"RE-BUILDING THE CITY'S WATER SYSTEMS FOR THE 21ST CENTURY"

Sewerage & Water Board OF NEW ORLEANS

625 ST. JOSEPH STREET
NEW ORLEANS, LA 70165 • 504-529-2837 OR 52-WATER
www.swbno.org

Addendum No. 2

Date: 11/27/2024

Your reference is directed to **Contract Number:** 2024-SWB-100 (Contract 2154) for 24" Waterline Replacement Decatur St. (Dumaine St. – Governor Nicholls St.) St. Peter St. (Chartres St. – Royal St.) which is scheduled to open at **11:30 a.m. CST** on **December 4, 2024** for SWBNO Engineering Department.

This addendum provides for the following:

1) Updated Due Date and Bid Opening
2) Attachments
   a) Attendance (Pages 2-3)
   b) Section 00 73 00.B WIFIA Language (Pages 4-23)
   c) Updated Wage Determination (Pages 24-29)
   d) EDBP Forms (Pages 30-31)
   e) Updated Bid Form (Pages 32-44)
   f) Questions and Responses (Pages 45-56)
   g) Updated Special Provisions 01200 (Pages 57-195)
   h) Updated Summary of Estimated Quantities (Page 196)

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1. Updated Due Date and Bid Opening:

Bids are due on **December 11, 2024, at 11:00 a.m.** Any Bids received after the specified time will be rejected.

Bids will then be publicly opened and read on **December 11, 2024, at 11:30 a.m.** at Sewerage and Water Board of New Orleans, 625 St. Joseph Street, Purchasing Conference Room 131, New Orleans, Louisiana.

The above revisions shall be incorporated in and take precedence over any conflicting part of the original proposal documents. This addendum is hereby officially made a part of the referenced proposal.

This addendum consists of One Hundred and Ninety six (196) pages.

*** END OF ADDENDUM ***

Please write legibly

SEWERAGE & WATER BOARD OF NEW ORLEANS
ATTENDANCE SHEET

PROJECT: Pre-Proposal Meeting: 2024-SWB-100 TM010	MEETING DATE: November 13, 2024. 2:00 P.M.
PLACE/ROOM: Carrollton Water Plant Rm. E202	FACILITATOR: Connor Metcalf, Procurement Analyst

NAME	COMPANY	EMAIL
Connor Metcalf	SWBNO	Cmetcalf@Swbno.org
Stan Bugusky	RNGD	sbugusky@rngd.com
Brian Mathe	Boh Bros	bmathe@bohbros.com
Sean Weick	Cycle Construction	seanw@cycleconstruction.com
Danny Albert	BLD Services LLC	Dalbert@bldllc.net
Austin Wolfson	CMG Pipelines, Inc	Austin@cmgpipelines.com
Tim Morgan	Wallace C Drennan	estimating@wallacecdrennan.com
Constantine F Nicoladis	N-Y Associates	cnicoladis@n-yassociates.com
Fred Mortali	N-Y Associates	fmortali@n-yassociates.com
Joel Galatas	SWBNO	jgalatas@swbno.org
Susan Diehl	SWBNO	sdiehl@swbno.org

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SEWERAGE & WATER BOARD OF NEW ORLEANS
ATTENDANCE SHEET

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NAME	COMPANY	EMAIL
Jazmin Carter	SWBNO	jcarter3@swbno.org
Maxwell Meeker	Hard Rock Construciton	mmeeker@hardrockconstruction.com
Alvin Porter	SWBNO	Aporter@swbno.org
Alexander Faurot	EFTDiversified, Inc	afaurot@eftnola.com
Mary Arceneaux	SWBNO	marceneaux@swbno.org
Twyla Rattler	SWBNO	trattler@swbno.org
Carmelo Gutierrez	CMG Pipelines, Inc	carmelo@cmgpipelines.com
Irma Plummer	SWBNO	Iplummer@swbno.org
Chanelle Collins	SWBNO	ccollins@swbno.org

Section 00 73 00.B

WIFIA REQUIRED CLAUSES FOR CONTRACT DOCUMENTS

The "Specification Package and Bid and Contract Language" packet is a document that includes everything that must be in the specification package as a requirement of the WIFIA program. The package provides all necessary language for WIFIA funded projects.

EPA MAKES NO CLAIMS REGARDING THE LEGALITY OF THE FEDERAL LANGUAGE PROVISIONS WITH RESPECT TO STATE OR LOCAL LAW.

Borrower-Specific Requirements

- Demonstration Cities and Metropolitan Development Act, 42 USC 3301 et seq., as amended and Executive Order 12372, 47 FR 30959, July 16, 1982
- Prohibitions relating to violations of CWA and CAA with respect to Federal contracts, grants, or loans under 42 USC 7606 and 33 USC 1368 and EO 11738, 38 FR 25161, September 12, 1973
- Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, 42 USC 4601 et seq

Economic and Miscellaneous Authorities

Debarment and Suspension, Executive Order 12549, 51 FR 6370, February 21, 1986

Suggested Contract Language: Contractor certifies that it will not knowingly enter into a contract with anyone who is ineligible under the 2 CFR part 180 and part 1532 or who is prohibited under Section 306 of the Clean Air Act or Section 508 of the Clean Water Act to participate in the Project. Suspension and debarment information can be accessed at http://www.sam.gov. Contractor represents and warrants that it has or will include a term or conditions requiring compliance with this provision in all of its subcontracts under this Agreement.

New Restrictions on Lobbying, 31 U.S.C 1352

Suggested Contract Language: FEDERAL LOBBYING RESTRICTIONS. Recipients of federal financial assistance may not pay any person for influencing or attempting to influence any officer or employee of a federal agency, a member of Congress, an officer or employee of Congress, or an employee of a member of Congress with respect to the award, continuation, renewal, amendment, or modification of a federal grant, loan, or contract. These requirements are implemented for USEPA in 40 CFR Part 34, which also describes types of activities, such as legislative liaison activities and professional and technical services, which are not subject to this prohibition. Upon award of this contract, Contractor shall complete and submit to the City the certification and disclosure forms in Appendix A and Appendix B to 40 CFR Part 34. Contractor shall also require all subcontractors and suppliers of any tier awarded a subcontract over $100,000 to similarly complete and submit the certification and disclosure forms pursuant to the process set forth in 40 CFR 34.110.

Civil Rights, Nondiscrimination, EEO Authorities

General Introductory Language

CIVIL RIGHTS OBLIGATIONS. Contractor shall comply with the following federal non- discrimination requirements:

a. Title VI of the Civil Rights Act of 1964, which prohibits discrimination based on race, color, and national origin, including limited English proficiency (LEP). (42 U.S.C 2000D, et. seq)

b. Section 504 of the Rehabilitation Act of 1973, which prohibits discrimination against persons with disabilities. (29 U.S.C. 794, supplemented by EO 11914, 41 FR 17871, April 29, 1976 and EO 11250, 30 FR 13003, October 13, 1965)

c. The Age Discrimination Act of 1975, which prohibits age discrimination. (42 U.S.C 6101 et. seq)

d. Section 13 of the Federal Water Pollution Control Act Amendments of 1972, which prohibits discrimination on the basis of sex.

e. 40 CFR Part 7, as it relates to the foregoing.

Equal Employment Opportunity, (41 CFR Part 60). (EO 11246, 30 FR 12319, September 28, 1965)

*****EEO Required Contract Language. Must be included verbatim. *****

Equal Employment Opportunity Obligations Under EO 11246:

The Contractor shall comply with Executive Order 11246, entitled 'Equal Employment Opportunity,' as amended by Executive Order 11375, and as supplemented in Department of Labor regulations (41 CFR Part 60).

Contractor's compliance with Executive order 11246 shall be based on implementation of the Equal Opportunity Clause, and specific affirmative active obligations required by the Standard Federal Equal Employment Opportunity Construction Contract Specifications, as set forth in 41 CFR Part 60-4.

During the performance of this contract, the contractor agrees as follows:

1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.
2) The contractor will, in all solicitations or advancements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment

without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

3) The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.
4) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the agency contracting officer, advising the labor union or workers' representative of the contractor's commitments under Section 202 of Executive Order No. 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
5) The contractor will comply with all provisions of Executive Order No. 11246 of Sept. 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
6) The contractor will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
7) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be cancelled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order No. 11246 of Sept. 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order No. 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.
8) The contractor will include the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order No. 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as may be directed by the Secretary of Labor as a means of enforcing such provisions including sanctions for noncompliance: Provided, however, that in the event the contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction, the contractor may request the United States to enter into such litigation to protect the interests of the United States. [Sec. 202 amended by EO 11375 of Oct. 13, 1967, 32 FR 14303, 3 CFR, 1966–1970 Comp., p. 684, EO 12086 of Oct. 5, 1978, 43 FR 46501, 3 CFR, 1978 Comp., p. 230, EO 13665 of April 8, 2014, 79 FR 20749, EO 13672 of July 21, 2014, 79 FR 42971]

Standard Federal Equal Employment Opportunity Construction Contract Specifications (41 CFR 60-4.3):

1) As used in these specifications:
   a) "Covered area" means the geographical area described in the solicitation from which this

contract resulted;

b) "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;

c) "Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.

d) "Minority" includes:

i) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);

ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);

iii) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and

iv) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).

2) Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of $10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.

3) If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or Subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or Subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.

4) The Contractor shall implement the specific affirmative action standards provided in paragraphs 7 a through p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered Construction contractors performing construction work in geographical areas where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the Federal Register in notice form, and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.

5) Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.

6) In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during

the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.

7) The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:
   a) Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.
   b) Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.
   c) Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefor, along with whatever additional actions the Contractor may have taken.
   d) Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.
   e) Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under 7b above.
   f) Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.
   g) Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with onsite supervisory personnel such as Superintendents, General

Foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

h) Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.

i) Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

j) Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's work force.

k) Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR part 60-3.

l) Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.

m) Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.

n) Ensure that all facilities and company activities are non-segregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

o) Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.

p) Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.

8) Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7a through p). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7a through p of these Specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.

9) A single goal for minorities and a separate single goal for women have been established. The

Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).

10) The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, sexual orientation, gender identity, or national origin.
11) The Contractor shall not enter into any Subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.
12) The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.
13) The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.
14) The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.
15) Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

Segregated Facilities, 41 CRF 60-1.8

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, sexual orientation, gender identity, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensuring that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. This obligation extends to all contracts containing the equal opportunity clause regardless of the amount of the contract. The term “facilities,” as used in this section, means waiting rooms, work areas, restaurants and other

eating areas, time clocks, restrooms, wash rooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees; Provided, That separate or single-user restrooms and necessary dressing or sleeping areas shall be provided to assure privacy between the sexes.

Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246) located at 41 CFR § 60-4.2:

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Specifications" set forth herein.
2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

Time-tables	**Goals for minority participation for each trade**	**Goals for female participation in each trade**
	Insert goals for each year[2]	6.9%[3]

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and non-federally involved construction.

The Contractor's compliance with the Executive Order and the regulations in 41 CFR part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of $10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.

[2] Goals can be found at: https://www.dol.gov/ofccp/TAguides/TAC_FedContractors_JRF_QA_508c.pdf
[3] Nationwide goal for all covered areas

4. As used in this Notice, and in the contract resulting from this solicitation, the "covered area" is (insert description of the geographical areas where the contract is to be performed giving the state, county and city, if any).

Participation by Disadvantaged Business Enterprises in Procurement under EPA Financial Assistance Agreements, 73 FR 15904

**Note:* The WIFIA program only requires use of the EPA DBE program' six good faith efforts during contract procurement. States may require additional DBE reporting.

Suggested Contract Language:

Disadvantaged Business Enterprises (DBE). The contractor must ensure that the DBE's six good faith efforts are used during the procurement of subcontractors for the (Project). The six good faith efforts are found at: https://ww.epa.gov/grants/disadvantaged-business-enterprise-program-requirements#sixgoodfaithefforts.

American Iron and Steel and Federal Labor Standards

American Iron and Steel (AIS) Requirement

The Contractor acknowledges to and for the benefit of Sewerage and Water Board of New Orleans ("Purchaser") and the United States Environmental Protection Agency ("EPA") that it understands the goods and services under this Agreement are being funded with monies made available by the Water Infrastructure Finance and Innovation Act program of the EPA that has statutory requirements commonly known as "American Iron and Steel" that requires all of the iron and steel products used in the project to be produced in the United States ("American Iron and Steel Requirement") including iron and steel products provided by the Contactor pursuant to this Agreement. The Contractor hereby represents, warrants and covenants to and for the benefit of the Purchaser and the EPA that (a) the Contractor has reviewed and understands the American Iron and Steel Requirement, (b) all of the iron and steel products used in the project will be and/or have been produced in the United States in a manner that complies with the American Iron and Steel Requirement, unless a waiver of the requirement is approved, and (c) the Contractor will provide any further verified information, certification or assurance of compliance with this paragraph, or information necessary to support a waiver of the American Iron and Steel Requirement, as may be requested by the Purchaser or the EPA. Notwithstanding any other provision of this Agreement, any failure to comply with this paragraph by the Contractor shall permit the Purchaser or the EPA to recover as damages against the Contractor any loss, expense, or cost (including without limitation attorney's fees) incurred by the Purchaser or the EPA resulting from any such failure (including without limitation any impairment or loss of funding, whether in whole or in part, from the EPA or any damages owed to the EPA by the Purchaser). While the Contractor has no direct contractual privity with the EPA, as a lender to the Purchaser for the funding of its project, the Purchaser and the Contractor agree that the EPA is a third-party beneficiary and neither this paragraph (nor any other provision of this Agreement necessary to give this paragraph force or effect) shall be amended or waived without the prior written consent of the EPA.

Note that the language below addresses Davis Bacon and Related Acts and incorporates the WIFIA borrower (Sewerage and Water Board of New Orleans) as an authorized representative, in accordance with the WIFIA loan agreement, to ensure compliance with this federal requirement.

***Required** Contract Language.*

Compliance with Davis-Bacon and Related Acts.

(a) In any contract in excess of $2,000 which is entered into for the actual construction, alteration and/or repair, including painting and decorating, of a public building or public work, or building or work financed in whole or in part from Federal funds or in accordance with guarantees of a Federal agency or financed from funds obtained by pledge of any contract of a Federal agency to make a loan, grant or annual contribution (except where a different meaning is expressly indicated), and which is subject to the labor standards provisions of any of the acts listed in 29 C.F.R. § 5.1, the following clauses (or any modifications thereof to meet the particular needs of the agency, provided that such modifications are first approved by the Department of Labor):

(1) Minimum wages.

(i) All laborers and mechanics employed or working upon the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (a)(1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in § 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and

wage rates conformed under paragraph (a)(1)(ii) of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

(ii)

(A) The WIFIA assistance recipient, [*Sewerage and Water Board of New Orleans*], on behalf of the U.S. Environmental Protection Agency (EPA), shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The WIFIA assistance recipient shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(2) The classification is utilized in the area by the construction industry; and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(B) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the WIFIA assistance recipient agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent to the Administrator of the Wage and Hour Division (WHD Administrator), U.S. Department of Labor, Washington, DC 20210. The WHD Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the WIFIA assistance recipient or will notify the WIFIA assistance recipient within the 30- day period that additional time is necessary.

(C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the WIFIA assistance recipient do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the WIFIA assistance recipient shall refer the questions, including the views of all interested parties and the recommendation of the WIFIA assistance recipient, to the WHD Administrator for determination. The WHD Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the WIFIA assistance recipient or will notify the WIFIA assistance recipient within the 30-day period that additional time is necessary.

(D) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(ii) (B) or (C) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of

or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

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

(2) Withholding. [*Sewerage and Water Board of New Orleans*], shall upon written request of the WIFIA Director or an authorized representative of the Department of Labor withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), all or part of the wages required by the contract, the WIFIA Director may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

(3) Payrolls and basic records.

(i) Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work (or under the United States Housing Act of 1937, or under the Housing Act of 1949, in the construction or development of the project). Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in

providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(ii) {no text here}

(A) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to [*Sewerage and Water Board of New Orleans*] . The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at http://www.dol.gov/esa/whd/forms/wh347instr.htm or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to [*Sewerage and Water Board of New Orleans*], for transmission to the EPA, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to[*Sewerage and Water Board of New Orleans*]).

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

(1) That the payroll for the payroll period contains the information required to be provided under § 5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under § 5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

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

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

(C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (a)(3)(ii)(B) of this section.

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

(iii) The contractor or subcontractor shall make the records required under paragraph (a)(3)(i) of this section available for inspection, copying, or transcription by authorized representatives of *Sewerage and Water Board of New Orleans*, EPA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the EPA may, after written notice to the [*Sewerage and Water Board of New Orleans*], take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

(4) Apprentices and trainees –

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

other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the WHD Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

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

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

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

(6) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (10) and such other clauses as the EPA may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

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

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

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

(10) Certification of eligibility.

(i) By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

(b) Contract Work Hours and Safety Standards Act. The following clauses set forth in paragraphs (b)(1), (2), (3), and (4) of this section shall be inserted in full in any contract in an amount in excess of
$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by § 5.5(a) or § 4.6 of part 4 of this title. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

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

one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

(2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (b)(1) of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (b)(1) of this section, in the sum of $25 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (b)(1) of this section.

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

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

(c) In addition to the clauses contained in paragraph (b), in any contract subject only to the Contract Work Hours and Safety Standards Act and not to any of the other statutes cited in § 5.1, the contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the contract for all laborers and mechanics, including guards and watchmen, working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. Further, the EPA shall cause or require the *Sewerage and Water Board of New Orleans*] to insert in any such contract a clause providing that the records to be maintained under this paragraph shall be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the [*Sewerage and Water Board of New Orleans*], EPA and the Department of Labor, and the contractor or subcontractor will permit such representatives to interview employees during working hours on the job.

END OF SECTION

LATEST UPDATES ON FEDERAL REQUIREMENTS

BUILD AMERICA, BUY AMERICA ACT

Other language may be included on contracts for clarity on this federal requirement if an applicable waiver applies. For example, if the WIFIA program has determined program waiver coverage, indicate in contract documents, "This Project is covered under the WIFIA Program Waiver (June 22, 2022), which waives BABA requirements."

Suggested Contract Language:

Build America, Buy America (Effective May 14, 2022)
The Contractor acknowledges to and for the benefit of ("Purchaser") and the United States Environmental Protection Agency ("EPA") that it understands the goods and services under this Agreement are being funded with federal monies made available by the Water Infrastructure Finance and Innovation Act program of EPA that have statutory requirements commonly known as "Build America, Buy America;" that requires all of the iron and steel, manufactured products, and construction materials used in the project to be produced in the United States ("Build America, Buy America Requirements") including iron and steel, manufactured products, and construction materials provided by the Contactor pursuant to this Agreement. The Contractor hereby represents and warrants to and for the benefit of the Purchaser and Funding Authority (a) the Contractor has reviewed and understands the Build America, Buy America Requirements, (b) all of the iron and steel, manufactured products, and construction materials used in the project will be and/or have been produced in the United States in a manner that complies with the Build America, Buy America Requirements, unless a waiver of the requirements is approved, and (c) the Contractor will provide any further verified information, certification or assurance of compliance with this paragraph, or information necessary to support a waiver of the Build America, Buy America Requirements, as may be requested by the Purchaser or the Funding Authority. Notwithstanding any other provision of this Agreement, any failure to comply with this paragraph by the Contractor shall permit the Purchaser or Funding Authority to recover as damages against the Contractor any loss, expense, or cost (including without limitation attorney's fees) incurred by the Purchaser or Funding Authority resulting from any such failure (including without limitation any impairment or loss of funding, whether in whole or in part, from the Funding Authority or any damages owed to the Funding Authority by the Owner). If the Contractor has no direct contractual privity with the Funding Authority, as a lender or awardee to the Purchaser for the funding of its project, the Purchaser and the Contractor agree that the Funding Authority is a third-party beneficiary and neither this paragraph (nor any other provision of this Agreement necessary to give this paragraph force or effect) shall be amended or waived without the prior written consent of the Funding Authority.

PROHIBITION ON CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT

Suggested Contract Language:
Prohibition on Certain Telecommunications and Video Surveillance Services or Equipment (Effective August 13, 2020). The John S. McCain National Defense Authorization Act for Fiscal Year 2019 (P.L. 115- 232), at Section 889, prohibits EPA financial assistance recipients, including WIFIA borrowers, from expending loan funds to procure or obtain; extend or renew a contract to procure or obtain; or enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that use covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in the Act, "covered telecommunications equipment or services" means:

a) Telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).
b) For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).
c) Telecommunications or video surveillance services provided by such entities or using such equipment.
d) Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.

The Act does not prohibit:

a) Procuring with an entity to provide a service that connects to the facilities of a third-party, such as backhaul, roaming, or interconnection arrangements.
b) Telecommunications equipment that cannot route or redirect user data traffic or permit visibility into any user data or packets that such equipment transmits or otherwise handles.

END OF SECTION

"General Decision Number: LA20240005 11/22/2024

Superseded General Decision Number: LA20230005

State: Louisiana

Construction Type: Heavy

Counties: Jefferson, Orleans, Plaquemines, St Bernard, St Charles, St James, St John the Baptist and St Tammany Counties in Louisiana.

HEAVY CONSTRUCTION PROJECTS (Includes flood control, water & sewer lines, and water wells. Also includes elevated storage tanks in all listed parishes except Plaquemines and St. James. Excludes industrial construction-chemical processing, power plants, and refineries.)

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:	. Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least $17.20 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2024.
If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:	. Executive Order 13658 generally applies to the contract. . The contractor must pay all covered workers at least $12.90 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2024.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at http://www.dol.gov/whd/govcontracts.

Modification Number Publication Date

0	01/05/2024
1	06/14/2024
2	11/22/2024

CARP0729-001 01/01/2023

	Rates	Fringes
MILLWRIGHT	$ 36.00	13.30

CARP1846-006 07/01/2022

	Rates	Fringes
CARPENTER (formbuilding/formsetting and Piledrivers)	$ 29.09	10.27

ELEC0130-005 12/04/2023

JEFFERSON, ORLEANS, PLAQUEMINES, ST. BERNARD, ST. CHARLES, ST. JAMES, AND ST. JOHN THE BAPTIST PARISHES

	Rates	Fringes
ELECTRICIAN (including low voltage wiring)	$ 34.00	15.20

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* ELEC1077-002 05/27/2024

ST. TAMMANY PARISH

	Rates	Fringes
ELECTRICIAN (including low voltage wiring)	$ 28.75	3%+11.55

ENGI0406-018 07/01/2009

	Rates	Fringes
OPERATOR: Power Equipment		
Bulldozer	$ 21.26	6.70
Mechanic	$ 23.31	6.70

PLAS0567-003 08/01/2022

JEFFERSON, ORLEANS, PLAQUEMINES, ST. BERNARD, ST. CHARLES, ST. JOHN THE BAPTIST, and ST. TAMMANY PARISHES

	Rates	Fringes
Cement Mason/Concrete Finisher	$ 30.47	7.97

PLAS0812-003 01/01/2022

ST. JAMES PARISH

	Rates	Fringes
Cement Mason/Concrete Finisher	$ 31.83	5.90

PLUM0060-002 06/05/2023

JEFFERSON, ORLEANS, PLAQUEMINES, ST. BERNARD, ST. CHARLES, ST. JAMES (Southeastern Portion), ST. JOHN THE BAPTIST, and ST.

TAMMANY PARISHES

	Rates	Fringes
Plumbers (excluding pipe laying)	$ 31.70	13.85

PLUM0198-005 12/08/2022

ST. JAMES PARISH (Northwestern Portion)

	Rates	Fringes
PLUMBER (excluding pipe laying)	$ 32.42	16.50

* SULA2004-007 05/13/2004

	Rates	Fringes
CARPENTER (all other work)	$ 13.75 **	2.60
Laborers:		
Common/Landscape	$ 9.88 **	0.00
Fence	$ 11.24 **	0.00
Flagger	$ 8.58 **	0.00
Mason Tender	$ 7.25 **	0.00
Pipelayer	$ 9.84 **	0.00
PIPEFITTER (excluding pipelaying)	$ 17.52	4.51
Power equipment operators:		
Backhoe/Excavator	$ 14.42 **	0.00
Crane	$ 16.34 **	3.30
Dragline	$ 16.50 **	0.00
Front End Loader	$ 13.89 **	0.00
Oiler	$ 10.03 **	0.00
Truck drivers:		
Dump	$ 11.01 **	0.00
Pickup	$ 12.25 **	0.00

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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** Workers in this classification may be entitled to a higher minimum wage under Executive Order 14026 ($17.20) or 13658 ($12.90). Please see the Note at the top of the wage determination for more information. Please also note that the minimum wage requirements of Executive Order 14026 are not currently being enforced as to any contract or subcontract to which the states of Texas, Louisiana, or Mississippi, including their agencies, are a party.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including

preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at https://www.dol.gov/agencies/whd/government-contracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (iii)).

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

Union Rate Identifiers

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

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

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

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

State Adopted Rate Identifiers

Classifications listed under the ""SA"" identifier indicate that the prevailing wage rate set by a state (or local) government was adopted under 29 C.F.R §1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 01/03/2024 reflects the date on which the classifications and rates under the ?SA? identifier took effect under state law in the state from which the rates were adopted.

WAGE DETERMINATION APPEALS PROCESS

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

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

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

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

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

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

Wage and Hour Administrator
U.S. Department of Labor

200 Constitution Avenue, N.W.
Washington, DC 20210

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

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

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

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

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END OF GENERAL DECISION"

ECONOMICALLY DISADVANTAGED BUSINESS PARTICIPATION SUMMARY SHEET

Minimum Percentage Goal Participation for this Contract is 36 %

Contract Name and Number # 2024-SWB-100 TM010 Contract 2154 24" Waterline Replacement

Name and Address of Disadvantaged Business Enterprise Company	Name of Contact Person	Scope of Work to be Performed	Dollar Amount of work to be performed	Percentage of Dollar Amount to Total Bid Price

THIS FORM MUST BE COMPLETED AND SUBMITTED AT THE TIME OF BID/PROPOSAL SUBMISSION. FAILURE TO SUBMIT A COMPLETED FORM WILL RENDER THE BID/PROPOSAL NON-RESPONSIVE.

NOTE: Signature required even if judged **NOT APPLICABLE** by the **BIDDER**

Prime Representative Name: _____

Prime Signature: _____

Prime Company's Name: _____

Date: _____

Prime Address: _____

E-mail: _____

_____

Telephone Number: _____

Revised October 30, 2024

ACKNOWLEDGEMENT

PRIME CONTRACTOR AND DBE SUBCONTRACTOR

Solicitation: _____

This form acknowledges that the

Prime _____

and

DBE Subcontractor _____ Certification: ☐ SLDBE or ☐ LAUCP

have agreed to the following terms of service:

Scope of Work:

Please note: Scope of work should describe the agreed upon terms between the Prime and DBE.

DBE Percentage of Total Contract: _____

Dollar Amount of DBE Work: $_____

By signing this acknowledgement, the Prime Contractor and DBE Subcontractor affirm that it will perform the Scope of Work for the estimated total dollar value stated. Both parties hereby certify that the information contained herein is true and correct.

FAILURE TO SUBMIT THIS FORM COMPLETED WITH SIGNATURES WILL RENDER BID/PROPOSAL NON-RESPONSIVE.

PRIME CONTRACTOR:

Printed Name: _____

Signature: _____

Date: _____

DBE SUBCONTRACTOR:

Printed Name: _____

Signature: _____

Date: _____

LOUISIANA UNIFORM PUBLIC WORK BID FORM
UNIT PRICE FORM

TO: Sewerage and Water Board of New Orleans
Purchasing Department, Room 133
625 St. Joseph Street
New Orleans, LA 70165

BID FOR: Contract No. 2154
24" WATERLINE REPLACEMENT
DECATUR ST. (DUMAINE ST. – GOVERNOR NICHOLLS ST.)
ST. PETER ST. (CHARTRES ST. – ROYAL ST.)

NAME OF BIDDER: _____

UNIT PRICES: This form shall be used for any and all work required by the Bidding Documents and described as unit prices. Amounts shall be stated in figures and only in figures.

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		REMOVAL AND DISPOSAL OF EXISTING PORTLAND CEMENT CONCRETE PAVEMENT (COMPOSITE)	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C202(52)(C)	5427.0	SY		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		REMOVAL AND DISPOSAL OF EXISTING SIDEWALK, DRIVEWAY, FOOT LAP (CONCRETE, BRICK, ASPHALT, ETC.)	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C202(52)(D)	760.0	SY		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		REMOVAL AND DISPOSAL OF EXISTING CURB AND GUTTER BOTTOM	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C202(52)(F)	2525.0	LF		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		SAW CUT CONCRETE CURB, PAVEMENT, SIDEWALK, ETC.	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C202(55)	70.0	LF		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		ROADWAY EXCAVATION	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C203(51)	1222.0	CY		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		UNSUITABLE SUBGRADE EXCAVATION AND SAND FILLING	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C203(58)	150.0	CY		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		GEOTEXTILE FABRIC FOR STABILIZATION	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C203(59)	5885.0	SY		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		GEOGRID	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C203(60)	5570.0	SY		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		BASE COURSE	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C302(51)	1268.0	CY		

LOUISIANA UNIFORM PUBLIC WORK BID FORM
UNIT PRICE FORM

TO: Sewerage and Water Board of New Orleans
Purchasing Department, Room 133
625 St. Joseph Street
New Orleans, LA 70165

BID FOR: Contract No. 2154
24" WATERLINE REPLACEMENT
DECATUR ST. (DUMAINE ST. – GOVERNOR NICHOLLS ST.)
ST. PETER ST. (CHARTRES ST. – ROYAL ST.)

NAME OF BIDDER: _____

UNIT PRICES: This form shall be used for any and all work required by the Bidding Documents and described as unit prices. Amounts shall be stated in figures and only in figures.

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		TRAFFIC MAINTENANCE AGGREGATE	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C402(51)	170.0	CY		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		APHALTIC CONCRETE (2" THICK)	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C501(53)	6117.0	SY		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		REINFORCED CONCRETE PAVEMENT (7" THICK)	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C601(54)	6117.0	SY		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		REINFORCED CONCRETE PIPE (15") (CLASS IV)	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C701(53)(F)	1500	LF		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		REINFORCED CONCRETE PIPE (18") (CLASS IV)	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C701(53)(G)	100	LF		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		REINFORCED CONCRETE PIPE (12") CLASS IV	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C701(53)E	20	LF		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		REINFORCED CONCRETE WYE (15") CLASS IV	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C701(59)	8	E		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		COLLECTOR LINE TO CATCH BASINS FOR DRAIN HOUSE CONNECTIONS (8")	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C701(72)	40	LF		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		NO. 1 STANDARD DRAIN MANHOLE	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C702(52)(J)	64	FTHT		

LOUISIANA UNIFORM PUBLIC WORK BID FORM
UNIT PRICE FORM

TO: Sewerage and Water Board of New Orleans
Purchasing Department, Room 133
625 St. Joseph Street
New Orleans, LA 70165

BID FOR: Contract No. 2154
24" WATERLINE REPLACEMENT
DECATUR ST. (DUMAINE ST. – GOVERNOR NICHOLLS ST.)
ST. PETER ST. (CHARTRES ST. – ROYAL ST.)

NAME OF BIDDER: _____

UNIT PRICES: This form shall be used for any and all work required by the Bidding Documents and described as unit prices. Amounts shall be stated in figures and only in figures.

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		NO. 1 STANDARD CATCH BASIN	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C702(53)(M)	6	EA		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		ADJUST MANHOLE OR DROP INLET UP TO 6"WITH BRICK AND MORTAR	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C702(54)(A)(1)	36	EA		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		MANHOLE REPAIR OR VERTICAL ADJUSTMENT UP TO GRADE 6" REUSING EXISTING METAL CASTING	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C702(54)(A)(3)	32	EA		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		REHABILITATION EXISTING MANHOLE	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C702(54)(I)	144	FTHT		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		BRICK SIDEWALK	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C706(57)	80	SY		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		RELAYING BRICK SIDEWALK	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C706(58)	280	SY		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		STONE SIDEWALK	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C706(59)	20	SY		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		RELAYING STONE SIDEWALK	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C706(60)	703	SY		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		LETTER OR NUMBER FOR TILE STREET NAME	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C706(61)	28	EA		

LOUISIANA UNIFORM PUBLIC WORK BID FORM
UNIT PRICE FORM

TO: Sewerage and Water Board of New Orleans
Purchasing Department, Room 133
625 St. Joseph Street
New Orleans, LA 70165

BID FOR: Contract No. 2154
24" WATERLINE REPLACEMENT
DECATUR ST. (DUMAINE ST. – GOVERNOR NICHOLLS ST.)
ST. PETER ST. (CHARTRES ST. – ROYAL ST.)

NAME OF BIDDER: _____

UNIT PRICES: This form shall be used for any and all work required by the Bidding Documents and described as unit prices. Amounts shall be stated in figures and only in figures.

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		RESETTING TILE STREET NAME	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C706(62)	6	EA		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		6" CONCRETE BARRIER CURB WITH DOWELS	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C707(56)	1233.0	LF		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		STONE CURB INCLUDING BASE (STRAIGHT, CIRCULAR OR DEPRESSED)	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C707(62)	150.0	LF		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		RESET EXISTING CURB (PRECAST, CONCRETE, STONE, ETC.) INCLUDING BASE	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C707(63)	2041.0	LF		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		TEMPORARY SIGNS, BARRICADES AND PAVEMENT MARKINGS	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C713(51)	1	LS		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		MOBILIZATION	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C727(51)	1	LS		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		TRAFFIC SIGNS	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C729(51)	32	EA		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		PLASTIC PVMT STRIPING (SOLID)(4IN W)(THERMO 90 MIL)	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C732(52)(A)	1750.0	LF		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		PLASTIC PVMT STRIPING (SOLID)(6IN W)(THERMO 90 MIL)	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C732(52)(B)	225.0	LF		

LOUISIANA UNIFORM PUBLIC WORK BID FORM
UNIT PRICE FORM

TO: Sewerage and Water Board of New Orleans
Purchasing Department, Room 133
625 St. Joseph Street
New Orleans, LA 70165

BID FOR: Contract No. 2154
24" WATERLINE REPLACEMENT
DECATUR ST. (DUMAINE ST. – GOVERNOR NICHOLLS ST.)
ST. PETER ST. (CHARTRES ST. – ROYAL ST.)

NAME OF BIDDER: _____

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DESCRIPTION:	_x_Base Bid or ___Alt. # ____		PLASTIC PVMT STRIPING (24IN W)(THERMO 125 MIL)	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C732(52)(E)	1360.0	LF		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		PLASTIC PVMT LEGENDS & SYMBOLS	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C732(54)	4	EA		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		CONSTRUCTION LAYOUT	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C740(51)	1	LS		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		6" PVC NEW WATER MAIN WITH MAIN LINE FITTINGS	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C741(51)(B)	30.0	LF		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		8" PVC NEW WATER MAIN WITH MAIN LINE FITTINGS	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C741(51)(C)(1)	144.0	LF		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		12" PVC NEW WATER MAIN WITH MAIN LINE FITTINGS	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C741(51)(E)	170.0	LF		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		24" DUCTILE IRON (RESTRAINED JOINT) NEW WATER MAIN WITH MAIN LINE FITTINGS	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C741(51)(I)(2)	1582.0	LF		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		NEW 2" VALVE	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C741(52)	2	EA		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		NEW 6" VALVE	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C741(52)(B)	7	EA		

LOUISIANA UNIFORM PUBLIC WORK BID FORM
UNIT PRICE FORM

TO: Sewerage and Water Board of New Orleans
Purchasing Department, Room 133
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BID FOR: Contract No. 2154
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NAME OF BIDDER: _____

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DESCRIPTION:	_x_Base Bid or ___Alt. # ____		NEW 8" VALVE	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C741(52)(C)	14	EA		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		NEW 12" VALVE	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C741(52)(E)	5	EA		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		NEW 24" VALVE	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C741(52)(I)	5	EA		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		NEW FIRE HYDRANT	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C741(54)	5	EA		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		REPLACE 5/8" TO 1" WATER HOUSE CONNECTION WITH 1" WATER HOUSE CONNECTION (FROM MAIN TO METER)	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C741(55)(A)	68	EA		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		REPLACE 1-1/2" WATER HOUSE CONNECTION (FROM MAIN TO METER)	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C741(55)(B)	6	EA		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		REPLACE 2" WATER HOUSE CONNECTION (FROM MAIN TO METER)	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C741(55)(C)	13	EA		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		REPLACE 4" WATER HOUSE CONNECTION (FROM MAIN TO METER)	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C741(55)(D)	10	EA		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		REPLACE 6" WATER HOUSE CONNECTION (FROM MAIN TO METER)	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C741(55)(E)	1	EA		

LOUISIANA UNIFORM PUBLIC WORK BID FORM
UNIT PRICE FORM

TO: Sewerage and Water Board of New Orleans
Purchasing Department, Room 133
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New Orleans, LA 70165

BID FOR: Contract No. 2154
24" WATERLINE REPLACEMENT
DECATUR ST. (DUMAINE ST. – GOVERNOR NICHOLLS ST.)
ST. PETER ST. (CHARTRES ST. – ROYAL ST.)

NAME OF BIDDER: _____

UNIT PRICES: This form shall be used for any and all work required by the Bidding Documents and described as unit prices. Amounts shall be stated in figures and only in figures.

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		REPLACE 8" WATER HOUSE CONNECTION (FROM MAIN TO METER)	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C741(55)(F)	2	EA		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		8" WATER LINE OFFSET UP TO 24"	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C741(71)(C-01)	4	EA		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		NEW WATER VALVE MANHOLE (4" THROUGH 12" VALVES)	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C741(74)(A)	4	EA		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		REMOVE MUD AND DEBRIS FROM INSIDE OF WATER METER BOX	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C741(75)	47	EA		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		ADJUST COMPLETE WATER METER BOX TO GRADE	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C741(76)	47	EA		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		REPLACE BROKEN WATER METER BOX (5/8") T0 (1")	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C741(77)	10	EA		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		SEWER POINT REPAIR UP TO TEN FEET (8" AT 6.1' - 8.0')	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C742(57)	6	EA		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		SEWER POINT REPAIR BEYOND TEN FEET (8" AT 6.1' - 8.0')	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C742(58)	20.0	LF		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		NEW SEWER HOUSE CONNECTIONS FROM MAIN TO BACK OF CURB	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C742(59)	50.0	EA		

LOUISIANA UNIFORM PUBLIC WORK BID FORM
UNIT PRICE FORM

TO: Sewerage and Water Board of New Orleans
Purchasing Department, Room 133
625 St. Joseph Street
New Orleans, LA 70165

BID FOR: Contract No. 2154
24" WATERLINE REPLACEMENT
DECATUR ST. (DUMAINE ST. – GOVERNOR NICHOLLS ST.)
ST. PETER ST. (CHARTRES ST. – ROYAL ST.)

NAME OF BIDDER: _____

UNIT PRICES: This form shall be used for any and all work required by the Bidding Documents and described as unit prices. Amounts shall be stated in figures and only in figures.

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		PIPE LINING (8" & CIPP LINING)	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C742(65)(C)	1565	LF		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		CUT LINER TO RESTORE EXISTING SEWER HOUSE CONNECTION (6", CIPP)	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
C742(66)(B)	48	EA		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		REMOVAL OF HANDICAP RAMPS, CURB AND GUTIER, AND CONCRETE SIDEWALKS AT INTERSECTIONS INCLUDING SAW	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
CF-05	40.0	SY		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		HANDICAP RAMPS, CURB AND GUTTER SIDEWALKS AT INTERSECTIONS	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
CF-06	100.0	SY		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		SURFACE APPLIED TACTILE / DETECTABLE WARNING SURFACE TILES	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
CF-14	12.0	SF		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		SINGLE VERTICAL CATCH BASIN REPAIR OR VERTICAL ADJUSTMENT REUSING EXISTING METAL CASTINGS	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
CF-315	9	EA		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		MANHOLE COVER	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
CF-371	4	EA		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		MANHOLE FRAME	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
CF-372	4	EA		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		MANHOLE REPAIR OR VERTICAL ADJUSTMENT UP TO 6" REUSING EXISTING METAL CASTINGS	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
CF-375	20	EA		

LOUISIANA UNIFORM PUBLIC WORK BID FORM
UNIT PRICE FORM

TO: Sewerage and Water Board of New Orleans
Purchasing Department, Room 133
625 St. Joseph Street
New Orleans, LA 70165

BID FOR: Contract No. 2154
24" WATERLINE REPLACEMENT
DECATUR ST. (DUMAINE ST. – GOVERNOR NICHOLLS ST.)
ST. PETER ST. (CHARTRES ST. – ROYAL ST.)

NAME OF BIDDER: _____

UNIT PRICES: This form shall be used for any and all work required by the Bidding Documents and described as unit prices. Amounts shall be stated in figures and only in figures.

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		MANHOLE REHABILITATION CEMENTITOUS LINER FULL DEPTH (SEWER)	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
CSS742(X9)	96	FTHT		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		TEMPORARY 2" WATERLINE	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
Extra Item 01	392	LF		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		TEMPORARY 6" WATERLINE	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
Extra Item 02	427	LF		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		TEMPORARY 8" WATERLINE	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
Extra Item 03	2322.0	LF		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		TEMPORARY 12"WATERLINE	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
Extra Item 04	80.0	LF		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		TEMPORARY TIE T0 EXISTING WATERLINE	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
Extra Item 05	4	EA		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		BACKFILL TRENCH AND TEMPORARY ASPHALT CONCRETE (6)	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
Extra Item 06	1236.0	SQ YD		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		TEMPORARY 2" GATE VALVE AND VALVE BOX	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
Extra Item 07	2	EA		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		TEMPORARY 6" GATE VALVE AND VALVE BOX	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
Extra Item 08	2	EA		

LOUISIANA UNIFORM PUBLIC WORK BID FORM
UNIT PRICE FORM

TO: Sewerage and Water Board of New Orleans
Purchasing Department, Room 133
625 St. Joseph Street
New Orleans, LA 70165

BID FOR: Contract No. 2154
24" WATERLINE REPLACEMENT
DECATUR ST. (DUMAINE ST. – GOVERNOR NICHOLLS ST.)
ST. PETER ST. (CHARTRES ST. – ROYAL ST.)

NAME OF BIDDER: _____

UNIT PRICES: This form shall be used for any and all work required by the Bidding Documents and described as unit prices. Amounts shall be stated in figures and only in figures.

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		TEMPORARY 8" GATE VALVE AND VALVE BOX	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
Extra Item 09	8	EA		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		TEMPORARY HOUSE CONNECTION TO EXISTING WATER METER	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
Extra Item 10	80	EA		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		24" LINE STOP	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
Extra Item 11	1.0	LS		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		REMOVE EXISTING 24" WATERLINE (STORE / DISPOSAL)	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
Extra Item 12	1582	LF		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		ADJUST SEWER CLEAN OUT TO GRADE	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
Extra Item 13	8	EA		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		TIE TO EXSITING DRAINAGE STRUCTURE	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
Extra Item 14	8	EA		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		REMOVE AND STORE EXISTING GRANITE CURBS	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
Extra Item 15	761.0	LF		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		COMPRESSION F DPE P PE	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
Extra Item 16	340.0	LF		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		DE - MOBILIZATION	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
Extra Item 17	3.0	EA		

DESCRIPTION:	_x_Base Bid or ___Alt. # ____		RE - MOBILIZATION	
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
Extra Item 18	3.0	EA		

LOUISIANA UNIFORM PUBLIC WORK BID FORM
UNIT PRICE FORM

TO: Sewerage and Water Board of New Orleans
Purchasing Department, Room 133
625 St. Joseph Street
New Orleans, LA 70165

BID FOR: Contract No. 2154
24" WATERLINE REPLACEMENT
DECATUR ST. (DUMAINE ST. – GOVERNOR NICHOLLS ST.)
ST. PETER ST. (CHARTRES ST. – ROYAL ST.)

NAME OF BIDDER: _____

UNIT PRICES: This form shall be used for any and all work required by the Bidding Documents and described as unit prices. Amounts shall be stated in figures and only in figures.

DESCRIPTION:	_x_ Base Bid or ___Alt. # ____		TEMPORARY	E E SIDEWALK (4)
REF. NO.	QUANTITY	UNIT OF MEASURE	UNIT PRICE	UNIT PRICE EXTENSION (Quantity times Unit Price)
Extra Item 19	400.0	SY		

Wording for "DESCRIPTION" is provided by the Owner.
All quantities are estimated. The contractor will be paid based upon actual quantities as verified by the Owner.

1-2 ADDITIONAL REQUIREMENTS

All blank spaces in this Proposal section shall be filled. A bid price shall be indicated for each bid item. Bids received without all such items completed will be considered non-responsive. The bid shall contain an acknowledgement of receipt of all Addenda in space provided. The Louisiana Uniform Public Work Bid Form & Unit Price Form (if applicable) and the amount of Deposit or Bid Bond five percent (5%) of the total amount of the proposal is REQUIRED to be submitted in a sealed envelope on bid opening date. The two (2) lowest numerical bidders have three (3) days after the bid opening (exclusive of Saturdays, Sundays and Holidays) to submit any additional information such as (Voluntary Extension Sheet, Affidavit, Economically Disadvantage Business Summary Sheet if applicable) as well as requirements of Sections 1-3 through 1-6 below. Failure to do so will render the bid non-responsive.

1-3 BIDDER DECLARATION

____ do hereby declare that_____the only person_____interested in this proposal and that no other person than the one ____herein named have any interest herein or in the contract proposed to be taken; that it is madewithout any connection with any other person or persons making proposal for the same work and that it is in all respects fair and without collusion or fraud; also that no member of the Sewerage and Water Board or of the City Council of the City of New Orleans or any officer or employee of the City of New Orleans or of the several boards thereof, who are by law excluded from participation herein, and directly or indirectly interested herein or in furnishing bond or in any portion of the profits hereof.

_____ do hereby also declare that_____have LOUISIANA CONTRACTOR'S LICENSE in the field of

_____ with NUMBER_____.

And_____do further declare that_____have carefully examined the annexed specifications and the drawings furnished, and personally inspected the ground and that_____will contract to provide the necessary tools, machinery and apparatus and other means of construction, and to furnish all labor and material specified in this contract or called for by the plans, necessary to complete the work in the manner specified and within the time mentioned in the specifications and according to the requirements of the Engineer, as herein set forth.

1-4 In accordance with Louisiana Revised Statute 38:2227 the following affidavit shown on the next page must be submitted with the bid, or no later than 3 days after the bid opening (excluding Saturdays, Sundays, and Holidays). Failure to do so will render the bid non-responsive. **Please note, THE AFFIDAVIT MUST BE NOTARIZED.**

1-5 GUARANTEES

_____ guarantee that the whole of the work under this contract will be substantially completedwithin **365** calendar days after the date of the "Commencement of Contract Times."

In case of delay in the completion of the contract beyond the contract time of completion as determined by the Board hereby agree to pay, as liquidated damages, the sum of **Two Thousand Dollars ($2,000.00)** for each calendar day of such delay, which liquidated damages shall become due by the mere elapsing of the delay without the necessity of putting_____in default.

1-6 EMERGENCY PROCEDURES

Contractor must furnish telephone numbers for routine or emergency telephone calls.

NAME TITLE

TELEPHONE NO.:
NORMAL CALLS _____

EMERGENCY _____

STATE OF LOUISIANA
PARISH OF ORLEANS

AFFIDAVIT

BEFORE ME, the undersigned authority, duly commissioned and qualified and sworn in and for the State and Parish aforesaid, personally came and appeared_____ who after being duly sworn, did depose and say as follows:

1) He/she is the_____ (title) of_____(company);

2) He/she has not been convicted of, or has entered a plea of guilty or nolo contendere to any of the crimes, or equivalent federal crimes, listed in Louisiana Revised Statute 38:2227, specifically: public bribery, corrupt influencing, extortion, money laundering, theft, identity theft, theft of a business record, false accounting, issuing worthless checks, bank fraud, forgery, contractors misapplication of payments, malfeasance in office.

3) The contracting entity, person or corporation whose principal(s), member(s), and /or Officer(s) have, within the preceding 5 years, not been convicted or plead guilty to, a felony under state or federal statutes, for embezzlement, theft of public funds, bribery, falsification or destruction of public records; (City Code Section 2-8)

4) The following is a list of individual partners, incorporators, directors, managers, officers, organizers, or members who have a minimum ten percent interest ownership interest in the bidding entity:

_____(name) _____(name)

_____(name) _____(name)

_____(name) _____(name)

5) No other persons hold an ownership interest in the bidding entity via a counter letter.

6) None of the above named individual partners, incorporators, directors, managers, officers, organizers, or members, who has a minimum ten percent interest ownership in the bidding entity, been convicted of, or has entered a plea of guilty or nolo contendere to any of the crimes, or equivalent federal crimes, listed in Louisiana Revised Statute 38:2227, specifically: public bribery, corrupt influencing, extortion, money laundering, theft, identity theft, theft of a business record, false accounting, issuing worthless checks, bank fraud, forgery, contractors misapplication of payments, malfeasance in office.

7) He/she is not delinquent on any taxes owed the City of New Orleans or fees/charges to the Sewerage and Water Board. (City Code Section 2-8)

The following sections apply only to Public Works Contracts:

8) In accord with LA Revised Statute 38:2212.10 the entity represented herein is registered and participates in the "Status verification system" of the Illegal Immigration Reform and Immigrant Responsibility Act of 1996, 8 U.S.C. 1324(a), known as the "E-Verify" program to verify that all employees in the State of Louisiana are legal citizens of the United States or are legal aliens.

9) The entity represented herein shall continue, during the term of the contract, to utilize a status verification system to verify the legal status of all new employees in the state of Louisiana.

10) The entity represented herein shall require all subcontractors to submit to the contractor a sworn affidavit verifying compliance with the Status verification system.

WITNESSES:

_____ _____

AFFIANT

_____

SWORN TO AND SUBSCRIBED BEFORE ME ON THIS

_____ DAY OF_____, 20_____.

_____ _____

NOTARY PUBLIC **Notary Id. No. or Bar Roll No.**

_____

PLEASE PRINT NAME OF NOTAR

1. Will the Contractor have more than twelve (12) continuous hours to perform tie-ins of the new 24" waterlines to the existing 24" waterlines? The section of the specifications referred to below limits the Contractor's work hours to 12 hours per day, from 7am to 6pm. It has been our experience; tie-ins of size can take between 18-24 hours.

   SECTION 1.26 – CONTRACTOR REQUIREMENTS FOR CONSTRUCTION WORK IN THE FRENCH QUARTER, B. Business Access, on page nos. 1200-28 to 1200-29 (pdf page nos.292-293) the first bullet point on page no. 1200-29 (pdf page no. 293) reads:

   - *No work between the hours of 6pm and 7am.*

2. Will the Contractor be charged contract time (days) for the dates listed in **SECTION 1.26 – CONTRACTOR REQUIREMENTS FOR CONSTRUCTION WORK IN THE FRENCH QUARTER** ? **YES.**

   SECTION 1.26 – CONTRACTOR REQUIREMENTS FOR CONSTRUCTION WORK IN THE FRENCH QUARTER, B. Business Access, on page nos. 1200-28 to 1200-29 (pdf page nos.292-293) the 3rd bullet point on page no. 1200-29 (pdf page no. 293) reads:

   - *The contractor will perform no work and ensure all sidewalks are open and safe for foot traffic on the following days:*

Holiday/Event	Start Date	End Date
New Orleans Wine and Food Experience	June 11, 2025	June 15, 2025
Pride Weekend	June 12, 2025	June 15, 2025
Essence Fest	July 3, 2025	July 6, 2025
Satchmo Summerfest	August 2, 2025	August 3, 2025
Krewe du Boo	October 25, 2025	October 25, 2025
New Year's Eve	December 31, 2025	January 1, 2026
Joan of Arc Parade	January 6, 2026	January 6, 2026
Krewe de Vieux	TBD	TBD
Mardi Gras	February 5, 2026	February 18, 2026
St. Patrick's Day	March 17, 2026	March 17, 2026
Crescent City Classic	April 4, 2026	April 4, 2026
French Quarter Festival	April 16, 2026	April 19, 2026

3. Please provide us with the Complaint Protocol defined by the SWBNO?

   SECTION 1.26 – CONTRACTOR REQUIREMENTS FOR CONSTRUCTION WORK IN THE FRENCH QUARTER, C. Impacts to Neighbors, on page no. 1200-29 (pdf page no.293) the last bullet point in C. reads:

   - *The contractor will follow the Complaint Protocol defined by SWBNO.* **Statement to be removed.**

4. What Storm Water Pollution Prevention Plam (SWWPP) and Storm Water Best Management Practices (BMP) Requirements govern for this Contract?
   The Specifications contain two (2) different Storm Water Pollution Prevention Plam (SWWPP) and Storm Water Best Management Practices (BMP) Requirements. PDF page no. 147 through pdf page no. 151, ATTACHMENT 4, Storm Water Pollution Prevention Plam (SWWPP) and Storm Water Best Management Practices (BMP) Requirements, listed in the specifications as 00 73 00 ATTACHMENT 4-1,, 4-2 and 4-3 is one set of the requirements and the other set is pdf page no. 398 through pdf page no. 407, SECTION 01 40 00 SWB SWPP & BMP REQUIREMENTS, listed in the specifications as 014000 – 1, 2, 3 & 4. **Section 00 73 00 (4-1, 4-2 and 4-3) is duplicated in Section 0140 00 and will be removed from the specifications by Addendum to avoid confusion.**

5. Is the Contractor required to have New Orleans Police Department Officer's detail on site for traffic control? **NO.** If so, how many hours of New Orleans Police Department Officer's detail for traffic control should the Contractor's include in their bids?

6. Will the S&WB consider adding a bid item for hourly of New Orleans Police Department Officer's detail for traffic control? **NO**

The following are questions regarding the above-referenced Contract:

7. What is the correct description and location of the above-referenced contract. The ADVERTISEMENT FOR BIDS (00 111 13-1) contains two (2) different descriptions of the above-referenced contract. **Answered in Addendum 1.**

   a. The heading of the ADVERTISEMENT FOR BIDS is:

SEWERAGE & WATER BOARD OF NEW ORLEANS
24" Waterline Replacement Decatur St. (Dumaine St. – Governor Nicholls St.) St. Peter St. (Chartres St. – Royal St.)
CONTRACT NO. 2154
SOLICITATION NO. 2024-SWB-100

b. The paragraph immediately the header is below and it is different from the header above:

The Sewerage and Water Board of New Orleans is requesting bids for the West Power Complex Water and Drainage line Tie-ins including the water supply tie-in at the water main near Claiborne Avenue and associated piping to tie-in the water supply at the two tie-in locations installed under Contract 1415 – one tie-in in the southeast corner of the C8 basin, and one on the west side of the C7 basin in the levee (Monticello Avenue). Contract 1443 also includes stormwater drainage installation from the tie-in location as installed by Contract 1415, connecting to a box culvert in Claiborne Avenue.

8. Please provide legible PDF page nos. 422 through 477. Within *APPENDIX C* of the Standard Drawings, Sewerage and Water Board of New Orleans, please note the following anomalies : **Answered in Addendum 1.**

a. PDF page nos. 422 through 451 and page nos. 467 through 477 have missing, random, or blurred text.
b. PDF page nos. 452 through 467 are blank.

9. Please provide legible PDF page nos. 480 through 787. Within *APPENDIX D* of the Standard Drawings, City of New Orleans, please note the following anomalies : **Answered in Addendum 1.**

a. PDF page nos. 480 through 787 are mostly blank except PDF page nos. 480, 481, 516, 540, 550, 551, 648, 649, 651-667, 684, 691 and 784 have random text.

10. Upon completion of a Task Order will the Owner give the Contractor Substantial Completion for the work within the Task Order? If not, according to LA Public Bid Law under RS 38:4441.C. "... A public entity shall not take, use, or occupy the public work or use or occupy the specified area of the public work for which it was intended until the substantial completion has been filed pursuant to this Section, unless an approved agreement of partial occupancy is executed between the public entity, the design professional of record, and the contractor." **Task orders are for coordination of work, one block at a time. A preliminary punch list will be given to the Contractor after the completion of each task order. Substantial Completion requires that all 4 blocks be complete.**

11. *APPENDIX F is* titled "Proposed Entergy Gas Mains" . Is this work completed? If it is not completed, will it be completed before the Notice to Proceed is issued and please provide a schedule of their work so that its impact can be included in our bid. **No, Entergy (gas & electric) will perform their work prior to the Contractor being issued task orders.**

12. Please explain the concept of Extra Work Items list as Extra Work Item Nos. 1-21. **Extra Work Items are not standard DPW Bid items (for the SWB). However, most of the extra work items are included in the**

measurement and payment with standard item descriptions, measurement and payment.

13. Please provide the locations on the plans, by station number(s) and offset(s), of the work called for under item nos. Extra Work Item Nos. 1-18 and 21 so that we are able to include the costs associated with performing the work at the location in our bids. **Items such as water meters, temporary valves & water lines, etc. are shown on the plans. The contractor can use the plan scale to derive the station and out.**

14. Please provide specifications for the work listed in the **"LOUISIANA UNIFORM PUBLIC BID FORM, UNIT PRICE FORM"** as "Extra Item 18", HDPE COMPRESSION". **This information will be included by Addendum.**

15. What size, in inches, is the HDPE in "Extra Item 18", HDPE COMPRESSION"? **This information will be included by Addendum.**

16. Extra Item Nos. 1-17, lack Please provide specifications for Extra Item Nos. 1-17, including, but not limited to the DESCRIPTION", MEASURMENT" and "PAYMENT" sections of the "SPECIAL PROVISIONS". **All extra items not having their own description are included under other standard items. For example a temporary water valve or temporary water line will have the same description and material specification as a permanent water valve or water line.**

17. What is the size, in inches, is the new water meter box "Extra Item No. 17" "INSTALL NEW WATER METER BOX"? **See standard details in appendix C.**

18. Please provide a bid item for the Water Valve Manholes/Vaults for the new 24" Water Valves. Bid Item no. C74274)(A) is only for 4" through 12" valves. **The valve box for a 24-inch valve will conflict with adjacent utilities therefore, the valve stem detail given in the standard drawings will be followed.**

19. What utilities, if any, have work to perform on this project? Please describe the work, if any, utilities have to perform on this project.. **See Appendix F for proposed Entergy Gas mains. And see the profile views in the plans of each of the four blocks for the existing locations of Entergy electric.**

20. Please provide us with any roadway corings or soils borings for this project. **Corings and borings were not performed for this project.**

21. Please provide is with any plans, diagrams and plots provided by utility companies as per LA RS 38:2223? **See no. 13 above.**

22. Please clarify the following statement in **SECTION 1.27 – NOTICE TO PROCEED – STARTUP TIME**, page no. 1200 – 30 of the SPECIAL PROVISIONS:

> *Before mobilization the Contractor shall coordinate any work at the site with being performed by Entergy electric and Entergy gas.*

Specifically, the phrase "any work as the with being performed" does not make sense in the context of the remaining words in the sentence.

The statement above will be revised in the addendum as follows.

> **Before mobilization the Contractor shall coordinate any work at the site with work being performed by Entergy electric and Entergy gas.**

23. **SECTION 1.27 – NOTICE TO PROCEED – STARTUP TIME**, page no. 1200 – 30 of the SPECIAL PROVISIONS, refers to the Contractor coordinating work performed by Entergy Gas and Electric. We are unclear what this means and what it requires the Contractor to do. The Contractor does not have any relationship, contractual or otherwise, with Entergy Gas and Electric. Entergy Gas and Electric's facilities are within the right of ways belonging to the City of New Orleans and operate under Right Of Way type agreements with the City of New Orleans. It is the City, as the public entity and the owner of the right of way, that has the relationship with Entergy Gas and Electric. In addition, and perhaps in recognition of the fact that the City has the relationship with the utility companies, LA RS 38:2223.A(3) states in part:

> *(3) Any anticipated temporary or permanent relocation of underground utilities or facilities deemed necessary shall be arranged by the public entity with the owners of the underground utility facilities prior to the start of construction. If a temporary or permanent relocation of utility facilities is necessary, the owner of the underground utility or facility shall be given a reasonable time to move such utility facilities unless the contractor to whom the contract for a public improvement is awarded agrees with the owner of the underground utility or facility to coordinate relocation with construction operations. The public entity, within ten calendar days after the award of the contract for a public work, shall notify in writing all owners of underground utilities or facilities known to be located in the construction area of the public improvement of the name and address of the contractor to whom the contract for public work was awarded.*

This statute mandates the public entity must arrange with the owners of the underground utility facilities requiring relocation prior to the start of construction and give them reasonable time to perform the relocations unless the Contractor agrees to coordinate their relocation. This statute contemplates that the Contractor and the owner of the utility might reach an agreement regarding relocation, but as noted, the Contractor has no control over the utility company. As a result, to the extent Section 1.27 seeks to require the Contractor to reach some agreement with

the utility related to the relocation of utilities, that requirement would be contrary to Public Bid Law. Please advise.

The contract documents do not require the contractor to enter into an agreement with privately owned utilities.

The locations of the Entergy gas and Entergy Electric utilities are shown in the plans and specs.

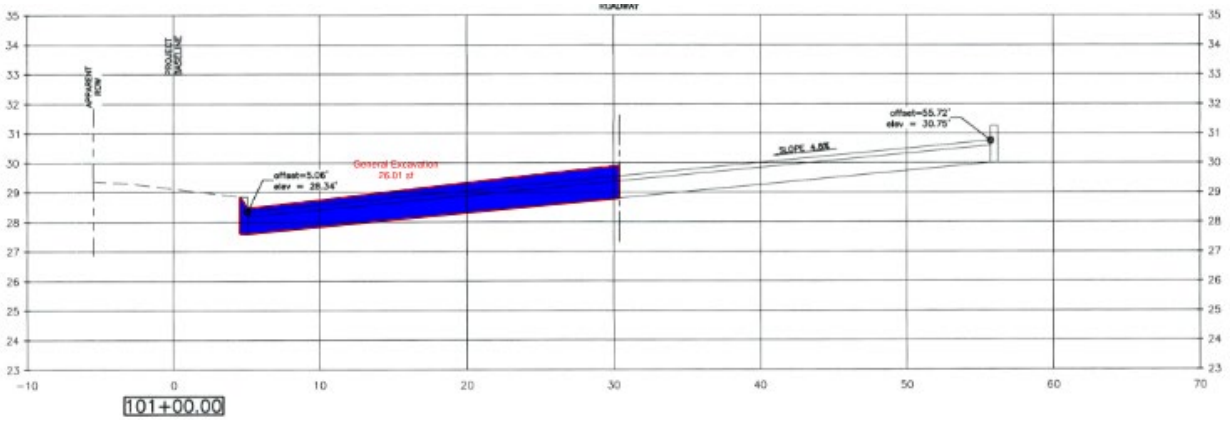
The coordination between SWB, the roadway contractor and utility owners (Entergy Gas & Entergy Electric) is regarding phasing and unanticipated utility conflicts with the proposed work. Generally, the roadway contractor should inform Entergy (electric and gas) prior to excavating adjacent to those utilities.

24. "Is Builders Risk Insurance required as indicated in the ITB since there are no building structures being built (it has been removed from previous projects)? Builders Risk insurance will not provide much protection because roadwork is not particularly vulnerable during construction and will cost the project hundreds of thousands of dollars." **Builders Risk Insurance is NOT required.**

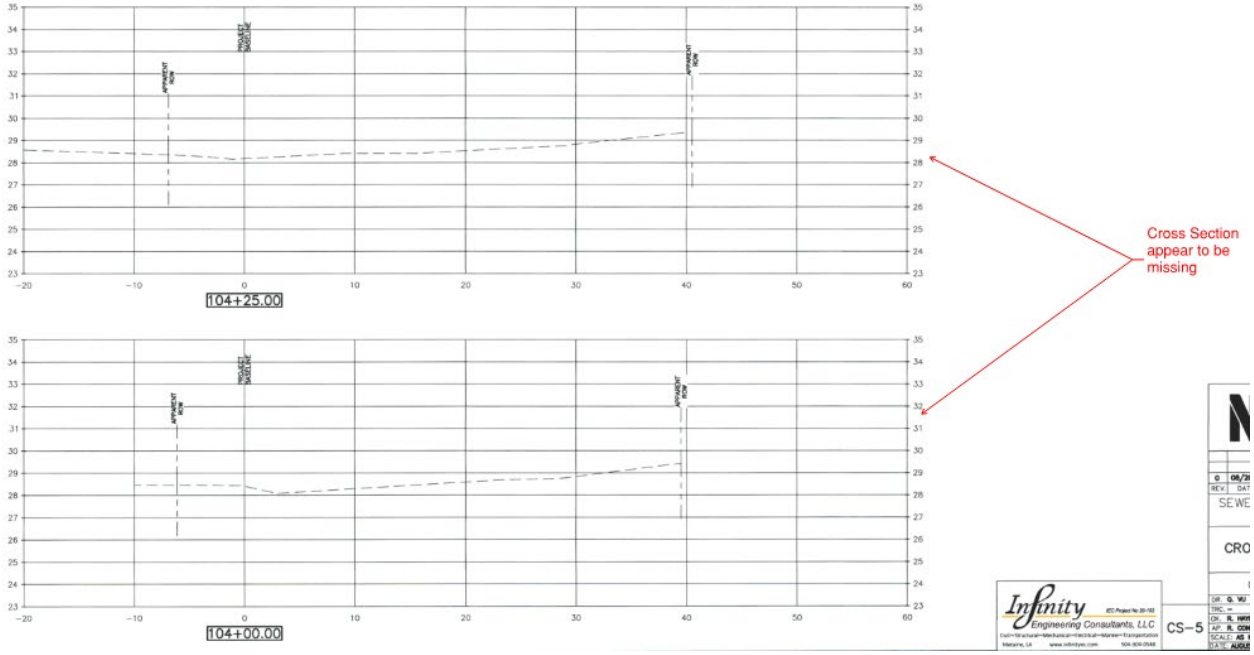
25. At various locations throughout the project, there are a set of Bike racks. Will they be removed prior to construction or will the contractor be responsible for removal, storage, & re-installation? If it is the contractor's responsibility, please confirm how the contractor will get paid. **The Contractor shall remove, store and reinstall bike racks as required at no direct pay.**

26. Cross Section 101+00 on the right side of the C/L appears to be incomplete? The existing conditions are not present. **The proposed solid cross section lines are correct but dashed existing survey line only extends as far as the original topographical survey.**

a.

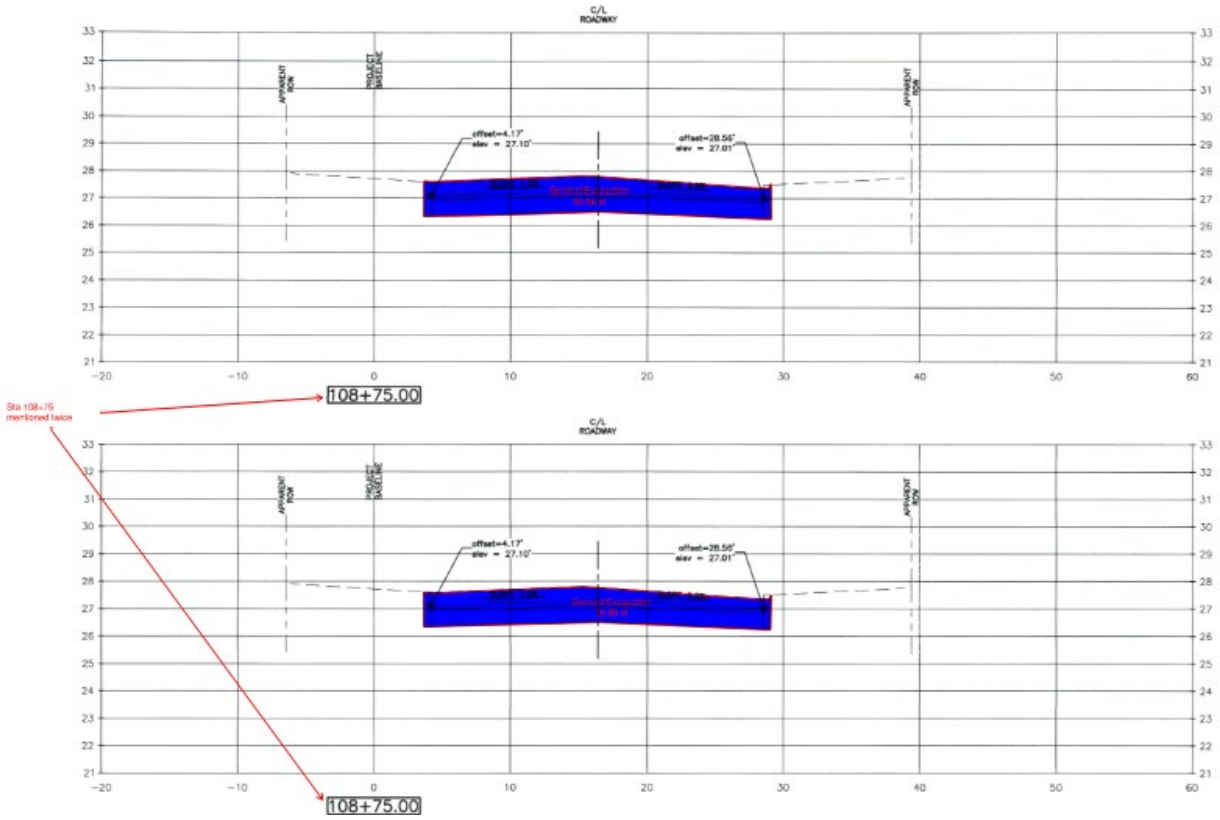


27. Cross Section 104+00 & 104+25 are missing **Showing proposed work in the cross sections at the intersections was not required as it may cause confusion.**



a.

28. Cross Section 108+75 – is listed twice. Please clarify. **Disregard one of the cross sections as it is a duplicate.**



a.

29. Specifications for the Temporary Sidewalk pay item states that it will be paid for by the SF but the unit bid form shows SY. Please confirm that it is 400 SY's and not 400 SF.

Extra Item 19 Temporary Concrete Sidewalk (4" Thick) shall be paid for per square yard.

30. Extra Item 21 – Temporary Sidewalk – What construction method will be utilized for this item? Can a detail be provided? Neither the specs nor the bid item details this work. **Contractor shall build Temporary Concrete Sidewalk per the standard drawings and specifications of the NODPW. Also, see the Measurement and Payment Section 01200.**

31. Extra Item 21 – Temp Sidewalks: When will this item be paid? **See the revised Measurement and payment Section 01200.**

32. Extra Item 21 – Temp Sidewalks: Does this include installation and removal? **Yes, See the revised Measurement and payment Section 01200.**

33. Can the Sewer and Water House Connection locations for each property? (typically a table is provided). **See Appendix E Water service House Connections in the Specifications.**

34. Will the "Req'd 2-inch steel HP Gas Main (by others)" on DWG. No. 8958-W be installed prior to construction? **Yes, the gas main is scheduled to be installed prior to the Contractor commencing work on each block. The Contractor will need to coordinate with Entergy Gas.** If not, what is the timeline to have that 2-inch gas main installed?

35. What is the pressure on the 24" Water line? **Estimated to be 50 to 70 psi.**

36. Is HDPE Compression method allowed for the 24" waterline even though you won't have the 24" flow? If so, how many consecutive intersections can be closed to string out the pipe required to perform HDPE Compression on the 24" water line? **HDPE Compression method is Not Allowed for the 24" waterline.**

37. On page DWG. No. 8958-W, Station 104+18.88, there is a "New 12" Water Valve and Valve Box" call out that doesn't point to a waterline. Please specify where this valve and

box will be installed. D-2 doesn't show the valve & box. Please clarify. **Call out does not apply. Delete call out.**

38. Page D-2, at the intersection of Royal Street & St. Peters calls out a permanent 12" line but also 24" line to be installed. Please clarify what is to be installed a 12" or a 24" waterline? **A 24" waterline shall be installed.**

39. Has the city performed any structural analysis on the builders near the work zone to know if the excavation required to perform this work will impact them structurally? **No**
40. Is there a Geotech report for this project? A Geotechnical investigation / Report was not performed for this project. **NO.**

41. Reinforced Concrete Wye (15") Class IV on the Unit Bid form Unit of Measure is LF but it seems it should be an each item. Please confirm. **Reinforced Concrete Wye (15") Class IV shall be bid per each.**

42. Extra Item 11: Should this item be paid for per each in lieu of lump sum? **Extra Item 11 24" Line Stop shall be bid per lump sum and includes the 24" water line stops as shown on the plans.**

43. Extra Item 18: What size is the HDPE compression? **See the revised Measurement and payment Section 01200.**

44. Existing Balcony Support: Will the contractor be responsible for any temp shoring necessary to protect the balcony columns on the nearby buildings? **The Contractor shall take care to not disturb the balcony supports and support foundations during construction. The Contractor is responsible for any damage to balconies, balcony supports and support foundations during construction.**

45. Are we required to backfill utility trenches with USACE approved Levee clay given the proximity to the Mississippi river flood wall? **Backfill per the contract documents, NODPW standard drawings and specifications.**

46. Hydro excavation may be required to uncover sensitive utilities in some of the areas of this project. Can a bid item be added in case hydro excavation is required to prevent damaging existing utilities? **NO.**

47. Can you provide specifications and details for the “Street Light Removal and Replacement” shown approximately at station 100+50 on Sheet P-P 01? Although the note reads to store, will the existing light be “Reinstalled” or “Replaced” with a new light? **The existing light pole will removed stored and reinstalled in accordance with all applicable standard specifications and details of NODPW and all applicable electrical codes.**

48. Approximate station 100+70 on plan sheet P-P 01 shows an 18” RCP 26 LF which appears to transition to a 15” RCP. The plan profile shows it to be PVC. What type of pipe should it be? How does this 18” pipe transition to the 15” RCP? **The new 18” pipe is a RCP. The new 18” RCP and 15” RCP are connected by a concrete Wye pipe.**

49. Are any of the buried temporary water mains to be removed or filled? **Buried temporary water mains shall be removed.**

50. Does “Extra Item 10 – Temporary water house connection to existing meter” include 1” through 8” water house connections? Can we assume the house connections or no larger than the temporary lines they are attached to? **Quantity (each) and sizes of temporary water service lines are as shown under C741(A) through C741(F) (permanent service water lines) on the plan quantity sheet.**

51. Can you provide a detail for “Extra Item 06 – Backfill Trench and Temporary Asphalt Concrete”. **See revised Measurement and Payment Section 01200 for detailed description.**

52. Where will “Extra Item 06 – Backfill Trench and Temporary Asphalt Concrete” be used? **See revised Measurement and Payment Section 01200 for detailed description.**

53. Can you provide a detail or description for “Extra Item 21 – Temporary Sidewalk”? **See revised Measurement and Payment Section 01200 for detailed description**

54. Please clarify “Extra Item 12 – Remove Existing 24” Water Line Store / Disposal”. Does the contractor have to salvage the pipe and bring it to some Sewer & Water Board location? **See revised Measurement and Payment Section 01200 for detailed description**

55. Can you supply a list of traffic signs to be replaced for item C729(51)? **Sign types are shown on plan sheets ST-1 and ST-2.**

SECTION 01200 – SPECIAL PROVISIONS

SECTION 2.04	Excavation
SECTION 2.05	Construction Routing and Maintenance
SECTION 2.06	Sheeting and Bracing
SECTION 2.07	Sanitary Sewer System Rehabilitation
SECTION 2.08	Gravity Sewer Pipebursting
SECTION 2.09	Pre- and Post-Rehabilitation CCTV Inspection and Cleaning
SECTION 2.10	Sanitary Sewer Manhole Rehabilitation
SECTION 2.11	Cured in Place Pipe Lining
SECTION 2.12	Water Point Repairs
SECTION 2.13	Geotextile for Stabilization
SECTION 2.14	Geogrid
SECTION 2.15	Vibrations Due to Construction Activities
SECTION 2.16	Superpave Asphaltic Concrete Requirements
SECTION 2.17	Interim Asphalt Pavement
SECTION 2.18	Base Course
SECTION 2.19	**Measurement and Payment**
SECTION C202	Removal of Structures and Obstructions
SECTION C203	Preparation of Roadway Pavement Subgrade
SECTION C302	Base and Subbase Course
SECTION C402	Traffic Maintenance Aggregate
SECTION C501	Asphaltic Concrete Mixtures
SECTION C601	Portland Cement Concrete Pavement
SECTION C701	Culverts and Storm Drains
SECTION C702	Manholes, Catch Basins, Drop Inlets, and Clean-outs
SECTION C706	Driveways and Sidewalks
SECTION C707	Curbs and Gutters
SECTION C713	Temporary Signs, Barricades and Pavement Markings
SECTION C727	Mobilization
SECTION C729	Traffic Signs and Devices
SECTION C732	Plastic Pavement Markings
SECTION C740	Construction Layout
SECTION C741	Water Mains
SECTION C742	Sewer Lines
SECTION E 06	Backfill Trench And Temporary Asphalt Concrete, 6” Thick
SECTION E 16	Compression Fit HDPE Pipe Lining Linear Foot

SECTION E 17	**De-mobilization**	**Each**
SECTION E 18	Re-mobilization	
SECTION E 19	**Temporary Concrete Sidewalk (4" Thick)**	

PART III	**SPECIAL ITEMS**
SECTION 3.01	Temporary Signs, Barricades, Pavement Markings, Construction Signing, Traffic Maintenance and Public Safety
SECTION 3.02	Mobilization
SECTION 3.03	Clearing and Grubbing and Disposal of Materials
SECTION 3.04	Construction Layout
SECTION 3.05	Traffic Control Plan
SECTION 3.06	Saw Cutting (Sidewalk, Driveway and Curbs)
SECTION 3.07	Pavement Saw Cutting Adjacent to Existing Pavement and at Patches and Utility Trenches
SECTION 3.08	Removal of ADA-Accessible Ramps, Curb and Gutter, and Concrete Sidewalk at intersections including saw cutting
SECTION 3.09	ADA-Accessible Ramps, Curb and Gutter, and Concrete Sidewalk at intersections
SECTION 3.10	Driveways and Sidewalks (Special Finish)
SECTION 3.11	Sidewalk Transition Adjacent to ADA-Accessible Curb Ramp Areas
SECTION 3.12	ADA-Accessible Curb Ramp Retrofit
SECTION 3.13	Concrete Pavement (8" Thick)
SECTION 3.14	Root Pruning, Tree Protection, Landscaping, and Sidewalk Gravel Bed
SECTION 3.15	Granular Material and Fill Material
SECTION 3.16	Catch Basin and Manhole Repairs and Vertical Adjustments
SECTION 3.17	Drain Line Repairs / Replacement
SECTION 3.18	Timber Curb
SECTION 3.19	Type-A Dead End Installation
SECTION 3.20	Concrete Barrier or Mountable Curb with Laying Strip
SECTION 3.21	Project Sign
SECTION 3.22	Non-Standard Sewer Rehabilitation Items
SECTION 3.23	Non-Standard Water Point Repair Items
SECTION 3.24	Well Point System (NOT USED)
SECTION 3.25	Pre and Post Rehabilitation CCTV Inspection and Cleaning Drain Structure(s)

PART I - SPECIAL PROVISIONS

SECTION 1.01 - GENERAL SPECIFICATIONS AND INTENT OF CONTRACT

A. The Contract Documents are complementary; what is required by one Contract Document is as binding as if required by all. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. In case of discrepancy, the following order of precedence will apply:

1. Change Orders
2. Agreement
3. Proposal
4. Addendum
5. Supplementary Conditions
6. General Conditions
7. Special Provisions (Section 01200) as included in the Specifications
8. Drawings
9. Standard Specifications entitled, "General Specifications for Street Paving, 2015 Edition"
10. Standard Drawings entitled, "Sewerage & Water Board of New Orleans Standard Drawings 2015"

Calculated dimensions will govern over scaled dimensions.

B. The Sewerage and Water Board of New Orleans General Specifications, General Notes (DWG. NO. 7260-S, 7260-W, and 7260-D) and Standard Drawings, shall govern for the construction of all sewer, water, and drainage systems except as otherwise approved by the properly authorized officer of the Sewerage and Water Board. All sewer, water, and drainage work when complete, must be inspected and accepted by the Sewerage and Water Board of New Orleans before final payment can be approved.

C. The intent of the contract is to provide performance of the work described. The Contractor shall furnish all labor, materials, equipment, tools, transportation, and supplies required to complete the work in accordance with the plans, project specifications and terms of the contract.

D. When an item in the proposal and contract contains a choice to be made by the Contractor and of the type material to be furnished, the Contractor, before the work is initiated, shall indicate his choice in accordance with the specifications for that item. Such notification shall be submitted to the Sewerage and Water Board Director in writing.

E. Payment for all bid items shall include all incidental materials, labor, supervision, and equipment required for installation in place according to the plans and specifications or as directed by the Sewerage and Water Board Director.

F. There shall be no direct pay for any work that is not listed in the bid proposal but is required to complete the construction of this project in accordance with the project plans and specifications. All costs thereof shall be included in the bid price of other items.

G. Prior to bidding, the Contractor is to examine the contract documents and visit the site to determine the extent of the work. Should the Contractor have any doubts or questions regarding Pay Items, he should, before submitting his bid, contact the Department of Finance, Purchasing Bureau.

H. The apparent silence of the Specifications as to any detail, or the apparent omission from them of a detailed description concerning any work to be done and materials to be furnished, shall be regarded as meaning that only the best general practice is to prevail and that only material and workmanship of the best quality is to be used and interpretation of these Specifications shall be made upon that basis.

I. The Sewerage and Water Board Director reserves the right to accept or reject any and all bids. The Sewerage and Water Board Director reserves the right to reduce, delete or increase the quantity of any item in the proposal.

J. Section C121.01 of the General Specifications for Street Paving, 2015 Edition shall be amended to include the following language:

"The contractor shall not sublet any portion of the contract, excluding material, without the prior written consent and approval of the Sewerage and Water Board Director, including work sublet to an authorized Disadvantaged Business Enterprise. If such consent is given, the contractor will be permitted to sublet a portion of the work but shall perform with the contractor's own organization work amounting to at least 50 percent of the total contract cost.

A subcontractor shall not further subcontract to a third party any portion of this authorized work, excluding material, without written consent, including work sublet to an authorized Disadvantaged Business Enterprise."

K. Section C135 Changes in the Work of the DPW 2015 General Specifications For Street Paving (2015 edition) is hereby deleted in its entirety and replaced with the following:

The Sewerage and Water Board Director shall have the right to make alterations in the line, grade, plan, form, or dimensions of the work herein contemplated, either before or after the commencement of the work and without notice to the sureties. If such alterations diminish the quantity of work to be done, they shall not constitute a claim for damages for anticipated profits for the work deleted.

SECTION 1.02 - <u>SCOPE OF WORK</u>

A. It is the intent of this project to install waterlines, rehabilitate sanitary sewer lines and sewer manholes, install drainage items, and remove and reconstruct the streets specified in the proposal.

B. Removal and reconstruction work shall be accomplished in accordance with the construction documents and shall include but is not limited to the following:

1. Installing drainage, sewer lining and water main systems as shown on the plans or as defined in the specifications or shown in the standard details.
2. Removing existing pavement and excavating to required depths as shown on the plans. Hauling and legally disposing of existing pavement and surplus materials from the project site.
3. Constructing new granite curbs including concrete base for granite curb.
4. Replacing slate sidewalks including concrete base required for the slate sidewalk.
5. Constructing concrete handicap ramps at locations shown on the plans.
6. Other work incidental to the project as shown on the plans.
7. The Sewerage and Water Board Director reserves the right to reduce, delete or increase the quantity of any item in the proposal.

SECTION 1.03 - SPECIAL PROJECT REQUIREMENTS

A. All utility frames, covers, and boxes shall be tilted to generally conform to the slope of the ramp or walk. Where frames, etc. fall at the edge of a ramp or slope, adjust the tilt halfway between ramp slope and original elevation and warp the surface of ramp to blend into the edge of utility frames. Covers and boxes are to be adjusted by the Contractor. Private utility frames, covers and boxes are to be adjusted by the respective private utility company.

B. Temporary Barricades and Sidewalks: The Contractor shall provide and maintain construction fences, barricades, tree protection fencing, warning lights and temporary sidewalks as required by the Sewerage and Water Board Director or other authorities in approved locations affording complete protection to the public and providing security to the premises during the construction period.

1. Modular barriers, which may be hollow and able to be filled with sand or water for added weight, which do not protrude into public walking spaces and do not create a tripping hazard, and which are capable of supporting secondary fencing for additional height, a permeable sheeting material which prevents the passage of debris or building materials, but which does not prohibit natural air flow, and lighting fixtures as needed to provide for public safety and security. Barriers must be high-visibility orange, white, or a combination of those colors and must meet OSHA standards for visibility in construction areas. Barriers must be between 29-50".
2. The secondary fencing must be able to be secured to the modular barriers without the need to attach any part of the fencing or hardware to the sidewalks, streets, or any other hardscaping in the project work area. The additional fencing must be a mesh-type, allowing for the free passage of air, and must be constructed from aluminum, galvanized steel-wire, or linear low-density polyethylene-coated steel wire. The additional mesh fencing must bring the total height, once mounted atop the modular barricades, to a minimum of 72".
3. Permeable sheeting material must be secured to, and cover completely, the additional fence
above the modular barriers and must serve to limit the passage of debris or construction materials out of the work site, to minimize noise associated with the work, and to aid in preventing persons from attempting to cross the barrier. The sheeting material must be water and wind resistant and must be replaced or repaired timely if holes, tears, or other defects develop in the sheeting.
4. Lighting must be secured to the barricade system such that it will adequately provide for the safety and security of the public, and which meets the standards of the New Orleans Police Department, New Orleans Fire Department, City of New Orleans Department of Code Enforcement, Louisiana State Police, or any other local authority which may mandate minimum lighting requirements."

The Contractor shall provide all necessary items to insure pedestrian access to properties during construction. When required, flashing lights shall be installed at required locations. Contractor shall maintain pedestrian access to all businesses and residences during construction. The Contractor shall provide temporary ADA compliant pedestrian bridges to businesses and residences when the entrance is inaccessible on the sidewalk or at any other time as required to maintain access. Contractor shall also maintain pedestrian and vehicular access on all side streets leading to Conti Street during construction. Contractor shall submit proposed plans for fencing/temporary barricades, pedestrian access ramps and vehicular side street access to the City for review. There will be no direct pay for the cost of the items described above in this paragraph, except for the temporary fencing. The cost of the items described above in this paragraph, except for the temporary fencing, shall be included in other bid items.

C. Compliances: The Contractor shall comply with safety standards and governing regulations for cleaning operations. Waste materials shall not be burned at the site. Debris or excess materials shall not be

buried on the Owner's property. Volatile or other harmful or dangerous materials shall not be discharged into drainage systems. The Contractor shall remove waste materials from the site and dispose of such waste in a lawful manner.

D. Salvageable Materials: Before the Contractor shall remove any items from the site, the Owner reserves the right to retain in his possession any demolished items that the Owner deems salvageable. All other items, after review by Owner, may be salvaged by the Contractor. All salvage materials as determined by the Sewerage and Water Board Director shall be delivered at the Contractor's expense to the related locations listed below and must provide forty-eight (48) hour notice to these locations before delivering the salvaged material.

1. Materials such as stone curbs, cobble stone, etc. to the Public Works/Maintenance yard at 838 South Genois Street.
2. Materials such as Traffic Control devices (signs and signals) to the DPW sign shop at 2700 Lafitte St.
3. Materials such as CB, MH frames, covers, hydrants, valves, etc. to the S&WB Central Yard at 2900 Peoples Ave.
4. Materials such as tree grates to the Department of Parks &Parkway Nursery at 2829 Gentilly Blvd.
5. Recycled asphalt product

E. The Contractor shall remove existing sidewalks, driveways, and pavement to full depth in areas shown on drawings, or as directed by project engineer, and shall take care not to damage existing pavement and existing curbing that is to remain. The use of "STOMPERS" and similar gravity equipment is prohibited in order to preserve the structural integrity of the adjacent buildings and adjoining property. All excavation is to be done from the street.

F. The Contractor shall be required to protect all adjacent properties, buildings, walls, fences, steps, etc., from damage due to demolition, removal, and construction of items required by the Contract Documents. Removal of material adjacent to adjoining structures should be done in such a manner so as not to cause damage by direct blows, vibrations, or other methods of demolition or construction. The Contractor shall promptly repair damages caused to adjacent facilities by demolition and construction operations at no cost to the property Owner or City.

G. The Contractor shall clean adjacent structures and improvements of dust, dirt and debris caused by demolition and construction operations, as directed by the Sewerage and Water Board Director or governing authorities. The Contractor shall return adjacent areas to condition existing prior to the start of the work.

H. The Contractor shall, before removing any signpost, etc., coordinate such removal with all of the appropriate City agencies and companies involved. Existing signposts, light standards, and all other items penetrating the sidewalk shall be straightened and reset in accordance with the Sewerage and Water Board Director’s requirements, at no direct payment. All traffic control devices and their associated hardware (sign, signal, conduit, and marking) removed or damaged during execution of this contract, other than as provided for in this contract, shall be replaced by the Contractor at no cost to the S&WB.

I. No sign, or signal shall be removed without the approval of the Sewerage and Water Board Director. The Contractor accepts all liabilities during the time of removal. Contractor will notify the DPW Traffic Engineer in writing when controls are removed and reinstalled. All signs, signals and markings removed during construction, shall be restored and in place prior to the final inspection.

J. It shall be the responsibility of the Contractor to maintain all public roadways, sidewalks, driveways, etc. in a clean condition during the construction project. All mud, trash, debris, etc. deposited on said areas by the Contractor shall be removed daily, before the end of work or more frequently, as necessary to maintain a clean condition. The Contractor shall return adjacent areas to condition existing prior to the start of the work.

K. The Contractor shall ensure that mail and trash pickup services can be provided on a continuous basis during construction of the project. If necessary, the Contractor shall relocate or provide curb side mailboxes for use during the construction period. No direct payment will be made for this work. Any costs incurred by this work will be included in project bid items.

L. For daily work on projects the Sewerage and Water Board Director shall provide the Contractor with a project specific "We Are Working" notification template that shall include the start and end date, not exceeding a thirty (30) day duration, and detailed scope of work to be performed. New notifications shall be distributed if the end date exceeds thirty (30) days from the time of distribution.

M. The Contractor may be allowed to work on the weekend but shall first request permission from the City no later than seventy-two (72) hours prior to beginning that work. Notification flyers, provided by the Sewerage and Water Board Director, must be distributed at least forty-eight (48) hours before any weekend work begins in an area.

N. The Contractor shall notify the Sewerage and Water Board Director office at least seventy- two (72) hours for all water valve closures. Water valve closures for businesses, schools/colleges/universities, and medical facilities that require specialized advanced coordination must be provided one week prior. Notification flyers, provided by the Sewerage and Water Board Director, must be distributed at least forty-eight (48) hours before the valve closures.

O. The Louisiana Department of Health and Hospitals requires at least twenty-four (24) notification of all test valve closures. Notification flyers, provided by the City and/or RoadworkNOLA, must be distributed at least twenty-four (24) hours before the valve closures. Test valve closures for businesses, schools/colleges/universities, and medical facilities that require specialized advanced coordination must be provided 72 hours in advance.

P. The Contractor must obtain approval from the City and/or RoadworkNOLA prior to distribution of notifications and is responsible for distributing all notifications, as required above. Failure to properly notify, based on these requirements, will result in a stop work order issued.

Q. It shall be the responsibility of the Contractor to distribute and obtain all Construction Authorization forms during the construction project. If necessary, a Construction Authorization form will be provided to the Contractor by the City. The Construction Authorization form is to be signed by the homeowner and a witness. All signed Construction Authorization forms are to be furnished to the Sewerage and Water Board Director prior to any work on the property listed on the Construction Authorization form. The Contractor shall return all disturbed areas to the condition existing prior to the start of the work.

R. The Contractor shall contact all utility companies prior to starting work to verify utility locations, depths of lines, etc., prior to starting demolition. Care should be taken in excavation around all utility lines. Utility service shall be maintained at all times for adjacent property owners, etc.

S. UTILITY SERVICES: Maintain existing utilities, keep in service, and protect against damage.

1. Do not interrupt existing utilities serving occupied or used facilities, except when authorized in writing by authorities having jurisdiction. Provide temporary services during interruptions to existing utilities, as acceptable to the governing authorities with no direct payment.

2. Note: Locations of existing utilities shown on the drawings are approximate. The Contractor shall verify their locations in the field with the appropriate agency in order to avoid conflicts and damage to utilities. Should damage occur to any existing utility lines or equipment, the Contractor shall be responsible for all cost repairs or replacements.

SECTION 1.04 - INTERPRETATION OF DOCUMENTS

No oral interpretation will be made to any bidder as to the meaning of any of the Contract Documents which in effect would modify any of the provisions of the same. Every request for an interpretation of the Documents shall be made in writing and delivered to the Sewerage and Water Board Director, at least seven (7) days (excluding weekends and holidays) before the time fixed for opening of bids. Any addenda shall be issued by the Sewerage and Water Board Director a minimum of 72 hours (excluding weekends and holidays) in advance of the time fixed for opening of bids. All bidders are requested to direct all questions about the contract documents promptly to the Sewerage and Water Board Director.

SECTION 1.05 - SPECIAL SAFETY PRECAUTIONS

In addition to the requirements of the General Specifications, it shall be the Contractor's responsibility to verify with the utility owners (electric, gas, telephone, communications, cable, etc., and New Orleans Sewerage and Water Board) having facilities within the project area, that the use of the Contractor's equipment (weights, configurations, characteristics, etc. provided by the Contractor) within the project area will not adversely affect their facilities.

SECTION 1.06 - SAFETY AND HEALTH REGULATIONS

The Code of Federal Regulations, Title 29, Occupational Safety and Health Administration (OSHA) shall apply. Safety and Health Provisions of the State of Louisiana shall apply where more stringent and where not covered by OSHA. The Contractor shall notify the Sewerage and Water Board Director within 24 hours of any reportable injury.

SECTION 1.07 - SAFETY PROTECTION & SECURITY

The Contractor shall be responsible for initiating, providing, maintaining, and supervising all safety precautions and programs in connection with the work. He shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:

a. All Employees on the work and other persons who may be affected thereby,

b. All the work and all materials or equipment to be incorporated herein, whether in storage on or off the site, and

c. Other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, drives, pavements, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction.

The Contractor shall comply with all applicable laws, ordinances, rules, regulations, and orders of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury, or loss. He shall erect and maintain, as required by the conditions and progress of the work, all necessary safeguards for its safety and protection. He shall notify owners of adjacent utilities when prosecution of the work may affect them.

The Contractor shall develop and provide an effective safety and health plan for inspection and training required and communicates the work practices to be applied to the work site(s). The Contractor must develop and implement a comprehensive health and safety plan for his or her employees, which covers all aspects of onsite construction operations and activities associated with the contract. This plan must comply with all applicable health and safety regulations and any project-specific requirements.

The Contractor must provide a copy of this plan to the Sewerage and Water Board Director prior to issue of the NTP. Acceptance of the Contractor's health and safety plan only signifies that the plan generally conforms to the requirements of the contract; it does not relieve the Contractor of the responsibility for providing employees with a safe and healthful work environment.

The Control measures outlined in the site-specific safety plan, provides each worker assigned to the job the opportunity to complete his/her task safely. Summary of this document should include but not limited to the following:

Description	Summary	Reference
Contractor Name	Self-Explanatory	29 CFR 1910-OSHA General Industry Safety and Health
Contract No.	Self-Explanatory	
Project Name	Self-Explanatory	
Responsibility and lines of Authority	Include the identification and job responsibilities of personnel responsible for safety and the lines of authority for each level of responsibilities.	
Responsible Member (Competent Person)	Designated by employer to identify hazards that are dangerous to employees	29 CFR 1926.32 (f) Section 01 200 Special Provisions, Section 1.07
General safety and health provisions	List the steps to be taken to control the hazards	29 CFR 1926.20
Safety training and education	All employees shall be trained in the recognition and avoidance or unsafe conditions, standards, to control or eliminate any hazards or other exposure	29 CFR 1926.21(B)(2)
Housekeeping	Work areas, walkway clear of debris; garbage and flammable /hazardous waste disposed, frequently and regularly	29 CFR 1926.25
Illumination	Construction areas, roadways, trenches, ditches, and storage areas where work is in progress shall be lighted with either natural or artificial illumination	29 CFR 1926.26
Personal protective equipment	Employers are to ensure all personnel wear of protective equipment in all operations where there is an exposure to hazardous conditions	29 CFR 1926.28
Site Inspection	Designated person to make frequent and regular documented inspections of the job site/sites, materials, and equipment. Provide proof of inspector's qualifications and or training certificates	29 CFR 1926.20(b)(3)
Lockout/tagout	Procedures established for unsafe equipment identified or made inoperable by tagging, locking, or removing	29 CFR 1926.20(b)(1)&(b)(2)

Representatives of the Contractor shall meet with the Sewerage and Water Board Director and Engineers representative prior to the start of construction for the purpose of reviewing safety requirements and discussing implementation of all health and safety provisions pertinent to the work under the assigned contract.

The representative will review the Contractor's site-specific safety and health plan with the Contractor as well as review all required safety data sheets (SDS) submitted for proposed products to be used by the Contractor. Due to the nature of the project/contract, the Contractor may be required to provide additional written comprehensive safety and health plans for the specific contract to include but not limited to the following:

Confined Space	Entry into any Manholes, Sewer, and Storm drains must be cleared for entry.	29 CFR 1910.146
Excavation and Shoring	Safe access and egress to all excavations, including ladders, steps, ramps, or other safe means of exit for employees working in trench excavations 4 feet (1.22 meters) or deeper.	29 CFR 1926 Subpart P
Lift Plan	Jobsite lifting with hydraulic excavators and backhoes is routine and lift capacity with rigging of each lift must be established.	29 CFR 1926.252 29 CFR 1926.601 29 CFR 1926.1400

Review and Acceptance of the Contractor's health and safety plan only signifies that the plan generally conforms to the requirements of the contract; it does not relieve the contractor of the responsibility for providing employees with a safe and healthful work environment.

The Contractor shall designate a responsible member of his organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated in writing by the Contractor to the Sewerage and Water Board Director for approval.

It shall be the Contractor's responsibility to maintain safety in the construction and maintenance zones within the project's vicinity. If the Contractor hires law enforcement during the project's duration, it shall be funded as an element in the Contractors Indirect Cost buildup presented at time of bid.

All damage, injury or loss to any property referred to in paragraphs b and c caused, directly or indirectly, in whole or in part, by the Contractor, any Subcontractor or anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, shall be remedied by the Contractor at no direct payment. The Contractor's duties and responsibilities for the safety and protection of the work shall continue until such time as all the work is completed and the Sewerage and Water Board Director has issued the Notice of Project Acceptance.

In emergencies affecting the safety of persons or the work or property at the site or adjacent thereto, the Contractor without special instructions or authorization from the Sewerage and Water Board Director, is obligated to act, at his discretion, to prevent threatened damage, injury, or loss.

The Contractor must protect and support all water, sewer, drain, and gas pipes or other conduits and buildings, walls, fences, or other properties which are liable to be damaged during the execution of his work. He shall take all reasonable and proper precautions to protect persons, animals, and vehicles of the public from injury, and shall erect and maintain a fence or railing around all excavation and place a sufficient number of warning lights about the work and keep them burning from twilight until sunrise and shall employ one or more watchmen as an additional security. He must, as far as practicable and consistent with good construction, permit

access to private and public property and leave fire hydrants and catch basins free from encumbrances. He must restore, at his own expense, all injured property caused by any act of omission on his part, or on the part of his agent, including but not limited to sidewalks, curbing, pipes, conduits, sewers and other public or private property, to a condition as good as it was when he entered upon the work.

In case of failure on the part of the Contractor to restore such property or make good such damage, the City may upon forty-eight (48) hours' notice proceed to repair, rebuild, or otherwise restore such property as may be deemed necessary, and the cost thereof, will be deducted from any monies due, or which may become due, under this contract.

Safety is the responsibility of the Contractor. There will be no direct payment for erecting and maintaining a fence or railing around excavations, placing warning lights and providing watchmen and supporting and protecting utilities as prescribed herein and the cost thereof shall be included in the prices bid for pay items in the Contract. There will be no direct payment for providing and supervising all safety precautions and programs in connection with the work and the cost thereof shall be included in the prices bid for pay items in the contract.

SECTION 1.08 - COORDINATION WITH UTILITY COMPANIES

A. All utility companies, including the Sewerage and Water Board, shall be contacted three working days prior to starting work to verify utility locations, depth of lines, etc., prior to starting demolition.

B. Contractor is responsible for contacting all utility companies so the utility companies can coordinate their efforts to move into the area to make whatever revisions they have to make to their utility installation.

C. Care shall be taken in excavation around all utility lines. Utility service shall be maintained at all times for adjacent property owners.

D. The Contractor shall notify the electric, gas, telephone, communications, and cable utility companies, utility owners, etc., three working days in advance of digging near or across their conduits or buried cables.

E. The Sewerage and Water Board must be notified three working days in advance of laying sewer and water lines called for in this contract.

F. Damage that may occur to any utility shall be repaired and paid for by the Contractor, except as noted to be paid for as a Bid Item.

G. The Contractor shall notify Entergy, S&WB and all other utility companies before any demolition takes place. The utility companies and the Contractor's representative should open all covers in the area and inspect and note any damage to frames, lines, manhole walls, etc. Any additional damage that occurs during demolition shall be repaired at the Contractor's expense. The utility companies have the option of repairing items and back charge the Contractor for such repairs.

H. UTILITY SERVICE: Maintain existing utilities, keep in service, and protect against damage during demolition operations.

Do not interrupt existing utilities serving occupied or used facilities, except when authorized in writing by authorities having jurisdiction. Provide temporary services during interruptions to existing utilities, as acceptable to the governing authorities.

The Contractor is hereby cautioned that many of the underground utility pipes, lines, conduits, cables, etc., are located immediately below the existing grade. Location and elevation of all utility lines have been established based on information furnished to the Engineers by the respective utility companies. However, location and depth of utility lines may vary from those shown on the Plans and Profiles.

The Contractor shall be required to provide property owners a minimum forty-eight (48) hours advanced notice for any foreseen or planned interruption of utility service(s).

SECTION 1.09 - COOPERATION WITH UTILITIES

A. The Contractor shall cooperate with officials of utility companies to avoid delays in completion of work due to non-removal or non-adjustment of utilities.

B. Some utility facilities will be removed, relocated, or adjusted in accordance with agreements between the City and utility companies. Such work may be underway concurrently with the Contractor's work and within construction limits covered by this contract.

C. Contractor shall consider in his bid all permanent and temporary utilities lines and appurtenances in their present or relocated positions and that no additional compensation will be allowed for delays, inconvenience or damage sustained by him due to interference from the said utility lines and appurtenances or the operation of moving them.

SECTION 1.10 - ABOVE GROUND UTILITIES

A. The Contractor shall exercise due care and caution to prevent damage to Fire Hydrants, Traffic Lights, Street Light Standards, Parking Meters, Utility Poles, Guy Poles, etc., whenever it is necessary to remove any type of pavement around such items. The Contractor shall repair and/or replace any such item damaged by his operations to the satisfaction of the utility's owner.

B. It shall be the responsibility of the Contractor to notify the appropriate owners of such facilities in the way of construction so that they can have representatives present, if they so desire, when the Contractor is performing such work around their facilities.

SECTION 1.11 - EXISTING UNDERGROUND AND OTHER INSTALLATIONS

Existing underground installations are indicated on the drawings only to the extent such information was made available to or discovered by Engineer in preparing the drawings. There is no guarantee as to the accuracy or completeness of such information, and all responsibility for the accuracy and completeness thereof if expressly disclaimed.

The Contractor shall be responsible for the preservation of all public and private property, monuments, highway signs, telephone lines, other utilities, etc., along and adjacent to the Work; shall use every precaution necessary to prevent damage to pipes, conduits, and other underground structures; and shall protect carefully from disturbance or damage all land monuments and property marks until an authorized agent has witnessed or otherwise referenced their locations and shall not remove them until directed by the property owners. The street and highway signs and markers, that are to be affected by the Work, shall be carefully removed when the work begins and stored in a manner to keep them clean and dry. The Contractor must obtain all necessary information in regard to existing utilities, and shall give notice in writing to the owners of the property or the authorities in charge of streets, gas, water, pipes, electric, sewers and other underground structures, including conduits, railways, poles and pole lines, manholes, catch basins, fixtures, appurtenances, and all other property that may be affected by the Contractor's operations, at least three (3) working days before his operations will affect such property or as specified elsewhere. The Contractor shall not hinder or interfere with any person in the protection of such work or with the operation of utilities, at any time. When property or the operation of railways, telephone lines, telegraph lines or other public utilities are endangered, the Contractor shall at his own expense, maintain flagmen or watchmen and any other necessary precautions to avoid interruption of service or damage to life or property, and shall promptly repair, restore, or make good injury or damage caused

by his operations in an acceptable manner.

SECTION 1.12 - UTILITIES EXPLORATION

Utilities exploration shall include all labor, materials, and equipment necessary for the Contractor to conduct a field investigation including exploratory excavations in advance of construction for the purpose of determining the existing location, size, and depth of all underground utilities shown or identified on the Drawings, any and all meetings with representatives of each utility, and furnishing the information to the Engineer. In addition to those utilities indicated on the Drawings, the Contractor shall also make exploratory excavations of all utilities which could impact the construction. This work shall include all test pit excavations including backfilling with sand, compaction, dewatering, pavement removal and replacement, and other related items. No direct payment shall be made for utility exploration.

SECTION 1.13 - SECURITY

Contractor shall be responsible for protection of the site, and all work, materials, equipment, and existing facilities thereon, against vandals and other unauthorized persons.

No claim shall be made against the City by reason of any act of an employee or trespasser, and Contractor shall make good all damage to the City's property resulting from his failure to provide security measures as specified.

Security measures shall be at least equal to those usually provided by the City to protect his existing facilities during normal operation, but shall also include such additional, security fencing, barricades, lighting, watchman services, and other measures as required to protect the site.

SECTION 1.14 – TEMPORARY UTILITIES

A. Temporary Lighting: Contractor shall provide, at his expense, temporary lighting facilities for prosecution and inspection of the work. These facilities shall be installed and maintained by the Contractor. Locate in such a manner as to result in the least interference with work upon the Project site and existing facilities. Contractor shall also provide temporary street lighting where the existing street lighting is disrupted due to construction activities.

B. Temporary Power: Contractor shall provide, at his expense, temporary power facilities required for prosecution and inspection of the Work. These facilities shall be installed and maintained by the Contractor. Locate in such a manner as to result in the least interference with work upon the Project site and existing facilities.

C. Temporary Water: The Contractor shall make the necessary arrangements, at his expense, for securing and transporting all water required in the construction, including water required for the mixing of concrete, sprinkling, flushing, flooding, or jetting, and including any temporary pipeline or equipment which may be necessary to make use of such water.

D. Temporary Sanitary Facilities: The Contractor shall provide, at his expense, adequate portable sanitary facilities on the site and shall be obscured from public view to the greatest extent possible. They shall be cleaned, deodorized, and disinfected each day construction is in progress, all at the Contractor's expense. If toilets of the chemically tested type are used, at least one toilet will be furnished for each 20 workers, in addition to the above requirement. Contractor shall enforce the use of such sanitary facilities by all personnel at the site.

SECTION 1.15 – INCLEMENT WEATHER DAYS

For this Contract, an Inclement Weather Day shall be defined as any day on which construction operations were unable to proceed for at least five (5) continuous hours of the day or 65% of the regular working hours, whichever is greater. Should the Contractor prepare to begin work on any given day in which inclement weather, or the conditions resulting from inclement weather, prevent work from beginning at the usual starting time, and the crew is dismissed as a result thereof, the day will be declared an Inclement Weather Day, whether or not conditions change during the day, resulting in the rest of the day becoming suitable for work. The Contractor shall notify Sewerage and Water Board Director and Engineer within 48 hours of an Inclement Weather Delay listing the critical path tasks affected by the delay.

SECTION 1.16 - AS-BUILT DRAWINGS

Contractor shall provide manually marked-up "red line" drawings to the project engineer for use in creating "as-built" AutoCAD® record drawings of the project. The original contract drawings shall be modified to show all additions, deletions, and other changes made during construction. Drawing modifications shall include both a markup of the graphics and a brief written explanation describing any changes. Wherever applicable, revisions shall include updates to details, sections, index, notes, drawing callouts, plan, and plan & profile views.

Each Sheet of the red line drawings shall include a stamp showing: RED-LINE DRAWINGS, name of Contractor, Superintendent's signature, and Date. Drawings shall also include: All field changes, any change in line or grade from the original drawings, location of mains and house service connections, and the limits of pavement removal and replacement.

To promote accuracy; red line drawings shall be updated on a bi-weekly basis with copies provided to the Sewerage and Water Board Director as work is completed for each block. Redlines shall be jointly reviewed/developed by the Contractor and Resident Inspector and discussed at each construction progress meeting. The Contractor shall furnish a final set of redline drawings prior to final inspection. The Contractor shall furnish redline drawings at no direct payment.

SECTION 1.17 - PROGRESS MEETINGS & SCHEDULE REQUIREMENTS

A. Progress meetings shall be scheduled biweekly or as requested by the Sewerage and Water Board Director.

B. Location of Meetings: The project field office of the Contractor or as approved by the Sewerage and Water Board Director.

C. Attendance: Sewerage and Water Board Director's Representative, Contractor, subcontractors, and suppliers as appropriate to the agenda, others as required.

D. Requirement: In addition to an updated approved schedule, the Contractor shall also provide a detailed two week look ahead schedule demonstrating the block locations along with the scope to be performed and present it to the Project Team as shown on the agenda. The Project Team shall review the requested schedule at the progress meeting and agree on an approved list of locations and scope of work. Contractor to provide CPM schedule, two-week look ahead schedule, RFI log, Plan Change Log, Submittal Log, and invoice status at each progress meeting.

E. Format: The Department will provide a two week look ahead schedule template at the Pre-Construction meeting, which shall be completed prior to all progress meetings. The Contractor's CPM schedule shall include the following criteria:

1. Schedule shall have a title that includes the Sewerage and Water Board Project ID and name.
2. The project schedule shall depict all field activities necessary to complete the work.
3. Activities shall be sufficiently detailed to include the block number, and a start/end date.
4. All schedule activities should be fully integrated, having predecessors and or successors.
5. Gantt chart shall show the predecessors and successors of each activity.
6. Critical Path Activities should be uniquely identified in the Gantt chart legend.
7. Schedules shall have a progress line in the Gantt chart that represents contractors progress to the date of the request.

F. Obligation: The Contractor shall abide by the schedule shown on the approved two week look ahead schedule. The Contractor shall not deviate from the approved schedule at any time, without obtaining prior approval. Shall deviations of the approved schedule be required, the Contractor shall submit deviations, in writing, requesting approval of the new locations and scope of work.

G. Repercussion: Failure to adhere to the approved two week look ahead will put the contractor in default and may result in a stop work order or termination of the contract for cause. This includes all work deviated from the approved schedule, including subcontractor work.

SECTION 1.18 – PRE-CONSTRUCTION VIDEO SURVEYS

Section C126.05 of the "General Specifications for Street Paving" is amended to include the following requirements:

Pre-Construction Video Surveys are optional and be performed at the Contractor's discretion. There shall be no direct payment for the Pre-Construction Video Surveys.

SECTION 1.19 – CONTRACTOR PROGRESS PAYMENT INVOICING AND DOCUMENTATION

Contractor shall be required to provide a detailed breakdown of each payment request that includes a summary of the work completed for each bid item by each municipal block. Additionally, a summary of the work completed for each bid item for each intersection, identified as "Intersection of (insert street name) Street and (insert cross street name) Street" shall be provided for quantification purposed blocks begin/end at the apparent right-of-way line of intersecting streets as shown on the plans. Contractor shall be required to provide separate invoices for the following categories when applicable:

- A.1.1 City of New Orleans Department of Public Works FEMA Eligible work items,
- A.1.3 City of New Orleans Department of Public Works FEMA ADA Eligible work items,
- A.2 City of New Orleans Department of Public Works non-FEMA Eligible work items,
- B.1.1 Sewerage and Water Board of New Orleans FEMA Eligible work items,

The Sewerage and Water Board Director will provide invoice and form templates, and direction to the Contractor on which work is non-FEMA Eligible.

Each contractor payment request shall include:

1. Two (2) original invoices certified by the Engineer and S&WB (if applicable) signed in blue ink. All invoices shall include the FEMA PW number and the S&WB reference number. Invoices shall be submitted monthly and shall include the billing period.
2. Two (2) original S&WB STS-651 and PWC-15 forms certified by the Engineer and S&WB signed in blue ink.
3. Two (2) Compact discs with all invoice forms and backup including but not limited to:
    a. Cover letter containing: Date, project ID, project name, invoice No., pay Period, Invoice amount, company logo, Purchase Order No., Service Contract No., FEMA PW No.
    b. Pre and post construction photographs for all completed work
    c. ADA ramp breakdown by location per funding source
    d. S&WB cost estimate STS-651 and PWC-15 Excel workbook.
    e. Certified payroll (if required)
    f. Updated approved CPM Schedule
    g. Approved Weather and Working Days report
    h. BMP/SCM Inspection Report with weather conditions noted and if rain occurred, appropriate photographs documenting Stormwater Pollution Prevention Plan Stormwater Control Measures in place.

SECTION 1.20 - SEQUENCE OF CONSTRUCTION

A. Section C126 of the General Specifications are hereby supplemented as follows:

B. The Contractor shall submit construction sequence and schedule to the Engineer and Sewerage and Water Board Director for approval prior to the start of construction in accordance with Section C126. Contractor shall be required to follow the approved sequence and schedule unless he has first obtained written approval from the Sewerage and Water Board Director for a deviation. Contractor shall incorporate in his schedule work items of other utilities and Contractors to ensure proper sequencing. The schedule shall include work items from Entergy New Orleans' contractor, Entergy Electric's construction crews, Entergy Gas's construction crews, and AT&T. Contractor shall be responsible for coordination and sequencing of the overall schedule. Construction Phases for Decatur St. (Dumaine St. – Governor Nicholls St.) and St. Peter St. (Chartres St. – Royal St.) shall be shown on Plans (Sheets D-2 and D-3).

C. Contractor shall, within three (3) days of initiating any work on a street, prepare and submit to the Sewerage and Water Board for review, a practical critical path schedule and phasing plan showing the order in which the Contractor proposes to carry on the work, the dates on which he will start the phases of the work, and the anticipated dates for completion of the same. The schedule shall be in the form of a progress chart of suitable scale to indicate appropriately the percentage of work scheduled for completion at any time. The Contractor shall enter on the chart the actual progress and present the updated information at each weekly Contractor/owner construction meeting or at such intervals as validated by the Sewerage and Water Board Director and shall provide electronically to the Sewerage and Water Board Director.

D. To facilitate Sewerage and Water Board Director testing and inspection requirements once Contractor starts utility work the utility installations shall be executed on a continuous basis until substantial completion of all utility work. Contractor shall substantially complete all work, including pavement restoration, for any continuous roadway segment with water and/or sewer work prior to initiating operations on roadway segments consisting of only roadway pavement restoration work, unless approved in writing by the Sewerage and Water Board Director. Once Contractor mobilizes to start work on a roadway segment Contractor must complete all approved work, including any necessary utility repairs or relocations in a continuous fashion within the approved scheduled time and shall maintain adequate personnel and equipment on site until such time all work is substantially complete. Work to be substantially completed includes, but is not limited to, utility replacement or rehabilitation, including all services, connections and tie-ins; roadway

repairs; curbs and gutters; drive aprons; sidewalks; ramps; proper backfilling of all cavities; and other incidental work in accordance with the project plans and specifications. Any work restricting access to any street, drive, or sidewalk shall be completed prior to substantial completion being granted. If to meet the approved schedule the contractor elects to work on multiple sites simultaneously the contractor must ensure the proper resources are available in order to adequately handle all the work in progress as specified. Contractor is responsible for performing all tasks to substantially complete all work in a concentrated area prior to moving onto another work area.

E. When scheduling work Contractor shall phase limits of construction to allow completion of all pavement work within ten (10) working days unless otherwise approved by the Sewerage and Water Board Director. The Contractor shall use traffic aggregate or steel plates for pavement activities exceeding ten (10) working days to minimize impacts to traffic flow in accordance with Section C402 in the General Specifications and Section 2.06 regarding the item C402(51) at no direct pay. Pavement repair shall commence immediately following the acceptance of the waterline installation on each block. In addition, Contractor shall only perform utility trenching operations ahead a distance sufficient for the length of pipe installation planned for the current workday, plus a reasonable additional distance ahead to reveal any obstructions that may necessitate changing the line or grade of the pipe. All other associated work within the scheduled work limits shall be completed in accordance with the approved critical path schedule and phasing plan.

F. Contractor shall phase all roadway construction including intersections to allow for the maintenance of traffic and emergency vehicle access.

G. Contractor shall notify the Sewerage & Water Board Director in writing at least two (2) working days prior to mobilizing and starting any utility work, including trenching, and at least two (2) working days prior to the day utility tie-ins to the existing system will be made and service will be transferred to the new main. These notifications shall be in addition to any other notification in accordance with Sewerage & Water Board requirements and per the project plans and specifications. Contractor shall notify the Sewerage & Water Board Director in writing at least two (2) working days prior performing any roadway restoration work detailed on the plans or include in approved plan changes, including removal operations.

H. Contractor shall receive no additional compensation for any work related to the means, methods, techniques, scheduling, sequences or procedures that are required to complete the project in accordance with the project plans and specifications.

I. The successful bidder shall be awarded the work for a period of three hundred (300) calendar days starting from the day after the Overall Notice to Proceed, which shall constitute the overall duration or contract period. The contract prices are firm during the entirety of the project.

J. The quantities given in the proposal form are approximate for the comparison of bids only. The Sewerage and Water Board Director reserves the right to purchase only such items and in such quantities as needed for the duration of this contract after acceptance of the lowest responsible bid. The Sewerage and Water Board Director also reserves the right to perform part of the work with its in-house forces or hire other contractors for similar work in the project area during the contract period.

The overall project scope shall be broken down and delineated as individual Task Orders, as detailed on Plan Sheets D-2 and D-3. Each Task Order may consist of one or multiple plan sheets, which will serve as the scope for that specific Task Order to include all utilities, roadway, and associated infrastructure work per the associated plan sheets.

Contract Task Orders shall be issued to the Contractor individually or grouped with multiple Task Orders at once, at the discretion of the Engineer and Sewerage and Water Board Director. Prior to issuance of a Task Order, Contractor, Engineer and S&WB will hold a Pre-Task Order Meeting to discuss scope, schedule, and

delivery strategy. Attached as Exhibit 01 is a sample Task Order to be utilized for this process.

All work within the limits of each Task Order shall be shown to the Contractor by a representative of the S&WB and/or Engineer prior to commencing work. Appropriate drawings and details will be furnished to the Contractor with each Task Order. Work sites may be non-continuous blocks for an individual task order; however, every effort will be made to consolidate the work to minimize scattered work sites.

Each Task Order will be issued with appropriate drawings or other attachments and will designate a specific Task Order number. All correspondence, billing, etc., pertaining to the work should reference the Task Order number and the current job number designation.

The Contractor shall begin the work within 10 days after issuance of an executed task order and a corresponding Task Order Notice to Proceed. If the Contractor fails to start a task order within 10 days of the Notice to Proceed date or leaves the work incomplete for over a 30-day period, the City shall approach the next lowest bidder to start and/or complete the Task Order(s) or utilize other contractors to perform the work. However, if the Contractor has a valid reason for the lack of progress or delayed start of an issued Task Order that is beyond the Contractor's control, he must obtain written permission from the Engineer or S&WB for the stipulated delay.

S&WB reserves the right to put a Task Order on hold at any time as needed, without reason. If the scope of work is discontinued, the Contractor will be compensated only for the completed and accepted items of work. There will be no compensation for any claims of downtime due to a Task Order being put on hold or discontinued. S&WB reserves the right to modify, add, or remove scope within an issued Task Order as needed to best serve the Project.

Beyond the initial Task Order issued for said Project, additional Task Orders shall be issued only when the previously issued Task Order is deemed Substantially Complete by the Engineer and S&WB. Substantial Completion, as defined for this purpose, shall be determined by one or more of the following criteria:

- Issued work within a given Task Order is 95% complete by the planned scope and cost or agreed upon scope and cost;
- All Utilities, Roadways & Driveways within the Task Order are complete and open to traffic;
- Any incomplete work consists of Punch List items which typically consist of addressing areas in need of minor backfilling, completion of pavement striping, necessary yard restorations, site clean- up, etc.

Additional Task Orders on the project shall only be issued when the preceding task orders are either complete or substantially complete, as defined above. If the Contractor fails to complete a task order within the agreed time frame or leaves the work incomplete or inactive for a period of 30 days, absent any previously agreed upon stipulated delay claim, S&WB reserves the right to complete the remainder of that task order, as well as all additional remaining work included in the overall project scope by either the use of S&WB work forces or other contractors.

It is understood by the Contractor that the quantities provided in the schedule of bid prices are a fair approximation of the amount of work to be done, and that the sum of the products of the approximate quantities multiplied by the unit price bid constitutes the base bid price, which sum shall be used in the comparison of bids and the awarding of the respective contracts. The actual constructed quantities may vary from the quantities listed in the proposal form.

SECTION 1.21 – SEWER SYSTEM EVALUATION AND REHABILITATION PROGRAM REQUIREMENTS

A. This contract does not include work commissioned by the Sewerage & Water Board of New Orleans under their Sewer System Evaluation and Rehabilitation Program in response to an EPA Consent Decree. However, any sewer rehabilitation work fulfilled under this contract shall meet the sewer rehabilitation requirements included herein this section. Contractor shall refer to sections 2.07 through 2.12 and Section 3.22 for additional sewer rehabilitation requirements for consent decree and non-consent decree sewer rehabilitation work.

SECTION 1.22 – WATER POINT REPAIRS

A. The Contractor shall furnish all labor, supervision, materials, and equipment required to complete items in this section.

B. All workmanship and materials shall conform to Section C741 of the Department of Public Works General Specifications for Street Paving, S&WB Dwg. No. 7260-W, and S&WB Standard Drawings, except as noted herein.

C. The Contractor shall examine the locations of every plan sheet, well in advance of any planned construction within that block, and report all leaks to the S&WB by calling in 52-WATER (529-2837).

D. Damages to the water distribution system caused by the Contractor, shall be repaired by the Contractor at no direct pay, or repaired by the S&WB at the Contractor's expense. If in the opinion of the Engineer that damages to the water distribution system were not a result of the Contractors normal construction activities, the contractor will be paid at the unit prices of the appropriate bid item.

E. All lead service lines (LSL) exposed within the project limits, regardless of status of utility replacement at the location of the LSL, shall be reported to the S&WB project representative immediately. Resident must receive S&WB-approved written notification at the time any LSL is located and/or replaced." The LSL shall be replaced once written approval is provided by S&WB representative.

F. If directed to replace the LSL, the service connection must be replaced from the water main to the meter box. Temporary splices or repairs of leaking or damaged LSLs are not allowed. If directed by S&WB project representative to relocate water meter location, the pipe material must be identified between the meter box and property line. If the service line between the meter and the property line is of lead material, the Contractor and S&WB shall coordinate with the property owner to ensure the entire LSL is replaced between the water main and the property.

G. Contractor shall refer to section 2.12 and section 3.23 for technical specifications and special pay items specific to the work in this section.

SECTION 1.23 – CONTRACT TASK ORDERS

The successful bidder shall be awarded the work for a period of Contract Duration working days starting from the day after the Overall Notice to Proceed, which shall constitute the overall duration or contract period. The contract prices are firm during the entirety of the project.

The quantities given in the proposal form are approximate for the comparison of bids only. The Sewerage and Water Board Director reserves the right to purchase only such items and in such quantities as needed for the duration of this contract after acceptance of the lowest responsible bid. Additional unit price

quantities will be in accordance with Section C136. The S&WB also reserves the right to perform part of the work with its in-house forces or hire other contractors for similar work in the project area during the contract period.

The overall project scope shall be broken down and delineated as individual Task Orders in contract documents. Each Task Order may consist of one or multiple plan sheets, which will serve as the scope for that specific Task Order to include all utilities, roadway, and associated infrastructure work per the associated plan sheets.

Contract Task Orders shall be issued to the Contractor individually or grouped with multiple Task Orders at once, at the discretion of the Engineer and the Sewerage and Water Board Director. Prior to issuance of a Task Order, Contractor, Engineer and S&WB will hold a Pre-Task Order Meeting to discuss scope, schedule, and delivery strategy. Task Order durations shall be determined by the Contractor during the Pre-Construction Meeting. Exhibit 1, attached at the end of this section, is a sample Task Order to be utilized for this process.

All work within the limits of each Task Order shall be shown to the Contractor by a representative of the Department of Public Works and/or Engineer prior to commencing work. Appropriate drawings and details will be furnished to the Contractor with each Task Order. Work sites may be non-continuous blocks for an individual task order; however, every effort will be made to consolidate the work to minimize scattered work sites.

Each Task Order will be issued with appropriate drawings or other attachments and will designate a specific Task Order number. All correspondence, billing, etc., pertaining to the work should reference the Task Order number and the current job number designation.

The Contractor shall begin the work within Ten (10) days after issuance of an executed task order and a corresponding Task Order Notice to Proceed. If the Contractor fails to start a task order within Ten (10) days of the Notice to Proceed date or leaves the work incomplete for over a 30-day period, the Sewerage and Water Board Director shall proceed in accordance with Sections C123 and C126 or shall approach the next lowest bidder to start and/or complete the Task Order(s) or utilize other contractors to perform the work. However, if the Contractor has a valid reason for the lack of progress or delayed start of an issued Task Order that is beyond the Contractor's control, he must obtain written permission from the Engineer or S&WB for the stipulated delay.

S&WB reserves the right to put a Task Order on hold at any time as needed, without reason. If the scope of work is discontinued, the Contractor will be compensated only for the completed and accepted items of work. The Sewerage and Water Board Director reserves the right to modify, add, or remove scope within an issued Task Order as needed to best serve the Project. Temporary waterline tie-ins shall be abandoned, removed, and tied into the adjacent mainline in accordance with Section C741 in the General Specifications at no direct pay.

Beyond the initial Task Order issued for said Project, additional Task Orders shall be issued only when the previously issued Task Order is deemed Substantially Complete by the Engineer and S&WB. The Contractor can request additional task orders to be issued and approved by the Sewerage and Water Board Director. Substantial Completion, as defined for this purpose, shall be determined by one or more of the following criteria:

- Issued work within a given Task Order is 95% complete by the planned scope and cost or agreed upon scope and cost;
- All Utilities, Roadways & Driveways within the Task Order are complete and open to traffic;

- Any minor incomplete work or Punch List items which typically consist of addressing areas in need of minor backfilling, completion of pavement striping, necessary yard restorations, patching, site cleanup, etc.

Additional Task Orders on the project shall only be issued when the preceding task orders are either complete or substantially complete, as defined above. The Contractor can request additional task orders to be issued and approved by the Sewerage and Water Board Director. If the Contractor fails to complete a task order within the agreed time frame or leaves the work incomplete or inactive for a period of Thirty (30) days, absent any previously agreed upon stipulated delay claim, S&WB shall proceed in accordance with Sections C123 and C126 and reserves the right to complete the remainder of that task order, as well as all additional remaining work included in the overall project scope by either the use of S&WB work forces or other contractors. The Contractor shall notify the Sewerage and Water Board Director within 48 hours of a critical path task delay listing the critical path tasks affected by the delay.

It is understood by the Contractor that the quantities provided in the schedule of bid prices are a fair approximation of the amount of work to be done, and that the sum of the products of the approximate quantities multiplied by the unit price bid constitutes the base bid price, which sum shall be used in the comparison of bids and the awarding of the respective contracts. The unit cost quantities represent a complete cost total, representing all work required to provide a completed project scope. The actual constructed quantities may vary from the quantities listed in the proposal form.

EXHIBIT 1
JIRR FEMA
Sewerage and Water Board of New Orleans Project No. RRXXX
TASK ORDER 01

Sewerage and Water Board of New Orleans
8800 S. Claiborne Ave.
New Orleans, LA 70118

Estimated Cost: Date Issued:

Plan Sheets:

Contractor: Project No. FEMA

You are hereby directed to commence work within XX days of the date of this work order and complete all work, including restoration, within XX days, in accordance with project specifications. If this task order is not substantially completed within XX days, no further task orders will be issued.

See attached Plan Sheets for details of **Task Order 01**.

Description:

Task Order 01 contains XX sheets located within XX Neighborhood in Orleans Parish. **Special attention shall be given to the roadway elevations to ensure positive drainage to the adjacent catch basins.** All work described in the attached plan sheets is subject to field verification. Variations shall be approved by the Engineer. The following is a list of the plan sheets associated with Task Order 01.

Site Location	DPW Sheet(S)	S&WB Sheet(s)
XXX	XX	XX
XXX	XX	XX
XXX	XX	XX

SIGNED:

Contractor.:_____DATE: _____

Engineer.:_____
_____DATE:_____

S&WB.:_____DATE:_____

Attachments

SECTION 1.24 – PROCORE COLLABORATION SOFTWARE

COLLABORATION SOFTWARE

1. SUMMARY
    a. Utilize S&WB-provided Procore construction management software (www.procore.com) to submit, track, distribute and collaborate on project documentation and action items.
    b. The intent of utilizing Procore construction management application is to reduce cost and schedule risk, improve quality and safety, and maintain a healthy team dynamic by improving information flow, reducing non-productive activities, reducing rework and decreasing turnaround times.
2. SOFTWARE USES
    a. Daily Log
        i. Daily log entry from web and mobile with automatic capture of daily weather conditions.
        ii. Attach photographs to entries directly from mobile.
        iii. Reporting capabilities to easily report on man-hours and activities for a certain time frame and contractor.
    b. Dashboards
        i. Dashboards that show the status of all currently assigned items with drill down capability to see the subject, assignee and due date of each item.
    c. Deficiency Tracking
        i. A means for recording, assigning and confirming completion of any deficiency or observation noted during the course of construction. Is accessible from web and mobile.
    d. Directory
        i. All team member's contact information that is accessible from web and mobile.
    e. Documents
        i. Storage location for miscellaneous project documents with the ability to have a folder hierarchy and privacy settings on folders.
        ii. No storage limit.
        iii. Download tracking.
        iv. Ability to revise and check out files, with access to all previous revisions.
    f. Drawings
        i. A system maintained current set of drawings on web and mobile, with access to all previous revisions as well.
        ii. Automatic hyperlinking capability for detail callouts.
        iii. Drawing markup capabilities on web and mobile.

iv. Ability to link RFIs, Submittals, Punchlist Items, Photos and Project Documents to the drawings.

v. Drawing Markups should be carried forward when new revisions are uploaded.

vi. Markups and linked documentation should be able to be public or private based on desired level of user accessibility.

g. Financial Management

i. Manage contracts, payment applications and change orders through the software.

ii. View contracts and change orders from web and mobile.

h. Inspections

i. Create inspections from web and mobile.

ii. Create a deficiency item from an inspection that can be assigned and tracked to completion.

i. Meetings

i. Create, edit and view meeting minutes from web and mobile.

ii. Create action items with assignees and due dates from a meeting item.

j. Mobile Accessibility

i. Native mobile applications for iOS and Android phones at a minimum that provide access to relevant project documentation, including as-built versions of Drawings and Specifications, even when there is no internet access.

k. Photos

i. Upload and view photos from web and mobile.

ii. Markup photos from mobile to clarify anything important in the photo.

iii. Link photos to specific locations on drawings.

l. Punchlist

i. Create punch-list items from web and mobile and link them to specific locations on the drawings.

ii. Distribute punch-list items to all contractors, for contractors to mark them as resolved with photographic proof of resolution via mobile, and for the items to be marked as complete via mobile or web.

m. Requests for Information (RFIs)

i. Create RFIs with assignees, due dates and attachments.

ii. Assignees can respond to RFIs both via the software and by responding to the system generated email.

iii. Auto-generated log of all RFIs.

n. Schedule

i. Display schedules from typical scheduling software such as Microsoft Project, Primavera P3, Primavera P6 or Asta Powerproject.

o. Specifications

i. Upload project specifications and manage them at the individual specification level.

ii. View and search specifications on web and mobile.

iii. Upload revisions to individual specifications and maintain all revision history.

iv. Auto-generated current specification log that provides access to the current version of each specification.

v. Link specifications to submittals and view the specification from the submittal.

p. Submittals

i. Upload a submittal register of all expected submittals.

ii. Create multi-step approval workflows for submittals, with reminder notifications for the current assignee.

iii. Upload any file type without size restrictions.

iv. Auto-generated submittal log.

3. TECHNOLOGY

a. Fully web based with mobile apps for Windows, iOS and Android phones.

b. Accessible without logging in through a virtual private network (VPN).

c. Works on the current version of Internet Explorer, Google Chrome, Mozilla Firefox and Apple Safari browsers.

d. Can generate emails automatically, and all attachments are included in the emails via download links to avoid emails not being delivered due to size.

e. PDF output of forms such as RFIs, Submittals, Meetings, Change Orders, etc. should be available and customizable.

4. TRAINING AND SUPPORT

a. Support to all parties via email, phone and live chat at no additional charge.

b. Training in the form of self-paced learning videos as well as interactive webinars.

c. The contractor shall hold a kickoff meeting with the Owner and applicable consultants at the beginning of the project to discuss how the software will be used, routing & naming protocols, etc.

5. PROCEDURES

a. RFIs and Submittals

i. The Contractor will be responsible for submitting all RFIs and Submittals through the software and assigning them to the appropriate parties.

ii. The S&WB's Architects, Engineers, Consultants, etc. are responsible for reviewing, approving, and posting all responses to RFIs and submittals via the software, including all relevant attachments.

iii. Responses to all RFIs shall be reviewed, accepted, or rejected by the Sewerage and Water Board Director of Public Works and or the Sewerage and Water Boards appointed representative.

iv. The Contractor will distribute approved and accepted responses to all affected subcontractors and confirm agreement with the response by closing the item.

b. Construction Documentation

i. The Engineer will manage Drawings, Specifications and Documents in the software to ensure that the current version of all applicable construction documentation is available to the entire team via web and mobile.

ii. The Engineer will ensure that all RFIs which modify the current drawings are posted to the drawings and available via web and mobile within 24 hours of the RFI being responded to.

c. The Engineer will record and distribute meeting minutes and action items via the software.

d. The Engineer's Resident Inspector will create daily reports, take daily site photos, and make them publicly available. Daily reports shall include but not limited to: Report number, days used on the contract, quantities per pay item, personnel and equipment on site, Construction start and end time, and construction activities per block.

e. Punchlist

i. All punch-list items will be managed through the software.

ii. Punchlist items will be created by the Engineer during the substantially complete project site walk-through with the Owner, Contractor and Owner's Representatives.

iii. It will be at the Owner's discretion whether Punchlist Items can be closed while a representative from the Owner or applicable consultant is not present.

f. General

i. It is intended that the contractor will utilize the software for at least all functions identified in "Section 2 – Software Uses."

6. PRICING

a. The cost of Procore Technologies services has been paid in full by the Owner

b. The software allows for unlimited users to ensure that all parties have access to the system.

7. HARDWARE

a. The Contractor will ensure all necessary users have access to devices compatible with Procore

b. The Contractor will maintain at least one Procore compatible device on site with a screen of 7" or larger for ease of viewing, sharing, and discussing plans in the field.

SECTION 1.25 – ENVIRONMENTAL PROTECTION AND STORM WATER POLLUTION PREVENTION

Environmental Protection and Storm Water Pollution Prevention Plan shall be in accordance with Section C204 Environmental Protection and Stormwater Pollution Prevention Plan from the General Specifications except as modified here-in.

The Contractor certifies under penalty of law that he understands and will abide by the terms and conditions of the following:

1. Permit LAR10M21: Orleans Parish-wide coverage for Storm Water Discharges Associated with Construction Activities five (5) acres or more for the JIRR Program

2. Sewerage & Water Board of New Orleans Plumbing Code

3. The Joint Infrastructure Recovery Request (JIRR) Program is authorized under LPDES Permit LAR10M215 that encompasses all of Orleans Parish for Storm Water Discharges Associated with Construction Activities five (5) acres or more. The permit had an effective date of June 8, 2020 and expiration date is March 28, 2024. This permit coverage alone automatically mandates that all JIRR projects regardless of the project size will be part of a "larger common plan of development" Since the entire program is covered, the contractor does not have to obtain a state-issued permit from LDEQ; regardless, an adequate Stormwater Pollution Prevention Plan shall be developed and maintained regardless of the size of the project.

4. Compliance with JIRR Permit LAR10M21.

SECTION 1.26 – CONTRACTOR REQUIREMENTS FOR CONSTRUCTION WORK IN THE FRENCH QUARTER

A. General:

- The contractor will provide SWBNO its staging plans within 90 days of NTP.

B. Business Access:

- The contractor will ensure sidewalks are passable to foot traffic at all times, except to complete tie-ins at the end of the block.
    - Tie-ins should take no longer than one day.
- Business/residence access points should be accessible at all times.
- Delivery access should be available at all times.
    - If delivery access will be restricted, the contractor must inform the resident/business 48 hours in advance.
- There will be no laydown yard on site.
    - If a laydown yard is needed SWBNO will need to approve it. The proposed laydown yard site cannot interfere with foot traffic on the work site.
- Produce and post clear wayfinding signage for vehicular traffic detour.
    - SWBNO can provide templates.
- Produce and post clear wayfinding signage for foot traffic depicting detours and business access.

- SWBNO can provide templates.

- No work between the hours of 6pm and 7am.
- The contractor will adhere to the City noise ordinance from 7am to 6pm.
- The contractor will perform no work and ensure all sidewalks are open and safe for foot traffic on the following days:

Holiday/Event	Start Date	End Date
New Orleans Wine and Food Experience	June 11, 2025	June 15, 2025
Pride Weekend	June 12, 2025	June 15, 2025
Essence Fest	July 3, 2025	July 6, 2025
Satchmo Summerfest	August 2, 2025	August 3, 2025
Krewe du Boo	October 25, 2025	October 25, 2025
New Year's Eve	December 31, 2025	January 1, 2026
Joan of Arc Parade	January 6, 2026	January 6, 2026
Krewe de Vieux	TBD	TBD
Mardi Gras	February 5, 2026	February 18, 2026
St. Patrick's Day	March 17, 2026	March 17, 2026
Crescent City Classic	April 4, 2026	April 4, 2026
French Quarter Festival	April 16, 2026	April 19, 2026

C. Impacts to Neighbors:

- The contractor will employ above-ground water bypasses to keep water service available for homes and businesses in the work area.
  - The contractor will respond to water bypass repairs within one hour.
- Contractor will follow city noise ordinances at all times during work hours.
- The contractor will monitor vibration throughout work.
- The contractor will conduct video surveys of properties before work to document previous condition.
  - For residents and business owners that refuse the video survey, the contractor will document their refusal via a form provided by SWBNO and share both print and digital copies with SWBNO.
- The contractor will coordinate with utility companies, including cable/phone, electricity, gas and develop Incident Management Protocols to address potential issues that may arise.
  - The contractor will provide ongoing assistance to SWBNO throughout incidents. During an incident, the contractor will make available sufficient communications staff and project resources to work effectively with SWBNO and proactively perform the contractor's communications responsibilities; and during a crisis incident situation, the contractor will provide SWBNO with content for holding statements within 15 minutes of the event occurring.

D. Public Outreach:

- The contractor will adhere to and fulfill customer notifications as outlined in the outreach plan developed by SWBNO.
- The contractor will provide a knowledgeable staff member to participate in up to six community meetings hosted in relation to the project. Anticipated timeline for meetings includes:
  - Contract awarded meeting

- One month out meeting
- During construction meeting(s) (potentially associated with phasing timeline)

- The contractor will provide SWBNO one-week notice via phone call and email before closing sidewalks/restricting access to businesses or residences to allow the utility to properly communicate with stakeholders.
- The contractor must notify impacted residents, property owners, and businesses one week in advance and the day before the following activities via physical collateral (e.g., letter, flyer, door hanger) and email (using the contact list collected and provided by SWBNO) using branded templates provided by SWBNO. The notifications must include an easy-to-read map of the detour and applicable timeline:
  - Sidewalk closure/restrictions to building access
  - Road closures
- The contractor must notify impacted residents, property owners, and businesses 72 hours in advance and the day of the following activities via physical collateral (e.g., letter, flyer, door hanger) and email (using the contact list collected and provided by SWBNO) using branded templates provided by SWBNO:
  - Planned water shut off
  - Planned sewer shut off
- The contractor will attempt to provide physical notice to residents and businesses on all floors of impacted buildings.
- The contractor will share any public-facing communication materials with the SWBNO Communications Department for review and quality control before distributing to customers.
  - When creating public-facing communication materials, the contractor will follow SWBNO's brand guidelines and utilize templates provided by SWBNO when possible.
- The contractor will direct all media inquiries to SWBNO's Communication Department.

E. Coordination Calls:

- Participate in monthly communications coordination calls
- Participate in four-week look-ahead calls

SECTION 1.27 – NOTICE TO PROCEED – STARTUP TIME

The Notice to Proceed (NTP) is scheduled to be issued for March 13, 2025. However, the Contractor shall not mobilize, store materials and equipment or place traffic control devices (detours) on site until May 12, 2025. The contract time begins with the date of the NTP. Prior to May 12, 2025 the Contractor shall submit a detailed construction schedule and shop drawings for review to the Engineer along with providing notifications to the residents and businesses, and executing and submitting the Southeast Louisiana Flood Protection Authority - East Hold Harmless Agreement located in Appendix A in order that it can be forwarded to the Southeast Louisiana Flood Protection Authority – East in order that the Permit OL2023-00272 may be issued, and obtain any other permits as required by the contract documents. A traffic control plan shall be submitted to the Director or Chief Traffic Engineer for the Department of Public Works Traffic Division for review a minimum of 30 days prior to mobilization on site. Procuring materials and equipment with long lead times and coordination of trash pickup shall be performed by the Contractor prior to mobilization. Before mobilization the Contractor shall coordinate any work at the site with work being performed by Entergy electric and Entergy gas.

Parking and Traffic Control Requirements

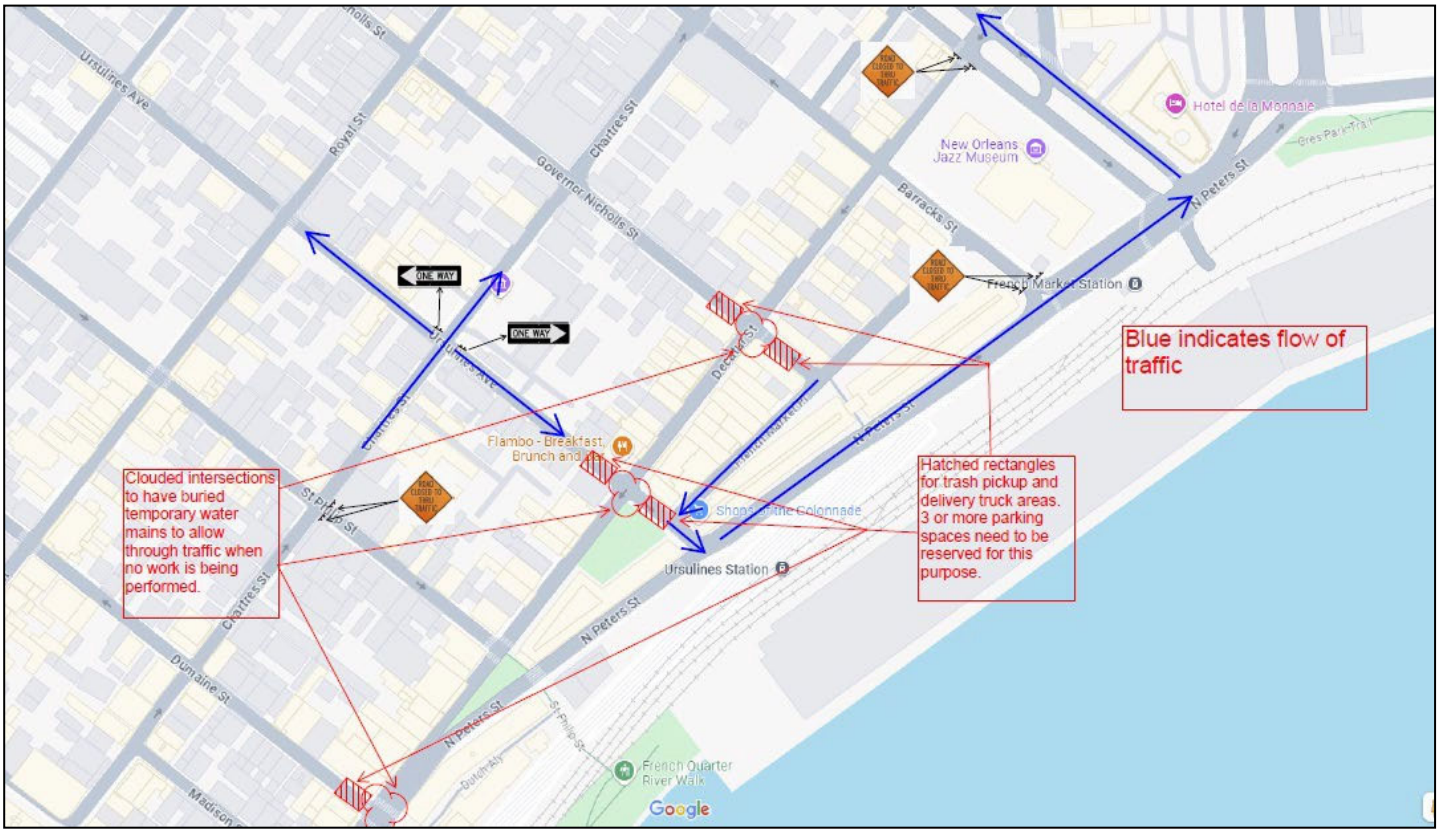
1. The contractor's personal vehicles shall not be parked adjacent to the project site, in the work zones or on detour routes.

2. The intersections of Decatur at Dumaine St. and Saint Phillip St. may be closed during construction.

3. The intersections of Decatur at Ursulines Ave. and Governor Nicholls St. shall have one lane open to traffic on those side streets. Temporary water lines shall be buried at these intersections.

4. At the intersections of Decatur at Dumaine St., St. Phillip St. and Governor Nicholls St. the first three parking spaces adjacent to Decatur St. Shall be reserved for trash pickup and delivery trucks.

See the Attached detour route plan guidelines.



Detour Plan Guide Lines

PART II – SUPPLEMENT TECHNICAL SPECIFICATIONS

SECTION 2.01 - REMOVAL OF EXISTING PAVEMENT

A. All existing pavement designated to be removed shall be removed and disposed of beyond the limits of project by the Contractor.

B. Payment for concrete and asphaltic concrete pavement removal shall include removal, hauling and disposing of pavement off of the project site.

C. Pavement consisting of asphaltic concrete over Portland cement concrete shall be considered Composite Pavement. Composite Pavement shall be removed, without regard to thickness, at the price bid per square yard for REMOVAL AND DISPOSAL OF EXISTING PORTLAND CEMENT CONCRETE PAVEMENT. There will be no additional payment if the Contractor elects to cold mill or remove the existing asphalt surface prior to removal of the concrete pavement.

D. Payment for the pay item C202(52)(C) REMOVAL AND DISPOSAL OF EXISTING PORTLAND CEMENT CONCRETE PAVEMENT shall be made at the contract unit price, including removal and disposal of existing curb at no direct pay.

SECTION 2.02 - CURBS OR CURB AND GUTTER BOTTOMS

The Contractor shall remove and dispose of all existing curb or curb and gutter bottoms in accordance with the plans. Existing stone curb to be removed shall be delivered to the Department of Public Works Maintenance Yard located at 838 South Genois Street unless directed by the Owner (No additional pay for disposal).

Price for new dowel curbs in new concrete pavement shall include horizontal dowels and longitudinal reinforcement as detailed on the standard plan by the City of New Orleans Department of Public Works (DPW).

Price for new curb shall include transitions, depression or hand forming curbs at obstructions as may be directed by the Sewerage and Water Board Director or required by the Department of Parks and Parkways.

The Contractor shall backfill and compact behind curb with select material obtained from roadway excavation or other approved sources and install the top 4 inches with batture sand behind the curb for dressing and beneath sidewalks and driveways at no direct pay. Payment shall be included in the unit price bid for curbs, sidewalks, or driveways as applicable.

Price for new curb and gutters associated with new asphalt pavement shall include all transverse and longitudinal reinforcement in conformance with the details on standard plan by S&WB included with these specifications.

Price for new curb or curb and gutters associated with Handicapped Ramp construction shall be measured and paid for as subsidiary to unit price bid for ADA-ACCESSIBLE CURB RAMPS, CURB AND GUTTER, AND CONCRETE SIDEWALKS AT INTERSECTIONS.

SECTION 2.03 - REMOVAL OF EXISTING SIDEWALKS, DRIVEWAYS, AND FOOTLAPS

Existing concrete sidewalk, driveway, and footlaps shown to be removed shall be removed and properly disposed of by the Contractor. At locations where sidewalk, driveway, or footlaps are to be removed but are not to be replaced, the contractor shall backfill the area with selected excavated or other suitable approved material at no direct payment.

SECTION 2.04 - EXCAVATION

A. Limits of roadway excavation are shown on the plans and are measured from the bottom of the existing pavement to the bottom of the base course, and/or sub-base (where applicable). All excavated material shall be hauled and disposed of off the project site.

B. The quantity shown in the proposal form is approximate and is included for information purposes only. Partial payments for excavation will be made on a percentage basis computed from the ratio of linear foot of roadway excavation completed to the total length of roadway in the project.

SECTION 2.05 - CONSTRUCTION ROUTING AND MAINTENANCE

The Contractor must minimize damage to streets used for access to the project for the delivery of materials and equipment by observing weight and speed limits as defined in the City Code in Section 38-169 and 38-73 (h) respectively. Access routes to the work site from designated "truck routes" will be established at the preconstruction meeting. The Contractor and his subcontractor(s) will be required to adhere to these routes to and from the project site. The routes may be revised by the Sewerage and Water Board Director to accommodate the work as it progresses. The Contractor is required to keep the work site clean, particularly the roadways adjacent to the work site. The Contractor shall clear such roadways of dirt, silt sand or other such material as often as necessary, or as specified by condition at the close of each workday.

SECTION 2.06 - SHEETING AND BRACING

A. Sheeting and bracing shall meet the design, material, installation, and maintenance requirements of all SAFETY AND HEALTH REGULATIONS.

B. The cost of sheeting and bracing shall be included in the unit price bid per linear foot for drain, sewer, or water lines.

C. The Contractor shall provide design services, materials, and labor necessary for sheeting, shoring, and bracing of excavations as required for trenches in a safe working condition. The Contractor shall provide for protections and supports of utilities, roadways, buildings, and structures, etc. when performing project work. The Contractor shall provide an adequate system to withstand lateral pressure in trenches, in accordance with local, state, and federal regulations. Where required to be designed by a licensed engineer, the sheeting and shoring plan must be submitted to the Engineer for his records.

SECTION 2.07 - SANITARY SEWER SYSTEM REHABILITATION

A. The supplemental specifications within this section are applicable to all sewer rehabilitation work within the scope of the SSERP or FEMA sewer rehabilitation program as per paragraphs 1.21A and 1.21B. Any general conditions, materials or methods not discussed within this section shall be governed by the SPW standard specifications section C742 and the S&WB standard details and specifications.

B. Sewer Flow Control

1. Contractor is responsible for all sewer flow control. There will be no direct pay for flow isolation, flow diversion (bypass) pumping or any other outreach and coordination required as part of flow isolation.

2. Contractor is responsible to determine the method of sewer flow control for any pipe size and flow quantity. S&WB cannot provide any guarantees to draw the system down to reduce surcharging.

3. Contractor shall ensure that sewer does not back-up into private property and shall have a plan to prevent sewer back-ups prior to start of work in case of unforeseen delays. A sewer flow control plan is required to be submitted prior to start.

4. Where it becomes necessary to shut down a private sewer service line while work in progress, and before the service lines are reconnected, the residents are to be notified by the Contractor at least one week prior to work and again 24 hours prior to shut down. Sewer service shutdowns shall be limited to 8 hours in duration and between the hours of 8:00 am and 6:00 pm, otherwise an alternate means of sewer flow shall be provided, including but not limited to by-pass pumping.

5. Under no circumstances shall sewer be removed from the system or discharged onto the ground or into the drainage system or other waterway. Refer to section 1.21G in cases of accidental spills or discharges.

6. Only pneumatic (inflatable) pipe plugs, specifically designed for municipal sewer applications, shall be installed in the gravity sewer system for flow control or diversion. Each plug shall bear a permanent identification tag with the installer's emergency contact information. A photo of a typical plug, showing the attached identification tag, must be submitted to the Engineer for approval. Plugs without ID tags will not be permitted on the jobsite or inside vehicles on the jobsite. The Engineer may direct the immediate suspension of work and removal from the worksite of unapproved flow control devices.

a. Under no circumstances shall any plug be left inside a pipe or manhole overnight. Pipe plugs are to be removed from the jobsite at the end of each workday.

7. Flow diversion pumping shall be performed to the satisfaction of the S&WB networks engineering representative, shall be complete with all pumps, piping and other appurtenances required to pump the required sewer flow around the work site continuously with capacity for unforeseen wet weather flows and shall not adversely impact upstream or downstream sewer flow conditions or levels. Flow diversion pumping setups shall be always manned by an experienced operator the pump is required to operate or sit in standby. Flow diversion pumping equipment and piping shall be drained back into the sanitary sewer system prior to disassembly. Contractors are required to submit a flow diversion plan to the engineer 5 business days prior to setting up a flow diversion pumping setup.

8. Any sewerage removed from the gravity system, such as dewatering of surcharged manholes or line segments shall be disposed into the sanitary sewer system.

9. When sewer flow control is used to perform CCTV inspection, the following depths of flow shall be maintained at a maximum:

a. For 10” and smaller diameter pipe, flow depth shall be maintained at or less than 10% of the pipe diameter.

b. For 12” through 24” diameter pipe, flow depth shall be maintained at or less than 15% of the pipe diameter.

c. For pipes larger than 24” diameter pipe, flow depth shall be maintained at or less than 20% of the pipe diameter.

10. For every location where flow diversion is required, the Contractor shall submit a site- specific flow diversion plan to the Engineer at least five (5) business days prior to mobilizing flow diversion equipment. The plan shall include pipe sizes and lengths, pump make/manufacturer, pump capacities, pump curves, a scaled drawing or diagram showing limits of the work, location of suction and discharge hoses, adjoining sewer segments and manholes, flow direction and plug locations, and any additional information requested by the Engineer.

11. The Contractor must conduct sewer flow control, isolation, and diversion in accordance with the approved plan and must have a Competent Person at the site throughout the flow control operation. Flow diversion pumps shall be always manned by and experienced operator.

C. Gravity Sewer and Service Lateral Rehabilitation

1. Contractor is responsible to obtain sewer service location records from the S&WB and to verify the location sewer service connections prior to excavation.

2. Contractor shall perform gravity sewer and service lateral rehabilitation in accordance with the sewer rehabilitation sheets.

3. Any service connections located within the limits of an excavated point repairs, or mainline replacement (excavated or otherwise) shall be fully replaced, including the wye and the 6” service lateral from the main line sewer to the property line. Abandoned service connections shall not be replaced unless directed by the S&WB.

4. All service line replacements shall include replacement of the tee or wye fitting at the main line sewer at no additional cost. The contractor shall perform a standard mainline point repair to replace the service tie-in, which will be paid for separately under the respective bid item price.

5. Sewer service laterals and main line sewers shall be installed at the same grades and elevations of the pipe being replaced. However, in cases where the sewer service lateral provides less than 2% slope, the contractor shall re-grade the service lateral from the property line to the main line sewer to provide a 2% slope where possible.

6. Contractor shall provide rigid non-shear couplings or flexible elastomer couplings with stainless steel shear bands where a mainline point repair or a service later replacement results in the connection between dissimilar pipe materials. These couplers shall conform to ASTM C425 for connections to vitrified clay pipe and otherwise ASTM C1173. The bands shall be stainless steel 316 and on conformance to ASTM A240. The shear rings shall be in conformance to ASTM A240. There will be no direct pay for these provisions; contractor shall include this cost in their respective bid items of work.

7. All tees, wyes, cleanouts, plugs and other fittings shall be of the same material as the mainline pipe and/or service repair piping used in the rehabilitation.

8. Trenching for gravity sewer and service lateral rehabilitation shall be in accordance with the S&WB standard drawings, unless additional requirements are necessary for compliance with local, state, or federal regulations pertaining to health and safety. Any existing foundation or trenching lumber shall remain in place.

9. Contractor shall completely close the sewer system prior to the end of his workday. The Contractor may not leave any open main line repairs or service laterals with the site unattended. The Contractor is responsible to complete all opened work or to provide temporary piping prior to leaving the site at no additional cost.

10. The Contractor shall not begin backfilling operations over excavated sewer rehabilitation until the work has been inspected by a representative of the S&WB.

11. The S&WB reserves the right to request a mandrel test of any mainline sewer replacements at no additional cost in accordance with DPW standard specifications section C742.03(b).

12. All mainline sewer point repairs and replacements shall be recorded via CCTV immediately after completion of the rehabilitation, backfilling, compaction but prior to final pavement restoration of the site. The site is defined as the full work zone contained to a mainline sewer line segment bound by two manholes inclusive of the full length of main line sewer and all connecting service laterals.

D. Backfill Requirements for Work Near Mississippi River Levee. All sewer rehabilitation excavations within 1,500-ft Mississippi River Levee (MRL) centerline shall be limited within the following US Army Corps of Engineers (USACE) restrictions itemized below:

1. All excavation work within 400-feet of the Mississippi River levee is performed, completed, and backfilled while the stage of the Mississippi River is below +11.0 feet on the Carrollton Gage, at New Orleans, Louisiana.

2. All excavation work more than 400-feet but less than 1,500-feet from the Mississippi River levee is performed, completed, and backfilled while the stage of the Mississippi River is below +15.0 feet on the Carrollton Gage, at New Orleans, Louisiana.

3. Information concerning current river stages may be obtained on our website at www.mvn.usace.army.mil.

4. Sewer pipe bedding must be grouted after compaction. The grout shall meet the following criteria: The slurry shall consist of one part cement, two parts bentonite, and six parts sand mixed with enough water to produce a slurry viscous enough to thoroughly fill the voids. The resulting slurry shall have no less than 12 pounds of solids per gallon.

5. All non-bedding backfill must be impermeable clay – no sand at no direct pay.

6. All work must be coordinated with the Orleans Levee District (OLD) in advance and will be subject to OLD inspection and approval prior to S&WB acceptance.

7. Any damage to the levee or floodwalls resulting from the applicant's activities is repaired at the applicant's expense.

8. The contractor shall provide a detailed schedule for all sewer rehabilitation excavations for coordination with the OLD and USACE. This schedule shall be updated and resubmitted at any time the work dates for these sites has changed.

SECTION 2.08 – GRAVITY SEWER PIPEBURSTING

A. General requirements

1. This Specification covers the work necessary to furnish and install, complete and in-place, high–density polyethylene pipe (HDPE) by the pipe bursting method specified herein. The CONTRACTOR shall provide all materials, labor, equipment, and services necessary for bypass pumping diversion of sewage flows, installation of HDPE pipe, reconnection of all service connections, and closed-circuit television (CCTV) pre- and post-inspection and air testing of the completed pipe system.

2. The CONTRACTOR shall locate receiving/insertion pits to suit the pipe bursting operation. Pits located in areas where new manholes are not being installed shall be excavated, backfilled, and compacted at no additional cost to the owner. This includes providing a new manhole at no additional cost to the owner if an existing manhole is removed or damaged.

B. Qualifications

1. The pipe bursting contractor shall be certified and satisfactorily trained by the pipe bursting system manufacturer that such company is fully trained and is a licensed installer of their pipe bursting system.

2. Polyethylene pipe joining shall be performed by personnel trained in the use of butt-fusion equipment by the specific manufacturer of said equipment and recommended methods for new pipe connections. Personnel directly involved with installing the new pipe shall receive training in the proper methods for handling and installing the polyethylene pipe. Training shall be performed by a qualified and certified representative of the equipment and pipe manufacturer.

3. The CONTRACTOR shall hold the BOARD and ENGINEER whole harmless in any legal action resulting from patent infringements.

C. Reference specifications, codes, and standards

1. The following references are part of this Specification. In case of conflict between the requirements of this Specification and those of the listed documents, the requirements of this Specification shall prevail.

2. The latest edition of the following references shall be used:

a. ASTM D1248 - Polyethylene Plastics Molding and Extrusion Materials

b. ASTM D2657 - Heat Joining of Thermoplastic Pipe and Fittings
ASTM D3035 - Polyethylene Plastic Pipe (SDR-PR) Based on Controlled Outside Diameter

c. ASTM D3261 - Specification for Butt Heat Fusion Polyethylene (PE) Plastic Fittings for Polyethylene (PE) Plastic Pipe and Tubing

d. ASTM D3350 - Polyethylene Plastic Pipe and Fittings Materials
e. ASTM F714 - Standard Specification for Polyethylene Plastic Pipe Based on Outside Diameter

D. Contractor submittals

1. Shop Drawings:

a. The CONTRACTOR shall submit catalog cuts, specifications, dimensioned drawings, installation details and sketches, and other pertinent information for the HDPE pipe installation work. All materials provided shall be fully in accordance with the requirements of the reference specifications specified above.

b. The CONTRACTOR shall verify with the pipe manufacturer all connection details.

c. The CONTRACTOR shall submit detail drawings and a written description of the construction procedure and sequence including its locations to bypass insertion and receiving bypass sewage flow of the host sewer and service laterals, install new hose sewer and service laterals, and disconnection and reconnection of the sewer service lateral connections.

2. Certification: The CONTRACTOR shall furnish a certified affidavit of compliance for all HDPE pipe and fittings furnished confirming that the materials supplied fully conform to the requirements specified herein.

3. Warranty as specified in Paragraph 1.06 Warranty of this Specification

4. The CONTRACTOR shall submit a complete plan for a sewage bypass pumping system in accordance with Section 2.07.

5. The CONTRACTOR shall perform trial fusion welds in the field for both main line and lateral connections and submit samples to the ENGINEER for review prior to installation of the pipe. Full penetration welds shall provide a homogeneous material across the cross section of the weld. The fusion machine employed for the trial welds shall be the same machine to be utilized for the complete project installation work.

6. Fusion equipment shall be operated only by technicians who have been certified by the pipe manufacturer or supplier and who have a minimum of 2 years' experience of fusion welding 8 inches or larger diameter pipelines. The technician's experience and verifiable references shall be documented in the HDPE pipe submittal.

E. Quality assurance

1. Quality assurance procedures shall be performed by the pipe manufacturer fully in accordance with the requirements of this Specification. The certification shall include certified laboratory data confirming that said tests have been performed on a sample of the pipe to be provided under this contract, or pipe from that production run, and that satisfactory results were obtained prior to any installation of said pipe.

2. Fusion joining and other procedures necessary for correct assembly of the polyethylene pipe shall be done only by personnel trained in those skills to the satisfaction of the ENGINEER and the pipe supplier.

3. Only those tools designed for the aforementioned procedures and approved by the pipe manufacturer or supplier and the ENGINEER, shall be used for assembly of pipe fittings to ensure proper installation. The heater plate shall be equipped with suitable means to measure the temperature of plate surfaces and to assure uniform heating such as thermometers or pyrometers.

4. Pipe (bursting) insertion equipment shall be operated only by technicians who have a minimum of 2 years' experience in the installation of the polyethylene pipe, using pipe bursting lining technology as specified herein. The technician's experience and references shall be documented in the HDPE pipe submittal.

5. The CONTRACTOR shall televise the installed pipe after existing services have been reconnected and manhole reconnection and sealing procedure work has been completed. The original post-television inspection video tape shall be provided to the ENGINEER for final approval.

F. The CONTRACTOR shall provide to the OWNER a warranty to be in force and effect for a period of 1 year from the date of final acceptance by the OWNER. The warranty shall require the CONTRACTOR to repair or replace the pipe should leakage, separation, collapse, or other failure result from faulty materials or installation as determined by the ENGINEER.

G. Materials

1. The CONTRACTOR shall provide polyethylene pipe as specified. The pipe shall be made to diameter and tolerances in accordance with ASTM D3035. The minimum ratio of orthogonal diameters prior to installation shall be 0.95. All pipes shall be made from virgin grade material. The pipe shall be of the diameter and class shown or specified and shall be furnished complete with all fabricated fittings, and other appurtenances as necessary for a complete and functional system.

2. Markings: Pipe materials shall be legibly marked by the pipe manufacturer. The following shall be printed on the pipe:

a. Name and trademark of manufacturer.

b. Nominal pipe size.

c. Dimension ratio.

d. The letters PE followed by the polyethylene grade per ASTM D1248, followed by the Hydrostatic Design Basis in hundreds of psi.

e. Manufacturing Standard Reference.

f. A production code from which the date and place of manufacture can be determined.

H. Pipe Material

1. Pipe: Pipe shall be high molecular weight, high-density polyethylene pipe. The material shall be listed by the Plastic Pipe Institute (PPI) with a designation of PE 3408 and have a minimum cell classification of 345434C, D, or E (inner wall shall be light in color) as described in ASTM D3350. The pipe material shall meet the requirements for Type III, Class B or C, Category 5, Grade P34 material as described in ASTM D1248. The pipe shall contain no recycled compound except that generated in the manufacturer's own plant from resin of the same specification from the same raw material pipe. Pipe (excluding black colored pipe) stored outside shall not be recycled. Pipe and fittings shall be made in conformance with ASTM F714 and ASTM D3261 as modified for the specified material. The pipe shall be homogeneous throughout and free of visible cracks, holes, foreign inclusions, or other injurious defects. It shall be uniform in density and other physical properties. Any pipe not meeting these criteria shall be rejected.

2. Pipe Color, Pipe shall conform to the following color scheme:

a. Inside: The inner wall shall be soft white only (Opticore or equal),

b. Outside: The outer wall shall be black only.

3. Standard Dimension Ratio (SDR): Pipe shall conform to the following:

a. Nominal Size: 8 to 12 inches.

b. Outside Diameter: 8 to 12 inches.

c. SDR: Minimum 17.

I. Polyethylene pipe shall be joined by butt fusion welding, as specified in Paragraph O, Pipe Joing, herein.

J. Connection of new service lateral to the sewer main shall be accomplished by use of electrofusion saddle type fittings. The service connection shall be specifically designed for connection to the HDPE sewer main being installed, and shall be Central Electrofusion System, as manufactured by Central Plastics Company, Shawnee, Oklahoma.

K. The CONTRACTOR shall protect existing and new facilities including utilities, road pavement, and private property from damage by forces generated by the pipe bursting equipment. Any damage to any existing facilities as a result of the pipe bursting operation shall be the responsibility of the CONTRACTOR. If it is found that the damage is a result of the pipe bursting operation, the cost to repair or replace the damage facility shall be the responsibility of the CONTRACTOR.

L. Preparation

1. All work shall be performed as specified herein and supervised by personnel experienced in the installation of the pipe.

2. All sewer service connections shall be identified and located by CCTV prior to the start of any pipe bursting operation and pipe insertion. Upon commencement, pipe insertion shall be continuous and without interruption from one manhole to another, except as approved by the ENGINEER. Upon completion of the insertion and installation of the new pipe, the CONTRACTOR shall expedite the reconnection of lateral service connections so as to minimize any inconvenience to the customers.

3. The project foreman assigned to the project by the CONTRACTOR shall be onsite at all times from the time of inception to the time of completion.

M. Handling and storage

1. The CONTRACTOR shall exercise special care during the unloading, handling, and storage of all polyethylene pipe to ensure that the pipe is not cut, gouged, scored, or otherwise damaged. Any pipe segment, which has cuts in the pipe wall exceeding 10 percent of the wall thickness, shall be cut out and removed from the site at the CONTRACTOR’s cost. The pipe shall be stored so that it is not deformed axially or circumferentially, which may hinder pipe installation. After the unloading of any pipe material ordered to the project site and before installation of the pipe, the CONTRACTOR shall inspect all pipe to verify its condition prior to installation with the ENGINEER and/or the project

inspector. A pipe condition inspection report provided by the CONTRACTOR shall be filed with and approved by the ENGINEER prior to installation.

2. All polyethylene pipe, without an ultraviolet inhibitor, shall not be stored unprotected against the outside elements.

N. Repairs to the existing line

1. If the pre-installation video inspection reveals a sag in the existing sewer greater than one- half the diameter of the existing pipe, the CONTRACTOR shall take necessary measures to eliminate these sags by the system of pipe replacement, digging a sag elimination pit and bringing the bottom of the pipe trench to a uniform grade in line with the existing pipe invert or by other measures that shall be approved by the ENGINEER. There is no additional pay for this work.

2. The CONTRACTOR shall repair the pipe where point repairs are identified on the Drawings. If not shown, it will constitute extra work when approved by the ENGINEER. Any required point repairs shall be performed as per these specifications and will be paid for separately under the respective bid items for the work.

O. Pipe joining

1. Sections of polyethylene pipe shall be joined into continuous lengths on the jobsite above ground. The joining method shall be the butt fusion method and shall be performed in strict accordance with the pipe manufacturer's recommendations. Fusion equipment used in the joining procedure shall be capable of meeting all conditions recommended by the pipe manufacturer, including, but not limited to, fusion temperature, alignment, and fusion pressure. Electrofusion may be used for field closures as necessary when appropriate fusion equipment can be utilized in a trench type environment. For end sections or "tail" pipe, the use of electrofusion couplings as manufactured by Central Plastics Company can be utilized.

2. A fire-retardant bag or suitable enclosure shall be used with the heater plate to facilitate control of heating process and to protect the heater plate surfaces from dirt and other debris when not in use. The heater plate surfaces shall be cleaned regularly as needed to prevent accumulation of fusion welding residues or other substances that may result in faulty pipe joining.

3. Butt fusion shall conform to ASTM D2657 and pipe manufacturer's criteria for the type of joining. Joint strength shall be equal to that of the adjacent pipe.

4. The inside and outside of pipe ends shall be cleaned with a cotton or non-synthetic cloth to remove dirt, water, grease, and other foreign materials. The pipe ends shall be cut square and carefully aligned just prior to heating.

5. After achieving the proper melt pattern, the pipe ends shall be brought together in a firm, rapid motion applying sufficient pressure to form a pipe bead (1/8 inch to 3/16 inch in height) around and inside the entire circumference of the pipe.

P. Pipe installation

1. The CONTRACTOR shall excavate, expose, and isolate all sewer service connections prior to replacing the existing sewer. The existing service connections may be encased in mortar, concrete, or reinforced concrete. There will be no additional compensation for demolition of this concrete.

2. The CONTRACTOR shall install the pipe by utilizing a constant tension system with a hydraulic or pneumatic bursting device that breaks away the existing pipe. A static "cone cracking"

method may be used, but only by advancing the mole bursting head with a "solid steel tow rod" pulled by a constant tension hydraulic pulling wrenching system. The advancement of the bursting mole head with a "chain" shall be prohibited. The void created by the bursting device shall be sufficient in size to accommodate the HDPE pipe, which shall be installed immediately after the void has been formed. The CONTRACTOR shall be responsible to provide adequately designed pipe bursting equipment to accomplish the replacement of the existing pipe under all adverse conditions.

3. The CONTRACTOR may utilize existing manholes where practical. Location of pits outside of existing manholes should be considered as replacement of existing manholes that are not designated to be replaced shall be at the sole cost of the CONTRACTOR. Manhole inverts and benches and channels shall be removed to permit access for installation equipment as appropriate. When installing through an existing manhole, the input and output pipe openings shall be enlarged as appropriate to accommodate to the maximum OD size of the bursting device. At no time shall the bursting device and/or the installation process put any undue stress on the existing surface. Benches and channels shall be reconstructed to proper elevations after the new pipe is in–place.

4. The CONTRACTOR shall secure the pipe to concrete structures or manholes after the pipe has been installed along the length of sewer replaced. The CONTRACTOR shall use a water stop or flange adapter, as supplied by the pipe manufacturer, that is fused and seated perpendicular to the pipe axis, around the pipe exterior, and grouted into the structure wall to create a watertight seal. The new pipe shall be installed 12 inches inside of the manhole opening. The structure or manhole connections shall be made a minimum of 12 hours after pipe insertion.

Q. Low pressure air testing

1. After a manhole-to-manhole section of sanitary sewer has been pipe bursted and prior to any service lines being connected to the replacement pipe, the pipe shall be plugged at each manhole with pneumatic plugs. The design of the plugs shall be such that they will hold against the test pressure without requiring external blocking or bracing. One of the plugs shall have three air hose connections; one for inflating of the plug; one for reading the air pressure in the sealed line; and one for introducing air into the sealed line.

2. Low pressure air shall then be introduced into the sealed line until the interlay air pressure reaches 4.0 psig greater than the average back pressure resulting from any groundwater that may be over the pipe. At least 2 minutes shall elapse to allow the pressure to stabilize.

3. The time required for the internal pressure to decrease from 3.5 to 2.5 psig greater than the average backpressure resulting from any groundwater that may be over the pipe, shall not be less than the time shown for a given diameter in the following table:

Carrier Pipe Diameter (inches)	Minimum Elapsed time (minutes)
8	4
10	5
12	6
15	7

R. Reconnection of sewer service connections

1. The CONTRACTOR shall successfully test the installed pipe prior to reconnecting sewer services.

2. All sewer service laterals shall be replaced from the new main line to the respective property line and will be paid for separately under the respective unit bid items.

3. Service connections shall be connected to the new pipe and installed in a hole that shall be drilled the full inside diameter of the outlet or as recommended by the connection manufacturer. Service connections shall only be connected to the mainline with the use of fused service fittings as per the requirements in this section.

S. Final cleaning and television inspection

1. Prior to final acceptance and final inspection of the pipe by the ENGINEER, the CONTRACTOR shall flush and clean all parts of the system by removing all accumulated construction debris, rocks, gravel, sand, silt, and other foreign material from the pipe.

2. After completion of the pipe installation, service reconnections, finish work at the manholes and final cleaning, the sewer shall be televised with a color CCTV tilt-head camera recorded in VHS format. The original tape shall be provided to the ENGINEER.

SECTION 2.09- PRE- AND POST-REHABILITATION CCTV INSPECTION AND CLEANING

A. Scope of work

1. Cleaning: The Contractor shall furnish all labor, materials, equipment, and incidentals required to clean sanitary sewer line segments and manholes to remove all debris, solids, sand, grease, grit, etc. as specified herein.

2. Sewer Flow Control: The Contractor shall provide all the labor, materials, equipment, and incidentals necessary to divert wastewater flow in accordance with Subsection 2.07.B of this specification.

3. Contractors shall perform line cleaning and CCTV inspection of sewer lines for the following conditions. There is no direct pay for CCTV inspections unless noted otherwise.

a. Pre-rehabilitation of Find and Fix lines, at direct pay.

b. Pre-rehabilitation of sewer line segments requiring full length CIPP lining.

c. Pre-rehabilitation of sewer line segments requiring full length replacement via pipe bursting or other trenchless methods.

d. Post-rehabilitation of any sewer line segments inclusive of all rehabilitation methods (replacement, point repair, lining, etc.).

e. Upon written request by the engineer to perform additional CCTV inspections, at direct pay.

f. In the case of a CCTV performed as a Pre-rehabilitation inspection for a full length CIPP and then the CIPP is canceled as a result of the CCTV findings, the Contractor will be reimbursed for the line cleaning and CCTV at direct pay.

g. For pre-rehabilitation of sewer service laterals requiring CIPP lining see Paragraph G.

h. For post-rehabilitation of sewer service laterals requiring CIPP lining see Paragraph G.

B. Submittals

1. The Contractor shall maintain a master copy of all DVD's and CCTV inspection reports submitted, until final acceptance of contract. All DVDs, and CCTV inspection reports submitted by the Contractor will become the property of the Board.

2. The Contractor shall submit two (2) DVD's, one (1) hard copy, and one (1) electronic copy of corresponding CCTV inspection reports on a weekly basis for all work accomplished the previous week.

3. For pre-rehabilitation and post-rehabilitation CCTV inspection, the Contractor shall submit to the Engineer for review two (2) DVD's, one (1) hard copy, and one (1) electronic copy of the CCTV inspection reports on-line segments identified herein as requiring pre-rehabilitation CCTV inspection.

4. Where defect coding is required, the Contractor shall provide the defect coding in the Microsoft Access database provided by the Board. Defect coding shall be performed in accordance with the Sewerage & Water Board of New Orleans' Sewer Condition Classification Manual.

5. The Contractor shall submit documentation that the CCTV inspection equipment to be utilized meets the requirements in these specifications.

6. Forms and reports the Contractor proposes using to document cleaning work.

C. Camera distortions, inadequate lighting, dirty lens, blurred/hazy or unsteady video will be grounds to reject pre- and post-rehabilitation CCTV inspections. If quality of the pre- and post-rehabilitation CCTV inspections and inspection reports is not adequate as determined by the Engineer, the Contractor shall provide a new pre- or post-rehabilitation CCTV inspection or inspection report. No additional payment shall be made for pre- and post-rehabilitation re-inspections.

D. When water from the public water supply is needed to meet the cleaning requirements of the equipment and the sewer, the Contractor shall obtain transient water meters from the Board with payment of a deposit. The Contractor shall be billed monthly by the Board for water usage. As a general rule, prior written approval from the Board is not needed to use fire hydrants located within this project area under this contract. However, fire hydrant keys are required and are available from the Sewerage and Water Board's Networks Department with payment of a deposit. The Contractor will be responsible for payment of deposit and payment of a monetary fine should the hydrant key(s) not be returned.

E. All high velocity sewer cleaning equipment shall be constructed for ease and safety of operation. The equipment shall have a variety of high velocity nozzles. The nozzles shall be capable of producing a scouring action from 15 degrees to 45 degrees in all size lines to be cleaned. In addition to conventional nozzles, use a nozzle or series of nozzles which direct the cleaning force to the bottom of the pipe for sewers

18 inches and larger. The equipment shall include a water tank, auxiliary engines, pumps, and hydraulically driven hose reel all contained within one single unit. All controls shall be located so the equipment can be operated above ground. A gauge shall be installed to indicate working pressure on the discharge of high-pressure water pumps.

F. CCTV inspection

1. The Contractor shall supply camera skids and floating skids or rafts as required to complete pre- and post- rehabilitation CCTV inspection as required in the Contract. The Contractor shall inspect sewer lines with pan and tilt conventional television equipment. The operation of the television equipment shall be controlled by a skilled technician or supervisor who shall be located at the control panel in the mobile television studio. The CCTV equipment including reels and the television studio are to be contained within a single vehicle.

2. The camera system shall be able to navigate around minor objects, roots, and debris. The camera cable shall be retracted to remove slack and to ensure an accurate footage reading.

3. The distance between manholes shall be verified by measuring tape. If the counter distance and the taping distance differ by more than 2 feet per 100 feet, the run shall be re-televised by CCTV Contractor.

G. Pre-rehabilitation CCTV

The Contractor shall perform pre-rehabilitation CCTV inspection as required herein.

1. The Contractor shall perform cleaning activities prior to pre-rehabilitation CCTV inspection.

2. The purpose of the pre-rehabilitation CCTV inspection is to provide defect coding data to the Engineer to determine the extent of rehabilitation for line segments identified as find and fix line segments. In addition, pre-rehabilitation CCTV inspection is intended to verify the location of service connections and to verify that additional repairs are not required for line segments and service laterals identified to receive full length CIPP liners.

3. Defect coding for line segments identified as find and fix line segments is required. The Contractor shall submit defect coding of find and fix line segments in the Microsoft Access database provided by the Board

4. The Engineer will make the final determination of rehabilitation for line segments identified as find and fix line segments.

5. The Contractor shall determine if a change or addition in the rehabilitation method(s) is necessary for line segments identified to receive a full length CIPP liner. If the Contractor determines that a change or addition in the rehabilitation method(s) is necessary, the Contractor shall provide the pre-rehabilitation CCTV inspection, DVD, and inspection report to the Engineer for review and approval.

H. Post-rehabilitation CCTV

1. The Contractor shall perform post-rehabilitation CCTV inspection as required herein.

2. Sewer line segments repaired by full-length replacement or by full-length lining will require cleaning prior to CCTV inspection and will require defect coding in accordance with the Board's Sewer Condition Classification Manual, latest edition.

3. Sewer line segments repaired by excavated point repair will require cleaning prior to CCTV inspection. The Contractor shall inspect the main from manhole to manhole, but defect coding of the line segments is not required.

4. Service laterals repaired by CIPP lining shall receive post-rehabilitation CCTV inspection. Defect coding of the service lateral is not required.

I. Cleaning

1. All interior surfaces of sewer lines shall be cleaned adequately to provide for a camera used in internal inspection to discern structural defects, misalignment, and infiltration and inflow sources. Cleaning shall be performed prior to internal inspection to preclude the buildup of debris from infiltration and inflow sources and discharges from upstream sewer line segments sections.

2. Cleaning: Cleaning shall be defined as the use of high velocity jet nozzle cleaning equipment to clean the line to the satisfaction of the Engineer.

3. Specialty cleaning: Specialty cleaning is defined as removal of obstructions such as roots and intruding connections. Obstruction removals may require the use of special equipment such as rodding or bucket machines, and/or expanding cutters. The Contractor will obtain authorization from the Engineer prior to conducting any specialty cleaning. Authorization shall be required for each individual sewer reach. No payment shall be made for specialty cleaning without prior approval by the Engineer.

4. No fire hydrant shall be obstructed so as to prevent its use in case of a fire in the area served by the hydrant.

5. The Contractor shall provide the Board with monthly readings of water consumption for billing purposes. All cleaning equipment must be equipped with a backflow preventer to prevent any contamination to the public water supply. When utilizing water from the public water supply, the Contractor shall remove water meters, fitting, and piping from fire hydrants at the end of each working day. The Contractor shall not waste water from public water supplies due to poor connections to hydrants.

6. If cleaning of an entire line segment cannot be successfully performed from one manhole, the equipment shall be re-setup at the manhole on the opposite end of the pipe segment being cleaned and cleaning shall be re-attempted.

7. The Contractor shall use a nozzle that directs the cleaning force to the full circumference of the pipe.

8. When using hydraulically propelled devices, the Contractor shall take necessary precautions to ensure that the water pressure created does not cause damage or flooding to public or private property.

9. The Contractor is responsible for the disposal of waste from cleaning operations at a permitted disposal site. The Board's East Bank Sewage Treatment Plant is available for disposal of waste from cleaning operation under this Contract. The Contractor shall abide by the operational policies and normal administrative working hours for the East Bank Sewage Treatment Plant when used for disposal.

10. Acceptance of sewer cleaning work is contingent upon the successful completion of the television inspection. If television inspection shows debris, solids, sand, grease, or grit remaining in the line, the cleaning is considered unsatisfactory. The Contractor, at no additional cost to the Board, shall repeat the cleaning, inspection, and televising of the sewer line until cleaning is acceptable by the Engineer.

J. Television equipment

1. Closed Circuit TV Equipment: The Contractor shall select and use closed-circuit television equipment that will produce color video recordings. The Contractor shall supply camera skids and floating skids or rafts as required to complete the CCTV portion of the Contract.

2. Pipe Inspection Camera

a. The television camera used for the sewer line inspection shall be one specifically designed and constructed for sewer pipeline inspection. The camera shall be waterproof and shall be operative in any conditions that may be encountered in the inspection environment. The camera shall be operative in 100% humidity conditions. The Contractor shall produce video recordings using a pan-and-tilt, radial viewing pipe inspection camera that pans ±275 degrees and rotates 360 degrees.

b. Television inspection of an entire line segment cannot be successfully completed from one manhole; a reverse set-up must be performed to obtain a complete television inspection. If successful televising of the entire line segment cannot then be accomplished, the inspection effort shall be abandoned. The Contractor will be paid for the inspection of the actual length of line segment televised. There will be no additional payment for reverse set-ups.

c. The camera shall be moved through the line segment in either direction at a rate not to exceed 30 feet per minute. Any means of propelling the camera through the sewer line which would produce non-uniform or jerky movement of the camera, will not be acceptable, Stop the camera at all defects so that a clear picture of the defect remains on the video screen for the operator to verbally describe the defect on the tape. Record a full 360^{O} pan view at all service lateral lines.

3. Wherever prevailing conditions allow, the CCTV camera head shall be positioned to reduce the risk of picture distortion. In circular sewers, position the television camera lens centrally (in prime position) within the sewer. In non-circular sewers, camera location shall be at mid-height of the sewer, unless otherwise agreed, and centered horizontally. In all instances, orient the camera along the longitudinal axis of the sewer when in prime position. A positioning tolerance of plus or minus 10% of the vertical sewer dimension shall be allowed when the camera is in prime position.

4. The adjustment of focus and iris shall provide a minimum focal range from 2 inches in front of the camera's lens to infinity. The distance along the sewer in focus from the initial point of observation shall be a minimum of twice the vertical height of the sewer. The illumination must be such as to allow an even distribution of the light around the sewer perimeter without the loss of contrast, flare out of picture, or shadowing.

5. The Contractor shall use a camera with camera height adjustment so that the camera lens is always centered at one-half the inside diameter or higher in the pipe being televised. The Contractor shall provide remote and/or automatic focus and aperture control.

6. The television inspection equipment shall be of such high quality as to enable the following to be achieved:

a. Color: With the monitor adjusted for correct saturation, the six colors plus black and white shall be clearly resolved with the primary and complementary colors in order of decreasing luminance.

b. Resolution: The live picture must be displayed on a monitor capable of providing a clear, stable image free of electrical interference with a minimum horizontal resolution not less than 450 lines.

7. The Closed-Circuit Television monitor display shall incorporate an automatically updated record in feet and tenths of a foot of the distance along the line from the cable calibration point to the center point of the camera. The Contractor shall use a suitable metering device that enables the cable length to be accurately measured; this shall be accurate to ±2%. The Contractor shall demonstrate that the tolerance is being complied with, by tape measurement between manholes on the surface. This taped measurement must be included on each television inspection log both written and electronic. If the Contractor fails to meet the required standard of accuracy, the Engineer shall instruct the Contractor to re-survey those lengths of sewer at no additional cost to the Board.

8. Video recordings shall be high quality. The video recording shall reproduce clearly discernable sound and video information on the television monitor. The recording shall be free of interference and shall produce a clear, stable image.

9. The audio portion of the recording shall be clear and complete, and easily discernible. The audio portion shall record the location or identification of the line segment, the manhole-to-manhole direction of travel, and the distance traveled on the specific inspection. The audio portion shall record and identify all visible defects and include the information required by the Sewerage and Water Board of New Orleans' Sewer Condition Classification Manual, latest edition.

10. The video recording equipment shall be continuously connected to the television inspection and monitoring equipment. The video recording and monitoring equipment shall have the built-in capability to allow the Engineer and the Contractor to instantly evaluate both the audio and video quality of the video recording at all times during the television survey. Video recordings shall be enclosed in plastic containers which shall clearly indicate the date the tape was recorded, the designated section(s) of sewer lines contained on the tape, and the referenced sewer inspection report covering the sections of the sewer lines so included.

11. Lateral Inspection Camera

a. The television camera used for the lateral inspection shall be one specifically designed and constructed for lateral inspection. The Contractor shall provide a portable "mini-cam" CCTV inspection system. This system shall provide a color video satisfactory to the Engineer and contain footage readings displayed on the monitor and videotape at all times. The accuracy of the distance meter shall be checked by the use of tape measurement and the accuracy shall be within 2%.

b. When the cleanout for a service line is inaccessible, the Contractor shall perform CCTV inspection of the service lateral from the mainline utilizing a lateral camera launcher system. A sewer main line television camera shall be used to position the lateral camera launcher.

12. DVD

a. The Contractor shall provide video recordings with audio comments in the DVD format, recorded at Standard Play (SP).

b. Complete sewer line segments shall be included on the same video recordings (i.e., CCTV inspections for sewer line segments shall not be divided among videotapes).

c. The video format shall be an MPEG-1 compressed video, and resolution video format shall be QSIF (Quarter-size Standard Image Format) of 176 x 112 pixels for NTSC video format.

d. Two labels are required on each DVD. One label shall be placed on the DVD Case and the other on the face of the DVD. The Contractor shall permanently label each as follows:

DVD Case

PRECONSTRUCTION AUDIO-VIDEO SURVEY
Contract No. Tape No.

Face of DVD

Project Title: Contractor:

Date Televised (MM/YY): Date Submitted

Manhole No. From	Manhole No. To	Pipe Diameter	Pipe Length	Street	Starting Counter No.

K. Television Inspection Report

1. The Contractor shall complete a Television Inspection Report covering the television inspection work and the information acquired, as described in the Sewerage and Water Board of New Orleans' Sewer Condition Classification Manual, latest edition.

2. The same television inspection code sheet shall be used throughout the Contract. The code sheet shall include abbreviations for specific defects as detailed in the Sewer Condition Classification Manual. Submit all electronic data files for the previous week's work to the Engineer weekly CD-ROM. Include hard copy printouts of the correlating inspection reports with each submittal. Submit electronic files on CD-ROM and DVDs for corresponding lines concurrently. Submit all electronic data files in a Microsoft Access database format provided by the Board. The manual and data entry database are available for review at the office of the SSERP Program Manager.

3. At the start of each line segment video recording, record and report the measured length of the sewer line being inspected. Begin with zero at the inside face of the start manhole, and end at the inside face of the end manhole.

4. At the start of each line segment video recording, electronically generate and clearly display, on the viewing monitor and video recording, a record of data in alphanumeric form containing the following information:

a. Size and Length of Line;

b. Automatic update of the camera's position, in feet and tenths, in the sewer line from adjusted zero;

c. Type of pipe material;

d. Upstream manhole name and downstream manhole name;

e. Date of inspection;

f. Road name or line segment location description;

g. Direction of inspection (upstream or downstream);

h. Starting time of the inspection.

5. Once the survey of the sewer line is under way, continuously display specific data on the viewing monitor and video recording. The size and position of the data display shall not interfere with the main subject of the picture yet shall be easily readable when the recording is replayed. At a minimum, the following data should be displayed:

a. Automatic update of the camera's position, in feet and tenths, in the sewer line from adjusted zero.

b. Upstream manhole name and downstream manhole name.

6. Each sewer length, i.e., the length of sewer between two consecutive manholes, shall be entered on a separate coding sheet. Thus, where a Contractor elects to "pull through" a manhole during a CCTV Survey, he shall start a new coding sheet at the manhole "pulled through" and shall re-set the distance to zero on the coding sheet.

7. The Contractor shall make submittals as required herein, on a weekly basis for all work accomplished the previous week.

L. Camera operation

1. All efforts should be made to prevent damage to the sewer conduit during the television inspection. In the case where damage is caused by the Contractor, for any reason, such as would be caused by incorrect deployment of bonds or retrieval of lodged equipment, the cost of repair or remedy shall be absorbed by the Contractor and shall be considered an incidental part of the Work. No separate measurement or payment will be made.

2. The CCTV operator shall accomplish simultaneous video and audio recording of defects, services, on site.

3. The camera shall be moved through the line in either direction at a uniform rate, stopping when necessary to insure proper documentation of the sewer's condition. Manual winches, power winches, TV cable, powered rewinds, and crawler devices or other devices that do not obstruct the camera view and do not interfere with proper documentation of the sewer conditions shall be used to move the camera through the entire sewer line section. The Contractor shall reposition his equipment as necessary so that the inspection can be performed from manhole on the opposite end of the pipe segment being viewed.

4. The lateral inspection camera video shall contain the forward and backward movement of the camera up to the mainline and back to the cleanout. If an attempt to video the service lateral line cannot be completed to the sewer main line, the blockage will be reported to the Engineer in writing and the service lateral line CCTV inspection will be abandoned.

5. When utilizing a lateral camera launcher system from the mainline, a maximum of 100 linear feet of the lateral or to the property cleanout, whichever is closer to the sewer main line, shall be inspected. Actual footage inspected may vary depending on lateral condition, bends, roots, launcher limitations, etc.

SECTION 2.10 - SANITARY SEWER MANHOLE REHABILITATION

A. Scope of work

1. The Contractor shall furnish all labor, materials, equipment, and incidentals required for the purpose of restoring structural integrity, eliminating water infiltration, repair of voids, and providing corrosion protection of the sanitary sewer manholes as shown on the Drawings and specified herein and assumed to be approximately 48" in diameter.

2. Sanitary sewer manhole rehabilitation shall include the following:

a. Leak-proofing of deteriorated, leaking, or structurally unsound manholes by lining with lightweight structurally reinforced concrete systems.

b. Repair and sealing of the manhole base, benches, channel, walls, corbel/cone, and chimney of brick, block, or precast manholes, including the removal of any unsound material.

c. Injection of chemical grout.

d. Cleaning and preparatory patching of manholes receiving liners.

e. Removal of flush valves and water service lines.

3. Sanitary sewer manhole rehabilitation for frames and covers replacement or adjustments shall be performed in accordance with section 3.16 of these special provisions (Items CF-371 through CF-378).

B. Submittals

1. The Contractor must submit for approval the manufacturers' specifications for all products that will be used for manhole rehabilitation. Only materials approved by the Engineer shall be on the job site.

2. The Contractor must, upon request by the Engineer, submit all other product information deemed necessary by the Board.

3. The Contractor must submit a written Vacuum Test Report for each test location of the concrete lining system indicating pressures, duration, actual leakage amounts, and other data to the Engineer for approval as a condition of acceptance. Testing is to be performed only when the Board inspector is present.

4. For the installation of the lightweight spray applied structural concrete lining system the Contractor shall submit a Warranty Certificate showing that the Contractor, the Applicator, and the Manufacturer will warrant the installed cementitious lining system against infiltration and corrosion for a minimum of 1 year from Final Acceptance of the Contract by the Board.

5. The Contractor shall provide certification from each product manufacturer utilized that the applicator is certified to apply the product and the manufacturer has witnessed and approved the application in the first manhole to be rehabilitated with the product.

C. Manhole rehabilitation materials

1. General

a. All materials shall be designed, manufactured, and intended for sewer manhole rehabilitation and the specific application in which they are used.

b. Each material shall be designed for application over damp surfaces (not wet surfaces or surfaces with actively running water) without degradation of the final product or the bond between the product and the manhole surface.

2. Infiltration Control: Stopping active leaks in concrete and masonry manholes shall be achieved by using the following:

a. Hydraulic Cement:

i. The hydraulic cement shall be a fast-setting, volume-stable, waterproofing, cementitious plugging material. The material shall consist of hydraulic cement, graded silica aggregates, and special plasticizing/accelerating agents. It shall not contain chlorides, gypsum, plasters, iron particles, aluminum powder or gas-forming agents, nor shall it promote the corrosion of steel.

ii. The material shall meet the following physical property requirements:

Set time (max)	ASTM C403	60 to 90 sec
Compressive strength (1hr)	ASTM C109	1000 psi
Bond strength (1hr)	ASTM C321	50 psi.

iii. The product must be factory blended requiring only the addition of water at the job site and shall not include any basic ingredient that exceeds the maximum allowable EPA limit for any heavy metal. Water used to mix product shall be clean and potable.

b. Chemical Grout:

i. The chemical grout shall be a hydrophilic liquid that is water reactive and will change from a free-flowing liquid to a water impermeable elastomeric gel upon injection to stop excessive infiltration to a manhole. The reaction (curing) shall produce a chemically stable and non-biodegradable, tough, flexible gel. The chemical grout shall be a urethane liquid in uncured form with a moderate viscosity suitable for pumping and variable curing times. ii. The polyurethane chemical grout shall be Scotch-Seal 5610 by 3M, Avanti AV-254, or approved equal.
The material shall meet or exceed the following requirements:

- The liquid shall have a solids content of 80% and a specific gravity of 1.04 to .11.
- The liquid shall have a viscosity of 300 to 1000 centipoise at 70-degree Fahrenheit.
- Gel times shall be in accordance with the manufacturer's recommendations.
- The grout shall have the ability to increase viscosity, density, gel strength and resistance to shrinkage by the use of additives in the reaction water.

iii. A reinforcing agent shall be added to the reaction water at the manufacturer's suggested rate. This agent is intended to increase the polyurethane gel's resistance to wet/dry cycles, freeze/thaw cycles, and solid movement stresses. The reinforcing agent shall be appropriate for the specific grout product that is to be used.

iv. Additional chemical grout additives, such as catalysts or accelerators, needed to make the grout function properly shall be as manufactured by 3M, Avanti, or approved equal and shall be used in a manner approved by the manufacturer.

3. Patching

a. Material - Patching, repointing, filling, and repairing nonleaking holes, cracks, and spalls in concrete and masonry manholes, including trough repair shall be achieved by using the following material:

b. A premixed non-shrink, cement-based, patching material. The material shall consist of hydraulic cement, graded silica aggregates, special plasticizing/accelerating agents, which has been formulated for vertical or overhead use. It shall not contain chlorides, gypsums, plasters, iron particles, aluminum powder, or gas-forming agents, nor shall it promote the corrosion of steel.

i. The material shall meet the following physical property requirements:

Set time (max)	ASTM C403	30 min
Compressive strength (1 hr.)	ASTM C109	800 psi
Compressive strength (28 day)	ASTM C109	3000 psi.

ii. The product must be factory blended requiring only the addition of water at the job site and shall not include any basic ingredient that exceeds the maximum allowable EPA limit for any heavy metal. Water used to mix product shall be clean and potable.

D. Spray applied and centrifugally cast lining materials

1. The material applied to the surface of the manhole shall be a lightweight structurally reinforced cementitious blend of siliceous aggregates, non-metallic fibers, and other additives. The material shall produce a monolithic liner that is impervious to the flow of water, resistant to sulfide attack, and restores structural integrity to the existing manhole walls. The material shall be Permacast MS-10,000, Quadex QM-1s, SCM Reliner MSP, Strong Seal MS-2A, or approved equal.

2. The product must be factory blended requiring only the addition of water at the job site and shall not include any basic ingredient that exceeds the maximum allowable EPA limit for any heavy metal. Water used to mix product shall be clean and potable.

3. The cementitious lining system shall result in a monolithic structure conforming to the interior shape and contour of the existing manhole and covering all interior surfaces. The lining system shall be completely watertight and free of any joints or openings other than pipe inlets, pipe outlets, and the rim opening. The junction of the lining material with the pipe material at the inlets and outlets shall be watertight.

4. The cementitious lining system shall allow rehabilitation of a concentric, eccentric, or flat top manhole without removing the manhole frame casting and top section or corbel.

5. For manholes greater than 12 feet in depth, the lining shall withstand the pressures associated with a groundwater depth equal to the manhole depth. Linings for all other manholes shall withstand the pressures associated with a minimum depth of 12 feet. The manufacturer's recommended lining thickness dimensions to withstand groundwater pressure shall be submitted to the engineer for review.

6. The material shall have the following minimum requirements:

Compressive Strength (28 days), psi	ASTM C109 - Standard Test Method for Compressive Strength of Hydraulic Cement Mortars	3,000
Tensile Strength, psi	ASTM C496 - Standard Test Method for Splitting Tensile Strength of Cylindrical Concrete Specimens	300
Flexural Strength, psi	ASTM C293 - Standard Test Method for Flexural Strength of Concrete	600
Bond Strength, psi	ASTM C321 - Standard Test Method for Bond Strength of Chemical-Resistant Mortars	130
Shrinkage, %	ASTM C596 - Standard Test Method for Drying Shrinkage of Mortar Containing Hydraulic Cement	0
Density, lb/cf	(when applied)	105

7. The material shall be designed for the selected method of application.

E. Wall cleaning material

1. Pressure Washing Equipment shall have the following minimum requirements:

a. Operating Pressure – 3,000 psi with the capability to produce a continuous flow of water at a minimum temperature of 210-degree Fahrenheit at a minimum force of 3,000 psi.

2. Cleaners: Detergent or muriatic acid capable of removing dirt, grease, oil, and other matter which would prevent bonding of the sealing material to the manhole wall. The Contractor shall refer to the lining material manufacturer's recommendations for preparatory surface cleaning.

F. New manhole frames and covers shall be East Jordan Iron Works (Vulcan) V-1501, or approved equal, as detailed on DPW STD Drawings 3143-E-1. Work shall be performed and will be paid for as per section 3.16.

G. Manhole casting embedment sealant

1. The sealant shall be a premium, extruded, bituminous, tacky rubber sealant in rope form for use on manholes as an embedment material for the frame to adjusting brick/mortar corbel. Work shall be performed and will be paid for as per section 3.16.

2. Sealant shall conform to the latest version of ASTM C990 - Standard Specification for Joints for Concrete Pipe, Manholes and Precast Box Sections Using Preformed Flexible Joint Sealants and Federal Specification SS-S-210A – Sealing Compound, Preformed Plastic, for Expansion Joints and Pipe Joints, Type I.

3. The sealant shall have the following properties:

Physical Properties	REQUIRED
Initial Elongation, %, min.	300
Elongation, %, min., at two weeks in total water immersion	300
Storage Life	Indefinite
Service Temperature Range, ^{0}F	-20 to 200

H. The Contractor shall perform all work needed to structurally repair manholes, improve sewer flow, prevent entrance of inflow or groundwater, and prevent entrance of soil or debris.

I. Delivery, storage, and handling

1. The materials shall be delivered to the job site in original unopened packaging and clearly labeled with the manufacturer's identification and printed instructions. The Contractor shall handle and store all material in accordance with manufacturer instructions and shall dispose of all wastes in accordance with applicable regulations.

2. The Contractor shall keep products safe from damage. The Contractor shall promptly remove damaged products from the job site and replace damaged products with undamaged goods.

J. Project conditions

1. Manholes Containing Flow Monitoring Equipment:

a. Drawings may not show locations of flow monitoring equipment. If a manhole contains any mechanical hardware or electrical flow monitoring equipment, the Contractor shall immediately notify the Engineer.

b. Work in such manholes shall be rescheduled at no additional cost to the Board until the Board has removed the equipment and the Contractor has been given further instructions.

c. Manholes with mechanical hardware or electrical equipment shall not be subjected to diversion pumping.

d. Any damage to installed equipment, resulting from the Contractor's failure to adhere to the above, shall be repaired by the Board at the Contractor's expense.

2. Field Location of Manholes:

a. The Contractor shall be responsible for locating and uncovering all manholes. If the Contractor is unable to locate a manhole after due diligence with measuring tapes, metal detectors, and probing, the Contractor shall notify the Engineer in writing for Board assistance.

b. The Contractor is cautioned that manholes that are not part of the subsystem being rehabilitated may be located within the project limits. No payment will be made to the Contractor for work in manholes not indicated on the Drawings or as directed in writing by the Engineer.

K. Manhole covers, frames, and adjusting rings from abandoned, broken, or adjusted castings shall remain the property of the Board. The Contractor shall deliver salvaged items at a time and to a property location designated by the Board.

L. Rehabilitation of manhole structure

1. Disposal Sites: The Contractor may dispose of sludge, sand, debris, grit, and liquid wastes resulting from performance of operations in this contract at the East Bank Sewage Treatment Plant (6501 Florida Avenue). There will be no charge for disposal at this location. The Contractor may utilize and coordinate other licensed disposal sites at no additional cost to the Board, upon approval by the Engineer.

2. Cleaning: All concrete and masonry surfaces to be rehabilitated shall be cleaned prior to the application of rehabilitation products. All grease, oil, laitance, coatings, loose bricks, mortar, unsound brick, or concrete and other foreign materials shall be completely removed. Water blasting utilizing 210-degree Fahrenheit steam unit and proper nozzles shall be the primary method of cleaning; however, other methods such as wet or dry sandblasting, acid wash, concrete cleaners, degreasers and/or mechanical means may be required to properly clean the surface. All surfaces on which these methods are used shall be thoroughly rinsed, scrubbed, and neutralized to remove cleaning agents and their reactant products. Debris resulting from cleaning shall not be washed downstream but shall be removed from the manhole.

3. Infiltration Control: After surface reparation and prior to the application of mortars and coatings, infiltration shall be stopped by use of an approved water stop compound or chemical grout. All large holes or voids around steps, joints or pipes, all spalled areas and all holes caused by missing or cracked brick shall be patched and all missing mortar shall be removed from the area to be patched or repointed, exposing a sound subbase. All cracks not subject to movement and greater than 1/16 inch in width shall be grouted with approved non-shrink-patching mortar.

4. Channel Repair: The Contractor shall remove all loose grout and rubble from existing channel. The Contractor shall rebuild channel if required by reshaping, repairing slope of shelves or benches. Work shall include aligning inflow and outflow ports in such a manner as to prevent the deposition of solids at the transition point. All inverts shall follow the grades of the pipe entering the manhole. Changes in direction of the sewer and entering branch or branches shall have a true curve of as large a radius as the size of the manhole will permit, but will be shaped to allow easy entrance of maintenance equipment including buckets, CCTV, etc.

5. Manhole Steps: All existing non-stainless-steel manhole steps shall be cut smooth with the wall or be removed completely prior to lining.

6. Full Depth Wall Liner: The lining system shall be installed in accordance with the manufacturer's recommendation to withstand groundwater pressures. Cementitious lining shall be applied to manhole wall, bench, and channel surfaces. All cementitious linings shall have a minimum thickness of 5/8 inch. All multi-component polymeric lining shall have a minimum thickness of 1/2 inch.

a. Application of all products shall be by manufacturer certified applicators.

b. Manholes requiring lining shall be cleaned no more than 2 hours before lining. The surface prior to lining shall be damp without noticeable free water droplets or running water. Materials shall be applied to a minimum uniform thickness ensuring that all cracks, crevices, and voids are filled, and a smooth surface remains after light troweling.

c. For spray applied lining, the first application shall take an initial set (disappearance of surface sheen which could be 15 minutes to 1 hour depending on ambient conditions) before the second application, if necessary, to assure a minimum total finished thickness of 5/8 inch. For centrifugally cast lining, the rotating casting applicator shall be positioned to evenly apply the material and shall be withdrawn at a rate to ensure a final minimum thickness of 5/8 inch. A depth gauge shall be used during application, at various locations, to verify the required thickness.

d. The Contractor shall apply light troweling to compact the material into voids and set the bond. The surface shall be troweled to a smooth finish with care taken not to over trowel and bring additional water to the surface.

e. The bench covers used to catch debris shall be removed and the bench and channel lined to produce a gradual slope from the walls to the channel with the thickness at the edge of the channel being no less than 5/8 inch. The wall and channel intersection shall be rounded to a uniform radius along the circumference of the intersection.

f. No application shall be made to a frozen surface or if freezing is expected to occur within the manhole for 24 hours after application. If ambient temperatures are in excess of 90-degree Fahrenheit, precautions shall be taken to keep the mix temperature at the time of application below 90-degree Fahrenheit.

g. The application shall have a minimum cure time as recommended by the manufacturer before being subjected to active sewer flow.

h. Liner samples shall be taken by the Board assigned testing laboratory on a weekly basis or as directed by the Engineer.

M. Testing and acceptance of full depth liners

1. Cementitious Liners

a. All rehabilitated manholes utilizing a full depth comprehensive lining system shall be tested by using a vacuum method. This testing shall follow the manufacturer's recommendations for proper and safe procedures. Vacuum testing of manholes and structures shall be performed following proper curing of the lining. Any visible leakage in the manhole or structure, before, during, or after the test shall be repaired regardless of the test result at no additional cost to the Board.

b. All pipes for vacuum testing shall be installed at the top access point of the manhole. A vacuum of 10 inches of mercury (5.0 psi) shall be drawn on the manhole and the time for the pressure vacuum to drop 9 inches of mercury (4.5 psi) shall be measured. Manholes will be considered to have failed the air test if the time to drop 1 inch of mercury is less than the value shown in the following table.

Vacuum Test Timetable

Depth - feet	48" Diameter	60" Diameter	72" Diameter	96" Diameter
4	10 sec.	13 sec.	16 sec.	19 sec.
8	20 sec.	26 sec.	32 sec.	38 sec.
12	30 sec.	39 sec.	48 sec.	57 sec.
16	40 sec.	52 sec.	64 sec.	76 sec.
20	50 sec.	65 sec.	80 sec.	95 sec.
24	60 sec.	78 sec.	96 sec.	114 sec.
+ Each 2'	+ 5 sec.	+ 6.5 sec.	+ 8.0 sec.	+ 9.5 sec.

c. When testing, manhole depths shall be rounded to the nearest foot. Testing times for intermediate values of manhole depth shall be interpolated. For manhole depths greater than 24 feet, the values shown in the last line of the table shall be added to the 24-foot value for each additional 2 feet of depth.

d. If the manhole or structure fails the vacuum test the Contractor shall perform additional repairs and repeat the test procedures until satisfactory results are obtained at no additional cost to the Board.

e. After the manhole rehabilitation work has been completed, the Contractor shall allow the manhole to be visually inspected by the Engineer. The finished surface shall be free of blisters, "runs", "sags", or other indications of uneven lining thickness. There shall be no evidence of visible leaks.

N. Manhole benches and channels

1. The Contractor shall remove obstructions and all loose materials from benches, troughs, and pipe inverts prior to shaping the channel. The Contractor shall form a smooth, U-shaped channel having a minimum depth of one-half exiting pipe diameter and connecting the inlet and exiting pipes of the manhole using an approved manhole rehabilitation material. The Contractor shall control flow to allow sufficient setting time for material used.

2. The Contractor shall form a smooth transition between the reshaped channel and a raised manhole bench to eliminate sharp edges of pipe, concrete bench, and channel. The Contractor shall make finished benches and channels smooth and without defects which would allow for accumulation of debris.

O. Removal of Flush Valve Apparatus and Water Service Lines

1. For each sewer manhole with a flush valve present, the Contractor is required to remove the flush valve apparatus from the manhole (ITEM NO. CSS742(X10) below). Prior to starting this work, Contractor must send written notification, including manhole ID numbers, to the Engineer. The Engineer's inspector must witness all work performed.

2. Remove the service line from the manhole to a distance of two (2) feet beyond the exterior face of the manhole wall as directed by the Engineer's inspector. [See SSERP Detail for Flush Valve Removal]. The water line penetration hole shall be filled from both inside and outside of the manhole with non-shrink grout, (ITEM NO. CSS742(X11) below). The Engineer's inspector must witness all work performed.

3. For each sewer manhole with a water service line present, locate and disconnect the service line at the water main (ITEM NO. CSS742(X12) below). [See SSERP Detail for Flush Valve Removal]. Prior to starting this work, Contractor must send written notification, including manhole ID numbers, to the Engineer. The Engineer's inspector must witness all work performed.

4. The Contractor shall refer to the S&WB unit sheets to find the closest water main. To locate the point of connection at the water main, identify the shortest distance between the water main and the point where the service line penetrates the manhole. [See SSERP Detail for Flush Valve Removal]. Typically, the actual connection is within six feet in either direction of the theoretical connection point. On the manhole side of the water main, and at approximately twelve (12) inches clear from the outside of the water main, carefully sawcut any pavement and excavate parallel to the main until the water service line is located. Once located, trace the service line to the main. Limits of pavement saw cutting and removal shall be limited to within panels and not extend beyond panel joints without engineer's approval.

5. At the water main, the service line may or may not be connected to the water main with a corporation cock. If a corporation cock is present, the corporation cock should be turned off and the service line disconnected. The cock should be inspected to determine if it is leaking. If there is no corporation cock, or if the corporation cock is leaking, it will be necessary for the S&WB to shut down the water main. The Contractor shall then remove the direct connection or leaking corporation cock and seal the tap hole using a full circle stainless steel repair clamp approved by the Engineer (ITEM NOS. CSW741-01 or CSW741-02).

6. The remainder of the water service line shall be abandoned in place.

7. Restore the site to pre-construction condition in accordance with the restoration specifications and pay items in this contract.

P. Final Acceptance of the Contract will be granted via Sewerage and Water Board Resolution. All Contract work is not considered final accepted until the Resolution has been passed by the Board of Directors.

SECTION 2.11 – CURED-IN-PLACE PIPE LINING

A. The Contractor shall provide all labor, materials, equipment, and incidentals to accomplish the Cured-In-Place Pipe (CIPP) Lining of all existing sewer pipe and service laterals as shown on the Drawings and specified herein.

B. The Contractor shall furnish an extended warranty for liner materials from the liner manufacturer for a total of 5 years from the date of Final Acceptance.

C. The Contractor shall have a minimum of two (2) years' experience in sewer line repairs by CIPP liner installation. The CIPP liner product manufacturer shall have a minimum installation history of two (2) years and 100,000 linear feet of furnished product including the sizes applicable for this project. Verifiable experience shall be submitted to the Board upon request.

D. Liner

1. All CIPP lining products shall comply with the latest versions of ASTM F1216 - Rehabilitation of Existing Pipelines and Conduits by the Inversion and Curing of a Resin- Impregnated Tube, or ASTM F1743 - Rehabilitation of Existing Pipelines and Conduits by Pulled-in- Place Installation of Cured-in-Place Thermosetting Resin Pipe (CIPP). The Contractor shall furnish a general purpose unsaturated, polyester, or thermosetting vinyl ester resin and catalyst system that provides cured physical strengths specified herein.

2. The flexible tube shall consist of one or more layers of needled felt or equivalent woven or non-woven material manufactured under quality-controlled conditions set by the manufacturer and be capable of carry resin and withstanding installation pressures and curing temperatures. The tube shall be compatible with the resin system used and shall contain no intermediate layers that delaminate after resin curing. It shall not be possible to separate any layers with a probe or knife blade such that the layers separate cleanly or the probe or knife blade moves freely between the layers.

3. The flexible tube material shall be able to stretch to fit irregular pipe sections and negotiate bends. The tube shall be fabricated to a size that when installed will neatly fit the internal circumference and length of the existing sanitary sewer main lines and service lateral lines when installed. Allowance shall be made for circumferential stretching during insertion so that the final cured product is snug against the wall of the host pipe and free of fins and buckles.

4. The resin used shall be a thermoset resin system that is compatible with the CIPP installation. The resin shall be able to cure in the presence of water and the initiation temperature for cure shall not be more than 180o F.

5. The liner thickness shall be sized for a minimum hydrostatic and earth load of 8 feet. The earth load and hydrostatic load shall be increased to the manhole depth for bury depths in excess of 8 feet unless otherwise noted.

6. The wall color of the interior pipe surface of the CIPP after installation shall not be of a dark or nonreflective nature that could inhibit proper CCTV inspection.

7. The liner shall be structurally designed for a fully deteriorated host pipe/direct bury condition, prism loading, and AASHTO Standard Specification for Highway Bridges HS-20-44 live loading due to traffic. The liner shall be designed for the following conditions:

DESIGN PARAMETER	VALUE
Minimum Service Life	50 years
Soil Density	120 pounds per cubic foot (lb/cf)
Soil Modulus	1000 pounds per square inch (psi)
Minimum Safety Factor	2.0
Ovality Factor	2%
Maximum Deflection	5% in vertical axis
Long Term Modulus Reduction Factor	50%

8. The final CIPP liners shall conform to the minimum structural standards as listed below in accordance with the latest versions of ASTM D790 - Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials and ASTM F1216 - Rehabilitation of Existing Pipelines and Conduits by the Inversion and Curing of a Resin- Impregnated Tube:

FINAL CIPP	MINIMUM REQUIRED
Flexural Stress	4,500 psi
Short Term Flexural Modules	250,000 psi
Long Term Flexural Modules	125,000 psi

9. The liner 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 125o F. CIPP liners shall meet the minimum chemical resistance requirements in accordance with the latest version of ASTM F1216 - Rehabilitation of Existing Pipelines and Conduits by the Inversion and Curing of a Resin-Impregnated Tube.

10. The liner shall be furnished to the following minimum thickness, or the thickness based upon design criteria as specified herein, whichever is greater:

Pipe Diameter (inch)	Depth of Sewer Invert (feet)	CIP Nominal Thickness (millimeter)_	(inches)
6	to 20	4.5	0.177
8	to 20	6.0	0.236
10	0 to 15	6.0	0.236
10	15.1 to 20	7.5	0.295
12	0 to 10	6.0	0.236
12	10.1 to 20	7.5	0.295
15	0 to 10	7.5	0.295

15	10.1 to 15	9.0	0.354
15	15.1 to 20	10.5	0.413
18	0 to 10	9.0	0.354
18	10.1 to 15	10.5	0.413
18	15.1 to 20	12.0	0.472
Pipe Diameter (inch)	Depth of Sewer Invert (feet)	CIP Nominal Thickness (millimeter)_	(inches)
21	0 to 10	10.0	0.374
21	10.1 to 20	15.0	0.555
24	0 to 10	12.0	0.472
24	10 to 22	15.0	0.590
27	0 to 10	12.0	0.465
27	10.1 to 20	18.0	0.705
30	0 to 10	15.0	0.590
30	10 to 22	21.0	0.817
36	0 to 20	24.0	0.921

E. Expanding hydrophilic rubber joint seal

1. The rubber joint seal shall be an extended hydrophilic rubber compounded from chloroprene (Neoprene) rubber and hydrophilic resin, which expands on contact with water.

2. The rubber joint seal shall be bonded with adhesive on one face to hold it in place during assembly.

3. On contact with water, the rubber shall swell a minimum of 8 times its original volume, if necessary, and mold itself to completely fill any gaps and exert pressure evenly to ensure the seal. High compression or bolt up forces shall not be necessary to affect a complete and watertight seal.

F. Chemical grout - Chemical Grout in accordance with SECTION 2.10 - SANITARY SEWER MANHOLE REHABILITATION, Subsection C, Paragraph 2, Subparagraph b.

G. Delivery, storage, and handling

1. The Contractor shall comply with the pipe manufacturer's printed recommendations for delivery, storage, and handling of all products.

2. The Contractor shall keep products safe from damage. The Contractor shall promptly remove damaged products from the job site and replace damaged products with undamaged goods at no additional cost to the Board.

H. All required flow isolation of private services shall be in accordance with section 2.07.B of these special provisions.

I. Preparation

1. The Contractor shall carry out his operations in accordance with all OSHA and manufacturer's safety requirements. Particular attention is drawn to those safety requirements involving the entering of confined spaces.

2. The Contractor shall take field measurements to verify the existing pipe diameter, ovality and length prior to manufacturing liners. The manufacturer shall incorporate these measurements into the manufacturing process of the liner. The outside of the flexible tube shall be marked along its full length at regular intervals not to exceed five (5) feet. It shall be the responsibility of the Contractor to remove all internal debris such as solids and roots and clean the existing sewer line prior to installation of the liner in accordance with Section 2.09 Pre-and Post-Rehabilitation CCTV Inspection and Cleaning.

3. Inspection of existing sewer lines shall be performed by experienced personnel trained in locating breaks, obstacles, and service connections by CCTV. The interior of the line shall be carefully inspected to determine the location of any conditions which may prevent proper installation of the CIPP liner into the main lines or service lateral lines, and such conditions shall be noted so they can be corrected. A videotape and log shall be kept as specified in Section 2.09 Pre-and Post- Rehabilitation CCTV Inspection and Cleaning.

4. The Contractor shall provide for the flow of sewage around the section or sections of pipe designated for lining as specified in Section 2.07B, Sewer Flow Control. The Contractor shall be completely responsible for preventing service line back-ups during the CIPP liner installation and curing periods.

5. The Contractor shall clear the line of obstructions such as solids, protruding gaskets, dropped joints, protruding service connections, or collapsed pipe that will prevent the insertion of the liner, as noted during pre-rehabilitation CCTV inspection. If inspection reveals an obstruction that cannot be removed by conventional sewer cleaning equipment, the Contractor, upon approval from the Engineer, shall make a point repair to uncover and remove or repair the obstruction prior to lining.

6. Location and distance from the upstream and downstream manholes of all internal and external point repairs shall be determined before rehabilitation commences.

7. Only those sewer services that are live and active shall be repaired or reinstated after the sewer main has been lined or replaced. The Contractor shall note that not all sewer lines segments have been televised in their entirety due to obstructions blocking further entry, etc. These obstructions shall be cleared to allow CCTV viewing of the entire segment length before lining is

commenced. The number of service connections on some sewer segments may exceed the number of buildings actually served. It is the Contractor's responsibility to determine through dye testing, CCTV inspection or other acceptable methods, the services that are live and require reinstatement prior to commencing lining of the sewer main. Services that are confirmed to be inactive shall not be reinstated. Services that are inactive, but reinstated, shall be plugged at no additional expense to the Board.

J. Installation

1. Installation shall be accomplished by inversion or winched-in-place methods and cured in place by ambient temperature or circulating hot water or steam to produce a hard, jointless, impermeable pipe repair. Installation procedures shall be in accordance with the latest versions of ASTM F1216 - Rehabilitation of Existing Pipelines and Conduits by the Inversion and Curing of a Resin-Impregnated Tube or ASTM F1743 - Rehabilitation of Existing Pipelines and Conduits by Pulled-in-Place Installation of Cured-in-Place Thermosetting Resin Pipe (CIPP), and the manufacturer's recommendations.

2. The Contractor shall designate a location where the reconstruction tube will be vacuum impregnated prior to installation. The Contractor shall allow the Engineer to inspect the materials and "wet out" procedure. Sufficient excess resin shall be used in accordance with the latest version ASTM F1216. A roller system shall be used to uniformly distribute the resin throughout the tube.

3. Before installation begins, the tube manufacturer shall provide the minimum pressure required to hold the tube tight against the existing conduit, and the maximum allowable pressure so as not to damage the tube. Once the installation has started the pressure shall be maintained between the minimum and maximum pressures until the installation has been completed.

4. The curing of the CIPP must take into account the existing pipe material, the resin system, and ground conditions (temperature, moisture level, and thermal conductivity of soil). The post-cure temperature should be held for a period as recommended by the resin manufacturer, during which time the recirculation of the water and cycling of the head source to maintain the temperature continues.

5. The bond between all CIPP layers shall be strong and uniform. All layers, after cure, shall be completely saturated with resin.

6. The CIPP shall be cooled to a temperature below 100oF before relieving the hydrostatic head. Care should be taken in release of the static head so that a vacuum will not be developed that could damage the newly installed liner.

7. Where practicable, liners can be installed in continuous runs through manholes where there are two of more continuous sewer segments requiring lining, especially to connect several short segments with continuous lining.

8. The temperature of water discharged to the sewer system from processing liners shall not exceed 125o F maximum, or the level allowed by State or local standards if less than 125o F.

9. The Contractor shall furnish on-site on a continuous basis one (1) additional operational robotic cutter assembly train and key spare components as a "stand-by" unit in the event of primary equipment breakdowns.

K. Post installation

1. After installation of the liner in a full segment pipe, a minimum of one (1) inch of the liner material shall be left to protrude from the wall of the entrance and the exit manhole.

2. The Contractor shall install a joint seal at all manhole inlet and outlet connections to seal the area where the line enters or leaves each manhole. The Contractor shall use grout to dress up around the end of the liner. This space may be sealed with a mechanical seal, chemical seal, or combination of both. The method used shall be as approved by the Engineer.

3. The upstream and downstream manholes shall be inspected and any holes or voids in the manhole wall immediately surrounding the new liner shall be sealed with a hydrophilic rubber joint seal and chemical grout as specified herein. The Engineer shall approve the seal.

4. Where liners of any type are installed in two or more continuous manhole segments, the liner invert through the trough of intermediate manholes shall be left intact. Final finishing of the installation in those intermediate manholes shall require removal of the top of the exposed liner with a horizontal cut and neat trimming of the liner edge along the top edge of the bench and any cut portions removed from the system.

5. Portions of any piece of liner material removed during installation shall be available for inspection and retention by the Engineer. Any unrestrained samples shall not be used for testing purposes.

6. The Contractor shall reinstate openings for all drop assemblies after relining the mainline sewer.

7. Service connections shall be reinstated without excavation, utilizing a remotely controlled cutting device monitored by a CCTV camera. The coupons from this action shall be collected downstream and submitted to the Engineer. The Contractor shall provide certification that he has the required equipment to reinstate the service connections as specified herein.

8. After the liner has been installed, in the event that the Contractor chooses to temporarily reinstate service lines, all active existing services may be temporarily reinstated by punching through the liner from the interior of the pipeline. Temporary reinstatements shall allow normal flow from the service line into the mainline. Final reinstatement of all active services within a rehabilitated line segment shall be performed internally using a robotic cutter within 48 hours of curing and buffed to a minimum of 95% of the original service opening size. The finished opening shall contain no jagged edges.

L. Testing

1. During the cool down process, after installation and curing of the liner, the Contractor shall perform tests on the sewer line to determine if it is watertight. No separate payment will be made for testing.

2. The Contractor shall furnish all necessary equipment to conduct the test.

3. The sewer shall be tested using either exfiltration test methods in accordance with the latest version of ASTM F1216 – Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Inversion and Curing of a Resin-Impregnated tube or air test methods as specified herein.

4. After completing lining and service reinstatement, every liner shall be CCTV inspected in accordance with Section 2.09 of the Special Provisions. Segments not fully conforming to these Specifications must be immediately brought to the Engineer's attention. The Contractor shall furnish a written proposed method of correction within 24 hours for approval by the Engineer.

5. The Board will have a certified independent testing lab analyze finished liner samples taken from the restrained sample located at the manhole invert. The Contractor shall furnish samples directly to the Engineer within 2 days after installation.

a. A minimum of one (1) sample shall be taken from every four (4) segments installed. The restrained samples shall be a minimum of one (1) foot in length. The Contractor shall place a sample mold aligned with and the same size as the existing sewer in such a manner as to allow the installation of the liner material through the restraining sample mold. This sample mold shall be made of SDR 35 PVC, or an Engineer approved equal.

b. The resin-impregnated tube shall be installed and cured through this restraining mold in order to obtain a liner sample representative of the actual liner physical characteristics. The sample shall be removed from the mold and shall be labeled with the project number, date of installation, pertinent manhole numbers, nominal thickness, flow direction, and location of installation. The Contractor and Engineer shall acknowledge receipt and transfer of all samples.

c. Tests in accordance with the latest versions of the ASTM standards for flexural strength, flexural modulus and wall thickness will be conducted by the independent testing lab.

d. A sample will be provided by the Contractor to the Engineer for all CIPP installation over 18" inches in diameter to be tested in accordance with ASTM standards.

M. Acceptance

1. The finished CIPP liner shall be fully rounded and free from visible defects, including but not limited to damage, deflection, holes, delamination, ridges, cracks, uncured resin, foreign inclusions, or other objectionable defects as determined by the Engineer.

2. There shall be no visible infiltration through the liner, or around the liner at manhole or service line connections. The Contractor shall be required to repair any visible leaks in a manner approved by the Engineer.

N. Non-conforming work

1. If either the thickness, flexural strength, or flexural modulus of elasticity of the installed CIPP liner are less than 80% of the approved design values, the product is considered unacceptable. A method of repair or replacement shall be submitted for review and approval by the Engineer. All work required to remedy non-conforming work shall be at no additional expense to the Board.

2. For all instances, as described in this Subsection, other than thickness, flexural strength, and flexural modulus of elasticity, where the CIPP liner is deemed unacceptable, the Contractor shall submit a method of repair or replacement for review and approval by the Engineer. All work required to remedy non-conforming work shall be at no additional expense to the Board.

3. Where post-installation thickness measurements and/or physical property testing is performed, payment for installed cured-in-place pipe shall be made in accordance with the following:

a. If the thickness, flexural strength, or flexural modulus of elasticity of the installed CIPP are 90% or greater than the approved design values, full payment shall be made accordingly.

b. If the thickness, flexural strength, or flexural modulus of elasticity of the installed CIPP are between 90% and 80% of the approved design values, with all at least 80% of the approved design values, payment shall be based on:

Adjusted Unit Price = Unit Price Bid X Value Factor, where:

Value Factor = [_* thickness +_* flexural strength +_* flexural modulus of elasticity] / 3.

* Insert actual measured or tested result expressed as a percentage of specified value. Maximum allowable percentage is 100%.

4. If a defect repair is required after the liner has cured, a short segment tube shall be used to splice across the defect repair. The overlap on each defect shall be twice the diameter, or 12 inches, whichever is greater.

O. Measurement and payment for Cured In Place Liners shall be in accordance with the DPW Standard Specifications Section C742.05(k).

SECTION 2.12 – <u>WATER POINT REPAIRS</u>

A. The supplemental specifications within this section are applicable to water related work not listed as a standard bid item in Section C741. Any general conditions, materials or methods not discussed within this section shall be governed by the DPW Standard Specifications Section C742 and the S&WB standard details and specifications.

B. Water point repairs shall be completed in accordance with this section as well as DPW General Specifications Section C741.02.2 and Special Provisions Section 1.22.

C. Point repairs of an existing water main shall consist of recaulking an existing lead bell joint and installing a bell joint clamp, repairing a leak on the water main by installing a full circular stainless steel repair clamp, or replacing a section of existing water main.

D. Point repairs of an existing water house connections 5/8” to 2” shall consist of replacing the entire service connection from the water main to the meter. Existing 5/8” and ¾” services shall be replaced with 1” Polyethylene (PE) tubing. There shall be no splices allowed in repair of the existing water house connection, unless directed by the Engineer.

E. Point repairs of an existing water house connection greater than 2” shall consist of replacement of existing pipe with polyvinyl chloride (PVC) of equal diameter from the main to the shut-off valve where practical. Couplings used to make connections between existing and new pipe shall be AWWA approved and pressure rated as required by S&WB.

F. New water mains sized 2-inch shall be Polyethylene plastic tubing (PE4710, DR 9) conforming to ASTM D2737 and AWWA C901-17, latest edition, and shall be compliant with NSF/ANSI 61. All bronze and brass fittings, connectors, corporation stops, and any other appurtenance used to complete the installation of the water main shall be of domestic manufacture and be lead free. Polyethylene pipe shall be jointed by thermal butt-fusion , flange assemblies, or polyethylene mechanical joint adapters. Installation shall be in accordance with manufacturer's recommendation.

G. All new water mains shall be polyethylene plastic tubing (PE4710, DR 9) conforming to ASTM D2737 and AWWA C901-17, latest edition, and shall be compliant with NSF/ANSI 61. All bronze and brass fittings, connectors, corporation stops, and any other appurtenance used to complete the installation of the water main shall be of domestic manufacture and be lead free. Polyethylene pipe shall be jointed by thermal butt-fusion, flange assemblies, or polyethylene mechanical joint adapters. Installation shall be in accordance with manufacturer's recommendation.

H. All pipe joints shall be installed watertight under all service conditions. Any leaks from improperly installed or defective joints discovered at any time prior to the one-year maintenance period following substantial completion will be repaired by and at the expense of the Contractor.

I. Before the water service is interrupted, the Contractor shall:
   a) Expose the existing water main at the repair point location and verify the type, size, and elevation of the existing service.
   b) Have sufficient materials, equipment, and manpower available at the job site.
   c) Verify materials on hand will meet the job needs after uncovering the existing mains.
   d) Request a water test closure through the S&WB Networks Department (942-3891) a minimum of thirty (30) working days in advance of the scheduled repair.
   e) Have notified all residents and the New Orleans Fire Department a minimum of seventy-two (72) hours in advance of interruption of service.
   f) Any damage caused by the Contractor, will be at the Contractor's own expense.

SECTION 2.13 – <u>GEOTEXTILE FOR STABILIZATION</u>

A. General: This work consists of furnishing and placing geotextile fabric in accordance with these specifications and in conformance with the details shown on the plans.

B. Materials: The geotextile fabric shall conform to Section 1019, Class D.

C. Construction Requirements: Rolls of geotextile fabric shall be kept covered at all times until used. Geotextile fabric that has been installed shall be covered with embankment within 7 calendar days. When ultraviolet damage occurs, the geotextile fabric shall be removed and replaced. The geotextile fabric shall be placed at the locations shown on the plans or as directed. Adjacent rolls of geotextile fabric will be overlapped or sewn. When rolls are overlapped, the overlap shall be a minimum of three (3') feet, including the ends of the rolls. The top layer of the geotextile fabric shall be parallel with adjacent rolls and in the direction of construction.

1. Geotextile fabric shall be placed as smooth as possible with no wrinkles or folds, except curved road sections. For curved road sections, the geotextile fabric shall be folded to accommodate the curve. The fold shall be in the direction of construction and pinned or stapled. Ruts that occur during construction shall be filled and compacted prior to placement of geotextile fabric.

2. Damaged geotextile fabric shall be either removed and replaced with new geotextile fabric or covered with a second layer of geotextile fabric extending three (3') feet in each direction from the damaged area.

SECTION 2.14 – GEOGRID

These items shall be governed by the requirements of the "General Specifications for Street Paving," the City of New Orleans, State of Louisiana, latest edition, Section C203 Geogrid, shall be the General Conditions for this Contract and shall govern except as modified here-in. Acceptable geogrid, when approved by the Engineer, shall meet the required material properties, geometry, and characteristics listed below.

PROPERTY	TEST METHOD	UNITS	GEOGRID OPTION VALUES	
Geometry				
Aperture Shape			Square	Equilateral Triangular
Aperture size	I.D. Calipered or Observed	in (mm)		1.6 (40) (nom)
MD		in (mm)	1.3 (33) (nom)	
CMD		in (mm)	1.3 (33) (nom)	
Thickness				
Ribs	Calipered	in (mm)		0.05 (1.2) (nom)
MD	Calipered	in (mm)	0.09 (2.4) (nom)	
CMD	Calipered	in (mm)	0.06 (1.5) (nom)	
Junctions	Calipered	in (mm)	0.125 (3.2) (nom)	0.13 (3.3) (nom)
Physical Characteristics				
Tensile Strength @ 2% Strain				
MD	ASTM D6637	lb/ft (kn/m)	650 (9.5)	
CMD	ASTM D6637	lb/ft (kn/m)	685 (10)	
Tensile Strength @ 5% Strain				
MD	ASTM D6637	lb/ft (kn/m)	1164 (17)	
CMD	ASTM D6637	lb/ft (kn/m)	1300 (19)	
Ultimate Tensile Strength				
MD	ASTM D6637	lb/ft (kn/m)	1713 (25)	
CMD	ASTM D6637	lb/ft (kn/m)	1775 (26)	
Overall Flexural Stiffness	ASTM D7748	mg-cm	2,150,000 (min)	
Radial Stiffness at 0.5% strain	ASTM D6637	lb/ft	38,500 (min)	18,495 (min)
Aperture Stability	ASTM D7864	m-N/deg	0.80 (min)	
Junction Efficiency	ASTM D6637 & D7737	%	93 (min)	93 (min)
Material				
Polypropylene	ASTM D-4101 Group 1/Class 1/Grade 2	%	98 (min)	98 (min)
Carbon Black	ASTM 4218	%	0.5 (min)	0.5 (min)

SECTION 2.15 – VIBRATIONS DUE TO CONSTRUCTION ACTIVITIES

Section C126 of the "General Specifications for Street Paving" is amended to include the following requirements:

The vibration monitoring is optional and be performed at the Contractor's discretion. There shall be no direct payment for vibration monitoring services.

SECTION 2.16 – SUPERPAVE ASPHALTIC CONCRETE REQUIREMENTS

All Superpave asphaltic concrete placement shall conform to Section C502 except where modified here within.

Roadway quality control, roadway acceptance, and surface tolerance shall apply to this project and shall conform to Section C501.-

Superpave asphaltic concrete binder course placement shall consist of ¾ inch (0.75") maximum nominal aggregate size. Superpave asphaltic concrete wearing course mixture shall consist of ½ inch (.5") maximum nominal aggregate size. Grade of Asphalt Cement shall be at minimum a PG 67-22. The Engineer shall verify the correct material is used and ensure that roadway density requirements are met in accordance with the contract documents.

The thickness of Superpave binder course shall be placed with a 5" section. Two (2) lifts shall be used: one at 3" and then one at 2". The thickness of Superpave wearing course shall be placed with a 2" section using one single lift.

NTSS-1HM (trackless tack) shall be considered as an acceptable prime coat when requested by the Contractor, approved by the Engineer, and follows the requirements of Section 505 from the latest version of LaDOTD Louisiana Standard Specifications for Roads and Bridges.

When the Owner determines that a core sample shall be obtained, the samples will be drilled by the Contractor at the locations determined by the Sewerage and Water Board Director at no direct pay and those samples shall be provided to the Department.

SECTION 2.17 – INTERIM ASPHALT PAVEMENT

Temporary asphalt pavement shall be same mix as asphaltic concrete wearing course; shall be a minimum of two (2) inches thick; shall be placed over a minimum of six (6) inches of compacted crushed stone or crushed concrete and encapsulated in a layer of geotextile fabric.

Measurement and payment for interim asphalt pavement shall be made at the unit price bid per square yard for Special Bid Item No. CF-501 INSTALL TEMPORARY PAVEMENT, 2" THICK when listed on the Unit Price Form.

SECTION 2.18 – BASE COURSE

All Base Course materials shall conform to section C302 except where modified here within.

Gray Limestone stone conforming to section C302.03 part C is the acceptable material for base course.

Recycled Portland Cement Concrete is not acceptable as a base course material. This is acceptable as a Traffic Maintenance Aggregate.

SECTION 2.29 – MEASUREMENT AND PAYMENT

Note: This section includes "Extra Bid Items" which are included under both standard SWB specifications or as stand-alone specifications. Extra Bid Items are used when the standard SWB or DPW specifications are not sufficient to scope and / or described the work.

SECTION C202 – REMOVAL OF STRUCTURES AND OBSTRUCTIONS (INCLUDES EXTRA ITEMS 12 & 15)

C202.01 DESCRIPTION: This work consists of removal and satisfactory disposal of pavements, sidewalks, curbs, gutters and other obstructions not designated or permitted to remain, except obstructions to be removed under other contract items. It shall also include salvaging of designated materials and backfilling resulting trenches, holes and pits, except the area to be excavated. At locations where pavement, curbs or gutter, sidewalk, driveway, or footlaps are to be removed but are not to be replaced, the Contractor shall backfill the area with selected excavated or other suitable approved material at no direct payment.

Extra Item 12 Remove Existing 24" Waterline (Store / Disposal) requires removal, offsite storage and disposal of 24" ductile iron pipe, including labor , material and equipment.

Extra Item 15 Remove and Store (off site) existing Granite Curbs includes careful (manual excavation) of granite curbs and delivery / storage as directed by the S&WB.

C202.02 GENERAL CONSTRUCTION REQUIREMENTS: The Contractor shall remove and dispose of all pavements, sidewalks, curbs, gutters and other obstructions. Designated salvageable material shall be removed, without unnecessary damage, in sections which may be readily transported. Salvageable material shall be stacked at specified storage areas by the Contractor. When no storage sites are specified, salvaged materials shall be delivered to the street maintenance yard. Materials not designated to be salvaged shall be disposed of, off the project, outside the view of the traveling public with written permission of the property owner on whose property the material is placed. Copies of agreements with property owners shall be furnished to the Director prior to beginning of work. Saw cut may be required prior to removal.

C202.03 MEASUREMENT: When the contract stipulates that payment will be made for the removal of specific items on a unit basis, measurement will be made by the unit stipulated in the contract.

Hauling salvaged materials (Granite Curbs) to specified storage sites will not be measured for payment. Saw cut will

be measured by the linear foot unless otherwise noted.

C202.04 PAYMENT: Payment for "removal and disposal of existing Portland Cement Concrete Pavement" shall be made at the contract unit price, including removal of asphaltic concrete pavement, regardless of thickness, on top of the existing Portland Cement Concrete Pavement and curb and gutter bottom if monolithic with pavement.

Payment for removal and disposal of "existing sidewalk, driveway, footlap," "existing curb", "existing curb and gutter bottom", "existing gutter bottom or rolling strip" and "existing asphaltic concrete pavement" shall be made at the contract unit price.

Payment for "saw cut" shall be made at the contract unit price per Linear Foot.

When the removal is an area to be excavated and payment is made under other items, no deduction will be made for those items.

Payment will be made under:

ITEM NO.	PAY ITEM	PAY UNIT
C202(52)(C)	Removal and Disposal of Existing Portland Cement Concrete Pavement (Composite)	Square Yard
C202(52)(D)	Removal and Disposal of Existing Sidewalk, Driveway, Foot Lap (Concrete, Brick, Asphalt, etc.)	Square Yard
C202(52)(F)	Removal of Existing Curb and Gutter bottom	Linear Foot
C202(55)	Saw Cut Concrete Curb, Pavement, Side-Walk, Driveway, etc. According to Plans (_" Depth)	Linear Foot
Extra Item 12	Remove Existing 24" Waterline (Store / Disposal)	Linear Foot
Extra Item 15	Remove and Store existing Granite Curbs	Linear Foot

SECTION C203 – PREPARATION OF ROADWAY PAVEMENT SUBGRADE

C203.01 DESCRIPTION: This work shall be in accordance with the requirements of Section C203 of the General Specifications for Street Paving, 2015 Edition, Department of Public Works City of New Orleans, Louisiana, and latest revisions, or as amended here in..

C203.02 MEASUREMENT: Roadway excavation, excluding pavement removal paid for in other items, shall be measured by the cubic yard, theoretical section, computed by the average end area methods.

Unsuitable subgrade, excavation, and sand filling, where directed for use by the Director, shall be measured by the cubic yard truck measure.

Geotextile fabric shall be measured by the square yard of covered areas in place. There will be no measurement for overlaps.

Geogrid will be measured by the square yard in place. There will be no measurement for overlaps.

C203.03 PAYMENT: Payment for the accepted quantities will be made at the contract unit prices.

Payment for "Roadway Excavation" shall include excavating, hauling, disposing of the excavated materials.

Payment for "Unsuitable Subgrade Excavation & Sand Filling" shall include excavation, disposal of unsuitable subgrade and replacing this material with sand, graded and compacted.

No direct payment will be made for grading and/or compacting the subgrade.

Payment will be made under:

ITEM NO.	PAY ITEM	PAY UNIT
C203(51)	Roadway Excavation	Cubic Yard
C203(58)	Unsuitable Subgrade, Excavation, & Sand Filling	Cubic Yard (Truck Measure)
C203(59)	Geotextile Fabric for Stabilization	Square Yard
C203(60)	Geogrid	Square Yard

SECTION C302 – BASE AND SUBBASE COURSE

C302.01 DESCRIPTION: This work shall be in accordance with the requirements of Section C302 of the General Specifications for Street Paving, 2015 Edition, Department of Public Works City of New Orleans, Louisiana, and latest revisions, or as amended here in..

C302.02 MEASUREMENT: The quantities for payment will be based on the horizontal dimensions and compacted thickness of the completed course shown on the plans, and any adjustments approved by the Director.

C302.03 PAYMENT: Payment for base course or subbase course will be made at the contract unit price per Cubic Yard (net section) including prime coat.

Payment will be made under:

ITEM NO.	PAY ITEM	PAY UNIT
C302(51)	Base Course	Cubic Yard, Net Section

SECTION C402 – TRAFFIC MAINTENANCE AGGREGATE

C402.01 DESCRIPTION: This work shall be in accordance with the requirements of Section C402 of the General Specifications for Street Paving, 2015 Edition, Department of Public Works City of New Orleans, Louisiana, and latest revisions, or as amended here in..

C402.02 MATERIALS: Aggregate for maintenance of traffic shall be crushed stone, crushed concrete, or approved equal.

C402.03 EQUIPMENT: Equipment necessary to produce a finished product meeting the specification requirements shall be furnished and maintained by the Contractor.

C402.04 CONSTRUCTION REQUIREMENTS: When directed, the Contractor shall satisfactorily place, shape, compact and maintain areas requiring traffic maintenance aggregate. When directed, the aggregate material shall be reused on the project at designated locations for traffic maintenance at no direct pay. When aggregate surfacing is no longer necessary for maintenance of traffic, the Contractor shall, unless otherwise directed, remove the aggregate surfacing and dispose of the removed materials in accordance with Section C202.

C402.06 MEASUREMENT: When directed, traffic maintenance aggregate shall be furnished and measured by the cubic yard, truck measure. Traffic maintenance aggregate for access to driveways and temporary surfacing of utility trenches will be provided and placed at no direct pay.

C402.07 PAYMENT: Payment for traffic maintenance aggregate maintained and subsequently removed (when required) will be made at the contract unit price.

Payment will be made under:

ITEM NO.	PAY ITEM	PAY UNIT
C402(51)	Traffic Maintenance Aggregate	Cubic Yard (Truck Measure)

SECTION C501 – ASPHALTIC CONCRETE MIXTURES

C501.01 DESCRIPTION: This work shall be in accordance with the requirements of Section C501 of the General Specifications for Street Paving, 2015 Edition, Department of Public Works City of New Orleans, Louisiana, and latest revisions, or as amended here in.

C501.02 MEASUREMENT: Measurement shall be in accordance with the requirements of Sections C501 of the General

Specifications for Street Paving, 2015 Edition, Department of Public Works City of New Orleans Louisiana, and latest revisions.

C501.03 PAYMENT: Payment shall be in accordance with the requirements of Sections C501 of the General Specifications for Street Paving, 2015 Edition, Department of Public Works City of New Orleans Louisiana, and latest revisions.

Payment will be made under:

ITEM NO.	PAY ITEM	PAY UNIT
C501(53)	Asphaltic Concrete (2"Thick)	Square Yard

SECTION C601 – PORTLAND CEMENT CONCRETE PAVEMENT

C601.01 DESCRIPTION: This work shall be in accordance with the requirements of Section C601 of the General Specifications for Street Paving, 2015 Edition, Department of Public Works City of New Orleans, Louisiana, and latest revisions, or as amended here in.

C601.02 MEASUREMENT: The area of all roadway pavements will be determined by actual measurements from back of curb to back of curb and no allowance will be made for curvature of the cross section. Deductions will not be made for the rails of electric and other railroads, nor for subsurface structures in the street occupying less than twelve square feet of area, when these are within the area or areas paved under the contract.

C601.03 PAYMENT: Payment for Portland cement concrete pavement will be on a lot basis, at the contract unit price per square yard, which includes furnishing and placing all materials including tie-bars, dowel bars, joint material and welded wire fabric. If the pavement does not conform to acceptance requirements, payment will be made at an adjusted unit price in accordance with Section C601.02. Payments includes cost of high early strength concrete.

Payment will be made under:

ITEM NO.	PAY ITEM	PAY UNIT
C601(54)	Reinforced Concrete Pavement (7" Thick)	Square Yard

SECTION C701 – CULVERTS AND STORM DRAINS (INCLUDES EXTRA ITEM 14)

Culverts and storm drains shall conform to all of the requirements of the General Specifications and Standard Plans of the Sewerage & Water Board (S&WB) of New Orleans (the latest revision) except as noted.

C701.01 DESCRIPTION: This work shall be in accordance with the requirements of Section C701 of the General Specifications for Street Paving, 2015 Edition, Department of Public Works City of New Orleans, Louisiana, and latest revisions, or as amended here in.

Extra Items 14 tie to existing drainage structure includes excavation, brick work, concrete saw cutting, labor, material and equipment, mortar necessary to make a watertight seal between new drain pipe and existing catch basin or manhole. Includes existing manholes and catch basins on side streets and those that are designated to be rehabilitated.

C701.02 MEASUREMENT: Drain pipes will be measured in place and the length determined by measuring from center to center of manholes, or other subsurface structures of which they form a part. If the drain line is connected to a square or rectangular manhole, the measurement will be to the center of the manhole. If the drain line is connected to a box canal wall, the

measurement will be to the face of the wall.

C701.03 PAYMENT: Payment for the accepted quantities will be made at the contract unit price.

(a) Payment for reinforced concrete pipe shall be made at the contract unit price, per linear foot of the types and sizes specified, including excavation, removal of existing pipe (if any), foundation lumber, bedding, engineering fabrics, backfill, complete shoring, pumping as necessary and tie-ins to manholes and catch basins. (Bid Items C701(53) or C701(54)).

(b) Payment for reinforced concrete wye in a new drain line shall be made at the contract unit price per Item No. C701(59) and shall be in addition to the payment per linear foot for reinforced concrete drain pipe.

Payment for reinforced concrete wye in an existing drain line shall be made at the contract unit price per Item No. C701(65), including a ten (10') foot point repair (total length including wye),couplings, excavation, removal of existing pipe, granular bedding, engineering fabric, backfill, foundation lumber, shoring, and pumping as necessary and saw cutting of existing pipe. (Bid Items (C701(53) or C701(54)).

(c) Payment for reinforced concrete tee shall be made at the contract unit price, per Item No. C701(66).

(d) Payment for point repairs of existing drain lines, up to ten (10') feet shall be made at the contract unit price, per each of the sizes specified, including excavation, foundation lumber, bedding, engineering fabrics, backfill, complete shoring and pumping, as necessary, pipe fittings, couplings, saw cutting existing pipe, removal of existing pipe, and tie-ins to existing manholes if required as per Item No. C701(68). Payment for point repair beyond ten (10') feet shall be made at the contract unit price per linear foot, including the above work, as per Item No. C701(69).

(e) Drain house connections from new drain line to back of curb shall be paid per each including, fittings, tie-ins, excavation, backfilling, removal of existing pipe (if any) and drilling the reinforced concrete pipe, per Item No. C701(70). Payment for drain service line tie-ins beyond back of curb will be made by linear foot of tie-in service lines, including the removal of existing pipes, fittings, and backfill (Item C701(71)). PVC collector line to catch basins for drain house connections shall be paid per linear foot, including, fitting tie-ins to catch basins, excavation, and backfilling per item No. C701(72).

Payment will be made under:

ITEM NO.	PAY ITEM	PAY UNIT
C701(53)	Reinforced Concrete Pipe (Size)	Linear Foot
C701(59)	Reinforced Concrete Wye or Arch Equivalent – New (size)	Each
C701(72)	Collector Line to Catch Basins for Drain House Connections (Size)	Linear Foot
Extra Item 14	Tie to Existing Drainage Structure	Each

SECTION C702 – MANHOLES, CATCH BASINS, DROP INLETS, AND CLEAN-OUTS

C702.01 DESCRIPTION: This work shall be in accordance with the requirements of Section C702 of the General Specifications for Street Paving, 2015 Edition, Department of Public Works City of New Orleans, Louisiana, and latest revisions, or as amended here in.

C702.03 MEASUREMENT: New and adjusted manholes, catch basins, drop inlets and clean-outs will be measured by the pay unit. New or rehabilitated manholes will be measured by vertical foot height. The height of manholes will be determined by measuring from the invert of the manholes to the top of the cast iron cover. Excavation and backfill shall not be measured for payment.

C702.04 PAYMENT: Payment for the accepted quantities will be made at the contract unit price.

(a) Payment for "standard manhole" shall be made at the contract unit price per foot height, including excavation, granular bedding and backfilling.

(b) Payment for "catch basin adjustment" shall be made at the contract unit price per each, including excavation, granular bedding and backfilling. For type C, the price shall include the risk of breakage and replacement of any casting and the cost of bricking up the front grating where necessary, so as to make such catch basins conform to a No. 1 standard catch basin.

(c) Payment for "catch basin & drop inlet" shall be made at the contract unit price per each, including excavation, granular bedding and backfilling.

(d) Payment for "rehabilitate existing catch basin" shall be made at the contract unit price per each.

(e) Payment for "rehabilitate existing manhole" shall be made at the contract unit price per foot height.

(f) Payment for "tap-in to existing drain line" shall be made at the contract unit price per each.

(g) Payment for "adjust manhole or drop inlet up to six (6") inches with brick and mortar" shall be made at the contract unit price per each, including the base material (Portland cement concrete or asphaltic) to be replaced around the manhole. Payment for "adjust manhole or drop inlet over six (6") inches" shall be made at the contract unit price per foot height, or any fraction of a foot, including the above work.

(h) Payment for "six (6") inch drain cleanout for roof drain" shall be made at the contract unit price per each, including excavation and backfilling.

(i) Payment for "cleanout box in existing culvert" and in "new culvert" shall be made at the contract unit price per each, including excavation and backfilling.

Payment will be made under:

ITEM NO.	PAY ITEM	PAY UNIT
C702(52)(J)	No. 1 Standard Drain Manhole	Foot Height
C702(53)(M)	No. 1 Standard Catch Basin	Each
C702(54)(A)(1)	Adjust Manhole or Drop Inlet up to 6" with Brick and Mortar	Each
C702(54)(A)(3)	Manhole Repair or Vertical Adjustment Up to grade 6"Reusing Metal Casting	Each
C702(54)(1)	Rehabilitation Existing Manhole	FTHT

SECTION C706 – DRIVEWAYS AND SIDEWALKS

C706.01 DESCRIPTION: This work shall be in accordance with the requirements of Section C706 of the General Specifications for Street Paving, 2015 Edition, Department of Public Works City of New Orleans, Louisiana, and latest revisions, or as amended here in.

C706.02 MEASUREMENT: The area of driveways will be determined by surface measurements and no extra allowance will be made for shoulders.

Sidewalk pavements will be paid for by surface measurements and no deduction will be made for subsurface structures occupying less than five (5) square feet of area. Areas under structures encroaching on public property not paved will not be included in the surface measurement.

C706.03 PAYMENT: Payment for concrete driveways, sidewalks or banquette pavement will be made at the contract price per square yard, which includes excavation, installation of expansion joint and welded wire fabric. Granular material for adjustment and removal of existing driveways, sidewalk or banquette pavement shall be paid for in other items.

Payment for "letters or numbers for Tile street names" will be per each tile at the contract unit price.

Payment for "Resetting Tile Street Name" will be per name at the contract unit price.

Payment will be made under:

ITEM NO.	PAY ITEM	PAY UNIT
C706(54)	Sidewalk at Intersection Including Handicapped Ramps (_____" Thick)	Square Yard
C706(56)	Handicapped Ramp (Specify Concrete Brick or Stone)	Square Yard
C706(57)	Brick Sidewalk	Square Yard
C706(58)	Relaying Brick Sidewalk	Square Yard
C706(59)	Stone Sidewalk	Square Yard
C706(60)	Relaying Stone Sidewalk	Square Yard
C706(61)	Letter or Number for Tile Street Name	Each
C706(62)	Resetting Tile Street Name	Each

SECTION C707 – CURBS AND GUTTERS

C707.01 DESCRIPTION: This work shall be in accordance with the requirements of Section C707 of the General Specifications for Street Paving, 2015 Edition, Department of Public Works City of New Orleans, Louisiana, and latest revisions, or as amended here in.

C707.10 MEASUREMENT: The length of curb, gutter, and curb and gutterbottom will be established by measurements of the actual curb, gutter and curb and gutterbottom in place and no allowance will be made for waste due to closures or other causes.

Circular curb shall be measured at the top outer face.

Timber curb will be measured by the number of board feet (MFBM) including board and posts.

Joint materials, rebars, concrete base and piers for stone curb or resetting existing curb shall not be measured for payment.

Excavation for reconstruction of curb and gutter bottom only, and excavation for setting and resetting stone curbs in rehabilitating projects shall not be measured for payment.

C707.11 PAYMENT: Payment for curbs, gutters, and curbs and gutterbottoms shall be made at the contract unit price per linear foot including curb transitions or depressions or after hand-forming curbs and curb and gutterbottom as directed by the Director, subject to the payment adjustment provisions of Section C501 for asphaltic concrete mixtures and Section C601 for Portland cement concrete.

Payment will be made under:

ITEM NO.	PAY ITEM	PAY UNIT
C707(56)	6" Concrete Barrier Curb with or Without Dowels (Straight, Circular or Depressed)	Linear Foot
C707(62)	Stone Curb Including Base (Straight,	Linear Foot

	Circular or Depressed)	
C707(63)	Reset Existing Curb (Precast Concrete, Stone, etc.) Including Base	Linear Foot

SECTION C713 – TEMPORARY SIGNS, BARRICADES AND PAVEMENT MARKINGS

C713.01 DESCRIPTION: This work shall be in accordance with the requirements of Section C713 of the General Specifications for Street Paving, 2015 Edition, Department of Public Works City of New Orleans, Louisiana, and latest revisions, or as amended here in.

C713.05 MEASUREMENT: The furnishing, erecting, maintaining and subsequent removing of temporary construction signs, barricades, pavement markings & markers and related devices will be measured on a lump sum basis.

C713.06 PAYMENT: Payment for temporary construction signs, barricades and related devices will be at the contract lump sum price in accordance with the following schedule:

% of Total Contract Amount Earned	Allowable % Lump Sum Price for Temporary Signs and Barricades
Initial Erection	20
25	40
50	60
75	80
100	100

Payment will be made under:

ITEM NO.	PAY ITEM	PAY UNIT
C713(51)	Temporary Signs, Barricades, Pavement Markings	Lump Sum

SECTION C727 – MOBILIZATION

C727.01 DESCRIPTION: This work shall be in accordance with the requirements of Section C727 of the General Specifications for Street Paving, 2015 Edition, Department of Public Works City of New Orleans, Louisiana, and latest revisions, or as amended here in. Requires pre-construction video be submitted to the Engineer prior to mobilization of equipment to the site.

C727.02 PAYMENTS:

(a) When the contract does not include a pay item for mobilization, no direct payment will be made for mobilization.

(b) When the contract contains a pay item for mobilization, payment will be made at the contract lump sum price, subject to the following provisions:

Partial payments for mobilization will be made in accordance with the following schedule up to a maximum of ten (10%) per cent of the original contract amount, including this item, and paymentof any remaining amount will be made upon completion of all work under the contract.

Percent of Total Contract Amount Earned		Allowable Percent of the Lump Sum Price For the Item
1st Partial Estimate	up to	25 %
10 %	up to	50 %
25 %	up to	75 %
50 %	up to	100 %

No payment adjustments will be made for this item due to changes in the work. Additional Mobilization cost occasioned, by a plan change, if approved, will be paid for within the Plan Change.

Nothing herein shall be construed to limit or preclude partial payments otherwise provided by the contract.

Payment will be made under:

ITEM NO.	PAY ITEM	PAY UNIT
C727(51)	Mobilization	Lump Sum

SECTION C729 – TRAFFIC SIGNS AND DEVICES

C729.01 DESCRIPTION: This work shall be in accordance with the requirements of Section C729 of the General Specifications for Street Paving, 2015 Edition, Department of Public Works City of New Orleans, Louisiana, and latest revisions, or as amended here in.

C729.02 MEASUREMENT: Traffic signs, street name signs, project signs, delineators and object marker assemblies shall be measured per each.

Concrete footing for securing sign posts will not be measured for payment.

C729.03 PAYMENT: Payment for installation of traffic signs, project signs, delineators and object marker assemblies shall be made at the contract unit price per each, including signs, posts and footing to complete the item in place.

Payment for installation of street name signs shall be made at the contract unit price per each, including four signs at each post, brackets, hardware, posts and footing to complete the item in place.

Payment will be made under:

ITEM NO.	PAY ITEM	PAY UNIT
C729(51)	Traffic Sign	Each

SECTION C732 – PLASTIC PAVEMENT MARKINGS

C732.01 DESCRIPTION: This work shall be in accordance with the requirements of Section C732 of the General Specifications for Street Paving, 2015 Edition, Department of Public Works City of New Orleans, Louisiana, and latest revisions, or as amended here in.

C732.02 MEASUREMENT:

(a) Plastic Pavement Striping: Plastic striping will be measured by the linear foot of striping, exclusive of gaps.

(b) Plastic Pavement Legends and Symbols: Plastic legends and symbols will be measured by lump sum. Symbols shall include all letters, lines, bars or markings necessary to convey the message at each location.

C732.03 PAYMENT: Payment for plastic pavement markings and removal of existing markings will be made at the contract unit prices.

Payment will be made under:

ITEM NO.	PAY ITEM	PAY UNIT
C732(52)	Plastic Pavement Striping (Solid Line)(_____" Width)	Linear Foot
C732(54)	Plastic Pavement Legends and Symbols	Each
C732(52)(A)	Plastic Pavement Striping (Solid)(4in W)(Thermo 90 Mil)	Linear Foot
C732(52)(B)	Plastic Pavement Striping (Solid)(6in W)(Thermo 90 Mil)	Linear Foot
C732(52)(E)	Plastic Pavement Striping (Solid)(24in W)(Thermo 125 Mil)	Linear Foot

SECTION C740 – CONSTRUCTION LAYOUT

C740.01 DESCRIPTION: This work shall be in accordance with the requirements of Section C740 of the General Specifications for Street Paving, 2015 Edition, Department of Public Works City of New Orleans, Louisiana, and latest revisions, or as amended here in.

C740.03 MEASUREMENT: Measurements for determination of pay quantities will be made by the Department. Construction layout and utility oversight and coordination will be measured per lump sum, which will include all labor, materials and incidentals required to complete the work. No changes in the lump sum contract price will be made for minor additions or deletions to the scope of work.

C740.04 PAYMENT: Payment for construction layout, and utility oversight and coordination will be made at the contract lump sum price in accordance with Table 740-1.

Payment will be made under:

Table C740-1
Construction Layout Payment Schedule

Percent of Total Contract Amount Earned	Allowable Percent of Lump Sum Price for Construction Layout
Staffed	25
25	50
50	80
75	95
100	100

ITEM NO.	PAY ITEM	PAY UNIT
C740(51)	Construction Layout	Lump Sum

SECTION C741 – WATER MAINS (INCLUDES EXTRA ITEMS 1 THRU 5 AND 7 THRU 11)

C741.01 DESCRIPTION: This work shall be in accordance with the requirements of Section C741 of the General Specifications for Street Paving, 2015 Edition, Department of Public Works City of New Orleans, Louisiana, and latest revisions, or as amended here in. Extra Item 10 Temporary House Connection to Existing Water Meter, connects the temporary waterlines (Extra Items 1 thru 4) to the water meters.

Work for all Extra Items 1 thru 5 and 7 thru 11 includes pressure testing, disinfection, installation and removal, maintenance and required repairs during construction, bedding and backfill, material, equipment, and labor.

C741.02 PAYMENT: Payment for the accepted quantities will be made at the contract unit price.

(a) Payment for furnishing and installing New Water Mains shall be made at the contract unit price per linear foot, including main line fittings (bends, tees, etc.), fire hydrant leads, tie-ins, excavation, removal of existing pipe (if any), pumping as necessary to prevent contaminatingthe existing system, bedding, complete shoring, backfilling material, hauling and disposal of excavation material, and any other related or incidental items required to complete this item of work for which separate payment is not provided for under other items in the Uniform Bid Form. There shall be no direct payment for plugging and abandoning existing manholes and filling with flowable material (sand/cement mixture).

(b) Payment for furnishing and installing 1-inch through 2-inch Polyethylene Pipe for water house connections (adjustment/replacement) shall be made at the contract unit price per each, including excavation, backfilling, service saddles, corporation cock and removal of existing pipe (if any) and any other related or incidental items required to complete this item of work for which separate payment is not provided for under other items in the Uniform Bid Form. There shall be no direct payment for tie-ins to the main or meter. Minimum size of water house connections shall be 1".

(c) Payment for furnishing and installing 4-inch through 8-inch PVC pipe for water house connections shall be made at the contract unit price per each, including, excavation, backfilling, and removal of existing pipe (if any) and any other related or incidental items required to complete this item of work for which separate payment is not provided for under other items in the Uniform Bid Form. There shall be no direct payment for tie-ins to the main or meter. PVC pipe for house connections shall meet the requirements of Section C741.02.01.

(d) Payment for furnishing and installing New Fire Hydrant shall be made at the contract unit price per each. including, excavation, backfilling, and removal of existing pipe (if any), and any other related or incidental items required to complete this item of work for which separate payment is not provided for under other items in the Uniform Bid Form.

(e) Payment for furnishing and Installing Water Valves up to and including 12-inch shall be made at the contract unit price per each. Payment for the installation of valves shall include furnishing and installing all ductile iron pipe, mechanical joint retainer glands, gaskets, including stainless steel tee bolts and nuts, etc. for a complete installation and any other related or incidental items required to complete this item of work for which separate payment is not provided for under other items in the Uniform Bid Form. The cost for valve boxes indicated on the plans shall be included in the bid price of the valves.

(f) Payment for furnishing and Installing Water Valves 16-inch and larger shall be made at the contract unit price per each. Payment for the installation of valves shall include furnishing and installing all ductile iron pipe, mechanical joint retainer glands, gaskets, including stainless steel tee bolts and nuts, etc. for a complete installation and any other related or incidental items required to complete this item of work for which separate payment is not provided for under other items in the Uniform Bid Form.

(g) Payment for furnishing and installing Water Main Offset shall be for offsets consisting of four (4) mechanical joint bends complete with retainer glands, stainless steel nuts and bolts and any other related or incidental items required to complete this item of work for which separate payment is not provided for under other items in the Uniform Bid Form, and shall be made at the contract unit price per each. Water line offsets consisting of only two (2) bends will be paid for at one-half (1/2) the unit price bid. Offsets are paid when not indicated on the plans. There is no direct pay for offsets shown on the plans.

(h) Payment for Plug Existing Water Main and Fill With Flowable Material (sand/cement mixture) shall be made at the contract unit price per linear foot, shall include all necessary equipment to completely fill the abandon main with sand/cement and any other related or incidental items required to complete this item of work for which separate payment is not provided

for under other items in the Uniform Bid Form.

(i) Payment for Construction of New Water Valve Manholes for 4-inch through 12-inch valves shall be made at the contract unit price per each, including excavation, granular bedding, foundation slab, manhole casting and cover and backfilling and any other related or incidental items required to complete this item of work for which separate payment is not provided for under other items in the Uniform Bid Form. There shall be no direct payment for plugging and abandoning existing manholes and filling with sand.

(j) Payment for Construction of New Water Valve Manholes for valves 16-inch and larger shall be made at the contract unit price per each, including excavation, granular bedding, foundation slab, manhole casting and cover, valve box, and backfilling and any other related or incidental items required to complete this item of work for which separate payment is not provided for under other items in the Uniform Bid Form. There shall be no direct payment for plugging and abandoning existing manholes and filling with sand.

(k) Payment for Remove Mud and Debris from Inside of Water Meter Box shall consist of the removal of all mud or debris within a meter box that does not need adjustment or replacement, and shall be made at the contract unit price per each.

(l) Payment for Adjust Complete Water Meter Box to Grade shall consist of adjusting the meter box to grade by placing bricks, slate, or similar material under the meter box pan, and shall be made at the contract unit price per each. There shall be no separation between the upper barrel and the lower meter box pan. Any mud or debris within the box shall be removed before the upper barrel and lower pan have been adjusted. There will be no additional payment for removal of mud and debris under another item. Meter boxes shall be adjusted to grade in areas where the grade of the curbs and/or sidewalks is changed or as directed by the Director. If the water house connection needs to be replaced from the meter to the property line in order to adjust the meter box, the new water house connection shall be paid under the item, "Remove and replace water house connection (from meter to property line) (all sizes)".

(m) Payment for Replace Broken Water Meter Box (5/8" to 1") shall be made at the contract unit price per each, shall include any meter box replacement or any new meter box required and any other related or incidental items required to complete this item of work for which separate payment is not provided for under other items in the Uniform Bid Form. Installation shall be as shown on S&WB Drawing. No. 7134-W.

(n) There shall be no direct payment for salvaging existing valves, fire hydrants, manhole castings and covers, etc.

(o) All other items of work necessary to the performance of the project, for which no specific unit price and/or lump sum pay item is established, shall be considered and designated part of the construction, and the existing pay items shall be full compensation. Items including but not limited to, trench safety, traffic control, contract closeout, shop drawings, submittals, and office support shall be merged into the prices bid.

(p) Temporary water mains, services connections and valves paid for separately under this item.

Payment will be made under:

ITEM NO.	PAY ITEM	PAY UNIT
C741(51)(B)	6" New Water Main with Main Line Fittings	Linear Foot
C741(51)(C)(1)	8" PVC New Water Main with Main Line Fittings	Linear Foot
C741(51)(E)(1)	12" PVC New Water Main with Main Line Fittings	Linear Foot C741(51)(I)(2) 24"
Ductile Iron (Restrained Joint) New Water Main with Main Line Fittings		Linear Foot
C741(52)	New 2" Valve	Each
C741(52)(B)	New 6" Valve	Each
C741(52)(C)	New 8" Valve	Each
C741(52)(E)	New 12" Valve	Each
C741(52)(I)	New 24" Valve	Each

C741(54)	New Fire Hydrant	Each
C741(55)(A)	Replace 5/8” to 1” Water House Connection with 1” Water House Connection (from Main to Meter)	Each
C741(55)(B)	Replace 1-1/2” Water House Connection (from Main to Meter)	Each
C741(55)(C)	Replace 2” Water House Connection (from Main to Meter)	Each
C741(55)(D)	Replace 4” Water House Connection (from Main to Meter)	Each
C741(55)(E)	Replace 6” Water House Connection (from Main to Meter)	Each
C741(55)(F)	Replace 8” Water House Connection (from Main to Meter)	Each
C741(71)(C-01)	8” Water Line Offset up to 24”	Each
C741(74)(A)	New Water Valve Manhole (4” through 12" Valves)	Each
C741(75)	Remove Mud and Debris from Inside Water Meter Box	Each
C741(76)	Adjust Complete Water Meter Box to Grade	Each
C741(77)	Replace Broken Water Meter Box (5/8”) to (1”)	Each
Extra Item 01	Temporary 2” Waterline	Linear Foot
Extra Item 02	Temporary 6” Waterline	Linear Foot
Extra Item 03	Temporary 8” Waterline	Linear Foot
Extra Item 04	Temporary 12” Waterline	Linear Foot
Extra Item 05	Temporary Tie to Existing Waterline	Each
Extra Item 07	Temporary 2” Gate Valve and Valve Box	Each
Extra Item 08	Temporary 6” Gate Valve and Valve Box	Each
Extra Item 09	Temporary 8” Gate Valve and Valve Box	Each
Extra Item 10	Temporary House Connection to Existing Water Meter	Each
Extra Item 11	24” Line Stop	Lump Sum

SECTION C742 – SEWER LINES (INCLUDES EXTRA ITEM 13)

C742.01 DESCRIPTION: This work shall be in accordance with the requirements of Section C742 of the General Specifications for Street Paving, 2015 Edition, Department of Public Works City of New Orleans, Louisiana, and latest revisions, or as amended here in.

Extra Item 13 includes labor, material, equipment, brick work, and concrete saw cutting necessary to adjust the sewer cleanout to grade up or down 6 inches.

C742.02 MEASUREMENT: Sewer mains will be measured in place and the length determined by measuring from center to center of manholes or other subsurface structures of which they form a part.

Depth of sewer mains for payment purposes shall be determined by measurement from the invert to the top of casting at original existing grades of connecting manholes. Depth of manholes shall be measured from invert to the top of casting.

C742.03 PAYMENT:

(a) Payment for relocation, replacement and restoration of existing sewer mains or installation of new sewer mains shall be made at the contract unit price per linear foot of the size and depth, which includes excavation, pumping, as necessary, complete shoring, foundation lumber, bedding, installation of new main, including fittings, backfill, drainage fabric and tie-ins. If the existing sewer main is to be replaced, the cost shall include removal of the existing sewer main.

(b) Payment for "install sewer manhole" shall be made at the contract unit price per foot high, including excavation, granular

bedding and backfilling. If the existing manhole is to be replaced, the cost shall include removal of the existing sewer manhole.

(c) Payment for "replacing manhole casting and cover" shall be made at the contract unit price per each including removal of the existing sewer manhole casting, installing the new casting at the specified grade and backfilling the excavation with approved backfill material. Adjustment to grade of the manhole casting shall be included in the cost of replacement.

(d) Payment for "point repair of existing sewer mains" shall be made at the contract unit price per each of the size and depth specified, including excavation, foundation lumber, bedding, drainage fabric, backfill, complete shoring, pumping as necessary and tie-ins. Payment for point repair beyond ten (10') feet shall be made at the contract unit price per the linear foot, including the above works.

(e) Payment for "new sewer house connection from main to back of curb" shall be made at the contract unit price per each of the size specified including installation of a wye or tee in the main, PVC pipes, fittings, a cap behind the curb, excavation and backfill.

(f) Payment for "replacing existing sewer house connection from existing main to back of curb" shall be made at the contract unit price per each including the installation of PVC pipe, fittings, excavation, backfill, and tie-ins from the existing wye or tee to the existing sewer house connection back of curb.

(g) Payment for "reconnecting existing sewer house connection to new main" shall be made at the contract unit price per each including installation of a new tee or wye into the main, removal and rep1xcement of up to three feet of the existing, excavation and backfill.

(h) Payment for "reconnecting existing sewer house connection to new main and extend to back of curb" shall be made at the contract unit price per each including the installation of PVC pipe, fittings, excavation, backfill, tie-in, and installation of a new wye or tee in the new main, from the new wye or tee to the existing sewer house connection back of curb.

(i) "Replacing existing sewer house connection beyond back of curb." If directed by the Director to replace the sewer house connections in (f) or (h) beyond back of curb, payment for this item shall be made at the contract unit price per linear foot per any additional footage beyond back of curb.

(j) "Adjust Sewer House Connections" includes removing and replacing up to 15 feet of existing sewer house connection where required to avoid conflict with new water, drain, or other utility line, including tie-ins at both ends, fittings, excavation, installation, backfill, no siphon permitted. Payment for this item shall be made at the contract unit price per each.

(k) Payment for "pipe lining" shall be made at the contract unit price per linear foot of the size and method specified to; (1) clean and inspect the existing pipe to be sure that the liner can be properly installed, (2) install the liner in accordance with Special Specifications; and (3) clean up and restore any damage caused by the lining process.

(l) Payment for "cut liner to restore existing service connections" shall be made at the contract unit price per each of the size and the method specified. If the lining method for restoring service connections requires excavation, the price shall include all excavation, backfill and surface restoration.

Payment will be made under:

ITEM NO.	PAY ITEM	PAY UNIT
C742(57)	Sewer Point Repair up to Ten Feet (Size & Depth)	Each
C742(58)	Sewer Point Repair beyond Ten Feet (Size & Depth)	Linear Foot
C742(59)	New Sewer House Connections from Main to Back of Curb (Size)	Each
C742(65)	Pipe Lining (Size & Method)	Linear Foot
C742(66)	Cut Liner to Restore Existing Sewer House	Each

	Connection (Size & Method)	
Extra Item 13	Adjust Sewer Clean Out to Grade	Each

EXTRA ITEM 06 BACKFILL TRENCH AND TEMPORARY ASPHALT CONCRETE, 6" THICK

EXTRA ITEM 16 DESCRIPTION: This work shall be in accordance with the requirements of Section C501 of the General Specifications for Street Paving, 2015 Edition, Department of Public Works City of New Orleans, Louisiana, and latest revisions, or as amended here in. Includes compacted granular material required to backfill to subgrade, 6" compacted aggregate base (95%) and 6" temporary asphalt concrete, removal and disposal of granular material, aggregate base, and asphalt. This item shall be used as direct by the Engineer primarily as described in Section Extra Item 17 – De-Mobilization.

EXTRA ITEM 06 MEASUREMENT: Measurement shall be in square yards of asphalt placed. No measurement will be made for granular material or aggregate base.

EXTRA ITEM 06 PAYMENT: Payment shall be made at the unit contract price for bid in square yards. Includes installation of asphalt, compacted aggregate base (95%), compacted granular (95%) material and removal and disposal of those items.

Payment will be made under:

ITEM NO.	PAY ITEM	PAY UNIT
Extra Item 06	Backfill Trench and Temporary Asphalt Concrete, 6" Thick	Square Yard

EXTRA ITEM 16 COMPRESSION FIT HDPE PIPE LINING

EXTRA ITEM 16 DESCRIPTION: The description of this item includes 3 parts Part 1 General, Part 2 Products and Part 3 Execution. This item requires special equipment, certified technicians, and experienced and certified supervision. Prior to on site mobilization of materials and equipment a CCTV inspection (and report) shall be performed. Only upon review of the report and approval by the Engineer may mobilization commence. Includes compression fit HDPE pipe lining for existing15" concrete storm drain pipe.

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Renewal of existing pipelines by compression fit HDPE pipe lining process.

1.2 UNIT PRICES

A. Measurement for compression fit lining is on a linear foot basis for the length of pipe being lined.

B. Refer to Measurement and Payment, for unit price procedures.

1.3 REFERENCES

A. ASTM F714 – Polyethylene (PE).

B. ASTM F3508 – CompressionFit

C. Cuts or gouges per ASTM F585

D. HDPE Resin PE4710 as characterized by ASTM 03035

E. Ductile iron fittings comply with AWWA C110

F. Stiffener inserts per ASTM

1.4 DEFINITIONS

A. Compression fit lining: Replacement of pressurized pipeline systems by insertion of compression fit HDPE pipe into an existing host main pipeline.

1.5 SYSTEM DESCRIPTION

A. Compression fit lining allows a new compression fit polyethylene (HDPE) pipe to be placed inside a new or existing pressurized pipeline. The system uses HDPE pipe which has an outside diameter slightly larger than the inside diameter of the pipe to be renewed. After sections of PE are butt fused together to form a continuous pipe, the PE pipe is pulled through a patented reduction die or similar device which temporarily reduces its diameter within the elastic limits of HDPE. This allows the HDPE pipe to be pulled through the existing pipeline. After the HDPE pipe has been pulled completely through the host pipe, the pulling force is removed and the HDPE pipe returns toward its original diameter until it presses tightly against the inside wall of the host pipe. Relaxation of the HDPE pipe will be a natural process. No forced reversion will be allowed using either water, steam, heat or other means. The tight fitting HDPE pipe results in a flow capacity close to or greater than the original pipeline design.

1.6 QUALITY ASSURANCE

A. In order to assure quality execution of the compression fit HDPE pipe lining method, the contractor must show proof of at least 5 projects in the last 36 months in the project state using Compression fit HDPE pipe lining technology.

B. For a process to be considered as acceptable and an "or equal", a minimum of 60,000 linear feet of successful municipal clients (i.e. cities, towns, water authorities, etc.) pressurized piping system installation in the US must be documented to assure commercial viability. Such documentation must be submitted and approved prior to the bid.

C. The contractor and/or his subcontractor shall not have less than five years of active experience in the installation of compression fit HDPE pipe lining with all work experience completed in the US.

Project experience must be with municipal clients (i.e. cities, towns, water authorities, etc.) in the US. Such documentation must be provided with the bid.

1.7 CONTRACTOR CERTIFICATION

In order to assure quality execution of the method, the contractor shall submit the following:

A. Certification

1. Certificate of training endorsed by the manufacturer of the constant tension pull equipment.

2. Certificate of training endorsed by the manufacturer of thermal fusion equipment in butt fusing of HDPE pipe and evidence of training with electro-fusion couplings.

3. Certificate of training endorsed by the supplier or manufacturer of HDPE electro-fusion fusion

couplers to be used in the method. In lieu of certificate, evidence of training may be substituted.

PART 2 - PRODUCTS

2.1 COMPRESSION FIT SPECIFICATIONS

A. The Compression Fit Specification shall be in accordance with guidelines of ASTM F3508.

B. The ASTM F3508 Class V Compressed Fit, dual-wall-pipe structure is specified by its Table 1 designation of PED3542C1111211.

C. The ASTM F3508 Class VI Compressed Fit single-wall Structural-Pipe, is specified a by its Table 1 designation of PED3521C1121211

D. The Compression Fit SMPT (Shape Memory Polymer Tubular) shall use PE4710 polyethylene with ASTM D 3350 cell class of #445574C-CC3.

E. The standard-diameter or custom-diameter extruded SMPT shall be extruded in accordance with the specifications and requirements of ASTM F714, or AWWA C906, or ASTM F2619.

2.2 PIPE SPECIFICATIONS

A. High Density Polyethylene Pipe must conform to ASTM F714 and NSF 61.

B. HDPE resin shall be PE4710 characterized by ASTM 03035.

C. All pipe shall be made of virgin material, no rework except that obtained from manufacturers own production.

D. Cuts or gouges, per ASTM F585 are acceptable up to 10% of wall thickness. Beyond 10% of wall, damage must be removed by cutting the damaged section from the pipe string and butt fusing the ends.

2.3 OTHER PRODUCT SPECIFICATIONS

A. Pipe Connection Fittings shall meet AWWA C906 and meet or exceed the pressure requirements of the HDPE Pipe.

2.4 PRODUCT COMPLIANCE

A. Certificate of compliance shall be supplied to the City that the Product Pipe is per specification.

B. All materials used with the coupling or connecting HDPE pipe must be submitted and approved by the City.

2.5 PRODUCT HANDLING

A. Pipe transport and handling shall be per manufacturer's recommendation.

B Product other than pipe must be stored and handled per manufacturer's recommendations.

2.6 DESIGN PARAMETERS

A. The design of the HDPE pipe shall be based on specific requirements of the Project.

2.7 PERFORMANCE REQUIREMENTS

A. Chemical Resistance: The Polyethylene pipe shall meet the chemical resistance requirements for all pressurized sewer pipe systems.

B. Hydraulic Capacity: Overall, the hydraulic cross section shall be maintained as large as possible.

PART 3 - EXECUTION

3.1 DOCUMENTATION AND PLANNING

A. Contractor shall submit a plan to the City on a marked up copy of the Project Drawings showing the Contractor's construction phasing and plans at the Pre- Construction Meeting. Plan details should include:

1. Pit locations for pipe insertion and receive locations.

2. Schedule of when various sections are to be rehabilitated.

3. Distances of each pull.

B. The Project Construction drawings provided by the Owner shall be marked by the contractor to show actual locations of services, fittings, and other reconnects. These markups shall be done the day of the actual placement. A set of marked up plans shall be returned to the Owner.

3.2 JOINING OF PIPE

A. Fusing: per Butt fusion methods in strict conformance to the pipe and/or fusing equipment manufacturer's recommendations shall be used to join sections of High Density Polyethylene Pipe.

B. Fusing of 'sticks' of pipe shall be performed in the general vicinity of the pipe insertion pit or lay down yard (staging area).

C. De-beading is required to remove the outside fusion roll back bead prior to compression fit HDPE pipe lining operations internal de-beading is not required..

3.3 COMPRESSION FIT HDPE PIPE LINING OPERATION

The compression fit lining operation described within provides guidance on the basic process of compression fit HDPE pipe lining. The followings outline the requirements necessary to implement successful operations.

A. Maximum use should be made of all available records. Details of material types together with the position of existing valves, plugs, bends, tees, collars, service connections or any other internal obstructions in the pipeline should be obtained.

B. Details of all other buried utilities must be obtained and both electricity cables and fiber optic ducts shall be physically marked out on site, at the entry and exit excavation positions.

C. Wherever possible, excavations that are required for the removal of bends, tees or other internal obstructions should be utilized as launch/reception pits or access points for the CCTV survey and pipeline cleaning

operations.

D. Internal inspection with the use of CCTV or man entry is required so that unknown internal obstructions can readily be identified and removed prior to the proving pig.

E. All internal obstructions will require removal prior to the compression fit HDPE pipe lining process operation.

F. The pipeline should be thoroughly cleaned using scrapers, wire brushes etc. to ensure all scale and sediment has been removed before pipe insertion.

G. A proving pig (i.e. Bullet/plunger/gauging pig) slightly larger in diameter than the Outside Diameter of HDPE pipe (i.e. pipe diameter after exiting the die) should be winched through the pipeline to ensure an unobstructed bore is available for pipe insertion only if deemed necessary by the contractor.

3.4 PIT LOCATION AND EXCAVATION

A. Receive pit and insertion pit locations shall be placed such that excavations are minimized. This may be accomplished by placing either or both of these pits at the point of a service connection or fitting.

B. All pits shall be shored to ensure worker safety per OSHA or other regulations.

C All pits shall be roped off and or covered when not active per OSHA or local regulations to ensure public safety.

D Traffic control shall be accommodated for by Contractor as per the Contract specifications. Safe traffic passage around pit excavations that are located in or adjacent to streets or highways shall meet Permit requirements of governing Right-of-Way Department. Parking of related employee vehicles, trucks and auxiliary and equipment shall be such that congestion and traffic delays are minimized. Traffic control plan shall be in accordance to the traffic control plan details of the contract document.

3.5 ROD PAYOUT OPERATION

A. Rod payout is the process of assembling a string of rods and pushing them in a step wise manner from Receive Pit, through the interior of the host pipe to Insertion Pit.

B. Lifting of rod boxes into or out of the Receive Pit shall be performed per OSHA or other applicable requirements with respect to equipment and method.

C. Threads or joining areas shall be cleaned of foreign matter before assembly.

D. Counting of Rods during payout or quantity of rods per box shall be monitored such that the operator is aware of the distance between the constant tension machine and the lead end of the rod string.

E. Host pipe in the Insertion Pit shall be cut or broken prior to arrival of the rod string. Sufficient length shall be removed so as to allow the pull head to enter the host pipe and bend the product within the allowable radius specified by the pipe manufacturer. The second end of the host pipe in the Insertion Pit shall be positioned or worked so as not to damage the product pipe as it travels through the Insertion Pit.

F. Workmen shall not enter the Insertion Pit when the rod string is nearing the Pit. A workman shall be in visual or radio contact with the machine operator so as to have the payout halted in a position that allows

attachment of the pull head.

3.6 TOOLING AND ATTACHMENT

A. The Product Pipe shall be moved into position for attachment to the rod string. Appropriate traffic or pedestrian control will be exercised along the path of the Product Pipe.

3.7 BEGIN OF PULL

A. During the start of the pull, the pull speed must be reduced to allow the pull head to travel through the reduction die and into the host pipe.

B. After the first 10 feet of HDPE enters the host pipe, the speed may be increased.

3.8 REDUCTION

A. The pipe diameter of the HDPE will be temporarily reduced between 5% and 15% as the new pipe is pulled through the reduction die or other reduction device immediately before entering the host pipe.

B. The reduction system will be uniform around the entire circumference to ensure no distortion occurs on the HDPE during pull in.

3.9 CONSTANT TENSION

Constant tension must be applied on the HDPE pipe string until the pull head reaches the receive pit. The equipment used during the compression fit operations must be of the constant tension type.

3.10 COMMENCEMENT OF PULL

A. After the pull head reaches the receive pit, the pulling force is removed. The contractor must use caution to pull the new HDPE a sufficient distance into the receive pit so the pipe does not retract back into the host pipe.

B. The HDPE pipe must then be allowed to relax to allow full reversion for a period of 24 to 48 hours before commissioning activities begin. The reversion period may lengthen or shorten depending on the characteristics of each pull, temperatures and other site specific conditions. The reversion process will be natural and no forced reversion will be allowed using either water, steam, heat or other methods.

3.11 ACCEPTANCE TESTING

A. HDPE resin shall be PE4710 as characterized by ASTM D 3035
B. If a Potable Water Line, disinfection of water line shall be carried out in accordance to AWWA C651 and the specification regarding Disinfection of Water Lines.

C. Hydrostatic pressure test shall be performed in accordance with ASTM F 2164, AWWA M55 and PPI Handbook Chapter 2 and in accordance to testing limits provided by the Owner.

3.12 ACCEPTANCE

A. The compression fit HDPE pipe lining shall be deemed acceptable when the installation is completed according to

specifications and the applicable tests are satisfied and;

B. When As-Built Drawings are submitted.

EXTRA ITEM 16 MEASUREMENT: Measurement shall be per linear foot of Compression Fit HDPE Pipe Lining installed.

EXTRA ITEM 16 PAYMENT: Payment shall be the unit contract price for bid and includes CCTV and Report of existing pipe and Maintenance of Traffic. No direct payment will be made for excavation, backfill, shoring and bracing of the entry and exit pits. No direct payment will be made for required fittings for and connections to (1) new catch basin, required fittings for and connection to (2) roof drains. Composite Pavement, Curb, connection to existing manholes / catch basins, Maintenance of Traffic Aggregate and Sidewalks are paid for under other items.

Payment will be made under:

ITEM NO.	PAY ITEM	PAY UNIT
Extra Item 16	Compression Fit HDPE Pipe Lining	Linear Foot

SECTION EXTRA ITEM 17 – DE-MOBILIZATION

EXTRA ITEM 17 DESCRIPTION: De-Mobilization may be utilized or required due to high water of the Mississippi River or any other reason or directed by the Engineer. Prior to the river reaching the high-water limit (per the USACE) the S&WB, based on predictions of the USACE, may direct (in writing) the contractor to halt construction / excavation.

All excavations shall be backfilled and compacted as required. Temporary asphalt pavement and temporary concrete sidewalks shall be placed as directed by the Engineer. Temporary asphalt pavement and temporary concrete sidewalks are paid for under other items.

Pedestrian access to sidewalks and all building exits and entrances shall be cleared and free of obstructions. All lanes (including parking lane) shall be open to traffic. Temporary pavement marking shall be placed as directed by the Engineer.

EXTRA ITEM 17 MEASUREMENT: Temporary pavement marking and backfill for trenches will not be measured for payment. Temporary asphalt pavement and temporary sidewalks are paid for under other items. Bonds and insurance are paid for under item C727 Mobilization.

EXTRA ITEM 17 PAYMENT: Payment will be made at the unit price bid. Payment includes materials and equipment removed and stored off site. Incidental coordination, supervision, labor, equipment, and material to perform the de-mobilization.

Payment will be made under:

ITEM NO.	PAY ITEM	PAY UNIT
Extra Item 17	De-Mobilization	Each

SECTION EXTRA ITEM 18 – RE-MOBILIZATION

EXTRA ITEM 18 DESCRIPTION: Re-Mobilization shall be paid for as it applies to the elevation of the Mississippi River or any other reason as directed by the Engineer. When the Mississippi River elevation is below the elevation permitted by the USACE the S&WB will direct (in writing) the contractor to begin construction. The contractor will be allowed 30 calendar days (grace period) to re-mobilize after which time the contract time will commence.

EXTRA ITEM 18 MEASUREMENT: The removal of temporary asphalt pavement and temporary sidewalks are paid for under other items. Bonds and insurance are paid for under item C727 Mobilization.

EXTRA ITEM 18 PAYMENT: Payment will be made at the unit price bid. Payment shall be in accordance with the requirements of Sections C727 Mobilization of the General Specifications for Street Paving, 2015 Edition, Department of Public Works City of New Orleans Louisiana, and latest revisions. Includes coordination, supervision, labor, equipment, transportation of equipment and material to perform the re-mobilization.

Payment will be made under:

ITEM NO.	PAY ITEM	PAY UNIT
Extra Item 18	Re-Mobilization	Each

SECTION EXTRA ITEM 19 – TEMPORARY CONCRETE SIDEWALK (4" THICK)

EXTRA ITEM 19 DESCRIPTION: This work shall be in accordance with the requirements of the General Specifications for Street Paving, 2015 Edition, Department of Public Works City of New Orleans, Louisiana, and latest revisions, or as amended here in. This item shall be used as direct by the Engineer primarily as described in Section Extra Item 17 – De-Mobilization.

EXTRA ITEM 19 MEASUREMENT: The area of temporary concrete sidewalk will be determined by surface measurements and no extra allowance will be made for shoulders.

Temporary concrete sidewalk pavements will be paid for by surface measurements and no deduction will be made for subsurface structures occupying less than five (5) square feet of area. Areas under structures encroaching on public property not paved will not be included in the surface measurement.

EXTRA ITEM 19 PAYMENT: Payment for temporary concrete sidewalk will be made at the contract price per square foot, which includes installation, removal and disposal, labor, material and equipment, excavation, installation of expansion joint and welded wire fabric. Granular material for adjustment and removal of existing driveways, sidewalk or banquette pavement shall be paid for in other items.

Payment will be made under:

ITEM NO.	PAY ITEM	PAY UNIT
Extra Item 19	Temporary Concrete Sidewalk (4" Thick)	Square Foot

PART III – SPECIAL ITEMS

SECTION 3.01 – TEMPORARY SIGNS, BARRICADES, PAVEMENT MARKINGS, CONSTRUCTION SIGNING, TRAFFIC MAINTENANCE AND PUBLIC SAFETY

This item shall be governed by the provisions of General Specifications Section C129 Temporary Signs, Barricades, Pavement Markings, Construction Signing, Traffic Maintenance and Public Safety except as follows:

There shall be no direct payment for Temporary Signs, Barricades, Pavement Markings, Construction Signing, Traffic Maintenance and Public Safety. All costs associated with Temporary Signs, Barricades, Pavement Markings, Construction Signing, Traffic Maintenance and Public Safety shall be included in other major items of the proposal.

SECTION 3.02 – MOBILIZATION

For this project mobilization will be considered as a subsidiary obligation of the contractor under other bid proposal items. There shall be no direct payment for mobilization, or for any items that may be referenced as subsidiary to or included in mobilization. All costs associated with mobilization shall be included in other major items of the proposal.

SECTION 3.03 – CLEARING AND GRUBBING AND DISPOSAL OF MATERIALS

There shall be no direct payment for any required Clearing and Grubbing and removal and disposal of material not listed for removal in the proposal. There shall be no direct payment for removal and disposal of culverts, metal curb protection at intersections, metal plates at driveways, existing drain lines or drainage structures and other materials other than Portland Cement Concrete Pavement and Asphaltic Cement Concrete Pavement. All costs associated with Clearing and Grubbing, and removal and disposal of other material shall be considered subsidiary to and included in Roadway Excavation or other major bid items of the proposal.

SECTION 3.04 – CONSTRUCTION LAYOUT

A. This item shall be governed by the requirements of Standard Specification Item C740(51) except as modified here-in. The Contractor will be responsible for laying out the work prior to beginning of construction and establishing grades for all roads to maintain positive drainage when the profile of the road is altered. The Contractor shall initiate a Request for Information to the Engineer for review if any changes to the existing road profile are to be made. The Contractor shall provide elevations to the Engineer in order to evaluate the effect of grade changes to the adjacent driveways, sidewalks, and residential lots. The Contractor shall submit a detailed sketch to the Engineer that shows existing roadway elevations and the proposed gutter line. This effort shall consist of adjusting catch basins or drop inlets as the low points of this profile. Any change to the existing road profile shall be approved by the engineer and S&WB prior to making any changes. The Engineer shall review and approve the proposed gutter line to assert that the road is laid out adhering to City Standards. Any changes made to the existing road profile without the City's approval may be rejected and replaced at the Contractor's expense.

B. Prior to starting construction in each block, the Contractor shall be required to mark using survey marking paint the limits of the pavement, driveway, sidewalk, and handicapped ramp removal as shown on the plans, and mark using a contrasting color any areas the contractor recommends as additional removal/replacement due to constructability concerns.

C. There shall be no direct payment for Construction Layout. All costs associated with the requirements included in Section C740 of the General Specifications shall be included in other major items of the proposal.

SECTION 3.05 – TRAFFIC CONTROL PLAN

The requirements of General Specifications Section C128 PERMITS AND REGULATIONS shall apply except a detailed traffic control plan shall be required for this project.

A. The Contractor shall maintain fifty (50%) percent of the roadway accessible to vehicular traffic at all times, and for major streets shall maintain 100% of roadway accessible to vehicular traffic between the hours of 7-9 A.M. and 4-6 P.M. A traffic control plan indicating, in detail, the location of

all signs, lights, and barricades must be prepared by the Contractor for the written approval of the Sewerage and Water Board Director, no less than two, nor more than ten working days in advance of implementation. It shall be the Contractor's responsibility to obtain these approvals in writing. There is no direct pay for this requirement.

B. The Police Department, Fire Department, all affected utilities as well as any and all residents and/or businesses affected must be informed a minimum of twenty-four (24) hours in advance of anticipated closures and the duration thereof.

C. Construction traffic control signs, barricades, warning lights, devices, and methods, shall comply with Part VI of Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD) unless otherwise directed by the Sewerage and Water Board Director. There is no direct pay for this.

D. All traffic control devices (roadway markings, signs, signals, signal controls, etc.) destroyed as a result of construction shall be replaced at the Contractor's expense.

E. The Contractor shall notify the Sewerage and Water Board Director immediately if the project requires changes or modifications to existing traffic control signs, parking meters, etc.

The Contractor performing work under this contract shall be required to coordinate and cooperate in scheduling his operations with the Sewerage and Water Board Director and S&WB prior to finalizing pavement repairs to accommodate other contractor's activities. There shall be at no direct payment for traffic control plans.

SECTION 3.06 – SAW CUTTING (SIDEWALK, DRIVEWAY AND CURBS)

A. This item shall be governed by the requirements of General Specification Item C202 (55) except as modified here-in. To ensure against ragged connections between old and new work, saw cutting will be required at sidewalks, driveways, curbs, and/or at other paved construction areas as may be designated by the Engineer.

B. The saw cuts in sidewalks shall be full depth with an appropriate saw to ensure the straight vertical edge for the upper portion on the patch. After the edges have been cut, the areas to be removed are broken in small pieces with pneumatic chisels or drills and the pieces removed. The resulting broken edge of the concrete below the saw cut is left fairly rough and irregular but in approximately vertical plane so that it will provide aggregate interlocks between the patch and existing concrete. Joints and typical joint spacing within the repair area shall be established or reestablished in accordance with the details shown on City of New Orleans Department of Public Works Standard Drawings.

The saw cuts in driveways and curbs shall be full depth with an appropriate saw to ensure the straight vertical edge for the upper portion on the patch. After the edges have been cut, the areas to be removed are broken in small pieces with pneumatic chisels or drills and the pieces removed. The resulting broken edge of the concrete below the saw cut is left fairly rough and irregular but in approximately vertical plane so that it will provide aggregate interlocks between the patch and existing concrete. When breaking the concrete driveway pavement an attempt shall be made to save a minimum twelve (12) inches of the existing welded wire fabric on each side.

Joints and typical joint spacing within the repair area shall be established or reestablished in accordance with the details shown on City of New Orleans Department of Public Works Standard Drawings.

C. Measurement and payment for saw cutting required to establish joints interior to the work area as required by the DPW Standard Details and General Specifications shall not be allowed.

D. Measurement and payment for saw cutting of sidewalks, driveways, or curbs along the ends or perimeter of removal areas as required to protect existing concrete that is to remain in-place shall be made at the unit price bid per linear foot for Special Bid Item No. CF-3 SIDEWALK, DRIVEWAY AND CURB SAW

CUTTING when listed on the Unit Price Form.

E. There shall be no Measurement and payment for the depth of saw cutting of sidewalks, driveways, or curbs along the ends or perimeter of removal areas. The depth of saw cutting shall follow the plan drawings regarding the pavement section thickness.

SECTION 3.07 – PAVEMENT SAW CUTTING ADJACENT TO EXISTING PAVEMENT AND AT PATCHES AND UTILITY TRENCHES

A. This item shall be governed by the requirements of Standard Specification Item C202 (56) except as modified here-in. The cut in roadway pavement adjacent to existing pavement that is to remain in place, and for patching, and for utility trenches shall be made prior to demolition of the paved area to be removed and shall be sawcut full pavement depth to ensure the adjacent paved areas that are to remain in place are protected from damage during the demolition process. If the contractor damages the edge of sawcut pavement the contractor shall be required to re-sawcut the entire concrete panel, or as approved by the engineer, to remove the damaged area. Any saw cutting, pavement, and related items that are required due to Contractor damage of existing pavement shall be at no direct cost.

B. This item shall include saw cutting for both Portland cement concrete and asphaltic concrete pavement along the ends or perimeter of removal areas as required to protect existing pavement that is to remain in-place. The pavement saw cut, assuming a full pavement-depth saw cut up to a 10" maximum depth, shall be made with an appropriate saw to ensure the straight vertical edge for the upper portion on the patch. After the edges have been cut, the areas to be removed shall be broken in small pieces with pneumatic chisels or drills and the pieces removed.

C. Measurement and payment for saw cutting required to establish or reestablish contraction and expansion joints interior to the work area as required by the DPW Standard Details and General Specifications shall not be allowed.

D. Measurement and payment for saw cutting existing pavement along the ends or perimeter of removal areas adjacent to patches and utility trenches shall be made at the unit price bid per linear foot for Special Bid Item No. CF-4 PAVEMENT SAW CUTTING ADJACENT TO EXISTING PAVEMENT AND AT PATCHES AND UTILITY TRENCHES when listed on the Unit Price Form.

SECTION 3.08 - REMOVAL OF ADA-ACCESSIBLE RAMPS, CURB AND GUTTER, AND CONCRETE SIDEWALKS AT INTERSECTIONS INCLUDING SAW CUTTING

A. This item shall be governed by the requirements of Standard Specification Item C202 except as modified here-in. The unit price bid per Square Yard for this item shall include all saw cutting of curb, curb and gutter bottom, sidewalk, and pavement, removal and proper disposal of existing pavement, curb, curb and gutter bottom, sidewalk, ramps, and curb transitions, including all excavation, associated with handicapped ramp removal and at the locations shown on the plans.

B. Measurement and payment for Handicap Ramps and Concrete sidewalks at intersection shall be made at the unit price bid per square yard for Special Bid Item No. CF-5 REMOVAL OF HANDICAPPED RAMPS, CURB AND GUTTER, AND CONCRETE SIDEWALKS AT INTERSECTIONS INCLUDING SAW CUTTING when listed on the Unit Price Form.

SECTION 3.09 - ADA-ACCESSIBLE CURB RAMPS, CURB AND GUTTER, AND CONCRETE SIDEWALKS AT INTERSECTIONS

A. This item shall be governed by the requirements of General Specification Item C706 (54) except as

modified here-in. Concrete sidewalks at intersection shall include the handicap ramp Type B as detailed on the Construction Documents, and the latest ADA standards, unless otherwise approved by the Sewerage and Water Board Director in writing on a case-by-case basis. Concrete shall be 3000 psi compressive strength at 28 days reinforced with 6x6 - W2.9xW2.9 reinforcing mesh weighing forty-two (42) lbs. per 100 sq. ft. placed at 2" from the top of slab.

B. Breaking out and removing existing pavement, curb, and sidewalk will be paid for under another item. Transitional sidewalk, where required, will be paid for under for under other items of the proposal.

C. Measurement and payment for Handicap Ramps and Concrete sidewalks at intersection shall be made at the unit price bid per square yard for Special Bid Item No. CF-6 ADA-ACCESSIBLE CURB RAMPS, CURB AND GUTTER, AND CONCRETE SIDEWALKS AT INTERSECTIONS, when listed on the Unit Price Form, and shall include: detectable warning surfaces, all necessary sand, backfill, concrete, transitional flares, transitional curbs, the curb with thickened section and gutter bottom, and all additional curb transitions required for ramp construction in accordance construction requirements of the Standard New Orleans DPW details.

All non-compliant ADA Handicap Ramps within the limits of construction shall be replaced with ADA compliant ramps unless otherwise approved by the Sewerage and Water Board Director.

Price shall include all backfill and compaction behind curb and along the edges of walk with select material obtained from roadway excavation or other approved sources and installation of the top 4 inches with batture sand for dressing and beneath sidewalks and curbs as required.

Price shall include removal and replacement of adjacent roadway pavement as required to form curb, gutter, and ramp transition areas, where adjacent pavement is not included on the drawings and quantified in other items of the proposal.

Price shall include all dowelling and transverse and longitudinal reinforcement in conformance with the Standard New Orleans DPW details.

Price for new curb or curb and gutters associated with Handicapped Ramp construction shall be measured and paid for as subsidiary to Square Yard unit price bid for ADA-ACCESSIBLE CURB RAMPS, CURB AND GUTTER, AND CONCRETE SIDEWALKS AT INTERSECTIONS.

SECTION 3.10 - DRIVEWAYS AND SIDEWALKS (SPECIAL FINISH)

This work consists of furnishing and constructing specially finished concrete driveways, sidewalks, and incidental paving slabs. Special finish sidewalks and driveways in this section shall be in conformance with the requirements of C706 of the DPW General Specifications.

A. SUBMITTALS

1. Product Data: Submit manufacturer's complete technical data sheet for the following:

   a. Colored admixture.
   b. Powder antiquing release agent.
   c. Imprinting/Texturing tools.

2. Samples for initial selection: Manufacturer's color charts showing full range of colors available.

3. Pea Gravel concrete mix shall be submitted in addition to standard concrete mixes for sidewalks and driveways. Pea Gravel Mix shall be in conformance with the requirements of Section C706 of the DPW General Specifications.

B. QUALITY ASSURANCE

1. Manufacturer Qualifications: Manufacturer with 5-years experience in production of specified products.

2. Installer Qualifications: An installer with 5-years experience with work of similar scope and quality.

3. Comply with the requirements of ACI 301.

4. Obtain each specified material from same source and maintain high degree of consistency in workmanship throughout the Project.

5. Notification of manufacturer's authorized representative shall be given at least 1-week before start of Work.

6. Integrally Colored Concrete Mockups:

7. Provide under provisions of Section "Submittals".

8. At location on Project selected by Owner and Engineer, place and finish 10 feet by 10 feet area.

9. For accurate color, the quantity of concrete mixed to produce the sample should not be less than 3 cubic yards or not less than 1/3 the capacity of the mixing drum on the ready-mix truck and should always be in full cubic yard increments. Excess material shall be discarded according to local regulations.

10. Construct mockup using processes and techniques intended for use on permanent work, including curing procedures. Include samples of control, construction and expansion joints in sample panels. Mockup shall be produced by the individual workers who will perform the work for the Project.

11. Retain samples of cements, sands, aggregates and color additives used in mockup for comparison with materials used in remaining work.

12. Accepted mockup provides visual standards for work of Section.

13. Mockup shall remain through completion of the work for use as a quality standard for furnished work. Remove mockup when directed.

C. DELIVERY, STORAGE, AND HANDLING

Colored Admixture: Comply with manufacturer's instructions. Deliver colored admixtures in original, unopened packaging. Store in dry conditions.

D. PROJECT CONDITIONS

Integrally Colored Concrete Environmental Requirements:

1. Schedule placement to minimize exposure to wind and hot sun before curing materials are applied.

2. Avoid placing concrete if rain, snow, or frost is forecast within 24-hours. Protect fresh concrete from moisture and freezing.

3. Comply with professional practices described in ACI 305R and ACI306R.

E. PRODUCTS

1. MATERIALS

a. Colored Admixture for Integrally Colored Concrete:

Admixture shall be a colored, water-reducing, admixture containing no calcium chloride with coloring agents that are lime proof and UV resistant.

b. Stamping/Imprinting Tools and Materials:

Stamping/Imprinting Tools and Materials shall be furnished by the Color Admixture manufacturer.

c. Powder antiquing release agent shall be recommended by pattern tool manufacturer and compatible with integral color additives.

2. COLORS AND PATTERNS

a. Concrete Color:

Provide cement, sand, aggregate and colored admixture as required to match existing stamped/colored concrete.

b. Curing Compound: Color to match colored concrete.

c. Surface Texture: Stamped concrete finish.

d. Stamp/Imprinting Pattern:

As required to match existing stamped driveway. The Contractor shall submit imprinting pattern to Engineer for review and approval before construction.

F. MEASUREMENT

The area of driveways will be determined by surface measurements and no extra allowance will be made for shoulders. Sidewalk pavements will be paid for by surface measurements and no deduction will be made for subsurface structures occupying less than five (5) square feet of area. Areas under structures encroaching on Public Property not paved will not be included in the surface measurement.

G. PAYMENT

Payment for special finish concrete driveways and sidewalks shall be made at the contract price per square yard, which includes excavation, installation of expansion joint and welded wire fabric. Granular material for adjustment and removal of existing driveways, sidewalk or banquette pavement shall be paid for in other items.

ITEM NO.	PAY ITEM	PAY UNIT
CF-7	4” Concrete Sidewalk (Special Finish)	Square Yard
CF-8	6” Concrete Driveway (Special Finish)	Square Yard
CF-9	6” Concrete Driveway (Special Finish) (Pea Gravel)	Square Yard

SECTION 3.11 - SIDEWALK TRANSITION ADJACENT TO ADA-ACCESSIBLE CURB RAMP AREAS

A. This item shall be governed by the requirements of Standard Specification Item C706 (51) Concrete Sidewalk, C706 (57) Brick Sidewalk, and C706 (59) Stone Sidewalk except as modified here-in. This item shall include all necessary work associated with transitioning line and grade of existing sidewalk and non-roadway paved transition areas adjacent to proposed handicapped ramp locations.

B. The unit price bid per Square Yard for SIDEWALK TRANSITION ADJACENT TO HANDICAPPED RAMPS shall include all saw cutting, removal and proper disposal of existing sidewalk and non-roadway paved transition areas, all excavation, subgrade preparation, setting bed, concrete foundation, grading, compaction, tamping, and furnishing and placing all necessary fill material, backfill, dressing, sand for adjustment, joints, reinforcement, grout, finishing, curing, and sidewalk or non-roadway paved transition area constructed of a material to match the existing type and surface course unless otherwise directed by the Sewerage and Water Board Director. Where existing sidewalk or non-roadway paved transition areas to be removed is Portland Cement Concrete the new surface course shall be 4 inches thick 3,000 psi concrete at 28 days reinforced with 6x6 - W2.9xW2.9 reinforcing mesh. Where existing sidewalk or non-roadway paved transition areas to be removed is Brick or Stone the new surface course shall be replaced in-kind and compliant with the construction requirements of the General Specifications for the type material removed. Where feasible and accepted by the Sewerage and Water Board Director existing salvaged material, if reusable, can be removed, properly cleaned, and re-installed. Price shall include all backfill and compaction behind curb and along the edges of walk with select material obtained from roadway excavation or other approved sources and the installation of the top four inches with Batture sand for dressing as required. The Contractor is solely responsible for coordinating with the respective utility for any required adjustments or relocations as required. If approved by the respective utility any necessary utility box adjustments shall be performed by the contractor in accordance with the appropriate standards and requirements at no direct payment.

C. When SIDEWALK TRANSITION ADJACENT TO HANDICAPPED RAMPS has been shown on the unit price proposal the extent of transition area allowable for measurement and payment shall be a maximum of 8’-0” in length in each direction from proposed handicapped ramps where existing sidewalk requires replacement to meet line and grade dictated by compliance with the latest ADA standards. The width of the sidewalk transition shall match the width of the material to be removed to meet line and grade dictated by compliance with the latest ADA standards. Locations eligible for use of this pay item shall be recommended by the contractor to the project engineer’s Resident Inspector (RI) for submission to the Sewerage and Water Board Director of an approved amount per each location proposed. The Contractor shall consult directly with the RI and provide field measurements, recommendations, and existing and proposed grades as needed to install ADA compliant sidewalk transitions to proposed handicapped ramp locations. Only locations and extents specifically pre-approved by the Sewerage and Water Board Director during construction will be eligible for payment. SIDEWALK TRANSITION ADJACENT TO HANDICAPPED RAMPS shall not be considered a material part of the work contemplated, and only amounts specifically approved in writing from the Sewerage and Water Board Director shall be measured and paid for at the contract unit price bid with no adjustment to the unit price for an increase or decrease in the final quantity approved.

D. Measurement and payment:

1. SIDEWALK TRANSITION ADJACENT TO HANDICAPPED RAMPS, not shown on the Construction Drawings but included in the unit price proposal, shall only be measured and paid for each location and specific quantity approved in writing by the Sewerage and Water Board Director for Special Bid Item No. CF-13 SIDEWALK TRANSITION ADJACENT TO HANDICAPPED RAMPS.
2. All sidewalk areas that are shown on the Construction Drawings are measured and paid for in other applicable pay items of the proposal.

SECTION 3.12 - ADA-ACCESSIBLE CURB RAMP RETROFIT

A. DESCRIPTION

1. This item shall include all necessary work associated with adding ADA compliant tactile / detectable warning surface tiles to existing curb ramps. This Section includes Specifications for furnishing and installing Surface Applied Tactile / Detectable Warning Surface Tiles (SA) in an inline truncated dome pattern on all curb ramps and walking surfaces at the locations and to the dimensions shown on the Drawings, in accordance with the Contract Documents and as directed by the Sewerage and Water Board Director. (Surface Applied Tactile is also known as Surface Mount Tactile Warning Tiles or Retrofit Tactile Warning Tiles).

B. RELATED DOCUMENTS

1. Drawings and general provisions of the Contract Documents.
2. Americans with Disabilities Act (ADA) Title 49 CFR Transportation, Part 37.9 Standards for Accessible Transportation Facilities, Appendix A, Section 4.29.2 Detectable Warnings on Walking Surfaces. FHA Memo (5-06-02) titled Truncated Domes. Federal Register Volume 71, No. 209, 49 CFR Part 37 (10-30-06), ADA Standards for Transportation Facilities (11- 29-06, DOT): Sections 406, 705, and 810. ADA Standards for Accessible Design – 2010 (9/05/11, DOJ), ADAAG: Sections 705 and 810. Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Rights of Way (7/23/11, Access Board), PROWAG: Sections R208, R304, R305, R308, and R309.

3. American Society for Testing and Materials (ASTM) Test Methods B117, C501, C1028, D543, D570, D638, D695, D790, G151, G155, and E84.

4. American Association of State Highway and Transportation Officials (AASHTO): Test Method AASHTO-H20

C. SUBMITTALS

1. Product Data: Submit manufacturer's literature describing products, installation procedures and maintenance instructions.

2. Samples for Verification Purposes: Submit two (2) Tactile Warning Surface samples minimum 8" x 8" of the kind proposed for use. Samples shall be properly labeled and shall contain the following information: Name of Project, Submitted by, Date of Submittal, Manufacturer's Name, and Catalog Number.

3. Shop Drawings: Submit Standard Manufacturer Shop Drawings showing all pertinent characteristics of the Surface Applied Tactile Warning Tile (SA) including profile, sound on cane contact amplification feature, fastener locations and installation methods.

4. Material Test Reports: Submit current test reports from qualified, accredited independent testing laboratory in accordance with ASTM guidelines and indicating that materials proposed for use are in compliance with specification requirements and meet the properties indicated. All test reports submitted shall be representative of the Surface Applied Tactile Warning Tile (SA) delivered to the Project.

5. Maintenance Instructions: Submit copies of manufacturer's specified maintenance practices for each type of Tactile Warning Surface Tile and accessory.

D. GUARANTEE

1. SA Tiles shall be guaranteed in writing for a period of five (5) years from date of Contract's final completion. The guarantee includes manufacturing defects, breakage, and deformation.

E. MATERIALS

1. Composition: SA Tiles shall be manufactured using a matte finish exterior grade homogeneous (uniform color throughout thickness of product) glass and carbon reinforced polyester based Sheet Molding Compound (SMC) composite material. Truncated domes must contain fiberglass reinforcement within the truncated dome for superior structural integrity and impact resistance. A matte finish will be required on the Tactile Warning Surface for superior slip resistance performance superior to that offered by a gloss finish. Use of Tactile Warning Surface Products employing coatings or featuring layers of material with differing composition, performance, or color properties is expressly prohibited under this Section.

2. Color: Color shall be homogeneous throughout SA Tile, Dark Gray (G) per Federal Standard 595B Table IV, Color No. 36118.

3. Domes: Square grid pattern of raised truncated domes of 0.2" nominal height, base diameter of 0.9" and top diameter of 0.45". The Federal Code of Regulations permits a truncated dome spacing range of 1.6"-2.4." For superior wheelchair, walker and shopping cart mobility, the preferred truncated dome spacing shall have a center-to-center (horizontally and vertically) spacing of 2.35", measured between the most adjacent domes on square grid.

4. Configuration: SA Tile sizes shall be as indicated on the Contract Drawings. The field area shall consist of a non-slip textured surface with a minimum static coefficient of friction of 0.80, wet and dry. At a minimum, the thickness of the body of SA Tile shall measure 3/16" (nominal). The SA Tile thickness shall not exceed ½" maximum when measured from the curb ramp surface to the top of the truncated dome. The field area shall consist of a non-slip textured surface with a minimum static coefficient of friction of 0.80, wet and dry.

5. In compliance with the Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Rights of Way (7/23/11, Access Board, "PROWAG") Section R302.7.2 and California Code of Regulations (CCR 2007) Section 1127B.5.5 and Section 1133B.8.5, the Composite Tactile Warning Surface Tiles shall have a perimeter beveled edge with a maximum slope of 1:2 in order to minimize the potential for a pedestrian tripping.

6. Radius SA Tile:

   a. Radius SA Tile measures 24"x 33.25" and features reverse score lines on each 24" dimension for a 10', 15', and 20' radius condition. The Radius SA Tile out of the box measures 11' - 6" radius.

   b. Truncated domes feature proper dome alignment for a radius application. Radius SA Tile shall be cut to the appropriate configuration using the reverse score lines as a guide.

7. Follow Tactile Warning Surface Manufacturer's installation procedures.

8. Dimensions: SA Tiles shall be held within the following dimensions and tolerances:

   a. Length and Width:

      i. Rectangular SA Tile: 2.35" Dome Spacing

ii. Radius SA Tile: 1.6” - 2.4” Dome Spacing

9. Fasteners: The Tactile Warning Surface Tile shall have minimum twelve (2’x3’ Tactile Warning Surface Tile) to twenty-four (3’x5’ Tactile Warning Surface Tile) countersunk fastening holes. Color matched, stainless steel 304, flat head drive anchor: ¼” diameter x 1 1/2” long.

10. Adhesive:
    a. Polyether Structural Adhesive/Sealant by Chem Link (M-1)
    b. Urethane Elastomeric Adhesive by Bostik (Hydroment Ultra-Set Advanced or Durabond D-818)
    c. Approved equal.

11. Sealants:
    a. Single Component Urethane Sealant:
        i. Sources: BASF NP1 by BASF Building Systems or Sikaflex 1A by Sika Corp.
        ii. Colors: Black, Limestone, Redwood Tan
    b. Polyether Structural Adhesive/Sealant by Chem Link (M-1)
        i. Colors: Black, Gray, Limestone, White
    c. Approved Equal

12. Available manufacturers, subject to compliance with these Specifications include, but are not limited to, the following:
    a. ADA Solutions Inc. of Chelmsford, MA (Phone: 800-372-0519, Fax: 978-262-9125, Web Site: www.adatile.com, Email: info@adatile.com, or owner approved equal.

F. EXECUTION

1. Preparation
    a. Transmit submittals and deliverables required by this Section.
    b. Furnish products as indicated.
    c. Substrate Condition: Ensure substrate is in suitable condition, and in compliance with the Tactile Warning Surface manufacturer recommendations, to receive work of this Section. Prior to construction, refer any and all discrepancies to the Engineer for further action.
2. Installation

a. Contractor will not be allowed to install Tactile Warning Surface Tiles until all submittals have been reviewed and approved by the Engineer.

b. SA Tile shall be installed per manufacturer's instructions.

c. To the maximum extent possible, the SA Tiles shall be oriented such that the rows of in-line truncated domes are parallel with the direction of the ramp. When multiple SA Tiles regardless of size are used, the truncated domes shall be aligned between the tactile warning surface tiles and throughout the entire tactile warning surface installation.

d. In accordance with the Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Rights of Way (7/23/11, Access Board): Sections 304 + 305), Tactile Warning Surface Tile shall be located relative to the curb line as shown within Sections 304+305 of the Guidelines.

e. Cutting of SA Tiles may be required to accommodate specific site conditions. All possible attempts shall be made to minimize cutting of the SA Tiles. Minimum acceptable width of the cut SA Tile shall be 9".

f. Environmental Conditions: Air and substrate temperatures must exceed 40 degrees for at least 8 daytime hours for a sound and proper installation. A "weed torch" may be used to boost the substrate temperature to expedite cure of adhesives and sealants.

g. Immediately prior to installing the SA Tiles, the concrete surfaces must be inspected to ensure that they are clean, dry, free of voids, curing compounds, projections, loose material, dust, oil, grease, sealers and determined to be structurally sound with a minimum four (4) day concrete cure period (unless otherwise directed by the SA Tile manufacturer) and that the surface is flat. As necessary, substrate may be mechanically cleaned with a diamond cup grinder or shot blaster to remove any dirt or foreign material although a broom or leaf blower is usually adequate for cleaning of the substrate.

h. Apply adhesive on the backside of the SA Tiles following the perimeter border and internal cross pattern established by the SA Tile manufacturer. Sufficient adhesive must be placed on the prescribed areas to have full coverage across the 2-inch width of the adhesive locator.

i. Set the SA Tile(s) true and square to the curb ramp areas as detailed in the Drawings. Allow 1/8" separation between successive SA Tiles for expansion/contraction.

j. Drill holes true and straight to a depth of 2" by 1/4" using the recommended bit. As necessary, additional countersunk holes may be added to the SA Tile by using a 5-point ½" (82 degree) countersink to create the necessary holes.

k. Mechanically fasten SA Tile to the concrete substrate using a 32oz. to 48oz. hammer to set the composite sleeve anchors. Ensure that the fastener has been set to full depth, straight and true. Care should be taken when setting the fastener to avoid any advertent blows with the hammer to the SA Tile.

l. Following the installation of the SA Tile, the sealant system should be applied to the perimeter edge. Follow the Tactile Warning Surface manufacturer's recommendations when applying the sealant in a cove type profile to blend and seal the SA Tile edge to the adjoining surfaces.

m. Do not allow foot traffic on installed SA Tile until the perimeter edge sealant has

cured sufficiently to avoid tracking. If the SA Tile must be placed into immediate pedestrian service, apply baby powder to the sealant to minimize the possibility of tracking while the sealant cures. Foot imprints may appear in the fully cured sealant application

n. A Urethane Sealant such as Sikaflex 1a or BASF NP1 shall be applied to the edge treatment for a watertight Tactile Warning Surface Tile installation.

3. Cleaning and Protecting

a. Protect SA Tiles against damage during construction period to comply with SA Tiles manufacturer's Specifications.

b. As necessary, while the Project remains under construction, protect SA Tiles against damage from rolling loads following installation by covering with plywood or hardwood.

c. If requested by the Sewerage and Water Board Director, clean SA Tiles not more than four (4) days prior to date scheduled for inspection intended to establish date of substantial completion in each area of project. Clean SA Tile by method specified by Tactile Warning Surface Products manufacturer.

G. MEASURMENT AND PAYMENT

1. When the Surface Applied Tactile / Detectable Warning Surface Tiles pay item has been shown on the unit price proposal the final approved quantity for installation, measurement, and payment shall be determined by and subject to written approval of the Sewerage and Water Board Director and shall not be considered a material part of the work contemplated. Only locations specifically approved in writing by the Sewerage and Water Board Director during construction shall be measured and paid for at the unit price bid with no adjustment to the unit price for an increase or decrease in the final amount approved.

2. The unit price bid per square foot for Surface Applied Tactile / Detectable Warning Surface Tiles shall include all cost to prepare, furnish, install, clean, protect and warrant the tiles in accordance with the specifications and the manufacturer's recommendations.

3. Surface Applied Tactile / Detectable Warning Surface Tiles shall be measured based on approved actual square footage of installed final product in-place.

4. Surface Applied Tactile / Detectable Warning Surface Tiles, not shown on the Construction Drawings but included in the unit price proposal, shall only be measured and paid for at location approved in writing by the Sewerage and Water Board Director for Special Bid Item No. CF-14 SURFACE APPLIED TACTILE / DETECTABLE WARNING SURFACE TILES.

SECTION 3.13 - CONCRETE PAVEMENT (8" THICK)

A. This item shall be governed by the requirements General Specification Item C601 except as modified here-in.

B. The final finish and texture shall be obtained using a broom, or other acceptable methods approved by the Sewerage and Water Board Director, in accordance with the latest edition of LaDOTD Louisiana Standard Specifications for Roads and Bridges Section 601.

C. At all locations proposed concrete pavement abuts existing concrete pavement that is to remain in place:

All concrete pavement within the designated area is to be removed and the subgrade area prepared to receive an eight (8") inch compacted crushed stone base course as shown on the typical roadway cross sections contained in the Construction Drawings. Compacted pumped sand covered by a geotextile fabric as required shall be used to bring subgrade to the required elevation. It shall also be used to replace unsuitable subgrade or to fill voids as directed.

No. 5 (#5) dowels 24" long at 12" on center shall be drilled and epoxy grouted into the existing concrete to allow for a proper tie-in.

Just prior to placing the new concrete, the vertical faces of the old concrete pavement are to be coated with an approved concrete epoxy per ASTM C 881 Type II. The new roadway pavement shall consist of four thousand (4,000) psi P.C.C.P. reinforced with 6 X 12 - W 7.5 X W 6.5 welded wire fabric, seventy-seven (77) pounds per one hundred (100) square feet. The new mesh shall be tied to the existing mesh where possible. Full width sheets are to be used and overlapped a minimum of 12", no partial or scrap pieces are to be used.

Wherever a joint (any type) or a part thereof falls within the affected area, the same shall be reestablished in kind and shall be incidental to the work included as concrete pavement.

After all roadway pavement repairs have been completed at a location, Bituminous Wearing Course material, if required, shall be placed in a continuous operation.

D. Unit Price bid shall include all preparation work and drilling and dowelling between existing and proposed pavement in accordance with the CONCRETE PAVEMENT REPAIR detail shown on City of New Orleans Department of Public Works Standard Drawing STD5, except epoxy grout shall also be required.

E. Measurement and payment for concrete pavement shall be made at the unit price bid per square yard for Bid Item No. C601 (54) REINFORCED CONCRETE PAVEMENT (8" THICK) when listed on the Unit Price Form.

SECTION 3.14 - ROOT PRUNING, TREE PROTECTION, LANDSCAPING, AND SIDEWALK GRAVEL BED

Landscaping shall be in accordance with Section C719 of the General Specifications for Street Paving Department of Public Works 2015 Edition (Revised 11/05/2015), Department of Parks and Parkways Specifications Section 02480 *Landscape Protection During Construction,* 02481 *Installation of Plant Materials* and Section 02485 *Seeding and Sodding,* and amended as follows:

A. Root Pruning – All tree roots, of City owned trees, damaged during removal of curbs, sidewalks and driveways shall be root pruned. All tree roots damaged during any excavation operations; yard drains, collector lines, etc. shall be root pruned. Tunneling and boring shall be required when working within the critical root zone. Trenching is prohibited from this area. Air spading may be required in order to reveal the roots under circumstances where construction occurs within the critical root zone as directed by the Parks & Parkways Department (PPD) arborist.

1. Air spading requirement - When working within the critical root zone, air spading is required to expose the top seven to ten inches of the critical root zone to reveal root conflicts.
2. Aerial pruning requirement – When root pruning occurs, aerial pruning is required as per the direction of the Chief Urban Forester to mitigate damage by reducing the canopy in proportion to the root reduction.

3. Lac Balsam is prohibited from use to dress severed roots as a tree wound treatment.
4. A living root that will be buried below grade following pruning shall be treated with a rooting hormone approved by the Chief Urban Forester.
5. A root flare that must be cut and remain exposed shall be treated with a copper paste approved by the Chief Urban Forester.
6. All root pruning shall occur prior to excavation.
7. When circumstance require that roots be exposed for more than 48 hours, the roots shall be re-cut to living tissue, re-treated, buried and irrigated promptly.
8. Approved root cutting tools – Sharp instruments that make clean cuts, including hand saw, loppers, snips or hand pruners, chain saw or reciprocating saw with unpainted blades. Dull blades are prohibited. Trenchers and excavators are prohibited.

B. Fertilization – All trees' roots pruned due to construction shall be fertilized using a water-soluble fertilizer injected into the soil. The fertilization plan shall be based upon soil lab test reports furnished by the Contractor. The minimum acceptable N-P-K ratio shall be 30-5-5. The nutrient complex and ratio (gal. /sq. ft.) must be approved by the Urban Forester overseeing the project.

C. Mycorrhizal Fungal Inoculate – Treatment equal to or better than Mycor Tree Saver, Cambistat, and mulching shall be applied to all construction damaged tree root zones per manufacturer's directions. Cost shall be included in the bid price for root pruning.

D. Termite Treatment – All tree roots pruned due to construction shall be treated for termites. A termiticide equal to or better than Premise manufactured by Bayer Corporation shall be used per manufacturer's directions. Cost shall be included in the bid price for root pruning.

E. Tree Permit Requirements – When necessary, the Contractor will be required to obtain a Tree Permit from the Department of Parks and Parkways.

1. Pre-Permit: In order to obtain a tree permit, the Contractor must satisfy the following conditions:

- The Contractor will ensure that the tree permit application will be made by a Louisiana Licensed Arborist certified by the International Society of Arboriculture
- A signed contract and a written detailed plan are required for issuance of the permit. The plan shall include the location of the proposed excavation, measurements of depth, length, and proximity to the main trunk of the tree, tools and methodology and exact time when work will be performed.

2. Post-Permit: Once PPD approves the tree permit, the Contractor must ensure the following on-going requirements are met:

- The Contractor will ensure that the Arborist is present on the construction site for all excavation and/or root pruning within protected areas of the tree.
- The Contractor will ensure that the Arborist visits the construction site for a minimum of one hour per day during active construction that is near to or involves trees.
- The Contractor will ensure that the Arborist will submit a weekly log of hours to the Chief Urban Forester with each invoice.

F. Canopy Pruning – When aerial pruning occurs, the resulting canopy shall be symmetrical and balanced as per the direction of the Chief Urban Forester.

G. Tree Replacement – Trees determined by the Chief Urban Forester to no longer be viable due to damage inflicted by the Contractor shall be replaced as directed by the Department of Parks and Parkways. At a minimum, trees shall be replaced on the basis of inch caliper per inch diameter lost. In the event that there is

not sufficient space for planting, an alternative location may be designated off site, or the Contractor my donate a sum equal to the cost of replacement to the Department of Parks and Parkways Plant-A-Tree Trust Fund.

H. Tunneling and Boring Requirement – When work cannot be redirected away from the Critical Root Zone, tunneling and boring is required for the installation of lines. Trenching is prohibited within the critical root zone. Air spading may be required in order to reveal the roots under circumstances where construction occurs within the critical root zone as directed by the Chief Urban Forester.

I. Root Barrier – When work includes installation of root barrier, the barrier may not be constructed from wood.

J. Restricted Use Instruments – Permission must be obtained from the Chief Urban Forester in advance for use of any machines intended for trenching or mechanical digging. When stump grinders are employed, it must be followed by the use of an approved cutting instrument that will remove any torn or shredded tissue back to a clean, living cut.

F. These items shall be governed by the requirements of General Specification Item C719 except as modified here-in.

G. When Root Pruning has been shown on the unit price proposal the extent of root pruning allowable shall be determined by the Parks & Parkways Department (PPD) and require written approval by the Sewerage and Water Board Director. The Contractor shall consult directly with the PPD and provide a licensed arborist as needed to perform root pruning. Only root pruning locations specifically approved by the Sewerage and Water Board Director during construction will be eligible for payment. Root Pruning shall not be considered a material part of the work contemplated, and only Root Pruning locations specifically approved in writing from the Sewerage and Water Board Director shall be measured and paid for at the unit price bid with no adjustment to the unit price for an increase or decrease in the number of items approved. Measurement and payment for Root Pruning shall be made for each approved location at the unit price bid per each tree for Special Bid Item No. CF-10 ROOT PRUNING. When Root Pruning has not been shown on the unit price proposal then any required Root Pruning shall be at no direct payment.

H. There shall be no direct payment for Root Trenching. The Contractor is responsible for protecting existing trees in and adjacent to the work area and installing tree protection measures as required by Parks and Parkways and as directed by the engineer. All costs associated with Root Trenching shall be included in other major items of the proposal.

I. There shall be no direct payment for tree protection. The Contractor is responsible for protecting existing trees in and adjacent to the work area and installing tree protection measures as required by Parks and Parkways and as directed by the Sewerage and Water Board Director. All costs associated with tree protection shall be included in other major items of the proposal. Tree protection shall be in place and approved by the PPD arborist prior to commencement of any work on site, including clearing and grubbing.

J. There shall be no direct payment for Sidewalk Gravel Bed as required for ramping over tree roots that interfere with placement of sidewalk. The Contractor is responsible for protecting existing trees in and adjacent to the work area and installing tree protection measures as required by Parks and Parkways and as directed by the engineer. All costs associated with Gravel Bed and Filter Cloth over Tree Roots shall be included in other major items of the proposal.

K. There shall be no direct payment for Tree Trimming required to obtain needed clearance to perform the work. The Contractor is responsible for protecting existing trees in and adjacent to the work area and installing tree protection measures as required by Parks and Parkways and as directed by the engineer. All costs associated with Tree Trimming shall be included in other major items of the proposal. There shall be

no direct payment for air spading and tunnel and boring required to work within the critical root zone as directed by the PPD arborist.

SECTION 3.15 - GRANULAR MATERIAL AND FILL MATERIAL

A. Granular material shall be governed by the requirements of Standard Specification Item C723 except as modified here-in. The Contractor shall be responsible for importation and placement of granular fill material as required for placement of timber or concrete curb and structures. There shall be no direct payment for Granular Material or Batture Sand. Payment for Item C723 Granular Material item no. C723 (52) Batture Sand for Dressing, Granular Material for other Adjustments shall not be allowed. All costs for Batture Sand for Dressing, Granular Material for other Adjustments shall be included in the unit price bid for curbs, sidewalks, or driveways, roadways, or other major items of the proposal as applicable.

B. Fill material shall be required as fill, backfill or dressing material to ensure positive drainage within the limits of the area disturbed by construction, areas adjacent to sidewalk or driveway repairs, and between sidewalk repairs and the roadway to comply with the typical roadway cross sections shown on the plans or as directed. The fill material shall be suitable on-site excavated earth material, subject to approval of the Sewerage and Water Board Director, or borrow material compliant with the requirements Standard Specification Item C723 Granular Material with subsection 1003.07 referencing 2006 Edition LaDOTD Standard Specifications for Roads and Bridges. Fill and borrow materials shall be free from waste, rubbish, large rocks, or other unsuitable or foreign material.

Suitable excavated material is to be used if available as fill or dressing to comply with the typical roadway cross sections shown on the plans. In the absence of a sufficient amount of suitable on-site material the Contractor shall provide and import borrow material. There shall be no direct payment for Fill Material. All costs associated with furnishing, hauling, storing, placement and compaction of material used as fill, backfill, or dressing in accordance with the typical sections or as required to ensure positive drainage shall be included in the unit price bid for curbs, sidewalks, or driveways, roadways, or other major items of the proposal as applicable.

SECTION 3.16 - CATCH BASIN AND MANHOLE REPAIRS AND VERTICAL ADJUSTMENTS

A. This work consists of the replacement of components and repair or vertical adjustment of vertical catch basins, mountable catch basins, drop inlet catch basins, and drain manholes as described and in accordance with the details, dimensions, and grades shown on plans or as directed by the Sewerage and Water Board Director. These items shall be governed by the requirements of the latest addition of standard Sewerage and Water Board New Orleans (SWBNO) drawings for the type of structure described and Standard Specification Item C702 except as modified herein. When Catch Basin and Manhole Repairs and Adjustments pay items have been shown on the unit price proposal the final approved quantity for installation, measurement, and payment shall be determined by and subject to written approval of the Sewerage and Water Board Director and shall not be considered a material part of the work contemplated. Only locations specifically approved in writing by the Sewerage and Water Board Director during construction shall be measured and paid for at the unit price bid with no adjustment to the unit price for an increase or decrease in the number of items approved.

B. Measurement and payment for Catch Basin and Manhole Repairs and Vertical Adjustments items shall be made at the unit prices bid under Special Bid Item Numbers CF-301 through CF-378 for Vertical Catch Basin, Drop Inlet Catch Basin, Mountable Catch Basin, and Drain Manhole in conjunction with Cover or Grate; Frame; Front Grate; and Repair or Vertical Adjustment of Single or Double Basins or Manhole Reusing Existing Metal Castings or Repair or Vertical Adjustment of Single or Double Basins or Manhole Brick Work Only, for each type of Special Bid Item. Measurement shall be per each or per foot height, as specified for each type of repair or vertical adjustment item.

C. Unit prices bid for Catch Basin and Manhole Repairs and Vertical Adjustments items shall include any related preparation and finishing work, all excavation, soil and debris removal and proper disposal, sheeting, shoring, bracing, bedding material, granular backfill, backfill and compaction, cement, mortar, sealants, fabric, shagging, materials, castings, transitions to match adjacent improvements, protection and restoration of adjacent areas, labor and workmanship required to provide each individual repair or adjustment as described. All required removal and replacement of adjacent improvements and any damage caused by the contractor to the bordering roadway, adjacent non-paved area, sidewalk, driveway, ramp, curb, existing structure or components, or other existing assets shall be considered incidental to the unit price paid for the Catch Basin and Manhole Repairs and Adjustments items and the contractor shall be required to replace improvements or repair the damages to comply with SWBNO and DPW approved standards at no direct pay. Each Catch Basin and Manhole Repairs and Adjustments pay item may be required individually, or in combination with other Catch Basin and Manhole Repairs and Adjustments pay items, but the unit price bid shall prevail for each item individually.

D. Vertical Catch Basin items - At no time is a vertical catch basin is to be installed in a driveway, in the event that an existing vertical catch basin is located in the face of a drive apron within project limits and the scope of adjacent work includes full depth restoration, the catch basin will need to be converted to a mountable catch basin conforming SWBNO Std. Drawing No. D-3431-A. Curb inlet type vertical catch basins shall conform to the requirements shown on SWBNO Standard Drawings D-873 and D-873A for single or double vertical catch basins, except:

CF-301 Vertical Catch Basin Cover

Work to provide and install Catch Basin Cover shall include furnishing and installing a cover on the catch basin existing frame. Catch Basins shall receive new covers made of fiberglass material sized to properly to fit flush in the existing metal frame. Fiberglass covers for Catch Basins shall be Grate Glass “M” Solid Composite Plate by Road Masters International or approved equal and shall meet AASHTO M 306 or HS-20 loading requirements. This work will include removing the damaged/missing cover as identified by the Sewerage and Water Board Director, cleaning the existing frame, and to fit/retrofit a new cover in the existing frame, measured per each Vertical Catch Basin Cover.

CF-302 Vertical Catch Basin Frame

Catch Basin frames shall meet AASHTO M 306 loading requirements and shall be of the proper size and installed to meet the requirements of the SWBNO drawings for the type of catch basin repaired. This work will include removing the damaged/missing cover and frame and to fit/retrofit a new frame to the structure including incidental removal and replacement of the bordering roadway and cleaning and reinstallation of the existing salvaged cover or in conjunction with a new cover pay item(s) as directed by the Sewerage and Water Board Director. Work and materials for Catch Basin Frame includes the removal of the existing cover and frame as necessary and furnishing and installing a new frame including all components and any related preparation or finishing work to the basin for the new frame installation, measured per each Vertical Catch Basin Frame.

If no structural repair or vertical adjustment work is required, then Vertical Catch Basin Frame placement shall include any incidental brick and mortar work required for the installation of the frame. If structural repairs or vertical adjustment are required, then the Vertical Catch Basin Frame pay item may be used in conjunction with other pay item(s) for repair or vertical adjustments. The Sewerage and Water Board Director will have sole authority in determining whether structural repairs or vertical adjustments are required.

CF-303 Lockable Vertical Catch Basin Frame and Cover

Work to provide and install Lockable Catch Basin Frame and Cover shall include furnishing and installing the frame and cover on an existing Catch Basin. Lockable Catch Basin Frame and Cover shall conform to East Jordan Iron Works, INC. V-4300-7 or approved equal. Item installation requirements shall follow CF-302 description. CF-303 Lockable Vertical Catch Basin Frame and Cover will be measured per each.

CF-311 Vertical Catch Basin Front Grate No. 1,
CF-312 Vertical Catch Basin Front Grate No. 2, and
CF-313 Vertical Catch Basin Front Grate No. 3

No. 1, 2, or 3 Catch Basin Front Grate shall meet AASHTO M 306 or HS-20 loading requirements. This work will include removing the damaged/missing grate and to fit/retrofit a new grate to the structure including incidental removal and replacement of the bordering roadway and cleaning and reinstallation of the existing salvaged frame and cover, or in conjunction with a new frame and/or cover pay item(s) as directed by the Sewerage and Water Board Director. Work and materials for Catch Basin Front Grate includes the removal and reinstallation of the existing cover and frame if necessary, and removal of the existing front grate and furnishing and installing a new front grate including and all components and any related preparation or finishing work to the basin for the new grate installation, measured per each Vertical Catch Basin Front Grate No. 1, 2, or 3. If no structural repair or vertical adjustment work is required then Catch Basin Front Grate placement shall include any incidental brick and mortar work required for the installation of the grate. If structural repairs or vertical adjustments are required, then the Catch Basin Front Grate pay item may be used in conjunction with other pay item for repair or vertical adjustments. The Sewerage and Water Board Director will have sole authority in determining whether structural repairs or vertical adjustments are required.

CF-315 Single Vertical Catch Basin Repair or Vertical Adjustment Reusing Existing Metal Castings, and
CF-316D Double Vertical Catch Basin Repair or Vertical Adjustment Reusing Existing Metal Castings

Work to repair or provide vertical adjustment of catch basin reusing existing metal castings shall consist of: remove and salvage the existing frame and cover, or frame, cover and grate, remove all of the existing brick and mortar structure to the lowest elevation of brick area requiring repair or adjustment, furnish and install new brick and mortar courses matching the existing size and location of the original structure, and clean and reinstall the salvaged frame and cover, or frame, cover and grate, measured per each.

CF-317 Single Vertical Catch Basin Repair or Vertical Adjustment Brick Work Only, and
CF-318D Double Vertical Catch Basin Repair or Vertical Adjustment Brick Work Only

Work to repair or provide brick work only for vertical adjustment of Vertical Catch Basins shall consist of removing all or a portion of the existing brick and mortar structure down to the lowest brick course elevation requiring repair and furnishing and installing new brick and mortar courses matching the existing size and location of the original structure, measured per each. Vertical Catch Basin Repair or vertical Adjustment Brick Work only shall be used in conjunction with a pay item for installing a new frame and/or a pay item for installing a new front grate.

E. Drop Inlet Catch Basin items - Drop inlet type Catch basins shall conform to the requirements shown on SWBNO Standard Drawings D-3264 for Standard 24”x30” Clear Opening Drop Inlet Catch Basins, except:

CF-331 Drop Inlet Catch Basin Grate

Work to provide and install Drop Inlet Catch Basin Grate shall include furnishing and installing a grate on the drop inlet catch basin existing frame. Drop Inlet Catch Basins shall receive new grates made of fiberglass material sized to properly to fit flush in the existing metal frame. Fiberglass grate for Catch Basins shall be Grate Glass “M” Mesh Composite Drain by Road Masters International or approved equal and shall meet AASHTO M 306 or HS-20 loading requirements. This work will include removing the damaged/missing grate as identified by the Sewerage and Water Board Director, cleaning the existing frame, and to fit/retrofit a new grate in the existing frame, measured per each Drop Inlet Catch Basin Grate.

CF-332 Drop Inlet Catch Basin Frame

Drop Inlet Catch Basin frames shall meet AASHTO M 306 loading requirements and shall be of the proper size and installed to meet the requirements of the SWBNO drawings for the type of catch basin repaired. This work will include removing the damaged/missing grate and frame and to fit/retrofit a new frame to the structure including incidental removal and replacement of the bordering roadway and cleaning and reinstallation of the existing salvaged grate, or in conjunction with a grate pay item(s) as directed by the Sewerage and Water Board Director. Work and materials for Drop Inlet Catch Basin Frame includes the removal of the existing grate and frame as necessary and furnishing and installing a new frame including all components and any related preparation or finishing work to the basin for the new frame installation, measured per each Drop Inlet Catch

Basin Frame. If no structural repair or vertical adjustment work is required, then Drop Inlet Catch Basin Frame placement shall include any incidental brick and mortar work required for the installation of the frame. If structural repairs or vertical adjustments are required, then the Drop Inlet Catch Basin Frame pay item may be used in conjunction with other pay item(s) for repair or vertical adjustments. The Sewerage and Water Board Director will have sole authority in determining whether structural repairs or vertical adjustments are required.

CF-335 Drop Inlet Catch Basin Repair or Vertical Adjustment Reusing Existing Metal Castings
Work to repair or provide vertical adjustment of drop inlet catch basin reusing existing metal castings shall consist of: remove and salvage the existing frame or frame and grate, remove all of the existing brick and mortar structure to the lowest elevation of brick area requiring repair or adjustment, furnish and install new brick and mortar courses matching the existing size and location of the original structure, and clean and reinstall the salvaged frame or frame and grate, measured per each.

CF-336 Drop Inlet Catch Basin Repair or Vertical Adjustment Brick Work Only
Work to repair or provide brick work only for vertical adjustment of Drop Inlet Catch Basins shall consist of removing all or a portion of the existing brick and mortar structure down to the lowest brick course elevation requiring repair and furnishing and installing new brick and mortar courses matching the existing size and location of the original structure. Drop Inlet Catch Basin Repair or vertical Adjustment Brick Work Only, measured per each, shall be used in conjunction with a pay item for installing a new drop inlet frame.

F. Mountable Catch Basin items - Mountable catch basin shall conform to the requirements shown on SWBNO Standard Drawings D-3431-A Standard Single Mountable Catch Basin and D-3431-B Standard Double Mountable Catch Basin, except:

CF-351 Mountable Catch Basin Grate
Work to provide and install Mountable Catch Basin Grate shall include furnishing and installing a grate in the mountable catch basin existing frame. Mountable Catch Basins shall receive new grates made of fiberglass material sized to properly to fit flush in the existing metal frame. Fiberglass grates for Catch Basins shall be Grate Glass “M” Mesh Composite Plate by Road Masters International or approved equal and shall meet AASHTO M 306 or HS-20 loading requirements. This work will include removing the damaged/missing grate as identified by the Sewerage and Water Board Director, cleaning the existing frame, and to fit/retrofit a new grate in the existing frame, measured per each Mountable Catch Basin Grate.

CF-352 Single or Double Mountable Catch Basin Frame
Mountable Catch Basin frames shall meet AASHTO M 306 loading requirements and shall be of the proper size and installed to meet the requirements of the SWBNO drawings for the type of catch basin repaired. This work will include removing the damaged/missing grate and frame and to fit/retrofit a new frame to the structure including incidental removal and replacement of the bordering roadway and curb, transition to match the adjacent roadway and curb, and cleaning and reinstallation of the existing salvaged grate, or in conjunction with a grate pay item(s) as directed by the Sewerage and Water Board Director. On rigid pavement streets, after installation of mountable catch basin frame an isolation pad of 4,000 psi concrete shall be installed as per details shown on City of New Orleans Department of Public Works Standard Drawings and included in the unit price bid for this item. Work and materials for Single or Double Mountable Catch Basin Frame includes the removal of the existing grate and frame as necessary and furnishing and installing a new frame including all components and any related preparation or finishing work to the basin for the new frame installation, measured per each Single or Double Mountable Catch Basin Frame. If no structural repair or vertical adjustment work is required, then Mountable Catch Basin Frame placement shall include any incidental brick and mortar work required for the installation of the frame. If structural repairs or vertical adjustments are required, then the Single Mountable Catch Basin Frame or Double Mountable Catch Basin Frame pay item may be used in conjunction with other pay item(s) for repair or vertical adjustments. The Sewerage and Water Board Director will have sole authority in determining whether structural repairs or vertical adjustments are required.

CF-353 Lockable Mountable Catch Basin Grate

Work to provide and install Lockable Mountable Catch Basin Grate shall include furnishing and installing a grate in the mountable catch basin existing frame. Mountable Catch Basins shall receive new grates which shall conform to the requirements of East Jordan Iron Works, INC. V4510-1L or approved equal and shall be installed to properly fit flush in the existing metal frame. This work will include removing the damaged/missing grate as identified by the Sewerage and Water Board Director, cleaning the existing frame, and to fit/retrofit a new grate in the existing frame, measured per each Lockable Mountable Catch Basin Grate.

CF-355 Single Mountable Catch Basin Repair or Vertical Adjustment Reusing Existing Metal Castings, and

CF-356D Double Mountable Catch Basin Repair or Vertical Adjustment Reusing Existing Metal Castings

Work to repair or provide vertical adjustment of single or double mountable catch basin reusing existing metal castings shall consist of: remove and salvage the existing frame(s) or frame(s) and grate(s), remove all of the existing brick and mortar structure to the lowest elevation of brick area requiring repair or adjustment, furnish and install new brick and mortar courses matching the existing size and location of the original structure, and clean and reinstall the salvaged frame or frame and grate, measured per each. On rigid pavement streets, after adjustment of the mountable catch basin an isolation pad of 4,000 psi concrete shall be installed as per details shown on City of New Orleans Department of Public Works Standard Drawings STD9 and included in the unit price bid for this item.

CF-357 Single Mountable Catch Basin Repair or Vertical Adjustment Brick Work Only, and

CF-358 Double Mountable Catch Basin Repair or Vertical Adjustment Brick Work Only

Work to repair or provide brick work only for vertical adjustment of Single or Double Mountable Catch Basins shall consist of removing all or a portion of the existing brick and mortar structure down to the lowest brick course elevation requiring repair and furnishing and installing new brick and mortar courses matching the existing size and location of the original structure. Single or Double Mountable Catch Basin Repair or vertical Adjustment Brick Work Only, measured per each, shall be used in conjunction with a pay item for installing a new mountable catch basin frame.

G. Manhole items - Manhole items shall conform to the requirements shown on SWBNO Standard Drawings D-870 Standard Drain Brick Manhole and D-871 Drain Manhole Frame & Cover or 3143-E-1 Sewer and Water Manhole Castings to match the type utility repaired. Manholes that are approved as described here-in, shall be adjusted to match with the level of the new surface using brick and mortar. Only City of New Orleans Department of Public Works and Sewerage and Water Board manholes and structures shall be adjusted to grade under this contract. Other manholes and structures shall be adjusted to grade by the respective utility company.

CF-371 Manhole Cover

Work to provide and install Manhole Covers shall include furnishing and installing a cover on the manhole existing frame. The new manhole cover shall be sized and installed properly to fit flush in the existing metal frame and shall meet AASHTO M 306 or HS-20 loading requirements. This work will include removing the damaged/missing cover as identified by the Sewerage and Water Board Director, cleaning the existing frame, and to fit/retrofit a new cover to the existing frame, measured per each Manhole Cover.

CF-372 Manhole Frame

Manhole frames shall meet AASHTO M 306 loading requirements and shall be of the proper size and installed to meet the requirements of the SWBNO drawings for the type of manhole repaired. This work will include removing the damaged/missing cover and frame and to fit/retrofit a new frame to the structure including incidental removal and replacement of the bordering roadway and cleaning and reinstallation of the existing salvaged grate, or in conjunction with a grate pay item(s) as directed by the Sewerage and Water Board Director. Work and materials for Manhole Frame includes the removal of the existing cover and frame as necessary and furnishing and installing a new frame including all components and any related preparation or finishing work to the manhole for the new frame installation, measured per each Manhole Frame. On rigid pavement streets, after installation of the frame an isolation pad of 4,000 psi concrete shall be installed as per details shown on

City of New Orleans Department of Public Works Standard Drawings and included in the unit price bid for this item.

Manhole Frame placement shall include any brick-and-mortar work required for the adjustment of the frame to the existing or new road pavement grade, inclusive of the requirements of item CF-377 at no additional compensation. The Sewerage and Water Board Director and the S&WB will have authority in determining whether structural repairs or vertical adjustments are required.

CF-375, Manhole Repair or Vertical Adjustment up to 6" Reusing Existing Metal Castings

Work to repair or provide a vertical adjustment of manholes up to 6" reusing existing metal castings shall consist of: remove and salvage the existing frame or frame and cover, excavation, remove all of the existing brick and mortar structure requiring repair or adjustment, furnish and install new brick and mortar courses matching the existing size and location of the original structure, sealing the exposed exterior surface, backfill, and clean and reinstall the salvaged frame or frame and cover, to repair or provide a vertical increase or decrease elevation adjustment to grade up to six inches (6"), measured per each (location). On rigid pavement streets, after adjustment of the manhole an isolation pad of 4,000 psi concrete shall be installed as per details shown on City of New Orleans Department of Public Works Standard Drawings and included in the unit price bid for this item.

CF-376, Manhole Repair or Vertical Adjustment over 6" Reusing Existing Metal Castings

Work to repair or provide vertical adjustment of manholes over 6" reusing existing metal castings shall consist of: remove and salvage the existing frame or frame and cover, excavation, remove all of the existing brick and mortar structure requiring repair or adjustment, furnish and install new brick and mortar courses matching the existing size and location of the original structure, sealing the exposed exterior surface, backfill, and clean and reinstall the salvaged frame or frame and cover, to repair or provide a vertical increase or decrease elevation adjustment to grade over six inches (6"),measured per foot height, or any fraction of a foot to the nearest 0.1'. On rigid pavement streets, after adjustment of the manhole an isolation pad of 4,000 psi concrete shall be installed as per details shown on City of New Orleans Department of Public Works Standard Drawings and included in the unit price bid for this item.

CF-377, Manhole Repair or Vertical Adjustment up to 6" Brick Work Only

Work to repair or provide brick work only for vertical adjustment up to 6" for manholes shall consist of excavation, removing all or a portion of the existing brick and mortar structure requiring repair or adjustment, and furnishing and installing new brick and mortar courses matching the existing size and location of the original structure, sealing the exposed exterior surface, and backfill to repair or provide a vertical increase or decrease elevation adjustment to grade up to six inches (6"). Manhole Repair or Vertical Adjustment up to 6" Brick Work Only, measured per each (location). This item shall be used in conjunction with the appropriate pay items for installing a new manhole frame and cover. On rigid pavement streets, after adjustment of the manhole an isolation pad of 4,000 psi concrete shall be installed as per details shown on City of New Orleans Department of Public Works Standard Drawings and included in the unit price bid for this item.

CF-378, Manhole Repair or Vertical Adjustment over 6" Brick Work Only

Work to repair or provide brick work only for vertical adjustment over 6" for manholes shall consist of excavation, removing all or a portion of the existing brick and mortar structure requiring repair, and furnishing and installing new brick and mortar courses matching the existing size and location of the original structure, sealing the exposed exterior surface, and backfill. Manhole Repair or Vertical Adjustment over 6" Brick Work Only, to repair or provide a vertical increase or decrease elevation adjustment to grade over six inches (6"), shall be measured per foot height or any fraction of a foot to the nearest 0.1'. This item shall be used in conjunction with the appropriate pay items for installing a new manhole frame and cover. On rigid pavement streets, after adjustment of the manhole an isolation pad of 4,000 psi concrete shall be installed as per details shown on City of New Orleans Department of Public Works Standard Drawings and included in the unit price bid for this item.

H. Measurement and payment of Special Bid Items for Catch Basin and Manhole Repairs and Vertical Adjustment:

ITEM NO. PAY ITEM PAY UNIT

CF-301, Vertical Catch Basin Cover, per each*
CF-302, Vertical Catch Basin Frame, per each*
CF-303, Lockable Vertical Catch Basin Frame and Cover, per each*
CF-311, Vertical Catch Basin Front Grate No. 1, per each*
CF-312, Vertical Catch Basin Front Grate No. 2, per each*
CF-313, Vertical Catch Basin Front Grate No. 3, per each*
CF-315, Single Vertical Catch Basin Repair or Vertical Adjustment Reusing Existing Metal Castings, per each
CF-316D, Double Vertical Catch Basin Repair or Vertical Adjustment Reusing Existing Metal Castings, per each
CF-317, Single Vertical Catch Basin Repair or Vertical Adjustment Brick Work Only, per each
CF-318D, Double Vertical Catch Basin Repair or Vertical Adjustment Brick Work Only, per each
CF-331, Drop Inlet Catch Basin Grate, per each
CF-332, Drop Inlet Catch Basin Frame, per each
CF-335, Drop Inlet Catch Basin Repair or Vertical Adjustment Reusing Existing Metal Castings, per each
CF-336, Drop Inlet Catch Basin Repair or Vertical Adjustment Brick Work Only, per each
CF-351, Mountable Catch Basin Grate, per each*
CF-352, Single or Double Mountable Catch Basin Frame, per each
CF-353, Lockable Mountable Catch Basin Grate, per each*
CF-355, Single Mountable Catch Basin Repair or Vertical Adjustment Reusing Existing Metal Castings, per each
CF-356D, Double Mountable Catch Basin Repair or Vertical Adjustment Reusing Existing Metal Castings, per each
CF-357, Single Mountable Catch Basin Repair or Vertical Adjustment Brick Work Only, per each
CF-358D, Double Mountable Catch Basin Repair or Vertical Adjustment Brick Work Only, per each
CF-371, Manhole Cover, per each
CF-372, Manhole Frame, per each
CF-375, Manhole Repair or Vertical Adjustment up to 6” Reusing Existing Metal Castings, per each
CF-376, Manhole Repair or Vertical Adjustment over 6” Reusing Existing Metal Castings, per foot height
CF-377, Manhole Repair or Vertical Adjustment up to 6” Brick Work Only, per each
CF-378, Manhole Repair or Vertical Adjustment over 6” Brick Work Only, per foot height

*Note, double catch basins requiring two covers, frames, or grates each shall be paid for separately.

SECTION 3.17 - DRAIN LINE REPAIRS / REPLACEMENT

3.17.01 GENERAL

A. These items shall be governed by the requirements of the “General Specifications for Street Paving,” the City of New Orleans, State of Louisiana, latest edition, Section C701 Storm Drains shall be the General Conditions for this Contract and shall govern except as modified here-in. All workmanship, material and tests shall conform to Section E of the General Specifications of the S&WB and the S&WB Standard Drawing No. 7260-S or 7260-D for the type of pipe material installed. When Culverts and Storm Drains replacement or repair items have been shown on the unit price proposal the final approved quantity for installation, measurement, and payment shall be determined by and subject to written approval of the Sewerage and Water Board Director and shall not be considered a material part of the work contemplated. Only locations specifically approved in writing by the Sewerage and Water Board Director before or during construction shall be measured and paid for at the unit price bid with no adjustment to the unit price for an increase or decrease in the bid quantity for approved work.

B. The Contractor shall conduct his operations in such manner as to cause the least possible interruption to service. The Contractor shall maintain drainage and driveway access at the end of the day's pipe laying. Open trenches shall only be as long as the length of pipe to be laid that day. At the end of the day's work, the end of the last length of pipe laid shall be blanked with a cover to prevent intrusion of trash. The Contractor shall provide bracing at power poles as per instructions from the utility owner where the trench excavation is adjacent to the poles (no direct pay). The Contractor shall exercise caution when placing and compacting backfill and bedding material as not to damage the pipe or cause joints to move out of place. The Contractor shall replace, at his own expense, any pipe, fittings, and other materials in existing installation which are damaged due to his operations. All pipe installations shall be inspected by the engineer's field representative before backfilling operations commence.

C. New pipe between two existing structures and pipe used for point repairs shall match the alignment and elevations of the existing pipe to be replaced unless otherwise shown in the plans or directed by the Sewerage and Water Board Director or the S&WB.

3.17.02 REPLACEMENT

A Pipe used for the replacement of the entire length of existing drain lines between manholes or structures shall be new reinforced concrete pipe conforming to Section E of the S&WB General Specifications installed as shown on SWBNO Standard Drawing No. D-3809, D-3810, D-3933, or D-3934.

B. New Class IV Reinforced Concrete Pipe shall be required when the cover over the pipe within the roadway between 2.0-2.5 ft. The installation of reinforced concrete pipe shall be installed as shown on SWBNO Standard Drawing No. D-3809, D-3810, D-3933 or D-3934.

3.17.03 DRAIN LINE REPAIRS

A. Pipe used for Point Repairs of Existing Drain Lines may be new reinforced concrete pipe conforming to Section E of the S&WB General Specifications or solid wall polyvinyl chloride (PVC) pipe at the Contractors option unless otherwise noted.

B. New Class IV Reinforced Concrete Pipe shall be required when the cover over the pipe within the roadway is less than 2.5 ft.

C. Solid wall PVC pipe less than 18-inches in diameter, unless otherwise noted, shall be SDR 26 (PS115) Polyvinyl Chloride (PVC) pipe manufactured in accordance with ASTM D3034, latest edition, and shall be U.L. listed. Solid wall PVC pipe sizes 18-inches through 30-inches in diameter, unless otherwise noted, shall be PS115 Polyvinyl Chloride (PVC) pipe manufactured in accordance with ASTM F679, latest edition, and shall be U.L. listed. The elastomeric gaskets and retainer rings shall be installed in accordance with ASTM D3212 and F477, or per latest Sewerage & Water Board requirements. The fittings for solid wall PVC pipe shall be SDR 35 and shall have the same inside diameter as the solid wall PVC.

D. PVC pipe used for drain point repairs up to 30" diameter shall be installed as shown on SWBNO Standard Drawing No. 4697-E5-A. PVC pipe connecting to brick manholes shall be installed as shown on SWBNO Standard Drawing No. 6178_B_6.

3.17.04 PAYMENT

A. Payment for drain line replacement or repairs shall conform to the "General Specifications for Street Paving," the City of New Orleans, State of Louisiana, latest edition, Section C701 Culverts and Storm Drains, C701.08 PAYMENT when listed on the Unit Price Form proposal.

SECTION 3.18 - TIMBER CURB

A. This item shall be governed by the requirements of Standard Specification Item C707 (64) Timber Curb except as modified here-in. The unit price bid per horizontal Linear Foot of finished timber curb for this item shall include removal and proper disposal of existing timber curb and posts, grading, furnishing, and installing all required timber posts and timber curb, and final grading.

B. Measurement and payment for Timber Curb, including posts, shall be made at the contract unit price per Linear Foot (LF) of timber curb under Special Bid Item No. CF - 15 TIMBER CURB when listed on the Unit Price Form.

SECTION 3.19 - TYPE-A DEAD END INSTALLATION

A. The Dead-End Installation shall be governed by the requirements of 2006 Edition LADOTD Standard Specifications for Roads and Bridges section 729.06 except as modified here-in. The Contractor shall be responsible for providing all materials including guard rail, u-channel signposts and required signs and construction of guard rail and installation of signs as required by standard plan HS-03. Payment for Item CF-16, when listed on the Unit Price Form, shall include all material, equipment, and labor necessary to complete installation including guard rail as noted.

B. Dead end road installations shall be as specified and located as shown on the project plans. Posts shall be vertical. Guard rail shall be constructed in accordance with 2006 Edition LaDOTD Standard Specifications for Roads and Bridges section 704. Contractor shall re-grade and ensure positive drainage within the limits of the area disturbed by construction. Any fill material shall be placed at no direct pay and shall meet all requirements for fill material of this project. Fill material shall be suitable on-site excavated earth material, subject to approval of the Sewerage and Water Board Director, or borrow material compliant with the requirements Standard Specification Item C723 Granular Material with subsection 1003.07

referencing 2006 Edition LaDOTD Standard Specifications for Roads and Bridges. Fill and borrow materials shall be free from waste, rubbish, large rocks, or other unsuitable or foreign material.

SECTION 3.20 - CONCRETE BARRIER OR MOUNTABLE CURB WITH LAYING STRIP

A. This item shall be governed by the requirements of Standard Specification Section C707 except as modified here-in.

B. See details for Concrete Barrier Curb and Laying Strip and for Concrete Mountable Curb and Laying Strip on the Construction Drawings Typical Roadway and Section Details sheets for additional concrete strip required to be placed between the concrete pavement and concrete curb for construction of composite roadways.

C. There shall be no direct measurement and payment for the laying strip portion of the concrete barrier curb or concrete mountable curb. All associated costs shall be included in other major items of the proposal.

SECTION 3.21 – PROJECT SIGN

A. This item shall be governed by the requirements of Standard Specification Section C729 except as modified here-in.

B. The CONTRACTOR shall provide one project identification sign in accordance with the Contract

Documents at no direct pay.

PROJECT SIGN CONSTRUCTION

B. The sign shall be constructed of 1/2-inch exterior plywood with 4-inch by 4-inch supports and 2-inch by 4-inch cross bracing.

C. The sign face shall be 4-feet vertical by 8-feet horizontal.

C. The sign will be printed in color on 10-mil Coroplast®.

SIGN CONTENT

A. The sign shall include the following information and graphic elements:

1) The City of New Orleans Fleur De Lis Logo at Left as shown on the Sign Example.
2) New Day New Orleans at top center as shown on the Sign Example.
3) The project name or title underneath New Day New Orleans as shown on the Sign Example.
4) Underneath project name: City Agency: Department of Public Works as shown on the Sign Example.
5) Underneath City Agency: Project Engineer: (company name) as shown on the Sign Template.
6) Underneath Project Engineer: Contractor (company name) as shown on the Sign Template.
7) Underneath Contractor: Track our progress at nola.gov, as shown on the Sign Example.
8) The Mayor's name underneath City of New Orleans at right as shown on the Sign Example.
9) Underneath the Mayors name, the Councilmembers at Large as shown on the Sign Example.
10) Underneath the Councilmembers at Large, Council District members as shown on the Sign Example.

B. The S&WB PM shall provide the editable sign file (in full-size PDF format) to the Contractor at the Pre-Construction meeting. Sign template provided may require editing to reflect the Project Name and General Contractor. Contractor shall verify content of template and submit PROOF to the Sewerage and Water Board Director for approval of Copy & Placement.

SIGN LOCATION, MAINTENANCE, AND REMOVAL

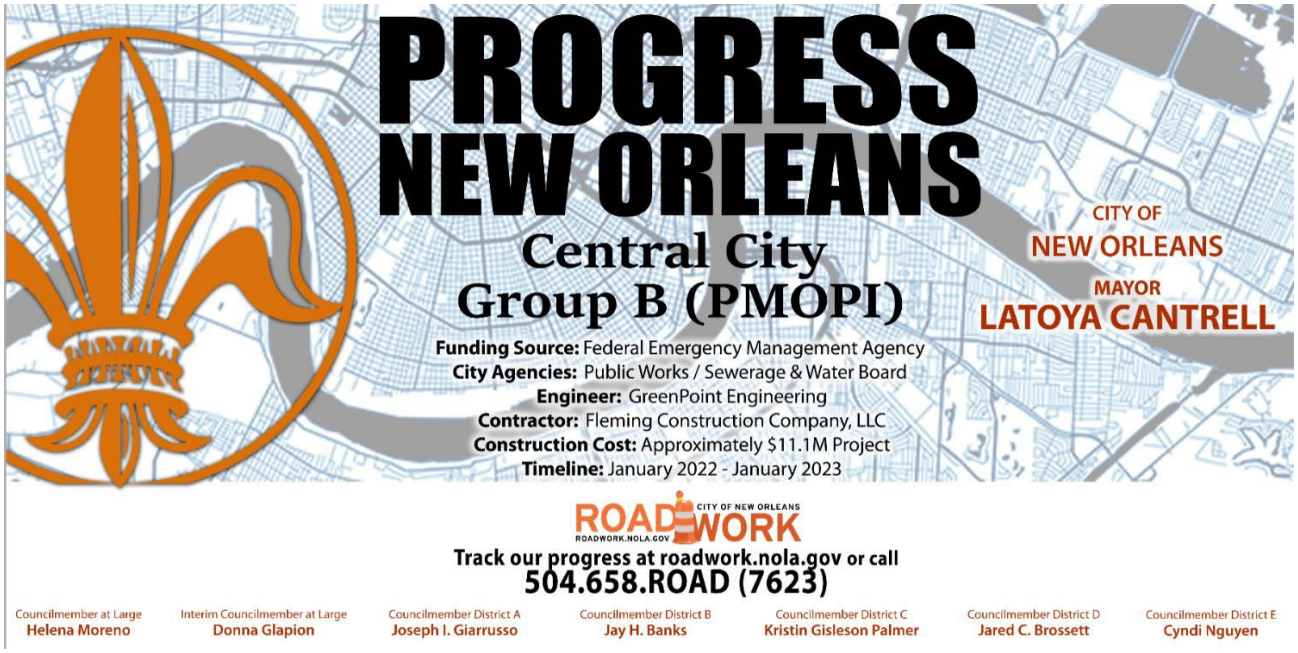
A. The project sign shall be located on the site as directed by the Sewerage and Water Board Director.

B. The sign shall be set 4 feet above the ground, measured from grade to the lower edge of the plywood sheet.

C. The CONTRACTOR shall maintain the sign in excellent condition throughout the duration of the project.

D. The CONTRACTOR shall remove the project sign and restore the area when directed by the owner upon preparation of the Notice of Completion.

SIGN EXAMPLE



SECTION 3.22 – NON-STANDARD SEWER REHABILITATION ITEMS

A. This section identifies special pay items applicable to the sewer rehabilitation work outlined in section 1.21 and 2.07 through 2.10 above.

B. Sanitary sewer rehabilitation including adjustment to sewer manhole covers shall be performed, measured, and paid for in accordance with the standard S&WB specifications section C702 or the Special Provisions (this section) paragraph 3.15 above, where the Special Provisions supersede the standard specifications.

C. Sanitary sewer rehabilitation including replacement of sanitary sewer manhole covers shall be performed, measured, and paid for in accordance with the standard S&WB specifications section C742 or the Special Provisions (this section) paragraph 3.15 above, where the Special Provisions supersede the standard specifications.

D. Sanitary sewer rehabilitation including the replacement of main line sanitary sewers, replacement of sanitary sewer lateral service connections and the lining of main line sanitary sewers, including the reinstatement of lateral service connections, shall be performed, measured, and paid for in accordance with the standard S&WB specifications section C742.

E. Sewer Line Replacement by Pipe Bursting. In cases where main line sanitary sewer lines cannot be fully replaced by conventional excavation (due to trees or obstructions), the S&WB may direct the contractor to perform sanitary sewer line replacement by means of pipe bursting. Replacement of the existing sewer house connections shall be performed in accordance with DPW standard specifications section C742.03.

1. CSS742(X1), Install Sewer Mains by Pipe Bursting (Size). Payment shall be made at the contract unit price per linear foot of the size specified for work including replacement of existing sewer main lines by pipe bursting as approved by the S&WB. Contractor shall include all labor materials and equipment to replace the main line sewer for the entire length from manhole to manhole. This work will be measured and paid for by the linear foot in the same manner as pay item C742(51) but without any provisions for depth.

2. CSS742(X2), Cut Pipe to Replace Existing Sewer House Connection from New Main to Back of Curb. Payment shall be made at the contract unit price per each for work including excavation and reinstatement of service connections disturbed from Install Sewer Mains by Pipe Bursting and the replacement of the service connection from the new main line to the back of the curb. Contractor shall include all labor materials and equipment to excavate, locate and expose each fitting, install a new fusible saddle, or tap for the appropriately sized main line sewer pipe, replace the sewer service lateral to the back of curb, including all required fittings and adjustments, and backfill and compact the excavation. With exception to the fusible saddle fitting, the work shall be performed as per DPW standard specification C742.03 and 742.05. This work will be measured and paid for by each in the same manner as pay item C742(60).

F. Sewer Line Point Repairs, Up to Twelve Feet. For the sewer rehabilitation work in this contract, sewer line point repairs shall be performed as specified in the DPW standard specification section C742.03 except that the length of the point repairs shall be twelve feet (12-ft).

1. CSS742(X3), Sewer Point Repair up to Twelve Feet (Size & Depth). Payment shall be made at the contract unit price per each of the size and depth specified for work including excavation, foundation lumber, bedding, drainage fabric, backfill, complete shoring, pumping as necessary and tie-ins. Contractor shall include all labor materials, equipment and appurtenances required to complete this work.

2. CSS742(X4), Sewer Point Repair beyond Twelve Feet (Size & Depth). Payment shall be made at the contract unit price per linear foot of the size and depth specified for work to including excavation, foundation lumber, bedding, drainage fabric, backfill, complete shoring, pumping as necessary and tie-ins. Contractor shall include all labor materials, equipment and appurtenances required to complete this work.

G. Find and Fix Lines. In some contracts the sewer rehabilitation work may include "Find and Fix" lines. These are line segments that were not locatable during inspection. The Contractor is responsible to locate the manholes for these line segments, perform sewer line cleaning and CCTV inspection. The manholes should then be secured to protect the safety of the public until the scope of rehabilitation has been determined. Manholes requiring vertical adjustment will be directed in the field and paid for under the respective bid unit item (Section 3.17.G above or Section C702). There is no direct payment for the coordination, locating or exposing of the manholes for lines identified as "Find and Fix" 2.09.E.

1. CSS742(X5), Sewer Main Line Cleaning (Size). Payment shall be made at the contract unit price per linear foot of the size specified for work including the cleaning of main line sewers in accordance with paragraph 2.09.E above in preparation for CCTV Inspection. Contractor shall include all labor materials, equipment and appurtenances required to complete this work.

2. CSS742(X6), Sewer Main Line CCTV Inspection (Size). Payment shall be made at the contract unit price per linear foot of the size specified for work including the CCTV inspection of main line sewers in accordance with paragraph 2.09.E above. Contractor shall include all labor materials, equipment and appurtenances required to complete this work.

H. Sewer Service Lateral CIPP Lining. In some cases, sanitary sewer lateral house connections will require replacement but not be accessible due to oak trees, construction, or other obstructions. In these cases, with authorization from the S&WB, the Contractor will perform rehabilitation on these house connections by means of lateral CIPP lining from the sanitary sewer main line. Work shall be performed in accordance with paragraph 2.09.D above.

1. CSS742(X7), Sewer Service Lateral CIPP Lining. Payment shall be made at the contract unit price per each lateral service house connection including cleaning, CCTV inspection prior to the lining, the CIPP lining and the CCTV inspection upon completion of the lining in accordance with paragraph 2.09.D above. Contractor shall include all labor materials, equipment and appurtenances required to complete this work.

I. Sewer Manhole Lining Rehabilitation. The sewer rehabilitation included in this contract will include the rehabilitation of manholes via a cementitious grout liner for either a partial depth or full depth. This work shall be performed in accordance with paragraph 2.09.F above.

1. CSS742(X8), Manhole Rehabilitation, Cementitious Liner, Partial Depth (2-feet). Payment shall be made at the contract unit price per each manhole and include the cleaning and cementitious liner application in the top 2 feet of the manhole in accordance with paragraph 2.09.F above. Contractor shall include all labor materials, equipment and appurtenances required to complete this work.

2. CSS742(X9), Manhole Rehabilitation, Cementitious Liner, Full Depth. Payment shall be made at the contract unit price per vertical foot height of interior manhole walls from the top of bench to the underside of the frame and include the cleaning and cementitious liner application for the full height of the manhole in accordance with paragraph 2.09.F above. Contractor shall include all labor materials, equipment and appurtenances required to complete this work.

3. CSS742(X13), Sewer Service Lateral CCTV Inspection. Payment shall be made at the contract unit price per each lateral service house connection including CCTV inspection prior to the lining and CCTV inspection upon completion of the lining in accordance with paragraph 2.10 above. Contractor shall include all labor materials equipment and appurtenances required to complete this work.

J. Measurement and payment of Special Bid Items for Sewer Rehabilitation include:

ITEM NO.	PAY ITEM	PAY UNIT
CSS742(X1)	Install Sewer Mains by Pipe Bursting (Size)	Linear Foot
CSS742(X2)	Fuse Service Tee and Drill Pipe to Replace Existing Sewer House Connection from New Main to Back of Curb	Each
CSS742(X3)	Sewer Point Repair up to Twelve Feet (Size & Depth)	Each
CSS742(X4)	Sewer Point Repair beyond Twelve Feet (Size & Depth)	Linear Foot
CSS742(X5)	Sewer Main Line Cleaning (Size)	Linear Foot
CSS742(X6)	Sewer Main Line CCTV Inspection (Size)	Linear Foot
CSS742(X7)	Sewer Service Lateral Lining (6" CIPP)	Each
CSS742(X8)	Manhole Rehabilitation, Cementitious Liner, Partial Depth (2-feet)	Each
CSS742(X9)	Manhole Rehabilitation, Cementitious Liner, Full Depth	Foot Height
CSS742(X10)	Removal of Cast Iron Flush Valve Apparatus from Sewer Manhole	Each
CSS742(X11)	Removal of water service line from sewer manhole	Each
CSS742(X12)	Locate and disconnect flush valve water service line from water main	Each
CSS742(X13)	Sewer Service Lateral CCTV Inspection	Each
CSS742(X14)	Well Point System	BLFT

K. Measurement and payment of for flush valve removal items CSS742(X10), CSS742(X11) and CSS742(X12) are specified in Section 2.10 above each item will be measured as a quantity of no more than one each per manhole containing a flush valve apparatus and/or water service connection.

SECTION 3.23 – NON-STANDARD WATER POINT REPAIR ITEMS

A. This section identifies special pay items applicable to the water point repairs work outlined in sections 1.22 and 2.12.

B. Payment for furnishing and installing water point repairs shall be made at the contract unit price including main line point repair installed as a complete system, including tie-ins, excavation, removal of existing pipe, pumping as necessary to prevent contaminating the existing system, bedding, complete shoring, backfilling material, hauling and disposal of excavation material, and any other related or incidental items required to complete this item of work for which separate payment is not provided for under other items in the Uniform Bid Form.

C. Payment for furnishing and installing 1-inch through 2-inch Polyethylene Pipe for water house connections (LSL replacement) shall be made at the contract unit price per each, including excavation, backfilling, service saddles, corporation cock and removal of existing pipe and any other related or incidental items required to complete this item of work for which separate payment is not provided for under other

items in the Uniform Bid Form. There shall be no direct payment for tie-ins to the main or meter.

D. Payment for furnishing and installing 2-inch Polyethylene Pipe watermain shall be made at the contract unit price per linear foot, including main line fittings (bends, tees, etc.), tie-ins, excavation, removal of existing pipe (if any), pumping as necessary to prevent contaminating the existing system, bedding, complete shoring, backfilling material, hauling and disposal of excavation material, and any other related or incidental items required to complete this item of work for which separate payment is not provided for under other items in the Uniform Bid Form. There shall be no direct payment for 2" valves as required per the plans.

E. The contractor may request reimbursement of monthly water hydrant meter fees paid to the Board that were used for SWBNO Testing and Flushing of new water mains. The Contractor shall record usage type and read meter on a daily basis. Contractor, Resident Inspector and Board Construction Manager will sign and certify each month's usage.

F. All other items of work necessary to the performance of the project, for which no specific unit price and/or lump sum pay item is established, shall be considered and designated part of the construction, and the existing pay items shall be full compensation. Items including but not limited to, trench safety, traffic control, contract closeout, shop drawings, submittals, and office support shall be merged into the prices bid.

G. There will be no direct payment for temporary water mains, temporary water service connections, and any related work including temporary tie-ins, removal of temporary work after installation of permanent work, and other incidentals. The cost of all work shall be included in the water point repair unit bid prices.

H. Measurement and payment of Special Bid Items for Water Point Repairs include:

ITEM NO.	PAY ITEM	PAY UNIT
CSW741-01	Repair Water Main with Full Circle Clamp (Pipe Size 4" – 8")	Each
CSW741-02	Repair Water Main with Full Circle Clamp (Pipe Size 12" – 16")	Each
CSW741-03	Repair Water Main with Bell Joint Clamp (Pipe Size 4" – 12")	Each
CSW741-04	Repair Water Main with Bell Joint Clamp (Pipe Size 16" – 24")	Each
CSW741-05	Repair Water Main by Remove and Replace – Minimum Length 4 FT, Maximum Length 10 FT (Pipe Size 4" – 12")	Each
CSW741-06	Repair Water Main by Remove and Replace – Minimum Length 4 FT, Maximum Length 10 FT (Pipe Size 16" – 24")	Each
CSW741-07	Repair Water Main by Remove and Replace – Beyond 10 FT, Maximum 18 FT (Pipe Size 4" – 12")	LF
CSW741-08	Repair Water Main by Remove and Replace – Beyond 10 FT, Maximum 18 FT (Pipe Size 16" – 24")	LF
CSW741-09	Replace 5/8" to 1" Lead Service Line Water House Connection with 1" Polyethylene Water House Connection (From Main to Meter)	LF
CSW741-10	Replace 1.5" Lead Service Line Water House Connection (From Main to Meter)	LF
CSW741-11	Replace 2" Lead Service Line Water House Connection (From Main to Meter)	
CSW741-12	2" New Water Main with Main Line Fittings	LF

SECTION 3.24 – <u>WELL POINT SYSTEM</u> (NOT USED)

SECTION 3.25 – PRE AND POST REHABILITATION CCTV INSPECTION AND CLEANING DRAIN STRUCTURE(S)

SECTION 3.25.A – VIDEO RECORDING

A. The Contractor shall furnish all labor, equipment, supplies, and supervision and shall perform all work required in accordance with these specifications. CCTV inspection shall be performed in the areas selected and approved by the Owner.

B. It shall be the responsibility of the Contractor to schedule and perform investigations to prevent system overflows. If flows are such that they interfere with the Contractor's ability to collect accurate data, then the Contractor shall be responsible to schedule his work during low flow periods or to request written permission to perform by-pass pumping around the site. The Contractor may provide by-pass pumping only with specific approval from the City.

C. Inspection of storm drain infrastructure by means of CCTV equipment shall be performed to determine the location and extent of any obstructions and defects such as offset joints, protruding tees, broken pipe, and other pipe defects. Logs shall note the existence of any significant defects. Cleaning by the Contractor shall be performed prior to each CCTV inspection on each pipeline to be inspected.

D. CCTV inspections shall be performed on one drainage structure-to-drainage structure pipe segment at a time. The inspection shall be performed by moving the CCTV camera through the line along the axis of the pipe at a rate not to exceed 30 feet per minute. Any means of propelling the camera through the pipe that would exceed this rate of speed or produce non-uniform or jerky movements shall not be acceptable. The camera shall be stopped for a minimum of 5 seconds at each identifiable defect to ensure proper documentation of the line's condition. In addition, the camera shall be stopped at each service connection, and the camera shall pan the service connection to video inside the service line. CCTV inspection is performed from the upstream manhole/catch basin to the downstream manhole/catch basin when the conditions allow. If conditions do not allow an upstream to downstream inspection, the inspection will be performed in reverse (from the downstream to the upstream drainage structure).

E. A header screen showing tape number, segment number, and manhole number shall be taped for 10 seconds at the beginning of each televised line segment. All header information shall be recorded on the log forms.

F. At the Contractor's discretion the camera shall be stopped or backed up to view and analyze conditions that appear to be unusual or uncommon for a sound storm drain line. At all times, the operating technician shall be able to move the camera through the line in either direction without loss of quality in the video presentation on the monitor. The picture shall be free of electrical interference and provide a clear, stable image of the specified resolutions at all times. The camera lens shall be cleaned, as required, to provide a clear image within the storm drain lines.

G. In the event that equipment becomes lodged in the line segment, the Contractor shall notify the City immediately. The City will remove the camera at no cost to the Contractor. Timely excavation is necessary to maintain project schedules and to eliminate the possibility of overflows resulting from the lodged equipment creating a blockage.

H. Continuous video recordings of the inspection view as it appears on the television monitor shall be taken. It is intended that a video recording will be made of the complete television inspection of all storm sewer lines as part of this project. The video recording shall be one on which both sound and video information can be reproduced with a video image equal to or better than the quality of the original picture on the television monitor.

A pan tilt zoom (PTZ) camera shall be used to conduct the inspection. The camera shall be waterproof and corrosion resistant and able to operate in temperatures between 0-50 degrees C (32- 122F). The sensor shall be ¼" color CCD with minimum 1.5 lux sensitivity for resolution of minimum 460 NTSC TV lines. A full 360-degree axial pan is required with a variable pan speed not to exceed 25 degrees/second. The camera shall have a minimum 40:1 zoom lens capable of 10X optical and 4X digital, with auto or remote manual focuses. The adjustment of focus and iris shall allow optimum picture quality to be achieved and shall be remotely operated. The illumination shall be such as to allow an even distribution of light around the pipeline perimeter without the loss of contrast or flare out of picture shadowing.

The replay of the recorded video information, when reviewed on a monitor-receiver, shall be free of electrical interference and shall produce a clear, stable image with a horizontal resolution equal to that of the television monitor in the television inspection studio. The audio portion of the completed signal shall be sufficiently free of electrical interference and background noise to produce an oral report that is clear and complete, and easily discernible. The audio portion of the tape report shall include the location or identification of the section, the manhole-to-manhole direction of travel, and the distance traveled on the specific run encountered. The audio portion of the tape shall also identify all defects. The video equipment shall be continuously connected to the television inspection or monitoring equipment. The video and monitoring equipment shall have the built-in capability to allow the technician to instantly review both the audio and video quality of the video productions at all times during the television survey. Playback speed shall be continuously adjustable from one-third normal speed for slow motion viewing to normal playback speed.

A suitable distance-reading device which uses cable length to accurately measure the location of the camera in the pipe shall be provided. This device shall be accurate to +/- 1% of the length of the inspection.

I. Laser Equipment Inspection: If determined necessary by S&WB, 2-D Laser scanning shall be conducted continuously and simultaneously with other inspection technology for the entire length of the selected pipe segment. Laser equipment shall be moved through the pipe on a transport vehicle capable of supporting the laser inspection equipment above the water level. Tracked platforms must be capable of forward/stop/reverse mobility for detailed high-resolution scans to be collected at a specified interval.

The laser equipment shall be designed and manufactured to produce a high resolution of measurement resulting in 0.25% of internal diameter, with a laser sensor accuracy of 0.5% or greater (i.e., an accuracy of 0.5 inches at 100 inches in pipelines up to 30 inches in diameter and a repeatability of 0.10% or greater for pipelines from 15 inches to 30 inches in diameter). The laser equipment shall be properly calibrated per the manufacturer's documentation and the calibration shall be recorded for verification.

The laser equipment shall be capable of measuring the distances to objects and surfaces in drain lines and shall be capable of imaging drain lines less than 36" in diameter. The laser

shall support 75 Hz scan rates or higher and be Class 1: eye-safe for operator safety. The laser sensor resolution shall be at least 1mm.

The laser equipment shall be operated in a manner to minimize measurement error sources attributable to the effects of the following:

1. Horizontal displacement from off-axis meander or pipeline alignment curvature that distorts cross-section measurement;
2. Vertical displacement due to sediment, debris, offset joints or other physical environment conditions that distorts cross-section measurement; and
3. Vertical displacement due to flow condition or other hydraulic environment factors that distorts cross-section measurement.

An overview of data collected by laser equipment is to be presented in a color-coded format as 2-D cross sections conveying pipe condition above the laser's centerline over the length of the inspection segment. The report shall provide a 2-D representation of an integrated overview of pipe wall thickness loss or increase data revealed from laser scanning and shall be presented in a color-coded format as an unrolled illustration of the pipe condition above the waterline over the length of the inspection segment. The pipe interior is to be flattened into a graphic whose y-axis represents pipe diameter, whose x-axis represents pipe length and whose color represents deviation from expected values indicating a gradation and severity of corrosion or buildup. Measured pipe internal diameter (ID) that coincides with expected values must be coded in a color that positively identifies and differentiates the measurement of the expected values from pipe wall loss or increase. Measured pipe ID that coincides with expected values must be coded green. Outward deformations, as measured by increasing pipe ID, must be colored on a yellow/red color scale, advanced deformation. Material gain (buildup) or inward deformation, as measured by decreasing pipe ID, must be on a blue color scale.

If S&WB determines that Laser Inspection is necessary, it will negotiate a unit price for that inspection upon the first use of this type of inspection. The unit price developed will be entered into the contract and used for the duration of the contract at the fixed established unit price.

J. Video recordings shall be enclosed in plastic containers which shall clearly indicate the date the tape was recorded, the designated section(s) of storm sewer lines contained on the tape, and the referenced storm sewer inspection report covering the sections of the storm sewer lines so included. Two permanent labels are required. One label shall be placed on the spine and the other on the face of the video. Recording of a single segment shall not span more than one video. The recording of a segment between manholes shall be continuous and complete. The videos become the property of the City, once submitted. The Contractor shall maintain a master copy of all videos and associated Inspection Reports for one year after Contract completion. Additional copies of the videos, if requested, shall be made by the Contractor on professional duplication equipment. Two permanent labels are required. One label shall be placed on the spine and the other on the face of the video. Permanently label each tape with the following information:

Contract No. _____ Disc No. _____

Face of DVD Case

Start Manhole	Finish Manhole

Spine of DVD Case

K. +CCTV inspection footage of service laterals shall be included on separate videos. The Contractor may include as many service lateral inspections as possible on each video provided that all service lines from the same mainline are on the same video. The DVD spine label shall be identical to those for mainline inspection. The face label of the video shall include the following information: mainline information (upstream manhole to downstream manhole), service line location, survey start point, and survey finishing point.

SECTION 3.25.B – DRAIN LINE CLEANING

A. Standard line cleaning shall be performed to remove foreign material and restore pipe capacity to 95%. Standard cleaning shall be defined as three (3) complete passes of the storm drain line with the cleaning equipment. The term "complete passes" shall mean cleaning from the upstream manhole all the way to the downstream manhole. Cleaning shall be performed with combination cleaning / vacuum trucks.

B. Heavy line cleaning shall be performed, only if required and approved by the City, to remove foreign material and restore pipe capacity to 95%. Heavy line cleaning shall be defined as four (4) or more complete passes of the storm drain line with the cleaning equipment. The term "complete passes" shall mean cleaning from the upstream manhole all the way to the downstream manhole. Cleaning shall be performed with combination cleaning / vacuum trucks.

C. Conditions such as broken pipe and major blockages may prevent cleaning from being accomplished, especially where additional damage would result if cleaning were attempted or continued. Should such conditions be encountered and the contractor is unable to clean the entire line from all

reasonable points of access and directions, the Contractor shall not be required to clean those specific pipe sections unless the Owner removes the apparent obstruction.

D. During cleaning operations, satisfactory precautions shall be taken by the Contractor in the use of cleaning equipment. Precautions shall be taken to ensure that damage to or flooding of public or private property does not occur during the cleaning procedure.

E. Selection of the equipment shall be the sole discretion of the Contractor and based on the conditions of lines at the time the work commences. The equipment shall be capable of removing dirt, grease, rocks, sand, and other materials and obstructions from the storm drain lines and manholes. There shall be no change in cost for use of additional or different equipment utilized at the discretion of the contractor to perform work. Contractor shall notify project engineer and Owner of equipment to be used prior to use or initiation of any work.

F. All sludge, dirt, sand, rocks, grease, and other solid or semi-solid materials resulting from the cleaning operation shall be removed at the downstream manhole/catch basin of the section being cleaned. Passing materials from pipe segment to pipe segment, which could cause line stoppages, accumulations of debris in wet wells, interference with in-line permanent flow monitoring equipment or damage to pumping equipment will not be permitted.

G. If the CCTV inspection shows the cleaning to be unsatisfactory, the Contractor shall re-clean and re-inspect the pipe segment at his sole expense until the cleaning is shown to be satisfactory.

H. All sludge, dirt, sand, rocks, grease, and other solid or semisolid materials removed from the storm drain lines during the cleaning operation shall be drained of water and transported to an approved licensed landfill facility. All costs associated with debris disposal will be the responsibility of the Contractor or as otherwise specified herein.

SECTION 3.25.C – <u>LATERAL DRAIN LINE CLEANING</u>

A. Contractor will use a lateral launch inspection system, consisting of a robotic tractor and a lateral launch CCTV camera, to remotely deploy a pan & rotate camera into lateral pipes connected to a mainline storm drainpipe. Should Contractor encounter multiple laterals converging in a single tap, Contractor shall utilize a steerable lateral camera with guide pin to inspect the adjoining laterals separately. Each pipe shall be identified as an independent inspection for data submittal and invoicing purposes.

B. A mainline television camera is used to position the lateral camera launcher. The lateral camera is used to inspect each lateral from the mainline.

C. The television inspection of the lateral will be attempted from inside the mainline up into the lateral or attempted from the service manhole towards the mainline. Lateral lines inspected from the service manhole towards the mainline will be attempted by using a mini push camera if necessary.

D. In the event a lateral pipe segment cannot be fully inspected after reasonable attempts to remove obstructions or traverse because of poor structural condition is not successful, Contractor shall provide all the information to the City and the City will determine alternate possible solutions or whether enough information has been obtained to safely assess the proximity of uninspected portions of pipe.

E. Under no circumstances shall a lateral line be cleaned or inspected on private property or beyond public right-of-way of non-local City street (i.e., federal, federal-aid or state routes) limits. Any cleaning or inspection services performed outside the City approved scope of work, private property,

or otherwise specified herein will not reimbursable and all associated costs contractor responsibility. The connections points for all laterals at the mainline or connecting structure shall be inspected at no direct cost. The limits of lateral lines cleaning and inspection operations for lateral lines connecting a drainage structure to the mainline may end at the drainage structure; however, where feasible the contactor shall point and video record for a sufficient time to obtain a clear view of the lateral system on the private property side (side opposite the mainline) at no additional cost. For lateral lines not connected to a drainage structure the lateral line shall be cleaned and inspected from the connection point to the mainline to the extent feasible on the private property side (side opposite the mainline). If the contractor is unable to reasonably clean or inspection a lateral line beyond the connection to the mainline the contractor shall point and video record for a sufficient time to obtain a clear view of the lateral system on the private property side (side opposite the mainline) at no additional cost. Field reports and video logs shall clearly document distinguish whether the line cleaned or inspected is a mainline or lateral.

SECTION 3.25.D – <u>DRAINAGE STRUCTURE CLEANING</u>

A. The Contractor shall furnish all labor, equipment, supplies, and supervision and shall perform all work required in accordance with these specifications. Drainage structure cleaning, including catch basins, drop inlets, conflict boxes, manholes, etc. shall be performed in the areas selected and approved by the City. Only manholes / catch basins with large debris such as rocks, bricks, trash, tree limbs, etc. will require cleaning. Also, cleaning will be required if small deposits or water has accumulated at greater than or equal to 1/3 of the depth of the manhole / catch basin (measured from rim to invert of the lowest pipe).

B. Selection of the equipment shall be the sole discretion of the Contractor and based on the conditions of drainage structures at the time the work commences. The equipment shall be capable of removing dirt, grease, rocks, sand, and other materials and obstructions from the drainage structures.

C. All sludge, dirt, sand, rocks, grease, and other solid or semisolid materials removed from the storm drainage structures during the cleaning operation shall be drained of water and transported to an approved licensed landfill facility. All costs associated with debris disposal will be the responsibility of the Contractor or as otherwise specified herein.

SECTION 3.25.E – <u>TELEVISION INSPECTION REPORTS</u>

A. Television Inspection Report: The Contractor shall complete a television inspection report covering the television inspection work and the information acquired. The television inspection report shall be completed by the Contractor.

B. A television inspection code sheet shall be used consistently throughout the contract. All electronic data files shall be submitted on CD-ROM, or flash drive, as directed and approved by the City.

C. Video Data Display: At the start of each storm sewer length being surveyed, the length of pipeline from zero up to the cable calibration point shall be recorded and reported in order to obtain a full record of the storm sewer length. The length reading entered on to the data display at the cable calibration point must allow for the distance from the start of the survey is zero. In the case of surveying through a manhole where a new header sheet is required, the distance shall be set at zero with the camera focused on the outgoing pipe entrance.

D. Television Inspection Record: AT the start of each manhole length a data generator shall electronically generate and clearly display on the viewing monitor and video recording a record of data in alphanumeric form containing the following minimum information:

a. Automatic update of the camera's position, in feet and tenths, in the storm sewer line from adjusted zero;
b. Size and Length of Line, Type of material line composed of, etc.;
c. Upstream manhole and downstream drainage structure reference numbers;
d. Date of inspection;
e. Road name/location;
f. Direction of inspection (upstream or downstream);
g. Starting time of the inspection;
h. Pipe ID references;

Once the survey of the pipeline is under way, specific data should be continuously displayed on the viewing monitor and video recording. The size and position of the data display shall be such as not to interfere with the main subject of the picture yet shall be easily readable when the recording is replayed. At minimum, the following data should be displayed:

Automatic update of the camera's position, in feet and tenths, in the storm sewer line from adjusted zero; \

Upstream manhole and downstream manhole reference numbers

Each storm sewer length, i.e., the length of the storm sewer between two consecutive drainage structures, shall be entered on a separate coding sheet. Thus, where a Contractor elects to "pull through" a manhole during a CCTV Survey, he shall start a new coding sheet at the manhole "pulled through" and shall re-set the distance to zero on the coding sheet.

All blind drainage structures and buried drainage structures shall be noted in the inspection report and logged on a separate log with the GPS location and type of structure. The log shall be provided to the City with each pay request.

The videos and corresponding reports shall be submitted to the City on a weekly basis for all work accomplished the previous week.

E. Laser Inspection Reporting: Laser scan final reporting shall include the pipe's true diameter, ovality (per ASTM FI216), x/y diameter, and maximum diameter. Segments or areas revealing deflection in horizontal alignment greater than 2% must be identified in the report. Where the presence of flow in the pipeline requires interpolation and estimation calculations to fill data gaps and complete the full circumference view, the method and calculations used to support these assumptions must be presented. Other data sources such as as-built data, if used for these calculations, must be identified in the report. To support identified radial localization of defects, individual ID measurements as computed from the axis of the inspected pipe must be presented in an illustrated ovality and deflection graphs covering the length of the inspection segment. Laser scan results identifying ovality and deflection must be presented in 2-D cross-sections. The color coding is to be identical to the aforementioned requirements. Where the presence of fluids in the pipe necessitates interpolation and estimation, calculations to fill gaps and complete the full circumference view will be performed. The method and calculations used to support these assumptions must be

presented. Any high-resolution scan obtained during the inspection are to be provided along with the report in a 3-D point cloud (VRML) format including software for viewing on a PC.

Precision Ovality Scans including but not limited to Sensor Error, Axis Alignment Error, and Processing Errors must be accurate to +/- 1%.

The report shall provide a 2-D representation of an integrated overview identifying concentricity, and deviation from concentricity resulting in ovality and eccentricity, presented in a color-coded format as an unrolled illustration of the pipe condition to include the entire pipe circumference (above the flow line) as well as a cross-section view. The pipe interior is to be flattened into a graphic whose y- axis represents pipe diameter, whose x-axis represents pipe length and whose color represents deviation from expected values indicating a gradation and severity of the deviation from concentricity. Measured pipe internal diameter (ID) that coincides with expected values must be coded in a color that positively identifies and differentiates the measurement of the expected values from actual concentricity measurements

The report shall provide a 3-D representation with variations in pipe wall shown in sharp relief for easy visual analysis for each of the aforementioned 2-D representations.

SECTION 3.25.F – SUBMITTALS

A. DATA: Data in CD-ROM, or flash drive, format shall be submitted to the City within ten (10) business days from time of inspection. Three (3) hard copies of the inspection report listed above shall be submitted.

B. CCTV Inspections: The Contractor shall provide videos with audio comments in DVD, or flash drive, format recorded at Standard Play (SP).
    a. Complete storm sewer line segments can be included on the same video (i.e., CCTV inspections for storm sewer line segments shall not be divided among videos).
    b. The video format shall be an MPEG-1 compressed video, and resolution video format shall be QSIF (Quarter-size Standard Image Format) of 176 x 112 pixels for NTSC video format.
    c. Two labels are required on each DVD. One label shall be placed on the spine of the DVD Cover and the other on the face of the DVD.

C. Other Required Submittals: The Contractor shall provide the following backup information to support and document each location that has been cleaned/inspected:
    a. Brief narrative describing scope of work for location and any findings after inspection.
    b. Maps/GIS Data of each location showing work completed
    c. Field logs and misc. information generated during field investigation. A log shall be made by the Contractor when each drainage structure-to- drainage structure pipe segment is televised. The log shall include at a minimum:
        a. Street name with municipal address hundred block number, and any intersecting street
        b. Location of each point of leakage
        c. Location of each service connection or other pipe entering the televised line
        d. Location and degree of offsets
        e. Location of any damaged sections, and nature of damage
        f. Location of buried structures or blind junctions

g. Location and amount of any deflection in alignment or grade of pipe; also, the total length of pipe sag
h. Pipe ID reference number, materials, diameter, and distance between pipe joints
i. Date, city, drainage structure-to- drainage structure segment, reference drainage structure ID number
j. Name of operator, and inspector
k. Direction of flow
l. If a reverse-set up
m. Video Filename

d. Confined space entry form (when required) per industry standards and any applicable federal or state requirements.
e. The Contractor shall prepare and submit a list of any encountered defects, obstructions, and blockage locations on a weekly basis. Any locations with defects which appear to require immediate corrective action based on their size and/or type on a daily and weekly basis.

D. Progress Reports: The Contractor will be required to provide a weekly progress report to the City showing, at a minimum, the status of all locations previously worked on in the prior week. The report shall include the location/address, size of drain line being inspected, date the notice to proceed was issued for the location, the status (complete, ongoing, etc.), and the anticipated completion date. A final overall project report shall also be provided upon completion of all work. A hard copy and CD with PDF copy of all reports within the billing period shall be provided with each invoice submitted and the final report submitted with or prior to the final retainage invoice.

SECTION 3.25.G – MEASUREMENT AND PAYMENT

A. CCTV Inspection of Main Lines (and/or Laterals). Drain line laterals shall be considered any drain line or pipe connecting stubbed or otherwise tied into the main drain line. Laterals may originate from drainage structures or other connecting features to facilitate the flow of stormwater into the primary drainage system. Under no circumstances shall a lateral line be cleaned or inspected on private property or beyond public right-of-way of non-local City street (i.e., federal, federal-aid or state routes) limits. Any cleaning or inspection services performed outside the City approved scope of work, private property, or otherwise specified herein will not reimbursable and all associated costs contractor responsibility. The connections points for all laterals at the mainline or connecting structure shall be inspected at no direct cost. The limits of lateral lines cleaning and inspection operations for lateral lines connecting a drainage structure to the mainline may end at the drainage structure; however, where feasible the contactor shall point and video record for a sufficient time to obtain a clear view of the lateral system on the private property side (side opposite the mainline) at no additional cost. For lateral lines not connected to a drainage structure the lateral line shall be cleaned and inspected from the connection point to the mainline to the extent feasible on the private property side (side opposite the mainline). If the contractor is unable to reasonably clean or inspection a lateral line beyond the connection to the mainline the contractor shall point and video record for a sufficient time to obtain a clear view of the lateral system on the private property side (side opposite the mainline) at no additional cost. Field reports and

video logs shall clearly document distinguish whether the line cleaned or inspected is a mainline or lateral.

a. *Measurement:* CCTV Inspection of existing storm sewer pipe including drainage structures will be measured in place on a linear foot basis to the nearest foot. Measurement will be along the horizontal centerline of the pipe with no deductions for drainage structures and will be from center of drainage structures to center of drainage structures for the actual storm sewer line televised. CCTV of mainlines will include a view of the upstream and downstream drainage structures where possible to indicate the relative condition of said drainage structures. Measurement will be made for a various range of pipeline diameters listed under this item on the Proposal Form.
    i. The pipe segment length, with respect to the referenced drainage structure, shall be determined with a meter device, accurate to within ±2%. Markings on the cable, instruments requiring observation inside a drainage structure, or correction of each reading for the depth of the referenced drainage structure shall not be allowed. Accuracy of the measurement meters shall be checked daily by use of a walking meter, roll-a-tape, or other suitable device.

b. *Payment:* Payment for CCTV inspection of the existing storm sewer pipe and drainage structures will be made for the respective quantities as determined above at the unit price bid in the Proposal Form. This price and payment shall be full compensation for all material, labor, and equipment, required for television set-up, including, storm sewer flow, camera retrieval, hard copy report, electronic report, video recording, measurement, etc.

B. Cleaning of Main Lines (and/or Catch Basin Laterals)

a. *Measurement:* Cleaning of existing storm sewer pipe including drainage structures will be measured in place on a linear foot basis to the nearest foot. Measurement will be along the horizontal centerline of the pipe with no deductions for drainage structures and will be from center of drainage structures to center of drainage structures for the actual storm sewer line televised. Cleaning of mainlines will include a view of the upstream and downstream drainage structures where possible to indicate the relative condition of said drainage structures. Measurement will be made for a various range of pipeline diameters listed under this item on the Proposal Form.
    i. If cleaning of an entire section cannot be successfully performed from one manhole/catch basin, the equipment shall be set up at the other manhole/catch basin and cleaning again attempted. If successful cleaning still cannot be performed or the equipment fails to traverse the entire manhole-to-manhole or catch basin to catch basin pipe segment, it will be assumed that a major blockage exists, and the cleaning operation will be abandoned. The cleaning operator will note these occurrences in his daily cleaning log. The Contractor will be compensated for cleaning for only the length associated with the portions thereof pipe successfully cleaned should this occur.

b. *Payment:* Payment for cleaning of the existing storm sewer pipe and drainage structures will be made for the respective quantities as determined above at the unit price bid in the Proposal Form. This price and payment shall be full compensation for all material, labor, and equipment, required for television set-up, including, storm

sewer flow, camera retrieval, hard copy report, electronic report, video recording, measurement, etc.

C. Heavy Cleaning of Main Lines (and/or Catch Basin Laterals)

a. *Measurement:* Heavy cleaning of existing storm sewer pipe including drainage structures will be measured in place on a linear foot basis to the nearest foot. Heavy cleaning is defined as making four or more complete passes in the specific line segment being cleaned. Measurement will be along the horizontal centerline of the pipe with no deductions for drainage structures and will be from center of manhole to center of drainage structures for the actual storm sewer line televised. Heavy cleaning of mainlines will include a view of the upstream and downstream drainage structures where possible to indicate the relative condition of said drainage structures. Measurement will be made for a various range of pipeline diameters listed under this item on the Proposal Form.

b. *Payment:* Payment for heavy cleaning of the existing storm sewer pipe and drainage structures will be made for the respective quantities as determined above at the unit price bid in the Proposal Form. This price and payment shall be full compensation for all material, labor, and equipment, required for television set-up, including, storm sewer flow, camera retrieval, hard copy report, electronic report, video recording, measurement, etc.

SECTION 3.25.H – OBSTRUCTIONS AND BLOCKAGES

A. The Contractor will notify the City of any obstructions and blockages preventing the Contractor from completing his/her work. The City shall be notified after an attempt for standard cleaning has taken place. The Contractor shall submit a partial inspection report as outlined above in Sections 3.25.E & 3.25.F. The City will review the submittal and provide further guidance to the Contractor on a case-by-case basis. City may authorize "Heavy Cleaning" as outlined herein or approve additional means, as requested by the contractor. Any additional costs associated with additional services to address obstructions and blockages shall be approved by the City prior to starting work, or incurring any mobilization or material, equipment, and labor costs. Contractor shall submit a request in writing for City approval complete with all necessary supporting backup and detailed estimate inclusive of all material, equipment, labor, and other incidental costs, in addition to any applicable taxes, fees, markup, profit, overhead, insurance, and bond, etc. costs in accordance with City requirements.

B. If a blockage or obstruction is encountered and conditions allow, the Contractor shall attempt to conduct the inspection and cleaning from the opposite end of the pipe and continue back towards the blockage or obstruction in order to ensure maximum data collection of the pipe segment. Any reverse set-up mobilization costs shall be at no direct pay.

a. If a reverse set-up is required because the cleaning or CCTV in the downstream direction could not be completed, a new coding sheet shall be prepared for the start of the reverse set-up cleaning or CCTV. In no instance shall the pipe ID be altered so that the downstream drainage structure reference number is listed first and upstream drainage structure reference number listed. All reverse set-ups shall be logged on a separate log.

C. It shall be the responsibility of the Contractor to schedule and perform investigations to prevent system overflows. If flows are such that they interfere with the Contractor's ability to collect accurate data, then the Contractor shall be responsible to schedule his work during low flow periods or to request written permission to perform by-pass pumping around the site. The Contractor may provide by-pass pumping only with specific approval from the City.

D. Inspection of storm drain infrastructure by means of CCTV equipment shall be performed to determine the location and extent of any obstructions and defects such as offset joints, protruding tees, broken pipe, and other pipe defects. Field logs / reports shall note the existence of any significant defects. Cleaning by the Contractor shall be performed prior to each CCTV inspection on each pipeline to be inspected.

E. Measurement and Payment Bid Items:

ITEM NO.	PAY ITEM	PAY UNIT
CSD701-01	CCTV Inspection of Main Storm Sewer Lines and Laterals, including Drainage Structures, under 15" diameter	Linear Feet
CSD701-02	CCTV Inspection of Main Storm Sewer Lines and Laterals, including Drainage Structures, 15" to 24" diameter	Linear Feet
CSD701-03	CCTV Inspection of Main Storm Sewer Lines and Laterals, including Drainage Structures, 27" to 30" diameter	Linear Feet
CSD701-04	CCTV Inspection of Main Storm Sewer Lines and Laterals, including Drainage Structures, 36" diameter and above	Linear Feet
CSD701-05	Cleaning of Main Storm Sewer Lines and Laterals, including Drainage Structures, under 15" diameter	Linear Feet
CSD701-06	Cleaning of Main Storm Sewer Lines and Laterals, including Drainage Structures, 15" to 24" diameter	Linear Feet
CSD701-07	Cleaning of Main Storm Sewer Lines and Laterals, including Drainage Structures, 27" to 30" diameter	Linear Feet
CSD701-08	Cleaning of Main Storm Sewer Lines and Laterals, including Drainage Structures, 36" diameter and above	Linear Feet
CSD701-09	Heavy Cleaning of Main Storm Sewer Lines and Laterals, including Drainage Structures, under 15" diameter	Linear Feet
CSD701-10	Heavy Cleaning of Main Storm Sewer Lines and Laterals, including Drainage Structures, 15" to 24" diameter	Linear Feet
CSD701-11	Heavy Cleaning of Main Storm Sewer Lines and Laterals, including Drainage Structures, 27" to 30" diameter	Linear Feet
CSD701-12	Heavy Cleaning of Main Storm Sewer Lines and Laterals, including Drainage Structures, 36" diameter and above	Linear Feet

SECTION 3.25.I – POST REHABILITATION CCTV AND INSPECTION

In accordance with Section C204 Environmental Protection and Stormwater Pollution Prevention Plan from the General Specifications, the Contractor is responsible for the long-term operation and maintenance of the related best management practices. Post rehabilitation CCTV and inspection is required, at no direct pay, to evaluate the storm sewer's capacity and ensure that the restored pipe is free from debris, obstructions, or foreign material which would have been caused by construction activities of the Contractor. Post rehabilitation CCTV and inspection shall follow the requirements of Sections 3.25.A through Section 3.25.F.

SECTION 3.26 – WATERLINE PIPE BURSTING (NOT USED)

SECTION 3.27 – NON-STANDARD BID ITEMS

ITEM NO	PAY ITEM	PAY UNIT
CF-3	Sidewalk, Driveway, and Curb Saw Cutting	LF
CF-4	Pavement Saw Cutting Adjacent to Existing Pavement and at Patches to Utility Trenches	LF
CF-5	Removal of Handicapped Ramps, Curb and Gutter, and Concrete Sidewalks at Intersections Including Saw Cutting	SY
CF-6	ADA-Accessible Curb Ramps, Curb and Gutter,, and Concrete Sidewalks at Intersections	SY
CF-7	4" Concrete Sidewalk (Special Finish)	SY
CF-8	6" Concrete Driveway (Special Finish)	SY
CF-9	6" Concrete Driveway (Special Finish) (Pea Gravel)	SY
CF-10	Root Pruning	EACH
CF-13	Sidewalk Transition Adjacent to Handicapped Ramps.	EACH
CF-14	Surface Applied Tactile / Detectable Warning Surface Tiles	EACH
CF-15	Timber Curb	LF
CF-16	Type-A Dead-End Installation	EACH
CF-301	Vertical Catch Basin Cover	EACH
CF-302	Vertical Catch Basin Frame	EACH
CF-303	Lockable Vertical Catch Basin Frame and Cover	EACH
CF-311	Vertical Catch Basin Front Grate No. 1	EACH
CF-312	Vertical Catch Basin Front Grate No. 2	EACH
CF-313	Vertical Catch Basin Front Grate No. 3	EACH
CF-315	Single Vertical Catch Basin Repair or Vertical Adjustment Reusing Existing Metal Castings	EACH
CF-316D	Double Vertical Catch Basin Repair or Vertical Adjustment Reusing Existing Metal Castings	EACH
CF-317	Single Vertical Catch Basin Repair or Vertical Adjustment Brick Work Only	EACH
CF-318D	Double Vertical Catch Basin Repair or Vertical Adjustment Brick Work Only	EACH
CF-331	Drop Inlet Catch Basin Grate	EACH
CF-332	Drop Inlet Catch Basin Frame	EACH
CF-335	Drop Inlet Catch Basin Repair or Vertical Adjustment Reusing Existing Metal Castings	EACH
CF-336	Drop Inlet Catch Basin Repair or Vertical Adjustment	EACH

	Brick Work Only	
CF-501	Install Temporary Pavement, 2” Thick	SY
CF-351	Mountable Catch Basin Grate	EACH
CF-352	Single or Double Mountable Catch Basin Frame	EACH
CF-353	Lockable Mountable Catch Basin Grate,	EACH
CF-355	Single Mountable Catch Basin Repair or Vertical Adjustment Reusing Existing Metal Castings	EACH
CF-356D	Double Mountable Catch Basin Repair or Vertical Adjustment Reusing Existing Metal Castings	EACH
CF-357	Single Mountable Catch Basin Repair or Vertical Adjustment Brick Work Only	EACH
CF-358D	Double Mountable Catch Basin Repair or Vertical Adjustment Brick Work Only	EACH
CF-371	Manhole Cover	EACH
CF-372	Manhole Frame	EACH
CF-375	Manhole Repair or Vertical Adjustment up to 6” Reusing Existing Metal Castings	EACH
CF-376	Manhole Repair or Vertical Adjustment over 6” Reusing Existing Metal Castings	Foot Height
CF-377	Manhole Repair or Vertical Adjustment up to 6” Brick Work Only	EACH
CF-378	Manhole Repair or Vertical Adjustment over 6” Brick Work Only	Foot Height
CSD701-01	CCTV Inspection of Main Storm Sewer Lines and Laterals, including Drainage Structures, under 15” diameter	LF
CSD701-02	CCTV Inspection of Main Storm Sewer Lines and Laterals, including Drainage Structures, 15” to 24” diameter	LF
CSD701-03	CCTV Inspection of Main Storm Sewer Lines and Laterals, including Drainage Structures, 27” to 30” diameter	LF
CSD701-04	CCTV Inspection of Main Storm Sewer Lines and Laterals, including Drainage Structures, 36” diameter and above	LF
CSD701-05	Cleaning of Main Storm Sewer Lines and Laterals, including Drainage Structures, under 15” diameter	LF
CSD701-06	Cleaning of Main Storm Sewer Lines and Laterals, including Drainage Structures, 15” to 24” diameter	LF
CSD701-07	Cleaning of Main Storm Sewer Lines and Laterals, including Drainage Structures, 27” to 30” diameter	LF
CSD701-08	Cleaning of Main Storm Sewer Lines and Laterals, including Drainage Structures, 36” diameter and above	LF
CSD701-09	Heavy Cleaning of Main Storm Sewer Lines and Laterals, including Drainage Structures, under 15” diameter	LF
CSD701-10	Heavy Cleaning of Main Storm Sewer Lines and Laterals, including Drainage Structures, 15” to 24” diameter	LF
CSD701-11	Heavy Cleaning of Main Storm Sewer Lines and Laterals, including Drainage Structures, 27” to 30” diameter	LF
CSD701-12	Heavy Cleaning of Main Storm Sewer Lines and Laterals, including Drainage Structures, 36” diameter and above	LF

CSS742(X1)	Install Sewer Mains by Pipe Bursting (Size)	LF
CSS742(X2)	Fuse Service Tee and Drill Pipe to Replace Existing Sewer House Connection from New Main to Back of Curb	EACH
CSS742(X3)	Sewer Point Repair up to Twelve Feet (Size & Depth)	EACH
CSS742(X4)	Sewer Point Repair beyond Twelve Feet (Size & Depth)	LF
CSS742(X5)	Sewer Main Line Cleaning (Size)	LF
CSS742(X6)	Sewer Main Line CCTV Inspection (Size)	LF
CSS742(X7)	Sewer Service Lateral Lining (6” CIPP)	EACH
CSS742(X8)	Manhole Rehabilitation, Cementitious Liner, Partial Depth (2-feet)	EACH
CSS742(X9)	Manhole Rehabilitation, Cementitious Liner, Full Depth	Foot Height
CSS742(X10)	Removal of Cast Iron Flush Valve Apparatus from Sewer Manhole	EACH
CSS742(X11)	Removal of water service line from sewer manhole	EACH
CSS742(X12)	Locate and disconnect flush valve water service line from water main	EACH
CSS742(X13)	Sewer Service Lateral CCTV Inspection	EACH
CSS742(X14)	Well Point System	BLFT
CSW741-01	Repair Water Main with Full Circle Clamp (Pipe Size 4” – 8”)	EACH
CSW741-02	Repair Water Main with Full Circle Clamp (Pipe Size 12” – 16”)	EACH
CSW741-03	Repair Water Main with Bell Joint Clamp (Pipe Size 4” – 12”)	EACH
CSW741-04	Repair Water Main with Bell Joint Clamp (Pipe Size 16” – 24”)	EACH
CSW741-05	Repair Water Main by Remove and Replace – Minimum Length 4 FT, Maximum Length 10 FT (Pipe Size 4” – 12”)	EACH
CSW741-06	Repair Water Main by Remove and Replace – Minimum Length 4 FT, Maximum Length 10 FT (Pipe Size 16” – 24”)	EACH
CSW741-07	Repair Water Main by Remove and Replace – Beyond 10 FT, Maximum 18 FT (Pipe Size 4” – 12”)	LF
CSW741-08	Repair Water Main by Remove and Replace – Beyond 10 FT, Maximum 18 FT (Pipe Size 16” – 24”)	LF
CSW741-09	Replace 5/8” to 1” Lead Service Line Water House Connection with 1” Polyethylene Water House Connection (From Main to Meter)	EACH
CSW741-10	Replace 1.5” Lead Service Line Water House Connection (From Main to Meter)	EACH
CSW741-11	Replace 2” Lead Service Line Water House Connection (From Main to Meter)	EACH
CSW741-12	2” New Water Main with Main Line Fittings	LF
CSW741(51)(C)(4)	8” HDPE New Water Main with Main Line Fittings by Pipe Bursting	LF

CSW741(51)(E)(4)	12” HDPE New Water Main with Main Line Fittings by Pipe Bursting	LF

END OF SECTION 01200

SUMMARY OF ESTIMATED QUANTITIES

BASE BID ITEMS

ITEM NO.	DESCRIPTION	UNIT	ESTIMATED QUANTITY
C202(52)(C)	REMOVAL AND DISPOSAL OF EXISTING PORTLAND CEMENT CONCRETE		
	PAVEMENT (COMPOSITE)	SY	5427
C202(52)(D)	REMOVAL AND DISPOSAL OF EXISTING SIDEWALK, DRIVEWAY, FOOT LAP		
	(CONCRETE, BRICK, ASPHALT, ETC.)	SY	760
C202(52)(F)	REMOVAL AND DISPOSAL OF EXISTING CURB AND GUTTER BOTTOM	LF	2525
C202(55)	SAW CUT CONCRETE CURB, PAVEMENT, SIDEWALK, ETC.	LF	70
C203(51)	ROADWAY EXCAVATION	CY	1222
C203(58)	UNSUITABLE SUBGRADE EXCAVATION AND SAND FILLING	CY	150
C203(59)	GEOTEXTILE FABRIC FOR STABILIZATION	SY	5885
C203(60)	GEOGRID	SY	5570
C302(51)	BASE COURSE	CY	1268
C402(51)	TRAFFIC MAINTENANCE AGGREGATE	CY	170
C501(53)	ASPHALTIC CONCRETE (2" THICK)	SY	6117
C601(54)	REINFORCED CONCRETE PAVEMENT (7" THICK)	SY	6117
C701(53)(F)	REINFORCED CONCRETE PIPE (15")(CLASS IV)	LF	1500
C701(53)(G)	REINFORCED CONCRETE PIPE (18")(CLASS IV)	LF	100
C701(53)(E)	REINFORCED CONCRETE PIPE (12")(CLASS IV)	LF	20
C701(59)	REINFORCED CONCRETE WYE (15")(CLASS IV)	EA	8
C701(72)	COLLECTOR LINE TO CATCH BASINS FOR DRAIN HOUSE CONNECTIONS (8")	LF	40
C702(52)(J)	NO. 1 STANDARD DRAIN MANHOLE	FTHT	64
C702(53)(M)	NO. 1 STANDARD CATCH BASIN	EA	6
C702(54)(A)(1)	ADJUST MANHOLE OR DROP INLET TO GRADE 6" WITH BRICK AND MORTAR	EA	36
C702(54)(A)(3)	MANHOLE REPAIR OR VERTICAL ADJUSTMENT UP TO GRADE 6" REUSING		
	EXISTING METAL CASTING	EA	32
C702(54)(I)	REHABILITATION EXISTING MANHOLE	FTHT	144
C706(57)	BRICK SIDEWALK	SY	80
C706(58)	RELAYING BRICK SIDEWALK	SY	280
C706(59)	STONE SIDEWALK	SY	20
C706(60)	RELAYING STONE SIDEWALK	SY	703
C706(61)	LETTER OR NUMBER FOR TILE STREET NAME	EA	28
C706(62)	RESETTING TILE STREET NAME	EA	6
C707(56)	6" CONCRETE BARRIER CURB WITH DOWELS	LF	1233
C707(62)	STONE CURB INCLUDING BASE (STRAIGHT, CIRCULAR OR DEPRESSED)	LF	150
C707(63)	RESET EXISTING CURB (PRECAST, CONCRETE, STONE, ETC.) INCLUDING BASE	LF	2041
C713(51)	TEMPORARY SIGNS, BARRICADES AND PAVEMENT MARKINGS	LS	1
C727(51)	MOBILIZATION	LS	1
C729(51)	TRAFFIC SIGNS	EA	32
C732(52)(A)	PLASTIC PVMT STRIPING (SOLID)(4IN W)(THERMO 90 MIL)	LF	1750
C732(52)(B)	PLASTIC PVMT STRIPING (SOLID)(6IN W)(THERMO 90 MIL)	LF	225
C732(52)(E)	PLASTIC PVMT STRIPING (24IN W)(THERMO 125 MIL)	LF	1360
C732(54)	PLASTIC PVMT LEGENDS & SYMBOLS	EA	4
C740(51)	CONSTRUCTION LAYOUT	LS	1
C741(51)(B)	6" PVC NEW WATER MAIN WITH MAIN LINE FITTINGS	LF	30
C741(51)(C)(1)	8" PVC NEW WATER MAIN WITH MAIN LINE FITTINGS	LF	144
C741(51)(E)	12" PVC NEW WATER MAIN WITH MAIN LINE FITTINGS	LF	170
C741(51)(I)(2)	24" DUCTILE IRON (RESTRAINED JOINT) NEW WATER MAIN WITH MAIN LINE FITTINGS	LF	1582
C741(52)	NEW 2" VALVE	EA	2
C741(52)(B)	NEW 6" VALVE	EA	7
C741(52)(C)	NEW 8" VALVE	EA	14
C741(52)(E)	NEW 12" VALVE	EA	5
C741(52)(I)	NEW 24" VALVE	EA	5
C741(54)	NEW FIRE HYDRANT	EA	5
C741(55)(A)	REPLACE 5/8" TO 1" WATER HOUSE CONNECTION WITH 1" WATER HOUSE		
	CONNECTION (FROM MAIN TO METER)	EA	68
C741(55)(B)	REPLACE 1-1/2" WATER HOUSE CONNECTION (FROM MAIN TO METER)	EA	6
C741(55)(C)	REPLACE 2" WATER HOUSE CONNECTION (FROM MAIN TO METER)	EA	13
C741(55)(D)	REPLACE 4" WATER HOUSE CONNECTION (FROM MAIN TO METER)	EA	10
C741(55)(E)	REPLACE 6" WATER HOUSE CONNECTION (FROM MAIN TO METER)	EA	1
C741(55)(F)	REPLACE 8" WATER HOUSE CONNECTION (FROM MAIN TO METER)	EA	2

SUMMARY OF ESTIMATED QUANTITIES

BASE BID ITEMS

ITEM NO.	DESCRIPTION	UNIT	ESTIMATED QUANTITY
C741(71)(C-01)	8" WATERLINE OFFSET UP TO 24"	EA	4
C741(74)(A)	NEW WATER VALVE MANHOLE (4" THROUGH 12" VALVES)	EA	4
C741(75)	REMOVE MUD AND DEBRIS FROM INSIDE OF WATER METER BOX	EA	47
C741(76)	ADJUST COMPLETE WATER METER BOX TO GRADE	EA	47
C741(77)	REPLACE BROKEN WATER METER BOX (5/8") TO (1")	EA	10
C742(57)	SEWER POINT REPAIR UP TO 10 FEET (8" AT 6.1'- 8.0')	EA	6
C742(58)	SEWER POINT REPAIR BEYOND 10 FEET (8" AT 6.1'- 8.0')	LF	20
C742(59)	NEW SEWER HOUSE CONNECTIONS FROM MAIN TO BACK OF CURB	EA	50
C742(65)(C)	PIPE LINING (8" & CIPP LINING)	LF	1565
C742(66)(B)	CUT LINER TO RESTORE EXISTING SEWER HOUSE CONNECTION (6", CIPP)	EA	48
CF-05	REMOVAL OF HANDICAP RAMPS, CURB AND GUTTER, AND CONCRETE SIDEWALKS		
	AT INTERSECTIONS INCLUDING SAW CUTTING	SY	40
CF-06	HANDICAP RAMPS, CURB AND GUTTER, AND CONCRETE SIDEWALKS		
	AT INTERSECTIONS	SY	100
CF-14	SURFACE APPLIED TACTILE / DETECTABLE WARNING SURFACE TILES	SF	12
CF-315	SINGLE VERTICAL CATCH BASIN REPAIR OR VERTICAL ADJUSTMENT REUSING		
	EXISTING METAL CASTING	EA	9
CF-371	MANHOLE COVER	EA	4
CF-372	MANHOLE FRAME	EA	4
CF-375	MANHOLE REPAIR OR VERTICAL ADJUSTMENT UP TO 6" REUSING EXISTING		
	METAL CASTING	EA	20
CSS-742(X9)	MANHOLE REHABILITATION CEMENTITOUS LINER FULL DEPTH (SEWER)	FTHT	96
EXTRA ITEM 01	TEMPORARY 2" WATERMAIN	LF	392
EXTRA ITEM 02	TEMPORARY 6" WATERMAIN	LF	427
EXTRA ITEM 03	TEMPORARY 8" WATERMAIN	LF	2322
EXTRA ITEM 04	TEMPORARY 12" WATERMAIN	LF	80
EXTRA ITEM 05	TEMPORARY TIE TO EXISTING WATERLINE	EA	4
EXTRA ITEM 06	BACKFILL TRENCH AND TEMPORARY ASPHALT CONCRETE (6" THICK)	SY	1236
EXTRA ITEM 07	TEMPORATY 2" GATE VALVE AND VALVE BOX	EA	2
EXTRA ITEM 08	TEMPORATY 6" GATE VALVE AND VALVE BOX	EA	2
EXTRA ITEM 09	TEMPORATY 8" GATE VALVE AND VALVE BOX	EA	8
EXTRA ITEM 10	TEMPORARY HOUSE CONNECTION TO EXISTING WATER METER	EA	80
EXTRA ITEM 11	24" LINE STOP	LS	1
EXTRA ITEM 12	REMOVE EXISTING 24" WATERLINE (STORE/DISPOSAL)	LF	1582
EXTRA ITEM 13	ADJUST SEWER CLEAN OUT TO GRADE	EA	8
EXTRA ITEM 14	TIE TO EXISTING DRAINAGE STRUCTURE	EA	8
EXTRA ITEM 15	REMOVE AND STORE EXISTING GRANITE CURBS	LF	761
EXTRA ITEM 16	COMPRESSION FIT HDPE PIPE LINING	LF	340
EXTRA ITEM 17	DE - MOBILIZATION	EA	3
EXTRA ITEM 18	RE - MOBILIZATION	EA	3
EXTRA ITEM 19	TEMPORARY CONCRETE SIDEWALK (4" THICK)	SY	400

STATE OF LOUISIANA
FRED C. MORTALI
License No. 35111
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
11/25/2024

NY ASSOCIATES, INC.
ENGINEERS • ARCHITECTS • PLANNERS
PROGRAM & PROJECT MANAGERS

REV.	DATE	DESCRIPTION	BY

SEWERAGE AND WATER BOARD OF NEW ORLEANS

BID QUANTITY SHEET

CONTRACT NO. 2154

DR.
TRC.
CK.
AP.
SCALE:
DATE: AUGUST 2024

GENERAL SUPERINTENDENT

DWG. NO. 8958-W

SET NO.

SHEET NO. X OF XX

BQ-1