THE WARREN GROUP
ARCHITECTS INC.

1801 South 2nd Street, Ste. 330 McAllen, TX 78503

Addendum No. 4

DATE: Wednesday, July 3, 2019

PROJECT: City of Pharr/PSJA Aquatic Facility

PROJECT NO: 971805/ 1819-35-510-C011-051

LOCATION: 3001 N. Cage Blvd., Pharr, Texas 78577

FROM: Laura N. Warren, The Warren Group Architects, Inc.

The following revisions and clarifications shall be considered part of the record contract documents dated June 7, 2019 for the above referenced project and included in the contract amount. All general notes and specifications shall apply to this addendum. Where provisions of the following supplementary data differ from those of the original Contract Documents, this Addendum shall govern and take precedence.

The following scope adjustments have been made. Please adjust bids with the following noted changes:

Specifications

Item No. 1: **As requested by Owner Representative, the Competitive Sealed Proposal opening date has been extended to Tuesday, 07/23/2019 in lieu of 07/11/2019. Time and location remain the same.**

Item No. 2: *Refer to Project Manual dated June 7, 2019.* **Spec Section 08 71 00 Door Hardware dated 06/7/2019 has been revised. Additional doors to receive card readers as requested by owner. Replace with Spec Section 08 71 00 Door Hardware ADD4 dated 07/03/2019. Insert this section.**

Drawings

Item No. 3: *Refer to Construction Documents Civil drawing set dated June 7, 2019.* **Refer to Civil Addendum #4 dated 7/03/2019.**

Item No. 4: *Refer to Construction Documents sheet A1.11A dated June 7, 2019.* **Several Exterior Wall types have been changed from EWA-7 to EWA-8. Refer to 30x42 sheet A1.11A ADD 4 dated 7/03/2019. Insert this sheet.**

Item No. 5: *Refer to Construction Documents sheet A2.11 dated June 7, 2019.* **Ladder with cage has been included to access higher level roof. Refer to 30x42 sheet A2.11 ADD 4 dated 7/03/2019. Insert this sheet.**

Item No. 6: *Refer to Construction Documents sheet A2.13 dated June 7, 2019.* **South Interior wall elevation has been provided. Refer to 30x42 sheet A2.13 ADD 4 dated 7/03/2019. Insert this sheet.**

Item No. 7: *Refer to Construction Documents sheet A3.02 dated June 7, 2019.* **Intumescent paint on exposed structure has been noted and clarification on Private Viewing floor structure has been properly depicted. Refer to 30x42 sheet A3.02 ADD 4 dated 7/03/2019. Insert this sheet.**

Item No. 8: *Refer to Construction Documents sheet A4.13 dated June 7, 2019.* **Elevation key has been edited to indicate correct drawing reference. Refer to 30x42 sheet A4.13 ADD 4 dated 7/03/2019. Insert this sheet.**

Item No. 9: *Refer to Construction Documents sheet A4.32 dated June 7, 2019.* **Height of Stair 168 has been edited to reflect structural drawings. Refer to 30x42 sheet A4.32 ADD 4 dated 7/03/2019. Insert this sheet.**

Item No. 10: *Refer to Construction Documents sheet A4.33 dated June 7, 2019.* **Height of Stair 168 has been edited to reflect structural drawings. Refer to 30x42 sheet A4.33 ADD 4 dated 7/03/2019. Insert this sheet.**

Item No. 11: *Refer to Construction Documents sheet A5.11 dated June 7, 2019.* **Louver Details 12, 13 and 14 have been provided. Refer to 30x42 sheet A5.11 ADD 4 dated 7/03/2019. Insert this sheet.**

Item No. 12: *Refer to Construction Documents sheet A6.21 dated June 7, 2019.* **Door and Window Schedules have been revised. Refer to 30x42 sheet A6.21 ADD 4 dated 7/03/2019. Insert this sheet.**

Item No. 13: *Refer to Construction Documents sheet A6.22 dated June 7, 2019.* **Detail keys have been provided along with elevations of louvers, coiling counter shutters, and overhead doors. Refer to 30x42 sheet A6.22 ADD 4 dated 7/03/2019. Insert this sheet.**

Item No. 14: *Refer to Construction Documents MEP drawing set dated June 7, 2019.* **Refer to MEP Addendum #4 dated 7/03/2019.**

ISSUED BY:

Laura N. Warren, AIA/Principal
The Warren Group Architects, Inc.

REGISTERED ARCHITECT
LAURA N. WARREN
18378
STATE OF TEXAS

Attachments:

PDF Format – 8.5"x11" 08 71 00 Door Hardware ADD4 dated 7/03/2019
PDF Format – 30”x42” C101 ADD 4 dated 07/03/2019
PDF Format – 30”x42” C102 ADD 4 dated 07/03/2019
PDF Format – 30”x42” C103 ADD 4 dated 07/03/2019
PDF Format – 30”x42” C104 ADD 4 dated 07/03/2019
PDF Format – 30”x42” C106 ADD 4 dated 07/03/2019
PDF Format – 30”x42” C111 ADD 4 dated 07/03/2019
PDF Format – 30”x42” C114 ADD 4 dated 07/03/2019
PDF Format – 30”x42” C115 ADD 4 dated 07/03/2019
PDF Format – 30”x42” C116 ADD 4 dated 07/03/2019
PDF Format – 30”x42” A1.11A ADD 4 dated 07/03/2019
PDF Format – 30”x42” A2.11 ADD 4 dated 07/03/2019
PDF Format – 30”x42” A2.13 ADD 4 dated 07/03/2019
PDF Format – 30”x42” A3.02 ADD 4 dated 07/03/2019
PDF Format – 30”x42” A4.13 ADD 4 dated 07/03/2019
PDF Format – 30”x42” A4.32 ADD 4 dated 07/03/2019
PDF Format – 30”x42” A4.33 ADD 4 dated 07/03/2019
PDF Format – 30”x42” A5.11 ADD 4 dated 07/03/2019
PDF Format – 30”x42” A6.21 ADD 4 dated 07/03/2019
PDF Format – 30”x42” A6.22 ADD 4 dated 07/03/2019
PDF Format – 30”x42” E1.02 ADD 4 dated 07/03/2019
PDF Format – 30”x42” E3.01 ADD 4 dated 07/03/2019

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Bidding Vendors
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ADDENDUM NO. 4
CIVIL PLANS
CITY OF PHARR/PSJA AQUATIC FACILITY
PROJECT NO. 1819-35-510-C011-051
PHARR, TEXAS
JULY 3, 2019

The following clarifications, corrections and directives shall become part of the Proposal, Contract Documents and Specifications for the **CITY OF PHARR/PSJA AQUATIC FACILITY** as prepared by The Warren Group Architects. Revised Civil Plan Sheets have been attached and made part of this Addendum No. 4 and the Contract Documents as follows:

C101 – Dimension Control & Signage Plan
C102 – Drainage Area Map
C103 – Drainage Area Calculations
C104 – Grading and Drainage Plan
C106 – Storm Sewer Line 'B' & 'C'
C111, C114, C115 and C116 – Typical Details

ITEM 1. Clarification has been added to the plans for the locations of "Edge Curbs" and "Wheel Stops" on the Center's Parking Areas. In general, curb stops will be required al all parking spaces facing the edge curb and along the bus parking area on the west side of the proposed building. Please note that the reinforced concrete wheel stops shall be "slotted" to provide drainage. Please refer to the detail contained in the Plans.

ITEM 2. The size and geometry for the Center's main entrance along the southbound frontage road of I69-C (U.S. Expressway 281) has changed. The entrance width has been reduced to 45 feet (Face to Face) and the center island has been eliminated.

ITEM 3. Please refer to the Architectural Plans for the location of the "Monument Sign".

ITEM 4. The revised plans show clarifications for the roof drain pipe sizes and specification. Roof Drain Pipes shall be PVC, AWWA C-900-16 DR18 with "Ring-Tite" joints and concrete thrust blocks at each bend and wye connection.

ITEM 5. Additional landscape storm water catchments have been added to the south side of the building within the landscape areas. Storm water catchments for those landscape areas shall be 24" diameter "Nyloplast" inlets as specified in the Typical Details. All other area inlets shall remain as specified.

ITEM 6. Clarification as to Reinforced Concrete Pipe (RCP) Strength Class designation has been shown in the Plans. In general, RCP Class III shall be used under paved areas. All other RCP shall be Class II. Please refer to schedule contained in the Plans.

ITEM 7. As a point of clarification, in general, the elevation of the existing site is at elevation 106 feet. Point elevations of existing ground have been included in the Drainage and Grading Plan Sheet C104 as reference.

ITEM 8. "Bioswales" are proposed for the east parking lot only.

Please acknowledge receipt of this Addendum on the space provided in the Proposal and/or Bid Documents.

Submitted by:

P.E. 7/3/19

Jorge D. Perez, P.E. Date
Perez Consulting Engineers
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ADDENDUM #4
CITY OF PHARR/PSJA AQUATIC FACILITY
07.03.2019

The following items shall become a part of the contract documents. Refer to full or partial sheets referenced and make changes noted. Bidders are responsible for reading all sections of the addendum. The Addendum consists of the following:

ELECTRICAL

Item 1 Sheet E1.02, Electrical Power Floor Plan, card reader rough-in have been added to drawing. Refer to attached drawing.

Item 2 Sheet E3.01, Electrical Lighting Fixture Schedule, revised fixture schedule. Refer to attached drawing.

STATE OF TEXAS
ABRAM L. DOMINGUEZ
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LICENSED
PROFESSIONAL ENGINEER

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07.03.2019

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SECTION 08 71 00
DOOR HARDWARE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes commercial door hardware for the following:

1. Swinging doors.

B. Door hardware includes, but is not necessarily limited to, the following:

1. Mechanical door hardware.
2. Electromechanical door hardware.
3. Cylinders specified for doors in other sections.

C. Related Sections:

1. Division 08 Section “Door Hardware Schedule”.
2. Division 08 Section “Hollow Metal Doors and Frames”.
3. Division 08 Section “Flush Wood Doors”.
4. Division 08 Section “Aluminum-Framed Entrances and Storefronts”.
5. Division 08 Section “Automatic Door Operators”.
6. Division 08 Section “Access Control Hardware”.
7. Division 28 Section “Access Control”.

D. Codes and References: Comply with the version year adopted by the Authority Having Jurisdiction.

1. ANSI A117.1 - Accessible and Usable Buildings and Facilities.
2. ICC/IBC - International Building Code.
3. NFPA 70 - National Electrical Code.
4. NFPA 80 - Fire Doors and Windows.
5. NFPA 101 - Life Safety Code.
6. NFPA 105 - Installation of Smoke Door Assemblies.
7. State Building Codes, Local Amendments.

E. Standards: All hardware specified herein shall comply with the following industry standards:

1. ANSI/BHMA Certified Product Standards - A156 Series
2. UL10C – Positive Pressure Fire Tests of Door Assemblies

1.3 SUBMITTALS

A. Product Data: Manufacturer's product data sheets including installation details, material descriptions, dimensions of individual components and profiles, operational descriptions and finishes.

B. Door Hardware Schedule: Prepared by or under the supervision of supplier, detailing fabrication and assembly of door hardware, as well as procedures and diagrams. Coordinate the final Door Hardware Schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.

1. Format: Comply with scheduling sequence and vertical format in DHI's "Sequence and Format for the Hardware Schedule."

2. Organization: Organize the Door Hardware Schedule into door hardware sets indicating complete designations of every item required for each door or opening. Organize door hardware sets in same order as in the Door Hardware Sets at the end of Part 3. Submittals that do not follow the same format and order as the Door Hardware Sets will be rejected and subject to resubmission.

3. Content: Include the following information:

a. Type, style, function, size, label, hand, and finish of each door hardware item.
b. Manufacturer of each item.
c. Fastenings and other pertinent information.
d. Location of door hardware set, cross-referenced to Drawings, both on floor plans and in door and frame schedule.
e. Explanation of abbreviations, symbols, and codes contained in schedule.
f. Mounting locations for door hardware.
g. Door and frame sizes and materials.
h. Warranty information for each product.

4. Submittal Sequence: Submit the final Door Hardware Schedule at earliest possible date, particularly where approval of the Door Hardware Schedule must precede fabrication of other work that is critical in the Project construction schedule. Include Product Data, Samples, Shop Drawings of other work affected by door hardware, and other information essential to the coordinated review of the Door Hardware Schedule.

C. Shop Drawings: Details of electrified access control hardware indicating the following:

1. Wiring Diagrams: Upon receipt of approved schedules, submit detailed system wiring diagrams for power, signaling, monitoring, communication, and control of the access control system electrified hardware. Differentiate between manufacturer-installed and field-installed wiring. Include the following:

a. Elevation diagram of each unique access controlled opening showing location and interconnection of major system components with respect to their placement in the respective door openings.
b. Complete (risers, point-to-point) access control system block wiring diagrams.
c. Wiring instructions for each electronic component scheduled herein.

2. Electrical Coordination: Coordinate with related sections the voltages and wiring details required at electrically controlled and operated hardware openings.

D. Keying Schedule: After a keying meeting with the owner has taken place prepare a separate keying schedule detailing final instructions. Submit the keying schedule in electronic format. Include keying system explanation, door numbers, key set symbols, hardware set numbers and special instructions. Owner must approve submitted keying schedule prior to the ordering of permanent cylinders/cores.

E. Proof of Compliance: (California located Projects): Provide a list of product(s) containing chemicals known to cause cancer or reproductive toxicity as defined by the Office of Environmental Health Hazard Assessment (OEHHA) under Proposition 65 (CA Code of Regulations, Title 27, Section 27001). The list includes the specific chemical(s), if the chemical will be exposed to consumers, the means of warning, and an illustration of the label.

F. Informational Submittals:

1. Product Test Reports: Indicating compliance with cycle testing requirements, based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified independent testing agency.

G. Operating and Maintenance Manuals: Provide manufacturers operating and maintenance manuals for each item comprising the complete door hardware installation in quantity as required in Division 01, Closeout Submittals.

1.4 QUALITY ASSURANCE

A. Manufacturers Qualifications: Engage qualified manufacturers with a minimum 5 years of documented experience in producing hardware and equipment similar to that indicated for this Project and that have a proven record of successful in-service performance.

B. Installer Qualifications: A minimum 3 years documented experience installing both standard and electrified door hardware similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.

C. Door Hardware Supplier Qualifications: Experienced commercial door hardware distributors with a minimum 5 years documented experience supplying both mechanical and electromechanical hardware installations comparable in material, design, and extent to that indicated for this Project. Supplier recognized as a factory direct distributor by the manufacturers of the primary materials with a warehousing facility in Project's vicinity. Supplier to have on staff a certified Architectural Hardware Consultant (AHC) available during the course of the Work to consult with Contractor, Architect, and Owner concerning both standard and electromechanical door hardware and keying.

D. Automatic Operator Supplier Qualifications: Power operator products and accessories are required to be supplied and installed through current members of the manufacturer's "Power Operator Preferred Installer" program. Suppliers are to be factory trained, certified, and a direct purchaser of the specified power operators and be responsible for the installation and maintenance of the units and accessories indicated for the Project.

E. Source Limitations: Obtain each type and variety of door hardware specified in this section from a single source unless otherwise indicated.

1. Electrified modifications or enhancements made to a source manufacturer's product line by a secondary or third party source will not be accepted.

2. Provide electromechanical door hardware from the same manufacturer as mechanical door hardware, unless otherwise indicated.

F. Each unit to bear third party permanent label demonstrating compliance with the referenced standards.

G. Keying Conference: Conduct conference to comply with requirements in Division 01 Section "Project Meetings." Keying conference to incorporate the following criteria into the final keying schedule document:

1. Function of building, purpose of each area and degree of security required.
2. Plans for existing and future key system expansion.
3. Requirements for key control storage and software.
4. Installation of permanent keys, cylinder cores and software.
5. Address and requirements for delivery of keys.

H. Pre-Submittal Conference: Conduct coordination conference in compliance with requirements in Division 01 Section "Project Meetings" with attendance by representatives of Supplier(s), Installer(s), and Contractor(s) to review proper methods and the procedures for receiving, handling, and installing door hardware.

1. Prior to installation of door hardware, conduct a project specific training meeting to instruct the installing contractors' personnel on the proper installation and adjustment of their respective products. Product training to be attended by installers of door hardware (including electromechanical hardware) for aluminum, hollow metal and wood doors. Training will include the use of installation manuals, hardware schedules, templates and physical product samples as required.
2. Inspect and discuss electrical roughing-in, power supply connections, and other preparatory work performed by other trades.
3. Review sequence of operation narratives for each unique access controlled opening.
4. Review and finalize construction schedule and verify availability of materials.
5. Review the required inspecting, testing, commissioning, and demonstration procedures

I. At completion of installation, provide written documentation that components were applied to manufacturer's instructions and recommendations and according to approved schedule.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Inventory door hardware on receipt and provide secure lock-up and shelving for door hardware delivered to Project site. Do not store electronic access control hardware, software or accessories at Project site without prior authorization.

B. Tag each item or package separately with identification related to the final Door Hardware Schedule, and include basic installation instructions with each item or package.

C. Deliver, as applicable, permanent keys, cylinders, cores, access control credentials, software and related accessories directly to Owner via registered mail or overnight package service. Instructions for delivery to the Owner shall be established at the "Keying Conference".

1.6 COORDINATION

A. Templates: Obtain and distribute to the parties involved templates for doors, frames, and other work specified to be factory prepared for installing standard and electrified hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing hardware to comply with indicated requirements.

B. Door Hardware and Electrical Connections: Coordinate the layout and installation of scheduled electrified door hardware and related access control equipment with required connections to source power junction boxes, low voltage power supplies, detection and monitoring hardware, and fire and detection alarm systems.

C. Door and Frame Preparation: Doors and corresponding frames are to be prepared, reinforced and pre-wired (if applicable) to receive the installation of the specified electrified, monitoring, signaling and access control system hardware without additional in-field modifications.

1.7 WARRANTY

A. General Warranty: Reference Division 01, General Requirements. Special warranties specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.

B. Warranty Period: Written warranty, executed by manufacturer(s), agreeing to repair or replace components of standard and electrified door hardware that fails in materials or workmanship within specified warranty period after final acceptance by the Owner. Failures include, but are not limited to, the following:

1. Structural failures including excessive deflection, cracking, or breakage.
2. Faulty operation of the hardware.
3. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
4. Electrical component defects and failures within the systems operation.

C. Standard Warranty Period: One year from date of Substantial Completion, unless otherwise indicated.

D. Special Warranty Periods:
1. Five years for standard duty cylindrical (bored) locks and latches.
2. Five years for exit hardware.
3. Ten years for manual surface door closer bodies.
4. Twenty five years for manual surface door closer bodies.
5. Five years for motorized electric latch retraction exit devices.
6. Two years for electromechanical door hardware.

1.8 MAINTENANCE SERVICE

A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of door hardware.

PART 2 - PRODUCTS

2.1 SCHEDULED DOOR HARDWARE

A. General: Provide door hardware for each door to comply with requirements in Door Hardware Sets and each referenced section that products are to be supplied under.

B. Designations: Requirements for quantity, item, size, finish or color, grade, function, and other distinctive qualities of each type of door hardware are indicated in the Door Hardware Sets at the end of Part 3. Products are identified by using door hardware designations, as follows:

1. Named Manufacturer's Products: Product designation and manufacturer are listed for each door hardware type required for the purpose of establishing requirements. Manufacturers' names are abbreviated in the Door Hardware Schedule.

C. Substitutions: Requests for substitution and product approval for inclusive mechanical and electromechanical door hardware in compliance with the specifications must be submitted in writing and in accordance with the procedures and time frames outlined in Division 01, Substitution Procedures. Approval of requests is at the discretion of the architect, owner, and their designated consultants.

2.2 HANGING DEVICES

A. Hinges: ANSI/BHMA A156.1 certified butt hinges with number of hinge knuckles and other options as specified in the Door Hardware Sets.

1. Quantity: Provide the following hinge quantity:

a. Two Hinges: For doors with heights up to 60 inches.
b. Three Hinges: For doors with heights 61 to 90 inches.
c. Four Hinges: For doors with heights 91 to 120 inches.
d. For doors with heights more than 120 inches, provide 4 hinges, plus 1 hinge for every 30 inches of door height greater than 120 inches.

2. Hinge Size: Provide the following, unless otherwise indicated, with hinge widths sized for door thickness and clearances required:

a. Widths up to 3’0”: 4-1/2” standard or heavy weight as specified.
b. Sizes from 3’1” to 4’0”: 5” standard or heavy weight as specified.

3. Hinge Weight and Base Material: Unless otherwise indicated, provide the following:

a. Exterior Doors: Heavy weight, non-ferrous, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate standard weight.

b. Interior Doors: Standard weight, steel, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate heavy weight.

4. Hinge Options: Comply with the following:

a. Non-removable Pins: Provide set screw in hinge barrel that, when tightened into a groove in hinge pin, prevents removal of pin while door is closed; for the all out-swinging lockable doors.

5. Manufacturers:

a. McKinney Products; ASSA ABLOY Architectural Door Accessories (MK).

B. Continuous Geared Hinges: ANSI/BHMA A156.26 Grade 1-600 certified continuous geared hinge. with minimum 0.120-inch thick extruded 6060 T6 aluminum alloy hinge leaves and a minimum overall width of 4 inches. Hinges are non-handed, reversible and fabricated to template screw locations. Factory trim hinges to suit door height and prepare for electrical cut-outs.

1. Manufacturers:

a. McKinney Products; ASSA ABLOY Architectural Door Accessories (MK).
b. Pemko Products; ASSA ABLOY Architectural Door Accessories (PE).

2.3 POWER TRANSFER DEVICES

A. Concealed Quick Connect Electric Power Transfers: Provide concealed wiring pathway housing mortised into the door and frame for low voltage electrified door hardware. Furnish with Molex™ standardized plug connectors and sufficient number of concealed wires (up to 12) to accommodate the electrified functions specified in the Door Hardware Sets. Connectors plug directly to through-door wiring harnesses for connection to electric locking devices and power supplies. Wire nut connections are not acceptable.

1. Manufacturers:

a. Pemko Products; ASSA ABLOY Architectural Door Accessories (PE) – EL-CEPT Series.
b. Securitron (SU) - EL-CEPT Series.

B. Electric Door Wire Harnesses: Provide electric/data transfer wiring harnesses with standardized plug connectors to accommodate up to twelve (12) wires. Connectors plug directly to through-door wiring harnesses for connection to electric locking devices and power supplies. Provide sufficient number and type of concealed wires to accommodate electric function of specified hardware. Provide a connector for through-door electronic locking devices and from hinge to junction box above the opening. Wire nut connections are not acceptable. Determine the length required for each electrified hardware component for the door type, size and construction, minimum of two per electrified opening.

1. Provide one each of the following tools as part of the base bid contract:
a. McKinney Products; ASSA ABLOY Architectural Door Accessories (MK) - Electrical Connecting Kit: QC-R001.

b. McKinney Products; ASSA ABLOY Architectural Door Accessories (MK) - Connector Hand Tool: QC-R003.

2. Manufacturers:

a. McKinney Products; ASSA ABLOY Architectural Door Accessories (MK) – QC-C Series.

2.4 DOOR OPERATING TRIM

A. Flush Bolts and Surface Bolts: ANSI/BHMA A156.3 and A156.16, Grade 1, certified.

1. Flush bolts to be furnished with top rod of sufficient length to allow bolt retraction device location approximately six feet from the floor.
2. Furnish dust proof strikes for bottom bolts.
3. Surface bolts to be minimum 8” in length and U.L. listed for labeled fire doors and U.L. listed for windstorm components where applicable.
4. Provide related accessories (mounting brackets, strikes, coordinators, etc.) as required for appropriate installation and operation.

5. Manufacturers:

a. Rockwood Products; ASSA ABLOY Architectural Door Accessories (RO).

B. Door Push Plates and Pulls: ANSI/BHMA A156.6 certified door pushes and pulls of type and design specified in the Hardware Sets. Coordinate and provide proper width and height as required where conflicting hardware dictates.

1. Push/Pull Plates: Minimum .050 inch thick, size as indicated in hardware sets, with beveled edges, secured with exposed screws unless otherwise indicated.
2. Door Pull and Push Bar Design: Size, shape, and material as indicated in the hardware sets. Minimum clearance of 2 1/2-inches from face of door unless otherwise indicated.
3. Offset Pull Design: Size, shape, and material as indicated in the hardware sets. Minimum clearance of 2 1/2-inches from face of door and offset of 90 degrees unless otherwise indicated.
4. Fasteners: Provide manufacturer's designated fastener type as indicated in Hardware Sets.

5. Manufacturers:

a. Rockwood Products; ASSA ABLOY Architectural Door Accessories (RO).

2.5 CYLINDERS AND KEYING

A. General: Cylinder manufacturer to have minimum (10) years experience designing secured master key systems and have on record a published security keying system policy.

B. Source Limitations: Obtain each type of keyed cylinder and keys from the same source manufacturer as locksets and exit devices, unless otherwise indicated.

C. Cylinders: Original manufacturer cylinders complying with the following:

1. Mortise Type: Threaded cylinders with rings and cams to suit hardware application.
2. Rim Type: Cylinders with back plate, flat-type vertical or horizontal tailpiece, and raised trim ring.
3. Bored-Lock Type: Cylinders with tailpieces to suit locks.
4. Mortise and rim cylinder collars to be solid and recessed to allow the cylinder face to be flush and be free spinning with matching finishes.
5. Keyway: Manufacturer's Standard.

D. Patented Cylinders: ANSI/BHMA A156.5, Grade 1, certified patented cylinders employing a utility patented and restricted keyway requiring the use of a patented key. Cylinders are to be protected from unauthorized manufacture and distribution by manufacturer's United States patents. Cylinders are to be factory keyed with owner having the ability for on-site original key cutting.

1. Manufacturers:

a. Yale Locks and Hardware (YA) - Keymark Series.

E. Keying System: Each type of lock and cylinders to be factory keyed.

1. Conduct specified "Keying Conference" to define and document keying system instructions and requirements.
2. Furnish factory cut, nickel-silver large bow permanently inscribed with a visual key control number as directed by Owner.
3. New System: Key locks to a new key system as directed by the Owner.

F. Key Quantity: Provide the following minimum number of keys:

1. Change Keys per Cylinder: Two (2)
2. Master Keys (per Master Key Level/Group): Five (5).
3. Construction Keys (where required): Ten (10).
4. Construction Control Keys (where required): Two (2).
5. Permanent Control Keys (where required): Two (2).

G. Construction Keying: Provide construction master keyed cylinders.

H. Key Registration List (Bitting List):

1. Provide keying transcript list to Owner's representative in the proper format for importing into key control software.
2. Provide transcript list in writing or electronic file as directed by the Owner.

I. Key Control Cabinet: Provide a key control system including envelopes, labels, and tags with self-locking key clips, receipt forms, 3-way visible card index, temporary markers, permanent markers, and standard metal cabinet. Key control cabinet shall have expansion capacity of 150% of the number of locks required for the project.

1. Manufacturers:

a. Lund Equipment (LU).
b. MMF Industries (MM).

c. Telkee (TK).

2.6 MECHANICAL LOCKS AND LATCHING DEVICES

A. Cylindrical Locksets, Grade 1 (Commercial Duty): ANSI/BHMA A156.2, Series 4000, Grade 1 certified.

1. Locks are to be non-handed and fully field reversible.

2. Manufacturers:

a. Yale Locks and Hardware (YA) 4700LN Series.

2.7 LOCK AND LATCH STRIKES

A. Strikes: Provide manufacturer's standard strike with strike box for each latch or lock bolt, with curved lip extended to protect frame, finished to match door hardware set, unless otherwise indicated, and as follows:

1. Flat-Lip Strikes: For locks with three-piece antifriction latchbolts, as recommended by manufacturer.
2. Extra-Long-Lip Strikes: For locks used on frames with applied wood casing trim.
3. Aluminum-Frame Strike Box: Provide manufacturer's special strike box fabricated for aluminum framing.
4. Double-lipped strikes: For locks at double acting doors. Furnish with retractable stop for rescue hardware applications.

B. Standards: Comply with the following:

1. Strikes for Mortise Locks and Latches: BHMA A156.13.
2. Strikes for Bored Locks and Latches: BHMA A156.2.
3. Strikes for Auxiliary Deadlocks: BHMA A156.36.
4. Dustproof Strikes: BHMA A156.16.

2.8 CONVENTIONAL EXIT DEVICES

A. General Requirements: All exit devices specified herein shall meet or exceed the following criteria:

1. At doors not requiring a fire rating, provide devices complying with NFPA 101 and listed and labeled for "Panic Hardware" according to UL305. Provide proper fasteners as required by manufacturer including sex nuts and bolts at openings specified in the Hardware Sets.

2. Where exit devices are required on fire rated doors, provide devices complying with NFPA 80 and with UL labeling indicating "Fire Exit Hardware". Provide devices with the proper fasteners for installation as tested and listed by UL. Consult manufacturer’s catalog and template book for specific requirements.

3. Except on fire rated doors, provide exit devices with hex key dogging device to hold the pushbar and latch in a retracted position. Provide optional keyed cylinder dogging on devices where specified in Hardware Sets.

4. Devices must fit flat against the door face with no gap that permits unauthorized dogging of the push bar. The addition of filler strips is required in any case where the door light extends behind the device as in a full glass configuration.

5. Electromechanical Options: Subject to same compliance standards and requirements as mechanical exit devices, electrified devices to be of type and design as specified in hardware sets. Include any specific controllers when conventional power supplies are not sufficient to provide the proper inrush current.

6. Lever Operating Trim: Where exit devices require lever trim, furnish manufacturer's heavy duty escutcheon trim with threaded studs for thru-bolts.

    a. Lock Trim Design: As indicated in Hardware Sets, provide finishes and designs to match that of the specified locksets.
    b. Where function of exit device requires a cylinder, provide a cylinder (Rim or Mortise) as specified in Hardware Sets.

7. Vertical Rod Exit Devices: Where surface or concealed vertical rod exit devices are used at interior openings, provide as less bottom rod (LBR) unless otherwise indicated. Provide dust proof strikes where thermal pins are required to project into the floor.

8. Narrow Stile Applications: At doors constructed with narrow stiles, or as specified in Hardware Sets, provide devices designed for maximum 2” wide stiles.

9. Dummy Push Bar: Nonfunctioning push bar matching functional push bar.

10. Rail Sizing: Provide exit device rails factory sized for proper door width application.

11. Through Bolt Installation: For exit devices and trim as indicated in Door Hardware Sets.

B. Conventional Push Rail Exit Devices (Heavy Duty): ANSI/BHMA A156.3, Grade 1 certified panic and fire exit hardware devices furnished in the functions specified in the Hardware Sets. Exit device latch to be stainless steel, pullman type, with deadlock feature.

1. Manufacturers:

    a. Yale Locks and Hardware (YA) – 7000 Series.

C. Security Push Rail Exit Devices (Heavy Duty): ANSI/BHMA A156.3, Grade 1 certified rim panic and fire exit hardware devices furnished in the functions specified in the Hardware Sets. Exit device latch to be constructed of high grade, heat treated, corrosion resistant nickel steel alloy, and have a full 3/4" throw projection with slide action positive deadlocking.

1. Static Load Force Resistance: Minimum 3000 lbs certified independent tested.

2. Manufacturers:

    a. Yale Locks and Hardware (YA) - Squarebolt Series.

D. Tube Steel Removable Mullions: ANSI/BHMA A156.3 removable steel mullions with malleable-iron top and bottom retainers and a primed paint finish.

1. Provide keyed removable feature where specified in the Hardware Sets.

2. Provide stabilizers and mounting brackets as required.

3. Provide electrical quick connection wiring options as specified in the hardware sets.

4. Manufacturers:

a. Yale Locks and Hardware (YA) - M200 Series.

2.9 DOOR CLOSERS

A. All door closers specified herein shall meet or exceed the following criteria:

1. General: Door closers to be from one manufacturer, matching in design and style, with the same type door preparations and templates regardless of application or spring size. Closers to be non-handed with full sized covers including installation and adjusting information on inside of cover.

2. Standards: Closers to comply with UL-10C for Positive Pressure Fire Test and be U.L. listed for use of fire rated doors.

3. Cycle Testing: Provide closers which have surpassed 15 million cycles in a test witnessed and verified by UL.

4. Size of Units: Comply with manufacturer's written recommendations for sizing of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Where closers are indicated for doors required to be accessible to the physically handicapped, provide units complying with ANSI ICC/A117.1.

5. Closer Arms: Provide heavy duty, forged steel closer arms unless otherwise indicated in Hardware Sets.

6. Closers shall not be installed on exterior or corridor side of doors; where possible install closers on door for optimum aesthetics.

7. Closer Accessories: Provide door closer accessories including custom templates, special mounting brackets, spacers and drop plates as required for proper installation. Provide through-bolt and security type fasteners as specified in the hardware sets.

B. Door Closers, Surface Mounted (Large Body Cast Iron): ANSI/BHMA A156.4, Grade 1 surface mounted, heavy duty door closers with complete spring power adjustment, sizes 1 thru 6; and fully operational adjustable according to door size, frequency of use, and opening force. Closers to be rack and pinion type, one piece cast iron body construction, with adjustable backcheck and separate non-critical valves for closing sweep and latch speed control.

1. Manufacturers:

a. Sargent Manufacturing (SA) - 281 Series.

C. Door Closers, Surface Mounted (Heavy Duty): ANSI/BHMA A156.4, Grade 1 surface mounted, heavy duty door closers with complete spring power adjustment, sizes 1 thru 6; and fully operational adjustable according to door size, frequency of use, and opening force. Closers to be rack and pinion type, one piece cast iron or aluminum alloy body construction, with adjustable backcheck and separate non-critical valves for closing sweep and latch speed control. Provide non-handed units standard.

1. Manufacturers:

a. Yale Locks and Hardware (YA) - 4400 Series.

2.10 ELECTROHYDRAULIC DOOR OPERATORS

A. General: Provide low energy operators of size recommended by manufacturer for door size, weight, and movement; for condition of exposure; and for compliance with UL 325. Coordinate operator mechanisms with door operation, hinges, and activation devices.

1. Fire-Rated Doors: Provide door operators for fire-rated door assemblies that comply with NFPA 80 for fire-rated door components and are listed and labeled by a qualified testing agency.

B. Standard: Certified ANSI/BHMA A156.19.

C. Performance Requirements:

1. Opening Force if Power Fails: Not more than 15 lbf required to release a latch if provided, not more than 30 lbf required to manually set door in motion, and not more than 15 lbf required to fully open door.
2. Entrapment Protection: Not more than 15 lbf required to prevent stopped door from closing or opening.

D. Configuration: Surface mounted or in-ground as required. Door operators to control single swinging and pair of swinging doors.

E. Operation: Power opening and spring closing operation capable of meeting ANSI A117.1 accessibility guideline. Provide time delay for door to remain open before initiating closing cycle as required by ANSI/BHMA A156.19. When not in automatic mode, door operator to function as manual door closer with fully adjustable opening and closing forces, with or without electrical power.

F. Features: Operator units to have full feature adjustments for door opening and closing force and speed, backcheck, motor assist acceleration from 0 to 30 seconds, time delay, vestibule interface delay, obstruction recycle, and hold open time from 0 up to 30 seconds.

G. Provide outputs and relays on board the operator to allow for coordination of exit device latch retraction, electric strikes, magnetic locks, card readers, safety and motion sensors and specified auxiliary contacts.

H. Brackets and Reinforcements: Manufacturer's standard, fabricated from aluminum with nonferrous shims for aligning system components.

I. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Norton Door Controls (NO) - 6000 Series.

2.11 ARCHITECTURAL TRIM

A. Door Protective Trim

1. General: Door protective trim units to be of type and design as specified below or in the Hardware Sets.

2. Size: Fabricate protection plates (kick, armor, or mop) not more than 2" less than door width (LDW) on stop side of single doors and 1" LDW on stop side of pairs of doors, and not more than 1" less than door width on pull side. Coordinate and provide proper width and height as required where conflicting hardware dictates. Height to be as specified in the Hardware Sets.

3. Where plates are applied to fire rated doors with the top of the plate more than 16" above the bottom of the door, provide plates complying with NFPA 80. Consult manufacturer's catalog and template book for specific requirements for size and applications.

4. Protection Plates: ANSI/BHMA A156.6 certified protection plates (kick, armor, or mop), fabricated from the following:

a. Stainless Steel: 300 grade, 050-inch thick.

5. Options and fasteners: Provide manufacturer's designated fastener type as specified in the Hardware Sets. Provide countersunk screw holes.

6. Manufacturers:

a. Rockwood Products; ASSA ABLOY Architectural Door Accessories (RO).

2.12 DOOR STOPS AND HOLDERS

A. General: Door stops and holders to be of type and design as specified below or in the Hardware Sets.

B. Door Stops and Bumpers: ANSI/BHMA A156.16, Grade 1 certified door stops and wall bumpers. Provide wall bumpers, either convex or concave types with anchorage as indicated, unless floor or other types of door stops are specified in Hardware Sets. Do not mount floor stops where they will impede traffic. Where floor or wall bumpers are not appropriate, provide overhead type stops and holders.

1. Manufacturers:

a. Rockwood Products; ASSA ABLOY Architectural Door Accessories (RO).

2.13 ARCHITECTURAL SEALS

A. General: Thresholds, weatherstripping, and gasket seals to be of type and design as specified below or in the Hardware Sets. Provide continuous weatherstrip gasketing on exterior doors and provide smoke, light, or sound gasketing on interior doors where indicated. At exterior applications provide non-corrosive fasteners and elsewhere where indicated.

B. Smoke Labeled Gasketing: Assemblies complying with NFPA 105 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for smoke control ratings indicated, based on testing according to UL 1784.

1. Provide smoke labeled perimeter gasketing at all smoke labeled openings.

C. Fire Labeled Gasketing: Assemblies complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated, based on testing according to UL-10C.

1. Provide intumescent seals as indicated to meet UL10C Standard for Positive Pressure Fire Tests of Door Assemblies, and NPFA 252, Standard Methods of Fire Tests of Door Assemblies.

D. Sound-Rated Gasketing: Assemblies that are listed and labeled by a testing and inspecting agency, for sound ratings indicated.

E. Replaceable Seal Strips: Provide only those units where resilient or flexible seal strips are easily replaceable and readily available from stocks maintained by manufacturer.

F. Manufacturers:

1. Pemko Products; ASSA ABLOY Architectural Door Accessories (PE).

2.14 ELECTRONIC ACCESSORIES

A. Request-to-Exit Motion Sensor: Request-to-Exit Sensors motion detectors specifically designed for detecting exiting through a door from the secure area to a non-secure area. Include built-in timers (up to 60 second adjustable timing), door monitor with sounder alert, internal vertical pointability coverage, 12VDC or 24VDC power and selectable relay trigger with fail safe/fail secure modes.

1. Manufacturers:

a. Securitron (SU) - XMS Series.

B. Door Position Switches: Door position magnetic reed contact switches specifically designed for use in commercial door applications. On recessed models the contact and magnetic housing snap-lock into a 1" diameter hole. Surface mounted models include wide gap distance design complete with armored flex cabling. Provide SPDT, N/O switches with optional Rare Earth Magnet installation on steel doors with flush top channels.

1. Manufacturers:

a. Securitron (SU) - DPS Series.

C. Switching Power Supplies: Provide switching power supplies that are dual voltage, UL listed, supervised units. Units shall be field selectable with a dedicated battery charging circuit that provide 4 Amp at 12VDC or 24VDC continuous, with up to 16 independently controlled power limited outputs. Units shall tolerate brownout or overvoltage input ± 15% of nominal voltage and have thermal shutdown protection with auto restart. Circuit breaker shall protect against overcurrent and reverse battery faults and units shall be available with a single relay fire trigger or individually triggered relayed outputs. Provide the least number of units, at the appropriate amperage level, sufficient to exceed the required total draw for the specified electrified hardware and access control equipment.

1. Manufacturers:

a. Securitron (SU) - AQ Series.

2.15 FABRICATION

A. Fasteners: Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. Provide screws according to manufacturers recognized installation standards for application intended.

2.16 FINISHES

A. Standard: Designations used in the Hardware Sets and elsewhere indicate hardware finishes complying with ANSI/BHMA A156.18, including coordination with traditional U.S. finishes indicated by certain manufacturers for their products.

B. Provide quality of finish, including thickness of plating or coating (if any), composition, hardness, and other qualities complying with manufacturer's standards, but in no case less than specified by referenced standards for the applicable units of hardware

C. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine scheduled openings, with Installer present, for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction, and other conditions affecting performance.

B. Notify architect of any discrepancies or conflicts between the door schedule, door types, drawings and scheduled hardware. Proceed only after such discrepancies or conflicts have been resolved in writing.

3.2 PREPARATION

A. Hollow Metal Doors and Frames: Comply with ANSI/DHI A115 series.

B. Wood Doors: Comply with ANSI/DHI A115-W series.

3.3 INSTALLATION

A. Install each item of mechanical and electromechanical hardware and access control equipment to comply with manufacturer's written instructions and according to specifications.

1. Installers are to be trained and certified by the manufacturer on the proper installation and adjustment of fire, life safety, and security products including: hanging devices; locking devices; closing devices; and seals.

B. Mounting Heights: Mount door hardware units at heights indicated in following applicable publications, unless specifically indicated or required to comply with governing regulations:

1. Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."
2. Wood Doors: DHI WDHS.3, "Recommended Locations for Architectural Hardware for Wood Flush Doors."
3. Where indicated to comply with accessibility requirements, comply with ANSI A117.1 "Accessibility Guidelines for Buildings and Facilities."
4. Provide blocking in drywall partitions where wall stops or other wall mounted hardware is located.

C. Power Operator products and accessories are required to be installed through current members of the manufacturer's "Power Operator Preferred Installer" program.

D. Retrofitting: Install door hardware to comply with manufacturer's published templates and written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work specified in Division 9 Sections. Do not install surface-mounted items until finishes have been completed on substrates involved.

E. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 7 Section "Joint Sealants."

F. Storage: Provide a secure lock up for hardware delivered to the project but not yet installed. Control the handling and installation of hardware items so that the completion of the work will not be delayed by hardware losses before and after installation.

3.4 FIELD QUALITY CONTROL

A. Field Inspection: Supplier will perform a final inspection of installed door hardware and state in report whether work complies with or deviates from requirements, including whether door hardware is properly installed, operating and adjusted.

3.5 ADJUSTING

A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to

operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

3.6 CLEANING AND PROTECTION

A. Protect all hardware stored on construction site in a covered and dry place. Protect exposed hardware installed on doors during the construction phase. Install any and all hardware at the latest possible time frame.

B. Clean adjacent surfaces soiled by door hardware installation.

C. Clean operating items as necessary to restore proper finish. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of owner occupancy.

3.7 DEMONSTRATION

A. Instruct Owner's maintenance personnel to adjust, operate, and maintain mechanical and electromechanical door hardware.

3.8 DOOR HARDWARE SETS

A. The hardware sets represent the design intent and direction of the owner and architect. They are a guideline only and should not be considered a detailed hardware schedule. Discrepancies, conflicting hardware and missing items should be brought to the attention of the architect with corrections made prior to the bidding process. Omitted items not included in a hardware set should be scheduled with the appropriate additional hardware required for proper application and functionality.

B. The supplier is responsible for handing and sizing all products and providing the correct option for the appropriate door type and material where more than one is presented in the hardware sets. Quantities listed are for each pair of doors, or for each single door.

C. Materials to be furnished in accordance to Premier/ASSA ABLOY GPO Contract #PP-FA-663.

D. Manufacturer’s Abbreviations:

1. MK - McKinney
2. PE - Pemko
3. RO - Rockwood
4. YA - Yale
5. RF - Rixson
6. SA - SARGENT
7. NO - Norton
8. SU - Securitron
9. OT - OTHER

Hardware Sets

Set: 1.0

Doors: 101A
Description: Exterior Pair, Vestibule Entrance, AO

2	Continuous Hinge	CFM85SLI-HD1 PT		PE	087100
1	Exit Device (CVR, exit only)	7120 EO ECK1	630	YA	087100
1	Exit Device (nightlatch)	7120 603F P ECK1 K600		YA	
2	Offset Door Pull	RM3310-24 Mtg-Type 12XHD	US32D	RO	087100
1	Conc Overhead Stop	6ADJ-X36	630	RF	087100
1	Surface Closer (CPS)	4430	689	YA	087100
1	Door Operator (Single)	6061	689	NO	087100
1	Threshold	253x3AFG		PE	087100
1	Rain Guard	346C TKSP		PE	087100
2	Sweep	345APK TKSP		PE	087100
1	ElectroLynx Harness (frame)	QC-C_ (size as required)		MK	087100
1	ElectroLynx Harness (door)	QC-C_ (size as required)		MK	087100
1	Electric Power Transfer	EL-CEPT		SU	087100
1	Switch Post	500		NO	087100
1	Door Switch	501		NO	087100

Notes: Perimeter seal and astragal by door/frame provider.

Set: 1.1

Doors: 101B
Description: Exterior Pair, Vestibule Entrance

2	Continuous Hinge	CFM85SLI-HD1 PT		PE	087100
1	Exit Device (nightlatch)	7120 603F ECK1 K600		YA	
1	Exit Device (CVR, exit only)	7120 EO ECK1	630	YA	087100
2	Offset Door Pull	RM3310-24 Mtg-Type 12XHD	US32D	RO	087100
2	Surface Closer (CPS)	4430	689	YA	087100
1	Threshold	253x3AFG		PE	087100
1	Rain Guard	346C TKSP		PE	087100
2	Sweep	345APK TKSP		PE	087100

Notes: Perimeter seal and astragal by door/frame provider.

Set: 2.0

Doors: 106B, 117B, 130A, 130B, 160A, 160B, 161A, 161B
Description: Exterior Pair, Corridor Exit

2	Continuous Hinge	CFM_SLI-HD1 (size as required)		PE	087100
1	Removable Mullion	KRM200	600	YA	087100
2	Exit Device (rim, exit only)	7150 EO ECK1	630	YA	087100
1	Cylinder	K6 Series	626	YA	087100
2	Surface Closer (CPS)	4430	689	YA	087100
2	Kick Plate	K1050 10" high x 1" LDW SA BEV	US32D	RO	
1	Threshold	253x3AFG		PE	087100
1	Gasketing	2891APK		PE	087100
1	Rain Guard	346C TKSP		PE	087100
2	Sweep	345APK TKSP		PE	087100
2	Astragal	29310CP TKSP		PE	087100

Notes: Template closer and exit device for weatherstrip mounting. Install weatherstrip on frame prior to installing closer or exit device strike to provide a continuous seal.

Set: 3.0

Doors: 157A, 157B, 164
Description: Exterior Pair, Mech/Elect, Exit

6	Hinge (stainless heavy weight)	T4A3386 NRP (size as required)	US26D	MK	087100
1	Removable Mullion	KRM200	600	YA	087100
1	Exit Device (rim, exit only)	7150 EO ECK1	630	YA	087100
1	Exit Device (rim, nightlatch)	7150F MO627F K600 ECK1	630	YA	087100
1	Cylinder	K6 Series	626	YA	087100
2	Surface Closer (CPS)	4430	689	YA	087100
2	Kick Plate	K1050 10" high x 1" LDW SA BEV	US32D	RO	
1	Threshold	253x3AFG		PE	087100
1	Gasketing	2891APK		PE	087100
1	Rain Guard	346C TKSP		PE	087100
2	Sweep	345APK TKSP		PE	087100
2	Astragal	29310CP TKSP		PE	087100

Notes: Template closer and exit device for weatherstrip mounting. Install weatherstrip on frame prior to installing closer or exit device strike to provide a continuous seal.

Set: 3.1

Doors: 163B

Description: Exterior Pair, Mech/Elect, Exit - CR

6	Hinge (stainless heavy weight)	T4A3386 NRP (size as required)	US26D	MK	087100
1	Removable Mullion	KRM200	600	YA	087100
1	Electric Exit Device (rim, fail secure)	7150 B S MO691F K620 ECK1	630	YA	087100
1	Exit Device (rim, exit only)	7150 EO ECK1	630	YA	087100
2	Cylinder	K6 Series	626	YA	087100
2	Surface Closer (CPS)	4430	689	YA	087100
2	Kick Plate	K1050 10" high x 1" LDW SA BEV	US32D	RO	
1	Threshold	253x3AFG		PE	087100
1	Gasketing	2891APK		PE	087100
1	Rain Guard	346C TKSP		PE	087100
2	Sweep	345APK TKSP		PE	087100
1	Astragal	29310CP TKSP		PE	087100
1	ElectroLynx Harness (frame)	QC-C_ (size as required)		MK	087100
1	ElectroLynx Harness (door)	QC-C_ (size as required)		MK	087100
1	Electric Power Transfer	EL-CEPT		SU	087100
1	Card Reader	Card Reader by Security		OT	
2	Position Switch	DPS-M-BK		SU	087100
1	Power Supply	AQD		SU	087100

Notes: Template closer and exit device for weatherstrip mounting. Install weatherstrip on frame prior to installing closer or exit device strike to provide a continuous seal.
Operation:
1. Door normally closed and locked. Access is obtained by valid credential or key override. Locksets mechanically lock during power failure.
2. Free egress from inside by depressing inside lever.
3. Request to exit switch in lever to signal authorized egress to the access control system.
4. Door position switch to signal door open/closed to the access control system.

Set: 4.0

Doors: 143

Description: Exterior Single, Riser

3	Hinge (stainless)	TA2314 NRP (size as required)	US26D	MK	087100

1	Storeroom or Closet Lock	MO 4705LN 497 K600	626	YA	087100
1	Surface Closer (CPS)	4430	689	YA	087100
1	Kick Plate	K1050 10" high x 2" LDW CSK BEV	US32D	RO	087100
1	Threshold	253x3AFG		PE	087100
1	Gasketing	2891APK		PE	087100
1	Rain Guard	346C TKSP		PE	087100
1	Sweep	345APK TKSP		PE	087100

Notes: Template closer for weatherstrip mounting. Install weatherstrip on frame prior to installing closer to provide a continuous seal.

Set: 5.0

Doors: 166

Description: Exterior Single, Acid Room, SRI - CR

3	Hinge (stainless)	TA2314 NRP (size as required)	US26D	MK	087100	
1	Fail Secure Lock	MO 4791LN 497 K600	626	YA	087100	⚡
1	Cylinder	K6 Series	626	YA	087100	
1	Door Closer	SRI 281 CPS	EN	SA	087100	
1	Kick Plate	K1050 10" high x 2" LDW SA BEV	US32D	RO		
1	Threshold	253x3AFG		PE	087100	
1	Gasketing	2891APK		PE	087100	
1	Rain Guard	346C TKSP		PE	087100	
1	Sweep	345APK TKSP		PE	087100	
1	ElectroLynx Harness (frame)	QC-C_ (size as required)		MK	087100	⚡
1	ElectroLynx Harness (door)	QC-C_ (size as required)		MK	087100	⚡
1	Electric Power Transfer	EL-CEPT		SU	087100	⚡
1	Card Reader	Card Reader by Security		OT		
1	Position Switch	DPS-M-BK		SU	087100	⚡
1	Power Supply	AQD		SU	087100	⚡

Notes: Template closer and for weatherstrip mounting. Install weatherstrip on frame prior to installing closer to provide a continuous seal.

Set: 6.0

Doors: 102B, 103A, 103B

Description: Interior Pair, Vestibule

2	Continuous Hinge	CFM_SLI-HD1 (size as required)		PE	087100
2	Door Pull	RM3300-24 Mtg-Type 12XHD	US32D	RO	087100
2	Push Bar	RM3102 Mtg-Type 12XHD	US32D	RO	087100
2	Surface Closer (CPS)	4430	689	YA	087100

Set: 6.1

Doors: 102A
Description: Interior Pair, Vestibule

2	Continuous Hinge	CFM_SLI-HD1 (size as required)		PE	087100
2	Door Pull	RM3300-24 Mtg-Type 12XHD	US32D	RO	087100
2	Push Bar	RM3102 Mtg-Type 12XHD	US32D	RO	087100
1	Conc Overhead Stop	6ADJ-X36	630	RF	087100
2	Surface Closer (CPS)	4430	689	YA	087100
1	Door Operator (Single)	6061	689	NO	087100
1	Door Switch	501		NO	087100
1	Door Switch (vestibule)	504		NO	087100

Set: 7.0

Doors: 103 D, 103C
Description: Interior Pair, Vestibule, SRI

2	Continuous Hinge	CFM_SLI-HD1 (size as required)		PE	087100
2	Door Pull	RM3300-24 Mtg-Type 12XHD	US32D	RO	087100
2	Push Bar	RM3102 Mtg-Type 12XHD	US32D	RO	087100
2	Door Closer	SRI 281 CPS	EN	SA	087100

Set: 8.0

Doors: 106A, 117A, 117C
Description: Interior Pair, Corridor, CR HO

6	Hinge (heavy weight)	T4A3786 NRP (size as required)	US26D	MK	087100
1	Removable Mullion	KRM200	600	YA	087100
1	Electric Exit Device (rim, fail secure)	7150 B S MO691F K620 ECK1	630	YA	087100
1	Exit Device (rim, exit only)	7150 EO ECK1	630	YA	087100
2	Surface Closer (CPSH)	4430T	689	YA	087100
2	Kick Plate	K1050 10" high x 1" LDW CSK BEV	US32D	RO	087100

2 Wall Stop	406	US26D	RO	087100	
1 Gasketing	S88BL		PE	087100	
1 ElectroLynx Harness (frame)	QC-C_ (size as required)		MK	087100	⚡
1 ElectroLynx Harness (door)	QC-C_ (size as required)		MK	087100	⚡
1 Electric Power Transfer	EL-CEPT		SU	087100	⚡
1 Card Reader	Card Reader by Security		OT		
2 Position Switch	DPS-M-BK		SU	087100	⚡
1 Power Supply	AQD		SU	087100	⚡

Notes: Operation:
1. Door normally closed, latched and locked. Access is obtained from the secure side by valid credential or key override. In the event of power failure door mechanically locks.
2. Free egress from the interior by depressing inside push pad.
3. Request to exit switch in push pad signals authorized egress to the access control system.
4. Door position switch signals door/open closed to access control system.
5. Contact switch in latch mechanism ensures positive strike.

Set: 9.0

Doors: 105, 116, 132A, 132B, 137A

Description: Interior Single, Admin/Concession, CR

3 Hinge	TA2714 (size as required)	US26D	MK	087100	
1 Fail Secure Lock	MO 4791LN 497 K600	626	YA	087100	⚡
1 Surface Closer	R4400	689	YA	087100	
1 Kick Plate	K1050 10" high x 2" LDW CSK BEV	US32D	RO	087100	
1 Wall Stop	406	US26D	RO	087100	
1 Gasketing	S88BL		PE	087100	
1 ElectroLynx Harness (frame)	QC-C_ (size as required)		MK	087100	⚡
1 ElectroLynx Harness (door)	QC-C_ (size as required)		MK	087100	⚡
1 Electric Power Transfer	EL-CEPT		SU	087100	⚡
1 Card Reader	Card Reader by Security		OT		
1 Position Switch	DPS-M-BK		SU	087100	⚡
1 Motion Sensor	XMS		SU	087100	⚡
1 Power Supply	AQD		SU	087100	⚡

Notes: Operation:
1. Door normally closed and locked. Access is obtained by valid credential or key override. Locksets mechanically lock during power failure.

2. Free egress from inside by depressing inside lever.
3. Door position switch to signal door open/closed to the access control system.
4. Motion sensor to signal authorized egress to the access control system.

Set: 10.0

Doors: 144, 159A, 168

Description: Interior Single, Pool, CR SRI

3	Hinge (stainless)	TA2314 (size as required)	US26D	MK 087100	
1	Fail Secure Lock	MO 4791LN 497 K600	626	YA 087100	⚡
1	Door Closer	SRI 281 O	EN	SA 087100	
1	Kick Plate	K1050 10" high x 2" LDW SA BEV	US32D	RO	
1	Wall Stop	406	US26D	RO 087100	
3	Silencer	608-RKW		RO 087100	
1	ElectroLynx Harness (frame)	QC-C_ (size as required)		MK 087100	⚡
1	ElectroLynx Harness (door)	QC-C_ (size as required)		MK 087100	⚡
1	Electric Power Transfer	EL-CEPT		SU 087100	⚡
1	Card Reader	Card Reader by Security		OT	
1	Position Switch	DPS-M-BK		SU 087100	⚡
1	Motion Sensor	XMS		SU 087100	⚡
1	Power Supply	AQD		SU 087100	⚡

Notes: Operation:
1. Door normally closed and locked. Access is obtained by valid credential or key override. Locksets mechanically lock during power failure.
2. Free egress from inside by depressing inside lever.
3. Door position switch to signal door open/closed to the access control system.
4. Motion sensor to signal authorized egress to the access control system.

Set: 11.0

Doors: 142

Description: Interior Pair, Storage

6	Hinge	TA2714 NRP (size as required)	US26D	MK 087100
2	Flush Bolt	555	US26D	RO 087100
1	Dust Proof Strike	570	US26D	RO 087100
1	Storeroom or Closet Lock	MO 4705LN 497 K600	626	YA 087100
1	Surface Closer	PR4400	689	YA 087100
2	Kick Plate	K1050 10" high x 1" LDW CSK	US32D	RO 087100

		BEV			
2	Wall Stop	406	US26D	RO	087100
2	Astragal	29310CP TKSP		PE	087100
2	Silencer	608-RKW		RO	087100

Set: 12.0

Doors: 162

Description: Exterior Pair, Mech

6	Hinge (stainless)	TA2314 NRP (size as required)	US26D	MK	087100
2	Flush Bolt	555	US26D	RO	087100
1	Dust Proof Strike	570	US26D	RO	087100
1	Storeroom or Closet Lock	MO 4705LN 497 K600	626	YA	087100
1	Surface Closer (CPS)	4430	689	YA	087100
2	Kick Plate	K1050 10" high x 1" LDW CSK BEV	US32D	RO	087100
2	Wall Stop	406	US26D	RO	087100
1	Threshold	253x3AFG		PE	087100
1	Gasketing	2891APK		PE	087100
1	Rain Guard	346C TKSP		PE	087100
2	Sweep	345APK TKSP		PE	087100
2	Astragal	29310CP TKSP		PE	087100

Notes: Template closer for weatherstrip mounting. Install weatherstrip on frame prior to installing closer to provide a continuous seal.

Set: 13.0

Doors: 165

Description: Exterior Pair, Calcium Hypo, SRI - CR

6	Hinge (stainless)	TA2314 NRP (size as required)	US26D	MK	087100	
2	Flush Bolt	555	US26D	RO	087100	
1	Dust Proof Strike	570	US26D	RO	087100	
1	Fail Secure Lock	MO 4791LN 497 K600	626	YA	087100	ϟ
1	Cylinder	K6 Series	626	YA	087100	
1	Door Closer	SRI 281 CPS	EN	SA	087100	
2	Kick Plate	K1050 10" high x 1" LDW SA BEV	US32D	RO		
1	Threshold	253x3AFG		PE	087100	
1	Gasketing	2891APK		PE	087100	

1	Rain Guard	346C TKSP		PE	087100
2	Sweep	345APK TKSP		PE	087100
2	Astragal	29310CP TKSP		PE	087100
1	ElectroLynx Harness (frame)	QC-C_ (size as required)		MK	087100
1	ElectroLynx Harness (door)	QC-C_ (size as required)		MK	087100
1	Electric Power Transfer	EL-CEPT		SU	087100
1	Card Reader	Card Reader by Security		OT	
1	Position Switch	DPS-M-BK		SU	087100
1	Power Supply	AQD		SU	087100

Notes: Template closer for weatherstrip mounting. Install weatherstrip on frame prior to installing closer to provide a continuous seal.

Set: 14.0

Doors: 167

Description: Interior Pair, Storage, SRI

6	Hinge (stainless)	TA2314 (size as required)	US26D	MK	087100
2	Flush Bolt	555	US26D	RO	087100
1	Dust Proof Strike	570	US26D	RO	087100
1	Storeroom or Closet Lock	MO 4705LN 497 K600	626	YA	087100
1	Door Closer	SRI 281 O	EN	SA	087100
2	Kick Plate	K1050 10" high x 2" LDW SA BEV	US32D	RO	
2	Wall Stop	406	US26D	RO	087100
1	Threshold	1665A		PE	087100
2	Astragal	29310CP TKSP		PE	087100
2	Silencer	608-RKW		RO	087100

Set: 15.0

Doors: 133

Description: Interior Single, Storage

3	Hinge	TA2714 (size as required)	US26D	MK	087100
1	Storeroom or Closet Lock	MO 4705LN 497 K600	626	YA	087100
1	Surface Closer	R4400	689	YA	087100
1	Kick Plate	K1050 10" high x 2" LDW CSK BEV	US32D	RO	087100
1	Wall Stop	406	US26D	RO	087100

3 Silencer	608-RKW		RO	087100

Set: 16.0

Doors: 129
Description: Interior Single, Elevator SRI

3 Hinge (stainless)	TA2314 (size as required)	US26D	MK	087100
1 Storeroom or Closet Lock	MO 4705LN 497 K600	626	YA	087100
1 Door Closer	SRI 281 O	EN	SA	087100
1 Kick Plate	K1050 10" high x 2" LDW SA BEV	US32D	RO	
3 Silencer	608-RKW		RO	087100

Set: 17.0

Doors: 114, 125, 126
Description: Single Interior, Elect/IT

3 Hinge	TA2714 (size as required)	US26D	MK	087100
1 Storeroom or Closet Lock	MO 4705LN 497 K600	626	YA	087100
1 Surface Closer	R4400	689	YA	087100
1 Kick Plate	K1050 10" high x 2" LDW CSK BEV	US32D	RO	087100
1 Wall Stop	406	US26D	RO	087100
1 Gasketing	S88BL		PE	087100

Set: 18.0

Doors: 145, 163A, 163C
Description: Interior Single, Storage/Yard, SRI

3 Hinge (stainless)	TA2314 NRP (size as required)	US26D	MK	087100
1 Storeroom or Closet Lock	MO 4705LN 497 K600	626	YA	087100
1 Door Closer	SRI 281 CPS	EN	SA	087100
1 Kick Plate	K1050 10" high x 2" LDW SA BEV	US32D	RO	
3 Silencer	608-RKW		RO	087100

Set: 19.0

Doors: 108, 109, 11 0, 111, 112, 119, 120, 121, 122, 124
Description: Interior Single, Coach/Conference

3 Hinge	TA2714 (size as required)	US26D	MK	087100

1 Entry Lock	MO 4707LN 497 K600	626	YA	087100
1 Kick Plate	K1050 10" high x 2" LDW CSK BEV	US32D	RO	087100
1 Wall Stop	406	US26D	RO	087100
1 Gasketing	S88BL		PE	087100

Set: 20.0

Doors: 147, 151

Description: Interior Single, Coach, SRI

3 Hinge (stainless)	TA2314 (size as required)	US26D	MK	087100
1 Entry Lock	MO 4707LN 497 K600	626	YA	087100
1 Wall Stop	406	US26D	RO	087100
3 Silencer	608-RKW		RO	087100

Set: 21.0

Doors: 158

Description: Interior Single, First Aid, SRI

3 Hinge (stainless)	TA2314 (size as required)	US26D	MK	087100
1 Privacy Lock	MO 4702LN 497	626	YA	087100
1 Door Closer	DA SRI 281 O	EN	SA	087100
1 Armor Plate	K1050 34" high x 2" LDW SA BEV	US32D	RO	
1 Wall Stop	406	US26D	RO	087100
1 Gasketing	S88BL		PE	087100

Set: 22.0

Doors: 135A, 135B

Description: Interior Single, Conditioning

3 Hinge (heavy weight)	T4A3786 (size as required)	US26D	MK	087100
1 Deadbolt (classroom)	D261 K600	626	YA	087100
1 Offset Door Pull	RM3310-24 Mtg-Type 12XHD	US32D	RO	087100
1 Push Plate	70C-RKW	US32D	RO	087100
1 Surface Closer	R4400	689	YA	087100
1 Kick Plate	K1050 10" high x 2" LDW CSK BEV	US32D	RO	087100
1 Wall Stop	406	US26D	RO	087100
1 Gasketing	S88BL		PE	087100

Set: 23.0

Doors: 205

Description: Interior Single, Private Viewing

3 Hinge	TA2714 (size as required)	US26D	MK	087100
1 Classroom Lock	MO 4708LN 497 K600	626	YA	087100
1 Surface Closer	R4400	689	YA	087100
1 Kick Plate	K1050 10" high x 2" LDW CSK BEV	US32D	RO	087100
1 Wall Stop	406	US26D	RO	087100
1 Gasketing	S88BL		PE	087100

Set: 24.0

Doors: 137B

Description: Interior Single, Corridor, SRI

3 Hinge (stainless)	TA2314 NRP (size as required)	US26D	MK	087100
1 Classroom Lock	MO 4708LN 497 K600	626	YA	087100
1 Door Closer	SRI 281 CPS	EN	SA	087100
1 Kick Plate	K1050 10" high x 2" LDW SA BEV	US32D	RO	
3 Silencer	608-RKW		RO	087100

Set: 25.0

Doors: 113, 123, 134, 206

Description: Interior Single, Restroom

3 Hinge	TA2714 (size as required)	US26D	MK	087100
1 Privacy Lock	MO 4702LN 497	626	YA	087100
1 Wall Stop	406	US26D	RO	087100
1 Gasketing	S88BL		PE	087100

Set: 26.0

Doors: 149, 153

Description: Interior Single, Changing Room, SRI

3 Hinge (stainless)	TA2314 (size as required)	US26D	MK	087100
1 Privacy Lock	MO 4702LN 497	626	YA	087100
1 Wall Stop	406	US26D	RO	087100
3 Silencer	608-RKW		RO	087100

Set: 27.0

Doors: 159B

Description: Interior Single, Trainer, SRI

3	Hinge (stainless)	TA2314 NRP (size as required)	US26D	MK	087100
1	Entry Lock	MO 4707LN 497 K600	626	YA	087100
1	Kick Plate	K1050 10" high x 2" LDW SA BEV	US32D	RO	
1	Wall Stop	406	US26D	RO	087100
3	Silencer	608-RKW		RO	087100

Set: 28.0

Doors: 155, 156

Description: Interior Single, Lifeguard Restroom, SRI

3	Hinge (stainless)	TA2314 (size as required)	US26D	MK	087100
1	Privacy Lock	MO 4702LN 497	626	YA	087100
1	Kick Plate	K1050 10" high x 2" LDW SA BEV	US32D	RO	
1	Wall Stop	406	US26D	RO	087100
1	Gasketing	S88BL		PE	087100

Set: 29.0

Doors: 140

Description: Interior Pair, Classroom

6	Hinge (heavy weight)	T4A3786 NRP (size as required)	US26D	MK	087100
1	Deadbolt (classroom)	D261 K600	626	YA	087100
2	Offset Door Pull	RM3310-24 Mtg-Type 12XHD	US32D	RO	087100
2	Push Plate	70C-RKW	US32D	RO	087100
2	Surface Closer	PR4400	689	YA	087100
2	Kick Plate	K1050 10" high x 2" LDW CSK BEV	US32D	RO	087100
2	Wall Stop	406	US26D	RO	087100
1	Gasketing	S88BL		PE	087100
1	Astragal	29310CP TKSP		PE	087100

Set: 30.0

Doors: 154

Description: Interior Pair, Break, SRI

6	Hinge (stainless heavy weight)	T4A3386 NRP (size as required)	US26D	MK	087100
1	Deadbolt (classroom)	D261 K600	626	YA	087100
2	Offset Door Pull	RM3310-24 Mtg-Type 12XHD	US32D	RO	087100
2	Push Plate	70C-RKW	US32D	RO	087100
2	Door Closer	SRI 281 O	EN	SA	087100
2	Kick Plate	K1050 10" high x 1" LDW SA BEV	US32D	RO	
2	Wall Stop	406	US26D	RO	087100
2	Astragal	29310CP TKSP		PE	087100
2	Silencer	608-RKW		RO	087100

Set: 31.0

Doors: 146, 150
Description: Interior Single, Women/Men, SRI

3	Hinge (stainless heavy weight)	T4A3386 NRP (size as required)	US26D	MK	087100
1	Deadbolt (classroom)	D261 K600	626	YA	087100
1	Offset Door Pull	RM3310-24 Mtg-Type 12XHD	US32D	RO	087100
1	Push Plate	70C-RKW	US32D	RO	087100
1	Door Closer	SRI 281 CPS	EN	SA	087100
1	Kick Plate	K1050 10" high x 2" LDW SA BEV	US32D	RO	
3	Silencer	608-RKW		RO	087100

Set: 32.0

Doors: 127
Description: Interior Pair, Corridor, SRI HO

6	Hinge (stainless heavy weight)	T4A3386 NRP (size as required)	US26D	MK	087100
1	Deadbolt (classroom)	D261 K600	626	YA	087100
2	Offset Door Pull	RM3310-24 Mtg-Type 12XHD	US32D	RO	087100
2	Push Plate	70C-RKW	US32D	RO	087100
2	Door Closer	SRI 281 CPSH	EN	SA	087100
2	Kick Plate	K1050 10" high x 1" LDW SA BEV	US32D	RO	
2	Astragal	29310CP TKSP		PE	087100
2	Silencer	608-RKW		RO	087100

Set: 33.0

Doors: 148, 152
Description: Interior Single, Women/Men, SRI

3	Hinge (stainless heavy weight)	T4A3386 (size as required)	US26D	MK	087100
1	Door Pull	RM3300-24 Mtg-Type 12XHD	US32D	RO	087100
1	Push Plate	70C-RKW	US32D	RO	087100
1	Door Closer	SRI 281 CPS	EN	SA	087100
1	Kick Plate	K1050 10" high x 2" LDW SA BEV	US32D	RO	
3	Silencer	608-RKW		RO	087100

END OF SECTION

SHEET NOTES

1. DRAWINGS AND SPECIFICATIONS ARE COMPLIMENTARY COMPONENTS OF THE CONTRACT DOCUMENTS. REVIEW ALL DRAWINGS AND SPECIFICATIONS FOR THE COMPLETE SCOPE OF WORK. NOTIFY ARCHITECT IMMEDIATELY FOR CLARIFICATIONS, IF NEEDED.
2. DO NOT SCALE DRAWINGS. IF DIMENSIONAL INFORMATION IS REQUIRED AND NOT FOUND, NOTIFY ARCHITECT IMMEDIATELY FOR CLARIFICATION.
3. ALL DOOR FRAMES ARE TO BE INSTALLED 4" MIN. AWAY OF ADJACENT PERPENDICULAR WALLS UNLESS OTHERWISE NOTED.
4. REFER TO STRL DWGS FOR ADDITIONAL STRUCTURAL SPECIFIC INFORMATION.
5. REFER TO MEP DWGS FOR ADDITIONAL MEP SPECIFIC INFORMATION.
6. REFER TO POOL CONSULTANT DWGS FOR ADDITIONAL POOL SPECIFIC INFORMATION.
7. REFER TO ROOF PLAN FOR ROOF DRAIN LOCATIONS.
8. REFER TO G0.01 FOR KEYS AND SYMBOLS.

SHEET LEGEND

ALTERNATE. SEE SPECIFICATIONS.

MATCH LINE

F.E.C.	FIRE EXTINGUISHER IN RECESSED CABINET
E.W.C.	HI–LO ELECTRICAL WATER COOLER
FD.	FLOOR DRAIN
RD.	ROOF DRAIN
O.D.	OVERFLOW DRAIN
P.P.	ADA PUSH PLATE
C.J.	CONTROL JOINT REFER 3/A5.11

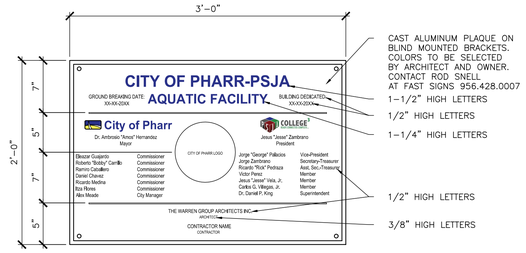
WALL LEGEND

1HR. FIRE RATED WALL

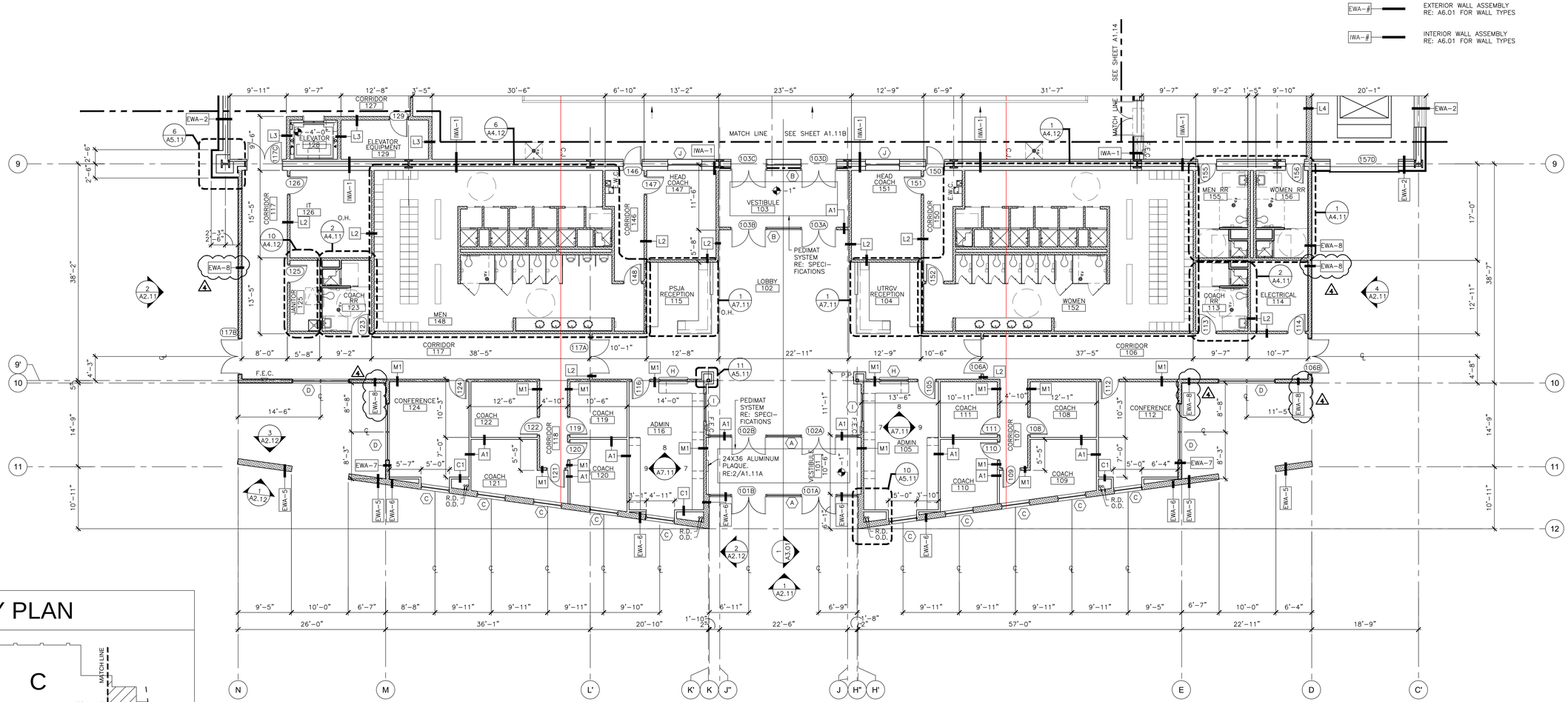
XX — INTERIOR WALL TYPE RE: A6.01 FOR WALL TYPES

EWA–# — EXTERIOR WALL ASSEMBLY RE: A6.01 FOR WALL TYPES

IWA–# — INTERIOR WALL ASSEMBLY RE: A6.01 FOR WALL TYPES

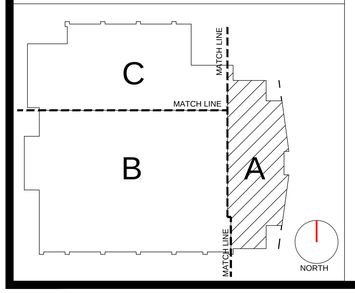


2 WALL PLAQUE
SCALE: 3"=1'-0"



1 FLOOR PLAN-A
SCALE: 1/8"=1'-0"

KEY PLAN



TWG
THE WARREN GROUP ARCHITECTS, INC.
1801 SOUTH SECOND ST.
SUITE 330
McALLEN, TX 78503
956 . 994.1900
twgarch.com

REVISION	DATE	APPROVED BY	DESCRIPTION
ADD1	6/17/2019	TWG	ADDITIONAL INFORMATION PROVIDED
ADD2	6/21/2019	TWG	ADDITIONAL INFORMATION PROVIDED
ADD3	6/26/2019	TWG	ADDITIONAL INFORMATION PROVIDED
ADD4	7/3/2019	TWG	ADDITIONAL INFORMATION PROVIDED

SEAL

EXP 10–31–19

PROPOSED

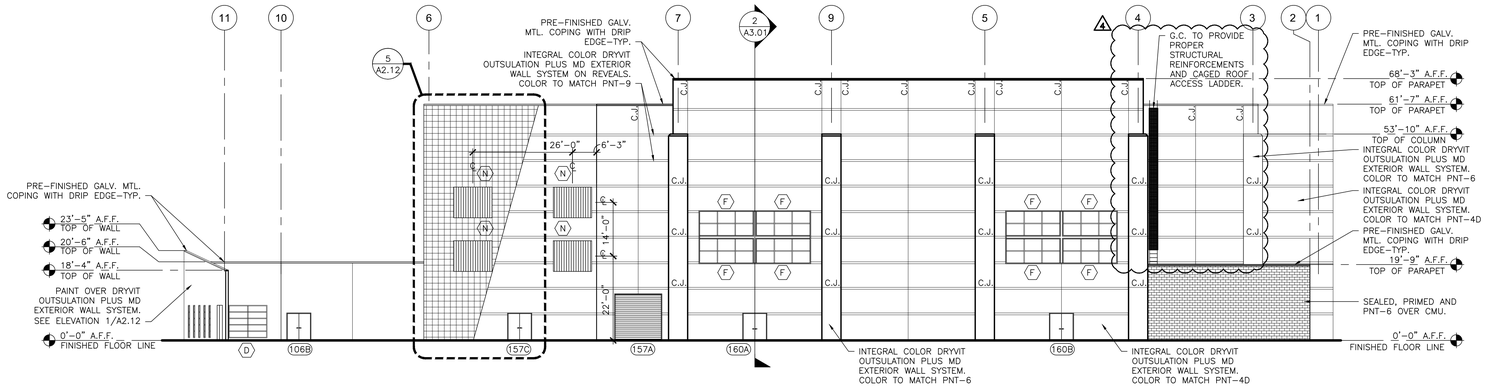
CITY OF PHARR/PSJA AQUATIC FACILITY

3001 N. CAGE BLVD
PHARR, TEXAS 78577

PROJECT	971805
DATE	06/07/2019
REVISED	07/03/2019

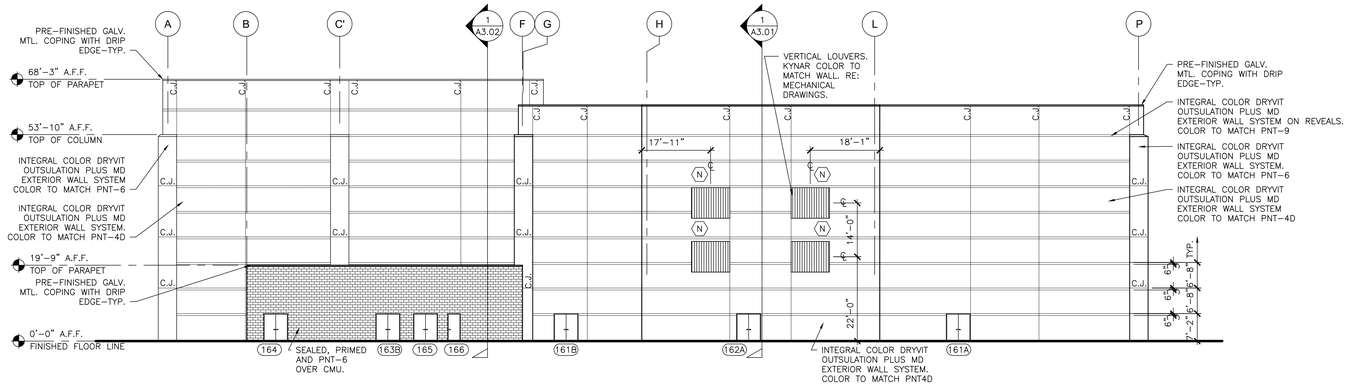
A1.11A ADD4

FLOOR PLAN-A



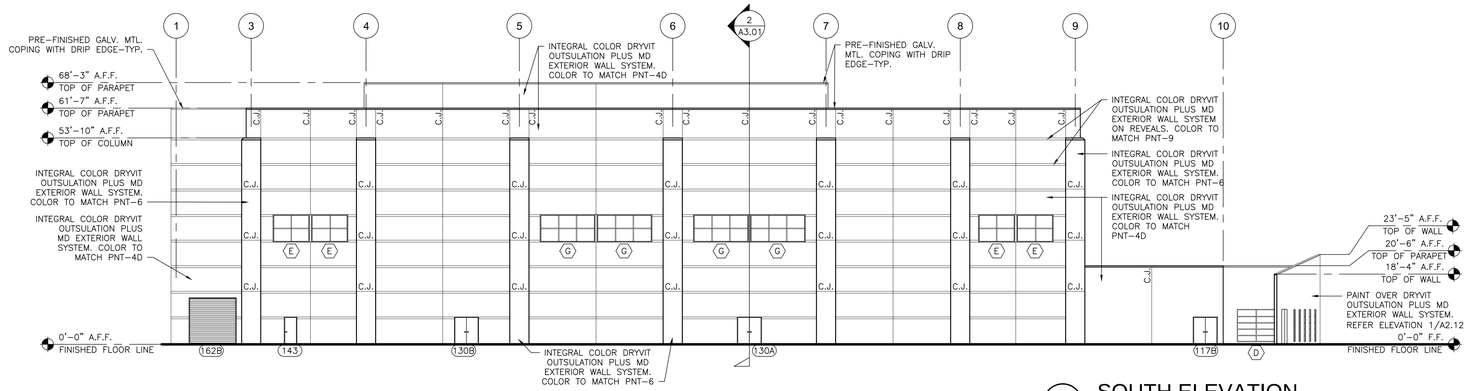
4 NORTH ELEVATION

SCALE: 1/16"=1'-0"



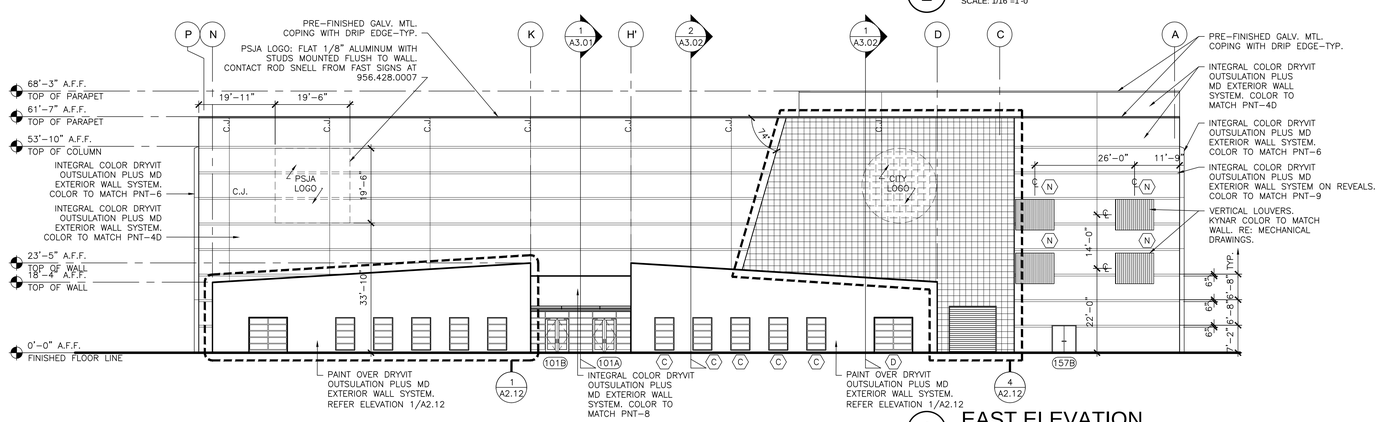
3 WEST ELEVATION

SCALE: 1/16"=1'-0"



2 SOUTH ELEVATION

SCALE: 1/16"=1'-0"



1 EAST ELEVATION

SCALE: 1/16"=1'-0"

SHEET NOTES

1. REFER TO SHEET A6.21 FOR DOOR AND WINDOW SCHEDULE.
2. REFER TO SHEET A6.22 FOR DOOR AND WINDOW ELEVATIONS.
3. REFER TO SHEET A6.11 FOR FINISH SCHEDULE.

SHEET LEGEND

CMU BLOCK

PORCELAIN TILE

C.J. CONTROL "V" JOINTS REFER TO 2/A5.11

THE WARREN GROUP ARCHITECTS, INC.

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SUITE 330
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ADD3	6/26/2019	TWG	ADDITIONAL INFORMATION PROVIDED
ADD4	7/3/2019	TWG	ADDITIONAL INFORMATION PROVIDED

SEAL

REGISTERED ARCHITECT JOHN W. WARREN 18375 STATE OF TEXAS

EXP 10-31-19

PROPOSED

CITY OF PHARR/PSJA AQUATIC FACILITY

3001 N. CAGE BLVD
PHARR, TEXAS 78577

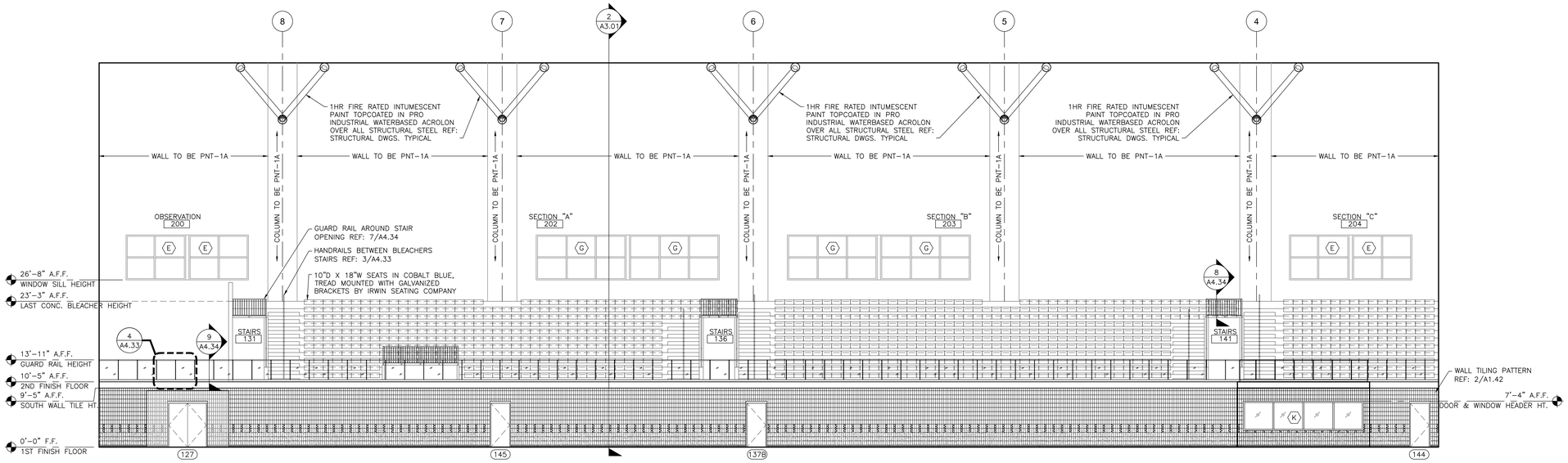
PROJECT	971805
DATE	06/07/2019
REVISED	07/03/2019

A2.11 ADD4

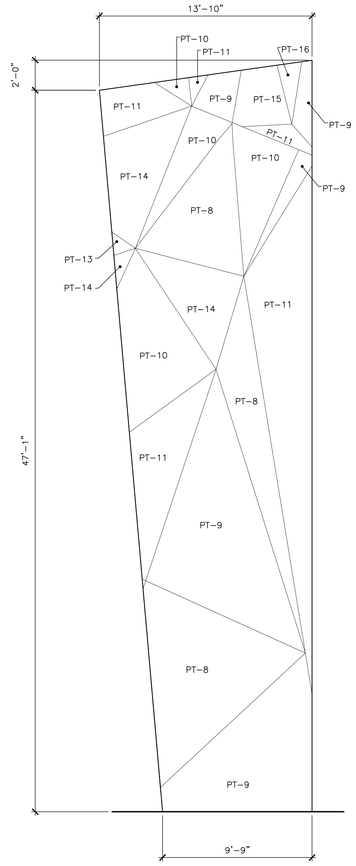
EXTERIOR ELEVATIONS

SHEET NOTES

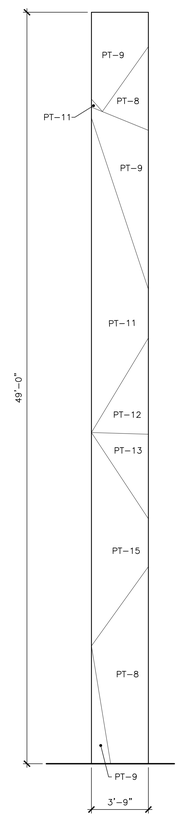
1. REFER TO SHEET A6.11 FOR FINISH SCHEDULE.



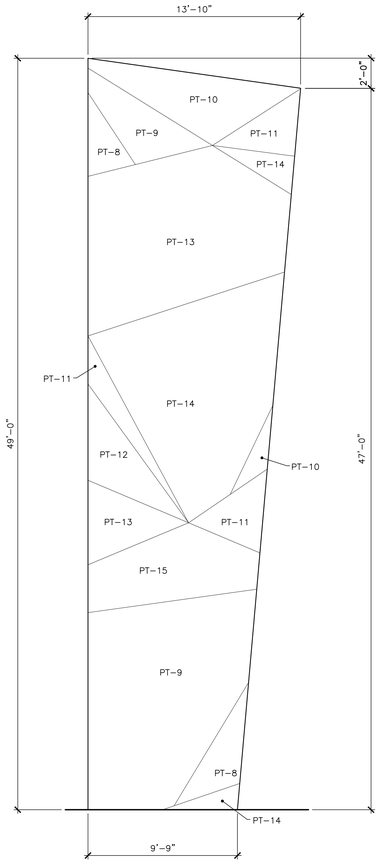
5 SOUTH INTERIOR WALL
SCALE: 1/8"=1'-0"



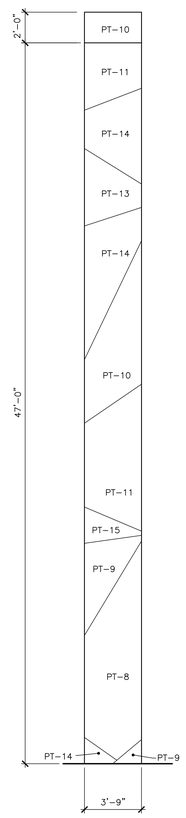
4 DIVE TOWER NORTH SIDE ELEVATION
SCALE: 1/4"=1'-0"



3 DIVE TOWER WEST SIDE ELEVATION
SCALE: 1/4"=1'-0"



2 DIVE TOWER SOUTH SIDE ELEVATION
SCALE: 1/4"=1'-0"



1 DIVE TOWER EAST SIDE ELEVATION
SCALE: 1/4"=1'-0"

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ADD4	7/3/2019	TWG	ADDITIONAL INFORMATION PROVIDED

SEAL

PROPOSED

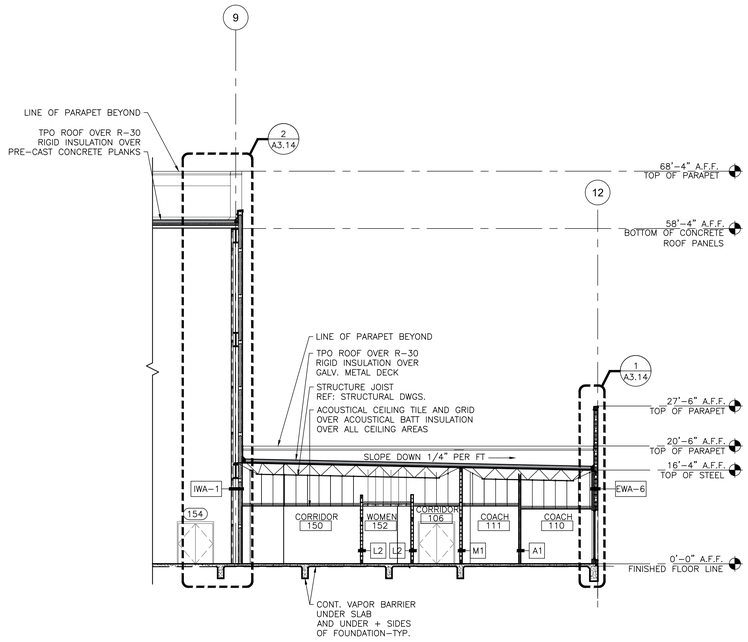
CITY OF PHARR/PSJA AQUATIC FACILITY

3001 N. CAGE BLVD
PHARR, TEXAS 78577

PROJECT	971805
DATE	06/07/2019
REVISED	07/03/2019

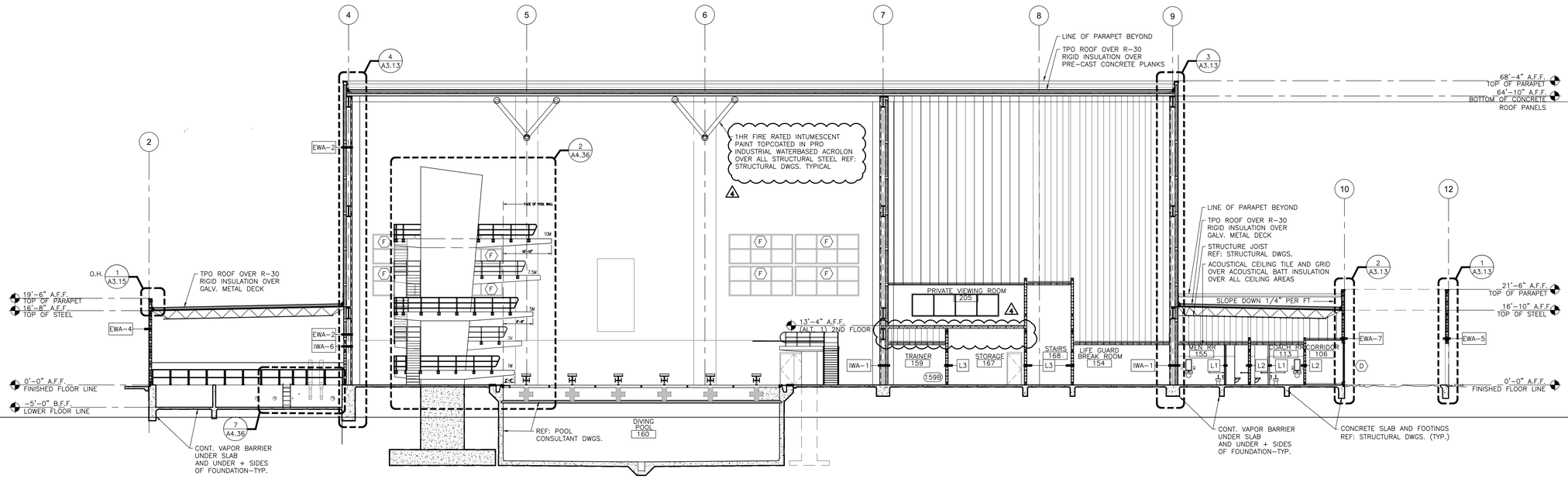
A2.13 ADD4

PARTIAL ENLARGED ELEVATIONS



2 PARTIAL BUILDING SECTION

SCALE: 3/32"=1'-0"



1 BUILDING SECTION

SCALE: 3/32"=1'-0"

TWG
THE WARREN GROUP
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REVISION	DATE	APPROVED BY	DESCRIPTION
ADD1	6/17/2019	TWG	ADDITIONAL INFORMATION PROVIDED
ADD2	6/21/2019	TWG	ADDITIONAL INFORMATION PROVIDED
ADD3	6/26/2019	TWG	ADDITIONAL INFORMATION PROVIDED
ADD4	7/3/2019	TWG	ADDITIONAL INFORMATION PROVIDED

SEAL

EXP 10-31-19

PROPOSED

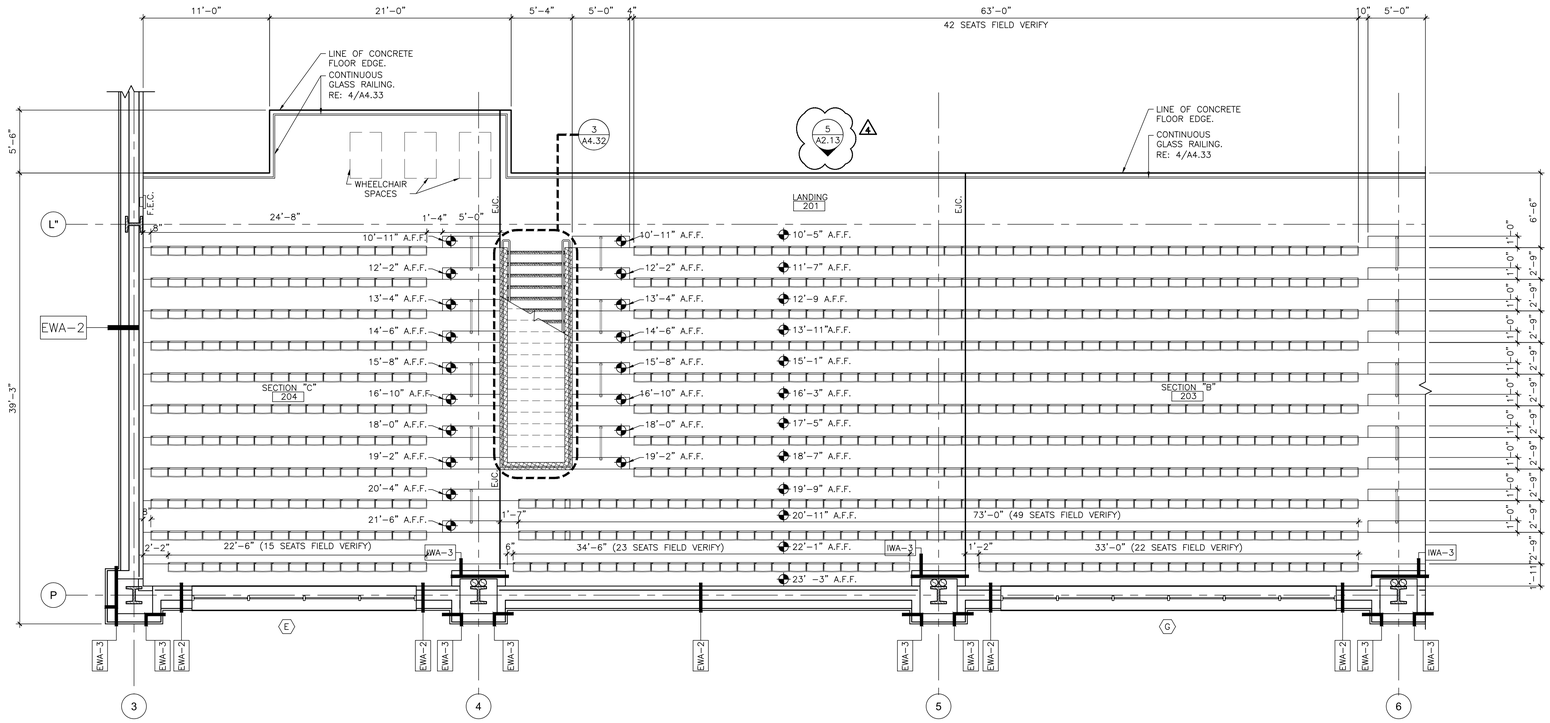
CITY OF PHARR/PSJA
AQUATIC FACILITY

3001 N. CAGE BLVD
PHARR, TEXAS 78577

PROJECT	971805
DATE	06/07/2019
REVISED	07/03/2019

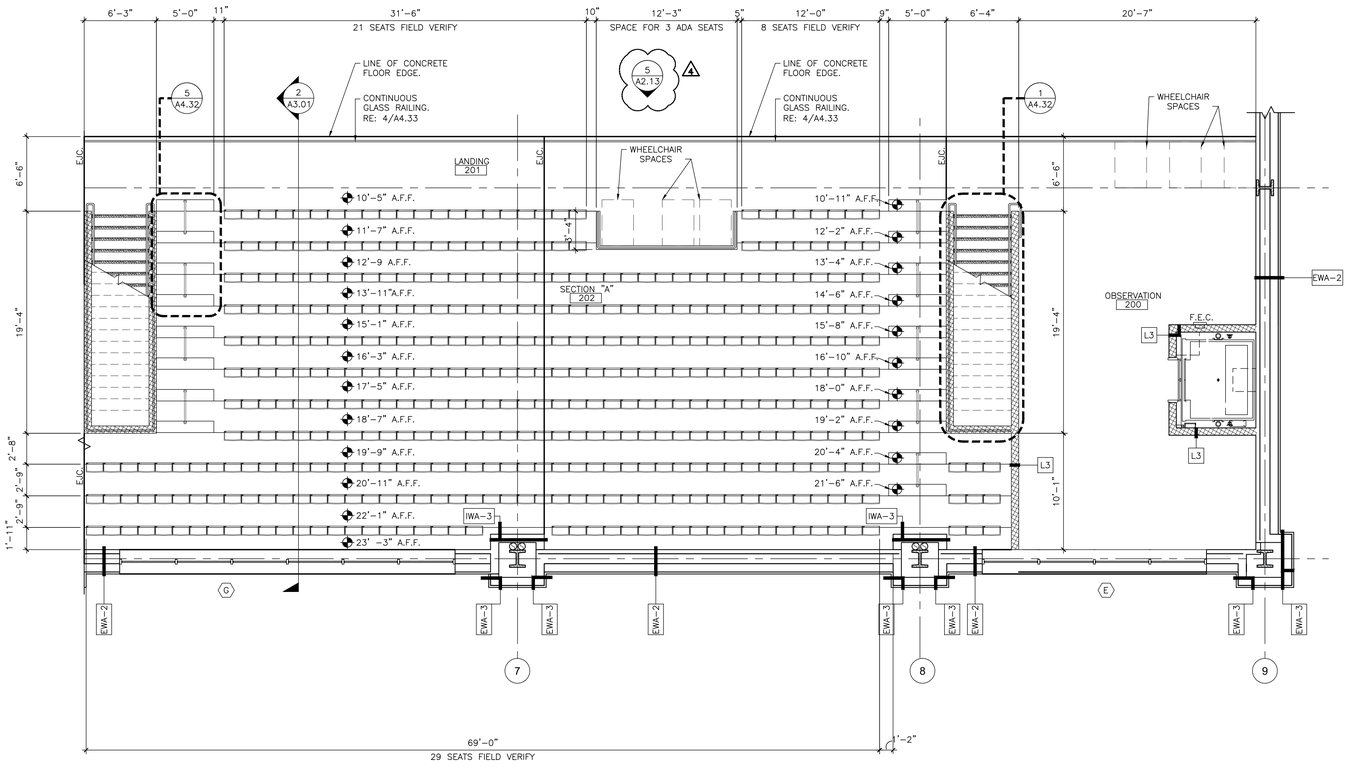
A3.02 ADD4

BUILDING SECTIONS



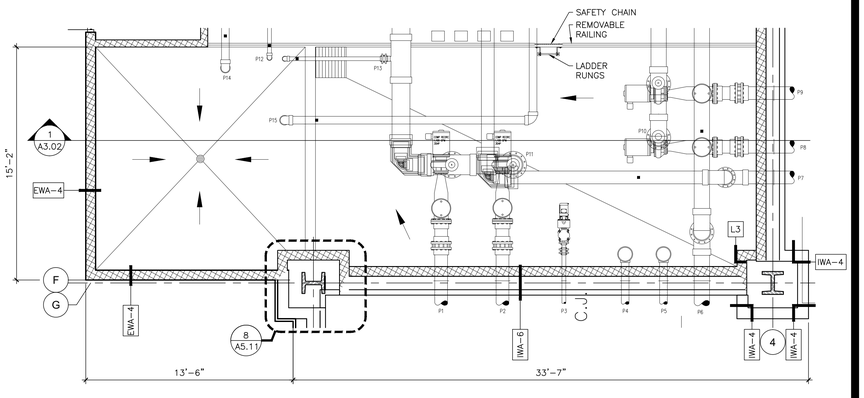
ENLARGED PARTIAL FLOOR PLAN-SECOND FLOOR

3 SCALE: 1/8"=1'-0"



ENLARGED PARTIAL FLOOR PLAN-SECOND FLOOR

2 SCALE: 1/8"=1'-0"



ENLARGED PARTIAL FLOOR PLAN-FIRST FLOOR

1 SCALE: 1/8"=1'-0"

SHEET NOTES

1. DRAWINGS AND SPECIFICATIONS ARE COMPLIMENTARY COMPONENTS OF THE CONTRACT DOCUMENTS. REVIEW ALL DRAWINGS AND SPECIFICATIONS FOR THE COMPLETE SCOPE OF WORK. NOTIFY ARCHITECT IMMEDIATELY FOR CLARIFICATIONS, IF NEEDED.
2. DO NOT SCALE DRAWINGS. IF DIMENSIONAL INFORMATION IS REQUIRED AND NOT FOUND, NOTIFY ARCHITECT IMMEDIATELY FOR CLARIFICATION.
3. ALL DOOR FRAMES ARE TO BE INSTALLED 4" AWAY OF ADJACENT PERPENDICULAR WALLS UNLESS OTHERWISE NOTED.
4. REFER TO STRL DWGS FOR ADDITIONAL STRUCTURAL SPECIFIC INFORMATION.
5. REFER TO MEP DWGS FOR ADDITIONAL MEP SPECIFIC INFORMATION.
6. REFER TO POOL CONSULTANT DWGS FOR ADDITIONAL POOL SPECIFIC INFORMATION.
7. REFER TO ROOF PLAN FOR ROOF DRAIN LOCATIONS.
8. REFER TO G0.01 FOR KEYS AND SYMBOLS.

SHEET LEGEND

- ALTERNATE. SEE SPECIFICATIONS.
- MATCH LINE
- 10"D X 18"W INFINITY SEATS IN COBALT BLUE, TREAD MOUNTED WITH GALVANIZED BRACKETS BY IRWIN SEATING COMPANY
- F.E.C. — FIRE EXTINGUISHER IN RECESSED CABINET
- EJC — EXP. JOINT COVER RE: SPECS

WALL LEGEND

- 1HR. FIRE RATED WALL
- XX — INTERIOR WALL TYPE RE: A6.01 FOR WALL TYPES
- EWA-# — EXTERIOR WALL ASSEMBLY RE: A6.01 FOR WALL TYPES
- IWA-# — INTERIOR WALL ASSEMBLY RE: A6.01 FOR WALL TYPES

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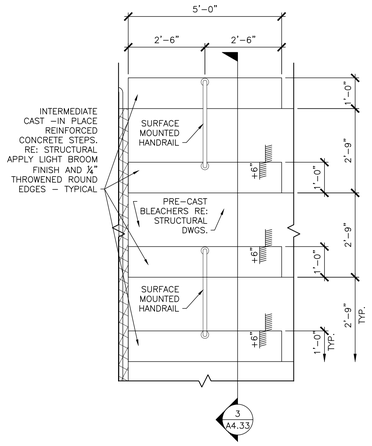
A4.13 ADD4

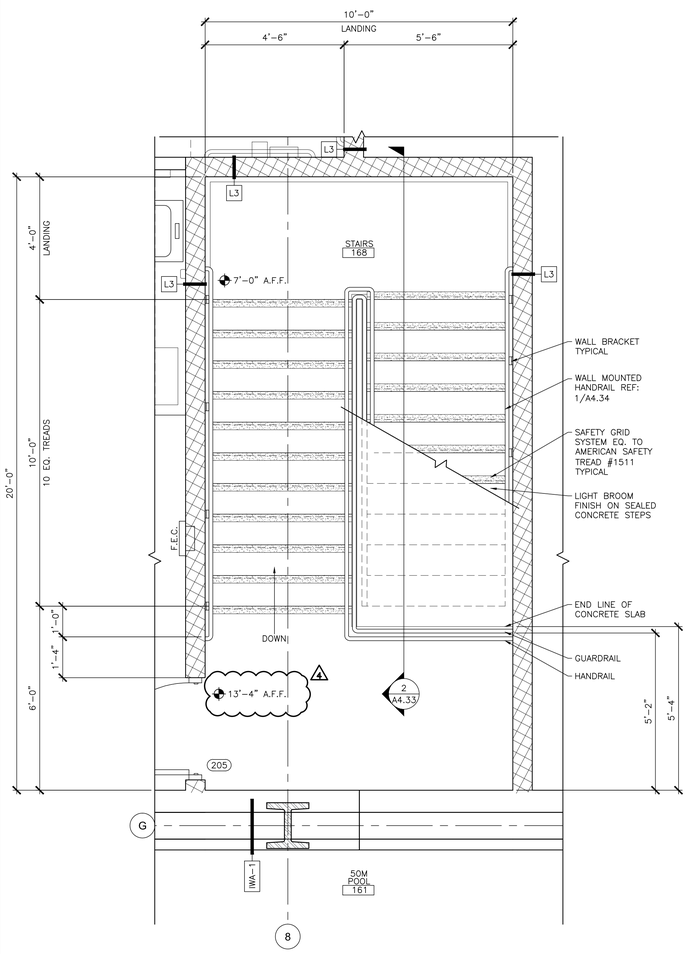
ENLARGED FLOOR PLANS



SEATING HANDRAIL SECOND FLOOR PLAN

5 SCALE:1/2"=1'-0"

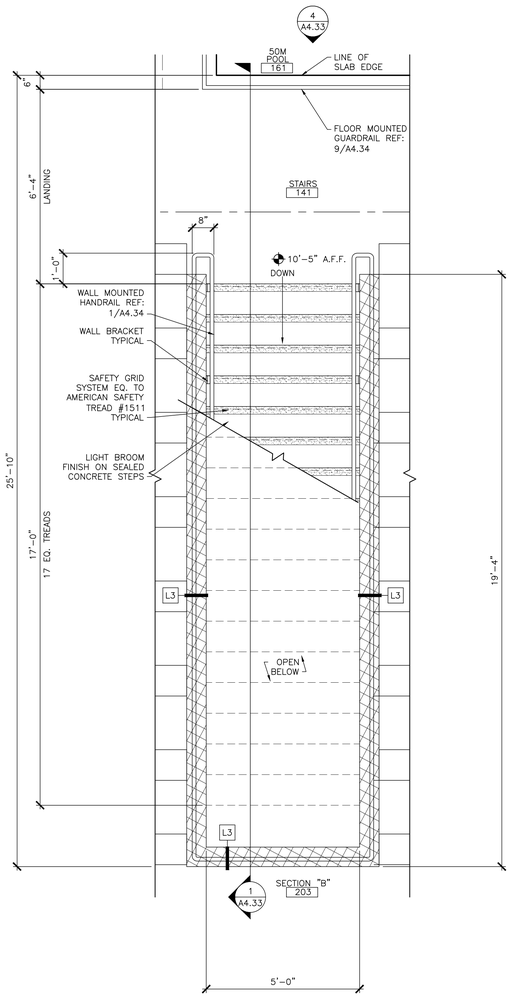
NORTH



ALT.#1 STAIR 168 AT SECOND FLOOR PLAN

4 SCALE:1/2"=1'-0"

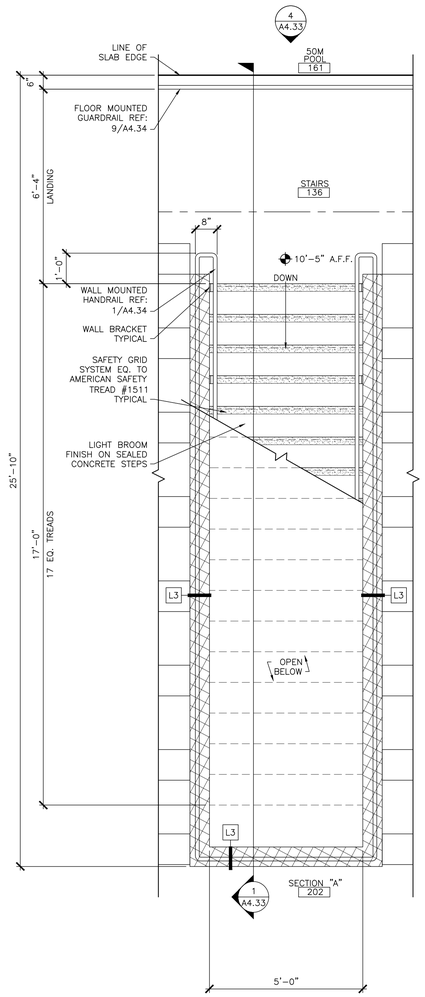
NORTH



STAIR 141 AT SECOND FLOOR PLAN

3 SCALE:1/2"=1'-0"

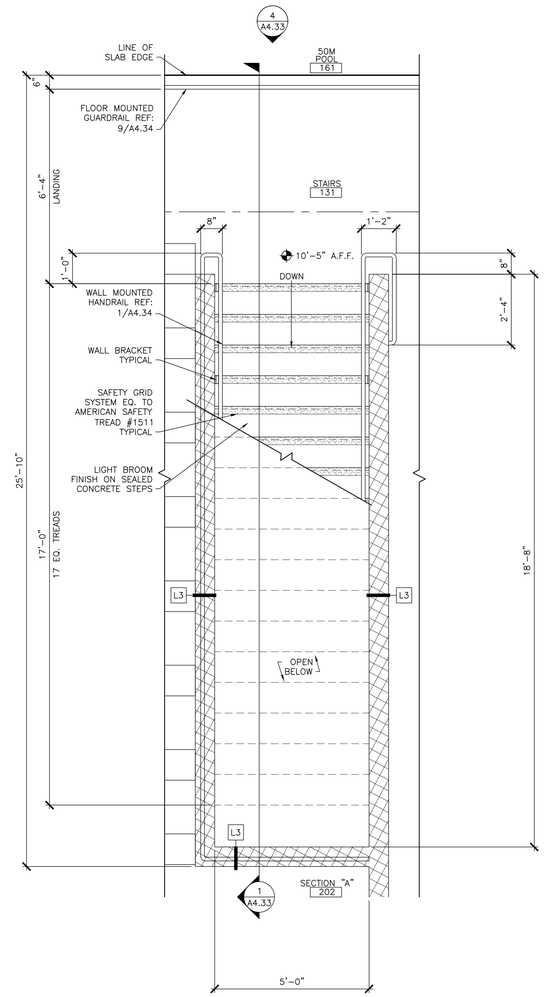
NORTH



STAIR 136 AT SECOND FLOOR PLAN

2 SCALE:1/2"=1'-0"

NORTH



STAIR 131 AT SECOND FLOOR PLAN

1 SCALE:1/2"=1'-0"

NORTH

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SEAL

REGISTERED ARCHITECT JOHN W. WARREN 18375 STATE OF TEXAS

EXP 10-31-19

PROPOSED

CITY OF PHARR/PSJA AQUATIC FACILITY

3001 N. CAGE BLVD
PHARR, TEXAS 78577

PROJECT	971805
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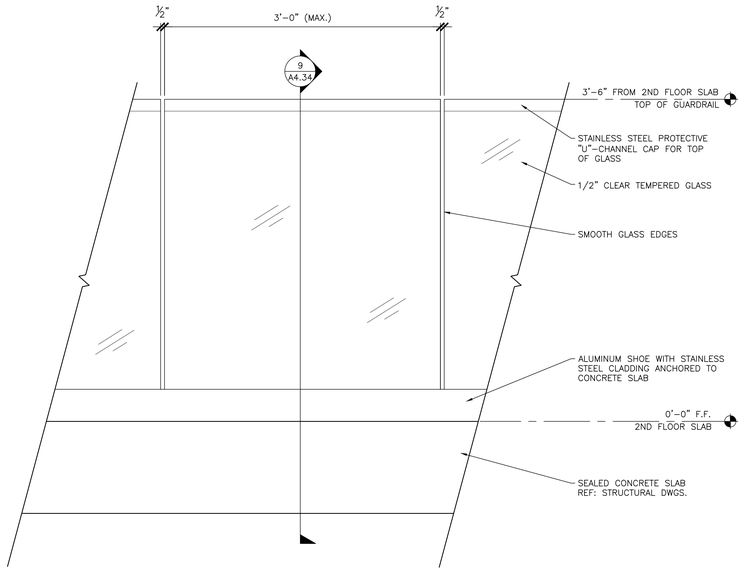
REVISED	07/03/2019 4

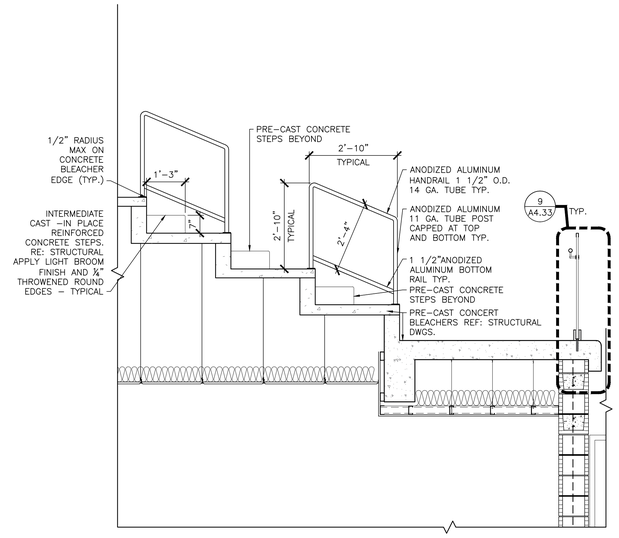
A4.32 ADD4

ENLARGED STAIRWAY PLANS



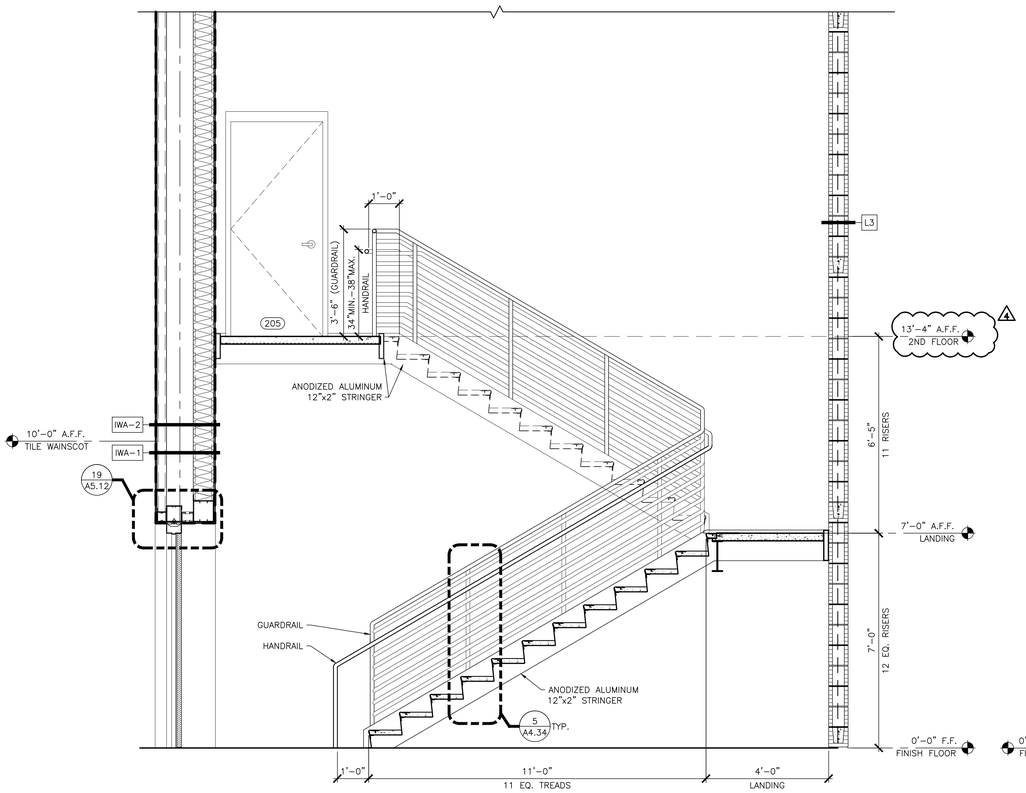
4 GLASS RAILING PARTIAL ELEVATION

SCALE:1/2"=1'-0"



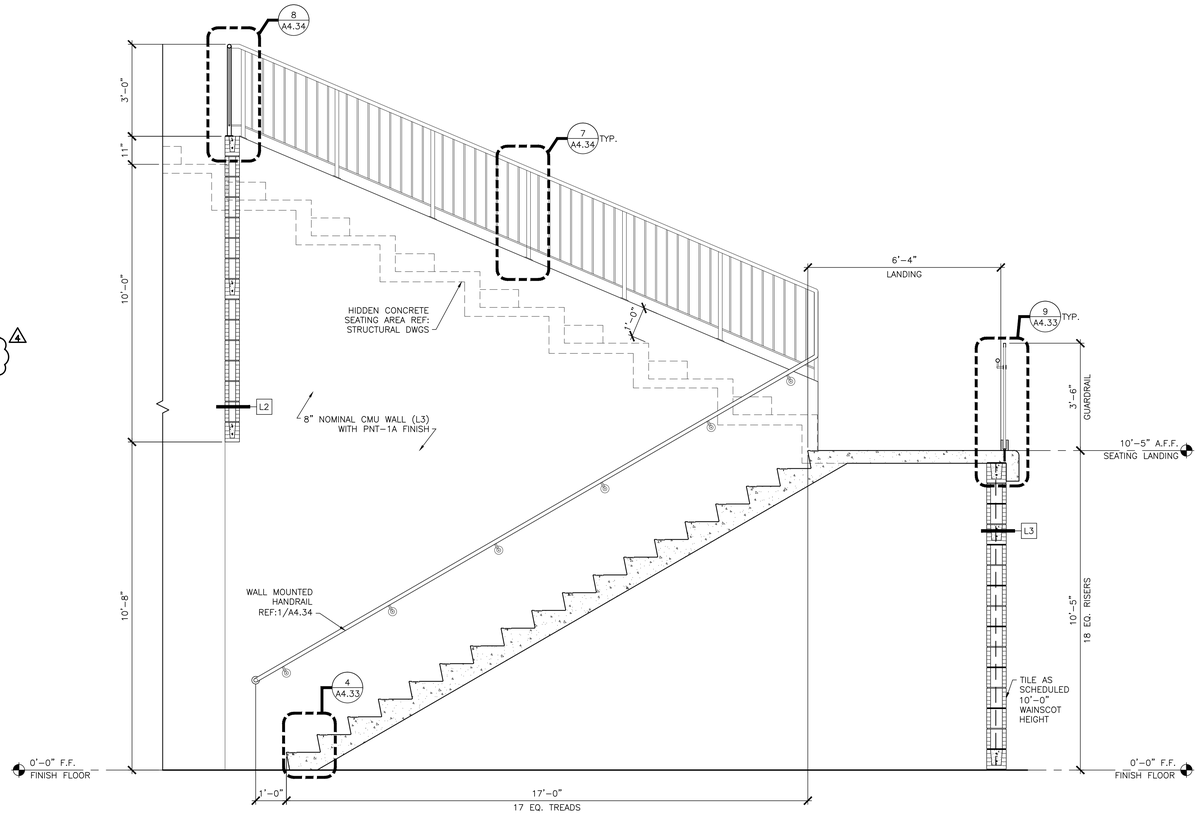
3 SEATING HARDRAIL

SCALE:1/2"=1'-0"



2 STAIR 168 SECTION

SCALE:1/2"=1'-0"



1 STAIR 131, 136, & 141 SECTION

SCALE:1/2"=1'-0"

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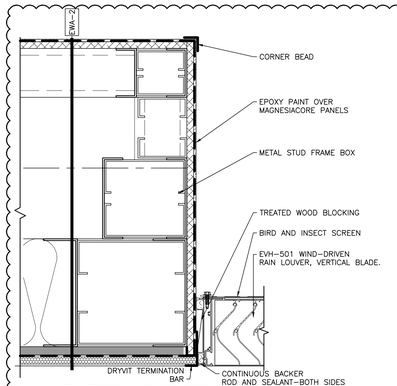
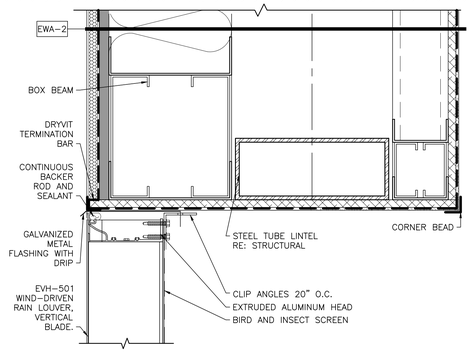
REVISED	07/03/2019

A4.33 ADD4

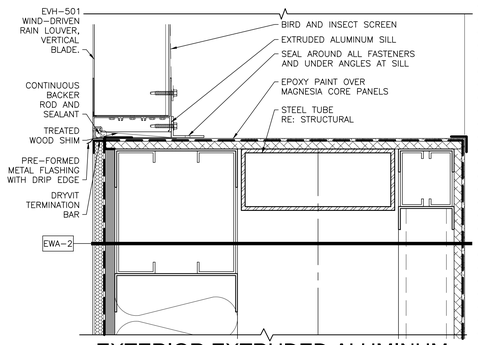
STAIRWAY SECTIONS



14 EXTERIOR EXTRUDED ALUMINUM LOUVER JAMB DETAIL
SCALE: 3"=1'-0" LUVR_JAMB_DETL_01

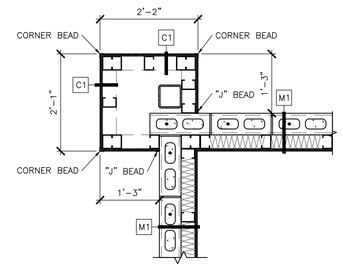


13 EXTERIOR EXTRUDED ALUMINUM LOUVER HEAD DETAIL
SCALE: 3"=1'-0" LUVR_HEAD_DETL_01



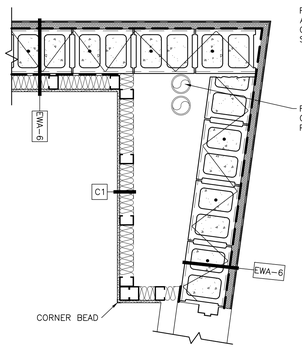
12 EXTERIOR EXTRUDED ALUMINUM LOUVER SILL DETAIL
SCALE: 3"=1'-0" LUVR_SILL_DETL_01

REFERENCE: A6.01 FOR WALL COMPONENT SPECIFICATIONS



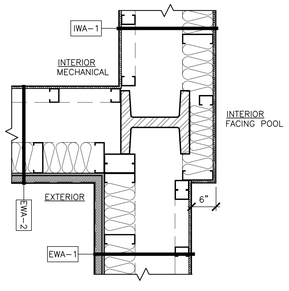
11 PLAN SECTION DETAIL
SCALE: 3/4"=1'-0" PLAN_DETL_008

REFERENCE: A6.01 FOR WALL COMPONENT SPECIFICATIONS



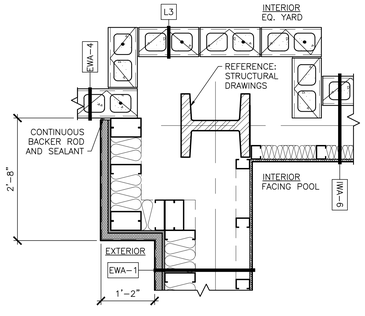
10 PLAN SECTION DETAIL
SCALE: 3/4"=1'-0" PLAN_DETL_007

REFERENCE: A6.01 FOR WALL COMPONENT SPECIFICATIONS



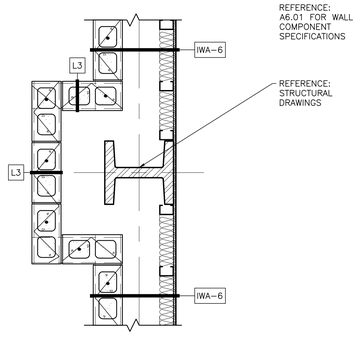
9 PLAN SECTION DETAIL
SCALE: 3/4"=1'-0" PLAN_DETL_006

REFERENCE: A6.01 FOR WALL COMPONENT SPECIFICATIONS



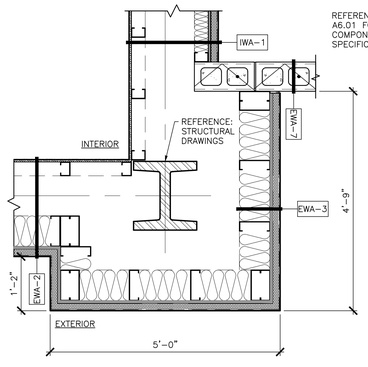
8 PLAN SECTION DETAIL
SCALE: 3/4"=1'-0" PLAN_DETL_005

REFERENCE: A6.01 FOR WALL COMPONENT SPECIFICATIONS



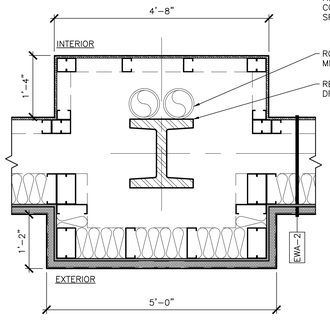
7 PLAN SECTION DETAIL
SCALE: 3/4"=1'-0" PLAN_DETL_004

REFERENCE: A6.01 FOR WALL COMPONENT SPECIFICATIONS



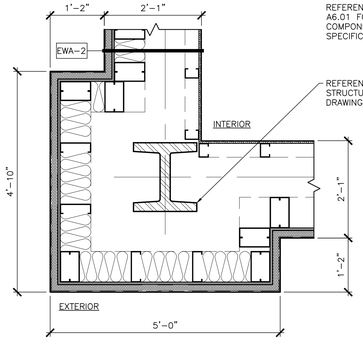
6 PLAN SECTION DETAIL
SCALE: 3/4"=1'-0" PLAN_DETL_003

REFERENCE: A6.01 FOR WALL COMPONENT SPECIFICATIONS

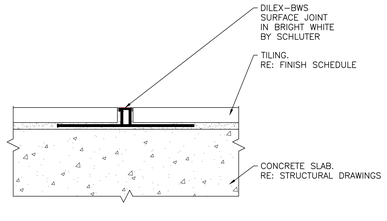


5 PLAN SECTION DETAIL
SCALE: 3/4"=1'-0" PLAN_DETL_002

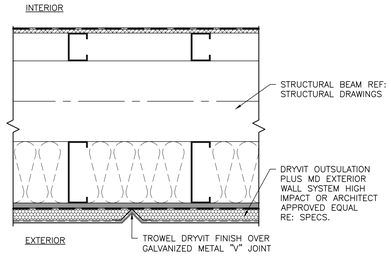
REFERENCE: A6.01 FOR WALL COMPONENT SPECIFICATIONS



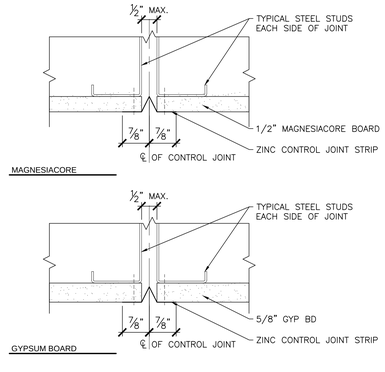
4 PLAN SECTION DETAIL
SCALE: 3/4"=1'-0" PLAN_DETL_001



3 CONTROL JOINT AT FLOOR TILING
SCALE: NTS JOINT_DETL_001



2 CONTROL "V" JOINT
SCALE: 1 1/2"=1'-0" PLAN-DETL_009



1 CELING CONTROL JOINTS
SCALE: 6'-1'-0" CLNG_DETL_001

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PROPOSED

CITY OF PHARR/PSJA AQUATIC FACILITY

3001 N. CAGE BLVD
PHARR, TEXAS 78577

PROJECT	971805
DATE	06/07/2019
REVISED	07/03/2019

A5.11 ADD4
DETAILS

OPENING			DOOR					FRAME			
No.	LOCATION TO	SWING	FIRE RATING	TYPE	FINISH	SIZE	ELEV.	TYPE	FINISH	ELEV.	REMARKS (TO: LH, RH, LHR, RHR; LOCATION)
168	50M POOL 161 TO STAIRS 168	LHR	–	FRP	–	3'–0" X 7'–0"	D	FRP	–		ALTERNATE
205	STAIRS 168 TO PRIVATE VIEWING ROOM 205	LH	–	H.MTL	PNT–7B	3'–0" X 7'–0"	E	H.MTL	PNT–7B		ALTERNATE
206	PRIVATE VIEWING ROOM 205 TO RR 206	LHR	–	H.MTL	PNT–7B	3'–0" X 7'–0"	C	H.MTL	PNT–7B		ALTERNATE

WINDOW SCHEDULE

ELEV.	TYPE	FRAME TYPE: TYPE	FRAME TYPE: FINISH	GLAZING	SIZE	REMARKS
A	FIXED	ALUMINUM	KAWNEER DEEP BLUE	1" INSULATED LOW–E TINTED REFLECTIVE GLASS	11'–0" X 26'–2"	
B	FIXED	ALUMINUM	KAWNEER DEEP BLUE	1/4" CLEAR SAFETY GLASS	11'–0" X 19'–2"	
C	FIXED	ALUMINUM	KAWNEER DEEP BLUE	1" INSULATED LOW–E TINTED REFLECTIVE GLASS	8'–6" X 5'–0"	
D	FIXED	ALUMINUM	KAWNEER DEEP BLUE	1" INSULATED LOW–E TINTED REFLECTIVE GLASS	8'–6" X 10'–0"	
E	FIXED	ALUMINUM	KAWNEER DEEP BLUE	1" INSULATED LOW–E TINTED REFLECTIVE GLASS	7'–2" X 9'–6"	
F	FIXED	ALUMINUM	KAWNEER DEEP BLUE	1" INSULATED LOW–E TINTED REFLECTIVE GLASS	6'–8" X 14'–4"	
G	FIXED	ALUMINUM	KAWNEER DEEP BLUE	1" INSULATED LOW–E TINTED REFLECTIVE GLASS	7'–2" X 14'–4"	
H	FIXED	ALUMINUM	KAWNEER DEEP BLUE	1/4" CLEAR SAFETY GLASS	4'–8" X 5'–0"	
I	FIXED	ALUMINUM	KAWNEER DEEP BLUE	1/4" CLEAR SAFETY GLASS	4'–0" X 5'–0"	
J	FIXED	ALUMINUM	KAWNEER DEEP BLUE	1/4" CLEAR SAFETY GLASS	4'–0" X 6'–0"	
K	FIXED	ALUMINUM	KAWNEER DEEP BLUE	1/4" CLEAR SAFETY GLASS	4'–8" X 19'–2"	
L	FIXED	ALUMINUM	KAWNEER DEEP BLUE	1/4" CLEAR SAFETY GLASS	4'–8" X 4'–8"	
M	FIXED	ALUMINUM	GRAY	–	4'–2"X6'–0"	
N	FIXED	ALUMINUM	TO MATCH WALL	–	RE: MECHANICAL DWGS	

NOTE:

DOOR SCHEDULE

OPENING No.	LOCATION TO	SWING	DOOR FIRE RATING	DOOR TYPE	DOOR FINISH	SIZE	ELEV.	FRAME TYPE	FRAME FINISH	FRAME ELEV.	REMARKS (TO: LH, RH, LHR, RHR; LOCATION)
101A	EXTERIOR TO VESTIBULE 101	DOUBLE	–	ALUMINUM	KAWNEER DEEP BLUE	(2) 3'–0" X 9'–0"	A	ALUM.	KAWNEER DEEP BLUE		
101B	EXTERIOR TO VESTIBULE 101	DOUBLE	–	ALUMINUM	KAWNEER DEEP BLUE	(2) 3'–0" X 9'–0"	A	ALUM.	KAWNEER DEEP BLUE		
102A	VESTIBULE 101 TO LOBBY 102	DOUBLE	–	ALUMINUM	KAWNEER DEEP BLUE	(2) 3'–0" X 9'–0"	A	ALUM.	KAWNEER DEEP BLUE		
102B	VESTIBULE 101 TO LOBBY 102	DOUBLE	–	ALUMINUM	KAWNEER DEEP BLUE	(2) 3'–0" X 9'–0"	A	ALUM.	KAWNEER DEEP BLUE		
103A	LOBBY 102 TO VESTIBULE 103	DOUBLE	–	ALUMINUM	KAWNEER DEEP BLUE	(2) 3'–0" X 9'–0"	A	ALUM.	KAWNEER DEEP BLUE		
103B	LOBBY 102 TO VESTIBULE 103	DOUBLE	–	ALUMINUM	KAWNEER DEEP BLUE	(2) 3'–0" X 9'–0"	A	ALUM.	KAWNEER DEEP BLUE		
103C	VESTIBULE 103 TO 50M POOL 161	DOUBLE	–	ALUMINUM	KAWNEER DEEP BLUE	(2) 3'–0" X 9'–0"	A	ALUM.	KAWNEER DEEP BLUE		
103D	VESTIBULE 103 TO 50M POOL 161	DOUBLE	–	ALUMINUM	KAWNEER DEEP BLUE	(2) 3'–0" X 9'–0"	A	ALUM.	KAWNEER DEEP BLUE		
105	LOBBY 102 TO ADMIN. 105	LH	–	H.MTL	PNT–7B	3'–0" X 7'–0"	E	H.MTL	PNT–7B		
106A	LOBBY 102 TO CORRIDOR 106	DOUBLE	–	H.MTL	PNT–7B	(2) 3'–0" X 7'–0"	F	H.MTL	PNT–7B		
106B	EXTERIOR TO CORRIDOR 106	DOUBLE	–	H.MTL	PNT–7B	(2) 3'–0" X 7'–0"	G	H.MTL	PNT–7B		
108	CORRIDOR 107 TO COACH 108	RH	–	H.MTL	PNT–7B	3'–0" X 7'–0"	E	H.MTL	PNT–7B		
109	CORRIDOR 107 TO COACH 109	RH	–	H.MTL	PNT–7B	3'–0" X 7'–0"	E	H.MTL	PNT–7B		
110	CORRIDOR 107 TO COACH 110	RH	–	H.MTL	PNT–7B	3'–0" X 7'–0"	E	H.MTL	PNT–7B		
111	CORRIDOR 107 TO COACH 111	LH	–	H.MTL	PNT–7B	3'–0" X 7'–0"	E	H.MTL	PNT–7B		
112	CORRIDOR 106 TO CONFERENCE 112	RH	–	H.MTL	PNT–7B	3'–0" X 7'–0"	E	H.MTL	PNT–7B		
113	CORRIDOR 106 TO COACH RR 113	LH	–	H.MTL	PNT–7B	3'–0" X 7'–0"	C	H.MTL	PNT–7B		
114	CORRIDOR 106 TO ELECTRICAL 114	RH	–	H.MTL	PNT–7B	3'–0" X 7'–0"	C	H.MTL	PNT–7B		
116	LOBBY 102 TO ADMIN. 116	RH	–	H.MTL	PNT–7B	3'–0" X 7'–0"	E	H.MTL	PNT–7B		
117A	LOBBY 102 TO CORRIDOR 117	DOUBLE	–	H.MTL	PNT–7B	(2) 3'–0" X 7'–0"	F	H.MTL	PNT–7B		
117B	EXTERIOR TO CORRIDOR 117	DOUBLE	–	H.MTL	PNT–7B	(2) 3'–0" X 7'–0"	G	H.MTL	PNT–7B		
117C	CORRIDOR 117 TO CORRIDOR 130	DOUBLE	–	H.MTL	PNT–7B	(2) 3'–0" X 7'–0"	F	H.MTL	PNT–7B		
119	CORRIDOR 118 TO COACH 119	RH	–	H.MTL	PNT–7B	3'–0" X 7'–0"	E	H.MTL	PNT–7B		
120	CORRIDOR 118 TO COACH 120	LH	–	H.MTL	PNT–7B	3'–0" X 7'–0"	E	H.MTL	PNT–7B		
121	CORRIDOR 118 TO COACH 121	LH	–	H.MTL	PNT–7B	3'–0" X 7'–0"	E	H.MTL	PNT–7B		
122	CORRIDOR 118 TO COACH 122	LH	–	H.MTL	PNT–7B	3'–0" X 7'–0"	E	H.MTL	PNT–7B		
123	CORRIDOR 117 TO COACH RR 123	RH	–	H.MTL	PNT–7B	3'–0" X 7'–0"	C	H.MTL	PNT–7B		
124	CORRIDOR 117 TO CONFERENCE 124	LH	–	H.MTL	PNT–7B	3'–0" X 7'–0"	E	H.MTL	PNT–7B		
125	CORRIDOR 117 TO JANITOR 125	LH	–	H.MTL	PNT–7B	3'–0" X 7'–0"	C	H.MTL	PNT–7B		
126	CORRIDOR 117 TO IT 126	LH	–	H.MTL	PNT–7B	3'–0" X 7'–0"	C	H.MTL	PNT–7B		
127	CORRIDOR 127 TO 50M POOL 161	DOUBLE	–	FRP	–	(2) 3'–0" X 7'–0"	F	FRP	–		
129	CORRIDOR 127 TO ELEVATOR EQUIPMENT 129	LH	–	FRP	–	3'–0" X 7'–0"	C	FRP	–		
130A	EXTERIOR TO CORRIDOR 130	DOUBLE	–	H.MTL	PNT–7B	(2) 3'–0" X 7'–0"	G	H.MTL	PNT–7B		
130B	EXTERIOR TO CORRIDOR 130	DOUBLE	–	H.MTL	PNT–7B	(2) 3'–0" X 7'–0"	G	H.MTL	PNT–7B		
132A	CORRIDOR 130 TO CONCESSION 132	RH	–	H.MTL	PNT–7B	3'–0" X 7'–0"	E	H.MTL	PNT–7B		
132B	CORRIDOR 130 TO CONCESSION 132	LH	–	H.MTL	PNT–7B	3'–0" X 7'–0"	E	H.MTL	PNT–7B		
133	CONCESSION 132 TO STORAGE 133	RH	–	H.MTL	PNT–7B	3'–0" X 7'–0"	C	H.MTL	PNT–7B		
134	CORRIDOR 130 TO RR 134	LH	–	H.MTL	PNT–7B	3'–0" X 7'–0"	C	H.MTL	PNT–7B		
135A	CORRIDOR 130 TO CONDITIONING 135	RH	–	H.MTL	PNT–7B	3'–0" X 7'–0"	E	H.MTL	PNT–7B		
135B	CORRIDOR 130 TO CONDITIONING 135	LH	–	H.MTL	PNT–7B	3'–0" X 7'–0"	E	H.MTL	PNT–7B		
137A	CORRIDOR 130 TO CORRIDOR 137	LHR	–	H.MTL	PNT–7B	3'–0" X 7'–0"	E	H.MTL	PNT–7B		
137B	CORRIDOR 137 TO 50M POOL 161	LH	–	FRP	–	3'–0" X 7'–0"	E	FRP	–		
140	CORRIDOR 130 CLASSROOM 140	DOUBLE	–	H.MTL	PNT–7B	(2) 3'–0" X 7'–0"	F	H.MTL	PNT–7B		
142	CORRIDOR 130 TO STORAGE 142	DOUBLE	–	H.MTL	PNT–7B	(2) 3'–0" X 7'–0"	H	H.MTL	PNT–7B		
143	EXTERIOR TO RISER ROOM 143	RHR	–	H.MTL	PNT–7B	3'–0" X 7'–0"	C	H.MTL	PNT–7B		
144	50M POOL 161 TO TIMING 144	RH	–	FRP	–	3'–0" X 7'–0"	E	FRP	–		
145	50M POOL 161 TO STORAGE 145	RHR	–	FRP	–	3'–0" X 7'–0"	C	FRP	–		
146	50M POOL 161 TO CORRIDOR 146	LHR	–	FRP	–	3'–0" X 7'–0"	B	FRP	–		
147	CORRIDOR 146 TO HEAD COACH 147	LH	–	FRP	–	3'–0" X 7'–0"	E	FRP	–		
148	CORRIDOR 146 TO MEN 148	LHR	–	FRP	–	3'–0" X 7'–0"	C	FRP	–		
150	50M POOL 161 TO CORRIDOR 150	RHR	–	FRP	–	3'–0" X 7'–0"	B	FRP	–		
151	CORRIDOR 150 TO HEAD COACH 151	RH	–	FRP	–	3'–0" X 7'–0"	E	FRP	–		
152	CORRIDOR 150 TO WOMEN 152	RHR	–	FRP	–	3'–0" X 7'–0"	C	FRP	–		
154	50M POOL 161 TO LIFE GUARD BREAK ROOM 154	DOUBLE	–	FRP	–	(2) 3'–0" X 7'–0"	F	FRP	–		
155	LIFE GUARD BREAK ROOM 154 TO MEN RR 155	RH	–	FRP	–	3'–0" X 7'–0"	C	FRP	–		
156	LIFE GUARD BREAK ROOM 154 TO WOMEN RR 156	LH	–	FRP	–	3'–0" X 7'–0"	C	FRP	–		
157A	EXTERIOR TO MECHANICAL 157	OVERHEAD	–	–	–	12'–0" X 12'–0"	J	–	–		
157B	EXTERIOR TO MECHANICAL 157	DOUBLE	–	H.MTL	PNT–7B	(2) 3'–0" X 7'–0"	H	H.MTL	PNT–7B		
157C	EXTERIOR TO MECHANICAL 157	DOUBLE	–	H.MTL	PNT–7B	(2) 3'–0" X 7'–0"	H	H.MTL	PNT–7B		
157D	EXTERIOR TO MECHANICAL 157	OVERHEAD	–	–	–	12'–0" X 12'–0"	J	–	–		
158	DIVING POOL 160 TO FIRST AID 158	RH	–	FRP	–	3'–0" X 7'–0"	E	FRP	–		
159A	DIVING POOL 160 TO TRAINER 159	LH	–	FRP	–	3'–0" X 7'–0"	E	FRP	–		
159B	TRAINER 159 TO FIRST AID 158	RH	–	FRP	–	3'–0" X 7'–0"	E	FRP	–		
160A	EXTERIOR TO DIVING POOL 160	DOUBLE	–	FRP	–	(2) 3'–0" X 7'–0"	G	ALUM	KAWNEER DEEP BLUE		
160B	EXTERIOR TO DIVING POOL 160	DOUBLE	–	FRP	–	(2) 3'–0" X 7'–0"	G	ALUM	KAWNEER DEEP BLUE		
161A	EXTERIOR TO 50M POOL 161	DOUBLE	–	FRP	–	(2) 3'–0" X 7'–0"	G	ALUM	KAWNEER DEEP BLUE		
161B	EXTERIOR TO 50M POOL 161	DOUBLE	–	FRP	–	(2) 3'–0" X 7'–0"	G	ALUM	KAWNEER DEEP BLUE		
162A	EXTERIOR TO MECHANICAL 162	DOUBLE	–	H.MTL	PNT–7B	(2) 3'–0" X 7'–0"	H	H.MTL	PNT–7B		
162B	EXTERIOR TO MECHANICAL 162	OVERHEAD	–	–	–	12'–0" X 12'–0"	J	–	–		
163A	50M POOL 161 TO POOL EQ. YARD 163	RHR	–	FRP	–	3'–0" X 7'–0"	C	FRP	–		
163B	EXTERIOR TO POOL EQ. YARD 163	DOUBLE	–	FRP	–	(2) 3'–0" X 7'–0"	H	ALUM	KAWNEER DEEP BLUE		
163C	50M POOL 161 TO POOL EQ. YARD 163	RHR	–	FRP	–	3'–0" X 7'–0"	C	FRP	–		
164	EXTERIOR TO ELECTRICAL 164	DOUBLE	–	H.MTL	PNT–7B	(2) 3'–0" X 7'–0"	H	H.MTL	PNT–7B		
165	EXTERIOR TO CALCIUM HYPO SYS. 165	DOUBLE	–	FRP	–	(2) 3'–0" X 7'–0"	H	ALUM	KAWNEER DEEP BLUE		
166	EXTERIOR TO ACID RM. 166	RHR	–	FRP	–	3'–0" X 7'–0"	C	ALUM	KAWNEER DEEP BLUE		
167	50M POOL 161 TO STORAGE 167	DOUBLE	–	FRP	–	(2) 3'–0" X 7'–0"	H	FRP	–		

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REVISION	DATE	APPROVED BY	DESCRIPTION
ADD1	6/17/2019	TWG	ADDITIONAL INFORMATION PROVIDED
ADD2	6/21/2019	TWG	ADDITIONAL INFORMATION PROVIDED
ADD3	6/26/2019	TWG	ADDITIONAL INFORMATION PROVIDED
ADD4	7/3/2019	TWG	ADDITIONAL INFORMATION PROVIDED

SEAL

EXP 10–31–19

PROPOSED

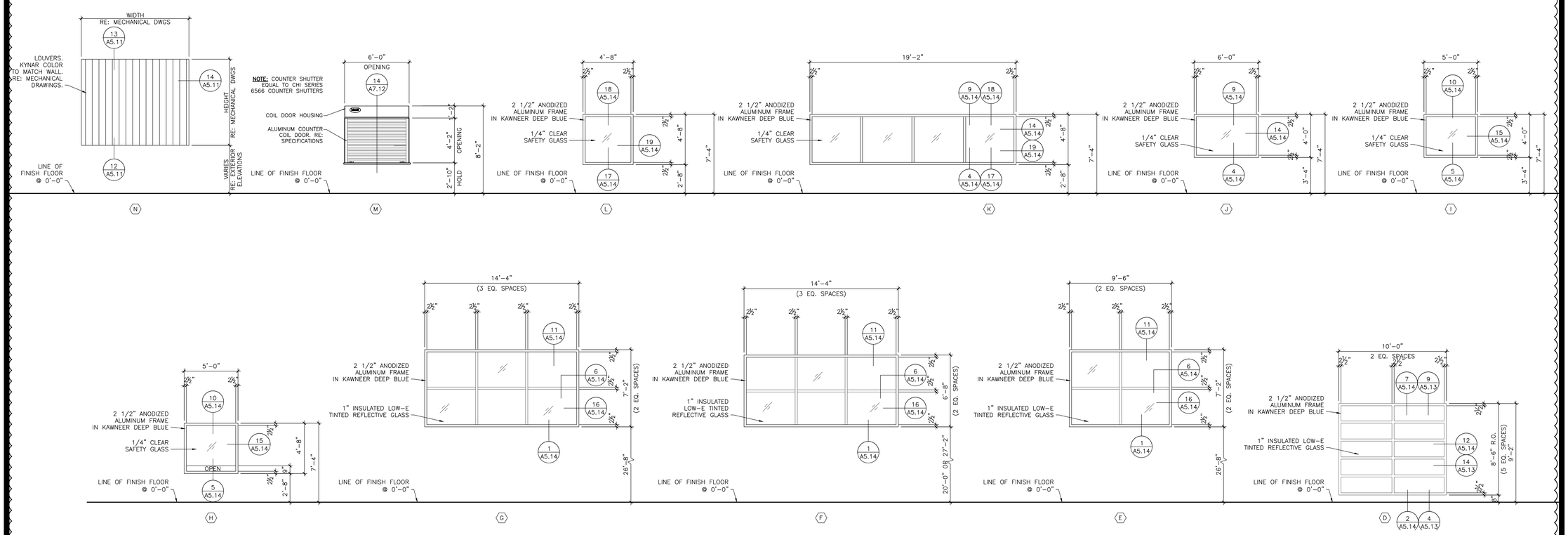
CITY OF PHARR/PSJA AQUATIC FACILITY

3001 N. CAGE BLVD
PHARR, TEXAS 78577

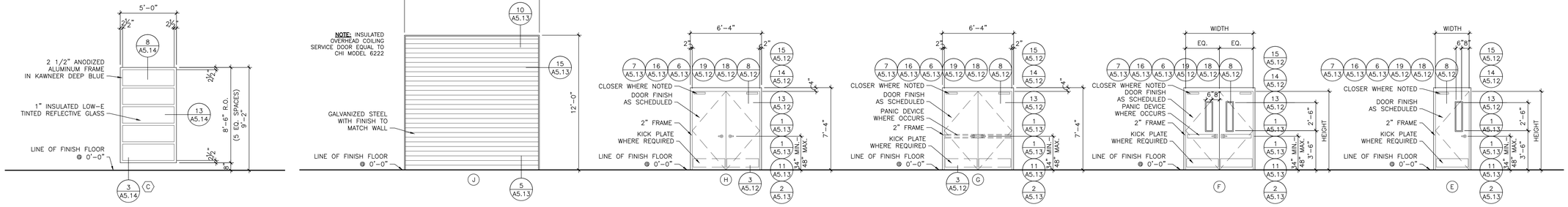
PROJECT	971805
DATE	06/07/2019
REVISED	07/03/2019

A6.21 ADD4

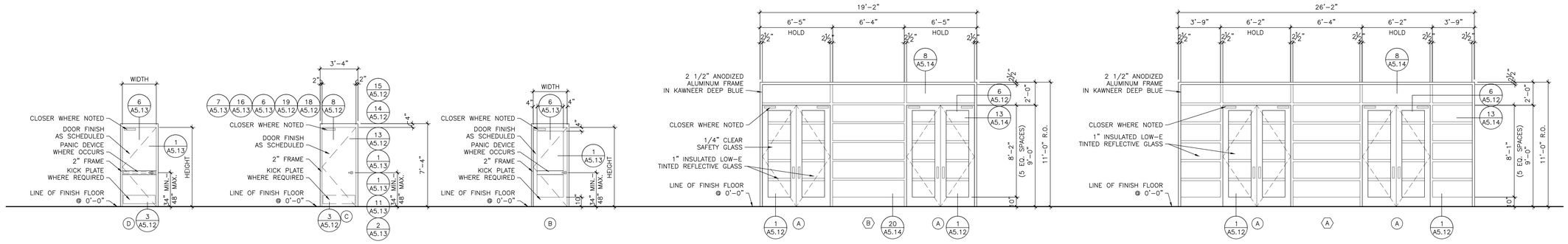
DOOR AND WINDOW SCHEDULES



3 WINDOW ELEVATIONS
SCALE: 1/4"=1'-0"



3 WINDOW ELEVATIONS
SCALE: 1/4"=1'-0"



2 DOOR ELEVATIONS
SCALE: 1/4"=1'-0"

1 DOOR FRAME - WINDOW ASSEMBLY ELEVATIONS
SCALE: 1/4"=1'-0"

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SEAL

PROPOSED

CITY OF PHARR/PSJA AQUATIC FACILITY

3001 N. CAGE BLVD
PHARR, TEXAS 78577

PROJECT	9718O5
DATE	06/07/2019
REVISED	07/03/2019

A6.22 ADD4

DOOR AND WINDOW ELEVATIONS

Line Table		
Line #	Length	Direction
L1	6.22	N81° 28' 41.82"W
L2	87.59	S08° 31' 18.21"W
L3	23.00	S81° 28' 41.93"E
L4	23.00	N81° 28' 41.73"W
L5	7.00	S08° 30' 30.72"W
L6	15.50	S81° 28' 41.73"E
L7	370.00	S08° 31' 18.29"W
L8	15.50	N81° 28' 41.78"W
L9	1.50	S08° 31' 18.25"W
L10	23.00	S81° 28' 41.78"E
L11	15.81	N81° 28' 41.65"W
L12	17.80	S08° 31' 18.22"W
L13	32.27	N81° 28' 41.75"W
L14	17.80	N08° 31' 18.27"E
L15	4.00	N81° 28' 42.53"W
L16	15.50	S08° 31' 18.22"W
L17	567.50	N81° 28' 41.78"W
L18	29.50	N08° 31' 18.22"E
L19	15.50	N81° 28' 41.78"W
L20	136.00	N08° 31' 18.22"E

Line Table		
Line #	Length	Direction
L21	15.50	S81° 28' 41.78"E
L22	20.50	N08° 30' 32.61"E
L23	11.68	N81° 28' 41.78"W
L24	8.94	S08° 29' 46.86"W
L27	8.82	N08° 33' 57.58"E
L28	11.77	N81° 28' 41.78"W
L29	16.50	S08° 30' 21.58"W
L30	15.50	S81° 28' 41.78"E
L31	172.00	S08° 31' 18.22"W
L32	15.50	N81° 28' 41.78"W
L33	42.00	S08° 31' 18.22"W
L34	541.41	N81° 28' 41.78"W
L35	15.49	N08° 31' 18.22"E
L36	87.92	S08° 31' 18.22"W
L37	6.77	S81° 28' 41.77"E
L38	8.56	N81° 28' 41.71"W
L39	35.50	N08° 31' 18.26"E
L40	8.56	S81° 28' 41.71"E
L41	31.50	S08° 31' 18.26"W
L42	23.68	S53° 31' 18.22"W

Line Table		
Line #	Length	Direction
L43	1.74	N08° 31' 18.22"E
L44	1.74	S81° 28' 41.78"E
L45	3.10	N81° 28' 41.78"W
L46	25.59	N53° 31' 18.22"E
L47	3.10	S08° 31' 18.22"W
L48	31.50	S81° 28' 41.77"E
L49	10.00	S08° 31' 37.16"W
L50	35.50	N81° 28' 41.77"W
L51	10.00	N08° 31' 37.16"E
L52	4.17	S81° 28' 41.77"E
L53	124.67	N08° 31' 12.41"E
L54	124.67	S08° 31' 12.41"W
L55	4.17	N81° 28' 45.88"W
L56	35.50	S81° 28' 41.77"E
L57	66.00	S08° 31' 24.99"W
L58	35.50	N81° 28' 41.77"W
L59	66.00	N08° 31' 24.99"E
L60	4.17	N81° 28' 45.88"W
L61	169.67	N08° 31' 14.15"E
L62	169.67	S08° 31' 14.15"W

Line Table		
Line #	Length	Direction
L63	4.17	S81° 28' 41.77"E
L64	35.50	N81° 28' 41.74"W
L65	9.50	N08° 31' 18.25"E
L66	31.50	S81° 28' 41.74"E
L67	9.50	S08° 31' 18.25"W
L68	11.39	S81° 28' 41.78"E
L69	31.50	S08° 31' 18.23"W
L70	11.39	N81° 28' 41.78"W
L71	35.50	N08° 31' 18.23"E
L72	4.17	N08° 31' 18.22"E
L73	160.28	N81° 28' 41.78"W
L74	160.28	S81° 28' 41.78"E
L75	4.17	S08° 31' 18.26"W
L76	3.50	N81° 28' 41.73"W
L77	35.50	N08° 31' 18.26"E
L78	3.50	S81° 28' 41.73"E
L79	31.50	S08° 31' 18.26"W
L80	3.50	S81° 28' 41.78"E
L81	31.50	S08° 31' 18.23"W
L82	3.50	N81° 28' 41.78"W

Line Table		
Line #	Length	Direction
L83	35.50	N08° 31' 18.23"E
L84	4.17	S08° 31' 18.23"W
L85	205.67	S81° 28' 41.78"E
L86	205.67	N81° 28' 41.78"W
L87	4.17	N08° 31' 18.26"E

NOTE:

LINES L7, L17, L34, L53, L54, L61 AND L62 ARE ALL TO BE EDGE CURB (REFER TO DETAILS 3/C111 & 4/C111)

Curve Table			
Curve #	Length	Radius	Delta
C1	1.80	25.00	004.12
C2	15.71	10.00	090.00
C3	15.71	10.00	090.00
C4	3.93	2.50	090.00
C5	3.93	2.50	090.00
C6	15.71	10.00	090.00
C7	3.93	2.50	090.00
C8	3.93	2.50	090.00
C9	3.93	2.50	090.00
C10	3.93	2.50	090.00
C11	3.93	2.50	090.00
C12	22.78	14.50	090.00
C13	17.12	30.00	032.70
C16	17.00	29.97	032.50
C17	22.78	14.50	090.00
C18	3.93	2.50	090.00
C19	3.93	2.50	090.00
C20	4.04	2.50	092.68
C21	14.48	9.50	087.32
C22	1.96	25.00	004.50
C23	3.93	2.50	090.00
C24	3.93	2.50	090.00
C25	7.07	4.50	090.00
C26	7.07	4.50	090.00
C27	22.38	9.50	135.00

Curve Table			
Curve #	Length	Radius	Delta
C28	38.48	24.50	090.00
C29	22.38	9.50	135.00
C30	38.48	24.50	090.00
C31	22.38	9.50	135.00
C32	22.38	9.50	135.00
C33	7.07	4.50	090.00
C34	3.93	2.50	090.00
C35	3.93	2.50	090.00
C36	7.07	4.50	090.00
C37	3.93	2.50	090.00
C38	3.93	2.50	090.00
C39	3.93	2.50	090.00
C40	3.93	2.50	090.00
C41	3.93	2.50	090.00
C42	7.07	4.50	090.00
C43	7.07	4.50	090.00
C44	3.93	2.50	090.00
C45	7.07	4.50	090.00
C46	7.07	4.50	090.00
C47	3.93	2.50	090.00
C48	3.93	2.50	090.00
C49	3.93	2.50	090.00
C50	3.93	2.50	090.00
C51	7.07	4.50	090.00
C52	7.07	4.50	090.00

Curve Table			
Curve #	Length	Radius	Delta
C53	7.07	4.50	090.00
C54	7.07	4.50	090.00
C55	3.93	2.50	090.00
C56	3.93	2.50	090.00

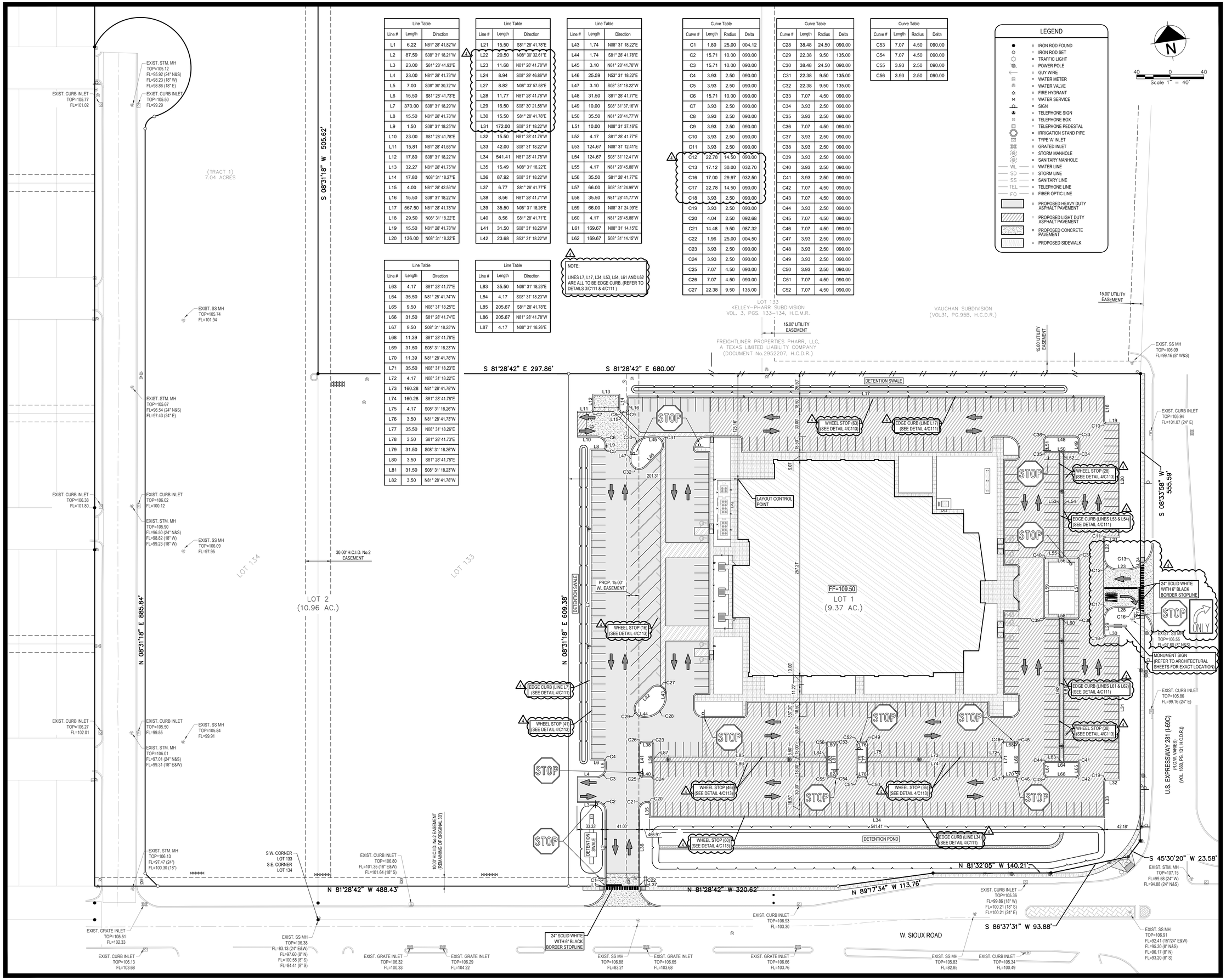
LEGEND

- = IRON ROD FOUND
- = IRON ROD SET
- = TRAFFIC LIGHT
- = POWER POLE
- = GUY WIRE
- = WATER METER
- = WATER VALVE
- = FIRE HYDRANT
- = WATER SERVICE
- = SIGN
- = TELEPHONE SIGN
- = TELEPHONE BOX
- = TELEPHONE PEDESTAL
- = IRRIGATION STAND PIPE
- = TYPE 'A' INLET
- = GRATED INLET
- = STORM MANHOLE
- = SANITARY MANHOLE
- WL = WATER LINE
- SD = STORM LINE
- SS = SANITARY LINE
- TEL = TELEPHONE LINE
- FO = FIBER OPTIC LINE
- = PROPOSED HEAVY DUTY ASPHALT PAVEMENT
- = PROPOSED LIGHT DUTY ASPHALT PAVEMENT
- = PROPOSED CONCRETE PAVEMENT
- = PROPOSED SIDEWALK

N

40 0 40

Scale 1" = 40'



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STATE OF TEXAS
JORGE D. PEREZ
34594
REGISTERED PROFESSIONAL ENGINEER
7/3/19

REVISION	DATE	APPROVED BY	DESCRIPTION
1 ADD4	7/3/2019	TWG	ADDITIONAL INFORMATION PROVIDED

PCE
Pérez Consulting Engineers
Texas Registered Engineering Firm F-2158
808 Dallas Ave. McAllen, Texas 78501
(956) 631-4482 fax (956) 682-1545

PROPOSED

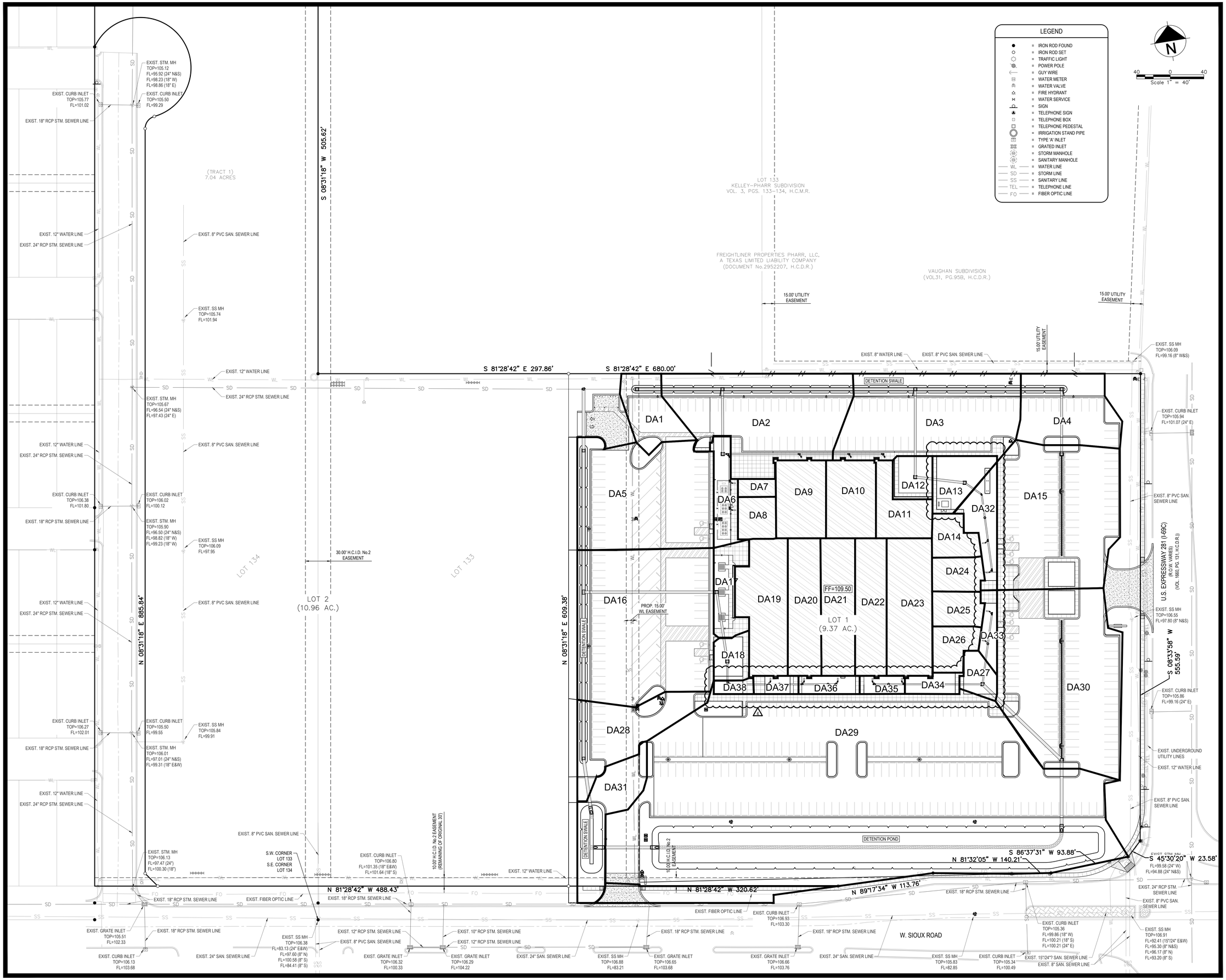
CITY OF PHARR
AQUATIC FACILITY

W SIOUX RD AND EXPRESSWAY 281
PHARR, TEXAS 78577

PROJECT	971805
DATE	6/07/2019
REVISED	

C101

DIMENSION CONTROL & SIGNAGE PLAN



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CITY OF PHARR
AQUATIC FACILITY

W SIOUX RD AND EXPRESSWAY 281
PHARR, TEXAS 78577

PROJECT	971805
DATE	6/07/2019
REVISED	

C102
DRAINAGE AREA MAP

DRAINAGE CALCULATIONS

4

PIPE DESIGN CALCULATIONS

PIPE	STRUCTURE		AREA		RUNOFF COEFFICIENT			TIME								PIPE DESIGN							HGL RESULTS			
NO.	NO.	TYPE	Incr.Area	TotalArea	RunoffCoeff.	IncrC x A	TotalC x A	InletTime	TimeConc	RnfalInt	TotalRunoff	AdnlFlow	TotalFlow	CapacFull	Veloc	LineLength	PipeSize	Type	n	PipeSlope	Inv ElevDn	Inv ElevUp	HGLDn	HGLUp	Grnd/RimDn	Grnd/RimUp
			(ac)	(ac)	(C)			(min)	(min)	(in/hr)	(cfs)	(cfs)	(cfs)	(cfs)	(ft/s)	(ft)	(in)			(%)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
	2.0000	OUTFALL																								
1.0000			0.5000	6.2200	0.7600	0.3800	4.4200	10.0000	24.6000	6.9000	30.5900	0.0000	30.5900	17.4600	5.7400	72.9960	36.0000	RCP	0.0130	0.0700	101.3100	101.3600	103.2700	103.6700	106.4000	105.4400
	8.0000	GRATE																								
2.0000			0.7000	5.7200	0.8000	0.5600	4.0400	10.0000	24.0000	7.0000	28.3000	0.0000	28.3000	17.8100	4.0000	168.2700	36.0000	RCP	0.0130	0.0700	101.3600	101.4800	104.3600	104.6600	105.4400	105.4400
	9.0000	GRATE																								
3.0000			0.2400	4.3900	0.6700	0.1600	2.9600	10.0000	23.0000	7.2000	21.1500	0.0000	21.1500	17.7500	2.9900	197.7300	36.0000	RCP	0.0130	0.0700	101.4800	101.6200	105.1500	105.3500	105.4400	105.4400
	10.0000	GRATE																								
4.0000			0.2000	4.1500	0.4500	0.0900	2.8000	10.0000	22.7000	7.2000	20.1400	0.0000	20.1400	18.1900	2.8500	67.1790	36.0000	RCP	0.0130	0.0700	101.6200	101.6700	105.4300	105.4900	105.4400	107.0400
	11.0000	GRATE																								
*5			0.0000	3.9500	0.0000	0.0000	2.7100	0.0000	22.5000	7.2000	19.5700	0.0000	19.5700	77.3300	2.7700	39.4190	36.0000	RCP	0.0130	1.3400	101.6700	102.2000	105.5600	105.5900	107.0400	107.2800
	12.0000	MH																								
6.0000			2.7500	3.9500	0.6200	1.7100	2.7100	10.0000	22.1000	7.3000	19.7400	0.0000	19.7400	40.6000	2.7900	78.2500	36.0000	RCP	0.0130	0.3700	102.2000	102.4900	105.7700	105.8400	107.2800	107.5700
	13.0000	GRATE																								
*7			0.0000	1.2000	0.0000	0.0000	1.0000	0.0000	16.2000	8.4000	8.4300	0.0000	8.4300	21.1200	1.1900	478.5710	36.0000	RCP	0.0130	0.1000	102.4900	102.9700	106.0000	106.0800	107.5700	106.8600
	14.0000	MH																								
*8			0.0000	1.2000	0.0000	0.0000	1.0000	0.0000	16.0000	8.5000	8.4700	0.0000	8.4700	17.8300	1.2000	16.8000	36.0000	RCP	0.0130	0.0700	102.9700	102.9800	106.1100	106.1100	106.8600	108.0600
	15.0000	GRATE																								
9.0000			0.6400	1.2000	0.8500	0.5400	1.0000	10.0000	14.9000	8.7000	8.7100	0.0000	8.7100	17.6200	1.2300	86.0000	36.0000	RCP	0.0130	0.0700	102.9800	103.0400	106.1200	106.1400	108.0600	107.1200
	16.0000	GRATE																								
10.0000			0.1000	0.5600	0.4200	0.0400	0.4600	10.0000	11.5000	9.6000	4.3900	0.0000	4.3900	17.5400	0.6200	130.1690	36.0000	RCP	0.0130	0.0700	103.0400	103.1300	106.1800	106.1900	107.1200	108.8900
	17.0000	GRATE																								
11.0000			0.0000	0.3400	0.0000	0.0000	0.3100	0.0000	10.4000	9.9000	3.0400	0.0000	3.0400	2.5400	3.8800	93.0000	12.0000	PVC	0.0100	0.3000	103.1300	103.4100	106.2000	106.6000	108.8900	104.4300
	58.0000	BEND																								
12.0000			0.0000	0.1400	0.0000	0.0000	0.1300	0.0000	10.0000	10.1000	1.2700	0.0000	1.2700	2.5400	1.6100	35.0000	12.0000	PVC	0.0100	0.3000	103.4100	103.5200	106.9700	106.9900	104.4300	104.4700
	59.0000	BEND																								
	17.0000	GRATE																								
13.0000			0.0000	0.1200	0.0000	0.0000	0.1100	0.0000	10.9000	9.8000	1.0600	0.0000	1.0600	2.5300	1.3500	48.4640	12.0000	PVC	0.0100	0.3000	103.1300	103.2800	106.2000	106.2200	108.8900	104.3800
	64.0000	BEND																								
14.0000			0.0000	0.0600	0.0000	0.0000	0.0500	0.0000	10.0000	10.1000	0.5400	0.0000	0.5400	2.5300	0.6900	35.3950	12.0000	PVC	0.0100	0.3000	103.2800	103.3800	106.2600	106.2700	104.3800	104.4200
	65.0000	BEND																								
	59.0000	BEND																								
15.0000			0.0000	0.1400	0.0000	0.0000	0.1300	0.0000	10.0000	10.1000	1.2700	0.0000	1.2700	1.1100	3.6400	4.0000	8.0000	PVC	0.0100	0.5000	103.5200	103.5400	107.0200	107.0500	104.4700	104.1400
	60.0000	BEND																								
16.0000			0.1400	0.1400	0.9000	0.1300	0.1300	10.0000	10.0000	10.1000	1.2700	0.0000	1.2700	1.1100	3.6400	4.0000	8.0000	PVC	0.0100	0.5000	103.5400	103.5600	107.2100	107.2300	104.1400	0.0000
	61.0000	BEND																								
	58.0000	BEND																								
17.0000			0.0000	0.2000	0.0000	0.0000	0.1800	0.0000	10.0000	10.1000	1.8100	0.0000	1.8100	1.1300	5.1900	4.2430	8.0000	PVC	0.0100	0.5200	103.4100	103.4300	106.7700	106.8300	104.4300	104.1000
	62.0000	BEND																								
18.0000			0.2000	0.2000	0.9000	0.1800	0.1800	10.0000	10.0000	10.1000	1.8100	0.0000	1.8100	1.1100	5.2000	4.0000	8.0000	PVC	0.0100	0.5000	103.4300	103.4500	107.1500	107.2000	104.1000	0.0000
	63.0000	BEND																								
	65.0000	BEND																								
19.0000			0.0000	0.0600	0.0000	0.0000	0.0500	0.0000	10.0000	10.1000	0.5400	0.0000	0.5400	0.6300	2.7700	4.2430	6.0000	PVC	0.0100	0.7500	103.3800	103.4100	106.2800	106.3000	104.4200	103.9100
	66.0000	BEND																								
20.0000			0.0600	0.0600	0.9000	0.0500	0.0500	10.0000	10.0000	10.1000	0.5400	0.0000	0.5400	0.6300	2.7700	4.0000	6.0000	PVC	0.0100	0.7500	103.4100	103.4400	106.3900	106.4100	103.9100	0.0000
	67.0000	BEND																								
	64.0000	BEND																								
21.0000			0.0000	0.0600	0.0000	0.0000	0.0500	0.0000	10.0000	10.1000	0.5400	0.0000	0.5400	0.6400	2.7700	4.2430	6.0000	PVC	0.0100	0.7800	103.2800	103.3100	106.2400	106.2700	104.3800	103.8700
	68.0000	BEND																								
22.0000			0.0600	0.0600	0.9000	0.0500	0.0500	10.0000	10.0000	10.1000	0.5400	0.0000	0.5400	0.6300	2.7700	4.0000	6.0000	PVC	0.0100	0.7500	103.3100	103.3400	106.3600	106.3800	103.8700	0.0000
	69.0000	BEND																								
	9.0000	GRATE																								
23.0000			0.0800	0.6300	0.6100	0.0500	0.5200	10.0000	12.2000	9.4000	4.8900	0.0000	4.8900	12.2000	1.0000	158.3300	30.0000	RCP	0.0130	0.0900	101.3500	101.4900	105.2700	105.2900	105.4400	108.8100
	21.0000	GRATE																								
24.0000			0.0500	0.5500	0.4200	0.0200	0.4700	10.0000	11.3000	9.7000	4.5600	0.0000	4.5600	7.8300	1.4500	83.4360	24.0000	RCP	0.0130	0.1200	102.4500	102.5500	105.3200	105.3500	108.8100	108.9800
	22.0000	GRATE																								
25.0000			0.0000	0.5000	0.0000	0.0000	0.4500	0.0000	11.2000	9.7000	4.3700	0.0000	4.3700	3.8300	3.5600	24.0320	15.0000	PVC	0.0100	0.2100	102.6200	102.6700	105.3700	105.4300	108.9800	103.6600
	47.0000	BEND																								
26.0000			0.0000	0.5000	0.0000	0.0000	0.4500	0.0000	11.1000	9.7000	4.3700	0.0000	4.3700	4.0800	3.5600	4.2430	15.0000	PVC	0.0100	0.2400	102.6700	102.6800	105.5800	105.5900	103.6600	103.6700
	48.0000	BEND																								
27.0000			0.0000	0.5000	0.0000	0.0000	0.4500	0.0000	10.9000	9.8000	4.4000	0.0000	4.4000	4.1400	3.5900	45.2800	15.0000	PVC	0.0100	0.2400	102.6800	102.7900	105.7400	105.8600	103.6700	103.8100
	49.0000	BEND																								
28.0000			0.0000	0.3000	0.0000	0.0000	0.2700	0.0000	10.6000	9.9000	2.6700	0.0000	2.6700	3.9800	2.1700	40.0000	15.0000	PVC	0.0100	0.2200	102.7900	102.8800	106.1400	106.1800	103.8100	103.9300
	50.0000	BEND																								
29.0000			0.0000	0.1500	0.0000	0.0000	0.1400	0.0000	10.0000	10.1000	1.3600	0.0000	1.3600	3.9800	1.1100	40.0000	15.0000	PVC	0.0100	0.2300	102.8800	102.9700	106.2900	106.3000	103.9300	104.0500
	51.0000	BEND																								
30.0000			0.0000	0.1500	0.0000	0.0000	0.1400	0.0000	10.0000	10.1000	1.3600	0.0000	1.3600	1.0800	3.9000	4.2430	8.0000	PVC	0.0100	0.4700	102.9700	102.9900	106.3200	106.3500	104.0500	103.7200
	52.0000	BEND																								
31.0000			0.1500	0.1500	0.9000	0.1400	0.1400	10.0000	10.0000	10.1000	1.3600	0.0000	1.3600	1.1100	3.9000	4.0000	8.0000	PVC	0.0100	0.5000	102.9900	103.0100	106.5200	106.5500	103.7200	0.0000
	53.0000	BEND																								
	50.0000	BEND																								
32.0000			0.0000	0.1500	0.0000	0.0000	0.1400	0.0000	10.0000	10.1000	1.3600	0.0000	1.3600	1.0800	3.9000	4.2430	8.0000	PVC	0.0100	0.4700	102.8500	102.8700	106.2400	106.2700	103.9300	103.6000
	54.0000	BEND																								
33.0000			0.1500	0.1500	0.9000	0.1400	0.1400	10.0000	10.0000	10.1000	1.3600	0.0000	1.3600	1.1100	3.9000	4.0000	8.0000	PVC	0.0100	0.5000	102.8300	102.8500	106.4500	106.4800	103.6000	0.0000
	55.0000	BEND																								
	49.0000	BEND																								
34.0000			0.0000	0.2000	0.0000	0.0000	0.1800	0.0000	10.0000	10.1000	1.8100	0.0000	1.8100	1.0800	5.1900	4.2430	8.0000	PVC	0.0100	0.4700	102.7900	102.8100	106.0100	106.0700	103.8100	103.4800
	56.0000	BEND																								
35.0000			0.2000	0.2000	0.9000	0.1800	0.1800	10.0000	10.0000	10.1000	1.8100	0.0000	1.8100	1.1100	5.2000	4.0000	8.0000	PVC	0.0100	0.5000	102.8100	102.8300	106.3900	106.4400	103.4800	0.0000
	57.0000	BEND																								

PIPE DESIGN CALCULATIONS

PIPE	STRUCTURE		AREA		RUNOFF COEFFICIENT			TIME								PIPE DESIGN							HGL RESULTS			
	3.0000	OUTFALL																								
36.0000			0.4700	2.5600	0.6900	0.3200	1.8600	10.0000	20.5000	7.6000	14.0800	0.0000	14.0800	17.5100	1.9900	101.5890	36.0000	RCP	0.0130	0.0700	102.3100	102.3800	105.3700	105.3800	106.2100	106.5300
	4.0000	GRATE																								
37.0000			0.4700	1.5900	0.7100	0.3300	1.1300	10.0000	18.0000	8.0000	9.0700	0.0000	9.0700	17.6200	1.2800	229.2110	36.0000	RCP	0.0130	0.0700	102.3800	102.5400	105.5100	105.5400	106.5300	106.5300
	5.0000	GRATE																								
38.0000			0.2200	0.8600	0.6500	0.1400	0.6400	10.0000	10.8000	9.8000	6.3100	0.0000	6.3100	17.5200	0.8900	173.9890	36.0000	RCP	0.0130	0.0700	102.5400	102.6600	105.5900	105.6100	106.5300	106.5300
	6.0000	GRATE																								
39.0000			0.6400	0.6400	0.7800	0.5000	0.5000	10.0000	10.0000	10.1000	5.0300	0.0000	5.0300	8.1400	1.6000	77.1670	24.0000	RCP	0.0130	0.1300	102.6600	102.7600	105.6200	105.6600	106.5300	107.1200
	7.0000	GRATE																								
	5.0000	GRATE																								
40.0000			0.0600	0.2600	0.3300	0.0200	0.1500	10.0000	14.3000	8.9000	1.3400	0.0000	1.3400	7.9800	0.4300	104.4750	24.0000	RCP	0.0130	0.1200	102.7000	102.8300	105.6000	105.6000	106.5300	109.0900
	19.0000	GRATE																								
41.0000			0.0800	0.2000	0.2900	0.0200	0.1300	10.0000	11.9000	9.5000	1.2500	0.0000	1.2500	7.7800	0.4000	59.1240	24.0000	RCP	0.0130	0.1200	102.8300	102.9000	105.6100	105.6100	109.0900	110.5300
	20.0000	GRATE																								
	4.0000	GRATE																								
42.0000			0.0800	0.5000	0.3600	0.0300	0.4100	10.0000	12.2000	9.4000	3.8300	0.0000	3.8300	7.7300	1.2200	77.0010	24.0000	RCP	0.0130	0.1200	102.4300	102.5200	105.5100	105.5300	106.5300	108.5700
	18.0000	GRATE																								
	20.0000	GRATE																								
43.0000			0.0000	0.1200	0.0000	0.0000	0.1100	0.0000	11.6000	9.6000	1.0400	0.0000	1.0400	2.4800	1.3200	24.4400	12.0000	PVC	0.0100	0.2900	102.9000	102.9700	105.6100	105.6300	110.5300	104.0500
	40.0000	BEND																								
44.0000			0.0000	0.1200	0.0000	0.0000	0.1100	0.0000	10.9000	9.8000	1.0600	0.0000	1.0600	2.5000	1.3500	54.8110	12.0000	PVC	0.0100	0.2900	102.9700	103.1300	105.6500	105.6800	104.0500	104.2100
	41.0000	BEND																								
45.0000			0.0000	0.0600	0.0000	0.0000	0.0500	0.0000	10.0000	10.1000	0.5400	0.0000	0.5400	2.5900	0.6900	35.2600	12.0000	PVC	0.0100	0.3100	103.1300	103.2400	105.7200	105.7200	104.2100	104.3200
	42.0000	BEND																								
	18.0000	GRATE																								
46.0000			0.0000	0.4200	0.0000	0.0000	0.3800	0.0000	12.2000	9.4000	3.5600	0.0000	3.5600	2.4300	4.5300	5.0300	12.0000	PVC	0.0100	0.4000	102.5200	102.5400	105.5700	105.6100	108.5700	103.6200
	23.0000	BEND																								
47.0000			0.0000	0.3500	0.0000	0.0000	0.3200	0.0000	11.7000	9.6000	3.0100	0.0000	3.0100	4.0600	2.4600	81.3850	15.0000	PVC	0.0100	0.2300	102.5400	102.7300	106.0800	106.1800	103.6200	103.8700
	24.0000	BEND																								
48.0000			0.0000	0.2200	0.0000	0.0000	0.2000	0.0000	11.0000	9.8000	1.9300	0.0000	1.9300	4.0100	1.5800	65.6670	15.0000	PVC	0.0100	0.2300	102.7300	102.8800	106.3100	106.3400	103.8700	104.0700
	25.0000	BEND																								
49.0000			0.0000	0.0900	0.0000	0.0000	0.0800	0.0000	10.0000	10.1000	0.8200	0.0000	0.8200	4.1200	0.6600	37.4170	15.0000	PVC	0.0100	0.2400	102.8800	102.9700	106.4000	106.4100	104.0700	104.1800
	26.0000	BEND																								
	42.0000	BEND																								
50.0000			0.0000	0.0600	0.0000	0.0000	0.0500	0.0000	10.0000	10.1000	0.5400	0.0000	0.5400	0.6100	2.7700	4.2430	6.0000	PVC	0.0100	0.7100	103.2400	103.2700	105.7300	105.7500	104.3200	103.8100
	43.0000	BEND																								
51.0000			0.0600	0.0600	0.9000	0.0500	0.0500	10.0000	10.0000	10.1000	0.5400	0.0000	0.5400	0.5300	2.7700	4.0000	6.0000	PVC	0.0100	0.7500	103.2700	103.3000	105.8400	105.8700	103.8100	0.0000
	44.0000	BEND																								
	26.0000	BEND																								
52.0000			0.0000	0.0900	0.0000	0.0000	0.0800	0.0000	10.0000	10.1000	0.8200	0.0000	0.8200	1.0800	2.3400	4.2430	8.0000	PVC	0.0100	0.4700	102.9700	102.9900	106.4100	106.4200	104.1800	103.8500
	27.0000	BEND																								
53.0000			0.0900	0.0900	0.9000	0.0800	0.0800	10.0000	10.0000	10.1000	0.8200	0.0000	0.8200	0.9300	2.3400	2.0000	8.0000	PVC	0.0100	0.5000	102.9900	103.0000	106.4900	106.4900	103.8500	0.0000
	28.0000	BEND																								
	41.0000	BEND																								
54.0000			0.0000	0.0600	0.0000	0.0000	0.0500	0.0000	10.0000	10.1000	0.5400	0.0000	0.5400	0.6200	2.7700	4.1490	6.0000	PVC	0.0100	0.7200	103.1300	103.1600	105.7000	105.7200	104.2100	103.7000
	45.0000	BEND																								
55.0000			0.0600	0.0600	0.9000	0.0500	0.0500	10.0000	10.0000	10.1000	0.5400	0.0000	0.5400	0.6300	2.7700	4.0000	6.0000	PVC	0.0100	0.7500	103.1600	103.1900	105.8100	105.8300	103.7000	0.0000
	46.0000	BEND																								
	25.0000	BEND																								
56.0000			0.0000	0.1300	0.0000	0.0000	0.1200	0.0000	10.0000	10.1000	1.1800	0.0000	1.1800	1.0800	3.3800	4.2430	8.0000	PVC	0.0100	0.4700	102.8800	102.9000	106.3700	106.3900	104.0700	103.7400
	29.0000	BEND																								
57.0000			0.1300	0.1300	0.9000	0.1200	0.1200	10.0000	10.0000	10.1000	1.1800	0.0000	1.1800	1.2500	3.3800	1.5740	8.0000	PVC	0.0100	0.6400	102.9000	102.9100	106.5300	106.5400	103.7400	0.0000
	30.0000	BEND																								
	18.0000	BEND																								
58.0000			0.0000	0.0700	0.0000	0.0000	0.0600	0.0000	11.6000	9.6000	0.6000	0.0000	0.6000	2.2500	0.7700	4.2430	12.0000	PVC	0.0100	0.2400	102.5400	102.5500	106.1600	106.1600	103.6200	103.6300
	33.0000	BEND																								
59.0000			0.0000	0.0700	0.0000	0.0000	0.0600	0.0000	11.0000	9.8000	0.6200	0.0000	0.6200	2.7300	0.7800	28.7190	12.0000	PVC	0.0100	0.3500	102.5500	102.6500	106.1700	106.1700	103.6300	103.7300
	34.0000	BEND																								
60.0000			0.0000	0.0500	0.0000	0.0000	0.0500	0.0000	10.1000	10.1000	0.4500	0.0000	0.4500	2.5800	0.5800	32.0780	12.0000	PVC	0.0100	0.3100	102.6500	102.7500	106.1800	106.1900	103.7300	103.8300
	35.0000	BEND																								
	24.0000	BEND																								
61.0000			0.0000	0.1300	0.0000	0.0000	0.1200	0.0000	10.0000	10.1000	1.1800	0.0000	1.1800	1.0800	3.3800	4.2430	8.0000	PVC	0.0100	0.4700	102.7300	102.7500	106.2500	106.2700	103.8700	103.5400
	31.0000	BEND																								
62.0000			0.1300	0.1300	0.9000	0.1200	0.1200	10.0000	10.0000	10.1000	1.1800	0.0000	1.1800	1.2500	3.3800	1.5740	8.0000	PVC	0.0100	0.6400	102.7500	102.7600	106.4100	106.4200	103.5400	0.0000
	32.0000	BEND																								
	35.0000	BEND																								
63.0000			0.0000	0.0500	0.0000	0.0000	0.0500	0.0000	10.0000	10.1000	0.4500	0.0000	0.4500	0.6100	2.3100	4.2430	6.0000	PVC	0.0100	0.7100	102.7500	102.7800	106.1900	106.2100	103.8300	103.3200
	36.0000	BEND																								
64.0000			0.0500	0.0500	0.9000	0.0500	0.0500	10.0000	10.0000	10.1000	0.4500	0.0000	0.4500	0.6300	2.3100	4.0030	6.0000	PVC	0.0100	0.7500	102.7800	102.8100	106.2700	106.2900	103.3200	0.0000
	37.0000	BEND																								
	34.0000	BEND																								
65.0000			0.0000	0.0200	0.0000	0.0000	0.0200	0.0000	10.1000	10.1000	0.1800	0.0000	0.1800	0.6100	0.9200	4.2430	6.0000	PVC	0.0100	0.7100	102.6500	102.6800	106.1800	106.1800	103.7300	103.2200
	38.0000	BEND																								
66.0000			0.0200	0.0200	0.9000	0.0200	0.0200	10.0000	10.0000	10.1000	0.1800	0.0000	0.1800	0.6300	0.9200	4.0000	6.0000	PVC	0.0100	0.7500	102.6800	102.7100	106.1900	106.2000	103.2200	0.0000
	39.0000	BEND																								

*NOTES:

LINES 5, 7 AND 8 WERE IMPLEMENTED INTO THE DESIGN ANALYSIS TO PROPERLY DESIGN THE CONVEYENCE WITHOUT A FLOW DELAY CAUSED BY DETENTION.
OUTFALL AT THE DOWN STREAM OF LINE 1 IS IN ACTUALLITY THE JUNCTION WITH THE EXISTING 24" PIPE.
OUTFALL AT THE DOWN STREAM OF LINE 36 IS IN ACTUALLITY THE JUNCTION WITH THE EXISTING 24" PIPE.

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REVISION	DATE	APPROVED BY	DESCRIPTION
4 ADD4	7/3/2019	TWG	ADDITIONAL INFORMATION PROVIDED

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PROPOSED

CITY OF PHARR
AQUATIC FACILITY

W SIOUX RD AND EXPRESSWAY 281
PHARR, TEXAS 78577

PROJECT 971805
DATE 6/07/2019
REVISED

C103
DRAINAGE AREA
CALCULATIONS

STORM SEWER STRUCTURE LIST	
STRUCTURE	STRUCTURE DETAILS
1	EXIST. 48" MANHOLE TOP=105.64 N = 16605872.34 E = 1087761.74 INV = 97.43 E
2	STD. 48" MANHOLE TOP = 106.40 N = 16605790.55 E = 1088292.13 INV = 98.70 W INV = 101.06 S INV = 98.70 E
3	TYPE 'C' INLET TOP = 105.71 N = 16605781.13 E = 1088354.97 INV = 98.86 W INV = 102.31 E
4	TYPE 'C' INLET TOP = 106.03 N = 16605766.08 E = 1088455.44 INV = 102.43 W INV = 102.43 E INV = 102.43 S
5	TYPE 'C' INLET TOP = 106.03 N = 16605732.11 E = 1088682.12 INV = 102.70 W INV = 102.70 E INV = 102.70 S
6	TYPE 'C' INLET TOP = 106.03 N = 16605706.33 E = 1088854.18 INV = 102.91 W INV = 102.91 S

STORM SEWER STRUCTURE LIST	
STRUCTURE	STRUCTURE DETAILS
7	TYPE 'C' INLET TOP = 107.12 N = 16605630.02 E = 1088842.75 INV = 103.00 N
8	TYPE 'C' INLET TOP = 104.94 N = 16605718.36 E = 1088281.31 INV = 101.15 N INV = 101.15 S
9	TYPE 'C-C' INLET TOP = 104.94 N = 16605551.95 E = 1088256.38 INV = 101.36 N INV = 101.36 S INV = 101.36 E
10	TYPE 'C' INLET TOP = 104.94 N = 16605356.40 E = 1088227.08 INV = 101.59 N INV = 101.59 S
16	TYPE 'C' INLET TOP = 107.12 N = 16605270.36 E = 1088788.88 INV = 103.08 S INV = 103.08 NW
17	TYPE 'C' INLET TOP = 108.25 N = 16605373.35 E = 1088709.27 INV = 103.24 SE INV = 103.24 W INV = 103.24 N

STORM SEWER STRUCTURE LIST	
STRUCTURE	STRUCTURE DETAILS
18	TYPE 'C' INLET TOP = 108.10 N = 16605689.88 E = 1088444.33 INV = 102.79 N INV = 102.52 E
19	TYPE 'C' INLET TOP = 108.50 N = 16605628.79 E = 1088666.83 INV = 102.83 N INV = 102.83 E
20	TYPE 'C' INLET TOP = 108.25 N = 16605613.40 E = 1088723.72 INV = 102.90 W INV = 102.90 SE
21	TYPE 'C' INLET TOP = 108.50 N = 16605528.49 E = 1088412.96 INV = 101.55 W INV = 102.45 S
22	TYPE 'C' INLET TOP = 108.25 N = 16605445.05 E = 1088413.18 INV = 102.55 N

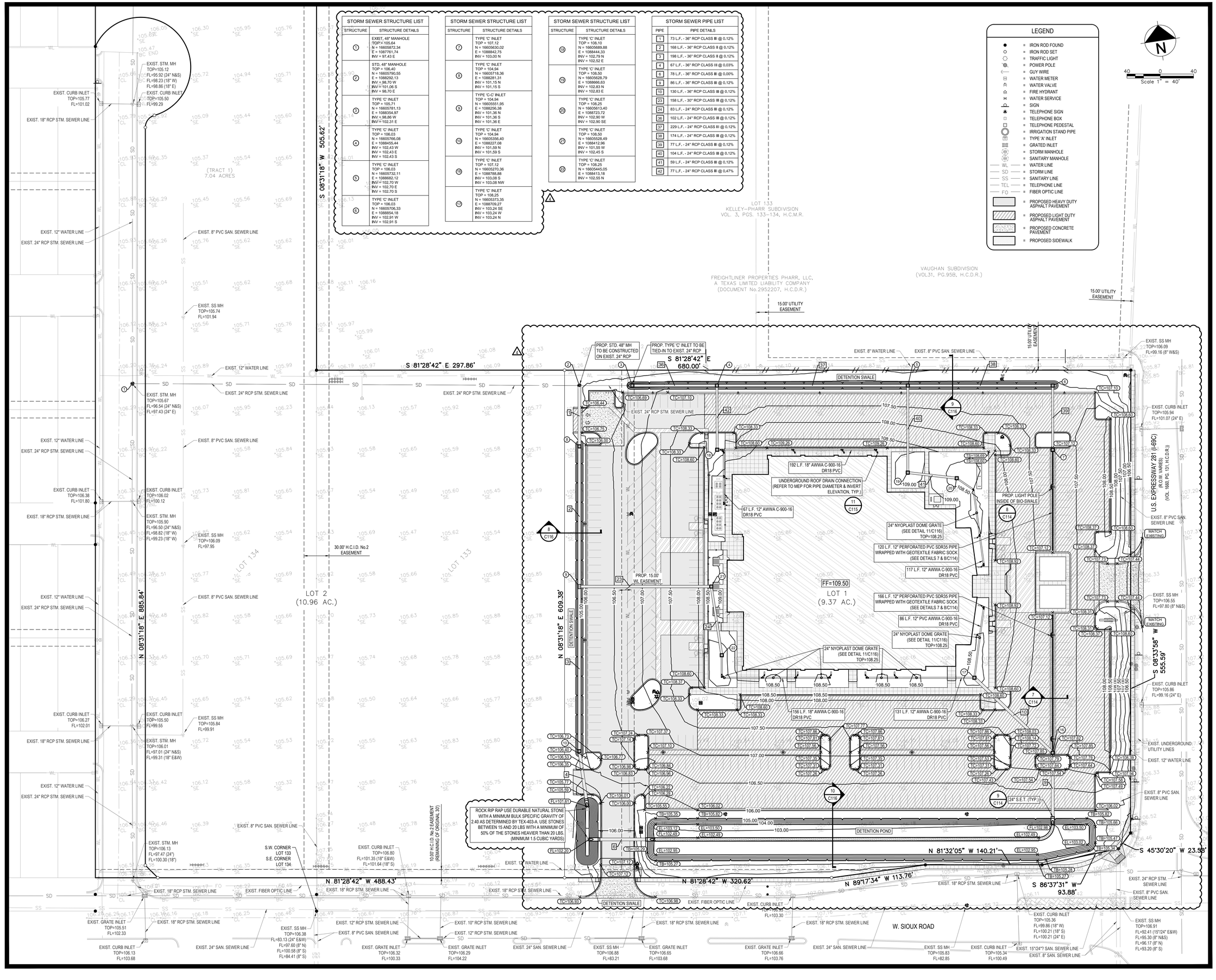
STORM SEWER PIPE LIST	
PIPE	PIPE DETAILS
1	73 L.F. - 36" RCP CLASS III @ 0.12%
2	168 L.F. - 36" RCP CLASS III @ 0.12%
3	198 L.F. - 36" RCP CLASS III @ 0.12%
4	67 L.F. - 36" RCP CLASS III @ 0.03%
6	78 L.F. - 36" RCP CLASS III @ 0.00%
9	86 L.F. - 36" RCP CLASS III @ 0.12%
10	130 L.F. - 36" RCP CLASS III @ 0.12%
23	158 L.F. - 30" RCP CLASS III @ 0.12%
24	83 L.F. - 24" RCP CLASS III @ 0.12%
36	102 L.F. - 24" RCP CLASS III @ 0.12%
37	229 L.F. - 24" RCP CLASS III @ 0.12%
38	174 L.F. - 24" RCP CLASS III @ 0.12%
39	77 L.F. - 24" RCP CLASS III @ 0.12%
40	104 L.F. - 24" RCP CLASS III @ 0.12%
41	59 L.F. - 24" RCP CLASS III @ 0.12%
42	77 L.F. - 24" RCP CLASS III @ 0.47%

LEGEND

- = IRON ROD FOUND
- = IRON ROD SET
- = TRAFFIC LIGHT
- = POWER POLE
- = GUY WIRE
- = WATER METER
- = WATER VALVE
- = FIRE HYDRANT
- = WATER SERVICE
- = SIGN
- = TELEPHONE SIGN
- = TELEPHONE BOX
- = TELEPHONE PEDESTAL
- = IRRIGATION STAND PIPE
- = TYPE 'A' INLET
- = GRATED INLET
- = STORM MANHOLE
- = SANITARY MANHOLE
- WL = WATER LINE
- SD = STORM LINE
- SS = SANITARY LINE
- TEL = TELEPHONE LINE
- FO = FIBER OPTIC LINE
- = PROPOSED HEAVY DUTY ASPHALT PAVEMENT
- = PROPOSED LIGHT DUTY ASPHALT PAVEMENT
- = PROPOSED CONCRETE PAVEMENT
- = PROPOSED SIDEWALK

N

40 0 40
Scale 1" = 40'



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PROPOSED

CITY OF PHARR AQUATIC FACILITY

W SIOUX RD AND EXPRESSWAY 281
PHARR, TEXAS 78577

PROJECT 971805
DATE 6/07/2019
REVISED

C104
GRADING AND DRAINAGE PLAN

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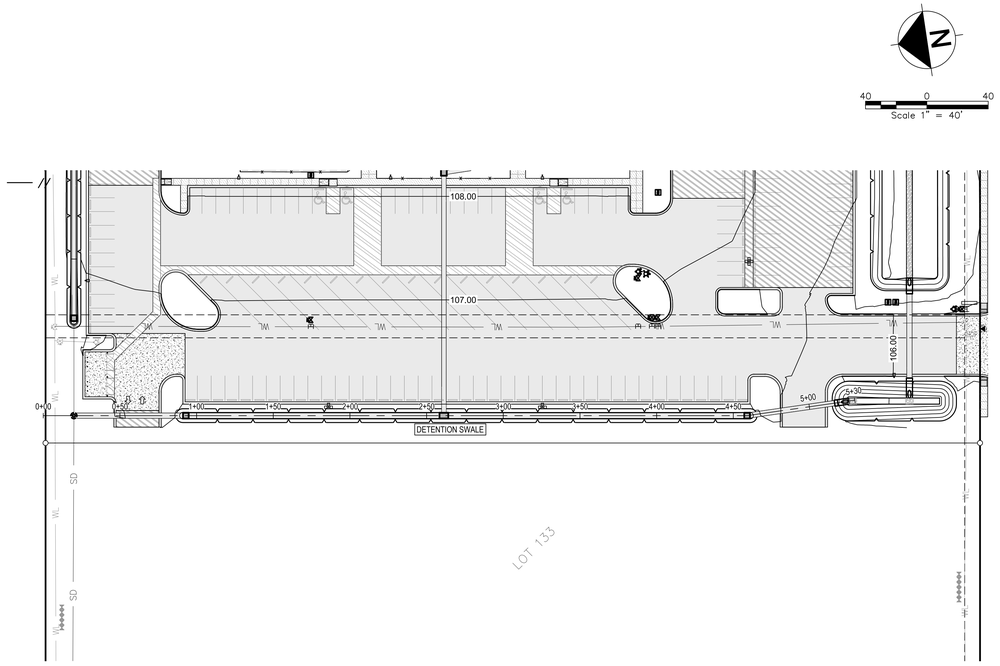
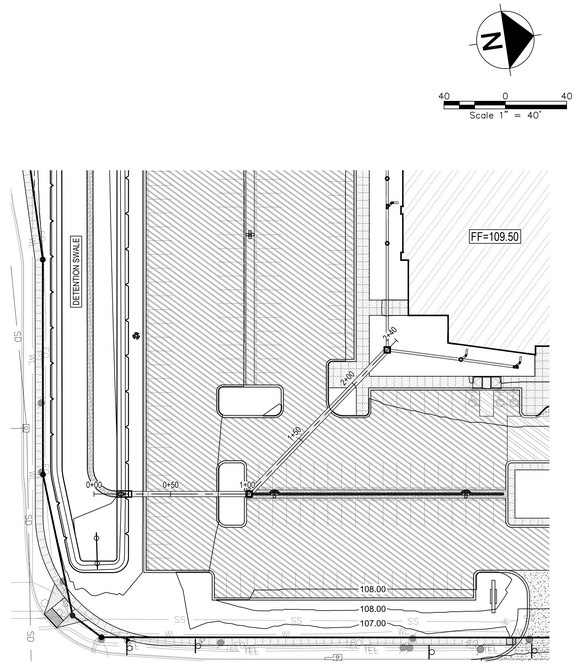
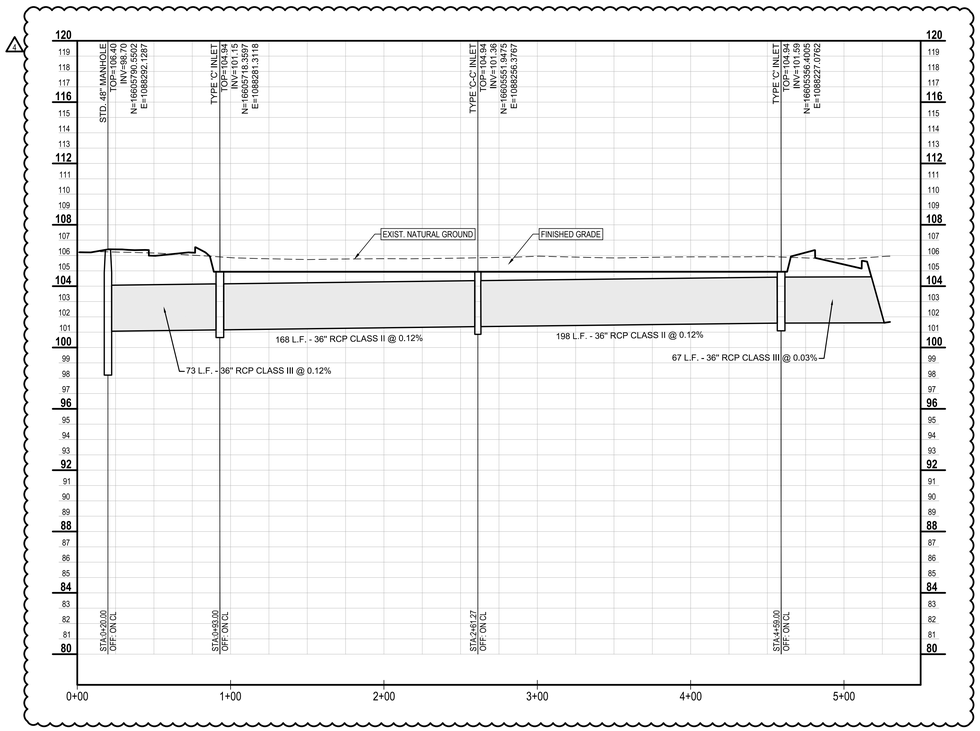
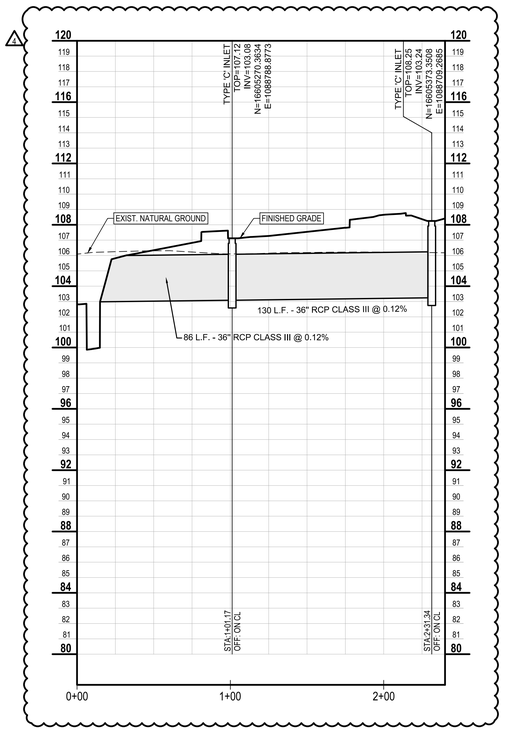


STORM SEWER LINE 'B' PROFILE
SCALE H: 1" = 40'
V: 1" = 4'



STORM SEWER LINE 'C' PROFILE
SCALE H: 1" = 40'
V: 1" = 4'





LEGEND

- = TRAFFIC LIGHT
- = POWER POLE
- = GUY WIRE
- = WATER METER
- = WATER VALVE
- = FIRE HYDRANT
- = WATER SERVICE
- = SIGN
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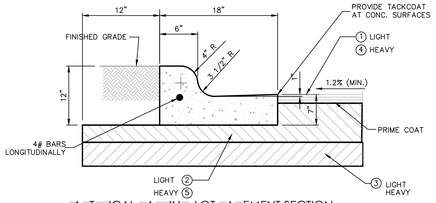
W SIOUX RD AND EXPRESSWAY 281
PHARR, TEXAS 78577

PROJECT	971805
DATE	6/07/2019
REVISED	

C106
STORM SEWER LINE
'B' & 'C'



TYPICAL PAVEMENT IN LOT PAVEMENT SECTION

KEYED NOTES:

1. PROPOSED 2.0 INCHES OF HOT MIX ASPHALTIC CONCRETE SURFACE COURSE WITH LIMESTONE AGGREGATES AND FILLERS TYPE D ITEM 340 (2014 TxDOT STANDARD SPECIFICATIONS) COMPACTION TO WITHIN AN AIR VOID RANGE OF 5 TO 9 PERCENT FROM MAXIMUM THEORETICAL GRAVITY PER TxDOT TEX-227-F.
2. PROPOSED 8 INCHES CALICHE TREATED GRAVEL FLEXIBLE BASE MATERIAL COMPOSED OF CRUSHED OR UNCRUSHED GRAVEL TYPES B OR C GRADES 1-3 ITEM 247 (2014 TxDOT STANDARD SPECIFICATIONS) COMPACTED TO 98 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY MODIFIED MOISTURE-DENSITY RELATIONSHIP (A.S.T.M. 1557) AT MOISTURE CONTENT WITHIN 2 PERCENT OF OPTIMUM MOISTURE.
3. 6 INCHES OF COMPACTED STABILIZED SUBGRADE TREATED WITH 2 PERCENT LIME IN ACCORDANCE TO ITEM 260 (2004 TxDOT STANDARD SPECIFICATIONS) COMPACTED TO 95 PERCENT OF THE STANDARD EFFORT (ASTM D648) MAXIMUM DRY DENSITY WITHIN 2 PERCENT OF THE OPTIMUM MOISTURE CONTENT.
4. PROPOSED 2.5 INCHES OF HOT MIX ASPHALTIC CONCRETE SURFACE COURSE WITH LIMESTONE AGGREGATES AND FILLERS TYPE D ITEM 340 (2014 TxDOT STANDARD SPECIFICATIONS) COMPACTION TO WITHIN AN AIR VOID RANGE OF 5 TO 9 PERCENT FROM MAXIMUM THEORETICAL GRAVITY PER TxDOT TEX-227-F.
5. PROPOSED 10 INCHES CALICHE TREATED GRAVEL FLEXIBLE BASE MATERIAL COMPOSED OF CRUSHED OR UNCRUSHED GRAVEL TYPES B OR C GRADES 1-3 ITEM 247 (2014 TxDOT STANDARD SPECIFICATIONS) COMPACTED TO 98 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY MODIFIED MOISTURE-DENSITY RELATIONSHIP (A.S.T.M. 1557) AT MOISTURE CONTENT WITHIN 2 PERCENT OF OPTIMUM MOISTURE.

FLEXIBLE BASE MATERIAL REQUIREMENTS

MATERIAL TYPES. DO NOT USE FILLERS OR BINDERS UNLESS APPROVED. FURNISH THE TYPE SPECIFIED ON THE PLANS IN ACCORDANCE WITH THE FOLLOWING.

TYPE A. CRUSHED STONE PRODUCED AND GRADED FROM OVERSIZE QUARRIED AGGREGATE THAT ORIGINATES FROM A SINGLE, NATURALLY OCCURRING SOURCE. DO NOT USE GRAVEL OR MULTIPLE SOURCES.

TYPE B. CRUSHED OR UNCRUSHED GRAVEL. BLENDING OF 2 OR MORE SOURCES IS ALLOWED.

TYPE C. CRUSHED GRAVEL WITH A MINIMUM OF 60% OF THE PARTICLES RETAINED ON A NO. 4 SIEVE WITH 2 OR MORE CRUSHED FACES AS DETERMINED BY TEX-460-A, PART I. BLENDING OF 2 OR MORE SOURCES IS ALLOWED.

TYPE D. TYPE A MATERIAL OR CRUSHED CONCRETE. CRUSHED CONCRETE CONTAINING GRAVEL WILL BE CONSIDERED TYPE D MATERIAL. CRUSHED CONCRETE MUST MEET THE REQUIREMENTS IN SECTION 247.2.1.3.2. (2014 TXDOT STANDARD SPECIFICATIONS MANUAL), "RECYCLED MATERIAL (INCLUDING CRUSHED CONCRETE) REQUIREMENTS," AND BE MANAGED IN A WAY TO PROVIDE FOR UNIFORM QUALITY. THE ENGINEER MAY REQUIRE SEPARATE DEDICATED STOCKPILES IN ORDER TO VERIFY COMPLIANCE.

TYPE E. CALICHE MATERIAL (AGGILLACEOUS LIMESTONE, CALCEROUS OR CALCEROUS CLAY PARTICLES). IF MATERIAL REQUIRES THE ADDITION OF LIME OR CEMENT TO MEET STRENGTH REQUIREMENTS FOR GRADE 4. THE COST FOR PERCENT LIME OR CEMENT TO BE ADDED SHALL BE SUBSIDIARY TO THE FLEXIBLE BASE UNIT PRICE AND INCLUDED WITH THE FINAL COST FOR PLACEMENT OF THE FLEXIBLE BASE.

GENERAL NOTES:

(A) CONCRETE CURB AND GUTTER SHALL BE PLACED ON AN APPROVED FOUNDATION CONFORMING TO THE REQUIREMENTS OF THE FLEXIBLE BASE SPECIFICATIONS

(B) THE PERCENT OF DENSITY AS DETERMINED BY COMPACTION RATIO (TEX-113-E) FOR THE NEW FLEXIBLE BASE SHALL BE A MINIMUM OF 98%

(C) THE CONTRACTOR'S ATTENTION IS CALLED TO THE FACT THAT CERTAIN EXISTING AND/OR PROPOSED STRUCTURES MAY BE WITHIN THE LIMITS OF THE FLEXIBLE BASE AND TREATED SUBGRADE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PERFORM CONSTRUCTION OPERATIONS WITHOUT DAMAGE TO THESE STRUCTURES.

(D) MOISTURE CONTENT ON FLEX BASE MATERIAL SHALL BE TESTED IN ACCORDANCE WITH (A.S.T.M. 1557 AND GT EX-103-E).

(E) TREAT NEWLY CONSTRUCTED FLEX BASE SURFACE WITH MC-30 ASPHALT MATERIAL MEETING REQUIRMENT OF ITEM 300 (TxDOT STANDARD SPECIFICATIONS) AT A RATE OF 0.22 TO 0.50 GAL/SY BEFORE PLACEMENT OF H.M.A.C. SURFACE.

(F) THE CONTRACTOR SHALL EXERCISE DILIGENCE IN THE APPLICATION OF ASPHALT BY THE USE OF FLAGGING AND ROLLING PROCEDURES TO KEEP FROM SPRAYING OR SPLATTERING THE TRAVELING PUBLIC WITH ASPHALTIC MATERIAL.

(G) TACK COAT LAYER SHALL BE APPLIED BETWEEN H.M.A.C. LIFTS BETWEEN CONCRETE STRUCTURES AND ASPHALT AND SHALL BE SUBSIDIARY TO ASPHALT SURFACE COURSE ITEM.

(H) TACK COAT BINDERS INCLUDE CSS-1H, SS-1H, AND PG 64-22.

(J) ALL CONCRETE SHALL BE TYPE A(2004 TXDOT SPECS) AND HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI @ 28 DAYS.

(K) AT THE EXPENSE OF THE CONTRACTOR AND TO THE SATISFACTION OF THE ENGINEER, REMOVE AND REPLACE ANY HOT MIX ASPHALTIC CONCRETE SURFACE COURSE THAT DOES NOT BOND OR THAT HAS IRREGULARITIES SUCH AS SEGREGATION, RUTTING, RAVELING, FLUSHING FATSPOTS, MAT SLIPPAGE, COLOR, TEXTURE, ROLLER MARKS, TEARS, GOUGES, STREAKS, OR UNCOATED AGGREGATED PARTICLES OR SURFACE THAT DO NOT MEET TYPE A SURFACE RIDE QUALITY IN ACCORDANCE TO ITEM 585 OF TECHNICAL SPECIFICATIONS.

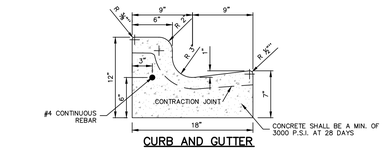
(L) IF IT IS NECESSARY TO USE ADDITIVES TO THE FLEXIBLE BASE MATERIAL TO MEET STANDARD SPECIFICATIONS, THE AMOUNT OF THE ADDITIVE SHOULD BE LIMITED TO AVOID A RIGID BASE.

(M) THE SPECIFIED PERCENT OF LIME IS FOR ESTIMATING AND PLANNING. THE ACTUAL QUANTITY OF LIME REQUIRED SHOULD BE DETERMINED AT THE TIME OF CONSTRUCTION BY LABORATORY TESTS ON BULK SAMPLES OF THE SUBGRADE SOILS.

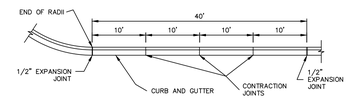
PROPERTY	TEST METHOD	GRADE 1	GRADE 2	GRADE 3	GRADE 4	GRADE 5
Master gradation sieve size (% retained)	Tex-110-E					
2-1/2 inches		0	0	0	–	0
2 inches		–	–	–	0	–
1-3/4 inches		0-10	0-10	0-10	–	0-5
7/8 inches		10-35	10-35	–	–	10-35
1/2 inches		–	–	–	20-60	–
3/8 inches		30-65	30-65	–	–	35-65
No. 4		45-75	45-75	45-75	40-75	45-75
No. 40		65-90	65-90	50-85	70-90	70-90
Liquid limit, % max. (see note 1)	Tex-104-E	40	40	40	–	35
Plastic index, max. (see note 1)	Tex-106-E	10	10	12	15	10
Plastic index, min. (see note 1)		AS SHOWN ON THE PLANS				
Wet ball mill, % max. (see note 2)	Tex-116-E	40	40	–	50	40
Wet ball mill, % max. increase passing the No. 40 sieve.		20	20	–	–	20
Classification (see note 3)	Tex-117-E	1.0	1.1-2.3	–	–	–
Min. compressive strength, psi (see note 3)						
lateral pressure 0 psi		35	35	–	–	–
lateral pressure 3 psi		–	–	–	–	90
lateral pressure 15 psi		175	175	–	150	175

1. DETERMINE PLASTIC INDEX IN ACCORDANCE WITH TEX-107-E (LINEAR SHRINKAGE) WHEN LIQUID LIMIT IS UNATTAINABLE AS DEFINED IN TEX-104-E.
2. WHEN A SOUNDNESS VALUE IS REQUIRED BY THE PLANS, TEST MATERIAL IN ACCORDANCE WITH TEX-411-A.
3. MEET BOTH THE CLASSIFICATION AND THE MINIMUM COMPRESSIVE STRENGTH, UNLESS OTHERWISE SHOWN ON THE PLANS.

1 TYPICAL ASPHALT PARKING LOT PAVEMENT SECTION
NOT TO SCALE



CURB AND GUTTER

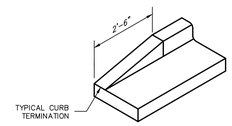


TYPICAL JOINTS

GENERAL NOTES:

1. ALL CONCRETE WORK SHALL BE TREATED WITH MEMBRANE CURING COMPOUND TYPE 2 WHITE PIGMENTED IN ACCORDANCE w/ TXDOT 1972 SPECIFICATIONS ITEM 531. CONSIDERED INCIDENTAL TO CONCRETE WORK.
2. 1/2" EXPANSION JOINTS REQUIRED AT 40' c.c. AND AT THE BEGINNING AND END OF ALL RADII. CONTRACTION JOINTS SHALL NOT EXCEED 10' c.c. (SEE SPECIFICATIONS FOR JOINT MATERIAL)

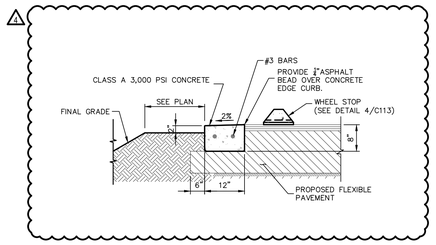
2 CURB AND GUTTER DETAIL



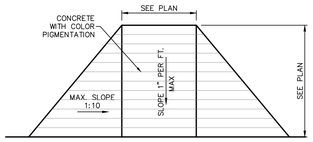
NOTES:

1. PROVIDE 1/2" EXPANSION JOINT @ 10'-0" O.C. 2. ALL EXPOSED SURFACES SHALL BE STRIPPED GREEN TROWELD AND CURB EDGING RUBBED SMOOTH.
2. 3000 psi CONCRETE

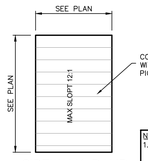
3 TYPICAL CURB TERMINATION
NOT TO SCALE



4 TYPICAL CONCRETE EDGE CURB DETAIL
NOT TO SCALE



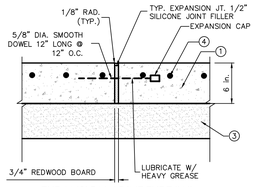
SIDEWALK RAMP



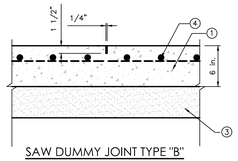
SIDEWALK RAMP

NOTE:
1. RAMPS SHALL BE GROOVED 1/4" DEEP, 3/4" WIDE AND 2" APART. COLOR PIGMENTATION SHALL BE ADDED TO THE CONCRETE AS COLOR CONTRASTING AGENT, "MALAYAN BUFF", OF DIRECT COLORS OR APPROVED EQUAL SHALL BE UTILIZED. ALL AS PER TEXAS ACCESSIBILITY STANDARDS (T.A.S.).
2. MAXIMUM PERMISSIBLE SLOPE = 12:1
3. USE 3000 PSI CONCRETE

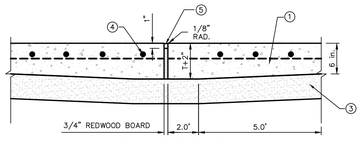
5 RAMP DETAILS
NOT TO SCALE



EXPANSION JOINT TYPE "A"



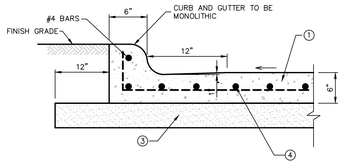
SAW DUMMY JOINT TYPE "B"



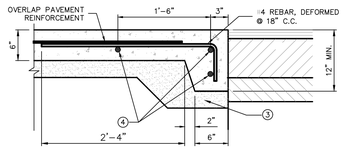
ISOLATION JOINT TYPE "C"

SPACING OF CONTROL JOINTS IN FEET

SLAB THICKNESS, IN.	SLUMP 4 TO 6 IN. MAXIMUM-SIZE AGGREGATE LESS THAN 3/4 IN.	SLUMP 4 TO 6 IN. MAXIMUM-SIZE AGGREGATE 3/4 IN. AND LARGER	SLUMP LESS THAN 4 IN.
5	10	12.5	15
6	12	15	18
7	14	18	21
8	16	20	24
9	18	23	27
10	20	25	30



CONCRETE PAVEMENT SECTION



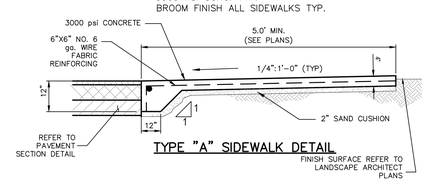
PAVEMENT TERMINATION DETAIL

KEYED NOTES:

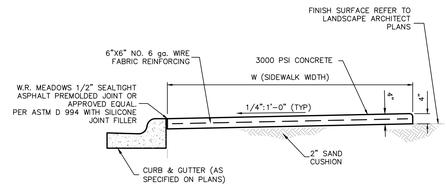
1. PROPOSED 6 INCHES REINFORCED CONCRETE PAVEMENT WITH A MINIMUM 28 DAY COMPRESSIVE STRENGHT OF 4000 P.S.I. MATERIALS AND PROPERTIES SHALL MEET APPLICABLE REQUIREMENTS IN THE ACI MANUAL OF CONCRETE PRACTICE.
2. ~~PROPOSED 4 INCHES CALICHE TREATED GRAVEL FLEXIBLE BASE MATERIAL COMPOSED OF CRUSHED OR UNCRUSHED GRAVEL TYPES B OR C GRADES 1-3 ITEM 247 (2014 TxDOT STANDARD SPECIFICATIONS) COMPACTED TO 98 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY MODIFIED MOISTURE-DENSITY RELATIONSHIP (A.S.T.M. 1557) AT MOISTURE CONTENT WITHIN 2 PERCENT OF OPTIMUM MOISTURE.~~ 1
3. 6 INCHES OF COMPACTED STABILIZED SUBGRADE TREATED WITH 2 PERCENT LIME IN ACCORDANCE TO ITEM 260 (2004 TxDOT STANDARD SPECIFICATIONS) COMPACTED TO 95 PERCENT OF THE STANDARD EFFORT (ASTM D648) MAXIMUM DRY DENSITY WITHIN 2 PERCENT OF THE OPTIMUM MOISTURE CONTENT.
4. REINFORCEMENT SHALL CONSIST OF THE FOLLOWING: NUMBER 4 BARS SPACED AT 18 INCHES ON CENTER IN BOTH DIRECTIONS
5. EXPANSION SILICONE JOINT FILLER/SEALER.
6. 80 MM TRAFFIC RATED CONCRETE PAVERS BY INOVATIVE BLOCK OR APPROVED EQUAL.
7. JOINT SAND FILLER MATERIAL AS PER MANUFACTURER'S RECOMMENDATIONS AND TO CONFORM TO GRADING REQUIREMENTS OF ASTM C 144.
8. 1 TO 1¼ INCH BEDDING SAND MATERIAL CONFORMING WITH GRADING REQUIREMENTS OF ASTM C 33.
9. 8 INCH WIDE PRECAST FIBER REINFORCED POLYMER BODY TRENCH DRAIN SYSTEM WITH HEAVY DUTY STEEL FRAME AND TRAFFIC RATED ADA APPROVED 10 INCH WIDE DUCTILE IRON GRATE BY DURATRENCH (MODEL DTPF-0.5-10C24CI-HDP). OR APPROVED EQUAL

6 TYPICAL REINFORCED CONCRETE PAVEMENT SECTION & JOINT DETAILS
NOT TO SCALE

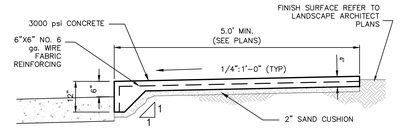
NOTE: EXPANSION JOINTS @ 20' O.C. TYP.
W/ ASPHALTIC MATERIAL (1/2") 1/4"
"DUMMY JOINTS" (CONTROL JOINTS) @ 5' O.C.
3000 PSI CONC. TYP.
BROOM FINISH ALL SIDEWALKS TYP.



TYPE "A" SIDEWALK DETAIL

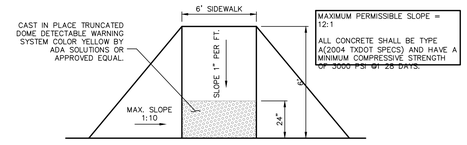


TYPE "B" SIDEWALK DETAIL



TYPE "C" SIDEWALK DETAIL

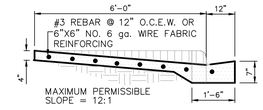
7 SIDEWALK DETAILS
NOT TO SCALE



MAXIMUM PERMISSIBLE SLOPE = 12:1

ALL CONCRETE SHALL BE TYPE A(2004 TXDOT SPECS) AND HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI @ 28 DAYS.

SIDEWALK RAMP ALONG CURB DETAIL



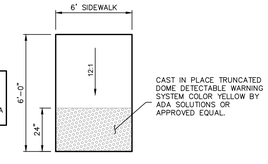
MAXIMUM PERMISSIBLE SLOPE = 12:1

USE 3000 PSI CONCRETE

SECTION VIEW
NOT TO SCALE

MAXIMUM PERMISSIBLE SLOPE = 12:1

ALL CONCRETE SHALL BE TYPE A(2004 TXDOT SPECS) AND HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI @ 28 DAYS.



SIDEWALK RAMP

8 SIDEWALK RAMP DETAILS
NOT TO SCALE

THE WARREN GROUP ARCHITECTS, INC.
1801 SOUTH SECOND ST.
SUITE 330
McALLEN, TX 78503
956.994.1900
twgarch.com

STATE OF TEXAS
JORGE D. PEREZ
34594
REGISTERED PROFESSIONAL ENGINEER
7/3/19

REVISION	DATE	APPROVED BY	DESCRIPTION
1 ADD4	7/3/2019	TWG	ADDITIONAL INFORMATION PROVIDED

PCE Perez Consulting Engineers
Texas Registered Engineering Firm F-2158
808 Dallas Ave. McAllen, Texas 78501
(956) 631-4482 fax (956) 682-1545

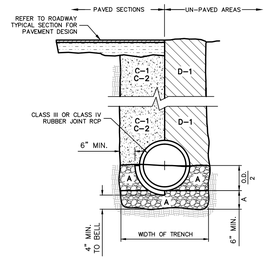
PROPOSED

CITY OF PHARR
AQUATIC FACILITY

W SIOUX RD AND EXPRESSWAY 281
PHARR, TEXAS 78577

PROJECT 971805
DATE 6/07/2019
REVISED

C111
TYPICAL DETAILS



GENERAL NOTES:

1. BACKFILL THE EXCAVATION AFTER PAVEMENT OF THE PERMANENT STRUCTURE. USE BACKFILL FREE FROM STONES LARGE ENOUGH TO INTERFERE WITH COMPACTION; LARGE OR FROZEN JUMPS THAT WILL NOT BRAKE DOWN READILY UNDER COMPACTING; A WOOD OR OTHER EXTRANEOUS MATERIAL. OBTAIN BACKFILL MATERIAL FROM EXCAVATION OR FROM OTHER SOURCES. CONTRACTOR SHALL REFER TO SECTION 02221 OF SPECIFICATIONS. BEFORE CONSTRUCTION.

2. WIDTH OF TRENCH

INSIDE DIAMETER OF PIPE (INCHES)	WIDTH OF TRENCH AT TOP OF PIPE (INCHES)
12 – 33	O.D. + 16
36 – 78	O.D. + 24
80 AND LARGER	O.D. + 30

3. PROVIDE PRECAST REINFORCED CONCRETE PIPE THAT CONFORMS TO THE DESIGN SHOWN ON THE PLANS AND TO ASTM C76

4. BACKFILL SHALL BE CLEAR OF ORGANIC MATERIALS, CONSTRUCTION DEBRIS OR TRASH. IT SHALL MEET THE FOLLOWING STANDARDS.

A – ANGULAR CRUSHED STONE OR ROCK OR CRUSHED GRAVEL. 100% PASSING 1 1/2" SIEVE, LESS THAN 10% PASSING NO. 4 SIEVE AND LESS THAN 5% PASSING NO. 200 SIEVE.

C-1 SELECT BACKFILL OR COHESIONLESS MATERIAL / SAND

SELECT BACKFILL – EXCAVATED MATERIAL BACKFILL OR CLEAN LOCAL MATERIAL CONSISTENT WITH THE SURROUNDING EARTH MATERIAL MAY BE USED (REFER TO SECTION 02221 OF SPECIFICATIONS) . PLACE BACKFILL IN UNIFORM LAYERS AT MOST 10 IN. DEEP (LOOSE MEASUREMENT) COMPACT EACH LAYER TO 95% STD PROCTOR DENSITY (ASTM D-698 & ASTM 4253) BRING EACH LAYER OF BACKFILL MATERIAL TO THE MOISTURE CONTENT NEEDED TO OBTAIN THE REQUIRED DENSITY. COMPACT EACH LIFT MECHANICALLY (ROLLERS MAY BE USED IF FEASIBLE).

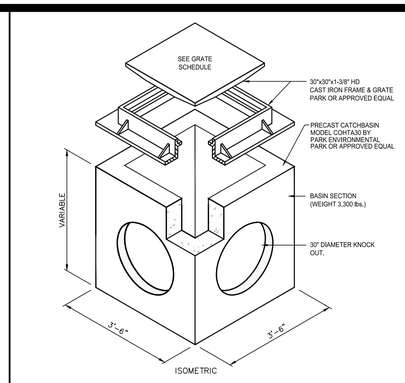
COHESIONLESS MATERIAL / SAND – USE WELL GRADED OR POORLY GRADED SANDS WITH MORE THAN 50% PASSING No. 4 SIEVE BUT LESS THAN 12% PASSING No. 200 SIEVE AND HAVE A PLASTICITY INDEX LESS THAN 4. PLACE SAND IN UNIFORM LAYERS AT MOST 10 IN. DEEP. COMPACT MATERIAL USING VIBRATORY EQUIPMENT OR MECHANICAL EQUIPMENT. WATER POUNDING / WATER JETTING WILL BE ALLOWED ONLY IF APPROVED IN WRITING BY THE CITY OR ENGINEER. (ASTM D-1557 OR TX 113-E)

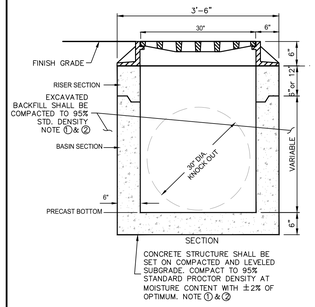
C-2 SAND CEMENT STABILIZED BACKFILL WITH 7% PORTLAND CEMENT, AS PER ITEM 400 SECTION 400.3.C OF THE 2000 TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.

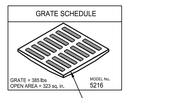
D-1 SELECT BACKFILL – PLACE BACK FILL IN UNIFORM LAYERS AT MOST 12 IN. DEEP. COMPACT EACH LAYER TO 90% STD PROCTOR DENSITY. COMPACT EACH LIFT MECHANICALLY (ROLLERS MAY BE USED IF FEASIBLE).

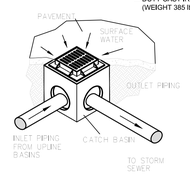
1 TYPICAL REINFORCED R.C.P. STORM SEWER TRENCH DETAIL

NOT TO SCALE









NOTES:

① BRING EACH LAYER (10 INCHES DEEP) TO THE MOISTURE CONTENT NEEDED TO OBTAIN THE REQUIRED DENSITY. USE MECHANICAL TAMPS OR RAMMERS TO COMPACT EXCAVATED BACKFILL.

② COHESIONLESS MATERIAL SUCH AS SAN MAY BE USED FOR BACKFILLING, COMPACT COHESIONLESS MATERIALS USING VIBRATORY EQUIPMENT.

SPECIFICATIONS

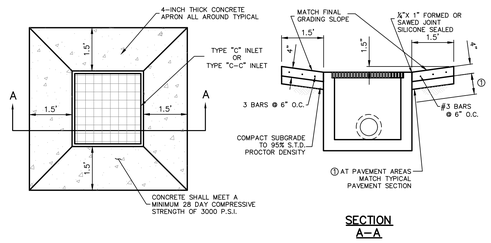
CONCRETE : Class 1 concrete with of design strength of 4500 PSI at 28 days. Unit is of monolithic construction at floor and first stage of wall with sectional riser to required depth. Rated for H-20 Loading.

REINFORCEMENT: Grade 60 reinforced with steel rebar to conform to ASTM A615 on required centers or equal.

C.I. CASTINGS: Cast iron frames and grates are manufactured of gray cast iron conforming to ASTM A48-76 Class 30.

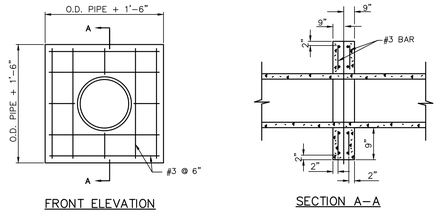
2 PRECAST TY. C GRATE INLET (PARK OR APPROVED EQUAL)

NOT TO SCALE



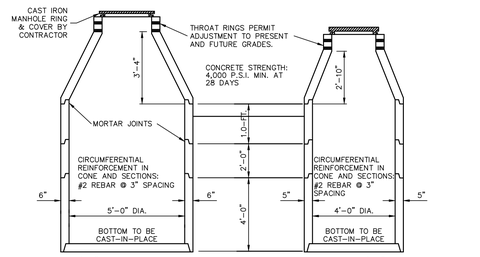
3 CONCRETE APRON AT GRATE INLET DETAIL

NOT TO SCALE



4 CONCRETE PIPE COLLAR DETAIL

NOT TO SCALE



WEIGHTS OF 5'-0" DIA. MANHOLE

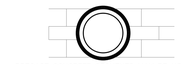
THROAT RING	90 LBS.
CONE SECTION	2800 LBS.
1'-0" SECTION	1329 LBS.
2'-0" SECTION	2658 LBS.
3'-0" SECTION	3987 LBS.
4'-0" SECTION	5316 LBS.

MANHOLES SECTIONS ARE CAST IN

1'-0" LENGTHS
2'-0" LENGTHS
3'-0" LENGTHS
4'-0" LENGTHS

WEIGHTS OF 4'-0" DIA. MANHOLE

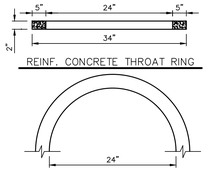
THROAT RING	90 LBS.
CONE SECTION	1750 LBS.
1'-0" SECTION	875 LBS.
2'-0" SECTION	1750 LBS.
3'-0" SECTION	2625 LBS.
4'-0" SECTION	3500 LBS.



PRECAST CONCRETE SEGMENTS MAY BE USED ON LARGER DIAMETER PIPELINES IN LIEU OF BREAKING OUT LARGE HOLES IN PRECAST SECTIONS.

SEGMENTAL BLOCK

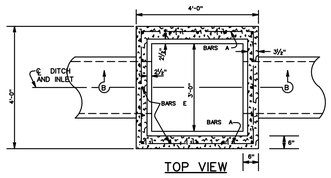
5'-0" DIA. – 15 BLOCKS FULL CIRCLE
4'-0" DIA. – 12 BLOCKS FULL CIRCLE



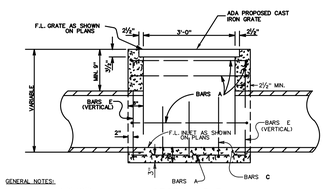
REINF. CONCRETE THROAT RING

5 CIRCULAR CONCRETE MANHOLE DETAILS (STORM SEWERS)

NOT TO SCALE



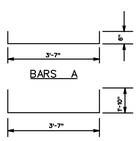
TOP VIEW



GENERAL NOTES:
1. TY "C" INLET TO BE USED FOR PIPES LESS OR EQUAL TO 24"
2. USE GALVANIZED STEEL IN ALL INLET GRATES.

SECTION B-B

INLET TY "C"

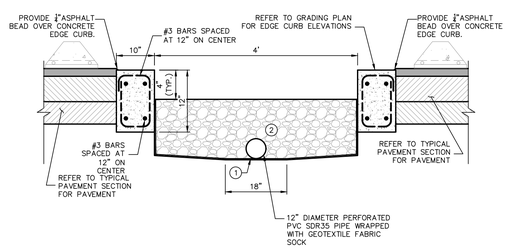


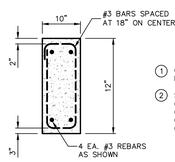
REINFORCING STEEL DETAILS

NOTE: ALL STEEL TO BE NO. 4 BARS ON 12" SPACING IN BOTH DIRECTIONS

6 TYPE "C" INLET DETAIL (CAST IN PLACE)

NOT TO SCALE



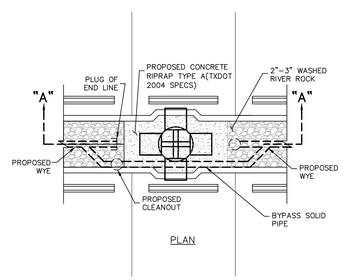


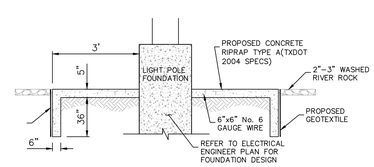
① GEOTEXTILE FABRIC AS SPECIFIED ON STANDARD SPECIFICATIONS ITEM 322262.

② SURFACE AGGREGATE 3" TO 5" DIAMETER CRUSHED STONE AND GRADED FROM AN OVERSIZED QUARRIED AGGREGATE THAT ORIGINATES FROM A SINGLE, NATURALLY OCCURRING SOURCE OR CRUSHED OR UNCRUSHED GRAVEL. BROKEN CONCRETE OR CONGLOMERATES WILL NOT BE ACCEPTABLE.

7 BIO-FILTRATION/DETENTION BASIN TYPICAL DETAIL

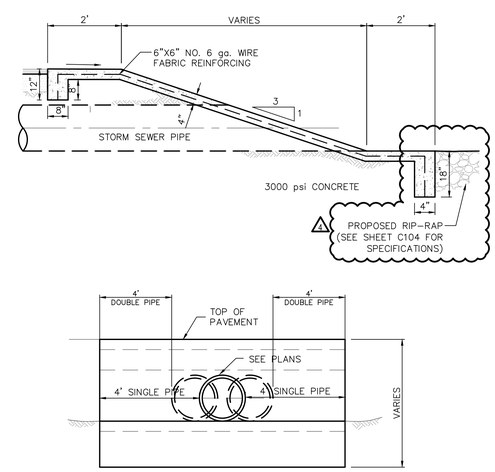
NOT TO SCALE





8 EDGE CURB TRANSITION AT LIGHT POLE FOUNDATION

NOT TO SCALE



9 CONCRETE SLOPED-END TREATMENT DETAIL

NOT TO SCALE

TWG
THE WARREN GROUP ARCHITECTS, INC.
1801 SOUTH SECOND ST.
SUITE 330
McALLEN, TX 78503
956 . 994.1900
twgarch.com

STATE OF TEXAS
JORGE D. PEREZ
34594
REGISTERED PROFESSIONAL ENGINEER
7/3/19

REVISION	DATE	APPROVED BY	DESCRIPTION
4 ADD4	7/2/2019	TWG	ADDITIONAL INFORMATION PROVIDED

PCE Perez Consulting Engineers
Texas Registered Engineering Firm F-2158
808 Dallas Ave. McAllen, Texas 78501
(956) 631-4482 fax (956) 682-1545

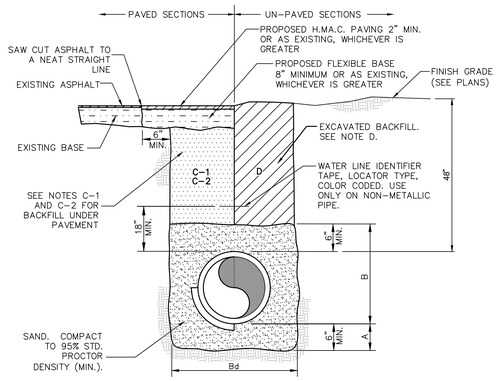
PROPOSED

CITY OF PHARR AQUATIC FACILITY

W SIOUX RD AND EXPRESSWAY 281
PHARR, TEXAS 78577

PROJECT	971805
DATE	6/07/2019
REVISED	

C114
TYPICAL DETAILS



GENERAL NOTES:

A. SAND BEDDING PLACED, HAND LEVELED, AND COMPACTED BEFORE PIPE IS LAID, UP TO BOTTOM OF PIPE (MIN. THICKNESS = 6").

B. SAND BACKFILL PLACED AND COMPACTED AFTER PIPE IS LAID, FROM BOTTOM OF PIPE TO 6" ABOVE THE TOP OF PIPE. WORK IN UNDER PIPE HAUNCHES AND COMPACT BY HAND TO SPRING LINE. USE VIBRATORY-TYPE COMPACTORS FOR LIFTS ABOVE THE SPRING LINE. MAXIMUM 6" LIFTS.

Bd. MINIMUM TRENCH WIDTH: PIPE O.D. + 16" (FOR 16" PIPE AND SMALLER) OR PIPE O.D. X 1.25 + 12" (FOR 18" PIPE AND LARGER)

C-1. (CITY STREETS, PARKING AREA, AND DRIVEWAYS) SELECT EXCAVATED BACKFILL MECHANICALLY COMPACTED TO 95% STANDARD PROCTOR DENSITY IN 8" MAX. LIFTS.

C-2 (STATE MAINTAINED ROADWAY) SAND/CEMENT STABILIZED BACKFILL WITH 7% PORTLAND CEMENT COMPACTED TO 95% STANDARD PROCTOR DENSITY.

D. EXCAVATED EARTH BACKFILL MECHANICALLY COMPACTED IN 12" MAX. LIFTS. MINIMUM STANDARD PROCTOR DENSITY: 90% OUTSIDE RIGHT OF WAY; 95% INSIDE RIGHT OF WAY

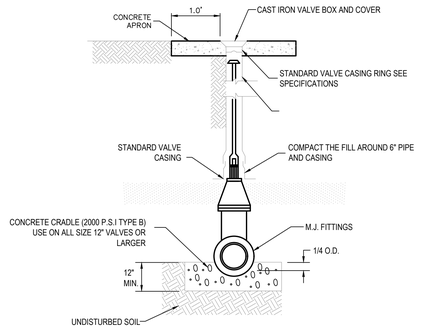
EMBEDMENT SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM D 2321. EMBEDMENT MATERIAL SHALL BE CLASS II OR III WITH < 50% PASSING A No. 200 SIEVE AND PLASTICITY INDEX < 7.

WHERE THIS STANDARD CONFLICTS WITH THE RECOMMENDATION OF ANY GEOTECHNICAL REPORT, OBTAIN WRITTEN CLARIFICATION FROM THE UTILITY ENGINEER PRIOR TO CONSTRUCTION.

FOUNDATION PREPARATION USING COBBLES, GRAVEL, CEMENT STABILIZATION, OR OTHER METHODS AS DIRECTED BY THE ENGINEER SHALL BE REQUIRED WHEN TRENCH BOTTOM IS UNSTABLE.

BACKFILLING AT STRUCTURES SHALL BE PLACED IN UNIFORM LAYERS, AND COMPACTED TO 95% STANDARD PROCTOR DENSITY IN 6" MAXIMUM LIFTS. STRUCTURE BACKFILL MATERIAL SHALL BE SAND.

1 WATERLINE BEDDING DETAIL
NOT TO SCALE



2 TYPICAL GATE VALVE DETAIL
NOT TO SCALE

NOTES:
1. THRUST BLOCK AREAS SHOWN ARE BASE ON TEST PRESSURES OF 150 P.S.I. FOR 6"-12" PIPE AND 200 P.S.I. FOR 14"-16" PIPE AND SOIL BEARING PRESSURE OF 1000 PSF.

2. MINIMUM AREAS SHOWN ARE IN SQUARE FEET.

3. BEARING MUST BE ON UNDISTURBED EARTH.

4. ADJUST THRUST BLOCK AREAS ACCORDINGLY IF PRESSURES AND\OR SOIL BEARING VALUE VARIES.

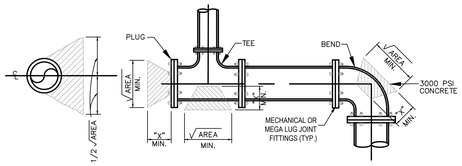
5. THRUST BLOCKING TO BE PLACED AT ALL DEAD ENDS AND TEES, AT ALL BENDS, AND OTHER AREAS WHICH MAY REQUIRE THRUST RESISTANCE AS APPROVED BY THE ENGINEER.

6. USE 3000 PSI CONCRETE.

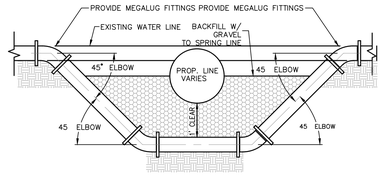
"X" DIMENSION MAY VARY TO PROVIDE REQ'D BEARING AGAINST UNDISTURBED EARTH.

HORIZONTAL BLOCKING TABLE
BEARING AREA OF BLOCK IN SQUARE FEET

PIPE SIZE (IN)	DEAD END AND TEE	90° BEND	45° BEND	22.5° BEND	11.25° BEND	5° BEND	"X"-DIM FT.
6	4.24	6.00	3.25	1.65	0.83	0.37	1.00
8	7.54	10.66	5.77	2.94	1.48	0.66	1.00
10	11.78	16.66	9.02	4.60	2.31	1.03	1.25
12	16.96	23.99	12.98	6.62	3.33	1.48	1.25
14	30.79	43.54	23.56	12.01	6.04	2.69	1.50
16	40.20	56.67	30.78	15.69	7.88	3.51	1.75



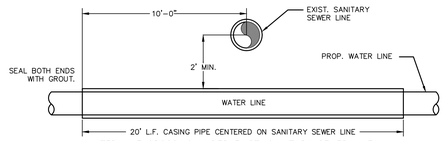
3 CONCRETE THRUST BLOCK DETAIL
NOT TO SCALE



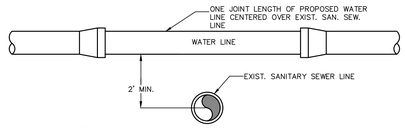
WATER LINE ADJUSTMENT PVC OR A.C.

NOTE:
ALL BENDS AND JOINTS MUST BE SUPPORTED BY A CONC. THRUST BLOCK, APPROVED EQUAL OR AS DIRECTED BY ENGINEER

4 WATER LINE ADJUSTMENT DETAIL
NOT TO SCALE



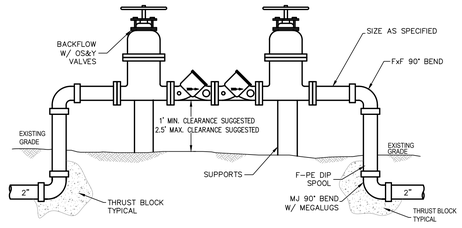
WATER LINE CROSSING UNDER EXIST. SANITARY SEWER LINE



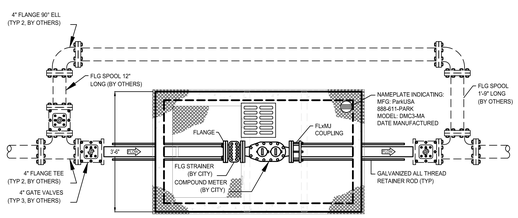
WATER LINE CROSSING OVER EXIST. SANITARY SEWER LINE

5 WATER LINE/SANITARY SEWER CROSSING DETAIL
NOT TO SCALE

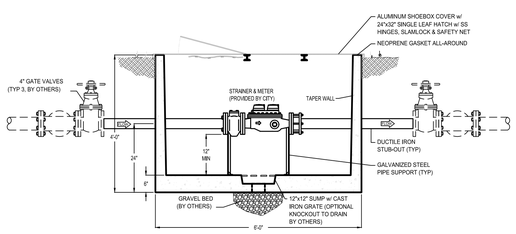
PROPOSED DOUBLE CHECK BACK FLOW PREVENTER TO BE APPROVED BY APPROPRIATE UTILITY ENTITY. (CITY OR WATER SUPPLY CORPORATION.) BACKFLOW PREVENTER SHALL HAVE AN ALUMINUM INSULATION JACKET, PRIME AND PAINT WITH APPROVED MARINE QUALITY PAINT.



6 2" DOUBLE CHECK BACKFLOW PREVENTER
NOT TO SCALE



PLAN VIEW



ELEVATION

Specifications

CONCRETE: Class I/II concrete with design strength of 4500 PSI at 28 days. Unit is of monolithic construction at floor and first stage of wall with sectional riser to required depth.

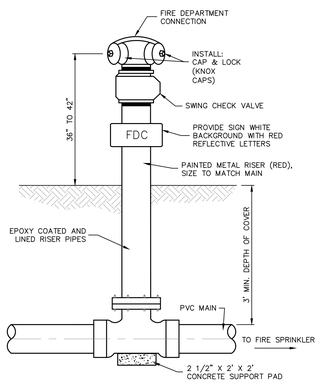
REINFORCEMENT: Grade 60 reinforced. Steel rebar conforming to ASTM A615 on required centers or equal.

HATCHWAY: Aluminum diamond plate cover with extruded aluminum frame furnished with drop handle, open door support and slam lock. (Pedestrian Rated)

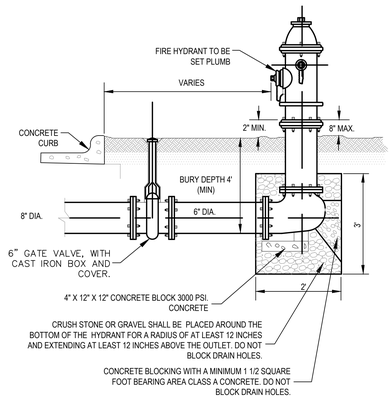
Engineering Data

The meter assembly shall be factory assembled in vault & hydrostatically tested prior to delivery. Field excavation & preparation shall be complete prior to delivery. Pipe, valves and fittings of the assembly shall be approved by one or more of the following associations:

7 4" DOMESTIC COMPOUND WATER METER ASSEMBLY W/BYPASS
BELOW GROUND
NOT TO SCALE



8 FIRE DEPARTMENT CONNECTION DETAIL
NOT TO SCALE



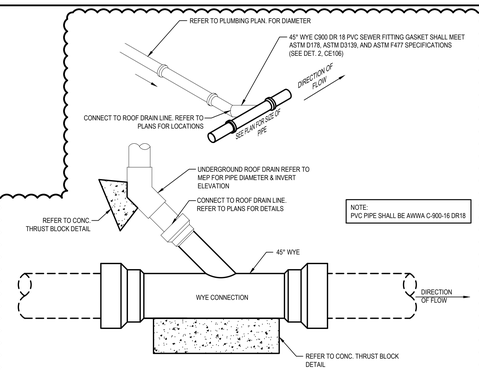
NOTE: USE FLANGED JOINTS FOR F.H. AND VALVE ASSEMBLY

NOTES:

1. USE CAST IRON OR DUCTILE IRON VALVES AND FITTINGS

2. ALL CAST IRON OR DUCTILE IRON FITTINGS SHALL BE MECHANICAL JOINT-TYPE.

9 FIRE HYDRANT INSTALLATION DETAIL
NOT TO SCALE



11 UNDERGROUND ROOF DRAIN CONNECTION DETAIL
NOT TO SCALE

"X" DIMENSION MAY VARY TO PROVIDE REQ'D BEARING AGAINST UNDISTURBED EARTH.

HORIZONTAL BLOCKING TABLE
BEARING AREA OF BLOCK IN SQUARE FEET

PIPE SIZE (IN)	DEAD END AND TEE	90° BEND	45° BEND	22.5° BEND	11.25° BEND	5° BEND	"X"-DIM FT.
6	4.24	6.00	3.25	1.65	0.83	0.37	1.00
8	7.54	10.66	5.77	2.94	1.48	0.66	1.00
10	11.78	16.66	9.02	4.60	2.31	1.03	1.25
12	16.96	23.99	12.98	6.62	3.33	1.48	1.25
14	30.79	43.54	23.56	12.01	6.04	2.69	1.50
16	40.20	56.67	30.78	15.69	7.88	3.51	1.75

NOTES:
1. THRUST BLOCK AREAS SHOWN ARE BASE ON TEST PRESSURES OF 150 P.S.I. FOR 6"-12" PIPE AND 200 P.S.I. FOR 14"-16" PIPE AND SOIL BEARING PRESSURE OF 1000 PSF.

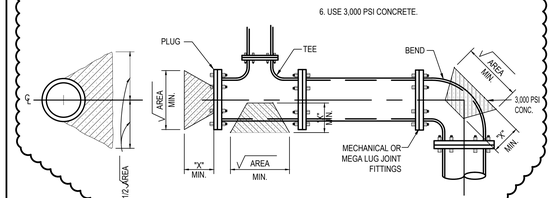
2. MINIMUM AREAS SHOWN ARE IN SQUARE FEET.

3. BEARING MUST BE ON UNDISTURBED EARTH.

4. ADJUST THRUST BLOCK AREAS ACCORDINGLY IF PRESSURES AND\OR SOIL BEARING VALUE VARIES.

5. THRUST BLOCKING TO BE PLACED AT ALL DEAD ENDS AND TEES, AT ALL BENDS, AND OTHER AREAS WHICH MAY REQUIRE THRUST RESISTANCE AS APPROVED BY THE ENGINEER.

6. USE 3,000 PSI CONCRETE.



12 CONCRETE THRUST BLOCKS
NOT TO SCALE

THE WARREN GROUP ARCHITECTS, INC.
1801 SOUTH SECOND ST.
SUITE 330
McALLEN, TEX 78503
956.994.1900
twgarch.com

STATE OF TEXAS
JORGE D. PEREZ
34594
REGISTERED PROFESSIONAL ENGINEER
7/3/19

REVISION	DATE	APPROVED BY	DESCRIPTION
ADD4	7/22/2019	TWG	ADDITIONAL INFORMATION PROVIDED

PCE Perez Consulting Engineers
Texas Registered Engineering Firm F-2158
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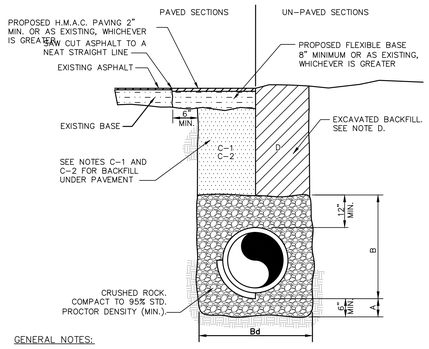
PROPOSED

CITY OF PHARR
AQUATIC FACILITY

W SIOUX RD AND EXPRESSWAY 281
PHARR, TEXAS 78577

PROJECT 971805
DATE 6/07/2019
REVISED

C115
TYPICAL DETAILS



GENERAL NOTES:

A. CRUSHED ROCK BEDDING PLACED, HAND LEVELED, AND COMPACTED BEFORE PIPE IS LAID, UP TO BOTTOM OF PIPE (MIN. THICKNESS = 6").

B. CRUSHED ROCK BACKFILL PLACED AND COMPACTED AFTER PIPE IS LAID, FROM BOTTOM OF PIPE TO 12" ABOVE THE TOP OF PIPE. WORK IN UNDER PIPE HAUNCHES AND COMPACT BY HAND TO SPRING LINE. USE VIBRATORY-TYPE COMPACTORS FOR LIFTS ABOVE THE SPRING LINE. MAXIMUM 6" LIFTS.
Bd. MINIMUM TRENCH WIDTH: PIPE O.D. + 16" (FOR 16" PIPE AND SMALLER); PIPE O.D. X 1.25 + 12" (FOR 18" PIPE AND LARGER)

C-1. (CITY STREETS, PARKING AREA, AND DRIVEWAYS) SELECT EXCAVATED BACKFILL MECHANICALLY COMPACTED TO 95% STANDARD PROCTOR DENSITY IN 8" MAX. LIFTS.

C-2 (STATE MAINTAINED ROADWAY) SAND/CEMENT STABILIZED BACKFILL WITH 7% PORTLAND CEMENT COMPACTED TO 95% STANDARD PROCTOR DENSITY.

D. EXCAVATED EARTH BACKFILL MECHANICALLY COMPACTED IN 12" MAX. LIFTS. MINIMUM STANDARD PROCTOR DENSITY: 90% OUTSIDE RIGHT OF WAY; 95% INSIDE RIGHT OF WAY

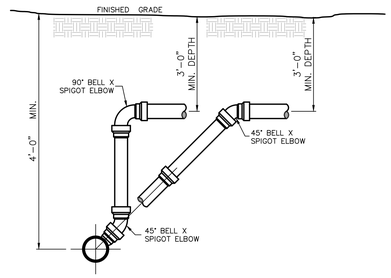
EMBEDMENT SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM D 2321. EMBEDMENT MATERIAL SHALL BE CLASS 1A (CRUSHED ROCK) OR 1B (CRUSHED ROCK-SAND MIXTURE) WITH LESS THAN 50% PASSING A No. 4 SIEVE. MAXIMUM ¾" SIZE FOR PIPE SIZE ≤ 15". GREATER THAN 90% OF CRUSHED ROCK SHALL HAVE AT LEAST THREE BROKEN FACES. NO MORE THAN 2% UNBROKEN FRACTION ALLOWED.

IN SATURATED OR UNSTABLE SOILS, EMBEDMENT SHALL BE CLASS 1B ONLY (SEE SPECIFICATIONS FOR GRADATION REQUIREMENTS).
WHERE THIS STANDARD CONFLICTS WITH THE RECOMMENDATION OF ANY GEOTECHNICAL REPORT, OBTAIN WRITTEN CLARIFICATION FROM THE UTILITY ENGINEER PRIOR TO CONSTRUCTION.

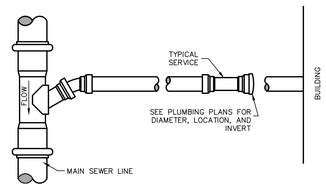
FOUNDATION PREPARATION USING COBBLES, GRAVEL, CEMENT STABILIZATION, OR OTHER METHODS AS APPROVED BY THE ENGINEER SHALL BE REQUIRED WHEN TRENCH BOTTOM IS UNSTABLE.

BACKFILLING AT STRUCTURES SHALL BE PLACED IN UNIFORM LAYERS, AND COMPACTED TO 95% STANDARD PROCTOR DENSITY IN 6" MAXIMUM LIFTS. STRUCTURE BACKFILL MATERIAL SHALL BE SAND.

1 SANITARY SEWER(NON-FORCEMAIN) PIPE BEDDING DETAIL
NOT TO SCALE

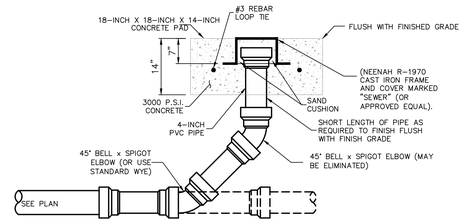


2 TYPICAL DEEP SANITARY SEWER SERVICE CONNECTION
NOT TO SCALE

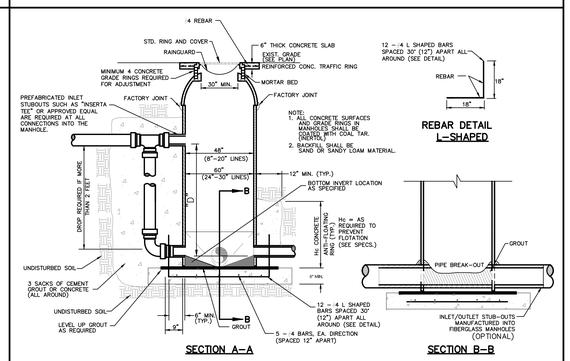


NOTE:
A SOUND DETECTION REFLECTOR "STUB-DEC-TA-CAL" BY GRIFFOLYN, INC. OR AN APPROVED SUBSTITUTE, WILL BE FASTENED TO THE END OF EACH SERVICE CONNECTION STUB TO FACILITATE LOCATION SERVICE STUBS.

3 SINGLE SANITARY SEWER SERVICE
NOT TO SCALE

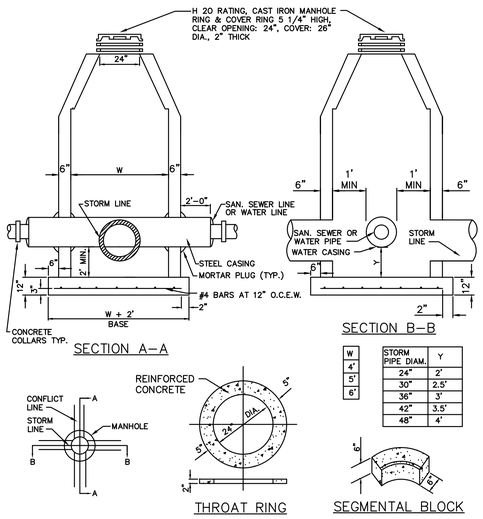


4 STANDARD EXTERIOR CLEANOUT
NOT TO SCALE



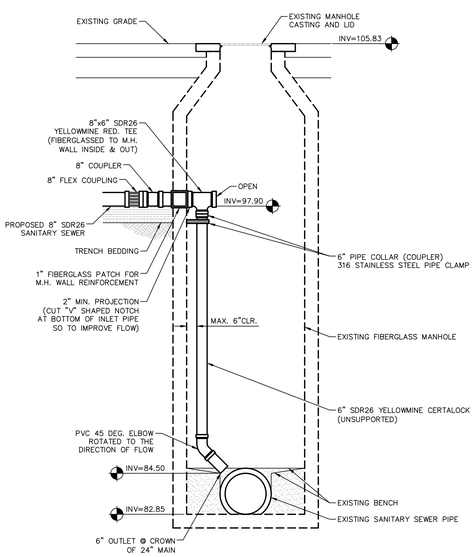
5 SAN. SEWER FIBERGLASS MANHOLE DETAIL
NOT TO SCALE

GENERAL NOTES AS PER TYPICAL CONCRETE STORM MANHOLE DETAIL.

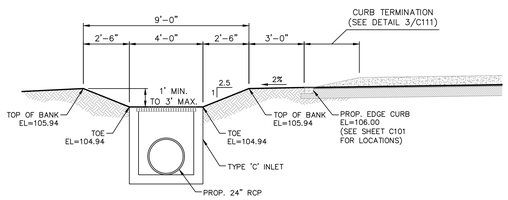


W	STORM PIPE DIAM.	Y
4'	24"	2'
	30"	2.5'
5'	36"	3'
	42"	3.5'
6'	48"	4'

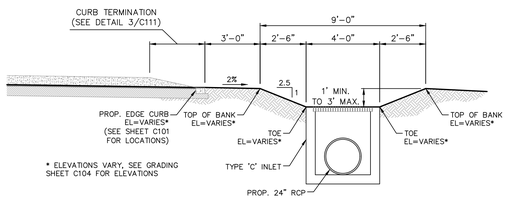
6 TYPICAL CONCRETE STORM CONFLICT MANHOLE DETAIL
NOT TO SCALE



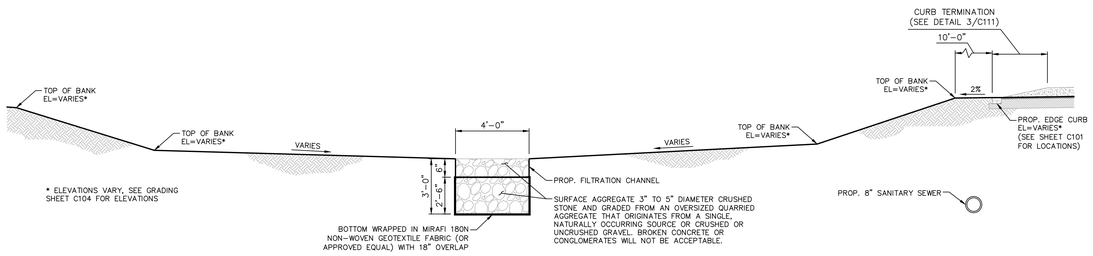
7 INTERNAL DROP CONNECTION DETAIL TO EXISTING MANHOLE (SIOUX ROAD)
NOT TO SCALE



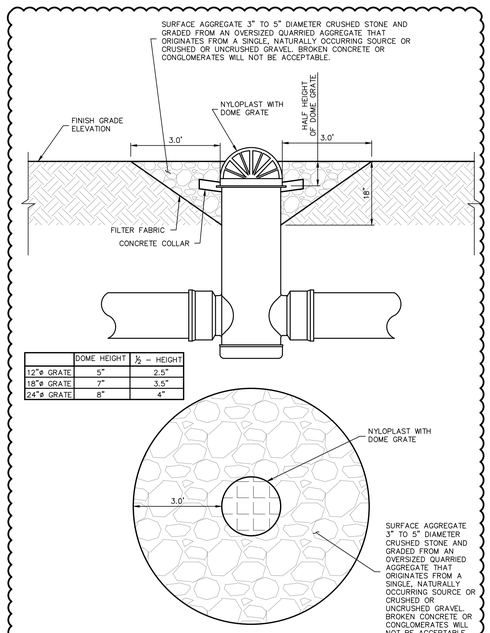
8 WEST DETENTION SWALE CROSS SECTION
NOT TO SCALE



9 NORTH DETENTION SWALE CROSS SECTION
NOT TO SCALE



10 DETENTION POND WITH FILTRATION CHANNEL TYPICAL CROSS SECTION
NOT TO SCALE



	DOME HEIGHT	½ - HEIGHT
12"ø GRATE	5"	2.5"
18"ø GRATE	7"	3.5"
24"ø GRATE	8"	4"

1 11 TYPICAL NYLOPLAST SECTION
NOT TO SCALE

TWG
THE WARREN GROUP ARCHITECTS, INC.
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7/3/19

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PROPOSED

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W SIOUX RD AND EXPRESSWAY 281
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PROJECT 971805
DATE 6/07/2019
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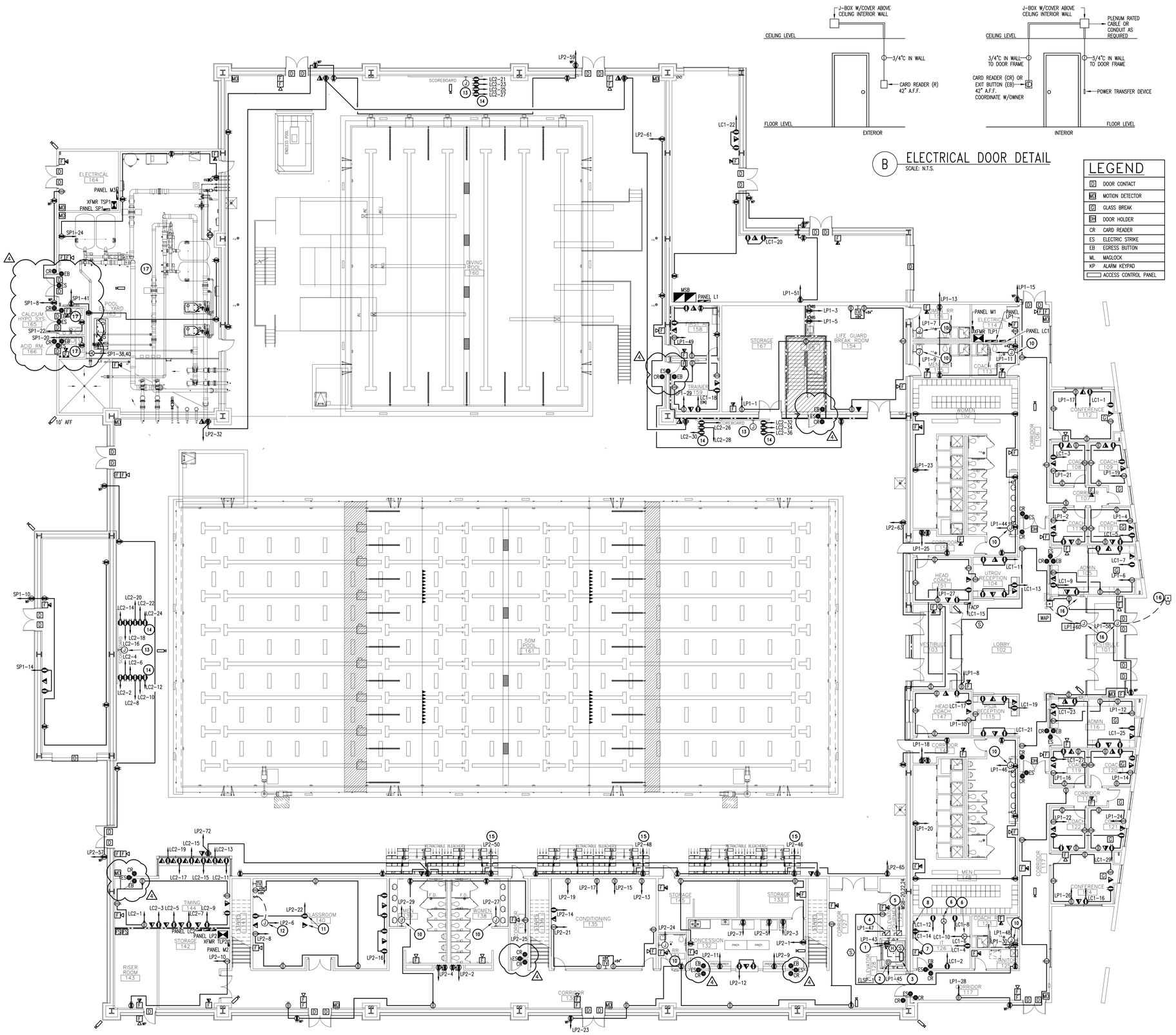
C116
TYPICAL DETAILS



B ELECTRICAL DOOR DETAIL

SCALE: N.T.S.

LEGEND

D	DOOR CONTACT
MD	MOTION DETECTOR
G	GLASS BREAK
DH	DOOR HOLDER
CR	CARD READER
ES	ELECTRIC STRIKE
EB	EGRESS BUTTON
ML	MAGLOCK
KP	ALARM KEYPAD
	ACCESS CONTROL PANEL

GENERAL NOTES:

A. COORDINATE ROUGH-IN LOCATION OF ALL DEVICES WITH ARCHITECTURAL ELEVATIONS, DETAILS, AND PLANS.

B. ALL DEVICES SHALL SHARE COMMON FACEPLATE WHERE APPLICABLE.

C. ALL ELECTRICAL COMPONENTS OF POOL TO BE BONDED PER NEC 680.

D. COORDINATE RECEPTACLES HEIGHT AND LOCATION WITH OWNER PRIOR TO ROUGH-IN.

E. ALL CIRCUITS SHALL BE LABEL PER NEC.

F. ALL EXTERIOR CAMERAS SHALL BE MOUNTED AT 18' AFF, UNO.

KEY NOTES:

1. TO LIGHTING PLAN. SEE DETAIL ELEVATOR PIT HIGH WATER ALARM ELECTRICAL SCHEMATIC SHEET E5.01.
2. FOR SUMP PUMP. SEE DETAIL ELEVATOR PIT HIGH WATER ALARM ELECTRICAL SCHEMATIC SHEET E5.01.
3. HIGH WATER LEVEL ALARM. SEE DETAIL ELEVATOR PIT HIGH WATER ALARM ELECTRICAL SCHEMATIC SHEET E5.01.
4. 30A, 2-POLE SWITCH WITH ONE 20A FUSE FOR ELEVATOR AUXILIARIES. COORDINATE EXACT LOCATION WITH ELEVATOR SUPPLIER PRIOR TO ROUGH-IN. SEE DETAIL ELEVATOR PIT HIGH WATER ALARM ELECTRICAL SCHEMATIC SHEET E5.01.
5. BUSSMAN #PS2T48R1AF1 POWER MODULE SWITCH WITH 150A FUSES FOR CONNECTION TO ELEVATOR CONTROLLER WITH 3#3/0, #6G, 2"C. COORDINATE EXACT LOCATION WITH ELEVATOR SUPPLIER PRIOR TO ROUGH-IN. BUSSMAN POWER MODULE SHALL BE FUSED AT ELEVATOR NAME PLATE RATING. SEE DETAIL ELEVATOR PIT HIGH WATER ALARM ELECTRICAL SCHEMATIC SHEET E5.01.
6. FURNISH AND INSTALL L5-30R RECEPTACLE. ROUTE 2#10, #10G, 1/2"C.
7. PROVIDE AND INSTALL 4' X 8' X 3/4" PLYWOOD BACKBOARD FOR MOUNTING OF COMMUNICATIONS EQUIPMENT. PROVIDE A FLOOR MOUNTED 3/4" X 4' GROUND BAR FOR TELEPHONE SERVICE. EXTEND #6 AWG FROM GROUND BAR TO MAIN GROUND BUS OF PANEL MSB.
8. FURNISH AND INSTALL 2-4"C FOR ROUTING OF TELEPHONE/CABLE.
9. FURNISH AND INSTALL J-BOX FOR CONNECTION OF OVERHEAD DOOR. ROUTE 2#12, #12G, 1/2"C.
10. FURNISH AND INSTALL J-BOX FOR CONNECTION OF HAND DRYER. COORDINATE EXACT LOCATION WITH ARCHITECTURAL DRAWINGS. ROUTE 2#10, #10G, 1/2"C.
11. FURNISH AND INSTALL RECEPTACLE AND SINGLE GANG BOX FOR CABLING. AT CEILING LOCATION FOR CONNECTION OF PROJECTOR. COORDINATE LOCATION WITH OWNER PRIOR TO ROUGH-IN.
12. FOR MOTORIZED PROJECTION SCREEN. COORDINATE EXACT LOCATION OF DEVICES WITH ARCHITECT PRIOR TO ROUGH-IN. ROUTE 3 WIRE CONTROL TO SWITCH FURNISHED WITH PROJECTION SCREEN. INSTALLED AND WIRED BY ELECTRICAL CONTRACTOR.
13. FOR SCOREBOARD, ROUTE 1"C TO TIMING ROOM 144. ROUTE TO ABOVE ACCESSIBLE CEILING.
14. FURNISH AND INSTALL RECEPTACLES FOR SCOREBOARD, COORDINATE EXACT LOCATION WITH EQUIPMENT INSTALLER.
15. FURNISH AND INSTALL RECEPTACLES FOR RETRACTABLE BLEACHERS. COORDINATE EXACT LOCATION WITH EQUIPMENT INSTALLER.
16. FURNISH AND INSTALL J-BOX FOR CONNECTION OF POWERED DOORS. STUB IN 3/4"C FROM J-BOX INTO ATTIC SPACE. COORDINATE LOCATION WITH OWNER PRIOR TO ROUGH-IN.
17. ALL CONDUITS IS SPACE SHALL BE OF PVC TYPE.

FIELD VERIFY ALL CONDITIONS

DESIGN DRAWINGS SCHEMATIC. THIS CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING OR AWARD OF CONTRACT TO INSPECT EXISTING FIELD CONDITIONS. THIS CONTRACT SHALL INCLUDE ALL LABOR AND MATERIALS NECCESSARY FOR FEILD MODIFICATIONS DUE TO EXISTING CONDITIONS.

THE CONTRACTOR SHALL CONTACT THE ARCHITECT, ENGINEER OR OWNER PRIOR TO BIDDING FOR INTERPRETATIONS AND CLARIFICATIONS OF THE DESIGN AND INCLUDE IN HIS BID ALL COSTS TO MEET THE DESIGN INTENT. CLARIFICATIONS MADE BY THE ARCHITECT, ENGINEER OR OWNER AFTER BIDDING WILL BE FINAL AND SHALL BE IMPLEMENTED AT CONTRACTORS COST.

BIDDING CONTRACTORS SHALL HAVE A WORKING KNOWLEDGE OF LOCAL CODES AND ORDINANCES AND SHALL INCLUDE IN THEIR BIDS THE COSTS FOR ALL WORK INSTALLED IN STRICT ACCORDANCE WITH GOVERNING CODES, THE PLANS AND SPECIFICATIONS NOT WITHSTANDING. THE CONTRACTOR SHALL ALERT ARCHITECT, ENGINEER OR OWNER OF ANY APPARENT DISCREPANCIES BETWEEN GOVERNING CODES AND DESIGN INTENT.

A ELECTRICAL POWER FLOOR PLAN

SCALE: 3/32" = 1'-0"

NORTH

MEP SOLUTIONS ENGINEERING

MECHANICAL, ELECTRICAL, PLUMBING ENGINEERS
800 E. BEAUMONT AVE. SUITE 2 McALLEN, TX 78501 (956) 664-2727
TEXAS BOARD OF PROFESSIONAL ENGINEERS REGISTRATION # F-9748

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REVISION	DATE	APPROVED BY	DESCRIPTION
ADD1	6/17/2019	TWG	ADDITIONAL INFORMATION PROVIDED
ADD2	6/21/2019	TWG	ADDITIONAL INFORMATION PROVIDED
ADD3	6/26/2019	TWG	ADDITIONAL INFORMATION PROVIDED
ADD4	7/3/2019	TWG	ADDITIONAL INFORMATION PROVIDED

STATE OF TEXAS
ABRAM L. DOMINGUEZ
97393
LICENSED PROFESSIONAL ENGINEER
07.03.2019

PROPOSED

CITY OF PHARR/PSJA AQUATIC FACILITY

3001 N. CAGE BLVD
PHARR, TEXAS 78577

PROJECT	971805
DATE	06/07/2019
REVISED	07/03/2019

E1.02

ELECTRICAL POWER FLOOR PLAN

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LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER & MODEL #	LAMPS/TEMP/VA	VOLTAGE
A	2X4 EDGE LIT FLAT PANEL FIXTURE	LITHONIA #EPANL 2X4 4800LM 40K MIN1 ZT MVOLT WILLIAMS #LP24 L50 8 40 DIM UNV METALUX #24FP4740C SIGNIFY #2FXP48LB40-4-DS-UNV-DIM	LED 4000K 47	120/277
AE	2X4 EDGE LIT FLAT PANEL FIXTURE EMERGENCY BATTERY PACK	LITHONIA #EPANL 2X4 4800LM 40K MIN1 ZT MVOLT E10WCP WILLIAMS #LP24 L50 8 40 EM/10WRM DIM UNV METALUX #24FP4740C-EL14W SIGNIFY #2FXP48LB40-4-DS-UNV-DIM-EMLED	LED 4000K 47	120/277
B	2X4 EDGE LIT FLAT PANEL FIXTURE	LITHONIA #EPANL 2X4 3000LM 40K MIN1 ZT MVOLT WILLIAMS #LP24 L50 8 40 DIM UNV METALUX #24FP3140C SIGNIFY #2FXP38LB40-4-DS-UNV-DIM	LED 4000K 39	120/277
BE	2X4 EDGE LIT FLAT PANEL FIXTURE EMERGENCY BATTERY PACK	LITHONIA #EPANL 2X4 3000LM 40K MIN1 ZT MVOLT E10WCP WILLIAMS #LP24 L50 8 40 EM/10WRM DIM UNV METALUX #24FP3140C-EL14W SIGNIFY #2FXP38LB40-4-DS-UNV-DIM-EMLED	LED 4000K 39	120/277
C	6" RECESSED DOWNLIGHT	LITHONIA #LDN6 40/10 L06 AR MVOLT WILLIAMS # 6DR-TL L10 8 40 DIM UNV O W CS HALO COMMERCIAL #PD610ED010-PDM6A840-61VC SIGNIFY #6RN / P6RDL10840CLZ10U	LED 4000K 13	120/277
CE	6" RECESSED DOWNLIGHT EMERGENCY BATTERY PACK	LITHONIA #LDN6 40/10 L06 AR MVOLT EM WILLIAMS # 6DR-TL L10 8 40 EM/10W DIM UNV O W CS HALO COMMERCIAL #PD610ED010EM-PDM6A840-61VC SIGNIFY #6RNEM / P6RDL10840CLZ10U	LED 4000K 13	120/277
D	6" RECESSED DOWNLIGHT	LITHONIA #LDN6 40/20 L06 AR MVOLT WILLIAMS # 6DR-TL L20 8 40 DIM UNV O W CS HALO COMMERCIAL #PD620ED010-PDM6A840-61VC SIGNIFY #6RN / P6RDL20840CLZ10U	LED 4000K 23	120/277
DE	6" RECESSED DOWNLIGHT EMERGENCY BATTERY PACK	LITHONIA #LDN6 40/20 L06 AR MVOLT EM WILLIAMS # 6DR-TL L20 8 40 EM/10W DIM UNV O W CS HALO COMMERCIAL #PD620ED010EM-PDM6A840-61VC SIGNIFY #6RNEM / P6RDL20840CLZ10U	LED 4000K 23	120/277
F	4' STRIPLIGHT	LITHONIA #ZL1N L48 3000LM FST MVOLT 40K WH METALUX #4SNLED-33SL-LW-UNV-L840-CD1 WILLIAMS #75R 4 L30 8 40 DIM UNV SIGNIFY #FSS430L840-UNV-DIM	LED 4000K 33	120/277
FE	4' LED STRIPLIGHT EMERGENCY BATTERY PACK	LITHONIA #ZL1N L48 3000LM FST MVOLT 40K 80CRI E7W WH METALUX #4SNLED-33SL-LW-UNV-EL7W-L840-CD1 WILLIAMS #75R 4 L30 8 40 EM/7WRM DIM UNV SIGNIFY #FSS430L840-UNV-DIM-EMLED	LED 4000K 33	120/277
G2	2' RECESSED PERIMETER LIGHTING	MARK ARCHITECTURAL #SPRILED LOP 2FT RLP FL 80CRI 40K 400LMF MVOLT CORONET #FLAWLESS LED 2 40 LTG1 UNV	LED 4000K 7	120/277
G3	3' RECESSED PERIMETER LIGHTING	MARK ARCHITECTURAL #SPRILED LOP 3FT RLP FL 80CRI 40K 400LMF MVOLT CORONET #FLAWLESS LED 3 40 LTG1 UNV	LED 4000K 10	120/277
G4	4' RECESSED PERIMETER LIGHTING	MARK ARCHITECTURAL #SPRILED LOP 4FT RLP FL 80CRI 40K 400LMF MVOLT CORONET #FLAWLESS LED 4 40 LTG1 UNV	LED 4000K 14	120/277
H3	3' LED SYSTEM STANDARD OUTPUT 120 DEGREE SYMMETRIC	CORONET #RUSH REC LED 3' 40 LTG1 UNV MARK ARCHITECTURAL #SL2L-LOP-3FT-FLP-TG-80CRI-40K-600LMF-MIN10-277-ZT	LED 4000K 21	120/277
H4	4' LED SYSTEM STANDARD OUTPUT 120 DEGREE SYMMETRIC	CORONET #RUSH REC LED 4' 40 LTG1 UNV MARK ARCHITECTURAL #SL2L-LOP-4FT-FLP-TG-80CRI-40K-600LMF-MIN10-277-ZT	LED 4000K 28	120/277
H4E	4' LED SYSTEM STANDARD OUTPUT 120 DEGREE SYMMETRIC EMERGENCY BATTERY PACK	CORONET #RUSH REC LED 4' 40 LTG1 UNV EM MARK ARCHITECTURAL #SL2L-LOP-4FT-FLP-TG-80CRI-40K-600LMF-MIN10-277-E10WLCP-ZT	LED 4000K 28	120/277
K	4' LED HIGH BAY INDOOR DIRECT/INDIRECT LUMINAIRE CLEAR ACRYLIC	LUX DYNAMICS #LUX-WAVE-8-D-H02-850-4'-U10-CA4' SPECGRADE #AFL-800-5000K-90X90-110/277-WT-NAT-CTAX1 AMETRIX #ASYX-OP-S-6-NT-U-L40-1-UNV-W-C-XX-STD METALUMEN #NATA DI 22L40K-NC M-L2 4	LED 5000K 724	120/277
KE	4' LED HIGH BAY INDOOR DIRECT/INDIRECT LUMINAIRE CLEAR ACRYLIC EMERGENCY BATTERY PACK	LUX DYNAMICS #LUX-WAVE-8-D-H02-850-4'-U10-CA4' EM SPECGRADE #AFL-800-5000K-90X90-110/277-WT-NAT-CTAX1 EM AMETRIX #ASYX-OP-S-6-NT-U-L40-1-UNV-W-C-XX-STD EM METALUMEN #NATA DI 22L40K-NC M-L2 4 EM	LED 5000K 724	120/277

LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER & MODEL #	LAMPS/TEMP/VA	VOLTAGE
M	THE MARINER 4' VAPOR TIGHT LINEAR EMERGENCY BATTERY PACK	SOLAS RAY LIGHTING #LQ-H4-112-50-X-XX DURAGUARD #LV4AOQ F 112 U 4K XX XX	LED 4000K 127	120/277
ME	THE MARINER 4' VAPOR TIGHT LINEAR EMERGENCY BATTERY PACK	SOLAS RAY LIGHTING #LQ-H4-112-50-X-XX-BB DURAGUARD #LV4AOQ F 112 U 4K XX XBU	LED 4000K 127	120/277
NE	4' STAIRWAY FIXTURE EMERGENCY BATTERY PACK DIMS TO 10% UNOCCUPIED	LITHONIA #WL4 30L LP840 MSD7 DIM10 EL14L METALUX #SWLED-LD4-32SL-LW-UNV-EL14W-L840-CD1-SVPD2 ILP CVL4-30WLED-UNV-40-USBD/HL SIGNIFY #SF4C33A40UDZT-US-EMLED	LED 4000K 30	120/277
P	2'X4' EDGE LIT FLAT PANEL FIXTURE DRYWALL GRID ADAPTER	LITHONIA #EPANL 2X4 4800LM 40K MIN1 ZT MVOLT DGA24 WILLIAMS #LP24 L50 8 40 DFK-2448W DIM UNV METALUX #24FP4740C-DF-4W-U SIGNIFY #2FXP48LB40-4-DS-UNV-DIM-FMA24	LED 4000K 47	120/277
Q	2'X4' EDGE LIT FLAT PANEL FIXTURE DRYWALL GRID ADAPTER	LITHONIA #EPANL 2X4 3000LM 40K MIN1 ZT MVOLT DGA24 WILLIAMS #LP24 L50 8 40 DFK-2448W DIM UNV METALUX #24FP3140C-DF-4W-U SIGNIFY #2FXP38LB40-4-DS-UNV-DIM-FMA24	LED 4000K 39	120/277
QE	2'X4' EDGE LIT FLAT PANEL FIXTURE EMERGENCY BATTERY PACK DRYWALL GRID ADAPTER	LITHONIA #EPANL 2X4 3000LM 40K MIN1 ZT MVOLT E10WCP DGA24 WILLIAMS #LP24 L50 8 40 DFK-2448W EM/10WRM DIM UNV METALUX #24FP3140C-EL14W-DF-4W-U SIGNIFY #2FXP38LB40-4-DS-UNV-DIM-EMLED-FMA24	LED 4000K 39	120/277
SA	SINGLE HEAD ARM MOUNTED AREA LIGHT TYPE R3 DISTRIBUITION 30' POLE, 24" PEDESTAL	LITHONIA #RSX2 LED P2 40K R3 LSI #SLM LED 18L SIL 3 UNV DIM 40 70CRI XX	LED 4000K 114	120/277
SB	FOUR HEAD ARM MOUNTED AREA LIGHT TYPE R5 DISTRIBUITION 30' POLE, 24" PEDESTAL	LITHONIA #RSX2 LED P2 40K R5 LSI #SLM LED 18L SIL 5W UNV DIM 40 70CRI XX	LED 4000K 456	120/277
SC	ARCHITECTURAL WALL SCONCE TYPE FORWARD THROW DISTRIBUTION FINISH AS SELECTED BY ARCHITECT	LITHONIA #WST LED P3 40K VF MVOLT RAYON #T630LED 40 UN12 40 T3 BZ McGRAW-EDISON #IST-AF-1000-LED-E1-T4FT-XX SIGNIFY #101L-32L-700-NW-G1-4-UNV-XX	LED 4000K 50	120/277
SD	TESIS IN-GROUND LUMINAIRE RECESSED HOUSING POLYMER	ERCO #33640.000 HYDREL #M9710C-SS-P1-30K-MVOLT-NSP-FLC20-34S-BL	LED 4000K 20	120/277
SF	M9700C IN-GRADE LUMINAIRE	HYDREL #M9700C LED P2 40K WWD LUMASCAPE # LS3080 30 S 840 A X XX XX 24 0 01 ND	LED 4000K 35	120/277
SH	16" SITE IN-GROUND LUMINAIRE GRAZING LIGHT WALLWASHER	ERCO #32848.023 TARGETTI #JE-R-10-WG-24-30K-L	LED 3000K 24	120/277
SJ	THREE HEAD ARM MOUNTED AREA LIGHT TYPE R3 DISTRIBUITION 30' POLE, 24" PEDESTAL	LITHONIA #RSX2 LED P2 40K R3 LSI #SLM LED 18L SIL 3 UNV DIM 40 70CRI XX	LED 4000K 342	120/277
SK4	4' RHYTHM LINEAR LED FLOOD WALL WASH DISTRIBUTION, ADJUSTABLE SURFACE MOUNT 18" EXTENDED ARM WITH STRUT, HALF VISOR	HYDREL #RHY4 SSBR WHT41K MVOLT WWD ASM EASRM18 HVSR CSL20 ETE DBL ORGATECH 3 1200 4 LH 40 U ND 120 SW XX	LED 4100K 57	120/277
SL	4' LINEAR LED FLOOD LIGHT	HYDREL #4750L 4FT 2000LMF 40K VNSP ORGATECH 3 1200 4 LH 40 U ND 120 SW XX	LED 4000K 64	120/277
X	UNIVERSAL EXIT LIGHT WITH BATTERY PACK,	LITHONIA #LQMSW3R120/277ELN MULE #MX-B-R-U SURE-LITES #LPX7 EELP #XE2RW-EM	LED'S FURNISHED	120/277

A ELECTRICAL LIGHTING FIXTURE SCHEDULE
SCALE: N.T.S.

HVLS FAN SCHEDULE

UNIT	HVLS-1, HVLS-2
SPACE SERVED	SPECTATOR AREA
AIRFLOW AT 100% SPEED (CFM)	86,400
AIRFLOW AT 80% SPEED (CFM)	69,000
AIRFLOW AT 60% SPEED (CFM)	50,500
AIRFLOW AT 40% SPEED (CFM)	34,300
AIRFLOW AT 20% SPEED (CFM)	18,800
FAN TYPE	DIRECT DRIVE
FAN MOTOR HP	3/4
MAX RATED CURRENT (A)	1.0
VOLTAGE	460/3/60
MAX DIAMETER (FT)	14
NUMBER OF FAN BLADES	5
MAX OP WEIGHT (LB)	168
NOTES	ALL

NOTES:
1. FAN CFM AIRFLOW SHALL BE RATED PER AMCA 230-15.
2. PROVIDE NEMA 4X VFD REMOTE MOUNTED MOTOR CONTROLLER. FAN MOUNTED MOTOR CONTROLLERS ARE NOT ACCEPTABLE.
3. PROVIDE REMOTE MOUNTED TOUCHSCREEN NETWORK INTERFACE WITH BACNET CAPABILITY FOR BAS INTERFACE.
4. PROVIDE DIRECT DRIVE MOTOR. GEAR DRIVEN SYSTEMS ARE NOT ALLOWED.
5. SEE SPECIFICATION FOR CONSTRUCTION AND OTHER REQUIREMENTS.

B ELECTRICAL HVLS FAN SCHEDULE
SCALE: N.T.S.

MEP SOLUTIONS ENGINEERING
MECHANICAL, ELECTRICAL, PLUMBING ENGINEERS
600 E. BEAUMONT AVE. SUITE 2 McALLEN, TX 78501 (956) 664-2727
TEXAS BOARD OF PROFESSIONAL ENGINEERS REGISTRATION # F-9748

TWG
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1801 SOUTH SECOND ST.
SUITE 330
McALLEN, TX 78503
956.994.1900
twgarch.com

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E3.01

ELECTRICAL LIGHTING FIXTURE SCHEDULE

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