NOTICE TO PROCEED

Date: April 4, 2019

Contractor: Granite Inliner, LLC

Project: 2019 Sewer Interceptor Repair and Replacements IFB-4602-19-DH

In accordance with the contract dated March 27, 2019 the Contractor is hereby notified to begin work on the Project on or before June 10, 2019.

The date of final completion as determined is 120 Calendar Days from the start date of this Notice to Proceed.

CITY OF GRAND JUNCTION, COLORADO

_____

Duane Hoff Jr., Senior Buyer

Receipt of this Notice to Proceed is hereby acknowledged:

Contractor: _____

By: _____

Print Name: _____

Title: _____

Date: _____

CITY OF Grand Junction COLORADO

NOTICE OF AWARD

Date: March 27, 2019

Company: Granite Inliner, LLC

Project: 2019 Sewer Interceptor Repair and Replacements IFB-4602-19-DH

You have been awarded the City of Grand Junction 2019 Sewer Interceptor Repair and Replacements IFB-4602-19-DH for a total price of **$1,735,905.00**.

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
9F789E7D50F...

Duane Hoff Jr., Senior Buyer

SUPPLIER ACKNOWLEDGEMENT

Receipt of this Notice to Award is hereby acknowledged:

Company: Granite Inliner, LLC

By: DocuSigned by:
Ashley M. Stinson – Secretary, Granite Inliner, LLC
55788FCF7F98448...
Ashley M. Stinson - Secretary, Granite Inliner

Title: Attorney-In-Fact

Date: 3/27/2019 | 16:57 MDT

CITY OF GRAND JUNCTION, COLORADO

****

CONTRACT

This CONTRACT made and entered into this 27th day of March, 2019 by and between the **City of 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 **Granite Inliner, LLC** 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 **2019 Sewer Interceptor Repair and Replacements IFB-4602-19-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; **2019 Sewer Interceptor Repair and Replacements;**
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 **One Million Seven Hundred Thirty Five Thousand Nine Hundred Five and 00/100 Dollars ($1,735,905.00).** 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.

CITY OF GRAND JUNCTION, COLORADO

By: DocuSigned by: Duane Hoff Jr., Senior Buyer – City of Grand Junction 9F709E7D50F14DC... 9/26/2019 | 09:40 MDT

Duane Hoff Jr., Senior Buyer — Date

Granite Inliner, LIC

By: DocuSigned by: Ashley M. Stinson – Secretary, Granite Inliner, LLC 55788FCF7F984F8... 9/27/2019 | 16:57 MDT

Ashley M. Stinson - Secretary, Granite Inliner, LLC — Date

Purchasing Division

Invitation for Bid

IFB-4602-19-DH
2019 Sewer Interceptor Repair and Replacements

Responses Due:

February 27, 2019 prior to 3:30pm

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
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

Table of Contents

Section 1	Instruction to Bidders
Section 2	General Contract Conditions
Section 3	Statement of Work
Section 4	Contractor's Bid Form
	Price Proposal/Bid Schedule Form
	Appendix
	Attachments

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 for the 2019 Sewer Interceptor Repair and Replacement Project. The project generally consists of, but may not be limited to, 1,605.71 LF of 12 inch cured in place pipe (CIPP); 878 LF of 15 inch CIPP; 2894 LF of 18 inch CIPP; 5,943 LF of 24 inch CIPP, 5535 LF if 30 CIPP. the coating of 37 sanitary sewer manholes (approximately 240 VLF), and bypass pumping necessary to complete said work. All dimensions and scope of work should be verified by Contractors prior to submission of bids.

IFB Questions:
Duane Hoff Jr., Senior Buyer
duaneh@gjcity.org

1.2. **Mandatory Pre-Bid Meeting:** **Prospective bidders are required to attend a mandatory pre-bid meeting on February 12, 2019 at 10:00am**. Meeting location shall be in the City Hall Auditorium, located at 250 N. 5th Street, Grand Junction, CO. 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. 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 then 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. Offeors 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 Contact 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 I 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 singed 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: 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 readvertise, 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: 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 **$750.00** 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 competed. 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.

2.30. 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.

2.31. 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.

2.32. 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.

2.33. 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.

2.34. Conflict of Interest: No public official and/or City/County employee shall have interest in any contract resulting from this IFB.

2.35. 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.

2.36. Employment Discrimination: During the performance of any services per agreement with the Owner, the Contractor, by submitting a Bid, agrees to the following conditions:

2.36.1. 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.

2.36.2. 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.

2.36.3. 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.

2.37. 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.

2.38. 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).

2.39. 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.

2.40. 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.

2.41. 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.

2.42. 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.

2.43. 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.

2.44. 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.

2.45. Evaluation of Bids and Offeors: 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.

2.46. 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.

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

2.48. 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.

2.49. 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.

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

2.51. 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.

2.52. Expenses: Expenses incurred in preparation, submission and presentation of this IFB are the responsibility of the company and cannot be charged to the Owner.

2.53. 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.

2.54. 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.

2.55. 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.

2.56. 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).

2.56.1. "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 sanitary sewer interceptor repair and replacement and all other work for the 2019 Sewer Interceptor Repair and Replacement Project. All dimensions and scope of work should be verified by Contractors prior to submission of bids.

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: The project generally consists of, but may not be limited to, 1,605.71 LF of 12 inch cured in place pipe (CIPP); 878 LF of 15 inch CIPP; 2894 LF of 18 inch CIPP; 5,943 LF of 24 inch CIPP, 5535 LF if 30 CIPP. the coating of 37 sanitary sewer manholes (approximately 240 VLF), and bypass pumping necessary to complete said work.

3.3. SPECIAL CONDITIONS & PROVISIONS:

3.3.1 Mandatory Pre-Bid Meeting: **Prospective bidders are required to attend a mandatory pre-bid meeting on February 12, 2019 at 10:00am**. Meeting location shall be in the City Hall Auditorium, located at 250 N. 5th Street, Grand Junction, CO. The purpose of this visit will be to inspect and to clarify the contents of this Invitation for Bids (IFB).

3.3.2 QUESTIONS REGUARDING SOLICIATION PROCESS/SCOPE OF WORK:
Duane Hoff Jr., Senior Buyer
City of Grand Junction
duaneh@gjcity.org

3.3.3 Project Manager: The Project Manager for the Project is Brendan Hines, 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 and Planning
Attn: Brendan Hines, Project Manager
333 West Ave., Building C
Grand Junction, CO 81501

3.3.4 Affirmative Action: The Contractor is not required to submit a written Affirmative Action Program for the Project.

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:

- It is anticipated that work will consist of days, nights, weekdays and weekends. City Holidays will be observed.

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 are required for the Project and will be obtained by the City at no cost to the Contractor:

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:

All process water that contains chemicals required for the CIPP work shall be treated prior to being discharged. A chemical makeup of the water and associated Material Safety Data Sheets shall be submitted to the City prior to starting the CIPP work. A Request to Discharge Industrial Process Wastewater Permit from the Industrial Pretreatment Division will be required. These Permits include effluent limitations, sampling, and reporting requirements needing approval prior to the discharge of process water. The Contractor shall supply the City with a detailed operational procedure for disposal of process water. The above mention Permits have been supplied in Appendix C.

3.3.12 City Furnished Materials: The City will furnish the following materials for the Project:

- Door-hangers

3.3.13 Project Newsletters: A newsletter for the Project will be prepared and distributed by the City. It will include general information about the Project including interruptions in utility services, street closures, parking restrictions, project schedule, and the names and telephone numbers of the contacts for the City and Contractor. The newsletter will be mailed approximately one week before the Contractor commences work.

The Contractor will be responsible for notifying all businesses and / or residents located adjacent to the work. Door hanger notifications shall be distributed at least two (2) working days prior to the day the work is scheduled to begin.

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

3.3.15 Authorized Representatives of the City: Those authorized to represent the City shall include Purchasing Agent, Engineers, and Inspectors employed by the City, only.

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

3.3.17 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.

The following guidelines and limitations shall apply to all traffic control:

1. The Contractor's operations shall cause no unnecessary inconvenience. The access rights of the public shall be considered at all times.
2. The CIPP Contractor will be responsible for all traffic control necessary to maintain one lane of traffic in each direction. If, in limited areas, it is necessary to have two-way traffic share one lane through the work zone, the Contractor shall request approval from the Engineer. If vehicles must cross bypass piping, a suitable road crossing device will be required.
3. Access to driveways and cross streets, shall be maintained at all times unless approved by Engineer. If necessary, traffic control flagging will be required during setup/teardown of bypass pumping equipment, or while the work zone progresses past the driveway or cross street. If vehicles must cross bypass piping, a suitable road crossing device will be required.

A suitable road crossing device is one that accommodates two-way traffic of all vehicle types including passenger vehicles and semi-truck tractor trailer combinations at a traveling speed of 10 mph.

3.3.18 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.

3.3.19 Quality Control Testing: The Contractor shall perform QA/QC on CIPP per Section 10 of Appendix D, Cured-In-Place-Pipe (CIPP) Specification.

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

1. Construction Schedule submitted at the pre-construction meeting and updated bi-weekly to reflect actual conditions.
2. Traffic Control Plan(s) necessary to conduct the Work submitted at the pre-construction meeting for approval by the City.
3. Product and material descriptive literature, including certification of conformance with the referenced specifications and shop drawings submitted prior to material delivery.
4. CIPP thickness design calculations.
5. Plan for bypass pumping of sewage as discussed under Appendix B, Bypass Pumping Specification.
6. Spill response plan as discussed under Appendix B, Bypass Pumping

Specification.

7. Manhole rehabilitation coating.

3.3.21 Uranium Mill Tailings: It is anticipated that radioactive mill tailings will not be encountered on this Project.

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

3.3.23 Excess Material: All excess materials shall be disposed in accordance with General Contract Condition Section 50.

3.3.24 Existing Utilities and Structures: Utilities were **not** potholed during design of this project with the exception of gas and phone at the G Road and River Road intersection. 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.

3.3.25 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.

3.3.26 Work to be Performed by the City (Prior to Construction): N/A

3.3.27 Existing Concrete Sidewalks, Pans, Fillets, Curbs and Gutters: The existing sidewalks, pans, fillets, curb and gutter and asphalt are in good serviceable condition. The Contractor will need to protect all concrete/asphalt adjacent to construction. If the concrete/asphalt 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.

3.3.28 Verification of Active Taps: It is the Contractors responsibility to verify all existing sewer taps to determine active vs inactive by smoke testing, use of dye, inserting a snake through a clean-out or roof vent and tracing to sewer main, etc. and only connect the active taps. There will be no separate measurement or payment for this work which will be considered incidental. Any damage to property or costs associated by failing to open active taps shall be the responsibility of the Contractor.

3.3.29 Staging Area: Staging shall take place at 333 West Ave. The Contractor shall coordinate with the engineer to determine the location of equipment and materials to be stored at this site. Any rutting due to heavy equipment shall be addressed following the Project. If tracking becomes an issue the Contractor will be required to construct tracking pads. All costs associated for this work shall be considered incidental to the Project. All stockpiling of materials and equipment shall be in accordance with General Contract Condition Section 51.

3.3.30 Interruption of Utilities and Services: The Contractor shall notify all property owners affected by the interruption of utilities and other services caused by the Contractor's operations associated with this Project. Such notice shall be given at least 24 hours prior to the interruption. Notice shall be given for, but not limited to the interruption of domestic water, sanitary sewer, trash pickup, mail delivery and changes in access to the property. Notice can be given via the Project Newsletter. When an interruption will occur but was not stated in the Project Newsletter, the Contractor shall, at a minimum, provide written notice and deliver to the resident/occupant; when the resident/occupant is not home at delivery time, the notice shall be attached to the door. Such notices shall provide contact information for the Contractor, the City Inspector and the City Project Engineer.

3.3.31 Stormwater Requirements: In accordance with the City of Grand Junction Storm Water Ordinance, Section 16-141 through 16-144, there shall be no discharge or cause to be discharged to the storm drainage system any wastewater other than storm runoff. Specifically, the discharge of any contaminated storm water due to construction, process or CIPP Project wastewaters to the storm sewer is prohibited. Proper Best Management Practices shall be in place to protect the stormwater system, including the containment of construction-related storm waters on the project to ensure that sewage or project construction-related stormwater runoff does not enter the storm drainage system.

3.3.32 Sanitary Sewer Service Locations: The location of sewer services shown on the construction drawings are based on TV video of the existing sanitary sewer main. Due to poor condition of the existing sewer main line, some services **may not have been located**. During close circuit television inspection, the Contractor shall pay close attention to the existing main in an effort to identify services that may not have been located. **When multiple or newly identified services exist for a single property, the Contractor, in consultation with the Inspector and/or Engineer, shall determine which services are active and which are inactive by using dye, tracing the line with a snake and locator, or smoking the service.** The Contractor shall notify the property owner prior to placing dye or smoke in the service. When using smoke, the Grand Junction Fire Department shall also be notified prior to smoking the service.

3.3.33 Water Fill Station: The Contractor along with the Project Engineer shall coordinate with the City Water Department for location and costs of water supply. As of January 2019 the price per 1000 gallons is $6.60. The Contractor will be supplied a pin for refill stations and will be billed accordingly.

3.3.34 Drying Beds for Waste: The Contractor along with the Project Engineer shall coordinate with the Persigo Plant for location of drying bed to be utilized during the cleaning of the sanitary sewer lines.

3.3.35 Bypass Pumping: Bypass pumping has been identified as a lump sum quantity. For all bypass pumping, the Contractor shall be responsible for estimating flows and providing sufficient pumping capacity to handle all flows (See Appendix B). The Contractor is advised that flows vary widely throughout the day and throughout the week. Bypass pumping plans, including spill-containment plans, are required for all

bypass pumping that is included in the Bid Schedule or used at the Contractor's discretion.

3.3.36 Work to be performed within Union Pacific Railroad Right of Way: The Contractor shall contact Justin Cordova, Manager of Track Maintenance (970-628-6019) following Notice to Award. All work within UPRR right of way and adjacent to crossings shall be coordinated with Mr. Cordova.

3.3.37 Process Wastewater: See Special Provisions, SP-2 for specifications.

3.3.38 PreVideo: The City did video the sanitary sewer line in 2018 and will supply to the Contractor upon request.

3.3.39 Cleaning of Host Pipe: Per the previdео performed by the City it was evident that portions of Line A and Line B contain a considerable amount of debris material in areas. The cleaning of the host lines shall be considered incidental to CIPP installation and will not be paid for separately. All material generated from the cleaning of the host pipe shall be delivered to Persigo and placed in designated drying bed.

3.3.40 Confined Space Entry: The Contractor is responsible for providing any and all confined space entry safety equipment; including, but not limited to; air testing equipment, fresh air blowers, tripods, harnesses, and SCBA equipment. The Contractor's air monitoring devices shall be calibrated and certified. The cost for all confined space entry equipment shall be incidental to the project cost, and will not be paid for separately.

3.4. SCOPE OF WORK:

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- 1 SECTION 250 – ENVIORMENTAL, HEALTH AND SAFETY MANAGEMENT

Section 250 of the Standard Specifications is hereby revised for this project as follows:

Subsection 250.01, Description, shall include the following:

Process Wastewater

All process wastewater generated from CIPP installation shall be captured, filtered, sampled and tested prior to being discharged back into the sanitary sewer system. A representative from the Persigo Industrial Pretreatment Division shall be present to observe sampling. The level of Styrene must be below 750 µg/l prior to discharge to the sanitary sewer system. All test results shall be reviewed and approved by a Persigo Industrial Pretreatment representative prior to discharge back into the system.

A chemical makeup of the water and associated Material Safety Data Sheets shall be submitted to the City prior to starting the CIPP work. A **Request to Discharge Industrial Process Wastewater Application** from the Industrial Pretreatment Division will be required. There will be effluent limitations, sampling, and reporting requirements needing approval prior to the discharge of process water. The Contractor shall supply the City with a detailed operational procedure for treatment and release of process water. The above mentioned Permit has been supplied in **Appendix C**.

Contact Stephen Stortz at (970) 256-4164 for further information.

Subsection 250.09, Method of Measurement, shall include the following:

Treatment of wastewater shall be considered incidental to the installation of the CIPP and will not be measured or paid for separately.

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:

Add the following:

SP-2 SECTION 108.5 – MANHOLES

Section 108.5 of the Standard Specifications is hereby revised for this project as follows:

SP-3 SECTION 102.11/102.14/108.2 – MANHOLES FOR SANITARY SEWERS AND STORM DRAINS

Sections 102.11/102.14/108.2 of the Standard Specifications is hereby revised for this project as follows:

Manhole Coating

The interior surface of all manholes shall be coated in accordance with section 102.11 of the City's Standard Specifications for Construction of Underground Utilities unless otherwise approved by the Project Engineer. The completed system will provide a corrosion resistant liner that restores the surface profile and eliminates water infiltration and exfiltration.

Performance Specification for Manhole Rehabilitation

Reconditioning shall occur after CIPP lining of the pipe to ensure all pipe to manhole interface is sealed. Any bypass pumping shall be incidental. Holiday Testing as per 102.11 required.

REFERENCES:

A. ASTM D7234 - Adhesion
B. ASTM D412 - Tensile Strength (PSI)
C. ASTM D412 - Elongation (%)

D. ASTM D624 - Tear Strength (PLI)
E. ASTM D2240 - Hardness
F. ASTM D522 - Flexibility (1/8" mandrel)
G. ASTM D4060 - Taber Abrasion (mg loss)

SUBMITTALS

All materials and procedures required to establish compliance with the specifications shall be submitted upon request to the owner/engineer for review/approval. Submittals shall include at least the following:

1. Technical Data Sheet on each product used.
2. Safety Data Sheet (SDS) for each product used.
3. Manufacturer's Certification of Applicator.
4. Certified Applicator Minimum Qualifications (Section 1.04 D).
5. Descriptive literature, bulletins and or catalogs of materials.
6. Work procedures including flow diversion plan, method of repair, etc.
7. Material and method for repair of leaks or cracks in the structure.
8. Applicator and Manufacturer warranty forms (Section 4.01)

QUALITY ASSURANCE

A. The manufacturer of the lining system for wastewater structures shall be a company that specializes in the design and manufacture of corrosion protection materials / systems for wastewater structures.

B. The applicator (company performing the installation) shall be completely trained in leak repair, surface preparation and application of the lining system.

C. The materials/products shall be suitable for installation in a wastewater environment without any deterioration of the liner.

D. The applicator shall be trained and provide a letter of certification from the manufacturer for the handling, mixing, application, and inspection of the liner system as described herein.

E. To ensure total unit responsibility, all materials and installation thereof shall be furnished and coordinated by manufacturer/certified applicator.

PRODUCTS

MATERIALS AND EQUIPMENT

A. The materials to be utilized in the lining of wastewater structures shall be designed and manufactured to withstand the severe effects a wastewater environment. The manufacturer of the corrosion protection products shall have at least 10 years of experience in the production of the lining products utilized, and the products shall have satisfactory installation record.

B. Equipment for installation of lining materials shall be of high quality and as recommended by the manufacturer.

C. The lining system to be utilized for wastewater structures shall be a multi-

layer 'stress skin panel' liner system as described below:

1. Liner:

Layer	Material
Moisture barrier	Polyurea
Surfacer	Polyurethane/Polymeric blend foam
Final corrosion barrier	Polyurea

2. The Modified polymer (silicone modified polyuria) shall be sprayable, solvent free, two-component polymeric, moisture/chemical barrier specifically developed for the corrosive wastewater environment.

3. The Polyurethane Rigid Structure Foam, shall be low viscosity two-component, containing flame retardants.

4. Total thickness of multi-layer liner system shall be a minimum of 500 mills.

D. The product shall be SPECTRASHIELD, manufactured by CCI Spectrum, Inc or approved equal. Approved vendors/applicators:
SpectraShield – Dan Sundvick (303)-378-1101
dsundvick@spectrashield.com

EXECUTION

INITIAL INSPECTION

A. Applicator shall take appropriate action to comply with all local, state, and federal regulations including those set forth by OSHA, EPA, the Owner and any other applicable authorities.

B. Prior to conducting any work, an initial inspection of the structure shall be performed to determine need for protection against hazardous gases or oxygen depleted atmosphere and the need for flow control or flow diversion.

C. If required, submit a plan for flow control or bypass to the owner/engineer for approval prior to conducting the work.

D. New Portland cement structures shall have endured a minimum of 28 days since manufacture prior to commencing installation of the liner system.

SURFACE PREPARATION

A. The surface preparation program will include checking the atmosphere for hydrogen sulfide, methane, low oxygen, or other gases, approved flow control equipment, and surface preparation equipment.

B. Surface preparation for standard manhole structures shall be in accordance with the manufacturer's recommendations, and may include high pressure water cleaning and shall provide a surface compatible for installation of the liner system.

C. Surface preparation and methods for other structures shall be in accordance with the manufacturer's recommendations, and may include high pressure water cleaning, hydro blasting, abrasive blasting, grinding, or detergent water cleaning,

and shall be suited to provide a surface compatible for installation of the liner system.

D. The surface preparation method shall produce a cleaned, abraded and sound surface with no evidence of laitance, loose concrete, loose brick, loose mortar, contaminants or debris, and shall display a surface profile suitable for application of the liner system in accordance with the manufacturer's recommendations.

E. After completion of surface preparation, perform the seven point check list, inspecting for:

1. Leaks
2. Cracks
3. Holes
4. Exposed Rebar
5. Ring and Cover condition
6. Invert Condition
7. Inlet and Outlet Pipe Condition

F. After the defects in the structure are identified, repair all leaks and severe cracks with Spectra-Grout, or other methods approved by the manufacturer.

G. Upon completion of leak and crack repair, the surface shall be primed in accordance with the manufacturer's recommendations.

MATERIAL INSTALLATION

A. Application procedures shall conform to recommendations of the manufacturer, including materials handling, mixing, environmental controls during application, safety and spray equipment.

B. Spray equipment shall be specifically designed to accurately ratio and apply the liner system.

C. Application of multi-component liner system shall be in strict accordance with manufacturer's recommendation. Final installation minimum total thickness shall be 500 mils. A permanent identification and date of work performed shall be affixed to the structure in a readily visible location.

D. If requested a final written report may be provided to the owner/engineer detailing the location, date of work and description of the work.

FINAL INSPECTION

A. Final liner system shall be completely free of pinholes or voids. Liner thickness shall be the minimum value as described herein.

B. Visual inspection may be made by the Owner/Engineer. Any deficiencies in the finished liner system shall be marked and repaired according to the procedures set forth by the manufacturer.

WARRANTY

Applicator and Manufacturer must warrant the liner system installation against failure for a period of 10 years from the installation date. Applicator shall correct failures any time prior to 10 years after the installation date. Failure will be deemed to have occurred if the protective liner fails to: (a) prevent the internal corrosion of the structure or (b) prevent groundwater infiltration. Failure does not include damage resulting from mechanical force or the presence of chemical substances not customarily present or

used in Wastewater Structures, defects in the workmanship or devises of others upon which the Wastewater Structure functions or act of God. The liner must be installed in accordance with Manufacturer's instructions by Applicators certified by Manufacturer. Executed 10-year Applicator and Manufacturer warranties are to be provided upon completion of work.

108.2 Method Measurement

Add the following paragraph:

Coating of manhole will be paid by vertical lineal foot. Depth of manhole was measured from center of manhole at rim to the top of bench. Work shall also include coating of bench. Work shall take place following lining processes to ensure the interface of the CIPP is coated properly.

108.5 Basis of Payment

Add the following items to the table:

Pay Item	**Pay Unit**
Manhole Coating (48" Manhole) to include manhole bench, upper exposed section of box structure to CIPP interface.	VLF

3.5. Attachments:

Appendix A: Project Submittal Form
Appendix B: Bypass Pumping
Appendix C: Request to Discharge Industrial Process Wastewater
Appendix D: Cured-In-Place (CIPP) Specification
Appendix E: Construction Drawings

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	January 31, 2019
Mandatory Pre-Bid Meeting	February 12, 2019
Inquiry deadline, no questions after this date	February 18, 2019
Addendum Posted	February 22, 2019
Submittal deadline for proposals	February 27, 2019
City Council or Board of Commissioners Approval	March 20, 2019
Notice of Award & Contract execution	March 21, 2019
Bonding & Insurance Cert due	March 28, 2019
Preconstruction meeting	TBD
Work begins no later than	TBD
Final Completion	120 Calendar Days from Notice to Proceed
Holidays:	City observed holidays

4. Contractor's Bid Form

Bid Date: _____

Project: IFB-4602-19-DH "2019 Sewer Interceptor Repair and Replacements"

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: _____

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

Name & address of Sub-Contractor	Description of work to be performed	% of Contract

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.

Bid Schedule: 2019 Sewer Interceptor Repair and Replacement Project

Contractor: _____

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
1	626	Portable Sanitary Facility	1.	Lump	$ _____	$ _____
2	630	Mobilization	1.	Lump	$ _____	$ _____
3	630	Traffic Control (Complete In Place) to Include Flagging	1.	Lump	$ _____	$ _____
4	630	Traffic Control Plan	1.	Lump	$ _____	$ _____
5	SP	Bypass Pumping per City Specifications. See Appendix B in Bid Documents.	1.	Lump	$ _____	$ _____
6	SP	Weekly Newsletter- See Bid Documents SC 3.3.12	1.	Lump	$ _____	$ _____
7	SP	12 Inch CIPP (Complete in Place) See Appendix C in Bid Documents.	1,606.	LF	$ _____	$ _____
8	SP	15 Inch CIPP (Complete in Place) See Appendix C in Bid Documents.	878.	LF	$ _____	$ _____
9	SP	18 Inch CIPP (Complete in Place) See Appendix C in Bid Documents.	2,894.	LF	$ _____	$ _____
10	SP	24Inch CIPP (Complete in Place) See Appendix C in Bid Documents.	5,942.	LF	$ _____	$ _____
11	SP	30 Inch CIPP (Complete in Place) See Appendix C in Bid Documents.	5,535.	LF	$ _____	$ _____
12	SP	Coat Manhole (48' I.D.) See SP - 7 for Specifications.	240.	VF	$ _____	$ _____
MCR		Minor Contract Revisions	- - -	- - -	- - -	$ 80,000.00
				Bid Amount:	**$**	_____

Bid Amount:

_____ **dollars**

APPENDIX A

PROJECT SUBMITTAL FORM

PROJECT SUBMITTAL FORM

PROJECT: **2019 Sewer Interceptor Repair and Replacements**

CONTRACTOR: _____

PROJECT ENGINEER: _____

Description	Date Received	Resubmittal Requested	Resubmittal Received	Date Accepted
SEWER CONSTRUCTION				
CIPP				
Manhole Coating				
EROSION CONTROL / STORMWATER MANAGEMENT				
Best Management Plan				
Process Water Treatment Plan (Wet Out Installation)				
PERMITS, PLANS, OTHER				
Traffic Control Plan				
PWWTP Discharge Permits-Appendix C				
Bypass Pumping Plan				

APPENDIX B
BYPASS PUMPING

BYPASS PUMPING SPECIFICATION

PART 1 – GENERAL

1.1 DESCRIPTION

A. The work covered under this section of the Specifications includes furnishing all plans, labor, equipment, permits, and materials necessary to implement a temporary pumping system for the purpose of diverting existing sewer flow around a work area for the duration of the project.

B. Contractor shall be required to field verify bypass pumping flow and sizing requirements prior to submission of shop drawings. Bypass pumping plan shall be submitted to Project Engineer for approval prior to implementation.

C. The bypass system shall provide provisions for maintaining vehicular and pedestrian access, avoiding damage to public and private property, preventing leakage from hoses and minimizing noise from pumps. Sound attenuation will be necessary as many of the sewer lines are adjacent to residences.

D. It shall be the responsibility of the Contractor to provide protection for the entire bypass system including but not limited to piping, piping connections, pumps and ancillary equipment. Materials utilized for bypass pumping shall be appropriate for use for the intended operation and service. Protection for the bypass piping shall be performed through positive protection means. The Contractor shall be responsible for any damage caused by the Contractor's failure to provide adequate protection to the bypass system.

E. The Contractor shall conduct field surveys prior to any bypass operations to determine if there are any storm drains, waterways, or other similar areas that could be negatively affected in the event of a spill. Any potential hazards will be described in a narrative and on a bypass map. This narrative and map will be included with the bypass plan that will be submitted to the Engineer for review. The Contractor shall prepare an emergency response plan to be followed in the event of a spill or release of sanitary sewage during the WORK. This plan shall be developed to minimize the impacts of the spill or release and include containment, cleanup and rinsate collection. The Contractor shall indicate the availability of the required materials and equipment for emergency response.

1.2 SUBMITTALS

A. For the flow bypassing method(s) utilized during pipe inspection, rehabilitation or reconstruction, the Contractor shall submit the following information specific for each bypass setup 10 days prior to construction:

1. A detailed plan and description outlining all provisions and precautions to be taken by the Contractor regarding the handling of existing pipeline flows. This plan should include schedules, locations, capacities of equipment, materials, sizing and selection data, location of nearby waterways, reinstate procedures, manufacturer catalog cut sheets and calculations,

and all other incidental items necessary and/or required to insure the proper protection of these facilities, including protection of the access and bypass pumping locations from damage due to discharge flows. Drawings indicating the location of the equipment, piping layouts and pumping and discharge manholes shall be included.
2. Copy of all permits required to perform the work.
3. Certification of workmen trained for welding and installing HDPE pipe.
4. Record of measurement or verification of sanitary sewer flow rates.
5. Emergency spill or release plan including site specific requirements.

1.3 DESIGN REQUIREMENTS

A. The City does not have any flow data for any of the project locations. It shall be the Contractor's responsibility to verify the estimated flows by measuring flows prior to the work and designing the pumping system accordingly. Bypass pumping systems shall have sufficient capacity to pump **50% more than the maximum measured flow**.

The Contractor shall provide all pipeline plugs, pumps of adequate size to handle peak flow, and temporary discharge piping to ensure than the total flow of the sewer can be safely diverted around the WORK. Bypass pumping systems shall be manned at all times while operating.

B. The Contractor shall have adequate standby equipment available and ready for immediate operation and use in the event of emergency or breakdown. Pumps will be selected per the results of the flow calculations and per site requirements. All bypass systems shall have a fully-operational back-up pump available in the event that a primary pump fails. This information shall be specified in the bypass plans.

C. The bypass pumping system shall be capable of bypassing the flow around the work area and of returning any amount of flow up to full available flow into City's sanitary sewer system as necessary for satisfactory performances of the work.

D. The bypass system shall adhere to all local, state and federal codes and regulations as required by the regulatory agencies having jurisdiction.

E. The Contractor shall maintain sewer flows around the work area in a manner that will protect and not cause surcharging of sewers, drains, damage or flooding to public and private property.

F. The Contractor shall protect water resources, wetlands and other natural resources during the WORK.

1.4 RESPONSIBILITY FOR OVERFLOWS OR SPILLS

A. It shall be the responsibility of the Contractor to schedule and perform the WORK in a manner that does not cause or contribute to incidence of overflows, releases or spills of sewage from the sanitary sewer system or the bypass operation.

B. The Contractor shall develop a site-specific spill response plan in the event that a spill involving sewage should occur. This plan shall include the following:

1. Emergency contact information for the spill response team.

2. Plan for immediately containing the leak or spill.
3. Plan for immediately addressing the source of the leak or spill.
4. Plan for immediately preventing public exposure to the leak or spill, including procedures for diverting pedestrian and automobile traffic away from the impacted area.
5. Contact information for vactor truck services.
6. Contact information for a laboratory certified to test water samples for the presence of fecal coliform.
7. Procedures for collecting water quality samples to assess the magnitude and range of impact of any leak or spill.
8. Procedures for washing down all affected areas with chlorinated potable water, including a requirement that all wastewater generated from this process be collected and disposed of in accordance with the applicable law.
9. Procedures for removing and replacing affected soils.
10. Plans for conducting an investigation to determine the causes of the leak or spill and a review of the results of the implementation of the spill response plan.

A copy of the spill response plan shall be provided to the Engineer for review and comment prior to the commencement of any work. The Contractor shall submit to the Engineer a list of contact information for all supervisory personnel working on the project, including a list of emergency contact numbers available for 24-hour assistance. The Contractor shall also coordinate with the Engineer and City to develop a list of individuals and agencies that must be contacted immediately in the event of a spill. Included on the list shall be the Colorado Department of Public Health and Environment Release and incident Reporting line: 1-877-518-5608. In the event of a spill, the Contractor shall report the spill to CDPHE and conform to all requirements of CDPHE Policy No. WQE-10.

C. In the event that the Contractor's work activities contribute to overflows, releases or spills, the Contractor shall immediately take the appropriate action to contain and stop the overflow, and notify the City of Grand Junction Wastewater Services at 970-256-4180 from 7:30 am to 4:30 pm, at 970-256-8333 after hours and holidays; if that line is busy, call non-emergency police dispatch at 970-242-6707; and as a last resort call police dispatch at 911. Clean up shall include rinsate collection and disinfection of the area affected by the spill to the satisfaction of the Engineer. Site-specific materials shall be used to retain and divert solids and divert flow from environmentally sensitive areas. Storm drains shall be covered to ensure that sewage does not reach the storm water system. Emergency response spill kits and other site-specific spill containment material shall be available on site at all times. An incident report including but not limited to cause of the release or spill, actions taken to mitigate the event and cleanup activities performed shall be submitted to the Engineer by the Contractor within 24 hours of completion of the cleanup activities.

PART 2 – MATERIALS

2.1 MATERIALS

A. Discharge piping will be selected according to flow calculations and system operating calculations. Suction piping will be selected according to pump size, flow calculations, and manhole depth based on manufacturer's specifications and recommendations.

B. Flexible hoses and associated couplings and connectors shall be abrasion resistant, suitable for the intended service, and shall be rated for the external and internal loads anticipated including test pressures. External loading design shall incorporate all anticipated traffic loadings, including traffic impact loading.

1. At a minimum, hose subject to traffic loading shall be composed of a system, such as traffic ramps or covers, but not limited to, capable of withstanding H-20 loading criteria. System shall be installed and maintained to meet H-20 loading requirements while in use or as directed by the Engineer.

C. Valves and fittings will be selected according to flow calculations, the pump sizes previously determined, and system operating pressures.

D. Plugs will be selected and installed according to the size of the line to be plugged, pipe and manhole configurations, and on a site-specific basis. All bypass systems will have additional plugs in the event one plug fails. All plugs will be inspected prior to every use for defects which may lead to failure.

2.2 DELIVERY, STORAGE, AND HANDLING

A. Transportation, handling, and storage of the piping, fittings, pumps and ancillary equipment and materials shall be as recommended by manufacturer.

B. If new materials or equipment become damaged before or during installation, it shall be repaired by the Contractor as recommended by the manufacturer or replaced as required by the Engineer at the Contractor's expense, prior to initiating the WORK.

C. The Contractor shall deliver, store and handle other materials as required to prevent damage. Damaged materials shall be replaced by the Contractor at no additional cost to the City.

D. The Contractor shall inspect all materials and equipment for proper operation prior to initiating the WORK. Any equipment or materials identified by the Engineer which is indicated unsuitable for use by the Contractor for use on this project shall be replaced by the Contractor at no additional cost to the City.

PART 3 – EXECUTION

3.1 PREPARATION

A. The Contractor is responsible for locating any existing utilities in the area that the Contractor selects to locate bypass pipelines. The Contractor shall locate bypass pipelines to minimize any disturbance to existing utilities and shall obtain approval of the pipeline locations from the City. The Contractor is responsible for all costs associated with relocating utilities and obtaining permits.

B. The Contractor shall protect existing facilities from damage during pumping activities.

3.2 INSTALLATION

A. General

1. Plugging or blocking of flows in the line segments to be bypassed shall incorporate a primary and secondary plugging device. When plugging is no longer required for performance of the work, it is to be removed in a manner that permits flows to slowly return to normal without surge, surcharge or other major disturbance.
2. The bypass piping shall be located off streets and sidewalks as required. Where bypass piping crosses, or is installed in driveways, sidewalks and/or other public or private ways, the Contractor shall provide and maintain facilities to permit normal pedestrian and vehicular traffic reasonable access to concourses in accordance with the Contractor's approved traffic control plan from the jurisdictional or governing authority.
3. Upon completion of the bypass pumping operations, the Contractor shall remove all piping and complete restoration, restoring all property to preconstruction condition including but not limited to pavement. The Contractor is responsible for obtaining any permits and/or permission for placement of the temporary pipeline within public and private properties.
4. Contractor shall not divert flow to new sewer or manhole prior to completion of the work as identified in the Contract Documents and as approved by the Engineer.

B. Piping

1. The pipe shall be assembled and joined at the site using couplings or flanges to provide a leak proof joint in strict accordance with the manufacturer's instructions and ASTM D 2657. Threaded or solvent cement joints and connections are not permitted.
2. All equipment and procedures used shall be used in strict compliance with the manufacturer's instructions and recommendations.
3. All joints shall be subject to acceptance by the Engineer prior to insertion.
4. Any section of the pipe having other defects of manufacturing or handling as determined by the Engineer shall be discarded and not used.

C. Cleanup and system removal

1. The Contractor shall restore bypass pump areas to pre bypass condition including any cleanup measures necessary due to fuel, coolant, oil, and sewage leaks. The Contractor shall document any cleanup measures that were necessary. The Contractor's bypass plan and methods shall ensure that all sewage in the bypass pipes, pumps, and fittings has been emptied into the sanitary sewer and flushed with potable water or scrubbed with a "pig" device before system removal.

PART 4 – MEASUREMENT AND PAYMENT

1. MEASUREMENT

   A. Measurement shall be by the lump sum to include all locations.

2. PAYMENT

   A. Payment shall be by the lump sum and shall include payment for all design costs of bypass pumping system, pumping equipment, pipes, labor, valves, spill prevention plan and equipment, labor, mobilization, fuel, potable water for hydrostatic testing of bypass lines, road crossing devices, costs to restore area to existing condition and all other items necessary to conduct bypass pumping.

APPENDIX C

REQUEST TO DISCHARGE INDUSTRIAL PROCESS WASTEWATER

REQUEST TO DISCHARGE INDUSTRIAL PROCESS WASTEWATER

This form shall be used by a non-permitted industrial, commercial or institutional facility proposing to discharge directly to the City/County Sewer System. The application must be received and approved by the Grand Junction Industrial Pretreatment Program at least 24 hours prior to the proposed discharge date.

FACILITY INFORMATION

NAME:_____

ADDRESS:_____

CONTACT (name and title): _____

PHONE: _____ FAX: _____ E-MAIL: _____

WASTEWATER INFORMATION

DESCRIBE TYPE OF WASTEWATER: _____
_____

DESCRIBE SPECIFIC LOCATION OF DISCHARGE: _____
_____

VOLUME OF WASTEWATER TO BE DISCHARGED IS _____ GALLONS

DISCHARGE RATE OF WASTWATER: _____ GALLONS PER MINUTE

REQUEST TO DISCHARGE ON: (dates) _____ BETWEEN THE HOURS OF _____ and _____

_____

IMPORTANT! ATTACH MATERIAL SAFETY DATA SHEET and/or LAB ANALYSIS RESULTS FOR ALL PARAMETERS REQUESTED TO BE DISCHARGED

_____

CERTIFICATION STATEMENT

I certify under penalty of law that I have personally examined and am familiar with the information herein and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. I certify that, to the best of my knowledge and belief, no dumping of concentrated Toxic Organics or other Toxic Materials into the wastewater has occurred.

Printed Name: _____ Title: _____

Signature: _____ Date: _____

Send/fax application to:	Industrial Pretreatment Program Persigo Wastewater Treatment Plant 2145 River Road Grand Junction, CO 81505	Phone: (970) 256-4180 Fax: (970) 245-8620

APPENDIX D

Cured-In-Place Pipe (CIPP) Specification

CURED -IN-PLACE PIPE (CIPP) SPECIFICATION

1. INTENT

1.1 It is the intent of this specification to provide for the reconstruction of pipelines and conduits by the installation of a resin-impregnated flexible tube, which is formed to the original conduit by use of a hydrostatic head. The resin is cured using hot water under hydrostatic pressure within the tube. The Cured-In-Place Pipe (CIPP) will be continuous and tight fitting. The CIPP must be designed for a "Fully Deteriorated Condition" with a safety factor of 2.0. The following requirements apply generally to the CIPP portion of the work with additional specifications as provided below:

- The subcontractor performing the CIPP work must be prequalified to work for the City of Grand Junction.
- The Subcontractor performing the CIPP work must be identified on the Bid Form and shall not be changed after bid opening without specific written approval from the Project Engineer.
- The Subcontractor shall verify host pipe diameter prior to design and fabrication of liner.
- Prior to installation of the CIPP, a design report shall be submitted to the Project Engineer, showing all assumptions, design calculations, test data and other pertinent information. **The design report must be stamped by the Licensed Professional Engineer that prepared it.** The design report is incidental to the lump sum pay item for installation of the CIPP.

2. REFERENCED DOCUMENTS

2.1 This specification references and incorporates ASTM F1216 (Rehabilitation of pipelines by the inversion and curing of a resin-impregnated tube), ASTM F1743 (Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the pull in and inflate curing of a resin-impregnated tube), and ASTM D790 (Test methods for flexural properties of non-reinforced plastics) which are made a part hereof by such reference and shall be the latest edition and revision thereof. In case of conflicting requirements between this specification and these referenced documents, this specification will govern.

3. PRODUCT, MANUFACTURER/INSTALLER QUALIFICATION REQUIREMENTS

3.1 Since sewer products are intended to have a 50 year design life, and in order to minimize the Owner's risk, only proven products with substantial successful long term track records will be approved. All trenchless rehabilitation products and installers must be pre-approved prior to the formal opening of proposals.

Products and Installing Companies seeking approval must supply information verifying that they meet all of the following criteria to be deemed Commercially Acceptable:

3.1.1 For a Product (materials, process, and workmanship) to be considered Commercially Proven, a minimum of 1,000,000 linear feet or 4,000 manhole-to-manhole line sections of successful wastewater/storm water collection system installations in the U.S. must be documented to the satisfaction of the Owner to assure commercial viability. In addition, at least 50,000 linear feet of the product shall have been in successful service within the State for a minimum of five years.

3.1.2 For an Installer to be considered as Commercially Proven, the Installer must satisfy all insurance, financial, and bonding requirements of the City, and must have had at least 3 (three) years active experience in the commercial installation of the product bid. In addition, the Installer must have successfully installed at least 3,000 feet of the product bid in wastewater, stormwater, or irrigation water systems. Acceptable documentation of these minimum installations must be included with the bid package as described in the Instructions to Bidders.

Subcontractors that propose to perform CIPP work must be prequalified specifically for CIPP work by the City of Grand Junction. Contact the Project Engineer for information regarding prequalified CIPP subcontractors or to make arrangements for prequalification. Note that the prequalification process can be time consuming. Subcontractors interested in prequalifying should begin the process as soon as possible.

3.1.3 Both the rehabilitation manufacturing and installation processes shall operate under a quality management system which is third-party certified to ISO 9000 or other internationally recognized organization standards. Proof of certification shall be required for approval of the CIPP sub-contractor.

3.1.4 The owner authorizes the use of proven materials that serve to enhance the pipe performance specified herein. Proven materials have passed independent laboratory testing, not excluding long-term (10,000 hour) structural behavior testing, and have been successfully installed to repair failing host pipes in the U. S. for at least 4 years. In addition to the aforementioned, the owner may require that the contractor demonstrate that the enhancements proposed exceed the specifications herein, prior to the installation of the enhanced material systems. This section in no way shall be interpreted as authorization to deviate from the minimum standard practices set forth herein.

3.1.5 **The CIPP subcontractor shall provide resumes of experience for the site supervisor (superintendent) to the City, demonstrating a minimum of 2 years of CIPP installation experience using the methods stipulated for this project.**

4. MATERIALS

4.1 Tube - The sewn Tube shall consist of one or more layers of absorbent non-woven felt fabric and meet the requirements of ASTM F1216, Section 5. The tube shall be constructed to withstand installation pressures, have sufficient strength to bridge missing pipe, and stretch to fit irregular pipe sections.

4.1.1 The wet out Tube shall have a uniform thickness that when compressed at installation pressures will meet or exceed the Design thickness.

4.1.2 The Tube shall be sewn to a size that when installed will tightly fit the internal circumference and length of the original pipe. Allowance should be made for circumferential stretching during inversion. Overlapped layers of felt in longitudinal seams that cause lumps in the final product shall not be utilized.

4.1.3 The outside layer of the Tube (before wet out) shall be coated with an impermeable, flexible membrane that will contain the resin and facilitate monitoring of resin saturation during the resin impregnation (wet out) procedure.

4.1.4 The Tube shall be homogeneous across the entire wall thickness containing no intermediate or encapsulated elastomeric layers. No material shall be included in the Tube that may cause delamination in the cured CIPP. No dry or unsaturated layers shall be evident.

4.1.5 The wall color of the interior pipe surface of CIPP after installation shall be a light reflective color so that a clear detailed examination with closed circuit television inspection equipment may be made.

4.1.6 Seams in the Tube shall be stronger than the non-seamed felt.

4.1.7 The outside of the Tube shall be marked for distance at regular intervals along its entire length, not to exceed 5 ft. Such markings shall include the Manufacturers name or identifying symbol. The tubes must be manufactured in the USA.

4.2 Resin - The resin system shall be a corrosion resistant polyester, vinyl ester, or epoxy and catalyst system that when properly cured within the tube composite meets the requirements of ASTM F1216, ASTM F1743, the physical properties herein, and those which are to be utilized in the Design of the CIPP for this project. The resin shall produce CIPP which will comply with the structural and chemical resistance requirements of this specification.

5. STRUCTURAL REQUIREMENTS

5.1 The CIPP shall be designed as per ASTM F1216, Appendix X.1. The CIPP design shall assume no bonding to the original pipe wall. The CIPP shall be designed for a fully deteriorated host pipe condition.

5.2 The Contractor must have performed long-term testing for flexural creep of the CIPP pipe material installed by his Company. Such testing results are to be used to determine the Long-term, time dependent flexural modulus to be utilized in the product design. This is a performance test of the materials (Tube and Resin) and general workmanship of the installation and curing. A percentage of the instantaneous flexural modulus value (as measured by ASTM D-790 testing) will be used in design calculations for external buckling. The percentage, or the long-term creep retention value utilized, will be verified by this testing. Values in excess of 50% will not be applied unless substantiated by qualified third party test data. The materials utilized for the contracted project shall be of a quality equal to or better than the materials used in the long-term test with respect to the initial flexural modulus used in Design.

5.3 The layers of the cured CIPP shall be uniformly bonded. It shall not be possible to separate any two layers with a probe or point of a knife blade so that the layers separate cleanly or the probe or knife blade moves freely between the layers. If separation of the layers occur during testing of field samples, new samples will be cut from the work. Any reoccurrence may cause rejection of the work.

5.4 The cured pipe material (CIPP) shall conform to the structural properties, as listed below.

MINIMUM PHYSICAL PROPERTIES

Property	Test Method	**Cured Composite** min. per ASTM F1216	**Cured Composite** (400,000 psi Resin)
Modulus of Elasticity	ASTM D-790 (short term)	250,000 psi	400,000 psi
Flexural Stress	ASTM D-790	4,500 psi	4,500 psi

The required structural CIPP wall thickness shall be based as a minimum, on the physical properties in the table above and in accordance with the Design Equations in the appendix of ASTM F 1216. All calculations shall be submitted to the Project Engineer prior to ordering of the pipe. The submittal shall show ALL information used in the calculations, including original equations, parameters, variables, definitions, values assigned, and intermediate results as well as final results. The purpose of this submittal is to allow the Project Engineer to examine all aspects of the design calculations. Submittal of governing equations and final results shall not be sufficient. Delays in proper submittal of a complete design package will not constitute a valid reason for schedule extension.

5.6 Any layers of the tube that are not saturated with resin prior to insertion into the existing pipe shall not be included in the structural CIPP wall thickness computation.

6. TESTING REQUIREMENTS

6.1 Chemical Resistance - The CIPP shall meet the chemical resistance requirements of ASTM F1216, Appendix X2. CIPP samples for testing shall be of tube and resin system similar to that proposed for actual construction. It is required that CIPP samples with and without plastic coating meet these chemical testing requirements.

6.2 Hydraulic Capacity - Overall, the hydraulic profile shall be maintained as large as possible. The CIPP shall have a minimum of the full flow capacity of the original pipe before rehabilitation. Calculated capacities may be derived using a commonly accepted roughness coefficient for the existing pipe material taking into consideration its age and condition.

6.3 CIPP Field Samples – The Contractor shall submit test results from field installations in the USA of the same resin system and tube materials as proposed for the actual installation. These test results must verify that the CIPP physical properties specified in Section 5.5 have been achieved in previous field applications. Samples for this project shall be made and tested as described in Section 10.1.

6.4 Installed CIPP Testing – The Contractor shall provide samples for testing to the City from the actual installed CIPP. Samples shall be provided at a minimum for one location per 1000 feet of installed CIPP. The sample shall be cut from a section of cured CIPP that has been pulled through a like diameter pipe which has been held in place by a suitable heat sink, such as sandbags. All curing, cutting, and identification of samples shall be witnessed by the City.

7. INSTALLATION RESPONSIBILITIES FOR INCIDENTAL ITEMS

7.1 The Contractor/subcontractor shall be responsible for reopening connections to all laterals shown on the drawings. This work shall be incidental to the CIPP pay item.

7.2 Cleaning of Host Line - The Contractor, when required, shall remove all internal debris out of the line that will interfere with the installation of CIPP. All debris removed from the sewer line shall be taken to the Persigo Wash Wastewater Treatment Plant located at 2145 River Road. Any hazardous waste material encountered during this project will be considered as a changed condition. The cleaning of the host lines shall be considered incidental to CIPP installation and will not be paid for separately.

7.3 Inspection of Pipelines - Inspection of pipelines shall be performed by experienced personnel trained in locating breaks, obstacles and service connections by close circuit television. The interior of the pipeline shall be carefully inspected to determine the location of any conditions which may prevent proper installation of CIPP into the pipelines, and it shall be noted so that these conditions can be corrected. A video tape and suitable log shall be kept for later reference by the Owner.

7.4 Line Obstructions - It shall be the responsibility of the Contractor to clear the line of obstructions such as solids, roots, projecting service pipes, mineral deposits, and other obstructions that will prevent the insertion of CIPP. If pre-installation inspection reveals an obstruction such as a protruding service connection, dropped joint, or a collapse that will prevent the inversion process, that was not evident on the pre-bid video and it cannot be removed by conventional sewer cleaning equipment, then the Contractor shall make a point repair excavation to uncover and remove or repair the obstruction. Such excavation shall be approved in writing by the Owner's representative prior to the commencement of the work and shall be considered as a separate pay item.

8. INSTALLATION

8.1 Installation of the CIPP shall conform with Traffic Control specifications and Special Conditions stipulated elsewhere in the Contract Documents. CIPP installation shall be in accordance with ASTM F1743 with the following modifications:

8.1.1 Resin Impregnation - The quantity of resin used for tube impregnation shall be sufficient to fill the volume of air voids in the tube with additional allowances for polymerization shrinkage and the loss of resin through cracks and irregularities in the original pipe wall. A vacuum impregnation process shall be used. To insure thorough resin saturation throughout the length of the felt tube, the point of vacuum shall be no further than 25 feet from the point of initial resin introduction.

After vacuum in the tube is established, a vacuum point shall be no further than 75 feet from the leading edge of the resin. The leading edge of the resin slug shall be as near to perpendicular as possible. A roller system shall be used to uniformly distribute the resin throughout the tube. If the Installer uses an alternate method of resin impregnation, the method must produce the same results. Any alternate resin impregnation method must be proven.

8.1.2 Tube Insertion – The wet out tube shall be positioned in the pipeline using the pull-through or inversion method.

8.1.3 Temperature gauges shall be placed inside the tube at the invert level of each end to monitor the temperatures during the cure cycle.

8.1.4 Curing shall be accomplished by utilizing steam pressure in accordance with the manufacturer's recommended cure schedule.

8.1.5 Cooling shall be performed using chilled air.

8.1.6 Reinstatement of Services– Sanitary Service connections (taps) at the main be reopened without excavation, utilizing a remotely controlled cutting device, monitored by a video TV camera. The Contractor shall certify that he has a minimum of two complete working units plus spare key components on site before each inversion. No additional payment will be made for excavations for the purpose of reopening connections (unless noted otherwise on the Construction Drawings) and the Contractor will be responsible for all costs and liability associated with such excavation and restoration work. Any damage to the CIPP or service lateral resulting from removing the coupon of CIPP material at the service tap shall be repaired at the Contractor's expense by open-cut excavation and installation of repair coupling and service tap as directed by the Engineer.

10. INSPECTION

10.1 CIPP samples shall be prepared and physical properties tested in accordance with ASTM, F1216 Section 8, using either method proposed. The flexural properties must meet or exceed the values listed in Table 1 of the applicable ASTM.

10.2 Wall thickness of samples shall be determined as described in ASTM F1216. The minimum wall thickness at any point shall not be less than 87½% of the design thickness as specified in this appendix.

10.3 Visual inspection of the CIPP shall be in accordance with ASTM F1216 and F1743. The Contractor shall provide a TV-log of the installation after all work is complete and prior to placing the sewer back in service.

11. CLEAN-UP

11.1 Upon acceptance of the installation work and testing, the Contractor shall restore the project area affected by the operations to a condition at least equal to that existing prior to the work.

12. PAYMENT

12.1 Payment for the CIPP installation shall be per lineal foot of CIPP installed, measured from end of pipe to end of pipe and shall include all aspects of the work described herein and on the Construction Drawings. This shall include the capture and treatment of all process water.

Payment for trenchless connection of services shall be made separately.

Add the following to **104.2.b Installation/Opening of Sewer Service Lines**:

Verification of Active Taps

It is the Contractors responsibility to verify all existing sewer taps to determine active vs inactive by smoke testing, use of dye, inserting a snake through a clean-out or roof vent and tracing to sewer main, etc. and only connect the active taps. There will be no separate measurement or payment for this work which will be considered incidental. Any damage to property or costs associated by failing to open active taps shall be the responsibility of the Contractor.

SECTION 105 – PIPELINE TESTING

Delete Section 105.2. The City of Grand Junction will not require the new sanitary sewer main to be pressure or leakage tested.

APPENDIX E

Construction Drawings

PROJECT NO. _____

2019 SEWER INTERCEPTOR REHABILITATIONS
JANUARY, 2019

1—Cover Sheet
2—Standard Abbreviations, Legend and Symbols
3—Summary of Approximate Quantities
4—Project Location Map
5—Keymap Sewer Interceptor Line A
6—Line A Plan & Profile Sta 0+00 — 10+00
7—Line A Plan & Profile Sta 10+00 — 20+00
8—Line A Plan & Profile Sta 20+00 — 30+00
9—Line A Plan & Profile Sta 30+00 — 40+00
10—Line A Plan & Profile Sta 40+00 — 50+00
11—Line A Plan & Profile Sta 50+00 — 57+00
12—Keymap Sewer Interceptor Line B
13—Line B Plan & Profile Sta 0+00 — 5+00
14—Line B Plan & Profile Sta 5+00 — 10+00
15—Line B Plan & Profile Sta 10+00 — 20+00
16—Line B Plan & Profile Sta 20+00 — 30+00
17—Line B Plan & Profile Sta 30+00 — 40+00
18—Line B Plan & Profile Sta 40+00 — 50+00
19—Line B Plan & Profile Sta 50+00 — 60+00
20—4th St Plan & Profile Sta 0+00 — 4+00
21—4th St Plan & Profile Sta 4+00 — 8+00
22—4th St Plan & Profile Sta 8+00 — 12+00
23—4th St Plan & Profile Sta 12+00 — 16+00
24—4th St Plan & Profile Sta 16+00 — 20+00
25—4th St Plan & Profile Sta 20+00 — 24+00
26—7th St Plan & Profile Sta 0+00 — 4+00
27—7th St Plan & Profile Sta 4+00 — 8+00
28—9th St Plan & Profile Sta 0+00 — 4+00
29—9th St Plan & Profile Sta 4+00 — 8+00
30—9th St Plan & Profile Sta 8+00 — 12+00
31—12th St Plan & Profile Sta 0+00 — 4+00
32—12th St Plan & Profile Sta 4+00 — 8+00
33—12th St Plan & Profile Sta 8+00 — 12+00
34—12th St Plan & Profile Sta 12+00 — 16+00
35—12th St Plan & Profile Sta 16+00 — 21+00

UTILITIES AND AGENCIES								
AGENCY	NAME	POSITION	ROLE	MAILING ADDRESS	STREET ADDRESS	CITY, STATE	VOICE-WK	FAX
CITY OF GRAND JUNCTION	BRENDAN HINES	PROJECT ENGINEER	PROJECT ENGINEER	333 WEST AVE BLDG C	333 WEST AVE BLDG C	GRAND JCT., CO 81501	(970) 256-4038	(970) 256-4022
CITY OF GRAND JUNCTION	LEE COOPER	PROJECT ENGINEER	SANITARY SEWER	333 WEST AVE BLDG C	333 WEST AVE BLDG C	GRAND JCT., CO 81501	(970) 256-4155	(970) 256-4022
GRAND VALLEY IRRIGATION CO.	PHIL BERTRAND	MANAGER	IRRIGATION	688 26 RD	688 26 RD	GRAND JCT., CO 81506	(970) 242-2762	
SPECTRUM	JEFF VALDEZ	MANAGER	CABLE TV	2502 FORESIGHT CIRCLE	2502 FORESIGHT CIRCLE	GRAND JCT., CO 81504	(970) 245-8750	(970) 245-6803
CENTURYLINK	CHRIS JOHNSON	ENGINEER	TELEPHONE	2524 BLICHMANN AVE	2524 BLICHMANN AVE	GRAND JCT., CO 81504	(970) 244-4311	(970) 240-4349
UTE WATER	JUSTIN BATES	SUPERVISOR	WATER	PO BOX 460	2190 H ¼ RD	GRAND JCT., CO 81502	(970) 242-7491	(970) 242-9189
XCEL	STEVE PIBURN	UNIT MANAGER	ELECTRIC	2538 BLICHMANN AVE	2538 BLICHMANN AVE	GRAND JCT., CO 81506	(970) 244-2664	(970) 244-2664
XCEL	SARAH BARRICAU	UNIT MANAGER	GAS	2538 BLICHMANN AVE	2538 BLICHMANN AVE	GRAND JCT., CO 81506	(970) 244-2656	(970) 244-2656

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

	DESCRIPTION	DATE
REVISION △		
REVISION △		
REVISION △		
REVISION △		

CITY OF Grand Junction COLORADO

Public Works
Engineering Division

811 Know what's below. Call before you dig.

DRAWING STATUS:
- ● PROGRESS
- ○ FINAL CONSTRUCTION DRAWINGS
- ○ ASBUILT

DESIGNED BY:
BRENDAN HINES, PROJECT ENGINEER 2019

REVIEWED BY:
TRENT C. PRALL, PUBLIC WORKS DIRECTOR 2019

AUTHORIZED FOR CONSTRUCTION
TRENT C. PRALL, PUBLIC WORKS DIRECTOR 2019

ACCEPTED AS CONSTRUCTED
BRENDAN HINES, PROJECT ENGINEER 2019

2019 SEWER INTERCEPTOR REHABILITATIONS JANUARY, 2019

N:\Landproj\2019 Sewer Interceptor Rehabilitations\dwg\01-04_Cover-Quant.dwg, 01/24/2019 2:42:26 PM

PROJECT NO. _____

ABBREVIATIONS

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY & TRANSPORTATION OFFICIALS
ABC	AGGREGATE BASE COURSE
AC	ASBESTOS CEMENT
AP	ANGLE POINT
ASB	ANCHORED STRAW BALES
ASP	ALUMINIZED STEEL PIPE
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS
AWWA	AMERICAN WATER WORKS ASSOCIATION
BC	BACK OF CURB
BF	BUTTERFLY VALVE
BOW	BACK OF WALK
BCR	BEGIN CURB RETURN
BOT	BOTTOM
BSWMP	BETTER STORM WATER MANAGEMENT PRACTICES
CH	CHORD
CAP	CORRUGATED ALUMINUM PIPE
CDOT	COLORADO DEPARTMENT OF TRANSPORTATION
CI	CAST IRON
C,G,& SW	CURB, GUTTER & SIDEWALK
℄	CENTER LINE
CL	CLEAR
CMP	CORRUGATED METAL PIPE
CO	CLEAN OUT
COMB	COMBINATION (AS IN STORM SEWER AND SANITARY SEWER)
CONC	CONCRETE
CSM	CITY SURVEY MONUMENT
CSP	CORRUGATED STEEL PIPE
CU	COPPER
DI	DUCTILE IRON
DWY	DRIVEWAY
E	ELECTRIC
ECR	END CURB RETURN
EG	EDGE OF GUTTER
EL	ELEVATION
EP	EDGE OF PAVEMENT
EX	EXISTING
FB	FULL BODY
FC	FACE OF CURB
FG	FINISHED GRADE
℄	FLOW LINE
FL	FLANGE
FM	FORCE MAIN
FO	FIBER OPTICS
FS	FAR SIDE
FTG	FOOTING
G	GAS
GB	GRADE BREAK
GM	GAS METER
GV	GATE VALVE
HBP	HOT BITUMINOUS PAVEMENT
HDPE	HIGH DENSITY POLYETHYLENE
INV	INVERT
IRR	IRRIGATION
L	LENGTH OF ARC
LC	LONG CHORD
LF	LINEAR FEET
LL	LONG ARC
LS	SHORT ARC
LT	LEFT
MB	MAILBOX
MCSM	MESA COUNTY SURVEY MONUMENT
MH	MANHOLE
MJ	MECHANICAL JOINT
MW	MILL WRAP
N/A	NOT APPLICABLE
NIC	NOT IN CONTRACT
NOP	NO ONE PERSON
NRCP	NON-REINFORMATIONRCED CONCRETE PIPE
NS	NEAR SIDE
NTS	NOT TO SCALE
OHP	OVERHEAD POWER
OHT	OVERHEAD TELEPHONE
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PE	POLYETHYLENE
PERF	PERFORATED
PI	POINT OF INTERSECTION
PIP	PLASTIC IRRIGATION PIPE
POC	POINT ON CURVE
POT	POINT ON TANGENT
PR	PROPOSED
PRC	POINT OF REVERSE CURVATURE
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
R	RADIUS
RCP	REINFORMATIONRCED CONCRETE PIPE
REQ'D	REQUIRED
RG	RESTRAINED GLANDS
RL	LONG RADIUS
ROW	RIGHT OF WAY
RP	RADIUS POINT
RR	RAIL ROAD
RS	SHORT RADIUS
RT	RIGHT
S	SLOPE
SAN	SANITARY
SC	SHORT CHORD
SCD	STANDARD CONTRACT DOCUMENTS
SCH	SCHEDULE
SF	SILT FENCE
SL	SECTION LINE
SSRB	STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION
SSUU	STANDARD SPECIFICATIONS FOR CONSTRUCTION OF UNDERGROUND UTILITIES
STA	STATION
STL	STEEL
STM	STORM
T	TELEPHONE
TAN	LENGTH OF TANGENT
TC	TOP OF CURB
TH	TEST HOLE
TV	TELEVISION
(TYP)	TYPICAL
UU	UNDERGROUND UTILITIES
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
VPC	VERTICAL POINT OF CURVATURE
VPCC	VERTICAL POINT OF COMPOUND CURVATURE
VPRC	VERTICAL POINT OF REVERSE CURVATURE
VPI	VERTICAL POINT OF INTERSECTION
VPT	VERTICAL POINT OF TANGENCY
W	WATER
Δ	DELTA ANGLE

LEGEND

BSWMP DRAINAGE BASIN BOUNDARY

BSWMP ANCHORED STRAW BALES — ASB ASB ASB ASB ASB ASB ASB

BSWMP SILT FENCE — SF SF SF SF SF SF SF

BUILDING

CONCRETE CURB AND GUTTER — 2' CURB AND GUTTER

7' C, G, & SW

CONCRETE CURB,GUTTER, & SIDEWALK

CONCRETE DITCH — CONCRETE

CONCRETE SIDEWALK — 4' SW

CULVERT — 18" RCP

EARTH DITCH — EARTH EARTH EARTH

EDGE OF GRAVEL

EDGE OF PAVEMENT

FENCE (BARBED WIRE)

FENCE (CHAIN LINK)

FENCE (IRON)

FENCE (PLASTIC)

FENCE (TEMPORARY CONSTRUCTION)

FENCE (WOOD)

FENCE (WOVEN WIRE)

GUARD RAIL — GR GR

HATCHING: INDICATES ASPHALT REMOVAL

HATCHING: INDICATES CONCRETE REMOVAL

HATCHING: INDICATES STAGING AREA — STAGING AREA

LINE (CENTER OF IMPROVEMENTS) — CENTERLINE

LINE (CITY LIMITS) — CITY LIMITS

LINE (CONTROL) — CONTROL LINE

LINE (EASEMENT)

LINE (MONUMENT/SECTION) — MONUMENT/SECTION LINE

LINE (PROPERTY)

LINE (RIGHT OF WAY)

MATCH LINE — MATCH LINE SEE SHEET NO ?

PIPE (IRRIGATION) — 4" IRR

PIPE (SIPHON) — 4" SIPHON

PROPOSED CONCRETE CURB AND GUTTER

PROPOSED CONCRETE CURB,GUTTER,& SIDEWALK

PROPOSED CONCRETE SIDEWALK

PROPOSED "WET" UTILITIES (CONSTRUCTION NOTE WILL INDICATE TYPE, SIZE, AND MATERIAL OF NEW MAIN) — 8" PVC SANITARY SEWER

ALL PROPOSED FEATURES NOT SHOWN IN LEGEND WILL BE SHOWN THE SAME AS THEIR EXISTING COUNTERPART, BUT INDICATED BY BOLDER LINETYPE

RAIL ROAD

RETAINING WALL — 1' RETAINING WALL

STRIPING (CONTINUOUS WHITE) — WHITE

STRIPING (DASHED WHITE) — WHITE

STRIPING (CONTINUOUS YELLOW) — YELLOW

STRIPING (DASHED YELLOW) — YELLOW

4570

TOP OF SLOPE — 4580

CONTOUR LINES (SHOWN BETWEEN TOP & TOE)

TOE OF SLOPE — 4570

TRAFFIC DETECTOR LOOP

UTILITY LINE (ABANDON) (THIS CASE A WATER LINE) — W (ABANDON) 8" W

UTILITY LINE (CABLE TV) — TV TV

UTILITY LINE (ELECTRIC) — E E

UTILITY LINE (FIBER OPTIC) — FO QWEST FO

UTILITY LINE (GAS) — G 1 1/4" MPE G

UTILITY LINE (HIGH VOLTAGE OVERHEAD POWER) — HVOHP

UTILITY LINE (OVERHEAD POWER) — OHP

UTILITY LINE (OVERHEAD TELEPHONE) — OHT

UTILITY LINE (SANITARY SEWER) — 8" SAN

UTILITY LINE (SANITARY SEWER FORCE MAIN) — 6" FM

UTILITY LINE (SANITARY SEWER SERVICE) — SS SS

UTILITY LINE (STORM SEWER) — 8" STM

UTILITY LINE (STORM SEWER, PERFORATED) — 6" PERF

UTILITY LINE (STORM/SANITARY SEWER SEWER COMBINATION) — 18" COMB

UTILITY LINE (TELEPHONE) — T T

UTILITY LINE (WATER) — W 8" W

SYMBOLS

BENCH MARK — A

CATCH BASIN

CLEAN OUT — CO

CURB STOP

FIRE HYDRANT

GUY WIRE ANCHOR

HEADGATE

IRRIGATION PUMP — P

MAILBOX — MB

MANHOLE (ELECTRIC) — E

MANHOLE (GAS) — G

MANHOLE (SANITARY/STORM)

MANHOLE (TELEPHONE) — T

MANHOLE (TV) — TV

MANHOLE (WATER) — W

METER (GAS) — GM

METER (WATER)

PEDESTAL (TELEPHONE)

PEDESTAL (TV) — TV

PROPERTY PIN

PULL BOX

REDUCER FITTING

SIGN OR POST (SIGN TYPE NOTED) — STOP

SPRINKLER HEAD

STREET LIGHT

SURVEY MONUMENT (CITY) — CSM

SURVEY MONUMENT (TYPE NOTED) — MCSM

TEST HOLE — TH #1

TRAFFIC PAINT MARKING

TRAFFIC SIGNAL POLE AND MAST ARM

UTILITY POLE

VALVE (GAS) — VG

VALVE (IRRIGATION) — VI

VALVE (WATER) — VW

VEGETATION (HEDGE OR BUSH)

VEGETATION (TREE STUMP)

VEGETATION (TREE) (CALIPER SIZE NOTED) — 8"

WATER HYDRANT — WH

WEIR

YARD LIGHT

BAR SCALE:

0 5 10 20

(IN FEET)
1 inch = 20 feet

NORTH ARROW:

N W E S

DESCRIPTION	DATE
REVISION Δ	
REVISION Δ	
REVISION Δ	
REVISION Δ	

DRAWN BY _____ DATE _____
DESIGNED BY _____ DATE _____
CHECKED BY _____ DATE _____
APPROVED BY _____ DATE _____

SCALES: PLAN & PROFILE
HORIZONTAL: 1" =
VERTICAL: 1" =

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

CITY OF GRAND JUNCTION
STANDARD ABBREVIATIONS, LEGEND, AND SYMBOLS

2

N:\Landproj\2019 Sewer Interceptor Rehabilitation\dwg\01-04_Cover-Quant.dwg, 02, 1/24/2019 2:42:27 PM

PROJECT NO. _____

Bid Schedule: 2019 Sewer Interceptor Repair and Replacement Project

Item No.	CDOT, City Ref.	Description	Quantity	Units
1	626	Portable Sanitary Facility	1.	Lump
2	630	Mobilization	1.	Lump
3	630	Traffic Control (Complete In Place) to Include Flagging	1.	Lump
4	630	Traffic Control Plan	1.	Lump
5	SP	Bypass Pumping per City Specifications. See Appendix B in Bid Documents.	1.	Lump
6	SP	Weekly Newsletter- See Bid Documents SC 3.3.12	1.	Lump
7	SP	12 Inch CIPP (Complete in Place) See Appendix C in Bid Documents.	1,605.71	LF
8	SP	15 Inch CIPP (Complete in Place) See Appendix C in Bid Documents.	877.7	LF
9	SP	18 Inch CIPP (Complete in Place) See Appendix C in Bid Documents.	2,893.8	LF
10	SP	24Inch CIPP (Complete in Place) See Appendix C in Bid Documents.	5,942.31	LF
11	SP	30 Inch CIPP (Complete in Place) See Appendix C in Bid Documents.	5,534.79	LF
12	SP	Coat Manhole (48' I.D.) See SP - 7 for Specifications.	239.25	VF

N:\Landproj\2019 Sewer Interceptor Rehabilitations\dwg\01-04_Cover-Quant.dwg, 03, 1/28/2019 10:12:37 AM

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY HMC DATE 2019
DESIGNED BY _____ DATE _____
CHECKED BY _____ DATE _____
APPROVED BY _____ DATE _____

SCALES: PLAN & PROFILE
HORIZONTAL: 1" =
VERTICAL: 1" =

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
SUMMARY OF APPROXIMATE QUANTITIES

4TH STREET CIPP
SHEETS 20 to 25

7TH STREET CIPP
SHEETS 26 to 27

SEWER INTERCEPTOR LINE A
SHEETS 5 to 11

SEWER INTERCEPTOR LINE B
SHEETS 12 to 19

12TH STREET CIPP
SHEETS 31 to 35

9TH STREET CIPP
SHEETS 28 to 30

DESCRIPTION	DATE
REVISION	
REVISION	
REVISION	
REVISION	

DRAWN BY HMC DATE 2019
DESIGNED BY DATE
CHECKED BY DATE
APPROVED BY DATE

SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 1250'
0 312.5 625 1250
VERTICAL: 1" =

CITY OF Grand Junction COLORADO

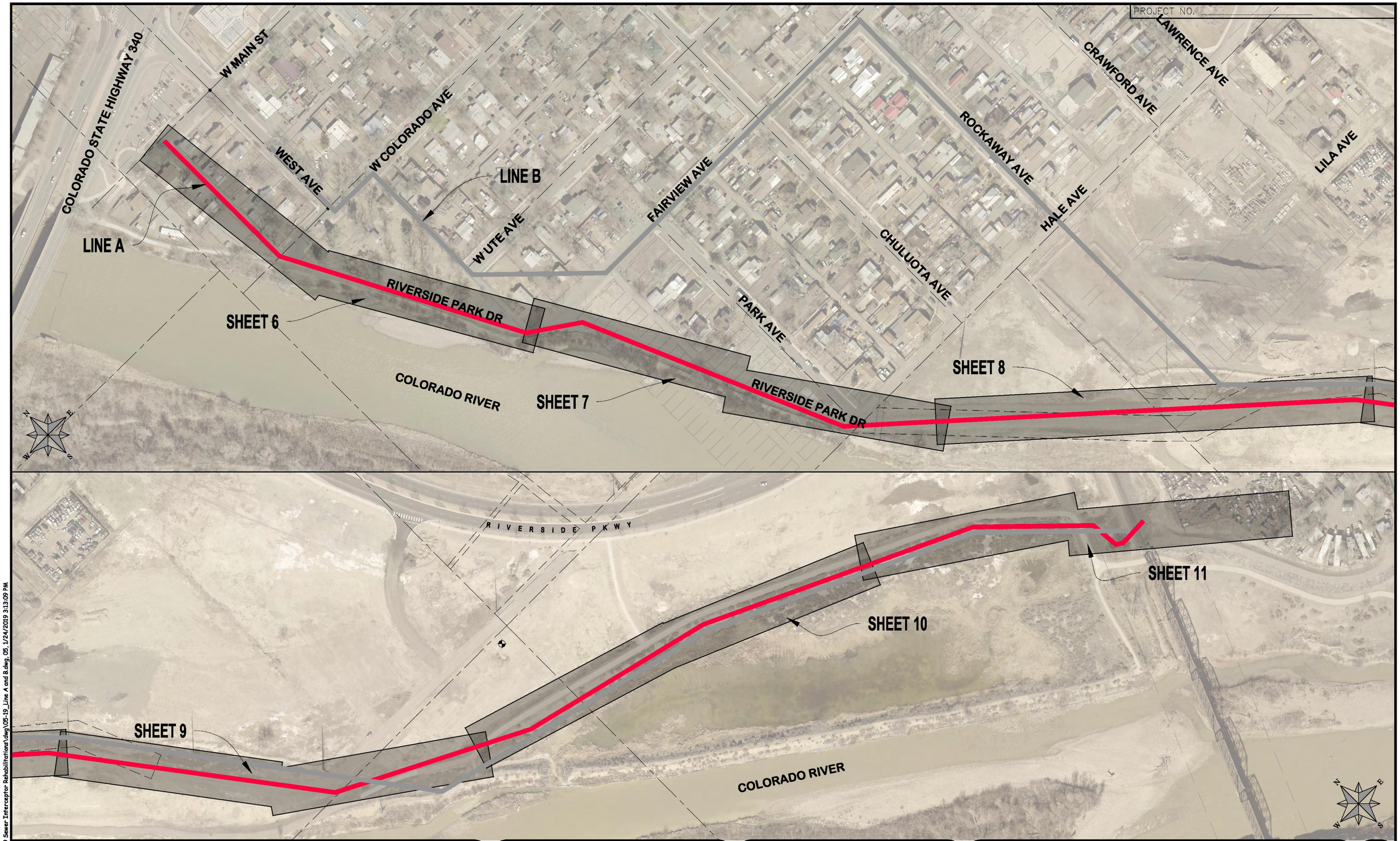
PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
PROJECT LOCATION MAP

4

N:\Landproj\2019 Sewer Interceptor Rehabilitations\dwg\01-04_Cover-Quant.dwg, 04, 1/24/2019 2:42:29 PM

PROJECT NO. _____



N:\Landproj\2019 Sewer Interceptor Rehabilitations\dwg\05-19_Line A and B.dwg, 05, 1/24/2019 3:13:09 PM

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY	HMC	DATE	2018
DESIGNED BY	JKT	DATE	2018
CHECKED BY	JKT	DATE	2018
APPROVED BY	JKT	DATE	2018

SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 20'
0 5 10 20

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
LINE A KEYMAP
STA 0+00 TO STA 57+00

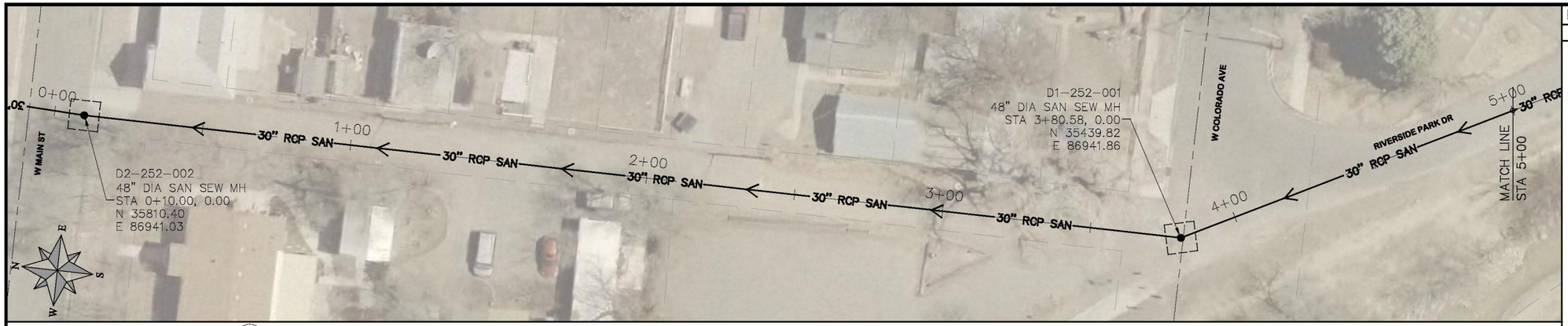
PROJECT NO. _____

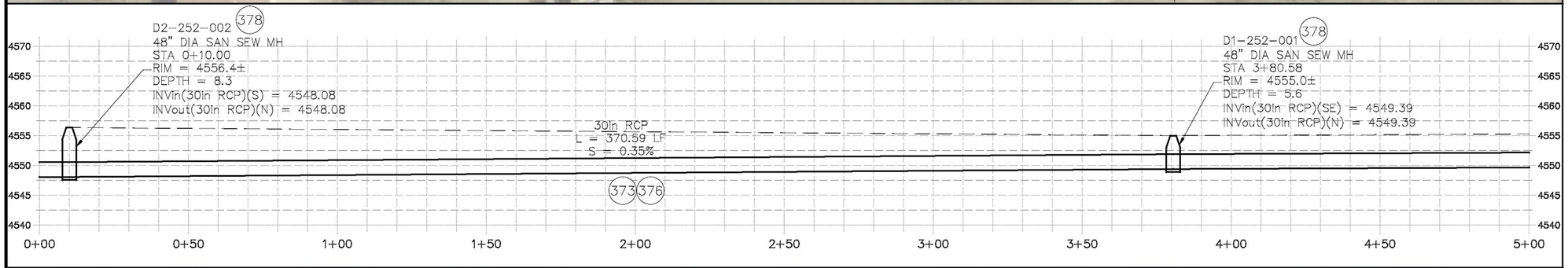
CONSTRUCTION NOTES

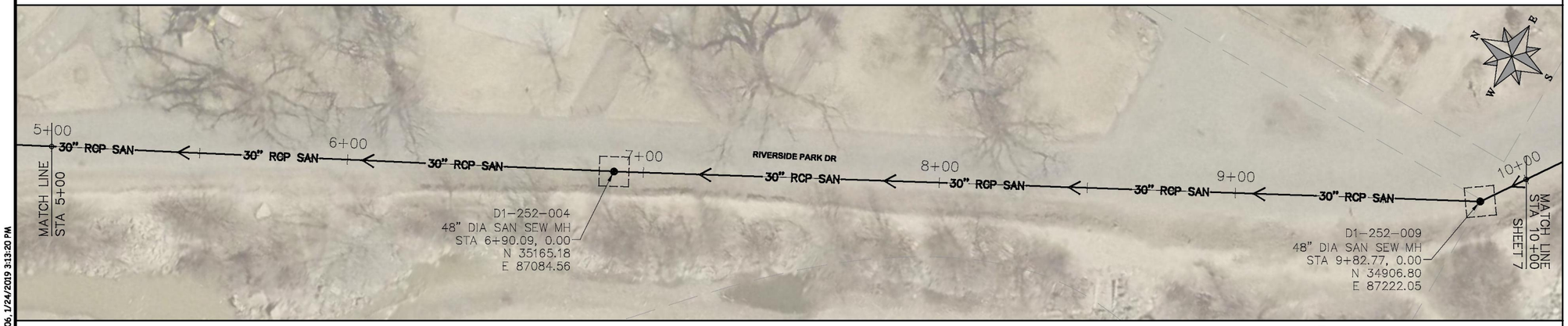
(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

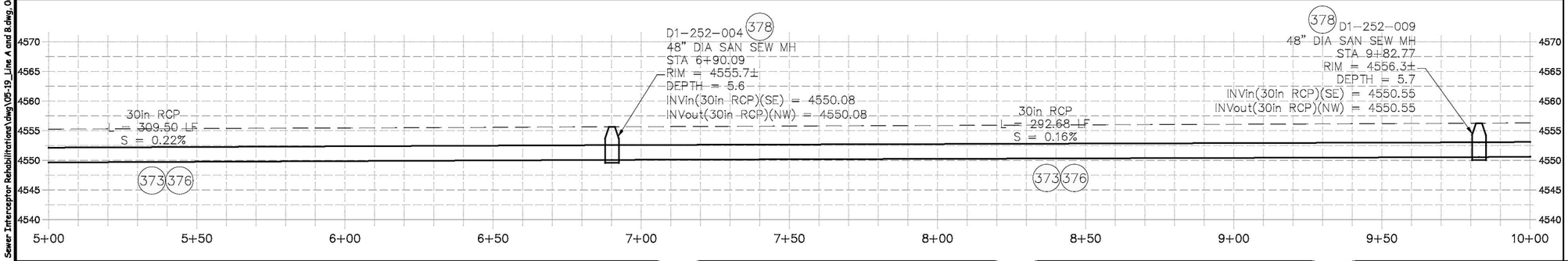
(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)

(378) SP RECONDITION EXISTING MANHOLE AND BENCH. (SEE PROJECT SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION)(REFER TO APPENDIX F FOR SPECIFICATIONS.)









DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 20'
0 5 10 20

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
LINE A PLAN AND PROFILE
STA 0+00 TO STA 10+00

N:\Landproj\2019 Sewer Interceptor Rehabilitations\dwg\05-19_Line A and B.dwg, 06, 1/24/2019 3:13:20 PM

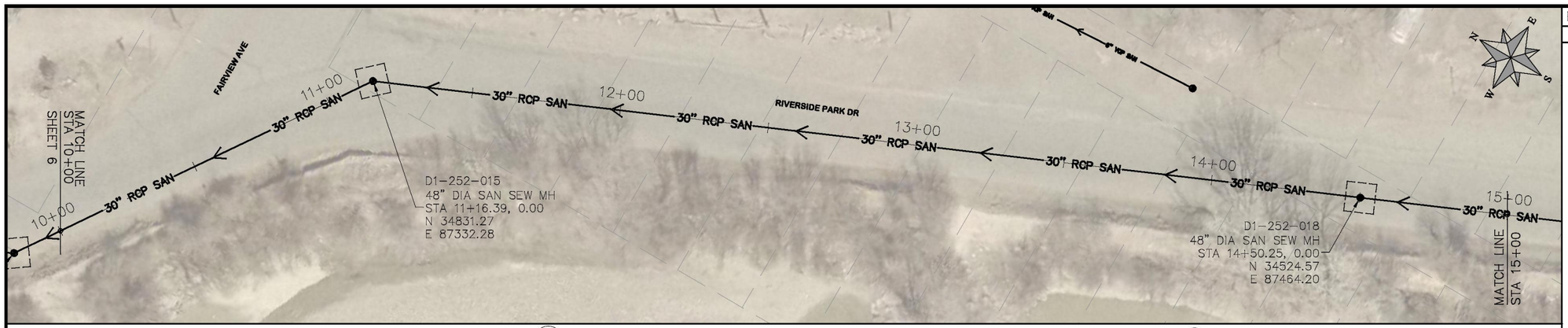
PROJECT NO. _____

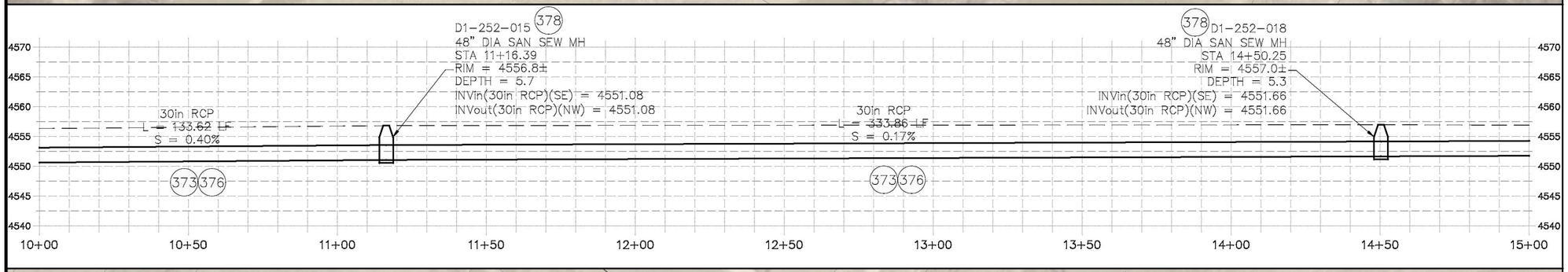
CONSTRUCTION NOTES

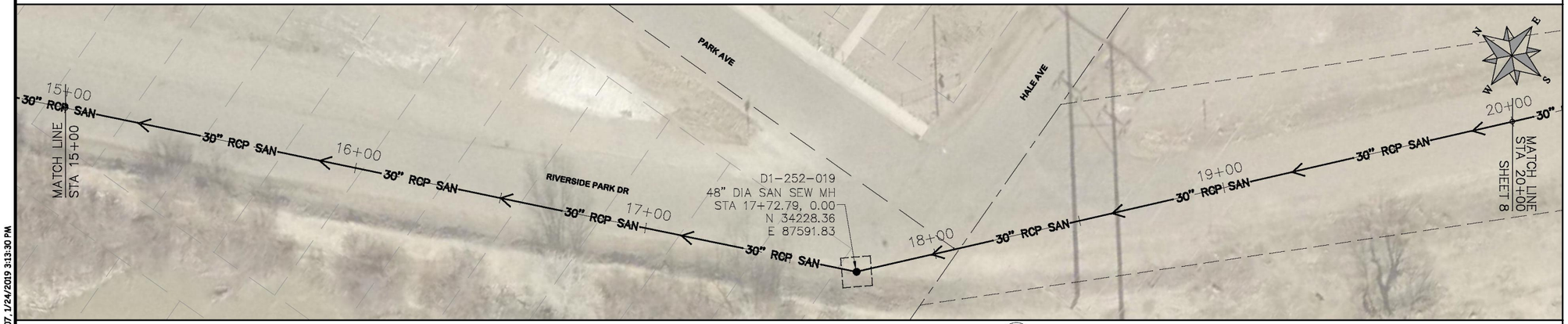
(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

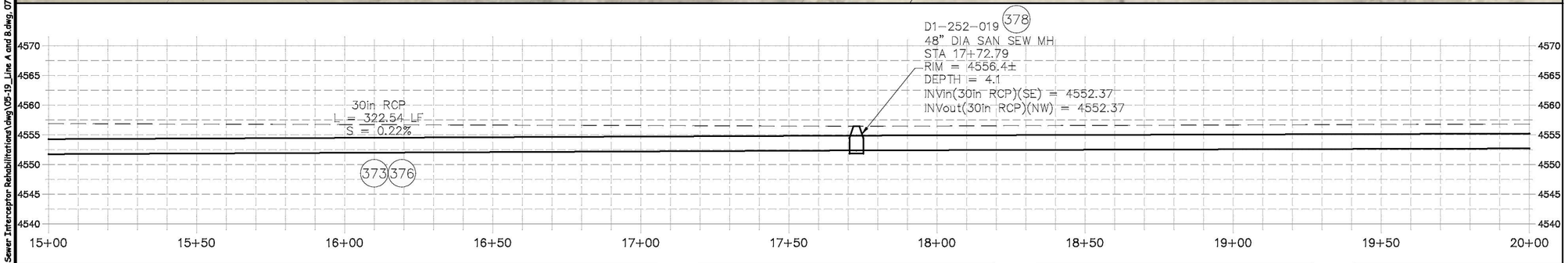
(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)

(378) SP RECONDITION EXISTING MANHOLE AND BENCH. (SEE PROJECT SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION)(REFER TO APPENDIX F FOR SPECIFICATIONS.)









DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 20'
0 5 10 20

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
LINE A PLAN AND PROFILE
STA 10+00 TO STA 20+00

N:\Landproj\2019 Sewer Interceptor Rehabilitations\dwg\05-19_Line A and B.dwg, 07, 1/24/2019 3:13:30 PM

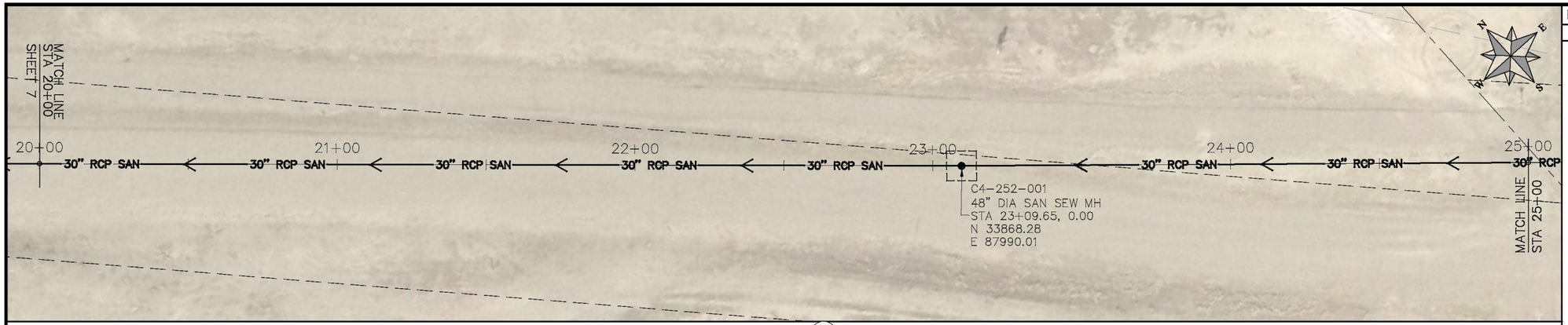
PROJECT NO. _____

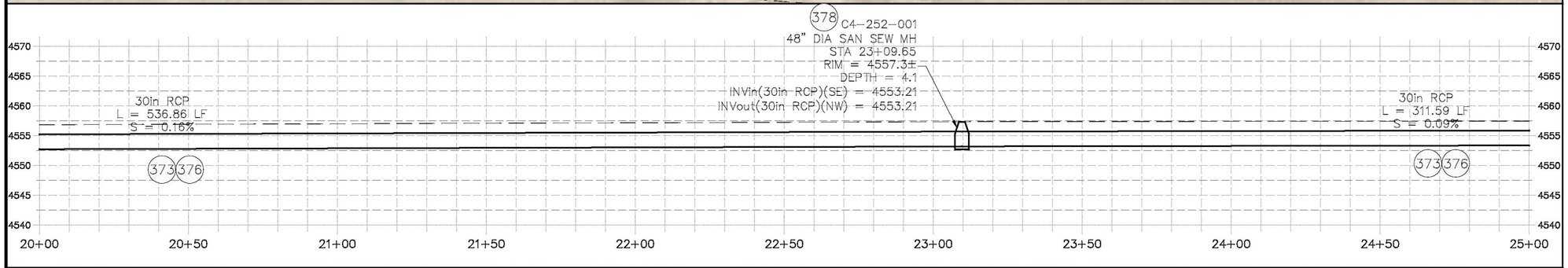
CONSTRUCTION NOTES

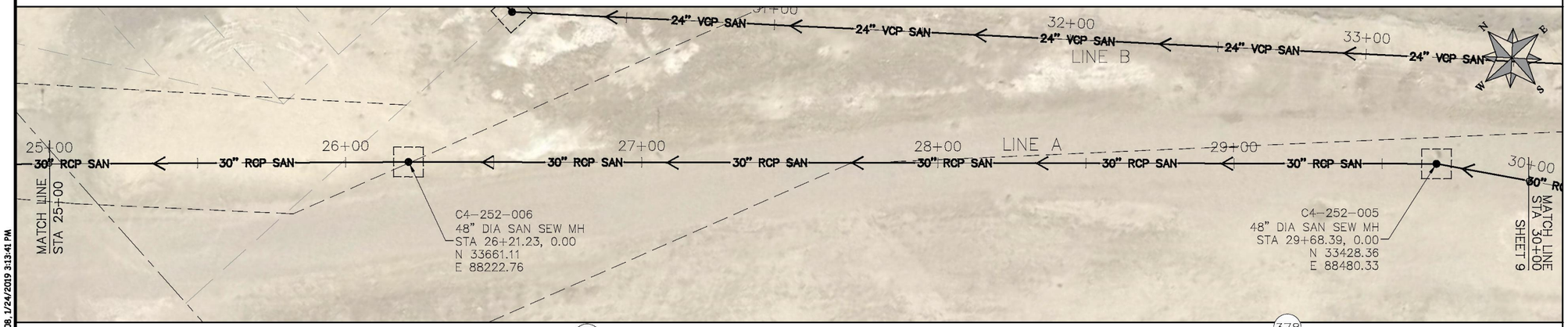
(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

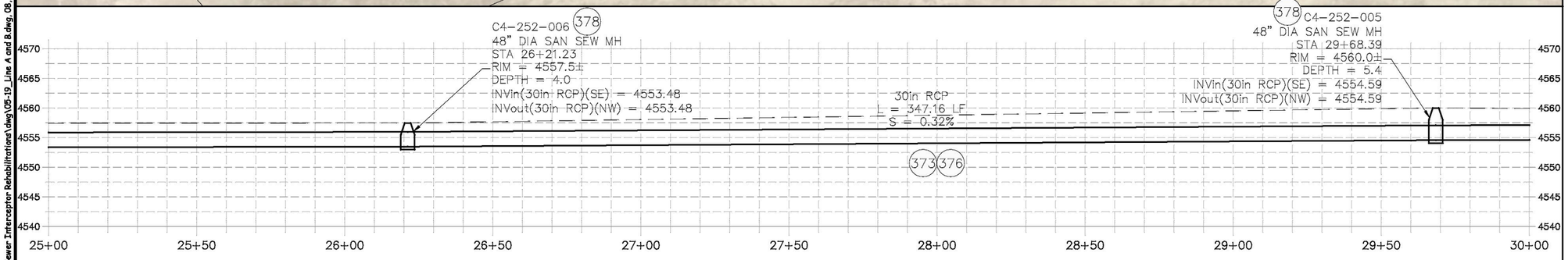
(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)

(378) SP RECONDITION EXISTING MANHOLE AND BENCH. (SEE PROJECT SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION)(REFER TO APPENDIX F FOR SPECIFICATIONS.)









DESCRIPTION	DATE
REVISION	
REVISION	
REVISION	
REVISION	

DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

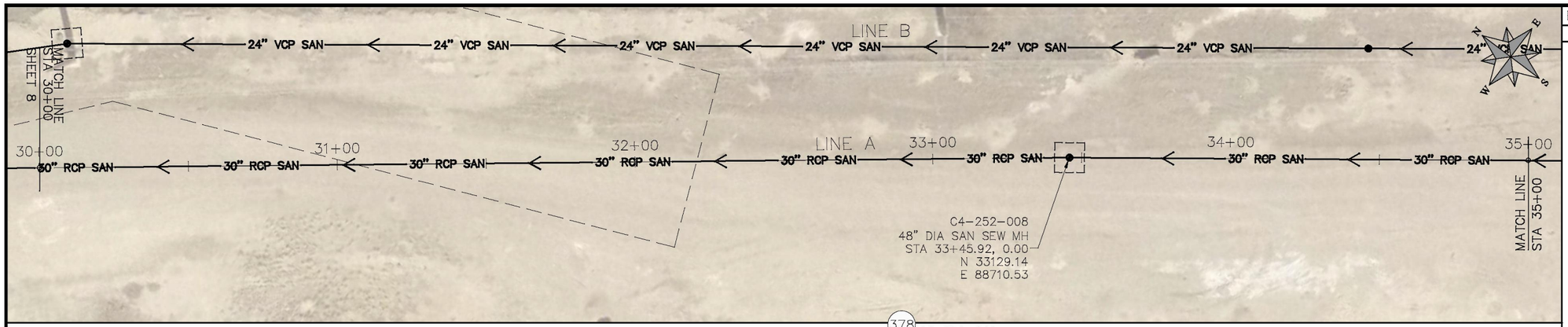
SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 20'
0 5 10 20

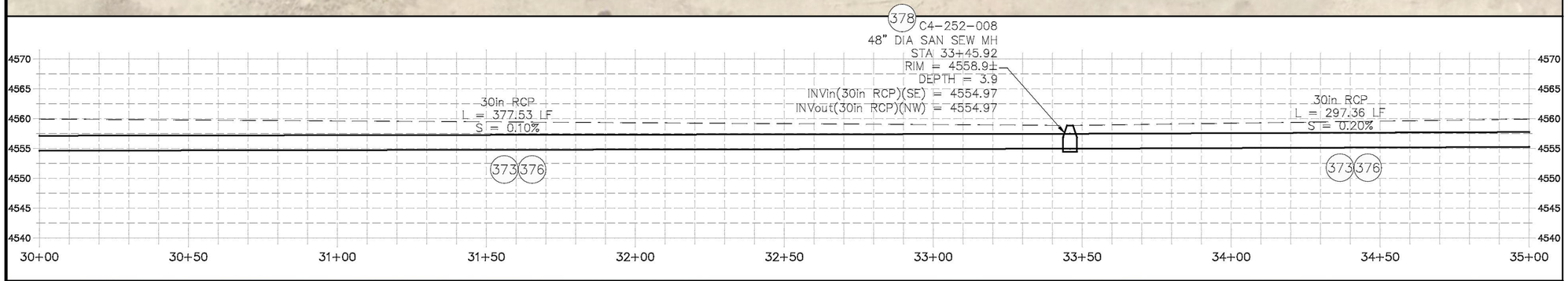
CITY OF Grand Junction COLORADO

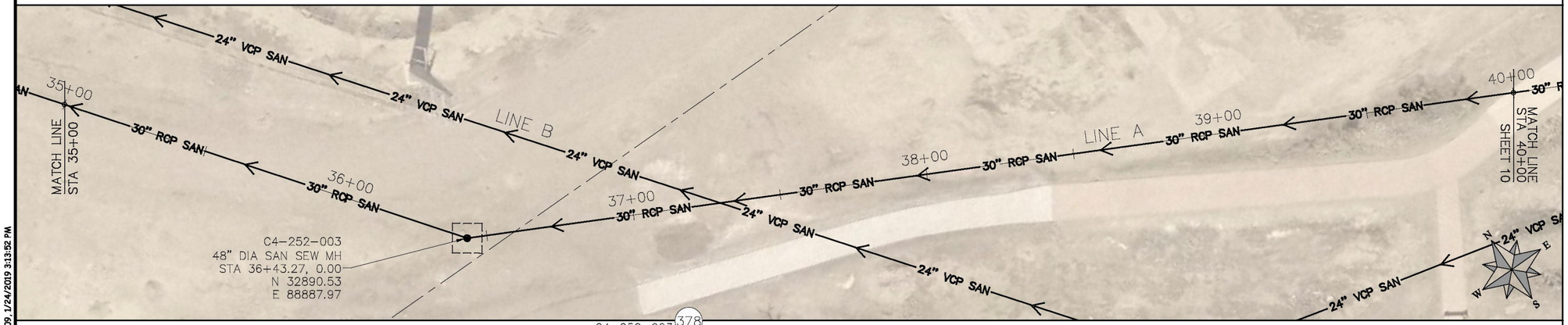
PUBLIC WORKS
ENGINEERING DIVISION

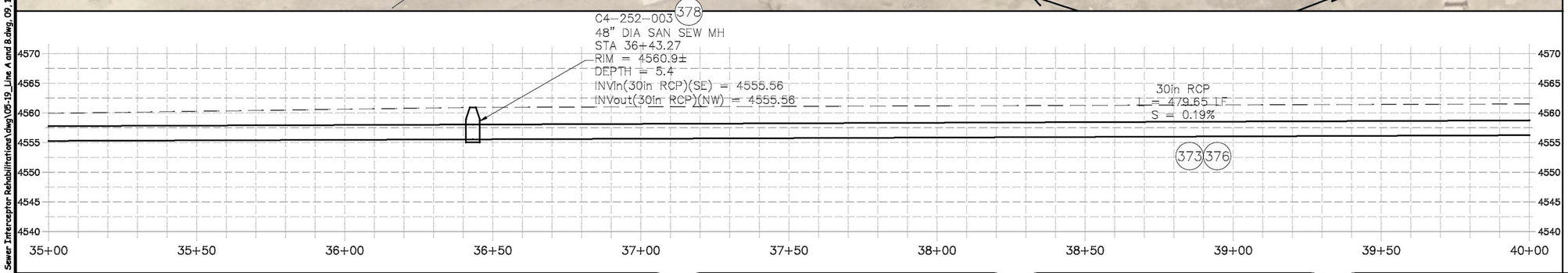
2019 SEWER INTERCEPTOR REHABILITATIONS
LINE A PLAN AND PROFILE
STA 20+00 TO STA 30+00

N:\Landproj\2019 Sewer Interceptor Rehabilitations\dwg\05-19_Line A and B.dwg, 08, 1/24/2019 3:13:41 PM









PROJECT NO. _____

CONSTRUCTION NOTES

373 CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

376 REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)

378 SP RECONDITION EXISTING MANHOLE AND BENCH. (SEE PROJECT SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION)(REFER TO APPENDIX F FOR SPECIFICATIONS.)

N:\Landproj\2019 Sewer Interceptor Rehabilitations\dwg\05-19_Line A and B.dwg, 09, 1/24/2019 3:13:52 PM

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 20'
0 5 10 20

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
LINE A PLAN AND PROFILE
STA 30+00 TO STA 40+00

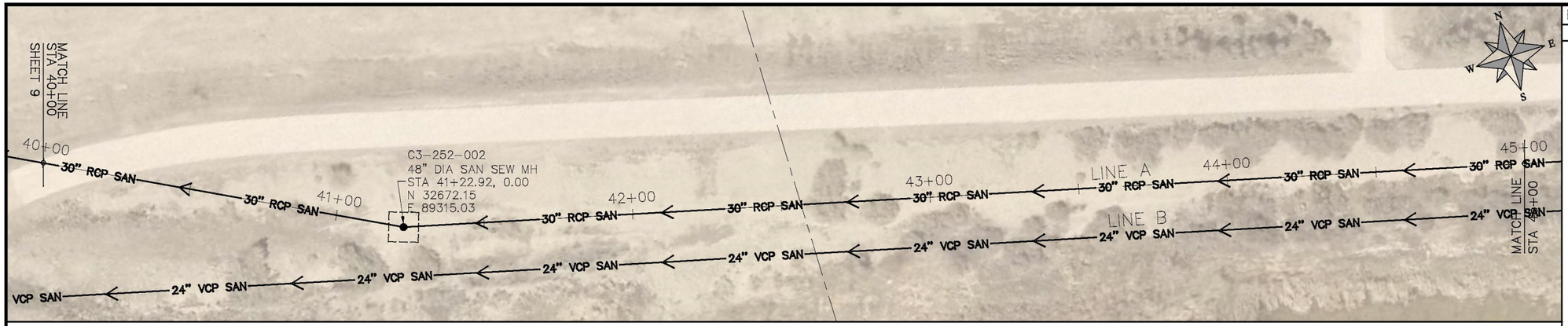
PROJECT NO. _____

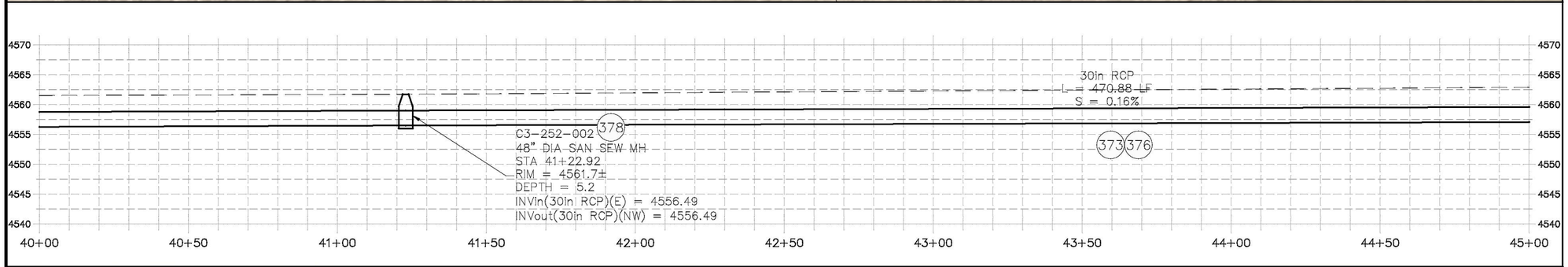
CONSTRUCTION NOTES

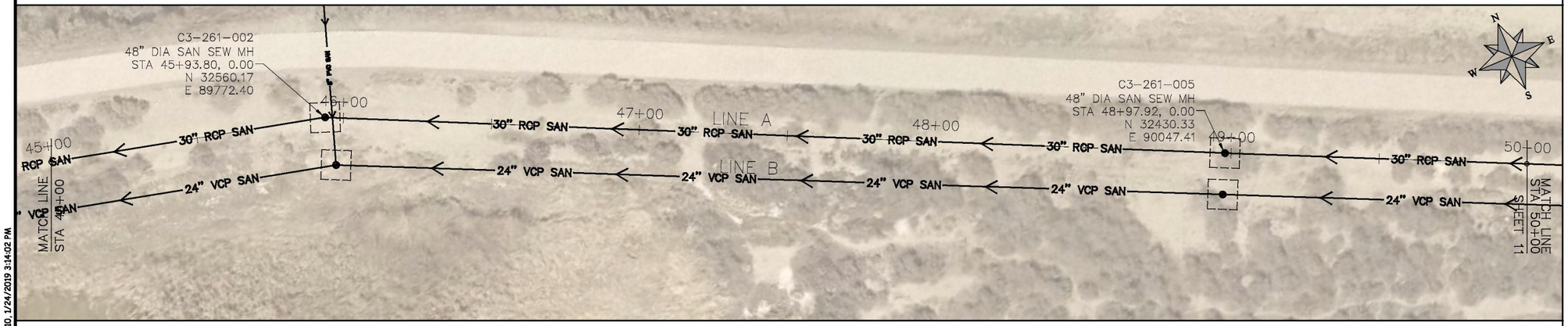
(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

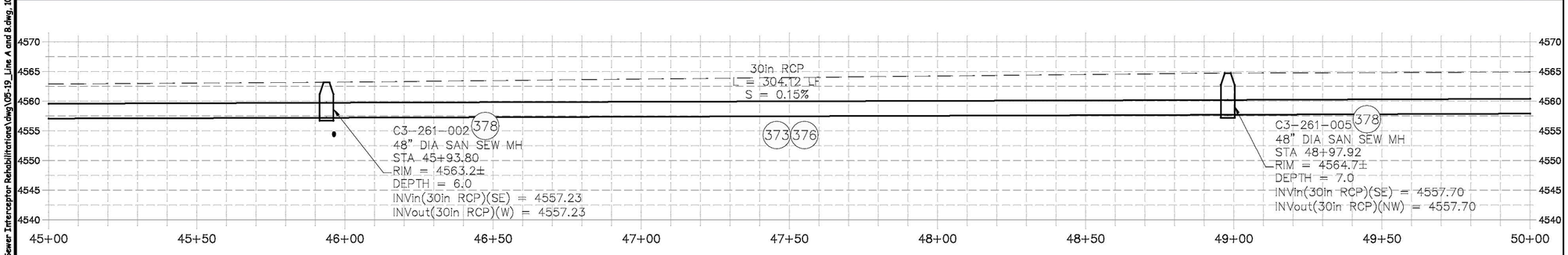
(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)

(378) SP RECONDITION EXISTING MANHOLE AND BENCH. (SEE PROJECT SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION)(REFER TO APPENDIX F FOR SPECIFICATIONS.)









DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 20'
0 5 10 20

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
LINE A PLAN AND PROFILE
STA 40+00 TO STA 50+00

10

N:\Landproj\2019 Sewer Interceptor Rehabilitations\dwg\05-19_Line A and B.dwg, 10, 1/24/2019 3:14:02 PM

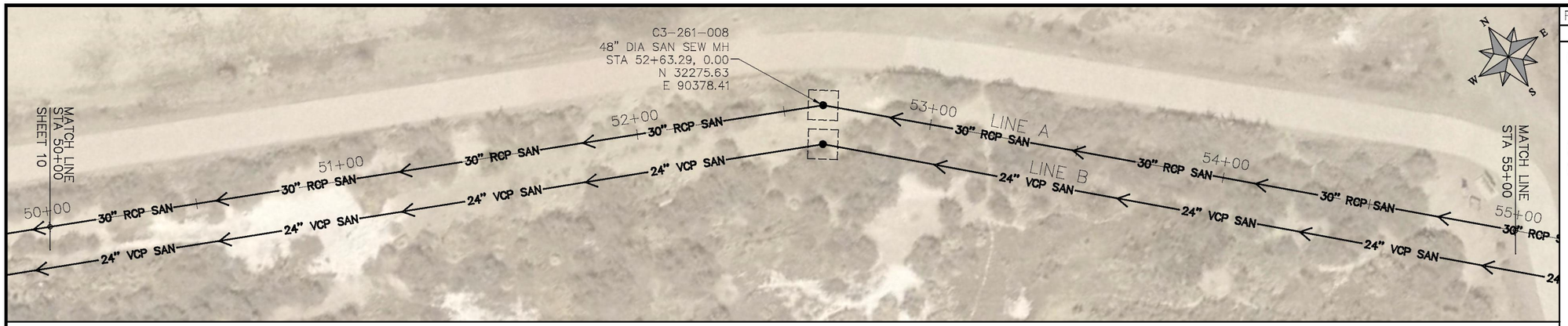
PROJECT NO. _____

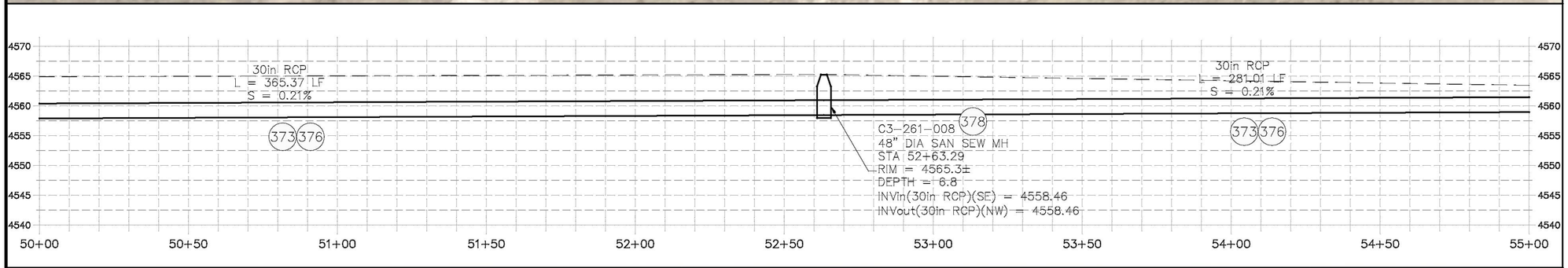
CONSTRUCTION NOTES

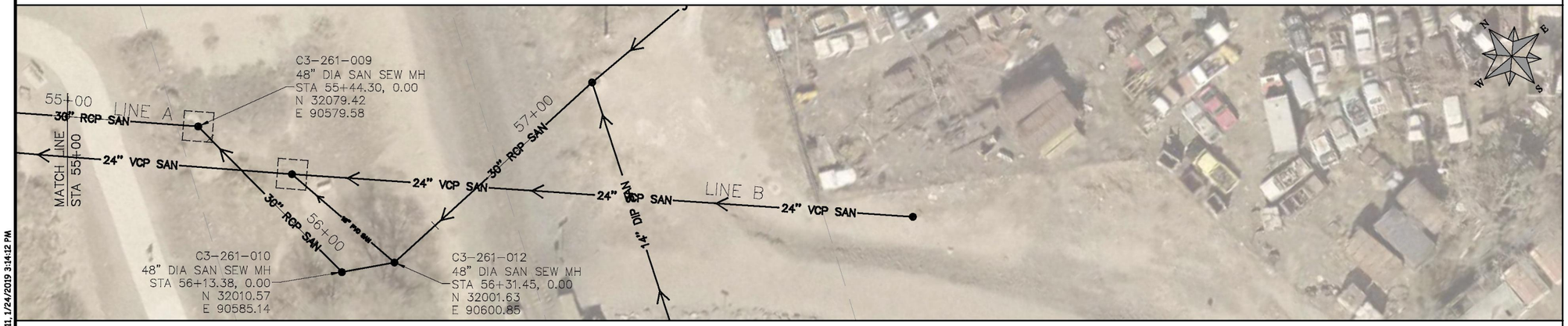
(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

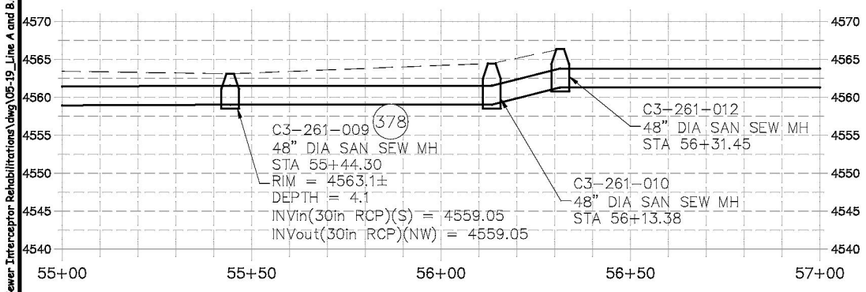
(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)

(378) SP RECONDITION EXISTING MANHOLE AND BENCH. (SEE PROJECT SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION)(REFER TO APPENDIX F FOR SPECIFICATIONS.)









DESCRIPTION	DATE
REVISION	
REVISION	
REVISION	
REVISION	

DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 20'
0 5 10 20

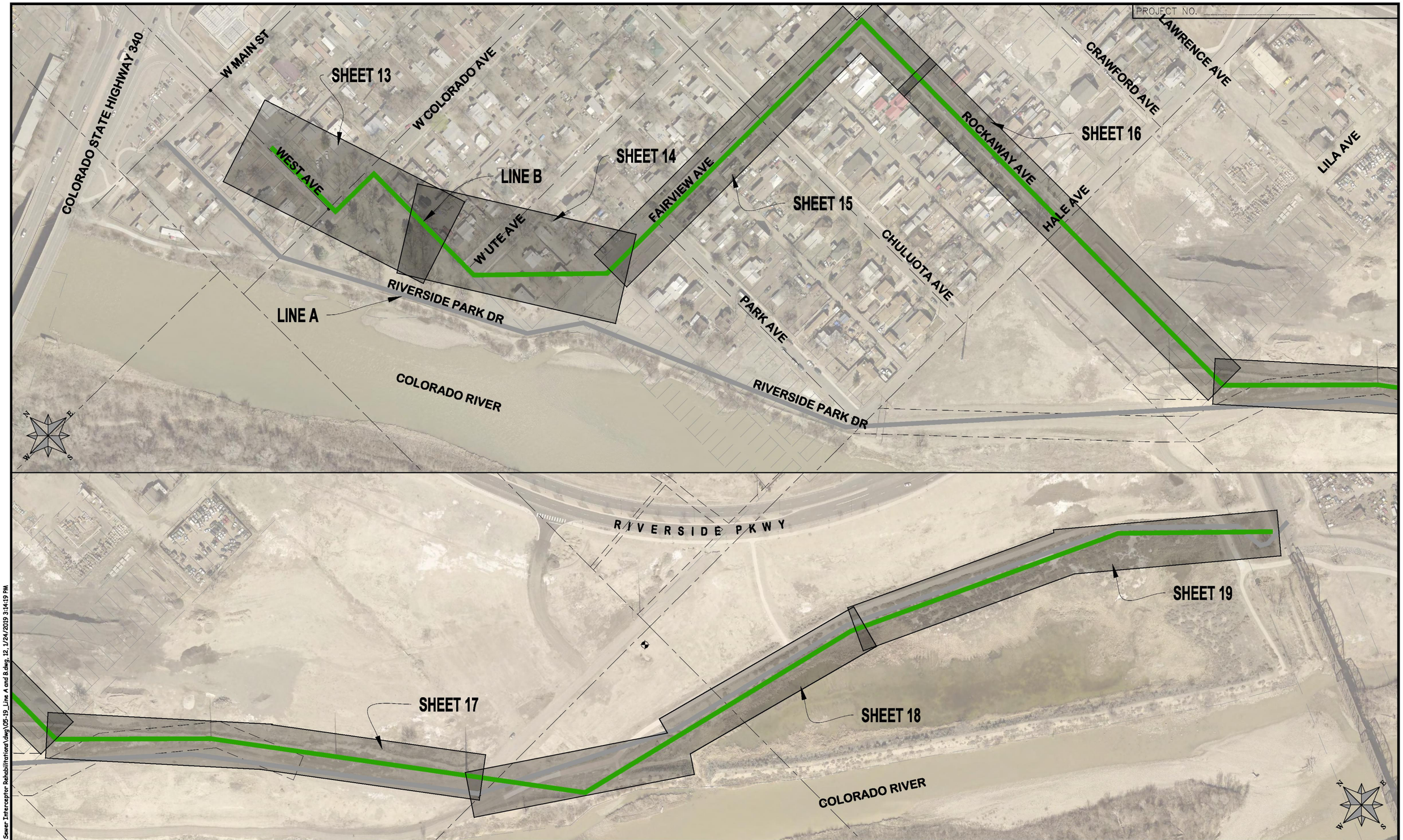
CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
LINE A PLAN AND PROFILE
STA 50+00 TO STA 57+00

N:\Landproj\2019 Sewer Interceptor Rehabilitations\dwg\05-19_Line A and B.dwg, 11, 1/24/2019 3:14:12 PM

PROJECT NO. _____



N:\Landproj\2019 Sewer Interceptor Rehabilitations\dwg\05-19_Line A and B.dwg, 12, 1/24/2019 3:14:19 PM

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

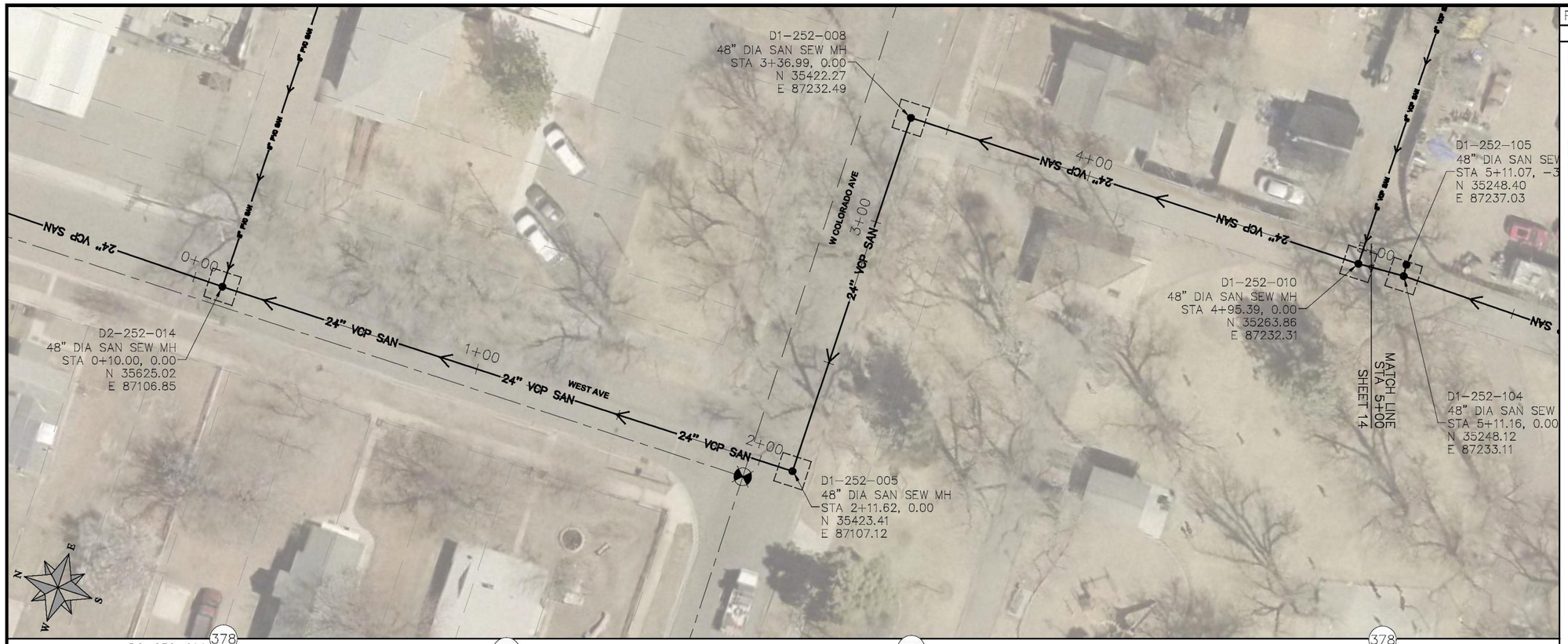
SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 200'
0 50 100 200
VERTICAL: 1" =

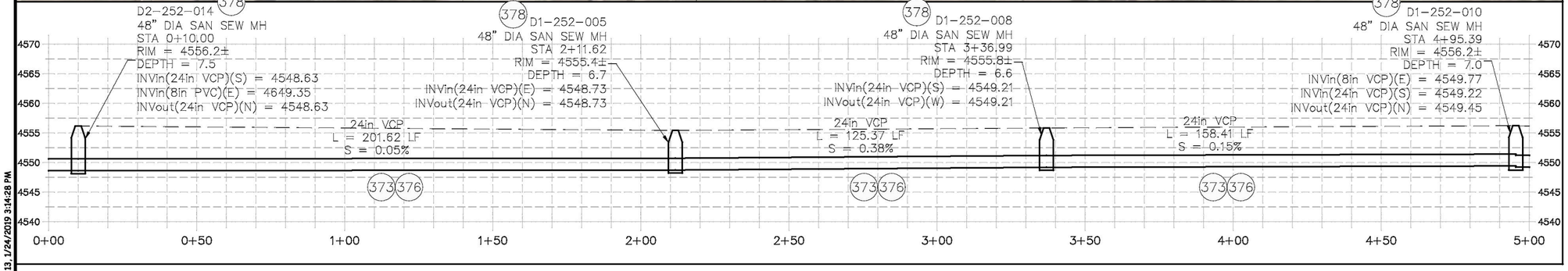
CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
LINE B KEYMAP
STA 0+00 TO STA 60+00

12





PROJECT NO. _____

CONSTRUCTION NOTES

373 CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

376 REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)

378 SP RECONDITION EXISTING MANHOLE AND BENCH. (SEE PROJECT SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION)(REFER TO APPENDIX F FOR SPECIFICATIONS.)

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY	HMC	DATE	2018
DESIGNED BY	JKT	DATE	2018
CHECKED BY	JKT	DATE	2018
APPROVED BY	JKT	DATE	2018

SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 20'
0 5 10 20

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
LINE B PLAN AND PROFILE
STA 0+00 TO STA 5+00

N:\Landproj\2019 Sewer Interceptor Rehabilitations\dwg\05-19_Line A and B.dwg, 13, 1/24/2019 3:14:28 PM

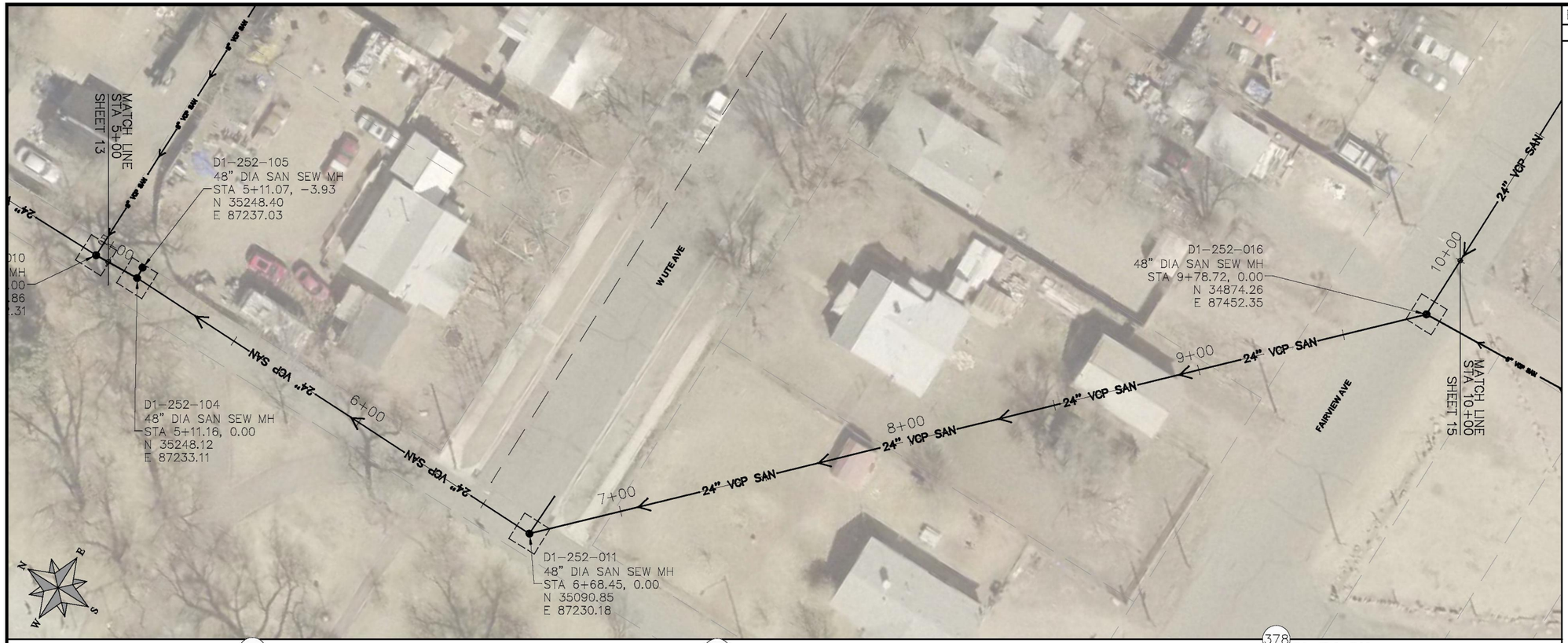
PROJECT NO. _____

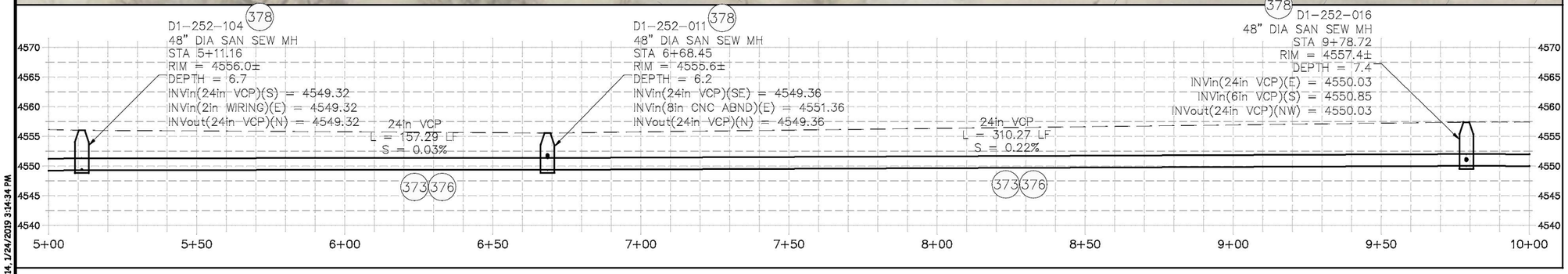
CONSTRUCTION NOTES

(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)

(378) SP RECONDITION EXISTING MANHOLE AND BENCH. (SEE PROJECT SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION)(REFER TO APPENDIX F FOR SPECIFICATIONS.)





N:\Landpro\V2019 Sewer Interceptor Rehabilitations\dwg\05-19_Line A and B.dwg, 14, 1/24/2019 3:14:34 PM

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 20'
0 5 10 20

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
LINE B PLAN AND PROFILE
STA 5+00 TO STA 10+00

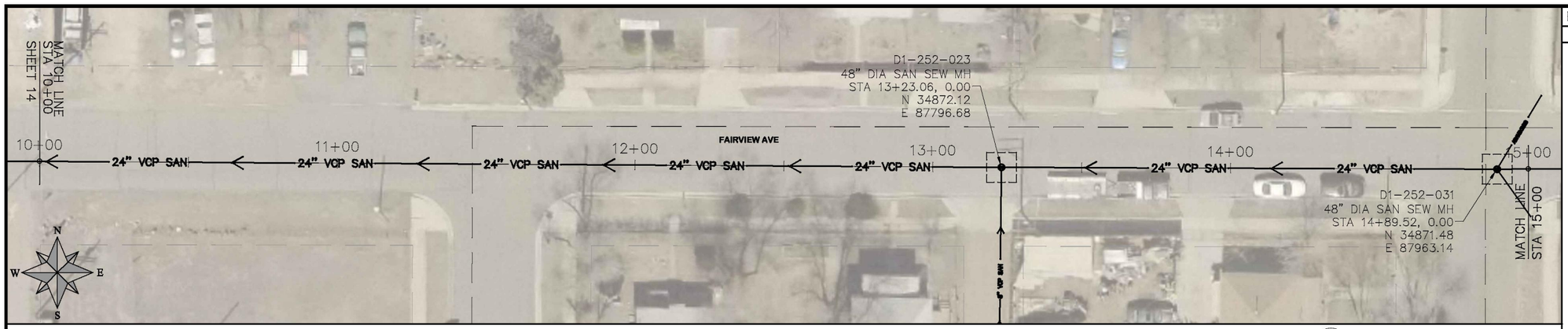
PROJECT NO. _____

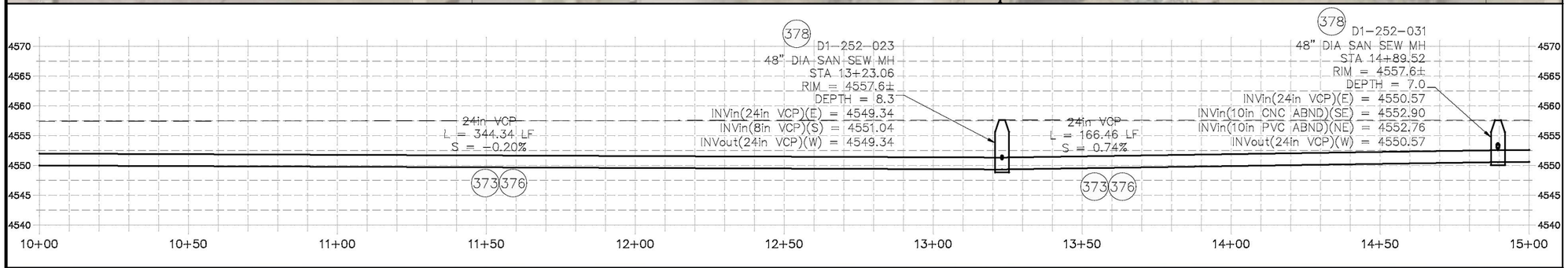
CONSTRUCTION NOTES

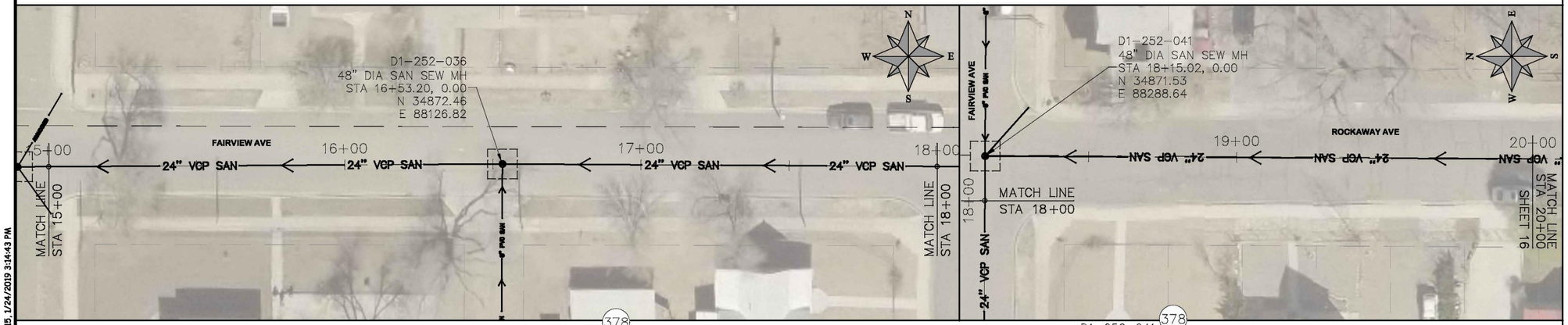
(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

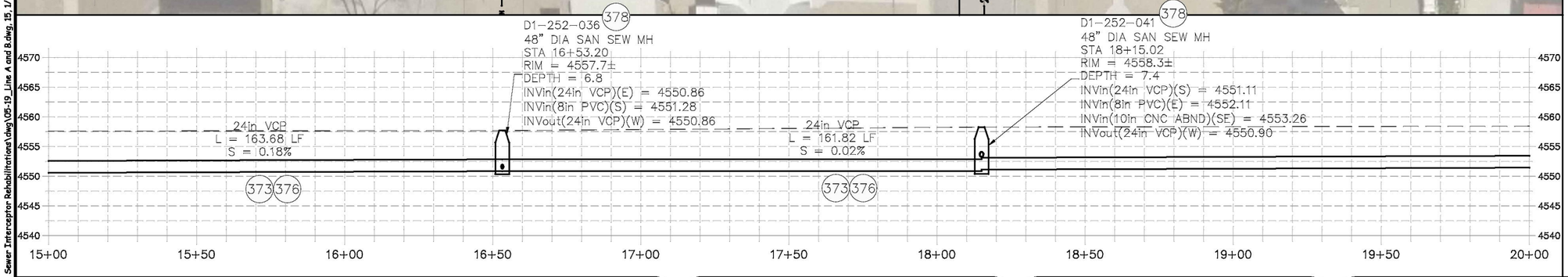
(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)

(378) SP RECONDITION EXISTING MANHOLE AND BENCH. (SEE PROJECT SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION)(REFER TO APPENDIX F FOR SPECIFICATIONS.)









DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 20'
0 5 10 20

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
LINE B PLAN AND PROFILE
STA 10+00 TO STA 20+00

N:\Landproj\2019 Sewer Interceptor Rehabilitations\dwg\05-19_Line A and B.dwg, 15, 1/24/2019 3:14:43 PM

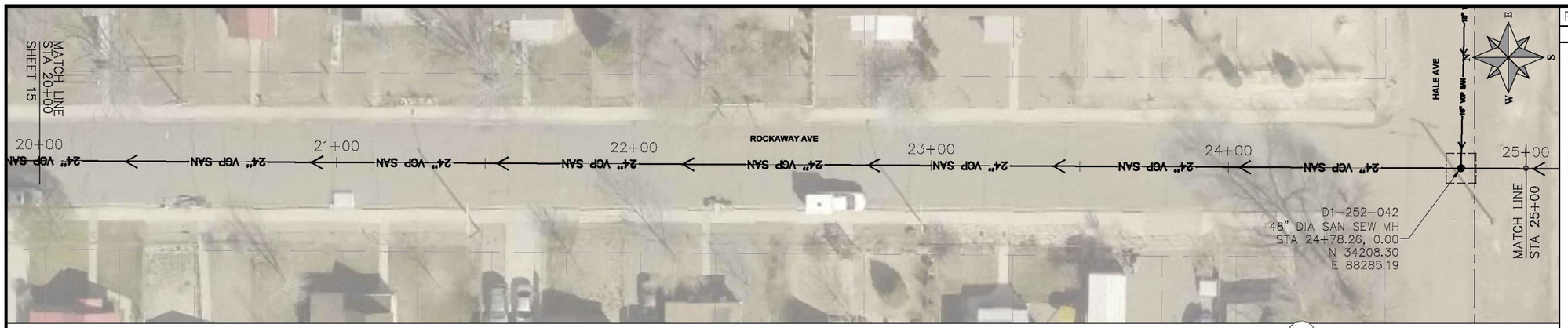
PROJECT NO. _____

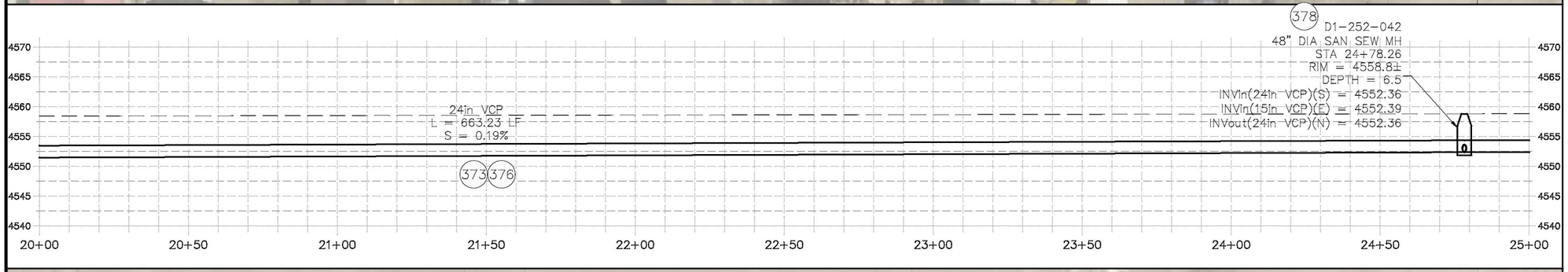
CONSTRUCTION NOTES

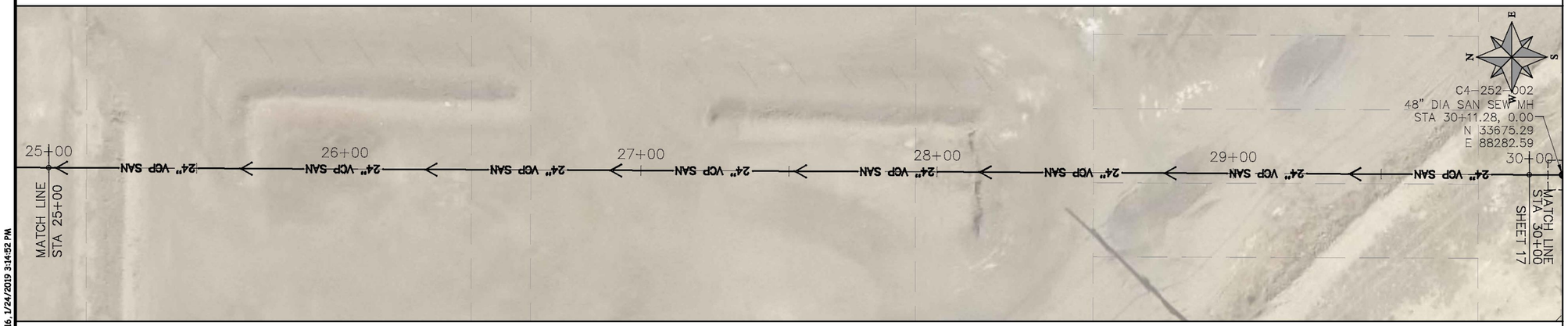
(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

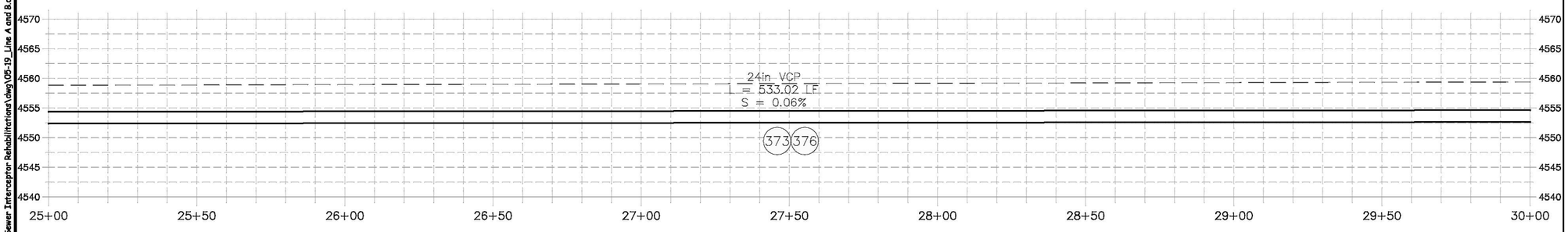
(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)

(378) SP RECONDITION EXISTING MANHOLE AND BENCH. (SEE PROJECT SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION)(REFER TO APPENDIX F FOR SPECIFICATIONS.)









DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

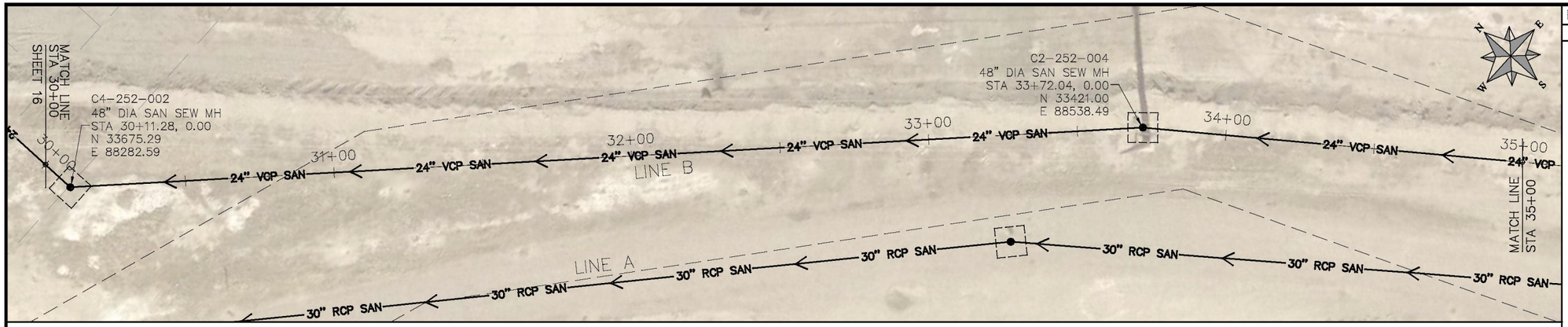
SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 20'
0 5 10 20

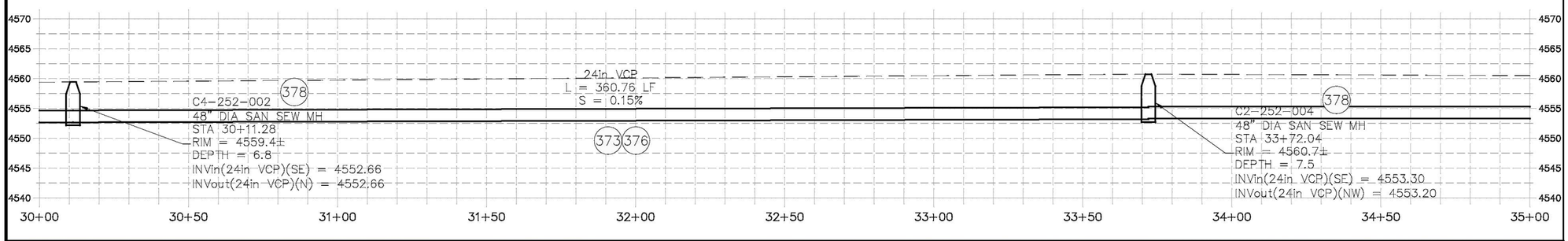
CITY OF Grand Junction COLORADO

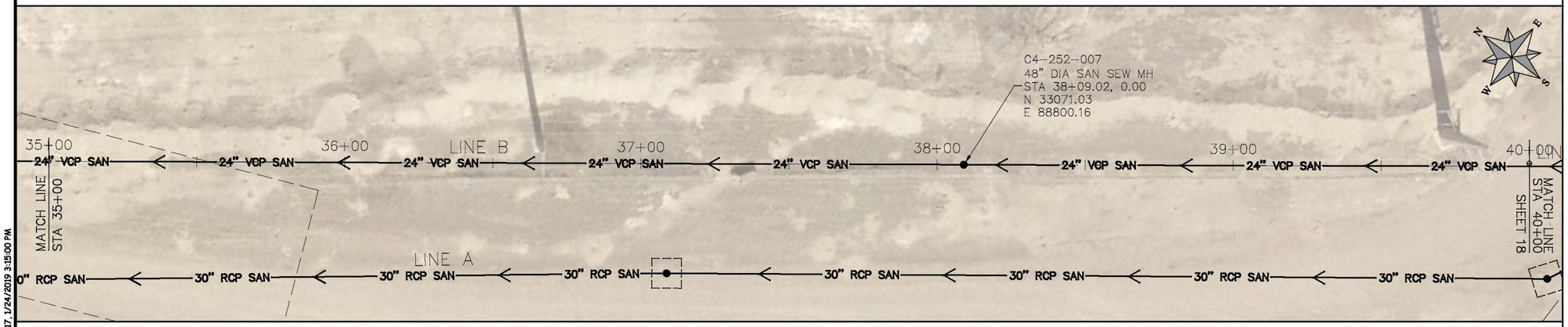
PUBLIC WORKS
ENGINEERING DIVISION

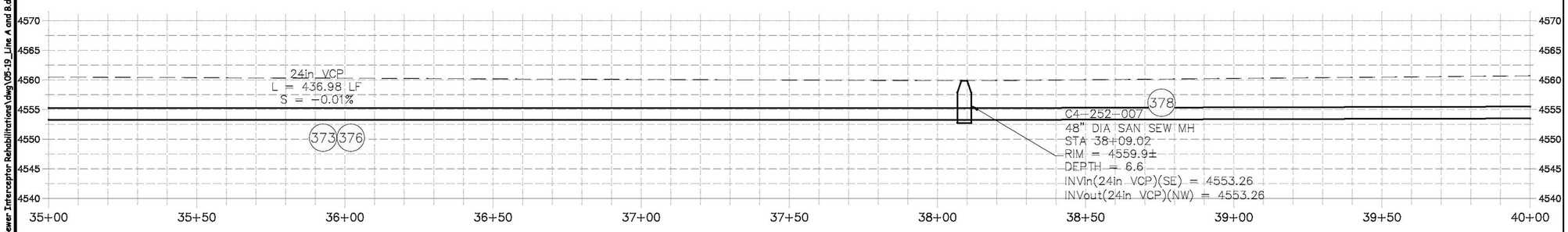
2019 SEWER INTERCEPTOR REHABILITATIONS
LINE B PLAN AND PROFILE
STA 20+00 TO STA 30+00

N:\Landproj\2019 Sewer Interceptor Rehabilitations\dwg\05-19_Line A and B.dwg, 16, 1/24/2019 3:14:52 PM









PROJECT NO. _____

CONSTRUCTION NOTES

373 CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

376 REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)

378 SP RECONDITION EXISTING MANHOLE AND BENCH. (SEE PROJECT SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION)(REFER TO APPENDIX F FOR SPECIFICATIONS.)

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 20'
0 5 10 20

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
LINE B PLAN AND PROFILE
STA 30+00 TO STA 40+00

17

N:\Landproj\2019 Sewer Interceptor Rehabilitations\dwg\05-19_Line A and B.dwg, 17, 1/24/2019 3:15:00 PM

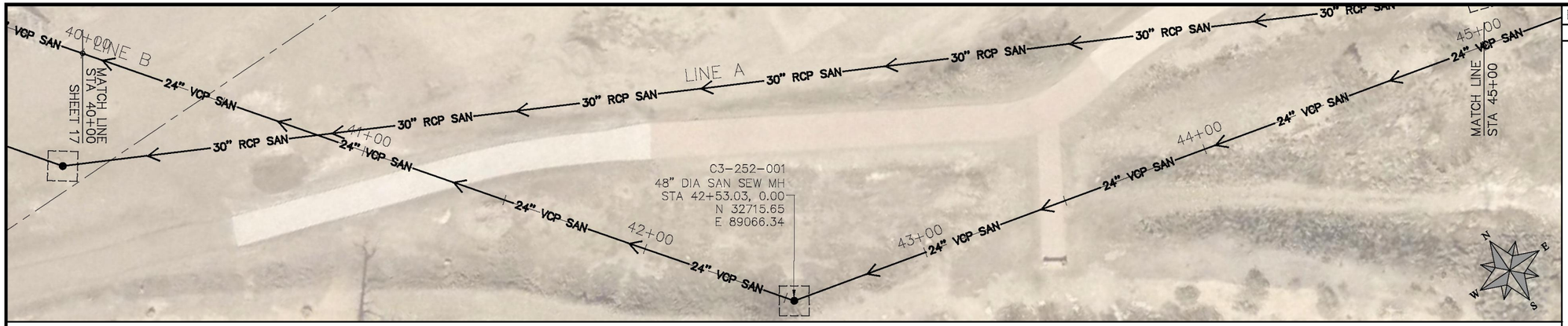
PROJECT NO. _____

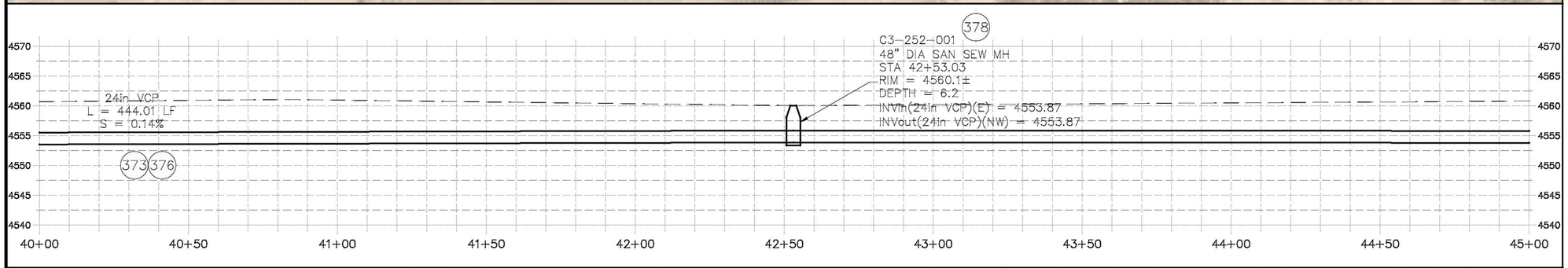
CONSTRUCTION NOTES

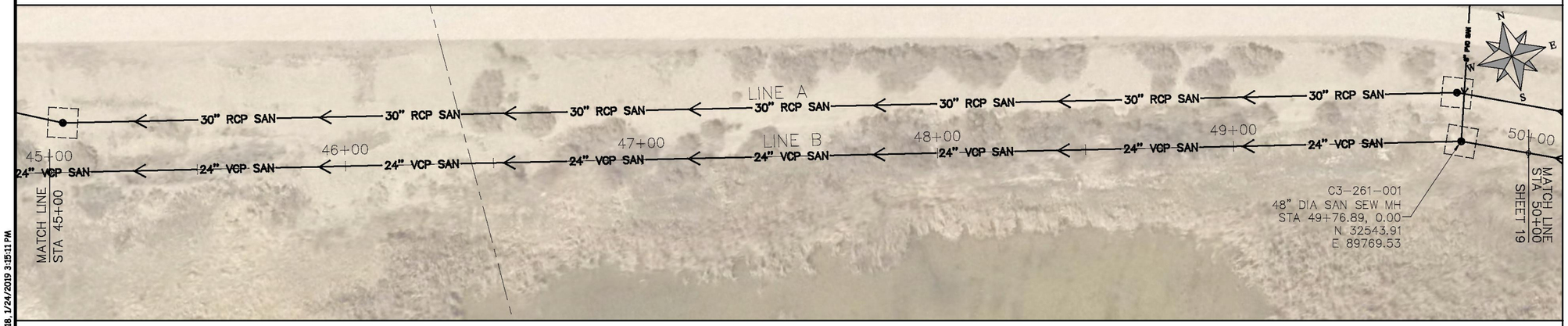
(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

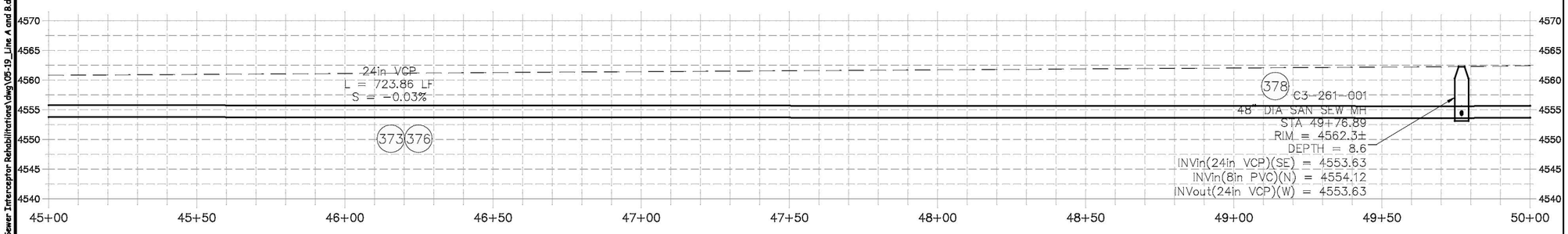
(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)

(378) SP RECONDITION EXISTING MANHOLE AND BENCH. (SEE PROJECT SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION)(REFER TO APPENDIX F FOR SPECIFICATIONS.)









DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 20'
0 5 10 20

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
LINE B PLAN AND PROFILE
STA 40+00 TO STA 50+00

N:\Landproj\2019 Sewer Interceptor Rehabilitations\dwg\05-19_Line A and B.dwg, 18, 1/24/2019 3:15:11 PM

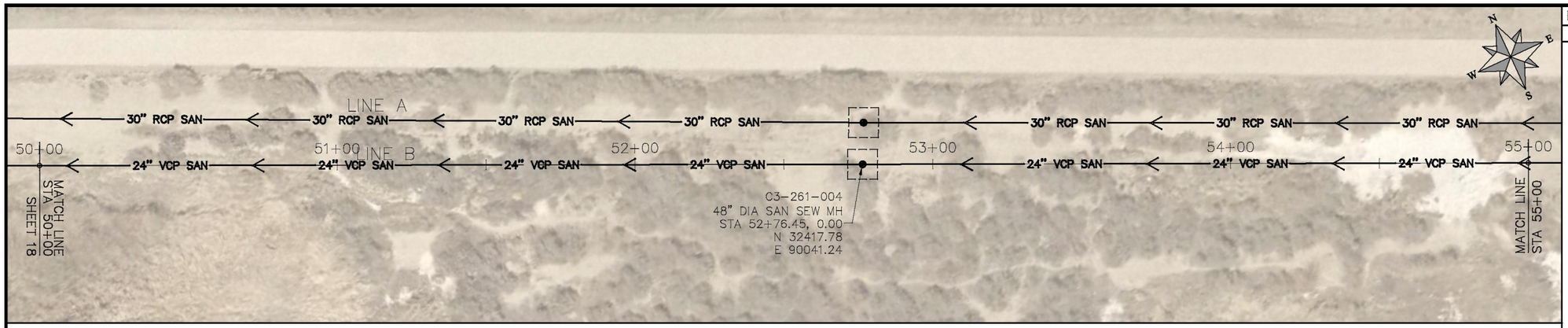
PROJECT NO. _____

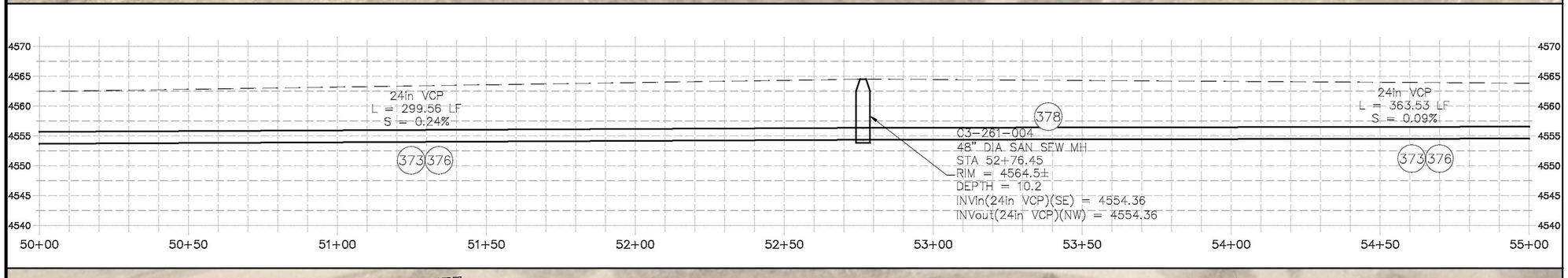
CONSTRUCTION NOTES

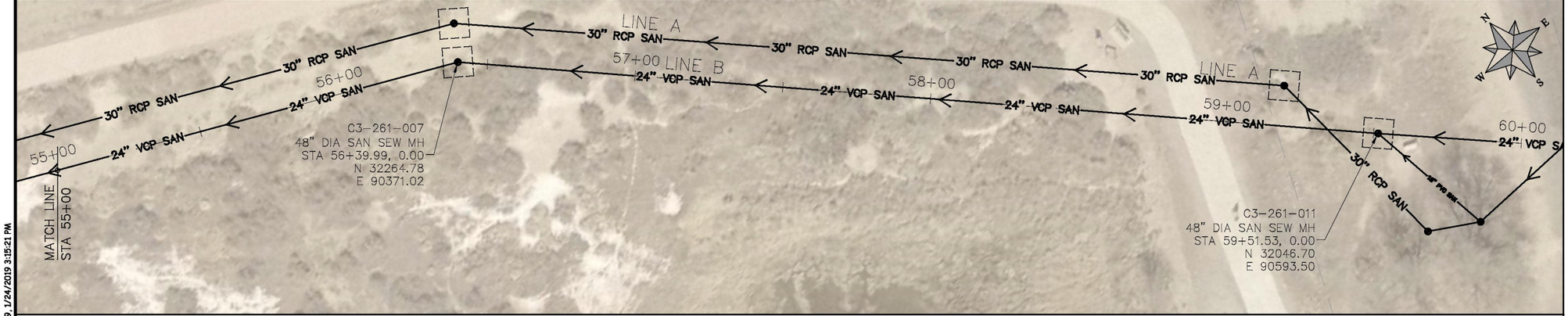
(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

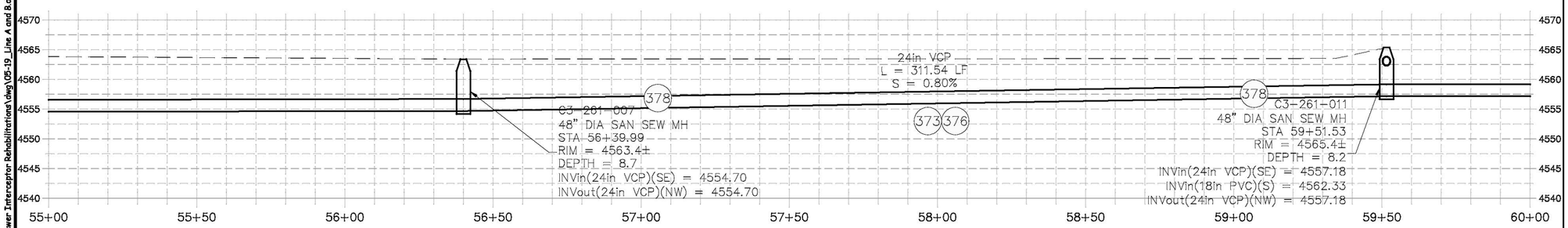
(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)

(378) SP RECONDITION EXISTING MANHOLE AND BENCH. (SEE PROJECT SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION)(REFER TO APPENDIX F FOR SPECIFICATIONS.)









DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 20'
0 5 10 20

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
LINE B PLAN AND PROFILE
STA 50+00 TO STA 60+00

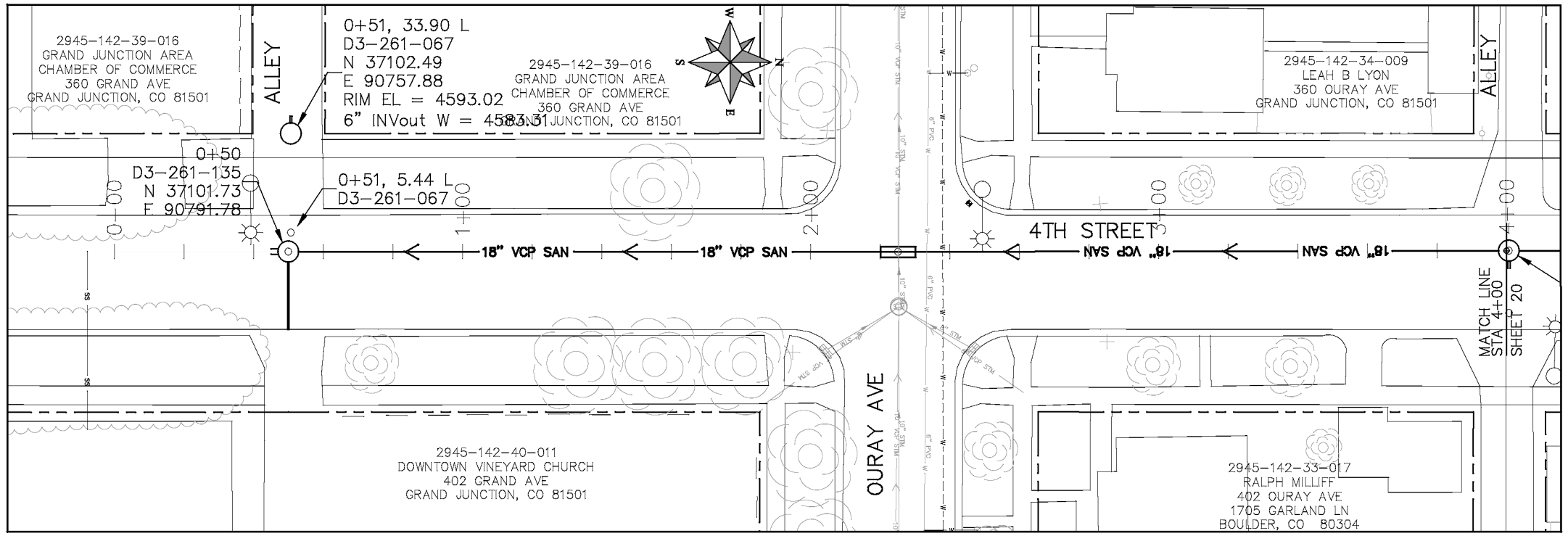
N:\Landproj\2019 Sewer Interceptor Rehabilitations\dwg\05-19_Line A and B.dwg, 19, 1/24/2019 3:15:21 PM

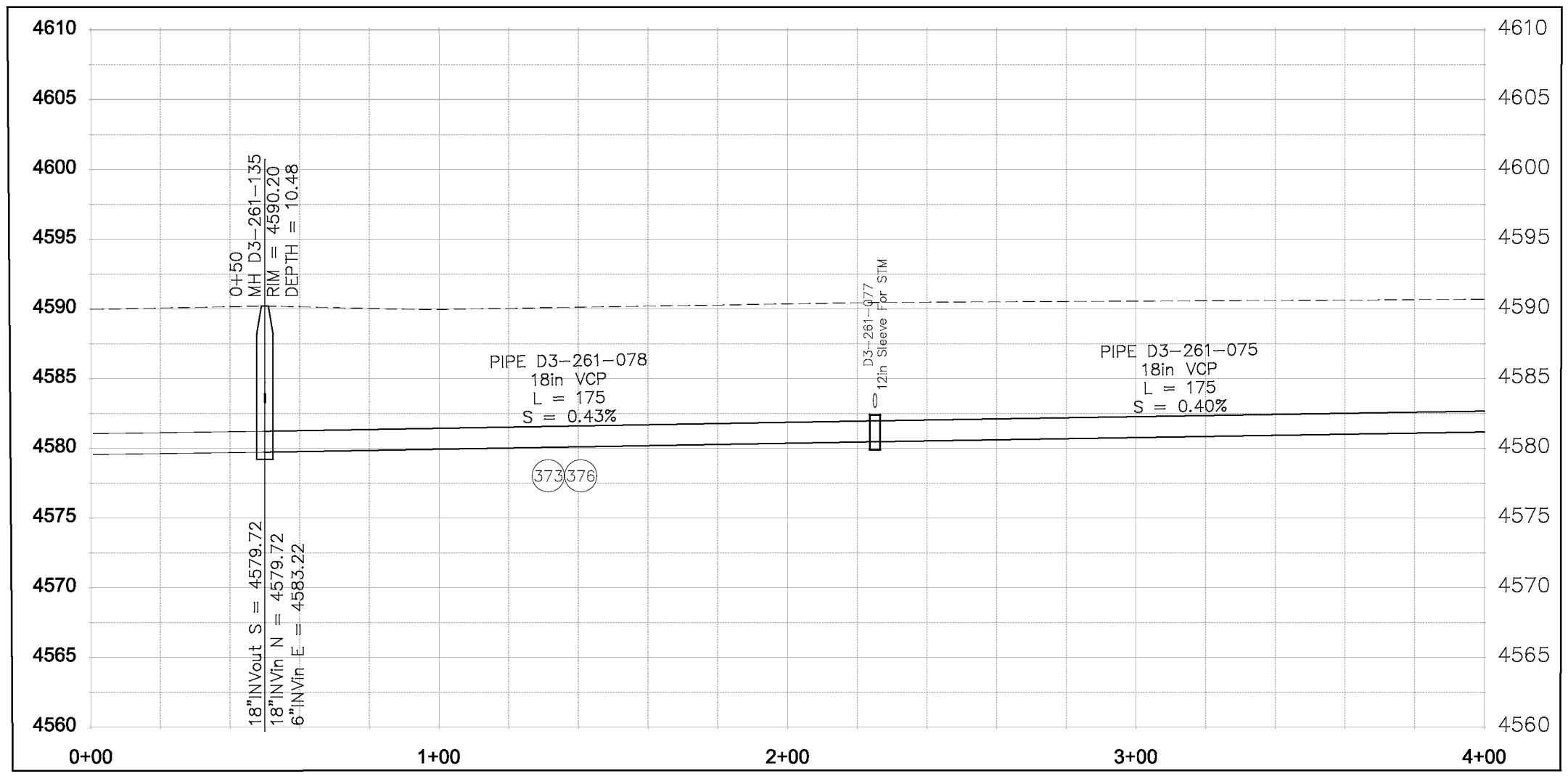
PROJECT NO. _____

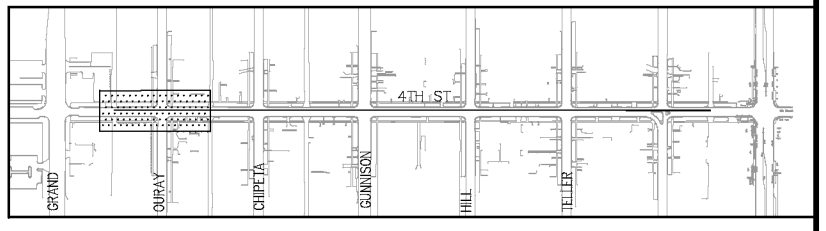
CONSTRUCTION NOTES

(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)







KEYMAP

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

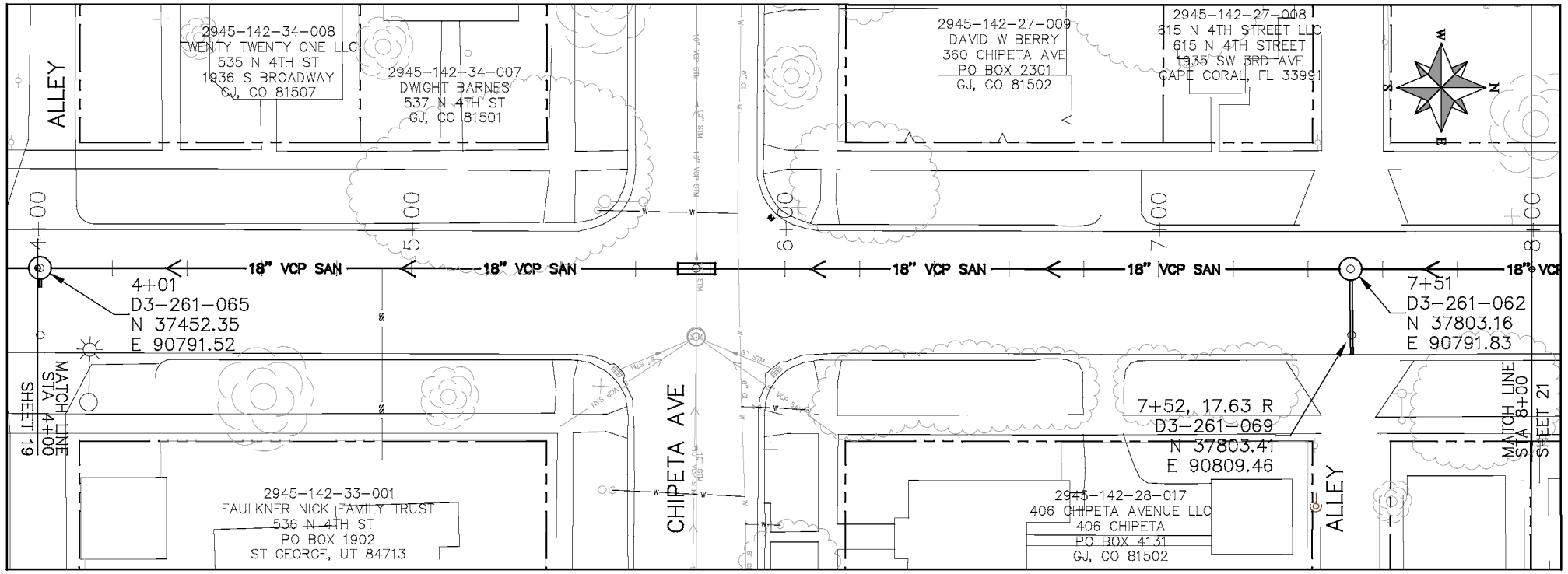
SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 10'
0 2.5 5 10

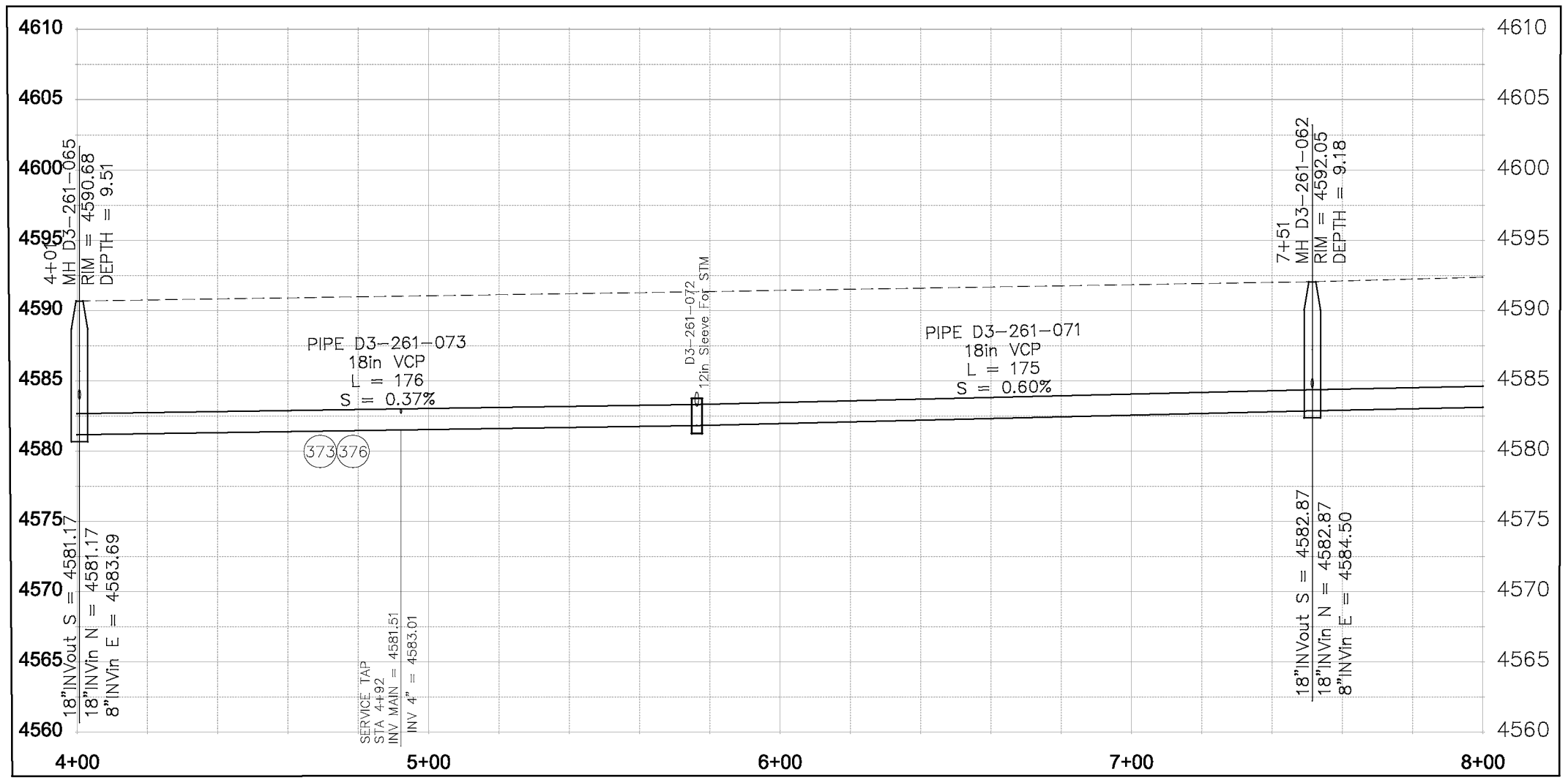
CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
4TH STREET CIPP
STA 0+00 TO STA 4+00

N:\Landproj\2019 Sewer Interceptor Rehabilitations\dwg\20-25_4th Street.dwg, 20, 1/24/2019 2:45:41 PM



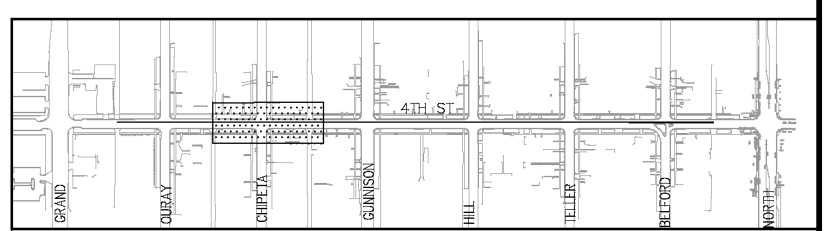


PROJECT NO. _____

CONSTRUCTION NOTES

373 CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

376 REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)



KEYMAP

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 10'
0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
4TH STREET CIPP
STA 4+00 TO STA 8+00

21

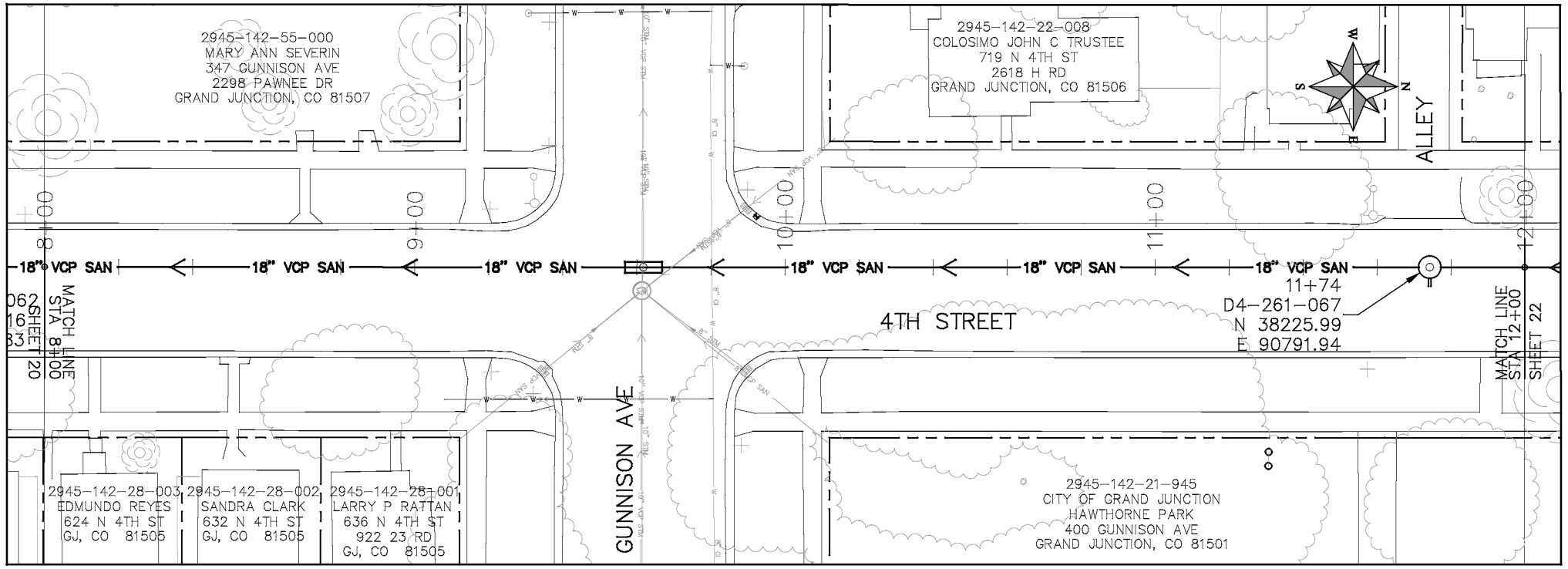
N:\Landproj\2019 Sewer Interceptor Rehabilitations\dwg\20-25_4th Street.dwg, 21, 1/24/2019 2:45:44 PM

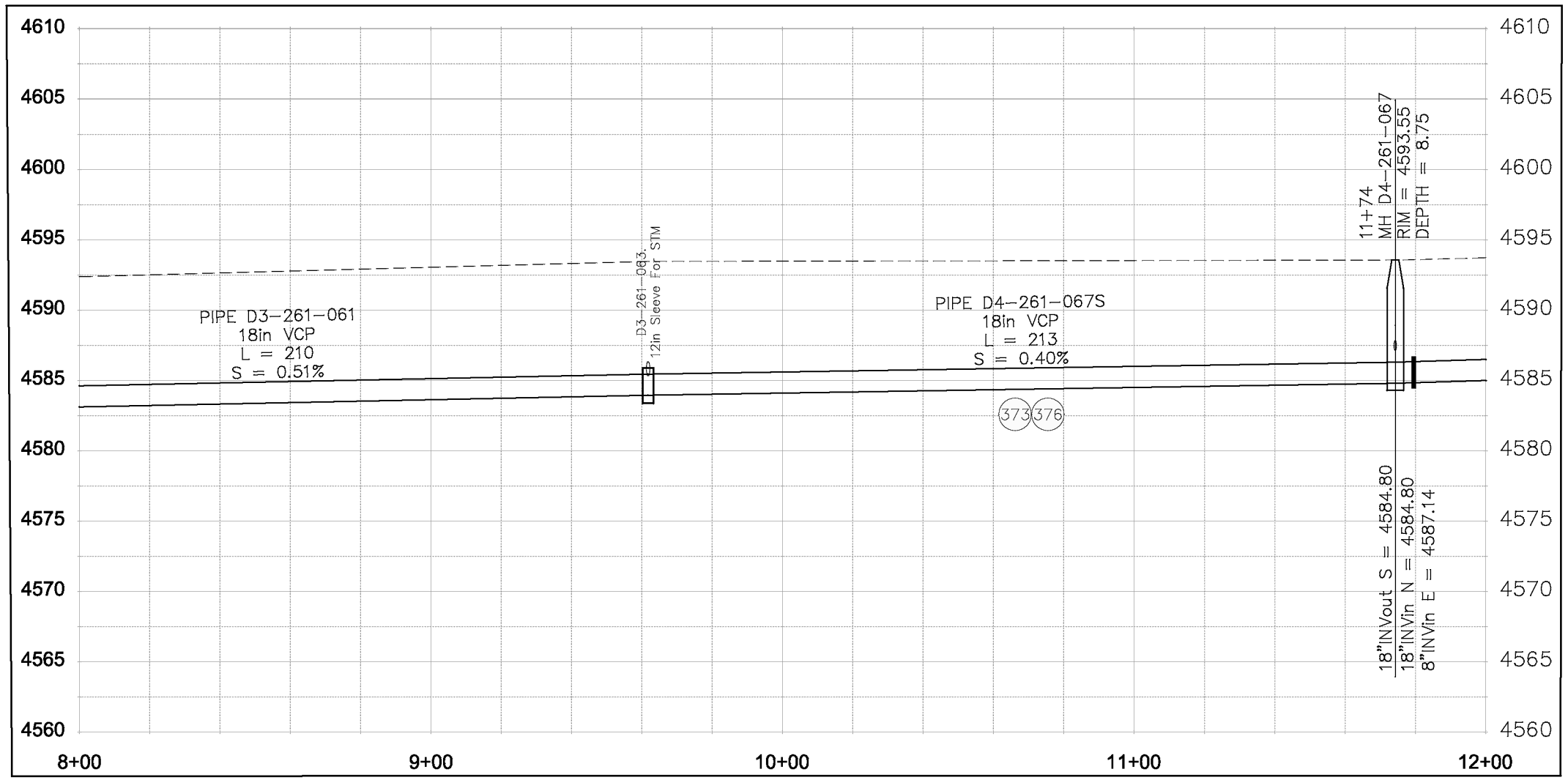
PROJECT NO. _____

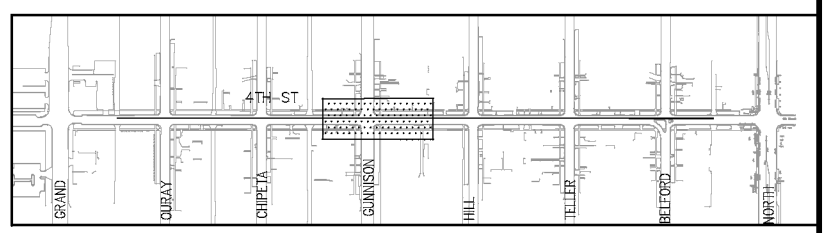
CONSTRUCTION NOTES

(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)







KEYMAP

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 10'
0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
4TH STREET CIPP
STA 8+00 TO STA 12+00

22

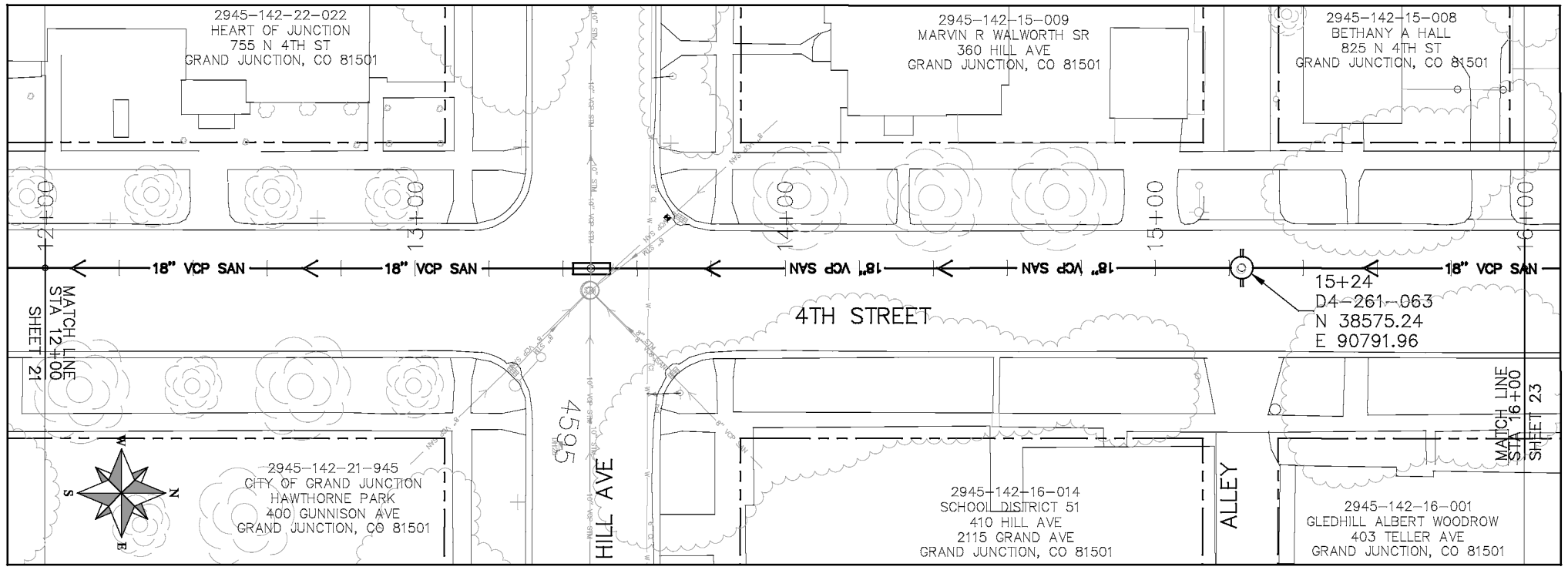
N:\Landproj\2019 Sewer Interceptor Rehabilitations\dwg\20-25_4th Street.dwg, 22, 1/24/2019 2:45:47 PM

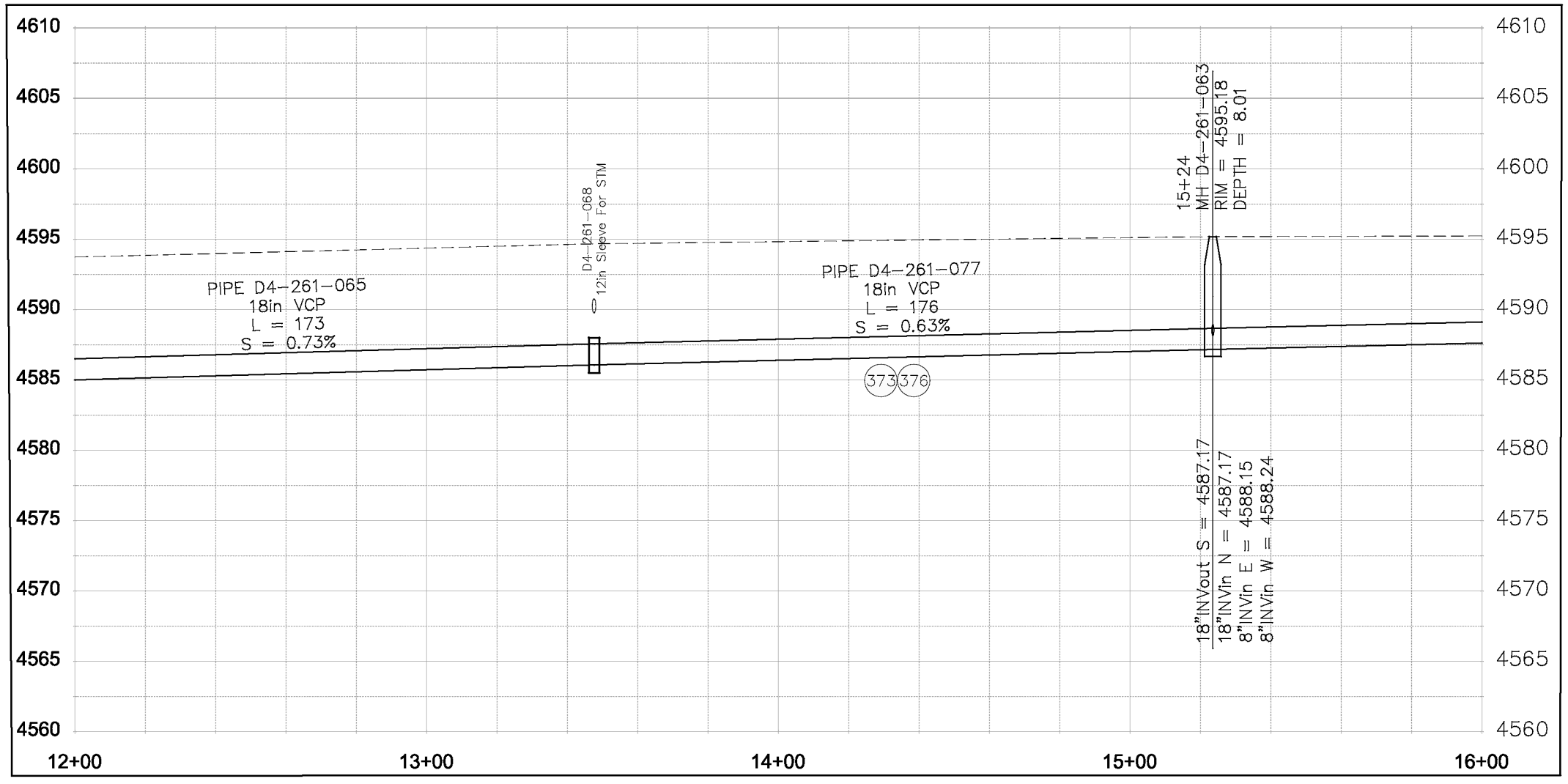
PROJECT NO. _____

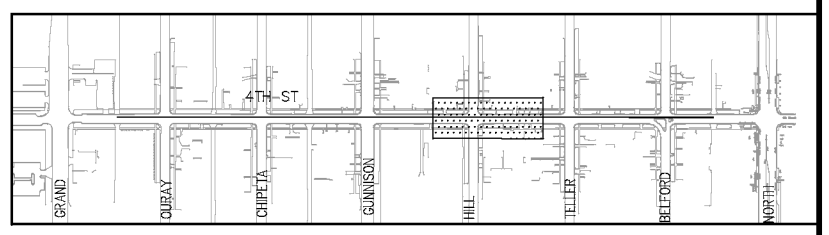
CONSTRUCTION NOTES

(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)







KEYMAP

N:\Landproj\2019 Sewer Interceptor Rehabilitations\dwg\20-25_4th Street.dwg, 23, 1/24/2019 2:45:50 PM

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY	HMC	DATE	2018
DESIGNED BY	JKT	DATE	2018
CHECKED BY	JKT	DATE	2018
APPROVED BY	JKT	DATE	2018

SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 10'
0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

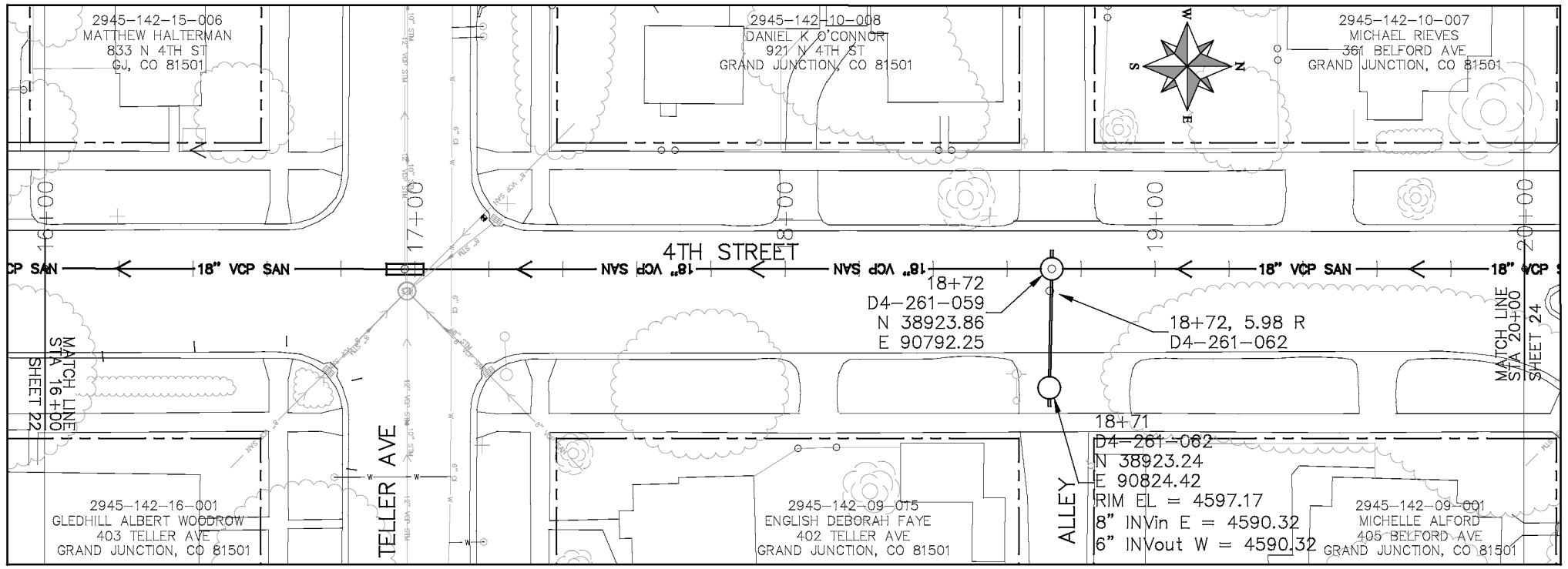
2019 SEWER INTERCEPTOR REHABILITATIONS
4TH STREET CIPP
STA 12+00 TO STA 16+00

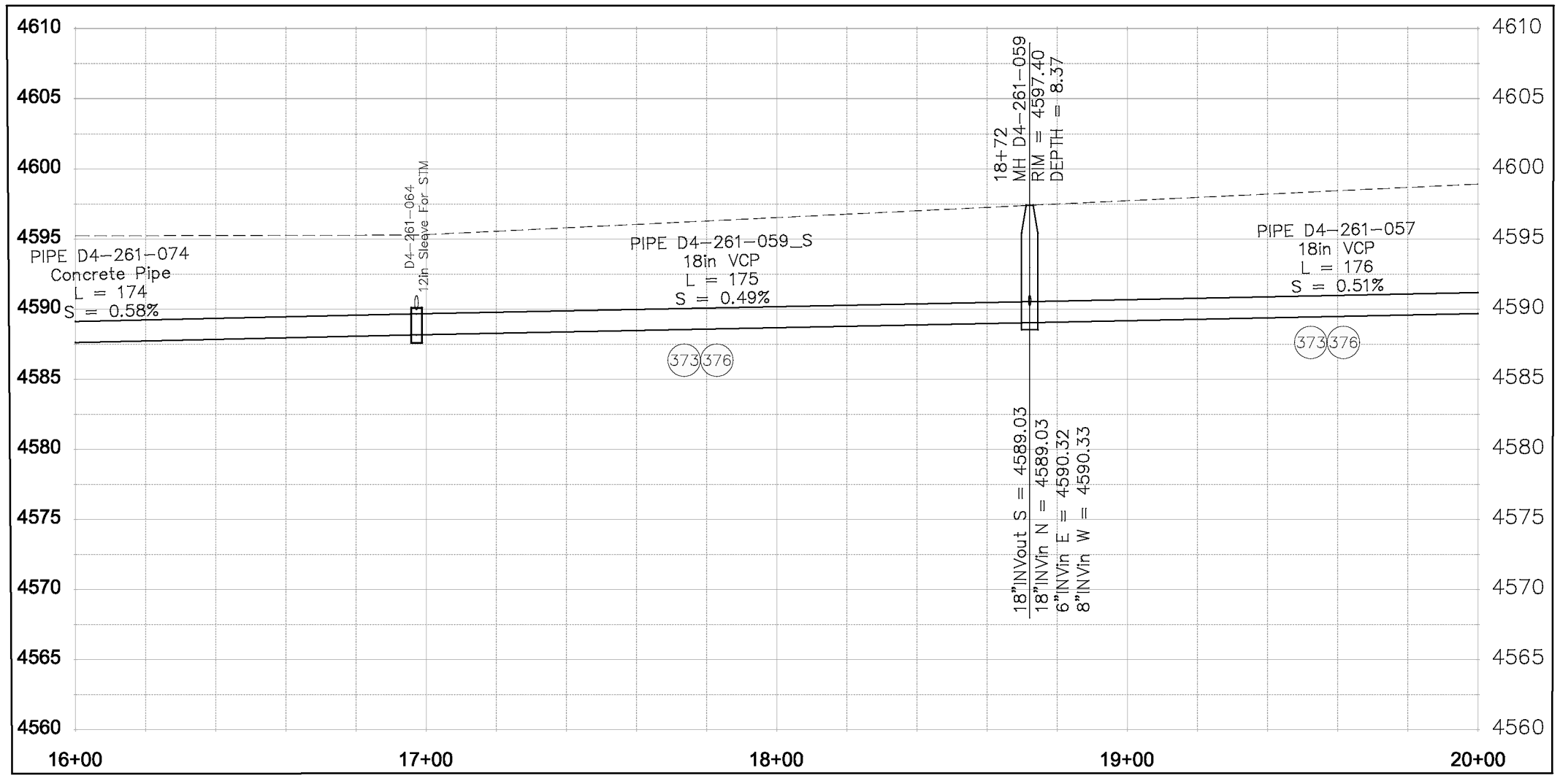
PROJECT NO. _____

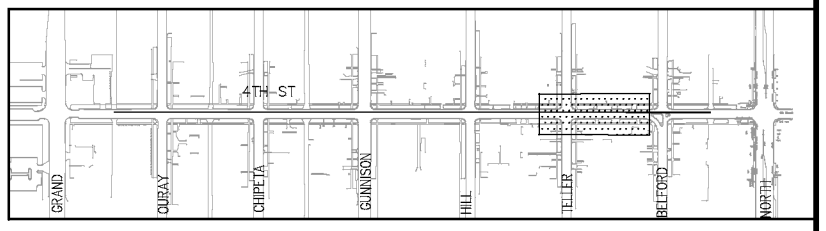
CONSTRUCTION NOTES

(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)







KEYMAP

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY	HMC	DATE	2018
DESIGNED BY	JKT	DATE	2018
CHECKED BY	JKT	DATE	2018
APPROVED BY	JKT	DATE	2018

SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 10'
0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
4TH STREET CIPP
STA 16+00 TO STA 20+00

24

N:\Landproj\2019 Sewer Interceptor Rehabilitations\dwg\20-25_4th Street.dwg, 24, 1/24/2019 2:45:53 PM

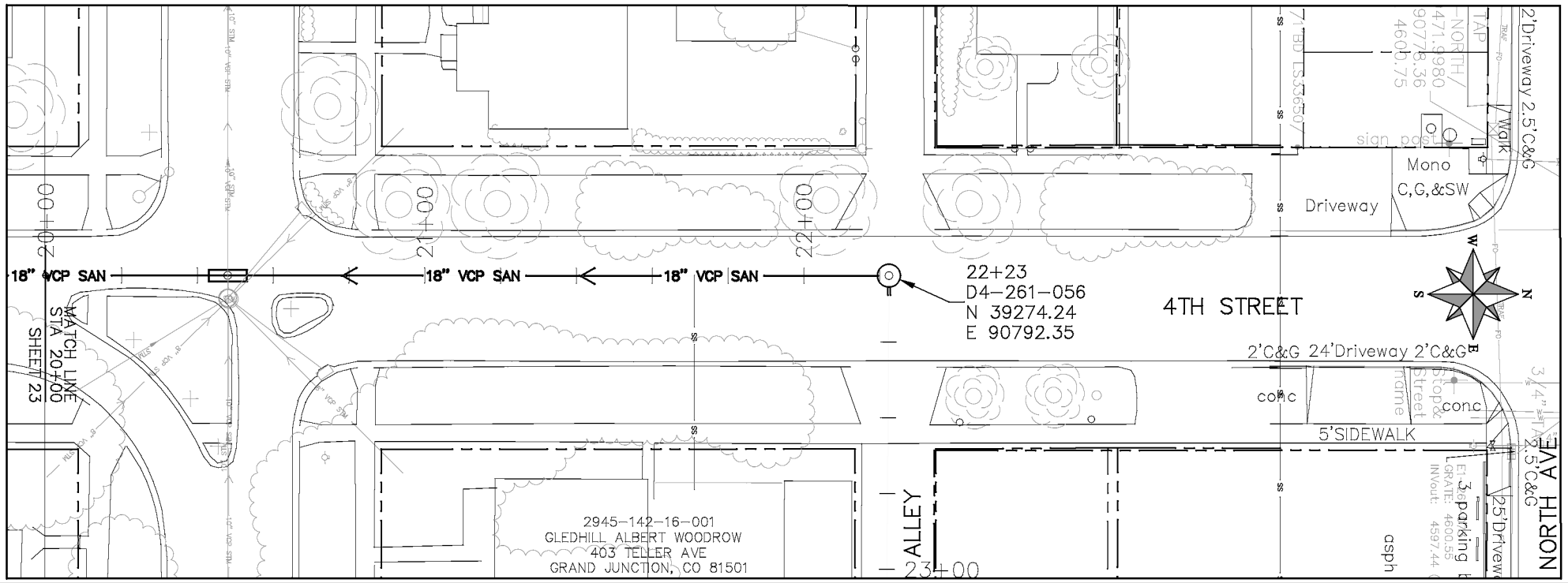
PROJECT NO. _____

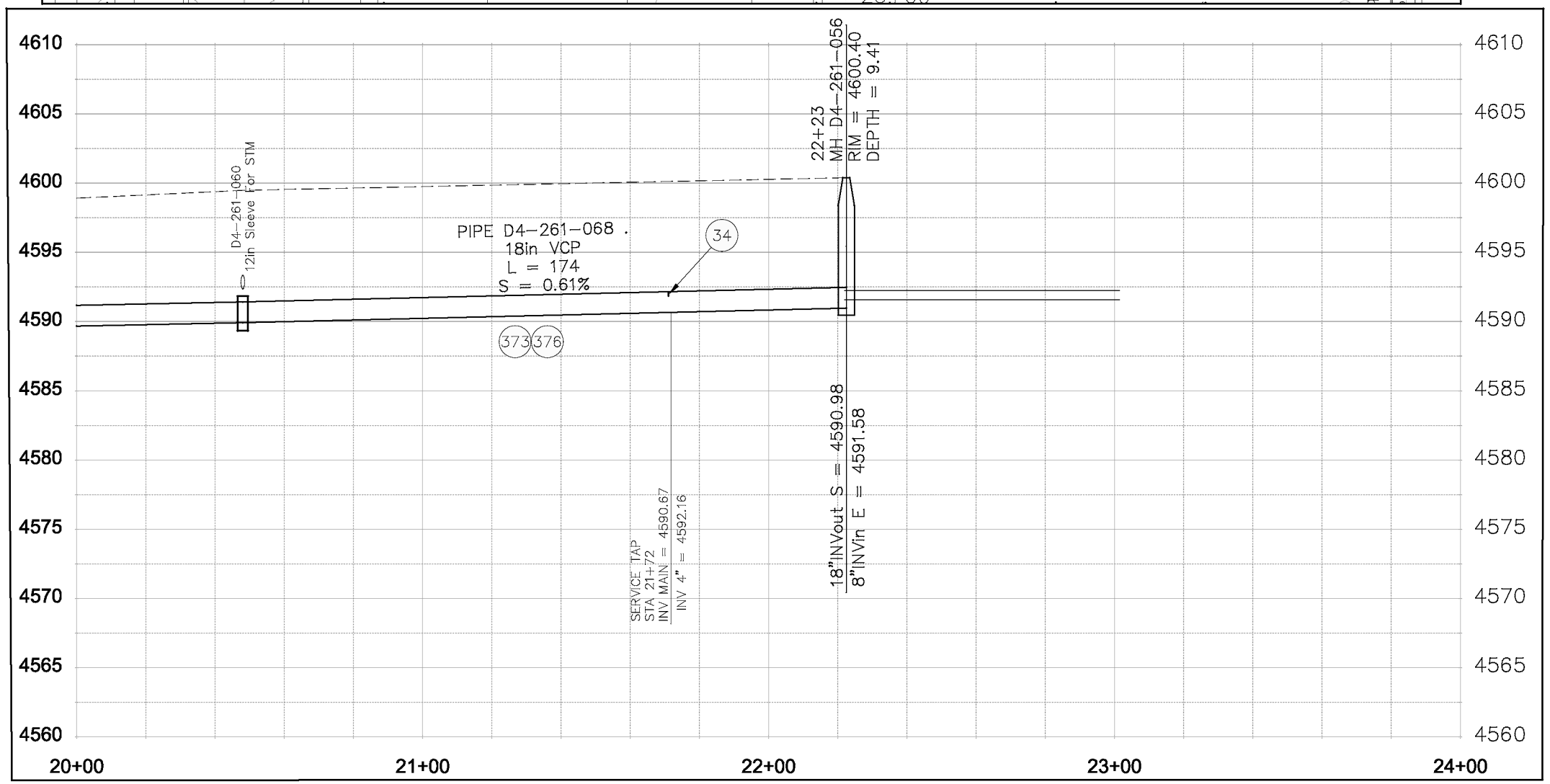
CONSTRUCTION NOTES

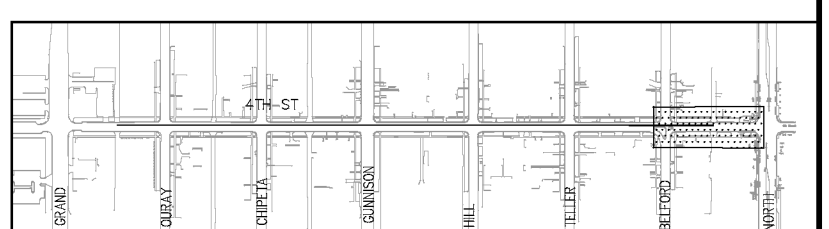
(34) REMOVE CIPP COUPON AT SERVICE LOCATION (INCIDENTAL TO CIPP) 252 MANHOLESHALL BE REMOVED. NEW PIPE INSTALLED AND CONNECTIONS BACK TO EXISTING PIPE COMPLETED PRIOR TO CIPP OPERATIONS FOR THIS RUN. CIPP "THROUGH" OLD MANHOLE LOCATION.

(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)







KEYMAP

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 10'
0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
4TH STREET CIPP
STA 20+00 TO STA 24+00

25

N:\Landproj\2019 Sewer Interceptor Rehabilitations\dwg\20-25_4th Street.dwg, 25, 1/24/2019 2:45:55 PM

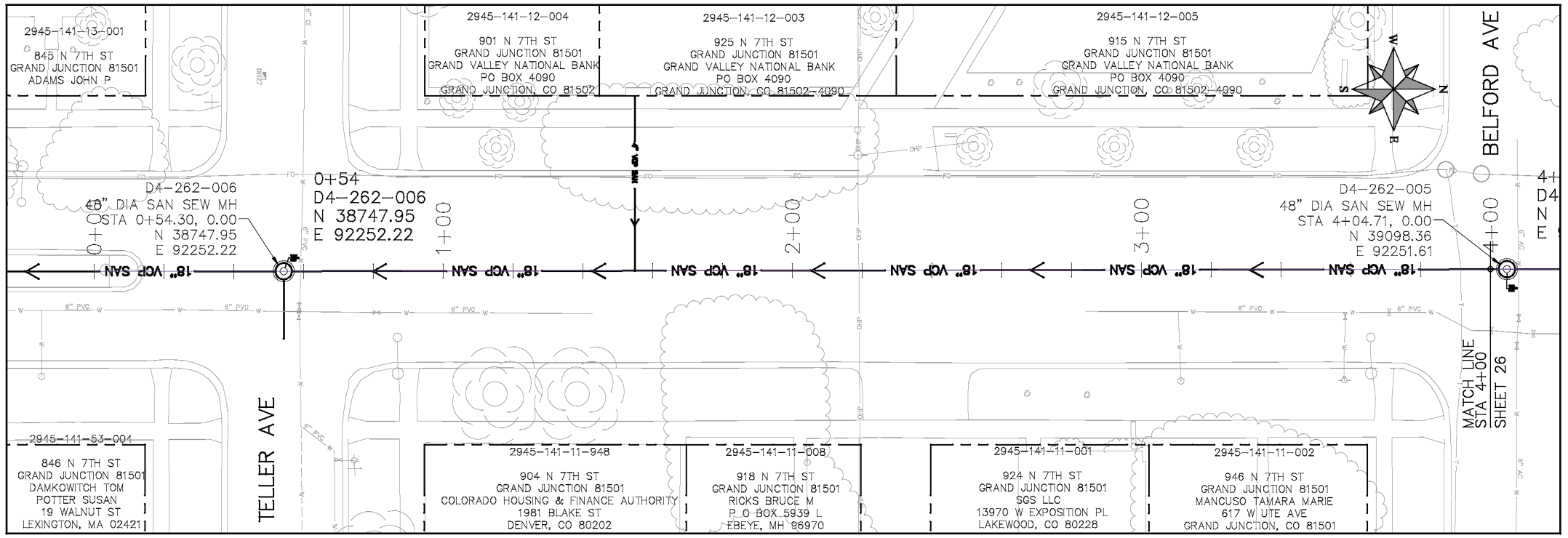
PROJECT NO. _____

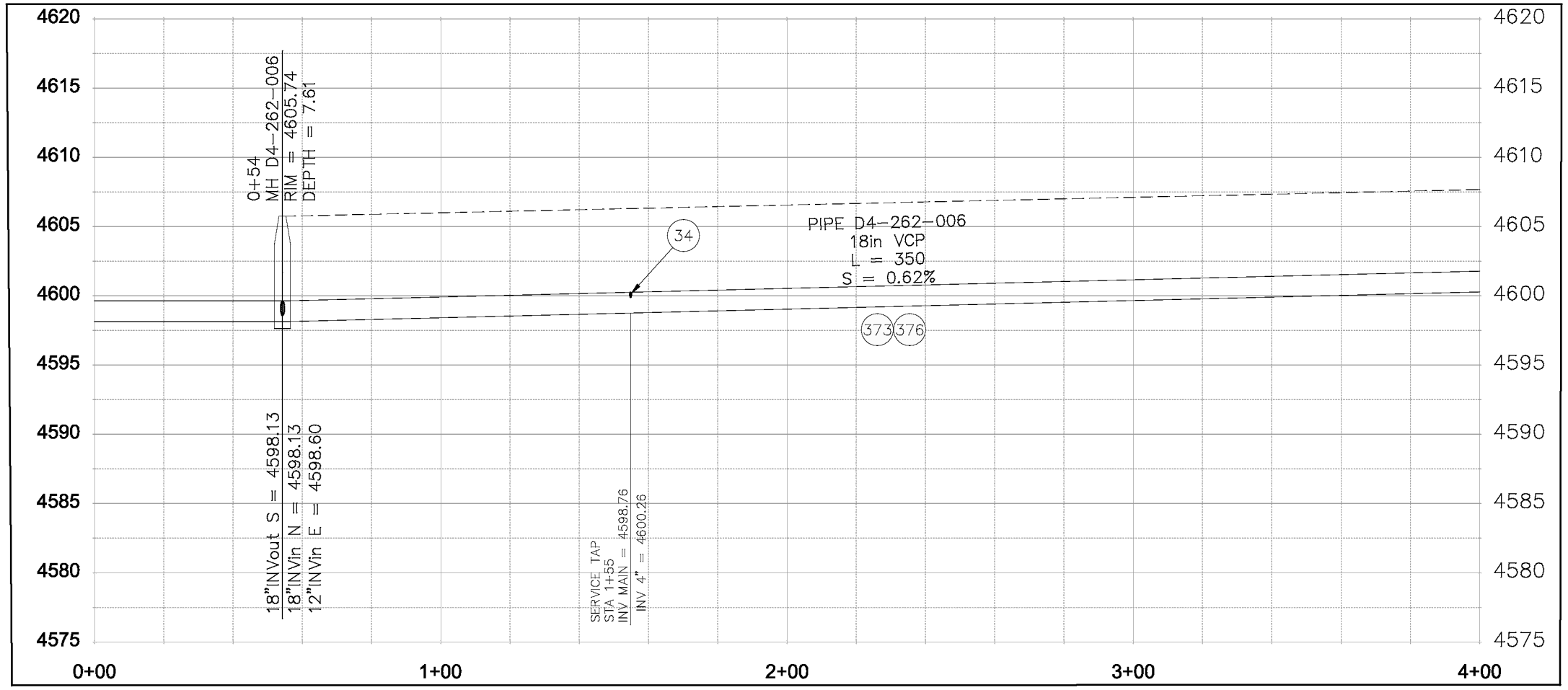
CONSTRUCTION NOTES

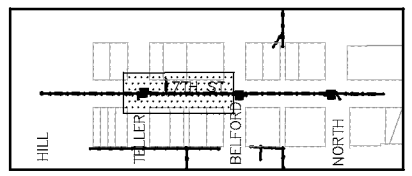
(34) REMOVE CIPP COUPON AT SERVICE LOCATION (INCIDENTAL TO CIPP) 252 MANHOLESHALL BE REMOVED. NEW PIPE INSTALLED AND CONNECTIONS BACK TO EXISTING PIPE COMPLETED PRIOR TO CIPP OPERATIONS FOR THIS RUN. CIPP "THROUGH" OLD MANHOLE LOCATION.

(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)







KEYMAP

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 10'
0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
7TH STREET CIPP
STA 0+00 TO STA 4+00

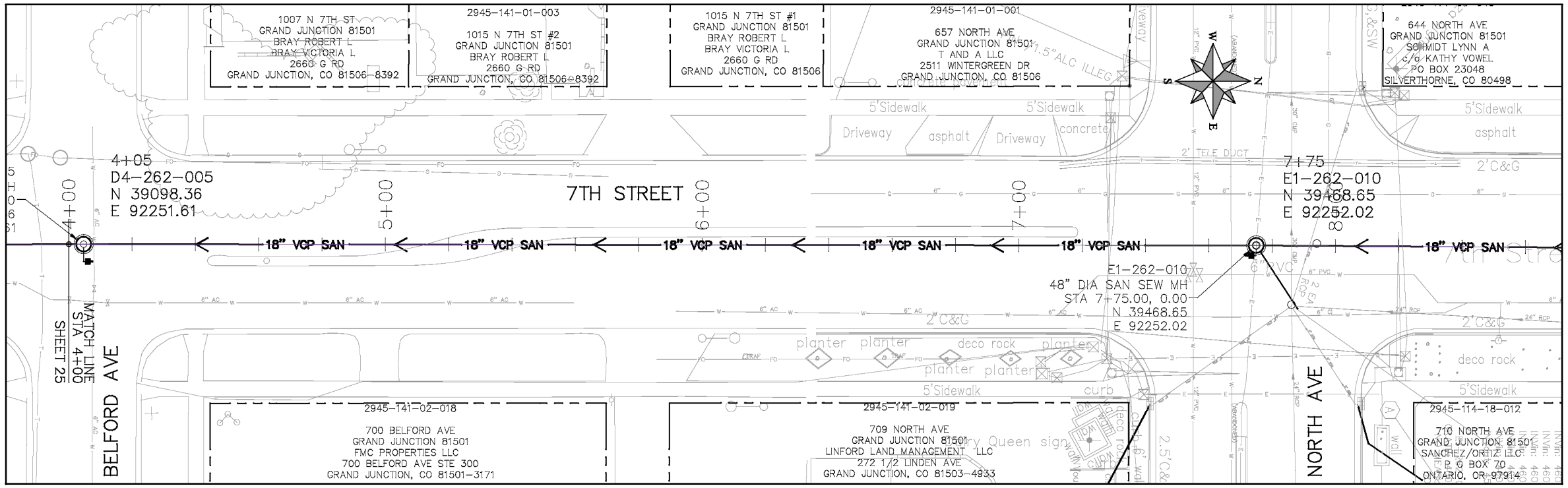
N:\Landproj\2019 Sewer Interceptor Rehabilitations\dwg\26-27_7th Street.dwg, 26, 1/24/2019 2:46:16 PM

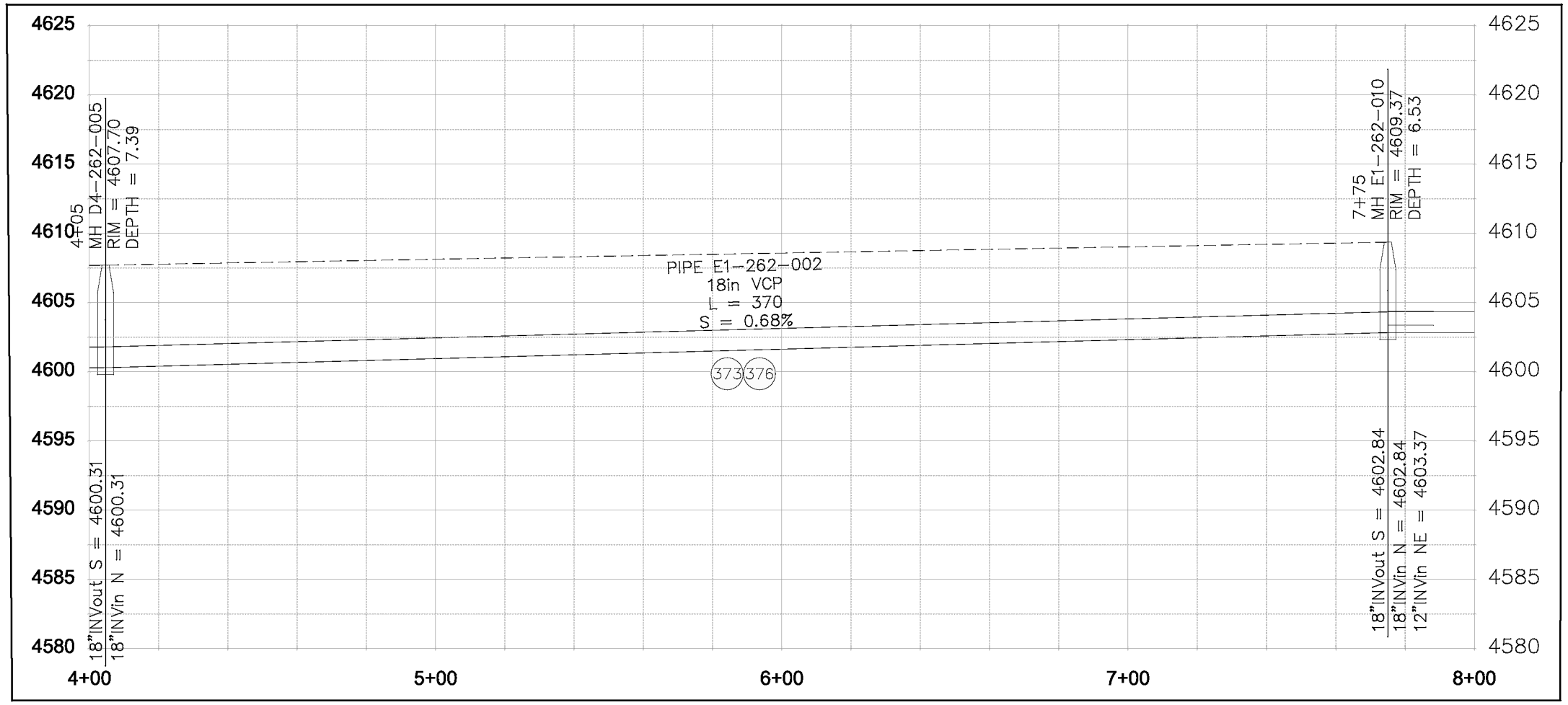
PROJECT NO. _____

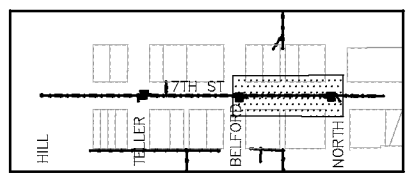
CONSTRUCTION NOTES

(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)







KEYMAP

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY	HMC	DATE	2018
DESIGNED BY	JKT	DATE	2018
CHECKED BY	JKT	DATE	2018
APPROVED BY	JKT	DATE	2018

SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 10'
0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
7TH STREET CIPP
STA 4+00 TO STA 8+00

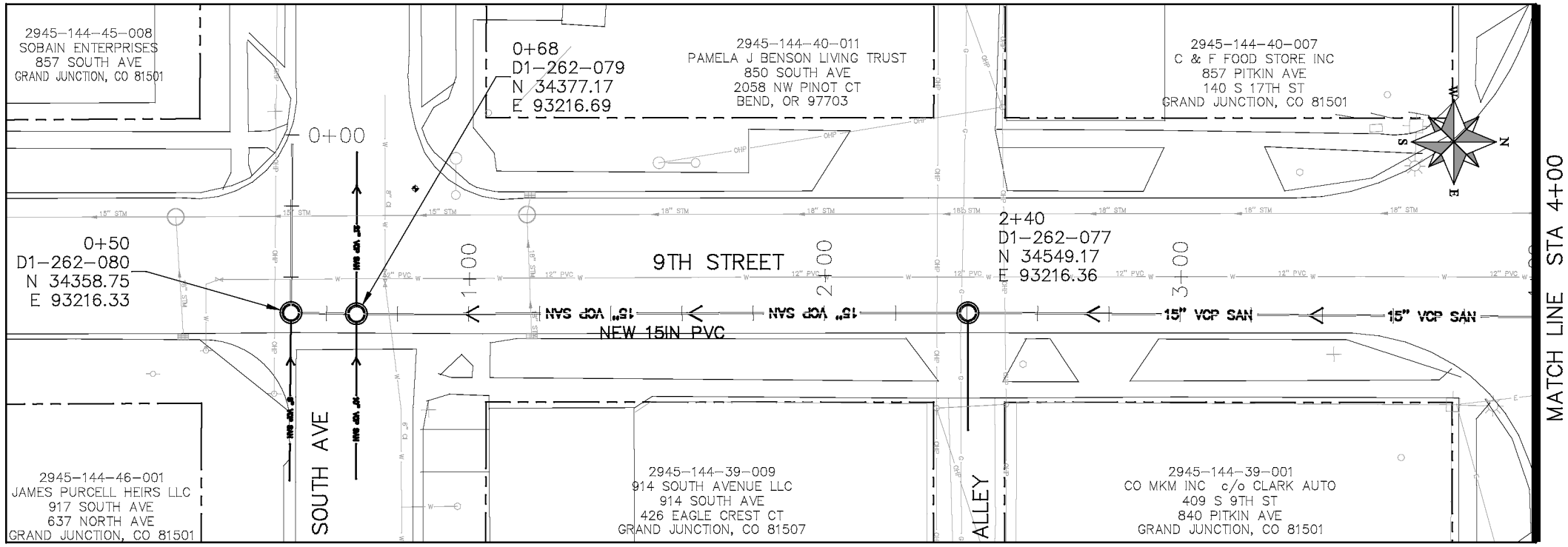
N:\Landproj\2019 Sewer Interceptor Rehabilitation\dwg\26-27_7th Street.dwg, 27, 1/24/2019 2:46:18 PM

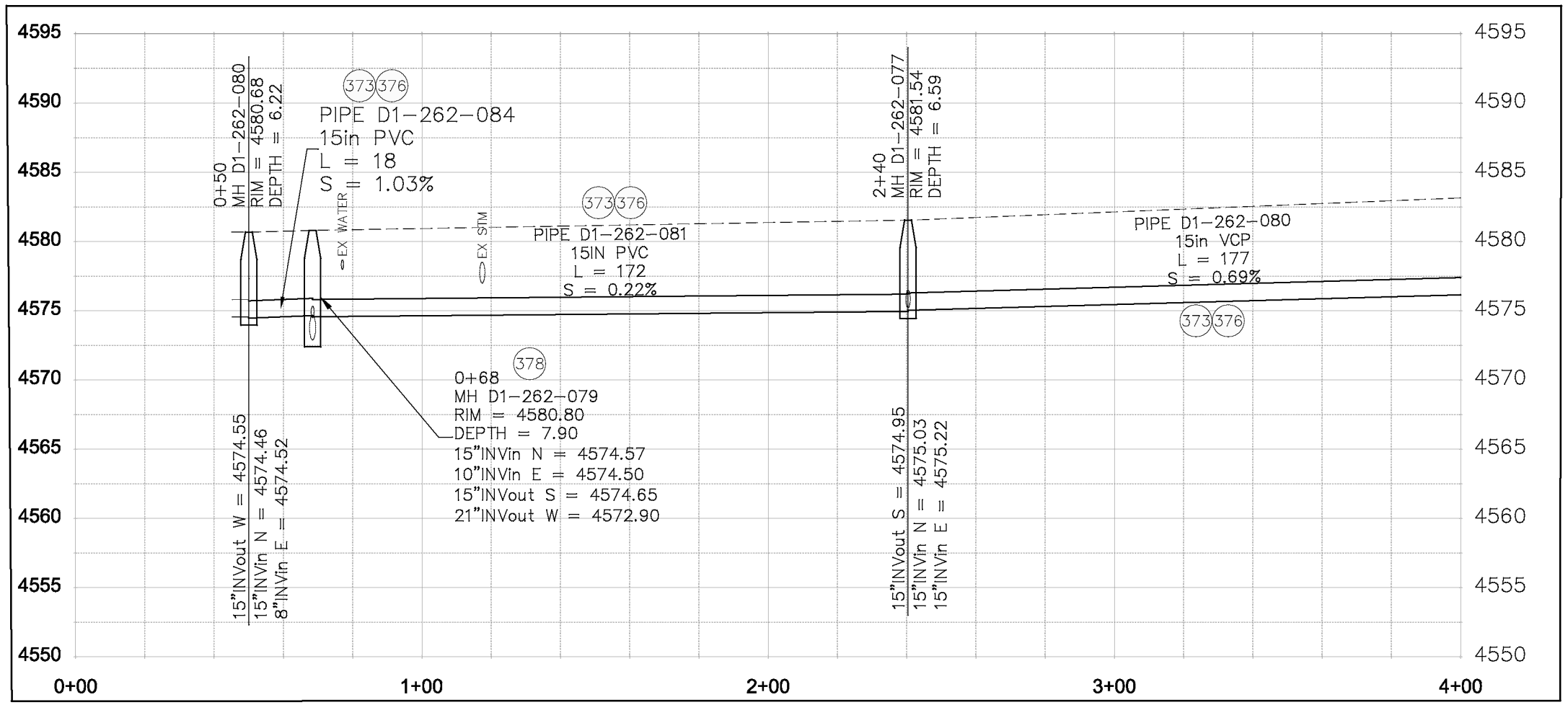
PROJECT NO. _____

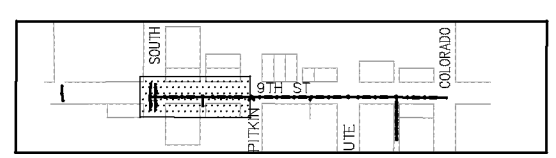
CONSTRUCTION NOTES

(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)







KEYMAP

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY HMC/JCS DATE 2016
DESIGNED BY JJV DATE 2016
CHECKED BY TCP DATE 2016
APPROVED BY HMC/JCS DATE 2016

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
9TH STREET CIPP
STA 0+00 TO STA 4+00

28

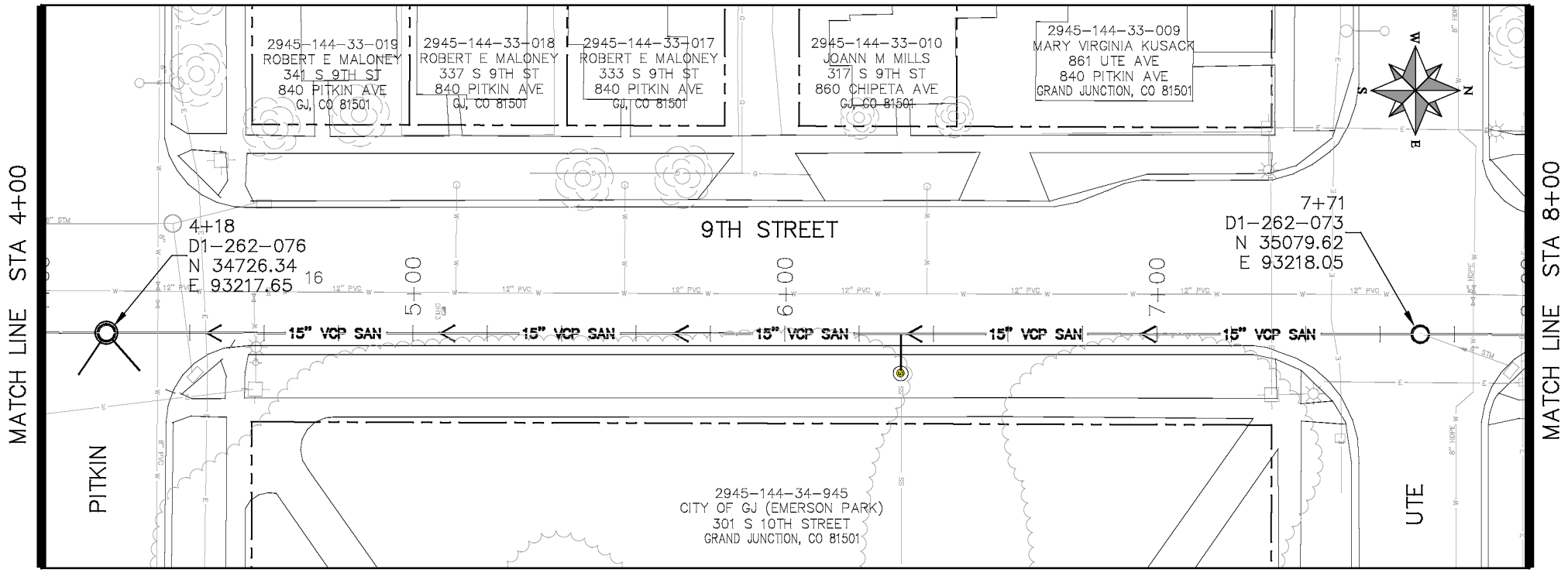
N:\Landproj\2019 Sewer Interceptor Rehabilitations\dwg\28-30_9th Street.dwg, 28, 1/24/2019 2:46:37 PM

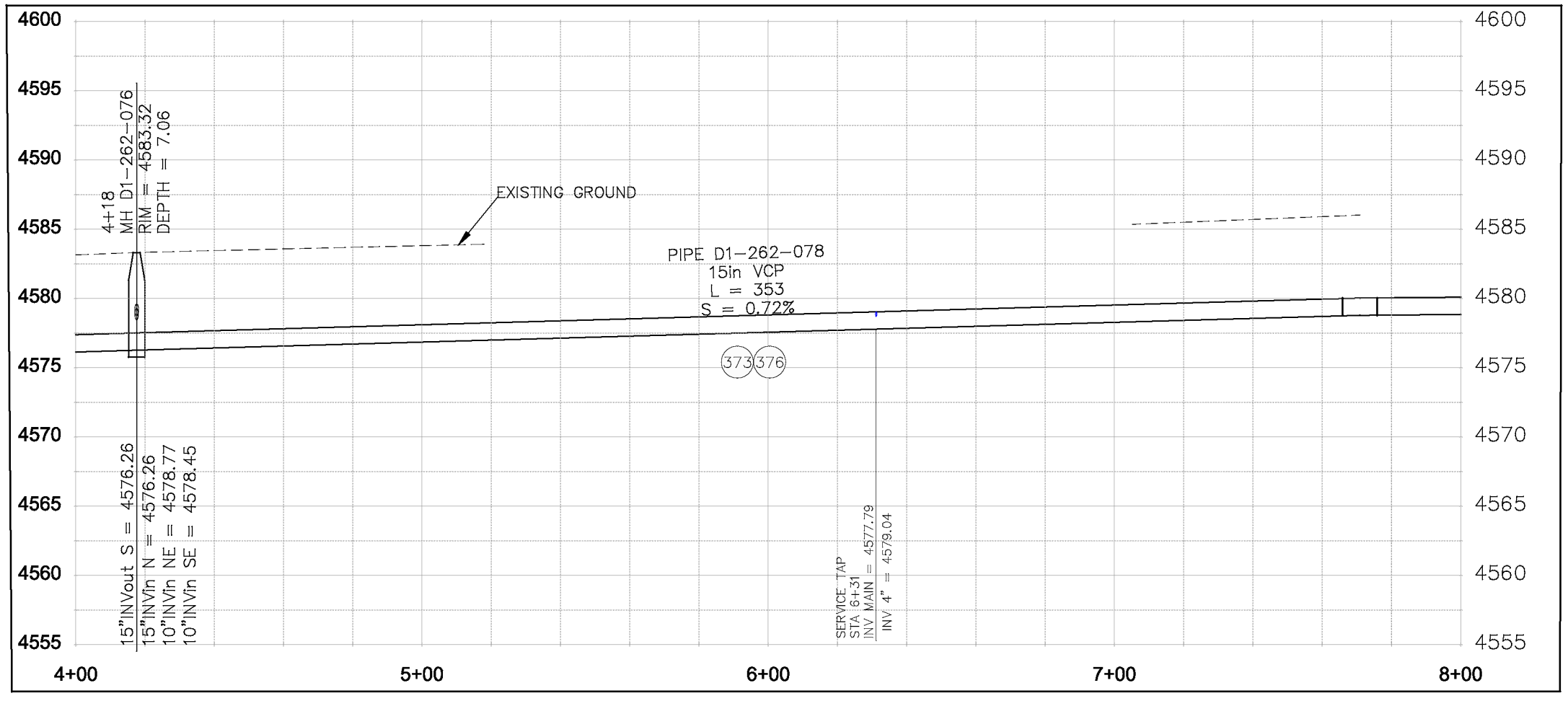
PROJECT NO. _____

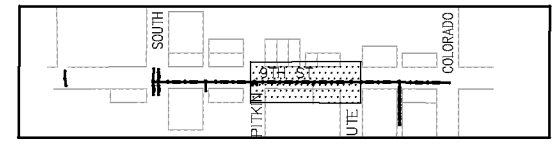
CONSTRUCTION NOTES

(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)







KEYMAP

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY HMC/JCS DATE 2016
DESIGNED BY JJV DATE 2016
CHECKED BY TCP DATE 2016
APPROVED BY HMC/JCS DATE 2016

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
9TH STREET CIPP
STA 4+00 TO STA 8+00

29

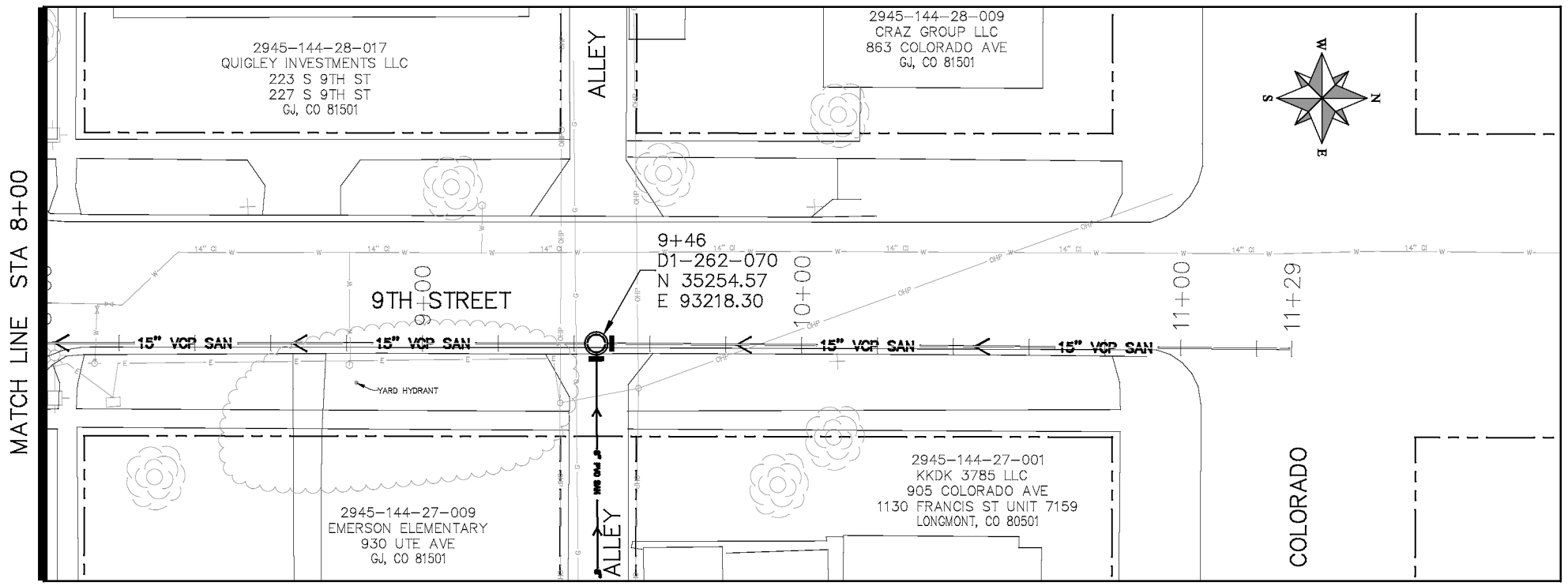
N:\Landproj\2019 Sewer Interceptor Rehabilitations\dwg\28-30_9th Street.dwg, 29, 1/24/2019 2:46:39 PM

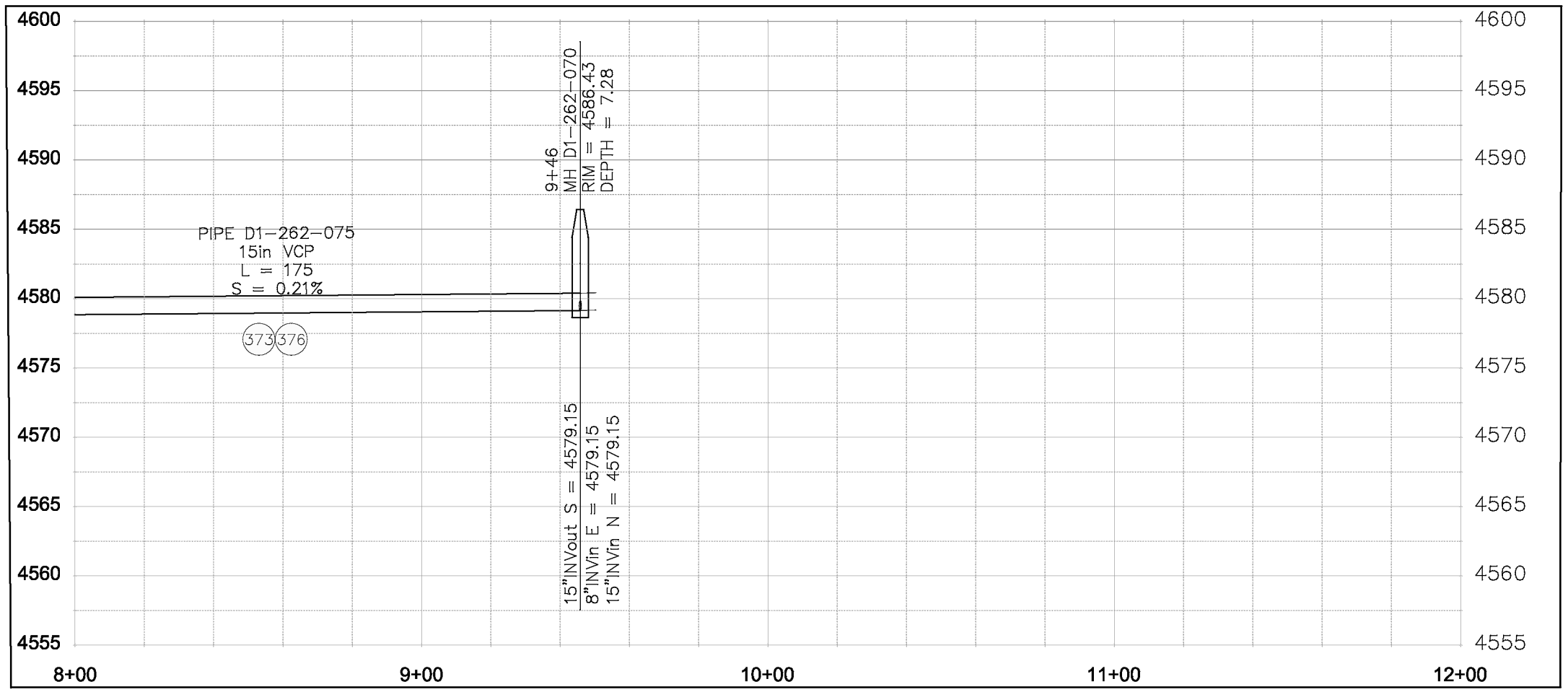
PROJECT NO. _____

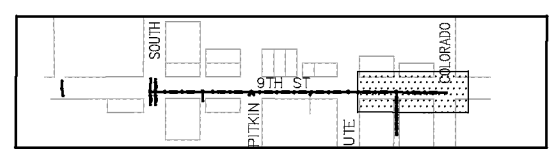
CONSTRUCTION NOTES

(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)







KEYMAP

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY HMC/JCS DATE 2016
DESIGNED BY JJV DATE 2016
CHECKED BY TCP DATE 2016
APPROVED BY HMC/JCS DATE 2016

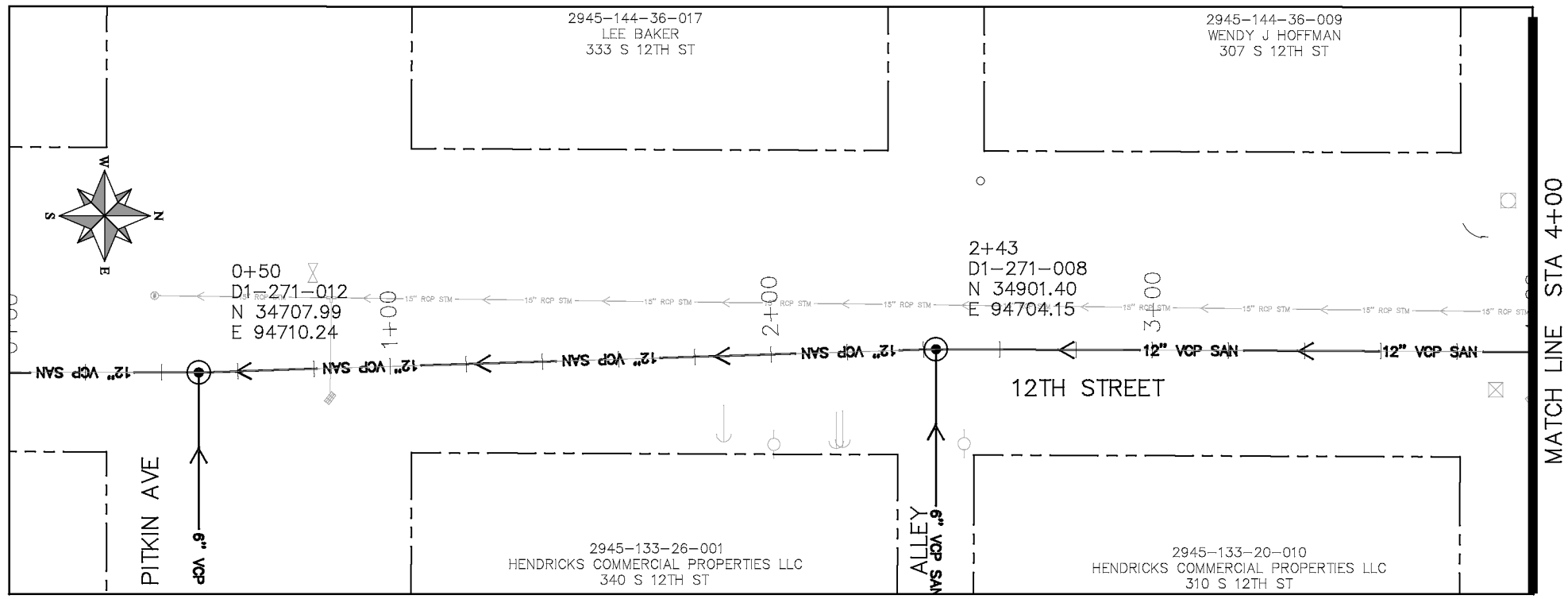
SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

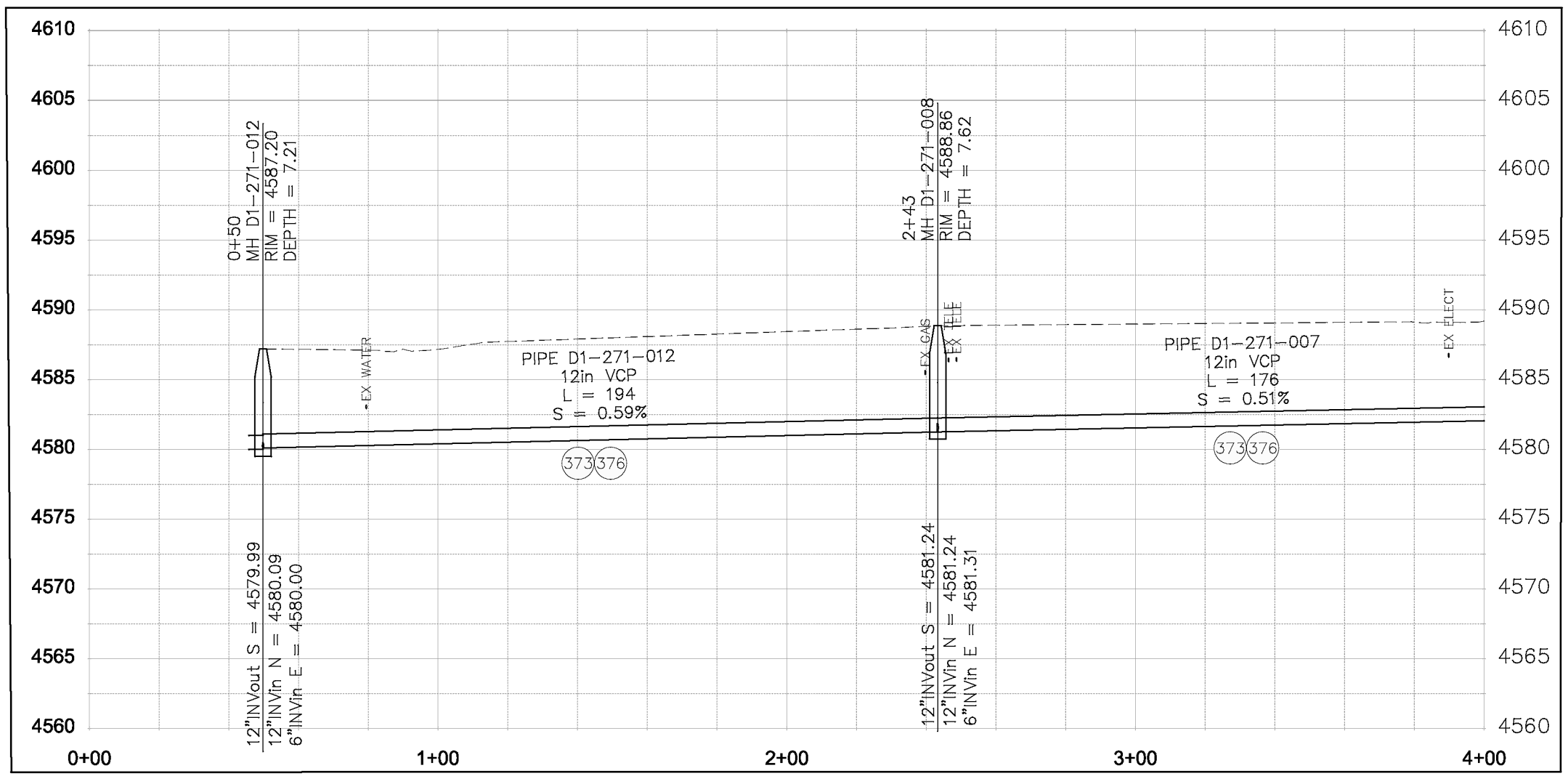
CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
9TH STREET CIPP
STA 8+00 TO STA 12+00

N:\Landpro\2019 Sewer Interceptor Rehabilitations\dwg\28-30_9th Street.dwg, 30, 1/24/2019 2:46:40 PM



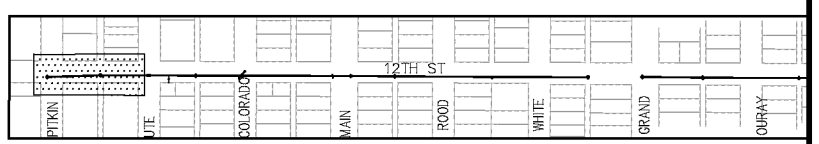


PROJECT NO. _____

CONSTRUCTION NOTES

373 CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

376 REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)



KEYMAP

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY HMC/JCS DATE 2016
DESIGNED BY JJV DATE 2016
CHECKED BY TCP DATE 2016
APPROVED BY HMC/JCS DATE 2016

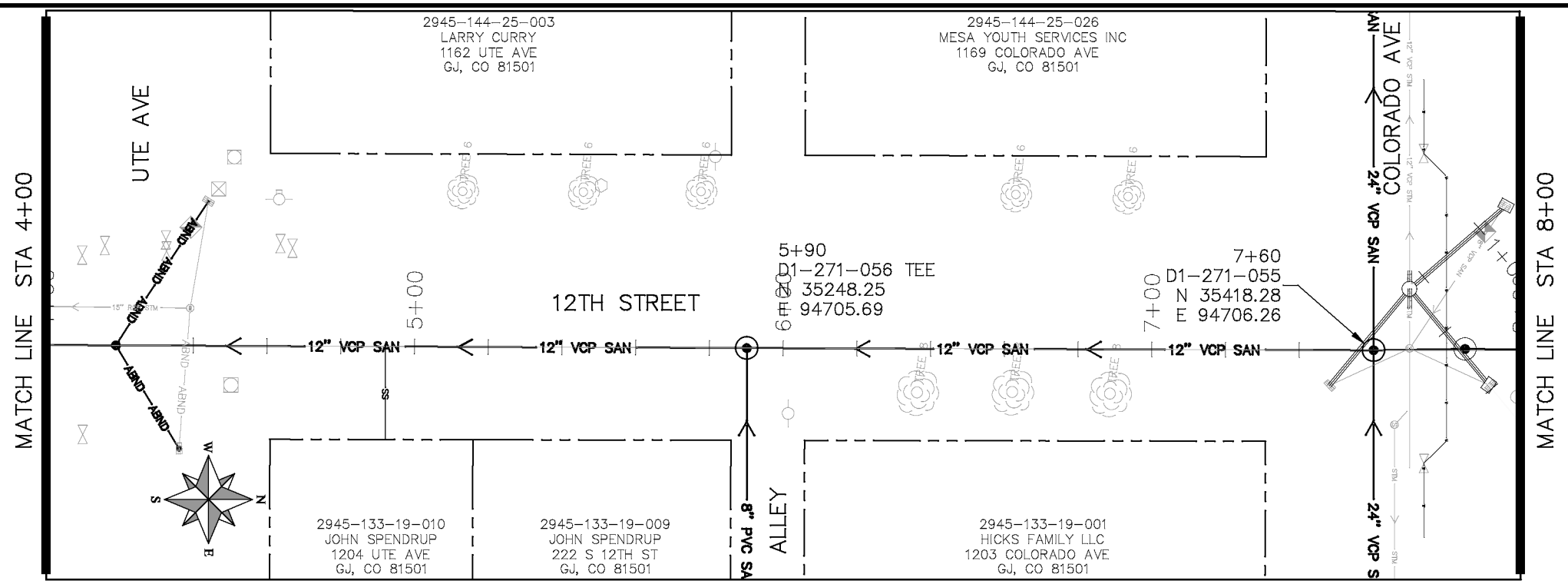
SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

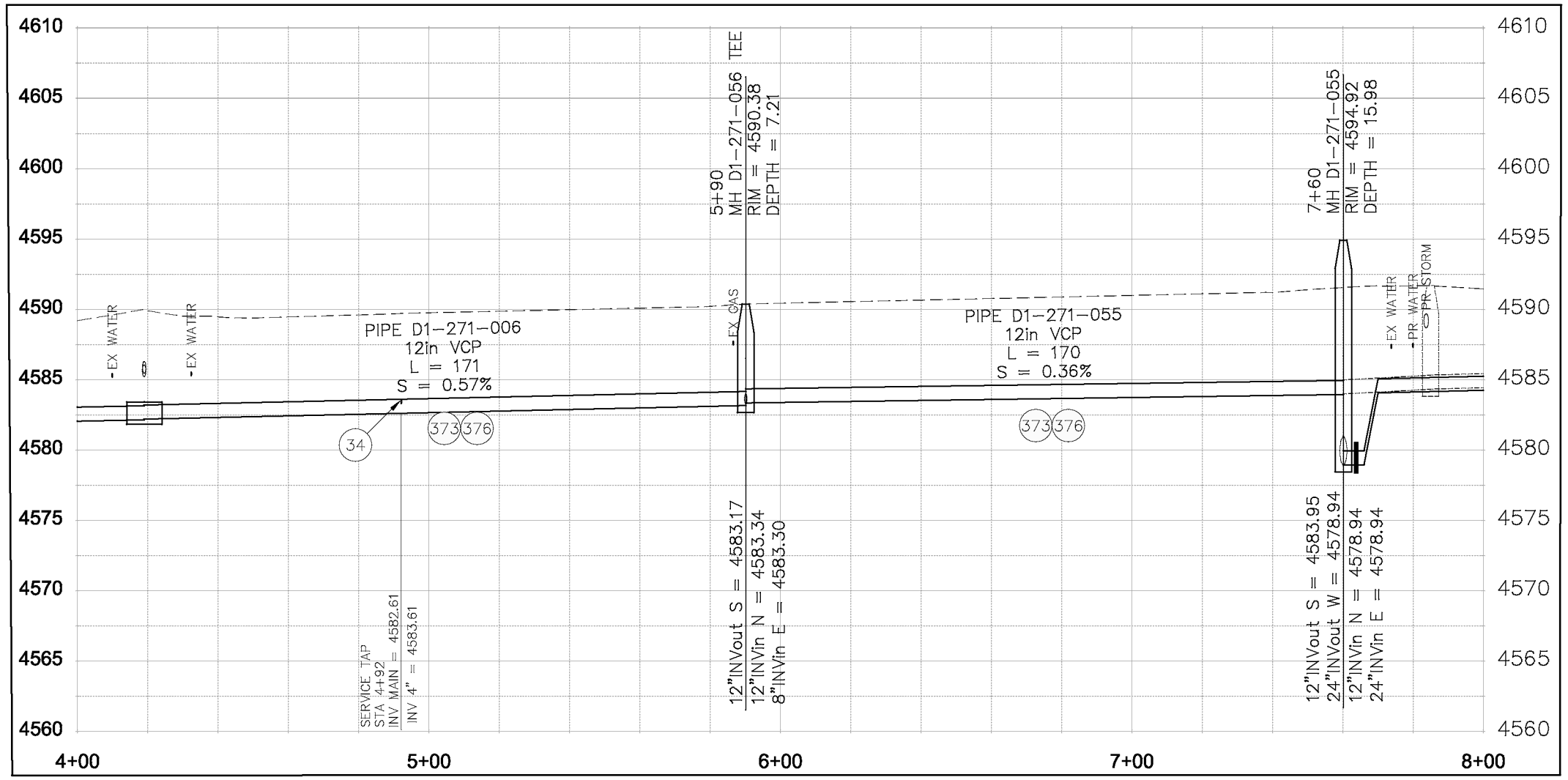
CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
12TH STREET CIPP
STA 0+00 TO STA 4+00

N:\Landproj\2019 Sewer Interceptor Rehabilitation\dwg\31-35_12th Street.dwg, 31, 1/24/2019 2:47:09 PM





PROJECT NO. _____

CONSTRUCTION NOTES

(34) REMOVE CIPP COUPON AT SERVICE LOCATION (INCIDENTAL TO CIPP) 252 MANHOLESHALL BE REMOVED. NEW PIPE INSTALLED AND CONNECTIONS BACK TO EXISTING PIPE COMPLETED PRIOR TO CIPP OPERATIONS FOR THIS RUN. CIPP "THROUGH" OLD MANHOLE LOCATION.

(373) 1CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE)

(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)

KEYMAP

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY HMC/JCS DATE 2016
DESIGNED BY JJV DATE 2016
CHECKED BY TCP DATE 2016
APPROVED BY HMC/JCS DATE 2016

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
12TH STREET CIPP
STA 4+00 TO STA 8+00

32

N:\Landproj\2019 Sewer Interceptor Rehabilitations\dwg\31-35_12th Street.dwg, 32, 1/24/2019 2:47:14 PM

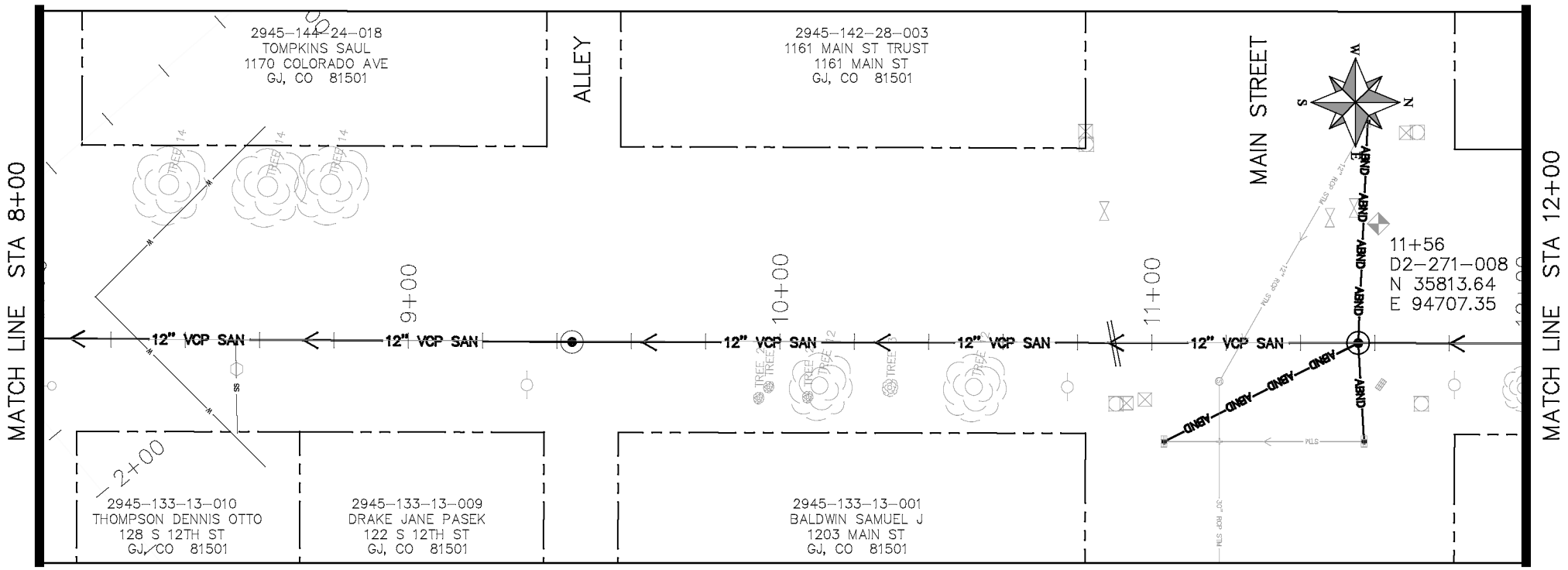
PROJECT NO. _____

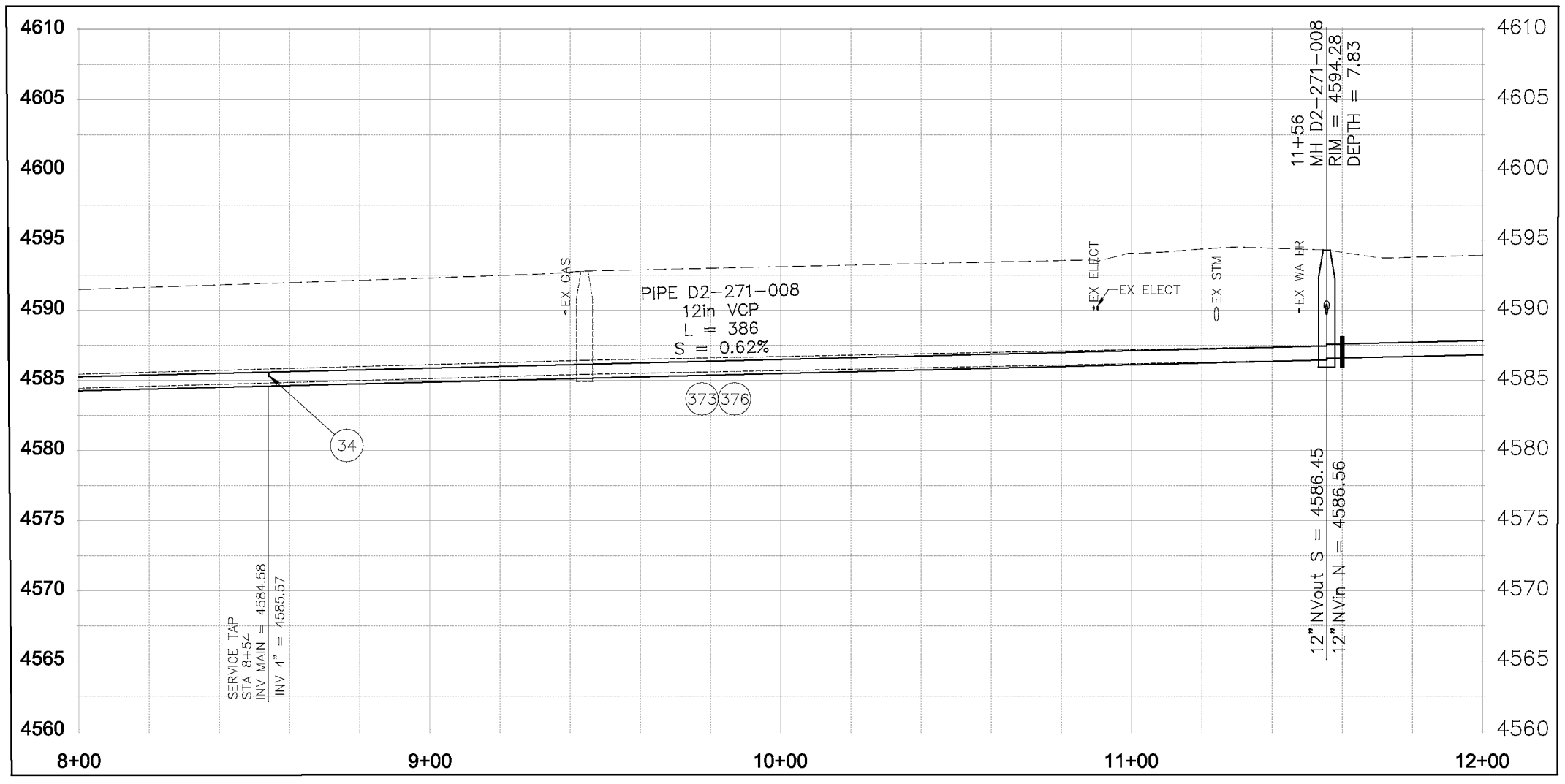
CONSTRUCTION NOTES

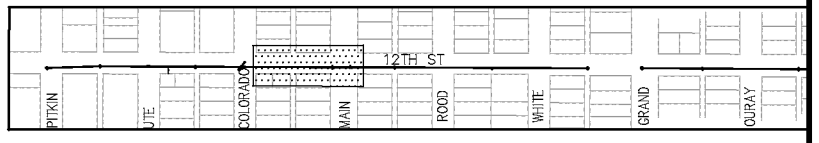
(34) REMOVE CIPP COUPON AT SERVICE LOCATION (INCIDENTAL TO CIPP) 252 MANHOLESHALL BE REMOVED. NEW PIPE INSTALLED AND CONNECTIONS BACK TO EXISTING PIPE COMPLETED PRIOR TO CIPP OPERATIONS FOR THIS RUN. CIPP "THROUGH" OLD MANHOLE LOCATION.

(373) 1CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE)

(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)







KEYMAP

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY HMC/JCS DATE 2016
DESIGNED BY JJV DATE 2016
CHECKED BY TCP DATE 2016
APPROVED BY HMC/JCS DATE 2016

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
12TH STREET CIPP
STA 8+00 TO STA 12+00

33

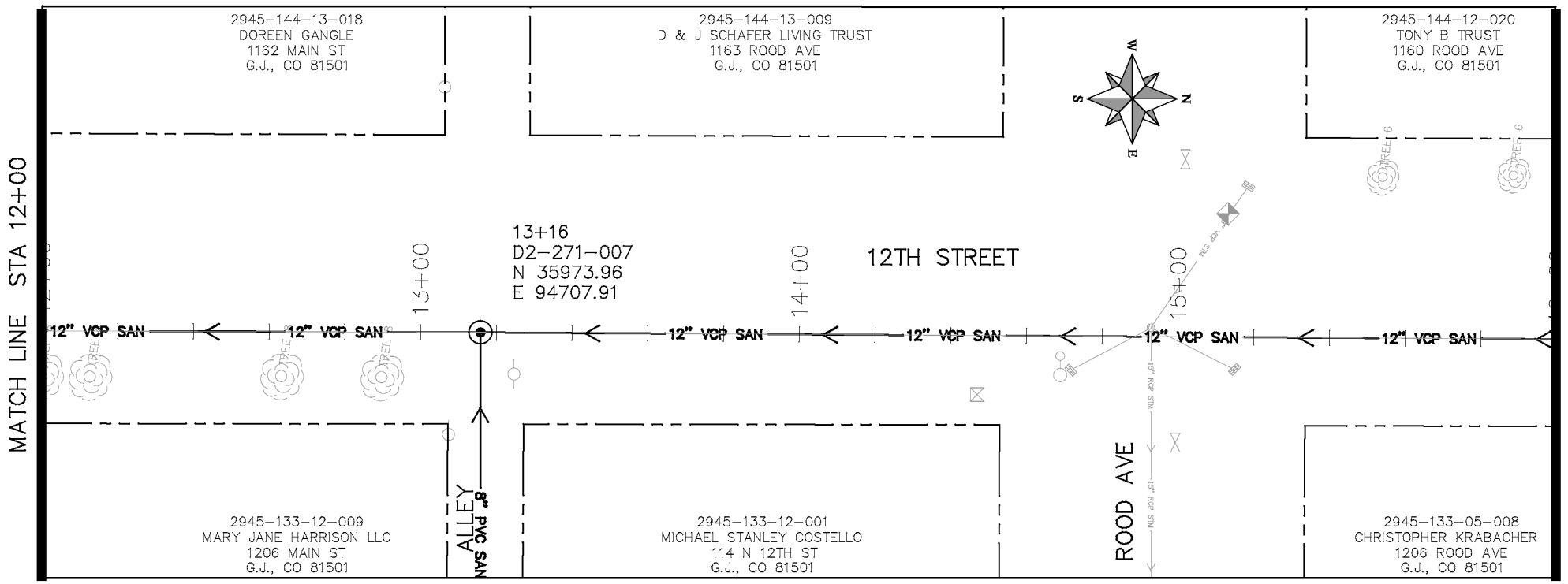
N:\Landproj\2019 Sewer Interceptor Rehabilitations\dwg\31-35_12th Street.dwg, 33, 1/24/2019 2:47:19 PM

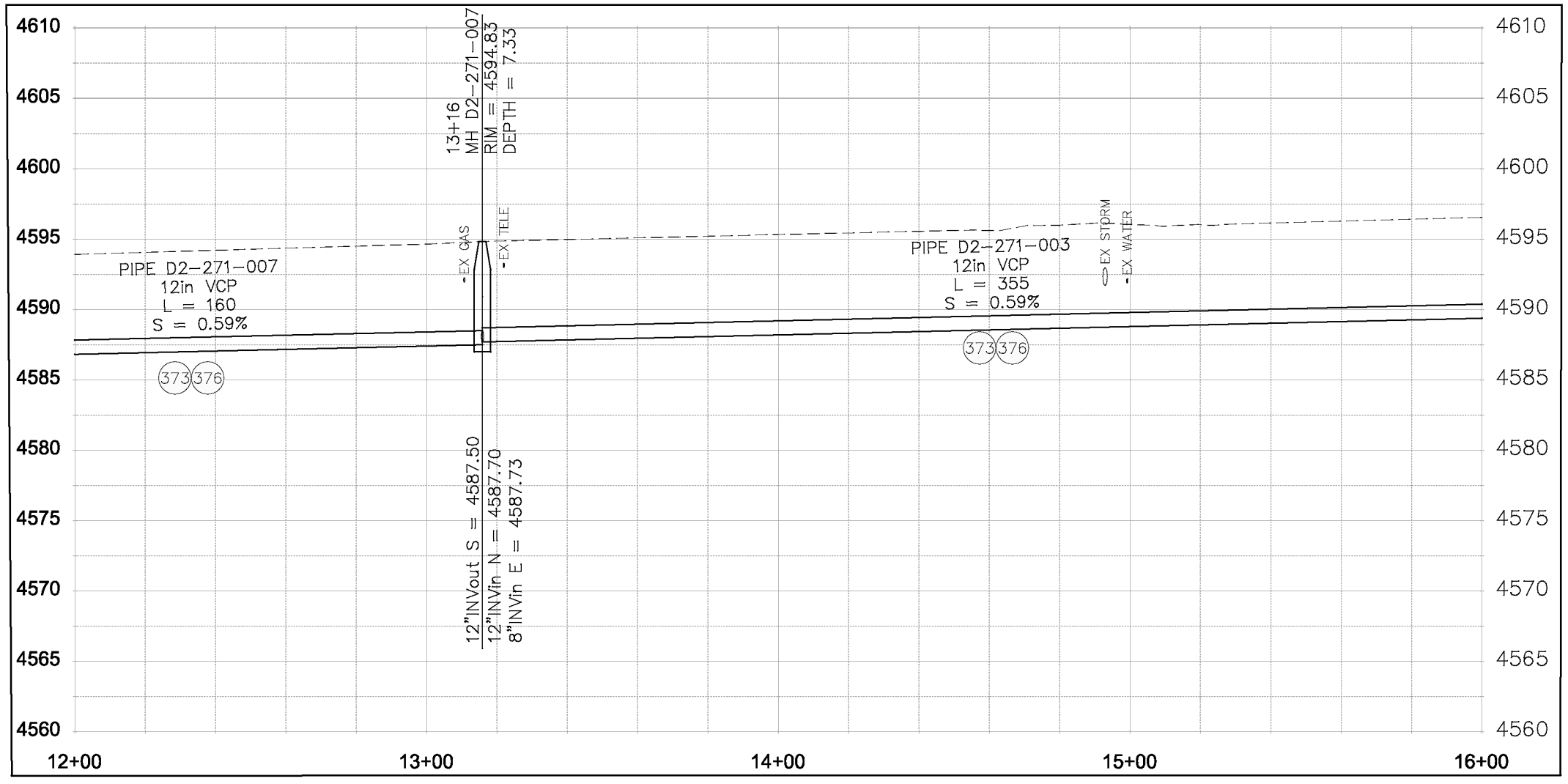
PROJECT NO. _____

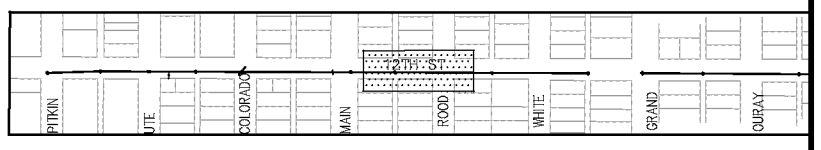
CONSTRUCTION NOTES

(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)







KEYMAP

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY HMC/JCS DATE 2016
DESIGNED BY JJV DATE 2016
CHECKED BY TCP DATE 2016
APPROVED BY HMC/JCS DATE 2016

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
12TH STREET CIPP
STA 12+00 TO STA 16+00

34

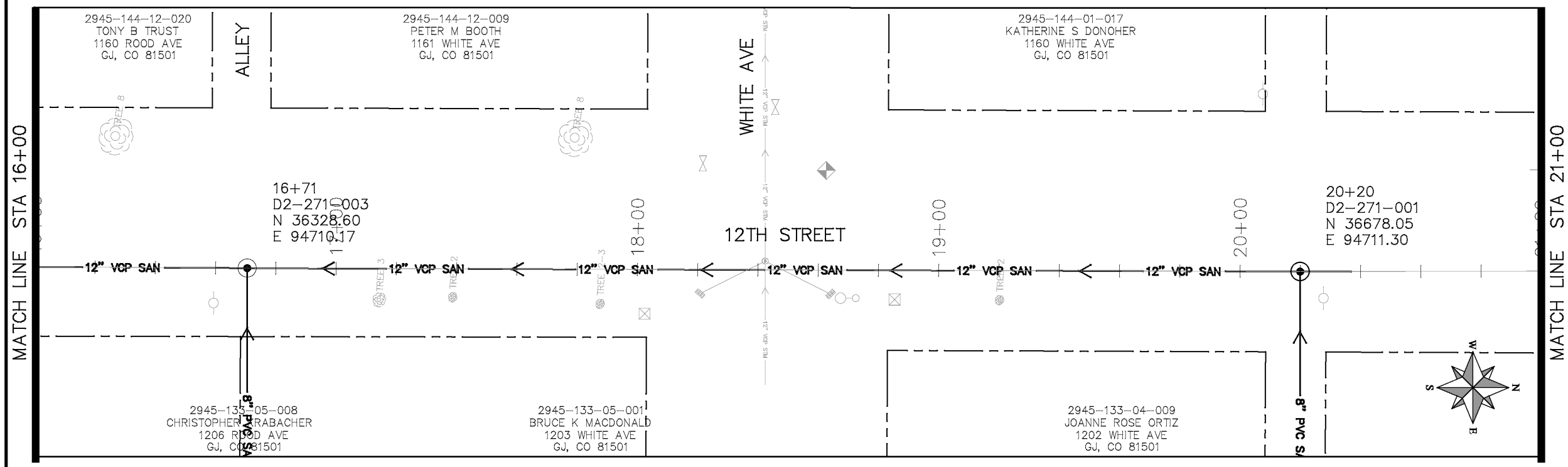
N:\Landproj\2019 Sewer Interceptor Rehabilitations\dwg\31-35_12th Street.dwg, 34, 1/24/2019 2:47:24 PM

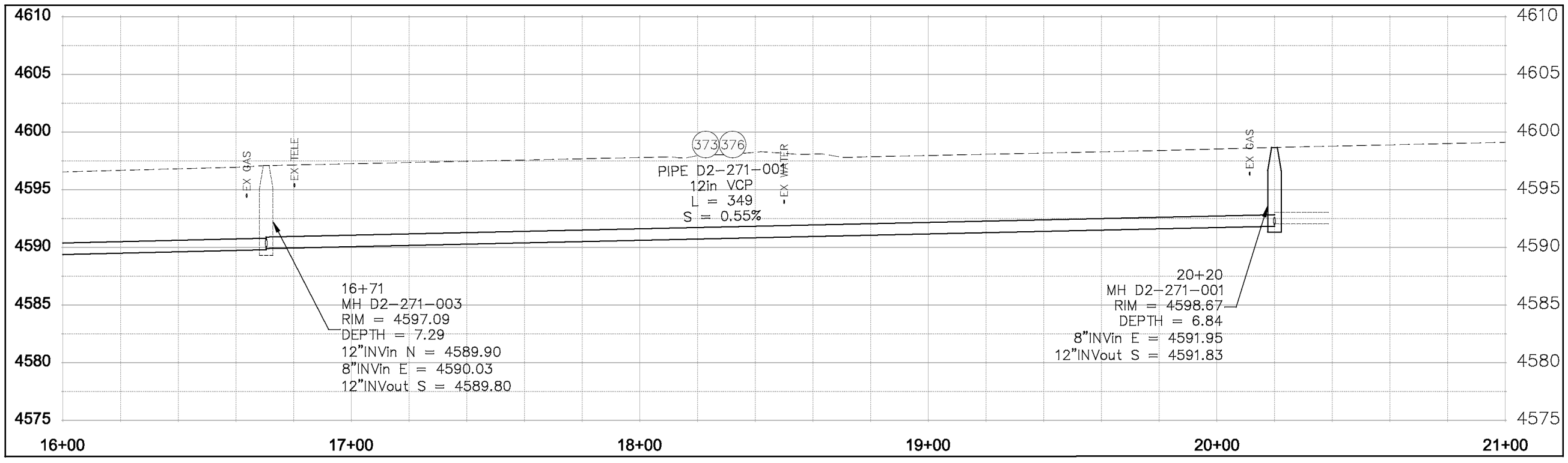
PROJECT NO. _____

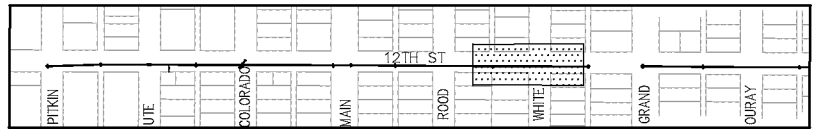
CONSTRUCTION NOTES

(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)







KEYMAP

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY HMC/JCS DATE 2016
DESIGNED BY JJV DATE 2016
CHECKED BY TCP DATE 2016
APPROVED BY HMC/JCS DATE 2016

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
12TH STREET CIPP
STA 16+00 TO STA 21+00

35

N:\Landproj\2019 Sewer Interceptor Rehabilitations\dwg\31-35_12th Street.dwg, 35, 1/24/2019 3:22:21 PM

CITY OF Grand Junction COLORADO

Purchasing Division

ADDENDUM NO. 1

DATE: **February 8, 2019**
FROM: **City of Grand Junction Purchasing Division**
TO: **All Offerors**
RE: **2019 Sewer Interceptor Repair and Replacements IFB-4602-19-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. Subcontractors that propose to perform CIPP work must be prequalified specifically for CIPP work by the City of Grand Junction. Contact the Project Engineer for information regarding prequalified CIPP subcontractors or to make arrangements for prequalification. Note that the prequalification process can be time consuming. Subcontractors interested in prequalifying should begin the process as soon as possible.

Q. If the general Contractor plans on self-performing this do they need to be pre-qualified, and if so is there enough time to do so prior to this bid?

A. Subcontractors will not be required to be prequalified specifically for CIPP work by the City of Grand Junction. This requirement has been removed from the Invitation to Bid document for the 2019 Sewer Interceptor Repair and Replacements project. However, all other qualification items as listed in the project specifications will be required by the subcontractor as part of their bid proposal.

2. It states in the specifications in 2.1 This specification references and incorporates ASTM F1216 (Rehabilitation of pipelines by the inversion and curing of a resin-impregnated tube), ASTM F1743 (Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the pull in and inflate curing of a resin impregnated tube), and ASTM D790 (Test methods for flexural properties of non-reinforced plastics) which are made a part hereof by such reference and shall be the latest edition and revision thereof. In case of conflicting requirements between this specification and these referenced documents, this specification will govern.

Q. If the UV CIPP Product meets and exceeds the materials and flexural modules and will exceed the testing requirements will the City allow the UV Cured Material?

A. Yes.

3. 3.1 Since sewer products are intended to have a 50 year design life, and in order to minimize the Owner's risk, only proven products with substantial successful long term track records will be approved. All trenchless rehabilitation products and installers must be pre-approved prior to the

formal opening of proposals. Products and Installing Companies seeking approval must supply information verifying that they meet all of the following criteria to be deemed Commercially Acceptable:

3.1.1 For a Product (materials, process, and workmanship) to be considered Commercially Proven, a minimum of 1,000,000 linear feet or 4,000 manhole-to-manhole line sections of successful wastewater/storm water collection system installations in the U.S. must be documented to the satisfaction of the Owner to assure commercial viability. In addition, at least 50,000 linear feet of the product shall have been in successful service within the State for a minimum of five years.

Q If the UV Cured CIPP meets and Exceeds the requirements will the City accept the use ASTM F-2019 and allow UV Cured CIPP lining systems? F-2019 is made from F1216 and F1743

A. The City will allow pipe rehabilitation by UV Cured-In-Place Pipe (CIPP) Process. The City will accept the use of ASTM F-2019.

4. Q. I believe there is a **355' ft discrepancy in the 12" dia** Grand Junction Bid List. It looks like they may have missed

D2-271-003	D2-271-007	355.00

next-to-last shot of 355' ft that is on the Plans (see Plan Sheet #34). Please check it out and let me know. Q is the above mentioned line segment omitted on purpose ?

A. The 355-ft segment of 12-inch CIPP was not intentionally left out of the Bid Schedule. The total 12-inch CIPP quantity should be 1,961 LF.

5. Q. We are wondering if the City will allow us to use the parallel lines 24" and 30" segments for bypass, and divert the flows to one diameter pipe while we CCTV and CIPP the other diameter pipe? The overview map page 4 is the best map page for reference. The Sewer Interceptor Line A and B drawings listed below will also help. Please let me know if you have any questions or need clarification. Walking the site next week will be helpful in determining the layout.

- Overview Map page 4
- Sewer Interceptor Line A (Sheets 5 to 11) – 30" Segments
- Sewer Interceptor Line B (Sheets 12 to 19) – 24" Segments

A. Utilization of the existing 24" and 30" Interceptor lines for bypass and diversion during CCTV and CIPP operations will be allowed. The Contractor will be required to submit a bypass pumping plan prior to approval. The contractor must meet all requirements as outlined in Appendix B (Bypass Pumping Specifications), to assure unanticipated flow increases will not surcharge any portion of either sewer line.

6. Q. We would like to submit an "as equal" substitute material for the manhole rehab portion of the 2019 Sewer Interceptor Repair and Replacements project. The product that we would like to submit is **GeoKrete®**, which is a corrosive resistant geopolymer material with superior structural strength.

A. This will be addressed in Addendum 2.

7. Q. Have you considered Electro Scan for the 2019 Sewer Interceptor Repair and Replacements project?

A. This will be addressed in Addendum 2.

8. Section 1.1 Purpose has been updated or modified as follows:

Purpose: The City of Grand Junction is soliciting competitive bids from qualified and interested companies for all labor, equipment, and materials required for the 2019 Sewer Interceptor Repair and Replacement Project. The project generally consists of, but may not be limited to, 1,961 LF of 12 inch cured in place pipe (CIPP); 878 LF of 15 inch CIPP; 2894 LF of 18 inch CIPP; 5,943 LF of 24 inch CIPP, 5535 LF if 30 CIPP. the coating of 37 sanitary sewer manholes (approximately 240 VLF), and bypass pumping necessary to complete said work. All dimensions and scope of work should be verified by Contractors prior to submission of bids.

9. Section 3.3.19 Quality Control Testing has been updated or modified as follows:

Quality Control Testing: The Contractor shall perform QA/QC on CIPP per Appendix D.1/D.2, Cured-In-Place-Pipe (CIPP) Specification.

10. Section 3.5 Attachments has been updated or modified as follows:

Attachments:

- Appendix A:Project Submittal Form
- Appendix B:Bypass Pumping
- Appendix C: Request to Discharge Industrial Process Wastewater
- Appendix D1: Pipe Rehabilitation by Hot Water/Steam Cured-In-Place Pipe (CIPP).
- Appendix D2: Pipe Rehabilitation by UV Cured-In-Place Pipe (CIPP)
- Appendix E:Construction Drawings

11. Appendix D1 – Pipe Rehabilitation by Hot Water/Steam Cured-In-Place Pipe (CIPP)

12. Appendix D2 – Pipe rehabilitation by UV Cured-In-Place (CIPP) shall be added to the solicitation documents. See attached.

13. Section 3.3.41 Bid Schedule shall be added as follows:

Bid Schedule: 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.

14. **Updated Bid Schedule:** Contractor shall utilize the attached Updated Bid Schedule when submitting their bid responses to this solicitation process.

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: 2019 Sewer Interceptor Repair and Replacement Project

Contractor: _____

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
1	626	Portable Sanitary Facility	1.	Lump Sum	$ _____	$ _____
2	630	Mobilization	1.	Lump Sum	$ _____	$ _____
3	630	Traffic Control (Complete In Place)	1.	Lump Sum	$ _____	$ _____
4	630	Traffic Control Flagging	1,000.	Hours	$ _____	$ _____
5	630	Traffic Control Plan	1.	Lump Sum	$ _____	$ _____
6	SP	Bypass Pumping per City Specifications. See Appendix B in Bid Documents.	1.	Lump Sum	$ _____	$ _____
7	SP	Weekly Newsletter- See Bid Documents SC 3.3.13	1.	Lump Sum	$ _____	$ _____
8	SP	12 Inch CIPP (Complete in Place) See Appendix D.1/D.2 in Bid Documents.	1,961.	LF	$ _____	$ _____
9	SP	15 Inch CIPP (Complete in Place) See Appendix D.1/D.2 in Bid Documents.	895.	LF	$ _____	$ _____
10	SP	18 Inch CIPP (Complete in Place) See Appendix D.1/D.2 in Bid Documents.	2,894.	LF	$ _____	$ _____
11	SP	24Inch CIPP (Complete in Place) See Appendix D.1/D.2 in Bid Documents.	5,942.	LF	$ _____	$ _____
12	SP	30 Inch CIPP (Complete in Place) See Appendix D.1/D.2 in Bid Documents.	5,535.	LF	$ _____	$ _____
13	SP	Coat Manhole (48' I.D.) See Sec. 4 (Special Provisions) for Specifications.	240.	VF	$ _____	$ _____
MCR		Minor Contract Revisions	---	---	---	$ 80,000.00

Bid Amount: **$** _____

Bid Amount:

_____ **dollars**

Contractor Name:
Contractor Address:
Contractor Phone #:
Contractor Chosen CIPP Curing Method:

APPENDIX D1

Pipe Rehabilitation by Hot Water/Steam Cured-In-Place Pipe (CIPP) Specification

PIPE REHABILITATION BY HOT WATER/STEAM CURED -IN-PLACE PIPE (CIPP) SPECIFICATION

1. INTENT

1.1 It is the intent of this specification to provide for the reconstruction of pipelines and conduits by the installation of a resin-impregnated flexible tube, which is formed to the original conduit by use of a hydrostatic head. The resin is cured using hot water under hydrostatic pressure within the tube. The Cured-In-Place Pipe (CIPP) will be continuous and tight fitting. The CIPP must be designed for a "Fully Deteriorated Condition" with a safety factor of 2.0. The following requirements apply generally to the CIPP portion of the work with additional specifications as provided below:

- The Subcontractor performing the CIPP work must be identified on the Bid Form and shall not be changed after bid opening without specific written approval from the Project Engineer.
- The Subcontractor shall verify host pipe diameter prior to design and fabrication of liner.
- Prior to installation of the CIPP, a design report shall be submitted to the Project Engineer, showing all assumptions, design calculations, test data and other pertinent information. **The design report must be stamped by the Licensed Professional Engineer that prepared it.** The design report is incidental to the lump sum pay item for installation of the CIPP.

2. REFERENCED DOCUMENTS

2.1 This specification references and incorporates ASTM F1216 (Rehabilitation of pipelines by the inversion and curing of a resin-impregnated tube), ASTM F1743 (Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the pull in and inflate curing of a resin-impregnated tube), and ASTM D790 (Test methods for flexural properties of non-reinforced plastics) which are made a part hereof by such reference and shall be the latest edition and revision thereof. In case of conflicting requirements between this specification and these referenced documents, this specification will govern.

3. PRODUCT, MANUFACTURER/INSTALLER QUALIFICATION REQUIREMENTS

3.1 Since sewer products are intended to have a 50 year design life, and in order to minimize the Owner's risk, only proven products with substantial successful long term track records will be approved. All trenchless rehabilitation products and installers must be pre-approved prior to the formal opening of proposals.

Products and Installing Companies seeking approval must supply information verifying that they meet all of the following criteria to be deemed Commercially Acceptable:

3.1.1 For a Product (materials, process, and workmanship) to be considered Commercially Proven, a minimum of 1,000,000 linear feet or 4,000 manhole-to-manhole line sections of successful wastewater/storm water collection system installations in the U.S. must be documented to the satisfaction of the Owner to assure commercial viability. In addition, at least 50,000 linear feet of the product shall have been in successful service within the State for a minimum of five years.

3.1.2 For an Installer to be considered as Commercially Proven, the Installer must satisfy all insurance, financial, and bonding requirements of the City, and must have had at least 3 (three) years active experience in the commercial installation of the product bid. In addition, the Installer must have successfully installed at least 3,000 feet of the product bid in wastewater, stormwater, or

irrigation water systems. Acceptable documentation of these minimum installations must be included with the bid package as described in the Instructions to Bidders.

3.1.3 Both the rehabilitation manufacturing and installation processes shall operate under a quality management system which is third-party certified to ISO 9001 or other internationally recognized organization standards. Proof of certification shall be required for approval of the CIPP sub-contractor.

3.1.4 The owner authorizes the use of proven materials that serve to enhance the pipe performance specified herein. Proven materials have passed independent laboratory testing, not excluding long-term (10,000 hour) structural behavior testing, and have been successfully installed to repair failing host pipes in the U. S. for at least 4 years. In addition to the aforementioned, the owner may require that the contractor demonstrate that the enhancements proposed exceed the specifications herein, prior to the installation of the enhanced material systems. This section in no way shall be interpreted as authorization to deviate from the minimum standard practices set forth herein.

3.1.5 **The CIPP subcontractor shall provide resumes of experience for the site supervisor (superintendent) to the City, demonstrating a minimum of 2 years of CIPP installation experience using the methods stipulated for this project.**

4. MATERIALS

4.1 Tube

4.1.1 The sewn Tube shall consist of one or more layers of absorbent non-woven felt fabric and meet the requirements of ASTM F1216, Section 5. The tube shall be constructed to withstand installation pressures, have sufficient strength to bridge missing pipe, and stretch to fit irregular pipe sections.

4.1.2 The wet out Tube shall have a uniform thickness that when compressed at installation pressures will meet or exceed the Design thickness.

4.1.3 The Tube shall be sewn to a size that when installed will tightly fit the internal circumference and length of the original pipe. Allowance should be made for circumferential stretching during inversion. Overlapped layers of felt in longitudinal seams that cause lumps in the final product shall not be utilized.

4.1.4 The outside layer of the Tube (before wet out) shall be coated with an impermeable, flexible membrane that will contain the resin and facilitate monitoring of resin saturation during the resin impregnation (wet out) procedure.

4.1.5 The Tube shall be homogeneous across the entire wall thickness containing no intermediate or encapsulated elastomeric layers. No material shall be included in the Tube that may cause delamination in the cured CIPP. No dry or unsaturated layers shall be evident.

4.1.6 The wall color of the interior pipe surface of CIPP after installation shall be a light reflective color so that a clear detailed examination with closed circuit television inspection equipment may be made.

4.1.7 Seams in the Tube shall be stronger than the non-seamed felt.

4.1.8 The outside of the Tube shall be marked for distance at regular intervals along its entire length, not to exceed 5 ft. Such markings shall include the Manufacturers name or identifying symbol. The tubes must be manufactured in the USA.

4.2 Resin

4.2.1 The resin system shall be a corrosion resistant polyester, vinyl ester, or epoxy and catalyst system that when properly cured within the tube composite meets the requirements of ASTM F1216, ASTM F1743, the physical properties herein, and those which are to be utilized in the Design of the CIPP for this project. The resin shall produce CIPP which will comply with the structural and chemical resistance requirements of this specification.

5. STRUCTURAL REQUIREMENTS

5.1 The CIPP shall be designed as per ASTM F1216, Appendix X.1. The CIPP design shall assume no bonding to the original pipe wall. The CIPP shall be designed for a fully deteriorated host pipe condition.

5.2 The Contractor must have performed long-term testing for flexural creep of the CIPP pipe material installed by his Company. Such testing results are to be used to determine the Long-term, time dependent flexural modulus to be utilized in the product design. This is a performance test of the materials (Tube and Resin) and general workmanship of the installation and curing. A percentage of the instantaneous flexural modulus value (as measured by ASTM D-790 testing) will be used in design calculations for external buckling. The percentage, or the long-term creep retention value utilized, will be verified by this testing. Values in excess of 50% will not be applied unless substantiated by qualified third party test data. The materials utilized for the contracted project shall be of a quality equal to or better than the materials used in the long-term test with respect to the initial flexural modulus used in Design.

5.3 The layers of the cured CIPP shall be uniformly bonded. It shall not be possible to separate any two layers with a probe or point of a knife blade so that the layers separate cleanly or the probe or knife blade moves freely between the layers. If separation of the layers occur during testing of field samples, new samples will be cut from the work. Any reoccurrence may cause rejection of the work.

5.4 The cured pipe material (CIPP) shall conform to the structural properties, as listed below.

MINIMUM PHYSICAL PROPERTIES

Property	Test Method	**Cured Composite** min. per ASTM F1216	**Cured Composite** (400,000 psi Resin)
Modulus of Elasticity	ASTM D-790 (short term)	250,000 psi	400,000 psi
Flexural Stress	ASTM D-790	4,500 psi	4,500 psi

The required structural CIPP wall thickness shall be based as a minimum, on the physical properties in the table

above and in accordance with the Design Equations in the appendix of ASTM F 1216. All calculations shall be submitted to the Project Engineer prior to ordering of the pipe. The submittal shall show ALL information used in the calculations, including original equations, parameters, variables, definitions, values assigned, and intermediate results as well as final results. The purpose of this submittal is to allow the Project Engineer to examine all aspects of the design calculations. Submittal of governing equations and final results shall not be sufficient. Delays in proper submittal of a complete design package will not constitute a valid reason for schedule extension.

5.5 Any layers of the tube that are not saturated with resin prior to insertion into the existing pipe shall not be included in the structural CIPP wall thickness computation.

6. TESTING REQUIREMENTS

6.1 Chemical Resistance - The CIPP shall meet the chemical resistance requirements of ASTM F1216, Appendix X2. CIPP samples for testing shall be of tube and resin system similar to that proposed for actual construction. It is required that CIPP samples with and without plastic coating meet these chemical testing requirements.

6.2 Hydraulic Capacity - Overall, the hydraulic profile shall be maintained as large as possible. The CIPP shall have a minimum of the full flow capacity of the original pipe before rehabilitation. Calculated capacities may be derived using a commonly accepted roughness coefficient for the existing pipe material taking into consideration its age and condition.

6.3 CIPP Field Samples – The Contractor shall submit test results from field installations in the USA of the same resin system and tube materials as proposed for the actual installation. These test results must verify that the CIPP physical properties specified in Section 5.5 have been achieved in previous field applications. Samples for this project shall be made and tested as described in Section 10.1.

6.4 Installed CIPP Testing – The Contractor shall provide samples for testing to the City from the actual installed CIPP. Samples shall be provided at a minimum for one location per 1000 feet of installed CIPP. The sample shall be cut from a section of cured CIPP that has been pulled through a like diameter pipe which has been held in place by a suitable heat sink, such as sandbags. All curing, cutting, and identification of samples shall be witnessed by the City.

7. INSTALLATION RESPONSIBILITIES FOR INCIDENTAL ITEMS

7.1 The Contractor/subcontractor shall be responsible for reopening connections to all laterals shown on the drawings. This work shall be incidental to the CIPP pay item.

7.2 Cleaning of Host Line - The Contractor, when required, shall remove all internal debris out of the line that will interfere with the installation of CIPP. All debris removed from the sewer line shall be taken to the Persigo Wash Wastewater Treatment Plant located at 2145 River Road. Any hazardous waste material encountered during this project will be considered as a changed condition. The cleaning of the host lines shall be considered incidental to CIPP installation and will not be paid for separately.

7.3 Inspection of Pipelines - Inspection of pipelines shall be performed by experienced personnel trained in locating breaks, obstacles and service connections by close circuit television. The interior of the pipeline shall be carefully inspected to determine the location of any conditions which may prevent proper installation of CIPP into the pipelines, and it shall be noted so that these conditions can be corrected. A video tape and suitable log shall be kept for later reference by the Owner.

7.4 Line Obstructions - It shall be the responsibility of the Contractor to clear the line of obstructions such as solids, roots, projecting service pipes, mineral deposits, and other obstructions that will prevent the insertion of CIPP. If pre-installation inspection reveals an obstruction such as a protruding service connection, dropped joint, or a collapse that will prevent the inversion process, that was not evident on the pre-bid video and it cannot be removed by conventional sewer cleaning equipment, then the Contractor shall make a point repair excavation to uncover and remove or repair the obstruction. Such excavation shall be approved in writing by the Owner's representative prior to the commencement of the work and shall be considered as a separate pay item.

8. INSTALLATION

8.1 Installation of the CIPP shall conform with Traffic Control specifications and Special Conditions stipulated elsewhere in the Contract Documents. CIPP installation shall be in accordance with ASTM F1743 with the following modifications:

8.2 Resin Impregnation - The quantity of resin used for tube impregnation shall be sufficient to fill the volume of air voids in the tube with additional allowances for polymerization shrinkage and the loss of resin through cracks and irregularities in the original pipe wall. A vacuum impregnation process shall be used. To insure thorough resin saturation throughout the length of the felt tube, the point of vacuum shall be no further than 25 feet from the point of initial resin introduction.

After vacuum in the tube is established, a vacuum point shall be no further than 75 feet from the leading edge of the resin. The leading edge of the resin slug shall be as near to perpendicular as possible. A roller system shall be used to uniformly distribute the resin throughout the tube. If the Installer uses an alternate method of resin impregnation, the method must produce the same results. Any alternate resin impregnation method must be proven.

8.3 Tube Insertion – The wet out tube shall be positioned in the pipeline using the pull-through or inversion method.

8.4 Temperature gauges shall be placed inside the tube at the invert level of each end to monitor the temperatures during the cure cycle.

8.5 Curing shall be accomplished by utilizing steam pressure in accordance with the manufacturer's recommended cure schedule.

8.6 Cooling shall be performed using chilled air.

8.7 Reinstatement of Services– Sanitary Service connections (taps) at the main be reopened without excavation, utilizing a remotely controlled cutting device, monitored by a video TV camera. The Contractor shall certify that he has a minimum of two complete working units plus spare key components on site before each inversion. No additional payment will be made for excavations for the purpose of reopening connections (unless noted otherwise on the Construction Drawings) and the Contractor will be responsible for all costs and liability associated with such excavation and restoration work. Any damage to the CIPP or service lateral resulting from removing the coupon of CIPP material at the service tap shall be repaired at the Contractor's expense by open-cut excavation and installation of repair coupling and service tap as directed by the Engineer.

9. INSPECTION

9.1 CIPP samples shall be prepared and physical properties tested in accordance with ASTM, F1216 Section 8, using either method proposed. The flexural properties must meet or exceed the values listed in Table 1 of the applicable ASTM.

9.2 Wall thickness of samples shall be determined as described in ASTM F1216. The minimum wall thickness at any point shall not be less than 87½% of the design thickness as specified in this appendix.

9.3 Visual inspection of the CIPP shall be in accordance with ASTM F1216 and F1743. The Contractor shall provide a TV-log of the installation after all work is complete and prior to placing the sewer back in service.

10. CLEAN-UP

10.1 Upon acceptance of the installation work and testing, the Contractor shall restore the project area affected by the operations to a condition at least equal to that existing prior to the work.

11. PAYMENT

11.1 Payment for the CIPP installation shall be per lineal foot of CIPP installed, measured from end of pipe to end of pipe and shall include all aspects of the work described herein and on the Construction Drawings. This shall include the capture and treatment of all process water. Payment for trenchless connection of services shall be made separately.

Add the following to **104.2.b Installation/Opening of Sewer Service Lines**:

Verification of Active Taps

It is the Contractors responsibility to verify all existing sewer taps to determine active vs inactive by smoke testing, use of dye, inserting a snake through a clean-out or roof vent and tracing to sewer main, etc. and only connect the active taps. There will be no separate measurement or payment for this work which will be considered incidental. Any damage to property or costs associated by failing to open active taps shall be the responsibility of the Contractor.

SECTION 105 – PIPELINE TESTING

Delete Section 105.2. The City of Grand Junction will not require the new sanitary sewer main to be pressure or leakage tested.

APPENDIX D2

Pipe Rehabilitation by UV Cured-In-Place Pipe (CIPP) Specification

1. INTENT

1.1 It is the intent of this specification to provide for the reconstruction of pipelines and conduits by the

installation of UV Cured-In-Place Pipe (CIPP). The UV Cured-In-Place Pipe (CIPP) will be continuous and tight fitting. The CIPP must be designed for a "Fully Deteriorated Condition" with a safety factor of 2.0. The following requirements apply generally to the CIPP portion of the work with additional specifications as provided below:

- The Subcontractor performing the CIPP work must be identified on the Bid Form and shall not be changed after bid opening without specific written approval from the Project Engineer.
- Prior to installation of the CIPP, a design report shall be submitted to the Project Engineer, showing all assumptions, design calculations, test data and other pertinent information. **The design report must be stamped by the Licensed Professional Engineer that prepared it**. The design report is incidental to the lump sum pay item for installation of the CIPP.

2. REFERENCED DOCUMENTS

A. ASTM D-543 Standard Test Method for Resistance of Plastics to Chemical Reagents.

B. ASTM D-790 Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.

C. ASTM D-1682 Test Methods for Breaking Load and Elongation of Textile Fabric.

D. ASTM D-3567 Standard Practice for Determining Dimensions of Reinforced Thermosetting Resin Pipe (RTRP) and Fittings.

E. ASTM D-3681 Standard Test Method for Chemical Resistance of Reinforced Thermosetting Resin Pipe in a Deflected Condition.

F. ASTM D-5813 Standard Specification for Cured-in-Place Thermosetting Resin Sewer Pipe.

G. ASTM F-1216 Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Inversion and Curing of a Resin-Impregnated Tube.

H. ASTM F-1743 Standard Practice for Rehabilitation of Existing Pipelines and Conduits by Pulled-in-Place Installation of Cured-in-Place Thermosetting Resin Pipe (CIPP).

I. ASTM F-2019 Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Pulled in Place Installation of Glass Reinforced Plastic (GRP) Cured-in-Place Thermosetting Resin Pipe (CIPP).

J. ASTM D-2990 Standard Test Methods for Tensile, Compressive, and Flexural Creep and Creep-Rupture of Plastics.

K. DIN EN 761 Plastic Piping Systems: Glass—Reinforced Thermosetting Plastics (GRP) Pipes - Determination of' the Creep Factor Under Dry Conditions.

L. APS Water Porosity Standard.

2.1 SUBMITTALS

A. Product Data: Resin; tube material, qualification testing results for laminate sample, resin enhancer, bond enhancer, certification of applicability of resin; sealant/caulking material, resin curing schedule showing time and temperature for each reach, Manufacturer's recommended installation pressures, minimum and maximum for each reach.

B. Design Information: Wall thickness design calculations for each pipe section.

C. Inspection Information: Video recordings (DVD) of pre and post-insertion inspections and curing

logs.

D. Qualifications: Documentation for experience of lining manufacturer and installer.

E. Certification: Affidavit for flat plate samples.

F. Public Relations: Notification Flyers.

G. Lateral Reinstatement: Products and Methods.

H. Resumes of the superintendents, foremen, and applicable lead personnel for the resin impregnation (wetout) crews and the field installation crews that will be used on this project. These must demonstrate competency and experience to perform the work scope as defined in the contract specifications.

3. PRODUCT, MANUFACTURER/INSTALLER QUALIFICATION REQUIREMENTS

3.1 Since sewer products are intended to have a 50 year design life, and in order to minimize the Owner's risk, only proven products with substantial successful long term track records will be approved. All trenchless rehabilitation products and installers must be pre-approved prior to the formal opening of proposals.

3.2 Manufacturer: Company specializing in manufacturing the Products specified in this section with minimum 3 years' experience, or otherwise allowed prior to bid acceptance.

ISO-9001 manufacturer certification is required.

3.3 Installer: Company specializing in performing the work of this section and who is licensed and approved by the manufacturer. Company shall have experience with projects of similar size and complexity as this project, minimum of 500,000 feet of installed UV CIPP product within the last 5 years, or otherwise allowed prior to bid acceptance.

Product Manufacturer experience shall not be utilized in lieu of actual installer experience. Installer experience refers to the actual Contractor intending to do the work. No exceptions.

3.4 Project Superintendent: Project Superintendent shall have a minimum of 3 years' experience as a Superintendent on UV-Cured CIPP projects, and have supervised the installation of 500,000 feet of installed UV CIPP product within the last 5 years, or otherwise allowed prior to bid acceptance.

Full Time Project Superintendent will be required and MUST be on site at all times throughout the duration of the lining work.

4. MATERIALS

4.1 Tube:

4.1.1 The tube material shall meet the requirements of ASTM F 2019. Standard felt lining systems are not acceptable.

4.1.2 The tubes shall have a uniform thickness that when compressed at installation pressures will equal the designed nominal tube thickness.

4.1.3 Contractor shall present tube thickness design calculations based on structural requirements listed below.

4.1.4 The tube shall be fabricated to a size that when installed, will tightly fit the internal circumference and length of the original pipe. Allowance should be made for circumferential stretching during

insertion. The minimum length shall be that deemed necessary by the Contractor to effectively span the distance between respective access points unless otherwise specified. The Contractor shall verify the lengths and diameters in the field before fabricating the tube. Individual insertion runs can be made over one or more manhole sections as determined in the field by the Contractor, as long as traffic control restrictions are adhered to.

4.1.5 The outside layer of the tube (before insertion) shall be plastic coated with a flexible material.

4.1.6 The tube shall be homogeneous across the entire wall thickness containing no intermediate or encapsulated elastomeric layers.

4.1.7 The wall color of the interior pipe surface of the CIPP after installation shall be a light reflective color so that a clear detail examination with closed circuit television inspection equipment may be made.

4.1.8 Over Expansion Sleeves shall be used in the following locations and as directed by the Engineer after the pipeline has cleaned and inspected via CCTV per the contract documents:

a. Each end of the pipe segment

b. At each section of pipe that has complete or significant wall loss.

4.2 UV Materials:

4.2.1 For UV products, the finished UV Light Cured Fiberglass pipe liner in place shall be fabricated from materials which when complete are chemically resistant to and will withstand internal exposure to domestic sewage having a pH range of 5 to 11 and temperatures up to 150 F.

4.2.2 The liner thickness shall be sized for a minimum hydrostatic and earth load as per design criteria or per ASTM F1216. The earth load and hydrostatic load shall be increased to the manhole depth unless otherwise noted as shown on the Drawings.

4.2.3 The liner shall be structurally designed to the following standards:

a. minimum service life: 50 years

b. fully deteriorated host pipe/direct bury condition

c. prism loading: 120 PCF soil

d. factor of safety: 2.0

e. ovality factor: 2%

f. maximum deflection: 5%

g. soil modulus: 1000 PSI

h. maximum lining enhancement factor: 5

i. H-20 live loading, applicable long term modulus reduction factor

j. groundwater: assume the groundwater elevation is at the existing ground surface

4.2.4 All UV cured-in-place fiberglass lining products shall comply with ASTM F 2019-03 or the intent thereof as determined by the Engineer, minimum finished liner thickness as defined by design calculation.

4.2.5 The Contractor shall furnish a general-purpose polyester or vinyl ester UV curing resin and catalyst system compatible with the Ultra Violet Light Curing process that provides cured physical strengths specified herein

4.3 Resin:

4.3.1 Submit data certifying that resin system is not recycled. Only PREMIUM, NON-RECYCLED resins will be accepted.

4.3.2 The resin shall be a corrosion, shrinkage and abrasion resistant UV cured isophthalic polyester resin that when properly cured within the tube composite meets the requirements of ASTM F2019, the physical properties herein, and those to be utilized in the design of the CIPP for this project. The resin shall produce CIPP that will comply with the structural and chemical resistance requirements of this specification.

4.3.3 The acceptable resin shall have been tested according to ASTM D2990, D5813, and F1216 by accredited third party testing facilities. Results of these tests shall be made available to the Engineer upon request.

4.3.4 The resin must be manufactured under ISO 9001:2015 certified procedures. The resin must have heat deflection temperature greater than 224 degrees Fahrenheit.

4.3.5 The quantity of resin used for tube impregnation shall be sufficient to fill the volume of all voids in the tube material with additional allowances for polymerization shrinkage and the loss of resin through cracks and irregularities in the original pipe wall. The amount of resin used shall exceed the calculated value by five to ten percent (5%-10%). Resin in excess of the calculated value shall be uniformly distributed throughout the length of the liner. The volume of resin required to meet the conditions listed above, shall be calculated for the diameter, thickness and targeted addition allowance of each diameter and thickness of CIPP liner per unit length, typically, per foot, and submitted to the Owner/Engineer for review.

4.4 End Sealing:

4.4.1 Each end of the CIPP shall be sealed to provide a watertight seal between the original pipe and the CIOPP liner. Sealing materials shall be compatible with the original pipe material and shall be suitable for application to moist surfaces.

4.4.2 Acceptable end sealing products include:

a. A two component, 100% solids, solvent-free, moisture tolerant, high-modulus, High-strength, structural epoxy paste adhesive conforming to ASTM C-881, Types I and IV, Grace-3, Class B and C. Product shall be Sikadur 31, Hi-Mod Gel manufactured by Sika, or approved equal.

b. A quick setting fiber reinforced calcium aluminate sulfate resistant cementitious material. Product shall be Strong-Seal QSR, or approve equal.

c. A single component hydrophilic polyurethane sealant. Product shall be Swellseal WA manufactured by DeNeef, or approved equal.

4.5 Lateral Seals:

4.5.1 ASTM F2561 compliant LMK T-Liner lateral sealing system shall be used to reconnect existing service laterals.

5. CHEMICAL RESISTANCE REQUIREMENTS

5.1 CIPP samples for testing shall be of tube and resin system same as to that proposed for actual construction. It is required that CIPP samples with and without plastic coating meet these chemical-testing requirements.

6. STRUCTURAL REQUIREMENTS

6.1 The layers of the cured CIPP shall he uniformly bonded. It shall not be possible to separate any two layers with a probe or point of a knife blade so that the layers separate cleanly or the probe or knife blade moves

freely between the layers; nor shall separation of the layers occur during testing performed under the requirements of this specification.

6.2 The cured CIPP for fiberglass reinforced tubes shall also conform to the minimum structural standards as listed below:

Flexural Strength (ASTM D-790):	25,000 PSI
Modulus of Elasticity (ASTM D-790):	1,000,000 PSI

7. PREPARATION

7.1 Access Points - Contractor will locate and designate all manhole access points, open and make access points available for the Work.

7.2 Cleaning of Sewer Lines - The Contractor shall remove all roots and internal debris (including grease), from the sewer line prior to CIPP installation by any means necessary.

7.3 Inspection of Pipelines - Inspection of pipelines shall be performed by NASSCO PACP-certified personnel, experienced and trained in locating defects, breaks, obstacles and service connections by closed circuit television (CCTV).

7.4 Infiltration - Minor infiltration is a normal condition sometimes encountered during the CIPP process. It is not a "changed condition" and should not be regarded as a reason for change orders. If in the opinion of the Engineer, infiltration is significant enough to adversely affect the curing process, chemical grouting or other remedies may be required. Payment for this additional work will be negotiated by the Owner and documented as a change order.

7.5 Site Restoration - Areas damaged or modified by the Work for this project shall be repaired or restored to a condition equal to or better than the original condition. Site restoration is incidental to the Work and shall not be regarded as a reason for change orders.

7.6 Public Relations - A Public Information and Notification Program shall, as a minimum, require the Contractor to be responsible for contacting homeowners or businesses who will be affected by the construction activities and informing them of the Work to be done and the estimated timing for the Work. Written notice shall be delivered to each home or business 2 weeks prior to installation. Notice shall include a local telephone number of the Contractor they can call to discuss the project, and how the homeowner or business will be affected. The written notice must be reviewed by the Owner prior to the start of' any work.

7.7 Service connections - Determine by dye test, running water or visual inspection whether connections are active or abandoned and provide results to Engineer prior to insertion. Engineer and Contractor shall agree prior to insertion which services are to be reopened. Only reopened services will be paid for.

8. INSTALLATION

8.1. CIPP installation shall be in accordance with ASTM F2019 for UV light Curing Installations. Installation shall be in accordance with manufacturer's recommendations, which shall be available for verification by the Engineer.

8.2 Curing schedules shall be strictly adhered to, per manufacturer requirements.

8.3 The CIPP liner shall make a tight fitting seal with the existing pipe(s) in the manholes. If the CIPP liner fails to make a tight seal, the Contractor shall apply a seal at that point using a sealant or caulking material that is compatible with CIPP materials, watertight, flexible and impervious to hydrogen sulfide. The top half of the

CIPP through a manhole shall be neatly cut off and not broken or sheared off. The channel in the manhole shall be a smooth continuation of the pipe(s) and shall be merged with other lines or channels. Void space between liner and channel wall shall be filled with non-shrink grout and sealed with sealant. CIPP and the existing pipe in the manhole must be sealed before proceeding on to the next manhole section and all manholes shall he individually inspected for CIPP cut-offs and sealing works. Liner shall be cut off at the pipes and all liner removed within intermediate manholes with deflection angles greater than 45 degrees.

8.4 The finished CIPP shall be continuous over the entire length of an insertion run between two manholes and be free from visual defects such as foreign inclusions, dry spots, pinholes, and delamination. If in the opinion of the Engineer, a portion of the liner is inadequate, the Contractor shall correct the defect(s) to the satisfaction of the Engineer.

8.5 Contractor shall terminate and seal end of CIPP liner to structures using one of the previously addressed methods.

8.6 A pre-liner will be allowed without prior approval from the Owner.

8.7 The liner shall be pulled into place via the manufacturer's instructions.

8.8 The liner shall he inflated with air before curing with Ultra Violet light according to the manufacturer's specifications.

8.9 The reconstruction tube will be impregnated to meet manufacturer specifications with UV Curing Resins in the manufacturing facility prior to installation. The Contractor shall allow the Owner to inspect the materials before installation.

8.10 The Pre Impregnated UV Light Fiberglass Liner shall be inserted through the existing manhole or other approved access by means of a pull in place process utilizing a winch which will fully extend it to the next designated manhole or termination point. The Fiberglass Liner shall be inflated in place slightly with air to the manufacturer's specification for installing the UV Chain. Liner cure schedule shall be adhered to per manufacturer's specifications. The Fiberglass liner will then be inspected with a camera mounted on the UV Chain as it is pulled to the end of the liner. After inspection and complete inflation to manufacturer's specifications, the UV light bulbs will he turned on. The curing will commence at a rate specified by the manufacturer according to the total dimensions of the liner.

8.11 As the liner is curing, the UV Curing System shall record all curing data in DVD format for the viewing of the Owner.

8.12 Initial cure shall be deemed to be complete when the UV Chain arrives at the initial entry point of insertion.

9. APPROVED PRODUCTS AND INSTALLERS (OR APPROVED EQUAL):

Saertex UV-Cured CIPP Liner System

Saertex USA, LLC.
12200 Mt. Holly-Huntersville Rd. Suite A
Huntersville, NC 28078
(704) 464-5998
Contact: Mark Hallett

Approved Installer for Saertex Liner System

C&L Water Solutions. Inc.
12249 Mead Way
Littleton, CO 80125
(303) 791-2521
Contact: Christopher Larson

10. TESTING

10.1 Testing will be required for each insertion of CIPP lining. The layers of the cured CIPP shall he uniformly bonded. It shall not be possible to separate any two layers with a probe so that the layers separate cleanly. If separation of the layers occurs during testing of field samples, new samples will be cut from the manhole samples. Any reoccurrence may cause rejection of the work. Contractor shall provide all labor and materials necessary to produce samples for laboratory and or field testing. Contractor to contract directly with certified laboratory for testing as required. Contractor shall contact testing lab prior to first insertion and determine sample size requirements. Samples shall be large enough to perform wall thickness test, flexural strength and modulus of elasticity test and porosity test.

10.2 Sample Preparation:

Samples will be submitted by the Contractor to an independent third party laboratory. The cured sample shall be tested by an independent testing laboratory approved by the Engineer. Final payment will not be made until acceptable test results are received by the Engineer.

The Contractor shall be responsible for any deviation from the specified physical properties. Failure to meet the specified physical properties will result in the liner being considered defective work. The Contractor shall be responsible for all costs associated with repair of defective work.

Samples used for testing shall be individually labeled to record the following:

1. Contract number and title
2. Sample number
3. Date of installation
4. Location of installation
5. Contractor Name including person responsible for collecting samples
6. Upstream and downstream manhole numbers from where the sample was taken
7. Type of restraint used

10.3 The wall thickness will be measured in accordance with the applicable sections of ASTM Test Method D5813 and D3567. Flexural strength and flexural modulus of elasticity shall be determined in accordance with ASTM D-790. Porosity test will be conducted in accordance with APS Water Porosity Standard. For pipe 15 inch and smaller, a constrained sample will he obtained by inverting through a like diameter inverted half-section of pipe which has been held in place by a suitable heat sink, such as sandbags. Sample location can be either the receiving manhole or an intermediate MH provided a straight through channel exists. For pipe greater than 15 inch but no greater than 24 inch a constrained sample will be obtained from an intermediate MH, if one exists.

10.4 A post-insertion CCTV log in a format acceptable to the Engineer shall he provided to the Engineer within two weeks of liner curing.

10.5 Wrinkle height shall not exceed 2% of the host pipe diameter.

10.6 Non-Conforming Work:

10.6.1 If the measured wall thickness of the installed ClPP is more than 5% less than specified, a minimum of 5% reduction in payment for that insertion will occur, or an additional liner sufficient to make up the deficiency must be installed, at the determination of the Engineer.

10.6.2 If the flexural strength, and/or flexural modulus of elasticity is more than 5% less than specified, a

minimum 5% reduction in payment for that insertion will occur, or an additional liner sufficient to make up the deficiency must be installed, at the determination of the Engineer.

10.6.3 If the liner fails the APS water porosity test (pass/fail test), a minimum 5% reduction in payment for that insertion will occur, or complete liner removal may be required or an additional liner sufficient to make up the deficiency must be installed, at the determination of the Engineer.

10.6.4 For all instances where the CIPP is deemed unacceptable, the Contractor shall submit a method of repair or replacement for review and approval by the Owner.

10.6.5 All Work required to remedy non-conforming work shall he at the sole cost of the Contractor.

11. PAYMENT

11.1 Payment for the CIPP installation shall be per lineal foot of CIPP installed, measured from end of pipe to end of pipe and shall include all aspects of the work described herein and on the Construction Drawings. This shall include the capture and treatment of all process water. Payment for trenchless connection of services shall be made separately.

Add the following to **104.2.b Installation/Opening of Sewer Service Lines**:

Verification of Active Taps

It is the Contractors responsibility to verify all existing sewer taps to determine active vs inactive by smoke testing, use of dye, inserting a snake through a clean-out or roof vent and tracing to sewer main, etc. and only connect the active taps. There will be no separate measurement or payment for this work which will be considered incidental. Any damage to property or costs associated by failing to open active taps shall be the responsibility of the Contractor.

SECTION 105 – PIPELINE TESTING

Delete Section 105.2. The City of Grand Junction will not require the new sanitary sewer main to be pressure or leakage tested.

12. PRIVATE PROPERTY

Care shall be taken to avoid damage to private property (i.e. sprinkler stems, lawn areas). If damage occurs, repairs shall be completed as soon as possible. Costs associated with repairs shall be the responsibility of the Contractor.

END OF SECTION

CITY OF Grand Junction COLORADO

Purchasing Division

ADDENDUM NO. 2

DATE: **February 15, 2019**
FROM: **City of Grand Junction Purchasing Division**
TO: **All Offerors**
RE: **2019 Sewer Interceptor Repair and Replacements IFB-4602-19-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. We would like to submit an "as equal" substitute material for the manhole rehab portion of the 2019 Sewer Interceptor Repair and Replacements project. The product that we would like to submit is **GeoKrete**®, which is a corrosive resistant geopolymer material with superior structural strength.

A. The City has conditionally approved GeoKrete as an "as equal" substitute material for the rehabilitation of the existing manholes, contingent on manufacturer acceptance of the required material and installation warranty period of 10 years, and minimum coating thickness of 500 mils.

2. Q. Have you considered Electro Scan for the 2019 Sewer Interceptor Repair and Replacements project?

A. The City is considering, and will be responsible for hiring a 3rd party QA testing company for the Quality Assurance of the CIPP and manhole rehabilitation installation.

The Contractor is responsible for Quality Control during the installation of the CIPP and manhole rehabilitation.

3. Q. We would like to submit as equal Castagra Ecodur material for the manhole rehab portion of the 2019 Sewer Interceptor Repair and Replacement Project.

A. The City has conditionally approved Costagra Ecodur as an "as equal" substitute material for the rehabilitation of the existing manholes, contingent on manufacturer acceptance of the required material and installation warranty period of 10 years, and minimum coating thickness of 500 mils.

4. Q. Can the City please provide a SS plan upstream of the 24" line where the bypass would start? Refer to map page 19 – MH C3-261-011.

A. Yes. Please see the attached As-Built sheet(s) for the above requested segment.

5. To clarify, the Inquiry Deadline for this solicitation process is by 5:00pm on February 19, 2019.

6. Q. Can videos of pipeline inspection be provided?

A. Videos will be provided to the awarded contractor for this project.

7. Q. Is leak mitigation in the manhole substrate and between the host pipe and the CIPP liner at the manhole going to be the responsibility of the manhole lining contractor?

A. Yes. Refer to SP-3, within Section 3.4 (Scope of Work), within the original Invitation for Bid document. The Contractor performing the liner installation shall prepare the manhole surface prior to applying the liner. This includes mitigating any leakage through the manhole substrate, as well as between the host pipe and the CIPP liner at the manhole.

8. Q. Will the City provide any pre-CCTV recordings for any of the segments proposed to be replaced?

A. Yes. Once the Contractor has been selected, the City will provide links to segments currently on record. Please note that the City does not guarantee that all segments included in the proposed project have been TV'd. The Contractor will be responsible for supplying CCTV on additional segments they deem necessary. Additional CCTV operations shall be incidental to the CIPP installation, and will not be paid for separately.

9. Q. Will the City require styrene testing?

A. Yes. All water produced during the curing process of the CIPP must be captured and tested, prior to being released back into the City system.

10. Q. How far down will the coatings within the rehabilitated manholes be required to go?

A. The coating within the lined manholes will be extended down to the low-flow water line.

11. Q. Will the City locate and mark the existing locations of the damaged multi-use concrete path prior to construction start date?

A. Yes. The City will mark all damaged locations of the concrete path adjacent to Line(s) A & B prior to beginning construction. The Contractor shall include the identified damaged areas of the multi-use trail on the traffic control plan.

12. Q. Can construction materials be stored at the toe of the RR embankment?

A. Yes. However, the staging area for any construction materials must be outside the existing railroad easement.

13. Q. How many manholes will need to be lined, and how many in addition will require manhole ring and cover replacement? Also, how many manholes will need to be fully replaced?
A. The City does not know the current condition of all existing manholes within the scope of the project. The City anticipates that zero manholes will need to be fully replaced. During construction, the Contractor shall notify the engineer if any manholes, (including the rings and covers) that are in a

state of disrepair, where lining alone appears to be inadequate for rehabilitation. The City anticipates that all manholes within the scope of the CIPP project will be lined.

14. Q. What is to be done with the sediment after cleaning the host pipe and manhole, prior to lining the manhole?

A. Refer to subsection(s) 3.3.35 and 3.3.40 of the Special Conditions, within the Invitation to Bid document, regarding the capture and delivery of sediment from cleaning the existing pipes and manholes.

15. Subsection 3.3.19 Quality Control Testing has been updated or modified as follows:

Quality Control Testing: The Contractor shall perform Quality Control on the CIPP installation per Appendix D.1/D.2, Cured-In-Place-Pipe (CIPP). The Contractor shall perform Quality Control on manhole rehabilitation per SP-3 of the Special Provisions.

16. The updated Construction plans will be included as part of Addendum #3.

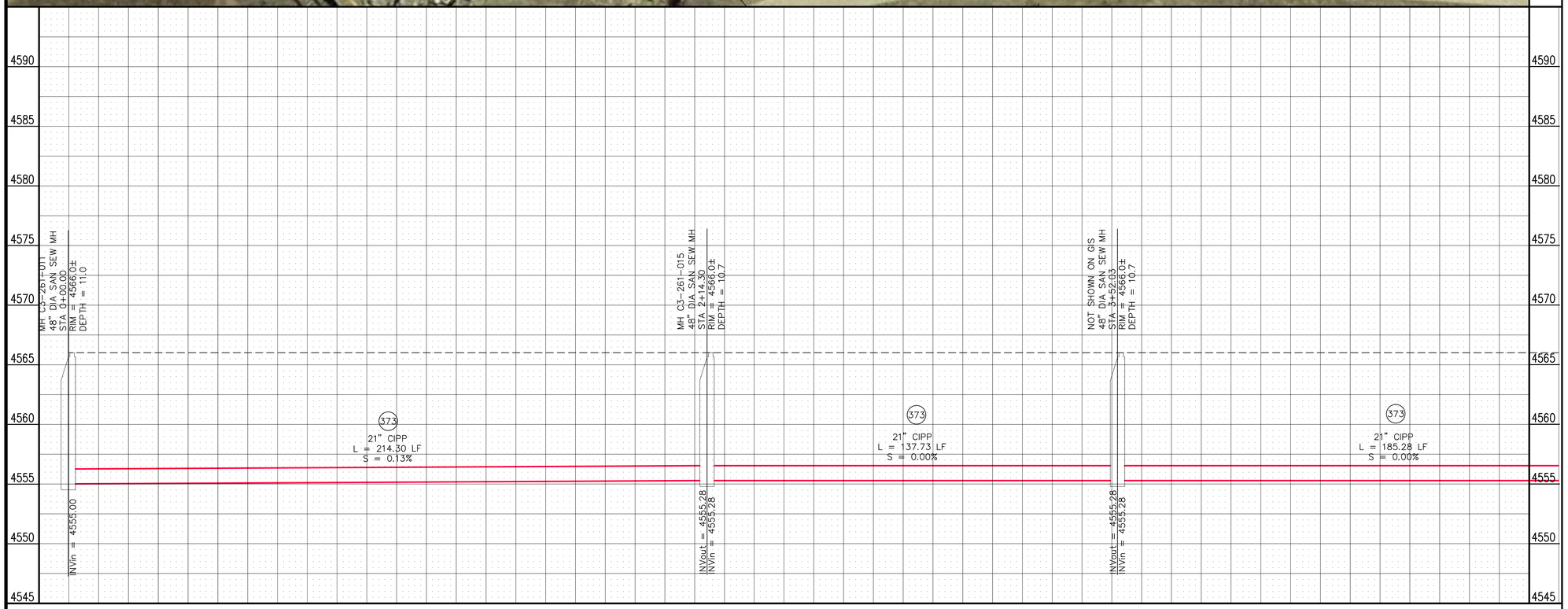
17. The updated Bid Schedule will be included as part of Addendum #3.

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



PROJECT NO. 902-F001508

CONSTRUCTION NOTES

373 SP CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY PIPE SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK AREA TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC.

376 REMOVE CIPP COUPON AT SERVICE LOCATION (INCIDENTAL TO CIPP)

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY JAH DATE 7/2012
DESIGNED BY JT DATE 7/2012
CHECKED BY DATE
APPROVED BY DATE

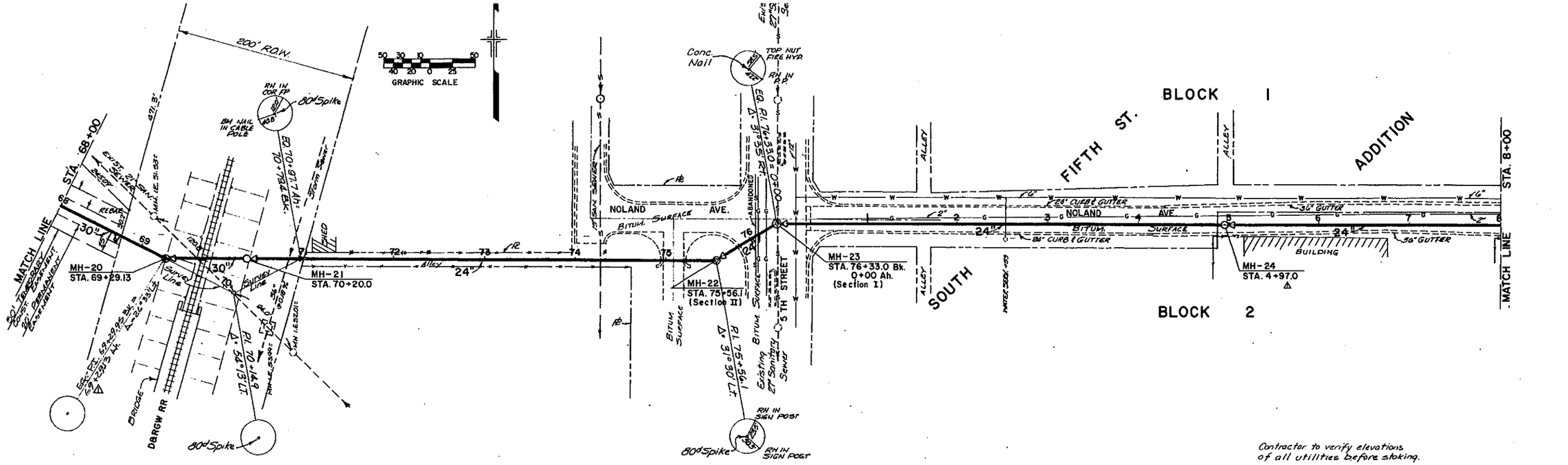
SCALES: PLAN HORIZONTAL 0 5 10 20; PROFILE HORIZONTAL 0 5 10 20, VERTICAL 0 2.5 5

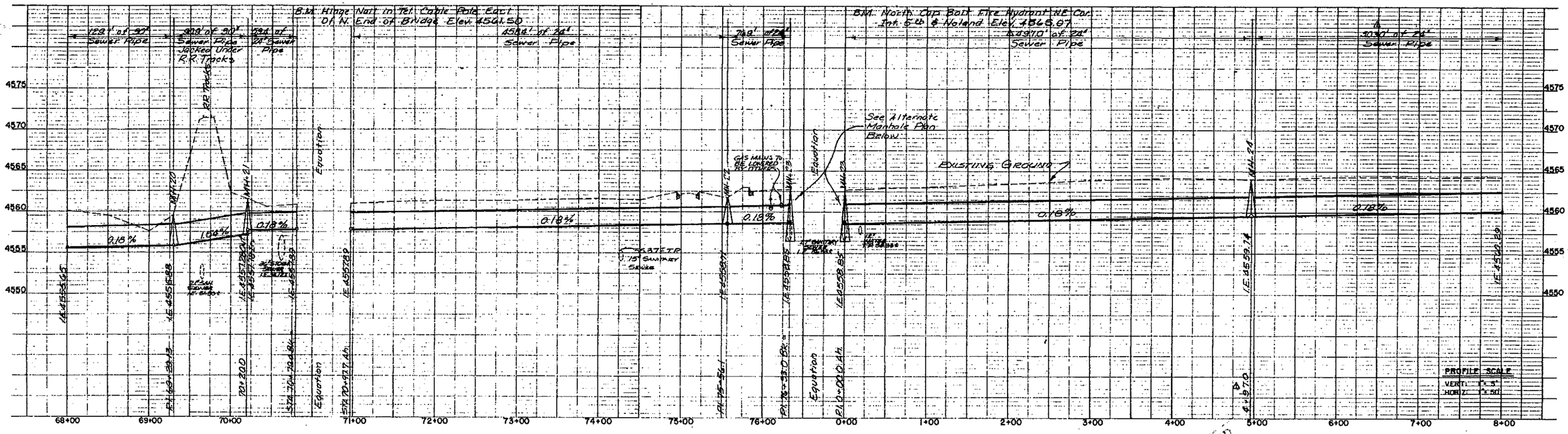
CITY OF Grand Junction COLORADO

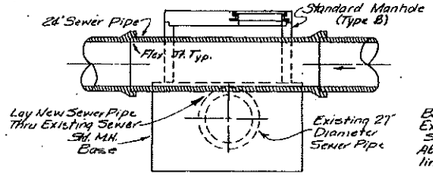
PUBLIC WORKS AND PLANNING ENGINEERING DIVISION

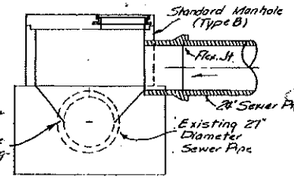
2012 SEWER INTERCEPTOR REHABILITATION
SANITARY SEWER PLAN AND PROFILE
RIVER TRAIL – STA. 0+00 TO 5+00

16









AS CONSTRUCTED

SEWER SYSTEM IMPROVEMENTS
GRAND JUNCTION, COLORADO

SOUTH SIDE INTERCEPTOR SEWER
(SECTIONS I & II)
PLAN and PROFILE
STA. 68+00 to STA. 76+33 (SECT. II)
STA. 0+00 to STA. 8+00 (SECT. I)

HENNINGSON, DURHAM & RICHARDSON, Inc.
ENGINEERS - ARCHITECTS

CITY OF Grand Junction COLORADO

Purchasing Division

ADDENDUM NO. 3

DATE: **February 22, 2019**
FROM: **City of Grand Junction Purchasing Division**
TO: **All Offerors**
RE: **2019 Sewer Interceptor Repair and Replacements IFB-4602-19-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. There is a short 10' section of 24"of pipe - MH D1-252-104 and D1-252-010 - that breaks in between Map pages 13 and 14. It is not called out for lining, but appears to be part of the project. Does the City want this segment lined?

A. The segment in question will also be lined as part of the Project.

2. Q. For pedestrian safety purposes, will the City allow a complete trail closure with diversion to Riverside Parkway during construction activities on the trail area?

A. It is the City's desire to keep access open to all portions of the trail during construction by way of signage. The Contractor that is awarded the project shall submit a traffic control plan to the City for approval. The Contractor and Engineer can then coordinate any temporary diversions/closures the Contractor feels is necessary.

3. Q. Are temporary trail closures acceptable?

A. See response above.

4. Q. Since it is an undetermined quantity, will bench construction, if any is needed, be paid from the force account?

A. The Contractor shall notify the engineer if the bench of any manhole is deteriorated beyond what can be rehabilitated, prior to rebuilding it. The costs associated with constructing a new bench will be paid from the force account.

5. Q. It is anticipated that some of the brick manholes on the 24' segments may become damaged during CIPP installation. What is the correct repair the City wants if -

a. If the brick manhole needs replacement, does the City want brick replacement or is a barrel section acceptable?
b. If a barrel section is acceptable, does the City have a detail on re-setting a pre-cast concrete cone on top of the brick manhole?
c. If the brick manhole is replaced, does the City still want Spectrashield or approved MH Rehab product on the new manhole?
d. Or, since the manhole would be new, does the City want any rehab at all?

A. The Contractor shall maintain caution during CIPP installation so as to not damage existing manholes. The Contractor shall repair any manholes that are damaged during CIPP installation.

a. If a brick manhole is damaged beyond repair, the Contractor shall remove it and replace it with a new concrete manhole. The Contractor shall inform the engineer if any manhole has been damaged during CIPP installation, prior to replacing the damaged manhole. This item will be paid from the force account.

b. This situation does not apply.

c. Yes. The Contractor shall also line any newly installed manholes with the selected lining/coating product.

d. N/A

6. Q. Will the City consider extending the calendar build time to 150 or 180 calendar days?

A. No. Due to multiple projects following in succession within the same area, the CIPP installation must be completed within the stated 120 calendar days.

7. Q. Will the contractor be required to pull a Railroad permit?

A. No. The City will coordinate with Union Pacific Railroad.

8. Q. Does the contractor need to include costs for the permit, Railroad insurance, flagging, and Railroad safety training?

A. No.

9. Q. After site review, we identified approximately 10 quantity 48" manholes that are already lined with Spectrashield. In our past experience, thermal cure has the potential to bond and/or melt to the product. Are we to assume that Spectrashield repairs need to be done to those manholes after installation is complete? Can those repairs be done with any of the approved MH rehab products if they are the selected Subcontractor?

A. The awarded Contractor (if not contracted with SpectraShield) shall coordinate with SpectrShield prior to installing the CIPP on pipe segments that span between existing SpectraShield lined manholes. SpectraShield shall be consulted on inspecting the condition of said manholes, and shall make the determination for further rehabilitation (if needed) on those manholes.

10. Q. Section 6 CIPP Testing requirements call for the contractor to provide samples to the City. Is the City obtaining a 3rd party lab for testing? Who is paying for the testing – Contractor or the City?

A. The City will obtain and pay for the 3rd party testing. The awarded Contractor will still need to provide samples of the installed CIPP to the City.

11. Q. Can the City please confirm the pipe type of the 12", 15", and 18" segments? Maps state they are VCP, but site inspection reveals some of the type as PVC.

A. Please see the updated construction plans and Bid Schedule for existing pipe type and quantity.

12. Q. Question: We would like to have SprayWall manufactured by SprayRoq at 250mils as an approved coating for this project. We are requesting 250mils as SprayWall is a structural Polyurethane and the specified coating of 500mils is foam with a thin top coat of epoxy.

A. The City has approved SprayWall, manufactured by SprayRoq as an "as equal" substitute material for the rehabilitation of the existing manholes.

16. See attached updated Construction plans.

17. See attached updated Bid Schedule. Contractor shall utilized this Bid Schedule when submitting their bid documents.

18. The City has approved GeoKrete, as an "as equal" substitute material for the rehabilitation of the existing manholes.

19. The City has approved Costagra Ecodur, as an "as equal" substitute material for the rehabilitation of the existing manholes.

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: 2019 Sewer Interceptor Repair and Replacement Project

Contractor: _____

Item No.	CDOT, City Ref.	Description	Quantity	Units	Unit Price	Total Price
1	626	Portable Sanitary Facility	1.	Lump Sum	$ _____	$ _____
2	630	Mobilization	1.	Lump Sum	$ _____	$ _____
3	630	Traffic Control (Complete In Place)	1.	Lump Sum	$ _____	$ _____
4	630	Traffic Control Flagging	1,000.	Hours	$ _____	$ _____
5	630	Traffic Control Plan	1.	Lump Sum	$ _____	$ _____
6	SP	Bypass Pumping per City Specifications. See Appendix B in Bid Documents.	1.	Lump Sum	$ _____	$ _____
7	SP	Weekly Newsletter- See Bid Documents SC 3.3.13	1.	Lump Sum	$ _____	$ _____
8	SP	12 Inch CIPP (Complete in Place) See Appendix D.1/D.2 in Bid Documents.	1,961.	LF	$ _____	$ _____
9	SP	15 Inch CIPP (Complete in Place) See Appendix D.1/D.2 in Bid Documents.	895.	LF	$ _____	$ _____
10	SP	18 Inch CIPP (Complete in Place) See Appendix D.1/D.2 in Bid Documents.	2,894.	LF	$ _____	$ _____
11	SP	24Inch CIPP (Complete in Place) See Appendix D.1/D.2 in Bid Documents.	5,942.	LF	$ _____	$ _____
12	SP	30 Inch CIPP (Complete in Place) See Appendix D.1/D.2 in Bid Documents.	4,498.	LF	$ _____	$ _____
13	SP	Coat Manhole (48' I.D.) See Sec. 4 (Special Provisions) for Specifications.	240.	VF	$ _____	$ _____
MCR		Minor Contract Revisions	---	---	---	$ 80,000.00

Bid Amount: **$** _____

Bid Amount:

_____ **dollars**

Contractor Name:
Contractor Address:
Contractor Phone #:
Contractor Chosen CIPP Curing Method:

PROJECT NO. _____

2019 SEWER INTERCEPTOR REHABILITATIONS FEBRUARY, 2019

1—Cover Sheet
2—Standard Abbreviations, Legend and Symbols
3—Summary of Approximate Quantities
4—Project Location Map
5—Keymap Sewer Interceptor Line A
6—Line A Plan & Profile Sta 0+00 — 10+00
7—Line A Plan & Profile Sta 10+00 — 20+00
8—Line A Plan & Profile Sta 20+00 — 30+00
9—Line A Plan & Profile Sta 30+00 — 40+00
10—Line A Plan & Profile Sta 40+00 — 50+00
11—Line A Plan & Profile Sta 50+00 — 57+00
12—Keymap Sewer Interceptor Line B
13—Line B Plan & Profile Sta 0+00 — 5+00
14—Line B Plan & Profile Sta 5+00 — 10+00
15—Line B Plan & Profile Sta 10+00 — 20+00
16—Line B Plan & Profile Sta 20+00 — 30+00
17—Line B Plan & Profile Sta 30+00 — 40+00
18—Line B Plan & Profile Sta 40+00 — 50+00
19—Line B Plan & Profile Sta 50+00 — 60+00
20—4th St Plan & Profile Sta 0+00 — 4+00
21—4th St Plan & Profile Sta 4+00 — 8+00
22—4th St Plan & Profile Sta 8+00 — 12+00
23—4th St Plan & Profile Sta 12+00 — 16+00
24—4th St Plan & Profile Sta 16+00 — 20+00
25—4th St Plan & Profile Sta 20+00 — 24+00
26—7th St Plan & Profile Sta 0+00 — 4+00
27—7th St Plan & Profile Sta 4+00 — 8+00
28—9th St Plan & Profile Sta 0+00 — 4+00
29—9th St Plan & Profile Sta 4+00 — 8+00
30—9th St Plan & Profile Sta 8+00 — 12+00
31—12th St Plan & Profile Sta 0+00 — 4+00
32—12th St Plan & Profile Sta 4+00 — 8+00
33—12th St Plan & Profile Sta 8+00 — 12+00
34—12th St Plan & Profile Sta 12+00 — 16+00
35—12th St Plan & Profile Sta 16+00 — 21+00

UTILITIES AND AGENCIES

AGENCY	NAME	POSITION	ROLE	MAILING ADDRESS	STREET ADDRESS	CITY, STATE	VOICE—WK	FAX
CITY OF GRAND JUNCTION	BRENDAN HINES	PROJECT ENGINEER	PROJECT ENGINEER	333 WEST AVE BLDG C	333 WEST AVE BLDG C	GRAND JCT., CO 81501	(970) 256—4038	(970) 256—4022
CITY OF GRAND JUNCTION	LEE COOPER	PROJECT ENGINEER	SANITARY SEWER	333 WEST AVE BLDG C	333 WEST AVE BLDG C	GRAND JCT., CO 81501	(970) 256—4155	(970) 256—4022
GRAND VALLEY IRRIGATION CO.	PHIL BERTRAND	MANAGER	IRRIGATION	688 26 RD	688 26 RD	GRAND JCT., CO 81506	(970) 242—2762	
SPECTRUM	JEFF VALDEZ	MANAGER	CABLE TV	2502 FORESIGHT CIRCLE	2502 FORESIGHT CIRCLE	GRAND JCT., CO 81504	(970) 245—8750	(970) 245—6803
CENTURYLINK	CHRIS JOHNSON	ENGINEER	TELEPHONE	2524 BLICHMANN AVE	2524 BLICHMANN AVE	GRAND JCT., CO 81504	(970) 244—4311	(970) 240—4349
UTE WATER	JUSTIN BATES	SUPERVISOR	WATER	PO BOX 460	2190 H ¼ RD	GRAND JCT., CO 81502	(970) 242—7491	(970) 242—9189
XCEL	STEVE PIBURN	UNIT MANAGER	ELECTRIC	2538 BLICHMANN AVE	2538 BLICHMANN AVE	GRAND JCT., CO 81506	(970) 244—2664	(970) 244—2664
XCEL	SARAH BARRICAU	UNIT MANAGER	GAS	2538 BLICHMANN AVE	2538 BLICHMANN AVE	GRAND JCT., CO 81506	(970) 244—2656	(970) 244—2656

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

	DESCRIPTION	DATE
REVISION △		
REVISION △		
REVISION △		
REVISION △		

CITY OF Grand Junction COLORADO

Public Works
Engineering Division

811 Know what's below. Call before you dig.

DRAWING STATUS:
- ● PROGRESS
- ○ FINAL CONSTRUCTION DRAWINGS
- ○ ASBUILT

DESIGNED BY:
BRENDAN HINES, PROJECT ENGINEER 2019

REVIEWED BY:
TRENT C. PRALL, PUBLIC WORKS DIRECTOR 2019

AUTHORIZED FOR CONSTRUCTION
TRENT C. PRALL, PUBLIC WORKS DIRECTOR 2019

ACCEPTED AS CONSTRUCTED
BRENDAN HINES, PROJECT ENGINEER 2019

2019 SEWER INTERCEPTOR REHABILITATIONS FEBRUARY, 2019

PROJECT NO. _____

ABBREVIATIONS

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY & TRANSPORTATION OFFICIALS
ABC	AGGREGATE BASE COURSE
AC	ASBESTOS CEMENT
AP	ANGLE POINT
ASB	ANCHORED STRAW BALES
ASP	ALUMINIZED STEEL PIPE
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS
AWWA	AMERICAN WATER WORKS ASSOCIATION
BC	BACK OF CURB
BF	BUTTERFLY VALVE
BOW	BACK OF WALK
BCR	BEGIN CURB RETURN
BOT	BOTTOM
BSWMP	BETTER STORM WATER MANAGEMENT PRACTICES
CH	CHORD
CAP	CORRUGATED ALUMINUM PIPE
CDOT	COLORADO DEPARTMENT OF TRANSPORTATION
CI	CAST IRON
C,G,& SW	CURB, GUTTER & SIDEWALK
℄	CENTER LINE
CL	CLEAR
CMP	CORRUGATED METAL PIPE
CO	CLEAN OUT
COMB	COMBINATION (AS IN STORM SEWER AND SANITARY SEWER)
CONC	CONCRETE
CSM	CITY SURVEY MONUMENT
CSP	CORRUGATED STEEL PIPE
CU	COPPER
DI	DUCTILE IRON
DWY	DRIVEWAY
E	ELECTRIC
ECR	END CURB RETURN
EG	EDGE OF GUTTER
EL	ELEVATION
EP	EDGE OF PAVEMENT
EX	EXISTING
FB	FULL BODY
FC	FACE OF CURB
FG	FINISHED GRADE
℄	FLOW LINE
FL	FLANGE
FM	FORCE MAIN
FO	FIBER OPTICS
FS	FAR SIDE
FTG	FOOTING
G	GAS
GB	GRADE BREAK
GM	GAS METER
GV	GATE VALVE
HBP	HOT BITUMINOUS PAVEMENT
HDPE	HIGH DENSITY POLYETHYLENE
INV	INVERT
IRR	IRRIGATION
L	LENGTH OF ARC
LC	LONG CHORD
LF	LINEAR FEET
LL	LONG ARC
LS	SHORT ARC
LT	LEFT
MB	MAILBOX
MCSM	MESA COUNTY SURVEY MONUMENT
MH	MANHOLE
MJ	MECHANICAL JOINT
MW	MILL WRAP
N/A	NOT APPLICABLE
NIC	NOT IN CONTRACT
NOP	NO ONE PERSON
NRCP	NON-REINFORMATIONRCED CONCRETE PIPE
NS	NEAR SIDE
NTS	NOT TO SCALE
OHP	OVERHEAD POWER
OHT	OVERHEAD TELEPHONE
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PE	POLYETHYLENE
PERF	PERFORATED
PI	POINT OF INTERSECTION
PIP	PLASTIC IRRIGATION PIPE
POC	POINT ON CURVE
POT	POINT ON TANGENT
PR	PROPOSED
PRC	POINT OF REVERSE CURVATURE
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
R	RADIUS
RCP	REINFORMATIONRCED CONCRETE PIPE
REQ'D	REQUIRED
RG	RESTRAINED GLANDS
RL	LONG RADIUS
ROW	RIGHT OF WAY
RP	RADIUS POINT
RR	RAIL ROAD
RS	SHORT RADIUS
RT	RIGHT
S	SLOPE
SAN	SANITARY
SC	SHORT CHORD
SCD	STANDARD CONTRACT DOCUMENTS
SCH	SCHEDULE
SF	SILT FENCE
SL	SECTION LINE
SSRB	STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION
SSUU	STANDARD SPECIFICATIONS FOR CONSTRUCTION OF UNDERGROUND UTILITIES
STA	STATION
STL	STEEL
STM	STORM
T	TELEPHONE
TAN	LENGTH OF TANGENT
TC	TOP OF CURB
TH	TEST HOLE
TV	TELEVISION
(TYP)	TYPICAL
UU	UNDERGROUND UTILITIES
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
VPC	VERTICAL POINT OF CURVATURE
VPCC	VERTICAL POINT OF COMPOUND CURVATURE
VPRC	VERTICAL POINT OF REVERSE CURVATURE
VPI	VERTICAL POINT OF INTERSECTION
VPT	VERTICAL POINT OF TANGENCY
W	WATER
Δ	DELTA ANGLE

LEGEND

BSWMP DRAINAGE BASIN BOUNDARY

BSWMP ANCHORED STRAW BALES — ASB ASB ASB ASB ASB ASB ASB

BSWMP SILT FENCE — SF SF SF SF SF SF SF

BUILDING

CONCRETE CURB AND GUTTER — 2' CURB AND GUTTER

7' C, G, & SW

CONCRETE CURB,GUTTER, & SIDEWALK

CONCRETE DITCH — CONCRETE

CONCRETE SIDEWALK — 4' SW

CULVERT — 18" RCP

EARTH DITCH — EARTH EARTH EARTH

EDGE OF GRAVEL

EDGE OF PAVEMENT

FENCE (BARBED WIRE)

FENCE (CHAIN LINK)

FENCE (IRON)

FENCE (PLASTIC)

FENCE (TEMPORARY CONSTRUCTION)

FENCE (WOOD)

FENCE (WOVEN WIRE)

GUARD RAIL — GR GR

HATCHING: INDICATES ASPHALT REMOVAL

HATCHING: INDICATES CONCRETE REMOVAL

HATCHING: INDICATES STAGING AREA — STAGING AREA

LINE (CENTER OF IMPROVEMENTS) — CENTERLINE

LINE (CITY LIMITS) — CITY LIMITS

LINE (CONTROL) — CONTROL LINE

LINE (EASEMENT)

LINE (MONUMENT/SECTION) — MONUMENT/SECTION LINE

LINE (PROPERTY)

LINE (RIGHT OF WAY)

MATCH LINE — MATCH LINE SEE SHEET NO ?

PIPE (IRRIGATION) — 4" IRR

PIPE (SIPHON) — 4" SIPHON

PROPOSED CONCRETE CURB AND GUTTER

PROPOSED CONCRETE CURB,GUTTER,& SIDEWALK

PROPOSED CONCRETE SIDEWALK

PROPOSED "WET" UTILITIES (CONSTRUCTION NOTE WILL INDICATE TYPE, SIZE, AND MATERIAL OF NEW MAIN) — 8" PVC SANITARY SEWER

ALL PROPOSED FEATURES NOT SHOWN IN LEGEND WILL BE SHOWN THE SAME AS THEIR EXISTING COUNTERPART, BUT INDICATED BY BOLDER LINETYPE

RAIL ROAD

RETAINING WALL — 1' RETAINING WALL

STRIPING (CONTINUOUS WHITE) — WHITE

STRIPING (DASHED WHITE) — WHITE

STRIPING (CONTINUOUS YELLOW) — YELLOW

STRIPING (DASHED YELLOW) — YELLOW

4570

TOP OF SLOPE — 4580

CONTOUR LINES (SHOWN BETWEEN TOP & TOE)

TOE OF SLOPE — 4570

TRAFFIC DETECTOR LOOP

UTILITY LINE (ABANDON) (THIS CASE A WATER LINE) — W (ABANDON) 8" W

UTILITY LINE (CABLE TV) — TV TV

UTILITY LINE (ELECTRIC) — E E

UTILITY LINE (FIBER OPTIC) — FO QWEST FO

UTILITY LINE (GAS) — G 1 1/4" MPE G

UTILITY LINE (HIGH VOLTAGE OVERHEAD POWER) — HVOHP

UTILITY LINE (OVERHEAD POWER) — OHP

UTILITY LINE (OVERHEAD TELEPHONE) — OHT

UTILITY LINE (SANITARY SEWER) — 8" SAN

UTILITY LINE (SANITARY SEWER FORCE MAIN) — 6" FM

UTILITY LINE (SANITARY SEWER SERVICE) — SS SS

UTILITY LINE (STORM SEWER) — 8" STM

UTILITY LINE (STORM SEWER, PERFORATED) — 6" PERF

UTILITY LINE (STORM/SANITARY SEWER SEWER COMBINATION) — 18" COMB

UTILITY LINE (TELEPHONE) — T T

UTILITY LINE (WATER) — W 8" W

SYMBOLS

BENCH MARK — A

CATCH BASIN

CLEAN OUT — CO

CURB STOP

FIRE HYDRANT

GUY WIRE ANCHOR

HEADGATE

IRRIGATION PUMP — P

MAILBOX — MB

MANHOLE (ELECTRIC) — E

MANHOLE (GAS) — G

MANHOLE (SANITARY/STORM)

MANHOLE (TELEPHONE) — T

MANHOLE (TV) — TV

MANHOLE (WATER) — W

METER (GAS) — GM

METER (WATER)

PEDESTAL (TELEPHONE)

PEDESTAL (TV) — TV

PROPERTY PIN

PULL BOX — PB

REDUCER FITTING

SIGN OR POST (SIGN TYPE NOTED) — STOP

SPRINKLER HEAD

STREET LIGHT

SURVEY MONUMENT (CITY) — CSM

SURVEY MONUMENT (TYPE NOTED) — MCSM

TEST HOLE — TH #1

TRAFFIC PAINT MARKING

TRAFFIC SIGNAL POLE AND MAST ARM

UTILITY POLE

VALVE (GAS) — GV

VALVE (IRRIGATION) — IV

VALVE (WATER) — WV

VEGETATION (HEDGE OR BUSH)

VEGETATION (TREE STUMP)

VEGETATION (TREE) (CALIPER SIZE NOTED) — 8"

WATER HYDRANT — FH

WEIR — W

YARD LIGHT

BAR SCALE:

0 5 10 20

(IN FEET)
1 inch = 20 feet

NORTH ARROW: N W E S

DESCRIPTION	DATE
REVISION Δ	
REVISION Δ	
REVISION Δ	
REVISION Δ	

DRAWN BY _____ DATE _____
DESIGNED BY _____ DATE _____
CHECKED BY _____ DATE _____
APPROVED BY _____ DATE _____

SCALES: PLAN & PROFILE
HORIZONTAL: 1" =
VERTICAL: 1" =

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

CITY OF GRAND JUNCTION
STANDARD ABBREVIATIONS, LEGEND, AND SYMBOLS

PROJECT NO. _____

Bid Schedule: 2019 Sewer Interceptor Repair and Replacement Project

Item No.	CDOT, City Ref.	Description	Quantity	Units
1	626	Portable Sanitary Facility	1.	Lump Sum
2	630	Mobilization	1.	Lump Sum
3	630	Traffic Control (Complete In Place)	1.	Lump Sum
4	630	Traffic Control Flagging	1,000.	Hours
5	630	Traffic Control Plan	1.	Lump Sum
6	SP	Bypass Pumping per City Specifications. See Appendix B in Bid Documents.	1.	Lump Sum
7	SP	Weekly Newsletter- See Bid Documents SC 3.3.13	1.	Lump Sum
8	SP	12 Inch CIPP (Complete in Place) See Appendix D.1/D.2 in Bid Documents.	1,961.	LF
9	SP	15 Inch CIPP (Complete in Place) See Appendix D.1/D.2 in Bid Documents.	895.	LF
10	SP	18 Inch CIPP (Complete in Place) See Appendix D.1/D.2 in Bid Documents.	2,894.	LF
11	SP	24Inch CIPP (Complete in Place) See Appendix D.1/D.2 in Bid Documents.	5,942.	LF
12	SP	30 Inch CIPP (Complete in Place) See Appendix D.1/D.2 in Bid Documents.	4,498.	LF
13	SP	Coat Manhole (48' I.D.) See Sec. 4 (Special Provisions) for Specifications.	240.	VF

DESCRIPTION	DATE
REVISION △	–
REVISION △	–
REVISION △	–
REVISION △	–

DRAWN BY HMC DATE 2019
DESIGNED BY _____ DATE _____
CHECKED BY _____ DATE _____
APPROVED BY _____ DATE _____

SCALES: PLAN & PROFILE
HORIZONTAL: 1" =
VERTICAL: 1" =

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
SUMMARY OF APPROXIMATE QUANTITIES

4TH STREET CIPP
SHEETS 20 to 25

7TH STREET CIPP
SHEETS 26 to 27

SEWER INTERCEPTOR LINE A
SHEETS 5 to 11

12TH STREET CIPP
SHEETS 31 to 35

9TH STREET CIPP
SHEETS 28 to 30

SEWER INTERCEPTOR LINE B
SHEETS 12 to 19

DESCRIPTION	DATE
REVISION	
REVISION	
REVISION	
REVISION	

DRAWN BY HMC DATE 2019
DESIGNED BY DATE
CHECKED BY DATE
APPROVED BY DATE

SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 1250'
0 312.5 625 1250
VERTICAL: 1" =

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
PROJECT LOCATION MAP

PROJECT NO. _____

COLORADO STATE HIGHWAY 340
W MAIN ST
WEST AVE
W COLORADO AVE
W UTE AVE
FAIRVIEW AVE
ROCKAWAY AVE
CRAWFORD AVE
LAWRENCE AVE
LILA AVE
HALE AVE
CHULUOTA AVE
PARK AVE
RIVERSIDE PARK DR
RIVERSIDE PARK DR
RIVERSIDE PKWY
COLORADO RIVER
COLORADO RIVER
LINE A
LINE B
SHEET 6
SHEET 7
SHEET 8
SHEET 9
SHEET 10
SHEET 11

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 20'
0 5 10 20

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
LINE A KEYMAP
STA 0+00 TO STA 57+00

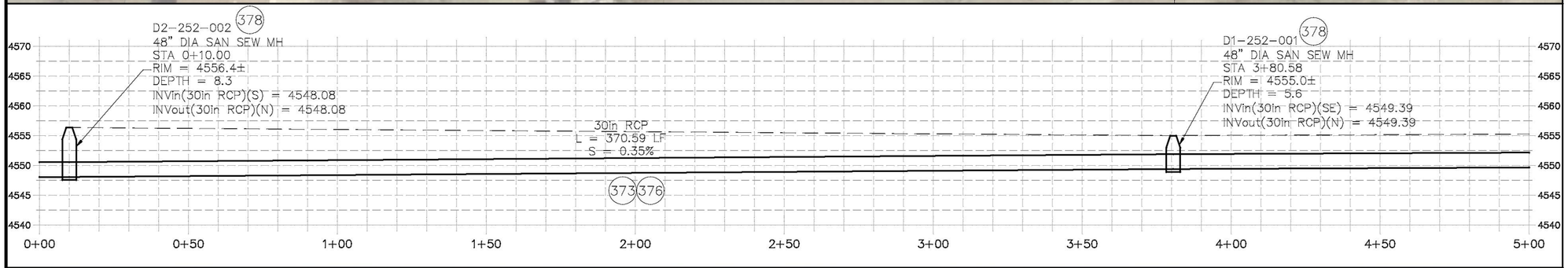
PROJECT NO. _____

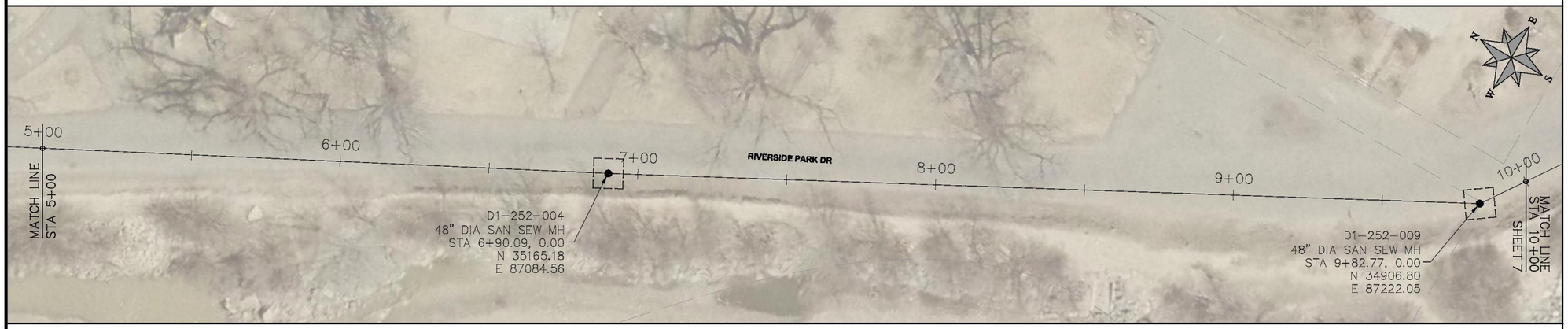
CONSTRUCTION NOTES

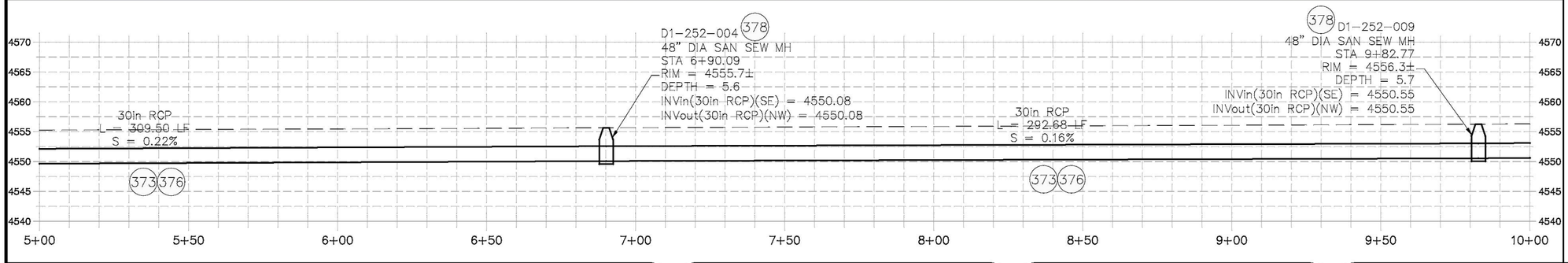
(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)

(378) SP RECONDITION EXISTING MANHOLE AND BENCH. (SEE PROJECT SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION).







DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

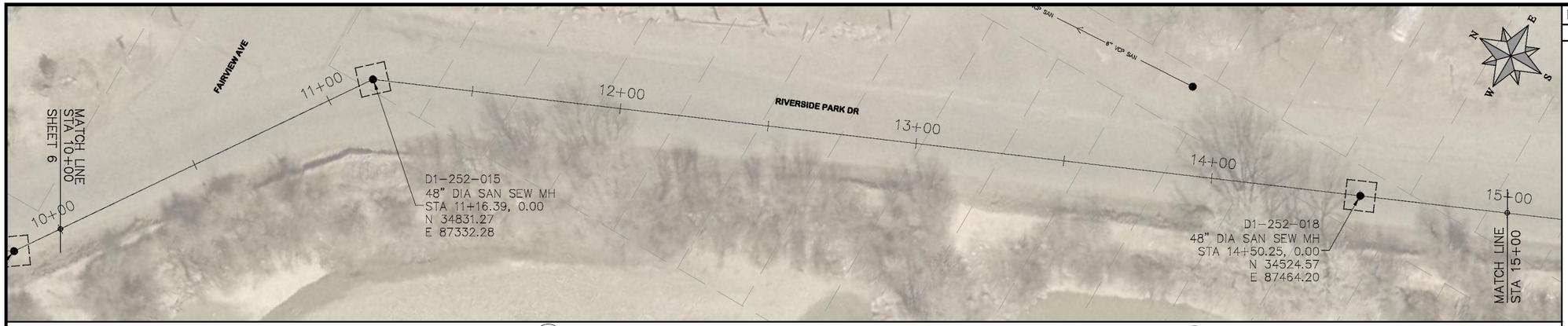
DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

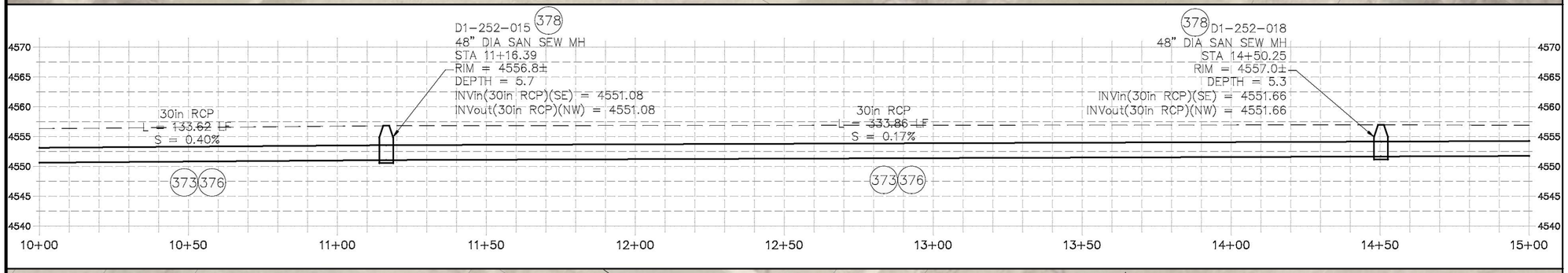
SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 20'
0 5 10 20

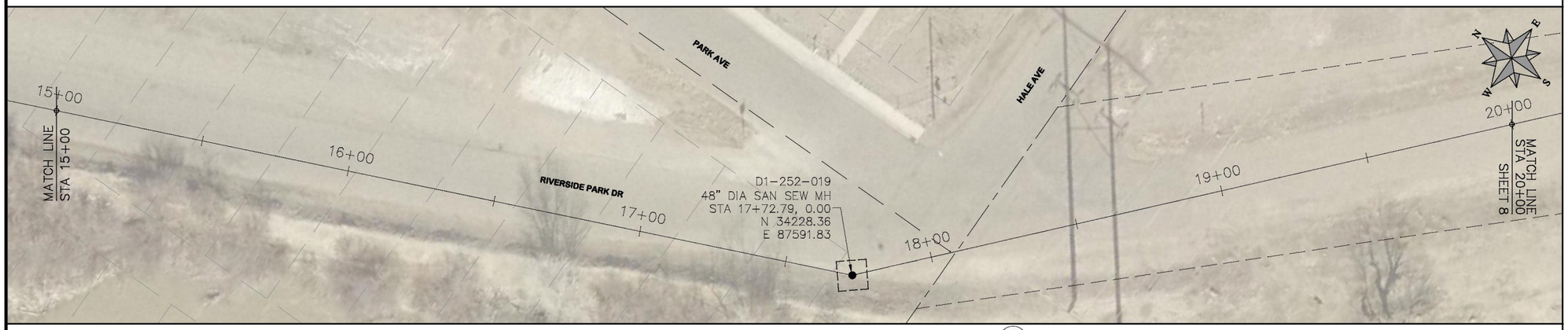
CITY OF Grand Junction COLORADO

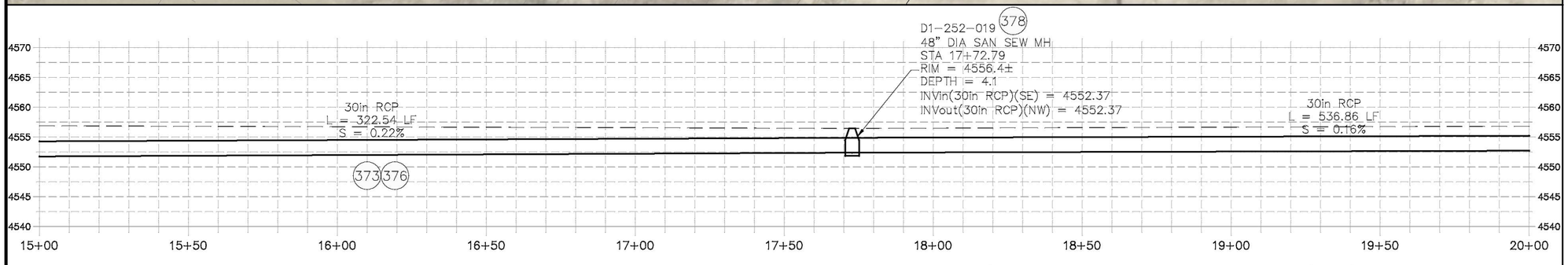
PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
LINE A PLAN AND PROFILE
STA 0+00 TO STA 10+00









PROJECT NO. _____

CONSTRUCTION NOTES

(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)

(378) SP RECONDITION EXISTING MANHOLE AND BENCH. (SEE PROJECT SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION).

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 20'
0 5 10 20

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
LINE A PLAN AND PROFILE
STA 10+00 TO STA 20+00

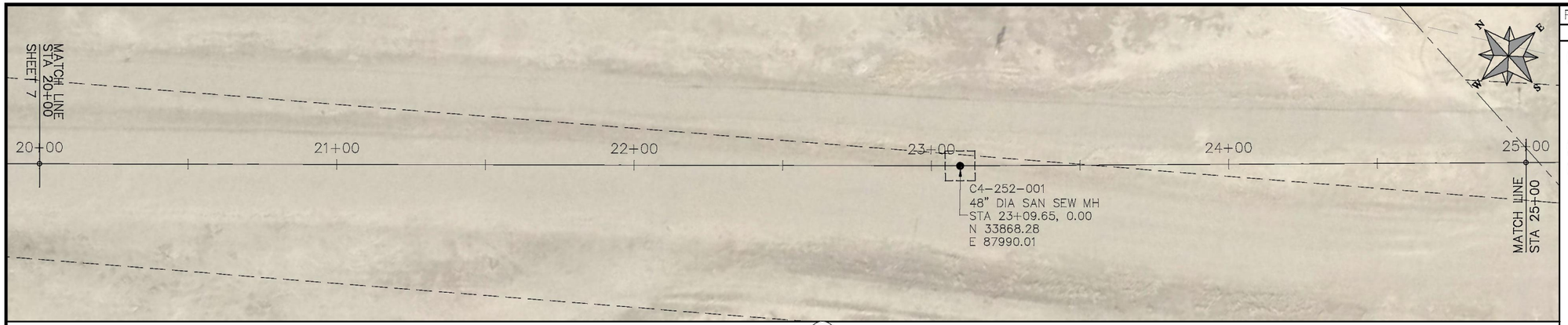
PROJECT NO. _____

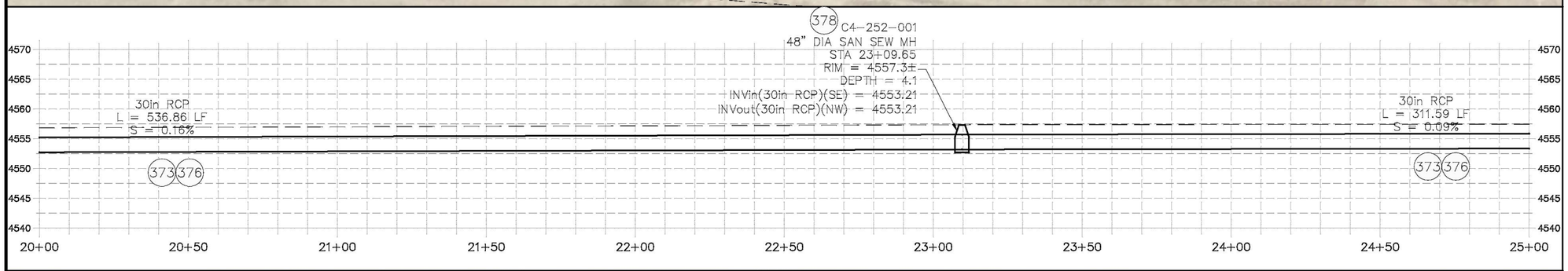
CONSTRUCTION NOTES

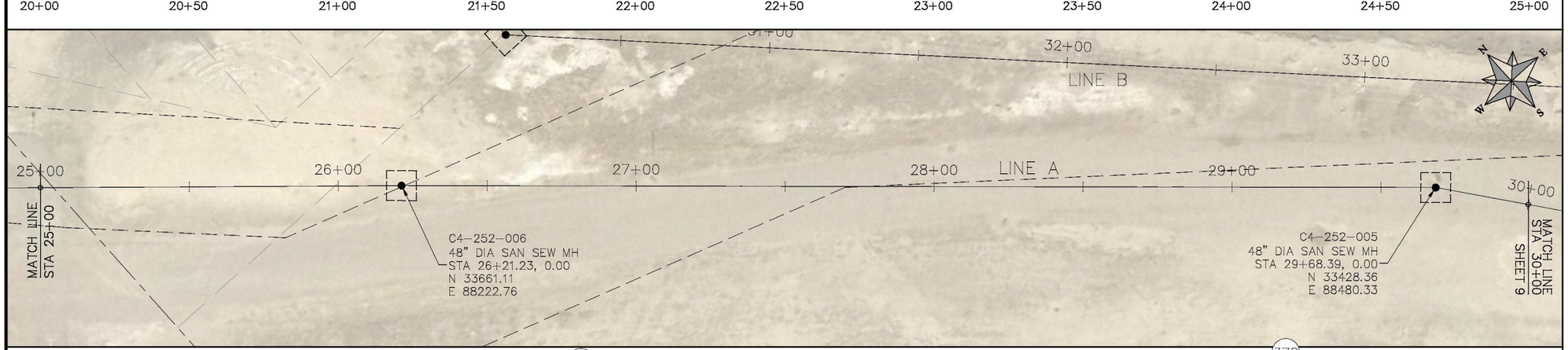
(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

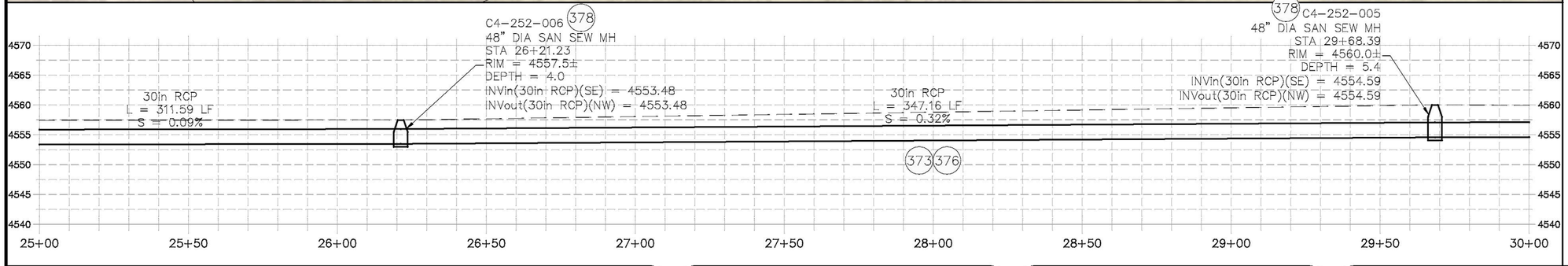
(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)

(378) SP RECONDITION EXISTING MANHOLE AND BENCH. (SEE PROJECT SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION).









DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

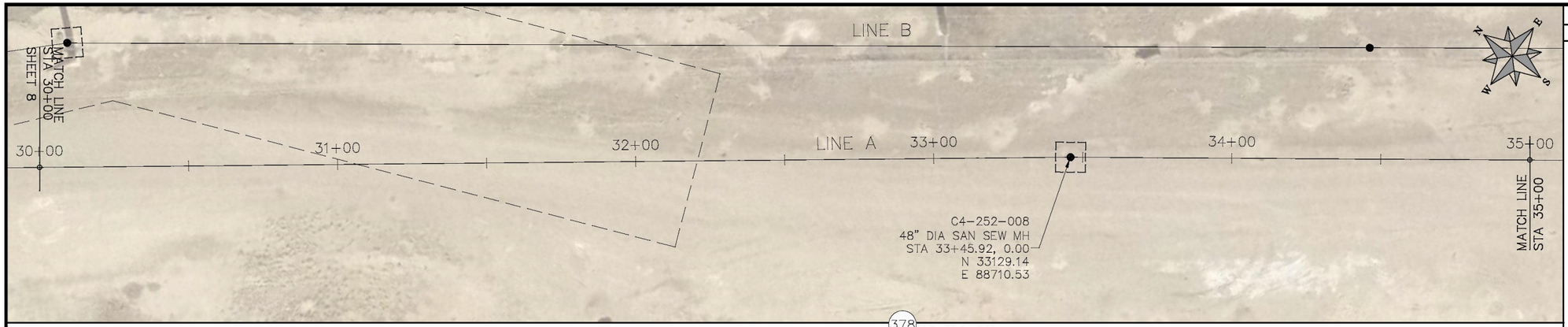
DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

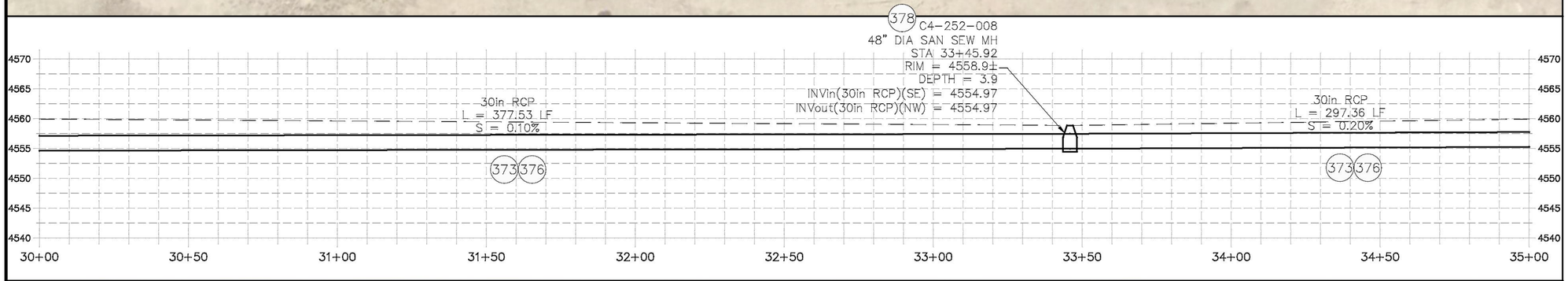
SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 20'
0 5 10 20

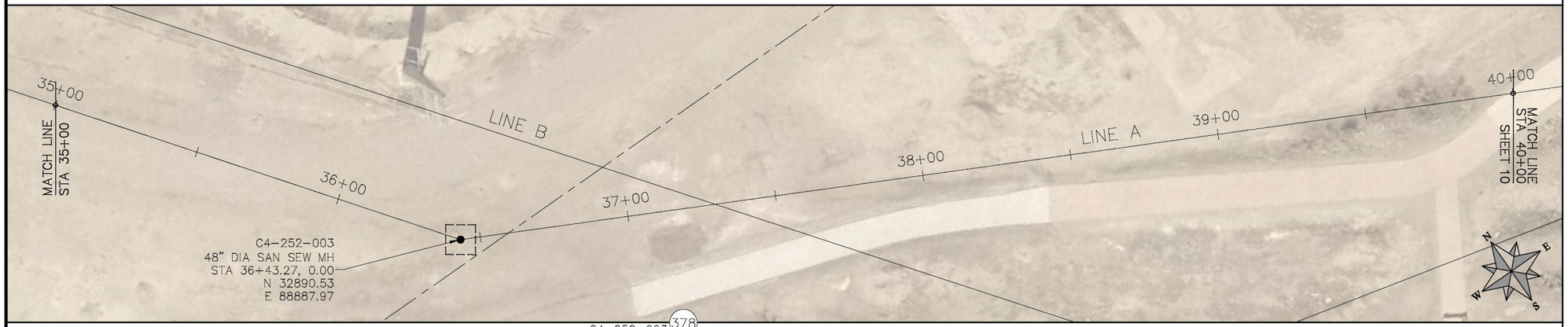
CITY OF Grand Junction COLORADO

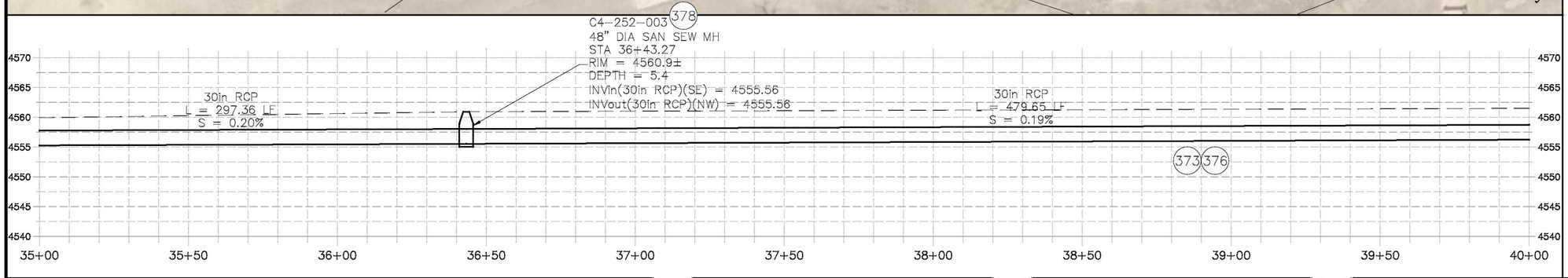
PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
LINE A PLAN AND PROFILE
STA 20+00 TO STA 30+00









PROJECT NO. _____

CONSTRUCTION NOTES

373 CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

376 REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)

378 SP RECONDITION EXISTING MANHOLE AND BENCH. (SEE PROJECT SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION).

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

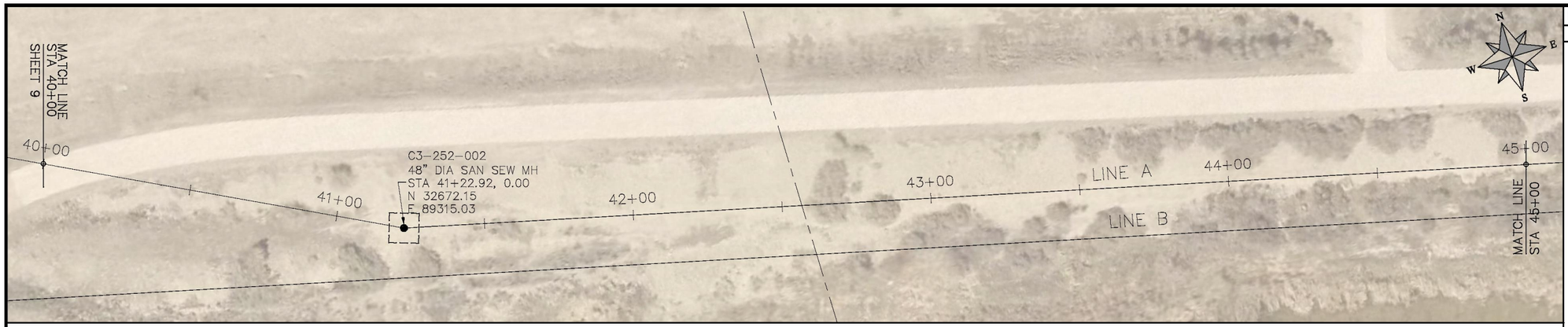
DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

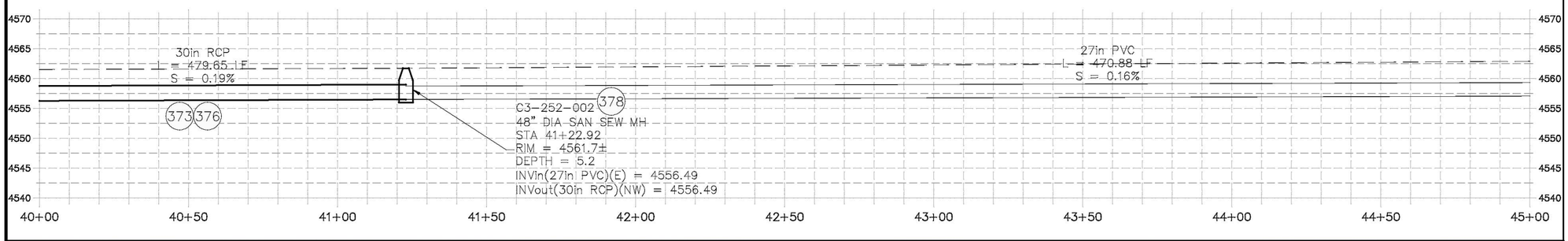
SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 20'
0 5 10 20

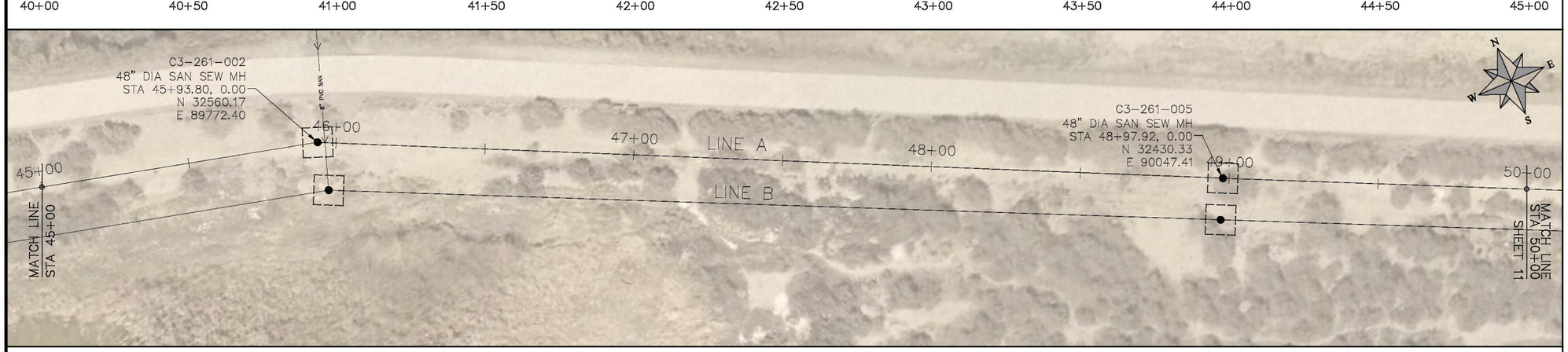
CITY OF Grand Junction COLORADO

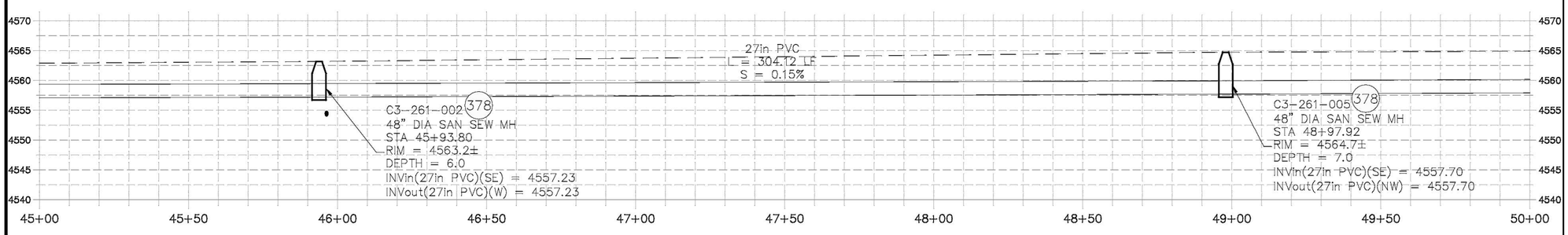
PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
LINE A PLAN AND PROFILE
STA 30+00 TO STA 40+00









PROJECT NO. _____

CONSTRUCTION NOTES

373 CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

376 REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)

378 SP RECONDITION EXISTING MANHOLE AND BENCH. (SEE PROJECT SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION).

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

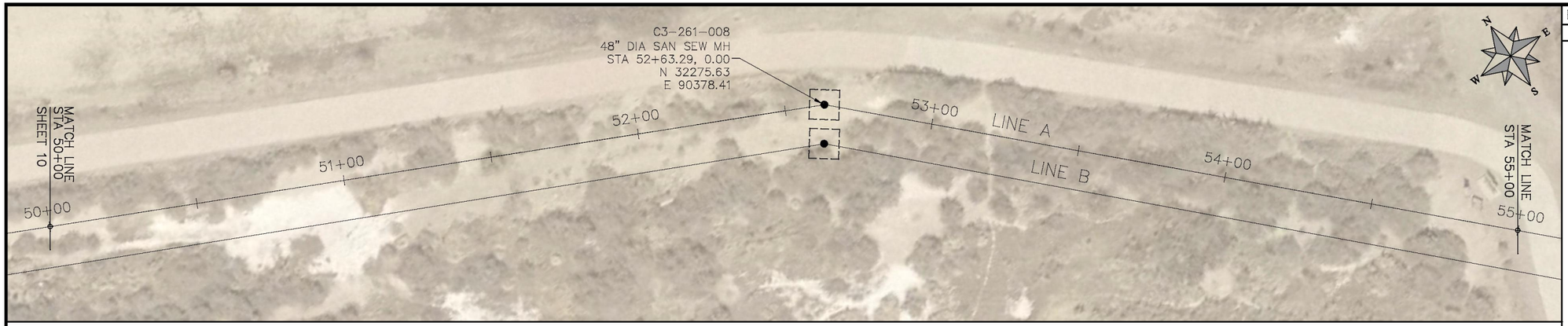
DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

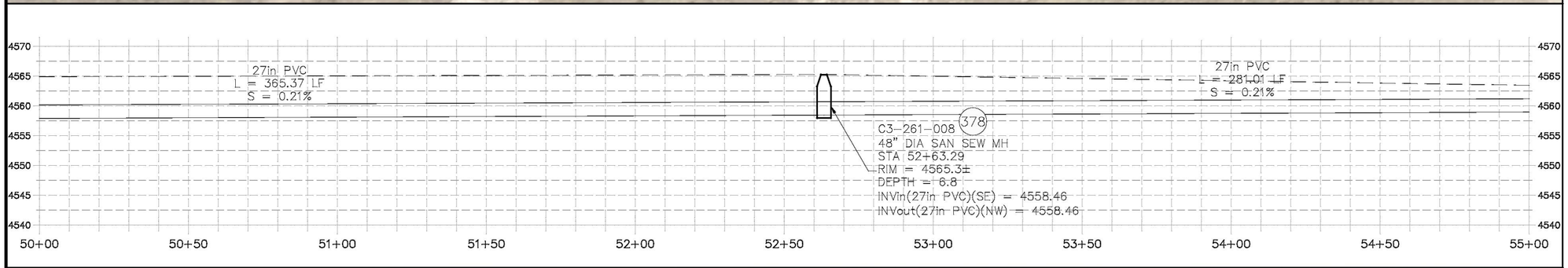
SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 20'
0 5 10 20

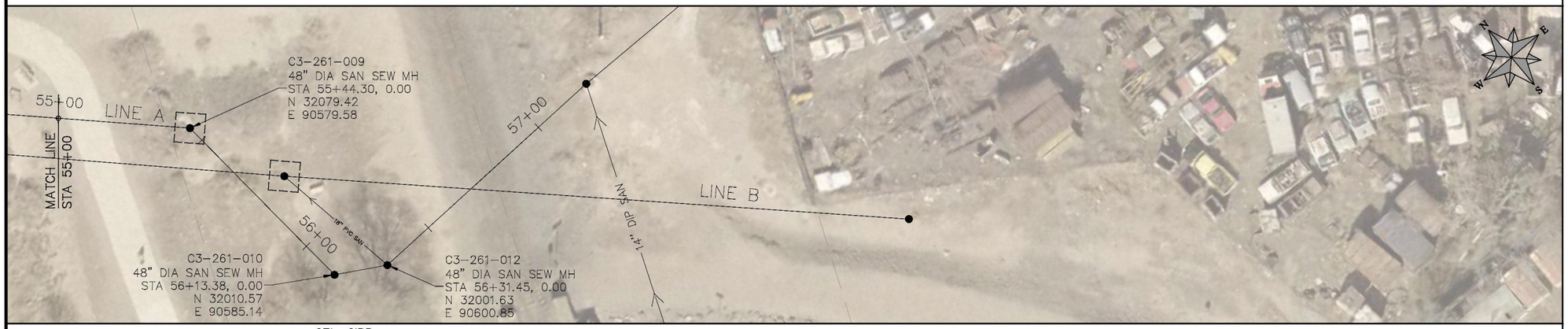
CITY OF Grand Junction COLORADO

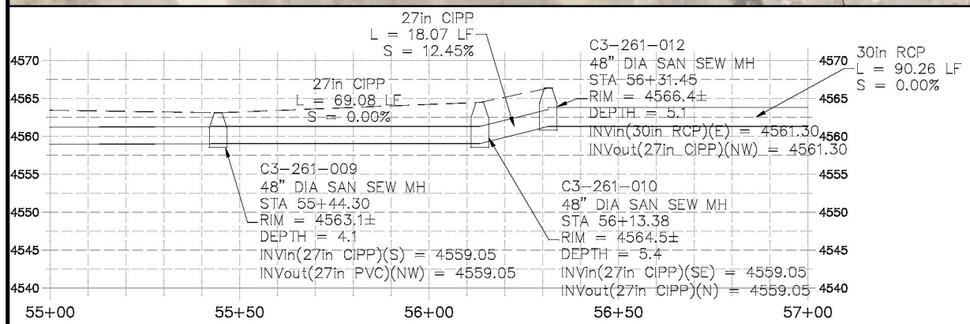
PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
LINE A PLAN AND PROFILE
STA 40+00 TO STA 50+00









PROJECT NO. _____

CONSTRUCTION NOTES

(378) SP RECONDITION EXISTING MANHOLE AND BENCH. (SEE PROJECT SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION).

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

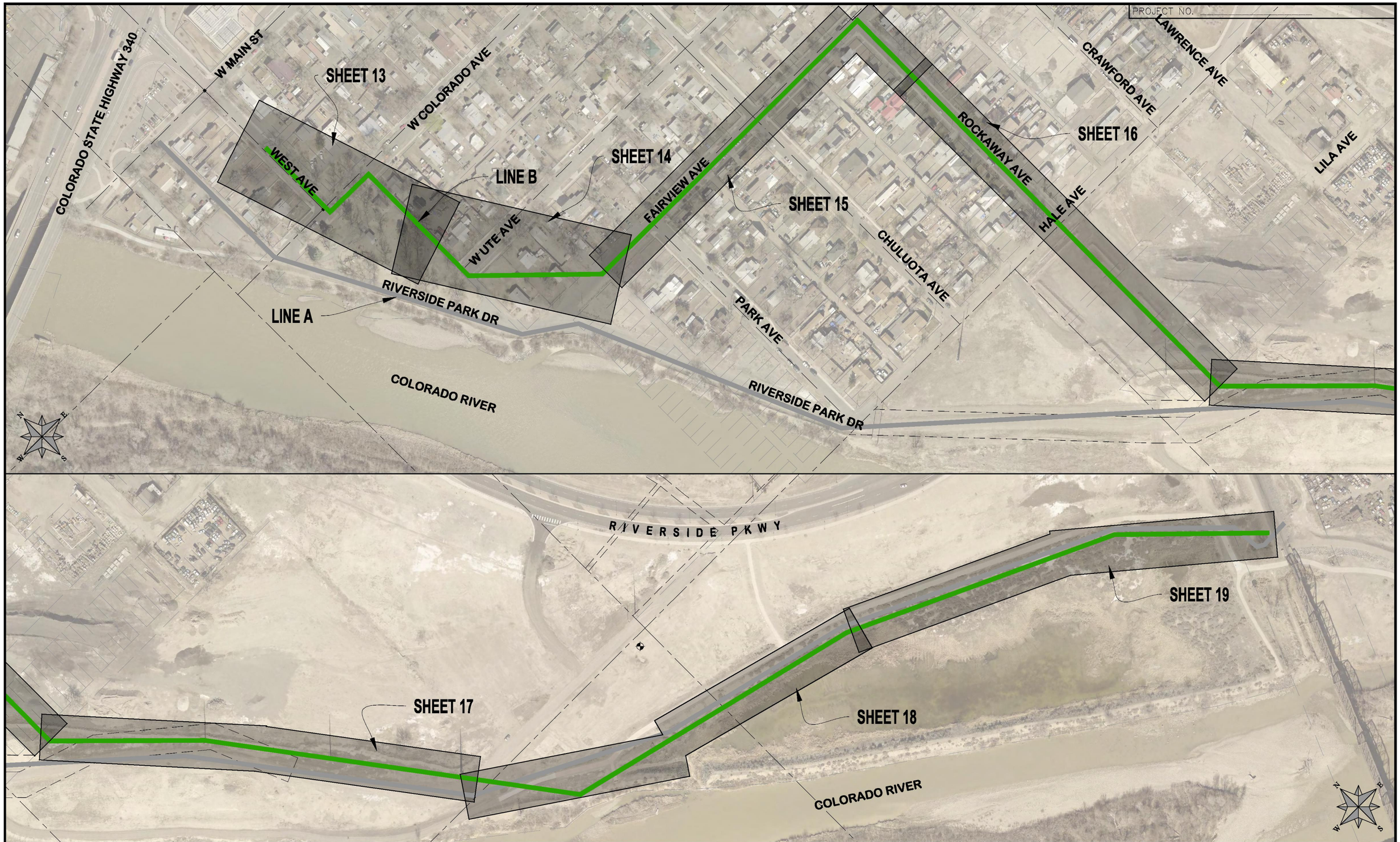
SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 20'
0 5 10 20

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
LINE A PLAN AND PROFILE
STA 50+00 TO STA 57+00

PROJECT NO. _____



DESCRIPTION	DATE
REVISION 1	–
REVISION 2	–
REVISION 3	–
REVISION 4	–

DRAWN BY	HMC	DATE	2018
DESIGNED BY	JKT	DATE	2018
CHECKED BY	JKT	DATE	2018
APPROVED BY	JKT	DATE	2018

SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 200'
0 50 100 200
VERTICAL: 1" =

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
LINE B KEYMAP
STA 0+00 TO STA 60+00

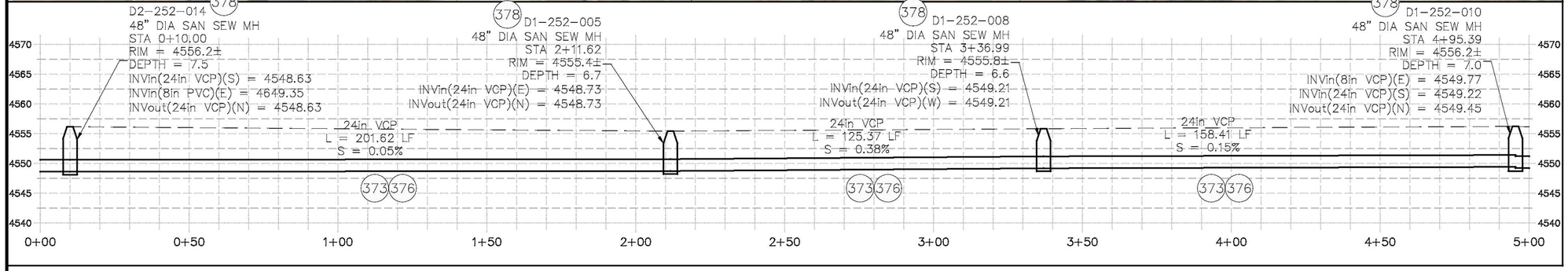
PROJECT NO. _____

CONSTRUCTION NOTES

(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)

(378) SP RECONDITION EXISTING MANHOLE AND BENCH. (SEE PROJECT SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION).



DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 20'
0 5 10 20

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
LINE B PLAN AND PROFILE
STA 0+00 TO STA 5+00

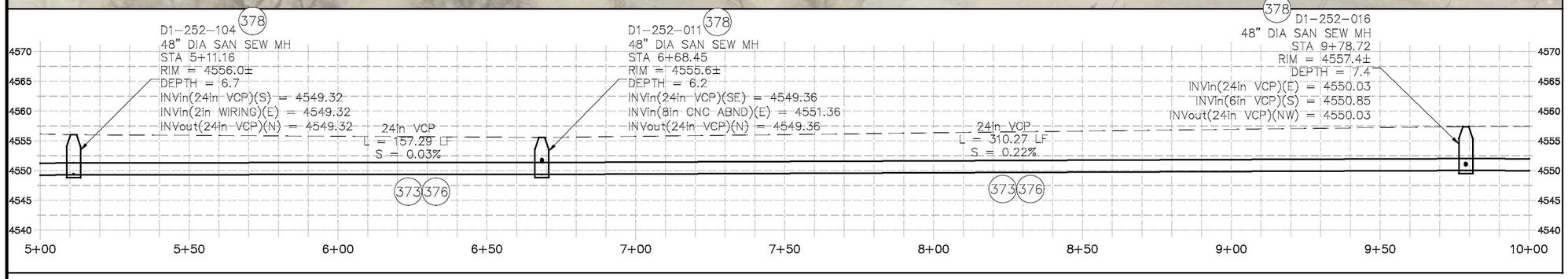
PROJECT NO. _____

CONSTRUCTION NOTES

(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)

(378) SP RECONDITION EXISTING MANHOLE AND BENCH. (SEE PROJECT SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION).



DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 20'
0 5 10 20

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
LINE B PLAN AND PROFILE
STA 5+00 TO STA 10+00

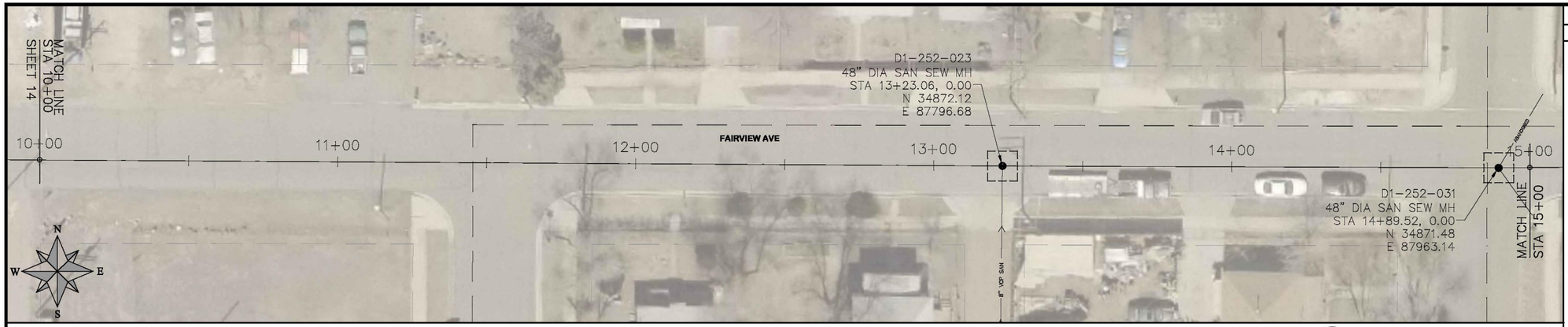
PROJECT NO. _____

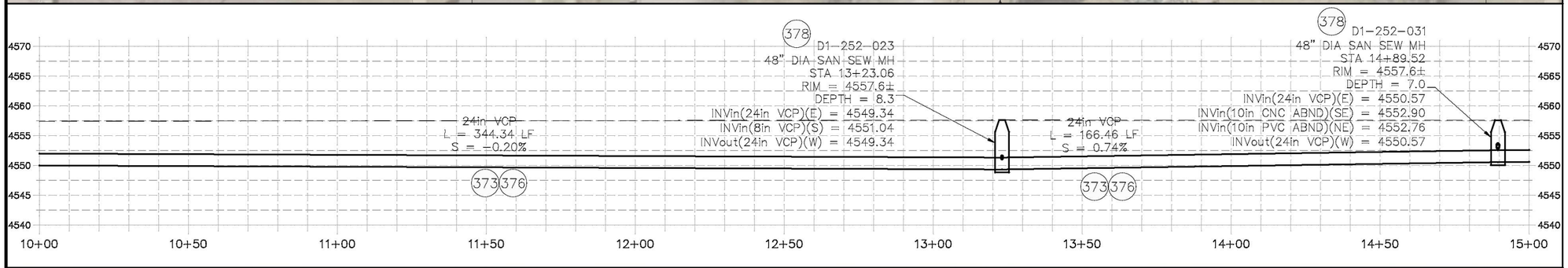
CONSTRUCTION NOTES

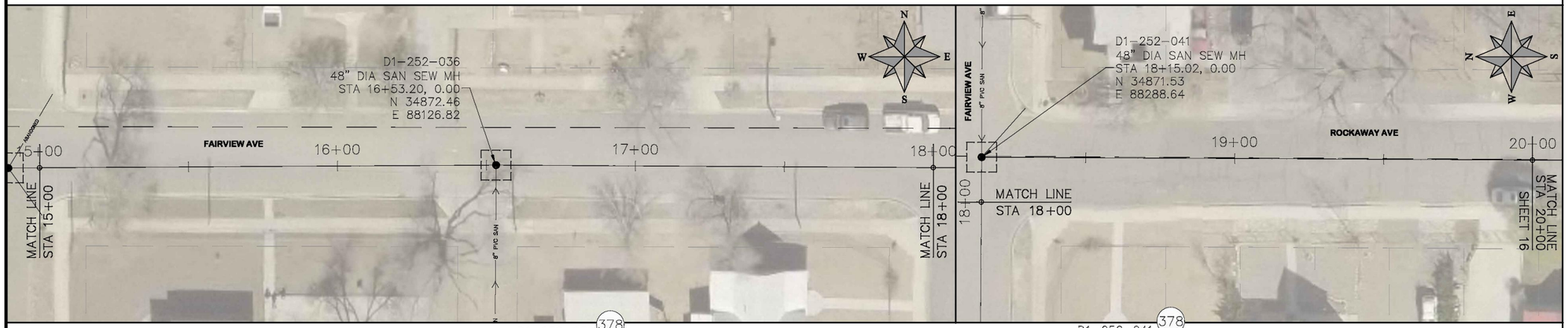
(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

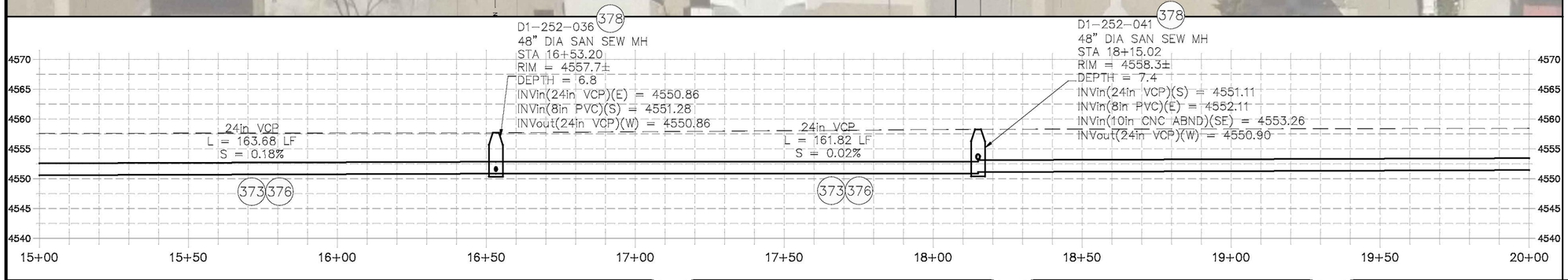
(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)

(378) SP RECONDITION EXISTING MANHOLE AND BENCH. (SEE PROJECT SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION).









DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

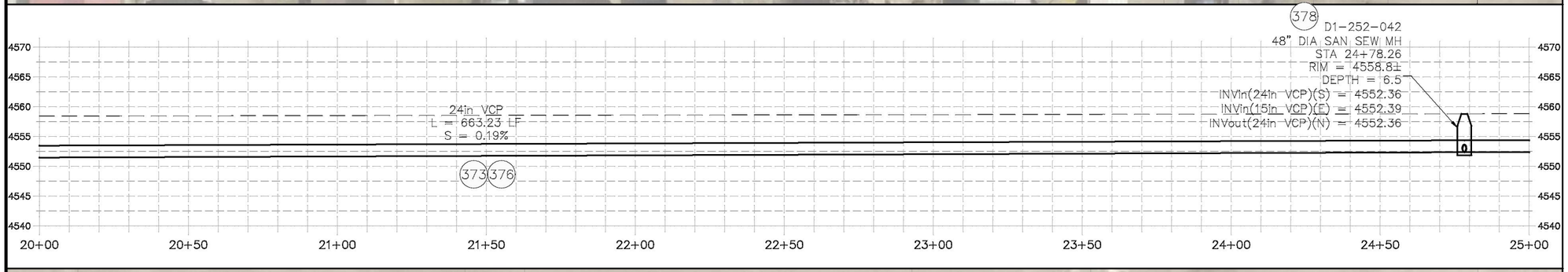
DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

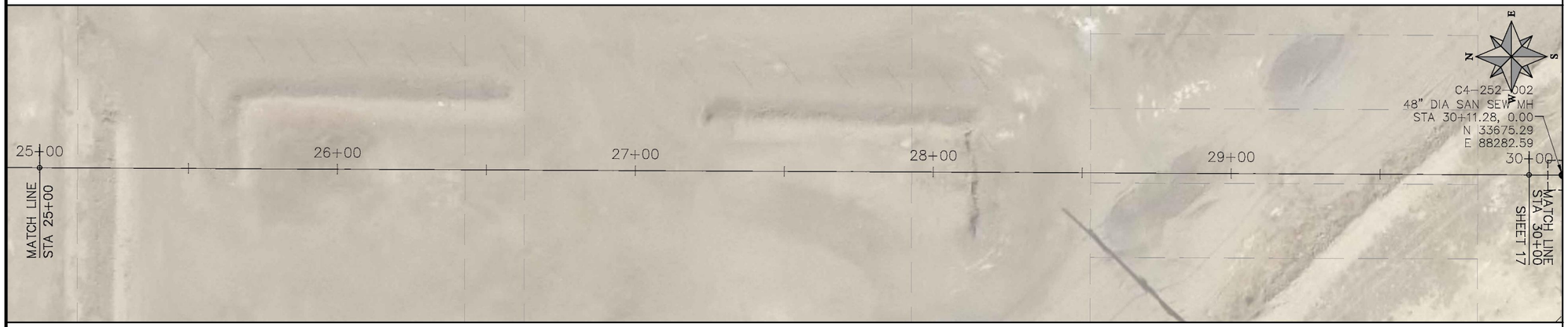
SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 20'
0 5 10 20

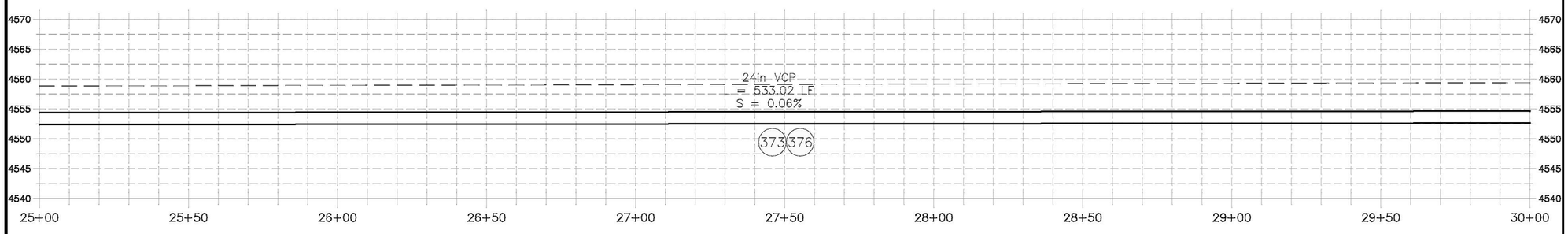
CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
LINE B PLAN AND PROFILE
STA 10+00 TO STA 20+00







PROJECT NO. _____

CONSTRUCTION NOTES

373 CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

376 REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)

378 SP RECONDITION EXISTING MANHOLE AND BENCH. (SEE PROJECT SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION).

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 20'
0 5 10 20

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
LINE B PLAN AND PROFILE
STA 20+00 TO STA 30+00

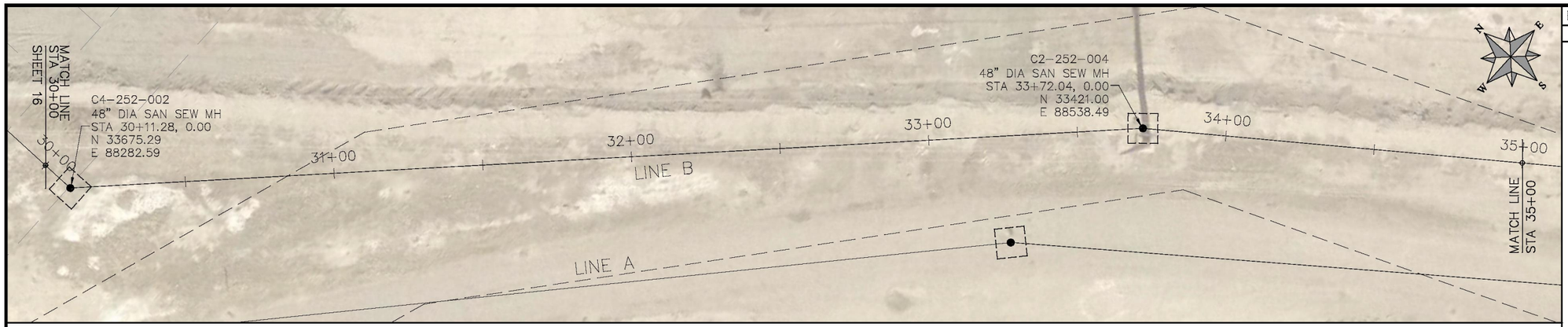
PROJECT NO. _____

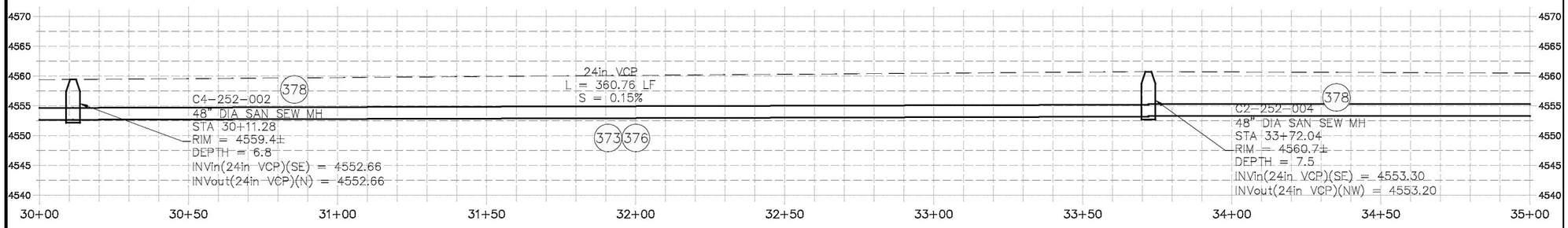
CONSTRUCTION NOTES

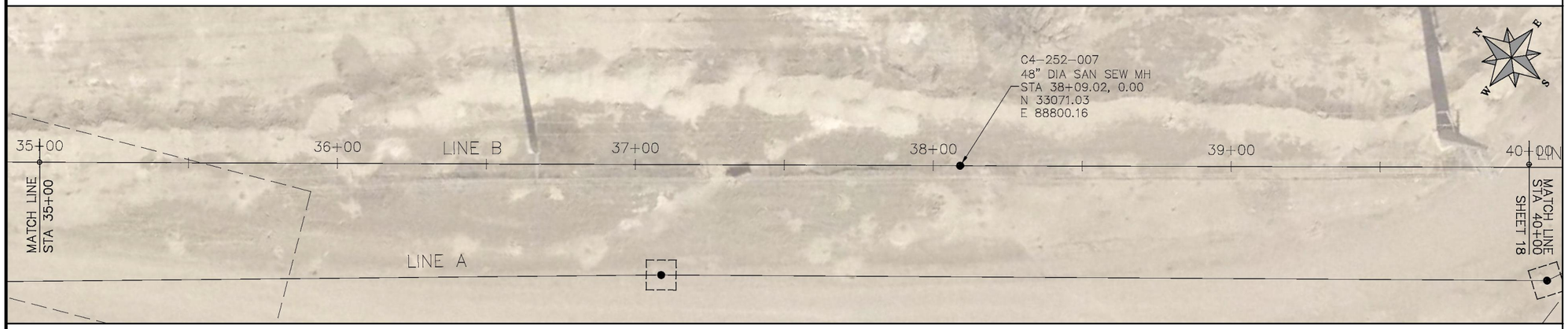
(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

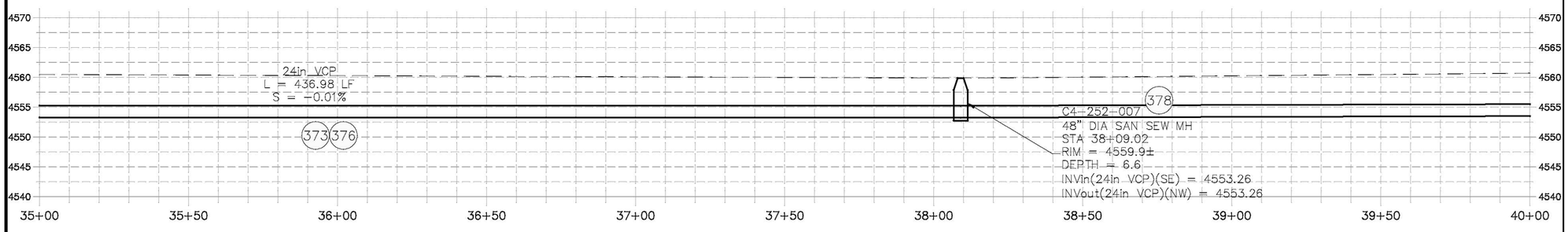
(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)

(378) SP RECONDITION EXISTING MANHOLE AND BENCH. (SEE PROJECT SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION).









DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 20'
0 5 10 20

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
LINE B PLAN AND PROFILE
STA 30+00 TO STA 40+00

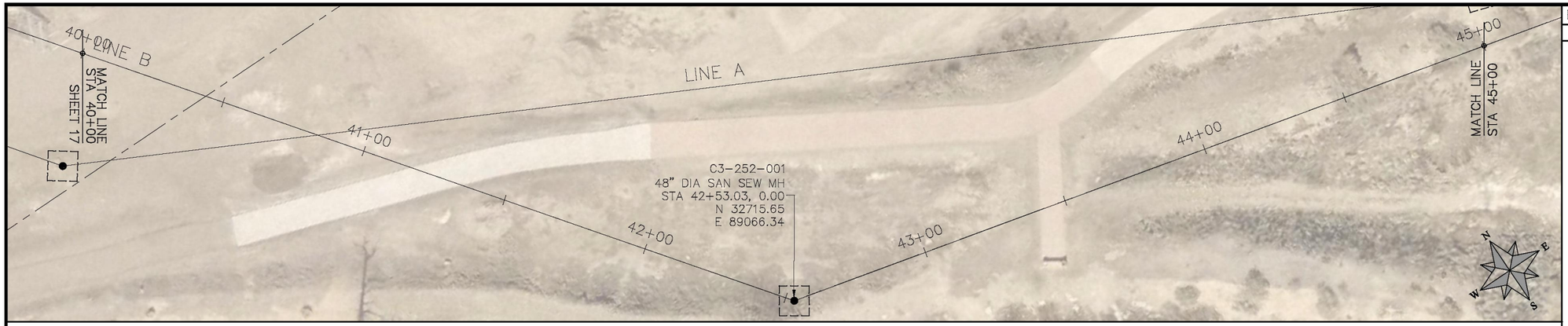
PROJECT NO. _____

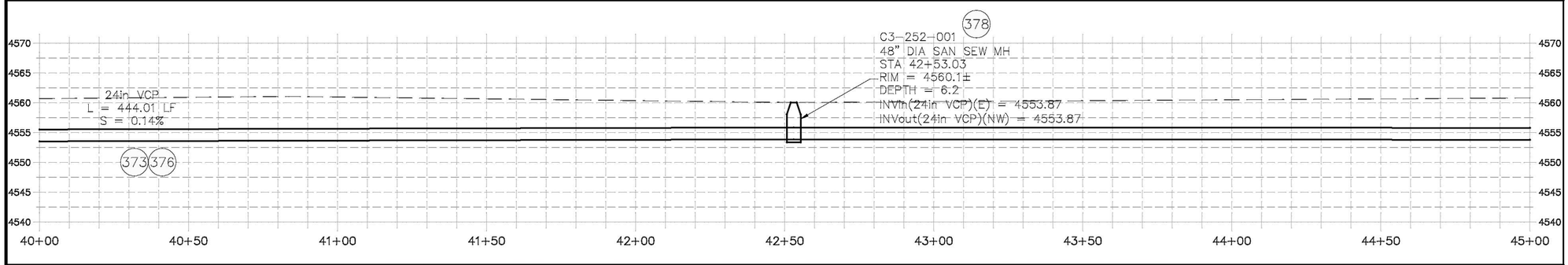
CONSTRUCTION NOTES

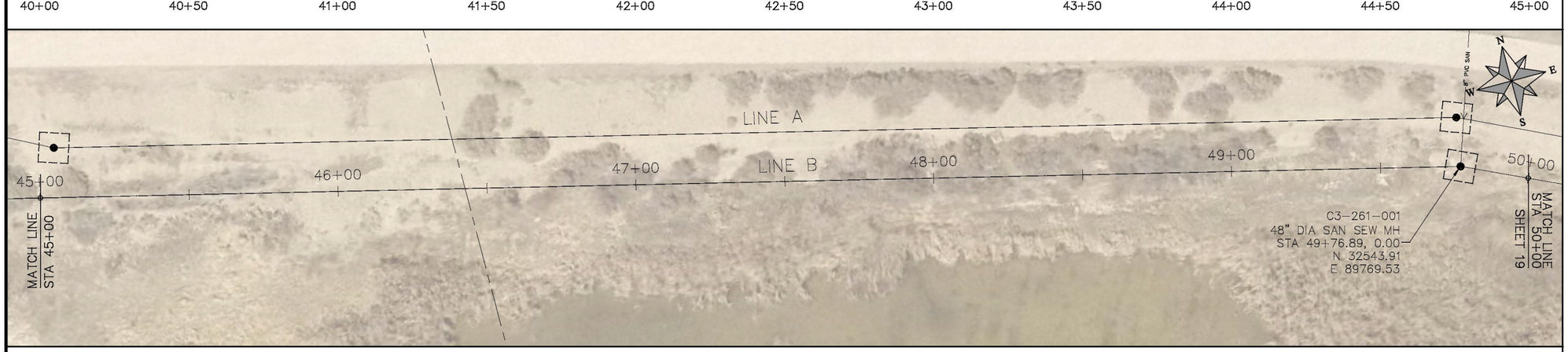
(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

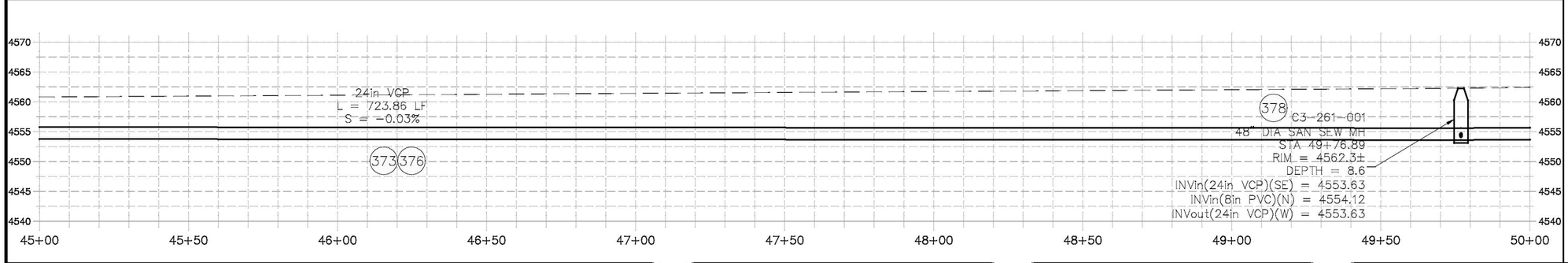
(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)

(378) SP RECONDITION EXISTING MANHOLE AND BENCH. (SEE PROJECT SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION).









DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 20'
0 5 10 20

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
LINE B PLAN AND PROFILE
STA 40+00 TO STA 50+00

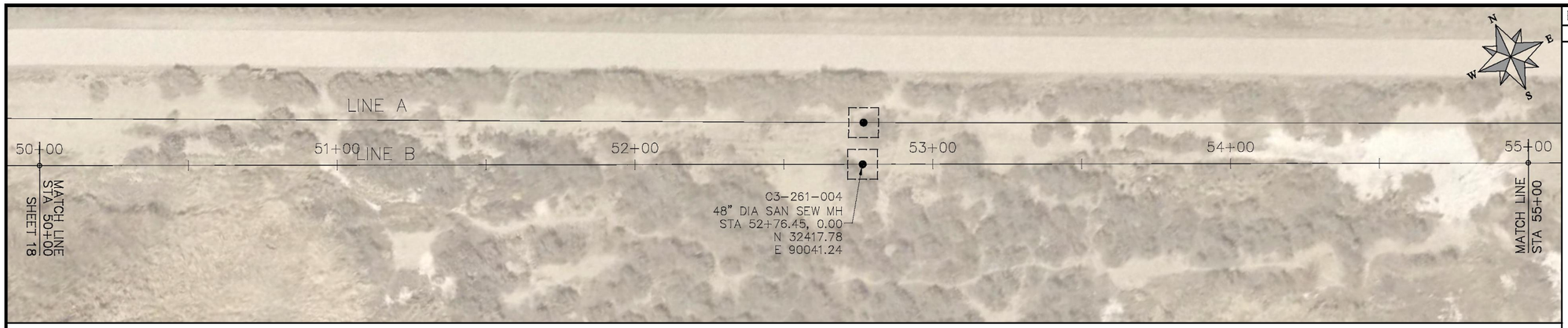
PROJECT NO. _____

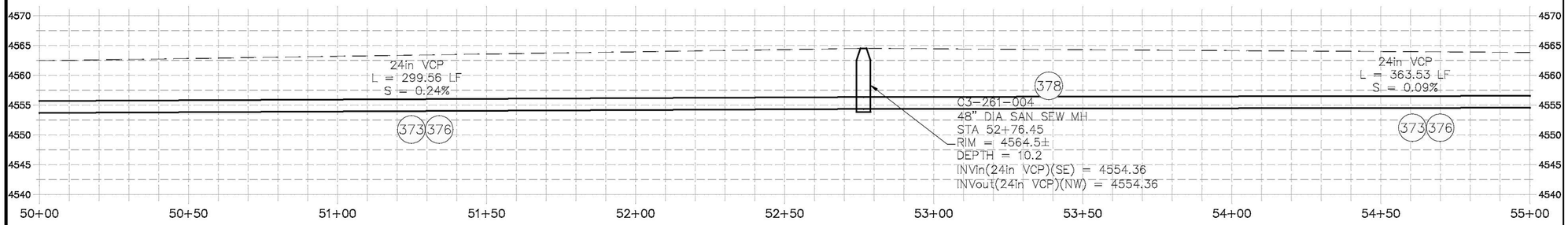
CONSTRUCTION NOTES

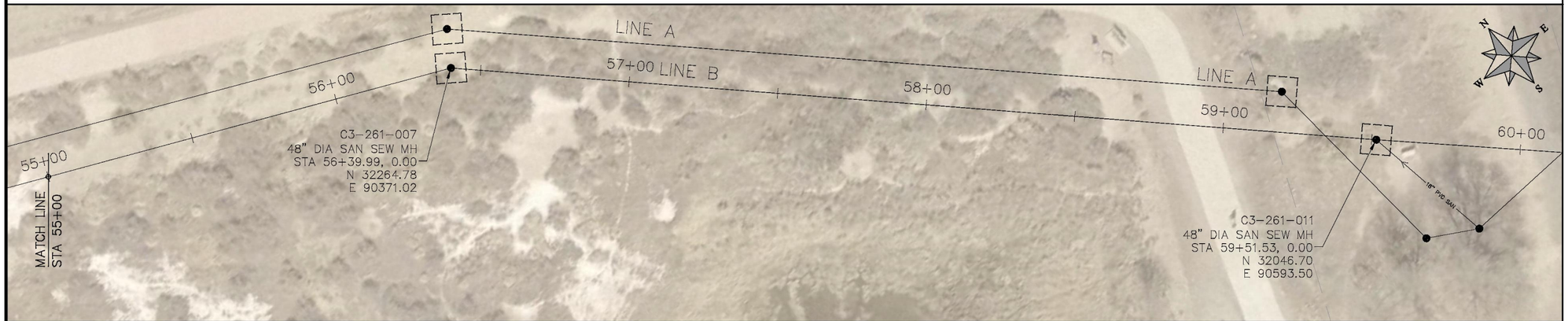
(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

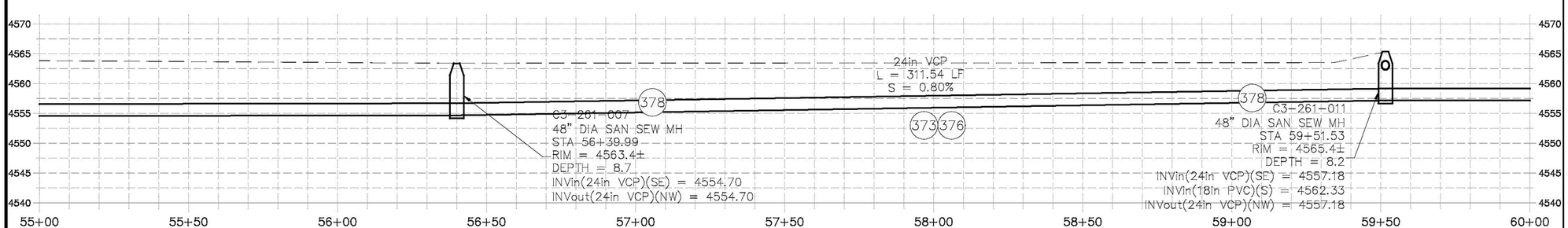
(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)

(378) SP RECONDITION EXISTING MANHOLE AND BENCH. (SEE PROJECT SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION).









DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 20'
0 5 10 20

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

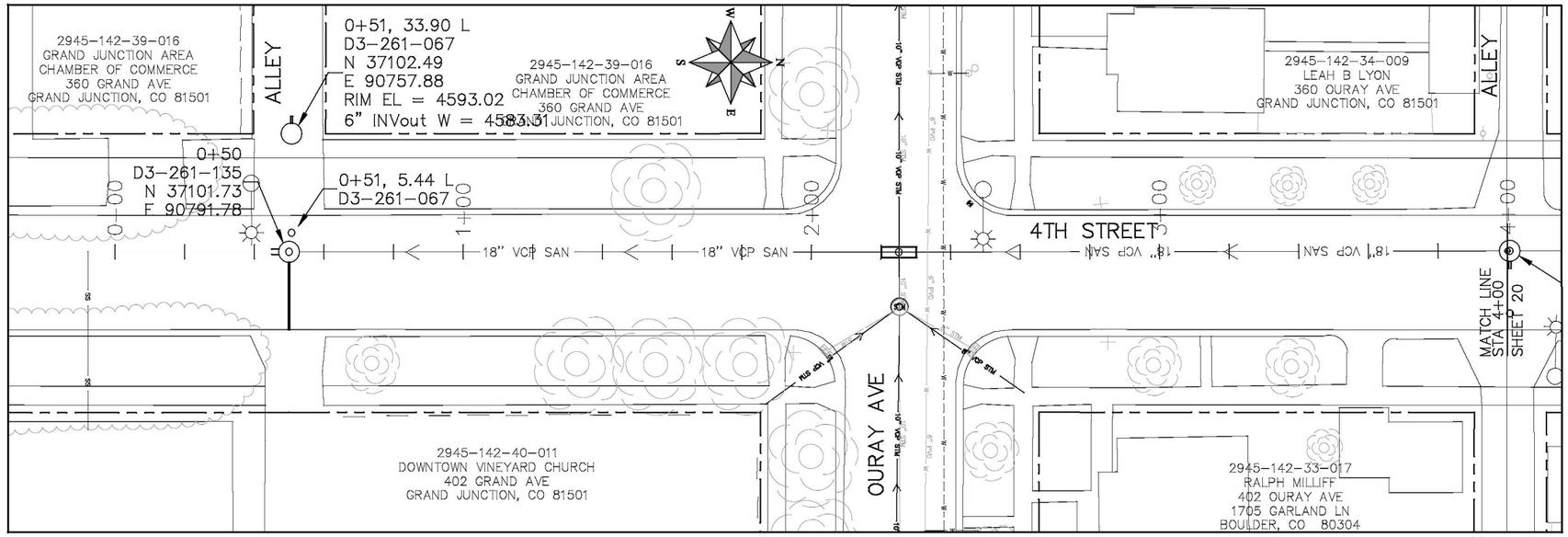
2019 SEWER INTERCEPTOR REHABILITATIONS
LINE B PLAN AND PROFILE
STA 50+00 TO STA 60+00

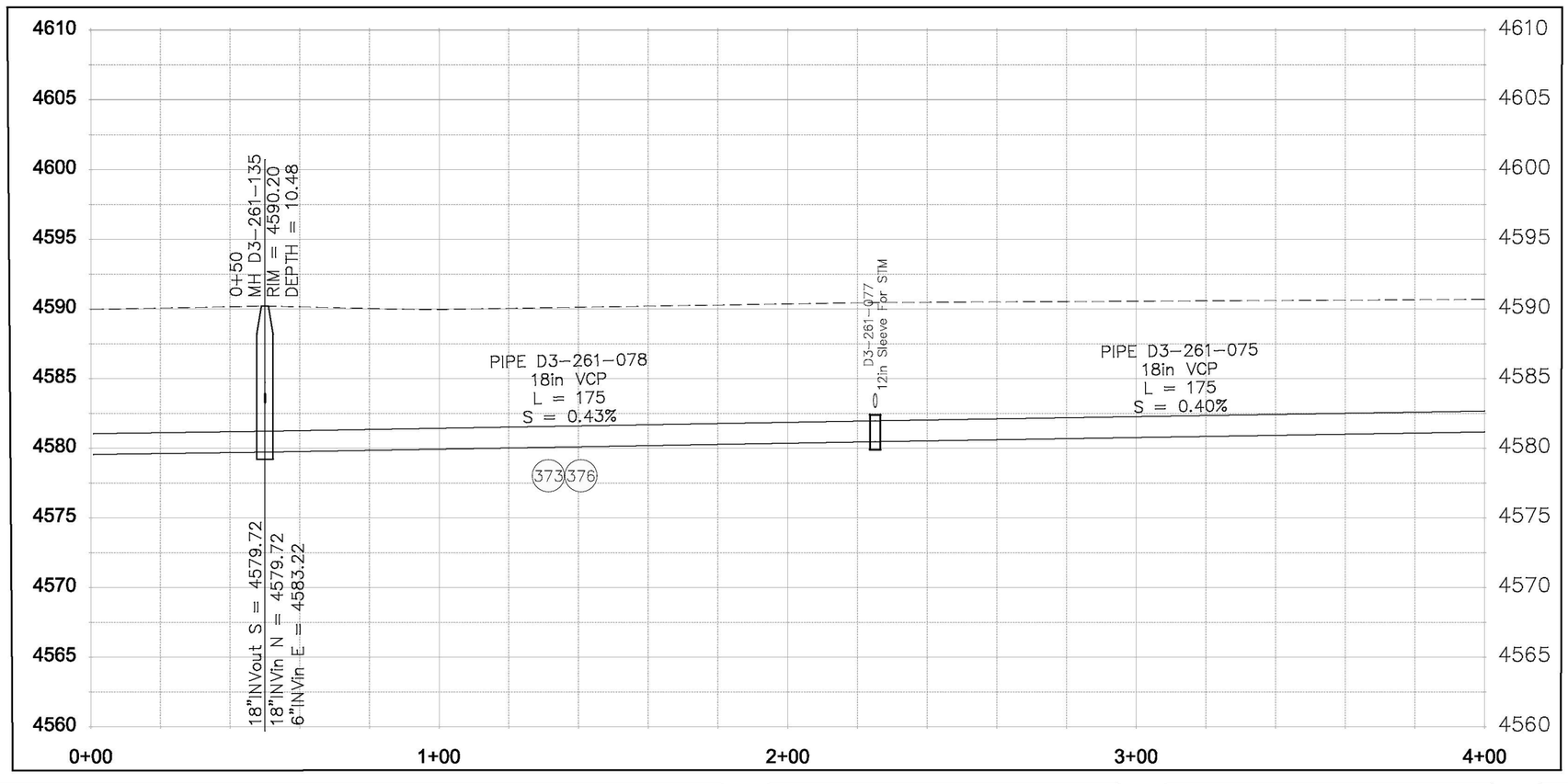
PROJECT NO. _____

CONSTRUCTION NOTES

(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)





KEYMAP

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 10'
0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

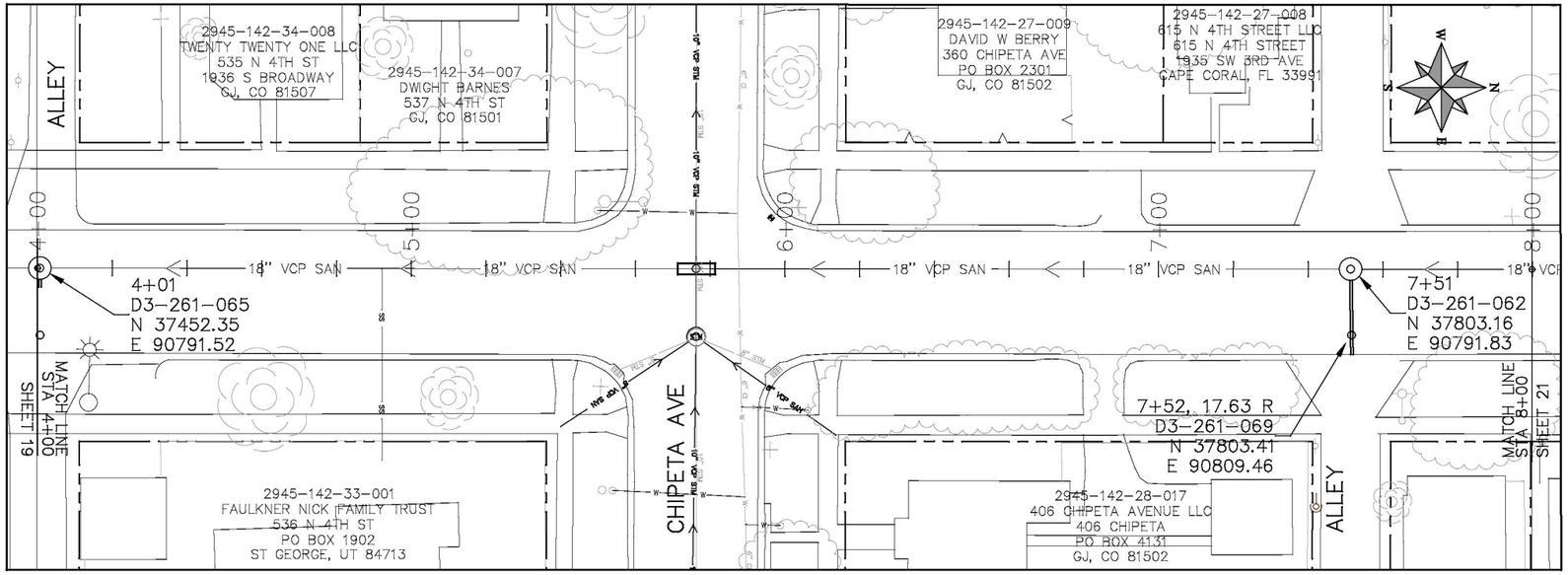
2019 SEWER INTERCEPTOR REHABILITATIONS
4TH STREET CIPP
STA 0+00 TO STA 4+00

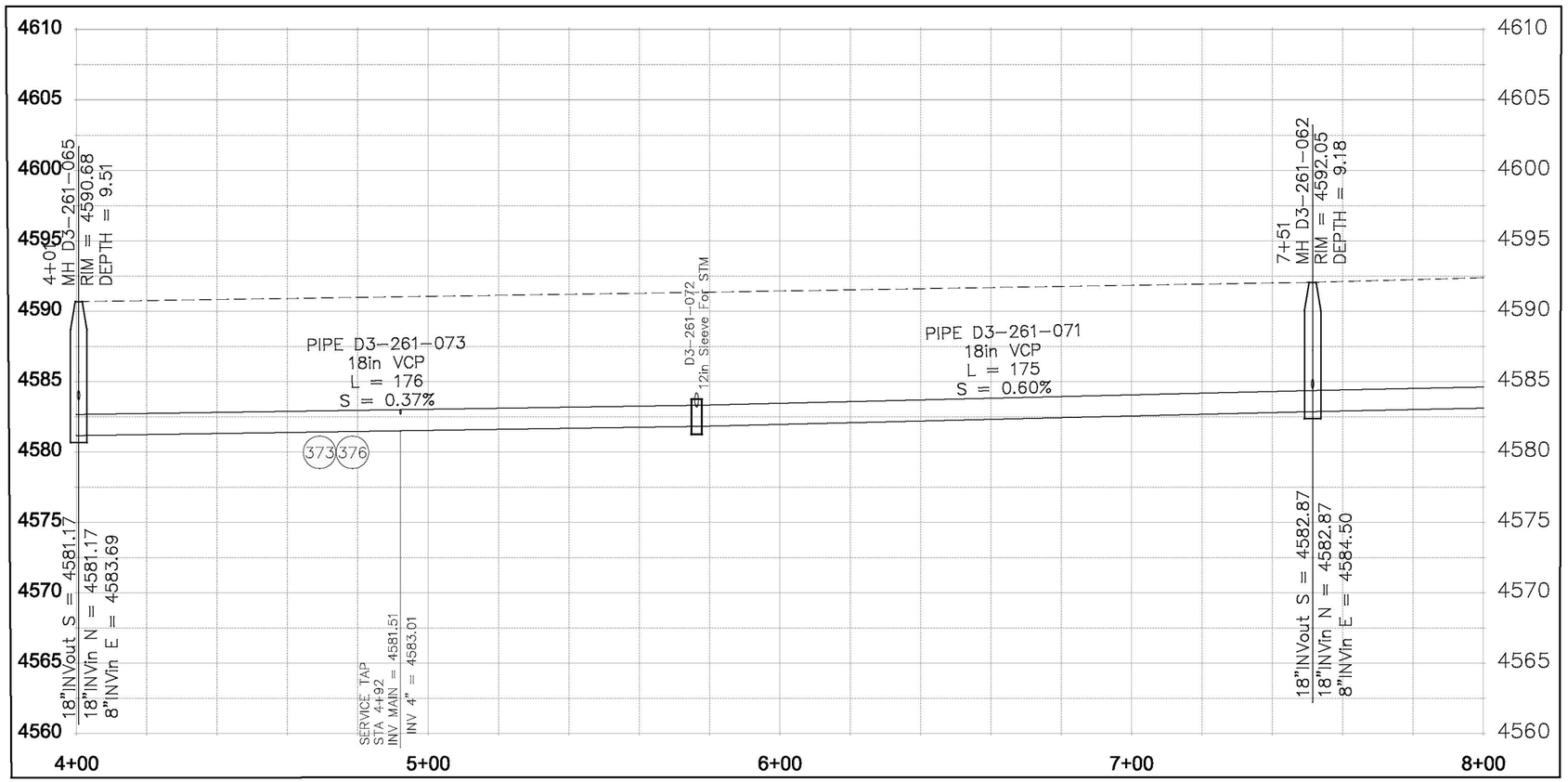
PROJECT NO. _____

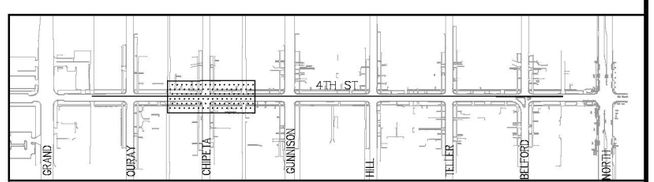
CONSTRUCTION NOTES

(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)







KEYMAP

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 10'
0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

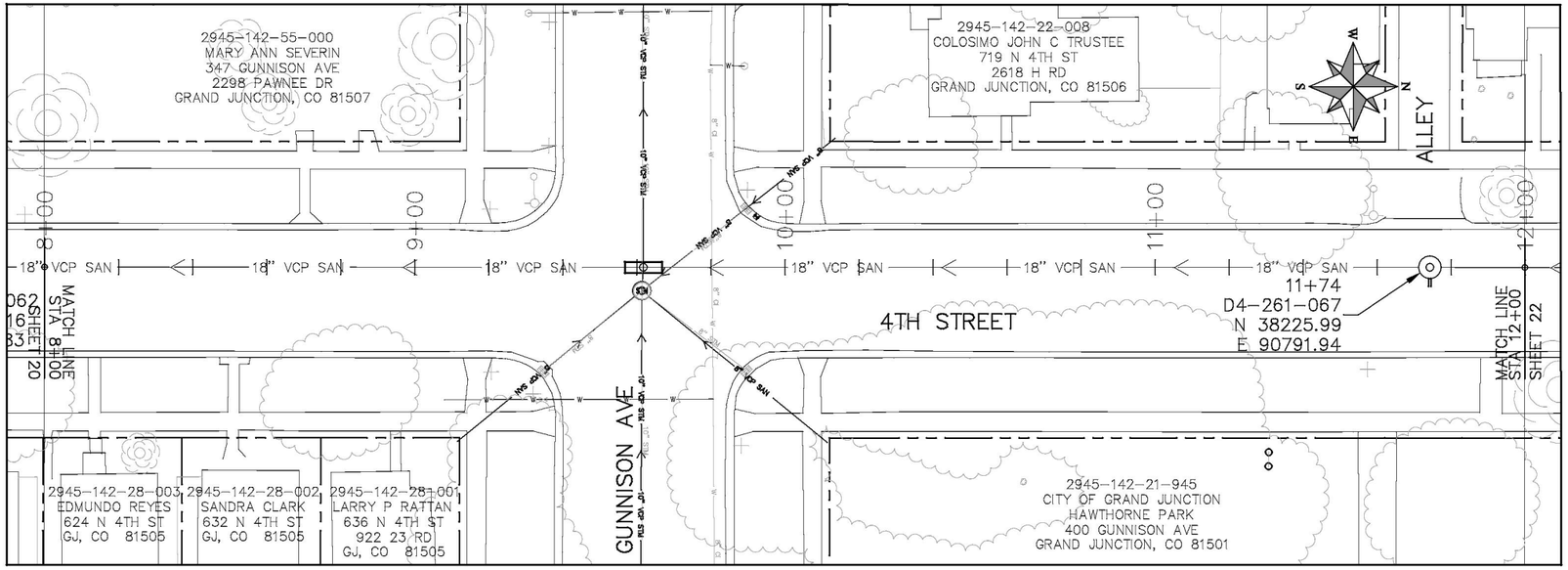
2019 SEWER INTERCEPTOR REHABILITATIONS
4TH STREET CIPP
STA 4+00 TO STA 8+00

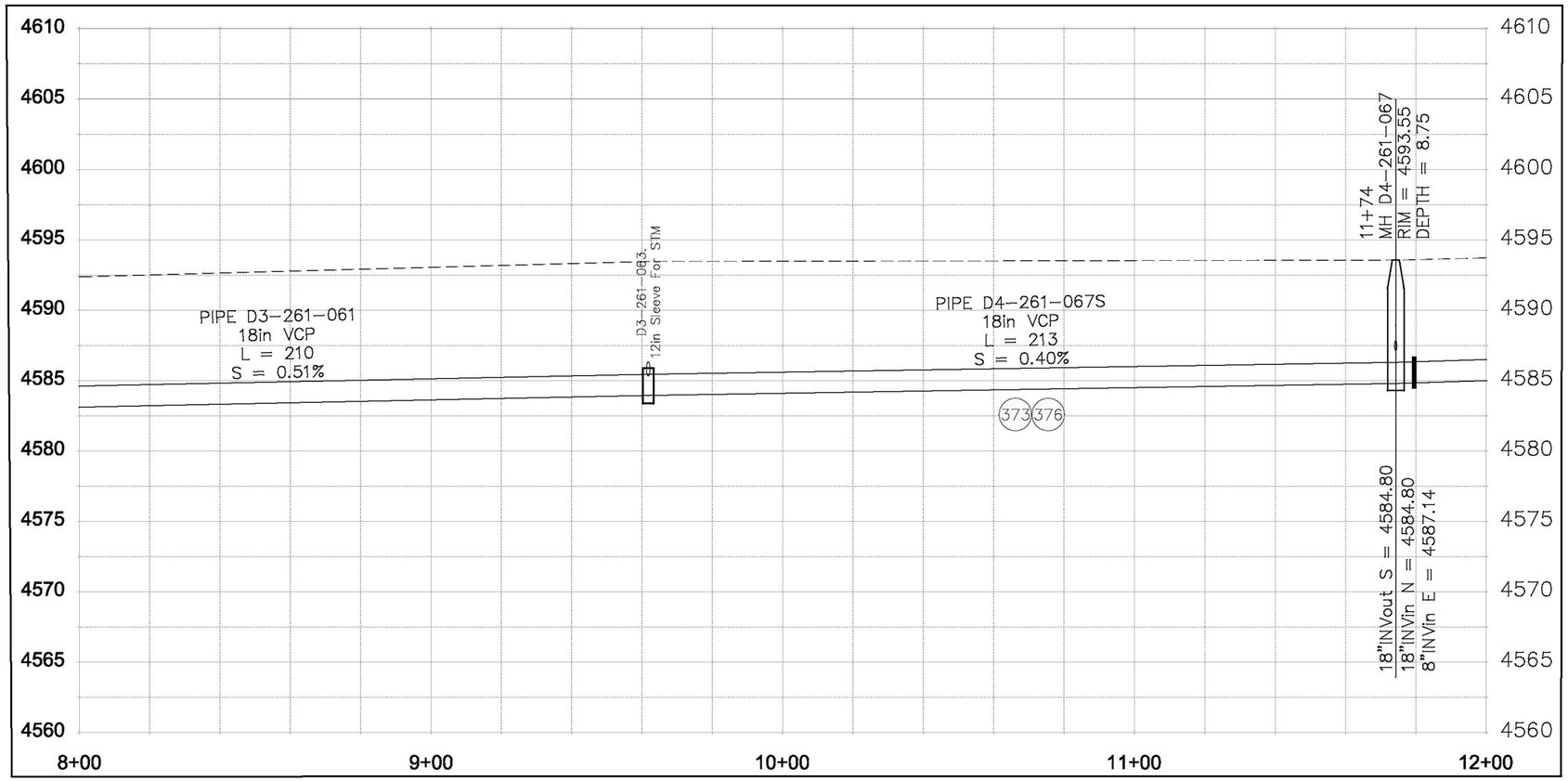
PROJECT NO. _____

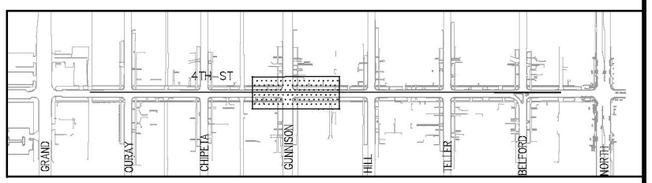
CONSTRUCTION NOTES

(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)







KEYMAP

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY	HMC	DATE	2018
DESIGNED BY	JKT	DATE	2018
CHECKED BY	JKT	DATE	2018
APPROVED BY	JKT	DATE	2018

SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 10'
0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

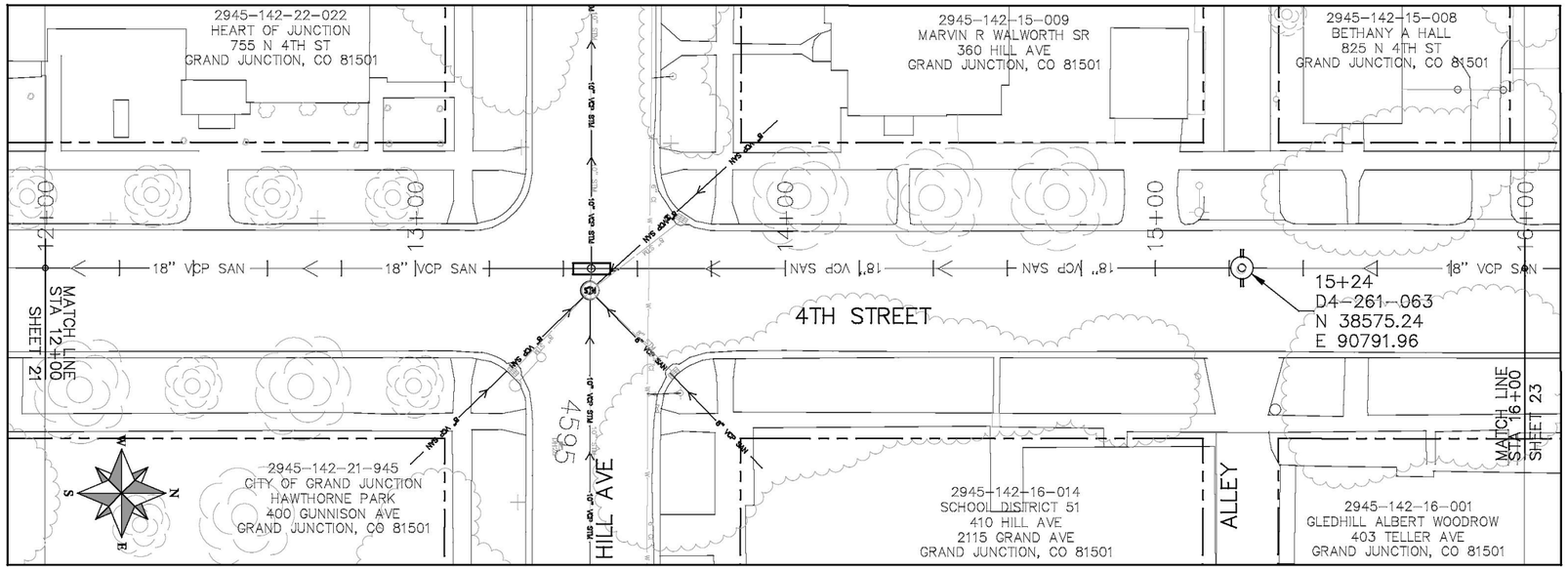
2019 SEWER INTERCEPTOR REHABILITATIONS
4TH STREET CIPP
STA 8+00 TO STA 12+00

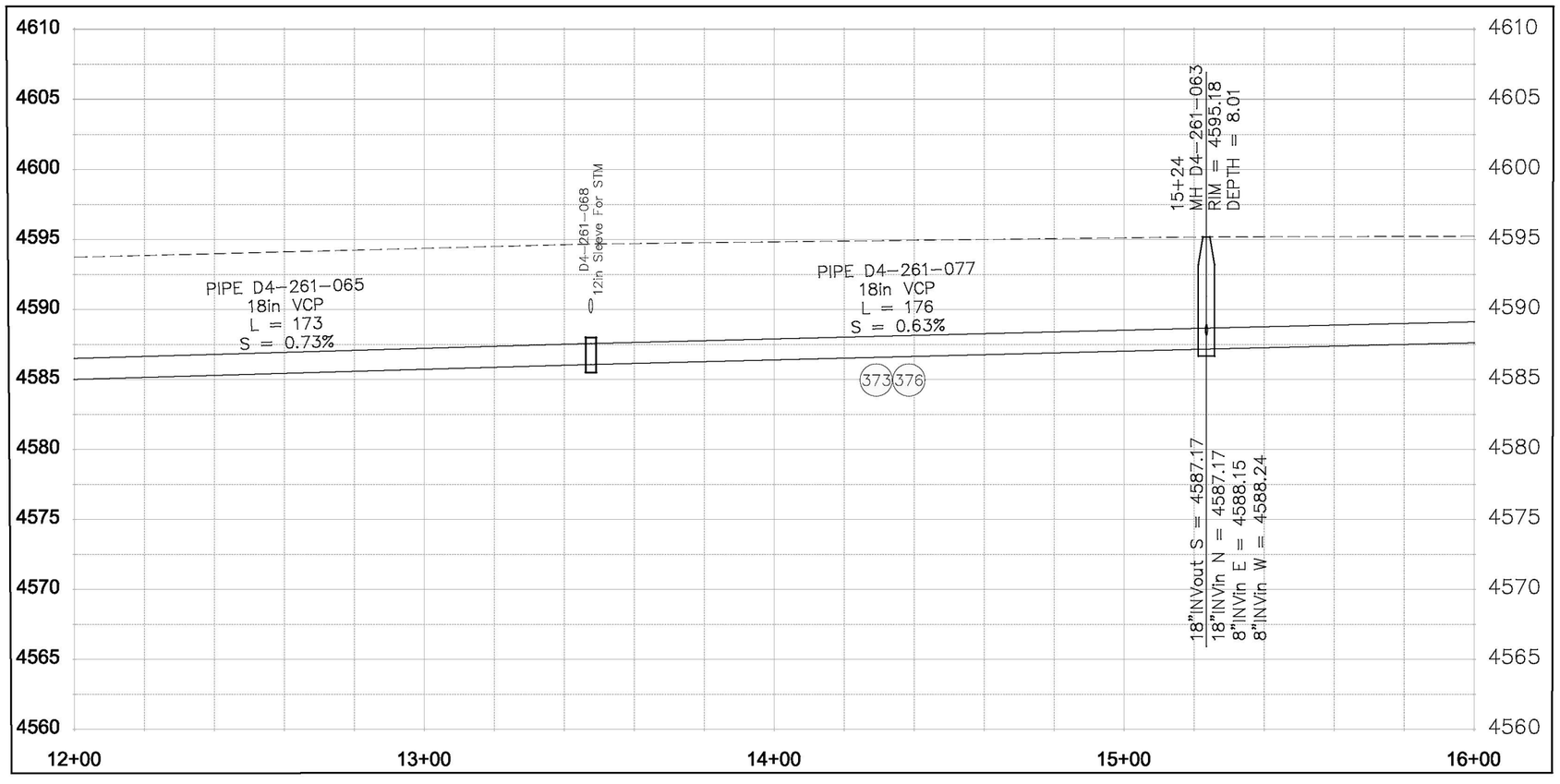
PROJECT NO. _____

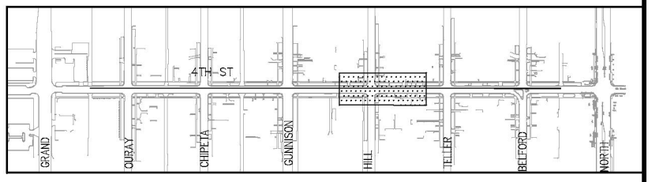
CONSTRUCTION NOTES

(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)







KEYMAP

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 10'
0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

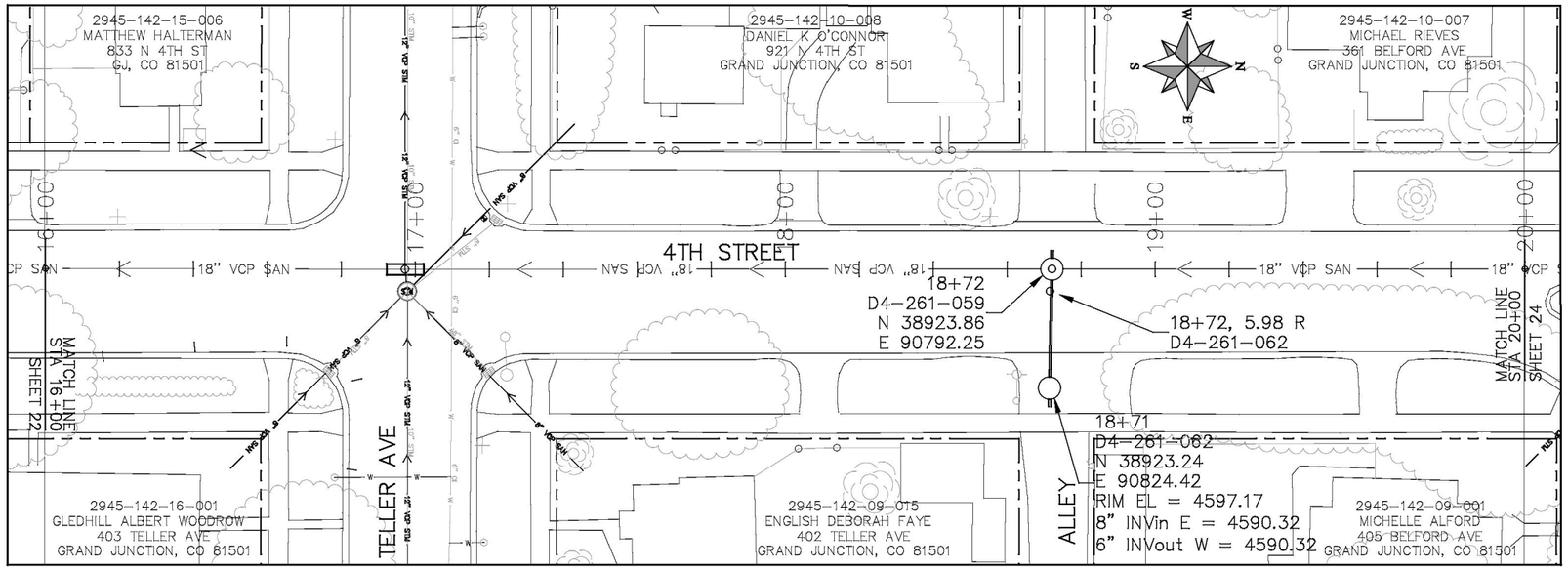
2019 SEWER INTERCEPTOR REHABILITATIONS
4TH STREET CIPP
STA 12+00 TO STA 16+00

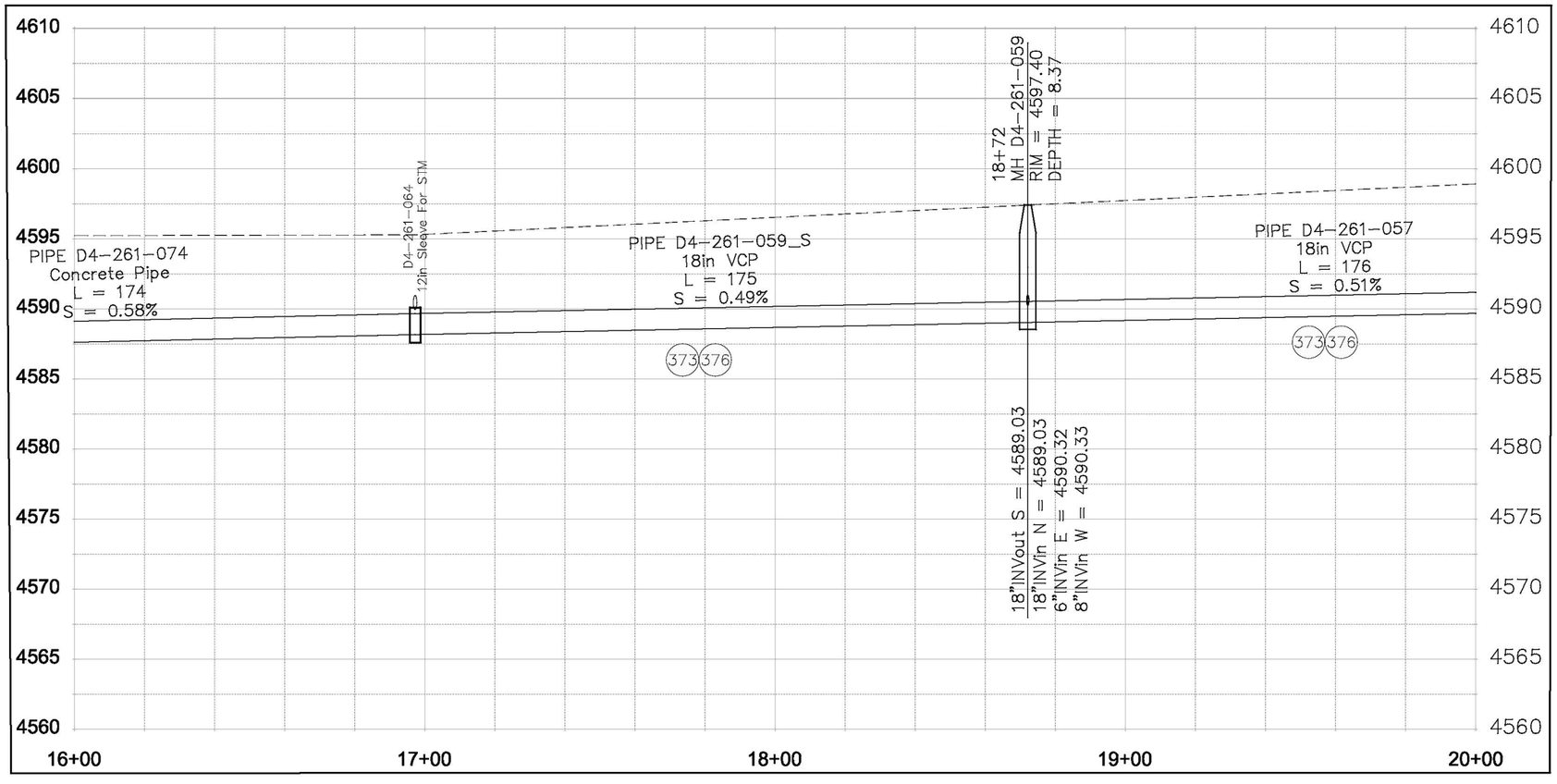
PROJECT NO. _____

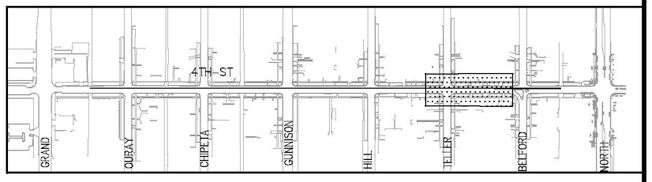
CONSTRUCTION NOTES

(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)







KEYMAP

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 10'
0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
4TH STREET CIPP
STA 16+00 TO STA 20+00

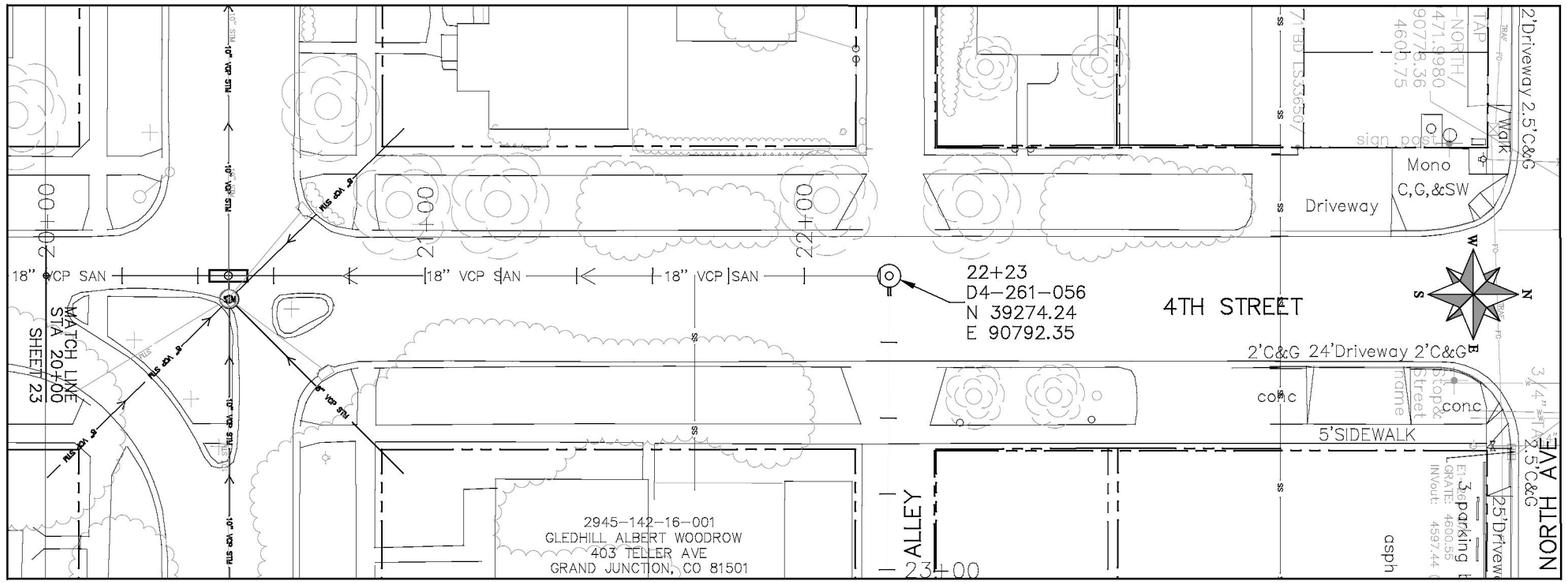
PROJECT NO. _____

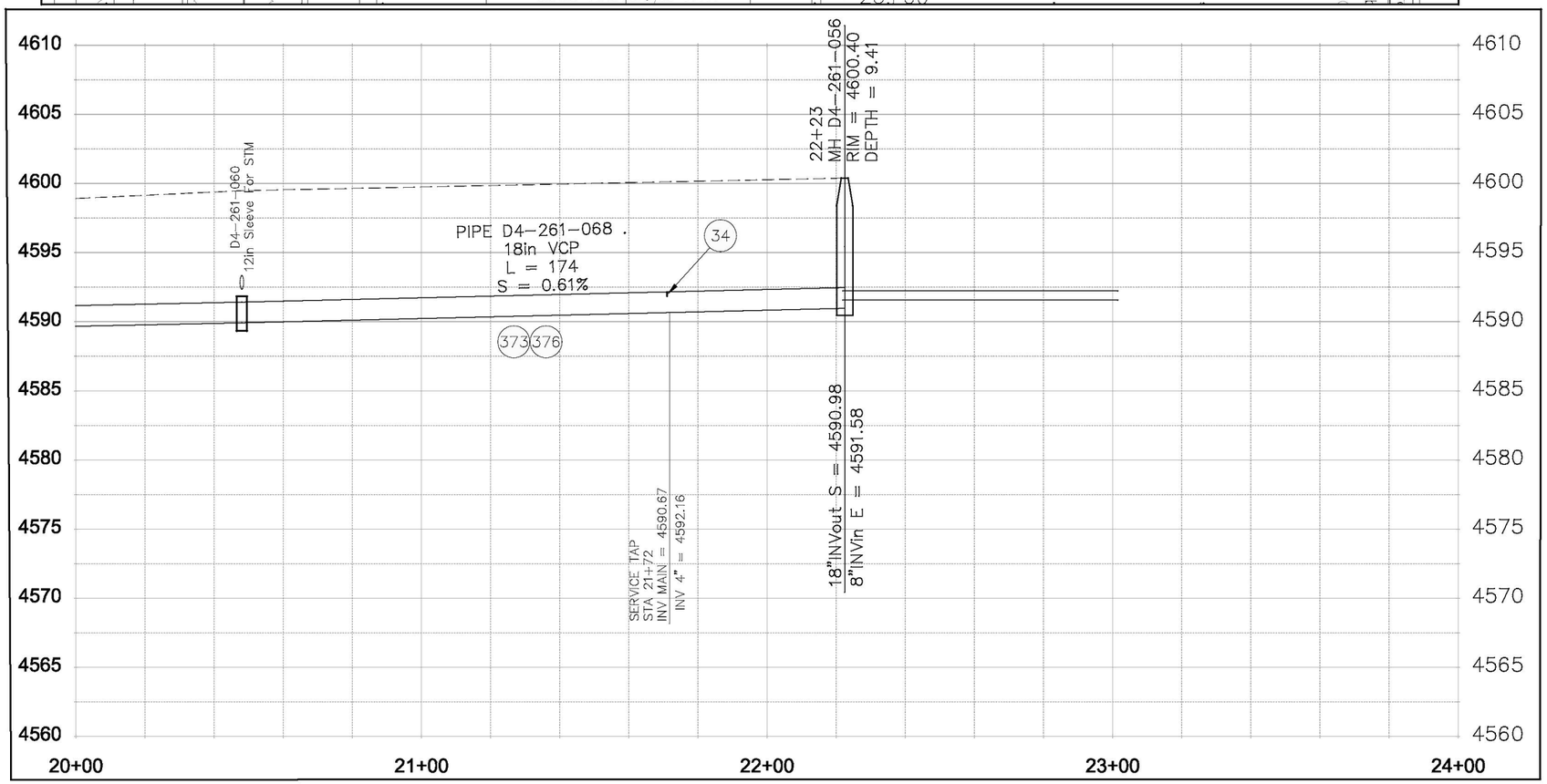
CONSTRUCTION NOTES

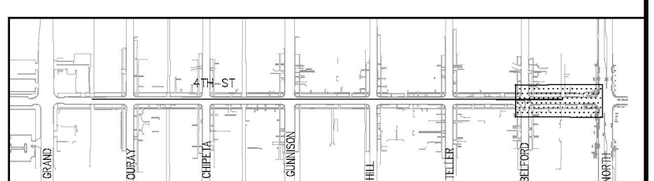
(34) REMOVE CIPP COUPON AT SERVICE LOCATION (INCIDENTAL TO CIPP) 252 MANHOLESHALL BE REMOVED. NEW PIPE INSTALLED AND CONNECTIONS BACK TO EXISTING PIPE COMPLETED PRIOR TO CIPP OPERATIONS FOR THIS RUN. CIPP "THROUGH" OLD MANHOLE LOCATION.

(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)







KEYMAP

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

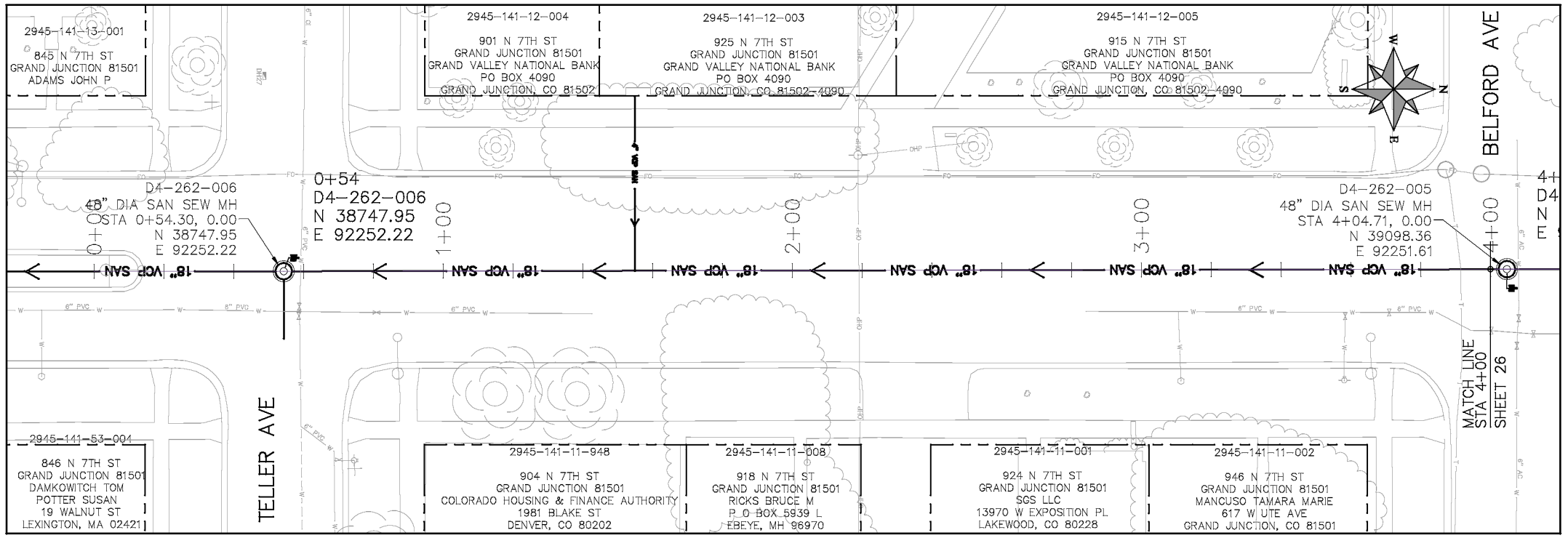
DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

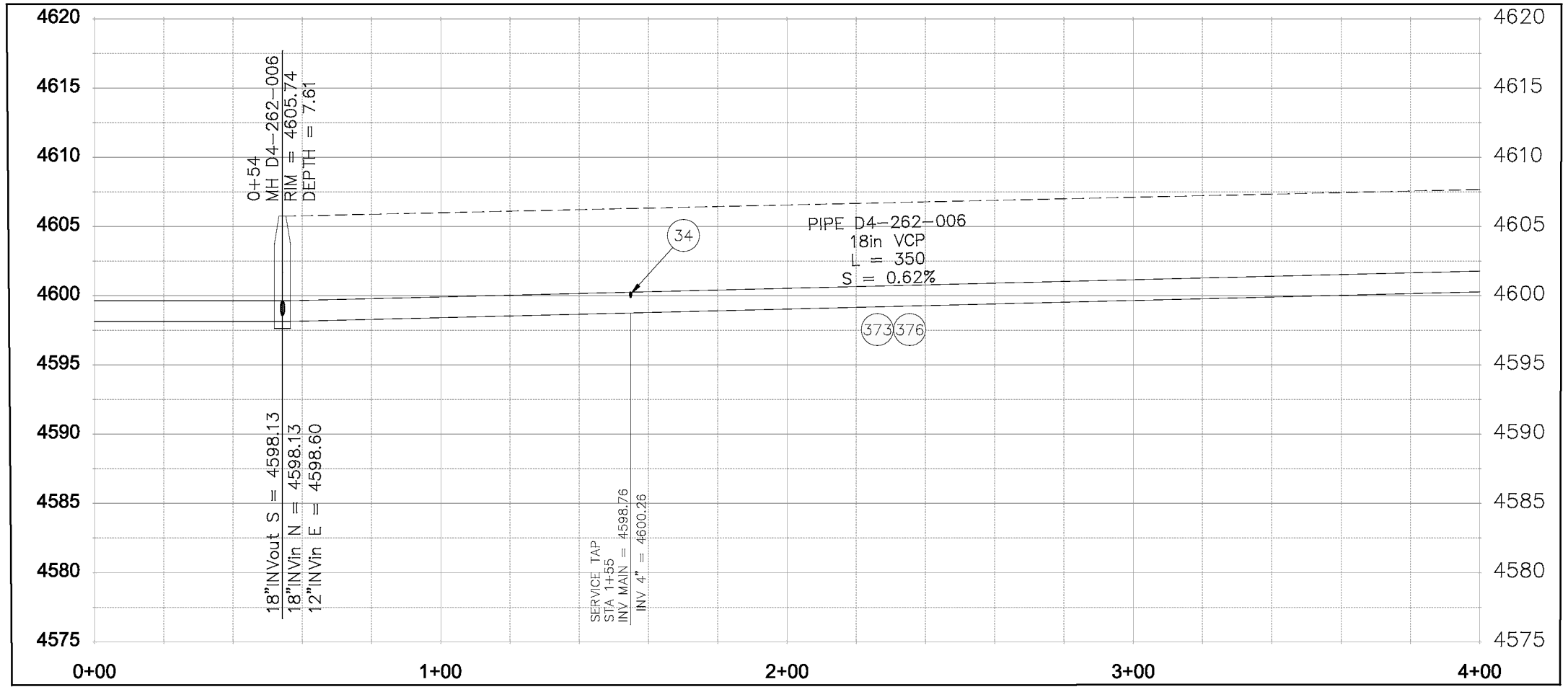
SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 10'
0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
4TH STREET CIPP
STA 20+00 TO STA 24+00





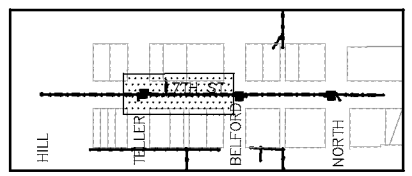
PROJECT NO. _____

CONSTRUCTION NOTES

(34) REMOVE CIPP COUPON AT SERVICE LOCATION (INCIDENTAL TO CIPP) 252 MANHOLESHALL BE REMOVED. NEW PIPE INSTALLED AND CONNECTIONS BACK TO EXISTING PIPE COMPLETED PRIOR TO CIPP OPERATIONS FOR THIS RUN. CIPP "THROUGH" OLD MANHOLE LOCATION.

(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)



KEYMAP

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 10'
0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
7TH STREET CIPP
STA 0+00 TO STA 4+00

N:\Landproj\2019 Sewer Interceptor Rehabilitations\dwg\26-27_7th Street.dwg, 26, 1/24/2019 2:46:16 PM

REVISION	DESCRIPTION	DATE
REVISION		
REVISION		
REVISION		
REVISION		

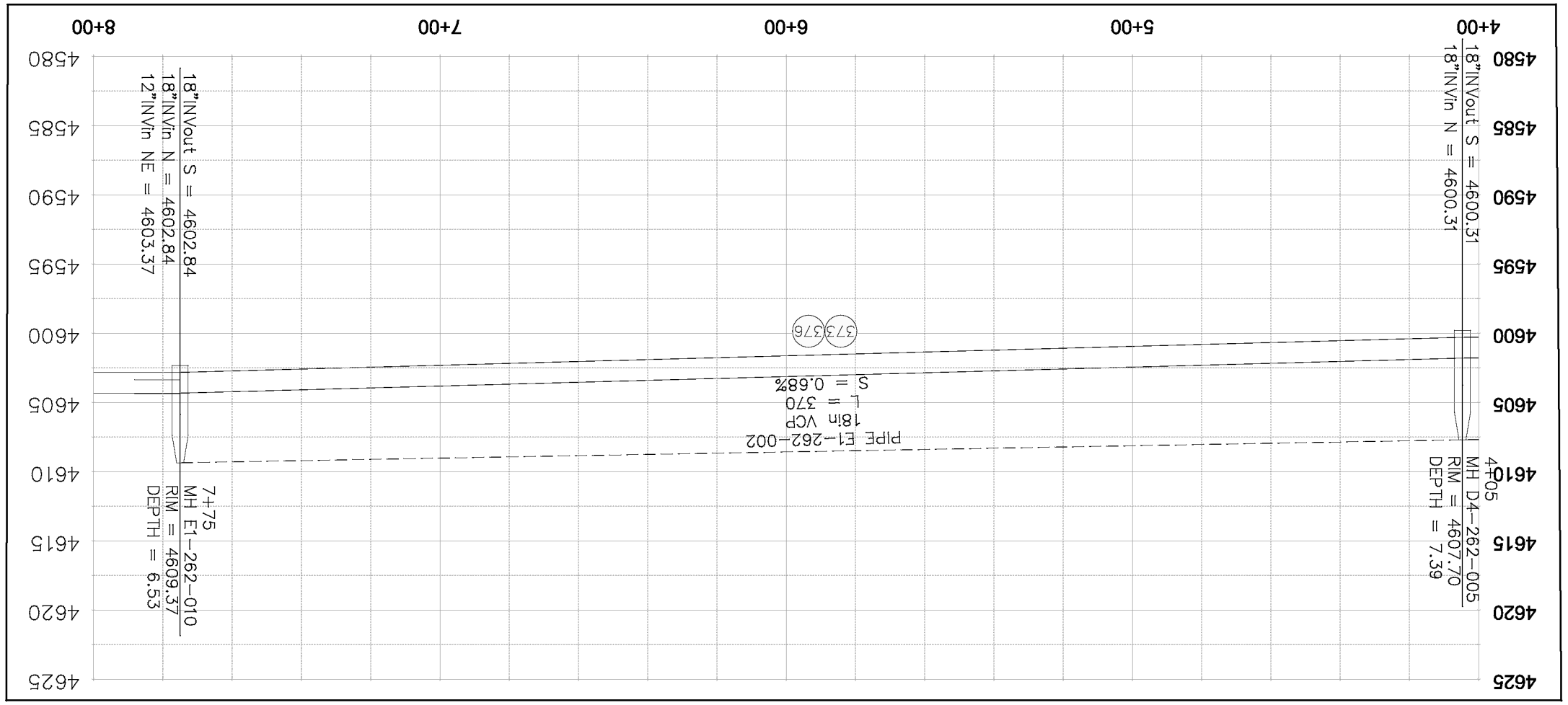
DRAWN BY	HMC	DATE 2018
DESIGNED BY	JKT	DATE 2018
CHECKED BY	JKT	DATE 2018
APPROVED BY	JKT	DATE 2018

SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 10'
0 2.5 5 10

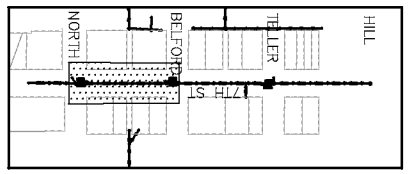
Grand Junction
CITY OF COLORADO

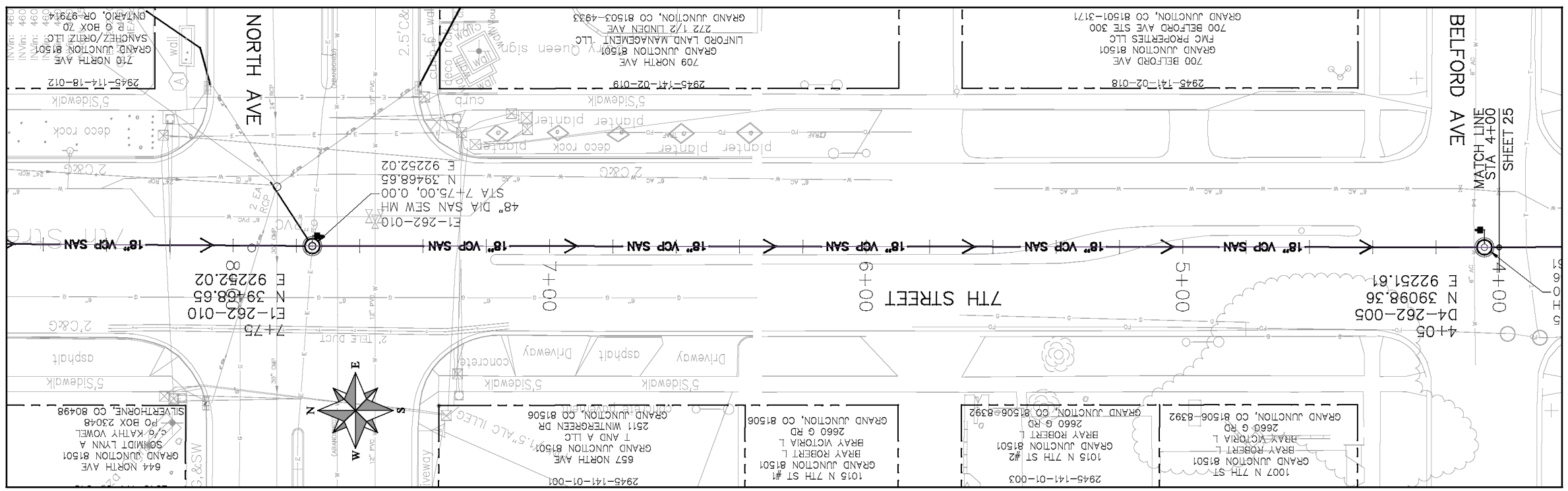
PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
7TH STREET CIPP
STA 4+00 TO STA 8+00



KEYMAP





PROJECT NO. _____

CONSTRUCTION NOTES

(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

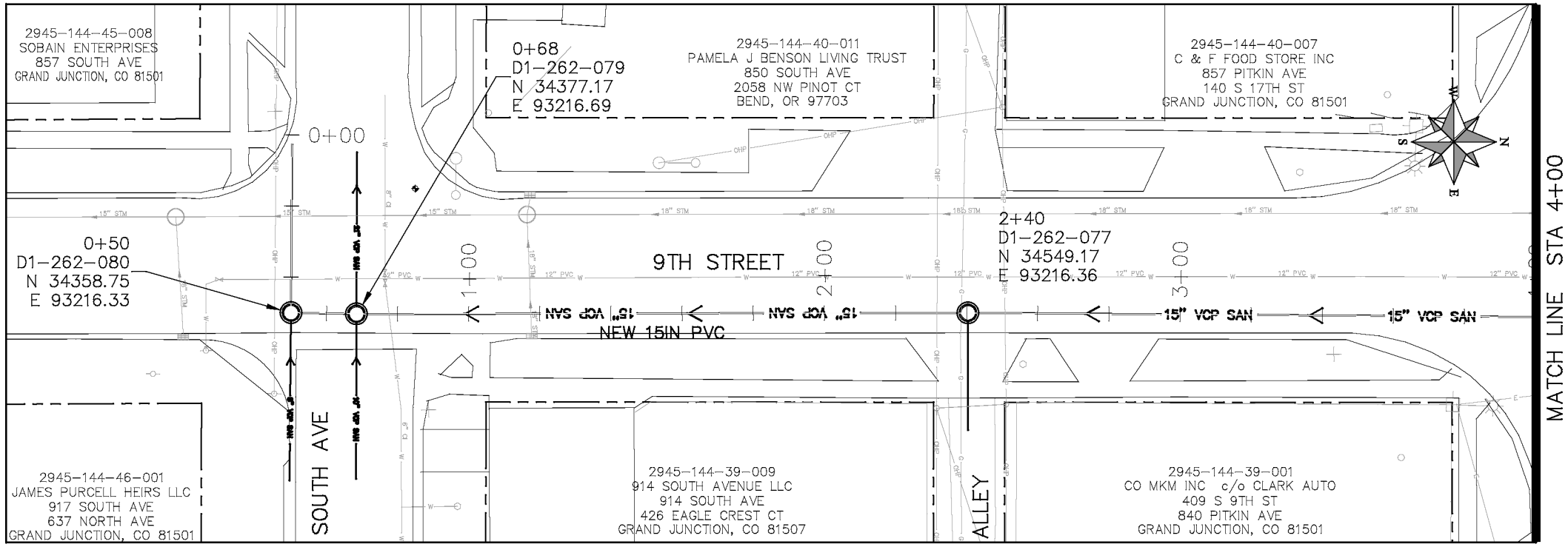
(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)

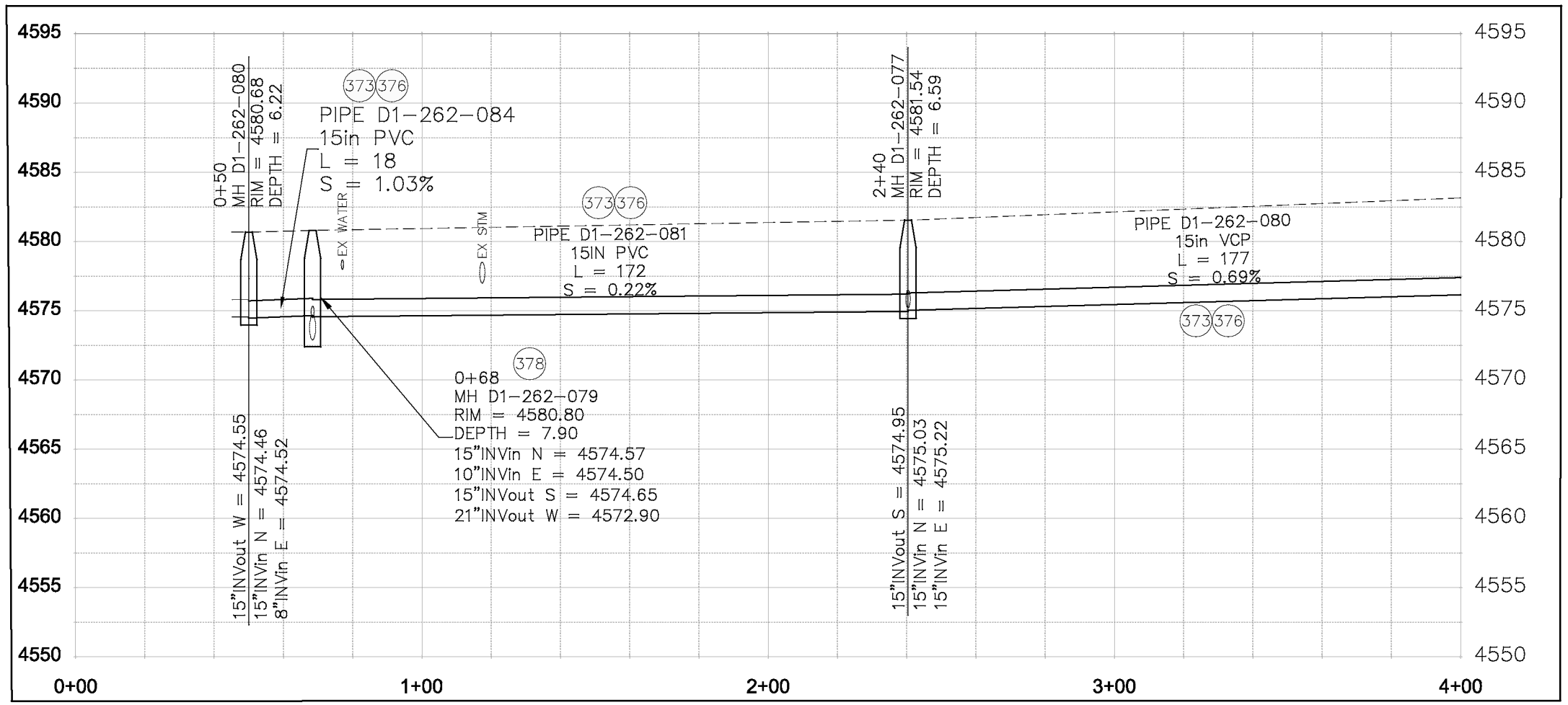
PROJECT NO. _____

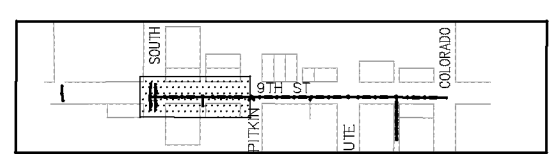
CONSTRUCTION NOTES

(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)







KEYMAP

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY HMC/JCS DATE 2016
DESIGNED BY JJV DATE 2016
CHECKED BY TCP DATE 2016
APPROVED BY HMC/JCS DATE 2016

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
9TH STREET CIPP
STA 0+00 TO STA 4+00

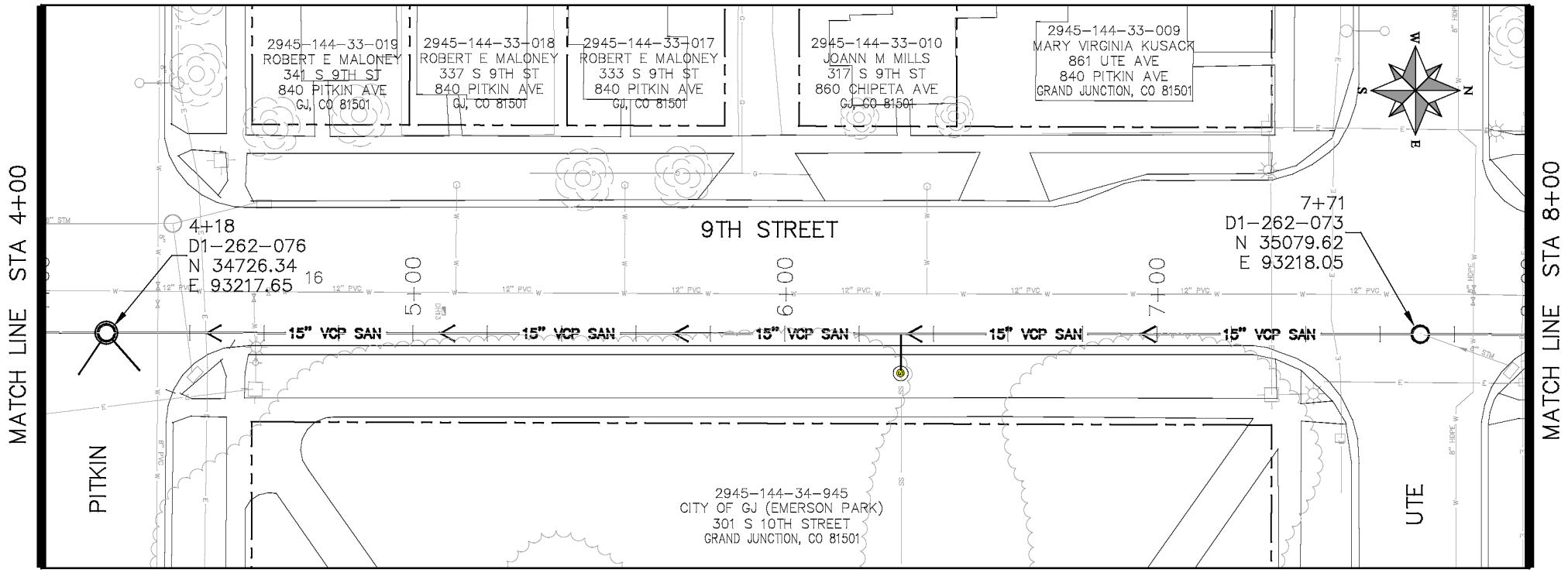
N:\Landproj\2019 Sewer Interceptor Rehabilitations\dwg\28-30_9th Street.dwg, 28, 1/24/2019 2:46:37 PM

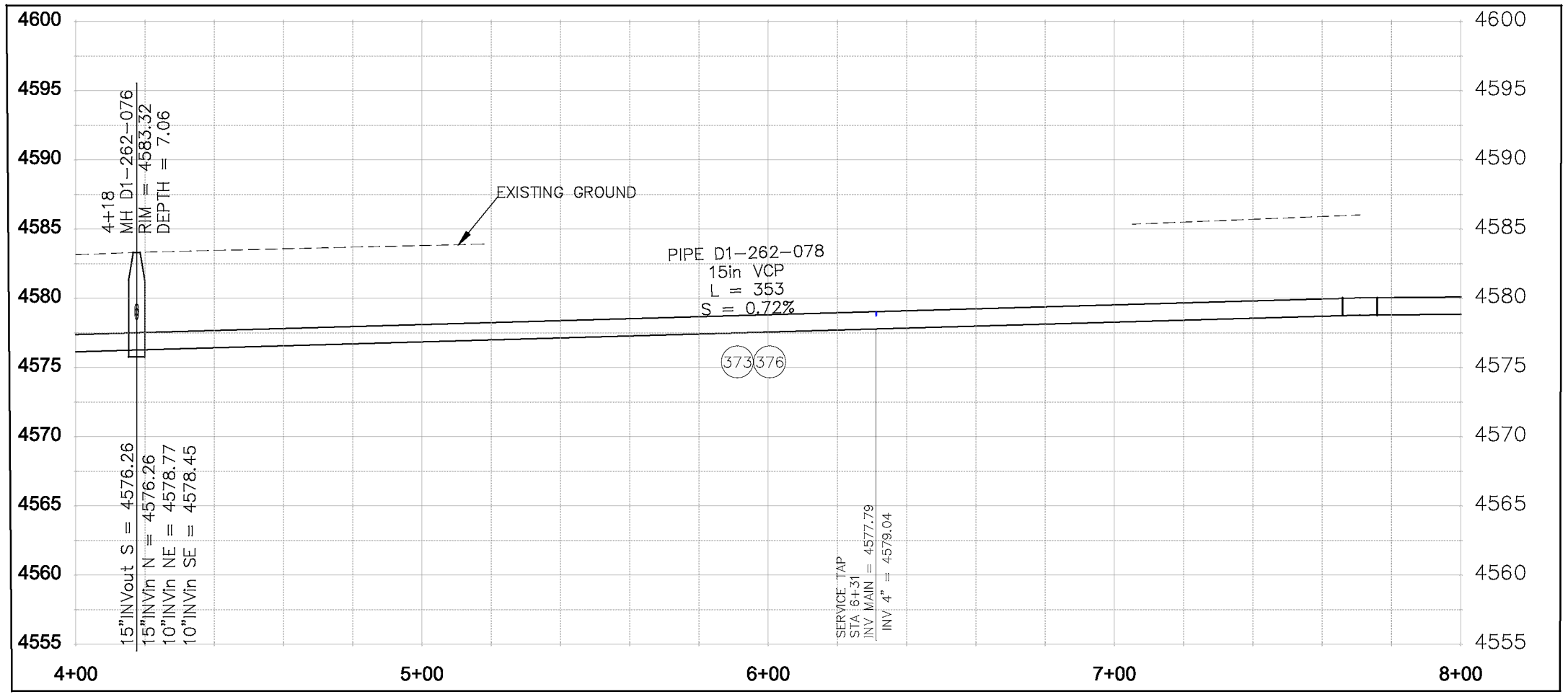
PROJECT NO. _____

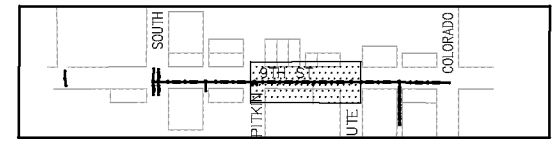
CONSTRUCTION NOTES

(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)







KEYMAP

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY HMC/JCS DATE 2016
DESIGNED BY JJV DATE 2016
CHECKED BY TCP DATE 2016
APPROVED BY HMC/JCS DATE 2016

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
9TH STREET CIPP
STA 4+00 TO STA 8+00

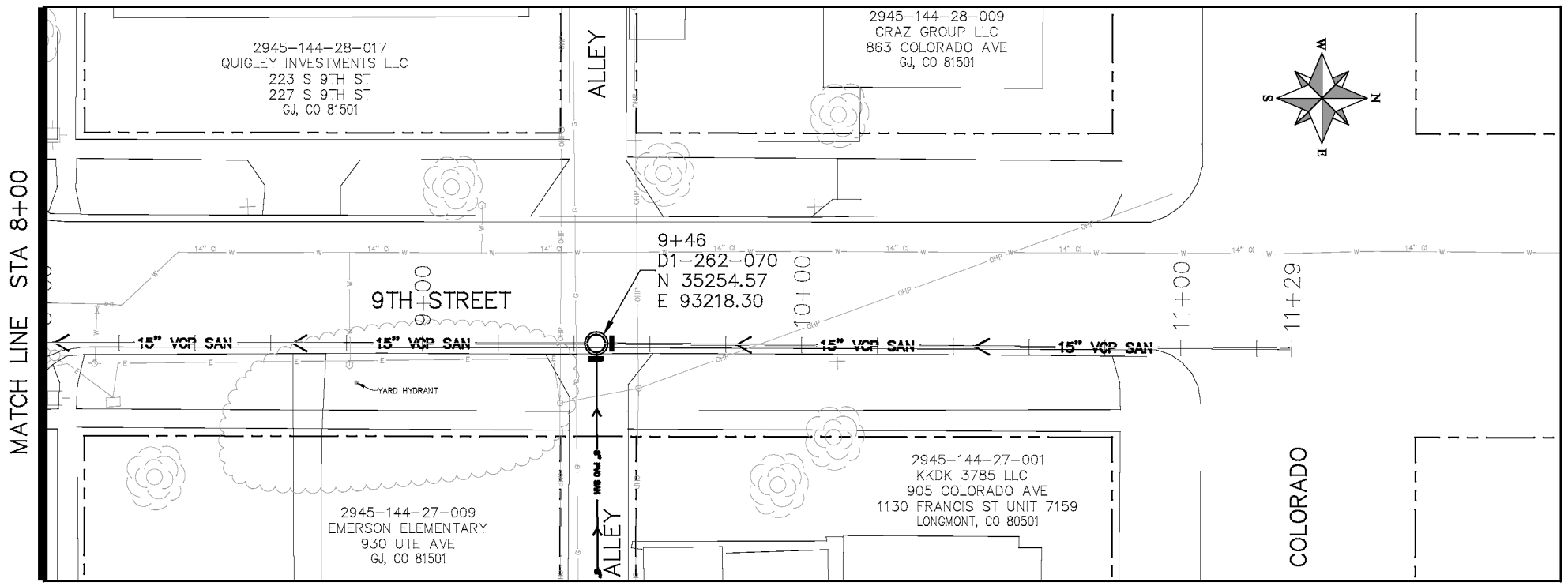
N:\Landproj\2019 Sewer Interceptor Rehabilitations\dwg\28-30_9th Street.dwg, 29, 1/24/2019 2:46:39 PM

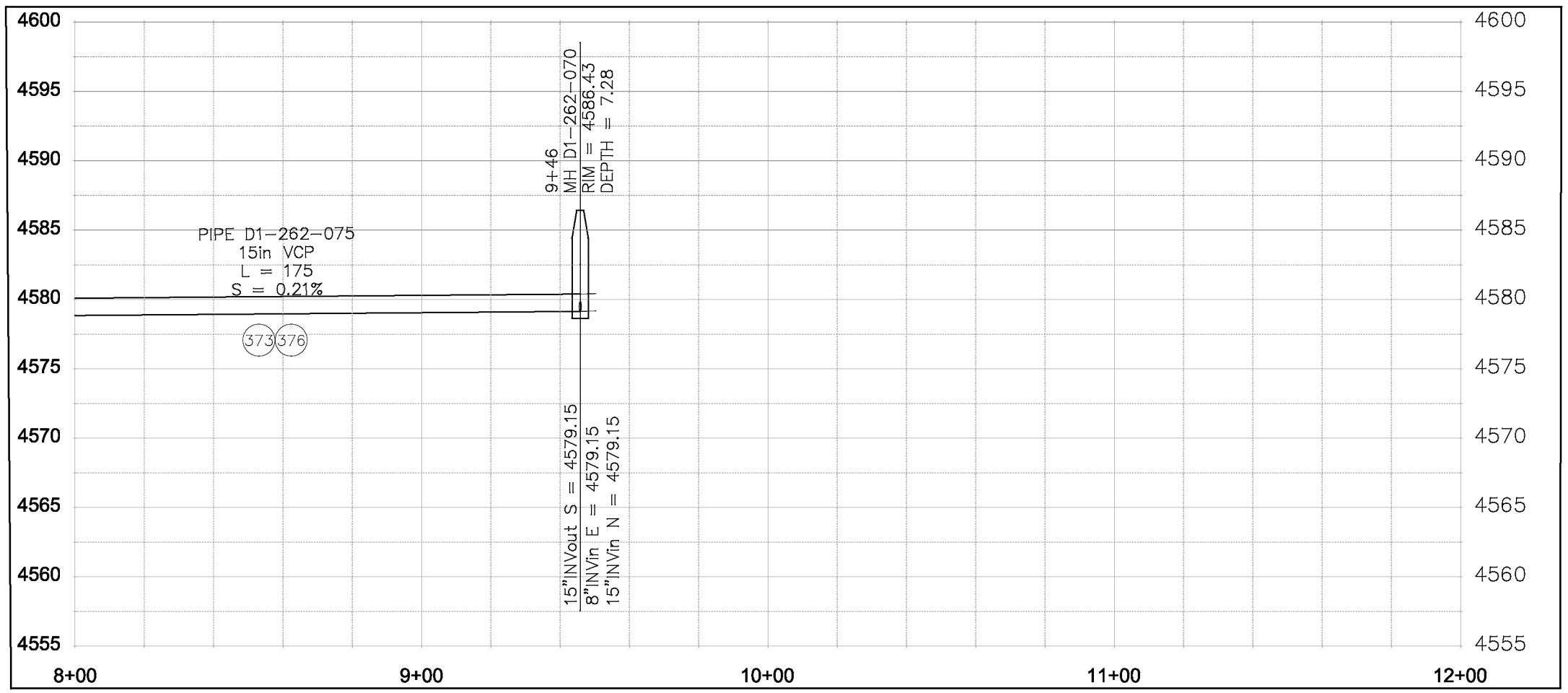
PROJECT NO. _____

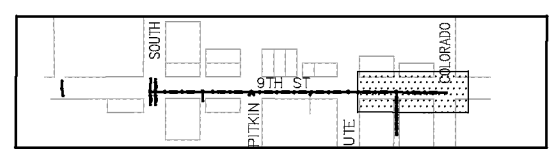
CONSTRUCTION NOTES

(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)







KEYMAP

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY HMC/JCS DATE 2016
DESIGNED BY JJV DATE 2016
CHECKED BY TCP DATE 2016
APPROVED BY HMC/JCS DATE 2016

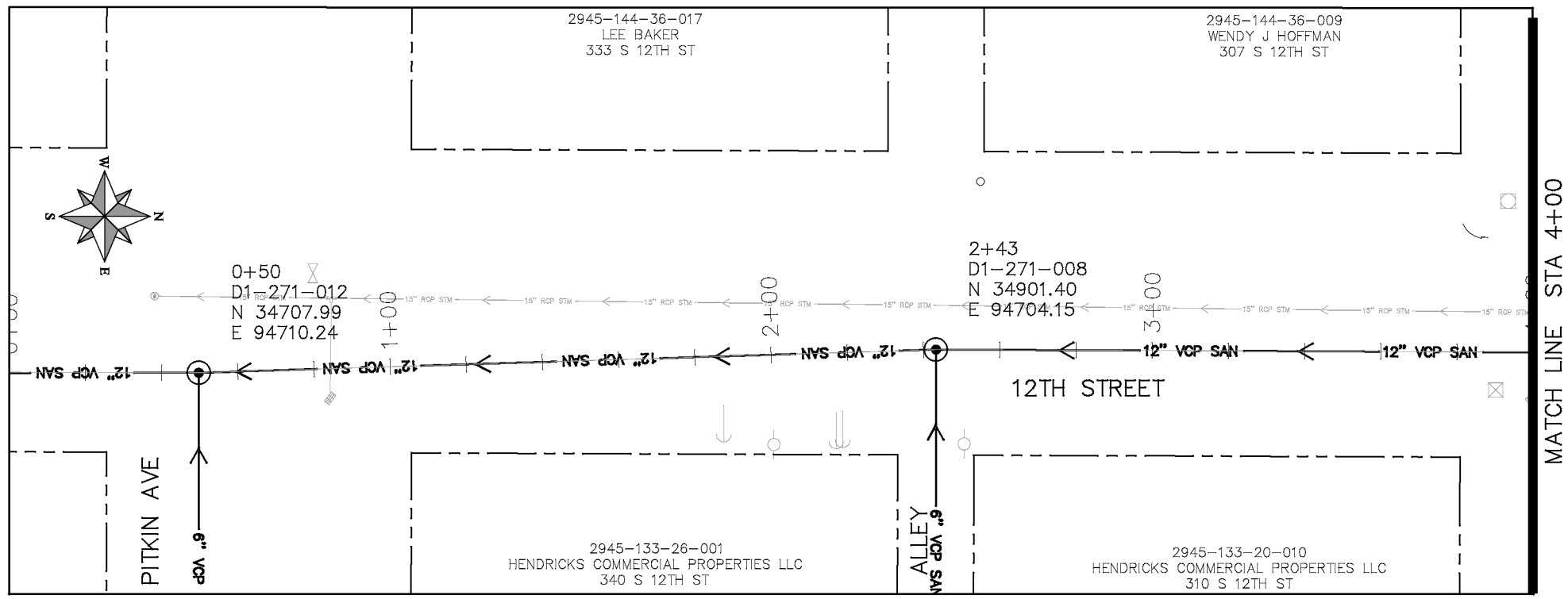
SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

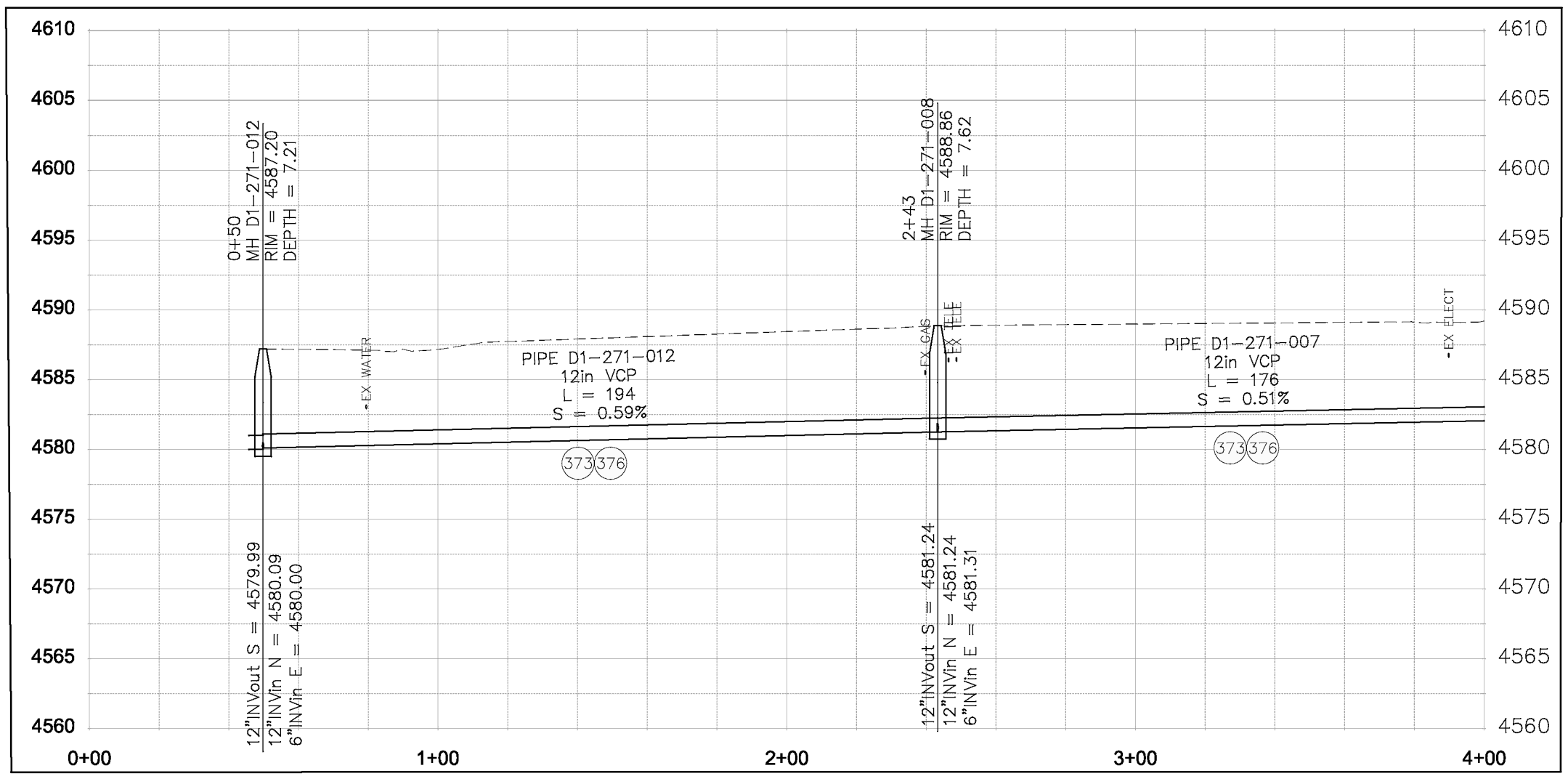
CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
9TH STREET CIPP
STA 8+00 TO STA 12+00

N:\Landpro\2019 Sewer Interceptor Rehabilitations\dwg\28-30_9th Street.dwg, 30, 1/24/2019 2:46:40 PM



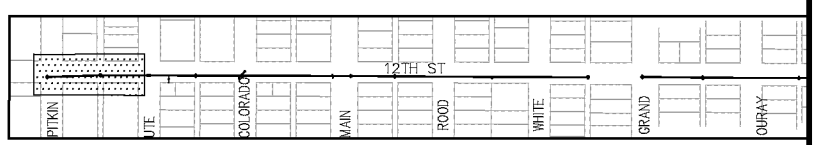


PROJECT NO. _____

CONSTRUCTION NOTES

373 CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

376 REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)



KEYMAP

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY HMC/JCS DATE 2016
DESIGNED BY JJV DATE 2016
CHECKED BY TCP DATE 2016
APPROVED BY HMC/JCS DATE 2016

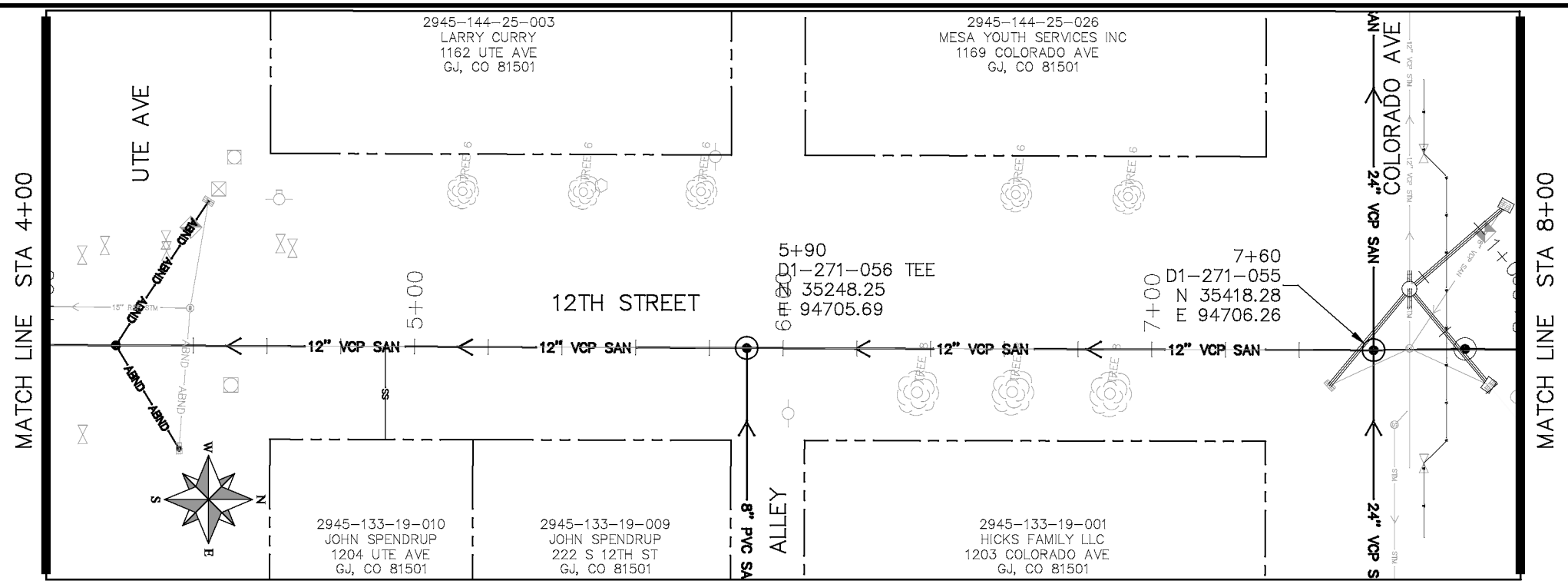
SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

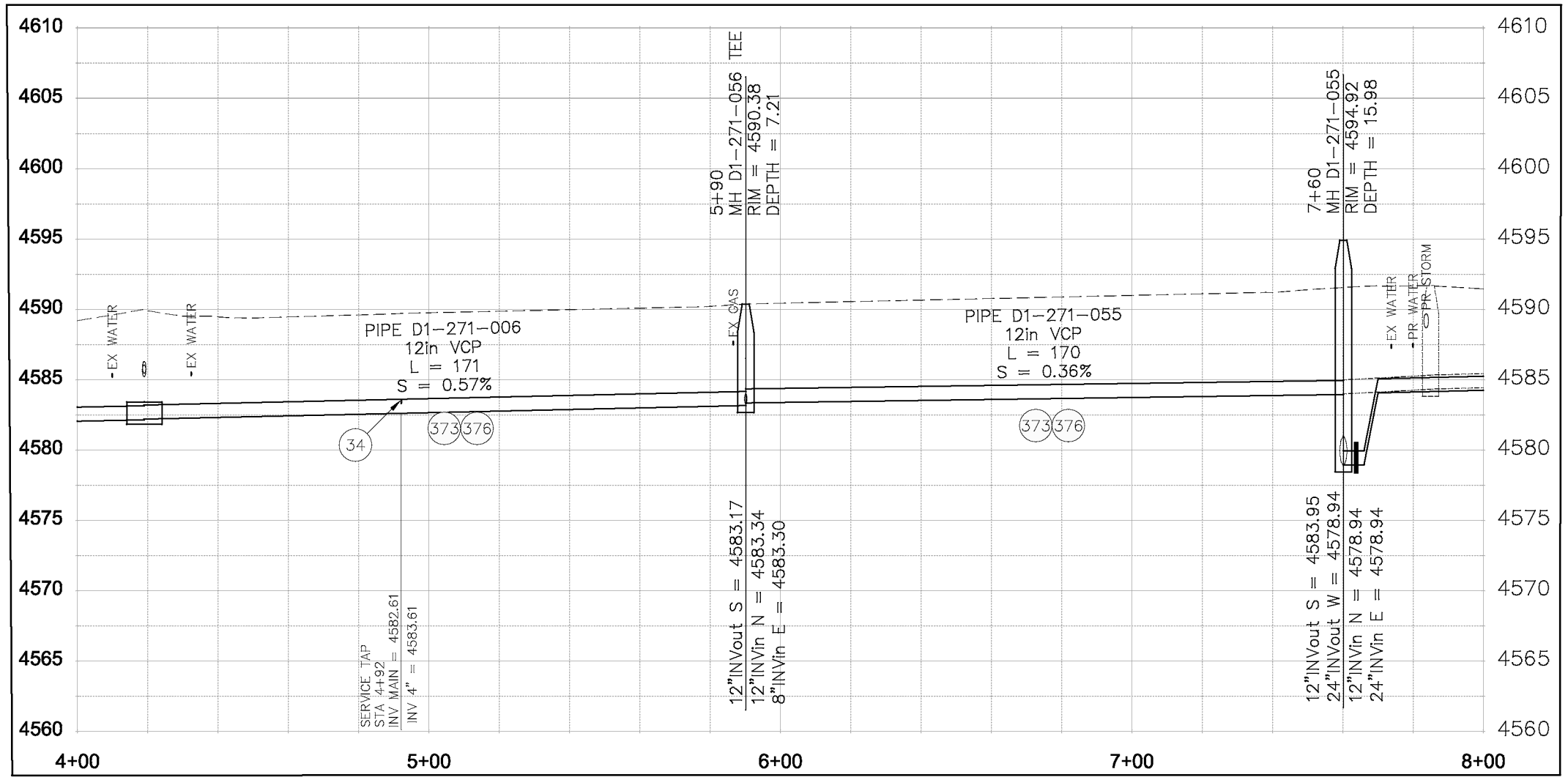
CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
12TH STREET CIPP
STA 0+00 TO STA 4+00

N:\Landproj\2019 Sewer Interceptor Rehabilitation\dwg\31-35_12th Street.dwg, 31, 1/24/2019 2:47:09 PM





PROJECT NO. _____

CONSTRUCTION NOTES

(34) REMOVE CIPP COUPON AT SERVICE LOCATION (INCIDENTAL TO CIPP) 252 MANHOLESHALL BE REMOVED. NEW PIPE INSTALLED AND CONNECTIONS BACK TO EXISTING PIPE COMPLETED PRIOR TO CIPP OPERATIONS FOR THIS RUN. CIPP "THROUGH" OLD MANHOLE LOCATION.

(373) 1CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE)

(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)

KEYMAP

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY HMC/JCS DATE 2016
DESIGNED BY JJV DATE 2016
CHECKED BY TCP DATE 2016
APPROVED BY HMC/JCS DATE 2016

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
12TH STREET CIPP
STA 4+00 TO STA 8+00

N:\Landproj\2019 Sewer Interceptor Rehabilitations\dwg\31-35_12th Street.dwg, 32, 1/24/2019 2:47:14 PM

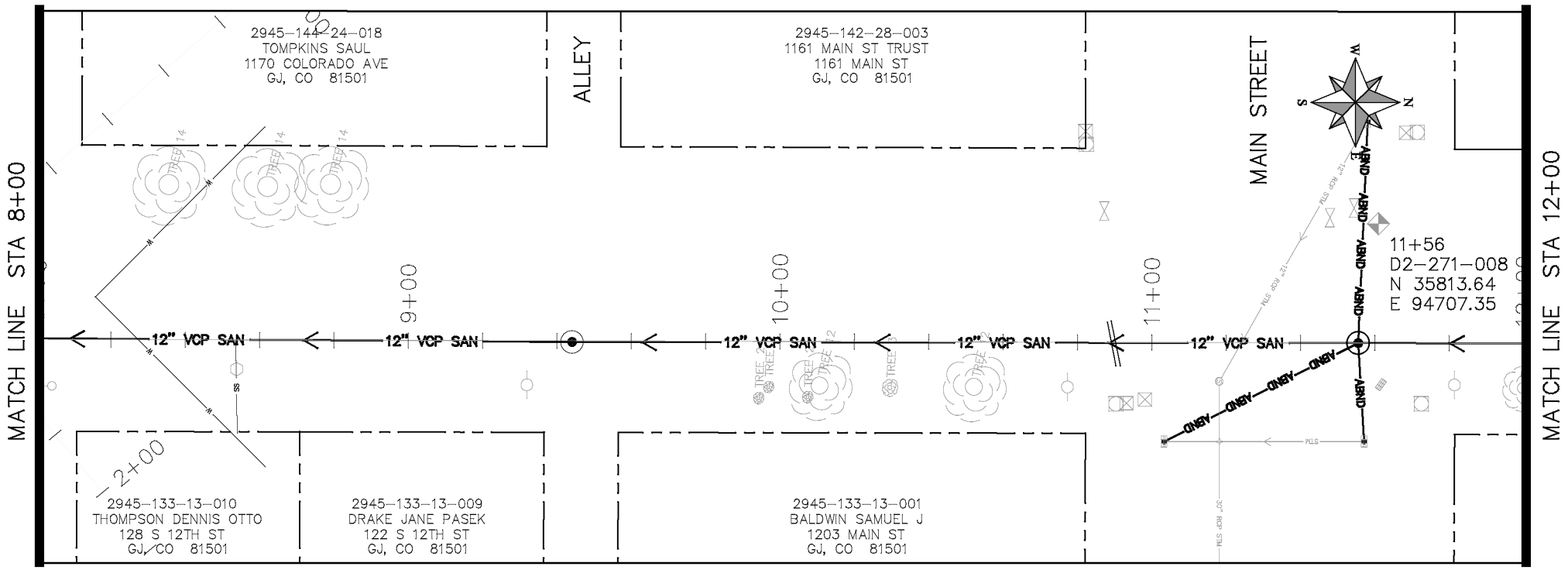
PROJECT NO. _____

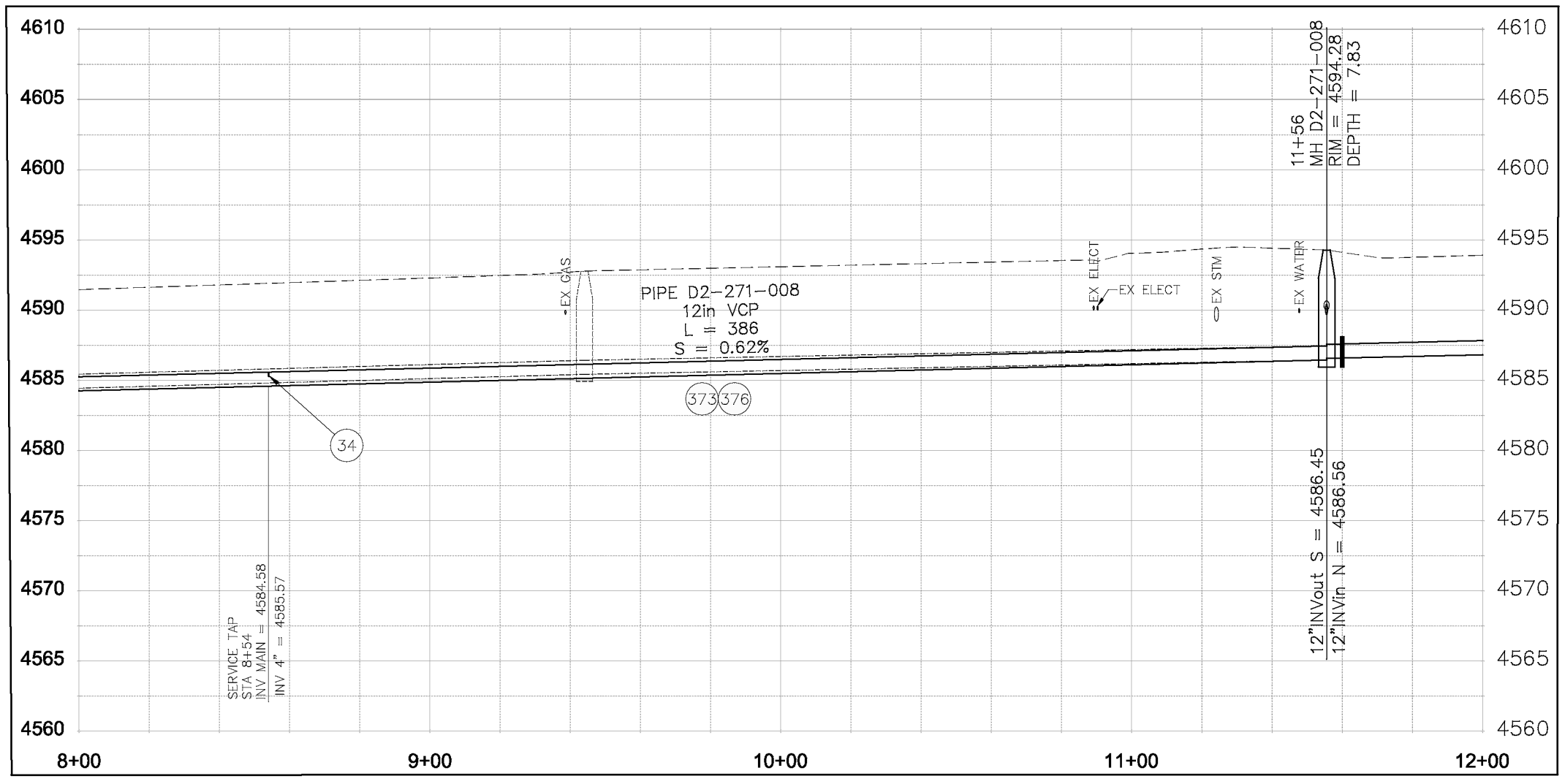
CONSTRUCTION NOTES

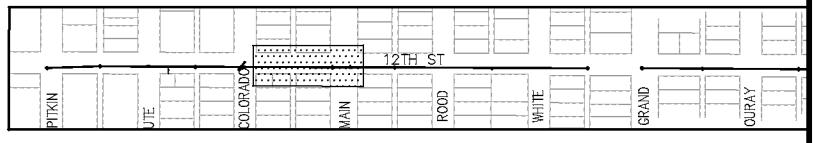
(34) REMOVE CIPP COUPON AT SERVICE LOCATION (INCIDENTAL TO CIPP) 252 MANHOLESHALL BE REMOVED. NEW PIPE INSTALLED AND CONNECTIONS BACK TO EXISTING PIPE COMPLETED PRIOR TO CIPP OPERATIONS FOR THIS RUN. CIPP "THROUGH" OLD MANHOLE LOCATION.

(373) 1CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE)

(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)







KEYMAP

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY HMC/JCS DATE 2016
DESIGNED BY JJV DATE 2016
CHECKED BY TCP DATE 2016
APPROVED BY HMC/JCS DATE 2016

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
12TH STREET CIPP
STA 8+00 TO STA 12+00

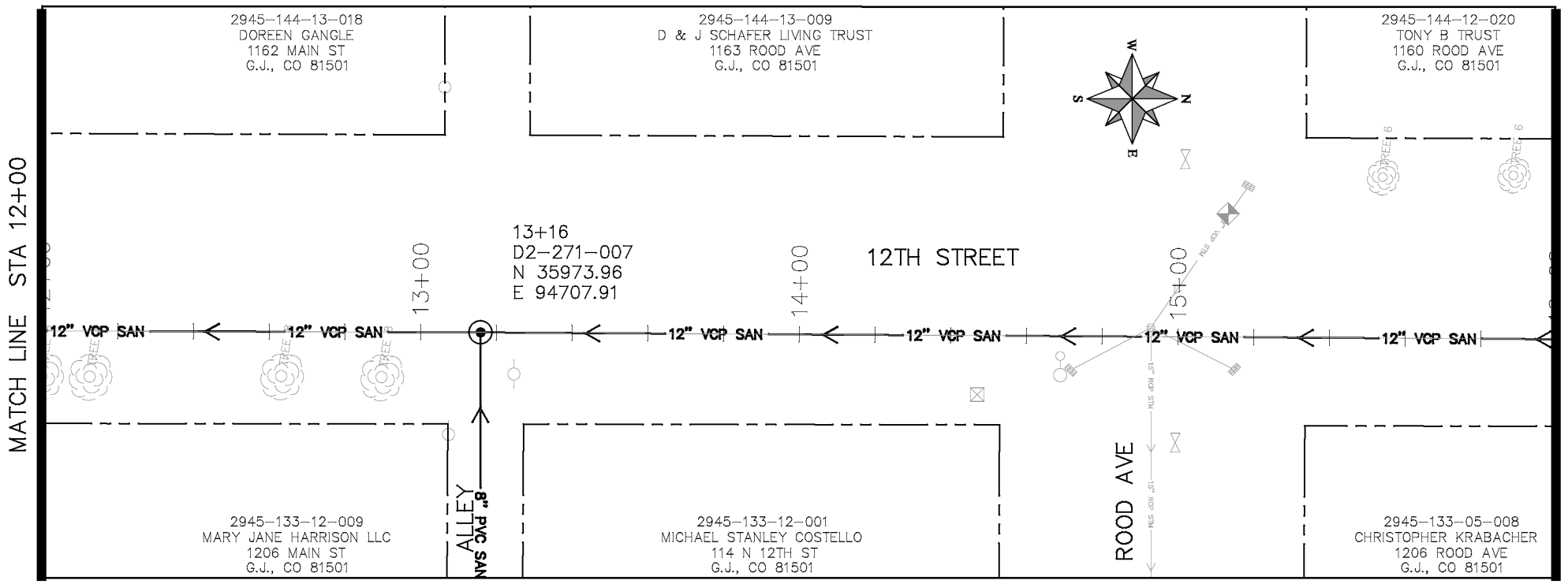
N:\Landproj\2019 Sewer Interceptor Rehabilitations\dwg\31-35_12th Street.dwg, 33, 1/24/2019 2:47:19 PM

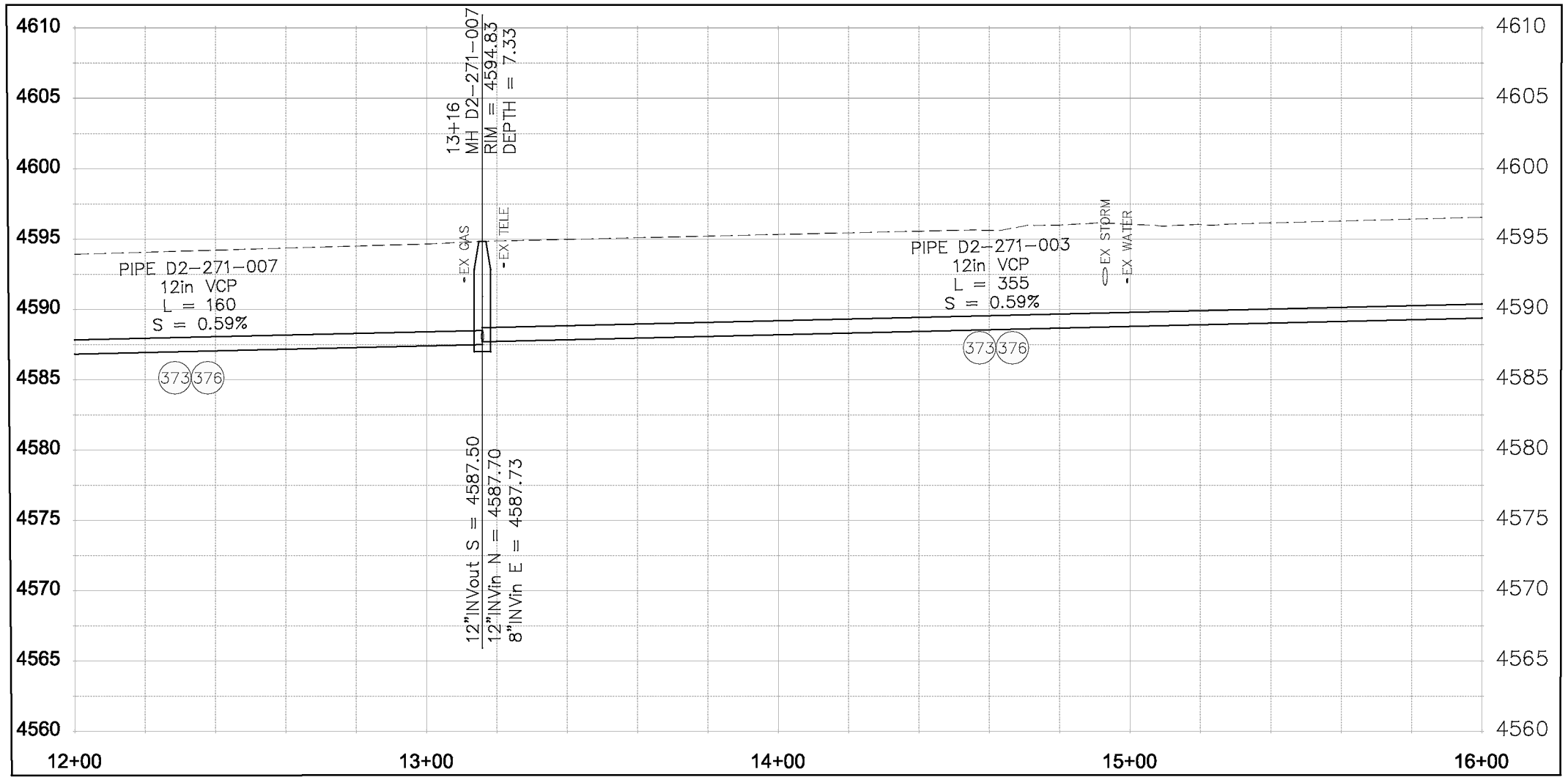
PROJECT NO. _____

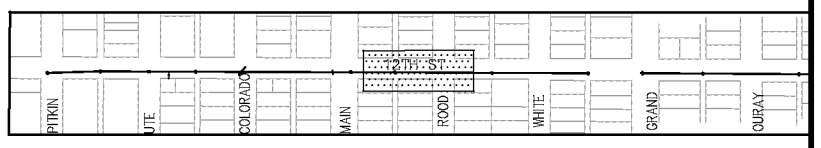
CONSTRUCTION NOTES

(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)







KEYMAP

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY HMC/JCS DATE 2016
DESIGNED BY JJV DATE 2016
CHECKED BY TCP DATE 2016
APPROVED BY HMC/JCS DATE 2016

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
12TH STREET CIPP
STA 12+00 TO STA 16+00

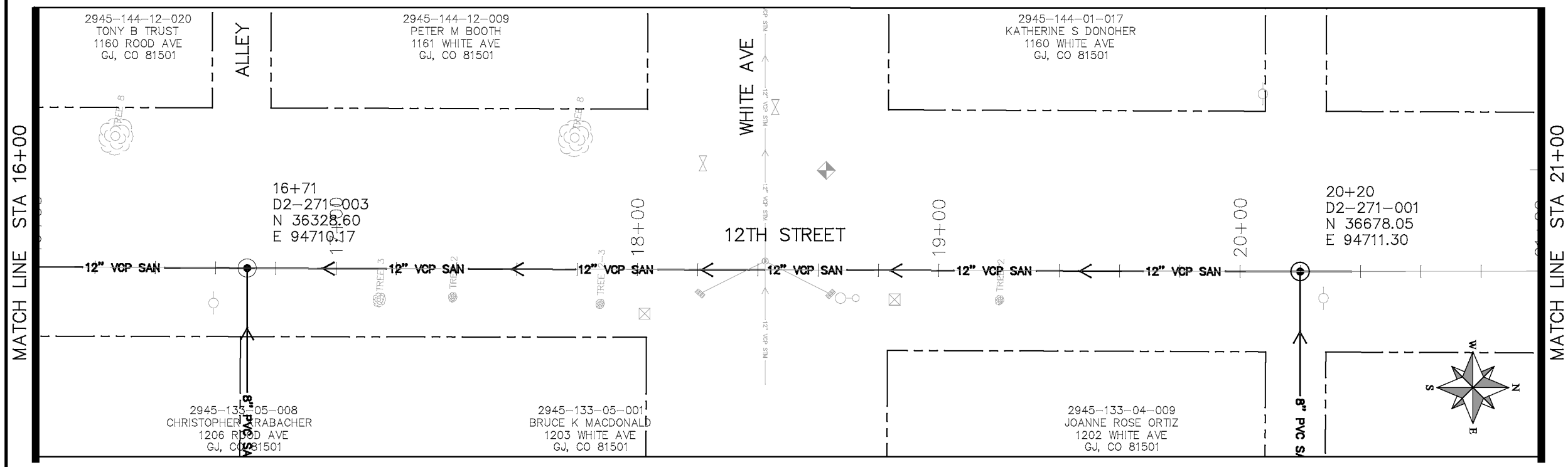
N:\Landproj\2019 Sewer Interceptor Rehabilitations\dwg\31-35_12th Street.dwg, 34, 1/24/2019 2:47:24 PM

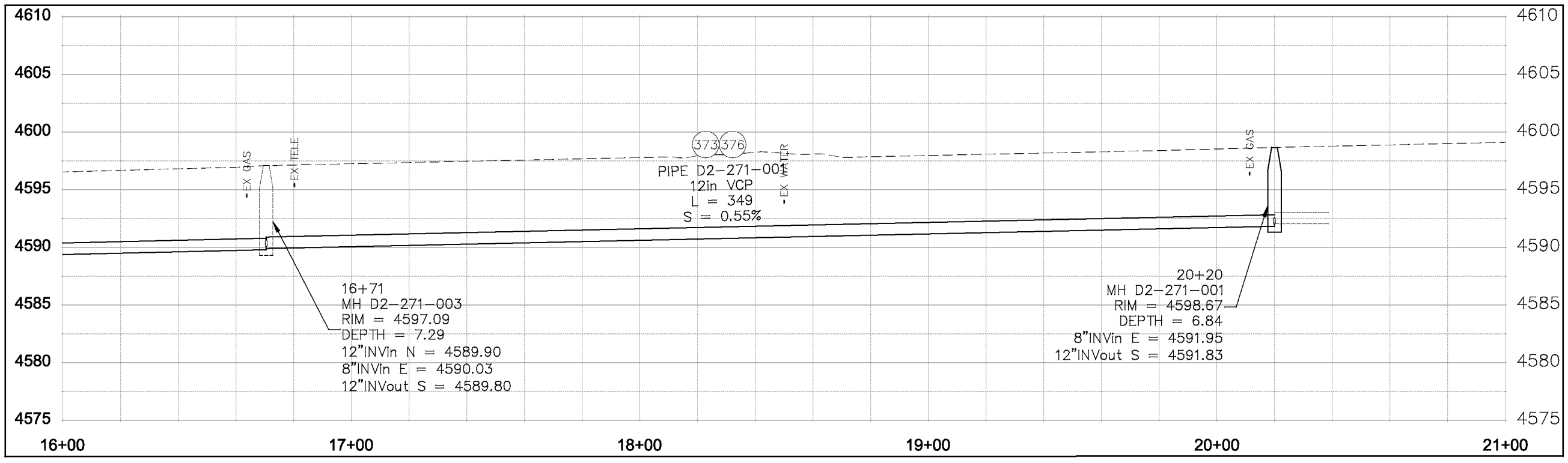
PROJECT NO. _____

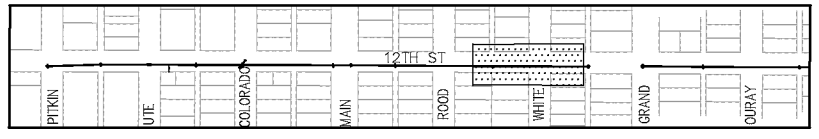
CONSTRUCTION NOTES

(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)







KEYMAP

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY HMC/JCS DATE 2016
DESIGNED BY JJV DATE 2016
CHECKED BY TCP DATE 2016
APPROVED BY HMC/JCS DATE 2016

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
12TH STREET CIPP
STA 16+00 TO STA 21+00

N:\Landproj\2019 Sewer Interceptor Rehabilitations\dwg\31-35_12th Street.dwg, 35, 1/24/2019 3:22:21 PM

PROJECT NO. _____

2019 SEWER INTERCEPTOR REHABILITATIONS FEBRUARY, 2019

1—Cover Sheet
2—Standard Abbreviations, Legend and Symbols
3—Summary of Approximate Quantities
4—Project Location Map
5—Keymap Sewer Interceptor Line A
6—Line A Plan & Profile Sta 0+00 — 10+00
7—Line A Plan & Profile Sta 10+00 — 20+00
8—Line A Plan & Profile Sta 20+00 — 30+00
9—Line A Plan & Profile Sta 30+00 — 40+00
10—Line A Plan & Profile Sta 40+00 — 50+00
11—Line A Plan & Profile Sta 50+00 — 57+00
12—Keymap Sewer Interceptor Line B
13—Line B Plan & Profile Sta 0+00 — 5+00
14—Line B Plan & Profile Sta 5+00 — 10+00
15—Line B Plan & Profile Sta 10+00 — 20+00
16—Line B Plan & Profile Sta 20+00 — 30+00
17—Line B Plan & Profile Sta 30+00 — 40+00
18—Line B Plan & Profile Sta 40+00 — 50+00
19—Line B Plan & Profile Sta 50+00 — 60+00
20—4th St Plan & Profile Sta 0+00 — 4+00
21—4th St Plan & Profile Sta 4+00 — 8+00
22—4th St Plan & Profile Sta 8+00 — 12+00
23—4th St Plan & Profile Sta 12+00 — 16+00
24—4th St Plan & Profile Sta 16+00 — 20+00
25—4th St Plan & Profile Sta 20+00 — 24+00
26—7th St Plan & Profile Sta 0+00 — 4+00
27—7th St Plan & Profile Sta 4+00 — 8+00
28—9th St Plan & Profile Sta 0+00 — 4+00
29—9th St Plan & Profile Sta 4+00 — 8+00
30—9th St Plan & Profile Sta 8+00 — 12+00
31—12th St Plan & Profile Sta 0+00 — 4+00
32—12th St Plan & Profile Sta 4+00 — 8+00
33—12th St Plan & Profile Sta 8+00 — 12+00
34—12th St Plan & Profile Sta 12+00 — 16+00
35—12th St Plan & Profile Sta 16+00 — 21+00

UTILITIES AND AGENCIES

AGENCY	NAME	POSITION	ROLE	MAILING ADDRESS	STREET ADDRESS	CITY, STATE	VOICE—WK	FAX
CITY OF GRAND JUNCTION	BRENDAN HINES	PROJECT ENGINEER	PROJECT ENGINEER	333 WEST AVE BLDG C	333 WEST AVE BLDG C	GRAND JCT., CO 81501	(970) 256—4038	(970) 256—4022
CITY OF GRAND JUNCTION	LEE COOPER	PROJECT ENGINEER	SANITARY SEWER	333 WEST AVE BLDG C	333 WEST AVE BLDG C	GRAND JCT., CO 81501	(970) 256—4155	(970) 256—4022
GRAND VALLEY IRRIGATION CO.	PHIL BERTRAND	MANAGER	IRRIGATION	688 26 RD	688 26 RD	GRAND JCT., CO 81506	(970) 242—2762	
SPECTRUM	JEFF VALDEZ	MANAGER	CABLE TV	2502 FORESIGHT CIRCLE	2502 FORESIGHT CIRCLE	GRAND JCT., CO 81504	(970) 245—8750	(970) 245—6803
CENTURYLINK	CHRIS JOHNSON	ENGINEER	TELEPHONE	2524 BLICHMANN AVE	2524 BLICHMANN AVE	GRAND JCT., CO 81504	(970) 244—4311	(970) 240—4349
UTE WATER	JUSTIN BATES	SUPERVISOR	WATER	PO BOX 460	2190 H ¼ RD	GRAND JCT., CO 81502	(970) 242—7491	(970) 242—9189
XCEL	STEVE PIBURN	UNIT MANAGER	ELECTRIC	2538 BLICHMANN AVE	2538 BLICHMANN AVE	GRAND JCT., CO 81506	(970) 244—2664	(970) 244—2664
XCEL	SARAH BARRICAU	UNIT MANAGER	GAS	2538 BLICHMANN AVE	2538 BLICHMANN AVE	GRAND JCT., CO 81506	(970) 244—2656	(970) 244—2656

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

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

CITY OF Grand Junction COLORADO

Public Works
Engineering Division

811 Know what's below. Call before you dig.

DRAWING STATUS:
- ● PROGRESS
- ○ FINAL CONSTRUCTION DRAWINGS
- ○ ASBUILT

DESIGNED BY:
BRENDAN HINES, PROJECT ENGINEER 2019

REVIEWED BY:
TRENT C. PRALL, PUBLIC WORKS DIRECTOR 2019

AUTHORIZED FOR CONSTRUCTION
TRENT C. PRALL, PUBLIC WORKS DIRECTOR 2019

ACCEPTED AS CONSTRUCTED
BRENDAN HINES, PROJECT ENGINEER 2019

N:\landpro\2019 Sewer Interceptor Rehabilitations\65CAD\01-04 Cover-Quant.dwg, 01.2/22/2019 3:03:14 PM

2019 SEWER INTERCEPTOR REHABILITATIONS FEBRUARY, 2019

PROJECT NO. _____

ABBREVIATIONS

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY & TRANSPORTATION OFFICIALS
ABC	AGGREGATE BASE COURSE
AC	ASBESTOS CEMENT
AP	ANGLE POINT
ASB	ANCHORED STRAW BALES
ASP	ALUMINIZED STEEL PIPE
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS
AWWA	AMERICAN WATER WORKS ASSOCIATION
BC	BACK OF CURB
BF	BUTTERFLY VALVE
BOW	BACK OF WALK
BCR	BEGIN CURB RETURN
BOT	BOTTOM
BSWMP	BETTER STORM WATER MANAGEMENT PRACTICES
CH	CHORD
CAP	CORRUGATED ALUMINUM PIPE
CDOT	COLORADO DEPARTMENT OF TRANSPORTATION
CI	CAST IRON
C,G,& SW	CURB, GUTTER & SIDEWALK
℄	CENTER LINE
CL	CLEAR
CMP	CORRUGATED METAL PIPE
CO	CLEAN OUT
COMB	COMBINATION (AS IN STORM SEWER AND SANITARY SEWER)
CONC	CONCRETE
CSM	CITY SURVEY MONUMENT
CSP	CORRUGATED STEEL PIPE
CU	COPPER
DI	DUCTILE IRON
DWY	DRIVEWAY
E	ELECTRIC
ECR	END CURB RETURN
EG	EDGE OF GUTTER
EL	ELEVATION
EP	EDGE OF PAVEMENT
EX	EXISTING
FB	FULL BODY
FC	FACE OF CURB
FG	FINISHED GRADE
℄	FLOW LINE
FL	FLANGE
FM	FORCE MAIN
FO	FIBER OPTICS
FS	FAR SIDE
FTG	FOOTING
G	GAS
GB	GRADE BREAK
GM	GAS METER
GV	GATE VALVE
HBP	HOT BITUMINOUS PAVEMENT
HDPE	HIGH DENSITY POLYETHYLENE
INV	INVERT
IRR	IRRIGATION
L	LENGTH OF ARC
LC	LONG CHORD
LF	LINEAR FEET
LL	LONG ARC
LS	SHORT ARC
LT	LEFT
MB	MAILBOX
MCSM	MESA COUNTY SURVEY MONUMENT
MH	MANHOLE
MJ	MECHANICAL JOINT
MW	MILL WRAP
N/A	NOT APPLICABLE
NIC	NOT IN CONTRACT
NOP	NO ONE PERSON
NRCP	NON-REINFORMATIONRCED CONCRETE PIPE
NS	NEAR SIDE
NTS	NOT TO SCALE
OHP	OVERHEAD POWER
OHT	OVERHEAD TELEPHONE
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PE	POLYETHYLENE
PERF	PERFORATED
PI	POINT OF INTERSECTION
PIP	PLASTIC IRRIGATION PIPE
POC	POINT ON CURVE
POT	POINT ON TANGENT
PR	PROPOSED
PRC	POINT OF REVERSE CURVATURE
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
R	RADIUS
RCP	REINFORMATIONRCED CONCRETE PIPE
REQ'D	REQUIRED
RG	RESTRAINED GLANDS
RL	LONG RADIUS
ROW	RIGHT OF WAY
RP	RADIUS POINT
RR	RAIL ROAD
RS	SHORT RADIUS
RT	RIGHT
S	SLOPE
SAN	SANITARY
SC	SHORT CHORD
SCD	STANDARD CONTRACT DOCUMENTS
SCH	SCHEDULE
SF	SILT FENCE
SL	SECTION LINE
SSRB	STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION
SSUU	STANDARD SPECIFICATIONS FOR CONSTRUCTION OF UNDERGROUND UTILITIES
STA	STATION
STL	STEEL
STM	STORM
T	TELEPHONE
TAN	LENGTH OF TANGENT
TC	TOP OF CURB
TH	TEST HOLE
TV	TELEVISION
(TYP)	TYPICAL
UU	UNDERGROUND UTILITIES
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
VPC	VERTICAL POINT OF CURVATURE
VPCC	VERTICAL POINT OF COMPOUND CURVATURE
VPRC	VERTICAL POINT OF REVERSE CURVATURE
VPI	VERTICAL POINT OF INTERSECTION
VPT	VERTICAL POINT OF TANGENCY
W	WATER
Δ	DELTA ANGLE

LEGEND

BSWMP DRAINAGE BASIN BOUNDARY

BSWMP ANCHORED STRAW BALES — ASB ASB ASB ASB ASB ASB ASB

BSWMP SILT FENCE — SF SF SF SF SF SF SF

BUILDING

CONCRETE CURB AND GUTTER — 2' CURB AND GUTTER

CONCRETE CURB,GUTTER, & SIDEWALK — 7' C, G, & SW

CONCRETE DITCH — CONCRETE

CONCRETE SIDEWALK — 4' SW

CULVERT — 18" RCP

EARTH DITCH — EARTH EARTH EARTH

EDGE OF GRAVEL

EDGE OF PAVEMENT

FENCE (BARBED WIRE)

FENCE (CHAIN LINK)

FENCE (IRON)

FENCE (PLASTIC)

FENCE (TEMPORARY CONSTRUCTION)

FENCE (WOOD)

FENCE (WOVEN WIRE)

GUARD RAIL — GR GR

HATCHING: INDICATES ASPHALT REMOVAL

HATCHING: INDICATES CONCRETE REMOVAL

HATCHING: INDICATES STAGING AREA — STAGING AREA

LINE (CENTER OF IMPROVEMENTS) — CENTERLINE

LINE (CITY LIMITS) — CITY LIMITS

LINE (CONTROL) — CONTROL LINE

LINE (EASEMENT)

LINE (MONUMENT/SECTION) — MONUMENT/SECTION LINE

LINE (PROPERTY)

LINE (RIGHT OF WAY)

MATCH LINE — MATCH LINE SEE SHEET NO ?

PIPE (IRRIGATION) — 4" IRR

PIPE (SIPHON) — 4" SIPHON

PROPOSED CONCRETE CURB AND GUTTER

PROPOSED CONCRETE CURB,GUTTER,& SIDEWALK

PROPOSED CONCRETE SIDEWALK

PROPOSED "WET" UTILITIES (CONSTRUCTION NOTE WILL INDICATE TYPE, SIZE, AND MATERIAL OF NEW MAIN) — 8" PVC SANITARY SEWER

ALL PROPOSED FEATURES NOT SHOWN IN LEGEND WILL BE SHOWN THE SAME AS THEIR EXISTING COUNTERPART, BUT INDICATED BY BOLDER LINETYPE

RAIL ROAD

RETAINING WALL — 1' RETAINING WALL

STRIPING (CONTINUOUS WHITE) — WHITE

STRIPING (DASHED WHITE) — WHITE

STRIPING (CONTINUOUS YELLOW) — YELLOW

STRIPING (DASHED YELLOW) — YELLOW

TOP OF SLOPE — 4580

CONTOUR LINES (SHOWN BETWEEN TOP & TOE)

TOE OF SLOPE — 4570

TRAFFIC DETECTOR LOOP

UTILITY LINE (ABANDON) (THIS CASE A WATER LINE) — W (ABANDON) 8" W

UTILITY LINE (CABLE TV) — TV TV

UTILITY LINE (ELECTRIC) — E E

UTILITY LINE (FIBER OPTIC) — FO QWEST FO

UTILITY LINE (GAS) — G 1 1/4" MPE G

UTILITY LINE (HIGH VOLTAGE OVERHEAD POWER) — HVOHP

UTILITY LINE (OVERHEAD POWER) — OHP

UTILITY LINE (OVERHEAD TELEPHONE) — OHT

UTILITY LINE (SANITARY SEWER) — 8" SAN

UTILITY LINE (SANITARY SEWER FORCE MAIN) — 6" FM

UTILITY LINE (SANITARY SEWER SERVICE) — SS SS

UTILITY LINE (STORM SEWER) — 8" STM

UTILITY LINE (STORM SEWER, PERFORATED) — 6" PERF

UTILITY LINE (STORM/SANITARY SEWER SEWER COMBINATION) — 18" COMB

UTILITY LINE (TELEPHONE) — T T

UTILITY LINE (WATER) — W 8" W

SYMBOLS

BENCH MARK — A

CATCH BASIN

CLEAN OUT — CO

CURB STOP

FIRE HYDRANT

GUY WIRE ANCHOR

HEADGATE

IRRIGATION PUMP — P

MAILBOX — MB

MANHOLE (ELECTRIC) — E

MANHOLE (GAS) — G

MANHOLE (SANITARY/STORM)

MANHOLE (TELEPHONE) — T

MANHOLE (TV) — TV

MANHOLE (WATER) — W

METER (GAS) — GM

METER (WATER)

PEDESTAL (TELEPHONE)

PEDESTAL (TV) — TV

PROPERTY PIN

PULL BOX

REDUCER FITTING

SIGN OR POST (SIGN TYPE NOTED) — STOP

SPRINKLER HEAD

STREET LIGHT

SURVEY MONUMENT (CITY) — CSM

SURVEY MONUMENT (TYPE NOTED) — MCSM

TEST HOLE — TH #1

TRAFFIC PAINT MARKING

TRAFFIC SIGNAL POLE AND MAST ARM

UTILITY POLE

VALVE (GAS) — GV

VALVE (IRRIGATION) — IV

VALVE (WATER)

VEGETATION (HEDGE OR BUSH)

VEGETATION (TREE STUMP)

VEGETATION (TREE) (CALIPER SIZE NOTED) — 8"

WATER HYDRANT — FH

WEIR — M

YARD LIGHT

BAR SCALE:

0 5 10 20

(IN FEET)
1 inch = 20 feet

NORTH ARROW:

N W E S

REVISION	DESCRIPTION	DATE
REVISION Δ		
REVISION Δ		
REVISION Δ		
REVISION Δ		

DRAWN BY _____ DATE _____
DESIGNED BY _____ DATE _____
CHECKED BY _____ DATE _____
APPROVED BY _____ DATE _____

SCALES: PLAN & PROFILE
HORIZONTAL: 1" =
VERTICAL: 1" =

CITY OF Grand Junction COLORADO

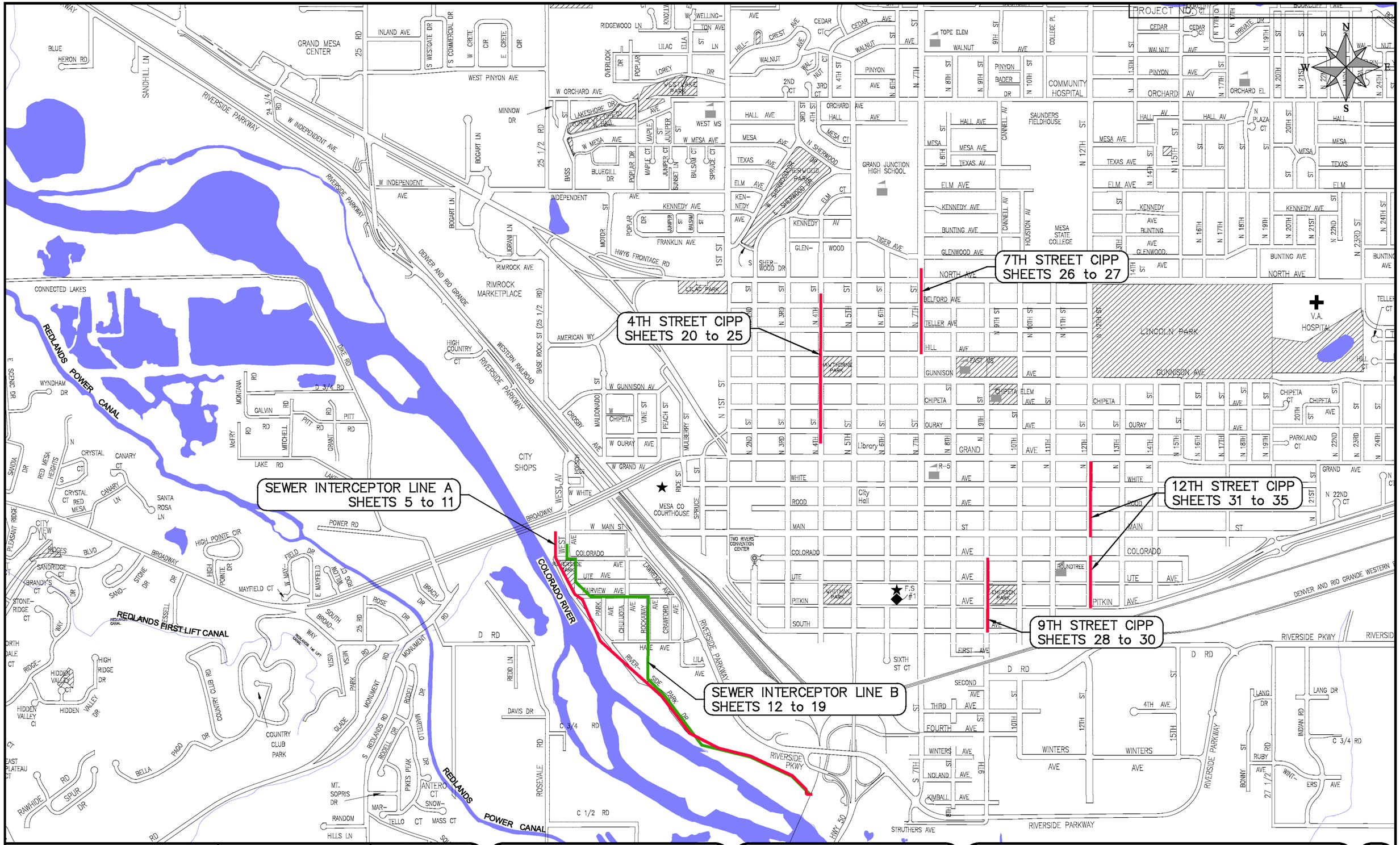
PUBLIC WORKS
ENGINEERING DIVISION

CITY OF GRAND JUNCTION
STANDARD ABBREVIATIONS, LEGEND, AND SYMBOLS

2

Bid Schedule: 2019 Sewer Interceptor Repair and Replacement Project

Item No.	CDOT, City Ref.	Description	Quantity	Units
1	626	Portable Sanitary Facility	1.	Lump Sum
2	630	Mobilization	1.	Lump Sum
3	630	Traffic Control (Complete In Place)	1.	Lump Sum
4	630	Traffic Control Flagging	1,000.	Hours
5	630	Traffic Control Plan	1.	Lump Sum
6	SP	Bypass Pumping per City Specifications. See Appendix B in Bid Documents.	1.	Lump Sum
7	SP	Weekly Newsletter- See Bid Documents SC 3.3.13	1.	Lump Sum
8	SP	12 Inch CIPP (Complete in Place) See Appendix D.1/D.2 in Bid Documents.	1,961.	LF
9	SP	15 Inch CIPP (Complete in Place) See Appendix D.1/D.2 in Bid Documents.	895.	LF
10	SP	18 Inch CIPP (Complete in Place) See Appendix D.1/D.2 in Bid Documents.	2,894.	LF
11	SP	24Inch CIPP (Complete in Place) See Appendix D.1/D.2 in Bid Documents.	5,942.	LF
12	SP	30 Inch CIPP (Complete in Place) See Appendix D.1/D.2 in Bid Documents.	4,498.	LF
13	SP	Coat Manhole (48' I.D.) See Sec. 4 (Special Provisions) for Specifications.	240.	VF



DESCRIPTION	DATE
REVISION	
REVISION	
REVISION	
REVISION	

DRAWN BY	HMC	DATE	2019
DESIGNED BY		DATE	
CHECKED BY		DATE	
APPROVED BY		DATE	

SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 1250'
0 312.5 625 1250
VERTICAL: 1" =

CITY OF **Grand Junction** COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
PROJECT LOCATION MAP

PROJECT NO. _____

COLORADO STATE HIGHWAY 340
W MAIN ST
WEST AVE
W COLORADO AVE
W UTE AVE
FAIRVIEW AVE
CHULUOTA AVE
PARK AVE
ROCKAWAY AVE
HALE AVE
CRAWFORD AVE
LAWRENCE AVE
LILA AVE
RIVERSIDE PARK DR
RIVERSIDE PARK DR
RIVERSIDE PKWY
COLORADO RIVER
COLORADO RIVER

LINE A
LINE B

SHEET 6
SHEET 7
SHEET 8
SHEET 9
SHEET 10
SHEET 11

N E S W

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 20'
0 5 10 20

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
LINE A KEYMAP
STA 0+00 TO STA 57+00

5

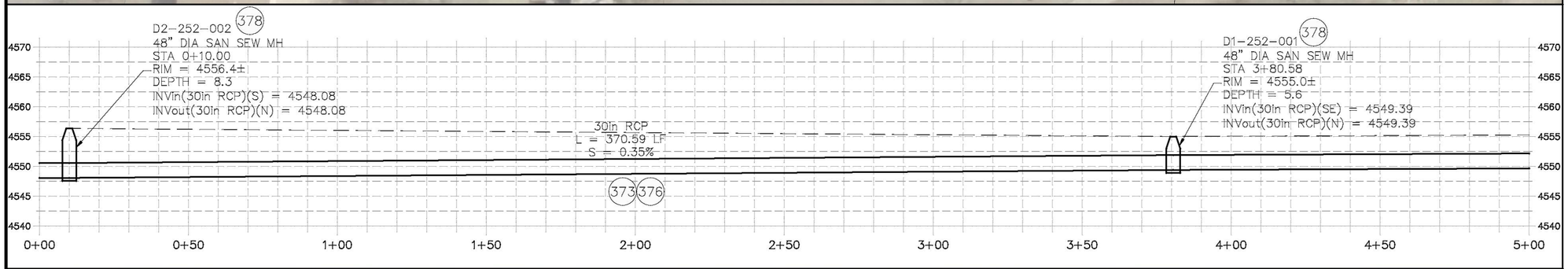
PROJECT NO. _____

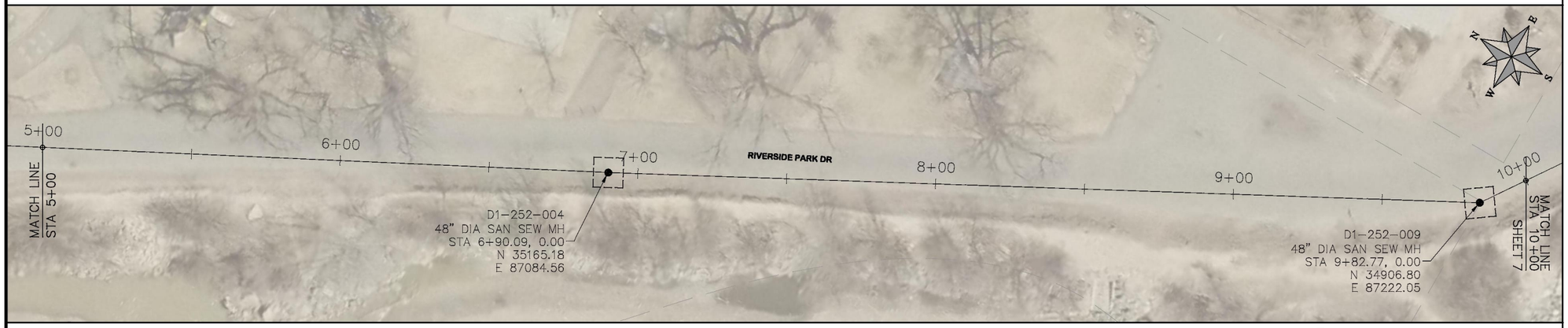
CONSTRUCTION NOTES

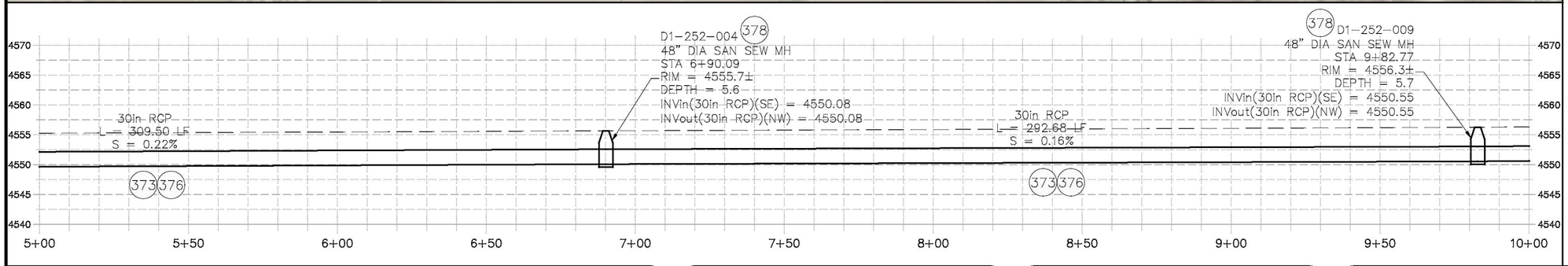
(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)

(378) SP RECONDITION EXISTING MANHOLE AND BENCH. (SEE PROJECT SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION).







DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 20'
0 5 10 20

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
LINE A PLAN AND PROFILE
STA 0+00 TO STA 10+00

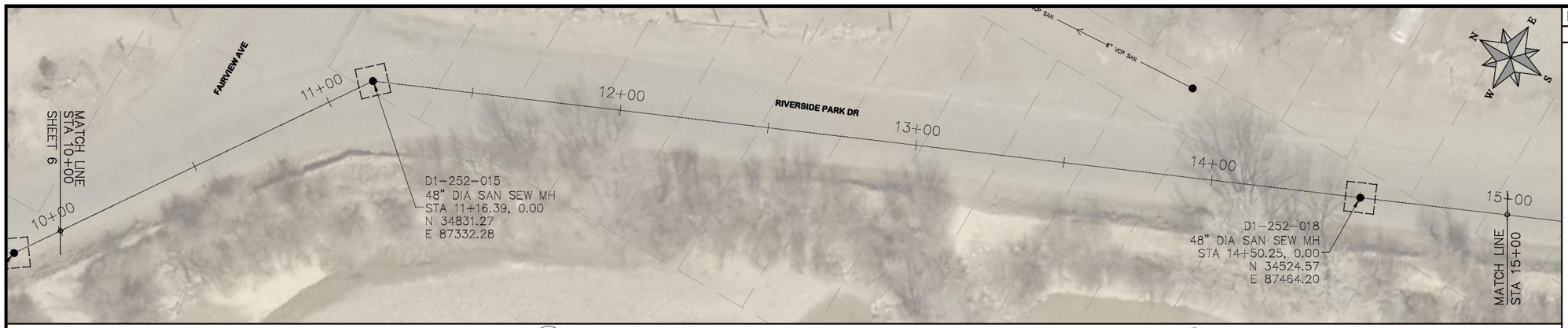
PROJECT NO. _____

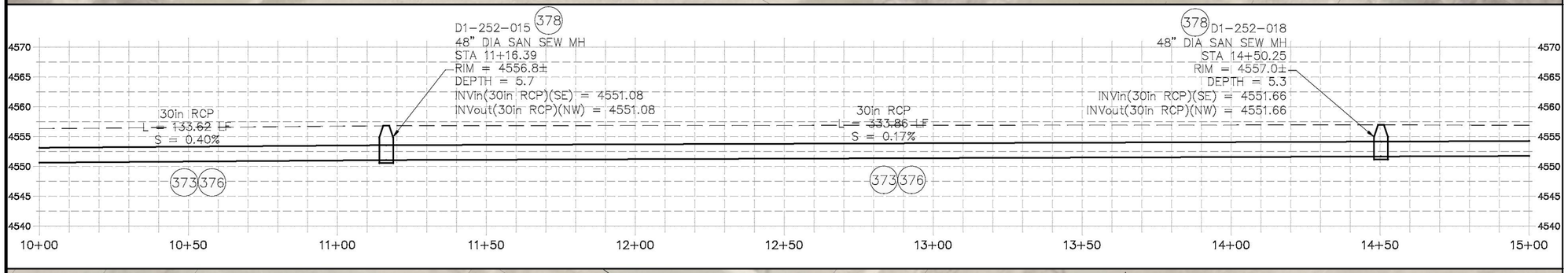
CONSTRUCTION NOTES

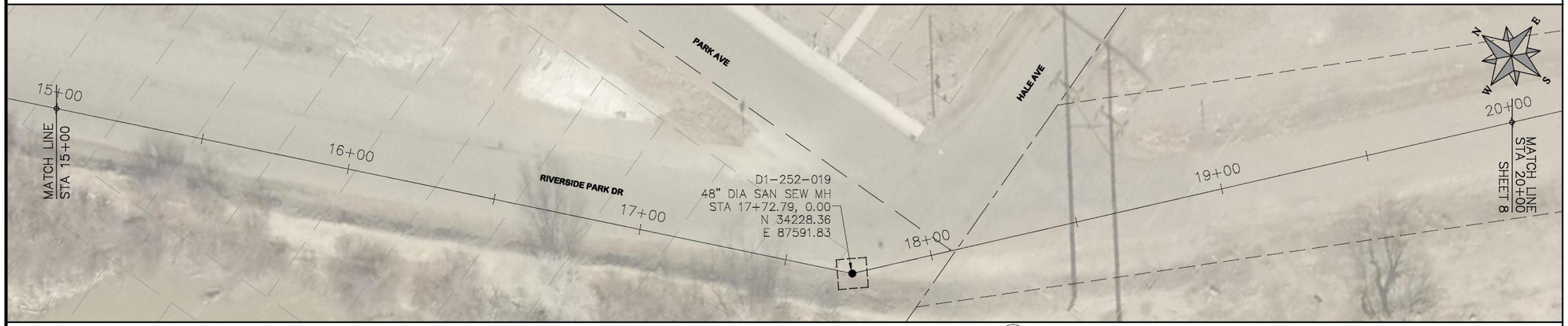
(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

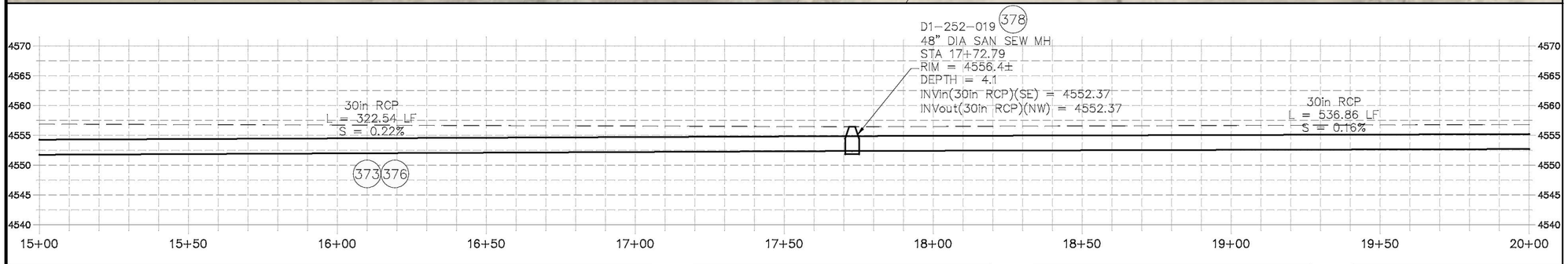
(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)

(378) SP RECONDITION EXISTING MANHOLE AND BENCH. (SEE PROJECT SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION).









DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

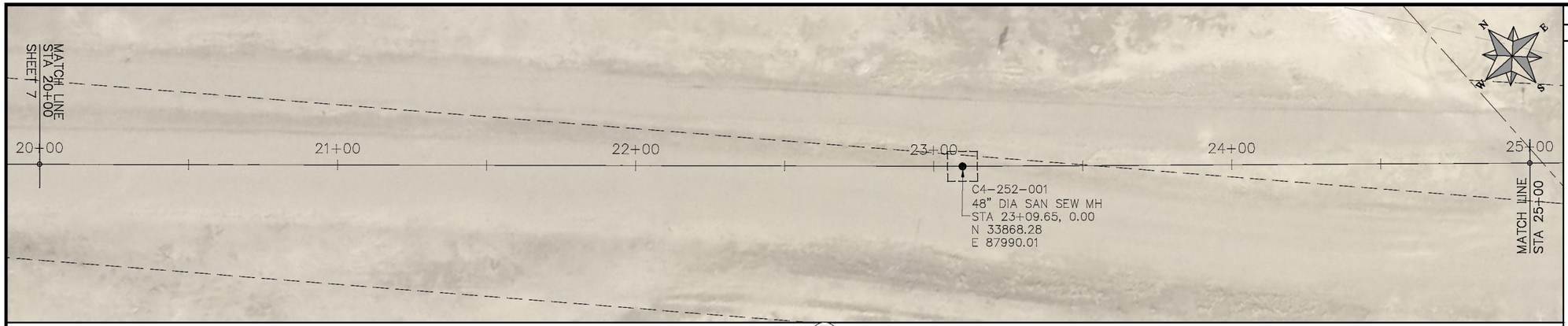
DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

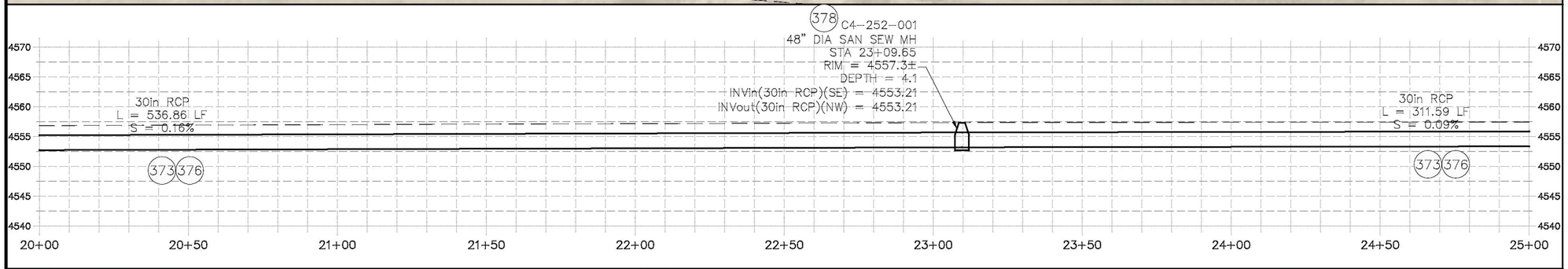
SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 20'
0 5 10 20

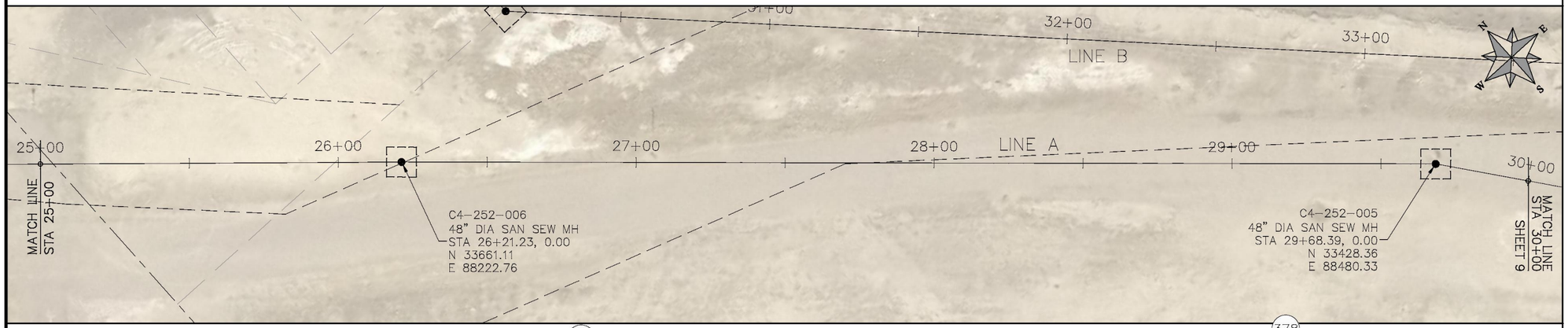
CITY OF Grand Junction COLORADO

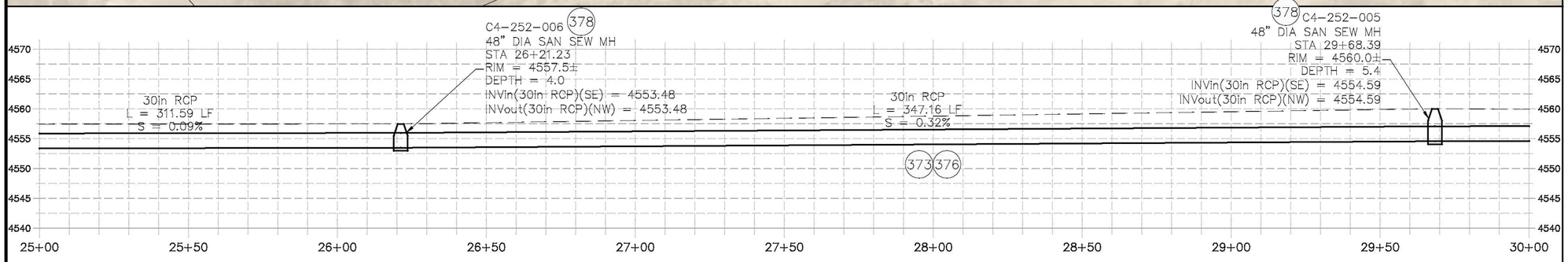
PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
LINE A PLAN AND PROFILE
STA 10+00 TO STA 20+00









PROJECT NO. _____

CONSTRUCTION NOTES

(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)

(378) SP RECONDITION EXISTING MANHOLE AND BENCH. (SEE PROJECT SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION).

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 20'
0 5 10 20

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
LINE A PLAN AND PROFILE
STA 20+00 TO STA 30+00

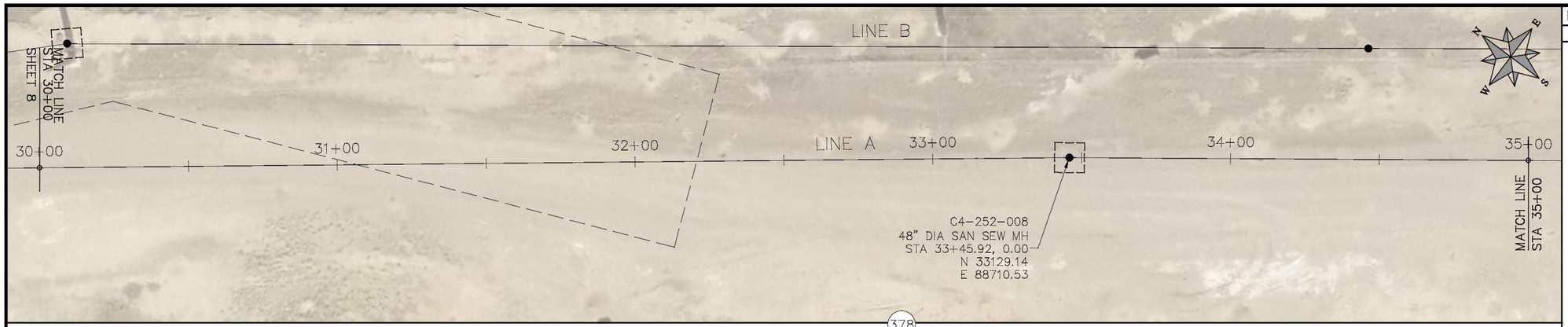
PROJECT NO. _____

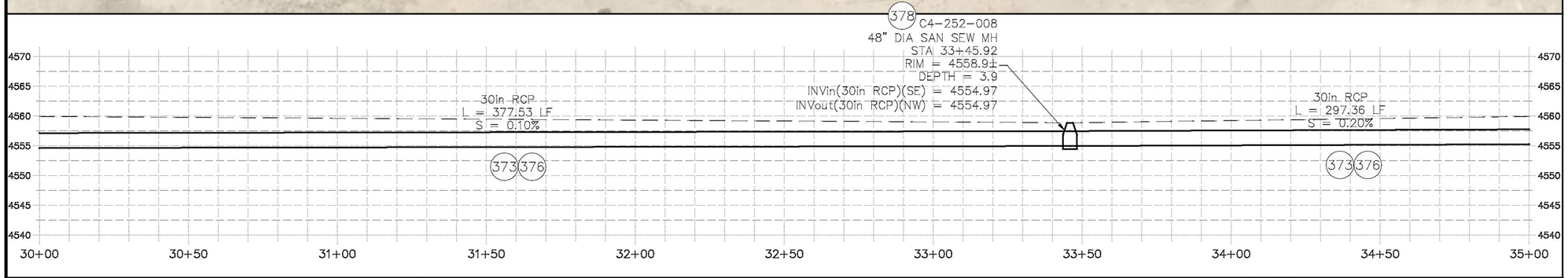
CONSTRUCTION NOTES

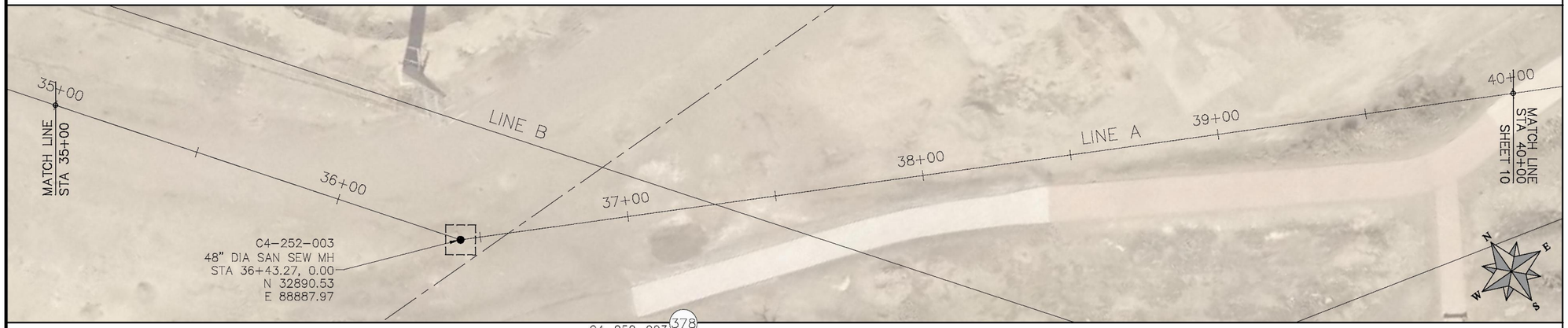
(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

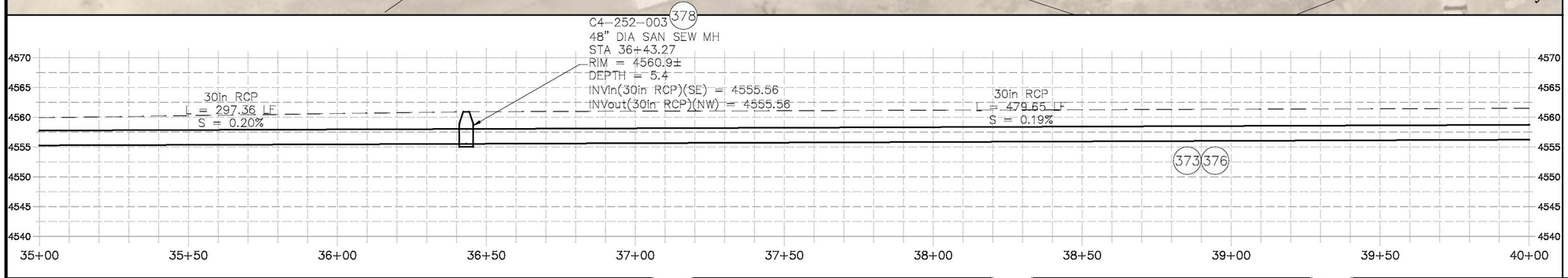
(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)

(378) SP RECONDITION EXISTING MANHOLE AND BENCH. (SEE PROJECT SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION).









DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

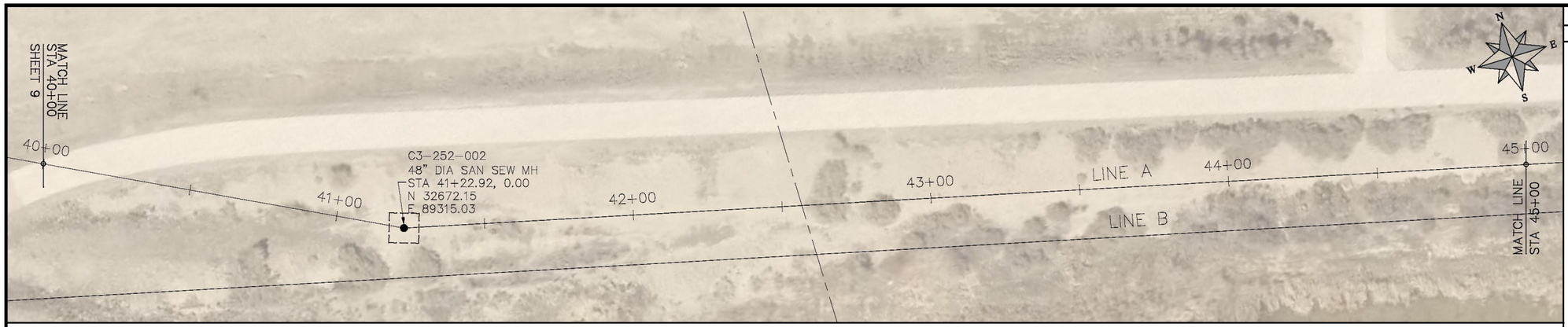
DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

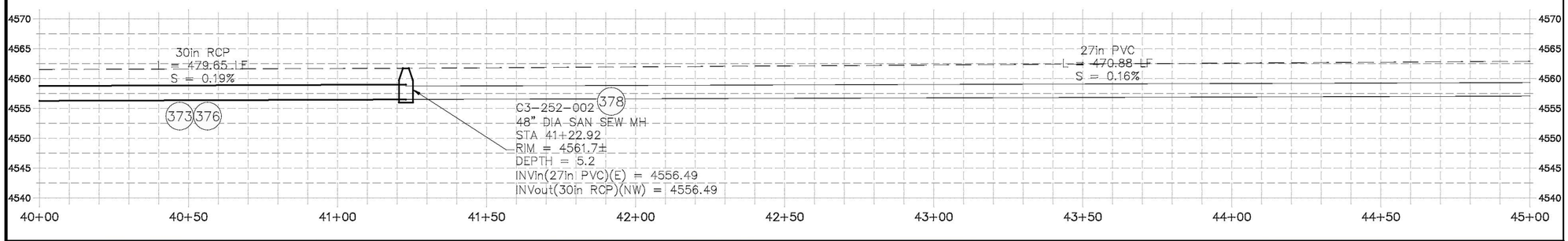
SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 20'
0 5 10 20

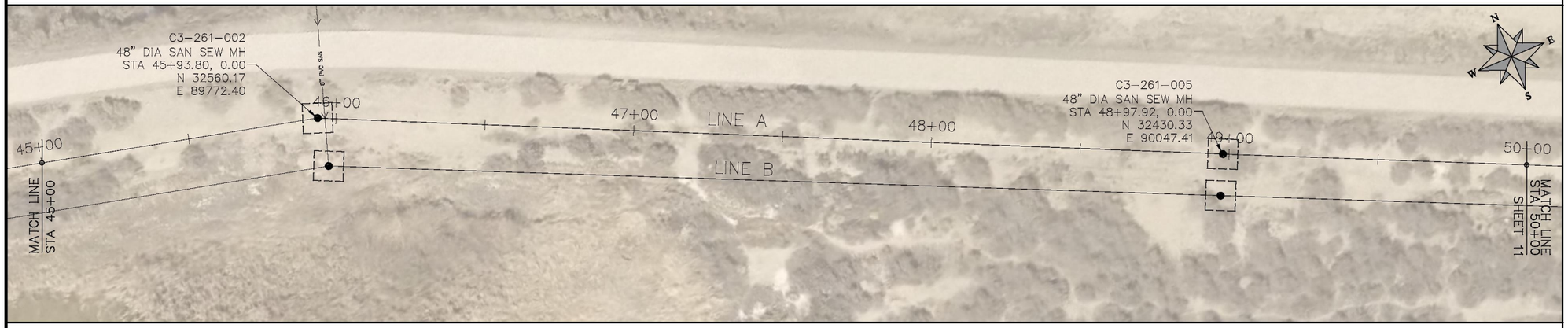
CITY OF Grand Junction COLORADO

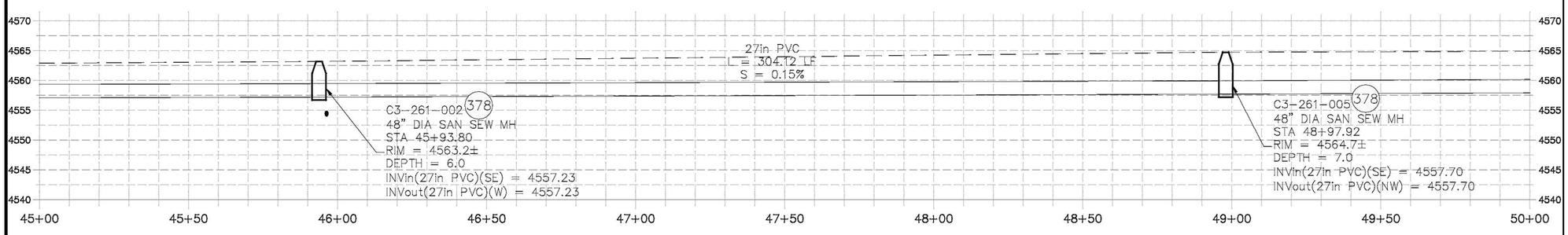
PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
LINE A PLAN AND PROFILE
STA 30+00 TO STA 40+00









PROJECT NO. _____

CONSTRUCTION NOTES

373 CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

376 REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)

378 SP RECONDITION EXISTING MANHOLE AND BENCH. (SEE PROJECT SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION).

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

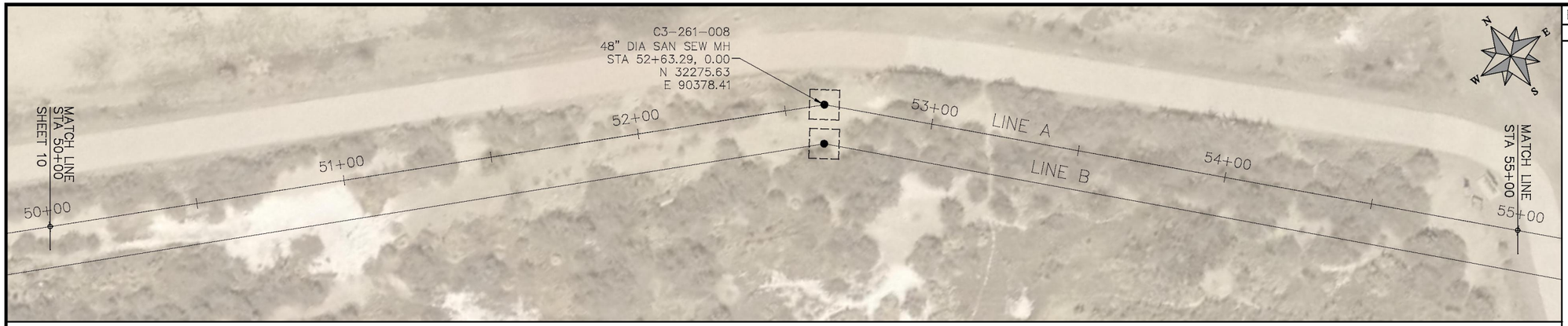
DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

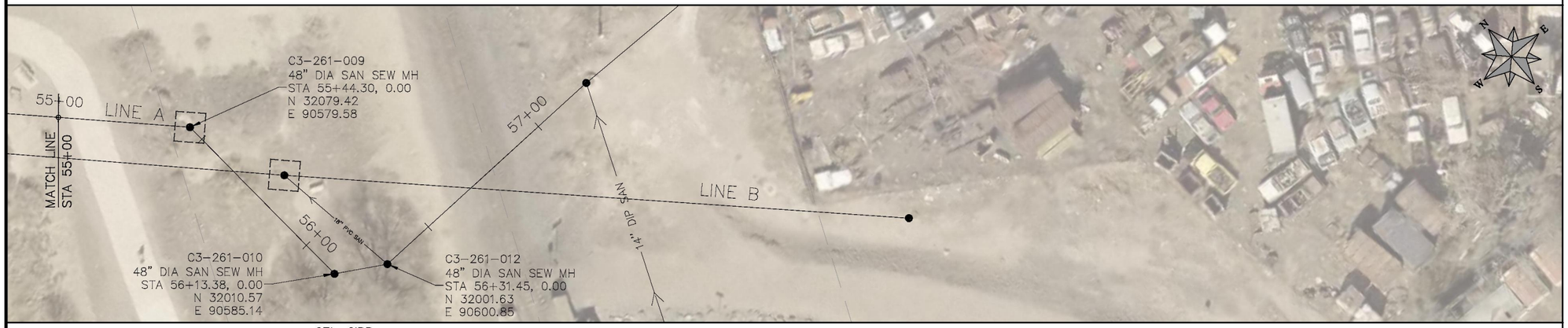
SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 20'
0 5 10 20

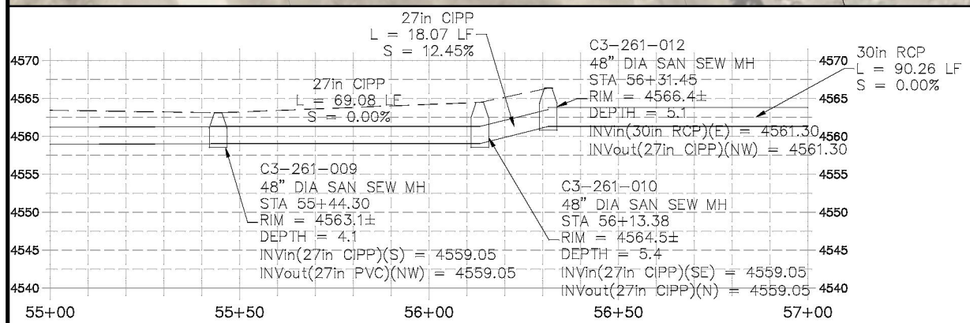
CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
LINE A PLAN AND PROFILE
STA 40+00 TO STA 50+00







PROJECT NO. _____

CONSTRUCTION NOTES

(378) SP RECONDITION EXISTING MANHOLE AND BENCH. (SEE PROJECT SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION).

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

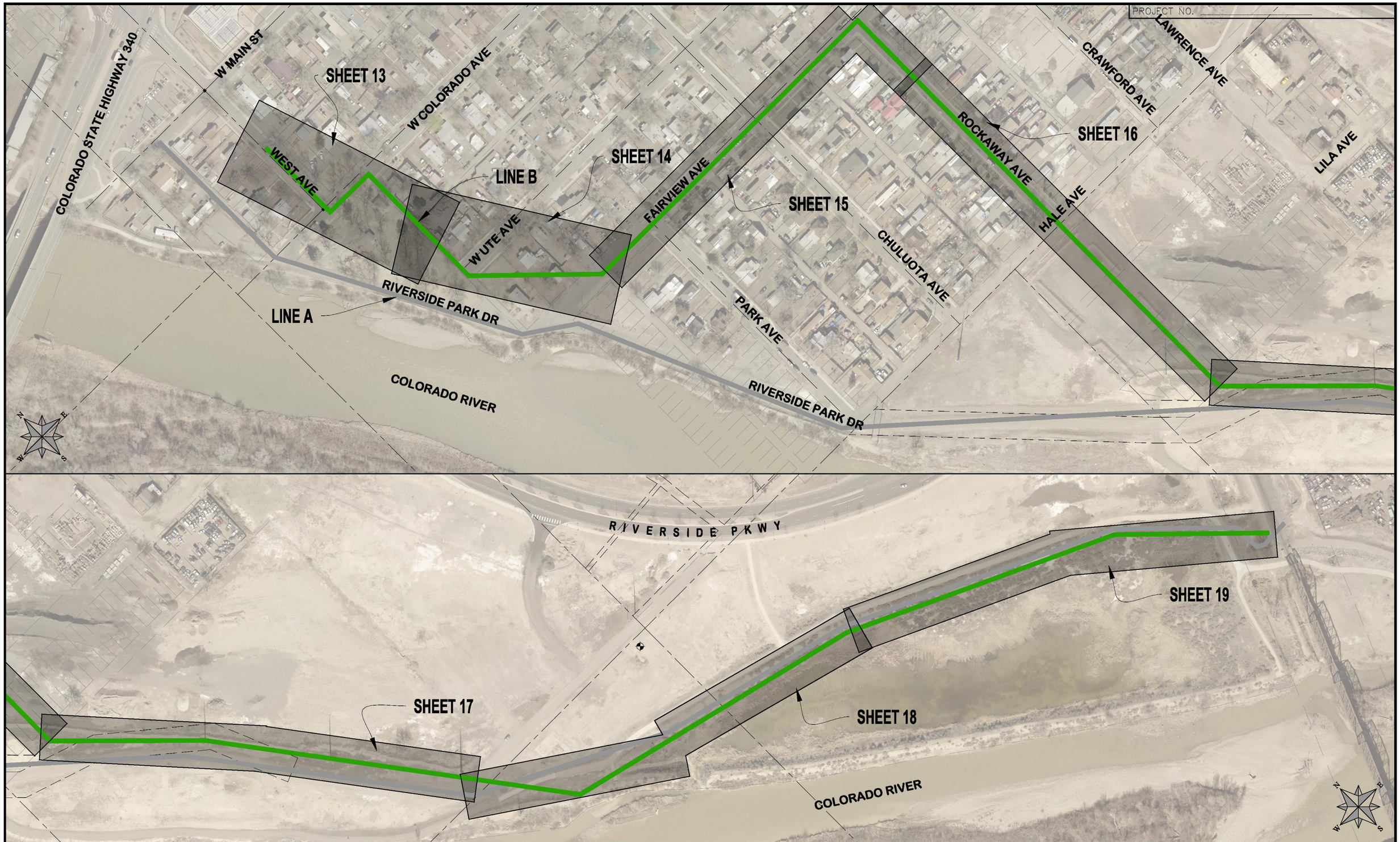
SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 20'
0 5 10 20

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
LINE A PLAN AND PROFILE
STA 50+00 TO STA 57+00

PROJECT NO. _____



DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

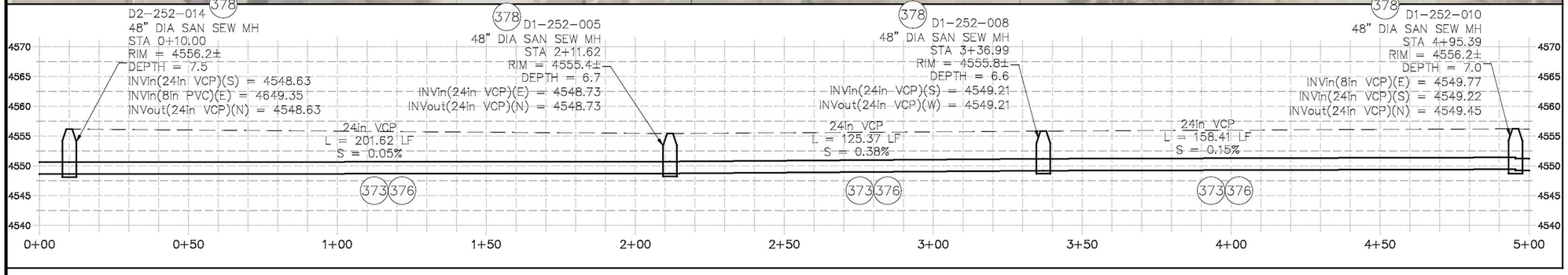
SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 200'
0 50 100 200
VERTICAL: 1" =

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
LINE B KEYMAP
STA 0+00 TO STA 60+00

12



PROJECT NO. _____

CONSTRUCTION NOTES

373 CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

376 REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)

378 SP RECONDITION EXISTING MANHOLE AND BENCH. (SEE PROJECT SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION).

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 20'
0 5 10 20

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
LINE B PLAN AND PROFILE
STA 0+00 TO STA 5+00

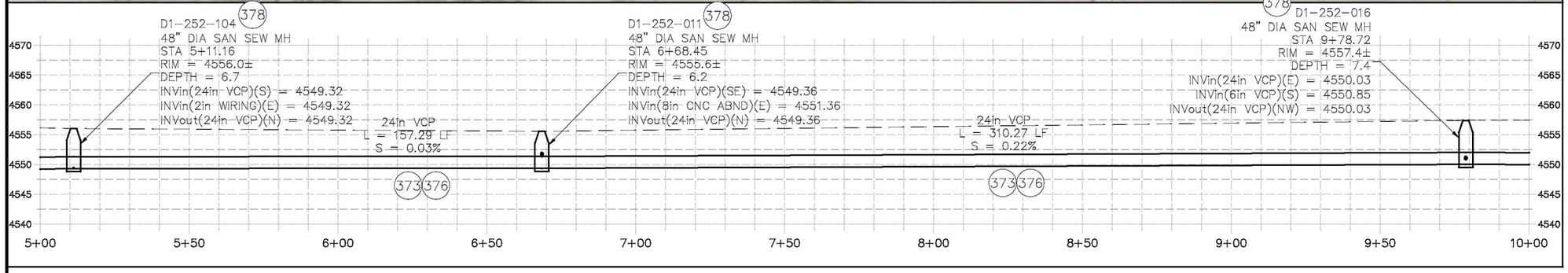
PROJECT NO. _____

CONSTRUCTION NOTES

(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)

(378) SP RECONDITION EXISTING MANHOLE AND BENCH. (SEE PROJECT SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION).



DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 20'
0 5 10 20

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
LINE B PLAN AND PROFILE
STA 5+00 TO STA 10+00

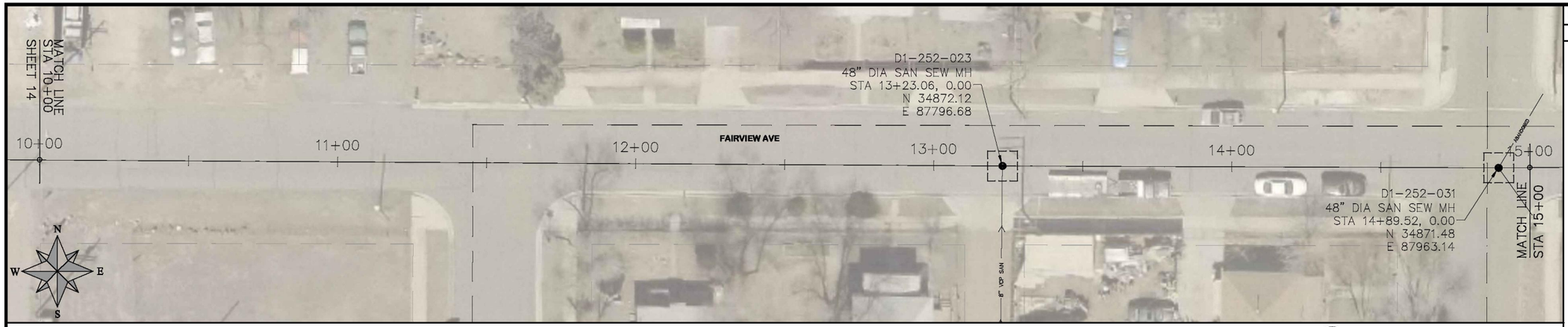
PROJECT NO. _____

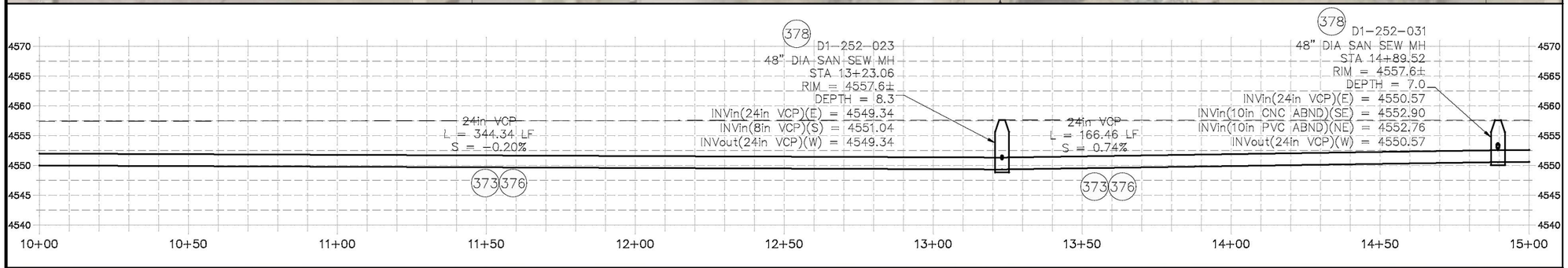
CONSTRUCTION NOTES

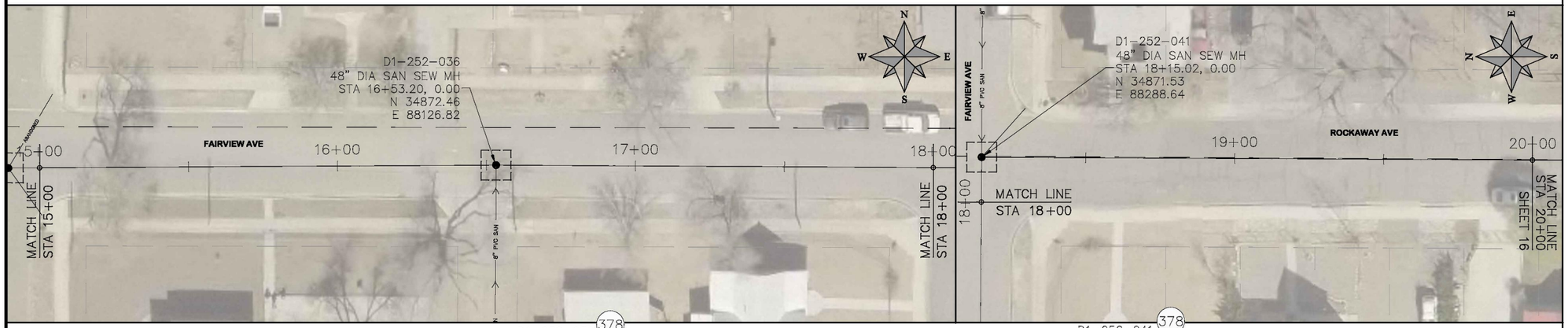
(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

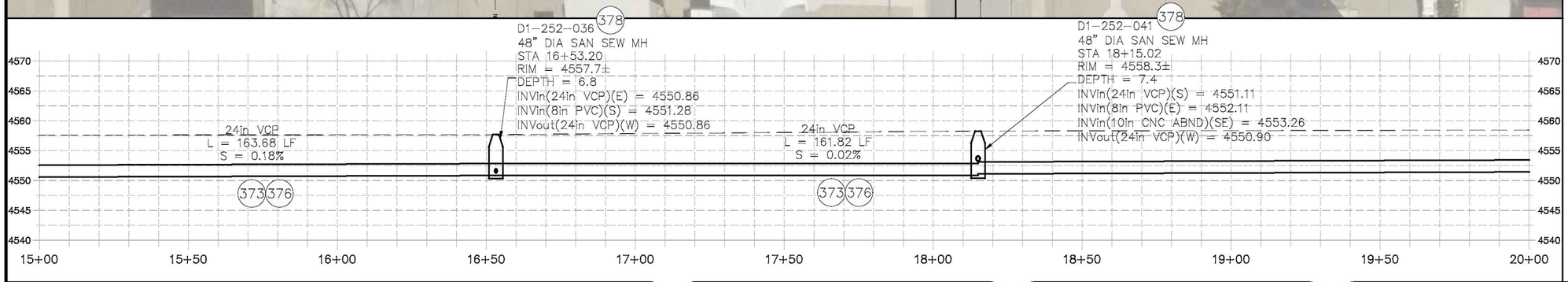
(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)

(378) SP RECONDITION EXISTING MANHOLE AND BENCH. (SEE PROJECT SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION).









DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

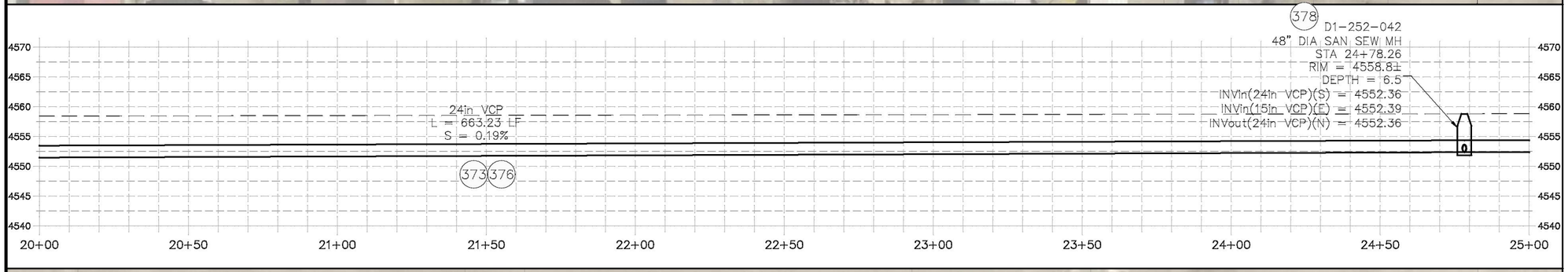
DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

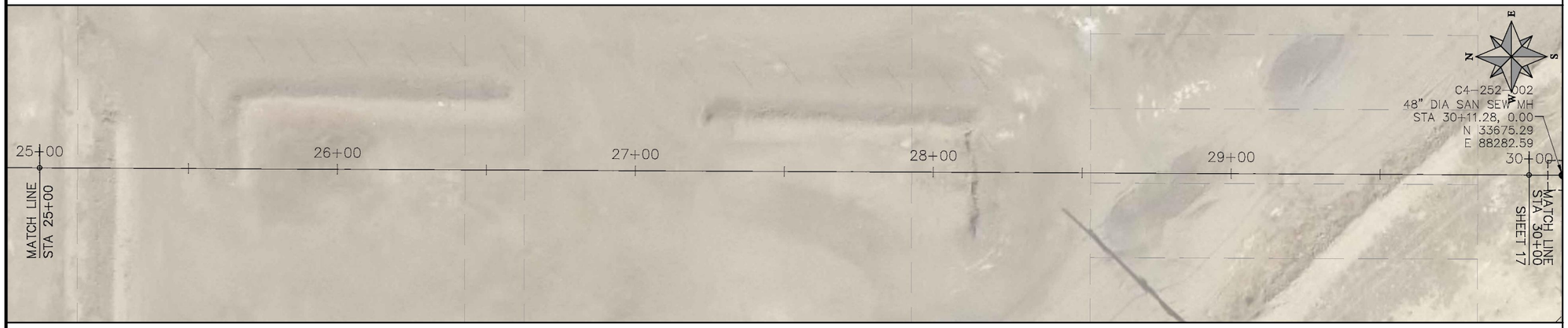
SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 20'
0 5 10 20

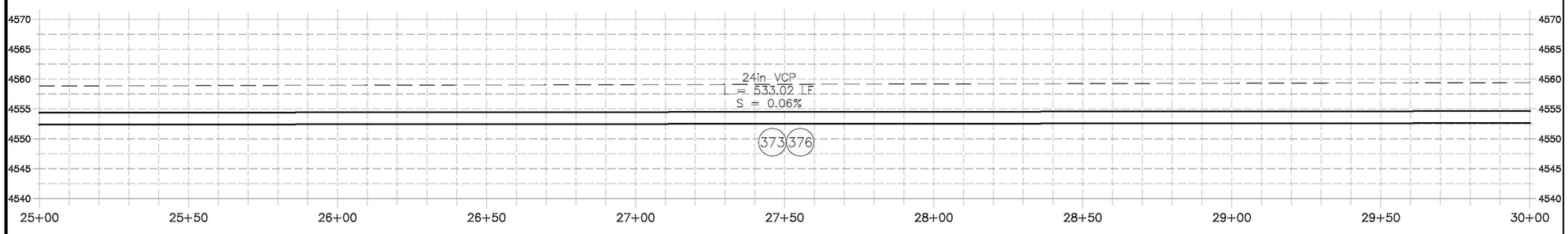
CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
LINE B PLAN AND PROFILE
STA 10+00 TO STA 20+00







PROJECT NO. _____

CONSTRUCTION NOTES

373 CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

376 REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)

378 SP RECONDITION EXISTING MANHOLE AND BENCH. (SEE PROJECT SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION).

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

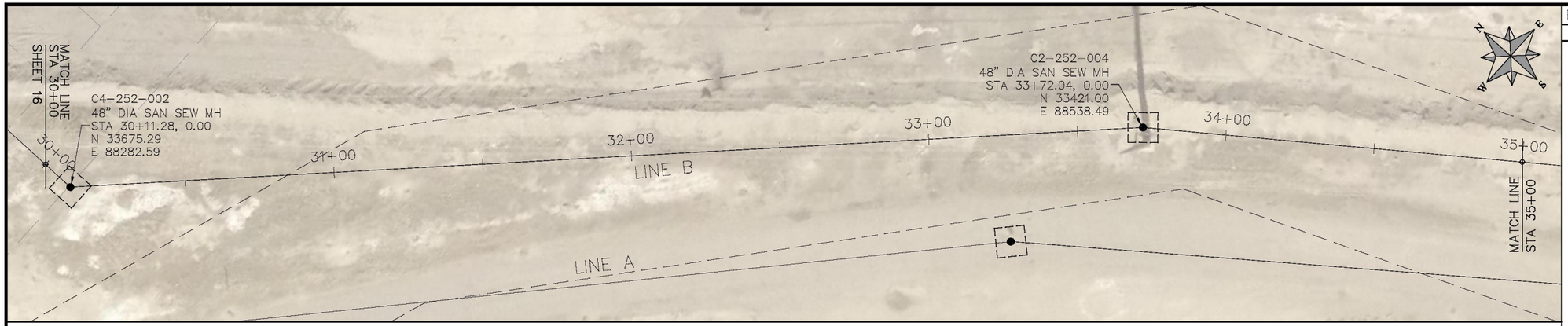
DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

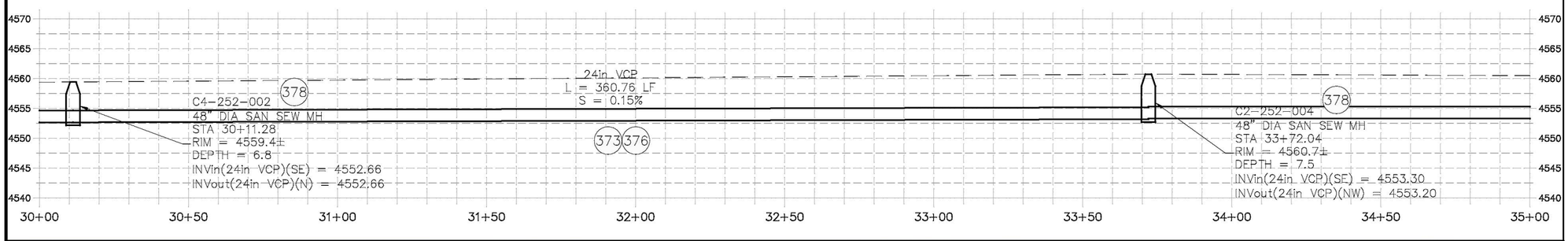
SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 20'
0 5 10 20

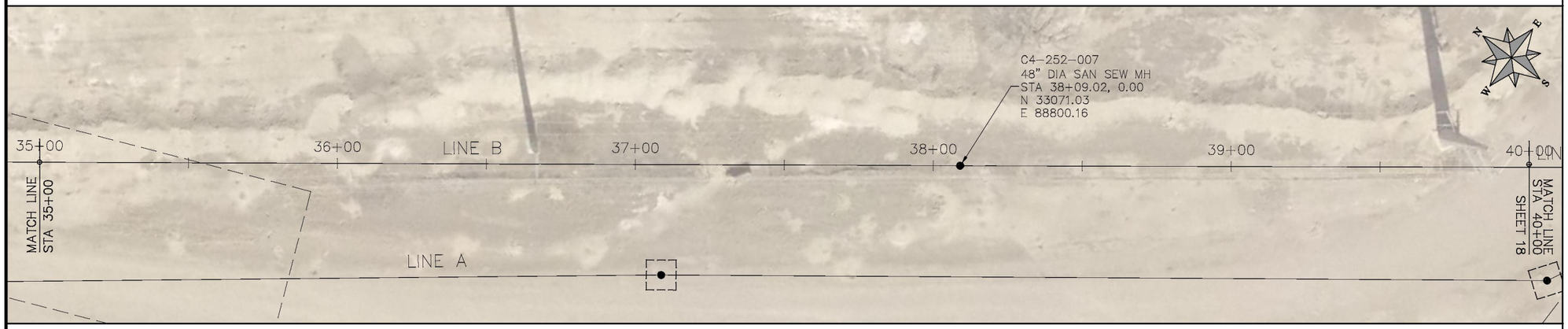
CITY OF Grand Junction COLORADO

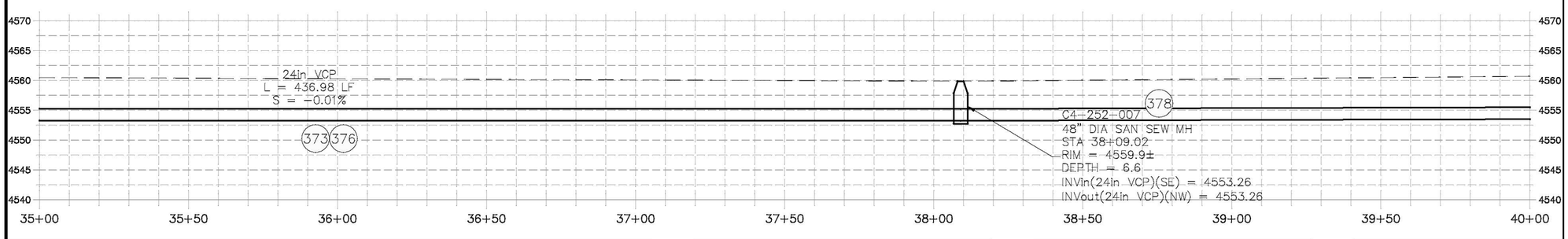
PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
LINE B PLAN AND PROFILE
STA 20+00 TO STA 30+00









PROJECT NO. _____

CONSTRUCTION NOTES

373 CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

376 REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)

378 SP RECONDITION EXISTING MANHOLE AND BENCH. (SEE PROJECT SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION).

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

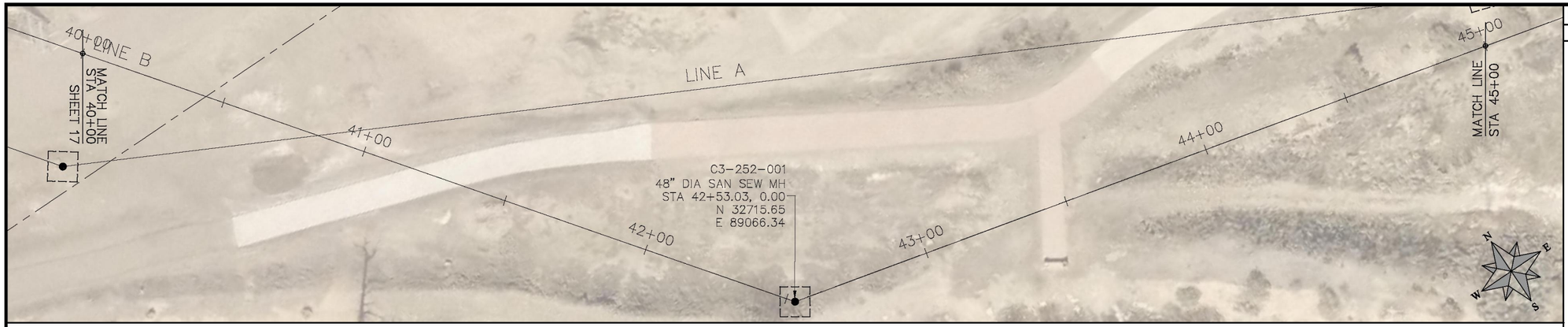
DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

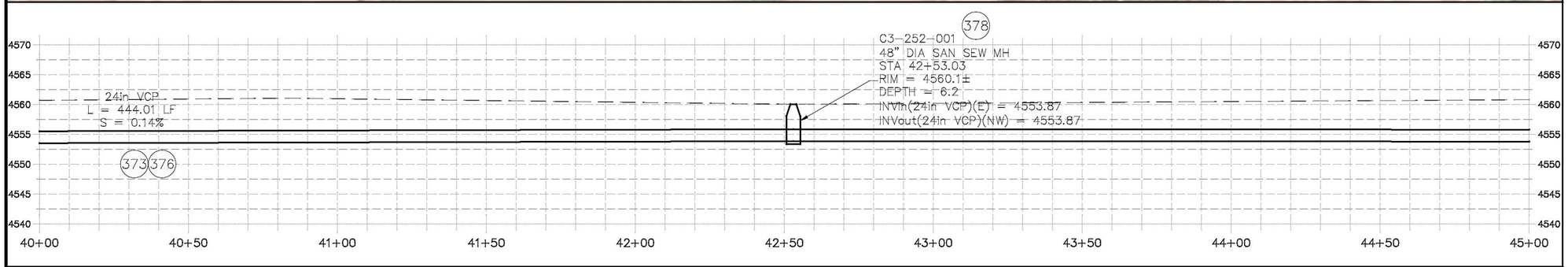
SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 20'
0 5 10 20

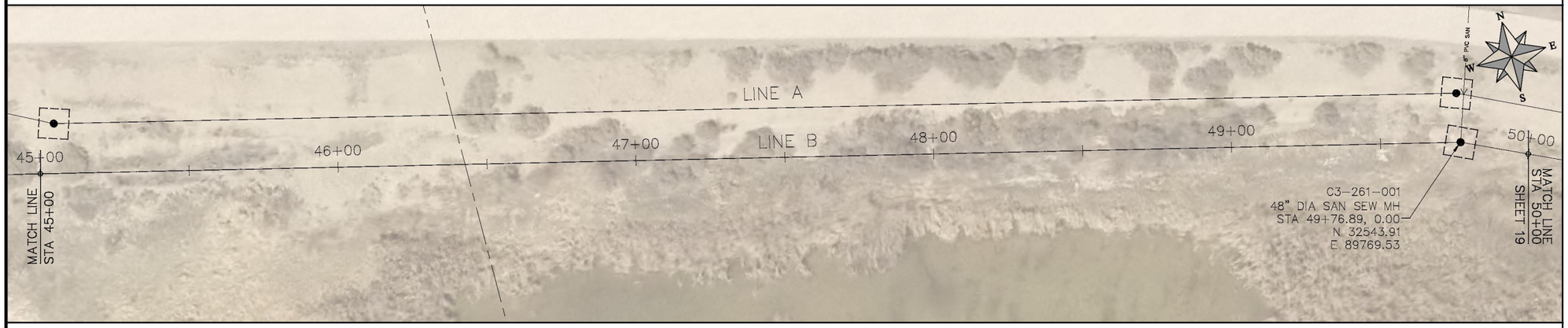
CITY OF Grand Junction COLORADO

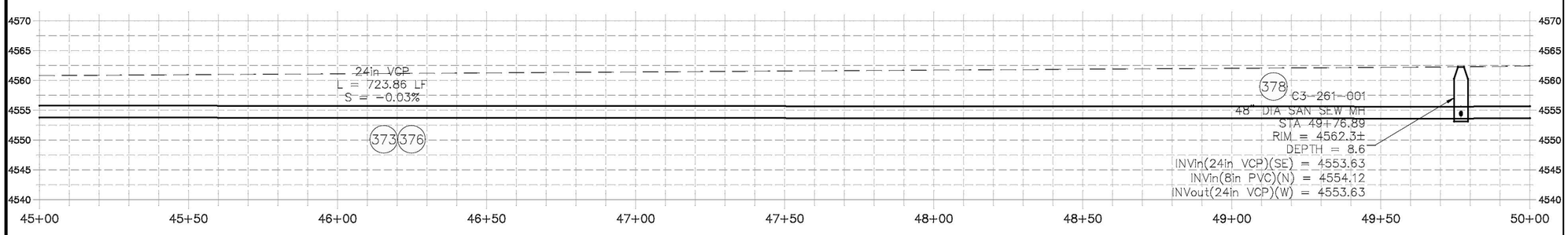
PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
LINE B PLAN AND PROFILE
STA 30+00 TO STA 40+00









PROJECT NO. _____

CONSTRUCTION NOTES

373 CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

376 REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)

378 SP RECONDITION EXISTING MANHOLE AND BENCH. (SEE PROJECT SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION).

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 20'
0 5 10 20

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
LINE B PLAN AND PROFILE
STA 40+00 TO STA 50+00

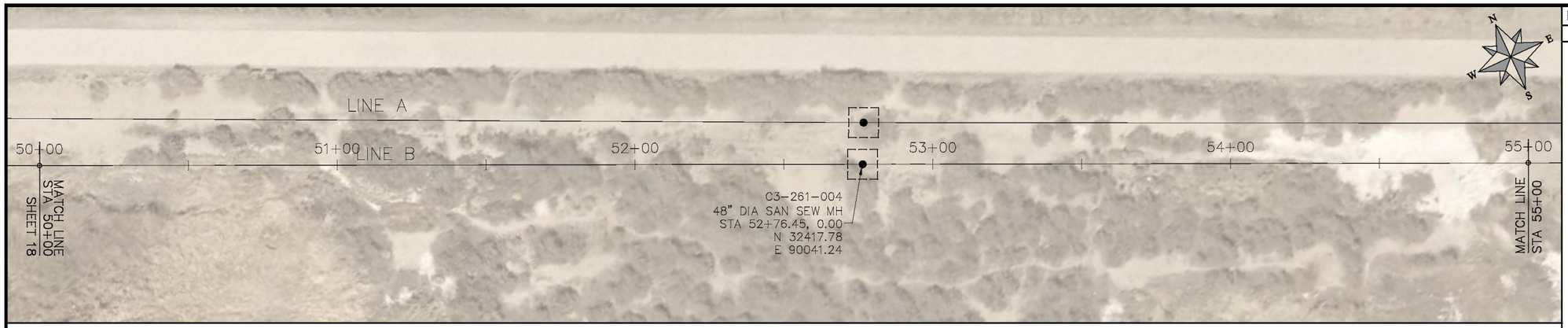
PROJECT NO. _____

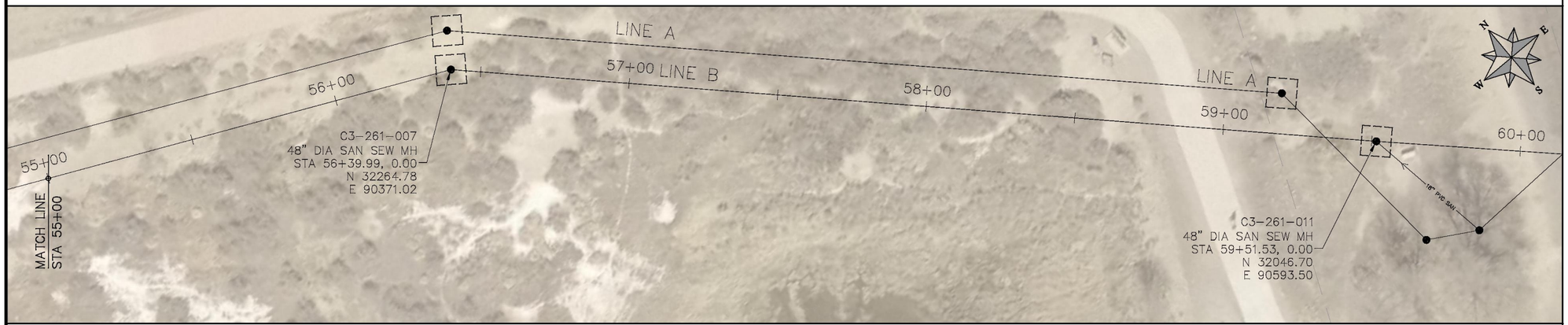
CONSTRUCTION NOTES

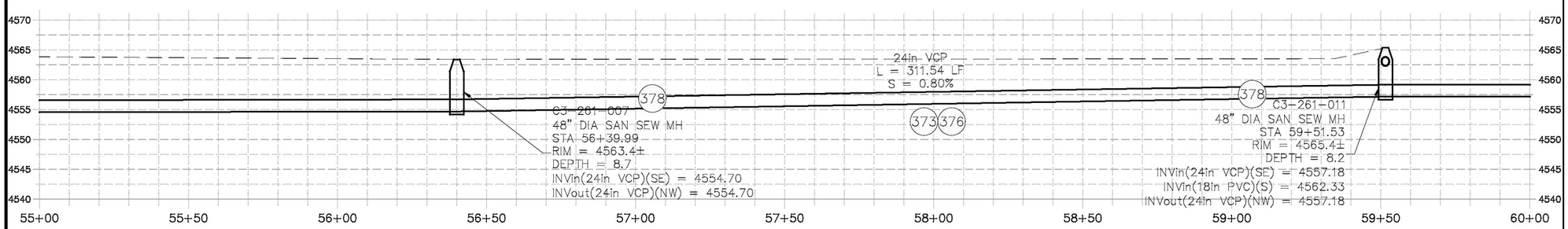
(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)

(378) SP RECONDITION EXISTING MANHOLE AND BENCH. (SEE PROJECT SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION).







DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 20'
0 5 10 20

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

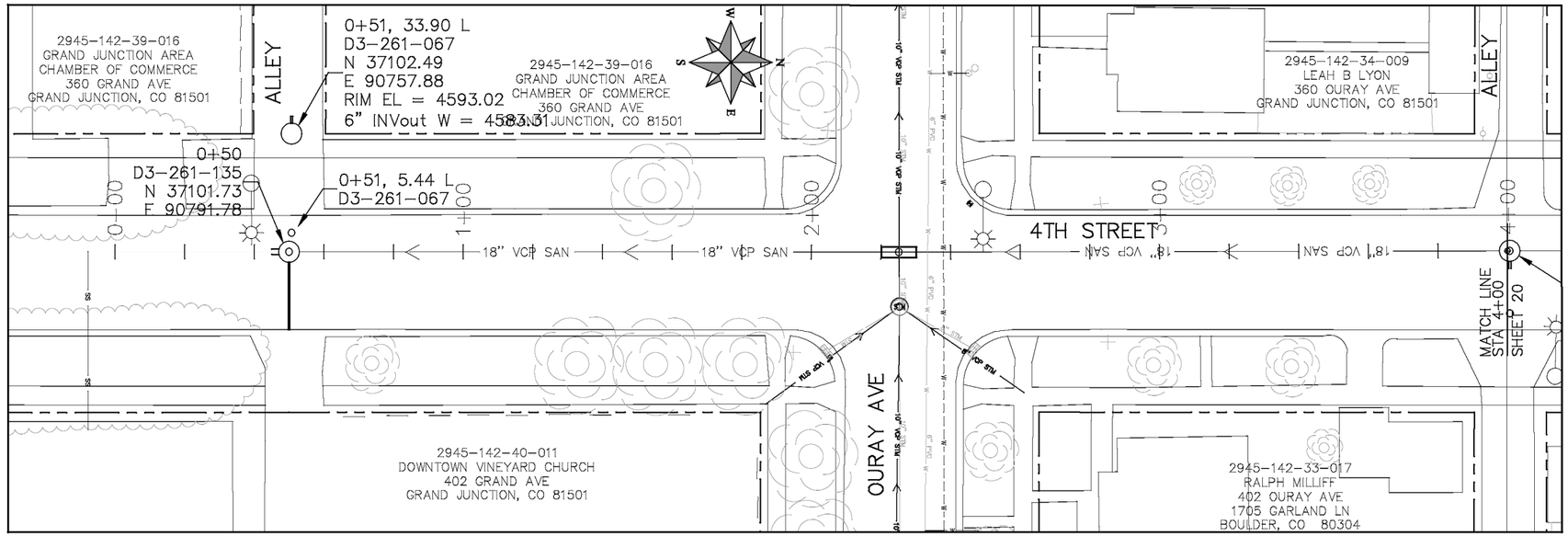
2019 SEWER INTERCEPTOR REHABILITATIONS
LINE B PLAN AND PROFILE
STA 50+00 TO STA 60+00

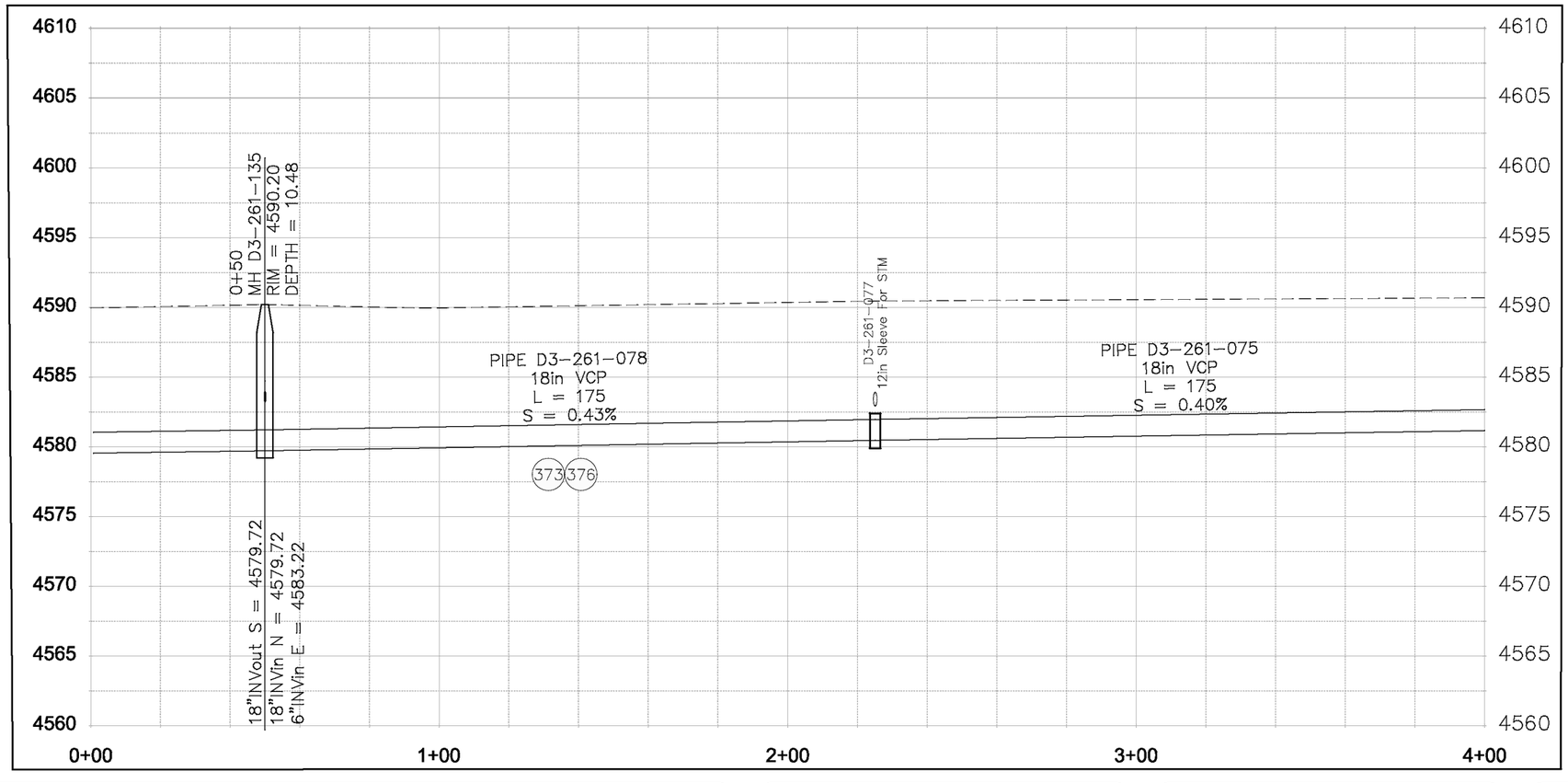
PROJECT NO. _____

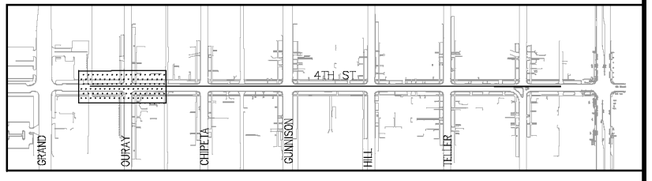
CONSTRUCTION NOTES

(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)







KEYMAP

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 10'
0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

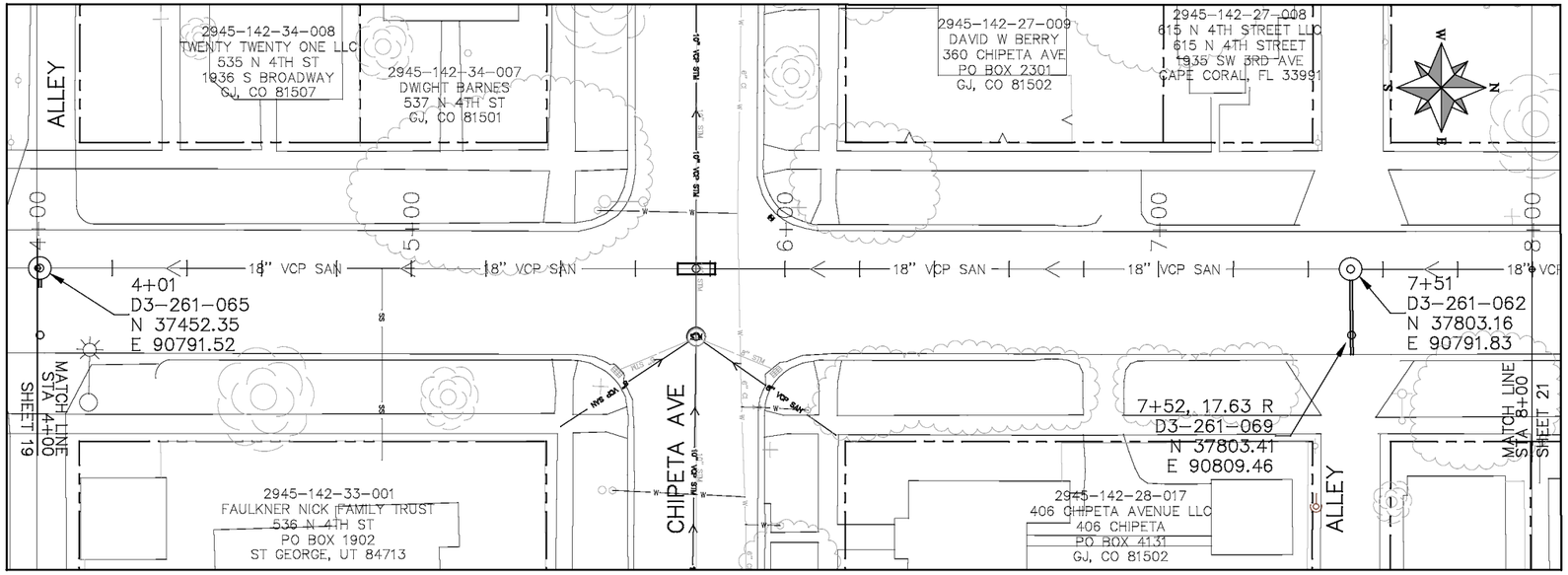
2019 SEWER INTERCEPTOR REHABILITATIONS
4TH STREET CIPP
STA 0+00 TO STA 4+00

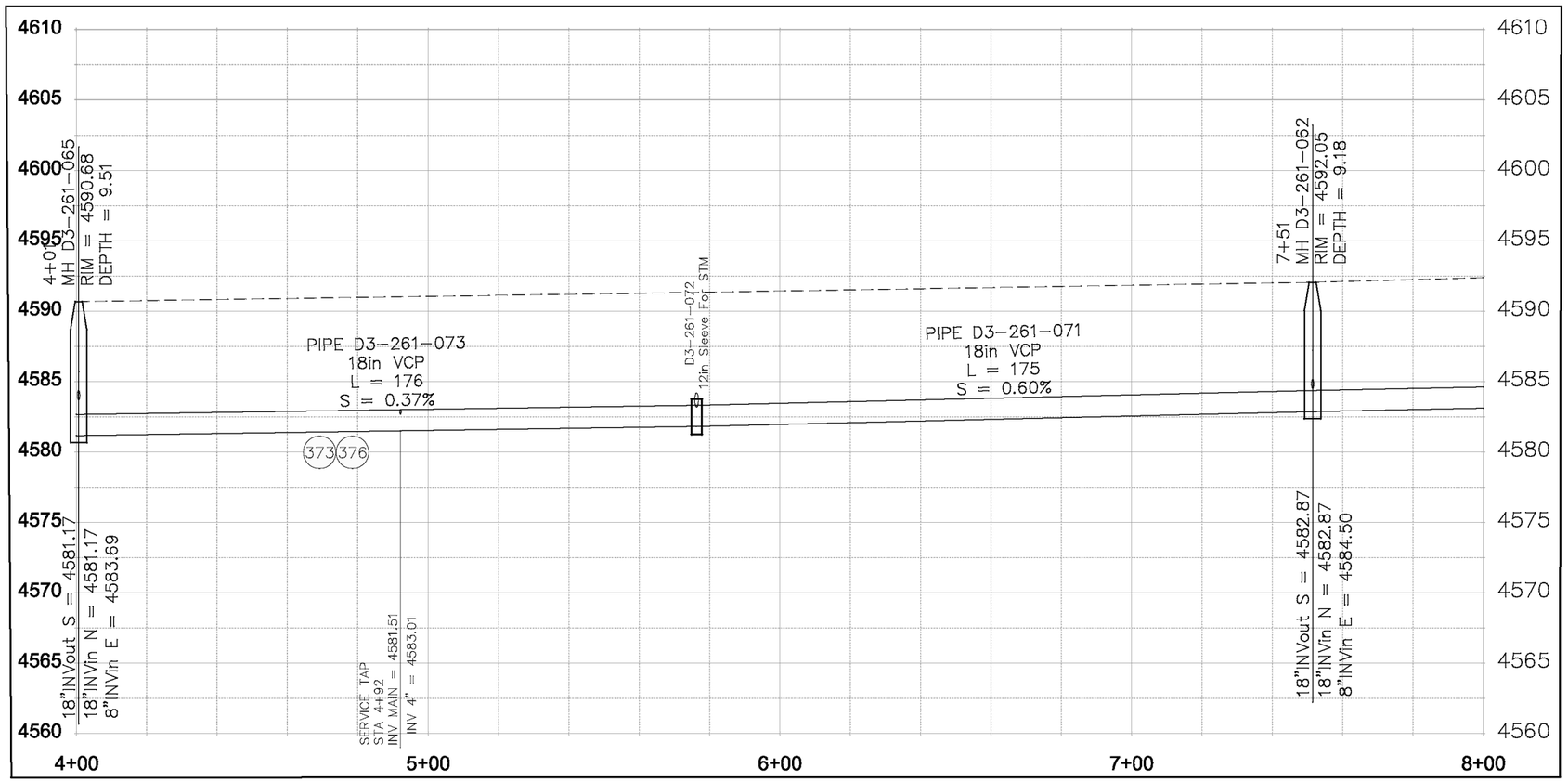
PROJECT NO. _____

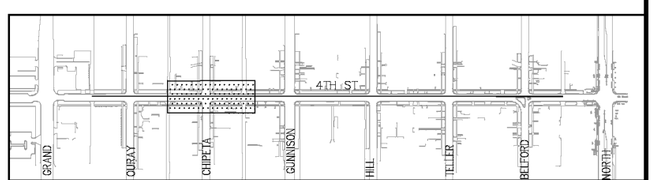
CONSTRUCTION NOTES

(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)







KEYMAP

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 10'
0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

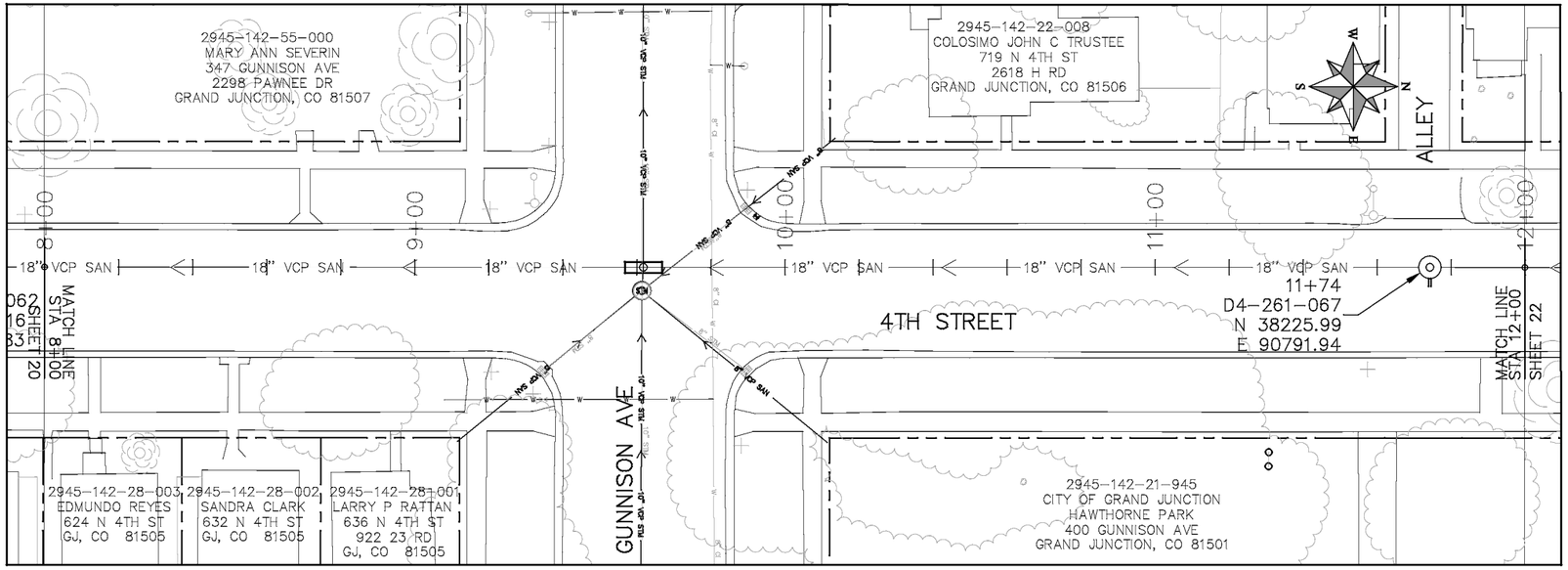
2019 SEWER INTERCEPTOR REHABILITATIONS
4TH STREET CIPP
STA 4+00 TO STA 8+00

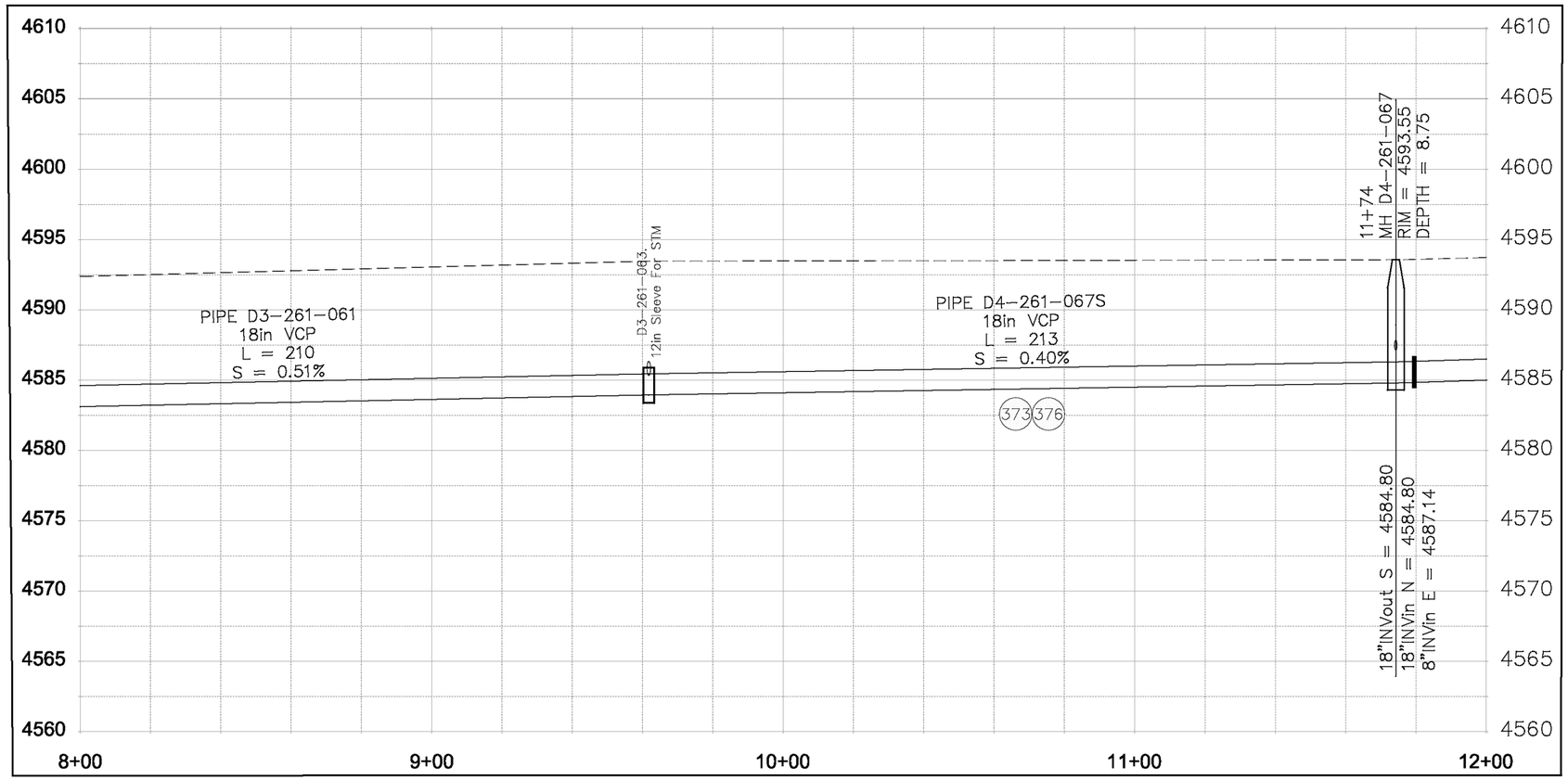
PROJECT NO. _____

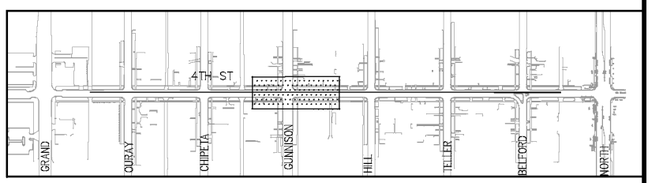
CONSTRUCTION NOTES

(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)







KEYMAP

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY	HMC	DATE	2018
DESIGNED BY	JKT	DATE	2018
CHECKED BY	JKT	DATE	2018
APPROVED BY	JKT	DATE	2018

SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 10'
0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

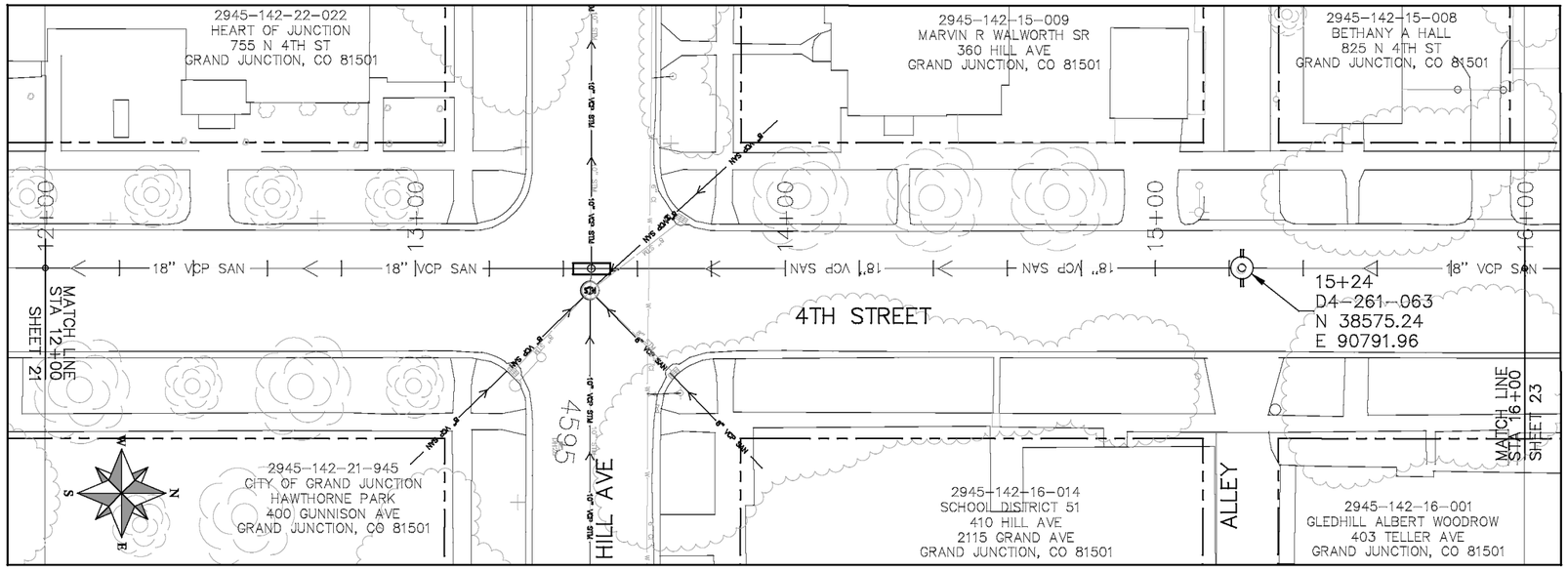
2019 SEWER INTERCEPTOR REHABILITATIONS
4TH STREET CIPP
STA 8+00 TO STA 12+00

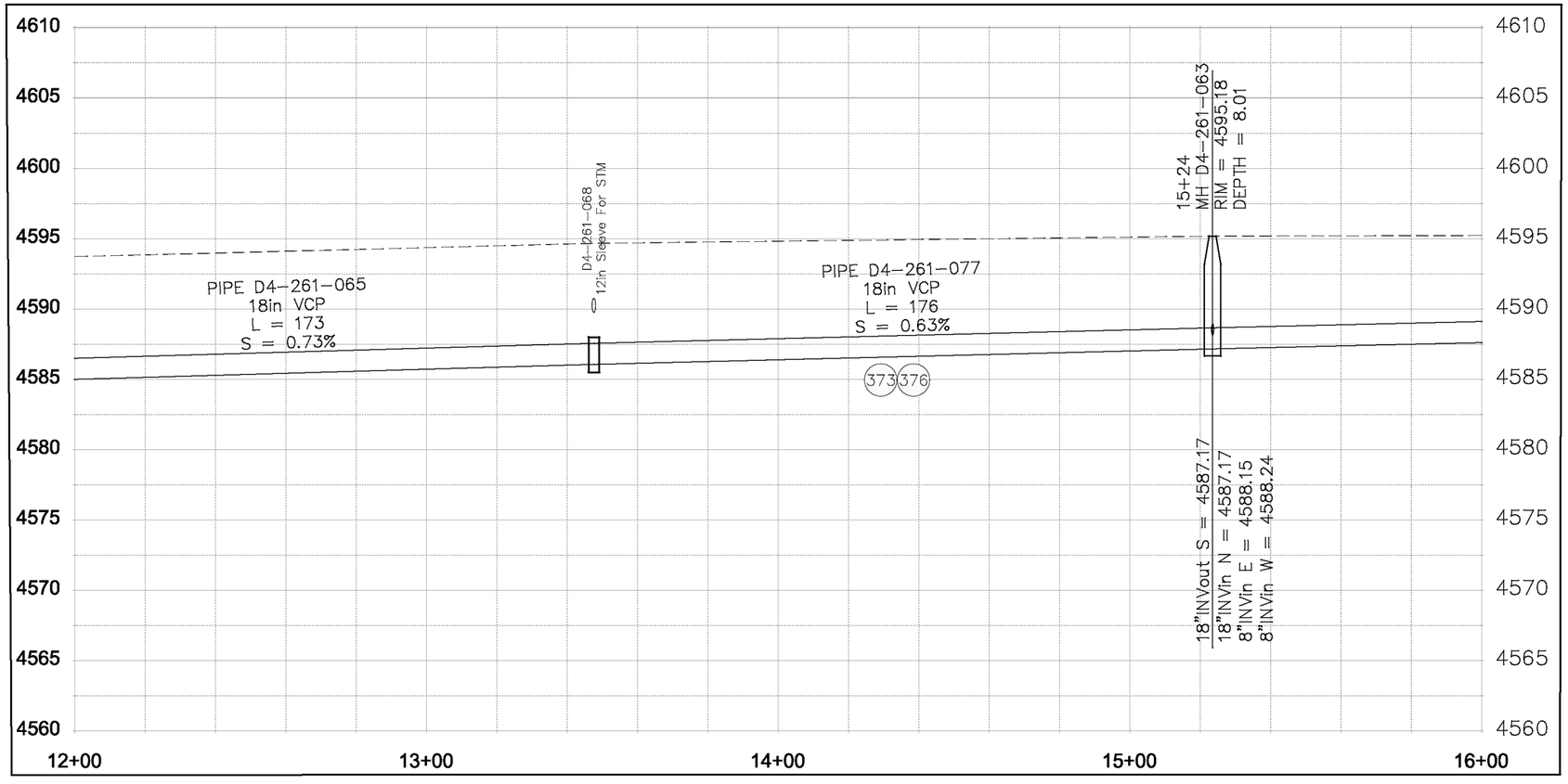
PROJECT NO. _____

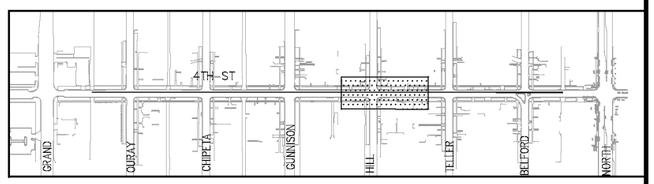
CONSTRUCTION NOTES

(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)







KEYMAP

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 10'
0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

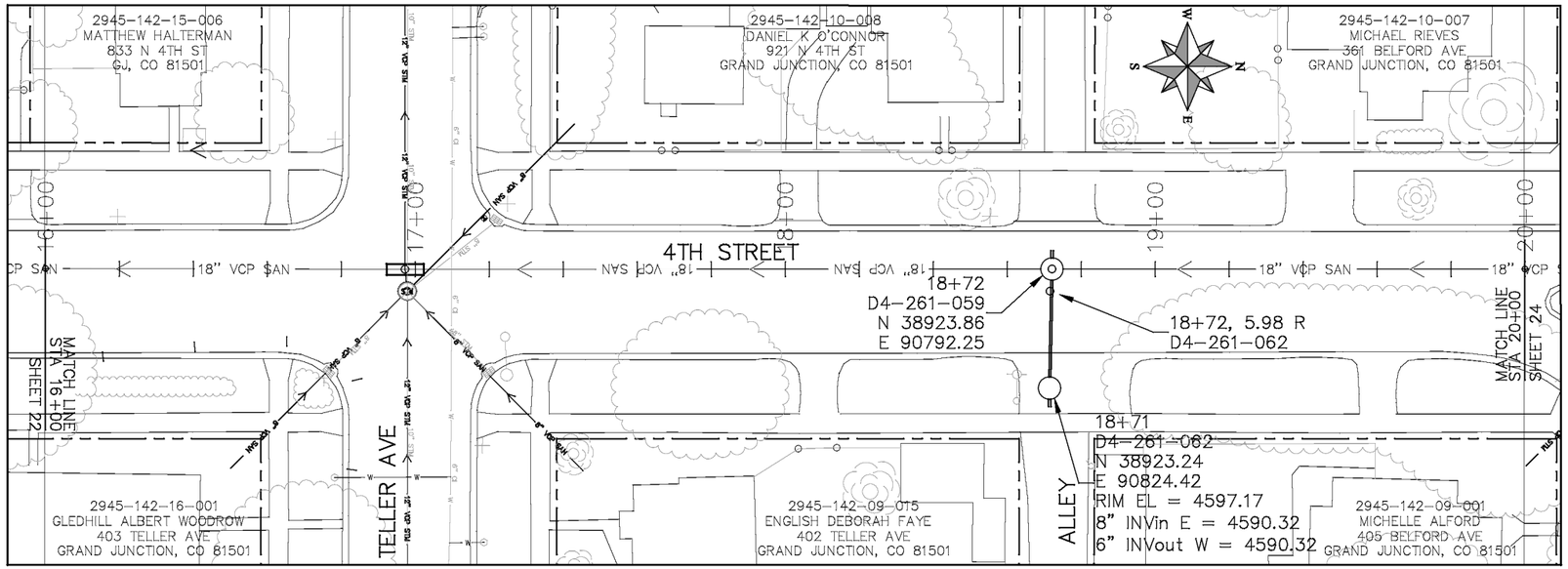
2019 SEWER INTERCEPTOR REHABILITATIONS
4TH STREET CIPP
STA 12+00 TO STA 16+00

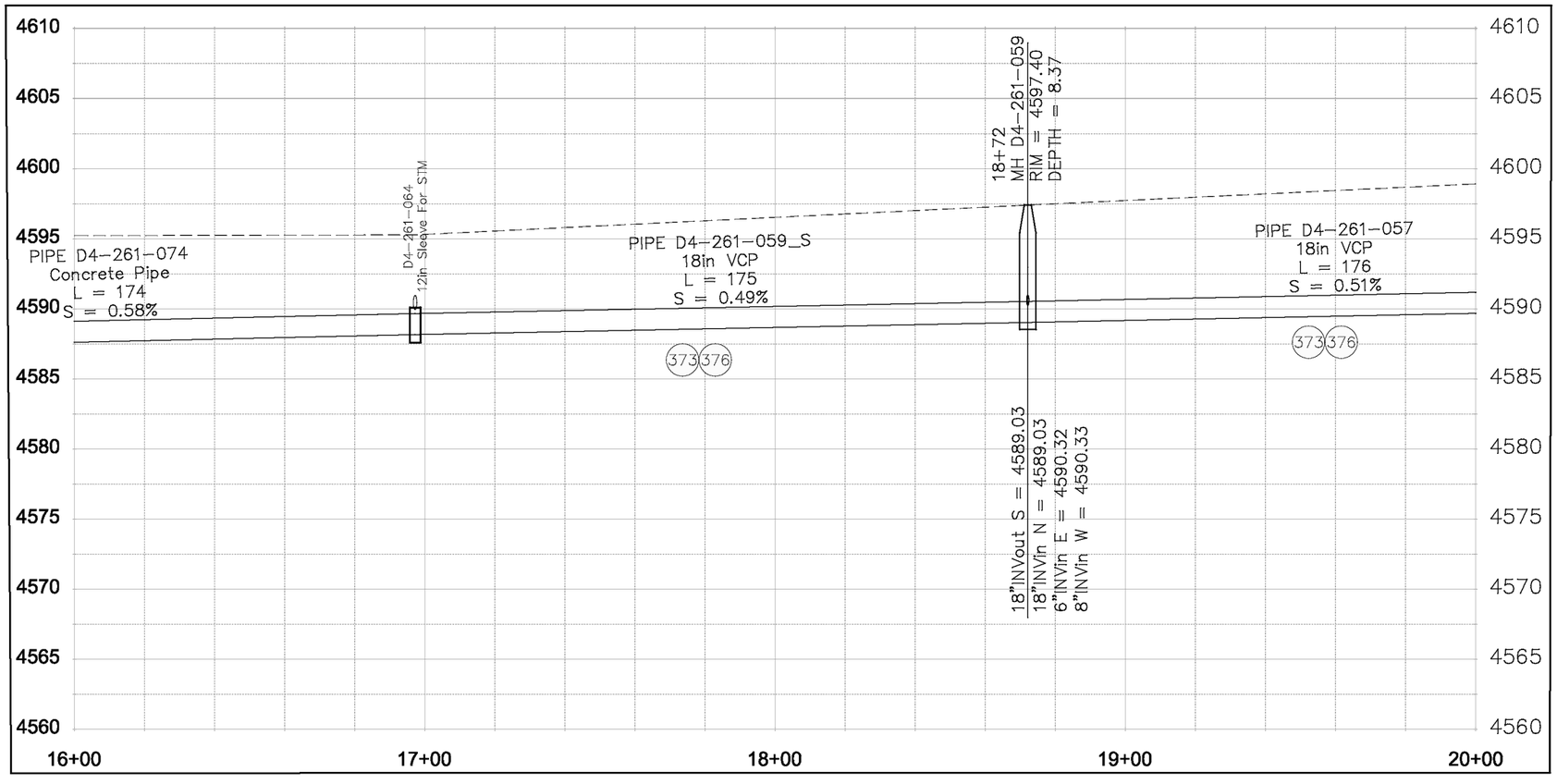
PROJECT NO. _____

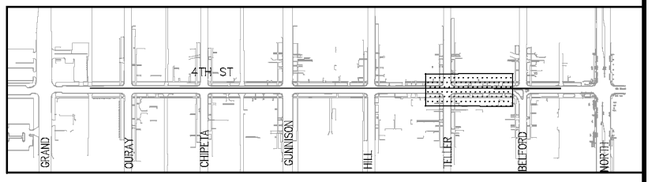
CONSTRUCTION NOTES

(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)







KEYMAP

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 10'
0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
4TH STREET CIPP
STA 16+00 TO STA 20+00

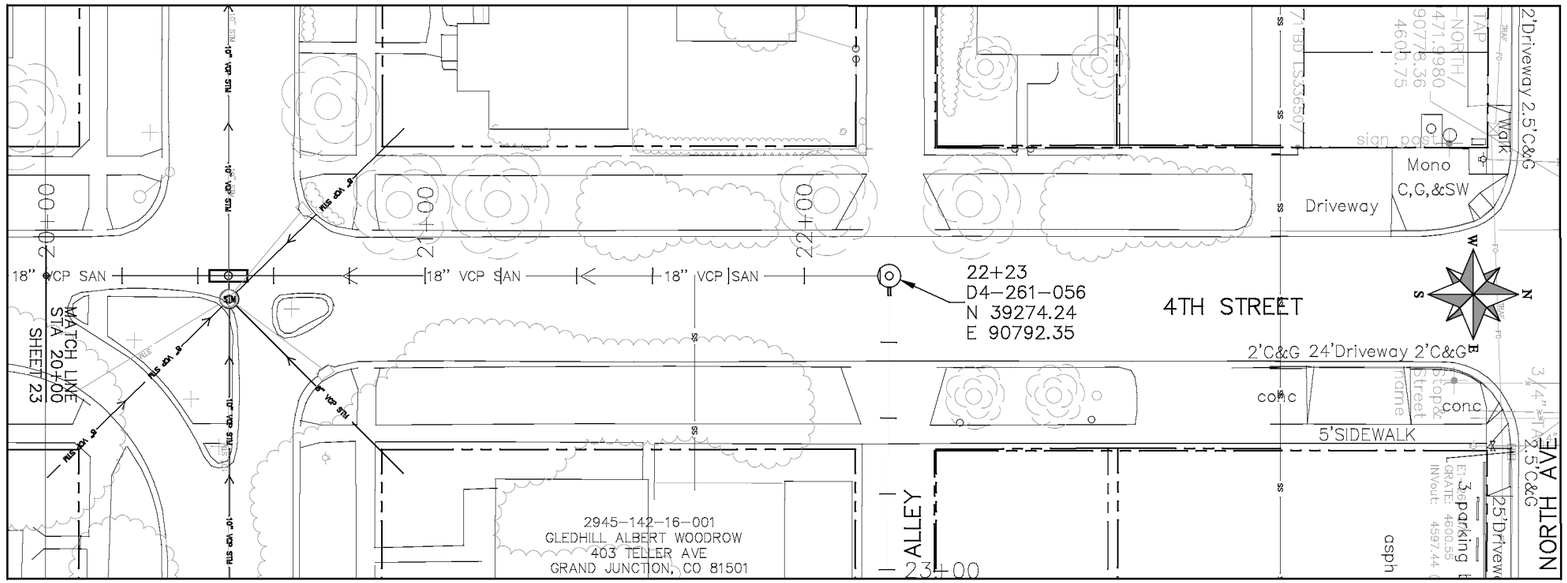
PROJECT NO. _____

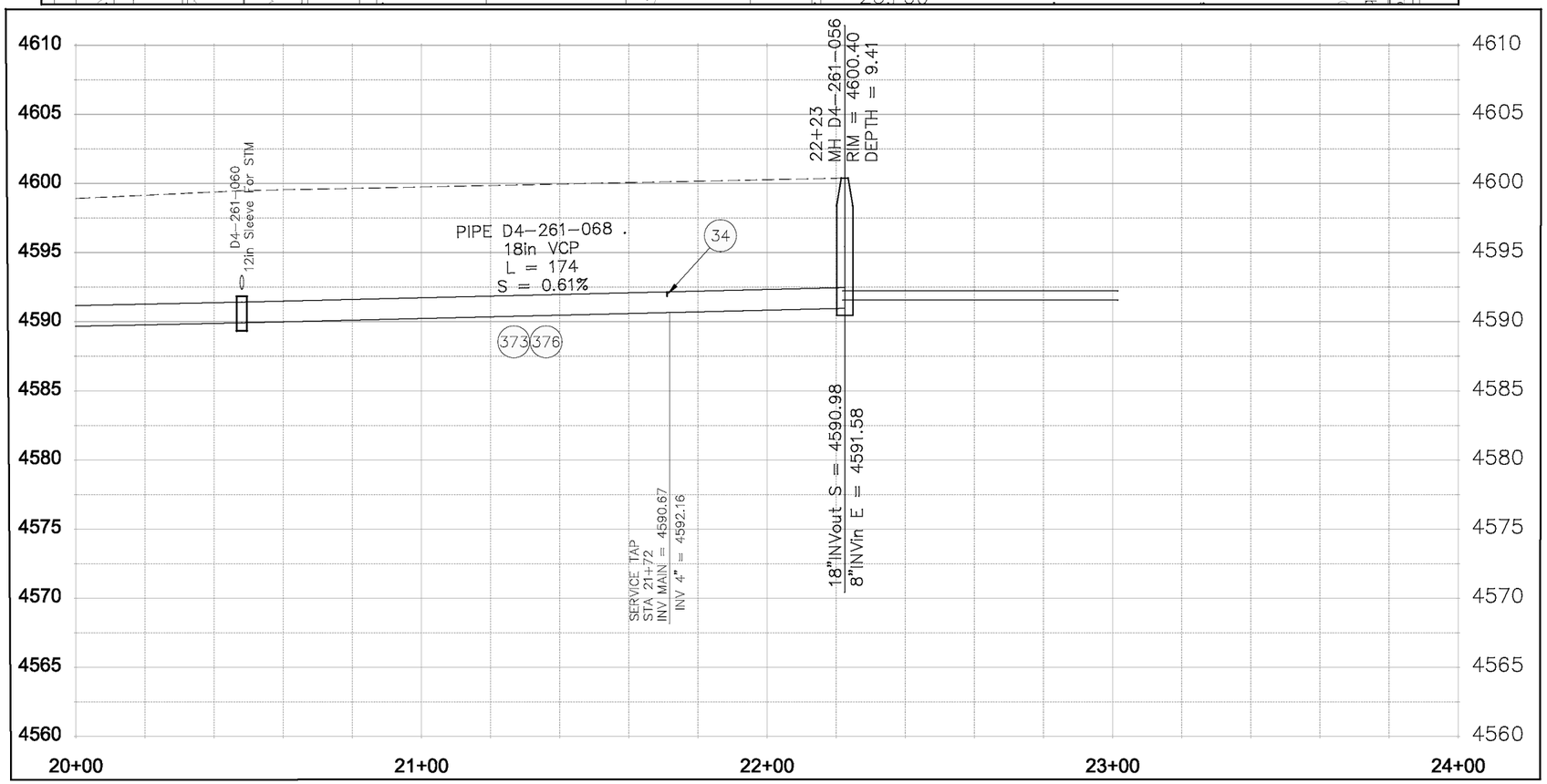
CONSTRUCTION NOTES

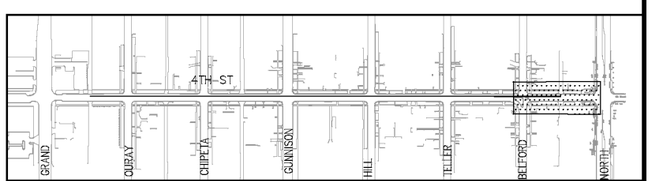
(34) REMOVE CIPP COUPON AT SERVICE LOCATION (INCIDENTAL TO CIPP) 252 MANHOLESHALL BE REMOVED. NEW PIPE INSTALLED AND CONNECTIONS BACK TO EXISTING PIPE COMPLETED PRIOR TO CIPP OPERATIONS FOR THIS RUN. CIPP "THROUGH" OLD MANHOLE LOCATION.

(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)







KEYMAP

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY HMC DATE 2018
DESIGNED BY JKT DATE 2018
CHECKED BY JKT DATE 2018
APPROVED BY JKT DATE 2018

SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 10'
0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
4TH STREET CIPP
STA 20+00 TO STA 24+00

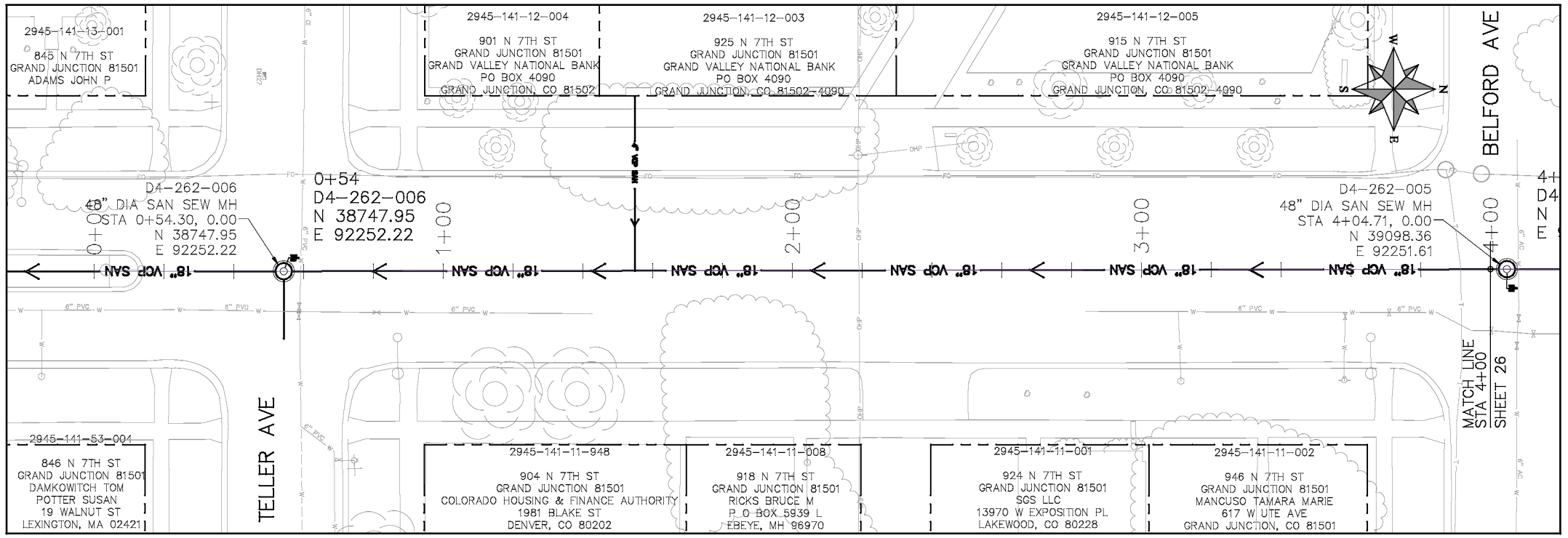
PROJECT NO. _____

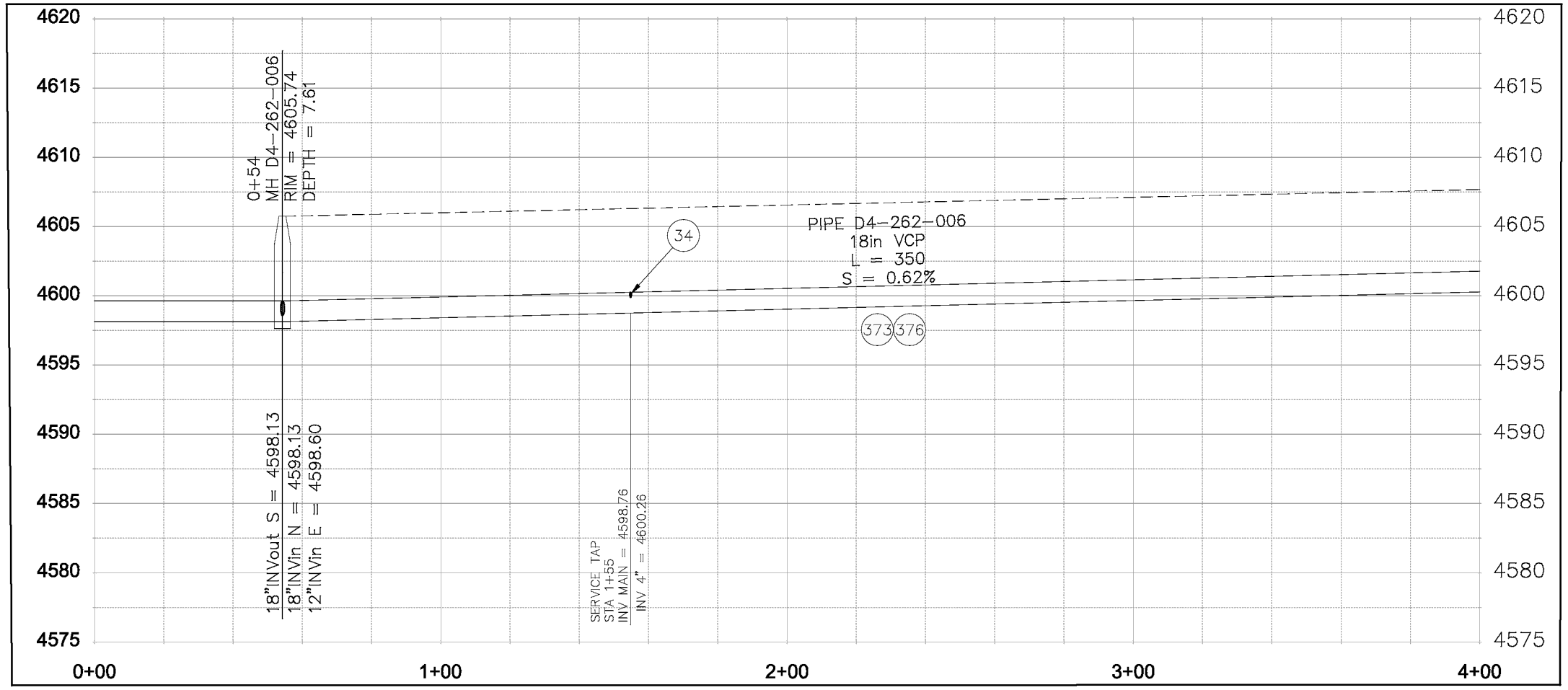
CONSTRUCTION NOTES

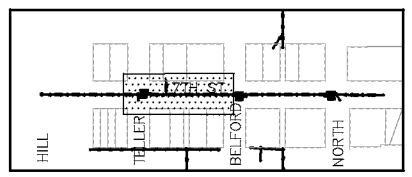
(34) REMOVE CIPP COUPON AT SERVICE LOCATION (INCIDENTAL TO CIPP) 252 MANHOLESHALL BE REMOVED. NEW PIPE INSTALLED AND CONNECTIONS BACK TO EXISTING PIPE COMPLETED PRIOR TO CIPP OPERATIONS FOR THIS RUN. CIPP "THROUGH" OLD MANHOLE LOCATION.

(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)







KEYMAP

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY	HMC	DATE	2018
DESIGNED BY	JKT	DATE	2018
CHECKED BY	JKT	DATE	2018
APPROVED BY	JKT	DATE	2018

SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 10'
0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
7TH STREET CIPP
STA 0+00 TO STA 4+00

26

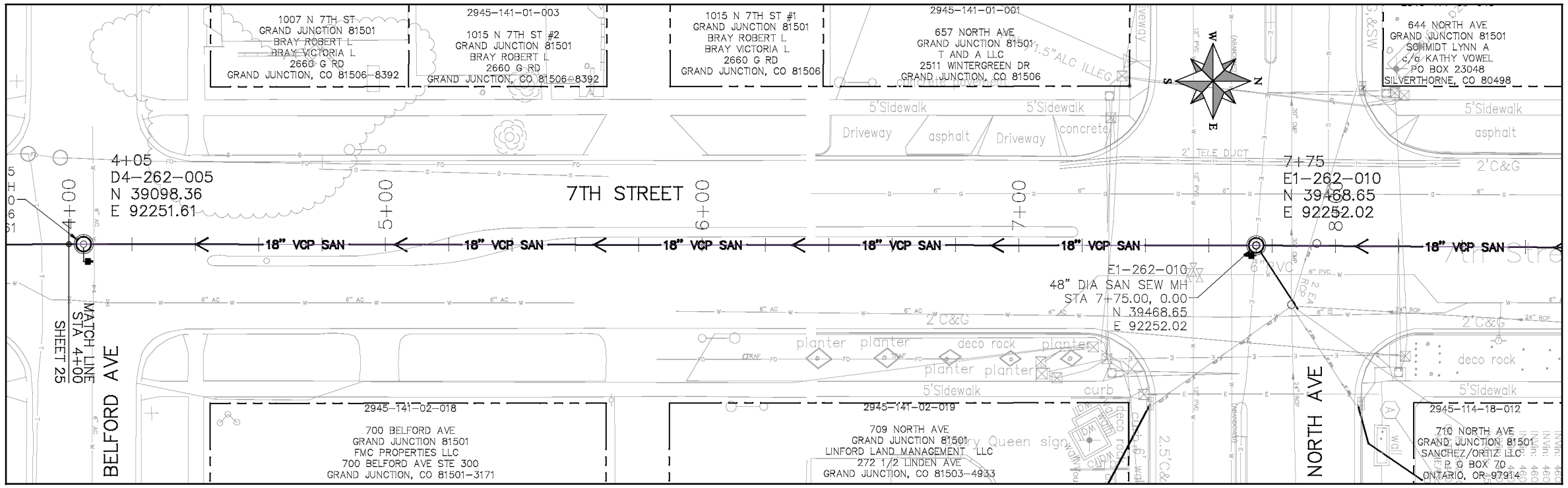
N:\Landproj\2019 Sewer Interceptor Rehabilitations\dwg\26-27_7th Street.dwg, 26, 1/24/2019 2:46:16 PM

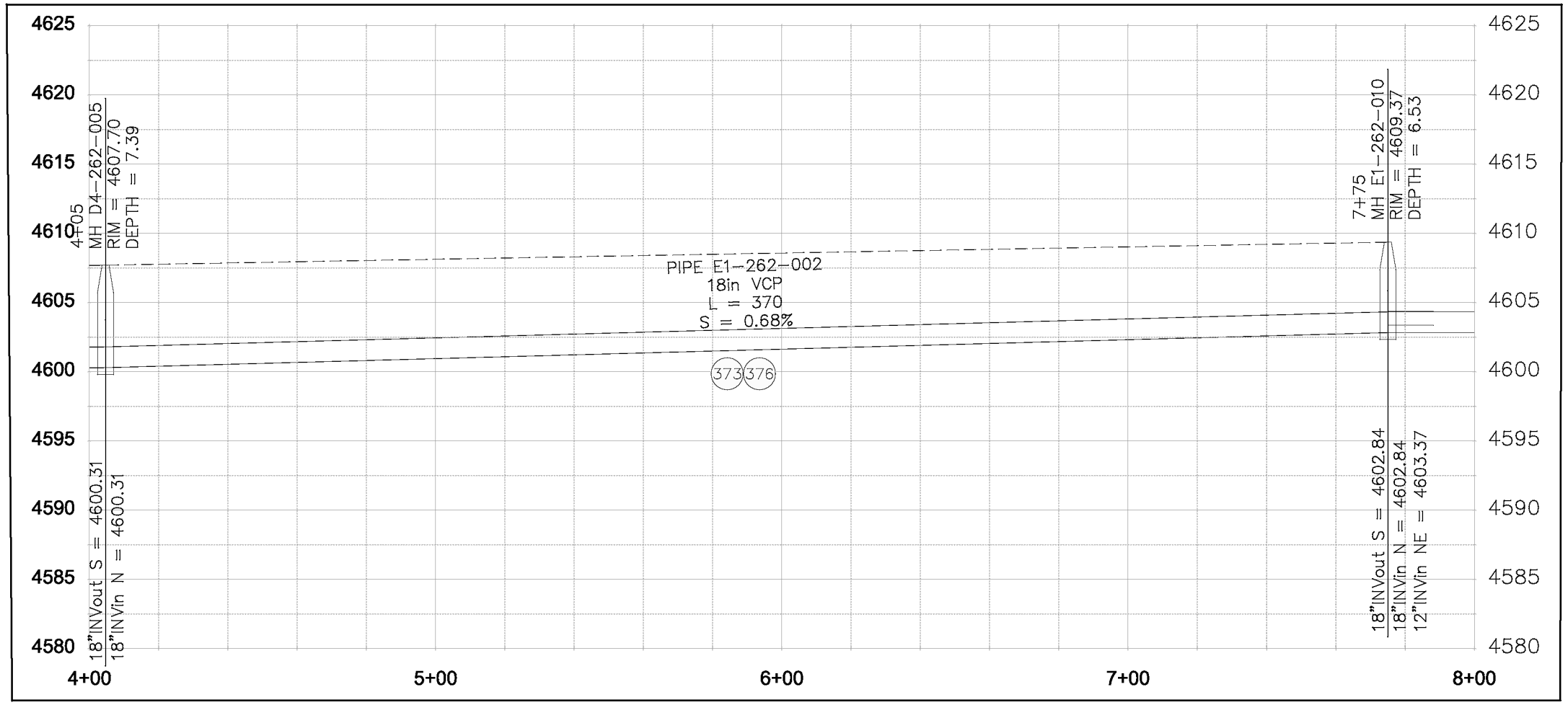
PROJECT NO. _____

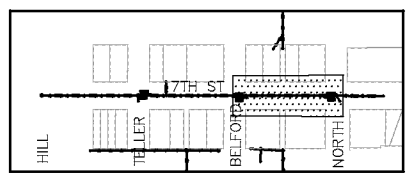
CONSTRUCTION NOTES

(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)







KEYMAP

DESCRIPTION	DATE
REVISION △	
REVISION △	
REVISION △	
REVISION △	

DRAWN BY	HMC	DATE	2018
DESIGNED BY	JKT	DATE	2018
CHECKED BY	JKT	DATE	2018
APPROVED BY	JKT	DATE	2018

SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40'
0 10 20 40
VERTICAL: 1" = 10'
0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
7TH STREET CIPP
STA 4+00 TO STA 8+00

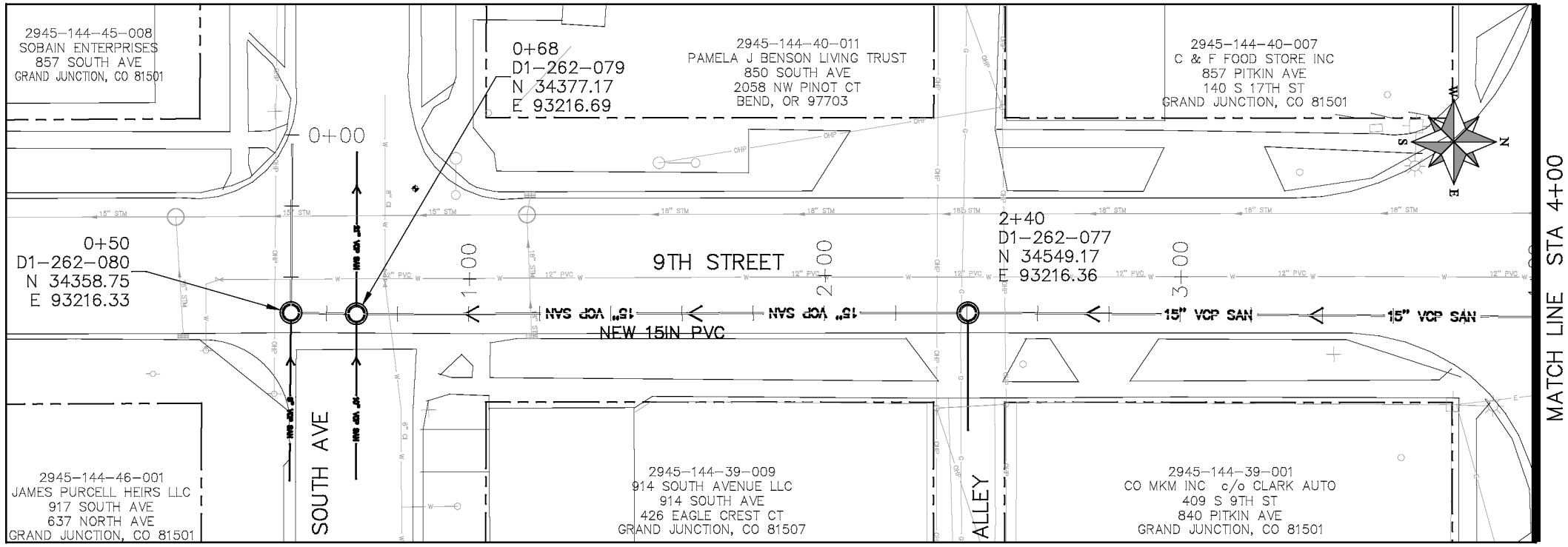
N:\Landproj\2019 Sewer Interceptor Rehabilitation\dwg\26-27_7th Street.dwg, 27, 1/24/2019 2:46:18 PM

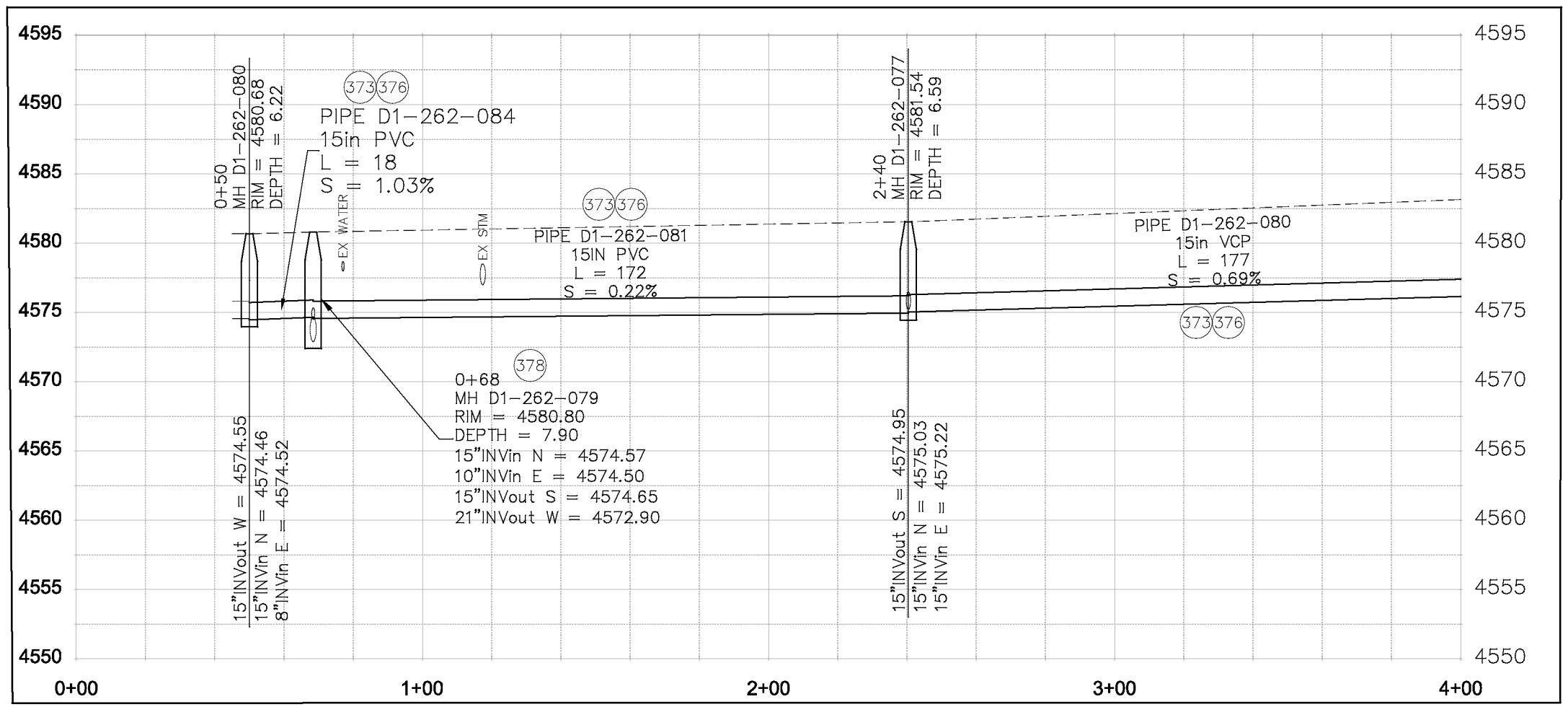
PROJECT NO. _____

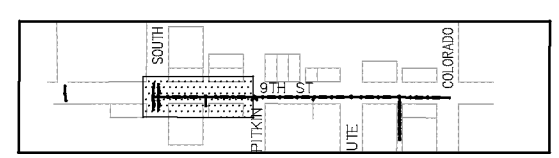
CONSTRUCTION NOTES

(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)







KEYMAP

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY HMC/JCS DATE 2016
DESIGNED BY JJV DATE 2016
CHECKED BY TCP DATE 2016
APPROVED BY HMC/JCS DATE 2016

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
9TH STREET CIPP
STA 0+00 TO STA 4+00

28

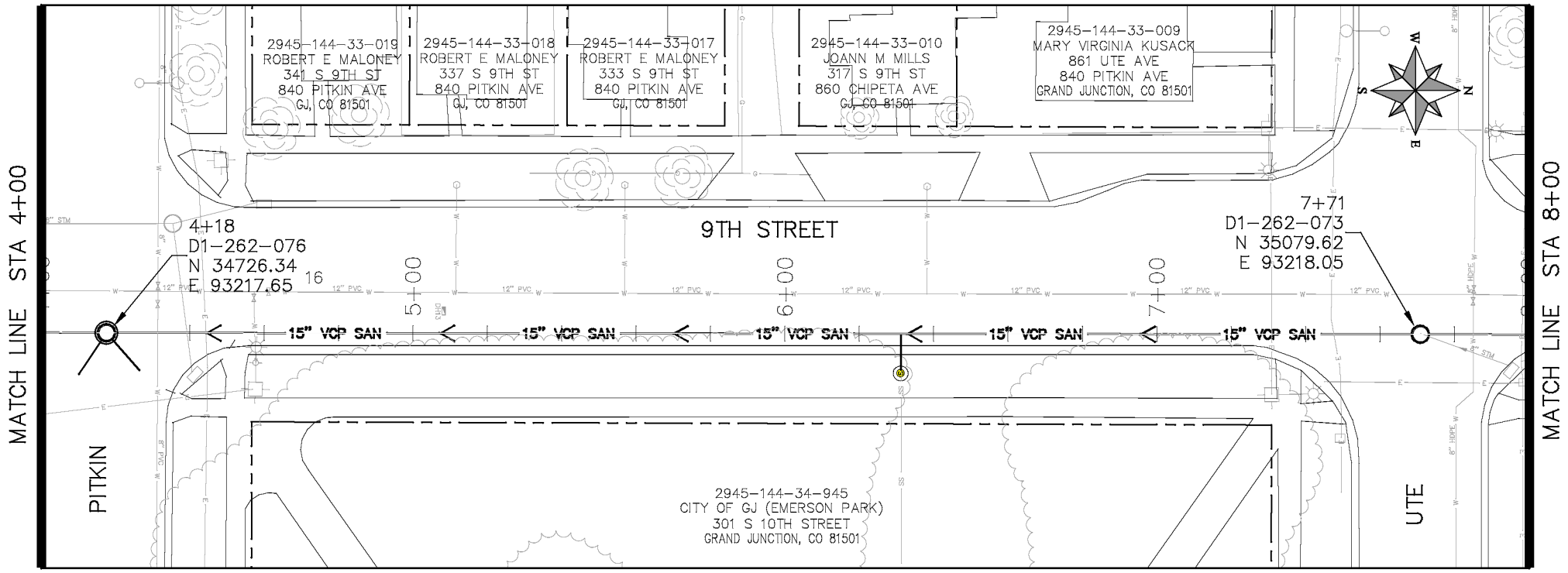
N:\Landproj\2019 Sewer Interceptor Rehabilitations\dwg\28-30_9th Street.dwg, 28, 1/24/2019 2:46:37 PM

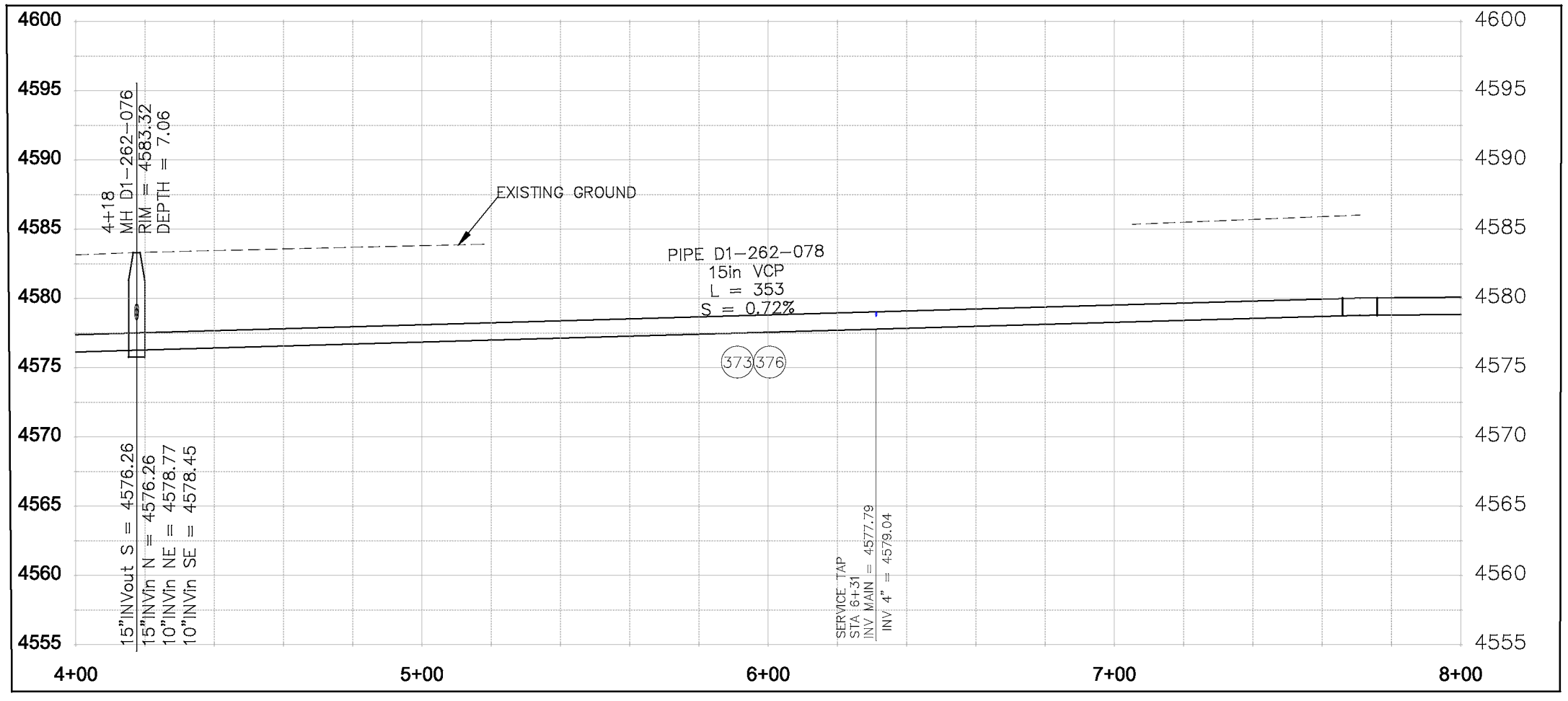
PROJECT NO. _____

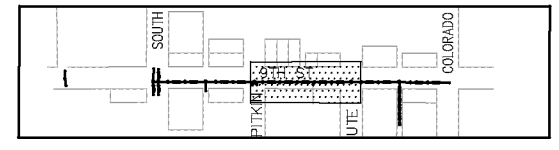
CONSTRUCTION NOTES

(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)







KEYMAP

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY HMC/JCS DATE 2016
DESIGNED BY JJV DATE 2016
CHECKED BY TCP DATE 2016
APPROVED BY HMC/JCS DATE 2016

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
9TH STREET CIPP
STA 4+00 TO STA 8+00

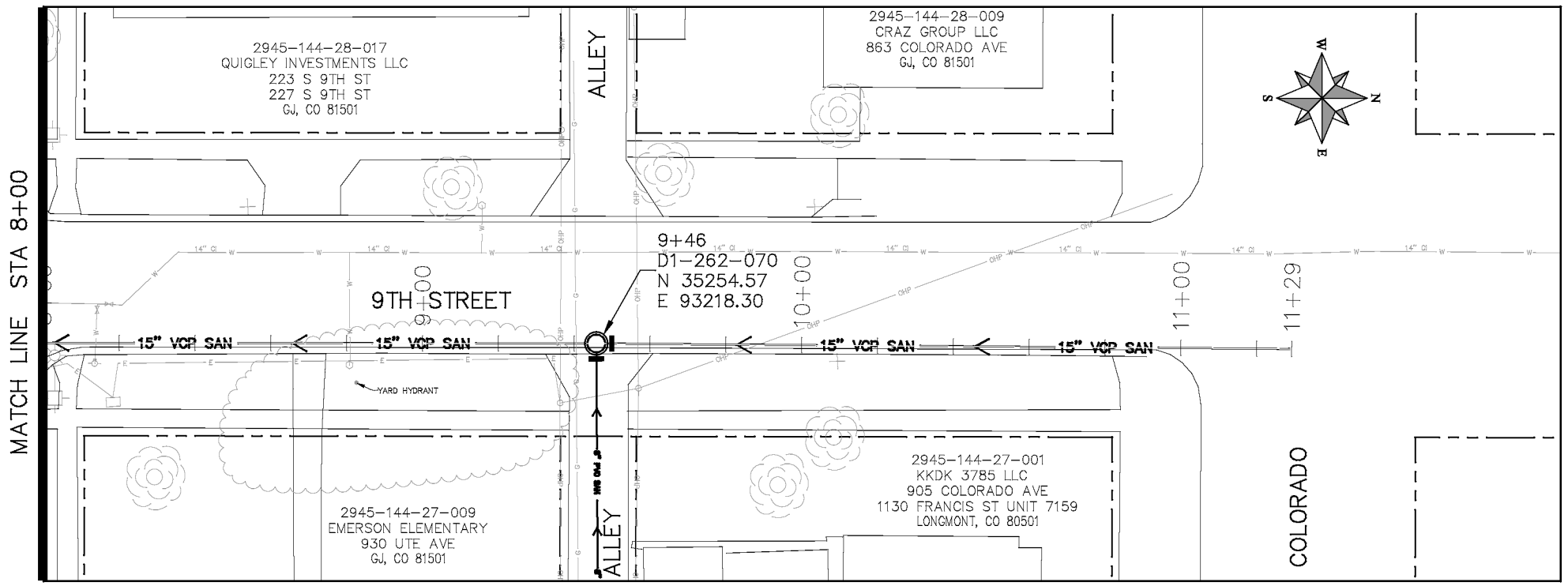
N:\Landproj\2019 Sewer Interceptor Rehabilitations\dwg\28-30_9th Street.dwg, 29, 1/24/2019 2:46:39 PM

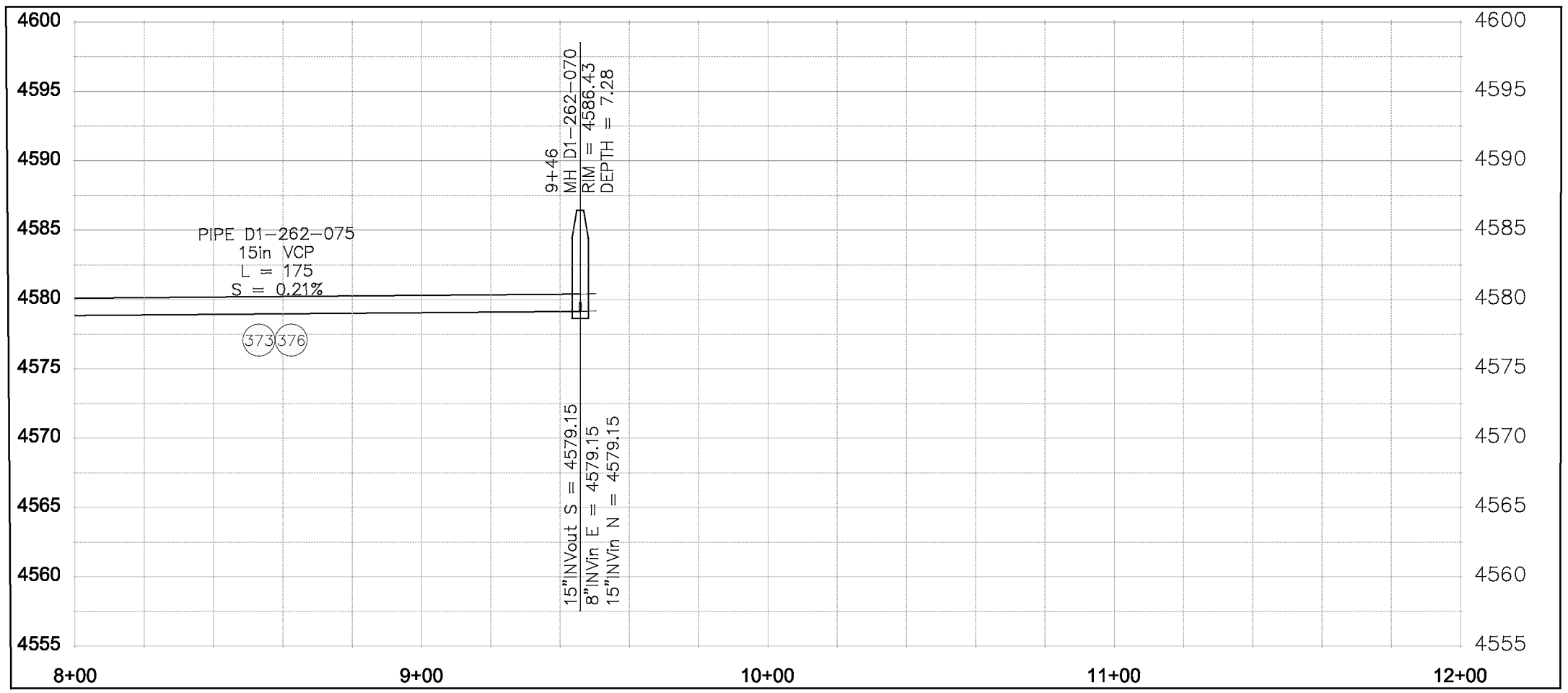
PROJECT NO. _____

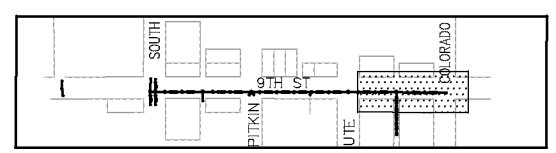
CONSTRUCTION NOTES

(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)







KEYMAP

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY HMC/JCS DATE 2016
DESIGNED BY JJV DATE 2016
CHECKED BY TCP DATE 2016
APPROVED BY HMC/JCS DATE 2016

SCALES: PLAN & PROFILE HORIZONTAL 0 10 20 40 VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
9TH STREET CIPP
STA 8+00 TO STA 12+00

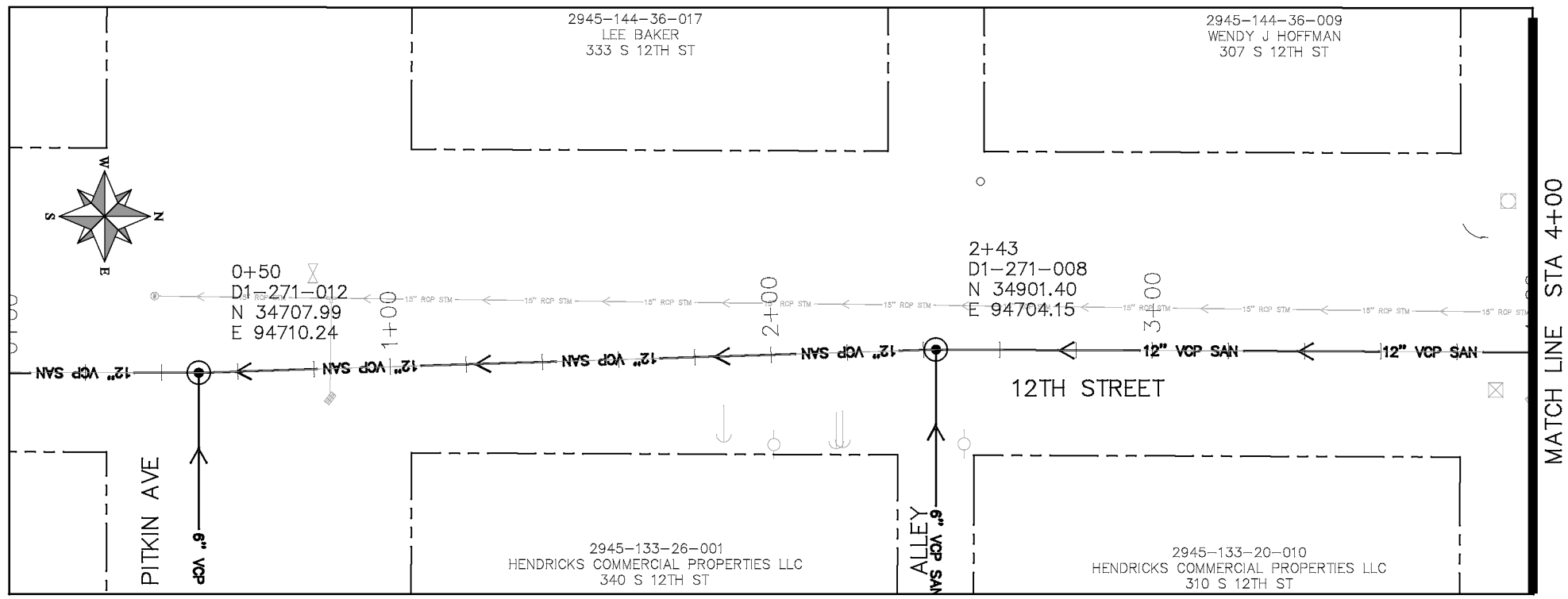
N:\Landpro\2019 Sewer Interceptor Rehabilitations\dwg\28-30_9th Street.dwg, 30, 1/24/2019 2:46:40 PM

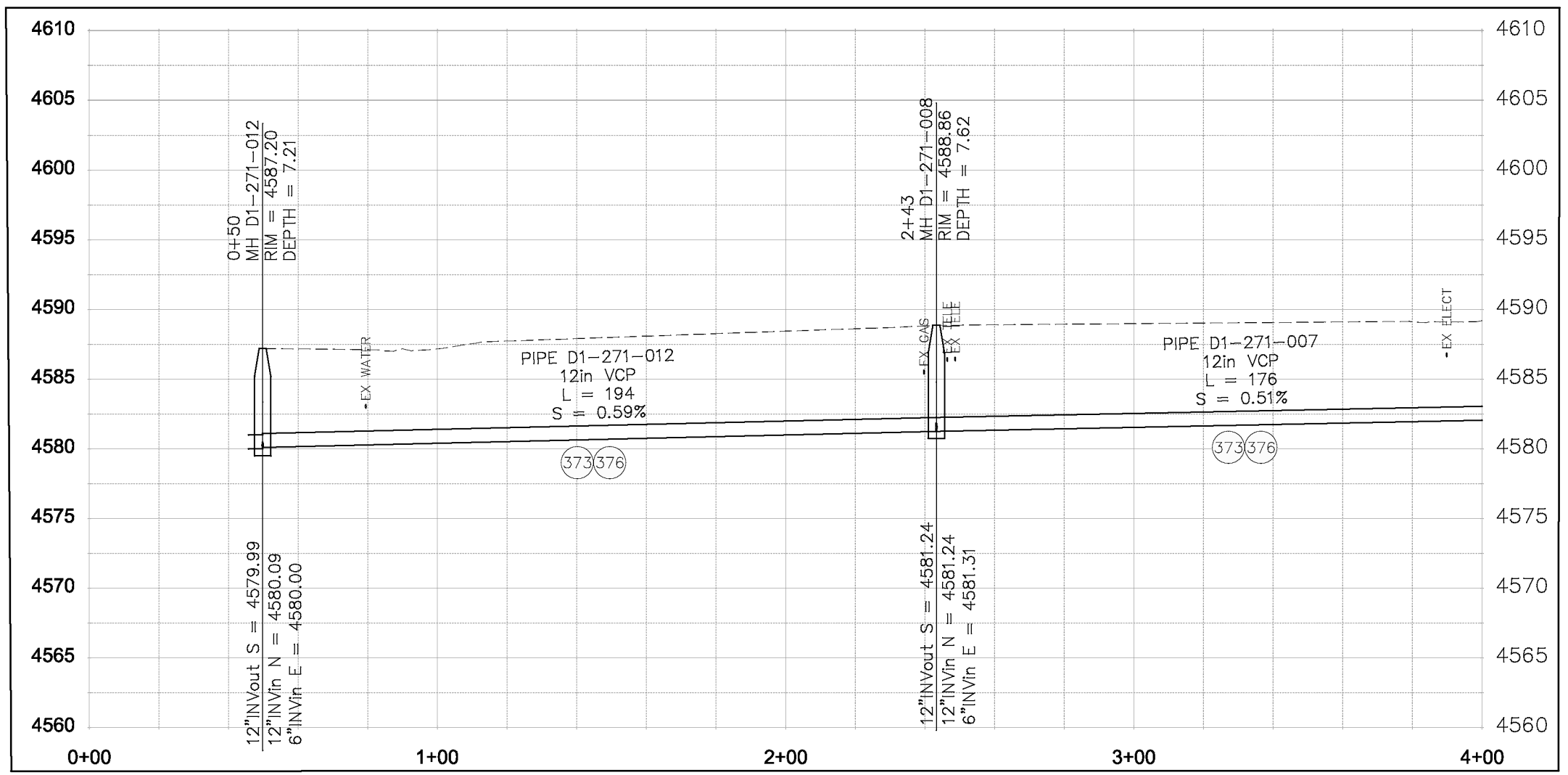
PROJECT NO. _____

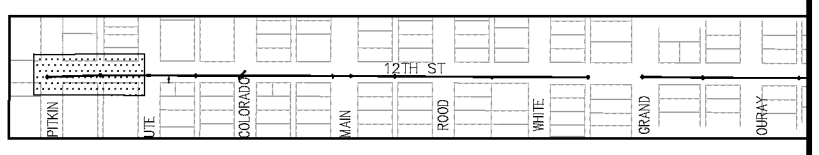
CONSTRUCTION NOTES

(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)







KEYMAP

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY HMC/JCS DATE 2016
DESIGNED BY JJV DATE 2016
CHECKED BY TCP DATE 2016
APPROVED BY HMC/JCS DATE 2016

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

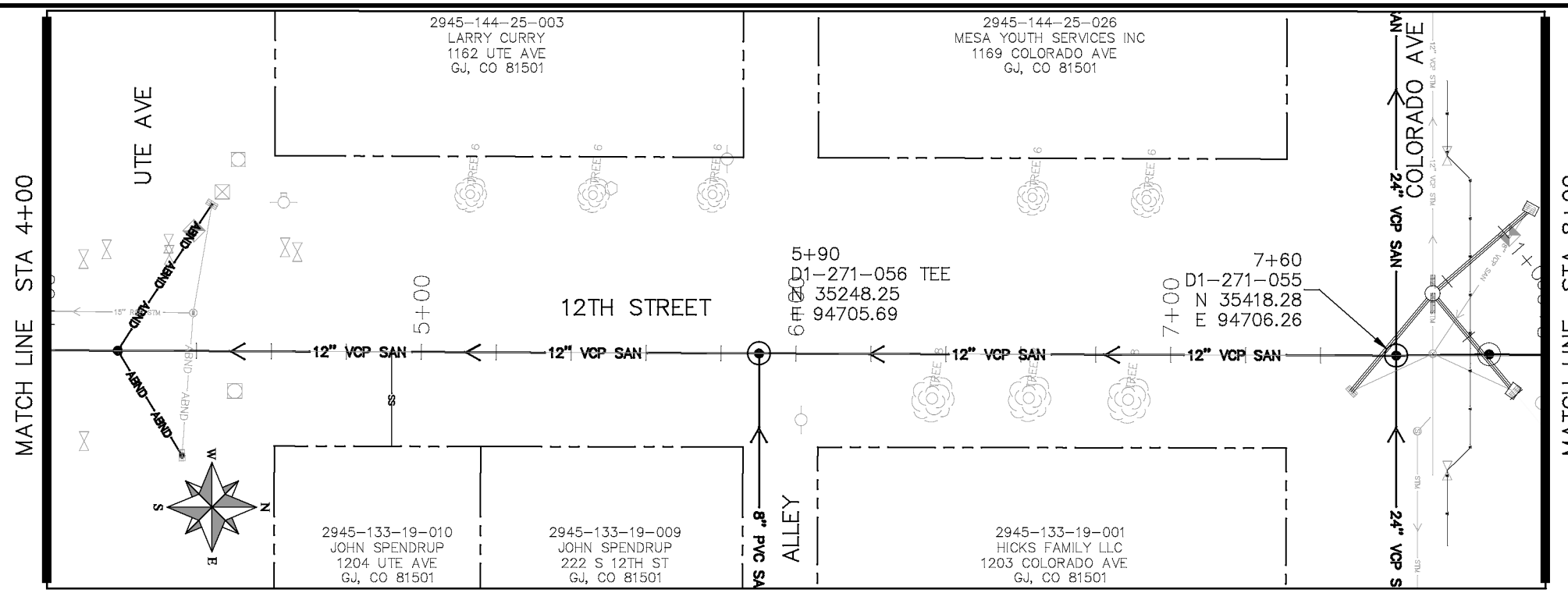
CITY OF Grand Junction COLORADO

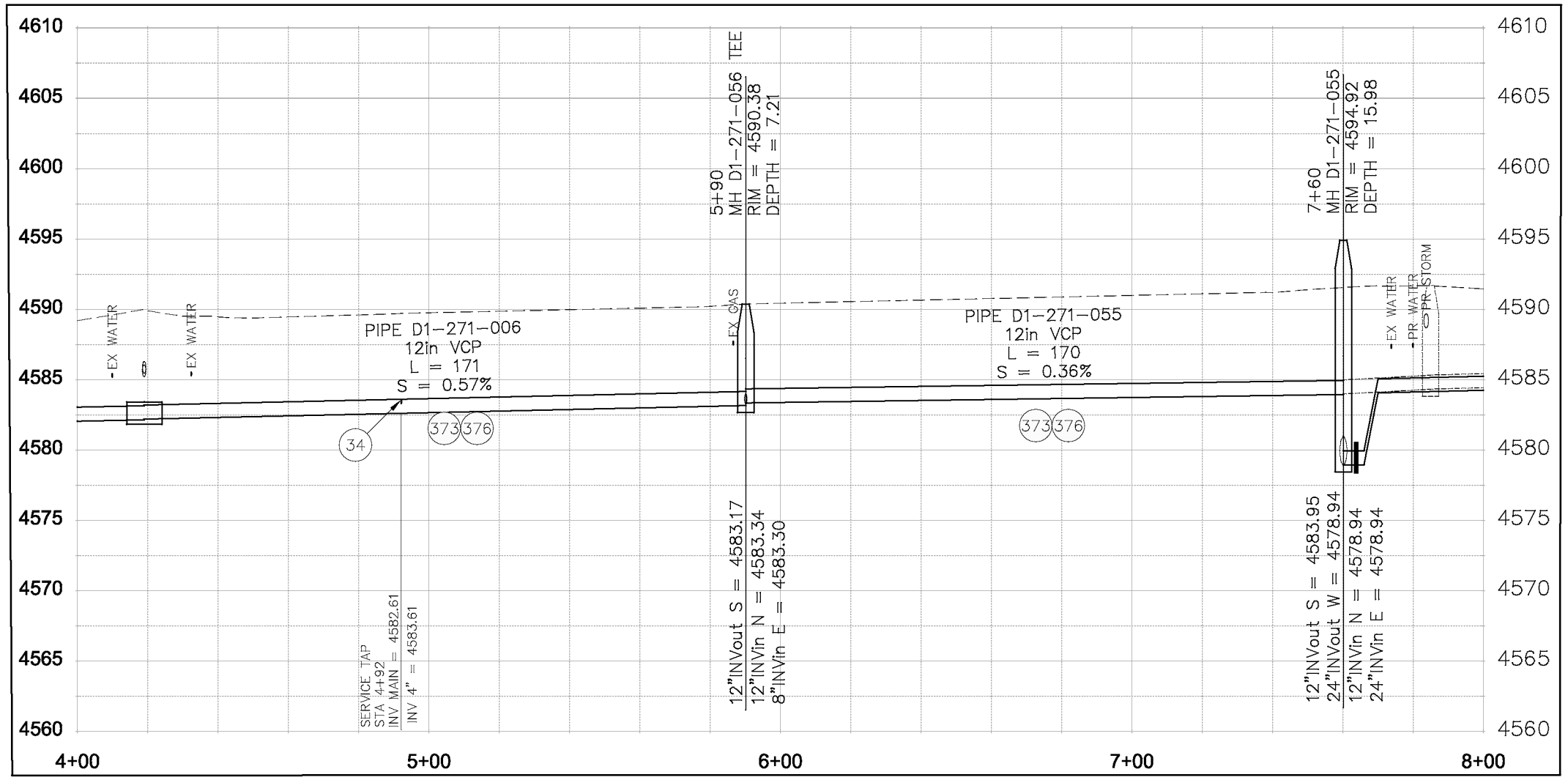
PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
12TH STREET CIPP
STA 0+00 TO STA 4+00

31

N:\Landproj\2019 Sewer Interceptor Rehabilitation\dwg\31-35_12th Street.dwg, 31, 1/24/2019 2:47:09 PM





PROJECT NO. _____

CONSTRUCTION NOTES

(34) REMOVE CIPP COUPON AT SERVICE LOCATION (INCIDENTAL TO CIPP) 252 MANHOLESHALL BE REMOVED. NEW PIPE INSTALLED AND CONNECTIONS BACK TO EXISTING PIPE COMPLETED PRIOR TO CIPP OPERATIONS FOR THIS RUN. CIPP "THROUGH" OLD MANHOLE LOCATION.

(373) 1CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE)

(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)

KEYMAP

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY HMC/JCS DATE 2016
DESIGNED BY JJV DATE 2016
CHECKED BY TCP DATE 2016
APPROVED BY HMC/JCS DATE 2016

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
12TH STREET CIPP
STA 4+00 TO STA 8+00

32

N:\Landproj\2019 Sewer Interceptor Rehabilitations\dwg\31-35_12th Street.dwg, 32, 1/24/2019 2:47:14 PM

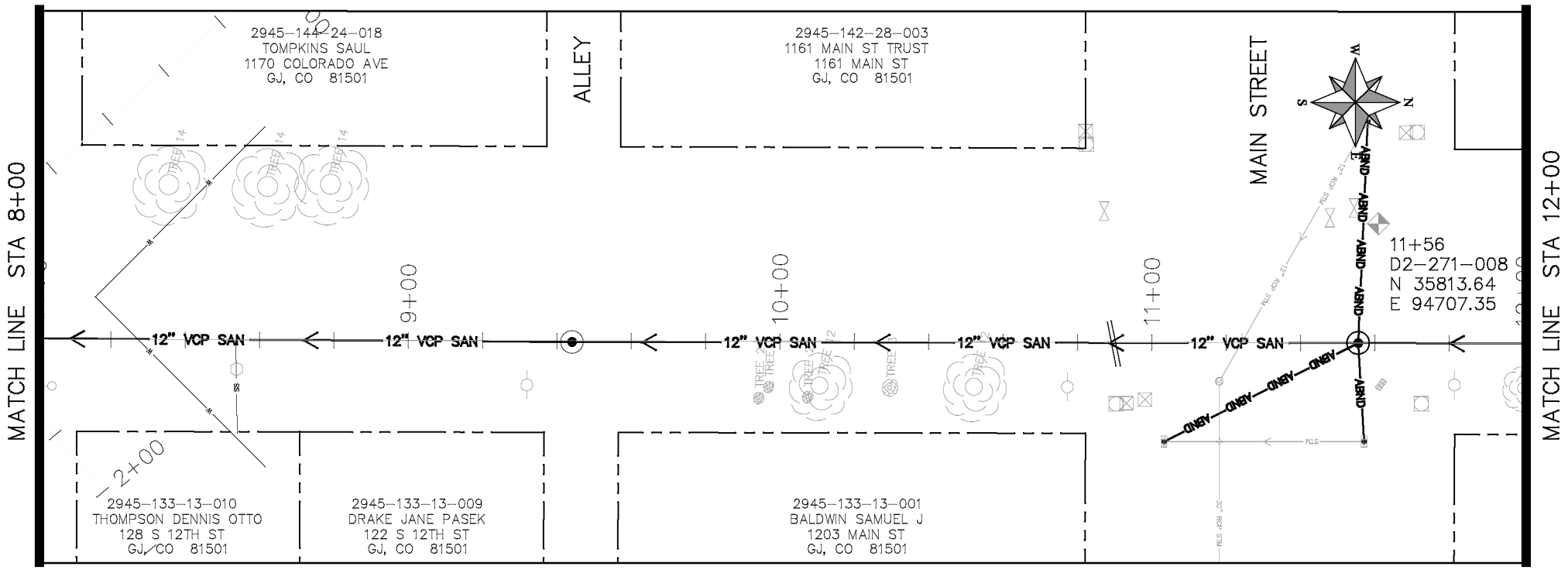
PROJECT NO. _____

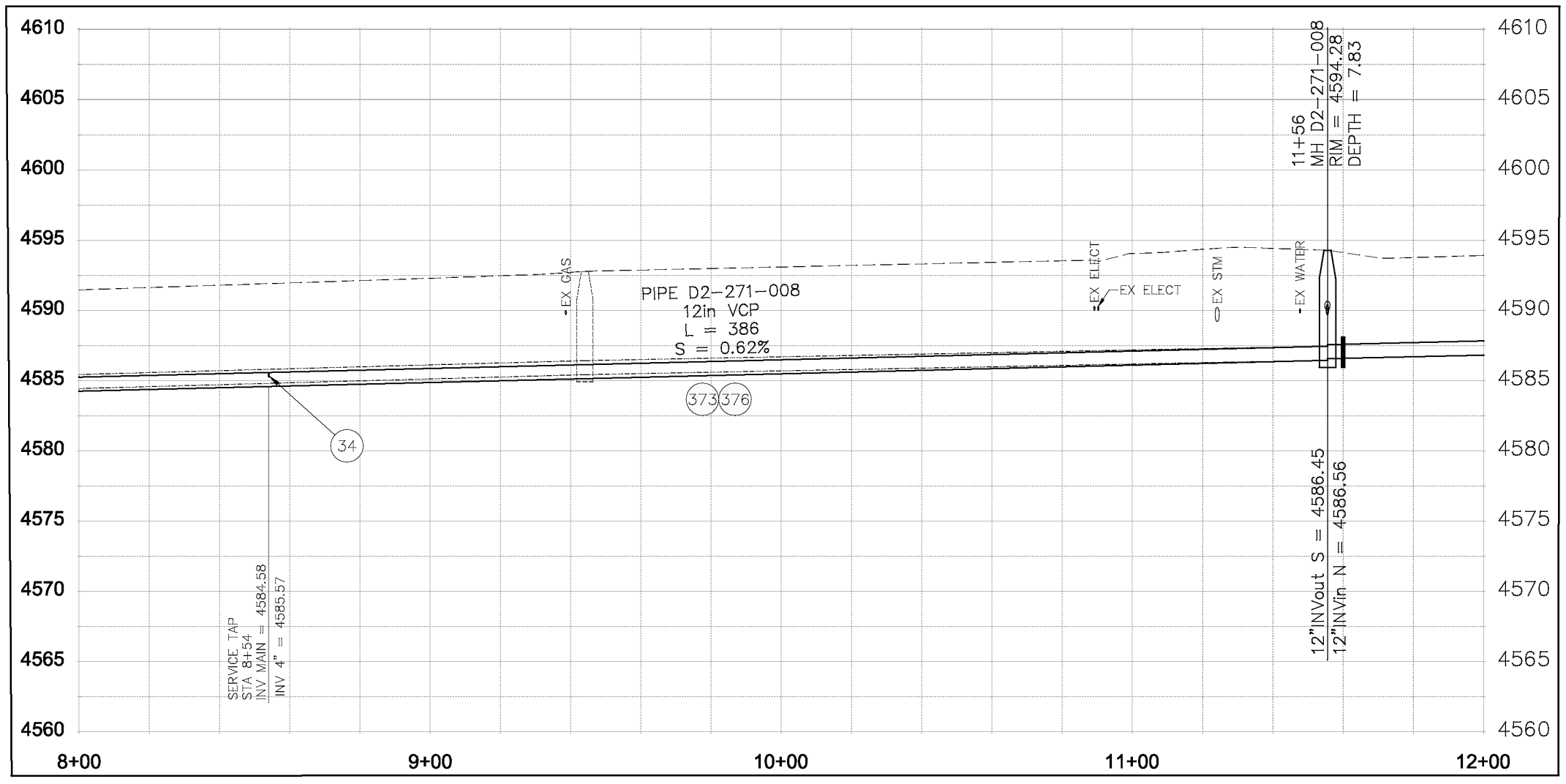
CONSTRUCTION NOTES

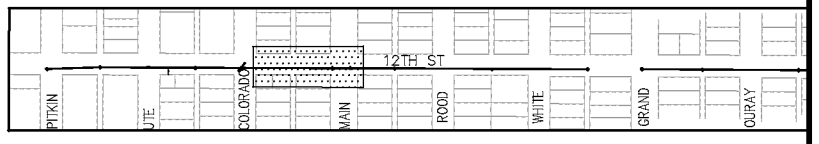
(34) REMOVE CIPP COUPON AT SERVICE LOCATION (INCIDENTAL TO CIPP) 252 MANHOLESHALL BE REMOVED. NEW PIPE INSTALLED AND CONNECTIONS BACK TO EXISTING PIPE COMPLETED PRIOR TO CIPP OPERATIONS FOR THIS RUN. CIPP "THROUGH" OLD MANHOLE LOCATION.

(373) 1CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE)

(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)







KEYMAP

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY HMC/JCS DATE 2016
DESIGNED BY JJV DATE 2016
CHECKED BY TCP DATE 2016
APPROVED BY HMC/JCS DATE 2016

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
12TH STREET CIPP
STA 8+00 TO STA 12+00

33

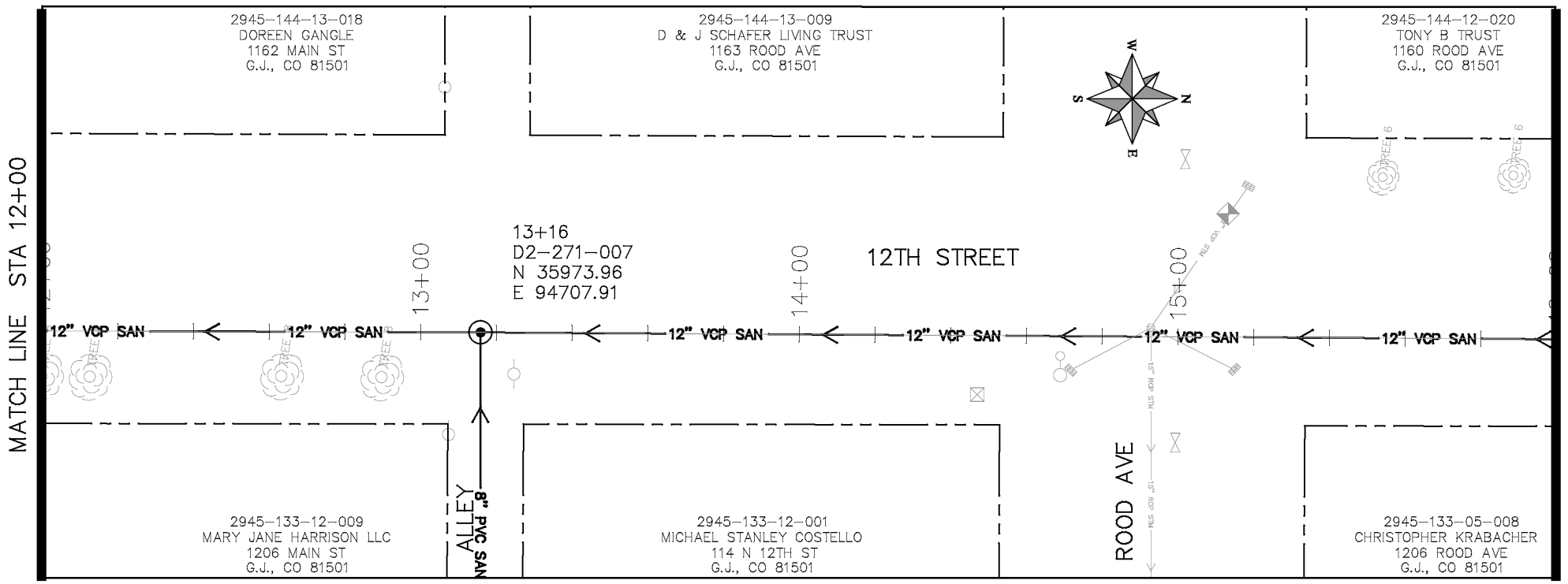
N:\Landproj\2019 Sewer Interceptor Rehabilitations\dwg\31-35_12th Street.dwg, 33, 1/24/2019 2:47:19 PM

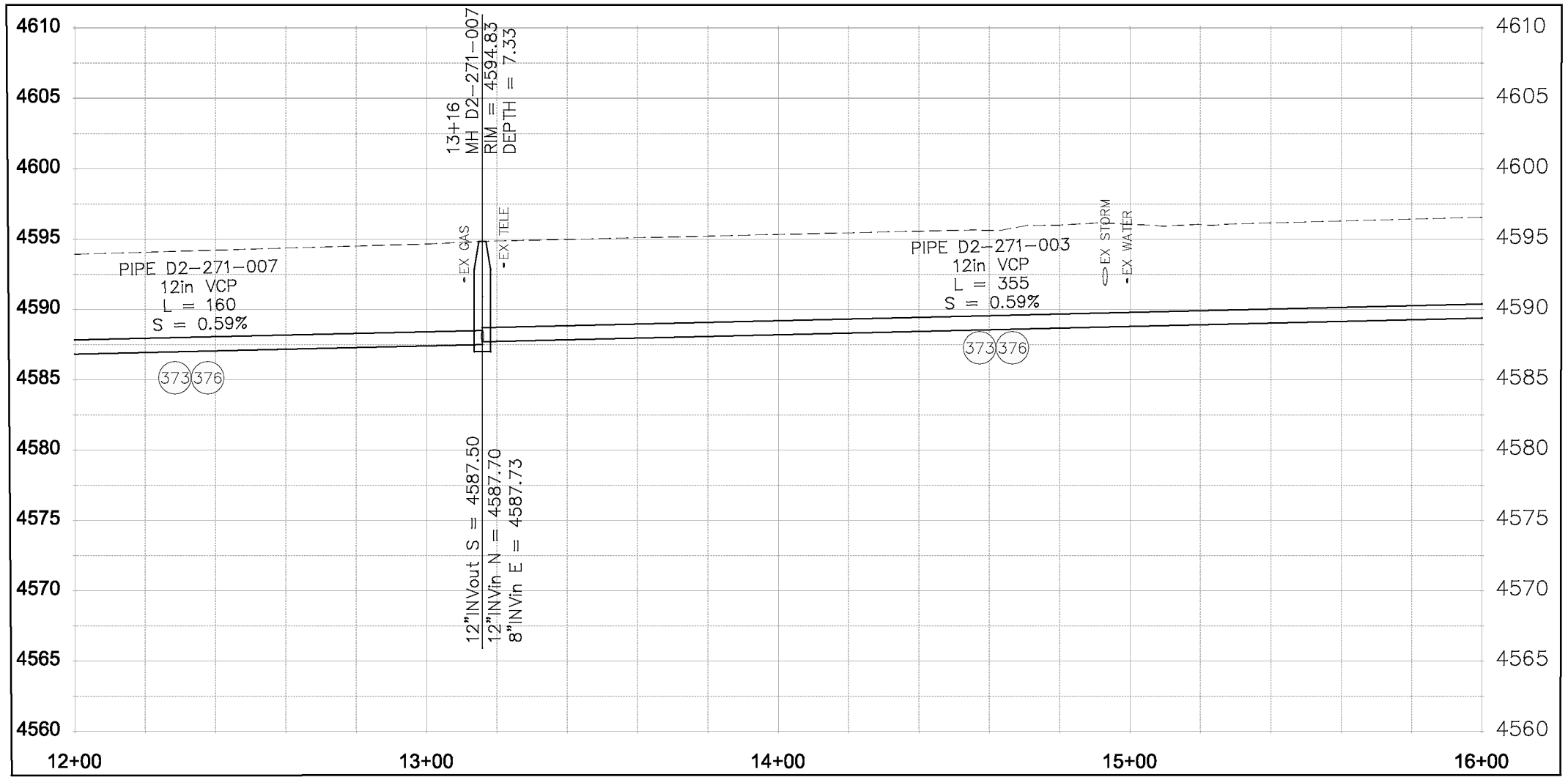
PROJECT NO. _____

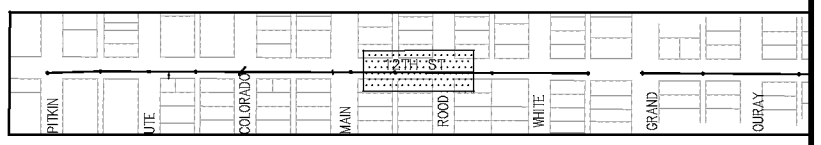
CONSTRUCTION NOTES

(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)







KEYMAP

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY HMC/JCS DATE 2016
DESIGNED BY JJV DATE 2016
CHECKED BY TCP DATE 2016
APPROVED BY HMC/JCS DATE 2016

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
12TH STREET CIPP
STA 12+00 TO STA 16+00

34

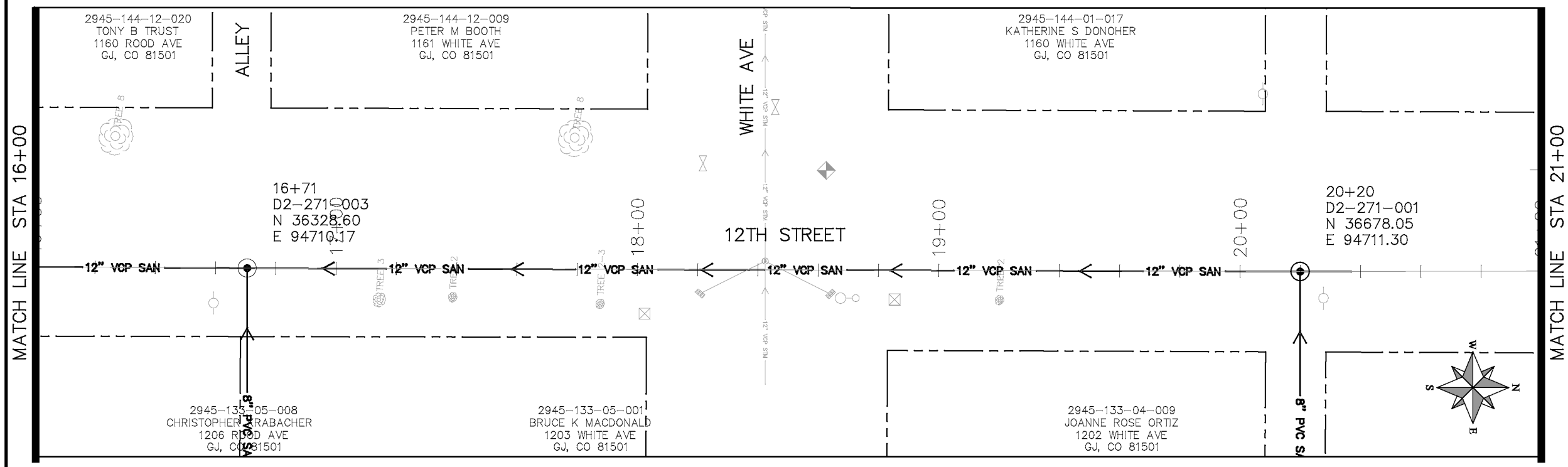
N:\Landproj\2019 Sewer Interceptor Rehabilitations\dwg\31-35_12th Street.dwg, 34, 1/24/2019 2:47:24 PM

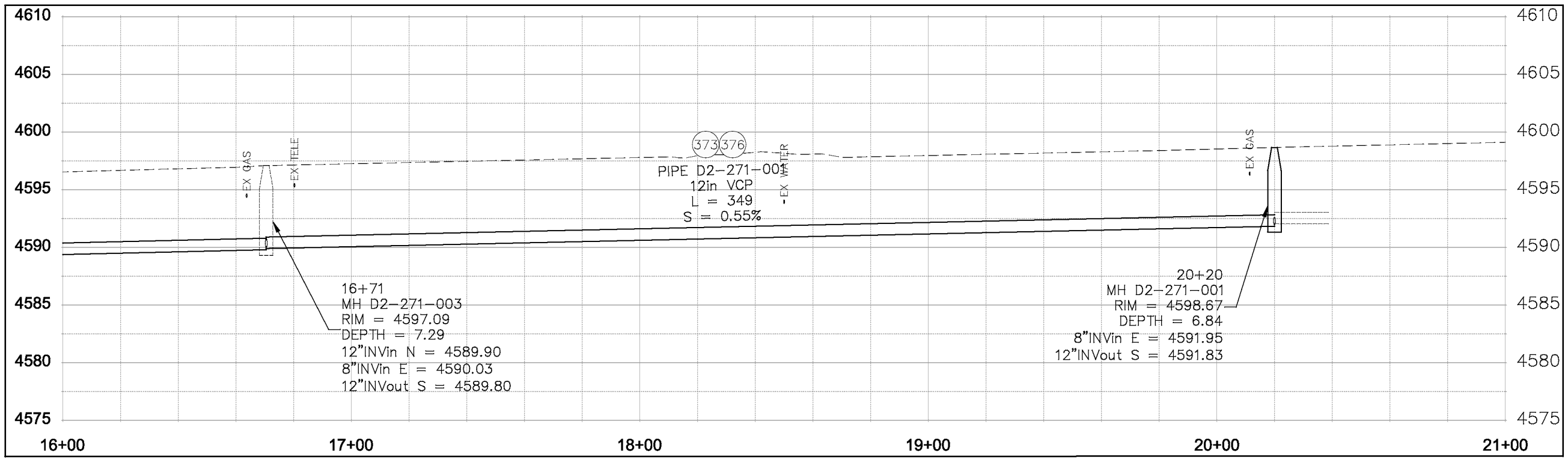
PROJECT NO. _____

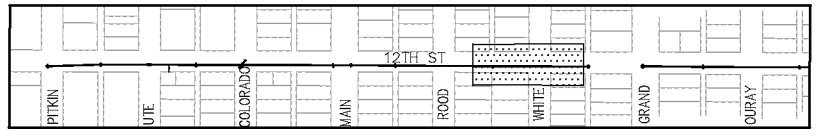
CONSTRUCTION NOTES

(373) CURED IN PLACE SANITARY SEWER PIPE PER PROJECT SPECIFICATIONS. DESIGNED, SUBMITTED, AND STAMPED BY P.E. FIELD VERIFY SIZE/MATERIAL BEFORE ORDERING LINER. DURING NEW PIPE INSTALLATION IT WILL BE NECESSARY TO BYPASS PUMP SEWAGE AROUND WORK TO A DOWNSTREAM MANHOLE. IF NECESSARY PROVIDE TRAFFIC CONTROL IN WORK AREA AND BYPASS AREA. MAINTAIN ACCESS TO ALL BUSINESSES AND RESIDENCES AND TWO WAY TRAFFIC (WHERE APPLICABLE).

(376) REMOVE CIPP COUPON AT SERVICE LOCATIONS (INCIDENTAL TO CIPP)







KEYMAP

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY HMC/JCS DATE 2016
DESIGNED BY JJV DATE 2016
CHECKED BY TCP DATE 2016
APPROVED BY HMC/JCS DATE 2016

SCALES:
PLAN & PROFILE
HORIZONTAL 0 10 20 40
VERTICAL 0 2.5 5 10

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

2019 SEWER INTERCEPTOR REHABILITATIONS
12TH STREET CIPP
STA 16+00 TO STA 21+00

35

N:\Landproj\2019 Sewer Interceptor Rehabilitations\dwg\31-35_12th Street.dwg, 35, 1/24/2019 3:22:21 PM

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 03/28/2019

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).

PRODUCER LIC #0C36861 1-415-403-1491 Alliant Insurance Services, Inc. 100 Pine Street, 11th Floor San Francisco, CA 94111	CONTACT NAME: Kimberly Leikam PHONE (A/C, No, Ext): 415-403-1491 FAX (A/C, No): 415-874-4818 E-MAIL ADDRESS: kleikam@alliant.com
INSURED Granite Inliner, LLC 585 West Beach Street Watsonville, CA 95076	INSURER(S) AFFORDING COVERAGE — NAIC # INSURER A: VALLEY FORGE INS CO — 20508 INSURER B: CONTINENTAL CAS CO — 20443 INSURER C: TRANSPORTATION INS CO — 20494 INSURER D: AGCS MARINE INS CO — 22837 INSURER E: INSURER F:

COVERAGES **CERTIFICATE NUMBER:** 55780135 **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	X COMMERCIAL GENERAL LIABILITY [ ] CLAIMS-MADE [X] OCCUR X XCU X Contractual Liability GEN'L AGGREGATE LIMIT APPLIES PER: [ ] POLICY [X] PRO-JECT [X] LOC [ ] OTHER:	X		GL2074978689	10/01/18	10/01/21	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG $	$ 2,000,000 $ 2,000,000 $ Nil $ 2,000,000 $ 10,000,000 $ 2,000,000 $
A	AUTOMOBILE LIABILITY X ANY AUTO [ ] OWNED AUTOS ONLY [ ] SCHEDULED AUTOS X HIRED AUTOS ONLY [X] NON-OWNED AUTOS ONLY [ ]	X		BUA2074978692	10/01/18	10/01/21	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) $	$ 2,000,000 $ $ $ $
B	X UMBRELLA LIAB [X] OCCUR X EXCESS LIAB [ ] CLAIMS-MADE [ ] DED [ ] RETENTION $			CUE2068209453	10/01/18	10/01/19	EACH OCCURRENCE AGGREGATE $	$ 8,000,000 $ 8,000,000 $
A C C A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y/N ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? [N] (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	N/A		WC274978630 (CA) WC274978661 (MT,WI,HI) WC274978658 (NY) WC274978644 (AOS/StopGap)	10/01/18 10/01/18 10/01/18 10/01/18	10/01/19 10/01/19 10/01/19 10/01/19	[X] PER STATUTE [ ] OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ 2,000,000 $ 2,000,000 $ 2,000,000
D	Owned, Leased/Rented Eqpt			MXI93059745	07/01/18	07/01/20	Limit Per Occurrence	2,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Business Unit: 3235
2019 Sewer Interceptor Repair and Replacements - IFB-4602-19-DH
The City of Grand Junction and its officers, employees, agents, and consultants are included as Additional Insured on the General Liability, Automobile Liability, Excess Liability and Equipment Liability policies as required by written contract subject to policy terms, conditions, and exclusions. Primary and Non-Contributory wording is included on the General Liability, Automobile Liability, Excess Liability and Equipment Liability policies as GL Per ISO Form CG0001 10/01; AL Per ISO Form CA0001 10/13

CERTIFICATE HOLDER

City of Grand Junction

250 North 5th Street

Grand Junction, CO 81501

USA

CANCELLATION

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

SUPPLEMENT TO CERTIFICATE OF INSURANCE

DATE
03/28/2019

NAME OF INSURED: Granite Inliner, LLC

required by written contract. In the event of cancellation by the insurance company(ies), the General Liability, Automobile Liability, Excess Liability, Equipment Liability and Worker's Compensation Liability policies provide thirty (30) days Notice of Cancellation (except for non-payment) to the Certificate Holder.

BLANKET ADDITIONAL INSURED - OWNERS, LESSEES OR CONTRACTORS – WITH PRODUCTS-COMPLETED OPERATIONS COVERAGE

It is understood and agreed that this endorsement amends the **COMMERCIAL GENERAL LIABILITY COVERAGE PART** as follows:

SCHEDULE (OPTIONAL)

Name of Additional Insured Persons Or Organizations
(As required by "written contract" per Paragraph A. below.)

Locations of Covered Operations
(As per the "written contract," provided the location is within the "coverage territory" of this Coverage Part.)

A. **Section II - Who Is An Insured** is amended to include as an additional insured:

1. Any person or organization whom you are required by "written contract" to add as an additional insured on this Coverage Part; and

2. The particular person or organization, if any, scheduled above.

B. The insurance provided to the additional insured is limited as follows:

1. The person or organization is an additional insured only with respect to liability for "bodily injury," "property damage," or "personal and advertising injury" caused in whole or in part by:

a. Your acts or omissions, or the acts or omissions of those acting on your behalf, in the performance of your ongoing operations specified in the "written contract"; or

b. "Your work" that is specified in the "written contract" but only for "bodily injury" or "property damage" included in the "products-completed operations hazard," and only if:

(1) The "written contract" requires you to provide the additional insured such coverage; and

(2) This Coverage Part provides such coverage.

2. If the "written contract" specifically requires you to provide additional insurance coverage via the 10/01 edition of CG2010 (aka CG 20 10 10 01), or via the 10/01 edition of CG2037 (aka CG 20 37 10 01), or via the 11/85 edition of CG2010 (aka CG 20 10 11 85), then in paragraph **B.1.** above, the words 'caused in whole or in part by' are replaced by the words 'arising out of'.

3. We will not provide the additional insured any broader coverage or any higher limit of insurance than:

a. The maximum permitted by law;

b. That required by the "written contract";

c. That described in **B.1.** above; or

d. That afforded to you under this policy,

whichever is less.

4. Notwithstanding anything to the contrary in Condition **4. Other Insurance** (Section **IV**), this insurance is excess of all other insurance available to the additional insured whether on a primary, excess, contingent or

any other basis. But if required by the "written contract" to be primary and non-contributory, this insurance will be primary and non-contributory relative to insurance on which the additional insured is a Named Insured.

5. The insurance provided to the additional insured does not apply to "bodily injury," "property damage," or "personal and advertising injury" arising out of:

   a. The rendering of, or the failure to render, any professional architectural, engineering, or surveying services, including:

      (1) The preparing, approving, or failing to prepare or approve maps, shop drawings, opinions, reports, surveys, field orders, change orders or drawings and specifications; and

      (2) Supervisory, inspection, architectural or engineering activities; or

   b. Any premises or work for which the additional insured is specifically listed as an additional insured on another endorsement attached to this Coverage Part.

C. **SECTION IV – COMMERCIAL GENERAL LIABILITY CONDITIONS** is amended as follows:

1. The **Duties In The Event of Occurrence, Offense, Claim or Suit** condition is amended to add the following additional conditions applicable to the additional insured:

   An additional insured under this endorsement will as soon as practicable:

   (1) Give us written notice of an "occurrence" or an offense which may result in a claim or "suit" under this insurance, and of any claim or "suit" that does result;

   (2) Except as provided in Paragraph **B.4.** of this endorsement, agree to make available any other insurance the additional insured has for a loss we cover under this Coverage Part;

   (3) Send us copies of all legal papers received, and otherwise cooperate with us in the investigation, defense, or settlement of the claim or "suit"; and

   (4) Tender the defense and indemnity of any claim or "suit" to any other insurer or self insurer whose policy or program applies to a loss we cover under this Coverage Part. But if the "written contract" requires this insurance to be primary and non-contributory, this provision **(4)** does not apply to insurance on which the additional insured is a Named Insured.

   We have no duty to defend or indemnify an additional insured under this endorsement until we receive from the additional insured written notice of a claim or "suit."

D. Only for the purpose of the insurance provided by this endorsement, **SECTION V – DEFINITIONS** is amended to add the following definition:

"Written contract" means a written contract or written agreement that requires you to make a person or organization an additional insured on this Coverage Part, provided the contract or agreement:

1. Is currently in effect or becomes effective during the term of this policy; and
2. Was executed prior to:
   a. The "bodily injury" or "property damage"; or
   b. The offense that caused the "personal and advertising injury,"

   for which the additional insured seeks coverage under this Coverage Part.

All other terms and conditions of the Policy remain unchanged.

Material used with permission of ISO Properties, Inc.

ADDITIONAL INSURED – PRIMARY AND NON-CONTRIBUTORY

It is understood and agreed that this endorsement amends the **BUSINESS AUTO COVERAGE FORM** as follows:

SCHEDULE

Name of Additional Insured Persons Or Organizations
Any person or organization whom the named insured is required by written contract to add as an additional insured on this policy.

1. In conformance with paragraph **A.1.c.** of **Who Is An Insured** of Section **II** – LIABILITY COVERAGE, the person or organization scheduled above is an insured under this policy.
2. The insurance afforded to the additional insured under this policy will apply on a primary and non-contributory basis if you have committed it to be so in a written contract or written agreement executed prior to the date of the "accident" for which the additional insured seeks coverage under this policy.

All other terms and conditions of the Policy remain unchanged.

Policy No: BUA2074978692
Endorsement No:
Effective Date: 10/01/2018

Insured Name: Granite Construction Incorporated