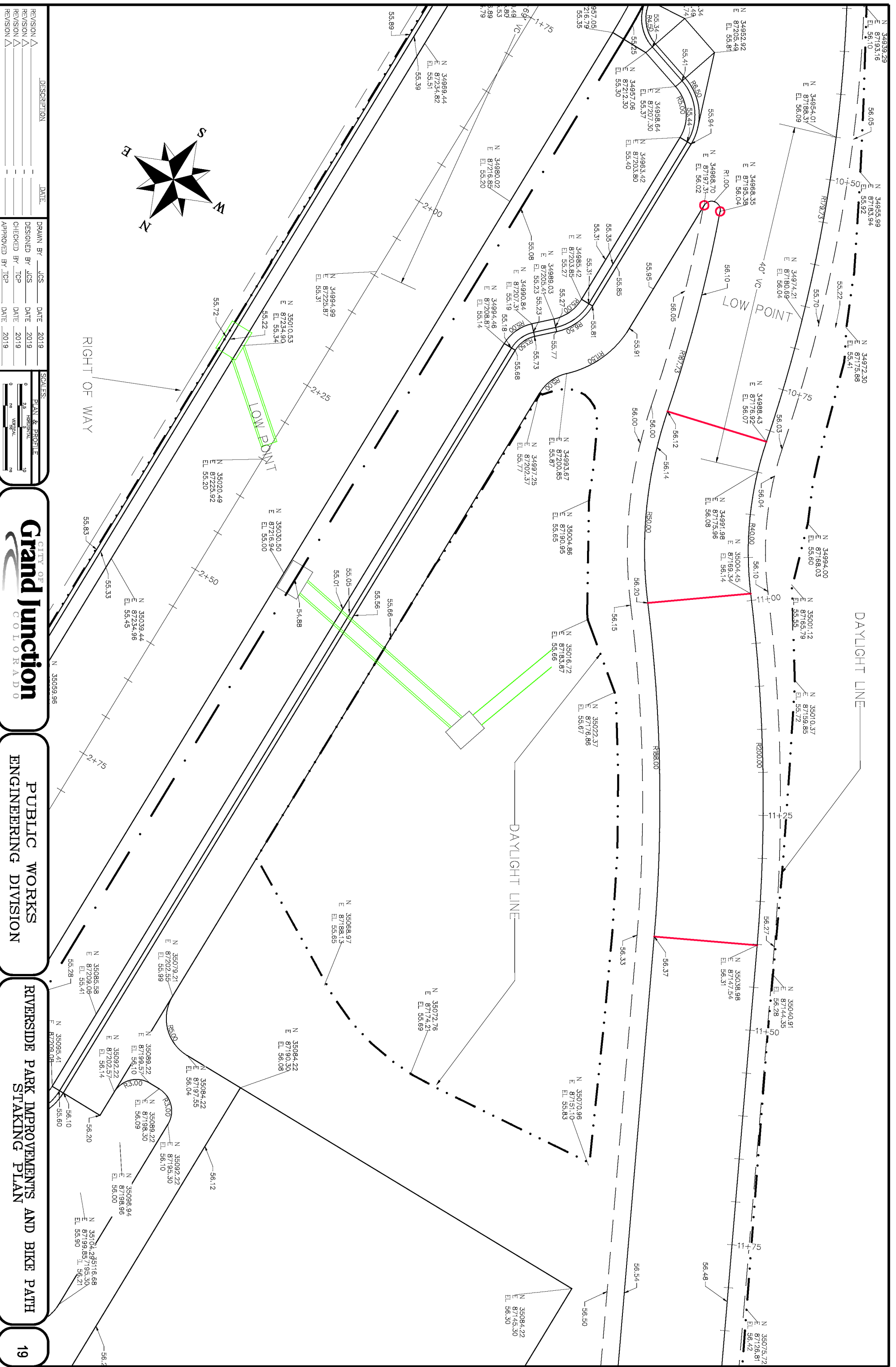
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DESIGNED BY	TCP	DATE	2019
CHECKED BY	TCP	DATE	2019
APPROVED BY	TCP	DATE	2019

SCALE	PLAN & PROFILE
0	2" = 100'
0	1" = 50'



**PUBLIC WORKS**  
ENGINEERING DIVISION

**RIVERSIDE PARK IMPROVEMENTS AND BIKE PATH**  
STAKING PLAN



REVISION	DESCRIPTION	DATE
REVISION		
REVISION		
REVISION		

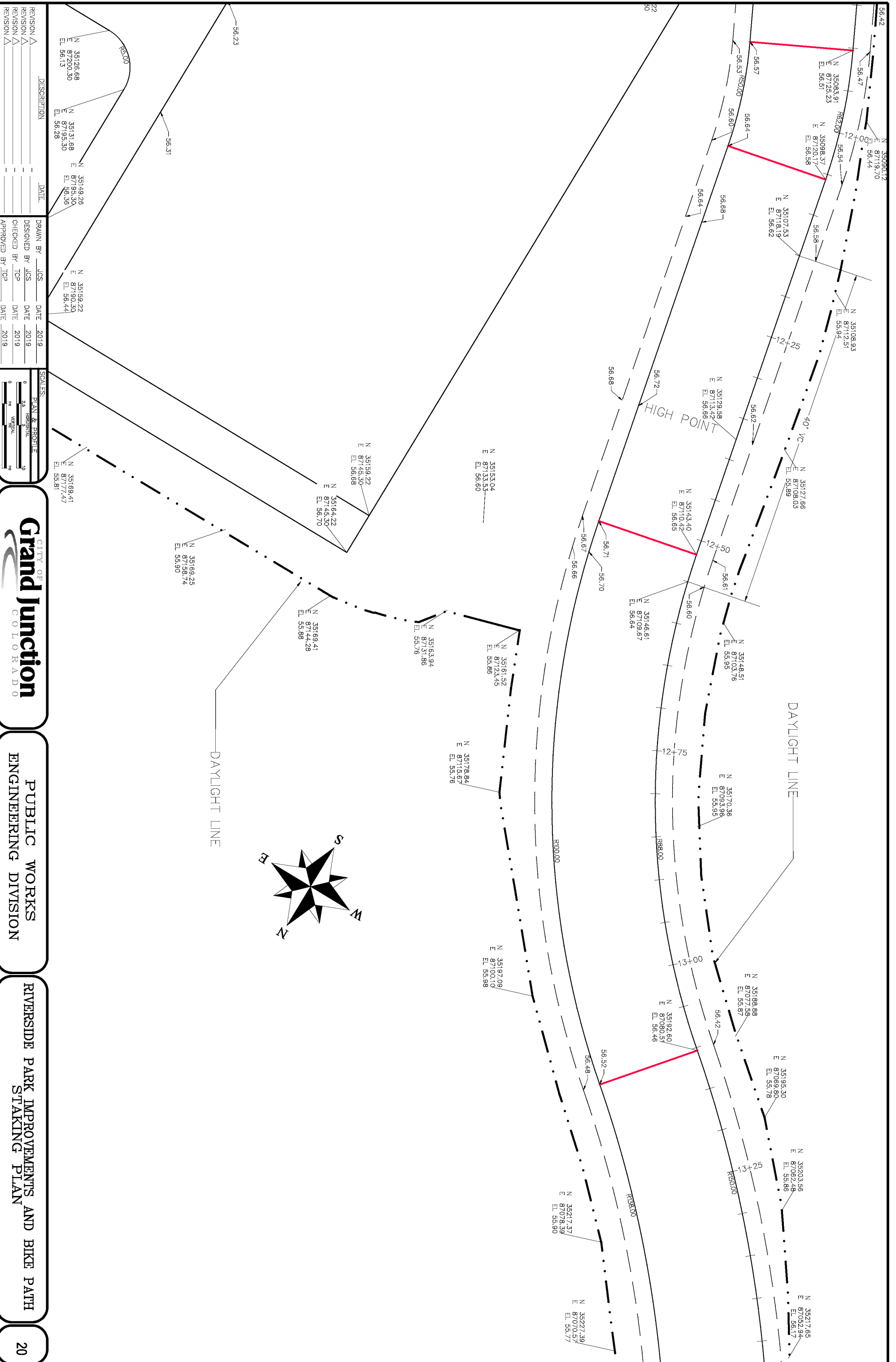
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APPROVED BY	TCP	DATE	2019

SCALE	PLAN & PROFILE
0	25
0	10



**PUBLIC WORKS**  
ENGINEERING DIVISION

**RIVERSIDE PARK IMPROVEMENTS AND BIKE PATH**  
STAKING PLAN



REVISION	DESCRIPTION	DATE
REVISION 1		
REVISION 2		
REVISION 3		
REVISION 4		

DESIGNED BY	DATE	DESIGNED BY	DATE
JCS	2019	JCS	2019
TCP	2019	TCP	2019
TCP	2019	TCP	2019

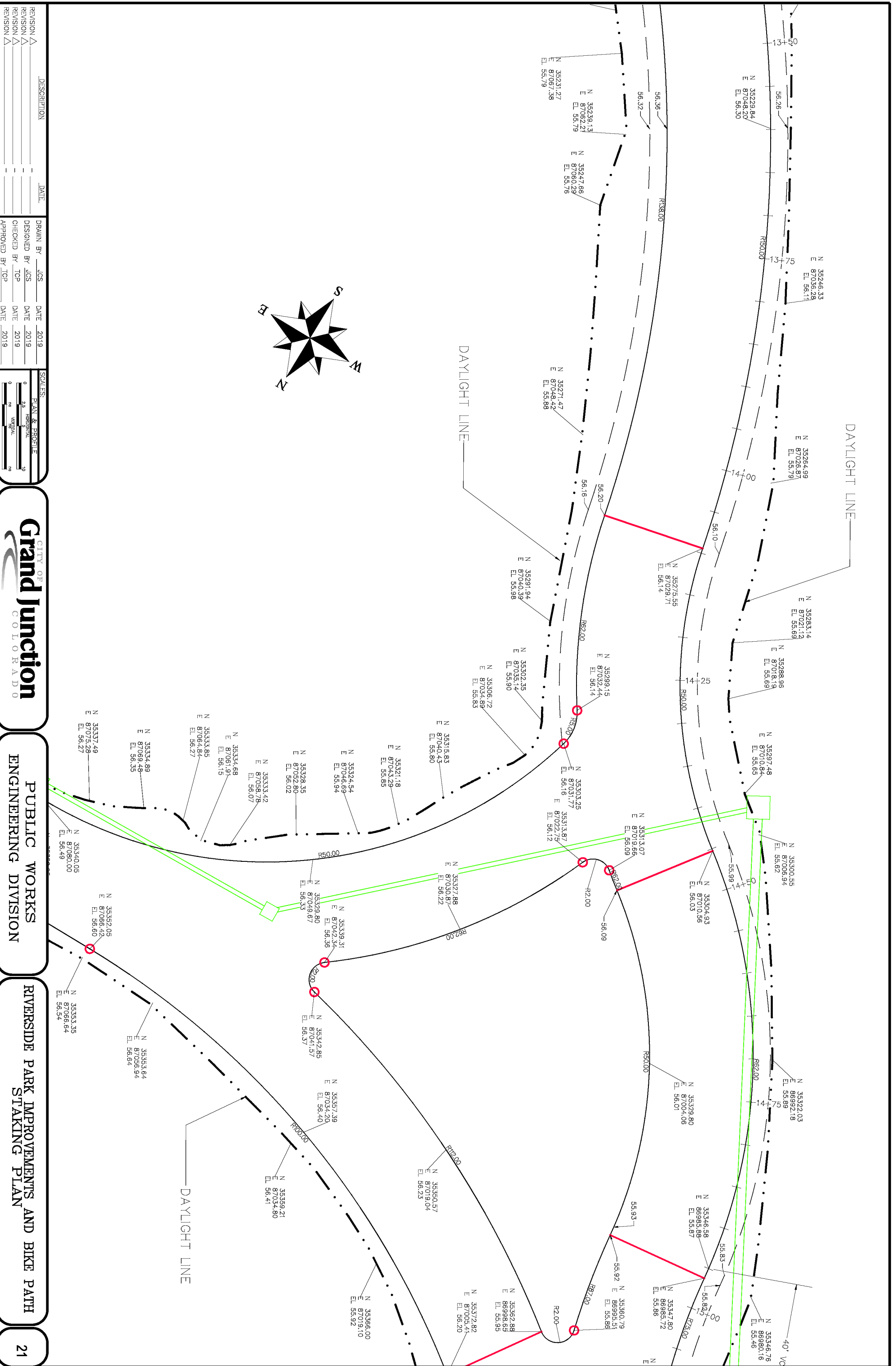
SCALE	PLAN & PROFILE
0" = 25'	HORIZONTAL
0" = 10'	VERTICAL

**CITY OF Grand Junction**  
COLORADO

**PUBLIC WORKS ENGINEERING DIVISION**

**RIVERSIDE PARK IMPROVEMENTS AND BIKE PATH STAKING PLAN**

**20**



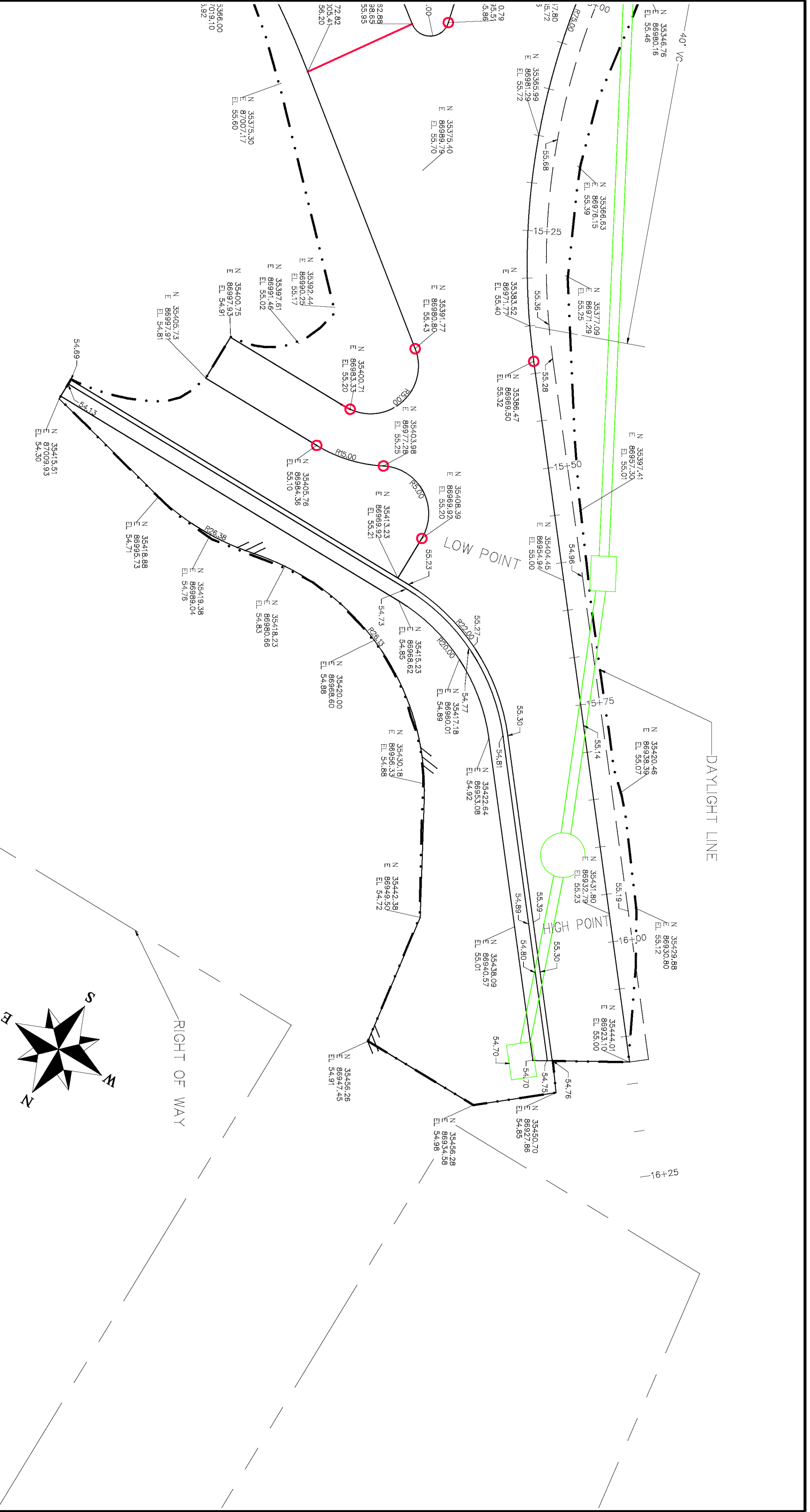
REVISION	DESCRIPTION	DATE
REVISION		
REVISION		
REVISION		

DESIGNED BY	DATE	SCALE
JCS	2019	1" = 20'
TCP	2019	1" = 20'
TCP	2019	1" = 20'
TCP	2019	1" = 20'



**PUBLIC WORKS ENGINEERING DIVISION**

**RIVERSIDE PARK IMPROVEMENTS AND BIKE PATH STAKING PLAN**



REVISION	DESCRIPTION	DATE
REVISION		
REVISION		
REVISION		

DATE	DATE	DATE
2019	2019	2019
2019	2019	2019
2019	2019	2019

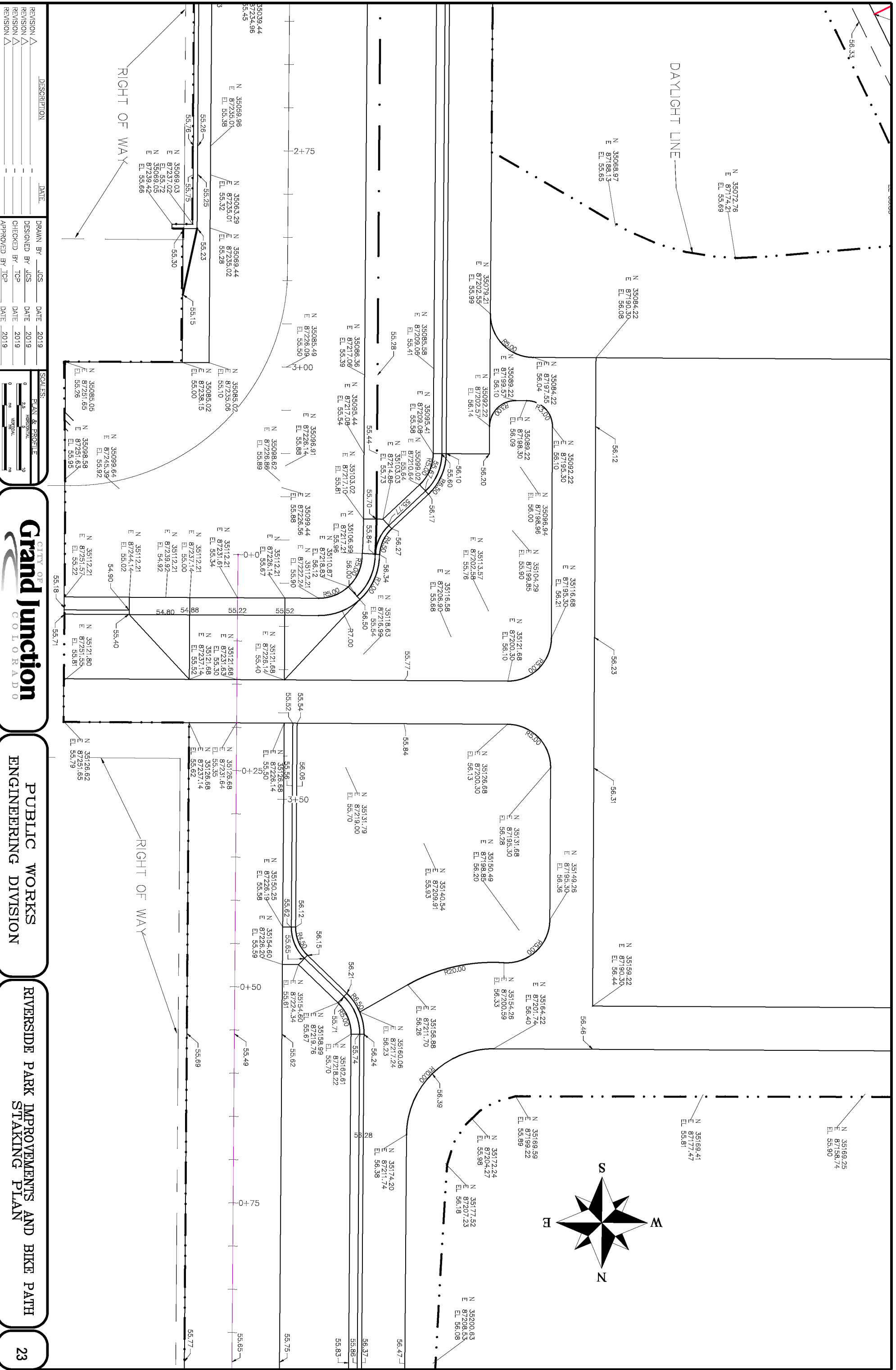
  

SCALE	SCALE
PLAN & PROFILE	1" = 20'
VERTICAL	1" = 2'
SECTION	1" = 2'



PUBLIC WORKS  
ENGINEERING DIVISION

RIVERSIDE PARK IMPROVEMENTS AND BIKE PATH  
STAKING PLAN



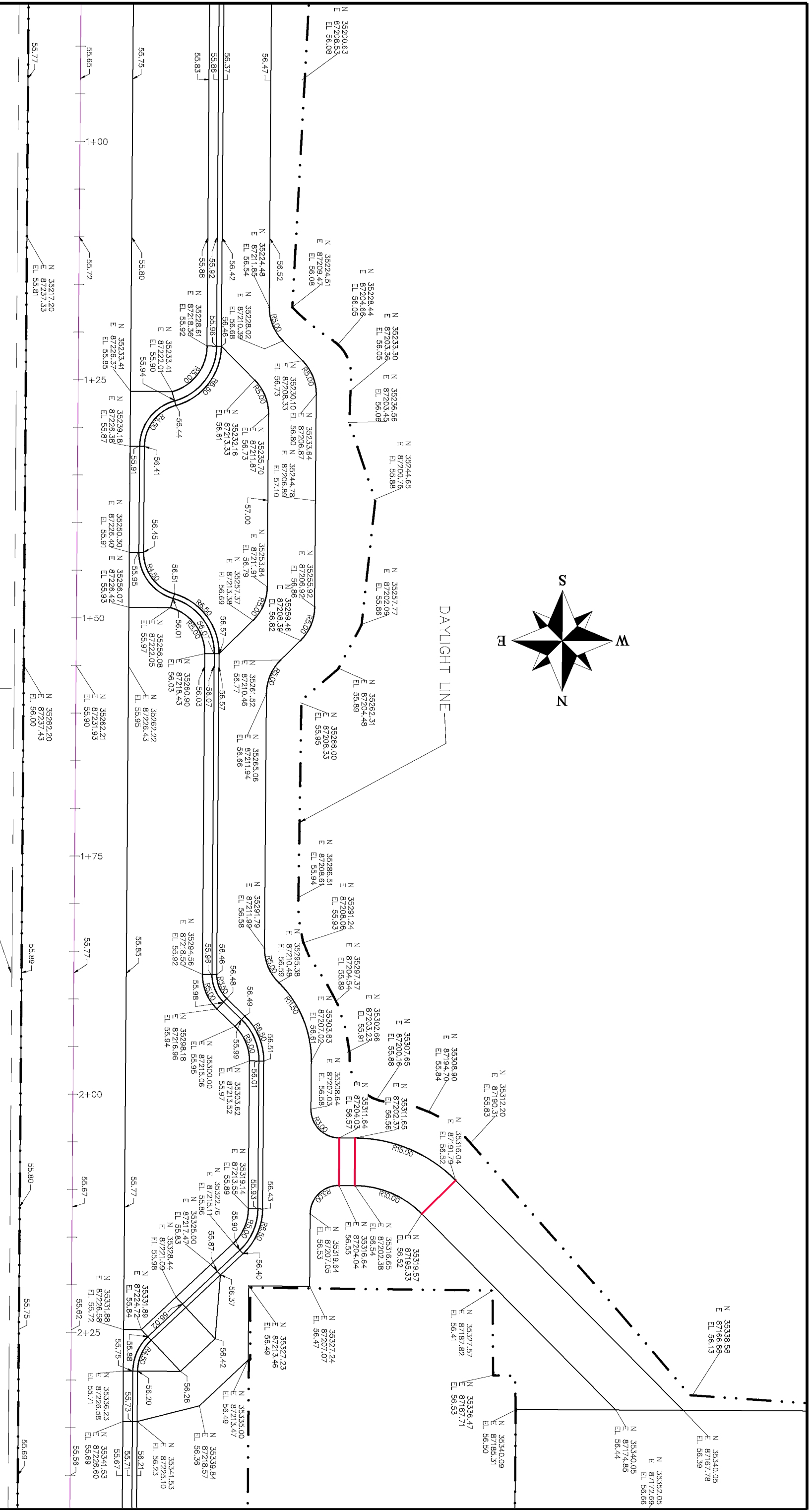
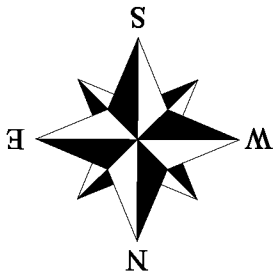
REVISION	DESCRIPTION	DATE
REVISION		
REVISION		
REVISION		

DESIGNED BY	DATE	SCALE
DESIGNED BY	DATE	SCALE
CHECKED BY	DATE	SCALE
APPROVED BY	DATE	SCALE

**CITY OF Grand Junction**  
COLORADO

**PUBLIC WORKS ENGINEERING DIVISION**

**RIVERSIDE PARK IMPROVEMENTS AND BIKE PATH**



REVISION	DESCRIPTION	DATE	DRAWN BY	JCS	DATE	2019
REVISION			DESIGNED BY	TCP	DATE	2019
REVISION			CHECKED BY	TCP	DATE	2019
REVISION			APPROVED BY	TOP	DATE	2019

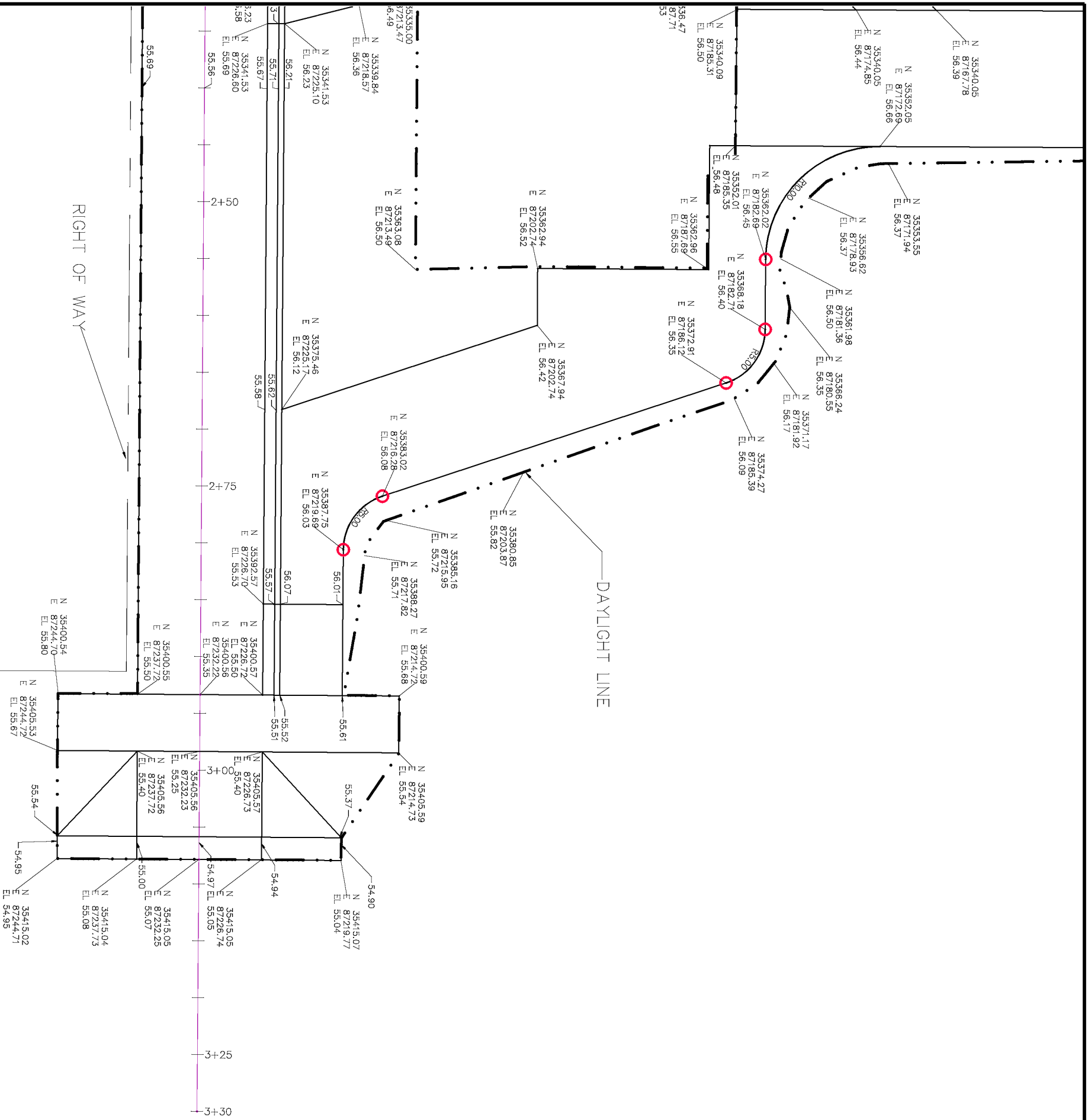
SCALES:	
PLAN & PROFILE	1" = 20'
HORIZONTAL	1" = 20'
VERTICAL	1" = 10'

PUBLIC WORKS  
ENGINEERING DIVISION

RIVERSIDE PARK IMPROVEMENTS AND BIKE PATH  
STAKING PLAN



REVISION	DESCRIPTION	DATE
REVISION		
REVISION		
REVISION		

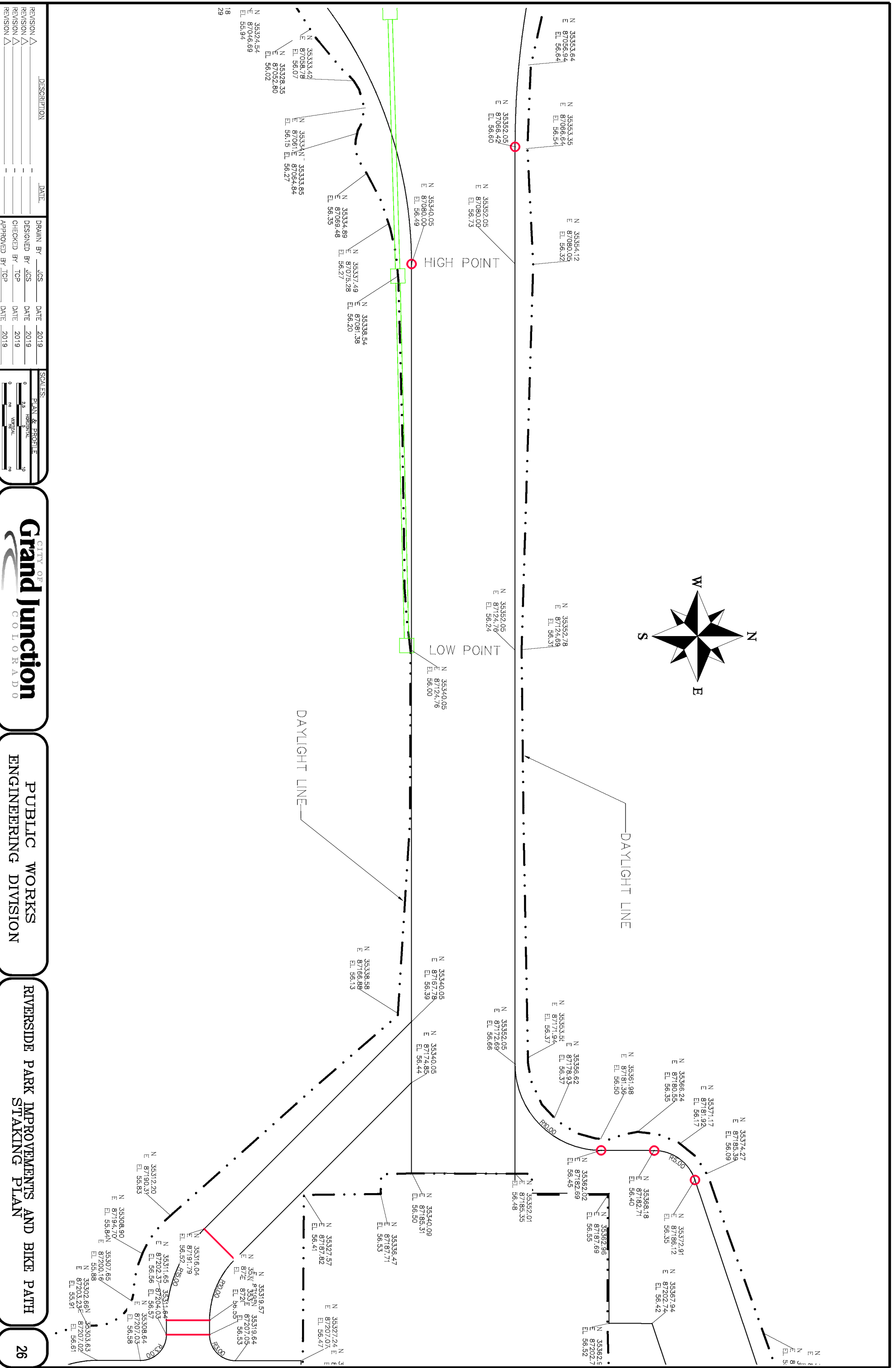
SCALE	DATE
PLAN & PROFILE	2019
DESIGNED BY JCS	2019
CHECKED BY JCS	2019
APPROVED BY JCS	2019

**CITY OF Grand Junction**  
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**PUBLIC WORKS ENGINEERING DIVISION**

**RIVERSIDE PARK IMPROVEMENTS AND BIKE PATH STAKING PLAN**





REVISION	DESCRIPTION	DATE
REVISION A		
REVISION B		
REVISION C		

DRAWN BY	JCS	DATE	2019
DESIGNED BY	JCS	DATE	2019
CHECKED BY	TOP	DATE	2019
APPROVED BY	TOP	DATE	2019

SCALES:

PLAN & PROFILE 1" = 20'

VERTICAL 1" = 10'

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COLORADO

**PUBLIC WORKS ENGINEERING DIVISION**

**RIVERSIDE PARK IMPROVEMENTS AND BIKE PATH STAKING PLAN**

**26**

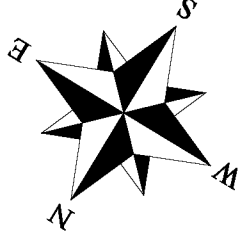
REVISION	DESCRIPTION	DATE
REVISION		
REVISION		
REVISION		

DATE	DESIGNED BY	CHECKED BY	APPROVED BY
2017	JCS	TCP	TCP
2017	JCS	TCP	TCP
2017	JCS	TCP	TCP

SCALE	PLAN & PROFILE
0	PLAN & PROFILE
1" = 30'	PLAN & PROFILE
1" = 10'	PLAN & PROFILE

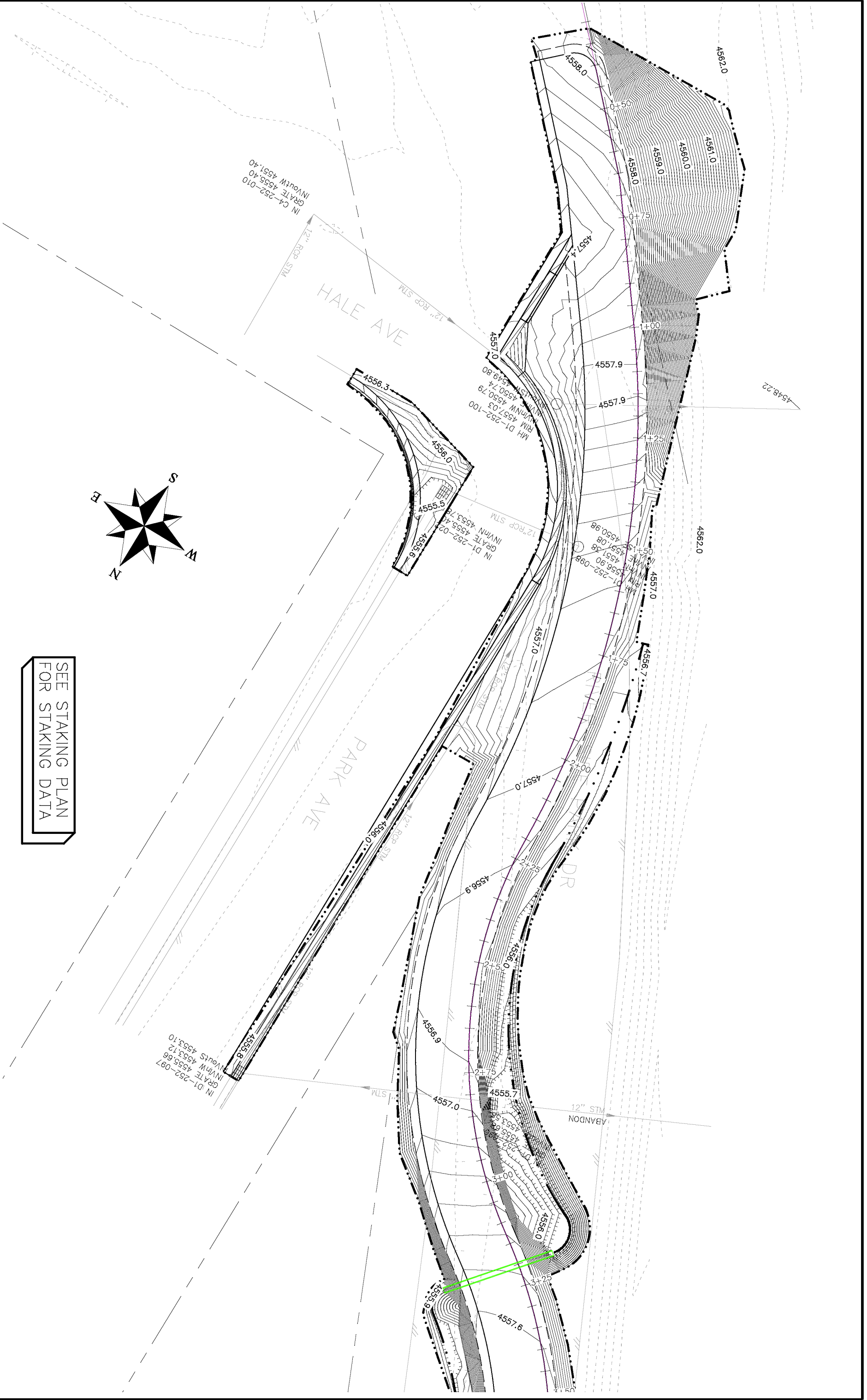


SEE STAKING PLAN FOR STAKING DATA

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COLORADO

**PUBLIC WORKS ENGINEERING DIVISION**

**RIVERSIDE PARK IMPROVEMENTS AND BIKE PATH TENTH FOOT CONTOUR PLAN**



REVISION	DESCRIPTION	DATE
REVISION $\Delta$		
REVISION $\Delta$		
REVISION $\Delta$		

DRAWN BY	JCS	DATE	2017
DESIGNED BY	JCS	DATE	2017
CHECKED BY	TOP	DATE	2017
APPROVED BY	TOP	DATE	2017

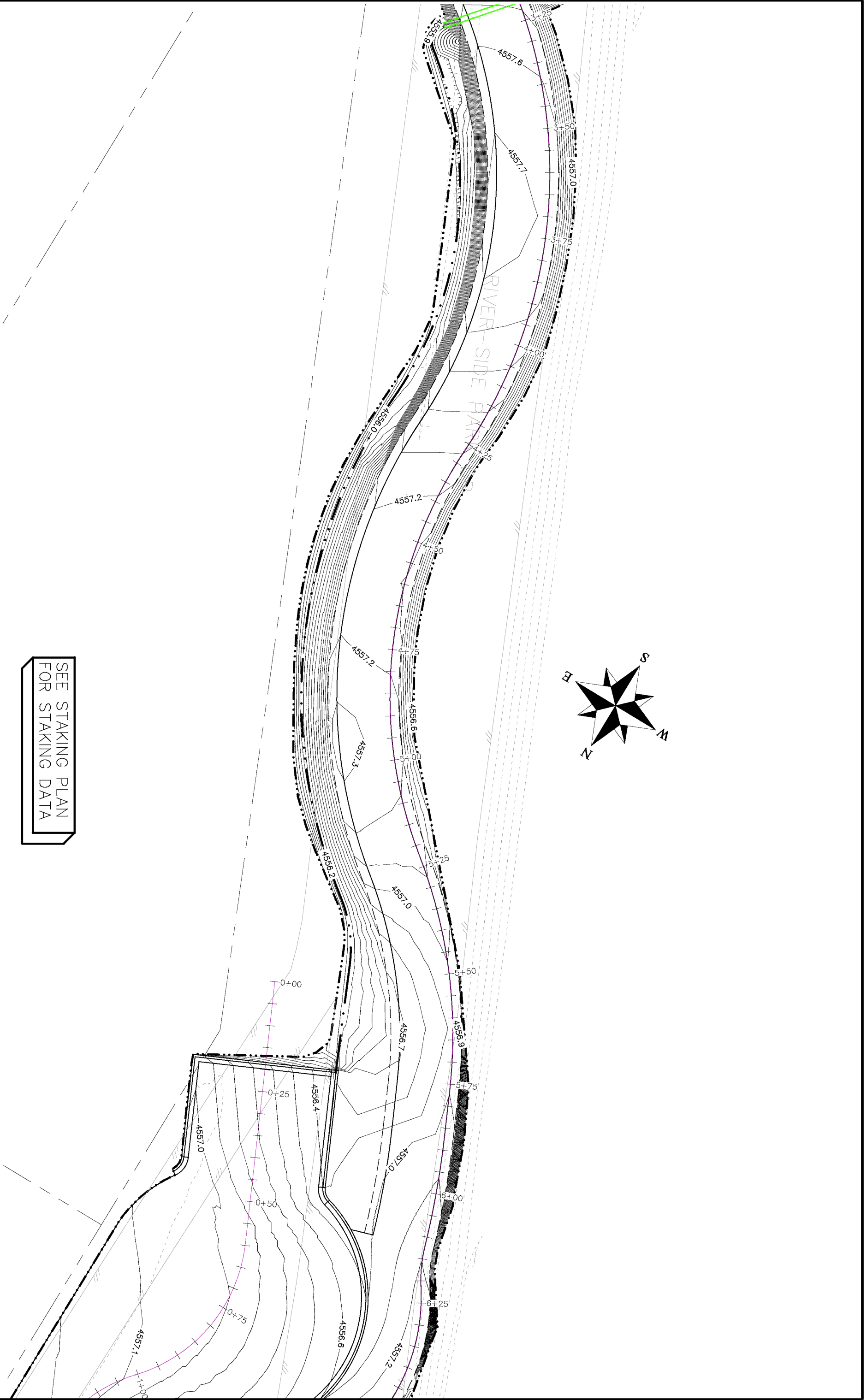
SCALES:	PLAN & PROFILE
0	1" = 40'
0	1" = 20'

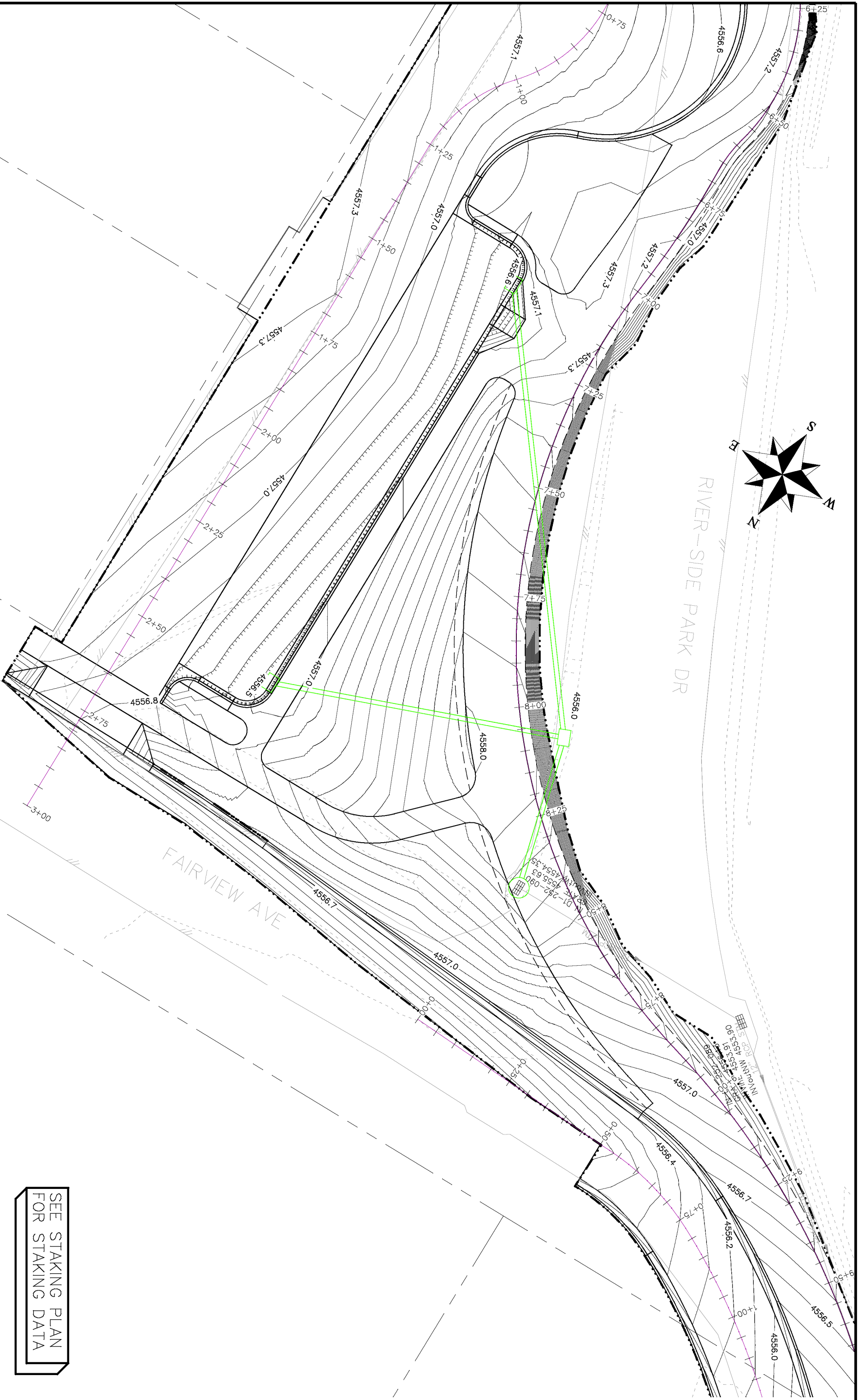
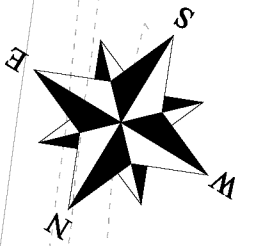


PUBLIC WORKS  
ENGINEERING DIVISION

RIVERSIDE PARK IMPROVEMENTS AND BIKE PATH  
TENTH FOOT CONTOUR PLAN

SEE STAKING PLAN  
FOR STAKING DATA





REVISION	DESCRIPTION	DATE
REVISION		
REVISION		
REVISION		

DATE	DESCRIPTION	DATE
2017	DRAWN BY JCS	2017
2017	DESIGNED BY JCS	2017
2017	CHECKED BY TCP	2017
2017	APPROVED BY TCP	2017

SCALE	PLAN & PROFILE
0" = 30'	0" = 30'
0" = 30'	0" = 30'
0" = 30'	0" = 30'



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ENGINEERING DIVISION

RIVERSIDE PARK IMPROVEMENTS AND BIKE PATH  
TENTH FOOT CONTOUR PLAN

SEE STAKING PLAN  
FOR STAKING DATA

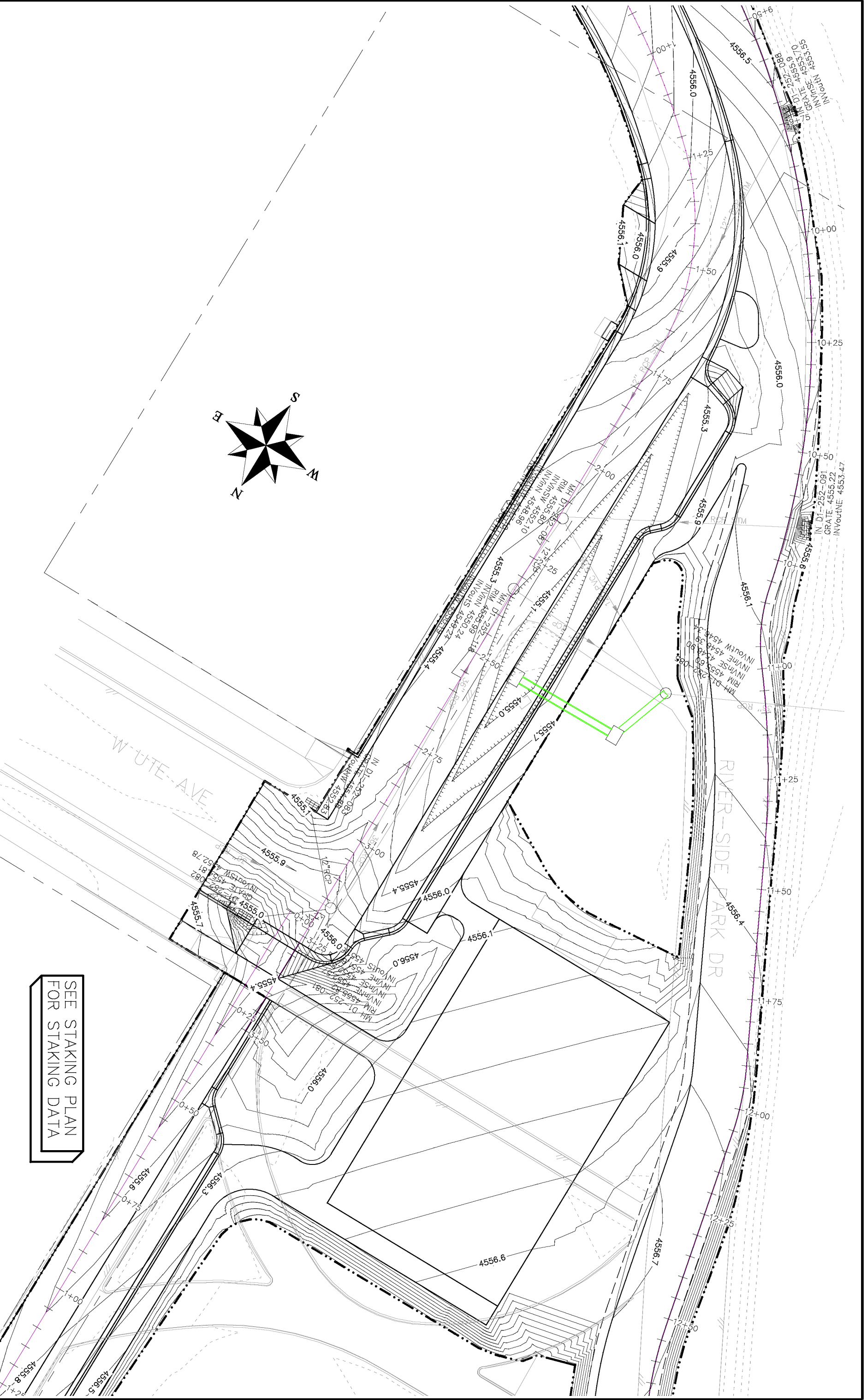
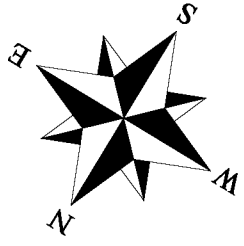
REVISION	DESCRIPTION	DATE
REVISION		
REVISION		
REVISION		

DRAWN BY	JCS	DATE	2017
DESIGNED BY	JCS	DATE	2017
CHECKED BY	TCP	DATE	2017
APPROVED BY	TCP	DATE	2017

SCALES	PLAN & PROFILE
0	30
0	30

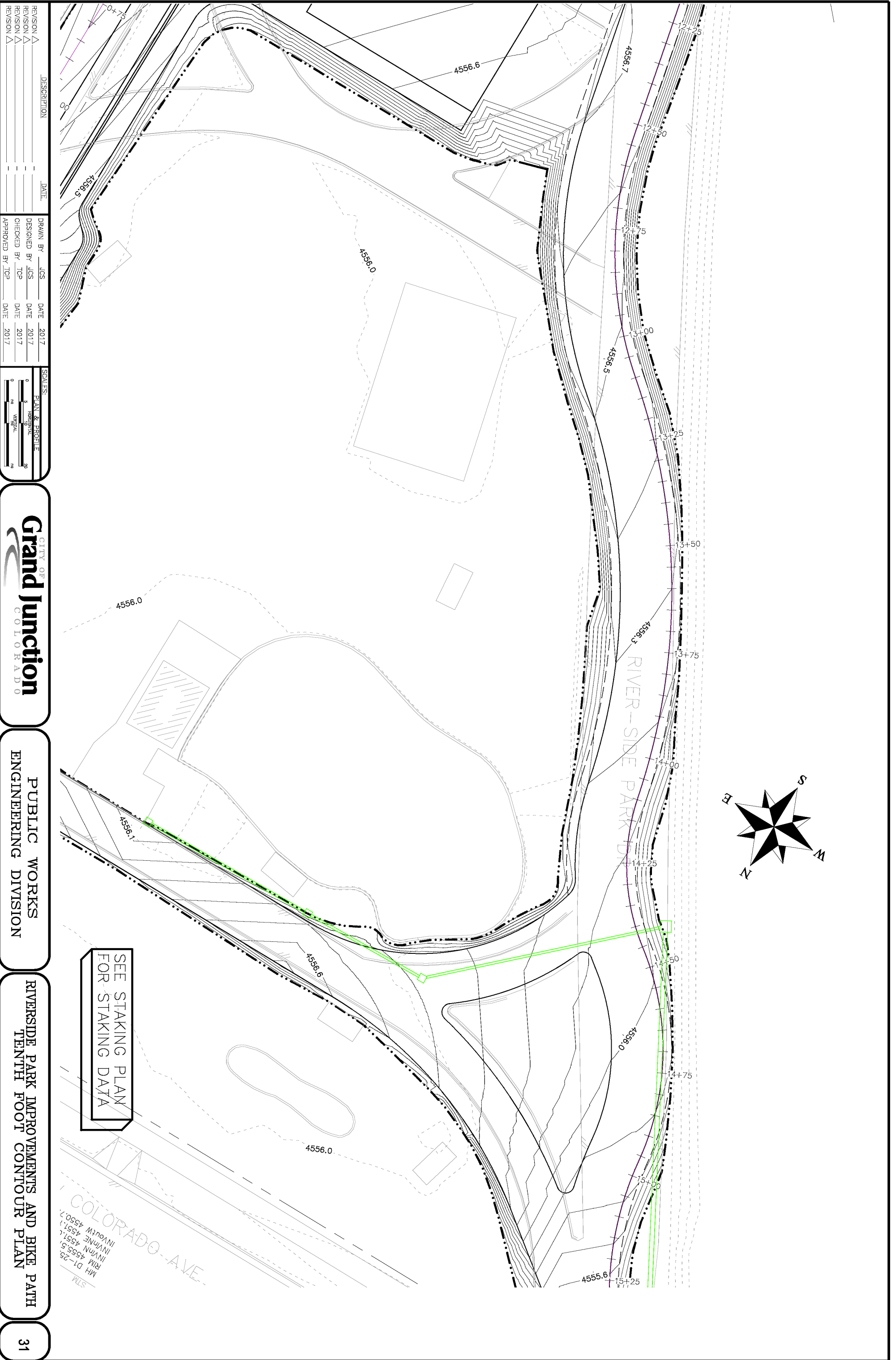


SEE STAKING PLAN FOR STAKING DATA



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RIVERSIDE PARK IMPROVEMENTS AND BIKE PATH  
TENTH FOOT CONTOUR PLAN



REVISION	DESCRIPTION	DATE
REVISION		
REVISION		
REVISION		

DATE	BY	DATE
2017	JCS	2017
2017	JCS	2017
2017	TCP	2017
2017	TCP	2017

SCALE	PLAN & PROFILE
0	0
9	9
18	18
27	27
36	36

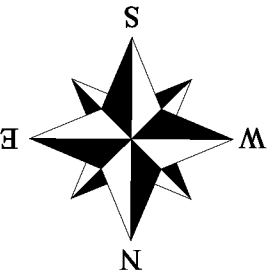
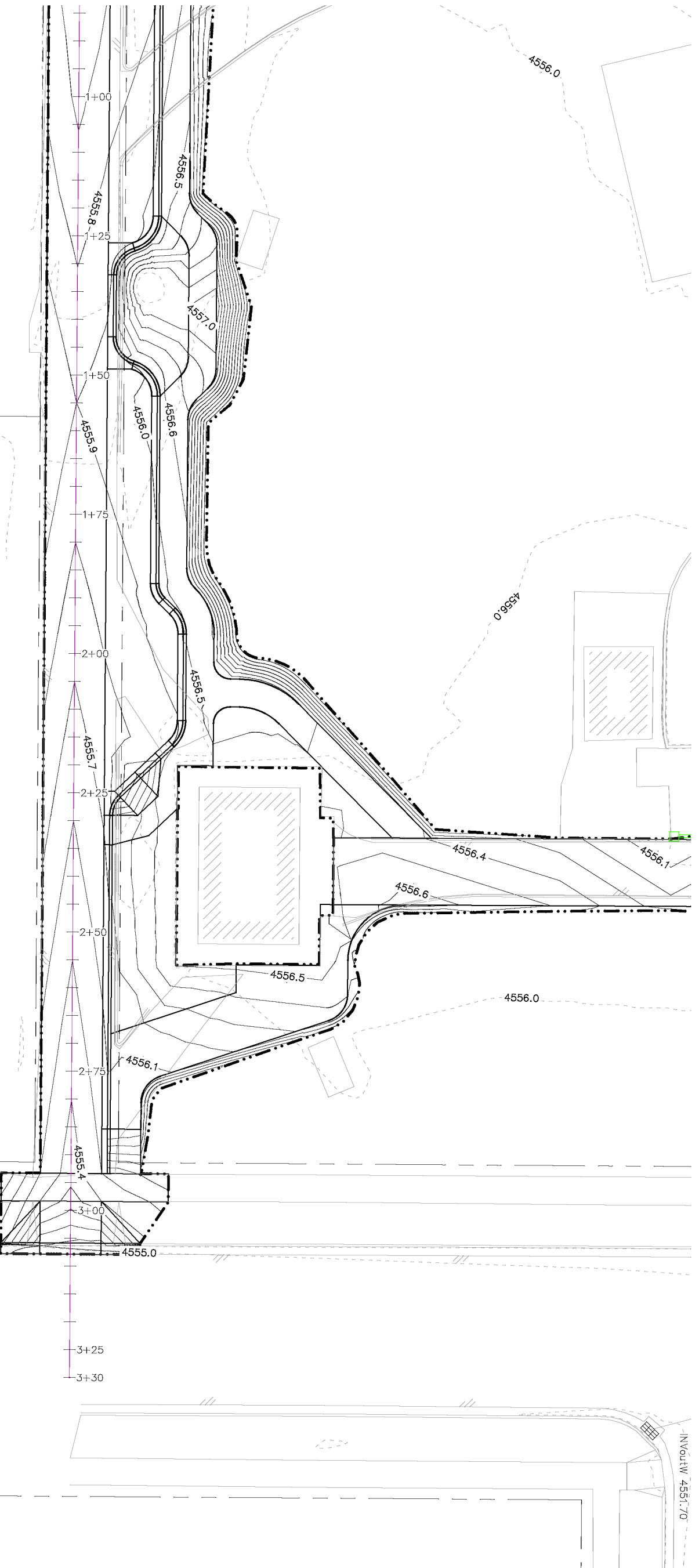


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ENGINEERING DIVISION

RIVERSIDE PARK IMPROVEMENTS AND BIKE PATH  
TENTH FOOT CONTOUR PLAN

SEE STAKING PLAN  
FOR STAKING DATA

COLORADO AVE  
MH D1-25  
RM 4555.5  
INV@N 4551.4  
INV@W 4551.7  
INVERT 4550.7  
STM



SEE STAKING PLAN  
FOR STAKING DATA

REVISION	DESCRIPTION	DATE
REVISION		
REVISION		
REVISION		

DATE	DESCRIPTION	DATE
2017	DRAWN BY JCS	2017
2017	DESIGNED BY JCS	2017
2017	CHECKED BY TCP	2017
2017	APPROVED BY TCP	2017

SCALE	PLAN & PROFILE
0	0
10	10
20	20



PUBLIC WORKS  
ENGINEERING DIVISION

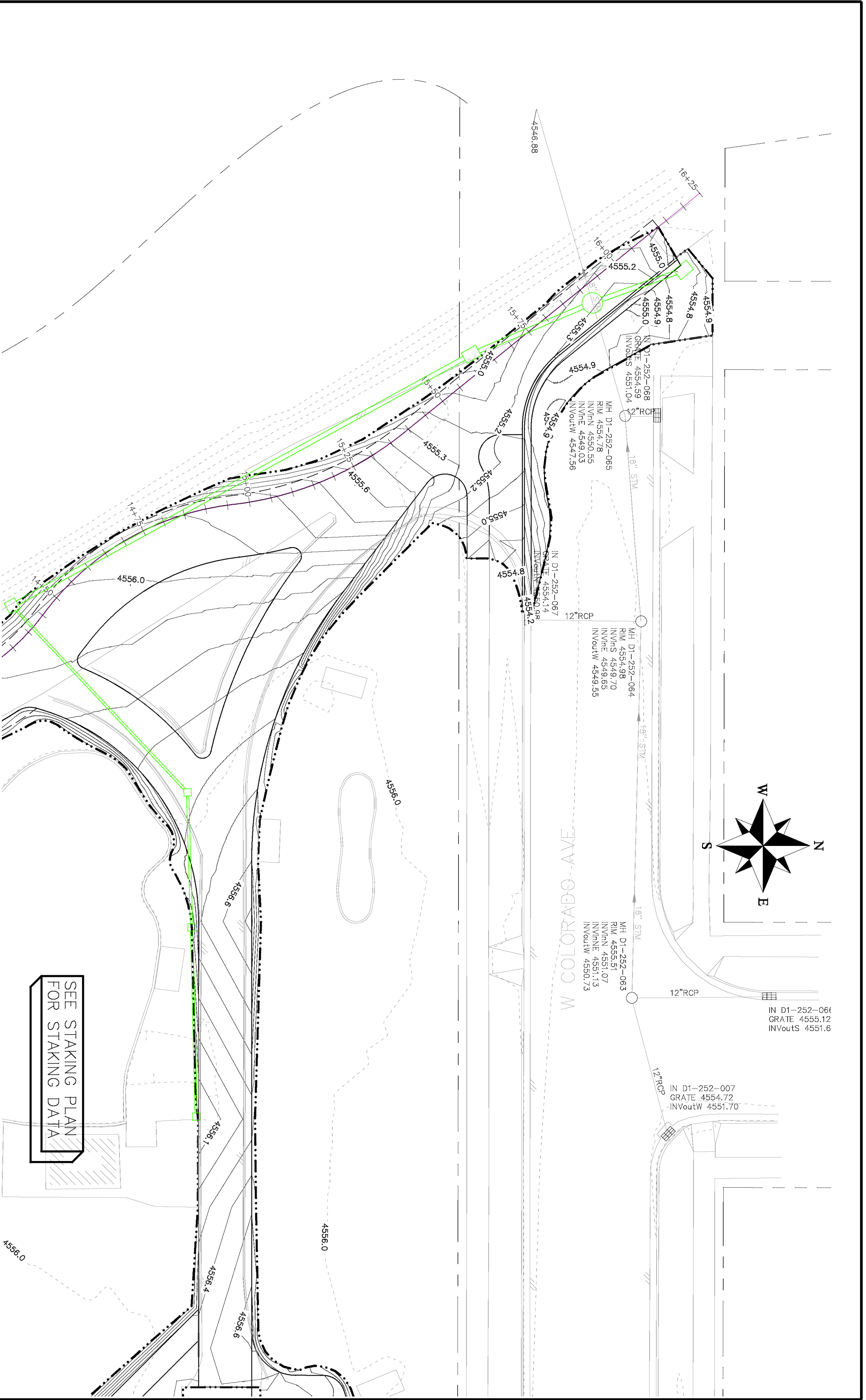
RIVERSIDE PARK IMPROVEMENTS AND BIKE PATH  
TENTH FOOT CONTOUR PLAN

REVISION	DESCRIPTION	DATE

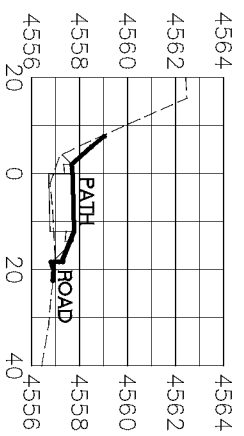
**CITY OF Grand Junction**  
C O L O R A D O

PUBLIC WORKS  
ENGINEERING DIVISION

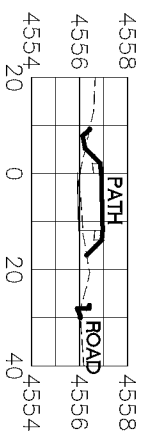
RIVERSIDE PARK IMPROVEMENTS AND BIKE PATH  
TENTH FOOT CONTOUR PLAN



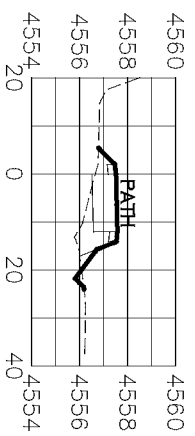




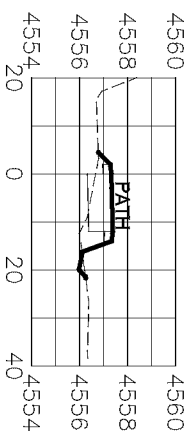
1+25.00



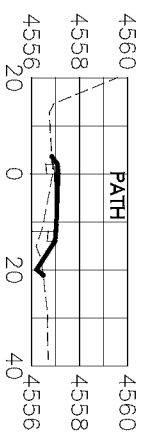
2+25.00



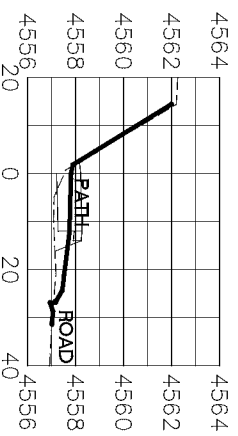
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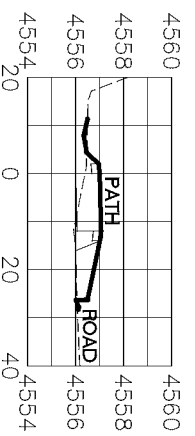
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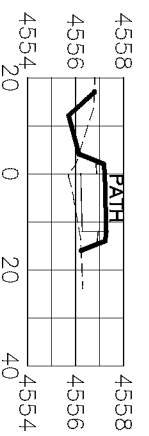
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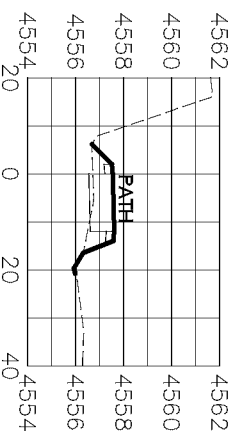
1+00.00



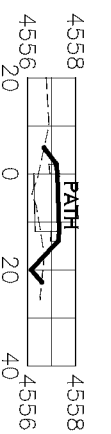
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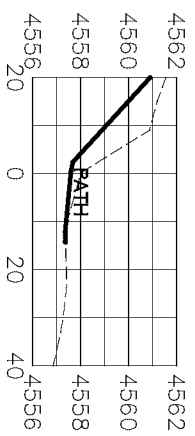
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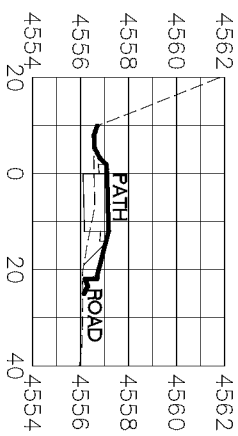
4+00.00



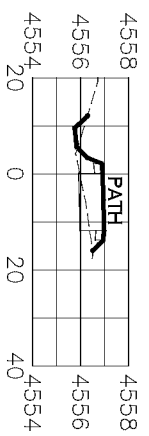
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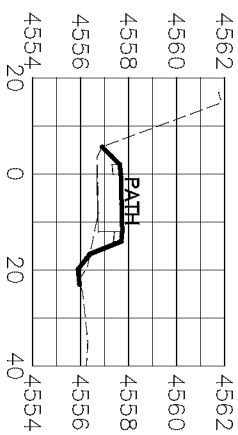
0+75.00



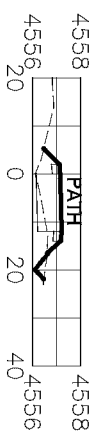
1+75.00



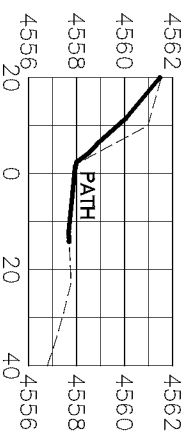
2+75.00



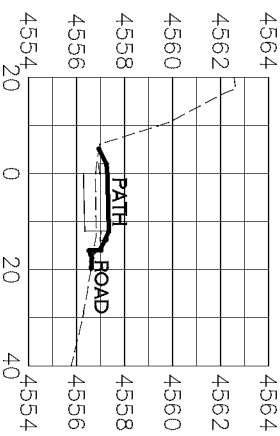
3+75.00



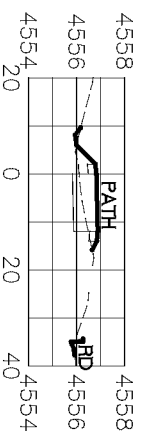
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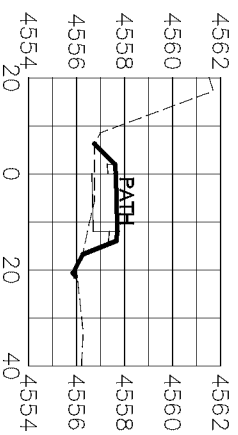
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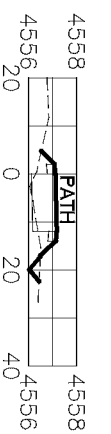
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2+50.00



3+50.00



4+50.00

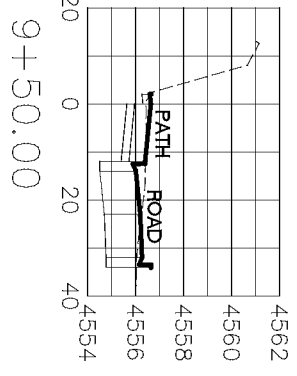
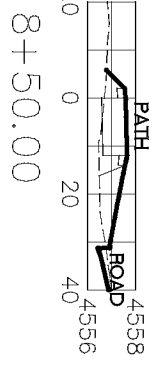
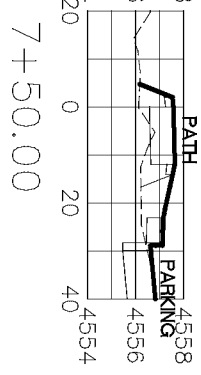
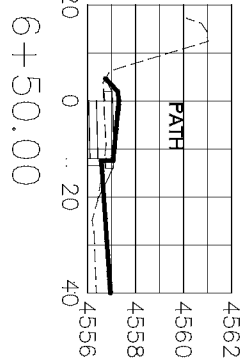
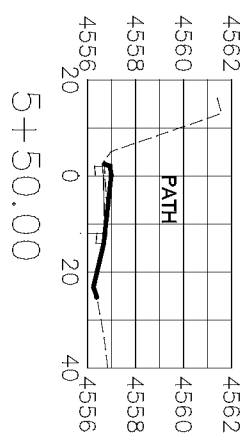
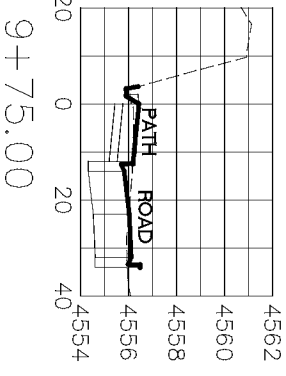
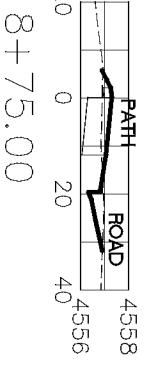
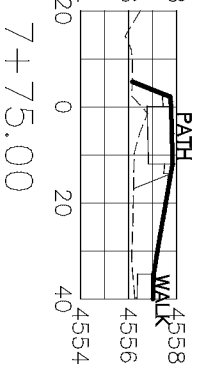
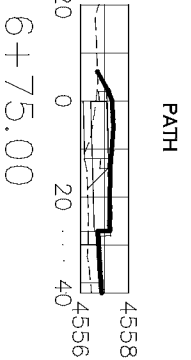
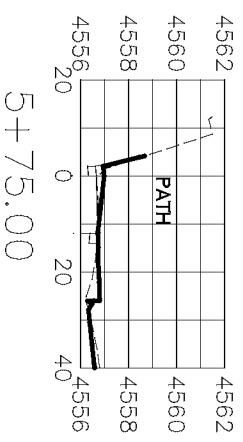
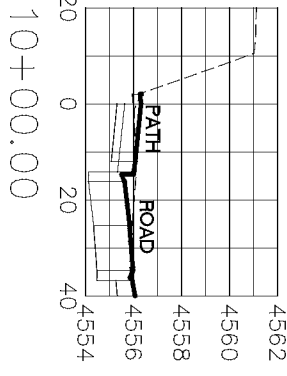
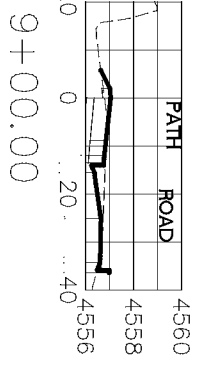
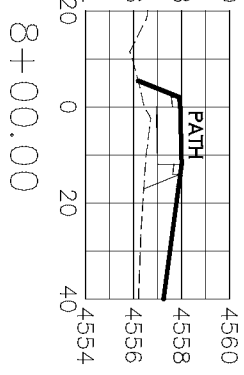
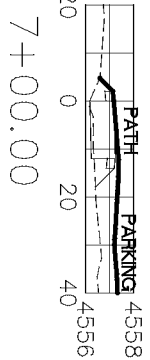
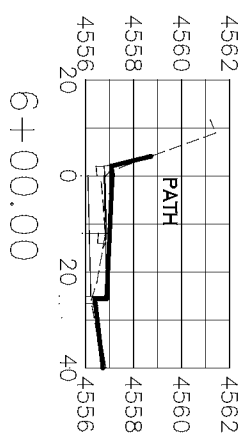
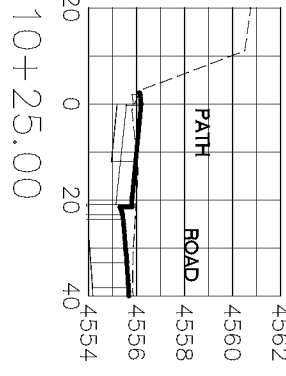
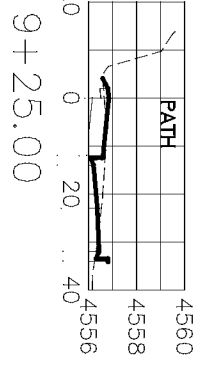
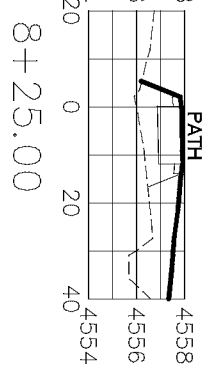
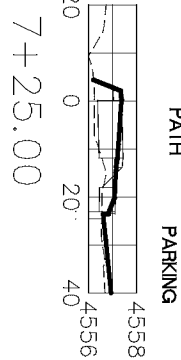
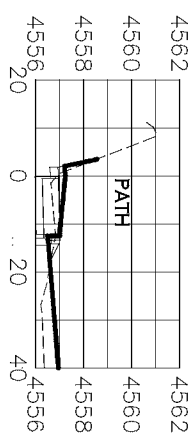
CONTROL LINE/WEST EDGE BIKE PATH

REVISION	DESCRIPTION	DATE	DESIGNED BY	DATE	CHECKED BY	DATE	APPROVED BY	DATE
REVISION			JCS	2018	JCS	2018		
REVISION			JCS	2018	JCS	2018		
REVISION			JCS	2018	JCS	2018		
REVISION			JCS	2018	JCS	2018		



PUBLIC WORKS ENGINEERING DIVISION

RIVERSIDE PARK IMPROVEMENTS AND BIKE PATH CROSS SECTIONS



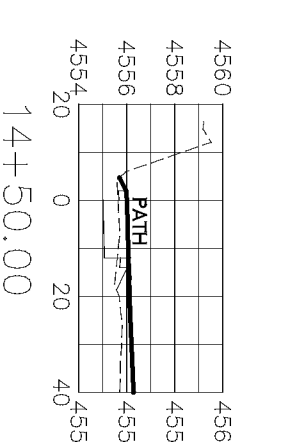
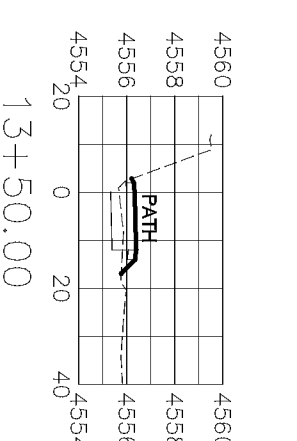
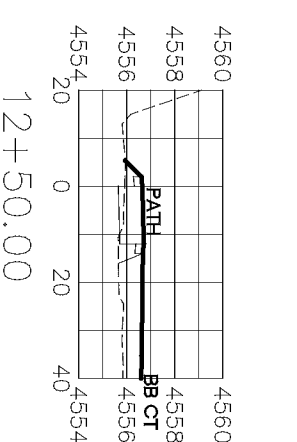
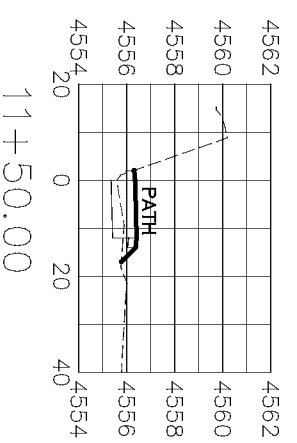
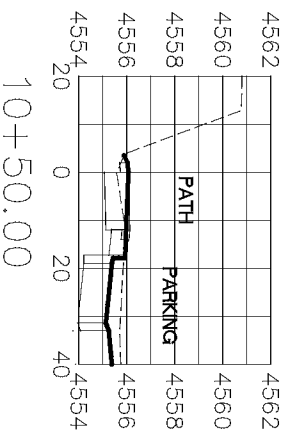
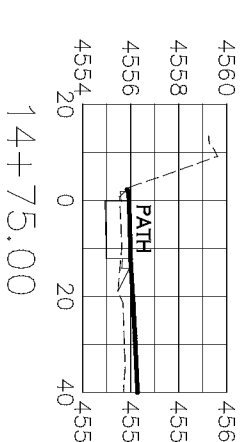
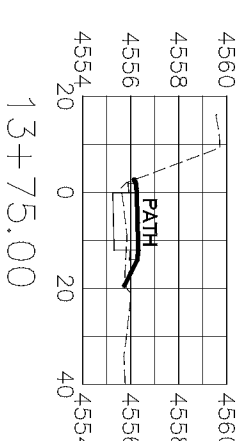
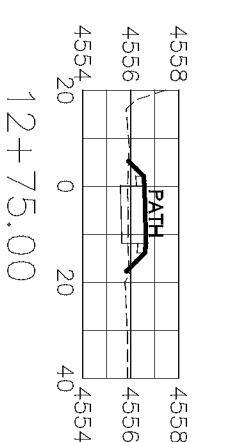
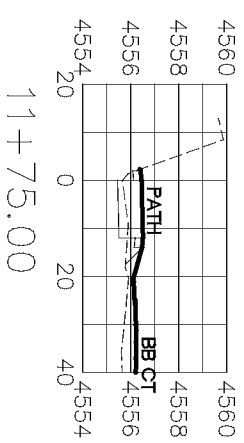
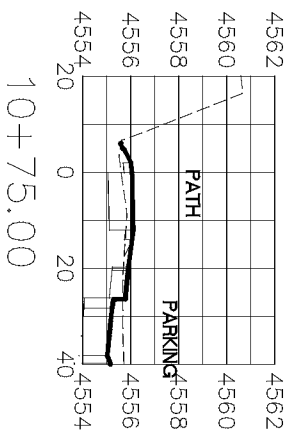
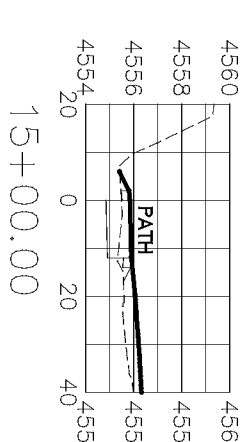
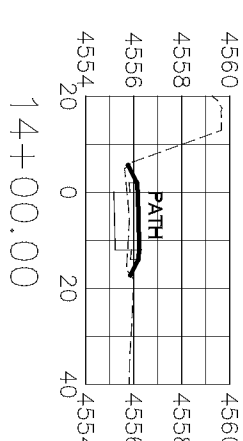
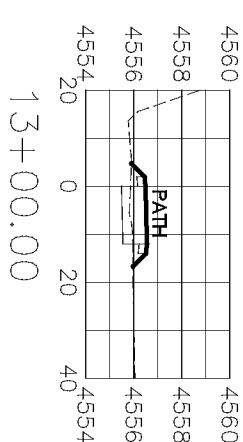
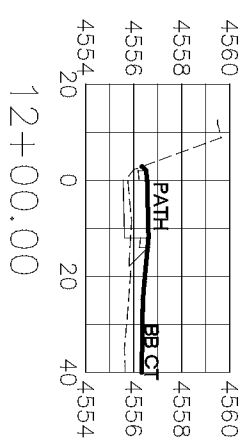
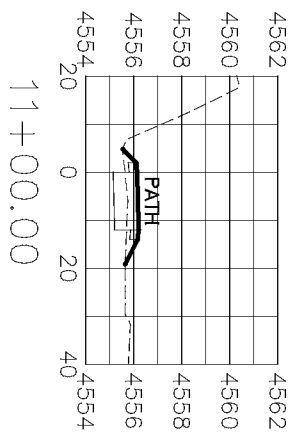
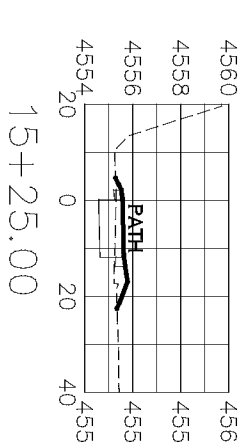
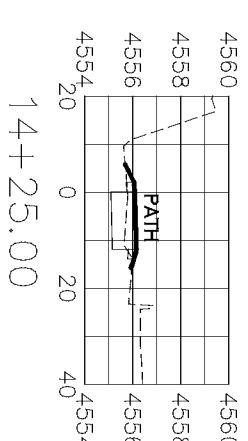
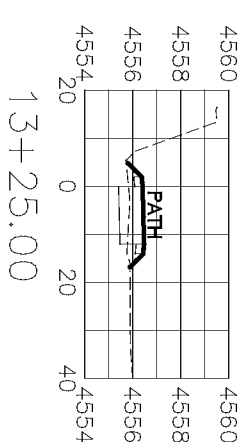
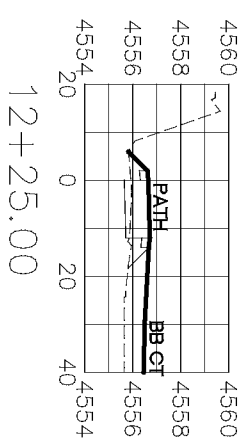
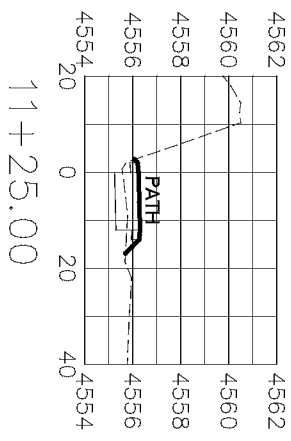
CONTROL LINE/WEST EDGE BIKE PATH

REVISION	DESCRIPTION	DATE	DESIGNED BY	DATE	SCALE
REVISION			JCS	2018	PLAN & PROFILE
REVISION			JCS	2018	0 20 40
REVISION			JCS	2018	0 4 8
REVISION			JCS	2018	0 19



PUBLIC WORKS ENGINEERING DIVISION

RIVERSIDE PARK IMPROVEMENTS AND BIKE PATH CROSS SECTIONS



CONTROL LINE/WEST EDGE BIKE PATH

REVISION	DESCRIPTION	DATE	DESIGNED BY	DATE	SCALE
1	DESIGNED	2018	JCS	2018	AS SHOWN
2	CHECKED	2018	JCS	2018	AS SHOWN
3	APPROVED	2018	JCS	2018	AS SHOWN



PUBLIC WORKS  
ENGINEERING DIVISION

RIVERSIDE PARK IMPROVEMENTS AND BIKE PATH  
CROSS SECTIONS

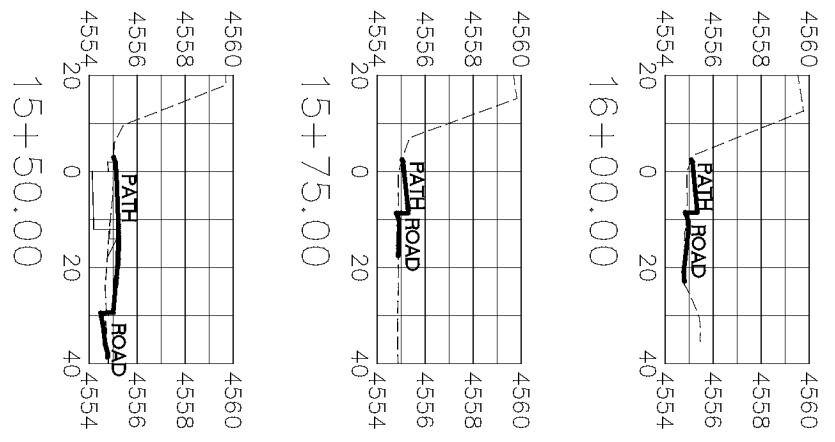
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REVISION			JCS	2018	PROFILING
REVISION			TCP	2018	VERTICAL
REVISION			TCP	2018	PLAN

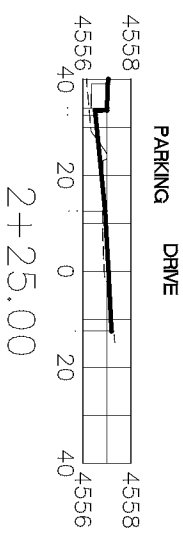
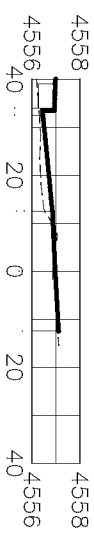
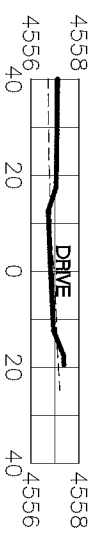
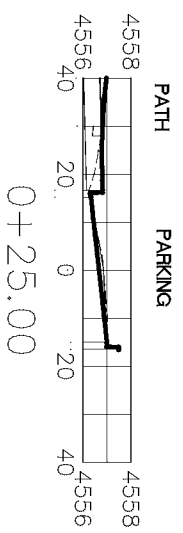
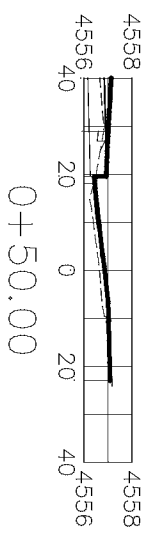
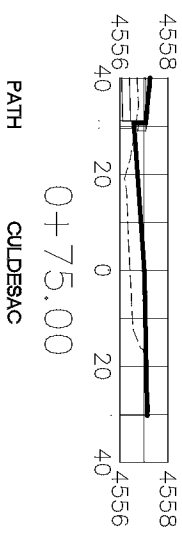
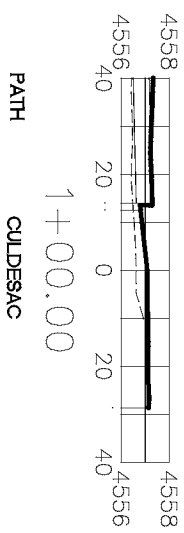
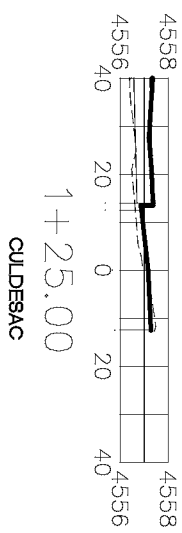
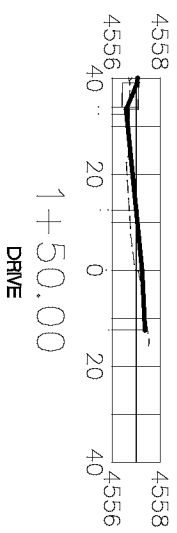
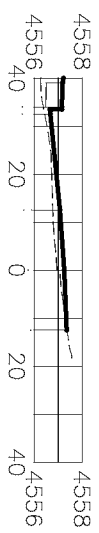
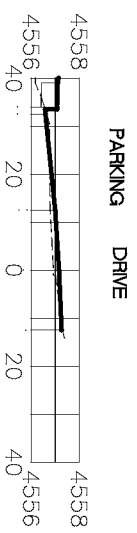


PUBLIC WORKS  
ENGINEERING DIVISION

RIVERSIDE PARK IMPROVEMENTS AND BIKE PATH  
CROSS SECTIONS

CONTROL LINE/WEST EDGE BIKE PATH





CENTER LINE PARKING CUL-DE-SAC

REVISION	DESCRIPTION	DATE
REVISION		
REVISION		
REVISION		

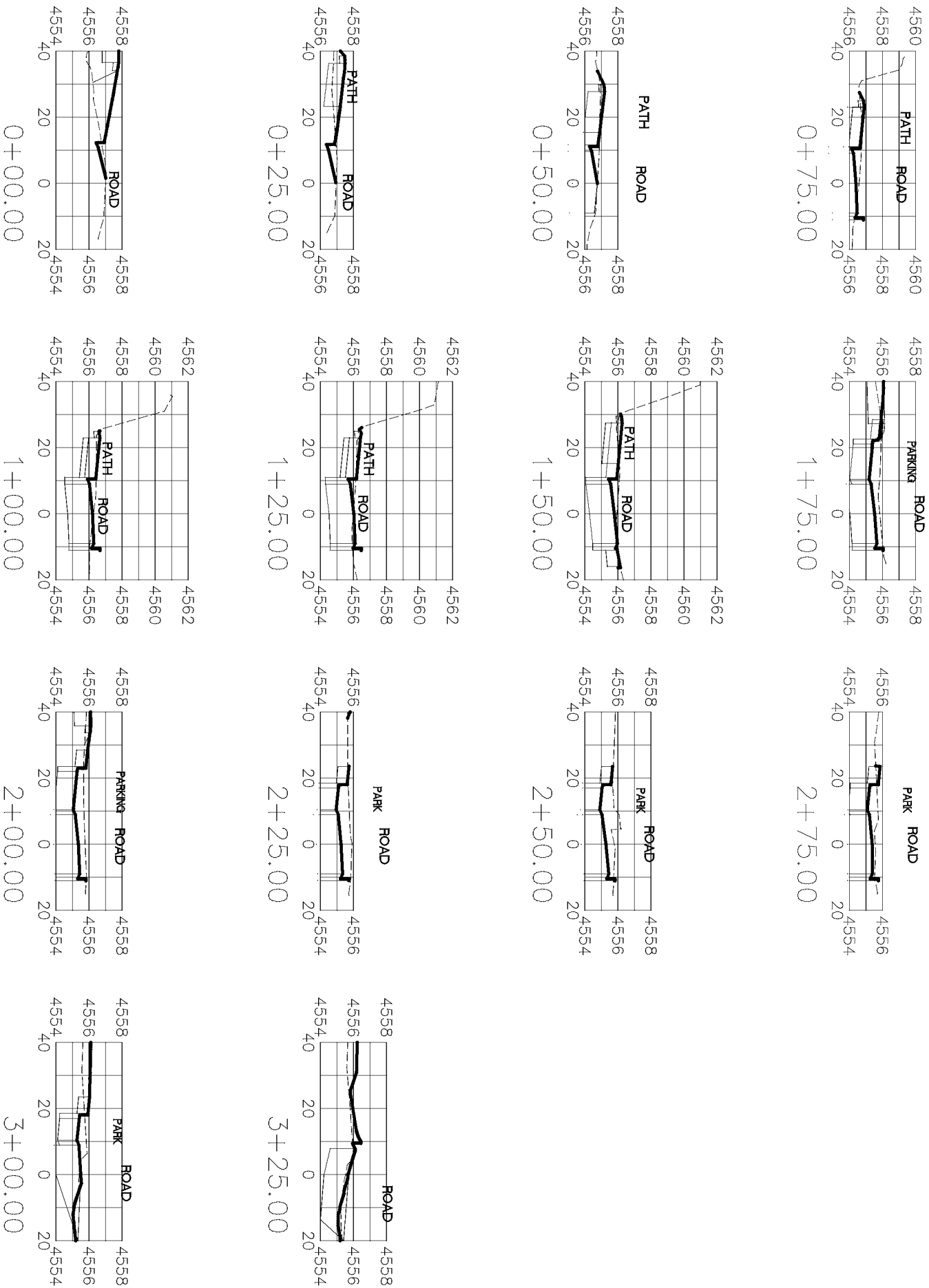
DESIGNED BY	DATE
JCS	2018
CHECKED BY	DATE
JCS	2018
APPROVED BY	DATE
JCS	2018

SCALE
PLAN & PROFILE
0" = 20'
0" = 4'
0" = 19'



PUBLIC WORKS  
ENGINEERING DIVISION

RIVERSIDE PARK IMPROVEMENTS AND BIKE PATH  
CROSS SECTIONS



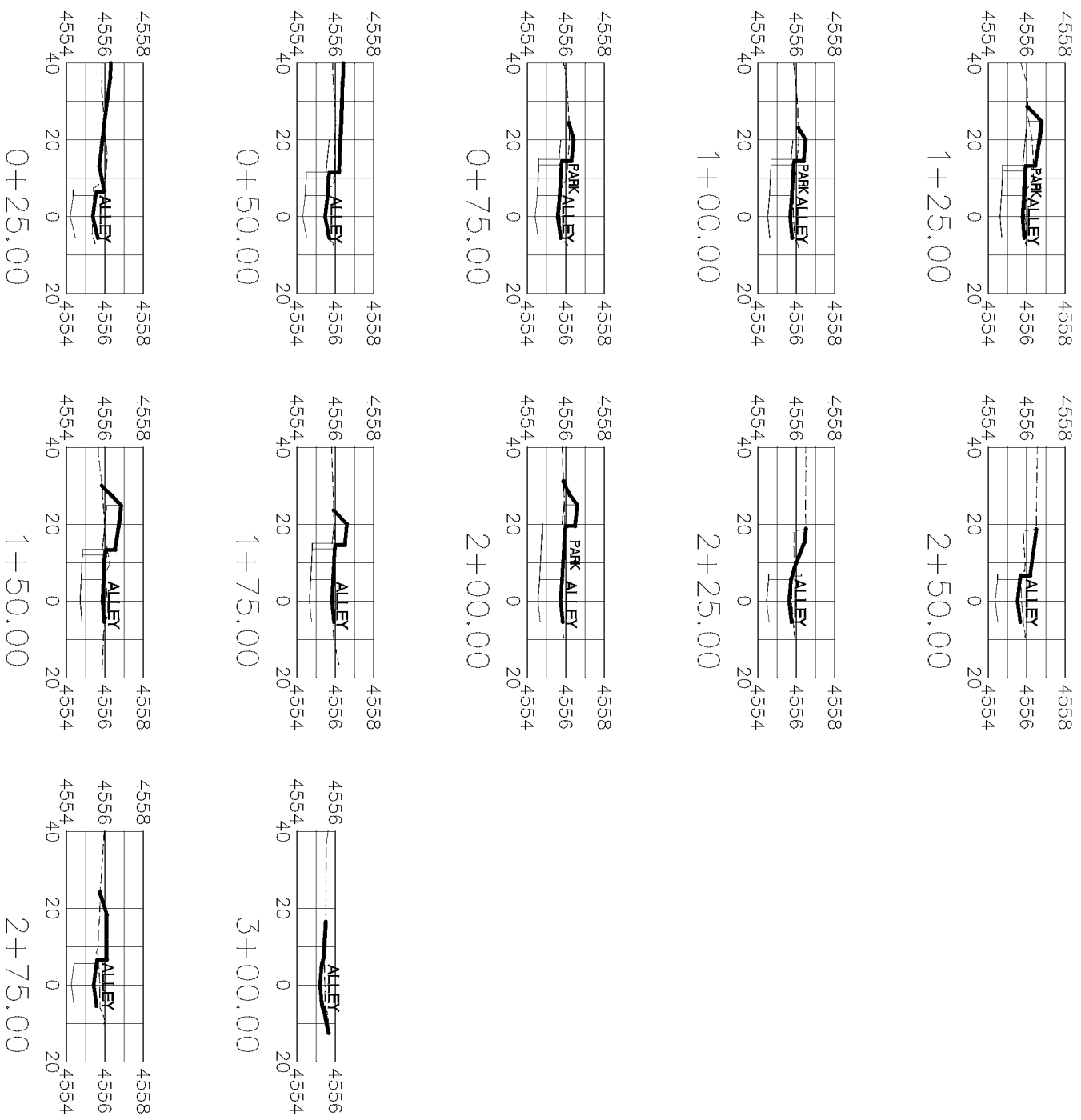
CENTER LINE NEW RIVER-SIDE PARK DRIVE

REVISION	DESCRIPTION	DATE	DESIGNED BY	DATE	SCALE
REVISION			JCS	2018	PLAN & PROFILE
REVISION			JCS	2018	1" = 40'
REVISION			JCS	2018	1" = 40'
REVISION			JCS	2018	1" = 40'



PUBLIC WORKS  
ENGINEERING DIVISION

RIVERSIDE PARK IMPROVEMENTS AND BIKE PATH  
CROSS SECTIONS



CENTER LINE PARK ALLEY

REVISION	DESCRIPTION	DATE	DESIGNED BY	DATE	SCALE
REVISION			JCS	2018	PLAN & PROFILE
REVISION			JCS	2018	1/8" = 1'-0"
REVISION			TOP	2018	1/4" = 1'-0"
REVISION			TOP	2018	1/2" = 1'-0"



PUBLIC WORKS  
ENGINEERING DIVISION

RIVERSIDE PARK IMPROVEMENTS AND BIKE PATH  
CROSS SECTIONS

**EROSION CONTROL MEASURES**

Contractor to update the SWMP according to specific construction phasing and stormwater management practices for current construction activity when warranted.

**Site Description**

1. The site has a total disturbance area of 2.4 acres with the majority of disturbance being caused by the Improvements to Riverside Park and the new bike path construction.
2. Stormwater leaves the site through a series of three existing storm drain collection systems directly to the Colorado River.
3. Proposed utilities for this project include: storm drain.

**Performance Standards**

The general requirements for erosion control work shall be as follows:

1. Any grading shall be conducted in such a manner so as to effectively reduce accelerated soil erosion and resulting sedimentation.
2. All grading shall be designed, constructed and completed in such a manner so that exposed area of any disturbed land shall be limited to the shortest time period.
3. Sediment caused by accelerated soil erosion shall be removed from runoff water before leaving the site.
4. The contractor shall try to minimize the amount of disturbance necessary for the construction project by preserving established vegetation to act as a BMP.

**During Construction (Temporary Measures)**

1. Inlet Protection: The use of inlet protection is proposed at all inlets to trap sediment before entering the storm drain collection systems that discharge directly into the Colorado River.

**After Construction (Permanent Measures)**

1. Reseeding: the majority of the site will be seeded with grass or other plantings by City of Grand Junctions Parks. All disturbed areas will be seeded if otherwise not proposed to be paved.

**Maintenance**

1. The contractor or his designated representative shall make routine checks on all erosion control measures to determine if repairs or sediment removal is necessary.
2. After each rainfall or moderate snow melt, erosion control measures are to be checked. If repairs are needed, they shall be completed immediately.
3. When temporary measures are to be removed, any silt and sediment deposits shall be removed and spread evenly in fill areas.

**General Notes**

1. The SWMP establishes the minimum acceptable requirements for stormwater pollution prevention on site. The Contractor may supplement these requirements as appropriate for specific construction activities. Any changes to the practices shown on this plan must be reviewed by Project Inspector/Engineer prior to implementation.
2. At all times during construction, erosion and sediment control shall be maintained by the contractor or his designated representative.
3. Erosion control systems shall be installed as grading progresses.
4. The Contractor shall provide and maintain a portable concrete washout facility.
5. Details shown are schematic only. Adjust as necessary to fit field conditions.
6. Negative impacts to downstream areas (or receiving waters) caused by the slope grading to be monitored and corrected by the contractor.
7. Construction traffic entrances shall be cleaned on a continual basis during slope grading.
8. A copy of the SWMP and construction plans shall be maintained on site at all times.

REVISION	DESCRIPTION	DATE
REVISION		
REVISION		
REVISION		

DATE	BY	DATE
2019	JCS	2019
2019	JCS	2019
2019	TOP	2019
2019	TOP	2019



**PUBLIC WORKS  
ENGINEERING DIVISION**

**RIVERSIDE PARK IMPROVEMENTS AND BIKE PATH  
STORM WATER MANAGEMENT NOTES**



REVISION	DESCRIPTION	DATE
REVISION		
REVISION		
REVISION		

DRAWN BY	JCS	DATE	2019
DESIGNED BY	JCS	DATE	2019
CHECKED BY	TOP	DATE	2019
APPROVED BY	TOP	DATE	2019

SCALES:

PLAN & PROFILE 1" = 10'

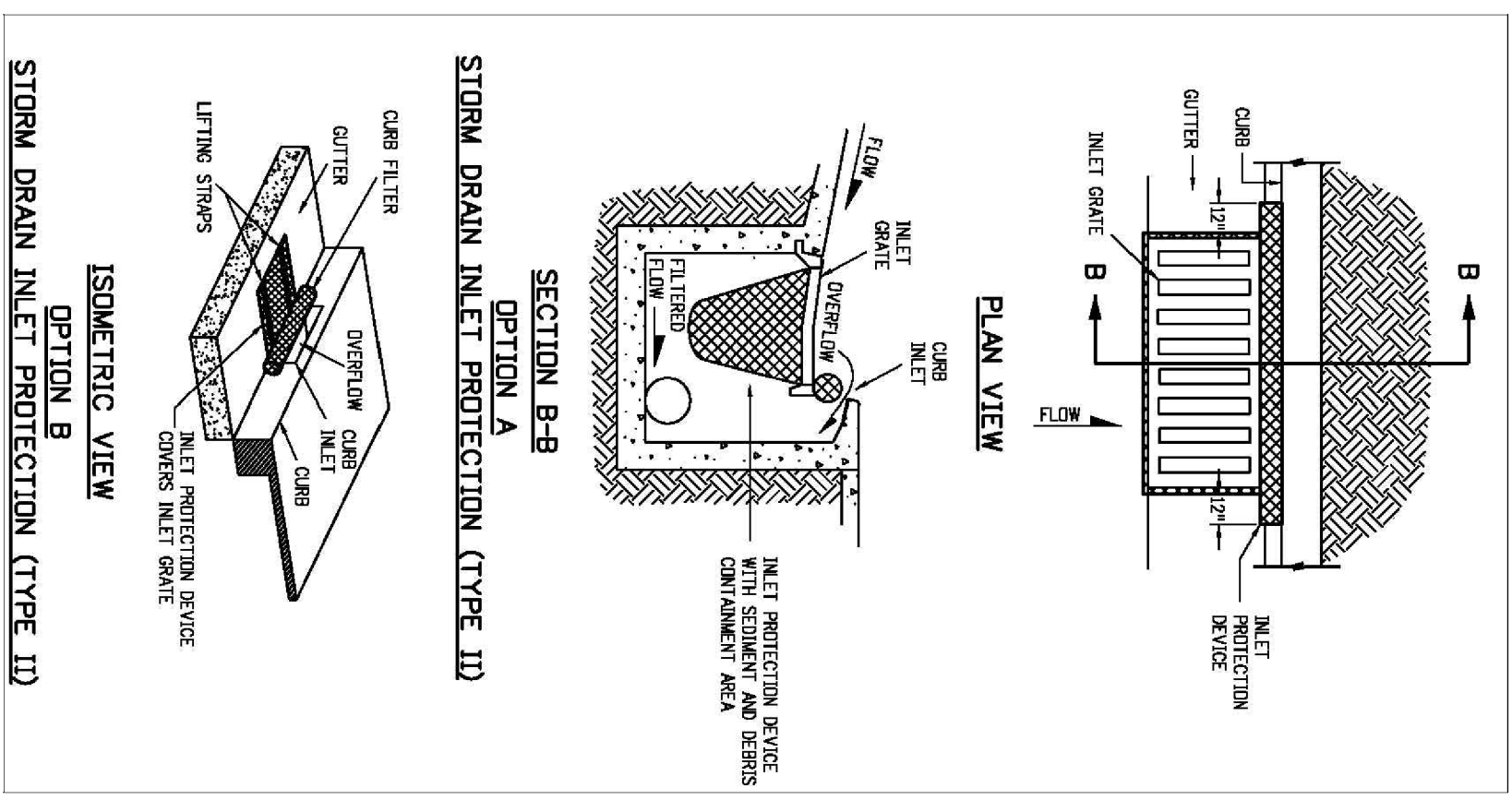
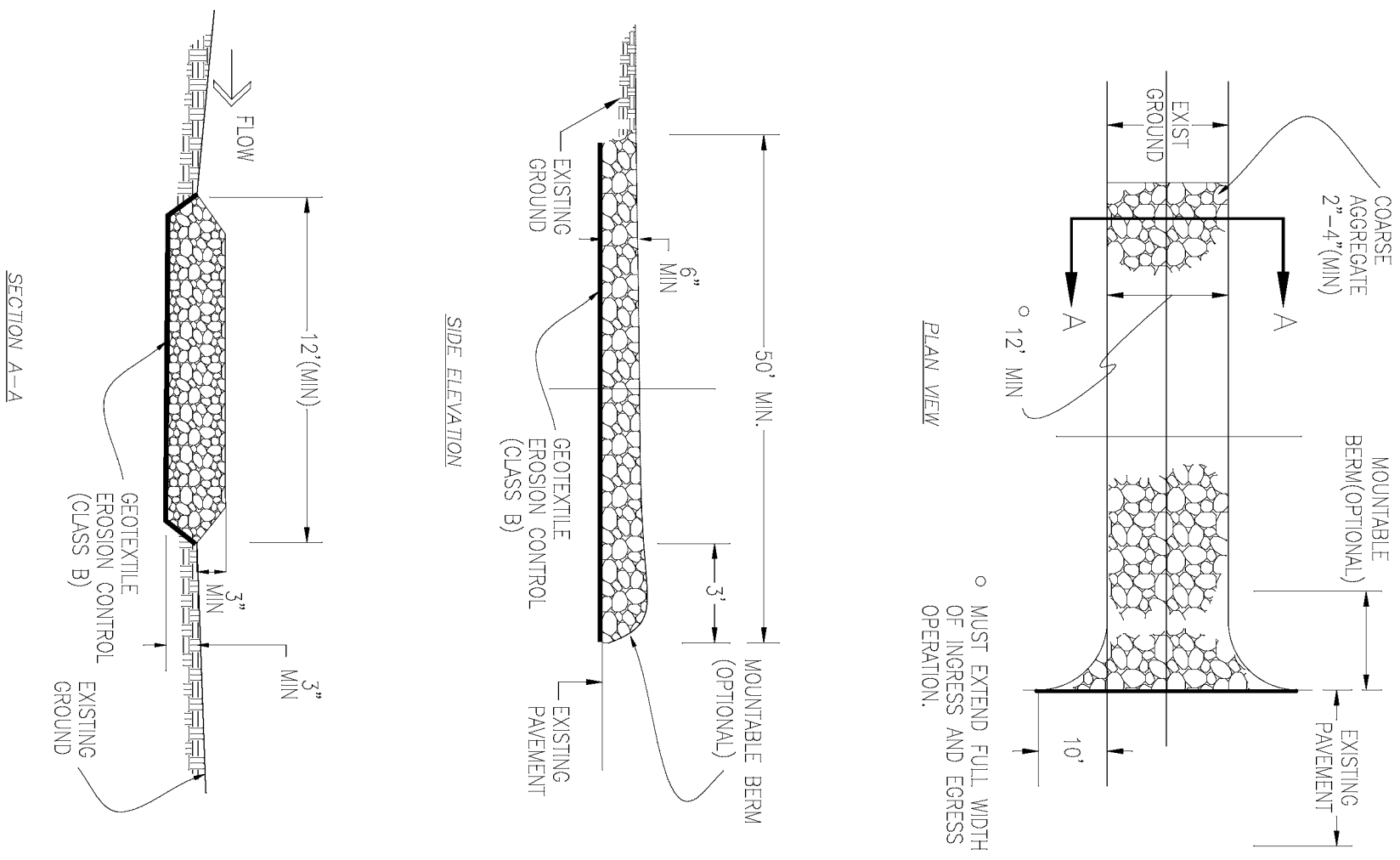
SECTION 1" = 12"

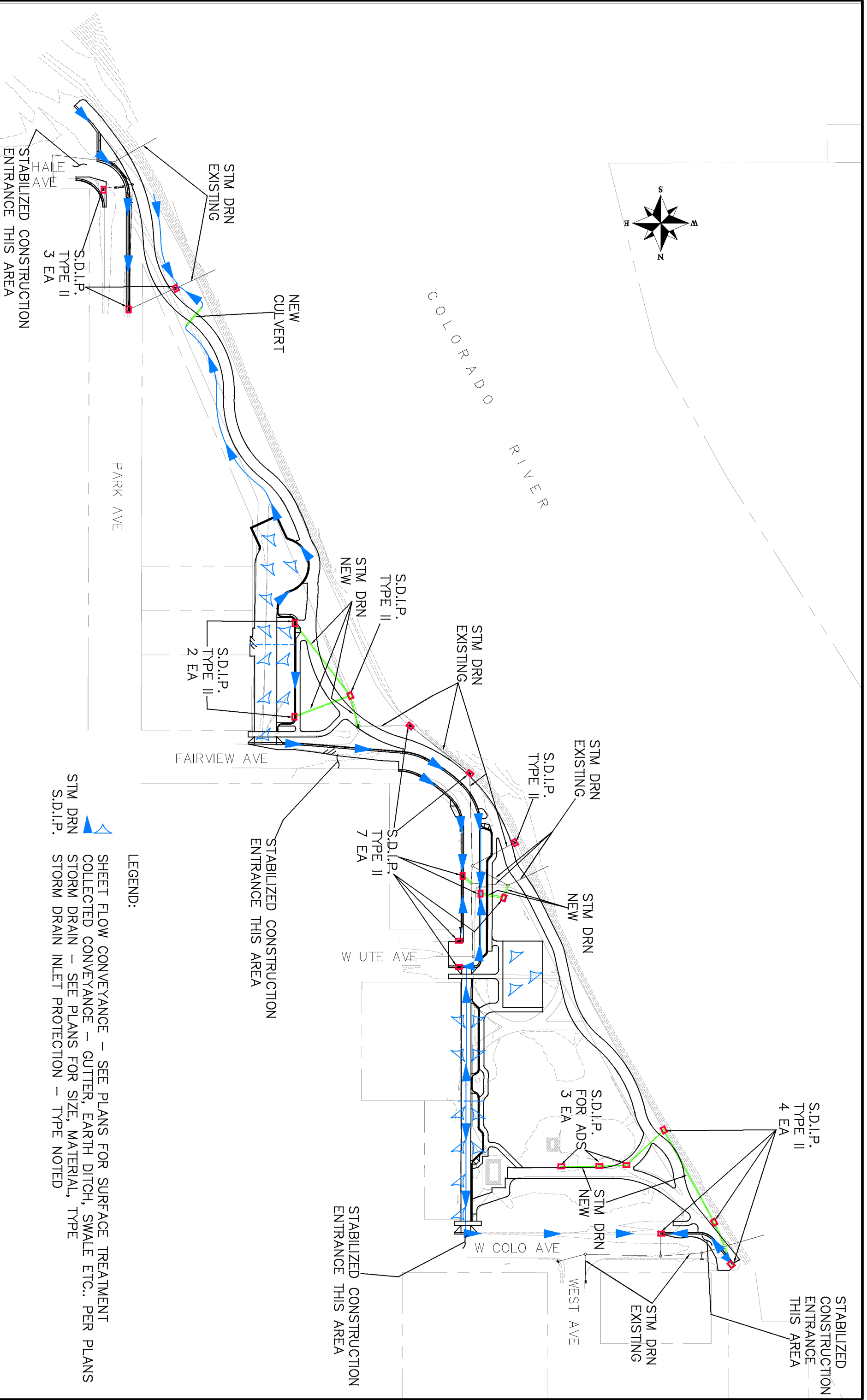
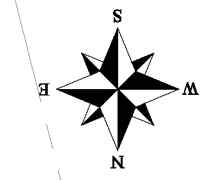
**CITY OF Grand Junction**  
C O U N T Y O F R A D O

PUBLIC WORKS ENGINEERING DIVISION

RIVERSIDE PARK IMPROVEMENTS AND BIKE PATH STORM WATER MANAGEMENT DETAILS

STABILIZED CONSTRUCTION ENTRANCE





REVISION	DATE	DESCRIPTION
REVISION A		
REVISION B		
REVISION C		

DATE	DATE	DATE	DATE
2019	2019	2019	2019

DESIGNED BY	CHECKED BY	APPROVED BY
JOS	TOP	TOP

DATE	DATE	DATE
2019	2019	2019

SCALES:

PLAN & PROFILE 1"=50'

VERTICAL 1"=10'

**CITY OF Grand Junction**  
C O L O R A D O

**PUBLIC WORKS ENGINEERING DIVISION**

**RIVERSIDE PARK IMPROVEMENTS AND BIKE PATH STORM WATER MANAGEMENT PLAN**

**43**

**LEGEND:**

SHEET FLOW CONVEYANCE - SEE PLANS FOR SURFACE TREATMENT COLLECTED CONVEYANCE - GUTTER, EARTH DITCH, SWALE ETC.. PER PLANS  
 STM DRN  
 S.D.I.P. TYPE II  
 STORM DRAIN INLET PROTECTION - TYPE NOTED

HALE AVE  
STABILIZED CONSTRUCTION ENTRANCE THIS AREA

PARK AVE

FAIRVIEW AVE  
STABILIZED CONSTRUCTION ENTRANCE THIS AREA

W UTE AVE  
STABILIZED CONSTRUCTION ENTRANCE THIS AREA

W COLO AVE  
WEST AVE  
STABILIZED CONSTRUCTION ENTRANCE THIS AREA

STABILIZED CONSTRUCTION ENTRANCE THIS AREA

STM DRN EXISTING

NEW CULVERT

STM DRN NEW  
S.D.I.P. TYPE II

STM DRN EXISTING

STM DRN EXISTING  
S.D.I.P. TYPE II

STM DRN NEW

S.D.I.P. FOR ADS  
3 EA

STM DRN NEW

STM DRN EXISTING

S.D.I.P. TYPE II  
4 EA

COLORADO RIVER

REVISION	DESCRIPTION	DATE	DRAWN BY	DATE
REVISION			JCS	2017
REVISION			JCS	2017
REVISION			JCS	2017

REVISION	DESCRIPTION	DATE	DESIGNED BY	DATE
REVISION			JCS	2017
REVISION			JCS	2017
REVISION			JCS	2017

REVISION	DESCRIPTION	DATE	CHECKED BY	DATE
REVISION			TGP	2017
REVISION			TGP	2017
REVISION			TGP	2017

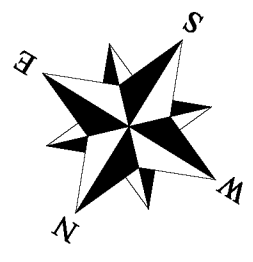
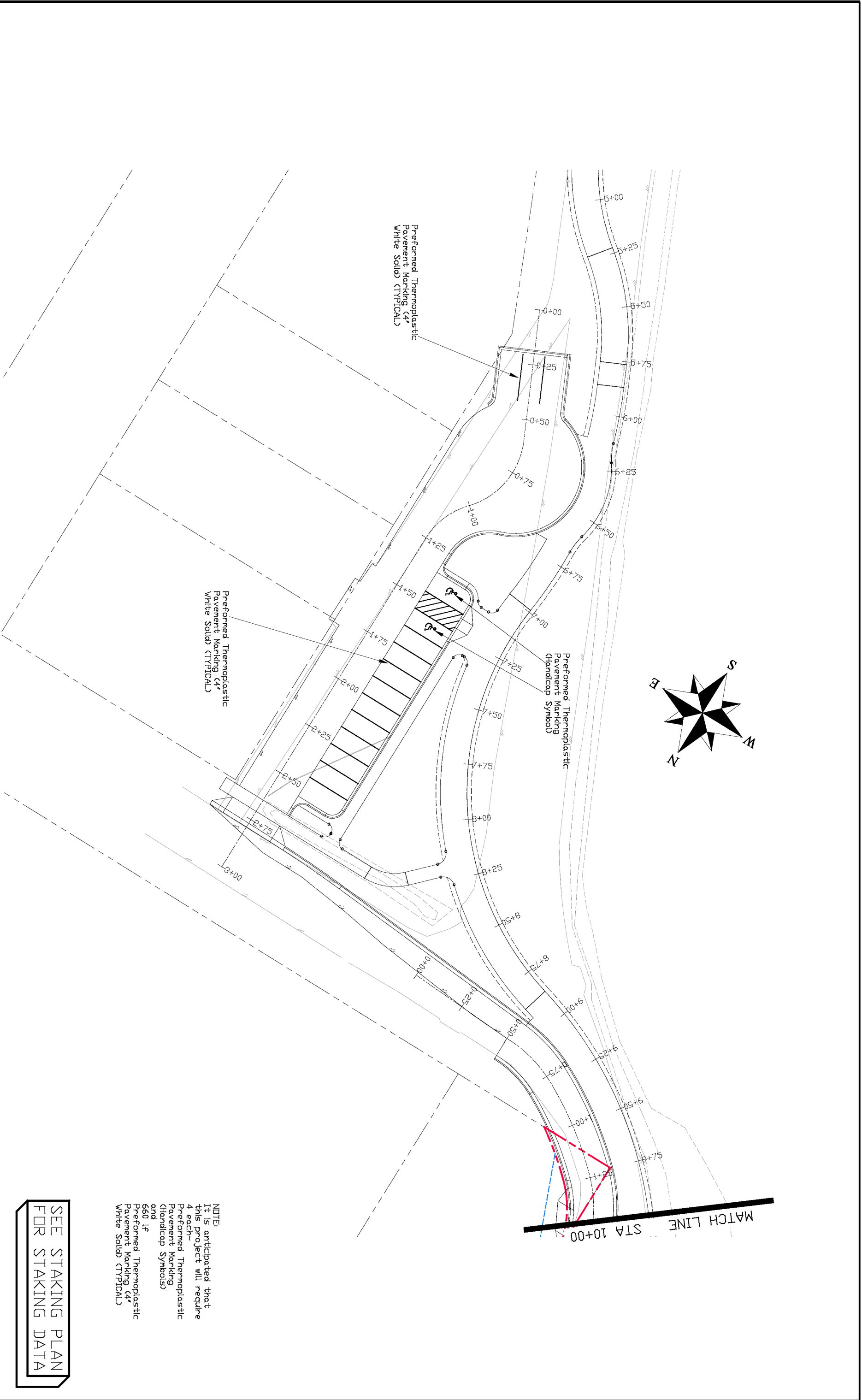
  

REVISION	DESCRIPTION	DATE	APPROVED BY	DATE
REVISION			TGP	2017
REVISION			TGP	2017
REVISION			TGP	2017

**Grand Junction**  
CITY OF GRAND JUNCTION, COLORADO

**PUBLIC WORKS ENGINEERING DIVISION**

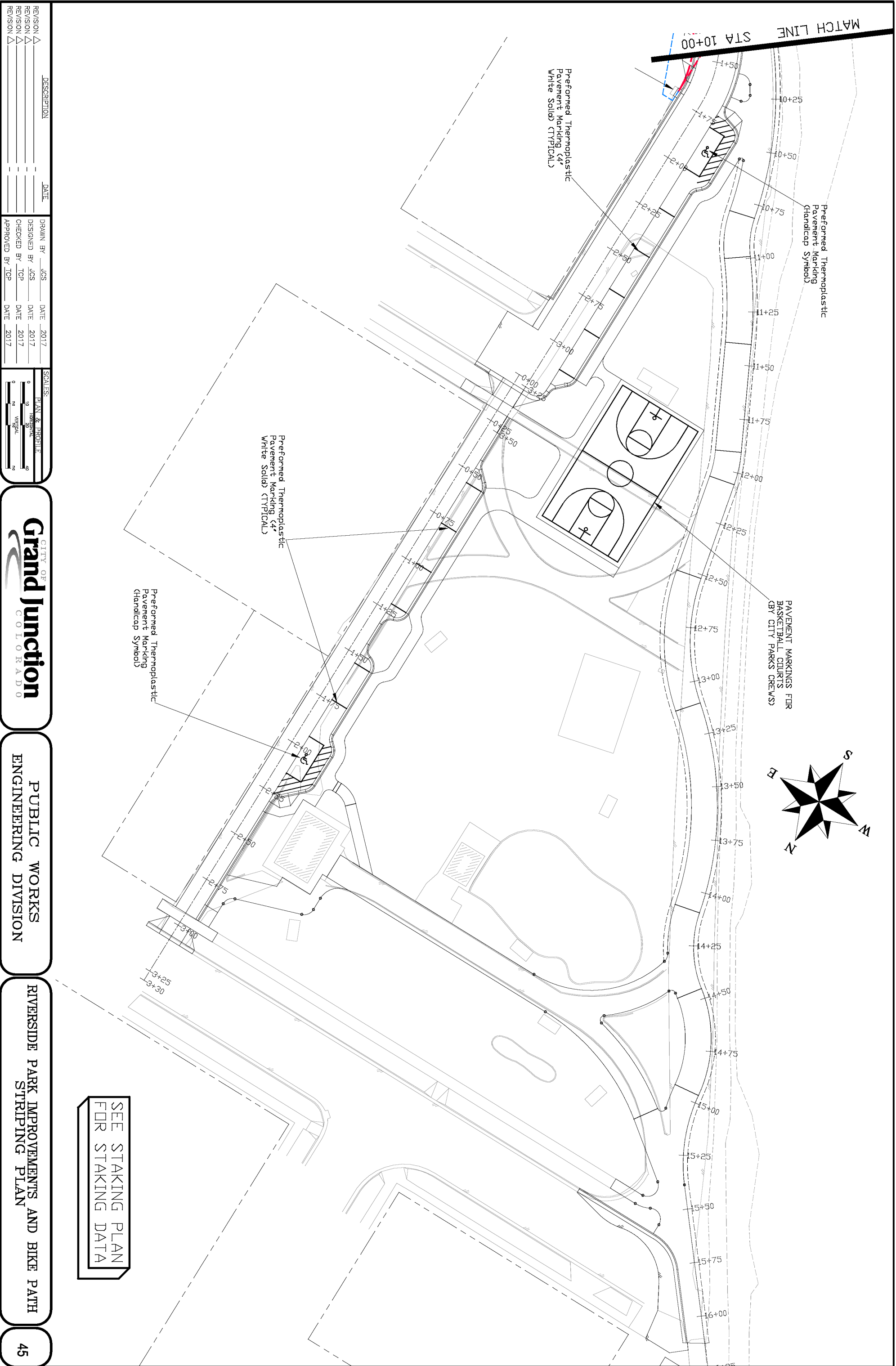
**RIVERSIDE PARK IMPROVEMENTS AND BIKE PATH STRIPING PLAN**



NOTE:  
It is anticipated that this project will require 4 each—  
Preformed Thermoplastic Pavement Marking (Handicap Symbols) and  
660 lf  
Preformed Thermoplastic Pavement Marking (4\"/>

SEE STAKING PLAN FOR STAKING DATA

MATCH LINE STA 10+00



REVISION	DESCRIPTION	DATE
REVISION		
REVISION		
REVISION		

DESCRIPTION	DATE
DRAWN BY JCS	DATE 2017
DESIGNED BY JCS	DATE 2017
CHECKED BY JCP	DATE 2017
APPROVED BY JCP	DATE 2017

SCALES:
PLAN & PROFILE 1" = 20'
SECTION 1" = 10'
VERTICAL 1" = 10'



**PUBLIC WORKS  
ENGINEERING DIVISION**

**RIVERSIDE PARK IMPROVEMENTS AND BIKE PATH  
STRIPING PLAN**



Purchasing Division

## ADDENDUM NO. 1

**DATE:** April 2, 2019  
**FROM:** City of Grand Junction Purchasing Division  
**TO:** All Offerors  
**RE:** Riverside Park Improvements and Bike Path IFB-4621-19-DH

Offerors responding to the above referenced solicitation are hereby instructed that the requirements have been clarified, modified, superseded and supplemented as to this date as hereinafter described.

Please make note of the following clarifications:

1. Q. Can you please tell me if there is any soil stabilization in this project? More specifically, soil nails or micropiles?

A. No. Please see the provided plan set in the solicitation documents.

2. Q. Per the above mentioned project and pay item #33 "Post Tension Basketball Court" it states to include all appurtenances. Can you provide a list of appurtenances?

A. Yes. All appurtenances shall include, but not be limited to, all materials necessary to install the post-tension concrete slab. Stamped plans by a licensed Engineer are required. See attached post-tension tennis court slab plans as an example, which includes the tendon/reinforcement layout, slab section details and construction notes and specifications. 8" of class 6 aggregate base course installed under the slab shall be incidental to the slab cost, and will not be paid for separately. The appurtenances shall also include materials for the two (2) basketball hoop posts (to be installed within the extents of the post-tension slab), backboards, rims, and any other materials necessary to construct the basketball hoops. The City is only responsible for striping the court. Please note that the dimensions (45'Wx75'L) for the post-tension basketball court slab meet regulation size for Junior High School basketball courts.

3. Q. Who is responsible for SWMP application and fees, and who is responsible for maintaining the stormwater management plan living document?

A. The City will pay the State SWMP application fee. However, the Contractor will be responsible for filling out and paying the 5-2-1 Drainage Authority Stormwater application fee. *Note that it was stated during the pre-bid meeting that the Contractor would be responsible for paying the application fee for the state application, but the City will now cover this fee.*

4. Q. Will the proposed construction at the corner of Fairview and Riverside Park Drive require a temporary closure for through traffic?

A. Yes. It is anticipated that once the proposed construction begins at the intersection of Fairview Avenue and Riverside Park Drive, Riverside Park Drive will no longer be able to route through-traffic. Additionally, temporary road closures and provided detours will be needed for the alleyway on the east side of Riverside Park, as well as for the improvements at the south end of Park Avenue. The Contractor has the discretion to phase temporary road closures and detours, depending on which areas of the Project they wish to work on first. Once the Project has been awarded the Contractor shall submit a construction phasing schedule and associated traffic control plan to the Project Engineer for review and approval prior to beginning construction.

5. The hours of operation adjacent to residential areas (shall be 8am to 5pm, Monday through Friday. Once the contract has been awarded, the Contractor may submit a revised working hour schedule request to extend working hours for those areas that are adjacent to the intersection of Hale Avenue and Riverside Park Drive.

The original solicitation for the project noted above is amended as noted.

All other conditions of subject remain the same.



Respectfully,

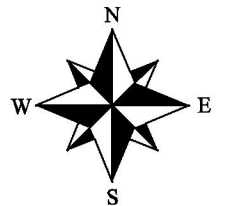
A handwritten signature in black ink, appearing to read "Duane Hoff Jr.", written in a cursive style.

Duane Hoff Jr., Senior Buyer  
City of Grand Junction, Colorado

**STREET LIGHTING GENERAL NOTES:**

1. THIS PROJECT WILL BE BID FOR THE INSTALLATION OF THE PEDESTRIAN, AND STREET LIGHTING. BASE PROJECT: COMPLETE THE MAIN PATH PEDESTRIAN LIGHTING ALONG RIVERSIDE PARK TRAIL.
2. THIS PROJECT CONSISTS OF WORK TO INSTALL ALL WIRING, CONDUIT, PULL BOXES, AND POWER PANEL. REFERENCE SCHEDULE OF LIGHTING DEVICES AND SUMMARY OF QUANTITIES DRAWING E2.
3. TYPES "SA & SB" LIGHT STANDARD & LUMINARIES (PEDESTRIAN AND STREET LIGHT), SHALL INCLUDE THE FOLLOWING ITEMS FROM VISUAL INTEREST LIGHTING LOCATED AT 3444 BRIGHTON BLVD, DENVER, CO 80216, 303.861.8448.
4. TYPE "SA" PHILLIP GARDCO GL13-2-70LA-6435-NW-UNV-BLP-LF, PROVIDE COLLISION BREAK AWAY CONNECTORS. FIXTURE TO BE 15' ABOVE FINISHED GRADE TO BOTTOM OF LIGHT. POLE - #401-4011-15-AB BK BREAKAWAY COUPLINGS(GARDCO, LYTEP)
5. TYPE "SB" PHILLIP GARDCO GL18-1-2-230LA-9680-NW-UNV-BLP-LF-PC-RPA2, PROVIDE COLLISION BREAK AWAY CONNECTORS. FIXTURE TO BE 27' ABOVE FINISHED GRADE TO BOTTOM OF LIGHT. POLE - #G18 BLP 401-5011-27-D1-AB-TBK(GARDCO BLACK) BAC-.75-SET(GARDCO,LYTEP) MOUNTING TO 5" ROUND STRAIGHT POLE.
6. PROVIDE ONE NEW MILL BANK PANEL (PP1, 240V, 1PH, 3W 100A, #CP3B11213A10C5XC1 LOCATED AS SHOWN IN DRAWINGS.
7. ALL PEDESTRIAN LIGHTING FIXTURES(TYPE "SA") INSTALLED ON THE PROJECT WILL BE CONTROLLED WITH A ELECTRICAL CONTRACTOR SUPPLIED PHOTO CELL TO BE LOCATED IN EACH NEW MILBANK POWER PEDESTALS IN SWITCHED SECTION OF PANEL. ORIENT PANEL PHOTOCELL WINDOW SO THAT PHOTOCELL WILL BE ORIENTED TO NORTH, TYPICAL.
8. ALL STREET LIGHTING FIXTURES(TYPE "SB") WILL EACH BE ORDERED WITH THEIR OWN PHOTOCELL INSTALLED IN THE FIXTURE, AND POWERED WITH NEW 240 VOLT 1-PHASE MILBANK POWER PEDESTAL ON UN-SWITCHED SECTION.
9. ELEVATIONS SHOWN IN THE SCHEDULE OF LIGHTING DEVICES ON THE PLANS SHEETS REPRESENT THE DESIGN FINISHED GRADE OR THE EXISTING GROUND FINISHED GRADE. THESE ELEVATIONS DO NOT INDICATE THE TOP ELEVATION OF THE LUMINARIES (PEDESTRIAN) FOUNDATION. PEDESTRIAN LIGHTING FOUNDATIONS SHALL BE CONSTRUCTED PER THE MANUFACTURERS RECOMMENDATIONS.
10. PULL BOXES FOR LIGHT STANDARD (PEDESTRIAN AND STREET) WILL BE TYPE 1 CDOT PULL BOXES 11"X18"X12".
11. PULL BOXES WILL BE INSTALLED IN GRADES WITHOUT CONCRETE WHERE POSSIBLE.
12. ALL ELECTRICAL CONDUIT SHALL BE SCHEDULE 80 PVC UNLESS NOTED OTHERWISE, TYPICAL.
13. UNLESS OTHERWISE NOTED, THE WORK DESCRIBED ON THE PLANS SHALL INCLUDE PROVIDING ALL LABOR AND MATERIALS NECESSARY FOR A COMPLETE AND OPERATIONAL ELECTRICAL SYSTEM. FURNISH ALL REQUIRED ITEMS WHETHER SUCH ARE SPECIFICALLY SHOWN OR NOT.
14. INFORMATION SHOWN ON DRAWINGS IS DIAGRAMMATIC ONLY AND SHALL NOT BE SCALED. OBTAIN VERIFY EXACT LOCATIONS, MEASUREMENTS, LEVELS, SPACE REQUIREMENTS, POTENTIAL CONFLICTS AMONG TRADES AND FOR ADJUSTING THE WORK REQUIRED BY THE ACTUAL CONDITIONS OF THE PROJECT. CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UNDER GROUND OBSTRUCTIONS AND MAKING ALLOWANCES FOR FIELD ADJUSTMENT OF LOCATION OF LUMINARIES TO AVOID SHUT DOWN OF ANY SERVICES OR SYSTEMS THAT ARE TO REMAIN.
15. BEFORE SUBMITTING THE BID ELECTRICAL CONTRACTOR SHALL VISIT AND EXAMINE THE PREMISES AND/OR JOB SITE SO AS TO ASCERTAIN THE EXISTING CONDITIONS IN WHICH THE CONTRACTOR WILL BE OBLIGED TO OPERATE IN PERFORMING HIS PART OF THE CONTRACT TO ANTICIPATE ANY POSSIBLE SPACE RESTRICTIONS OR CONSTRAINTS THAT COULD AFFECT THE TIMELY COMPLETION OF THE ELECTRICAL WORK IN ACCORDANCE WITH THE INTENT OF THE SPECIFICATIONS AND DRAWINGS. THE ELECTRICAL CONTRACTOR SHALL REPORT TO THE THE PROJECT ENGINEER OR GENERAL CONTRACTOR ANY CONDITIONS THAT MIGHT PREVENT THE SPECIFIED ELECTRICAL WORK FROM BEING PERFORMED IN THE MANNER INTENDED. NO CONSIDERATION OR ALLOWANCE WILL BE GRANTED TO THE ELECTRICAL CONTRACTOR FOR FAILURE TO VISIT THE PROJECT SITE, OR FOR ANY ALLEGED MISUNDERSTANDING OF THE MATERIALS TO BE FURNISHED OR WORK TO BE DONE..
16. THE ELECTRICAL CONTRACTOR SHALL EXAMINE THE DRAWINGS OF ALL TRADES WHOSE WORK RELATES TO OR IS DEPENDENT ON ELECTRICAL WORK TO BECOME FULLY INFORMED OF THE EXTENT AND CHARACTER OF THEIR SPECIFIED WORK AND BE ABLE TO COORDINATE WITH OTHER TRADES WHILE AVOIDING POSSIBLE INTERFERENCE WITH THE ELECTRICAL WORK.
17. THE CONTRACTOR SHALL USE CONDUIT PLUGS AND SEALING PLUGS FOR SEALING ALL EMPTY CONDUITS AND CONDUITS OCCUPIED WITH CABLING, RESPECTIVELY, INSTALLED UNDER THIS CONTRACT. CONDUIT PLUGS SHALL BE MANUFACTURED FROM HIGH-IMPACT PLASTIC COMPONENTS, COMBINED WITH DURABLE ELASTIC GASKETS. THEY SHALL BE CORROSION PROOF AND APPROPRIATE FOR USE AS EITHER A LONG-TERM OR TEMPORARY SEAL. CONDUIT PLUGS SHALL BE REMOVABLE AND REUSABLE. THEY SHALL BE BOTH WATERTIGHT AND AIRTIGHT TO PREVENT THE FLOW OF WATER AND BUILDUP OF SEDIMENTATION WITHIN THE CONDUIT. EACH CONDUIT PLUG SHALL BE EQUIPPED WITH A ROPE TIE DEVICE TO ALLOW THE SECURING OF PULL ROPE TO THE PLUG'S BACK COMPRESSION PLATE. THE CONTRACTOR SHALL ATTACH THE PULL ROPE TO THE BACK COMPRESSION PLATE OF THE PLUG AND STORE EXCESS SLACK PULL ROPE BEHIND THE PLUG WITHIN THE CONDUIT FOR FUTURE USE.

- PP1-X ELECTRICAL CIRCUIT NUMBER (REFER TO PANEL SCHEDULES)
- UB  HEAVY DUTY, TRAFFIC RATED, FLUSH-TO-GRADE POLYMER CONCRETE SPLICE BOX WITH HEAVY DUTY, TRAFFIC RATED, BOLTED COVER. 11"X18"X12" TYPE 1.
-  UNDER GROUND BURIED RACEWAY (2#6 THWN CU AND 1#8 GND) IN 2" PVC CONDUIT (UNLESS NOTED OTHERWISE ON PLANS) IN 24" DEEP TRENCH, BURY AND COMPACTED BACKFILL TO CITY STANDARDS.
-  INSTALL SINGLE ARM PEDESTRIAN STANDARD OR STREET STANDARD AS SPECIFIED.



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RIVERSIDE PARK TRAIL  
COVER SHEET PLAN

Schedule of Lighting Devices							
DESCRIPTION				LUMINAIRE LED PEDESTRIAN (70 WATT) TYPE SA EACH	FOUNDATION SPECIAL EACH	LUMINAIRE LED STREET (250 WATT) TYPE SB EACH	See note 2 NOTES
SHEET NO.	TYPE	NORTH	EAST	PLAN	PLAN	PLAN	
E3	SA-1	34158.99	87634.41	1	1		1
E3	SA-2	34248.46	87605.09	1	1		1
E3	SA-3	34332.72	87588.72	1	1		1
E3	SA-4	34399.76	87530.57	1	1		1
E3	SA-5	34472.89	87506.97	1	1		1
E4	SA-6	34557.03	87469.87	1	1		1
E4	SA-7	34628.95	87421.71	1	1		1
E4	SA-8	34718.71	87414.34	1	1		1
E4	SA-9	34835.72	87365.53	1	1		1
E5	SA-10	34875.72	87279.17	1	1		1
E5	SA-11	34924.78	87221.43	1	1		1
E5	SA-12	35009.87	87181.83	1	1		1
E5	SA-13	35085.85	87138.97	1	1		1
E6	SA-14	35172.22	87113.89	1	1		1
E6	SA-15	35225.92	87067.47	1	1		1
E6	SA-16	35287.22	87039.87	1	1		1
E6	SA-17	35373.80	87001.76	1	1		1
E4	SB-1	34780.69	87417.10		1	1	2
TABLE TOTALS				17	18	1	

Tabulation of Approximate Quantities(BASE PROJECT)					
ITEM NO.	REF. NO.	CONSTRUCTION NOTE DESCRIPTION	QUANTITY	UNIT	NOTES
1		2 INCH ELECTRICAL CONDUIT (PLASTIC)	1685	LF	
2		TYPE ONE PULL BOX	18	EA	
3		WIRING	1	LS	
4		LIGHT STANDARD AND LUMINAIRE (STREET)	1	EA	
5		LIGHT STANDARD AND LUMINAIRE (PEDESTRIAN)	17	EA	
6		LIGHT STANDARD FOUNDATION (SPECIAL)	18	EA	
		LIGHTING CONTROL CENTER (SPECIAL)	1	EA	
SUMMARY NOTES:					

STREET LIGHTING GENERAL NOTES:

- EACH LIGHT TO HAVE A PULL BOX "UB", REFERENCE ELECTRICAL SHEETS.

SCHEDULE OF LIGHTING DEVICES NOTES:

- FOUNDATION TOP HEIGHT EQUAL TO ADJACENT SIDEWALK
- FOUNDATION TOP HEIGHT AT 2'6" AS SHOWN IN DETAIL.

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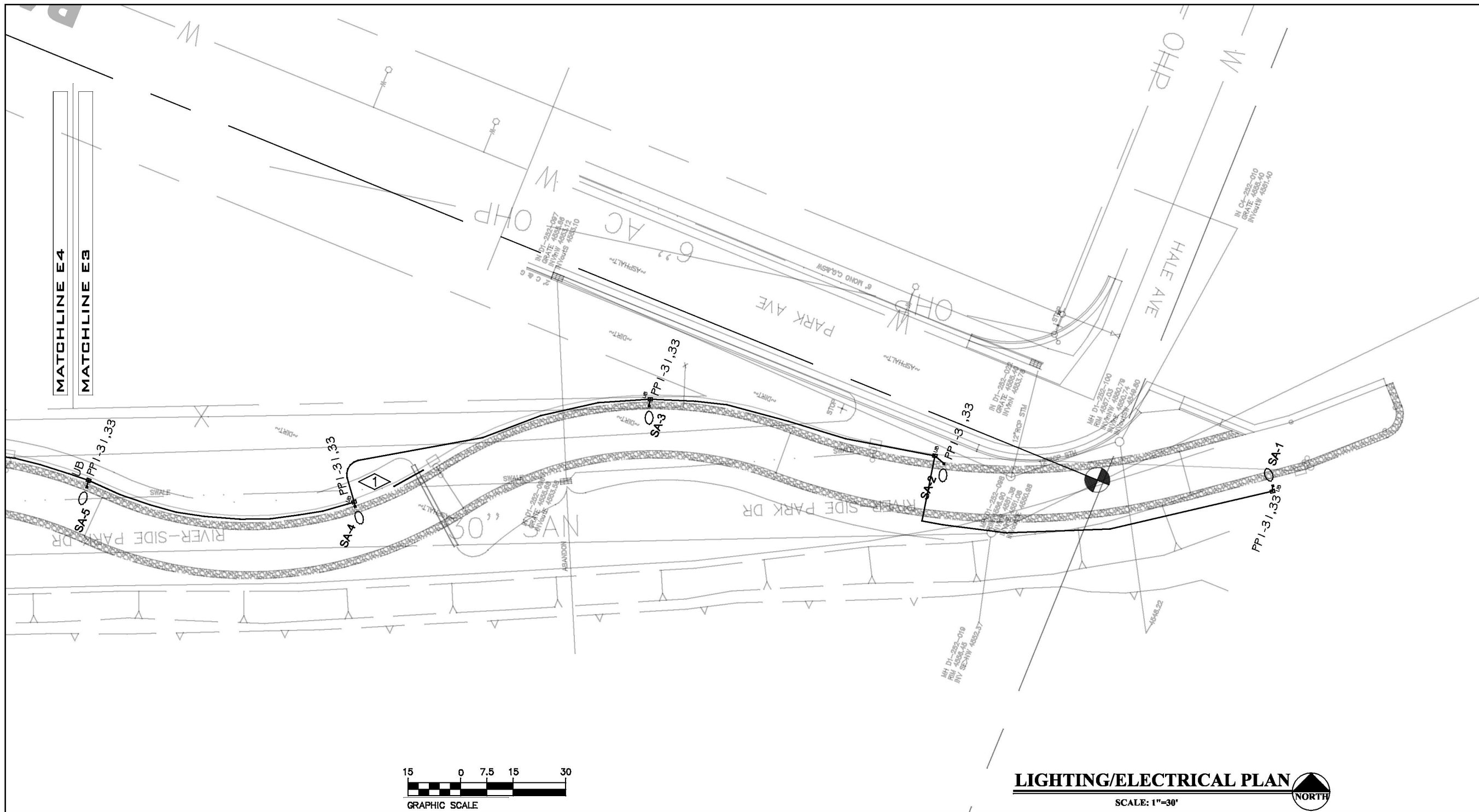
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RIVERSIDE PARK TRAIL  
LIGHTING SCHEDULES





**LIGHTING/ELECTRICAL PLAN**  
SCALE: 1"=30'



FLAG NOTES:

ROUTE CONDUIT AROUND SWALE AND CASING PIPE.

GENERAL NOTES:

1. POWER CIRCUIT AS SHOWN ON DRAWING, TYPICAL.
2. LIGHT TO BE ORIENTED TO BE PERPENDICULAR TO ROADWAY AND SHINE ON ROADWAY, TYPICAL.
3. PROVIDE 2-#6 THWN + #8GND IN 2" PVC SCHEDULE 80 CONDUIT BETWEEN PULL BOXES UNLESS SHOWN OTHERWISE, TYPICAL.

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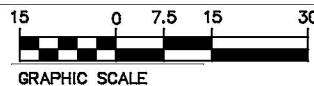
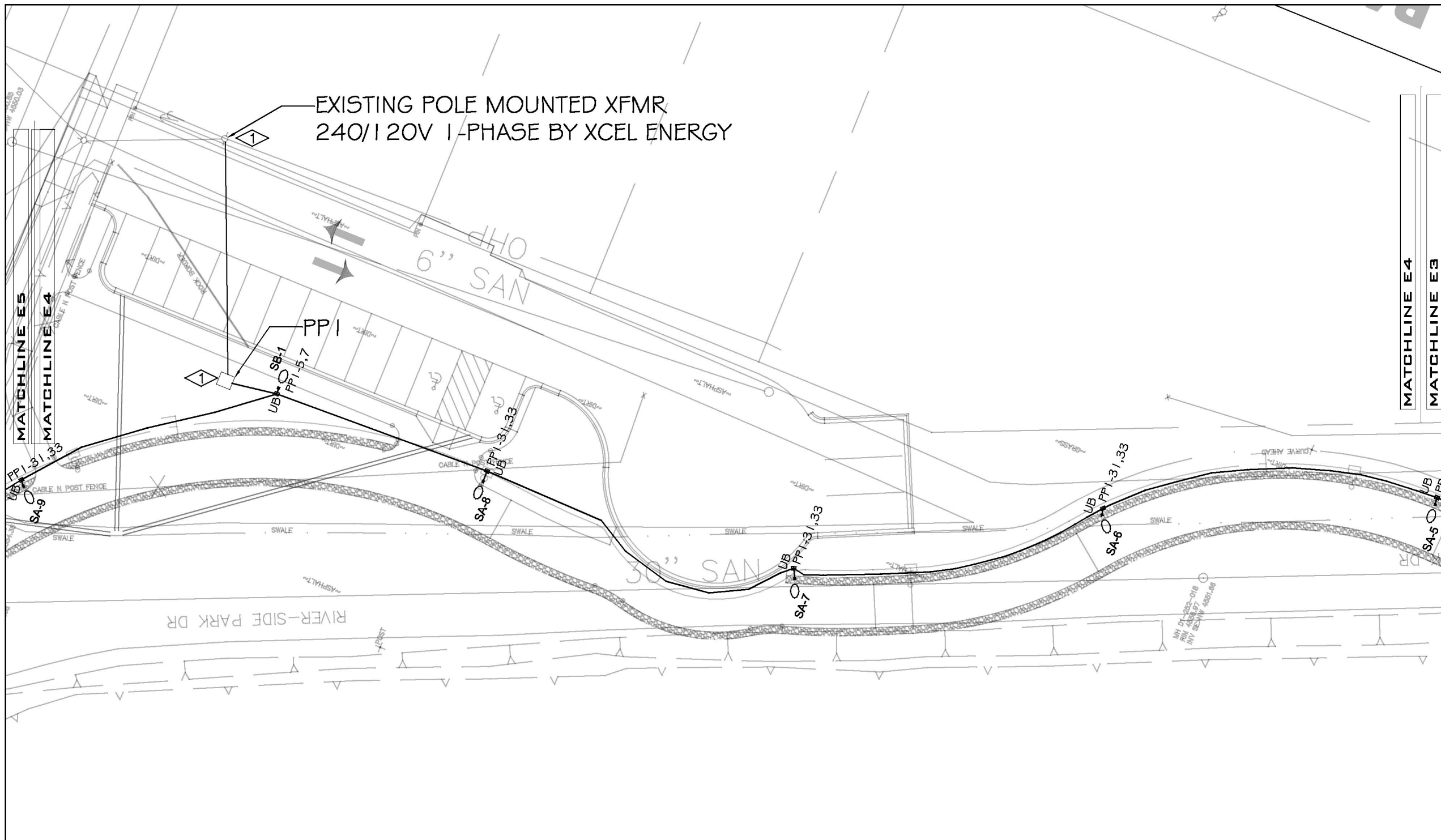
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RIVERSIDE PARK TRAIL  
COMPOSITE UTILITY PLAN



**LIGHTING/ELECTRICAL PLAN**  
SCALE: 1"=30'



**GENERAL NOTES:**

1. POWER CIRCUIT AS SHOWN ON DRAWING, TYPICAL.
2. LIGHT TO BE ORIENTED TO BE PERPENDICULAR TO ROADWAY AND SHINE ON ROADWAY, TYPICAL.
3. PROVIDE 2-#6 THWN + #8GND IN 2" PVC SCHEDULE 80 CONDUIT BETWEEN PULL BOXES UNLESS SHOWN OTHERWISE, TYPICAL.

**FLAG NOTES:**

- ◊ COORDINATE CONNECTIONS TO EXISTING POLE MOUNTED TRANSFORMER, METER AND PEDESTAL PANEL WITH XCEL ENERGY PRIOR TO ROUGH-IN. RETURN EXISTING BIKE PATH TO AS NEW CONDITION AFTER TRENCHING.

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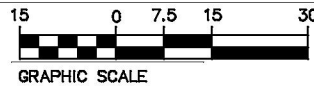
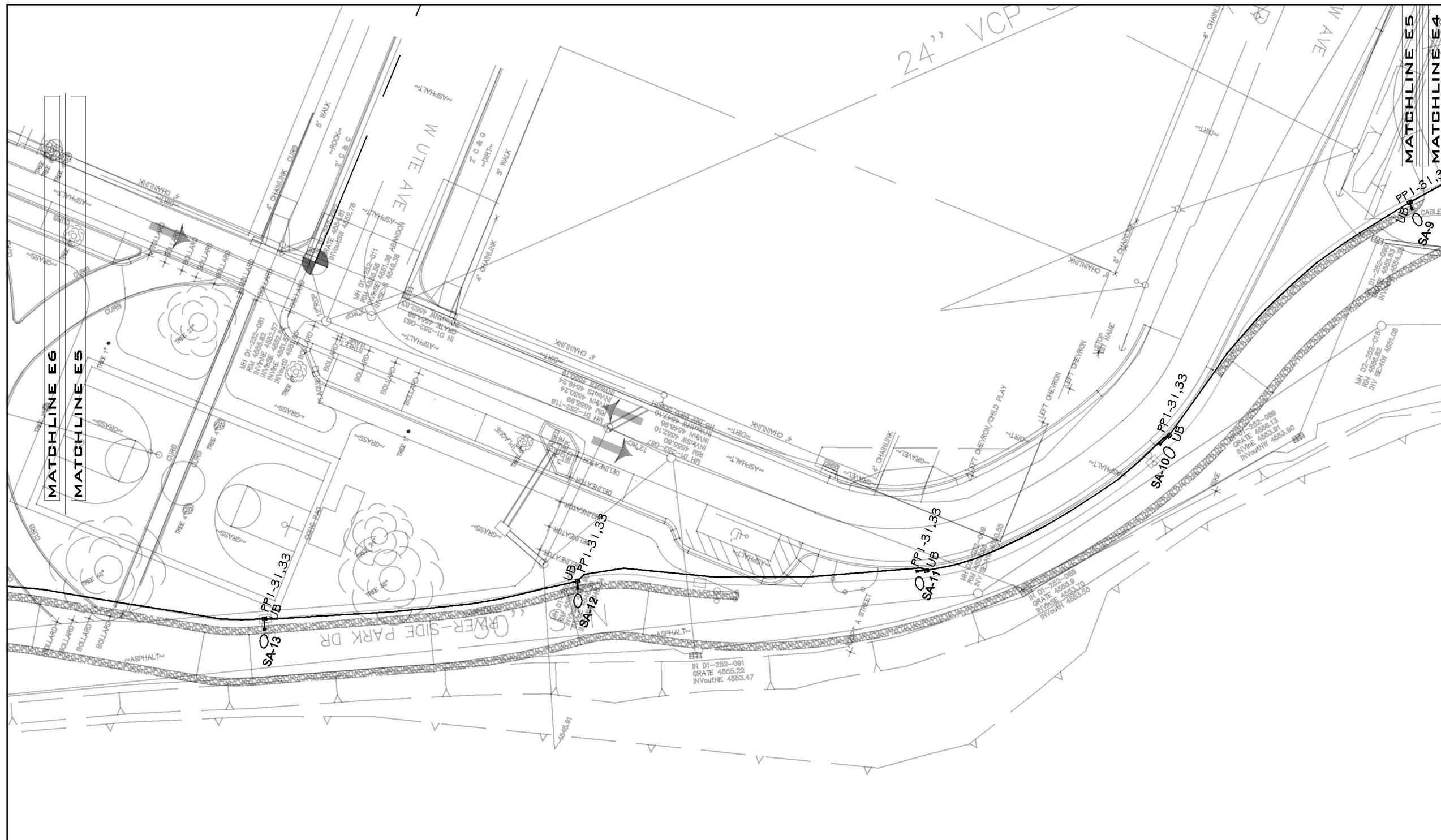
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RIVERSIDE PARK TRAIL  
COMPOSITE UTILITY PLAN



**LIGHTING/ELECTRICAL PLAN**

SCALE: 1"=30'



GENERAL NOTES:

1. POWER CIRCUIT AS SHOWN ON DRAWING, TYPICAL.
2. LIGHT TO BE ORIENTED TO BE PERPENDICULAR TO ROADWAY AND SHINE ON ROADWAY, TYPICAL.
3. PROVIDE 2-#6 THWN + #8GND IN 2" PVC SCHEDULE 80 CONDUIT BETWEEN PULL BOXES UNLESS SHOWN OTHERWISE, TYPICAL.

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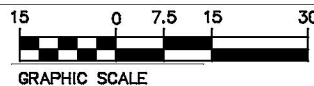
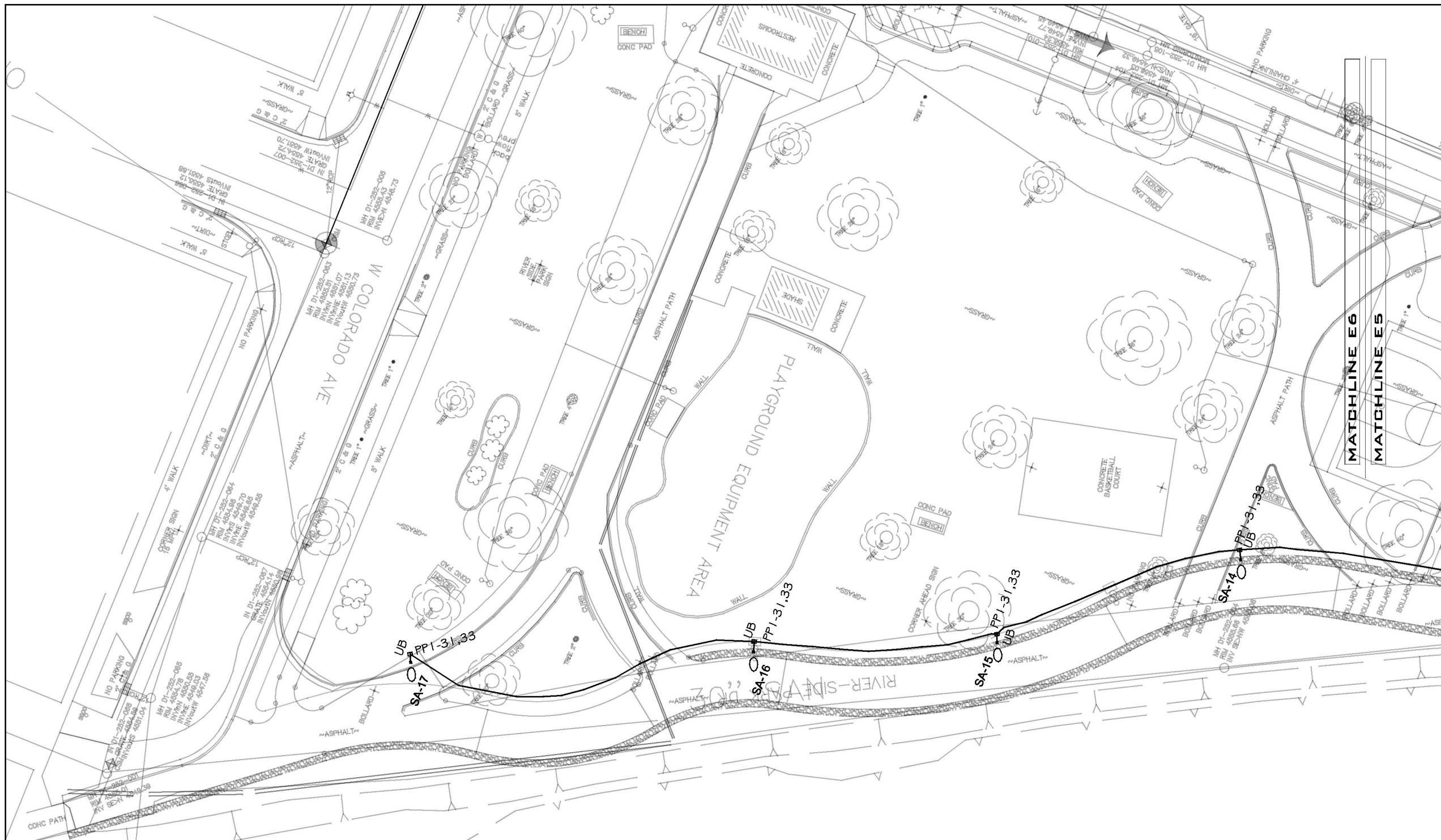
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RIVERSIDE PARK TRAIL  
COMPOSITE UTILITY PLAN



**LIGHTING/ELECTRICAL PLAN**  
SCALE: 1"=30'  
NORTH

**GENERAL NOTES:**

1. POWER CIRCUIT AS SHOWN ON DRAWING, TYPICAL.
2. LIGHT TO BE ORIENTED TO BE PERPENDICULAR TO ROADWAY AND SHINE ON ROADWAY, TYPICAL.
3. PROVIDE 2-#6 THWN + #8GND IN 2" PVC SCHEDULE 80 CONDUIT BETWEEN PULL BOXES UNLESS SHOWN OTHERWISE, TYPICAL.

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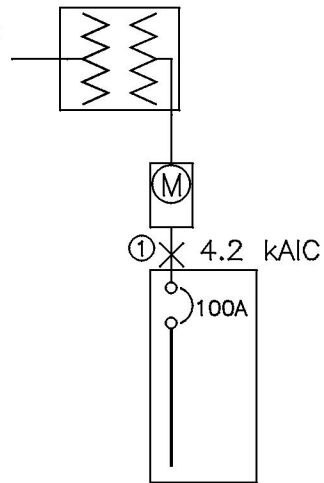


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RIVERSIDE PARK TRAIL  
COMPOSITE UTILITY PLAN

E6  
of 12

EXISTING POLE MOUNTED TRANSFORMER  
50KVA 240/120 VOLT,  
1PH 3W  
BY XCEL



PP1 100A MCB MILBANK PEDESTAL  
CP3B11213A10CSXC1, 24  
UNSWITCHED/12 SWITCHED CKTS  
240/120V 1PH, 3W  
10 kAIC

① 1 SET(S)[2" PVC  
SCHED. 80  
(3#3(CU,THWN)+1#8(CU)GND]

**ONE-LINE DIAGRAM**  
A  
1  
NOT TO SCALE

GENERAL NOTES:

1. IN AS MUCH AS DESIGN REQUIRES THAT CERTAIN ASSUMPTIONS BE MADE REGARDING EXISTING CONDITIONS, AND BECAUSE SOME OF THESE ASSUMPTIONS CANNOT BE VERIFIED. FIELD COORDINATION DURING CONSTRUCTION SERVICES IS IMPERATIVE. CONTRACTORS BIDDING THIS WORK MUST MAKE REASONABLE ALLOWANCES FOR UNFORESEEN CONTINGENCIES.
2. THE SERVING ELECTRICAL ASSOCIATION SHALL ADVISE THE OWNER/ENGINEER PRIOR TO SERVICE MODIFICATION REQUIRING COST TO THE OWNER.
3. REFERENCE CIVIL, LANDSCAPE AND IRRIGATION DRAWING PLANS FOR COORDINATION AND LOCATION OF ALL UNDER GROUND SYSTEMS.
4. ALL WORK SHALL BE COORDINATED WITH OTHER TRADES AS REQUIRED: REFERENCE CIVIL LANDSCAPE AND IRRIGATION DRAWINGS.
5. ALL WIRING IS SHOWN DIAGRAMMATICALLY ON DRAWINGS, FIELD VERIFY ALL CONDITIONS PRIOR TO ROUGH-IN.
6. ALL ELECTRICAL WORK SHALL COMPLY WITH THE LATEST EDITION OF NATIONAL ELECTRICAL CODE AND ALL APPLICABLE LOCAL CODES.
7. ALL WIRE TO BE #6 UNLESS NOTED OTHERWISE.
8. CONDUCTOR COUNT IS SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL ENSURE THAT ANY AND ALL DEVICES AND EQUIPMENT ARE CIRCUITED PROPERLY. CONTRACTOR SHALL ENSURE THAT NO EQUIPMENT OR DEVICES ARE COMBINED OTHER THAN WHAT IS DEPICTED.
9. FIELD VERIFY ALL DIMENSIONS, DO NOT SCALE DRAWINGS.
10. COORDINATE INSTALLATION OF METER AND ELECTRICAL REQUIREMENTS WITH XCEL ENERGY.
11. PEDESTAL MUST MEET ALL XCEL ENERGY REQUIREMENTS I.E. COLD SEQUENCE PADLOCK SLIP LATCH ON METER COVER, HOLD OPEN BAR ON METER HOOD.

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**RIVERSIDE PARK TRAIL  
ONE-LINE DIAGRAMS**

Panel Schedule PP1										
Circuit Information::			Protection Information::			Conductor Information::			Calculated Kaic: 4.2	
Circuits: 12 UNSWITCHED/12 SWITCHED			Frame Size: 100A			Conductor: 3				
Voltage: 120 / 240			Load (A): 21			Neutral: 3				
System: 1Ø,			NEMA: Type 3R			Ground: 1-2 ga.				
Hertz: 60			OCPD Size: 100A			Insulation: THWN				
			10 Kaic			Material: Copper				
UN-SWITCHED CIRCUIT DIRECTORY						Raceway: 2 in. - PVC SCHED 80				
Ct#	Load Description	OCPD Size / Ø	Load - kVA AØ	Load - kVA BØ	L	Load - kVA BØ	AØ	OCPD Size / Ø	Load Description BØ	Ct#
1	MAIN	100A / 2			L1		0.18	15A / 2	CONTROL POWER	2
3	---				L2	0.18	0.3	60A / 2	SWITCHED LC CONTROL	4
5	STREET LIGHTS	20A / 2	0.096		L1	0.3			---	6
7	---	20A / 2		0.096	L2					8
9	SPARE(FUTURE)	20A / 2			L1			20A / 1	SPARE(FUTURE)	10
11	SPARE(FUTURE)	20A / 2			L2			20A / 1	SPARE(FUTURE)	12
SWITCHED CIRCUIT DIRECTORY										
Ct#	Load Description	OCPD Size / Ø	Load - kVA AØ	Load - kVA BØ	L	Load - kVA BØ	AØ	OCPD Size / Ø	Load Description BØ	Ct#
13	PATHWAY LIGHTS	20A / 2	0.72		L1			20A / 2	SPARE(FUTURE)	14
15	---			0.72	L2				---	16
17	SPARE(FUTURE)	20A / 2			L3				SPARE(FUTURE)	18
19	---				L1					20
21					L2					22
23					L3					24
Phase Totals - kVA:			0.816	0.816		0.48	0.3			
Load Totals							Amps:	kVA:		
							6.7	2.412		

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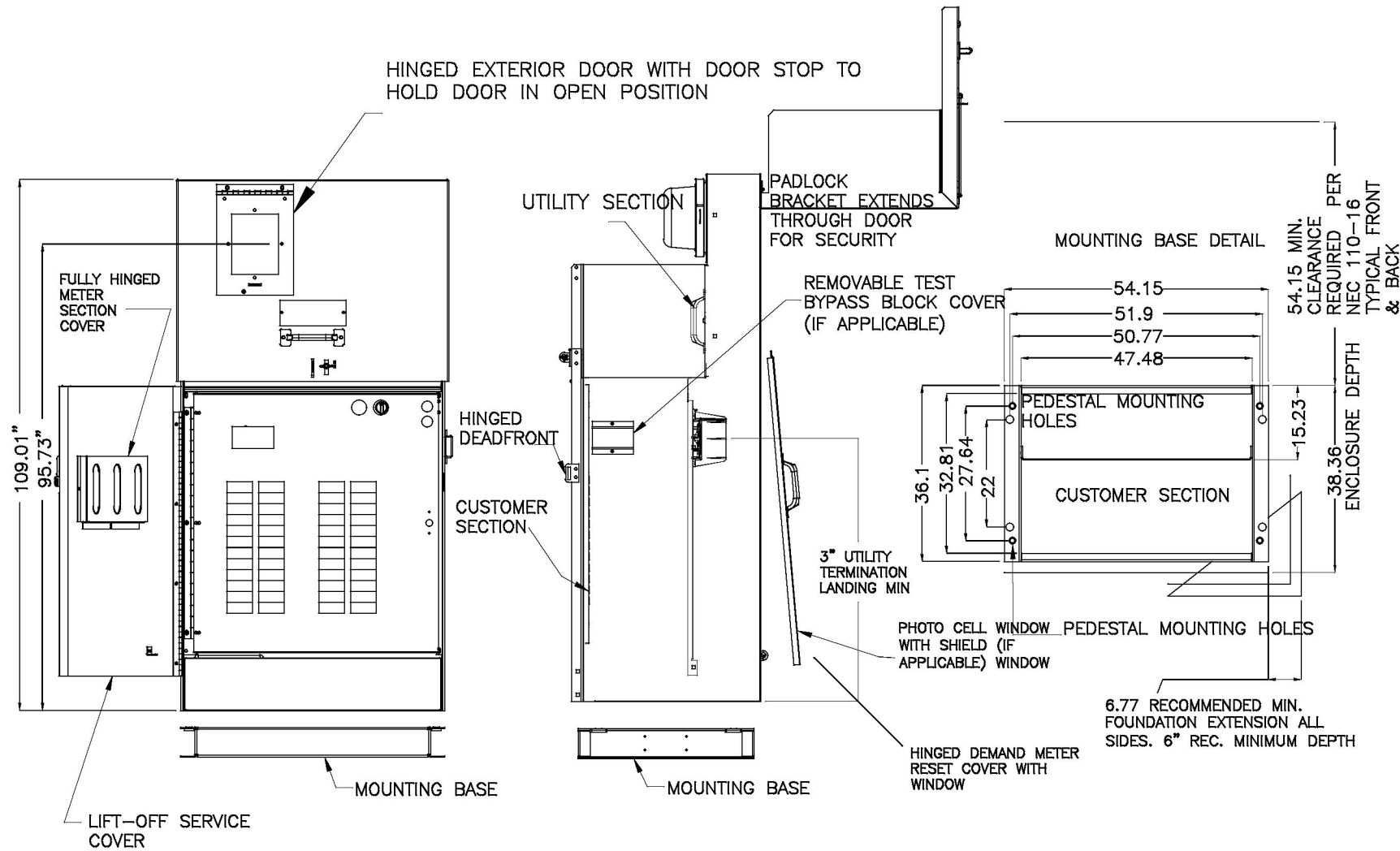
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RIVERSIDE PARK TRAIL  
PANEL SCHEDULES

**24" COMMERCIAL PEDESTAL**



**B TYPICAL 1-PHASE POWER PEDESTAL/LIGHTING CONTROL CENTER PLAN**  
**1 NOT TO SCALE**

**NOTES**

- COORDINATE EXACT INSTALATION REQUIREMENTS WITH PROVIDER PRIOR TO ROUGH-IN OR TRENCHING. CONTROL CABINET SHALL BE U/L LISTED "INDUSTRIAL CONTROL PANEL" PER UL 508.
- CONSTRUCTION SHALL BE NEMA 3R, 12 GA. A60 STEEL POWDER COATED MINT GREEN WITH PHOTO ELECTRIC CELL IN SERVICE CABINET. ELECTRICAL CONTRACTOR TO PROVIDE PHOTOCELL.
- VOLTAGE RATINGS OF SERVICE EQUIPMENT SHALL CONFORM TO THE SERVICE VOLTAGES INDICATED ON THE PLANS.
- SERVICE EQUIPMENT ENCLOSURE AND METERING EQUIPMENT SHALL MEET THE REQUIREMENTS OF THE SERVING UTILITY. WHEN THE SERVING UTILITY PROVIDES BOTH METERED AND UNMETERED CIRCUITS, A SEPARATE BUS SHALL BE PROVIDED FOR EACH CIRCUIT. THE METER AREA SHALL HAVE A SEALING, LOCKABLE, RAIN TIGHT COVER THAT CAN BE REMOVED WITHOUT THE USE OF TOOLS.
- SERVICE EQUIPMENT SHALL BE FACTORY WIRED AND CONFORM TO NEMA STANDARDS.
- THE EXTERIOR DOOR SHALL HAVE PROVISIONS FOR PADLOCKING. THE PADLOCK HOLE SHALL BE A MINIMUM DIAMETER OF 11mm.
- ALL TERMINALS FOR INCOMING SERVICE CONDUCTORS SHALL BE COMPATIBLE WITH EITHER COPPER OR ALUMINUM CONDUCTORS SIZED TO SUIT THE CONDUCTORS SHOWN ON THE PLAN. TERMINAL LUGS SHALL BE COPPER OR TIN-PLATED ALUMINUM. SOLID NEUTRAL TERMINAL STRIP SHALL BE RATED 200A UNLESS OTHERWISE SPECIFIED AND FOR USE WITH COPPER OR ALUMINUM CONDUCTORS. THE TERMINAL SHOULD INCLUDE BUT NOT BE LIMITED TO:
  - INCOMING TERMINALS (LANDING LUGS)
  - NEUTRAL LUGS
  - SOLID NEUTRAL TERMINAL STRIP.
  - TERMINAL STRIPS FOR CONDUCTORS WITHIN THE ENCLOSURE.
- CIRCUIT BREAKER SPACES (20mm NOMINAL) SHALL BE PROVIDED FOR BRANCH CIRCUITS. CIRCUIT BREAKER INTERIORS SHALL BE COPPER. INTERIORS SHALL ACCEPT PLUG-IN OR CABLE-IN/ CABLE-OUT CIRCUIT BREAKERS.
- PLUG-IN CIRCUIT BREAKERS MAY BE MOUNTED IN THE VERTICAL OR HORIZONTAL POSITION. CABLE-IN/ CABLE-OUT CIRCUIT BREAKERS SHALL BE MOUNTED IN THE VERTICAL POSITION.
- FASTENERS ON THE EXTERIOR OF THE ENCLOSURE SHALL BE VANDAL RESISTANT AND SHALL NOT BE REMOVABLE FROM THE EXTERIOR. ALL NUTS, BOLTS, SCREWS, WASHERS, AND HINGES SHALL BE STAINLESS STEEL.
- PHENOLIC NAME PLATES SHALL BE PROVIDED AS REQUIRED.
- A PLASTIC COVERED WIRING DIAGRAM SHALL BE ATTACHED TO THE INSIDE OF THE FRONT DOOR.
- FOUNDATION SHALL EXTEND 50mm MINIMUM BEYOND EDGE OF ENCLOSURE.
- PANEL WILL ADHERE TO XCEL ENERGY REQUIREMENT FOR COLD SEQUENCE DISCONNECTION.

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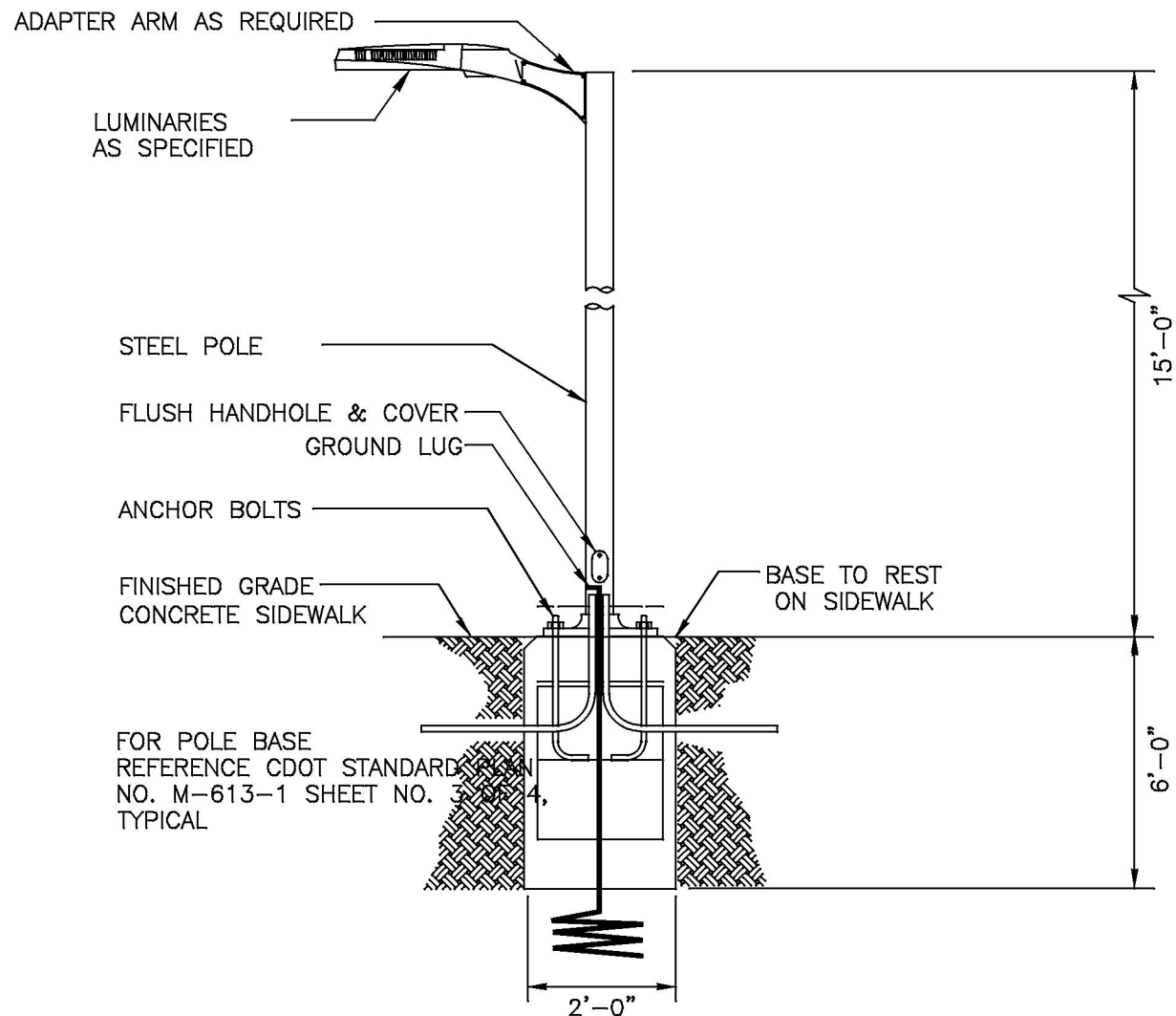
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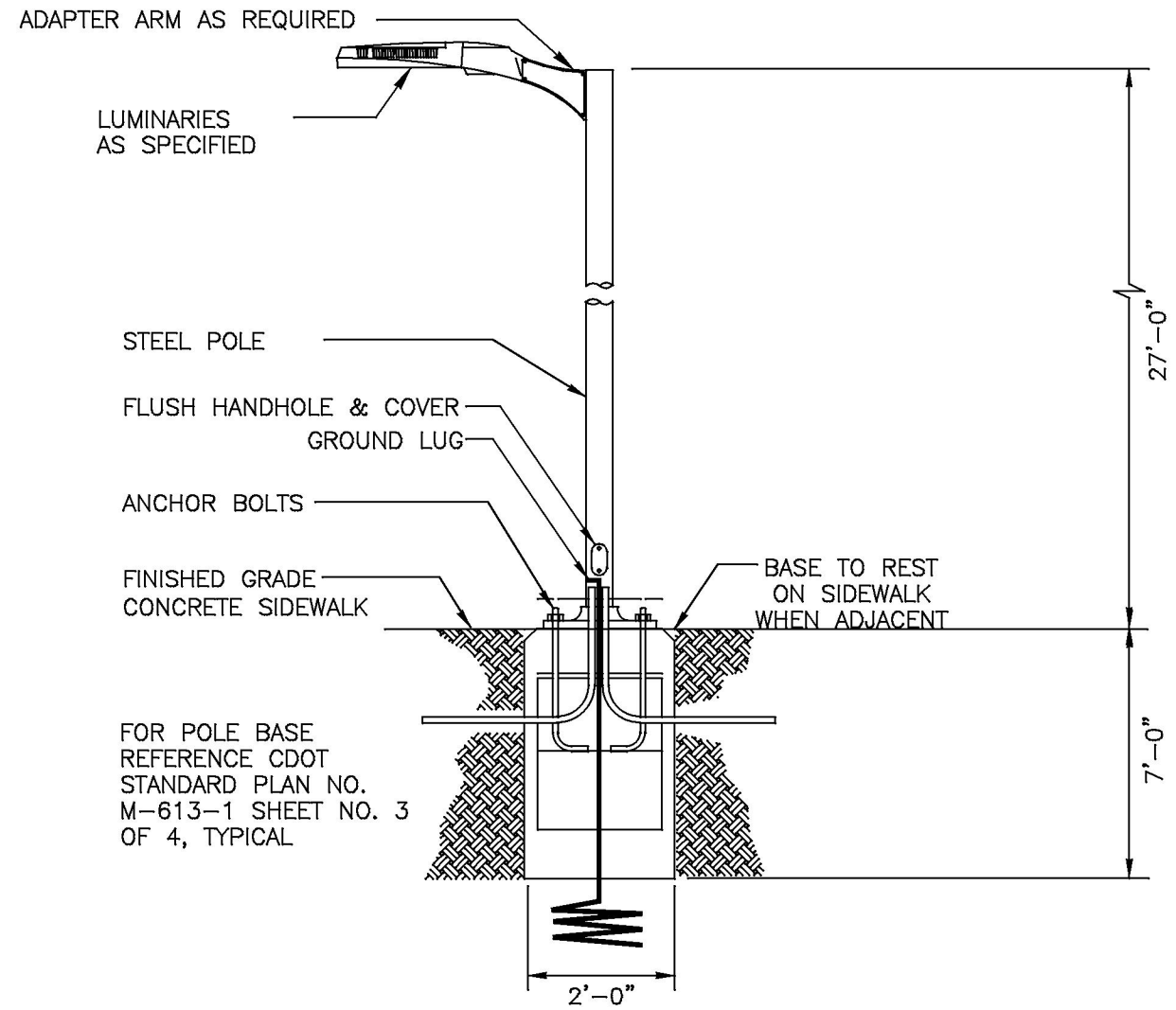
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**RIVERSIDE PARK TRAIL  
PEDESTAL DETAILS**



**TYPICAL SA LIGHT DETAIL**

NOT TO SCALE



**TYPICAL SB LIGHT DETAIL**

NOT TO SCALE

**GENERAL NOTES:**

1. ELECTRICAL CONTRACTOR TO ORDER ALL REQUIRED HARDWARE FOR MOUNTING OF EACH LUMINARIES.
2. VERIFY THE BURY DEPTH AND DIAMETER OF THE SONOTUBE FOR POLE LUMINARIES WITH THE CIVIL ENGINEER PRIOR TO PURCHASING THE EQUIPMENT. DEPTH WILL DEPEND ON SOIL CONDITIONS. TYPICAL CONCRETE DEPTH IS SHOWN IN DETAIL. VERIFY DEPTH WITH CIVIL ENGINEER.
3. ELECTRICAL CONTRACTOR TO VERIFY THAT ALL FIXTURES TO COMPLY WITH LIGHT TRESPASS AND DARK SKY CODES.
4. NOTIFY ENGINEER OF ANY OBSTRUCTIONS TO POLE PLACEMENT IMMEDIATELY BEFORE PROCEEDING.
5. VERIFY REQUIRED VOLTAGE OF FOR EACH LUMINARIES WITH AVAILABLE VOLTAGES PRIOR TO ORDERING.
6. REFERENCE CDOT STANDARD PLAN NO. M-613-1 SHEET NO. 3 OF 4, TYPICAL

TYPE	MANUFACTURER MODEL NUMBER	APPROVAL	LUMINAIRE SCHEDULE		
			VOLTAGE MOUNTING # OF LAMPS	BALLAST LAMPE TYPE LAMP CAT.#	DESCRIPTION
SA	PHILIPS GARDCO GL13-2-70LA-6435-NW-UNV-BLP-LF	OWNER	UNV POLE	ELECTRONIC LED	PEDESTRIAN LUMINAIRE, ARM MOUNTED, LED, CUTOFF, ORDER ROUND STEEL POLE SO THAT LAMP HEIGHT IS 15' AFG MEASURED AT BOTTOM OF LUMINAIRE. COLOR OF POLE AND ARM TO MATCH, BOTH BLACK. POLE#401-4011-15-AB BK BREAKAWAY COUPLINGS(GARDCO, LYTEP)
		REQUESTED	1	50 W	
SB	PHILIPS GARDCO GL18-1-2-230LA-9680-NW-UNV-BLP-LF-PC-RPA2	OWNER	UNV POLE	ELECTRONIC LED	STREET SIDE LUMINAIRE, ARM MOUNTED, LED, CUTOFF, ROUND STEEL POLE TO BE 27' SO THAT TOTAL HEIGHT AFG TO BOTTOM OF FIXTURE IS 27'. COLOR OF POLE AND ARM TO MATCH, BOTH BLACK. POLE #G18 BLP 401-5011-27-D1-AB-TBK(GARDCO BLACK) BAC-75-SET(GARDCO,LYTEP) MOUNTING TO 5" ROUND STRAIGHT POLE.
		REQUESTED	1	230 W	

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CONSTRUCTION**

DATE: 3-11-2019



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EMAIL: joelm@ACMengrs.com

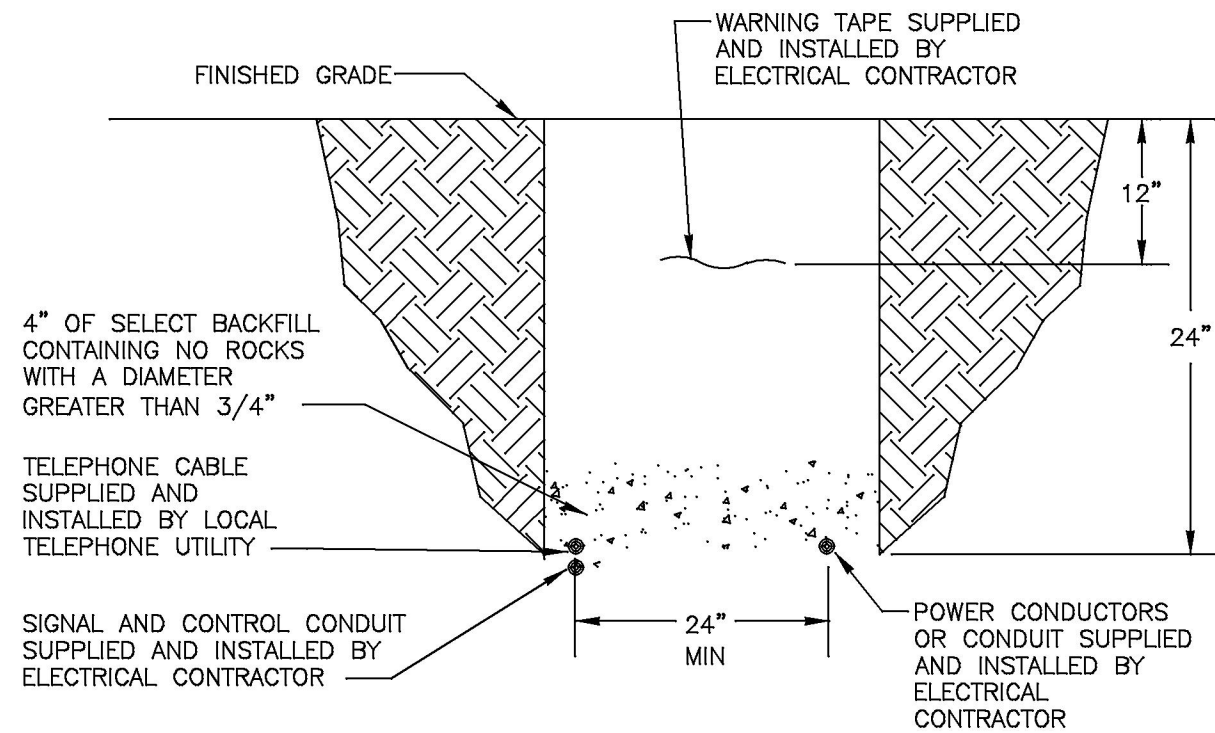
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REVISION Δ			AJM	3-11-2019
REVISION Δ			AJM	3-11-2019
REVISION Δ			AJM	3-11-2019
REVISION Δ			BH	3-11-2019



PUBLIC WORKS  
ENGINEERING DIVISION

RIVERSIDE PARK TRAIL  
LIGHTING DETAILS





## TYPICAL SECONDARY ELECTRICAL TRENCH DETAIL

NOT TO SCALE

GENERAL NOTES:

1. TRENCH WIDTH WILL BE 30".
2. STEEL GAS PIPE OR STEEL DUCT IS NOT ALLOWED IN TRENCH CONSTRUCTION.
3. WHERE UNDERGROUND UTILITIES CROSS OR ENCROACH INTO CITY STREETS THEY SHALL BE INSTALLED TO A DEPTH PROVIDING 3' MINIMUM COVER BELOW FINISHED GRADE.

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DATE: 3-11-2019



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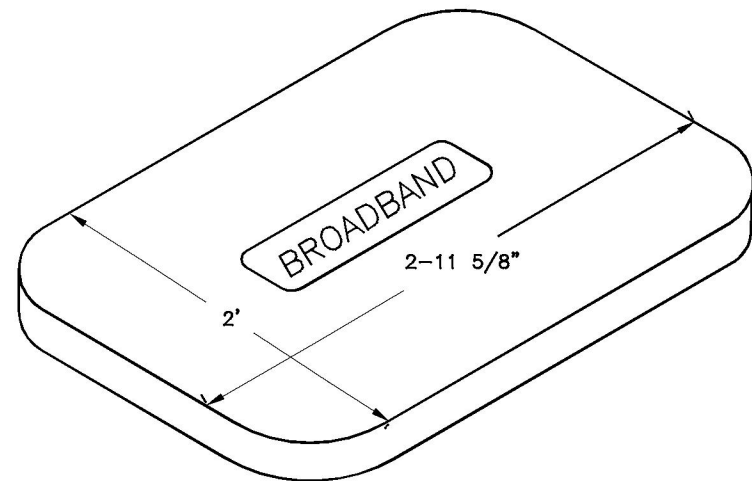
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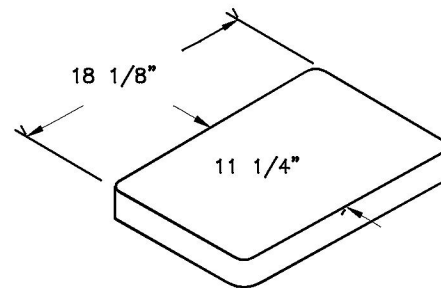
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RIVERSIDE PARK TRAIL  
UTILITY DETAILS DETAILS

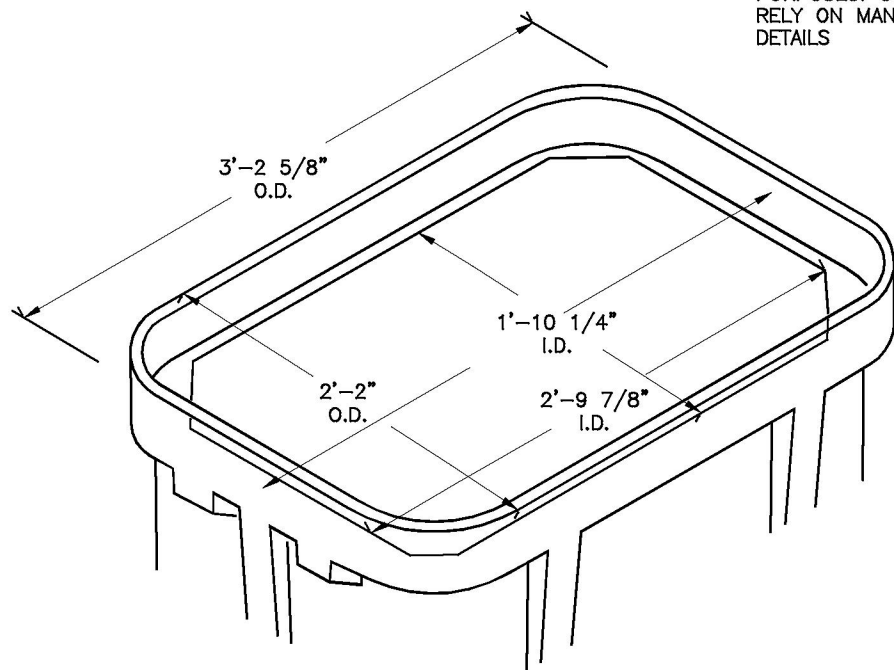


COVER

BROADBAND PULL BOX (HUBBEL QUAZITE BOX) (BOX PART NO PG2436BA30) COVER PART NO PG2436HA00) OR ENGINEER APPROVED EQUAL DIMENSIONS SHOWN HERE FOR LAYOUT AND PLANNING PURPOSES. CONTRACTOR SHALL RELY ON MANUFACTURER DETAILS

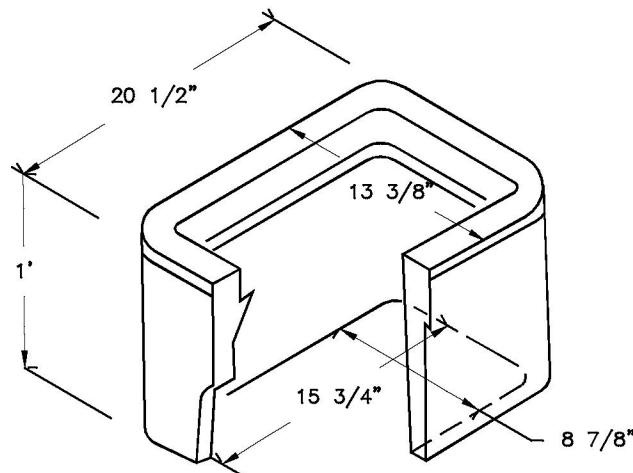


11 1/4"



BOX

BROADBAND PULL BOX DIMENSIONS SHOWN HERE FOR LAYOUT AND PLANNING PURPOSES. CONTRACTOR SHALL RELY ON MANUFACTURER DETAILS



STREET LIGHT AND PEDESTRIAN LIGHT PULL BOX

DIMENSIONS SHOWN HERE FOR LAYOUT AND PLANNING PURPOSES. CONTRACTOR SHALL RELY ON MANUFACTURER DETAILS

GENERAL NOTES:

- PULL BOXES, PULL BOX COVERS AND EXTENSIONS SHALL BE MADE OF FIBERGLASS REINFORCED POLYMER CONCRETE. PULL BOXES SHALL BE VERIFIED BY 3RD PARTY NATIONALLY RECOGNIZED INDEPENDENT TESTING LABORATORY AS MEETING ALL TEST PROVISIONS OF THE LATEST ANSI/SCTE 77 SPECIFICATION FOR UNDERGROUND ENCLOSURE INTEGRITY, TIER 22 RATING. CERTIFICATION DOCUMENTS SHALL BE SUBMITTED WITH MATERIALS SUBMITTALS. THE PULL BOX SHALL HAVE A DETACHABLE COVER WITH A SKID RESISTANT SURFACE AND HAVE THE WORDS ELECTRICAL CAST INTO THE SURFACE. FADING THE WORDS SHALL NOT BE ACCEPTED. MARKINGS SHOWING THE TIER 22 RATING MUST BE LABELED OR STENCILED ON THE INSIDE AND OUTSIDE OF THE BOX AND THE ON UNDER SIDE OF THE COVER. THE COVER SHALL BE ATTACHED TO THE PULL BOX BODY BY MEANS OF A MINIMUM 3/8-7 UNIFIED NATIONAL COURSE (UNC) STAINLESS STEEL PENTA HEAD BOLTS SHALL HAVE TWO LIFT SLOTS TO AIDE IN THE REMOVAL OF THE LID.
- PULL SLOTS SHALL BE RATED FOR A MINIMUM PULL OUT OF 3,000 POUNDS. MAGNESIUM CHLORIDE TESTS SHOULD BE PERFORMED IN ACCORDANCE WITH THE LATEST ANSI/SCTE 77 SPECIFICATION FOR UNDERGROUND ENCLOSURE INTEGRITY, TIER 22 RATING.

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TYPICAL PULLBOX DETAIL

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REVISION			AJM	3-11-2019
REVISION			BH	3-11-2019



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RIVERSIDE PARK TRAIL  
UTILITY DETAILS DETAILS

**GENERAL NOTES**

**PRESTRESSING STEEL**

- 1.1 PRESTRESSING STEEL SHALL BE 1/2" DIAMETER 7 WIRE LOW RELAXATION STRAND FOR PRE STRESSED CONCRETE MANUFACTURED IN ACCORDANCE WITH ASTM A418, GRADE 270 LATEST REVISION AND SHALL HAVE A MINIMUM ULTIMATE TENSILE STRENGTH OF 41,300 LBS.
- |                                 |               |
|---------------------------------|---------------|
| NOMINAL AREA                    | 0.153 SQ. IN. |
| MODULUS OF ELASTICITY (ASSUMED) | 29,500 KSI    |
| ULTIMATE STRENGTH               | 41.3 KIPS     |
| MAX. ANCHORING FORCE            | 33.3 KIPS     |

- 1.2 STRANDS IS COATED WITH A CORROSION PREVENTATIVE LUBRICATING GREASE MEETING THE RECOMMENDATIONS AND ENCASED IN A CONTINUOUSLY EXTRUDED SEAMLESS, POLYETHYLENE PLASTIC SHEATHING OF 50 MILS MINIMUM THICKNESS. TORN OR DAMAGED SHEATHING SHALL BE REPAIRED PRIOR TO CONCRETE PLACING. SMALL TEARS OR SHEATHING FREE SECTIONS OF CABLE LESS THAN 6" IN LENGTH MAY BE REPAIRED WITH TAPE.

**ANCHORAGES**

- 2.1 ALL ANCHORING HARDWARE SHALL MEET THE MINIMUM REQUIREMENTS SET FORTH IN ACI "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318-88, CHAPTER 18) - ALONG WITH PTI "SPECIFICATIONS FOR UNBONDED SINGLE STRAND TENDONS" IN A NON-AGGRESSIVE ENVIRONMENT.

**TENDON FABRICATION**

- 3.1 TENDONS SHALL BE FABRICATED TO PREDETERMINED LENGTH AS SHOWN ON THE PLACING DRAWINGS. THE LENGTH SHALL BE SUFFICIENT TO ALLOW A MINIMUM OF 18" AT EACH STRESSING END.

- 3.2 TENDONS WHICH ARE STRESSED FROM ONE END ONLY SHALL HAVE FIXED-END ANCHORAGES ATTACHED PRIOR TO SHIPMENT. TENDONS WHICH ARE INTERMEDIATELY STRESSED SHALL HAVE THE INTERMEDIATE ANCHORAGE(S) PLACED BEHIND THE FIXED-END ANCHORAGE, OR WITH NO FIXED-END ANCHORAGE, PLACED NEAR THE END OF THE TENDON COIL.

- 3.3 TENDONS SHALL BE CLEARLY IDENTIFIED BY COLOR CODE AS CALLED OUT ON THE PLACING DRAWINGS FOR EASE OF INSTALLATION. COLOR CODE SHALL BE MARKED ON THE FIXED-END ANCHORAGE CASTINGS AND/OR ON THE STRAND SHEATHING.

- 3.4 EACH TENDON SHIPMENT SHALL BE ACCOMPANIED BY A TENDON FABRICATION ORDER INDICATING THE NUMBER OF TENDONS, THEIR LENGTH, COLOR CODE AND TOTAL NUMBER OF ANCHORAGE CASTINGS, WEDGES, GROMMETS AND SUPPORT CHAIRS (WHERE APPLICABLE) SHIPPED.

- 3.5 TENDONS WILL BE FABRICATED IN SUCH SEQUENCE AND QUANTITY AS TO ALLOW SHIPPING IN FULL TRUCKLOADS. UPON ARRIVAL, PURCHASER SHALL INSPECT THE SHIPMENT PRIOR TO UNLOADING AND SHALL NOTE ANY DAMAGE OR QUANTITY VARIATIONS ON THE CARRIER'S BILL OF LADING. VSL SHALL HAVE NO LIABILITY WHATSOEVER WITH RESPECT TO ANY DAMAGE OR VARIATIONS NOT SO NOTED.

- 3.6 PURCHASER SHALL PROPERLY UNLOAD TENDONS. THE USE OF A NYLON SLING IS RECOMMENDED FOR UNLOADING TENDONS TO PREVENT DAMAGE TO THE SHEATHING. PURCHASER SHALL SATISFACTORILY PROTECT TENDONS AND OTHER MATERIALS AT THE JOB SITE FROM CORROSION AND OTHER PERILS PRIOR TO PLACEMENT.

**TENDON PLACEMENT**

- 4.1 LOCATE THE CENTER LINES OF THE BUNDLES AT THE EDGE FORMS AS SHOWN ON THE PLACING DRAWINGS. LOCATE AND MARK THE INDIVIDUAL ANCHORAGE CENTERLINES. AT STRESSING ENDS, THE CONTRACTOR SHALL DRILL 3/4" DIAMETER HOLES IN THE EDGE FORMS. AT INTERMEDIATE STRESSING JOINTS, NOTCHED OR SPLIT FORMS SHALL BE PROVIDED TO FACILITATE TENDON PLACING.

- 4.2 AT STRESSING ENDS, NAIL ANCHORAGES WITH GROMMETS SECURELY IN PLACE AGAINST EDGE FORMS. VSL RECOMMENDS USING RING SHANK NAILS.

- 4.3 LAY BOTTOM BACK UP BARS ALONG EDGES OF SLAB, INTERMEDIATE STRESSING JOINTS, AND ADDED TENDON FIXED ENDS.

- 4.4 PLACE SUPPORT BARS AND TENDONS ACCORDING TO VSL PLACING DRAWINGS. REVIEW DETAILS AND NOTES SHOWING PLACING SEQUENCE IN CRITICAL AREAS. PLACEMENT OF REBAR MUST BE COORDINATED WITH PLACEMENT OF TENDONS. IN CASE OF CONFLICT, TENDON LOCATION GOVERNS.

- 4.5 AT STRESSING ENDS, REMOVE SHEATHING FLUSH WITH BACK SIDE OF ANCHORAGE CASTING. THE LENGTH FROM INSIDE FACE OF EDGE FORM TO STRAND END MUST BE AT LEAST 18". PASS TENDONS THROUGH ANCHORAGES.

- 4.6 AT INTERMEDIATE STRESSING JOINTS, SLIDE ANCHORAGE CASTING TO APPROXIMATE JOINT LOCATION. REMOVE JUST ENOUGH SHEATHING TO INSURE PROPER STRESSING. THE SHEATHING CAN REMAIN IN ANCHORAGE CASTING. PLACE TENDON THROUGH EDGE FORM AND NAIL ANCHORAGE CASTING AND SPLIT GROMMETS AGAINST THE INSIDE.

- 4.7 LAY TOP BACK UP BARS ALONG EDGES OF SLAB, INTERMEDIATE STRESSING JOINTS AND ADDED TENDON FIXED ENDS; THE BOTTOM AND TOP BACK-UP BARS TO ANCHORAGES OR TENDONS AS SHOWN ON SHOP DRAWINGS.

- 4.8 CHAIR UP SUPPORT BARS ACCORDING TO TENDON PROFILES SHOWN. PLACE TENDONS WITH SMOOTH HORIZONTAL CURVES AT ANCHORAGES AND AROUND OPENINGS AS SHOWN. FOR UNIFORM TENDONS, PLACE ONE CHAIR AT EACH INTERSECTION OF TENDON GROUP AND BAR. FOR Banded TENDONS, PLACE ONE CHAIR AT EVERY OTHER INTERSECTION OF TENDON GROUP AND BAR (UNLESS NOTED OTHERWISE ON PLACING DRAWINGS). TIE CHAIR, TENDON GROUP AND BAR TOGETHER. Banded TENDONS SHALL BE TIED DIRECTLY TO BEAM SUPPORT BARS IN BUNDLES AS SHOWN IN BEAM DETAILS.

- 4.9 CONCRETE SHALL BE PLACED IN SUCH A MANNER AS NOT TO DISTURB THE TENDON PROFILES. WORKERS MUST BE CAUTIONED AGAINST WALKING ON TENDONS OR SUPPORT BARS. ANY TENDON DISPLACED DURING CONCRETE PLACEMENT MUST BE RESTORED TO ITS ORIGINAL PROFILE BEFORE CONCRETE SETS.

**TENDON STRESSING**

- 5.1 THE STRESSING OPERATION MUST BE UNDER THE IMMEDIATE CONTROL OF A PERSON EXPERIENCED WITH THIS TYPE OF WORK. THIS PERSON MUST MAINTAIN A CLOSE CHECK AND RIGID CONTROL OF ALL OPERATIONS.

- 5.2 THE STRESSING MUST NOT COMMENCE UNTIL CONCRETE TEST CYLINDERS, CURED UNDER JOB SITE CONDITIONS, HAVE BEEN TESTED AND INDICATE THAT THE CONCRETE HAS REACHED A MINIMUM STRENGTH OF 2500 P.S.I., BUT WITHIN 96 HOURS OF CONCRETE PLACEMENT.

- 5.3 ALL PRE STRESSING STEEL SHALL BE STRESSED BY MEANS OF VSL HYDRAULIC JACKS, EQUIPPED WITH HYDRAULIC PRESSURE GAUGES CALIBRATED EVERY 6 MONTHS. A CALIBRATION CHART SHALL ACCOMPANY EACH JACK AND GAUGE COMBINATION. HYDRAULIC JACKS AND GAUGES ARE CALIBRATED AS A UNIT. **DO NOT INTERCHANGE.**

- 5.4 THE STRESSING SEQUENCE SHALL BE AS FOLLOWS:

- 5.4.1 SLAB ON GRADE: STRESS ALL NORTH-SOUTH UNIFORM TENDONS; STRESS ALL EAST-WEST UNIFORM TENDONS.

- 5.5 THE PROCEDURE FOR STRESSING SHALL BE AS FOLLOWS:

- 5.5.1 REMOVE GROMMETS AT STRESSING ENDS AND COLLECT FOR RE-USE. INSPECT THE CASTING TAPER VOID TO INSURE THAT CEMENT PASTE OR OTHER DEBRIS IS NOT PRESENT IN ANCHORAGE. REMOVE IF PRESENT.

- 5.5.2 REMOVE EXCESS GREASE AND DIRT FROM STRAND TAIL BY USING RAGS. IT IS NOT NECESSARY TO THOROUGHLY CLEAN THE TAILS OR GREASE, ONLY TO REMOVE EXCESS SURFACE MATERIALS.

- 5.5.3 INSTALL PERMANENT WEDGES IN A SIDE-BY-SIDE (NOT COVER-AND-UNDER) POSITION, AND HAND SEAT IN ANCHORAGE CASTING USING HAND SEATING TOOL.

- 5.5.4 USING A DEVICE TO ESTABLISH A CONSTANT REFERENCE DIMENSION FROM THE FACE OF THE CONCRETE, MARK WITH A QUIK DRY SPRAY PAINT (DO NOT USE LUMBER CRAYON) TO ESTABLISH A REFERENCE POINT FOR ELONGATION MEASUREMENTS. **DO NOT OVER SPRAY; MARK SHOULD BE CLEAR AND NOT SMEARED OR SPREAD OUT OR AN ACCURATE MARKING WILL NOT BE ACHIEVED.**

- 5.5.5 INSTALL WEDGES AND MARK BOTH ENDS PRIOR TO STRESSING AT EITHER END.

- 5.5.6 INSPECT JACK FOR LOOSE SCREWS, FITTINGS OR CONNECTIONS, AND TIGHTEN AS NECESSARY. CHECK JACK GRIPPERS TO INSURE THEY ARE CLEAN AND ALIGNED PROPERLY.

- 5.5.6 SEAT THE NOSEPIECE OF JACK CONCENTRICALLY AGAINST THE ANCHORAGE CASTING AND CLOSE JACK GRIPPER ARMS EVENLY AGAINST STRAND. **FAILURE TO DO SO MAY RESULT IN BROKEN OR DAMAGED STRANDS.**

- 5.5.7 STRESS TENDONS TO 80% OF ULTIMATE STRENGTH OF STRAND, I.E. 33 KIPS (SEE JACK CALIBRATION CURVE FOR GAUGE PRESSURE).

- 5.5.8 PERMANENTLY SEAT THE WEDGES IN THE ANCHORAGE USING THE HYDRAULIC SEATING DEVICE BUILT INTO THE JACK.

- 5.5.9 REMOVE THE STRESSING JACK.

- 5.5.10 MEASURE FINAL ELONGATION AND RECORD. PLACE THE MARKING DEVICE AGAINST THE CONCRETE SURFACE AND MEASURE THE DISTANCE FROM MARKING DEVICE TO PAINT MARK. THIS DISTANCE WILL BE THE TENDON ELONGATION. ALL INFORMATION MUST BE FILED IN ON THE STRESSING RECORDS.

- 5.6 THE POST-TENSIONING OPERATION SHALL BE CONDUCTED SO THAT ACCURATE ELONGATION OF THE PRE STRESSING STEEL CAN BE RECORDED AND COMPARED WITH CALCULATED ELONGATIONS. RECORDS SHALL BE KEPT OF ALL JACKING FORCES AND ELONGATIONS AND SUBMITTED PROMPTLY TO THE STRUCTURAL ENGINEER FOR HIS DATA. IF INCONSISTENCIES EXCEEDING ± 7% OCCUR BETWEEN CALCULATED AND MEASURED ELONGATION, THE CAUSE OF THE INCONSISTENCY SHALL BE DETERMINED AND RESOLVED.

- 5.7 TENDONS STRESSED FROM ONE END ONLY SHALL BE SO INDICATED ON THE PLACING DRAWINGS. TENDONS THAT ARE STRESSED FROM BOTH ENDS NEED NOT BE STRESSED FROM BOTH ENDS SIMULTANEOUSLY. THESE TENDONS MAY HAVE MORE ELONGATION AT ONE END THEN THE OPPOSITE END; ELONGATIONS FROM BOTH ENDS ARE ADDED AND THAT TOTAL COMPARED TO THE CALCULATED ELONGATION SHOWN.

- 5.8 SAFE OPERATING PROCEDURES SHOULD ALWAYS BE FOLLOWED:

- 5.8.1 READ CAUTION LABELS ON EQUIPMENT.

- 5.8.2 ALL EQUIPMENT SHOULD BE KEPT THOROUGHLY CLEAN AND IN A WORKING CONDITION. PRIOR TO COMMENCING THE STRESSING OPERATIONS, ALL NUTS, SCREWS, AND FITTINGS (ON THE JACKS), SHALL BE CHECKED TO INSURE THAT THEY ARE TIGHT. ALL PRESSURE FITTINGS AND HOSES SHOULD BE CHECKED FOR LEAKS. AFTER COMPLETING EACH DAY'S STRESSING OPERATION, THE EQUIPMENT SHALL BE THOROUGHLY CLEANED, INCLUDING GRIPPER ASSEMBLIES, AND STORED SO AS TO PREVENT DAMAGE WHILE EQUIPMENT IS NOT IN USE.

- 5.8.3 JACKS AND PUMPS SHALL BE SECURED TO A FIXED OBJECT BY MEANS OF SAFETY LINE TO PREVENT EQUIPMENT FROM BEING THROWN OFF BUILDING SHOULD TENDON, EQUIPMENT OR HYDRAULIC LINE FAIL DURING STRESSING.

- 5.8.4 ALL PERSONNEL NOT DIRECTLY INVOLVED IN THE STRESSING OR RECORDING OPERATION ARE TO REMAIN CLEAR OF THE STRESSING AND DEAD END AREAS UNTIL THE STRESSING OPERATION IS COMPLETE.

- 5.8.5 PERSONNEL DIRECTLY INVOLVED IN THE STRESSING OPERATIONS ARE TO REMAIN CLEAR OF THE TENDON BEING STRESSED AT ALL TIMES. NEVER PERMIT ANYONE TO STAND DIRECTLY BEHIND OVER, OR BESIDE THE TENDON OR JACK WHEN LOAD IS BEING APPLIED. EQUIPMENT OPERATOR SHOULD ALWAYS USE REMOTE CONTROL SWITCH PROVIDED WITH UNIT, MAINTAINING SIX (6) FEET CLEAR FROM UNIT; DO NOT STAND BETWEEN JACK AND PUMP UNIT. DO NOT ALLOW PERSONNEL TO BECOME ENTANGLED IN THE HYDRAULIC HOSES DURING STRESSING OPERATIONS.

- 5.8.6 ELONGATION MEASUREMENTS ARE NEVER TO BE TAKEN WHILE JACK IS UNDER LOAD. REMOVE JACK FROM STRAND PRIOR TO TAKING READINGS. PERSONNEL INVOLVED IN ELONGATION RECORDINGS ARE TO FOLLOW SAME SAFETY RULES AS EQUIPMENT OPERATORS.

- 5.8.7 NEVER ATTEMPT TO ADJUST POSITION OF JACK, EITHER BY STRIKING OR PUSHING, AFTER LOAD HAS BEEN APPLIED. RELEASE LOAD, REMOVE JACK AND REPOSITION IF NECESSARY.

- 5.8.8 DO NOT ALTER ANY EQUIPMENT SUPPLIED BY VSL. ANY DEFECTIVE PARTS ARE TO BE REPLACED ONLY BY QUALIFIED VSL PERSONNEL USING VSL SUPPLIED PARTS UNLESS INSTRUCTED OTHERWISE BY VSL. THIS INCLUDES THE COMPLETE TENSIONING UNIT INCLUDING PUMP, HOSES, FITTINGS, JACKS, COUPLERS AND GAUGES.

- 5.8.9 WHEN EQUIPMENT IS BEING MOVED BETWEEN FLOORS OR ADJACENT FLOORS BY MEANS OF HOISTING EQUIPMENT, GAUGES SHOULD BE REMOVED AND HAND CARRIED. DO NOT ATTEMPT TO TRANSPORT EQUIPMENT WHILE GAUGE IS STILL ATTACHED TO PUMP UNIT.

**SEALING ANCHORAGE BLOCK OUTS**

- 6.1 AFTER STRESSING IS COMPLETED, ELONGATIONS VERIFIED, AND STRUCTURAL ENGINEER HAS GIVEN APPROVAL, CUT OFF EXCESS TENDON STRAND APPROXIMATELY 1" AWAY FROM THE FACE OF THE ANCHORAGE. COAT EXPOSED TENDON AND ANCHORAGE WITH A RUST INHIBITOR.

- 6.2 A BONDING AGENT SHOULD BE APPLIED TO BLOCK OUT AND ANCHORAGE. THEN THE EXPOSED ANCHORAGE BLOCK OUT SHOULD BE FILLED. IT IS SUGGESTED THAT A NONMETALLIC, NON-SHRINK EPOXY MIX BE USED FOR THIS PURPOSE. PATCHING MATERIAL MUST BE NON-CORROSIVE TO TENDON ELEMENTS AND CONTAIN NO CHLORIDES, SULFATES, OR NITRATES.

**MISCELLANEOUS**

- 7.1 ALL THE EQUIPMENT USED FOR HANDLING AND PLACING TENDONS MUST NOT DAMAGE OR DETERIORATE THE PRE STRESSING STEEL, OR THE ANCHORAGES.

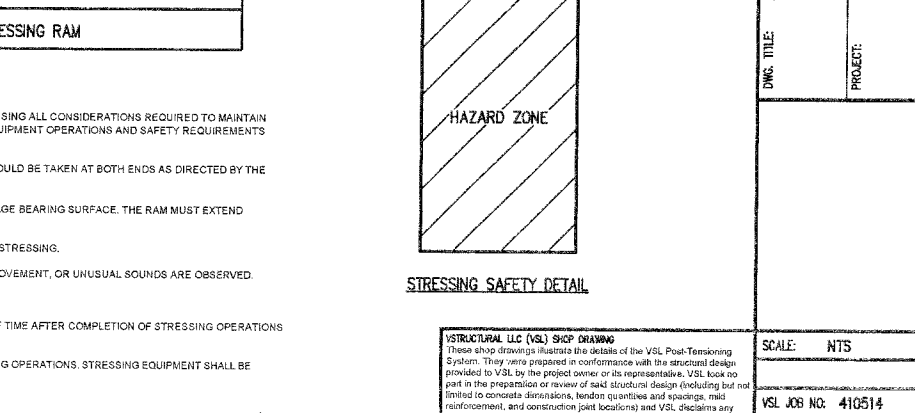
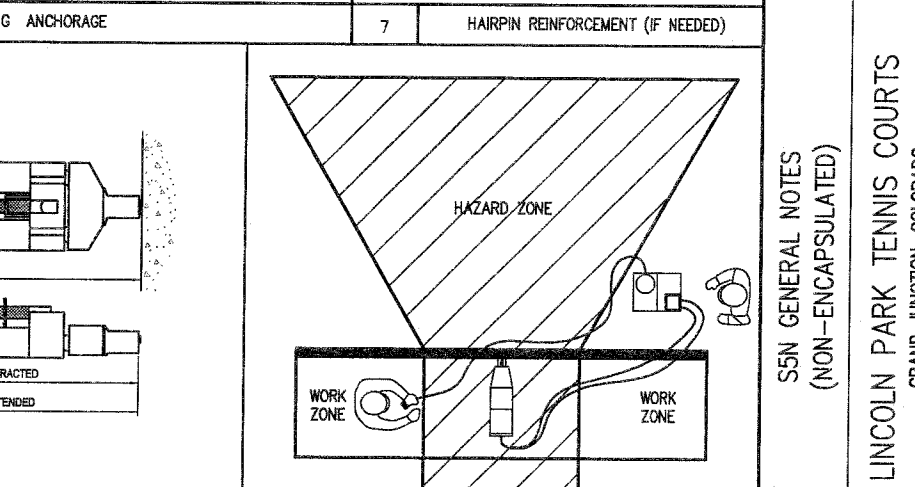
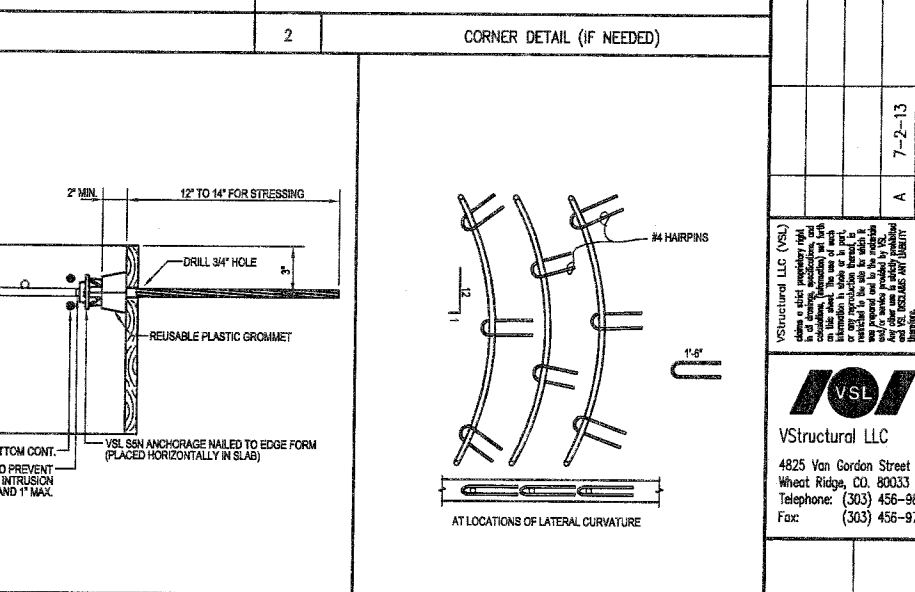
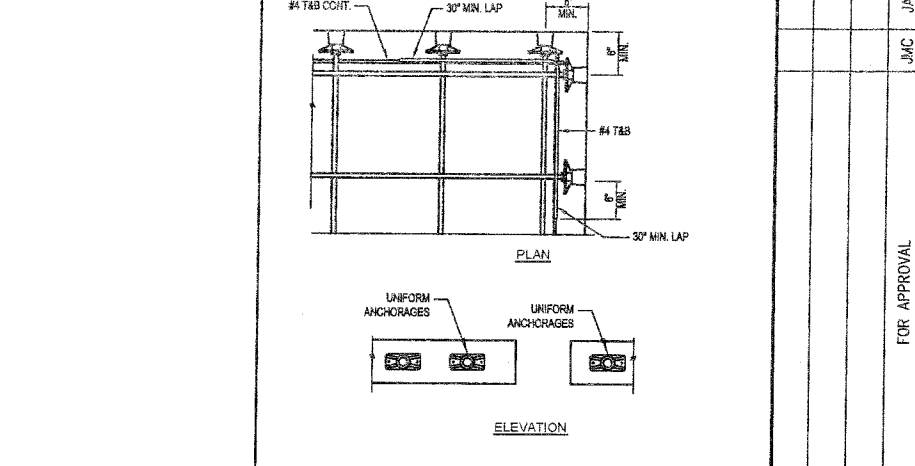
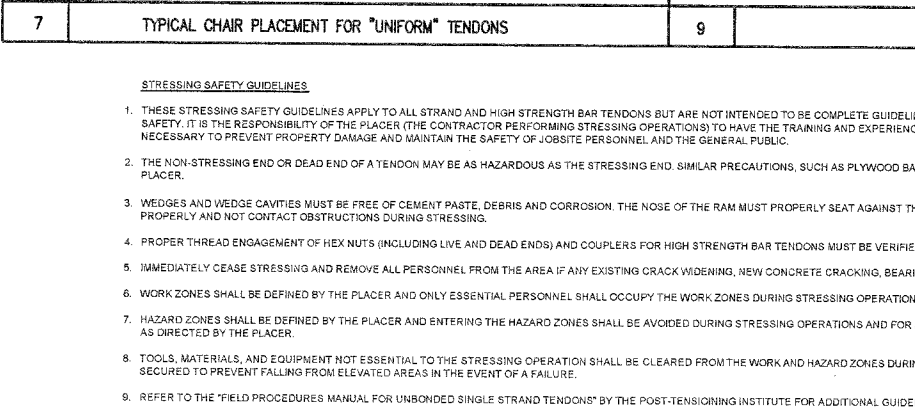
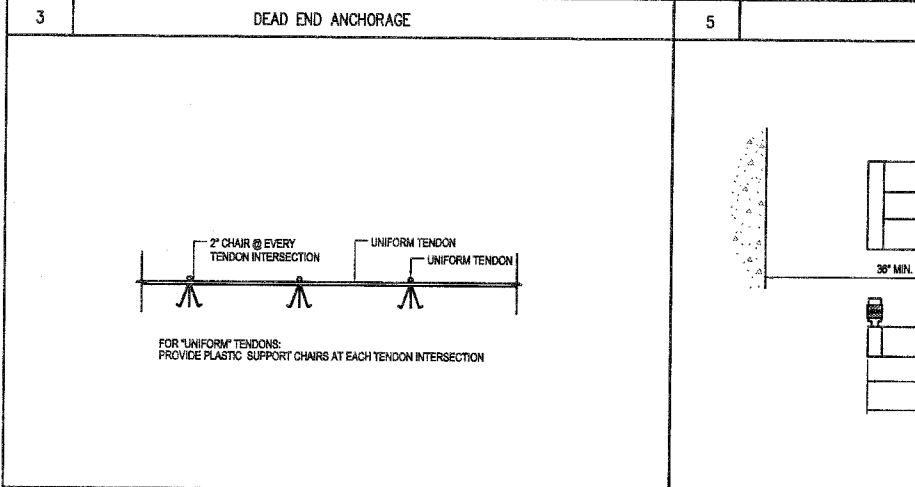
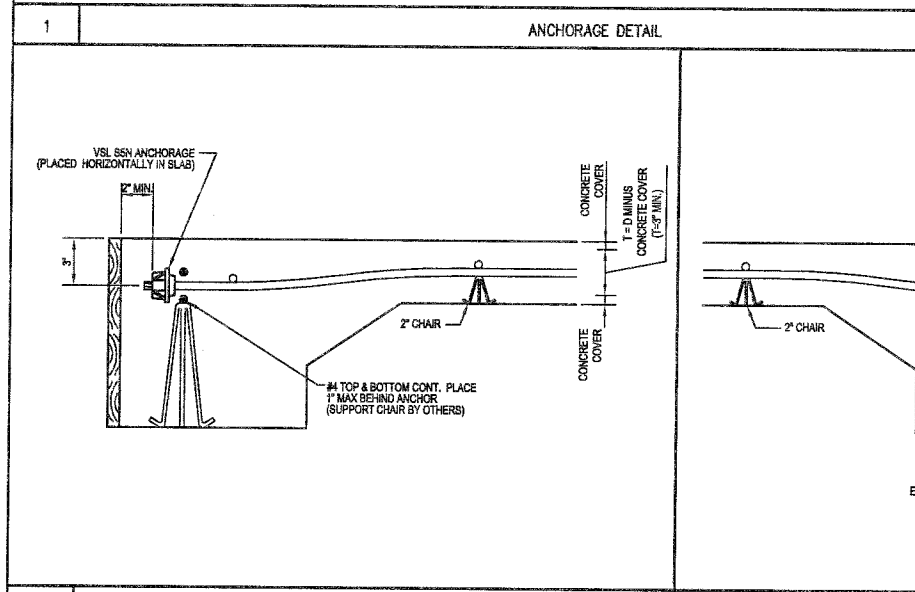
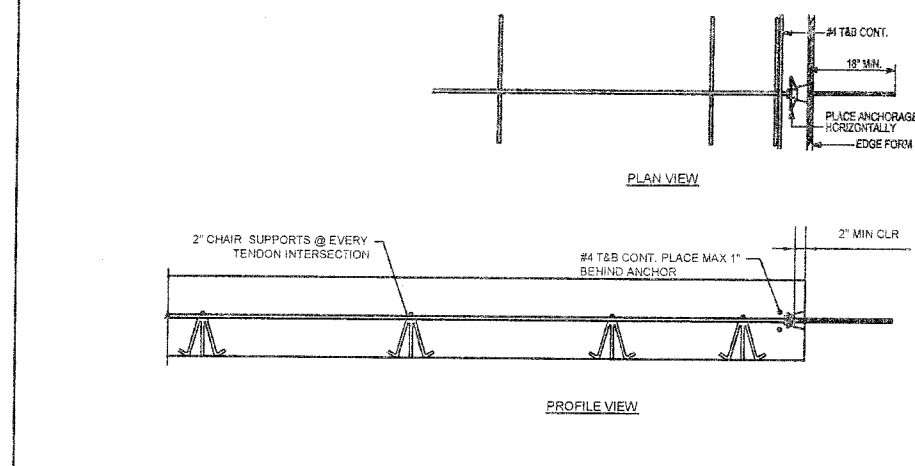
- 7.2 BURNING AND WELDING IN THE VICINITY OF THE TENDONS IS DISCOURAGED. CARE MUST BE TAKEN TO INSURE THAT TENDONS ARE NOT SUBJECT TO HIGH TEMPERATURES, WELDING SPARKS OR GROUND CURRENTS.

- 7.3 VSL PLACING DRAWINGS ARE INTENDED FOR TENDON AND SUPPORT BAR PLACEMENT ONLY. SEE ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR EXACT LOCATION OF EDGE FORMS, OPENING, CHANGES OF LEVEL AND FINAL FINISHED CONCRETE ELEVATIONS OF SLABS AND BEAMS.

- 7.4 ALL INSERTS FOR SUSPENDED MECHANICAL AND ARCHITECTURAL WORK MUST BE CAST-IN-PLACE. IF ADDITIONAL FASTENERS ARE REQUIRED, POWER-DRIVEN FASTENERS WILL BE PERMITTED ONLY WHERE THEY WILL NOT SPALL THE CONCRETE AND NOT DAMAGE THE TENDONS. CONTRACTORS MUST LOCATE TENDONS AT THE SURFACE OF THE SLAB BEFORE DRIVING FASTENERS.

- 7.5 ALL POCKETS AND CLOSURE STRIPS REQUIRED FOR ANCHORAGES MUST BE ADEQUATELY REINFORCED SO AS NOT TO DECREASE THE STRENGTH OF THE STRUCTURE.

- 7.6 WHEN 6 OR MORE STRANDS ARE SPACED AT LESS THAN 12" O.C. HAIRPINS MUST BE USED AT THE ANCHORAGES AS SHOWN IN DETAIL OR AS SPECIFIED BY THE STRUCTURAL ENGINEER.



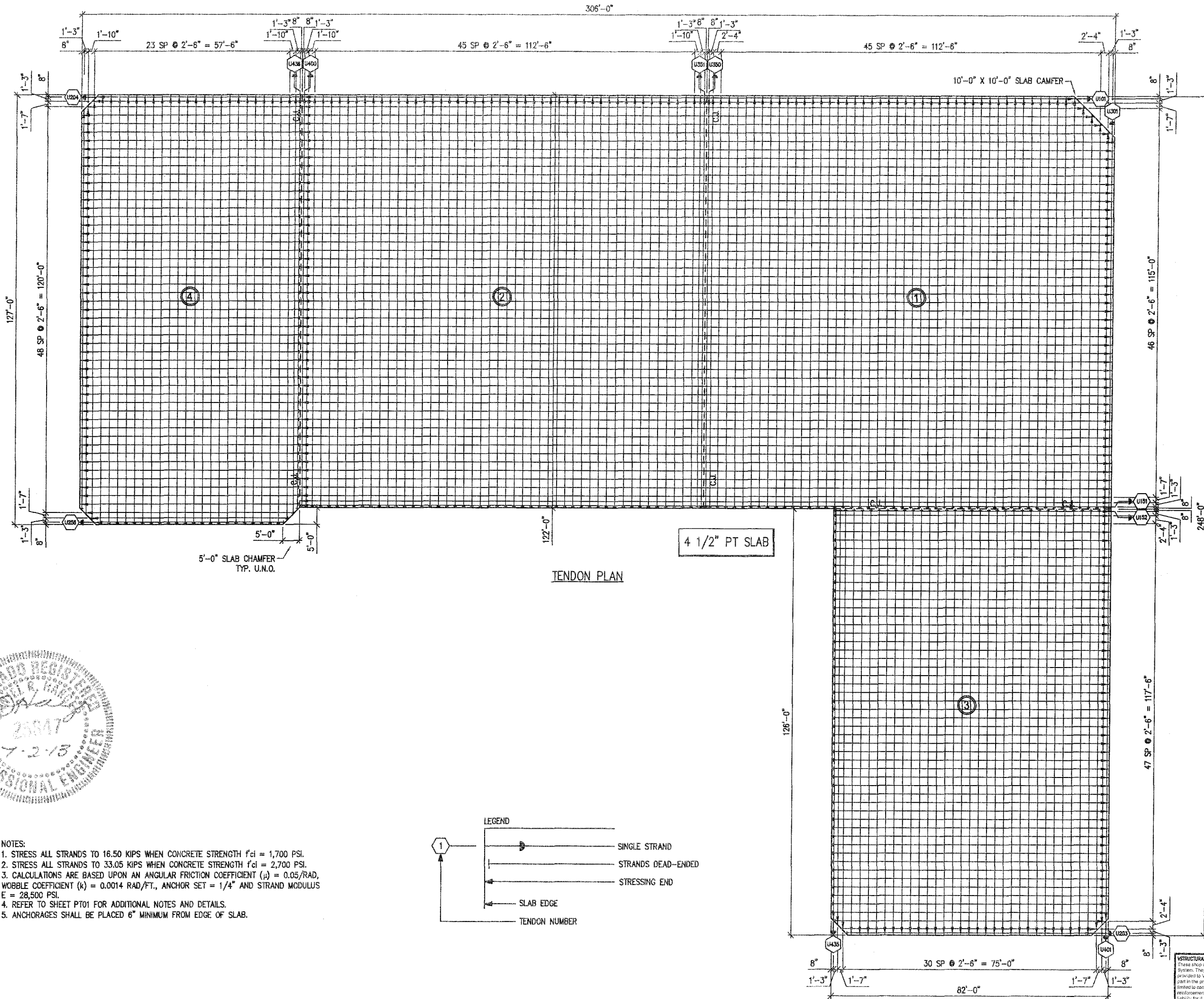
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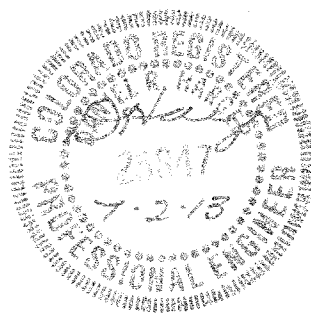
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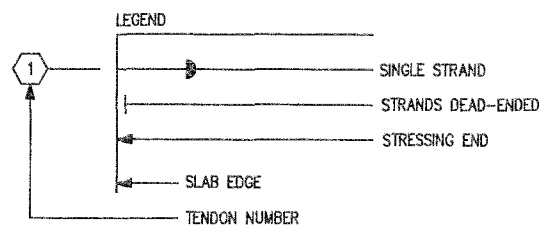


4 1/2" PT SLAB

TENDON PLAN



- NOTES:
1. STRESS ALL STRANDS TO 16.50 KIPS WHEN CONCRETE STRENGTH  $f'_{ci} = 1,700$  PSI.
  2. STRESS ALL STRANDS TO 33.05 KIPS WHEN CONCRETE STRENGTH  $f'_{ci} = 2,700$  PSI.
  3. CALCULATIONS ARE BASED UPON AN ANGULAR FRICTION COEFFICIENT ( $\mu$ ) = 0.05/RAD, WOBBLE COEFFICIENT ( $k$ ) = 0.0014 RAD/FT., ANCHOR SET = 1/4" AND STRAND MODULUS  $E = 28,500$  PSI.
  4. REFER TO SHEET PT01 FOR ADDITIONAL NOTES AND DETAILS.
  5. ANCHORAGES SHALL BE PLACED 6" MINIMUM FROM EDGE OF SLAB.

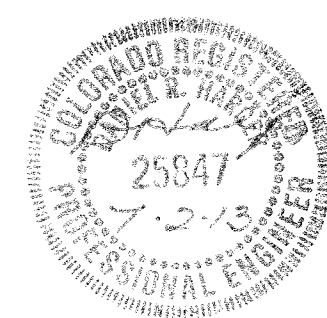


VSTRUCTURAL LLC (VSL) SHOP DRAWING  
 These shop drawings illustrate the details of the VSL Post-Tensioning System. They were prepared in accordance with the structural design provided to VSL by the project owner or its representative. VSL does not part in the preparation or review of said structural design (including but not limited to concrete dimensions, tendon quantities and spacings, rebar reinforcement, and construction joint locations) and VSL disclaims any liability for it. The stamp or seal of a VSL employee on these shop drawings pertains only to the transfer of the cost-reducing forces required by the engineer of record on the structural drawings, and not to the adequacy of the structural design. No warranty, expressed or implied, as to the adequacy of the structural design is made by virtue of any stamp or seal.

VSTRUCTURAL LLC (VSL) <small>Offers a third party liability (TPL) in all drawings, specifications and on this plan. The use of such information is subject to the terms and conditions of the TPL policy, which is available to the project owner. For more information, contact VSL at (303) 456-9887.</small>	
<b>VStructural LLC</b> 4825 Van Gordon Street Wheat Ridge, CO, 80033 Telephone: (303) 456-9887 Fax: (303) 456-9796	
DWG. TITLE: TENDON PLAN PROJECT: LINCOLN PARK TENNIS COURTS GRAND JUNCTION, COLORADO	
REV. A DATE 7-2-13	FOR APPROVAL JMC JA REVISION BY CHK
SCALE: NTS VSL Dwg. No. 410514 VSL Dwg. No. PT02	

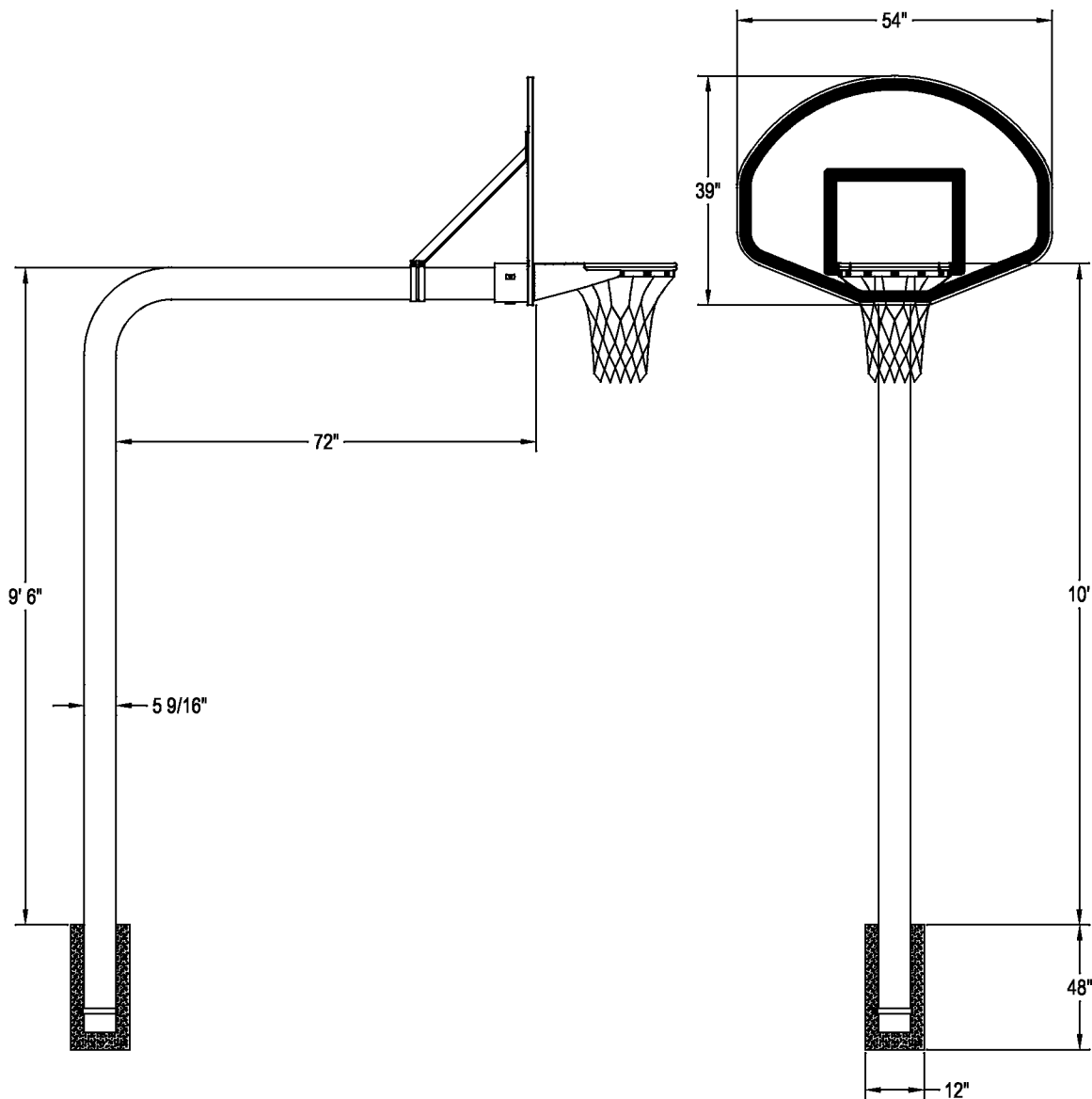
TENDON SCHEDULE							
TENDON(S)	POUR	QUANTITY	STRAND LENGTH (FT)	KIND	TYPE	CONCRETE LENGTH (FT)	ELONG1 (IN)
U101	1	1	233	UNIFORM	<----->	229.67	18.80
U102	1	1	234	UNIFORM	<----->	230.92	18.89
U103	1	1	236	UNIFORM	<----->	232.50	19.01
U104	1	1	238	UNIFORM	<----->	235.00	19.21
U105	1	1	241	UNIFORM	<----->	237.50	19.40
U106	1	1	243	UNIFORM	<----->	240.00	19.59
U107-U151	1	45	244	UNIFORM	<----->	241.00	19.67
U152-U200	3	49	84	UNIFORM	----->	82.00	6.80
U201	3	1	82	UNIFORM	----->	80.50	6.67
U202	3	1	78	UNIFORM	----->	75.83	6.29
U203	3	1	75	UNIFORM	----->	73.33	6.09
U204	4	1	63	UNIFORM	----->	60.67	5.04
U205	4	1	64	UNIFORM	----->	61.92	5.14
U206	4	1	65	UNIFORM	----->	63.50	5.28
U207-U253	4	47	67	UNIFORM	----->	65.00	5.40
U254	4	1	64	UNIFORM	----->	62.00	5.15
U255	4	1	61	UNIFORM	----->	58.83	4.89
U256	4	1	58	UNIFORM	----->	56.33	4.68
U301	1	1	113	UNIFORM	----->	110.67	9.07
U302	1	1	114	UNIFORM	----->	111.92	9.17
U303	1	1	116	UNIFORM	----->	114.25	9.35
U304	1	1	119	UNIFORM	----->	116.75	9.55
U305	1	1	121	UNIFORM	----->	119.25	9.74
U306	1	1	124	UNIFORM	----->	121.75	9.93
U307-U350	1	44	124	UNIFORM	----->	122.00	9.95
U351-U400	2	50	124	UNIFORM	----->	122.00	9.95
U401	3	1	124	UNIFORM	----->	121.67	9.92
U402	3	1	125	UNIFORM	----->	122.92	10.02
U403	3	1	126	UNIFORM	----->	124.50	10.14
U404-U432	3	29	128	UNIFORM	----->	126.00	10.26
U433	3	1	126	UNIFORM	----->	124.50	10.14
U434	3	1	125	UNIFORM	----->	122.92	10.02
U435	3	1	124	UNIFORM	----->	121.67	9.92
U436	4	1	125	UNIFORM	----->	122.67	10.00
U437	4	1	126	UNIFORM	----->	123.92	10.10
U438	4	1	128	UNIFORM	----->	125.75	10.24
U439-U460	4	22	129	UNIFORM	----->	127.00	10.33
U461	4	1	126	UNIFORM	----->	124.50	10.14
U462	4	1	123	UNIFORM	----->	120.83	9.86
U463	4	1	120	UNIFORM	----->	118.33	9.67

STRAND AND ANCHOR SUMMARY					
POUR	TOTAL QUANTITY	TOTAL STRAND LENGTH (FT)	S5N		
			DE	SO	SE
1	101	18,568	50	0	152
2	50	6,200	50	0	50
3	87	8,813	87	0	87
4	81	7,110	81	0	81
TOTALS:	319	40,691	268	0	370



FOR APPROVAL		JMC	BY
REVISION			
A	7-2-13	DATE	
		REV.	
<p>VStructural LLC (VSL) shall be a sole proprietorship and not a partnership, limited liability company, or other legal entity. The use of such information in this or in any other drawing is subject to the terms and conditions set forth in the VSL Standard Terms and Conditions of Service. Any other use is strictly prohibited and may result in legal action.</p>			
<p><b>VSL</b> VStructural LLC 4825 Van Gordon Street Wheat Ridge, CO. 80033 Telephone: (303) 456-9887 Fax: (303) 456-9796</p>			
TENDON SCHEDULE		LINCOLN PARK TENNIS COURTS GRAND JUNCTION, COLORADO	
DWG. TITLE:		PROJECT:	
SCALE: SCALE		VSL JOB NO: JOB_NO	
		VSL DWG. NO. PT03	

**VSTRUCTURAL LLC (VSL) SHOP DRAWING**  
These shop drawings illustrate the details of the VSL Post-Tensioning System. They were prepared in accordance with the structural design provided to VSL by the project owner or its representative. VSL does not participate in the preparation or review of final structural design (including but not limited to concrete dimensions, tendon quantities and spacings, rebar reinforcement, and construction joint locations) and VSL disclaims any liability for it. The stamp or seal of a P.E. employee on these shop drawings pertains only to the transfer of the post-tensioning forces required by the engineer of record on the structural drawings, and not to the adequacy of the structural design. No warranty, expressed or implied, as to the adequacy of the structural design is made by virtue of any stamp or seal.



Pole shall be constructed of 5 9/16" outside diameter schedule 40 structural pipe and have a hot dipped galvanized finish. Design shall be a bent gooseneck style and allow for a 48" bury into the ground and a 72" extension from the front of the pole to the face of the backboard. Two 1 5/8" diameter, 13 ga. flow coated galvanized tubular braces shall support the top of the backboard and connect directly to the pole. Pole shall be designed so that the rim mounts directly to the horizontal pole section through the backboard to eliminate stress on the backboard during play. Pole systems without backboard support braces shall not be considered equal. Pole shall carry a limited lifetime warranty. Backboard shall be constructed of formed and welded steel with a 39" x 54" fan-shaped playing surface. Skin shall be 12 ga. mild steel and support structure shall be 7 ga. and 10 ga. All skin edges shall be formed to create a 1 1/2" lip to add strength. The backboard shall be coated with a white polyester powder coated finish and have an official orange shooter's square and border. Backboard shall accept rims with a 5"x 5" hole pattern and be manufactured in the USA. Backboard shall carry a minimum 10-year limited warranty. Rim shall consist of two 5/8" diameter AISI 1018 cold drawn carbon steel rings welded together at a minimum of six places. Back and side plates shall be 3/16" thick and be continuously welded. The net attachment system shall be of a continuous type constructed of 3/16" x 1" steel with punched net attachment slots suitable for nylon ( included ) or chain ( optional ) nets. Individual or continuous wire formed netlocks are not an acceptable equal. Rim shall be punched to mount on any front mount backboard, have an unconditional lifetime warranty and orange powder coated finish. Mounting hardware shall be included. Rim shall be made in the USA. Installation to be completed in accordance with manufacturer's instructions. Do not scale drawings. Entire system shall weigh approximately 405#.



## PRODUCT SPECIFICATION

PR76 MEGA-DUTY STEEL FAN GOOSENECK PLAYGROUND SYSTEM

REVISED 7/11/17



Purchasing Division

## **ADDENDUM NO. 2**

**DATE:** April 2, 2019  
**FROM:** City of Grand Junction Purchasing Division  
**TO:** All Offerors  
**RE:** Riverside Park Improvements and Bike Path IFB-4621-19-DH

Offerors responding to the above referenced solicitation are hereby instructed that the requirements have been clarified, modified, superseded and supplemented as to this date as hereinafter described.

Please make note of the following clarifications:

1. See attached updated basketball hoop specifications.

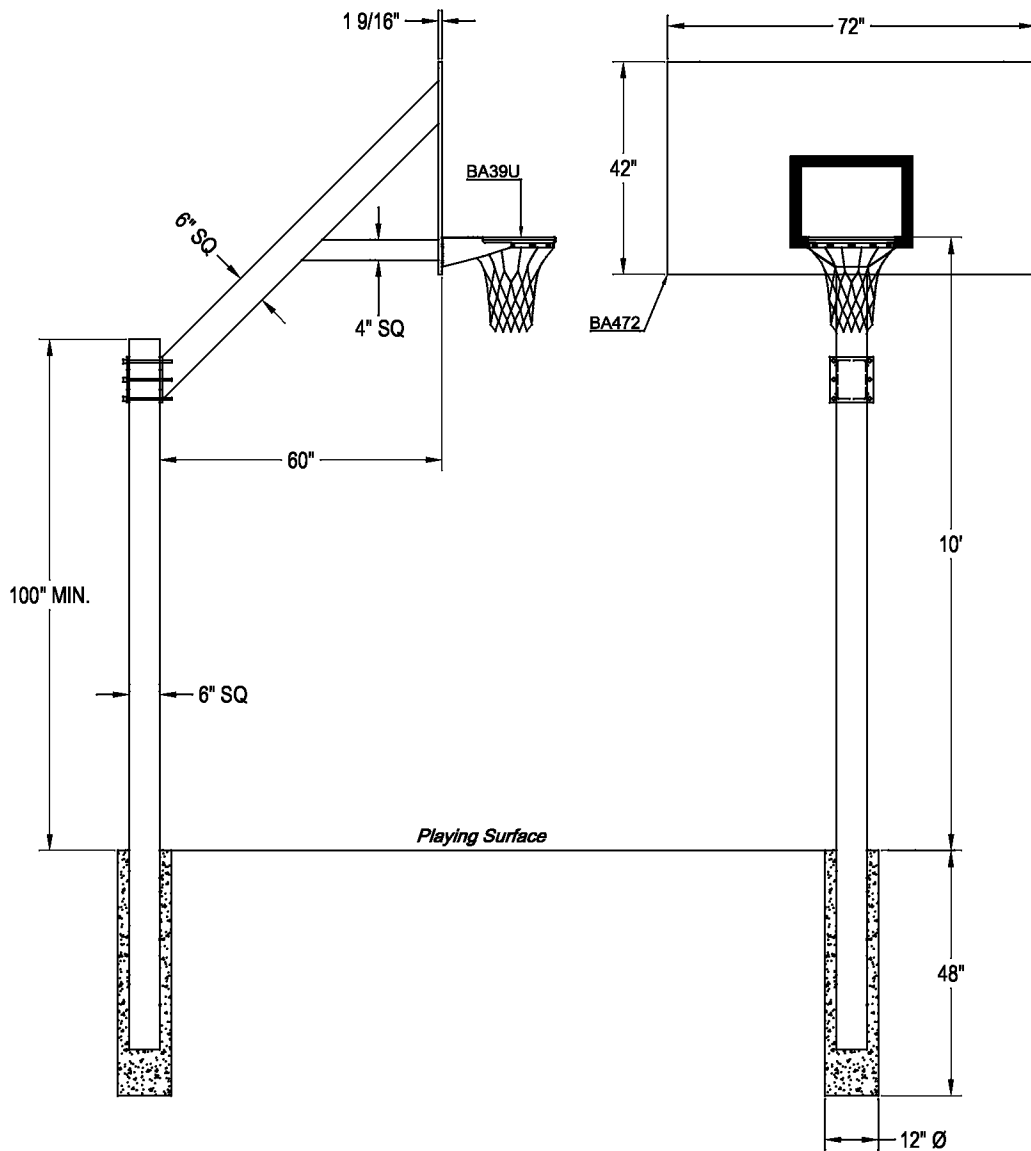
The original solicitation for the project noted above is amended as noted.

All other conditions of subject remain the same.

Respectfully,

A handwritten signature in black ink, appearing to read "Duane Hoff Jr.", written in a cursive style.

Duane Hoff Jr., Senior Buyer  
City of Grand Junction, Colorado



Pole shall be constructed of 6" square, 3/16" wall structural steel tube suitable for a 39" in-ground installation. 45° extension arm shall be 6" square, 3/16" wall structural tube with a 4" square, 1/8" wall steel tube horizontal support and 1/4" thick steel backboard support plate. Pole shall be designed so that rim mounts directly to pole to minimize stress on the backboard. Extension arm shall be mounted by means of 6 each 5/8" grade 8 bolts. Pole system shall provide a minimum setback from the front of pole to front of backboard of 60". Entire pole system shall have a textured black polyester powder coated finish and carry a lifetime functional warranty. Vertical pole shall be capped to keep out rain. Backboard shall be constructed of formed and welded steel with a 42" x 72" rectangular playing surface. Skin shall be 12 ga. mild steel and rear structure shall be 7 ga. and 10 ga. steel. All edges of the skin shall be formed in such a way that no shear edges are exposed. Boards with exposed shear edges shall not be considered equal. The backboard shall be coated with a white polyester powder coated finish and have an official-sized orange shooter's square. Backboards shall carry an unconditional lifetime functional warranty. Rim shall consist of two 5/8" diameter high strength steel rings welded together at a minimum of six places. Back and side plates shall be 3/16" thick and be continuously welded. The net attachment system shall be of a continuous type constructed of 3/16" x 1" steel with punched net attachment slots suitable for nylon (included) or chain (optional) nets. Individual or continuous wire formed netlocks are not an acceptable equal. Rim shall have an unconditional lifetime warranty and orange powder coated finish. Installation to be completed in accordance to manufacturer's instructions. Do not scale drawings. Entire system weight shall be 525#.



## PRODUCT SPECIFICATION

BA871XL-BK STEEL ULTIMATE™ PLAYGROUND BASKETBALL SYSTEM

REVISED 7/1/17





Purchasing Division

## **ADDENDUM NO. 3**

**DATE:** April 15, 2019  
**FROM:** City of Grand Junction Purchasing Division  
**TO:** All Offerors  
**RE:** Riverside Park Improvements and Bike Path IFB-4621-19-DH

Offerors responding to the above referenced solicitation are hereby instructed that the requirements have been clarified, modified, superseded and supplemented as to this date as hereinafter described.

Please make note of the following clarifications:

1. **The Responses Due Date and Time have been changed to April 22, 2019 prior to 3:30pm.**

2. The IFB Tentative Time Schedule has been modified as follows:

### **IFB TENTATIVE TIME SCHEDULE:**

Invitation for Bids available	March 13, 2019
Mandatory Pre-Bid Meeting	March 28, 2019
Inquiry deadline, no questions after this date	April 3, 2019
Addendum Posted	April 9, 2019
Submittal deadline for proposals	April 22, 2019
City Council or Board of Commissioners Approval	May 15, 2019
Notice of Award & Contract execution	May 16, 2019
Bonding & Insurance Cert due	May 21, 2019
Preconstruction meeting	TBD
Work begins no later than	TBD
Final Completion	120 Calendar Days From Notice to Proceed

Holidays: May 27, 2019 (Memorial Day)  
July 4, 2019 (Independence Day)

3. See the attached Bid Schedule with the following revisions:

- Item No. 2 has been revised to [12" Storm Drain Pipe (C-900 PVC)]
- Item No. 5 has been revised to [18" Storm Drain Pipe (RCP)]
- Item No. 33 has been revised to reflect "SF" as the pay unit.
- Item No. 42 has been revised to [Luminaire LED (Pedestrian) to include foundation]

- Item No. 43 has been added as [Luminaire LED (Street) to include foundation]
- Item No. 44 has been added as [Electrical Pull Box (Type 1) (11"x18"x12")]
- Item No. 45 has been added as [Electrical Panel Pedestal (Complete in Place) to include appurtenances]
- Item No. 46 has been added as [Wiring (Complete in Place)]
- Item No. 47 has been added as [Trenching for Site Electrical (Pedestrian & Street light circuits) – approx. 1,685 LF with (2)-2" Schedule 80 PVC conduits. (Refer to Utility Detail Sheet E11).]

Contractor shall utilize the attached updated Price Bid Schedule when submitting their bid response.

4. See attached the revised Site Lighting/Electrical Plan set.

The original solicitation for the project noted above is amended as noted.

All other conditions of subject remain the same.

Respectfully,



Duane Hoff Jr., Senior Buyer  
City of Grand Junction, Colorado

## Bid Schedule: Riverside Park Improvements and Bike Path (Addendum #3)

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
1	108.2	6" Storm Drain Pipe (C-900 PVC)	132.	LF	\$ _____	\$ _____
2	108.2	12" Storm Drain Pipe (C-900 PVC)	380.	LF	\$ _____	\$ _____
3	108.2	12" Storm Drain Pipe (RCP)	26.	LF	\$ _____	\$ _____
4	108.2	18" Storm Drain Pipe (C-900 PVC)	15.	LF	\$ _____	\$ _____
5	108.2	18" Storm Drain Pipe (RCP)	40.	LF	\$ _____	\$ _____
5	108.5	Manhole Barrel Section (D>5")(48" I.D.)	3.	VLF	\$ _____	\$ _____
6	108.5	Storm Sewer Basic Manhole (48" I.D.)	2.	EA	\$ _____	\$ _____
7	108.5	ADS Inlets or engineer approved	3.	EA	\$ _____	\$ _____
8	108.6	Special Small Storm Drain Area Inlet (see plan details)	1.	EA	\$ _____	\$ _____
9	108.6	Large Area Inlet (24"x36")	7.	EA	\$ _____	\$ _____
10	202	Removal of Asphalt (full depth)	6,825.	SY	\$ _____	\$ _____
11	202	Removal of Concrete (all concrete features noted as being removed on the plans)	285.	SY	\$ _____	\$ _____
12	202	Removal of Ground Sign-Contractor Shall Remove Sign and Post and Return to The Traffic Department at City Shops. Contractor to Provide Temporary Stop Signs, and Regulatory Signs Per the M.U.T.C.D.	11.	EA	\$ _____	\$ _____
13	108.7	Granular Stabilization Material (Type B)	100.	TON	\$ _____	\$ _____
14	203	Excavation	2,100.	CY	\$ _____	\$ _____
15	208	Erosion Control (Complete in Place)	Lump	SUM	---	\$ _____
16	208	Stabilized Construction Entrance	2.	EA	\$ _____	\$ _____
17	209	Dust Abatement	90.	DAYS	\$ _____	\$ _____
18	210	Adjust MH Rim to Finished Grade	15.	EA	\$ _____	\$ _____
19	210	Replace Vertical Curb Inlet Frame and Grate with Area Inlet Frame and Grate and adjust to Final Grade	1.	SY	\$ _____	\$ _____
20	304	Subgrade Stabilization - Aggregate Base Course (Class 3) (12" Thick)	400.	SY	\$ _____	\$ _____
21	304	Aggregate Base Course Shoulder (Class 6) (4" Thick)	610.	SY	\$ _____	\$ _____

## Bid Schedule: Riverside Park Improvements and Bike Path (Addendum #3)

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
22	306	Reconditioning (12" Deep)	3,100.	SY	\$ _____	\$ _____
23	304	Aggregate Base Course (below HMA) (Class 6) (13" Thick)	1,800.	SY	\$ _____	\$ _____
24	401	Hot Mix Asphalt (5" thick) (Grading SX 75, Binder Grade 64-22)	500.	TON	\$ _____	\$ _____
25	420	Geosynthetics - Mirafi RS580i or approved equal	400.	SY	\$ _____	\$ _____
26	608	Concrete Curb and Gutter (2' Wide) to include 6" of Class 6 Aggregate Base Course.	900.	LF	\$ _____	\$ _____
27	608	Concrete Curb and Gutter (1.5' Wide) to include 6" of Class 6 Aggregate Base Course.	800.	LF	\$ _____	\$ _____
28	608	Concrete Sidewalk (6" Thick) to include 6" of Class 6 Aggregate Base Course.	3,111.	SY	\$ _____	\$ _____
29	608	Concrete Pavement (Parking & Alley) (8" Thick) to include 6" of Class 6 Aggregate Base Course.	900.	SY	\$ _____	\$ _____
30	608	Concrete Driveway Section (8" thick) includes 6" CL6 ABC	100.	SY	\$ _____	\$ _____
31	608	Concrete Corner Fillet to include 6" of Class 6 Aggregate Base Course.	15.	SY	\$ _____	\$ _____
32	608	Concrete Curb Ramp to include 6" of Class 6 Aggregate Base Course.	28.	SY	\$ _____	\$ _____
33	608	Post Tension Basketball Court Concrete Slab (45' x 75') to include all appurtenances. Contractor to provide shop drawing stamped by Professional Engineer	3,375.	SF	\$ _____	\$ _____
34	608	Detectable Warning (Cast Iron, Wet Set) (2'x2)	9.	EA	\$ _____	\$ _____
35	620	Sanitary Facility	1.	EA	\$ _____	\$ _____
36	625	Construction Surveying		Lump SUM	---	\$ _____
37	626	Mobilization		Lump SUM	---	\$ _____
38	627	Preformed Thermoplastic Pavement Marking (4" White Solid)	660.	LF	\$ _____	\$ _____
39	627	Preformed Thermoplastic Pavement Marking (Handicap Symbol)	4.	EA	\$ _____	\$ _____
40	630	Traffic Control (Complete In Place)		Lump SUM	---	\$ _____
41	630	Traffic Control Plan		Lump SUM	---	\$ _____

## Bid Schedule: Riverside Park Improvements and Bike Path (Addendum #3)

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
42	Elec	Luminaire LED (Pedestrian) to include foundation.	17.	EA	\$ _____	\$ _____
43	Elec	Luminaire LED (Street) to include foundation.	1.	EA	\$ _____	\$ _____
44	Elec	Electrical Pull Box (Type I)(11" x 18" x 12")	18.	EA	\$ _____	\$ _____
45	Elec	Electrical Panel Pedestal (Complete in Place) to include appurtenances.	1.	EA	\$ _____	\$ _____
46	Elec	Wiring (Complete in Place)		Lump SUM	---	\$ _____
47	Elec	Trenching for Site Electrical (Pedestrian & Street lt. circuits) - approx. 1,685 LF with (2)-2" Schedule 80 PVC conduits. (Refer to Utility Detail Sheet E11)		Lump SUM	---	\$ _____
MCR		Minor Contract Revisions	---	---	---	\$ <u>40,000.00</u>

**Bid Amount:** \$ \_\_\_\_\_



**Bid Amount:**

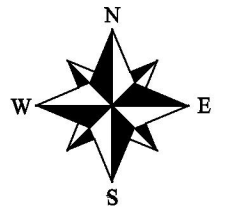
**dollars**

<b>Contractor Name:</b>
<b>Contractor Address:</b>
<b>Contractor Phone #:</b>

**STREET LIGHTING GENERAL NOTES:**

1. THIS PROJECT WILL BE BID FOR THE INSTALLATION OF THE PEDESTRIAN, AND STREET LIGHTING. BASE PROJECT: COMPLETE THE MAIN PATH PEDESTRIAN LIGHTING ALONG RIVERSIDE PARK TRAIL.
2. THIS PROJECT CONSISTS OF WORK TO INSTALL ALL WIRING, CONDUIT, PULL BOXES, AND POWER PANEL. REFERENCE SCHEDULE OF LIGHTING DEVICES AND SUMMARY OF QUANTITIES DRAWING E2.
3. TYPES "SA & SB" LIGHT STANDARD & LUMINARIES (PEDESTRIAN AND STREET LIGHT), SHALL INCLUDE THE FOLLOWING ITEMS FROM VISUAL INTEREST LIGHTING LOCATED AT 3444 BRIGHTON BLVD, DENVER, CO 80216, 303.861.8448.
4. TYPE "SA" PHILLIP GARDCO GL13-2-70LA-6435-NW-UNV-BLP-LF, PROVIDE COLLISION BREAK AWAY CONNECTORS. FIXTURE TO BE 15' ABOVE FINISHED GRADE TO BOTTOM OF LIGHT. POLE - #401-4011-15-AB BK BREAKAWAY COUPLINGS(GARDCO, LYTEP)
5. TYPE "SB" PHILLIP GARDCO GL18-1-2-230LA-9680-NW-UNV-BLP-LF-PC-RPA2, PROVIDE COLLISION BREAK AWAY CONNECTORS. FIXTURE TO BE 27' ABOVE FINISHED GRADE TO BOTTOM OF LIGHT. POLE - #G18 BLP 401-5011-27-D1-AB-TBK(GARDCO BLACK) BAC-.75-SET(GARDCO,LYTEP) MOUNTING TO 5" ROUND STRAIGHT POLE.
6. PROVIDE ONE NEW MILL BANK PANEL (PP1, 240V, 1PH, 3W 100A, #CP3B11213A10CSXC1 LOCATED AS SHOWN IN DRAWINGS.
7. ALL PEDESTRIAN LIGHTING FIXTURES(TYPE "SA") INSTALLED ON THE PROJECT WILL BE CONTROLLED WITH A ELECTRICAL CONTRACTOR SUPPLIED PHOTO CELL TO BE LOCATED IN EACH NEW MILBANK POWER PEDESTALS IN SWITCHED SECTION OF PANEL. ORIENT PANEL PHOTOCELL WINDOW SO THAT PHOTOCELL WILL BE ORIENTED TO NORTH, TYPICAL.
8. ALL STREET LIGHTING FIXTURES(TYPE "SB") WILL EACH BE ORDERED WITH THEIR OWN PHOTOCELL INSTALLED IN THE FIXTURE, AND POWERED WITH NEW 240 VOLT 1-PHASE MILBANK POWER PEDESTAL ON UN-SWITCHED SECTION.
9. ELEVATIONS SHOWN IN THE SCHEDULE OF LIGHTING DEVICES ON THE PLANS SHEETS REPRESENT THE DESIGN FINISHED GRADE OR THE EXISTING GROUND FINISHED GRADE. THESE ELEVATIONS DO NOT INDICATE THE TOP ELEVATION OF THE LUMINARIES (PEDESTRIAN) FOUNDATION. PEDESTRIAN LIGHTING FOUNDATIONS SHALL BE CONSTRUCTED PER THE MANUFACTURERS RECOMMENDATIONS.
10. PULL BOXES FOR LIGHT STANDARD (PEDESTRIAN AND STREET) WILL BE TYPE 1 CDOT PULL BOXES 11"X18"X12".
11. PULL BOXES WILL BE INSTALLED IN GRADES WITHOUT CONCRETE WHERE POSSIBLE.
12. ALL ELECTRICAL CONDUIT SHALL BE SCHEDULE 80 PVC UNLESS NOTED OTHERWISE, TYPICAL.
13. UNLESS OTHERWISE NOTED, THE WORK DESCRIBED ON THE PLANS SHALL INCLUDE PROVIDING ALL LABOR AND MATERIALS NECESSARY FOR A COMPLETE AND OPERATIONAL ELECTRICAL SYSTEM. FURNISH ALL REQUIRED ITEMS WHETHER SUCH ARE SPECIFICALLY SHOWN OR NOT.
14. INFORMATION SHOWN ON DRAWINGS IS DIAGRAMMATIC ONLY AND SHALL NOT BE SCALED. OBTAIN VERIFY EXACT LOCATIONS, MEASUREMENTS, LEVELS, SPACE REQUIREMENTS, POTENTIAL CONFLICTS AMONG TRADES AND FOR ADJUSTING THE WORK REQUIRED BY THE ACTUAL CONDITIONS OF THE PROJECT. CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UNDER GROUND OBSTRUCTIONS AND MAKING ALLOWANCES FOR FIELD ADJUSTMENT OF LOCATION OF LUMINARIES TO AVOID SHUT DOWN OF ANY SERVICES OR SYSTEMS THAT ARE TO REMAIN.
15. BEFORE SUBMITTING THE BID ELECTRICAL CONTRACTOR SHALL VISIT AND EXAMINE THE PREMISES AND/OR JOB SITE SO AS TO ASCERTAIN THE EXISTING CONDITIONS IN WHICH THE CONTRACTOR WILL BE OBLIGED TO OPERATE IN PERFORMING HIS PART OF THE CONTRACT TO ANTICIPATE ANY POSSIBLE SPACE RESTRICTIONS OR CONSTRAINTS THAT COULD AFFECT THE TIMELY COMPLETION OF THE ELECTRICAL WORK IN ACCORDANCE WITH THE INTENT OF THE SPECIFICATIONS AND DRAWINGS. THE ELECTRICAL CONTRACTOR SHALL REPORT TO THE THE PROJECT ENGINEER OR GENERAL CONTRACTOR ANY CONDITIONS THAT MIGHT PREVENT THE SPECIFIED ELECTRICAL WORK FROM BEING PERFORMED IN THE MANNER INTENDED. NO CONSIDERATION OR ALLOWANCE WILL BE GRANTED TO THE ELECTRICAL CONTRACTOR FOR FAILURE TO VISIT THE PROJECT SITE, OR FOR ANY ALLEGED MISUNDERSTANDING OF THE MATERIALS TO BE FURNISHED OR WORK TO BE DONE..
16. THE ELECTRICAL CONTRACTOR SHALL EXAMINE THE DRAWINGS OF ALL TRADES WHOSE WORK RELATES TO OR IS DEPENDENT ON ELECTRICAL WORK TO BECOME FULLY INFORMED OF THE EXTENT AND CHARACTER OF THEIR SPECIFIED WORK AND BE ABLE TO COORDINATE WITH OTHER TRADES WHILE AVOIDING POSSIBLE INTERFERENCE WITH THE ELECTRICAL WORK.
17. THE CONTRACTOR SHALL USE CONDUIT PLUGS AND SEALING PLUGS FOR SEALING ALL EMPTY CONDUITS AND CONDUITS OCCUPIED WITH CABLING, RESPECTIVELY, INSTALLED UNDER THIS CONTRACT. CONDUIT PLUGS SHALL BE MANUFACTURED FROM HIGH-IMPACT PLASTIC COMPONENTS, COMBINED WITH DURABLE ELASTIC GASKETS. THEY SHALL BE CORROSION PROOF AND APPROPRIATE FOR USE AS EITHER A LONG-TERM OR TEMPORARY SEAL. CONDUIT PLUGS SHALL BE REMOVABLE AND REUSABLE. THEY SHALL BE BOTH WATERTIGHT AND AIRTIGHT TO PREVENT THE FLOW OF WATER AND BUILDUP OF SEDIMENTATION WITHIN THE CONDUIT. EACH CONDUIT PLUG SHALL BE EQUIPPED WITH A ROPE TIE DEVICE TO ALLOW THE SECURING OF PULL ROPE TO THE PLUG'S BACK COMPRESSION PLATE. THE CONTRACTOR SHALL ATTACH THE PULL ROPE TO THE BACK COMPRESSION PLATE OF THE PLUG AND STORE EXCESS SLACK PULL ROPE BEHIND THE PLUG WITHIN THE CONDUIT FOR FUTURE USE.

- PP1-X ELECTRICAL CIRCUIT NUMBER (REFER TO PANEL SCHEDULES)
- UB  HEAVY DUTY, TRAFFIC RATED, FLUSH-TO-GRADE POLYMER CONCRETE SPLICE BOX WITH HEAVY DUTY, TRAFFIC RATED, BOLTED COVER. 11"X18"X12" TYPE 1.
-  UNDER GROUND BURIED RACEWAY (2#6 THWN CU AND 1#8 GND) IN 2" PVC CONDUIT (UNLESS NOTED OTHERWISE ON PLANS) IN 24" DEEP TRENCH, BURY AND COMPACTED BACKFILL TO CITY STANDARDS.
-  INSTALL SINGLE ARM PEDESTRIAN STANDARD OR STREET STANDARD AS SPECIFIED.



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ENGINEERS; PH: 970-245-7292  
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EMAIL: joelm@ACMengr.com

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REVISION $\Delta$			AJM	4-9-2019
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REVISION $\Delta$			BH	4-9-2019



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ENGINEERING DIVISION

RIVERSIDE PARK TRAIL  
COVER SHEET PLAN

Schedule of Lighting Devices							
				See note 2			
DESCRIPTION				LUMINAIRE LED PEDESTRIAN (70 WATT) TYPE SA	FOUNDATION SPECIAL	LUMINAIRE LED STREET (250 WATT) TYPE SB	NOTES
				EACH	EACH	EACH	
SHEET NO.	TYPE	NORTH	EAST	PLAN	PLAN	PLAN	
E3	SA-1	34158.99	87634.41	1	1		1
E3	SA-2	34248.46	87605.09	1	1		1
E3	SA-3	34332.72	87588.72	1	1		1
E3	SA-4	34399.76	87530.57	1	1		1
E3	SA-5	34472.89	87506.97	1	1		1
E4	SA-6	34557.03	87469.87	1	1		1
E4	SA-7	34628.95	87421.71	1	1		1
E4	SA-8	34718.71	87414.34	1	1		1
E4	SA-9	34835.72	87365.53	1	1		1
E5	SA-10	34875.72	87279.17	1	1		1
E5	SA-11	34924.78	87221.43	1	1		1
E5	SA-12	35009.87	87181.83	1	1		1
E5	SA-13	35085.85	87138.97	1	1		1
E6	SA-14	35172.22	87113.89	1	1		1
E6	SA-15	35225.92	87067.47	1	1		1
E6	SA-16	35287.22	87039.87	1	1		1
E6	SA-17	35375.56	87005.13	1	1		1
E4	SB-1	34780.69	87417.10		1	1	2
TABLE TOTALS				17	18	1	

Tabulation of Approximate Quantities(BASE PROJECT)					
ITEM NO.	REF. NO.	CONSTRUCTION NOTE DESCRIPTION	QUANTITY	UNIT	NOTES
1		2 INCH ELECTRICAL CONDUIT (PLASTIC)	1685	LF	
2		TYPE ONE PULL BOX	18	EA	
3		WIRING	1	LS	
4		LIGHT STANDARD AND LUMINAIRE (STREET)	1	EA	
5		LIGHT STANDARD AND LUMINAIRE (PEDESTRIAN)	17	EA	
6		LIGHT STANDARD FOUNDATION (SPECIAL)	18	EA	
		LIGHTING CONTROL CENTER (SPECIAL)	1	EA	
SUMMARY NOTES:					

STREET LIGHTING GENERAL NOTES:

- EACH LIGHT TO HAVE A PULL BOX "UB", REFERENCE ELECTRICAL SHEETS.

SCHEDULE OF LIGHTING DEVICES NOTES:

- FOUNDATION TOP HEIGHT EQUAL TO ADJACENT SIDEWALK
- FOUNDATION TOP HEIGHT AT 2'6" AS SHOWN IN DETAIL.



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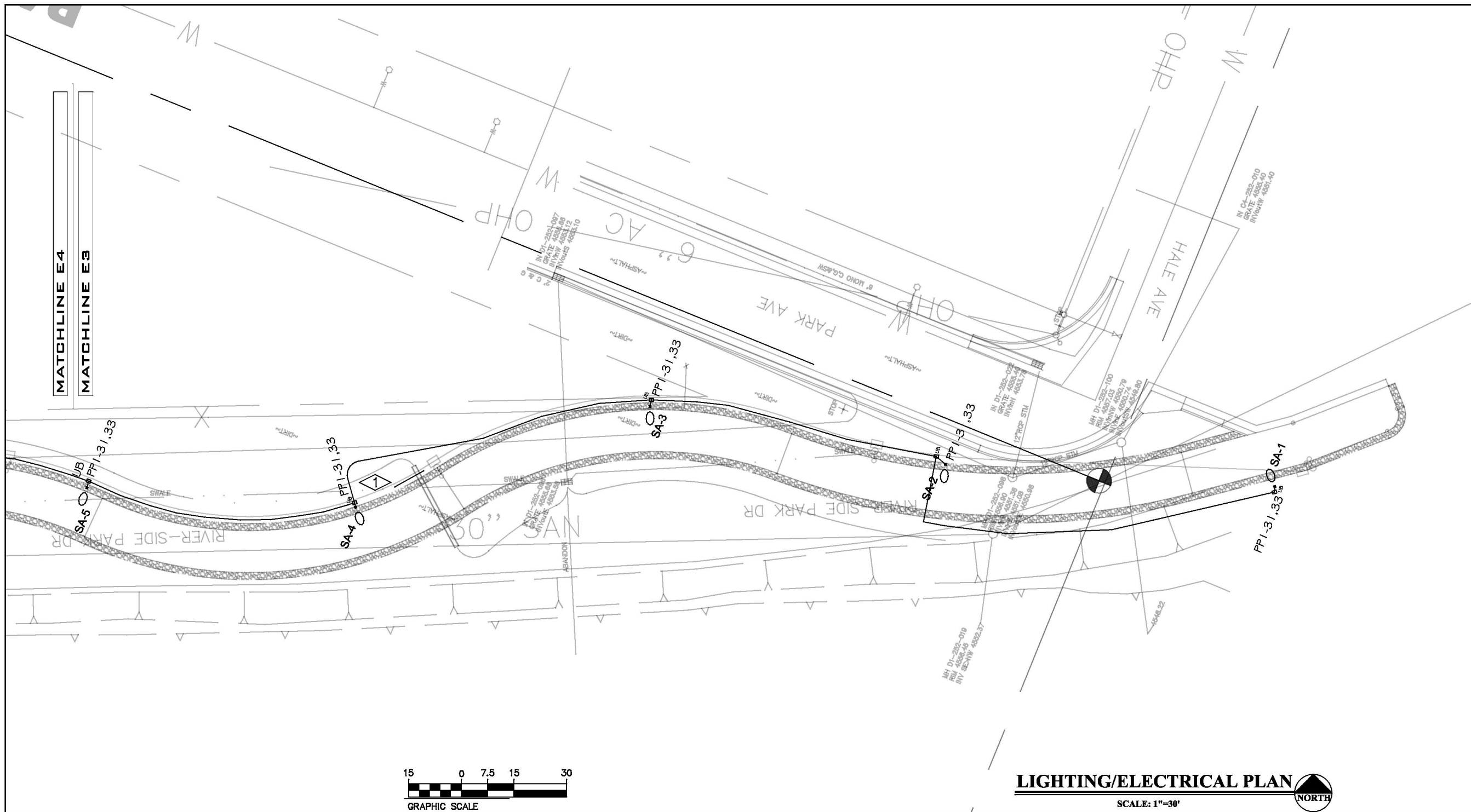
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RIVERSIDE PARK TRAIL  
LIGHTING SCHEDULES



**FLAG NOTES:**

① ROUTE CONDUIT AROUND SWALE AND CASING PIPE.

**GENERAL NOTES:**

1. POWER CIRCUIT AS SHOWN ON DRAWING, TYPICAL.
2. LIGHT TO BE ORIENTED TO BE PERPENDICULAR TO ROADWAY AND SHINE ON ROADWAY, TYPICAL.
3. PROVIDE 2-#6 THWN + #8GND IN 2" PVC SCHEDULE 80 CONDUIT BETWEEN PULL BOXES UNLESS SHOWN OTHERWISE, TYPICAL.



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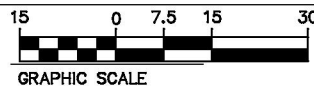
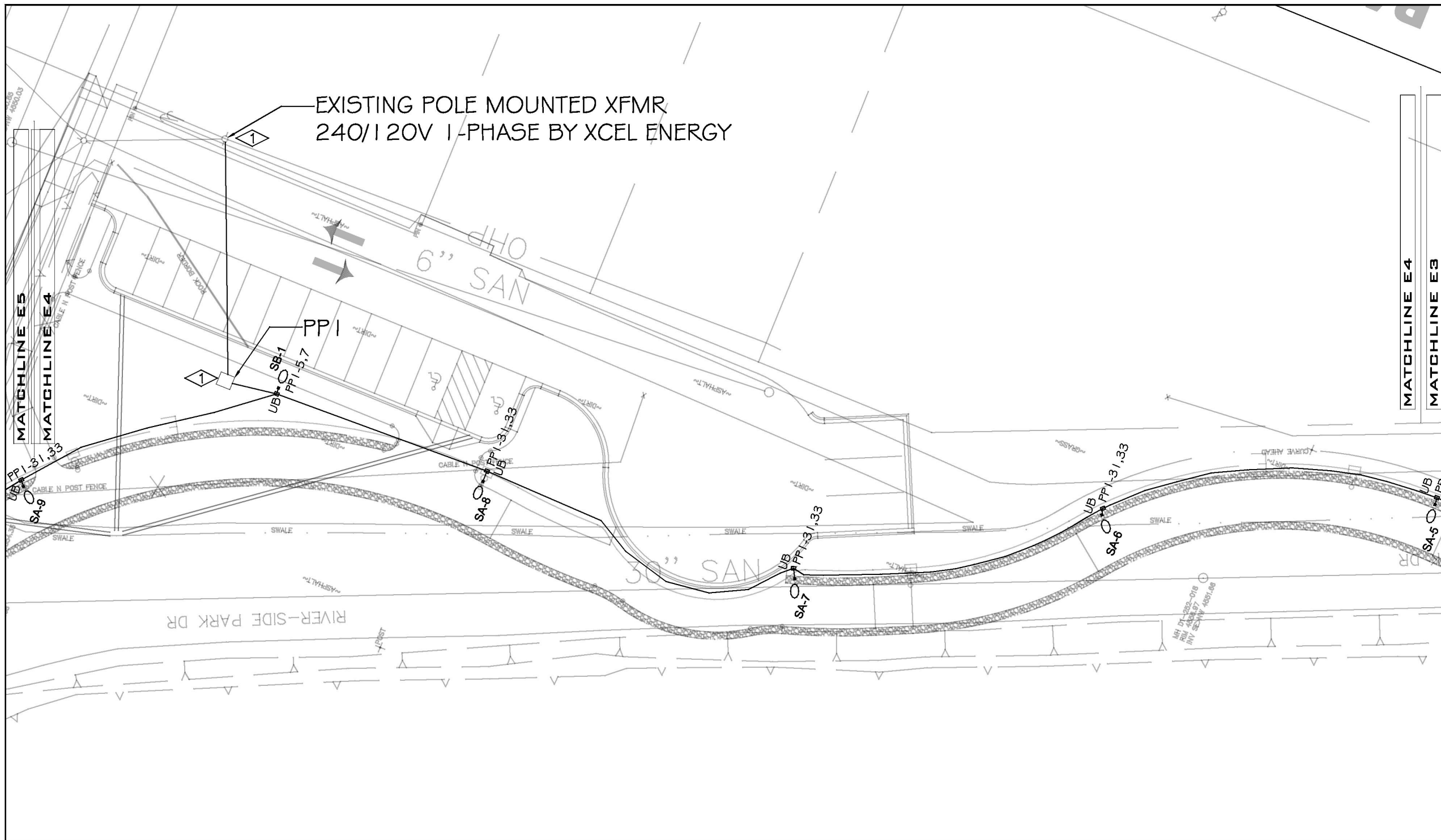
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ENGINEERING DIVISION**

**RIVERSIDE PARK TRAIL  
COMPOSITE UTILITY PLAN**





**LIGHTING/ELECTRICAL PLAN**  
SCALE: 1"=30'



**GENERAL NOTES:**

1. POWER CIRCUIT AS SHOWN ON DRAWING, TYPICAL.
2. LIGHT TO BE ORIENTED TO BE PERPENDICULAR TO ROADWAY AND SHINE ON ROADWAY, TYPICAL.
3. PROVIDE 2-#6 THWN + #8GND IN 2" PVC SCHEDULE 80 CONDUIT BETWEEN PULL BOXES UNLESS SHOWN OTHERWISE, TYPICAL.

**FLAG NOTES:**

- ◊ COORDINATE CONNECTIONS TO EXISTING POLE MOUNTED TRANSFORMER, METER AND PEDESTAL PANEL WITH XCEL ENERGY PRIOR TO ROUGH-IN. RETURN EXISTING BIKE PATH TO AS NEW CONDITION AFTER TRENCHING.



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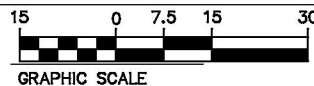
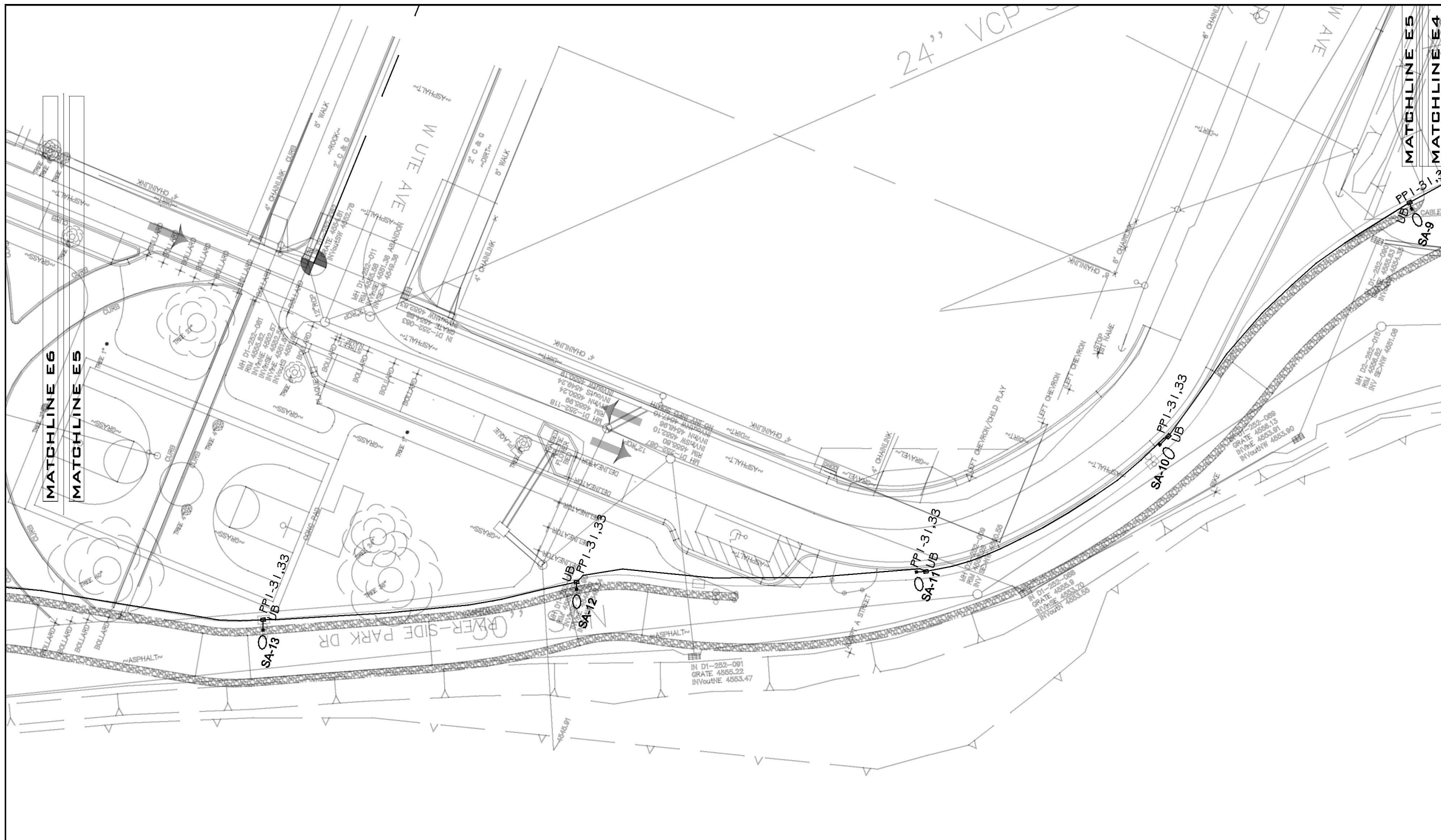
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ENGINEERING DIVISION

RIVERSIDE PARK TRAIL  
COMPOSITE UTILITY PLAN



**LIGHTING/ELECTRICAL PLAN**  
SCALE: 1"=30'  
NORTH

**GENERAL NOTES:**

1. POWER CIRCUIT AS SHOWN ON DRAWING, TYPICAL.
2. LIGHT TO BE ORIENTED TO BE PERPENDICULAR TO ROADWAY AND SHINE ON ROADWAY, TYPICAL.
3. PROVIDE 2-#6 THWN + #8GND IN 2" PVC SCHEDULE 80 CONDUIT BETWEEN PULL BOXES UNLESS SHOWN OTHERWISE, TYPICAL.



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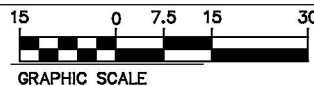
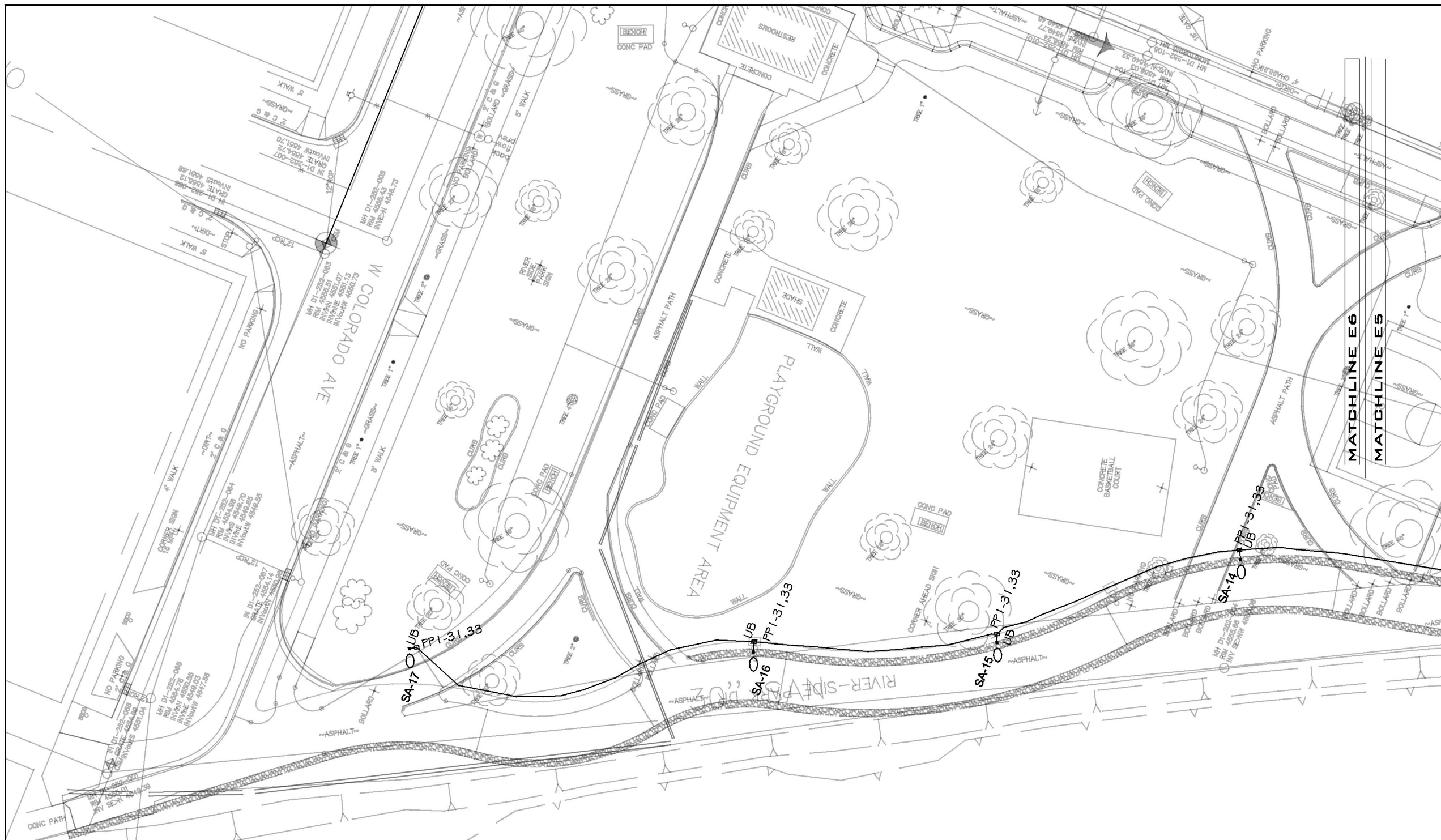
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RIVERSIDE PARK TRAIL  
COMPOSITE UTILITY PLAN

E5  
of 12



**LIGHTING/ELECTRICAL PLAN**  
SCALE: 1"=30'

**GENERAL NOTES:**

1. POWER CIRCUIT AS SHOWN ON DRAWING, TYPICAL.
2. LIGHT TO BE ORIENTED TO BE PERPENDICULAR TO ROADWAY AND SHINE ON ROADWAY, TYPICAL.
3. PROVIDE 2-#6 THWN + #8GND IN 2" PVC SCHEDULE 80 CONDUIT BETWEEN PULL BOXES UNLESS SHOWN OTHERWISE, TYPICAL.



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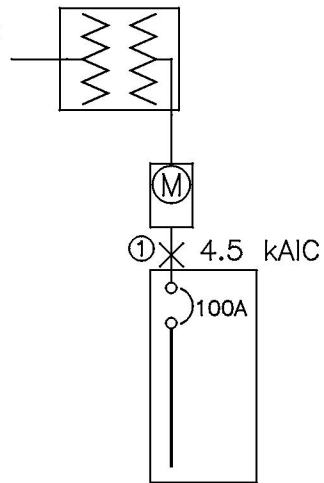
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RIVERSIDE PARK TRAIL  
COMPOSITE UTILITY PLAN

EXISTING POLE MOUNTED TRANSFORMER  
50KVA 240/120 VOLT,  
1PH 3W  
BY XCEL



PP1 100A MCB MILBANK PEDESTAL  
CP3B11213A10CSXC1, 24  
UNSWITCHED/12 SWITCHED CKTS  
240/120V 1PH, 3W  
10 kAIC

① 1 SET(S)[2" PVC  
SCHED. 80  
(3#3(CU,THWN)+1#8(CU)GND]

**ONE-LINE DIAGRAM**  
A  
1  
NOT TO SCALE

GENERAL NOTES:

1. IN AS MUCH AS DESIGN REQUIRES THAT CERTAIN ASSUMPTIONS BE MADE REGARDING EXISTING CONDITIONS, AND BECAUSE SOME OF THESE ASSUMPTIONS CANNOT BE VERIFIED. FIELD COORDINATION DURING CONSTRUCTION SERVICES IS IMPERATIVE. CONTRACTORS BIDDING THIS WORK MUST MAKE REASONABLE ALLOWANCES FOR UNFORESEEN CONTINGENCIES.
2. THE SERVING ELECTRICAL ASSOCIATION SHALL ADVISE THE OWNER/ENGINEER PRIOR TO SERVICE MODIFICATION REQUIRING COST TO THE OWNER.
3. REFERENCE CIVIL, LANDSCAPE AND IRRIGATION DRAWING PLANS FOR COORDINATION AND LOCATION OF ALL UNDER GROUND SYSTEMS.
4. ALL WORK SHALL BE COORDINATED WITH OTHER TRADES AS REQUIRED: REFERENCE CIVIL LANDSCAPE AND IRRIGATION DRAWINGS.
5. ALL WIRING IS SHOWN DIAGRAMMATICALLY ON DRAWINGS, FIELD VERIFY ALL CONDITIONS PRIOR TO ROUGH-IN.
6. ALL ELECTRICAL WORK SHALL COMPLY WITH THE LATEST EDITION OF NATIONAL ELECTRICAL CODE AND ALL APPLICABLE LOCAL CODES.
7. ALL WIRE TO BE #6 UNLESS NOTED OTHERWISE.
8. CONDUCTOR COUNT IS SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL ENSURE THAT ANY AND ALL DEVICES AND EQUIPMENT ARE CIRCUITED PROPERLY. CONTRACTOR SHALL ENSURE THAT NO EQUIPMENT OR DEVICES ARE COMBINED OTHER THAN WHAT IS DEPICTED.
9. FIELD VERIFY ALL DIMENSIONS, DO NOT SCALE DRAWINGS.
10. COORDINATE INSTALLATION OF METER AND ELECTRICAL REQUIREMENTS WITH XCEL ENERGY.
11. PEDESTAL MUST MEET ALL XCEL ENERGY REQUIREMENTS I.E. COLD SEQUENCE PADLOCK SLIP LATCH ON METER COVER, HOLD OPEN BAR ON METER HOOD.



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RIVERSIDE PARK TRAIL  
ONE-LINE DIAGRAMS

**Panel Schedule PP1**

<b>Circuit Information::</b>	<b>Protection Information::</b>	<b>Conductor Information::</b>	Calculated Kaic: 4.5
Circuits: 12 UNSWITCHED/12 SWITCHED	Frame Size: 100A	Conductor: 3	
Voltage: 120 / 240	Load (A): 21	Neutral: 3	
System: 1Ø,	NEMA: Type 3R	Ground: 1-2 ga.	
Hertz: 60	OCPD Size: 100A	Insulation: THWN	
	10 Kaic	Material: Copper	
UN-SWITCHED CIRCUIT DIRECTORY		Raceway: 2 in. - PVC SCHED 80	

Ct#	Load Description	OCPD Size / Ø	Load - kVA		L	Load - kVA		OCPD Size / Ø	Load Description	Ct#
			AØ	BØ		BØ	AØ			
1	MAIN	100A /2			L1		0.18	15A /2	CONTROL POWER	2
3	---				L2	0.18	0.3	60A /2	SWITCHED LC CONTROL	4
5	STREET LIGHTS	20A/2	0.1152		L1	0.3			---	6
7	---	20A/2		0.1152	L2					8
9	SPARE(FUTURE)	20A/2			L1			20A/1	SPARE(FUTURE)	10
11	SPARE(FUTURE)	20A/2			L2			20A/1	SPARE(FUTURE)	12

**SWITCHED CIRCUIT DIRECTORY**

Ct#	Load Description	OCPD Size / Ø	Load - kVA		L	Load - kVA		OCPD Size / Ø	Load Description	Ct#
			AØ	BØ		BØ	AØ			
13	PATHWAY LIGHTS	20A /2	0.8568		L1			20A /2	SPARE(FUTURE)	14
15	---			0.8568	L2				---	16
17	SPARE(FUTURE)	20A /2			L1				SPARE(FUTURE)	18
19	---				L2					20
21					L1					22
23					L2					24
Phase Totals - kVA:			0.972	0.972		0.48	0.3			
<b>Load Totals</b>						Amps:	kVA:			
						7.6	2.724			



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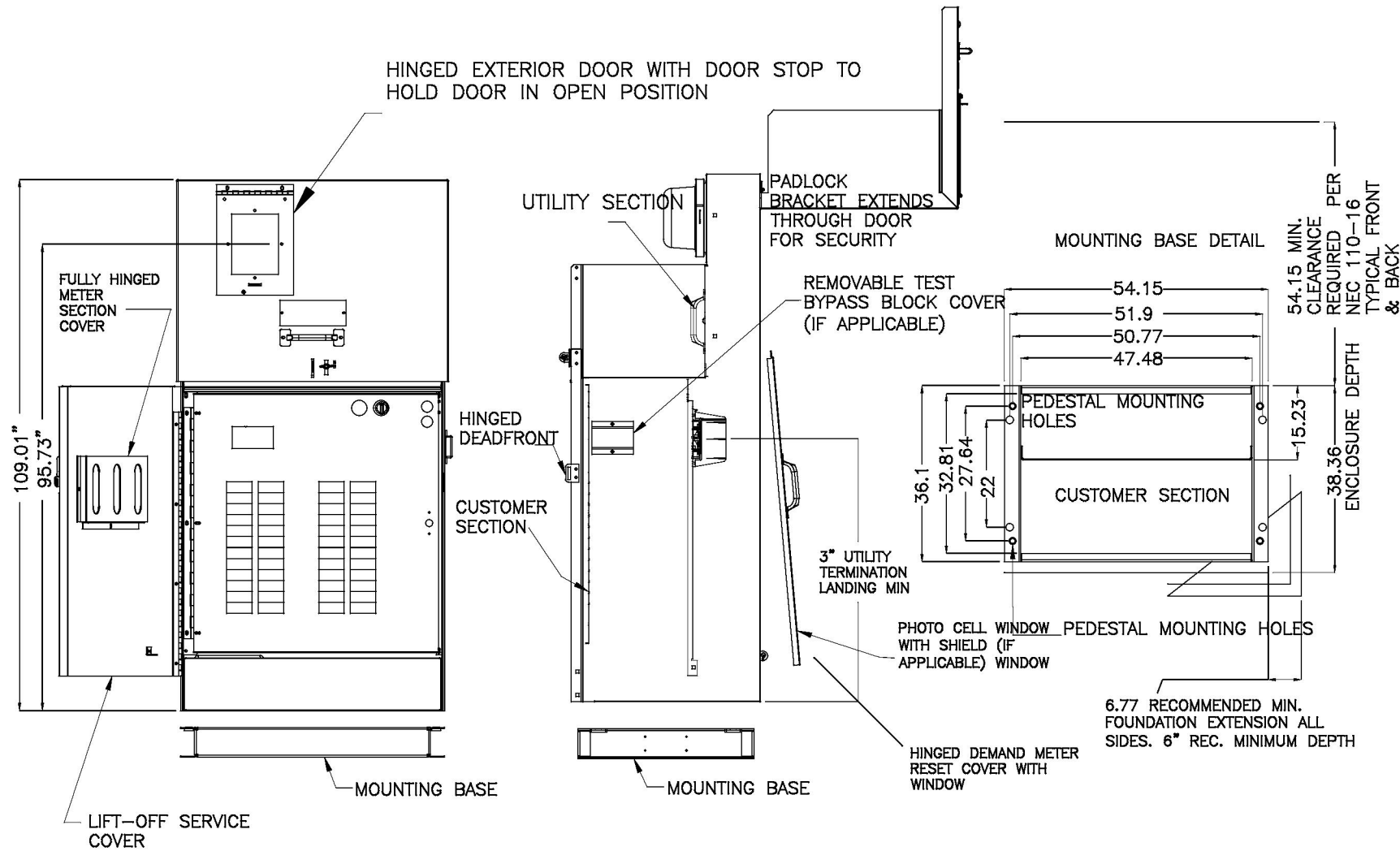
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RIVERSIDE PARK TRAIL  
PANEL SCHEDULES

**24" COMMERCIAL PEDESTAL**



**B TYPICAL 1-PHASE POWER PEDESTAL/LIGHTING CONTROL CENTER PLAN**  
**1 NOT TO SCALE**

**NOTES**

1. COORDINATE EXACT INSTALATION REQUIREMENTS WITH PROVIDER PRIOR TO ROUGH-IN OR TRENCHING. CONTROL CABINET SHALL BE U/L LISTED "INDUSTRIAL CONTROL PANEL" PER UL 508.
2. CONSTRUCTION SHALL BE NEMA 3R. 12 GA. A60 STEEL POWDER COATED MINT GREEN WITH PHOTO ELECTRIC CELL IN SERVICE CABINET. ELECTRICAL CONTRACTOR TO PROVIDE PHOTOCCELL.
3. VOLTAGE RATINGS OF SERVICE EQUIPMENT SHALL CONFORM TO THE SERVICE VOLTAGES INDICATED ON THE PLANS.
4. SERVICE EQUIPMENT ENCLOSURE AND METERING EQUIPMENT SHALL MEET THE REQUIREMENTS OF THE SERVING UTILITY. WHEN THE SERVING UTILITY PROVIDES BOTH METERED AND UNMETERED CIRCUITS, A SEPARATE BUS SHALL BE PROVIDED FOR EACH CIRCUIT. THE METER AREA SHALL HAVE A SEALING, LOCKABLE, RAIN TIGHT COVER THAT CAN BE REMOVED WITHOUT THE USE OF TOOLS.
5. SERVICE EQUIPMENT SHALL BE FACTORY WIRED AND CONFORM TO NEMA STANDARDS.
6. THE EXTERIOR DOOR SHALL HAVE PROVISIONS FOR PADLOCKING. THE PADLOCK HOLE SHALL BE A MINIMUM DIAMETER OF 11mm.
7. ALL TERMINALS FOR INCOMING SERVICE CONDUCTORS SHALL BE COMPATIBLE WITH EITHER COPPER OR ALUMINUM CONDUCTORS SIZED TO SUIT THE CONDUCTORS SHOWN ON THE PLAN. TERMINAL LUGS SHALL BE COPPER OR TIN-PLATED ALUMINUM. SOLID NEUTRAL TERMINAL STRIP SHALL BE RATED 200A UNLESS OTHERWISE SPECIFIED AND FOR USE WITH COPPER OR ALUMINUM CONDUCTORS. THE TERMINAL SHOULD INCLUDE BUT NOT BE LIMITED TO:
  - A) INCOMING TERMINALS (LANDING LUGS)
  - B) NEUTRAL LUGS
  - C) SOLID NEUTRAL TERMINAL STRIP.
  - D) TERMINAL STRIPS FOR CONDUCTORS WITHIN THE ENCLOSURE.
8. CIRCUIT BREAKER SPACES (20mm NOMINAL) SHALL BE PROVIDED FOR BRANCH CIRCUITS. CIRCUIT BREAKER INTERIORS SHALL BE COPPER. INTERIORS SHALL ACCEPT PLUG-IN OR CABLE-IN/ CABLE-OUT CIRCUIT BREAKERS.
9. PLUG-IN CIRCUIT BREAKERS MAY BE MOUNTED IN THE VERTICAL OR HORIZONTAL POSITION. CABLE-IN/ CABLE-OUT CIRCUIT BREAKERS SHALL BE MOUNTED IN THE VERTICAL POSITION.
10. FASTENERS ON THE EXTERIOR OF THE ENCLOSURE SHALL BE VANDAL RESISTANT AND SHALL NOT BE REMOVABLE FROM THE EXTERIOR. ALL NUTS, BOLTS, SCREWS, WASHERS, AND HINGES SHALL BE STAINLESS STEEL.
11. PHENOLIC NAME PLATES SHALL BE PROVIDED AS REQUIRED.
12. A PLASTIC COVERED WIRING DIAGRAM SHALL BE ATTACHED TO THE INSIDE OF THE FRONT DOOR.
13. FOUNDATION SHALL EXTEND 50mm MINIMUM BEYOND EDGE OF ENCLOSURE.
14. PANEL WILL ADHERE TO XCEL ENERGY REQUIREMENT FOR COLD SEQUENCE DISCONNECTION.



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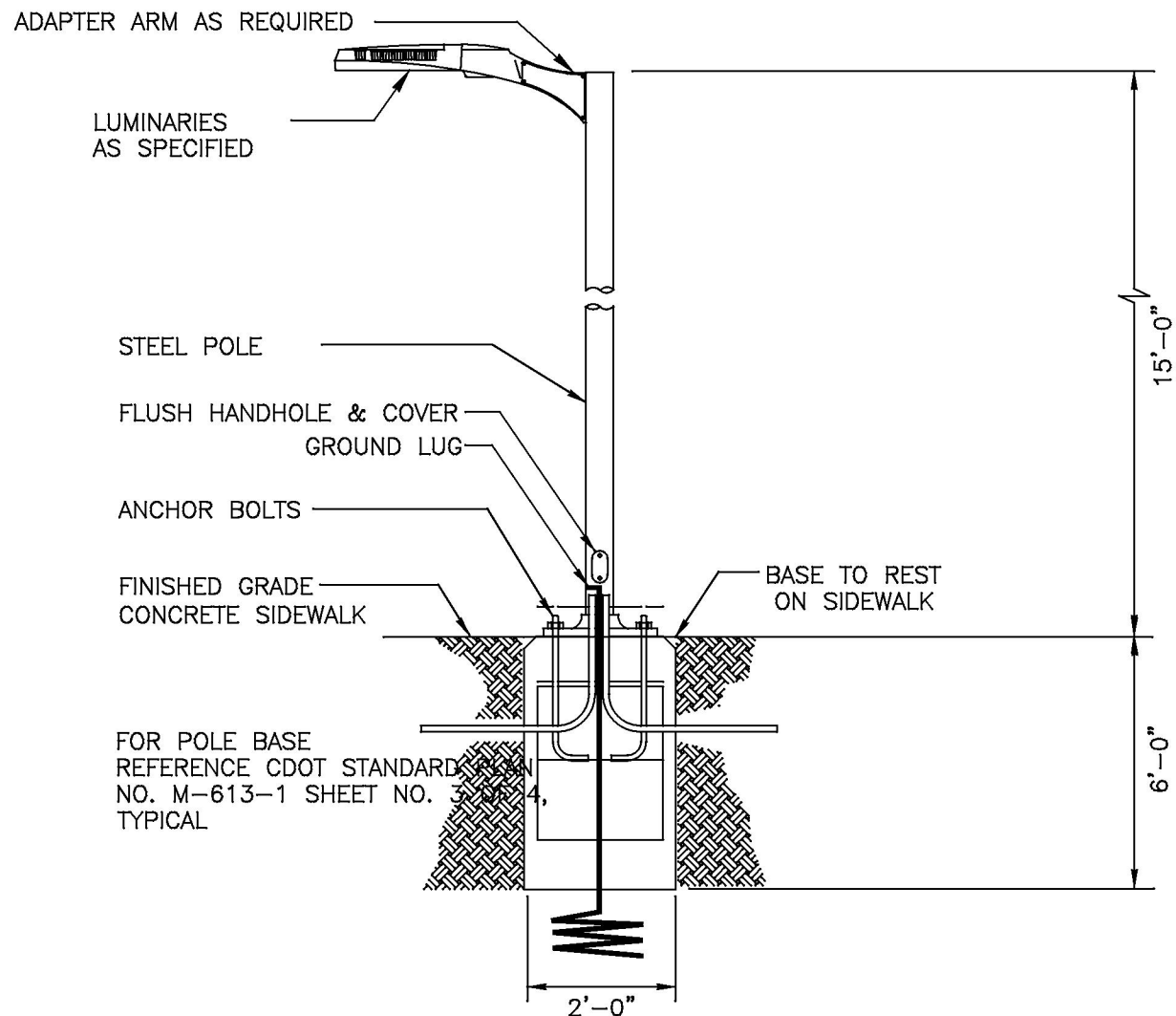
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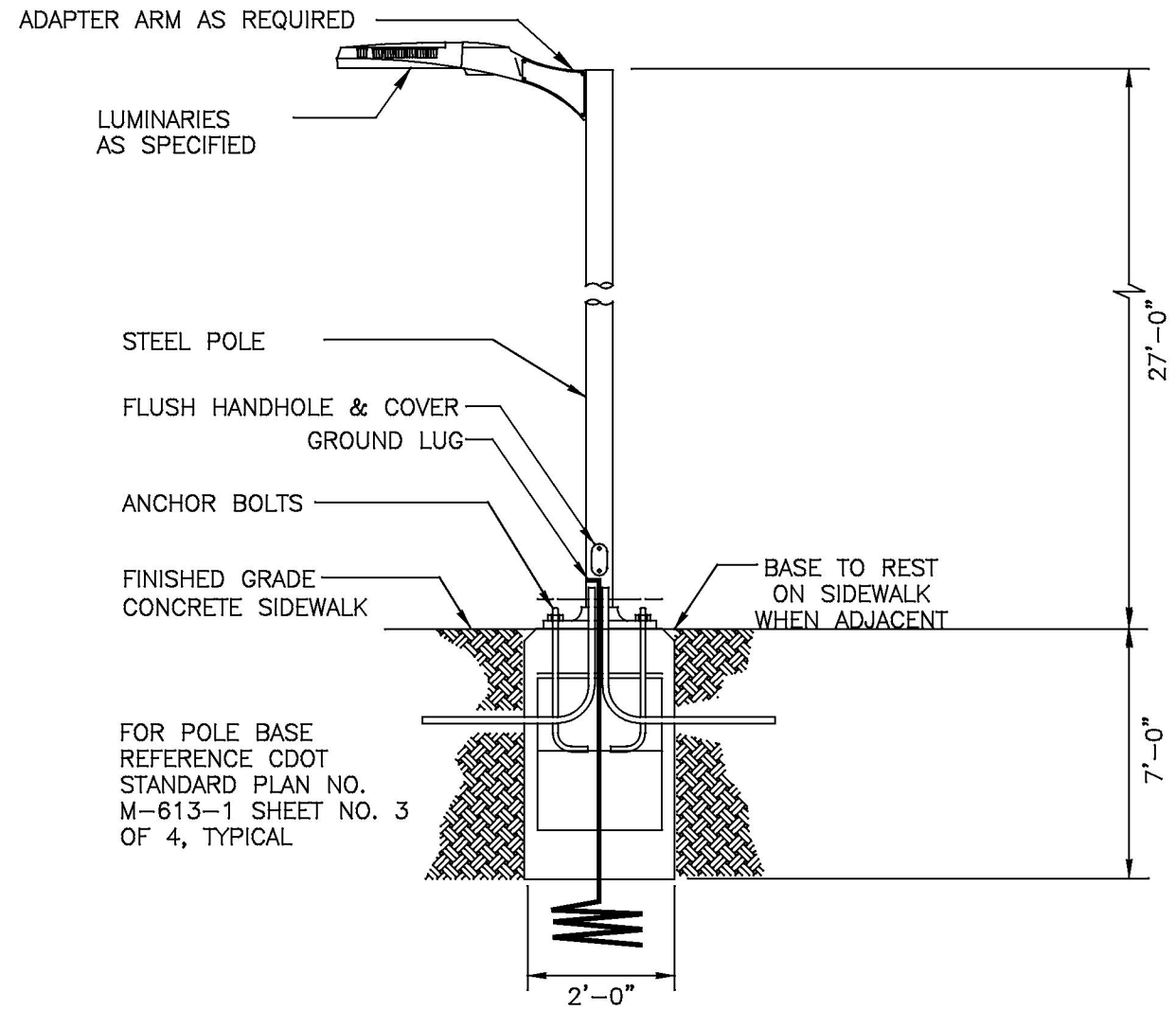
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**RIVERSIDE PARK TRAIL  
 PEDESTAL DETAILS**



**TYPICAL SA LIGHT DETAIL**

NOT TO SCALE



**TYPICAL SB LIGHT DETAIL**

NOT TO SCALE

**GENERAL NOTES:**

1. ELECTRICAL CONTRACTOR TO ORDER ALL REQUIRED HARDWARE FOR MOUNTING OF EACH LUMINARIES.
2. VERIFY THE BURY DEPTH AND DIAMETER OF THE SONOTUBE FOR POLE LUMINARIES WITH THE CIVIL ENGINEER PRIOR TO PURCHASING THE EQUIPMENT. DEPTH WILL DEPEND ON SOIL CONDITIONS. TYPICAL CONCRETE DEPTH IS SHOWN IN DETAIL. VERIFY DEPTH WITH CIVIL ENGINEER.
3. ELECTRICAL CONTRACTOR TO VERIFY THAT ALL FIXTURES TO COMPLY WITH LIGHT TRESPASS AND DARK SKY CODES.
4. NOTIFY ENGINEER OF ANY OBSTRUCTIONS TO POLE PLACEMENT IMMEDIATELY BEFORE PROCEEDING.
5. VERIFY REQUIRED VOLTAGE OF FOR EACH LUMINARIES WITH AVAILABLE VOLTAGES PRIOR TO ORDERING.
6. REFERENCE CDOT STANDARD PLAN NO. M-613-1 SHEET NO. 3 OF 4, TYPICAL

TYPE	MANUFACTURER MODEL NUMBER	APPROVAL	LUMINAIRE SCHEDULE		
			VOLTAGE MOUNTING # OF LAMPS	BALLAST LAMPE TYPE LAMP CAT. #	DESCRIPTION
SA	PHILIPS GARDCO GL13-2-70LA-6435-NW-UNV-BLP-LF	OWNER	UNV POLE	ELECTRONIC LED	PEDESTRIAN LUMINAIRE, ARM MOUNTED, LED, CUTOFF, ORDER ROUND STEEL POLE SO THAT LAMP HEIGHT IS 15' AFG MEASURED AT BOTTOM OF LUMINAIRE. COLOR OF POLE AND ARM TO MATCH, BOTH BLACK. POLE#401-4011-15-AB BK BREAKAWAY COUPLINGS(GARDCO, LYTEP)
		REQUESTED	1	50 W	
SB	PHILIPS GARDCO GL18-1-2-230LA-9680-NW-UNV-BLP-LF-PC-RPA2	OWNER	UNV POLE	ELECTRONIC LED	STREET SIDE LUMINAIRE, ARM MOUNTED, LED, CUTOFF. ROUND STEEL POLE TO BE 27' SO THAT TOTAL HEIGHT AFG TO BOTTOM OF FIXTURE IS 27'. COLOR OF POLE AND ARM TO MATCH, BOTH BLACK. POLE #G18 BLP 401-5011-27-D1-AB-TBK(GARDCO BLACK) BAC-.75-SET(GARDCO,LYTEP) MOUNTING TO 5" ROUND STRAIGHT POLE.
		REQUESTED	1	230 W	

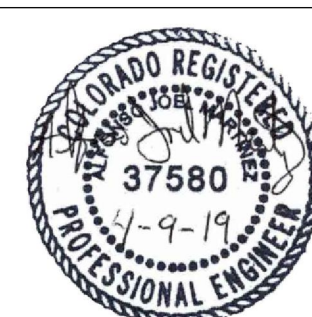
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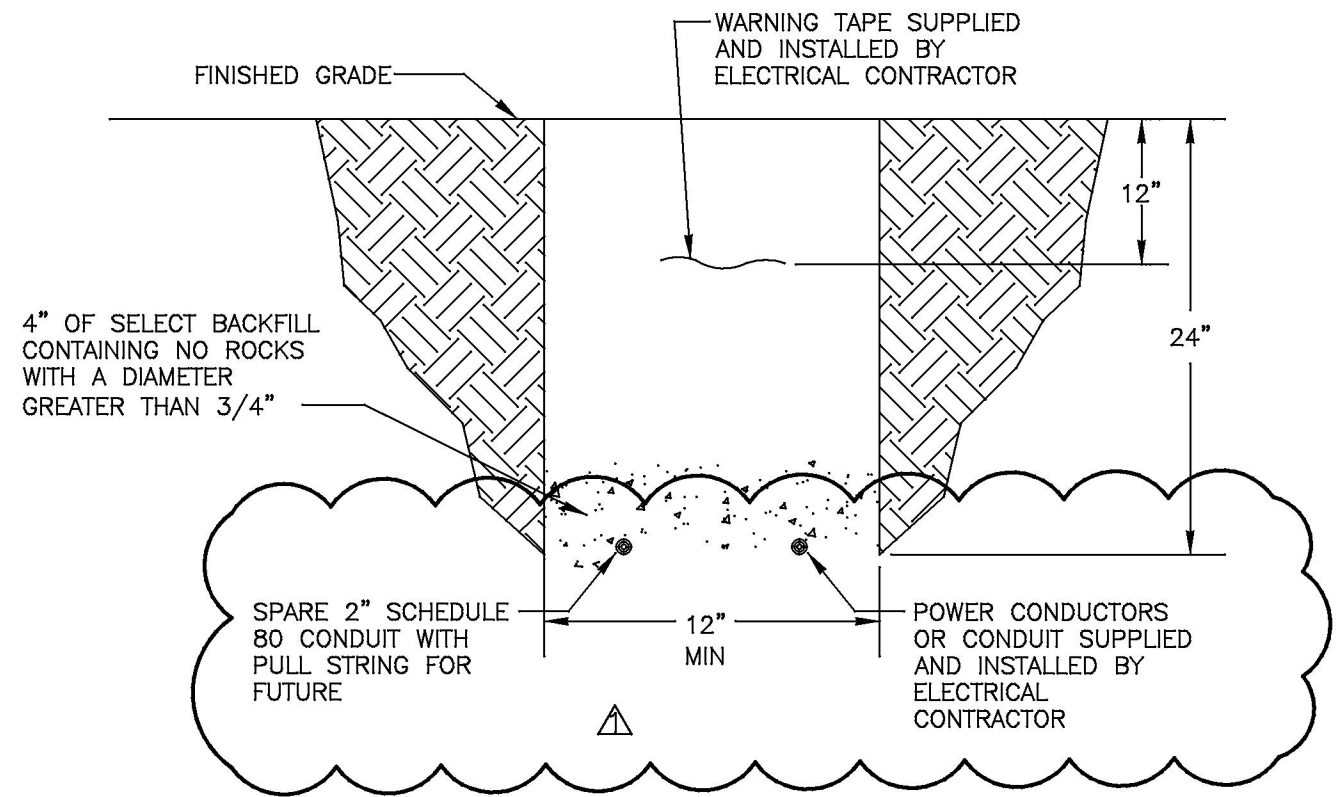
RIVERSIDE PARK TRAIL  
LIGHTING DETAILS

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## TYPICAL SECONDARY ELECTRICAL TRENCH DETAIL

NOT TO SCALE

GENERAL NOTES:

1. TRENCH WIDTH WILL BE 12".
2. STEEL GAS PIPE OR STEEL DUCT IS NOT ALLOWED IN TRENCH CONSTRUCTION.
3. WHERE UNDERGROUND UTILITIES CROSS OR ENCROACH INTO CITY STREETS THEY SHALL BE INSTALLED TO A DEPTH PROVIDING 3' MINIMUM COVER BELOW FINISHED GRADE.
4. PROVIDE 2-#6 THWN + #8GND IN 2" PVC SCHEDULE 80 CONDUIT BETWEEN PULL BOXES UNLESS SHOWN OTHERWISE, TYPICAL.
5. PROVIDE PULL STRING AND CAPS FOR SPARE CONDUITS.



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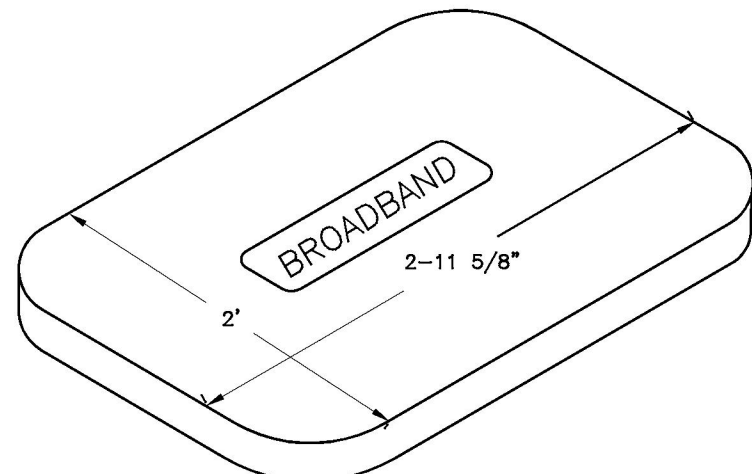
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REVISION $\Delta$	CLARIFIED WIRE SIZE AND TRENCH	4-15-19	AJM	4-9-2019
REVISION $\Delta$			AJM	4-9-2019
REVISION $\Delta$			AJM	4-9-2019
REVISION $\Delta$			BH	4-9-2019



PUBLIC WORKS  
ENGINEERING DIVISION

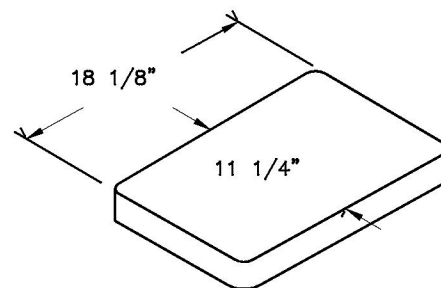
RIVERSIDE PARK TRAIL  
UTILITY DETAILS DETAILS





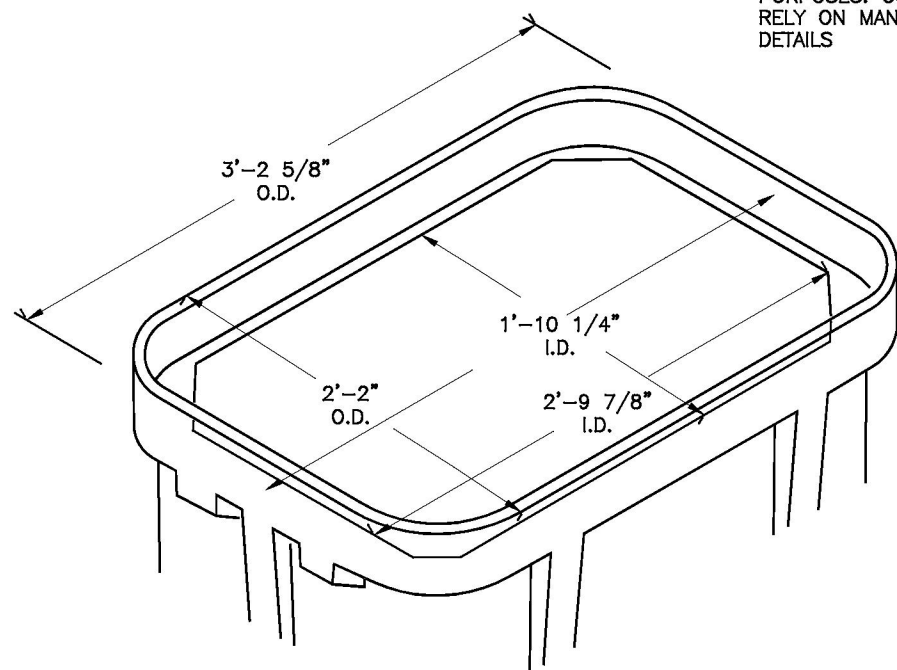
COVER

BROADBAND PULL BOX (HUBBEL QUAZITE BOX) (BOX PART NO PG2436BA30) COVER PART NO PG2436HA00) OR ENGINEER APPROVED EQUAL DIMENSIONS SHOWN HERE FOR LAYOUT AND PLANNING PURPOSES. CONTRACTOR SHALL RELY ON MANUFACTURER DETAILS



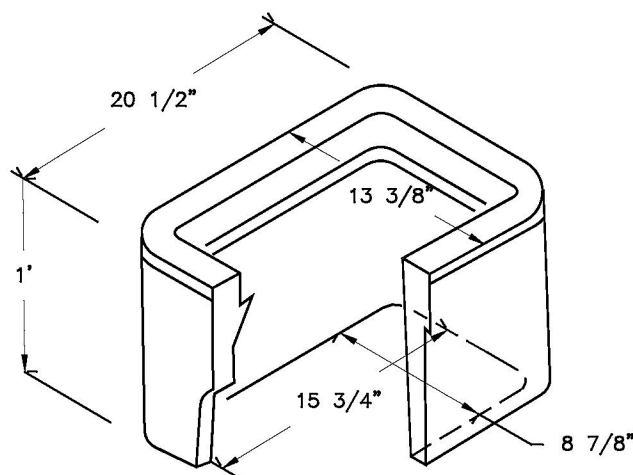
STREET LIGHT AND PEDESTRIAN LIGHT PULL BOX

DIMENSIONS SHOWN HERE FOR LAYOUT AND PLANNING PURPOSES. CONTRACTOR SHALL RELY ON MANUFACTURER DETAILS



BOX

BROADBAND PULL BOX DIMENSIONS SHOWN HERE FOR LAYOUT AND PLANNING PURPOSES. CONTRACTOR SHALL RELY ON MANUFACTURER DETAILS



GENERAL NOTES:

- PULL BOXES, PULL BOX COVERS AND EXTENSIONS SHALL BE MADE OF FIBERGLASS REINFORCED POLYMER CONCRETE. PULL BOXES SHALL BE VERIFIED BY 3RD PARTY NATIONALLY RECOGNIZED INDEPENDENT TESTING LABORATORY AS MEETING ALL TEST PROVISIONS OF THE LATEST ANSI/SCTE 77 SPECIFICATION FOR UNDERGROUND ENCLOSURE INTEGRITY, TIER 22 RATING. CERTIFICATION DOCUMENTS SHALL BE SUBMITTED WITH MATERIALS SUBMITTALS. THE PULL BOX SHALL HAVE A DETACHABLE COVER WITH A SKID RESISTANT SURFACE AND HAVE THE WORDS ELECTRICAL CAST INTO THE SURFACE. FADING THE WORDS SHALL NOT BE ACCEPTED. MARKINGS SHOWING THE TIER 22 RATING MUST BE LABELED OR STENCILED ON THE INSIDE AND OUTSIDE OF THE BOX AND THE ON UNDER SIDE OF THE COVER. THE COVER SHALL BE ATTACHED TO THE PULL BOX BODY BY MEANS OF A MINIMUM 3/8-7 UNIFIED NATIONAL COURSE (UNC) STAINLESS STEEL PENTA HEAD BOLTS SHALL HAVE TWO LIFT SLOTS TO AIDE IN THE REMOVAL OF THE LID.
- PULL SLOTS SHALL BE RATED FOR A MINIMUM PULL OUT OF 3,000 POUNDS. MAGNESIUM CHLORIDE TESTS SHOULD BE PERFORMED IN ACCORDANCE WITH THE LATEST ANSI/SCTE 77 SPECIFICATION FOR UNDERGROUND ENCLOSURE INTEGRITY, TIER 22 RATING.

TYPICAL PULLBOX DETAIL

NOT TO SCALE



Know what's below.  
Call before you dig.



**ACM CONSULTING**  
ELECTRICAL DESIGN, CONSULTING  
ENGINEERS; PH: 970-245-7292  
PO 3211 GRAND JCT., CO 81502  
EMAIL: joelm@ACMengrs.com

REVISION	DESCRIPTION	DATE	DRAWN BY	DATE
REVISION	△		AJM	4-9-2019
REVISION	△		AJM	4-9-2019
REVISION	△		AJM	4-9-2019
REVISION	△		BHI	4-9-2019



PUBLIC WORKS  
ENGINEERING DIVISION

RIVERSIDE PARK TRAIL  
UTILITY DETAILS DETAILS



Purchasing Division

## **ADDENDUM NO. 4**

**DATE:** April 17, 2019  
**FROM:** City of Grand Junction Purchasing Division  
**TO:** All Offerors  
**RE:** Riverside Park Improvements and Bike Path IFB-4621-19-DH

Offerors responding to the above referenced solicitation are hereby instructed that the requirements have been clarified, modified, superseded and supplemented as to this date as hereinafter described.

Please make note of the following clarifications:

1. Q. I think there is still an error with bid item #19 "Replace Vertical Curb Inlet and Grate with Area Inlet Frame and Grate and Adjust to Height". The bid documents list this item as 1 SY and shouldn't it be 1 Each?

A. Bid item #19 has been corrected to a UOM of Each. See attached updated Price Bid Schedule. Contractor shall utilize this updated Price Bid Schedule when submitting their bid response.

2. Please reference the bid schedule for the Riverside Park project, line item 47. The spare 2 inch conduit that was added, does it 90 up into each j-box like the other 2 inch conduit or does it run the continuous 1685 ft without any pull boxes. The original solicitation for the project noted above is amended as noted.

A. Please refer to the general notes on sheets E3 through E6 of the Electrical Plan set, stating that (2)-#6 THWN + #8GND wires shall be installed within 2" PVC Schedule 80 conduit between pull boxes. The spare conduit shall be installed only within the 1,685 LF of trench, as shown within the electrical trench detail on sheet E11 of the Electrical Plan set. The spare 2" schedule 80 PVC conduit shall not be 90° up into each J-box.

All other conditions of subject remain the same.

Respectfully,

A handwritten signature in black ink, appearing to read "Duane Hoff Jr.", written over a white background.

Duane Hoff Jr., Senior Buyer  
City of Grand Junction, Colorado

## Bid Schedule: Riverside Park Improvements and Bike Path (Addendum #4)

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
1	108.2	6" Storm Drain Pipe (C-900 PVC)	132.	LF	\$ _____	\$ _____
2	108.2	12" Storm Drain Pipe (C-900 PVC)	380.	LF	\$ _____	\$ _____
3	108.2	12" Storm Drain Pipe (RCP)	26.	LF	\$ _____	\$ _____
4	108.2	18" Storm Drain Pipe (C-900 PVC)	15.	LF	\$ _____	\$ _____
5	108.2	18" Storm Drain Pipe (RCP)	40.	LF	\$ _____	\$ _____
5	108.5	Manhole Barrel Section (D>5")(48" I.D.)	3.	VLF	\$ _____	\$ _____
6	108.5	Storm Sewer Basic Manhole (48" I.D.)	2.	EA	\$ _____	\$ _____
7	108.5	ADS Inlets or engineer approved	3.	EA	\$ _____	\$ _____
8	108.6	Special Small Storm Drain Area Inlet (see plan details)	1.	EA	\$ _____	\$ _____
9	108.6	Large Area Inlet (24"x36")	7.	EA	\$ _____	\$ _____
10	202	Removal of Asphalt (full depth)	6,825.	SY	\$ _____	\$ _____
11	202	Removal of Concrete (all concrete features noted as being removed on the plans)	285.	SY	\$ _____	\$ _____
12	202	Removal of Ground Sign-Contractor Shall Remove Sign and Post and Return to The Traffic Department at City Shops. Contractor to Provide Temporary Stop Signs, and Regulatory Signs Per the M.U.T.C.D.	11.	EA	\$ _____	\$ _____
13	108.7	Granular Stabilization Material (Type B)	100.	TON	\$ _____	\$ _____
14	203	Excavation	2,100.	CY	\$ _____	\$ _____
15	208	Erosion Control (Complete in Place)	Lump	SUM	---	\$ _____
16	208	Stabilized Construction Entrance	2.	EA	\$ _____	\$ _____
17	209	Dust Abatement	90.	DAYS	\$ _____	\$ _____
18	210	Adjust MH Rim to Finished Grade	15.	EA	\$ _____	\$ _____
19	210	Replace Vertical Curb Inlet Frame and Grate with Area Inlet Frame and Grate and adjust to Final Grade	1.	EA	\$ _____	\$ _____
20	304	Subgrade Stabilization - Aggregate Base Course (Class 3) (12" Thick)	400.	SY	\$ _____	\$ _____
21	304	Aggregate Base Course Shoulder (Class 6) (4" Thick)	610.	SY	\$ _____	\$ _____

## Bid Schedule: Riverside Park Improvements and Bike Path (Addendum #4)

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
22	306	Reconditioning (12" Deep)	3,100.	SY	\$ _____	\$ _____
23	304	Aggregate Base Course (below HMA) (Class 6) (13" Thick)	1,800.	SY	\$ _____	\$ _____
24	401	Hot Mix Asphalt (5" thick) (Grading SX 75, Binder Grade 64-22)	500.	TON	\$ _____	\$ _____
25	420	Geosynthetics - Mirafi RS580i or approved equal	400.	SY	\$ _____	\$ _____
26	608	Concrete Curb and Gutter (2' Wide) to include 6" of Class 6 Aggregate Base Course.	900.	LF	\$ _____	\$ _____
27	608	Concrete Curb and Gutter (1.5' Wide) to include 6" of Class 6 Aggregate Base Course.	800.	LF	\$ _____	\$ _____
28	608	Concrete Sidewalk (6" Thick) to include 6" of Class 6 Aggregate Base Course.	3,111.	SY	\$ _____	\$ _____
29	608	Concrete Pavement (Parking & Alley) (8" Thick) to include 6" of Class 6 Aggregate Base Course.	900.	SY	\$ _____	\$ _____
30	608	Concrete Driveway Section (8" thick) includes 6" CL6 ABC	100.	SY	\$ _____	\$ _____
31	608	Concrete Corner Fillet to include 6" of Class 6 Aggregate Base Course.	15.	SY	\$ _____	\$ _____
32	608	Concrete Curb Ramp to include 6" of Class 6 Aggregate Base Course.	28.	SY	\$ _____	\$ _____
33	608	Post Tension Basketball Court Concrete Slab (45' x 75') to include all appurtenances. Contractor to provide shop drawing stamped by Professional Engineer	3,375.	SF	\$ _____	\$ _____
34	608	Detectable Warning (Cast Iron, Wet Set) (2'x2)	9.	EA	\$ _____	\$ _____
35	620	Sanitary Facility	1.	EA	\$ _____	\$ _____
36	625	Construction Surveying		Lump SUM	---	\$ _____
37	626	Mobilization		Lump SUM	---	\$ _____
38	627	Preformed Thermoplastic Pavement Marking (4" White Solid)	660.	LF	\$ _____	\$ _____
39	627	Preformed Thermoplastic Pavement Marking (Handicap Symbol)	4.	EA	\$ _____	\$ _____
40	630	Traffic Control (Complete In Place)		Lump SUM	---	\$ _____
41	630	Traffic Control Plan		Lump SUM	---	\$ _____

## Bid Schedule: Riverside Park Improvements and Bike Path (Addendum #4)

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
42	Elec	Luminaire LED (Pedestrian) to include foundation.	17.	EA	\$ _____	\$ _____
43	Elec	Luminaire LED (Street) to include foundation.	1.	EA	\$ _____	\$ _____
44	Elec	Electrical Pull Box (Type I)(11" x 18" x 12")	18.	EA	\$ _____	\$ _____
45	Elec	Electrical Panel Pedestal (Complete in Place) to include appurtenances.	1.	EA	\$ _____	\$ _____
46	Elec	Wiring (Complete in Place)	Lump	SUM	---	\$ _____
47	Elec	Trenching for Site Electrical (Pedestrian & Street lt. circuits) - approx. 1,685 LF with (2)-2" Schedule 80 PVC conduits. (Refer to Utility Detail Sheet E11)	Lump	SUM	---	\$ _____
MCR		Minor Contract Revisions	---	---	---	\$ <u>40,000.00</u>

**Bid Amount:** \$ \_\_\_\_\_

**Bid Amount:**

**dollars**

<b>Contractor Name:</b>
<b>Contractor Address:</b>
<b>Contractor Phone #:</b>

## 4. Contractor's Bid Form

Bid Date: 4/2/19

Project: IFB-4616-19-DH "Riverfront at Dos Rios Business Park Phase 1"

Bidding Company: Sorter Construction, Inc.

Name of Authorized Agent: William R. Ogle - President

Email bill@sorterdigs.com

Telephone 970-242-1436 Address 2802 Hwy 50

City Grand Junction State CO Zip 81416

The undersigned Bidder, in compliance with the Invitation for Bids, having examined the Instruction to Bidders, General Contract Conditions, Statement of Work, Specifications, and any and all Addenda thereto, having investigated the location of, and conditions affecting the proposed work, hereby proposes to furnish all labor, materials and supplies, and to perform all work for the Project in accordance with Contract Documents, within the time set forth and at the prices stated below. These prices are to cover all expenses incurred in performing the work required under the Contract Documents, of which this Contractor's Bid Form is a part.

The undersigned Contractor does hereby declare and stipulate that this offer is made in good faith without collusion or connection to any person(s) providing an offer for the same work, and that it is made in pursuance of, and subject to, all terms and conditions of the Instructions to Bidders, the Specifications, and all other Solicitation Documents, all of which have been examined by the undersigned.

The Contractor also agrees that if awarded the Contract, to provide insurance certificates within ten (10) working days of the date of Notification of Award. Submittal of this offer will be taken by the Owner as a binding covenant that the Contractor will be prepared to complete the project in its entirety.

The Owner reserves the right to make the award on the basis of the offer deemed most favorable, to waive any formalities or technicalities and to reject any or all offers. It is further agreed that this offer may not be withdrawn for a period of sixty (60) calendar days after closing time. Submission of clarifications and revised offers automatically establish a new thirty day (30) period.

Prices in the bid proposal have not knowingly been disclosed with another provider and will not be prior to award.

- Prices in this bid proposal have been arrived at independently, without consultation, communication or agreement for the purpose of restricting competition.
- No attempt has been made nor will be to induce any other person or firm to submit a bid proposal for the purpose of restricting competition.
- The individual signing this bid proposal certifies they are a legal agent of the offeror, authorized to represent the offeror and is legally responsible for the offer with regard to supporting documentation and prices provided.
- Direct purchases by the City of Grand Junction are tax exempt from Colorado Sales or Use Tax. Tax exempt No. 98-903544. The undersigned certifies that no Federal, State, County or Municipal tax will be added to the above quoted prices.
- City of Grand Junction payment terms shall be Net 30 days.
- Prompt payment discount of 0 percent of the net dollar will be offered to the Owner if the invoice is paid within N/A days after the receipt of the invoice.

RECEIPT OF ADDENDA: the undersigned Contractor acknowledges receipt of Addenda to the Solicitation, Specifications, and other Contract Documents.

State number of Addenda received: 1, 2, 3

It is the responsibility of the Bidder to ensure all Addenda have been received and acknowledged.

By signing below, the Undersigned agree to comply with all terms and conditions contained herein.

Company: Sorter Construction, Inc.

Authorized Signature: William R. Ogle

Title: President

## Bid Schedule: River Front at Dos Rios - Phase 1 (Addendum #3)

**Contractor:** Sorter Construction, Inc.

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
1	104.4	Cap top half of sewer in concrete per City Standard Detail GU-04	2.	EA	\$ 695.00	\$ 1,390.00
2	108.2	6" Irrigation Conduit (Schedule 80 PVC)	525.	LF	\$ 14.00	\$ 7,350.00
3	108.2	6" Water Pipe (C-900 PVC)	20.	LF	\$ 25.00	\$ 500.00
4	108.2	8" Water Pipe (C-900 PVC)	500.	LF	\$ 25.00	\$ 12,500.00
5	108.2	4" Sewer Service Pipe (SDR 35)	60.	LF	\$ 16.50	\$ 990.00
6	108.2	6" Gravity Sewer Pipe (SDR 35)	75.	LF	\$ 24.00	\$ 1,800.00
7	108.2	8" Gravity Sewer Pipe (SDR 35)	400.	LF	\$ 24.00	\$ 9,600.00
8	108.2	12" Storm Drain Pipe (RCP)	32.	LF	\$ 44.00	\$ 1,408.00
9	108.2	18" Storm Drain Pipe (RCP)	500.	LF	\$ 49.00	\$ 24,500.00
10	108.2	24" Storm Drain Pipe (RCP)	230.	LF	\$ 61.00	\$ 14,030.00
11	108.2	Import Trench Backfill	35.	CY	\$ 30.00	\$ 1,050.00
12	108.3	6" Gate Valve	2.	EA	\$ 900.00	\$ 1,800.00
13	108.3	8" Gate Valve	2.	EA	\$ 1,350.00	\$ 2,700.00
14	108.3	8" x 6" Tee	2.	EA	\$ 445.00	\$ 890.00
15	108.3	8" x 8" Tee	1.	EA	\$ 520.00	\$ 520.00
16	108.3	8", 11.25° Elbow	2.	EA	\$ 335.00	\$ 670.00
17	108.3	8", 22.5° Elbow	3.	EA	\$ 350.00	\$ 1,050.00
18	108.3	8" End Cap/Plug	2.	EA	\$ 225.00	\$ 450.00
19	108.3	Fire Hydrant	2.	EA	\$ 4,000.00	\$ 8,000.00
20	108.3	8" x 4" Sewer Service Tap	1.	EA	\$ 115.00	\$ 115.00
21	108.3	Sanitary Sewer Cleanout (2-way) to include appurtenances per City Standard Detail SS - 07.	1.	EA	\$ 230.00	\$ 230.00
22	108.4	1" Water Service Line (Copper)	50.	LF	\$ 6.00	\$ 300.00
23	108.4	1" Water Service Assembly	2.	EA	\$ 500.00	\$ 1,000.00
24	108.5	Sanitary Sewer Basic Manhole (48" I.D.)	4.	EA	\$ 3,100.00	\$ 12,400.00
25	108.5	Sanitary Sewer Basic Manhole (60" I.D.)	1.	EA	\$ 3,900.00	\$ 3,900.00
26	108.5	Manhole Barrel Section (D>5')(48" I.D.)	12.	VLF	\$ 150.00	\$ 1,800.00
27	108.5	Storm Sewer Basic Manhole (48" I.D.)	3.	EA	\$ 3,600.00	\$ 10,800.00
28	108.5	Storm Sewer Basic Manhole (60" I.D.)	2.	EA	\$ 4,300.00	\$ 8,600.00
29	108.7	Granular Stabilization Material (Type B)	40.	TONS	\$ 50.00	\$ 2,000.00
30	108.6	Single Storm Drain Inlet (Vertical Curb)	2.	EA	\$ 3,200.00	\$ 6,400.00
31	202	Remove Asphalt	1,700.	SY	\$ 2.50	\$ 4,250.00
32	202	Remove Concrete	15.	SY	\$ 20.00	\$ 300.00
33	203	Excavation and Embankment - See SP - 4.	1,925.	CY	\$ 7.00	\$ 13,475.00

## Bid Schedule: River Front at Dos Rios - Phase 1 (Addendum #3)

**Contractor:** Sorter Construction, Inc.

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
34	207	Topsoil (6" Thick)	700.	SY	\$ 2.00	\$ 1,400.00
35	208	Erosion Control (Complete in Place)	1.	Lump	\$ 1,500.00	\$ 1,500.00
36	208	Stabilized Construction Entrance	2.	EA	\$ 1,000.00	\$ 2,000.00
37	209	Dust Abatement	30.	DAYS	\$ 75.00	\$ 2,250.00
38	304	Aggregate Base Course (Class 6) (13" Thick)	2,250.	SY	\$ 11.25	\$ 25,312.50
39	306	Reconditioning (12" Deep)	2,250.	SY	\$ 2.00	\$ 4,500.00
40	401	Hot Mix Asphalt (5" thick) (Grading SX 75, Binder Grade 64-22)	615.	TON	\$ 99.50	\$ 61,192.50
41	420	Geosynthetics - Mirafi RS580i or approved equal	200.	SY	\$ 15.00	\$ 3,000.00
42	608	Concrete Curb (6" Wide, 14" High) to include 6" of Class 6 Aggregate Base Course.	10.	LF	\$ 46.50	\$ 465.00
43	608	Concrete Curb and Gutter (2' Wide) to include 6" of Class 6 Aggregate Base Course.	780.	LF	\$ 16.75	\$ 13,065.00
44	608	Concrete Sidewalk (6" Thick) to include 6" of Class 6 Aggregate Base Course.	215.	SY	\$ 60.50	\$ 13,007.50
45	608	Concrete Curb Ramp to include 6" of Class 6 Aggregate Base Course.	6.	SY	\$ 102.50	\$ 615.00
46	608	Detectable Warning (Cast Iron, Wet Set)(2'x2' per Ramp)	2.	EA	\$ 125.00	\$ 250.00
47	613	Joint Trench with Broad Band (Site Electrical - street lt circuits-(2)) 2" Schedule 80 PVC. Refer to Utility Detail	2,230.	LF	\$ 5.00	\$ 11,150.00
48	613	Joint Trench with Site Electrical - street lt circuits (Broad Band (3)-2") Schedule 80 PVC. Refer to Utility Detail	3,345.	LF	\$ 5.00	\$ 16,725.00
49	613	Joint Trench with XCEL energy and Charter who provides and places their materials (Century Link) 4" Schedule 80 PVC. Refer to Utility Detail.	1,115.	LF	\$ 6.00	\$ 6,690.00
50	613	Joint Trench with XCEL energy and Charter who provides and places their materials (Century Link) 2" Schedule 80 PVC. Refer to Utility Detail and SP -5 for details.	1,115.	LF	\$ 5.00	\$ 5,575.00
51	613	Large Splice Box (Quasite) (3' - 2 5/8"	2.	EA	\$ 925.00	\$ 1,850.00
52	613	Splice Box (Provided by Others-Century Link)	2.	EA	\$ 250.00	\$ 500.00
53	620	Sanitary Facility	1.	EA	\$ 225.00	\$ 225.00



# Bid Schedule: River Front at Dos Rios - Phase 1 (Addendum #3)

**Contractor:** Sorter Construction, Inc.

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
54	625	Construction Surveying	1.	Lump	\$ 6,895.00	\$ 6,895.00
55	626	Mobilization	1.	Lump	\$ 9,772.50	\$ 9,772.50
56	630	Traffic Control (Complete In Place)	1.	Lump	\$ 1,800.00	\$ 1,800.00
57	630	Traffic Control Plan	1.	Lump	\$ 500.00	\$ 500.00
58	Electrical	Luminaire LED (Street) to include foundation.	5.	EA	\$ 5,770.00	\$ 28,850.00
59	Electrical	Electrical Pull Box (Type I)(11" x 18" x 12")	7.	EA	\$ 341.00	\$ 2,387.00
60	Electrical	2 Plex Receptacle (Complete in Place) to include appurtenances.	1.	EA	\$ 310.00	\$ 310.00
61	Electrical	Wiring (Complete in Place)	1.	LUMP	\$ 5,335.00	\$ 5,335.00
62	Electrical	Electrical Panel Pedestal (Complete in Place) to Include Appurtenances.	1.	EA	\$ 11,110.00	\$ 11,110.00
MCR		Minor Contract Revisions	---	---	---	\$ 30,000.00
<b>Bid Amount:</b>						<b>\$ 425,000.00</b>

**Bid Amount:**

Four hundred twenty-five thousand dollars and 00/100

**dollars**

<b>Contractor Name:</b> Sorter Construction, Inc.
<b>Contractor Address:</b> 2802 Hwy 50, GJ, CO 81503
<b>Contractor Phone #:</b> 970-242-1436

The undersigned Bidder proposes to subcontract the following portion of Work:

<u>Name &amp; address of Sub-Contractor</u>	<u>Description of work to be performed</u>	<u>% of Contract</u>
<u>High Desert Surveying - GJ, CO</u>	<u>Surveying</u>	<u>1.5%</u>
<u>Mays Concrete, Inc. - GJ, CO</u>	<u>Concrete</u>	<u>5.2%</u>
<u>Martin Construction, Fruita, CO</u>	<u>Paving</u>	<u>13.6%</u>
<u>White Star Electric - GJ, CO</u>	<u>Electrical</u>	<u>16.9%</u>

The undersigned Bidder acknowledges the right of the City to reject any and all Bids submitted and to waive informalities and irregularities therein in the City's sole discretion.

By submission of the Bid, each Bidder certifies, and in the case of a joint Bid each party thereto certifies as to his own organization, that this Bid has been arrived at independently, without collusion, consultation, communication, or agreement as to any matter relating to this Bid with any other Bidder or with any competitor.



2802 Highway 50  
Grand Junction, CO 81503  
Phone: 970-242-1436  
Fax: 970-242-9040

### **Riverfront at Dos Rios Phase 1 References**

1. Mtn View Subdivision Phases 1, 2 & 3 – Next Level Development, Rick Wagner 970-250-3151
2. Sienna Creek Subdivision – Cairn Homes, Bill Fitzgerald 970-234-2455
3. Thunder Valley, Summer Hill, Quail Meadows Subdivision – Bray & Co, Kevin Bray 970-270-9985



**BID BOND**

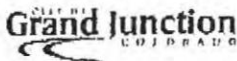
KNOW ALL MEN BY THESE PRESENTS,

that we, Sorter Construction, Inc. (    an individual,    a partnership,  a corporation incorporated in the State of Colorado ) as Principal, and Hartford Fire Insurance Company (incorporated in the State of Connecticut ) as Surety, are held and firmly bound unto the City of Grand Junction, Colorado, (hereinafter called "City") in the penal sum of five percent of bid submitted dollars (\$ 5% of bid submitted ), lawful money of the United States, for the payment of which sum we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that WHEREAS the Principal has submitted the accompanying Bid dated April 2, 2019 for construction of IFB 4616-19-DH Riverfront at Dos Rios (the Project) for the City and

WHEREAS, the City has required as a condition for receiving said Bid that the Principal deposit with the City either a cashier's check or a certified check equivalent to not less than five percent of the amount of said Bid or in lieu thereof furnish a Bid Bond for said amount conditioned that in event of a failure to execute the proposed Contract for such construction and to provide the required Performance and Payment Bonds and Insurance Certificates if the Contract be awarded to the Bidder, that said sum be paid immediately to the City as Liquidated Damages and not as a penalty for the Principal's failure to perform.

NOW, THEREFORE, if the Principal shall, within the period specified therefore, on the attached prescribed forms presented to the Bidder for signature, enter into a written Contract with the City in accordance with said Bid as accepted, and give Performance and Payment Bonds with good and sufficient Surety, or Sureties, as may be required upon the forms prescribed by the City, for the faithful performance and the proper fulfillment of said Contract, provide Certificates of Insurance as required by said Contract, and provide all other information and documentation required by the Contract Documents, then this obligation shall be void and of no effect, otherwise to remain in full force and effect. In the event suit is brought upon this bond by the City and the City prevails, the principal and surety shall pay all costs incurred by the City in such suit, including reasonable attorneys' fees and costs to be fixed by the Court.



IN WITNESS WHEREOF, the above bound parties have executed this instrument under their several seals the name and corporate seal of each corporate party being hereto affixed and duly signed by its undersigned representative pursuant to authority of its governing board.

Dated this 2th day of April, 2019

Principal: Sorter Construction, Inc.
Address: 2802 Hwy 50
Grand Junction, CO 81503
Signed: William R. Ogle
Title: William R. Ogle, President



Surety: Hartford Fire Insurance Company
Address: 690 Asylum Avenue
Hartford, CT 06155
Signed: Tina Post
Title: Tina Post, Attorney-in-Fact

(seal)

INSTRUCTIONS FOR COMPLETING BID BOND

- 1. The full legal name and residence of each individual executing this Bond as Principal must be inserted in the first paragraph.
2. If the Principal is a partnership, the full name of the partnership and all individuals must be inserted in the first paragraph which must recite that individuals are partners composing the partnership, and all partners must execute the Bond as individuals.
3. The State of incorporation of each corporate Principal or Surety to the Bond must be inserted in the first paragraph and the Bond must be executed under the corporate seal of said party attested by its secretary or other appropriate officer.
4. Attach a copy of the power-of-attorney for the Surety's agent.

# POWER OF ATTORNEY

Direct Inquiries/Claims to:

**THE HARTFORD**

Bond T-12

One Hartford Plaza

Hartford, Connecticut 06155

email: [bond.claims@thehartford.com](mailto:bond.claims@thehartford.com)

call: 888-266-3488 | fax: 860-757-5835

KNOW ALL PERSONS BY THESE PRESENTS THAT:

Agency Code: 34-340125

- Hartford Fire Insurance Company, a corporation duly organized under the laws of the State of Connecticut
- Hartford Casualty Insurance Company, a corporation duly organized under the laws of the State of Indiana
- Hartford Accident and Indemnity Company, a corporation duly organized under the laws of the State of Connecticut
- Hartford Underwriters Insurance Company, a corporation duly organized under the laws of the State of Connecticut
- Twin City Fire Insurance Company, a corporation duly organized under the laws of the State of Indiana
- Hartford Insurance Company of Illinois, a corporation duly organized under the laws of the State of Illinois
- Hartford Insurance Company of the Midwest, a corporation duly organized under the laws of the State of Indiana
- Hartford Insurance Company of the Southeast, a corporation duly organized under the laws of the State of Florida

having their home office in Hartford, Connecticut (hereinafter collectively referred to as the "Companies") do hereby make, constitute and appoint, **up to the amount of Unlimited** :

Rebecca A Borquez, Brian Dere, Sandra Livermore, James B. Lummis, Sarah O'Neal, Tina Post of GRAND JUNCTION, Colorado

their true and lawful Attorney(s)-in-Fact, each in their separate capacity if more than one is named above, to sign its name as surety(ies) only as delineated above by , and to execute, seal and acknowledge any and all bonds, undertakings, contracts and other written instruments in the nature thereof, on behalf of the Companies in their business of guaranteeing the fidelity of persons, guaranteeing the performance of contracts and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law.

In Witness Whereof, and as authorized by a Resolution of the Board of Directors of the Companies on August 1, 2009, the Companies have caused these presents to be signed by its Vice President and its corporate seals to be hereto affixed, duly attested by its Assistant Secretary. Further, pursuant to Resolution of the Board of Directors of the Companies, the Companies hereby unambiguously affirm that they are and will be bound by any mechanically applied signatures applied to this Power of Attorney.



John Gray, Assistant Secretary

M. Ross Fisher, Vice President

STATE OF CONNECTICUT }  
COUNTY OF HARTFORD } ss. Hartford

On this 12th day of July, 2012, before me personally came M. Ross Fisher, to me known, who being by me duly sworn, did depose and say: that he resides in the County of Hartford, State of Connecticut; that he is the Vice President of the Companies, the corporations described in and which executed the above instrument; that he knows the seals of the said corporations; that the seals affixed to the said instrument are such corporate seals; that they were so affixed by authority of the Boards of Directors of said corporations and that he signed his name thereto by like authority.



CERTIFICATE

Kathleen T. Maynard  
Notary Public

My Commission Expires July 31, 2016

I, the undersigned, Vice President of the Companies. DO HEREBY CERTIFY that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies, which is still in full force effective as of April 2, 2019  
Signed and sealed at the City of Hartford.



Kevin Heckman, Assistant Vice President



# CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)  
03/25/2019

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

**IMPORTANT:** If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

<b>PRODUCER</b> Moody-Valley Insurance Agency 760 Horizon Drive, Suite 302 Grand Junction CO 81506		<b>CONTACT NAME:</b> Tina Post <b>PHONE (A/C, No, Ext):</b> (970) 248-8300 <b>E-MAIL ADDRESS:</b> tina.post@moodyins.com		<b>FAX (A/C, No):</b> (970) 242-1894	
		<b>INSURER(S) AFFORDING COVERAGE</b>			<b>NAIC #</b>
		<b>INSURER A:</b> Phoenix Insurance Company			25623
		<b>INSURER B:</b> Travelers Prop Cas Co of America			25674
		<b>INSURER C:</b> Pinnacol Assurance			41190
		<b>INSURER D:</b> Homeland Insurance Company of New York			
		<b>INSURER E:</b>			
		<b>INSURER F:</b>			

**COVERAGES**                      **CERTIFICATE NUMBER:** 19/20 Master                      **REVISION NUMBER:**


THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDITIONAL INSURED	SUBROGATION	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> <b>COMMERCIAL GENERAL LIABILITY</b> <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR  GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PROJECT <input type="checkbox"/> LOC OTHER:			DTCO3K292584PKX19	01/01/2019	01/01/2020	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 300,000 MED EXP (Any one person) \$ 10,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000 Employee Benefits \$ 1,000,000
B	<b>AUTOMOBILE LIABILITY</b> <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY <input type="checkbox"/> AUTOS ONLY			DT8103K286080TIL19	01/01/2019	01/01/2020	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ Uninsured motorist BI- \$ 1,000,000
B	<input checked="" type="checkbox"/> <b>UMBRELLA LIAB</b> <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> DED <input checked="" type="checkbox"/> RETENTION \$ 10,000			CUP4K512417TIL26	01/01/2019	01/01/2020	EACH OCCURRENCE \$ 5,000,000 AGGREGATE \$ 5,000,000
C	<b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b> ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below		Y/N Y	1001880	07/01/2018	07/01/2019	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000
D	Contractors Pollution			7930039100003	10/22/2018	01/01/2020	Limit 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Bid Bond: IFB 4616-19-DH Riverfront at Dos Rios

**CERTIFICATE HOLDER****CANCELLATION**

City of Grand Junction 205 N 5th St  Grand Junction CO 81501	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.  AUTHORIZED REPRESENTATIVE 
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**ADDITIONAL REMARKS SCHEDULE**

<b>AGENCY</b> Moody-Valley Insurance Agency		<b>NAMED INSURED</b> Sorter Construction, Inc.	
<b>POLICY NUMBER</b>			
<b>CARRIER</b>	<b>NAIC CODE</b>	<b>EFFECTIVE DATE:</b>	

**ADDITIONAL REMARKS**

**THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,**  
**FORM NUMBER:** 30 **FORM TITLE:** Certificate of Liability Insurance: Notes

**CONTRACTUAL LIABILITY APPLIES PER POLICY TERMS AND CONDITIONS**

Leased & Rented Equipment: QT6603K967997TIL19 1/1/2019 to 1/1/2020  
 Limit ACV - 250,000 Deductible 1% of the loss with a 1,000 minimum and a 5,000 maximum

**General Liability:**  
 Blanket Additional Insured status applies only to the extent provided in form CGD246 08/05 and CGD316 11/11 when required by written contract.  
 Blanket Waiver of Subrogation applies only to the extent provided in form and CGD316 11/11 when required by written contract.  
 Primary and Non-Contributory status only to the extent provided in form CGD246 08/05 when required by written contract.  
 Designated Project General Aggregate applies only to the extent provided in form CGD211 01/04 when required by written contract.

**Auto Liability:**  
 Blanket Additional Insured status applies only to the extent provided in form CAT353 02/15 when required by written contract.  
 Blanket Waiver of Subrogation applies only to the extent provided in form CAT353 02/15 when required by written contract.

**Excess Liability:**  
 Excess Liability policy is on a follow form basis for the following underlying insurance coverages: General Liability, Automobile Liability, and Employers Liability. Additional insured status will follow when required by written contract including Primary and Non-Contributory status when required by written contract.  
 Blanket Waiver of Subrogation applies only to the extent provided in form and UM0488 07/08 when required by written contract.

**Worker's Compensation:**  
 359-B From Attached Includes Blanket Waiver of Subrogation. Status applies when required by written contract.

**IMPORTANT:**  
 The policy forms referenced will be sent via email only. To obtain copies, please send your request with the email address to certrequestgj@moodyins.com





# CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)  
05/22/2019

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

**IMPORTANT:** If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

<b>PRODUCER</b> Moody-Valley Insurance Agency 760 Horizon Drive, Suite 302  Grand Junction CO 81506		<b>CONTACT NAME:</b> Tina Post <b>PHONE (A/C, No, Ext):</b> (970) 248-8300 <b>FAX (A/C, No):</b> (970) 242-1894 <b>E-MAIL ADDRESS:</b> tina.post@moodyins.com	
		<b>INSURER(S) AFFORDING COVERAGE</b>	
		<b>INSURER A:</b> Phoenix Insurance Company	<b>NAIC #</b> 25623
		<b>INSURER B:</b> Travelers Prop Cas Co of America	25674
		<b>INSURER C:</b> Pinnacol Assurance	41190
		<b>INSURER D:</b> Homeland Insurance Company of New York	
		<b>INSURER E:</b>	
		<b>INSURER F:</b>	


**COVERAGES**      **CERTIFICATE NUMBER:** 19/20 Master      **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR  GENL AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER:		Y	DTCO3K292584PKX19	01/01/2019	01/01/2020	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 300,000 MED EXP (Any one person) \$ 10,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COM/PO/AGG \$ 2,000,000 Employee Benefits \$ 1,000,000
B	<b>AUTOMOBILE LIABILITY</b> <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY			DT8103K286080TIL19	01/01/2019	01/01/2020	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ Uninsured motorist Bi- \$ 1,000,000
B	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> DED <input checked="" type="checkbox"/> RETENTION \$ 10,000			CUP4K512417TIL26	01/01/2019	01/01/2020	EACH OCCURRENCE \$ 5,000,000 AGGREGATE \$ 5,000,000
C	<b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b> ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below		Y/N Y	N/A 1001880	07/01/2018	07/01/2019	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000
D	Contractors Pollution			7930039100003	10/22/2018	01/01/2020	Limit 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

RE Project: Riverside Park Improvements and Bike Path IFB-4621-19-DH

<b>CERTIFICATE HOLDER</b>	<b>CANCELLATION</b>
City of Grand Junction 250 N 5th St  Grand Junction CO 81501	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.  AUTHORIZED REPRESENTATIVE 

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AGENCY CUSTOMER ID: 00027260

LOC #: \_\_\_\_\_



### ADDITIONAL REMARKS SCHEDULE

Page \_\_\_\_\_ of \_\_\_\_\_

AGENCY Moody-Valley Insurance Agency		NAMED INSURED Sorter Construction, Inc.	
POLICY NUMBER			
CARRIER	NAIC CODE	EFFECTIVE DATE:	

**ADDITIONAL REMARKS**

**THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,**  
**FORM NUMBER:** 30      **FORM TITLE:** Certificate of Liability Insurance: Notes

**CONTRACTUAL LIABILITY APPLIES PER POLICY TERMS AND CONDITIONS**

Leased & Rented Equipment: QT6603K967997TIL19 1/1/2019 to 1/1/2020  
 Limit ACV - 250,000    Deductible 1% of the loss with a 1,000 minimum and a 5,000 maximum

**General Liability:**

Blanket Additional Insured status applies only to the extent provided in form CGD246 08/05 and CGD316 11/11 when required by written contract.  
 Blanket Waiver of Subrogation applies only to the extent provided in form and CGD316 11/11 when required by written contract.  
 Primary and Non-Contributory status only to the extent provided in form CGD246 08/05 when required by written contract.  
 Designated Project General Aggregate applies only to the extent provided in form CGD211 01/04 when required by written contract.

**Auto Liability:**

Blanket Additional Insured status applies only to the extent provided in form CAT353 02/15 when required by written contract.  
 Blanket Waiver of Subrogation applies only to the extent provided in form CAT353 02/15 when required by written contract.

**Excess Liability:**

Excess Liability policy is on a follow form basis for the following underlying insurance coverages: General Liability, Automobile Liability, and Employers Liability. Additional insured status will follow when required by written contract including Primary and Non-Contributory status when required by written contract.  
 Blanket Waiver of Subrogation applies only to the extent provided in form and UM0488 07/08 when required by written contract.

**Worker's Compensation:**

359-B From Attached Includes Blanket Waiver of Subrogation. Status applies when required by written contract.

**IMPORTANT:**

The policy forms referenced will be sent via email only. To obtain copies, please send your request with the email address to certrequestgj@moodyins.com