INTERLOCAL AGREEMENT BETWEEN BROWARD COUNTY AND CITY OF SUNRISE FOR SURTAX-FUNDED MUNICIPAL TRANSPORTATION PROJECT: REPLACE STORMWATER PUMP STATION NO. 5 (SUNR-025.1)

This Interlocal Agreement ("Agreement") is made and entered by and between Broward County, a political subdivision of the State of Florida ("County"), and City of Sunrise, a municipality of the State of Florida ("Municipality") (each a "Party" and collectively referred to as the "Parties").

RECITALS

A. In November 2018, Broward County voters approved a 30-year sales surtax (also known as "Penny for Transportation") to fund statutorily-permissible transportation expenditures.

B. All projects, County, State, and municipal, funded by the transportation surtax are evaluated for eligibility under Section 212.055(1), Florida Statutes, by the independent Transportation Surtax Oversight Board before the Broward County Board of County Commissioners makes the final decisions regarding project funding.

C. A process has been established pursuant to which surtax-funded staff at the Broward Metropolitan Planning Organization ("MPO") prioritize municipal projects, with the exception of municipal rehabilitation and maintenance projects, and make recommendations for funding. The first round of ranking of municipal capital projects was recently completed by the MPO following extensive and detailed discussions with the submitting municipalities, and the Project contemplated in this Agreement was included in that review and ranking.

D. The municipal Project defined herein has been determined statutorily eligible for funding and subsequently approved for funding by the Broward County Board of County Commissioners.

E. The purpose of this Agreement is to set forth the terms and conditions for County to provide transportation surtax funding for the Project and the terms and conditions for Municipality to complete the Project. Municipality will implement the Project, as funded by County with surtax funding, in accordance with the terms of this Agreement.

Now, therefore, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

ARTICLE 1. DEFINITIONS

1.1. **Board** means the Board of County Commissioners of Broward County, Florida.

1.2. **Contract Administrator** means the County Administrator or such other person designated by the County Administrator in writing.

1.3. **Contractor** means the persons, firms, or corporations with whom Municipality has or will contract for the performance of the Project.

1.4. **Consultant** means the architect or engineer with whom Municipality has or will contract to provide programming, design, construction management, engineering, and inspection, or other professional services for the Project.

1.5. **County Business Enterprise** or **CBE** means an entity certified as meeting the applicable requirements of Section 1-81, Broward County Code of Ordinances.

1.6. **Maximum Funding Amount** means the maximum funding amount stated in Section 5.4.

1.7. **Oversight Board** means the independent Transportation Surtax Oversight Board created pursuant to Section 31½-75 of the Broward County Code of Ordinances.

1.8. **Project** means the project described in Exhibit A.

1.9. **Project Manager** means the City of Sunrise Director of Utilities.

1.10. **Subcontractor** means an entity or individual providing services to Municipality through Contractor or Consultant for all or any portion of the Project. The term "Subcontractor" includes subconsultants.

1.11. **Surety** means the surety company or individual that is bound by the performance bond and payment bond and that is responsible for Contractor's or Consultant's acceptable and timely performance and completion of the Project under this Agreement and for the payment of all debts pertaining thereto in accordance with Section 255.05, Florida Statutes.

1.12. **Surtax-Funded Projects** means any project, including without limitation the Project described in Exhibit A, that is funded in whole or in part by the transportation surtax collected pursuant to Section 212.055(1), Florida Statutes.

ARTICLE 2. EXHIBITS

Exhibit A	**Project Description and Project Schedule**
Exhibit B	**Funding Schedule**
Exhibit C	**Reporting Requirements**
Exhibit D	**Form Contracts**
Exhibit E	**Municipal Resolution Authorizing Execution of Agreement**

ARTICLE 3. PROJECT DESCRIPTION; COMPETITIVE PROCUREMENT; PERMITTING

3.1. Project Description and Project Schedule. Municipality shall perform, or cause to be performed, the Project in accordance with the Project Description and the Project Schedule set forth in **Exhibit A**. The Project Description is a general description of the Project and is deemed to include preliminary considerations and prerequisites, and all labor, materials, equipment, and

tasks that are such an inseparable part of the Project described that exclusion of any of them would be impractical, illogical, or unconscionable.

3.2. Municipal Responsibility for the Project. Municipality is solely responsible for the Project, subject to the terms of this Agreement. County has no responsibility for the construction means, methods, techniques, sequences, or procedures employed in the performance of the Project. Municipality shall be solely responsible for retention, supervision, and payment of Contractor, Consultant, and all Subcontractors. Municipality shall be solely responsible for securing any and all property rights or permits required by the Project. Nothing in this Agreement shall impose on County an obligation to assume any contract or subcontract, or to make payment to Contractor, Consultant, or any Subcontractor, vendor, or supplier, or to perform the Project or any portion thereof, or to supply any goods or services for the Project. Further, nothing contained herein shall create any contractual relationship between County and Contractor, Consultant, or any Subcontractor, vendor, or supplier.

3.3. Competitive Procurement; Consultants' Competitive Negotiation Act. Except to the extent the Contract Administrator has approved utilization of an existing contract by Municipality for the services to be performed by Contractor or Consultant, Municipality must provide the proposed solicitation(s) for the Project to the Contract Administrator for review at least twenty (20) days prior to publication of the solicitation by Municipality. County's review shall include, without limitation, determination of the applicable CBE Goal (as defined in Article 10), which must be included by Municipality in the solicitation(s). If Municipality seeks to utilize an existing contract for the services to be performed by the Contractor or Consultant, Municipality must obtain prior approval by County and must provide the Contract Administrator with the proposed contract and supporting documentation for consideration pursuant to the procedures stated in Section 3.5.2; County may require, as a condition for its approval, that the engagement of Contractor or Consultant for this Project utilizing an existing municipal contract include modifications or additions to the existing contract terms and conditions, including without limitation any provision identified in Section 3.5.3. Municipality must comply with all applicable provisions of state law including, as applicable, Section 255.20 and Section 287.055, Florida Statutes, in the procurement of any services or materials relating to the Project. If any applicable state or federal procurement requirement is stricter than any other applicable requirement, Municipality shall be obligated to meet the stricter requirement. Prior to the execution of any contract with Contractor or Consultant relating to the Project, Project Manager shall certify in writing to the Contract Administrator that the procurement and the proposed contract comply with the requirements of this Section 3.3.

3.4. Modifications to Project or Phases.

3.4.1. Material Changes to the Project. Material changes are changes that increase the Maximum Funding Amount or materially modify the Project Description. Any proposed material change to the Project Description that does not increase the Maximum Funding Amount requires the prior written approval of the Contract Administrator. Any proposed material change that would increase the Maximum Funding Amount requires an

amendment of this Agreement. Any proposed material change may also, if determined necessary by Contract Administrator pursuant to the applicable contractual, statutory, or other surtax-related requirements, require review by the Oversight Board for statutory eligibility. Municipality shall submit to the Contract Administrator written notice of the proposed material change and appropriate backup documentation; if requested by the Contract Administrator, Municipality shall provide any additional requested backup documentation. The Contract Administrator will either approve or disapprove in writing the proposed material change to the Project Description that does not increase the Maximum Funding Amount within fifteen (15) calendar days after receipt of the written notice and all requested backup documentation; if not timely approved, the request shall be deemed disapproved. Any material change that increases the Maximum Funding Amount must be approved by the Board.

3.4.2. Modifications to Construction Phase. Requests for additional funding as a result of modifications to the construction phase of a Project that exceed the amount provided in the then-current Funding Schedule, including without limitation change orders or other scope changes, are subject to (i) approval by the Contract Administrator, and (ii) the Board's allocation of additional funding; such requests may also, if determined necessary by Contract Administrator pursuant to the applicable contractual, statutory, or other surtax-related requirements, require additional review by the Oversight Board for statutory eligibility. Municipality shall submit to the Contract Administrator written notice of its request for additional funding and appropriate backup documentation; if requested by the Contract Administrator, Municipality shall provide any additional requested backup documentation. The Contract Administrator will either approve or disapprove the request in writing within fifteen (15) calendar days after receipt of the written notice and all requested backup documentation; if not timely approved, the request shall be deemed disapproved.

3.4.3. Owner Enhancements. In addition to any approvals that may be required pursuant to this Agreement, any increased or additional costs due to changes in the quality of materials, furnishings, finishes, aesthetics, or any other cost reasonably determined by the Contract Administrator to be an "owner enhancement" (including, without limitation, decorative lighting, decorative paving, and improvements that are not within the public right of way) must be funded solely by Municipality with non-surtax funding, and County shall have no funding responsibility for any such increased costs. Upon the Contract Administrator's request, the Project Manager shall provide sufficient detail for the Contract Administrator's determination of whether any increased or additional costs include owner enhancements. The Contract Administrator shall determine, after consultation with the Project Manager, whether the increased or additional costs constitute owner enhancements.

3.4.4. Project Schedule. Any proposed change in the Project Schedule that modifies the commencement or completion date for any phase or for the Project by more than sixty

(60) days requires the prior written approval of the Contract Administrator. Municipality shall submit to the Contract Administrator written notice of the proposed change and appropriate backup documentation; if requested by the Contract Administrator, Municipality shall provide any additional requested backup documentation. The Contract Administrator will either approve or disapprove in writing the proposed change within fifteen (15) calendar days after receipt of the written notice and all requested backup documentation; if not timely disapproved, the request shall be deemed approved.

3.4.5. Nonmaterial Changes. Nonmaterial changes to the Project (namely, changes that do not require approvals under Sections 3.4.1, 3.4.2, 3.4.3, or 3.4.4) do not require County approval and may be approved by the Project Manager.

3.5. Contractor and Consultant Contracts.

3.5.1. Form Contracts. County has preapproved the Surtax-Funded Projects Form Construction Contract and the Surtax-Funded Projects Form Consultant Contract (collectively, the "**Form Contracts**") attached as **Exhibit D**, which Municipality may utilize for its contracts with Contractor and Consultant, respectively. County may update the Form Contracts from time to time upon written notice to Municipality, and such updated Form Contracts shall be the applicable forms for solicitations advertised after the date of such written notice by County.

3.5.2. County Approval. Unless the Form Contracts are utilized for the Project with no material modification or an existing municipal contract is approved by County for use pursuant to Section 3.3, Municipality must obtain written approval from the County Attorney's Office for Municipality's contract(s) with Contractor and with Consultant prior to utilization of the contracts for the Project (and prior to publication of the solicitation, if the contract is included in the solicitation). In addition to the provisions required to be included in Municipality's contracts with Contractor and with Consultant pursuant to Section 8.1 or Section 10.5, Municipality's contracts must also include the provisions listed in Section 3.5.3 and Section 3.5.4, as applicable, in the form stated in the Form Contracts. Any material modification to any required contractual provision must be approved in advance by the County Attorney's Office; no subsequent material change to the contract(s) for the Project may be made without written approval from the County Attorney's Office. Municipality agrees and acknowledges that County's approval of any contracts with Contractor or Consultant, including without limitation the Form Contracts, is solely for purposes of protecting County's interests; County approval of any such contract does not constitute a legal opinion, including without limitation as to the legal sufficiency of the contract, for use or reliance by Municipality or any third party and shall not be the basis for any claim or liability against County or asserted to avoid any reimbursement or other obligation of Municipality under this Agreement. Municipality shall provide at least twenty (20) days' written notification to the Contract Administrator and the County Attorney's Office prior to award of the contract to Contractor or Consultant, as applicable, which notice must include a copy of the competitive solicitation

(or other applicable procurement document) for the Project, the responsive submission by the proposed Contractor or Consultant, the proposed contract amount for the Project, the proposed contract, and the date on which Municipality intends to award the contract. County may disapprove the proposed contract: (a) for failure to comply with any requirement of this Agreement; (b) if the contract price exceeds or is materially inconsistent with the Funding Schedule (absent good cause, as determined by Contract Administrator); or (c) after consultation with Project Manager, for any other good cause as determined in the sole discretion of the Contract Administrator. If County disapproves any proposed contract, County must provide notice of such disapproval within twenty (20) days after receipt of the notice and the documents required pursuant to this section; if not timely disapproved, the proposed contracts shall be deemed approved.

3.5.3. For the contract with Contractor, the following provisions from the Surtax-Funded Projects Form Construction Contract must be included:

3.5.3.1. Contract, Article 3 (Contract Time)
3.5.3.2. Contract, Article 5 (Progress Payments; Retainage)
3.5.3.3. Contract, Article 6 (Acceptance and Final Payment)
3.5.3.4. General Conditions, Article 4 (Performance Bond and Payment Bond) and Article 5 (Qualification of Surety)
3.5.3.5. General Conditions, Article 17 (Project Records and Right to Audit) (*see also* Section 8.1 herein)
3.5.3.6. General Conditions, Article 33 (Location and Damage to Existing Facilities, Equipment, or Utilities)
3.5.3.7. General Conditions, Article 38 (Change Orders) and Article 39 (Value of Change Order Work)
3.5.3.8. General Conditions, Article 14 (Superintendence and Supervision)
3.5.3.9. General Conditions, Article 20 (Differing Site Conditions)
3.5.3.10. General Conditions, Article 40 (Notification and Claim for Change of Contract Time or Contract Price)
3.5.3.11. General Conditions, Article 41 (No Damages for Delay)
3.5.3.12. General Conditions, Article 42 (Excusable Delay; Compensable; Non-Compensable)
3.5.3.13. General Conditions, Article 53 (Domestic Partnership)
3.5.3.14. General Conditions, Article 54 (Equal Employment Opportunity and CBE/SBE Compliance)
3.5.3.15. Supplemental Wage Requirements (Prevailing Wage Rate Ordinance)

3.5.4. For the contract with Consultant, the following provisions from the Surtax-Funded Projects Form Consultant Contract must be included:

3.5.4.1. Article 4 (Time for Performance; Contractor Damages)
3.5.4.2. Sections 5.3 and 5.4 (Reimbursable Expenses; Method of Billing)
3.5.4.3. Section 7.5 (Truth in Negotiation)

3.5.4.4. Section 7.9 (Domestic Partnership Requirement)
3.5.4.5. Article 10 (Equal Employment Opportunity and CBE Compliance)
3.5.4.6. Section 11.4 (Public Records and Trade Secrets)
3.5.4.7. Section 11.5 (Audit Rights)
3.5.4.8. Section 11.8 (Indemnification)
3.5.4.9. Section 11.14 (Drug-Free Workplace)

ARTICLE 4. TERM AND TIME OF PERFORMANCE

4.1. Term. The term of this Agreement shall begin on the date it is fully executed by the Parties ("Effective Date") and shall end on April 30, 2027 ("Initial Term"), unless extended pursuant to Section 4.2.

4.2. Extensions. The Parties may renew this Agreement for up to two (2) additional one (1) year terms (each an "Extension Term") by written approval of the Project Manager and the County Administrator at least thirty (30) days prior to the expiration of the then-current term. Any further extension shall require approval by the Board and the governing body of Municipality.

4.3. Fiscal Year. The continuation of this Agreement beyond the end of any County fiscal year (October 1 through September 30) is subject to both the appropriation and the availability of transportation surtax funds in accordance with Chapter 129, Florida Statutes.

4.4. Time of the Essence. Unless expressly waived by the Contract Administrator in writing, time is of the essence in Municipality's performance of its duties, obligations, and responsibilities under this Agreement.

ARTICLE 5. FUNDING AND SURETY

5.1. Surtax Funding. County shall provide funding to Municipality for the Project in accordance with the Funding Schedule (**Exhibit B**). Any amounts, costs, or expenses indicated as ineligible for funding in Exhibit B shall not be funded by County but must instead be funded by Municipality from non-surtax funds. The Parties agree and acknowledge that all funding provided by County to Municipality under this Agreement shall be paid exclusively from and subject to the availability of proceeds from the transportation surtax levied pursuant to Section 212.055(1), Florida Statutes, and County shall not have any obligation to provide, nor shall County provide, any funding from County's general revenue or any other County source. Municipality agrees and stipulates that the funding provided by County to Municipality under this Agreement will be utilized by Municipality only for the purposes permitted under Section 212.055(1), Florida Statutes.

5.2. Method of Billing and Payment. Municipality shall invoice County only in accordance with the Funding Schedule. Any credit due to County under Section 5.6 must be reflected on the next applicable invoice. To be proper, each invoice must comply with the requirements of Exhibit B and be accompanied by a certification by the City Manager or designee and the Director of

Finance and Administrative Services or designee of Municipality, or such other persons designated by Municipality with authority to act in similar capacities, that all funds received and utilized to date by Municipality under this Agreement were utilized only for the Project, only for the portion(s) of the Project that the Oversight Board and County determined were eligible for surtax funding, and only for purposes that Municipality independently determined were eligible for surtax funding. County shall pay Municipality in accordance with the Funding Schedule within thirty (30) days of receipt of Municipality's proper invoice. Payment shall be made to Municipality at the address designated by Municipality for notices pursuant to Section 11.6.

5.3. Phases; Funding Schedule. The Funding Schedule may provide for funding the Project in phases or by deliverable, with the funding for subsequent phases or deliverables to be determined after completion of prior phases or particular deliverables. Any such later-determined funding for the Project, including any modification to the funding amount(s), phase(s), or deliverable(s) stated in the Funding Schedule, shall require a written amendment to this Agreement with an amended Funding Schedule attached thereto setting forth the next phase(s) or deliverable(s) and applicable funding for same. All terms and conditions of this Agreement shall apply to any such amended Funding Schedule. The County Administrator, on behalf of County, and the Municipality's City Manager or designee on behalf of Municipality, are authorized to execute amendments to this Agreement to incorporate an amended Funding Schedule, provided the total of all funding obligations of County under this Agreement does not exceed the total Maximum Funding Amount. Any amended Funding Schedule or other amendment that would cause County's total funding obligations under this Agreement to exceed the Maximum Funding Amount shall not be effective unless approved by the Board.

5.4. Maximum Funding. Municipality acknowledges that the Maximum Funding Amount set forth below is the maximum amount payable by County and constitutes a limitation upon County's obligation to provide funding to Municipality for the Project. Municipality further acknowledges that subtotal amounts set forth below for the applicable phases and in the Funding Schedule (including as amended) are the maximum amounts payable for the applicable portions of the Project, and constitute limitations on County's obligation to provide funding to Municipality for the Project.

Description	Not-To-Exceed Amounts
Phase 1: Construction (including 5% retainage)	$1,045,118.16
Reimbursable Inflation Adjustment (11.74%)	$122,667.58
MAXIMUM FUNDING AMOUNT:	$1,167,785.74

In no event shall County be liable to provide funding to Municipality in excess of the applicable amounts stated in the Funding Schedule or the Maximum Funding Amount, regardless of the basis for any claim or the basis for increased cost, including, without limitation, differing site conditions, delays, weather, or any other reason. If the actual costs of the Project exceed the amount County is obligated to fund per the Funding Schedule, as same may be amended pursuant to this Agreement, Municipality shall be solely responsible for funding any and all such additional amounts. Municipality is solely responsible for any and all costs to operate, support,

and maintain the Project unless otherwise agreed in writing by the Parties; County has no obligation to fund any costs related to the Project except as expressly stated in this Agreement.

5.5. Adjustments for Corridor Projects; Funding Withholding; Other Delayed Funding.

5.5.1. In order to avoid duplicative construction and unnecessary disruption of the local transportation network and community, the Parties shall cooperate in good faith to coordinate the timing of the Project with other projects that affect the same or nearby transportation elements, including, without limitation, other Surtax-Funded Projects and other County or State roadway projects (collectively, "Corridor Projects"). The Contract Administrator shall provide prompt notice to Municipality if County determines that the timing of the Project requires adjustment due to a Corridor Project. Upon receipt of such a notice, Municipality shall use best efforts to suspend any additional work on the Project pending an agreed adjustment to the Project Schedule, and the Parties shall cooperate to mutually approve an adjusted Funding Schedule (adjusted only as to timing, absent good cause as determined by Contract Administrator) and Project Schedule. County may withhold any otherwise scheduled funding until such adjustments are mutually approved by the Parties. To the extent some or all of the Project costs are modified as a direct result of a timing adjustment to accommodate a Corridor Project, such modified costs shall be addressed in an amendment to the Funding Schedule and, if necessary, an amendment to this Agreement.

5.5.2. If commencement or completion of a phase of the Project is delayed beyond its scheduled date by more than one (1) year, or work suspended for more than one (1) year, the Funding Schedule may be unilaterally adjusted as to timing (but not amount) by written notice issued by the Contract Administrator, after consultation with Municipality, to reflect the delay; any adjustment to the amount of funding for any phase in connection with the delay shall require an amended Funding Schedule in accordance with Section 5.3.

5.6. Overpayments; Refunds. Any funding provided by County under this Agreement for a Phase that exceeds the actual amounts expended by Municipality in accordance with this Agreement for that Phase shall be credited against the next invoice to County or refunded to County, as elected by County. Any funding provided by County under this Agreement that exceeds actual amounts paid by Municipality for the Project shall be promptly refunded to County upon Municipality's discovery of an overpayment, County's request for refund, or sixty (60) days after completion of the Project, whichever occurs first. For purposes of this calculation, any interest expense(s) incurred by Municipality are not an allowable cost. Any refunds, credits, liquidated damages, insurance proceeds (after payment of any applicable deductible), claim or litigation proceeds (after payment of attorneys' fees and costs), or other amounts received by or credited to Municipality by or on behalf of Contractor, Consultant, or any Subcontractor (collectively, "Proceeds") shall be either credited against future funding due from County under this Agreement or paid by Municipality to County within thirty (30) days after its receipt of the Proceeds, as elected by County. The total Proceeds amount credited or refunded

to County shall not exceed the total funding provided by County under this Agreement. Municipality shall promptly notify County of any amount of Proceeds received by or credited to Municipality, and of any claims filed or asserted relating to the Project. For unresolved claims or litigation, the Parties shall cooperate to ensure any Proceeds are first credited or repaid to the benefit of County before any other allocation.

5.7. Separate Accounting. Municipality shall deposit and maintain all funding received from any source for the Project in a segregated fund or account, which shall be subject to audit pursuant to Article 8. Any interest earned by Municipality on any funds provided under this Agreement shall be credited against the funding otherwise due from County under this Agreement and must be utilized by Municipality solely in accordance with the terms of this Agreement. Upon prior written approval by the Contract Administrator, Municipality may utilize other methods of separate accounting for the Project funds provided the accounting method permits a full and complete audit of the funds as required by Article 8.

5.8. Withholding by County. Notwithstanding any provision of this Agreement to the contrary, County may withhold, in whole or in part, payment to the extent necessary to ensure utilization of the funds in accordance with this Agreement, applicable law, and the Board-approved transportation surtax program. Failure of Municipality or the Project to comply with the Reporting Requirements or the Performance Metrics may also be a basis to withhold or limit future funding for the Project, as determined in the reasonable discretion of the Contract Administrator. The amount withheld shall not be subject to payment of interest by County. Upon written notice by County and except as expressly stated otherwise herein, payment may be withheld by County for the duration of any failure of Municipality to comply with a term, condition, or requirement of this Agreement; County shall promptly pay the amount withheld to Municipality when Municipality's noncompliance with the applicable terms and conditions of this Agreement is cured to the reasonable satisfaction of Contract Administrator.

5.9. Final Invoice and Reconciliation. Unless otherwise stated in the Funding Schedule or approved by the Contract Administrator, Municipality must submit the final invoice to County no later than one hundred twenty (120) days after the completion of the Project. The final invoice must be accompanied by a complete summary of all expenses incurred and all amounts paid for the Project, all funding, Proceeds, interest, or other amounts received relating to the Project, and any unpaid invoices, amounts still owing, disputed charges, or other unresolved issues relating to the Project that may impact the financial accounting of the Project (collectively, the "Final Reconciliation"). Upon request by the Contract Administrator, Municipality shall provide any backup or additional documentation requested relating to the Final Reconciliation; if County or Municipality identifies any error or omission in the Final Reconciliation, Municipality shall resubmit a corrected final invoice and corrected Final Reconciliation. County shall pay the correct final invoice after review and approval of the Final Reconciliation.

ARTICLE 6. TRANSPORTATION SURTAX PROJECT COORDINATION AND PARTICIPATION

6.1. Reporting Requirements. Unless waived in writing by the Contract Administrator, Municipality shall comply with the Reporting Requirements set forth in **Exhibit C**. In addition,

Municipality shall provide written reports to the Contract Administrator consisting of the following information as of the date of the report, with monthly information provided within thirty (30) days after the end of the applicable month, quarterly information provided within forty-five (45) days after the end of the applicable quarter, and annual information provided within one hundred eighty (180) days after the end of the fiscal year:

6.1.1. Quarterly Report on Expenditures: For both total to date and total for the applicable quarter, the total funds received from any funding source for the Project (itemized by funding source) and total funds (by funding source) expended to date for the Project;

6.1.2. Monthly Report on Project Schedule: The updated Project Schedule, summary of progress during the applicable quarter, and any adjustments to the Project Schedule (including all approved adjustments and pending requests for adjustments);

6.1.3. Monthly report on Material Changes or Impacts: All material changes to the Project, the Project Schedule, or any other aspect of the Project that may impact the cost of the Project or the ability of the Project to achieve the intended goals or purposes; and

6.1.4. Annual Audit Reports: On an annual basis, copies of Municipality's most recent annual financial reporting packages, reports, or other information required to be submitted in accordance with Section 215.97, Florida Statutes. A copy of Municipality's most recent single audit complies with this requirement.

6.2. Performance Metrics. Municipality must ensure that the quality, progress, and nature of the Project strictly comply with the Performance Metrics stated in Exhibit C. The Contract Administrator may modify the Performance Metrics for the Project at any time with the written approval of the Project Manager. In addition to the reporting required pursuant to Section 6.1 above, Municipality shall provide written reports to the Contract Administrator on at least an annual basis, no later than ninety (90) days after the end of the fiscal year, documenting the Project's compliance with the applicable Performance Metrics. The Contract Administrator or designee will provide technical assistance and support, as may be reasonably requested by Municipality, and shall make available to Municipality a centralized repository of relevant, available metrics and data.

6.3. Permitting for Surtax-Funded Projects. To decrease public inconvenience and to facilitate the expeditious and efficient completion of Surtax-Funded Projects, for any Surtax-Funded Project that is performed by County and is in whole or in part within the geographical boundaries of Municipality, Municipality shall waive, to the full extent permissible under applicable law, all municipal permitting requirements, except to the extent of any portion of the work performed by County that will be owned, operated, and maintained by Municipality. The waiver shall include, but not be limited to, the requirements of permit application, permit issuance, inspections, and permitting fees. County shall be responsible for ensuring adequate plan review, inspections, and compliance with State and County standards for work in the public right of way.

County shall waive, to the full extent permissible under applicable law, all County permitting fees for municipal Surtax-Funded Projects.

6.4. Road Closures. Municipality shall institute and comply with a cooperative notification program that ensures County is promptly notified and promptly provided with data reasonably requested by County regarding all municipal roads that are closed for any reason, including but not limited to the Project, other construction, or flooding, in a format prescribed by County. Providing Municipality consistently utilizes the cooperative notification program established by County and promptly cures any nonperformance upon notice by County, nonrecurring or isolated incidents of failure by Municipality to timely notify as required by this Section 6.4 shall not be a basis for withholding or nonpayment of funding by County under this Agreement.

6.5. Branding and Marketing. At County's request, Municipality shall participate in reasonable branding and marketing in the form and content prescribed by County, including, but not limited to, signage prominently acknowledging the surtax funding source of Surtax-Funded Projects, utilizing County-approved wording, logo, or other imagery, which branding and marketing will acknowledge the project contributions of County and Municipality. The costs for all branding and marketing requested by County pursuant to this Section 6.5 shall be fully funded by County. Provided Municipality cures any nonperformance within thirty (30) days after notice by County, nonrecurring or isolated incidents of failure by Municipality to comply with this Section 6.5 shall not be a basis for withholding or nonpayment of funding by County under this Agreement.

6.6. Data Collection and Sharing. To the extent requested by County, Municipality shall ensure the Project includes incorporation and placement of sensors or other devices on municipal roads, rights of way, properties, and assets for County-approved applications for mobility-related data collection purposes, provided such placement shall not unreasonably interfere with the aesthetics or Municipality's use of such roads, rights of way, properties, or assets. The costs for any such incorporation and placement requested by County shall be funded by County. Municipality shall ensure the collection of data includes and is consistent with the scope, type, frequency, quantity, and format requested by County in order to facilitate countywide collection and utilization of transportation data. For the useful life of the Project, to the extent requested by County, Municipality shall provide County any and all access to such data as may be requested by County, including recurring or real-time access or periodic download. Provided Municipality cures any nonperformance within thirty (30) days after notice by County, nonrecurring or isolated incidents of Municipality's failure to comply with this Section 6.6 shall not be a basis for withholding or nonpayment of funding by County under this Agreement.

6.7. Conflict of Interest.

6.7.1. Municipality represents and agrees that it has not contracted, and will not contract during the term of this Agreement, with the MPO for the MPO to perform any of the following services (collectively, the "Contracting Prohibitions"):

6.7.1.1. Any design, construction, oversight, or management services relating to any Surtax-Funded Project or any proposed project for which transportation surtax funding is being or will be sought;

6.7.1.2. Any planning, oversight, or reporting services relating to any receipt by Municipality of community shuttle surtax funding; or

6.7.1.3. Any grant writing or grant consultation services in connection with any Surtax-Funded Project (or proposed Surtax-Funded Project).

6.7.2. The foregoing Contracting Prohibitions:

6.7.2.1. Shall not apply to any state- or federally-mandated services provided by the MPO for which services the MPO does not receive any compensation from Municipality beyond Municipality's annual contribution to the MPO;

6.7.2.2. May be waived by the County Administrator in connection with any Surtax-Funded Project for which the County Administrator determines, in his or her sole discretion, that such waiver is in the best interest of Broward County for reasons including, but not limited to, that such waiver would permit the performance of services reasonably necessary to obtain significant state or federal matching funds in connection with any project or proposed project. No such waiver shall be effective unless approved by the County Administrator in writing; and

6.7.2.3. Do not prohibit or in any way impede the ability of Municipality to contract with any entity other than the MPO for transportation planning services whether or not such services are in connection with any Surtax-Funded Project.

The Parties agree that any violation of the Contracting Prohibitions will constitute a material breach of this Agreement which, in addition to all other remedies available to County under this Agreement, would permit County to terminate this Agreement, withhold all funds otherwise payable to Municipality under this Agreement, and require Municipality to repay County in full for any funds previously paid by County under this Agreement.

6.8. Sale, Transfer, or Disposal of Surtax-Funded Property. Municipality shall not sell or otherwise transfer or dispose of its title, rights, or interests, or any portion thereof, in real property, facilities, or equipment, funded in any part by County under this Agreement, without prior written approval from County. If a sale, transfer, or disposal occurs in violation of this section, unless otherwise agreed in writing by the Parties, Municipality shall pay County, within ninety (90) days after the sale, transfer, or disposal, an amount equal to the greater of County's

share of the fair market value or the straight line depreciated value of the improvements plus land value. "County's share of the fair market value" as used herein means the percentage of surtax funding in the Project multiplied by the best obtainable price for the item, and the resulting product then reduced by reasonable sales costs. If the property has never been used for the intended purpose of the Project, Municipality shall pay the greater of County's share of the fair market value or the entire amount of surtax funding provided for the Project.

6.9. Affirmation of MPO Prioritization and Ranking Process. Municipality acknowledges that the prioritization and ranking process of municipal capital projects for fiscal year 2020 was completed in compliance with all applicable obligations of County and the MPO; and was informed by each project's ability to alleviate traffic congestion and improve connectivity, as well as shovel-readiness, construction work planned in the vicinity of a proposed project, corridor delivery timing, and other existing conditions that allow surtax revenues to be utilized responsibly, efficiently, and with the least interruption to residents and businesses. Municipality hereby waives and releases any and all claims it has or may have that accrued at any time prior to the effective date of this Agreement, which claims, in any way, relate to, result from, or are in connection with the prioritization and ranking process of municipal capital projects for fiscal year 2020 or the County's funding decisions related thereto. Municipality agrees and stipulates that the MPO prioritization and ranking process for fiscal year 2020 was proper and consistent with the applicable interlocal agreements and that the County is not, as of the effective date of this agreement, in breach or default of any provision of any applicable interlocal agreement relating in any way to expenditure of transportation surtax proceeds.

ARTICLE 7. INDEMNIFICATION

Municipality shall indemnify, hold harmless, and defend County and all of County's current, past, and future officers, agents, servants, and employees (collectively, "Indemnified Party") from and against any and all causes of action, demands, claims, losses, liabilities, and expenditures of any kind, including attorneys' fees, court costs, and expenses, including through the conclusion of any appellate proceedings, raised or asserted by any person or entity not a party to this Agreement, and caused or alleged to be caused, in whole or in part, by any intentional, reckless, or negligent act or omission of Municipality, its officers, employees, agents, or servants, arising from, relating to, or in connection with this Agreement (collectively, a "Claim"). If any Claim is brought against an Indemnified Party, Municipality shall, upon written notice from County, defend each Indemnified Party against each such Claim by counsel satisfactory to County or, at County's option, pay for an attorney selected by the County Attorney to defend the Indemnified Party. The obligations of this section shall survive the expiration or earlier termination of this Agreement. If considered necessary by the Contract Administrator and the County Attorney, any sums due Municipality under this Agreement may be retained by County until all Claims subject to this indemnification obligation have been settled or otherwise resolved. Any amount withheld shall not be subject to payment of interest by County.

ARTICLE 8. AUDITING

8.1. Audit Rights and Retention of Records. County shall have the right to audit the books, records, and accounts of Municipality, Contractor, Consultant, and Subcontractors (the "Audited Entities") that are related to the Project or this Agreement (the "Contract Records"). Audits, reviews, monitoring, inspections, and investigations conducted pursuant to this Agreement may include, but are not limited to, on-site visits by County staff, interviews of staff of any of the Audited Entities, review of performance and financial reports, determining and monitoring appropriate corrective action, and issuing management letters on deficiencies or weaknesses identified. Audited Entities shall fully comply and cooperate with any auditing and monitoring activities deemed appropriate by County.

Audited Entities shall keep such books, records, and accounts as may be necessary in order to record complete and correct entries related to this Agreement and performance under this Agreement. All such books, records, and accounts shall be kept in written form, or in a form capable of conversion into written form within a reasonable time, and upon request by the Contract Administrator to do so, Audited Entities shall make same available in written form at no cost to County.

Contract Records include any and all information, materials, and data of every kind and character, including without limitation, records, books, papers, documents, subscriptions, recordings, agreements, purchase orders, leases, contracts, commitments, arrangements, notes, daily diaries, drawings, receipts, vouchers, and memoranda, and any and all other documents that pertain to rights, duties, obligations, or performance relating to the Project. Contract Records include hard copy and electronic records, written policies and procedures, time sheets, payroll records and registers, cancelled payroll checks, estimating work sheets, correspondence, invoices and related payment documentation, general ledgers, insurance rebates and dividends, and any other records pertaining to rights, duties, obligations, or performance relating to the Project of any of the Audited Entities.

Audited Entities shall preserve and make available, at reasonable times within Broward County, Florida, for examination and audit, all financial records, supporting documents, statistical records, and any other documents pertinent to the Project or this Agreement until the later of five (5) years after expiration or termination of this Agreement, resolution of any audit findings, or as otherwise required by law. Any audit or inspection pursuant to this section may be performed by any County representative (including any outside representative engaged by County) or the Oversight Board. The Project and all expenditures relating to the Project shall be subject to the Oversight Board's review, critique, and analysis for the duration of the Project.

Any incomplete or incorrect entry in such books, records, and accounts shall be a basis for County's disallowance and recovery of any payment made or based upon such entry. If an audit or inspection in accordance with this section discloses overpricing or overcharges to County of any nature in excess of five percent (5%) of the total contract billings reviewed by County, the reasonable actual cost of County's audit shall be reimbursed to County by Municipality in addition to any required adjustments for the overcharges. Any adjustments or payments due as a result

of such audit or inspection shall be made by Municipality to County within thirty (30) days after presentation of County's findings to Municipality.

Municipality shall ensure that the requirements of this section are included in all agreements with any other Audited Entity. Municipality shall further include in its contract with Contractor and its contract with Consultant the following provision:

> "If an audit inspection or examination in accordance with this provision discloses overpricing or overcharges to Municipality (of any nature) by the contractor or the contractor's subcontractors in excess of five percent (5%) of the total contract billings reviewed, the reasonable actual cost of any audit conducted by or on behalf of Municipality, Broward County, or the Independent Transportation Surtax Oversight Board shall be reimbursed by contractor to the Municipality or Broward County, as applicable, along with any required adjustments for the overpricing or overcharges. Any adjustments or payments that must be made as a result of any such audit or inspection of the contractor's invoices or records shall be made within a reasonable amount of time (not to exceed 30 days) after presentation of the audit findings to contractor."

8.2. Performance Audit. The Project, and all funding received, maintained, or expended by Municipality for the Project, shall be subject to audits and reviews by the Oversight Board at its expense (and subject to reimbursement pursuant to this article) for the duration of the Project and continuing until five (5) years after the later of completion of the project, expiration or termination of this Agreement, or resolution of any audit findings. Municipality shall fully cooperate and provide any and all requested Contract Records as may be requested by the Oversight Board. The Project and all funds received, maintained, or expended relating to the Project shall be subject to the Oversight Board's review, critique, and analysis for the duration of the Project.

ARTICLE 9. TERMINATION

9.1. This Agreement may be terminated for cause by the aggrieved Party if the Party in breach has not corrected the breach within thirty (30) days after receipt of written notice from the aggrieved Party identifying the breach. This Agreement may also be terminated by the Board upon sixty (60) days' prior written notice if the Board determines that the Project cannot be funded with surtax funding under applicable law, including Section 212.055, Florida Statutes. This Agreement may be immediately terminated by written notice by the County Administrator if the transportation surtax is determined by a court of competent jurisdiction to be invalid, void, or illegal.

9.2. This Agreement may be terminated for cause by County for reasons including, but not limited to, any of the following:

9.2.1. Inability of Municipality, including through Contractor or Consultant, to perform or complete the Project in compliance with this Agreement, including the Project

Schedule (including any extensions approved by Contract Administrator, approval of which shall not be unreasonably withheld);

9.2.2. Repeated submission (whether negligent or intentional) for payment of false or incorrect invoices;

9.2.3. Fraud, misrepresentation, or material misstatement in the performance of this Agreement or the Project by Municipality, Contractor, or Consultant;

9.2.4. Contractor's or Consultant's act or omission that violates any applicable requirement of Section 1-81, Broward County Code of Ordinances; or

9.2.5. Utilization of the funding provided by County under this Agreement in a manner that violates applicable law or for uses or purposes that are not permitted uses for transportation surtax funds under Section 212.055, Florida Statutes.

9.3. Notice of termination shall be provided in accordance with the "Notices" section of this Agreement.

9.4. If this Agreement is terminated by County, Municipality shall be paid from proceeds of the surtax levied pursuant to Section 212.055, Florida Statutes, if funding is available, for any work on the Project properly performed through the termination date specified in the written notice of termination, subject to any right of County to retain any sums otherwise due and payable.

9.5. In addition to any right of termination stated in this Agreement, County and Municipality shall be entitled to seek any and all available remedies, whether stated in this Agreement or otherwise available at law or in equity, all such remedies being cumulative.

9.6. Municipality may terminate this Agreement upon thirty (30) days' prior written notice to County if Municipality determines not to proceed with the Project and either (a) the written notice of termination is provided prior to Municipality's receipt of any funding from County under this Agreement, or (b) prior to the effective date of termination, Municipality returns all funding received from County under this Agreement, including any interest earned by Municipality on any funds provided by County under this Agreement.

ARTICLE 10. EQUAL EMPLOYMENT OPPORTUNITY AND CBE COMPLIANCE

10.1. No Party may discriminate on the basis of race, color, sex, religion, national origin, disability, age, marital status, political affiliation, sexual orientation, pregnancy, or gender identity and expression in the performance of this Agreement. Municipality shall include the foregoing or similar language in its contracts with Contractor and Consultant, and shall require inclusion of the foregoing or similar language in their contracts with Subcontractors, except that any project assisted by the U.S. Department of Transportation funds shall comply with the nondiscrimination requirements in 49 C.F.R. Parts 23 and 26.

10.2. Unless otherwise approved in advance in writing by County's Director of Office of Economic and Small Business Development ("OESBD"), Municipality shall comply with all applicable requirements of the County Business Opportunity Act, Section 1-81, et seq., Broward County Code of Ordinances, in the award and administration of any contract or agreement regarding the Project. Failure by Municipality to carry out any of the requirements of this article shall constitute a material breach of this Agreement, which shall permit County to terminate this Agreement or exercise any other remedy provided under this Agreement, the Broward County Code of Ordinances, the Broward County Administrative Code, or under other applicable law, all such remedies being cumulative.

10.3. Unless otherwise approved in advance in writing by County's Director of OESBD, Municipality will meet the required CBE goal for the Project by utilizing (or requiring the utilization of) CBE firms for at least thirty percent (35%) of total Project costs, except that no CBE commitment shall apply to agreements that are subject to other participation goals (e.g., federal DBE program or SBE reserves), agreements that are expressly exempt from the County's Procurement Code, agreements that are otherwise ineligible by state or federal law, and agreements to which goals are not assigned by the County (e.g., sole source, sole brand, and emergency agreements) (the "Commitment").

10.4. Each CBE firm utilized to meet the Commitment must be certified by OESBD. Municipality shall inform County immediately when a CBE firm is not able to perform or if Municipality believes the CBE firm should be replaced for any other reason, so that OESBD may review and verify the good faith efforts of Municipality to substitute the CBE firm with another CBE firm, as applicable. Whenever a CBE firm is terminated for any reason, Municipality shall provide written notice to OESBD and, upon written approval of the Director of OESBD, shall substitute another CBE firm in order to meet the CBE goal, unless otherwise provided in this Agreement or agreed in writing by the Parties. Such substitution shall not be required if the termination results from modification of the Project and no CBE firm is available to perform the modified Project; in which event, Municipality shall notify County, and OESBD may adjust the Commitment by written notice to Municipality. Municipality shall not terminate a CBE firm for convenience without County's prior written consent, which consent shall not be unreasonably withheld.

10.5. Municipality shall include the following provision in its contract with Contractor:

> "The parties stipulate that if Contractor fails to meet the CBE utilization obligation in the Interlocal Agreement between Municipality and Broward County (the "Commitment"), the damages to Broward County and Municipality arising from such failure are not readily ascertainable at the time of contracting. If Contractor fails to meet the Commitment and Broward County determines, in the sole discretion of the OESBD Program Director, that Contractor failed to make Good Faith Efforts (as defined in Section 1-81, Broward County Code of Ordinances) to meet the Commitment, Contractor shall pay Municipality liquidated damages in an amount equal to fifty percent (50%) of the actual dollar amount by which Contractor failed to achieve the Commitment, up to a maximum amount of ten percent (10%) of the total contract amount excluding costs and reimbursable expenses.

An example of this calculation is stated in Section 1-81.7, Broward County Code of Ordinances. As elected by Broward County, such liquidated damages amount shall be either credited against any amounts due Contractor from Municipality, or must be paid by Municipality to Broward County within thirty (30) days after written demand by Broward County. Any failure to meet the Commitment attributable solely to force majeure, changes to the Project, or inability to substitute a CBE Subcontractor where the OESBD Program Director has determined that such inability is due to no fault of Contractor, shall not be deemed a failure by Contractor to meet the Commitment."

10.6. Municipality shall require Contractor and Consultant to provide written monthly reports to the Municipality and the Contract Administrator no later than ten (10) business days after the end of the month regarding Contractor's and Consultant's compliance with the Commitment stated in this article. In addition, Municipality shall require Contractor and Consultant to allow County to engage in onsite reviews to monitor Contractor's and Consultant's progress in achieving the Commitment and maintaining the applicable contractual and CBE obligations.

ARTICLE 11. MISCELLANEOUS

11.1. Contract Administrator Authority; Dispute Resolution; Escalation. The Contract Administrator is authorized to coordinate and communicate with Municipality to manage and supervise the performance of this Agreement. Any determination by the Contract Administrator that this Agreement authorizes the Contract Administrator to make shall be binding on the Parties. Unless expressly stated otherwise in this Agreement or otherwise set forth in an applicable provision of the Broward County Procurement Code, Broward County Code of Ordinances, or Broward County Administrative Code, the Contract Administrator may exercise any ministerial authority in connection with the day-to-day management of this Agreement. In the event of a dispute regarding the performance of this Agreement, both Parties stipulate and agree to expedited dispute resolution procedures as follows: if either Party provides notice of a dispute that the respective staff have failed to resolve despite diligent good faith efforts, the Contract Administrator and the Project Manager (or other appropriate representative(s) designated by County or Municipality, respectively) shall meet in person or via videoconference within ten (10) business days and attempt in good faith to resolve the dispute and report potential resolutions to their respective governing bodies for consideration; if either Party thereafter provides written notice of impasse, the Mayors or Vice-Mayors of the County and Municipality shall meet in person or via videoconference within ten (10) business days and attempt in good faith to resolve the dispute and report potential resolutions to their respective governing bodies for consideration; any resolution must be approved by the governing bodies of both Parties to be effective. If either Party thereafter provides written notice of impasse, either Party may proceed to seek any available judicial remedies and the Parties agree and stipulate that the requirements of Chapter 164 shall be deemed fully met and both Parties waive and agree not to assert any defense based upon failure to fully comply with the intergovernmental dispute resolution proceedings otherwise required under Chapter 164.

11.2. Public Records. The Parties agree and stipulate that both Parties are subject to Florida public records laws and shall fully comply with same. At the request of County, Municipality shall, in accordance with applicable law, respond to any request for public records received by County relating to the Project. Any other public records request shall be responded to by the receiving party. Each Party shall cooperate upon request by the other Party and provide any requested records to enable the Party to respond to a public records request.

Any material submitted to County that Municipality, Contractor, or Consultant contends constitutes or contains trade secrets or is otherwise exempt from production under Florida public records laws (including Chapter 119, Florida Statutes) ("Trade Secret Materials") must be separately submitted and conspicuously labeled "EXEMPT FROM PUBLIC RECORD PRODUCTION – TRADE SECRET." In addition, Municipality, Contractor, or Consultant, as applicable, must, simultaneous with the submission of any Trade Secret Materials, provide a sworn affidavit from a person with personal knowledge attesting that the Trade Secret Materials constitute trade secrets under Section 812.081, Florida Statutes, and stating the factual basis for same. If a third party submits a request to County for records designated by Municipality, Contractor, or Consultant as Trade Secret Materials, County shall refrain from disclosing the Trade Secret Materials, unless otherwise ordered by a court of competent jurisdiction or authorized in writing by Municipality, Contractor, or Consultant, as applicable. Municipality shall indemnify and defend, and shall require Contractor and Consultant to indemnify and defend, County and its employees and agents from any and all claims, causes of action, losses, fines, penalties, damages, judgments and liabilities of any kind, including attorneys' fees, litigation expenses, and court costs, relating to the nondisclosure of any Trade Secret Materials in response to a public records request by a third party.

11.3. Independent Contractor. Nothing in this Agreement constitutes or creates a partnership, joint venture, or any other relationship between the Parties or any Party and Contractor, Consultant, or any Subcontractor. Neither Party nor its agents shall act as officers, employees, or agents of the other Party. Neither Party shall have the right to bind the other Party to any obligation not expressly undertaken by that Party under this Agreement.

11.4. Sovereign Immunity. Except to the extent sovereign immunity may be deemed to be waived by entering into this Agreement, nothing herein is intended to serve as a waiver of sovereign immunity by County or Municipality, nor shall anything included herein be construed as consent by County or Municipality to be sued by third parties in any matter arising out of this Agreement. County and Municipality are subdivisions of the State of Florida, as defined in Section 768.28, Florida Statutes, and shall be responsible for the negligent or wrongful acts or omissions of their respective employees pursuant to Section 768.28, Florida Statutes.

11.5. Third-Party Beneficiaries. Neither Municipality nor County intends to directly or substantially benefit a third party by this Agreement. Therefore, the Parties acknowledge that there are no third-party beneficiaries to this Agreement and that no third party shall be entitled to assert a right or claim against either of them based upon this Agreement.

11.6. Notices. In order for a notice to a Party to be effective under this Agreement, notice must be sent via U.S. first-class mail, hand delivery, or commercial overnight delivery, each with a contemporaneous copy via email, to the addresses listed below and shall be effective upon mailing or hand delivery (provided the contemporaneous email is also sent). The addresses for notice shall remain as set forth in this section unless and until changed by providing notice of such change in accordance with the provisions of this section.

FOR COUNTY:
Broward County Administrator
Attn: Monica Cepero
115 South Andrews Avenue, Room 409
Fort Lauderdale, Florida 33301
Email address: mcepero@broward.org

With a copy to:

Broward County Attorney's Office:
Attn: Nathaniel A. Klitsberg
115 South Andrews Avenue, Room 423
Fort Lauderdale, Florida 33301
Email address: nklitsberg@broward.org

FOR MUNICIPALITY:
City of Sunrise
City Manager's Office
Attn: Mark S. Lubelski
10770 W. Oakland Park Blvd.
Sunrise, Florida 33351
Email address: mlubelski@sunrisefl.gov

With a copy to:

City of Sunrise
City Attorney's Office
Attn: Thomas P. Moss
10770 W. Oakland Park Blvd.
Sunrise, Florida 33351
Email address: tmoss@sunrisefl.gov

11.7. Assignment. Neither this Agreement nor any right or interest in it may be assigned, transferred, subcontracted, or encumbered by Municipality without the prior written consent of County. Any assignment, transfer, encumbrance, or subcontract in violation of this section shall be void and ineffective, constitute a breach of this Agreement, and permit County to immediately

terminate this Agreement, in addition to any other remedies available to County at law or in equity, all such remedies being cumulative.

11.8. Materiality and Waiver of Breach. Each requirement, duty, and obligation set forth in this Agreement was bargained for at arm's-length and is agreed to by the Parties. Each requirement, duty, and obligation set forth in this Agreement is substantial and important to the formation of this Agreement, and each is, therefore, a material term of this Agreement. County's or Municipality's failure to enforce any provision of this Agreement shall not be deemed a waiver of such provision or modification of this Agreement. A waiver of any breach of a provision of this Agreement shall not be deemed a waiver of any subsequent breach and shall not be construed to be a modification of the terms of this Agreement. To be effective, any waiver must be in writing signed by an authorized signatory of the Party granting the waiver.

11.9. Compliance with Laws. Municipality and the Project must comply with all applicable federal, state, and local laws, codes, ordinances, rules, and regulations including, without limitation, Americans with Disabilities Act, 42 U.S.C. § 12101, Section 504 of the Rehabilitation Act of 1973, and any related federal, state, or local laws, rules, and regulations.

11.10. Representation of Authority. The Parties represent and warrant that this Agreement constitutes the legal, valid, binding, and enforceable obligation of each Party, that execution of this Agreement is within each Party's legal powers, and that each individual executing this Agreement is duly authorized by all necessary and appropriate action to do so on behalf of that Party and does so with full legal authority.

11.11. Severability. If any part of this Agreement is found to be unenforceable by any court of competent jurisdiction, that part shall be deemed severed from this Agreement and the balance of this Agreement shall remain in full force and effect.

11.12. Joint Preparation. This Agreement has been jointly prepared by the Parties, and shall not be construed more strictly against either Party.

11.13. Interpretation. The titles and headings contained in this Agreement are for reference purposes only and shall not in any way affect the meaning or interpretation of this Agreement. All personal pronouns used in this Agreement shall include any other gender, and the singular shall include the plural, and vice versa, unless the context otherwise requires. Terms such as "herein," "hereof," "hereunder," and "hereinafter" refer to this Agreement as a whole and not to any particular sentence, paragraph, or section where they appear, unless the context otherwise requires. Whenever reference is made to a section or article of this Agreement, such reference is to the section or article as a whole, including all of the subsections of such section, unless the reference is made to a particular subsection or subparagraph of such section or article. Any reference to "days" means calendar days, unless otherwise expressly stated.

11.14. Priority of Provisions. Unless otherwise expressly stated in this Agreement, if there is a conflict or inconsistency between any term, statement, requirement, or provision of any document or exhibit attached to, referenced by, or incorporated in this Agreement and any

provision of Articles 1 through 11 of this Agreement, the provisions contained in Articles 1 through 11 shall prevail and be given effect. In the event of a conflict between this Agreement and the Transportation System Surtax Interlocal Agreement, executed by County on August 29, 2018, as amended, the provisions of this Agreement shall prevail and be given effect.

11.15. Law, Jurisdiction, Venue, Waiver of Jury Trial. This Agreement shall be interpreted and construed in accordance with and governed by the laws of the State of Florida. The exclusive venue for any lawsuit arising from, related to, or in connection with this Agreement shall be in the state courts of the Seventeenth Judicial Circuit in and for Broward County, Florida. If any claim arising from, related to, or in connection with this Agreement must be litigated in federal court, the exclusive venue for any such lawsuit shall be in the United States District Court or United States Bankruptcy Court for the Southern District of Florida. **BY ENTERING INTO THIS AGREEMENT, EACH OF MUNICIPALITY AND COUNTY HEREBY EXPRESSLY WAIVES ANY RIGHTS IT MAY HAVE TO A TRIAL BY JURY OF ANY CIVIL LITIGATION RELATED TO THIS AGREEMENT.**

11.16. Amendments. No modification, amendment, or alteration in the terms or conditions contained in this Agreement shall be effective unless contained in a written document prepared with the same or similar formality as this Agreement and executed by duly authorized representatives of County and Municipality.

11.17. Prior Agreements. This Agreement represents the final and complete understanding of the Parties regarding the subject matter and supersedes all prior and contemporaneous negotiations and discussions regarding that subject matter. There is no commitment, agreement, or understanding concerning the subject matter of this Agreement that is not contained in this written document.

11.18. Payable Interest

11.18.1. Payment of Interest. County shall not be liable to pay any interest to Municipality for any reason, whether as prejudgment interest or for any other purpose, and in furtherance thereof Municipality waives, rejects, disclaims, and surrenders any and all entitlement it has or may have to receive interest in connection with a dispute or claim arising from, related to, or in connection with this Agreement. This subsection shall not apply to any claim for interest, including for post-judgment interest, if such application would be contrary to applicable law.

11.18.2. Rate of Interest. If the preceding subsection is inapplicable or is determined to be invalid or unenforceable by a court of competent jurisdiction, the annual rate of interest payable by County under this Agreement, whether as prejudgment interest or for any other purpose, shall be, to the full extent permissible under applicable law, one quarter of one percent (0.25%) simple interest (uncompounded).

11.19. Incorporation by Reference. Any and all Recital clauses stated above are true and correct and are incorporated in this Agreement by reference. The attached exhibits are incorporated into and made a part of this Agreement.

11.20. Prevailing Wage Requirement. If construction work in excess of Two Hundred Fifty Thousand Dollars ($250,000.00) is required of, or undertaken by, Municipality as a result of this Agreement, Section 26-5, Broward County Code of Ordinances, as amended from time to time, shall be deemed to apply to such construction work. Municipality shall ensure Contractor fully complies with the requirements of such ordinance and satisfies, complies with, and completes the required forms as set forth in the Surtax-Funded Projects Form Construction Contract or such other contract as is approved pursuant to this Agreement.

11.21. Counterparts and Multiple Originals. This Agreement may be executed in multiple originals, and may be executed in counterparts, whether signed physically or electronically, each of which shall be deemed to be an original, but all of which, taken together, shall constitute one and the same agreement.

11.22. Living Wage Requirement. To the extent Contractor is a "covered employer" within the meaning of the Broward County Living Wage Ordinance, Sections 26-100 through 26-105, Broward County Code of Ordinances, Municipality shall include in its written agreement with Contractor that Contractor agrees to and shall pay to all of its employees providing "covered services," as defined in the ordinance, a living wage as required by such ordinance, and shall fully comply with the requirements of such ordinance, and that Contractor shall ensure all of its Subcontractors that qualify as "covered employers" fully comply with the requirements of such ordinance.

11.23. Workforce Investment Program. Municipality acknowledges the Broward Workforce Investment Program, Section 19.211, Broward County Administrative Code ("Workforce Investment Program"). Municipality shall include in its contract with Contractor the requirements of the Workforce Investment Program and Contractor's agreement to use good faith efforts to meet the First Source Referral Goal and the Qualifying New Hires Goal as set forth in the Workforce Investment Program, including by (a) publicly advertising exclusively with CareerSource Broward for at least five (5) business days any vacancies that are the direct result of this Agreement (whether those vacancies are with Municipality or its Subcontractors) and using good faith efforts to interview any qualified candidates referred under the Workforce Investment Program, and (b) using good faith efforts to hire Qualifying New Hires, as defined by the Workforce Investment Program, for at least fifty percent (50%) of the vacancies that are the direct result of this Agreement.

11.24. Polystyrene Food Service Articles. Municipality shall include in its contract with Contractor the requirements of the prohibition on the use or sale of expanded polystyrene products (e.g., Styrofoam) or single-use plastic beverage straws or stirrers on County property set forth in Section 27.173, Broward County Administrative Code.

11.25. Survivability. Notwithstanding any expiration or termination of this Agreement, the following provisions shall survive expiration and termination: Section 3.2 (Municipal Responsibility for the Project); Section 5.6 (Overpayments; Refunds); Article 6 (Transportation Surtax Project Coordination and Participation); Article 7 (Indemnification); Article 8 (Auditing);

Section 11.2 (Public Records); Section 11.15 (Law, Jurisdiction, Venue, Waiver of Jury Trial); and Section 11.18 (Payable Interest).

11.26. Approvals. To be effective, any approval under this Agreement made by or on behalf of the County, County Administrator, Contract Administrator, Project Manager, or other representative of either Party must be in writing.

(The remainder of this page is intentionally blank.)

IN WITNESS WHEREOF, the Parties hereto have made and executed this Agreement: BROWARD COUNTY, through its BOARD OF COUNTY COMMISSIONERS, signing by and through its County Administrator, authorized to execute same by Board action on the 25th day of August, 2020, Agenda Item No. 86, and Municipality, signing by and through its Mayor duly authorized to execute same.

COUNTY

BROWARD COUNTY, by and through
its County Administrator

By Dr. Kimm Campbell
for County Administrator

27 day of September, 2024

COUNTY COMMISSIONERS
CREATED OCT. 1ST 1915
BROWARD COUNTY FLORIDA

Approved as to form by
Andrew J. Meyers
Broward County Attorney
Governmental Center, Suite 423
115 South Andrews Avenue
Fort Lauderdale, Florida 33301
Telephone: (954) 357-7600

William J. Bucciero
Digitally signed by William J. Bucciero
Date: 2024.09.20 10:40:59 -04'00'
By _____
William J. Bucciero (Date)
Assistant County Attorney

NATHANIEL A. KLITSBERG
Digitally signed by NATHANIEL A. KLITSBERG
Date: 2024.09.26 10:13:58 -04'00'
By _____
Nathaniel A. Klitsberg (Date)
Transportation Surtax General Counsel

INTERLOCAL AGREEMENT BETWEEN BROWARD COUNTY AND CITY OF SUNRISE FOR SURTAX-FUNDED MUNICIPAL TRANSPORTATION PROJECT: REPLACE STORMWATER PUMP STATION NO. 5 (SUNR-025.1)

MUNICIPALITY

ATTEST:

CITY OF SUNRISE

CITY CLERK Felicia M. Brava, City Clerk

By _____
Mayor Michael J. Ryan

Michael Ryan, Mayor
Print Name

10 day of Sept, 2024

I HEREBY CERTIFY that I have approved this Agreement as to form and legal sufficiency subject to execution by the parties:

By: _____
Thomas P. Moss
City Attorney

EXHIBIT A
Project Description and Project Schedule

1. Project: As further detailed in the signed and sealed plans and specifications ("Scope of Work") attached hereto as Exhibit A-1, this Project includes the following: Storm Water Pump Station No. 5 Replacement Project.

2. Deliverables:

Municipality shall provide quantifiable, measurable, and verifiable units of Deliverables as set forth below. Each Deliverable must specify the required minimum level of work to be performed and the criteria for evaluating successful completion of the Deliverable.

DELIVERABLES: Phase 1 - Construction

No.	Description	Duration/Deadline	Acceptance Criteria
1	Execution of ILA between County and Municipality	September 10, 2024	ILA executed by Municipality
2	Project Construction Advertising Bid, Award, Construction Contract execution	March 31, 2025	Approved Solicitation; Fully Executed Construction Agreement
3	Notice to Proceed (NTP) and Commencement	July 31, 2025	Approved Shop Drawings, Obtained Permits, NTP Issued by Municipality
4	Complete Construction Phase 1	August 18, 2025	Phase 1 - Ordered Pumps, Raker, Electrical & Structural Components
5	Complete Construction Phase 2	July 31, 2026	Phase 2 - Permanent Drive Installed; Final Grading Complete; Mechanical Components Installed; Pump Station Startup Complete
6	Substantial Completion	September 30, 2026	Punchlist Generated; Pump Station Operational
7	Final Completion	December 31, 2026	Project is certified, Consultant/Engineer/PM's Notice of Acceptability presented to Municipality, and Final Payment Issued

3. Project Schedule:

Description	Deadline
County and Municipality execution of Project Specific ILA	September 20, 2024
Bid Advertisement	October 31, 2024
Bid Award and Construction Contract Execution	March 31, 2025
Notice to Proceed	July 31, 2025
Substantial Completion	September 30, 2026
Final Project Completion	December 31, 2026

INDEX OF PLANS

SHEET NO.	SHEET DESCRIPTION
C-01	COVER SHEET
C-01A	DIGITAL SIGNATURE SHEET (OPTIONAL)
C-02	KEY SHEET
C-03	NOTES AND LEGEND
C-04	PUMP STATION #5 EASEMENT PLAN
C-05	SITE PLAN
C-06	EROSION CONTROL AND TEMPORARY FENCING PLAN
C-07	STORMWATER POLLUTION PREVENTION NOTES
C-08	POLLUTION PREVENTION DETAILS AND NOTES
C-09 TO C-11	ACCESS DRIVE PLAN
C-12	DEMOLITION PLAN
C-13	TEMPORARY BYPASS DRAINAGE PLAN
C-14	PUMP STATION PLAN
C-15	PUMP STATION PROFILE
C-16	INTAKE CANAL PLAN & CROSS SECTIONS
C-17	INTAKE CANAL LINING PLAN & DETAILS
C-18 TO C-19	INTAKE CANAL BOAT RAMP GRADING AND DETAILS
C-20	STILLING WELL PLAN
C-21 TO C-22	STILLING WELL DETAILS
C-23	PAVING AND GRADING PLAN
C-24 TO C-25	RAKER SYSTEM DETAILS
C-26	C-13 CANAL PLAN, CROSS SECTIONS & DETAILS
C-27	C-13 CANAL ENDWALL DETAILS
C-28 TO C-29	GENERAL DETAILS
C-30 TO C-31	FENCE DETAILS
C-32	SFWMD STAFF GAGE DETAILS
1-4	SURVEY (STONER AND ASSOCIATE, INC.)
S-01	STRUCTURAL SITE PLAN
S-02	STRUCTURAL NOTES
S-03	CONCRETE DECK SLAB PLAN & DETAILS
S-04 TO S-05	STEEL SHEET PILE WALL DETAILS
S-06	INTAKE STRUCTURE GENERAL ASSEMBLY
S-07 TO S-08	INTAKE STRUCTURE DETAILS
S-09	PUMP CHAMBER STRUCTURE GENERAL ASSEMBLY
S-10 TO S-11	PUMP CHAMBER STRUCTURE DETAILS
S-12	DISCHARGE STRUCTURE GENERAL ASSEMBLY
S-13 TO S-14	DISCHARGE STRUCTURE DETAIL
S-15	BY PASS STRUCTURE #1 DETAILS
S-16	BY PASS STRUCTURE #1 SLIDE GATE DETAIL
S-17	BY PASS STRUCTURE #2 DETAIL
S-18 TO S-19	DUMP SLAB PLAN & DUMP SLAB DETAILS
S-20	MISCELLANEOUS FOUNDATION DETAILS & NOTES
S-21 TO S-25 (REFERENCE)	FDOT STANDARD PLANS INDEX 425-010 (2020/2021) STANDARD STRUCTURE DESIGN DATA (5 SHEETS)
E-1	ELECTRICAL SITE AND FPL SERVICE PLAN
E-2	PHOTOMETRIC PUMP STATION PLAN
E-3	ELECTRICAL PUMP STATION PLAN
E-4	ELECTRICAL GROUNDING AND LIGHTING PROTECTION PLAN
E-5	PANEL SCHEDULE, RISER DIAGRAM, LOAD CALCS, NOTES
E-6	MOTOR CONTROL CENTER DETAIL
E-7	WALK-IN ELECTRICAL ENCLOSURE PLAN
E-8	SWBD LAYOUT, ELEVATION AND PLAN VIEW
E-9	NOTES, LEGENDS, ETC.
E-10 TO E-11	ELECTRICAL DETAILS
I-01	CONTROL SEQUENCE
I-02	CONTROL PANEL DETAILS
I-03	I & C DETAILS
I-04	PUMP STATION I & C DIAGRAM
T-1	LANDSCAPE TREE DISPOSITION PLAN
LD-1	LANDSCAPE PLAN AND DETAILS

CONSTRUCTION AND MATERIAL SHALL BE IN ACCORDANCE WITH THE CITY OF SUNRISE MINIMUM DESIGN AND CONSTRUCTION STANDARDS

REFERENCE TO STANDARD PLANS : FLORIDA DEPARTMENT OF TRANSPORTATION "STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION", FY 2020-21 EDITION, AND AS MODIFIED AND SUPPLEMENTED BY THE PLANS AND DETAILS.

ATTENTION IS DIRECTED TO THE FACT THAT THESE PLANS MAY BE ALTERED IN SCALE BY REPRODUCTION AND MAY BE REDUCED IN SCALE. THIS MUST BE TAKEN INTO ACCOUNT WHEN OBTAINING SCALED DATA.

APPROVALS / PERMIT AGENCIES

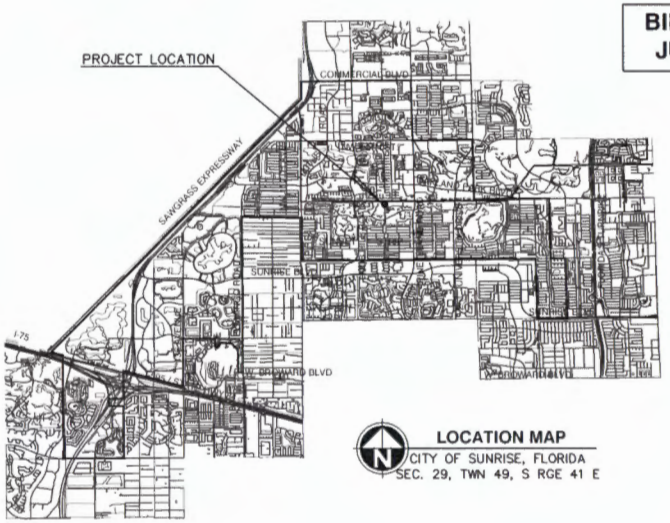
CITY OF SUNRISE COMMUNITY DEVELOPMENT DEPARTMENT
BROWARD COUNTY ENVIRONMENTAL ENGINEERING & PERMIT DIVISION
SOUTH FLORIDA WATER MANAGEMENT DISTRICT (SFWMD)
FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP)
UNITED STATES ARMY CORPS OF ENGINEERS (USACE)

CITY OF SUNRISE
FLORIDA

PLANS FOR:

STORM WATER PUMP STATION #5
PUMP STATION REPLACEMENT





LOCATION MAP
CITY OF SUNRISE, FLORIDA
SEC. 29, TWN 49, S RGE 41 E

BID SET PLANS
JULY 20, 2022

CITY COMMISSION

Michael J. Ryan	Mayor
Jacqueline A. Guzman	Deputy Mayor
Mark A. Douglas	Assistant Deputy Mayor
Joseph A. Scuotto	Commissioner
Neil C. Kerch	Commissioner
Mark Lubelski, P.E.	City Manager
Alan Gavazzi, AIA	Capital Projects Director
Guarionex De Los Santos	Project Manager

ALL HORIZONTAL AND VERTICAL CONTROL UTILIZES THE FOLLOWING:
HORIZONTAL DATUM - NAD83
VERTICAL DATUM - NAVD 1988

ELEVATIONS SHOWN ON THESE PLANS ARE REFERENCED TO THE NAVD 1988 DATUM (NGVD 29 REFERENCE ELEVATIONS HAVE TO BE CONVERTED BY SUBTRACTING 1.55')

FLOOD DATA:
WATERWAYS - ZONE AE
FEMA BASE FLOOD ELEVATION 7.0
FEMA MAP NUMBER 12011C0345H
EFFECTIVE DATE AUGUST 18, 2014

CALL 48 HOURS BEFORE YOU DIG 811
IT'S THE LAW! DIAL 811
Know what's below. Call before you dig.
SUNSHINE STATE ONE CALL OF FLORIDA, INC.

111-504-28

LEAVE BLANK - FOR CITY USE ONLY

REVISIONS					
Date	By	Description	Date	By	Description

	Names	Dates
Drawn by	IK	05/2020
Checked by	DWG	05/2020
Designed by	IK	05/2020
Checked by	JWR	05/2020
Approved by	JOSEPH W. ROLES, JR. P.E.	

JOSEPH ROLES AND ASSOC., INC.
CONSULTING ENGINEERS
7301 N.W. 5th STREET, SUITE 101
PLANTATION, FLORIDA 33317
PHONE (954) 587-1818
CERTIFICATE OF AUTHORIZATION NO. 8640

Engineer of Record: JOSEPH W. ROLES, JR. P.E. PE NO. 16965

PREPARED FOR: CITY OF SUNRISE FLORIDA

STORM WATER PUMP STATION #5
PUMP STATION REPLACEMENT

COVER SHEET

SHEET NO. C-01



Joseph W Roles Jr PE

Digitally signed by Joseph W Roles Jr
DN: C=US, O=Joseph Roles and Assoc., Inc., OU=A01410D0000017503E08DBF0000726F, CN=Joseph W Roles Jr
Reason: Engineering Certification - FL P.E. #16965
Location: Plantation, FL
Date: 2022-07-20 13:26:42
Foxit Reader Version: 9.6.0

JULY 20, 2022

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY JOSEPH W. ROLES, JR. P.E. ON THE DATE ADJACENT TO THE SEAL USING IDEN TRUST THIRD PARTY CERTIFICATION.

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

JOSEPH ROLES AND ASSOC., INC.
7501 N.W. 4th STREET, SUITE 101
PLANTATION, FLORIDA 33317
PHONE (954) 581-1945
CERTIFICATE OF AUTHORIZATION NO. 3948
JOSEPH W. ROLES, JR., P.E. NO. 16965

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.005, F.A.C.

INDEX OF PLANS

SHEET NO.	SHEET DESCRIPTION
C-01	COVER SHEET
C-02	KEY SHEET
C-03	NOTES AND LEGEND
C-04	PUMP STATION #5 EASEMENT PLAN
C-05	SITE PLAN
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C-27	C-13 CANAL ENDWALL DETAILS
C-28 TO C-29	GENERAL DETAILS
C-30 TO C-31	FENCE DETAILS
C-32	SFWMD STAFF GAGE DETAILS



David W Garmizo PE

Digitally signed by David W Garmizo
DN: C=US, O=Florida, dnQualifier=A01410C0000017E4824FA3D0000974A, CN=David W Garmizo
Reason: Engineering Certification - FL P.E. #47061
Location: Plantation, FL
Date: 2022-07-20 13:46:22
Foxit Reader Version: 9.6.0

JULY 20, 2022

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY DAVID W. GARMIZO, P.E. ON THE DATE ADJACENT TO THE SEAL USING IDEN TRUST THIRD PARTY CERTIFICATION.

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JOSEPH ROLES AND ASSOC., INC.
7501 N.W. 4th STREET, SUITE 101
PLANTATION, FLORIDA 33317
PHONE (954) 581-1945
CERTIFICATE OF AUTHORIZATION NO. 3948
JOSEPH W. ROLES, JR., P.E. NO. 16965

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.005, F.A.C.

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S-02	STRUCTURAL NOTES
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S-17	BY PASS STRUCTURE #2 DETAIL
S-18 TO S-19	DUMP SLAB PLAN & DUMP SLAB DETAILS
S-20	MISCELLANEOUS FOUNDATION DETAILS & NOTES



David L Rice

Digitally signed by David L Rice
Date: 2022.07.21 14:26:59 -04'00'

JULY 20, 2022

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY DAVID L. RICE, P.E. ON THE DATE ADJACENT TO THE SEAL.

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

RC ENGINEERING, INC.
5532 NW 106TH DR.
CORAL SPRINGS, FL 33076
PHONE: (954) 757-7900
DAVID L. RICE, P.E. 34343

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.005, F.A.C.

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E-3	ELECTRICAL PUMP STATION PLAN
E-4	ELECTRICAL GROUNDING AND LIGHTING PROTECTION PLAN
E-5	PANEL SCHEDULE, RISER DIAGRAM, LOAD CALCS, NOTES
E-6	MOTOR CONTROL CENTER DETAIL
E-7	WALK-IN ELECTRICAL ENCLOSURE PLAN
E-8	SWBD LAYOUT, ELEVATION AND PLAN VIEW
E-9	NOTES, LEGENDS, ETC.
E-10 TO E-11	ELECTRICAL DETAILS
I-01	CONTROL SEQUENCE
I-02	CONTROL PANEL DETAILS
I-03	I & C DETAILS
I-04	PUMP STATION I & C DIAGRAM



James D Stoner

JULY 20, 2022

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY JAMES D. STONER, P.S.M. ON THE DATE ADJACENT TO THE SEAL.

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

STONER & ASSOCIATES, INC.
4341 S.W. 62nd AVENUE
TOWN OF DAVIE, FLORIDA 33314
PHONE: (954) 585-0997
FLORIDA LICENSED SURVEY AND MAPPING BUSINESS NO. 6633
WALTER DE LA ROCHA P.S.M. NO. 6081

THE ABOVE NAMED PROFESSIONAL SURVEYOR AND MAPPER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 5J-17.062, F.A.C.

INDEX OF PLANS

SHEET NO.	SHEET DESCRIPTION
1-4	SURVEY (STONER AND ASSOCIATE, INC.)



Michael J_ Petrow

Digitally signed by Michael J_ Petrow
DN: C=US, O="Michael J Petrow & Associates, Inc", CN=Michael J_ Petrow, E=mjpinc2@bellsouth.net
Reason: I am the author of this document
Location:
Date: 2022-07-20 13:20:26

JULY 20, 2022

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY MICHAEL J. PETROW, L.A. ON THE DATE ADJACENT TO THE SEAL.

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

MICHAEL J. PETROW AND ASSOCIATES, INC.
A.S.L.A.
P.O. BOX 8601
CORAL SPRINGS, FL 33075
PHONE: (954) 448-0659
MICHAEL J. PETROW, L.A., FL. REG. #392

THE ABOVE NAMED REGISTERED LANDSCAPE ARCHITECT SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G10, F.A.C.

INDEX OF PLANS

SHEET NO.	SHEET DESCRIPTION
T-1	LANDSCAPE TREE DISPOSITION PLAN
LD-1	LANDSCAPE PLAN AND DETAILS

111-504-28

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REVISIONS					
Date	By	Description	Date	By	Description

	Names	Dates
Drawn by	IK	05/20
Checked by	DWG	05/20
Designed by	IK	05/20
Checked by	JWR	05/20
Approved by	JOSEPH W. ROLES, JR. P.E.	

JOSEPH ROLES AND ASSOC., INC. CONSULTING ENGINEERS
7501 N.W. 4th STREET, SUITE 101 PLANTATION, FLORIDA 33317 PHONE (954) 581-1945 CERTIFICATE OF AUTHORIZATION NO. 3948

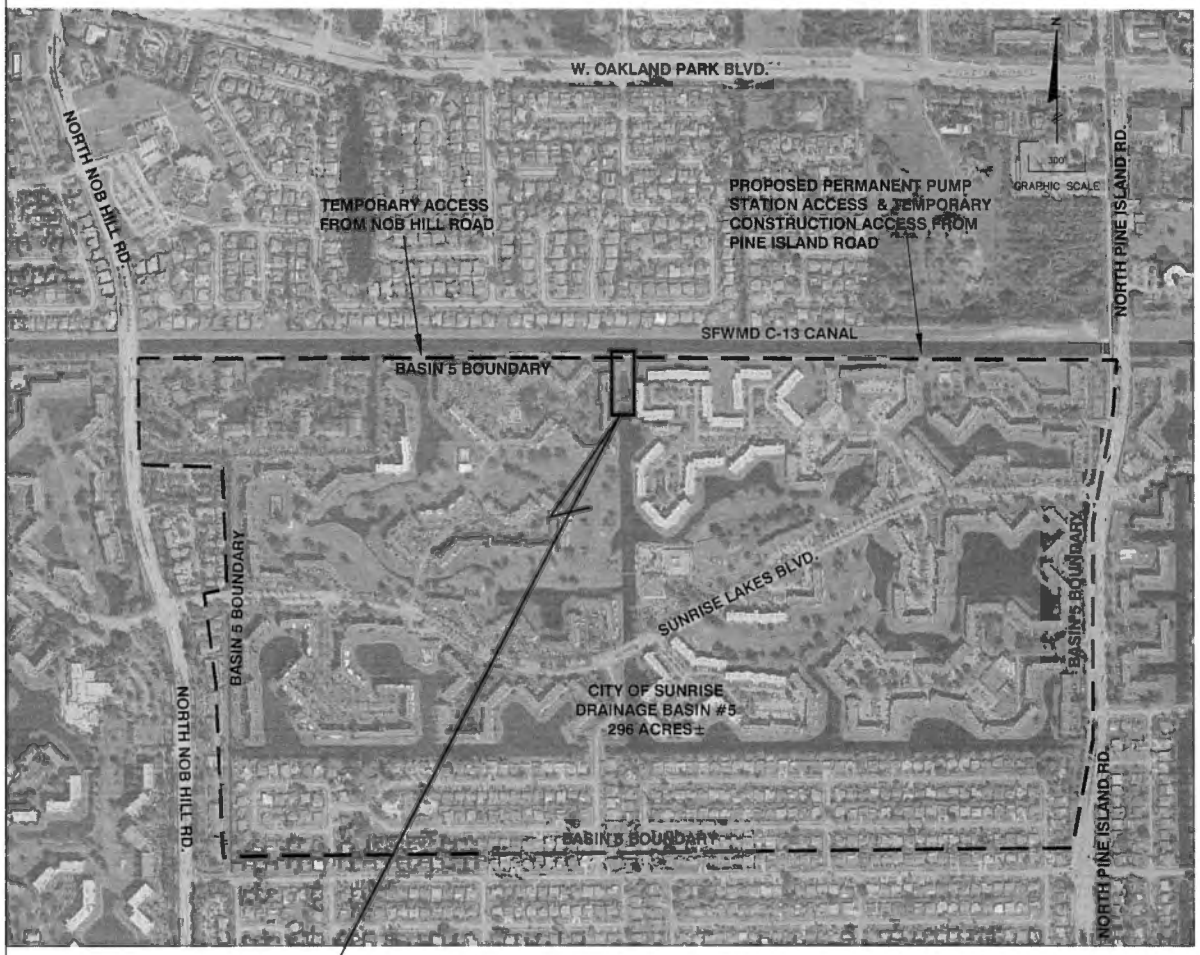
Engineer of Record: JOSEPH W. ROLES, JR. P.E. PE NO. 16965

PREPARED FOR: CITY OF SUNRISE FLORIDA

STORM WATER PUMP STATION #5
PUMP STATION REPLACEMENT

DIGITAL SIGNATURE SHEET

SHEET NO: C-01A



GENERAL NOTES AND SPECIFICATIONS:

1. ALL CONSTRUCTION FOR THIS PROJECT SHALL BE DONE IN STRICT ACCORDANCE WITH THE REQUIREMENTS OF THE PROJECT PLANS, SPECIFICATIONS AND THE REQUIREMENTS OF THE CITY AND ALL APPLICABLE PERMIT AGENCIES GOVERNING SPECIFICATION ARE THE PROJECT SPECIFICATION PROVIDED BY THE CITY OF SUNRISE AND, AS REFERENCED OR AMENDED BY THE PLANS OR DETAILS, THE FLORIDA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" – JANUARY 2021 EDITION. THE FDOT SPECIFICATION SHALL APPLY TO TO ALL UNDERGROUND STRUCTURES AND PIPE, SHEET PILING, CONCRETE CONSTRUCTION, PAVING AND DRIVEWAYS AND ALL CANAL IMPROVEMENT WORK. ELEMENTS OF THE PROJECT SUBJECT TO THE FLORIDA BUILDING CODE INCLUDE ALL ELECTRICAL SYSTEM COMPONENTS AND WIND LOAD STRUCTURAL REQUIREMENTS FOR ABOVE GRADE WORK, INCLUDING FENCES, THE ELECTRICAL ENCLOSURE AND THE RAKER SYSTEM.
2. HORIZONTAL AND VERTICAL CONTROL DATA WILL BE PROVIDED BY THE CITY OF SUNRISE. ALL CONSTRUCTION STAKING WILL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE DESIGN SURVEY WAS PREPARED FOR THE CITY BY STOMER & ASSOCIATES, INC., SURVEYORS AND MAPPERS.
3. THE LOCATION OF EXISTING UTILITIES AND TOPOGRAPHY HAS BEEN PREPARED FROM THE MOST RELIABLE INFORMATION AVAILABLE TO THE ENGINEER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT TOPOGRAPHY AND LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION SINCE TOTAL ACCURACY OF THE DATA PROVIDED CANNOT BE GUARANTEED.
4. PRIOR TO CONSTRUCTION, A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD, WHICH WILL INCLUDE THE ENGINEER, THE CONTRACTOR, THE CITY OF SUNRISE REPRESENTATIVE AND ALL UTILITY COMPANIES. THE CONTRACTOR IS TO NOTIFY THE FOLLOWING UTILITY COMPANIES, AGENCIES AND ANY OTHERS SERVING THE AREA (MINIMUM 72 HOURS PRIOR TO CONSTRUCTION):

AT&T FLORIDA (OTIS KEEVE)	(954) 723-2540
FLORIDA POWER & LIGHT FIBER (DANNY HASKET)	(305) 552-2931
FLORIDA POWER & LIGHT DISTRIBUTION (KAROL CHORA)	(954) 717-2081
FLORIDA POWER & LIGHT TRANSMISSION (GEORGE BECK)	(561) 904-3604
COMCAST CABLE (LEONARD MAXWELL-NEWBOLD)	(954) 447-8405
CITY OF SUNRISE (COMMUNITY DEVELOPMENT DEPARTMENT)	(954) 746-3284
CITY OF SUNRISE (GAS) (ROBERT DUBIN)	(954) 572-2298
SOUTH FLORIDA WATER MANAGEMENT DISTRICT	(561) 686-8800
SUNSHINE	1-800-432-4770

5. WORK PERFORMED FOR THIS PROJECT WILL NOT BE CONSIDERED AS COMPLETE, UNTIL FINAL ACCEPTANCE OF THE WORK BY THE ENGINEER, PERMIT AGENCIES AND THE CITY AND UNTIL THE FOLLOWING DOCUMENTS ARE RECEIVED FROM THE CONTRACTOR AND APPROVED BY THE CITY AND THE ENGINEER:
   1. CONTRACTOR'S WAIVER AND RELEASE OF LIEN.
   2. CONTRACTOR'S LETTER OF WARRANTY (I.E. LETTER AGREEMENT, ONE (1) YEAR GUARANTEE).
   3. "AS BUILT" DATA AS PREPARED BY A REGISTERED LAND SURVEYOR EMPLOYED BY THE CONTRACTOR.
   4. OTHER ITEMS AS MAY BE REQUIRED BY THE CITY ENGINEER, SOUTH FLORIDA WATER MANAGEMENT DISTRICT, BROWARD COUNTY AND THE DESIGN OR CONSTRUCTION ENGINEER.
6. ALL WORK WITHIN THE PUBLIC RIGHT-OF-WAY, INCLUDING MAINTENANCE OF TRAFFIC, SHALL BE IN ADHERENCE TO THE "MANUAL OF UNIFORM CONTROL DEVICES" (M.U.T.C.D.) AND IN ACCORDANCE WITH THE REQUIREMENTS OF THE FLORIDA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" – LATEST EDITION AND THE FDOT "STANDARD PLANS" LATEST EDITION, EXCEPT AS AMENDED OR NOTED BY THE PLANS AND DETAILS
7. ANY DAMAGE TO EXISTING FACILITIES BY THE CONTRACTOR SHALL BE REPAIRED BY THE CONTRACTOR OR THE APPROPRIATE UTILITY COMPANY AT THE CONTRACTOR'S EXPENSE.
8. ALL WORK FOR THIS PROJECT WILL BE LIMITED TO THE EXISTING SFWMD RIGHT-OF-WAY AND PERMANENT AND TEMPORARY EASEMENTS, AS INDICATED ON THE DRAWINGS.
9. EXISTING VALVES BOXES AND MANHOLES RINGS TO BE ADJUSTED TO THE FINISH GRADE AND TO CITY STANDARDS.
10. ALL NEW AND EXISTING IRRIGATION MUST PROVIDE 100% COVERAGE, 50% OVERLAP, WITH A RAIN SENSOR OVERRIDE AND WATER FROM A RUST FREE SOURCE.
11. THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE UTILITY COMPANY AT LEAST TWO (2) FULL WORKING DAYS IN ADVANCE OF ANY EXCAVATION INVOLVING ITS UTILITIES SO THAT A COMPANY REPRESENTATIVE CAN BE PRESENT. THE LOCATION OF THE UTILITIES SHOWN IN THE PLANS ARE APPROXIMATE ONLY. THE EXACT LOCATION SHALL BE DETERMINED BY THE CONTRACTOR DURING CONSTRUCTION.
12. FOR THE CONSTRUCTION ACCESSES FROM NORTH PINE ISLAND ROAD AND NOB HILL ROAD THE CONTRACTOR SHALL SUBMIT A DETAILED MAINTENANCE OF TRAFFIC PLAN TO THE CITY OF SUNRISE AND BROWARD COUNTY FOR APPROVAL FOUR WEEKS PRIOR TO COMMENCEMENT OF CONSTRUCTION. MAINTENANCE OF TRAFFIC SHALL BE IN ACCORDANCE WITH CURRENT EDITIONS OF THE FLORIDA D.O.T. SPECIFICATIONS AND "STANDARD PLANS" AND THE CURRENT EDITION OF "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES."

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111-504-28

REVISIONS					
Date	By	Description	Date	By	Description

	Names	Dates
Drawn by	IK	05/20
Checked by	DWG	05/20
Designed by	IK	05/20
Checked by	JWR	05/20
Approved by	JOSEPH W. ROLES, JR. P.E.	

JOSEPH ROLES AND ASSOC., INC.
CONSULTING ENGINEERS
7301 N.W. 4th STREET, SUITE 101
PLANTATION, FLORIDA 33317
PHONE (954) 581-1848
CERTIFICATE OF AUTHORIZATION NO. 5845
Engineer of Record: JOSEPH W. ROLES, JR. P.E. PE NO. 16965

PREPARED FOR: CITY OF SUNRISE FLORIDA

STORM WATER PUMP STATION #5
PUMP STATION REPLACEMENT

KEY SHEET

SHEET NO. C-02

PUMP STATION GENERAL CONSTRUCTION NOTES AND SPECIFICATIONS:

1. PER THE STONER & ASSOCIATES, INC. SURVEY, THE PROJECT HORIZONTAL COORDINATES ARE BASED ON THE FLORIDA STATE PLANE COORDINATE SYSTEM (EAST ZONE), NORTH AMERICAN DATUM 1983/2011 ADJUSTMENT (N.A.D. 83/2011).
2. PER THE STONER & ASSOCIATES, INC. SURVEY, THE ELEVATIONS SHOWN ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (N.A.V.D. 88), BENCHMARK 1021, BROWARD COUNTY ENGINEERING DEPARTMENT BRASS DISK STAMPED C-10A, IN THE SIDEWALK AT THE SOUTHEAST CORNER OF BRIDGE ON PINE ISLAND ROAD OVER THE C-13 CANAL, ELEVATION = 12.54'
3. ALL LOCATIONS AND ELEVATIONS SHOWN FOR EXISTING SURFACE AND SUBSURFACE STRUCTURES, PIPING, ETC.. ARE BASED ON THE PROJECT TOPOGRAPHIC AND LOCATION SURVEY AND ANY AVAILABLE RECORD DRAWINGS AND THE BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL CONSIDER ALL LOCATIONS AND ELEVATIONS APPROXIMATE IN NATURE. PRIOR TO THE START OF CONSTRUCTION AND/OR ORDERING OF ANY MATERIALS OR FABRICATED ITEMS, THE CONTRACTOR SHALL CONFIRM THE EXACT LOCATIONS AND ELEVATIONS. IN ADDITION, THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY IF ADDITIONAL STRUCTURES, UTILITIES, ETC.. NOT SHOWN ON THE DRAWINGS EXIST WITHIN THE AREA OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE AS-BUILT INFORMATION AND WRITTEN NOTIFICATION OF ALL CONFLICTS WITH THE PROPOSED CONSTRUCTION TO THE ENGINEER. THE CONTRACTOR SHALL NOT PROCEED WITH ANY WORK UNTIL ALL CONFLICTS HAVE BEEN RESOLVED
4. ALL EXISTING VALVES AND MANHOLES TO BE ADJUSTED TO FINISH GRADE TO CITY STANDARDS AS INCIDENTAL WORK TO THE CONTRACT.
5. ALL PROPOSED GRADES SHOWN ARE FINISHED GRADES, UNLESS NOTED OTHERWISE THE CONTRACTOR SHALL GRADE UNIFORMLY BETWEEN FINISHED AND EXISTING GRADES
6. CONTRACTOR SHALL VERIFY THE PUMP CHAMBER DIMENSIONS WITH PUMP MANUFACTURER'S SHOP DRAWINGS PRIOR TO FABRICATION OF THE PRECAST STRUCTURE.
7. UNLESS OTHERWISE SPECIFIED, ALL BOLTS, NUTS, WASHER , ETC. AND MISCELLANEOUS HARDWARE SHALL BE 318 STAINLESS STEEL. UNLESS OTHERWISE INDICATED CONTRACTOR SHALL APPLY ANTI-SEIZE COMPOUND TO ALL THREADS.
8. ALL ON-SITE FIELD WELDING SHALL BE PERFORMED BY A CERTIFIED WELDER.
9. CONTRACTOR SHALL ACCESS SITE(S) FROM NOB HILL ROAD OR NORTH PINE ISLAND ROAD C-13 CANAL ACCESS GATES IN THE SFWMD RIGHT-OF-WAY. CONTRACTOR SHALL COORDINATE TEMPORARY ACCESS WITH SFWMD AS REQUIRED.
10. CONTRACTOR SHALL COMPLY WITH THE APPROVED POLLUTION PREVENTION PLAN AND ALL POLLUTION PREVENTION ITEMS SHALL BE IN PLACE PRIOR TO CONSTRUCTION COMMENCEMENT AND REMAIN IN COMPLIANCE WITH NPDES REQUIREMENTS THROUGH FINAL COMPLETION.
11. EROSION AND SEDIMENT CONTROL 'BEST MANAGEMENT PRACTICES' MUST BE USED AT ALL TIME DURING CONSTRUCTION. CONTRACTOR SHALL PROVIDE A "SPILL KIT" ON SITE THAT IS APPROPRIATE FOR SCOPE OF WORK AND EQUIPMENT ON SITE. SPILL KIT SHALL REMAIN ON SITE FOR THE PROJECT DURATION, OR UNTIL REMOVAL IS APPROVED BY CITY.
12. THE CONTRACTOR SHALL COORDINATE WITH THE NECESSARY UTILITY COMPANIES AND SUNSHINE STATE ONE CALL OF FLORIDA, INC.. (800-432-4330 OR 811) FOR LOCATES 48 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION. CONTRACTOR SHALL COORDINATE WITH THE SUNRISE GAS DIVISION TO HAVE HIGH PRESSURE SERVICE LINE TO THE EXISTING PUMP STATION RETIRED PRIOR TO DEMOLITION OF EXISTING STATION.
13. CONTRACTOR SHALL MAINTAIN ORAINAGE FROM THE ADJACENT DEVELOPMENT TO THE SFWMD C-13 CANAL FOR THE DURATION OF THE PROJECT. CONTRACTOR SHALL INSTALL THE TEMPORARY BYPASS DRAINAGE SYSTEM INCLUDED IN THE PLANS, OR PROVIDE AN ALTERNATE SYSTEM ACCEPTABLE TO THE CITY. CONTRACTOR SHALL MAINTAIN AT MINIMUM, A TEMPORARY 10" HYDRAULIC PUMP ON SITE TO AUGMENT THE TEMPORARY GRAVITY BYPASS SYSTEM. ANY ALTERNATE SYSTEM PROPOSED BY THE CONTRACTOR SHALL BE SUBMITTED IN A WRITTEN PLAN FOR CITY REVIEW PRIOR TO COMMENCEMENT OF CONSTRUCTION. AN ALTERNATE BYPASS SYSTEM SHALL BE CAPABLE OF A FLOW RATE EQUAL TO ONE OF THE EXISTING PUMPS AT 13,000 GPM, OR 29 CFS.
14. CONTRACTOR IS RESPONSIBLE TO OBTAIN ALL REQUIRED CONSTRUCTION PERMITS. CONTRACTOR MUST SUBMIT FOR AND OBTAIN A FINAL DEWATERING PERMIT FROM SOUTH FLORIDA WATER MANAGEMENT DISTRICT PRIOR TO CONSTRUCTION. THE ENGINEERING PERMIT ISSUED BY SFWMD FOR THE PROJECT INCLUDES A DEWATERING PERMIT AS A "PLACE HOLDER" PERMIT WITH ASSUMED CONDITIONS. THE CONTRACTOR WILL BE RESPONSIBLE FOR ADJUSTING THE PERMIT TO ACCOMMODATE HIS MEANS AND METHODS OF CONSTRUCTION.
15. CONTRACTOR SHALL OBTAIN A PERMIT OR MODIFY ANY PREVIOUSLY ISSUED RIGHT-OF-WAY PERMITS ISSUED BY THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT FOR TEMPORARY ACCESS AND TEMPORARY MATERIALS STORAGE WITHIN THE C-13 CANAL RIGHT-OF-WAY PRIOR TO COMMENCING CONSTRUCTION.
16. CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING A MAINTENANCE OF TRAFFIC PLAN (MOT) AND COORDINATING CONSTRUCTION ENTRANCES AND EXITS WITH THE CITY OF SUNRISE OR BROWARD COUNTY TRAFFIC ENGINEERING. CONTRACTOR SHALL OBTAIN MOT PERMITS FROM THE CITY OF SUNRISE AND BROWARD COUNTY AS REQUIRED.
17. DIRECTIONAL BORING AND RESTORATION OF OPEN TRENCH FOR UTILITIES, (ELECTRIC, ETC..) REQUIRE CITY OF SUNRISE CONSTRUCTION PERMITS.
18. CANAL FILL MATERIAL SHALL BE AN APPROVED MATERIAL WITH A MINIMUM LBR OF 40, FREE FROM ROCKS LARGER THAN 3" AND FREE FROM ORGANIC MATERIAL AND OTHER EXTRANEOUS AND UNSUITABLE MATERIALS.
19. CONTRACTORS WORKING HOURS SHALL BE IN ACCORDANCE WITH CITY CODES AND REGULATIONS. DUE TO THE ADJACENT RESIDENTIAL BUILDINGS, CONSTRUCTION NOISE SHALL BE MAINTAINED AT THE MINIMUM LEVEL POSSIBLE, WHILE NOT INTERFERING WITH THE PROJECT CONSTRUCTION.
20. CONSTRUCTION SHALL NOT COMMENCE BEFORE 8:00 AM AND CONTRACTOR SHALL NOT WORK ON THE PROJECT AFTER 6:00 PM. WORK HOURS MAY BE MODIFIED UNDER SPECIAL CIRCUMSTANCES WITH WRITTEN PERMISSION FROM THE CITY.
21. CONTRACTOR SHALL NOTIFY THE CITY OF SUNRISE GAS DEPARTMENT PRIOR TO EXCAVATION WITHIN 15-FEET OF THE EXISTING 6-INCH HIGH PRESSURE GAS MAIN LOCATED ON THE SOUTH SIDE OF THE SFWMD C 13 RIGHT-OF-WAY. A CITY GAS REPRESENTATIVE SHALL BE PRESENT WHEN WORKING IN THE VICINITY OF THE CITY GAS MAIN.
22. CONTRACTOR SHALL RESTORE ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES, INCLUDING CONSTRUCTION STAGING AREAS AND ACCESS ROADS TO ORIGINAL OR BETTER CONDITION. DISTURBED AREAS, INCLUDING CANAL BANKS, AND SLOPES, SHALL BE SODDED WITH ST. AUGUSTINE OR ARGENTINE BAHIA SOD AS PER ORIGINAL SOD. ALL REPLACEMENT SOD OUTSIDE OF THE SFWMD RIGHT-OF-WAY SHALL BE ST. AUGUSTINE FLORATAM AND SHALL BE PLACED ON 2" OF GRADED 70/30 TOPSOIL OR APPROVED EQUAL. ALL SOD AND LANDSCAPE SHALL BE WATERED TO INSURE SATISFACTORY CONDITION UPON ACCEPTANCE OF THE PROJECT. AREAS DISTURBED ADJACENT TO STRUCTURES SHALL BE SODDED IMMEDIATELY FOLLOWING CONSTRUCTION.
23. CONTRACTOR SHALL DEMOLISH AND LEGALLY DISPOSE OF THE EXISTING PUMP STATION BUILDING, SLABS, FENCING, CULVERTS, PIPES, PUMPS, MOTORS. ALL EQUIPMENT, STEEL SHEET PILE WALLS AND APPURTENANCES, ETC. WITHIN LIMITS OF CONSTRUCTION, WHETHER SHOWN ON THE CONSTRUCTION DRAWINGS OR NOT . CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REMOVAL, DISPOSAL, ABANDONMENT AND RELOCATIONS NECESSARY TO COMPLETE THE WORK. CONTRACTOR SHALL PROVIDE GAS MAIN SUPPORT WHEN REMOVING EXISTING DISCHARGE CULVERT. ANY EQUIPMENT INDICATED TO BE SALVAGED FOR THE CITY SHALL BE DELIVERED TO A LOCATION DESIGNATED BY THE CITY WITHIN 10 MILES OF THE PROJECT LOCATION.
24. ALL WORK SPECIFIED PER FDOT "STANDARD PLANS" (LATEST EDITION) OR OTHER FDOT REFERENCES SHALL BE PERFORMED IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION (UNLESS NOTED OTHERWISE.) ALL FDOT "STANDARD PLANS" INDEXES, IF NOT INCLUDED IN THE CONTRACT PLANS, ARE INCORPORATED AS PLAN REFERENCES HEREIN. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING COMPLETE COPIES OF THE LATEST EDITION OF FDOT "STANDARD PLANS" INDEXES FOR HIS USE.
25. ALL WORK SHALL BE OPEN AND SUBJECT TO INSPECTION BY AUTHORIZED PERSONNEL OF THE CITY, INVOLVED UTILITY COMPANIES, THE PROJECT ENGINEER , AND REGULATORY AGENCIES. WORK COVERED WITHOUT REQUIRED INSPECTION WILL BE UNCOVERED FOR INSPECTION AT THE CONTRACTOR'S EXPENSE.
26. PRIOR TO COMMENCEMENT OF ANY EXCAVATION, THE CONTRACTOR SHALL COMPLY WITH CHAPTER 556 OF THE FLORIDA STATUTES: "THE UNDERGROUND FACILITY DAMAGE PREVENTION AND SAFETY ACT." WHERE EXCAVATIONS TO A DEPTH IN EXCESS OF FIVE FEET (5) ARE REQUIRED, THE CONTRACTOR SHALL INCLUDE THE FOLLOWING INFORMATION IN THE BID:
    A. REFERENCE TO THE TRENCH SAFETY STANDARDS THAT WILL BE IN EFFECT DURING THE PERIOD OF CONSTRUCTION OF THE PROJECT
    B. WRITTEN ASSURANCES BY THE CONTRACTOR PERFORMING THE TRENCH EXCAVATION THAT SUCH CONTRACTOR WILL COMPLY WITH THE FLORIDA TRENCH SAFETY ACT.
    C. A SEPARATE TABULATION IDENTIFYING ANY EXTRAORDINARY COST OF COMPLIANCE WITH THE APPLICABLE TRENCH SAFETY STANDARDS.
27. GROUND AND SURFACE WATER LEVELS SHOWN ON THE PLANS AND ON THE SURVEY ARE FOR PERMITTING AND INFORMATION ONLY. ACTUAL WATER LEVELS MAY VARY. NO CONTRACT PRICE ADJUSTMENTS WILL BE MADE BASED UPON ANY VARIATION ON THE ACTUAL GROUND AND SURFACE WATER LEVELS THAT DO NOT CONFORM TO THE ELEVATIONS INDICATED ON THE SURVEY OR DRAWINGS.
28. CONTRACTOR MUST TAKE REASONABLE PRECAUTIONS TO CONTROL DUST AT ALL TIMES, WHETHER OR NOT THE SITE IS ACTIVE, INCLUDING AT NIGHT TIME, ON WEEKENDS, AND ON HOLIDAYS. CONTRACTOR MUST NOT LET AIRBORNE DUST CROSS PROJECT BOUNDARIES. CONTRACTOR SHALL APPLY WATER AT REGULAR INTERVALS, OR IF DIRECTED BY THE CITY, PRE-SOAKING TO CONTROL DUST AND PREVENT OBJECTIONABLE BLOWING OR DRIFTING OF DUST, SAND, AND OTHER DEBRIS MAY BE REQUIRED BY THE CITY AT NO COST TO THE CITY.
29. TO PROTECT EXISTING GAS, WATER, SEWER, COMMUNICATION AND OTHER UTILITIES THE CONTRACTOR SHALL CONSTRUCT A ONE FOOT MINIMUM LIMEROCK BERM/ TEMPORARY PAD OVER EXISTING UTILITY LINES PRIOR TO MOVING HEAVY EQUIPMENT OVER THE UTILITIES. IF REQUIRE, THE CONTRACTOR SHALL PROVIDE ADDITIONAL BRIDGING OVER UTILITIES, INCLUDING STEEL PLATES OR TIMBERS. COST OF BERMS, PAD AND BRIDGING SHALL BE CONSIDERED AS INCIDENTAL TO THE CONTRACT AND NO SEPARATE PAYMENT SHALL BE MADE FOR THIS WORK.
30. CONTRACTOR SHALL REPAIR EXISTING IRRIGATION SYSTEMS AT ALL PROJECT LOCATIONS THAT ARE DISTURBED OR DAMAGED AS A RESULT OF CONSTRUCTION. CONTRACTOR SHALL RELOCATE AND REINSTALL THE EXISTING IRRIGATION PUMPS , INTAKES, VALVES, ELECTRIC PANELS, ETC., IN CONFLICT WITH THE CONSTRUCTION.
31. CONTRACTOR IS RESPONSIBLE FOR SITE SECURITY, AT A MINIMUM CONTRACTOR SHALL PROVIDE A TEMPORARY 6 FOOT HIGH CHAIN LINK FENCE WITH GREEN WIND SCREEN AROUND PROJECT WORK SITE AT THE EASEMENT LINES, AND IN THE SFWMD RIGHT-OF-WAY, FOR THE DURATION OF CONSTRUCTION. SFWMD RIGHT-OF-WAY FENCING SHALL HAVE TWO DOUBLE GATES, AT LEAST 16 FEET WIDE FOR CONSTRUCTION AND SFWMD ACCESS, AS SHOWN ON THE PLANS. THE CONTRACTOR SHALL SUBMIT AN INSTALLATION PLAN TO THE CITY OF SUNRISE SHOWING ALL SITE ACCESS PRIOR TO BEGINNING CONSTRUCTION.
32. THE CONTRACTOR'S MEANS AND METHODS THAT ARE USED FOR TEMPORARY AND PERMANENT SHEET PILE DRIVING SHALL NOT NEGATIVELY IMPACT ADJACENT PROPERTY OWNERS, CONTRACTOR SHALL PROVIDE VIBRATION MONITORING WHILE PERFORMING WORK THAT CAUSES EXCESSIVE VIBRATION.
33. CONSTRUCTION OF THIS FACILITY IS ADJACENT TO RESIDENTIAL BUILDINGS. CONTRACTOR SHALL PROVIDE SOUND ATTENUATION TO MEET THE CITY OF SUNRISE CODE OF ORDINANCES, FOR ALL EQUIPMENT INCLUDING BUT NOT LIMITED TO DEWATERING PUMPS, BY-PASS PUMPS, GENERATORS ,ETC..
34. A CONCRETE TRUCK WASHOUT AREA SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF SUNRISE STANDARD DETAIL. LOCATION OF THE WASHOUT AREA SHALL BE AT THE CONTRACTOR'S DISCRETION WITHIN THE TEMPORARY CONSTRUCTION EASEMENT AREA. THE WASHOUT AREA SHALL NOT BE PLACED IN THE SFWMD RIGHT-OF-WAY.
35. CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGN AND CONSTRUCTION OF AN AUTOMATIC, LOW VOLUME IRRIGATION SYSTEM FOR NEW LANDSCAPING. PROVIDE DESIGN PLAN AND SHOP DRAWINGS FOR SYSTEM FOR APPROVAL.
36. CONTRACTOR SHALL PROVIDE CONSTRUCTION SIGNAGE, INCLUDING PROJECT SIGNS AS DESIGNATED BY THE CITY, NO TRESPASSING CONSTRUCTION SIGNS, AND OTHER WARNING SIGNS AS NECESSARY TO WARN THE PUBLIC.
37. CONTRACTOR SHALL RESTORE ALL EASEMENTS TO THEIR PRE-WORK CONDITIONS.

LEGEND:

℄	CENTERLINE
(TYP.)	TYPICAL
R/W	RIGHT-OF-WAY
EL.	ELEVATION
CATV	CABLE TV BOX
	CONCRETE LIGHT POLE
	WIRE PULL BOX
	SIGN
	SEWER VALVE
	WATER VALVE
S	SANITARY SEWER MANHOLE
	UNKNOWN MANHOLE
	NON-VEHICULAR ACCESS LINE
WM	UNDERGROUND WATER MAIN
FM	UNDERGROUND FORCEMAIN
BE	UNDERGROUND ELECTRIC LINE
SL	UNDERGROUND STREET LIGHT LINE
BT	UNDERGROUND TELEPHONE LINE
CATV	UNDERGROUND CABLE TV LINE
FOC	UNDERGROUND FIBER OPTIC CABLE LINE
GAS	UNDERGROUND GAS LINE
BCTEDCO	BURIED SIGNAL INTERCONNECT CABLE (COPPER)
BCTEDFO	BURIED SIGNAL INTERCONNECT CABLE (FIBER)
OE	OVERHEAD ELECTRIC LINE
SAN	SANITARY SEWER LINE
STRM	STORM SEWER LINE
OT	OVERHEAD TELEPHONE LINE

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REVISIONS						
Date	By	Description	Date	By	Description	

	Names	Dates
Drawn by	IK	05/20
Checked by	DWG	05/20
Designed by	IK	05/20
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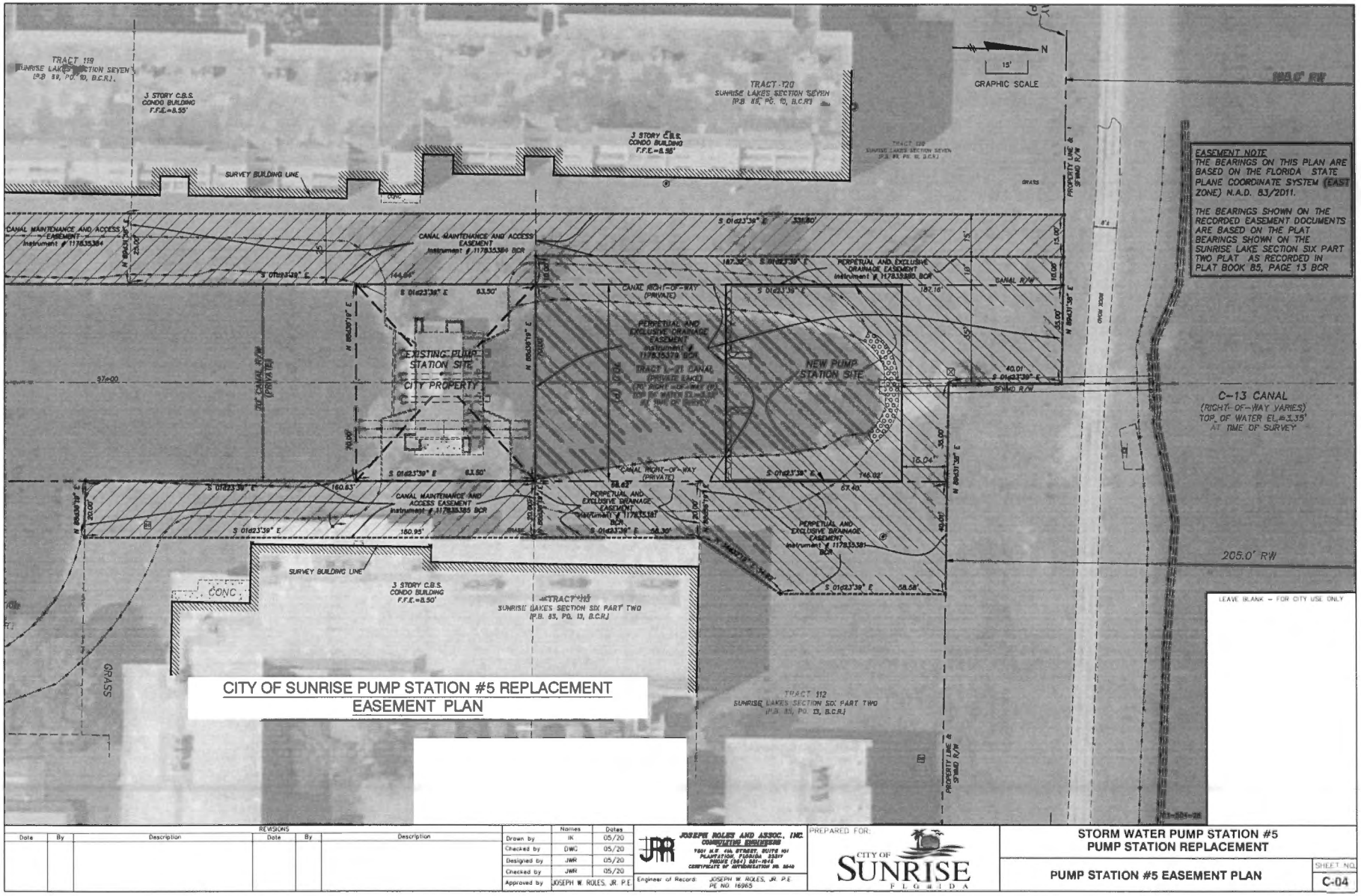
Engineer of Record: JOSEPH W. ROLES, JR. P.E.
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PREPARED FOR: CITY OF SUNRISE FLORIDA

STORM WATER PUMP STATION #5
PUMP STATION REPLACEMENT

NOTES AND LEGEND

SHEET NO. C-03



REVISIONS					
Date	By	Description	Date	By	Description

	Names	Dates
Drawn by	IK	05/20
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Designed by	JWR	05/20
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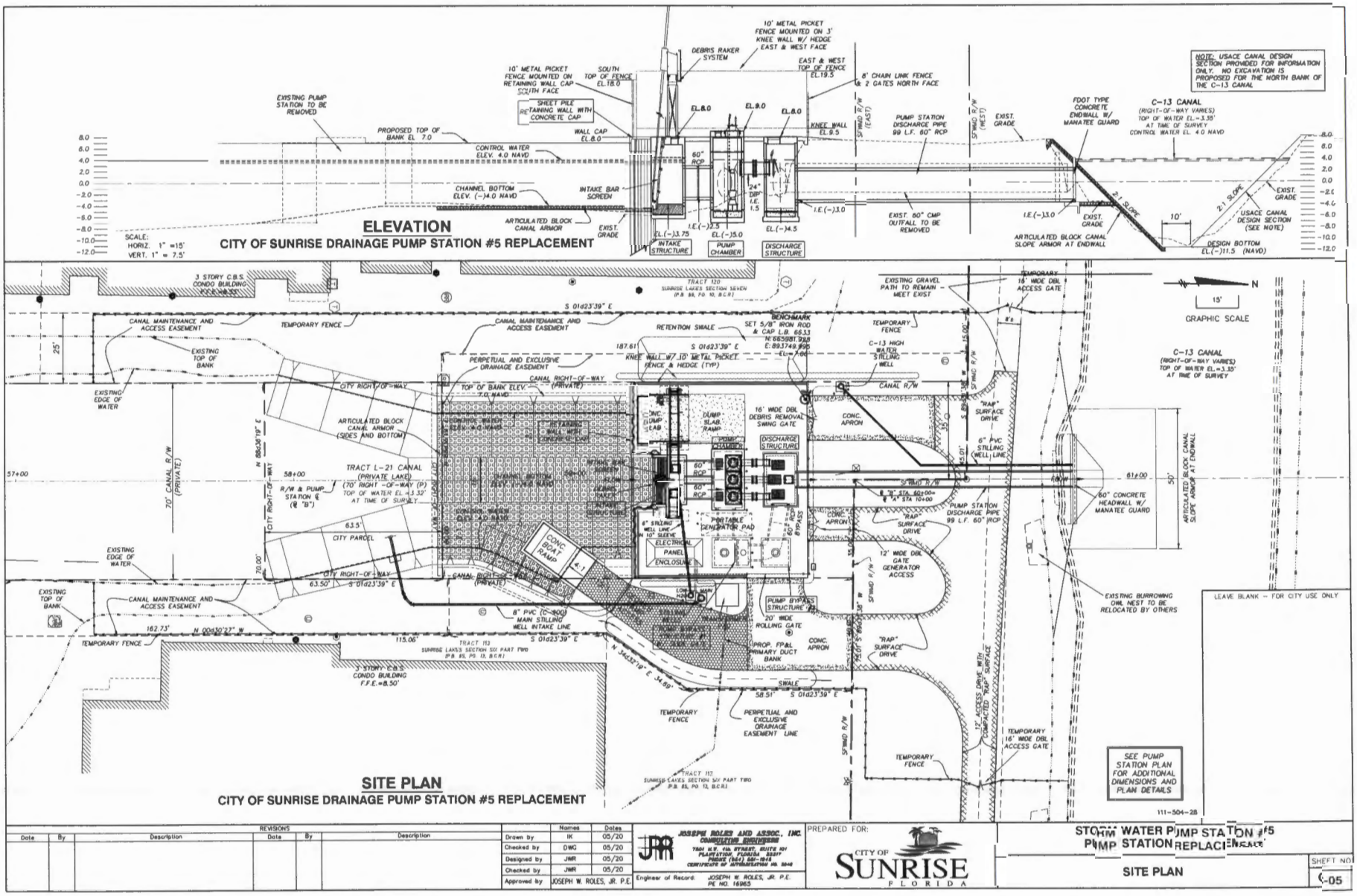
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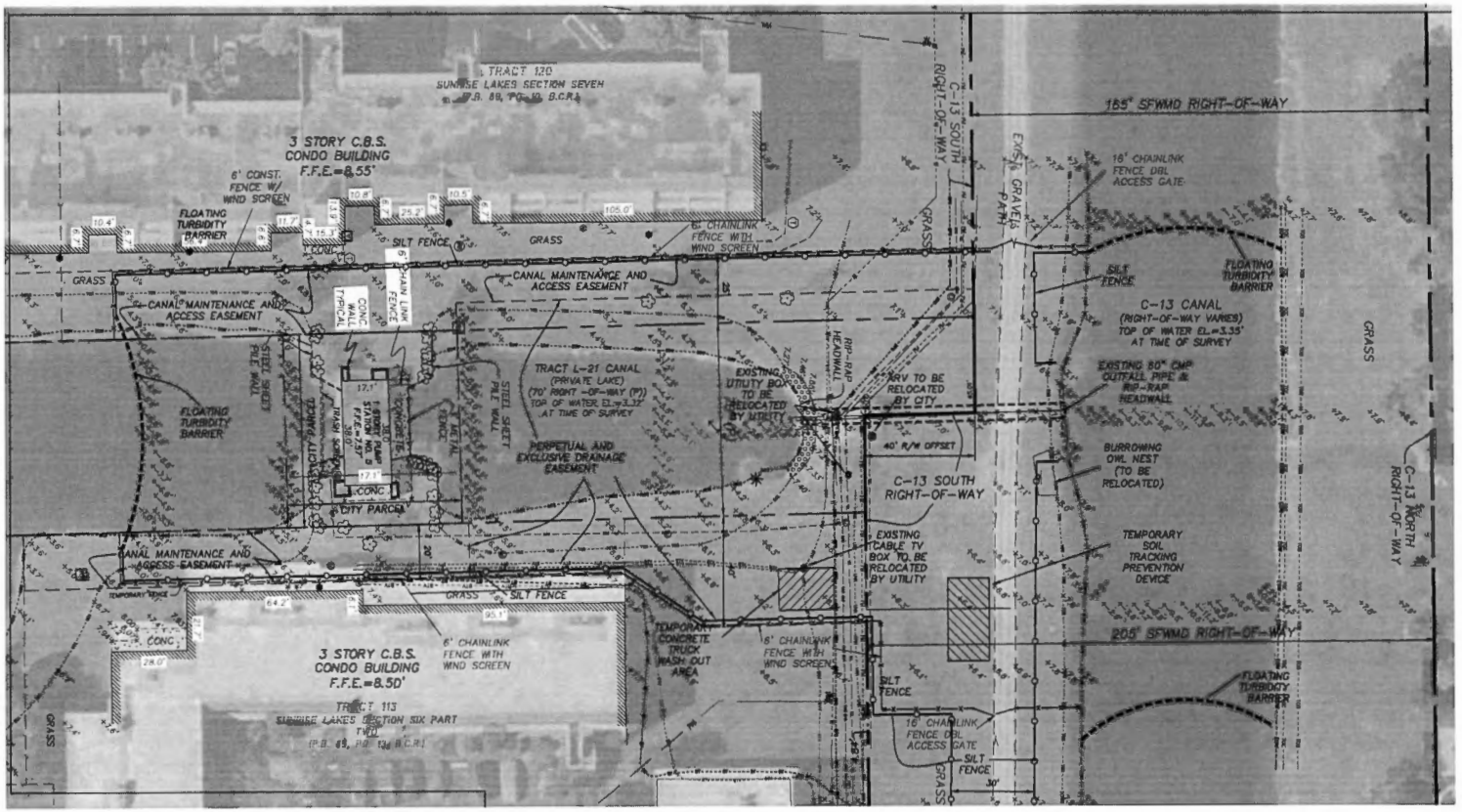
PREPARED FOR: CITY OF SUNRISE FLORIDA

STORM WATER PUMP STATION #5
PUMP STATION REPLACEMENT

PUMP STATION #5 EASEMENT PLAN

SHEET NO. C-04


ELEVATION
CITY OF SUNRISE DRAINAGE PUMP STATION #5 REPLACEMENT
SCALE: HORIZ. 1" =15' VERT. 1" = 7.5'
10' METAL PICKET FENCE MOUNTED ON 3' KNEE WALL W/ HEDGE EAST & WEST FACE
DEBRIS RAKER SYSTEM
10' METAL PICKET FENCE MOUNTED ON RETAINING WALL CAP SOUTH FACE
SOUTH TOP OF FENCE EL.18.0
EAST & WEST TOP OF FENCE EL.19.5
8' CHAIN LINK FENCE & 2 GATES NORTH FACE
EXISTING PUMP STATION TO BE REMOVED
SHEET PILE RETAINING WALL WITH CONCRETE CAP
PROPOSED TOP OF BANK EL 7.0
CONTROL WATER ELEV. 4.0 NAVD
WALL CAP EL.8.0
KNEE WALL EL.9.5
PUMP STATION DISCHARGE PIPE 99 L.F. 60" RCP
FDOT TYPE CONCRETE ENDWALL W/ MANATEE GUARD
C-13 CANAL (RIGHT-OF-WAY VARIES) TOP OF WATER EL.-3.35' AT TIME OF SURVEY CONTROL WATER EL. 4.0 NAVD
NOTE: USACE CANAL DESIGN SECTION PROVIDED FOR INFORMATION ONLY. NO EXCAVATION IS PROPOSED FOR THE NORTH BANK OF THE C-13 CANAL
CHANNEL BOTTOM ELEV. (-)4.0 NAVD
INTAKE BAR SCREEN
ARTICULATED BLOCK CANAL ARMOR
EXIST. GRADE
60" RCP
24" DIP I.E. 1.5
EL.(-)8.0
EL.(-)9.0
I.E.(-)2.5
EL.(-)3.75
EL.(-)5.0
EL.(-)4.5
I.E.(-)3.0
EXIST. 60" CMP OUTFALL TO BE REMOVED
ARTICULATED BLOCK CANAL SLOPE ARMOR AT ENDWALL
2:1 SLOPE
10'
USACE CANAL DESIGN SECTION (SEE NOTE)
DESIGN BOTTOM EL.(-)11.5 (NAVD)
INTAKE STRUCTURE
PUMP CHAMBER
DISCHARGE STRUCTURE
SITE PLAN
CITY OF SUNRISE DRAINAGE PUMP STATION #5 REPLACEMENT
3 STORY C.B.S. CONDO BUILDING F.F.E.=8.50'
TRACT 120 SUNRISE LAKES SECTION SEVEN (P.B. 88, PG. 10, B.C.R.)
S 01d23'39" E
CANAL MAINTENANCE AND ACCESS EASEMENT
TEMPORARY FENCE
RETENTION SWALE
BENCHMARK SET 5/8" IRON ROD & CAP L.B. 6633 N:665981.928 E:893749.956 EL=7.00
EXISTING GRAVEL PATH TO REMAIN - MEET EXIST
TEMPORARY 16' WIDE DBL ACCESS GATE
GRAPHIC SCALE
C-13 CANAL (RIGHT-OF-WAY VARIES) TOP OF WATER EL.-3.35' AT TIME OF SURVEY
PERPETUAL AND EXCLUSIVE DRAINAGE EASEMENT
CANAL RIGHT-OF-WAY (PRIVATE)
TOP OF BANK ELEV. 7.0 NAVD
KNEE WALL W/ 10' METAL PICKET FENCE & HEDGE (TYP)
C-13 HIGH WATER STILLING WELL
CANAL R/W
EXISTING TOP OF BANK
EXISTING EDGE OF WATER
CITY RIGHT-OF-WAY
ARTICULATED BLOCK CANAL ARMOR (SIDES AND BOTTOM)
TRACT L-21 CANAL (PRIVATE LAKE) (70' RIGHT-OF-WAY (P) TOP OF WATER EL.-3.32' AT TIME OF SURVEY
R/W & PUMP STATION ℄ ("B")
70' CANAL R/W (PRIVATE)
CONC. BUMP SLAB
DUMP SLAB RAMP
16' WIDE DBL DEBRIS REMOVAL SWING GATE
CONC. APRON
"RAP" SURFACE DRIVE
6" PVC STILLING WELL LINE
PUMP CHAMBER
DISCHARGE STRUCTURE
60" RCP
57+00
58+00
61+00
CITY PARCEL
63.5'
63.50'
S 01d23'39" E
6" STILLING WELL LINE-10" SLEEVE
PORTABLE GENERATOR PAD
ELECTRICAL PANEL ENCLOSURE
CONC. BOAT RAMP 4:1
12' WIDE DBL GATE GENERATOR ACCESS
PUMP STATION DISCHARGE PIPE 99 L.F. 60" RCP
60" CONCRETE HEADWALL W/ MANATEE GUARD
ARTICULATED BLOCK CANAL SLOPE ARMOR AT ENDWALL
EXISTING BURROWING OWL NEST TO BE RELOCATED BY OTHERS
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8" PVC (C-900) MAIN STILLING WELL INTAKE LINE
PUMP BYPASS STRUCTURE #5
20' WIDE ROLLING GATE
PROP. FP&L PRIMARY DUCT BANK
162.73'
N 00d30'27" W
115.06'
TRACT 112 SUNRISE LAKES SECTION SIX PART TWO (P.B. 85, PG. 13, B.C.R.)
3 STORY C.B.S. CONDO BUILDING F.F.E.=8.50'
N 34d32'18" E 34.69'
SWALE
58.51'
TEMPORARY FENCE
PERPETUAL AND EXCLUSIVE DRAINAGE EASEMENT LINE
12' ACCESS DRIVE WITH COMPACTED "RAP" SURFACE
SEE PUMP STATION PLAN FOR ADDITIONAL DIMENSIONS AND PLAN DETAILS
111-504-28
REVISIONS
Date | By | Description | Date | By | Description
Names | Dates
Drawn By IK 05/20
Checked by DWG 05/20
Designed by JWR 05/20
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PREPARED FOR:
CITY OF SUNRISE FLORIDA
STORM WATER PUMP STATION #5 PUMP STATION REPLACEMENT
SITE PLAN
SHEET NO. C-05



NOTE:
1. BURROWING OWL NESTS (A PROTECTED SPECIES) ARE LOCATED IN THE C-13 CANAL RIGHT-OF-WAY. KNOWN NEST SITES ARE MARK. CONTRACTOR TO USE CAUTION AND FOLLOW ALL REGULATIONS REGARDING WORKING IN THE VICINITY OF ANY ACTIVE OWL NEST. RELOCATION OF SOME NESTS BY QUALIFIED PERSONNEL MAY BE NECESSARY FOR ANY NEST FOUND IN CONFLICT WITH THE CONSTRUCTION.

EXISTING SITE TOPOGRAPHY, PROJECT EROSION CONTROL PLAN TEMPORARY FENCING PLAN & UTILITY ADJUSTMENTS

NOTE:
SEE ACCESS PLAN SHEETS C-09, C-10 AND C-11 FOR CONTINUATION OF EROSION CONTROL PLAN

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Drawn by	IK	05/20
Checked by	DWG	05/20
Designed by	JWR	05/20
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PREPARED FOR: CITY OF SUNRISE FLORIDA

STORM WATER PUMP STATION #5
PUMP STATION REPLACEMENT

EROSION CONTROL AND TEMPORARY FENCING PLAN

SHEET NO. C-06

EROSION CONTROL NOTES AND SPECIFICATIONS:

THE FOLLOWING NARRATIVE OF THE STORM WATER POLLUTION PREVENTION PLAN CONTAINS REFERENCES TO THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, THE STANDARD PLANS, AND OTHER SHEETS OF THESE CONSTRUCTION PLANS. THE FIRST SHEET OF THE CONSTRUCTION PLANS (CALLED THE KEY SHEET) CONTAINS AN INDEX TO THE OTHER SHEETS. THE COMPLETE STORM WATER POLLUTION PREVENTION PLAN INCLUDES SEVERAL ITEMS: THIS NARRATIVE DESCRIPTION, THE DOCUMENTS REFERENCED IN THIS NARRATIVE, THE CONTRACTOR'S APPROVED EROSION CONTROL PLAN REQUIRED BY SPECIFICATION SECTION 104, AND REPORTS OF INSPECTIONS MADE DURING CONSTRUCTION.

1.0 SITE DESCRIPTION:

1.A NATURE OF CONSTRUCTION ACTIVITIES:

THE PROJECT, LOCATED IN THE CITY OF SUNRISE IN BROWARD COUNTY, INVOLVES DEMOLITION OF AND EXISTING DRAINAGE PUMP STATION, DREDGING AND SHAPING EXISTING CANALS, PARTIALLY FILLING AN EXISTING CANAL, CONSTRUCTING A REPLACEMENT PUMP STATION, DEWATERING, INSTALLING PIPE, INSTALLING ABOVE AND BELOW GROUND LEVEL STRUCTURES, INSTALLATION OF CANAL LINING AND RIP-RAP, BOAT RAMP CONSTRUCTION, STABILIZED ACCESS DRIVE CONSTRUCTION, GRADING AND LANDSCAPE.

1.B SEQUENCE OF MAJOR SOIL DISTURBING ACTIVITIES:

IN THE EROSION CONTROL PLAN THE CONTRACTOR SHALL PROVIDE A DETAILED SEQUENCE OF CONSTRUCTION FOR ALL CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL FOLLOW THE SEQUENCE OF MAJOR ACTIVITIES DESCRIBED BELOW. UNLESS THE CONTRACTOR PROPOSES A DIFFERENT SEQUENCE THAT IS EQUAL OR BETTER AT CONTROLLING EROSION AND TRAPPING SEDIMENT AND IS APPROVED BY THE ENGINEER.

FOR EACH CONSTRUCTION PHASE, INSTALL PERIMETER CONTROLS AFTER CLEARING AND GRUBBING NECESSARY FOR INSTALLATION OF CONTROLS BUT BEFORE BEGINNING OTHER WORK FOR THE CONSTRUCTION PHASE. REMOVE PERIMETER CONTROLS ONLY AFTER ALL UPSTREAM AREAS ARE STABILIZED.

1. EARTHWORK ASSOCIATED DEMOLITION, EXCAVATION AND FILLING OF CANAL AREAS.
2. CONSTRUCTION OF THE ACCESS DRIVE
3. TEMPORARY CONSTRUCTION FOR BYPASS DRAINAGE.
4. COFFER DAM CONSTRUCTION AND CONSTRUCTION DEWATERING
5. PERMANENT CONSTRUCTION OF THE NEW PUMP STATION.

1.C AREA ESTIMATES:

TOTAL SITE AREA: 2.50 AC
TOTAL AREA TO BE DISTURBED: 2.17 AC

1.D RUNOFF DATA:

Runoff Coefficients:
Before Construction: 0.50
During Construction: 0.70
After Construction: 0.60

1.E SITE MAP:

THE CONSTRUCTION PLANS ARE BEING USED AS THE SITE MAPS. THE LOCATION OF THE REQUIRED INFORMATION IS DESCRIBED BELOW. THE SHEET NUMBERS FOR THE PLAN SHEETS REFERENCED ARE IDENTIFIED ON THE KEY SHEET OF THESE CONSTRUCTION PLANS.

DRAINAGE PATTERNS:
ALL DRAINAGE SHEET FLOWS TO THE ADJACENT CANALS AND CURRENTLY NO DRAINAGE SYSTEM IS INSTALLED IN THE CONSTRUCTION AREA.

AREAS OF SOIL DISTURBANCE:
THE AREAS TO BE DISTURBED ARE INDICATED ON THE PLAN SHEETS, AND CROSS SECTION SHEETS. ANY AREAS WHERE PERMANENT FEATURES ARE SHOWN TO BE CONSTRUCTED ABOVE OR BELOW GROUND WILL BE DISTURBED.

AREAS NOT TO BE DISTURBED:
ESSENTIALLY THE ENTIRE PROJECT WILL BE DISTURBED DURING CONSTRUCTION.

LOCATIONS OF TEMPORARY AND PERMANENT CONTROLS:
TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AND THEIR LOCATIONS ARE SHOWN ON THE EROSION CONTROL PLANS. PERMANENT EROSION AND SEDIMENT CONTROL DEVICES AND THEIR LOCATIONS ARE SHOWN ON THE PLAN SHEETS AND DETAIL SHEETS OF THE CONSTRUCTION PLANS.

AREAS TO BE STABILIZED:
TEMPORARY STABILIZATION PRACTICES ARE SHOWN IN THE SAME LOCATION AS THE TEMPORARY CONTROLS MENTIONED ABOVE. PERMANENT STABILIZATION IS SHOWN ON THE TYPICAL SECTION SHEETS, AND PLAN SHEETS.

SURFACE WATERS:
THE SURFACE WATERS WITHIN THE CONSTRUCTION SITE INCLUDE THE SFWMD C-13 CANAL AND THE CITY OF SUNRISE DRAINAGE BASIN 5 DISCHARGE CANAL.

DISCHARGE POINTS TO SURFACE WATERS:
ALL DISCHARGE POINTS ARE EXISTING.

1.F QUALITY OF EXISTING STORMWATER DISCHARGE

THE EXISTING STORMWATER RUNOFF FROM THE PROJECT SITE AREA CURRENTLY DISCHARGES TO THE RECEIVING WATERS THROUGH OVERLAND SHEET FLOW. THERE ARE NO INDEPENDENT DRAINAGE SYSTEMS. ALL AREAS ARE SODDED AND ARE UNTREATED.

SOILS DATA: THE SOILS WITHIN THE PROJECT LIMITS ARE SANDY WITH ROCK AND TOPSOILS.

1.G. RECEIVING WATERS:

THE RECEIVING WATER FOR THE THE CITY OF SUNRISE BASIN 5 SYSTEM IS THE SFWMD C-13 CANAL.

2.0 CONTROLS:

2.0 EROSION AND SEDIMENT CONTROL:

IN THE EROSION CONTROL PLAN, THE CONTRACTOR SHALL DESCRIBE THE PROPOSED STABILIZATION AND STRUCTURAL PRACTICES BASED ON THE CONSTRUCTION SEQUENCE PLAN. THE FOLLOWING RECOMMENDED GUIDELINES ARE OUTLINED IN THE CONSTRUCTION PLANS. THE CONTRACTOR MAY CHOOSE TO ACCEPT THE FOLLOWING GUIDELINES OR MODIFY THEM SUBJECT TO THE APPROVAL OF THE CITY AND THE ENGINEER. AS WORK PROGRESSES, THE CONTRACTOR SHALL MODIFY THE PLAN TO ADAPT FOR SEASONAL VARIATION, CHANGES IN CONSTRUCTION ACTIVITIES, AND THE NEED FOR BETTER PRACTICES.

FOR EACH CONSTRUCTION PHASE, INSTALL PERIMETER CONTROLS AFTER CLEARING AND GRUBBING NECESSARY FOR INSTALLATION OF CONTROLS BUT BEFORE BEGINNING OTHER WORK FOR THE CONSTRUCTION PHASE. REMOVE PERIMETER CONTROLS ONLY AFTER ALL UPSTREAM AREAS ARE STABILIZED. REFER TO EROSION CONTROL PLANS FOR ADDITIONAL INFORMATION.

2.A.1 STABILIZATION PRACTICES

IN THE EROSION CONTROL PLAN THE CONTRACTOR SHALL DESCRIBE THE STABILIZATION PRACTICES PROPOSED TO CONTROL EROSION. THE CONTRACTOR SHALL INITIATE ALL STABILIZATION MEASURES AS SOON AS PRACTICAL, BUT IN NO CASE MORE THAN 7 DAYS PRIOR TO IMPLEMENTION OF CONSTRUCTION IN THE IMPACTED AREA. IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, THE STABILIZATION PRACTICES SHALL INCLUDE AT LEAST THE FOLLOWING, UNLESS OTHERWISE APPROVED BY THE ENGINEER.

TEMPORARY:

* ARTIFICIAL COVERINGS IN ACCORDANCE WITH FDOT SPECIFICATION SECTION 104
* SEED AND MULCH, AND SOD IN ACCORDANCE WITH FDOT SPECIFICATION SECTION 104

PERMANENT.

* ASPHALT OR CONCRETE SURFACE
* SOD IN ACCORDANCE WITH FDOT SPECIFICATION SECTION 575

2.A.2 STRUCTURAL PRACTICES

THE CONTRACTOR SHALL DESCRIBE THE PROPOSED STRUCTURAL PRACTICES TO CONTROL OR TRAP SEDIMENT AND OTHERWISE PREVENT THE DISCHARGE OF POLLUTANTS FROM EXPOSED AREAS OF THE SITE. SEDIMENT CONTROLS SHALL BE IN PLACE BEFORE DISTURBING SOIL UPSTREAM OF THE CONTROL. THE STRUCTURAL PRACTICES SHALL INCLUDE AT LEAST THE FOLLOWING, UNLESS OTHERWISE APPROVED BY THE ENGINEER.

TEMPORARY:

* SILT FENCE IN ACCORDANCE WITH FDOT EROSION AND SEDIMENT CONTROL MANUAL
* SOIL TRACKING PREVENTION DEVICES IN ACCORDANCE WITH FDOT EROSION AND SEDIMENT CONTROL MANUAL
* FLOATING TURBIDITY BARRIERS IN ACCORDANCE WITH FDOT EROSION AND SEDIMENT CONTROL MANUAL
* INLET PROTECTION SYSTEMS IN ACCORDANCE WITH FDOT EROSION AND SEDIMENT CONTROL MANUAL

PERMANENT:

* DRAINAGE SUMPS IN DRAINAGE STRUCTURE BOTTOMS. NOTE THAT PUMP STATION PRECAST STRUCTURES MAY NOT ALL BE PROVIDED WITH SUMPS.

2.B STORMWATER MANAGEMENT

A TEMPORARY STORMWATER SYSTEM WILL BE CONSTRUCTED TO CONVEY RUNOFF FROM THE EXISTING DISCHARGE CANAL TO THE C-13 CANAL TO MANAGE BASIN DRAINAGE DURING CONSTRUCTION. A BACKFLOW CONTROL FLAPGATE VALVE IS INCORPORATED INTO TEMPORARY SYSTEM TO PRECLUDE THE C-13 CANAL FROM DRAINING INTO THE BASIN.

2.C OTHER CONTROLS

THE CONTRACTOR SHALL PRACTICE GOOD HOUSEKEEPING BY INSTITUTING A CLEAN, ORDERLY, CONSTRUCTION SITE. THE FOLLOWING CONTROLS SHALL BE IMPLEMENTED TO FURTHER REDUCE POLLUTION AT THE PROJECT SITE:

2.C.1 DISCHARGE OF MATERIALS TO SURFACE WATERS

NO CONSTRUCTION MATERIAL SHALL BE DISCHARGED TO WATERS OF THE STATE UNLESS AUTHORIZED BY A SECTION 404 PERMIT AND/OR THE STATE OF FLORIDA ENVIRONMENTAL RESOURCE PERMIT. ALL CONSTRUCTION DEBRIS SHALL BE DISPOSED OF IN AN APPROVED UPLAND LOCATION. BUILDING MATERIAL SHALL NOT BE DISPOSED OF IN WATERWAYS, WETLANDS OR BURIED ON-SITE.

2.C.2 OFF-SITE VEHICLE TRACKING & DUST CONTROL

THE CONTRACTOR SHALL TAKE MEASURES TO INSURE THE CLEANUP OF SEDIMENTS THAT HAVE BEEN TRACKED BY VEHICLES OR HAVE BEEN TRANSPORTED BY WIND OR STORM WATER ABOUT THE SITE OR ONTO NEARBY ROADWAYS. STABILIZED CONSTRUCTION ENTRANCES AND CONSTRUCTION ROADS SHALL BE IMPLEMENTED IN ORDER TO REDUCE OFFSITE TRACKING. LOADED HAUL TRUCKS SHALL BE COVERED WITH TARPAULIN. EXCESS DIRT ON THE ROAD SHALL BE REMOVED DAILY.

2.C.3 WASTE DISPOSAL

THE CONTRACTOR SHALL DEMONSTRATE THE PROPER DISPOSAL OF ALL CONSTRUCTION AND DEMOLITION WASTE GENERATED WITHIN THE PROJECT LIMITS. WASTE MAY INCLUDE, BUT NOT BE LIMITED TO, VEGETATION FROM CLEARING AND GRUBBING ACTIVITIES, PACKAGING MATERIALS, SCRAP BUILDING MATERIALS, LITTER FROM TRAVELING PUBLIC, SEWAGE FROM SANITARY FACILITIES, HERBICIDES AND PESTICIDES AND THEIR CONTAINERS, AND HYDROCARBON PRODUCTS. CONTRACTOR SHALL DESIGNATE A WASTE COLLECTION AREA ONSITE AND DELINEATE THE AREA ON THE SWPPP SITE MAP.

SANITARY/SEPTIC FACILITIES SHALL BE PROVIDED AND MAINTAINED IN A NEAT AND SANITARY CONDITION, FOR THE USE OF THE CONTRACTOR'S EMPLOYEES AS NECESSARY TO COMPLY WITH THE REQUIREMENTS AND REGULATIONS OF THE STATE AND LOCAL BOARDS OF HEALTH. A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR, AS REQUIRED BY STATE REGULATIONS, WILL COLLECT ALL SANITARY WASTE FROM PORTABLE UNITS.

THE CONTRACTOR WILL PROVIDE LITTER CONTROL AND COLLECTION WITHIN THE PROJECT LIMITS DURING CONSTRUCTION ACTIVITIES. CONTRACTOR WILL PROVIDE AN ADEQUATE NUMBER OF LITTER CONTAINERS WITH LIDS AT THE STAGING, STOCKPILE AND FIELD OFFICE AREAS. WASTE COLLECTION WILL BE SCHEDULED SO THAT CONTAINERS ARE EMPTIED PRIOR TO OVERFLOW. SPILLED LITTER CONTAINERS SHALL BE CLEANED UP IMMEDIATELY.

2.C.4 FERTILIZERS AND PESTICIDES

THE APPLICATION AND HANDLING OF HERBICIDES AND PESTICIDES SHALL BE IN COMPLIANCE WITH THE MANUFACTURER RECOMMENDED METHOD AND IN ACCORDANCE WITH FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. HERBICIDE AND PESTICIDES SHALL BE STORED ONSITE IN THEIR ORIGINAL CONTAINERS WITH PRODUCT LABEL INTACT. COPY OF MSD SHEETS AS WELL AS A COPY OF FLORIDA LICENSE FOR HERBICIDE APPLICATOR WITH PROPER ENDORSEMENTS FOR CHEMICAL USED AS WELL AS AQUATICS MUST BE PROVIDED.

2.C.5 TOXIC/HAZARDOUS MATERIAL HANDLING

CONTRACTOR SHALL PROVIDE THE EQUIPMENT NECESSARY TO CONTAIN AND CLEAN UP SPILLS OF HAZARDOUS MATERIALS, INCLUDING PETROLEUM PRODUCTS. SPILLS SHALL BE CONTAINED AND CLEANED UP IMMEDIATELY AFTER THEY OCCUR. SPILLED MATERIAL AND THE EQUIPMENT USED TO CLEAN UP THE SPILL SHALL NOT COME IN CONTACT WITH SURFACE WATERS OR BE INTRODUCED INTO STORM WATER. DISPOSAL OF SURPLUS PRODUCT WILL BE DONE ACCORDING TO MANUFACTURER RECOMMENDED METHOD.

CONTRACTOR SHALL PROVIDE A PROJECT SPECIFIC HAZARDOUS MATERIALS SPILL CONTROL PLAN IN ORDER TO ADDRESS THE HANDLING OF HYDROCARBON AND HAZARDOUS MATERIALS.

PETROLEUM PRODUCTS SHALL BE STORED IN COVERED AREAS WITH SECONDARY CONTAINMENT SURROUNDING CONTAINER.

TOXIC/HAZARDOUS MATERIALS EXPOSED DURING CONSTRUCTION ACTIVITIES SHALL BE HANDLED AS PER THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

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111-504-28

REVISIONS					
Date	By	Description	Date	By	Description

	Names	Dates
Drawn by	IK	05/20
Checked by	DMC	05/20
Designed by	JMR	05/20
Checked by	JMR	05/20
Approved by	JOSEPH W. ROLES, JR. P.E.	

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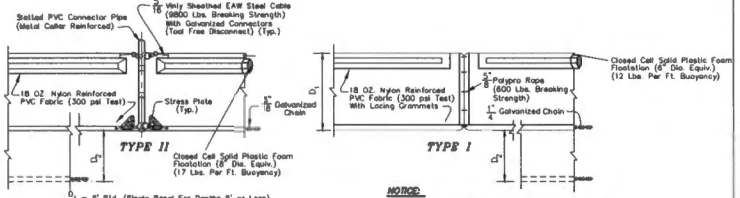
Engineer of Record: JOSEPH W. ROLES, JR. P.E.
PE NO. 16965

PREPARED FOR: CITY OF SUNRISE FLORIDA

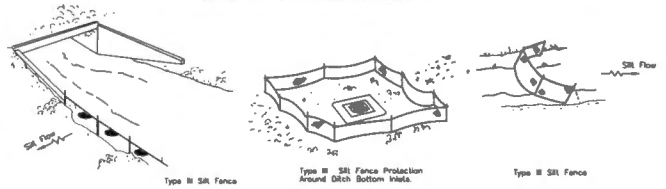
STORM WATER PUMP STATION #5
PUMP STATION REPLACEMENT

STORMWATER POLLUTION PREVENTION NOTES

SHEET NO. C-07

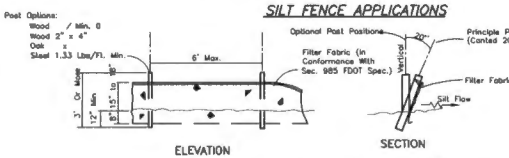


FLOATING TURBIDITY BARRIERS



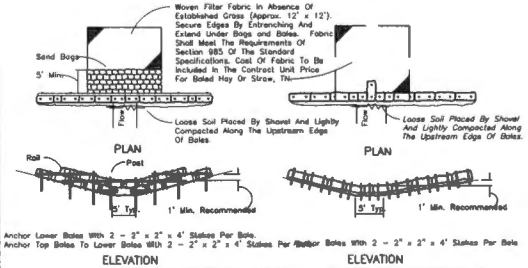
Do not deploy in a manner that silt fences will act as a dam across permanent flowing watercourses. Silt fences are to be used at upland locations and turbidity barriers used at permanent bodies of water

SILT FENCE APPLICATIONS

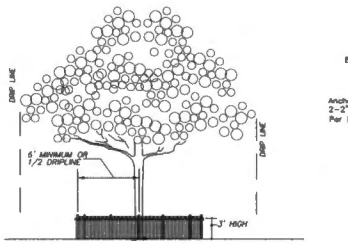


Note: Silt Fence to be paid for under the contract unit price for Staked Silt Fence (LF).

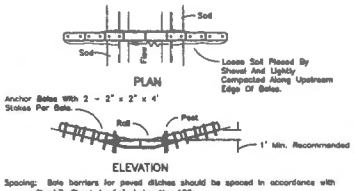
TYPE III SILT FENCE



BARRIER FOR UNPAVED DITCHES



TREE PROTECTION BARRICADES



BARRIER FOR PAVED DITCH

I. GENERAL NOTES

(a) ALL EROSION CONTROL DEVICES SHALL BE INSTALLED TO COMPLY WITH THE STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION GENERIC PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES.
(b) ALL EROSION CONTROL DEVICES SHALL BE IN PLACE PRIOR TO COMMENCEMENT OF WORK
(c) INSTALL SILT FENCE WHERE REQUIRED BY THE APPROVED POLLUTION PREVENTION PLAN
(d) PROVIDE HAY BALES FOR DITCH BLOCKS WHERE REQUIRED BY THE APPROVED POLLUTION PREVENTION PLAN
(e) PROVIDE ROCK BAGS AT INLET OPENINGS WHERE REQUIRED BY THE APPROVED POLLUTION PREVENTION PLAN
(f) ALL CONTROL DEVICES SHALL REMAIN IN PLACE UNTIL ALL UPSTREAM AREAS ARE FULLY STABILIZED AND PERMANENT GRASSING IS IN PLACE.
(g) INLET PROTECTION WILL BE REQUIRED FOR ALL THE INLETS IMPACTED BY THE PROJECT DURING CONSTRUCTION
(h) SPILL KIT MUST BE PROVIDED ON SITE DURING THE ENTIRE DURATION OF PROJECT OR UNTIL REMOVAL IS APPROVED BY CITY. SPILL KIT MUST BE APPROPRIATE FOR THE SCOPE OF WORK AND EQUIPMENT ON SITE.

II. EROSION AND SEDIMENT CONTROLS

(a) TURBIDITY MONITORING PLAN

THE PURPOSE OF THE TURBIDITY MONITORING PLAN IS TO ENSURE THAT STATE WATER QUALITY STANDARDS ARE ADHERED TO AS ADJACENT SURFACE WATER THROUGHOUT THE AREA OF CONSTRUCTION.

A WATER QUALITY MONITORING PROGRAM SHALL BE IMPLEMENTED AS OUTLINED BELOW.

TURBIDITY SHALL BE EXPRESSED IN NEPHELOMETRIC TURBIDITY UNITS (NTU). BACKGROUND SAMPLES SHALL BE TAKEN 200 FEET UPSTREAM OF ANY CONSTRUCTION ACTIVITY WITHIN ADJACENT SURFACE WATER. SAMPLES SHALL BE TAKEN 200 FEET DOWNSTREAM. SAMPLES SHALL BE TAKEN THREE DAILY, WITH AT LEAST A FOUR-HOUR INTERVAL, DURING ALL WORK AUTHORIZED BY THIS PERMIT.

MONITORING SHALL BEGIN ON THE FIRST DAY OF CONSTRUCTION FOR ALL ACTIVITIES WITHIN OR TO SURFACE WATERS. MONITORING SHALL CEASE WHEN ALL CONSTRUCTION MONITORING ACTIVITIES ARE COMPLETED. THE MONITORING DATA MUST DEMONSTRATE THAT TURBIDITY ADJACENT AND 200 FEET DOWNSTREAM OF ALL PROPOSED ACTIVITIES MEETS OFW STANDARDS FOR NATURAL BACKGROUND TURBIDITY AND 29O FEET UPSTREAM OF EACH PROPOSED ACTIVITY FOR A PERIOD OF 7 CONSECUTIVE DAYS AFTER COMPLETION OF CONSTRUCTION. IF MONITORING SHOWS SUCH DATA TO BE EXCEEDED, CONSTRUCTION ACTIVITIES SHALL BE IMMEDIATELY STOPPED. STAFF SHALL BE NOTIFIED IMMEDIATELY BY TELEPHONE OR E-MAIL AND IN WRITING WITHIN 24 HOURS THAT ADEQUATE CORRECTIVE MEASURES HAVE BEEN TAKEN AND TURBIDITY HAS RETURNED TO ACCEPTABLE LEVELS. ALL MONITORING DATA SHALL BE MAINTAINED ON SITE AND BE AVAILABLE TO DISTRICT STAFF DURING REGULAR BUSINESS HOURS.

THE CONTENT OF THE DATA SHALL INCLUDE: 1) PERMIT AND APPLICATION NUMBER; (2) DATES OF SAMPLING AND ANALYSIS; (3) A STATEMENT DESCRIBING THE METHODS USED IN COLLECTION, HANDLING, STORAGE AND ANALYSIS OF THE SAMPLES; (4) A MAP INDICATING THE SAMPLING LOCATIONS AND (5) A STATEMENT BY THE INDIVIDUAL RESPONSIBLE FOR IMPLEMENTATION OF THE SAMPLING PROGRAM CONCERNING THE REPRESENTIVITY, PRECISION, LIMITS OF DETECTION AND ACCURACY OF THE DATA. MONITORING REPORTS SHALL ALSO INCLUDE THE FOLLOWING INFORMATION FOR EACH SAMPLE THAT IS TAKEN:

(a) TIME OF DAY SAMPLES TAKEN;
(b) DEPTH OF WATER BODY;
(c) DEPTH OF SAMPLES;
(d) WATER/WEAT WEATHER CONDITIONS;
(e) WIND DIRECTION AND VELOCITY

(b) STABILIZATION PRACTICES:

STABILIZATION MEASURES, SUCH AS SODDING OR SEEDING OF SIDE SLOPES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE SHALL THE TIME BE GREATER THAN SEVEN (7) DAYS AFTER THE CONSTRUCTION ACTIVITY TEMPORARILY OR PERMANENTLY CEASES.

(c) STRUCTURAL PRACTICES INCLUDE:

(a) SILT FENCES
(b) HAY BALES
(c) ROCK BAGS
(d) SOIL TRACKING PREVENTION DEVICES AT CONSTRUCTION ENTRANCES/EXITS
(e) FLOATING TURBIDITY BARRIERS

(d) SILT FENCE LOCATIONS

(a) SILT FENCE SHALL BE USED ALONG THE LENGTH OF THE PROJECT WHERE THE EXISTING GROUND SLOPES AWAY FROM THE RIGHT-OF-WAY, EASEMENT LINE OR PROPERTY LINE AS APPLICABLE AND ANY LOCATION WHERE THERE IS POTENTIAL FOR SEDIMENT TO BE DIRECTED OFF-SITE.
(b) EXCEPTIBLE AREAS SHALL INCLUDE SILT FENCE AROUND THE PERIMETER.

(e) HAY BALE LOCATIONS

GENERALLY, HAY BALES SHALL BE INSTALLED AT EXISTING INLET LOCATIONS AND AS DITCH BLOCKS TO AVOID DOWNSTREAM SILTATION. DITCH BLOCKS WHERE REQUIRED SHOULD BE LOCATED APPROXIMATELY EVERY 300 FEET.

(f) ROCK BAG LOCATIONS

GENERALLY, ROCK BAGS SHALL BE INSTALLED FOR THE PURPOSE OF CONTROLLING SILTATION AT CURB AND GUTTER INLETS WHERE STAKES CANNOT BE DRIVEN.

(f) CONSTRUCTION ENTRANCES/EXITS

SOIL TRACKING PREVENTION DEVICES (STD. INDEX NO. 102) SHALL BE PROVIDED FOR BOTH ON-SITE AND OFF-SITE LOCATIONS OF STOCKPILED OR EXCAVATED MATERIAL, INCLUDING ANY PROPOSED PONDS SITES, IF IMMEDIATELY ADJACENT TO A PUBLIC RIGHT-OF-WAY OR ROADWAY THE CONTRACTOR SHALL BE RESPONSIBLE FOR MODIFYING THE SYSTEM OR PROCEDURES AS NEEDED

(g) TURBIDITY BARRIER LOCATION

(a) STAKED TURBIDITY BARRIER SHALL BE USED AT AREAS WHERE PERMANENT WATER BODIES ARE LESS THAN 3 FEET DEEP.
(b) ALL EROSION CONTROL DEVICES SHALL BE INSTALLED ACCORDING TO THE CONTRACT DOCUMENTS.
(c) ANY TEMPORARY MATERIAL USED FOR POLLUTION OR EROSION CONTROL DURING CONSTRUCTION SHALL BE REMOVED AT THE COMPLETION OF THE PROJECT AND FINAL STABILIZATION OF SOILS HAS BEEN ACHIEVED.

III. OTHER CONTROLS

(i) WASTE DISPOSAL:

(a) THE CONTRACTOR WILL PROVIDE LITTER CONTROL AND COLLECTION WITHIN THE PROJECT BOUNDARIES DURING CONSTRUCTION ACTIVITIES.
(b) ALL FERTILIZERS AND CHEMICAL CONTAINERS SHALL BE DISPOSED OF BY THE CONTRACTOR ACCORDING TO EPA'S STANDARDS PRACTICES AS DETAILED BY THE MANUFACTURER.
(c) NO SOLID MATERIALS, INCLUDING BUILDING AND CONSTRUCTION MATERIALS, SHALL BE DISCHARGED TO WETLANDS OR SURFACE WATERS.
(d) ALL SANITARY WASTE WILL BE COLLECTED FROM PORTABLE UNITS BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR AS REQUIRED BY STATE REGULATIONS.

(j) OFF-SITE VEHICLE TRACKING - WILL BE CONTROLLED BY THE FOLLOWING METHODS.
(a) LONGER HAUL TRUCKS ARE TO BE COVERED BY A TARPAULIN AT ALL TIMES
(b) EXCESS DIRT ON ROAD WILL BE REMOVED DAILY

(j) STATE AND LOCAL REGULATIONS: PERMITS WILL BE REQUIRED FROM THE FOLLOWING AGENCIES.
(a) SOUTH FLORIDA WATER MANAGEMENT DISTRICT (SFWMD)
(b) U.S. ARMY CORPS OF ENGINEERS (USACOE)
(c) MIAMI DADE(DERM)

CONTRACTOR TO SIGN AN "EROSION AND SEDIMENTATION CONTROL AGREEMENT" IN ADDITION TO COMPLYING WITH THE POLLUTION PREVENTION CONTROL PLAN.

(k) APPLICATION OF FERTILIZERS AND PESTICIDES

FERTILIZERS AND PESTICIDES WILL BE USED ON THIS PROJECT IN ACCORDANCE WITH "FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", SECTIONS 570, 575, OR 577, AT THE DISCRETION OF THE CONTRACTOR WITH THE COORDINATION OF THE ENGINEER.

(l) NON-STORMWATER (INCLUDING SPILL REPORTING)

THE CONTRACTOR WILL PROVIDE THE CITY WITH AN EROSION CONTROL PLAN THAT WILL INCLUDE SPILL CONTINGENCY REPORTING, AND RESPONSES. THE PLAN SHALL SPECIFY WHAT MANAGEMENT PRACTICES AND BUFFER METHODS WILL BE USED TO PREVENT POTENTIAL POLLUTANTS (FUEL, LUBRICANTS, HEMROIDES, ETC.) FROM SPILLING ON TO THE SOIL OR INTO THE SURFACE WATERS. IF A SPILL DOES OCCUR, OR IF CONTAMINATED SOIL OR GROUNDWATER IS ENCOUNTERED, CONTACT DISTRICT CONTAMINATION IMPACT COORDINATOR

IV. MAINTENANCE:

(a) THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE AND REPAIRS OF EROSION AND SEDIMENT CONTROL DEVICES, AND REMOVAL OF EROSION AND SEDIMENT CONTROL DEVICES WHEN NOTICE OF TERMINATION IS MAILED.

(b) INSTALLATION, MAINTENANCE, REPAIR AND REMOVAL REQUIRED FOR THE CONTROL AND ABATEMENT OF EROSION AND WATER POLLUTION SHALL BE INCLUDED IN THE INDIVIDUAL COSTS OF THE EROSION CONTROL DEVICES.

(c) THE FOLLOWING PRACTICES WILL BE USED TO MAINTAIN EROSION AND SEDIMENT CONTROLS. GENERAL - ALL CONTROL MEASURES WILL BE MAINTAINED DAILY BY THE CONTRACTOR. ALL MEASURES WILL BE MAINTAINED IN GOOD WORKING ORDER. IF A REPAIR IS NECESSARY, IT WILL BE INITIATED WITHIN 24 HOURS OF NOTICE.

(d) STRUCTURAL PRACTICES - SILT FENCE - SILTATION WILL BE REMOVED FROM SILT FENCE AND SILTATION BARRIERS WHEN IT HAS REACHED ONE-HALF OF THE HEIGHT OF THE BARRIER. SILT FENCE WILL BE INSPECTED FOR BARE SPOTS, WASHOUTS, AND SATISFACTORY GROWTH. HAY BALES SHALL BE REPLACED EVERY THREE (3) MONTHS OR SOONER IF THEY HAVE REDUCED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE. TEMPORARY DITCH BLOCKS SHALL BE REPLACED EVERY TWELVE (12) MONTHS OR SOONER IF HAS REDUCED ITS USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORMWATER FLOW OR DRAINAGE. STABILIZED CONSTRUCTION ENTRANCES SHALL BE MAINTAINED TO PREVENT CLOGGING OF ROCK BEDDING WHICH MAY IMPEDE THE USEFULNESS OF THE STRUCTURE.

V. INSPECTION

(a) THE CONTRACTOR SHALL INSTALL AND MAINTAIN RAIN GAUGES ON THE PROJECT SITE AND RECORD WEEKLY RAINFALL IN ACCORDANCE WITH THE NPDES PERMIT. ALL CONTROL MEASURES WILL BE INSPECTED DAILY BY THE CONTRACTOR.

(b) ALL EROSION AND WATER POLLUTION ABATEMENT AND CONTROL MEASURES WILL BE INSPECTED AT LEAST EVERY SEVEN (7) CALENDAR DAYS OR WITHIN 24 HOURS OF THE END OF A RAIN EVENT THAT IS 0.5 INCH OR GREATER BY CONTRACTOR'S PERSONNEL WHO ARE F.S.E.P. CERTIFIED STORMWATER MANAGEMENT INSPECTORS.

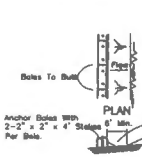
(c) THE CONTRACTOR SHALL COMPLETE ALL SWPPP INSPECTION REPORT FORMS REQUIRED FOR THE NPDES PERMIT.

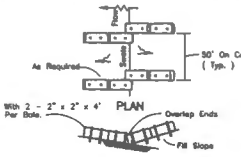
VI. TRACKING AND REPORTING

(a) THE CONTRACTOR SHALL SUBMIT A WEEKLY REPORT TO THE CITY DOCUMENTING THE DAILY INSPECTIONS AND MAINTENANCE OR REPAIRS TO THE SEDIMENT CONTROL DEVICES. THE CONTRACTOR SHALL MAINTAIN ALL REQUIRED REPORTS AND COMPLETE ALL SWPPP INSPECTION FORMS.

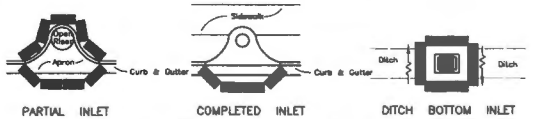
(b) PREPARATION OF ALL THE CONTRACTOR'S REPORTS OF INSPECTION, MAINTENANCE AND REPAIRS REQUIRED FOR THE CONTROL AND ABATEMENT OF EROSION AND WATER POLLUTION SHALL BE INCLUDED IN THE INDIVIDUAL COSTS OF THE EROSION CONTROL DEVICES.

(c) THE CONTRACTOR SHALL USE THE MOST CURRENT CONSTRUCTION INSPECTION REPORT (NO. 680-040-03, DATED 2-2009 OR AS UPDATED), FOR DAILY INSPECTIONS.

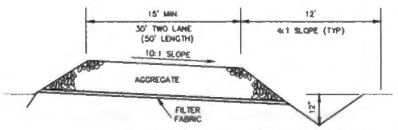




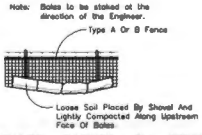
BARRIERS FOR FILL SLOPES



PROTECTION AROUND INLETS OR SIMILAR STRUCTURES



SOIL TRACKING PREVENTION DEVICE



BALES BACKED BY FENCE

NOTES

1. ON SITE CONCRETE WASHOUT AREA SHALL BE PROVIDED AND USED FOR ALL TRUCK WASHOUTS FOR THE PROJECT.
2. SPILL KIT MUST BE PROVIDED ON SITE DURING ENTIRE DURATION OF PROJECT OR UNTIL REMOVAL IS APPROVED BY CITY. SPILL KIT MUST BE APPROPRIATE FOR SCOPE OF WORK AND EQUIPMENT ONSITE.

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111-304-28

REVISIONS						
Date	By	Description	Date	By	Description	

	Names	Dates
Drawn by	IK	05/20
Checked by	DWG	05/20
Designed by	IK	05/20
Checked by	JWR	05/20
Approved by	JOSEPH W. ROLES, JR. P.E.	

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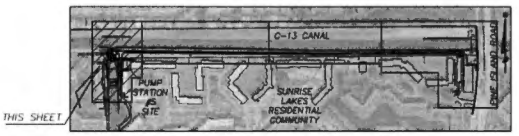
Engineer of Record: JOSEPH W. ROLES, JR. P.E. PE NO. 16985

PREPARED FOR: CITY OF SUNRISE FLORIDA

STORM WATER PUMP STATION #5
PUMP STATION REPLACEMENT

POLLUTION PREVENTION DETAILS AND NOTES

SHEET NO. C-08

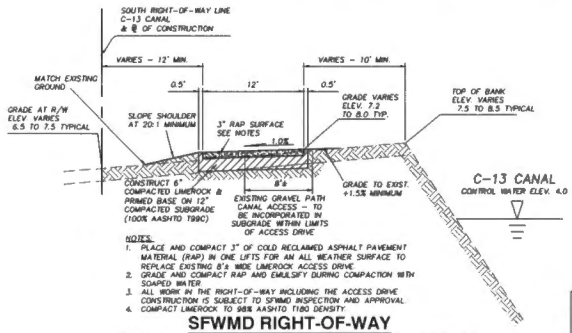


KEY MAP – SHEET LOCATION

N

30'

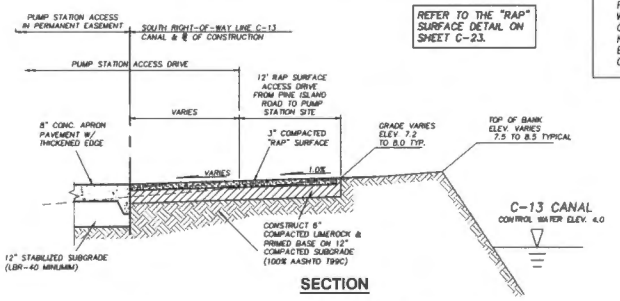
GRAPHIC SCALE



NOTES:
1. PLACE AND COMPACT 3" OF COLD RECLAIMED ASPHALT PAVEMENT MATERIAL (RAP) IN ONE LIFTS FOR AN ALL WEATHER SURFACE TO REPLACE EXISTING 8'± WIDE LIMEROCK ACCESS DRIVE.
2. GRADE AND COMPACT RAP AND EMULSIFY DURING COMPACTION WITH SOAPED WATER.
3. ALL WORK IN THE RIGHT-OF-WAY INCLUDING THE ACCESS DRIVE CONSTRUCTION IS SUBJECT TO SFWMD INSPECTION AND APPROVAL.
4. COMPACT LIMEROCK TO 98% AASHTO T180 DENSITY.

SFWMD RIGHT-OF-WAY CITY PUMP STATION/ CANAL ACCESS DRIVE TYPICAL SECTION A-A

N.T.S.



REFER TO THE "RAP" SURFACE DETAIL ON SHEET C-23.

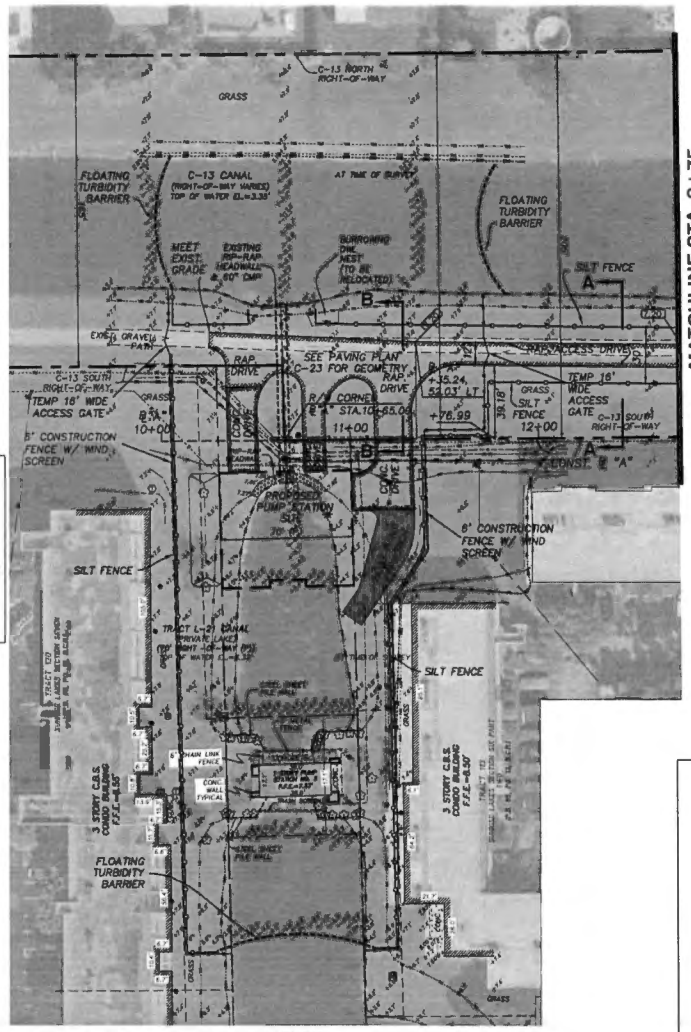
SECTION

SFWMD RIGHT-OF-WAY & PUMP STATION SITE ACCESS AREA DETAILS & TYPICAL SECTION B-B

N.T.S.

NOTES:
1. RAP SURFACED DRIVE WILL REPLACE THE EXISTING 8'± ROCK ROAD AND PROVIDE AN ALL WEATHER DUST FREE SURFACE.
2. ALL WORK IN THE SFWMD RIGHT-OF-WAY INCLUDING THE ACCESS STABILIZATION CONSTRUCTION IS SUBJECT TO SFWMD INSPECTION AND APPROVAL.
3. IRRIGATION HEADS FOR THE PUMP STATION ACCESS AREA SHALL BE INSTALLED OUTSIDE THE SFWMD R/W.
4. PROVIDE UTILITY AND IRRIGATION SLEEVES PER THE PLAN LOCATIONS.
5. CONCRETE DRIVE PAVEMENT DOES NOT EXTEND INTO THE RIGHT-OF-WAY.
6. ⚠1 ALL EXCAVATION AND BACKFILLING WITHIN THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT RIGHT-OF-WAY SHALL BE IN COMPLIANCE WITH THE DISTRICT STANDARD SPECIFICATIONS, SECTION 02220, "EXCAVATION AND BACKFILLING". A COPY OF THE DISTRICT SPECIFICATION IS INCLUDED IN THE CONTRACT DOCUMENTS FOR REFERENCE.
7. COMPACT LIMEROCK TO 98% AASHTO T180 DENSITY.

NOTE:
1. SEE PAVING PLAN SHEET C-23 FOR PUMP STATION ACCESS DRIVEWAYS GRADING AND GEOMETRY.
2. BURROWING OWL NESTS (A PROTECTED SPECIES) ARE LOCATED IN THE C-13 CANAL RIGHT-OF-WAY. KNOWN NEST SITES ARE MARK. CONTRACTOR TO USE CAUTION AND FOLLOW ALL REGULATIONS REGARDING WORKING IN THE VICINITY OF ACTIVE OWL NEST. RELOCATION OF SOME NESTS BY QUALIFIED PERSONEL MAY BE NECESSARY FOR NEST FOUND IN CONFLICT WITH THE CONSTRUCTION.



PLAN

111-504-28

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REVISIONS					
Date	By	Description	Date	By	Description
06/28/2021	JMR	⚠1 ADDED NOTE #6 SFWMD FOR EXCAVATION AND BACKFILLING WITHIN THE SFWMD ROW			

	Names	Dates
Drawn by	HK	05/20
Checked by	DWG	05/20
Designed by	JMR	05/20
Checked by	JMR	05/20
Approved by	JOSEPH W. ROLES, JR. P.E.	

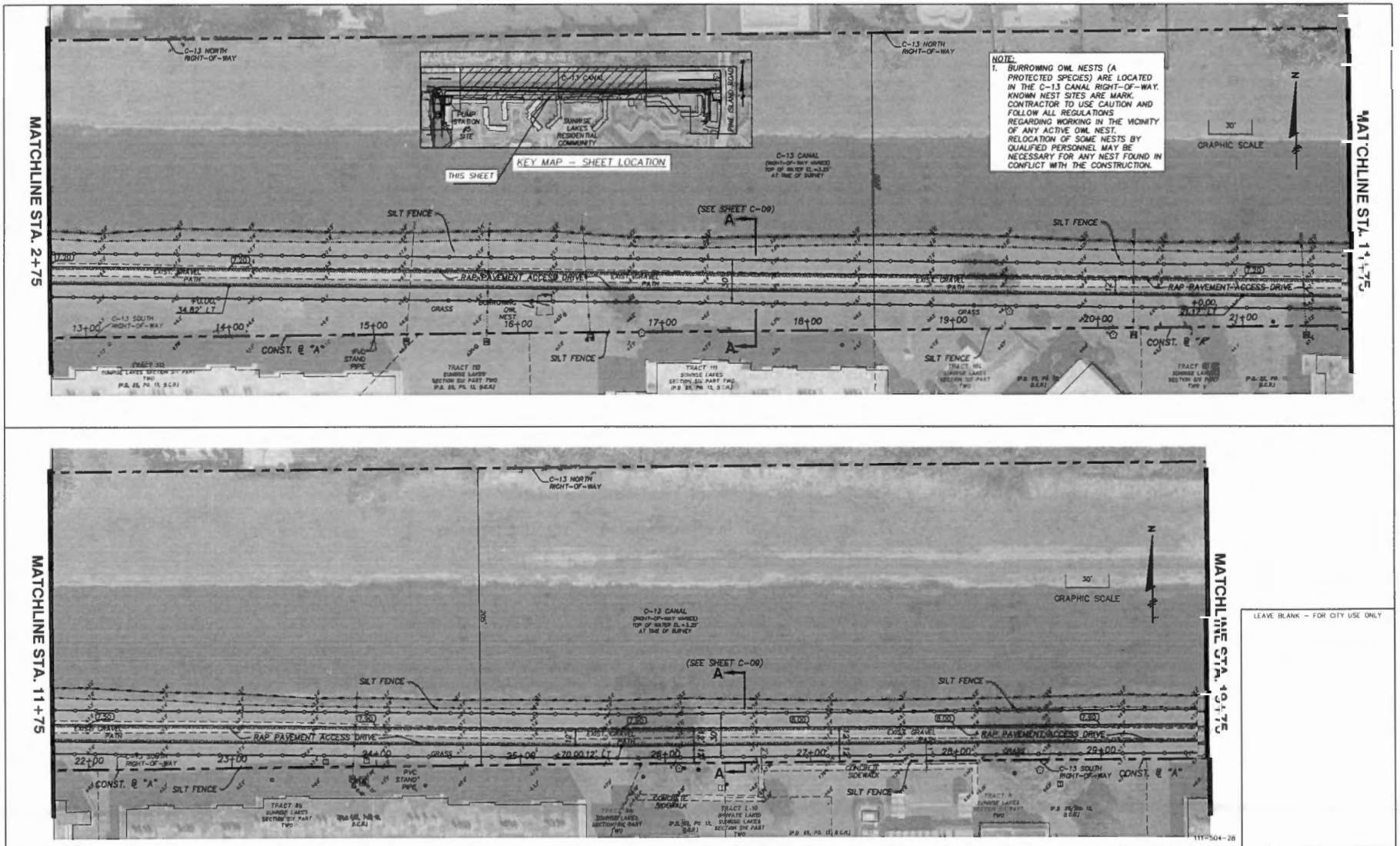
JOSEPH ROLES AND ASSOC., INC.
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CERTIFICATE OF AUTHORIZATION NO. 6945
Engineer of Record: JOSEPH W. ROLES, JR. P.E. PE NO. 16965

PREPARED FOR: CITY OF SUNRISE FLORIDA

STORM WATER PUMP STATION #5
PUMP STATION REPLACEMENT

ACCESS DRIVE PLAN

SHEET NO. C-09



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REVISIONS					
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	Names	Dates
Drawn by	IK	05/20
Checked by	DWG	05/20
Designed by	JWR	05/20
Checked by	JWR	05/20
Approved by	JOSEPH W. ROLES, JR. P.E.	

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7501 N.E. 4th STREET, SUITE 104
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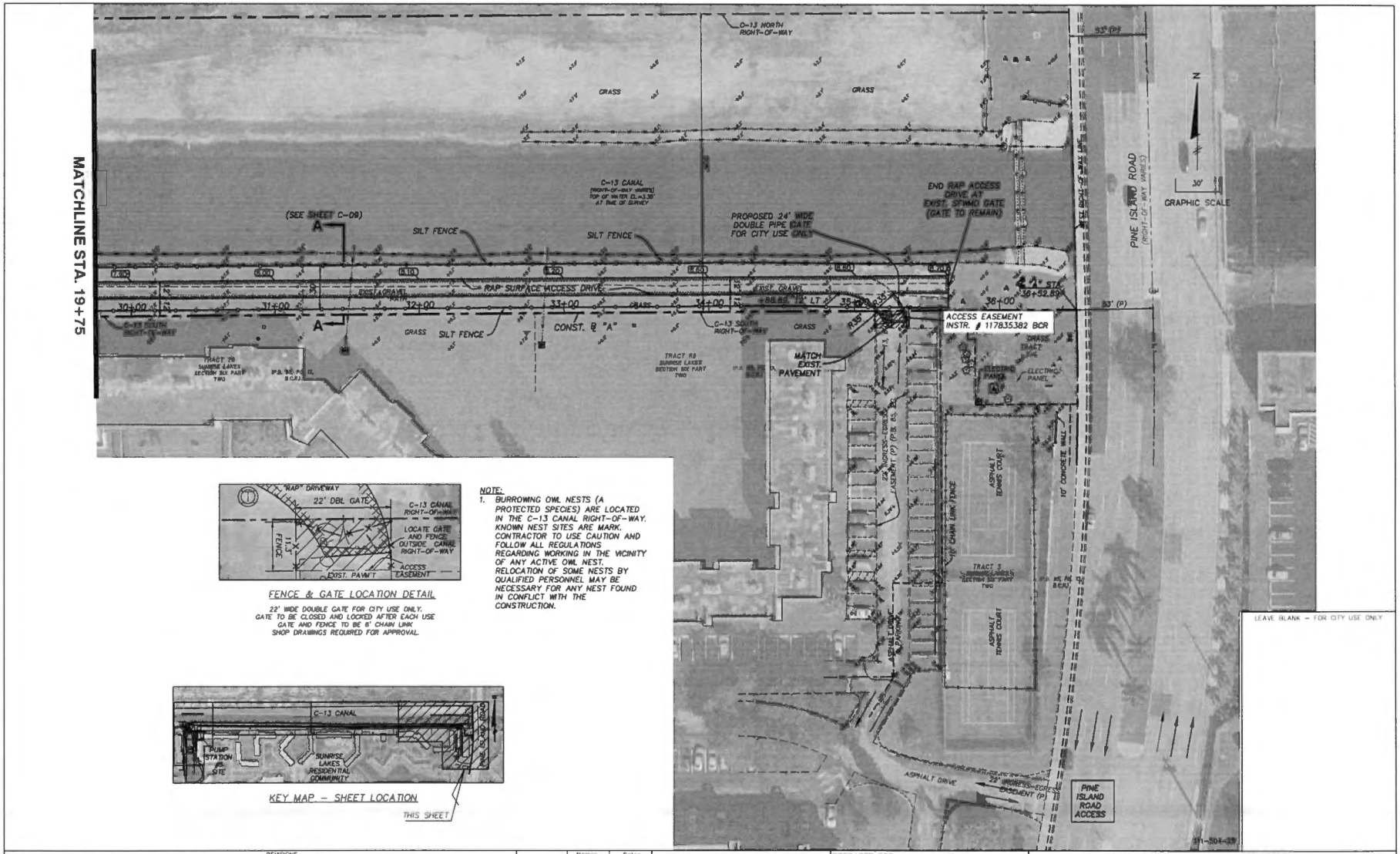
Engineer of Record JOSEPH W. ROLES, JR. P.E. PE NO. 18965

PREPARED FOR: CITY OF SUNRISE FLORIDA

STORM WATER PUMP STATION #5
PUMP STATION REPLACEMENT

ACCESS DRIVE PLAN

SHEET NO C-10



REVISIONS					
Date	By	Description	Date	By	Description

	Names	Dates
Drawn by	IK	05/20
Checked by	DWG	05/20
Designed by	JWR	05/20
Checked by	JWR	05/20
Approved by	JOSEPH W. ROLES, JR. P.E.	

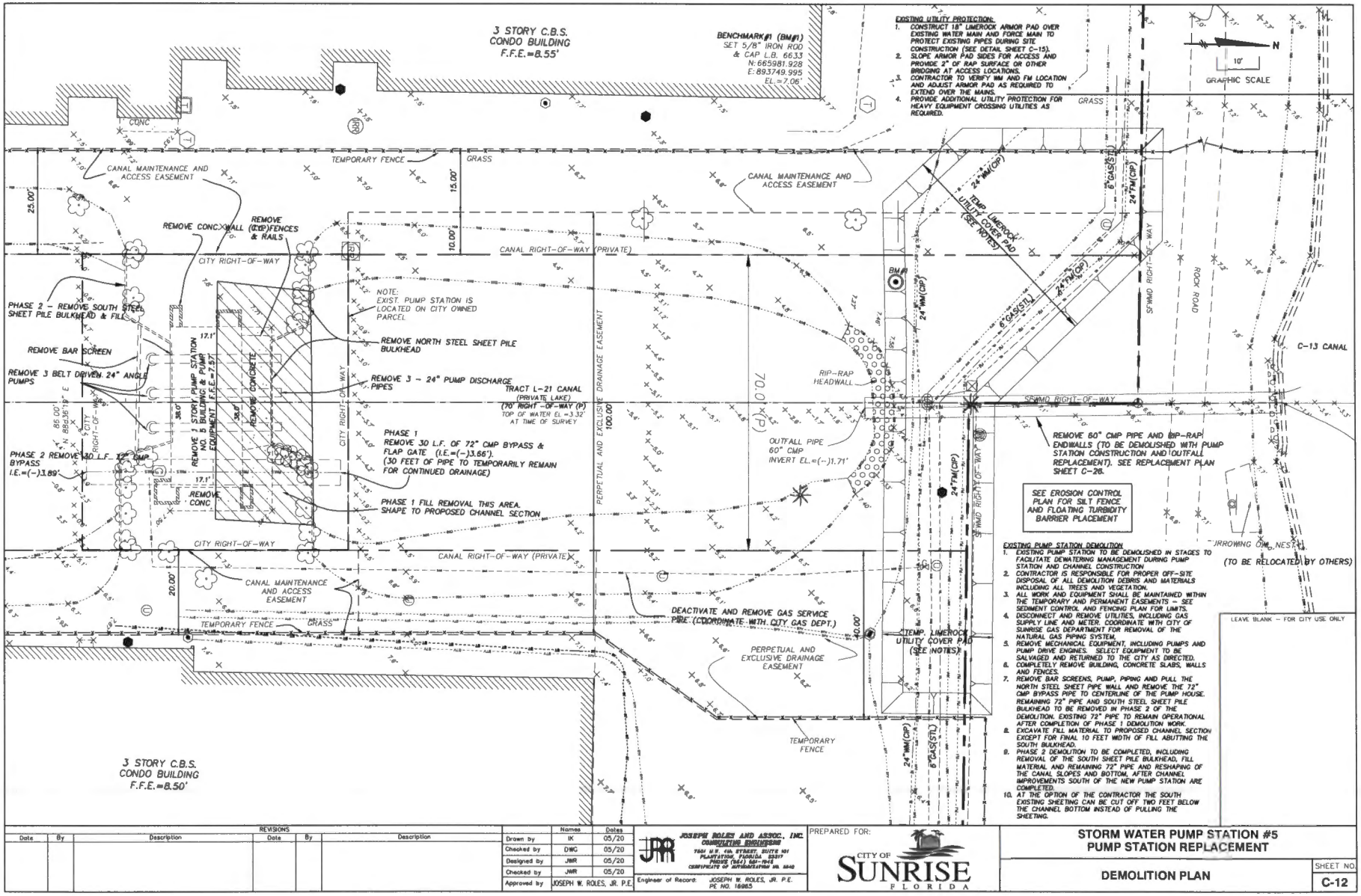
JOSEPH ROLES AND ASSOC., INC.
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PLANTATION, FLORIDA 33317
PHONE (954) 587-1945
CERTIFICATE OF AUTHORIZATION NO. 6940
Engineer of Record: JOSEPH W. ROLES, JR. P.E. PE NO. 16965

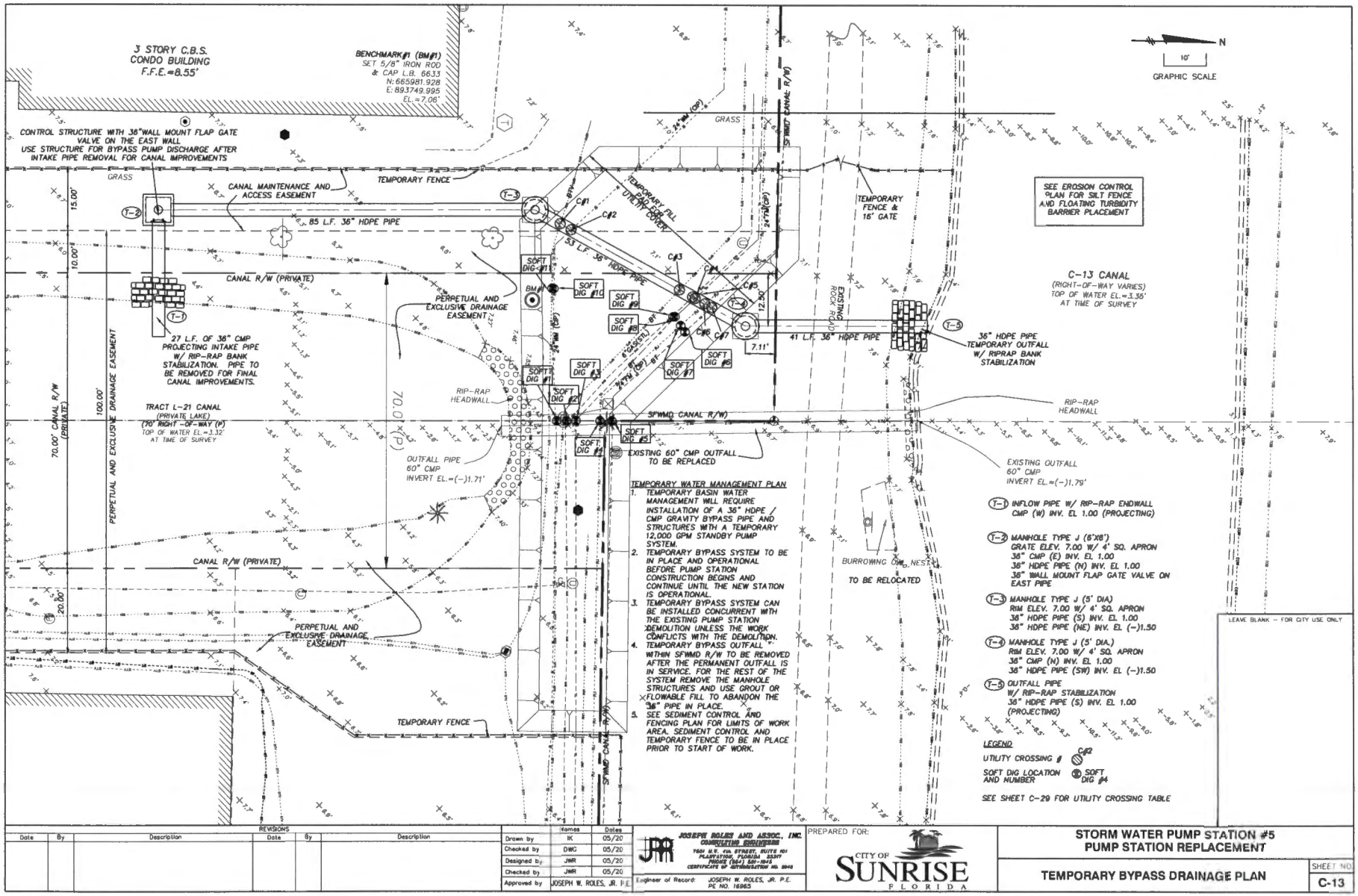
PREPARED FOR: CITY OF SUNRISE FLORIDA

STORM WATER PUMP STATION #5
PUMP STATION REPLACEMENT

ACCESS DRIVE PLAN

SHEET NO.: C-11


3 STORY C.B.S.
CONDO BUILDING
F.F.E.=8.55'
BENCHMARK #1 (BM#1)
SET 5/8" IRON ROD
& CAP. L.B. 6633
N: 665981.928
E: 891749.995
EL.=7.06'
EXISTING UTILITY PROTECTION:
1. CONSTRUCT 18" LIMEROCK ARMOR PAD OVER EXISTING WATER MAIN AND FORCE MAIN TO PROTECT EXISTING PIPES DURING SITE CONSTRUCTION (SEE DETAIL SHEET C-15).
2. SLOPE ARMOR PAD SIDES FOR ACCESS AND PROVIDE 2" OF RAP SURFACE OR OTHER BRIDGING AT ACCESS LOCATIONS. CONTRACTOR TO VERIFY WM AND FM LOCATION AND ADJUST ARMOR PAD AS REQUIRED TO EXTEND OVER THE MAINS.
3. PROVIDE ADDITIONAL UTILITY PROTECTION FOR HEAVY EQUIPMENT CROSSING UTILITIES AS REQUIRED.
GRAPHIC SCALE
CANAL MAINTENANCE AND ACCESS EASEMENT
TEMPORARY FENCE
GRASS
REMOVE CONC. WALL
REMOVE (CYP) FENCES & RAILS
CITY RIGHT-OF-WAY
CANAL RIGHT-OF-WAY (PRIVATE)
PHASE 2 - REMOVE SOUTH STEEL SHEET PILE BULKHEAD & FILL
REMOVE BAR SCREEN
REMOVE 3 BELT DRIVEN 24" ANGLE PUMPS
PHASE 2 REMOVE 30 L.F. 72" CMP BYPASS I.E.=(-)3.89'
REMOVE 1 STORY PUMP STATION NO. 5 BUILDING & PUMP EQUIPMENT F.F.E.=7.57'
REMOVE CONCRETE
REMOVE CONC.
NOTE: EXIST. PUMP STATION IS LOCATED ON CITY OWNED PARCEL
REMOVE NORTH STEEL SHEET PILE BULKHEAD
REMOVE 3 - 24" PUMP DISCHARGE PIPES
TRACT L-21 CANAL (PRIVATE LAKE) (70' RIGHT-OF-WAY (P)) TOP OF WATER EL.=3.32' AT TIME OF SURVEY
PHASE 1 REMOVE 30 L.F. OF 72" CMP BYPASS & FLAP GATE (I.E.=(-)3.66'). (30 FEET OF PIPE TO TEMPORARILY REMAIN FOR CONTINUED DRAINAGE)
PHASE 1 FILL REMOVAL THIS AREA. SHAPE TO PROPOSED CHANNEL SECTION
PERPETUAL AND EXCLUSIVE DRAINAGE EASEMENT
70.0' (P)
100.00'
RIP-RAP HEADWALL
OUTFALL PIPE 60" CMP INVERT EL.=(-)1.71'
TEMP. LIMEROCK UTILITY COVER PAD (SEE NOTES)
24"HM(CIP)
6"GAS(STL)
SFWMD RIGHT-OF-WAY
ROCK ROAD
C-13 CANAL
REMOVE 60" CMP PIPE AND RIP-RAP ENDWALLS (TO BE DEMOLISHED WITH PUMP STATION CONSTRUCTION AND OUTFALL REPLACEMENT). SEE REPLACEMENT PLAN SHEET C-26.
SEE EROSION CONTROL PLAN FOR SILT FENCE AND FLOATING TURBIDITY BARRIER PLACEMENT
BURROWING OWL NESTING (TO BE RELOCATED BY OTHERS)
DEACTIVATE AND REMOVE GAS SERVICE PIPE (COORDINATE WITH CITY GAS DEPT.)
PERPETUAL AND EXCLUSIVE DRAINAGE EASEMENT
3 STORY C.B.S.
CONDO BUILDING
F.F.E.=8.50'
EXISTING PUMP STATION DEMOLITION
1. EXISTING PUMP STATION TO BE DEMOLISHED IN STAGES TO FACILITATE DEWATERING MANAGEMENT DURING PUMP STATION AND CHANNEL CONSTRUCTION
2. CONTRACTOR IS RESPONSIBLE FOR PROPER OFF-SITE DISPOSAL OF ALL DEMOLITION DEBRIS AND MATERIALS INCLUDING ALL TREES AND VEGETATION.
3. ALL WORK AND EQUIPMENT SHALL BE MAINTAINED WITHIN THE TEMPORARY AND PERMANENT EASEMENTS - SEE SEDIMENT CONTROL AND FENCING PLAN FOR LIMITS.
4. DISCONNECT AND REMOVE UTILITIES, INCLUDING GAS SUPPLY LINE AND METER. COORDINATE WITH CITY OF SUNRISE GAS DEPARTMENT FOR REMOVAL OF THE NATURAL GAS PIPING SYSTEM.
5. REMOVE MECHANICAL EQUIPMENT, INCLUDING PUMPS AND PUMP DRIVE ENGINES. SELECT EQUIPMENT TO BE SALVAGED AND RETURNED TO THE CITY AS DIRECTED.
6. COMPLETELY REMOVE BUILDING, CONCRETE SLABS, WALLS AND FENCES.
7. REMOVE BAR SCREENS, PUMP, PIPING AND PULL THE NORTH STEEL SHEET PIPE WALL AND REMOVE THE 72" CMP BYPASS PIPE TO CENTERLINE OF THE PUMP HOUSE. REMAINING 72" PIPE AND SOUTH STEEL SHEET PILE BULKHEAD TO BE REMOVED IN PHASE 2 OF THE DEMOLITION. EXISTING 72" PIPE TO REMAIN OPERATIONAL AFTER COMPLETION OF PHASE 1 DEMOLITION WORK.
8. EXCAVATE FILL MATERIAL TO PROPOSED CHANNEL SECTION EXCEPT FOR FINAL 10 FEET WIDTH OF FILL ABUTTING THE SOUTH BULKHEAD.
9. PHASE 2 DEMOLITION TO BE COMPLETED, INCLUDING REMOVAL OF THE SOUTH SHEET PILE BULKHEAD, FILL MATERIAL AND REMAINING 72" PIPE AND RESHAPING OF THE CANAL SLOPES AND BOTTOM, AFTER CHANNEL IMPROVEMENTS SOUTH OF THE NEW PUMP STATION ARE COMPLETED.
10. AT THE OPTION OF THE CONTRACTOR THE SOUTH EXISTING SHEETING CAN BE CUT OFF TWO FEET BELOW THE CHANNEL BOTTOM INSTEAD OF PULLING THE SHEETING.
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Date | By | Description | Date | By | Description
Drawn by IK 05/20
Checked by DWG 05/20
Designed by JMR 05/20
Checked by JMR 05/20
Approved by JOSEPH W. ROLES, JR. P.E. 05/20
JOSEPH ROLES AND ASSOC., INC. CONSULTING ENGINEERS
7551 W.S. 4th STREET, SUITE 101 PLANTATION, FLORIDA 33317 PHONE (954) 581-1948 CERTIFICATE OF AUTHORIZATION NO. 6640
Engineer of Record: JOSEPH W. ROLES, JR. P.E. PE NO. 16965
PREPARED FOR: CITY OF SUNRISE FLORIDA
STORM WATER PUMP STATION #5
PUMP STATION REPLACEMENT
DEMOLITION PLAN
SHEET NO. C-12



REVISIONS					
Date	By	Description	Date	By	Description

	Names	Dates
Drawn by	IK	05/20
Checked by	DWG	05/20
Designed by	JWR	05/20
Checked by	JWR	05/20
Approved by	JOSEPH W. ROLES, JR. P.E.	

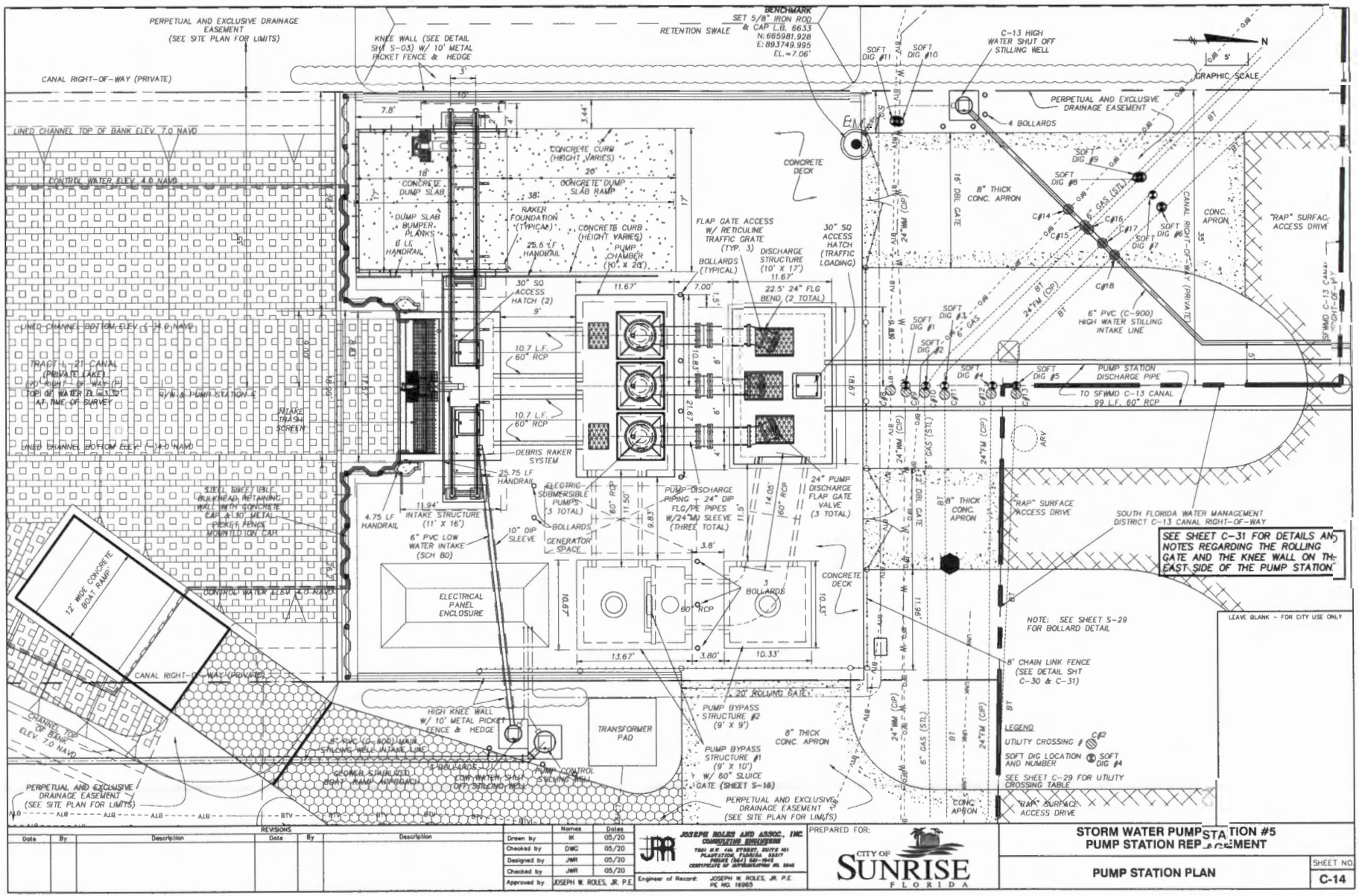
JOSEPH ROLES AND ASSOC., INC. CONSULTING ENGINEERS
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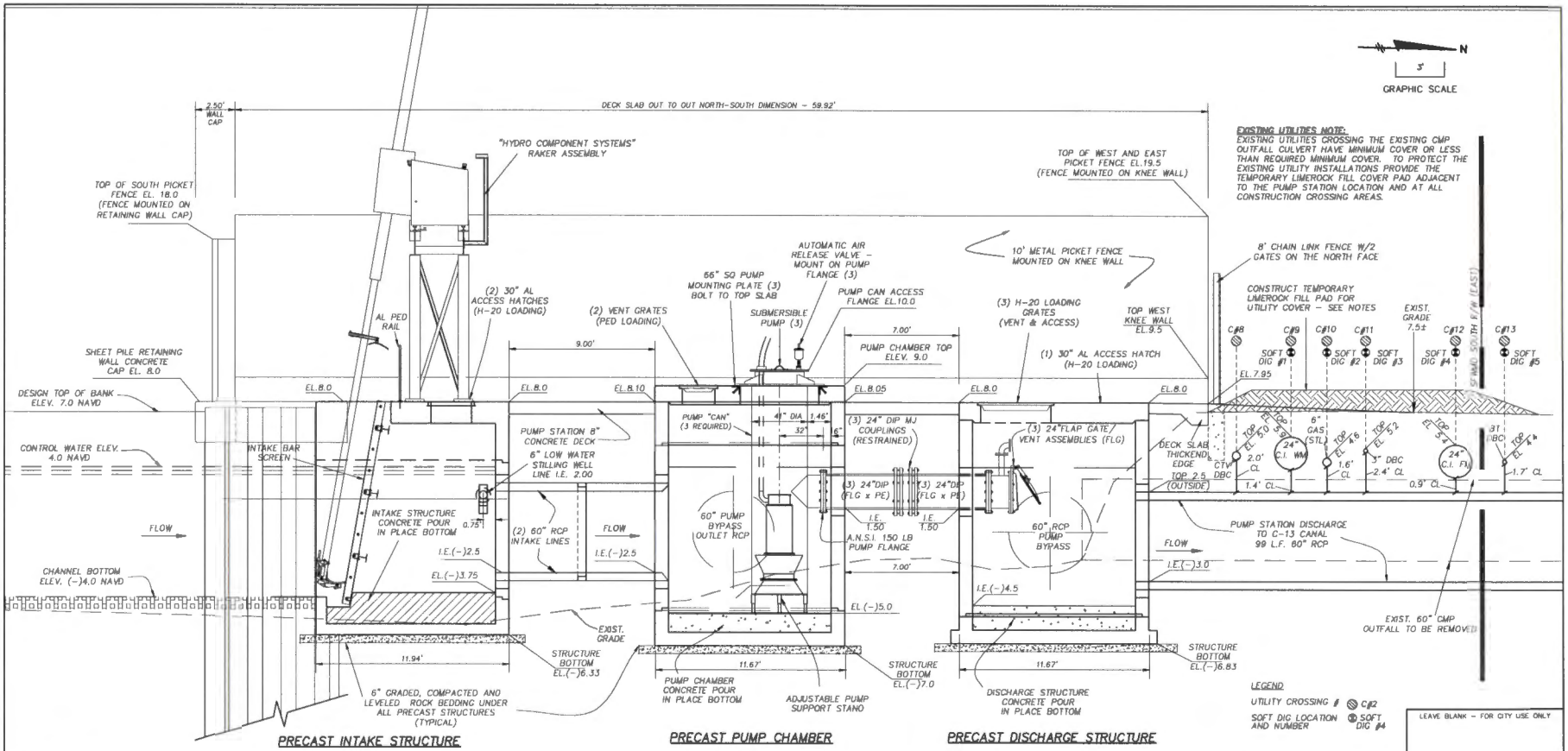
PREPARED FOR: CITY OF SUNRISE FLORIDA

STORM WATER PUMP STATION #5 PUMP STATION REPLACEMENT

TEMPORARY BYPASS DRAINAGE PLAN

SHEET NO. C-13


PERPETUAL AND EXCLUSIVE DRAINAGE EASEMENT (SEE SITE PLAN FOR LIMITS)
KNEE WALL (SEE DETAIL SHT S-03) W/ 10' METAL PICKET FENCE & HEDGE
BENCHMARK SET 5/8" IRON ROD & CAP L.B. 6633 N: 665981.928 E: 893749.995 EL.=7.06'
RETENTION SWALE
C-13 HIGH WATER SHUT OFF STILLING WELL
GRAPHIC SCALE
CANAL RIGHT-OF-WAY (PRIVATE)
LINED CHANNEL TOP OF BANK ELEV. 7.0 NAVD
CONTROL WATER ELEV. 4.6 NAVD
CONCRETE CURB (HEIGHT VARIES)
CONCRETE DUMP SLAB
CONCRETE DUMP SLAB RAMP
DUMP SLAB BUMPER PLANKS
6' LG HANDRAIL
RAKER FOUNDATION (TYPICAL)
CONCRETE CURB (HEIGHT VARIES)
25.6 L.F. HANDRAIL
PUMP CHAMBER (10' x 20')
CONCRETE DECK
FLAP GATE ACCESS W/ RETICULINE TRAFFIC GRATE (TYP. 3)
DISCHARGE STRUCTURE (10' X 17') 11.67'
30" SQ ACCESS HATCH (TRAFFIC LOADING)
BOLLARDS (TYPICAL)
30" SQ ACCESS HATCH (2) 9'
22.5° 24" FLG BEND (2 TOTAL)
10.7 L.F. 60" RCP
DEBRIS RAKER SYSTEM
25.75 LF HANDRAIL
TRACT L-21 CANAL (PRIVATE LAKE)
20' RIGHT-OF-WAY (R)
TOP OF WATER EL=3.32' AT TIME OF SURVEY
R/W & PUMP STATION 4
INLAKE TRASH SCREEN
LINED CHANNEL BOTTOM ELEV. (-)4.0 NAVD
STEEL SHEET PILE BULKHEAD RETAINING WALL WITH CONCRETE CAP & 30" METAL PICKET FENCE MOUNTED ON CAP
4.75 LF HANDRAIL
11.94' INTAKE STRUCTURE (11' x 16')
6" PVC LOW WATER INTAKE (SCH 80)
10" DIP SLEEVE
ELECTRIC SUBMERSIBLE PUMPS (3 TOTAL)
PUMP DISCHARGE PIPING 24" DIP FLG/PE PIPES W/24" DIP SLEEVE (THREE TOTAL)
24" PUMP DISCHARGE FLAP GATE VALVE (3 TOTAL)
BOLLARDS
GENERATOR SPACE
ELECTRICAL PANEL ENCLOSURE
12' WIDE CONCRETE BOAT RAMP
CONTROL WATER ELEV. 4.0 NAVD
CANAL RIGHT-OF-WAY (PRIVATE)
CHANNEL TOP OF BANK ELEV. 7.0 NAVD
HIGH KNEE WALL W/ 10' METAL PICKET FENCE & HEDGE
8" PVC (C-900) MAIN STILLING WELL INTAKE LINE
POWER SUBMERGED BOAT RAMP APPARATUS
5 BOLLARDS
LOW WATER SHUT OFF STILLING WELL
PUMP CONTROL STILLING WELL
TRANSFORMER PAD
PERPETUAL AND EXCLUSIVE DRAINAGE EASEMENT (SEE SITE PLAN FOR LIMITS)
PUMP BYPASS STRUCTURE #2 (9' x 9')
PUMP BYPASS STRUCTURE #1 (9' x 10') W/ 60" SLUICE GATE (SHEET S-16)
20' ROLLING GATE
8" THICK CONC. APRON
CONC. APRON
4 BOLLARDS
8" THICK CONC. APRON
"RAP" SURFACE ACCESS DRIVE
SOUTH FLORIDA WATER MANAGEMENT DISTRICT C-13 CANAL RIGHT-OF-WAY
SEE SHEET C-31 FOR DETAILS AND NOTES REGARDING THE ROLLING GATE AND THE KNEE WALL ON THE EAST SIDE OF THE PUMP STATION
6" PVC (C-900) HIGH WATER STILLING INTAKE LINE
PUMP STATION DISCHARGE PIPE
TO SFWMD C-13 CANAL 99 L.F. 60" RCP
NOTE: SEE SHEET S-29 FOR BOLLARD DETAIL
8' CHAIN LINK FENCE (SEE DETAIL SHT C-30 & C-31)
LEGEND
UTILITY CROSSING #
SOFT DIG LOCATION AND NUMBER
SEE SHEET C-29 FOR UTILITY CROSSING TABLE
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Date | By | Description
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Checked by DWG 05/20
Designed by JWR 05/20
Checked by JWR 05/20
Approved by JOSEPH W. ROLES, JR. P.E.
JOSEPH ROLES AND ASSOC., INC. CONSULTING ENGINEERS
Engineer of Record: JOSEPH W. ROLES, JR. P.E. PE NO. 16965
PREPARED FOR: CITY OF SUNRISE FLORIDA
STORM WATER PUMP STATION #5 PUMP STATION REPLACEMENT
PUMP STATION PLAN
SHEET NO. C-14



PRECAST INTAKE STRUCTURE

PRECAST PUMP CHAMBER

SUBMERSIBLE PUMP SPECIFICATION
"MWI" MODEL SEA24 PUMP
W/ 50 HP 480V 3ϕ ELECTRIC MOTOR
(THREE (3) REQUIRED)
PUMP CAN DIAMETER - 41"
SUMP ELEVATION = (-)5.00
PUMPS OFF ELEVATION = +4.00
(CANAL CONTROL WATER ELEVATION = +4.00)

PRECAST DISCHARGE STRUCTURE

PUMP STATION OPERATING ELEVATION TABLE	
LEAD PUMP ON	+4.50 NAVD
LAG PUMP ON	+4.85 NAVD
ALL PUMPS OFF	+4.00 NAVD
C-13 HIGH WATER OFF	+7.00 NAVD
INTAKE STRUCTURE LOW WATER OFF	+2.50 NAVD

PRECAST UNIT NOTES:
1. ALL MAIN STRUCTURES ARE DESIGNED TO BE FABRICATED AS PRE-CAST AND SHOULD BE INSTALLED IN A DRY, DEWATERED CONDITION.
2. CONTRACTOR WILL BE RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF A SHEET PILE COFFER DAM TO MANAGE THE DRY INSTALLATION
3. CONTRACTOR TO PROVIDE A CRANE PAD FOR THE HEAVY LIFTS NECESSARY TO SET THE PRECAST STRUCTURE SEGMENTS. CRANE PAD SHOULD BE PLACED ON THE EAST SIDE OF THE PUMP STATION TO AVOID EXISTING UNDERGROUND UTILITIES AND DRAINAGE PIPES. CONTRACTOR MAY PROVIDE AN ALTERNATE LOCATION FOR APPROVAL.
4. EXISTING SHALLOW UTILITIES WILL REQUIRE SUPPLEMENTAL BRIDGING FOR HEAVY EQUIPMENT ACCESS IN ADDITION TO THE TEMPORARY LIMEROCK COVER PAD. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITIES FROM ALL HEAVY EQUIPMENT ACCESSING THE SITE, INCLUDING EXCAVATORS, DUMP TRUCKS, CRANES, PRECAST TRANSPORT VEHICLE AND ANY OTHER POTENTIAL HEAVY LOADS.
5. ALL PRECAST STRUCTURES ARE TO BE PLACED ON A GRADED, COMPACTED AND LEVELED GRAVEL BEDDING.
6. ALL STRUCTURES ARE TO BE INSTALLED PLUMB AND LEVEL. BOTTOM SECTION OF EACH STRUCTURE MUST BE SURVEYED TO VERIFY THE HORIZONTAL AND VERTICAL ALIGNMENT AND APPROVED BY THE ENGINEER PRIOR TO PLACEMENT OF THE SUBSEQUENT SECTIONS
7. PRECASTER IS RESPONSIBLE TO MATCH CAST THE SECTIONS OF EACH STRUCTURE FOR PROPER FIELD FIT. SECTION THAT DO PROPERLY MATCH WILL BE REJECTED.
8. MASTIC SEALANT ("RAM-NEK" OR EQUAL) SHALL BE PLACED IN THE KEYED SHEAR JOINT BETWEEN STRUCTURE SEGMENTS.

PUMP STATION #5 REPLACEMENT - STATION PROFILE THROUGH CENTERLINE

REVISIONS						
Date	By	Description	Date	By	Description	

	Names	Dates
Drawn by	IK	05/20
Checked by	DWG	05/20
Designed by	JWR	05/20
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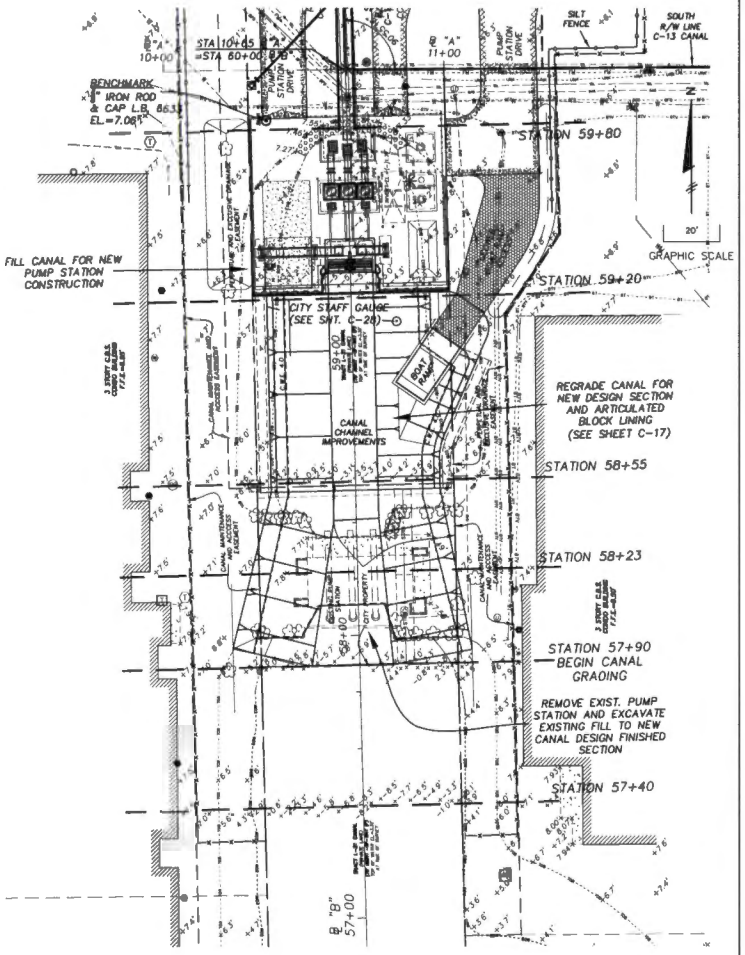
JOSEPH ROLES AND ASSOC., INC.
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PHONE (954) 581-1848
CERTIFICATE OF AUTHORIZATION NO. 5842
Engineer of Record: JOSEPH W. ROLES, JR. P.E.
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PREPARED FOR: CITY OF SUNRISE FLORIDA

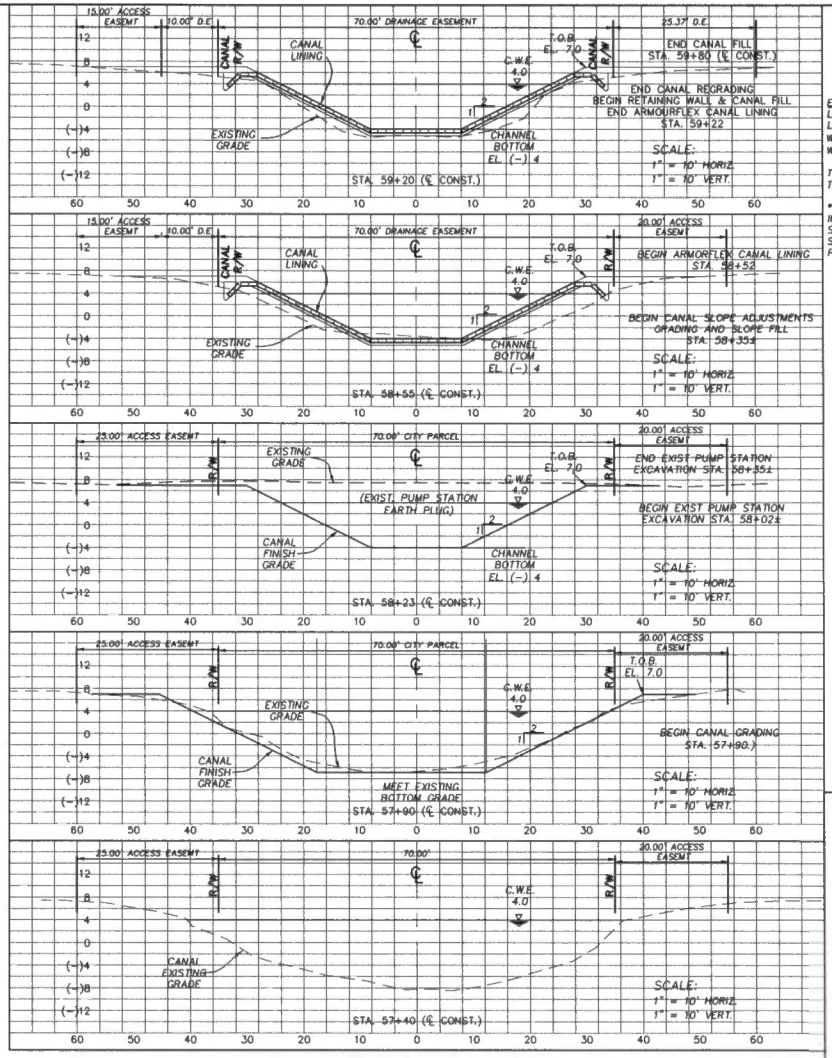
STORM WATER PUMP STATION #5
PUMP STATION REPLACEMENT

PUMP STATION PROFILE

SHEET NO. C-15



INTAKE CANAL PLAN



INTAKE CANAL CROSS SECTIONS

EARTHWORK SUMMARY

LANDWARD CUT	257 C.Y.
LANDWARD FILL	558 C.Y.
WATERWARD CUT (@ CWE)	345 C.Y.
WATERWARD FILL (@ CWE)	645 C.Y.
TOTAL CANAL CUT**	602 C.Y.
TOTAL CANAL FILL**	1,203 C.Y.

**QUANTITIES ARE GROSS IN-PLACE MEASURE WITH NO SHRINKAGE APPLIED AND WITHOUT SUBTRACTING DISPLACEMENT OF PIPE AND STRUCTURES

NOTE
SEE SHEET C-17 FOR ARTICULATED BLOCK MAT CONSTRUCTION DETAILS

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REVISIONS					
Date	By	Description	Date	By	Description

	Names	Dates
Drawn by	IK	05/20
Checked by	DWG	05/20
Designed by	JWR	05/20
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Approved by	JOSEPH W. ROLES, JR. P.E.	

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PHONE (954) 581-1945
CERTIFICATE OF AUTHORIZATION NO. 5945

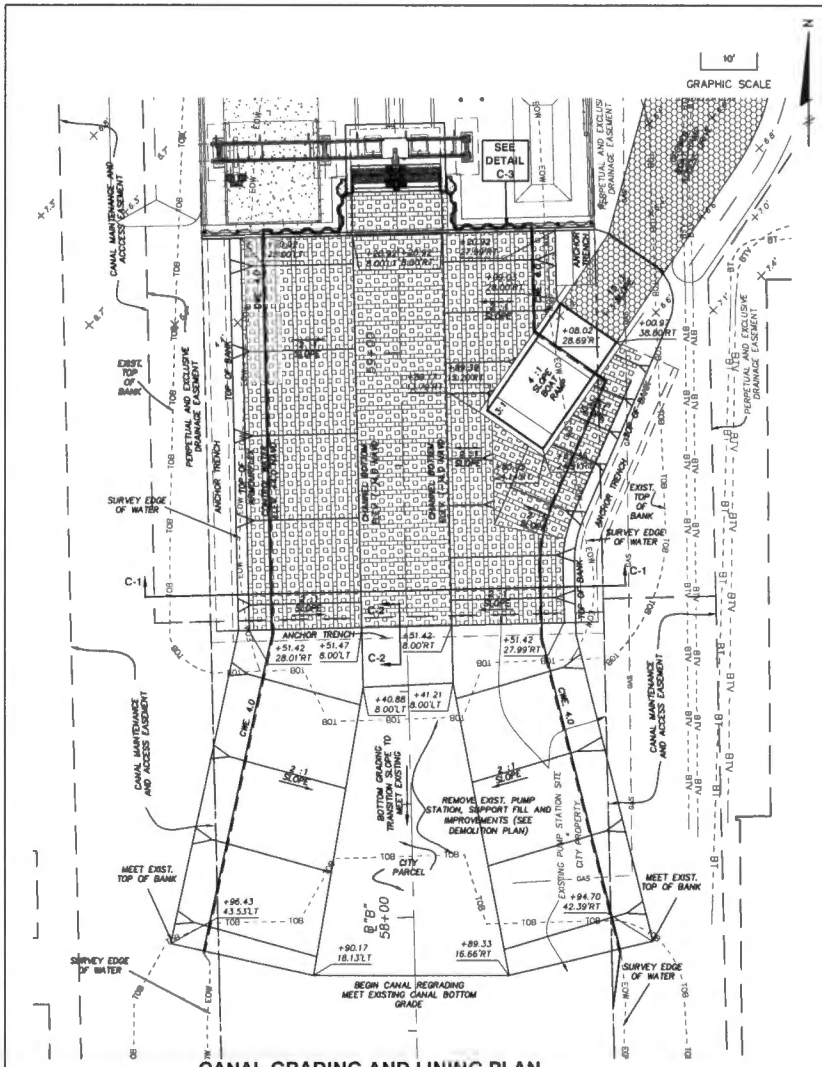
Engineer of Record: JOSEPH W. ROLES, JR. P.E. PE NO. 16965

PREPARED FOR: CITY OF SUNRISE FLORIDA

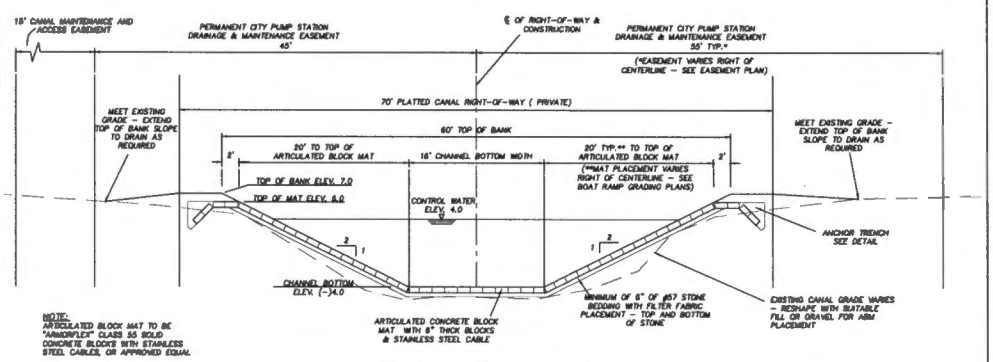
STORM WATER PUMP STATION #5
PUMP STATION REPLACEMENT

INTAKE CANAL PLAN & CROSS SECTIONS

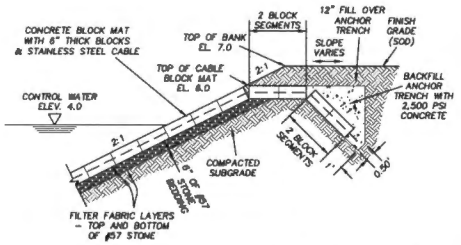
SHEET NO. C-16



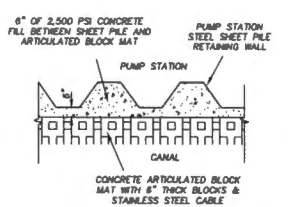
CANAL GRADING AND LINING PLAN



ARTICULATED BLOCK MAT TYPICAL SECTION / SECTION C-1
NOT TO SCALE

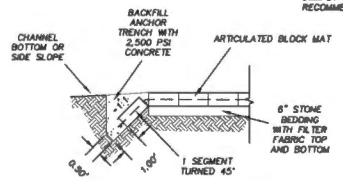


ARTICULATED BLOCK MAT AND ANCHOR TRENCH DETAIL
NOT TO SCALE

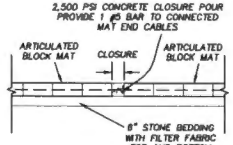


DETAIL C-3
ARTICULATED BLOCK MAT NORTH CLOSURE DETAIL AT BULKHEAD CONNECTION
NOT TO SCALE

NOTE: ALL MAT ANCHORAGES SHALL COMPLY WITH THE MANUFACTURE'S RECOMMENDATIONS



SECTION C-2
ARTICULATED BLOCK MAT ANCHOR TRENCH DETAIL AT SOUTH CHANNEL CONNECTION
NOT TO SCALE



ARTICULATED BLOCK MAT END JOINT CONNECTION DETAIL
NOT TO SCALE

CANAL LINING SECTIONS & DETAILS

111-504-28

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REVISIONS						
Date	By	Description	Date	By	Description

	Names	Dates
Drawn by	IK	05/20
Checked by	DWG	05/20
Designed by	JWR	05/20
Checked by	JWR	05/20
Approved by	JOSEPH W. ROLES, JR. P.E.	

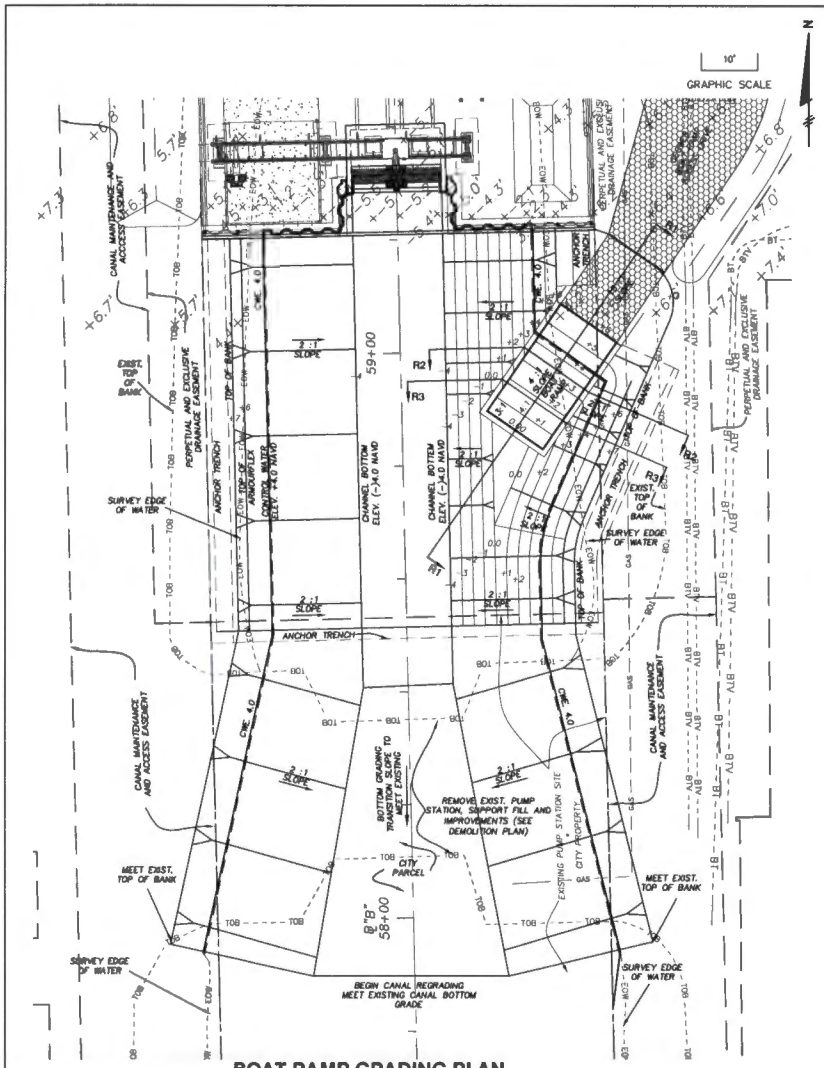
JOSEPH ROLES AND ASSOC., INC.
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PLANTATION, FLORIDA 33317
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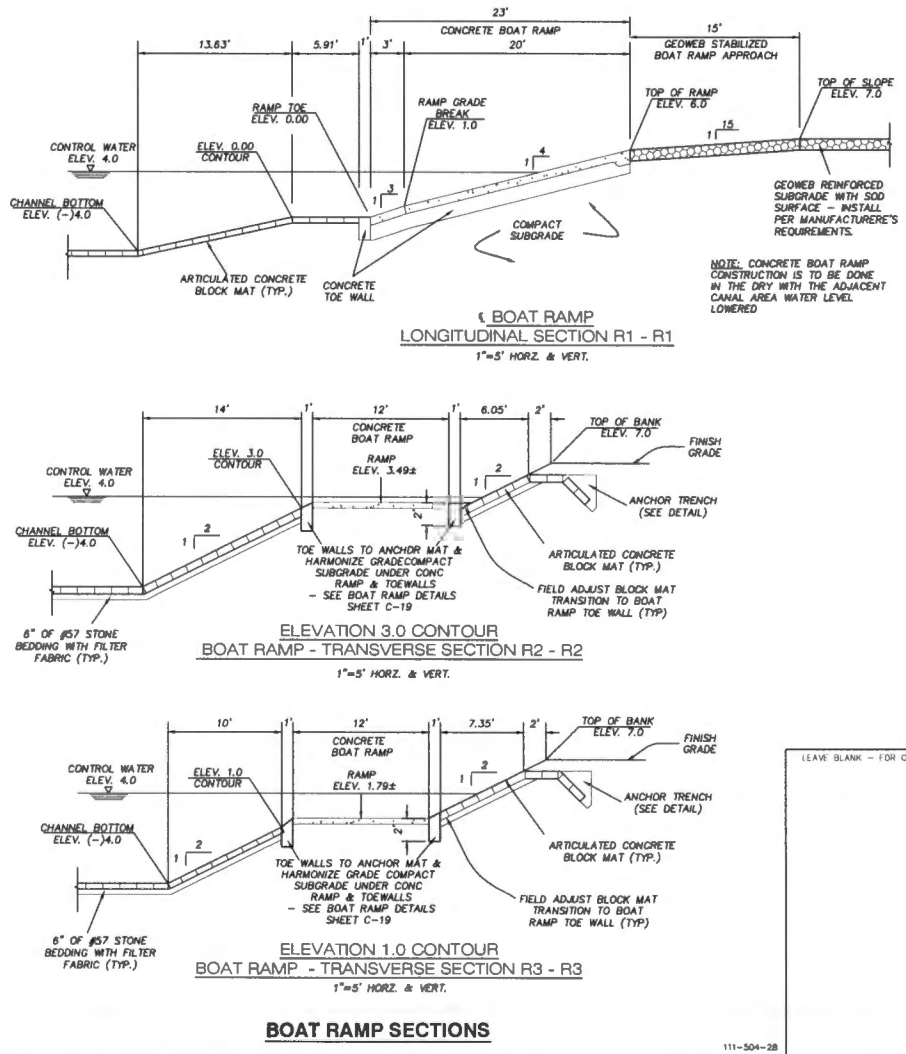
PREPARED FOR: CITY OF SUNRISE FLORIDA

STORM WATER PUMP STATION #5
PUMP STATION REPLACEMENT

INTAKE CANAL LINING PLAN & DETAILS

SHEET NO. C-17





BOAT RAMP SECTIONS

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Checked by	JWR	05/20
Approved by	JOSEPH W. ROLES, JR. P.E.	

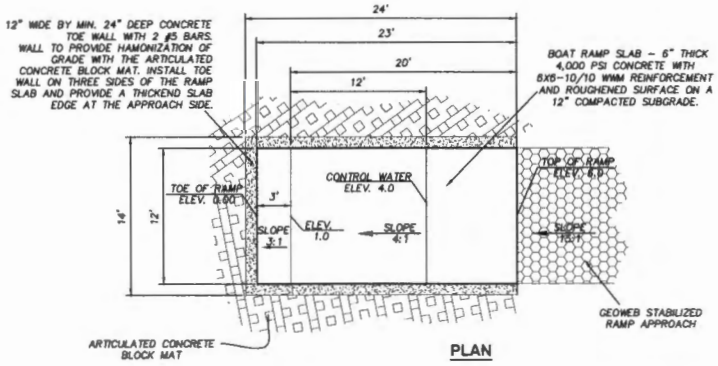
JOSEPH ROLES AND ASSOC., INC.
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PREPARED FOR: CITY OF SUNRISE FLORIDA

STORM WATER PUMP STATION #5
PUMP STATION REPLACEMENT

INTAKE CANAL BOAT RAMP GRADING AND DETAILS

SHEET NO. C-18



BOAT RAMP SLAB DETAILS

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111-304-28

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	Names	Dates
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Designed by	JWR	05/20
Checked by	JWR	05/20
Approved by	JOSEPH W. ROLES, JR. P.E.	

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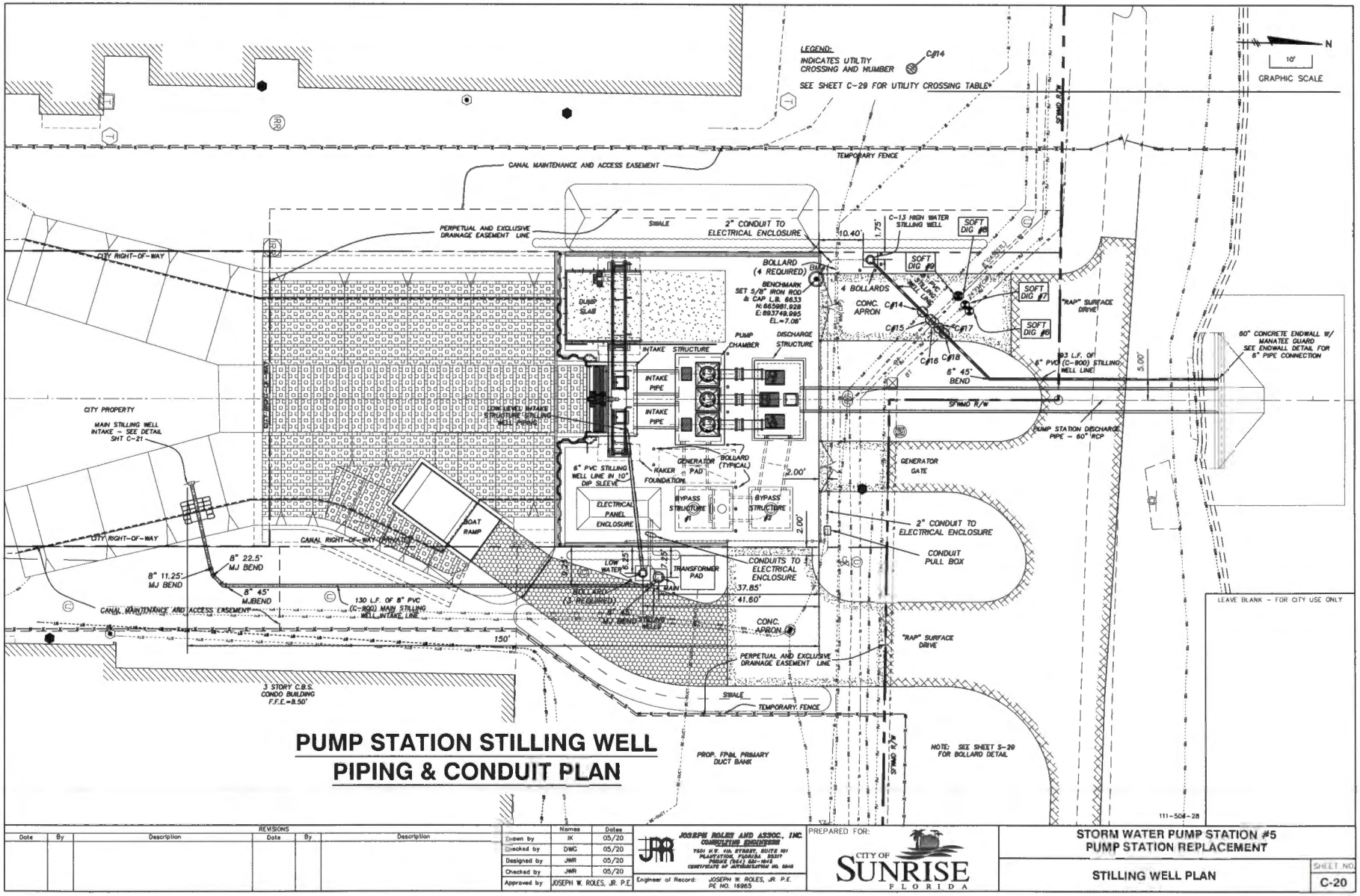
Engineer of Record: JOSEPH W. ROLES, JR. P.E. PE NO. 16965

PREPARED FOR: CITY OF SUNRISE FLORIDA

STORM WATER PUMP STATION #5
PUMP STATION REPLACEMENT

INTAKE CANAL BOAT RAMP GRADING AND DETAILS

SHEET NO. C-19



PUMP STATION STILLING WELL PIPING & CONDUIT PLAN

REVISIONS					
Date	By	Description	Date	By	Description

	Names	Dates
Drawn by	IK	05/20
Checked by	DWG	05/20
Designed by	JWR	05/20
Checked by	JWR	05/20
Approved by	JOSEPH W. ROLES, JR. P.E.	

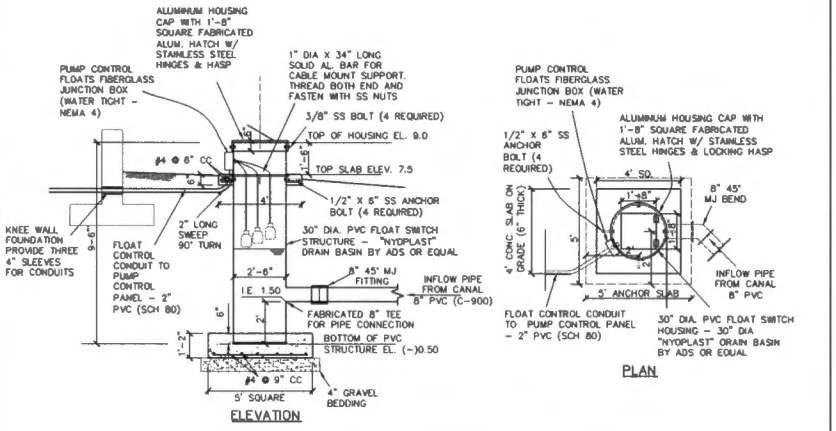
JOSEPH ROLES AND ASSOC., INC.
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PLANTATION, FLORIDA 33317
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CERTIFICATE OF AUTHORIZATION NO. 6848
Engineer of Record: JOSEPH W. ROLES, JR. P.E. PE NO. 16965

PREPARED FOR: CITY OF SUNRISE FLORIDA

STORM WATER PUMP STATION #5
PUMP STATION REPLACEMENT

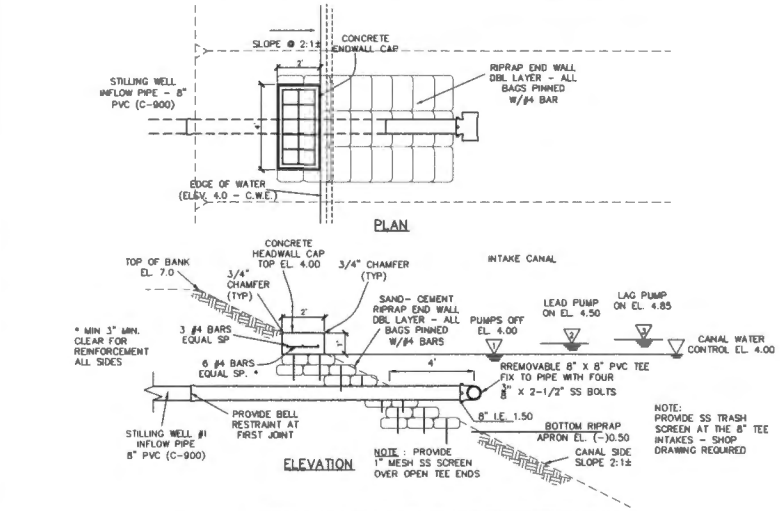
STILLING WELL PLAN

SHEET NO. C-20



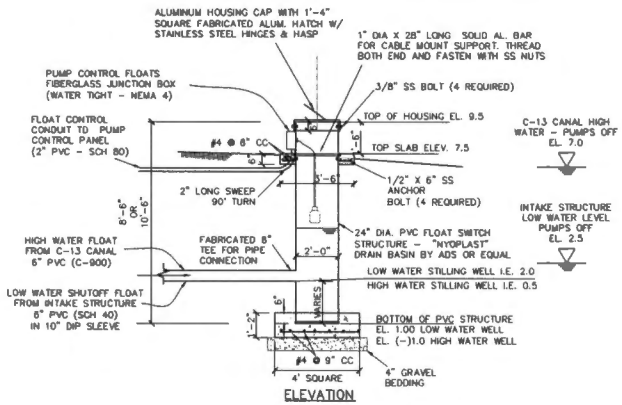
MAIN PUMP CONTROL 30" DIAMETER STILLING WELL DETAIL

N.T.S.



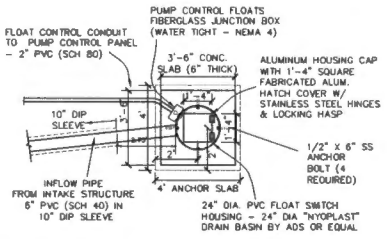
CANAL MAIN STILLING WELL INFLOW PIPE DETAIL

N.T.S.

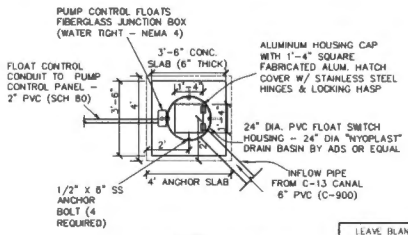


TYPICAL 24" DIAMETER STILLING WELL DETAIL

FOR LOW WATER AND HIGH WATER STILLING WELLS



LOW WATER STILLING WELL PLAN



C-13 HIGH WATER STILLING WELL PLAN

NOTE:
CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR THE STILLING WELL CAPS AND HATCHES FOR APPROVAL.

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111-504-28

REVISIONS						
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	Names	Dates
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Designed by	IK	05/20
Checked by	JWR	05/20
Approved by	JOSEPH W. ROLES, JR. P.E.	

JOSEPH ROLES AND ASSOC., INC.
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7601 W.S. 4th STREET, SUITE 101
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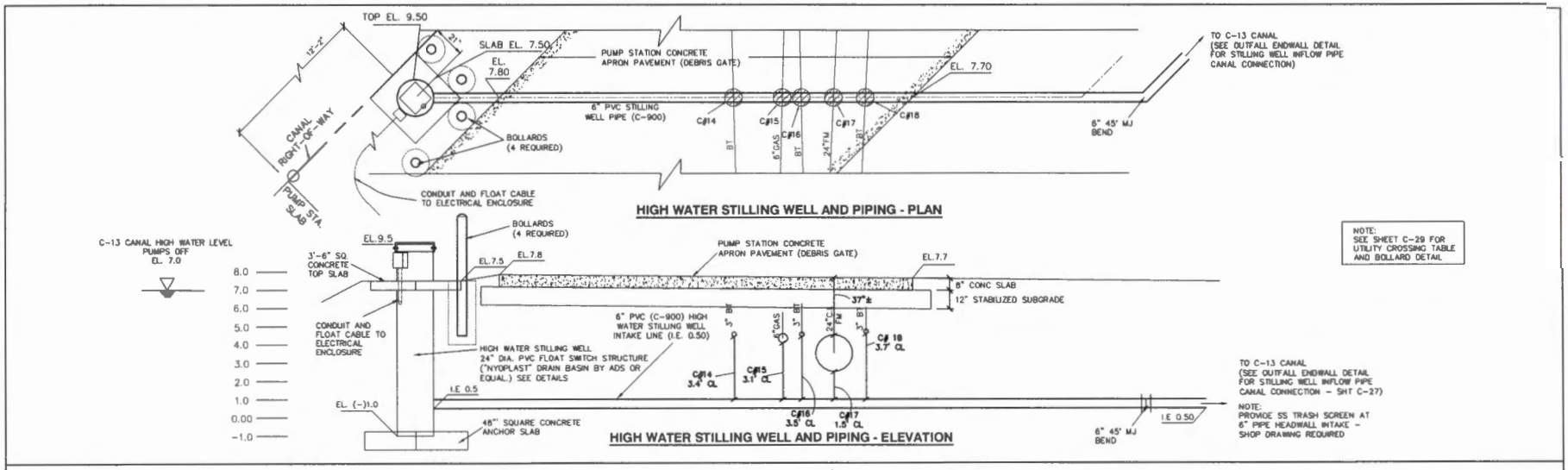
Engineer of Record: JOSEPH W. ROLES, JR. P.E. PE NO. 16965

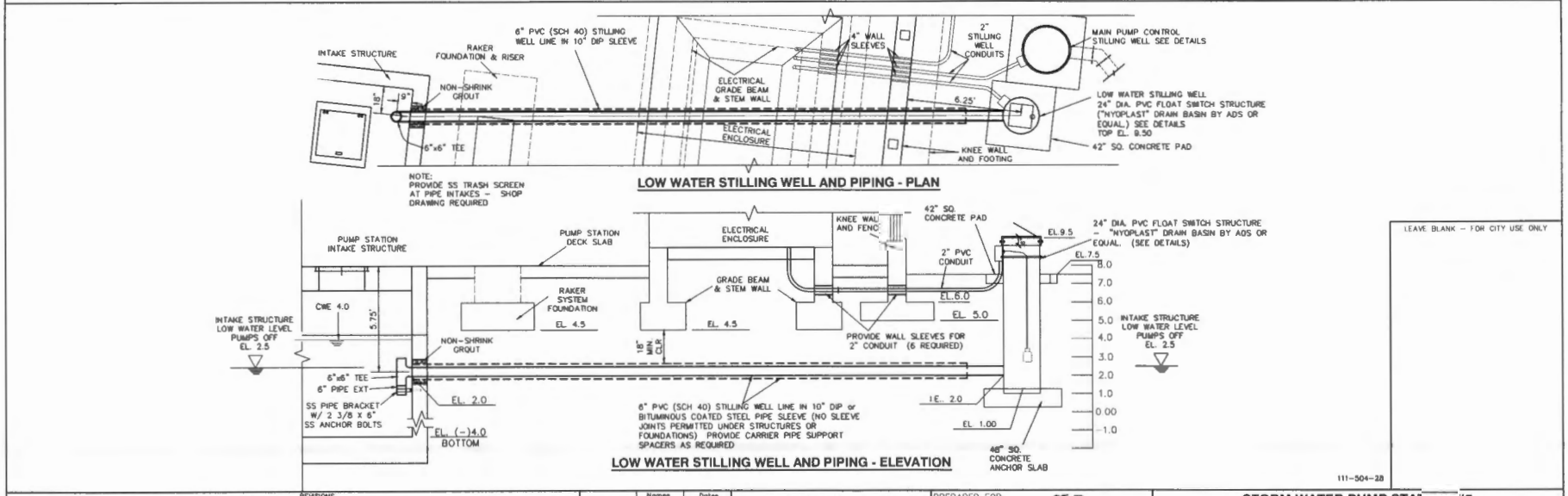
PREPARED FOR: CITY OF SUNRISE FLORIDA

STORM WATER PUMP STATION #5
PUMP STATION REPLACEMENT

STILLING WELL DETAILS

SHEET NO. **C-21**





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	Names	Dates
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Checked by	DWG	05/20
Designed by	IK	05/20
Checked by	JWR	05/20
Approved by	JOSEPH W. ROLES, JR. P.E.	

JOSEPH ROLES AND ASSOC., INC. CONSULTING ENGINEERS
7301 N.W. 4th STREET, SUITE 101 PLANTATION, FLORIDA 33317 PHONE (954) 580-1818 CERTIFICATE OF AUTHORIZATION NO. 8948

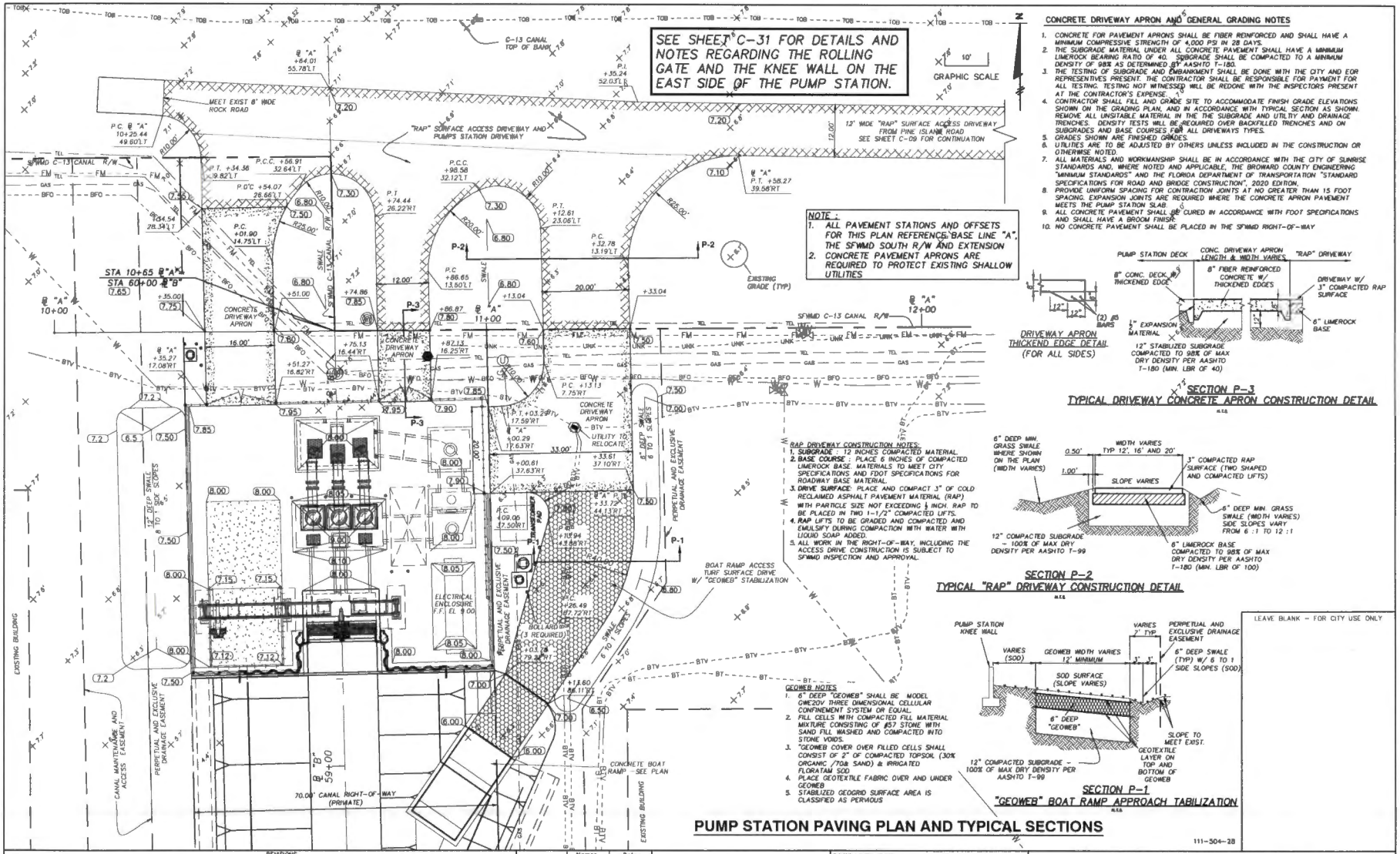
Engineer of Record: JOSEPH W. ROLES, JR. P.E. PE NO. 16965

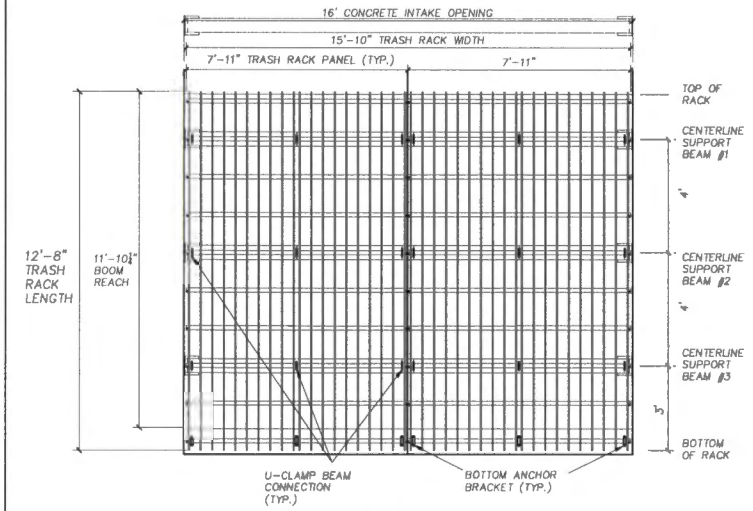
PREPARED FOR: CITY OF SUNRISE FLORIDA

STORM WATER PUMP STATION #5 PUMP STATION REPLACEMENT

STILLING WELL DETAILS

SHEET NO. C-22


SEE SHEET C-31 FOR DETAILS AND NOTES REGARDING THE ROLLING GATE AND THE KNEE WALL ON THE EAST SIDE OF THE PUMP STATION.
GRAPHIC SCALE
CONCRETE DRIVEWAY APRON AND GENERAL GRADING NOTES
1. CONCRETE FOR PAVEMENT APRONS SHALL BE FIBER REINFORCED AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI IN 28 DAYS.
2. THE SUBGRADE MATERIAL UNDER ALL CONCRETE PAVEMENT SHALL HAVE A MINIMUM LIMEROCK BEARING RATIO OF 40. SUBGRADE SHALL BE COMPACTED TO A MINIMUM DENSITY OF 98% AS DETERMINED BY AASHTO T-180.
3. THE TESTING OF SUBGRADE AND EMBANKMENT SHALL BE DONE WITH THE CITY AND EOR REPRESENTIVES PRESENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PAYMENT FOR ALL TESTING. TESTING NOT WITNESSED WILL BE REDONE WITH THE INSPECTORS PRESENT AT THE CONTRACTOR'S EXPENSE.
4. CONTRACTOR SHALL FILL AND GRADE SITE TO ACCOMMODATE FINISH GRADE ELEVATIONS SHOWN ON THE GRADING PLAN, AND IN ACCORDANCE WITH TYPICAL SECTION AS SHOWN. REMOVE ALL UNSUITABLE MATERIAL IN THE THE SUBGRADE AND UTILITY AND DRAINAGE TRENCHES. DENSITY TESTS WILL BE REQUIRED OVER BACKFILLED TRENCHES AND ON SUBGRADES AND BASE COURSES FOR ALL DRIVEWAYS TYPES.
5. GRADES SHOWN ARE FINISHED GRADES.
6. UTILITIES ARE TO BE ADJUSTED BY OTHERS UNLESS INCLUDED IN THE CONSTRUCTION OR OTHERWISE NOTED.
7. ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE CITY OF SUNRISE STANDARDS AND, WHERE NOTED AND APPLICABLE, THE BROWARD COUNTY ENGINEERING "MINIMUM STANDARDS" AND THE FLORIDA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", 2020 EDITION.
8. PROVIDE UNIFORM SPACING FOR CONTRACTION JOINTS AT NO GREATER THAN 15 FOOT SPACING. EXPANSION JOINTS ARE REQUIRED WHERE THE CONCRETE APRON PAVEMENT MEETS THE PUMP STATION SLAB.
9. ALL CONCRETE PAVEMENT SHALL BE CURED IN ACCORDANCE WITH FDOT SPECIFICATIONS AND SHALL HAVE A BROOM FINISH.
10. NO CONCRETE PAVEMENT SHALL BE PLACED IN THE SFWMD RIGHT-OF-WAY
NOTE :
1. ALL PAVEMENT STATIONS AND OFFSETS FOR THIS PLAN REFERENCE BASE LINE "A", THE SFWMD SOUTH R/W AND EXTENSION
2. CONCRETE PAVEMENT APRONS ARE REQUIRED TO PROTECT EXISTING SHALLOW UTILITIES
DRIVEWAY APRON THICKEND EDGE DETAIL (FOR ALL SIDES)
SECTION P-3
TYPICAL DRIVEWAY CONCRETE APRON CONSTRUCTION DETAIL
RAP DRIVEWAY CONSTRUCTION NOTES:
1. SUBGRADE : 12 INCHES COMPACTED MATERIAL.
2. BASE COURSE : PLACE 6 INCHES OF COMPACTED LIMEROCK BASE. MATERIALS TO MEET CITY SPECIFICATIONS AND FDOT SPECIFICATIONS FOR ROADWAY BASE MATERIAL.
3. DRIVE SURFACE: PLACE AND COMPACT 3" OF COLD RECLAIMED ASPHALT PAVEMENT MATERIAL (RAP) WITH PARTICLE SIZE NOT EXCEEDING ½ INCH. RAP TO BE PLACED IN TWO 1-1/2" COMPACTED LIFTS.
4. RAP LIFTS TO BE GRADED AND COMPACTED AND EMULSIFY DURING COMPACTION WITH WATER WITH LIQUID SOAP ADDED.
5. ALL WORK IN THE RIGHT-OF-WAY, INCLUDING THE ACCESS DRIVE CONSTRUCTION IS SUBJECT TO SFWMD INSPECTION AND APPROVAL.
SECTION P-2
TYPICAL "RAP" DRIVEWAY CONSTRUCTION DETAIL
GEOWEB NOTES
1. 6" DEEP "GEOWEB" SHALL BE MODEL GW620V THREE DIMENSIONAL CELLULAR CONFINEMENT SYSTEM OR EQUAL.
2. FILL CELLS WITH COMPACTED FILL MATERIAL MIXTURE CONSISTING OF #57 STONE WITH SAND FILL WASHED AND COMPACTED INTO STONE VOIDS.
3. "GEOWEB COVER OVER FILLED CELLS SHALL CONSIST OF 2" OF COMPACTED TOPSOIL (30% ORGANIC /70& SAND) & IRRIGATED FLORATAM SOD
4. PLACE GEOTEXTILE FABRIC OVER AND UNDER GEOWEB
5. STABILIZED GEOGRID SURFACE AREA IS CLASSIFIED AS PERVIOUS
SECTION P-1
"GEOWEB" BOAT RAMP APPROACH TABILIZATION
PUMP STATION PAVING PLAN AND TYPICAL SECTIONS
LEAVE BLANK - FOR CITY USE ONLY
EXISTING BUILDING
CONCRETE BOAT RAMP - SEE PLAN
70.00' CANAL RIGHT-OF-WAY (PRIVATE)
BOAT RAMP ACCESS TURF SURFACE DRIVE W/ "GEOWEB" STABILIZATION
ELECTRICAL ENCLOSURE F.F. EL. 9.00
PERPETUAL AND EXCLUSIVE DRAINAGE EASEMENT
CANAL MAINTENANCE AND ACCESS EASEMENT
MEET EXIST 8' WIDE ROCK ROAD
"RAP" SURFACE ACCESS DRIVEWAY AND PUMPS STATION DRIVEWAY
12' WIDE "RAP" SURFACE ACCESS DRIVEWAY FROM PINE ISLAND ROAD SEE SHEET C-09 FOR CONTINUATION
CONCRETE DRIVEWAY APRON
EXISTING GRADE (TYP)
UTILITY TO RELOCATE
STA 10+65 @ "A" STA 60+00 @ "B"
REVISIONS
Date | By | Description | Date | By | Description
Drawn by IK 05/20
Checked by DWG 05/20
Designed by JWR 05/20
Checked by JWR 05/20
Approved by JOSEPH W. ROLES, JR. P.E.
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PREPARED FOR: CITY OF SUNRISE FLORIDA
STORM WATER PUMP STATION #5
PUMP STATION REPLACEMENT
PAVING AND GRADING PLAN
SHEET NO. C-23
111-504-28

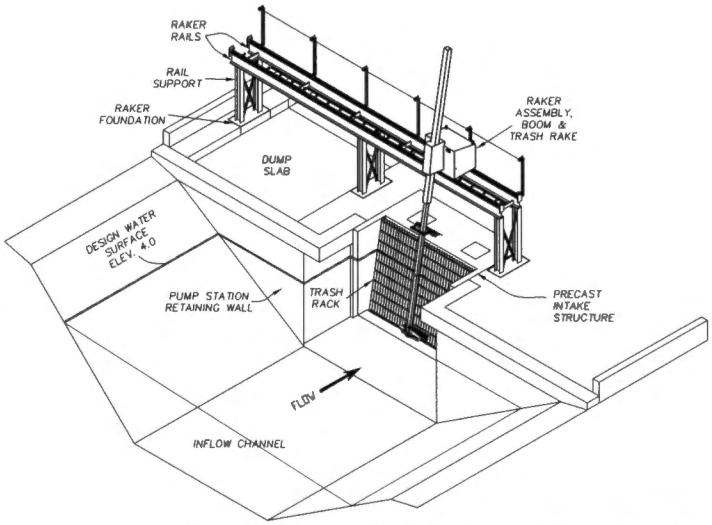


TRASH RACK ASSEMBLY DETAIL

SCALE : ½" = 1'

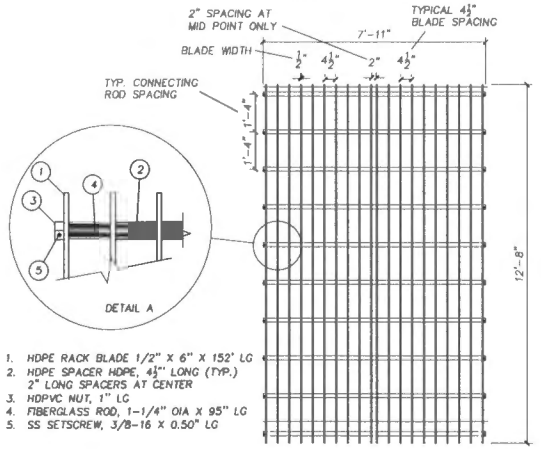
TRASH RACK NOTES:

1. SUPPORT BEAM IS NOT SUPPLIED BY THE RAKER MANUFACTURER. FABRICATION AND INSTALLATION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. THE DIMENSIONAL POSITION OF THE RAKER BOOM TO THE TRASH RACK IS CRITICAL FOR THE PROPER OPERATION OF THE RAKER SYSTEM. SEE RAKER PLAN AND DETAILS FOR DIMENSIONAL MOUNTING AND ORIENTATION REQUIREMENTS FOR THE TRASH RACK PANELS.



RAKER ASSEMBLY AND TRASH RACK PERSPECTIVE VIEW

NO SCALE



1. HDPE RACK BLADE 1/2" X 6" X 152' LG
2. HDPE SPACER HDPE, 4½" LONG (TYP.) 2" LONG SPACERS AT CENTER
3. HDPVC NUT, 1" LG
4. FIBERGLASS ROD, 1-1/4" DIA X 95" LG
5. SS SETSCREW, 3/8-16 X 0.50" LG

TRASH RACK PANEL DETAIL (2 REQUIRED)

SCALE : ½" = 1'

TRASH RAKER SYSTEM GENERAL NOTES:

1. THE TRASH RAKER SYSTEM INCLUDING TRASH RACKS, SHALL BE A MODEL 2 SYSTEM AS MANUFACTURED BY HYDRO COMPONENT SYSTEMS, LLC [HCS]
2. TRASH RAKER SYSTEM SHALL BE COMPLETE AND ASSEMBLED WITH ALL INTERNAL CONTROLS AND WIRING. RAIL SYSTEM TO INCLUDE ALL FASTENERS LESS CONCRETE ANCHORS AND FINISHED AS DESCRIBED
3. THE RAIL SYSTEM DIMENSIONS, INCLUDING RAIL SUPPORT SPACING, TO BE VERIFIED PRIOR TO FABRICATION.
4. ELECTRICAL CONDUCTOR BAR SYSTEM AND EXTERNAL ELECTRICAL CONTROLS SHALL BE BY THE MANUFACTURER AND SHALL BE INSTALLED AND CONNECTED BY THE CONTRACTOR'S ELECTRICIAN. ALL WIRING EXTERNAL TO THE TRASH RAKER TO BE COMPLETED BY CONTRACTOR'S LICENSED ELECTRICIAN. SYSTEM REQUIRES CLEAN 480 VOLT, 3 PHASE POWER WITH A PROPERLY SIZED AND FUSED SAFETY DISCONNECT LOCATED AS REQUIRED BY CODE AND AS SHOWN ON THE ELECTRICAL DRAWINGS.

TRASH RACK NOTES

1. THE TRASH RACK UNIT SHALL BE 15'-10" WIDE BY 12'-8" LONG AND WILL BE COMPRISED OF 2 PANELS, EACH WITH EITHER 4-1/2" OR 2" CLEAR SPACING BETWEEN THE 0.5" X 6" VERTICAL BLADES. SEE THE RACK DETAIL FOR THE LOCATIONS OF THE CLEAR SPACING. RACKS ARE TO BE FACTORY ASSEMBLED AND READY FOR INSTALLATION BY THE CONTRACTOR. RACK COMPONENTS SHALL MEET THE FOLLOWING REQUIREMENTS

   BLADES : THE BLADES SHALL BE FABRICATED FROM EXTRA HIGH MOLECULAR WEIGHT HEXENE COPOLYMER

   HORIZONTAL RODS : THE RODS SHALL BE 1 ¼" FULL DIAMETER, PULTRUDED FRP UTILIZING A VINYL ESTER (VE) RESIN SYSTEM CONTAINING UV INHIBITORS. RODS ARE TO BE THREADED ON ENDS ONLY AND MAINTAIN THE FULL DIAMETER FOR THE TOTAL LENGTH OF ROD UNDER LOAD.

   SPACERS : THE BLADE SPACERS SHALL BE EXTRUDED OF COMPARABLE MATERIAL TO THE BLADES AND BE PRECISION CUT TO LENGTH TO ACCURATELY MAINTAIN THE SPECIFIED CLEAR SPACING BETWEEN THE BLADES.

   NUTS : THE NUTS SHALL BE OF A HEX STYLE TO FACILITATE INSTALLATION ON THE THREADED HORIZONTAL RODS AND MOLDED FROM A HIGH-DENSITY POLYVINYLCHLORIDE WHICH IS RESISTANT TO WATER ABSORPTION.

   SHIPPING : UNLESS SPECIFIED OTHERWISE ALL RACK PANELS ARE TO BE SHIPPED FULLY ASSEMBLED TO ENSURE PROPER FIT AND DIMENSION.

2. MOUNTING HARDWARE INCLUDING STAINLESS STEEL U-BOLTS AND MOUNTING BRACKETS NECESSARY TO SECURE RACK PANELS TO THE INTAKE STRUCTURE SUPPORTS TO BE PROVIDED BY THE MANUFACTURER.
3. TRASH RACK INSTALLATIONS TO CONFORM TO THE FOLLOWING TOLERANCES FOR USE WITH THE TRASH RAKER SYSTEM.
   1. ANGLE: THE FACE OR PLANE IN CONTACT WITH THE RAKE HEAD MUST BE WITHIN ±0.5° OF THE SPECIFIED ANGLE OVER THE ENTIRE FACE OF THE RACK WHERE THE RAKER IS TO BE USED.
   2. PLANE: THE BLADES OF THE TRASH RACK MUST NOT DEVIATE FROM A NOMINAL PLANE MORE THAN ±0.25" OVERALL OR MORE THAN ±0.13" BLADE TO BLADE OVER THE ENTIRE FACE OF THE RACK WHERE THE RAKER IS TO BE USED.
   3. VERTICAL DEVIATION: INDIVIDUAL BLADES OF THE TRASH RACK MUST NOT DEVIATE MORE THAN ±0.25" OVERALL (TOP TO BOTTOM) EITHER CLOCKWISE OR COUNTERCLOCKWISE AS VIEWED PERPENDICULAR TO THE RAKED FACE.
   4. SKEW: INDIVIDUAL BLADES MUST BE PERPENDICULAR WITHIN ±0.5° OVER THE ENTIRE FACE OF THE RACK WHERE THE RAKER IS TO BE USED.
   5. U-BOLTS AND BRACKETS SHALL BE INSTALLED IN A FASHION SUCH THAT THE LEGS ARE APPROXIMATELY CENTERED ABOUT THE HORIZONTAL ROD, APPROXIMATELY CENTERED BETWEEN THE BLADES AND TIGHTENED IN PLACE SUCH THAT THE U-BOLT JUST BEGINS TO MAKE CONTACT WITH THE SPACER.

111-504-28

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REVISIONS						
Date	By	Description	Date	By	Description	

	Names	Dates
Drawn by	JWR	05/20
Checked by	DWG	05/20
Designed by	JWR	05/20
Checked by	JWR	05/20
Approved by	JOSEPH W. ROLES, JR P.E.	

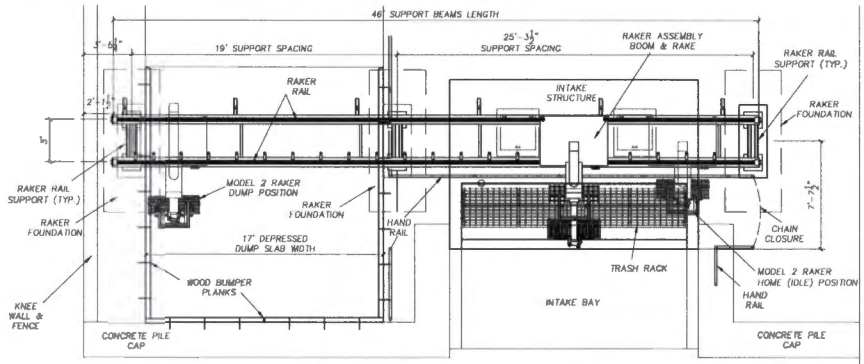
JOSEPH ROLES AND ASSOC., INC.
CONSULTING ENGINEERS
7601 N.W. 4th STREET, SUITE 101
PLANTATION, FLORIDA 33317
PHONE (954) 581-1818
CERTIFICATE OF AUTHORIZATION NO. 5848
Engineer of Record: JOSEPH W. ROLES, JR. P.E. PE NO. 16965

PREPARED FOR: CITY OF SUNRISE FLORIDA

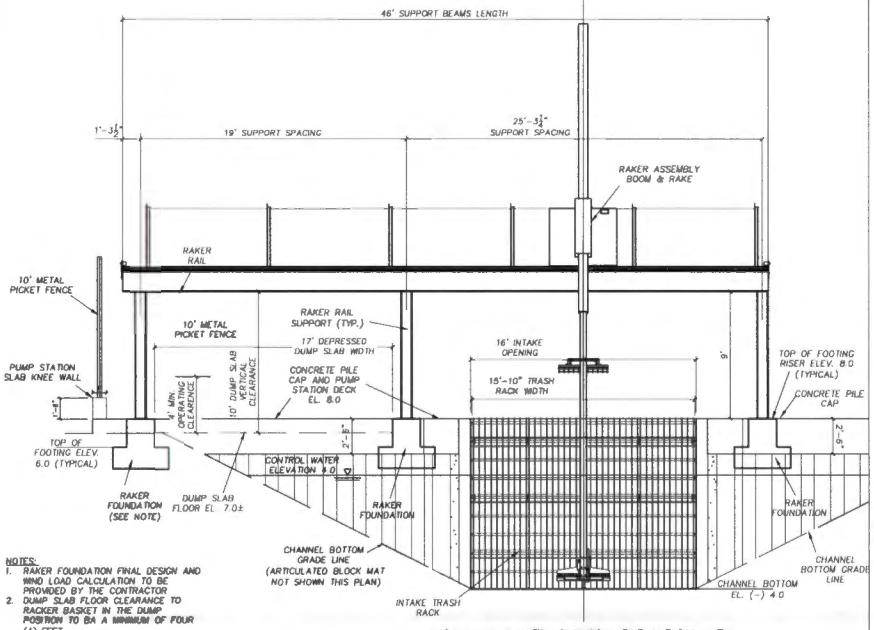
STORM WATER PUMP STATION #5
PUMP STATION REPLACEMENT

RAKER SYSTEM DETAILS

SHEET NO. C-24



MODEL 2 RAKER SYSTEM PLAN VIEW
SCALE : 1/4" =1'



NOTES:
1. RAKER FOUNDATION FINAL DESIGN AND WIND LOAD CALCULATION TO BE PROVIDED BY THE CONTRACTOR
2. DUMP SLAB FLOOR CLEARANCE TO RACKER BASKET IN THE DUMP POSITION TO BA A MINIMUM OF FOUR (4) FEET

MODEL 2 RAKER SYSTEM ELEVATION VIEW
SCALE : 1/4" = 1'

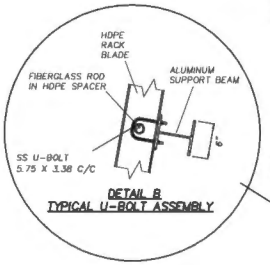
NOTE:
THE DIMENSIONAL POSITION OF THE RAKER BOOM TO THE TRASH RACK IS CRITICAL FOR THE PROPER OPERATION OF THE RAKER SYSTEM. BASED UPON THE BOTTOM OF THE RAKER RAIL STRUCTURE BEAM BEING NINE (9) FEET ABOVE THE DECK ELEVATION OF 8' (NAVD), THE DIMENSIONAL REQUIREMENTS MEASURED HORIZONTALLY ARE AS FOLLOWS:

(1) FROM THE POINT OF THE INTERSECTION OF THE UPSTREAM FACE OF THE TRASH RACK BLADE AND THE DECK ELEVATION OF 8.0 (NAVD) TO:

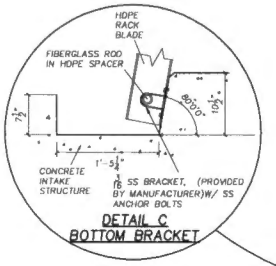
(2) TO THE FACE OF THE WEB OF THE RAIL STRUCTURE BEAM THE CRITICAL DISTANCE IS: 2'-3 3/8"

(3) THE MOUNTING ANGLE OF THE TRASH RACK PANELS MUST BE SET AT 80 DEGREES AND MOUNTED AT THE POSITION SHOWN.

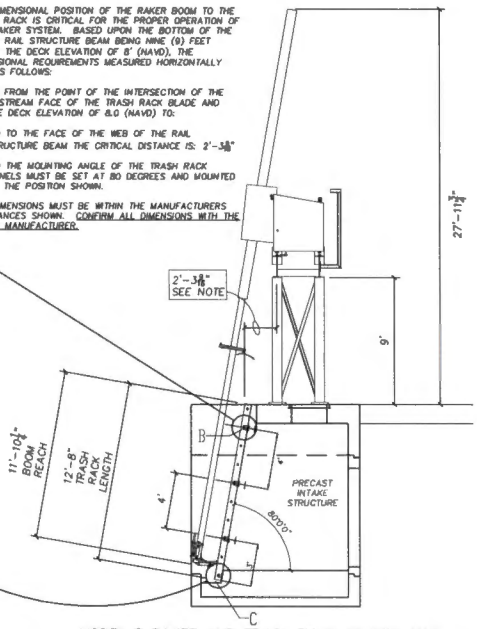
ALL DIMENSIONS MUST BE WITHIN THE MANUFACTURERS TOLERANCES SHOWN. CONFIRM ALL DIMENSIONS WITH THE RAKER MANUFACTURER.



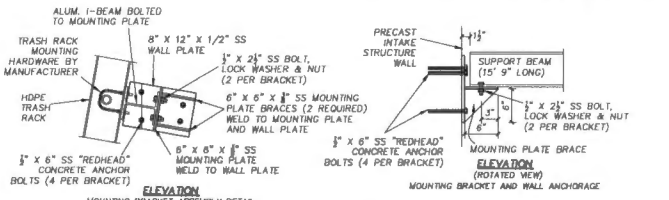
DETAIL B
TYPICAL U-BOLT ASSEMBLY

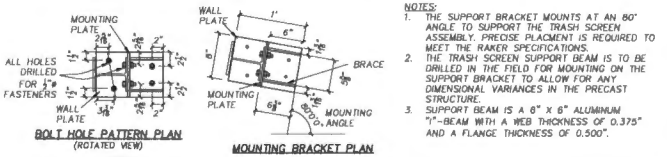


DETAIL C
BOTTOM BRACKET



MODEL 2 RAKER AND TRASH RACK PROFILE VIEW
SCALE : 1/4" = 1'





NOTES:
1. THE SUPPORT BRACKET MOUNTS AT AN 80° ANGLE TO SUPPORT THE TRASH SCREEN ASSEMBLY. PRECISE PLACMENT IS REQUIRED TO MEET THE RAKER SPECIFICATIONS.
2. THE TRASH SCREEN SUPPORT BEAM IS TO BE DRILLED IN THE FIELD FOR MOUNTING ON THE SUPPORT BRACKET TO ALLOW FOR ANY DIMENSIONAL VARIANCES IN THE PRECAST STRUCTURE.
3. SUPPORT BEAM IS A 6" X 6" ALUMINUM "I"-BEAM WITH A WEB THICKNESS OF 0.375" AND A FLANGE THICKNESS OF 0.500".

TRASH RACK SUPPORT BEAM MOUNTING BRACKET DETAILS

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111-504-2

REVISIONS						
Date	By	Description	Date	By	Description

	Names	Dates
Drawn by	JWR	05/20
Checked by	DWG	05/20
Designed by	JWR	05/20
Checked by	JWR	05/20
Approved by	JOSEPH W. ROLES, JR. P.E.	

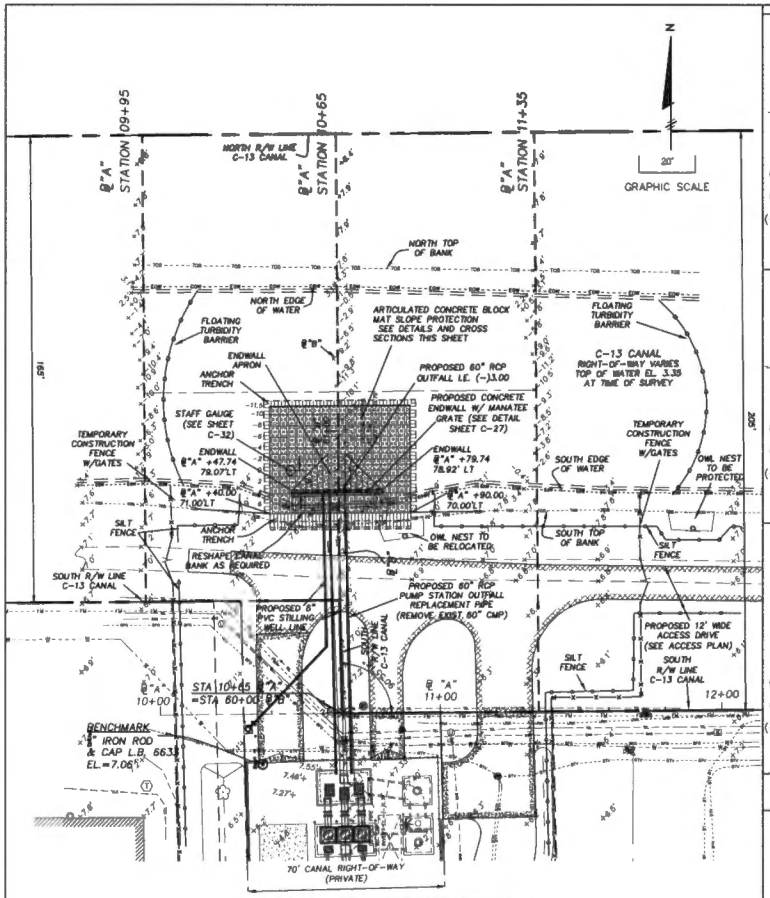
JOSEPH ROLES AND ASSOC., INC.
CONSULTING ENGINEERS
7501 N.W. 4th STREET, SUITE 201
PLANTATION, FLORIDA 33317
PHONE (954) 581-1848
CERTIFICATE OF AUTHORIZATION NO. 5845
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PE NO. 16965

PREPARED FOR:
CITY OF SUNRISE FLORIDA

STORM WATER PUMP STATION #5
PUMP STATION REPLACEMENT

RAKER SYSTEM DETAILS

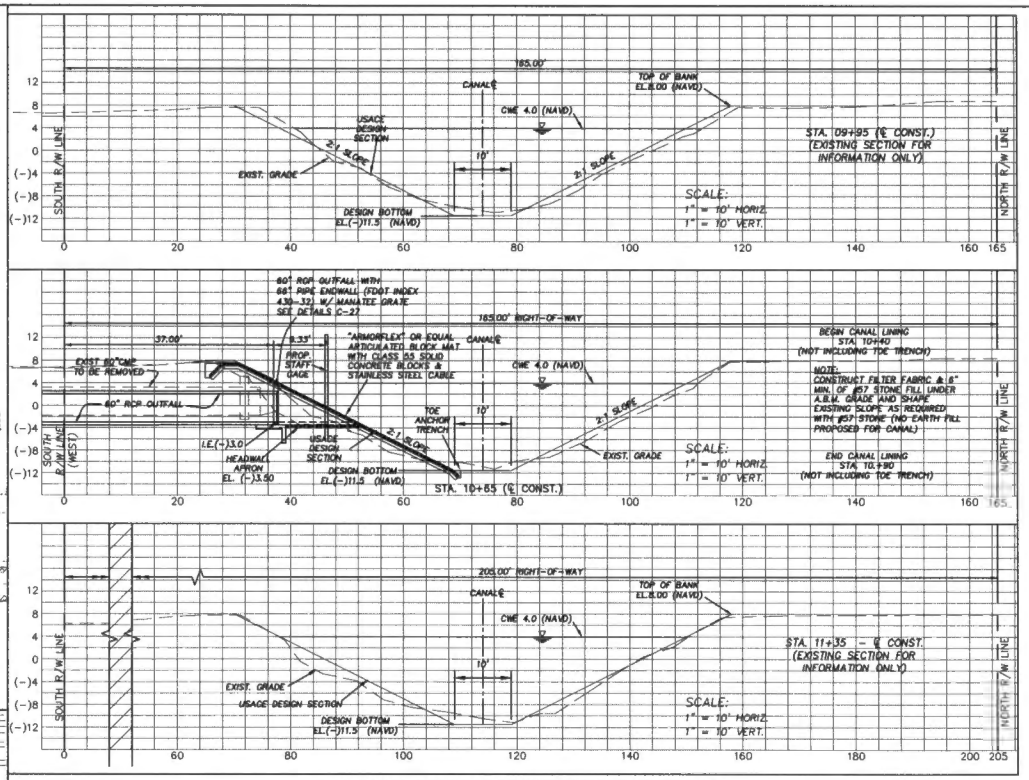
SHEET NO.
C-25



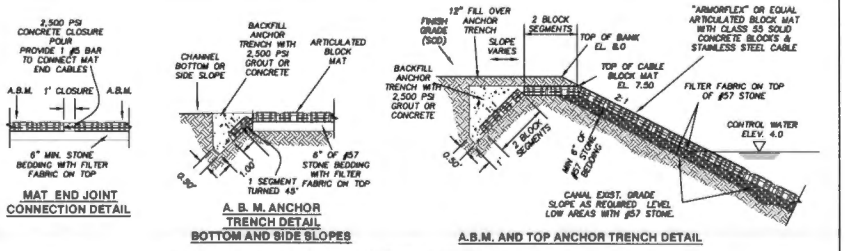
C-13 CANAL PUMP STATION OUTFALL REPLACEMENT PLAN

⚠ NOTES REGARDING WORK WITHIN THE SFWMD RIGHT-OF-WAY:

1. ALL EXCAVATION AND BACKFILLING WITHIN THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT RIGHT-OF-WAY SHALL BE IN COMPLIANCE WITH THE DISTRICT STANDARD SPECIFICATIONS, SECTION 02220, "EXCAVATION AND BACKFILLING". A COPY OF THE DISTRICT SPECIFICATION IS INCLUDED IN THE CONTRACT DOCUMENTS FOR REFERENCE.
2. ALL WORK WITHIN THE DISTRICT RIGHT-OF-WAY IS SUBJECT TO INSPECTION AND APPROVAL BY THE DISTRICT REPRESENTATIVE.



C-13 CANAL CROSS SECTIONS AND LINING DETAILS



MAT END JOINT CONNECTION DETAIL

A. B. M. ANCHOR TRENCH DETAIL BOTTOM AND SIDE SLOPES

A.B.M. AND TOP ANCHOR TRENCH DETAIL

C-13 CANAL ARTICULATED BLOCK DETAILS

111-504-28

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REVISIONS					
Date	By	Description	Date	By	Description
06/28/2021	JWR	⚠ ADDED SFWMD EXCAVATION AND BACKFILLING NOTES			

	Names	Dates
Drawn by	IK	05/20
Checked by	DWG	05/20
Designed by	JWR	05/20
Checked by	JWR	05/20
Approved by	JOSEPH W. ROLES, JR. P.E.	

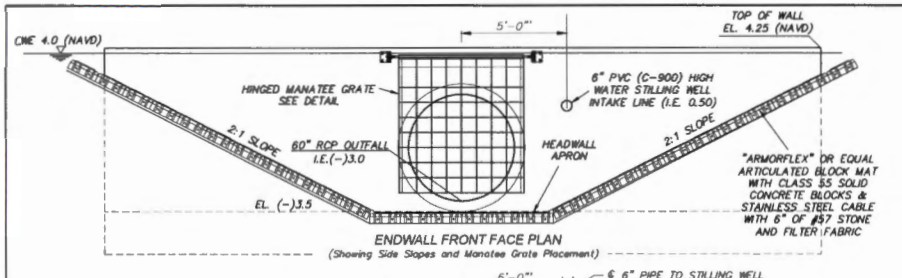
JOSEPH ROLES AND ASSOC., INC. CONSULTING ENGINEERS
7551 N.W. 4th STREET, SUITE 101 PLANTATION, FLORIDA 33317 PHONE (954) 581-1946 CERTIFICATE OF AUTHORIZATION NO. 6948
Engineer of Record: JOSEPH W. ROLES, JR. P.E. PE NO. 16965

PREPARED FOR: CITY OF SUNRISE FLORIDA

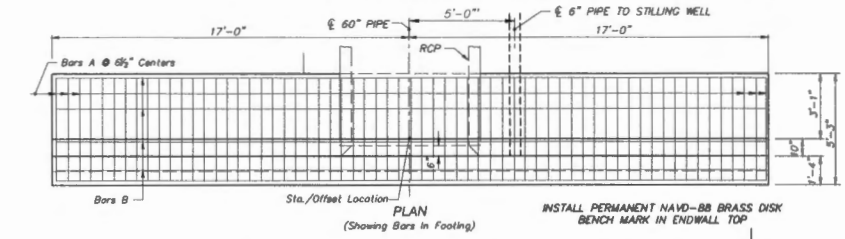
STORM WATER PUMP STATION #5 PUMP STATION REPLACEMENT

C-13 CANAL PLAN, CROSS SECTIONS & DETAILS

SHEET NO. C-26

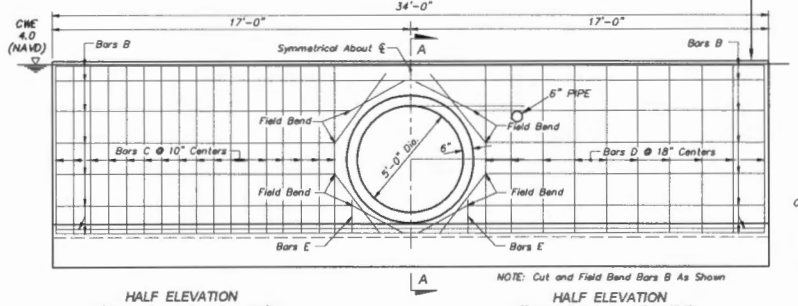


ENDWALL FRONT FACE PLAN
(Showing Side Slopes and Manatee Grate Placement)



PLAN
(Showing Bars In Footing)

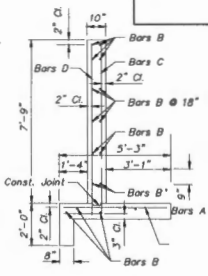
INSTALL PERMANENT NAVD-88 BRASS DISK BENCH MARK IN ENDWALL TOP



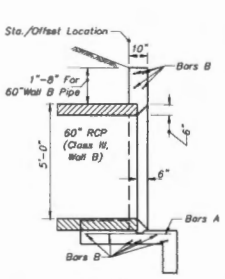
NOTE: Cut and Field Bend Bars B As Shown

HALF ELEVATION
(Showing Bars In Back Face Wall)

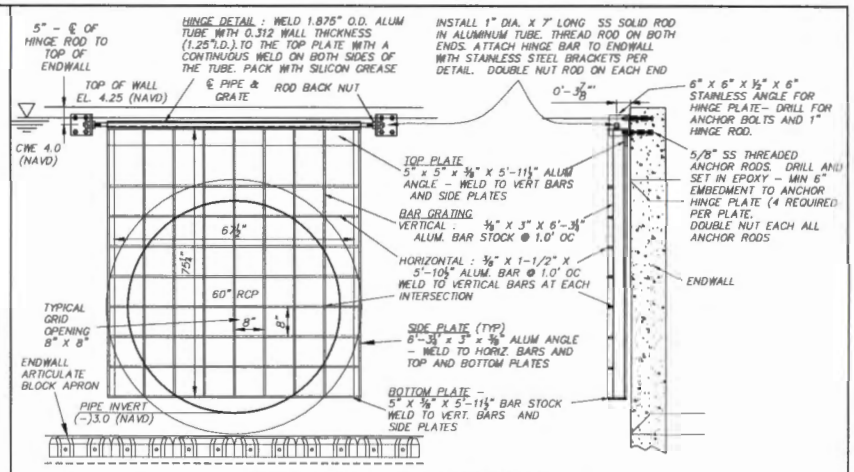
HALF ELEVATION
(Showing Bars In Front Face Wall)



TYPICAL SECTION THRU ENDWALL



SECTION AA



ENDWALL MANATEE GRATE DETAIL

NOTES:
1. PROVIDE 12' OF ⅜" SS LIFTING CHAIN ATTACHED TO BOTTOM OF GRATE AND EXTENDED TO TOP OF ENDWALL. PROVIDE CHAIN HANGER AT TOP OF ENDWALL.
2. PROVIDE SHOP DRAWINGS OF THE MANATEE GRATE FOR APPROVAL PRIOR TO ASSEMBLY.

BILL OF REINFORCING STEEL

MARK	SIZE	NO. REQD.	LENGTH	LOCATION	BENDING
A	5	63	4'-11"	Footing	Straight
B	4	17	33'-8"	Footing & Wall	Straight
C	5	34	9'-11"	Wall	Bend
D	4	20	8'-1"	Wall	Straight
E	4	4	1'-8"	Wall	Straight

BENDING DIAGRAM



Bar C

NOTE: All bar dimensions are out to out

ESTIMATED QUANTITIES

ITEM	UNIT	RCP	
3,400 psi Concrete	Cu. Yd.	13.2	
Reinforcing Steel	Lb.	1170	

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GENERAL NOTES

1. Straight concrete endwalls are intended for use outside the clear zone.
2. Endwall may be cast-in-place or precast construction. cast-in-place endwall shall conform to the details on this drawing, as detailed from the FDOT "Standard Drawings", Index 430-32. Precast construction which adheres to this drawing, shall include additional reinforcement required for handling, which shall be determined by the contractor or supplier, Precast construction does not require additional approvals. Deviations from the provided endwall design for precast or cast in place endwal shall require approval and calculations provided by a professional engineer retain by the contractor for review and approval by the City prior to construction. See FDOT Standard Drawing - Index 425-001 for additional opening and grouting details.
3. Reinforcing steel shall be either grade 40 or 60
4. Concrete shall ASTM C478, 4,000 PSI concrete. Precast units shall be manufactured in plants meeting the requirements of section 449 of the FDOT Specifications for Road and Bridge Construction.
5. Chamfer: All exposed edges and corners to be chamfered 3/4" unless otherwise shown.
6. Any portion of corrugated metal pipe, if used, that is in direct contact with the concrete slab and extending 12" beyond shall have a continuous bituminous coating of 0.004" minimum thickness applied prior to placing of the concrete
7. Sodding limits and type shall be in accordance with the drawings.
8. For this contract there will be no value difference between cast-in-place and precast construction. Construction means and method is at the contractor option.

STRAIGHT CONCRETE ENDWALL FOR SINGLE 60" PIPE

(USING FDOT STANDARD PLANS - INDEX 430-32 FOR 66" PIPE ENDWALL DETAILS)

111-504-28

REVISIONS						
Date	By	Description	Date	By	Description	

	Names	Dates
Drawn by	JWR	05/20
Checked by	DWC	05/20
Designed by	JWR	05/20
Checked by	JWR	05/20
Approved by	JOSEPH W. ROLES, JR. P.E.	

JOSEPH ROLES AND ASSOC., INC. CONSULTING ENGINEERS
7901 N.E. 4th STREET, SUITE 101 PLANTATION, FLORIDA 33317 PHONE (954) 581-1945 CERTIFICATE OF AUTHORIZATION NO. 5548

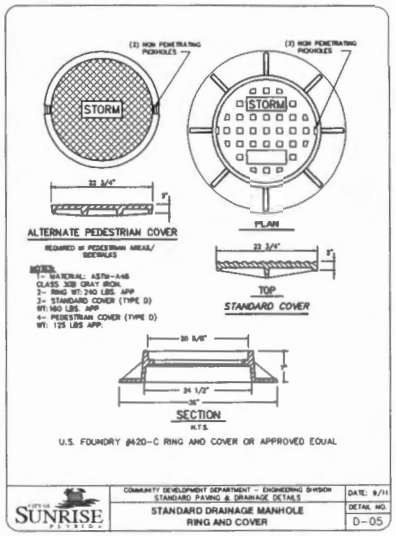
Engineer of Record: JOSEPH W. ROLES, JR. P.E. PE NO. 18965

PREPARED FOR: CITY OF SUNRISE FLORIDA

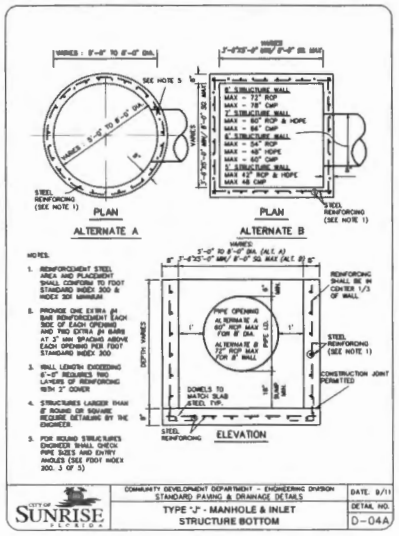
STORM WATER PUMP STATION #5
PUMP STATION REPLACEMENT

C-13 CANAL ENDWALL DETAILS

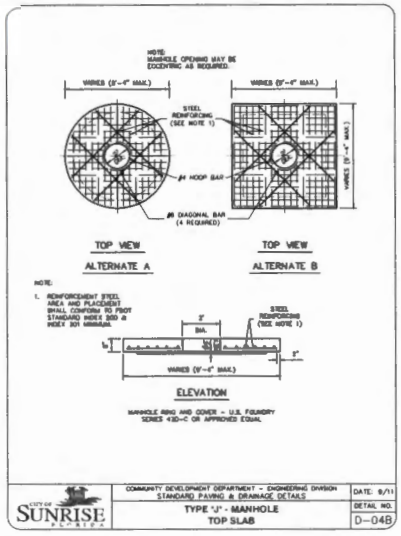
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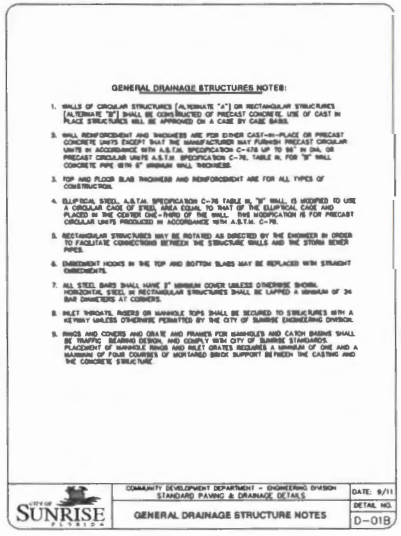
CITY OF SUNRISE FLORIDA | COMMUNITY DEVELOPMENT DEPARTMENT – ENGINEERING DIVISION STANDARD PAVING & DRAINAGE DETAILS | DATE: 9/11 | STANDARD DRAINAGE MANHOLE RING AND COVER | DETAIL NO. D-05



CITY OF SUNRISE FLORIDA | COMMUNITY DEVELOPMENT DEPARTMENT – ENGINEERING DIVISION STANDARD PAVING & DRAINAGE DETAILS | DATE: 9/11 | TYPE "J" - MANHOLE & INLET STRUCTURE BOTTOM | DETAIL NO. D-04A



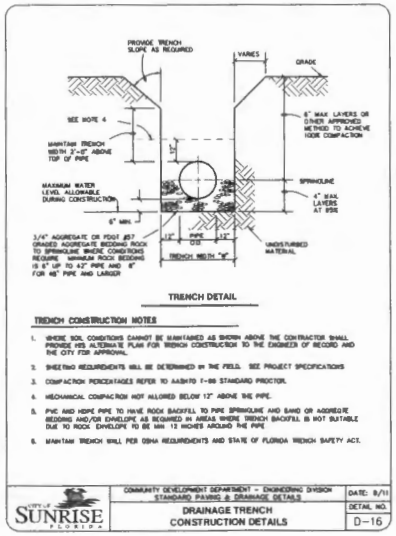
CITY OF SUNRISE FLORIDA | COMMUNITY DEVELOPMENT DEPARTMENT – ENGINEERING DIVISION STANDARD PAVING & DRAINAGE DETAILS | DATE: 9/11 | TYPE "J" - MANHOLE TOP SLAB | DETAIL NO. D-04B



GENERAL DRAINAGE STRUCTURES NOTES:

1. WALLS OF CIRCULAR STRUCTURES [ALTERNATE "A"] OR RECTANGULAR STRUCTURES [ALTERNATE "B"] SHALL BE CONSTRUCTED OF PRECAST CONCRETE. USE OF CAST IN PLACE STRUCTURES WILL BE APPROVED ON A CASE BY CASE BASIS.
2. WALL REINFORCEMENT AND THICKNESS ARE FOR EITHER CAST-IN-PLACE OR PRECAST CONCRETE UNITS EXCEPT THAT THE MANUFACTURER MAY FURNISH PRECAST CIRCULAR UNITS IN ACCORDANCE WITH A.S.T.M. SPECIFICATION C-478 UP TO 96" ID, DIA. OR PRECAST CIRCULAR UNITS A.S.T.M. SPECIFICATION C-76, TABLE III, FOR "B" WALL CONCRETE PIPE WITH 8" MINIMUM WALL THICKNESS.
3. TOP AND FLOOR SLAB THICKNESS AND REINFORCEMENT ARE FOR ALL TYPES OF CONSTRUCTION.
4. ELLIPTICAL STEEL, A.S.T.M. SPECIFICATION C-76, TABLE III, "B" WALL IS MODIFIED TO USE A CIRCULAR CAGE OF STEEL AREA EQUAL TO THAT OF THE ELLIPTICAL CAGE AND PLACED IN THE CENTER ONE-THIRD OF THE WALL. THIS MODIFICATION IS FOR PRECAST CIRCULAR UNITS PRODUCED IN ACCORDANCE WITH A.S.T.M. C-76.
5. RECTANGULAR STRUCTURES MAY BE ROTATED AS DIRECTED BY THE ENGINEER IN ORDER TO FACILITATE CONNECTIONS BETWEEN THE STRUCTURE WALLS AND THE STORM SEWER PIPES.
6. EMBEDMENT HOOKS IN THE TOP AND BOTTOM SLABS MAY BE REPLACED WITH STRAIGHT EMBEDMENTS.
7. ALL STEEL BARS SHALL HAVE 2" MINIMUM COVER UNLESS OTHERWISE SHOWN. HORIZONTAL STEEL IN RECTANGULAR STRUCTURES SHALL BE LAPPED A MINIMUM OF 24 BAR DIAMETERS AT CORNERS.
8. INLET THROATS, RISERS OR MANHOLE TOPS SHALL BE SECURED TO STRUCTURES WITH A KEYWAY UNLESS OTHERWISE PERMITTED BY THE CITY OF SUNRISE ENGINEERING DIVISION.
9. RINGS AND COVERS AND GRATE AND FRAMES FOR MANHOLES AND CATCH BASINS SHALL BE TRAFFIC BEARING DESIGN, AND COMPLY WITH CITY OF SUNRISE STANDARDS. PLACEMENT OF MANHOLE RINGS AND INLET GRATES REQUIRES A MINIMUM OF ONE AND A MAXIMUM OF FOUR COURSES OF MORTARED BRICK SUPPORT BETWEEN THE CASTING AND THE CONCRETE STRUCTURE.

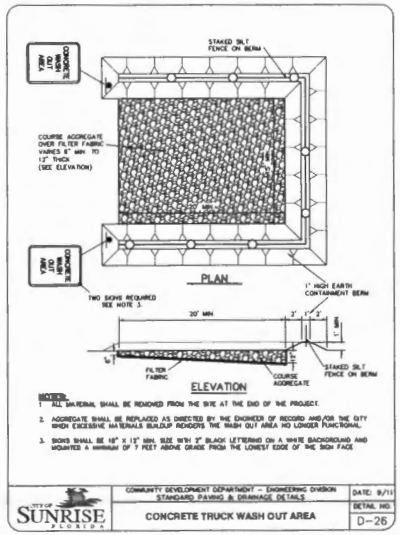
CITY OF SUNRISE FLORIDA | COMMUNITY DEVELOPMENT DEPARTMENT – ENGINEERING DIVISION STANDARD PAVING & DRAINAGE DETAILS | DATE: 9/11 | GENERAL DRAINAGE STRUCTURE NOTES | DETAIL NO. D-01B



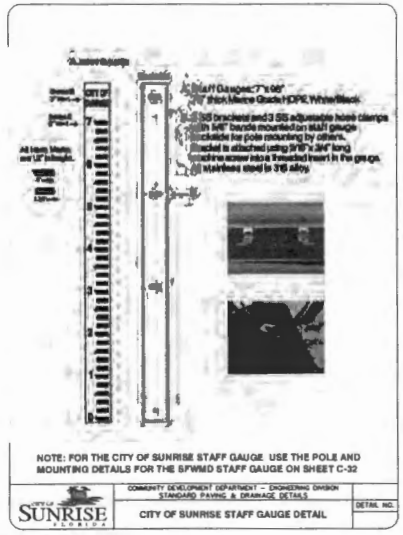
TRENCH CONSTRUCTION NOTES

1. WHERE SOIL CONDITIONS CANNOT BE MAINTAINED AS SHOWN ABOVE THE CONTRACTOR SHALL PROVIDE HIS ALTERNATE PLAN FOR TRENCH CONSTRUCTION TO THE ENGINEER OF RECORD AND THE CITY FOR APPROVAL.
2. SHEETING REQUIREMENTS WILL BE DETERMINED IN THE FIELD. SEE PROJECT SPECIFICATIONS
3. COMPACTION PERCENTAGES REFER TO AASHTO T-99 STANDARD PROCTOR.
4. MECHANICAL COMPACTION NOT ALLOWED BELOW 12" ABOVE THE PIPE.
5. PVC AND HDPE PIPE TO HAVE ROCK BACKFILL TO PIPE SPRINGLINE AND SAND OR AGGREGATE BEDDING AND/OR ENVELOPE AS REQUIRED IN AREAS WHERE TRENCH BACKFILL IS NOT SUITABLE DUE TO ROCK. ENVELOPE TO BE MIN. 12 INCHES AROUND THE PIPE
6. MAINTAIN TRENCH WALL PER OSHA REQUIREMENTS AND STATE OF FLORIDA TRENCH SAFETY ACT.

CITY OF SUNRISE FLORIDA | COMMUNITY DEVELOPMENT DEPARTMENT – ENGINEERING DIVISION STANDARD PAVING & DRAINAGE DETAILS | DATE: 9/11 | DRAINAGE TRENCH CONSTRUCTION DETAILS | DETAIL NO. D-16



CITY OF SUNRISE FLORIDA | COMMUNITY DEVELOPMENT DEPARTMENT – ENGINEERING DIVISION STANDARD PAVING & DRAINAGE DETAILS | DATE: 9/11 | CONCRETE TRUCK WASH OUT AREA | DETAIL NO. D-26



NOTE: FOR THE CITY OF SUNRISE STAFF GAUGE USE THE POLE AND MOUNTING DETAILS FOR THE SFWMD STAFF GAUGE ON SHEET C-32

CITY OF SUNRISE FLORIDA | COMMUNITY DEVELOPMENT DEPARTMENT – ENGINEERING DIVISION STANDARD PAVING & DRAINAGE DETAILS | CITY OF SUNRISE STAFF GAUGE DETAIL | DETAIL NO.

111-504-28

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REVISIONS						Names	Dates
Date	By	Description	Date	By	Description	Drawn by: IK	05/20
						Checked by: DWG	05/20
						Designed by: IK	05/20
						Checked by: JWR	05/20
						Approved by: JOSEPH W. ROLES, JR. P.E.	

JOSEPH ROLES AND ASSOC., INC. CONSULTING ENGINEERS
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PHONE (954) 581-1946
CERTIFICATE OF AUTHORIZATION NO. 8648

Engineer of Record: JOSEPH W. ROLES, JR. P.E. PE NO. 18965

PREPARED FOR: CITY OF SUNRISE FLORIDA

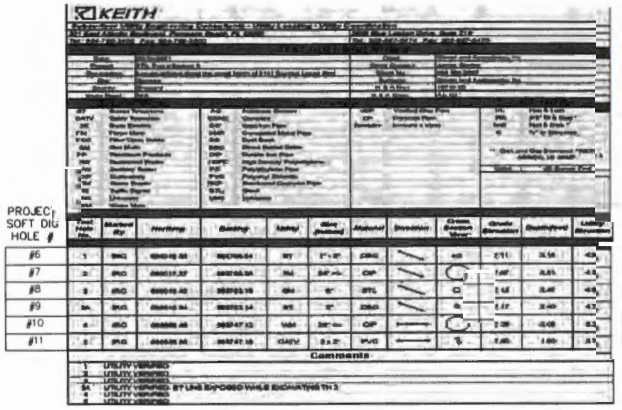
STORM WATER PUMP STATION #5 PUMP STATION REPLACEMENT

GENERAL DETAILS

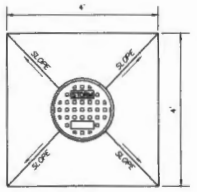
SHEET NO. C-28

UTILITY & DRAINAGE PIPE CROSSING TABLE

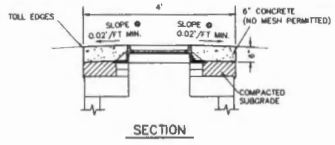
CROSSING NO.	UPPER PIPE								LOWER PIPE							COMMENTS
	TYPE			SIZE	GROUND ELEV.	TOP OF PIPE	BOTTOM OF PIPE	COVER	TYPE			SIZE	EST. TOP OF PIPE	BOTTOM OF PIPE	CLEARANCE	
C#1	EXIST.	PVC	BTV	2@2"	7.3	5.70'	5.5'	1.60'	PROP.	HDPE	STORM	36"	1.5	(-)1.5	4.0'	TEMPORARY STORM (SOFT DIG #11)
C#2	EXIST.	C.I.	WM	24"	7.28	5.20'	3.1'	2.08'	PROP.	HDPE	STORM	36"	1.5	(-)1.5	1.6'	TEMPORARY STORM (SOFT DIG #10)
C#3	EXIST.	PVC	BT	3"	7.2	4.7'	4.45'	2.5'	PROP.	HDPE	STORM	36"	1.5	(-)1.5	2.9'	TEMPORARY STORM
C#4	EXIST.	STL	GAS	6"	7.15	4.68'	4.1'	2.47'	PROP.	HDPE	STORM	36"	1.5	(-)1.5	2.6'	TEMPORARY STORM (SOFT DIG #9)
C#5	EXIST.	DBC	BT	3"	7.17	4.77'	4.5'	2.40'	PROP.	HDPE	STORM	36"	1.5	(-)1.5	3.0'	TEMPORARY STORM (SOFT DIG #8)
C#6	EXIST.	CIP	FM	24"	7.07	4.56'	2.5'	2.51'	PROP.	HDPE	STORM	36"	1.5	(-)1.5	1.0'	TEMPORARY STORM (SOFT DIG #7)
C#7	EXIST.	DBC	BT	3"	7.11	4.96'	4.7'	2.15'	PROP.	HDPE	STORM	36"	1.5	(-)1.5	3.2'	TEMPORARY STORM (SOFT DIG #6)
C#8	EXIST.	PVC	BTV	2@2"	7.5	5.0	4.8'	2.5'	PROP.	RCP	STORM	60"	2.5	(-)3.0	2.3'	RCP OUTFALL PIPE
C#9	EXIST.	C.I.	WM	24"	7.7	5.9	3.9	1.8'	PROP.	RCP	OUTFALL	60"	2.5	(-)3.0	1.4'	RCP OUTFALL PIPE (SOFT DIG #1)
C#10	EXIST.	STL	GAS	6"	7.8	4.6	4.1	3'	PROP.	RCP	OUTFALL	60"	2.5	(-)3.0	1.6'	RCP OUTFALL PIPE (SOFT DIG #2)
C#11	EXIST.	DBC	BT	3"	7.5	5.2	4.9	2.3'	PROP.	RCP	OUTFALL	60"	2.5	(-)3.0	2.4'	RCP OUTFALL PIPE (SOFT DIG #3)
C#12	EXIST.	C.I.	FM	24"	7.4	5.4	3.4	2.0'	PROP.	RCP	OUTFALL	60"	2.5	(-)3.0	0.9'	RCP OUTFALL PIPE (SOFT DIG #4)
C#13	EXIST.	PVC	BT	3"	7.4	4.4	4.1	2.9'	PROP.	RCP	OUTFALL	60"	2.5	(-)3.0	1.6'	RCP OUTFALL PIPE (SOFT DIG #5)
C#14	EXIST.	PVC	BT	3"	7.2	4.7'	4.45'	2.5'	PROP.	PVC	INTAKE	6"	1.0	0.5	3.4	STILLING WELL LINE
C#15	EXIST.	STL	GAS	6"	7.15	4.68'	4.1'	2.47'	PROP.	PVC	INTAKE	6"	1.0	0.5	3.1	STILLING WELL LINE (SOFT DIG #9)
C#16	EXIST.	DBC	BT	3"	7.17	4.77'	4.5'	2.40'	PROP.	PVC	INTAKE	6"	1.0	0.5	3.5	STILLING WELL LINE (SOFT DIG #8)
C#17	EXIST.	CIP	FM	24"	7.07	4.56'	2.5'	2.51'	PROP.	PVC	INTAKE	6"	1.0	0.5	1.5	STILLING WELL LINE (SOFT DIG #7)
C#18	EXIST.	DBC	BT	3"	7.11	4.96'	4.7'	2.15'	PROP.	PVC	INTAKE	6"	1.0	0.5	3.7	STILLING WELL LINE (SOFT DIG #6)



SOFT DIG FIELD REPORT – HOLES 6 THROUGH 11



PLAN

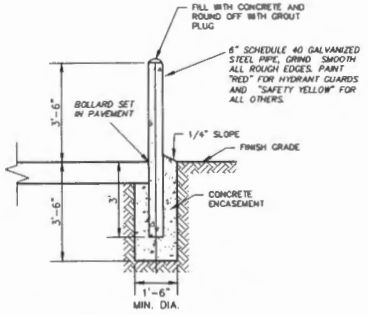


SECTION

TEMPORARY BYPASS DRAINAGE MANHOLE APRON DETAIL

NOTES:
1. CONSTRUCT 1.5' WIDE (MIN.) APRON AROUND MANHOLE (4 SIDES).
2. APRON AROUND MANHOLE SHALL BE 6" THICK CONCRETE ON COMPACTED SUBGRADE.
3. CONCRETE SHALL BE 3000 P.S.I. MIN., @ 28 DAYS TYPE 2 CEMENT.
4. SLOPE OF APRON SHALL MATCH EXISTING GROUND SLOPE OR 2% MINIMUM
5. PROVIDE LIGHT BROOM FINISH ON CONCRETE SURFACE AND TOOL ALL EXPOSED EDGES.

(NOT A CITY STANDARD DETAIL)
N.T.S.



GUARD POST/BOLLARD DETAIL

N.T.S.
(NOT A CITY STANDARD DETAIL)

NOTES:
1. SEE SHEETS PUMP STATION PROFILE, TEMPORARY DRAINAGE PLAN AND HIGH WATER STILLING WELL PLAN AND PROFILE FOR ADDITIONA CROSSING INFORMATION.
2. THE ELEVATION OF EACH EXISTING UTILITY AND DRAINAGE CROSSING MUST BE FIELD VERIFIED TO ESTABLISH AS-BUILT TOP OF UTILITY/ DRAINAGE INSTALLATION PRIOR TO START OF CONSTRUCTION
3. ELEVATIONS FOR THE TEMPORARY DRAINAGE PIPE UTILITY CROSSINGS AND THE STILLING WELL INTAKE LINE CROSSING ARE ASSUMED TO BE MINIMUM BASED UPON THE ADJACENT TEST HOLE ELEVATIONS.

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111-504-28

REVISIONS					
Date	By	Description	Date	By	Description

	Names	Dates
Drawn by	IK	05/20
Checked by	DWC	05/20
Designed by	IK	05/20
Checked by	JMR	05/20
Approved by	JOSEPH W. ROLES, JR. P.E.	

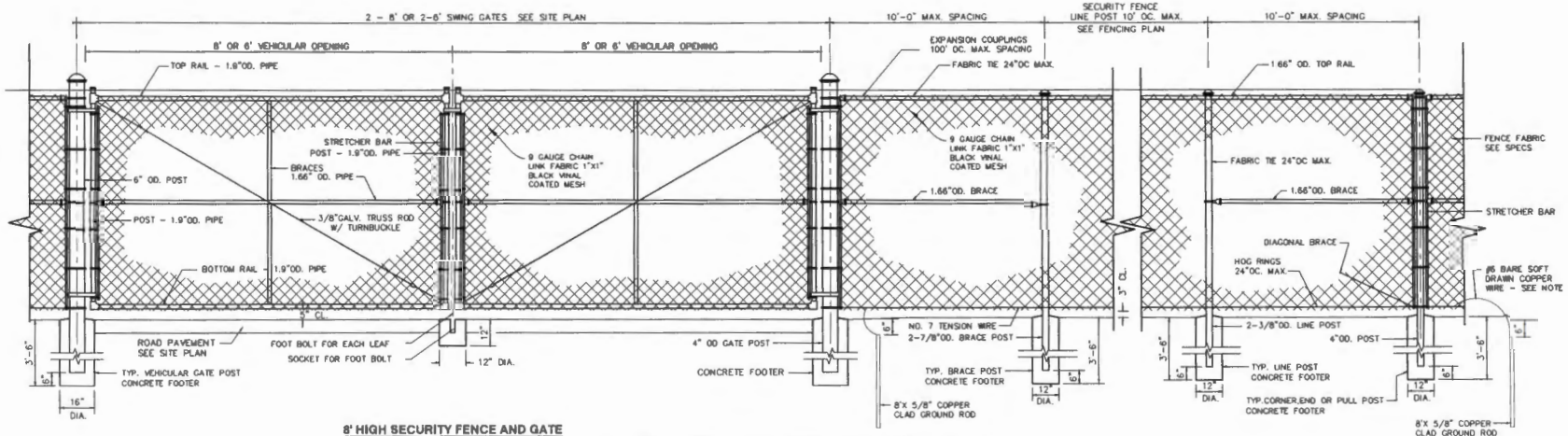
JOSEPH ROLES AND ASSOC., INC.
CONSULTING ENGINEERS
7401 N.W. 4th STREET, SUITE 101
PLANTATION, FLORIDA 33317
PHONE (954) 581-1543
CERTIFICATE OF AUTHORIZATION NO. 5848
Engineer of Record: JOSEPH W. ROLES, JR. P.E. PE NO. 16965

PREPARED FOR: CITY OF SUNRISE FLORIDA

STORM WATER PUMP STATION #5 PUMP STATION REPLACEMENT

GENERAL DETAILS

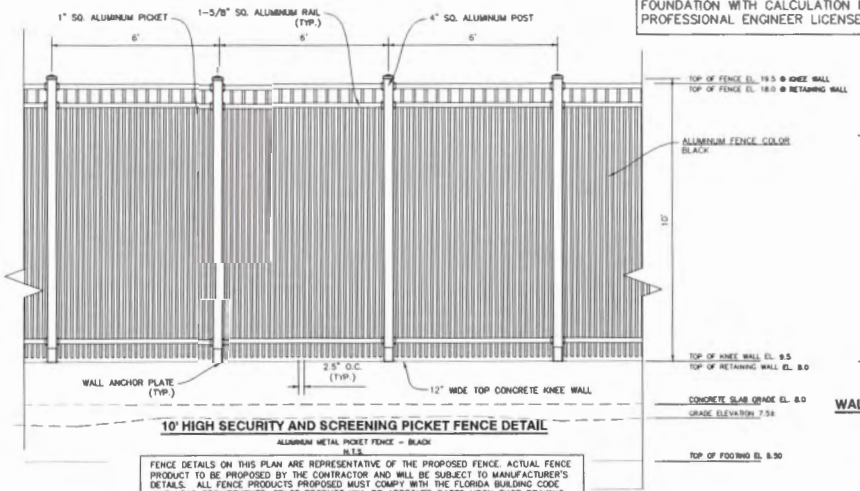
SHEET NO. C-29



8' HIGH SECURITY FENCE AND GATE

CHAINLINK FENCE – BLACK VINAL COATED
N.T.S.

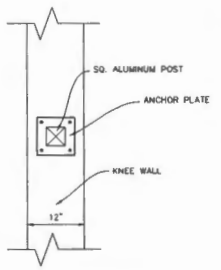
ALL FENCE PRODUCTS PROPOSED BY THE CONTRACTOR SHALL MEET THE FLORIDA BUILDING CODE WIND LOAD REQUIREMENTS. CONTRACTOR TO PROVIDE SHOP DRAWING OF FENCE AND FOUNDATION WITH CALCULATION PROVIDED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF FLORIDA



10' HIGH SECURITY AND SCREENING PICKET FENCE DETAIL

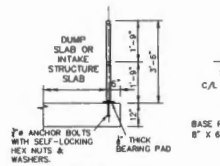
ALUMINUM METAL PICKET FENCE – BLACK
N.T.S.

FENCE DETAILS ON THIS PLAN ARE REPRESENTATIVE OF THE PROPOSED FENCE. ACTUAL FENCE PRODUCT TO BE PROPOSED BY THE CONTRACTOR AND WILL BE SUBJECT TO MANUFACTURER'S DETAILS. ALL FENCE PRODUCTS PROPOSED MUST COMPLY WITH THE FLORIDA BUILDING CODE WIND LOAD REQUIREMENTS. FENCE PRODUCT WILL BE APPROVED BASED UPON SHOP DRAWING SUBMITTAL AND WILL COMPLY IN GENERAL WITH THE APPEARANCE REPRESENTATION PROVIDED. FENCE WILL BE SUBJECT TO THE THE APPROVAL AND ACCEPTANCE OF THE CITY OF SUNRISE REGARDLESS OF THE ABILITY TO COMPLY WITH THE BUILDING CODE..

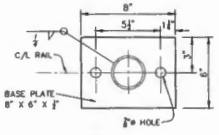


WALL ANCHOR PLATE

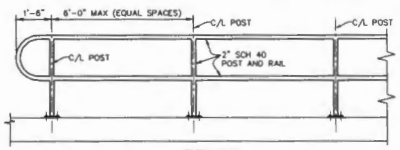
N.T.S.



SECTION



BASE PLATE DETAIL



ELEVATION

NOTES:

1. THIS RAILING IS APPLICABLE FOR ALL CASES WHERE A PEDESTRIAN DROP-OFF HAZARD DOES THAT DOES NOT REQUIRE COMPLIANCE WITH ADA REQUIREMENTS.
2. ALL POSTS AND RAILS SHALL BE 2" NOMINAL (SCH 40) BRUSHED ALUMINUM
3. ANCHOR BOLTS SHALL BE IN ACCORDANCE WITH ASTM F1554 GRADE 36. HEADLESS ANCHOR BOLTS FOR ADHESIVE ANCHORS SHALL BE THREADED FULL LENGTH.
4. PROVIDE CHAIN CLOSURE AND HOOK AT OPEN RAILS AT RAKER ASSEMBLY OPERATING AREA AND INTAKE BAY TO SECURE ACCESS.

GUIDERAIL DETAILS

N.T.S.

111–504–28

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REVISIONS					
Date	By	Description	Date	By	Description

	Names	Dates
Drawn by	HK	05/20
Checked by	DWG	05/20
Designed by	JMR	05/20
Checked by	JMR	05/20
Approved by	JOSEPH W. ROLES, JR. P.E.	

JOSEPH ROLES AND ASSOC., INC. CONSULTING ENGINEERS
7581 N.W. 4th STREET, SUITE 101 PLANTATION, FLORIDA 33317 PHONE (954) 581-2442 CERTIFICATE OF AUTHORIZATION NO. 8948

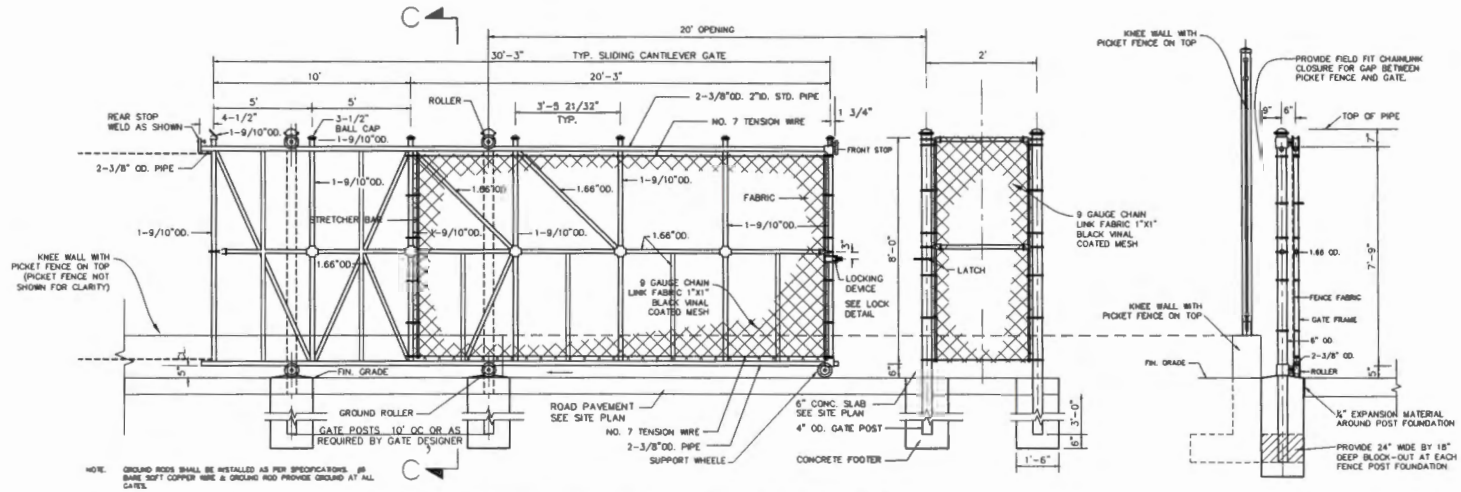
Engineer of Record: JOSEPH W. ROLES, JR. P.E. PE NO. 16965

PREPARED FOR: CITY OF SUNRISE FLORIDA

STORM WATER PUMP STATION #5 PUMP STATION REPLACEMENT

FENCE DETAILS

SHEET NO. C-30



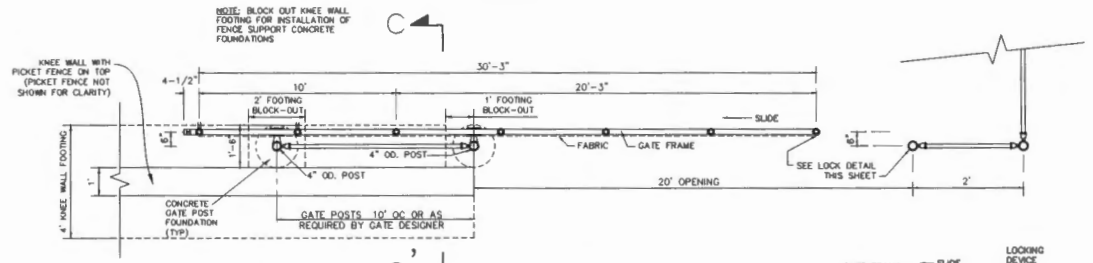
8' HIGH SINGLE SLIDING GATE & FENCE ELEVATION/SECTION B-B'

N.T.S.

GATE POST

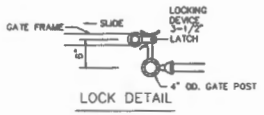
SECTION C-C'

N.T.S.



8' HIGH SINGLE SLIDING CANTILEVER GATE PLAN

N.T.S.



LOCK DETAIL

ROLLING GATE NOTES:

1. PROVIDE FIELD FIT CHAINLINK CLOSURE FOR GAP BETWEEN PICKET FENCE AND GATE.
2. PROVIDE 24" WIDE BY 18" DEEP BLOCK-OUT IN KNEE WALL FOUNDATION TO ACCOMODATE THE FENCE POST FOUNDATIONS (12" WIDE AT THE END OF THE WALL). SEE DOUBLE SLIDING CANTILEVER GATE PLAN THIS SHEET.
3. FENCE POST AND GATE POST LOCATIONS SHALL BE FIELD DETERMINED PRIOR TO CONSTRUCTION OF KNEE WALL.
4. FENCE POSTS AND GATE POSTS ALONG THE EAST SIDE OF THE PUMP STATION TO BE INSTALLED PRIOR TO CONSTRUCTION OF THE CONCRETE DECK SLAB.

FENCES TO MEET FLORIDA BUILDING CODE WIND LOAD REQUIREMENTS. CONTRACTOR TO PROVIDE SHOP DRAWING OF FENCE AND FOUNDATION WITH CALCULATION PROVIDED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF FLORIDA

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111-504-28

REVISIONS					
Date	By	Description	Date	By	Description

	Names	Dates
Drawn by	IK	05/20
Checked by	DWC	05/20
Designed by	JWR	05/20
Checked by	JWR	05/20
Approved by	JOSEPH W. ROLES, JR. P.E.	

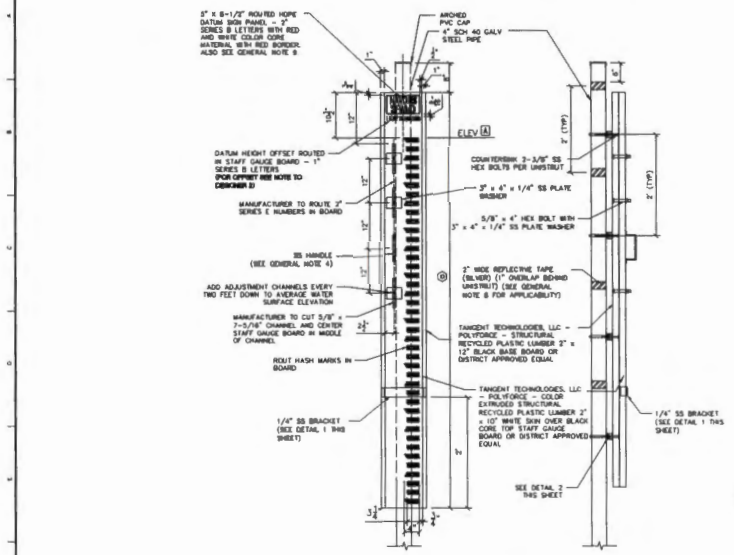
JOSEPH ROLES AND ASSOC., INC.
CONSULTING ENGINEERS
7601 N.W. 4th STREET, SUITE 101
PLANTATION, FLORIDA 33317
PHONE (954) 581-1945
CERTIFICATE OF AUTHORIZATION NO. 6948
Engineer of Record: JOSEPH W. ROLES, JR. P.E. PE NO. 16965

PREPARED FOR: CITY OF SUNRISE FLORIDA

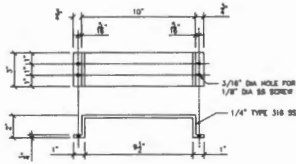
STORM WATER PUMP STATION #5
PUMP STATION REPLACEMENT

FENCE DETAILS

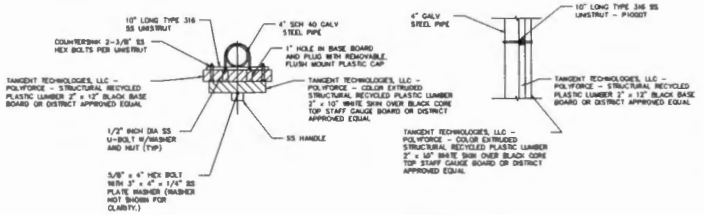
SHEET NO C-31



NAVD 88 STAFF GAUGE DETAIL (STEEL POLE)
NOT TO SCALE



MOUNTING BRACKET DETAIL
NOT TO SCALE
1
2/2



UNISTRUT MOUNTING DETAIL
NOT TO SCALE
2
2/2

GENERAL NOTES:

1. PRIOR TO FABRICATION OF THE STAFF GAUGE, THE CONTRACTOR SHALL DISCUSS AND VERIFY INFORMATION INCLUDING VENDOR(S) FOR FABRICATION OF THE GAUGE BOARD WITH THE DISTRICT PROJECT MANAGER OR SURVEY AND MAPPING SECTION
2. STAFF GAUGES TO BE IN ACCORDANCE WITH DISTRICT TECHNICAL SPECIFICATION SECTION 02781
3. THE STEEL PIPE MOUNTED STAFF GAUGES SHALL BE ADJUSTABLE.
4. HARDWARE:
   A. ALL SCREWS, BOLTS, NUTS, UNISTRUT AND WASHERS SHALL BE TYPE 316 SS UNLESS NOTED OTHERWISE.
   B. THE HANDLE SHALL BE A CAST TYPE 316 SS OR COMPARABLE PULL HANDLE W/ FOUR THROUGH HOLES (TWO EACH SIDE), RECTANGULAR GRIP, FOUR M8 SCREWS, MCMASTER CARR ITEM 13725A23 OR DISTRICT APPROVED EQUAL.
   C. FASTEN SS BRACKET TO 3" x 12" BLACK BACK BOARD USING 1/8" DIA SS HEX HEAD CONCRETE SCREWS, 1-3/4" LONG (2 TYP EACH SIDE).
5. DATUM CONVERSION (BETWEEN NAVD 88 AND NGVD 29 DATUMS) SHALL BE OBTAINED FROM THE DISTRICT SURVEY AND MAPPING SECTION.
6. NO BRACING OR CONNECTION WILL BE MADE TO WALKWAYS OR STRUCTURES UNLESS APPROVED BY THE DISTRICT.
7. SERIES B LETTERS SHALL BE BASED ON FEDERAL HIGHWAY ADMINISTRATION STANDARD ALPHABETS FOR TRAFFIC CONTROL DEVICES.
8. REFLECTOR AND REFLECTIVE MARKING TAPE SHALL BE PROVIDED ON ALL STEEL MOUNTING POLES LOCATED WITHIN CANALS OR WATER BODIES.
9. MANUFACTURER TO PERMANENTLY MOUNT DATUM SIGN PANEL IN ROUTED CAVITY.
10. ALL PIPES AND COUPLINGS SHALL BE HOT-DIP GALVANIZED.
11. TANGENT TECHNOLOGIES, LLC IS ONLY THE MANUFACTURER OF THE RECYCLE PLASTIC BOARD. HASH MARK AND OTHER ROUTING BY USE OF A COMPUTER NUMERICAL CONTROL (CNC) MACHINE IS NOT PERFORMED BY TANGENT TECHNOLOGIES, LLC.

NOTE TO DESIGNER:

5. DESIGNER SHALL DETERMINE AND COMPLETE THE DISTRICT'S ELEVATION AND DIMENSION SCHEDULE TABLE.
6. DESIGNER SHALL OBTAIN THE FOLLOWING INFORMATION FROM THE DISTRICT SURVEY AND MAPPING SECTION:
   a. DATUM CONVERSION BETWEEN NAVD 88 AND NGVD 29
   b. HISTORICAL LOW, AVERAGE/MEAN AND HIGH WATER SURFACE ELEVATIONS
   c. GAUGE BOARD LENGTH
9. GAUGE BOARD LENGTH (B) TO BE IN WHOLE FEET.

ELEVATION AND DIMENSION SCHEDULE

MARK	ELEVATION OR DIMENSION		DESCRIPTION
	STRUCTURE NAME		
	UPSTREAM	DOWNSTREAM	
(A)	9.00	N/A	10TH ELEVATION OF GAUGE FOR NAVD (FT NAVD 88)
(B)	8.0'	N/A	MOUNTING AND GAUGE BOARD LENGTHS FOR NAVD 88
N/A	4.00	N/A	AVERAGE WATER SURFACE ELEVATION (FT NAVD 88)
N/A	20'	N/A	MINIMUM POLE LENGTH (FT)
N/A	10'	N/A	MINIMUM EMBEDMENT*

* IN FIELD VERIFY EMBEDMENT DEPENDENT TO VERIFY IN AREA MODIFIED BY MUCK OR LIMEROCK

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

STANDARD SITE DETAILS
STAFF GAUGE DETAILS
STEEL PIPE-MOUNTED

11
2 SHEET 2 OF 2

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REVISIONS					
Date	By	Description	Date	By	Description

	Names	Dates
Drawn by	IK	05/20
Checked by	DWC	05/20
Designed by	IK	05/20
Checked by	JWR	05/20
Approved by	JOSEPH W. ROLES, JR. P.E.	

JOSEPH ROLES AND ASSOC., INC.
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7504 N.W. 4th STREET, SUITE 101
PLANTATION, FLORIDA 33317
PHONE (954) 581-1646
CERTIFICATE OF AUTHORIZATION NO. 5940

Engineer of Record: JOSEPH W. ROLES, JR. P.E. PE NO. 16965

PREPARED FOR: CITY OF SUNRISE FLORIDA

STORM WATER PUMP STATION #5 PUMP STATION REPLACEMENT

SFWMD STAFF GAUGE DETAIL

SHEET NO. C-32

SKETCH OF TOPOGRAPHIC AND SPECIFIC PURPOSE (TREE) SURVEY

ABBREVIATIONS

A	ARC LENGTH
B.C.R.	BROWARD COUNTY RECORDS
B.O.S.E.	BOTTOM OF STRUCTURE ELEVATION
C.B.S.	CONCRETE BLOCK STRUCTURE
℄	CENTER LINE
CB	CATCH BASIN
C/M	CALCULATED AND MEASURED
CLF	CHAIN LINK FENCE
CMP	CORRUGATED METAL PIPE
CONC.	CONCRETE
D	DELTA ANGLE
D.E.	DRAINAGE EASEMENT
Diam.	DIAMETER
D.M.E.	DRAINAGE MAINTENANCE EASEMENT
EL.	ELEVATION
ELEC.	ELECTRIC
EQUIP.	EQUIPMENT
F.F.E.	FINISHED FLOOR ELEVATION
FND.	FOUND
FPL	FLORIDA POWER & LIGHT
HDPE	HIGH DENSITY POLY ETHYLENE
ID	IDENTIFICATION
I.E.E.	INGRESS/EGRESS EASEMENT
I.E.	INVERT ELEVATION
IP	IRON PIPE
IPC	IRON PIPE AND CAP
IR	IRON ROD
IRC	IRON ROD AND CAP
LB	LICENSED BUSINESS
L.M.E.	LAKE MAINTENANCE EASEMENT
L.B.M.E.	LAKE BANK MAINTENANCE EASEMENT
M.D.C.R.	MIAMI-DADE COUNTY RECORDS
MH	MANHOLE
MHD	MANHOLE DRAINAGE
MHS	MANHOLE SEWER
N/D	NAIL & DISC
O.R.B.	OFFICIAL RECORDS BOOK
P	PLAT
P.B.	PLAT BOOK
PCP	PERMANENT CONTROL POINT
PG.	PAGE
P.O.B.	POINT OF BEGINNING
P.O.C.	POINT OF COMMENCEMENT
PRD	POLLUTION RETARDANT DEVICE
PRM	PERMANENT REFERENCE MONUMENT
PVC	POLYVINYL CHLORIDE
PT	POINT
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
R.E.	RIM ELEVATION
R/W	RIGHT-OF-WAY
SAN	SANITARY
SWK	SIDEWALK
TOB	TOP OF BANK OR BERM
TOE	TOE OF SLOPE
TR	TREE NUMBER
TRAV.	TRAVERSE
TYP	TYPICAL
U.E.	UTILITY EASEMENT
VCP	VITRIFIED CLAY PIPE

LEGEND

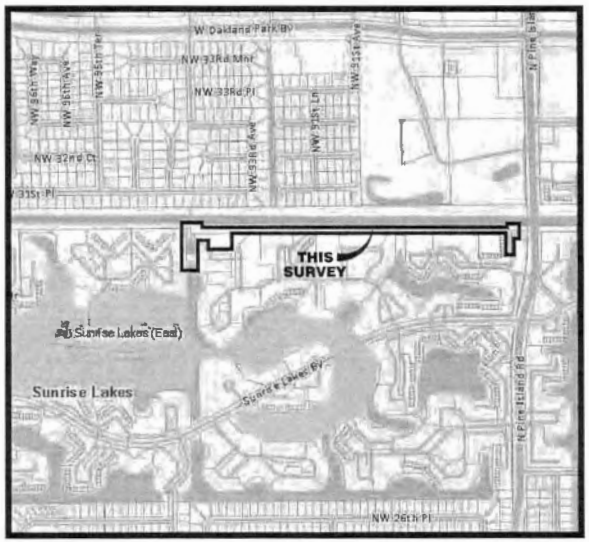
- AIR CONDITIONER
- REPAD
- BACK FLOW PREVENTER
- BENCH
- BOLLARD
- CABLE TV BOX
- CABLE TV RISER
- CABLE TV VAULT
- CATCH BASIN
- CLEANOUT
- CONCRETE LIGHT POLE
- CONCRETE POWER POLE
- DOUBLE SUPPORT SIGN
- DRINKING FOUNTAIN
- DOUBLE VALVE ASSEMBLY
- ELECTRIC CABINET
- ELECTRIC METER
- ELECTRIC PANEL
- ELECTRIC VAULT
- FIRE DEPARTMENT CONNECTION
- FIRE HYDRANT
- FLAG POLE
- GAS BOX
- GAS METER
- GUTTER INLET
- GROUND LIGHT
- HANDICAP
- HIGH MAST LIGHT POLE
- IRRIGATION BOX
- IRRIGATION PUMP
- LIGHTED BOLLARD
- MAIL BOX
- STORM DRAINAGE MANHOLE
- SPOT ELEVATION (HARD SURFACE)
- SPOT ELEVATION (SOFT SURFACE)

TREE LEGEND

- PALM
- PALM CLUSTER
- TREE
- TREE CLUSTER

LEGEND

- ELECTRIC MANHOLE
- GREASE TRAP MANHOLE
- SANITARY SEWER MANHOLE
- METAL LIGHT POLE
- METAL POST
- PLASTIC POST
- SINGLE SUPPORT SIGN
- STUMP
- TELEPHONE RISER
- TRASH -- GARBAGE BIN
- TREE
- TREE CLUSTER
- TELEPHONE VAULT
- TRANSFORMER ON PAD
- UTILITY POLE
- GAS VALVE
- IRRIGATION VALVE
- SEWER VALVE
- UNKNOWN VALVE
- WATER VALVE
- COMMUNICATIONS VAULT
- ELECTRIC VAULT
- FIBER OPTIC VAULT
- UNKNOWN UTILITY VAULT
- WIRE PULL BOX
- ELECTRIC WIRE PULL BOX
- STREET LIGHT WIRE PULL BOX
- TELEPHONE WIRE PULL BOX
- TRAFFIC WIRE PULL BOX
- WATER METER
- UTILITY MARKER
- CONCRETE POST
- METAL FENCE
- CHAIN LINK FENCE
- TOP OF BANK
- TOE OF SLOPE
- EDGE OF WATER
- OVERHEAD WIRES
- BURIED ELECTRIC
- BURIED FIBER OPTIC
- BURIED TELEPHONE
- BURIED TELEVISION CABLE
- GAS MAIN
- SANITARY SEWER LINE
- STREET LIGHT
- STORM DRAINAGE
- TRAFFIC SIGNAL
- UNKNOWN UTILITY
- WATER LINE
- WATER MAIN
- IRRIGATION
- BREAK IN LINE SCALE



LOCATION MAP
NOT TO SCALE

TREE TABLE

TREE ID#	BOTANIC NAME	TRUNK DIAMETER	COMMENT
369	FICUS TREE	48"	
370	FICUS TREE	28"	
378	FICUS TREE	12"	
379	FICUS TREE	4"	
380	FICUS TREE	4"	
381	FICUS TREE	6"	
382	FICUS TREE	4"	
383	FICUS TREE	6"	
384	FICUS TREE	10"	
385	FICUS TREE	12"	
386	FICUS TREE	10"	
412	UNKNOWN TREE	6"	
413	FICUS TREE	6"	
414	FICUS TREE	6"	
415	FICUS TREE	4"	
416	FICUS TREE	6"	
419	YUCCA CLUSTER	6"	
426	FICUS TREE	6"	
427	OAK TREE	6"	
428	FICUS TREE	4"	
429	FICUS TREE	6"	
430	FICUS TREE	8"	
431	FICUS TREE	12"	
461	UNKNOWN TREE	6"	
462	UNKNOWN TREE	8"	
520	FICUS TREE	8"	
521	FICUS TREE	4"	
522	FICUS TREE	4"	
523	FICUS TREE	4"	
524	FICUS TREE	4"	
525	FICUS TREE	4"	
526	FICUS TREE	4"	
527	FICUS TREE	4"	

TREE TABLE

TREE ID#	BOTANIC NAME	TRUNK DIAMETER	COMMENT
528	FICUS TREE	6"	
573	SABAL PALM	14"	
582	SABAL PALM	14"	(DEAD)
770	FICUS TREE	24"	
821	TAMARIND TREE	12"	
837	UMBRELLA TREE	24"	
962	FICUS TREE	36"	
1029	FICUS TREE	48"	
1172	SILVER BUTTONWOOD TREE	20"	
1173	SILVER BUTTONWOOD TREE	20"	
1174	SILVER BUTTONWOOD TREE	12"	
1175	UMBRELLA TREE	24"	
1176	UMBRELLA TREE	24"	
1177	ROYAL PALM	14"	
1369	FICUS TREE	36"	
1648	UNKNOWN TREE CLUSTER	15"	
1650	UMBRELLA TREE CLUSTER	15"	
1653	UMBRELLA TREE CLUSTER	18"	
1655	UMBRELLA TREE CLUSTER	18"	
1657	ARECA PALM CLUSTER	40"	
1732	UMBRELLA TREE CLUSTER	16"	
1733	UNKNOWN TREE	30"	
1736	ARECA PALM CLUSTER	40"	
1737	UNKNOWN TREE CLUSTER	6"	
1738	UNKNOWN TREE CLUSTER	6"	
1739	UMBRELLA TREE CLUSTER	18"	
1745	UNKNOWN PALM CLUSTER	30"	
1746	BOTTLE BRUSH TREE	10"	
1747	UMBRELLA TREE CLUSTER	24"	
1767	UMBRELLA TREE	8"	
1806	UNKNOWN TREE	30"	
1807	UNKNOWN TREE	30"	
1808	UNKNOWN TREE	24"	

TREE SURVEY NOTES:

1. THIS FIRM HAS IDENTIFIED THE VARIOUS TYPES OF TREES LOCATED ON THIS SITE BASED ON COMMON KNOWLEDGE OF TREE SPECIES. FOR POSITIVE IDENTIFICATION OF TREE SPECIES A QUALIFIED LANDSCAPE ARCHITECT OR BOTANIST SHOULD BE CONSULTED. TREES THREE (3") CALIPER INCHES OR LARGER, WHEN MEASURED AT BREAST HEIGHT, ARE SHOWN ON THE SURVEY DRAWING. HEDGES AND GROUND COVER ARE NOT SHOWN THE SURVEY DRAWING. EXOTIC TREES SUCH AS MELALEUCA, BRAZILIAN PEPPER, AND AUSTRALIAN PINE ARE NOT SHOWN ON THE SURVEY DRAWING.
2. EACH TREE LOCATED HAS BEEN TAGGED WITH A NUMBERED TAG THAT CORRESPONDS TO THE TREE LEGEND SHOWN HEREON
3. CLUSTERS OF TREES ARE SHOWN GROUPED WITH AN APPROXIMATION OF THE TOTAL NUMBER OF TREES LOCATED WITHIN THE GROUP
4. THE CANOPY DIAMETER AND SPREAD ARE NOT SHOWN HEREON, UNLESS INDICATED OTHERWISE.

811 Know what's below. Call before you dig. www.callsunshine.com

SURVEY NOTES:

1. THIS SKETCH OF TOPOGRAPHIC AND SPECIFIC PURPOSE (TREE) SURVEY WAS PREPARED IN ACCORDANCE WITH THE STANDARDS OF PRACTICE FOR SURVEYING ESTABLISHED BY THE BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS IN CHAPTER 5J-17, FLORIDA ADMINISTRATIVE CODES, PURSUANT TO SECTION 472.027, FLORIDA STATUTES.
2. THIS SURVEY IS NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL EMBOSSED SEAL OF A FLORIDA LICENSED PROFESSIONAL SURVEYOR AND MAPPER. IF THIS SURVEY HAS BEEN DELIVERED IN PORTABLE DOCUMENT FORMAT (PDF) AND DIGITALLY SIGNED AND SEALED, A VALID SERIAL NUMBER MUST BE PRESENT FOR THE SURVEY TO BE CONSIDERED VALID.
3. BOUNDARY LINES AND RIGHT-OF-WAY LINES ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY AND ARE BASED ON PLATS AND/OR RIGHT-OF-WAY MAPS OF RECORD. THIS SKETCH OF SURVEY DOES NOT REPRESENT A SURVEY OF THE BOUNDARY OR RIGHT OF WAY LINES.
4. A SEARCH OF THE PUBLIC RECORDS FOR OWNERSHIP, EASEMENTS, RIGHTS-OF-WAY, OR OTHER MATTERS OF RECORD WAS NOT PERFORMED BY STONER & ASSOCIATES, INC. THERE MAY BE ADDITIONAL INFORMATION RECORDED IN THE PUBLIC RECORDS THAT IS NOT SHOWN HEREON. FOR FURTHER INFORMATION, CONTACT A QUALIFIED TITLE COMPANY OR CONSULT THE PUBLIC RECORDS OF BROWARD COUNTY, FLORIDA
5. THE HORIZONTAL COORDINATES SHOWN HEREON ARE BASED ON THE FLORIDA STATE PLANE COORDINATE SYSTEM (EAST ZONE), NORTH AMERICAN DATUM 1983/2011 ADJUSTMENT (N.A.D. 83/2011). THE COORDINATES FOR EACH CONTROL POINT WERE ESTABLISHED BY UTILIZING A COMBINATION OF GPS OBSERVATIONS AND/OR CONVENTIONAL SURVEY MEASUREMENTS.
6. THE BEARINGS SHOWN HEREON ARE BASED ON N.02°37'28"E. ALONG THE MOST WESTERLY SURVEY CONTROL LINE.
7. THE ELEVATIONS SHOWN HEREON ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (N.A.V.D. 88), BENCHMARK 1021, BROWARD COUNTY ENGINEERING DEPARTMENT BRASS DISK STAMPED C-10A, IN THE SIDEWALK AT THE SOUTHEAST CORNER OF BRIDGE ON PINE ISLAND ROAD OVER THE C-13 CANAL. ELEVATION = 12.54'.
8. THE PROPERTY SHOWN HEREON HAS THE FOLLOWING FLOOD ZONE DESIGNATION:
   a. NFIP COMMUNITY NAME & COMMUNITY NUMBER: 125338
   b. COUNTY NAME: BROWARD COUNTY
   c. STATE OF FLORIDA
   d. MAP/PANEL NUMBER: 12011C0345
   e. SUFFIX: H
   f. FIRM INDEX DATE: 08/18/2014
   g. FIRM PANEL EFFECTIVE/REVISED DATE: 08/18/2014
   h. FLOOD ZONE: X & AE 7
   i. BASE FLOOD ELEVATION: N/A & 7
   j. THE FLOOD ZONE INFORMATION SHOWN HEREON IS BASED UPON THE CURRENT PUBLISHED FLOOD INSURANCE RATE MAP (FIRM) ON THE DATE THIS SURVEY WAS PREPARED. THE DATA CONTAINED IN THE FIRM MAP IS SUBJECT TO CHANGE WITHOUT NOTICE. THE FLOOD ZONE BOUNDARIES (WHEN SHOWN) ARE APPROXIMATE, BASED ON DIGITAL FIRM PANEL MAP IMAGE. FOR THE LATEST FLOOD ZONE INFORMATION CONSULT THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) OR YOUR LOCAL GOVERNMENTAL BUILDING DEPARTMENT.
9. CERTAIN FEATURES ARE REPRESENTED BY THE SYMBOLS REFLECTED IN THIS MAP. THE LEGEND OF FEATURES MAY HAVE BEEN ENLARGED FOR CLARITY AND MAY NOT REPRESENT THE ACTUAL SHAPE OR SIZE OF THE FEATURE. THE SYMBOLS MAY HAVE BEEN PLOTTED AT THE APPROPRIATE CENTER OF THE FEATURE BASED UPON THE FIELD LOCATION
10. THIS SKETCH IS INTENDED TO BE DISPLAYED AT A HORIZONTAL SCALE OF 1 INCH = 30 FEET.
11. THE HORIZONTAL ACCURACY FOR WELL DEFINED IMPROVEMENTS DEPICTED ON THIS SKETCH IS ONE-TENTH (0.1' ±) OF A FOOT PLUS OR MINUS. THE VERTICAL (ELEVATIONS) ACCURACY FOR WELL DEFINED IMPROVEMENTS, FEATURES, AND SURFACES DEPICTED ON THIS SURVEY IS TWO-TENTHS (0.2' ±) OF A FOOT, PLUS OR MINUS
12. HEDGES, GROUND COVER, AND OTHER LANDSCAPE FEATURES ARE NOT SHOWN HEREON, UNLESS OTHERWISE NOTED.
13. IRRIGATION FEATURES, SUCH AS SPRINKLERS, ARE NOT SHOWN HEREON.
14. FENCES AND WALL DIMENSIONS ARE APPROXIMATE. THE SURVEYOR DID NOT DETERMINE OWNERSHIP OF FENCES AND WALLS.
15. SUBSURFACE FEATURES ARE NOT SHOWN HEREON. THIS SITE COULD HAVE UNDERGROUND INSTALLATIONS THAT ARE NOT SHOWN HEREON. BEFORE DESIGN, CONSTRUCTION, OR EXCAVATION CONTACT 811 AND/OR THE APPROPRIATE UTILITY COMPANIES FOR FIELD VERIFICATION OF UTILITIES.
16. THE EXTERIOR BUILDING DIMENSIONS SHOWN HEREON REPRESENT THE OVERALL SIZE OF THE BUILDING (FOOTPRINT). SUBSURFACE BUILDING FOOTINGS AND SUPPORTS WERE NOT LOCATED. CERTAIN ARCHITECTURAL FEATURES MAY NOT BE SHOWN ON THE SURVEY. ROOF OVERHANGS ARE NOT SHOWN UNLESS OTHERWISE NOTED. BUILDING DIMENSIONS AND BUILDING SETBACKS ARE SHOWN ROUNDED TO THE NEAREST ONE-TENTH (0.1') OF A FOOT BEFORE DESIGN OF IMPROVEMENTS CRITICAL DIMENSIONS SHOWN BE CONFIRMED
17. THE DIMENSIONS SHOWN HEREON ARE BASED UPON U.S. SURVEY FEET AND FRACTIONAL PARTS THEREOF
18. THE SURVEYOR DID NOT INSPECT THIS PROPERTY FOR ENVIRONMENTAL HAZARDS.
19. THE SANITARY SEWER AND STORM DRAINAGE AS-BUILT DATA SHOWN HEREON WAS COLLECTED FOR ENGINEERING DESIGN PURPOSES ONLY. THE AS-BUILT DATA IS LIMITED TO STRUCTURE RIM AND PIPE INVERT ELEVATIONS ONLY. PIPE SIZES AND PIPE MATERIAL TYPES SHOULD BE CONFIRMED BEFORE DESIGN OF IMPROVEMENTS. THE SURVEYORS DID NOT PHYSICALLY ENTER THE STRUCTURES. ALL THE MEASUREMENTS AND ELEVATIONS WERE COLLECTED (WITH THE LID OF THE STRUCTURE REMOVED) BY VISUAL OBSERVATIONS IN ACTIVE FACILITIES WITH WATER AND EFFLUVIUM PRESENT. THE CONNECTIONS BETWEEN STRUCTURES WERE NOT VISUALLY INSPECTED OR VERIFIED AND THE CONDITION OF PIPING WAS NOT DETERMINED. CRITICAL ELEVATIONS AND DIMENSIONS SHOULD BE VERIFIED BEFORE DESIGN OF IMPROVEMENTS, WITH THE FACILITIES PUMPED DOWN AND PIPES CLEANED OUT. BEFORE ORDERING REPLACEMENT OF CONNECTING PIPES THE SIZE AND TYPE OF PIPES SHOULD BE CONFIRMED
20. THE INFORMATION DEPICTED ON THIS SKETCH OF SURVEY REPRESENTS THE RESULTS OF A FIELD SURVEY ON THE DATE INDICATED ON THE BORDER OF THE DRAWING AND CAN ONLY BE CONSIDERED VALID FOR THIS DATE AND INDICATES THE GENERAL CONDITIONS EXISTING AT THE TIME OF THE FIELD SURVEY.
21. THIS SKETCH OF SURVEY CANNOT BE RELIED UPON BY PERSONS OR ENTITIES OTHER THAN THOSE PERSONS OR ENTITIES CERTIFIED TO HEREON. ADDITIONS OR DELETIONS TO THIS SURVEY AND/OR REPORTS BY PEOPLE OR PERSONS OTHER THAN THE SIGNING PARTIES ARE PROHIBITED WITHOUT PRIOR WRITTEN CONSENT OF THE SIGNING PARTY OR PARTIES.
22. THE INFORMATION CONTAINED IN THIS DOCUMENT WAS PREPARED BY STONER & ASSOCIATES, INC. (S&A). S&A HAS TAKEN PRECAUTIONS TO ENSURE THE ACCURACY OF THIS DOCUMENT AND THE DATA REFLECTED HEREIN. S&A CANNOT NOT GUARANTEE THAT ALTERATIONS AND/OR MODIFICATIONS WILL NOT BE MADE TO THE DATA CONTAINED IN THIS DOCUMENT BY OTHERS AFTER IT LEAVES OUR POSSESSION. THIS DOCUMENT MUST BE COMPARED TO THE ORIGINAL HARD COPY (WHICH BEARS THE RAISED SURVEYOR'S CERTIFICATION SEAL) TO ENSURE THE ACCURACY OF THE INFORMATION CONTAINED HEREIN AND TO FURTHER ENSURE THAT ALTERATIONS AND/OR MODIFICATIONS HAVE NOT BEEN MADE. S&A MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, CONCERNING THE ACCURACY OF THE INFORMATION CONTAINED IN THIS OR ANY DOCUMENT TRANSMITTED OR RENDERED BY COMPUTER OR OTHER ELECTRONIC MEANS. CONTACT S&A FOR VERIFICATION OF ACCURACY

CERTIFIED TO:

CITY OF SUNRISE

SURVEYOR'S CERTIFICATE:

THIS IS TO CERTIFY THAT THIS SKETCH OF TOPOGRAPHIC AND SPECIFIC PURPOSE (TREE) SURVEY WAS MADE UNDER MY RESPONSIBLE CHARGE AND IS ACCURATE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I FURTHER CERTIFY THAT THIS SKETCH MEETS THE STANDARDS OF PRACTICE, ESTABLISHED BY THE BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS, CHAPTER 5J-17, FLORIDA ADMINISTRATIVE CODES, PURSUANT TO SECTION 472.027, FLORIDA STATUTES.

DATE OF SIGNATURE: 11/12/2020

JAMES D. STONER
PROFESSIONAL SURVEYOR AND MAPPER NO. 6038 STATE OF FLORIDA
STONER AND ASSOCIATES, INC. L.B. 6633
jstoner@stonersurveyors.com

NO.	REVISION	DATE	BY
1	ADD UTILITY LOCATIONS	9/2021	KS
2	ADD TREE SURVEY	12/2021	CMS

REVISED PER CITY COMMENTS DATED 10/27/20

REVISED PER CITY COMMENTS DATED 11/12/20

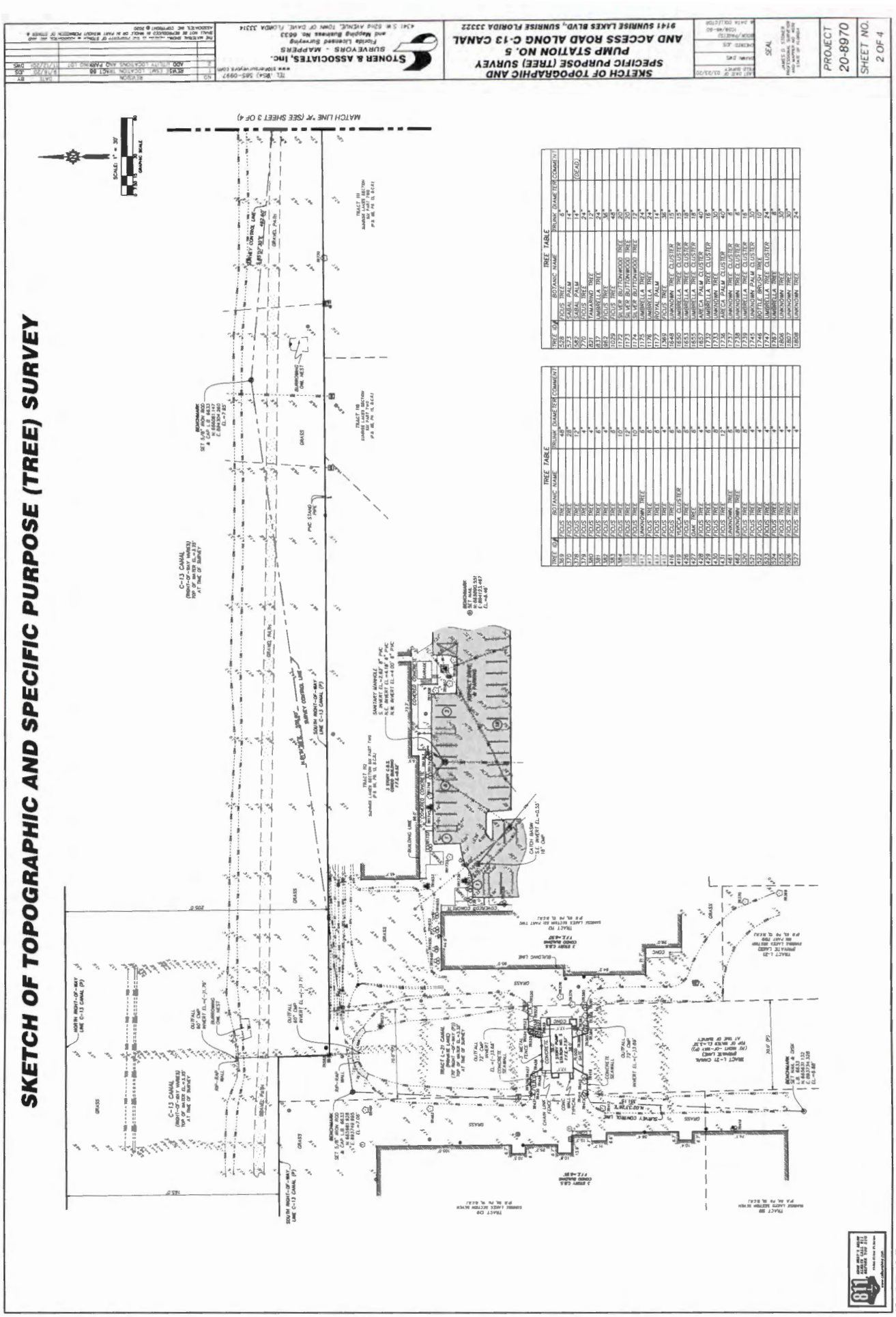
STONER & ASSOCIATES, Inc.
SURVEYORS - MAPPERS
Florida Licensed Surveying and Mapping Business No. 6633
4341 S.W. 62nd AVENUE, DAVIE, FLORIDA 33314
TEL: (954) 585-0997
www.stonersurveyors.com

SKETCH OF TOPOGRAPHIC AND SPECIFIC PURPOSE (TREE) SURVEY
PUMP STATION NO. 5
AND ACCESS ROAD ALONG C-13 CANAL
9141 SUNRISE LAKES BLVD., SUNRISE FLORIDA 33322

SEAL
JAMES D. STONER
PROFESSIONAL SURVEYOR AND MAPPER NO. 6038
STATE OF FLORIDA

PROJECT
20-8970

SHEET NO.
1 OF 4


SKETCH OF TOPOGRAPHIC AND SPECIFIC PURPOSE (TREE) SURVEY
SKETCH OF TOPOGRAPHIC AND SPECIFIC PURPOSE (TREE) SURVEY
PUMP STATION NO. 5
AND ACCESS ROAD ALONG C-13 CANAL
9141 SUNRISE LAKES BLVD., SUNRISE FLORIDA 33322
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Florida Licensed Surveying and Mapping Business No. 6633
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TEL. (954) 585-0997
www.stonersurveys.com
SEAL
PROJECT 20-8970
SHEET NO. 2 OF 4
SCALE: 1" = 30'
MATCH LINE "A" (SEE SHEET 3 OF 4)
TREE TABLE
TREE TABLE
C-13 CANAL
SUNRISE LAKES SECTION
SUNRISE LAKES EASTERN SECTION
SUNRISE LAKES EASTERN SECTION
SUNRISE LAKES EASTERN

SKETCH OF TOPOGRAPHIC AND SPECIFIC PURPOSE (TREE) SURVEY
MATCH LINE "A" (SEE SHEET 2 OF 4)
MATCH LINE "B" (SEE LOWER LEFT, THIS SHEET)
MATCH LINE "B" (SEE UPPER RIGHT, THIS SHEET)
MATCH LINE "C" (SEE SHEET 4 OF 4)
C-13 CANAL
SOUTH RIGHT-OF-WAY LINE C-13 CANAL (R/W)
SURVEY CONTROL LINE
GRASS
GRAVEL PATH
SCALE: 1" = 40'
SKETCH OF TOPOGRAPHIC AND SPECIFIC PURPOSE (TREE) SURVEY
PUMP STATION NO. 5
AND ACCESS ROAD ALONG C-13 CANAL
9141 SUNRISE LAKES BLVD., SUNRISE FLORIDA 33322
STONER & ASSOCIATES, Inc.
SURVEYORS - MAPPERS
Florida Licensed Surveying and Mapping Business No. 6633
4341 S.W. 62nd AVENUE, TOWN OF DAVIE, FLORIDA 33314
TEL (954) 585-0997
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REVISE ESMT LOCATION TRAC 88 8/17/20 STS
ADD UTILITY LOCATIONS AND BANKING LOT 7/17/20 DWS
PROJECT 20-8970
SHEET NO. 3 OF 4
SEAL

SKETCH OF TOPOGRAPHIC AND SPECIFIC PURPOSE (TREE) SURVEY

ABBREVIATIONS

ARC LENGTH	
BROWARD COUNTY RECORDS	
BLOCK	
CENTRAL ANGLE DESIGNATION	
CONCRETE BLOCK STRUCTURE	
CLUTCH BURN	
CENTERLINE	
CORRUGATED METAL PIPE	
CALCULATED	
CALCULATED AND MEASURED	
DELTA ANGLE	
DRAINAGE EASEMENT	
DRAINAGE MAINTENANCE EASEMENT	
DIAMETER	
ELECTRIC	
ELECTRIC EASEMENT	
FINISHED FLOOR ELEVATION	
FLORIDA POWER & LIGHT	
HIGH DENSITY POLY ETHYLENE	
INGRESS/EGRESS EASEMENT	
IRON PIPE	
IRON ROD	
IRON ROD AND CAP	
LICENSED SURVEYOR	
LAKE MAINTENANCE EASEMENT	
MIAMI-DADE COUNTY RECORDS	
MANHOLE	
MANHOLE DRAINAGE	
MEASURED	
NAIL & DISC	
OFFICIAL RECORDS BOOK	
PLAT	
PLAT BOOK	
PERMANENT CONTROL POINT	
PAGE	
POINT OF COMMENCEMENT	
POLLUTION RETARDANT DEVICE	
POLYVINYL CHLORIDE	
MONUMENT	
RADIUS	
REINFORCED CONCRETE PIPE	
RIM ELEVATION	
RIGHT-OF-WAY	
SQUARE FEET OR SECOND	
SIDEWALK	
TOP OF BANK OR BERM	
TRAVERSE	
UTILITY EASEMENT	
VITRIFIED CLAY PIPE	

LEGEND

AIR CONDITIONER	
BUILDING	
BACK FLOW PREVENTER	
BENCH	
BOLLARD	
CABLE TV BOX	
CABLE TV RISER	
CATCH BASIN	
CLEANOUT	
DOUBLE LIGHT POLE	
DOUBLE SUPPORT SIGN	
DRINKING FOUNTAIN	
DOUBLE VALVE ASSEMBLY	
ELECTRIC METER	
ELECTRIC PANEL	
ELECTRIC VAULT	
FIRE HYDRANT	
FIRE DEPARTMENT CONNECTION	
FLAG POLE	
GAS METER	
GUTTER INLET	
HEDGE	
HIGH MAST LIGHT POLE	
IRRIGATION BOX	
IRRIGATION PUMP	
LIGHTED BOLLARD	
MAILBOX	
STORM DRAINAGE MANHOLE	
SPOT ELEVATION (HARD SURFACE)	
SPOT ELEVATION (SOFT SURFACE)	

TREE LEGEND

PALM	
PALM CLUSTER	
TREE	
TREE CLUSTER	

LEGEND

ELECTRIC MANHOLE	
GROUND RISER MANHOLE	
SANITARY SEWER MANHOLE	
METAL LIGHT POLE	
METAL POST	
SIGN	
SINGLE SUPPORT SIGN	
STUMP	
TELEPHONE RISER	
TRUCK - GARBAGE BIN	
TREE	
TREE CLUSTER	
TELEPHONE VAULT	
WATER METER ON PAD	
ELECTRIC VAULT	
COMMUNICATIONS VAULT	
FIBER OPTIC VAULT	
UNKNOWN UTILITY VAULT	
ELECTRIC WIRE PULL BOX	
STREET LIGHT WIRE PULL BOX	
TELEPHONE WIRE PULL BOX	
WATER VALVE	
SEWER VALVE	
IRRIGATION VALVE	
GAS VALVE	
UTILITY POLE	
WOOD FENCE	
CHAIN LINK FENCE	
METAL FENCE	
CONCRETE POST	
UTILITY MARKER	
WATER PULL BOX	
IRRIGATION PULL BOX	
STREET LIGHT POLE	
ELECTRIC WIRE PULL BOX	
TELEPHONE WIRE PULL BOX	
UNKNOWN UTILITY VAULT	
ELECTRIC VAULT	
FIBER OPTIC VAULT	
TELEPHONE VAULT	
WATER METER ON PAD	
UTILITY POLE	
WOOD FENCE	
CHAIN LINK FENCE	
TOP OF BANK	
EDGE OF WATER	
OVERHEAD WIRES	
BURIED ELECTRIC	
BURIED FIBER OPTIC	
BURIED TELEVISION CABLE	
GAS MAIN	
SANITARY SEWER LINE	
STORM SEWER	
STREET LIGHT	
TRAFFIC GAUGE	
TRAFFIC SIGNAL	
UNKNOWN UTILITY	
WATER LINE	
WATER MAIN	
BREAK IN LINE SCALE	

TREE TABLE

TREE ID#	BOTANIC NAME	TRUNK DIAMETER	COMMENTS
569	PODS TREE	48"	
570	PODS TREE	28"	
579	PODS TREE	24"	
580	PODS TREE	4"	
581	PODS TREE	4"	
582	PODS TREE	10"	
583	PODS TREE	8"	
584	PODS TREE	12"	
585	PODS TREE	10"	
586	PODS TREE	12"	
412	PODS TREE	6"	
413	PODS TREE	6"	
414	PODS TREE	6"	
415	PODS TREE	6"	
416	PODS TREE	6"	
417	PODS TREE	6"	
418	PODS TREE	6"	
419	YUCCA CLUSTER	6"	
420	PODS TREE	6"	
421	OAK TREE	6"	
422	PODS TREE	6"	
423	PODS TREE	6"	
424	PODS TREE	6"	
425	PODS TREE	6"	
426	PODS TREE	6"	
427	PODS TREE	6"	
428	PODS TREE	6"	
429	PODS TREE	6"	
430	PODS TREE	6"	
431	PODS TREE	6"	
432	PODS TREE	6"	
433	PODS TREE	6"	
434	PODS TREE	6"	
435	PODS TREE	6"	
436	PODS TREE	6"	
437	PODS TREE	6"	
438	PODS TREE	6"	
439	PODS TREE	6"	
440	PODS TREE	6"	
441	PODS TREE	6"	
442	PODS TREE	6"	
443	PODS TREE	6"	
444	PODS TREE	6"	
445	PODS TREE	6"	
446	PODS TREE	6"	
447	PODS TREE	6"	
448	PODS TREE	6"	
449	PODS TREE	6"	
450	PODS TREE	6"	
451	PODS TREE	6"	
452	PODS TREE	6"	
453	PODS TREE	6"	
454	PODS TREE	6"	
455	PODS TREE	6"	
456	PODS TREE	6"	
457	PODS TREE	6"	

TREE TABLE

TREE ID#	BOTANIC NAME	TRUNK DIAMETER	COMMENTS
528	FICUS TREE	6"	
529	ROYAL PALM	14"	
530	ROYAL PALM	14"	
531	FICUS TREE	12"	
532	TAMARIND TREE	12"	
533	FICUS TREE	12"	(DEAD)
534	FICUS TREE	24"	
535	UMBRELLA TREE	24"	
536	SILVER BUTTONWOOD TREE	20"	
537	FICUS TREE	48"	
538	FICUS TREE	12"	
539	SILVER BUTTONWOOD TREE	20"	
540	SILVER BUTTONWOOD TREE	20"	
541	UMBRELLA TREE	24"	
542	UMBRELLA TREE	24"	
543	ROYAL PALM	14"	
544	ROYAL PALM	14"	
545	UMBRELLA TREE CLUSTER	15"	
546	UMBRELLA TREE CLUSTER	15"	
547	UMBRELLA TREE CLUSTER	18"	
548	UMBRELLA TREE CLUSTER	15"	
549	UMBRELLA TREE CLUSTER	40"	
550	UMBRELLA TREE CLUSTER	15"	
551	UNKNOWN TREE	30"	
552	ARECA PALM CLUSTER	8"	
553	UNKNOWN PALM CLUSTER	8"	
554	UNKNOWN TREE CLUSTER	6"	
555	UMBRELLA TREE CLUSTER	16"	
556	UNKNOWN PALM CLUSTER	8"	
557	UMBRELLA TREE CLUSTER	30"	
558	UMBRELLA TREE CLUSTER	24"	
559	UNKNOWN TREE	30"	
560	UNKNOWN TREE	24"	

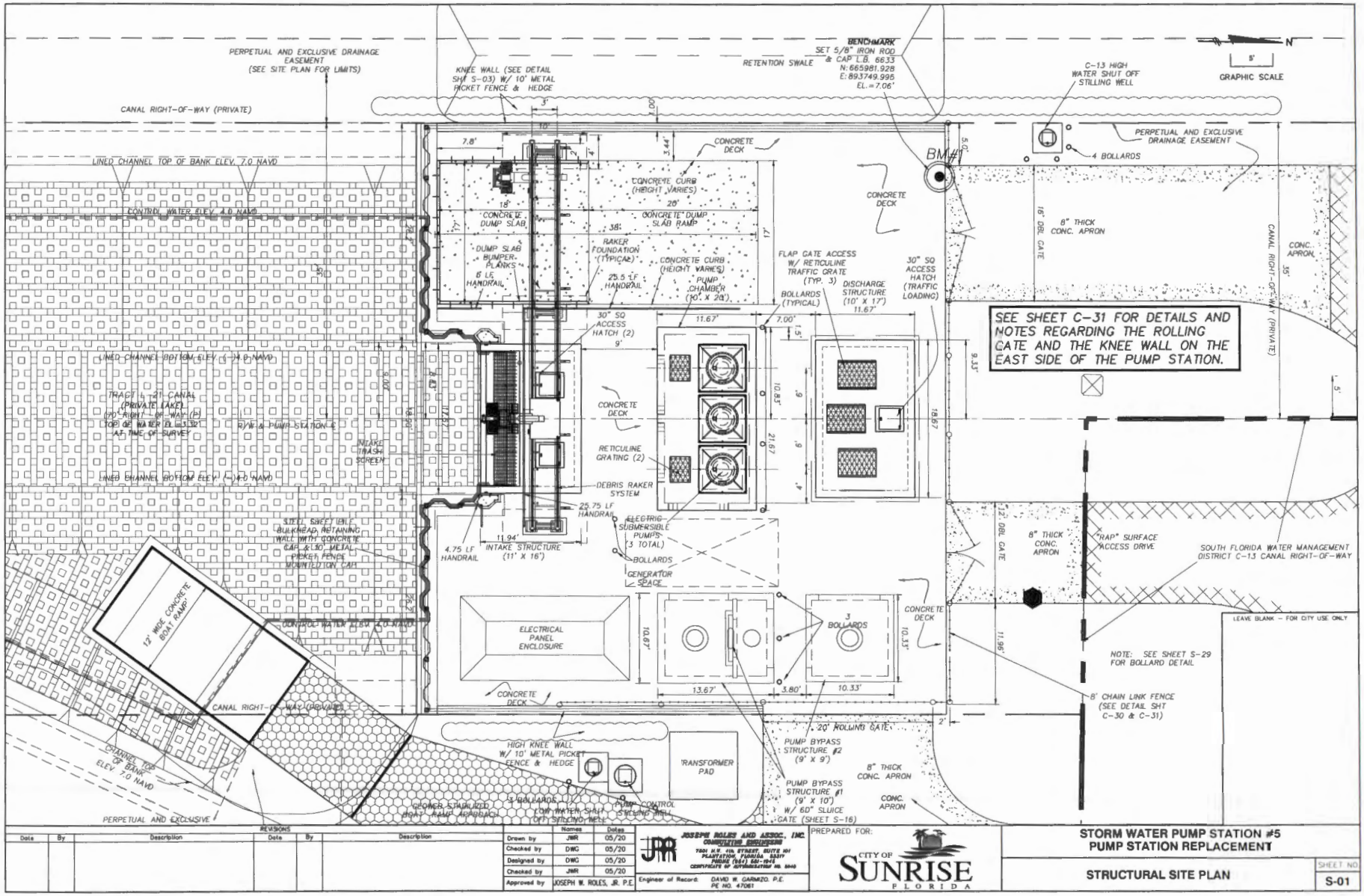
SEAL	JAMES E. STONER, PROFESSIONAL SURVEYOR AND MAPPER NO. 6533, STATE OF FLORIDA
LAST DATE OF FIELD SURVEY	03/03/20
DRAWN BY	DJS
CHECKED BY	JCS
BOOK/PAGE(S)	1056/44-60
FB DATA COLLECTOR	
PROJECT	20-8970
SHEET NO.	4 OF 4

SKETCH OF TOPOGRAPHIC AND SPECIFIC PURPOSE (TREE) SURVEY
PUMP STATION NO. 5
AND ACCESS ROAD ALONG C-13 CANAL
9141 SUNRISE LAKES BLVD., SUNRISE FLORIDA 33322

TEL (954) 585-0997
www.stonersurveyors.com
STONER & ASSOCIATES, Inc.
SURVEYORS - MAPPERS
Florida Licensed Surveying and Mapping Business No. 6533
4341 S.W. 62nd AVENUE, TOWN OF DAVIE, FLORIDA 33314

NO	REVISION	DATE	BY
1	REVISE TSMT LOCATION, TRACT 'B'	7/9/20	JCS
2	ADD UTILITY LOCATIONS AND PARKING LOT	7/14/20	JCS

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PERPETUAL AND EXCLUSIVE DRAINAGE EASEMENT (SEE SITE PLAN FOR LIMITS)
CANAL RIGHT-OF-WAY (PRIVATE)
KNEE WALL (SEE DETAIL SHT S-03) W/ 10' METAL PICKET FENCE & HEDGE
BENCHMARK
SET 5/8" IRON ROD & CAP L.B. 6633
N: 665981.928
E: 893749.996
EL.= 7.06'
RETENTION SWALE
C-13 HIGH WATER SHUT OFF STILLING WELL
GRAPHIC SCALE
LINED CHANNEL TOP OF BANK ELEV. 7.0 NAVD
CONTROL WATER ELEV. 4.0 NAVD
LINED CHANNEL BOTTOM ELEV. (-)4.0 NAVD
TRACT L-21 CANAL (PRIVATE LAKE) (120' RIGHT-OF-WAY) (R) TOP OF WATER EL. 3.32' AT TIME OF SURVEY
R/W & PUMP STATION C
INTAKE TRASH SCREEN
CONCRETE DECK
CONCRETE CURB (HEIGHT VARIES)
CONCRETE DUMP SLAB
CONCRETE DUMP SLAB RAMP
DUMP SLAB BUMPER-PLANKS
RAKER FOUNDATION (TYPICAL)
CONCRETE CURB (HEIGHT VARIES)
PUMP CHAMBER (10' X 24')
5' LF HANDRAIL
25.5 LF HANDRAIL
FLAP GATE ACCESS W/ RETICULINE TRAFFIC GRATE (TYP. 3)
BOLLARDS (TYPICAL)
DISCHARGE STRUCTURE (10' X 17')
30" SQ ACCESS HATCH (TRAFFIC LOADING)
30" SQ ACCESS HATCH (2)
RETICULINE GRATING (2)
DEBRIS RAKER SYSTEM
25.75 LF HANDRAIL
4.75 LF HANDRAIL
INTAKE STRUCTURE (11' X 16')
ELECTRIC SUBMERSIBLE PUMPS (3 TOTAL)
GENERATOR SPACE
STEEL SHEET PILE BULKHEAD RETAINING WALL WITH CONCRETE CAP & 50' METAL PICKET FENCE MOUNTED ON CAP
12' WIDE CONCRETE BOAT RAMP
ELECTRICAL PANEL ENCLOSURE
3 BOLLARDS
HIGH KNEE WALL W/ 10' METAL PICKET FENCE & HEDGE
TRANSFORMER PAD
PUMP BYPASS STRUCTURE #2 (9' X 9')
PUMP BYPASS STRUCTURE #1 (9' X 10') W/ 60" SLUICE GATE (SHEET S-16)
20' ROLLING GATE
8" THICK CONC. APRON
CONC. APRON
PUMP CONTROL STANDBY GEN.
4 BOLLARDS
COMP. WATER SALT OFF STANDBY GEN.
GROMER STABILIZED BOAT RAMP APPROACH
CHANNEL TOP OF BANK ELEV. 7.0 NAVD
PERPETUAL AND EXCLUSIVE DRAINAGE EASEMENT
4 BOLLARDS
BM#1
8" THICK CONC. APRON
16' DBL GATE
CANAL RIGHT-OF-WAY (PRIVATE)
CONC. APRON
SEE SHEET C-31 FOR DETAILS AND NOTES REGARDING THE ROLLING GATE AND THE KNEE WALL ON THE EAST SIDE OF THE PUMP STATION.
12' DBL GATE
8" THICK CONC. APRON
"RAP" SURFACE ACCESS DRIVE
SOUTH FLORIDA WATER MANAGEMENT DISTRICT C-13 CANAL RIGHT-OF-WAY
LEAVE BLANK – FOR CITY USE ONLY
NOTE: SEE SHEET S-29 FOR BOLLARD DETAIL
8' CHAIN LINK FENCE (SEE DETAIL SHT C-30 & C-31)
REVISIONS
Date | By | Description | Date | By | Description
Drawn by JWR 05/20
Checked by DWG 05/20
Designed by DWG 05/20
Checked by JWR 05/20
Approved by JOSEPH W. ROLES, JR. P.E.
JOSEPH ROLES AND ASSOC., INC. CONSULTING ENGINEERS
7501 N.W. 4th STREET, SUITE 201 PLANTATION, FLORIDA 33317 PHONE (954) 581-1944 CERTIFICATE OF AUTHORIZATION NO. 5940
Engineer of Record: DAVID W. GARMZO, P.E. PE NO. 47061
PREPARED FOR:
CITY OF SUNRISE FLORIDA
STORM WATER PUMP STATION #5
PUMP STATION REPLACEMENT
STRUCTURAL SITE PLAN
SHEET NO. S-01

STRUCTURAL NOTES

GENERAL SPECIFICATIONS:
Florida Department of Transportation Standard Specifications for Road and Bridge Construction (2021 edition) and FDOT "Standard Plans" 2020–2021 edition for all precast units and sheet pile retaining wall, except as modified by the plans.

DESIGN SPECIFICATION:
2020 Florida Building Code (FBC) (with local amendments). All vertical construction shall be in accordance with "High Wind Velocity Zone" provisions per the FBC including the Raker system, the electrical enclosure, knee walls and fences.

CONCRETE NOTES:
1. Provide 3/4 inch chamfers on all exposed edges and corners except as otherwise noted.
2. Construction joints will be permitted only at the locations indicated on the plans, additional construction joints or alterations to those shown will require approval by the engineer. Provision shall be made for transfer of shear and other forces through construction joints. Construction joints shall be clean of all laitance.
3. Concrete slump shall be as follows:

	Slump in Inches	
	Minimum	Maximum
Pavements and slabs	1-1/2	4
Heavy slabs, beams, walls	3	5

4. Cover for reinforcing steel shown in the plan details will produce the following minimum clearance based on placement and fabrication tolerances shown below:
   Precast slab – 3/4"
   Cast-in-place slab – 2"
   Beams – 1-1/2"
   Exposed unprotected concrete – 1-1/2"
   Formed concrete below grade – 2"
   Unformed concrete below grade – 3"
   Bent cap – 4" at bottom (3" sides and top)
5. Placing drawings and bar lists shall conform to A.C.I.'s "Manual of Standard Practice for Detailing Reinforced Concrete Structures." (A.C.I. 315)
6. Details of concrete reinforcement shall be in accordance with "The Manual of Standard Practice for Reinforced Concrete Construction" as published by the Concrete Reinforcing Steel Institute unless otherwise indicated.
7. Concrete construction techniques shall conform to the "Specifications for Structural Concrete for Buildings" (A.C.I. 301).
8. Reinforcement shall be carefully placed, rigidly supported, and well tied with bar supports and spacers.
9. Adequate vertical and horizontal shoring shall be provided to safely support all construction loads.
10. Spread bars around small openings and sleeves in slabs where possible. Discontinue bars at large openings where necessary and provide an area of reinforcing equal to the interrupted reinforcing, distributed each side of opening (top and bottom).
11. All openings in concrete slabs or walls over 12" square shall have one (1) #5 by 5'-0" diagonal in each corner in the center of the slab or wall.
12. Reinforcing steel in footings or pile caps shall be assembled as mats with bars equally spaced and wired together at each intersection before concrete is placed.
13. Footing elevations are to top of footing (T.F.) and slab elevations are to top of slab (T.S.).
14. Dowel column and wall reinforcing to footing with same size and number of dowels as vertical bars above. Dowels shall be hooked "L" at bottom and shall be lapped 30 bar diameter minimum with the column or wall reinforcing above.
15. Provide polypropelene fiber reinforcement for concrete slabs on grade unless otherwise indicated. If welded wire mesh is specified for slab on grade reinforcement it shall be minimum 6"x6" W2.9xW2.9 WWF.
16. Provide shear key in top of wall footings and column footings at walls.
17. Provide temperature bars in one-way slabs at right angle to principal reinforcing as scheduled.

REINFORCEMENT:
18. Reinforcement shall be ASTM A-615, Grade 60.
19. All dimensions pertaining to location of reinforcing are to centerline of bars except where the clear dimension is shown to face of concrete.
20. Reinforcement detail dimensions are out-to-out of bars.

DESIGN METHOD:
Load factor have been calculated for service load.

SURFACE FINISH (Pump Station):
All exposed surfaces of pile cap at pump station shall receive a "Class 5 applied finish coating".

ENVIRONMENT:
Superstructure: Slightly Aggressive
Substructure: Slightly Aggressive
Location: Inland

FLOOD CRITERIA:
1. Building is located in Flood Zone AE with a design flood elevation of 7.0' (N.A.V.D.)
2. The lowest floor elevation for the electrical enclosure is 9.0' (N.A.V.D.)

MISCELLANEOUS:
3. All wood in contact with masonry, concrete, or steel shall be pressure-treated.
4. Contractor shall verify all dimensions with the engineering drawings prior to construction and fabrication. Discrepancies shall be brought to the attention of the engineer before construction.
5. All work shall be done in accordance with all pertinent local, state, and federal building regulations.
6. See plans by civil plans Pump Station for additional information of the pump station construction and Location.
7. Provide 1/4" neoprene between aluminum plates and concrete.
8. Provide rubber gasket between stainless steel bolts and aluminum.

DESIGN DATA:
9. Normal weight concrete (145 PCF) 28-day compressive strength:

Foundations	3,000 PSI
Precast Units	3,400 PSI
Perimeter Knee Walls	3,400 PSI
Infill Concrete	2,500 PSI
Slab on Grade	3,000 PSI
Pump Station Retaining Wall Cap (FDOT Class IV)	5,500 PSI

10. Aluminum – 6061-T6 unless otherwise indicated.
11. Structural steel – A36 unless otherwise indicated.
12. Structural steel for tubes A500, 46KSI.
13. All bolts to be Stainless Steel – SS316
14. Structural wood and timber – fb = 1200 PSI min.

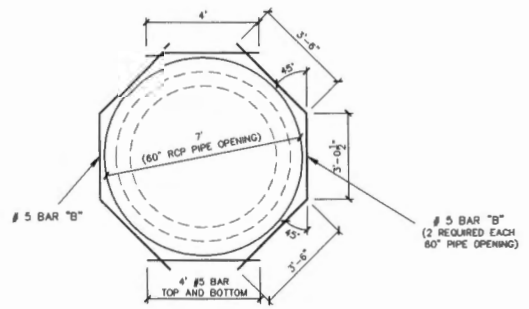
15. Design Loads:
    Non-Traffic DL = 40 p.s.f.
    Traffic DL = AASHTO H-20
16. Soil bearing pressures:
    Foundations are designed on the assumption of a minimum soil bearing value of 2500 PSF. It shall be the CONTRACTOR's responsibility to assure that the actual soil bearing value equals or exceeds this minimum and, if it is less, to make such provision as the actual conditions may require. It is the contractor's responsibility to review the soils report by the Geotechnical Engineer of Record.

17. Occupancy Classification: Group V (645 s.f.) Unmanned

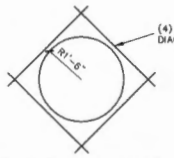
SHOP DRAWINGS:
The engineer's review is only for conformance with the design concept of the project and compliance with the information given in the Contract Documents. The contractor is responsible for dimensions to be confirmed and correlated at the site; for information that pertains solely to the fabrication, processes, or to the means, methods, techniques, sequences and procedures of construction; and for coordination of the work of all trades. The engineer's approval of a specific item shall not include approval of an assembly of which the item is a component.

CONTRACTOR PROVIDED FOUNDATION DESIGN

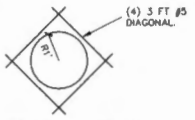
Two assemblies included in this project require that the Contractor provide the final foundation design configuration. These two assemblies include the Raker System and the Electrical Enclosure. The contractor or vendor shall retain an engineer licensed in the State of Florida to provide signed and sealed foundation plans and calculations meeting all required provisions of the Florida Building Code for approval by the engineer. A place holder concept design, which includeS some of the required provisions of the foundation designs, are included in the construction plans.



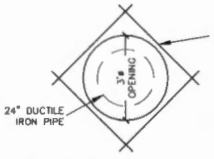
BAR "B" BENDING DIAGRAM
60" PIPE WALL OPENING DIAGONAL REINFORCEMENT



36" DIAMETER SLAB OPENING
DIAGONAL REINFORCEMENT



24" DIAMETER SLAB OPENING
DIAGONAL REINFORCEMENT



36" DIAMETER PIPE WALL OPENING
DIAGONAL REINFORCEMENT

WALL AND SLAB OPENINGS DIAGONAL REINFORCEMENT DETAILS

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REVISIONS					
Date	By	Description	Date	By	Description

	Names	Dates
Drawn by	JMR	05/21
Checked by	DWG	05/21
Designed by	DWG	05/21
Checked by	JMR	05/21
Approved by	JOSEPH W. ROLES, JR. P.E.	

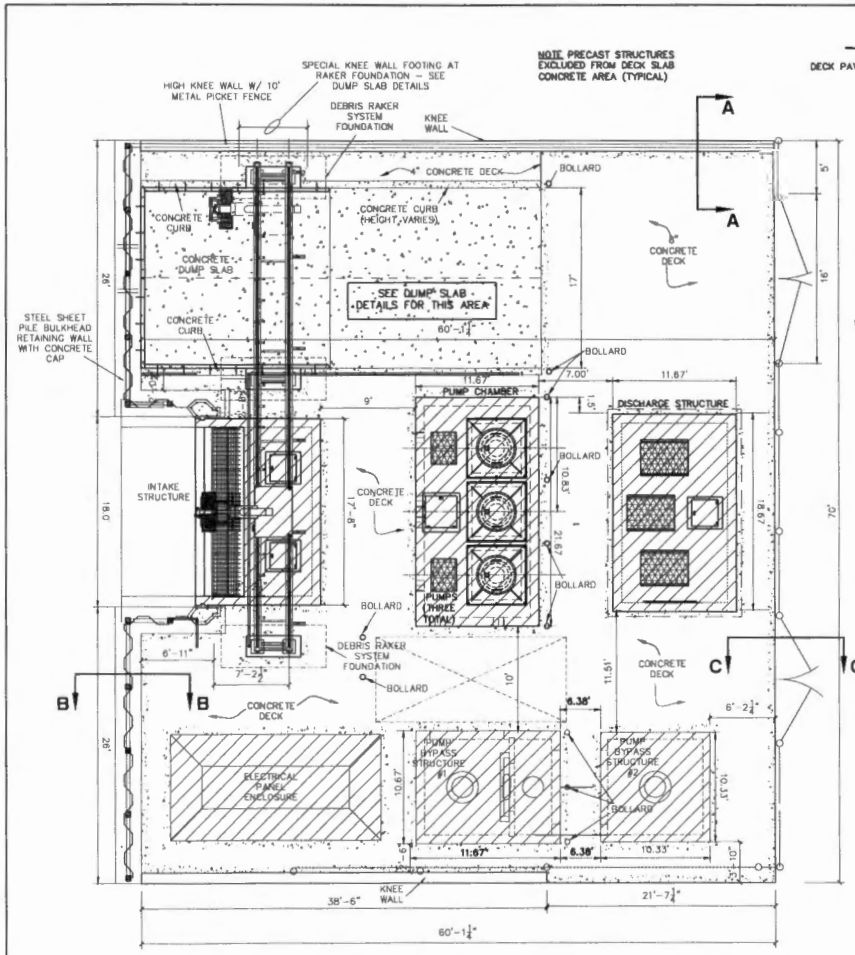
JOSEPH ROLES AND ASSOC., Inc.
CONSULTING ENGINEERS
7841 N.W. 46th STREET, SUITE 101
PLANTATION, FLORIDA 33317
PHONE (954) 581-1818
CERTIFICATE OF AUTHORIZATION NO. 3644
Engineer of Record: DAVID W. CARMAZO, P.E.
PE NO. 47061

PREPARED FOR:
CITY OF SUNRISE FLORIDA

STORM WATER PUMP STATION #5
PUMP STATION REPLACEMENT

STRUCTURAL NOTES

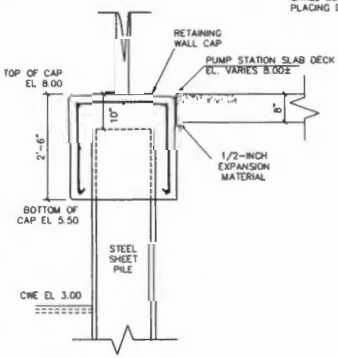
SHEET NO.
S-02



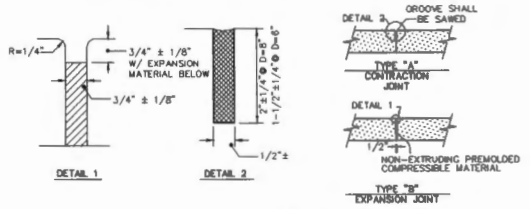
SEE SHEET C-31 FOR DETAILS AND NOTES REGARDING THE ROLLING GATE AND THE KNEE WALL ON THE EAST SIDE OF THE PUMP STATION.

CONCRETE DECK SLAB CONSTRUCTION NOTES

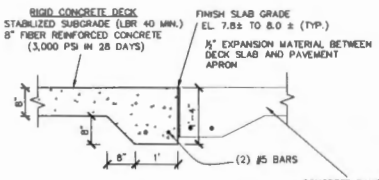
1. CONCRETE FOR DECK SLAB SHALL BE FIBER REINFORCED AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI IN 28 DAYS.
2. THE SUBGRADE MATERIAL UNDER THE DECK SLAB SHALL HAVE A MINIMUM LIMEROCK BEARING RATIO OF 40. SUBGRADE SHALL BE COMPACTED TO A MINIMUM DENSITY OF 98% AS DETERMINED BY AASHTO T-180.
3. THE TESTING OF SUBGRADE AND EMBANKMENT SHALL BE DONE PRIOR TO REQUESTING ANY INSPECTION BY THE CITY.
4. CONTRACTOR SHALL FILL AND GRADE SITE TO ACCOMMODATE FINISH GRADE ELEVATIONS SHOWN AND IN ACCORDANCE WITH TYPICAL SECTION AS SHOWN.
5. ALL UNSUITABLE MATERIAL SHALL BE REMOVED FROM THE SUBGRADE. TESTS WILL BE REQUIRED IN BACKFILLED TRENCHES FOR UNDERGROUND STRUCTURES, PIPES AND CONDUITS PRIOR TO DECK SLAB CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PAYMENT FOR ALL TESTING.
6. GRADES SHOWN ARE FINISHED GRADES.
7. UTILITIES ARE TO BE ADJUSTED BY OTHERS UNLESS INCLUDED IN THE CONSTRUCTION PLANS OR OTHERWISE NOTED.
8. ALL MATERIALS AND WORKMANSHIP SALL BE IN ACCORDANCE WITH THE CITY OF SUNRISE STANDARDS, THE FLORIDA BUILDING CODE WHERE APPLICABLE AND THE FLORIDA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", LATEST EDITION, WHERE APPLICABLE, UNLESS OTHERWISE NOTED OR SPECIFIED.
9. CONTRACTOR TO PROVIDE EXPANSION MATERIAL BETWEEN DECK SLAB CONCRETE AND ALL PRECAST UNITS, FOUNDATION POURS, THE KNEE WALLS AND THE SHEET PILE WALL CAP CONCRETE AND OTHER LOCATIONS SHOWN ON THE PLANS. CONTRACTOR SHALL SUBMIT A PLAN FOR PROPOSED TYPE "A" CONTRACTION JOINT LOCATIONS FOR APPROVAL BY THE ENGINEER PRIOR TO PLACING DECK SLAB CONCRETE.



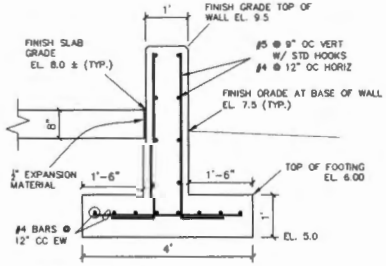
SECTION B-B
SLAB EDGE AT
RETAINING WALL CAP



CONCRETE PAVEMENT JOINT DETAILS



SECTION C-C
SLAB THICKEND EDGE



TYPICAL SECTION A-A – KNEE WALL

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REVISIONS					
Date	By	Description	Date	By	Description

	Names	Dates
Drawn by	JWR	05/20
Checked by	DWC	05/20
Designed by	DWC	05/20
Checked by	JWR	05/20
Approved by	JOSEPH W. ROLES, JR. P.E.	

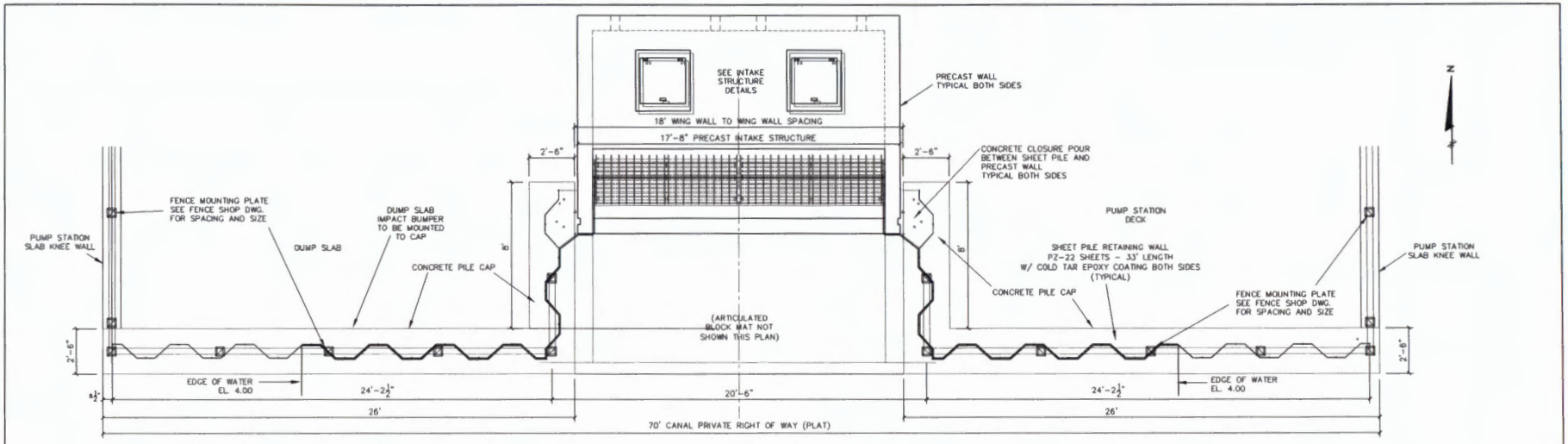
JOSEPH ROLES AND ASSOC., INC.
CONSULTING ENGINEERING
7551 N.W. 4th STREET, SUITE 101
PLANTATION, FLORIDA 33317
PHONE (954) 581-5415
CERTIFICATE OF AUTHORIZATION NO. 8648
Engineer of Record: DAVID W. CARMIZO, P.E. PE NO. 47061

PREPARED FOR: CITY OF SUNRISE FLORIDA

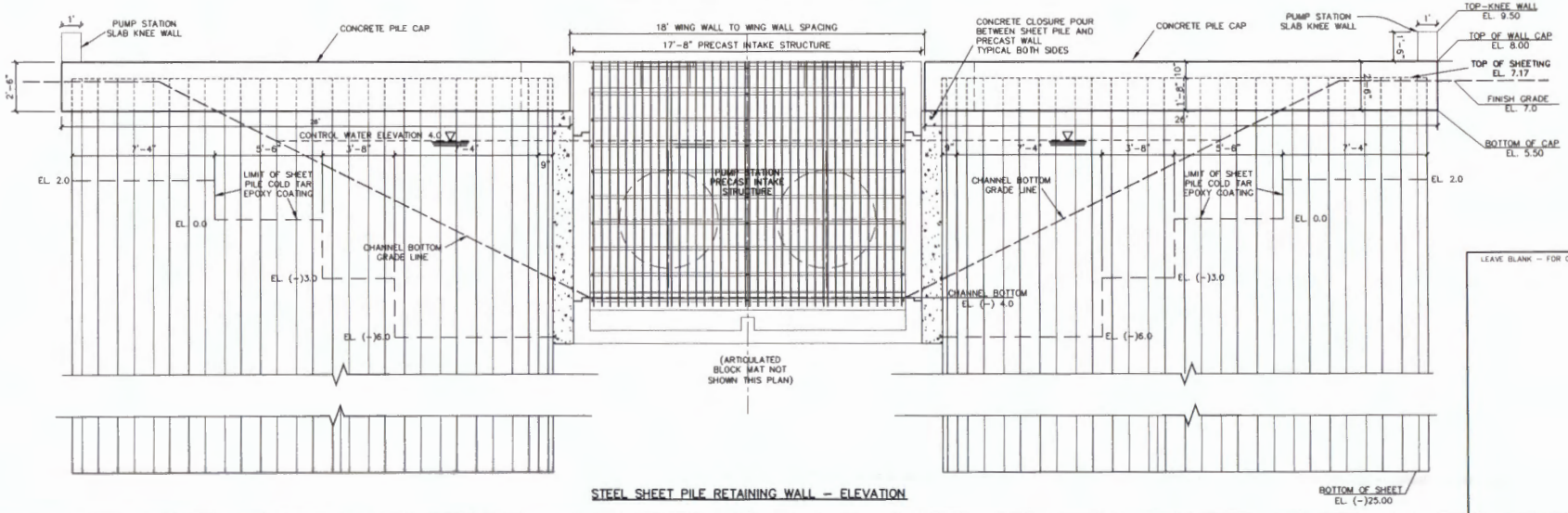
STORM WATER PUMP STATION #5
PUMP STATION REPLACEMENT

CONCRETE DECK SLAB PLAN & DETAILS

SHEET NO. S-03



STEEL SHEET PILE RETAINING WALL - PLAN



STEEL SHEET PILE RETAINING WALL - ELEVATION

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REVISIONS					
Date	By	Description	Date	By	Description

	Names	Dates
Drawn by	JMR	05/20
Checked by	DWG	05/20
Designed by	DWG	05/20
Checked by	JMR	05/20
Approved by	JOSEPH W. ROLES, JR. P.E.	

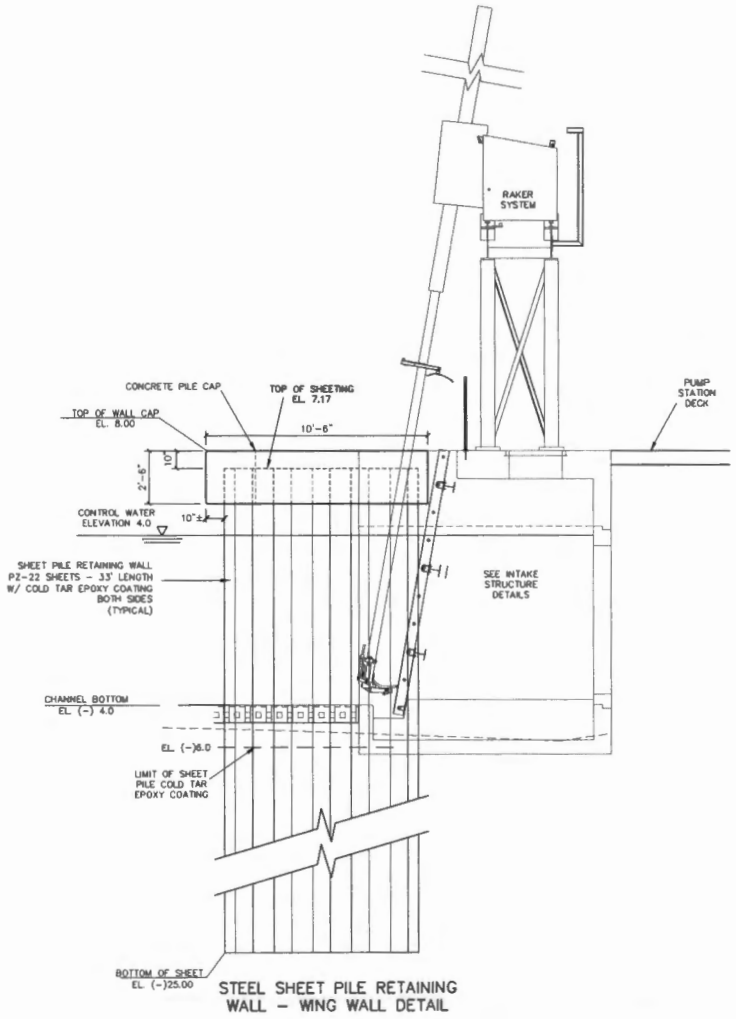
JOSEPH ROLES AND ASSOC., INC.
CONSULTING ENGINEERS
7804 N.W. 44th STREET, SUITE 101
PLANTATION, FLORIDA 33317
PHONE (954) 581-1918
CERTIFICATE OF AUTHORIZATION NO. 5840
Engineer of Record: DAVID W. GARMIZO, P.E. PE NO. 47061

PREPARED FOR: CITY OF SUNRISE FLORIDA

STORM WATER PUMP STATION #5
PUMP STATION REPLACEMENT

STEEL SHEET PILE WALL DETAILS

SHEET NO. **S-04**



STEEL SHEET PILE RETAINING WALL - WING WALL DETAIL

STEEL SHEET PILE RETAINING WALL - NOTES

SPECIFICATIONS:

1. PILE CONSTRUCTION: USE "FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" 2020 EDITION UNLESS OTHERWISE NOTED ON THE PLANS.
2. DESIGN: AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES (1996 EDITIONS) AND APPROVED REVISIONS. FDOT STANDARD DESIGN GUIDELINES (REVISED JANUARY 2003).

DESIGN CRITERIA:

1. EFFECTIVE SECTION MODULUS = $\frac{1.3 \times \text{SERVICE LOAD MOMENT}}{0.55\ Fy}$
2. PENETRATION DEPTH = 1.5 x CALCULATED SERVICE LOAD PENETRATION DEPTH
3. NO IMPACT LOADS
4. MAX. ALLOWABLE DEFLECTION: 2" UNDER SURCHARGE LOADING (USING GROSS MOMENT OF INERTIA)

- SHOP DRAWINGS SHALL BE SUBMITTED TO, AND APPROVED BY, THE E.O.R. PRIOR TO ORDERING.
- THE CONTRACTOR SHALL SELECT A SHEET PILE SECTION FOR THE WALL SEGMENTS WITH AN "EFFECTIVE SECTION MODULUS" EQUAL TO OR LARGER THAN THAT SPECIFIED.
- IF A COLD-ROLLED SECTION IS CHOSEN, FILTER FABRIC SHALL BE PLACED BEHIND THE WALL PRIOR TO FILL BEING PLACED. THIS COST SHALL BE INCLUDED IN THE UNIT COST OF THE SHEET PILE WALL.
- IF REQUIRED, SPECIAL TRANSITION PANELS SHALL BE FABRICATED TO CONNECT DIFFERENT SHEET PILE SECTIONS TOGETHER AND INCLUDED IN THE COST OF THE WALL.

PIPE CAP CONCRETE:
ALL CONCRETE SHALL CONFORM TO SECTION 346 OF THE FDOT SPECIFICATIONS AND SHALL BE CLASS IV, WITH A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 5,500 P.S.I.

REINFORCING STEEL:
ALL REINFORCEMENT SHALL BE BLACK REINFORCEMENT, ASTM A615, GRADE 60.

ENVIRONMENT:
DESCRIPTION: SLIGHTLY AGGRESSIVE.

APPLIED FINISH COATING:

- A FDOT CLASS 5 FINISH COATING SHALL BE APPLIED TO ALL EXPOSED SURFACES OF THE PILE CAPS.
- COAL TAR EPOXY COATING, PER FDOT "APPROVED PRODUCT LIST", SHALL BE APPLIED TO THE TOP OF SHEETING (BOTH SIDES) TO THE LIMITS AS SHOWN ON THE PLAN PRIOR TO DRIVING. ACCESSIBLE AREAS TO BE TOUCHED-UP UPON COMPLETION OF DRIVING. THE COATING SHALL BE A THREE-COAT SYSTEM COMPRISED OF ONE COAT OF SELF-CURING INORGANIC ZINC PRIMER AND TWO COATS OF COAL TAR EPOXY. THE PRIMER SHALL BE SHOP-APPLIED IN ACCORDANCE WITH SECTION 561. THE COAL TAR EPOXY SHALL BE SHOP-APPLIED IN ACCORDANCE WITH SECTION 560 OF THE STANDARD SPECIFICATIONS
- SHEET PILE RETAINING WALL ITEM SHALL INCLUDE ALL CONCRETE AND REINFORCING STEEL FOR THE PILE CAP AND SHEETING FURNISHED AND DRIVEN AND ACCEPTED. THE STEEL SHEET PILING ITEM SHALL INCLUDE ALL WORK TO FURNISH THE COAL TAR EPOXY COATING, SURFACE PREPARATION, APPLICATION OF THE COAL TAR EPOXY, AND ANY TOUCHING-UP REQUIRED.

CHAMFERS:

ALL SHARP CORNERS OF SHEET PILE CONCRETE CAPS, ABOVE GROUND, TO HAVE 3/4 " x 3/4 " CHAMFERS.

COVER:

CONCRETE COVER SHOWN IN THE PLANS DOES NOT INCLUDE REINFORCEMENT PLACEMENT AND FABRICATION TOLERANCES. UNLESS SHOWN AS "MINIMUM COVER". SEE FDOT'S SPECIFICATION FOR ALLOWABLE REINFORCEMENT PLACEMENT TOLERANCES. UNLESS OTHERWISE SHOWN IN THE PLANS, THE CONCRETE COVER FOR SHEET PILE CAPS SHALL BE 2".

SHEETING:

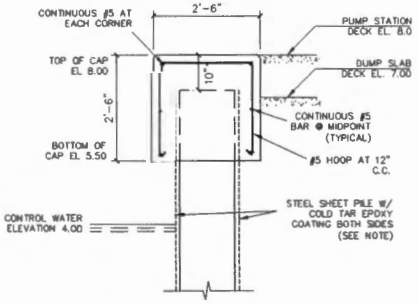
STEEL SHEETING SHALL BE TO ASTM A572 AND SHALL HAVE A MINIMUM YIELD STRESS OF 50 k.s.i.

EFFECTIVE SECTION MODULUS - IN.(CUBED)/FT.
PZ-22 = 18.1

* EFFECTIVE SECTION MODULUS HAS BEEN COMPUTED BY TAKING INTO ACCOUNT THE EFFECTS OF CORROSION LOSS ALLOWANCES AND THE HARTMAN REQUCTION FACTOR.

THE SELECTION OF THE SHEET PILE SECTIONS SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO SATISFY ALL DETAILS INCLUDING MINIMUM CLEARANCES, COVER, EMBEDMENTS, REINFORCEMENT, INTERLOCKING AND FIELD CUTTING. ANY MODIFICATIONS OF THE PLANS TO ACCOMMODATE THE CONTRACTOR'S SELECTION SHALL BE PAID FOR BY THE CONTRACTOR AND SUBJECT TO APPROVAL OF THE ENGINEER. THE CONTRACTOR MAY NOT USE A DIFFERENT SHEET PILE TYPE FROM THOSE LISTED WITHOUT THE APPROVAL OF THE ENGINEER.

FOR THIS PROJECT, ONLY STEEL SHEETING PRODUCED IN THE UNITED STATES WILL BE ALLOWED.



TYPICAL SECTION THROUGH CAP

WALL CAP NOTES:
1. ¾" x ¾" CHAMFER AT ALL EXPOSED CONCRETE EDGES (TYP)
2. FDOT CLASS 5 FINISH ALL EXPOSED CONCRETE SURFACES

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REVISIONS					
Date	By	Description	Date	By	Description

	Names	Dates
Drawn by	JMR	05/20
Checked by	DWG	05/20
Designed by	DWG	05/20
Checked by	JMR	05/20
Approved by	JOSEPH W. ROLES, JR. P.E.	

JOSEPH ROLES AND ASSOC., INC.
CONSULTING ENGINEERS
7301 W.S. 4th STREET, SUITE 101
PLANTATION, FLORIDA 33317
PHONE (954) 581-1818
CERTIFICATE OF AUTHORIZATION NO. 5646

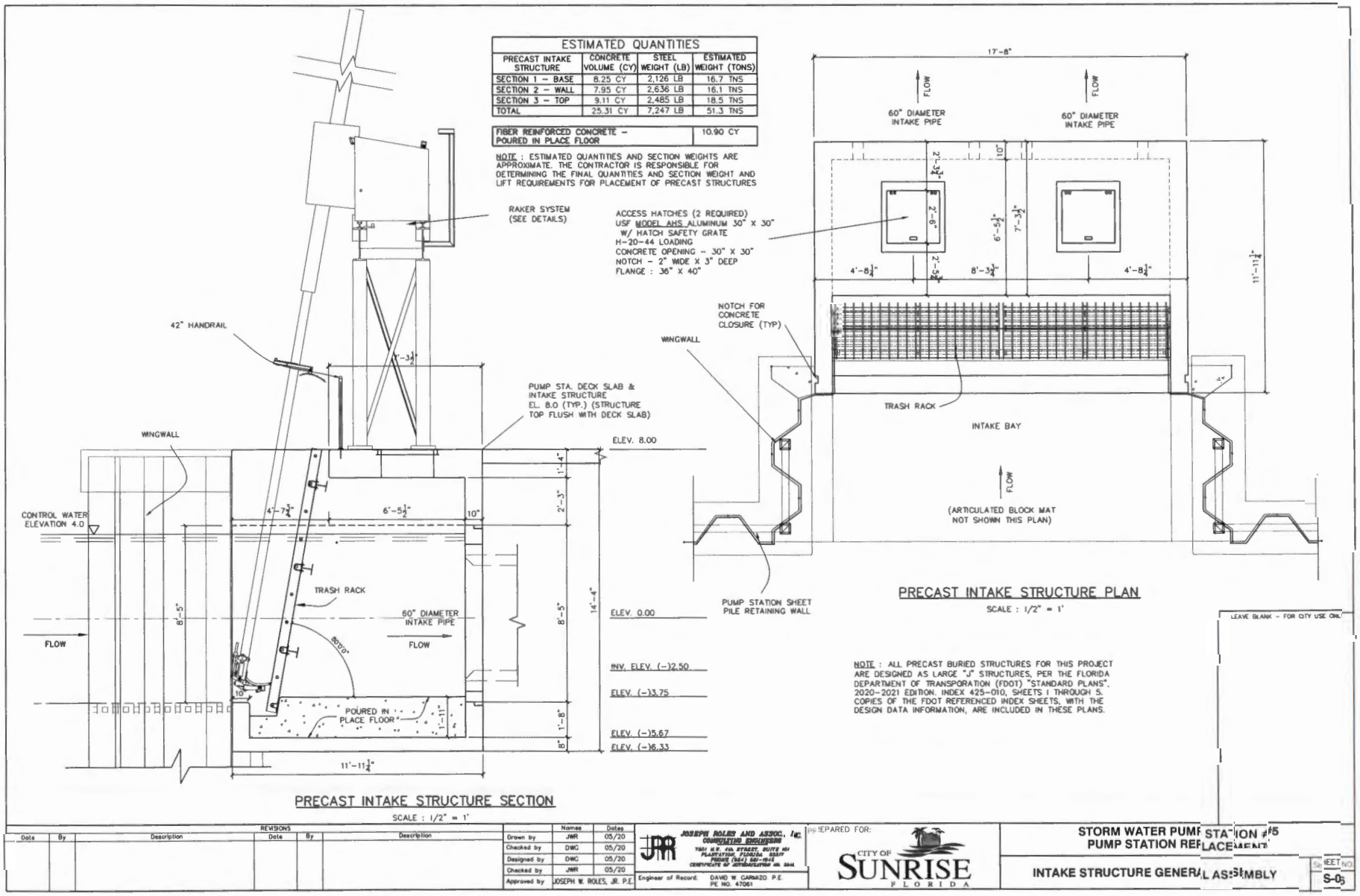
Engineer of Record: DAVID W. GARMIZO, P.E. PE NO. 47061

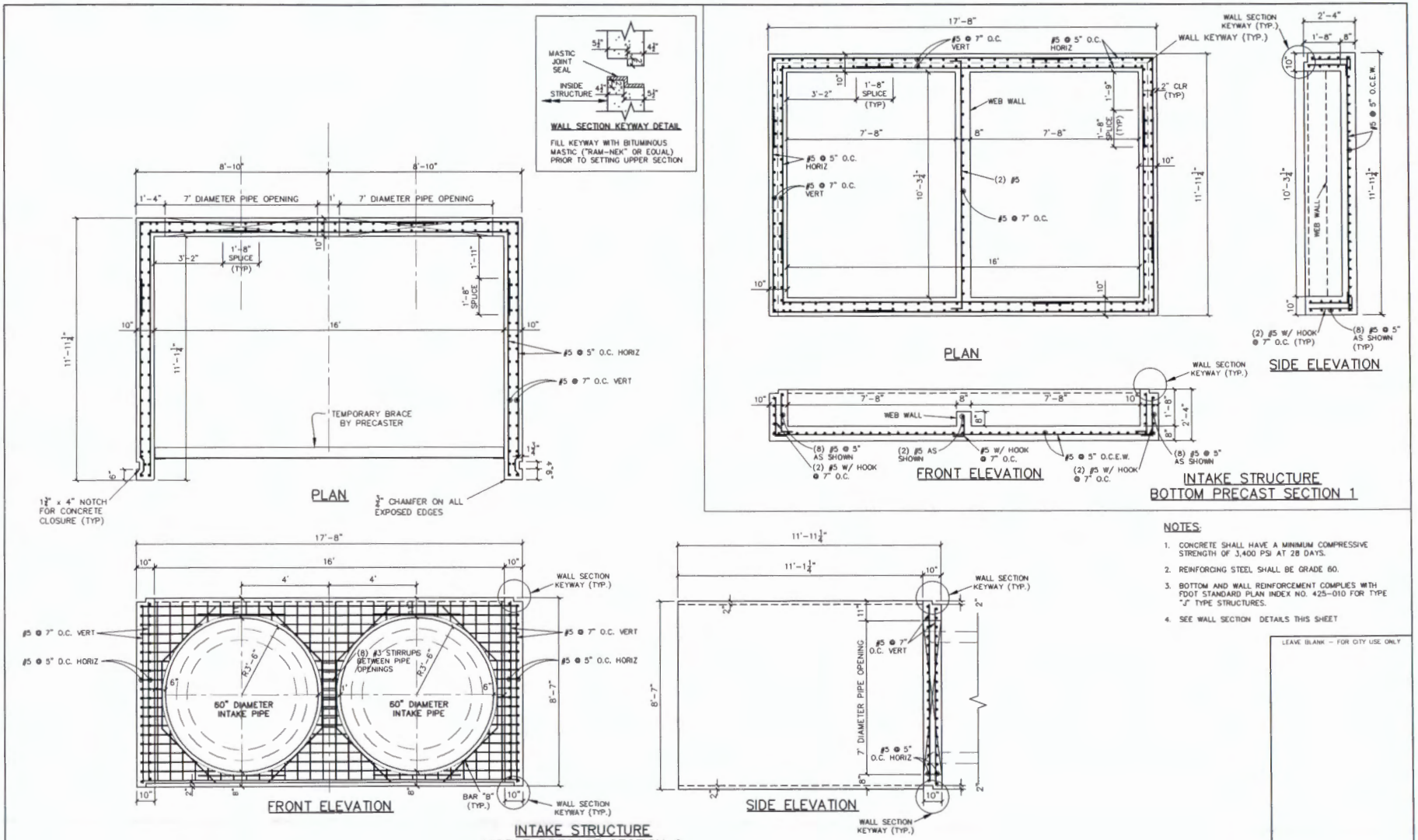
PREPARED FOR: CITY OF SUNRISE FLORIDA

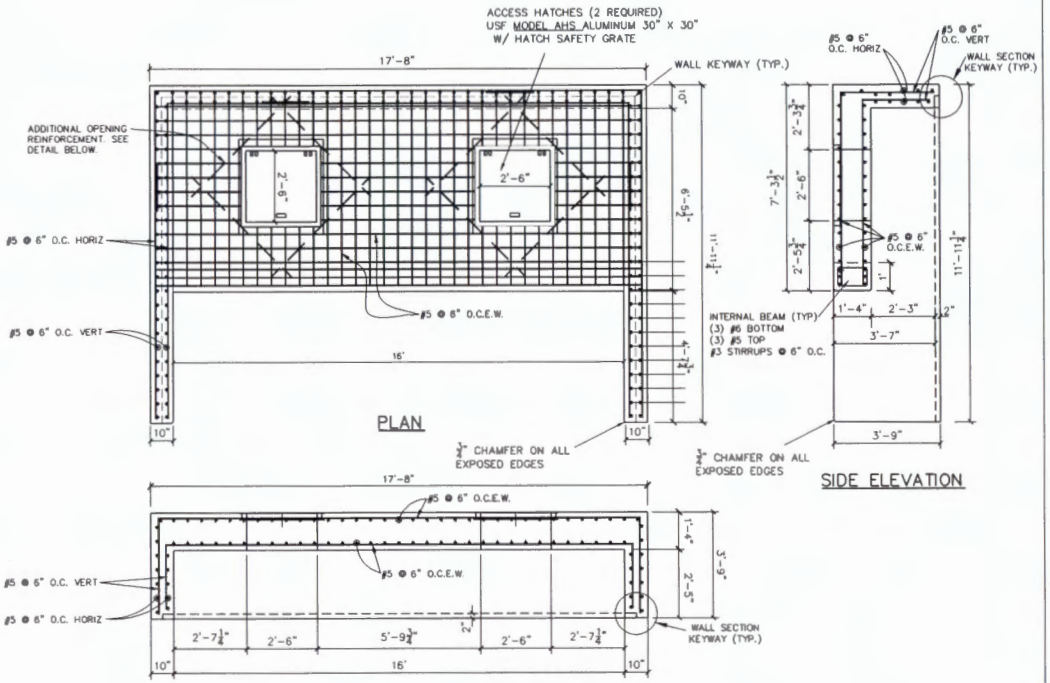
STORM WATER PUMP STATION #5 PUMP STATION REPLACEMENT

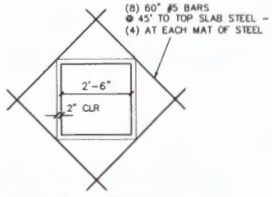
STEEL SHEET PILE WALL DETAILS

SHEET NO. S-05


ESTIMATED QUANTITIES
PRECAST INTAKE STRUCTURE | CONCRETE VOLUME (CY) | STEEL WEIGHT (LB) | ESTIMATED WEIGHT (TONS)
SECTION 1 – BASE | 8.25 CY | 2,126 LB | 16.7 TNS
SECTION 2 – WALL | 7.95 CY | 2,636 LB | 16.1 TNS
SECTION 3 – TOP | 9.11 CY | 2,485 LB | 18.5 TNS
TOTAL | 25.31 CY | 7,247 LB | 51.3 TNS
FIBER REINFORCED CONCRETE – POURED IN PLACE FLOOR | 10.90 CY
NOTE : ESTIMATED QUANTITIES AND SECTION WEIGHTS ARE APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE FINAL QUANTITIES AND SECTION WEIGHT AND LIFT REQUIREMENTS FOR PLACEMENT OF PRECAST STRUCTURES
RAKER SYSTEM (SEE DETAILS)
ACCESS HATCHES (2 REQUIRED) USF MODEL AHS ALUMINUM 30" X 30" W/ HATCH SAFETY GRATE H-20-44 LOADING CONCRETE OPENING – 30" X 30" NOTCH – 2" WIDE X 3" DEEP FLANGE : 36" X 40"
42" HANDRAIL
WINGWALL
PUMP STA. DECK SLAB & INTAKE STRUCTURE EL. 8.0 (TYP.) (STRUCTURE TOP FLUSH WITH DECK SLAB)
CONTROL WATER ELEVATION 4.0
TRASH RACK
60" DIAMETER INTAKE PIPE
FLOW
POURED IN PLACE FLOOR
ELEV. 8.00
ELEV. 0.00
INV. ELEV. (–)2.50
ELEV. (–)3.75
ELEV. (–)5.67
ELEV. (–)6.33
PRECAST INTAKE STRUCTURE SECTION
SCALE : 1/2" = 1'
17'-8"
60" DIAMETER INTAKE PIPE
NOTCH FOR CONCRETE CLOSURE (TYP)
WINGWALL
TRASH RACK
INTAKE BAY
(ARTICULATED BLOCK MAT NOT SHOWN THIS PLAN)
PUMP STATION SHEET PILE RETAINING WALL
PRECAST INTAKE STRUCTURE PLAN
SCALE : 1/2" = 1'
NOTE : ALL PRECAST BURIED STRUCTURES FOR THIS PROJECT ARE DESIGNED AS LARGE "J" STRUCTURES, PER THE FLORIDA DEPARTMENT OF TRANSPORATION (FDOT) "STANDARD PLANS". 2020-2021 EDITION. INDEX 425-010, SHEETS 1 THROUGH 5. COPIES OF THE FDOT REFERENCED INDEX SHEETS, WITH THE DESIGN DATA INFORMATION, ARE INCLUDED IN THESE PLANS.
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REVISIONS
Date | By | Description | Date | By | Description
Drawn by JMR 05/20
Checked by DWC 05/20
Designed by DWC 05/20
Checked by JMR 05/20
Approved by JOSEPH W. ROLES, JR. P.E.
JOSEPH ROLES AND ASSOC., INC CONSULTING ENGINEERS
Engineer of Record: DAVID W. CARBAZO P.E. PE NO. 47061
PREPARED FOR: CITY OF SUNRISE FLORIDA
STORM WATER PUMP STATION #5 PUMP STATION REPLACEMENT
INTAKE STRUCTURE GENERAL ASSEMBLY
SHEET NO. S-03


WALL SECTION KEYWAY DETAIL
MASTIC JOINT SEAL
INSIDE STRUCTURE
FILL KEYWAY WITH BITUMINOUS MASTIC ("RAM-NEK" OR EQUAL) PRIOR TO SETTING UPPER SECTION
8'-10"
6'-10"
1'-4"
7' DIAMETER PIPE OPENING
1'
7' DIAMETER PIPE OPENING
3'-2"
1'-8" SPLICE (TYP)
1'-11"
1'-8" SPLICE
10"
16'
#5 @ 5" O.C. HORIZ
#5 @ 7" O.C. VERT
TEMPORARY BRACE BY PRECASTER
PLAN
1½" x 4" NOTCH FOR CONCRETE CLOSURE (TYP)
¾" CHAMFER ON ALL EXPOSED EDGES
17'-8"
#5 @ 7" O.C. VERT
#5 @ 5" O.C. HORIZ
WALL KEYWAY (TYP.)
2" CLR (TYP)
WEB WALL
7'-8"
8"
1'-9"
(2) #5
PLAN
WALL SECTION KEYWAY (TYP.)
2'-4"
1'-8"
8"
#5 @ 5" O.C.E.W.
(2) #5 W/ HOOK @ 7" O.C. (TYP)
(8) #5 @ 5" AS SHOWN (TYP)
SIDE ELEVATION
(8) #5 @ 5" AS SHOWN
(2) #5 AS SHOWN
#5 W/ HOOK @ 7" O.C.
#5 @ 5" O.C.E.W.
(2) #5 W/ HOOK @ 7" O.C.
FRONT ELEVATION
INTAKE STRUCTURE BOTTOM PRECAST SECTION 1
17'-8"
16'
4'
4'
WALL SECTION KEYWAY (TYP.)
#5 @ 7" O.C. VERT
#5 @ 5" O.C. HORIZ
(8) #3 STIRRUPS BETWEEN PIPE OPENINGS
R2'-6"
50" DIAMETER INTAKE PIPE
8'-7"
BAR "B" (TYP.)
FRONT ELEVATION
11'-11¼"
SIDE ELEVATION
7' DIAMETER PIPE OPENING
INTAKE STRUCTURE MIDDLE PRECAST SECTION 2
NOTES:
1. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,400 PSI AT 28 DAYS.
2. REINFORCING STEEL SHALL BE GRADE 60.
3. BOTTOM AND WALL REINFORCEMENT COMPLIES WITH FDOT STANDARD PLAN INDEX NO. 425-010 FOR TYPE "J" TYPE STRUCTURES.
4. SEE WALL SECTION DETAILS THIS SHEET
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REVISIONS
Date | By | Description | Date | By | Description
Drawn by JMR 05/20
Checked by DWG 05/20
Designed by DWG 05/20
Checked by JMR 05/20
Approved by JOSEPH W. ROLES, JR P.E.
JOSEPH ROLES AND ASSOC., INC. CONSULTING ENGINEERS
7801 N.W. 44th STREET, SUITE 101 PLANTATION, FLORIDA 33317 PHONE (954) 581-1945 CERTIFICATE OF AUTHORIZATION NO. 5448
Engineer of Record: DAVID W. GARMIZO P.E. PE NO. 47061
PREPARED FOR: CITY OF SUNRISE FLORIDA
STORM WATER PUMP STATION #5
PUMP STATION REPLACEMENT
INTAKE STRUCTURE DETAILS
SHEET NO. S-07



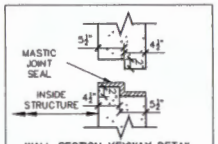


TOP SLAB OPENING
ADDITIONAL REINFORCEMENT

INTAKE STRUCTURE
TOP PRECAST SECTION 3

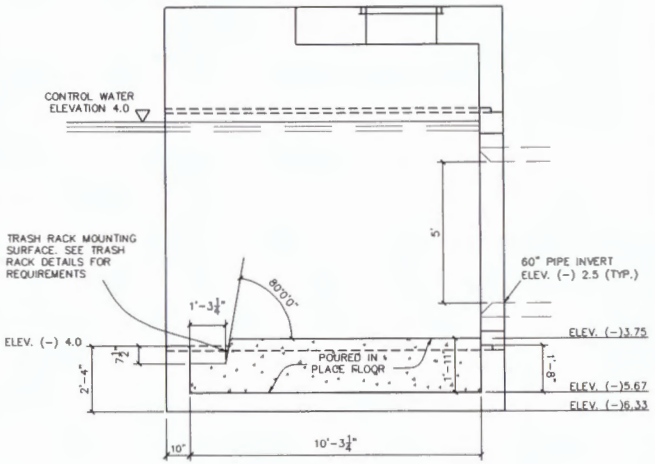
NOTES:

1. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,400 PSI AT 28 DAYS.
2. REINFORCING STEEL SHALL BE GRADE 60.
3. BOTTOM AND WALL REINFORCEMENT COMPLIES WITH FDOT STANDARD PLAN INDEX NO. 425-010 FOR TYPE "J" TYPE STRUCTURES.
4. SEE WALL SECTION DETAILS THIS SHEET



WALL SECTION KEYWAY DETAIL

FILL KEYWAY WITH BITUMINOUS MASTIC ("RAM-NEK" OR EQUAL) PRIOR TO SETTING UPPER SECTION



INTAKE STRUCTURE
INVERT BALLAST CONCRETE POUR
WITH
TRASH RACK BOTTOM SUPPORT

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REVISIONS					
Date	By	Description	Date	By	Description

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Drawn by	JWR	05/20
Checked by	DWG	05/20
Designed by	DWG	05/20
Checked by	JWR	05/20
Approved by	JOSEPH W. ROLES, JR. P.E.	

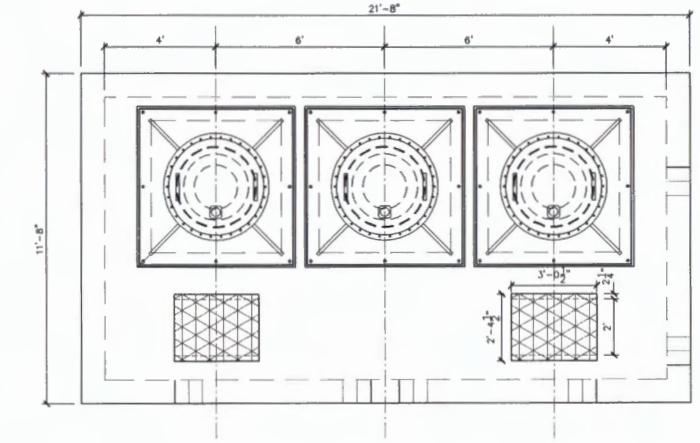
JOSEPH ROLES AND ASSOC., INC.
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7581 N.W. 4th STREET, SUITE 101
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PHONE (954) 584-1881
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Engineer of Record: DAVID W. GARMIZO, P.E.
PE NO. 47061

PREPARED FOR: CITY OF SUNRISE FLORIDA

STORM WATER PUMP STATION #5
PUMP STATION REPLACEMENT

INTAKE STRUCTURE DETAILS

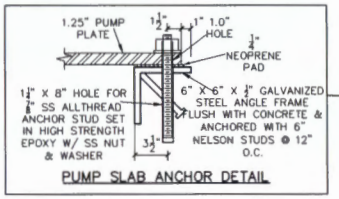
SHEET NO. S-08



PUMP SPECIFICATIONS

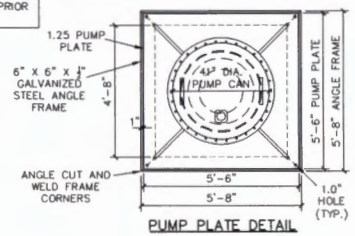
"MWI" ELECTRIC SUBMERSIBLE PUMP

MODEL	SEA324X24
SERIAL #	TBD
SIZE	24" DISCHARGE
TYPE	AXIAL FLOW
GPM	13,016
HD.FT	8.5
IMP. DIA.	24.0 IN
RPM	590

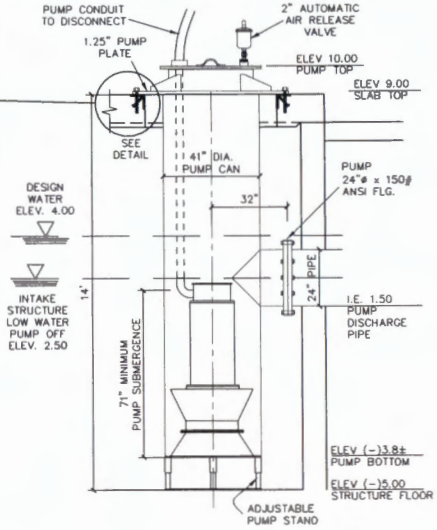


PUMP SLAB ANCHOR DETAIL

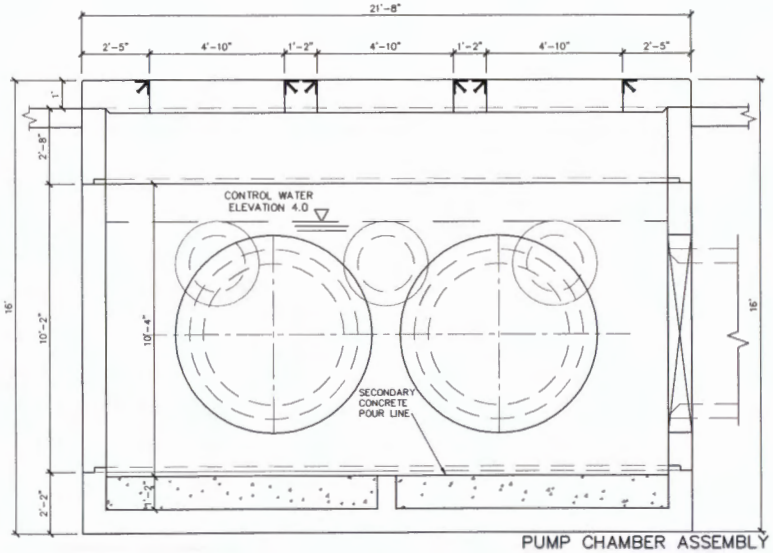
CONFIRM PUMP PLATE HOLE PATTERN PRIOR TO DRILLING.



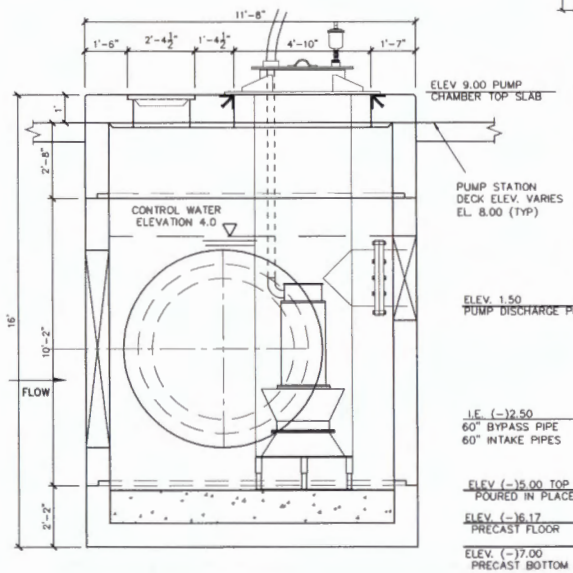
PUMP PLATE DETAIL



PUMP INSTALLATION DETAILS



PUMP CHAMBER ASSEMBLY



QUANTITIES SUMMARY

PRECAST PUMP CHAMBER	CONCRETE VOLUME (CY)	STEEL WEIGHT (LB)	ESTIMATED WEIGHT (TONS)
SECTION 1 – BASE	12.25 CY	2,673	24.8 TNS
SECTION 2 – WALL	15.65 CY	5,338	31.7 TNS
SECTION 3 – WALL	5.1 CY	1,631	10.3 TNS
SECTION 4 – TOP	7.0 CY	1,357	14.2 TNS
TOTAL	40.0 CY	10,999	81.0 TNS

FIBER REINFORCED CONCRETE – POURED IN PLACE FLOOR	8.35 CY

NOTE : ESTIMATED QUANTITIES AND SECTION WEIGHTS ARE APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE FINAL QUANTITIES AND SECTION WEIGHT AND LIFT REQUIREMENTS FOR PLACEMENT OF PRECAST STRUCTURES

NOTE : ALL PRECAST BURIED STRUCTURES FOR THIS PROJECT ARE DESIGNED AS LARGE "J" STRUCTURES, PER THE FLORIDA DEPARTMENT OF TRANSPORATION (FDOT) "STANDARD PLANS", 2020–2021 EDITION, INDEX 425–010, SHEETS 1 THROUGH 5. COPIES OF THE FDOT REFERENCED INDEX SHEETS, WITH THE DESIGN DATA INFORMATION, ARE INCLUDED IN THESE PLANS.

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	Names	Dates
Drawn by	JMR	05/20
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Designed by	DWG	05/20
Checked by	JMR	05/20
Approved by	JOSEPH W. ROLES, JR. P.E.	

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CERTIFICATE OF AUTHORIZATION NO. 8648

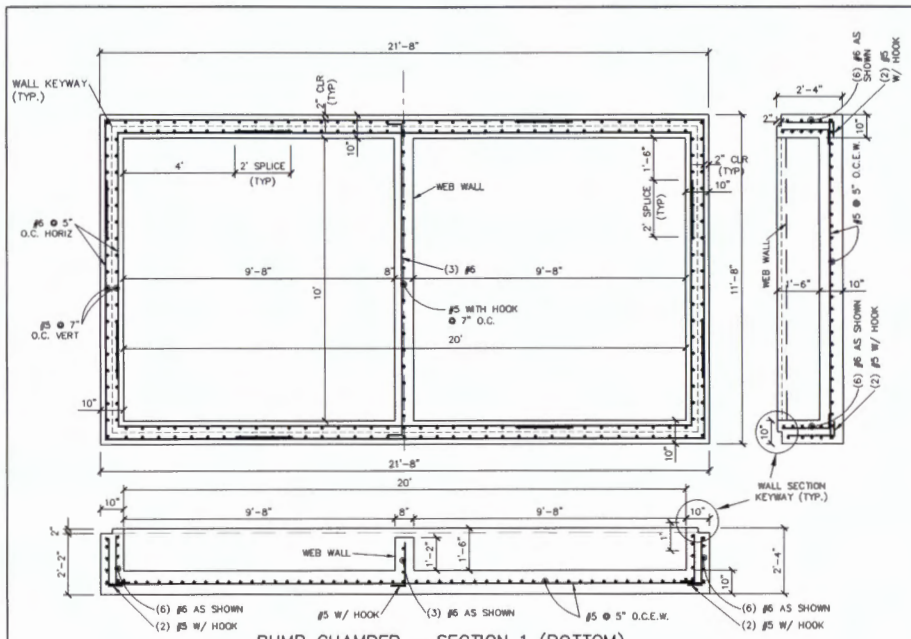
Engineer of Record: DAVID W. GARMAZO, P.E. PE NO. 47061

PREPARED FOR: CITY OF SUNRISE FLORIDA

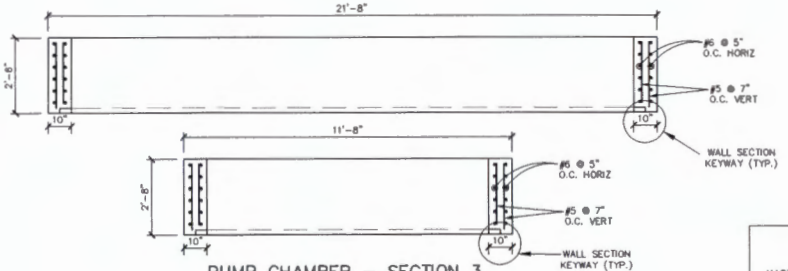
STORM WATER PUMP STATION #5
PUMP STATION REPLACEMENT

PUMP CHAMBER STRUCTURE GENERAL ASSEMBLY

SHEET NO. S-09



PUMP CHAMBER – SECTION 1 (BOTTOM)

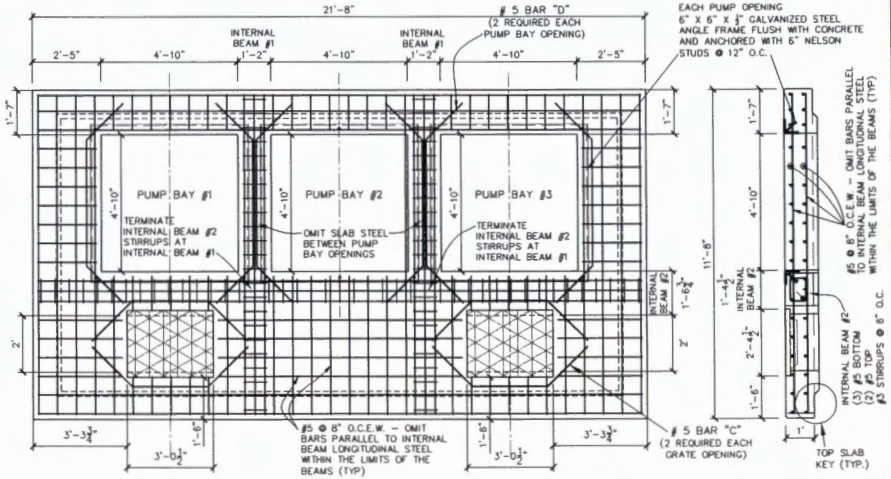


PUMP CHAMBER – SECTION 3 (TOP RISER)

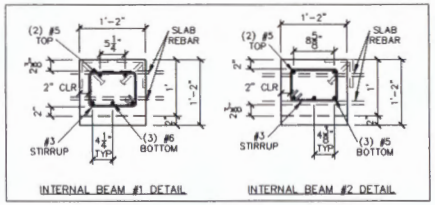


BAR "C" BENDING DIAGRAM
36" GRATE OPENING DIAGONAL REINFORCEMENT

BAR "D" BENDING DIAGRAM
4'-10" PUMP OPENING DIAGONAL REINFORCEMENT

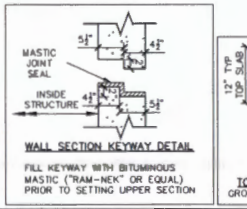


PUMP CHAMBER – SECTION 4 (TOP)



INTERNAL BEAM #1 DETAIL

INTERNAL BEAM #2 DETAIL



WALL SECTION KEYWAY DETAIL

FILL KEYWAY WITH BITUMINOUS MASTIC ("RAM-NEK" OR EQUAL) PRIOR TO SETTING UPPER SECTION



TOP SLAB KEYWAY DETAIL

GROUT SEAL TOP SLAB TO WALL

NOTES:

1. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,400 PSI AT 28 DAYS
2. REINFORCING STEEL SHALL BE GRADE 60.
3. BOTTOM AND WALL REINFORCEMENT COMPLIES WITH FDOT STANDARD PLAN INDEX NO. 425-010 FOR TYPE "J" TYPE STRUCTURES.
4. SEE WALL SECTION AND AND TOP SLAB KEYWAY DETAILS THIS SHEET

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Drawn by	JMR	05/20
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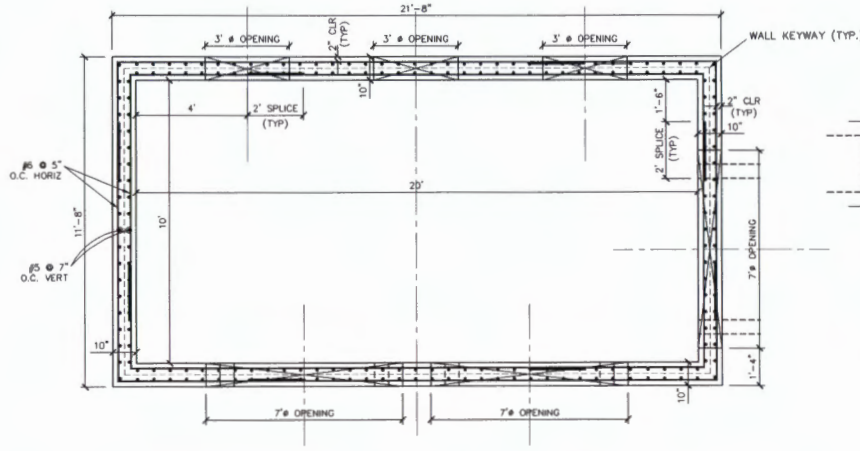
JOSEPH ROLES AND ASSOC., INC.
CONSULTING ENGINEERS
7301 W.P. Kin. STREET, SUITE 101
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PHONE (954) 581-1918
CERTIFICATE OF AUTHORIZATION NO. 8646
Engineer of Record: DAVID W. GARMIZO, P.E. PE NO. 47061

PREPARED FOR: CITY OF SUNRISE FLORIDA

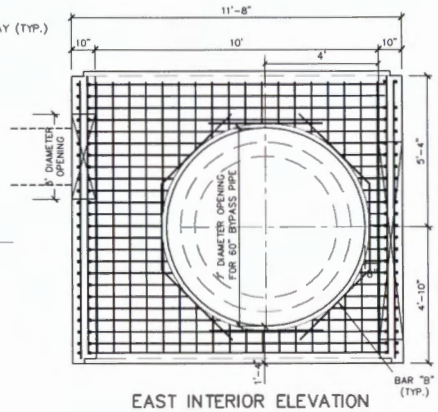
STORM WATER PUMP STATION #5
PUMP STATION REPLACEMENT

PUMP CHAMBER STRUCTURE DETAIL

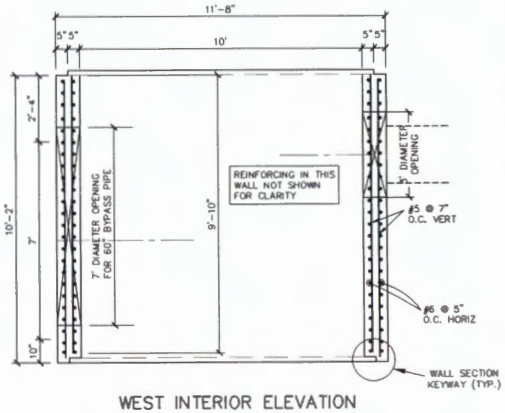
SHEET NO. **S-10**



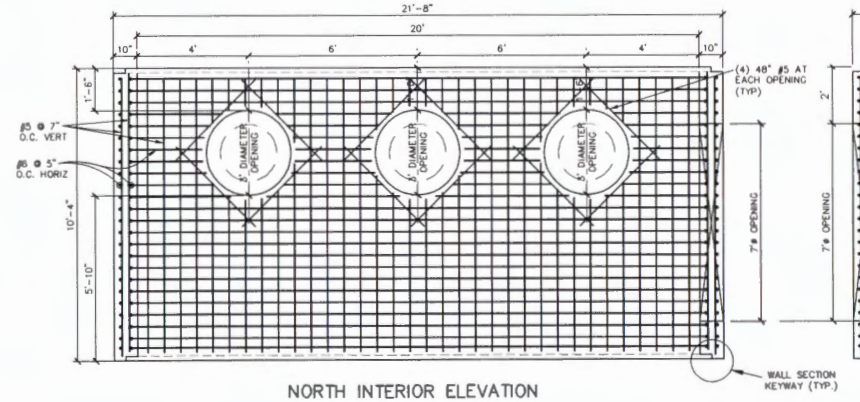
PLAN VIEW



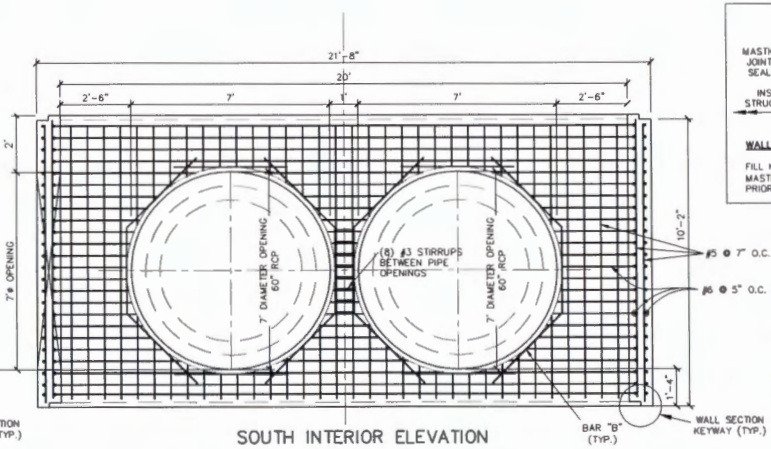
EAST INTERIOR ELEVATION



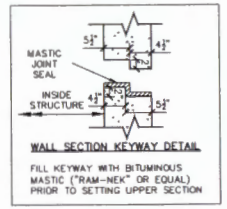
WEST INTERIOR ELEVATION



NORTH INTERIOR ELEVATION



SOUTH INTERIOR ELEVATION



NOTES:

1. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,400 PSI AT 28 DAYS.
2. REINFORCING STEEL SHALL BE GRADE 60.
3. BOTTOM AND WALL REINFORCEMENT COMPLIES WITH FDOT STANDARD PLAN INDEX NO. 425-010 FOR TYPE "J" TYPE STRUCTURES.
4. SEE WALL SECTION DETAILS THIS SHEET

PUMP CHAMBER – SECTION 2 (MIDDLE)

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Drawn by	JWR	05/20
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Approved by	JOSEPH W. ROLES, JR. P.E.	

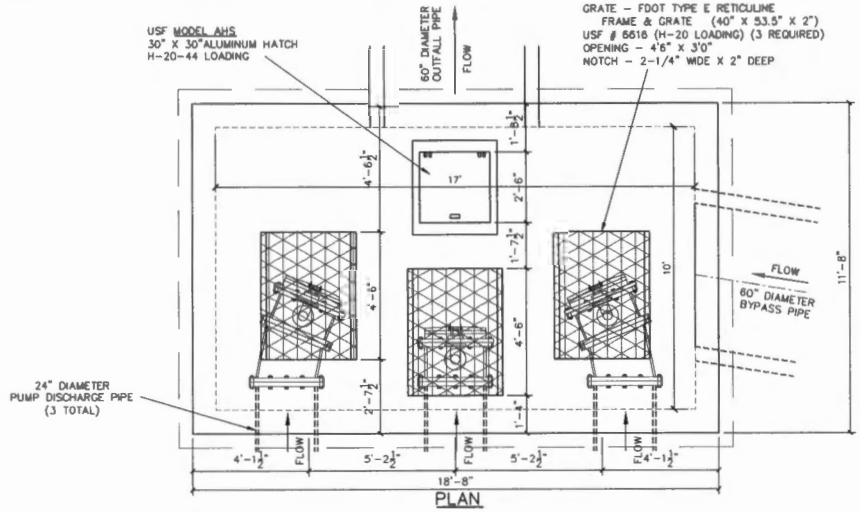
JOSEPH ROLES AND ASSOC., INC.
CONSULTING ENGINEERS
7801 N.W. 44th STREET, SUITE 101
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PHONE (954) 581-1818
CERTIFICATE OF AUTHORIZATION NO. 5940
Engineer of Record: DAVID W. GARMIZO, P.E.
PE NO. 47061

PREPARED FOR: CITY OF SUNRISE FLORIDA

STORM WATER PUMP STATION #5
PUMP STATION REPLACEMENT

PUMP CHAMBER STRUCTURE DETAIL

SHEET NO. S-11



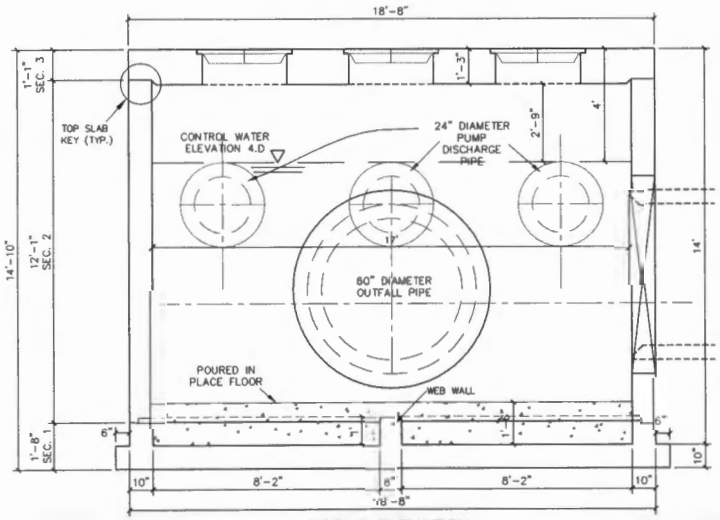
PLAN

NOTE : ALL PRECAST BURIED STRUCTURES FOR THIS PROJECT ARE DESIGNED AS LARGE "J" STRUCTURES, PER THE FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) "STANDARD PLANS", 2020-2021 EDITION. INDEX 425-010, SHEETS 1 THROUGH 5. COPIES OF THE FDOT REFERENCED INDEX SHEETS, WITH THE DESIGN DATA INFORMATION, ARE INCLUDED IN THESE PLANS.

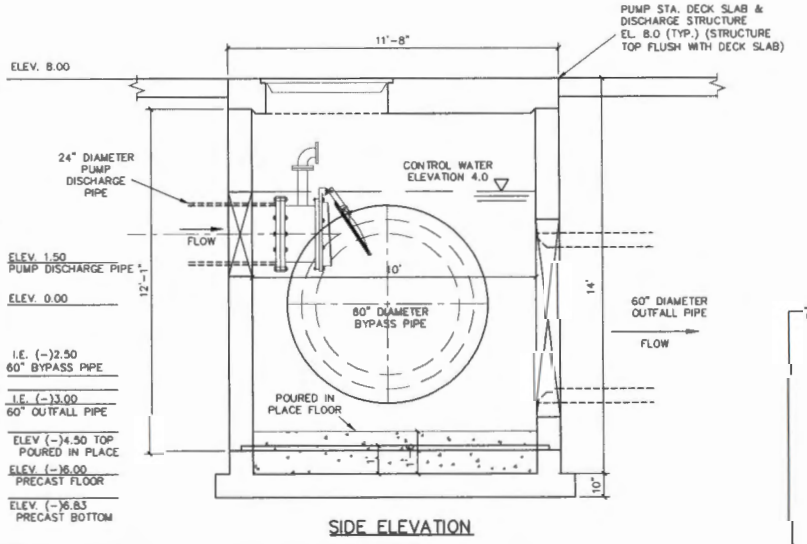
QUANTITIES SUMMARY			
PRECAST DISCHARGE STRUCTURE	CONCRETE VOLUME (CY)	STEEL WEIGHT (LB)	ESTIMATED WEIGHT (TONS)
SECTION 1 - BASE	14.48 CY	2,238 LB	19.7 TNS
SECTION 2 - WALL	15.54 CY	6,916 LB	31.5 TNS
SECTION 3 - TOP	9.72 CY	1,780 LB	16.7 TNS
TOTAL	39.74 CY	10,934 LB	67.9 TNS

FIBER REINFORCED CONCRETE - POURED IN PLACE FLOOR	9.22 CY

NOTE : ESTIMATED QUANTITIES AND SECTION WEIGHTS ARE APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE FINAL QUANTITIES AND SECTION WEIGHT AND LIFT REQUIREMENTS FOR PLACEMENT OF PRECAST STRUCTURES



FRONT ELEVATION



SIDE ELEVATION

DISCHARGE STRUCTURE - GENERAL CONFIGURATION AND ASSEMBLY

LEAVE BLANK - FOR CITY USE ONLY

REVISIONS					
Date	By	Description	Date	By	Description

	Names	Dates
Drawn by	JMR	05/20
Checked by	DWG	05/20
Designed by	DWG	05/20
Checked by	JMR	05/20
Approved by	JOSEPH W. ROLES, JR. P.E.	

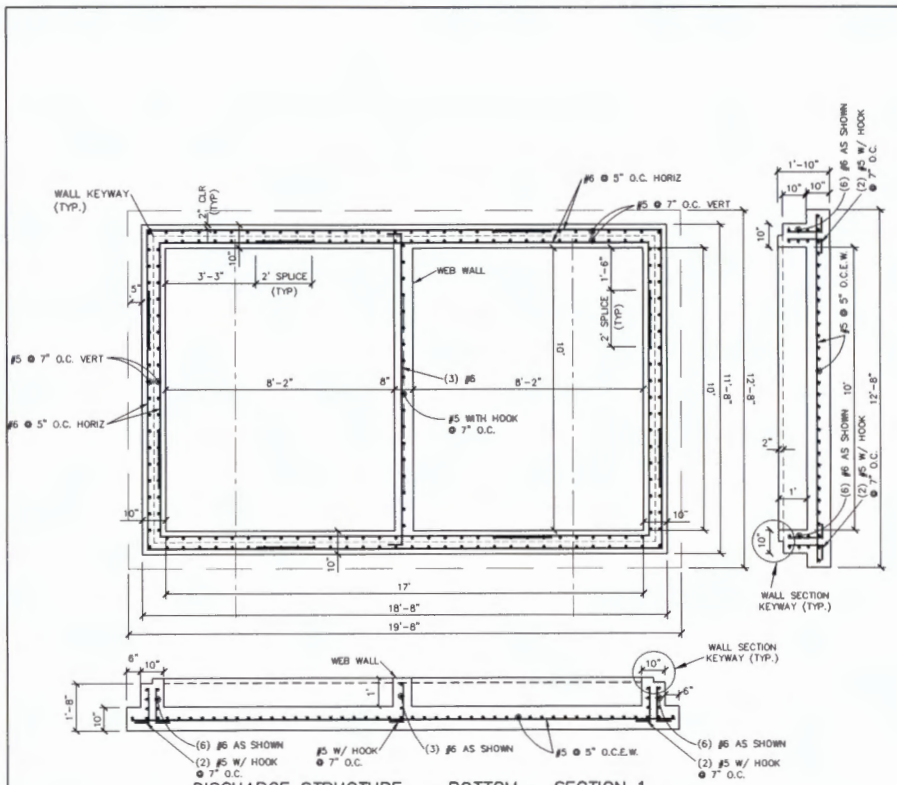
JOSEPH ROLES AND ASSOC., INC.
CONSULTING ENGINEERS
7301 W.S.R. 7 (441) STREET, SUITE 101
PLANTATION, FLORIDA 33317
PHONE (954) 581-7474
CERTIFICATE OF AUTHORIZATION NO. 6646
Engineer of Record: DAVID W. GARBAZO, P.E. PE NO. 47061

PREPARED FOR: CITY OF SUNRISE FLORIDA

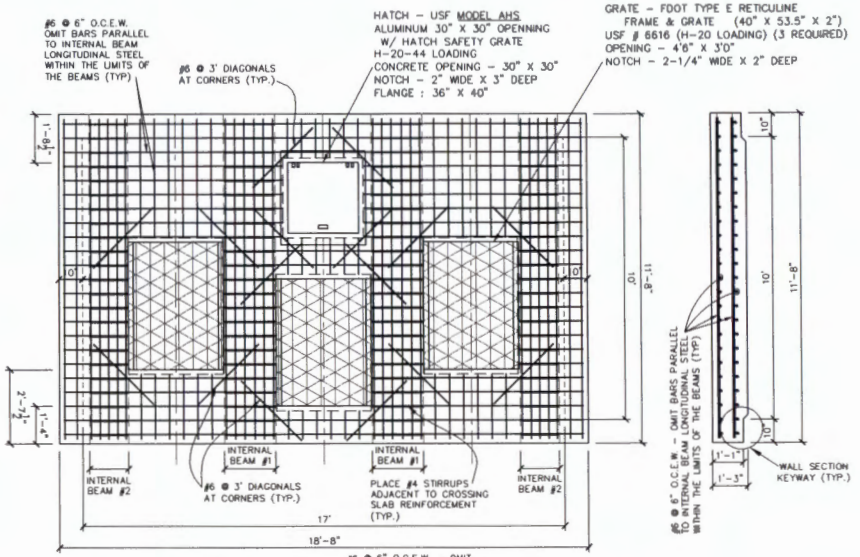
STORM WATER PUMP STATION #5 PUMP STATION REPLACEMENT

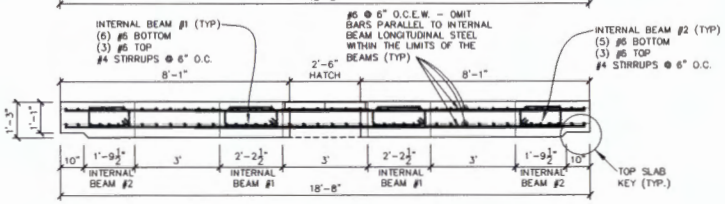
DISCHARGE STRUCTURE GENERAL ASSEMBLY

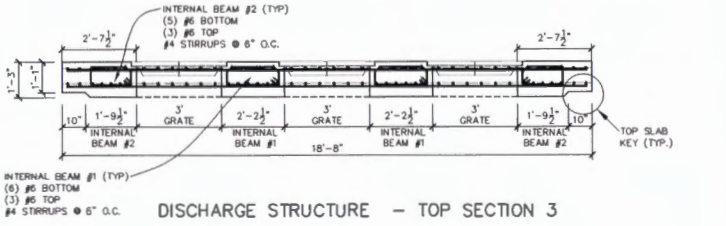
SHEET NO. S-12



DISCHARGE STRUCTURE – BOTTOM – SECTION 1



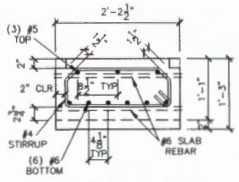




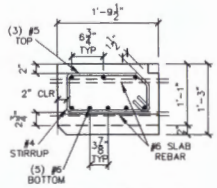
DISCHARGE STRUCTURE – TOP SECTION 3

NOTES:

1. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,400 PSI AT 28 DAYS.
2. REINFORCING STEEL SHALL BE GRADE 60.
3. BOTTOM AND WALL REINFORCEMENT COMPLIES WITH FDOT STANDARD PLAN INDEX NO. 425-010 FOR TYPE "J" TYPE STRUCTURES.



INTERNAL BEAM #1 DETAIL



INTERNAL BEAM #2 DETAIL

LEAVE BLANK – FOR CITY USE ONLY

DISCHARGE STRUCTURE – BOTTOM (SEC 1) AND TOP (SEC 3) SECTIONS

REVISIONS					
Date	By	Description	Date	By	Description

	Names	Dates
Drawn by	JWR	05/20
Checked by	DWG	05/20
Designed by	DWG	05/20
Checked by	JWR	05/20
Approved by	JOSEPH W. ROLES, JR. P.E.	

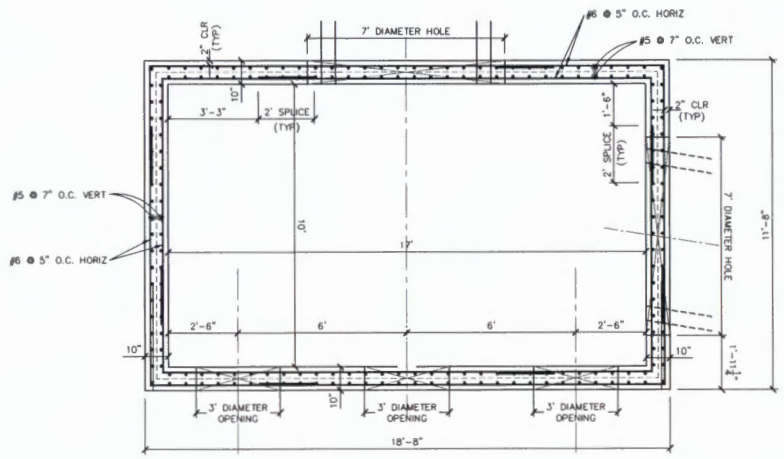
JOSEPH ROLES AND ASSOC., INC.
CONSULTING ENGINEERS
7501 N.W. 4th STREET, SUITE 101
PLANTATION, FLORIDA 33317
PHONE (954) 581-1918
CERTIFICATE OF AUTHORIZATION NO. 8640
Engineer of Record: DAVID W. GARMAZO, P.E. PE NO. 47061

PREPARED FOR: CITY OF SUNRISE FLORIDA

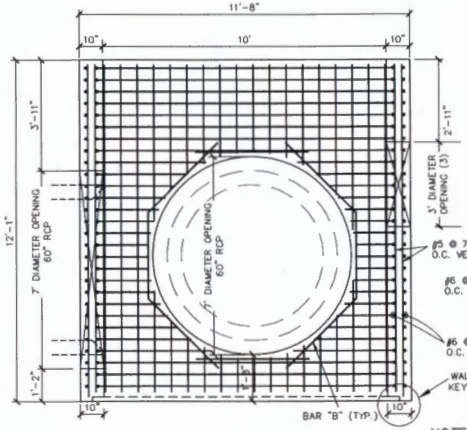
STORM WATER PUMP STATION #5
PUMP STATION REPLACEMENT

DISCHARGE STRUCTURE DETAIL

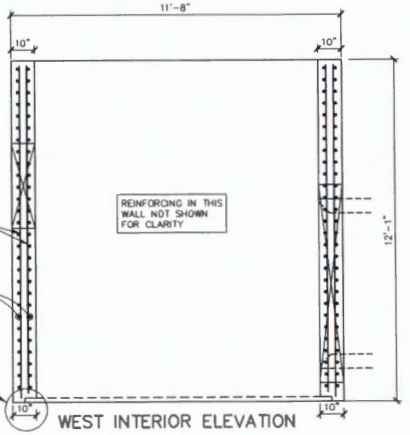
SHEET NO. **S-13**



PLAN VIEW



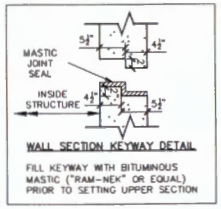
EAST INTERIOR ELEVATION



WEST INTERIOR ELEVATION

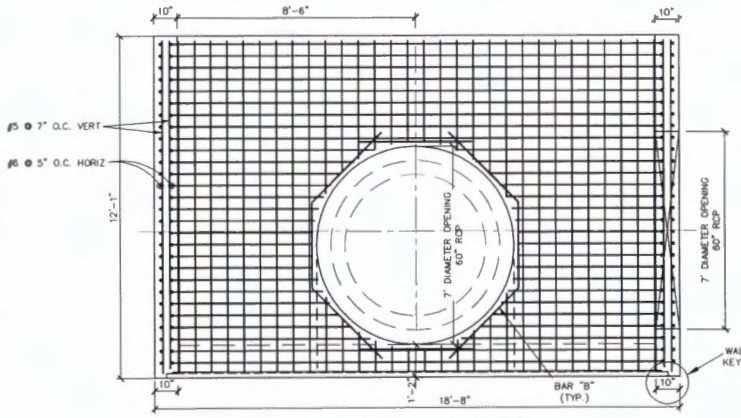
NOTES:

1. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,400 PSI AT 28 DAYS.
2. REINFORCING STEEL SHALL BE GRADE 60.
3. BOTTOM AND WALL REINFORCEMENT COMPLIES WITH FDOT STANDARD PLAN INDEX NO. 425-010 FOR TYPE "J" TYPE STRUCTURES.
4. SEE WALL SECTION DETAILS THIS SHEET

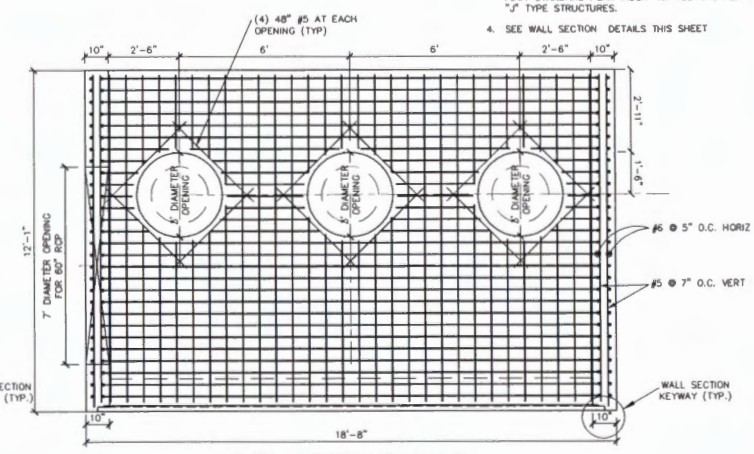


WALL SECTION KEYWAY DETAIL

FILL KEYWAY WITH BITUMINOUS MASTIC ("RAM-NEK" OR EQUAL) PRIOR TO SETTING UPPER SECTION



NORTH INTERIOR ELEVATION



SOUTH INTERIOR ELEVATION

DISCHARGE STRUCTURE – MIDDLE SECTION (SEC 2)

LEAVE BLANK – FOR CITY USE ONLY

REVISIONS					
Date	By	Description	Date	By	Description

	Names	Dates
Drawn by	JWR	05/20
Checked by	DWC	05/20
Designed by	DWC	05/20
Checked by	JWR	05/20
Approved by	JOSEPH W. ROLES, JR. P.E.	

JOSEPH ROLES AND ASSOC., INC.
CONSULTING ENGINEERS
7504 N.W. 4th STREET, SUITE 101
PLANTATION, FLORIDA 33317
PHONE (954) 581-1945
CERTIFICATE OF AUTHORIZATION NO. 5640

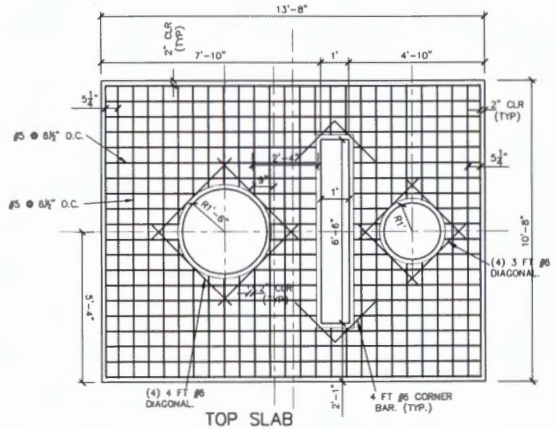
Engineer of Record: DAVID W. GARMIZO, P.E.
PE NO. 47061

PREPARED FOR: CITY OF SUNRISE FLORIDA

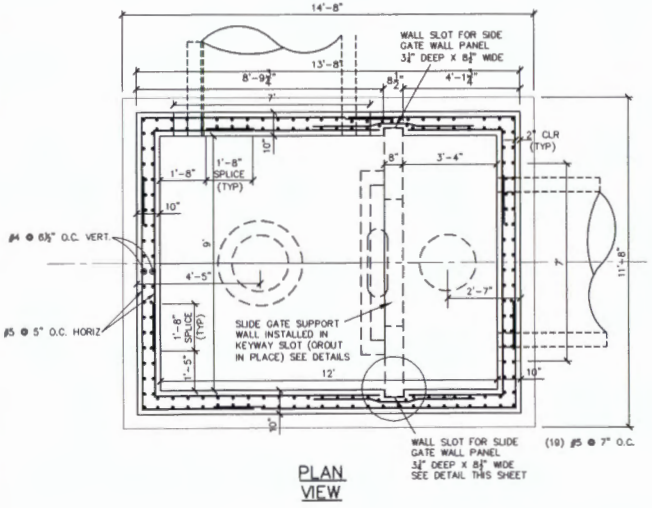
STORM WATER PUMP STATION #5
PUMP STATION REPLACEMENT

DISCHARGE STRUCTURE DETAIL

SHEET NO. S-14



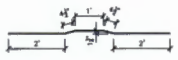
TOP SLAB



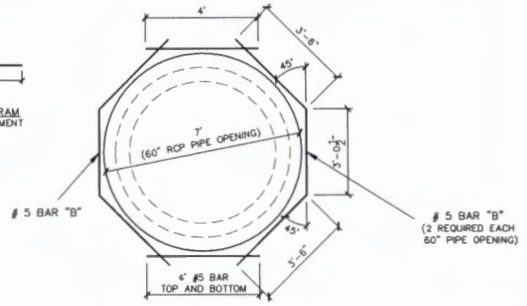
PLAN VIEW

NOTES:

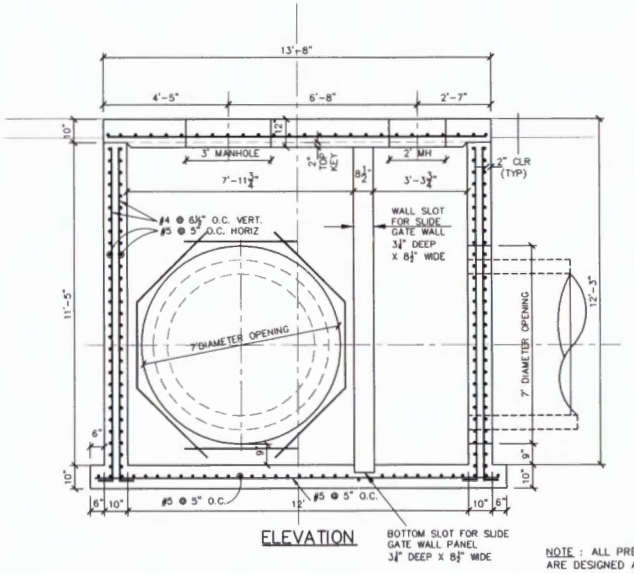
1. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,400 PSI AT 28 DAYS.
2. REINFORCING STEEL SHALL BE GRADE 60
3. STRUCTURE IS DESIGNED IN ACCORDANCE WITH FDOT STANDARD PLAN INDEX NO. 425-010.
4. 36" RING AND COVER SHALL BE USF 1309 SLAB TYPE RING AND CR SERIES COVER.
5. 24" RING AND COVER SHALL BE USF 1110-P SLAB TYPE RING AND USF 3600 GRATE COVER.
6. SEE SLIDE GATE AND CONCRETE GATE WALL PANEL INSERT DETAILS FOR FURTHER INFORMATION FOR THIS STRUCTURE



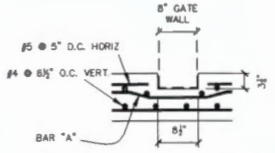
BAR "A" BENDING DIAGRAM
FOR WALL SLOT REINFORCEMENT



BAR "B" BENDING DIAGRAM
60" PIPE WALL OPENING DIAGONAL REINFORCEMENT



ELEVATION



WALL KEYWAY DETAIL

QUANTITIES SUMMARY

PRECAST BYPASS STRUCTURE #1	CONCRETE VOLUME (CY)	STEEL WEIGHT (LB)	ESTIMATED WEIGHT (TONS)
BOX	18.90 CY	5,042 LB	38.3 TNS
TOP SLAB	4.0 CY	537 LB	8.1 TNS
GATE WALL	2.1 CY	351 LB	4.2 TNS
TOTAL	25 CY	5,930 LB	50.6 TNS

NOTE : ESTIMATED QUANTITIES AND SECTION WEIGHTS ARE APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE FINAL QUANTITIES AND SECTION WEIGHT AND LIFT REQUIREMENTS FOR PLACEMENT OF PRECAST STRUCTURES

NOTE : ALL PRECAST BURIED STRUCTURES FOR THIS PROJECT ARE DESIGNED AS LARGE "J" STRUCTURES, PER THE FLORIDA DEPARTMENT OF TRANSPORATION (FDOT) "STANDARD PLANS", 2020-2021 EDITION. INDEX 425-010, SHEETS 1 THROUGH 5. COPIES OF THE FDOT REFERENCED INDEX SHEETS, WITH THE DESIGN DATA INFORMATION, ARE INCLUDED IN THESE PLANS.

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GRAVITY BYPASS STRUCTURE #1 W/ SLIDE GATE

REVISIONS					
Date	By	Description	Date	By	Description

	Names	Dates
Drawn by	JMR	05/20
Checked by	DWG	05/20
Designed by	DWG	05/20
Checked by	JMR	05/20
Approved by	JOSEPH W. ROLES, JR. P.E.	

JOSEPH ROLES AND ASSOC., INC.
CONSULTING ENGINEERS
7504 N.W. 4th STREET, SUITE 101
PLANTATION, FLORIDA 33317
PHONE (954) 581-1941
CERTIFICATE OF AUTHORIZATION NO. 5640

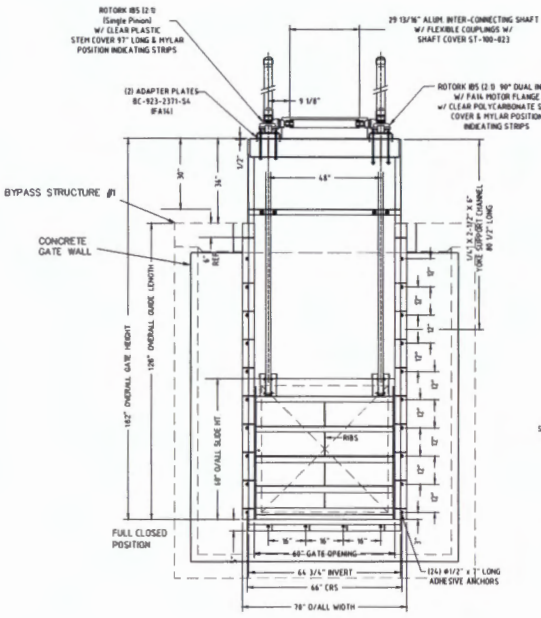
Engineer of Record: DAVID W. GARMZO. P.E. PE NO. 47061

PREPARED FOR: CITY OF SUNRISE FLORIDA

STORM WATER PUMP STATION #5
PUMP STATION REPLACEMENT

BY PASS STRUCTURE #1 DETAILS

SHEET NO. S-15



GRAVITY BYPASS STRUCTURE #1
STAINLESS STEEL SLIDE GATE AND GATE WALL DETAILS

NOTES:
1. SLIDE GATE SHALL BE A 60" BY 60", SINGLE LEAF 316 STAINLESS STEEL GATE, WITH ELECTRIC MOTOR ACTUATED OPENING AND CLOSING, "SERIES 623 SLIDE GATE", AS MANUFACTURED BY WHIPPS, INC. 370 SOUTH ATHOL ROAD, ATHOL, MA. 01331, OR APPROVED EQUAL.
2. ACTUATOR SHALL BE A "ROTORK" MODEL IB5 (2:1) 90° DUEL INPUT W/ EIM 2000 SERIES ACTUATOR, OR APPROVED EQUAL.
3. GATE SHALL PROVIDE SEATING AND UNSEATING DESIGN HEAD OF 5.0 FEET MINIMUM AND MAXIMAUM LEAKAGE AT DESIGN HEAD OF 0.05 GPM PER FOOT OF SEAL
4. SHOP DRAWING APPROVAL REQUIRED BEFORE GATE AND COMPONENTS FABRICATION.
5. SEE ELECTRICAL DRAWING FOR CONDUIT ROUTING.
6. SLIDE GATE INSTALLATION SHALL COMPLY WITH THE MANUFACURER'S REQUIREMENTS AND DIRECTIONS.
7. PRECASTED MAY CONSTRUCT THE SLIDE GATE SUPPORT PANEL AS A PART OF THE STRUCTURE. CONTRACTOR SHALL SUBMIT ALTERNATE DESIGN FOR APPROVAL PRIOR TO FABRICATION.

LEAVE BLANK – FOR CITY USE ONLY

REVISIONS					
Date	By	Description	Date	By	Description

	Names	Dates
Drawn by	JWR	05/20
Checked by	DWG	05/20
Designed by	DWG	05/20
Checked by	JWR	05/20
Approved by	JOSEPH W. ROLES, JR. P.E.	

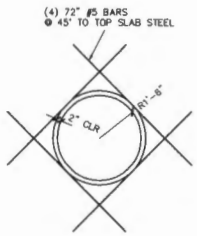
JOSEPH ROLES AND ASSOC., INC.
CONSULTING ENGINEERS
7301 W. 4th. STREET, SUITE 101
PLANTATION, FLORIDA 33317
PHONE (954) 584-1945
CERTIFICATE OF AUTHORIZATION NO. 8648
Engineer of Record: DAVID W. GARMZO. P.E. PE NO. 47061

PREPARED FOR: CITY OF SUNRISE FLORIDA

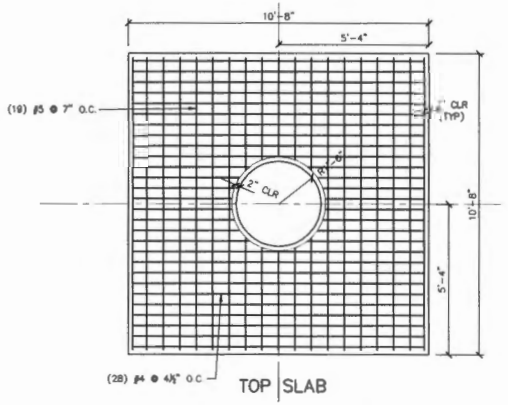
STORM WATER PUMP STATION #5
PUMP STATION REPLACEMENT

BYPASS STRUCTURE #1 SLIDE GATE DETAIL

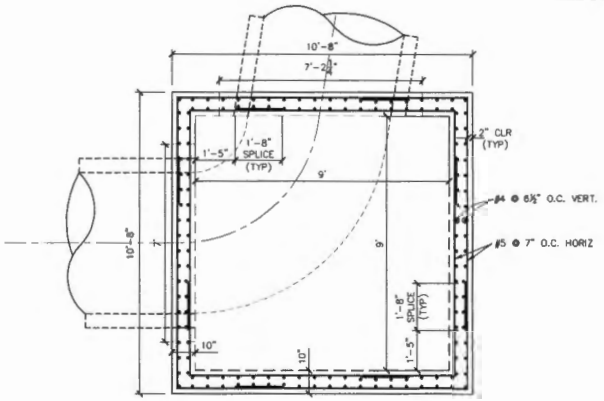
SHEET NO. **S-16**



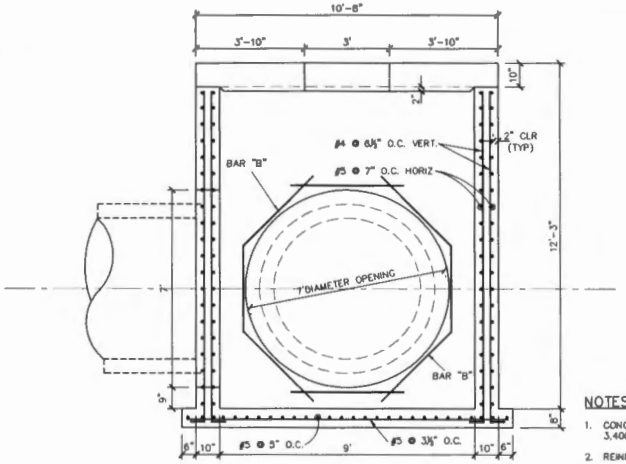
TOP SLAB OPENING
ADDITIONAL REINFORCEMENT



TOP SLAB



PLAN VIEW



ELEVATION

QUANTITIES SUMMARY			
PRECAST BYPASS STRUCTURE #2	CONCRETE VOLUME (CY)	STEEL WEIGHT (LB)	ESTIMATED WEIGHT (TONS)
BOX	16.60 CY	3,336 LB	33.5 TNS
TOP SLAB	4.0 CY	515 LB	4.0 TNS
TOTAL	20.6 CY	3,851 LB	37.5 TNS

NOTE : ESTIMATED QUANTITIES AND SECTION WEIGHTS ARE APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE FINAL QUANTITIES AND SECTION WEIGHT AND LIFT REQUIREMENTS FOR PLACEMENT OF PRECAST STRUCTURES

NOTES:

1. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,400 PSI AT 28 DAYS.
2. REINFORCING STEEL SHALL BE GRADE 60.
3. STRUCTURE IS DESIGNED IN ACCORDANCE WITH FDOT STANDARD PLAN INDEX NO. 425-010.
4. 36" RING AND COVER SHALL BE USF 1309 SLAB TYPE RING AND CR SERIES COVER.
5. SEE SHEET S-02 FOR PIPE OPENING REINFORCEMENT DETAIL.

NOTE : ALL PRECAST BURIED STRUCTURES FOR THIS PROJECT ARE DESIGNED AS LARGE "J" STRUCTURES, PER THE FLORIDA DEPARTMENT OF TRANSPORATION (FDOT) "STANDARD PLANS", 2020-2021 EDITION, INDEX 425-010, SHEETS 1 THROUGH 5. COPIES OF THE FDOT REFERENCED INDEX SHEETS, WITH THE DESIGN DATA INFORMATION, ARE INCLUDED IN THESE PLANS.

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GRAVITY BYPASS STRUCTURE #2

REVISIONS					
Date	By	Description	Date	By	Description

	Names	Dates
Drawn by	JWR	05/20
Checked by	DWG	05/20
Designed by	DWG	05/20
Checked by	JWR	05/20
Approved by	JOSEPH W. ROLES, JR. P.E.	

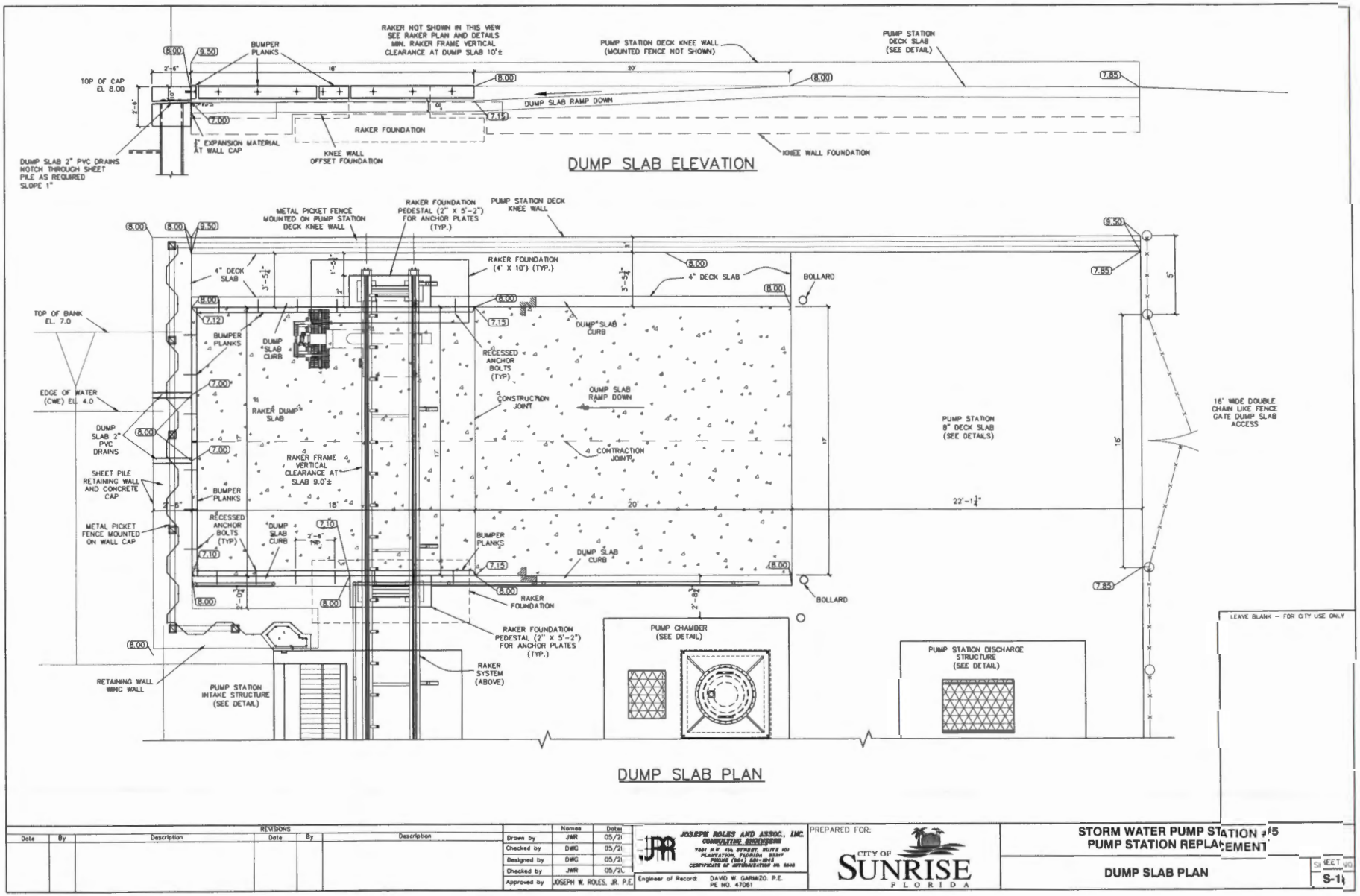
JOSEPH ROLES AND ASSOC., INC.
CONSULTING ENGINEERS
7351 W.T. 4th STREET, SUITE 101
PLANTATION, FLORIDA 33317
PHONE (954) 581-1913
CERTIFICATE OF AUTHORIZATION NO. 5648
Engineer of Record: DAVID W. GARMIZO, P.E. PE NO. 47061

PREPARED FOR: CITY OF SUNRISE FLORIDA

STORM WATER PUMP STATION #5
PUMP STATION REPLACEMENT

BY PASS STRUCTURE #2 DETAILS

SHEET NO. S-17



REVISIONS					
Date	By	Description	Date	By	Description

	Names	Date
Drawn by	JWR	05/2
Checked by	DWG	05/2
Designed by	DWG	05/2
Checked by	JWR	05/2
Approved by	JOSEPH W. ROLES, JR. P.E.	

JOSEPH ROLES AND ASSOC., INC.
CONSULTING ENGINEERING
7081 N.W. 4th STREET, SUITE 101
PLANTATION, FLORIDA 33317
PHONE (561) 581-1015
CERTIFICATE OF AUTHORIZATION NO. 5645

Engineer of Record: DAVID W. GARMIZO, P.E.
PE NO. 47061

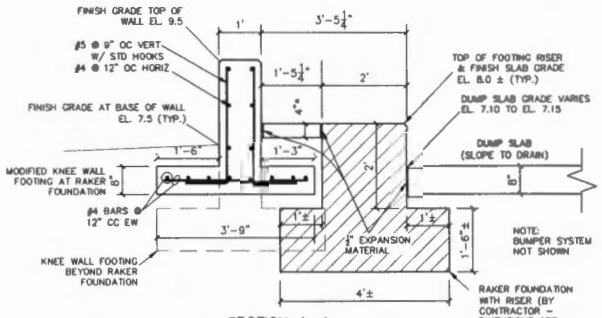
PREPARED FOR:
CITY OF SUNRISE FLORIDA

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STORM WATER PUMP STATION #5
PUMP STATION REPLACEMENT

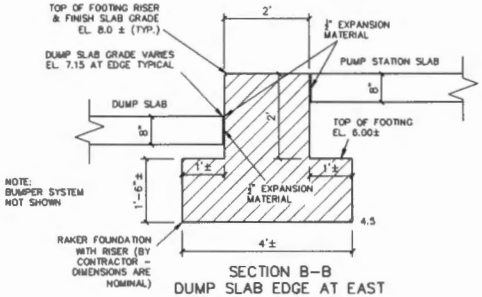
DUMP SLAB PLAN

SHEET NO.
S-1

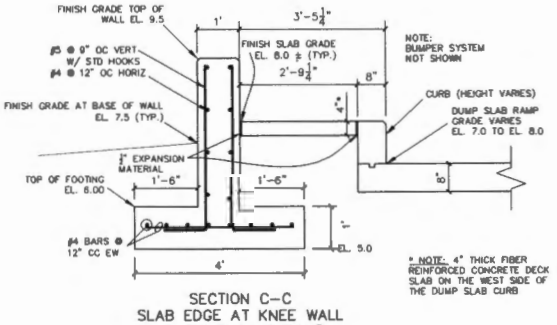


SECTION A–A
DUMP SLAB EDGE &
MODIFIED KNEE WALL FOOTING
AT WEST RAKER FOOTING

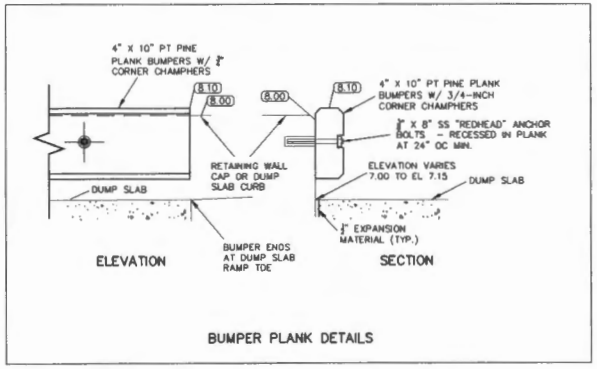
* NOTE: 4" THICK FIBER REINFORCED CONCRETE DECK SLAB ON THE WEST SIDE OF THE DUMP SLAB CURB



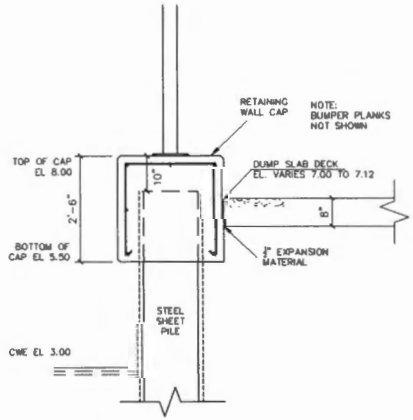
SECTION B–B
DUMP SLAB EDGE AT EAST
RAKER MIDDLE FOOTING



SECTION C–C
SLAB EDGE AT KNEE WALL
& DUMP SLAB RAMP



BUMPER PLANK DETAILS



SECTION B–B
SLAB EDGE AT
RETAINING WALL CAP

LEAVE BLANK – FOR CITY USE ONLY

REVISIONS					
Date	By	Description	Date	By	Description

	Names	Dates
Drawn by	JWR	05/20
Checked by	DWG	05/20
Designed by	DWG	05/20
Checked by	JWR	05/20
Approved by	JOSEPH W. ROLES, JR. P.E.	

JOSEPH ROLES AND ASSOC., INC.
CONSULTING ENGINEERING
7901 S.W. 6th STREET, SUITE 101
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PHONE (954) 587-1060
CERTIFICATE OF AUTHORIZATION NO. 6945

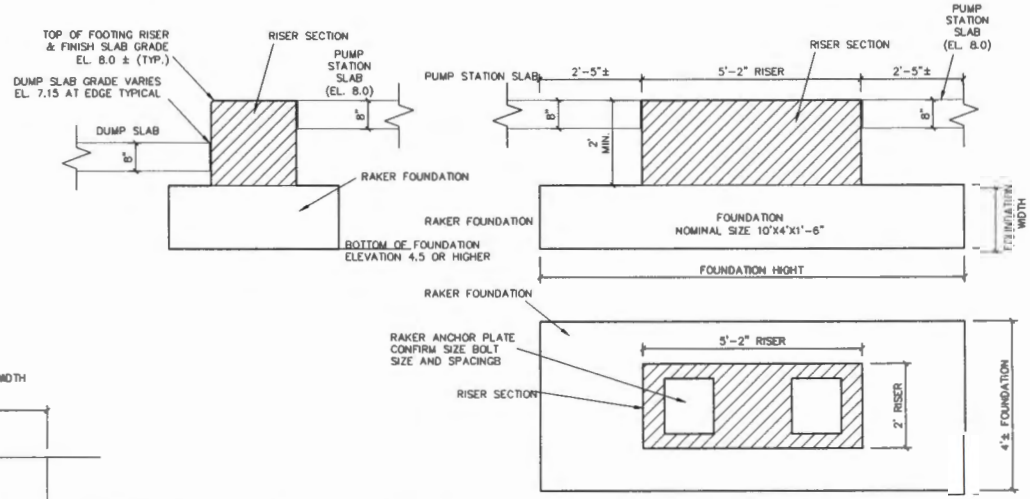
Engineer of Record: DAVID W. GARMIZO, P.E.
PE NO. 47061

PREPARED FOR:
CITY OF SUNRISE FLORIDA

STORM WATER PUMP STATION #5
PUMP STATION REPLACEMENT

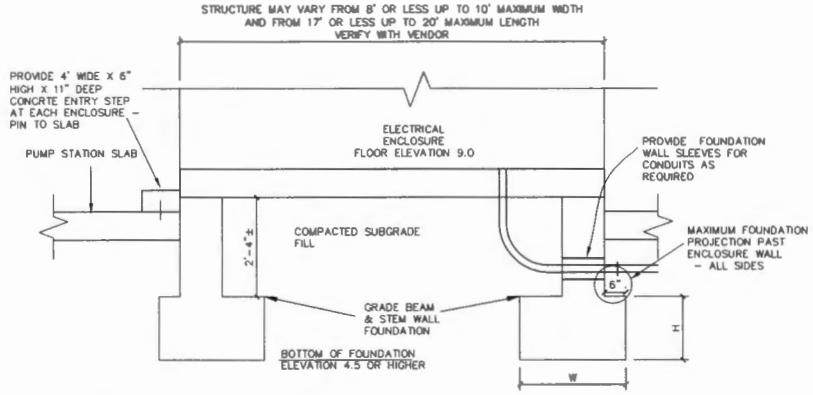
DUMP SLAB DETAILS

SHEET NO.
S-1



RAKER SYSTEM FOUNDATION GENERAL CONFIGURATION

NOTES
1. CONTRACTOR SHALL COORDINATE WITH THE VENDOR AND PROVIDE FINAL FOUNDATION DESIGN.
2. RISER SECTION IS REQUIRED TO MEET THE DIMENSIONS PROVIDED. RISERS AND RAKER SUPPORT COLUMNS TO BE LOCATED AS SHOWN ON THE PLANS.
3. TOP OF RISER SECTION IS ELEVATION 8.0 (NAVD-88)
4. WATER TABLE DESIGN ELEVATION @ 4.0 (NAVD-88)
5. ALL FOUNDTATION DIMENSIONS ARE NOMINAL AND MAY BE ADJUSTED TO COMPLY WITH THE REQUIREMENTS OF THE RAKER SYSTEM.
6. RAKER ANCHOR BOLTS AND BOLT PATTERN PER VENDOR.
7. CONTRACTOR TO COORDINATE WITH THE RAKER SUPPLIER TO PREPARE A FLORIDA BUILDING CODE COMPLIANT, SIGNED AND SEALED SHOP DRAWING FOUNDATION DESIGN, INCLUDING, PLANS, DETAILS AND CALCULATIONS TO BE PREPARED BY AN ENGINEER REGISTERED IN THE STATE OF FLORIDA.



ELECTRICAL ENCLOSURE FOUNDATION GENERAL CONFIGURATION

NOTES
1. CONTRACTOR TO COORDINATE WITH THE ENCLOSURE FABRICATOR TO PROVIDE A FLORIDA BUILDING CODE COMPLIANT FOUNDATION SHOP DRAWING DESIGN WITH PLANS, DETAILS AND CALCULATION TO BE PREPARED BY AN ENGINEER REGISTERED IN THE STATE OF FLORIDA FOR APPROVAL BY THE CITY AND ENGINEER.
2. PUMP STATION SLAB IS AT ELEVATION 8.0
3. ELECTRICAL ENCLOSURE FLOOR ELEVATION IS 9.0
4. WATER TABLE DESIGN ELEVATION IS 4.0
5. ALL FOUNDTATION DIMENSIONS SHOWN ARE NOMINAL UNLESS OTHERWISE NOTED, AND MAY BE ADJUSTED TO COMPLY WITH THE REQUIREMENTS OF THE ENCLOSURE. FOUNDATION CONFIGURATION MAY VARY FROM THE GENERAL CONFIGURATION SHOWN
6. ENCLOSURE ANCHOR BOLTS AND BOLT PATTERNS PER VENDOR.
7. PROVIDE CONCRETE STEP ENTRY AT EACH DOOR.

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REVISIONS					
Date	By	Description	Date	By	Description

	Names	Dates
Drawn by	JWR	05/20
Checked by	DWG	05/20
Designed by	DWG	05/20
Checked by	JWR	05/20
Approved by	JOSEPH W. ROLES, JR. P.E.	

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CERTIFICATE OF AUTHORIZATION NO. 5645
Engineer of Record: DAVID W. GARMAZO, P.E. PE NO. 47061

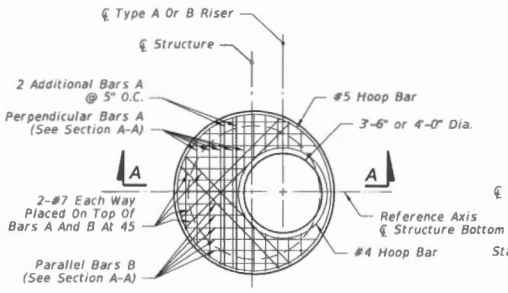
PREPARED FOR: CITY OF SUNRISE FLORIDA

STORM WATER PUMP STATION #5 PUMP STATION REPLACEMENT

MISCELLANEOUS FOUNDATION DETAILS & NOTES

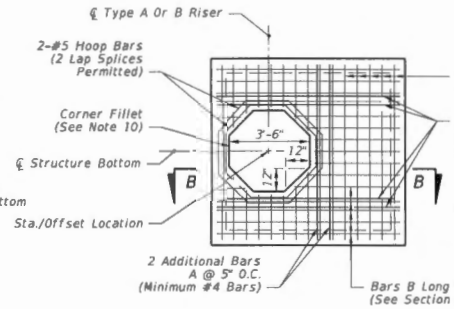
SHEET NO. S-20

Municipal Interlocal Agreement for Surtax-Funded Transportation Projects

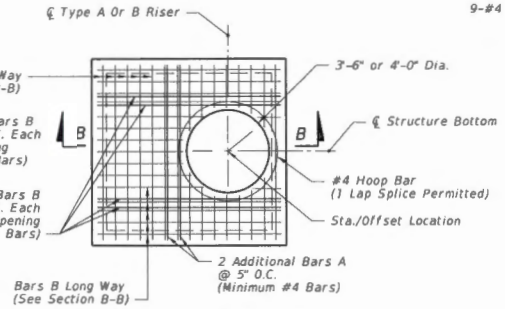


NOTE:
Not Applicable For Type A, B, C, D & E Ditch Bottom Inlets Or Type S & V Gutter Inlets.
See Indexes 425-040, 425-050, 425-051, and 425-052.

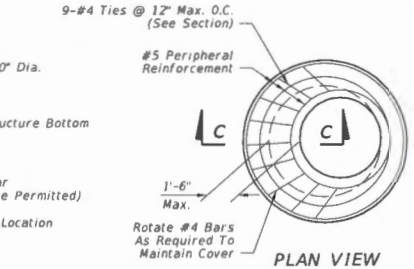
TOP SLAB REINFORCING STEEL DIAGRAM
(ALTERNATE A)



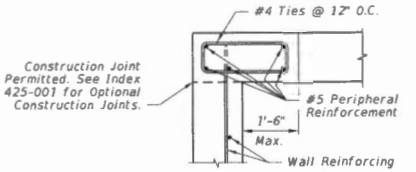
SQUARE OPENING WITH CORNER FILLETS
TOP SLAB REINFORCING STEEL DIAGRAM
(ALTERNATE B)



ROUND RISER OPENING

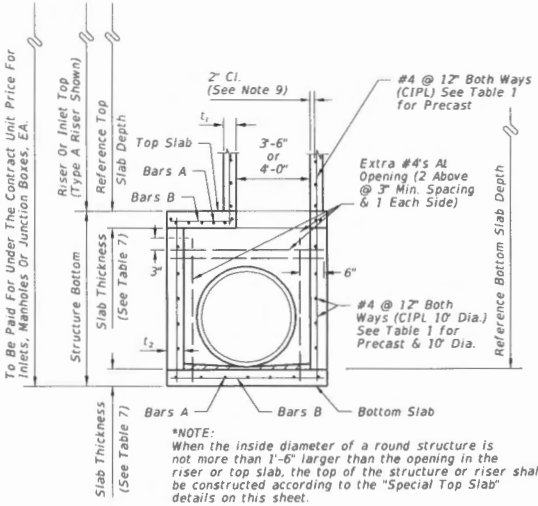


PLAN VIEW



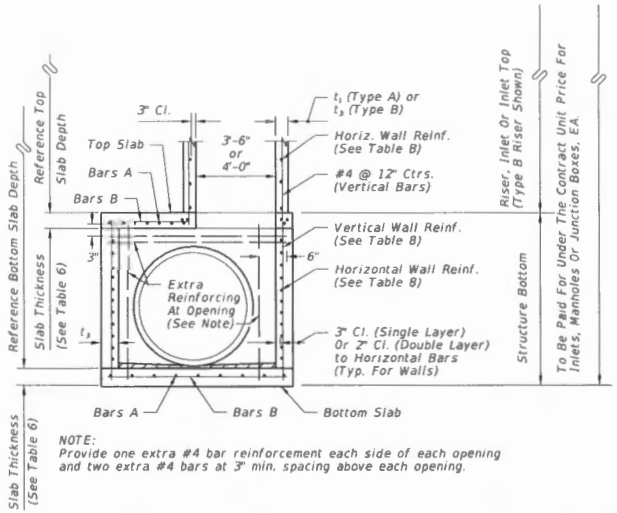
SECTION C-C

SPECIAL TOP SLAB*



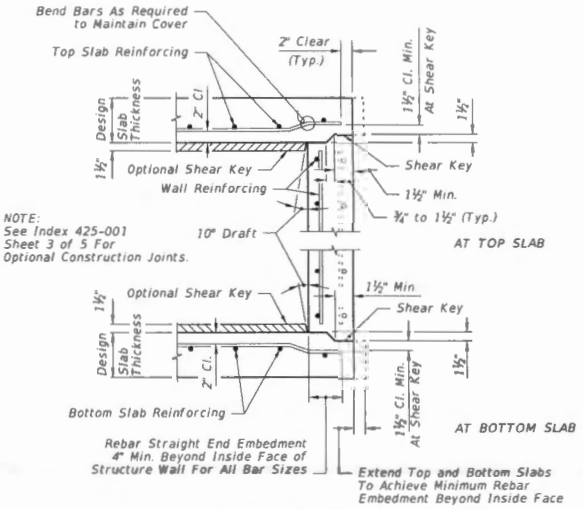
*NOTE:
When the inside diameter of a round structure is not more than 1'-6" larger than the opening in the riser or top slab, the top of the structure or riser shall be constructed according to the "Special Top Slab" details on this sheet.

SECTION A-A
(ALTERNATE A)



NOTE:
Provide one extra #4 bar reinforcement each side of each opening and two extra #4 bars at 3" min. spacing above each opening.

SECTION B-B
(ALTERNATE B)



NOTE:
See Index 425-001 Sheet 3 of 5 For Optional Construction Joints.

TYPICAL SLAB TO WALL DETAILS
FOR PRECAST STRUCTURES

CITY OF SUNRISE
PUMP STATION #5
SHEET S-21

LAST REVISION	REVISION	DESCRIPTION.	FDOT	FY 2020-21 STANDARD PLANS	STRUCTURE BOTTOMS TYPE J AND P	INDEX	SHEET
11/01/19						425-010	1 of 5

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ROUND STRUCTURE BOTTOMS (ALTERNATE A) & ROUND RISERS- TABLE 1

Wall Thickness (t_1 & t_2) and Vertical & Horizontal Areas of Reinforcement (A_s)

Type	Structure/Riser Diameter (ft)	Cast-In-Place Items Class II Concrete			Precast Items				
					Class II Concrete			ASTM C478	
		t_1 Riser (in.)	t_2 Bottom (in.)	A_s (in.²/ft.)	t_1 Riser (in.)	t_2 Bottom (in.)	A_s (in.²/ft.)	t_1 or t_2 (in.)	A_s *** (in.²/ft.)
P	3'-6"	6	8	0.20	6	8	0.20	4**	0.105
P	4'-0"	6	8	0.20	6	8	0.20	5**	0.120
J	5'-0"	-	8	0.20	-	8	0.20	6**	0.150
J	6'-0"	-	8	0.20	-	8	0.20	6	0.180
J	7'-0"	-	8	0.20	-	8	0.20	7	0.210
J	8'-0"	-	8	0.20	-	8	0.20	8	0.240
J	10'-0"	-	10	0.40##	-	10	0.40##	10	0.300
J	12'-0"	-	10	0.40##	-	12	0.40##	12	0.360

TABLE 1 NOTES:

##Provide 0.20 eq. in.²/ft. at each face, 12" max. bar spacing.

**Modified minimum wall thickness.

***Min. total circumferential reinforcement for continuous steel hoops:

A_s = 0.40 sq. in. for riser section height equal or less than 2'-0" (2 hoop min.)

A_s = 0.60 sq. in. for riser section height more than 2'-0" up to 4'-0" (3 hoop min.)

Areas of reinforcing for precast items are based on Grade 60 reinforcing;

No reduction in the area of reinforcement is allowed for welded wire fabric in Table 1;

Area of vertical reinforcing may be reduced in accordance with ASTM C478.

SQUARE & RECTANGULAR STRUCTURES (ALTERNATE B) - TABLE 2

Type	Wall Length (ft)	Max. Depth (ft)	Wall Thickness (t_3)	
			CIP (in.)	Precast (in.)
P	≤ 3'-6"	40	6 Riser 8 Bottom	6
J	4'-0"	40	8	6
J	5'-0"	22	-	6
J	6'-0"	15	-	6
J	5'-0" to 9'-0"	40	8	8
J	10'-0"	26	8	8
J	10'-0" to 12'-0"	40	10	9
J	16'-0"	35	-	9
J	16'-0"	40	10	10
J	20'-0"	25	-	9
J	20'-0"	30	10	10

TABLE 2 NOTES:

See Table 8 for Reinforcing Schedule.

GENERAL NOTES

1. Standard structure bottoms 4'-0" diameter and smaller (Alt. A) and 3'-6" square (Alt. B) are designated Type P. Larger standard structure bottoms are designated Type J. Risers are permitted for all structures. Round risers are designated Type A, square risers are designated Type B.
2. Walls of circular structures (Alt. A) constructed in place may be of brick or reinforced concrete. Precast and rectangular structures (Alt. B) shall be constructed of reinforced concrete only.
3. Wall thickness and reinforcement are for either reinforced cast-in-place or precast concrete units except that precast circular units may be furnished with walls in accordance with ASTM C478 (see modified wall thicknesses in Table 1).
4. Top and bottom slab thickness and reinforcement are for precast and cast-in-place construction. All concrete shall be of Class II concrete, except use Class IV concrete when shown in the Plans, for special applications of structures located in extremely aggressive environments. Concrete as specified in ASTM C478 (4000 psi) may be used in lieu of Class II concrete for precast items manufactured in accordance with Specifications Section 449.
5. All reinforcement shown is Grade 60 steel, deformed bar. Equivalent area Grade 40 steel or equivalent area smooth or deformed welded wire reinforcement in accordance with Specification Section 931 may be substituted according to Index 425-001, unless otherwise noted.
6. Alt. A or Alt. B structure bottoms may be used in conjunction with curb inlet tops Types 1, 2, 3, 4, 5, 6, 9, and 10, and any manhole or junction box unless otherwise shown in the plans or other standard drawings. Alt. B structure bottoms may be used in conjunction with curb inlet Types 7 & 8, or any ditch bottom inlet unless otherwise shown in the plans or other standard drawings.
7. Rectangular structures may be rotated as directed by the Engineer in order to facilitate connections between the structure walls and storm sewer pipes.
8. Except when ACI hooks are specifically required, reinforcement in top and bottom slab shall be straight embedment.
9. All reinforcement must have 2" minimum cover except for 3'-6" diameter precast circular units manufactured under ASTM C478, keyed construction otherwise shown. Additional bars used to restrain hole formers for precast structures with grouted pipe connections,may be left flush with the hole surface. Cut or bend reinforcement at pipe openings to maintain cover. Exposed ends of reinforcing at precast pipe openings and grouted joints must be removed to 1" below the concrete surface and sealed with a Type F epoxy in accordance with Specification Section 926. Horizontal steel in rectangular structures shall be lapped a minimum of 30 bar diameters or by standard hooks at corners.
10. The corner fillets shown are necessary for rectangular structures used with circular risers and inlet throats and when used on skew with rectangular risers, inlets and inlet throats. Fillets will be required in the top slab of the Alt. A structure bottoms when used with the Alt. B risers. Each fillet shall be reinforced with two #5 bars.
11. Inlet walls, throats, risers or manhole tops shall be secured to structures as shown on Index 425-001 Optional Construction Joints.
12. Structures with depths over 14' below the mean high water table are to be checked for flotation by the designer of the drainage project.
13. Units larger than specified standards may be substituted at the contractor's option when these units will not cause or increase the severity of utility conflicts. Such larger units shall be furnished at no additional cost to the Department. Larger Alt. A units cannot replace Alt. B units without approval of the Engineer. This note applies to this Index only.
14. For manhole and junction box tops, for frames and covers, and, for supplementary details and notes see Index 425-001.
15. Type J structure bottoms must have a minimum 6'-0" wall height when possible, for maintenance access.

CITY OF SUNRISE
PUMP STATION #5
SHEET S-22

LAST REVISION	REVISION	DESCRIPTION:	FDOT	FY 2020-21 STANDARD PLANS	STRUCTURE BOTTOMS TYPE J AND P	INDEX	SHEET
11/01/17						425-010	2 of 5

TABLE 3-MINIMUM STRUCTURE SIZES FOR SINGLE PIPE CONNECTION PER SIDE

PIPE SIZE	RECTANGULAR Side Dimension (L)		ROUND Diameter (D)	
	Single Pipe Per Side	Note Number	Single Pipe or θ=180°	2 to 4 Pipes θ=90°
18"	3'-6"		3'-6"	4'-0"
24"	3'-6"		3'-6"	5'-0"
30"	3'-6"/4'-0"	2	4'-0"	6'-0"
36"	4'-0"/5'-0"	3	5'-0"	7'-0"
42"	5'-0"		6'-0"	7'-0"
48"	6'-0"		6'-0"	8'-0"
54"	6'-0"		7'-0"	10'-0"
60"	7'-0"		7'-0"	10'-0"
66"	7'-0"/8'-0"	4	8'-0"	12'-0"
72"	8'-0"		8'-0"	12'-0"
78"	9'-0"		10'-0"	12'-0"
84"	9'-0"		12'-0"	N/A

TABLE 3 NOTES:

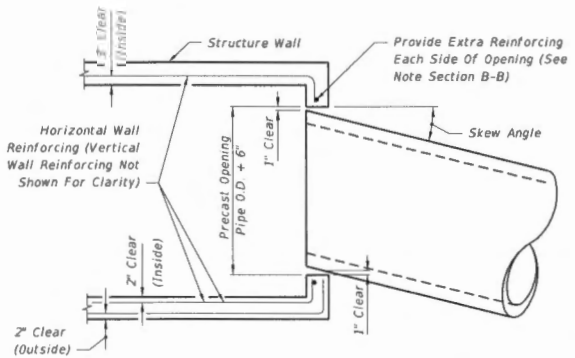
1. For Round Structures sizes with variable angles between pipes and variable pipe sizes, refer to the FDOT Storm Drain Handbook
2. For 3'-6" Precast Square Structure Bottoms, 30" Pipes with similar invert elevations are not permitted in adjacent walls. Use 4'-0" Side Dimensions when 30" pipe openings are required on adjacent walls and the difference in flow lines is less than 3'-0".
3. For 4'-0" Precast Square Structure Bottoms, 36" Pipes with similar invert elevations are not permitted in adjacent walls. Use 5'-0" Side Dimensions when 36" pipe openings are required on adjacent walls and the difference in flow lines is less than 3'-0".
4. For 7'-0" Precast Square Structure Bottoms, 66" Pipes with similar invert elevations are not permitted in adjacent walls. Use 8'-0" Side Dimensions when 66" pipe openings are required on adjacent walls and the difference in flow lines is less than 4'-0".

TABLE 4-MINIMUM SIZES FOR MULTIPLE PARALLEL PIPE CONNECTIONS FOR RECTANGULAR STRUCTURE BOTTOMS

PIPE SIZE	PIPE SPACING (S)	MINIMUM WALL LENGTH (L) FOR NUMBER OF PARALLEL PIPES 2	3	4
18"	2'-10"	6'-0"	8'-6"	11'-0"
24"	3'-5"	6'-6"	10'-0"	13'-6"
30"	4'-3"	8'-0"	12'-6"	16'-6"
36"	5'-1"	9'-6"	14'-6"	19'-6"
42"	6'-0"	11'-0"	17'-0"	-
48"	6'-9"	12'-6"	19'-0"	-
54"	7'-8"	14'-0"	-	-
60"	8'-6"	15'-0"	-	-
66"	9'-0"	16'-6"	-	-
72"	10'-0"	18'-0"	-	-
78"	10'-9"	19'-0"	-	-
84"	11'-8"	20'-6"	-	-

TABLE 4 NOTES:

1. Minimum wall lengths based on precast structures, using concrete pipe with maximum skew angles per Table 5.
2. Wall lengths exceeding 20'-0" require special designs.

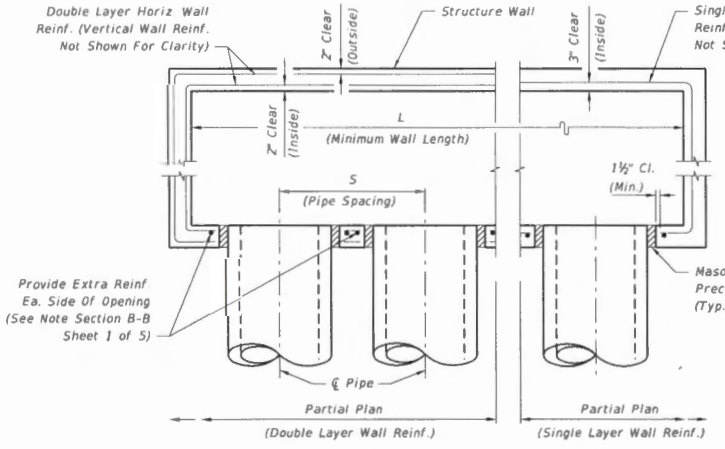


MAXIMUM PIPE SKEW FOR PRECAST ROUND OPENINGS
PLAN VIEW

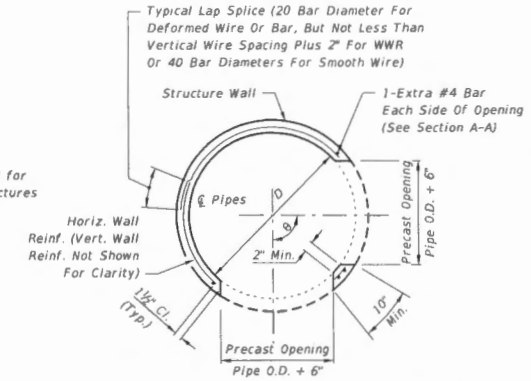
TABLE 5 - MAXIMUM PIPE SKEW FOR PRECAST ROUND OPENINGS

	WALL THICKNESS	PIPE SIZE 18"	24"	30"	36"	42"	48"	54"	60"	66"	72"	78"	84"
MAXIMUM SKEW ANGLE	8"	19°	17°	16°	16°	15°	14°	14°	13°	13°	13°	12°	12°
	6"	21°	20°	18°	17°	17°	16°	15°	15°	14°	14°	13°	13°

TABLE 5 NOTES:
These values are based on 2" clearance for precast structures. Larger skews are possible for Cast-In-Place Structures or elliptical pipe openings when approved by the Engineer.



MULTIPLE PARALLEL PIPE CONNECTIONS DETAIL
PLAN VIEW



PRECAST ROUND STRUCTURES WITH MULTIPLE PIPE CONNECTIONS

CITY OF SUNRISE
PUMP STATION #5
SHEET S-23

STRUCTURE SIZES FOR PIPE CONNECTIONS

LAST REVISION	REVISION	DESCRIPTION:			INDEX	SHEET
11/01/17			FY 2020-21 STANDARD PLANS	STRUCTURE BOTTOMS TYPE J AND P	425-010	3 of 5

SLAB DESIGNS - SQUARE AND RECTANGULAR STRUCTURES (TABLE 6)
(ALL SLABS 8" THICK EXCEPT AS NOTED - REINFORCING PARALLEL TO SHORT WAY AND LONG WAY)

SHORT-WAY		LONG-WAY	
SLAB DEPTH	SCHEDULE (Bars A)	SLAB DEPTH	SCHEDULE (Bars B)
SIZE: 3'-6" x UNLIMITED			
≥0.5' < 8'	B10	≥0.5' < 24'	B10
8' < 13'	B5.5	24'-40'	B5.5
13' < 31'	C6.5		
31'-40'	D7		
SIZE: 4' x UNLIMITED			
≥0.5' < 7'	B5.5	≥0.5' < 15'	B10
7' < 19'	C6.5	15' < 29'	B5.5
19' < 31'	D7	29'-40'	C6.5
31'-40'	E5		
SIZE: 5' x 5'			
≥0.5' < 3'	C6.5	≥0.5' < 3'	C6.5
3' < 7'	B5.5	3' < 13'	C6.5
7' < 22'	C6.5	13' < 22'	D7
22' < 29'	D7	22' < 29'	D4.5
29'-40'	E5	29'-40'	E5
SIZE: 5' x 6'			
≥0.5' < 12'	C6.5	≥0.5' < 3'	C6.5
12' < 26'	D7	3' < 9'	B5.5
26'-40'	E5	9' < 23'	C3.5
		23' < 35'	D4.5
		35'-40'	E5
SIZE: 5' x 7'			
≥0.5' < 10'	C6.5	≥0.5' < 10'	B5.5
10' < 20'	D7	10' < 31'	C3.5
20' < 34'	E5	31'-40'	D4.5
34'-40'	F5		
SIZE: 5' x 8'			
≥0.5' < 7'	C6.5	≥0.5' < 8'	B10
7' < 13'	D7	8' < 17'	B5.5
13' < 24'	E5	17' < 25'	C6.5
24'-40'	F5	25'-40'	C3.5
SIZE: 5' x 9'			
≥0.5' < 8'	C6.5	≥0.5' < 14'	B10
8' < 14'	D7	14' < 24'	B5.5
14' < 25'	E5	24' < 34'	C6.5
25'-40'	F5	34'-40'	C3.5
SIZE: 5' x UNLIMITED			
≥0.5' < 8'	C6.5	≥0.5' < 14'	B10
8' < 14'	D7	14' < 24'	B5.5
14' < 25'	E5	24' < 34'	C6.5
25'-40'	F5	34'-40'	C3.5

SHORT-WAY		LONG-WAY	
SLAB DEPTH	SCHEDULE (Bars A)	SLAB DEPTH	SCHEDULE (Bars B)
SIZE: 6' x 6'			
≥0.5' < 13'	C6.5	≥0.5' < 10'	C3.5
13' < 23'	D7	10' < 18'	D4.5
23'-40'	E5	18' < 27'	E5
		27' < 33'	E3
		33'-40'	F5
SIZE: 6' x 7'			
≥0.5' < 8'	C6.5	≥0.5' < 8'	C6.5
8' < 16'	D7	8' < 12'	C3.5
16' < 28'	E5	12' < 21'	D4.5
28'-40'	F5	21' < 28'	E5
		28' < 35'	E3
		35'-40'	F5
SIZE: 6' x 8'			
≥0.5' < 6'	C6.5	≥0.5' < 6'	B5.5
6' < 13'	D7	6' < 11'	C6.5
13' < 22'	E5	11' < 17'	C3.5
22' < 35'	F5	17' < 22'	D4.5
35'-40'	G5	22' < 32'	E5
		32'-40'	E3
SIZE: 6' x 9'			
≥0.5' < 8'	D7	≥0.5' < 8'	B5.5
8' < 14'	E5	8' < 14'	C6.5
14' < 24'	F5	14' < 21'	C3.5
24'-34'	G5	21' < 25'	D4.5
		25'-34'	E5
SIZE: 6' x UNLIMITED			
≥0.5' < 8'	D7	≥0.5' < 8'	B5.5
8' < 14'	E5	8' < 14'	C6.5
14' < 24'	F5	14' < 21'	C3.5
24'-34'	G5	21' < 25'	D4.5
		25'-34'	E5
SIZE: 7' x 7'			
≥0.5' < 8'	C6.5	≥0.5' < 4'	C6.5
8' < 15'	D7	4' < 7'	C3.5
15' < 26'	E5	7' < 11'	D4.5
26'-40'	F5	11' < 22'	E3
		22' < 32'	F3.5
		32'-40'	G3.5
SIZE: 7' x 8'			
≥0.5' < 5'	C6.5	≥0.5' < 5'	C6.5
5' < 11'	D7	5' < 8'	C3.5
11' < 19'	E5	8' < 13'	D4.5
19' < 30'	F5	13' < 22'	E3
30'-40'	G5	22' < 30'	F3.5
		30'-40'	G3.5
SIZE: 7' x 9'			
≥0.5' < 9'	D7	≥0.5' < 7'	C6.5
9' < 15'	E5	7' < 10'	C3.5
15' < 25'	F5	10' < 14'	D4.5
25' - 34'	G5	14' < 21'	E5
		21' < 29'	F5
		29'-34'	F3.5

SHORT-WAY		LONG-WAY	
SLAB DEPTH	SCHEDULE (Bars A)	SLAB DEPTH	SCHEDULE (Bars B)
SIZE: 8' x 8'			
≥0.5' < 10'	D7	≥0.5' < 9'	D4.5
10' < 19'	E5	9' < 13'	E5
19'-30'	F5	13' < 18'	F5
		18' < 23'	F3.5
		23'-30'	G3.5
SIZE: 8' x 9'			
≥0.5' < 8'	D7	≥0.5' < 7'	D7
8' < 14'	E5	7' < 9'	D4.5
14' < 23'	F5	9' < 15'	E3
23'-31'	G3.5	15' < 20'	F5
		20' < 23'	F3.5
		23'-31'	G3.5
SIZE: 9' x 9'			
≥0.5' < 8'	D7	≥0.5' < 7'	D4
8' < 14'	E5	7' < 10'	E5
14' < 22'	F5	10' < 17'	F3.5
		17' < 22'	G3.5
SIZE: 9'x9'x10" SLAB THICKNESS			
22' < 36'	F5	22' < 31'	F3.5
36'-40'	G5	31'-40'	G3.5
SIZE: 10'x10'x10" SLAB THICKNESS			
≥0.5' < 7'	C6.5	0.5' < 6'	C6.5
7' < 10'	D7	6' < 9'	D4.5
10' < 18'	E5	9' < 15'	E5
18' < 27'	F5	15' < 22'	F5
27'-32'	G5	22'-32'	G3.5
SIZE: 12'x12'x12" SLAB THICKNESS			
≥0.5' < 10'	D7	≥0.5' < 8'	D7
10' < 16'	E5	8' < 14'	E5
16' < 25'	F5	14' < 22'	F5
25'-35'	G5	22' < 30'	G5
		30'-35'	H4

SLAB DESIGNS - ROUND STRUCTURES (TABLE 7)

SLAB DEPTH	SLAB THICKNESS	REINF. (2-WAY) SCHEDULE
SIZE: 3'-6" DIAMETER		
2'-15'	6" Precast	C6.5
0.5' < 30'	8"	A6
30'-40'	8"	B5.5
SIZE: 4'-0" DIAMETER		
≥0.5' < 19'	8"	A6
19' < 30'	8"	B5.5
30'-40'	8"	C6.5
SIZE: 5'-0" DIAMETER		
≥0.5' < 15'	8"	B5.5
15' < 26'	8"	C6.5
26' < 35'	8"	D7
35'-40'	8"	D4.5
SIZE: 6'-0" DIAMETER		
≥0.5' < 9'	8"	B5.5
9' < 15'	8"	C6.5
15' < 22'	8"	C3.5
22' < 30'	8"	D4.5
30'-40'	8"	E5
SIZE: 7'-0" DIAMETER		
≥0.5' < 8'	8"	C3.5
8' < 16'	8"	D4.5
16' < 23'	8"	E5
23' < 27'	8"	E3
27'-40'	8"	F3.5
SIZE: 8'-0" DIAMETER		
≥0.5' < 10'	8"	D4.5
10' < 16'	8"	E5
16' < 19'	8"	E3
19' < 29'	8"	F3.5
29'-40'	10"	F5
SIZE: 10'-0" DIAMETER		
≥0.5' < 12'	10"	D4.5
12' < 20'	10"	E5
20' < 28'	10"	F5
28'-40'	10"	G3.5
SIZE: 12'-0" DIAMETER		
≥0.5' < 8'	10"	D4.5
8' < 13'	10"	E5
13' < 18'	10"	F5
18' < 26'	10"	G3.5
26'-40'	12"	G3.5

CITY OF SUNRISE
PUMP STATION #5
SHEET S-24

SLAB AND WALL DESIGN TABLE NOTES

1. Size is the inside dimension(s) of a structure.
2. Slab reinforcement is appropriate for top, intermediate, and bottom slabs.
3. Bottom Slabs for precast 3'-6" x 3'-6" rectangular structures at 15' depth or less, may be 6" thick.
4. Slab depth is measured from finished grade to top of slab.
5. Wall depth is measured to the top of the bottom slab for boxes and to the top of the intermediate slab for risers.
6. Wall height is the distance between top of lower slab to bottom of upper slab. Maximum wall height is 12' for wall lengths exceeding 5', or 10' for wall lengths exceeding 12'.
7. Wall lengths exceeding 6'-0" require two layers of reinforcing (See Table B) with 2" of cover from the horizontal bars to the inside and outside faces for each layer.
8. Wall lengths exceeding the dimensions or depths shown in Table B, or 12'-0" diameter require a special design.
9. Wall thickness and reinforcing for rectangular structures is based on the longer wall length.
10. Reinforcing schedules with larger areas of steel may be substituted for schedules with smaller bar or wire spacing, except that Schedule B10 may not be substituted for Schedule A6. See Index 425-001 for allowable bar spacing adjustments when larger areas of reinforcing are substituted.

LAST REVISION	REVISION	DESCRIPTION:	FDOT	FY 2020-21 STANDARD PLANS	STRUCTURE BOTTOMS TYPE J AND P	INDEX	SHEET
11/01/17						425-010	4 of 5

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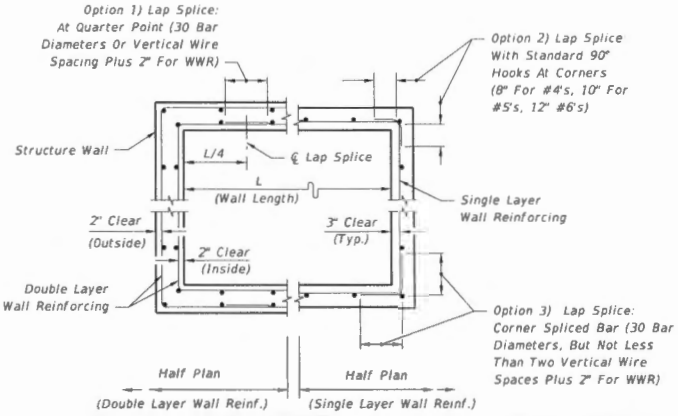
WALL DESIGNS - RECTANGULAR STRUCTURES (TABLE 8)

VERTICAL REINFORCING			HORIZONTAL REINFORCING			WALL THICKNESS
WALL DEPTH	SCHEDULE		WALL DEPTH	SCHEDULE		
SIZE: 3'-6" & RISERS						
≥1.17' - 40'	A12		≥1.17' < 10'	B10		6"/8"
			10' < 18'	B5.5		6"/8"
			18' < 29'	C6.5		6"/8"
			29' - 40'	C3.5		6"/8"
SIZE: 4'-0"						
≥1.17' - 40'	A12		≥1.17' < 6'	B10		6"/8"
			6' < 10'	B5.5		6"/8"
			10' < 20'	C6.5		6"/8"
			20' < 28'	C3.5		6"/8"
			28' - 40'	D4.5		6"/8"
SIZE: 5'-0"						
≥1.17' - 40'	A12		≥1.17' < 5'	B5.5		6"/8"
			5' < 9'	C6.5		6"/8"
			9' < 15'	C3.5		6"/8"
			15' < 22'	D4.5		6"/8"
			22' - 40'	E3		8"
SIZE: 6'-0"						
≥1.17' < 26'	A12		≥1.17' < 9'	C3.5		6"/8"
			9' < 15'	D4.5		6"/8"
			15' < 26'	E3		8"
	Inside	Outside		Inside	Outside	
26' - 40'	A12	A12	26' - 40'	D7	D7	8"
SIZE: 7'-0"						
	Inside	Outside		Inside	Outside	
≥1.17' < 25'	A12	A12	≥1.17' < 7'	B10	B10	8"
26' - 40'	B10	B10	7' < 10'	B5.5	B5.5	8"
			10' < 20'	C6.5	C6.5	8"
			20' < 30'	D7	D7	8"
			30' - 40'	E5	E5	8"
SIZE: 8'-0"						
	Inside	Outside		Inside	Outside	
≥1.17' < 20'	A12	A12	≥1.17' < 6'	B5.5	B5.5	8"
20' - 40'	C6.5	C6.5	6' < 13'	C6.5	C6.5	8"
			13' < 22'	D7	D7	8"
			22' < 31'	E5	E5	8"
			31' - 40'	F5	F5	8"
SIZE: 9'-0"						
	Inside	Outside		Inside	Outside	
≥1.17' < 12'	A12	A12	≥1.17' < 8'	C6.5	C6.5	8"
12' < 28'	C6.5	C6.5	8' < 15'	D7	D7	8"
28' - 40'	D7	D7	15' < 23'	E5	E5	8"
			23' - 40'	F5	F5	8"
SIZE: 10'-0"						
	Inside	Outside		Inside	Outside	
≥1.17' < 10'	B10	B10	≥1.17' < 10'	D7	D7	8"
10' < 21'	C6.5	C6.5	10' < 17'	E5	E5	8"
21' < 26'	D7	D7	17' < 26'	F5	F5	8"
26' - 40'	C6.5	C6.5	26' - 40'	F5	F5	10"

VERTICAL REINFORCING			HORIZONTAL REINFORCING			WALL THICKNESS
WALL DEPTH	SCHEDULE		WALL DEPTH	SCHEDULE		
SIZE: 10'-0" (Precast Only)						
	Inside	Outside		Inside	Outside	
26' - 40'	D7	D7	26' - 40'	F5	F5	9"
SIZE: 12'-0"						
	Inside	Outside		Inside	Outside	
≥1.17' < 14'	B10	B10	≥1.17' < 10'	C6.5	C6.5	10"
14' < 25'	C6.5	C6.5	10' < 17'	D7	D7	10"
25' - 40'	D7	D7	17' < 24'	E5	E5	10"
			24' - 40'	F5	F5	10"
SIZE: 12'-0" (Precast Only)						
	Inside	Outside		Inside	Outside	
≥1.17' < 12'	B10	B10	≥1.17' < 10'	D7	D7	9"
12' < 24'	C6.5	C6.5	10' < 17'	D4.5	D4.5	9"
24' - 40'	D7	D7	17' < 23'	E5	E5	9"
			23' < 32'	F5	F5	9"
			32' - 40'	G5	G5	9"
SIZE: 16'-0"						
	Inside	Outside		Inside	Outside	
≥1.17' < 11'	C6.5	C6.5	≥1.17' < 13'	D7	D7	10"
11' < 20'	D7	D7	13' < 20'	E5	E5	10"
20' < 28'	E5	E5	20' < 28'	F5	F5	10"
28' - 40'	F5	F5	28' - 40'	G5	G5	10"
SIZE: 16'-0" (Precast Only)						
	Inside	Outside		Inside	Outside	
≥1.17' < 10'	C6.5	C6.5	≥1.17' < 9'	D7	D7	9"
10' < 18'	D7	D7	9' < 13'	D4.5	D4.5	9"
18' < 25'	E5	E5	13' < 19'	E5	E5	9"
25' - 35'	F5	F5	19' < 27'	F5	F5	9"
			27' - 35'	G5	G5	9"
SIZE: 20'-0"						
	Inside	Outside		Inside	Outside	
≥1.17' < 10'	C6.5	C6.5	≥1.17' < 8'	D7	D7	10"
10' < 17'	D7	D7	8' < 12'	E5	E5	10"
17' - 30'	E5	E5	12' < 20'	F5	F5	10"
			20' - 30'	G5	G5	10"
SIZE: 20'-0" (Precast Only)						
	Inside	Outside		Inside	Outside	
≥1.17' < 8'	C6.5	C6.5	≥1.17' < 8'	D4.5	D4.5	9"
8' < 13'	D7	D7	8' < 12'	E5	E5	9"
13' - 25'	E5	E5	12' < 19'	F5	F5	9"
			19' - 25'	G5	G5	9"

REINFORCING SCHEDULE				
SCHEDULE	GRADE 60 BARS OR 65 KSI & 70 KSI WELDED WIRE REINFORCING			
	GRADE 60 AREA ($in.^2/ft.$)	MAXIMUM SPACING		
		GR 60 BARS (in.)	WWR EQUIV. AREA*	
			65 KSI (in.)	70 KSI (in.)
A12	0.20	12	8	8
A6	0.20	6	5	4½
B10	0.24	10	8	7½
B5.5	0.24	5½	5	4
C6.5	0.37	6½	6	5
C3.5	0.37	3½	3	2½
D7	0.53	7	6	5
D4.5	0.53	4½	4	3½
E5	0.73	5	4	4
E3	0.73	3	3	3
F5	1.06	5	4	4
F3.5	1.06	3½	3	3
G5	1.45	5	4	4
G3.5	1.45	3½	3	3
H4	1.75	4	3	3

*Equivalent Area Welded Wire Reinforcing may be substituted in accordance with Index 425-001.



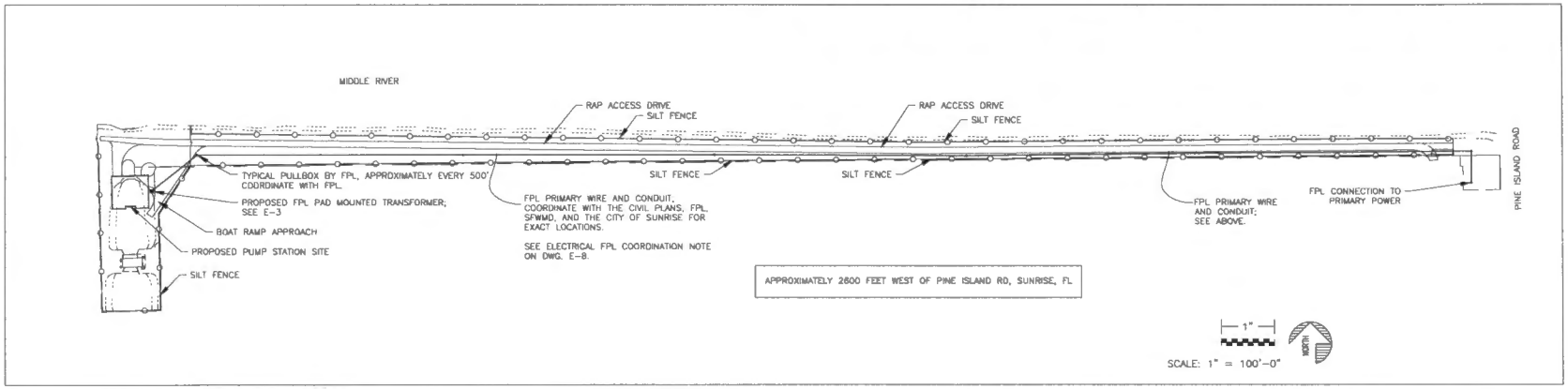
WALL REINFORCING SPLICE DETAILS (ALTERNATE B)

CITY OF SUNRISE
PUMP STATION #5
SHEET S-20

LAST REVISION	REVISION	DESCRIPTION:	FDOT	FY 2020-21 STANDARD PLANS	STRUCTURE BOTTOMS TYPE J AND P	INDEX	SHEET
11/01/17						425-010	5 of 5



PLOT PLAN
NOT TO SCALE



811

KNOW WHAT'S BELOW, CALL BEFORE YOU DIG!
811 OR 1-800-432-4770
WWW.CALLSUNSHINE.COM

ELECTRIC SERVICE REQUIREMENTS

277/480V, 3 PHASE, 4 WIRE, 60 HZ
400 AMP MAIN
291 FULL LOAD AMPS
3-50 HP (HI AMP) MOTORS
SEE ELECTRICAL RISER ON E-5

FPL ADDITIONAL INSTALLATION NOTES

COORDINATE WITH FPL PRIOR TO THE START OF THE PROJECT.

CONTRACTOR SHALL INSTALL THE FPL FURNISHED ITEMS. ALL WORK SHALL BE COMPLETED UNDER THE FPL MANAGER'S DIRECTION. FOLLOW THE FPL STANDARDS.

THESE FPL FURNISHED ITEMS SHALL INCLUDE, BUT ARE NOT LIMITED TO, CONDUIT, PULLBOXES, ETC.

CONTRACTOR SHALL COORDINATE ALL EASEMENTS ALONG THE PROPOSED CONDUIT ROUTING. MAINTAIN A 24" MINIMUM SEPARATION FROM ANY UTILITY EASEMENT.

COORDINATE WITH THE CIVIL ENGINEER, SFWMD, FPL, AND THE CITY OF SUNRISE FOR ALL WORK PRIOR TO THE START OF THE PROJECT.

FPL PROJECT MANAGER: RUTH.ABILY@FPL.com 954-717-1430
ENGINEERING LEADER: ROY TORRES

FPL COORDINATION NOTES

PRIOR TO ANY WORK, CONTACT AND COORDINATE THE PROJECT WITH THE FPL PROJECT MANAGER. VERIFY THE VOLTAGE, PHASE, SERVICE, SIZES AND QUANTITY OF SERVICE WIRES AND CONDUITS, SERVICE LOCATION, FPL TRANSFORMER LOCATION, AVAILABLE FAULT CURRENT, AND OTHER REQUIREMENTS.

SUBMIT THE ELECTRICAL DRAWINGS TO THE FPL PROJECT MANAGER THROUGH THE FPL PORTAL SYSTEM. CONTACT THE FPL PROJECT MANAGER FOR DETAILS.

FPL SERVICE CENTER: 1. POMPANO 2. WINGATE 3. GULF STREAM

	NAME	EMAIL	OFFICE TEL	MOBILE TEL
FPL PROJECT MANAGER:				
FPL SENIOR LEAD:				
FPL ENGINEERING LEADER:				
FPL SERVICE CENTER MANAGER:				
FPL ACCOUNT MANAGER:				
FPL PORTAL MANAGER:				

FPL TRANSFORMER INFORMATION:
SIZE IN KVA: KVA
VOLTAGE: VOLTS
PHASE: PH
AVAILABLE FAULT CURRENT: AMPS
DEMAND FOR LAST YEAR (IF AVAILABLE): KWD
%FULL XF LOAD
ELECTRIC SERVICE MAIN MINIMUM AIC: AMPS

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DAVID LAWRENCE RICE LICENSE No. 34343 STATE OF FLORIDA PROFESSIONAL ENGINEER

RC ENGINEERING INC
8332 NW 100th DR.
CORAL SPRINGS, FL 33076
(954)757-7900

DAVID L RICE P.E.
STATE OF FLORIDA
CA-4755 PE-34343
RC JOB #20020

REVISIONS					
Date	By	Description	Date	By	Description

	Names	Dates
Drawn by	MAH	2022/02/22
Checked by	DLR	2022/02/22
Designed by	DLR	2022/02/22
Checked by	DLR	2022/02/22
Approved by	DAVID L. RICE, PE	

JOSEPH ROLES AND ASSOC., INC.
CONSULTING ENGINEERS
7351 N.W. 4th STREET, SUITE 101
PLANTATION, FLORIDA 33317
PHONE (954) 581-1946
CERTIFICATE OF AUTHORIZATION NO. EB-48

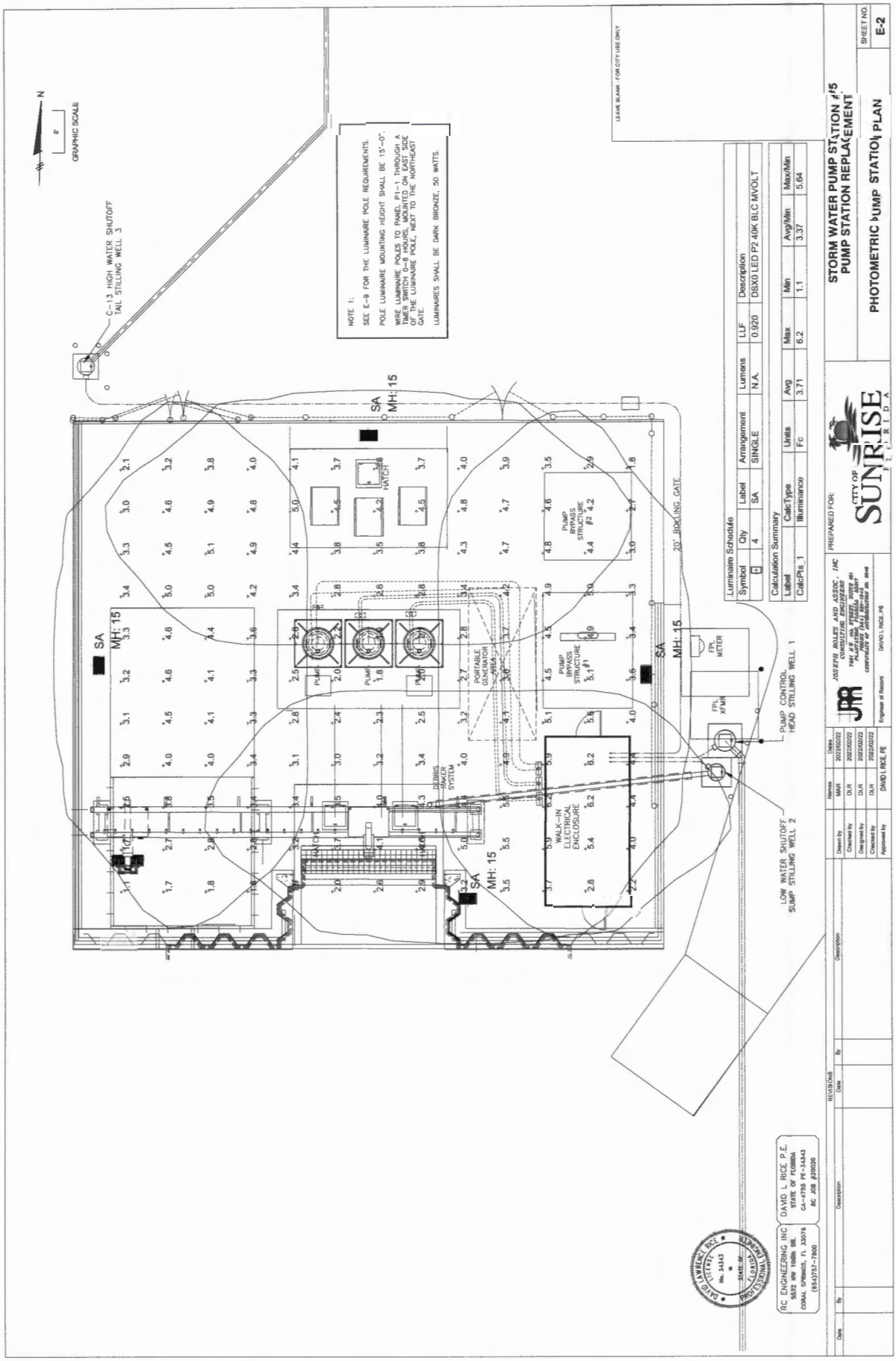
Engineer of Record: DAVID L. RICE, PE

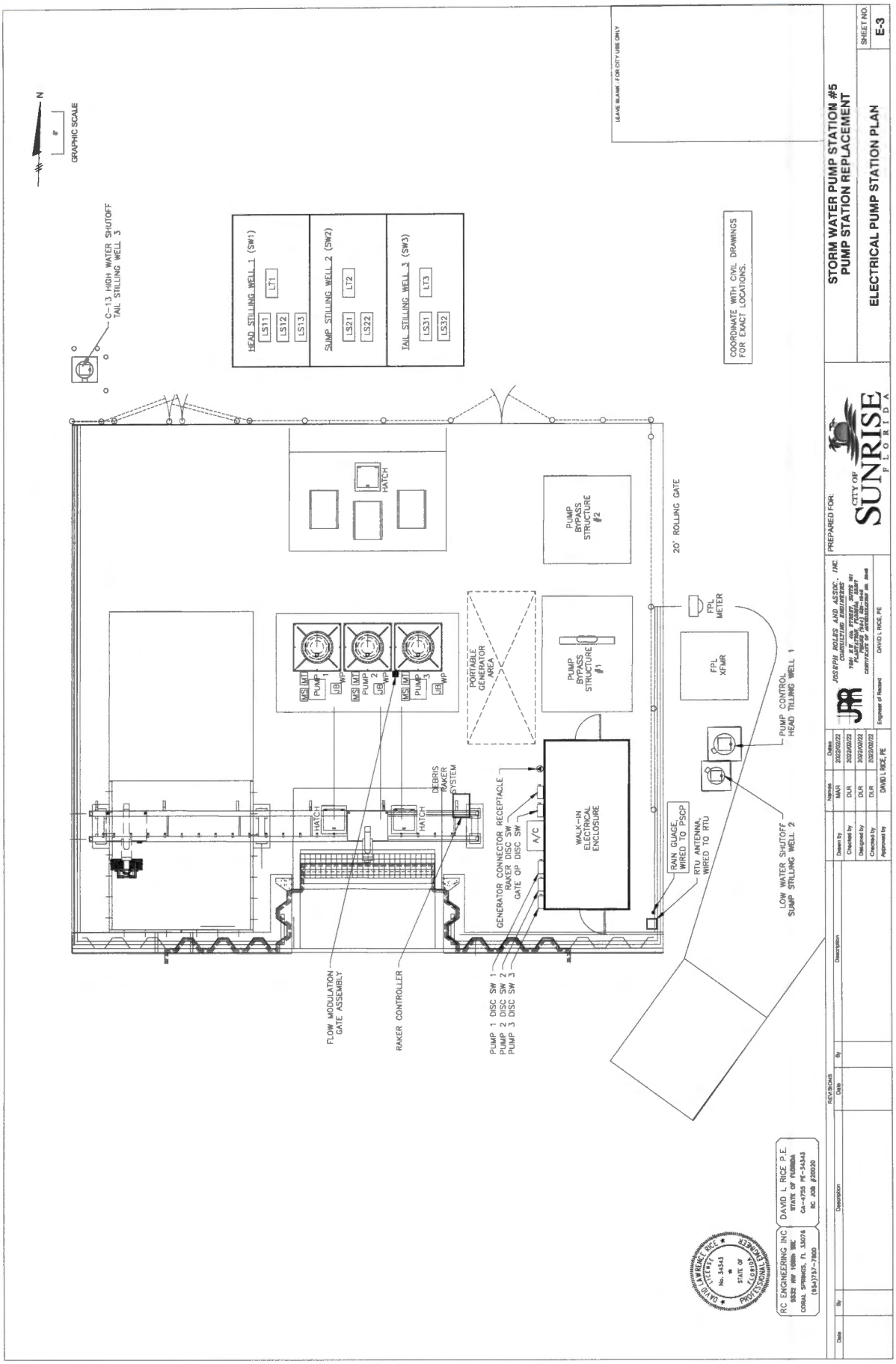
PREPARED FOR: CITY OF SUNRISE FLORIDA

STORM WATER PUMP STATION #5
PUMP STATION REPLACEMENT

ELECTRICAL SITE PLAN

SHEET NO. **E-1**


GRAPHIC SCALE
C-13 HIGH WATER SHUTOFF TAIL STILLING WELL 3
NOTE 1:
SEE E-9 FOR THE LUMINAIRE POLE REQUIREMENTS.
POLE LUMINAIRE MOUNTING HEIGHT SHALL BE 15'-0".
WIRE LUMINAIRE POLES TO PANEL P1-1 THROUGH A TIMER SWITCH 0-9 HOURS, MOUNTED ON EAST SIDE OF THE LUMINAIRE POLE, NEXT TO THE NORTHEAST GATE.
LUMINAIRES SHALL BE DARK BRONZE, 50 WATTS.
LEAVE BLANK - FOR CITY USE ONLY
SA MH: 15
20' ROLLING GATE
PUMP BYPASS STRUCTURE #2
PUMP BYPASS STRUCTURE #1
PORTABLE GENERATOR CONN.
DEBRIS RAKER SYSTEM
WALK-IN ELECTRICAL ENCLOSURE
FPL METER
FPL XFMR
PUMP CONTROL HEAD STILLING WELL 1
LOW WATER SHUTOFF SUMP STILLING WELL 2
Luminaire Schedule
Symbol | Qty | Label | Arrangement | Lumens | LLF | Description
4 | SA | SINGLE | N.A. | 0.920 | DSX0 LED P2 40K BLC MVOLT
Calculation Summary
Label | CalcType | Units | Avg | Max | Min | Avg/Min | Max/Min
CalcPts 1 | Illuminance | Fc | 3.71 | 6.2 | 1.1 | 3.37 | 5.64
PREPARED FOR:
CITY OF SUNRISE FLORIDA
JOSEPH R. ROLFE AND ASSOC., INC CONSULTING ENGINEERS
DAVID L. RICE, PE
Engineer of Record
RC ENGINEERING INC 5832 NW 108th Ct. CORAL SPRINGS, FL 33076 (954)757-7900
DAVID L RICE P.E. STATE OF FLORIDA CA-47798 PE-34343 RC JOB #20026
STORM WATER PUMP STATION #5 PUMP STATION REPLACEMENT
PHOTOMETRIC PUMP STATION PLAN
SHEET NO. E-2


GRAPHIC SCALE
N
C-13 HIGH WATER SHUTOFF
TAIL STILLING WELL 3
HEAD STILLING WELL 1 (SW1)
LS11
LS12
LS13
LT1
SUMP STILLING WELL 2 (SW2)
LS21
LS22
LT2
TAIL STILLING WELL 3 (SW3)
LS31
LS32
LT3
COORDINATE WITH CIVIL DRAWINGS FOR EXACT LOCATIONS.
LEAVE BLANK - FOR CITY USE ONLY
HATCH
PUMP BYPASS STRUCTURE #2
20' ROLLING GATE
PUMP 1
PUMP 2
PUMP 3
PORTABLE GENERATOR AREA
PUMP BYPASS STRUCTURE #1
FPL METER
FPL XFMR
PUMP CONTROL HEAD TILLING WELL 1
DEBRIS RAKER SYSTEM
GENERATOR CONNECTOR RECEPTACLE
RAKER DISC SW
GATE OP DISC SW
A/C
WALK-IN ELECTRICAL ENCLOSURE
RAIN GUAGE, WIRED TO PSCP
RTU ANTENNA, WIRED TO RTU
LOW WATER SHUTOFF SUMP STILLING WELL 2
FLOW MODULATION GATE ASSEMBLY
RAKER CONTROLLER
PUMP 1 DISC SW
PUMP 2 DISC SW
PUMP 3 DISC SW
PREPARED FOR:
CITY OF SUNRISE FLORIDA
JOSEPH ROLES AND ASSOC., INC.
CONSULTING ENGINEERS
DAVID L. RICE, P.E.
Engineer of Record
STORM WATER PUMP STATION #5
PUMP STATION REPLACEMENT
ELECTRICAL PUMP STATION PLAN
SHEET NO.
E-3
RC ENGINEERING INC
9532 NW 108th TRC
CORAL SPRINGS, FL 33076
(954)737-7900
DAVID L RICE P.E.
STATE OF FLORIDA
CA-#7753 PE-34343
RC JOB #20020
No. 34343
STATE OF FLORIDA
PROFESSIONAL ENGINEER
Revisions
Description
Date
By
Issues
Date
Drawn by
Checked by
Designed by
Checked by
Approved by
MAR
DLR
DLR
DLR
DAVID L RICE, PE
2/22/2022

LIGHTNING PROTECTION SYSTEM SPECIFICATIONS

THE LIGHTNING PROTECTION CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, AND ENGINEERING DRAWINGS AS REQUIRED FOR THE COMPLETION OF A FUNCTIONAL AND UNOBTRUSIVE CONCEALED SYSTEM OF GROUNDS, CONDUCTORS, AND AIR TERMINALS FOR THE PROTECTION AGAINST DAMAGE BY LIGHTNING OF THE SITE (APPROXIMATELY 70'x70'). TIE IN THE LIGHT POLES, ANTENNA POLE, ELECTRICAL PANEL ENCLOSURE, AND ALL METAL STRUCTURES.

ALL WIRING SHALL BE COPPER. CONNECT TO THE BUILDING GROUND RING.

THE COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH THE STATE AND LOCAL AUTHORITIES HAVING JURISDICTION (AHJ), FBC–SEVENTH EDITION (2020), NFPA 780 (2020), LPI–175 (2020), AND UL–96.

PROVIDE SIGNED AND SEALED DRAWINGS BY A FLORIDA PROFESSIONAL ENGINEER FOR PERMITTING.

THE INSTALLING CONTRACTOR SHALL HAVE A MINIMUM OF FIVE (5) YEARS OF EXPERIENCE IN THIS SPECIALIZED WORK AND BE A MASTER INSTALLER OF THE LIGHTNING PROTECTION INSTITUTE (LPI).

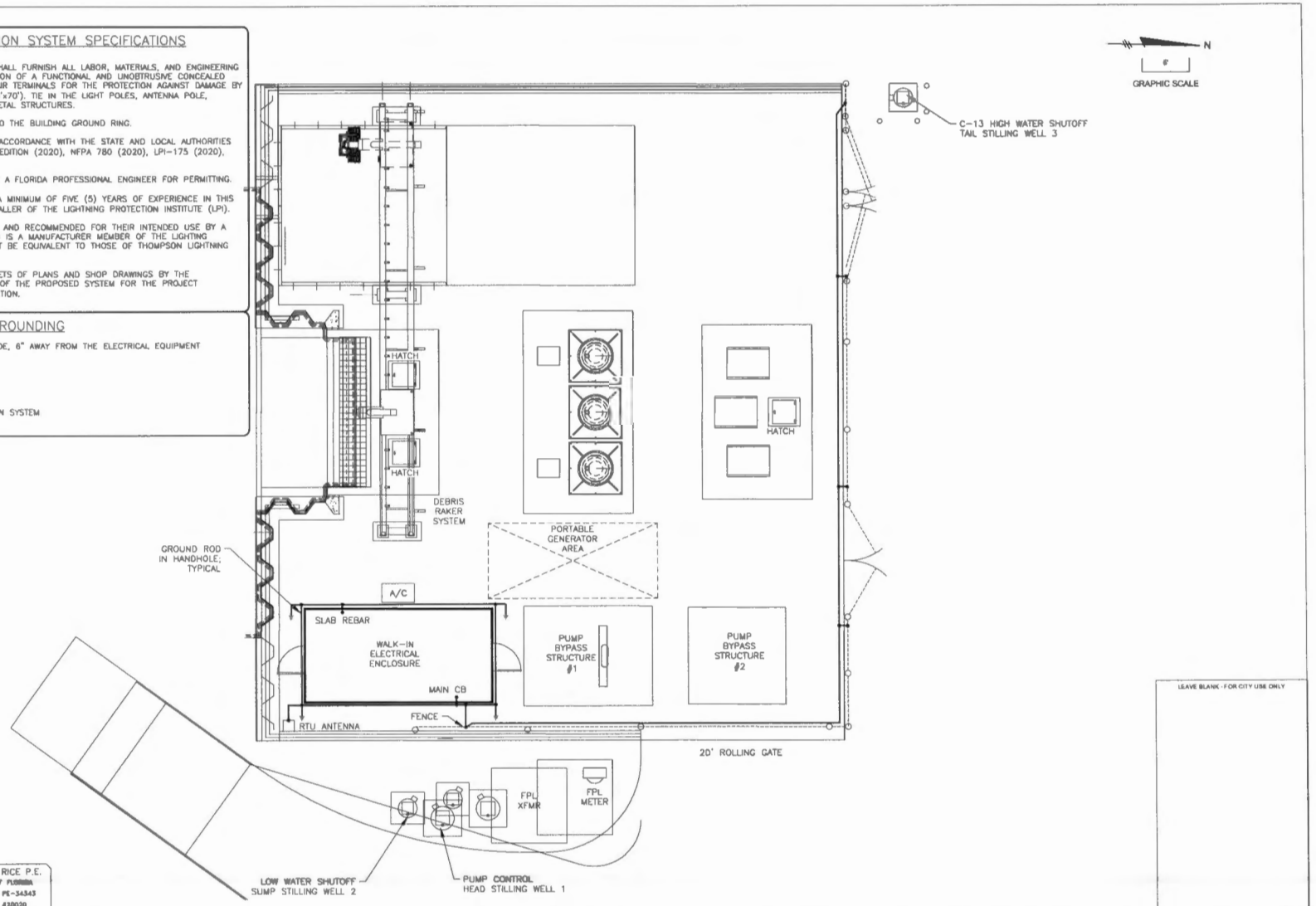
ALL MATERIALS USED SHALL BE FURNISHED AND RECOMMENDED FOR THEIR INTENDED USE BY A LIGHTNING PROTECTION MANUFACTURER WHO IS A MANUFACTURER MEMBER OF THE LIGHTING PROTECTION INSTITUTE. ALL MATERIALS MUST BE EQUIVALENT TO THOSE OF THOMPSON LIGHTNING PROTECTION, ST. PAUL, MINNESOTA.

THE CONTRACTOR SHALL SUBMIT SIX (6) SETS OF PLANS AND SHOP DRAWINGS BY THE MANUFACTURER SHOWING DETAILED DESIGN OF THE PROPOSED SYSTEM FOR THE PROJECT ENGINEER'S APPROVAL PRIOR TO CONSTRUCTION.

GROUNDING

FURNISH A GROUND RING, 36" BELOW GRADE, 6" AWAY FROM THE ELECTRICAL EQUIPMENT ENCLOSURE.

- 3/0 BARE COPPER GROUND RING
- 10' x 3/4" COPPER GROUND RODS
- CADWELD CONNECTIONS
- HANDHOLES AT EACH GROUND ROD
- CONNECT TO THE PERIMETER FENCE.
- CONNECT TO THE LIGHTNING PROTECTION SYSTEM



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Engineer of Record DAVID L RICE, PE

PREPARED FOR: CITY OF SUNRISE FLORIDA

STORM WATER PUMP STATION #5 PUMP STATION REPLACEMENT

ELECTRICAL GROUNDING AND LIGHTNING PROTECTION PLAN

SHEET NO. E-4

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PANEL SCHEDULE

MOUNTING: S
NEMA RATING: 1
SQD, SIEMENS, GE

TYPE : NQOD
AIC : 22000
MAIN : 60 A MCB

VOLTAGE : 120/208
PHASE & WIRE: 3 PH, 4 W
AMP RATING : 125

PANEL ID: P1
LOCATION:
RCENG

CKT NO.	TRIP AMPS	WIRE & CONDUIT	CIRCUIT DESCRIPTION	PHASE A	PHASE B	PHASE C	CIRCUIT DESCRIPTION	WIRE & CONDUIT	TRIP AMPS	CKT NO.
1	20/1	3#10/C	LIGHTS, SITE	500						
				500			RECEPT	3#12/C	20/1	2
3	20/1	–	SPARE		500					
					500		RECEPT	3#12/C	20/1	4
5	20/1	3#12/C	LIGHTS, ENCL			500				
						500	RECEPT	3#12/C	20/1	6
7	20/1	3#12/C	CONTROLS	500						
				500			SPARE	–	20/1	8
9	20/1	3#12/C	CONTROLS		500					
					500		SPARE	–	20/1	10
11	20/1	–	SPARE			500				
						500	SPARE	–	20/1	12
13	20/2	3#12/C	EXH FAN	500						
				500			SPACE	–	20/1	14
15					500					
					500		SPACE	–	20/1	16
17	20/1	–	SPACE			500				
						500	SPACE	–	20/1	18
19	20/1	–	SPACE	0						
				0			SPD	5#8/C	30/3	20
21	20/1	–	SPACE		0					
					0					22
23	20/1	–	SPACE			0				
						0				24
NOTES: X			SUBTOTAL	3000	3000	3000				
				3000	3000	3000	TOTAL VA 9000			

I (LINE) = VA/VOLTS/1.73(3 PH)
I (LINE) = 25 AMPS

NOTES

COORDINATE WITH FPL FOR ALL REQUIREMENTS. SEE E-1.

FURNISH AND INSTALL ARC FLASH HAZARD WARNING LABELS AS PER NFPA 110.16.

SURGE PROTECTION DEVICES SHALL BE SIZED BY THE EQUIPMENT MANUFACTURER.

COORDINATE INSTALLATION WITH THE SERVICE AND CONTROL EQUIPMENT MANUFACTURERS AND THE STAND-ALONE ELECTRICAL ENCLOSURE (PACKAGED EQUIPMENT CENTER) MANUFACTURER.

PUMPS P1, P2, AND P3 ARE HIGH AMPACITY PUMPS THAT EXCEED NFPA 70 MINIMUM LOADS. CIRCUIT BREAKERS, STARTERS, WIRING, ETC. SHALL BE SIZED AND COORDINATED WITH THE PUMP ELECTRICAL DATA.
460 VOLT, 50 HP, 3 PHASE, 60 HZ, 60 HP EQUIVALENT

FLA: 74
NEMA DESIGN: B
NEMA CODE: G
SERVICE FACTOR: 1.15
SPEED: 600 RPM
STARTING: SOFT START
WINDING THERMOSTAT: 1 PER PHASE
MOISTURE PROBE: 1-JUNCTION BOX
1-STATION HOUSING

LOAD CALCULATIONS

MCC 1

PUMP 1	50HP (HI AMP)	60,000 VA
PUMP 2	50HP (HI AMP)	60,000 VA
PUMP 3	50HP (HI AMP)	60,000 VA
TRASH RAKER SYSTEM	8HP MAX	11,500 VA
FMG		10,000 VA
PANEL P1		15,000 VA
A/C UNIT		10,000 VA
25% LARGEST MOTOR		15,000 VA
		241,500 VA
AMPS AT 480V, 3 PH		291 AMPS

FPL AVAILABLE FAULT CURRENT LESS THAN 65,000 AMPS. SEE FPL LETTER MAIN 1/1 AIC. 65,000 AMPS

SS – STAINLESS STEEL
4X – NEMA 4X

NOTES FOR FUTURE PORTABLE GENERATOR SIZING

LOAD CALCULATIONS:

PUMP 1 LEAD	50HP	HI AMP	60,000 VA
PUMP 2 LAG	50HP	HI AMP	60,000 VA
PUMP 3 LOCKED OUT			0 VA
TRASH RAKER	8HP		11,500 VA
FMG			10,000 VA
PANEL P1			15,000 VA
A/C UNIT			10,000 VA
			166,500 VA
AMPS AT 480V-220A			201 AMPS

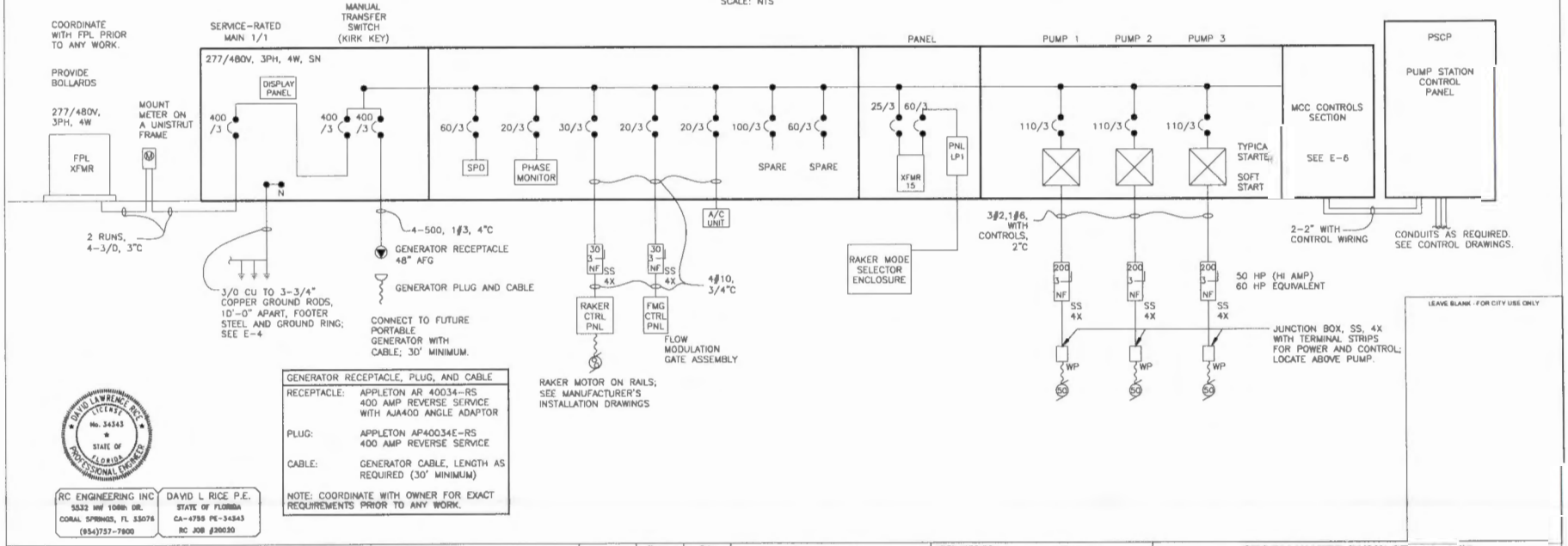
PUMPS SHALL BE SEQUENTIALLY STARTED.

STEP 1:	PANEL P1		15,000 VA
	TRASH RAKER	8HP	11,500 VA
	FMG		10,000 VA
	A/C UNIT		10,000 VA
STEP 2:	PUMP LEAD	50HP-HI AMP	60,000 VA (60 HP EQ)
STEP 3:	PUMP LAG	50HP-HI AMP	60,000 VA (60 HP EQ)

FUTURE PORTABLE GENERATOR DATA
277/480V, 3PH, 4W, SN
NOT A SEPARTAELY DERIVED SYSTEM
200 KW, 250 KVA
WEATHER PROOF ENCLOSURE
FBC HVHZ RATED ENCLOSURE
DIESEL FUEL
SOUND ATTENUATION FOR RESIDENTIAL AREA

ELECTRICAL RISER DIAGRAM

SCALE: NTS



GENERATOR RECEPTACLE, PLUG, AND CABLE

RECEPTACLE:	APPLETON AR 40034-RS 400 AMP REVERSE SERVICE WITH AJA400 ANGLE ADAPTOR
PLUG:	APPLETON AP40034E-RS 400 AMP REVERSE SERVICE
CABLE:	GENERATOR CABLE, LENGTH AS REQUIRED (30' MINIMUM)

NOTE: COORDINATE WITH OWNER FOR EXACT REQUIREMENTS PRIOR TO ANY WORK.

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PREPARED FOR: CITY OF SUNRISE FLORIDA

STORM WATER PUMP STATION #5 PUMP STATION REPLACEMENT

PANEL SCHEDULE, RISER DIAGRAM, LOAD CALCS, NOTES

SHEET E-5

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MCC PUMP CONTROL SECTION
SCALE: NTS

TYPICAL FOR 3 PUMPS
SEE E-8 FOR THE MCC PUMP CONTROL PANEL VIEW

MCC SEQUENCE OF OPERATION

PUMP CONTROL

THE PUMP SHALL RUN IF THE PUMP HOA SWITCH IS IN THE HAND POSITION OR IN THE AUTOMATIC POSITION AND THE PLC CONTACT IS CLOSED.

THE PUMP SHALL NOT RUN WHEN:
- THE HEAD STILLING WELL 1 IS LOW (LS13) AND THE HEAD LOW LEVEL OVERRIDE KEY SWITCH IS OFF
- OR
- THE SUMP STILLING WELL 2 IS LOW (LS22)(PSCP)
- OR
- THE TAIL STILLING WELL 3 IS HIGH (LS31)(PSCP)
- OR
- MOTOR OVERLOAD
- OR
- MOTOR OVER TEMP
- OR
- MOTOR SEAL FAIL

SEE 1-01 FOR ADDITIONAL INFORMATION.

WIRING INSIDE PANEL
WIRING EXTERIOR TO PANEL

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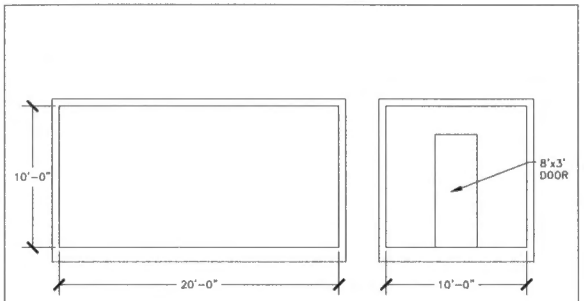
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STORM WATER PUMP STATION #5
PUMP STATION REPLACEMENT

MOTOR CONTROL CENTER DETAIL

SHEET NO. **E-6**

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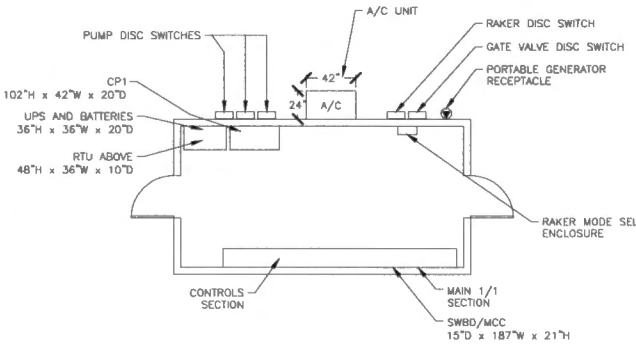


WALK-IN ELECTRICAL ENCLOSURE
SCALE: 1/4" = 1'0"

AIR CONDITIONER UNIT
480V, 3PH, 4W

SIZED BY WALK IN ENCLOSURE, MANUFACTURER.

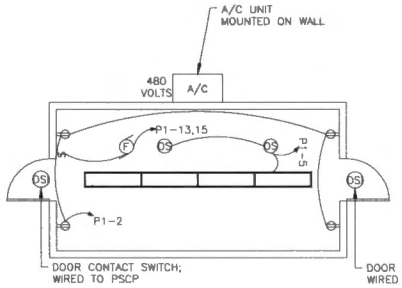
PROVIDE SHOP DRAWINGS



SWITCHGEAR LAYOUT
WALK-IN ENCLOSURE
SCALE: 1/4" = 1'0"

NORTH

LUMINAIRE SCHEDULE							
DES	MTG	LAMP	VOLT	WATTS	DESCRIPTION	MANUFACTURER	TOTAL WATTS
A	S	LED	120	65	4' WRAP WITH 90 MIN BATTERY BACKUP	LITHONIA LBL 4W 8000LM 80CRI 40K MVOLT EL14L	65



WALK-IN ELECTRICAL ENCLOSURE
SCALE: 1/4" = 1'0"

NORTH

WALK-IN ENCLOSURE NOTES

PREFABRICATED WALK-IN ENCLOSURE
NON-HAZARDOUS AREA
CONFORM TO:
- FLORIDA BUILDING CODE, BROWARD EDITION HIGH-VELOCITY HURRICANE ZONE, SEVENTH EDITION (2020)
- NFPA 70 (2017)

COORDINATE WITH THE STRUCTURAL DRAWINGS.
PROVIDE A COMPLETE SET OF SUBMITTALS, SIGNED AND SEALED BY A FLORIDA REGISTERED ENGINEER.

INCLUDE THE FOLLOWING FOR A COMPLETE AND OPERATIONAL WALK-IN ENCLOSURE:
- WIND LOADING CALCULATIONS
- AIR CONDITIONING DESIGN
- ELECTRICAL DESIGN

COORDINATE THE FOUNDATION, STEPS, ETC. WITH THE STRUCTURAL DRAWINGS.
COORDINATE FLOOR PENETRATIONS FOR CONDUITS WITH THE ELECTRICAL DRAWINGS.
COORDINATE THE SWITCHGEAR WITH THE SWITCHGEAR MANUFACTURER.
COORDINATE MINIMAL DIMENSIONS WITH THE ELECTRICAL DRAWINGS.

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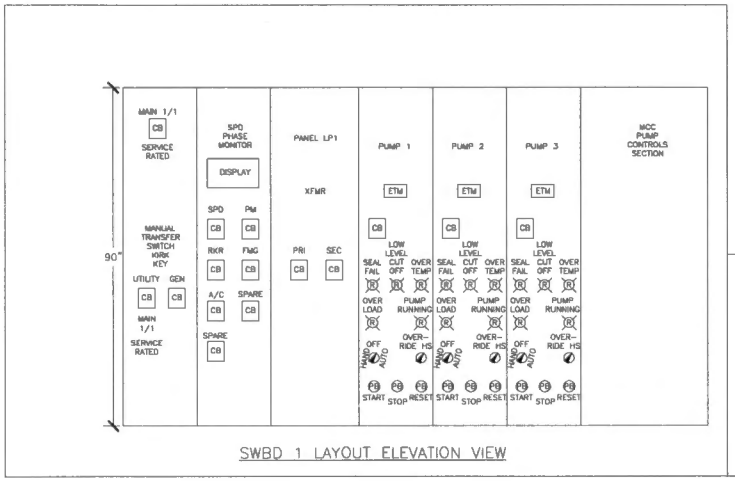
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STORM WATER PUMP STATION #5
PUMP STATION REPLACEMENT

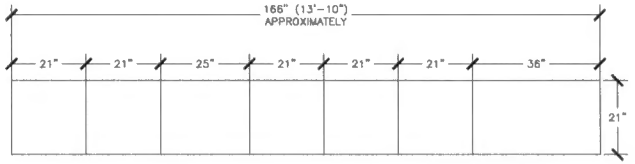
WALK-IN ELECTRICAL ENCLOSURE PLAN

SHEET NO. E-7

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SWBD 1 LAYOUT ELEVATION VIEW



SWBD 1 LAYOUT PLAN VIEW

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PREPARED FOR: CITY OF SUNRISE FLORIDA

STORM WATER PUMP STATION #5
PUMP STATION REPLACEMENT

SWBD LAYOUT, ELEVATION AND PLAN VIEW

SHEET NO. **E-8**

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NOTES

THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, TAXES, AND OTHER FEES AS REQUIRED FOR A COMPLETE JOB. THE COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH STATE AND LOCAL AUTHORITIES HAVING JURISDICTION, FBC SEVENTH EDITION, FFPC SEVENTH EDITION,
NFPA 70 (NEC) 2017, AND NFPA 72 2016.

THE CONTRACT DOCUMENTS INDICATE THE EXTENT AND GENERAL ARRANGEMENT OF EQUIPMENT AND WIRING. ALL ITEMS NOT SPECIFICALLY MENTIONED IN THE DOCUMENTATION BUT WHICH ARE OBVIOUSLY NECESSARY TO MAKE A COMPLETE WORKING INSTALLATION SHALL BE INCLUDED. THE WORK SHALL BE OF FIRST CLASS QUALITY.

THE CONTRACTOR SHALL PROVIDE A GUARANTEE AGAINST DEFECTIVE WORKMANSHIP, MATERIALS, OR EQUIPMENT FOR A MINIMUM OF ONE (1) YEAR FROM THE DATE OF ACCEPTANCE.

THE CONTRACTOR SHALL VISIT THE PROJECT. IF ANY DEPARTURES FROM THE CONTRACT DOCUMENTS ARE DEEMED NECESSARY BY THE CONTRACTOR, DETAIL OF SUCH DEPARTURES AND REASONS THEREFORE SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. THIS MUST BE DONE AS SOON AS POSSIBLE AND WITHIN TEN (10) DAYS AFTER AWARD OF CONTRACT. NO SUCH DEPARTURES SHALL BE MADE WITHOUT WRITTEN APPROVAL OF THE ENGINEER.

THE CONTRACTOR SHALL VERIFY ALL EQUIPMENT AND SIZES. COORDINATE THESE REQUIREMENTS AND SIZES WITH THE OTHER TRADES AND THE OWNER'S REPRESENTATIVE BEFORE PLACING ORDERS.

THE CONTRACTOR SHALL WIRE AND CONNECT ALL MOTORS, STARTERS, CONTROLS, OR OTHER ELECTRICAL ITEMS PROVIDED BY THE OTHER TRADES. THE CONTRACTOR SHALL PROVIDE ALL CONTROL WIRING, AND PROVIDE POWER TO ALL CONTROL DEVICES.

THE CONTRACTOR SHALL COORDINATE ALL WORK WITH THE LOCAL ELECTRIC UTILITIES. PRIOR TO ANY WORK, THE CONTRACTOR SHALL CONTACT THE UTILITY PROJECT MANAGER FOR COORDINATION AND UTILITY REQUIREMENTS. FURNISH ONE COPY OF THE ELECTRIC PLANS TO THE PROJECT MANAGER FOR REVIEW, AND NOTIFY THE OWNER AND THE ENGINEER OF ANY DISCREPANCIES.

THE CONTRACTOR SHALL PROVIDE ALL CUTTING AND PATCHING, ETC. FOR A COMPLETE JOB. ALL MATERIALS SHALL BE NEW, SHALL BE LISTED BY AN NRTL, SHALL BE APPROVED BY THE LOCAL CODE ENFORCING AUTHORITIES, AND SHALL BE OF COMMERCIAL GRADE.

ALL FUSES SHALL BE TIME-DELAY, CURRENT LIMITING, CLASS RK1 (0-600A) OR CLASS L (600-6000A). FUSES SHALL BE SIZED AS SHOWN ON THE DRAWINGS.

ALL CIRCUIT BREAKERS SHALL BE FULL SIZE; NO TANDEM TYPE CIRCUIT BREAKERS. PROVIDE AN ACCURATE PANEL SCHEDULE ON THE INSIDE OF EACH PANEL DOOR.

ALL WIRING SHALL BE COPPER. THE MINIMUM SIZE SHALL BE #12 AWG, EXCEPT AS NOTED. THE INSULATION SHALL BE THHN, THWN. ALL WIRING SHALL BE IN CONDUIT.

ALL GUTTER AND WIREWAY SIZES SHALL COMPLY WITH NEC ARTICLE 376.22 AND TABLES 312.6(A) & (B).

ELECTRICAL EQUIPMENT EXPOSED TO THE WEATHER SHALL BE WEATHERPROOF. ALL ELECTRICAL EQUIPMENT SHALL BE MOUNTED 2' ABOVE THE FLOOD PLANE.

CONDUIT EXPOSED TO THE WEATHER SHALL BE PVC OR RIGID GALVANIZED STEEL. FLEXIBLE CONDUIT SHALL ONLY BE USED FOR SHORT, FINAL CONNECTIONS TO INTERIOR LIGHTING FIXTURES AND EQUIPMENT. NO CONDUIT SHALL BE RUN IN THE DUCTWORK. ALL EMPTY CONDUITS SHALL HAVE NYLON PULL CORDS AND SHALL BE IDENTIFIED AT EACH END. ALL CONDUITS THROUGH THE ROOF SHALL PENETRATE THE ROOF USING PROPER, APPROVED FLASHING.

ALL UNDERGROUND CONDUIT SHALL BE PVC SCHEDULE 40 WITH PROPER SIZED GROUND CONDUCTOR. SCHEDULE 80 PVC SHALL BE USED WHERE CONDUIT IS EXPOSED AND IS SUBJECT TO DAMAGE.

PENETRATION OF ALL PIPES AND CONDUITS THROUGH FIRE RATED PARTITIONS SHALL BE IN COMPLIANCE WITH UL ASSEMBLY. PROVIDE 3M FIRE BARRIER CP-25 N/S FIRESTOP CAULKING FOR CONDUITS UP TO 4" IN TWO (2) HOUR (MAX) RATED FIRE PARTITIONS.

SHOP DRAWINGS SHALL BE PROVIDED AND SHALL INCLUDE, BUT NOT BE LIMITED TO, SWITCH GEAR, LUMINAIRES, AND LOW VOLTAGE SYSTEMS. THE FOLLOWING SHALL APPLY:
1. PROVIDE A DETAILED LIST OF ANY DEVIATION BETWEEN EACH SPECIFIED ITEM AND THE ITEM SUBMITTED FOR REVIEW. THIS LIST SHALL BE HIGHLIGHTED SUCH THAT ALL DEVIATIONS ARE OBVIOUS AND CLEAR, AND INCLUDE INFORMATION ON DIMENSIONS, FINISH, MATERIAL, ETC.
2. PROVIDE SCALED SHOP DRAWINGS SHOWING THE FIT OF ALL ITEMS WHERE THE DIMENSIONS OF THE SUBMITTED ITEMS ARE DIFFERENT FROM THE SPECIFIED ITEMS.
3. PROVIDE COST SAVINGS INFORMATION TO OWNER, WHERE ANY DEVIATIONS ARE IDENTIFIED IN THE DETAILED LIST ABOVE.

ELECTRICAL LEGEND

- POLE MOUNTED LIGHT FIXTURE
- 4' WRAPAROUND
- STRIP LIGHT
- EMERGENCY LIGHT FIXTURE WITH BATTERY BACK-UP, WIRE TO UNSWITCHED LEG ON CLOSEST LIGHTING CIRCUIT
- EXIT SIGN LIGHT WITH BATTERY BACK-UP, WIRE TO UNSWITCHED LEG ON CLOSEST LIGHTING CIRCUIT WITH EM LIGHT COMBINATION
- $ — 120V-20A TOGGLE SWITCH - 42" AFF. 2-2 POLE, 3-3 WAY, 4-4 WAY, D-DIMMER, K-KEY, F-FAN SPEED CONTROL, M-MOTOR RATED (WITH OVERLOADS), T-TIMER (PRESET BUTTONS 10, 20, 30, 60 MINUTES). ALL SWITCHES SHALL BE OCCUPANCY SENSOR (PASSIVE IR AND ULTRASONIC) TYPE EXCEPT AS SHOWN
- OS — OCCUPANCY SENSOR-PASSIVE INFRARED AND ULTRASONIC WITH ALL REQUIRED ACCESSORIES. CEILING MOUNTED PER MANUFACTURER RECOMMENDATIONS
- 120V - 20A DUPLEX RECEPTACLE - 18" AFF OR AS NOTED (C-CEILING MOUNTED) (A-AUTOMATIC CONTROL)
- J — JUNCTION BOX
- MOTOR - SEE PANEL SCHEDULE FOR SIZE
- ETS — ELECTRONIC TIME SWITCH, PROGRAMMABLE, 365 DAYS, ASTRONOMICAL, 100 HOUR BACK-UP, (INTERMATIC ET 90000 SERIES OR EQUIVALENT)
- LC — LIGHTING CONTACTOR
- SPD — SURGE PROTECTION DEVICE (ERICO OR EQUIVALENT)
- DISCONNECT SWITCH, SIZE AND FUSE AS NOTED; F-FUSE PER MFG
- STARTER, MAGNETIC, ENCL, HOA, OLS, AUX, SIZE AS REQUIRED
- CONDUIT RUN, CONCEAL AS POSSIBLE
- FLEXIBLE CONDUIT
- ELECTRICAL DISTRIBUTION PANEL
- EC — ELECTRICAL CONTRACTOR
- GFCI — GROUND FAULT CIRCUIT INTERRUPTER
- WP — WEATHERPROOF
- WR — WEATHER-RESISTANT
- EWH — ELECTRIC WATER HEATER

NOTES REGARDING ENERGY CONSERVATION

FLORIDA BUILDING CODE, SIXTH EDITION (2017), ENERGY CONSERVATION
COMMERCIAL PROVISIONS, CHAPTER 4 (CE), ENERGY EFFICIENCY

C405.6.3 VOLTAGE DROP:
MAXIMUM OF 5%.

C405.6.4 COMPLETION REQUIREMENT:
RECORD DRAWINGS SHALL BE PROVIDED BY THE CONTRACTOR TO THE OWNER WITHIN 30 DAYS AFTER SYSTEM ACCEPTANCE. DRAWINGS SHALL INCLUDE:
1. A SINGLE LINE DIAGRAM OF THE BUILDING DISTRIBUTION SYSTEM
2. FLOOR PLANS INDICATING LOCATION AND AREA SERVED FOR ALL DISTRIBUTION.
3. UPDATED PANEL SCHEDULES.

C405.6.4.2 MANUALS:
OPERATION AND MAINTENANCE MANUALS SHALL BE PROVIDED BY THE CONTRACTOR TO THE OWNER WITHIN 30 DAYS AFTER SYSTEM ACCEPTANCE. MANUALS SHALL INCLUDE:
1. SUBMITTAL DATA
2. OPERATION AND MAINTENANCE MANUALS
3. NAME AND ADDRESS OF AT LEAST ONE QUALIFIED SERVICE AGENCY.

C408 SYSTEM COMMISSIONING:
PROVIDE A SYSTEM COMMISSIONING REPORT PRIOR TO THE FINAL INSPECTION AS PER C408. PROVIDE A SEPARATE COST PROPOSAL TO THE OWNER FOR ACCEPTANCE.

PUMP STATION ELECTRICAL ABBREVIATIONS

AI	ANALOG INPUT
AO	ANALOG OUTPUT
CB	CIRCUIT BREAKER
CR	CONTROL RELAY
DI	DIGITAL INPUT
DO	DIGITAL OUTPUT
EN	ETHERNET
ETM	ELAPSED TIME METER
F	FUSE
GFI	GROUND FAULT INTERRUPTER
HMI	HUMAN-MACHINE INTERFACE
HOA	HAND, OFF, AUTOMATIC
LC	LIGHTING CONTACTOR
LS	LEVEL SWITCH
LT	LEVEL TRANSDUCER
MCC	MOTOR CONTROL CENTER
MCP	MAIN CONTROL PANEL
MT	MOTOR OVER TEMP
MTR	MOTOR
MS	MOTOR SEAL
OL	OVERLOAD RELAY
OT	OVER TEMP
PB	PUSHBUTTON
PLC	PROGRAMMABLE LOGIC CONTROLLER
PM	POWER MONITOR
PSCP	PUMP STATION CONTROL PANEL
R,G,A	RED, GREEN, AMBER PILOT LIGHT
RTU	REMOTE TERMINAL UNIT, RADIO TELEMETRY
SCADA	SUPERVISORY CONTROL AND DATA ACQUISITION
SPD	SURGE PROTECTION DEVICE
SS	SELECTOR SWITCH
SS	316 STAINLESS STEEL
TD	TIME DELAY
UPS	UNINTERRUPTIBLE POWER SUPPLY
VFD	VARIABLE FREQUENCY DRIVE
4X	NEMA 4X ENCLOSURE

PUMP STATION ELECTRICAL LEGEND

- S — MOTOR
- TRANSFORMER
- FUSE
- CIRCUIT BREAKER
- SAFETY DISCONNECT SWITCH, HP RATED
- GROUND
- LEVEL SWITCH, FLOAT SWITCH
- THERMAL SWITCH
- HEATER
- PL — PILOT LIGHT
- ETM — ELAPSED TIME METER
- HOA — HAND, OFF, AUTOMATIC SWITCH
- SELECTOR SWITCH
- PUSH-BUTTON SWITCH
- ON-OFF SWITCH
- NORMALLY OPEN CONTACT
- NORMALLY CLOSED CONTACT
- JB — JUNCTION BOX
- PANELBOARD, ELECTRICAL EQUIPMENT ENCLOSURE
- M — MOTOR OPERATED VALVE
- INSTRUMENT CALLOUT
- TIMING CONTACT
- CONTROL RELAY, MOTOR STARTER, ETC
- C01 — DENOTES CONDUIT TAG 01
- C01 / C02 — DENOTES SEPARATE CONDUITS WITH SEPARATE WIRE
- A-1 — DENOTES PANELBOARD A, CIRCUIT 3

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Checked by	DLR	2022/02/22
Designed by	DLR	2022/02/22
Checked by	DLR	2022/02/22
Approved by	DAVID L RICE, PE	

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CERTIFICATE OF AUTHORIZATION NO. 5940

Engineer of Records DAVID L RICE, PE

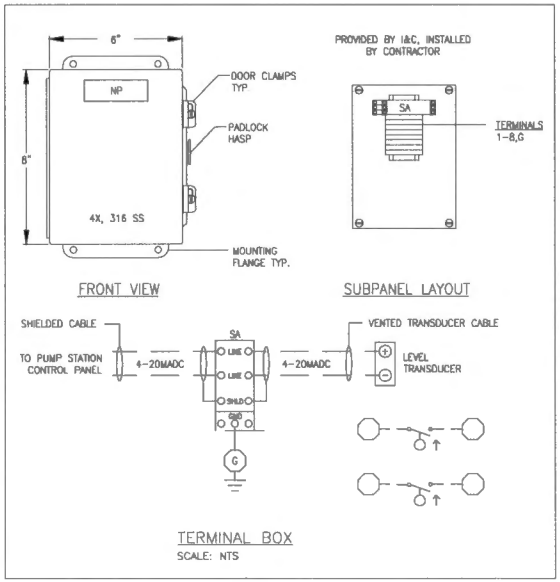
PREPAREO FOR: CITY OF SUNRISE FLORIDA

STORM WATER PUMP STATION #5
PUMP STATION REPLACEMENT

NOTES, LEGENDS, ETC.

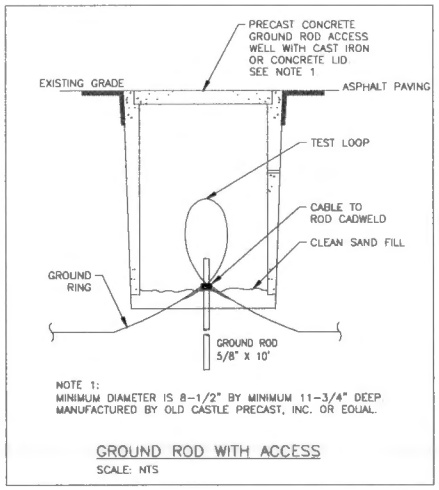
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TERMINAL BOX

SCALE: NTS



NOTE 1:
MINIMUM DIAMETER IS 8-1/2" BY MINIMUM 11-3/4" DEEP MANUFACTURED BY OLD CASTLE PRECAST, INC. OR EQUAL.

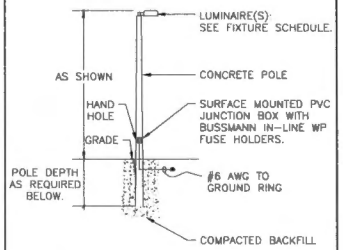
GROUND ROD WITH ACCESS

SCALE: NTS

811

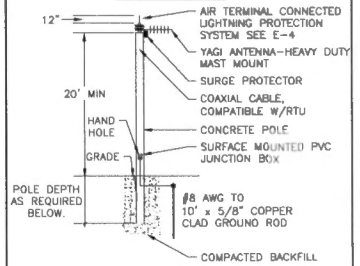
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LUMINAIRE AND POLE ASSEMBLY



NOTE:
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RTU ANTENNA



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Checked by	DLR	2022/02/22
Designed by	DLR	2022/02/22
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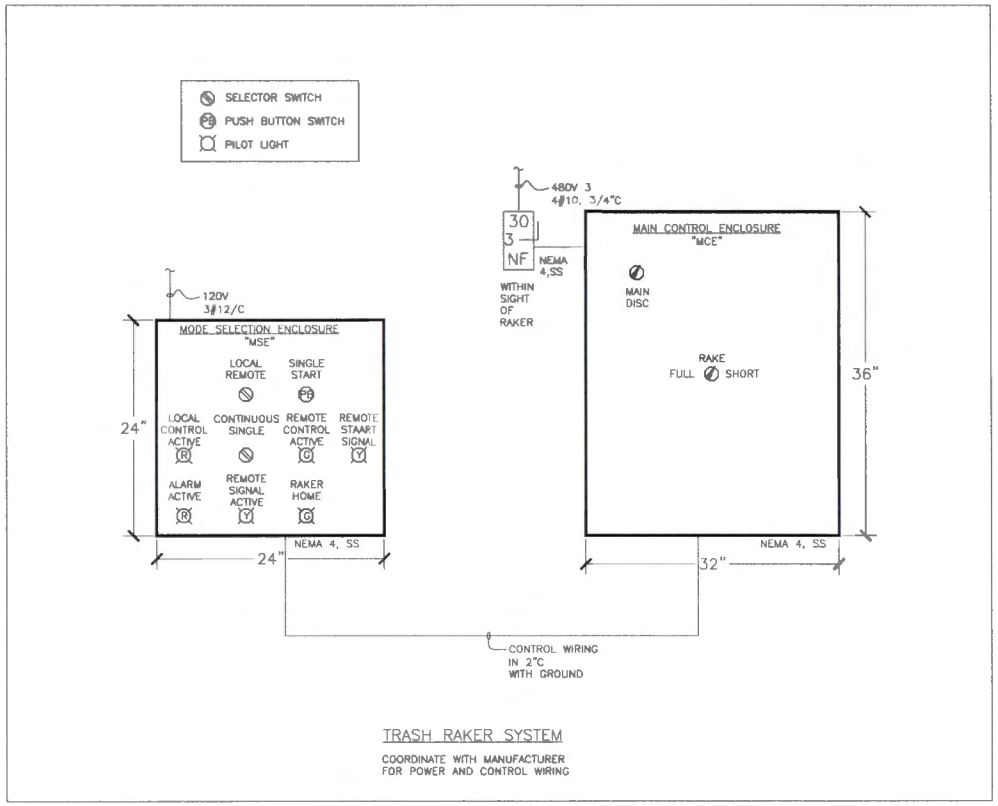
PREPARED FOR: CITY OF SUNRISE FLORIDA

STORM WATER PUMP STATION #5
PUMP STATION REPLACEMENT

ELECTRICAL DETAILS

SHEET NO.
E-10

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TRASH RAKER SYSTEM

COORDINATE WITH MANUFACTURER FOR POWER AND CONTROL WIRING

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STORM WATER PUMP STATION #5
PUMP STATION REPLACEMENT

ELECTRICAL DETAILS

SHEET NO. **E-11**

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PUMP STATION ELECTRICAL LEGEND

- MOTOR
- TRANSFORMER
- FUSE
- CIRCUIT BREAKER
- SAFETY DISCONNECT SWITCH, HP RATED
- GROUND
- LEVEL SWITCH, FLOAT SWITCH
- THERMAL SWITCH
- HEATER
- PILOT LIGHT
- RTM — RUN TIME METER
- SELECTOR SWITCH
- PUSH-BUTTON SWITCH
- ON-OFF SWITCH
- NORMALLY OPEN CONTACT
- NORMALLY CLOSED CONTACT
- JB — JUNCTION BOX
- PANELBOARD, ELECTRICAL EQUIPMENT ENCLOSURE
- M — MOTOR OPERATED VALVE
- INSTRUMENT CALLOUT
- TIMING CONTACT
- CONTROL RELAY, MOTOR STARTER, ETC.
- C01 — DENOTES CONDUIT TAG 01
- C01 / C02 — DENOTES SEPARATE CONDUITS WITH SEPARATE WIRE
- A-1 — DENOTES PANELBOARD A, CIRCUIT 3

PUMP STATION ELECTRICAL ABBREVIATIONS

AI	ANALOG INPUT
AO	ANALOG OUTPUT
CB	CIRCUIT BREAKER
CR	CONTROL RELAY
DI	DIGITAL INPUT
DO	DIGITAL OUTPUT
EN	ETHERNET
ETM	ELAPSED TIME METER
F	FUSE
GFI	GROUND FAULT INTERRUPTER
HMI	HUMAN-MACHINE INTERFACE
HOA	HAND OR OFF OR AUTOMATIC
LC	LIGHTING CONTACTOR
LS	LEVEL SWITCH
LT	LEVEL TRANSDUCER
MCC	MOTOR CONTROL CENTER
MCP	MAIN CONTROL PANEL
MMI	MAIN-MACHINE INTERFACE
MT	MOTOR OVER TEMP
MTR	MOTOR
MS	MOTOR SEAL
OL	OVERLOAD RELAY
PB	PUSHBUTTON
PLC	PROGRAMMABLE LOGIC CONTROLLER
PM	POWER MONITOR
PSCP	PUMP STATION CONTROL PANEL
R,G,A	RED, GREEN, AMBER PILOT LIGHT
RTU	REMOTE TERMINAL UNIT, RADIO TELEMETRY UNIT
SCADA	SUPERVISORY CONTROL AND DATA ACQUISITION
SPD	SURGE PROTECTION DEVICE
SS	SELECTOR SWITCH
SS	316 STAINLESS STEEL
TD	TIME DELAY
UPS	UNINTERRUPTIBLE POWER SUPPLY
4X	NEMA 4X ENCLOSURE

SEQUENCE OF OPERATION

THROUGH THE PLC

ONLY TWO OF THE THREE PUMPS SHALL OPERATE AT THE SAME TIME. THE THIRD PUMP SHALL BE LOCKED OUT.

PUMPS SHALL START SEQUENTIALLY WITH AN ADJUSTABLE TIME DELAY BETWEEN EACH START.

AN ALTERNATION PROGRAM SHALL CONTROL THE OPERATION OF THE PUMPS.

CONDITION A: LEAD PUMP SHALL BE PUMP 1
LAG PUMP SHALL BE PUMP 2
LOCKED OUT PUMP SHALL BE PUMP 3

CONDITION B: LEAD PUMP SHALL BE PUMP 2
LAG PUMP SHALL BE PUMP 3
LOCKED OUT PUMP SHALL BE PUMP 1

CONDITION C: LEAD PUMP SHALL BE PUMP 3
LAG PUMP SHALL BE PUMP 1
LOCKED OUT PUMP SHALL BE PUMP 2

CONTROL LAKE LEVEL (STILLING WELL 1)(MAIN CONTROL)
WHEN LS12 IS HIGH, THEN THE LEAD PUMP STARTS.

WHEN LS11 IS HIGH, THEN THE LAG PUMP STARTS.

WHEN LS11 AND LS12 ARE BOTH LOW AND LS13 IS LOW, THEN THE LEAD AND LAG PUMPS STOP.

OVERRIDE CONTROL (STILLING WELL 2)(SUMP)
WHEN LS22 IS LOW FOR AN ADJUSTABLE TIME DELAY, THE PUMPS SHALL BE LOCKED OUT UNTIL A MANUAL RESET PUSH BUTTON IS ENERGIZED BY ON-SITE PERSONNEL.

AN ALARM SHALL BE INDICATED ON THE PANEL AND AN ALARM SIGNAL SHALL BE SENT TO THE PLC AND THE RTU.

OVERRIDE CONTROL (STILLING WELL 3)(C-13)
WHEN LS 31 IS HIGH FOR AN ADJUSTABLE TIME DELAY, THE PUMPS SHALL BE LOCKED OUT.

WHEN LS31 AND LS 32 ARE BOTH LOW, THE PUMPS SHALL BE ENABLED TO RUN.

A HIGH LEVEL (C-13 CANAL) SIGNAL SHALL BE INDICATED ON THE PANEL AND A HIGH LEVEL (C-13 CANAL) SIGNAL SHALL BE SENT TO THE PLC AND THE RTU.

INSTRUMENT AND CONTROL DRAWING LIST

I-01	CONTROL SEQUENCE
I-02	PUMP STATION I & C
I-03	CONTROL PANEL DETAILS
I-04	MISCELLANEOUS DETAILS

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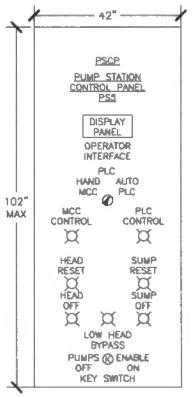
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STORM WATER PUMP STATION #5
PUMP STATION REPLACEMENT

CONTROL SEQUENCE

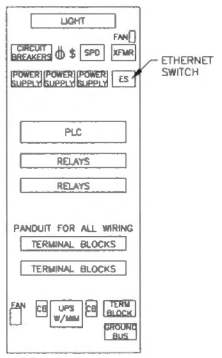
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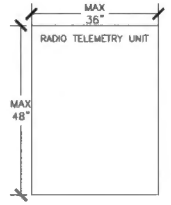
FRONT VIEW
PUMP STATION CONTROL PANEL
102"H, 42"W, 20"D
NEMA 12 STEEL CABINET
UL LISTED

PSCP

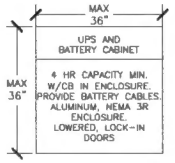


INTERIOR VIEW

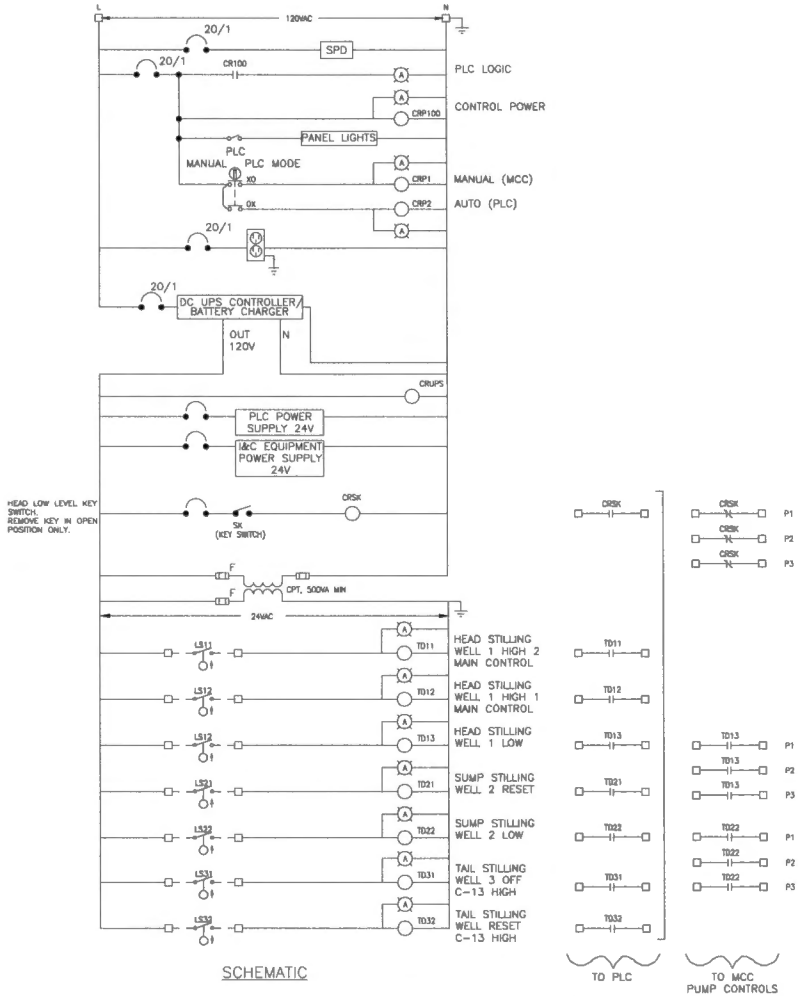
PSCP



RTU ENCLOSURE
48"H, 36"W, 10"D MAXIMUM
NEMA 12, SS
UL LISTED



UPS AND BATTERY CABINET
INTERIOR VIEW
36"H, 36"W, 15"D MAXIMUM
UL LISTED



SCHEMATIC

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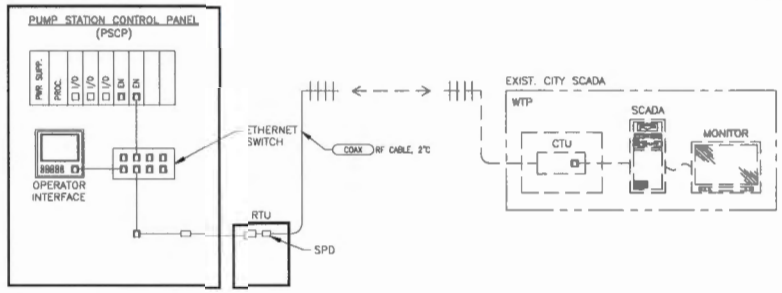
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STORM WATER PUMP STATION #5 PUMP STATION REPLACEMENT

CONTROL PANEL DETAILS

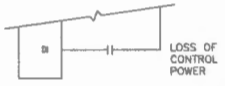
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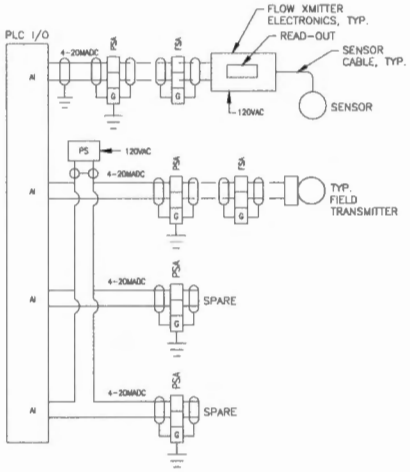
NETWORK DIAGRAM

NTS



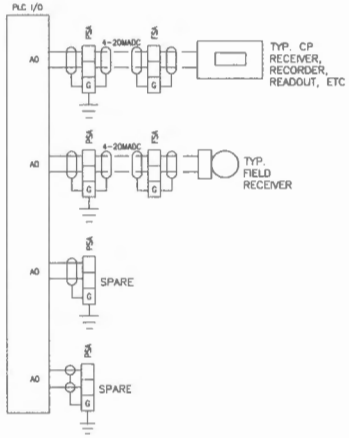
ADDITIONAL DISCRETE SIGNALS

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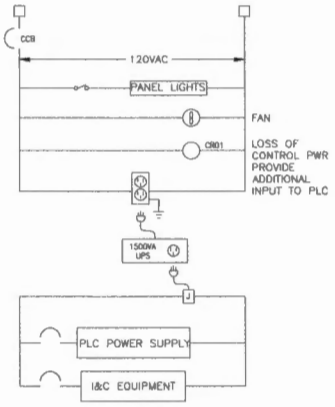
TYPICAL AI LOOP DIAGRAM

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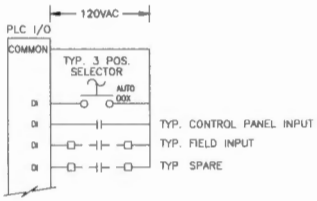
TYPICAL AO LOOP DIAGRAM

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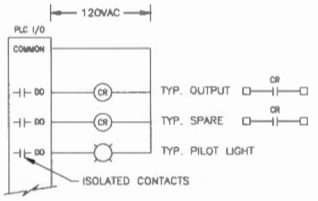
TYP. CTRL POWER WIRING DIAGRAM

NTS



TYPICAL DI DIAGRAM

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TYPICAL DO DIAGRAM

NTS

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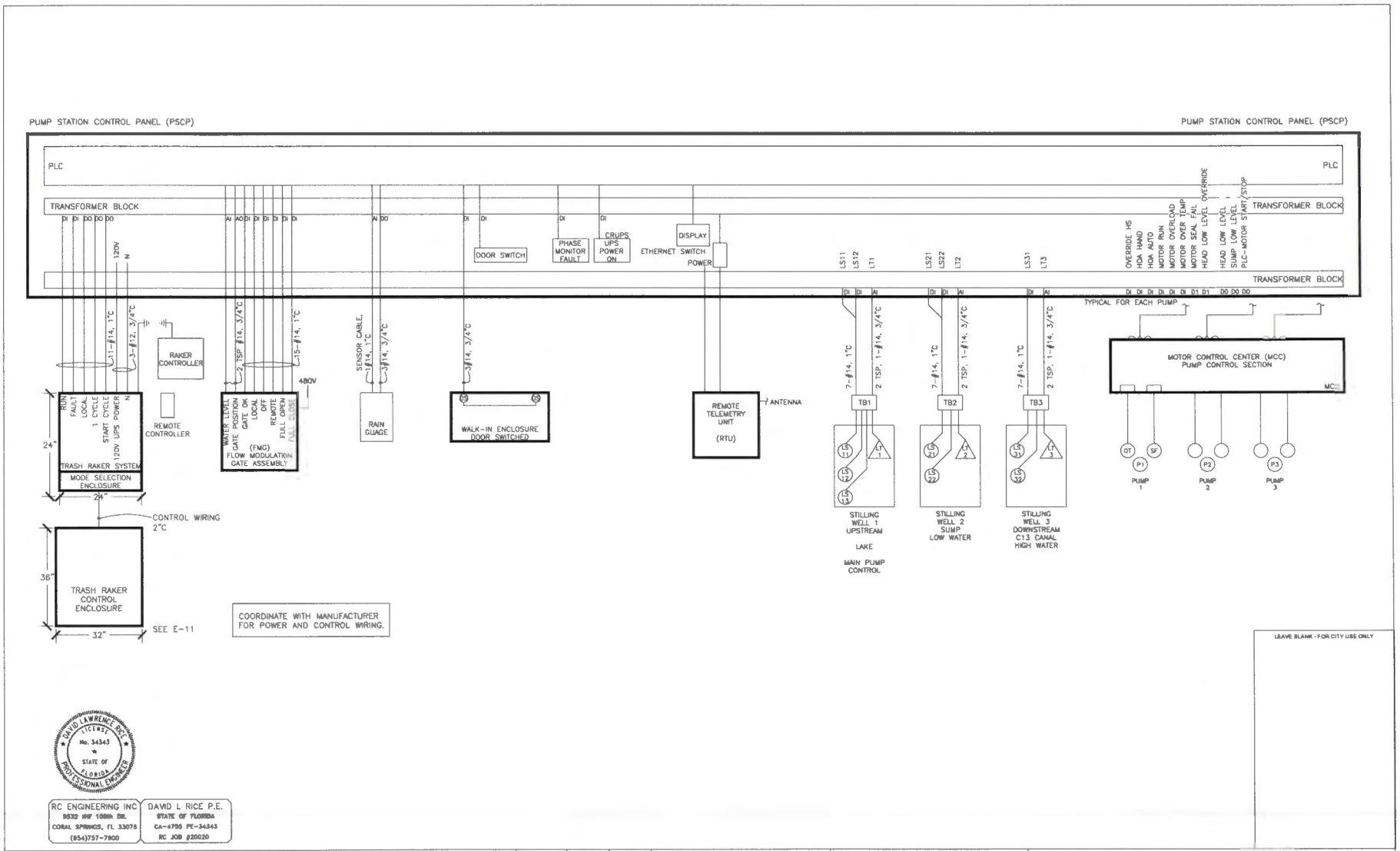
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CITY OF SUNRISE FLORIDA

STORM WATER PUMP STATION #5
PUMP STATION REPLACEMENT

I & C DETAILS

SHEET NO.
I-03

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Approved by	DAVID L RICE, PE	

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CERTIFICATE OF AUTHORIZATION NO. 00-46
Engineer of Record. DAVID L RICE, PE

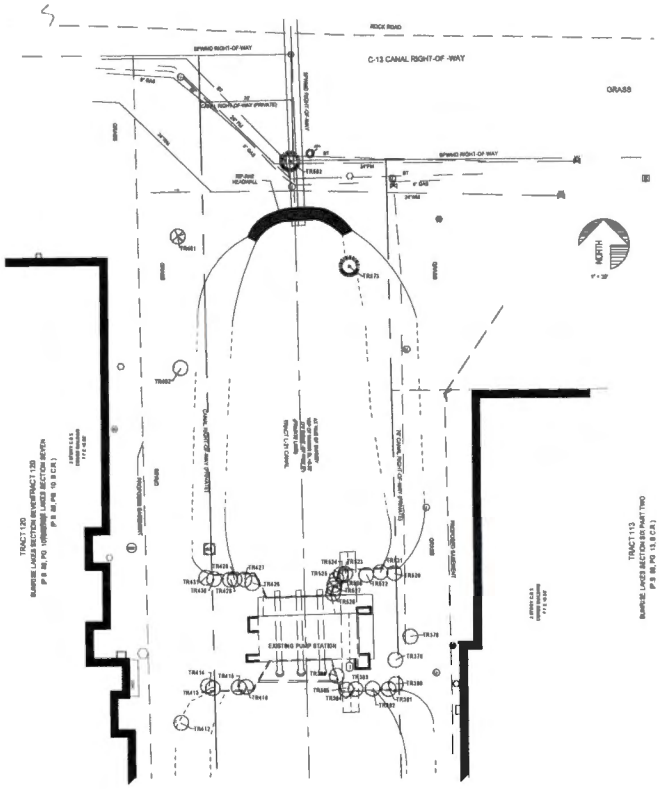
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STORM WATER PUMP STATION #5
PUMP STATION REPLACEMENT

PUMP STATION I & C DIAGRAM

SHEET NO. I-04

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TREE TABLE			
TREE ID#	BOTANIC NAME	TRUNK DIAMETER	COMMENT
369	FICUS TREE	48"	REMAIN
370	FICUS TREE	28"	REMAIN
378	FICUS TREE	12"	REMAIN
379	FICUS TREE/SHRUB	4"	CITY
380	FICUS TREE/SHRUB	4"	CITY
381	FICUS TREE/SHRUB	6"	CITY
382	FICUS TREE/SHRUB	4"	CITY
383	FICUS TREE/SHRUB	6"	CITY
384	FICUS TREE/SHRUB	10"	CITY
385	FICUS TREE/SHRUB	12"	CITY
386	FICUS TREE/SHRUB	10"	CITY
412	UNKNOWN TREE	6"	REMAIN
413	FICUS TREE/SHRUB	6"	CITY
414	FICUS TREE/SHRUB	6"	CITY
415	FICUS TREE/SHRUB	4"	CITY
416	FICUS TREE/SHRUB	6"	CITY
419	YUCCA CLUSTER	6"	REMAIN
426	FICUS TREE/SHRUB	6"	CITY
427	OAK TREE	6"	CITY
428	FICUS TREE/SHRUB	4"	CITY
429	FICUS TREE/SHRUB	6"	CITY
430	FICUS TREE/SHRUB	8"	CITY
431	FICUS TREE/SHRUB	12"	CITY
461	UNKNOWN TREE	6"	REMOVE
462	UNKNOWN TREE	8"	REMOVE
520	FICUS TREE/SHRUB	8"	CITY
521	FICUS TREE/SHRUB	4"	CITY
522	FICUS TREE/SHRUB	4"	CITY
523	FICUS TREE/SHRUB	4"	CITY
524	FICUS TREE/SHRUB	4"	CITY
525	FICUS TREE/SHRUB	4"	CITY
526	FICUS TREE/SHRUB	4"	CITY
527	FICUS TREE/SHRUB	4"	CITY
528	FICUS TREE/SHRUB	6"	CITY
573	SABAL PALM	14"	REMOVE
582	SABAL PALM	14"	(DEAD)

SUMMARY :

- 27 TOTAL CITY FICUS TREE/SHRUBS TO BE REMOVED. IF ANY REQUIRE MITIGATION IT WILL NEED TO BE OFF-SITE. EXISTING CITY PROPERTY TO BE EXCAVATED AND LAND WILL BE LOST TO THE INTAKE CANALAND THERE IS NO PERMISSION TO MITIGATE ON ADJACENT PRIVATE PROPERTY
- 3 TREES TO BE REMOVED FOR PUMP STATION CONSTRUCTION.
- 1 DEAD TREE TO BE REMOVED
- 5 TREES IN CONSTRUCTION AREA TO REMAIN

ALL FICUS TREE/SHRUB LISTED ON THE TREE TABLE ARE FICUS BENJAMINA, BENJAMINE FIG

LEGAL SIZE - FOR CITY USE ONLY

©Copyright 2020, Michael J. Petrow and Associates, Inc. All Rights Reserved. RIGHT OF OWNERSHIP: The drawings, designs, arrangements and ideas represented by these plans are an instrument of service for this project only and are owned by and remain the property of the Landscape Architect. None of such drawings, designs, arrangements and ideas may be used for any purpose whatsoever without the express written permission of the Landscape Architect. To the best of our knowledge, the plans and specifications submitted herewith comply with all existing requirements and ordinances of the applicable building codes at the time of the plans preparation. No warranty either expressed or implied is hereby given.

MICHAEL J. PETROW AND ASSOCIATES, INC.
LANDSCAPE ARCHITECTURE
P.O. BOX 8601
CORAL SPRINGS, FLORIDA 33076

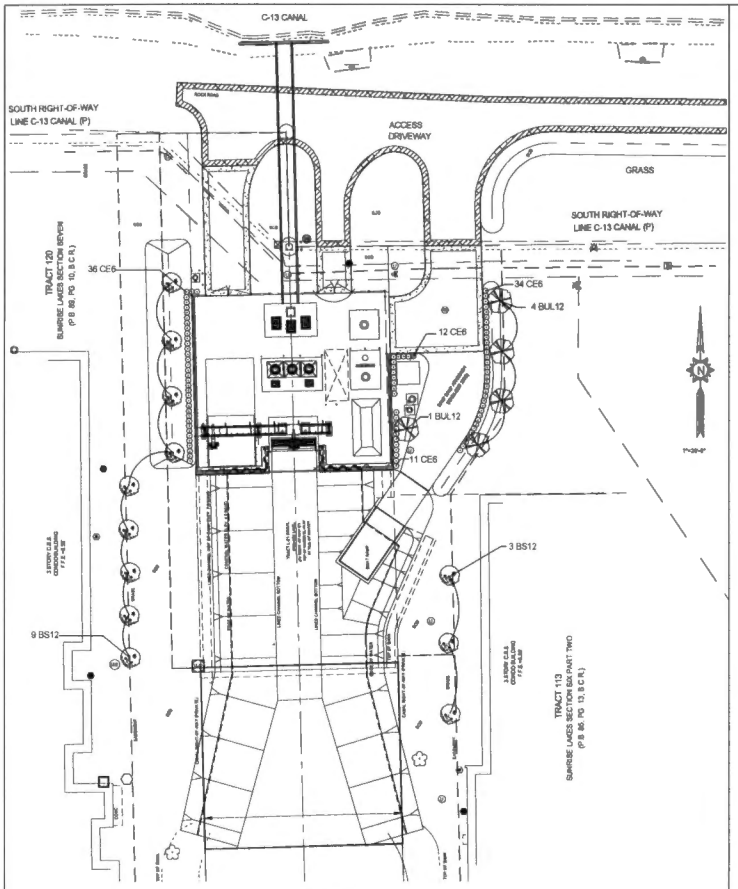
TREE DISPOSITION PLAN
STORM WATER PUMP STATION #5
PUMP STATION REPLACEMENT

PERMIT PLAN

REVISION
FEBRUARY 21, 2022
TREE DISPOSITION CHART

SEAL

DATE
AUGUST 13, 2020
DRAWN BY M.J.P.
DRAWING NO.
T-1
OF ONE



PLANT LIST

NOTE: The quantities on this plant list are to be used as a guide only. Bidder shall do independent takeoff for bidding purposes. *Denotes native plants.

CT=CLEAR TRUNK GW=GREY WOOD DB=DIAMETER BREAST HEIGHT(4 1/2') OA=OVERALL HEIGHT
FTB=FULL TO BASE HHT=HEAVY TRUNK CAL=CALIPER@12" FOR GRADES 8 STDS. SNG.=SINGLE TRUNK
DBL=DOUBLE TRUNK TRP=TRIPLE TRUNK STD.=TREE ST ANDARD MULT=MULTI-TRUNK
STAG=STAGGERED HEIGHTS BB=BALLED AND BURLAPPED FG=FIELD GROWN
ALL PLANT MATERIALS MUST ADHERE TO CURRENT GRADES AND STANDARDS FOR FLORIDA NUMBER ONE QUALITY OR BETTER. CONTAINER SIZE, WHEN LISTED, IS THE MINIMUM CONTAINER SIZE ACCEPTABLE FOR THE PLANT SPECIFIED.
ALL PLANT MATERIAL WILL BE ACCEPTED BY THE PLANT SIZE SPECIFICATION AND NOT THE CONTAINER SIZE.

SYM.	QNT	BOTANICAL NAME	COMMON NAME	OA HEIGHT	SPREAD	TRUNK SPECS.	TRUNK DIA.	COMMENTS
BS3	12	Bursera simaruba	*Gumbo Limbo	12'	6'	4.5"CT	2.5"dbh	
BUL 12	5	Bulnesia arborea	Verawood	12'	6'	5" CT	2.5 "dbh	
CE 6	183	Cerocarpus arcuifus	Green Buttonwood Shrub	6'	4'			
OTHER LANDSCAPE MATERIALS								
BUL		Bulnes Sp Regal						As Needed
SOIL		Planting Soil/Cubic Yards						As Needed
SOD		TO BE MEASURED IN FIELD	LOCATION AS SHOWN ON PLAN & GENERAL SPECIFICATIONS					

GENERAL SPECIFICATIONS

1. All plant materials shall be Florida No. 1 or better as set forth by the Florida Department of Agriculture, Grades and Standards for Nursery Plants, current edition. All plants to be graded shall comply with the general requirements listed there in. Certification that all plant materials installed are Florida No. 1 or better shall be the sole responsibility of the Landscape Contractor. Said certification shall be provided to the Owner or his authorized representative at the time of delivery of the plant material to the job site. Any dispute regarding plant material grade shall be determined by a representative of the Division of Plant Industry of the State of Florida. All rules and guidelines set by the State for the purposes of grading plant materials shall be followed.

2. Palms shall be planted so that all heads are clear of building walls and windows at mature spread.

3. All Salad Palms, Queen Palms, Washingtonia Palms, Phoenix varieties and all other single trunk, upright varieties with six foot (6') of clear trunk or greater shall be staked as detailed.

4. All trees shall be planted so that heads will be clear of building walls, roof lines and windows at mature spread. Shade trees shall not be located closer that fifteen feet (15') from project light poles. Medium and small trees and palms shall not be planted closer than seven and one half feet (7 1/2') from project light poles. Florida Power and Light tree location guidelines shall be followed in all cases relating to FPL power pole or easement locations. Where Codes require, locations of all trees planted in Rights-Of-Way or utility easements shall be confirmed by the landscape contractor with the City or County Engineer before installation. All tree trunk calipers shall be measured at 4 1/2' above top of root ball. All trees that are designated as single - trunk trees shall have a single, dominant leader and a relatively straight trunk. All trees that are designated as multi-trunk trees shall have at least three trunks with equal calipers originating from the base of the trees, and with angles no greater than 45 degrees. Trees with bark inclusion or codominant trunks will not be accepted.

5. All Trees and Palms shall be kept in an upright position. Under no circumstances shall any support method used employ the driving of nails or other mechanical devices of any kind into the bark of any tree or palm. Staking except Terra Toggle shall be removed approximately 6 months after planting or at the time of establishment of the tree. Any exposed Terra Toggle strapping shall be cut and removed after the wood supports have decomposed. All synthetic burlap, synthetic string or cords shall be removed before any trees are planted. All synthetic tape (ie. tagging tape, nursery tape) shall be removed from trunks, branches, etc. before inspection. The top one-third of any natural burlap shall be removed before the trees are backfilled. All wire baskets shall be removed from the top and sides of the rootball to a depth of 3" and all remaining wire shall be cut to prevent girdling. All trees, (except palms) and other plants shall be planted with the top of their rootballs 2" (+/-) above the final grade surrounding the planting area as detailed. Palms shall be planted with the top of the rootball flush with the surrounding area.

6. All trees within or overhanging pedestrian areas shall have a clear trunk high enough to allow unobstructed pedestrian movement under or around trees. distance concerns must be maintained for clear sight visibility from thirty (30) inches to seventy-two (72) inches, tree trunks excluded.

7. All hedges shall be planted with twelve inches (12") clear space between outer branches and building walls, fences or pavement edges and three feet (3') back from edge of parking spaces at the time of planting. Spacing of shrubs center to center shall be as specified by the municipality for screening requirements. Air conditioning equipment, air conditioning, irrigation pumps, FPL transformers, pool pumps, etc., must be screened on three (3) sides by shrubs.

8. Irrigation shall be by underground, automatic, rust free system with 100% coverage and a minimum of 50% overlap of sprinkler rain sensor shall be installed. Irrigation water shall not be directed onto or over impervious surfaces. Irrigation systems other than City water shall require a South Florida Water Management District water use permit prior to the issuance of the required irrigation permit from the City and/or the operation of the irrigation system. Approved irrigation permits shall be required from the City prior to installation.

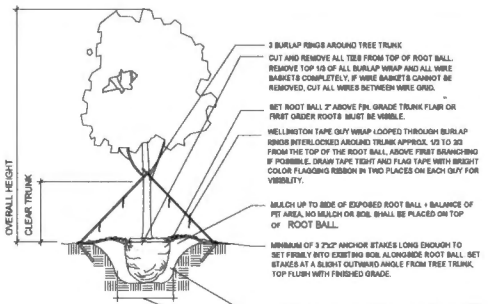
9. Planting soil shall be at least 30% muck and 70% sand pulverized and weed free, to be mixed with existing soil free from rocks and debris and backfilled into plant pits by washing in. Planting soil for Sabal Palms shall be clean sand. Existing soil may be used as planting soil if approved by the Landscape Architect.

10. Fertilizer for trees and shrubs shall be a general purpose 50% organic fertilizer low in phosphorus, with minor elements, iron and manganese and shall be mixed with the planting soil at the time of backfilling. Fertilizer for palms shall be a palm special type to include manganese and magnesium sulfate. Application rates for all fertilizers at the time of planting shall be 1/2 the manufacturers recommendations for established plants. Fertilizer for palms shall be a palm special type to include manganese and magnesium sulfate. Application rates for all fertilizers at the time of planting shall be 1/2 the manufacturers recommendations for established plants.

11. Mulch shall be shredded eucalyptus or other clean hardwood species grade "B" or better set at a 3" minimum depth and well down to prevent wind displacement. Cypress, red or dyed mulch shall not be accepted. All mulch shall All mulch shall be certified "Arsenic Free". All trees shall have a water ring with a minimum depth of two inches, maximum of three inches, and a diameter of 3 feet to 4 feet around the base. No mulch shall be placed over the rootball of any tree, All mulch shall be kept two inches from the stems of all shrub plant material.

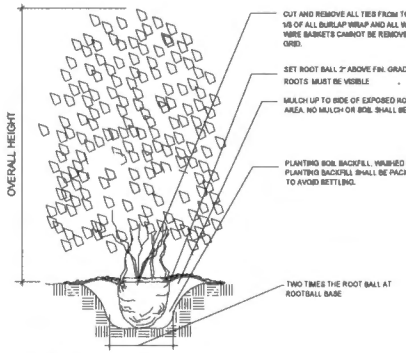
12. Sod shall be Stenotaphrum secundatum "Floritam" or "Palmetto" solid sod, weed free and set with staggered joints. Sod shall be placed on all areas not used for buildings, vehicular use areas, walks, site structures or planting beds and shall extend to any abutting street pavement edge and to the mean waterline of any abutting canal, lake or waterway. Sod shall be placed no closer than three (3) feet from the trunk of any tree. Sod placed adjacent to pavement and curbs shall be set with top of sod-soil soil flush with the top of the adjacent pavement and/or curb.

13. Planting plans take precedence over plant lists. The Landscape Contractor shall be responsible for doing his own takeoff. The Landscape Contractor shall familiarize himself with the municipal code and deed restrictions of the municipality in which the project is located. All existing codes and deed restrictions pertaining to the municipality in which the project is located shall apply and may supersede these General Specifications. The more stringent requirement shall apply.



TREE DETAIL

N.T.S.



LARGE SHRUB DETAIL

N.T.S.

14. The Landscape Contractor shall be aware of the locations of all easements and utilities above and below ground and shall call utility stakeout forty eight (48) hours before any digging operations begin. All plant pits located in easements shall be hand dug.

15. The Landscape Contractor shall provide a written guarantee to the Owner for all plant materials and workmanship for a period no less than one year from the time of final inspection and acceptance by the Owner. At the end of the guarantee period, all plant materials shall be inspected by the Landscape Contractor and the Owner. All plants that are in a healthy, growing condition at the time of the inspection shall be free from further guarantee and shall be the Owners responsibility. All plants that are in questionable condition due to transplant shock shall continue under the guarantee until recovery or, if deemed severely retarded in growth or dead, shall be replaced. Replaced plant material shall be guaranteed for the same time period and under the same conditions as the original plant material. This guarantee does not apply if the plant materials have not been maintained by the Owner as instructed by the Landscape Contractor, are damaged by storms, vandalism, insect or freeze damage or acts of God beyond the Landscape Contractors control. All plants shall be free from harmful plant pests at the time of planting.

USE BLANK - FOR CITY USE ONLY

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SUMMARY OF OWNERSHIP: The drawings, designs, arrangements and ideas represented by these plans are an instrument of service for this project only and are owned by and remain the property of the Landscape Architect. Reuse of said drawings, designs, arrangements and ideas may be used for any purpose whatsoever without the express written permission of the Landscape Architect. To the best of our knowledge the plans and specifications submitted herewith comply with all zoning requirements and provisions of the applicable building codes at the time of the plans preparation. No warranty, either implied or implied is hereby given.

MICHAEL J. PETROW AND ASSOCIATES, INC.
LANDSCAPE ARCHITECTURE
P.O. BOX 6801
CORAL SPRINGS, FLORIDA 33075

LANDSCAPE PLAN
STORM WATER PUMP STATION #5
PUMP STATION REPLACEMENT

PERMIT PLAN

REVISION
FEBRUARY 21, 2021

SEAL

DATE AUGUST 13, 2020
DRAWN BY M.J.P.
DRAWING NO. LD-1
OF ONE

EXHIBIT B
Funding Schedule

Funding Amounts: The amounts stated in this Funding Schedule are the maximum amounts payable for the Phase(s) stated, and shall be invoiced and paid only in accordance with the remainder of this Funding Schedule (as may be amended from time to time) and the terms and conditions of the Agreement. In the event of a conflict between anything stated in this Funding Schedule and anything stated elsewhere in the Agreement, the provisions stated in Articles 1 through 11 of the Agreement shall govern and control.

Invoicing/Application for Funding Documentation: Municipality shall submit the following with each invoice or Application for Funding (as defined below): an updated progress schedule; documentation of all invoices received from or payments made to Contractor or Consultant for which funding is sought; a statement indicating the cumulative amount of CBE participation to date; and a certification that all funding amounts sought are statutorily eligible for funding under Section 212.055, Florida Statutes.

Additional Invoicing Requirements: If checked, the checked requirements apply to all invoices/Applications for Funding under this Agreement:
☒ For CEI Consultants: All costs invoiced shall be supported by properly certified payrolls, time records, invoices, contracts, or vouchers evidencing in appropriate detail the amounts invoiced/expended and the nature and purpose of such amounts.
☐ For Construction Contractor: Pay Application documents consistent with AIA Document G702 and G703.

Funding Parameters: The checked expenses are <u>ineligible</u> for funding under this Agreement:
☒ Costs incurred by Municipality prior to the execution of this Agreement
☒ Costs incurred after the expiration of this Agreement
☒ Costs that are not expressly permitted in Exhibit A or B
☒ Amounts that Contractor, Consultant, or Subcontractors are contractually responsible to pay, credit, or reimburse to Municipality or County (e.g., liquidated damages for not meeting the Project Schedule, audit costs, etc.)
☒ Amounts attributable to good or services received under a contract or other arrangement that was not approved by County
☒ Audit costs incurred by Municipality
☒ Legal and accounting fees and expenses
☒ Costs for operation, support, or maintenance of the Project
☒ Interest expenses incurred by Municipality
☒ Municipality's staff or other personnel costs in directly performing the Project

Advance Payment of Maximum Not-to-Exceed Amount

Municipality shall invoice County for up to a quarter of the applicable Total Maximum Not-To-Exceed Amount specified below in advance of the applicable Deliverable or Phase ("Application for Funding"). The first Application for Funding shall be submitted to the Contract Administrator no later than thirty (30) days after the full execution of this Agreement. Municipality shall submit no more than four separate Applications for Funding per funding schedule provided below.

Each quarter will be funded in advance by County per the schedule(s) stated below, with each funding amount determined by the Maximum Not-to-Exceed Amount for the applicable Deliverable less any unexpended funding for prior Deliverables. Unexpended funds for prior Deliverables shall be deducted from subsequent Applications for Funding or refunded to County, as requested by the Contract Administrator.

Each Application for Funding (after the first) shall include the information required in the Agreement including the following information for the prior Deliverables (as applicable): the amount of funding received and evidence of actual expenditures (including documentation demonstrating all invoices received from and payments made to Consultant/Contractor); a statement indicating the cumulative amount of CBE participation; an updated progress schedule; and all required certifications including that all Deliverables sought are statutorily eligible for funding under Section 212.055, Florida Statutes.

After Project final completion, successful Project closeout, and all other Project funding has been expended on the Project, Municipality may submit an Application for Funding to County seeking reimbursement for eligible Project costs associated with inflation up to the Reimbursable Inflation Adjustment Amount specified below. An Application for Funding for the Reimbursable Inflation Adjustment Amount must include: the information set forth above for an Application for Funding; a certification that all other Project funding has been utilized; and invoices documenting expenditures for eligible Project Costs up to the Reimbursable Inflation Adjustment Amount. The Inflation Adjustment Amount may not exceed eleven and nine tenths percent (11.9%) of the Total Maximum Not-To-Exceed Amount excluding the Reimbursable Inflation Adjustment Amount.

Absent prior written approval by the Contract Administrator, Municipality may not submit an Application for Funding for a Deliverable until all prior Deliverables have been satisfactorily completed.

Deliverable/Phase Description	Maximum Not-To-Exceed Amount
Deliverables 1-3: Execution of ILA, Construction Contract Execution, NTP Issued.	$261,279.54
Deliverables 4-5: Complete Construction Phases 1 & 2	$261,279.54
Deliverable 6: Substantial Completion	$261,279.54

Deliverable 7: Final Completion	$261,279.54
Reimbursable Inflation Adjustment	$122,667.58
TOTAL MAXIMUM NOT-TO-EXCEED AMOUNT:	**$1,167,785.74**

EXHIBIT C
Reporting Requirements

Municipality shall submit to County and the Oversight Board, on a quarterly and annual basis, a detailed Financial Report that includes the information contained in the attached Sample Financial Report.

Municipality shall submit to County on a monthly basis a detailed report of the Project Metrics and progress towards applicable goals in a form prescribed by County (see attached MAP PMO Project Report Status Template). The reports must include sufficient information to enable County's Program Management Office ("PMO") to track and document on a monthly basis:

- Key activities and Project milestones since the previous report;
- Expected activities/milestones to be completed before the next report;
- If applicable, key issues/challenges the Project faces and the plan to resolve or manage the issues/challenges; and
- Overall status of the Project.

Municipality's annual financial report for the Project must be audited and certified by an independent CPA, at Municipality's expense, with an opinion as to whether the financial information in the report is presented in accordance with Generally Accepted Accounting Principles and whether the Project is in accordance with the operative interlocal agreements for surtax funding. The audit shall contain sufficient information for County and the Oversight Board to determine if the Project expenditures conform to this Agreement and applicable law. The annual financial report must also include cumulative financial information for each individual Surtax-Funded Project undertaken by Municipality. The annual financial report must include appropriate footnote disclosures in support of the financial information items presented, including disclosure of any issue of noncompliance with this Agreement or applicable law.

Sample Financial Report

Project Name:	
Quarterly Period:	

Section A: Total/Maximum Project Funding

1.	Surtax Maximum Funding Amount (per Section 5.4)	$
2.	Non-Surtax Funding Awarded/Committed	$
3.	**Total Project Funding** (Total lines 1 + 2)	**$**
4.	Less Proceeds (as defined in Section 5.6)	($)
5.	**Adjusted Project Funding** (Line 3 minus Line 4)	$

Section B: Funding Received to Date

		Quarter Reported	**Fiscal Year to Date**	**Total**
6.	Surtax Funding Received	$	$	$
7.	Non-Surtax Funding Received	$	$	$
8.	**Total Project Funding Received** (Total lines 6 + 7)	**$**	**$**	**$**

Section C: Expenditures to Date

		Quarter Reported	**Fiscal Year to date**	**Total**
9.	Surtax Funding Expended	$	$	$
10.	Non-Surtax Funding Expended	$	$	$
11.	Total Project Funding Expended (Total lines 9 + 10)	**$**	**$**	**$**

Section D: Available Funding to Date

12.	**Adjusted Project Funding** (Line 5 above)	$
13.	Total Project Funding Expended to Date (Line 11 above)	$
14.	**Available Project Funding to date** (Line 12 minus line 13)	$

Section E: Contract Financials (*complete for each of Contractor and Consultant*)

Original Contract amount	$
Changes (increases or decreases)	$
Revised contract amount	**$**
Total Work Completed to Date	$
Retainage Held to Date	$
Total Earned Less Retainage	**$**
Total Amount Paid to Date	**$**
Work Completed this Quarter	$
Retainage Held for Work Completed this Quarter	$

Retainage Released this Quarter	$
Amount Paid this Quarter	$

Section F: Quarterly Detailed Expenditures (for Quarter Reported)

Invoice No.	Invoice Date	Vendor Name	Description of Work	Invoice Amount	Amount Paid

Section G: Project Schedule & Status

15.	Project Schedule Completion Date	
16.	Total Project Schedule Time Remaining	
17.	Amount Project Is Ahead/Behind Schedule	☐ Ahead by ___ Days ☐ Behind by ___ Days
18.	Explanation for Change in Project Schedule:	
19.	Project Run Rate (Actual vs. Planned Expenditures)	
20.	Percentage of Project Phases/Milestones Met	%

Section H: Performance Metrics

A. [To be provided by the PMO as applicable]

B. [To be provided by the PMO as applicable]

MAP PMO Project Status Report *Template*

<Agency> Project: *<fill in project name or id>*	Owner: *<fill in>*	July 15,2019
Progress update • *Key activities since the last status report* • ?	**Overall Progress** Red = Execution critical delay Amber = Delay but recoverable Green = On track **Summary:** (may include) • *Key take-aways for BoCC, OB and SurTax Admin* • *Project run rate; actual vs. planned* • *% Milestones met* • *Days over budget* • *Leverage ratio* • *Key reminders of critical decisions/milestones/etc.*	
Key activities to be completed in the next <2-4> weeks: • ? • ?		
Issues/Challenges:	**Proposed solutions:**	

EXHIBIT D
Form Contracts

County provided the example form Surtax-Funded Consultant Contract and Construction Contract to the Municipality.

CITY CLERK
CITY OF SUNRISE
2024 SEP 11 PM 2:47

SUNRISE, FLORIDA

RESOLUTION NO. 24-109

A RESOLUTION OF THE CITY OF SUNRISE, FLORIDA, APPROVING AN "INTERLOCAL AGREEMENT BETWEEN BROWARD COUNTY AND CITY OF SUNRISE FOR SURTAX-FUNDED MUNICIPAL TRANSPORTATION PROJECT: REPLACE STORMWATER PUMP STATION NO. 5 (SUNR-025.1)"; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, Broward County voters approved by referendum the Transportation Surtax ("Penny for Transportation") on November 6, 2018; and

WHEREAS, Broward County, the Municipalities, and the Broward Metropolitan Organization (MPO) entered into the "Transportation System Surtax Interlocal Agreement," as amended, which provided for a cooperative and organized process for the Municipalities to submit projects for evaluation and funding with Transportation Surtax proceeds; and

WHEREAS, on January 26, 2021, the City Commission approved the Second Amendment to and Restatement of the Transportation System Surtax Interlocal Agreement, which outlined the criteria for evaluating process, documented the allocation for municipal capital projects, and included other minor changes; and

WHEREAS, one of the City projects approved for Transportation Surtax Funding is the replacement of Stormwater Pump Station No. 5; and

WHEREAS, Transportation Surtax funding in the amount of $1,167,785.74 will be provided by Broward County to partially fund the project. In order for the City to receive the funds, a project-specific Interlocal Agreement is required to be executed by the City and Broward County.

NOW THEREFORE, BE IT RESOLVED BY THE CITY COMMISSION OF THE CITY OF SUNRISE, FLORIDA:

Section 1. An "Interlocal Agreement between Broward County and City of Sunrise for Surtax-Funded Municipal Transportation Project: Replace Stormwater Pump Station No. 5 (SUNR-025.1)" (Interlocal Agreement) is hereby approved. A copy of the Interlocal Agreement is attached hereto and made a part of this Resolution as Exhibit A.

Section 2. The Mayor is hereby authorized to execute the Interlocal Agreement.

Section 3. The Director of Utilities is hereby authorized to extend the Interlocal Agreement, in accordance with the terms of the approved Interlocal Agreement. The Director of Utilities shall provide the City Clerk with a copy of any such extension.

Section 4. Effective Date. This Resolution shall be effective immediately upon its passage.

PASSED AND ADOPTED this 10TH DAY of SEPTEMBER, 2024.

Mayor Michael J. Ryan

Authentication:



Felicia M. Bravo
City Clerk

MOTION: KERCH
SECOND: SCUOTTO

DOUGLAS: YEA
GUZMAN: YEA
KERCH: YEA
SCUOTTO: YEA
RYAN: YEA

Approved by the City Attorney
as to Form and Legal Sufficiency

Thomas P. Moss