

Attachment C – 00 40 00 Forms for General Bid

SRF ELIGIBLE BASE BID ITEMS

Item No.	Estimated Quantity	Units	Description of the Work and Unit Price Bid Written in Words and Numbers	Amount
011100.1	1	LUMP SUM	General Construction, the lump sum price of Dollars (\$ _____) lump sum	\$ _____
011100.2	1	LUMP SUM	Mobilization, the lump sum price of Dollars (\$ _____) lump sum	\$ _____
011100.3	1	LUMP SUM	Demobilization, the lump sum price of Dollars (\$ _____) lump sum	\$ _____
310001.1	3,700	CUBIC YARD	Rock and Boulder Excavation, the unit price of Dollars (\$ _____) per cubic yard	\$ _____
310001.2	6,500	CUBIC YARD	Additional Excavation and Select Fill Replacement, the unit price of Dollars (\$ _____) per cubic yard	\$ _____

SRF INELIGIBLE BASE BID ITEMS

Item No.	Estimated Quantity	Units	Description of the Work and Unit Price Bid Written in Words and Numbers	Amount
014100.1	1	ALLOWANCE	City of Westfield Building Permit Fees, the lump sum price of <u>Thirty-Five Thousand Dollars</u> Dollars (\$35,000.00) allowance	\$ <u>35,000.00</u>
014100.2	1	ALLOWANCE	City of Westfield Conservation Commission Fee, the lump sum price of <u>Seven Thousand Five Hundred Dollars</u> Dollars (\$7,500.00) allowance	\$ <u>7,500.00</u>

Total amount of Base Bid based on Engineer's estimate of quantities for Items 011100.1 through 310001.2 inclusive and the work on the Filed Sub-Bidders (in words) :

_____ Dollars

(In figures) (\$ _____).

For Alternate No. 1: Add _____

_____ Dollars (\$ _____)

OR Deduct _____

_____ Dollars (\$ _____)

For Alternate No. 2: Add _____

_____ Dollars (\$ _____)

OR Deduct _____

_____ Dollars (\$ _____)

D. The subdivision of the proposed contract price is as follows:

Item D. 1: The work of the General Contractor _____

Dollars (\$ _____)

Item D. 2: The work of the Filed Sub-Bidders: _____

Dollars (\$ _____)

Sub-Trade	Name of Sub-Bidder	Price	Require bonds?
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_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

The undersigned further certifies under penalties of perjury that the said undersigned is not presently debarred from doing public construction work in the Commonwealth under the provisions of section 29-F of M.G.L. Chapter 29, or any other applicable debarment provisions of any other General Laws or any rule or regulations promulgated thereunder.

The undersigned agrees that each of the above named sub-bidders will be used for the work indicated at the amount stated, unless a substitution is made. The undersigned further agrees to pay the premiums for the performance and payment bonds furnished by sub-bidders as requested herein and that all of the cost of all such premiums is included in the amount set forth in Item 1 of this bid.

The undersigned agrees that if he is selected as general contractor, he will promptly confer with the awarding authority on the question of sub-bidders; and that the awarding authority may substitute for any sub-bid listed above a sub-bid filed with the awarding authority by another sub-bidder for the sub-trade against whose standing and ability the undersigned makes no objection; and that the undersigned will use all such finally selected sub-bidders at the amounts named in their respective sub-bids and be in every way as responsible for them and their work as if they had been originally named in this general bid, the total contract price being adjusted to conform thereto.

Bidders must fully comply with Subpart C of 2 CFR Part 180 and 2 CFR Part 1532, entitled Responsibilities of Participants Regarding Transactions (Doing Business with Other Persons). Contractors, subcontractors, or supplies that appear on the Excluded Parties List System at www.usgovxml.com/dataservice.aspx?ds=EPLS are not eligible for award of any contracts funded by the Massachusetts State Revolving Fund.

Completion Date: **1,537 Days from Date of Notice to Proceed**

Date: _____
(Please print or type Name of General Bidder)

by: _____
(Please print or type Name and Title of person signing Bid)

(Business Address)

(Please include City, State, Zip Code, Business Telephone & facsimile numbers)

SIGN HERE: _____

Please certify by writing your initials in the space provided below that all employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration at the time the employee begins work and shall furnish documentation of successful completion of said course with the first certified payroll report for each employee.

Please initial: _____

- If a Corporation, signature and seal by duly authorized officer is required.
- If a partnership, so state and names and residential addresses of all partners are required.
- If an individual, so state and also indicate residential address if different than business address and also sign.

APPENDIX A2

Certification Statements wording required in the BID PROPOSAL of contracts bid under the provisions of c.149 s 44A – 44J (Building Contract with filed Sub-bids)

Pursuant to M.G.L. Ch. 62C, s 49A, I certify under the penalties of perjury that I, to my best knowledge and belief, have filed all state tax returns and paid all State Taxes Required under law.

The undersigned bidder hereby certifies he/she will comply with the specific affirmative action steps contained in the Equal Employment Opportunity/Affirmative Action (EEO/AA) provisions of this Contract, including compliance with the Disadvantaged Business Enterprise provisions as required under these contract provisions. The contractor receiving the award of the contract shall incorporate the EEO/AA provisions of this contract into all subcontracts and purchase orders so that such provisions will be binding upon each subcontractor or vendor.

The undersigned certifies under penalties of perjury that there have been no substantial changes in his financial position or business organization other than those changes noted within the application since the applicant's most recent pre-qualification statement and that the bid is in all respects bonafide, fair and made without collusion or fraud with any other person.

c149 s44D (1)(b) “Person” shall mean any natural person, joint venture, partnership, corporation or other business or legal entity which sells materials, equipment or supplies used in or for, or engages in the performance of, the same or similar construction, reconstruction, installation, demolition, maintenance or repair work or any part thereof.

c149 s44E (2) The undersigned hereby certifies that he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed on the work and that he will comply fully with all laws and regulations applicable to awards made subject to section forty-four A.

c149 s44E (3) The undersigned further certifies under penalty of perjury that the said undersigned is not presently debarred from doing public construction work in the Commonwealth of Massachusetts under the provision of Section Twenty-Nine F of Chapter Twenty-Nine, or any other applicable debarment provisions of any other Chapter of the General Laws or any rule or regulation promulgated thereunder; and is not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency.

(Date)

(Name of General Bidder)

(Federal Employer Identification No.)

By:
(Signature)

(Title & Name of person signing bid)

(Business Address)

(City State, Zip)

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APPENDIX B DIESEL RETROFIT PROGRAM

The Department of Environmental Protection (“DEP”) has developed the Diesel Retrofit Program in response to increasing public health concerns with the emissions from diesel engines and vehicles.

Diesel Construction Equipment Standard

All diesel powered non-road construction equipment and vehicles greater than 50 brake horsepower which will be used in the performance of the work under the Contract (hereinafter “Diesel Construction Equipment”) must have the following pollution control device installed unless exempt as provided below:

1. Emission control technology verified by U.S. Environmental Protection Agency (“EPA”) or the California Air Resources Board (“CARB”) for use with non-road engines;
2. Emission control technology verified by EPA or CARB for use with on-road engines provided that such equipment is operated with diesel fuel that has no more than 15 parts per million sulfur content (i.e. Ultra Low Sulfur Diesel fuel); or
3. Emission control technology certified by the manufacturer that such technology meets or exceeds the emission reductions provided by on-road or off-road emission control technology verified by EPA or CARB, i.e. that a Diesel Oxidation Catalyst is achieving the following minimum emission reductions: particulate matter 20%; carbon monoxide 40%; volatile organic compounds 50%; or a Diesel Particulate Filter is achieving a minimum of 85% emission reductions for particulate matter.

Emission control devices, such as oxidation catalysts or particulate filters, shall be installed on the exhaust system side of the Diesel Construction Equipment. The Contractor shall be responsible to insure that the emissions control technology is operated, maintained, and serviced as recommended by the manufacturer.

For the latest up-to-date list of EPA verified-technologies, see:

<https://www.epa.gov/verified-diesel-tech>

For the latest up-to-date list of CARB verified technologies, see:

<http://www.arb.ca.gov/diesel/verdev/vt/cvt.htm>

Exemptions

The following Diesel Construction Equipment shall be exempt from the standard above. The Contractor shall include such Diesel Construction Equipment in the required recordkeeping:

1. Diesel Construction Equipment not owned by the Contractor and used in the performance of the work under this Contract for 30 calendar days (cumulative days but not necessarily consecutive) or less;
2. Unless otherwise exempt, additional Diesel Construction Equipment originally not anticipated to be used under the Contract or used as permanent replacement after the work under the Contract has commenced, for 15 calendar days from the date such Diesel Construction Equipment is brought on site;

**APPENDIX B (cont.)
DIESEL RETROFIT PROGRAM**

3. Diesel Construction Equipment with an engine that meets the EPA particulate matter (PM) Tier emission standards in effect at the start of the Contract for non-road diesel engines for the applicable engine power group (e.g., as of January 1, 2009, a piece of Diesel Construction Equipment with a Tier 3 engine is exempt from meeting the standard until the piece of Diesel Construction Equipment is available with a Tier 4 engine) provided that if such emissions standards are superseded during the Contract then such Diesel Construction Equipment must be retrofitted in accordance with the standards above prior to the end of the Contract;
4. A large crane (e.g. a sky crane or link belt crane which is responsible for critical lift operations) if such device would adversely affect the operation of the crane provided the Contractor submits to the municipality's project engineer written technical justification documenting the adverse impact on operation; and
5. Diesel Construction Equipment that the project engineer has determined is necessary to control a compelling emergency including but not limited to, the need for rescue vehicles or other equipment to prevent harm to human beings or additional equipment required to address a catastrophic emergency such as structure collapse or imminent collapse. After the compelling emergency is controlled, such non-compliant equipment must be removed from the Contract site and may not be used in further performance of the work under this Contract. Meeting Contract deadlines is not a compelling emergency.

Contractor Certification

Each bidder shall submit as part of its bid, the Statement of Intent to Comply. Within 10 days of being notified that it has been awarded a contract, the bidder and each of its Contractors and Subcontractors shall submit a Diesel Retrofit Program Contractor Certification. Each such Certification shall contain the following information for each piece of Diesel Construction Equipment:

1. Contractor or Subcontractor name;
2. Equipment type, make, model;
3. Vehicle Identification Number or VIN;
4. Engine model and year of manufacture;
5. Engine HP rating;
6. Emission Control Device (ECD) type (Diesel Oxidation Catalyst or Diesel Particulate Filter);
7. ECD make, model, and manufacturer;
8. ECD EPA or CARB Verification Number or manufacturer's certification that the DOC or DPF meets or exceeds emission reductions provided by similar emission control technology verified by EPA or CARB;
9. ECD installation date;
10. Type of fuel to be used; and
11. Whether the equipment is owned or rented.

Recordkeeping

Each Contractor and Subcontractor shall maintain detailed records of all Diesel Construction Equipment used under the Contract, including the dates and duration times the Diesel Construction Equipment is

**APPENDIX B (cont.)
DIESEL RETROFIT PROGRAM**

used at the Contract site. Records shall be available for inspection by DEP. Each Contractor and Subcontractor shall notify DEP within 48 hours of any new Diesel Construction Equipment brought onto the Contract site.

For Diesel Construction Equipment that has an emissions control device with a manufacturer's certification, the Contractor shall maintain records of all supporting emissions test data and test procedures. If upon review the emissions reductions are not supported by the test data and test procedures, then the emissions control device may need to be replaced with a compliant retrofit device.

Project Regulatory Agreement

The following language shall be included section 4 (Covenants of the Borrower) of the municipality's Project Regulatory Agreement if it receives funds from the State Revolving Fund:

The Borrower shall require each Contractor and Subcontractor to submit the Diesel Retrofit Program Contractor Certification to DEP and the Borrower prior to commencing work on the Project. The Borrower shall not allow any Contractor or Subcontractor to commence work at the Project site prior to submitting such Certification.

**APPENDIX B (cont.)
DIESEL RETROFIT PROGRAM**

STATEMENT OF INTENT TO COMPLY

This form must be signed and submitted by the bidder as part of the bid.

Local Governmental Unit _____ **SRF Project No.** _____

Contract No. _____ **Contact Title** _____

Bidder _____

The undersigned, on behalf of the above-named Bidder, agrees that, if awarded the Contract:

1. the Bidder shall comply with the Massachusetts Department of Environmental Protection's ("MassDEP") Diesel Retrofit Program by ensuring that all diesel powered non-road construction equipment and vehicles greater than 50 brake horsepower which will be used in the performance of the work under the Contract are equipped or retrofitted with a pollution control device in accordance with the Diesel Retrofit Program Standard;
2. the Bidder shall require all Subcontractors to comply with MassDEP's Diesel Retrofit Program by ensuring all diesel powered non-road construction equipment and vehicles greater than 50 brake horsepower which will be used in the performance of the work under the Contract are equipped or retrofitted with a pollution control device in accordance with the Diesel Retrofit Program Standard; and
3. The Bidder shall submit and shall require each Subcontractor to submit a Diesel Retrofit Program Contractor Certification (form attached) with a Diesel Retrofit List to MassDEP Municipal Services and the Bidder within 10 days of the bidder being notified that it has been awarded the Contract. The Bidder shall require each Subcontractor to update such Certification and List within 2 days of using additional Diesel Construction Equipment on the project under the Contract.

(Signature of Bidder's Authorized Representative)

(Date)

APPENDIX B (cont.)

DIESEL RETROFIT PROGRAM CONTRACTOR CERTIFICATION

Each Contractor and its Subcontractor(s) must sign and email this form to the DEP DMS project engineer, within 10 days after the contractor is awarded.

Local Governmental Unit _____ SRF Project No. _____

Contract No. _____ Contact Title _____

Contractor _____

I, _____, an authorized signatory for _____, whose principal place of business is at _____ do hereby certify that any and all diesel powered non-road construction equipment and vehicles greater than 50 brake horsepower which will be used in the performance of the work under the Contract (hereinafter "Diesel Construction Equipment") have pollution control devices, such as oxidation catalysts or particulate filters, installed on the exhaust system side of the diesel combustion engine equipment in accordance with the Diesel Retrofit Program Standard.

I am submitting on behalf of _____ a list of all said Diesel Construction Equipment, labeled "Diesel Retrofit List," that will be used in connection with this Contract by _____. I hereby certify that the information on the attached Diesel Retrofit List is correct and accurate as of the date of signature. The List includes the following information for each piece of Diesel Construction Equipment:

1. Equipment type, make, model;
2. Vehicle Identification Number or VIN;
3. Engine model and year of manufacture;
4. Engine HP rating;
5. Emission Control Device ("ECD") type (Diesel Oxidation Catalyst or Diesel Particulate Filter);
6. ECD make, model, and manufacturer;
7. ECD EPA or CARB Verification Number or manufacturer's certification that the DOC or DPF meets or exceeds emission reductions provided by similar emission control technology verified by EPA or CARB;
8. ECD installation date;
9. Type of fuel to be used; and
10. Whether the equipment is owned or rented.

APPENDIX B (cont.)

DIESEL RETROFIT PROGRAM CONTRACTOR CERTIFICATION

_____ shall notify DEP within 48 hours of any new Diesel Construction Equipment brought onto the Contract site. _____ shall maintain detailed records of all Diesel Construction Equipment used at the Contract site, including the dates and duration times the Diesel Construction Equipment is used at the Contract site. _____ shall make such records available for inspection by DEP. _____ shall ensure that the emissions control technology for each piece of Diesel Construction Equipment is operated, maintained, and serviced as recommended by the manufacturer. _____ shall retrofit prior to the end of the Contract any Diesel Construction Equipment no longer exempt from meeting the Diesel Construction Equipment Standard under exemption 3 (because it had an engine that met the EPA particulate matter (PM) Tier emission standards currently in effect at the start of the Contract for non-road diesel engines for the applicable engine power group and such emissions standards were superseded during the Contract).

I acknowledge that this certificate is being furnished as a requirement under this Contract and is subject to applicable State and federal laws, both criminal and civil. Signed under pains and penalty of perjury on this date _____.

Signature _____

Name: _____

Title: _____

DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION
 MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION
 DIVISION OF MUNICIPAL SERVICES

SCHEDULE OF PARTICIPATION FOR SRF CONSTRUCTION

Project Title: _____ **Project Location:** _____

Disadvantaged Minority Business Enterprise Participation in the SRF Loan Work

Name & Address of D/MBE	Nature of Participation	Dollar Value of Participation
1.		
2.		
3.		

Total D/MBE Commitment: \$ _____

Percentage D/MBE Participation = (Total D/MBE Commitment) / (Bid Price) = _____ **%**

Disadvantaged Women Business Enterprise Participation in the SRF Loan Work

Name & Address of D/WBE	Nature of Participation	Dollar Value of Participation
1.		
2.		
3.		

Total D/WBE Commitment: \$ _____

Percentage D/WBE Participation = (Total D/WBE Commitment) / (Bid Price) = _____ **%**

The Bidder agrees to furnish implementation reports as required by MassDEP to indicate the D/MBEs and D/WBE(s) which it has used or intends to use. Breach of this commitment constitutes a breach of the contract.

Name of Bidder: _____

Date: _____ By: _____
Signature

NOTE: Participation of a DBE may be counted in only their certified category; the same dollar participation cannot be used in computing the percentage of D/MBE participation and again of D/WBE participation.

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DBE CERTIFICATION OF UNITED STATES CITIZENSHIP

For the SRF program, under the EPA Disadvantage Business Enterprise (DBE) Rule, a DBE must be owned or controlled by a socially and economically disadvantaged person that is also a **citizen of the United States** (See 40 CFR 33.202). "Ownership" is defined at 13 CFR 124.105 and "control" is defined at 13 CFR 124.106.

DBEs are certified for the SRF program through the Supplier Diversity Office using the federal Department of Transportation (DOT) DBE rules. EPA allows the use of DBEs certified under the DOT rules as long as they are also United States citizens. To ensure compliance with the EPA rule, MassDEP must verify United States citizenship through the completion of the following form for each DBE used on the project.

SRF Project Number _____

Contract Number _____

Contract Title _____

DBE Subcontractor _____

The undersigned, on behalf of the above named DBE subcontractor, hereby certifies that the DBE firm is either owned or controlled by a person or persons that are citizens of the United States.

Printed Name and Title of DBE Signatory

DBE Signature

Date

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DISADVANTAGED BUSINESS ENTERPRISE
PROGRAM DBE SUBCONTRACTOR PARTICIPATION
FORM

The United States Environmental Protection Agency (EPA) requires that this form be provided to all subcontractors on the project. At the option of the subcontractor, this form may be filled out and submitted directly to the EPA DBE Coordinator.

NAME OF SUBCONTRACTOR	PROJECT NAME
ADDRESS	CONTRACT NO.
TELEPHONE NO.	E-MAIL ADDRESS
PRIME CONTRACTOR NAME:	

Please use the space below to report any concerns regarding the above EPA-funded project (e.g., reason for termination by prime contractor, late payment, etc.).

CONTRACT ITEM NO.	ITEM OF WORK OR DESCRIPTION OF SERVICES RECEIVED FROM THE PRIME CONTRACTOR	AMOUNT SUBCONTRACTOR WAS PAID BY PRIME CONTRACTOR
<div style="display: flex; justify-content: space-between; margin-top: 20px;"> Subcontractor Signature Title/Date </div>		

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Attachment D – 00 40 01 Forms for Sub Bid

BID NO. 24-51; WEST PARISH WATER TREATMENT PLANT

SUB-BID OPENING DATE: 2:00 P.M. JUNE 11, 2024

GC OPENING DATE: 2:00 P.M. JUNE 25, 2024

SECTION 00 40 01

FORM FOR SUB-BIDS¹

TO: All General Bidders or As Indicated or Except Those Excluded in section C. below:

Sub Bid category: _____

A. The undersigned:

(please type or print name of firm)

Proposes to furnish all labor and materials required for completing, in accordance with the hereinafter described Drawings, Specifications, and Addenda prepared by Hazen & Sawyer, Inc. for the West Parish Water Treatment Plant project in Westfield, Massachusetts, all work specified in of the Specifications and in any Drawings specified in any such Section for, for the price of:

_____ Dollars

(\$ _____).

For Alternate No. 1 (Painting Only):

Add _____

_____ Dollars (\$ _____)

OR Deduct _____

_____ Dollars (\$ _____)

B. This Sub-Bid includes Addenda numbered _____, _____, _____, _____, _____.

C. This Sub-Bid:

(_____) May **not** be used by the following general bidder(s):

¹ Addendum No.12

() May **only** be used by the following general bidder(s):

(Do not answer Part C if no General Bidders are selected or excluded.)

D. The undersigned agrees that if he is selected a sub-bidder, he will, within five days, Saturdays, Sundays and legal holidays excluded, after presentation of a subcontract by the General Bidder selected as the General Contractor, execute with such general bidders a subcontract in accordance with the terms of the sub-bid, and contingent upon the execution of General Contract and, if requested so to do in the general bid by such general bidder who shall pay the premiums therefore, furnish Performance and Labor and Materials Payment Bonds of a surety company qualified to do business under the laws of the Commonwealth and satisfactory to the Awarding Authority, in the full sum of the subcontract price.

E. The names of all persons, firms, and corporations furnishing to the undersigned labor or labor and materials for the class of classes or part thereof of work for which the provisions of the Section of the Specifications for this sub-trade require a listing in this paragraph, including the undersigned if customarily furnished by persons on his own payroll and in the absence of a contrary provision in the Specifications, the name of each such class of work or part thereto and the bid price for such class of work or part thereof are:

NAME	CLASS OF WORK	BID PRICE
<hr/>	<hr/>	<hr/>
<hr/>	<hr/>	<hr/>
<hr/>	<hr/>	<hr/>
<hr/>	<hr/>	<hr/>
<hr/>	<hr/>	<hr/>
<hr/>	<hr/>	<hr/>
<hr/>	<hr/>	<hr/>

(Do not give bid price for any class or part thereof furnished by the undersigned.)

F. The undersigned agrees that the above list of bids to the undersigned represents bona fide bids based on the hereinbefore described Drawings, Specifications, and Addenda and that, if the undersigned is awarded the Contract, they will be used for the work indicated at the amounts stated, if satisfactory to the Awarding Authority.

G. The undersigned further agrees to be bound to the General Contractor by terms of the hereinbefore described Drawings, Specifications, including all General Conditions stated therein, and Addenda, and to assume toward him all the obligations and responsibilities that he, by those documents, assumes toward the Owner.

H. The undersigned offers the following information as evidence of his qualifications to perform the work as bid upon according to all the requirements of the Drawings and Specifications:

1. Have been in business under present business name _____ years.

2. Ever failed to complete any work awarded? _____

3. List one or more recent buildings with names of General Contractor and Architect on which you served as Subcontractor for work of similar character as required by the above-named building:

	BUILDING	ARCHITECT	GEN'L CONTRACTOR	CONTRACT AM'T
(a)	_____	_____	_____	_____
(b)	_____	_____	_____	_____
(c)	_____	_____	_____	_____

4. Bank Reference

I. The undersigned hereby certifies that he/she is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed on the work that he/she will comply fully with all laws and regulations applicable to awards of Subcontractors subject to Section forty-four F.

The undersigned further certifies under penalties of perjury that this sub-bid is all respects bona fide, fair, and made without collusion or fraud with any other person. As used in this subsection, the word "person" shall mean any natural person, joint venture, partnership, corporation, or other business or legal entity. The undersigned further certifies under penalty

of perjury that the said undersigned is not presently debarred from doing public construction work in the Commonwealth under the debarment provisions of any chapter of the Massachusetts General Laws or any rule or regulation promulgated thereunder, and is not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department of agency.

Date: _____

(Please type or print the Business Name of the Sub-Bidder)

By: _____
(Please type or print the Name and title of the Person Signing the Bid)

SIGN HERE: _____
(Signature)

Please certify by writing your initials in the space provided below that all employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration at the time the employee begins work and shall furnish documentation of successful completion of said course with the first certified payroll report for each employee.

Please initial: _____

(please type or print Business address including City, State, and Zip Code)

(if mail address is different, please enter below)

(Business Telephones – please include fax number & e-mail)

Attachment E – 00 52 00 Agreement

SECTION 00 52 00
AGREEMENT^{1,2}

THIS AGREEMENT is by and between the Springfield Water and Sewer Commission (hereinafter called Owner) and _____ (hereinafter called Contractor).

Owner and Contractor, in consideration of the mutual covenants hereinafter set forth, agree as follows:

ARTICLE 1 – WORK

1.01 Contractor shall at its own cost and expense furnish all labor, services, tools, materials, equipment, and incidentals necessary to complete all Work as specified or indicated in the Contract Documents to construct the West Parish Water Treatment Plant. The Work is generally described in Section 01 11 00 – Summary of Work of the General Requirements.

ARTICLE 2 – PROJECT

2.01 The Project for which the Work under the Contract Documents may be the whole or only a part is generally described as follows:

- A. Provisions of sedimentation and erosion controls.
- B. Provisions for stormwater management during and after construction.
- C. Protection of utilities proximal to the area of Work, including staging and storage areas, travel routes, and elsewhere Contractor’s machinery, vehicles, and equipment operate.
- D. Abatement of hazardous materials.
- E. Improvements to Bridge No. 4.
- F. Demolition of Slow Sand Filter Nos. 7-10 and associated Regulator House No. 3.
- G. Demolition of Slow Sand Filter Nos. 15-18 and associated Regulator House No. 4.
- H. Demolition of six sand storage bins east of Slow Sand Filters Nos. 15-18.
- I. Installation of temporary bracing and supports as required to stabilize portions of the exterior Slow Sand Filter walls and top and bottom slabs, and to protect existing structures and utilities.

1 Addendum No.4
2 Addendum No. 12

- J. Reorientation of Gate No. 3 and access roads to the Rapid Sand Filter Building.
- K. Restoration and protection of the Site at all times.
- L. Raw water conveyance pipeline improvements, including connection to the existing supply from the Sedimentation Basin and new supply from the Energy Dissipation Valve (EDV) / Equalization Tank Facility.
- M. A new 65-mgd firm capacity dissolved air flotation (DAF) water treatment plant located on the site of existing Slow Sand Filter Nos. 7-10 and 15-18, including the following:
 - 1. Static mixers.
 - 2. Flocculation tanks.
 - 3. DAF basins.
 - 4. Rapid sand filters.
 - 5. Filtered water weir box.
 - 6. Chemical storage and feed facilities, including the following chemical systems:
 - a. Polyaluminum chloride.
 - b. Cationic polymer.
 - c. Filter aid polymer.
 - d. Sodium hydroxide.
 - e. Sodium hypochlorite.
 - f. Phosphoric acid.
 - g. Space for future chemicals.
 - 7. Control room.
 - 8. Laboratory.
 - 9. Operations workshop.
 - 10. Administrative areas.
 - 11. Two waste washwater storage tanks.
 - 12. One centrate equalization tank.

- N. Dewatering Building, including centrifuges, solids conveyors, polymer storage, truck bay, control room, and floated solids storage tanks.
- O. Connections to existing finished water transmission mains.
- P. Electric-powered HVAC for new buildings.
- Q. Access roadways and gates.
- R. Sanitary collection and treatment system, including a new septic system and a tight tank.
- S. Potable and non-potable water systems for the new buildings.
- T. Primary electrical service system from a new service entrance, emergency power system, manual transfer switch with bypass connection for redundant portable generator, and power distribution system.
- U. PLC-based monitoring and control system.

ARTICLE 3 – ENGINEER

- 3.01 The Project has been designed by Hazen and Sawyer, 100 Great Meadow Road, Suite 702, Wethersfield, CT 06109 (hereinafter called Engineer), which is to act as Owner's representative, assume all duties and responsibilities and have the rights and authority assigned to Engineer in the Contract Documents in connection with completion of the Work in accordance with the Contract Documents.

ARTICLE 4 – CONTRACT TIMES

4.01 Time of the Essence

- A. All time limits for Milestones, if any, Substantial Completion and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.
- B. Project Milestones:
 - 1. Milestone 1: Backwash recirculation Work in the Owner's Backwash Pump Station, including, but not limited to, new interior 10-inch backwash water feed piping, air-release valve, magnetic flow meter, flow control valve, motorized valves, integration of the new flow meter and valves with the existing PLC-CLEARWELL-CP, modifications to existing PLC programming and SCADA graphic displays, functional field testing, training of the Owner's staff, and furnishing of all O&M manuals and spare parts. The Work will be substantially completed within 310 calendar days after the date when the Contract Times commence to run as provided in Paragraph 2.03 of the General Conditions.

2. Milestone 2: Partial utilization of the Administration Area of the West Parish Water Treatment Plant by the Owner. The Work will be substantially completed within 1,373 calendar days after the date when the Contract Times commence to run as provided in Paragraph 2.03 of the General Conditions.

4.02 Days to Achieve Substantial Completion and Final Payment

- A. The Work shall be substantially completed within 1,451 calendar days after the date when the Contract Times commence to run as provided in the General Conditions, and completed and ready for final payment in accordance with the General Conditions within 1,537 calendar days from the date when the Contract Times commence to run.

4.03 Liquidated Damages

- A. Owner and Contractor recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial loss if the Work is not substantially completed within the time specified in Paragraph 4.02.A for Substantial Completion, plus any extensions thereof allowed in accordance with the General Conditions. Owner and Contractor also recognize the delays, expense and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by Owner if the Work is not substantially completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty) Contractor shall pay Owner \$7,300.00 for each day that expires after the time specified in Paragraph 4.02.A above for Substantial Completion (adjusted for changes thereof, if any, made in the General Conditions) until the Work is substantially complete.
- B. Provisions for punitive damages associated with the performance of the Dewatering System are set forth in Specification Section 46 76 33 – Dewatering Centrifuges. Contractor shall refer to Part 2.03 Manufacturer Performance Penalties.

4.04 Special Damages:

- A. After Substantial Completion, if Contractor shall neglect, refuse or fail to complete the remaining Work within the Contract Time or proper extension thereof, if any, granted by Owner, Contractor shall pay Owner \$7,300.00 for each day that expires after the time specified in Paragraph 4.02.A for Work to be completed and ready for final payment (adjusted for extensions thereof, if any, made in accordance with the General Conditions) until the Work is completed and ready for final payment.

- 4.05 Owner may deduct liquidated damages and special damages as determined by the provisions of this Article 4 from progress payments due Contractor under this Agreement.

ARTICLE 5 – CONTRACT PRICE

- 5.01 Owner shall pay Contractor, in current funds, for completion of the Work in accordance with the Contract Documents the prices stated in Contractor's Bid, which Bid is attached

hereto and identified as Exhibit 1 of this Agreement. As provided in the General Conditions, estimated quantities are not guaranteed, and determinations of actual quantities and classifications are to be made by Engineer as provided in the General Conditions. Unit prices have been computed as provided in the General Conditions.

ARTICLE 6 – PAYMENT PROCEDURES

6.01 Submittal and Processing of Payments

- A. Contractor shall submit Applications for Payment in accordance with the General Conditions. Applications for Payment will be processed as provided in the General Conditions.

6.02 Progress Payments; Retainage

- A. Owner shall make monthly progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment as recommended by Engineer. Contractor's Applications for Payment will be due on the 30th day of each month, or as otherwise mutually agreed by Owner and Contractor, during performance of the Work as provided in Paragraph 6.02.A.1. All progress payments will be on the basis of the progress of the Work measured by the approved Schedule of Values provided for in the General Conditions. A progress payment will not be made whenever the value of the Work completed since the last previous progress payment is less than \$5,000.
 - 1. Progress payments will be made in accordance with Massachusetts General Laws, Chapter 30, Section 39K except as noted below.
 - 2. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Engineer may determine or Owner may withhold, including, but not limited to, liquidated damages in accordance with Paragraph 14.02 of the General Conditions.
 - a. 95 percent of Work completed (with balance being retainage); and
 - b. 95 percent of cost of materials and equipment not incorporated in the Work (with balance being retainage).
 - 3. Upon Substantial Completion, Owner shall pay Contractor the entire balance due on the contract less (1) a retention based on its estimate of the fair value of its claims against the contractor and of the cost of completing the incomplete and unsatisfactory items of work and less (2) a retention for direct payments to subcontractors based on demands for same in accordance with the provisions of Section 39 F, or based on the record of payments by the Contractor to the subcontractors under this contract if such record of payment indicates that the Contractor has not paid subcontractors as provided in Section 39 F.

4. Certified payrolls shall be submitted weekly and with each progress estimate.
5. No progress payments shall be made without receipt of up-to-date certified payrolls.
6. Applications for Payment shall include required American Iron and Steel certifications where applicable.

6.03 Final Payment:

- A. Upon final completion and acceptance of the Work in accordance with the General Conditions, Owner shall pay the remainder of the Contract Price as recommended by Engineer as provided in the General Conditions.

ARTICLE 7 – INTEREST

- A. Not used.

ARTICLE 8 – CONTRACTOR'S REPRESENTATIONS

8.01 As part of the inducement for Owner to enter into this Agreement, Contractor makes the following representations:

- A. Contractor has examined and carefully studied the Contract Documents and the other related data identified in the Bidding Documents.
- B. Contractor has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
- C. Contractor is familiar with and is satisfied as to the Laws and Regulations that may affect cost, progress, and performance of the Work.
- D. Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities); if any, that have been identified in Section 01 11 00 – Summary of Work as containing reliable “technical data”, and (2) reports and drawings of Hazardous Environmental Conditions, if any, at the Site that have been identified in Section 01 11 00 – Summary of Work as containing reliable “technical data”.
- E. Contractor has considered the information known to Contractor; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Site-related reports and drawings identified in the Contract Documents, with respect to the effect of such information, observations, and documents on:

1. The cost, progress, and performance of the Work;
 2. The means, methods, techniques, sequences and procedures of construction to be employed by Contractor, including applying the specific means, methods, techniques, sequences, and procedures of construction expressly required by the Contract Documents, and;
 3. Contractor's safety precautions and programs.
- F. Based on the information and observations referred to in Paragraph 8.01.E above, Contractor does not consider that further examinations, investigations, explorations, tests, studies or data are necessary for the performance of the Work at the Contract Price, within the Contract Times and in accordance with the other terms and conditions of the Contract Documents.
- G. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.
- H. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents and the written resolution thereof by Engineer is acceptable to Contractor.
- I. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work.
- J. Contractor's entry into this Contract constitutes an incontrovertible representation by Contractor that without exception all prices in the Agreement are premised upon performing and furnishing the Work required by the Contract Documents.

ARTICLE 9 – CONTRACT DOCUMENTS

9.01 The Contract Documents consist of the following:

- A. This Agreement
- B. Contract Security
- C. Conditions of the Contract
- D. Specifications, as listed in the table of contents of the Project Manual
- E. The Drawings bound to the Project Manual, comprising a set entitled "West Parish Water Treatment Plant", and including the following:
 1. Drawings number G-001 through E-4500.
- F. Addenda consisting of number 1 through _____, inclusive.

G. The following, which may be delivered or issued on or after the Effective Date of the Agreement, and are not attached hereto:

1. Notice to Proceed.
2. Work Change Directive(s)
3. Change Order(s)
4. Field Order(s)

9.02 The documents listed in Paragraph 9.01 above are attached to this Agreement (except as expressly noted otherwise above). Documents not attached are incorporated by reference. There are no Contract Documents other than those listed in this Article 9.

9.03 The Contract Documents may only be amended or supplemented as provided in the General Conditions.

ARTICLE 10 – MISCELLANEOUS

10.01 Terms

A. Terms used in this Agreement will have the meanings indicated in the General Conditions and the Supplementary Conditions.

10.02 Assignment of Contract

A. No assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, moneys that may become due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

10.03 Successors and Assigns

A. Owner and Contractor each binds itself, its partners, successors, assigns, and legal representatives to the other party hereto, its partners, successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

10.04 Severability

A. Any provision or part of the Contract Documents, held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Owner and Contractor, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof

with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

10.05 Waiver

- A. The waiver by the Owner of any breach or violation of any term, covenant, or condition of this Agreement or of any Law or Regulation shall not be deemed to be a waiver of any other term, covenant, condition, or Law or Regulation, or of any subsequent breach or violation of the same or of any other term, covenant, condition, or Law or Regulation. The subsequent payment of any monies or fee by the Owner which may become due hereunder shall not be deemed to be a waiver of any preceding breach or violation by Contractor of any term, covenant, condition of this Agreement or of any applicable Law or Regulation.

10.06 Contractor's Certifications

- A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 10.06:
 - 1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process or in the Contract execution;
 - 2. "fraudulent practice" means an intentional misrepresentation of facts made to:
 - a. influence the bidding process or the execution of the Contract to the detriment of Owner,
 - b. establish Bid or Contract prices at artificial non-competitive levels, or
 - c. deprive Owner of the benefits of free and open competition.
 - 3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and
 - 4. "coercive practice" means harming or threatening to harm directly or indirectly persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

10.07 Disadvantaged Business Enterprise (DBE) Participation

- A. The fair share goals for disadvantaged business enterprise (DBE) participation for this contract are a minimum of 4.8 percent Disadvantaged Minority Business Enterprise (D/MBE) participation and 6.9 percent Disadvantaged Women Business Enterprise (D/WBE) participation, applicable to the total dollar amount paid for the construction contract. The Contractor shall take all affirmative steps necessary to achieve this goal,

and shall provide reports documenting the portion of contract and subcontract dollars paid to DBEs, and its efforts to achieve the goals, with each invoice submitted or at such greater intervals as specified by the Owner. The Contractor shall require similar reports from its subcontractors.

- B. 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://www.epa.gov/grants/disadvantaged-business-enterprise-program-requirements#sixgoodfaithefforts>.

10.08 Equal Employment Opportunity/Affirmative Action (EEO/AA) Requirements

- A. 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 September 24, 1965, entitled 'Equal Employment Opportunity', as amended by Executive Order No. 11375, and as supplemented in Department of Labor regulations (41 CFR Part 60), and of the rules, regulations, and relevant orders of the Secretary of Labor. (EO 11246, 30 FR 12319, September 28, 1965). Contractor's compliance with Executive Order No. 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.
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. Comp., P. 684, EO 12086 of October 5, 1978, 43 FR 46501, 3 CFR, 1978 Comp., p. 230.
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 September 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 Articles 10.08.A.1 through 10.08.A.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 October 13, 1967, 32 FR 14303, 3 CFR, 1966-1970 Comp., p. 684, EO 12086 of October 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].

B. The Contractor shall comply with the following federal non-discrimination requirements:

1. 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).
2. 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).
3. The Age Discrimination Act of 1975, which prohibits age discrimination. (42 U.S.C 6101 et. seq).
4. Section 13 of the Federal Water Pollution Control Act Amendments of 1972, which prohibits discrimination on the basis of sex.
5. 40 CFR Part 7, as it relates to the foregoing.

10.09 The Contractor shall not participate in or cooperate with an international boycott, as defined in Section 999(b)(3) and (4) of the Internal Revenue Code 1986, as amended, or engage in conduct declared to be unlawful by Section 2 of Chapter 151E of the Massachusetts General Laws.

10.10 Change Orders

A. In accordance with the Massachusetts Department of Environmental Protection's Policy Memorandum #10, the agreed upon direct labor markup for Change Orders on this project shall be an amount not to exceed ____ of the sum of the following:

1. The estimated cost of labor.
2. Direct labor cost.
3. Material and freight costs.
4. Equipment costs.

B. In the case of work done by a subcontractor, the agreed upon direct labor markup for Change Orders on this project shall be an amount not to exceed 5% of the following for the Contractor's overhead and profit:

1. Subcontractor's estimated cost of labor.
2. Subcontractor's direct labor cost.
3. Subcontractor's material and freight costs.
4. Subcontractor's equipment costs.

10.11 Not Used.

10.12 The Build America Buy America (BABA) requirements are waived for this Contract based on EPA's Decision Memorandum titled Adjustment Period Waiver of Section 70914(a) of P.L. 117-58, Build America, Buy America Act for SRF Projects that have initiated Design Planning issued September 2, 2022.

10.13 This Contract is subject to the American Iron and Steel requirements of P.L. 113-76, the Consolidated Appropriations Act of 2014.

A. The Contractor acknowledges to and for the benefit of the Owner, the Commonwealth of Massachusetts, 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 Drinking Water State Revolving Fund and the Water Infrastructure Finance and Innovation Act program of the EPA that have statutory requirements commonly known as "American Iron and Steel" that requires all of the iron and steel products used in the Contract to be produced in the United States ("American Iron and Steel Requirement"), including iron and steel products provided by the Contractor pursuant to this Agreement. The Contractor hereby represents and warrants to and for the benefit of the Owner, the Commonwealth of Massachusetts, and the EPA that:

1. The Contractor has reviewed and understands the American Iron and Steel Requirement.
2. 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.
3. 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 Owner, the Commonwealth of Massachusetts, or the EPA.

B. Notwithstanding any other provision of this Agreement, any failure to comply with this Article by the Contractor shall permit the Owner, the Commonwealth of Massachusetts, or the EPA to recover as damages against the Contractor any loss, expense, or cost (including without limitation attorney's fees) incurred by the Owner, the Commonwealth of Massachusetts, 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 Commonwealth of Massachusetts or the EPA or any damages owed to the Commonwealth of Massachusetts or the EPA by the Owner). While the Contractor has no direct contractual privity with the Commonwealth of Massachusetts or the EPA, as a lender to the Owner for the funding of this Contract, the Owner and the Contractor agree that the Commonwealth of Massachusetts and the EPA is each a third-party beneficiary and neither this Article (nor any other provision of this Agreement necessary to give this Article force or effect) shall be amended or waived without the prior written consent of the Commonwealth of Massachusetts or the EPA.

C. Compliance with American Iron and Steel is required in accordance with P.L. 113-76, Section 436.

10.14 Minimum Wage Rates as determined by the Executive Office of Labor and Workforce Development under the provision of the Massachusetts General Laws, Chapter 149, Sections 26 to 27D, as amended, apply to this Contract. It is the responsibility of the Contractor, before bid opening, to request if necessary, any additional information on Minimum Wage Rates for those trades people who may be employed for the proposed Work under this Contract.

10.15 Davis-Bacon Prevailing Wage Rate Requirements

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 CFR §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

a. 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)(d) of this Article; 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)(b) of this Article) 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.

b.

- 1) The Owner, 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 Commonwealth of Massachusetts award official and Owner shall approve a request for an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:
 - a) The work to be performed by the classification requested is not performed by a classification in the wage determination.
 - b) The classification is utilized in the area by the construction industry.
 - c) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.
- 2) If the Contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the Owner agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report and documentation of the action taken and the request, including the local wage determination, shall be sent by the Owner to the Commonwealth of Massachusetts award official. The Commonwealth of Massachusetts award official will transmit the request to the Administrator of the Wage and Hour Division (WHD Administrator), Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210 and to the EPA DB Regional Coordinator concurrently. The WHD Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification request within 30 days of receipt and so advise the Commonwealth of Massachusetts award official and the Owner or will notify the

Commonwealth of Massachusetts award official and the Owner within the 30-day period that additional time is necessary.

- 3) In the event the Contractor, the laborers or mechanics to be employed in the classification or their representatives, and the Owner do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the award official shall refer the request and the local wage determination, including the views of all interested parties and the recommendation of the Commonwealth of Massachusetts award official, to the WHD Administrator for determination. The request shall be sent to the EPA DB Regional Coordinator concurrently. The WHD Administrator, or an authorized representative, will issue a determination within 30 days of receipt of the request and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.
- 4) The wage rate (including fringe benefits where appropriate) determined pursuant to Paragraphs (A)(1)(b)(2) or (3) of this Article, 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.

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

- a. The Owner, shall upon written request of the EPA Award Official, 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 EPA Award Official or 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

- a. 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.
- b.
 - 1) The Contractor shall submit weekly, for each week in which any contract work is performed, a copy of all payrolls to the Owner. Such documentation shall be available on request of the Commonwealth of Massachusetts or EPA. As to each payroll copy received, the Owner shall provide written confirmation in a form satisfactory to the Commonwealth of Massachusetts and EPA indicating whether or not

the project is in compliance with the requirements of 29 CFR 5.5(a)(1) based on the most recent payroll copies for the specified week. The payrolls 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 the weekly payrolls. 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 <https://www.dol.gov/whd/forms/wh347.pdf> 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 the Owner for transmission to the Commonwealth of Massachusetts or EPA if requested by EPA, the Commonwealth of Massachusetts, 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 Article for a Contractor to require a subcontractor to provide addresses and social security numbers to the Contractor for its own records, without weekly submission to the Owner.

- 2) 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:
 - a) 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.
 - b) 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.
 - c) 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.

- 3) 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 (C)(2)(b) of this Article.
 - 4) 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.
- c. The Contractor or subcontractor shall make the records required under Paragraph (C)(1) of this Article available for inspection, copying, or transcription by authorized representatives of the Owner, Commonwealth of Massachusetts, 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 or Commonwealth of Massachusetts may, after written notice to the Contractor, sponsor, applicant, or Owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.
4. Apprentices and Trainees
- a. 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.

- b. 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.

- c. 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 determines may be appropriate, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The 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 Owner, Commonwealth of Massachusetts, EPA, the U.S. Department of Labor, or the employees or their representatives.
10. Certification of Eligibility
 - a. 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).
 - b. (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).
 - c. 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 Articles 10.14.B.1 through 10.14.B.4 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 Article the Contractor and any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, such Contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in Paragraph (B)(1) of this Article, 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 Article.
 3. Withholding for Unpaid Wages and Liquidated Damages. The Owner, upon written request of the EPA Award Official or an authorized representative of the Department of Labor, shall 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 Contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same 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 Article.
 4. Subcontracts. The Contractor or subcontractor shall insert in any subcontracts the clauses set forth in Paragraphs (B)(1) through (B)(4) of this Article 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 (B)(4) of this Article.
- C. In addition to the clauses contained in Paragraph (B) of this Article, 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 Owner 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 Owner, EPA and the Department of Labor, and the Contractor or subcontractor will permit such representatives to interview employees during working hours on the job.

D. Compliance Verification

1. The Owner shall periodically interview a sufficient number of employees entitled to DB prevailing wages (covered employees) to verify that contractors or subcontractors are paying the appropriate wage rates. As provided in 29 CFR 5.6(a)(6), all interviews must be conducted in confidence. The Owner must use Standard Form 1445 (SF 1445) or equivalent documentation to memorialize the interviews. Copies of the SF 1445 are available from EPA on request.
2. The Owner shall establish and follow an interview schedule based on its assessment of the risks of noncompliance with DB posed by contractors or subcontractors and the duration of the contract or subcontract. At a minimum, the Owner should conduct interviews with a representative group of covered employees within two weeks of each Contractor or subcontractor's submission of its initial weekly payroll data and two weeks prior to the estimated completion date for the contract or subcontract. The Owner must conduct more frequent interviews if the initial interviews or other information indicates that there is a risk that the Contractor or subcontractor is not complying with DB. Owner shall immediately conduct necessary interviews in response to an alleged violation of the prevailing wage requirements. All interviews shall be conducted in confidence.
3. The Owner shall periodically conduct spot checks of a representative sample of weekly payroll data to verify that Contractors or subcontractors are paying the appropriate wage rates. The Owner shall establish and follow a spot check schedule based on its assessment of the risks of noncompliance with DB posed by Contractors or subcontractors and the duration of the contract or subcontract. At a minimum, if practicable, the Owner should spot check payroll data within two weeks of each Contractor or subcontractor's submission of its initial payroll data and two weeks prior to the completion date the contract or subcontract. The Owner must conduct more frequent spot checks if the initial spot check or other information indicates that there is a risk that the Contractor or subcontractor is not complying with DB. In addition, during the examinations the Owner shall verify evidence of fringe benefit plans and payments thereunder by contractors and subcontractors who claim credit for fringe benefit contributions.

4. The Owner shall periodically review contractors and subcontractors use of apprentices and trainees to verify registration and certification with respect to apprenticeship and training programs approved by either the U.S Department of Labor or a state, as appropriate, and that contractors and subcontractors are not using disproportionate numbers of, laborers, trainees and apprentices. These reviews shall be conducted in accordance with the schedules for spot checks and interviews described in Item 5(b) and (c) above.
5. The Owner must immediately report potential violations of the DB prevailing wage requirements to the EPA DB contact listed above and to the appropriate DOL Wage and Hour District Office listed at https://www.dol.gov/whd/whd_district_offices.pdf.

10.16 Suspension and Debarment

- A. The Contractor agrees that it will fully comply with Subpart C of 2 CFR Part 180 and 2 CFR Part 1532, entitled Responsibilities of Participants Regarding Transactions (Doing Business with Other Persons), and that it will not knowingly enter into a contract with anyone who is ineligible under 2 CFR Part 180 and 2 CFR Part 1532 (per Executive Order 12549, 51 FR 6370, February 21, 1986) 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. The Contractor shall not award any subcontracts or purchase any materials from suppliers that appear on the Excluded Parties List System. Suspension and debarment information can be accessed at <https://sam.gov/content/exclusions>. The Contractor represents and warrants that it shall include this requirement in each subcontract and require it to be included in all subcontracts regardless of tier. The Contractor shall maintain reasonable records to demonstrate compliance with these requirements.

10.17 Federal Lobbying Restrictions

- A. 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.

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

- A. As used in these specifications:

1. "Covered area" means the geographical area described in the solicitation from which this contract resulted;
 2. "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;
 3. "Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.
 4. "Minority" includes:
 - a. Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);
 - b. Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);
 - c. 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
 - d. 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).
- B. 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.
- C. 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.

- D. The Contractor shall implement the specific affirmative action standards provided in paragraphs Articles 10.17.G.1 through 10.17.G.16 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.
- E. 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.
- F. 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.
- G. 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:
1. 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.
 2. 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.

3. 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.
4. 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.
5. 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.
6. 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.
7. 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.
8. 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.

9. 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.
 10. 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.
 11. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR part 60-3.
 12. 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.
 13. 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.
 14. 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.
 15. 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.
 16. Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.
- H. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (Articles 10.17.G.1 through 10.17.G.16). 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 Articles 10.17.G.1 through 10.17.G.16 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.

- I. 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).
- J. 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.
- K. The Contractor shall not enter into any Subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.
- L. 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.
- M. 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.
- N. 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.

- O. 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).

10.19 Segregated Facilities (41 CFR 60-1.8)

- A. 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.

10.20 Prohibition on Certain Telecommunications and Video Surveillance Services or Equipment

- A. 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:
 - 1. Telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).
 - 2. 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).

3. Telecommunications or video surveillance services provided by such entities or using such equipment.
 4. 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.
- B. The Act does not prohibit:
1. Procuring with an entity to provide a service that connects to the facilities of a third-party, such as backhaul, roaming, or interconnection arrangements.
 2. 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.

Pursuant to M.G.L. c.44, s31C, I certify that an appropriation has been made in the total amount of the contract.

Owner's Accountant or Auditor: _____

Signature: _____

Name: _____

Title: _____

IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement on the day and year first written above.

This Agreement will be effective on _____, _____ (which is the Effective Date of the Agreement).

Owner: _____ Contractor: _____

Signature: _____ Signature: _____

Name: _____ Name: _____

Title: _____ Title: _____

(CORPORATE SEAL)

(CORPORATE SEAL)

Attest _____ Attest _____

Title: _____ Title: _____

Address for giving notices

Address for giving notices

Agent for service of process: _____

(Attach evidence of authority to sign and resolution or other documents authorizing execution of Agreement.)

(If Contractor is a corporation, partnership, or limited liability company, attach evidence of authority to sign.)

Designated Representative:

Name: _____

Title: _____

Address: _____

Phone No.: _____

Fax No.: _____

Designated Representative:

Name: _____

Title: _____

Address: _____

Phone No.: _____

Fax No.: _____

END OF AGREEMENT

NO TEXT ON THIS PAGE

Attachment F – 01 14 00 Coordination with Owner’s Operations

SECTION 01 14 00¹
COORDINATION WITH OWNER'S OPERATIONS

PART 1 – GENERAL

1.01 SUMMARY

A. Section Includes:

1. Requirements for coordinating with Owner's operations during the Work and included requirements for tie-ins and shutdowns necessary to complete the Work without impact on Owner's operations except as allowed in this Section.
2. Contractor shall provide labor, materials, tools, equipment and incidentals shown, specified and required to coordinate with Owner's operations during the Work.

B. General Requirements:

1. Except for shutdowns specified in this Section, Contractor shall coordinate and perform the Work such that Owner's water treatment facility remains in continuous satisfactory operation during the Project. Schedule and conduct the Work such that the Work does not: impede Owner's water treatment production or processes, create potential hazards to operating equipment and personnel, reduce the quality of the facility's water treatment process, or cause odors or other nuisances.
 - a. In no case is a shutdown allowed for the Rapid Sand Filter Plant.
 - b. In no case is a full shutdown allowed to the Hydraulic Control Structure.
 - c. Any shutdown of Slow Sand Filter (SSF)² Nos. 11-14 requires prior approval of the Owner and as consistent with submittals related to shutdowns or tie-ins. Shutdowns will not be approved for excavation work adjacent to structures.³
2. The three transmission mains that connect the Site and Provin Mountain Storage Facility will be referred to as 54" main (also known as TM 1 or North), 42" main (also known as TM 2 or Middle) and the 60" main (also known as TM 3 or South). These mains are shown on the Drawings.
3. Work not specifically covered in this Section or in referenced Sections may, in general, be completed at any time during regular working hours in accordance with

1 Addendum No. 12

2 Addendum No.2

3 Addendum No.4

the General Conditions and Supplementary Conditions, subject to the requirements in this Section.

4. Contractor has the option of providing additional temporary facilities that can eliminate or mitigate a constraint without additional cost to Owner, provided such additional temporary facilities: do not present hazards to the public, personnel, structures, and equipment; that such additional temporary facilities do not adversely affect Owner's ability to comply with Laws and Regulations, permits, and operating requirements; that such temporary facilities do not generate or foster the generation of odors and other nuisances; and that requirements of the Contract Documents are fulfilled.
5. Do not shut off or disconnect existing operating systems, unless accepted by Engineer in writing. All lockout/tagout of existing operating systems shall be performed collaboratively between the Owner and Contractor. Operation of existing equipment will be by the Owner. Where necessary for the Work, Contractor shall seal or bulkhead Owner-operated gates and valves to prevent leakage that may affect the Work, Owner's operations, or both. All sealing and bulkheading shall be performed in coordination with the Owner. Provide temporary watertight plugs, bulkheads, and line stops as required. After completing the Work, remove seals, plugs, bulkhead, and line stops to satisfaction of the Engineer.
6. All existing infrastructure shall be operated by Owner. This includes but is not limited to equipment, valves and gates within the Slow Sand Filter and Rapid Sand Filter facilities, and in the yard.

C. Continuous Treatment Provision:

1. The Owner's water treatment facility is a drinking water treatment plant that consists of a direct filtration and slow sand filters and provides safe drinking water to 250,000 customers. Continuous operation of these treatment facilities are required at all times.
2. Contractor shall provide labor, equipment, materials, and incidentals to provide continuous treatment to the level prior to construction Work.
3. Contractor shall be responsible for providing temporary pumping facilities, chemical feed systems, systems, piping, valves, appurtenances, equipment, materials, and temporary utilities as may be necessary to complete the Work without treatment bypassing.

D. Related Sections:

1. Section 01 11 00 – Summary of Work
2. Section 01 25 00 – Substitution Procedures
3. Section 01 73 00 – Execution of Work

1.02 REFERENCES

A. Definitions:

1. A “shutdown” is when a portion of the normal operation of Owner’s facility, whether equipment, systems, piping, or conduit, has to be temporarily suspended or taken out of service to perform the Work.
2. A “tie-in” refers to a connection by Contractor of temporary or permanent infrastructure to the Owner’s existing infrastructure including but not limited to water treatment facilities and transmission mains.

1.03 ADMINISTRATIVE REQUIREMENTS

A. Coordination:

1. Review installation procedures under other Specification sections and coordinate Work that must be performed with or before the Work specified in this Section.
2. Notify other contractors in advance of Work requiring coordination with Owner’s operations, to provide other contractors sufficient time for work included in their contracts that must be installed with or before Work specified in this Section.
3. When possible, combine multiple tie-ins into a single transmission main shutdown to minimize impacts on Owner’s operations and processes.

B. Pre-Shutdown Meetings: Contractor shall schedule and conduct meetings with Owner and Engineer prior to scheduling any shutdown or tie-in. Each transmission main shutdown or tie-in requires the submittal of a detailed shutdown or tie-in plan and a proposed schedule for review and approval by the Owner and Engineer. The final scheduling of each shutdown or tie-in must be approved by the Owner.

C. Sequencing:

1. Perform the Work in the specified sequence. Certain phases or stages of the Work may require working 24-hour days or work during hours outside of regular working hours. Work may be accelerated from a later stage to an earlier stage if Owner’s operations are not adversely affected by proposed sequence change, with Engineer’s acceptance. Stages specified in this Section are sequential in performance of the Work.

D. Scheduling:

1. Work that may interrupt normal operations shall be accomplished at times convenient to Owner.
2. Furnish at the Site, in close proximity to shutdown and tie-in work areas, tools, equipment, spare parts and materials, both temporary and permanent, necessary

to successfully complete the shutdown. Complete to the extent possible, prefabrication of piping and other assemblies prior to the associated shutdown. Demonstrate to Engineer's satisfaction that Contractor has complied with these requirements before commencing the shutdown.

3. If Contractor's operations cause an unscheduled interruption of Owner's operations, immediately re-establish satisfactory operation for Owner.
4. Unscheduled shutdowns or interruptions of continued safe and satisfactory operation of Owner's facilities are not acceptable. All fines or penalties by authorities having jurisdiction, all costs incurred by the Owner for responding to emergencies (e.g., public notices and emergency response), and all of the Owner's costs associated with the interruption shall be paid solely by Contractor if, in Engineer's opinion, Contractor did not conform to the requirements of the Contract Documents, or was negligent in the Work, or did not exercise proper precautions in conducting the Work.
5. Work requiring service interruptions for tie-ins shall be performed during scheduled shutdowns.
6. Temporary, short-term shutdowns of any piping, conduits, equipment, and systems may be required. Coordinate requirements for such shutdowns with Engineer and Owner.

1.04 SUBMITTALS

A. Action/Informational Submittals:

1. **Sequence of work:** The Contractor shall submit a detailed description of the proposed sequence. The sequence shall be supported by drawings, schedule and duration of activities, and details of equipment proposed to perform the work.
2. **Substitute Sequence Submittal:** When deviation from specified sequence is proposed, provide submittal explaining in detail the proposed sequence change and its effects, including evidence that Owner's operations will not be adversely affected by proposed change. List benefits of proposed sequence change, including benefits to Progress Schedule. Submit in accordance with Section 01 25 00 – Substitution Procedures.
3. **Shutdown and Tie-In Planning Submittal:**
 - a. For each shutdown and tie-in, submit an inventory of labor and materials required to perform the shutdown and tie-in tasks, an estimate of time required to accomplish the complete shutdown including time for Owner to take down and start up existing equipment, systems, or conduits, and written description of steps required to complete the Work associated with the shutdown and tie-in.

- b. Furnish submittal to Engineer at least thirty (30) calendar days prior to proposed shutdown and tie-in start date. Do not start work until obtaining Engineer's acceptance of shutdown planning submittal.
 - c. Owner shall initiate all shutdowns and tie-ins. Do not start work until Owner has authorized Contractor to proceed following Owner's initiation of all shutdowns and tie-ins.
4. Shutdown and Tie-In Scheduling: After acceptance of shutdown and tie-in planning submittal and prior to starting the shutdown, meet with the Engineer and the Owner to discuss and agree on the date and time each shutdown and tie-in is to start.

1.05 SITE CONDITIONS

- A. General Constraints: Specified in the Contract Documents are the sequence and shutdown durations, where applicable, for Owner's equipment, systems, and conduits that are to be taken out of service temporarily for the Work. New equipment, materials, and systems may be used by Owner after the specified field quality controls and testing are successfully completed and the materials or equipment are Substantially Complete.
- B. In no case is a shutdown allowed for the Rapid Sand Filter Plant. Any shutdown of Slow Sand Filter Nos. 11-14 requires prior approval of the Owner and as consistent with submittals related to shutdowns or tie-ins.
- C. The following constraints apply to coordination with Owner's operations:
 - 1. Operational Access: Owner's personnel shall have access to equipment and areas that remain in operation.
 - 2. Schedule and perform equipment and system start-ups for Monday through Thursday. Equipment and systems shall not be placed into operation on Friday, Saturday, and Sunday without prior approval of Owner.
 - 3. Dead End Valves or Pipe: Provide blind flanges, watertight bulkheads, or valves at temporary and permanent terminuses of pipes and conduits. Blind flanges and bulkheads shall be suitable for the service and braced and blocked, as required, or otherwise restrained as directed by Engineer. Temporary valves shall be suitable for their associated service. Where valve is provided at permanent terminus of pipe or conduit, also provide on downstream side of valve a blind flange with drain/flushing connection.
 - 4. The Contractor shall be responsible for dewatering process tanks, basins, conduits, and other work areas to be dewatered for shutdowns and tie-ins. Maintain clean and dry work area by pumping and properly disposing of fluid that accumulates in work areas.

5. Draining and Cleaning of Conduits, Tanks, and Basins: The Contractor will dewater process tanks and basins at beginning of each shutdown and as required for decommissioning. The Contractor shall flush and wash down tanks and basins with potable water.
6. Draining and cleaning conducted by Contractor shall be as specified below:
 - a. Contractor shall remove liquids and solids and dispose of them at appropriate location at the Site as directed by Engineer. Contents of pipes, tanks, basins, and conduits undergoing modifications shall be transferred to existing process tanks or conduits at the Site with capacity sufficient to accept such discharges, using hoses, piping, pumps, or other means provided by Contractor. Discharge of fluids across floors is not allowed.
 - b. If drainage point is not available on the piping or conduit to be drained, provide a wet tap using tapping saddle and valve or other method approved by Engineer. Uncontrolled spillage of pipe's or conduit's contents is not allowed.
 - c. Spillage shall be brought to Engineer's attention immediately, both verbally and in writing, and reported in accordance with Laws and Regulations. If spillage is not suitable for discharge to the drainage system, such as chemical spills, as determined by Engineer, Contractor shall remove spillage by other method as acceptable to the Engineer.
7. Electrical, Control, Communication, and Monitoring Systems:
 - a. Owner's existing SCADA system and fiber optic network shall remain functional, subject to the constraints herein.
 - b. Existing fiber optic communications and network connectivity within and between the Owner's facilities shall remain operational at all times except when required to be off-line due to a planned and scheduled outage.
 - c. Unless Contractor elects to use existing fiber and/or temporary fiber, at their discretion, at least one communication path through the new dual redundant fiber optic communication points shall be in place at all times until substantial completion.
 - d. With Owners and Engineers written concurrence, each existing process area shall be permitted to have a single, non-concurrent, scheduled outage for the purpose of making required PLC panel hardware modifications, loading the associated PLC logic, and its field testing/demonstration. Field testing and demonstration shall immediately follow modifications in an effort to keep scheduled shutdowns as short as possible. A 14-day period of no SCADA outage shall proceed each scheduled shutdown.
8. Owner's Existing Systems and Water Sources for Testing:

- a. Use of the Owner's Existing Backwash Pumps:
 - 1) The Owner relies on the existing backwash pumps to backwash existing filters that must remain in operation during the Project. Contractor shall schedule use of the existing backwash pumps with the Owner. All existing equipment shall be operated by the Owner.
 - 2) Contractor shall coordinate with the Owner any use of the existing backwash pumps to perform field testing and startup activities in accordance with Section 01 75 00 – Checkout and Startup Procedures. Owner reserves the right to suspend the use of the existing backwash pumps at any time. All existing equipment shall be operated by the Owner.

- b. Use of Elevated Storage Tank and Fire Loop Piping:
 - 1) The Owner relies on the existing elevated storage tank and fire loop piping for the existing fire protection system. This system will remain in operation during the Project. Contractor shall schedule use of this system with the Owner.
 - 2) Owner shall allow Contractor use of the elevated storage tank and fire loop piping to perform field testing and startup activities in accordance with Section 01 75 00 – Checkout and Startup Procedures. Owner shall approve any use of this system in advance and reserves the right to suspend the use of this system at any time.
 - 3) In the event that Owner approves use of this system for Contractor's field testing and startup activities, Contractor shall provide a backflow preventer and flow meter to support such use. Contractor shall be responsible for providing an approved backflow prevention device to be inspected and tested by the Owner at its discretion.

- c. Use of Raw Water Sources:
 - 1) The Owner relies on the raw water sources at the Energy Dissipation Valve Facility, the Control Tunnel and Sedimentation Basin. These systems will remain in operation during the Project. Any use of raw water from the Owner's water supply system requires prior approval of the Owner. All existing equipment shall be operated by the Owner.
 - 2) Owner shall allow Contractor use of a raw water source to perform field testing and startup activities in accordance with Section 01 75 00 – Checkout and Startup Procedures. Owner reserves the right to suspend the use of this system at any time. All existing equipment shall be operated by the Owner.

- d. No other owner supplied water source may be used by the Contractor without explicit written permission from the Owner.⁴
9. Hydraulic Isolation Between New and Existing Facilities:
- a. The Contractor shall ensure that the new, West Parish Water Treatment Plant remains hydraulically isolated from the existing treatment facilities at all times at the West Parish Filter site. The Contractor shall coordinate with the Owner to ensure that interconnections between these systems at the West Parish Filter Site are closed unless otherwise directed by the Owner.

10. Cleaning of Chemical Tanks and Pipelines

- a. The Contractor will be responsible for draining, disposing, cleaning and flushing of existing chemical systems noted herein. Chemical systems include all bulk storage, day storage, metering and transfer pumps, and all pipelines.
- b. The Contractor shall legally dispose all chemicals and all materials generated by the cleaning. Volumes of chemical required for disposal are indicated herein.
- c. NOT USED²
- d. Chemical systems include the following:²

CHEMICAL	Concentration	Volume for Disposal
Polymer C-379	NA	1,900 gal
Aluminum Chlorohydrate PC-2800	NA	1,200 gal
Phosphoric Acid	75%	3,700 gal
Sodium Hydroxide	50%	9,700 gal

- e. Each chemical tank should be emptied of chemical prior to any cleaning. Once the chemical storage tanks have been emptied, they should be flushed with clean water, either via spraying them down through the manway at the top of each tank, or via filling and draining the tanks.
- f. All chemical piping and pumps for each system listed above shall be flushed including but not limited to fill piping to the bulk tanks, piping between bulk tanks and day tanks, and piping between the day tanks and the injection point. All equipment and accessories shall be flushed including but not limited to transfer pumps, metering pumps and calibration columns. All components shall be flushed with process or hydrant water for a minimum of 5 minutes.

- g. The Contractor shall clean to levels below detectable limits of target chemical and removal of all visible surface contamination. The Contractor shall have a Massachusetts-licensed independent testing laboratory take surface swabs, perform testing and provide test reports to certifying compliance with the specified cleaning.
- h. 10 samples shall be taken for each chemical system, tested and reported on. Of the 10 samples, 2 samples shall be taken from the interior surface of each bulk tank, 2 samples shall be taken from the interior surface of each day tank, and 6 samples shall be taken from the pipeline at multiple locations as directed by the owner.

11. Chlorine Injection Bypass

- a. The Contractor shall be responsible for maintaining chlorine injection into TM 3 (South) at all times. During the work required to the buried chlorine line, the Contractor shall provide a chlorine bypass to maintain chemical injection. One available solution is to use the temporary 3" NSF certified hose between the chlorine feeder handhole (shown on C-251), and the hydraulic control structure. Where running across the road, the hose shall be protected with an H20 rated ramp, plate, or sleeve so that vehicles may pass over it without disruption. The Contractor may also choose to bury the hose at a depth that would prevent any damage to it. The Contractor shall provide a contingency plan to clean the area and provide a backup means of conveyance in case of spillage. The Contractor shall be prepared with materials and labor to enact the plan while the bypass is in use. This chlorine bypass shall be available for installation at any time." ²

1.06 SEQUENCE OF WORK

- A. ⁴Perform the Work in the specified sequence or as otherwise approved by Engineer. Certain phases or stages of the Work may require working 24-hour days or work during hours outside of regular working hours. Work may be accelerated from a later stage to an earlier stage if Owner's operations are not adversely affected by proposed sequence change, and with Engineer's acceptance. Stages specified in this Section are sequence-dependent.
 - 1. Perform Construction Sequencing Phase I per Contract Drawing C-002, steps 1-5.
 - 2. Perform Construction Sequencing Phase I, Step 6: Treated Water Piping Demolition and Reconfiguration.
 - a. The operation of existing Rapid Sand Filter Plant and SSF Nos. 11-14 shall not be interrupted under any circumstance with the exception of filtered

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water operations described below. Shutdowns described below shall occur in coordination with the Owner and Engineer.

- b. SSF 9-10, and SSF 15-18 shall remain operational until noted below.
- c. The shutdowns related to Tie-ins 2 and 4 may last no longer than 2 days. The shutdown related to Tie-in 3 may last no longer than 10 days. Shutdown restrictions for Tie-ins 7E, 7W, 8E, 8W, 9E and 9W are described below. Once each shutdown is initiated, the Contractor shall work continuously until the work corresponding to that shutdown is complete. Once all new connections have been made, tested, and disinfected, the regular operation of the existing facilities shall resume.
- d. The shutdowns related to Tie-ins 2, 3, 4 and the tie-ins by SSF 11-14 (7E, 7W, 8E, 8W, 9E, 9W) must occur during the low demand season between November 1 and April 30. Tie-ins shall not be permitted on holiday or holiday weekends including Thanksgiving, Christmas, New Years, Memorial Day, July 4th and Labor Day.⁵
- e. Connections to the Phosphate and Caustic lines are required for the construction of the new chemical injection vault. These connections must be made in a manner that does not remove the ability for chemical injection in the existing injection vaults. Additionally, chemical injection must be maintained to the system at all times without interruption.⁶
- f. Before the Tie-ins begin, the interconnection at Sackett Road shall be opened (valves 11828 through 11834).⁶
- g. Tie-ins 1, 2, 3 and 4 part 1 may occur in the order proposed by the Contractor and approved by the Owner. Once these tie-ins are complete, the Contractor may proceed with Tie-in 4 part 2. Once Tie-in 4 part 2 is complete, the Contractor may proceed with the remaining Tie-ins. No two tie-ins may occur simultaneously unless approved by the Owner. Tie-ins shall not be permitted on holiday or holiday weekends including Thanksgiving, Christmas, New Years, Memorial Day, July 4th and Labor Day.⁴⁶
- h. The Tie-ins are shown in the Civil and General drawings. They are described as follows: ⁶
 - 1) Tie-In No. 1 shall consist of installing two, 42" line stops at the existing 42" treated water pipe (TM 2 Middle), followed by cutting and draining the existing 42" filtered water main, disinfecting the entire section between the linestops per Section 40 05 00 – Basic Mechanical Requirements, then connecting a new steel fitting into the main. The

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Contractor shall construct a 36" temporary main up to a new, closed butterfly valve. The Contractor shall install piping, valves, thrust blocks, and cut and cap the 42" line as shown on the Drawings. ⁶

- 2) Tie-In 2 shall consist of isolating the north side of the hydraulic control by closing gates and installing stop logs within structure. Complete tie-in 2 by coring the hydraulic control structure and installing the temporary treated water pipe, valve and slide gate shown in the Contract Drawings. Once Tie-in 2 is complete, the Contractor shall clean the hydraulic control structure and return it to service. To complete this work, the Raw Water lines feeding filtered water and washwater reservoir (formerly SSF 7), sand storage (formerly SSF 8), SSF 9-10 may be removed from service. ⁶
- 3) Tie-In No. 3 shall consist of shutting down SSF 11-14 and installing a linestop in the 36" treated water main. Once the linestop is installed, the Contractor shall cut and drain the 36" treated water main, then install a 36" x 36" x 36" tee, valve, and complete the connection to the hydraulic control structure. The new chemical injection vault shall be completed and commissioned by this time. ⁶
- 4) Tie-In 4 shall be conducted in two parts. ⁶
 - a) Part 1: The Contractor shall install a linestop on the 36" treated water pipe stub from TM 3 (South). The Contractor shall then make the connection to this stub with the 36" temporary treated water line and 36" butterfly valve. A new blowoff connection shall be installed on this stub. By this time, all temporary bypass conduits associated with Tie-ins 1 through 4 shall be installed and tested. ⁶
 - b) Part 2: The Owner shall close valves 11827, BV-36-02, BV-36-03 and BV-36-05 to take this section of TM 3 (South) offline and dewater it. The Contractor shall open the new slide gate and valves installed during Tie-in 2 to send flow North out of the Hydraulic Control Structure. The Contractor shall cut and cap TM 3 (South) at the location shown on the Contract Drawings at the location east of Existing Regulator House No 4. Simultaneously along with this step, the Contractor shall move the existing ultrasonic flow meter on TM 3 (South) from the existing metering vault to a new metering vault built along the temporary treated water line. ⁶
 - c) Contractor shall return TM 3 (South) to service by opening new valves and linestops installed with Tie-ins 1, 2, 3 and 4, and the Owner shall close valve 215. ⁶

- d) After Tie-In No. 4 is completed, tested, and disinfected, the Contractor may begin interim conditions as shown on G-013. Once interim conditions begin, the 60" treated water line (TM 3 South) may be removed within the footprint of the project as shown on the Contract Drawings, which includes cutting and capping TM 3 at the 42" section by the Northwest corner of SSF 15. At this time, SSF 15-18 may be removed from service and corresponding raw water lines removed per the extent shown on the Contract Drawings.⁶
- 5) Tie-In 5 shall consist of installing two, 60" linestop at the 60" transmission main (TM 1, North) and constructing a 36" bypass to maintain the 60" transmission main active during the completion of Tie-in 5. Cutting and draining the existing 60" treated water pipe, then connecting a new steel tee into the pipe shall be completed next. The Contractor shall install the tee with a new butterfly valve that is left in the closed position. Tie-in 5 may occur at any time before startup of the facility, and the bypass must be left in place until approved by the Owner.⁶
- 6) Tie-ins by SSF 11-14: The tie-ins by SSF 11-14 include connection to the 36" Filtered Water Main from SSF 11-14 (Tie-ins 7E and 7W), 54" Raw Water main (Tie-ins 8E and 8W), and 24" drain from SSF 11-14 (Tie-ins 9E and 9W).
 - a) Shutdown restrictions for SSF 11-14 are described in Schedule 01 14 00 B.
 - b) The Contractor may conduct shutdown of SSF 11-14 for Tie-ins 7E and 7W (Shutdown 5).
 - c) The Contractor may conduct tie-in 8W in two, separate shutdowns by cutting and capping the line within the first shutdown (Shutdown 5), returning it to service, building the 54" and 72" raw water line and making the tie-in 8E, then completing tie-in 8W in a second shutdown (shutdown 6). The Contractor must complete this work within a single, low-demand season.
 - d) The Contractor shall assume that bypass pumping of 2.5 mgd is required to construct the 24" drain line and to conduct Tie-ins 9E and 9W.
- 3. Perform Construction Sequencing Phase II through Phase V as shown on C-003, C-004, C-005 and C-006.
 - a. The remaining construction and commissioning work of the new facility described in the Contract Documents may occur during these phases.

- b. Prior to demolition of Regulator Houses 3 and 4 during Phase II, Contractor shall abate hazardous materials in both structures in accordance with Section 02 82 00 – Asbestos Abatement, Section 02 83 00 – Lead Based Paint Management, Section 02 84 00 – PCBs in Building Material Management, and Section 02 85 00 – Hazardous Materials / Universal Waste Management.
 - c. During demolition of Regulator Houses 3 and 4 during Phase II, Contractor shall maintain the 24” drain service at Regulator House 3 and the 30” drain service at Regulator House 4 until the new 30” site drain has been installed. Contractor shall suspend demolition of Regulator Houses 3 and 4 at the top of the basement bottom slab until the new 30” site drain has been installed. Contractor shall demolish the basement bottom slab, 24” drain at Regulator House 3, 30” drain at Regulator House 4, and concrete-encased piping only after the new 30” site drain has been installed.
 - d. Installation of the 60” raw water transmission main between the EDV Structure and Cook Brook shall not begin until the EDV Structure is substantially complete. Installation of the 60” raw water transmission main between Cook Brook and the new water treatment plant may begin before the EDV Structure is substantially complete. Refer to Section 01 11 00 – Summary of Work for other construction contracts at the Site. The 60” motorized gate shall remain closed and under lock out and tag out until startup.⁴
 - e. Backwash recirculation piping (BWF shown on M-5101 and M-5102) shall be installed within the times specified in Article 4 of the Agreement. This includes all work associated with installation of piping, valves, appurtenances, and system functional testing.⁵
4. Decommissioning of Existing Facilities
- a. Decommissioning activities of existing facilities in this contract may occur only after the facility has been fully commissioned and accepted by the Owner. Decommissioning activities include, but are not limited to:
 - 1) Cutting and capping of permanent and temporary treated water lines, raw water lines and backwash water lines.
 - 2) Removing connections from existing chemical lines to the treated water mains.
 - 3) Draining and isolating tanks at existing facilities including all tanks within the Slow Sand Filter and Rapid Sand Filter Facilities.
 - 4) Cleaning of chemical tanks and pipelines as described in this section.

- 5) Electrical decommissioning as called for under the electrical drawings and Division 26.

1.07 TIE-INS

- B. Table 01 14 00-A in this Section lists connections by Contractor to existing facilities. Table 01 14 00-A may not include all tie-ins required for the Work; Contractor shall perform tie-ins required to complete the Work. For tie-ins not included in Table 01 14 00-A, obtain requirements for tie-ins from Engineer.

1.08 SHUTDOWNS

A. General:

1. Work that may interrupt normal operations shall be accomplished at times convenient to Owner.
2. Furnish at the Site, in close proximity to the shutdown and tie-in work areas, tools, equipment, spare parts and materials, both temporary and permanent, necessary to successfully complete the shutdown. Complete to the extent possible, prefabrication of piping and other assemblies prior to the associated shutdown. Demonstrate to Engineer's satisfaction that Contractor has complied with these requirements before commencing the shutdown.
3. If Contractor's operations cause an unscheduled interruption of Owner's operations, immediately notify the Owner and re-establish satisfactory operation for Owner.
4. Unscheduled shutdowns or interruptions of continued safe and satisfactory operation of Owner's facilities are not acceptable. All fines or penalties by authorities having jurisdiction, all costs incurred by the Owner for responding to emergencies (e.g., public notices and emergency response), and all of the Owner's costs associated with the interruption shall be paid solely by Contractor if, in Engineer's opinion, Contractor did not conform to the requirements of the Contract Documents, or was negligent in the Work, or did not exercise proper precautions in conducting the Work.
5. Shutdowns shall be in accordance with Table 01 14 00-B of this Section. Work requiring service interruptions for tie-ins shall be performed during scheduled shutdowns.
6. Temporary, short-term shutdowns of any piping, conduits, equipment, and systems may not be included in Table 01 14 00-B. Coordinate requirements for such shutdowns with Engineer and Owner.

B. Treatment Process Shutdown and Site Access Constraints:

1. All equipment and processes for existing facilities shall be operational except where described herein.
2. Owner will have roadway access in accordance with the site access plans shown on the Drawings. Where access to active Owner facilities is limited or restricted due to Contractor's Work, Contractor shall construct and maintain temporary access roads and provide temporary steel road plates to maintain continuous movement of traffic as required and in accordance with Section 01 55 00 – Contractor Access and Parking.

C. Shutdowns of Electrical Systems: Comply with Laws and Regulations, including the National Electric Code. Contractor shall lock out and tag circuit breakers and switches operated by Owner and shall verify that affected cables and wires are de-energized to ground potential before shutdown Work is started. Upon completion of shutdown Work, remove the locks and tags and notify Engineer that facilities are available for use.

D. Shutdowns of Communications, SCADA, and Networking:

1. Any SCADA outages for any existing process pumps and related facilities shall be scheduled in advance with the Owner. This work may include required connections to existing switches, installation of additional hardware, and modification and download of software into existing controllers. All such shutdowns shall be fully planned and coordinated with the existing plant operations to minimize disturbances to normal operations.

E. Shutdowns of Existing On-Site Sewage Disposal System:

1. Temporary, short-term shutdown of the existing on-site sewage disposal system is required to tie-in the new septic tank to the existing on-site sewage disposal system.
2. Contractor shall provide a temporary, watertight plug to isolate existing sanitary flows from new sanitary sewer that will serve the existing on-site sewage disposal system. Contractor shall arrange for temporary sanitary hauling to maintain existing sanitary service during the tie-in of the new septic tank to the existing on-site sewage disposal system.
3. Shutdowns shall be in accordance with Table 01 14 00-B of this Section. Work requiring interruption of existing sanitary service for tie-ins shall be performed during scheduled shutdowns.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.01 GENERAL

- A. In addition to requirements of this Section, conform to requirements of Section 01 73 00 – Execution of Work.
- B. Refer to Table 01 14 00-B in this Section for schedule of process equipment and service lines out-of-service during shutdown.
- C. Refer to Table 01 14 00-B in this Section for schedule of process equipment in operation during shutdown.
- D. Refer to Table 01 14 00-B in this Section for tie-ins required during each shutdown. Refer to Table 01 14 00-A in this Section for detailed tie-in schedule.
- E. Refer to Table 01 14 00-B in this Section for duration of each shutdown.

3.02 DETAILED SHUTDOWN REQUIREMENTS:

- A. Prior to Typical Shutdown:
 - 1. Obtain Engineer's acceptance of proposed shutdown planning submittal and shutdown notification submittal.
 - 2. Submittal and approval of all shop drawings required.
 - 3. Coordinate with plant operations on timing of shutdown and provide required notice to Owner.
 - 4. Bring necessary piping, couplings, valves, equipment, and appurtenances to the work areas.
 - 5. Assist Owner in preparing to take equipment, tanks, basins, and conduits temporarily out of service.
 - 6. Coordinate other tie-ins to be performed simultaneously.
 - 7. Install and ensure functionality of temporary systems as applicable.
- B. During Typical Shutdown:
 - 1. Remove existing equipment, piping, and accessories as required.
 - 2. Verify operation of new equipment, materials, and systems.

3. Following approval from Engineer, return equipment and system to operation with Owner.

C. Following Typical Shutdown:

1. Verify functionality of equipment and system.
2. Verify operation of new equipment and systems and verify that joints in piping are watertight or gastight as applicable.
3. Repair joints that are not watertight or gastight as applicable.
4. Remove temporary systems as applicable.

**Table 01 14 00-A
Schedule of Tie-Ins**

Tie-In No.	New Line Size and Service	Existing (Connecting) Line Size & Service	Tie-In Building/Location	Construction Sequencing Phase	Shutdown Included
1	36" Filtered Water Pipe	42" Filtered Water (TM 2 Middle)	Northeast of SSF 16	I	No
2	36" Filtered Water Pipe	Hydraulic Control Structure	Hydraulic Control Structure	I	Yes
3	36" Filtered water Pipe	36" Filtered Water Discharge from SSF 11-14	North of Hydraulic Control Structure	I	Yes
4	36" Filtered Water Pipe	36" Pipe Stub into 60" Filtered Water (TM 3 South)	Between SSF 16 and Upper Lagoon	I	Yes (part 2)
5	60" Filtered Water Pipe	60" Filtered Water Pipe (TM 1 North)	North of SSF 16	I	No
6	6" Sanitary Sewer	6" Sanitary Sewer	Northwest of Existing On-Site Sewage Disposal System Distribution Box	IV	Yes
7E	36" Filtered Water Pipe	36" Filtered Water from SSF 11-14	Northeast of SSF 11-14 and South of Cook Brook	II-V	Yes
7W	36" Filtered Water Pipe	36" Filtered Water from SSF 11-14	Northeast of SSF 11-14 and South of Cook Brook	II-V	Yes
8E	54" Raw Water	54" Raw Water Intake	Northeast of SSF 11-14 and South of Cook Brook	II-V	No
8W	54" Raw Water	54" Raw Water Intake	Northeast of SSF 11-14 and South of Cook Brook	II-V	Yes
9E	24" Drain	24" Drain from SSF 11-14	Northeast of SSF 11-14 and South of Cook Brook	II-V	No
9W	24" Drain	24" Drain from SSF 11-14	Northeast of SSF 11-14 and South of Cook Brook	II-V	No

**Table 01 14 00-B
Schedule of Shutdowns**

Shutdown No.	Process Equipment and Service Lines Out-of-Service During Shutdown	Process Equipment In Operation During Shutdown	Tie-In Nos.	Maximum Duration
1	Hydraulic Control Structure (Northern Side)	Hydraulic Control Structure (Southern Side)	2	2 Days
2	Slow Sand Filters 11-14	Rapid Sand Filter Plant and Slow Sand Filters 15-18	3	10 Days
3	TM 3 (South) Between the West Parish Filter Site and Sacket Rd Interconnection	TM 1 (North), TM 2 (Middle) TM 3 (South) Downstream of the Sackett Rd Interconnection	4, part 2	2 Days
4	6" Sanitary Sewer and Existing On-Site Sewage Disposal System	N/A	6	2 Days
5	Slow Sand Filters 11-14	Rapid Sand Filter Plant	7E, 7W, 8W	10 Days
6	Slow Sand Filters 11-14	Rapid Sand Filter Plant	8W	3 days

END OF SECTION

Attachment G – 01 41 00.01 Schedule of Permits Attachments 10 and 11

Attachment 10: Water Quality Certification Correspondence¹

¹ Addendum No. 12

Cantor, Jacob

From: Daniel Nitzsche <daniel.nitzsche@gza.com>
Sent: Friday, August 18, 2023 11:59 AM
To: Grover, Mary (DEP)
Cc: Hoek, Katie; Barrett, Kristen; Darleen Buttrick; Wallace, Levi; Morin, Marc; Jacob Weinrich; Christina Jones; james.laurila@waterandsewer.org; Frank Zabaneh; Sheeran, Daniel; Melissa P. Coady; Schassler, Kate; DoyleBreen, Jennifer; Pogodzienski, Rhonda; O'Donnell, Joyce; Nelson, Christopher (Chelmsford); Benziger Jr, Charles
Subject: Withdrawal of 401 WQC Application, 23-WW10-0015-APP - West Parish Water Treatment Facility

Caution! External email – think before you click

Hi Mary,
On behalf of the Springfield Water and Sewer Commission, GZA is asking the Department to withdraw the 401 WQC application (record number: **23-WW10-0015-APP**) without prejudice for the proposed Water Treatment Plant project only. The proposed BVW fill within the ORW has been eliminated.

If you have any questions, please contact us at your earliest convenience.

Sincerely,
Dan

Daniel M. Nitzsche, CPESC, CESSWI, SE, SI
Senior Consultant/Wetland Scientist
GZA | 1350 Main Street, STE 1400 | Springfield, MA 01103
o: 413-726-2100 | c: 413-478-0946 | daniel.nitzsche@gza.com | www.gza.com

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For information about GZA GeoEnvironmental, Inc. and its services, please visit our website at www.gza.com.

Attachment 11: Massachusetts Department of
Environmental Protection Approval of Chemical Addition
Retrofit of Water Systems Serving Less Than 3,300 People
(BRP WS34 Approval)¹

¹ Addendum No. 12



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

Western Regional Office • 436 Dwight Street, Springfield MA 01103 • 413-784-1100

Maura T. Healey
Governor

Kimberley Driscoll
Lieutenant Governor

Rebecca L. Tepper
Secretary

Bonnie Heiple
Commissioner

SENT VIA ELECTRONIC MAIL
james.laurila@waterandsewer.org

May 16, 2024

Mr. James Laurila, Director of Water Operations
Springfield Water & Sewer Commission
P.O. Box 995
Springfield, MA 01101

Re: Springfield
Springfield Water & Sewer Commission
PWS ID# 1281000
Modification of Domestic Water System
24-WS34-0004-APP

Dear Mr. Laurila:

The Massachusetts Department of Environmental Protection (MassDEP) received an above referenced permit application dated March 28, 2024, from Hazan and Sawyer submitted on behalf of the Springfield Water & Sewer Commission (SWSC or Commission). This permit application was submitted to raise the pH for the domestic water system in the West Parish Filter (WPF) facility using sodium hydroxide. The current domestic water system includes an ultraviolet (UV) disinfection system and a sodium hypochlorite dosing system, and the system is supplied with filtered water from the existing West Parish filters. The Commission is constructing a new treatment plant at the site. Once constructed, the new treatment plant will supply water to the domestic water system at a lower pH than currently supplied. Prior to the modification permit application, the Domestic Water System was conditionally approved by MassDEP on April 15, 2022, and the final inspection was approved on September 25, 2023.

With this letter, MassDEP hereby grants the conditional approval for the above referenced permit application.

If you have any questions regarding this letter, please contact Hem Pokharel at Hem.Pokharel@Mass.Gov.

Respectfully,

Andrew Kelly, Section Chief
Drinking Water Program
Western Regional Office

Encloser: Chemical addition report

ecc: MassDEP DWP, Boston, Springfield Board of Health, Ludlow Board of Health, Marc Morin– Hazen and Sawyer, MassDEP WERO - H Pokharel, D Paine, J Gibbs

DEP-WERO/WERO/BWR/WS/Permits/Treatment/Springfield/SWSC Domestic - 24-WS34-0004-APP\1281000-2024-05-16-PER-WS34 Cond App NaOH-Domestic-SWSC

DEP WERO - WS\2023-2025PWSCorr\S-Z\1281000\1281000-2024-05-16-PER-WS34 Cond App NaOH-Domestic-SWSC

Y:\DWPArchive\WERO\Springfield-1281000-System Modification-2024-05-16
This information is available in alternate format. Please contact Melixza Esenyie at 617-626-1282.
TTY# MassRelay Service 1-800-439-2370
MassDEP Website: www.mass.gov/dep

Printed on Recycled Paper

**Springfield Water & Sewer Commission
Conditional Permit Approval
BRP WS-34 Chemical Addition Retrofit of Water systems <3,300 People**

Background

The Springfield Water and Sewer Commission (SWSC or Commission) operates a domestic water system at the West Parish site which supplies onsite potable water to approximately 40 employees. The domestic water system includes an ultraviolet (UV) disinfection system and a sodium hypochlorite dosing system, and the system is supplied with filtered water from the existing West Parish filters.

The Commission is constructing a new treatment plant at the site. Once constructed, the new treatment plant will supply water to the domestic water system at a lower pH than currently supplied. Due to the change with the new plant online, caustic chemical dosing is needed to achieve the desired pH before distribution.

Sodium Hydroxide Chemical System

The new West Parish Water Treatment Plant (WPWTP) will include chemical storage and feed equipment for the domestic water system. 10% sodium hydroxide (caustic) will be added after UV disinfection to adjust the pH to meet existing distribution system water quality. Based on the expected dosage and flows, the storage volumes are more practical with a 10% sodium hydroxide solution.

Once the new WPWTP is constructed, the domestic water system will be supplied with filtered water prior to post filtration pH adjustment. The Tetra Tech (RTW) Model was used to estimate the sodium hydroxide dose that would be required. Hazen and Sawyer ran the water process model using pilot sample results for clarified water quality data and the optimal pH for coagulation to estimate the sodium hydroxide required to achieve a pH of 7.75. The resulting dose will range from 0.5 to 4.7 mg/L for finished water pH adjustment.

Design Flows for Chemical Systems

The sodium hydroxide chemical system, including tanks and pumps, are designed for 0.14 MGD (100 gpm), with an average flow of 0.04 MGD (25 gpm). The chemical system is sized, consisting of the following:

- Bulk storage tanks consisting of at least 30 days of chemical supply to meet average treated water demand.
- Day tank storage sized to contain a 60-hour chemical supply at average flow and dose. Chemical Storage and Feed Facilities

Bulk Storage

Sodium hydroxide for the domestic chemical system will be supplied in liquid form. The estimated monthly usage was calculated using an active concentration of 0.93 lb/gal. The average estimated dose is 1.8 mg/L and the maximum flow is 0.14 mgd. Bulk chemical storage volumes are based on providing a minimum of 30 days of storage under conditions of average system flow and average chemical dose at the highest usage, however, to allow for more practical delivery volumes, a 55-gallon drum is proposed. A preliminary estimate for the size of the tank.

The bulk storage tank will be placed on a containment pad and there will be a ramp to the containment pad for replacing an empty drum. The proposed volume for sodium hydroxide storage is more than 30 days' worth of storage on an average basis, as referenced in the Chapter 6 guidelines, to provide additional storage volume for operational flexibility and management of chemical age. The 10% sodium hydroxide is stable when stored at room temperature.

Day Tank and Transfer Pump

Sodium hydroxide will be transferred from the bulk tank to a smaller (day) tank. The proposed day tank will be a 4-gallon high-density polyethylene tank and placed on a containment pad. A manual hand pump is proposed to transfer chemical from the bulk tank to the day tank.

Chemical Metering Pumps

Metering pumps are sized to operate over the full range of flow rates and chemical doses. A summary of the minimum and maximum active concentrations, design doses, and flows are presented in Table below. Also included is the minimum and maximum use in gallons per day. The pumps will be selected to accurately meter the flows over the entire range of pump output required.

Table 1: Metering Pump Selection Criteria

	Design Dose (mg/L)	Design Flow (mgd)	Design Use (gpd)
Minimum	0.5	0.02	0.1
Maximum	4.7	0.14	6.1

Secondary Containment

Sodium hydroxide will be stored in a dedicated secondary containment area to ensure that the full volume of the tank can be contained in the event of a tank failure. The containment is sized to hold 110 percent of the total volume of tanks. For this system, containment pallets will be used as secondary containment.

Conditional Approval

The decision herein is based on the permit application submittal and all relevant information received by MassDEP to date. MassDEP, acting under the authority of Chapter 111, Section 17 of the Massachusetts General Laws and pursuant to MassDEP's authority under 310 CMR 22.04(7) to require that each supplier of water operate and maintain its system in a manner that ensures the delivery of safe drinking water to consumers, grants conditional approval for the proposed corrosion control treatment system at SWSC subject to the following conditions:

1. SWSC is required to notify MassDEP in writing about any changes in the proposed critical chemical feed tank volume, the critical chemical type, the critical chemical concentration, and the critical chemical feed pump.
2. MassDEP requires that the daily pH readings be taken at the entry point to the system. The daily pH readings, the amount of water pumped each day, and amount of chemical used each day, must be recorded daily on the attached monthly Chemical Addition Form. The form is to be signed by the primary treatment Certified Operator and submitted to MassDEP by the 10th of the following month.
3. The final Record drawings must be submitted to MassDEP within 45-days of completion of this project.
4. MassDEP requires that SWSC revise its Emergency Response Plan (ERP), and its Operations and Maintenance plans (O & M) and notify MassDEP within 45 days of placing the system online.
5. SWSC must be able to obtain the spare parts and the feed pump within 24 hrs. Documentation demonstrating this condition must be available at the final inspection.

6. MassDEP requires SWSC to ensure that the safety showers, eye washes and treatment facilities taps are tested properly and are in good working order and available for use before the switch-over.
7. The Safety Data Sheet must always be present at an accessible location at the treatment plant.
8. SWSC must ensure onsite staff are trained regarding this treatment system's required measurements, the ERP, the O & M plans, and the O & M logs. The daily tasks are overseen by the licensed primary treatment operator serving SWSC. Demonstration that SWSC meets this condition is required at the final inspection.
9. The required safety equipment must be in place and operational at the final inspection. SWSC must confirm to MassDEP that the spill kit and the personal safety equipment (PPE) are available on site during final inspection.
10. Provide a copy of schedule for the switch, transition procedure and safety precautions that would be taken to ensure a safe switch in the influent water. Notify the end users about the switch.
11. Prior to MassDEP's final inspection of the water system, SWSC shall submit a Registered Professional Engineer's certification letter to MassDEP stating that the installation is in accordance with MassDEP's permit approval and in compliance with applicable MassDEP regulations, guidelines, and policies. The certification shall include final as-built plans that include any changes from the draft plans.
12. Once the treatment system is installed and ready for operation, MassDEP requires that SWSC schedule a final inspection with a Drinking Water Program staff person to conduct a final inspection prior to placing this system in service. MassDEP shall conduct a final inspection of the completed water system a minimum of seven (7) calendar days prior to the system's planned activation. The inspection shall be attended by the Certified Operator, representatives of SWSC and Hazen and Sawyer.

This approval does not constitute an approval with State and local requirements and procedures related to public bidding and contract laws.



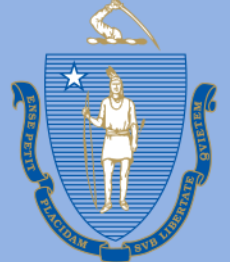
Massachusetts Department of Environmental Protection – Drinking Water Program
CHEMICAL ADDITION REPORT – 310 CMR 22.15(4) Chemical Addition Reporting Requirements

C-ADD

I. PWS Information - Refer to MassDEP "Chemical Addition Report Guidance and Instructions" for details.									
PWS Name ¹ :			Town ¹ :			PWSID ¹ :			
Treatment Plant Name ² :			Treatment Plant ID# ² :		Reporting Period ² :		Month	Year	
II. Chemical & Operational Information									
Chemical Name ³ :			Purchased Strength ³ :		Target Range/min ¹³ :				
Manufacturer ³ :			Purchased Density (lb/gal) ³ :		Target Dose ¹³ :				
Product Name ³ :			Dilution Factor or Mix Ratio ¹³ :		Alarm Setting (low) ¹⁴ :				
Reason for Adding Chemical ³ :			NSF Approved (Y/N) ¹⁴ :		Alarm Setting (high) ¹⁴ :				
			Date of last anti-siphon valve inspection/replacement ¹⁵ :						
III. Daily Reporting									
Note: Water quality data reported on C-ADD form may be considered for compliance purposes.									
Day	Treated Water ⁶ <input type="checkbox"/> Gallons <input type="checkbox"/> MG	Measured Chemical Used		Calculated Chemical Used (lbs) ¹⁶	Chemical Dosage ¹⁹ (mg/L)	Parameters Measured ⁴ , Results, Units and Method ²³ - (Grab or Continuous Analyzer) ²⁴			O&M Notes/Comments ²² PWS note any equipment breakdown, off-line status, changes in purchased product or batch mixing day, measured parameters or dosages that are out of target range, etc.
		Volume ¹⁷ (gal/day)	Weight ¹⁷ (lbs/day)			a.	b.	c.	
1						<input type="checkbox"/> G <input type="checkbox"/> A	<input type="checkbox"/> G <input type="checkbox"/> A	<input type="checkbox"/> G <input type="checkbox"/> A	
2									
3									
4									
5									
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31									
Total						Indicate total # of days the residual was off-target for the month (from Section II) Monthly Target Summary²¹ :			
*Describe result (daily average, min/max, instantaneous reading, grab, etc), sample location (entry-point, before/after filters, tanks, etc.) and instrumentation used (SCADA, chart recorder, test kit, bench, etc.) ²⁵ :						I certify under penalties of law that I am the person authorized to fill out this form and the information contained herein is true, accurate and complete to the best extent of my knowledge. PWS Authorized Person - Signature & Date ²⁶ :			
a. _____						Print Name: _____ Title: _____			
b. _____									
c. _____									



重要 महत्वपूर्ण σημαντικός
Important
կարևոր quan trọng مهم



Communication for Non-English-Speaking Parties

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If you need this document translated, please contact MassDEP's Diversity Director at the telephone number listed below.

Español Spanish

Este documento es importante y debe ser traducido de inmediato. Si necesita este documento traducido, comuníquese con la Directora de Diversidad de MassDEP al número de teléfono que aparece más abajo.

Português Portuguese

Este é um documento importante e deve ser traduzido imediatamente. Se precisar de uma tradução deste documento, entre em contato com o Diretor de Diversidade da MassDEP nos números de telefone listados abaixo.

繁體中文 Chinese Traditional

本文件非常重要，應立即翻譯。如果您需要翻譯這份文件，請用下面列出的電話號碼聯絡 MassDEP 多元化負責人。

简体中文 Chinese Simplified

本文件非常重要，应立即翻译。如果您需要翻译这份文件，请用下面列出的电话号码与 MassDEP 的多元化主任联系。

Ayisyen Kreyòl Haitian Creole

Dokiman sa-a se yon bagay enpòtan epi yo ta dwe tradwi l imedyatman. Si ou bezwen dokimar sa a tradwi, tanpri kontakte Direktè Divèsite MassDEP la nan nimewo telefòn endike anba.

Việt Vietnamese

Tài liệu này rất quan trọng và cần được dịch ngay lập tức. Nếu quý vị cần dịch tài liệu này, xin liên lạc với Giám đốc Đa dạng của MassDEP theo các số điện thoại ghi dưới đây.

ប្រទេសកម្ពុជា Khmer/Cambodian

ឯកសារនេះគឺសំខាន់ហើយគួរត្រូវបានបកប្រែភ្លាមៗ។ ប្រសិនបើអ្នកត្រូវការឱ្យគេបកប្រែឯកសារនេះ:

សូមទាក់ទងមកនាយកដ្ឋានពិពិធកម្មរបស់ MassDEP តាមលេខទូរស័ព្ទខាងក្រោម។

Kriolu Kabuverdianu Cape Verdean

Kel dokumentu li é inportáti y debe ser traduzidu imediatamenti. Se bu meste di kel dokumentu traduzidu, pur favor kontakta Diretor di Diversidádi di MassDEP na numeru abaxu indikadu.



Contact **Glynis L. Bugg, Acting Diversity Director/Civil Rights 857-262-0606**

**Massachusetts Department of Environmental Protection
100 Cambridge Street 9th Floor Boston, MA 02114**

TTY# MassRelay Service 1-800-439-2370 • <https://www.mass.gov/environmental-justice>

(Version revised 1.5.2023) 310 CMR 1.03(5)(a)

Русский Russian

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العربية Arabic

هذه الوثيقة مهمة ويجب ترجمتها على الفور. إذا كنت بحاجة إلى هذه الوثيقة مترجمة، يرجى الاتصال بمدير التنوع (MassDEP ٨٥٧٢٦٢٠٦٠٦) على أرقام الهواتف المدرجة أدناه.

한국어 Korean

이 문서는 중요하고 즉시 번역해야 합니다. 이 문서의 번역이 필요하시다면, 아래의 전화 번호로 MassDEP의 다양성 담당 이사에 문의하시기 바랍니다.

հայերեն Armenian

Այս փաստաթուղթը կարևոր է և պետք է անմիջապես թարգմանվի: Եթե Ձեզ անհրաժեշտ է այս փաստաթուղթը թարգմանել, դիմեք MassDEP-ի բազմազանության տնօրենին ստորև նշված հեռախոսահամարով:

فارسی Farsi Persian

این نامه و مدارکی که بدست شما رسیده خیلی مهم و قانونی است. اگر شما احتیاج دارید که این نامه و مدارک به زبان فارسی ترجمه بشود لطفت خیلی زود به ماساچوست سازمان محیط زیست (MassDEP) در شماره تلفن ٨٥٧٢٦٢٠٦٠٦ تماس بگیرید.

Français French

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Deutsch German

Dieses Dokument ist wichtig und sollte sofort übersetzt werden. Sofern Sie eine Übersetzung dieses Dokuments benötigen, wenden Sie sich bitte an den Diversity Director MassDEP unter der unten aufgeführten Telefonnummer.

Ελληνική Greek

Το παρόν έγγραφο είναι σημαντικό και θα πρέπει να μεταφραστεί αμέσως. Αν χρειάζεστε μετάφραση του παρόντος εγγράφου, παρακαλούμε επικοινωνήστε με τον Διευθυντή Διαφορετικότητας του MassDEP στους αριθμούς τηλεφώνου που αναγράφονται παρακάτω.

Italiano Italian

Comunicazione per parti che non parlano inglese. Questo documento è importante e dovrebbe essere tradotto immediatamente. Se avete bisogno di questo documento tradotto, potete contattare il Direttore di Diversità di MassDEP al numero di telefono elencato di seguito.

Język Polski Polish

Dokument ten jest ważny i powinien zostać natychmiast przetłumaczony. Jeśli potrzebujesz przetłumaczonej wersji dokumentu, prosimy o kontakt z dyrektorem ds. różnorodności MassDEP pod jednym z numerów telefonu wymienionych poniżej.

हिन्दी Hindi

यह दस्तावेज़ महत्वपूर्ण है और इसका तुरंत अनुवाद किया जाना चाहिए. यदि आपको इस दस्तावेज़ का अनुवाद करने की आवश्यकता है, तो कृपया नीचे सूचीबद्ध टेलीफोन नंबरों पर मासडेप्स डाइवर्सिटी के निदेशक से संपर्क करें.

Contact **Glynis L. Bugg, Acting Diversity Director/Civil Rights 857-262-0606**

Massachusetts Department of Environmental Protection

100 Cambridge Street 9th Floor Boston, MA 02114

TTY# MassRelay Service 1-800-439-2370 • <https://www.mass.gov/environmental-justice>

(Version revised 1.5.2023) 310 CMR 1.03(5)(a)

Attachment H – 08 71 01 Table 1: Hardware Sets

Table 1: Hardware Sets

Set	Items	Set	Items
1	<ol style="list-style-type: none"> 1. Continuous Hinges 2. Passage Latch Set 3. Overhead Door Closer (each leaf) 4. Flush Bolts 5. Coordinator 6. Threshold 7. Door Bottom Seal 8. Weatherstripping 9. Astragal w/Weatherstripping 	6-EL	<ol style="list-style-type: none"> 1. Hinges 2. Electronic Vertical Rod Panic 3. EPT 4. Overhead Door Closer (each leaf) 5. Coordinator 6. Threshold 7. Kickplate 8. Silencers
1-EL	<ol style="list-style-type: none"> 1. Continuous Hinges 2. Electronic Vertical Rod Panic 3. EPT 4. Overhead Door Closer (each leaf) 5. Coordinator 6. Threshold 7. Door Bottom Seal 8. Weatherstripping 9. Astragal w/Weatherstripping 	7-EL	<ol style="list-style-type: none"> 1. Continuous Hinges 2. Electronic Mortise Lockset 3. EPT 4. Overhead Door Closer 5. Threshold 6. Door Bottom Seal 7. Weatherstripping 8. Kick Plate
2	<ol style="list-style-type: none"> 1. Continuous Hinges 2. Passage Latch Set 3. Overhead Door Closer Holder (each leaf) 4. Flush Bolts 5. Coordinator 6. Threshold 7. Silencers 	8-EL	<ol style="list-style-type: none"> 1. Continuous Hinges 2. Electronic Mortise Lockset (IDP) 3. EPT 4. Overhead Door Closer 5. Threshold 6. Door Bottom Seal 7. Weatherstripping 8. Kick Plate
2-EL	<ol style="list-style-type: none"> 1. Continuous Hinges 2. Electronic Vertical Rod Panic 3. EPT 4. Overhead Door Closer Holder (each leaf) 5. Coordinator 6. Silencers 	9	<ol style="list-style-type: none"> 1. Hinges 2. Passage Latch Set 3. Overhead Door Closer Holder 4. Threshold 5. Silencers
3	<ol style="list-style-type: none"> 1. Hinges 2. Panic Hardware 3. Overhead Door Closer 4. Threshold 5. Silencers 	9-EL	<ol style="list-style-type: none"> 1. Hinges 2. Electronic Mortise Lockset 3. EPT 4. Overhead Door Closer Holder 5. Threshold 6. Silencers
4-EL	<ol style="list-style-type: none"> 1. Continuous Hinges 2. Electronic Vertical Rod Panic 3. EPT 4. Overhead Door Closer Holder 5. Threshold 6. Door Bottom Seal 7. Weatherstripping 	10	<ol style="list-style-type: none"> 1. Hinges 2. Passage Latchset 3. Overhead Door Closer Holder 4. Silencers
5-EL	<ol style="list-style-type: none"> 1. Hinges 2. Panic Hardware 3. Electronic Strike 4. Overhead Door Closer 5. Threshold 6. Kickplate 7. Silencers 	11	<ol style="list-style-type: none"> 1. Hinges 2. Office Lockset 3. Overhead Door Closer 4. Silencer
6	<ol style="list-style-type: none"> 1. Hinges 2. Vertical Rod Panic Device 3. Overhead Door Closer (each leaf) 4. Coordinator 5. Silencers 6. Threshold (per Door Schedule) 	12	<ol style="list-style-type: none"> 1. Hinges 2. Privacy Lockset (with occupied indicator) 3. Overhead Door Closer 4. Silencer

Attachment I – Part 2 of 26 06 11 Cable and Conduit Schedule

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸							
CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
OUTDOOR C&C							
P-001	5"	3 - #1/0 AWG (23 KV) & 1 - #4/0 GND	PVC SCHEDULE 40	EXISTING UTILITY POLE	UTILITY METERING	23KV Power	
P-DB-1-SPARE-A	5"	SPARE	PVC SCHEDULE 40	EXISTING UTILITY POLE	UTILITY METERING	23KV Power	
P-002	5"	3 - #1/0 AWG (23 KV) & 1 - #4/0 GND	PVC SCHEDULE 40	UTILITY METERING	DSW-SVC-01	23KV Power	
P-DB-2-SPARE-A	5"	SPARE	PVC SCHEDULE 40	UTILITY METERING	DSW-SVC-01	23KV Power	
P-003	5"	3 - #1/0 AWG (23 KV) & 1 - #4/0 GND	PVC SCHEDULE 40	DSW-SVC-01	TX-SVC-01	23KV Power	
P-DB-3-SPARE-A	5"	SPARE	PVC SCHEDULE 40	DSW-SVC-01	TX-SVC-01	23KV Power	
P-004-A	5"	4 - #600 KCMIL W 1#500 GND	PVC SCHEDULE 40	TX-SVC-01	SWGR-01	480V Power	
P-004-B	5"	4 - #600 KCMIL W 1#500 GND	PVC SCHEDULE 40	TX-SVC-01	SWGR-01	480V Power	

7 Addendum No.7

8 Addendum No.12

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-004-C	5"	4 - #600 KCMIL W 1#500 GND	PVC SCHEDULE 40	TX-SVC-01	SWGR-01	480V Power	
P-004-D	5"	4 - #600 KCMIL W 1#500 GND	PVC SCHEDULE 40	TX-SVC-01	SWGR-01	480V Power	
P-004-E	5"	4 - #600 KCMIL W 1#500 GND	PVC SCHEDULE 40	TX-SVC-01	SWGR-01	480V Power	
P-004-F	5"	4 - #600 KCMIL W 1#500 GND	PVC SCHEDULE 40	TX-SVC-01	SWGR-01	480V Power	
P-004-G	5"	4 - #600 KCMIL W 1#500 GND	PVC SCHEDULE 40	TX-SVC-01	SWGR-01	480V Power	
P-004-H	5"	4 - #600 KCMIL W 1#500 GND	PVC SCHEDULE 40	TX-SVC-01	SWGR-01	480V Power	
P-004-I	5"	4 - #600 KCMIL W 1#500 GND	PVC SCHEDULE 40	TX-SVC-01	SWGR-01	480V Power	
P-004-J	5"	4 - #600 KCMIL W 1#500 GND	PVC SCHEDULE 40	TX-SVC-01	SWGR-01	480V Power	
P-DB-4- SPARE-A	5"	SPARE	PVC SCHEDULE 40	TX-SVC-01	SWGR-01	480V Power	
P-DB-4- SPARE-B	5"	SPARE	PVC SCHEDULE 40	TX-SVC-01	SWGR-01	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-005-A	5"	4 - #600 KCMIL W 1#500 GND	PVC SCHEDULE 40	2000 KW STANDBY GENERATOR	GENERATOR MANUAL TRANSFER SWITCH	480V Power	
P-005-B	5"	4 - #600 KCMIL W 1#500 GND	PVC SCHEDULE 40	2000 KW STANDBY GENERATOR	GENERATOR MANUAL TRANSFER SWITCH	480V Power	
P-005-C	5"	4 - #600 KCMIL W 1#500 GND	PVC SCHEDULE 40	2000 KW STANDBY GENERATOR	GENERATOR MANUAL TRANSFER SWITCH	480V Power	
P-005-D	5"	4 - #600 KCMIL W 1#500 GND	PVC SCHEDULE 40	2000 KW STANDBY GENERATOR	GENERATOR MANUAL TRANSFER SWITCH	480V Power	
P-005-E	5"	4 - #600 KCMIL W 1#500 GND	PVC SCHEDULE 40	2000 KW STANDBY GENERATOR	GENERATOR MANUAL TRANSFER SWITCH	480V Power	
P-005-F	5"	4 - #600 KCMIL W 1#500 GND	PVC SCHEDULE 40	2000 KW STANDBY GENERATOR	GENERATOR MANUAL TRANSFER SWITCH	480V Power	
P-005-G	5"	4 - #600 KCMIL W 1#500 GND	PVC SCHEDULE 40	2000 KW STANDBY GENERATOR	GENERATOR MANUAL TRANSFER SWITCH	480V Power	
P-005-H	5"	4 - #600 KCMIL W 1#500 GND	PVC SCHEDULE 40	2000 KW STANDBY GENERATOR	GENERATOR MANUAL TRANSFER SWITCH	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-005-I	5"	4 - #600 KCMIL W 1#500 GND	PVC SCHEDULE 40	2000 KW STANDBY GENERATOR	GENERATOR MANUAL TRANSFER SWITCH	480V Power	
P-005-J	5"	4 - #600 KCMIL W 1#500 GND	PVC SCHEDULE 40	2000 KW STANDBY GENERATOR	GENERATOR MANUAL TRANSFER SWITCH	480V Power	
P-DB-7- SPARE-A	5"	SPARE	PVC SCHEDULE 40	2000 KW STANDBY GENERATOR	GENERATOR MANUAL TRANSFER SWITCH	480V Power	
P-DB-7- SPARE-B	5"	SPARE	PVC SCHEDULE 40	2000 KW STANDBY GENERATOR	GENERATOR MANUAL TRANSFER SWITCH	480V Power	
P-006-A	5"	4 - #600 KCMIL W 1#500 GND	PVC SCHEDULE 40	GENERATOR MANUAL TRANSFER SWITCH	SWGR-01	480V Power	
P-006-B	5"	4 - #600 KCMIL W 1#500 GND	PVC SCHEDULE 40	GENERATOR MANUAL TRANSFER SWITCH	SWGR-01	480V Power	
P-006-C	5"	4 - #600 KCMIL W 1#500 GND	PVC SCHEDULE 40	GENERATOR MANUAL TRANSFER SWITCH	SWGR-01	480V Power	
P-006-D	5"	4 - #600 KCMIL W 1#500 GND	PVC SCHEDULE 40	GENERATOR MANUAL TRANSFER SWITCH	SWGR-01	480V Power	
P-006-E	5"	4 - #600 KCMIL W 1#500 GND	PVC SCHEDULE 40	GENERATOR MANUAL TRANSFER SWITCH	SWGR-01	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-006-F	5"	4 - #600 KCMIL W 1#500 GND	PVC SCHEDULE 40	GENERATOR MANUAL TRANSFER SWITCH	SWGR-01	480V Power	
P-006-G	5"	4 - #600 KCMIL W 1#500 GND	PVC SCHEDULE 40	GENERATOR MANUAL TRANSFER SWITCH	SWGR-01	480V Power	
P-006-H	5"	4 - #600 KCMIL W 1#500 GND	PVC SCHEDULE 40	GENERATOR MANUAL TRANSFER SWITCH	SWGR-01	480V Power	
P-006-I	5"	4 - #600 KCMIL W 1#500 GND	PVC SCHEDULE 40	GENERATOR MANUAL TRANSFER SWITCH	SWGR-01	480V Power	
P-006-J	5"	4 - #600 KCMIL W 1#500 GND	PVC SCHEDULE 40	GENERATOR MANUAL TRANSFER SWITCH	SWGR-01	480V Power	
P-DB-6- SPARE-A	5"	SPARE	PVC SCHEDULE 40	GENERATOR MANUAL TRANSFER SWITCH	SWGR-01	480V Power	
P-DB-6- SPARE-B	5"	SPARE	PVC SCHEDULE 40	GENERATOR MANUAL TRANSFER SWITCH	SWGR-01	480V Power	
P-007-A	5"	SPARE	PVC SCHEDULE 40	MH # 2 (FUTURE POWER SOURCE)	SWGR-01	480V Power	
P-007-B	5"	SPARE	PVC SCHEDULE 40	MH # 2 (FUTURE POWER SOURCE)	SWGR-01	480V Power	
P-007-C	5"	SPARE	PVC SCHEDULE 40	MH # 2 (FUTURE POWER SOURCE)	SWGR-01	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-007-D	5"	SPARE	PVC SCHEDULE 40	MH # 2 (FUTURE POWER SOURCE)	SWGR-01	480V Power	
P-007-E	5"	SPARE	PVC SCHEDULE 40	MH # 2 (FUTURE POWER SOURCE)	SWGR-01	480V Power	
P-007-F	5"	SPARE	PVC SCHEDULE 40	MH # 2 (FUTURE POWER SOURCE)	SWGR-01	480V Power	
P-007-G	5"	SPARE	PVC SCHEDULE 40	MH # 2 (FUTURE POWER SOURCE)	SWGR-01	480V Power	
P-007-H	5"	SPARE	PVC SCHEDULE 40	MH # 2 (FUTURE POWER SOURCE)	SWGR-01	480V Power	
P-007-I	5"	SPARE	PVC SCHEDULE 40	MH # 2 (FUTURE POWER SOURCE)	SWGR-01	480V Power	
P-007-J	5"	SPARE	PVC SCHEDULE 40	MH # 2 (FUTURE POWER SOURCE)	SWGR-01	480V Power	
P-DB-8-SPARE-A	5"	SPARE	PVC SCHEDULE 40	SWGR-01	MH # (FUTURE POWER SOURCE)	480V Power	
P-DB-8-SPARE-B	5"	SPARE	PVC SCHEDULE 40	SWGR-01	MH # (FUTURE POWER SOURCE)	480V Power	
P-008-A	5"	3 - #600 KCMIL W 1#500 GND	PVC SCHEDULE 40	SWGR-01	SWGR-02 BUS "A"	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-008-B	5"	3 - #600 KCMIL W 1#500 GND	PVC SCHEDULE 40	SWGR-01	SWGR-02 BUS "A"	480V Power	
P-008-C	5"	3 - #600 KCMIL W 1#500 GND	PVC SCHEDULE 40	SWGR-01	SWGR-02 BUS "A"	480V Power	
P-008-D	5"	3 - #600 KCMIL W 1#500 GND	PVC SCHEDULE 40	SWGR-01	SWGR-02 BUS "A"	480V Power	
P-008-E	5"	3 - #600 KCMIL W 1#500 GND	PVC SCHEDULE 40	SWGR-01	SWGR-02 BUS "A"	480V Power	
P-008-F	5"	3 - #600 KCMIL W 1#500 GND	PVC SCHEDULE 40	SWGR-01	SWGR-02 BUS "A"	480V Power	
P-008-G	5"	3 - #600 KCMIL W 1#500 GND	PVC SCHEDULE 40	SWGR-01	SWGR-02 BUS "A"	480V Power	
P-008-H	5"	3 - #600 KCMIL W 1#500 GND	PVC SCHEDULE 40	SWGR-01	SWGR-02 BUS "A"	480V Power	
P-008-I	5"	3 - #600 KCMIL W 1#500 GND	PVC SCHEDULE 40	SWGR-01	SWGR-02 BUS "A"	480V Power	
P-008-J	5"	3 - #600 KCMIL W 1#500 GND	PVC SCHEDULE 40	SWGR-01	SWGR-02 BUS "A"	480V Power	
P-DB-9A- SPARE-A	5"	SPARE	PVC SCHEDULE 40	SWGR-01	SWGR-02 BUS "A"	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-DB-9A-SPARE-B	5"	SPARE	PVC SCHEDULE 40	SWGR-01	SWGR-02 BUS "A"	480V Power	
P-009-A	5"	3 - #600 KCMIL W 1#500 GND	PVC SCHEDULE 40	SWGR-01	SWGR-02 BUS "B"	480V Power	
P-009-B	5"	3 - #600 KCMIL W 1#500 GND	PVC SCHEDULE 40	SWGR-01	SWGR-02 BUS "B"	480V Power	
P-009-C	5"	3 - #600 KCMIL W 1#500 GND	PVC SCHEDULE 40	SWGR-01	SWGR-02 BUS "B"	480V Power	
P-009-D	5"	3 - #600 KCMIL W 1#500 GND	PVC SCHEDULE 40	SWGR-01	SWGR-02 BUS "B"	480V Power	
P-009-E	5"	3 - #600 KCMIL W 1#500 GND	PVC SCHEDULE 40	SWGR-01	SWGR-02 BUS "B"	480V Power	
P-009-F	5"	3 - #600 KCMIL W 1#500 GND	PVC SCHEDULE 40	SWGR-01	SWGR-02 BUS "B"	480V Power	
P-009-G	5"	3 - #600 KCMIL W 1#500 GND	PVC SCHEDULE 40	SWGR-01	SWGR-02 BUS "B"	480V Power	
P-009-H	5"	3 - #600 KCMIL W 1#500 GND	PVC SCHEDULE 40	SWGR-01	SWGR-02 BUS "B"	480V Power	
P-009-I	5"	3 - #600 KCMIL W 1#500 GND	PVC SCHEDULE 40	SWGR-01	SWGR-02 BUS "B"	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-009-J	5"	3 - #600 KCMIL W 1#500 GND	PVC SCHEDULE 40	SWGR-01	SWGR-02 BUS "B"	480V Power	
P-DB-9B- SPARE-C	5"	SPARE	PVC SCHEDULE 40	SWGR-01	SWGR-02 BUS "B"	480V Power	
P-DB-9B- SPARE-D	5"	SPARE	PVC SCHEDULE 40	SWGR-01	SWGR-02 BUS "B"	480V Power	
P-010-A	5"	3 - #600 KCMIL W 1#3/0 GND	PVC SCHEDULE 40	SWGR-02 BUS "A"	ATS-4A-DWB	480V Power	VIA PB-4A-DW AND PB-4C-DW
P-010-B	5"	3 - #600 KCMIL W 1#3/0 GND	PVC SCHEDULE 40	SWGR-02 BUS "A"	ATS-4A-DWB	480V Power	VIA PB-4A-DW AND PB-4C-DW
P-010-C	5"	3 - #600 KCMIL W 1#3/0 GND	PVC SCHEDULE 40	SWGR-02 BUS "A"	ATS-4A-DWB	480V Power	VIA PB-4A-DW AND PB-4C-DW
P-DB-10A- SPARE-A	5"	SPARE	PVC SCHEDULE 40	SWGR-02 BUS "A"	DEWATERING BUILDING "PB- 4A-DW"	480V Power	
P-011-A	5"	3 - #600 KCMIL W 1#1/0 GND	PVC SCHEDULE 40	SWGR-02 BUS "A"	EXISTING RAPID SAND FILTER MAIN SWITCHGEAR	480V Power	
P-011-B	5"	3 - #600 KCMIL W 1#1/0 GND	PVC SCHEDULE 40	SWGR-02 BUS "A"	EXISTING RAPID SAND FILTER MAIN SWITCHGEAR	480V Power	
P-DB-11A- SPARE-A	5"	SPARE	PVC SCHEDULE 40	SWGR-02 BUS "A"	EXISTING RAPID SAND	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
					FILTER MAIN SWITCHGEAR		
P-012	5"	3 - #600 KCMIL W 1#3 GND	PVC SCHEDULE 40	SWGR-02 BUS "A"	ATS-WATERSHED	480V Power	
P-013-A	5"	3 - #600 KCMIL W 1#1/0 GND	PVC SCHEDULE 40	SWGR-02 BUS "A"	EXISTING MCC-5 BACKWASH FACILITY	480V Power	
P-013-B	5"	3 - #600 KCMIL W 1#1/0 GND	PVC SCHEDULE 40	SWGR-02 BUS "A"	EXISTING MCC-5 BACKWASH FACILITY	480V Power	
P-DB-11A-SPARE-B	5"	SPARE	PVC SCHEDULE 40	SWGR-02 BUS "A"	EXISTING MCC-5 BACKWASH FACILITY	480V Power	
P-014-A	5"	3 - #600 KCMIL W 1#3/0 GND	PVC SCHEDULE 40	SWGR-02 BUS "B"	ATS-4B-DWB	480V Power	VIA PB-4A-DW AND PB-4C-DW
P-014-B	5"	3 - #600 KCMIL W 1#3/0 GND	PVC SCHEDULE 40	SWGR-02 BUS "B"	ATS-4B-DWB	480V Power	VIA PB-4A-DW AND PB-4C-DW
P-014-C	5"	3 - #600 KCMIL W 1#3/0 GND	PVC SCHEDULE 40	SWGR-02 BUS "B"	ATS-4B-DWB	480V Power	VIA PB-4A-DW AND PB-4C-DW
P-DB-10B-SPARE-A	5"	SPARE	PVC SCHEDULE 40	SWGR-02 BUS "B"	DEWATERING BUILDING "PB-4B-DW"	480V Power	
P-015	5"	3 - #600 KCMIL W 1#3 GND	PVC SCHEDULE 40	SWGR-02 BUS "B"	ATS-WATERSHED	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-DB-11B-SPARE-A	5"	SPARE	PVC SCHEDULE 40	SWGR-02 BUS "B"	ATS-WATERSHED	480V Power	
P-016-A	5"	3 - #600 KCMIL W 1#1/0 GND	PVC SCHEDULE 40	SWGR-02 BUS "B"	EXISTING MCC-5 BACKWASH FACILITY	480V Power	
P-016-B	5"	3 - #600 KCMIL W 1#1/0 GND	PVC SCHEDULE 40	SWGR-02 BUS "B"	EXISTING MCC-5 BACKWASH FACILITY	480V Power	
P-017-A	5"	3 - #600 KCMIL W 1#3/0 GND	PVC SCHEDULE 40	SWGR-03	ATS-4A-DWB	480V Power	VIA PB-4B-DW AND PB-4D-DW
P-017-B	5"	3 - #600 KCMIL W 1#3/0 GND	PVC SCHEDULE 40	SWGR-03	ATS-4A-DWB	480V Power	VIA PB-4B-DW AND PB-4D-DW
P-017-C	5"	3 - #600 KCMIL W 1#3/0 GND	PVC SCHEDULE 40	SWGR-03	ATS-4A-DWB	480V Power	VIA PB-4B-DW AND PB-4D-DW
P-018-A	5"	3 - #600 KCMIL W 1#3/0 GND	PVC SCHEDULE 40	SWGR-03	ATS-4B-DWB	480V Power	VIA PB-4B-DW AND PB-4D-DW
P-018-B	5"	3 - #600 KCMIL W 1#3/0 GND	PVC SCHEDULE 40	SWGR-03	ATS-4B-DWB	480V Power	VIA PB-4B-DW AND PB-4D-DW
P-018-C	5"	3 - #600 KCMIL W 1#3/0 GND	PVC SCHEDULE 40	SWGR-03	ATS-4B-DWB	480V Power	VIA PB-4B-DW AND PB-4D-DW
P-DB-12A-SPARE-A	5"	SPARE	PVC SCHEDULE 40	SWGR-03	ATS-4A-DWB	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-DB-12B-SPARE-A	5"	SPARE	PVC SCHEDULE 40	SWGR-03	ATS-4B-DWB	480V Power	
P-DB-13A-SPARE-A	5"	SPARE	PVC SCHEDULE 40	SWGR-03	ATS-4A-DWB	480V Power	
P-DB-13B-SPARE-A	5"	SPARE	PVC SCHEDULE 40	SWGR-03	ATS-4B-DWB	480V Power	
P-019-A	5"	3 - #600 KCMIL W 1#3/0 GND	PVC SCHEDULE 40	EXISTING 800 KW STANDBY GENERATOR	EXISTING GENERATOR MANUAL TRANSFER SWITCH	480V Power	
P-019-B	5"	3 - #600 KCMIL W 1#3/0 GND	PVC SCHEDULE 40	EXISTING 800 KW STANDBY GENERATOR	EXISTING GENERATOR MANUAL TRANSFER SWITCH	480V Power	
P-019-C	5"	3 - #600 KCMIL W 1#3/0 GND	PVC SCHEDULE 40	EXISTING 800 KW STANDBY GENERATOR	EXISTING GENERATOR MANUAL TRANSFER SWITCH	480V Power	
P-020-A	5"	3 - #600 KCMIL W 1#3/0 GND	PVC SCHEDULE 40	EXISTING GENERATOR MANUAL TRANSFER SWITCH	SWGR-03	480V Power	
P-020-B	5"	3 - #600 KCMIL W 1#3/0 GND	PVC SCHEDULE 40	EXISTING GENERATOR MANUAL TRANSFER SWITCH	SWGR-03	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-020-C	5"	3 - #600 KCMIL W 1#3/0 GND	PVC SCHEDULE 40	EXISTING GENERATOR MANUAL TRANSFER SWITCH	SWGR-03	480V Power	
P-DB-15A- SPARE-A	5"	SPARE	PVC SCHEDULE 40	EXISTING 800 KW STANDBY GENERATOR	SWGR-03	480V Power	
P-021-A	5"	3 - #600 KCMIL W 1#1/0 GND	PVC SCHEDULE 40	SWGR-03	EXISTING RAPID SAND FILTER MAIN SWITCHGEAR	480V Power	
P-021-B	5"	3 - #600 KCMIL W 1#1/0 GND	PVC SCHEDULE 40	SWGR-03	EXISTING RAPID SAND FILTER MAIN SWITCHGEAR	480V Power	
P-022	5"	3 - #600 KCMIL W 1#3 GND	PVC SCHEDULE 40	ATS-WATERSHED	EXISTING DPWB WATERSHED BUILDING	480V Power	
P-023	1"	2 - #10 AWG W 1#12 GND	PVC SCHEDULE 40	ADMIN BUILDING (LP-1A-ADM)	GATE 3	208V Power	
P-DB-19- SPARE-A	1"	SPARE	PVC SCHEDULE 40	ADMIN BUILDING	GATE 3	208V Power	
P-023.1	1"	2 - #10 AWG W 1#10 GND	PVC SCHEDULE 40	EXISTING RAPID SAND FILTER BUILDING	GATE 4	208V Power	
P-DB-19- SPARE-B	1"	SPARE	PVC SCHEDULE 40	EXISTING RAPID SAND FILTER BUILDING	GATE 4	208V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-024	1"	2 - #8 AWG W 1#10 GND	PVC SCHEDULE 40	ADMIN BUILDING (LP-1A-ADM)	GATE 2	208V Power	
P-DB-20-SPARE-A	1"	SPARE	PVC SCHEDULE 40	ADMIN BUILDING	GATE 2	208V Power	
P-025	1"	2 - 6 AWG W 1#10 GND	PVC SCHEDULE 40	ADMIN BUILDING (LP-EV-ADM)	EV CHARGER 1	208V Power	
P-026	1"	2 - 6 AWG W 1#10 GND	PVC SCHEDULE 40	ADMIN BUILDING (LP-EV-ADM)	EV CHARGER 2	208V Power	
P-027	1"	2 - 6 AWG W 1#10 GND	PVC SCHEDULE 40	ADMIN BUILDING (LP-EV-ADM)	EV CHARGER 3	208V Power	
P-028	1"	2 - 6 AWG W 1#10 GND	PVC SCHEDULE 40	ADMIN BUILDING (LP-EV-ADM)	EV CHARGER 4	208V Power	
P-029	1"	2 - 6 AWG W 1#10 GND	PVC SCHEDULE 40	ADMIN BUILDING (LP-EV-ADM)	EV CHARGER 5	208V Power	
P-030	1"	2 - 6 AWG W 1#10 GND	PVC SCHEDULE 40	ADMIN BUILDING (LP-EV-ADM)	EV CHARGER 6	208V Power	
P-DB-22-SPARE-A	1"	SPARE	PVC SCHEDULE 40	ADMIN BUILDING	EV CHARGER	208V Power	
-	-	-	-	-	-	-	-
P-DB-25-SPARE-A	2"	SPARE	PVC SCHEDULE 40	DEWATERING BUILDING	WASTE WASHWATER TANK (WWT)		

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-032	1"	3 - #12 AWG W 1#12 GND	PVC SCHEDULE 40	MCC-2A	SLS-01/LCP-01	480V Power	
P-DB-16- SPARE-A	1"	SPARE	PVC SCHEDULE 40	MCC-2A	SLS-01	480V Power	
P-033	1"	3 - #12 AWG W 1#12 GND	PVC SCHEDULE 40	MCC-2B	SLS-02/LCP-02	480V Power	
P-DB-17- SPARE-A	1"	SPARE	PVC SCHEDULE 40	MCC-2B	SLS-02	480V Power	
P-033.1	1 1/2"	4 - #2 AWG W 1#8 GND	PVC SCHEDULE 40	LP-1-CHEM-TB	GENERATOR PANEL	208V Power	
P-033.2	1"	2 - #10 AWG W 1#10 GND	PVC SCHEDULE 40	LP-3A-ADM	T-70740 (LAB WASTE HOLDING TANK)	120V Power	VIA HH #2B
P-033.3	1"	2 - #10 AWG W 1#10 GND	PVC SCHEDULE 40	LP-1-PLUMB-TB	METER CHAMBER	120V Power	
P-033.4	1"	2 - #6 AWG W 1#10 GND	PVC SCHEDULE 40	LP-1-PLUMB-TB	SP-03	120V Power	
ADMIN C&C							
P-034-A	5"	3 - #600 KCMIL W 1#1/0 GND	RGS	SWGR-02 BUS "A"	ATS-MAIN-ADM	480V Power	
P-034-B	5"	3 - #600 KCMIL W 1#1/0 GND	RGS	SWGR-02 BUS "A"	ATS-MAIN-ADM	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-035-A	5"	3 - #600 KCMIL W 1#1/0 GND	RGS	SWGR-02 BUS "B"	ATS-MAIN-ADM	480V Power	
P-035-B	5"	3 - #600 KCMIL W 1#1/0 GND	RGS	SWGR-02 BUS "B"	ATS-MAIN-ADM	480V Power	
P-036-A	5"	3 - #600 KCMIL W 1#1/0 GND	RGS	ATS-MAIN-ADM	PP-MAIN-ADM	480V Power	
P-036-B	5"	3 - #600 KCMIL W 1#1/0 GND	RGS	ATS-MAIN-ADM	PP-MAIN-ADM	480V Power	
P-037	2"	3 - #4/0 AWG W 1#6 GND	RGS	PP-MAIN-ADM	PP-1-ADM	480V Power	
P-038	2"	3 - #4/0 AWG W 1#6 GND	RGS	PP-MAIN-ADM	PP-2-ADM	480V Power	
P-039-A	3"	3 - #350 KCMIL W 1#1 GND	RGS	PP-MAIN-ADM	PP-3-ADM	480V Power	
P-039-B	3"	3 - #350 KCMIL W 1#1 GND	RGS	PP-MAIN-ADM	PP-3-ADM	480V Power	
P-040	2"	3 - #2 AWG W 1#8 GND	RGS	PP-MAIN-ADM	DSW-UPS-ADM	480V Power	
-	-	-	-	-	-	-	-
P-042	2"	3 - #2 AWG W 1#8 GND	RGS	DSW-UPS-ADM	UPS-ADM	240V Power	
P-043	2"	4 - #2 AWG W 1#8 GND	RGS	UPS-ADM	LP-UPS-ADM	240V Power	
P-044	1"	3 - #6 AWG W 1#10 GND	RGS	PP-MAIN-ADM	DSW-TX-UPS- EMER-1-ADM	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-045	1"	3 - #6 AWG W 1#10 GND	RGS	DSW-TX-UPS-EMER-1-ADM	TX-UPS-EMER-1-ADM	480V Power	
P-046	1 1/2"	3 - #3 AWG W 1#8 GND	RGS	TX-UPS-EMER-1-ADM	UPS-EMER-1-ADM	240V Power	
P-047	1 1/2"	3 - #3 AWG W 1#8 GND	RGS	UPS-EMER-1-ADM	LP-UPS-EMER-1-ADM	240V Power	
P-047.1	1 1/2"	3 - #1 AWG W 1#6 GND	RGS	PP-MAIN-ADM	DSW-TX-EV-ADM	480V Power	
P-047.2	1 1/2"	3 - #1 AWG W 1#6 GND	RGS	DSW-TX-EV-ADM	TX-EV-ADM	480V Power	
P-047.3	2 1/2"	4 - #250 KCMIL W 1#4 GND	RGS	TX-EV-ADM	LP-EV-ADM	208V Power	
P-048	3/4"	3 - #10 AWG W 1#10 GND	RGS	PP-1-ADM	DSW-CWP-01	480V Power	
P-048.1	3/4"	3 - #10 AWG W 1#10 GND	RGS	DSW-CWP-01	VFD-CWP-01	480V Power	
P-049	3/4"	3 - #10 AWG W 1#10 GND	RGS	VFD-CWP-01	CWP-01	480V Power	
P-050	3/4"	3 - #10 AWG W 1#10 GND	RGS	PP-1-ADM	DSW-CWP-02 (STANDBY)	480V Power	
P-050.1	3/4"	3 - #10 AWG W 1#10 GND	RGS	DSW-CWP-02 (STANDBY)	VFD-CWP-02 (STANDBY)	480V Power	
P-051	3/4"	3 - #10 AWG W 1#10 GND	RGS	VFD-CWP-02 (STANDBY)	CWP-02 (STANDBY)	480V Power	
P-052	1"	3 - #6 AWG W 1#10 GND	RGS	PP-1-ADM	TX-1-ADM	480V Power	
P-053	1"	4 - #3 AWG W 1#8 GND	RGS	TX-1-ADM	LP-1A-ADM	208V Power	
P-054	3/4"	3 - #12 AWG W 1#12 GND	RGS	PP-1-ADM	DSW-SP-01	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-055	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-SP-01	SP-01	480V Power	
P-056	3/4"	3 - #12 AWG W 1#12 GND	RGS	PP-1-ADM	DSW-EUH-53	480V Power	
P-057	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EUH-53	EUH-53	480V Power	
P-058	1"	3 - #8 AWG W 1#10 GND	RGS	PP-1-ADM	ELEVATOR CONTROLLER	480V Power	
P-059	1"	3 - #8 AWG W 1#10 GND	RGS	ELEVATOR CONTROLLER	ELEVATOR	480V Power	
P-060	3/4"	3 - #10 AWG W 1#10 GND	RGS	PP-2-ADM	DSW-WH-01	480V Power	
P-061	3/4"	3 - #10 AWG W 1#10 GND	RGS	DSW-WH-01	WH-01	480V Power	
P-062	3/4"	3 - #10 AWG W 1#10 GND	RGS	PP-2-ADM	DSW-WH-02	480V Power	
P-063	3/4"	3 - #10 AWG W 1#10 GND	RGS	DSW-WH-02	WH-02	480V Power	
P-064	2"	3 - #4/0 AWG W 1#4 GND	RGS	PP-2-ADM	TX-2-ADM	480V Power	
P-065	3"	4 - #600 KCMIL W 1#3 GND	RGS	TX-2-ADM	LP-2-ADM	480V Power	
P-066	3/4"	3 - #8 AWG W 1#10 GND	RGS	PP-3-ADM	DSW-VRF-01	480V Power	
P-067	3/4"	3 - #8 AWG W 1#10 GND	RGS	DSW-VRF-01	VRF-01	480V Power	
P-068	3/4"	3 - #10 AWG W 1#10 GND	RGS	PP-3-ADM	DSW-VRF-02	480V Power	
P-069	3/4"	3 - #10 AWG W 1#10 GND	RGS	DSW-VRF-02	VRF-02	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-070	3/4"	3 - #10 AWG W 1#10 GND	RGS	PP-3-ADM	DSW-VRF-03	480V Power	
P-071	3/4"	3 - #10 AWG W 1#10 GND	RGS	DSW-VRF-03	VRF-03	480V Power	
P-072	3/4"	3 - #8 AWG W 1#10 GND	RGS	PP-3-ADM	DSW-VRF-04	480V Power	
P-073	3/4"	3 - #8 AWG W 1#10 GND	RGS	DSW-VRF-04	VRF-04	480V Power	
P-074	3/4"	3 - #10 AWG W 1#10 GND	RGS	PP-3-ADM	DSW-VRF-05	480V Power	
P-075	3/4"	3 - #10 AWG W 1#10 GND	RGS	DSW-VRF-05	VRF-05	480V Power	
P-076	1 1/2"	3 - #2 AWG W 1#6 GND	RGS	PP-3-ADM	DSW-DOAS-01	480V Power	
P-077	1 1/2"	3 - #2 AWG W 1#6 GND	RGS	DSW-DOAS-01	DOAS-01	480V Power	
P-078	1 1/2"	3 - #2 AWG W 1#6 GND	RGS	PP-3-ADM	DSW-DOAS-02	480V Power	
P-079	1 1/2"	3 - #2 AWG W 1#6 GND	RGS	DSW-DOAS-02	DOAS-02	480V Power	
P-080	2"	3 - #3/0 AWG W 1#6 GND	RGS	PP-3-ADM	TX-3-ADM	480V Power	
P-081	2 1/2"	4 - #250 KCMIL W 1#4 GND	RGS	TX-3-ADM	LP-3-ADM	480V Power	
P-082	3/4"	3 - #12 AWG W 1#12 GND	RGS	PP-3-ADM	DSW-EF-19	480V Power	
P-083	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EF-19	EF-19	480V Power	
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-086	3/4"	3 - #12 AWG W 1#12 GND	RGS	LP-1A-ADM	DSW-EWH-01	208V Power	
P-087	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EWH-01	EWH-01	208V Power	
P-088	3/4"	3 - #12 AWG W 1#12 GND	RGS	LP-1A-ADM	DSW-EWH-02	208V Power	
P-089	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EWH-02	EWH-02	208V Power	
P-090	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1A-ADM	GMU-01	120V Power	
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
P-094	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1A-ADM	ELEVATOR F/A CONTROLLER	120V Power	
P-095	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1A-ADM	DDC-11	120V Power	
P-096	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1A-ADM	LCS-CWP-01	120V Power	
P-097	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1A-ADM	LCS-CWP-02	120V Power	
P-098	1 1/2"	4 - #2 AWG W 1#8 GND	RGS	LP-2-ADM	LP-2A-ADM	208V Power	
P-099	1 1/2"	4 - #2 AWG W 1#8 GND	RGS	LP-2-ADM	LP-2B-ADM	208V Power	
P-100	1 1/2"	4 - #2 AWG W 1#8 GND	RGS	LP-2-ADM	LP-2C-ADM	208V Power	
P-101	1 1/2"	4 - #2 AWG W 1#8 GND	RGS	LP-2-ADM	LP-BR-ADM	208V Power	
P-102	2"	4 - #1/0 AWG W 1#6 GND	RGS	LP-2-ADM	LP-LAB-ADM	208V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-103	1 1/2"	4 - #2 AWG W 1#8 GND	RGS	LP-2-ADM	LP-2D-ADM	208V Power	
P-104	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2A-ADM	BC-01	208V Power	
P-105	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2A-ADM	FTR-07	208V Power	
P-106	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2A-ADM	FTR-08	208V Power	
P-107	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2A-ADM	FTR-09	208V Power	
P-108	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2A-ADM	FTR-10	208V Power	
P-109	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2A-ADM	FCU-05	208V Power	
P-110	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2A-ADM	FCU-06	208V Power	
P-111	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2A-ADM	FCU-07	208V Power	
P-112	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2A-ADM	FCU-08	208V Power	
P-113	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2A-ADM	FCU-09	208V Power	
P-114	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2A-ADM	FCU-10	208V Power	
P-115	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2A-ADM	FCU-11	208V Power	
P-116	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2A-ADM	FCU-12	208V Power	
P-117	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2A-ADM	FCU-13	208V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-118	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2A-ADM	TP-02 (ROOM 1208)	120V Power	Locker Room Suite Electronic Trap Primer
P-119	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2B-ADM	BC-02	208V Power	
P-120	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2B-ADM	FTR-01	208V Power	
P-121	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2B-ADM	FTR-02	208V Power	
P-122	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2B-ADM	FTR-03	208V Power	
P-123	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2B-ADM	FTR-04	208V Power	
P-124	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2B-ADM	FTR-05	208V Power	
P-125	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2B-ADM	FTR-06	208V Power	
P-126	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2B-ADM	FCU-14	208V Power	
P-127	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2B-ADM	FCU-15	208V Power	
P-128	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2B-ADM	FCU-16	208V Power	
-	-	-	-	-	-	-	-
P-130	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2B-ADM	FCU-18	208V Power	
P-131	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2B-ADM	FCU-19	208V Power	
P-132	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2B-ADM	FCU-20	208V Power	
P-133	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2B-ADM	FCU-23	208V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-134	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2C-ADM	FCU-21	120V Power	
P-135	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2C-ADM	FCU-22	120V Power	
P-136	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2C-ADM	WPS-01	120V Power	
P-137	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2C-ADM	RCP-01	120V Power	
P-138	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2C-ADM	TP-01 (ROOM 1218)	120V Power	1st Floor Admin JC Electronic Trap Primer
P-139	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2C-ADM	BC-03	208V Power	
P-140	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2C-ADM	RCP-02	120V Power	
-	-	-	-	-	-	-	-
P-142	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2C-ADM	DDC-13	120V Power	
P-143	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2C-ADM	DDC-15	120V Power	
P-143.1	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2C-ADM	LCP-AP01	120V Power	
P-143.2	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2C-ADM	LCP-AP02	120V Power	
P-143.3	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2C-ADM	LCP-AP03	120V Power	
P-143.4	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2C-ADM	FCU-24	208V Power	
P-143.5	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2C-ADM	FCU-25	208V Power	
P-143.6	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2C-ADM	FCU-26	208V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-143.7	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2C-ADM	FCU-27	208V Power	
P-143.8	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2C-ADM	FCU-28	208V Power	
P-144	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2D-ADM	ADM LTG - (1100, 1101, 1103)	120V Power	
P-145	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2D-ADM	ADM LTG - (1210, 1211, 1212, 1213,1214, 1215)	120V Power	
P-146	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2D-ADM	ADM LTG - (1221, 1222, 1223, 1224)	120V Power	
P-147	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2D-ADM	ADM RECP - EL.457.00	120V Power	
P-148	1"	2 - #8 AWG W 1#10 GND	PVC SCHEDULE 40	LP-2D-ADM	OUTDOOR LTG - ADMIN SOUTH	208V Power	
P-149	1"	2 - #8 AWG W 1#10 GND	PVC SCHEDULE 40	LP-2D-ADM	OUTDOOR LTG - DWB	208V Power	
P-150	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2D-ADM	ADM LTG - (1200, 1201, 1202)	120V Power	
P-151	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2D-ADM	ADM LTG - (1203, 1204, 1205, 1206, 1207, 1208, 1209)	120V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-152	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-2D-ADM	ADM LTG - (1216, 1217, 1218, 1219, 1220)	120V Power	
P-153	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2D-ADM	ADM RECP - EL.457.00	120V Power	
P-154	1"	2 - #8 AWG W 1#10 GND	PVC SCHEDULE 40	LP-2D-ADM	OUTDOOR LTG - ADMIN SOUTH	208V Power	
P-155	1"	2 - #8 AWG W 1#10 GND	PVC SCHEDULE 40	LP-2D-ADM	OUTDOOR LTG - LB1/LB2	120V Power	
P-155.1	3/4"	2 - #8 AWG W 1#10 GND	RGS	LP-2D-ADM	ADM EAST RECP - EL.471.00	120V Power	
P-155.2	3/4"	2 - #8 AWG W 1#10 GND	RGS	LP-2D-ADM	ADM EAST RECP - EL.471.00	120V Power	
P-155.3	3/4"	2 - #8 AWG W 1#10 GND	RGS	LP-2D-ADM	ADM EAST RECP - EL.471.00	120V Power	
P-155.4	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2D-ADM	ADM LTG - (1201)	120V Power	
P-155.5	3/4"	2 - #8 AWG W 1#10 GND	RGS	LP-2D-ADM	ADM EAST RECP - EL.471.00	120V Power	
P-155.6	3/4"	2 - #8 AWG W 1#10 GND	RGS	LP-2D-ADM	ADM EAST RECP - EL.471.00	120V Power	
P-155.7	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2D-ADM	ADM LTG - (OUTSIDE CANOPY)	120V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-155.8	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2D-ADM	ADM LTG - BREAK ROOM 1202	120V Power	
P-155.9	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2D-ADM	ADM RECP - RECPT DSK EL.457.00	120V Power	
P-155.10	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-2D-ADM	ADM WEST RECP - EL.471.00	120V Power	
P-155.11	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2D-ADM	ADM RECP - LOBY DISPLAY EL.471	120V Power	
P-155.12	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2D-ADM	ADM RECP - LOBY WALL EL.471	120V Power	
P-155.13	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-2D-ADM	ADM WEST RECP - EL.471.00	120V Power	
P-155.14	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-2D-ADM	ADM WEST RECP - EL.471.00	120V Power	
P-156	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-BR-ADM	FCU-01	208V Power	
P-157	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-BR-ADM	FCU-02	208V Power	
P-158	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-BR-ADM	FCU-03	208V Power	
P-159	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-BR-ADM	FCU-04	208V Power	
P-160	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-BR-ADM	RECP BREAK RM - EL.471.00	120V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-161	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-BR-ADM	TRAINING RM - EL.471.00	120V Power	
P-162	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-BR-ADM	TRAINING RM - EL.471.00	120V Power	
P-163	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-BR-ADM	ADM EAST RECP - EL.471.00	120V Power	
P-163.1	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-BR-ADM	ADM EAST RECP - EL.471.00	120V Power	
P-163.2	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-BR-ADM	RECP BREAK RM - EL.471.00	120V Power	
P-163.3	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-BR-ADM	TRAINING RM - EL.471.00	120V Power	
P-163.4	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-BR-ADM	ADM EAST RECP - EL.471.00	120V Power	
P-163.5	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-BR-ADM	ADM EAST RECP - EL.471.00	120V Power	
P-164	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-BR-ADM	RECP BREAK RM - DISHWASHER	208V Power	
P-165	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-BR-ADM	RECP BREAK RM - EL.471.00	120V Power	
P-166	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-BR-ADM	RECP BREAK RM REFRIGERATO R	120V Power	
P-167	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-BR-ADM	RECP BREAK RM - MICROWAVE	120V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-168	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-BR-ADM	RECEP BREAK ROOM - MONITOR	120V Power	
P-168.1	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-BR-ADM	RECEP TRAINING ROOM - MONITOR	120V Power	
P-168.2	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-BR-ADM	RECEP TRAINING ROOM - MONITOR	120V Power	
P-168.3	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-BR-ADM	TRAINING RM - EL.471.00	120V Power	
P-169	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-LAB-ADM	TP-01 (Room 1221)	120V Power	Laboratory Electronic Trap Primer
P-170	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-LAB-ADM	FS (Rm 1221)	120V Power	Laboratory Emergency Shower Flow Switch
P-171	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-LAB-ADM	FS (Rm 1220)	120V Power	Microbiology Lab Emergency Eyewash Flow Switch
P-172	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-LAB-ADM	FSH-70001	120V Power	
-	-	-	-	-	-	-	-
P-173.1	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-LAB-ADM	ADM LAB RECP - EL.471.00	120V Power	
P-173.2	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-LAB-ADM	ADM LAB RECP - EL.471.00	120V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-173.3	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-LAB-ADM	ADM LAB RECP - EL.471.00	120V Power	
P-173.4	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-LAB-ADM	ADM LAB RECP - EL.471.00	120V Power	
P-173.5	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-LAB-ADM	ADM LAB RECP - EL.471.00	120V Power	
P-173.6	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-LAB-ADM	ADM LAB RECP - EL.471.00	120V Power	
P-173.7	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-LAB-ADM	ADM LAB RECP - EL.471.00	120V Power	
P-173.8	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-LAB-ADM	ADM LAB RECP - EL.471.00	120V Power	
P-173.9	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-LAB-ADM	ADM LAB RECP - EL.471.00	120V Power	
P-173.10	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-LAB-ADM	AUTOCLAVE	120V Power	
P-173.11	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-LAB-ADM	AUTOCLAVE	120V Power	
P-173.12	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-LAB-ADM	INCUBATOR	120V Power	
P-173.13	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-LAB-ADM	INCUBATOR	120V Power	
P-173.14	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-LAB-ADM	INCUBATOR	120V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-173.15	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-LAB-ADM	DRYING OVEN	120V Power	
P-173.16	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-LAB-ADM	DRYING OVEN	120V Power	
P-173.17	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-LAB-ADM	UNDECOUNTE R FREEZER	120V Power	
P-173.18	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-LAB-ADM	UNDERCOUN T ER ICE MAKER	120V Power	
P-173.19	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-LAB-ADM	FUME HOOD	120V Power	
P-173.20	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-LAB-ADM	LAB REFRIGERATO R	120V Power	
P-173.21	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-LAB-ADM	LAB REFRIGERATO R	120V Power	
P-173.22	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-LAB-ADM	RH UNDR COUNTR LAB REFRIG	120V Power	
-	-	-	-	-	-	-	-
P-173.24	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-LAB-ADM	ADM LAB RECP REG RACK- EL.471	120V Power	
P-173.25	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-LAB-ADM	ADM LAB RECP REG RACK- EL.471	120V Power	
P-173.26	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-LAB-ADM	ADM LAB RECP - EL.471.00	120V Power	
P-173.27	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-LAB-ADM	ADM LAB RECP REG RACK- EL.471	120V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-173.28	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-LAB-ADM	ADM LAB RECP REG RACK- EL.471	120V Power	
P-173.29	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-LAB-ADM	LAB DISHWASHER	208V Power	
P-174	1 1/2"	4 - #2 AWG W 1#8 GND	RGS	LP-3-ADM	LP-3A-ADM	208V Power	
P-175	1 1/2"	4 - #2 AWG W 1#8 GND	RGS	LP-3-ADM	LP-3B-ADM	208V Power	
P-176	1 1/2"	4 - #2 AWG W 1#8 GND	RGS	LP-3-ADM	LP-3C-ADM	208V Power	
P-177	2 1/2"	4 - #4/0 AWG W 1#6 GND	RGS	LP-3-ADM	LP-3D-ADM	208V Power	
P-178	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3A-ADM	FCU-29	208V Power	
P-179	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3A-ADM	FCU-30	208V Power	
P-180	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3A-ADM	FCU-31	208V Power	
P-181	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3A-ADM	FCU-32	208V Power	
P-182	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3A-ADM	FCU-33	208V Power	
P-183	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3A-ADM	FCU-34	208V Power	
P-184	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3A-ADM	FCU-35	208V Power	
P-185	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3A-ADM	FCU-36	208V Power	
P-186	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3A-ADM	BC-04	208V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-187	1"	2 - #8 AWG W 1#10 GND	RGS	LP-3A-ADM	WH-03	208V Power	
P-188	1"	2 - #8 AWG W 1#10 GND	RGS	LP-3A-ADM	WH-04	208V Power	
P-189	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3A-ADM	TP-01 (Room 1311)	120V Power	2nd Floor Admin JC Electronic Trap Primer
P-190	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3A-ADM	TP-01 (Room 1313)	120V Power	2nd Floor Mech Room Electronic Trap Primer
P-191	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3A-ADM	DOAS-1	120V Power	
P-192	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3A-ADM	RCP-03	120V Power	
P-193	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3A-ADM	DSW-EF-17	120V Power	
P-193.1	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3A-ADM	LCS-70740	120V Power	
P-194	3/4"	2 - #12 AWG W 1#12 GND	RGS	DSW-EF-17	EF-17	120V Power	
P-195	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3A-ADM	DDC-07	120V Power	
P-196	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3B-ADM	FCU-37	208V Power	
P-197	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3B-ADM	FCU-38	208V Power	
P-198	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3B-ADM	FCU-39	208V Power	
P-199	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3B-ADM	FCU-40	208V Power	
P-200	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3B-ADM	FCU-41	208V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-201	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3B-ADM	FCU-42	208V Power	
P-202	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3B-ADM	FCU-43	208V Power	
P-203	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3B-ADM	FCU-44	208V Power	
P-204	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3B-ADM	FCU-45	208V Power	
P-205	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3B-ADM	BC-05	208V Power	
P-206	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3B-ADM	DOAS-2	208V Power	
P-207	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3B-ADM	BMS-01	120V Power	
P-208	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3B-ADM	BMS-MCP	120V Power	
P-209	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3B-ADM	LCS-EF-21	120V Power	
P-210	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3B-ADM	VRF CENTRALIZED CONTROLLER	120V Power	
P-211	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3B-ADM	LCS-EF-20	120V Power	
P-212	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3B-ADM	BMS-04	120V Power	
P-212.1	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3B-ADM	LCP-AP04	120V Power	
P-212.2	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3B-ADM	LCP-AP05	120V Power	
P-212.3	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3B-ADM	LCP-AP06	120V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-213	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3C-ADM	FCU-46	208V Power	
P-214	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3C-ADM	FCU-47	208V Power	
P-215	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3C-ADM	FCU-48	208V Power	
P-216	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3C-ADM	FCU-49	208V Power	
P-217	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3C-ADM	FCU-50	208V Power	
P-218	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3C-ADM	FCU-51	208V Power	
P-219	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3C-ADM	FCU-52	208V Power	
P-220	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3C-ADM	FCU-53	208V Power	
P-221	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3C-ADM	FCU-54	208V Power	
P-222	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3C-ADM	FCU-55	208V Power	
-	-	-	-	-	-	-	-
P-224	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-3C-ADM	HP-01	208V Power	
P-225	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3C-ADM	DSW-EF-18	120V Power	
P-226	3/4"	2 - #12 AWG W 1#12 GND	RGS	DSW-EF-18	EF-18	120V Power	
P-227	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3C-ADM	DSW-EF-20	120V Power	
P-228	3/4"	2 - #12 AWG W 1#12 GND	RGS	DSW-EF-20	EF-20	120V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-229	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3C-ADM	DSW-EF-21	120V Power	
P-230	3/4"	2 - #12 AWG W 1#12 GND	RGS	DSW-EF-21	EF-21	120V Power	
P-231	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3C-ADM	DDC-05	120V Power	
P-231.1	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3C-ADM	DDC-06	120V Power	
P-232	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3C-ADM	LCS-EF-17	120V Power	
P-233	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3C-ADM	LCS-EF-18	120V Power	
P-234	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3C-ADM	LCS-EF-19	120V Power	
P-234.1	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3C-ADM	IG-RCP-01 (INERT GAS PANEL)	120V Power	
P-234.2	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3C-ADM	RELEASING PANEL COMPRESSOR	120V Power	
P-234.3	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3C-ADM	PRE-ACTION RELEASING PANEL	120V Power	
P-235	3/4"	2 - #8 AWG W 1#10 GND	RGS	LP-3D-ADM	ADM WEST RECP - EL.485.00	120V Power	
P-236	3/4"	2 - #8 AWG W 1#10 GND	RGS	LP-3D-ADM	ADM WEST RECP - EL.485.00	120V Power	
P-237	3/4"	2 - #8 AWG W 1#10 GND	RGS	LP-3D-ADM	ADM WEST RECP - EL.485.00	120V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-238	3/4"	2 - #8 AWG W 1#10 GND	RGS	LP-3D-ADM	ADM WEST RECP - EL.485.00	120V Power	
P-239	3/4"	2 - #8 AWG W 1#10 GND	RGS	LP-3D-ADM	ADM WEST RECP - EL.485.00	120V Power	
P-240	3/4"	2 - #8 AWG W 1#10 GND	RGS	LP-3D-ADM	ADM WEST RECP - EL.485.00	120V Power	
P-241	3/4"	2 - #8 AWG W 1#10 GND	RGS	LP-3D-ADM	ADM WEST RECP - EL.485.00	120V Power	
P-242	3/4"	2 - #8 AWG W 1#10 GND	RGS	LP-3D-ADM	ADM WEST RECP - EL.485.00	120V Power	
P-243	1"	2 - #10 AWG W 1#10 GND	RGS	LP-3D-ADM	ADM RECP - EL.499.00	120V Power	
P-244	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-3D-ADM	LTG - (1300,1301,130 2)	120V Power	
P-245	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3D-ADM	LTG - (1303,1304,130 5,1306, 1307,1308,1309)	120V Power	
P-246	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3D-ADM	LTG - (1310,1311,131 2)	120V Power	
P-247	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3D-ADM	LTG - (1313,1314,131 5,1316)	120V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-248	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3D-ADM	ADM LTG - ROOF	120V Power	
P-249	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3D-ADM	LTG - (1300)	120V Power	
P-250	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3D-ADM	LTG - (1317,1318,131 9)	120V Power	
P-251	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3D-ADM	LTG - (1320,1321,132 2)	120V Power	
P-252	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3D-ADM	LTG - (1323,1324,132 5)	120V Power	
P-253	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3D-ADM	LTG - (1326,1327,132 8,1329,1330,133 1)	120V Power	
P-253.1	3/4"	2 - #8 AWG W 1#10 GND	RGS	LP-3D-ADM	ADM EAST RECP - EL.485.00	120V Power	
P-253.2	3/4"	2 - #8 AWG W 1#10 GND	RGS	LP-3D-ADM	ADM EAST RECP - EL.485.00	120V Power	
P-253.3	3/4"	2 - #8 AWG W 1#10 GND	RGS	LP-3D-ADM	ADM EAST RECP - EL.485.00	120V Power	
P-253.4	3/4"	2 - #8 AWG W 1#10 GND	RGS	LP-3D-ADM	ADM EAST RECP - EL.485.00	120V Power	
P-253.5	3/4"	2 - #8 AWG W 1#10 GND	RGS	LP-3D-ADM	ADM EAST RECP - EL.485.00	120V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-253.6	3/4"	2 - #8 AWG W 1#10 GND	RGS	LP-3D-ADM	ADM EAST RECP - EL.485.00	120V Power	
P-253.7	3/4"	2 - #8 AWG W 1#10 GND	RGS	LP-3D-ADM	ADM EAST RECP - EL.485.00	120V Power	
P-253.8	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-3D-ADM	ADM EAST RECP - EL.485.00	120V Power	
P-253.9	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-3D-ADM	RECP BREAK RM REFRIGERATO R	120V Power	
P-253.10	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-3D-ADM	RECP BREAK RM - MICROWAVE	120V Power	
P-253.11	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-3D-ADM	ADM WEST RECP - EL.485.00	120V Power	
P-254	1"	2 - #8 AWG W 1#10 GND	RGS	LP-UPS-EMER-1-ADM	EM/EXIT LTG - EL. 457,STAIR A (ADM)	120V Power	
P-255	1"	2 - #8 AWG W 1#10 GND	RGS	LP-UPS-EMER-1-ADM	EM/EXIT LTG - EL 485 (ADM)	120V Power	
P-256	1"	2 - #8 AWG W 1#10 GND	RGS	LP-UPS-EMER-1-ADM	EM/EXIT LTG - EL. 457 RM 2100/2102 (TB)	120V Power	
P-257	1"	2 - #8 AWG W 1#10 GND	RGS/PVC COATED RGS/PVC SCH 80	LP-UPS-EMER-1-ADM	EM/EXIT LTG - EL. 471 RM EAST(TB)	120V Power	PVC COATED RGS OR PVC SCHEDULE 80 WHERE APPLICABLE

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-258	1"	2 - #8 AWG W 1#10 GND	RGS	LP-UPS-EMER-1-ADM	EM/EXIT LTG - EL. 485 RM 2300(TB)	120V Power	
P-259	1"	2 - #8 AWG W 1#10 GND	RGS	LP-UPS-EMER-1-ADM	EXIT DOOR EXTERIOR ADM/TB LTG	120V Power	
P-260	1"	2 - #8 AWG W 1#10 GND	RGS	LP-UPS-EMER-1-ADM	TB ROOF LTG	120V Power	
P-261	1"	2 - #8 AWG W 1#10 GND	RGS	LP-UPS-EMER-1-ADM	TB ROOF LTG	120V Power	
P-262	1"	2 - #8 AWG W 1#10 GND	RGS	LP-UPS-EMER-1-ADM	EM/EXIT LTG - EL 471 (ADM)	120V Power	
P-263	1"	2 - #8 AWG W 1#10 GND	RGS	LP-UPS-EMER-1-ADM	EM/EXIT LTG - EL. 457 RM 2101 (TB)	120V Power	
P-264	1"	2 - #8 AWG W 1#10 GND	RGS	LP-UPS-EMER-1-ADM	EM/EXIT LTG - EL. 471 RM WEST, STAIR C, STAIR D (TB)	120V Power	
P-265	1"	2 - #8 AWG W 1#10 GND	RGS	LP-UPS-EMER-1-ADM	EM/EXIT LTG - EL. 485 RM 2301 NORTH (TB)	120V Power	
P-265.1	1"	2 - #8 AWG W 1#10 GND	RGS	LP-UPS-EMER-1-ADM	EM/EXIT LTG - EL. 485 RM 2302/2303(TB)	120V Power	
P-265.2	1"	2 - #8 AWG W 1#10 GND	RGS	LP-UPS-EMER-1-ADM	EM/EXIT LTG - EL. 471 RM EAST, STAIR B (TB)	120V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-265.3	1"	2 - #8 AWG W 1#10 GND	RGS	LP-UPS-EMER-1-ADM	EM/EXIT LTG - EL. 485 RM 2301 SOUTH (TB)	120V Power	
P-266	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-UPS-ADM	SCADA SERVER NO. 1	120V Power	
P-267	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-UPS-ADM	SCADA SERVER NO. 2	120V Power	
P-268	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-UPS-ADM	SCADA SERVER NO. 3	120V Power	
P-269	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-UPS-ADM	OPERATOR CONSOLE & MONITOR 1	120V Power	
P-270	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-UPS-ADM	OPERATOR CONSOLE & MONITOR 2	120V Power	
P-271	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-UPS-ADM	OPERATOR CONSOLE & MONITOR 3	120V Power	
P-272	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-UPS-ADM	OPERATOR SCREEN & MONITORS	120V Power	
P-273	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-UPS-ADM	PLC CABINET NO. 1 (TRAIN A)	120V Power	
P-274	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-UPS-ADM	PLC CABINET NO. 2 (TRAIN B)	120V Power	
P-275	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-UPS-ADM	PLC CABINET NO. 3 (BOP)	120V Power	
P-276	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-UPS-ADM	IT SERVER # 1	120V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-277	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-UPS-ADM	IT SERVER # 2	120V Power	
P-278	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-UPS-ADM	IT SERVER # 3	120V Power	
P-279	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-UPS-ADM	IT DATA DIODE	120V Power	
P-280	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-UPS-ADM	IT FIREWALL	120V Power	
P-281	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-UPS-ADM	SCADA DATA DIODE	120V Power	
P-282	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-UPS-ADM	NETWORK ROUTER	120V Power	
P-283	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-UPS-ADM	IT NAS2	120V Power	
P-284	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-UPS-ADM	SCADA NAS1	120V Power	
P-285	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-UPS-ADM	PROGRAMMIN G STATION & MONITOR	120V Power	
P-286	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-UPS-ADM	ETHERNET SWITCH NO. 1	120V Power	
P-287	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-UPS-ADM	ETHERNET SWITCH NO. 2	120V Power	
P-288	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-UPS-ADM	ETHERNET SWITCH NO. 3	120V Power	
P-289	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-UPS-ADM	ETHERNET SWITCH NO. 4	120V Power	
P-290	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-UPS-ADM	ETHERNET SWITCH NO. 5	120V Power	
P-290.1	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-UPS-ADM	ACP-ADM	120V Power	
-	-	-	-	-	-	-	-

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
-	-	-	-	-	-	-	-
TB C&C							
P-291-A	5"	3 - #600 KCMIL W 1#3/0 GND	RGS	SWGR-02 BUS "A"	MCC-1A	480V Power	
P-291-B	5"	3 - #600 KCMIL W 1#3/0 GND	RGS	SWGR-02 BUS "A"	MCC-1A	480V Power	
P-291-C	5"	3 - #600 KCMIL W 1#3/0 GND	RGS	SWGR-02 BUS "A"	MCC-1A	480V Power	
P-292-A	5"	3 - #600 KCMIL W 1#3/0 GND	RGS	SWGR-02 BUS "A"	MCC-2A	480V Power	
P-292-B	5"	3 - #600 KCMIL W 1#3/0 GND	RGS	SWGR-02 BUS "A"	MCC-2A	480V Power	
P-292-C	5"	3 - #600 KCMIL W 1#3/0 GND	RGS	SWGR-02 BUS "A"	MCC-2A	480V Power	
P-293-A	5"	3 - #600 KCMIL W 1#3/0 GND	RGS	SWGR-02 BUS "A"	MCC-3A	480V Power	
P-293-B	5"	3 - #600 KCMIL W 1#3/0 GND	RGS	SWGR-02 BUS "A"	MCC-3A	480V Power	
P-293-C	5"	3 - #600 KCMIL W 1#3/0 GND	RGS	SWGR-02 BUS "A"	MCC-3A	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-294-A	5"	3 - #600 KCMIL W 1#1/0 GND	RGS	SWGR-02 BUS "A"	SWBD-1A	480V Power	
P-294-B	5"	3 - #600 KCMIL W 1#1/0 GND	RGS	SWGR-02 BUS "A"	SWBD-1A	480V Power	
P-295-A	5"	3 - #600 KCMIL W 1#3/0 GND	RGS	SWGR-02 BUS "B"	MCC-1B	480V Power	
P-295-B	5"	3 - #600 KCMIL W 1#3/0 GND	RGS	SWGR-02 BUS "B"	MCC-1B	480V Power	
P-295-C	5"	3 - #600 KCMIL W 1#3/0 GND	RGS	SWGR-02 BUS "B"	MCC-1B	480V Power	
P-296-A	5"	3 - #600 KCMIL W 1#3/0 GND	RGS	SWGR-02 BUS "B"	MCC-2B	480V Power	
P-296-B	5"	3 - #600 KCMIL W 1#3/0 GND	RGS	SWGR-02 BUS "B"	MCC-2B	480V Power	
P-296-C	5"	3 - #600 KCMIL W 1#3/0 GND	RGS	SWGR-02 BUS "B"	MCC-2B	480V Power	
P-297-A	5"	3 - #600 KCMIL W 1#3/0 GND	RGS	SWGR-02 BUS "B"	MCC-3B	480V Power	
P-297-B	5"	3 - #600 KCMIL W 1#3/0 GND	RGS	SWGR-02 BUS "B"	MCC-3B	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-297-C	5"	3 - #600 KCMIL W 1#3/0 GND	RGS	SWGR-02 BUS "B"	MCC-3B	480V Power	
P-298-A	5"	3 - #600 KCMIL W 1#1/0 GND	RGS	SWGR-02 BUS "B"	SWBD-1B	480V Power	
P-298-B	5"	3 - #600 KCMIL W 1#1/0 GND	RGS	SWGR-02 BUS "B"	SWBD-1B	480V Power	
P-299-A	5"	SPARE	RGS	SWGR-02 BUS "A"	SPARE BREAKER	480V Power	
P-299-B	5"	SPARE	RGS	SWGR-02 BUS "A"	SPARE BREAKER	480V Power	
P-300-A	5"	SPARE	RGS	SWGR-02 BUS "A"	SPARE BREAKER	480V Power	
P-300-B	5"	SPARE	RGS	SWGR-02 BUS "A"	SPARE BREAKER	480V Power	
P-300-C	5"	SPARE	RGS	SWGR-02 BUS "A"	SPARE BREAKER	480V Power	
P-301-A	5"	SPARE	RGS	SWGR-02 BUS "B"	SPARE BREAKER	480V Power	
P-301-B	5"	SPARE	RGS	SWGR-02 BUS "B"	SPARE BREAKER	480V Power	
P-302-A	5"	SPARE	RGS	SWGR-02 BUS "B"	SPARE BREAKER	480V Power	
P-302-B	5"	SPARE	RGS	SWGR-02 BUS "B"	SPARE BREAKER	480V Power	
P-302-C	5"	SPARE	RGS	SWGR-02 BUS "B"	SPARE BREAKER	480V Power	
P-303	3/4"	3 - #10 AWG W 1#10 GND	RGS	MCC-1A	DSW- MONORAIL 1	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-304	3/4"	3 - #10 AWG W 1#10 GND	RGS	DSW-MONORAIL 1	MONORAIL 1	480V Power	
P-305	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-1A	DSW-WH-05	480V Power	
P-306	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-WH-05	WH-05	480V Power	
P-307	1"	3 - #8 AWG W 1#10 GND	RGS	MCC-1A	DSW-DHC-01	480V Power	
P-308	1"	3 - #8 AWG W 1#10 GND	RGS	DSW-DHC-01	DHC-01	480V Power	
P-309	3/4"	3 - #12 AWG W 1#12 GND	PVC COATED RGS	MCC-1A	DSW-P-56060	480V Power	
P-310	3/4"	3 - #12 AWG W 1#12 GND	PVC COATED RGS	DSW-P-56060	P-56060	480V Power	
P-311	3"	3 - #500 KCMIL W 1#3 GND	RGS	MCC-1A	VFD-33030	480V Power	
P-312	3"	3 - #500 KCMIL W 1#3 GND	RGS	VFD-33030	P-33030	480V Power	
P-313	3"	3 - #500 KCMIL W 1#3 GND	RGS	MCC-1A	VFD-33010	480V Power	
P-314	3"	3 - #500 KCMIL W 1#3 GND	RGS	VFD-33010	P-33010	480V Power	
P-315	3/4"	3 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	MCC-1A	DSW-P-52080	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-316	3/4"	3 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	DSW-P-52080	P-52080	480V Power	
P-317	3/4"	3 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	MCC-1A	DSW-P-54060	480V Power	
P-318	3/4"	3 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	DSW-P-54060	P-54060	480V Power	
P-319	3/4"	3 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	MCC-1A	DSW-P-53060	480V Power	
P-320	3/4"	3 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	DSW-P-53060	P-53060	480V Power	
P-321	3/4"	3 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	MCC-1A	DSW-P-52060	480V Power	
P-322	3/4"	3 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	DSW-P-52060	P-52060	480V Power	
P-323	3/4"	3 - #12 AWG W 1#12 GND	PVC COATED RGS	MCC-1A	DSW-P-51060	480V Power	
P-324	3/4"	3 - #12 AWG W 1#12 GND	PVC COATED RGS	DSW-P-51060	P-51060	480V Power	
P-325	1"	3 - #6 AWG W 1#10 GND	RGS	MCC-1A	DSW-AC-01	480V Power	
P-326	1"	3 - #6 AWG W 1#10 GND	RGS	DSW-AC-01	AC-01	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-327	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-1A	DSW-P-35020	480V Power	
P-328	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-P-35020	P-35020	480V Power	
P-329	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-1A	DSW-P-35060	480V Power	
P-330	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-P-35060	P-35060	480V Power	
P-331	3/4"	3 - #12 AWG W 1#12 GND	PVC COATED RGS	MCC-1B	DSW-P-51070	480V Power	
P-332	3/4"	3 - #12 AWG W 1#12 GND	PVC COATED RGS	DSW-P-51070	P-51070	480V Power	
P-333	3/4"	3 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	MCC-1B	DSW-P-52070	480V Power	
P-334	3/4"	3 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	DSW-P-52070	P-52070	480V Power	
P-335	3/4"	3 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	MCC-1B	DSW-P-53070	480V Power	
P-336	3/4"	3 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	DSW-P-53070	P-53070	480V Power	
P-337	3/4"	3 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	MCC-1B	DSW-P-54070	480V Power	
P-338	3/4"	3 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	DSW-P-54070	P-54070	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-339	3/4"	3 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	MCC-1B	DSW-P-52090	480V Power	
P-340	3/4"	3 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	DSW-P-52090	P-52090	480V Power	
P-341	3"	3 - #500 KCMIL W 1#3 GND	RGS	MCC-1B	VFD-33020	480V Power	
P-342	3"	3 - #500 KCMIL W 1#3 GND	RGS	VFD-33020	P-33020	480V Power	
P-343	3"	3 - #500 KCMIL W 1#3 GND	RGS	MCC-1B	VFD-33040	480V Power	
P-344	3"	3 - #500 KCMIL W 1#3 GND	RGS	VFD-33040	P-33040	480V Power	
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
P-349	3/4"	3 - #12 AWG W 1#12 GND	PVC COATED RGS	MCC-1B	DSW-P-56070	480V Power	
P-350	3/4"	3 - #12 AWG W 1#12 GND	PVC COATED RGS	DSW-P-56070	P-56070	480V Power	
P-351	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-1B	DSW-P-35030	480V Power	
P-352	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-P-35030	P-35030	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-353	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-1B	DSW-P-35070	480V Power	
P-354	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-P-35070	P-35070	480V Power	
P-355	1"	3 - #6 AWG W 1#10 GND	RGS	MCC-1B	DSW-BCU-01	480V Power	
P-356	1"	3 - #6 AWG W 1#10 GND	RGS	DSW-BCU-01	BCU-01	480V Power	
P-357	1"	3 - #6 AWG W 1#10 GND	RGS	MCC-1B	DSW-AC-02	480V Power	
P-358	1"	3 - #6 AWG W 1#10 GND	RGS	DSW-AC-02	AC-02	480V Power	
P-359	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-2A	DSW-MONORAIL 2	480V Power	
P-360	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MONORAIL 2	MONORAIL 2	480V Power	
P-361	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-2A/VFD-20120	DSW-FLOC-20120	480V Power	
P-362	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-FLOC-20120	FLOC-20120	480V Power	
P-363	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-2A/VFD-20130	DSW-FLOC-20130	480V Power	
P-364	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-FLOC-20130	FLOC-20130	480V Power	
P-365	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-2A/VFD-20220	DSW-FLOC-20220	480V Power	
P-366	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-FLOC-20220	FLOC-20220	480V Power	
P-367	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-2A/VFD-20230	DSW-FLOC-20230	480V Power	
P-368	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-FLOC-20230	FLOC-20230	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-369	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-2A/VFD-20320	DSW-FLOC-20320	480V Power	
P-370	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-FLOC-20320	FLOC-20320	480V Power	
P-371	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-2A/VFD-20330	DSW-FLOC-20330	480V Power	
P-372	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-FLOC-20330	FLOC-20330	480V Power	
P-373	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-2A/VFD-20420	DSW-FLOC-20420	480V Power	
P-374	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-FLOC-20420	FLOC-20420	480V Power	
P-375	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-2A/VFD-20430	DSW-FLOC-20430	480V Power	
P-376	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-FLOC-20430	FLOC-20430	480V Power	
P-377	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-2A/VFD-20520	DSW-FLOC-20520	480V Power	
P-378	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-FLOC-20520	FLOC-20520	480V Power	
P-379	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-2A/VFD-20530	DSW-FLOC-20530	480V Power	
P-380	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-FLOC-20530	FLOC-20530	480V Power	
P-381	2"	3 - #250 KCMIL W 1#4 GND	RGS	MCC-2A	BL-45010	480V Power	
P-382	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-2A/VFD-30160	DSW-SKMR-30160	480V Power	
P-383	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-SKMR-30160	SKMR-30160	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-384	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-2A/VFD-30260	DSW-SKMR-30260	480V Power	
P-385	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-SKMR-30260	SKMR-30260	480V Power	
P-386	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-2A/VFD-30360	DSW-SKMR-30360	480V Power	
P-387	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-SKMR-30360	SKMR-30360	480V Power	
P-388	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-2A/VFD-30460	DSW-SKMR-30460	480V Power	
P-389	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-SKMR-30460	SKMR-30460	480V Power	
P-390	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-2A/VFD-30560	DSW-SKMR-30560	480V Power	
P-391	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-SKMR-30560	SKMR-30560	480V Power	
P-392	2"	3 - #3/0 AWG W 1#6 GND	RGS	MCC-2A	LCP-34010/COMP-34010	480V Power	
P-393	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-2B/VFD-20620	DSW-FLOC-20620	480V Power	
P-394	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-FLOC-20620	FLOC-20620	480V Power	
P-395	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-2B/VFD-20630	DSW-FLOC-20630	480V Power	
P-396	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-FLOC-20630	FLOC-20630	480V Power	
P-397	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-2B/VFD-20720	DSW-FLOC-20720	480V Power	
P-398	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-FLOC-20720	FLOC-20720	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-399	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-2B/VFD-20730	DSW-FLOC-20730	480V Power	
P-400	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-FLOC-20730	FLOC-20730	480V Power	
P-401	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-2B/VFD-20820	DSW-FLOC-20820	480V Power	
P-402	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-FLOC-20820	FLOC-20820	480V Power	
P-403	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-2B/VFD-20830	DSW-FLOC-20830	480V Power	
P-404	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-FLOC-20830	FLOC-20830	480V Power	
P-405	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-2B/VFD-20920	DSW-FLOC-20920	480V Power	
P-406	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-FLOC-20920	FLOC-20920	480V Power	
P-407	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-2B/VFD-20930	DSW-FLOC-20930	480V Power	
P-408	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-FLOC-20930	FLOC-20930	480V Power	
P-409	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-2B/VFD-21020	DSW-FLOC-21020	480V Power	
P-410	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-FLOC-21020	FLOC-21020	480V Power	
P-411	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-2B/VFD-21030	DSW-FLOC-21030	480V Power	
P-412	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-FLOC-21030	FLOC-21030	480V Power	
P-413	2"	3 - #250 KCMIL W 1#4 GND	RGS	MCC-2B	BL-45030	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-414	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-2B/VFD-30660	DSW-SKMR-30660	480V Power	
P-415	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-SKMR-30660	SKMR-30660	480V Power	
P-416	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-2B/VFD-30760	DSW-SKMR-30760	480V Power	
P-417	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-SKMR-30760	SKMR-30760	480V Power	
P-418	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-2B/VFD-30860	DSW-SKMR-30860	480V Power	
P-419	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-SKMR-30860	SKMR-30860	480V Power	
P-420	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-2B/VFD-30960	DSW-SKMR-30960	480V Power	
P-421	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-SKMR-30960	SKMR-30960	480V Power	
P-422	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-2B/VFD-31060	DSW-SKMR-31060	480V Power	
P-423	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-SKMR-31060	SKMR-31060	480V Power	
P-424	2"	3 - #3/0 AWG W 1#6 GND	RGS	MCC-2B	LCP-34020/COMP-34020	480V Power	
P-425-A	3"	3 - #250 KCMIL W 1#2 GND	RGS	MCC-2B	HV-03	480V Power	
P-425-B	3"	3 - #250 KCMIL W 1#2 GND	RGS	MCC-2B	HV-03	480V Power	
P-426	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-2B	DSW-MONORAIL 3	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-427	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MONORAIL 3	MONORAIL 3	480V Power	
P-427.1	2"	3 - #4/0 AWG W 1#3 GND	RGS	MCC-2B	MCC-2-1 (SEPARATE SECTION)	480V Power	
P-427.2	2"	3 - #4/0 AWG W 1#3 GND	RGS	MCC-2B	MCC-2-1 (SEPARATE SECTION)	480V Power	
P-428	3"	3 - #350 KCMIL W 1#4 GND	RGS	MCC-3A	HV-01	480V Power	
P-429	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-3A	DSW-ACCU-01	480V Power	
P-430	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-ACCU-01	ACCU-01	480V Power	
P-431	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-3A	DSW-ACCU-03	480V Power	
P-432	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-ACCU-03	ACCU-03	480V Power	
P-433	4"	3 - #600 KCMIL W 1#3 GND	RGS	MCC-3A	DHU-01	480V Power	
P-434	3/4"	3 - #6 AWG W 1#10 GND	RGS	MCC-3A	DSW-AC-03	480V Power	
P-435	3/4"	3 - #6 AWG W 1#10 GND	RGS	DSW-AC-03	AC-03	480V Power	
P-436	1"	3 - #3 AWG W 1#8 GND	RGS	MCC-3A	DSW-WH-10	480V Power	
P-437	1"	3 - #3 AWG W 1#8 GND	RGS	DSW-WH-10	WH-10	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-438	3"	3 - #350 KCMIL W 1#4 GND	RGS	MCC-3B	HV-02	480V Power	
P-439	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-3B	DSW-ACCU-02	480V Power	
P-440	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-ACCU-02	ACCU-02	480V Power	
P-441	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-3B	DSW-ACCU-04	480V Power	
P-442	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-ACCU-04	ACCU-04	480V Power	
P-443	3/4"	3 - #6 AWG W 1#10 GND	RGS	MCC-3B	DSW-AC-04	480V Power	
P-444	3/4"	3 - #6 AWG W 1#10 GND	RGS	DSW-AC-04	AC-04	480V Power	
P-445	1 1/2"	3 - #2 AWG W 1#8 GND	RGS	SWBD-1A	PP-1A-TB	480V Power	
P-446	1 1/2"	3 - #2 AWG W 1#8 GND	RGS	SWBD-1A	PP-1B-TB	480V Power	
P-447	1 1/2"	3 - #2 AWG W 1#8 GND	RGS	SWBD-1A	PP-1C-TB	480V Power	
P-448	1 1/2"	3 - #2 AWG W 1#8 GND	RGS	SWBD-1A	PP-1D-TB	480V Power	
P-449	1 1/2"	3 - #2 AWG W 1#8 GND	RGS	SWBD-1B	PP-1E-TB	480V Power	
P-450	1 1/2"	3 - #2 AWG W 1#8 GND	RGS	SWBD-1B	PP-1F-TB	480V Power	
P-451	1 1/2"	3 - #2 AWG W 1#8 GND	RGS	SWBD-1B	PP-1G-TB	480V Power	
P-452	1 1/2"	3 - #2 AWG W 1#8 GND	RGS	SWBD-1B	PP-1H-TB	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-453	1 1/2"	3 - #2 AWG W 1#8 GND	RGS	SWBD-1A	PP-1-TB	480V Power	
P-454	1 1/2"	3 - #2 AWG W 1#8 GND	RGS	SWBD-1A	PP-2-TB	480V Power	
P-455	1 1/2"	3 - #2 AWG W 1#8 GND	RGS	SWBD-1B	PP-3-TB	480V Power	
P-456	1 1/2"	3 - #3 AWG W 1#8 GND	RGS	SWBD-1A	PP-2A-TB	480V Power	
P-457	1 1/2"	3 - #3 AWG W 1#8 GND	RGS	SWBD-1A	PP-2B-TB	480V Power	
P-458	1 1/2"	3 - #3 AWG W 1#8 GND	RGS	SWBD-1A	PP-2C-TB	480V Power	
P-459	1 1/2"	3 - #3 AWG W 1#8 GND	RGS	SWBD-1A	PP-2D-TB	480V Power	
P-460	1 1/2"	3 - #2 AWG W 1#8 GND	RGS	SWBD-1B	PP-2E-TB	480V Power	
P-461	1 1/2"	3 - #2 AWG W 1#8 GND	RGS	SWBD-1B	PP-2F-TB	480V Power	
P-462	1 1/2"	3 - #2 AWG W 1#8 GND	RGS	SWBD-1B	PP-2G-TB	480V Power	
P-463	1 1/2"	3 - #2 AWG W 1#8 GND	RGS	SWBD-1B	PP-2H-TB	480V Power	
P-464	1 1/2"	3 - #2 AWG W 1#8 GND	RGS	SWBD-1B	PP-2I-TB	480V Power	
P-465	1 1/2"	3 - #2 AWG W 1#8 GND	RGS	SWBD-1A	PP-2J-TB	480V Power	
P-466	1 1/2"	3 - #2 AWG W 1#8 GND	RGS	SWBD-1A	PP-2K-TB	480V Power	
P-467	1 1/2"	3 - #2 AWG W 1#8 GND	RGS	SWBD-1A	PP-2L-TB	480V Power	
P-468	1 1/2"	3 - #2 AWG W 1#8 GND	RGS	SWBD-1A	PP-2M-TB	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-469	1 1/2"	3 - #2 AWG W 1#8 GND	RGS	SWBD-1B	PP-2N-TB	480V Power	
P-470	3/4"	3 - #8 AWG W 1#10 GND	RGS	SWBD-1A	TX-UPS-1-MOV-TB	480V Power	
P-471	1 1/2"	3 - #2 AWG W 1#8 GND	RGS	TX-UPS-1-MOV-TB	UPS-1-MOV-TB	240V Power	
P-472	1 1/2"	3 - #2 AWG W 1#8 GND	RGS	UPS-1-MOV-TB	LP-1-UPS-MOV-TB	240V Power	
P-473	3/4"	3 - #8 AWG W 1#10 GND	RGS	SWBD-1B	TX-UPS-2-MOV-TB	480V Power	
P-474	1 1/2"	3 - #2 AWG W 1#8 GND	RGS	TX-UPS-2-MOV-TB	UPS-2-MOV-TB	240V Power	
P-475	1 1/2"	3 - #2 AWG W 1#8 GND	RGS	UPS-2-MOV-TB	LP-2-UPS-MOV-TB	240V Power	
P-476	1 1/2"	3 - #1 AWG W 1#6 GND	RGS	SWBD-1B	DSW-TX-LP-457-TB	480V Power	
P-477	1 1/2"	3 - #1 AWG W 1#6 GND	RGS	DSW-TX-LP-457-TB	TX-LP-457-TB	480V Power	
P-478	2"	4 - #3/0 AWG W 1#6 GND	RGS	TX-LP-457-TB	LP-457-TB	208V Power	
P-479	2 1/2"	3 - #300 KCMIL W 1# 4GND	RGS	SWBD-1B	DSW-TX-LP-471-TB	480V Power	
P-480	2 1/2"	3 - #300 KCMIL W 1# 4GND	RGS	DSW-TX-LP-471-TB	TX-LP-471-TB	480V Power	
P-481	3"	4 - #600 KCMIL W 1# 3GND	RGS	TX-LP-471-TB	LP-471-TB	208V Power	
P-482	1 1/2"	3 - #1 AWG W 1#6 GND	RGS	SWBD-1B	DSW-TX-LP-485-TB	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-483	1 1/2"	3 - #1 AWG W 1#6 GND	RGS	DSW-TX-LP-485-TB	TX-LP-485-TB	480V Power	
P-484	2 1/2"	4 - #4/0 AWG W 1#6 GND	RGS	TX-LP-485-TB	LP-485-TB	208V Power	
P-485	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1A-TB	DSW-FCV-10111	480V Power	
P-486	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-FCV-10111	FCV-10111	480V Power	
P-487	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1A-TB	DSW-MOV-40130	480V Power	
P-488	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-40130	MOV-40130	480V Power	
P-489	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1A-TB	DSW-MOV-40140	480V Power	
P-490	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-40140	MOV-40140	480V Power	
P-491	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1A-TB	DSW-MOV-40150	480V Power	
P-492	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-40150	MOV-40150	480V Power	
P-493	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1A-TB	DSW-MOV-40170	480V Power	
P-494	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-40170	MOV-40170	480V Power	
P-495	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1A-TB	DSW-MOV-40230	480V Power	
P-496	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-40230	MOV-40230	480V Power	
P-497	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1A-TB	DSW-MOV-40240	480V Power	
P-498	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-40240	MOV-40240	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-499	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1A-TB	DSW-MOV-40250	480V Power	
P-500	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-40250	MOV-40250	480V Power	
P-501	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1A-TB	DSW-FCV-46001	480V Power	
P-502	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-FCV-46001	FCV-46001	480V Power	
P-503	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1A-TB	DSW-FCV-46002	480V Power	
P-504	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-FCV-46002	FCV-46002	480V Power	
P-505	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1B-TB	DSW-MOV-40270	480V Power	
P-506	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-40270	MOV-40270	480V Power	
P-507	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1B-TB	DSW-MOV-40330	480V Power	
P-508	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-40330	MOV-40330	480V Power	
P-509	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1B-TB	DSW-MOV-40340	480V Power	
P-510	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-40340	MOV-40340	480V Power	
P-511	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1B-TB	DSW-MOV-40350	480V Power	
P-512	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-40350	MOV-40350	480V Power	
P-513	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1B-TB	DSW-MOV-40370	480V Power	
P-514	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-40370	MOV-40370	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-515	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1B-TB	DSW-MOV-40430	480V Power	
P-516	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-40430	MOV-40430	480V Power	
P-517	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1B-TB	DSW-MOV-40440	480V Power	
P-518	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-40440	MOV-40440	480V Power	
P-519	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1B-TB	DSW-MOV-40450	480V Power	
P-520	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-40450	MOV-40450	480V Power	
P-521	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1B-TB	DSW-FCV-60504	480V Power	
P-522	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-FCV-60504	FCV-60504	480V Power	
P-523	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1B-TB	DSW-FCV-60505	480V Power	
P-524	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-FCV-60505	FCV-60505	480V Power	
P-525	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1C-TB	DSW-MOV-40470	480V Power	
P-526	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-40470	MOV-40470	480V Power	
P-527	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1C-TB	DSW-MOV-40530	480V Power	
P-528	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-40530	MOV-40530	480V Power	
P-529	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1C-TB	DSW-MOV-40540	480V Power	
P-530	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-40540	MOV-40540	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-531	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1C-TB	DSW-MOV-40550	480V Power	
P-532	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-40550	MOV-40550	480V Power	
P-533	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1C-TB	DSW-MOV-40570	480V Power	
P-534	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-40570	MOV-40570	480V Power	
P-535	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1C-TB	DSW-MOV-30001	480V Power	
P-536	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-30001	MOV-30001	480V Power	
P-537	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1C-TB	DSW-MOV-30002	480V Power	
P-538	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-30002	MOV-30002	480V Power	
P-539	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1C-TB	DSW-MOV-30003	480V Power	
P-540	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-30003	MOV-30003	480V Power	
P-541	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1C-TB	DSW-FCV-40100	480V Power	
P-542	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-FCV-40100	FCV-40100	480V Power	
P-543	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1D-TB	DSW-MOV-40630	480V Power	
P-544	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-40630	MOV-40630	480V Power	
P-545	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1D-TB	DSW-MOV-40640	480V Power	
P-546	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-40640	MOV-40640	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-547	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1D-TB	DSW-MOV-40650	480V Power	
P-548	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-40650	MOV-40650	480V Power	
P-549	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1D-TB	DSW-MOV-40670	480V Power	
P-550	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-40670	MOV-40670	480V Power	
P-551	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1D-TB	DSW-MOV-40730	480V Power	
P-552	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-40730	MOV-40730	480V Power	
P-553	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1D-TB	DSW-MOV-40740	480V Power	
P-554	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-40740	MOV-40740	480V Power	
P-555	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1D-TB	DSW-MOV-40750	480V Power	
P-556	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-40750	MOV-40750	480V Power	
P-557	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1D-TB	DSW-MOV-40770	480V Power	
P-558	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-40770	MOV-40770	480V Power	
P-559	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1E-TB	DSW-FCV-10121	480V Power	
P-560	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-FCV-10121	FCV-10121	480V Power	
P-561	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1E-TB	DSW-MOV-40830	480V Power	
P-562	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-40830	MOV-40830	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-563	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1E-TB	DSW-MOV-40840	480V Power	
P-564	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-40840	MOV-40840	480V Power	
P-565	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1E-TB	DSW-MOV-40850	480V Power	
P-566	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-40850	MOV-40850	480V Power	
P-567	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1E-TB	DSW-MOV-40870	480V Power	
P-568	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-40870	MOV-40870	480V Power	
P-569	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1E-TB	DSW-MOV-40930	480V Power	
P-570	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-40930	MOV-40930	480V Power	
P-571	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1E-TB	DSW-MOV-40940	480V Power	
P-572	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-40940	MOV-40940	480V Power	
P-573	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1E-TB	DSW-MOV-40950	480V Power	
P-574	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-40950	MOV-40950	480V Power	
P-575	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1F-TB	DSW-MOV-40970	480V Power	
P-576	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-40970	MOV-40970	480V Power	
P-577	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1F-TB	DSW-MOV-41030	480V Power	
P-578	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-41030	MOV-41030	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-579	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1F-TB	DSW-MOV-41040	480V Power	
P-580	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-41040	MOV-41040	480V Power	
P-581	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1F-TB	DSW-MOV-41050	480V Power	
P-582	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-41050	MOV-41050	480V Power	
P-583	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1F-TB	DSW-MOV-41070	480V Power	
P-584	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-41070	MOV-41070	480V Power	
P-585	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1F-TB	DSW-MOV-41130	480V Power	
P-586	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-41130	MOV-41130	480V Power	
P-587	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1F-TB	DSW-MOV-41140	480V Power	
P-588	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-41140	MOV-41140	480V Power	
P-589	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1F-TB	DSW-MOV-41150	480V Power	
P-590	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-41150	MOV-41150	480V Power	
P-591	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1F-TB	DSW-MOV-41170	480V Power	
P-592	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-41170	MOV-41170	480V Power	
P-593	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1G-TB	DSW-MOV-41230	480V Power	
P-594	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-41230	MOV-41230	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-595	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1G-TB	DSW-MOV-41240	480V Power	
P-596	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-41240	MOV-41240	480V Power	
P-597	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1G-TB	DSW-MOV-41250	480V Power	
P-598	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-41250	MOV-41250	480V Power	
P-599	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1G-TB	DSW-MOV-41270	480V Power	
P-600	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-41270	MOV-41270	480V Power	
P-601	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1G-TB	DSW-MOV-41330	480V Power	
P-602	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-41330	MOV-41330	480V Power	
P-603	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1G-TB	DSW-MOV-41340	480V Power	
P-604	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-41340	MOV-41340	480V Power	
P-605	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1G-TB	DSW-MOV-41350	480V Power	
P-606	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-41350	MOV-41350	480V Power	
P-607	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1G-TB	DSW-MOV-41370	480V Power	
P-608	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-41370	MOV-41370	480V Power	
P-609	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1H-TB	DSW-MOV-41430	480V Power	
P-610	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-41430	MOV-41430	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-611	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1H-TB	DSW-MOV-41440	480V Power	
P-612	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-41440	MOV-41440	480V Power	
P-613	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1H-TB	DSW-MOV-41450	480V Power	
P-614	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-41450	MOV-41450	480V Power	
P-615	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1H-TB	DSW-MOV-41470	480V Power	
P-616	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-41470	MOV-41470	480V Power	
P-617	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1H-TB	DSW-MOG-42050	480V Power	
P-618	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOG-42050	MOG-42050	480V Power	
P-619	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1H-TB	DSW-MOG-42060	480V Power	
P-620	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOG-42060	MOG-42060	480V Power	
P-621	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1H-TB	DSW-EUH-52	480V Power	
P-622	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EUH-52	EUH-52	480V Power	
P-623	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1-TB	DSW-EUH-26 (LOWER CENTRAL GALLERY-1)	480V Power	
P-624	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EUH-26 (LOWER CENTRAL GALLERY-1)	EUH-26 (LOWER CENTRAL GALLERY-1)	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-625	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1-TB	DSW-EUH-27 (LOWER CENTRAL GALLERY-2)	480V Power	
P-626	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EUH-27 (LOWER CENTRAL GALLERY-2)	EUH-27 (LOWER CENTRAL GALLERY-2)	480V Power	
P-627	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1-TB	DSW-EUH-45 (CHEMICAL CORRIDOR)	480V Power	
P-628	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EUH-45 (CHEMICAL CORRIDOR)	EUH-45 (CHEMICAL CORRIDOR)	480V Power	
P-629	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1-TB	DSW-EUH-49 (STAIRS NORTH)	480V Power	
P-630	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EUH-49 (STAIRS NORTH)	EUH-49 (STAIRS NORTH)	480V Power	
P-631	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1-TB	DSW-EUH-28 (LOWER CENTRAL GALLERY-3)	480V Power	
P-632	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EUH-28 (LOWER CENTRAL GALLERY-3)	EUH-28 (LOWER CENTRAL GALLERY-3)	480V Power	
P-633	3/4"	3 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	PANEL PP-1-TB	DSW-EUH-36 (CAUSTIC RM)	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-634	3/4"	3 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	DSW-EUH-36 (CAUSTIC RM)	EUH-36 (CAUSTIC RM)	480V Power	
P-635	3/4"	3 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	PANEL PP-1-TB	DSW-EUH-37 (HYPO RM-1)	480V Power	
P-636	3/4"	3 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	DSW-EUH-37 (HYPO RM-1)	EUH-37 (HYPO RM-1)	480V Power	
P-637	3/4"	3 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	PANEL PP-1-TB	DSW-EUH-38 (HYPO RM-2)	480V Power	
P-638	3/4"	3 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	DSW-EUH-38 (HYPO RM-2)	EUH-38 (HYPO RM-2)	480V Power	
P-639	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1-TB	ROLL-UP DOOR (WTP CHEMICAL CORRIDOR - EAST SIDE)	480V Power	
P-640	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-1-TB	ROLL-UP DOOR (WTP WTP GALLERY - NORTH SIDE)	480V Power	
P-641	3/4"	3 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	PANEL PP-2-TB	DSW-EUH-39 (PHOS ACID RM)	480V Power	
P-642	3/4"	3 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	DSW-EUH-39 (PHOS ACID RM)	EUH-39 (PHOS ACID RM)	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-643	3/4"	3 - #12 AWG W 1#12 GND	PVC COATED RGS	PANEL PP-2-TB	DSW-EUH-40 (PACI RM-1)	480V Power	
P-644	3/4"	3 - #12 AWG W 1#12 GND	PVC COATED RGS	DSW-EUH-40 (PACI RM-1)	EUH-40 (PACI RM-1)	480V Power	
P-645	3/4"	3 - #12 AWG W 1#12 GND	PVC COATED RGS	PANEL PP-2-TB	DSW-EUH-41 (PACI RM-2)	480V Power	
P-646	3/4"	3 - #12 AWG W 1#12 GND	PVC COATED RGS	DSW-EUH-41 (PACI RM-2)	EUH-41 (PACI RM-2)	480V Power	
P-647	3/4"	3 - #12 AWG W 1#12 GND	PVC COATED RGS	PANEL PP-2-TB	DSW-EUH-42 (FILTER AID POLY RM)	480V Power	
P-648	3/4"	3 - #12 AWG W 1#12 GND	PVC COATED RGS	DSW-EUH-42 (FILTER AID POLY RM)	EUH-42 (FILTER AID POLY RM)	480V Power	
P-649	3/4"	3 - #12 AWG W 1#12 GND	PVC COATED RGS	PANEL PP-2-TB	DSW-EUH-43 (CATIONIC POLY Rm)	480V Power	
P-650	3/4"	3 - #12 AWG W 1#12 GND	PVC COATED RGS	DSW-EUH-43 (CATIONIC POLY Rm)	EUH-43 (CATIONIC POLY Rm)	480V Power	
P-651	3/4"	3 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	PANEL PP-2-TB	DSW-EUH-44 (FUTURE CHEM RM)	480V Power	
P-652	3/4"	3 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	DSW-EUH-44 (FUTURE CHEM RM)	EUH-44 (FUTURE CHEM RM)	480V Power	
P-653	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2-TB	DSW-EUH-51 (STAIR WEST)	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-654	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EUH-51 (STAIR WEST)	EUH-51 (STAIR WEST)	480V Power	
P-655	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2-TB	DSW-EUH-25 (FILTER GALLERY-5)	480V Power	
P-656	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EUH-25 (FILTER GALLERY-5)	EUH-25 (FILTER GALLERY-5)	480V Power	
P-657	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2-TB	ROLL-UP DOOR (WTP WORKSHOP - NORTH SIDE)	480V Power	
P-658	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-3-TB	DSW-EUH-21 (FILTER GALLERY-1)	480V Power	
P-659	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EUH-21 (FILTER GALLERY-1)	EUH-21 (FILTER GALLERY-1)	480V Power	
P-660	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-3-TB	DSW-EUH-22 (FILTER GALLERY-2)	480V Power	
P-661	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EUH-22 (FILTER GALLERY-2)	EUH-22 (FILTER GALLERY-2)	480V Power	
P-662	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-3-TB	DSW-EUH-23 (FILTER GALLERY-3)	480V Power	
P-663	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EUH-23 (FILTER GALLERY-3)	EUH-23 (FILTER GALLERY-3)	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-664	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-3-TB	DSW-EUH-24 (FILTER GALLERY-4)	480V Power	
P-665	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EUH-24 (FILTER GALLERY-4)	EUH-24 (FILTER GALLERY-4)	480V Power	
P-666	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-3-TB	DSW-EUH-29 (LOWER CENTRAL GALLERY-4)	480V Power	
P-667	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EUH-29 (LOWER CENTRAL GALLERY-4)	EUH-29 (LOWER CENTRAL GALLERY-4)	480V Power	
P-668	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-3-TB	DSW-EUH-30 (LOWER CENTRAL GALLERY-5)	480V Power	
P-669	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EUH-30 (LOWER CENTRAL GALLERY-5)	EUH-30 (LOWER CENTRAL GALLERY-5)	480V Power	
P-670	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-3-TB	DSW-EUH-46 (SPRINKLER RISER ROOM)	480V Power	
P-671	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EUH-46 (SPRINKLER RISER ROOM)	EUH-46 (SPRINKLER RISER ROOM)	480V Power	
P-672	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-3-TB	DSW-EUH-47 (STAIRS EAST)	480V Power	
P-673	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EUH-47 (STAIRS EAST)	EUH-47 (STAIRS EAST)	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-674	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-3-TB	DSW-EUH-48 (FILTERED WATER ROOM)	480V Power	
P-675	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EUH-48 (FILTERED WATER ROOM)	EUH-48 (FILTERED WATER ROOM)	480V Power	
P-676	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2A-TB	DSW-MOV- 30110	480V Power	
P-677	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-30110	MOV-30110	480V Power	
P-678	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2A-TB	DSW-MOV- 30120	480V Power	
P-679	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-30120	MOV-30120	480V Power	
P-680	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2A-TB	DSW-MOV- 30130	480V Power	
P-681	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-30130	MOV-30130	480V Power	
P-682	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2A-TB	DSW-MOV- 30140	480V Power	
P-683	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-30140	MOV-30140	480V Power	
P-684	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2A-TB	DSW-MOV- 30150	480V Power	
P-685	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-30150	MOV-30150	480V Power	
P-686	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2A-TB	DSW-MOV- 30210	480V Power	
P-687	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-30210	MOV-30210	480V Power	
P-688	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2A-TB	DSW-MOV- 30220	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-689	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-30220	MOV-30220	480V Power	
P-690	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2A-TB	DSW-MOV-30230	480V Power	
P-691	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-30230	MOV-30230	480V Power	
P-692	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2A-TB	DSW-MOV-30240	480V Power	
P-693	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-30240	MOV-30240	480V Power	
P-694	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2A-TB	DSW-MOV-30250	480V Power	
P-695	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-30250	MOV-30250	480V Power	
P-696	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2B-TB	DSW-MOV-30310	480V Power	
P-697	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-30310	MOV-30310	480V Power	
P-698	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2B-TB	DSW-MOV-30320	480V Power	
P-699	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-30320	MOV-30320	480V Power	
P-700	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2B-TB	DSW-MOV-30330	480V Power	
P-701	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-30330	MOV-30330	480V Power	
P-702	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2B-TB	DSW-MOV-30340	480V Power	
P-703	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-30340	MOV-30340	480V Power	
P-704	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2B-TB	DSW-MOV-30350	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-705	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-30350	MOV-30350	480V Power	
P-706	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2B-TB	DSW-MOV-30410	480V Power	
P-707	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-30410	MOV-30410	480V Power	
P-708	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2B-TB	DSW-MOV-30420	480V Power	
P-709	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-30420	MOV-30420	480V Power	
P-710	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2B-TB	DSW-MOV-30430	480V Power	
P-711	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-30430	MOV-30430	480V Power	
P-712	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2B-TB	DSW-MOV-30440	480V Power	
P-713	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-30440	MOV-30440	480V Power	
P-714	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2B-TB	DSW-MOV-30450	480V Power	
P-715	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-30450	MOV-30450	480V Power	
P-716	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2C-TB	DSW-MOV-30510	480V Power	
P-717	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-30510	MOV-30510	480V Power	
P-718	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2C-TB	DSW-MOV-30520	480V Power	
P-719	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-30520	MOV-30520	480V Power	
P-720	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2C-TB	DSW-MOV-30530	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-721	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-30530	MOV-30530	480V Power	
P-722	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2C-TB	DSW-MOV-30540	480V Power	
P-723	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-30540	MOV-30540	480V Power	
P-724	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2C-TB	DSW-MOV-30550	480V Power	
P-725	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-30550	MOV-30550	480V Power	
P-725.1	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2C-TB	DSW-MOV-33054	480V Power	
P-725.2	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-33054	MOV-33054	480V Power	
P-726	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2D-TB	DSW-MOV-20110	480V Power	
P-727	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-20110	MOV-20110	480V Power	
P-728	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2D-TB	DSW-MOV-20210	480V Power	
P-729	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-20210	MOV-20210	480V Power	
P-730	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2D-TB	DSW-MOV-20310	480V Power	
P-731	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-20310	MOV-20310	480V Power	
P-732	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2D-TB	DSW-MOV-20410	480V Power	
P-733	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-20410	MOV-20410	480V Power	
P-734	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2D-TB	DSW-MOV-20510	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-735	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-20510	MOV-20510	480V Power	
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
P-738	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2E-TB	DSW-EUH-11 (DAF-1)	480V Power	
P-739	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EUH-11 (DAF-1)	EUH-11 (DAF-1)	480V Power	
P-740	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2E-TB	DSW-EUH-12 (DAF-2)	480V Power	
P-741	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EUH-12 (DAF-2)	EUH-12 (DAF-2)	480V Power	
P-742	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2E-TB	DSW-EUH-13 (DAF-3)	480V Power	
P-743	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EUH-13 (DAF-3)	EUH-13 (DAF-3)	480V Power	
P-744	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2E-TB	DSW-EUH-14 (DAF-4)	480V Power	
P-745	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EUH-14 (DAF-4)	EUH-14 (DAF-4)	480V Power	
P-746	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2E-TB	DSW-EUH-20 (DAF-10)	480V Power	
P-747	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EUH-20 (DAF-10)	EUH-20 (DAF-10)	480V Power	
P-748	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2E-TB	DSW-EUH-31 (UPPER CENTRAL GALLERY-1)	480V Power	
P-749	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EUH-31 (UPPER CENTRAL GALLERY-1)	EUH-31 (UPPER CENTRAL GALLERY-1)	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-750	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2E-TB	DSW-EUH-32 (UPPER CENTRAL GALLERY-2)	480V Power	
P-751	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EUH-32 (UPPER CENTRAL GALLERY- 2)	EUH-32 (UPPER CENTRAL GALLERY-2)	480V Power	
P-752	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2E-TB	DSW-EUH-33 (UPPER CENTRAL GALLERY-3)	480V Power	
P-753	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EUH-33 (UPPER CENTRAL GALLERY- 3)	EUH-33 (UPPER CENTRAL GALLERY-3)	480V Power	
P-754	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2E-TB	DSW-EF-09 (DAF ROOM EF/RF)	480V Power	
P-754.1	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EF-09 (DAF ROOM EF/RF)	VFD-EF-09 (DAF ROOM EF/RF)	480V Power	
P-755	3/4"	3 - #12 AWG W 1#12 GND	RGS	VFD-EF-09 (DAF ROOM EF/RF)	EF-09 (DAF ROOM EF/RF)	480V Power	
P-756	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2F-TB	DSW-MOV- 30610	480V Power	
P-757	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-30610	MOV-30610	480V Power	
P-758	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2F-TB	DSW-MOV- 30620	480V Power	
P-759	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-30620	MOV-30620	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-760	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2F-TB	DSW-MOV-30630	480V Power	
P-761	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-30630	MOV-30630	480V Power	
P-762	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2F-TB	DSW-MOV-30640	480V Power	
P-763	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-30640	MOV-30640	480V Power	
P-764	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2F-TB	DSW-MOV-30650	480V Power	
P-765	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-30650	MOV-30650	480V Power	
P-766	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2F-TB	DSW-MOV-30710	480V Power	
P-767	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-30710	MOV-30710	480V Power	
P-768	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2F-TB	DSW-MOV-30720	480V Power	
P-769	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-30720	MOV-30720	480V Power	
P-770	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2F-TB	DSW-MOV-30730	480V Power	
P-771	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-30730	MOV-30730	480V Power	
P-772	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2F-TB	DSW-MOV-30740	480V Power	
P-773	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-30740	MOV-30740	480V Power	
P-774	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2F-TB	DSW-MOV-30750	480V Power	
P-775	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-30750	MOV-30750	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-776	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2G-TB	DSW-MOV-30810	480V Power	
P-777	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-30810	MOV-30810	480V Power	
P-778	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2G-TB	DSW-MOV-30820	480V Power	
P-779	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-30820	MOV-30820	480V Power	
P-780	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2G-TB	DSW-MOV-30830	480V Power	
P-781	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-30830	MOV-30830	480V Power	
P-782	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2G-TB	DSW-MOV-30840	480V Power	
P-783	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-30840	MOV-30840	480V Power	
P-784	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2G-TB	DSW-MOV-30850	480V Power	
P-785	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-30850	MOV-30850	480V Power	
P-786	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2G-TB	DSW-MOV-30910	480V Power	
P-787	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-30910	MOV-30910	480V Power	
P-788	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2G-TB	DSW-MOV-30920	480V Power	
P-789	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-30920	MOV-30920	480V Power	
P-790	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2G-TB	DSW-MOV-30930	480V Power	
P-791	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-30930	MOV-30930	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-792	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2G-TB	DSW-MOV-30940	480V Power	
P-793	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-30940	MOV-30940	480V Power	
P-794	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2G-TB	DSW-MOV-30950	480V Power	
P-795	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-30950	MOV-30950	480V Power	
P-796	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2H-TB	DSW-LCV-34051	480V Power	
P-797	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-LCV-34051	LCV-34051	480V Power	
P-798	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2H-TB	DSW-MOV-31010	480V Power	
P-799	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-31010	MOV-31010	480V Power	
P-800	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2H-TB	DSW-MOV-31020	480V Power	
P-801	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-31020	MOV-31020	480V Power	
P-802	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2H-TB	DSW-MOV-31030	480V Power	
P-803	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-31030	MOV-31030	480V Power	
P-804	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2H-TB	DSW-MOV-31040	480V Power	
P-805	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-31040	MOV-31040	480V Power	
P-806	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2H-TB	DSW-MOV-31050	480V Power	
P-807	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-31050	MOV-31050	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-808	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2H-TB	DSW-LCV-34081	480V Power	
P-809	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-LCV-34081	LCV-34081	480V Power	
P-810	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2I-TB	DSW-MOV-20610	480V Power	
P-811	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-20610	MOV-20610	480V Power	
P-812	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2I-TB	DSW-MOV-20710	480V Power	
P-813	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-20710	MOV-20710	480V Power	
P-814	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2I-TB	DSW-MOV-20810	480V Power	
P-815	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-20810	MOV-20810	480V Power	
P-816	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2I-TB	DSW-MOV-20910	480V Power	
P-817	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-20910	MOV-20910	480V Power	
P-818	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2I-TB	DSW-MOV-21010	480V Power	
P-819	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-21010	MOV-21010	480V Power	
P-820	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2J-TB	DSW-EUH-15 (DAF-5)	480V Power	
P-821	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EUH-15 (DAF-5)	EUH-15 (DAF-5)	480V Power	
P-822	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2J-TB	DSW-EUH-16 (DAF-6)	480V Power	
P-823	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EUH-16 (DAF-6)	EUH-16 (DAF-6)	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-824	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2J-TB	DSW-EUH-17 (DAF-7)	480V Power	
P-825	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EUH-17 (DAF-7)	EUH-17 (DAF-7)	480V Power	
P-826	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2J-TB	DSW-EUH-18 (DAF-8)	480V Power	
P-827	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EUH-18 (DAF-8)	EUH-18 (DAF-8)	480V Power	
P-828	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2J-TB	DSW-EUH-19 (DAF-9)	480V Power	
P-829	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EUH-19 (DAF-9)	EUH-19 (DAF-9)	480V Power	
P-830	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2J-TB	DSW-EUH-34 (UPPER CENTRAL GALLERY-4)	480V Power	
P-831	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EUH-34 (UPPER CENTRAL GALLERY- 4)	EUH-34 (UPPER CENTRAL GALLERY-4)	480V Power	
P-832	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2J-TB	DSW-EUH-35 (UPPER CENTRAL GALLERY-5)	480V Power	
P-833	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EUH-35 (UPPER CENTRAL GALLERY- 5)	EUH-35 (UPPER CENTRAL GALLERY-5)	480V Power	
P-833.1	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2J-TB	DSW-SF-01	480V Power	
P-833.2	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-SF-01	SF-01	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-834	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2K-TB	DSW-EUH-1 (FILTER-1)	480V Power	
P-835	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EUH-1 (FILTER-1)	EUH-1 (FILTER-1)	480V Power	
P-836	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2K-TB	DSW-EUH-2 (FILTER-2)	480V Power	
P-837	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EUH-2 (FILTER-2)	EUH-2 (FILTER-2)	480V Power	
P-838	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2K-TB	DSW-EUH-3 (FILTER-3)	480V Power	
P-839	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EUH-3 (FILTER-3)	EUH-3 (FILTER-3)	480V Power	
P-840	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2K-TB	DSW-EUH-4 (FILTER-4)	480V Power	
P-841	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EUH-4 (FILTER-4)	EUH-4 (FILTER-4)	480V Power	
P-842	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2K-TB	DSW-EUH-5 (FILTER-5)	480V Power	
P-843	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EUH-5 (FILTER-5)	EUH-5 (FILTER-5)	480V Power	
P-844	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2K-TB	DSW-EUH-6 (FILTER-6)	480V Power	
P-845	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EUH-6 (FILTER-6)	EUH-6 (FILTER-6)	480V Power	
P-846	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2K-TB	DSW-EUH-7 (FILTER-7)	480V Power	
P-847	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EUH-7 (FILTER-7)	EUH-7 (FILTER-7)	480V Power	
P-848	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2K-TB	DSW-EUH-8 (FILTER-8)	480V Power	
P-849	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EUH-8 (FILTER-8)	EUH-8 (FILTER-8)	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-850	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2K-TB	DSW-EUH-9 (FILTER-9)	480V Power	
P-851	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EUH-9 (FILTER-9)	EUH-9 (FILTER-9)	480V Power	
P-852	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2K-TB	DSW-EUH-10 (FILTER-10)	480V Power	
P-853	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EUH-10 (FILTER-10)	EUH-10 (FILTER-10)	480V Power	
P-854	3/4"	3 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	PANEL PP-2L-TB	DSW-EF-01 (Hypo Rm)	480V Power	
P-854.1	3/4"	3 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	DSW-EF-01 (Hypo Rm)	VFD-EF-01 (Hypo Rm)	480V Power	
P-855	3/4"	3 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	VFD-EF-01 (Hypo Rm)	EF-01 (Hypo Rm)	480V Power	
P-856	3/4"	3 - #12 AWG W 1#12 GND	PVC COATED RGS	PANEL PP-2L-TB	DSW-EF-02 (PACI Rm)	480V Power	
P-856.1	3/4"	3 - #12 AWG W 1#12 GND	PVC COATED RGS	DSW-EF-02 (PACI Rm)	VFD-EF-02 (PACI Rm)	480V Power	
P-857	3/4"	3 - #12 AWG W 1#12 GND	PVC COATED RGS	VFD-EF-02 (PACI Rm)	EF-02 (PACI Rm)	480V Power	
P-858	3/4"	3 - #12 AWG W 1#12 GND	PVC COATED RGS	PANEL PP-2L-TB	DSW-EF-03 (Filter Aid Poly Rm)	480V Power	
P-858.1	3/4"	3 - #12 AWG W 1#12 GND	PVC COATED RGS	DSW-EF-03 (Filter Aid Poly Rm)	VFD-EF-03 (Filter Aid Poly Rm)	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-859	3/4"	3 - #12 AWG W 1#12 GND	PVC COATED RGS	VFD-EF-03 (Filter Aid Poly Rm)	EF-03 (Filter Aid Poly Rm)	480V Power	
P-860	3/4"	3 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	PANEL PP-2L-TB	DSW-EF-04 (Caustic Rm)	480V Power	
P-860.1	3/4"	3 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	DSW-EF-04 (Caustic Rm)	VFD-EF-04 (Caustic Rm)	480V Power	
P-861	3/4"	3 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	VFD-EF-04 (Caustic Rm)	EF-04 (Caustic Rm)	480V Power	
P-862	3/4"	3 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	PANEL PP-2L-TB	DSW-EF-05 (Phos Acid Rm)	480V Power	
P-862.1	3/4"	3 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	DSW-EF-05 (Phos Acid Rm)	VFD-EF-05 (Phos Acid Rm)	480V Power	
P-863	3/4"	3 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	VFD-EF-05 (Phos Acid Rm)	EF-05 (Phos Acid Rm)	480V Power	
P-864	3/4"	3 - #12 AWG W 1#12 GND	PVC COATED RGS	PANEL PP-2L-TB	DSW-EF-06 (Coag Poly Rm)	480V Power	
P-864.1	3/4"	3 - #12 AWG W 1#12 GND	PVC COATED RGS	DSW-EF-06 (Coag Poly Rm)	VFD-EF-06 (Coag Poly Rm)	480V Power	
P-865	3/4"	3 - #12 AWG W 1#12 GND	PVC COATED RGS	VFD-EF-06 (Coag Poly Rm)	EF-06 (Coag Poly Rm)	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-866	3/4"	3 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	PANEL PP-2L-TB	DSW-EF-07 (Future Rm)	480V Power	
P-866.1	3/4"	3 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	DSW-EF-07 (Future Rm)	VFD-EF-07 (Future Rm)	480V Power	
P-867	3/4"	3 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	VFD-EF-07 (Future Rm)	EF-07 (Future Rm)	480V Power	
P-868	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2L-TB	DSW-EF-08 (Filter Room EF/RF)	480V Power	
P-868.1	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EF-08 (Filter Room EF/RF)	VFD-EF-08 (Filter Room EF/RF)	480V Power	
P-869	3/4"	3 - #12 AWG W 1#12 GND	RGS	VFD-EF-08 (Filter Room EF/RF)	EF-08 (Filter Room EF/RF)	480V Power	
P-870	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2M-TB	DSW-MOV- 40120	480V Power	
P-871	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-40120	MOV-40120	480V Power	
P-872	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2M-TB	DSW-MOV- 40220	480V Power	
P-873	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-40220	MOV-40220	480V Power	
P-874	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2M-TB	DSW-MOV- 40320	480V Power	
P-875	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-40320	MOV-40320	480V Power	
P-876	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2M-TB	DSW-MOV- 40420	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-877	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-40420	MOV-40420	480V Power	
P-878	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2M-TB	DSW-MOV-40520	480V Power	
P-879	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-40520	MOV-40520	480V Power	
P-880	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2M-TB	DSW-MOV-40620	480V Power	
P-881	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-40620	MOV-40620	480V Power	
P-882	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2M-TB	DSW-MOV-40720	480V Power	
P-883	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-40720	MOV-40720	480V Power	
P-884	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2N-TB	DSW-MOV-40820	480V Power	
P-885	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-40820	MOV-40820	480V Power	
P-886	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2N-TB	DSW-MOV-40920	480V Power	
P-887	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-40920	MOV-40920	480V Power	
P-888	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2N-TB	DSW-MOV-41020	480V Power	
P-889	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-41020	MOV-41020	480V Power	
P-890	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2N-TB	DSW-MOV-41120	480V Power	
P-891	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-41120	MOV-41120	480V Power	
P-892	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2N-TB	DSW-MOV-41220	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-893	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-41220	MOV-41220	480V Power	
P-894	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2N-TB	DSW-MOV-41320	480V Power	
P-895	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-41320	MOV-41320	480V Power	
P-896	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2N-TB	DSW-MOV-41420	480V Power	
P-897	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-41420	MOV-41420	480V Power	
P-898	3/4"	3 - #12 AWG W 1#12 GND	RGS	PANEL PP-2N-TB	DSW-MOV-45020	480V Power	
P-899	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-45020	MOV-45020	480V Power	
P-900	1 1/2"	4 - #2 AWG W 1# 8GND	RGS	LP-457-TB	LP-1-SAMPLE-TB	208V Power	
P-901	1 1/2"	4 - #2 AWG W 1# 8GND	RGS	LP-457-TB	LP-1-INSTR-TB	208V Power	
P-902	1 1/2"	4 - #2 AWG W 1# 8GND	RGS	LP-457-TB	LP-2-INSTR-TB	208V Power	
P-903	1 1/2"	4 - #2 AWG W 1# 8GND	RGS	LP-457-TB	LP-3-INSTR-TB	208V Power	
P-904	1 1/2"	4 - #2 AWG W 1# 8GND	RGS	LP-457-TB	LP-LTG-457-TB	208V Power	
P-905	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-SAMPLE-TB	DSW-P-10310	230V Power	
P-906	3/4"	2 - #12 AWG W 1#12 GND	RGS	DSW-P-10310	P-10310	230V Power	
P-907	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-SAMPLE-TB	DSW-P-10330	230V Power	
P-908	3/4"	2 - #12 AWG W 1#12 GND	RGS	DSW-P-10330	P-10330	230V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-909	1"	2 - #10 AWG W 1#10 GND	RGS	LP-1-SAMPLE-TB	DSW-P-42030	230V Power	
P-910	1"	2 - #10 AWG W 1#10 GND	RGS	DSW-P-42030	P-42030	230V Power	
P-911	1"	2 - #10 AWG W 1#10 GND	RGS	LP-1-SAMPLE-TB	DSW-P-42040	230V Power	
P-912	1"	2 - #10 AWG W 1#10 GND	RGS	DSW-P-42040	P-42040	230V Power	
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
P-917	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-SAMPLE-TB	DSW-P-30010	230V Power	
P-918	3/4"	2 - #12 AWG W 1#12 GND	RGS	DSW-P-30010	P-30010	230V Power	
P-919	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-SAMPLE-TB	DSW-P-30020	230V Power	
P-920	3/4"	2 - #12 AWG W 1#12 GND	RGS	DSW-P-30020	P-30020	230V Power	
P-921	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-SAMPLE-TB	TP-01 (RM 2101)	120V Power	Filter Gallery Electronic Trap Primer (1)
P-922	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-SAMPLE-TB	TP-01 (RM 2101)	120V Power	Filter Gallery Electronic Trap Primer (2)
P-923	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-SAMPLE-TB	TP-01 (RM 2101)	120V Power	Filter Gallery Electronic Trap Primer (3)
P-924	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-SAMPLE-TB	TP-01 (RM 2101)	120V Power	Filter Gallery Electronic Trap Primer (4)

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-925	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-SAMPLE-TB	TP-01 (RM 2100)	120V Power	Central Pipe Gallery Electric Trap Primer (1)
P-926	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-SAMPLE-TB	TP-01 (RM 2100)	120V Power	Central Pipe Gallery Electric Trap Primer (2)
P-927	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-UPS-MOV-TB	DSW-MOV- 40160	230V Power	
P-928	3/4"	2 - #12 AWG W 1#12 GND	RGS	DSW-MOV-40160	MOV-40160	230V Power	
P-929	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-UPS-MOV-TB	DSW-MOV- 40260	230V Power	
P-930	3/4"	2 - #12 AWG W 1#12 GND	RGS	DSW-MOV-40260	MOV-40260	230V Power	
P-931	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-UPS-MOV-TB	DSW-MOV- 40360	230V Power	
P-932	3/4"	2 - #12 AWG W 1#12 GND	RGS	DSW-MOV-40360	MOV-40360	230V Power	
P-933	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-UPS-MOV-TB	DSW-MOV- 40460	230V Power	
P-934	3/4"	2 - #12 AWG W 1#12 GND	RGS	DSW-MOV-40460	MOV-40460	230V Power	
P-935	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-UPS-MOV-TB	DSW-MOV- 40560	230V Power	
P-936	3/4"	2 - #12 AWG W 1#12 GND	RGS	DSW-MOV-40560	MOV-40560	230V Power	
P-937	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-UPS-MOV-TB	DSW-MOV- 40660	230V Power	
P-938	3/4"	2 - #12 AWG W 1#12 GND	RGS	DSW-MOV-40660	MOV-40660	230V Power	
P-939	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-UPS-MOV-TB	DSW-MOV- 40760	230V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-940	3/4"	2 - #12 AWG W 1#12 GND	RGS	DSW-MOV-40760	MOV-40760	230V Power	
P-941	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-UPS-MOV-TB	DSW-MOV-10110	230V Power	
P-942	3/4"	2 - #12 AWG W 1#12 GND	RGS	DSW-MOV-10110	MOV-10110	230V Power	
P-943	1"	2 - #10 AWG W 1#10 GND	RGS	LP-1-UPS-MOV-TB	DSW-MOV-34060	230V Power	
P-944	1"	2 - #10 AWG W 1#10 GND	RGS	DSW-MOV-34060	MOV-34060	230V Power	
P-945	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2-UPS-MOV-TB	DSW-MOV-40860	230V Power	
P-946	3/4"	2 - #12 AWG W 1#12 GND	RGS	DSW-MOV-40860	MOV-40860	230V Power	
P-947	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2-UPS-MOV-TB	DSW-MOV-40960	230V Power	
P-948	3/4"	2 - #12 AWG W 1#12 GND	RGS	DSW-MOV-40960	MOV-40960	230V Power	
P-949	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2-UPS-MOV-TB	DSW-MOV-41060	230V Power	
P-950	3/4"	2 - #12 AWG W 1#12 GND	RGS	DSW-MOV-41060	MOV-41060	230V Power	
P-951	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2-UPS-MOV-TB	DSW-MOV-41160	230V Power	
P-952	3/4"	2 - #12 AWG W 1#12 GND	RGS	DSW-MOV-41160	MOV-41160	230V Power	
P-953	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2-UPS-MOV-TB	DSW-MOV-41260	230V Power	
P-954	3/4"	2 - #12 AWG W 1#12 GND	RGS	DSW-MOV-41260	MOV-41260	230V Power	
P-955	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2-UPS-MOV-TB	DSW-MOV-41360	230V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-956	3/4"	2 - #12 AWG W 1#12 GND	RGS	DSW-MOV-41360	MOV-41360	230V Power	
P-957	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2-UPS-MOV-TB	DSW-MOV-41460	230V Power	
P-958	3/4"	2 - #12 AWG W 1#12 GND	RGS	DSW-MOV-41460	MOV-41460	230V Power	
P-959	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2-UPS-MOV-TB	DSW-MOV-10120	230V Power	
P-960	3/4"	2 - #12 AWG W 1#12 GND	RGS	DSW-MOV-10120	MOV-10120	230V Power	
P-961	1"	2 - #10 AWG W 1#10 GND	RGS	LP-2-UPS-MOV-TB	DSW-MOV-34090	230V Power	
P-962	1"	2 - #10 AWG W 1#10 GND	RGS	DSW-MOV-34090	MOV-34090	230V Power	
P-963	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-INSTR-TB	FIT-10111	120V Power	
P-964	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-INSTR-TB	FIT-10121	120V Power	
P-965	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-INSTR-TB	AIT-10311	120V Power	
P-966	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-INSTR-TB	AIT-10312	120V Power	
P-967	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-INSTR-TB	AIT-10331	120V Power	
P-968	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-INSTR-TB	AIT-10332	120V Power	
P-969	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-INSTR-TB	AIT-10321	120V Power	
P-970	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-INSTR-TB	AIT-10322	120V Power	
P-971	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-INSTR-TB	AIT-10341	120V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-972	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-INSTR-TB	AIT-10342	120V Power	
P-973	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-INSTR-TB	AIT-30012	120V Power	
P-974	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-INSTR-TB	AIT-30022	120V Power	
P-975	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-INSTR-TB	FSL-33012	120V Power	
P-976	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-INSTR-TB	FSL-33022	120V Power	
P-977	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-INSTR-TB	FSL-33032	120V Power	
P-978	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-INSTR-TB	FSL-33042	120V Power	
P-979	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-INSTR-TB	AIT-40104	120V Power	
P-980	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-INSTR-TB	FIT-40105	120V Power	
P-981	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-INSTR-TB	AIT-40204	120V Power	
P-982	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-INSTR-TB	FIT-40205	120V Power	
P-983	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-INSTR-TB	AIT-42041	120V Power	
P-984	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-INSTR-TB	AIT-42042	120V Power	
P-985	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-INSTR-TB	AIT-40304	120V Power	
P-986	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-INSTR-TB	FIT-40305	120V Power	
-	-	-	-	-	-	-	-

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-988	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-INSTR-TB	RIO-FLT-A1	120V Power	
P-989	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-INSTR-TB	RIO-FLT-B1	120V Power	
P-990	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2-INSTR-TB	AIT-40404	120V Power	
P-991	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2-INSTR-TB	AIT-40504	120V Power	
P-992	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2-INSTR-TB	AIT-40604	120V Power	
P-993	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2-INSTR-TB	AIT-40704	120V Power	
P-994	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2-INSTR-TB	AIT-40804	120V Power	
P-995	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2-INSTR-TB	AIT-40904	120V Power	
P-996	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2-INSTR-TB	AIT-41004	120V Power	
P-997	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2-INSTR-TB	AIT-41104	120V Power	
P-998	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2-INSTR-TB	AIT-41204	120V Power	
P-999	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2-INSTR-TB	FIT-40405	120V Power	
P-1000	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2-INSTR-TB	FIT-40505	120V Power	
P-1001	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2-INSTR-TB	FIT-40605	120V Power	
P-1002	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2-INSTR-TB	FIT-40705	120V Power	
P-1003	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2-INSTR-TB	FIT-40805	120V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-1004	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2-INSTR-TB	FIT-40905	120V Power	
P-1005	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2-INSTR-TB	FIT-41005	120V Power	
P-1006	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2-INSTR-TB	FIT-41105	120V Power	
P-1007	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2-INSTR-TB	FIT-41205	120V Power	
P-1008	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2-INSTR-TB	FSL-10314	120V Power	
P-1009	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2-INSTR-TB	FSL-10334	120V Power	
P-1010	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2-INSTR-TB	LCS-42030	120V Power	
P-1011	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2-INSTR-TB	LCS-42040	120V Power	
P-1012	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2-INSTR-TB	AIT-46004	120V Power	
P-1013	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2-INSTR-TB	FIT-60504	120V Power	
P-1014	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2-INSTR-TB	FIT-60505	120V Power	
P-1015	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2-INSTR-TB	AIT-60506	120V Power	
P-1016	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2-INSTR-TB	FSL-42053	120V Power	
P-1017	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2-INSTR-TB	FSL-42058	120V Power	
P-1018	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2-INSTR-TB	FSL-30014	120V Power	
P-1019	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2-INSTR-TB	FSL-30024	120V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-1019.1	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2-INSTR-TB	LSH-70730	120V Power	
P-1020	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3-INSTR-TB	AIT-41304	120V Power	
P-1021	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3-INSTR-TB	AIT-41404	120V Power	
P-1022	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3-INSTR-TB	FIT-41305	120V Power	
P-1023	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3-INSTR-TB	FIT-41405	120V Power	
P-1024	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3-INSTR-TB	AIT-42061	120V Power	
P-1025	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3-INSTR-TB	AIT-42062	120V Power	
P-1026	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3-INSTR-TB	FSL-10325	120V Power	
P-1027	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3-INSTR-TB	FSL-10345	120V Power	
P-1028	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3-INSTR-TB	FIT-46001	120V Power	
P-1029	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3-INSTR-TB	FIT-46002	120V Power	
P-1030	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3-INSTR-TB	DDC-04	120V Power	
P-1031	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3-INSTR-TB	DDC-12	120V Power	
P-1032	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3-INSTR-TB	ESD-07	120V Power	
P-1033	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3-INSTR-TB	BMS-03	120V Power	
P-1034	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3-INSTR-TB	DDC-09	120V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-1035	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3-INSTR-TB	ESD-02	120V Power	
P-1035.1	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3-INSTR-TB	LCP-AP45	120V Power	
P-1035.2	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3-INSTR-TB	LCP-AP50	120V Power	
P-1035.3	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3-INSTR-TB	LCP-AP55	120V Power	
P-1035.4	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3-INSTR-TB	LCP-AP60	120V Power	
P-1035.5	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3-INSTR-TB	OWS-FLT-A1	120V Power	
P-1035.6	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3-INSTR-TB	OWS-FLT-B1	120V Power	
P-1035.7	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3-INSTR-TB	ESD-01	120V Power	
P-1035.8	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3-INSTR-TB	ESD-03	120V Power	
P-1035.9	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3-INSTR-TB	ESD-04	120V Power	
P-1035.10	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3-INSTR-TB	ESD-05	120V Power	
P-1035.11	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3-INSTR-TB	ESD-06	120V Power	
P-1036	3/4"	2 - #8 AWG W 1#10 GND	RGS	LP-LTG-457-TB	TB RECP - EL. 457.00	120V Power	
P-1037	3/4"	2 - #8 AWG W 1#10 GND	RGS	LP-LTG-457-TB	TB RECP - EL. 457.00	120V Power	
P-1038	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-LTG-457-TB	TB LTG - CENTRAL PIPE GALLERY	120V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-1039	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-LTG-457-TB	TB LTG - FILTER PIPE GALLERY	120V Power	
P-1040	3/4"	2 - #8 AWG W 1#10 GND	RGS	LP-LTG-457-TB	TB RECP - EL. 457.00	120V Power	
P-1041	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-LTG-457-TB	TB LTG - CENTRAL PIPE GALLERY	120V Power	
P-1042	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-LTG-457-TB	TB LTG - FILTER PIPE GALLERY	120V Power	
P-1043	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-LTG-457-TB	TB LTG - STORAGE	120V Power	
P-1044	2"	4 - #4/0 AWG W 1#6 GND	RGS	LP-471-TB	LP-1-CHEM-TB	208V Power	
P-1045	1 1/2"	4 - #2 AWG W 1# 8GND	RGS	LP-471-TB	LP-2-CHEM-TB	208V Power	
P-1046	1 1/2"	4 - #2 AWG W 1# 8GND	RGS	LP-471-TB	LP-4-INSTR-TB	208V Power	
P-1047	1 1/2"	4 - #2 AWG W 1# 8GND	RGS	LP-471-TB	LP-5-INSTR-TB	208V Power	
P-1048	1 1/2"	4 - #2 AWG W 1# 8GND	RGS	LP-471-TB	LP-6-INSTR-TB	208V Power	
P-1049	1 1/2"	4 - #2 AWG W 1# 8GND	RGS	LP-471-TB	LP-1-PLUMB- TB	208V Power	
P-1050	2"	4 - #4/0 AWG W 1# 6GND	RGS	LP-471-TB	LP-LTG-471-TB	208V Power	
P-1051	3/4"	2 - #12 AWG W 1#12 GND	PVC COATED RGS	LP-1-CHEM-TB	P-51120	230V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-1052	3/4"	2 - #12 AWG W 1#12 GND	PVC COATED RGS	LP-1-CHEM-TB	P-51130	230V Power	
P-1053	3/4"	2 - #12 AWG W 1#12 GND	PVC COATED RGS	LP-1-CHEM-TB	P-51140	230V Power	
P-1054	3/4"	2 - #12 AWG W 1#12 GND	PVC COATED RGS	LP-1-CHEM-TB	P-51150	230V Power	
P-1055	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-1-CHEM-TB	P-52120	230V Power	
P-1056	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-1-CHEM-TB	P-52130	230V Power	
P-1057	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-1-CHEM-TB	P-52140	230V Power	
P-1058	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-1-CHEM-TB	P-52150	230V Power	
P-1059	3/4"	2 - #8 AWG W 1#10 GND	PVC COATED RGS	LP-1-CHEM-TB	SKID-55120	120V Power	
P-1060	3/4"	2 - #8 AWG W 1#10 GND	PVC COATED RGS	LP-1-CHEM-TB	SKID-55130	120V Power	
P-1060.1	3/4"	2 - #12 AWG W 1#12 GND	PVC COATED RGS	LP-1-CHEM-TB	SKID-56120	120V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-1060.2	3/4"	2 - #12 AWG W 1#12 GND	PVC COATED RGS	LP-1-CHEM-TB	SKID-56130	120V Power	
P-1061	3/4"	2 - #10 AWG W 1#10 GND	PVC COATED RGS	LP-1-CHEM-TB	DSW-MX-55112	120V Power	
P-1062	3/4"	2 - #10 AWG W 1#10 GND	PVC COATED RGS	DSW-MX-55112	MX-55112	120V Power	
P-1063	3/4"	2 - #10 AWG W 1#10 GND	PVC COATED RGS	LP-1-CHEM-TB	DSW-MX-55117	120V Power	
P-1064	3/4"	2 - #10 AWG W 1#12 GND	PVC COATED RGS	DSW-MX-55117	MX-55117	120V Power	
P-1064.1	1 1/2"	4 - #2 AWG W 1# 8GND	RGS	LP-1-CHEM-TB	GENERATOR PANEL	208V Power	
P-1065	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-2-CHEM-TB	P-52160	230V Power	
P-1066	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-2-CHEM-TB	P-52170	230V Power	
P-1067	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-2-CHEM-TB	P-52180	230V Power	
P-1068	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-2-CHEM-TB	P-52190	230V Power	
P-1069	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-2-CHEM-TB	P-53120	230V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-1070	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-2-CHEM-TB	P-53130	230V Power	
P-1071	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-2-CHEM-TB	P-53140	230V Power	
P-1072	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-2-CHEM-TB	P-53150	230V Power	
P-1073	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-2-CHEM-TB	P-54120	230V Power	
P-1074	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-2-CHEM-TB	P-54130	230V Power	
P-1075	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-2-CHEM-TB	P-54140	230V Power	
P-1076	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-2-CHEM-TB	P-54150	230V Power	
P-1077	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-4-INSTR-TB	LCS-51000	120V Power	
P-1078	3/4"	2 - #12 AWG W 1#12 GND	PVC COATED RGS	LP-4-INSTR-TB	LSH-51012	120V Power	
P-1079	3/4"	2 - #12 AWG W 1#12 GND	PVC COATED RGS	LP-4-INSTR-TB	LSH-51022	120V Power	
P-1080	3/4"	2 - #12 AWG W 1#12 GND	PVC COATED RGS	LP-4-INSTR-TB	LSH-51032	120V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-1081	3/4"	2 - #12 AWG W 1#12 GND	PVC COATED RGS	LP-4-INSTR-TB	LSH-51042	120V Power	
P-1082	3/4"	2 - #12 AWG W 1#12 GND	PVC COATED RGS	LP-4-INSTR-TB	LSH-51101	120V Power	
P-1083	3/4"	2 - #12 AWG W 1#12 GND	PVC COATED RGS	LP-4-INSTR-TB	FSH-51102	120V Power	
P-1083.1	3/4"	2 - #12 AWG W 1#12 GND	PVC COATED RGS	LP-4-INSTR-TB	FSH-51103	120V Power	
P-1084	3/4"	2 - #12 AWG W 1#12 GND	PVC COATED RGS	LP-4-INSTR-TB	LSH-51112	120V Power	
P-1085	3/4"	2 - #12 AWG W 1#12 GND	PVC COATED RGS	LP-4-INSTR-TB	LCP-51120	120V Power	
P-1086	3/4"	2 - #12 AWG W 1#12 GND	PVC COATED RGS	LP-4-INSTR-TB	LCP-51130	120V Power	
P-1087	3/4"	2 - #12 AWG W 1#12 GND	PVC COATED RGS	LP-4-INSTR-TB	LCP-51140	120V Power	
P-1088	3/4"	2 - #12 AWG W 1#12 GND	PVC COATED RGS	LP-4-INSTR-TB	LCP-51150	120V Power	
P-1089	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-4-INSTR-TB	FSH-51001	120V Power	
P-1090	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-4-INSTR-TB	LCS-56000	120V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-1091	3/4"	2 - #12 AWG W 1#12 GND	PVC COATED RGS	LP-4-INSTR-TB	FSH-56102	120V Power	
P-1092	3/4"	2 - #12 AWG W 1#12 GND	PVC COATED RGS	LP-4-INSTR-TB	LSH-56012	120V Power	
P-1093	3/4"	2 - #12 AWG W 1#12 GND	PVC COATED RGS	LP-4-INSTR-TB	LSH-56022	120V Power	
P-1094	3/4"	2 - #12 AWG W 1#12 GND	PVC COATED RGS	LP-4-INSTR-TB	LSH-56101	120V Power	
P-1095	3/4"	2 - #12 AWG W 1#12 GND	PVC COATED RGS	LP-4-INSTR-TB	LSH-56112	120V Power	
P-1096	3/4"	2 - #12 AWG W 1#12 GND	PVC COATED RGS	LP-4-INSTR-TB	LCP-56120	120V Power	
P-1097	3/4"	2 - #12 AWG W 1#12 GND	PVC COATED RGS	LP-4-INSTR-TB	LCP-56130	120V Power	
P-1098	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-4-INSTR-TB	LCS-53000	120V Power	
P-1099	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-4-INSTR-TB	LSH-53012	120V Power	
P-1100	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-4-INSTR-TB	LSH-53022	120V Power	
P-1101	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-4-INSTR-TB	FSH-53102	120V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-1102	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-4-INSTR-TB	LSH-53101	120V Power	
P-1103	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-4-INSTR-TB	LSH-53112	120V Power	
P-1104	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-4-INSTR-TB	LCP-53120	120V Power	
P-1105	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-4-INSTR-TB	LCP-53130	120V Power	
P-1106	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-4-INSTR-TB	LCP-53140	120V Power	
P-1107	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-4-INSTR-TB	LCP-53150	120V Power	
P-1108	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-5-INSTR-TB	LCP-52120	120V Power	
P-1109	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-5-INSTR-TB	LCP-52130	120V Power	
P-1110	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-5-INSTR-TB	LCP-52140	120V Power	
P-1111	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-5-INSTR-TB	LCP-52150	120V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-1112	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-5-INSTR-TB	LCP-52160	120V Power	
P-1113	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-5-INSTR-TB	LCP-52170	120V Power	
P-1114	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-5-INSTR-TB	LCP-52180	120V Power	
P-1115	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-5-INSTR-TB	LCP-52190	120V Power	
P-1116	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-5-INSTR-TB	LCS-52000	120V Power	
P-1117	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-5-INSTR-TB	LSH-52012	120V Power	
P-1118	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-5-INSTR-TB	LSH-52022	120V Power	
P-1119	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-5-INSTR-TB	FSH-52101	120V Power	
P-1120	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-5-INSTR-TB	LSH-52102	120V Power	
P-1121	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-5-INSTR-TB	LSH-52112	120V Power	
P-1121.1	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-5-INSTR-TB	LSH-52117	120V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-1122	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-5-INSTR-TB	FSH-51002	120V Power	
P-1123	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-5-INSTR-TB	LCS-54000	120V Power	
P-1124	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-5-INSTR-TB	LSH-54012	120V Power	
P-1125	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-5-INSTR-TB	LSH-54022	120V Power	
P-1126	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-5-INSTR-TB	LSH-54032	120V Power	
P-1127	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-5-INSTR-TB	LSH-54042	120V Power	
P-1128	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-5-INSTR-TB	LSH-54052	120V Power	
P-1129	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-5-INSTR-TB	LSH-54112	120V Power	
P-1130	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-5-INSTR-TB	LSH-54101	120V Power	
P-1131	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-5-INSTR-TB	FSH-54102	120V Power	
P-1132	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-5-INSTR-TB	LCP-54120	120V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-1133	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-5-INSTR-TB	LCP-54130	120V Power	
P-1134	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-5-INSTR-TB	LCP-54140	120V Power	
P-1135	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-5-INSTR-TB	LCP-54150	120V Power	
P-1136	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-5-INSTR-TB	RIO-MCC-1A	120V Power	
P-1137	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-5-INSTR-TB	RIO-MCC-1D	120V Power	
P-1137.1	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-6-INSTR-TB	OWP-CHEM	120V Power	
P-1138	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-6-INSTR-TB	FSL-52105	120V Power	
P-1139	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-6-INSTR-TB	FSL-52106	120V Power	
P-1140	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-6-INSTR-TB	FSL-52107	120V Power	
P-1141	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-6-INSTR-TB	FSL-52108	120V Power	
P-1142	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-6-INSTR-TB	FSH-51003	120V Power	
P-1143	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-6-INSTR-TB	FSH-51004	120V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-1144	3/4"	2 - #12 AWG W 1#12 GND	PVC COATED RGS	LP-6-INSTR-TB	LSH-55101	120V Power	
P-1145	3/4"	2 - #12 AWG W 1#12 GND	PVC COATED RGS	LP-6-INSTR-TB	FSH-55102	120V Power	
P-1146	3/4"	2 - #12 AWG W 1#12 GND	PVC COATED RGS	LP-6-INSTR-TB	LCS-55112	120V Power	
P-1147	3/4"	2 - #12 AWG W 1#12 GND	PVC COATED RGS	LP-6-INSTR-TB	LCS-55117	120V Power	
P-1148	3/4"	2 - #12 AWG W 1#12 GND	PVC COATED RGS	LP-6-INSTR-TB	LCP-55120	120V Power	
P-1149	3/4"	2 - #12 AWG W 1#12 GND	PVC COATED RGS	LP-6-INSTR-TB	LCP-55130	120V Power	
P-1150	3/4"	2 - #12 AWG W 1#12 GND	PVC COATED RGS	LP-6-INSTR-TB	WIT-55111	120V Power	
P-1151	3/4"	2 - #12 AWG W 1#12 GND	PVC COATED RGS	LP-6-INSTR-TB	WIT-55116	120V Power	
P-1152	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-6-INSTR-TB	RIO-CHEM-A	120V Power	
P-1153	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-6-INSTR-TB	RIO-CHEM-B	120V Power	
P-1154	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-6-INSTR-TB	RIO-CHEM-C	120V Power	
P-1155	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-6-INSTR-TB	FSL-42045	120V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-1156	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-6-INSTR-TB	FSL-42046	120V Power	
P-1157	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-6-INSTR-TB	FSL-42047	120V Power	
P-1158	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-6-INSTR-TB	FSL-42048	120V Power	
-	-	-	-	-	-	-	-
P-1160	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-6-INSTR-TB	FIT-34009	120V Power	
P-1161	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-6-INSTR-TB	LSH-54103	120V Power	
P-1162	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-6-INSTR-TB	FSH-54104	120V Power	
P-1162.1	3/4"	2 - #10 AWG W 1#12 GND	RGS	LP-6-INSTR-TB	LCP-AP35	120V Power	
P-1162.2	3/4"	2 - #10 AWG W 1#12 GND	RGS	LP-6-INSTR-TB	LCP-AP40	120V Power	
P-1163	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-PLUMB	FS (RM 2207)	120V Power	Chemical Assay Emergency Shower Flow Switch
P-1164	3/4"	2 - #12 AWG W 1#12 GND	PVC COATED RGS	LP-1-PLUMB	FS (RM 2210)	120V Power	PACL Storage Room Emergency Shower Flow Switch
P-1165	3/4"	2 - #12 AWG W 1#12 GND	PVC COATED RGS	LP-1-PLUMB	FS (RM 2210)	120V Power	Future Chemical Storage Room Emergency Shower Flow Switch

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-1166	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-1-PLUMB	FS (RM 2212)	120V Power	Exterior Chemical Delivery Emergency Shower Flow Switch
P-1167	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-PLUMB	FS (RM 2209)	120V Power	Chemical Corridor Emergency Shower Flow Switch (1)
P-1168	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-PLUMB	FS (RM 2209)	120V Power	Chemical Corridor Emergency Shower Flow Switch (2)
P-1169	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-PLUMB	FS (RM 2209)	120V Power	Chemical Corridor Emergency Shower Flow Switch (3)
P-1170	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-1-PLUMB	FS (RM 2211)	120V Power	Hypochlorite Storage Room Emergency Shower Flow Switch (1)
P-1171	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-1-PLUMB	FS (RM 2211)	120V Power	Hypochlorite Storage Room Emergency Shower Flow Switch (2)
P-1172	3/4"	2 - #12 AWG W 1#12 GND	PVC COATED RGS	LP-1-PLUMB	FS (RM 2213)	120V Power	Coagulant Polymer Storage Room Emergency Shower Flow Switch
P-1173	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-1-PLUMB	FS (RM 2214)	120V Power	Phosphoric Acid Storage Room Emergency Shower Flow Switch
P-1174	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-1-PLUMB	FS (RM 2215)	120V Power	Sodium Hydroxide Storage Room

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CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
							Emergency Shower Flow Switch
P-1175	3/4"	2 - #12 AWG W 1#12 GND	PVC COATED RGS	LP-1-PLUMB	FS (RM 2216)	120V Power	Filter Aid Polymer Storage Room Emergency Shower Flow Switch
P-1176	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-PLUMB	TP-01 (RM 2202)	120V Power	Workshop Corridor Electronic Trap Primer
P-1177	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-PLUMB	TP-02 (RM 2202)	120V Power	Workshop Electronic Trap Primer
P-1178	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-PLUMB	TP-02 (RM 2206)	120V Power	Process Area Restroom/JC Electronic Trap Primer
P-1179	1"	2 - #10 AWG W 1#10 GND	RGS	LP-1-PLUMB	RCP-05	120V Power	
P-1180	1"	2 - #10 AWG W 1#10 GND	RGS	LP-1-PLUMB	RCP-06	120V Power	
P-1181	1"	2 - #8 AWG W 1#10 GND	RGS	LP-1-PLUMB	WH-06	208V Power	
P-1182	1"	2 - #10 AWG W 1#10 GND	RGS	LP-1-PLUMB	DSW-EF-10	120V Power	
P-1183	1"	2 - #10 AWG W 1#10 GND	RGS	DSW-EF-10	EF-10	120V Power	
P-1184	3/4"	2 - #10 AWG W 1#12 GND	RGS	LP-1-PLUMB	LCS-EF-10	120V Power	
P-1185	1"	2 - #6 AWG W 1#10 GND	RGS	LP-LTG-471-TB	TB RECP - EL. 471.00	120V Power	
P-1186	1"	2 - #6 AWG W 1#10 GND	RGS	LP-LTG-471-TB	TB RECP - EL. 471.00	120V Power	

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CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-1187	1"	2 - #6 AWG W 1#10 GND	RGS	LP-LTG-471-TB	TB RECP - EL. 471.00	120V Power	
P-1188	1"	2 - #6 AWG W 1#10 GND	RGS	LP-LTG-471-TB	TB RECP - EL. 471.00	120V Power	
P-1189	1"	2 - #6 AWG W 1#10 GND	RGS	LP-LTG-471-TB	TB RECP - EL. 471.00	120V Power	
P-1190	1"	2 - #6 AWG W 1#10 GND	RGS	LP-LTG-471-TB	TB RECP - EL. 471.00	120V Power	
P-1191	1"	2 - #6 AWG W 1#10 GND	RGS	LP-LTG-471-TB	TB RECP - EL. 471.00	120V Power	
P-1192	1"	2 - #6 AWG W 1#10 GND	RGS	LP-LTG-471-TB	TB RECP - EL. 471.00	120V Power	
P-1193	3/4"	2 - #12 AWG W 1#12 GND	PVC COATED RGS	LP-LTG-471-TB	TB RECP - POLYALMNM CHLORIDE	120V Power	
P-1194	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-LTG-471-TB	TB RECP - FUTURE/PHOS. ACID	120V Power	
P-1195	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-LTG-471-TB	TB RECP - SODIUM HYDROXIDE	120V Power	
P-1196	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-LTG-471-TB	TB RECP - SODIUM HYPOCHLORIT E	120V Power	
P-1197	3/4"	2 - #12 AWG W 1#12 GND	PVC COATED RGS	LP-LTG-471-TB	TB RECP - COAG POLY	120V Power	
P-1198	3/4"	2 - #12 AWG W 1#12 GND	PVC COATED RGS	LP-LTG-471-TB	TB RECP - FILTER AID POLYMER	120V Power	

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CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-1199	1"	2 - #6 AWG W 1#10 GND	RGS	LP-LTG-471-TB	TB LTG - WORKSHOP AND STORAGE	120V Power	
P-1200	1"	2 - #6 AWG W 1#10 GND	RGS	LP-LTG-471-TB	TB LTG - ELECTRICAL ROOM	120V Power	
P-1201	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-LTG-471-TB	TB LTG - EQUIPMENT PLATFORM, VIEWING PLATFORM	120V Power	
P-1202	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-LTG-471-TB	TB LTG - CORRIDOR	120V Power	
P-1203	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-LTG-471-TB	TB LTG - FUTURE, PHOSPHORIC ACID	120V Power	
P-1204	3/4"	2 - #12 AWG W 1#12 GND	PVC COATED RGS	LP-LTG-471-TB	TB LTG - POLYALMNM CHLORIDE	120V Power	
P-1205	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-LTG-471-TB	TB LTG - SODIUM HYPOCHLORIT E	120V Power	
P-1206	3/4"	2 - #12 AWG W 1#12 GND	PVC COATED RGS	LP-LTG-471-TB	TB LTG - FILTER AID POLYMER, COAG POLY	120V Power	
P-1207	3/4"	2 - #12 AWG W 1#12 GND	PVC SCHEDULE 80	LP-LTG-471-TB	TB LTG - SODIUM HYDROXIDE	120V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-1208	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-LTG-471-TB	TB LTG - FIRE SPINK, FLTR WTR	120V Power	
P-1209	1"	2 - #8 AWG W 1#10 GND	RGS	LP-LTG-471-TB	TB LTG - FLOC/DAF NORTH	120V Power	
P-1210	1"	2 - #8 AWG W 1#10 GND	RGS	LP-LTG-471-TB	TB LTG - FLOC/DAF NORTH	120V Power	
P-1211	1"	2 - #8 AWG W 1#10 GND	RGS	LP-LTG-471-TB	TB LTG - FLOC/DAF NORTH	120V Power	
P-1212	1"	2 - #8 AWG W 1#10 GND	RGS	LP-LTG-471-TB	TB LTG - FLOC/DAF NORTH	120V Power	
P-1213	1"	2 - #8 AWG W 1#10 GND	RGS	LP-LTG-471-TB	TB LTG - FLOC/DAF NORTH	120V Power	
P-1214	1"	2 - #8 AWG W 1#10 GND	RGS	LP-LTG-471-TB	TB LTG - FLOC/DAF NORTH	120V Power	
P-1215	1"	2 - #8 AWG W 1#10 GND	RGS	LP-LTG-471-TB	TB LTG - FLOC/DAF SOUTH	120V Power	
P-1216	1"	2 - #8 AWG W 1#10 GND	RGS	LP-LTG-471-TB	TB LTG - FLOC/DAF SOUTH	120V Power	
P-1217	1"	2 - #8 AWG W 1#10 GND	RGS	LP-LTG-471-TB	TB LTG - FLOC/DAF SOUTH	120V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-1218	1"	2 - #8 AWG W 1#10 GND	RGS	LP-LTG-471-TB	TB LTG - FLOC/DAF SOUTH	120V Power	
-	-	-	-	-	-	-	-
P-1220	1 1/2"	4 - #2 AWG W 1#8 GND	RGS	LP-485-TB	LP-2-SAMPLE- TB	208V Power	
P-1221	1 1/2"	4 - #2 AWG W 1#8 GND	RGS	LP-485-TB	LP-7-INSTR-TB	208V Power	
P-1222	1 1/2"	4 - #2 AWG W 1#8 GND	RGS	LP-485-TB	LP-1-HV-TB	208V Power	
P-1223	2"	4 - #2/0 AWG W 1#6 GND	RGS	LP-485-TB	LP-LTG-485-TB	208V Power	
P-1224	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2-SAMPLE-TB	DSW-P-10320	230V Power	
P-1225	3/4"	2 - #12 AWG W 1#12 GND	RGS	DSW-P-10320	P-10320	230V Power	
P-1226	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2-SAMPLE-TB	DSW-P-10340	230V Power	
P-1227	3/4"	2 - #12 AWG W 1#12 GND	RGS	DSW-P-10340	P-10340	230V Power	
P-1228	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2-SAMPLE-TB	DSW-STR- 33050	120V Power	
P-1229	3/4"	2 - #12 AWG W 1#12 GND	RGS	DSW-STR-33051	STR-33050	120V Power	
P-1230	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2-SAMPLE-TB	T-34030	120V Power	
P-1231	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2-SAMPLE-TB	T-34040	120V Power	
P-1232	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-7-INSTR-TB	FIT-34000	120V Power	
P-1233	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-7-INSTR-TB	FIT-45001	120V Power	

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CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-1234	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-7-INSTR-TB	FSL-10316	120V Power	
P-1235	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-7-INSTR-TB	FSL-10317	120V Power	
P-1236	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-7-INSTR-TB	RIO-DAF-A1	120V Power	
P-1237	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-7-INSTR-TB	RIO-DAF-B1	120V Power	
P-1238	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-7-INSTR-TB	RIO-DAF-A2	120V Power	
P-1239	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-7-INSTR-TB	RIO-DAF-B2	120V Power	
P-1240	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-7-INSTR-TB	RIO-FLT-A2	120V Power	
P-1241	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-7-INSTR-TB	RIO-FLT-B2	120V Power	
P-1242	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-7-INSTR-TB	RIO-MCC-2A	120V Power	
P-1243	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-7-INSTR-TB	RIO-MCC-2D	120V Power	
P-1244	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-7-INSTR-TB	DDC-02	120V Power	
P-1245	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-7-INSTR-TB	BMS-02	120V Power	
P-1246	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-7-INSTR-TB	LCS-EF-11	120V Power	
P-1247	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-7-INSTR-TB	DDC-03	120V Power	
P-1248	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-7-INSTR-TB	LCS-EF-01	120V Power	
P-1249	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-7-INSTR-TB	LCS-EF-03	120V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-1250	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-7-INSTR-TB	LCS-EF-05	120V Power	
P-1251	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-7-INSTR-TB	LCS-EF-08	120V Power	
P-1252	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-7-INSTR-TB	LCS-EF-09	120V Power	
P-1253	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-7-INSTR-TB	LCS-EF-07	120V Power	
P-1254	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-7-INSTR-TB	LCS-EF-12	120V Power	
P-1255	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-7-INSTR-TB	LCS-SF-01	120V Power	
P-1256	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-7-INSTR-TB	LCS-EF-02	120V Power	
P-1257	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-7-INSTR-TB	LCS-EF-04	120V Power	
P-1258	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-7-INSTR-TB	LCS-EF-06	120V Power	
P-1259	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-7-INSTR-TB	DDC-01	120V Power	
P-1259.1	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-7-INSTR-TB	OWS-DAF-A1	120V Power	
P-1259.2	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-7-INSTR-TB	OWS-DAF-B1	120V Power	
P-1259.3	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-7-INSTR-TB	OWS-FLT-A2	120V Power	
P-1259.4	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-7-INSTR-TB	OWS-FLT-B2	120V Power	
P-1259.5	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-7-INSTR-TB	OWS-BOP	120V Power	
P-1260	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-1-HV-TB	HV-1	120V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-1261	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-1-HV-TB	HV-2	120V Power	
P-1262	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-1-HV-TB	HV-3	120V Power	
P-1263	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-HV-TB	DSW-EF-11	120V Power	
P-1264	3/4"	2 - #12 AWG W 1#12 GND	RGS	DSW-EF-11	EF-11	120V Power	
P-1265	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-HV-TB	DSW-EF-12	120V Power	
P-1266	3/4"	2 - #12 AWG W 1#12 GND	RGS	DSW-EF-12	EF-12	120V Power	
P-1266.1	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-1-HV-TB	LCP-AP10	120V Power	
P-1266.2	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-HV-TB	LCP-AP15	120V Power	
P-1266.3	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-HV-TB	LCP-AP20	120V Power	
P-1266.4	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-HV-TB	LCP-AP25	120V Power	
P-1266.5	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-1-HV-TB	LCP-AP30	120V Power	
P-1267	1"	2 - #6 AWG W 1#10 GND	RGS	LP-LTG-485-TB	TB RECP - EL. 485.00	120V Power	
P-1268	1"	2 - #6 AWG W 1#10 GND	RGS	LP-LTG-485-TB	TB RECP - EL. 485.00	120V Power	
P-1269	1"	2 - #6 AWG W 1#10 GND	RGS	LP-LTG-485-TB	TB RECP - EL. 485.00	120V Power	
P-1270	1"	2 - #6 AWG W 1#10 GND	RGS	LP-LTG-485-TB	TB RECP - EL. 485.00	120V Power	
P-1271	1"	2 - #6 AWG W 1#10 GND	RGS	LP-LTG-485-TB	TB RECP - EL. 485.00	120V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-1272	1"	2 - #6 AWG W 1#10 GND	RGS	LP-LTG-485-TB	TB RECP - EL. 485.00	120V Power	
P-1273	1"	2 - #6 AWG W 1#10 GND	RGS	LP-LTG-485-TB	TB RECP - EL. 485.00	120V Power	
P-1274	1"	2 - #6 AWG W 1#10 GND	RGS	LP-LTG-485-TB	TB RECP - EL. 485.00	120V Power	
P-1275	1"	2 - #6 AWG W 1#10 GND	RGS	LP-LTG-485-TB	TB RECP - EL. 499.00	120V Power	
P-1276	1"	2 - #6 AWG W 1#10 GND	RGS	LP-LTG-485-TB	TB LTG - DAF OPERATING AREA	120V Power	
P-1277	1"	2 - #6 AWG W 1#10 GND	RGS	LP-LTG-485-TB	TB LTG - DAF OPERATING AREA	120V Power	
P-1278	1"	2 - #6 AWG W 1#10 GND	RGS	LP-LTG-485-TB	TB LTG - DAF OPERATING AREA	120V Power	
P-1279	1"	2 - #6 AWG W 1#10 GND	RGS	LP-LTG-485-TB	TB LTG - DAF OPERATING AREA	120V Power	
P-1280	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-LTG-485-TB	TB LTG - 485 ELECTRICAL RM	120V Power	
P-1281	1"	2 - #6 AWG W 1#10 GND	RGS	LP-LTG-485-TB	TB LTG - FILTER OPERATING AREA	120V Power	
P-1282	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-LTG-485-TB	TB LTG - CENTRAL OPERATING AREA	120V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-1283	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-LTG-485-TB	TB LTG - CENTRAL OPERATING AREA	120V Power	
P-1284	1"	2 - #6 AWG W 1#10 GND	RGS	LP-LTG-485-TB	TB LTG - FILTER OPERATING AREA	120V Power	
P-1285	1"	2 - #6 AWG W 1#10 GND	RGS	LP-LTG-485-TB	TB LTG - FILTER OPERATING AREA	120V Power	
P-1286	1"	2 - #6 AWG W 1#10 GND	RGS	LP-LTG-485-TB	TB LTG - FILTER OPERATING AREA	120V Power	
DWB & WWT C&C							
P-1287-A	5"	3 - #600 KCMIL W 1#3/0 GND	RGS	ATS-4A-DWB	MCC-4A	480V Power	
P-1287-B	5"	3 - #600 KCMIL W 1#3/0 GND	RGS	ATS-4A-DWB	MCC-4A	480V Power	
P-1287-C	5"	3 - #600 KCMIL W 1#3/0 GND	RGS	ATS-4A-DWB	MCC-4A	480V Power	
P-1288-A	5"	3 - #600 KCMIL W 1#3/0 GND	RGS	ATS-4B-DWB	MCC-4B	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-1288-B	5"	3 - #600 KCMIL W 1#3/0 GND	RGS	ATS-4B-DWB	MCC-4B	480V Power	
P-1288-C	5"	3 - #600 KCMIL W 1#3/0 GND	RGS	ATS-4B-DWB	MCC-4B	480V Power	
P-1289	3"	3 - #350 KCMIL W 1#4 GND	RGS	MCC-4A	CCP-60210	480V Power	
P-1290	3"	3 - #350 KCMIL W 1#4 GND	RGS	CCP-60210	CENT-60210 (MAIN DRIVE)	480V Power	
P-1291	3"	3 - #350 KCMIL W 1#4 GND	RGS	CCP-60210	CENT-60210 (BACK DRIVE/HPU)	480V Power	
P-1292	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-4A	DSW-CONV- 60300	480V Power	
P-1293	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-CONV-60300	CONV-60300	480V Power	
P-1294	3/4"	3 - #8 AWG W 1#10 GND	RGS	MCC-4A	VFD-60140	480V Power	
P-1294.1	3/4"	3 - #8 AWG W 1#10 GND	RGS	VFD-60140	DSW-P-60140	480V Power	
P-1295	3/4"	3 - #8 AWG W 1#10 GND	RGS	DSW-P-60140	P-60140	480V Power	
P-1296	2"	3 - #3/0 AWG W 1#6 GND	RGS	MCC-4A	PANEL PP-1- DW	480V Power	
P-1297	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-4A/VFD-EF-13	DSW-EF-13	480V Power	
P-1298	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EF-13	EF-13	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-1299	1 1/2"	3 - #2 AWG W 1#8 GND	PVC SCHEDULE 40	MCC-4A	VFD-46010	480V Power	
P-1299.1	1 1/2"	3 - #2 AWG W 1#8 GND	PVC COATED RGS	VFD-46010	DSW-P-46010	480V Power	
P-1300	1 1/2"	3 - #2 AWG W 1#8 GND	PVC COATED RGS	DSW-P-46010	P-46010	480V Power	
P-1301	1 1/2"	3 - #2 AWG W 1#8 GND	PVC SCHEDULE 40	MCC-4A	VFD-46030	480V Power	
P-1301.1	1 1/2"	3 - #2 AWG W 1#8 GND	PVC COATED RGS	VFD-46030	DSW-P-46030	480V Power	
P-1302	1 1/2"	3 - #2 AWG W 1#8 GND	PVC COATED RGS	DSW-P-46030	P-46030	480V Power	
P-1303	1"	3 - #10 AWG W 1#10 GND	PVC SCHEDULE 40	MCC-4A	DSW-MX-46050	480V Power	
P-1304	1"	3 - #10 AWG W 1#10 GND	PVC COATED RGS	DSW-MX-46050	MX-46050	480V Power	
P-1305	1"	3 - #10 AWG W 1#10 GND	PVC COATED RGS	MCC-4A/VFD-60510	DSW-P-60510	480V Power	
P-1306	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-P-60510	P-60510	480V Power	
P-1307	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-4A	DSW-MX-60130	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-1308	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MX-60130	MX-60130	480V Power	
P-1309	3"	3 - #500 KCMIL W 1#3 GND	RGS	MCC-4A	HV-04	480V Power	
P-1310	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-4A	DSW-MX-60530	480V Power	
P-1311	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MX-60530	MX-60530	480V Power	
P-1312	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-4A	DSW-WH-07	480V Power	
P-1313	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-WH-06	WH-07	480V Power	
P-1314	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-4A	DSW-EUH-57	480V Power	
P-1315	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EUH-57	EUH-57	480V Power	
P-1316	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-4A	DSW-EUH-56	480V Power	
P-1317	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EUH-56	EUH-56	480V Power	
P-1318	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-4A	DSW-EUH-55	480V Power	
P-1319	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EUH-55	EUH-55	480V Power	
P-1320	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-4A	DSW-EUH-54	480V Power	
P-1321	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EUH-54	EUH-54	480V Power	
P-1322	2"	3 - #1 AWG W 1#6 GND	RGS	MCC-4A	TX-4A-LP-DW	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-1323	2"	4 - #3/0 AWG W 1#6 GND	RGS	TX-4A-LP-DW	LP-DW	208V Power	
P-1324	3"	3 - #350 KCMIL W 1#4 GND	RGS	MCC-4B	CCP-60220	480V Power	
P-1325	3"	3 - #350 KCMIL W 1#4 GND	RGS	CCP-60220	CENT-60220 (MAIN DRIVE)	480V Power	
P-1326	3"	3 - #350 KCMIL W 1#4 GND	RGS	CCP-60220	CENT-60220 (BACK DRIVE/HPU)	480V Power	
P-1327	1"	3 - #3 AWG W 1#8 GND	RGS	MCC-4B	DSW-CRANE- 60230	480V Power	
P-1328	1"	3 - #3 AWG W 1#8 GND	RGS	DSW-CRANE-60230	CRANE-60230	480V Power	
P-1329	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-4B	DSW-CONV- 60310	480V Power	
P-1330	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-CONV-60310	CONV-60310	480V Power	
P-1331	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-4B	DSW-CONV- 60320	480V Power	
P-1332	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-CONV-60320	CONV-60320	480V Power	
P-1333	3/4"	3 - #8 AWG W 1#10 GND	RGS	MCC-4B	VFD-60160	480V Power	
P-1333.1	3/4"	3 - #8 AWG W 1#10 GND	RGS	VFD-60160	DSW-P-60160	480V Power	
P-1334	3/4"	3 - #8 AWG W 1#10 GND	RGS	DSW-P-60160	P-60160	480V Power	
P-1335	1 1/2"	3 - #2 AWG W 1#8 GND	PVC SCHEDULE 40	MCC-4B	VFD-46020	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-1335.1	1 1/2"	3 - #2 AWG W 1#8 GND	PVC COATED RGS	VFD-46020	DSW-P-46020	480V Power	
P-1336	1 1/2"	3 - #2 AWG W 1#8 GND	PVC COATED RGS	DSW-P-46020	P-46020	480V Power	
P-1337	1 1/2"	3 - #2 AWG W 1#8 GND	PVC SCHEDULE 40	MCC-4B	VFD-46040	480V Power	
P-1337.1	1 1/2"	3 - #2 AWG W 1#8 GND	PVC COATED RGS	VFD-46040	DSW-P-46040	480V Power	
P-1338	1 1/2"	3 - #2 AWG W 1#8 GND	PVC COATED RGS	DSW-P-46040	P-46040	480V Power	
P-1339	1"	3 - #10 AWG W 1#10 GND	PVC SCHEDULE 40	MCC-4B	DSW-MX-46060	480V Power	
P-1340	1"	3 - #10 AWG W 1#10 GND	PVC COATED RGS	DSW-MX-46060	MX-46060	480V Power	
P-1341	1"	3 - #10 AWG W 1#10 GND	PVC COATED RGS	MCC-4B/VFD-60520	DSW-P-60520	480V Power	
P-1342	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-P-60520	P-60520	480V Power	
P-1343	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-4B	DSW-MX-60150	480V Power	
P-1344	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MX-60150	MX-60150	480V Power	
P-1345	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-4B/VFD-EF-14	DSW-EF-14	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-1346	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EF-14	EF-14	480V Power	
P-1347	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-4B	DSW-MX-60540	480V Power	
P-1348	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MX-60540	MX-60540	480V Power	
P-1349	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-4B	DSW-EUH-58	480V Power	
P-1350	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EUH-58	EUH-58	480V Power	
P-1351	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-4B	DSW-EUH-59	480V Power	
P-1352	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EUH-59	EUH-59	480V Power	
P-1353	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-4B	DSW-EUH-60	480V Power	
P-1354	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-EUH-60	EUH-60	480V Power	
P-1355	1 1/2"	3 - #1/0 AWG W 1#6 GND	RGS	MCC-4B	DSW-WH-09	480V Power	
P-1356	1 1/2"	3 - #1/0 AWG W 1#6 GND	RGS	DSW-WH-09	WH-09	480V Power	
P-1357	2"	3 - #3/0 AWG W 1#6 GND	RGS	MCC-4B	PANEL PP-1-DW	480V Power	
P-1358	2"	3 - #1 AWG W 1#6 GND	RGS	MCC-4B	TX-4B-LP-DW	480V Power	
P-1359	2"	4 - #3/0 AWG W 1#6 GND	RGS	TX-4B-LP-DW	LP-DW	208V Power	
P-1360	3/4"	3 - #12 AWG W 1#12 GND	RGS	MCC-4B	DSW-SP-02	480V Power	
P-1361	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-SP-02	SP-02	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-1362	3/4"	3 - #8 AWG W 1#10 GND	RGS	MCC-4B	DSW-VRF-06	480V Power	
P-1363	3/4"	3 - #8 AWG W 1#10 GND	RGS	DSW-VRF-06	VRF-06	480V Power	
P-1364	3/4"	3 - #12 AWG W 1#12 GND	RGS	PP-1-DW	DSW-MOV-60115	480V Power	
P-1365	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-60115	MOV-60115	480V Power	
P-1366	3/4"	3 - #12 AWG W 1#12 GND	RGS	PP-1-DW	DSW-MOV-60125	480V Power	
P-1367	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-60125	MOV-60125	480V Power	
P-1368	3/4"	3 - #12 AWG W 1#12 GND	RGS	PP-1-DW	ROLL-UP-DOOR (DWB - WEST SIDE)	480V Power	
P-1369	3/4"	3 - #12 AWG W 1#12 GND	RGS	PP-1-DW	ROLL-UP-DOOR (DWB - WEST SIDE)	480V Power	
P-1370	3/4"	3 - #8 AWG W 1#10 GND	RGS	PP-1-DW	LCP-60300	480V Power	
P-1371	3/4"	3 - #12 AWG W 1#12 GND	RGS	PP-1-DW	DSW-MOV-60311	480V Power	
P-1372	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-60311	MOV-60311	480V Power	
P-1373	3/4"	3 - #12 AWG W 1#12 GND	RGS	PP-1-DW	DSW-MOV-60312	480V Power	
P-1374	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-60312	MOV-60312	480V Power	
P-1375	3/4"	3 - #12 AWG W 1#12 GND	RGS	PP-1-DW	DSW-MOV-60321	480V Power	
P-1376	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-60321	MOV-60321	480V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-1377	3/4"	3 - #12 AWG W 1#12 GND	RGS	PP-1-DW	DSW-MOV-60322	480V Power	
P-1378	3/4"	3 - #12 AWG W 1#12 GND	RGS	DSW-MOV-60322	MOV-60322	480V Power	
P-1379	3/4"	3 - #12 AWG W 1#12 GND	RGS	PP-1-DW	CENT-60211 (DIVERter GATE 1)	480V Power	
P-1380	3/4"	3 - #12 AWG W 1#12 GND	RGS	PP-1-DW	CENT-60212 (DIVERter GATE 2)	480V Power	
P-1381	1 1/2"	4 - #2 AWG W 1#8 GND	RGS	LP-DW	LP-1-DW	208V Power	
P-1382	1 1/2"	4 - #2 AWG W 1#8 GND	RGS	LP-DW	LP-2-DW	208V Power	
P-1383	1 1/2"	4 - #2 AWG W 1#8 GND	RGS	LP-DW	LP-3-DW	208V Power	
P-1385	1 1/2"	4 - #2 AWG W 1#8 GND	RGS	LP-DW	LP-INSTR-DW	208V Power	
P-1385.1	1 1/2"	3 - #2 AWG W 1#8 GND	RGS	LP-DW	TX-3-DW	208V Power	
P-1385.2	1 1/2"	3 - #2 AWG W 1#8 GND	RGS	TX-3-DW	UPS-EMER-1-DW	240V Power	
P-1385.3	1 1/2"	3 - #2 AWG W 1#8 GND	RGS	UPS-EMER-1-DW	LP-UPS-EMER-1-DW	240V Power	
P-1386	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-DW	DSW-MX-60425	120V Power	
P-1387	3/4"	2 - #12 AWG W 1#12 GND	RGS	DSW-MX-60425	MX-60425	120V Power	
P-1388	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-DW	DSW-MX-60465	120V Power	
P-1389	3/4"	2 - #12 AWG W 1#12 GND	RGS	DSW-MX-60465	MX-60465	120V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-1390	3/4"	2 - #8 AWG W 1#10 GND	RGS	LP-1-DW	DSW-SKID-60430	120V Power	
P-1391	3/4"	2 - #8 AWG W 1#10 GND	RGS	DSW-SKID-60430	SKID-60430	120V Power	
P-1392	3/4"	2 - #8 AWG W 1#10 GND	RGS	LP-1-DW	DSW-SKID-60470 (STANDBY)	120V Power	
P-1393	3/4"	2 - #8 AWG W 1#10 GND	RGS	DSW-SKID-60470 (STANDBY)	SKID-60470 (STANDBY)	120V Power	
P-1394	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-DW	DSW-P-60410	120V Power	
P-1395	3/4"	2 - #12 AWG W 1#12 GND	RGS	DSW-P-60410	P-60410	120V Power	
P-1396	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-DW	DSW-P-60450 (STANDBY)	120V Power	
P-1397	3/4"	2 - #12 AWG W 1#12 GND	RGS	DSW-P-60450 (STANDBY)	P-60450 (STANDBY)	120V Power	
P-1398	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-DW	WE-60421	120V Power	
P-1399	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-1-DW	WE-60461	120V Power	
P-1400	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-1-DW	CCP-60210	120V Power	
P-1401	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-1-DW	CCP-60220 (STANDBY)	120V Power	
P-1402	3/4"	3 - #12 AWG W 1#12 GND	RGS	LP-1-DW	SOV-60302	120V Power	
P-1403	3/4"	3 - #12 AWG W 1#12 GND	RGS	LP-1-DW	SOV-60303	120V Power	
P-1404	3/4"	3 - #12 AWG W 1#12 GND	RGS	LP-1-DW	SOV-60304	120V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-1405	3/4"	3 - #12 AWG W 1#12 GND	RGS	LP-1-DW	SOV-60322	120V Power	
P-1406	3/4"	3 - #12 AWG W 1#12 GND	RGS	LP-1-DW	SOV-60323	120V Power	
P-1407	3/4"	3 - #12 AWG W 1#12 GND	RGS	LP-1-DW	SOV-60324	120V Power	
P-1408	3/4"	3 - #12 AWG W 1#12 GND	RGS	LP-2-DW	FCU-57	208V Power	
P-1409	3/4"	3 - #12 AWG W 1#12 GND	RGS	LP-2-DW	FCU-58	208V Power	
P-1410	3/4"	3 - #12 AWG W 1#12 GND	RGS	LP-2-DW	FCU-59	208V Power	
P-1411	3/4"	3 - #12 AWG W 1#12 GND	RGS	LP-2-DW	FCU-60	208V Power	
P-1412	3/4"	3 - #12 AWG W 1#12 GND	RGS	LP-2-DW	FCU-61	208V Power	
P-1413	3/4"	3 - #12 AWG W 1#12 GND	RGS	LP-2-DW	FCU-56	208V Power	
P-1414	3/4"	3 - #12 AWG W 1#12 GND	RGS	LP-2-DW	BC-06	208V Power	
P-1415	3/4"	3 - #12 AWG W 1#12 GND	RGS	LP-2-DW	RCP-06	120V Power	
P-1416	3/4"	3 - #12 AWG W 1#12 GND	RGS	LP-2-DW	RCP-07	120V Power	
P-1417	3/4"	3 - #12 AWG W 1#12 GND	RGS	LP-2-DW	HV-4	120V Power	
P-1418	3/4"	3 - #12 AWG W 1#12 GND	RGS	LP-2-DW	TP-02	120V Power	DWB Electronic Trap Primer
P-1419	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-2-DW	DSW-WH-08	208V Power	
P-1420	3/4"	2 - #8 AWG W 1#10 GND	RGS	DSW-WH-08	WH-08	208V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-1421	3/4"	2 - #8 AWG W 1#10 GND	RGS	LP-2-DW	DSW-EF-15	120V Power	
P-1422	3/4"	2 - #12 AWG W 1#12 GND	RGS	DSW-EF-15	EF-15	120V Power	
P-1423	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2-DW	DSW-EF-16	120V Power	
P-1424	3/4"	2 - #12 AWG W 1#12 GND	RGS	DSW-EF-16	EF-16	120V Power	
P-1425	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2-DW	LCS-EF-13	120V Power	
P-1426	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2-DW	LCS-EF-14	120V Power	
P-1427	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2-DW	LCS-EF-16	120V Power	
P-1428	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2-DW	DDC-14	120V Power	
P-1429	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2-DW	DDC-08	120V Power	
P-1430	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2-DW	LCS-EF-15	120V Power	
P-1430.1	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2-DW	FS (ROOM 3201)	120V Power	Dewatering Polymer Storage Room Emergency Shower Flow Switch
P-1430.2	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-2-DW	FS (ROOM 3305)	120V Power	DWB Sample Room Emergency Eyewash Flow Switch
P-1431	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-3-DW	DWB RECP - EL. 450.00	120V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-1432	1"	2 - #6 AWG W 1#10 GND	RGS	LP-3-DW	DWB RECP - EL. 464.50	120V Power	
P-1433	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-3-DW	DWB RECP - EL. 484.50	120V Power	
P-1434	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-3-DW	DWB RECP - EL. 450.00	120V Power	
P-1435	1"	2 - #6 AWG W 1#10 GND	RGS	LP-3-DW	DWB RECP - EL. 464.50	120V Power	
P-1436	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-3-DW	DWB RECP - EL. 484.50	120V Power	
P-1437	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-3-DW	DWB LTG - SOLIDS REMOVAL	120V Power	
P-1438	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3-DW	DWB LTG - PUMP ROOM	120V Power	
P-1439	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3-DW	DWB LTG - POLYMER ROOM	120V Power	
-	-	-	-	-	-	-	-
P-1441	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3-DW	DWB LTG - RESTROOM	120V Power	
P-1442	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-3-DW	DWB LTG - EXTERIOR	120V Power	
P-1443	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3-DW	DWB LTG - CENT ROOM	120V Power	
P-1444	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3-DW	DWB LTG - ELEC ROOM	120V Power	
P-1445	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3-DW	DWB LTG - JANITOR & SAMPLE ROOMS	120V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-1446	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3-DW	DWB LTG - CONTROL ROOM	120V Power	
P-1446.1	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3-DW	DWB RECP - CONTROL ROOM	120V Power	
P-1446.2	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-3-DW	DWB RECP - CONTROL ROOM	120V Power	
P-1446.3	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-3-DW	DWB RECP - CTRL AND I&C RMS	120V Power	
P-1446.4	1"	2 - #10 AWG W 1#10 GND	PVC SCHEDULE 40	LP-3-DW	WAST WASHWATER TANK - REC	120V Power	
P-1446.5	1"	2 - #10 AWG W 1#10 GND	PVC SCHEDULE 40	LP-3-DW	WAST WASHWATER TANK - LTG	120V Power	
P-1447	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-INSTR-DW	TSH-60140	120V Power	
P-1448	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-INSTR-DW	TSH-60160	120V Power	
P-1449	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-INSTR-DW	FIT-60201	120V Power	
P-1450	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-INSTR-DW	FIT-60202	120V Power	
P-1451	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-INSTR-DW	FIT-60301	120V Power	
P-1452	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-INSTR-DW	FIT-60401	120V Power	
P-1453	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-INSTR-DW	LCS-60425	120V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF⁷⁸

CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-1454	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-INSTR-DW	LCS-60465	120V Power	
P-1455	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-INSTR-DW	WIT-60421	120V Power	
P-1456	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-INSTR-DW	WIT-60461	120V Power	
P-1457	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-INSTR-DW	LCP-60430	120V Power	
P-1458	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-INSTR-DW	LCP-60470	120V Power	
P-1459	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-INSTR-DW	RIO- RESIDUALS	120V Power	
P-1460	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-INSTR-DW	AIT-60203	120V Power	
P-1461	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-INSTR-DW	AIT-60204	120V Power	
P-1461.1	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-INSTR-DW	LCP-AP65	120V Power	
P-1461.2	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-INSTR-DW	LCP-AP70	120V Power	
P-1461.3	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-INSTR-DW	OWP-RESID	120V Power	
P-1462	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-UPS-EMER-1-DW	EM/EXIT LTG - EL. 450.00, STAIR A	120V Power	
P-1463	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-UPS-EMER-1-DW	EM/EXIT LTG - EL. 464.50	120V Power	
P-1464	3/4"	2 - #12 AWG W 1#12 GND	RGS	LP-UPS-EMER-1-DW	EM/EXIT LTG - EL. 484.50	120V Power	
P-1465	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-UPS-EMER-1-DW	DWB LTG - EXTERIOR	120V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF ⁷⁸							
CONDUIT NO.	SIZE	CABLE & SIZE	CONDUIT TYPE	FROM	TO	PURPOSE	REMARKS
P-1466	3/4"	2 - #10 AWG W 1#10 GND	RGS	LP-UPS-EMER-1-DW	ACP-DW	120V Power	
BACKWASH FACILITY C&C							
P-1467	3/4"	2 - #12 AWG W 1#12 GND	RGS	PANEL LP1 (EXISTING PANEL)	FCV-81040	120V Power	
P-1468	3/4"	2 - #12 AWG W 1#12 GND	RGS	PANEL LP1 (EXISTING PANEL)	MOV-81050	120V Power	
P-1469	3/4"	2 - #12 AWG W 1#12 GND	RGS	PANEL LP1 (EXISTING PANEL)	FCV-81060	120V Power	
P-1470	3/4"	2 - #12 AWG W 1#12 GND	RGS	PANEL LP1 (EXISTING PANEL)	FIT-81060	120V Power	
P-1471	3/4"	2 - #12 AWG W 1#12 GND	RGS	PANEL LP1 (EXISTING PANEL)	LCP-70360	120V Power	
P-1472	3/4"	2 - #12 AWG W 1#12 GND	RGS	PANEL LP1 (EXISTING PANEL)	LCP-70370	120V Power	
P-1473	3/4"	2 - #12 AWG W 1#12 GND	RGS	PANEL LP1 (EXISTING PANEL)	P-70360	120V Power	
P-1474	3/4"	2 - #12 AWG W 1#12 GND	RGS	PANEL LP1 (EXISTING PANEL)	P-70370	120V Power	
P-1475	3/4"	2 - #12 AWG W 1#12 GND	RGS	PANEL LP1 (EXISTING PANEL)	WIT-70352	120V Power	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF							
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS	
OUTDOOR C&C							

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
C-001	4"	SINGLE MODE FIBER	PVC SCHEDULE 40	SWGR-02-A	ATS-1A	
C-002	4"	SINGLE MODE FIBER	PVC SCHEDULE 40	RAPID SAND FILTER BUILDING	ADMIN BUILDING	
C-003	1"	SINGLE MODE FIBER	PVC SCHEDULE 40	DDC-12	SLS-01	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
C-004	1"	SINGLE MODE FIBER	PVC SCHEDULE 40	DDC-15	SLS-02	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
C-005	4"	SINGLE MODE FIBER	PVC SCHEDULE 40	EXISTING POLE	ADMIN BUILDING (CONTROL ROOM)	VIA HH #1A
C-006	1"	SINGLE MODE FIBER	PVC SCHEDULE 40	ADMIN BUILDING	GATE 3	VIA HH #1C
C-006.1	1"	SINGLE MODE FIBER	PVC SCHEDULE 40	ADMIN BUILDING	GATE 4	
C-007	1"	SINGLE MODE FIBER	PVC SCHEDULE 40	ADMIN BUILDING	GATE 2	VIA HH #1C
C-008	2"	SINGLE MODE FIBER	PVC SCHEDULE 40	DEWATERING BUILDING	WASTE WASHWATER TANK (WWT)	VIA DB-24 (C-578, C-582, C-586, C-587, C-588, C-589, C-590, C-592, C-593, C-596)
C-DB-25-SPARE-A	2"	SPARE	PVC SCHEDULE 40	DEWATERING BUILDING	WASTE WASHWATER TANK (WWT)	
C-DWB-ATS-A	2"	SINGLE MODE FIBER	PVC SCHEDULE 40	SWGR-01	ATS-4A-DWB	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
C-DWB-ATS-B	2"	SINGLE MODE FIBER	PVC SCHEDULE 40	SWGR-01	ATS-4B-DWB	
C-DB-10A-SPARE-A	4"	SPARE	PVC SCHEDULE 40	SWGR-02-A	ATS-1A	
C-DB-14-SPARE-A	4"	SPARE	PVC SCHEDULE 40	ADMIN BUILDING	RAPID SAND FILTER BUILDING	
C-DB-18-SPARE-A	4"	SPARE	PVC SCHEDULE 40	EXISTING POLE	ADMIN BUILDING	
ADMIN C&C						
C-009	1"	CAT6 CABLE	RGS	NETWORK SERVER RACK	PLC-TRAIN-A	
C-010	1"	CAT6 CABLE	RGS	NETWORK SERVER RACK	PLC-TRAIN-B	
C-011	1"	CAT6 CABLE	RGS	NETWORK SERVER RACK	PLC-BOP	
C-012	1"	SINGLE MODE FIBER	RGS	NETWORK SERVER RACK	RIO-WQSB	
C-013	1"	SINGLE MODE FIBER	RGS	NETWORK SERVER RACK	RIO-WQTH	
C-014	1"	SINGLE MODE FIBER	RGS	NETWORK SERVER RACK	CENT-PLC-001	
C-015	1"	SINGLE MODE FIBER	RGS	NETWORK SERVER RACK	CENT-PLC-002	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
C-016	1"	SINGLE MODE FIBER	RGS	NETWORK SERVER RACK	EDV-CP	
C-017	1"	SINGLE MODE FIBER	RGS	NETWORK SERVER RACK	CLEARWELL-CP	
C-018	1"	SINGLE MODE FIBER	RGS	NETWORK SERVER RACK	EXISTING SCADA SYSTEM FAST SAND FILTER BUILDING	
C-019	1"	SINGLE MODE FIBER	RGS	NETWORK SERVER RACK	OWS-BOP	
C-020	3/4"	2 #14	RGS	RIO-DAF-B2	FIRE ALARM PANEL	XA-70410
C-021	3/4"	2 #14	RGS	RIO-DAF-B2	HVAC CONTROL PANEL	XA-TBD
C-022	3/4"	2 #14	RGS	RIO-DAF-B2	FSH-70001	FAH-70001
C-023	1"	2 #14	PVC SCHEDULE 40	LCS-70740	LSH-70742	VIA HH #2A
C-024	3/4"	2 #14	RGS	DOAS-01 VCP	FACP	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
C-025	3/4"	2 #14	RGS	DDC-05	FACP	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
C-026	3/4"	2 #14	RGS	DOAS-02 VCP	FACP	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
C-027	3/4"	2 #14	RGS	DDC-06	FACP	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
C-028	3/4"	8 #14	RGS	DDC-05	EF-17	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
C-029	3/4"	8 #14	RGS	DDC-06	EF-18	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
C-030	3/4"	CAT6 CABLE	RGS	DDC-11	VFD-CWP-01	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
C-031	3/4"	CAT6 CABLE	RGS	DDC-11	VFD-CWP-02	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
C-032	3/4"	CAT6 CABLE	RGS	DDC-06	VFD-EF-19	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
C-033	3/4"	2#14	RGS	DDC-11	VFD-CWP-01	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
C-034	3/4"	2#14	RGS	DDC-11	VFD-CWP-02	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
C-035	3/4"	2#14	RGS	DDC-06	VFD-EF-19	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
C-036	3/4"	8 #14	RGS	DDC-05	EF-20	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
C-037	3/4"	8 #14	RGS	DDC-05	EF-21	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
C-038	3/4"	6 #14	RGS	DDC-13	SP-01 VCP	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
TB C&C						
C-039	1"	SINGLE MODE FIBER	RGS	PLC-TRAIN-A	RIO-DAF-A1	
C-040	1"	SINGLE MODE FIBER	RGS	PLC-TRAIN-A	RIO-FLT-A1	
C-041	1"	SINGLE MODE FIBER	RGS	PLC-TRAIN-A	RIO-DAF-A2	
C-042	1"	SINGLE MODE FIBER	RGS	PLC-TRAIN-A	RIO-FLT-A2	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
C-043	1"	SINGLE MODE FIBER	RGS	PLC-TRAIN-B	RIO-DAF-B1	
C-044	1"	SINGLE MODE FIBER	RGS	PLC-TRAIN-B	RIO-FLT-B1	
C-045	1"	SINGLE MODE FIBER	RGS	PLC-TRAIN-B	RIO-DAF-B2	
C-046	1"	SINGLE MODE FIBER	RGS	PLC-TRAIN-B	RIO-FLT-B2	
C-047	1"	SINGLE MODE FIBER	RGS	PLC-BOP	RIO-CHEM-A	
C-048	1"	SINGLE MODE FIBER	RGS	PLC-BOP	RIO-CHEM-B	
C-049	1"	SINGLE MODE FIBER	RGS	PLC-BOP	RIO-CHEM-C	
C-050	1"	SINGLE MODE FIBER	RGS	PLC-BOP	RIO-MCC-1D	
C-051	1"	SINGLE MODE FIBER	RGS	PLC-BOP	RIO-MCC-2D	
C-052	1"	CAT 6 CABLE	RGS	RIO-MCC-1D	RIO-MCC-1A	
C-053	1"	CAT 6 CABLE	RGS	RIO-MCC-2D	RIO-MCC-2A	
C-054	1"	12 #14	RGS	RIO-DAF-B2	MOV-10120	ZSH-10120, ZSL-10120, YN-10120, YA-10120, ZCH-10120, ZCL-10120

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
C-055	1"	SINGLE MODE FIBER	RGS	RIO-DAF-A1	OWS-DAF-A1	
C-056	1"	SINGLE MODE FIBER	RGS	RIO-DAF-B1	OWS-DAF-B1	
C-057	1"	SINGLE MODE FIBER	RGS	RIO-FLT-A2	OWS-FLT-A2	
C-058	1"	SINGLE MODE FIBER	RGS	RIO-FLT-B2	OWS-FLT-B2	
C-059	1"	SINGLE MODE FIBER	RGS	RIO-CHEM-A	OWP-CHEM	
C-060	3/4"	2 #14	RGS	MOV-10120	LCS-10120	
C-061	1"	12 #14	RGS	RIO-DAF-A2	MOV-10110	ZSH-10110, ZSL-10110, YN-10110, YA-10110, ZCH-10110, ZCL-10110
C-062	3/4"	2 #14	RGS	MOV-10110	LCS-10110	
C-063	3/4"	4 #14	RGS	LCS-10310	P-10310	
C-064	3/4"	4 #14	RGS	LCS-10330	P-10330	
C-065	3/4"	2 #14	RGS	RIO-DAF-A2	FSL-10314	
C-066	3/4"	2 #14	RGS	RIO-DAF-B2	FSL-10334	
C-067	3/4"	6 #14	RGS	RIO-DAF-A2	FCV-10111	ZSL-10111, YN-10111, YA-10111
C-068	3/4"	2 #14	RGS	FCV-10111	LCS-10111	
C-069	3/4"	6 #14	RGS	RIO-DAF-B2	FCV-10121	ZSL-10121, YN-10121, YA-10121
C-070	3/4"	2 #14	RGS	FCV-10121	LCS-10121	
C-071	3/4"	4 #14	RGS	RIO-DAF-A2	ZSO-10313	ZSO-10313, ZSC-10313
C-072	3/4"	4 #14	RGS	RIO-DAF-B2	ZSO-10314	ZSO-10314, ZSC-10314
C-073	3/4"	4 #14	RGS	RIO-DAF-A2	ZSO-10311	ZSO-10311, ZSC-10311
C-074	3/4"	4 #14	RGS	RIO-DAF-B2	ZSO-10312	ZSO-10312, ZSC-10312

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF

CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
C-075	3/4"	2 #14	RGS	RIO-DAF-A2	FSL-10316	FAL-10316
C-076	3/4"	2 #14	RGS	RIO-DAF-B2	FSL-10317	FAL-10317
C-077	3/4"	4 #14	RGS	LCS-10320	P-10320	
C-078	3/4"	4 #14	RGS	LCS-10340	P-10340	
C-079	3/4"	2 #14	RGS	RIO-DAF-A2	FSL-10325	FAH-10325
C-080	3/4"	2 #14	RGS	RIO-DAF-B2	FSL-10345	FAL-10345
C-081	1"	12 #14	RGS	RIO-DAF-A1	MOV-20110	ZSH-A, ZSL-A, YN-A, YA-A, ZCH-A, ZCL-A
C-082	1"	12 #14	RGS	RIO-DAF-A1	MOV-20210	ZSH-A, ZSL-A, YN-A, YA-A, ZCH-A, ZCL-A
C-083	1"	12 #14	RGS	RIO-DAF-A1	MOV-20310	ZSH-A, ZSL-A, YN-A, YA-A, ZCH-A, ZCL-A
C-084	1"	12 #14	RGS	RIO-DAF-A2	MOV-20410	ZSH-A, ZSL-A, YN-A, YA-A, ZCH-A, ZCL-A
C-085	1"	12 #14	RGS	RIO-DAF-A2	MOV-20510	ZSH-A, ZSL-A, YN-A, YA-A, ZCH-A, ZCL-A
C-086	1"	12 #14	RGS	RIO-DAF-B1	MOV-20610	ZSH-A, ZSL-A, YN-A, YA-A, ZCH-A, ZCL-A
C-087	1"	12 #14	RGS	RIO-DAF-B1	MOV-20710	ZSH-A, ZSL-A, YN-A, YA-A, ZCH-A, ZCL-A
C-088	1"	12 #14	RGS	RIO-DAF-B1	MOV-20810	ZSH-A, ZSL-A, YN-A, YA-A, ZCH-A, ZCL-A
C-089	1"	12 #14	RGS	RIO-DAF-B2	MOV-20910	ZSH-A, ZSL-A, YN-A, YA-A, ZCH-A, ZCL-A
C-090	1"	12 #14	RGS	RIO-DAF-B2	MOV-21010	ZSH-A, ZSL-A, YN-A, YA-A, ZCH-A, ZCL-A
C-091	3/4"	8 #14	RGS	RIO-MCC-2D	VFD-20120	YSH-B, YN-B, YA-B, YCH-B
C-092	3/4"	8 #14	RGS	RIO-MCC-2D	VFD-20220	YSH-B, YN-B, YA-B, YCH-B
C-093	3/4"	8 #14	RGS	RIO-MCC-2D	VFD-20320	YSH-B, YN-B, YA-B, YCH-B
C-094	3/4"	8 #14	RGS	RIO-MCC-2D	VFD-20420	YSH-B, YN-B, YA-B, YCH-B
C-095	3/4"	8 #14	RGS	RIO-MCC-2D	VFD-20520	YSH-B, YN-B, YA-B, YCH-B

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF

CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
C-096	3/4"	8 #14	RGS	RIO-MCC-2D	VFD-20620	YSH-B, YN-B, YA-B, YCH-B
C-097	3/4"	8 #14	RGS	RIO-MCC-2D	VFD-20720	YSH-B, YN-B, YA-B, YCH-B
C-098	3/4"	8 #14	RGS	RIO-MCC-2D	VFD-20820	YSH-B, YN-B, YA-B, YCH-B
C-099	3/4"	8 #14	RGS	RIO-MCC-2D	VFD-20920	YSH-B, YN-B, YA-B, YCH-B
C-100	3/4"	8 #14	RGS	RIO-MCC-2D	VFD-21020	YSH-B, YN-B, YA-B, YCH-B
C-101	3/4"	8 #14	RGS	VFD-20120	FLOC-20120	
C-102	3/4"	8 #14	RGS	VFD-20220	FLOC-20220	
C-103	3/4"	8 #14	RGS	VFD-20320	FLOC-20320	
C-104	3/4"	8 #14	RGS	VFD-20420	FLOC-20420	
C-105	3/4"	8 #14	RGS	VFD-20520	FLOC-20520	
C-106	3/4"	8 #14	RGS	VFD-20620	FLOC-20620	
C-107	3/4"	8 #14	RGS	VFD-20720	FLOC-20720	
C-108	3/4"	8 #14	RGS	VFD-20820	FLOC-20820	
C-109	3/4"	8 #14	RGS	VFD-20920	FLOC-20920	
C-110	3/4"	8 #14	RGS	VFD-21020	FLOC-21020	
C-111	3/4"	8 #14	RGS	RIO-MCC-2D	VFD-20130	YSH-C, YN-C, YA-C, YCH-C
C-112	3/4"	8 #14	RGS	RIO-MCC-2D	VFD-20230	YSH-C, YN-C, YA-C, YCH-C
C-113	3/4"	8 #14	RGS	RIO-MCC-2D	VFD-20330	YSH-C, YN-C, YA-C, YCH-C
C-114	3/4"	8 #14	RGS	RIO-MCC-2D	VFD-20430	YSH-C, YN-C, YA-C, YCH-C
C-115	3/4"	8 #14	RGS	RIO-MCC-2D	VFD-20530	YSH-C, YN-C, YA-C, YCH-C
C-116	3/4"	8 #14	RGS	RIO-MCC-2D	VFD-20630	YSH-C, YN-C, YA-C, YCH-C
C-117	3/4"	8 #14	RGS	RIO-MCC-2D	VFD-20730	YSH-C, YN-C, YA-C, YCH-C
C-118	3/4"	8 #14	RGS	RIO-MCC-2D	VFD-20830	YSH-C, YN-C, YA-C, YCH-C
C-119	3/4"	8 #14	RGS	RIO-MCC-2D	VFD-20930	YSH-C, YN-C, YA-C, YCH-C
C-120	3/4"	8 #14	RGS	RIO-MCC-2D	VFD-21030	YSH-C, YN-C, YA-C, YCH-C
C-121	3/4"	8 #14	RGS	VFD-20130	FLOC-20130	
C-122	3/4"	8 #14	RGS	VFD-20230	FLOC-20230	
C-123	3/4"	8 #14	RGS	VFD-20330	FLOC-20330	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
C-124	3/4"	8 #14	RGS	VFD-20430	FLOC-20430	
C-125	3/4"	8 #14	RGS	VFD-20530	FLOC-20530	
C-126	3/4"	8 #14	RGS	VFD-20630	FLOC-20630	
C-127	3/4"	8 #14	RGS	VFD-20730	FLOC-20730	
C-128	3/4"	8 #14	RGS	VFD-20830	FLOC-20830	
C-129	3/4"	8 #14	RGS	VFD-20930	FLOC-20930	
C-130	3/4"	8 #14	RGS	VFD-21030	FLOC-21030	
C-131	1"	12 #14	RGS	RIO-DAF-A1	MOV-30110	ZSH-E, ZSL-E, YN-E, YA-E, ZCH-E, ZCL-E
C-132	1"	12 #14	RGS	RIO-DAF-A1	MOV-30210	ZSH-E, ZSL-E, YN-E, YA-E, ZCH-E, ZCL-E
C-133	1"	12 #14	RGS	RIO-DAF-A1	MOV-30310	ZSH-E, ZSL-E, YN-E, YA-E, ZCH-E, ZCL-E
C-134	1"	12 #14	RGS	RIO-DAF-A2	MOV-30410	ZSH-E, ZSL-E, YN-E, YA-E, ZCH-E, ZCL-E
C-135	1"	12 #14	RGS	RIO-DAF-A2	MOV-30510	ZSH-E, ZSL-E, YN-E, YA-E, ZCH-E, ZCL-E
C-136	1"	12 #14	RGS	RIO-DAF-B1	MOV-30610	ZSH-E, ZSL-E, YN-E, YA-E, ZCH-E, ZCL-E
C-137	1"	12 #14	RGS	RIO-DAF-B1	MOV-30710	ZSH-E, ZSL-E, YN-E, YA-E, ZCH-E, ZCL-E
C-138	1"	12 #14	RGS	RIO-DAF-B1	MOV-30810	ZSH-E, ZSL-E, YN-E, YA-E, ZCH-E, ZCL-E
C-139	1"	12 #14	RGS	RIO-DAF-B2	MOV-30910	ZSH-E, ZSL-E, YN-E, YA-E, ZCH-E, ZCL-E
C-140	1"	12 #14	RGS	RIO-DAF-B2	MOV-31010	ZSH-E, ZSL-E, YN-E, YA-E, ZCH-E, ZCL-E
C-141	1"	12 #14	RGS	RIO-DAF-A1	MOV-30120	ZSH-F, ZSL-F, YN-F, YA-F, ZCH-F, ZCL-F
C-142	1"	12 #14	RGS	RIO-DAF-A1	MOV-30220	ZSH-F, ZSL-F, YN-F, YA-F, ZCH-F, ZCL-F

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
C-143	1"	12 #14	RGS	RIO-DAF-A1	MOV-30320	ZSH-F, ZSL-F, YN-F, YA-F, ZCH-F, ZCL-F
C-144	1"	12 #14	RGS	RIO-DAF-A2	MOV-30420	ZSH-F, ZSL-F, YN-F, YA-F, ZCH-F, ZCL-F
C-145	1"	12 #14	RGS	RIO-DAF-A2	MOV-30520	ZSH-F, ZSL-F, YN-F, YA-F, ZCH-F, ZCL-F
C-146	1"	12 #14	RGS	RIO-DAF-B1	MOV-30620	ZSH-F, ZSL-F, YN-F, YA-F, ZCH-F, ZCL-F
C-147	1"	12 #14	RGS	RIO-DAF-B1	MOV-30720	ZSH-F, ZSL-F, YN-F, YA-F, ZCH-F, ZCL-F
C-148	1"	12 #14	RGS	RIO-DAF-B1	MOV-30820	ZSH-F, ZSL-F, YN-F, YA-F, ZCH-F, ZCL-F
C-149	1"	12 #14	RGS	RIO-DAF-B2	MOV-30920	ZSH-F, ZSL-F, YN-F, YA-F, ZCH-F, ZCL-F
C-150	1"	12 #14	RGS	RIO-DAF-B2	MOV-31020	ZSH-F, ZSL-F, YN-F, YA-F, ZCH-F, ZCL-F
C-151	1"	12 #14	RGS	RIO-DAF-A1	MOV-30130	ZSH-G, ZSL-G, YN-G, YA-G, ZCH-G, ZCL-G
C-152	1"	12 #14	RGS	RIO-DAF-A1	MOV-30230	ZSH-G, ZSL-G, YN-G, YA-G, ZCH-G, ZCL-G
C-153	1"	12 #14	RGS	RIO-DAF-A1	MOV-30330	ZSH-G, ZSL-G, YN-G, YA-G, ZCH-G, ZCL-G
C-154	1"	12 #14	RGS	RIO-DAF-A2	MOV-30430	ZSH-G, ZSL-G, YN-G, YA-G, ZCH-G, ZCL-G
C-155	1"	12 #14	RGS	RIO-DAF-A2	MOV-30530	ZSH-G, ZSL-G, YN-G, YA-G, ZCH-G, ZCL-G
C-156	1"	12 #14	RGS	RIO-DAF-B1	MOV-30630	ZSH-G, ZSL-G, YN-G, YA-G, ZCH-G, ZCL-G
C-157	1"	12 #14	RGS	RIO-DAF-B1	MOV-30730	ZSH-G, ZSL-G, YN-G, YA-G, ZCH-G, ZCL-G
C-158	1"	12 #14	RGS	RIO-DAF-B1	MOV-30830	ZSH-G, ZSL-G, YN-G, YA-G, ZCH-G, ZCL-G

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
C-159	1"	12 #14	RGS	RIO-DAF-B2	MOV-30930	ZSH-G, ZSL-G, YN-G, YA-G, ZCH-G, ZCL-G
C-160	1"	12 #14	RGS	RIO-DAF-B2	MOV-31030	ZSH-G, ZSL-G, YN-G, YA-G, ZCH-G, ZCL-G
C-161	1"	12 #14	RGS	RIO-DAF-A1	MOV-30140	ZSH-H, ZSL-H, YN-H, YA-H, ZCH-H, ZCL-H
C-162	1"	12 #14	RGS	RIO-DAF-A1	MOV-30240	ZSH-H, ZSL-H, YN-H, YA-H, ZCH-H, ZCL-H
C-163	1"	12 #14	RGS	RIO-DAF-A1	MOV-30340	ZSH-H, ZSL-H, YN-H, YA-H, ZCH-H, ZCL-H
C-164	1"	12 #14	RGS	RIO-DAF-A2	MOV-30440	ZSH-H, ZSL-H, YN-H, YA-H, ZCH-H, ZCL-H
C-165	1"	12 #14	RGS	RIO-DAF-A2	MOV-30540	ZSH-H, ZSL-H, YN-H, YA-H, ZCH-H, ZCL-H
C-166	1"	12 #14	RGS	RIO-DAF-B1	MOV-30640	ZSH-H, ZSL-H, YN-H, YA-H, ZCH-H, ZCL-H
C-167	1"	12 #14	RGS	RIO-DAF-B1	MOV-30740	ZSH-H, ZSL-H, YN-H, YA-H, ZCH-H, ZCL-H
C-168	1"	12 #14	RGS	RIO-DAF-B1	MOV-30840	ZSH-H, ZSL-H, YN-H, YA-H, ZCH-H, ZCL-H
C-169	1"	12 #14	RGS	RIO-DAF-B2	MOV-30940	ZSH-H, ZSL-H, YN-H, YA-H, ZCH-H, ZCL-H
C-170	1"	12 #14	RGS	RIO-DAF-B2	MOV-31040	ZSH-H, ZSL-H, YN-H, YA-H, ZCH-H, ZCL-H
C-171	1"	12 #14	RGS	RIO-DAF-A1	MOV-30150	ZSH-J, ZSL-J, YN-J, YA-J, ZCH-J, ZCL-J
C-172	1"	12 #14	RGS	RIO-DAF-A1	MOV-30250	ZSH-J, ZSL-J, YN-J, YA-J, ZCH-J, ZCL-J
C-173	1"	12 #14	RGS	RIO-DAF-A1	MOV-30350	ZSH-J, ZSL-J, YN-J, YA-J, ZCH-J, ZCL-J
C-174	1"	12 #14	RGS	RIO-DAF-A2	MOV-30450	ZSH-J, ZSL-J, YN-J, YA-J, ZCH-J, ZCL-J

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
C-175	1"	12 #14	RGS	RIO-DAF-A2	MOV-30550	ZSH-J, ZSL-J, YN-J, YA-J, ZCH-J, ZCL-J
C-176	1"	12 #14	RGS	RIO-DAF-B1	MOV-30650	ZSH-J, ZSL-J, YN-J, YA-J, ZCH-J, ZCL-J
C-177	1"	12 #14	RGS	RIO-DAF-B1	MOV-30750	ZSH-J, ZSL-J, YN-J, YA-J, ZCH-J, ZCL-J
C-178	1"	12 #14	RGS	RIO-DAF-B1	MOV-30850	ZSH-J, ZSL-J, YN-J, YA-J, ZCH-J, ZCL-J
C-179	1"	12 #14	RGS	RIO-DAF-B2	MOV-30950	ZSH-J, ZSL-J, YN-J, YA-J, ZCH-J, ZCL-J
C-180	1"	12 #14	RGS	RIO-DAF-B2	MOV-31050	ZSH-J, ZSL-J, YN-J, YA-J, ZCH-J, ZCL-J
C-181	3/4"	8 #14	RGS	RIO-MCC-2D	VFD-30160	YSH-K, YN-K, YA-K, YCH-K
C-182	3/4"	8 #14	RGS	RIO-MCC-2D	VFD-30260	YSH-K, YN-K, YA-K, YCH-K
C-183	3/4"	8 #14	RGS	RIO-MCC-2D	VFD-30360	YSH-K, YN-K, YA-K, YCH-K
C-184	3/4"	8 #14	RGS	RIO-MCC-2D	VFD-30460	YSH-K, YN-K, YA-K, YCH-K
C-185	3/4"	8 #14	RGS	RIO-MCC-2D	VFD-30560	YSH-K, YN-K, YA-K, YCH-K
C-186	3/4"	8 #14	RGS	RIO-MCC-2D	VFD-30660	YSH-K, YN-K, YA-K, YCH-K
C-187	3/4"	8 #14	RGS	RIO-MCC-2D	VFD-30760	YSH-K, YN-K, YA-K, YCH-K
C-188	3/4"	8 #14	RGS	RIO-MCC-2D	VFD-30860	YSH-K, YN-K, YA-K, YCH-K
C-189	3/4"	8 #14	RGS	RIO-MCC-2D	VFD-30960	YSH-K, YN-K, YA-K, YCH-K
C-190	3/4"	8 #14	RGS	RIO-MCC-2D	VFD-31060	YSH-K, YN-K, YA-K, YCH-K
C-191	3/4"	8 #14	RGS	VFD-30160	SKMR-30160	
C-192	3/4"	8 #14	RGS	VFD-30260	SKMR-30260	
C-193	3/4"	8 #14	RGS	VFD-30360	SKMR-30360	
C-194	3/4"	8 #14	RGS	VFD-30460	SKMR-30460	
C-195	3/4"	8 #14	RGS	VFD-30560	SKMR-30560	
C-196	3/4"	8 #14	RGS	VFD-30660	SKMR-30660	
C-197	3/4"	8 #14	RGS	VFD-30760	SKMR-30760	
C-198	3/4"	8 #14	RGS	VFD-30860	SKMR-30860	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF

CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
C-199	3/4"	8 #14	RGS	VFD-30960	SKMR-30960	
C-200	3/4"	8 #14	RGS	VFD-31060	SKMR-30960	
C-201	1"	12 #14	RGS	RIO-DAF-A2	MOV-30001	ZSH-30001, ZSL-30001, YN-30001, YA-30001, ZCH-30001, ZCL-30001
C-202	1"	12 #14	RGS	RIO-DAF-B2	MOV-30002	ZSH-30002, ZSL-30002, YN-30002, YA-30002, ZCH-30002, ZCL-30002
C-203	1"	12 #14	RGS	RIO-DAF-A2	MOV-30003	ZSH-30003, ZSL-30003, YN-30003, YA-30003, ZCH-30003, ZCL-30003
C-204	3/4"	4 #14	RGS	LCS-30010	P-30010	
C-205	3/4"	4 #14	RGS	LCS-30020	P-30020	
C-206	3/4"	2 #14	RGS	RIO-MCC-2D	FSL-30014	FAL-30014
C-207	3/4"	2 #14	RGS	RIO-MCC-2D	FSL-30024	FAL-30024
C-208	1"	12 #14	RGS	RIO-MCC-1D	VFD-33010	PSL-33011, YSH-33010, YN-33010, YA-33010, YCH-33010, FSL-33012
C-209	3/4"	2 #14	RGS	RIO-MCC-1D	PSL-33011	
C-210	1"	12#14	RGS	VFD-33010	LCS-33010	
C-211	3/4"	2 #14	RGS	RIO-MCC-1D	FSL-33012	
C-212	1"	12 #14	RGS	RIO-MCC-1D	VFD-33020	PSL-33021, YSH-33020, YN-33020, YA-33020, YCH-33020, FSL-33022
C-213	3/4"	2 #14	RGS	RIO-MCC-1D	PSL-33021	
C-214	1"	12#14	RGS	VFD-33020	LCS-33020	
C-215	3/4"	2 #14	RGS	RIO-MCC-1D	FSL-33022	
C-216	1"	12 #14	RGS	RIO-MCC-1D	VFD-33030	PSL-33031, YSH-33030, YN-33030, YA-33030, YCH-33030, FSL-33032
C-217	3/4"	2 #14	RGS	RIO-MCC-1D	PSL-33031	
C-218	1"	12#14	RGS	VFD-33030	LCS-33030	
C-219	3/4"	2 #14	RGS	RIO-MCC-1D	FSL-33032	
C-220	1"	12 #14	RGS	RIO-MCC-1D	VFD-33040	PSL-33041, YSH-33040, YN-33040, YA-33040, YCH-33040, FSL-33042
C-221	3/4"	2 #14	RGS	RIO-MCC-1D	PSL-33041	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
C-222	1"	12#14	RGS	VFD-33040	LCS-33040	
C-223	3/4"	2 #14	RGS	RIO-MCC-1D	FSL-33042	
C-224	3/4"	6 #14	RGS	RIO-DAF-A2	LCP-33050	DPAH-33050, YI-33050, YA-33050
C-225	3/4"	2 #14	RGS	LCP-33050	STR-33050	
C-226	3/4"	2 #14	RGS	LCP-33050	PDSH-33053	
C-227	3/4"	2 #14	RGS	LCP-33050	MOV-33054	
C-228	3/4"	8 #14	RGS	RIO-MCC-2D	LCP-34010/COMP-34010	YSH-34010, YA-34010, PAL-34010, TAH-34010
C-229	3/4"	8 #14	RGS	RIO-MCC-2D	LCP-34020/COMP-34020	YSH-34020, YA-34020, PAL-34020, TAH-34020
C-230	3/4"	2 #14	RGS	RIO-MCC-2D	PSL-34032	PAL-34032
C-231	3/4"	2 #14	RGS	RIO-MCC-2D	PSL-34042	PAL-34042
C-232	3/4"	2 #14	RGS	RIO-DAF-A2	DPSL-34006	PDAH-34006
C-233	3/4"	2 #14	RGS	RIO-DAF-A2	DPSL-34003	PDAH-34003
C-234	3/4"	8 #14	RGS	RIO-DAF-A2	LCV-34051	YSH-34051, YN-34051, YA-34051, YCH-34051
C-235	3/4"	8 #14	RGS	RIO-DAF-A2	MOV-34060	YSH-34060, YN-34060, YA-34060, YCH-34060
C-236	3/4"	8 #14	RGS	RIO-DAF-B2	LCV-34081	YSH-34081, YN-34081, YA-34081, YCH-34081
C-237	3/4"	8 #14	RGS	RIO-DAF-B2	MOV-34090	YSH-34090, YN-34090, YA-34090, YCH-34090
C-238	3/4"	2 #14	RGS	RIO-DAF-A2	LSH-35012	
C-239	1"	12 #14	RGS	RIO-MCC-1D	MCC-1	PSL-35021, YSH-35020, YN-35020, YA-35020, YCH-35020, PSH-35022
C-240	3/4"	2 #14	RGS	RIO-MCC-1D	PSL-35021	
C-241	1"	12 #14	RGS	MCC-1	LCS-35020	
C-242	3/4"	2 #14	RGS	LCS-35020	TSH-35020	
C-243	3/4"	2 #14	RGS	RIO-MCC-1D	PSH-35022	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
C-244	1"	12 #14	RGS	RIO-MCC-1D	MCC-1	PSL-35031, YSH-35030, YN-35030, YA-35030, YCH-35030, PSH-35032
C-245	3/4"	2 #14	RGS	RIO-MCC-1D	PSL-35031	
C-246	1"	12 #14	RGS	MCC-1	LCS-35030	
C-247	3/4"	2 #14	RGS	LCS-35030	TSH-35030	
C-248	3/4"	2 #14	RGS	RIO-MCC-1D	PSH-35032	
C-249	3/4"	2 #14	RGS	RIO-DAF-B2	LSH-35052	
C-250	1"	12 #14	RGS	RIO-MCC-1D	MCC-1	PSL-35061, YSH-35060, YN-35060, YA-35060, YCH-35060, PSH-35062
C-251	3/4"	2 #14	RGS	RIO-MCC-1D	PSL-35061	
C-252	1"	12 #14	RGS	MCC-1	LCS-35060	
C-253	3/4"	2 #14	RGS	LCS-35060	TSH-35060	
C-254	3/4"	2 #14	RGS	RIO-MCC-1D	PSH-35062	
C-255	1"	12 #14	RGS	RIO-MCC-1D	MCC-1	PSL-35071, YSH-35070, YN-35070, YA-35070, YCH-35070, PSH-35072
C-256	3/4"	2 #14	RGS	RIO-MCC-1D	PSL-35071	
C-257	1"	12 #14	RGS	MCC-1	LCS-35070	
C-258	3/4"	2 #14	RGS	LCS-35070	TSH-35070	
C-259	3/4"	2 #14	RGS	RIO-MCC-1D	PSH-35072	
C-260	1"	12 #14	RGS	RIO-FLT-A1	MOV-40120	ZSH-AA, ZSL-AA, YN-AA, YA-AA, ZCH-AA, ZCL-AA
C-261	1"	12 #14	RGS	RIO-FLT-A1	MOV-40220	ZSH-AA, ZSL-AA, YN-AA, YA-AA, ZCH-AA, ZCL-AA
C-262	1"	12 #14	RGS	RIO-FLT-A1	MOV-40320	ZSH-AA, ZSL-AA, YN-AA, YA-AA, ZCH-AA, ZCL-AA
C-263	1"	12 #14	RGS	RIO-FLT-A1	MOV-40420	ZSH-AA, ZSL-AA, YN-AA, YA-AA, ZCH-AA, ZCL-AA
C-264	1"	12 #14	RGS	RIO-FLT-A2	MOV-40520	ZSH-AA, ZSL-AA, YN-AA, YA-AA, ZCH-AA, ZCL-AA
C-265	1"	12 #14	RGS	RIO-FLT-A2	MOV-40620	ZSH-AA, ZSL-AA, YN-AA, YA-AA, ZCH-AA, ZCL-AA

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
C-266	1"	12 #14	RGS	RIO-FLT-A2	MOV-40720	ZSH-AA, ZSL-AA, YN-AA, YA-AA, ZCH-AA, ZCL-AA
C-267	1"	12 #14	RGS	RIO-FLT-B1	MOV-40820	ZSH-AA, ZSL-AA, YN-AA, YA-AA, ZCH-AA, ZCL-AA
C-268	1"	12 #14	RGS	RIO-FLT-B1	MOV-40920	ZSH-AA, ZSL-AA, YN-AA, YA-AA, ZCH-AA, ZCL-AA
C-269	1"	12 #14	RGS	RIO-FLT-B1	MOV-41020	ZSH-AA, ZSL-AA, YN-AA, YA-AA, ZCH-AA, ZCL-AA
C-270	1"	12 #14	RGS	RIO-FLT-B1	MOV-41120	ZSH-AA, ZSL-AA, YN-AA, YA-AA, ZCH-AA, ZCL-AA
C-271	1"	12 #14	RGS	RIO-FLT-B2	MOV-41220	ZSH-AA, ZSL-AA, YN-AA, YA-AA, ZCH-AA, ZCL-AA
C-272	1"	12 #14	RGS	RIO-FLT-B2	MOV-41320	ZSH-AA, ZSL-AA, YN-AA, YA-AA, ZCH-AA, ZCL-AA
C-273	1"	12 #14	RGS	RIO-FLT-B2	MOV-41420	ZSH-AA, ZSL-AA, YN-AA, YA-AA, ZCH-AA, ZCL-AA
C-274	1"	12 #14	RGS	RIO-FLT-A1	MOV-40130	ZSH-BB, ZSL-BB, YN-BB, YA-BB, ZCH-BB, ZCL-BB
C-275	1"	12 #14	RGS	RIO-FLT-A1	MOV-40230	ZSH-BB, ZSL-BB, YN-BB, YA-BB, ZCH-BB, ZCL-BB
C-276	1"	12 #14	RGS	RIO-FLT-A1	MOV-40330	ZSH-BB, ZSL-BB, YN-BB, YA-BB, ZCH-BB, ZCL-BB
C-277	1"	12 #14	RGS	RIO-FLT-A1	MOV-40430	ZSH-BB, ZSL-BB, YN-BB, YA-BB, ZCH-BB, ZCL-BB
C-278	1"	12 #14	RGS	RIO-FLT-A2	MOV-40530	ZSH-BB, ZSL-BB, YN-BB, YA-BB, ZCH-BB, ZCL-BB
C-279	1"	12 #14	RGS	RIO-FLT-A2	MOV-40630	ZSH-BB, ZSL-BB, YN-BB, YA-BB, ZCH-BB, ZCL-BB
C-280	1"	12 #14	RGS	RIO-FLT-A2	MOV-40730	ZSH-BB, ZSL-BB, YN-BB, YA-BB, ZCH-BB, ZCL-BB
C-281	1"	12 #14	RGS	RIO-FLT-B1	MOV-40830	ZSH-BB, ZSL-BB, YN-BB, YA-BB, ZCH-BB, ZCL-BB

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
C-282	1"	12 #14	RGS	RIO-FLT-B1	MOV-40930	ZSH-BB, ZSL-BB, YN-BB, YA-BB, ZCH-BB, ZCL-BB
C-283	1"	12 #14	RGS	RIO-FLT-B1	MOV-41030	ZSH-BB, ZSL-BB, YN-BB, YA-BB, ZCH-BB, ZCL-BB
C-284	1"	12 #14	RGS	RIO-FLT-B1	MOV-41130	ZSH-BB, ZSL-BB, YN-BB, YA-BB, ZCH-BB, ZCL-BB
C-285	1"	12 #14	RGS	RIO-FLT-B2	MOV-41230	ZSH-BB, ZSL-BB, YN-BB, YA-BB, ZCH-BB, ZCL-BB
C-286	1"	12 #14	RGS	RIO-FLT-B2	MOV-41330	ZSH-BB, ZSL-BB, YN-BB, YA-BB, ZCH-BB, ZCL-BB
C-287	1"	12 #14	RGS	RIO-FLT-B2	MOV-41430	ZSH-BB, ZSL-BB, YN-BB, YA-BB, ZCH-BB, ZCL-BB
C-288	1"	12 #14	RGS	RIO-FLT-A1	MOV-40140	ZSH-CC, ZSL-CC, YN-CC, YA-CC, ZCH-CC, ZCL-CC
C-289	1"	12 #14	RGS	RIO-FLT-A1	MOV-40240	ZSH-CC, ZSL-CC, YN-CC, YA-CC, ZCH-CC, ZCL-CC
C-290	1"	12 #14	RGS	RIO-FLT-A1	MOV-40340	ZSH-CC, ZSL-CC, YN-CC, YA-CC, ZCH-CC, ZCL-CC
C-291	1"	12 #14	RGS	RIO-FLT-A1	MOV-40440	ZSH-CC, ZSL-CC, YN-CC, YA-CC, ZCH-CC, ZCL-CC
C-292	1"	12 #14	RGS	RIO-FLT-A2	MOV-40540	ZSH-CC, ZSL-CC, YN-CC, YA-CC, ZCH-CC, ZCL-CC
C-293	1"	12 #14	RGS	RIO-FLT-A2	MOV-40640	ZSH-CC, ZSL-CC, YN-CC, YA-CC, ZCH-CC, ZCL-CC
C-294	1"	12 #14	RGS	RIO-FLT-A2	MOV-40740	ZSH-CC, ZSL-CC, YN-CC, YA-CC, ZCH-CC, ZCL-CC
C-295	1"	12 #14	RGS	RIO-FLT-B1	MOV-40840	ZSH-CC, ZSL-CC, YN-CC, YA-CC, ZCH-CC, ZCL-CC
C-296	1"	12 #14	RGS	RIO-FLT-B1	MOV-40940	ZSH-CC, ZSL-CC, YN-CC, YA-CC, ZCH-CC, ZCL-CC
C-297	1"	12 #14	RGS	RIO-FLT-B1	MOV-41040	ZSH-CC, ZSL-CC, YN-CC, YA-CC, ZCH-CC, ZCL-CC

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
C-298	1"	12 #14	RGS	RIO-FLT-B1	MOV-41140	ZSH-CC, ZSL-CC, YN-CC, YA-CC, ZCH-CC, ZCL-CC
C-299	1"	12 #14	RGS	RIO-FLT-B2	MOV-41240	ZSH-CC, ZSL-CC, YN-CC, YA-CC, ZCH-CC, ZCL-CC
C-300	1"	12 #14	RGS	RIO-FLT-B2	MOV-41340	ZSH-CC, ZSL-CC, YN-CC, YA-CC, ZCH-CC, ZCL-CC
C-301	1"	12 #14	RGS	RIO-FLT-B2	MOV-41440	ZSH-CC, ZSL-CC, YN-CC, YA-CC, ZCH-CC, ZCL-CC
C-302	1"	12 #14	RGS	RIO-FLT-A1	MOV-40150	ZSH-GG, ZSL-GG, YN-GG, YA-GG, ZCH-GG, ZCL-GG
C-303	1"	12 #14	RGS	RIO-FLT-A1	MOV-40250	ZSH-GG, ZSL-GG, YN-GG, YA-GG, ZCH-GG, ZCL-GG
C-304	1"	12 #14	RGS	RIO-FLT-A1	MOV-40350	ZSH-GG, ZSL-GG, YN-GG, YA-GG, ZCH-GG, ZCL-GG
C-305	1"	12 #14	RGS	RIO-FLT-A1	MOV-40450	ZSH-GG, ZSL-GG, YN-GG, YA-GG, ZCH-GG, ZCL-GG
C-306	1"	12 #14	RGS	RIO-FLT-A2	MOV-40550	ZSH-GG, ZSL-GG, YN-GG, YA-GG, ZCH-GG, ZCL-GG
C-307	1"	12 #14	RGS	RIO-FLT-A2	MOV-40650	ZSH-GG, ZSL-GG, YN-GG, YA-GG, ZCH-GG, ZCL-GG
C-308	1"	12 #14	RGS	RIO-FLT-A2	MOV-40750	ZSH-GG, ZSL-GG, YN-GG, YA-GG, ZCH-GG, ZCL-GG
C-309	1"	12 #14	RGS	RIO-FLT-B1	MOV-40850	ZSH-GG, ZSL-GG, YN-GG, YA-GG, ZCH-GG, ZCL-GG
C-310	1"	12 #14	RGS	RIO-FLT-B1	MOV-40950	ZSH-GG, ZSL-GG, YN-GG, YA-GG, ZCH-GG, ZCL-GG
C-311	1"	12 #14	RGS	RIO-FLT-B1	MOV-41050	ZSH-GG, ZSL-GG, YN-GG, YA-GG, ZCH-GG, ZCL-GG
C-312	1"	12 #14	RGS	RIO-FLT-B1	MOV-41150	ZSH-GG, ZSL-GG, YN-GG, YA-GG, ZCH-GG, ZCL-GG
C-313	1"	12 #14	RGS	RIO-FLT-B2	MOV-41250	ZSH-GG, ZSL-GG, YN-GG, YA-GG, ZCH-GG, ZCL-GG

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
C-314	1"	12 #14	RGS	RIO-FLT-B2	MOV-41350	ZSH-GG, ZSL-GG, YN-GG, YA-GG, ZCH-GG, ZCL-GG
C-315	1"	12 #14	RGS	RIO-FLT-B2	MOV-41450	ZSH-GG, ZSL-GG, YN-GG, YA-GG, ZCH-GG, ZCL-GG
C-316	3/4"	8 #14	RGS	RIO-FLT-A1	FCV-40100	ZSH-40100, ZSL-40100, YN-40100, YA-40100
C-317	3/4"	4 #14	RGS	FCV-40100	LCS-40100	
C-318	3/4"	6 #14	RGS	RIO-FLT-A1	MOV-40160	ZSL-MM, YN-MM, YA-MM
C-319	3/4"	6 #14	RGS	RIO-FLT-A1	MOV-40260	ZSL-MM, YN-MM, YA-MM
C-320	3/4"	6 #14	RGS	RIO-FLT-A1	MOV-40360	ZSL-MM, YN-MM, YA-MM
C-321	3/4"	6 #14	RGS	RIO-FLT-A1	MOV-40460	ZSL-MM, YN-MM, YA-MM
C-322	3/4"	6 #14	RGS	RIO-FLT-A2	MOV-40560	ZSL-MM, YN-MM, YA-MM
C-323	3/4"	6 #14	RGS	RIO-FLT-A2	MOV-40660	ZSL-MM, YN-MM, YA-MM
C-324	3/4"	6 #14	RGS	RIO-FLT-A2	MOV-40760	ZSL-MM, YN-MM, YA-MM
C-325	3/4"	6 #14	RGS	RIO-FLT-B1	MOV-40860	ZSL-MM, YN-MM, YA-MM
C-326	3/4"	6 #14	RGS	RIO-FLT-B1	MOV-40960	ZSL-MM, YN-MM, YA-MM
C-327	3/4"	6 #14	RGS	RIO-FLT-B1	MOV-41060	ZSL-MM, YN-MM, YA-MM
C-328	3/4"	6 #14	RGS	RIO-FLT-B1	MOV-41160	ZSL-MM, YN-MM, YA-MM
C-329	3/4"	6 #14	RGS	RIO-FLT-B2	MOV-41260	ZSL-MM, YN-MM, YA-MM
C-330	3/4"	6 #14	RGS	RIO-FLT-B2	MOV-41360	ZSL-MM, YN-MM, YA-MM
C-331	3/4"	6 #14	RGS	RIO-FLT-B2	MOV-41460	ZSL-MM, YN-MM, YA-MM
C-332	3/4"	6 #14	RGS	RIO-FLT-A1	MOV-40170	ZSL-NN, YN-NN, YA-NN
C-333	3/4"	6 #14	RGS	RIO-FLT-A1	MOV-40270	ZSL-NN, YN-NN, YA-NN
C-334	3/4"	6 #14	RGS	RIO-FLT-A1	MOV-40370	ZSL-NN, YN-NN, YA-NN
C-335	3/4"	6 #14	RGS	RIO-FLT-A1	MOV-40470	ZSL-NN, YN-NN, YA-NN
C-336	3/4"	6 #14	RGS	RIO-FLT-A2	MOV-40570	ZSL-NN, YN-NN, YA-NN
C-337	3/4"	6 #14	RGS	RIO-FLT-A2	MOV-40670	ZSL-NN, YN-NN, YA-NN
C-338	3/4"	6 #14	RGS	RIO-FLT-A2	MOV-40770	ZSL-NN, YN-NN, YA-NN
C-339	3/4"	6 #14	RGS	RIO-FLT-B1	MOV-40870	ZSL-NN, YN-NN, YA-NN

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF

CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
C-340	3/4"	6 #14	RGS	RIO-FLT-B1	MOV-40970	ZSL-NN, YN-NN, YA-NN
C-341	3/4"	6 #14	RGS	RIO-FLT-B1	MOV-41070	ZSL-NN, YN-NN, YA-NN
C-342	3/4"	6 #14	RGS	RIO-FLT-B1	MOV-41170	ZSL-NN, YN-NN, YA-NN
C-343	3/4"	6 #14	RGS	RIO-FLT-B2	MOV-41270	ZSL-NN, YN-NN, YA-NN
C-344	3/4"	6 #14	RGS	RIO-FLT-B2	MOV-41370	ZSL-NN, YN-NN, YA-NN
C-345	3/4"	6 #14	RGS	RIO-FLT-B2	MOV-41470	ZSL-NN, YN-NN, YA-NN
C-346	3/4"	2 #14	RGS	RIO-FLT-A2	FSL-42045	FAL-42045
C-347	3/4"	2 #14	RGS	RIO-FLT-A2	FSL-42046	FAL-42046
C-348	3/4"	2 #14	RGS	RIO-FLT-B2	FSL-42047	FAL-42048
C-349	3/4"	2 #14	RGS	RIO-FLT-B2	FSL-42048	FAL-42047
C-350	3/4"	4 #14	RGS	LCS-40430	P-42030	
C-351	3/4"	4 #14	RGS	LCS-40440	P-42040	
C-352	3/4"	2 #14	RGS	RIO-FLT-A2	FSL-42053	FAL-42053
C-353	3/4"	2 #14	RGS	RIO-FLT-B2	FSL-42058	FAL-42058
C-354	1"	12 #14	RGS	RIO-FLT-A2	MOG-42050	ZSH-42050, ZSL-42050, YN-42050, YA-42050, ZCH-42050, ZCL-42050
C-355	1"	12 #14	RGS	RIO-FLT-B2	MOG-42060	ZSH-42060, ZSL-42060, YN-42060, YA-42060, ZCH-42060, ZCL-42060
C-356	1"	14 #14	RGS	RIO-MCC-2D	MCC-2	YSH-45010, YN-45010, YA-45010, YCH-45010, PAH-45010, TAH-45010, YAK-45010
C-357	1"	18 #14	RGS	MCC-2	LCP-45010	
C-358	3/4"	8 #14	RGS	LCP-45010	BL-45010	
C-359	1"	14 #14	RGS	RIO-MCC-2D	MCC-2	YSH-45030, YN-45030, YA-45030, YCH-45030, PAH-45030, TAH-45030, YAH-45030
C-360	1"	18 #14	RGS	MCC-2	LCP-45030	
C-361	3/4"	8 #14	RGS	LCP-45030	BL-45030	
C-362	1"	12 #14	RGS	RIO-MCC-2D	MOV-45020	ZSH-45020, ZSL-45020, YN-45020, YA-45020, ZCH-45020, ZCL-45020

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
C-363	3/4"	10 #14	PVC COATED RGS	RIO-MCC-1D	LCS-51000	LAH-51012, LAH-51022, LAH-51032, LAH-51042, LAH-51101
C-364	3/4"	2 #14	PVC COATED RGS	LCS-51000	LSH-51012	
C-365	3/4"	2 #14	PVC COATED RGS	LCS-51000	LSH-51022	
C-366	3/4"	2 #14	PVC COATED RGS	LCS-51000	LSH-51032	
C-367	3/4"	2 #14	PVC COATED RGS	LCS-51000	LSH-51042	
C-368	3/4"	2 #14	RGS	RIO-CHEM-A	FSH-51001	FAH-51001
C-369	3/4"	2 #14	RGS	RIO-CHEM-A	FSH-51002	FAH-51002
C-370	3/4"	6 #14	RGS	RIO-MCC-1D	MCC-1	YSH-51060, YAK-51060, YA-51060
C-371	1"	12 #14	PVC COATED RGS	MCC-1	LCS-51060	
C-372	3/4"	2 #14	PVC COATED RGS	LSH-51112	LCS-51060	FROM PACL DAY TANK
C-373	3/4"	6 #14	RGS	RIO-MCC-1D	MCC-1	YSH-51070, YAK-51070, YA-51070
C-374	1"	12 #14	PVC COATED RGS	MCC-1	LCS-51070	
C-375	3/4"	2 #14	PVC COATED RGS	LSH-51112	LCS-51070	FROM PACL DAY TANK

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
C-376	3/4"	2 #14	PVC COATED RGS	RIO-CHEM-A	LSH-51101	LAH-51101
C-377	3/4"	2 #14	PVC COATED RGS	RIO-CHEM-A	FSH-51102	FAH-51102
C-377.1	3/4"	2 #14	PVC COATED RGS	RIO-CHEM-A	FSH-51103	FAH-51103
C-378	3/4"	2 #14	PVC COATED RGS	RIO-CHEM-A	LSH-51112	LAH-51112
C-379	3/4"	8 #14	PVC COATED RGS	RIO-CHEM-A	LCP-51120	YSH-51120, YN-51120, YA-51120, YCH-51120
C-380	3/4"	8 #14	PVC COATED RGS	RIO-CHEM-A	LCP-51130	YSH-51130, YN-51130, YA-51130, YCH-51130
C-381	3/4"	8 #14	PVC COATED RGS	RIO-CHEM-A	LCP-51140	YSH-51140, YN-51140, YA-51140, YCH-51140
C-382	3/4"	8 #14	PVC COATED RGS	RIO-CHEM-A	LCP-51150	YSH-51150, YN-51150, YA-51150, YCH-51150
C-383	3/4"	6 #14	PVC SCHEDULE 80	RIO-MCC-1D	LCS-52000	LAH-52012, LAH-52022, LAH- 52101
C-384	3/4"	2 #14	PVC SCHEDULE 80	LCS-52000	LSH-52012	
C-385	3/4"	2 #14	PVC SCHEDULE 80	LCS-52000	LSH-52022	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
C-386	3/4"	2 #14	RGS	RIO-CHEM-A	FSH-51003	FAH-51003
C-387	3/4"	6 #14	RGS	RIO-MCC-1D	MCC-1	YSH-52060, YAK-52060, YA-52060
C-388	1"	12 #14	PVC SCHEDULE 80	MCC-1	LCS-52060	
C-389	3/4"	2 #14	PVC SCHEDULE 80	LSH-52112	LCS-52060	FROM DAY TANK
C-390	3/4"	6 #14	RGS	RIO-MCC-1D	MCC-1	YSH-52070, YAK-52070, YA-52070
C-391	1"	12 #14	PVC SCHEDULE 80	MCC-1	LCS-52070	
C-392	3/4"	2 #14	PVC SCHEDULE 80	LSH-52112	LCS-52070	FROM DAY TANK
C-393	3/4"	6 #14	RGS	RIO-MCC-1D	MCC-1	YSH-52080, YAK-52080, YA-52080
C-394	1"	12 #14	PVC SCHEDULE 80	MCC-1	LCS-52080	
C-395	3/4"	2 #14	PVC SCHEDULE 80	LSH-52117	LCS-52080	FROM DAY TANK
C-396	3/4"	6 #14	RGS	RIO-MCC-1D	MCC-1	YSH-52090, YAK-52090, YA-52090
C-397	1"	12 #14	PVC SCHEDULE 80	MCC-1	LCS-52090	
C-398	3/4"	2 #14	PVC SCHEDULE 80	LSH-52117	LCS-52090	FROM DAY TANK
C-399	3/4"	2 #14	PVC SCHEDULE 80	RIO-CHEM-B	LSH-52101	LAH-52101

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
C-400	3/4"	2 #14	PVC SCHEDULE 80	RIO-CHEM-B	FSH-52102	FAH-52102
C-401	3/4"	2 #14	PVC SCHEDULE 80	RIO-CHEM-B	LSH-52112	LAH-52112
C-402	3/4"	8 #14	PVC SCHEDULE 80	RIO-CHEM-B	LCP-52120	YSH-52120, YN-52120, YA-52120, YCH-52120
C-403	3/4"	8 #14	PVC SCHEDULE 80	RIO-CHEM-B	LCP-52130	YSH-52130, YN-52130, YA-52130, YCH-52130
C-404	3/4"	8 #14	PVC SCHEDULE 80	RIO-CHEM-B	LCP-52140	YSH-52140, YN-52140, YA-52140, YCH-52140
C-405	3/4"	8 #14	PVC SCHEDULE 80	RIO-CHEM-B	LCP-52150	YSH-52150, YN-52150, YA-52150, YCH-52150
C-406	3/4"	2 #14	PVC SCHEDULE 80	RIO-CHEM-B	FSL-52105	FAL-52105
C-407	3/4"	2 #14	PVC SCHEDULE 80	RIO-CHEM-B	FSL-52106	FAL-52106
C-408	3/4"	2 #14	PVC SCHEDULE 80	RIO-CHEM-B	LSH-52117	LAH-52117
C-409	3/4"	8 #14	PVC SCHEDULE 80	RIO-CHEM-B	LCP-52160	YSH-52160, YN-52160, YA-52160, YCH-52160
C-410	3/4"	8 #14	PVC SCHEDULE 80	RIO-CHEM-B	LCP-52170	YSH-52170, YN-52170, YA-52170, YCH-52170

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
C-411	3/4"	8 #14	PVC SCHEDULE 80	RIO-CHEM-B	LCP-52180	YSH-52180, YN-52180, YA-52180, YCH-52180
C-412	3/4"	8 #14	PVC SCHEDULE 80	RIO-CHEM-B	LCP-52190	YSH-52190, YN-52190, YA-52190, YCH-52190
C-413	3/4"	2 #14	PVC SCHEDULE 80	RIO-CHEM-B	FSL-52107	FAL-52107
C-414	3/4"	2 #14	PVC SCHEDULE 80	RIO-CHEM-B	FSL-52108	FAL-52108
C-415	3/4"	6 #14	PVC SCHEDULE 80	RIO-MCC-1D	LCS-53000	LAH-53012, LAH-53022, LAH-53101
C-416	3/4"	2 #14	PVC SCHEDULE 80	LCS-53000	LSH-53012	
C-417	3/4"	2 #14	PVC SCHEDULE 80	LCS-53000	LSH-53022	
C-418	3/4"	2 #14	RGS	RIO-CHEM-A	FSH-51004	FAH-51004
C-419	3/4"	6 #14	RGS	RIO-MCC-1D	MCC-1	YSH-53060, YAK-53060, YA-53060
C-420	1"	12 #14	PVC SCHEDULE 80	MCC-1	LCS-53060	
C-421	3/4"	2 #14	PVC SCHEDULE 80	LSH-53112	LCS-53060	FROM DAY TANK
C-422	3/4"	6 #14	RGS	RIO-MCC-1D	MCC-1	YSH-53070, YAK-53070, YA-53070

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
C-423	1"	12 #14	PVC SCHEDULE 80	MCC-1	LCS-53070	
C-424	3/4"	2 #14	PVC SCHEDULE 80	LSH-53112	LCS-53070	FROM DAY TANK
C-425	3/4"	2 #14	PVC SCHEDULE 80	RIO-CHEM-C	LSH-53101	LAH-53101
C-426	3/4"	2 #14	PVC SCHEDULE 80	RIO-CHEM-C	FSH-53102	FAH-53102
C-427	3/4"	2 #14	PVC SCHEDULE 80	RIO-CHEM-C	LSH-53112	LAH-53112
C-428	3/4"	8 #14	PVC SCHEDULE 80	RIO-CHEM-C	LCP-53120	YSH-53120, YN-53120, YA-53120, YCH-53120
C-429	3/4"	8 #14	PVC SCHEDULE 80	RIO-CHEM-C	LCP-53130	YSH-53130, YN-53130, YA-53130, YCH-53130
C-430	3/4"	8 #14	PVC SCHEDULE 80	RIO-CHEM-C	LCP-53140	YSH-53140, YN-53140, YA-53140, YCH-53140
C-431	3/4"	8 #14	PVC SCHEDULE 80	RIO-CHEM-C	LCP-53150	YSH-53150, YN-53150, YA-53150, YCH-53150
C-432	1"	12 #14	PVC SCHEDULE 80	RIO-MCC-1D	LCS-54000	LAH-54012, LAH-54022, LAH-54032, LAH-54042, LAH-54052, LAH-54101
C-433	3/4"	2 #14	PVC SCHEDULE 80	LCS-54000	LSH-54012	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
C-434	3/4"	2 #14	PVC SCHEDULE 80	LCS-54000	LSH-54022	
C-435	3/4"	2 #14	PVC SCHEDULE 80	LCS-54000	LSH-54032	
C-436	3/4"	2 #14	PVC SCHEDULE 80	LCS-54000	LSH-54042	
C-437	3/4"	2 #14	PVC SCHEDULE 80	LCS-54000	LSH-54052	
C-438	3/4"	6 #14	RGS	RIO-MCC-1D	MCC-1	YSH-54060, YAK-54060, YA-54060
C-439	1"	12 #14	PVC SCHEDULE 80	MCC-1	LCS-54060	
C-440	3/4"	2 #14	PVC SCHEDULE 80	LSH-54112	LCS-54060	FROM DAY TANK
C-441	3/4"	6 #14	RGS	RIO-MCC-1D	MCC-1	YSH-54070, YAK-54070, YA-54070
C-442	1"	12 #14	PVC SCHEDULE 80	MCC-1	LCS-54070	
C-443	3/4"	2 #14	PVC SCHEDULE 80	LSH-54112	LCS-54070	FROM DAY TANK
C-444	3/4"	2 #14	PVC SCHEDULE 80	RIO-CHEM-A	LSH-54101	LAH-54101
C-445	3/4"	2 #14	PVC SCHEDULE 80	RIO-CHEM-A	FSH-54102	FAH-54102

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
C-446	3/4"	2 #14	PVC SCHEDULE 80	RIO-CHEM-A	LSH-54103	LAH-54103
C-447	3/4"	2 #14	PVC SCHEDULE 80	RIO-CHEM-A	FSH-54104	FAH-54104
C-448	3/4"	2 #14	PVC SCHEDULE 80	RIO-CHEM-A	LSH-54112	LAH-54112
C-449	3/4"	8 #14	PVC SCHEDULE 80	RIO-CHEM-A	LCP-54120	YSH-54120, YN-54120, YA-54120, YCH-54120
C-450	3/4"	8 #14	PVC SCHEDULE 80	RIO-CHEM-A	LCP-54130	YSH-54130, YN-54130, YA-54130, YCH-54130
C-451	3/4"	8 #14	PVC SCHEDULE 80	RIO-CHEM-A	LCP-54140	YSH-54140, YN-54140, YA-54140, YCH-54140
C-452	3/4"	8 #14	PVC SCHEDULE 80	RIO-CHEM-A	LCP-54150	YSH-54150, YN-54150, YA-54150, YCH-54150
C-453	3/4"	4 #14	PVC COATED RGS	LCS-55112	MX-55112	
C-454	3/4"	2 #14	PVC COATED RGS	RIO-CHEM-B	LSH-55101	LAH-55101
C-455	3/4"	4 #14	PVC COATED RGS	LCS-55117	MX-55117	
C-456	3/4"	2 #14	PVC COATED RGS	RIO-CHEM-B	FSH-55102	FAH-55102

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
C-457	3/4"	8 #14	PVC COATED RGS	RIO-CHEM-B	SKID-55120	YSH-55120, YN-55120, YA-55120, YCH-55120
C-458	3/4"	8 #14	PVC COATED RGS	RIO-CHEM-B	SKID-55130	YSH-55130, YN-55130, YA-55130, YCH-55130
C-459	3/4"	6 #14	PVC COATED RGS	RIO-MCC-1D	LCS-56000	LAH-56012, LAH-56022, LAH- 56101
C-460	3/4"	2 #14	PVC COATED RGS	LCS-56000	LSH-56012	
C-461	3/4"	2 #14	PVC COATED RGS	LCS-56000	LSH-56022	
C-462	3/4"	6 #14	RGS	RIO-MCC-1D	MCC-1	YSH-56060, YAK-56060, YA-56060
C-463	1"	12 #14	PVC COATED RGS	MCC-1	LCS-56060	
C-464	3/4"	2 #14	PVC COATED RGS	LSH-56112	LCS-56060	FROM DAY TANK
C-465	3/4"	6 #14	RGS	RIO-MCC-1D	MCC-1	YSH-56070, YAK-56070, YA-56070
C-466	1"	12 #14	PVC COATED RGS	MCC-1	LCS-56070	
C-467	3/4"	2 #14	PVC COATED RGS	LSH-56112	LCS-56070	FROM DAY TANK
C-468	3/4"	2 #14	PVC COATED RGS	RIO-CHEM-B	LSH-56101	LAH-56101

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
C-469	3/4"	2 #14	PVC COATED RGS	RIO-CHEM-B	LSH-56112	LAH-56112
C-470	3/4"	2 #14	PVC COATED RGS	RIO-CHEM-B	FSH-56102	FAH-56102
C-471	3/4"	8 #14	PVC COATED RGS	RIO-CHEM-B	SKID-56120	YSH-56120, YN-56120, YA-56120, YCH-56120
C-472	3/4"	8 #14	PVC COATED RGS	RIO-CHEM-B	SKID-56130	YSH-56130, YN-56130, YA-56130, YCH-56130
C-473	1"	SINGLE MODE FIBER	RGS	PLC-BOP	EXISTING GENERATOR	YLR-70501, XA-70501, YA-70501, XI-70501
C-474	1"	6 #14	RGS	RIO-MCC-1D	BKR-70510	ZSC-70510, ZSO-70510, YA-70510
C-475	1"	CAT6 CABLE	RGS	PLC-BOP	STANDBY GENERATOR	YLR-70520, XA-70520, YA-70520, XI-70520
C-476	1"	CAT6 CABLE	RGS	STANDBY GENERATOR	ELECTRICAL SYSTEM MONITORING	
C-477	1"	CAT6 CABLE	RGS	ELECTRICAL SYSTEM MONITORING	CONTROL ROOM ELECTRICAL SYSTEM MONITORING STATION	
C-478	1"	CAT6 CABLE	RGS	PLC-BOP	ELECTRICAL SYSTEM MONITORING	ZSC-70550, ZSO-70550, YA-70550, ZC-70550
C-479	1"	CAT6 CABLE	RGS	PLC-BOP	ELECTRICAL SYSTEM MONITORING	ZSC-70560, ZSO-70560, YA-70560, ZC-70560
C-480	1"	CAT6 CABLE	RGS	ELECTRICAL SYSTEM MONITORING	SWGR-70550 (SWGR NO. 1)	ZSC-70550, ZSO-70550, YA-70550, ZC-70550
C-481	1"	CAT6 CABLE	RGS	ELECTRICAL SYSTEM MONITORING	SWGR-70560 (SWGR NO. 2)	ZSC-70560, ZSO-70560, YA-70560, ZC-70560

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
C-482	3/4"	10 #14	RGS	PLC-BOP	UPS-ADM	EA-70551, YA-70551, JA-70551, ZA-70551, XA-70551
C-483	3/4"	2 #14	RGS	RIO-DAF-B2	LSH-70730	LAH-70730
C-484	3/4"	2 #14	RGS	HV-01 VCP	FACP	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
C-485	3/4"	2 #14	RGS	DDC-01	FACP	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
C-486	3/4"	2 #14	RGS	HV-02 VCP	FACP	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
C-487	3/4"	2 #14	RGS	BCU-01 VCP	FACP	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
C-488	3/4"	2 #14	RGS	DDC-02	FACP	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
C-489	3/4"	2 #14	RGS	DHU-01 VCP	FACP	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
C-490	3/4"	2 #14	RGS	SF-01 EC CONTROLLER	FACP	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
C-491	3/4"	2 #14	RGS	DDC-03	FACP	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
C-492	3/4"	2 #14	RGS	HV-03 VCP	FACP	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
C-493	3/4"	2 #14	RGS	DDC-04	FACP	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
C-494	3/4"	CAT6 CABLE	RGS	DDC-04	VFD-EF-01	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
C-495	3/4"	CAT6 CABLE	RGS	DDC-04	VFD-EF-02	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
C-496	3/4"	CAT6 CABLE	RGS	DDC-04	VFD-EF-03	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
C-497	3/4"	CAT6 CABLE	RGS	DDC-04	VFD-EF-04	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
C-498	3/4"	CAT6 CABLE	RGS	DDC-04	VFD-EF-05	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
C-499	3/4"	CAT6 CABLE	RGS	DDC-01	VFD-EF-06	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
C-500	3/4"	CAT6 CABLE	RGS	DDC-01	VFD-EF-07	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
C-501	3/4"	CAT6 CABLE	RGS	DDC-01	VFD-EF-08	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
C-502	3/4"	CAT6 CABLE	RGS	DDC-02	VFD-EF-09	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
C-503	3/4"	2 #14	RGS	DDC-04	VFD-EF-01	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
C-504	3/4"	2 #14	RGS	DDC-04	VFD-EF-02	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
C-505	3/4"	2 #14	RGS	DDC-04	VFD-EF-03	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
C-506	3/4"	2 #14	RGS	DDC-04	VFD-EF-04	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
C-507	3/4"	2 #14	RGS	DDC-04	VFD-EF-05	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
C-508	3/4"	2 #14	RGS	DDC-01	VFD-EF-06	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
C-509	3/4"	2 #14	RGS	DDC-01	VFD-EF-07	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
C-510	3/4"	2 #14	RGS	DDC-01	VFD-EF-08	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
C-511	3/4"	2 #14	RGS	DDC-02	VFD-EF-09	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
C-512	3/4"	8 #14	RGS	DDC-02	EF-10	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
C-513	3/4"	8 #14	RGS	DDC-02	EF-11	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
C-514	3/4"	8 #14	RGS	DDC-02	EF-12	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
C-515	3/4"	2 #14	RGS	DDC-03	COMP-1	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
C-516	3/4"	2 #14	RGS	DDC-03	COMP-2	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
C-517	3/4"	CAT6 CABLE	RGS	DDC-7	WH-10 VCP	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
DWB & WWT C&C						
C-518	1"	SINGLE MODE FIBER	RGS	PLC-BOP	RIO-RESIDUALS	
C-519	1"	SINGLE MODE FIBER	RGS	RIO-RESIDUALS	OWS-RESID	
C-520	1"	12 #14	RGS	RIO-RESIDUALS	MOV-60115	ZSH-60115, ZSL-60115, YN-60115, YA-60115, ZCH-60115, ZCL-60115
C-521	3/4"	2 #14	RGS	RIO-RESIDUALS	LSH-60112	
C-522	3/4"	10 #14	RGS	RIO-RESIDUALS	MCC-4	YSH-60130, YN-60130, YA-60130, YCH-60130, YAK-60130
C-523	3/4"	10 #14	RGS	MCC-4	LCS-60130	
C-524	3/4"	2 #14	RGS	CENT-60210	VFD-60140	FROM DEWATERING CENTRIFUGE NO.1
C-525	3/4"	2 #14	RGS	RIO-RESIDUALS	PSL-60141	
C-526	3/4"	2 #14	RGS	RIO-RESIDUALS	LSL-60112	
C-527	1"	12 #14	RGS	VFD-60140	LCS-60140	
C-528	3/4"	2 #14	RGS	LCS-60140	TSH-60140	
C-529	3/4"	2 #14	RGS	RIO-RESIDUALS	PSH-60142	
C-530	1"	12 #14	RGS	RIO-RESIDUALS	MOV-60125	ZSH-60125, ZSL-60125, YN-60125, YA-60125, ZCH-60125, ZCL-60125

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
C-531	3/4"	2 #14	RGS	RIO-RESIDUALS	LSH-60122	
C-532	3/4"	10 #14	RGS	RIO-RESIDUALS	MCC-4	YSH-60150, YN-60150, YA-60150, YCH-60150, YAK-60150
C-533	3/4"	10 #14	RGS	MCC-4	LCS-60150	
C-534	3/4"	2 #14	RGS	CENT-60220	VFD-60160	FROM DEWATERING CENTRIFUGE NO.2
C-535	3/4"	2 #14	RGS	RIO-RESIDUALS	PSL-60161	
C-536	1"	12 #14	RGS	VFD-60160	LCS-60160	
C-537	3/4"	2 #14	RGS	LCS-60160	TSH-60160	
C-538	3/4"	2 #14	RGS	LCS-60160	LSL-60122	
C-539	3/4"	2 #14	RGS	RIO-RESIDUALS	PSH-60162	
C-540	1 1/2"	SINGLE MODE FIBER	RGS	RIO-RESIDUALS	CENT-60210	
C-541	1 1/2"	SINGLE MODE FIBER	RGS	RIO-RESIDUALS	CENT-60220	
C-542	3/4"	2 #14	RGS	RIO-RESIDUALS	FSH-60301	FAH-60301
C-543	3/4"	2 #14	RGS	CENT-60210	LCP-60300	
C-544	3/4"	2 #14	RGS	CENT-60220	LCP-60300	
C-545	3/4"	2 #14	RGS	LCP-60300	YSK-60321	
C-546	3/4"	2 #14	RGS	LCP-60300	YSK-60311	
C-547	3/4"	2 #14	RGS	LCP-60300	YSK-60301	
C-548	3/4"	2 #14	RGS	LCP-60300	YSK-60302	
C-549	3/4"	2 #14	RGS	LCP-60300	SSL-60312	
C-550	3/4"	2 #14	RGS	LCP-60300	SSL-60320	
C-551	3/4"	2 #14	RGS	LCP-60300	CONV-60300	
C-552	3/4"	2 #14	RGS	LCP-60300	MOV-60311	
C-553	3/4"	2 #14	RGS	LCP-60300	MOV-60321	
C-554	3/4"	2 #14	RGS	LCP-60300	MOV-60312	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF

CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
C-555	3/4"	2 #14	RGS	LCP-60300	MOV-60322	
C-556	3/4"	2 #14	RGS	LCP-60300	CONV-60310	
C-557	3/4"	2 #14	RGS	LCP-60300	CONV-60320	
C-558	3/4"	2 #14	RGS	RIO-RESIDUALS	FSH-60401	FAH-60401
C-559	3/4"	4 #14	RGS	LCS-60425	MX-60425	
C-560	3/4"	4 #14	RGS	LCS-60425	MX-60465	
C-561	3/4"	8 #14	RGS	RIO-RESIDUALS	SKID-60430	YSH-60430, YN-60430, YA-60430, YCH-60430
C-562	3/4"	2 #14	RGS	CENT-60210	SKID-60430	FROM DEWATERING CENTRIFUGE NO.1
C-563	3/4"	8 #14	RGS	RIO-RESIDUALS	SKID-60470	YSH-60470, YN-60470, YA-60470, YCH-60470
C-564	3/4"	2 #14	RGS	CENT-60220	SKID-60470	FROM DEWATERING CENTRIFUGE NO.2
C-565	3/4"	10 #14	RGS	RIO-RESIDUALS	VFD-60510	YSH-60510, YN-60510, YA-60510, YCH-60510, YAK-60510
C-566	1"	12 #14	RGS	VFD-60510	LCS-60510	
C-567	3/4"	2 #14	RGS	LCS-60510	TSH-60510	
C-568	3/4"	2#14	RGS	LCS-60510	LSLL-60504	
C-569	3/4"	10 #14	RGS	RIO-RESIDUALS	VFD-60520	YSH-60520, YN-60520, YA-60520, YCH-60520, YAK-60520
C-570	1"	12 #14	RGS	VFD-60520	LCS-60520	
C-571	3/4"	2 #14	RGS	LCS-60520	TSH-60520	
C-572	3/4"	2#14	RGS	LCS-60520	LSLL-60504	
C-573	3/4"	2 #14	RGS	RIO-RESIDUALS	LSH-60503	
C-574	1"	10 #14	RGS	RIO-RESIDUALS	MCC-4	YSH-60530, YN-60530, YA-60530, YCH-60530, YAK-60530
C-575	1"	10 #14	RGS	MCC-4	LCS-60530	
C-576	1"	10 #14	RGS	RIO-RESIDUALS	MCC-4	YSH-60540, YN-60540, YA-60540, YCH-60540, YAK-60540

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
C-577	1"	10 #14	RGS	MCC-4	LCS-60540	
C-578	1"	10 #14	PVC COATED RGS	RIO-RESIDUALS	VFD-46010	YSH-46010, YN-46010, YA-46010, YCH-46010, YAK-46010
C-579	1"	12 #14	PVC COATED RGS	VFD-46010	LCS-46010	
C-580	1"	2 #14	PVC COATED RGS	LCS-46010	TSH-46010	
C-581	1"	2 #14	PVC COATED RGS	LCS-46010	LSLL-46013	
C-582	1"	10 #14	PVC COATED RGS	RIO-RESIDUALS	VFD-46020	YSH-46020, YN-46020, YA-46020, YCH-46020, YAK-46020
C-583	1"	12 #14	PVC COATED RGS	VFD-46020	LCS-46020	
C-584	1"	2 #14	PVC COATED RGS	LCS-46020	TSH-46020	
C-584.1	1"	2 #14	PVC COATED RGS	LCS-46020	LSLL-46013	
C-585	1"	10 #14	PVC COATED RGS	RIO-RESIDUALS	MCC-4	YSH-46050, YN-46050, YA-46050, YCH-46050, YAK-46050
C-586	1"	10 #14	PVC COATED RGS	MCC-4	LCS-46050	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
C-587	1"	2 #14	PVC COATED RGS	RIO-RESIDUALS	LSH-46012	LAH-46012
C-588	1"	4 #14	PVC COATED RGS	RIO-RESIDUALS	ZSO-46070/SLG-46070	ZSH-46070, ZSL-46070
C-589	1"	4 #14	PVC COATED RGS	RIO-RESIDUALS	ZSC-46070/SLG-46070	ZSH-46070, ZSL-46070
C-590	1"	2 #14	PVC COATED RGS	RIO-RESIDUALS	LSH-46022	LAH-46022
C-591	1"	10 #14	PVC COATED RGS	RIO-RESIDUALS	MCC-4	YSH-46060, YN-46060, YA-46060, YCH-46060, YAK-46060
C-592	1"	10 #14	PVC COATED RGS	MCC-4	LCS-46060	
C-593	1"	10 #14	PVC COATED RGS	RIO-RESIDUALS	VFD-46030	YSH-46030, YN-46030, YA-46030, YCH-46030, YAK-46030
C-594	1"	12 #14	PVC COATED RGS	VFD-46030	LCS-46030	
C-595	1"	2 #14	PVC COATED RGS	LCS-46030	TSH-46030	
C-595.1	1"	2 #14	PVC COATED RGS	LCS-46030	LSLL-46023	
C-596	1"	10 #14	PVC COATED RGS	RIO-RESIDUALS	VFD-46040	YSH-46040, YN-46040, YA-46040, YCH-46040, YAK-46040

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
C-597	1"	12 #14	PVC COATED RGS	VFD-46040	LCS-46040	
C-598	1"	2 #14	PVC COATED RGS	LCS-46040	TSH-46040	
C-599	1"	2 #14	PVC COATED RGS	LCS-46040	LSLL-46023	
C-600	3/4"	6 #14	RGS	RIO-DAF-A2	FCV-46001	ZSL-46001, YN-46001, YA-46001
C-601	3/4"	2 #14	RGS	FCV-46001	LCS-46001	
C-602	3/4"	6 #14	RGS	RIO-DAF-B2	FCV-46002	ZSL-46002, YN-46002, YA-46002
C-603	3/4"	2 #14	RGS	FCV-46002	LCS-46002	
C-604	3/4"	6 #14	RGS	RIO-DAF-A2	FCV-60504	ZSL-60504, YN-60504, YA-60504
C-605	3/4"	2 #14	RGS	FCV-60504	LCS-60504	
C-606	3/4"	6 #14	RGS	RIO-DAF-B2	FCV-60505	ZSL-60505, YN-60505, YA-60505
C-607	3/4"	2 #14	RGS	FCV-60505	LCS-60505	
C-608	3/4"	2 #14	RGS	HV-04 VCP	FACP	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
C-609	3/4"	2 #14	RGS	DDC-08	FACP	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
C-610	3/4"	CAT6 CABLE	RGS	DDC-08	VFD-EF-13	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
C-611	3/4"	CAT6 CABLE	RGS	DDC-08	VFD-EF-14	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
C-612	3/4"	2 #14	RGS	DDC-08	VFD-EF-13	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
C-613	3/4"	2 #14	RGS	DDC-08	VFD-EF-14	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
C-614	3/4"	8 #14	RGS	DDC-08	EF-15	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
C-615	3/4"	8 #14	RGS	DDC-08	EF-16	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
C-616	3/4"	6 #14	RGS	DDC-14	SP-02 VCP	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
C-617	3/4"	CAT6 CABLE	RGS	DDC-16	WH-09 VCP	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
BACKWASH FACILITY C&C						
C-618	1"	12 #14	RGS	PLC-CLEARWELL-CP	MOV-81050	ZSH-81050, ZSL-81050, YN-81050, YA-81050, ZCH-81050, ZCL-81050
C-619	3/4"	6 #14	RGS	PLC-CLEARWELL-CP	FCV-81060	ZSL-81060, YN-81060, YA-81060
C-620	3/4"	8 #14	RGS	PLC-CLEARWELL-CP	LCP-70360	YSH-70360, YN-70360, YA-70360, YCH-70360
C-621	3/4"	8 #14	RGS	PLC-CLEARWELL-CP	LCP-70370	YSH-70370, YN-70370, YA-70370, YCH-70370

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
ADMIN C&C						
I-001	1"	CAT6 CABLE	RGS	PLC-BOP	ELECTRICAL SYSTEM MONITORING	JI-70511, JI-70512
I-002	1"	CAT6 CABLE	RGS	PLC-BOP	ELECTRICAL SYSTEM MONITORING	JI-70521, JI-70522
I-003	1"	CAT6 CABLE	RGS	PLC-BOP	ELECTRICAL SYSTEM MONITORING	JI-70531, JI-70532

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
I-004	1"	CAT6 CABLE	RGS	PLC-BOP	ELECTRICAL SYSTEM MONITORING	JI-70541, JI-70542
I-005	3/4"	2/C #16TSH	RGS	LOCAL-BOP	LCS-70740	LI-70741
I-006	1"	2/C #16TSH	PVC SCHEDULE 40	LCS-70740	LIT-70741	VIA HH #2A
I-007	3/4"	2/C #16TSH	RGS	DDC-11	VFD-CWP-01	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
I-008	3/4"	2/C #16TSH	RGS	DDC-11	VFD-CWP-02	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
I-009	3/4"	2/C #16TSH	RGS	DDC-06	VFD-EF-19	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
TB C&C						
I-010	1"	CAT6 CABLE	RGS	ELECTRICAL SYSTEM MONITORING	MCC-1	JI-70511, JI-70512
I-011	1"	CAT6 CABLE	RGS	ELECTRICAL SYSTEM MONITORING	MCC-2	JI-70521, JI-70522
I-012	1"	CAT6 CABLE	RGS	ELECTRICAL SYSTEM MONITORING	MCC-3	JI-70531, JI-70532
I-013	3/4"	2/C #16TSH	RGS	RIO-DAF-A2	AIT-10311	AI-10311
I-014	3/4"	MANF. PROV. CABLE	RGS	AIT-10311	AE-10311	
I-015	1"	2/C 2#16TSH	RGS	RIO-DAF-A2	AIT-10312	AI-10312, TI-10312

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
I-016	3/4"	MANF. PROV. CABLE	RGS	AIT-10312	AE-10312	
I-017	3/4"	2/C #16TSH	RGS	RIO-DAF-B2	AIT-10331	AI-10331
I-018	3/4"	MANF. PROV. CABLE	RGS	AIT-10331	AE-10331	
I-019	1"	2/C 2#16TSH	RGS	RIO-DAF-B2	AIT-10332	AI-10332, TI-10332
I-020	3/4"	MANF. PROV. CABLE	RGS	AIT-10332	AE-10332	
I-021	3/4"	2/C #16TSH	RGS	RIO-DAF-A2	FIT-10111	FI-10111
I-022	3/4"	MANF. PROV. CABLE	RGS	FIT-10111	FE-10111	
I-023	1"	2/C 2#16TSH	RGS	RIO-DAF-A2	FCV-10111	ZC-10111, ZI-10111
I-024	3/4"	2/C #16TSH	RGS	RIO-DAF-B2	FIT-10121	FI-10121
I-025	3/4"	MANF. PROV. CABLE	RGS	FIT-10121	FE-10121	
I-026	1"	2/C 2#16TSH	RGS	RIO-DAF-B2	FCV-10121	ZC-10121, ZI-10121
I-027	3/4"	2/C #16TSH	RGS	RIO-DAF-A2	AIT-10321	
I-028	3/4"	MANF. PROV. CABLE	RGS	AIT-10321	AE-10321	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
I-029	1"	2/C 2#16TSH	RGS	RIO-DAF-A2	AIT-10322	AI-10322, TI-10322
I-030	3/4"	MANF. PROV. CABLE	RGS	AIT-10322	AE-10322	
I-031	3/4"	2/C #16TSH	RGS	RIO-DAF-B2	AIT-10341	
I-032	3/4"	MANF. PROV. CABLE	RGS	AIT-10341	AE-10341	
I-033	1"	2/C 2#16TSH	RGS	RIO-DAF-B2	AIT-10342	AI-10342, TI-10342
I-034	3/4"	MANF. PROV. CABLE	RGS	AIT-10342	AE-10342	
I-035	3/4"	2/C #16TSH	RGS	RIO-DAF-B2	LIT-10421	LI-10421
I-036	3/4"	2/C #16TSH	RGS	RIO-DAF-A2	LIT-10411	LI-10411
I-037	1"	2/C 2#16TSH	RGS	RIO-MCC-2A	VFD-20120	SI-B, SC-B
I-038	1"	2/C 2#16TSH	RGS	RIO-MCC-2A	VFD-20220	SI-B, SC-B
I-039	1"	2/C 2#16TSH	RGS	RIO-MCC-2A	VFD-20320	SI-B, SC-B
I-040	1"	2/C 2#16TSH	RGS	RIO-MCC-2A	VFD-20420	SI-B, SC-B
I-041	1"	2/C 2#16TSH	RGS	RIO-MCC-2A	VFD-20520	SI-B, SC-B
I-042	1"	2/C 2#16TSH	RGS	RIO-MCC-2A	VFD-20620	SI-B, SC-B
I-043	1"	2/C 2#16TSH	RGS	RIO-MCC-2A	VFD-20720	SI-B, SC-B

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
I-044	1"	2/C 2#16TSH	RGS	RIO-MCC-2A	VFD-20820	SI-B, SC-B
I-045	1"	2/C 2#16TSH	RGS	RIO-MCC-2A	VFD-20920	SI-B, SC-B
I-046	1"	2/C 2#16TSH	RGS	RIO-MCC-2A	VFD-21020	SI-B, SC-B
I-047	1"	2/C 2#16TSH	RGS	VFD-20120	FLOC-20120	
I-048	1"	2/C 2#16TSH	RGS	VFD-20220	FLOC-20220	
I-049	1"	2/C 2#16TSH	RGS	VFD-20320	FLOC-20320	
I-050	1"	2/C 2#16TSH	RGS	VFD-20420	FLOC-20420	
I-051	1"	2/C 2#16TSH	RGS	VFD-20520	FLOC-20520	
I-052	1"	2/C 2#16TSH	RGS	VFD-20620	FLOC-20620	
I-053	1"	2/C 2#16TSH	RGS	VFD-20720	FLOC-20720	
I-054	1"	2/C 2#16TSH	RGS	VFD-20820	FLOC-20820	
I-055	1"	2/C 2#16TSH	RGS	VFD-20920	FLOC-20920	
I-056	1"	2/C 2#16TSH	RGS	VFD-21020	FLOC-21020	
I-057	1"	2/C 2#16TSH	RGS	RIO-MCC-2A	VFD-20130	SI-C, SC-C
I-058	1"	2/C 2#16TSH	RGS	RIO-MCC-2A	VFD-20230	SI-C, SC-C
I-059	1"	2/C 2#16TSH	RGS	RIO-MCC-2A	VFD-20330	SI-C, SC-C

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
I-060	1"	2/C 2#16TSH	RGS	RIO-MCC-2A	VFD-20430	SI-C, SC-C
I-061	1"	2/C 2#16TSH	RGS	RIO-MCC-2A	VFD-20530	SI-C, SC-C
I-062	1"	2/C 2#16TSH	RGS	RIO-MCC-2A	VFD-20630	SI-C, SC-C
I-063	1"	2/C 2#16TSH	RGS	RIO-MCC-2A	VFD-20730	SI-C, SC-C
I-064	1"	2/C 2#16TSH	RGS	RIO-MCC-2A	VFD-20830	SI-C, SC-C
I-065	1"	2/C 2#16TSH	RGS	RIO-MCC-2A	VFD-20930	SI-C, SC-C
I-066	1"	2/C 2#16TSH	RGS	RIO-MCC-2A	VFD-21030	SI-C, SC-C
I-067	1"	2/C 2#16TSH	RGS	VFD-20130	FLOC-20130	
I-068	1"	2/C 2#16TSH	RGS	VFD-20230	FLOC-20230	
I-069	1"	2/C 2#16TSH	RGS	VFD-20330	FLOC-20330	
I-070	1"	2/C 2#16TSH	RGS	VFD-20430	FLOC-20430	
I-071	1"	2/C 2#16TSH	RGS	VFD-20530	FLOC-20530	
I-072	1"	2/C 2#16TSH	RGS	VFD-20630	FLOC-20630	
I-073	1"	2/C 2#16TSH	RGS	VFD-20730	FLOC-20730	
I-074	1"	2/C 2#16TSH	RGS	VFD-20830	FLOC-20830	
I-075	1"	2/C 2#16TSH	RGS	VFD-20930	FLOC-20930	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
I-076	1"	2/C 2#16TSH	RGS	VFD-21030	FLOC-21030	
I-077	1"	2/C 2#16TSH	RGS	RIO-MCC-2A	VFD-30160	SI-C, SC-C
I-078	1"	2/C 2#16TSH	RGS	RIO-MCC-2A	VFD-30260	SI-C, SC-C
I-079	1"	2/C 2#16TSH	RGS	RIO-MCC-2A	VFD-30360	SI-C, SC-C
I-080	1"	2/C 2#16TSH	RGS	RIO-MCC-2A	VFD-30460	SI-C, SC-C
I-081	1"	2/C 2#16TSH	RGS	RIO-MCC-2A	VFD-30560	SI-C, SC-C
I-082	1"	2/C 2#16TSH	RGS	RIO-MCC-2A	VFD-30660	SI-C, SC-C
I-083	1"	2/C 2#16TSH	RGS	RIO-MCC-2A	VFD-30760	SI-C, SC-C
I-084	1"	2/C 2#16TSH	RGS	RIO-MCC-2A	VFD-30860	SI-C, SC-C
I-085	1"	2/C 2#16TSH	RGS	RIO-MCC-2A	VFD-30960	SI-C, SC-C
I-086	1"	2/C 2#16TSH	RGS	RIO-MCC-2A	VFD-31060	SI-C, SC-C
I-087	1"	2/C 2#16TSH	RGS	VFD-30160	SKMR-30160	
I-088	1"	2/C 2#16TSH	RGS	VFD-30260	SKMR-30260	
I-089	1"	2/C 2#16TSH	RGS	VFD-30360	SKMR-30360	
I-090	1"	2/C 2#16TSH	RGS	VFD-30460	SKMR-30460	
I-091	1"	2/C 2#16TSH	RGS	VFD-30560	SKMR-30560	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
I-092	1"	2/C 2#16TSH	RGS	VFD-30660	SKMR-30660	
I-093	1"	2/C 2#16TSH	RGS	VFD-30760	SKMR-30760	
I-094	1"	2/C 2#16TSH	RGS	VFD-30860	SKMR-30860	
I-095	1"	2/C 2#16TSH	RGS	VFD-30960	SKMR-30960	
I-096	1"	2/C 2#16TSH	RGS	VFD-31060	SKMR-31060	
I-097	3/4"	2/C #16TSH	RGS	RIO-DAF-A2	LIT-30011	
I-098	3/4"	2/C #16TSH	RGS	RIO-DAF-B2	LIT-30021	
I-099	3/4"	2/C #16TSH	RGS	RIO-DAF-A2	AIT-30012	
I-100	3/4"	MANF. PROV. CABLE	RGS	AIT-30012	AE-30012	
I-101	3/4"	2/C #16TSH	RGS	RIO-DAF-B2	AIT-30022	
I-102	3/4"	MANF. PROV. CABLE	RGS	AIT-30022	AE-30022	
I-103	1"	2/C 2#16TSH	RGS	RIO-MCC-1A	VFD-33010	SI-33010, SC-33010
I-104	1"	2/C 2#16TSH	RGS	VFD-33010	LCS-33010	
I-105	1"	2/C 2#16TSH	RGS	RIO-MCC-1A	VFD-33020	SI-33020, SC-33020
I-106	1"	2/C 2#16TSH	RGS	VFD-33020	LCS-33020	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
I-107	1"	2/C 2#16TSH	RGS	RIO-MCC-1A	VFD-33030	SI-33030, SC-33030
I-108	1"	2/C 2#16TSH	RGS	VFD-33030	LCS-33030	
I-109	1"	2/C 2#16TSH	RGS	RIO-MCC-1A	VFD-33040	SI-33040, SC-33040
I-110	1"	2/C 2#16TSH	RGS	VFD-33040	LCS-33040	
I-111	3/4"	2/C #16TSH	RGS	RIO-DAF-A2	PIT-33053	PI-33053
I-112	3/4"	2/C #16TSH	RGS	RIO-MCC-2A	PIT-34031	PG-34031
I-113	3/4"	2/C #16TSH	RGS	RIO-MCC-2A	PIT-34041	PG-34041
I-114	3/4"	2/C #16TSH	RGS	RIO-DAF-A2	FIT-34000	FI-34000
I-115	3/4"	MANF. PROV. CABLE	RGS	FIT-34000	FE-34000	
I-116	3/4"	2/C #16TSH	RGS	RIO-DAF-A2	FIT-34009	FI-34009
I-117	3/4"	2/C #16TSH	RGS	RIO-DAF-A2	LIT-34051	LI-34051
I-118	3/4"	MANF. PROV. CABLE	RGS	LIT-34051	LE-34051	
I-119	1"	2/C 2#16TSH	RGS	RIO-DAF-A2	LCV-34051	ZI-34051, ZC-34051
I-120	3/4"	2/C #16TSH	RGS	RIO-DAF-A2	PIT-34052	PG-34052
I-121	1"	2/C 2#16TSH	RGS	RIO-DAF-A2	MOV-34060	ZI-34060, ZC-34060

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
I-122	3/4"	2/C #16TSH	RGS	RIO-DAF-B2	LIT-34081	
I-123	3/4"	MANF. PROV. CABLE	RGS	LIT-34081	LE-34081	
I-124	1"	2/C 2#16TSH	RGS	RIO-DAF-B2	LCV-34081	ZI-34081, ZC-34081
I-125	3/4"	2/C #16TSH	RGS	RIO-DAF-B2	PIT-34082	PG-34082
I-126	1"	2/C 2#16TSH	RGS	RIO-DAF-B2	MOV-34090	ZI-34090, ZC-34090
I-127	3/4"	2/C #16TSH	RGS	RIO-DAF-A2	LIT-35011	
I-128	3/4"	2/C #16TSH	RGS	RIO-DAF-B2	LIT-35051	
I-129	3/4"	2/C #16TSH	RGS	RIO-FLT-A1	LIT-40101	LI-DD
I-130	3/4"	2/C #16TSH	RGS	RIO-FLT-A1	LIT-40201	LI-DD
I-131	3/4"	2/C #16TSH	RGS	RIO-FLT-A1	LIT-40301	LI-DD
I-132	3/4"	2/C #16TSH	RGS	RIO-FLT-A1	LIT-40401	LI-DD
I-133	3/4"	2/C #16TSH	RGS	RIO-FLT-A2	LIT-40501	LI-DD
I-134	3/4"	2/C #16TSH	RGS	RIO-FLT-A2	LIT-40601	LI-DD
I-135	3/4"	2/C #16TSH	RGS	RIO-FLT-A2	LIT-40701	LI-DD
I-136	3/4"	2/C #16TSH	RGS	RIO-FLT-B1	LIT-40801	LI-DD
I-137	3/4"	2/C #16TSH	RGS	RIO-FLT-B1	LIT-40901	LI-DD

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
I-138	3/4"	2/C #16TSH	RGS	RIO-FLT-B1	LIT-41001	LI-DD
I-139	3/4"	2/C #16TSH	RGS	RIO-FLT-B1	LIT-41101	LI-DD
I-140	3/4"	2/C #16TSH	RGS	RIO-FLT-B2	LIT-41201	LI-DD
I-141	3/4"	2/C #16TSH	RGS	RIO-FLT-B2	LIT-41301	LI-DD
I-142	3/4"	2/C #16TSH	RGS	RIO-FLT-B2	LIT-41401	LI-DD
I-143	1"	2/C 2#16TSH	RGS	RIO-FLT-A1	FCV-40100	ZCH-40100, ZI-40100
I-144	3/4"	2/C #16TSH	RGS	RIO-FLT-A1	PIT-40103	PI-FF
I-145	3/4"	2/C #16TSH	RGS	RIO-FLT-A1	PIT-40203	PI-FF
I-146	3/4"	2/C #16TSH	RGS	RIO-FLT-A1	PIT-40303	PI-FF
I-147	3/4"	2/C #16TSH	RGS	RIO-FLT-A1	PIT-40403	PI-FF
I-148	3/4"	2/C #16TSH	RGS	RIO-FLT-A2	PIT-40503	PI-FF
I-149	3/4"	2/C #16TSH	RGS	RIO-FLT-A2	PIT-40603	PI-FF
I-150	3/4"	2/C #16TSH	RGS	RIO-FLT-A2	PIT-40703	PI-FF
I-151	3/4"	2/C #16TSH	RGS	RIO-FLT-B1	PIT-40803	PI-FF
I-152	3/4"	2/C #16TSH	RGS	RIO-FLT-B1	PIT-40903	PI-FF
I-153	3/4"	2/C #16TSH	RGS	RIO-FLT-B1	PIT-41003	PI-FF

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
I-154	3/4"	2/C #16TSH	RGS	RIO-FLT-B1	PIT-41103	PI-FF
I-155	3/4"	2/C #16TSH	RGS	RIO-FLT-B2	PIT-41203	PI-FF
I-156	3/4"	2/C #16TSH	RGS	RIO-FLT-B2	PIT-41303	PI-FF
I-157	3/4"	2/C #16TSH	RGS	RIO-FLT-B2	PIT-41403	PI-FF
I-158	3/4"	2/C #16TSH	RGS	RIO-FLT-A1	AIT-40104	AI-JJ
I-159	3/4"	2/C #16TSH	RGS	RIO-FLT-A1	AIT-40204	AI-JJ
I-160	3/4"	2/C #16TSH	RGS	RIO-FLT-A1	AIT-40304	AI-JJ
I-161	3/4"	2/C #16TSH	RGS	RIO-FLT-A1	AIT-40404	AI-JJ
I-162	3/4"	2/C #16TSH	RGS	RIO-FLT-A2	AIT-40504	AI-JJ
I-163	3/4"	2/C #16TSH	RGS	RIO-FLT-A2	AIT-40604	AI-JJ
I-164	3/4"	2/C #16TSH	RGS	RIO-FLT-A2	AIT-40704	AI-JJ
I-165	3/4"	2/C #16TSH	RGS	RIO-FLT-B1	AIT-40804	AI-JJ
I-166	3/4"	2/C #16TSH	RGS	RIO-FLT-B1	AIT-40904	AI-JJ
I-167	3/4"	2/C #16TSH	RGS	RIO-FLT-B1	AIT-41004	AI-JJ
I-168	3/4"	2/C #16TSH	RGS	RIO-FLT-B1	AIT-41104	AI-JJ
I-169	3/4"	2/C #16TSH	RGS	RIO-FLT-B2	AIT-41204	AI-JJ

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
I-170	3/4"	2/C #16TSH	RGS	RIO-FLT-B2	AIT-41304	AI-JJ
I-171	3/4"	2/C #16TSH	RGS	RIO-FLT-B2	AIT-41404	AI-JJ
I-172	3/4"	MANF. PROV. CABLE	RGS	AIT-40104	AE-40104	
I-173	3/4"	MANF. PROV. CABLE	RGS	AIT-40204	AE-40204	
I-174	3/4"	MANF. PROV. CABLE	RGS	AIT-40304	AE-40304	
I-175	3/4"	MANF. PROV. CABLE	RGS	AIT-40404	AE-40404	
I-176	3/4"	MANF. PROV. CABLE	RGS	AIT-40504	AE-40504	
I-177	3/4"	MANF. PROV. CABLE	RGS	AIT-40604	AE-40604	
I-178	3/4"	MANF. PROV. CABLE	RGS	AIT-40704	AE-40704	
I-179	3/4"	MANF. PROV. CABLE	RGS	AIT-40804	AE-40804	
I-180	3/4"	MANF. PROV. CABLE	RGS	AIT-40904	AE-40904	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
I-181	3/4"	MANF. PROV. CABLE	RGS	AIT-41004	AE-41004	
I-182	3/4"	MANF. PROV. CABLE	RGS	AIT-41104	AE-41104	
I-183	3/4"	MANF. PROV. CABLE	RGS	AIT-41204	AE-41204	
I-184	3/4"	MANF. PROV. CABLE	RGS	AIT-41304	AE-41304	
I-185	3/4"	MANF. PROV. CABLE	RGS	AIT-41404	AE-41404	
I-186	3/4"	2/C #16TSH	RGS	RIO-FLT-A1	FIT-40105	FI-LL
I-187	3/4"	2/C #16TSH	RGS	RIO-FLT-A1	FIT-40205	FI-LL
I-188	3/4"	2/C #16TSH	RGS	RIO-FLT-A1	FIT-40305	FI-LL
I-189	3/4"	2/C #16TSH	RGS	RIO-FLT-A1	FIT-40405	FI-LL
I-190	3/4"	2/C #16TSH	RGS	RIO-FLT-A2	FIT-40505	FI-LL
I-191	3/4"	2/C #16TSH	RGS	RIO-FLT-A2	FIT-40605	FI-LL
I-192	3/4"	2/C #16TSH	RGS	RIO-FLT-A2	FIT-40705	FI-LL
I-193	3/4"	2/C #16TSH	RGS	RIO-FLT-B1	FIT-40805	FI-LL
I-194	3/4"	2/C #16TSH	RGS	RIO-FLT-B1	FIT-40905	FI-LL

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
I-195	3/4"	2/C #16TSH	RGS	RIO-FLT-B1	FIT-41005	FI-LL
I-196	3/4"	2/C #16TSH	RGS	RIO-FLT-B1	FIT-41105	FI-LL
I-197	3/4"	2/C #16TSH	RGS	RIO-FLT-B2	FIT-41205	FI-LL
I-198	3/4"	2/C #16TSH	RGS	RIO-FLT-B2	FIT-41305	FI-LL
I-199	3/4"	2/C #16TSH	RGS	RIO-FLT-B2	FIT-41405	FI-LL
I-200	3/4"	MANF. PROV. CABLE	RGS	FIT-40105	FE-40105	
I-201	3/4"	MANF. PROV. CABLE	RGS	FIT-40205	FE-40205	
I-202	3/4"	MANF. PROV. CABLE	RGS	FIT-40305	FE-40305	
I-203	3/4"	MANF. PROV. CABLE	RGS	FIT-40405	FE-40405	
I-204	3/4"	MANF. PROV. CABLE	RGS	FIT-40505	FE-40505	
I-205	3/4"	MANF. PROV. CABLE	RGS	FIT-40605	FE-40605	
I-206	3/4"	MANF. PROV. CABLE	RGS	FIT-40705	FE-40705	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
I-207	3/4"	MANF. PROV. CABLE	RGS	FIT-40805	FE-40805	
I-208	3/4"	MANF. PROV. CABLE	RGS	FIT-40905	FE-40905	
I-209	3/4"	MANF. PROV. CABLE	RGS	FIT-41005	FE-41005	
I-210	3/4"	MANF. PROV. CABLE	RGS	FIT-41105	FE-41105	
I-211	3/4"	MANF. PROV. CABLE	RGS	FIT-41205	FE-41205	
I-212	3/4"	MANF. PROV. CABLE	RGS	FIT-41305	FE-41305	
I-213	3/4"	MANF. PROV. CABLE	RGS	FIT-41405	FE-41405	
I-214	1"	2/C 2#16TSH	RGS	RIO-FLT-A1	MOV-40160	ZC-MM, ZI-MM
I-215	1"	2/C 2#16TSH	RGS	RIO-FLT-A1	MOV-40260	ZC-MM, ZI-MM
I-216	1"	2/C 2#16TSH	RGS	RIO-FLT-A1	MOV-40360	ZC-MM, ZI-MM
I-217	1"	2/C 2#16TSH	RGS	RIO-FLT-A1	MOV-40460	ZC-MM, ZI-MM
I-218	1"	2/C 2#16TSH	RGS	RIO-FLT-A2	MOV-40560	ZC-MM, ZI-MM
I-219	1"	2/C 2#16TSH	RGS	RIO-FLT-A2	MOV-40660	ZC-MM, ZI-MM

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
I-220	1"	2/C 2#16TSH	RGS	RIO-FLT-A2	MOV-40760	ZC-MM, ZI-MM
I-221	1"	2/C 2#16TSH	RGS	RIO-FLT-B1	MOV-40860	ZC-MM, ZI-MM
I-222	1"	2/C 2#16TSH	RGS	RIO-FLT-B1	MOV-40960	ZC-MM, ZI-MM
I-223	1"	2/C 2#16TSH	RGS	RIO-FLT-B1	MOV-41060	ZC-MM, ZI-MM
I-224	1"	2/C 2#16TSH	RGS	RIO-FLT-B1	MOV-41160	ZC-MM, ZI-MM
I-225	1"	2/C 2#16TSH	RGS	RIO-FLT-B2	MOV-41260	ZC-MM, ZI-MM
I-226	1"	2/C 2#16TSH	RGS	RIO-FLT-B2	MOV-41360	ZC-MM, ZI-MM
I-227	1"	2/C 2#16TSH	RGS	RIO-FLT-B2	MOV-41460	ZC-MM, ZI-MM
I-228	1"	2/C 2#16TSH	RGS	RIO-FLT-A1	MOV-40170	ZC-NN, ZI-NN
I-229	1"	2/C 2#16TSH	RGS	RIO-FLT-A1	MOV-40270	ZC-NN, ZI-NN
I-230	1"	2/C 2#16TSH	RGS	RIO-FLT-A1	MOV-40370	ZC-NN, ZI-NN
I-231	1"	2/C 2#16TSH	RGS	RIO-FLT-A1	MOV-40470	ZC-NN, ZI-NN
I-232	1"	2/C 2#16TSH	RGS	RIO-FLT-A2	MOV-40570	ZC-NN, ZI-NN
I-233	1"	2/C 2#16TSH	RGS	RIO-FLT-A2	MOV-40670	ZC-NN, ZI-NN
I-234	1"	2/C 2#16TSH	RGS	RIO-FLT-A2	MOV-40770	ZC-NN, ZI-NN
I-235	1"	2/C 2#16TSH	RGS	RIO-FLT-B1	MOV-40870	ZC-NN, ZI-NN

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
I-236	1"	2/C 2#16TSH	RGS	RIO-FLT-B1	MOV-40970	ZC-NN, ZI-NN
I-237	1"	2/C 2#16TSH	RGS	RIO-FLT-B1	MOV-41070	ZC-NN, ZI-NN
I-238	1"	2/C 2#16TSH	RGS	RIO-FLT-B1	MOV-41170	ZC-NN, ZI-NN
I-239	1"	2/C 2#16TSH	RGS	RIO-FLT-B2	MOV-41270	ZC-NN, ZI-NN
I-240	1"	2/C 2#16TSH	RGS	RIO-FLT-B2	MOV-41370	ZC-NN, ZI-NN
I-241	1"	2/C 2#16TSH	RGS	RIO-FLT-B2	MOV-41470	ZC-NN, ZI-NN
I-242	3/4"	2/C #16TSH	RGS	RIO-FLT-A2	AIT-42061	AI-42061
I-243	3/4"	MANF. PROV. CABLE	RGS	AIT-42061	AE-42061	
I-244	3/4"	2/C #16TSH	RGS	RIO-FLT-B2	AIT-42062	AI-42062
I-245	3/4"	MANF. PROV. CABLE	RGS	AIT-42062	AE-42062	
I-246	3/4"	2/C #16TSH	RGS	RIO-FLT-A2	AIT-42041	AI-42041
I-247	3/4"	MANF. PROV. CABLE	RGS	AIT-42041	AE-42041	
I-248	3/4"	2/C #16TSH	RGS	RIO-FLT-B2	AIT-42042	AI-42042
I-249	3/4"	MANF. PROV. CABLE	RGS	AIT-42042	AE-42042	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
I-250	3/4"	2/C #16TSH	RGS	RIO-FLT-A2	LIT-42031	LI-42031
I-251	3/4"	2/C #16TSH	RGS	RIO-FLT-B2	LIT-42032	LI-42032
I-252	3/4"	2/C #16TSH	RGS	RIO-FLT-A2	LIT-42033	LI-42033
I-253	3/4"	2/C #16TSH	RGS	RIO-FLT-B2	LIT-42034	LI-42034
I-254	3/4"	2/C #16TSH	RGS	RIO-WQSB	AX-43061	AI-43061
I-255	3/4"	MANF. PROV. CABLE	RGS	AIX43061	AE-43061	
I-256	3/4"	2/C #16TSH	RGS	RIO-WQSB	AX-43062	AI-43062
I-257	3/4"	MANF. PROV. CABLE	RGS	AX-43062	AE-43062	
I-258	3/4"	2/C #16TSH	RGS	RIO-WQSB	AX-43063	AI-43063
I-259	3/4"	MANF. PROV. CABLE	RGS	AX-43063	AE-43063	
I-260	3/4"	2/C #16TSH	RGS	RIO-WQTH	AX-43051	AI-43051
I-261	3/4"	MANF. PROV. CABLE	RGS	AX-43051	AE-43051	
I-262	3/4"	2/C #16TSH	RGS	RIO-WQTH	AX-43052	AI-43052
I-263	3/4"	MANF. PROV. CABLE	RGS	AX-43052	AE-43052	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
I-264	3/4"	2/C #16TSH	RGS	RIO-WQTH	AX-43053	AI-43053
I-265	3/4"	MANF. PROV. CABLE	RGS	AX-43053	AE-43053	
I-266	3/4"	2/C #16TSH	RGS	RIO-MCC-2A	FIT-45001	FI-45001
I-267	1 1/2"	2/C 4#16TSH	PVC COATED RGS	RIO-CHEM-A	LCS-51000	LI-51011, LI-51021, LI-51031, LI-51041
I-268	3/4"	2/C #16TSH	PVC COATED RGS	LCS-51000	LIT-51011	
I-269	3/4"	MANF. PROV. CABLE	PVC COATED RGS	LIT-51011	LI-51011	
I-270	3/4"	2/C #16TSH	PVC COATED RGS	LCS-51000	LIT-51021	
I-271	3/4"	MANF. PROV. CABLE	PVC COATED RGS	LIT-51021	LI-51021	
I-272	3/4"	2/C #16TSH	PVC COATED RGS	LCS-51000	LIT-51031	
I-273	3/4"	MANF. PROV. CABLE	PVC COATED RGS	LIT-51031	LI-51031	
I-274	3/4"	2/C #16TSH	PVC COATED RGS	LCS-51000	LIT-51041	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
I-275	3/4"	MANF. PROV. CABLE	PVC COATED RGS	LIT-51041	LI-51041	
I-276	3/4"	2/C #16TSH	PVC COATED RGS	RIO-CHEM-A	LIT-51111	LI-51111
I-277	1"	2/C 2#16TSH	PVC COATED RGS	RIO-CHEM-A	P-51120	SI-51120, SC-51120
I-278	1"	2/C 2#16TSH	PVC COATED RGS	RIO-CHEM-A	P-51130	SI-51130, SC-51130
I-279	1"	2/C 2#16TSH	PVC COATED RGS	RIO-CHEM-A	P-51140	SI-51140, SC-51140
I-280	1"	2/C 2#16TSH	PVC COATED RGS	RIO-CHEM-A	P-51150	SI-51150, SC-51150
I-281	1"	2/C 2#16TSH	PVC SCHEDULE 80	RIO-CHEM-B	LCS-52000	LI-52011, LI-52021
I-282	3/4"	2/C #16TSH	PVC SCHEDULE 80	LCS-52000	LIT-52011	
I-283	3/4"	MANF. PROV. CABLE	PVC SCHEDULE 80	LIT-52011	LI-52011	
I-284	3/4"	2/C #16TSH	PVC SCHEDULE 80	LCS-52000	LIT-52021	
I-285	3/4"	MANF. PROV. CABLE	PVC SCHEDULE 80	LIT-52021	LI-52021	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
I-286	3/4"	2/C #16TSH	PVC SCHEDULE 80	RIO-CHEM-B	LIT-52111	LI-52111
I-287	1"	2/C 2#16TSH	PVC SCHEDULE 80	RIO-CHEM-B	P-52120	SI-52120, SC-52120
I-288	1"	2/C 2#16TSH	PVC SCHEDULE 80	RIO-CHEM-B	P-52130	SI-52130, SC-52130
I-289	1"	2/C 2#16TSH	PVC SCHEDULE 80	RIO-CHEM-B	P-52140	SI-52140, SC-52140
I-290	1"	2/C 2#16TSH	PVC SCHEDULE 80	RIO-CHEM-B	P-52150	SI-52150, SC-52150
I-291	3/4"	2/C #16TSH	PVC SCHEDULE 80	RIO-CHEM-B	LIT-52116	LI-52116
I-292	1"	2/C 2#16TSH	PVC SCHEDULE 80	RIO-CHEM-B	P-52160	SI-52160, SC-52160
I-293	1"	2/C 2#16TSH	PVC SCHEDULE 80	RIO-CHEM-B	P-52170	SI-52170, SC-52170
I-294	1"	2/C 2#16TSH	PVC SCHEDULE 80	RIO-CHEM-B	P-52180	SI-52180, SC-52180
I-295	1"	2/C 2#16TSH	PVC SCHEDULE 80	RIO-CHEM-B	P-52190	SI-52190, SC-52190
I-296	1"	2/C 2#16TSH	PVC SCHEDULE 80	RIO-CHEM-C	LCS-53000	LI-53011, LI-53021

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
I-297	3/4"	2/C #16TSH	PVC SCHEDULE 80	LCS-53000	LIT-53011	
I-298	3/4"	MANF. PROV. CABLE	PVC SCHEDULE 80	LIT-53011	LI-53011	
I-299	3/4"	2/C #16TSH	PVC SCHEDULE 80	LCS-53000	LIT-53021	
I-300	3/4"	MANF. PROV. CABLE	PVC SCHEDULE 80	LIT-53021	LI-53021	
I-301	3/4"	2/C #16TSH	PVC SCHEDULE 80	RIO-CHEM-C	LIT-53111	LI-53111
I-302	1"	2/C 2#16TSH	PVC SCHEDULE 80	RIO-CHEM-C	P-53120	SI-53120, SC-53120
I-303	1"	2/C 2#16TSH	PVC SCHEDULE 80	RIO-CHEM-C	P-53130	SI-53130, SC-53130
I-304	1"	2/C 2#16TSH	PVC SCHEDULE 80	RIO-CHEM-C	P-53140	SI-53140, SC-53140
I-305	1"	2/C 2#16TSH	PVC SCHEDULE 80	RIO-CHEM-C	P-53150	SI-53150, SC-53150
I-306	1 1/2"	2/C 5#16TSH	PVC SCHEDULE 80	RIO-CHEM-A	LCS-54000	LI-54011, LI-54021, LI-54031, LI-54041, LI-54051
I-307	3/4"	2/C #16TSH	PVC SCHEDULE 80	LCS-54000	LIT-54011	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
I-308	3/4"	MANF. PROV. CABLE	PVC SCHEDULE 80	LIT-54011	LI-54011	
I-309	3/4"	2/C #16TSH	PVC SCHEDULE 80	LCS-54000	LIT-54021	
I-310	3/4"	MANF. PROV. CABLE	PVC SCHEDULE 80	LIT-54021	LI-54021	
I-311	3/4"	2/C #16TSH	PVC SCHEDULE 80	LCS-54000	LIT-54031	
I-312	3/4"	MANF. PROV. CABLE	PVC SCHEDULE 80	LIT-54031	LI-54031	
I-313	3/4"	2/C #16TSH	PVC SCHEDULE 80	LCS-54000	LIT-54041	
I-314	3/4"	MANF. PROV. CABLE	PVC SCHEDULE 80	LIT-54041	LI-54041	
I-315	3/4"	2/C #16TSH	PVC SCHEDULE 80	LCS-54000	LIT-54051	
I-316	3/4"	MANF. PROV. CABLE	PVC SCHEDULE 80	LIT-54051	LI-54051	
I-317	3/4"	2/C #16TSH	PVC SCHEDULE 80	RIO-CHEM-A	LIT-54111	LI-54111
I-318	1"	2/C 2#16TSH	PVC SCHEDULE 80	RIO-CHEM-A	P-54120	SI-54120, SC-54120

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
I-319	1"	2/C 2#16TSH	PVC SCHEDULE 80	RIO-CHEM-A	P-54130	SI-54130, SC-54130
I-320	1"	2/C 2#16TSH	PVC SCHEDULE 80	RIO-CHEM-A	P-54140	SI-54140, SC-54140
I-321	1"	2/C 2#16TSH	PVC SCHEDULE 80	RIO-CHEM-A	P-54150	SI-54150, SC-54150
I-322	3/4"	2/C #16TSH	PVC COATED RGS	RIO-CHEM-B	WIT-55111	WI-55111
I-323	3/4"	MANF. PROV. CABLE	PVC COATED RGS	WIT-55111	WE-55111	
I-324	3/4"	2/C #16TSH	PVC COATED RGS	RIO-CHEM-B	WIT-55116	WI-55116
I-325	3/4"	MANF. PROV. CABLE	PVC COATED RGS	WIT-55116	WE-55116	
I-326	1"	2/C 2#16TSH	PVC COATED RGS	RIO-CHEM-B	SKID-55120	SI-55120, SC-55120
I-327	1"	2/C 2#16TSH	PVC COATED RGS	RIO-CHEM-B	SKID-55130	SI-55130, SC-55130
I-328	1"	2/C 2#16TSH	PVC COATED RGS	RIO-CHEM-C	LCS-56000	LI-56011, LI-56021
I-329	3/4"	2/C #16TSH	PVC COATED RGS	LCS-56000	LIT-56011	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
I-330	3/4"	MANF. PROV. CABLE	PVC COATED RGS	LIT-56011	LI-56011	
I-331	3/4"	2/C #16TSH	PVC COATED RGS	LCS-56000	LIT-56021	
I-332	3/4"	MANF. PROV. CABLE	PVC COATED RGS	LIT-56021	LI-56021	
I-333	3/4"	2/C #16TSH	PVC COATED RGS	RIO-CHEM-C	LIT-56111	LI-56111
I-334	1"	2/C 2#16TSH	PVC COATED RGS	RIO-CHEM-C	SKID-56120	SI-56120, SC-56120
I-335	1"	2/C 2#16TSH	PVC COATED RGS	RIO-CHEM-C	SKID-56130	SI-56130, SC-56130
I-336	3/4"	2/C #16TSH	RGS	DDC-04	VFD-EF-01	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
I-337	3/4"	2/C #16TSH	RGS	DDC-04	VFD-EF-02	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
I-338	3/4"	2/C #16TSH	RGS	DDC-04	VFD-EF-03	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
I-339	3/4"	2/C #16TSH	RGS	DDC-04	VFD-EF-04	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
I-340	3/4"	2/C #16TSH	RGS	DDC-04	VFD-EF-05	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
I-341	3/4"	2/C #16TSH	RGS	DDC-01	VFD-EF-06	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
I-342	3/4"	2/C #16TSH	RGS	DDC-01	VFD-EF-07	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
I-343	3/4"	2/C #16TSH	RGS	DDC-01	VFD-EF-08	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
I-344	3/4"	2/C #16TSH	RGS	DDC-02	VFD-EF-09	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
I-344.1	1"	2/C #16TSH	PVC SCHEDULE 40	TREATMENT BUILDING	METER CHAMBER	
DWB & WWT C&C						
I-345	1"	SINGLE MODE FIBER	RGS	ELECTRICAL SYSTEM MONITORING	MCC-4	JI-70541, JI-70542
I-345.1	1"	2/C 2#16TSH	RGS	VFD-60140	LCS-60140	
I-346	3/4"	2/C #16TSH	RGS	RIO-RESIDUALS	LIT-60111	LI-60111
I-346.1	1"	2/C 2#16TSH	RGS	VFD-60160	LCS-60160	
I-347	3/4"	2/C #16TSH	RGS	RIO-RESIDUALS	LIT-60121	LI-60121
I-348	3/4"	2/C #16TSH	RGS	RIO-RESIDUALS	AIT-60203	AI-60203
I-349	3/4"	MANF. PROV. CABLE	RGS	AIT-60203	AE-60203	
I-350	3/4"	2/C #16TSH	RGS	RIO-RESIDUALS	AIT-60204	AI-60204
I-351	3/4"	MANF. PROV. CABLE	RGS	AIT-60204	AE-60204	

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
I-352	3/4"	2/C #16TSH	RGS	CENT-60210	FIT-60201	
I-353	3/4"	MANF. PROV. CABLE	RGS	FIT-60201	FE-60201	
I-354	3/4"	2/C #16TSH	RGS	CENT-60220	FIT-60202	
I-355	3/4"	MANF. PROV. CABLE	RGS	FIT-60202	FE-60202	
I-356	3/4"	2/C #16TSH	RGS	RIO-RESIDUALS	WIT-60421	WI-60421
I-357	3/4"	MANF. PROV. CABLE	RGS	WIT-60421	WE-60421	
I-358	3/4"	2/C #16TSH	RGS	RIO-RESIDUALS	WIT-60461	WI-60421
I-359	3/4"	MANF. PROV. CABLE	RGS	WIT-60461	WE-60461	
I-360	1"	2/C 2#16TSH	RGS	RIO-RESIDUALS	SKID-60430	SI-60430, SC-60430
I-361	1"	2/C 2#16TSH	RGS	RIO-RESIDUALS	SKID-60470	SI-60470, SC-60470
I-362	3/4"	2/C #16TSH	RGS	RIO-RESIDUALS	LIT-60501	LI-60501
I-363	1"	2/C 2#16TSH	RGS	RIO-RESIDUALS	VFD-60510	SI-60510, SC-60510
I-364	1"	2/C 2#16TSH	RGS	VFD-60510	LCS-60510	
I-365	1"	2/C 2#16TSH	RGS	RIO-RESIDUALS	VFD-60520	SI-60520, SC-60520

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
I-366	1"	2/C 2#16TSH	RGS	VFD-60520	LCS-60520	
I-367	3/4"	2/C #16TSH	RGS	RIO-DAF-A2	PIT-46003	PI-46003
I-368	3/4"	2/C #16TSH	RGS	RIO-DAF-A2	AIT-46004	AI-46004
I-369	3/4"	MANF. PROV. CABLE	RGS	AIT-46004	AE-46004	
I-369.1	2"	2/C 10#16TSH	RGS	DEWATERING BUILDING	WASTE WASHWATER TANK (WWT)	VIA DB-24 (I-370, I-372, I-374, I-375, I-376, I-378)
I-370	1"	2/C 2#16TSH	PVC COATED RGS	RIO-RESIDUALS	VFD-46010	SI-46010, SC-46010
I-371	1"	2/C 2#16TSH	PVC COATED RGS	VFD-46010	LCS-46010	
I-372	1"	2/C 2#16TSH	PVC COATED RGS	RIO-RESIDUALS	VFD-46020	SI-46020, SC-46020
I-373	1"	2/C 2#16TSH	PVC COATED RGS	VFD-46020	LCS-46020	
I-374	1"	2/C #16TSH	PVC COATED RGS	RIO-RESIDUALS	LIT-46011	LI-46011
I-375	1"	2/C #16TSH	PVC COATED RGS	RIO-RESIDUALS	LIT-46021	LI-46021
I-376	1"	2/C 2#16TSH	PVC COATED RGS	RIO-RESIDUALS	VFD-46030	SI-46030, SC-46030

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
I-377	1"	2/C 2#16TSH	PVC COATED RGS	VFD-46030	LCS-46030	
I-378	1"	2/C 2#16TSH	PVC COATED RGS	RIO-RESIDUALS	VFD-46040	SI-46040, SC-46040
I-379	1"	2/C 2#16TSH	PVC COATED RGS	VFD-46040	LCS-46040	
I-380	3/4"	2/C #16TSH	RGS	RIO-DAF-A2	FIT-46001	FI-46001
I-381	3/4"	MANF. PROV. CABLE	RGS	FIT-46001	FE-46001	
I-382	1"	2/C 2#16TSH	RGS	RIO-DAF-A2	FCV-46001	ZC-46001, ZI-46001
I-383	3/4"	2/C #16TSH	RGS	RIO-DAF-B2	FIT-46002	FI-46002
I-384	3/4"	MANF. PROV. CABLE	RGS	FIT-46002	FE-46002	
I-385	1"	2/C 2#16TSH	RGS	RIO-DAF-B2	FCV-46002	ZC-46002, ZI-46002
I-386	3/4"	2/C #16TSH	RGS	RIO-DAF-A2	FIT-60504	FI-60504
I-387	3/4"	MANF. PROV. CABLE	RGS	FIT-60504	FE-60504	
I-388	1"	2/C 2#16TSH	RGS	RIO-DAF-A2	FCV-60504	ZC-60504, ZI-60504
I-389	1"	2/C #16TSH	RGS	RIO-DAF-A2	AIT-60506	AI-60506

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
I-390	3/4"	MANF. PROV. CABLE	RGS	AIT-60506	AE-60506	
I-391	3/4"	2/C #16TSH	RGS	RIO-DAF-B2	FIT-60505	FI-60505
I-392	3/4"	MANF. PROV. CABLE	RGS	FIT-60505	FE-60505	
I-393	1"	2/C 2#16TSH	RGS	RIO-DAF-B2	FCV-60505	ZC-60505, ZI-60505
I-394	3/4"	2/C #16TSH	RGS	DDC-08	VFD-EF-13	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
I-395	3/4"	2/C #16TSH	RGS	DDC-08	VFD-EF-14	REFER TO H-DRAWINGS (DWG H-003) FOR BLOCK DIAGRAMS
BACKWASH FACILITY C&C						
I-396	1"	2/C 2#16TSH	RGS	PLC-CLEARWELL-CP	FCV-81040	ZC-81040, ZI-81040
I-397	3/4"	2/C #16TSH	RGS	PLC-CLEARWELL-CP	FIT-81060	FI-81060
I-398	3/4"	MANF. PROV. CABLE	RGS	FIT-81060	FE-81060	
I-399	1"	2/C 2#16TSH	RGS	PLC-CLEARWELL-CP	FCV-81060	ZC-81060, ZI-81060
I-400	1"	2/C 2#16TSH	RGS	PLC-CLEARWELL-CP	P-70360	SI-70360, SC-70360
I-401	1"	2/C 2#16TSH	RGS	PLC-CLEARWELL-CP	P-70370	SI-70370, SC-70370
I-402	3/4"	2/C #16TSH	RGS	PLC-CLEARWELL-CP	WIT-70352	WI-TBD

CABLE AND CONDUIT SCHEDULE - WEST PARISH WTF						
CONDUIT NO.	SIZE	CABLE	CONDUIT TYPE	FROM	TO	REMARKS
I-403	3/4"	MANF. PROV. CABLE	RGS	WIT-70352	WE-70352	

END OF SECTION

Attachment J – 25 50 00 Lighting 2.02G

G. Fixtures shall be as specified in the schedule below²³

Fixture Type	Fixture Wattage	Description	Basis of Design Mfr. and Model
LC1/ LP1/ LW1	67W (max)	Ceiling/Pendant/Wall-mounted (as indicated on the Drawings), 120-277VAC, LED light fixture, color temperature of 4000K, lineal ribbed frosted polycarbonate lens, medium distribution, gasketed frosted polycarbonate housing, stainless steel latches, 54-inch, 8000 lumen minimum. Wet location Listed. Mount LP1/LW1 9'-0" AFF unless otherwise noted on drawings.	Holophane EVT4 LED Series, or engineer approved equal.
LP2	49W (max)	Ceiling/Pendant/Wall-mounted (as indicated on the Drawings), 120-277VAC, LED light fixture, color temperature of 4000K, lineal ribbed frosted polycarbonate lens, wide distribution, gasketed frosted polycarbonate housing, stainless steel latches, 54-inch, 6000 lumen minimum. Wet location Listed. Mount LP2 12'-0" AFF.	Holophane EVT4 LED Series, or engineer approved equal.
LW2	71W (max)	Wall-mounted, 120-277VAC, full-cutoff LED light fixture, color temperature of 3000K, IESNA Type 3 Medium distribution, bronze A360-cast aluminum housing, 'P30' LED package, 7800 lumen minimum, and wet location Listed. Mount LW2 9'-0" AFF unless otherwise noted on drawings.	Holophane HLWPC2 Series, or engineer approved equal.
LW3	72W (max)	Wall-mounted, 120-277VAC, LED light fixture, color temperature of 4000K, prismatic borosilicate glass lens, IESNA Type III Medium distribution, gray die-cast aluminum housing, 8500 lumen minimum, and wet location Listed. Mount LW3 10'-0" AFF unless otherwise noted on drawings.	Holophane WCNG WallConnect LED, or engineer approved equal.
LW4	74W (max)	Wall-mounted with 35° universal arm mount, 120-277VAC, LED light fixture, color temperature of 4000K, 80 CRI, prismatic borosilicate frosted glass lens, wide distribution with upright, corrosion-resistant gray cast aluminum housing, 10000 lumen minimum, and wet location listed. Mount LW4 10'-0" AFF unless otherwise noted on drawings.	Holophane Petrolux PXLW Series, or engineer approved equal.
LC4/ LP4	74W (max)	Ceiling/Pendant-mounted, 120-277VAC, LED light fixture, color temperature of 4000K, 80 CRI, prismatic borosilicate glass lens, wide distribution with upright, corrosion-resistant gray cast aluminum housing, 10000 lumen minimum, and wet location listed. Mount LP4 12'-0" AFF unless otherwise noted on drawings.	Holophane Petrolux PXLW Series, or engineer approved equal.

2 Addendum No.3

3 Addendum No.12

Fixture Type	Fixture Wattage	Description	Basis of Design Mfr. and Model
LC5/ LP5	100W (max)	Ceiling/Pendant-Mounted, 120-277VAC, LED light fixture, color temperature of 4000K, 80 CRI, frosted, prismatic borosilicate glass lens, medium Distribution, gray cast aluminum housing, 12,000 lumen minimum, (Pendant mount) - furnish with hook and cord, L5-15P plug, and L5-15R receptacle, damp location listed. Mount LP5 15'-6" AFF to bottom of fixture unless otherwise noted on drawings.	Holophane Phuzion PHZ Series, or engineer approved equal.
LW6	83W (max)	Wall-mounted with 35° universal arm mount, 120-277VAC, LED light fixture, color temperature of 4000K, 80 CRI, prismatic borosilicate frosted glass lens, medium distribution <u>with</u> upright, corrosion-resistant gray cast aluminum housing, 12,000 lumen minimum, and wet location Listed. Mount LW6 13'-6" AFF unless otherwise noted on drawings.	Holophane Petrolux PXHW Series, or engineer approved equal.
LW7	86W (max)	Wall mounted recessed LED pool/basin light fixture, suitable for underwater mounting, 120VAC, housing and door shall be heavy wall cast bronze construction, all hardware and niche to be stainless steel, cord to be submersible rated, provided with temperature sensing low water cut off, color temperature of 4100K, warm white, convex linear spread lens, wide flood distribution, 8700 lumen minimum, IP 68 rated up to three meters. Mount LW7 14'-0" above tank bottom.	Hydrel 4426 series, or engineer approved equal
LR1	15.9W (max)	Recessed troffer 120-277VAC, 2ft x 2ft LED light fixture, 3000K color temperature, 80CRI, 2000 lumen minimum, cold rolled steel, pre-painted housing, ribbed reflector, acrylic linear prismatic diffuser.	Lithonia 2VTL2 Series, or engineer approved equal.
LR2	23.2W (max)	Recessed troffer 120-277VAC, 2ft x 4ft LED light fixture, 3000K color temperature, 80CRI, 3200 lumen minimum, cold rolled steel, pre-painted housing, ribbed reflector, acrylic linear prismatic diffuser.	Lithonia 2VTL4 Series, or engineer approved equal.
LR3	27.7W (max)	Recessed troffer 120-277VAC, 2ft x 2ft LED light fixture, 35K/40K/50K switchable white color temperature, 80CRI, switchable 2500LM, 3200LM, 4000LM lumen output, cold rolled steel, pre-painted housing, ribbed reflector, satin white lens.	Lithonia CPX LED Switchable Series, or engineer approved equal.
LR4	8W (max)	Ceiling mounted LED light fixture, 120-277VAC with 0-10V dimming, color temperature of 3000K, 80 CRI, diffuse lens, aluminum frame with white finish with white flange, hyperbolic medium trim, 800 lumen minimum.	Indy LLP4 Series, or engineer approved equal.

Fixture Type	Fixture Wattage	Description	Basis of Design Mfr. and Model
LR5	15W (max)	Ceiling (junction box) mounted LED light fixture, 120VAC, color temperature of 3000K, 90 CRI, diffuse lens, tapered surface/box mount disc fixture, aluminum frame with white finish, 990 lumen minimum. ELECTRICAL SUBCONTRACTOR shall install per manufacturer requirements when located in wet locations such as restrooms or shower areas.	Juno SlimBasics JSBT Series, or approved equal.
LC6	6W per linear foot (max)	Ceiling mounted linear LED light fixture, Length as indicated on drawings, 120-277VAC, color temperature of 3000K, 80CRI, frosted clear acrylic lens, medium distribution, aluminum frame, architect selected finish, 600 lumen per linear foot minimum	Mark Architectural Lighting Slot 2 S2SD Series, or engineer approved equal.
LR6	5W (max)	Cove mounted linear LED light fixture, 1'-0" Length, 120-277VAC, color temperature of 3000K-5000K tunable white, 80CRI, frosted clear acrylic lens, wall wash distribution, aluminum frame with white finish, 600 lumen per linear foot minimum	Mark Architectural Lighting MKS101 Series, or engineer approved equal.
LR6A	14W (max)	Cove mounted linear LED light fixture, 1'-0" Length, 120-277VAC, color temperature of 3000K-5000K tunable white, 80CRI, frosted clear acrylic lens, wall 40x60, aluminum frame with white finish, 250 lumen per linear foot minimum	Mark Architectural Lighting MKS101 Series, or engineer approved equal.
LC7	6W per linear foot (max)	Ceiling mounted linear LED light fixture, Length as indicated on drawings, 120-277VAC, color temperature of 3000K, 80CRI, frosted clear acrylic lens, medium distribution, aluminum frame, architect selected finish, 600 lumen per linear foot minimum	Mark Architectural Lighting Slot 2 S2SD Series, or engineer approved equal.
LR7	32W (max)	Cove mounted linear LED light fixture, 4'-0" Length, 120-277VAC, color temperature of 3000K, 80CRI, frosted clear acrylic lens, wall wash distribution, aluminum frame with white finish, 600 lumen per linear foot minimum	Mark Architectural Lighting MKS101 Series, or engineer approved equal.
LR7A	14W (max)	Cove mounted linear LED light fixture, 4'-0" Length, 120-277VAC, color temperature of 3000K, 80CRI, frosted clear acrylic lens, 40x60 distribution, aluminum frame with white finish, 250 lumen per linear foot minimum	Mark Architectural Lighting MKS101 Series, or engineer approved equal.
LP8	15W (max)	Pendant-mounted, 120-277VAC, LED light fixture, tube style decorative architectural fixture, color temperature 3000K, 80CRI, 1.5" diameter, 30" fixture length with an overall height including power cable 8'-0", clear silver aluminum gasketed housing,	Camman P8700 Tano Series, or engineer approved equal

Fixture Type	Fixture Wattage	Description	Basis of Design Mfr. and Model
LW8	37W (max)	Wall (yoke) mounted, 120-277VAC, LED light fixture, color temperature of 3000K, prismatic borosilicate glass lens, wide flood, 6x6 distribution, 5500 lumen minimum, bronze die cast aluminum housing, wet location Listed. Furnish and install fixture on equipment screening Pole. Mount LW8 7'-0" AFF.	Holophane Predator PSLED Series, or engineer approved equal.
LP9	15W (max)	Pendant-mounted, 120-277VAC, LED light fixture, tube style decorative architectural fixture, color temperature 3000K, 80CRI, 1.5" diameter, 30" fixture length with an overall height including power cable 9'-0", clear silver aluminum gasketed housing.	Camman P8700 Tano Series, or engineer approved equal
LW9	20W (max)	Wall-mounted, 120-277VAC, LED light fixture, Jelly Jar style vapor tight industrial fixture, color temperature 4000K, 80CRI, frosted clear glass lens with wire guard, medium distribution, corrosion-resistant gray cast aluminum housing, 1500 lumen minimum, wet location listed.	Lithonia Vapor Tight series or engineer approved equal
LC10	4.8W per linear foot (max)	Ceiling-mounted, 120-277VAC, linear LED light fixture, length as indicated on drawings, direct standard output, color temperature 3000k, aluminum frame with bronze finish, 533 lumen per linear foot minimum, and wet location Listed. Manufacturer shall furnish wiring drawings.	ALight Lino series LIN 3SP. or engineer approved equal
LP10	15W (max)	Pendant-mounted, 120-277VAC, LED light fixture, tube style decorative architectural fixture, color temperature 3000K, 80CRI, 1.5" diameter, 30" fixture length with an overall height including power cable 10'-0", clear silver aluminum gasketed housing,	Camman P8700 Tano Series, or engineer approved equal
LW10	3W per linear foot (max)	Wall mounted linear LED light fixture, 6'-9" Length, 120VAC, color temperature of 3000K , static white high-efficacy, optimal illumination, furnish with standard and clear endcaps as required for continuous illumination, encapsulated translucent lens, , aluminum frame with bronze finish, black wire color, 283 lumen per linear foot minimum Mount LW10 above sign with 90 degree mounting arm. Wet location listed.	QTL VERS-ENCAPSULATED (06) series, or engineer approved equal
LP11	15W (max)	Pendant-mounted, 120-277VAC, LED light fixture, tube style decorative architectural fixture, color temperature 3000K, 80CRI, 1.5" diameter, 30" fixture length with an overall height including power cable 11'-0", clear silver aluminum gasketed housing.	Camman P8700 Tano Series, or engineer approved equal

Fixture Type	Fixture Wattage	Description	Basis of Design Mfr. and Model
LP12	40W (max)	Pendant mounted linear LED light fixture, 4'-0" Length, 120VAC, color temperature of 3000K, 80CRI, frosted clear acrylic lens, direct distribution, aluminum frame with white finish, 400 lumen per linear foot minimum. Mount LP12 10'-0" to bottom of fixture.	Peerless Round 4 RD4MS Series, or engineer approved equal
LB1	65W (max)	Base-mounted 7'-0" away from flagpole, MVOLT, LED flagpole light fixture, specialty architectural flood, color temperature 3000K, 80CRI, clear watershed lens, 20 deg distribution, bronze aluminum housing, pole with knuckle mount, 8330 lumen minimum. Wet location Listed	Hydrel SAF14 LED series, or engineer approved equal
LB2	11W (max)	Base-mounted, 120VAC, LED sign light fixture, specialty architectural flood, color temperature 3000K, 80CRI, clear watershed lens, 45 deg distribution, bronze aluminum housing, pole with knuckle mount, 600 lumen minimum. Wet location Listed	Hydrel ASPEN series, or engineer approved equal
LL1	74W (max)	Pole-mounted, 120-277VAC, LED light fixture, color temperature of 3000K, 80 CRI, prismatic borosilicate glass lens, forward throw, corrosion-resistant gray cast aluminum housing, gray upright shield, 10,000 lumen minimum, and wet location Listed. Furnish and install fixture on Pole Type C, reference Pole Schedule.	Holophane Petrolux PXLW Series, or engineer approved equal.
LL1A	74W (max)	Pole-mounted, 120-277VAC, LED light fixture, color temperature of 3000K, 80 CRI, prismatic borosilicate glass lens, medium distribution, corrosion-resistant gray cast aluminum housing, gray upright shield, 10,000 lumen minimum, and wet location Listed. Furnish and install fixture on Pole Type B, reference Pole Schedule.	Holophane Petrolux PXLW Series, or engineer approved equal.
LL2	74W (max)	Pole-mounted with 35° universal arm mount, 120-277VAC, LED light fixture, color temperature of 4000K, 80 CRI, prismatic borosilicate glass lens, wide distribution, corrosion-resistant gray cast aluminum housing, gray upright shield, 10,000 lumen minimum, and wet location Listed. Furnish and install fixture on Pole Type B, reference Pole Schedule.	Holophane Petrolux PXLW Series, or engineer approved equal.
LL3	67W (max)	Pole-mounted, 120-277VAC, full-cutoff LED light fixture, color temperature of 3000K, IESNA roadway Type 3 distribution, bronze die cast aluminum housing, 10,500 lumen minimum, house-side shield, wet location Listed. Furnish and install fixture on Pole Type A, reference Pole Schedule.	AEL Autobahn ATB0 Series, or Engineer approved equal.

Fixture Type	Fixture Wattage	Description	Basis of Design Mfr. and Model
XW1/ XC1	5W (sign)	Wall/ceiling mounted, red LED exit sign, 120/277VAC, black die cast aluminum housing, gasketed impact resistant polycarbonate cover, brushed aluminum stencil with field-selectable chevrons, single/double face as indicated on the drawings, brownout and surge protected, wet location Listed. Mount XW1 0'-6" above door.	Holophane DeLeon DLT LX Series, Chloride Hz Series or Emergilite IL Series.
XW3/ XC3	5W (sign)	Wall/ceiling mounted, red LED exit sign, 120/277VAC, extruded brushed aluminum finish, clear acrylic panels, red letters on mirrored panel, field-selectable chevrons, single/double face as indicated on the drawings, brownout and surge protected, damp location Listed. Mount XW3 0'-6" above door.	Lithonia EDG/EDGR Series, or Engineer approved equal.

Attachment K – 31 23 19 Dewatering

SECTION 31 23 19

DEWATERING^{1,2}

PART 1 – GENERAL

1.01 GENERAL PROVISIONS

- A. General provisions of Contract, including GENERAL and SUPPLEMENTARY CONDITIONS, GENERAL REQUIREMENTS (if any), apply to work specified in this Section.
- B. The Contractor shall coordinate Work with that of all other trades or contracts affecting or affected by Work of this Section. Cooperate with such trades to assure the steady progress of all Work under the Contract.

1.02 DESCRIPTION OF WORK

- A. Work by the Contractor includes providing design, labor, materials and equipment necessary to control, manage and dispose of groundwater during construction, including but not limited to the following:
 - 1. Designing, furnishing, installing, operating, monitoring, maintaining, and removing temporary dewatering systems as necessary to control water levels and hydrostatic pressures during construction, control bottom of excavation stability from heaving and piping, and to permit construction to occur “in the dry” and maintain stable subgrades.
 - 2. Providing, maintaining, and removing temporary surface control devices used to direct surface water runoff away from excavations or other prepared subgrades.
 - 3. Monitoring groundwater levels and monitoring the performance of dewatering systems.
 - 4. Obtaining all required discharge permits, including preparing permits and permit fees.
 - 5. Properly disposing of all discharge water in accordance with permit requirements. Comply with applicable rules, regulations, laws, permits and ordinances of all authorities having jurisdiction including, but not limited to the West Parish Water Treatment Plant and the Massachusetts Department of Environmental Protection (MASSDEP). All labor, materials, equipment and services necessary to make work comply with such requirements shall be provided without additional cost to the Owner.
- B. The Contractor shall bear the cost of any replacement or rehabilitation of the subgrade or structures damaged due to dewatering, system failures, or Contractor negligence.

¹ Addendum No. 5

² Addendum No. 12

- C. The Contractor is responsible for determining the need and extent of required dewatering systems, sedimentation and dewatering techniques and controls that meet the requirements of the Project Permits and this Section. The anticipated locations where construction activities will require dewatering are provided below, but not limited to. The dewatering depths and locations are approximate and it is the Contractor's responsibility to review Project documents for depths and limits based on means and methods. The Drawings supersede references to dewatering locations and limits below.
1. Wash Water Tank: Groundwater was measured at about El. 443 feet and bottom of proposed tank foundation is El. 419.3 feet.
 2. Water Treatment Building: Groundwater in the vicinity was measured at about El. 455 feet and bottom of proposed foundation is as low as El. 450 feet.
 3. Raw Water Main: The new Raw Water Main parallels Granville Road on the south side of the Plant, bends north between the Clearwell Building and existing Slow Sand Filter No. 12&14, crosses Cook Brook, and heads north to the existing EDV Structure. The Raw Water Main is anticipated to be below groundwater near the Water Treatment Building, in proximity to Cook Brook, and where the pipe extends from Cook Brook to the EDV Structure.
 4. The Raw Water Main extends below Cook Brook. The Design team has anticipated the Contractor will divert the brook, in coordination with the temporary support of excavation, to complete the installation below Cook Brook.
- D. If wells or well points are to be used, they shall be designed by a Massachusetts registered Professional Engineer, installed with proper filter packs and developed by an experienced dewatering specialty contractor. Do not operate wells or well points such that fines are removed from the surrounding soils.
- E. Dewatering sumps shall operate through properly installed filter media so that fines are not pumped from areas surrounding the excavation. Discharge effluent shall be clear of sediment. Provide frac tanks, filter sacks, and whatever additional means are necessary to maintain sediment-free discharge.

1.03 RELATED WORK

- A. The following items are not included in this Section and will be performed under the designated Sections:
1. Section 31 20 00: EARTHWORK
 2. Section 31 50 00: SUPPORT OF EXCAVATION
 3. Section 31 25 00: EROSION AND SEDIMENTATION CONTROLS
 4. Section 31 52 01: DEWATERING AND FLOW DIVERSION FOR STREAMWORK

1.04 REGULATORY REQUIREMENTS

- A. Comply with all rules, regulations, laws, and ordinances of the Commonwealth of Massachusetts, City of Westfield, and of all other authorities having jurisdiction.

1.05 PERFORMANCE REQUIREMENTS

- A. Dewatering Performance: The Contractor shall design, furnish, install, test, operate, monitor, and maintain dewatering system of sufficient scope, size, and capacity to

control hydrostatic pressures and to lower, control, remove, and dispose of groundwater and permit excavation and construction to proceed on dry, stable subgrades.

1. Delegated Design: The Contractor shall design dewatering systems, including comprehensive engineering analysis by a qualified professional engineer, using accepted engineering practice and design criteria indicated herein. Design and shop drawings shall be stamped by a registered Professional Engineer licensed in the Commonwealth of Massachusetts.
2. West Parish Filter #2 Dam and West Parish Filter #3 Dam are located on the edges of the Work. Two vibrating wire piezometers will be installed by the Owner's Design Team adjacent/in each dam, with the intent of evaluating drawdown due to construction dewatering. Base line piezometer measurements at the wells will be collected prior to dewatering. The water levels within the two piezometers at each dam during dewatering operations shall not fluctuate by more than 2 feet when compared to base line measurements. If the water levels fluctuate more than 2 feet, the Contractor's dewatering design shall include provisions to rewater and or the dewatering shall be terminated, modified, and restarted.
3. The piezometer monitoring program will include water level alerts that will be sent to the Design Team, Owner and Contractor if the differential water levels are exceeded. In the event that an alert is sent, the Contractor shall visit the Site, modify and or abandon dewatering so that the piezometer measurements return to within 2 feet of base line measurements, and respond in writing to the alert within 6 hours of receiving the alert, no matter what day or time of day the alert is sent.
4. Groundwater shall be lowered to a minimum of 2 feet below bottom of excavations and deeper as necessary to perform the work in the "dry" and to maintain a firm and stable subgrade.
5. See Article 1.9 for deflection criteria of adjacent structures.
6. The Contractor shall continuously monitor and maintain dewatering operations to ensure erosion control, stability of excavations and constructed slopes, that excavation does not flood, and that damage to subgrades and permanent structures is prevented.
7. For wellpoints (or similar), the Contractor's dewatering system shall include redundant components such that if one pump or well becomes inoperable, a backup is available to maintain dewatered groundwater levels. The system shall include 100% standby power onsite throughout operation.
8. For wellpoints (or similar), the design shall include provisions to maintain the dewatering system without affecting the normal operation of the system.
9. Provide sufficient fuel to maintain a five-day supply onsite.
10. For dewatering greater than 5 feet of drawdown below static groundwater levels, the Contractor shall have onsite pipes and pumps of sufficient size and quantity to be able to flood the excavation within 12 hours in an emergency situation. Restoration of the working area shall be carried out by the Contractor at no

additional cost to the Owner.

11. For dewatering greater than 5 feet of drawdown below static groundwater levels, the Contractor's design engineer shall visit the Site, at a minimum, during the initial drawdown and the week following the initial drawdown to confirm the performance of the dewatering system. Any changes to the dewatering system shall be submitted via email to the Design Team for record.
 12. The Contractor shall prevent surface water from entering excavations by grading, dikes, or other means. Accomplish dewatering without damaging existing buildings, structures, and site improvements adjacent to excavation.
 13. The Contractor shall remove the dewatering system when no longer required for construction. If allowed in writing by the Owner, the dewatering system may also be properly abandoned (e.g., grouting well points). There is no guarantee the Owner will allow abandonment, depending on location and depth of system.
- B. The Contractor shall be solely responsible for any damage to adjacent buildings, dams, structures, utilities, and other facilities caused by the dewatering operations. Any damage caused by the dewatering operations shall be repaired at no additional cost to the Owner. Locate dewatering facilities where they will not interfere with existing utilities, facilities and/or construction Work to be done under this Contract.
- C. The Contractor shall provide adequate backup power to be able to operate the dewatering system through the duration of the work so that disturbance of utility or structure subgrade does not occur.

1.06 QUALIFICATIONS

- A. The dewatering Contractor shall submit adequate documentation (resumes, project descriptions, similar project contact information) prior to submission of the design submittal showing the following minimum qualifications:
1. Field personnel supervising the dewatering system installation, operation and maintenance has a minimum of 20 years of experience with similar types of groundwater control systems. Experience shall include project name, location, type of groundwater control system, type of soils, and depth of dewatering.
 2. Company has performed a minimum of 10 similar projects in the past 10 years. Similar projects must be in similar soils, used similar groundwater control systems, and have the same or deeper depth of dewatering.
 3. If the Contractor does not have personnel with the required groundwater control experience, they shall retain an experienced specialist to design and oversee the operation of the groundwater control facilities.
- B. The dewatering Engineer shall submit adequate documentation (resumes project descriptions, similar project contact information) showing the following minimum qualifications:
1. Professional Engineer stamping the dewatering system design has a minimum of 20 years of experience with similar types of groundwater control systems.

Experience shall include a minimum of 10 similar projects designed within the past 10 years, including project name, location, type of groundwater control system, type of soils, and depth of dewatering. Engineer shall be licensed in the Commonwealth of Massachusetts.

1.07 SUBMITTALS

- A. A mandatory Site meeting, or with the Owner's approval a conference call, with the Contractor, dewatering designer, ESS Engineer, Geotechnical Engineer, Earthwork Contractor, and Dewatering Engineer is required prior to submission of calculations or working drawings that include support of excavation systems and a dewatering drawdown of 5 feet or greater. The intent of the meeting is to coordinate the design components.
- B. See Article 1.06 for Qualification Submittal requirements.
- C. ^(OBJ) At least 14 days prior to the start of dewatering activities, the Contractor shall submit to Engineer for review a comprehensive submittal that addresses the items listed herein. Review of the submittal by the Engineer shall not relieve the Contractor of the responsibility to provide and safely complete the Work.
1. Dewatering system design and calculations stamped and signed by a licensed Professional Engineer, registered in the Commonwealth of Massachusetts, that includes:
 - a. Estimated drawdown and flow for the excavations.
 - b. Estimated groundwater drawdown and lowering below surrounding structures, including the existing dams, utilities and buildings, and estimated settlements.
 - c. Boundary conditions including Upper Lagoon and Cook Brook.
 - d. Minimum number, depth, and diameter of wells and pumps.
 - e. Well filter design.
 - f. Estimated soil properties.
 - g. Finite element seepage analysis estimating exit gradients, flow velocities, and flow rates for any dewatering drawdown greater than 10 feet.
 2. Dewatering system plans shall include:
 - a. Plan and Section drawings showing the arrangement, location and depths of the proposed dewatering system components, including observation wells, wellpoints, headers, sumps, ditches, and discharge lines, as necessary.
 - b. Locations and sizes of discharge pits and sedimentation removal details.
 - c. A complete description of the equipment and materials to be used and the procedures to be followed in installation, operation, maintenance and abandonment procedures in relation to the proposed sequence of excavation and method of earth support.
 3. The Contractor's Dewatering Plan shall include daily observation requirements, operation requirements, water quality testing and frequency for discharged water, and control procedures to be adopted if dewatering problems arise

4. Submit copies of all groundwater discharge permits or written approval obtained by the Contractor for proposed methods of discharge.
 6. Daily discharge rates and observation well readings (if wells are installed per design).
 6. Coordinate dewatering submittals with the excavation support submittals. Do not proceed with the installation of excavation support until submittals for dewatering and excavation support have been reviewed by the Engineer.
- D. At the completion of dewatering, submit the following:
1. Dewatering well removal records including date, well number, location, procedures and materials used.

1.08 PROJECT CONDITIONS

- A. The Contractor shall visit the site to review all details of the work and working conditions and to verify dimensions in the field. Notify the Engineer in writing of any discrepancy before performing any work.
- B. Consult official records of existing utilities and structures, both surface and subsurface, and their connection to be fully informed on all existing conditions and limitations as they apply to this work and its relation to other construction work.
- C. West Parish Filter #2 Dam and West Parish Filter #3 Dam are located on the edges of the Work and must be protected, including changes to seepage, settlement and / or slope stability. Inspection/Evaluation Reports of the two dams are listed under Section 01 11 00 and can be provided upon request.
- D. The Contractor shall protect existing utilities to remain within the work area.
- E. Notify the Engineer in writing if unexpected subsurface conditions are encountered.
- F. Project-Site Information: Geotechnical and environmental reports have been prepared for this Project and are available in the supplemental information that is made available for information only. The opinions expressed in the reports are those of the geotechnical engineer and environmental professional and represent interpretations of subsurface conditions, tests, and results of analyses conducted by geotechnical engineer and environmental professional. The Owner will not be responsible for interpretations or conclusions drawn from this data.
 1. After obtaining Owner's permission, the Contractor shall perform additional subsurface explorations deemed necessary at no expense to the Owner.
- G. As part of the dewatering design, obtain the data required to analyze the water and soil environment at the Site in order to assure that the material used for the dewatering systems will not erode, deteriorate, clog or otherwise hinder the system's performance during the period of the dewatering.
- H. Water level readings have been made in the explorations at times and under conditions

stated on the logs. Fluctuations in the level of the groundwater may occur due to variations in rainfall, temperature, and other factors occurring since the time measurements were made.

- I. The Contractor shall provide all conveyances (piping, hosing, or open channels) to convey dewatering effluent to discharge point. The use of existing drains, pipes, or open channels will not be permitted to be the Contractor's use for discharging dewatering effluent.

1.09 DEFLECTION MONITORING

- A. The Contractor shall install a survey monitoring system, consisting of an automated total station, that will survey existing buildings, dams, structures and site improvements located in proximity of the Work. See Specification 315000.
- B. The Contractor's dewatering design shall limit settlement and deflection of buildings, dams, structures and utilities within the limit of drawdown to ½ inch or less. If settlements or deflections of ½ inch or more are measured, the Contractor shall provide modification or other means of dewatering to limit any additional movement. The Owner's survey monitoring system will be basis of deflection monitoring. The Contractor may install a separate monitoring system at no additional cost to the Owner.

PART 2 – PRODUCTS

NOT APPLICABLE

PART 3 – EXECUTION

3.01 PREPARATION

- A. The Contractor shall protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by dewatering operations.
 1. Prevent surface water and subsurface or groundwater from entering excavations, from ponding on prepared subgrades, and from flooding site and surrounding area.
 2. Protect subgrades and foundation soils from softening and damage by rain or water accumulation.
- B. The Contractor shall install dewatering system to ensure minimum interference with roads, streets, walks, and other adjacent occupied and used facilities.
 1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by authorities having jurisdiction.
- C. The Contractor shall provide temporary grading to facilitate dewatering and control of surface water.

- D. The Contractor shall monitor dewatering systems continuously.
- E. The Contractor shall promptly repair damages to adjacent facilities caused by dewatering.
- F. The dewatering system design must be coordinated with the excavation support design.

3.02 INSTALLATION

- A. The Contractor shall install dewatering system utilizing wells, well points, or similar methods complete with pump equipment, standby power and pumps, filter material, valves, appurtenances, water disposal, and surface-water controls.
 - 1. Space well points or wells at intervals required to provide dewatering to the levels described herein.
 - 2. Use filters or other means to prevent pumping of fine sands or silts from the subsurface.
- B. Before excavating below groundwater level, place system into operation to lower water to specified levels (i.e., dewater ahead of the excavation). Operate system continuously until utilities, and structures have been constructed and fill / backfill materials have been placed or until dewatering is no longer required.
- C. The Contractor shall provide an adequate system to lower and control groundwater to permit excavation, construction of utilities and structures, and placement of fill materials on dry subgrades. Install sufficient dewatering equipment to drain water-bearing strata above and below bottom of excavations.
 - 1. Open-sump pumping that leads to loss of fines, soil piping, subgrade softening, and slope instability shall not be permitted. If damage to existing or new construction occurs due to loss of fines, soil piping, subgrade softening or slope instability, the Contractor will supply all materials, labor, and perform all repair Work to satisfaction of the Owner at no additional cost to the Owner.
- D. Provide standby equipment on site, installed and available for immediate operation, to maintain dewatering on continuous basis if any part of system becomes inadequate or fails. If dewatering requirements are not satisfactory due to inadequacy or failure of dewatering system, restore damaged structures and foundation soils at no additional expense to Owner.
 - 1. Remove dewatering system from Project site on completion of dewatering. Abandon wells in accordance with all laws, regulations, and permits.

3.03 DISPOSAL OF WATER

- A. The Contractor shall take all necessary precautions to prevent flow or seepage back into the excavation. The Contractor shall preclude the accidental discharge of fuel, oil, etc., in order to prevent adverse effects on groundwater quality.

- B. The Contractor shall dispose of water removed by dewatering in a manner that avoids endangering public health, property, and portions of work under construction or completed. Dispose of water and sediment in a manner that avoids inconvenience to others. Provide sumps, sedimentation tanks, and other flow-control devices as required by authorities having jurisdiction.
- C. All handling and disposal of groundwater shall be in accordance with the reviewed contractor submittals and permit stipulations obtained by the Contractor.
- D. If frac tanks and or filter sacks are required, the Contractor shall provide all necessary piping for discharge to the sediment removal system and specified discharge point at no additional cost to the Owner. The Contractor shall operate pumps and frac tanks in such a manner as to comply with the requirements of discharge permits. If necessary, the Contractor shall provide additional tanks and/or other mitigating measures at no additional cost to the Owner.
- E. Dewatering discharge shall be conducted in a manner that will not result in interference with other work or damage to adjacent properties, pavements and other surfaces, buildings, structures, utilities, and the environment.

3.04 FIELD QUALITY CONTROL

- A. The Contractor shall provide continual observation to ensure that subsurface soils are not being removed by the dewatering operation.

END OF SECTION

NO TEXT ON THIS PAGE

Attachment L – 31 50 00 Support of Excavation

SECTION 31 50 00
SUPPORT OF EXCAVATION^{1,2}

PART 1 – GENERAL

1.01 GENERAL

- A. General provisions of Contract, including GENERAL and SUPPLEMENTARY CONDITIONS, GENERAL REQUIREMENTS (if any), apply to work specified in this Section.
- B. The Contractor shall coordinate Work with that of all other trades or contracts affecting or affected by Work of this Section. Cooperate with such trades to assure the steady progress of all Work under the Contract.
- C. The Contractor shall be responsible for the design and construction of the temporary excavation support system, in accordance with the minimum design requirements specified herein and shown on the Contract Drawings.

1.02 DESCRIPTION OF WORK

- A. Temporary earth support systems shall be designed by the Contractor's engineer using normally accepted engineering parameters and design practices. The type of system shall be selected by the Contractor based on Site limitations, this Specification, and the recommendation of the design Engineer. It is the Contractor's responsibility to locate the earth support system such that it does not interfere or damage existing utilities, structures, or new construction.³
- B. Sheet pile walls are prohibited. Any deep foundation element of a temporary support of excavation must be drilled and not driven.
- C. The temporary earth support contractor shall coordinate with all other contractors onsite and the Owner, so as not to prohibit the functions of the facility, equipment, or other contractors. The Site has limited available area for storage, laydown, or maneuvering. No additional payment shall be made due to insufficient laydown, storage or maneuvering area. All Contractor's will have the opportunity to inspect the Site during bidding to view Site limitations. A non-mandatory pre-bid conference will be held.
- D. Support of excavation is anticipated to be required at the following areas, but not limited to the below. THE EXCAVATION DEPTHS ARE APPROXIMATE AND IT IS THE CONTRACTOR'S responsibility to review the project documents for excavation depths and

1 Addendum No. 5

2 Addendum No. 12

3 Addendum No.4

limits based on means and methods. The Drawings supersede references to excavation locations and limits below.

1. During demolition of the existing Slow Sand Filters to protect existing utilities and infrastructure. The existing Slow Sand Filter walls could be used as temporary earth support, provided they are adequately braced and that supporting calculations are provided to, and reviewed by the Owner and the Owner's Engineer. Available drawings of the existing Slow Sand Filters are listed under Section 01 11 00 and can be provided upon request.³
2. Raw Water Main installation. Excavations are up to about 23-feet deep.
 - a. The Raw Water Main will be installed adjacent to Existing Slow Sand Filters No. 12 and 14. The filter walls are unreinforced concrete from the 1920s and must be protected during excavation support installation and removal. Influence of the Slow Sand Filter foundations, if any, must be included in system design.
 - b. The Raw Water Main will cross below Cook Brook, requiring temporary dewatering (or diversion) and temporary excavation support. The Contractor is responsible for coordination of the temporary dewatering and excavation support such that flooding of the excavation does not occur. Repairs required due to flooding of the excavation shall be borne by the Contractor at no additional cost to the Owner.³
 - c. The Raw Water Main crosses an existing bedrock tunnel adjacent to the EDV Structure. Available drawings of the bedrock tunnel are listed under Section 01 11 00 and can be provided upon request. The Contractor is responsible for protection of the existing bedrock tunnel during construction. At the Contractor's discretion, and with the Owner's written permission, the Contractor may perform additional test pits and or test probes, at no additional cost to the Owner. Repairs to the bedrock tunnel caused by construction shall be repaired by the Contractor at no additional cost to the Owner.³
3. The temporary Treated Water Transmission Mains are approximately 30 feet below existing grade and within approximately 40 feet from the Upper Lagoon.
4. Treated Water Transmission Main installations. Excavations are up to approximately 40 feet below existing grade.
 - a. The Treated Water Transmission Main connecting to the existing transmission main at the north end of the site is approximately 35 feet away from Cook Brook and approximately 10 feet from the waste washwater tanks.
 - b. The Treated Water Transmission Main connecting to the existing transmission main at the east end of the site is approximately 200 feet away from the Upper Lagoon.
5. Wash Water Tank: Bottom of proposed footing is approximately 50 feet below existing grade.

6. Water Treatment Building: Bottom of proposed footing is approximately El. 450 feet, approximately 20 feet below existing grade.
 7. Tying new utilities into existing utilities to the east of the existing Rapid Sand Filter Building to limit excavations and protect existing utilities.
 8. New utilities deeper than about 6 feet, as needed to limit excavation limits and allow continued use of the facility and equipment.
 9. Other areas based on the Contractor's sequencing, means and methods, or other requirements.
- E. The work covered under this Section includes the Contractor to furnish all materials, labor, tools, equipment, and other incidental items for the safe and complete installation of earth support systems to be used.
 - F. Excavation support shall be sequenced so there is always access to the existing buildings and equipment, unless approved in writing by the owner.
 - G. Earth support systems shall be designed and installed in coordination with any required dewatering to all the Work to be performed in the dry.
 - H. The Contractor's work shall include the cost of any replacement or rehabilitation of the subgrade or structures damaged due to excavation support system failures or Contractor negligence.
 - I. The Contractor shall design and implement an automated deflection monitoring system to measure the performance and deflection of the earth support systems and existing buildings.

1.03 RELATED WORK

- A. Section 31 00 01 – EARTHWORK
- B. Section 31 23 19 – DEWATERING

1.04 DEFINITIONS AND REFERENCE STANDARDS

- A. Earth Support Systems (ESS): Earth support systems specified herein are systems required for temporary lateral earth support to protect the adjacent structures, roadways, and utilities. Elements for ESS could include soldier piles and lagging, soil nail wall, trench boxes, slide rail system, secant pile walls, tiebacks, wales, struts, rakers, or other options.
- B. Geotechnical Engineer: Consultant hired by the Owner for review of submittals required herein, and observation/documentation of installation, as applicable.
- C. ASTM: Specifications of the American Society for Testing and Materials.
- D. AWS: Standard Code for Welding in Building Construction, of the American Welding Society.

- E. AISC: Specification of the American Institute of Steel Construction.
- F. ACI: American Concrete Institute
- G. API: American Petroleum Institute
- H. PTI: Post-Tensioning Institute

1.05 QUALITY ASSURANCE

- A. The Contractor shall adhere to the applicable requirements of the Standard Specifications, OSHA Standards, and to all other applicable ordinances, codes, statutory rules and regulations of the Federal, State, and local authorities having jurisdiction.
- B. Observation and Testing: The Owner will retain a Geotechnical Engineer to perform on-site observation and to witness testing and installation of select ESS. The Geotechnical Engineer shall be provided sufficient notification and adequate opportunity to observe and document the work. The Contractor shall cooperate with the Geotechnical Engineer to provide access to the work for observation, measurements, and testing. Review by the Owner or Geotechnical Engineer shall not relieve the Contractor from their responsibility for performing the Work in accordance with the Contractor Documents. The services of the Owner's Geotechnical Engineer may include, but not be limited to the following:
 - 1. Observation and documentation during installation of ESS.
 - 2. Review of submittals/shop drawings for the ESS.
 - 3. The Geotechnical Engineer's presence does not include supervision or direction of the actual work by the Contractor, their employees or agents. Neither the presence of the Geotechnical Engineer, nor any observations and testing performed by them, shall excuse the Contractor from defects discovered in their work. The Geotechnical Engineer shall not be liable for any defects or failures in the Contractor's work.³
- C. The Contractor shall retain an independent testing agency to sample and test the temporary earth support system materials (e.g., concrete, shotcrete, mortar, grout, etc.). The testing agency's field representative taking the samples shall have at least three years of applicable experience. The Contractor shall provide access and such auxiliary personnel and services as needed to assist the testing agency to complete the work.
- D. All pressure gages, torque wrenches, and jacks employed in the testing and tensioning of ESS components (load tests, tie-back anchors, tie-rods, soil nails, etc.) shall be calibrated by an approved testing laboratory at the Contractor's expense. The Contractor shall submit a certificate of calibration which is dated within three months prior to use on this project.

1.06 QUALIFICATIONS

- A. The ESS Contractor shall submit adequate documentation (resumes, project

descriptions, similar project contact information) prior to submission of the design submittal showing the following minimum qualifications, subject to Owner approval:

1. Field personnel supervising the ESS system installation, operation and maintenance has a minimum of 20 years of experience with similar types of ESS systems. Experience shall include project name, location, type of ESS system, type of soils, and depth of excavation.
2. Company has performed a minimum of 10 similar projects in the past 10 years. Similar projects must be in similar soils, used similar ESS systems, and have the same or deeper excavations.
3. If the Contractor does not have personnel with the required ESS experience, they shall retain an experienced specialist to design and oversee the operation.

B. The ESS Engineer shall submit adequate documentation (resumes, project descriptions, similar project contact information) showing the following minimum qualifications, subject to Owner approval:

1. Professional Engineer stamping the ESS design has a minimum of 20 years of experience with similar types of ESS systems. Experience shall include a minimum of 10 similar projects designed within the past 10 years, including project name, location, type of ESS, type of soils, and excavation depth. Engineer shall be licensed in the Commonwealth of Massachusetts.

C. The instrumentation engineer shall submit adequate documentation (resumes, project descriptions, similar project contact information) showing the following minimum qualifications, subject to Owner approval:

1. Professional Engineer stamping the Work Plan has a minimum of 20 years of experience with similar types of monitoring systems. Experience shall include a minimum of 10 similar projects within the past 10 years, including project name, location, type of monitoring, and type of structures monitored. Engineer shall be licensed in the Commonwealth of Massachusetts.

1.07 DESIGN CRITERIA

- A. These criteria are intended to serve as a guide to the Contractor and their Engineer in the design of the ESS for temporary lateral loading conditions and shall be regarded as the minimum acceptable. The Contractor shall be responsible for detailed designs which account for the varying field and subsurface conditions, using industry accepted design references.³
- B. The primary function of the ESS is to serve as a vertical and lateral support system to retain the overhead and/or adjacent soil, water, structures, utilities, streets, and other facilities and to protect them from damage due to settlement, lateral movements, loss-of-ground, vibration, or any other causes related to this construction.
- C. The minimum required depth for the ESS shall be determined by the Contractor's Engineer based on data made available and shall be subject to review by the Geotechnical Engineer.³

D. The ESS shall be designed for the following minimum design criteria:

1. Lateral pressures and design methods shall conform to accepted engineering practice, be performed in accordance with the Massachusetts State Building Code, and be performed, stamped and signed by a registered Professional Engineer registered in the Commonwealth of Massachusetts.
2. Hydrostatic pressures as appropriate.
3. Construction lateral surcharge loading of 250 psf minimum to account for surcharge associated with construction equipment. The Contractor and its design engineer shall verify that these pressures are appropriate for the selected construction equipment. Additional construction surcharge shall be considered and applied as appropriate.
4. Minimum applied surcharges from equipment and other structures shall be calculated in accordance with the Naval Facilities Design Manual 7.02, dated 1986.³
5. Provide a minimum factor of safety of 1.5 on passive pressure to calculate toe stability.
6. The bottom of excavation used in the support of excavation design shall include 2 feet of over excavation below the footing elevation.
7. The Contractor's design shall include development of detailed mitigating procedures and methods to be undertaken in the event that movements of the ESS result in movement of the ground, overhead structures, or adjacent structures.
8. Drilled piles and tiebacks shall be installed using temporary casing to avoid possible loss of ground.
9. If the ESS will be within the zone of influence of existing building foundations, the foundation loading shall be included as part of the ESS design.

1.08 PERFORMANCE CRITERIA

- A. The Contractor shall be responsible for damage to any structure due to their work, and for corrective action or repairs needed to restore the structure to its original condition at no cost to the Owner and no schedule impact to the Project.
- B. The Contractor's ESS system shall satisfactorily control movements of the adjacent existing buildings, roadways, utilities, and other structures, to prevent damage. The vertical and lateral movement shall be less than 0.75 inches, or 0.3% of the wall height, whichever is greater, at any location or depth along the ESS.
- C. The criteria presented in 1.08.B are intended only to establish a guideline, and in no way relieves the Contractor of their responsibility for preventing detrimental movements or damage causing structural distress of any structure or utility. The Contractor shall provide

all measures necessary to control movements to within the established performance criteria, or to lesser amounts, as required to prevent damage.³

- D. The work shall be executed in such a manner as to prevent damage to existing structures and to any other public and private property and existing improvements. The Contractor shall protect existing improvements from damage caused by settlement, lateral movement, loss of ground, undermining, washout, and other potential hazards which may be initiated by ESS operations. Damage to existing facilities shall be repaired by the Contractor at their own expense.
- E. Excavation support systems shall be designed and installed in a manner that limits the peak particle velocity measured at the ground surface throughout the installation period to the USBM- RI 8507 recommended guidelines (included at end of Section). The peak particle velocity limits are to be measured at a distance of 25 feet from the face of the nearest existing structure adjacent to excavation area, or 50 feet from the nearest structure, whichever is less.
- F. The Contractor shall install a survey monitoring system, consisting of an automated motorized total station (AMTS), that will survey the top of ESS, existing buildings, dams, structures and site improvements located in proximity of the Work. The survey data shall be available real-time and submitted to the Design Team and Owner daily, or more frequently , if requested, throughout the course of the project.
- G. For each ESS greater than 20 feet deep, the Contractor's design engineer shall visit the Site, at a minimum, during the initial day of ESS installation, during the initial day of tiebacks (if applicable), midway during ESS installation, and during the final day of excavation to confirm the performance of the ESS. Any changes to the ESS shall be submitted via email to the Design Team for record.

1.09 SUBMITTALS

- A. The Contractor's submittals shall be subject to the review of the Geotechnical Engineer and shall not proceed with construction until review has been completed. The Contractor shall revise or modify the proposed ESS scheme in accordance with review comments provided by the Geotechnical Engineer.
- B. Review of the excavation support system by the Geotechnical Engineer will not relieve the Contractor from the responsibility for the adequacy of the design and construction of excavation support system to achieve the required results.
- C. Qualification Package
 - 1. Submit the names and qualifications of the ESS subcontractor, Engineer and Testing Firm, including resumes to demonstrate the qualifications of the engineer, field superintendent and the field representative for the Testing Agent required in Article 1.05.C and 1.06.
 - 2. Welder Qualifications and Welding Procedures in accordance with AWS D1.5.

D. Design Drawings and Calculations

1. A mandatory Site meeting, or with the Owner's approval a conference call, with the Contractor, ESS Engineer, Geotechnical Engineer, Earthwork Contractor, and Dewatering Engineer is required prior to submission of calculations or working drawings that include support of excavation systems and a dewatering drawdown of 5 feet or greater. The intent of the meeting is to coordinate the design components.
2. The Contractor shall submit working drawings and calculations, prepared and stamped by a Professional Engineer licensed in the Commonwealth of Massachusetts, at least two (2) weeks before beginning excavation for excavation support systems. At a minimum, the working drawings and calculations shall include the following:
 - a. Grades and strengths of all construction materials used.
 - b. Design excavation depth.
 - c. Minimum depths for the excavation support system.
 - d. Materials, details, arrangement, and method of construction of the proposed excavation support system and sequence of construction (including bottom elevation of excavation at each stage).
 - e. Loads on the excavation support system, including anticipated equipment, and other surcharge loads on adjacent ground during construction.
 - f. Plan view showing ESS limits and existing utility facilities.
 - g. Section views showing the proposed ESS components, excavation depths and assumed soil conditions.
 - h. Method of supporting existing utilities through excavation.
 - i. Views showing excavation support system, including details around any openings in the support system walls, such as those required to accommodate utility penetrations.
 - j. Mechanism and procedures for transferring load into piles, tiebacks, struts, or other members.
 - k. Concrete/ Grout mix design proposed for the ESS systems.
 - l. Details of plan to contain and dispose of drill spoils during the drilling operations.
 - m. Theoretical deflection of the system.
2. Trench Boxes and Slide Rail Systems

- a. For trench boxes and slide rail systems, submit drawings indicating the proposed location, installation and removal sequencing, and model of trench box or slide rail systems.
 - b. Calculations and or product sheets showing the proposed system can retain the required excavation depths and pressures, including any required surcharge loads.
3. Slow Sand Filter Wall Reuse
- a. Calculations showing the existing structure, including modifications/additions/bracing, can retain the required excavation depths and pressures, including any required surcharge loads.
4. Deflection Monitoring Work Plan
- a. The Contractor shall submit a deflection monitoring work plan, prepared and stamped by a Professional Engineer licensed in the Commonwealth of Massachusetts, at least two (2) weeks before beginning excavation support system or dewatering installation. At a minimum, the work plan shall include the following:
 - 1) A letter or memorandum from the ESS designer stating that they reviewed the Work Plan and have no comments. The ESS designer shall review the deflection measurements and provide weekly memorandums indicating the data has been reviewed and stating whether modifications to the ESS are required.
 - 2) Type of AMTS with manufacturer's recommended practices for setup, operation, calibration, accuracy, and precision.
 - 3) Type of survey targets and manufacturer's cut sheets.
 - 4) Calibration sheets for AMTS.
 - 5) Installation methods for AMTS and survey targets.
 - 6) Plan showing the location and quantity of AMTS and survey targets.
 - 7) Example daily monitoring report.
 - 8) Screenshot of website showing web-based platform and example deflection plots.

1.10 JOB CONDITIONS

- A. The Contractor shall visit the site to review working conditions and to verify dimensions in the field during the bidding phase. Notify the Engineer in writing of any discrepancy before performing any work.
- B. Interruption of Existing Utilities: Do not interrupt any utility serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility according to requirements required by utility Owner:

1. Notify Owner no fewer than fourteen consecutive calendar days in advance of proposed interruption of utility.
 2. Do not proceed with interruption of utility without Owner's written permission.
- C. The Contractor is hereby made aware that the proposed construction is located within an active water treatment plant setting. Installation of the excavation support system shall not compromise the use of the property or any existing structures.
- D. The Contractor shall protect existing utilities to remain within the work area in accordance with the requirements of authorities having jurisdiction over the same.
- E. The Contractor shall immediately stop installation of the earth support system upon direction of the Owner.
- F. Contractor shall have materials and equipment available to backfill the ESS in the event excess movement or failure is measured.
- G. Proceed with caution in areas of utility facilities. The Contractor is responsible for any damage to utilities caused by the Contractor's operations. Damaged utilities shall be restored by the Contractor to equal or better operation at no additional cost to the Owner.
- H. If existing utility facilities interfere with the proposed method of support, modify or relocate such facilities as required in a manner accepted by the Owner and the utility owner.
- I. West Parish Filter #2 Dam and West Parish Filter #3 Dam are located on the edges of the Work and must be protected, including changes to seepage, settlement and or slope stability. Inspection/Evaluation Reports of the two dams are listed under Section 01 11 00 and can be provided upon request.
- J. Contractor is responsible for the deflection monitoring required in this Specification, including reviewing deflection data, ensuring alert system and deflection equipment is operational, and real-time access to the data is available.

1.11 SUBSURFACE SOIL DATA

- A. The Contractor shall review logs of borings, records of explorations, and other pertinent data for the site. After obtaining Owner's permission, take whatever additional subsurface explorations as deemed necessary at no expense to the Owner.
- B. Subsurface exploration logs and locations are shown in the Geotechnical Engineering Report prepared by GZA GeoEnvironmental, Inc.
- C. Aforementioned data is for general information and is accurate only at the particular locations and times the subsurface explorations were made. It is the Contractor's responsibility to make interpretations and draw conclusions based on the character of materials to be encountered and the impact on the work specified herein, based on the Contractor's expert knowledge of the area and of support of excavation techniques.

- D. The Contractor affirms that the site and all conditions affecting the Work under this Section have been carefully examined. No claim for additional costs will be allowed because of lack of full knowledge of existing conditions as indicated in the Contract Documents, or obvious from observation at the site.

PART 2 – PRODUCTS

2.01 STEEL

- A. Structural Steel for use as soldier piles, secant pile walls, rakers, pin piles, cross lot bracing, and wales shall be rolled or fabricated sections conforming to the applicable requirements of ASTM Grade A36 or higher. Structural steel shall be new, or in like-new condition and conform to the latest edition of the AISC Manual of Steel Construction. If used structural steel is proposed, no members with permanent deformations are to be provided or used. Do not splice elements of support systems unless included in the reviewed design submittal.
- B. NOT USED.
- C. Steel Casing: Steel pipe conforming to ASTM A 252 Grade 3 except with minimum yield strength of 80 ksi. May be new “Structural Grade” (a.k.a. “Mill Secondary”) steel pipe meeting requirements herein but without Mill Certification, free from defects (dents, cracks, tears) and with two coupon tests per truckload delivered to the fabricator.
- D. Steel core reinforcement as a minimum shall be standard deformed steel conforming to the requirements of ASTM A615, Grade 60, and Grade 150 a structural steel section conforming to ASTM A36, welded or seamless pipe conforming to ASTM designations: A53, A500, A501, or A618, or equivalent.

2.02 CEMENT GROUT

- A. Cement grout for piles shall conform to the requirements of the Massachusetts State Building Code and American Society for Testing and Materials (ASTM) Specification C94 for Ready Mixed Concrete, Third Edition.
- B. The cement grout mixture shall have a minimum 28-day compressive strength of 4,000 psi.

2.03 TIMBER LAGGING:

- A. Construction grade having a minimum thickness of three inches (3”). Wood shall be new and have been treated for use below ground. If timber lagging is to be left in place, only pressure treated wood shall be used.

2.04 TIEBACKS AND SOIL NAILS

- A. Tendons shall be fabricated from single or multiple elements of the following:

1. Steel bars conforming to ASTM Designation A 722, "High Strength Steel Bars for Prestressed Concrete."
 2. Seven wire strand conforming to ASTM Designation A416, "Low-Relaxation, Seven Wire Steel Strand for Prestressed Concrete."
 3. Wires conforming to ASTM Designation A 421, "Stress Relieved Steel Wire for Prestressed Concrete."
 4. Compact seven wire strands conforming to ASTM Designation A 779, "Steel Strand, Seven Wire, Uncoated, Compacted for Prestressed Concrete."
- B. Anchorages shall be capable of developing 95 percent of the guaranteed minimum ultimate tensile strength of the prestressing steel elements. All anchor head assemblies shall be re-stressable.
- C. The bearing plate shall be fabricated from structural steel and capable of developing 95 percent of the guaranteed minimum ultimate tensile strength of the tendon steel elements.
- D. Centralizers shall be fabricated from any material, except wood, which is non detrimental to the prestressing steel elements. The centralizer shall position the tendon in the drill hole so a minimum of 0.5 inch of grout cover is provided around each anchor strand. Centralizers shall be spaced at maximum 10-foot intervals.
- E. Cement Grout
1. Cement grout used for encapsulating tiebacks shall be a neat cement grout conforming to the shop drawing submittal for the tiebacks, except as noted below.
 2. Non shrink grout made with TYPE I, II, or III Portland Cement conforming to ASTM C 150 specifications shall be used. Cement should be fresh and should not contain any lumps or other indications of hydration.
 3. Appropriate measures shall be taken to preclude freezing of the grout prior to its reaching design strength.
 4. Water for mixing grout shall be potable.
 5. Cement grout utilized for tiebacks shall have sufficient strength to achieve an effective bond between grout and the anchor tendon.
 6. Redesign of the cement grout mix shall be conducted by the Contractor if performance and/or proof tested tiebacks do not meet the specified criteria for acceptance as determined by the EAG.

2.05 SHOTCRETE

- A. Shotcrete material shall be in accordance with the FHWA Geotechnical Engineering Circular No. 7, dated March 2003.

2.06 1.01 STRUCTURE MONITORING

1. AMTS shall be used to measure longitudinal, transverse, and vertical movements of the survey targets mounted on buildings and structures. AMTS shall consist of Leica TM-50, TOPCON MS AX or other equipment, as approved equal.
2. The AMTS shall include software and hardware capable of making automatic measurements at regular intervals. The software shall allow for data to be queried on demand by Engineer, Owner or Contractor.
3. AMTS optical survey targets shall consist of a 3D survey target consisting of either an L-bar Mini Prism or a right-angle reflector target.

PART 3 – EXECUTION

3.01 GENERAL

- A. The Contractor shall install and maintain the excavation support system in accordance with the reviewed and approved working drawings, and in such a manner as to prevent movement, settlement, or loss of ground, removal of fines from the adjacent ground, and damage to or movement of adjacent structures and utilities.³
- B. Perform field welding by certified welders in accordance with American Welding Society Standards AWS D 1.5, "Bridge Welding Code".
- C. The Contractor shall control vibrations associated with installation of earth support systems to meet vibration limits herein and so as not to damage structures. Vibration monitoring may be provided by the Geotechnical Engineer at no cost to the Contractor, as requested by the Owner. If the specified vibration monitoring levels are exceeded or settlement of the structure occurs, the Contractor may be directed by the Owner to adjust the installation procedures and/or to cease earth support installation until modifications to the installation are proposed and reviewed.
- D. The Contractor shall make necessary provisions to prevent damage to utilities or other structures due to settlement caused by vibrations or movement of the excavation support system.
- E. Protection of Existing Adjacent Structures:
 1. The Contractor shall repair all damage to adjacent structures due to ESS work and restore the surfaces and finishes to the original state.
 2. The Contractor is hereby advised that construction activities, such as installing steel piles, may cause vibrations strong enough to settle granular and miscellaneous fill

layers. The Contractor shall take all necessary steps to minimize vibrations and protect all existing structures and utilities.

3. If in the opinion of the Owner or Geotechnical Engineer the structural integrity of any building is jeopardized, the Contractor shall immediately discontinue further excavation in the affected area and backfill the excavation to mitigate further movement. The backfill shall remain until such time that the Engineer evaluates the impact on the structure and may direct the Contractor to perform any remedial work. The Contractor shall submit proposed remedial measures to the Engineer and Owner for review. Submittals shall include methods and names of subcontractors. Mitigating measures shall be at no additional cost to the Owner.

3.02 SOLDIER PILES AND LAGGING AND SECANT PILE WALL

A. General

1. Piles shall be installed to the locations, line and grades specified in the reviewed Shop Drawings. Pile locations shall be checked during installation and appropriate measures taken as necessary to maintain the correct pile location.
2. Drilled piles shall be designed and constructed in accordance with provisions of the Massachusetts State Building Code, latest edition. All welding, if required, shall be performed by operators who have been previously qualified by tests as prescribed in the "AWS Standard Code".
3. Pile installation shall be by drilling, and not by driving or vibratory methods.

B. Lines and Grades

1. The Contractor shall be responsible for the correct location of piles and keeping a record of the piles installed.
2. The Contractor shall maintain all location stakes and shall establish all elevations required, including the elevation of the top of the pile and casing, the bottom of the pile and casing, and other location and elevation information required regarding the piles.

C. Method of Installation

1. Pile installation shall be made by non-displacement, low vibration methods such as rotary drilling. Wet rotary drilling methods shall employ sufficient fluid pressure to provide complete removal of the drill cuttings from the hole. Driving or vibratory hammer installation of casing is prohibited.
2. Drilling shall be conducted in such a manner to prevent loss of ground beyond the specified pile diameter. The drilling operation shall employ the use of an outer casing, drilling mud or other methods to stabilize the hole and prevent loss of

ground. Drilling mud in the hole shall be sufficiently fluid such that it is readily and fully displaced by the cement grout.

3. All excavation and drilling spoils shall be controlled to minimize disturbances to site conditions and hindrances to pile installation procedures and requirements. All spoils and waste material shall be removed from the site. Disposal of spoils and waste into the local drainage system shall not be allowed.
4. The Contractor is responsible for controlling the amount of dust and dirt created by the pile installation process using whatever methods are most appropriate.
5. Soldier piles shall be completed (casing or HP/W-section installed in pre-drilled holes and grouted/backfilled) the same day the pile is drilled.
6. For soldier piles utilizing core steel, grouting of the piles shall provide complete filling of the pile with a minimum of segregation. Grout shall be placed under pressure by means of a tremie pipe and grout pumped from the bottom of the pile upward in one continuous operation until the pile is filled and suitable, undiluted cement grout returns at the top of the pile. The cement grout shall not be allowed to fall freely.
7. Core steel shall be centered in the hole with appropriate centering devices.
8. For soldier piles with HP- or W-sections, the pile section shall be centered in the drill hole and lean concrete shall be pumped into the hole using tremie methods from the pile base to 1 foot above the required excavation base to displace water or slurry (if used). Above the concrete, the pile shall be backfilled with sand or flowable fill to the top of existing grade.
9. The casing shall be withdrawn in a controlled manner with the grout level maintained at the top of the pile, to ensure that the grout completely fills the drill hole.
10. The sequence of pile installation shall be such that piles located less than 8 feet from the pile to be drilled are not installed prior to 12 hours after initial grouting of previously installed piles. If connectivity between adjacent micropiles are observed, stop drilling, contact Contractor's Engineer for potential redesign requirements, and notify Geotechnical Engineer.
11. Regrouting shall be scheduled so that adjacent piles have been drilled and initially grouted prior to regrout of each specific pile.
12. Remove sand or flowable fill from pile as excavation progresses, sufficient to place lagging. Follow the excavation closely with placement of lagging. Lagging shall have louvered openings (gaps) between the boards less than 1 inch and at least 1/8-inch. Allowable unlagged height shall be no greater than three feet (3'). Reduce unlagged height if slumping of soil is encountered.

13. Perform excavation for the installation of lagging to minimize the formation of voids. Backpack voids between soil and lagging with sandpack.
14. Excavation shall proceed at a pace that prevents movement of unsupported soil. If unstable material is encountered during excavation, take suitable measures to stabilize it and prevent ground displacement.
15. Maintain a sufficient quantity of material on hand for lagging, bracing and other operations for protection of the Work.
16. If soldier piles and lagging are to be left in place, the installed locations shall be included on the as-built drawing and the ESS shall be cut at least 4 feet below finished grade. The ESS shall also be removed from within 1 foot in all directions around existing utilities to remain, or around new utilities during backfill operation.

D. Tolerances and Criteria for Acceptance

1. Piles shall be installed as close as practicable to the required locations. The pile design shall include a maximum lateral and vertical deviation from the correct location.
2. Piles which are believed to have collapsed, based on the grout take volume, or which are otherwise unsatisfactory as specified above and which cannot be removed or repaired, shall be abandoned and filled with cement grout, and replaced at no cost to the Owner.
3. Piles that are rejected because of damage, mislocation, misalignment, or failure to meet other installation criteria, shall either be supplemented with additional piles or shall be cut off below the design cut-off grade and replaced at no cost to the Owner.

E. Disposal of Excavated Material

1. All excavated material, slurry and soil shall be removed and legally disposed of off site by the Contractor. Prior to drill water discharge, the excess water shall pass through a sedimentation basin and geotextile filter system to remove soil fines.

3.03 RAKERS, WALES, AND STRUTS

- A. Use rakers, wales, struts, corner braces to provide support of the excavation walls internally as required. Include web stiffeners, plates, brackets, or angles as required to prevent rotation, crippling or buckling of connections and points of bearing between structural steel members. Allow for eccentricities due to fabrication and assembly. Consider effects of temperature changes.
- B. Install and maintain all support members in continuous tight contact with each other and with the wall being supported.

- C. Preload all bracing members (including rakers, corner braces, and struts) in accordance with methods, procedures and sequence as described on the reviewed shop drawings. Coordinate excavation work with installation of bracing and preloading. Use steel shims and steel wedges, welded or bolted in place, to maintain the preloading force in the bracing after release of the jacking equipment pressure. Wood shims or wedges shall not be used.
- D. Braces shall be preloaded to fifty (50) percent of the maximum design load. Provide means to control the fluctuation of loading due to temperature variations.
- E. Accomplish preloading by jacking struts, rakers, etc. in place against the lateral excavation support system walls, or by other methods reviewed by the Geotechnical Engineer.
- F. Coordinate locations of all bracing and components thereof for temporary lateral excavation support with locations of permanent structural steel and foundation wall elements.

3.04 TIEBACKS

- A. Tiebacks shall be designed and installed by the Contractor in accordance with the current edition of the "Recommendations for Prestressed Rock and Soil Anchors", by the Post-Tensioning Institute.
- B. Excavation support wall, and other support system members incorporated in a system using tiebacks, shall be designed to resist the vertical components of the tieback loads without settlement during any stage of the excavation and construction.
- C. Coordinate locations of all bracing and components thereof for temporary lateral excavation support with locations of permanent foundation wall elements.
- D. Install tiebacks in accordance with reviewed shop drawings and as specified herein.
- E. Tiebacks shall be installed through sleeves or holes provided in the earth support system. Prevent loss-of-ground and water seepage at the tieback locations. Implement remedial measures immediately if loss-of-ground or seepage occurs at these locations.
- F. Tiebacks shall be installed by duplex drilling methods only, using internal flushing methods only which provide return of wash fluid and cuttings through the inside of the outer casing. Outer casing shall be extended for the entire tieback length. Methods of installation shall be used which prevent the loss-of-ground, e.g. collapsing hole.
- G. Each tieback must be capable of being re-tensioned, if necessary.
- H. Each tieback installed for support of earth excavations shall be tested to verify and establish the tieback capacity. All testing shall be performed in the presence of the Geotechnical Engineer. Performance tests shall be performed on a minimum of 10 percent of tiebacks for each design, as selected by the Geotechnical Engineer, to verify the tieback

design. Tiebacks grouted into differing strata will be considered a different design. All other tiebacks shall be proof-tested.

- I. Performance Tests shall be conducted in accordance with procedures described in the current edition of the "Recommendations for Prestressed Rock and Soil Anchors", by the Post-Tensioning Institute.
- J. Proof Tests shall be conducted in accordance with procedures described in the current edition of the "Recommendations for Prestressed Rock and Soil Anchors", by the Post-Tensioning Institute.
- K. Acceptance of performance tests and proof tests shall be in accordance with the current edition of the "Recommendations for Prestressed Rock and Soil Anchors", by the Post-Tensioning Institute.
- L. Any tieback which does not meet the criteria for acceptance for its design capacity can only be incorporated in the bracing system using 67 percent of the load that can be maintained and meets the criteria for acceptance. Re-groutable anchors will be accepted at full capacity after re-grouting and acceptable proof-testing.
- M. Additional tests shall be performed when any changes are made in the tieback assembly or installation procedures at no additional cost to the Owner.
- N. De-tension tiebacks in accordance with the proposed construction sequence as reviewed by the Geotechnical Engineer. Tie-back locations that are not removed shall be surveyed and included in the as-built survey.

3.05 SLIDE RAIL SYSTEM

- A. Slide Rail systems shall consist of a temporary modular and interlocking system of vertical beams and shoring panels. The slide rail system shall be installed in accordance with the manufacturer requirements and at a minimum, the vertical beams and the shoring panels shall be concurrently advanced with the excavation.
- B. Slide rail systems shall not be used within 15 feet of existing utilities or buildings, unless approved in writing by the Owner/Owner's agent. If approved by the Owner/Owner's Agent, the requirements in this Specification (e.g., limiting deflections, contractor responsibilities) shall still apply.

3.06 SOIL NAIL WALL

- A. Shotcrete Installation
 - 1. Do not apply shotcrete to frozen surfaces, during high winds, heavy rains, or when temperatures are below 40-degrees Fahrenheit.
 - 2. Direct the shotcrete at right angles to the receiving surface except when shooting ground reinforcing bars. Apply shotcrete in a circular fashion to build up the required

layer thickness. Apply shotcrete in a steady, uninterrupted flow. If the flow becomes intermittent, direct the flow away from the work area until it becomes steady.

3. The surface of each shotcrete layer shall be uniform and free of sags, drips or runs.
4. Remove laitance, loose material, and rebound. Promptly remove rebound from the work area.
5. Taper construction joints to a thin edge over a distance of at least 1 foot. Wet the joint surface before placing additional shotcrete at the joint. Do not use square construction joint.
6. Soil nail locations shall be surveyed and included in the as-built survey.

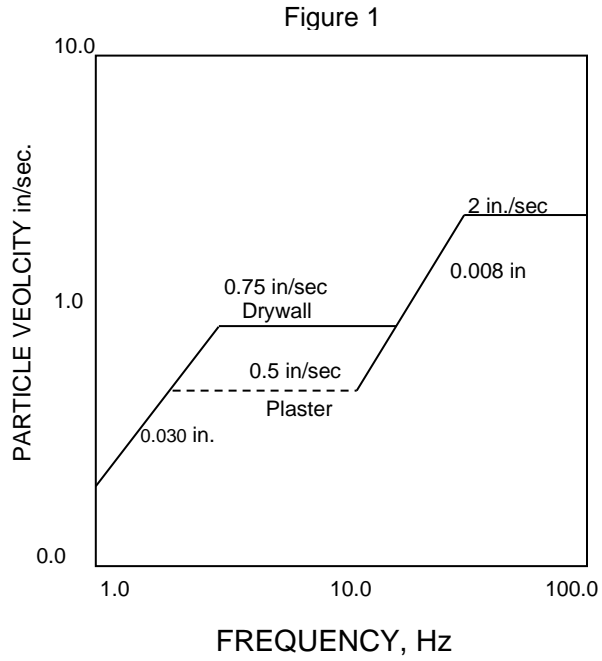
3.07 MONITORING PROGRAM

1.
 - B. The Contractor's Engineer shall maintain a secure web-based platform to display real-time data collected from the AMTS system(s). The web-based platform shall include plan views of the instrument locations; time rate plots of displacement at the instrumentation; visual alarm icons identifying instrumentation locations exceeding project threshold and limiting values; on-demand data downloading; automated daily reporting; and email alert notifications if thresholds are exceeded.
 - C. The Owner and Owner's Engineer shall be provided real-time access to deflection measurements.
 - D. Daily reports shall be emailed to the Owner, Owner's Design Team, ESS designer, dewatering designer, and Contractor by 6 pm each day. The daily reports shall include daily deflection measurements, plot of deflection over time (at least a week's worth of data shown on plot), and identification of any threshold or action limit exceedances.
 - E. Threshold and or Action Limit alerts shall be sent within 10 minutes of measurements.
 - F. At a minimum, the following structures shall be monitored at the frequency stated:
 1. Buildings within 50 feet of dewatering greater than 5 feet or ESS greater than 15 feet deep: monitoring points shall be at 10-foot spacing.
 2. Dams within 200 feet of dewatering greater than 5 feet below static water level: monitoring points shall be on a 10-foot grid on a 30-foot section of the embankment. The grid shall extend from the toe of the downstream slope to the normal water level on the upstream side of the dam and extend a minimum of 30 feet from the embankment edge closest to the work towards the center of the dam.
 3. Dams within a 1 horizontal to 1 vertical line from the base of ESS, or within 100 feet from a 40-foot deep or greater ESS: Same spacing as 3.07.E.2.

- G. Contractor shall conduct Work without damaging or altering the monitoring points. Contractor shall notify instrumentation Engineer, and Owner's design team, if damaged instrumentation equipment is identified. As part of the notification, Contractor shall provide proposed repair and or relocation of the instrumentation. Monitoring points shall be replaced/repared within 2 days and AMTS's shall be repaired/replaced within 1 day at no additional cost to the Owner.
- H. Contractor shall monitor the data and email notifications. If action limits are met or exceeded, Contractor shall immediately implement appropriate engineered controls such that acceptable levels are achieved and/or Work shall be stopped at no additional cost to Owner. The Owner's Engineer has authority to stop work at any time if the action values are exceeded, or if cracking, deformation, settlement or other damage is observed.
- I. If action limit alerts are received after working hours, or on weekends, Contractor shall visit the Site within 6 hours of an alert and notify the Owner of the excavation/dewatering status and immediately implement appropriate engineered controls such that acceptable levels are achieved and/or Work shall be stopped at no additional cost to the Owner.
- J. Contractor shall measure deflection at least a week prior to start of dewatering and or ESS installation. The deflection monitoring frequency shall be no more than on an hourly basis. Monitoring of a structure or ESS can be discontinued once excavations are backfilled or dewatering has been stopped for at least a week.
- K. Deflection Limits
 - 1. Deflection limits are referenced to changes from the baseline readings prior to start of excavation or dewatering Work.
 - 2. A threshold limit of 0.5 inches, or 0.2% of the wall height, whichever is greater, in horizontal or vertical directions shall be set. If the threshold limit is achieved, survey frequency shall be increased to every 10 minutes, until the movement stabilizes. Once the movement stabilizes, and following review and approval by the ESS and dewatering designer, hourly readings can be re-established.
 - 3. The action limit for movement is 0.75 inch in any direction, or 0.3% of the wall height, whichever is greater. If the action limit is achieved, Contractor shall immediately implement appropriate engineered controls such that acceptable levels are achieved and/or Work shall be stopped at no additional cost to the Owner.
 - a. Following implementation of the engineered controls, Contractor and Contractor's Engineer shall provide a Memorandum describing the cause of the exceedance and what steps shall be undertaken to prevent further exceedances of the Action limit. No work in the vicinity of the exceedance shall be restarted until the Memorandum is reviewed by the Owner and Owner's Engineer.

FIGURE 1

**NEW U. S. BUREAU OF MINES CRITERIA
FROM REPORT RI-8507 (November, 1980)**



END OF SECTION

NO TEXT ON THIS PAGE

Attachment M – 32 10 00 Paving and Surfacing

SECTION 32 10 00
PAVING AND SURFACING ¹

PART 1 – GENERAL

1.01 THE REQUIREMENT

- A. The Contractor shall furnish all labor, equipment and materials and perform all operations in connection with the construction of asphalt concrete pavement, asphalt concrete overlay, reinforced concrete pavement, gravel roads, concrete curb and gutter, repair and reconstruction of existing asphalt concrete pavement, repair of existing gravel roads, and pavement markings complete as specified herein and as detailed on the Drawings.
- B. All new roads including the replacement of portions of the existing roads shall be to the limits, grades, thicknesses and types as shown on the Drawings. Patches for pipe crossings and areas damaged during the construction work shall be asphalt and/or gravel, depending upon the material encountered, unless otherwise indicated.
- C. Keep pavement removal to a minimum width suitable for the required construction.
- D. Removal and replacement of pavement due to damage by the operation of the Contractor, but not required as part of the project, is at the Contractor's expense.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Requirements of related work are included in Division 01, Division 02 and Division 03 of these Specifications.

1.03 RELATED SECTIONS

- A. Section 31 00 01 – Earthwork
- B. Section 03 30 00 – Cast-in-Place Concrete

1.04 REFERENCES

- A. Massachusetts Department of Transportation (MassDOT) Standard Specifications for Highways and Bridges, 2023.

1.05 STANDARD SPECIFICATIONS

- A. Except as otherwise provided in the Specifications or on the plans, all work shall be in accordance with the Massachusetts Department of Transportation Standard

¹ Addendum No.12

Specifications for Highways and Bridges except that any reference to "MassDOT," "Department" or "Unit" shall mean the "Owner". When reference to these Specifications is intended, the description will be MassDOT Section or MassDOT Specifications ".

- B. Except with the approval of the Engineer, the placing of concrete or asphalt concrete surface paving shall be subject to the Seasonal and Weather Restrictions set forth in MassDOT Specifications.

1.06 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

- A. Submit the following in accordance with Section 01 33 23, Shop Drawings, Product Data and Samples.
 - 1. Materials constituents, gradation, source and certification. Submit at least 15 days prior to installation of materials, material certificates signed by manufacturer and Contractor, certifying that materials comply with, or exceed, specified requirements.
 - 2. The job mix formulas (JMF) shall be delivered to the Owner at least two (2) weeks prior to beginning paving operations. The JMF submitted for asphalt concrete pavement shall be dated to within 12 months of asphalt placement.
 - 3. No paving shall be placed until submittals have been reviewed and accepted by the Owner.
 - 4. Submit shop drawings showing fabrication, placement, and support of concrete reinforcement, and location of proposed construction joints, contraction joints (doweled or sawed), and expansion joints.
 - 5. Concrete Mix Reports: Submit at least 15 days before placing concrete, reports for each concrete mix type that contains the information specified herein.
 - 6. Delivery Tickets: Submit to the Engineer with a copy of the delivery ticket for each load of concrete delivered to the site. Delivery tickets shall contain all information specified in ASTM C94 Section 14.1.
 - 7. Laboratory results of material evaluations tests.

PART 2 – MATERIALS

2.01 SELECT FILL

- A. The Contractor shall place select fill as necessary to complete the embankments, shoulders, subgrade foundation and replacement for removed unsuitable material in accordance with Section 31 00 01 – Earthwork.

2.02 ASPHALT PAVEMENT

- A. Asphalt shall be provided by MassDOT approved producer. See following web-link: <https://www.mass.gov/service-details/hot-mix-asphalt-production-facility-m3117>
- B. Pavement for this Project shall meet the requirements of the MassDOT Standard Specifications and as specified herein.

1. Permanent asphalt pavement should be as follows:

- a. **SUBBASE COURSE:** The base shall be a minimum thickness of 16". Material shall be dense graded crushed stone for sub-base meeting the requirements of MassDOT Section M2.01.7. Gradation of material shall meet the requirements as follows:

Sieve Designation	Percent Passing
2 inch	100
1 ½ inch	70 - 100
¾ inch	50 - 85
No. 4	30 - 55
No. 50	8 – 24
No. 200	3 - 10

- b. **BASE COURSE:** Hot mix asphalt (HMA) base course shall be mixture type SUPERPAVE Intermediate Course – 19.0 (SIC – 19.0) in accordance with MassDOT Section 450.10 and Section M3.06.0. Base course shall have a minimum thickness of 2.5".
- c. **TOP COURSE:** HMA top course shall be mixture type SUPERPAVE Surface Course – 12.5 (SSC – 12.5) in accordance with MassDOT Section 450.10 and Section M3.06.0. Top course shall have a minimum thickness of 1.5".

2. Combined Aggregate Requirements:

- a. The combined aggregate shall have a normal maximum aggregate size of 4.75 to 19.0 mm for HMA top course and no larger than 25.0 mm for HMA base course.
- b. The combined aggregate shall conform to the gradation requirements specified in the following table:

Nominal Maximum Aggregate Size – Control Points (Percent Passing)

Sieve Size	37.5 mm		25.0 mm		19.0 mm		12.5 mm		9.5 mm		4.75 mm	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
50.0 mm	100	-	-	-	-	-	-	-	-	-	-	-
37.5 mm	90	100	100	-	-	-	-	-	-	-	-	-
25.0 mm	-	90	90	100	100	-	-	-	-	-	-	-
19.0 mm	-	-	-	90	90	100	100	-	-	-	-	-
12.5 mm	-	-	-	-	-	90	90	100	100	-	100	-
9.5 mm	-	-	-	-	-	-	-	90	90	100	95	100
4.75 mm	-	-	-	-	-	-	-	-	-	90	90	100
2.36 mm	15	41	19	45	23	49	28	58	32	67	-	-
1.18 mm	-	-	-	-	-	-	-	-	-	-	30	60
0.075 mm	0	6	1	7	2	8	2	10	2	10	6	12

2.03 ASPHALT TACK COAT

- A. A tack coat of asphalt emulsion, grade RS-1 shall be uniformly applied to new pavement surfaces prior to placing pavement courses.
- B. Tack coat shall be applied at a rate of 1/20 gal/sy. immediately prior to laying bottom course of the new pavement.

2.04 RIGID PORTLAND CEMENT CONCRETE PAVEMENT

- A. All materials associated with rigid concrete pavement shall be in accordance with the materials listed on MassDOT Section 476.40. All work and concrete placement shall be in accordance with Section 03 30 00 – Cast-in-Place Concrete and MassDOT Section 476. Subbase material shall be per MassDOT Section M2.01.7.

2.05 RIGID CONCRETE PAVEMENT REINFORCING

- A. Reinforcing, shall be as shown on the Contract Drawings, and as specified under MassDOT Section M8.01.2.

2.06 CONCRETE CURB AND GUTTERS

- A. Concrete shall be Class B in accordance with the requirements of Section 03 30 00 – Cast-in-Place Concrete, except that concrete shall be air-entrained to provide an air content of 6% ± 1.5%.

2.07 PAVEMENT MARKINGS

- A. Traffic Arrow
 - 1. The traffic arrow shall consist of MassDOT M7.01.03 – Liquid Thermoplastic Striping Material and color shall be as shown on the Contract Drawings.

2. The traffic arrow shall conform to the U.S. Department of Transportation, Federal Highway Administration "Manual of Uniform Traffic Control Devices for Streets and Highways" (MUTCD), latest edition.

B. Parking Stall Striping

1. Parking stall striping shall consist of MassDOT M7.01.03 – Liquid Thermoplastic Striping Material and shall be 4 inches wide. Color shall be as shown on the Contract Drawings.

C. No Parking Zone Striping

1. No parking zone striping shall consist of MassDOT M7.01.03 – Liquid Thermoplastic Striping Material and shall be 4 inches wide. Color shall be as shown on the Contract Drawings.

PART 3 – EXECUTION

3.01 GENERAL

- A. Permanent bituminous base course and top course pavement shall not be constructed until the specified time period for trench settlement has elapsed and when so directed by the Engineer. The specified time period for trench settlement shall be the period between Nov. 15th and April 15th as a minimum. Roads with trenches excavated and backfilled prior to Nov. 15th shall not be paved with permanent base course and top course until April 15th of the following year, at the earliest.
- B. The Owner reserves the right to delete any paving items of work from the Contract without penalty.
- C. The Contractor shall replace all pavement, markings, curbs, waterways and drives which have been removed or damaged during construction operations. Pavement replacement shall include satisfactory repair by the Contractor of roadways, curbs, sidewalks, driveways and any other surface disturbed by his operations by the same materials as removed or as specified herein. Care shall be taken to minimize trench widths in paved areas.
- D. The Contractor shall place all bituminous pavement by machine method only unless otherwise permitted by the Engineer. The equipment for spreading and finishing shall be mechanical, self-powered pavers, capable of spreading and finishing the pavement true to the established line, grade, width and crown. The pavement shall be placed and compacted only at such times as to permit the proper checking by the Engineer. Paving boxes shall be of proper size to allow paving the excavated trenches.
- E. Hand methods of placing bituminous pavement will be permitted only for particular locations in the work where because of irregularity, inaccessibility or other unavoidable obstacles mechanical spreading and finishing cannot be performed.

- F. Exercise extreme care in the removal of pavement so that pavement will not be unnecessarily disturbed or destroyed. Mechanically cut pavement to be cut to a straight line, unless otherwise directed by the Engineer.

3.02 SUBBASE COURSES AND SUBGRADE

- A. After the subgrade has been shaped to line, grade, and cross section, it shall be thoroughly compacted. This operation shall include any required reshaping and wetting to obtain proper compaction. All soft or otherwise unsuitable material shall be removed and replaced with suitable material from excavation or borrow. The resulting area, and all low sections, holes, or depressions shall be brought to the required grade with approved material and thoroughly compacted. Refer to Section 31 00 01 for compaction requirements.
- B. Subbase courses shall be constructed to the depths and areas shown on the Drawings.
- C. Aggregate subbase courses shall be constructed in accordance with MassDOT Standard Specifications, Division II – Construction Details.
- D. The Contractor shall regrade and recompact the subbase course for installation of permanent base and top course pavement in areas which are disturbed during construction, and in areas as directed by the Engineer.
- E. After the subbase course has been rolled to the required grade, any broken or irregular edges of the existing pavement shall be saw cut in straight lines leaving a sound vertical face 12- inches back from the edge of the trench or other excavations to accept placement of a 12- inch minimum overlap of bituminous base course pavement on undisturbed material.
- F. The edges of the existing pavement shall receive an application of a cut-back asphalt so that the new pavement material may be properly bonded to the existing.

3.03 BITUMINOUS PAVEMENT

- A. Bituminous base course and top course pavement for all roads, driveways and parking areas shall be constructed in accordance with the MassDOT Standard Specifications, Division II – Construction Details.
- B. Temporary Pavement
 1. Temporary pavement shall be placed in areas where test pits or exploratory excavations occur in paved areas, where shown on the Drawings, and as directed by the Engineer.
 2. The Contractor shall place temporary pavement the full width of the excavation within the same week of the trench being backfilled unless otherwise directed by the Engineer.

3. Temporary pavement shall be repaired as necessary to maintain the surface of the pavement until replaced by the permanent pavement. If points of settlement or holes appear in the temporary pavement, the Contractor shall repair the same within 24 hours of notification by the Engineer.
4. After the specified time period for trench settlement has elapsed and when so directed by the Engineer, the Contractor shall remove and dispose of the temporary pavement, cut the trench edges and regrade the base course for installation of the permanent pavement.

C. Full Width Permanent Pavement Overlay

1. When ordered by the Engineer, the Contractor shall furnish a full width overlay from curb to curb or edge of traveled way to edge of traveled way as shown on the Drawings. The overlay shall be completed after the roadway has been in place for one freeze/thaw cycle, unless otherwise ordered by the Owner.
2. Work shall include:
 - a. At the overlay limits, mechanically grind (cold-plane) a joint in the existing pavement to provide overlap of base course on undisturbed material as shown on the Drawings. Place a 6" wide strip of emulsified asphalt at all joints.
 - b. Remove all temporary paving and existing paving within the cut limits of the trench repair area.
 - c. All driveways shall be mechanically ground (cold planed) or saw cut prior to installation of pavement overlays. Feathering will not be acceptable. Place a 6" wide strip of emulsified asphalt at all joints.
 - d. The trench shall be shimmed as required to remove all settlement. Shimming shall be considered subsidiary to the overlay item unless otherwise noted.
 - e. The Contractor shall mechanically sweep the entire roadway prior to placement of the overlay.
 - f. Contractor shall be responsible for raising all utility covers and boxes prior to placement of the overlay. The final elevation of the fixtures shall be ¼" below the final pavement elevation.
 - g. The full width permanent pavement overlay shall consist of hot bituminous concrete wearing course over the existing pavement and trench repair base course.
 - h. After placement of the overlay, the Contractor shall pour a bead of emulsified asphalt in all tie-in joints and cover with a layer of sand.

3.04 EMBANKMENT

- A. The embankment shall be constructed in accordance with Section 31 00 01 – Earthwork.

3.05 ASPHALT CONCRETE PAVEMENT PHASING

- A. Contractor shall be responsible for phasing the placement of asphalt concrete pavement sections and courses to account for individual construction activities, the construction traffic volume, and vehicle loading expected throughout construction activities. The placement of asphalt concrete pavement shall also be phased so the aggregate base course, once installed, is not exposed to freeze/thaw cycles.

3.09 RIGID PORTLAND CEMENT CONCRETE

- A. The subgrade and base course beneath portland cement concrete pavement shall be prepared in accordance with the MassDOT Standard Specifications, Division II – Construction Details.
- B. The surface of the base shall be damp at the time the concrete is placed. The Contractor shall sprinkle the base when necessary to provide a damp surface. The Contractor shall satisfactorily correct all soft areas in the subgrade or base prior to placing concrete.
- C. Hauling over the base course shall not be allowed except where specifically permitted by and in writing by the Engineer. The Engineer may allow equipment dumping concrete to operate on the base to the extent and under the conditions the Engineer deems necessary to facilitate placing and spreading the concrete.
- D. Installation of the rigid concrete pavement shall be in accordance with the details shown on the Contract Drawings and MassDOT Section 476.
- E. The maximum contraction joint spacing is 15 feet. Construction joints can be placed up to 30 feet for reinforced pavements. Joints shall be installed per the requirements of MassDOT Section 476.68. Transverse contraction joints shall be formed by an approved joint insert. Longitudinal joints shall be formed by allowing the paver to deposit the mixture adjacent to the joint to such depth that maximum compaction can be obtained along the joint. Pinch the joint by rolling immediately behind the paver. Expansion joints shall be placed when the pavement abuts a structure using 1 inch expansion joint material (filler) and sealant as specified in MassDOT Section 476.40.

3.10 CONCRETE CURB AND GUTTER AND SIDEWALK

- A. The expansion joint filler for concrete curb and gutters shall be cut to conform with the cross section of the curb. Expansion joints shall be spaced at intervals of not more than 50 feet. Formed control joints shall be installed at intervals not exceeding 10 feet. (Expansion joints can be placed at intervals of 45 feet and control joints at 15 feet if curb and gutter is machine placed.) Depth of joint shall be 1/3 the thickness. Curved forms shall be used where radii are indicated; straight segments shall not be permitted. Upon

removal of the forms, exposed curb faces shall be immediately rubbed down to a smooth and uniform surface. No plastering shall be permitted.

- B. Concrete sidewalks shall include contraction joints between each panel of sidewalk and when sidewalk width exceeds 6-feet, longitudinal contraction joints shall be placed as required. Additionally, ½" expansion joints and sealer shall be placed at a maximum spacing of 50-feet of sidewalk. ½" expansion joint material and sealer shall also be where sidewalks abut and rigid structure or curb and gutter.

3.11 UNDERGROUND UTILITY LINES

- A. Where an underground utility line is beneath the new roadway, the backfilling shall be carried out with special care, and the final consolidation shall be accomplished by a vibratory roller. Construction of the roadway over the trench shall be deferred as long as practicable.

3.12 JUNCTION WITH OTHER PAVING

- A. Where new asphalt concrete pavement abuts existing asphalt concrete pavement, the existing pavement shall be cut back to insure obtaining the specified compaction of the new pavement courses and interlocking adjoining courses. Existing subbase courses shall be cut back from the subgrade level of the new pavement on a one-on-one slope into the existing pavement, and the asphalt courses of the existing pavement shall be removed for an additional 6-inches back from the slope. The edge of the existing asphalt courses shall be saw cut straight and true. The faces between new and existing asphalt courses shall receive an application of tack coat.
- B. Where new rigid concrete pavement abuts existing rigid concrete or asphalt concrete paving, the existing paving shall be saw cut straight and true. An expansion joint of a 1/2-inch minimum thickness with filler material and sealant shall be placed between the new concrete pavement and the existing rigid concrete or asphalt concrete paving.

3.13 PAVEMENT MARKINGS

- A. Preparation:
 - 1. Protect buildings, walks, pavement, curbing, trees, shrubs, mulch, etc. from overspray of paint and damage.
 - 2. Clean and sweep all areas to be striped or re-striped of all sand, dirt, grease, oil, etc. Large areas of tar, grease or foreign materials may require sand blasting, steam cleaning or power brooming to accomplish complete removal.
 - 3. Application of markings shall not proceed until authorization is received from Engineer.
 - 4. Asphalt concrete pavements shall have been in place for at least 7 days prior to the application of pavement markings.

B. Installation

1. Pavement markings shall be installed in accordance with Section 860 of the MassDOT Standard Specifications for Highways and Bridges.

3.14 FIELD QUALITY CONTROL

A. Thickness and Surface Tolerances:

1. Bituminous pavement courses shall be tested in-place for compliance with compacted thickness and surface tolerance requirements.
2. Contractor shall repair or remove and replace unacceptable pavement and retest as directed by the Engineer, all at no additional cost to the Owner.
3. Testing, tolerances and replacement shall be as specified in MassDOT Standard Specifications.
4. In-place testing shall be scheduled and made by a testing laboratory experienced and certified to complete the testing required.

B. Compaction: Refer to Section 31 00 01.

C. Protection: Protect completed work with barricades or other devices as approved by Engineer so that no damage occurs as a result of subsequent construction operations. Repair damages or other irregularities to satisfaction of Engineer, at no additional cost to the Owner, before final acceptance by the Engineer.

D. Guarantee: During the one year correction period, the Contractor shall maintain the surfacing and shall promptly fill any depressions and holes that may occur so as to keep the surfacing in a safe and satisfactory condition for traffic. Fill material shall be in compliance with these Specifications.

END OF SECTION