SECTION 00 91 13.01 - ADDENDUM #1

The following provisions replace, revise, and/or add to the drawings and specifications titled "Howell Community Park: Site Improvements" dated "June 21, 2016. The contractor shall acknowledge said provisions by recognizing receipt of this Addendum on page I of the Louisiana Uniform Public Work Bid Form.

PART 1. GENERAL ITEMS

GENERAL CLARIFICATIONS

1. See included Pre-Bid Agenda Notes that act as part of this Addendum.

2. See included Pre-Bid Sign In Sheet that act as part of this Addendum. Note that attendance at the Pre-Bid meeting is NOT mandatory.

3. When and if there is a "conflict" with plans and specification book, let it be known that "Plans" supersede "Specifications".

4. Bids Due: 2:00PM CT; Thursday, July 21, 2016 at BREC Administration Bldg. (6201 Florida Blvd, Baton Rouge, LA 70806). Bids to be opened and read aloud in Room 2034 at 2:15 PM same day. NO bids will be received after the 2:00PM CT deadline on Thursday, July 21st.

5. Contract Time: Contract time has been revised and extended from 180 Consecutive Calendar Days to **210** Consecutive Calendar Days.

6. GeoTech Report: Please see the attached report for clarity, nothing has changed, but some people had issues printing.

ELECTRICAL RELATED CLARIFICATIONS

1. There is a 4160 Transformer to a Secondary 480. Is this supplied by the Electrical Contractor or Entergy? The pad mounted transformer is provided by the electrical contractor. We are distributing the park's primary 4160v service to this location. The electrical contractor will also have to provide connections to the 4160 pod transformer on the rack. This will have to be coordinated with the park's electrical representatives. We have coordinated this with Entergy as far as their meter possibly having to be upsized due to the added loads. Entergy has indicated the meter is adequate.

2. Our response to the prior approval submittals.
   a) In reviewing the VUE fixtures submitted from PLS (www.plsinc.net), our understanding is that they are a reputable manufacturer that offers the specified 5 year warranty. This manufacturer is acceptable. We do have a few comments that would need to be corrected when submittals come through in the construction phase.

- The LLF to be used is .9 in lieu of .95. to adequately compare to the design values.
- The mounting height of the fixture in the calculation should take into count the 3' base.
- The luminaire arrangement of the pole near the future courts should be modified to accommodate the possible addition of an extra luminaire in the future.
- The pole shall be rated to accommodate the EPA of the luminaire configuration for 100 mph winds.

Because of the above factors, we believe this particular manufacturer may need to modify the lumen packages or amount of fixtures in order to achieve the desired foot candle levels of 30 fc average at 3' AFG.

b) "Phillips Gardco" is a prior-approved manufacturer. Shop drawings will need to be submitted during construction showing compliance with specified illuminance values.

LANDSCAPE RELATED CLARIFICATIONS

1. In the specifications Division 107300 under description of product it lists 2 pavilion sizes 24 x 34 and 16 x 24 but the plans and details show 16 x 33 and 16 x 18. Can you clarify which sizes are correct?
   There are two pavilion sizes listed in the plans 16x33 and 16x18.
   Please replace verbiage In Section 107300, 1.1, A.,
   with **"Pavilion Types: 1. ARC 16x33 (ARC ROOF) with MEGA METAL ROOF. 2. ARC 16x18 (ARC ROOF) with MEGA METAL ROOF"**
   and Section 107300, 1.1 B. Roof Slope **3/12**
   and Section 107300, 1.1 C. **"(MCH) is 8'-2 7/8" for 16x33 Pavilion and (MCH) is 8'-2 ½" for the 16'x18' Pavilion"**

2. On the site furnishing schedule I was able to find the 72-68-1PL ADA picnic table but not the 72-60-PL on Dumor's website. Is that just a standard 6' Picnic Table? And they are recycled plastic correct?
   Please use the following benches: 72-68-1PL ADA and 72 Series PL – 6' Bench (Walnut color) Yes they are recycled plastic material.

3. Please clarify who is installing the irrigation zones? The plans show installation of Mississippi Water Boxes and state that BREC will run laterals to be within 10' of boxes. Who is supplying the zones for the landscape/sod/sprig/seed areas? Is this a design/build on irrigation? Is there an existing irrigation timer to control existing/proposed zones? It is up to each contractor to provide the means and methods of watering during turf establishment and the initial maintenance period. The plans identify the location and quantity of Mississippi Water Boxes required at a minimum, of which the owner will bring the water source to within 10' of these boxes. There are no existing controller and timers to be used, so again this is up to the means and methods of the contractor to provide adequate irrigation water to establish turf on the project per specifications.

CIVIL RELATED CLARIFICATIONS

1. Regarding the sewer pump station:
    a. What is the diameter and depth of the basin?
    Refer to the revised sheet C-9. The minimum diameter is 36". The depth for the specified model is 48", but may vary, depending on the manufacturer.

    b. What are the pump conditions (GPM @ TDH)?
    Refer to the revised sheet C-9. The pump shall be capable of pumping a minimum of 10gpm at 50ft TDH.
    c. What do you require as far as controls?
    Refer to the revised sheet C-9. The system shall include all level & pump controls in accordance with the manufacturer's recommendation to ensure proper operation.

PART 2. PLAN REVISIONS

1. TS-1.0 Title Sheet
    a. Changed "TS-2.0 Overall Layout Sheet" to "TS-2.0 Overall Layout Plan".
    b. Changed "C-0 Site Plan" to "C-0 Improvements Plan".
    c. Corrected spelling of "Utility" in sheet name for sheets C-2.2 & C-3.2.

2. TS-2.0 Overall Layout Plan
    a. Relocated sidewalk connection to adjacent neighborhood.
    b. Added "Drainage" to "Pipe Notes".
    c. Added "or approved equal" to note 1.3 under "Drainage Pipe Notes".
    d. Removed legend.
    e. Revised Site Plan Note 11.
    f. Added Site Plan Note 17.

3. D-1 Demolition Plan
    a. Revised limits of disturbance to include stockpile area & asphalt at location of new driveway connection near existing clubhouse.
    b. Revised reference note for existing inlets along upper bank of creek to 16/TS-2.0.
    c. Added note indicating that existing pole & transformer shall remain.
    d. Added notes requiring removal of existing bench & pipe rail in area of new driveway.

4. ES-1 Phase I Erosion Control Plan
    a. Revised limits of disturbance to include stockpile area & asphalt at location of new driveway connection near existing clubhouse.

5. ES-2 Phase II Erosion Control Plan
    a. Revised limits of disturbance to include stockpile area & asphalt at location of new driveway connection near existing clubhouse.
    b. Added required inlet protection to existing inlet along south side of creek.
    c. Removed silt fence designation ("SF") along northern boundary of site.

6. C-0 Improvements Plan
    a. Clarified limits of existing tree line.
    b. Removed features that do not existing within stockpile area.
    c. Called for removal of existing trees, if necessary.
    d. Relocated sidewalk connection to adjacent neighborhood.
    e. Required proposed sidewalk to match existing sidewalk in grade & alignment at the point of connection.
    f. Added required radius to proposed sidewalk.

7. C-1 Improvements Plan
    a. Relocated sidewalk connection to adjacent neighborhood.
    b. Labeled contours at proposed ditch connection to proposed pond.
    c. Revised rip-rap layout at proposed ditch connections to proposed pond (three locations).
    d. Revised sidewalk grades & adjusted contours at proposed modular restroom.

8. C-2.1 Site Improvements Plan
    a. Removed curbs along a portion of the entry drive along E Brookstown Rd (two locations).
    b. Added curb cuts behind entry drive (two locations).
    c. Removed required curb ramps at parking island (two locations).
    d. Added curb ramps behind parking island (two locations).
    e. Revised “Asphalt Court” to “Asphalt Track” in legend.

9. C-2.2 Grading/Utility Improvements Plan
    a. Revised contours at playground areas.
    b. Specified 1-1/2” domestic water line.
    c. Added “45” contour north of structure 4.
    d. Revised spot elevations at structures 2 & 3.
    e. Revised two spot elevations along north side of proposed parking lot.
    f. Revised grades at entry drive & adjacent area along E Brookstown Rd.
    g. Added New Improvements Legend.
    h. Revised “Invert In” elevation for structure 1.1 & added note.
    i. Revised “Type” for structures 4 & 11.
    j. Added structures 14 & 15.
    k. Revised pipe type for run 1.1-2.
    l. Added pipe run 14-15.

10. C-3.1 Site Improvements Plan
    a. Removed extraneous leader for curb cut that is not required.
    b. Added two (2) curb cuts at island within parking area.
    c. Added note allowing for field adjustment of proposed curb near transformer pad.

11. C-3.2 Grading/Utility Improvements Plan
    a. Added rip-rap to curb cut along entry drive.
    b. Added “45” contour north of entry drive.
    c. Revised diameter of sewer force main from 2” to 1-1/4”.
    d. Revised spot elevation and labeled “45” contour near turn in entry drive.
    e. Revised “46” contour behind parking area.
    f. Revised eight (8) spot elevations within parking area.
    g. Revised two (2) spot elevations along propose sidewalk east of parking area, and revised “46” contour adjacent to it.
    h. Revised “45” & “46” contours near northwest corner of parking area.
    i. Revised “45” contour between parking area & basketball courts.
    j. Revised spot elevations along sidewalk adjacent to proposed modular restroom.
    k. Revised length of sewer pipe from restroom to grinder pump station.
    l. Revised “Invert In” elevation of sewer pipe to grinder pump station.
    m. Added New Improvements Legend.
    n. Revised structure 22 to included atrium-style grate.
    o. Revised structure 23 lid elevation to 43.75.
    p. Revised structure 25 type to “Existing Inlet”.
    q. Removed structure 31.
    r. Changed pipe run 28-29 to 15” RCPA.
    s. Changed TOC elevation for require sanitary sewer manhole to 49.00.
    t. Revised note referencing existing sewer service connection.

12. C-4 Improvements Plan
    a. Widened proposed swale along west side of multipurpose field to allow for reduced side slopes.
    b. Added note requiring existing swale to be filled & graded to drain.
    c. Labeled several contours near modular restroom & proposed sidewalk.
    d. Increased length of pipe run 26-27 to 32’.

13. C-5 Improvements Plan
    a. Increased length of pipe run 5-6 to 26’, and adjusted construction slope to 0.21%.
    b. Clarified that apron removal is required for pipe installation.

14. C-6 Detail Sheet
    a. Revised Heavy Duty Asphaltic Pavement section to consist of the following:
        i. Pavement Alt. 1: 3.5” asphaltic concrete wearing course over 8” class II granular base course over 12” compacted structural fill
        ii. Pavement Alt. 2: 3.5” asphaltic concrete wearing course over 4” class II granular base course over 10” soil-cement treated base

15. C-7 Detail Sheet
    a. Revised note on curb cut detail to specify that rip-rap shall be placed below pavement elevations.

16. C-8 Detail Sheet
    a. Removed extraneous ramp section.
    b. Added note referencing ramp detail on this sheet.
    c. Removed curb ramp at parking island.
    d. Added two (2) curb ramps behind parking island.

17. C-9 Detail Sheet
    a. Revised outfall pipe note to allow for multiple material types.
    b. Revised pump station inlet elevation.
    c. Revised pump station outlet elevation & provided minimum cover.
    d. Revised force main diameter.
    e. Revised pump station model number.
    f. Added grinder pump notes.
    g. Relocated water service connection detail to this sheet.

Re-Issued Sheets:

TS-1.0
TS-2.0
D-1
ES-1
ES-2
C-0
C-1
C-2.1
C-2.2
C-3.1
C-3.2
C-4
C-5
C-6
C-7
C-8
C-9
L-1.1
L-1.2
L-1.3
L-1.4
L-1.5
L-3.1
L-3.5
L-3.7
E-100
E-400
S-1.0
S-2.0

PART 3. SPECIFICATION CLARIFICATIONS

NONE

END OF SECTION 00 91 13.01

DDG
WWW.DDGPC.COM

Howell Park
5511 Winbourne Ave; Baton Rouge, LA 70805
Pre-Bid Meeting Agenda
July 12, 2016

1) **Sign In**
2) **Introductions**
3) **Bids Due**
   a) **10:00 AM CT; Thursday, July 21, 2016**
   b) BREC Finance Department; 6201 Florida Boulevard; Baton Rouge, LA 70806
   c) Bids Opened and Read aloud in BREC's 2nd Floor Conference Room 2034; 10:15 AM CT
4) **Summary of Information for Bidders:**
   a) NO Bids will be accepted after 10:00 AM CT; Thursday, July 21, 2016
   b) Qualifications: Licensed Contractors under Chapter 24 of Title 37 of LA Revised Statutes.
   c) Contractors are responsible for full examination of bid documents and project site.
   d) Review of Project Alternates.
   e) Interpretations & Addenda. **Written request to DDG by 5:00 PM, Wednesday; July 13, 2016.**
   f) Bid Security: **5%** of sum of total bid.
   g) Performance and Payment Bonds: 100% of Contract Amount.
   h) Contract Time: 180 Consecutive Calendar Days.
   i) Liquidated Damages: **$500.00 per Day**
   j) Insurance Requirements: refer to Special Provisions, pages **SP-6 to SP-7.**
   k) Permits and Testing Fees:
      - All fees to obtain permits by contractor.
      - All fees for testing purposes by owner.
   l) Guarantee: Two (2) year warrantee on all work, unless stated higher in contract docs (Landscape Material = 90 days following Final Acceptance).
   m) Forms Required for Complete Bid Submittal:
      - Louisiana Uniform Public Work Bid Form
      - Bid Bond
      - Corporate Resolution
   n) Opinion of Probable Cost: Base Bid - $2.997M; Alt #1 - $39K; Alt #2 - $70K; Alt #3 - $285K.
5) **Anticipated Addenda: To be issued C.O.B.; Friday; July 15, 2016**
   a) Contractor Inquiries:
      - General Clarifications
      - Pre-Approvals
      - Pre-Bid Conference Items
   b) Drawing Amendments:
      - Sheet Clarifications
      - Sheet Revisions
   c) Specification Amendments:
      - Specification Clarifications
      - Specification Revisions
6) **Review/Overview of Drawings & Specifications**
7) **Site Visit** *(if needed)*

DDG
DUPLANTIS DESIGN GROUP

IMAGINE YOUR PARKS 2
Better Parks – Better Living
BREC

July 12th, 2016 10:00 am

Pre-Bid Conference

Howell Park Improvements

Sign-In Sheet

	Name	Company	Phone	eMail
1.	Jason Landrum	D.D.G.	225.751.4490	jlandrum@ddgpc.com
2.	Scott Heil	DDG	225.751.4490	SHEIL@DDGPC.COM
3.	Jerry Smith	I.E. Inc	225.927.6541	mburley@ie baton rouge
ELEC 4.	Eugene Higgins	Eugene Higgins Inc	225-335-3677	higgrp@AOL.COM
5.	Dylan Munson	Russell Coleman Contr.	225-572-6813	DMunson@ RCollmancontr.com
6.	Brittany Shipp	Industrial Enterprises	(225) 927-6541	mburley@iebatonrouge.com
7.	Jeff Rowig	Barriere Const.	504-430-3539	Jeffrey@barriere.com
8.	Bianca Goodrow	Barriere Const	225-313-5832	biancag@barriere.com
9.	Reed Richard	BREC	225-273-6405	rrichard@brec.org
10.	Steven J. Lumpkin	Alternative Turf Specialists	225-776-6711	slumpkin@atplanet.com
11.	Rennie Carter	Charles Carter	225 357-9698	RCARTER@CHARLESCARTER.NET
12.	Steve Strickland	F.G. Sullivan, Jr. C.LLC	225-927-8476	SSTRICKLAND@FGSULLIVAN.COM
13.	Brennan Stutes	Bayou Tree Service	225-315-2467	Brennan.Stutes@bayoutreeservice.com
14.	Hilland Barber	Barber Bros.	225-355-5611	LHB@BARBER LHB.-BROTHERS.com
15.				
16.	SSTRICKLAND@fgsullivan.com			
17.				
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Proposed Howell Golf Course Re-Purposing
Baton Rouge, LA

Report of Subsurface Investigation and Geotechnical Evaluation

SESI Project No: B16-119
June 14, 2016

Baton Rouge Office

11638 Sunbelt Court
Baton Rouge, LA 70809

Tel: (225) 751-1727
Fax: (225) 752-1467
www.soearth.com

SOUTHERN EARTH SCIENCES, INC.

Geotechnical, Environmental & Construction Materials Testing

June 14, 2016

BREC
6201 Florida Blvd.
Baton Rouge, Louisiana 70806

Attn.: Ms. Eileen Bonin

Re: Geotechnical Engineering Services for
Proposed Howell Golf Course
Re-Purposing
Baton Rouge, Louisiana
SESI File No.: B16-119

Dear Ms. Bonin:

Southern Earth Sciences, Inc. (SESI) is pleased to submit our Geotechnical Engineering Study Report for the above referenced project. This report includes the results of field and laboratory testing, recommendations for the foundation design, paving recommendations, and general site preparation as related to soils.

We appreciate the opportunity to perform this Geotechnical Engineering Study and look forward to continued participation during the design and construction phases of this project. If you have any questions pertaining to this report, or if we may be of further service, please contact our office.

Respectfully submitted,
SOUTHERN EARTH SCIENCES, INC.

Sarah A. Finnegan, E.I.
Project Manager
Geotechnical Engineering Department

STATE OF LOUISIANA
MICHAEL J. JUNEAU, JR.
License No. 37242
PROFESSIONAL ENGINEER IN CIVIL ENGINEERING
6/14/2016

Jason E. Engen
Client Development/
CMT Department Manager

Mike Juneau, P.E., MBA
Baton Rouge Branch Manager

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PROJECT INFORMATION

Project Authorization

Southern Earth Sciences, Inc. (SESI) has completed a subsurface exploration for the proposed Howell Golf Course Re-Purposing in Baton Rouge, LA. Our Geotechnical Engineering services were performed in general accordance with SESI's Geotechnical Engineering Proposal No: P16-111.04 dated April 21, 2016. Authorization to proceed with this investigation was received from Mr. Ted Jack with BREC. through a signed *Service Contract Agreement* dated April 25, 2016.

Project Description

It is understood that the project will consist of design and construction of two (2) new bathroom buildings, two (2) new paved parking lots and one (1) pond at the existing Howell Golf Course in Baton Rouge, Louisiana.

Structural loads were not provided at this time; however, a maximum column and wall load of 20 kips and 1.5 kips per linear foot, respectively, is assumed. In addition, it is understood that the locations of the proposed bathroom building will be raised approximately seven (7) feet above existing grade. In addition, it is desired to reuse the material excavated from the proposed pond to create the aforementioned bathroom building pads.

REPORT LIMITATIONS

While the test locations are representative of subsurface conditions at their respective sites and for their respective vertical reaches, local variations characteristic of the subsurface materials of the region are anticipated and may be encountered. The delineation between soil types shown on the logs is approximate and the description represents our interpretation of subsurface conditions at the designated test location and on the particular date drilled.

This report has been prepared in order to aid in the evaluation of this project and to assist the engineers in design. It is intended for use with regard to the specific project discussed herein and any substantial changes in the project, loads, locations, or assumed grades should be brought to our attention so that we may determine how such changes may affect our conclusions and recommendations. We would appreciate the opportunity to review the plans and specifications for construction to ensure that our conclusions and recommendations are interpreted correctly.

Professional judgments on design alternatives and criteria are presented in this report. These are based partly on our evaluations of technical information gathered, partly on our understanding of the characteristics of the project being planned, and partly on our general experience with subsurface conditions in the area. We do not guarantee performance of the

project in any respect, only that our engineering work and judgments rendered meet the standard of care of our profession.

As the project geotechnical engineer of record that developed the design recommendations, please be aware that we cannot accept responsibility for the performance of the foundation system if we are not afforded the opportunity to confirm that our recommendations have been followed. Accordingly, we recommend that Southern Earth Sciences, Inc. be retained on this project to perform observation and field-testing services during the construction phase of this project. Please see the attached *Construction Materials Testing* sheet for contact information.

This report is exclusively for the use and benefit of the addressee(s) identified on the first page of this report and is not for the use or benefit of, nor may it be relied upon by any other person or entity. The contents of this report may not be quoted in whole or in part or distributed to any person or entity other than the addressee(s) hereof without, in each case, advanced written consent.

PURPOSE AND SCOPE OF SERVICES

The purpose of this study was to explore the subsurface conditions at the site to enable an evaluation for site preparation and foundation design. As proposed by SESI and understood by the addressee, two (2) soil borings to a depth of about 25 feet within the footprint of the proposed bathroom buildings, two (2) soil borings to a depth of about six (6) feet within the footprint of the proposed parking/drive areas, and one (1) soil boring to a depth of about 15 feet within the footprint of the proposed pond were drilled and sampled for this project. Depths and locations were as proposed by SESI and understood by the addressee. All references to depth are based on the existing grade at the time of our field investigation.

The scope of services also included conducting laboratory tests on selected samples recovered from the test locations. These tests may have included visual description and classification, moisture content, liquid limit, plastic limit, and unconfined compressive strength. Both field and laboratory testing procedures are briefly discussed in Appendix A of this report.

This report includes a site description, discusses the conditions of the existing subsoil materials at the site, and presents recommendations on the following:

- Site preparation;
- Foundation type, depth, and estimated settlement;
- Slope failure recommendations;
- Pavement sections; and,
- Comments regarding factors that may impact construction and performance of the proposed project.

The scope of geotechnical services did not include an environmental site assessment for

determining the presence or absence of wetlands, hazardous or toxic materials in the soil, surface water, groundwater, or air on, below, or around the site. Any statement in this report or on the boring logs regarding odors, colors, and unusual or suspicious items or conditions are strictly for informational purposes.

In addition, SESI did not provide any service to investigate or detect the presence of moisture, mold, or other biological contaminates in or around any structure, or any service that was designed or intended to prevent or lower the risk of the occurrence or amplification of the same.

The client acknowledges that mold is ubiquitous to the environment with mold amplification occurring when building materials are impacted by moisture. The client further acknowledges that site conditions are outside of SESI's control, and that mold amplification will likely occur, or continue to occur, in the presence of moisture. As such, SESI cannot and shall not be held responsible for the occurrence or recurrence of mold amplification.

SITE LOCATION AND DESCRIPTION

The project site for the proposed Howell Golf Course Re-Purposing is located at the existing Howell Golf Course at 5509 Winbourne Avenue in Baton Rouge, Louisiana. The site is bound to the east by E. Brookstown Dr., to the south by Winbourne Ave., to the west by Elm Dr., and to the north by Howell Park Ave. and Linden Street. The project site is topographically flat with grass cover and some trees.

FIELD EXPLORATION

The field exploration, performed to evaluate the engineering characteristics of the foundation materials, included sampling the test locations and recovering soil samples.

As previously mentioned, two (2) soil borings to a depth of about 25 feet within the footprint of the proposed bathroom buildings, two (2) soil borings to a depth of about six (6) feet within the footprint of the proposed parking/drive areas, and one (1) soil boring to a depth of about 15 feet within the footprint of the proposed pond were drilled and sampled for this project. The depths and sites of the test locations were as proposed by SESI and understood by the addressee. The test locations were determined at the project site using a handheld GPS. The *Test Location Plan* sheet, included in Appendix D, presents the approximate sites of the test locations.

Descriptions of soil and groundwater conditions encountered in the test locations are shown on their respective logs in Appendix D. The boring logs are labeled with their initial letter followed by boring number. For example, log "B-1" represents boring '1' drilled for this project and "P-1" represents parking boring '1.'

SUBSURFACE CONDITIONS

Subsurface Materials

The general subsurface description presented in the table below is generalized in nature to highlight the major subsurface materials features and characteristics. The boring logs, included in Appendix D, present specific information at individual test location including: soil description, stratification, ground water level, tests' location, and laboratory tests results. This information represents the actual conditions at the test locations. Variations may occur and should be expected between and beyond test locations. The stratification represents the approximate boundary between subsurface materials and the actual transition may be gradual.

Boring Number	Depth (ft.)	General Classification
B-1	0-25	Alternating layers of medium to very stiff light gray and tan Lean and Fat CLAY
B-2	0-2	Stiff gray and brown Clayey SILT
	2-25	Alternating layers of medium to very stiff gray, brown, and tan Lean and Fat CLAY
B-3	0-15	Alternating layers of stiff to very stiff gray, brown, and tan Lean and Fat CLAY
P-1	0-6	Alternating layers of stiff gray and tan Lean and Fat CLAY
P-2	0-2	Medium gray and brown Clayey SILT
	2-6	Stiff light gray and tan Fat CLAY becoming Lean CLAY

Groundwater

The free groundwater level was detected at test location B-1 and B-2 at the depth of 18 feet below the existing ground surface. We caution that the clay soils present at this site will have a tendency to retain moisture and to create perched water conditions after periods of wet weather. Fluctuations in the groundwater level will occur due to variances in rainfall, elevation, drainage, types of soil encountered and other factors not evident at the time measurements were made. Groundwater levels should be verified prior to construction. Groundwater levels encountered at the test locations at the time of our investigation are shown on the appropriate *Soil Boring Logs* sheets attached in Appendix D. Reference to depth has been made with respect to the existing ground surface.

DISCUSSION

Based on the laboratory test results, the encountered subsoil materials provided good strength parameters. The subsurface clay soil encountered at all locations are generally medium to very stiff in nature.

For this project, SESI considered the use of both deep and shallow foundation systems. After analysis of subsurface conditions and provided/assumed data, SESI determined a shallow foundation system is suitable to support the proposed structures if and when the following sections and appendices are correctly interpreted and applied.

Please review the following sections for further information on the corresponding site, foundation recommendations, and pavement recommendations.

RECOMMENDATIONS

Site Development Recommendations

Site Preparation

Prior to development of any structures or fill deposit, the complete earthwork area must be properly cleaned. SESI recommends that any existing structural elements, all top soil materials containing organic matter, vegetation or any other foreign matter, debris, deleterious materials, and soft pockets present shall be removed from the site to make the ground surface properly leveled. The actual removal depth shall be determined in the field by SESI's Geotechnical Engineer or his/her representative. Please note that the stripped materials can only be used in landscaping, but not at any structural area.

SESI also recommends that any surface soils that are weak and/or high in silt content, observed to rut or deflect excessively (greater than one (1) inch) during site preparation, should be undercut to a competent layer and replaced with properly compacted structural fill material. Please note that the presence of soil with a combination of high silt content and high moisture contents within the foundation areas may cause construction and in-service problems such as pumping action, compaction, etc.

Based on the furnished information, we understand that after clearing and properly leveling of the site, compacted structural fill on the order of seven (7) feet will be placed across the footprints of the new bathroom buildings to achieve the design grade.

Presence of Expansive Soils

Based on the laboratory test results, the subsurface soils encountered at the test locations are considered to have low swelling potential. Generally, the subsurface soils with swelling potential above the ground water level and within the depths subjected to moisture content changes are expected to undergo volume change behavior and were considered in our potential vertical rise (PVR) estimation. **The potential vertical rise (PVR) is estimated to be ½ inch using an applied load of 1.0 psi.** The PVR estimates were performed using the TEX 124E method analyzing the upper 10 feet of soil.

One (1) inch of PVR is generally accepted as the maximum allowable value for design and construction. However, the Structural Engineer or others should determine if these PVR values are within the acceptable limits. These PVR estimations assume that the soils are allowed to increase/decrease in moisture content from a relatively wet condition to a relatively dry condition over a depth of approximately ten (10) feet from the existing ground surface at the time of field exploration.

Slope Failure Discussion and Recommendations

SESI was asked to address the failures that are present along the side slopes of the concrete drainage canal that runs east-west through the site. SESI Engineers visited the site to recognize and determine possible remedies for these failures. It was observed that at several places along the slopes of the drainage ditch, there are large wash-out cavities situated along the top edge of the slope's concrete apron. It is our opinion that these cavities have been created by improper drainage of the golf course and not from a slope stability failure. Ideally, the runoff water from the surface sheet flow would drain over the top of the concrete apron and down the concrete slope into the canal. However, due to the grading of the existing soil and imperfections in the draining system, water is being stopped at the edge of the concrete apron instead of running over the top as originally designed. Over time, the pooling at the edge of the apron has caused scouring of the existing soil to occur and as such, has led to the creation of cavities under and behind the concrete apron and lined slope. As a result of this, you will start to observe the cavities below the concrete which are inevitably leading to the failures that are seen at this site, as seen in Figure 1. Scouring of the soil will continue to occur until remedial measures are taken.

Figure 1. Washout failure under concrete slope

As an immediate solution in order to limit any further washout damage, we suggest filling the existing cavities with riprap and flow-fill. As a long term solution, we recommend re-grading and maintaining the area of the course that is adjacent to the canal, as represented in Figures 2 & 3 in Appendix D. This re-grading will ensure positive water flow over the concrete apron and down the slope of the canal, instead of stopping at the edge of the apron and inevitably draining under/behind the concrete.

Shallow Foundation Recommendations

Foundation Parameters

Assuming the project site is prepared in accordance with the "Site Development Recommendations" section and Appendices B and C of this report, and based on the provided/assumed structural loads, the proposed structure may be supported on a shallow foundation system. **Square spread and continuous footings bearing at least 18 inches below finished grade, within properly compacted structural fill or the medium stiff in situ**

clay soil, may be designed for a net allowable bearing capacity of 1,400 psf and 1,165 psf, respectively. A minimum dimension of 24 inches for the square spread footing and 18 inches for the continuous footing should be used in the foundation design to reduce the possibility of a local bearing failure.

Total and differential settlements for square spread footings up to four (4) feet and continuous footings up to two (2) feet in width are expected to be in the order of approximately 1 ½ inches. Settlement was estimated based on the total sustained dead loads of 70% of the above recommended net allowable bearing capacities plus up to seven (7) feet of fill material, using empirical correlations between Atterberg Limits and compressibility. The Structural Engineer shall confirm if these magnitudes are within tolerance limits. If not, SESI shall be notified in order to provide some remedial measures and/or change the foundation type.

In addition, SESI understands that the construction for structures on shallow foundation will be a monolithic type of construction and the anticipated uplift loads will be resisted by the concrete mass of floor slab and footings. The uplift resistance of a shallow foundation also depends on the weight of soil directly above it. Therefore, to accommodate uplift loads, we recommend increasing the depth of foundation. **For design purposes, the ultimate resistance may be based on buoyant unit weights for soil and concrete and a factor of safety of at least 2.0 shall be used to compute allowable uplift resistance.** This should be verified by a Structural Engineer, and if it is determined that this is not a feasible option to resist uplift loads, deep foundations shall be considered as an alternate foundation system.

The bottom of the foundation excavations must be dry, clean and free of loose, soft materials and construction debris prior to placement of steel or concrete. Cavities formed as a result of excavation of soft or loose soil zones should be backfilled with properly compacted structural fill material or granular fill including compacted crushed stone. The foundation excavations should be observed by SESI's Geotechnical Engineer or their representative prior to steel or concrete placement. Concrete shall be poured as quickly as possible to avoid exposure of the footing materials to moisture changes (wetting or drying). Surface run-off water should be channeled away from the excavation and not be allowed to pond. If for any reason the excavation is required to be open for more than one (1) day, it shall be protected to minimize moisture loss/gain.

Building Floor Slab

The building floor slab can be supported on a minimum of 12 inches of properly compacted structural fill assuming that the site is prepared as described in the "Site Development Recommendations" section, and Appendices B and C of this report. Proof rolling, as discussed in Appendix B of this report, should be accomplished to identify soft or unstable soils that should be removed from the floor slab area prior to fill placement and/or floor

slab construction. These soils should be replaced with properly compacted structural fill as described in this report.

SESI recommends that a minimum four (4) inch thick free-draining granular mat be placed beneath the floor slab to enhance drainage. The soil surface shall be graded to drain away from the building without low spots that can trap water prior to placing the granular drainage layer. Polyethylene sheeting should be placed to act as a vapor retarder where the floor will be in contact with moisture sensitive equipment or products such as tile, wood, carpet, etc., as directed by the design engineer. The decision to locate the vapor retarder in direct contact with the slab or beneath the layer of granular fill should be made by the design engineer after considering the moisture sensitivity of subsequent floor finishes, anticipated project conditions, and the potential effects of slab curling and cracking. The floor slabs should have an adequate number of joints to reduce cracking resulting from differential movement and shrinkage.

For subgrades prepared as recommended and properly compacted fill material, a modulus of subgrade reaction (k value) of 120 pounds per cubic inch (pci) may be used in the grade slab design. However, depending on how the slab load is applied, the value will have to be geometrically modified.

Floor Slab Precautions

The precautions listed below should be followed for construction of slab-on-grade pads. These details will not reduce the amount of movement, but are intended to reduce potential damage should some settlement of the supporting subgrade take place. Some increase in moisture content is inevitable as a result of development and associated landscaping. However, extreme moisture content increases can be largely controlled by proper and responsible site drainage, building maintenance and irrigation practices.

- Cracking of slab-on-grade concrete is normal and should be expected. Cracking can occur not only as a result of heaving or compression of the supporting soil material, but also as a result of concrete curing stresses. The occurrence of concrete shrinkage cracks and problems associated with concrete curing may be reduced and/or controlled by limiting the slump of the concrete, proper concrete placement, finishing, and curing, and by the placement of crack control joints at frequent intervals, particularly where re-entrant slab corners occur. The American Concrete Institute (ACI) recommends a maximum panel size (in feet) equal to approximately three times the thickness of the slab (in inches) in both directions. For example, joints are recommended at a maximum spacing of twelve (12) feet based on having a four-inch slab. SESI also recommends that the slab be independent of the foundation walls. Using fiber reinforcement in the concrete can also control shrinkage cracking.

- Areas supporting slabs should be properly moisture conditioned and compacted. Backfill

in all interior and exterior water and sewer line trenches should be carefully compacted to reduce the shear stress in the concrete extending over these areas.

Exterior slabs should be isolated from the building. These slabs should be reinforced to function as independent units. Movement of these slabs should not be transmitted to the building foundation or superstructure.

PAVEMENT RECOMMENDATIONS

Pavement Sections

Actual traffic type and frequency anticipated has not been provided at this time. However, SESI assumes that the average daily traffic (ADT) will consist of mostly passenger vehicles and occasional truck traffic (e.g. Garbage trucks). Moreover, our scope of work did not include extensive sampling and CBR testing of the existing subgrade or potential sources of imported fill for the specific purpose of a detailed pavement analysis. Instead, SESI assumed pavement-related design parameters that are considered to be typical for the area soil types. Please note that if the assumed traffic data varies significantly from actual or anticipated traffic, SESI should be contacted for re-evaluation of pavement recommendations.

The pavement subgrade should be prepared as discussed in “Site Development Recommendations” section, and Appendices B and C of this report. The recommended pavement thicknesses presented below are considered typical and minimum for the assumed parameters at the site. We understand that budgetary considerations sometimes warrant thinner pavement sections than those presented. However, the client, the owner, and the project designers should be aware that thinner pavement sections may result in increased maintenance costs and lower than anticipated pavement life.

Based on our empirical analysis from field and lab test results, a CBR of 4 and a Modulus of Subgrade Reaction (k) of 110 pci should be assigned to the near surface soils. With these assumptions, it is possible to use a typical “standard” pavement section consisting of the following:

RIGID PAVEMENT		
Pavement Materials	**Minimum Thickness, Inches**	
	Parking and drive areas for pedestrian vehicles	**Drives for trucks up to 10,000-pound, single-axle loads**
Reinforced Portland Cement Concrete	5	6
Compacted Limestone Aggregate Base Course	-	6
Compacted Structural Fill	10	10

The aggregate base course should meet the requirements of Sub-Section 1003 of the latest edition of the Louisiana Standard Specifications for Roads and Bridges Manual (LSSRB), and should be compacted to at least 95 percent of maximum dry density near the optimum moisture content in accordance with ASTM D698, Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft3 (600 kN-m/m3)).

Pavement materials may be placed after the subgrade or structural fill has been properly proof rolled or compacted, and fine-graded. These activities shall be accomplished following the Louisiana Department of Transportation and Development Standard Specifications for Road and Bridge Construction guidelines.

Proper finishing of concrete pavement requires the use of appropriate construction joints to reduce cracking. Construction joints shall be designed in accordance with the current Portland Cement Association and the American Concrete Institute guidelines. Joints should be sealed to reduce the potential for water infiltration into the supporting soils. The design of steel reinforcement should be in accordance with current accepted codes.

FLEXIBLE PAVEMENT		
Pavement Materials	**Minimum Thickness, Inches**	
	Parking and drive areas for pedestrian vehicles	**Drives for trucks up to 10,000-pound, single-axle loads**
Asphaltic Concrete Wearing Course	2.5	5
Compacted Limestone Aggregate Base Course	5	7
Compacted Structural Fill	12	12

Asphaltic concrete should meet the requirements of Part V of the latest edition of the LSSRB. The aggregate base should meet the requirements of Sub-Section 1003 of the LSSRB. The base and structural fill should be compacted to at least 95 percent of the maximum dry density near the optimum moisture content in accordance with ASTM D698.

Water should not be allowed to pond behind curbs and saturate the base. In down grade areas, the limestone base shall extend through the slope to provide an exit path for any water accumulating under the pavement.

Alternative Base Course Options

Alternative options to aggregate base course include the following:

Option 1: For rigid and flexible pavements, soil-cement treated base course of a minimum

thickness of 10 inches is an acceptable alternative to an aggregate base course. A minimum of 9% by volume of cement is recommended to use for soil-cement base course. Please note that the cement treatment should meet the requirements of Section 305 of the latest edition of the LSSRB. Per Section 305.04, lime conditioning is required prior to cement treatment in accordance with Section 304 for Type C treatment if the PI (Plasticity Index) of soil is more than 15. Percent by volume of lime required for lime conditioning is 6 when PI of soil is between 16 and 25, and 9 when PI of soil is between 26 and 35. The treated soil should be compacted at least 95% of maximum dry density near the optimum moisture content in accordance with the Sub-section 303.11 of LSSRB.

It should be noted that although the cement treated base course may be adequate to support the anticipated traffic loads, some reflective cracking should be anticipated in the new pavement as a result of shrinkage cracks that may develop in the cement treated base course prior to asphalt placement. The use of three (3) to four (4) inches of stone at the cement treated based and asphalt interface will help reduce reflective cracking and extend the life of the pavement.

Option 2: For rigid pavement only, soil-lime treated base course of a minimum thickness of 10 inches is an acceptable alternative to an aggregate base course. A minimum of 11% by volume (approximately 4% by dry weight) for hydrated lime is recommended to use for soil-lime base course. Please note that the lime treatment should meet the requirements of Section 304 and Type B treatment of the latest edition of the LSSRB. Per LSSRB Sub-section 304.04 and Type B treatment, the treated soil shall have a maximum liquid limit of 40 and a maximum PI of 10 and should be compacted at least 95% of maximum dry density near the optimum moisture content in accordance with Sub-section 304.07.

Please note that caution should be used when cement and/or lime treatment is performed on site in closely populated areas.

APPENDIX

APPENDIX A
FIELD AND LABORATORY PROCEDURES

Drilling Methods and Sampling Procedures

The borings were drilled with an ATV (all-terrain vehicle) mounted drill rig using hollow-stem auger or wet rotary drilling techniques to advance the borehole. Undisturbed samples were obtained using three (3) inch diameter thin-walled Shelby tube sampling procedures in general accordance with ASTM D-1587 *Standard Practice for Thin-Walled Tube Sampling of Soils for Geotechnical Purposes*. These samples were extruded in the field with a hydraulic ram, and were identified according to project number, boring number and depth, wrapped in aluminum foil and placed in plastic bags to preserve the natural moisture condition; then, they were transported to the laboratory in containers to minimize disturbance.

When undisturbed samples could not be recovered, disturbed samples were obtained in accordance to the procedures of ASTM D-1586 *Standard Test Method for Standard Penetration Test (SPT) and Split-Barrel Sampling of Soils*. These samples were also identified according to project number, boring number and depth, and were placed in plastic bags and transported to the laboratory for testing. The depths at which undisturbed and/or disturbed samples were obtained are shown on the attached boring logs in Appendix E of this report.

Laboratory Testing Program

A supplemental laboratory testing program was conducted to determine additional pertinent engineering characteristics of the subsurface materials. This program may have included the following procedures:

- ASTM D2216 *Standard Test Method for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass*: This test is performed to determine the water (moisture) content of soils obtained from the field exploration. The water content is the ratio, expressedas a percentage, of the mass of “free” water in a given mass of soil to the mass of the dry soil solids.

- ASTM D4318 *Standard Test Methods for Liquid Limit, Plastic Limit and Plasticity Index of Soils:* These test methods cover the determination of the liquid limit, plastic limit, and the plasticity index of soils which are used to classify the soil and evaluate index properties and residual strength characteristics of the soils.

- ASTM D2166 *Standard Test Method for Unconfined Compressive Strength of Cohesive Soils*: Unconfined Compressive Strength (UC) tests are used to evaluate the shear strength characteristics of soils.

- ASTM D-422 *Standard Test Method for Particle-Size Analysis of Soils:* This test method covers the quantitative determination of the distribution of particle sizes in soils. The distribution of larger particles is determined by sieving (No. 200 sieve), while the distribution of smaller particles is determined by a sedimentation process, using a hydrometer.

The results of these tests are found in the accompanying boring logs located in the Appendix. Please note that the samples obtained and not tested will be retained for a period of thirty (30) days; if further instructions are not received, SESI will dispose the samples at that time.

APPENDIX B
STRUCTURAL FILL SPECIFICATIONS AND CONSIDERATIONS

Structural Fill Materials

After subgrade preparation and observation has been completed, structural fill placement, if necessary, may begin. The structural fill should consist of lean clays and sandy lean clays (CL) or clayey sands (SC) having the following recommended material properties:

a. Liquid Limit: 40 maximum
b. Plasticity Index: 12 to 22 maximum
c. Inert Material (Non-Expansive)
d. Free of Organics
e. Maximum Particle Size: 2-in

This material must be certified and approved by the Geotechnical Engineer prior to its use.

Structural Fill Deposit Construction

After all surface preparation and observation has been completed, the structural fill activities may begin. These activities must be performed in a sequential order where lower elevations must be worked before higher ones. The structural fill shall be deposited in lifts of eight (8) inches of loose material. Each lift shall be compacted and certified by the Geotechnical Engineer or a representative prior to placement of other lifts. The passing criteria shall be a 95% of the maximum dry density as determined by ASTM D-698, *Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft^3 (600 kN-m/m^3))*, and a moisture content between one (1) below and three (3) above percentages of the optimum moisture content. If water must be added, it should be uniformly applied and thoroughly mixed into the soil by disking or scarifying. As a guideline, it is recommended that field density tests be performed at a frequency of not less than one test per 2,500 square feet.

It is important to maintain the structural fill thickness as uniform as possible. Uneven fill thicknesses under a structure may cause differential soil responses to the applied loads which can produce cracking, settling, or tilting of the structure. Uniform fill areas shall consider the footprint of the structure plus a five (5) feet strip around its perimeter.

Fill slopes shall be maintained at a maximum 2 Horizontal: 1 Vertical steepness. The runoff of water across the faces of the slopes shall be avoided by appropriate drainage ways. In addition, appropriate drainage ways shall be maintained at all earthwork surface areas in order to not affect compaction.

Proof Rolling

Upon completion of the stripping activities, the exposed areas shall be properly proof rolled in order to prepare the natural terrain to receive the design structural fill and traffic loads. The proof roll consists of compacting the exposed surface with a 20- to 25-ton loaded dump truck. Surface soils that are observed to rut or deflect under the truck load should be undercut and replaced with the proper structural fill. These activities should be performed during a period of dry weather and should be supervised by a Geotechnical Engineer or a representative.

APPENDIX C
CONSTRUCTION CONSIDERATIONS

Observation and Testing

The preceding recommendations require a close supervision of the Geotechnical Engineer or representative; therefore, it is recommended that SESI be retained to provide observation and testing for the complete duration of all earthwork and foundation activities for this project. SESI cannot accept responsibility for any conditions deviated from those described in this report, nor for the performance of the foundation if not engaged to provide construction observation and testing.

Moisture Sensitive Soils/Weather Related Concerns

Most of the subsurface materials encountered at this site are expected to be sensitive to disturbances caused by changes in moisture content. During wet weather periods, the increment of the moisture content of the soil may cause a significant reduction of the soil strength and support capabilities. Furthermore, soils that become wet may be slow to dry, thus significantly retarding the progress of grading and compaction activities. For these reasons, it will be advantageous to perform earthwork and foundation construction activities during dry weather.

Foundation Maintenance

Water shall be kept from ponding adjacent to the structure at all times in order to prevent reductions of the soil strength and support capabilities. For this, the following measures shall be implemented:

a) Surface Drainage – always drain away from the foundation; on vegetated ground, a minimum slope of 5% is required. Never allow water to accumulate close to or around the foundation.

b) Landscaping:

- Avoid placing plants immediately adjacent to the foundation.
- Avoid placing sprinkler system pipes near the foundation (they could leak).
- Direct sprinkler heads away from the foundation.

Trees shall be planted at a minimum distance of half the anticipated canopy diameter or twenty (20) feet, whichever is larger, from the foundation edge. If existing trees are closer than this, they should be thoroughly soaked at least twice a week during dry periods and once a week during moderate rainfall periods.

Excavations Regulations

In the Federal Register, Volume 54, No. 209 (October 1989), the United States Department of Labor, Occupational Safety and Health Administration (OSHA) amended its "Construction Standards for Excavations, 29 CFR, part 1926, Subpart P". This document was issued to better

insure the safety of workmen entering trenches or excavations. It is mandated, by this federal regulation, that excavations, whether they be utility trenches, basement excavations or footing excavations, be constructed in accordance with the new OSHA guidelines.

The contractor is solely responsible for designing and constructing stable, temporary excavations and shall shore, slope, or bench the sides of the excavations as required to maintain stability of both the excavation sides and bottom. The contractor's "responsible person", as defined in 29 CFR Part 1926, should evaluate the soil exposed in the excavations as part of the contractor's safety procedures. In no case should slope height, slope inclination, or excavation depth, including utility trench excavation depth, exceed those specified in local, state, and federal safety regulations.

We are providing this information solely as a service to our client. SESI does not assume responsibility for construction site safety or the contractor's or other parties' compliance with local, state, and federal safety or other regulations.

APPENDIX D

SUPPORTING DOCUMENTS

SOUTHERN EARTH SCIENCES, INC.

Geotechnical, Environmental & Construction Materials Testing

SESI PROJECT: B16-119
BREC HOWELL PARK GOLF COURSE
RE-PURPOSING
BATON ROUGE, LOUISIANA
DATE: 6/8/16
DRAWN BY:SAF

*EXAGGERATED DRAWING. ACTUAL EXTENTS SHOULD BE DETERMINED AT TIME OF CONSTRUCTION

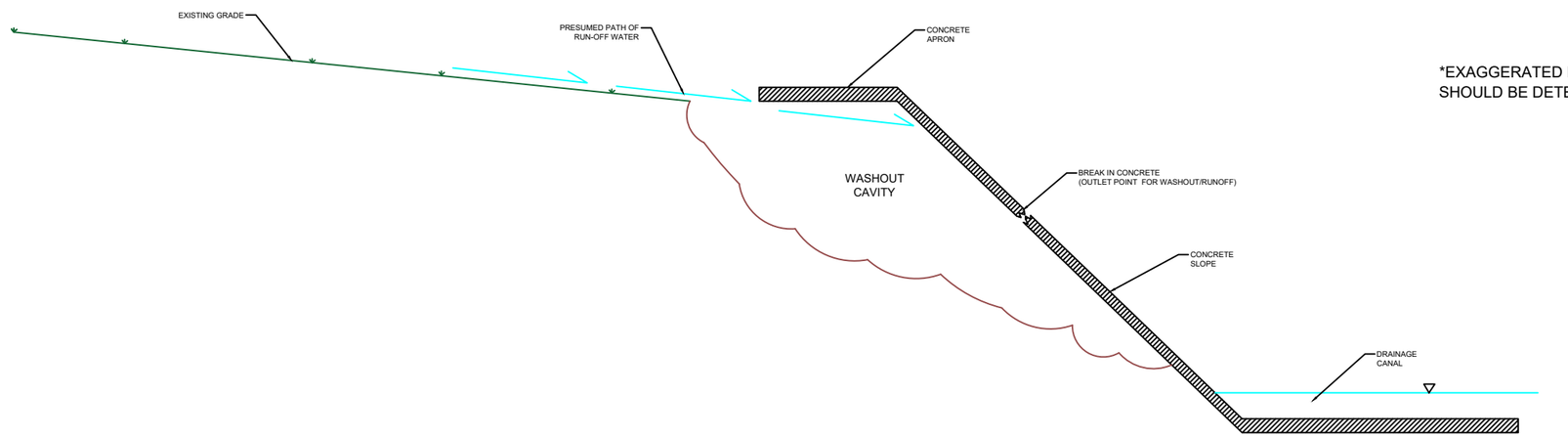


FIGURE 2
EXISTING SLOPE FAILURE
(NOT TO SCALE)

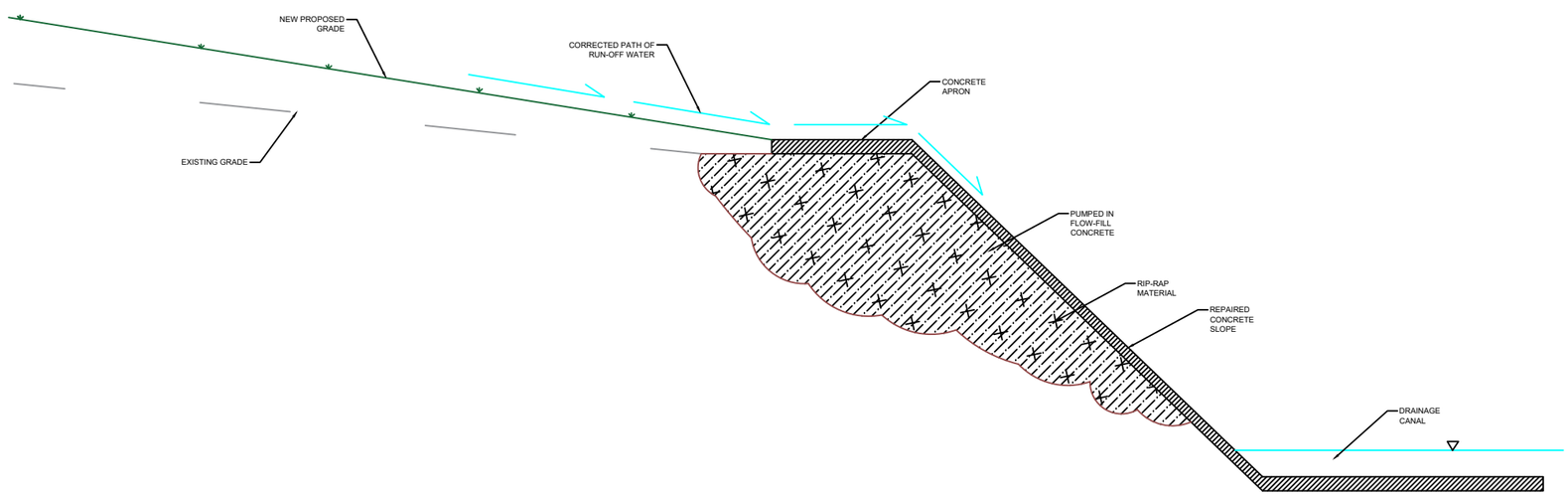


FIGURE 3
RECOMMENDED SLOPE FAILURE SOLUTION
(NOT TO SCALE)

SOUTHERN EARTH SCIENCES, INC.
Geotechnical, Environmental & Construction Materials Testing

APPROXIMATE TEST LOCATION

N

PROPOSED HOWELL PARK GOLF COURSE RE-PURPOSING
BATON ROUGE, LOUISIANA
SESI FILE NO.: B16-119

SOUTHERN EARTH SCIENCES, INC.
Geotechnical, Environmental & Construction Materials Testing
www.soearth.com

FIGURE 4
TEST LOCATION PLAN

BORING LOG

BORING NO.:
PROJECT:
PROJECT LOCATION:
BORING LOCATION:
BORING ELEVATION:
GEOL/ENGR:
METHOD:

PROJECT NO.:
DATE DRILLED:
DATE COMPLETED:
WATER LEVEL:
WATER LEVEL DATE:
LOGGED BY:
DRILLER:

DEPTH (FEET)	SAMPLE	Standard Penetration (Blows/Ft.) or Penetrometer (TSF)	Unconfined Compressive Strength (TSF)	Moisture Content (%)	Dry Unit Weight (PCF)	LL	PI	Symbol	MATERIAL CLASSIFICATION

Description of strata as follows:
Strength (or Consistency), Color, Minor Constituent, Major Constituent, additional observations, etc.

Field evaluation of shear strength/relative density:
Standard Penetration Test (ASTM D-1586) in Blows/Ft.
Pocket penetrometer readings in Tons/Sq. Ft.

5
10
15
20
25
30
35
40

Groundwater second reading

Groundwater first encountered

Graphical presentation of material type:

Fat CLAY	SILT	SAND	FILL
Lean CLAY	CLAYEY SILT	CLAYEY SAND	GRAVEL
ORGANIC CLAY	SANDY SILT	SILTY SAND	GRAVELLY SAND
PEAT	ORGANIC SILT	SANDY CLAY	

Laboratory Information

As determined by Unconfined Compression (ASTM D-2166) or Unconsolidated Undrained Triaxial (ASTM D-2850), if noted.

Determined using applicable portions of ASTM D-2166 and ASTM D-2216.

Determined using ASTM D-2216 or D-4959.

Determined using ASTM D-4318. Provides data for application of Unified Classification System (UCS).

COMMENTS:

Shelby Tube Sample
Auger Sample
Split-spoon Sample
No Recovery

Sample recovery method.

GENERAL NOTES FROM LITERATURE

Unified Soil Classification System

***Coarse-grained soils.* More than 50% retained on US # 200 Sieve**	***Gravels: More than 50% retained on US # 4 Sieve***	*Clean Gravel (little or no fines)*	*GW*	*Well graded gravels and gravel-sand mixtures with little or no fines*
			GP	*Poorly graded gravels and gravel-sand mixtures with little or no fines*
		Gravels with fines	*GM*	*Silty gravels, gravel-sand-silt mixtures*
			GC	*Clayey gravels, gravel-sand-clay mixtures*
	Gravels: More than 50% passing through US # 4 Sieve	*Clean sand (little or no fines)*	*SW*	*Well graded sands and gravelly sands, little or no fines*
			SP	*Poorly graded sands and gravelly sands, little or no fines*
		Sands with fines	*SM*	*Silty sands, sand-silt mixtures*
			SC	*Clayey sands, sand-clay mixtures*
***Fine-grained soils.* More than 50% passed through US Sieve # 200**	***Silts and Clays with liquid limit (LL) less than 50***		*ML*	*Inorganic silts, very fine sands, rock flour, silty or clayey fine sands*
			CL	*Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays*
			OL	*Organic silts and organic silty clays of low plasticity*
	Silts and Clays with liquid limit (LL) greater than 50		*MH*	*Inorganic silts, micaceous diatomaceous fine sand or silty soil, elastic silts*
			CH	*Inorganic clays of high plasticity, fat clays*
			OH	*Organic clays of medium to high plasticity*
High organic soils			*PT*	*Peat, muck and other highly organic soils*

Classification of Granular Soils as per U.S. Standard Sieve Analysis

Description	*Boulders*	*Cobbles*	*Gravel*		*Sand*			*Silt or Clay*
			Coarse	*Fine*	*Coarse*	*Medium*	*Fine*	
Sieve Size	*>12 inches*	*3-12 inches*	*0.75 to 3inches*	*#4 to 0.75 iches*	*#10-#4*	*#40-#10*	*#200-#40*	*<#200*

Note:#4=5mm, #10=5mm, #40=0.4mm, #200=0.8mm

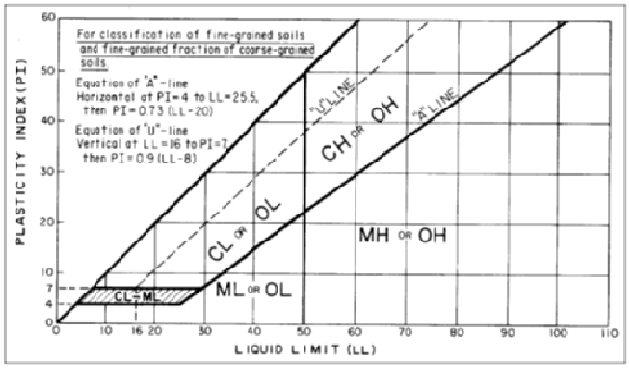
Consistency of Cohesive Soils

Consistency	Unconfined Compressive Strength, (tsf)	SPT* (N)
Very Soft	<0.25	<2
Soft	0.25 to 0.50	2 to 4
Medium Stiff	0.50 to 1.0	5 to 8
Stiff	1.0 to 2.0	9 to 15
Very Stiff	2.0 to 4.0	16 to 30
Hard	>4.0	>30

Relative Density of Granular Soils

Relative Density	SPT* (N)
Very Loose	0 to 4
Loose	5 to 10
Medium Dense	11 to 24
Dense	25 to 50
Very Dense	>50

**Standard Penetration test (SPT) value (N-value) is a number of blows required to advance a standard 2-inch O.D. split-spoon sampler (SS) the last 12 inches of the total 18 inches penetration with a 140-pound hammer falling from 30 in. height.*



Plasticity Characteristics

Plasticity	Plasticity Index (PI)
Non-Plastic	0
Slight	1 to 5
Low	5 to 10
Medium	11 to 20
High	21 to 40
Very high	> 40

SOUTHERN EARTH SCIENCES, INC.

SOUTHERN EARTH SCIENCES, INC.

Geotechnical, Environmental & Construction Materials Testing

Laboratory Test Results

Howell Park Golf Course, BR, LA

Technical Responsibility: MJ

Quality Assurance Officer

Client: BREC

Project No.: **B16-119**

PM: MJ

Date of Issue: 5/13/2016

Boring No.	Depth (ft)	Classification	ASTM DESIGNATION D2216 ω %	D4318 Atterberg Limits LL	D4318 PL	D4318 PI	D2166 γwet pcf	D2166 γdry pcf	D2166 Cohesion U psf	D2850 Cohesion UU psf	D2850 Confining Pressure psi	D422, C136 or C117 Grain Size (%) Gravel	Sand	Silt	Clay	% Passing #200	USCS	Remarks
B-1	0-2	Medium, Light Gray and Tan Lean CLAY with limestone	19.9	31	17	14	123.2	102.8	844.7								(CL)	30°28'50.97"N; 91° 7'57.45"W Disturbed sample
B-1	2-4	Tan Lean CLAY with ferrous nodules	25.4														(CL)	
B-1	4-6	Medium, Light Gray and Tan Lean CLAY with ferrous nodules	20.9	42	16	26	125.3	103.5	712.6								(CL)	
B-1	6-8	Light Gray and Tan Fat CLAY with silt pockets and ferrous nodules	20.6														(CH)	
B-1	8-10	Stiff, Light Gray and Tan Lean CLAY with ferrous nodules	22.5	38	15	23	127.7	104.1	1309.4								(CL)	
B-1	13-15	Light Gray and Tan Fat CLAY with silt pockets and ferrous nodules	21.1														(CH)	
B-1	18-20	Very Stiff, Light Gray and Tan Lean CLAY with ferrous nodules	21.0	34	17	17	128.1	105.7	2132.6								(CL)	Water Level = 18'
B-1	23-25	Light Gray and Tan Fat CLAY with sandy silt pockets	35.7														(CH)	
B-2	0-2	Firm, Gray and Brown Clayey SILT with grass roots becoming Stiff, Light Gray and Brown Lean CLAY with ferrous nodules	24.0	38	23	15	116.2	93.8	1883.9								(ML)(CL)	30°29'1.96"N; 91° 7'51.20"W
B-2	2-4	Light Gray and Tan Lean CLAY with ferrous nodules	29.1														(CL)	
B-2	4-6	Very Stiff, Light Gray and Tan Lean CLAY with ferrous nodules	21.9	39	20	19	128.9	105.8	2475.3								(CL)	
B-2	6-8	Light Gray and Tan Fat CLAY with silt pockets and ferrous nodules	21.4														(CH)	
B-2	8-10	Light Gray and Tan Fat CLAY with silt pockets and ferrous nodules	20.2														(CH)	
B-2	13-15	Very Stiff, Light Gray and Tan Lean CLAY with large silt streaks and ferrous nodules	21.9	42	14	28	129.0	105.8	2077.8								(CL)	
B-2	18-20	Light Gray and Tan Fat CLAY with silt pockets and ferrous nodules	22.1														(CH)	Water Level = 18'; after 15 minutes = 18'
B-2	23-25	Medium, Light Gray and Tan Lean CLAY with silt pockets and ferrous nodules	21.9	30	20	10	125.2	102.6	734.3								(CL)	

SOUTHERN EARTH SCIENCES, INC.

Geotechnical, Environmental & Construction Materials Testing

Laboratory Test Results

Howell Park Golf Course, BR, LA

Technical Responsibility: MJ

Quality Assurance Officer

Client: BREC

Project No.: **B16-119**

PM: MJ

Date of Issue: 5/13/2016

Boring No.	Depth (ft)	Classification	ASTM DESIGNATION D2216 ω %	D4318 Atterberg Limits LL	D4318 PL	D4318 PI	D2166 γ_{wet} pcf	D2166 γ_{dry} pcf	D2166 Cohesion U psf	D2850 UU psf	D2850 Confining Pressure psi	D422, C136 or C117 Grain Size (%) Gravel	Sand	Silt	Clay	% Passing #200	USCS	Remarks
B-3	0-2	Light Gray and Brown Lean CLAY with ferrous nodules	26.5														(CL)	30°29'3.33"N; 91° 7'54.27"W
B-3	2-4	Very Stiff, Light Gray and Tan Fat CLAY with silt and ferrous nodules	22.7	52	17	35	128.8	104.8	2274.7								(CH)	Water Level = NE
B-3	4-6	Light Gray and Tan Fat CLAY with silt, ferrous nodules and calcareous nodules	23.5														(CH)	
B-3	6-8	Stiff, Light Gray and Tan Lean CLAY with ferrous nodules	23.6	37	17	20	126.6	102.4	1399.4								(CL)	
B-3	8-10	Light Gray and Tan Fat CLAY with silt, ferrous nodules and calcareous nodules	19.6														(CH)	
B-3	13-15	Stiff, Light Gray and Tan Lean CLAY with trace silt streaks and ferrous nodules	23.9	47	14	33	127.7	103.1	1518.9								(CL)	
P-1	0-2	Stiff, Gray and Tan Lean CLAY with grass roots at the top	22.0	48	19	29	120.9	99.2	1355.5								(CL)	30°28'49.76"N; 91° 7'59.05"W
P-1	2-4	Light Gray and Tan Fat CLAY and Lean CLAY with ferrous nodules and calcareous nodules	19.5														(CH)(CL)	Water Level = NE
P-1	4-6	Stiff, Light Gray and Tan Lean CLAY with ferrous nodules	22.8	43	16	27	127.3	103.6	1909.6								(CL)	
P-2	0-2	Medium, Gray and Brownish Gray Clayey SILT with ferrous nodules and grass roots at the top	21.7	45	33	12	115.6	95.0	836.8								(ML)	30°29'4.25"N; 91° 7'46.84"W
P-2	2-4	Light Gray and Tan Fat CLAY and Lean CLAY with ferrous nodules and calcareous nodules	23.7														(CH)(CL)	Water Level = NE
P-2	4-6	Stiff, Light Gray and Tan Lean CLAY with ferrous nodules	24.2	32	22	10	126.7	102.1	1400.9								(CL)	

FIELD BORING LOG

BORING NO.: B-1
PROJECT: HOWELL PARK GOLF COURSE
PROJECT LOCATION: BATON ROUGE, LA
BORING LOCATION: 30°28'50.97"N; 91° 7'57.45"W
BORING ELEVATION: EXISTING GRADE
GEOL/ENGR: MJ
METHOD: AUGER

PROJECT NO.: B16-119
DATE DRILLED: 05/09/16
DATE COMPLETED: 05/09/16
WATER LEVEL: 18 ft
WATER LEVEL DATE: 05/09/16
LOGGED BY: WW
DRILLER: SESI

DEPTH (feet)	SAMPLE	Unconfined Compressive Strength (tsf)	Moisture Content (%)	Dry Unit Weight (pcf)	LL	PI	Symbol	MATERIAL CLASSIFICATION
	■	0.84	20	103	31	14		Medium, Light Gray and Tan Lean CLAY (CL) -- with limestone
	■		25					-- tan with ferrous nodules
5	■	0.71	21	104	42	26		--medium, light gray and tan with ferrous nodules
	■		21					Light Gray and Tan Fat CLAY (CH) -- with silt pockets and ferrous nodules
	■	1.31	23	104	38	23		Stiff, Light Gray and Tan Lean CLAY (CL) -- with ferrous nodules
10								
	■		21					Light Gray and Tan Fat CLAY (CH) -- with silt pockets and ferrous nodules
15								
▼								
	■	2.13	21	106	34	17		Very Stiff, Light Gray and Tan Lean CLAY (CL) -- with ferrous nodules
20								
	■		36					Light Gray and Tan Fat CLAY (CH) -- with sandy silt pockets
25								Bottom at 25 Feet
30								

COMMENTS:

■ SHELBY TUBE

FIELD BORING LOG

BORING NO.: B-2
PROJECT: HOWELL PARK GOLF COURSE
PROJECT LOCATION: BATON ROUGE, LA
BORING LOCATION: 30°29'1.96"N; 91° 7'51.20"W
BORING ELEVATION: EXISTING GRADE
GEOL/ENGR: MJ
METHOD: AUGER

PROJECT NO.: B16-119
DATE DRILLED: 05/09/16
DATE COMPLETED: 05/09/16
WATER LEVEL: 18 ft
WATER LEVEL DATE: 05/09/16
LOGGED BY: WW
DRILLER: SESI

DEPTH (feet)	SAMPLE	Unconfined Compressive Strength (tsf)	Moisture Content (%)	Dry Unit Weight (pcf)	LL	PI	Symbol	MATERIAL CLASSIFICATION
	■	1.88	24	94	38	15		Firm, Gray and Brown Clayey SILT (ML) -- with grass roots
	■							Stiff, Light Gray and Brown Lean CLAY (CL) -- with ferrous nodules
	■		29					-- light gray and tan with ferrous nodules
5	■	2.48	22	106	39	19		-- very stiff, with ferrous nodules
	■							Light Gray and Tan Fat CLAY (CH) -- with silt pockets and ferrous nodules
	■		21					
	■		20					-- with silt pockets and ferrous nodules
10								
	■	2.08	22	106	42	28		Very Stiff, Light Gray and Tan Lean CLAY (CL) -- with large silt streaks and ferrous nodules
15								
▼								
	■		22					Light Gray and Tan Fat CLAY (CH) -- with silt pockets and ferrous nodules
20								
	■	0.73	22	103	30	10		Medium, Light Gray and Tan Lean CLAY (CL) -- with silt pockets and ferrous nodules
25								Bottom at 25 Feet
30								

COMMENTS: WATER LEVEL AFTER 15 MINUTES = 18'

■ SHELBY TUBE

FIELD BORING LOG

BORING NO.: B-3
PROJECT: HOWELL PARK GOLF COURSE
PROJECT LOCATION: BATON ROUGE, LA
BORING LOCATION: 30°29'3.33"N; 91° 7'54.27"W
BORING ELEVATION: EXISTING GRADE
GEOL/ENGR: MJ
METHOD: AUGER

PROJECT NO.: B16-119
DATE DRILLED: 05/09/16
DATE COMPLETED: 05/09/16
WATER LEVEL: NE
WATER LEVEL DATE: 05/09/16
LOGGED BY: WW
DRILLER: SESI

DEPTH (feet)	SAMPLE	Unconfined Compressive Strength (tsf)	Moisture Content (%)	Dry Unit Weight (pcf)	LL	PI	Symbol	MATERIAL CLASSIFICATION
			27					Light Gray and Brown Lean CLAY (CL) -- with ferrous nodules
		2.27	23	105	52	35		Very Stiff, Light Gray and Tan Fat CLAY (CH) -- with silt and ferrous nodules
5			24					-- with silt, ferrous nodules and calcareous nodules
		1.40	24	102	37	20		Stiff, Light Gray and Tan Lean CLAY (CL) -- with ferrous nodules
			20					Light Gray and Tan Fat CLAY (CH) -- with silt, ferrous nodules and calcareous nodules
10								
		1.52	24	103	47	33		Stiff, Light Gray and Tan Lean CLAY (CL) -- with trace silt streaks and ferrous nodules
15								Bottom at 15 Feet
20								
25								
30								

COMMENTS: NE: NOT ENCOUNTERED

SHELBY TUBE

FIELD BORING LOG

BORING NO.: P-1
PROJECT: HOWELL PARK GOLF COURSE
PROJECT LOCATION: BATON ROUGE, LA
BORING LOCATION: 30°28'49.76"N; 91° 7'59.05"W
BORING ELEVATION: EXISTING GRADE
GEOL/ENGR: MJ
METHOD: AUGER

PROJECT NO.: B16-119
DATE DRILLED: 05/09/16
DATE COMPLETED: 05/09/16
WATER LEVEL: NE
WATER LEVEL DATE: 05/09/16
LOGGED BY: WW
DRILLER: SESI

DEPTH (feet)	SAMPLE	Unconfined Compressive Strength (tsf)	Moisture Content (%)	Dry Unit Weight (pcf)	LL	PI	Symbol	MATERIAL CLASSIFICATION
	■	1.36	22	99	48	29		Stiff, Gray and Tan Lean CLAY (CL) -- with grass roots at the top
	■		20					Light Gray and Tan Fat CLAY (CH)
	■							Light Gray and Tan Lean CLAY (CL) -- with ferrous nodules and calcareous nodules
5	■	1.91	23	104	43	27		-- stiff, with ferrous nodules
								Bottom at 6 Feet
10								
15								
20								
25								
30								

COMMENTS: NE: NOT ENCOUNTERED

■ SHELBY TUBE

FIELD BORING LOG

BORING NO.: P-2
PROJECT: HOWELL PARK GOLF COURSE
PROJECT LOCATION: BATON ROUGE, LA
BORING LOCATION: 30°29'4.25"N; 91° 7'46.84"W
BORING ELEVATION: EXISTING GRADE
GEOL/ENGR: MJ
METHOD: AUGER

PROJECT NO.: B16-119
DATE DRILLED: 05/09/16
DATE COMPLETED: 05/09/16
WATER LEVEL: NE
WATER LEVEL DATE: 05/09/16
LOGGED BY: WW
DRILLER: SESI

DEPTH (feet)	SAMPLE	Unconfined Compressive Strength (tsf)	Moisture Content (%)	Dry Unit Weight (pcf)	LL	PI	Symbol	MATERIAL CLASSIFICATION
	■	0.84	22	95	45	12		Medium, Gray and Brownish Gray Clayey SILT (ML) -- with ferrous nodules and grass roots at the top
	■							Light Gray and Tan Fat CLAY (CH)
	■		24					Light Gray and Tan Lean CLAY (CL) -- with ferrous nodules and calcareous nodules
5	■	1.40	24	102	32	10		-- stiff, with ferrous nodules
								Bottom at 6 Feet
10								
15								
20								
25								
30								

COMMENTS: NE: NOT ENCOUNTERED

■ SHELBY TUBE

Important Information about Your

Geotechnical Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

While you cannot eliminate all such risks, you can manage them. The following information is provided to help.

Geotechnical Services Are Performed for Specific Purposes, Persons, and Projects

Geotechnical engineers structure their services to meet the specific needs of their clients. A geotechnical engineering study conducted for a civil engineer may not fulfill the needs of a construction contractor or even another civil engineer. Because each geotechnical engineering study is unique, each geotechnical engineering report is unique, prepared *solely* for the client. No one except you should rely on your geotechnical engineering report without first conferring with the geotechnical engineer who prepared it. *And no one — not even you* — should apply the report for any purpose or project except the one originally contemplated.

Read the Full Report

Serious problems have occurred because those relying on a geotechnical engineering report did not read it all. Do not rely on an executive summary. Do not read selected elements only.

A Geotechnical Engineering Report Is Based on A Unique Set of Project-Specific Factors

Geotechnical engineers consider a number of unique, project-specific factors when establishing the scope of a study. Typical factors include: the client's goals, objectives, and risk management preferences; the general nature of the structure involved, its size, and configuration; the location of the structure on the site; and other planned or existing site improvements, such as access roads, parking lots, and underground utilities. Unless the geotechnical engineer who conducted the study specifically indicates otherwise, do not rely on a geotechnical engineering report that was:

- not prepared for you,
- not prepared for your project,
- not prepared for the specific site explored, or
- completed before important project changes were made.

Typical changes that can erode the reliability of an existing geotechnical engineering report include those that affect:

- the function of the proposed structure, as when it's changed from a parking garage to an office building, or from a light industrial plant to a refrigerated warehouse,
- elevation, configuration, location, orientation, or weight of the proposed structure,
- composition of the design team, or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project changes—even minor ones—and request an assessment of their impact. *Geotechnical engineers cannot accept responsibility or liability for problems that occur because their reports do not consider developments of which they were not informed.*

Subsurface Conditions Can Change

A geotechnical engineering report is based on conditions that existed at the time the study was performed. *Do not rely on a geotechnical engineering report* whose adequacy may have been affected by: the passage of time; by man-made events, such as construction on or adjacent to the site; or by natural events, such as floods, earthquakes, or groundwater fluctuations. *Always* contact the geotechnical engineer before applying the report to determine if it is still reliable. A minor amount of additional testing or analysis could prevent major problems.

Most Geotechnical Findings Are Professional Opinions

Site exploration identifies subsurface conditions only at those points where subsurface tests are conducted or samples are taken. Geotechnical engineers review field and laboratory data and then apply their professional judgment to render an opinion about subsurface conditions throughout the site. Actual subsurface conditions may differ—sometimes significantly—from those indicated in your report. Retaining the geotechnical engineer who developed your report to provide construction observation is the most effective method of managing the risks associated with unanticipated conditions.

A Report's Recommendations Are *Not* Final

Do not overrely on the construction recommendations included in your report. *Those recommendations are not final,* because geotechnical engineers develop them principally from judgment and opinion. Geotechnical engineers can finalize their recommendations only by observing actual

subsurface conditions revealed during construction. *The geotechnical engineer who developed your report cannot assume responsibility or liability for the report's recommendations if that engineer does not perform construction observation.*

A Geotechnical Engineering Report Is Subject to Misinterpretation

Other design team members' misinterpretation of geotechnical engineering reports has resulted in costly problems. Lower that risk by having your geotechnical engineer confer with appropriate members of the design team after submitting the report. Also retain your geotechnical engineer to review pertinent elements of the design team's plans and specifications. Contractors can also misinterpret a geotechnical engineering report. Reduce that risk by having your geotechnical engineer participate in prebid and preconstruction conferences, and by providing construction observation.

Do Not Redraw the Engineer's Logs

Geotechnical engineers prepare final boring and testing logs based upon their interpretation of field logs and laboratory data. To prevent errors or omissions, the logs included in a geotechnical engineering report should *never* be redrawn for inclusion in architectural or other design drawings. Only photographic or electronic reproduction is acceptable, *but recognize that separating logs from the report can elevate risk.*

Give Contractors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can make contractors liable for unanticipated subsurface conditions by limiting what they provide for bid preparation. To help prevent costly problems, give contractors the complete geotechnical engineering report, *but* preface it with a clearly written letter of transmittal. In that letter, advise contractors that the report was not prepared for purposes of bid development and that the report's accuracy is limited; encourage them to confer with the geotechnical engineer who prepared the report (a modest fee may be required) and/or to conduct additional study to obtain the specific types of information they need or prefer. A prebid conference can also be valuable. *Be sure contractors have sufficient time* to perform additional study. Only then might you be in a position to give contractors the best information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions.

Read Responsibility Provisions Closely

Some clients, design professionals, and contractors do not recognize that geotechnical engineering is far less exact than other engineering disciplines. This lack of understanding has created unrealistic expectations that have led to disappointments, claims, and disputes. To help reduce the risk of such outcomes, geotechnical engineers commonly include a variety of explanatory provisions in their reports. Sometimes labeled "limitations" many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely.* Ask questions. Your geotechnical engineer should respond fully and frankly.

Geoenvironmental Concerns Are Not Covered

The equipment, techniques, and personnel used to perform a *geoenvironmental* study differ significantly from those used to perform a *geotechnical* study. For that reason, a geotechnical engineering report does not usually relate any geoenvironmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated environmental problems have led to numerous project failures.* If you have not yet obtained your own geoenvironmental information, ask your geotechnical consultant for risk management guidance. *Do not rely on an environmental report prepared for someone else.*

Obtain Professional Assistance To Deal with Mold

Diverse strategies can be applied during building design, construction, operation, and maintenance to prevent significant amounts of mold from growing on indoor surfaces. To be effective, all such strategies should be devised for the *express purpose* of mold prevention, integrated into a comprehensive plan, and executed with diligent oversight by a professional mold prevention consultant. Because just a small amount of water or moisture can lead to the development of severe mold infestations, a number of mold prevention strategies focus on keeping building surfaces dry. While groundwater, water infiltration, and similar issues may have been addressed as part of the geotechnical engineering study whose findings are conveyed in this report, the geotechnical engineer in charge of this project is not a mold prevention consultant; ***none of the services performed in connection with the geotechnical engineer's study were designed or conducted for the purpose of mold prevention. Proper implementation of the recommendations conveyed in this report will not of itself be sufficient to prevent mold from growing in or on the structure involved.***

Rely on Your ASFE-Member Geotechnical Engineer for Additional Assistance

Membership in ASFE/The Geoprofessional Business Association exposes geotechnical engineers to a wide array of risk management techniques that can be of genuine benefit for everyone involved with a construction project. Confer with your ASFE-member geotechnical engineer for more information.

ASFE THE GEOPROFESSIONAL BUSINESS ASSOCIATION

8811 Colesville Road/Suite G106, Silver Spring, MD 20910
Telephone: 301/565-2733 Facsimile: 301/589-2017
e-mail: info@asfe.org www.asfe.org

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IIGER01115.0MRP

Baton Rouge, LA 225-356-4355

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SOUTHERN EARTH SCIENCES, INC.

Geotechnical, Environmental & Construction Materials Testing

CONSTRUCTION MATERIALS TESTING

Full Range of Services and Unparalleled Response

Southern Earth Sciences, Inc. laboratories are **certified** by **AASHTO, AMRL, CMEC** and the **U.S. Army Corps of Engineers** to perform soil, concrete, asphalt and materials testing. Our professional inspectors and technicians continually participate in proficiency testing programs to ensure internal quality control.

FIELD TESTING AND INSPECTION

In addition to our laboratory testing facilities, SESI maintains a fully outfitted mobile field laboratory available for on-site testing. This allows our OSHA safety certified technicians to perform both call-out services on small projects or full-time quality control testing and inspection on major projects. The on-site testing lab offers a full range of services.

Services

- Dipstick technology for flatness testing of concrete slabs
- Soil testing—compaction, pile load testing, pile and caisson inspection, plate load bearing tests
- Asphaltic concrete testing—core density and thickness, evaluation of aggregates, mix designs, plant and field control
- Portland cement concrete—batch plant and field control, core drilling, molding, curing and testing cylinders
- Slump testing, air content and unit weight
- Pipe and block inspection
- Soundness and abrasion of aggregates
- Bridge inspection
- Pile integrity testing
- Pile dynamic analysis (PDA)
- Vibration monitoring
- Rebar location/depth of cover
- Post tensioning inspection
- Welding and steel framing inspections
- Vacuum and pressure testing

LABORATORY TESTING OF MATERIALS

Strategically located laboratories make testing of soils, concrete, asphalt and metals quick and convenient. Branch managers supervise all lab operations in accordance with ASTM Specifications E-329 and E-699. All equipment is calibrated annually to ensure accurate data. SESI technicians are certified by appropriate accrediting agencies on a routine basis.

Services

- Consolidation testing
- Flexible wall permeability testing
- Triaxial testing
- Soil classification testing
- Concrete strength testing
- Steel strength testing

Affiliate Member PEDESTAL AIA Baton Rouge

Environmental • Construction Materials Testing • Geotechnical • Subsurface Investigations

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SOUTHERN EARTH SCIENCES, INC.

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www.soearth.com

SOUTHERN EARTH SCIENCES, INC.

Geotechnical, Environmental & Construction Materials Testing

July 12, 2016

BREC
6201 Florida Blvd.
Baton Rouge, Louisiana 70806

Attn.: Ms. Eileen Bonin

Re: Alternate Pavement Sections
Proposed Howell Golf Course
Repurposing
Baton Rouge, Louisiana
SESI File No: B16-119 Addendum 01

Dear Ms. Bonin:

As requested, SESI is pleased to submit this addendum letter addressing alternate pavement sections for the proposed parking/drive areas at the above referenced project.

This addendum letter supplements SESI's previously submitted Geotechnical Engineering Study report (i.e., SESI File No. B16-119, dated June 14, 2016). **All other provisions and recommendations presented in the aforementioned SESI reports shall remain in full and strict effect.**

We appreciate the opportunity to be part of this project and look forward to continued participation during the design and construction phases of this project.

If you have any further questions pertaining to this report, or if we may be of further service, please contact our office.

Respectfully submitted,
Southern Earth Sciences, Inc.

Mike Juneau, P.E., MBA
Baton Rouge Branch Manager

Alternative Pavement Sections

SESI was requested to provide recommendations for alternative pavement sections for the above referenced project. The proposed parking/drive areas are designed for mostly pedestrian traffic with an occasional school bus. Our scope of work did not include extensive sampling and CBR testing of the existing subgrade or potential sources of imported fill for the specific purpose of a detailed pavement analysis. Instead, we have assumed pavement-related design parameters that are considered to be typical for the area soil types.

The principle geotechnical emphasis for pavement is to provide a uniform, continuous subgrade with a limestone base course and wearing course. The alternative pavement sections presented below were evaluated for estimated anticipated moving loads assumed. Other typical parameters considered for the design of the pavement sections are given in the following table. The actual anticipated number of ESALs were not provided at the time of this addendum letter. Therefore, SESI estimated the number of ESALs based on provided average daily traffic and vehicle types. If the anticipated EASLs are considerably different than the assumed number of ESALs, our office should be contacted for a re-evaluation.

DESIGN PARAMETERS	
Average Daily Traffic	100
Design Life, years	20
Growth Rate, %	1.0
Estimated ESALs	20,942
CBR	3
Modulus of Subgrade Reaction, K	110-120 psi
Layer Coefficients	0.14 Limestone Base 0.12 Soil Cement Subbase 0.06 Structural Fill Subbase

FLEXIBLE PAVEMENT SECTION		
Pavement Materials	**Minimum Thickness, Inches**	
	Drives for trucks up to 10,000-pound, single-axle loads	
	Alternate 1	**Alternate 2**
Asphaltic Concrete Wearing Course	3.5	3.5
Compacted Limestone Aggregate Base Course	4	8
Compacted Cement Treated Subgrade (Min. 9% by Volume)	10	-
Compacted Structural Fill	-	12

The limestone aggregate base should also meet the requirements of the LDOTD for 610 limestone and be compacted to at least 95 percent of the maximum dry density as determined by ASTM D 698 (Standard Proctor) within three (3) percent of optimum moisture content.

A minimum of 9% by volume of cement is recommended to use for cement treated soil material. Please note that the cement treatment should meet the requirements of Section 305 of the latest edition of the LSSRB. Per Sub-section 305.04, lime conditioning is required prior to cement treatment in accordance with Section 304 for Type C treatment if the PI (Plasticity Index) of soil is more than 30. Percent by volume of lime required for lime conditioning 9 when PI of soil is greater than 30. The treated soil should be compacted at least 95% of maximum dry density near the optimum moisture content in accordance with the Sub-section 303.11 of LSSRB.

Please note that caution should be used when cement and/or lime treatment is performed on site in closely populated areas.

CONSTRUCTION PLANS

FOR

HOWELL COMMUNITY PARK: SITE IMPROVEMENTS

5511 WINBOURNE AVENUE
BATON ROUGE, LA. 70805
JUNE 2016

BREC COMMISSIONERS

LLOYD H. BENSON II - CHAIRMAN
VERGE S. AUSBERRY, JR. - VICE CHAIRMAN
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MIKE WALKER
DAVID TATMAN
SANDRA DAVIS

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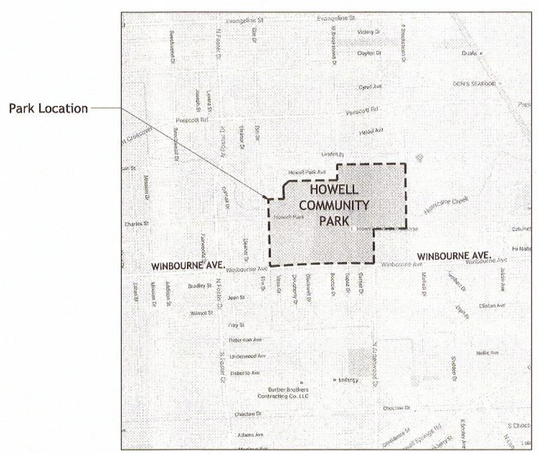
L-1.1A	BASKETBALL COURT LAYOUT PLAN
L-1.2	AMPHITHEATER BERM LANDSCAPE PLAN
L-1.3	RECREATIONAL POND LANDSCAPE PLAN
L-1.4	PLAY AREA AND TRACK LANDSCAPE PLAN
L-1.4 A	PLAY AREA DETAIL
L-1.4 B	PLAY AREA LAYOUT AND DIMENSIONS
L-1.4 C	PLAY AREA DRAINAGE LAYOUT
L-1.5	FIRST TEE AREA GOLF IMPROVEMENTS
L-1.6	FENCE LAYOUT AND DETAILS
L-2.1	SPORTS AREA WATER SERVICE
L-2.2	PLAY AREA AND TRACK WATER SERVICE
L-2.3	AMPHITHEATER WATER SERVICE
L-3.1	LANDSCAPE DETAILS
L-3.2	FABRICATED PAVILION (16X33) DETAILS
L-3.3	FABRICATED PAVILION (16X18) DETAILS
L-3.4 A	FABRICATED RESTROOM DETAILS
L-3.4 B	FABRICATED RESTROOM DETAILS
L-3.4 C	FABRICATED RESTROOM DETAILS
L-3.5	FABRICATED RESTROOM AND PAVILION DETAILS
L-3.6	DETAILS
L-3.7	DETAILS
S-1.0	EXISTING CONDITION AND DEMO
S-2.0	BRIDGE RECONSTRUCTION PLANS
E-100	SCHEDULE & RISER DIAGRAM
E-200	SITE PLAN - ELECTRICAL
E-300	PARTIAL SITE PLAN - LIGHT AND POWER
E-400	PARTIAL SITE PLAN - LIGHT AND POWER
E-500	ELECTRICAL DETAILS



VICINITY MAP

PROJECT DIRECTORY

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BREC - HOWELL PARK IMPROVEMENTS
BATON ROUGE, LOUISIANA
EAST BATON ROUGE PARRISH

DRAWN	JAB
CHECKED	SMH
ISSUED DATE	6-21-2016
ISSUED FOR	BID
PROJECT NO.	16-111
FILE	16-111 C-0 Cover Sheet
SHEET	TS-1.0

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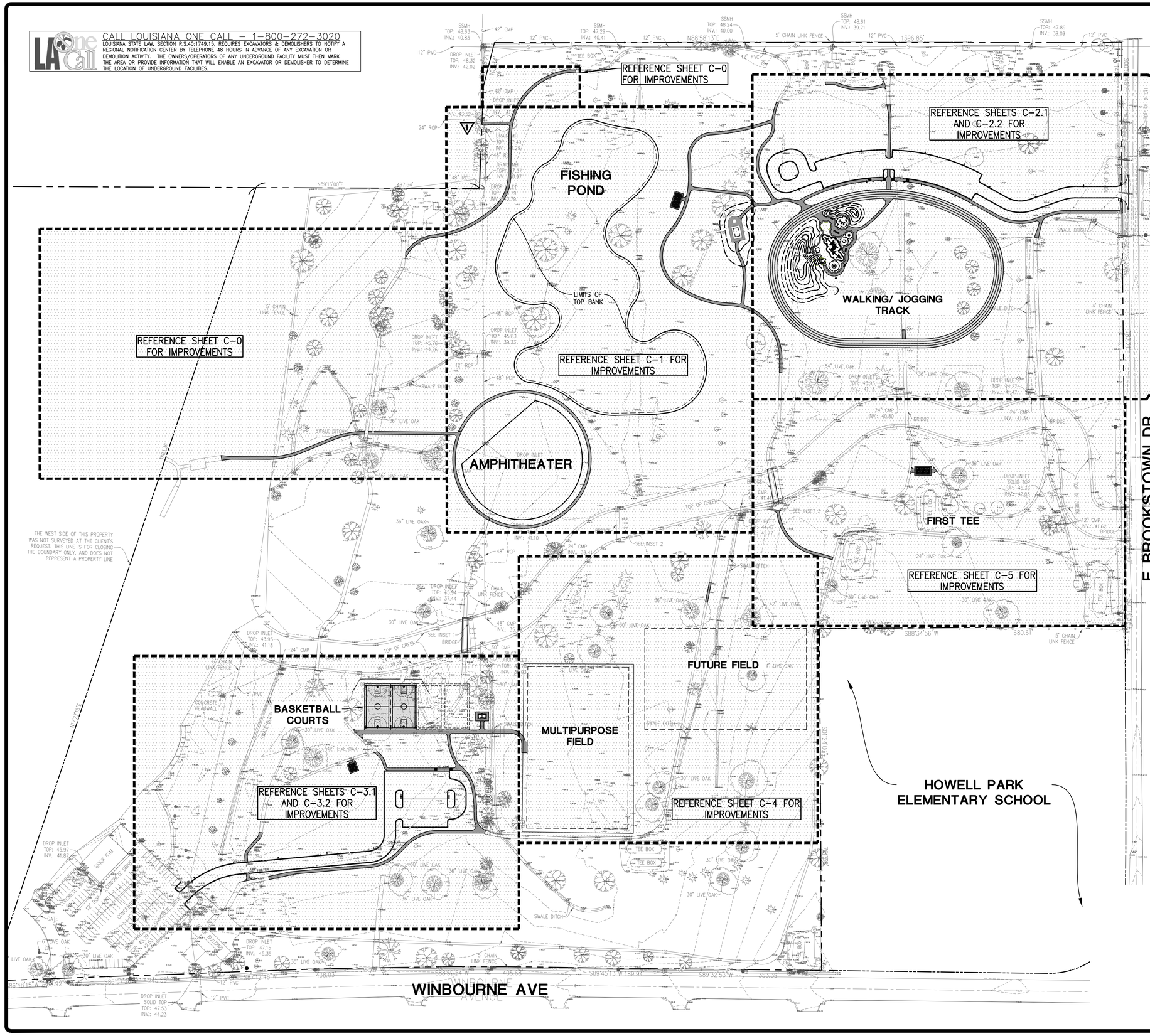
CALL LOUISIANA ONE CALL – 1-800-272-3020
LOUISIANA STATE LAW, SECTION R.S.40:1749.15, REQUIRES EXCAVATORS & DEMOLISHERS TO NOTIFY A REGIONAL NOTIFICATION CENTER BY TELEPHONE 48 HOURS IN ADVANCE OF ANY EXCAVATION OR DEMOLITION ACTIVITY. THE OWNERS/OPERATORS OF ANY UNDERGROUND FACILITY MUST THEN MARK THE AREA OR PROVIDE INFORMATION THAT WILL ENABLE AN EXCAVATOR OR DEMOLISHER TO DETERMINE THE LOCATION OF UNDERGROUND FACILITIES.



SITE PLAN NOTES:

1. INFORMATION SHOWN AS EXISTING WAS TAKEN FROM A TOPOGRAPHIC SURVEY PROVIDED BY BENCHMARK GROUP, LLC, DATED MARCH 11, 2016. DDG HAS NOT VERIFIED ANY OF THIS INFORMATION.
2. EXISTING CONTOURS SHOWN AT ONE FOOT (1') INTERVALS.
3. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL UTILITIES AND NOTIFYING THE APPROPRIATE UTILITY COMPANY PRIOR TO BEGINNING CONSTRUCTION.
4. CONSTRUCTION SHALL COMPLY WITH ALL GOVERNING CODES AND BE CONSTRUCTED TO THE SAME.
5. CONTRACTOR IS RESPONSIBLE FOR REPAIRS OF DAMAGE TO ANY EXISTING IMPROVEMENTS DURING CONSTRUCTION, SUCH AS, BUT NOT LIMITED TO, DRAINAGE, UTILITIES, PAVEMENT, STRIPING, CURBS, ETC. REPAIRS SHALL BE EQUAL TO OR BETTER THAN EXISTING CONDITIONS.
6. CLEARING AND GRUBBING LIMITS SHALL INCLUDE ALL AREAS DISTURBED BY GRADING OPERATIONS. CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL UNDISTURBED AREAS, ALL PROPERTY CORNERS, AND REPLACING ALL PINS ELIMINATED OR DAMAGED DURING CONSTRUCTION.
7. ALL WORK SHALL BE IN ACCORDANCE WITH THE ADA ACCESSIBILITY GUIDELINES.
8. THE BASE FLOOD ELEVATION FOR THE SITE IS 52.00'. THE RECORD INUNDATION LEVEL FOR THE SITE IS 51.00'.
9. CONTRACTOR SHALL MANAGE STORMWATER RUNOFF THROUGHOUT THE CONSTRUCTION PROCESS TO ENSURE NO NEGATIVE IMPACTS TO UPSTREAM DRAINAGE.
10. GEOTECHNICAL INVESTIGATION REPORT BY SOUTHERN EARTH SCIENCES, DATED JUNE 14, 2016, IS CONSIDERED A PART OF THIS DOCUMENT. THE CONTRACTOR MUST REVIEW IT FOR CONSTRUCTION REQUIREMENTS. IF DIFFERENCES ARE NOTED BETWEEN THESE PLANS AND THE GEOTECHNICAL REPORT, THE REQUIREMENTS OUTLINED IN THE GEOTECHNICAL REPORT WILL GOVERN. IN THE EVENT OF A DISCREPANCY BETWEEN THE PLANS AND GEOTECHNICAL REPORT, PLEASE NOTIFY THE CIVIL ENGINEER FOR DIRECTION.
11. CONTRACTOR TO REMOVE OR RELOCATE WHEN APPLICABLE, ALL EXISTING BUILDINGS, FOUNDATIONS, EASEMENTS, AND CONNECTING IMPROVEMENTS, DRAIN PIPES, SANITARY SEWER PIPE, POWER POLES AND GUY WIRES, WATER METERS AND WATER LINES, WELLS, SIDEWALKS, SIGN POLES, UNDERGROUND GAS, SEPTIC TANKS, AND ASPHALT, SHOWN AND NOT SHOWN, WITHIN CONSTRUCTION LIMITS AND WHERE NEEDED, TO ALLOW FOR FILL MATERIAL AND THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS, UNLESS OTHERWISE DENOTED, TO BE REMOVED AS UNCLASSIFIED EXCAVATION.
12. CONTRACTOR SHALL ON ALL UTILITIES, COORDINATE INSPECTION WITH THE APPROPRIATE AUTHORITIES PRIOR TO COVERING TRENCHES AT INSTALLATION.
13. SITE LIGHTING SHOWN FOR REFERENCE ONLY. REFERENCE PLANS BY OTHERS FOR FINAL LOCATION AND DETAILS.
14. REFERENCE ELECTRICAL PLANS FOR REQUIRED ELECTRIC SERVICE TO BATHROOMS, GRINDER PUMP, AND SITE LIGHTING.
15. CONTRACTOR SHALL CONFIRM INVERTS OF EXISTING DRAINAGE & SEWER SYSTEM PRIOR TO INSTALLATION OF ANY SANITARY OR STORM SEWER IMPROVEMENTS, AND SHALL NOTIFY PROJECT ENGINEER OF ANY DISCREPANCIES.
16. CONTRACTOR SHALL INSPECT ALL EXISTING DRAINAGE INLETS ADJACENT TO THE TOP BANK OF HURRICANE CREEK WITHIN PROJECT LIMITS AND PROVIDE REPAIRS WHERE EROSION HAS OCCURRED. REMEDIATION SHALL INCLUDE, BUT NOT BE LIMITED TO, POINT REPAIRS WHERE PIPES OR INLETS HAVE FAILED, AND BACKFILLING OF SINKHOLES WITH SUITABLE MATERIAL OR FLOWABLE FILL. COSTS FOR THIS WORK SHALL BE INCLUDED IN PROJECT BIDS.
17. SIDEWALK CROSS SLOPE SHALL BE .5% TO 1.5% AND SHALL MATCH EXISTING DRAINAGE PATTERNS.

SANITARY SEWER NOTES:

1. ALL WORK SHALL BE DONE TO THE CITY/PARISH OF EAST BATON ROUGE STANDARD SPECIFICATIONS.
2. REFERENCE BUILDING PLANS FOR ALL BUILDING SERVICE CONNECTIONS.
3. SANITARY SEWER PIPE OF DIFFERENT MATERIAL SHALL BE JOINED BY A RUBBER SLEEVE WITH STAINLESS STEEL COUPLING, MADE FOR TRANSITIONS FROM ONE MATERIAL TO ANOTHER.
4. DIMENSIONS SHOWN ARE TO CENTERLINE OF PIPE OR TO CENTERLINE OF MANHOLE.
5. SET TOPS OF MANHOLE FRAMES AND COVERS FLUSH WITH FINISHED SURFACE FOR MANHOLES THAT OCCUR IN PAVEMENTS. SET TOPS 3 INCHES ABOVE FINISHED SURFACE ELSEWHERE UNLESS OTHERWISE INDICATED.
6. INSTALL SEWER CLEANOUTS EVERY 50' FOR 3" PIPE OR LESS AND EVERY 80' FOR 4" AND 6" PIPE AS PER LOUISIANA PLUMBING CODE.
7. THE MINIMUM HORIZONTAL SEPARATION BETWEEN THE CLOSEST TWO POINTS OF THE WATER AND SEWER LINE IS TEN (10) FEET, OR MINIMUM VERTICAL SEPARATION BETWEEN THE CLOSEST TWO POINTS OF THE WATER AND SEWER LINE IS EIGHTEEN (18) INCHES.
8. CONTRACTOR SHALL GROUT AROUND ALL PIPE ENTRANCES TO SANITARY SEWER MANHOLES WITH NON-SHRINKING GROUT TO ASSURE CONNECTION IS WATER TIGHT.

DRAINAGE PIPE NOTES:

1. IN THE PIPE TABLE, THE "TYPE" COLUMN DEFINES THE SIZE AND MATERIAL TYPE OF THE PIPE. WHERE A SPECIFIC PIPE TYPE IS CALLED FOR, THAT SPECIFIC PIPE TYPE MUST BE UTILIZED. WHERE AN ASTERISK (*) IS SPECIFIED, THE CONTRACTOR MAY UTILIZE ANY ONE OF THE PIPE TYPES LISTED BELOW. AN "A" AT THE END OF THE PIPE TYPE DESIGNATES AN ARCH PIPE.
   - 1.1. REINFORCED CONCRETE PIPE (RCP)
   - 1.2. POLYVINYL CHLORIDE PIPE (PVC): A-2000 OR APPROVED EQUAL
   - 1.3. CONTECH ULTRA-FLO (GALVANIZED STEEL WITH ASPHALT COATING) WITH TYPE III JOINTS (CMP) OR APPROVED EQUAL.
2. THE CONTRACTOR SHALL SUBMIT BUOYANCY CALCULATIONS ON ALL RUNS OF PIPE THAT DO NOT UTILIZE CONCRETE PIPE. BUOYANCY CALCULATIONS SHALL BE PREPARED, SIGNED, AND SEALED BY A REGISTERED ENGINEER, SHALL REPRESENT ACTUAL FIELD CONDITIONS, AND SHALL DEMONSTRATE THAT THE PIPE UTILIZED WILL NOT BECOME BUOYANT UNDER ANY CONDITIONS. THE CONTRACTOR MAY ELECT TO PROVIDE A RESTRAINING SYSTEM, DESIGNED BY A REGISTERED ENGINEER, ADEQUATE TO RESIST BUOYANT FORCES WHERE NECESSARY.

WATER NOTES:

1. DIMENSIONS SHOWN ARE TO CENTERLINE OF PIPE OR FITTING.
2. ALL VALVES SHALL BE INSTALLED IN A CAST IRON VALVE BOX WITH COVER.
3. THE MINIMUM COVER ON WATER MAINS SHALL BE 3 FEET.
4. REFERENCE BUILDING PLANS FOR ALL BUILDING SERVICE CONNECTIONS.

OVERALL LAYOUT PLAN

SCALE IN FEET
100' 50' 0 100' 200' 300'

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SIGNATURE:
DATE: 07-15-2016
STAMP: STATE OF LOUISIANA, SCOTT M. FEIL, Licensed Professional Engineer, CIVIL ENGINEERING

BREC - HOWELL PARK IMPROVEMENTS
BATON ROUGE, LOUISIANA
EAST BATON ROUGE PARRISH

DRAWN	JAB
CHECKED	SMH
ISSUED DATE	6-21-2016
ISSUED FOR	BID
PROJECT NO.	16-111
FILE	16-111 C-1 Improvements Plan
SHEET	TS-2.0

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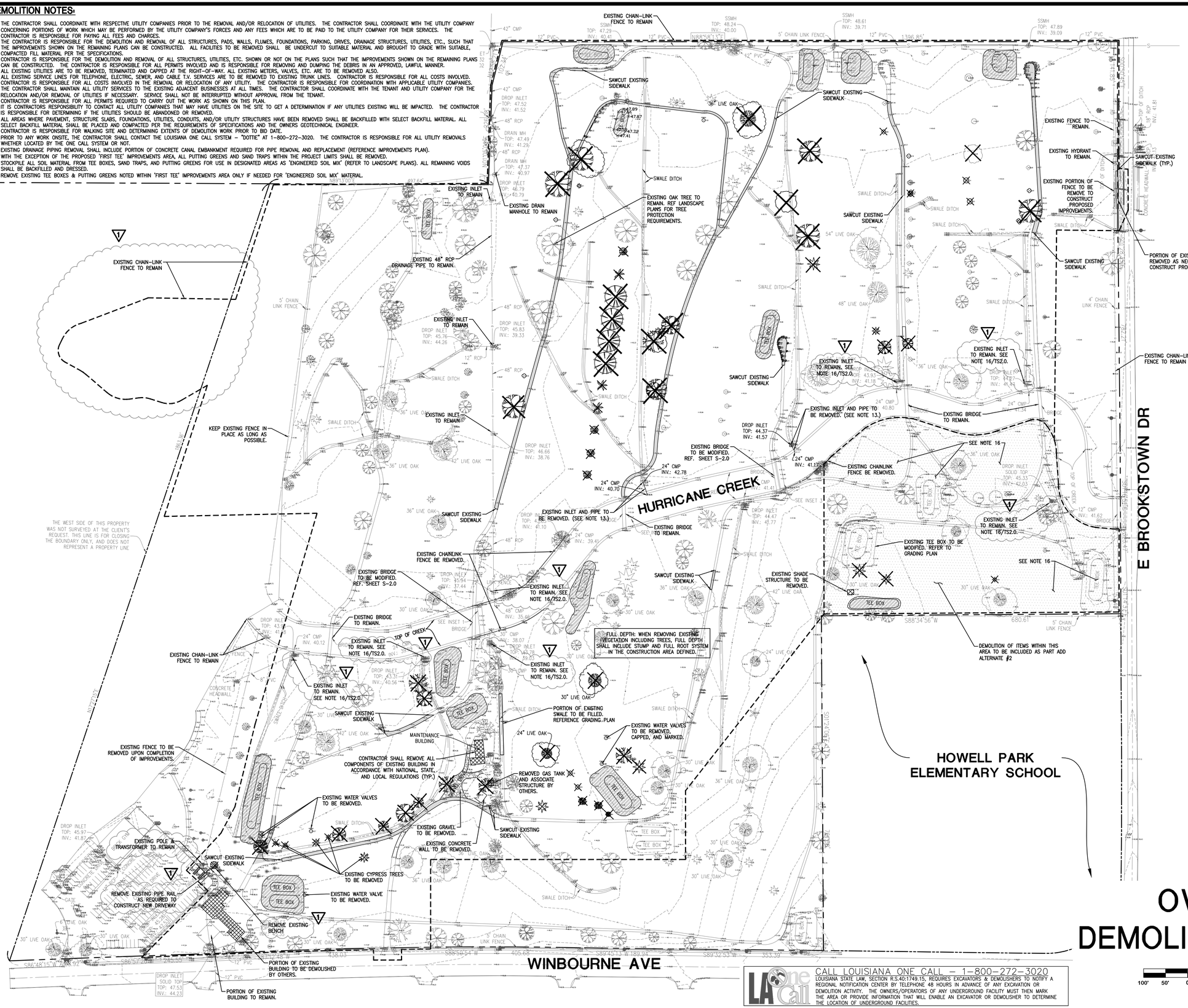
DEMOLITION NOTES:

1. THE CONTRACTOR SHALL COORDINATE WITH RESPECTIVE UTILITY COMPANIES PRIOR TO THE REMOVAL AND/OR RELOCATION OF UTILITIES. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANY CONCERNING PORTIONS OF WORK WHICH MAY BE PERFORMED BY THE UTILITY COMPANY'S FORCES AND ANY FEES WHICH ARE TO BE PAID TO THE UTILITY COMPANY FOR THEIR SERVICES. THE CONTRACTOR IS RESPONSIBLE FOR PAYING ALL FEES AND CHARGES.
2. THE CONTRACTOR IS RESPONSIBLE FOR THE DEMOLITION AND REMOVAL OF ALL STRUCTURES, PADS, WALLS, FLUMES, FOUNDATIONS, PARKING, DRIVES, DRAINAGE STRUCTURES, UTILITIES, ETC., SUCH THAT THE IMPROVEMENTS SHOWN ON THE REMAINING PLANS CAN BE CONSTRUCTED. ALL FACILITIES TO BE REMOVED SHALL BE UNDERCUT TO SUITABLE MATERIAL AND BROUGHT TO GRADE WITH SUITABLE, COMPACTED FILL MATERIAL PER THE SPECIFICATIONS.
3. CONTRACTOR IS RESPONSIBLE FOR THE DEMOLITION AND REMOVAL OF ALL STRUCTURES, UTILITIES, ETC. SHOWN OR NOT ON THE PLANS SUCH THAT THE IMPROVEMENTS SHOWN ON THE REMAINING PLANS CAN BE CONSTRUCTED. THE CONTRACTOR IS RESPONSIBLE FOR ALL PERMITS INVOLVED AND IS RESPONSIBLE FOR REMOVING AND DUMPING THE DEBRIS IN AN APPROVED, LAWFUL MANNER.
4. ALL EXISTING UTILITIES ARE TO BE REMOVED, TERMINATED AND CAPPED AT THE RIGHT-OF-WAY. ALL EXISTING METERS, VALVES, ETC. ARE TO BE REMOVED ALSO.
5. ALL EXISTING SERVICE LINES FOR TELEPHONE, ELECTRIC, SEWER, AND CABLE T.V. SERVICES ARE TO BE REMOVED TO EXISTING TRUNK LINES. CONTRACTOR IS RESPONSIBLE FOR ALL COSTS INVOLVED.
6. CONTRACTOR IS RESPONSIBLE FOR ALL COSTS INVOLVED IN THE REMOVAL OR RELOCATION OF ANY UTILITY. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH APPLICABLE UTILITY COMPANIES.
7. THE CONTRACTOR SHALL MAINTAIN ALL UTILITY SERVICES TO THE EXISTING ADJACENT BUSINESSES AT ALL TIMES. THE CONTRACTOR SHALL COORDINATE WITH THE TENANT AND UTILITY COMPANY FOR THE RELOCATION AND/OR REMOVAL OF UTILITIES IF NECESSARY. SERVICE SHALL NOT BE INTERRUPTED WITHOUT APPROVAL FROM THE TENANT.
8. CONTRACTOR IS RESPONSIBLE FOR ALL PERMITS REQUIRED TO CARRY OUT THE WORK AS SHOWN ON THIS PLAN.
9. IT IS CONTRACTORS RESPONSIBILITY TO CONTACT ALL UTILITY COMPANIES THAT MAY HAVE UTILITIES ON THE SITE TO GET A DETERMINATION IF ANY UTILITIES EXISTING WILL BE IMPACTED. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING IF THE UTILITIES SHOULD BE ABANDONED OR REMOVED.
10. ALL AREAS WHERE PAVEMENT, STRUCTURE SLABS, FOUNDATIONS, UTILITIES, CONDUITS, AND/OR UTILITY STRUCTURES HAVE BEEN REMOVED SHALL BE BACKFILLED WITH SELECT BACKFILL MATERIAL. ALL SELECT BACKFILL MATERIAL SHALL BE PLACED AND COMPACTED PER THE REQUIREMENTS OF SPECIFICATIONS AND THE OWNERS GEOTECHNICAL ENGINEER.
11. CONTRACTOR IS RESPONSIBLE FOR WALKING SITE AND DETERMINING EXTENTS OF DEMOLITION WORK PRIOR TO BID DATE.
12. PRIOR TO ANY WORK ONSITE, THE CONTRACTOR SHALL CONTACT THE LOUISIANA ONE CALL SYSTEM – "DOTTIE" AT 1-800-272-3020. THE CONTRACTOR IS RESPONSIBLE FOR ALL UTILITY REMOVALS WHETHER LOCATED BY THE ONE CALL SYSTEM OR NOT.
13. EXISTING DRAINAGE PIPING REMOVAL SHALL INCLUDE PORTION OF CONCRETE CANAL EMBANKMENT REQUIRED FOR PIPE REMOVAL AND REPLACEMENT (REFERENCE IMPROVEMENTS PLAN).
14. WITH THE EXCEPTION OF THE PROPOSED "FIRST TEE" IMPROVEMENTS AREA, ALL PUTTING GREENS AND SAND TRAPS WITHIN THE PROJECT LIMITS SHALL BE REMOVED.
15. STOCKPILE ALL SOIL MATERIAL FROM TEE BOXES, SAND TRAPS, AND PUTTING GREENS FOR USE IN DESIGNATED AREAS AS 'ENGINEERED SOIL MIX' (REFER TO LANDSCAPE PLANS). ALL REMAINING VOIDS SHALL BE BACKFILLED AND DRESSED.
16. REMOVE EXISTING TEE BOXES & PUTTING GREENS NOTED WITHIN 'FIRST TEE' IMPROVEMENTS AREA ONLY IF NEEDED FOR 'ENGINEERED SOIL MIX' MATERIAL.



LEGEND - NEW IMPROVEMENTS

- EXISTING FEATURE TO BE REMOVED.
- EXISTING STRUCTURE TO BE REMOVED.
- EXISTING TREE TO BE REMOVED.
- EXISTING SIDEWALK TO BE REMOVED
- EXISTING GRAVEL TO BE REMOVED
- EXISTING TEE BOX TO BE REMOVED. SEE NOTED 15
- EXISTING BUILDING TO BE REMOVED
- LIMITS OF DISTURBANCE

ANY WORK IN THE ROADWAY OR ADJACENT TO THE ROADWAY CAUSING AN INTERFERENCE TO VEHICULAR TRAFFIC REQUIRES PRIOR NOTIFICATION TO THE CITY OF BATON ROUGE TRAFFIC ENGINEERING DEPARTMENT AND CONFORMITY TO THE REQUIREMENTS OF THE UNIFORM MANUAL ON TRAFFIC CONTROL DEVICES OF THE STATE OF LOUISIANA. THE CONTRACTOR MUST FURNISH ALL NECESSARY TRAFFIC SIGNS AND/OR BARRICADES AND MAINTAIN THEM DURING CONSTRUCTION ACTIVITY.

CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ADEQUATE TRAFFIC CONTROL THROUGHOUT THE CONSTRUCTION PROCESS.

NOTE:
CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ACCESS AND CONNECTIONS OF UTILITIES TO EXISTING ADJACENT DEVELOPMENTS DURING THE DEMOLITION PROCESS.

OVERALL DEMOLITION PLAN

SCALE IN FEET
100' 50' 0 100' 200' 300'

CALL LOUISIANA ONE CALL – 1-800-272-3020
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REVISION	BY
1 ADDENDUM #1 07/15/2016	SMH

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DATE: 07-15-2016
STAMP: STATE OF LOUISIANA, SCOTT M. HILL, Licensed Professional Engineer, No. 34716, IN, CIVIL ENGINEERING

BREC - HOWELL PARK IMPROVEMENTS
BATON ROUGE, LOUISIANA
EAST BATON ROUGE PARRISH

DRAWN	JAB
CHECKED	SMH
ISSUED DATE	6-21-2016
ISSUED FOR	BID
PROJECT NO.	16-111
FILE	16-111 D-1 Demolition Plan
SHEET	D-1

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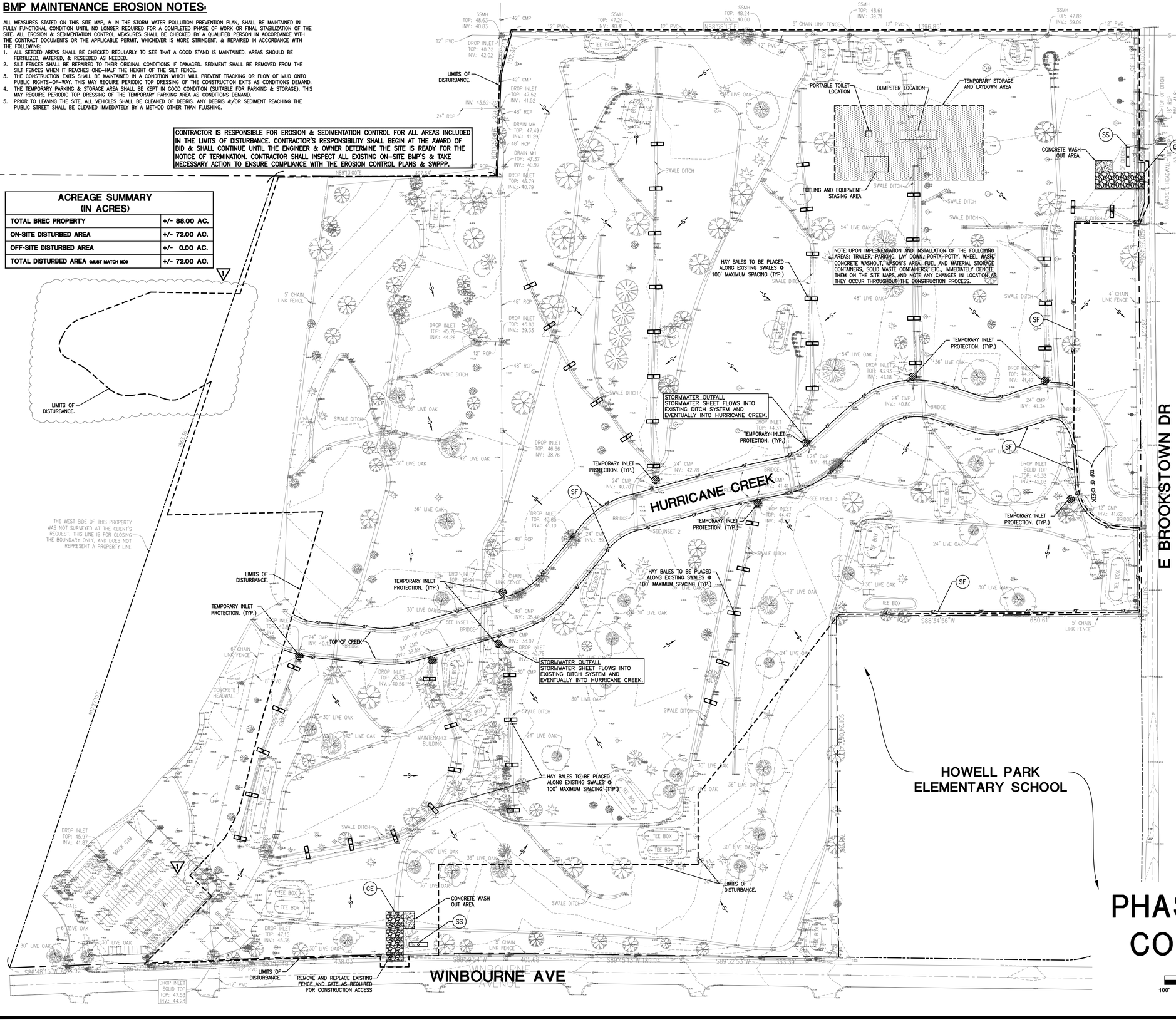
BMP MAINTENANCE EROSION NOTES:

ALL MEASURES STATED ON THIS SITE MAP, & IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION & SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON IN ACCORDANCE WITH THE CONTRACT DOCUMENTS OR THE APPLICABLE PERMIT, WHICHEVER IS MORE STRINGENT, & REPAIRED IN ACCORDANCE WITH THE FOLLOWING:

1. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED, & RESEEDED AS NEEDED.
2. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE-HALF THE HEIGHT OF THE SILT FENCE.
3. THE CONSTRUCTION EXITS SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION EXITS AS CONDITIONS DEMAND.
4. THE TEMPORARY PARKING & STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING & STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AREA AS CONDITIONS DEMAND.
5. PRIOR TO LEAVING THE SITE, ALL VEHICLES SHALL BE CLEANED OF DEBRIS. ANY DEBRIS &/OR SEDIMENT REACHING THE PUBLIC STREET SHALL BE CLEANED IMMEDIATELY BY A METHOD OTHER THAN FLUSHING.

CONTRACTOR IS RESPONSIBLE FOR EROSION & SEDIMENTATION CONTROL FOR ALL AREAS INCLUDED IN THE LIMITS OF DISTURBANCE. CONTRACTOR'S RESPONSIBILITY SHALL BEGIN AT THE AWARD OF BID & SHALL CONTINUE UNTIL THE ENGINEER & OWNER DETERMINE THE SITE IS READY FOR THE NOTICE OF TERMINATION. CONTRACTOR SHALL INSPECT ALL EXISTING ON-SITE BMP'S & TAKE NECESSARY ACTION TO ENSURE COMPLIANCE WITH THE EROSION CONTROL PLANS & SWPPP.

ACREAGE SUMMARY (IN ACRES)	
TOTAL BREC PROPERTY	+/- 88.00 AC.
ON-SITE DISTURBED AREA	+/- 72.00 AC.
OFF-SITE DISTURBED AREA	+/- 0.00 AC.
TOTAL DISTURBED AREA (MUST MATCH NOI)	+/- 72.00 AC.



GENERAL EROSION NOTES:

1. ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORMWATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) AND THE LOUISIANA POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT (LPDES PERMIT) AND BECOME FAMILIAR WITH THEIR CONTENTS.
2. CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES AS REQUIRED BY THE SWPPP. ADDITIONAL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED AS DICTATED BY CONDITIONS AT NO ADDITIONAL COST TO OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.
3. BEST MANAGEMENT PRACTICES (BMP'S) AND CONTROLS SHALL CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AS APPLICABLE. CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY PERMITTING AGENCY OR OWNER.
4. CONTRACTOR SHALL MINIMIZE CLEARING TO THE MINIMUM EXTENT PRACTICAL OR AS REQUIRED BY THE GENERAL PERMIT.
5. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED, AS REQUIRED BY THE GENERAL PERMIT.
6. RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORM WATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.
7. ALL STORMWATER POLLUTION PREVENTION MEASURES PRESENTED ON THIS PLAN AND IN THE STORMWATER POLLUTION PREVENTION PLAN SHALL BE INITIATED AS SOON AS PRACTICABLE.
8. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED.
9. WHERE CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE IS TEMPORARILY CEASED, AND EARTH DISTURBING ACTIVITIES WILL BE RESUMED WITHIN 21 DAYS, TEMPORARY STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF SITE.
10. IN AREAS EXPERIENCING DROUGHTS WHERE THE INITIATION OF STABILIZATION MEASURES BY THE 14TH DAY AFTER CONSTRUCTION ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED IS PRECLUDED BY SEASONAL ARID CONDITIONS, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE.
11. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
12. THE CONTRACTOR SHALL REVIEW THE PROPOSED CLEARING SEQUENCE TO INSURE THAT THE LEAST AMOUNT OF LAND POSSIBLE AT ANY ONE TIME IS DISTURBED WITHOUT PERMANENT STABILIZATION.
13. CONTRACTOR SHALL PROVIDE DRAINAGE SWALES AS NECESSARY TO PROVIDE ADEQUATE SITE DRAINAGE. ANY DRAINAGE SWALES PROVIDED SHALL BE PROTECTED BY HAY BALE BARRIERS IN ACCORDANCE WITH THE SWPPP AND REQUIRED BMP'S.
14. TEMPORARY SEEDING SHALL BE IN ACCORDANCE WITH SECTION 717 OF THE LSSRB.
15. IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCES IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER & TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE. ONLY USE INGRESS/EGRESS LOCATIONS AS PROVIDED.
16. ON-SITE & OFFSITE SOIL STOCKPILE & BORROW AREAS SHALL BE PROTECTED FROM EROSION & SEDIMENTATION THROUGH IMPLEMENTATION OF BEST MANAGEMENT PRACTICES. STOCKPILE & BORROW AREA LOCATIONS SHALL BE NOTED ON THE SITE MAP & PERMITTED IN ACCORDANCE WITH GENERAL PERMIT REQUIREMENTS.
17. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION & SEDIMENT CONTROL MEASURES (SILT FENCES, ETC.) TO PREVENT EROSION & POLLUTANT DISCHARGE.

LEGEND - NEW IMPROVEMENTS

SITE FEATURES

- DIRECTION OF OVERLAND FLOW
- BOUNDARY LINE
- LIMITS OF DISTURBANCE

EROSION DETAILS

- (CE) TEMPORARY CONSTRUCTION EXIT
- (SS) SWPPP INFORMATION SIGN
- (SF) TEMPORARY SILT FENCE
- TEMPORARY INLET PROTECTION
- HAY BALES

PHASE 1 EROSION CONTROL PLAN

SCALE IN FEET

100' 50' 0 100' 200' 300'

REVISION		BY
1	ADDENDUM #1 07/15/2016	SMH

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SIGNATURE:

DATE: 07-15-2016

STAMP: STATE OF LOUISIANA · SCOTT M. HELLER · No. 34716 · LICENSED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING

BREC - HOWELL PARK IMPROVEMENTS
BATON ROUGE, LOUISIANA
EAST BATON ROUGE PARRISH

DRAWN	JAB
CHECKED	SMH
ISSUED DATE	6-21-2016
ISSUED FOR	BID
PROJECT NO.	16-111
FILE	16-111 ES-1 Erosion Control Plan
SHEET	ES-1

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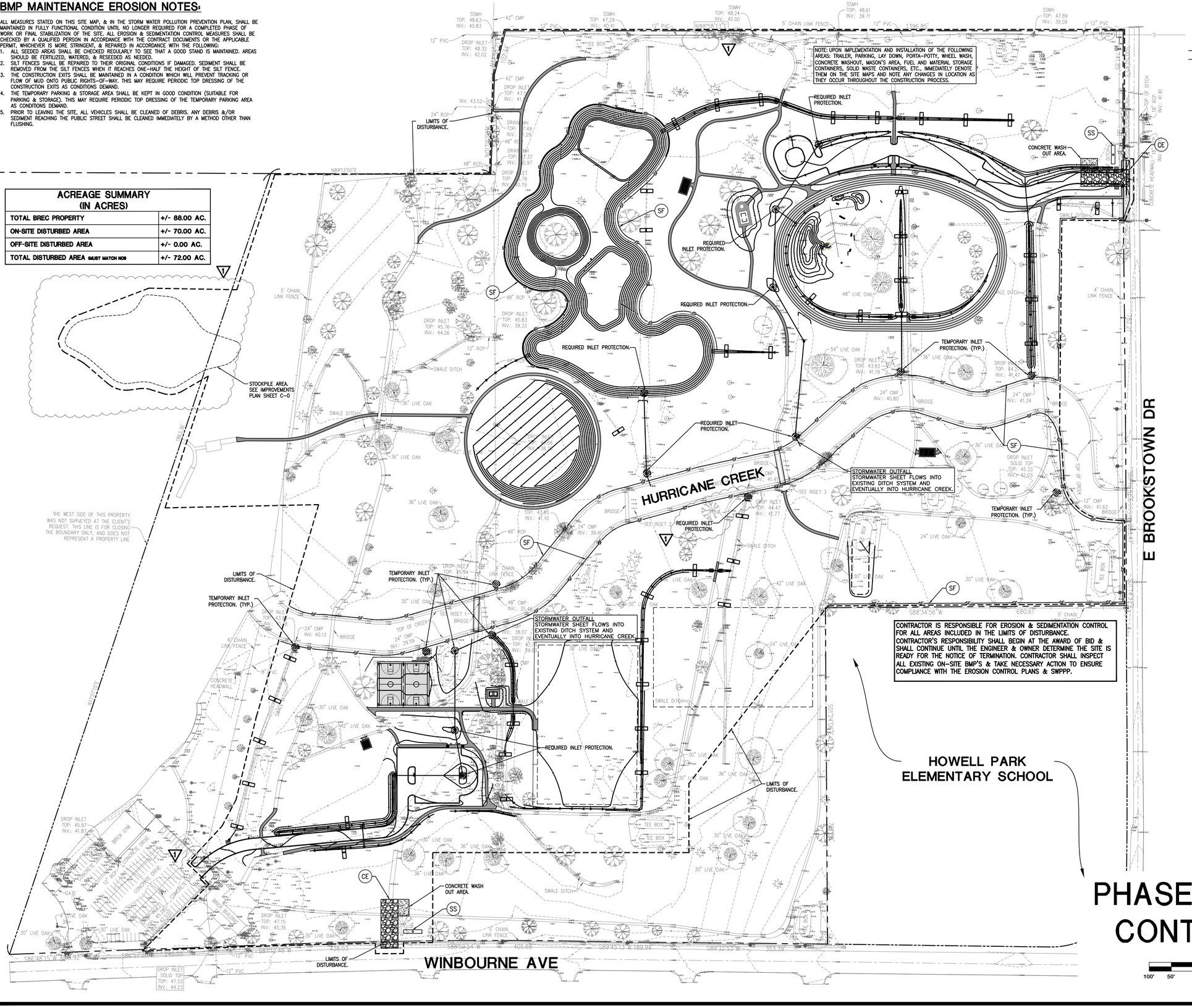
BMP MAINTENANCE EROSION NOTES:

ALL MEASURES STATED ON THIS SITE MAP, & IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION & SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON IN ACCORDANCE WITH THE CONTRACT DOCUMENTS OR THE APPLICABLE PERMIT, WHICHEVER IS MORE STRINGENT, & REPAIRED IN ACCORDANCE WITH THE FOLLOWING:

1. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED, & RESEEDED AS NEEDED.
2. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE-HALF THE HEIGHT OF THE SILT FENCE.
3. THE CONSTRUCTION EXITS SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION EXITS AS CONDITIONS DEMAND.
4. THE TEMPORARY PARKING & STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING & STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AREA AS CONDITIONS DEMAND.
5. PRIOR TO LEAVING THE SITE, ALL VEHICLES SHALL BE CLEANED OF DEBRIS. ANY DEBRIS &/OR SEDIMENT REACHING THE PUBLIC STREET SHALL BE CLEANED IMMEDIATELY BY A METHOD OTHER THAN FLUSHING.

ACREAGE SUMMARY (IN ACRES)

TOTAL BREC PROPERTY	+/- 88.00 AC.
ON-SITE DISTURBED AREA	+/- 70.00 AC.
OFF-SITE DISTURBED AREA	+/- 0.00 AC.
TOTAL DISTURBED AREA (MUST MATCH NOI)	+/- 72.00 AC.



LEGEND - NEW IMPROVEMENTS

SITE FEATURES

- DIRECTION OF OVERLAND FLOW
- BOUNDARY LINE
- LIMITS OF DISTURBANCE

EROSION DETAILS

- CE — TEMPORARY CONSTRUCTION EXIT
- SS — SWPPP INFORMATION SIGN
- SF — TEMPORARY SILT FENCE
- TEMPORARY INLET PROTECTION
- HAY BALES

PHASE 2 EROSION CONTROL PLAN

SCALE IN FEET: 100' 50' 0 100' 200' 300'

REVISION	BY
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BREC - HOWELL PARK IMPROVEMENTS
BATON ROUGE, LOUISIANA
EAST BATON ROUGE PARRISH

DRAWN	JAB
CHECKED	SMH
ISSUED DATE	6-21-2016
ISSUED FOR	BID
PROJECT NO.	16-111
FILE	16-111 ES-2 Erosion Control Plan
SHEET	ES-2

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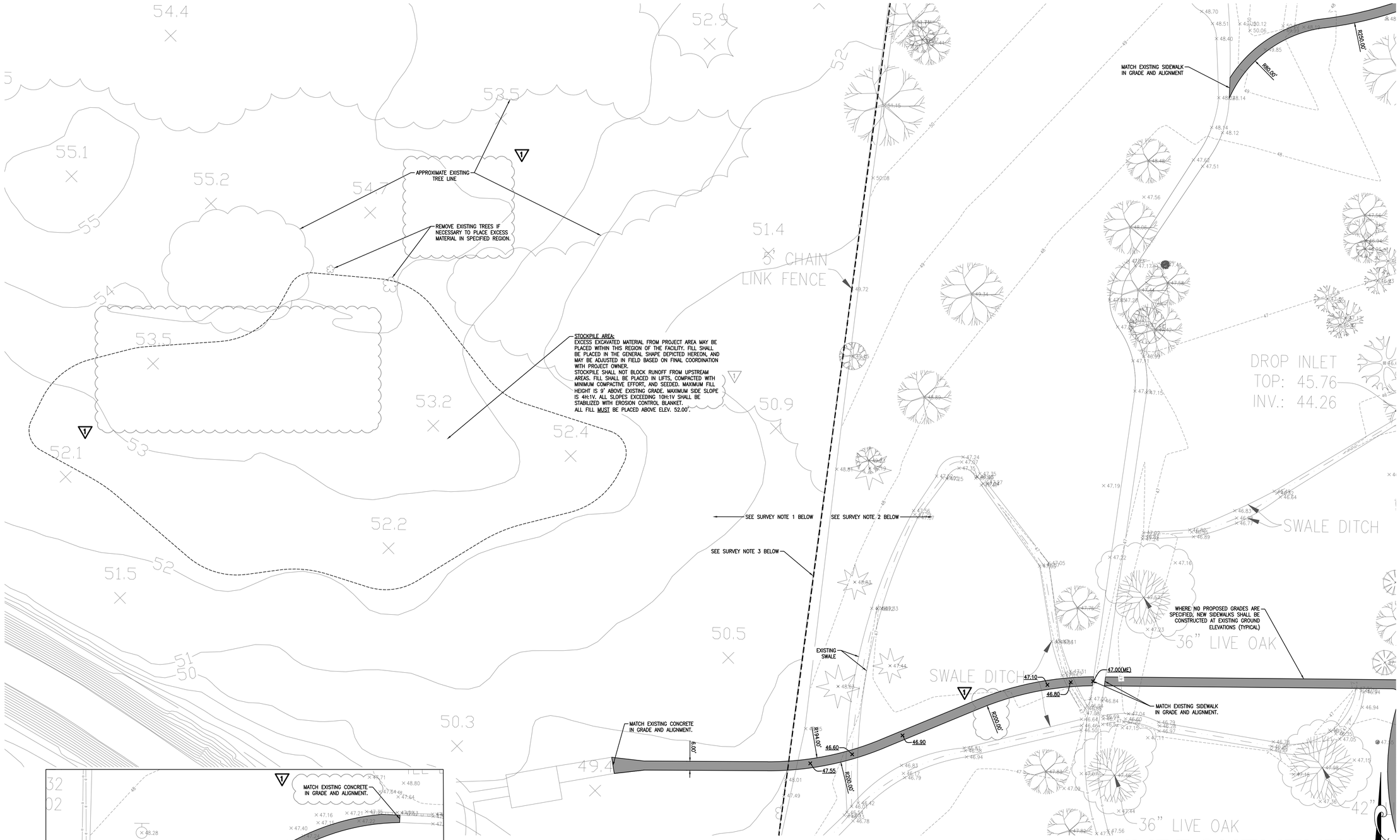
CALL LOUISIANA ONE CALL – 1-800-272-3020
LOUISIANA STATE LAW, SECTION R.S.40:1749.15, REQUIRES EXCAVATORS & DEMOLISHERS TO NOTIFY A REGIONAL NOTIFICATION CENTER BY TELEPHONE 48 HOURS IN ADVANCE OF ANY EXCAVATION OR DEMOLITION ACTIVITY. THE OWNERS/OPERATORS OF ANY UNDERGROUND FACILITY MUST THEN MARK THE AREA OR PROVIDE INFORMATION THAT WILL ENABLE AN EXCAVATOR OR DEMOLISHER TO DETERMINE THE LOCATION OF UNDERGROUND FACILITIES.



SURVEY NOTES:

1. INFORMATION SHOWN AS EXISTING WITHIN THIS REGION OF THE FACILITY WAS TAKEN FROM A TOPOGRAPHIC SURVEY PROVIDED BY AERO-DATA CORP., DATED MARCH 1, 2005. DDG HAS NOT VERIFIED ANY OF THIS INFORMATION.
2. INFORMATION SHOWN AS EXISTING WITHIN THIS REGION OF THE FACILITY WAS TAKEN FROM A TOPOGRAPHIC SURVEY PROVIDED BY BENCHMARK GROUP, LLC, DATED MARCH 11, 2016. DDG HAS NOT VERIFIED ANY OF THIS INFORMATION.
3. LINE NOTED DESIGNATES THE POINT OF DEMARCATION BETWEEN THE TWO ABOVE DESCRIBED TOPOGRAPHIC SURVEYS.

IMPROVEMENTS PLAN

SCALE IN FEET

30' 15' 0 30' 60' 90'

REVISION	BY
1 ADDENDUM #1 07/15/2016	SMH

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STAMP: STATE OF LOUISIANA, JAMES A. BOUDREAUX III, Licensed No. 34716, REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING

BREC - HOWELL PARK IMPROVEMENTS
BATON ROUGE, LOUISIANA
EAST BATON ROUGE PARRISH

DRAWN	JAB
CHECKED	SMH
ISSUED DATE	6-21-2016
ISSUED FOR	BID
PROJECT NO.	16-111
FILE	16-111 C-0 Improvements Plan
SHEET	C-0

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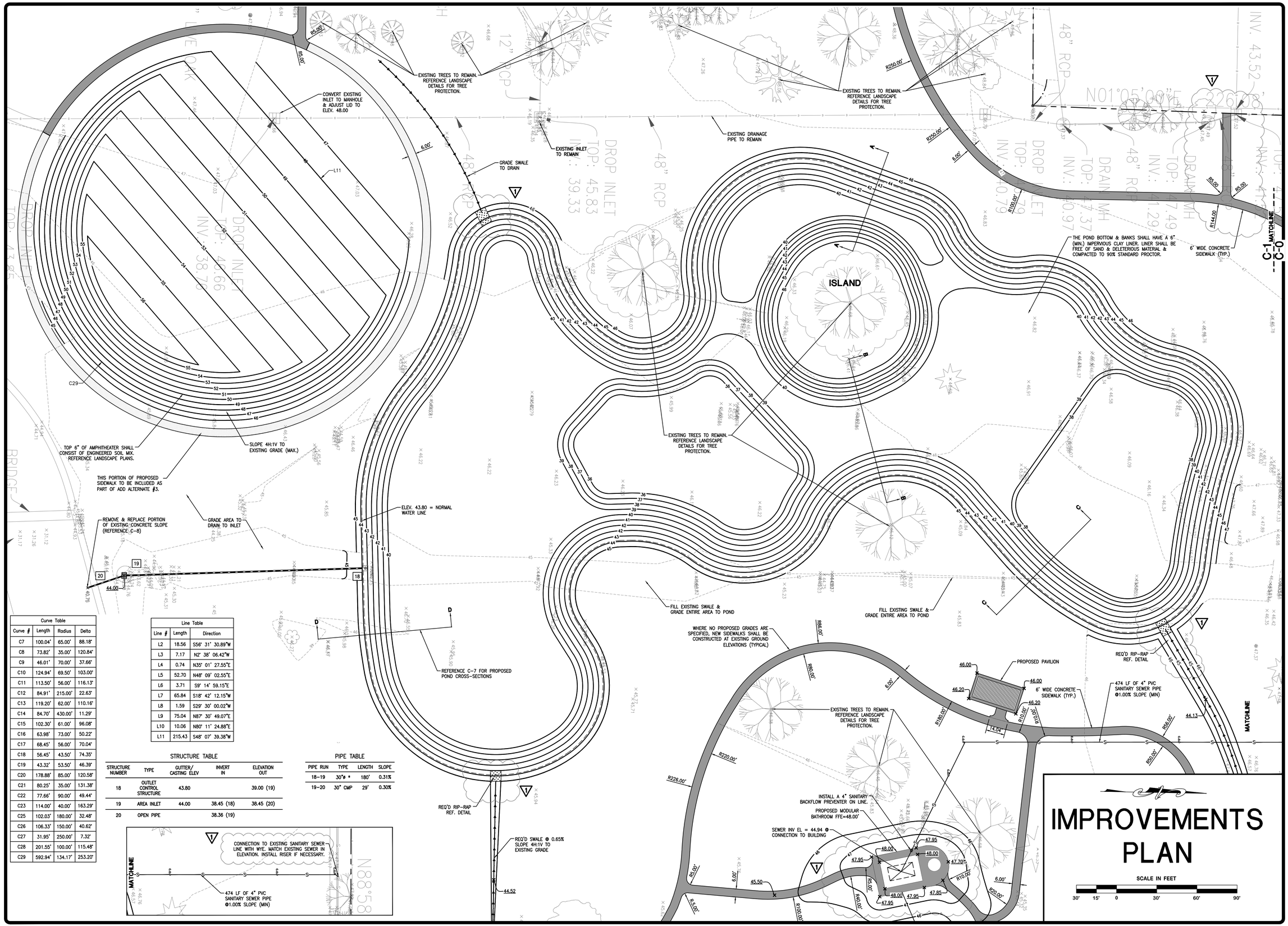

Curve Table			
Curve #	Length	Radius	Delta
C7	100.04'	65.00'	88.18°
C8	73.82'	35.00'	120.84°
C9	46.01'	70.00'	37.66°
C10	124.94'	69.50'	103.00'
C11	113.50'	56.00'	116.13°
C12	84.91'	215.00'	22.63°
C13	119.20'	62.00'	110.16°
C14	84.70'	430.00'	11.29°
C15	102.30'	61.00'	96.08°
C16	63.98'	73.00'	50.22°
C17	68.45'	56.00'	70.04°
C18	56.45'	43.50'	74.35°
C19	43.32'	53.50'	46.39°
C20	178.88'	85.00'	120.58°
C21	80.25'	35.00'	131.38°
C22	77.66'	90.00'	49.44°
C23	114.00'	40.00'	163.29°
C25	102.03'	180.00'	32.48°
C26	106.33'	150.00'	40.62°
C27	31.95'	250.00'	7.32°
C28	201.55'	100.00'	115.48°
C29	592.94'	134.17'	253.20°

Line Table		
Line #	Length	Direction
L2	18.56	S56° 31' 30.89"W
L3	7.17	N2° 38' 06.42"W
L4	0.74	N35° 01' 27.55"E
L5	52.70	N48° 09' 02.55"E
L6	3.71	S9° 14' 59.15"E
L7	65.84	S18° 42' 12.15"W
L8	1.59	S29° 30' 00.02"W
L9	75.04	N87° 30' 49.07"E
L10	10.06	N80° 11' 24.88"E
L11	215.43	S48° 07' 39.38"W

STRUCTURE TABLE

STRUCTURE NUMBER	TYPE	GUTTER/ CASTING ELEV	INVERT IN	ELEVATION OUT
18	OUTLET CONTROL STRUCTURE	43.80		39.00 (19)
19	AREA INLET	44.00	38.45 (18)	38.45 (20)
20	OPEN PIPE		38.36 (19)	

PIPE TABLE

PIPE RUN	TYPE	LENGTH	SLOPE
18-19	30"ø *	180'	0.31%
19-20	30" CMP	29'	0.30%

REVISION	BY
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STAMP: STATE OF LOUISIANA, Scott M. Hill, License No. 34716, PROFESSIONAL ENGINEER IN CIVIL ENGINEERING

BREC - HOWELL PARK IMPROVEMENTS
BATON ROUGE, LOUISIANA
EAST BATON ROUGE PARRISH

DRAWN	JAB
CHECKED	SMH
ISSUED DATE	6-21-2016
ISSUED FOR	BID
PROJECT NO.	16-111
FILE	16-111 C-1 Improvements Plan
SHEET	C-1

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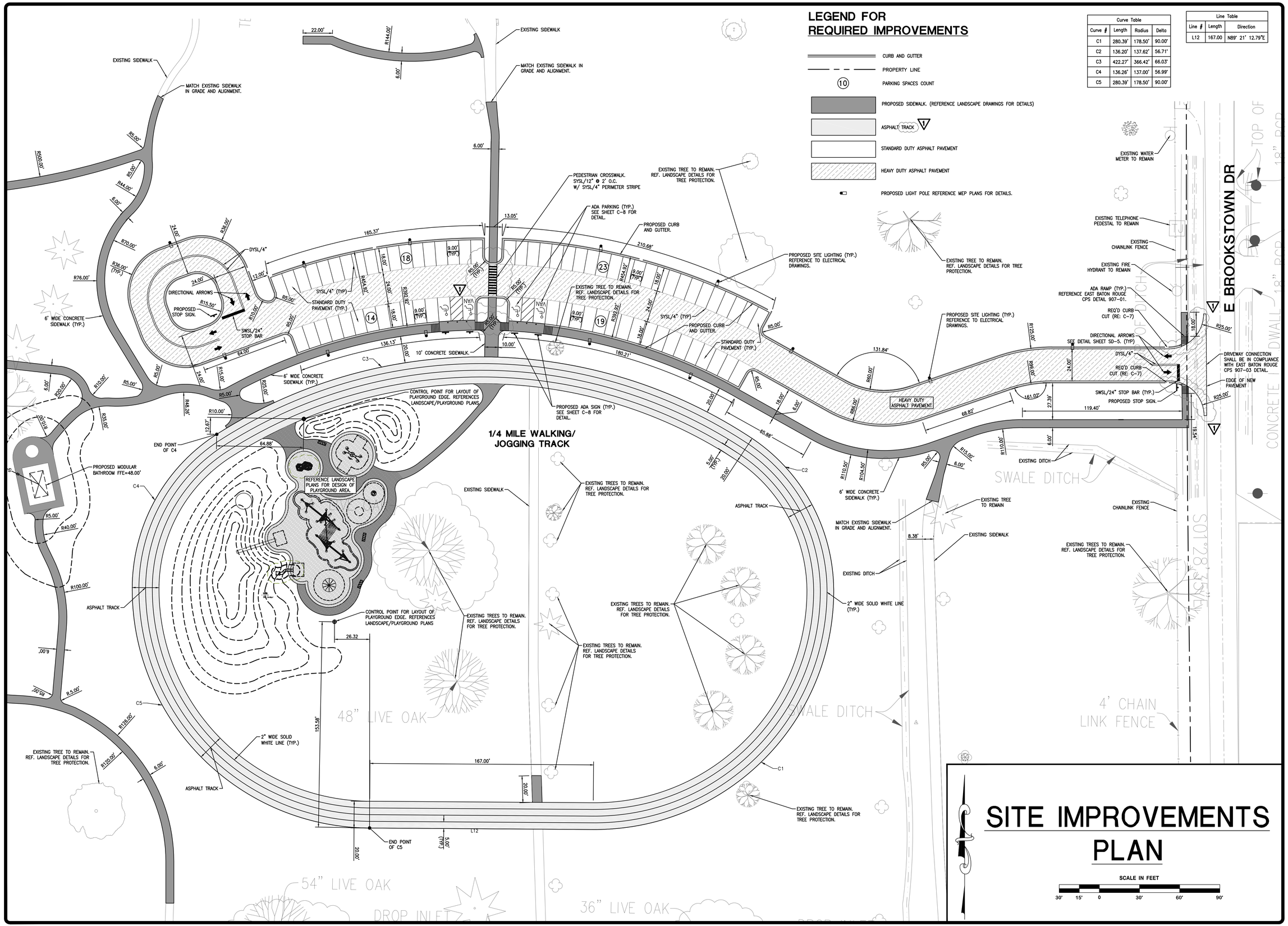
LEGEND FOR REQUIRED IMPROVEMENTS

- CURB AND GUTTER
- PROPERTY LINE
- (10) PARKING SPACES COUNT
- PROPOSED SIDEWALK. (REFERENCE LANDSCAPE DRAWINGS FOR DETAILS)
- ASPHALT TRACK (V)
- STANDARD DUTY ASPHALT PAVEMENT
- HEAVY DUTY ASPHALT PAVEMENT
- PROPOSED LIGHT POLE REFERENCE MEP PLANS FOR DETAILS.

Curve Table			
Curve #	Length	Radius	Delta
C1	280.39'	178.50'	90.00°
C2	136.20'	137.62'	56.71°
C3	422.27'	366.42'	66.03°
C4	136.26'	137.00'	56.99°
C5	280.39'	178.50'	90.00°

Line Table		
Line #	Length	Direction
L12	167.00	N89° 21' 12.79"E



SITE IMPROVEMENTS PLAN

SCALE IN FEET

30' 15' 0 30' 60' 90'

REVISION	BY
1 ADDENDUM #1 07/15/2016	SMH

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BREC - HOWELL PARK IMPROVEMENTS
BATON ROUGE, LOUISIANA
EAST BATON ROUGE PARRISH

DRAWN	JAB
CHECKED	SMH
ISSUED DATE	6-21-2016
ISSUED FOR	BID
PROJECT NO.	16-111
FILE	16-111 C-1 Improvements Plan
SHEET	C-2.1

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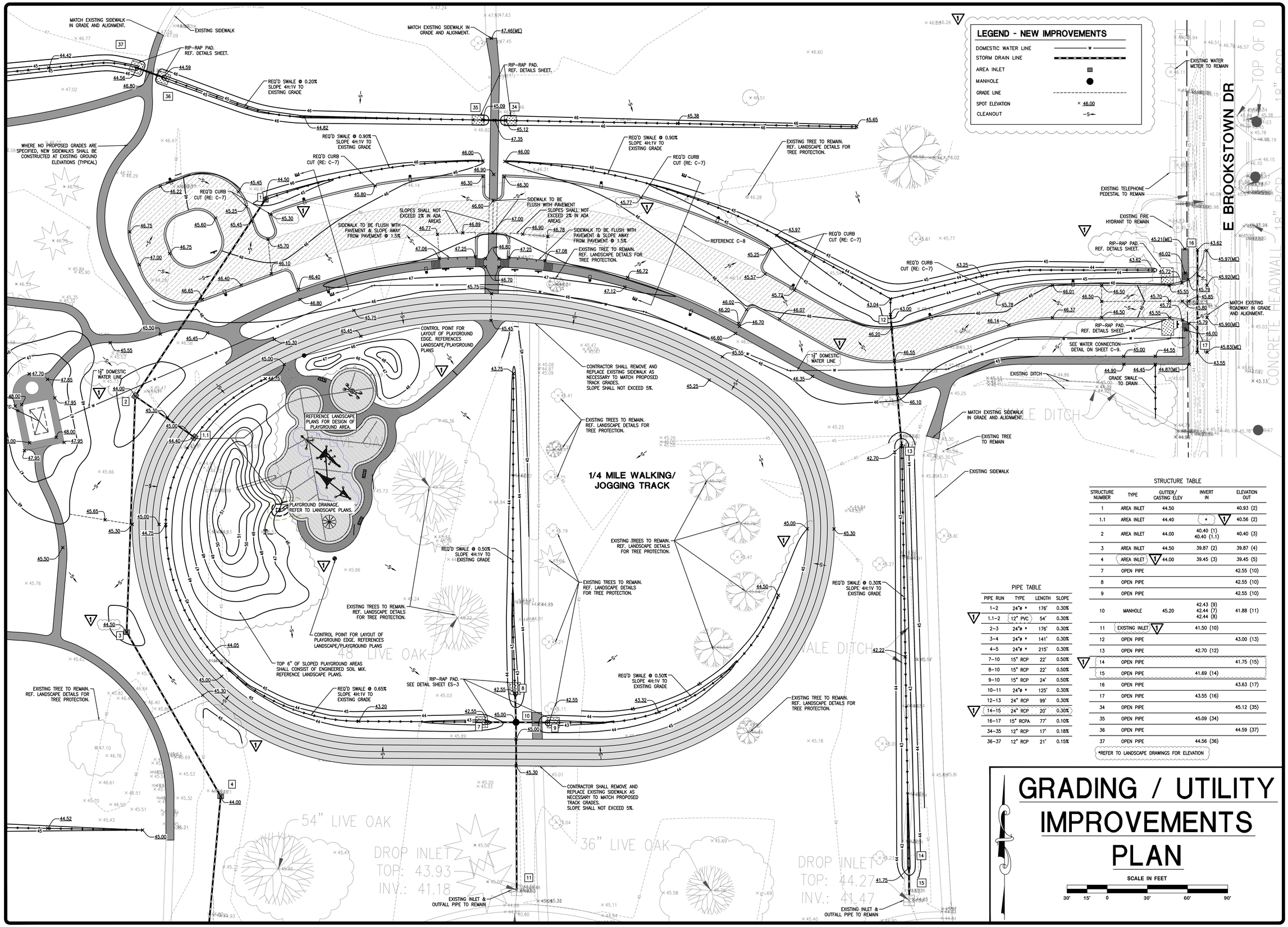

STRUCTURE TABLE

STRUCTURE NUMBER	TYPE	GUTTER/ CASTING ELEV	INVERT IN	ELEVATION OUT
1	AREA INLET	44.50		40.93 (2)
1.1	AREA INLET	44.40	*	40.56 (2)
2	AREA INLET	44.00	40.40 (1) 40.40 (1.1)	40.40 (3)
3	AREA INLET	44.50	39.87 (2)	39.87 (4)
4	AREA INLET	44.00	39.45 (3)	39.45 (5)
7	OPEN PIPE			42.55 (10)
8	OPEN PIPE			42.55 (10)
9	OPEN PIPE			42.55 (10)
10	MANHOLE	45.20	42.43 (9) 42.44 (7) 42.44 (8)	41.88 (11)
11	EXISTING INLET		41.50 (10)	
12	OPEN PIPE			43.00 (13)
13	OPEN PIPE		42.70 (12)	
14	OPEN PIPE			41.75 (15)
15	OPEN PIPE		41.69 (14)	
16	OPEN PIPE			43.63 (17)
17	OPEN PIPE		43.55 (16)	
34	OPEN PIPE			45.12 (35)
35	OPEN PIPE		45.09 (34)	
36	OPEN PIPE			44.59 (37)
37	OPEN PIPE		44.56 (36)	

*REFER TO LANDSCAPE DRAWINGS FOR ELEVATION

PIPE TABLE

PIPE RUN	TYPE	LENGTH	SLOPE
1–2	24"ø *	176'	0.30%
1.1–2	12" PVC	54'	0.30%
2–3	24"ø *	176'	0.30%
3–4	24"ø *	141'	0.30%
4–5	24"ø *	215'	0.30%
7–10	15" RCP	22'	0.50%
8–10	15" RCP	22'	0.50%
9–10	15" RCP	24'	0.50%
10–11	24"ø *	125'	0.30%
12–13	24" RCP	99'	0.30%
14–15	24" RCP	20'	0.30%
16–17	15" RCPA	77'	0.10%
34–35	12" RCP	17'	0.18%
36–37	12" RCP	21'	0.15%

GRADING / UTILITY IMPROVEMENTS PLAN

SCALE IN FEET

30' 15' 0 30' 60' 90'

REVISION	BY
1 ADDENDUM #1 07/15/2016	SMH

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BREC - HOWELL PARK IMPROVEMENTS
BATON ROUGE, LOUISIANA
EAST BATON ROUGE PARRISH

DRAWN	JAB
CHECKED	SMH
ISSUED DATE	6-21-2016
ISSUED FOR	BID
PROJECT NO.	16-111
FILE	16-111 C-2 Grading Plan
SHEET	C-2.2

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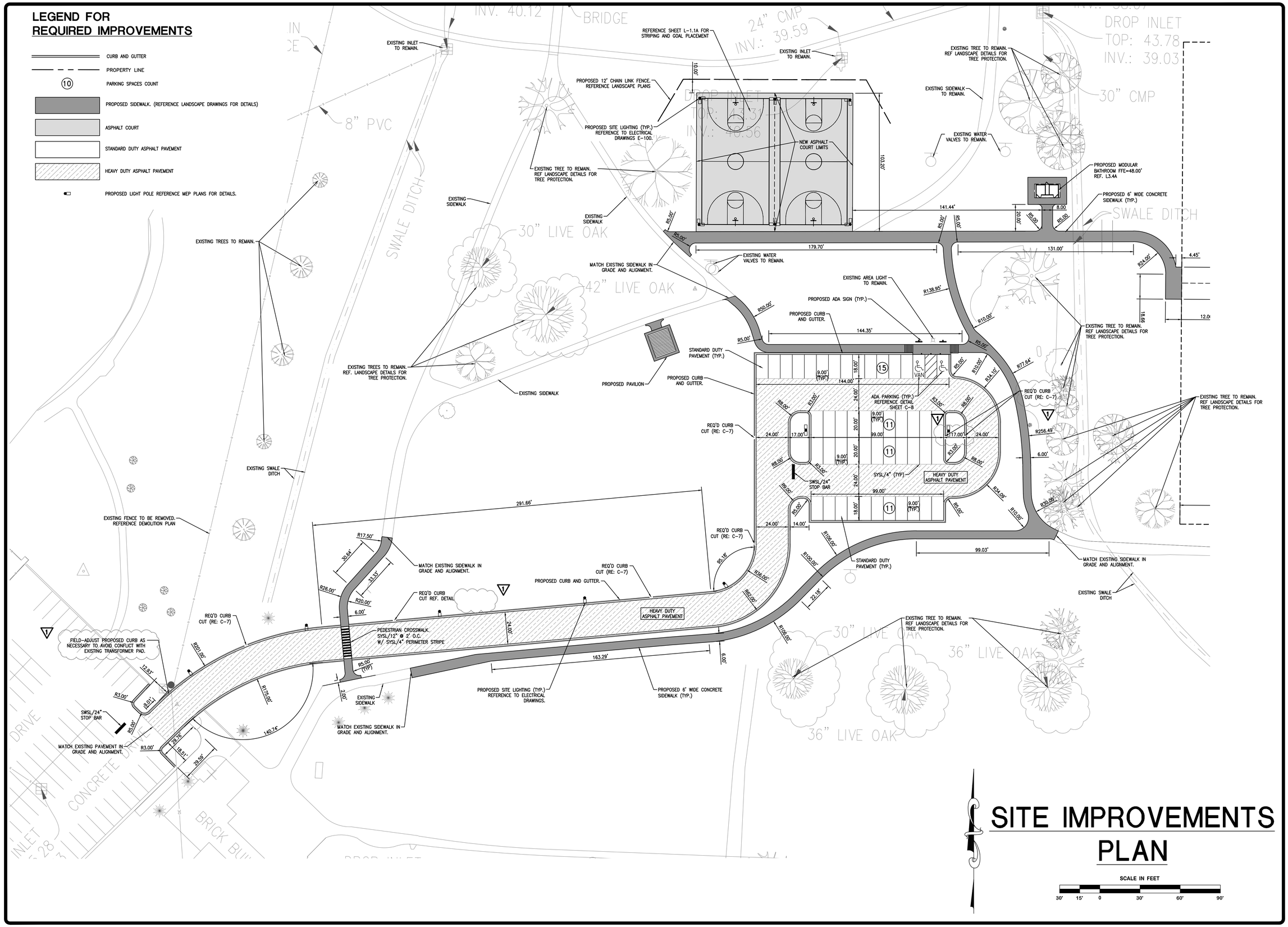
LEGEND FOR REQUIRED IMPROVEMENTS

- CURB AND GUTTER
- PROPERTY LINE
- (10) PARKING SPACES COUNT
- PROPOSED SIDEWALK. (REFERENCE LANDSCAPE DRAWINGS FOR DETAILS)
- ASPHALT COURT
- STANDARD DUTY ASPHALT PAVEMENT
- HEAVY DUTY ASPHALT PAVEMENT
- PROPOSED LIGHT POLE REFERENCE MEP PLANS FOR DETAILS.



SITE IMPROVEMENTS PLAN

SCALE IN FEET

30' 15' 0 30' 60' 90'

REVISION	BY
1 ADDENDUM #1 07/15/2016	SMH

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BREC - HOWELL PARK IMPROVEMENTS
BATON ROUGE, LOUISIANA
EAST BATON ROUGE PARRISH

DRAWN	JAB
CHECKED	SMH
ISSUED DATE	6-21-2016
ISSUED FOR	BID
PROJECT NO.	16-111
FILE	16-111 C-1 Improvements Plan
SHEET	C-3.1

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STRUCTURE TABLE

STRUCTURE NUMBER	TYPE	GUTTER/ CASTING ELEV	INVERT IN	ELEVATION OUT
21	OPEN PIPE			41.50 (22)
22*	AREA INLET	44.00	40.41 (21)	40.41 (23)
23	AREA INLET	43.75	40.10 (22)	40.10 (24)
24*	AREA INLET	44.00	39.56 (23)	39.56 (25)
25	EXISTING INLET		39.30 (24)	
28	AREA INLET	44.10		42.10 (29)
29	OPEN PIPE		42.00 (28)	

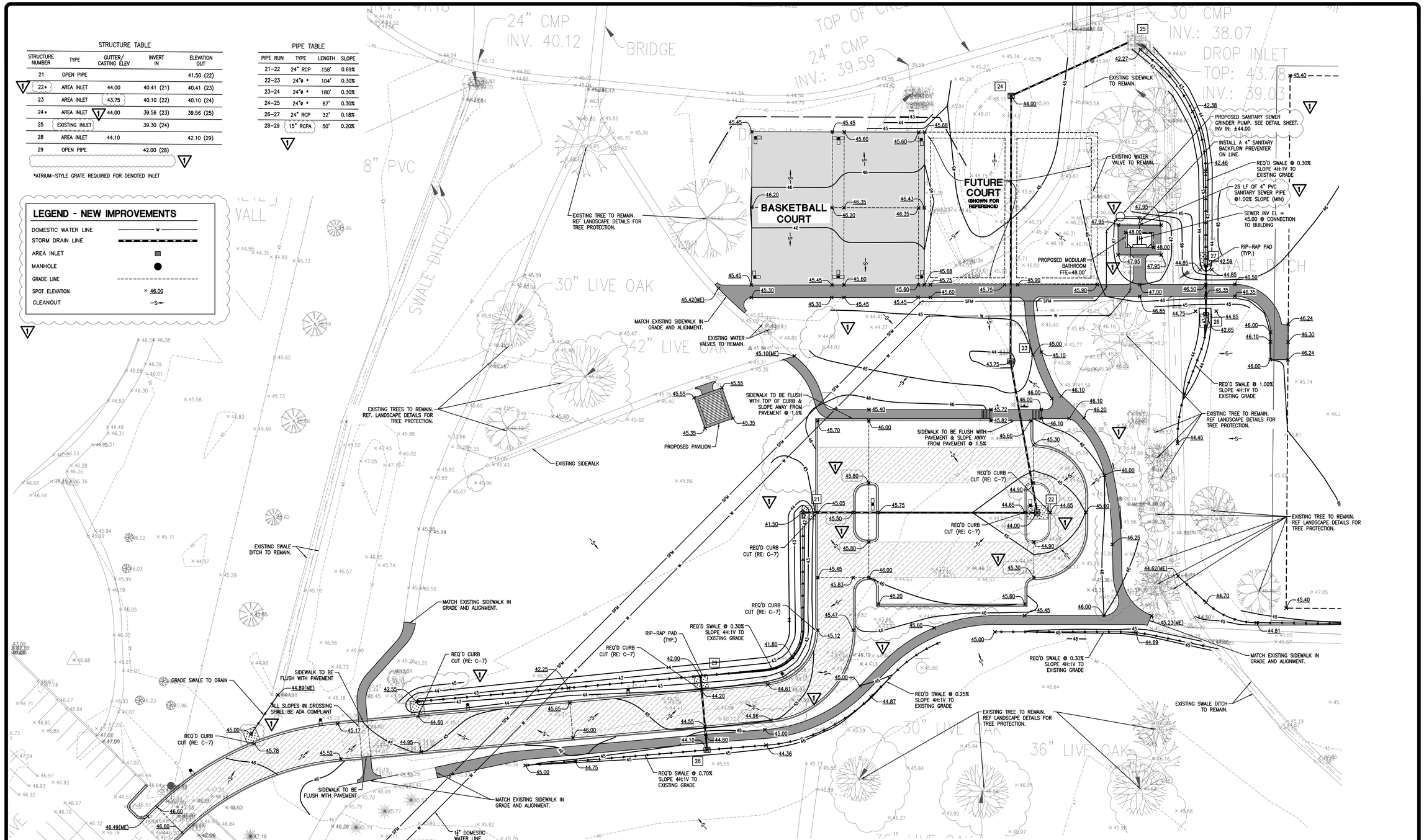
*ATRIUM-STYLE GRATE REQUIRED FOR DENOTED INLET

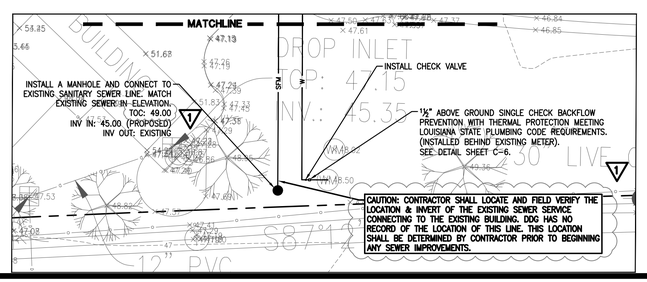
PIPE TABLE

PIPE RUN	TYPE	LENGTH	SLOPE
21-22	24" RCP	158'	0.69%
22-23	24"ø *	104'	0.30%
23-24	24"ø *	180'	0.30%
24-25	24"ø *	87'	0.30%
26-27	24" RCP	32'	0.18%
28-29	15" RCPA	50'	0.20%

LEGEND - NEW IMPROVEMENTS

- DOMESTIC WATER LINE
- STORM DRAIN LINE
- AREA INLET
- MANHOLE
- GRADE LINE
- SPOT ELEVATION × 46.00
- CLEANOUT





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GRADING / UTILITY IMPROVEMENTS PLAN

SCALE IN FEET

30' 15' 0 30' 60' 90'

REVISION	BY
1 ADDENDUM #1 07/15/2016	SMH

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SIGNATURE:

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BREC - HOWELL PARK IMPROVEMENTS
BATON ROUGE, LOUISIANA
EAST BATON ROUGE PARRISH

DRAWN	JAB
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PROJECT NO.	16-111
FILE	16-111 C-2 Grading Plan
SHEET	C-3.2

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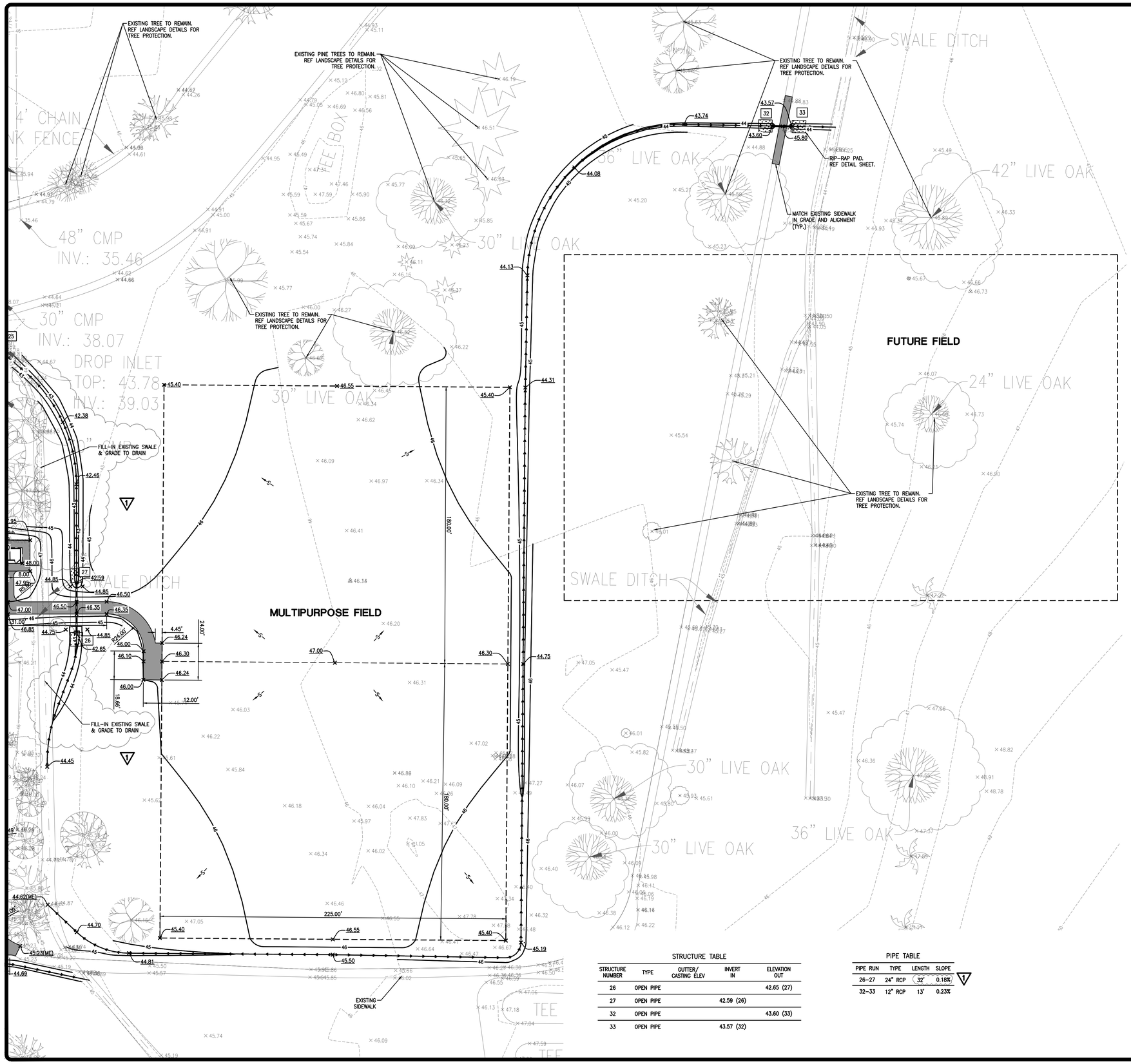

STRUCTURE TABLE

STRUCTURE NUMBER	TYPE	GUTTER/ CASTING ELEV	INVERT IN	ELEVATION OUT
26	OPEN PIPE			42.65 (27)
27	OPEN PIPE		42.59 (26)	
32	OPEN PIPE			43.60 (33)
33	OPEN PIPE		43.57 (32)	

PIPE TABLE

PIPE RUN	TYPE	LENGTH	SLOPE
26-27	24" RCP	32'	0.18%
32-33	12" RCP	13'	0.23%

IMPROVEMENTS PLAN

SCALE IN FEET

30' 15' 0 30' 60' 90'

REVISION	BY
1 ADDENDUM #1 07/15/2016	SMH

DUPLANTIS DESIGN GROUP, PC
CIVIL ENGINEERING-ARCHITECTURE-LANDSCAPE ARCHITECTURE
8352 BLUEBONNET BLVD.
BATON ROUGE, LA 70810
PHONE: 225-751-4490 \ FAX: 225-751-4495
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THIBODAUX \ COVINGTON \ HOUSTON \ BATON ROUGE \ HOUMA

SIGNATURE:
DATE: 07-15-2016

STAMP: STATE OF LOUISIANA, SCOTT M. FELL, Licensed Professional Engineer, No. 34716, CIVIL ENGINEERING

BREC - HOWELL PARK IMPROVEMENTS
BATON ROUGE, LOUISIANA
EAST BATON ROUGE PARRISH

DRAWN	JAB
CHECKED	SMH
ISSUED DATE	6-21-2016
ISSUED FOR	BID
PROJECT NO.	16-111
FILE	16-111 C-1 Improvements Plan
SHEET	C-4

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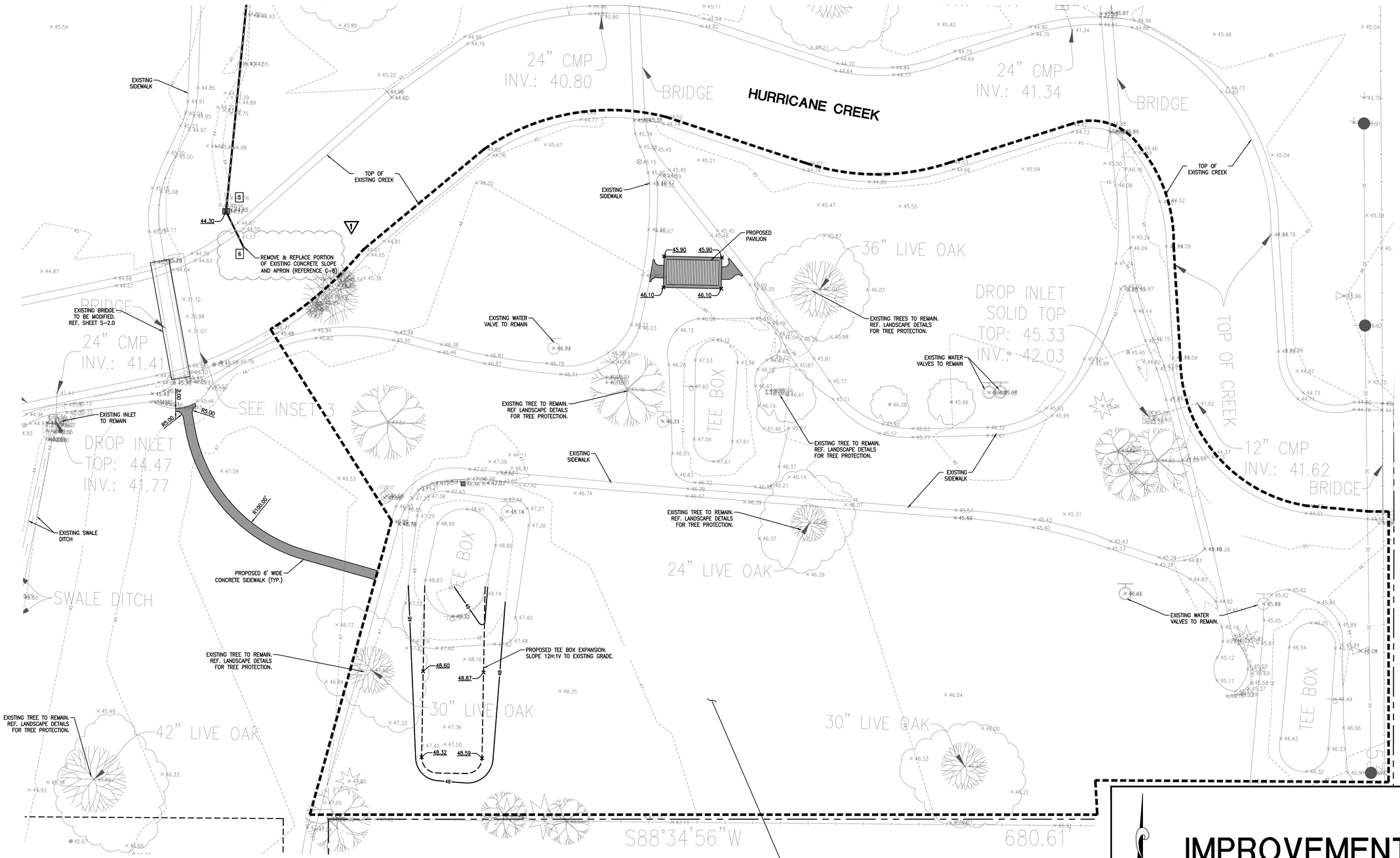
STRUCTURE TABLE				
STRUCTURE NUMBER	TYPE	GUTTER/ CASTING ELEV	INVERT IN	ELEVATION OUT
5	AREA INLET	44.30	38.80 (4)	38.80 (6)
6	OPEN PIPE		38.75 (5)	

PIPE TABLE			
PIPE RUN	TYPE	LENGTH	SLOPE
5-6	24" CMP	26'	0.21%



IMPROVEMENTS PLAN

SCALE IN FEET

30' 15' 0 30' 60' 90'

REVISION	BY
1 ADDENDUM #1 07/15/2016	SMH

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THIBODAUX \ COVINGTON \ HOUSTON \ BATON ROUGE \ HOUMA

SIGNATURE:

DATE: 07-15-2016

STAMP: STATE OF LOUISIANA • CIVIL ENGINEERING • Licensed to practice as a PROFESSIONAL ENGINEER IN LOUISIANA • Licensed No. 15471 • 07-15-16

BREC - HOWELL PARK IMPROVEMENTS
BATON ROUGE, LOUISIANA
EAST BATON ROUGE PARRISH

DRAWN	JAB
CHECKED	SMH
ISSUED DATE	6-21-2016
ISSUED FOR	BID
PROJECT NO.	16-111
FILE	16-111 C-1 Improvements Plan
SHEET	C-5

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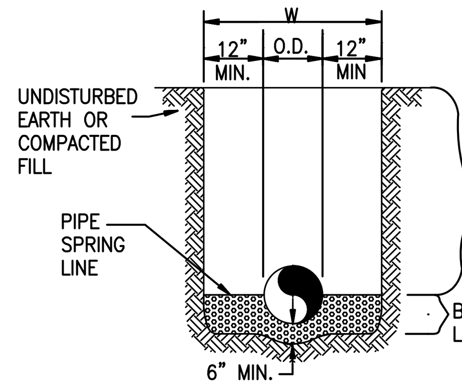
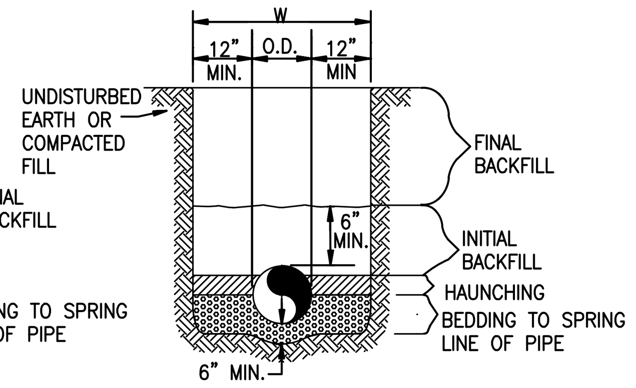


RIGID PIPE

N.T.S.



FLEXIBLE PIPE

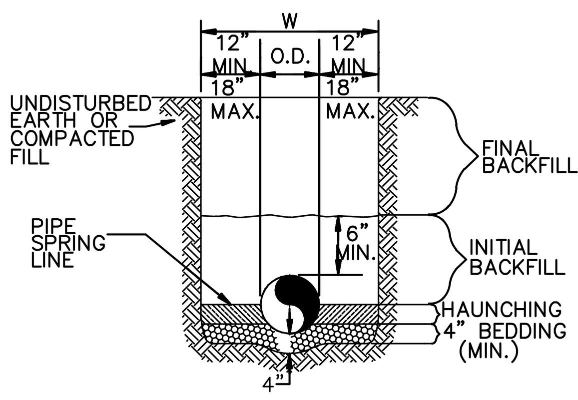
N.T.S.

GENERAL NOTES

1. BEDDING SHALL BE CLASS I–A WORKED BY HAND. IF GROUNDWATER IS ANTICIPATED, THEN BEDDING SHALL BE CLASS I–B OR CLASS II COMPACTED TO 95% STANDARD PROCTOR.
2. HAUNCHING SHALL BE WORKED AROUND THE PIPE BY HAND TO ELIMINATE VOIDS AND SHALL BE CLASS I–A OR CLASS I–B OR CLASS II COMPACTED TO 95% PROCTOR.
3. INITIAL BACKFILL SHALL BE CLASS I–A WORKED BY HAND, OR CLASS I–B OR CLASS II COMPACTED TO 95% STANDARD PROCTOR.
4. INITIAL BACKFILL NOT UNDER PAVED AREAS CAN BE CLASS III COMPACTED TO 90% STANDARD PROCTOR.
5. FINAL BACKFILL SHALL BE CLASS I, II, OR III COMPACTED AS NOTED IN NOTES 3. AND 4.
6. FINAL BACKFILL NOT UNDER PAVED AREAS CAN BE CLASS IV–A COMPACTED TO 95% STANDARD PROCTOR.
7. ALL MATERIALS ARE CLASSIFIED IN ACCORDANCE WITH ASTM D 2321–LATEST EDITION.
8. ALL MATERIALS SHALL BE INSTALLED IN MAXIMUM 8" LOOSE LIFTS IN ACCORDANCE WITH ASTM D 698. CLASS III AND IV–A MATERIALS SHALL BE COMPACTED NEAR OPTIMUM MOISTURE CONTENT.
9. FILL SALVAGED FROM EXCAVATION SHALL BE FREE OF DEBRIS, ORGANICS AND ROCKS LARGER THAN 3".
10. ALL TRENCH EXCAVATIONS SHALL BE SLOPED, SHORED, SHEETED, BRACED, OR OTHERWISE SUPPORTED IN COMPLIANCE WITH OSHA REGULATIONS AND LOCAL ORDINANCES.

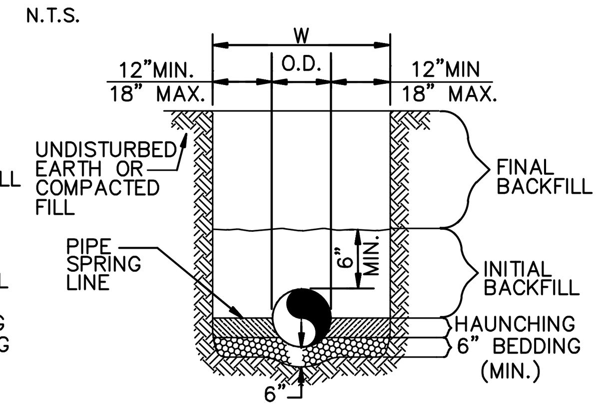
STORM SEWER TRENCH AND BEDDING

N.T.S.



WATER LINE

N.T.S.



SANITARY SEWER

N.T.S.

GENERAL NOTES

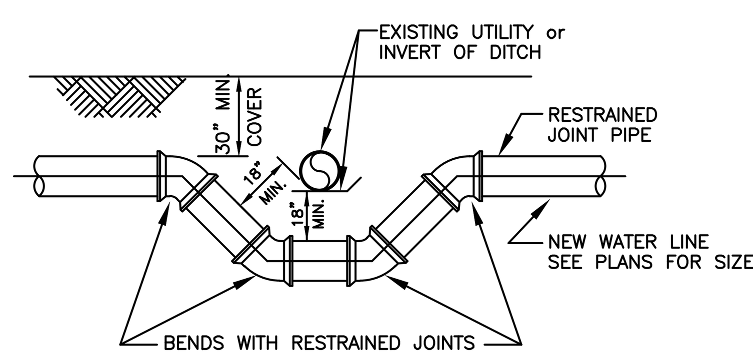
1. BEDDING SHALL BE CLASS I–A WORKED BY HAND. IF GROUNDWATER IS ANTICIPATED, THEN BEDDING SHALL BE CLASS I–B COMPACTED TO 95% STANDARD PROCTOR.
2. HAUNCHING SHALL BE WORKED AROUND THE PIPE BY HAND TO ELIMINATE VOIDS AND SHALL BE CLASS I–A OR CLASS I–B OR CLASS II COMPACTED TO 95% PROCTOR.
3. INITIAL BACKFILL SHALL BE CLASS I–A WORKED BY HAND, OR CLASS I–B OR CLASS II COMPACTED TO 95% STANDARD PROCTOR.
4. INITIAL BACKFILL NOT UNDER PAVED AREAS CAN BE CLASS III COMPACTED TO 90% STANDARD PROCTOR.
5. FINAL BACKFILL SHALL BE CLASS I, II, OR III COMPACTED AS NOTED IN NOTES 3. AND 4.
6. FINAL BACKFILL NOT UNDER PAVED AREAS CAN BE CLASS IV–A COMPACTED TO 95% STANDARD PROCTOR.
7. ALL MATERIALS ARE CLASSIFIED IN ACCORDANCE WITH ASTM D 2321–89.
8. ALL MATERIALS SHALL BE INSTALLED IN MAXIMUM 8" LOOSE LIFTS IN ACCORDANCE WITH ASTM D 698. CLASS III AND IV–A MATERIALS SHALL BE COMPACTED NEAR OPTIMUM MOISTURE CONTENT.
9. FILL SALVAGED FROM EXCAVATION SHALL BE FREE OF DEBRIS, ORGANICS AND ROCKS LARGER THAN 3".
10. ALL TRENCH EXCAVATIONS SHALL BE SLOPED, SHORED, SHEETED, BRACED, OR OTHERWISE SUPPORTED IN COMPLIANCE WITH OSHA REGULATIONS AND LOCAL ORDINANCES.

UTILITY TRENCH AND BEDDING

N.T.S.

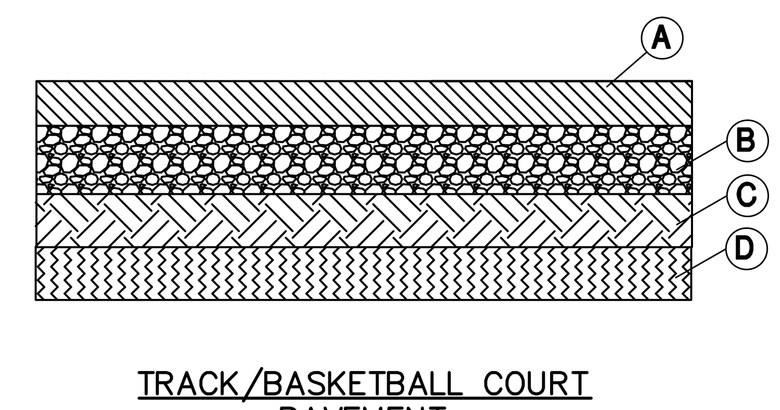
CLASS	TYPE	SOIL GROUP SYMBOL D2487	DESCRIPTION
1A	MANUFACTURED AGGREGATES; OPEN–GRADED, CLEAN	NONE	ANGULAR,CRUSHED STONE OR ROCK, CRUSHED GRAVEL, BROKEN CORAL, CRUSHED SLAG, CINDERS OR SHELLS; LARGE VOID CONTENT, CONTAIN LITTLE OR NO FINES
1B	MANUFACTURED, PROCESSED AGGREGATES: DENSE–GRADED, CLEAN.	NONE	ANGULAR,CRUSHED STONE (OR OTHER CLASS 1A MATERIALS) AND STONE/SAND MIXTURES WITH GRADATIONS SELECTED TO MINIMIZE MIGRATION OF ADJACENT SOILS; CONTAIN LITTLE OR NO FINES (SEEX1.8)
II	COARSE–GRAINED SOILS CLEAN	GW	WELL–GRADED GRAVELS AND GRAVEL–SAND MIXTURES; LITTLE OR NO FINES
		GP	POORLY–GRADED GRAVELS AND GRAVEL–SAND MIXTURES; LITTLE OR NO FINES
		SW	WELL–GRADED SANDS AND GRAVELY SANDS; LITTLE OR NO FINES
		SP	POORLY–GRADED SANDS AND GRAVELY SANDS; LITTLE OR OR NO FINES
	COARSE–GRAINED SOILS BORDERLINE CLEAN TO W/ FINES	e.g. GW–GC, SP–SM	SANDS AND GRAVELS WHICH ARE BORDERLINE BETWEEN CLEAN AND WITH FINES
III	COARSE–GRAINED SOILS WITH FINES	GM	SILTY GRAVELS, GRAVEL–SAND–SILT MIXTURES
		GC	CLAYEY GRAVELS, GRAVEL–SAND–CLAY MIXTURES
		SM	SILTY SANDS, SAND–SILT MIXTURES
		SC	CLAYEY SANDS, SAND–CLAY MIXTURES
IV–A	FINE–GRAINED SOILS (INORGANIC)	ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS, SILTS WITH SLIGHT PLASTICITY
		CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
IV–B	FINE–GRAINED SOILS (INORGANIC)	MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS
		CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS.
V	ORGANIC SOILS	OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
		OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
	HIGHLY ORGANIC	PT	PEAT AND OTHER HIGH ORGANIC SOILS.

GENERAL SOIL CLASSIFICATION CHART



WATER LINE OFFSET DETAIL

N.T.S.



TRACK/BASKETBALL COURT PAVEMENT

N.T.S.

PAVEMENT ALT. 1

A. 2.5" ASPHALTIC CONCRETE WEARING COURSE IN ACCORDANCE WITH SUPERPAVE REQUIREMENTS IN THE LSSRB, 2006 EDITION.

B. 5" CLASS II GRANULAR BASE IN ACCORDANCE WITH REQUIREMENTS OF SECTION 1003.03 IN THE LSSRB, 2006 EDITION.

C. 12" COMPACTED STRUCTURAL FILL COMPACTED TO AT LEAST 95% OF MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698 (STANDARD PROCTOR) WITHIN 2% OF OPTIMUM MOISTURE CONTENT.

D. EXISTING STABLE SUBGRADE OR FILL IN COMPLIANCE WITH THE SPECIFICATIONS.

NOTES:
1. ACTUAL APPLICATION RATES OF HYDRATED LIME SHALL BE DETERMINED IN FIELD BY TESTING AGENCY.
2. ALL MATERIAL AND CONSTRUCTION METHODS SHALL CONFORM TO THE LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES LATEST EDITION.
3. THE MOISTURE CONTENT AND DENSITY OF THE TOP 12" OF SUBGRADE SHALL BE EVALUATED AND SUBJECT TO PROOFROLL WITHIN TWO DAYS PRIOR TO BASE CONSTRUCTION.

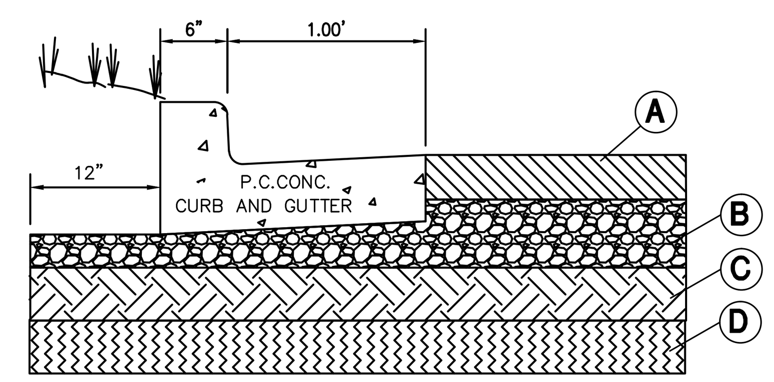
PAVEMENT ALT. 2

A. 2.5" ASPHALTIC CONCRETE WEARING COURSE IN ACCORDANCE WITH SUPERPAVE REQUIREMENTS IN THE LSSRB, 2006 EDITION.

B. 3" CLASS II GRANULAR COURSE IN ACCORDANCE WITH REQUIREMENTS OF SECTION 1003.03 IN THE LSSRB, 2006 EDITION.

C. 10" SOIL–CEMENT TREATED BASE COURSE (9% BY VOLUME). LIME CONDITIONING REQUIRED IF PLASTICITY INDEX OF MATERIAL IS GREATER THAN 15. REFER TO SECTION 304 FOR TYPE C TREATMENT IN THE LSSRB, 2006 EDITION.

D. EXISTING STABLE SUBGRADE OR FILL IN COMPLIANCE WITH THE SPECIFICATIONS.



STANDARD DUTY ASPHALTIC PAVEMENT

N.T.S.

1

PAVEMENT ALT. 1

A. 2.5" ASPHALTIC CONCRETE WEARING COURSE IN ACCORDANCE WITH SUPERPAVE REQUIREMENTS IN THE LSSRB, 2006 EDITION.

B. 5" CLASS II GRANULAR BASE IN ACCORDANCE WITH REQUIREMENTS OF SECTION 1003.03 IN THE LSSRB, 2006 EDITION.

C. 12" COMPACTED STRUCTURAL FILL COMPACTED TO AT LEAST 95% OF MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698 (STANDARD PROCTOR) WITHIN 2% OF OPTIMUM MOISTURE CONTENT.

D. EXISTING STABLE SUBGRADE OR FILL IN COMPLIANCE WITH THE SPECIFICATIONS.

NOTES:
1. ACTUAL APPLICATION RATES OF HYDRATED LIME SHALL BE DETERMINED IN FIELD BY TESTING AGENCY.
2. ALL MATERIAL AND CONSTRUCTION METHODS SHALL CONFORM TO THE LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES LATEST EDITION.
3. THE MOISTURE CONTENT AND DENSITY OF THE TOP 12" OF SUBGRADE SHALL BE EVALUATED AND SUBJECT TO PROOFROLL WITHIN TWO DAYS PRIOR TO BASE CONSTRUCTION.

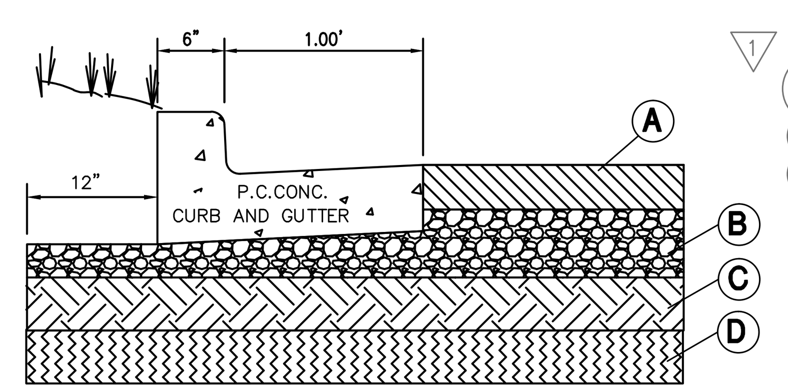
PAVEMENT ALT. 2

A. 2.5" ASPHALTIC CONCRETE WEARING COURSE IN ACCORDANCE WITH SUPERPAVE REQUIREMENTS IN THE LSSRB, 2006 EDITION.

B. 3" CLASS II GRANULAR COURSE IN ACCORDANCE WITH REQUIREMENTS OF SECTION 1003.03 IN THE LSSRB, 2006 EDITION.

C. 10" SOIL–CEMENT TREATED BASE COURSE (9% BY VOLUME). LIME CONDITIONING REQUIRED IF PLASTICITY INDEX OF MATERIAL IS GREATER THAN 15. REFER TO SECTION 304 FOR TYPE C TREATMENT IN THE LSSRB, 2006 EDITION.

D. EXISTING STABLE SUBGRADE OR FILL IN COMPLIANCE WITH THE SPECIFICATIONS.



HEAVY DUTY ASPHALTIC PAVEMENT

N.T.S.

PAVEMENT ALT. 1

1

A. 3.5" ASPHALTIC CONCRETE WEARING COURSE IN ACCORDANCE WITH SUPERPAVE REQUIREMENTS IN THE LSSRB, 2006 EDITION.

B. 8" CLASS II GRANULAR BASE IN ACCORDANCE WITH REQUIREMENTS OF SECTION 1003.03 IN THE LSSRB, 2006 EDITION..

C. 12" COMPACTED STRUCTURAL FILL COMPACTED TO AT LEAST 95% OF MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698 (STANDARD PROCTOR) WITHIN 2% OF OPTIMUM MOISTURE CONTENT.

D. EXISTING STABLE SUBGRADE OR FILL IN COMPLIANCE WITH THE SPECIFICATIONS.

NOTES:
1. ACTUAL APPLICATION RATES OF HYDRATED LIME SHALL BE DETERMINED IN FIELD BY TESTING AGENCY.
2. ALL MATERIAL AND CONSTRUCTION METHODS SHALL CONFORM TO THE LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES LATEST EDITION.
3. THE MOISTURE CONTENT AND DENSITY OF THE TOP 12" OF SUBGRADE SHALL BE EVALUATED AND SUBJECT TO PROOFROLL WITHIN TWO DAYS PRIOR TO BASE CONSTRUCTION.

PAVEMENT ALT. 2

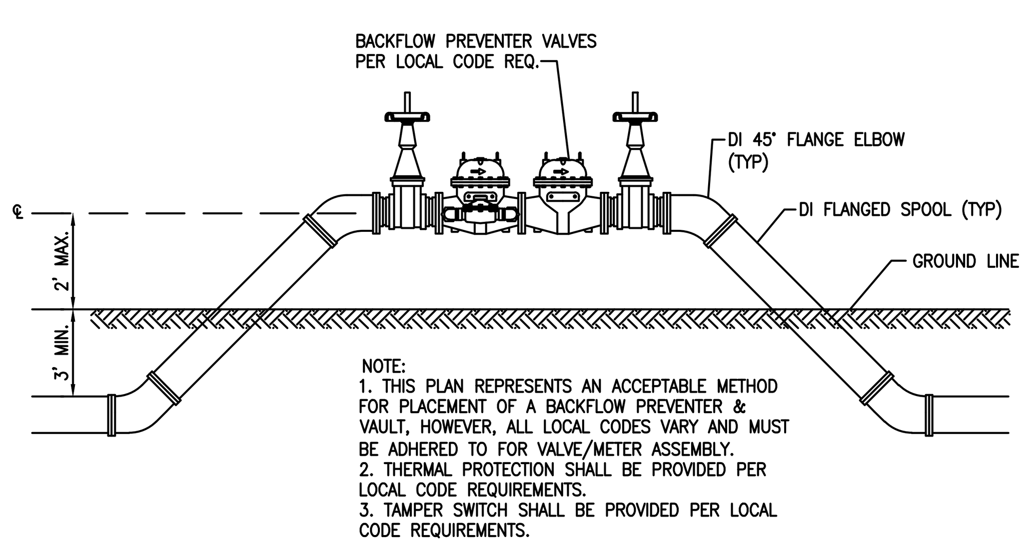
1

A. 3.5" ASPHALTIC CONCRETE WEARING COURSE IN ACCORDANCE WITH SUPERPAVE REQUIREMENTS IN THE LSSRB, 2006 EDITION.

B. 4" CLASS II GRANULAR COURSE IN ACCORDANCE WITH REQUIREMENTS OF SECTION 1003.03 IN THE LSSRB, 2006 EDITION.

C. 10" SOIL–CEMENT TREATED BASE COURSE (9% BY VOLUME). LIME CONDITIONING REQUIRED IF PLASTICITY INDEX OF MATERIAL IS GREATER THAN 15. REFER TO SECTION 304 FOR TYPE C TREATMENT IN THE LSSRB, 2006 EDITION.

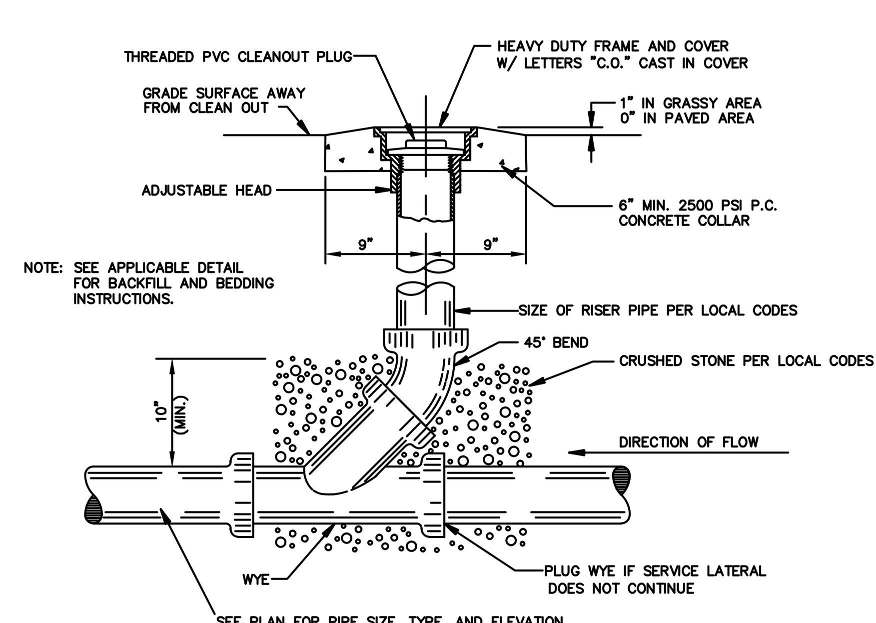
D. EXISTING STABLE SUBGRADE OR FILL IN COMPLIANCE WITH THE SPECIFICATIONS.



NOTE:
1. THIS PLAN REPRESENTS AN ACCEPTABLE METHOD FOR PLACEMENT OF A BACKFLOW PREVENTER & VAULT, HOWEVER, ALL LOCAL CODES VARY AND MUST BE ADHERED TO FOR VALVE/METER ASSEMBLY.
2. THERMAL PROTECTION SHALL BE PROVIDED PER LOCAL CODE REQUIREMENTS.
3. TAMPER SWITCH SHALL BE PROVIDED PER LOCAL CODE REQUIREMENTS.

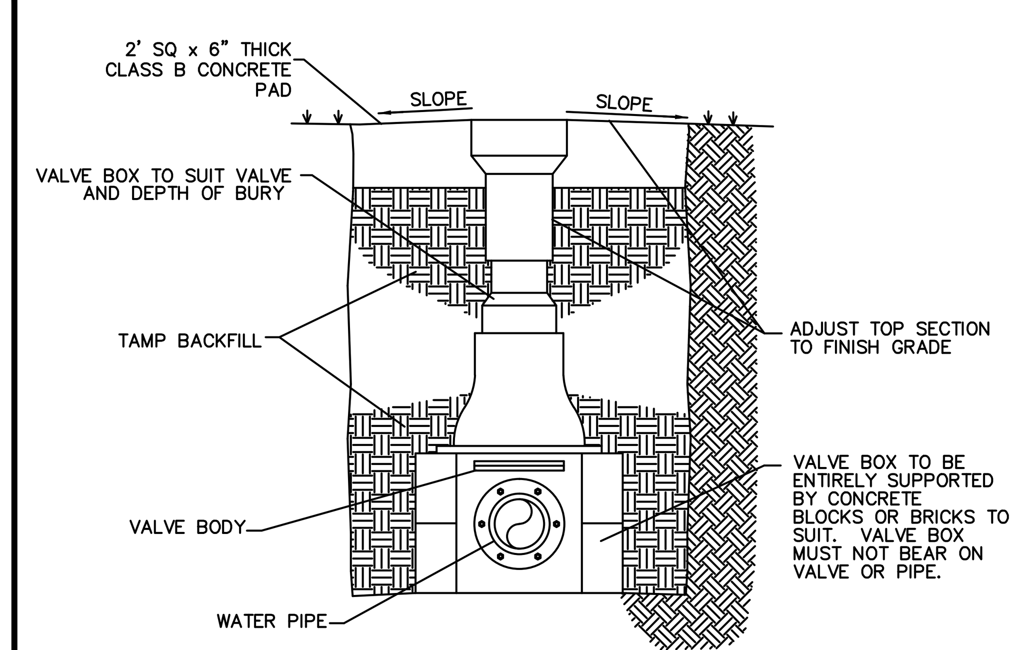
ABOVE GROUND BACKFLOW PREVENTER

N.T.S.



SANITARY SEWER CLEAN-OUT

N.T.S.



GATE VALVE

NTS

DETAIL SHEET

REVISION	BY
1 ADDENDUM #1 07/15/2016	SMH

DUPLANTIS DESIGN GROUP, PC
CIVIL ENGINEERING • ARCHITECTURE • LANDSCAPE ARCHITECTURE
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STAMP
STATE OF LOUISIANA SCOTT M. HEIL License No. 34716 REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING

SIGNATURE:

DATE: 07–15–2016

BREC - HOWELL PARK IMPROVEMENTS
BATON ROUGE, LOUISIANA
EAST BATON ROUGE PARRISH

DRAWN JAB

CHECKED SMH

ISSUED DATE 6-21-2016

ISSUED FOR BID

PROJECT NO. 16-111

FILE 16-111 SD Detail Sheets

SHEET C-6

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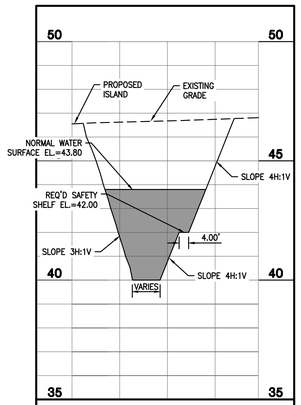
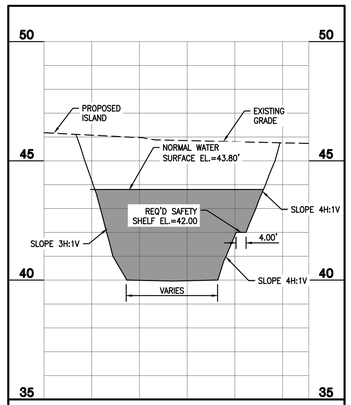
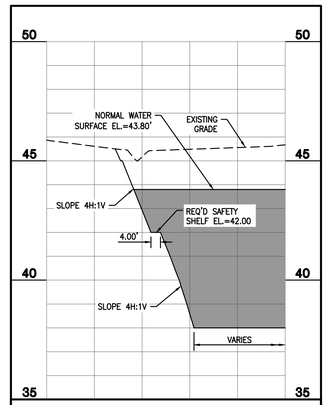
POND NOTES:
1. EROSION CONTROL BLANKET SHALL BE PLACED FROM TOP OF BANK TO BOTTOM OF POND ALONG ALL SIDE SLOPES.
2. THE POND BOTTOM AND POND BANKS SHALL HAVE A 6" (MIN.) IMPERVIOUS CLAY LINER. LINER SHALL BE FREE OF SAND AND DELETERIOUS MATERIAL AND COMPACTED TO 90% STANDARD PROCTOR.



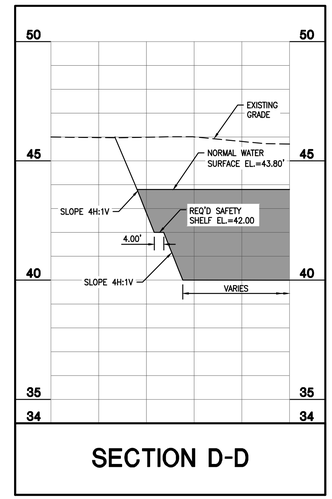
SECTION A-A



SECTION B-B



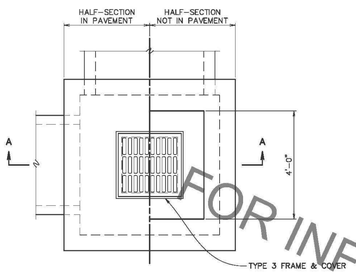
SECTION C-C



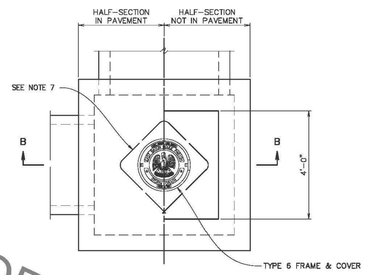
SECTION D-D

PROFILE SCALE: 1"=30' (HORIZONTAL)
1"=3' (VERTICAL)

PROJECT NO.	SHEET



TOP VIEW
TYPE 3
SCALE: 3/4"=1'-0"



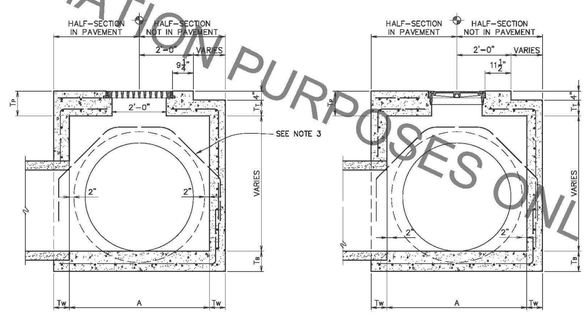
TOP VIEW
TYPE 6
SCALE: 3/4"=1'-0"

PIPE SIZE		DIMENSION
ROUND PIPE	ARCH PIPE (ROUND EQUIV.)	A *
15"	–	2'-10"
18"	15"	2'-10"
24"	18"	2'-10"
30"	24"	3'-5"
36"	30"	4'-0"
42"	36"	4'-8"
48"	–	5'-2"
54"	42"	5'-9"
60"	48"	6'-4"
–	54"	6'-8"
72"	60"	7'-8"
84"	72"	8'-10"

* INCREASE AS REQUIRED TO PROVIDE MINIMUM TOP WIDTH OF 4' SQUARE.

NOTE:
1. SEE STANDARD PLAN 702-99 FOR FRAME AND COVER DETAILS. TYPE 3 OR TYPE 6 FRAME AND COVER REQUIRED.
2. PRECAST CONCRETE STRUCTURES CONFORMING TO STANDARD PLAN 702-97 MAY BE FURNISHED.
3. DIAGONAL REINFORCEMENT REQUIRED FOR PIPE LARGER THAN 36". BARS SHALL LAP TO A FULL LENGTH VERTICAL BAR W/18d LAP LENGTH.
4. DIMENSION A MAY BE VARIED FOR SKEWED PIPE.
5. SEE STANDARD PLAN 702-96 FOR THICKNESS, REINFORCING STEEL, AND OTHER STRUCTURAL DETAILS.
6. SEE STANDARD PLAN 702-98 FOR FOR CURB TRANSITION DETAILS.
7. DIAGONAL REINFORCEMENT REQUIRED. USE SAME REBAR SIZE AS TOP REINFORCING. PLACE AS BOTTOM STEEL IF LOCATED IN PAVEMENT.

PLAN STATION CALL-OUT



SECTION A-A
TYPE 3
SCALE: 3/4"=1'-0"

SECTION B-B
TYPE 6
SCALE: 3/4"=1'-0"

STATE OF LOUISIANA
BRIAN K. HARMON
REG. No. 22565
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

DECEMBER 6, 2010

STANDARD PLAN No.	DATED	SHT. No.
702-20	DEC. 6, 2010	1 OF 1

CAST IRON GRATE INLET AND JUNCTION BOX

ENGINEERING DIVISION
DEPARTMENT OF PUBLIC WORKS
CITY OF BATON ROUGE & PARISH OF EAST BATON ROUGE

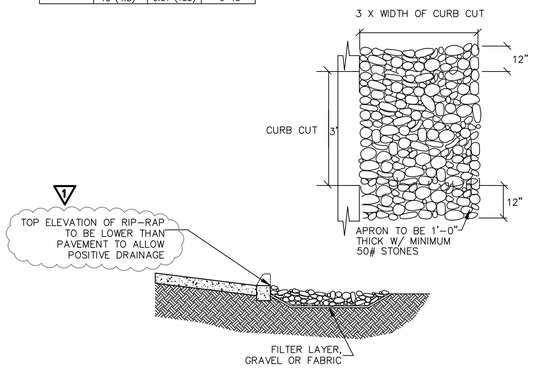
DATE	DESCRIPTION REVISION	BY	DESIGNED	DRAWN	CHECKED	APPROVED
			GLP	GLP	GLP	B. HARMON

702-20

FOR INFORMATION PURPOSES ONLY

TABLE 711-1 RIPRAP			
RIPRAP CLASS[1]	STONE SIZE LB (KG)	SPHERICAL DIAMETER FT (MM)[2]	% OF STONE SMALLER THAN
30 LB (15 KG)	140 (64)	1.24 (375)	100
	60 (27)	0.94 (285)	42–100
	30 (15)	0.74 (225)	15–50
	10 (4.5)	0.51 (155)	0–15

1. THE STONE SIZE USED TO DEFINE THE RIP-RAP CLASS IS THE MINIMUM MEDIAN STONE SIZE FOR THE STONE CLASS. THE MINIMUM THICKNESS OF A RIP-RAP LAYER SHALL BE NO LESS THAN THE SPHERICAL DIAMETER OF THE MAXIMUM STONE SIZE IN THE RIP-RAP CLASS.
2. SPHERICAL DIAMETERS OF RIP-RAP CLASSES UP TO 30LB (15KG) ARE BASED ON A SOLID WEIGHT OF 140LB/CU FT (2240 KG/CU M). SPHERICAL DIAMETERS OF RIP-RAP CLASSES ABOVE 30LB (15KG) ARE BASED ON A SOLID WEIGHT OF 155 LB/CU FT (2480 KG/CU M).



1. "AVERAGE SIZE" IS THAT SIZE EXCEEDED BY AT LEAST 50% OF THE TOTAL WEIGHT OF THE TONNAGE SHIPPED; i.e., 50% OF THE TONNAGE SHALL CONSIST OF PIECES LARGER THAN THE "AVERAGE" SIZE (NORMALLY HALF THE SPECIFIED NOMINAL TOP SIZE).
2. PIECES SMALLER THAN THE MINIMUM SIZE SHOWN SHALL NOT EXCEED 15% OF THE TONNAGE SHIPPED.
3. RIP-RAP SHALL BE GROUTED WITH A NON-SHRINKING GROUT OR UNDERLINED WITH FILTER FABRIC TO PREVENT ROCK & STONE INTEGRATION.
4. RIP-RAP SHALL BE ON TOP THE CLOTH FILTER DIRECTLY ON THE PREPARED FOUNDATION. OVERLAP THE EDGES BY AT LEAST 12 INCHES, & SPACE ANCHOR PINS EVERY 3 FEET ALONG OVERLAP. BURY THE UPSTREAM END OF THE CLOTH A MINIMUM OF 12 INCHES BELOW GROUND & WHERE NECESSARY, BURY THE LOWER END OF THE CLOTH OR OVERLAP WITH THE NEXT SECTION AS REQUIRED.

CURB CUT DETAIL

DETAIL SHEET

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SIGNATURE:
DATE: 07-15-2016

STATE OF LOUISIANA
SCOTT M. HELF
License No. 34716
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING

STAMP

BREC - HOWELL PARK IMPROVEMENTS
BATON ROUGE, LOUISIANA
EAST BATON ROUGE PARRISH

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ISSUED DATE	6-21-2016
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PROJECT NO.	16-111
FILE	16-111 SD Detail Sheets
SHEET	C-7

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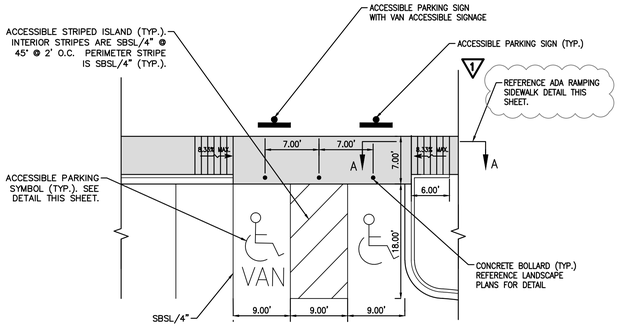
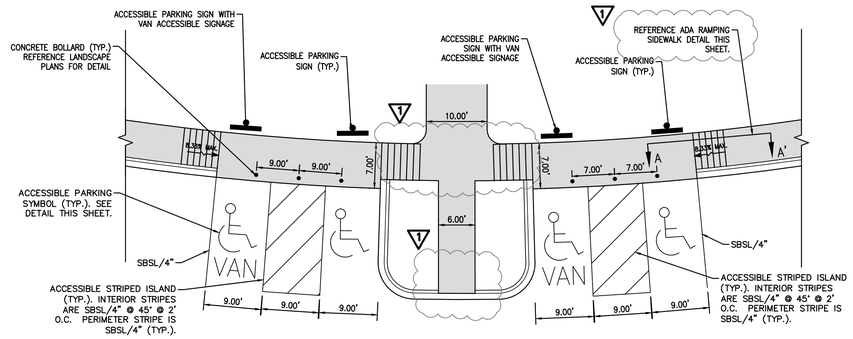
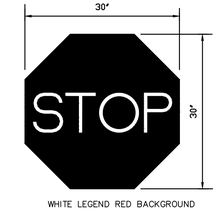


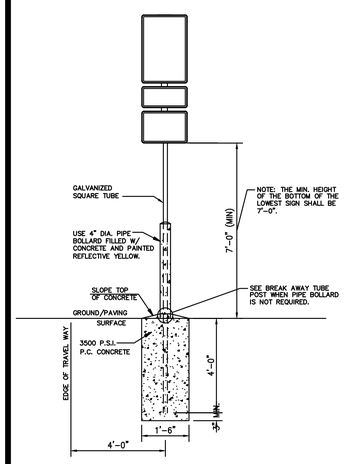
HANDICAP PARKING DETAIL
(SOUTH PARKING LOT)



HANDICAP PARKING DETAIL
(NORTH PARKING LOT)

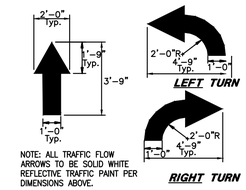


R1-1
"STOP" SIGN
N.T.S.

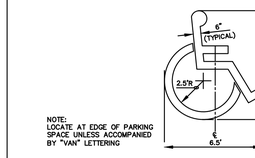


SINGLE POST
N.T.S.

SIGN BASE DETAIL
N.T.S.

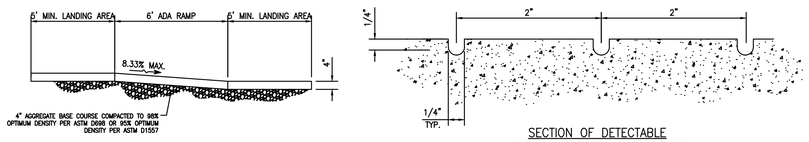


TRAFFIC FLOW ARROW
N.T.S.



NOTE:
LOCATE AT EDGE OF PARKING SPACE UNLESS ACCOMPANIED BY "VAN" LETTERING

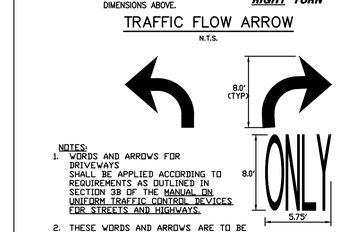
ACCESSIBLE PARKING SYMBOL
N.T.S.



SECTION A-A'

SECTION OF DETECTABLE WARNING PATTERN IN SURFACE

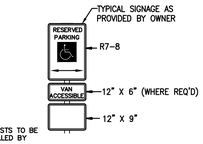
ADA RAMP IN SIDEWALK DETAIL
N.T.S.



PEDESTRIAN CROSSING STRIPING
N.T.S.

NOTES:
1. WORDS AND ARROWS FOR DRIVEWAYS SHALL BE APPLIED ACCORDING TO REQUIREMENTS AS OUTLINED IN SECTION 3B OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS.
2. THESE WORDS AND ARROWS ARE TO BE PAINTED REFLECTIVE WHITE.

RIGHT/LEFT TURN ONLY
PAVEMNET MARKINGS
N.T.S.

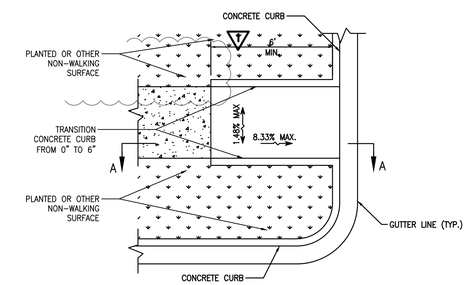


NOTE:
ALL SIGNAGE AND POSTS TO BE SUPPLIED AND INSTALLED BY CONTRACTOR.

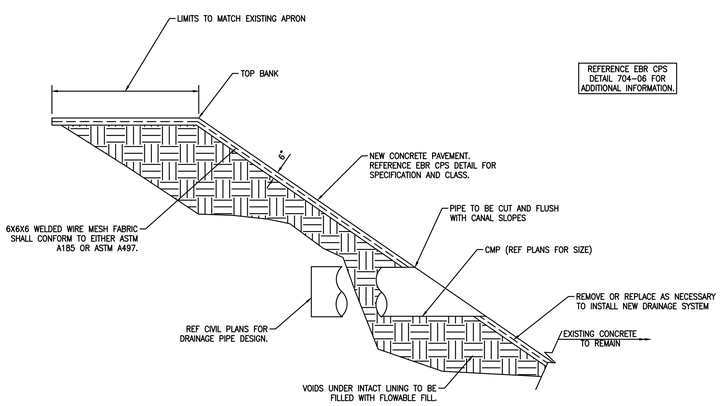
ACCESSIBLE PARKING SIGN
N.T.S.

NOTES:

1. THE SURFACE OF RAMP SHALL HAVE DETECTABLE WARNINGS AS SHOWN. DETECTABLE WARNINGS WITHIN PUBLIC R.O.W. SHALL CONSIST OF RAISED TRUNCATED DOMES. SEE DETECTABLE WARNING DETAIL.
2. THE SURFACE OF RAMP SHALL HAVE "GROOVES" AS SHOWN. SEE 'DETECTABLE WARNING PATTERN IN SURFACE DETAIL'.
3. CONSTRUCT PER A.D.A. STANDARDS.
4. REFER TO PLANS FOR ADJACENT SLOPES.
5. THE CROSS SLOPE OF THE RAMP SURFACE SHALL BE NO GREATER THAN 1:48.
6. THE CURB RAMP SHALL CONTRAST VISUALLY WITH THE ADJOINING SURFACES AND CONTAIN DETECTABLE WARNING SURFACES.
7. CONTRACTOR SHALL VERIFY REQUIREMENTS OF LOCAL CODES PRIOR TO CONSTRUCTING RAMPS.

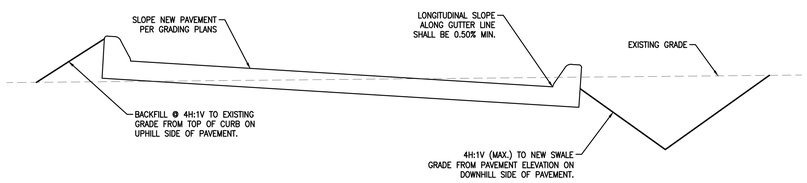


PLAN TYPE I



REFERENCE EBR CPS DETAIL 704-06 FOR ADDITIONAL INFORMATION.

PIPE CONNECTION AT
HURRICANE CREEK DETAIL
N.T.S.



SECTION E-E

DETAIL SHEET

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BATON ROUGE, LOUISIANA
EAST BATON ROUGE PARRISH

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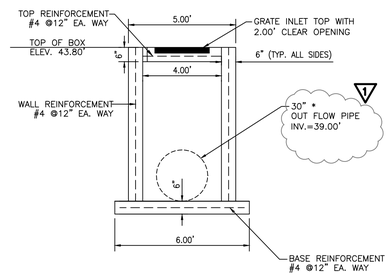
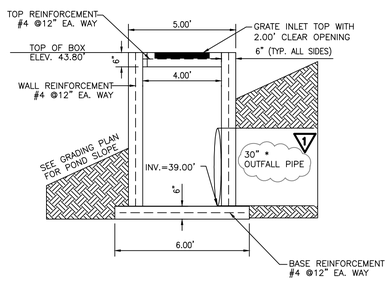
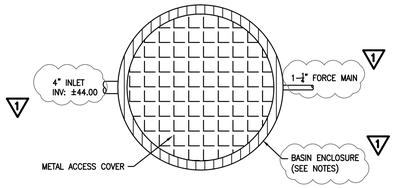


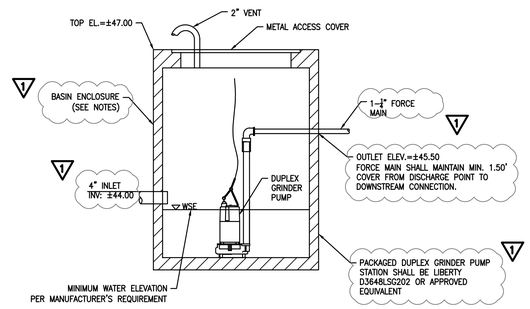


OUTLET CONTROL STRUCTURE FOR POND

N.T.S.



PLAN VIEW

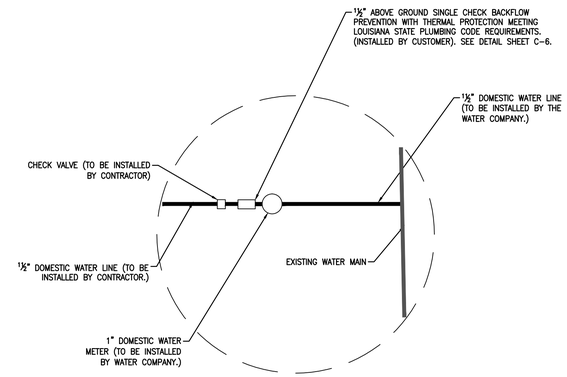


GRINDER PUMP NOTES:

1. MINIMUM BASIN DIAMETER SHALL BE 36".
2. BASIN ENCLOSURE SHALL BE CONSTRUCTED OF STRUCTURALLY SOUND, CORROSION-RESISTANT MATERIAL SUCH AS FIBERGLASS, POLYETHYLENE, CONCRETE, OR OTHER SUITABLE MATERIAL.
3. PUMPS SHALL BE CAPABLE OF PUMPING A MINIMUM OF 10GPM AT 50FT TDH.
4. SYSTEM SHALL INCLUDE ALL LEVEL & PUMP CONTROLS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION TO ENSURE PROPER OPERATION.
5. ABOVE-GROUND VISUAL ALARM SYSTEM SHALL BE PROVIDED.
6. CHECK-VALVE SHALL BE PROVIDED AT DISCHARGE LINE OUTLET.
7. WET WELL DETENTION TIME SHALL NOT EXCEED 30MINS AT THE DESIGN FLOW.

GRINDER PUMP DETAIL

N.T.S.



WATER SERVICE CONNECTION DETAIL

N.T.S.

DETAIL SHEET

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BREC - HOWELL PARK IMPROVEMENTS
BATON ROUGE, LOUISIANA
EAST BATON ROUGE PARRISH

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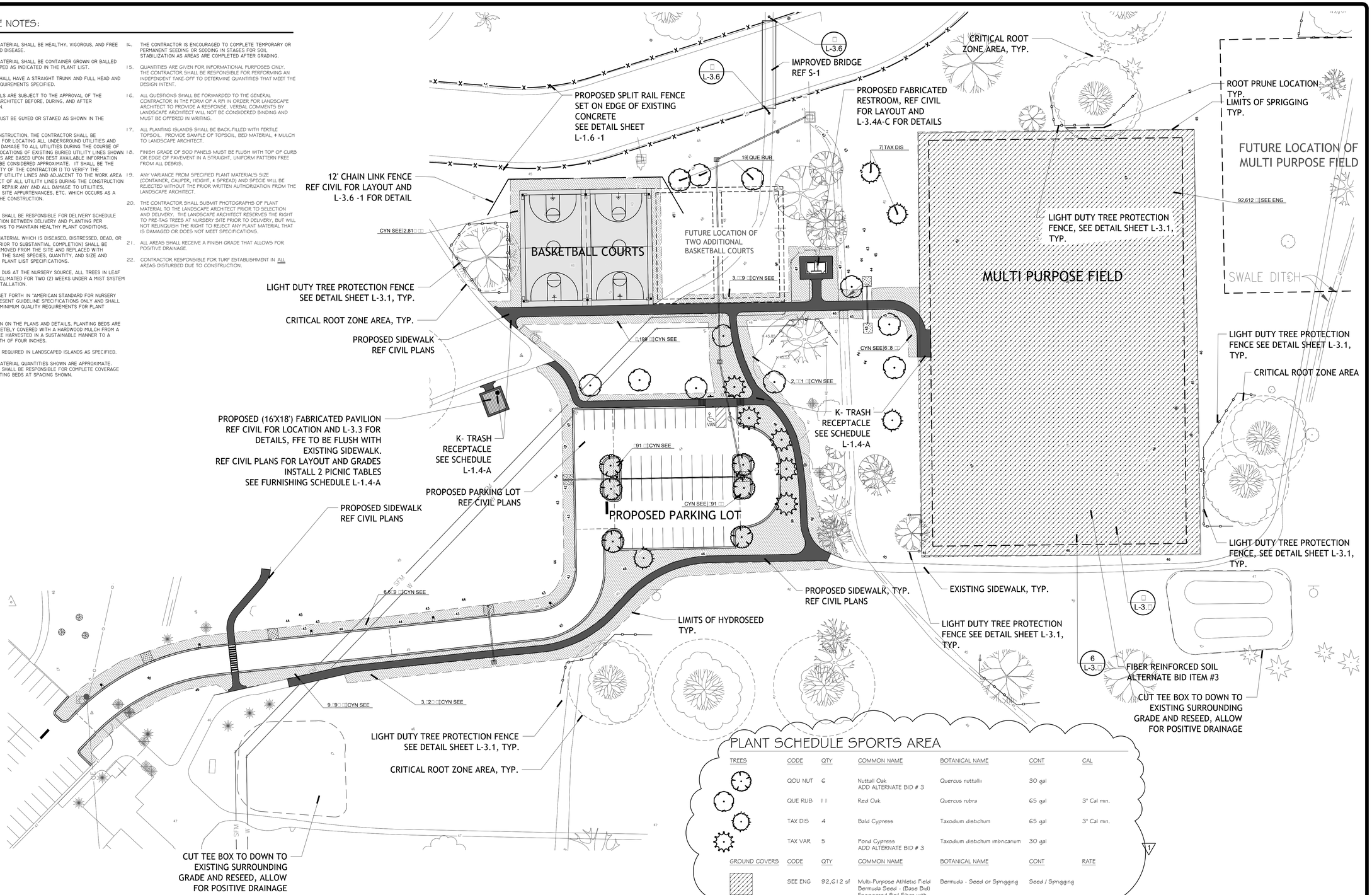
LANDSCAPE NOTES:

1. ALL PLANT MATERIAL SHALL BE HEALTHY, VIGOROUS, AND FREE OF PESTS AND DISEASE.
2. ALL PLANT MATERIAL SHALL BE CONTAINER GROWN OR BALLED AND BUR LAPPED AS INDICATED IN THE PLANT LIST.
3. ALL TREES SHALL HAVE A STRAIGHT TRUNK AND FULL HEAD AND MEET ALL REQUIREMENTS SPECIFIED.
4. ALL MATERIALS ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT BEFORE, DURING, AND AFTER INSTALLATION.
5. ALL TREES MUST BE GUYED OR STAKED AS SHOWN IN THE DETAILS.
6. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES AND SHALL AVOID DAMAGE TO ALL UTILITIES DURING THE COURSE OF THE WORK. LOCATIONS OF EXISTING BURIED UTILITY LINES SHOWN ON THE PLANS ARE BASED UPON BEST AVAILABLE INFORMATION AND ARE TO BE CONSIDERED APPROXIMATE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR 1) TO VERIFY THE LOCATIONS OF UTILITY LINES AND ADJACENT TO THE WORK AREA 2) TO PROTECT OF ALL UTILITY LINES DURING THE CONSTRUCTION PERIOD 3) TO REPAIR ANY AND ALL DAMAGE TO UTILITIES, STRUCTURES, SITE APPURTENANCES, ETC. WHICH OCCURS AS A RESULT OF THE CONSTRUCTION.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR DELIVERY SCHEDULE AND PROTECTION BETWEEN DELIVERY AND PLANTING PER SPECIFICATIONS TO MAINTAIN HEALTHY PLANT CONDITIONS.
8. ANY PLANT MATERIAL WHICH IS DISEASED, DISTRESSED, DEAD, OR REJECTED (PRIOR TO SUBSTANTIAL COMPLETION) SHALL BE PROMPTLY REMOVED FROM THE SITE AND REPLACED WITH MATERIAL OF THE SAME SPECIES, QUANTITY, AND SIZE AND MEETING ALL PLANT LIST SPECIFICATIONS.
9. AFTER BEING DUG AT THE NURSERY SOURCE, ALL TREES IN LEAF SHALL BE ACCLIMATED FOR TWO (2) WEEKS UNDER A MIST SYSTEM PRIOR TO INSTALLATION.
10. STANDARDS SET FORTH IN "AMERICAN STANDARD FOR NURSERY STOCK" REPRESENT GUIDELINE SPECIFICATIONS ONLY AND SHALL CONSTITUTE MINIMUM QUALITY REQUIREMENTS FOR PLANT MATERIAL.
11. WHERE SHOWN ON THE PLANS AND DETAILS, PLANTING BEDS ARE TO BE COMPLETELY COVERED WITH A HARDWOOD MULCH FROM A LOCAL SOURCE HARVESTED IN A SUSTAINABLE MANNER TO A MINIMUM DEPTH OF FOUR INCHES.
12. WEED MAT IS REQUIRED IN LANDSCAPED ISLANDS AS SPECIFIED.
13. ALL PLANT MATERIAL QUANTITIES SHOWN ARE APPROXIMATE. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETE COVERAGE OF ALL PLANTING BEDS AT SPACING SHOWN.
14. THE CONTRACTOR IS ENCOURAGED TO COMPLETE TEMPORARY OR PERMANENT SEEDING OR SODDING IN STAGES FOR SOIL STABILIZATION AS AREAS ARE COMPLETED AFTER GRADING.
15. QUANTITIES ARE GIVEN FOR INFORMATIONAL PURPOSES ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PERFORMING AN INDEPENDENT TAKE-OFF TO DETERMINE QUANTITIES THAT MEET THE DESIGN INTENT.
16. ALL QUESTIONS SHALL BE FORWARDED TO THE GENERAL CONTRACTOR IN THE FORM OF A RFI IN ORDER FOR LANDSCAPE ARCHITECT TO PROVIDE A RESPONSE. VERBAL COMMENTS BY LANDSCAPE ARCHITECT WILL NOT BE CONSIDERED BINDING AND MUST BE OFFERED IN WRITING.
17. ALL PLANTING ISLANDS SHALL BE BACK-FILLED WITH FERTILE TOPSOIL. PROVIDE SAMPLE OF TOPSOIL, BED MATERIAL, & MULCH TO LANDSCAPE ARCHITECT.
18. FINISH GRADE OF SOD PANELS MUST BE FLUSH WITH TOP OF CURB OR EDGE OF PAVEMENT IN A STRAIGHT, UNIFORM PATTERN FREE FROM ALL DEBRIS.
19. ANY VARIANCE FROM SPECIFIED PLANT MATERIAL'S SIZE (CONTAINER, CALIPER, HEIGHT, & SPREAD) AND SPECIE WILL BE REJECTED WITHOUT THE PRIOR WRITTEN AUTHORIZATION FROM THE LANDSCAPE ARCHITECT.
20. THE CONTRACTOR SHALL SUBMIT PHOTOGRAPHS OF PLANT MATERIAL TO THE LANDSCAPE ARCHITECT PRIOR TO SELECTION AND DELIVERY. THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO PRE-TAG TREES AT NURSERY SITE PRIOR TO DELIVERY, BUT WILL NOT RELINQUISH THE RIGHT TO REJECT ANY PLANT MATERIAL THAT IS DAMAGED OR DOES NOT MEET SPECIFICATIONS.
21. ALL AREAS SHALL RECEIVE A FINISH GRADE THAT ALLOWS FOR POSITIVE DRAINAGE.
22. CONTRACTOR RESPONSIBLE FOR TURF ESTABLISHMENT IN ALL AREAS DISTURBED DUE TO CONSTRUCTION.



PLANT SCHEDULE SPORTS AREA

TREES	CODE	QTY	COMMON NAME	BOTANICAL NAME	CONT	CAL
	QOU NUT	6	Nuttall Oak ADD ALTERNATE BID # 3	Quercus nuttallii	30 gal	
	QUE RUB	11	Red Oak	Quercus rubra	65 gal	3" Cal min.
	TAX DIS	4	Bald Cypress	Taxodium distichum	65 gal	3" Cal min.
	TAX VAR	5	Pond Cypress ADD ALTERNATE BID # 3	Taxodium distichum imbricanum	30 gal	

GROUND COVERS	CODE	QTY	COMMON NAME	BOTANICAL NAME	CONT	RATE
	SEE ENG	92,612 sf	Multi-Purpose Athletic Field Bermuda Seed - (Base Bid) Engineered Soil Fiber with Sprigging (ALT # 3)	Bermuda - Seed or Sprigging	Seed / Sprigging	
	CYN SEE	34,938 sf	Bermuda Grass	Cynodon dactylon	seed	

ROOT PRUNE AREA

CRITICAL ROOT ZONE AREA

LIGHT DUTY TREE PROTECTION FENCE, SEE SHEET L-3.1 FOR DETAIL

HEAVY DUTY TREE PROTECTION FENCE, SEE SHEET L-3.1 FOR DETAIL

CONTRACTOR IS RESPONSIBLE FOR TURF ESTABLISHMENT ON ALL DISTURBED AREAS AS A RESULT OF CONSTRUCTION.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL QUANTITIES SHOWN ON THESE PLANS BEFORE PRICING THE WORK.

0 40 80 120 feet
SCALE: 1" = 40'

NORTH

CALL LOUISIANA ONE CALL – 1-800-272-3020
LOUISIANA STATE LAW, SECTION R.S.40:1749.15, REQUIRES EXCAVATORS & DEMOLISHERS TO NOTIFY A REGIONAL NOTIFICATION CENTER BY TELEPHONE 48 HOURS IN ADVANCE OF ANY EXCAVATION OR DEMOLITION ACTIVITY. THE OWNERS/OPERATORS OF ANY UNDERGROUND FACILITY MUST THEN MARK THE AREA OR PROVIDE INFORMATION THAT WILL ENABLE AN EXCAVATOR OR DEMOLISHER TO DETERMINE THE LOCATION OF UNDERGROUND FACILITIES.

SPORTS AREA LANDSCAPE PLAN

REVISION	BY
1 Addendum #1 7-14-16	JPL

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BATON ROUGE, LOUISIANA
EAST BATON ROUGE PARRISH

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BATON ROUGE, LOUISIANA

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FILE	16-111 L-1 Landscape Plan FINAL
SHEET	L-1.1

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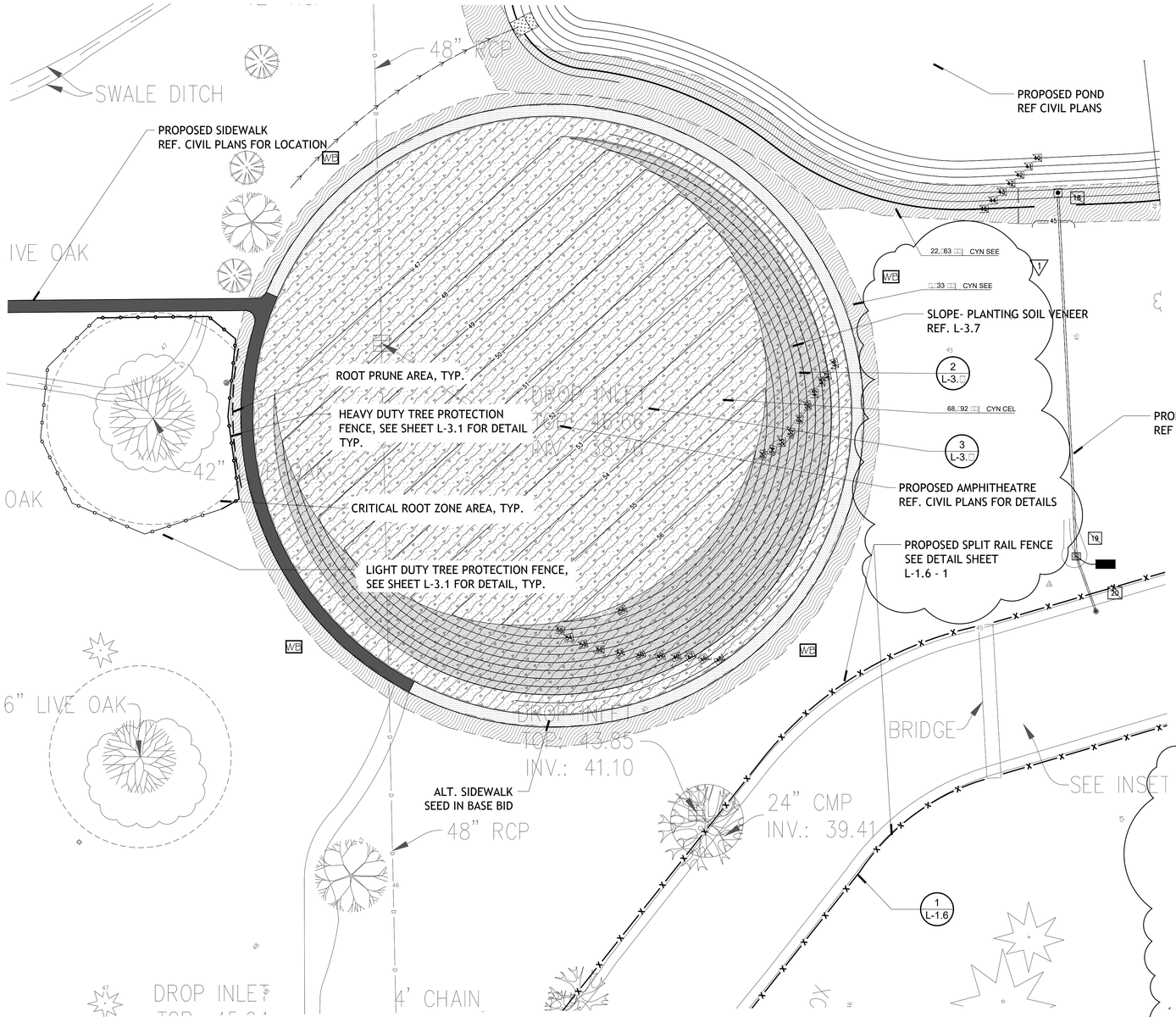

PLANT SCHEDULE AMPITHEATRE

GROUND COVERS	CODE	QTY	COMMON NAME	BOTANICAL NAME	CONT	RATE
	CYN SEE	7,433 sf	Bermuda Grass	Cynodon dactylon	seed	
	CYN CEL	68,492 sf	Celebration Bermuda Grass	Cynodon dactylon `Celebration`	Spnagging	12 to 16 bushels / 1,000 sq. ft.

ROOT PRUNE AREA

CRITICAL ROOT ZONE AREA

LIGHT DUTY TREE PROTECTION FENCE, SEE SHEET L-3.1 FOR DETAIL

HEAVY DUTY TREE PROTECTION FENCE, SEE SHEET L-3.1 FOR DETAIL

AMPHITHEATRE BERM LANDSCAPE PLAN

CONTRACTOR IS RESPONSIBLE FOR TURF ESTABLISHMENT ON ALL DISTURBED AREAS AS A RESULT OF CONSTRUCTION.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL QUANTITIES SHOWN ON THESE PLANS BEFORE PRICING THE WORK.

0 30 60 90 feet

SCALE: 1" = 30'

NORTH

CALL LOUISIANA ONE CALL – 1-800-272-3020

LOUISIANA STATE LAW, SECTION R.S.40:1749.15, REQUIRES EXCAVATORS & DEMOLISHERS TO NOTIFY A REGIONAL NOTIFICATION CENTER BY TELEPHONE 48 HOURS IN ADVANCE OF ANY EXCAVATION OR DEMOLITION ACTIVITY. THE OWNERS/OPERATORS OF ANY UNDERGROUND FACILITY MUST THEN MARK THE AREA OR PROVIDE INFORMATION THAT WILL ENABLE AN EXCAVATOR OR DEMOLISHER TO DETERMINE THE LOCATION OF UNDERGROUND FACILITIES.

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SHEET	L-1.2

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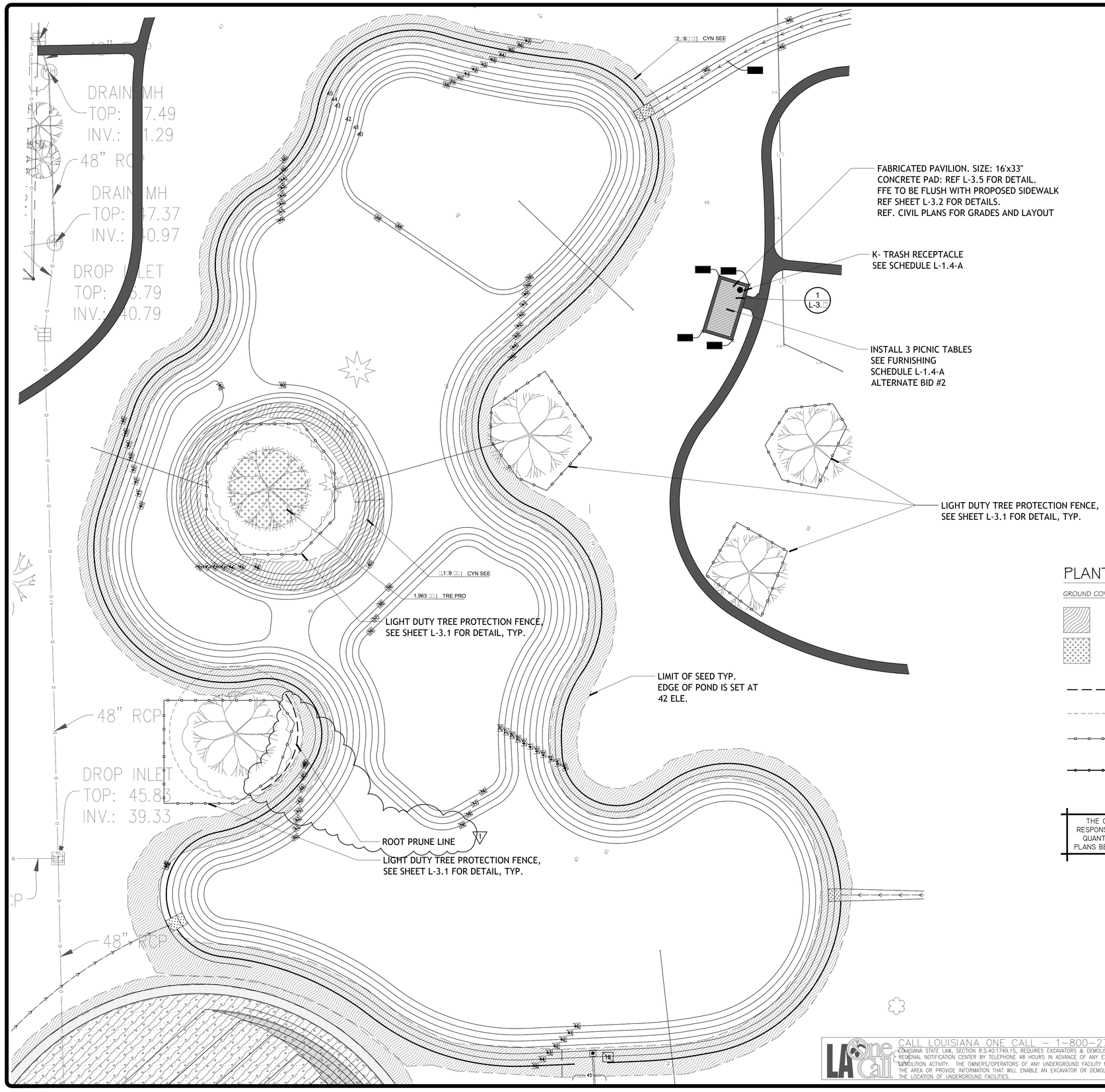

PLANT SCHEDULE POND

GROUND COVERS	CODE	QTY	COMMON NAME	BOTANICAL NAME	CONT
	CYN SEE	47,674 sf	Bermuda Grass	Cynodon dactylon	seed
	TRE PRO	1,963 sf	Shredded Hardwood Mulch 4" Depth	Tree Protection Mulch	Mulch

ROOT PRUNE AREA

CRITICAL ROOT ZONE AREA

LIGHT DUTY TREE PROTECTION FENCE, SEE SHEET L-3.1 FOR DETAIL

HEAVY DUTY TREE PROTECTION FENCE, SEE SHEET L-3.1 FOR DETAIL

THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL QUANTITIES SHOWN ON THESE PLANS BEFORE PRICING THE WORK.

RECREATIONAL POND LANDSCAPE PLAN

CALL LOUISIANA ONE CALL – 1-800-272-3020
LOUISIANA STATE LAW, SECTION R.S.40:1749.15, REQUIRES EXCAVATORS & DEMOLISHERS TO NOTIFY A REGIONAL NOTIFICATION CENTER BY TELEPHONE 48 HOURS IN ADVANCE OF ANY EXCAVATION OR DEMOLITION ACTIVITY. THE OWNERS/OPERATORS OF ANY UNDERGROUND FACILITY MUST THEN MARK THE AREA OR PROVIDE INFORMATION THAT WILL ENABLE AN EXCAVATOR OR DEMOLISHER TO DETERMINE THE LOCATION OF UNDERGROUND FACILITIES.

0 30 60 90 feet
SCALE: 1" = 30'

NORTH

REVISION	BY
1 Addendum #1 7-14-16	JPL

DUPLANTIS DESIGN GROUP, PC
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8352 BLUEBONNET BLVD.
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PHONE: 225-751-4490 \ FAX: 225-751-4495
WWW.DDGPC.COM
THIBODAUX \ COVINGTON \ HOUSTON \ BATON ROUGE \ HOUMA

SIGNATURE:
DATE: 7-15-16
STAMP

BREC - HOWELL PARK IMPROVEMENTS
BATON ROUGE, LOUISIANA
EAST BATON ROUGE PARRISH

BREC
BATON ROUGE, LOUISIANA

DRAWN	AMR
CHECKED	JPL
ISSUED DATE	6/21/2016
ISSUED FOR	BID
PROJECT NO.	16-111
FILE	16-111 L-1 Landscape Plan FINAL
SHEET	L-1.3

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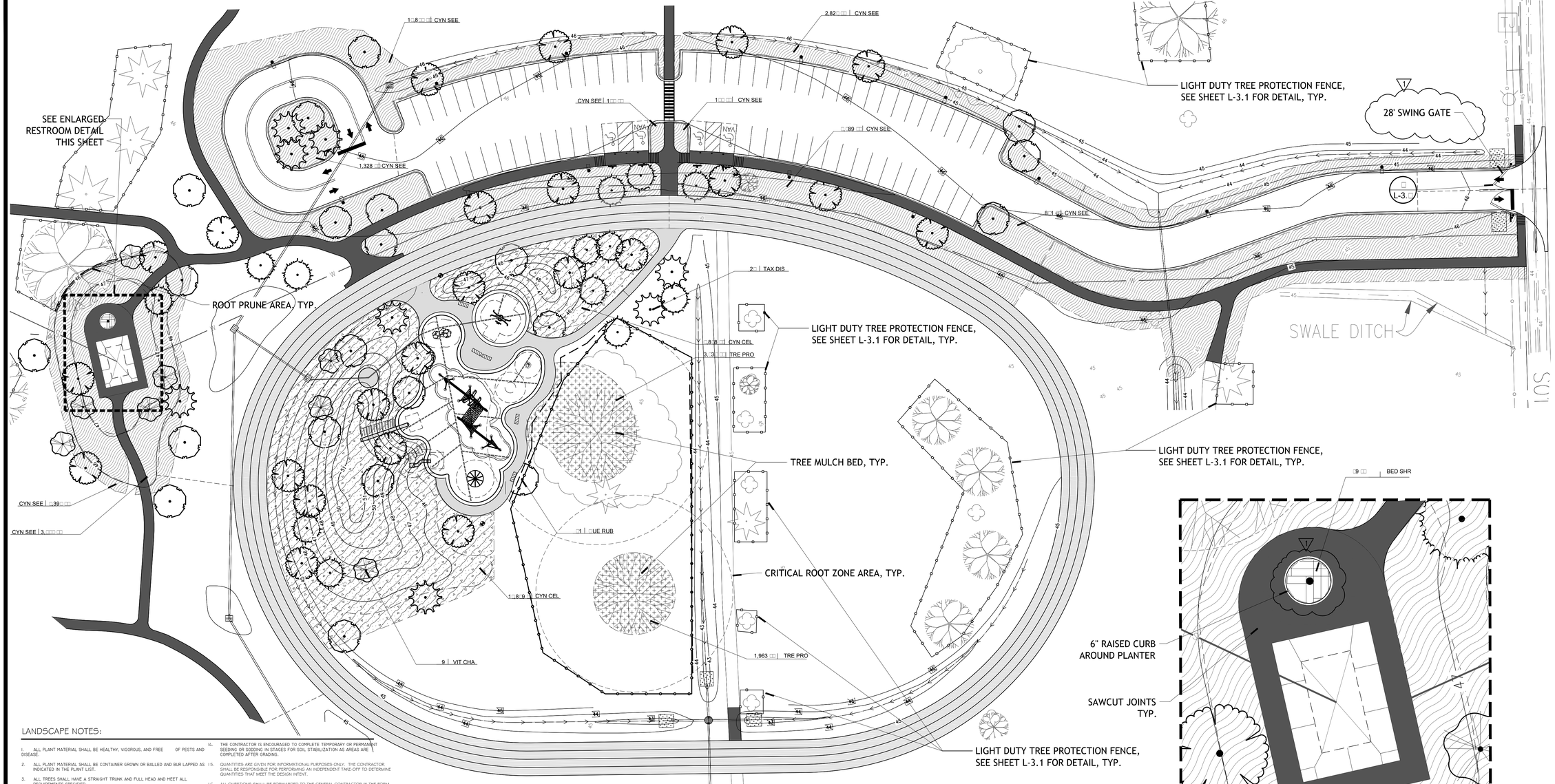

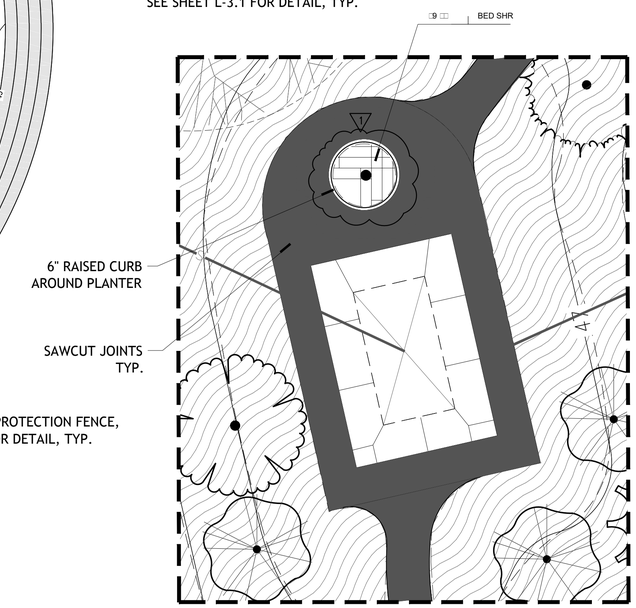

ENLARGED RESTROOM AREA

0 10 20 30 feet

SCALE: 1" = 10'

LANDSCAPE NOTES:

1. ALL PLANT MATERIAL SHALL BE HEALTHY, VIGOROUS, AND FREE OF PESTS AND DISEASE.
2. ALL PLANT MATERIAL SHALL BE CONTAINER GROWN OR BALLED AND BUR LAPPED AS INDICATED IN THE PLANT LIST.
3. ALL TREES SHALL HAVE A STRAIGHT TRUNK AND FULL HEAD AND MEET ALL REQUIREMENTS SPECIFIED.
4. ALL MATERIALS ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT BEFORE, DURING, AND AFTER INSTALLATION.
5. ALL TREES MUST BE GUYED OR STAKED AS SHOWN IN THE DETAILS.
6. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES AND SHALL AVOID DAMAGE TO ALL UTILITIES DURING THE COURSE OF THE WORK. LOCATIONS OF EXISTING BURIED UTILITY LINES SHOWN ON THE PLANS ARE BASED UPON BEST AVAILABLE INFORMATION AND ARE TO BE CONSIDERED APPROXIMATE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR 1) TO VERIFY THE LOCATIONS OF UTILITY LINES AND ADJACENT TO THE WORK AREA. 2) TO PROTECT OF ALL UTILITY LINES DURING THE CONSTRUCTION PERIOD 3) TO REPAIR ANY AND ALL DAMAGE TO UTILITIES, STRUCTURES, SITE APPURTENANCES, ETC. WHICH OCCURS AS A RESULT OF THE CONSTRUCTION.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR DELIVERY SCHEDULE AND PROTECTION BETWEEN DELIVERY AND PLANTING PER SPECIFICATIONS TO MAINTAIN HEALTHY PLANT CONDITIONS.
8. ANY PLANT MATERIAL WHICH IS DISEASED, DISTRESSED, DEAD, OR REJECTED (PRIOR TO SUBSTANTIAL COMPLETION) SHALL BE PROMPTLY REMOVED FROM THE SITE AND REPLACED WITH MATERIAL OF THE SAME SPECIES, QUANTITY, AND SIZE AND MEETING ALL PLANT LIST SPECIFICATIONS.
9. AFTER BEING DUG AT THE NURSERY SOURCE, ALL TREES IN LEAF SHALL BE ACCLIMATED FOR TWO (2) WEEKS UNDER A MIST SYSTEM PRIOR TO INSTALLATION.
10. STANDARDS SET FORTH IN "AMERICAN STANDARD FOR NURSERY STOCK" REPRESENT GUIDELINE SPECIFICATIONS ONLY AND SHALL CONSTITUTE MINIMUM QUALITY REQUIREMENTS FOR PLANT MATERIAL.
11. WHERE SHOWN ON THE PLANS AND DETAILS, PLANTING BEDS ARE TO BE COMPLETELY COVERED WITH A HARDWOOD MULCH FROM A LOCAL SOURCE HARVESTED IN A SUSTAINABLE MANNER TO A MINIMUM DEPTH OF FOUR INCHES.
12. WEED MAT IS REQUIRED IN LANDSCAPED ISLANDS AS SPECIFIED.
13. ALL PLANT MATERIAL QUANTITIES SHOWN ARE APPROXIMATE. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETE COVERAGE OF ALL PLANTING BEDS AT SPACING SHOWN.
14. THE CONTRACTOR IS ENCOURAGED TO COMPLETE TEMPORARY OR PERMANENT SEEDING OR SODDING IN STAGES FOR SOIL STABILIZATION AS AREAS ARE COMPLETED AFTER GRADING.
15. QUANTITIES ARE GIVEN FOR INFORMATIONAL PURPOSES ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PERFORMING AN INDEPENDENT TAKE-OFF TO DETERMINE QUANTITIES THAT MEET THE DESIGN INTENT.
16. ALL QUESTIONS SHALL BE FORWARDED TO THE GENERAL CONTRACTOR IN THE FORM OF A RFI IN ORDER FOR LANDSCAPE ARCHITECT TO PROVIDE A RESPONSE. VERBAL COMMENTS BY LANDSCAPE ARCHITECT WILL NOT BE CONSIDERED BINDING AND MUST BE OFFERED IN WRITING.
17. ALL PLANTING ISLANDS SHALL BE BACK-FILLED WITH FERTILE TOPSOIL. PROVIDE SAMPLE OF TOPSOIL, BED MATERIAL, & MULCH TO LANDSCAPE ARCHITECT.
18. FINISH GRADE OF SOD PANELS MUST BE FLUSH WITH TOP OF CURB OR EDGE OF PAVEMENT IN A STRAIGHT, UNIFORM PATTERN FREE FROM ALL DEBRIS.
19. ANY VARIANCE FROM SPECIFIED PLANT MATERIALS SIZE (CONTAINER, CALIPER, HEIGHT, & SPREAD) AND SPECIE WILL BE REJECTED WITHOUT THE PRIOR WRITTEN AUTHORIZATION FROM THE LANDSCAPE ARCHITECT.
20. THE CONTRACTOR SHALL SUBMIT PHOTOGRAPHS OF PLANT MATERIAL TO THE LANDSCAPE ARCHITECT PRIOR TO SELECTION AND DELIVERY. THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO PRE-TAG TREES AT NURSERY SITE PRIOR TO DELIVERY, BUT WILL NOT RELINQUISH THE RIGHT TO REJECT ANY PLANT MATERIAL THAT IS DAMAGED OR DOES NOT MEET SPECIFICATIONS.
21. ALL AREAS SHALL RECEIVE A FINISH GRADE THAT ALLOWS FOR POSITIVE DRAINAGE.
22. CONTRACTOR RESPONSIBLE FOR TURF ESTABLISHMENT IN ALL AREAS DISTURBED DUE TO CONSTRUCTION.

ROOT PRUNE AREA

CRITICAL ROOT ZONE AREA

LIGHT DUTY TREE PROTECTION FENCE, SEE SHEET L-3.1 FOR DETAIL

HEAVY DUTY TREE PROTECTION FENCE, SEE SHEET L-3.1 FOR DETAIL

PLANT SCHEDULE PLAY AREA

TREES	CODE	QTY	COMMON NAME	BOTANICAL NAME	CONT	CAL
	QOU NUT	23	Nuttall Oak ADD ALTERNATE BID # 3	Quercus nuttallii	30 gal	
	QUE RUB	22	Red Oak	Quercus rubra	65 gal	3" Cal min.
	TAX DIS	13	Bald Cypress	Taxodium distichum	65 gal	3" Cal min.
	TAX VAR	8	Pond Cypress ADD ALTERNATE BID # 3	Taxodium distichum imbncanum	30 gal	
	VIT CHA	8	Chaste Tree	Vitex agnus-castus	30 gal	

GROUND COVERS	CODE	QTY	COMMON NAME	BOTANICAL NAME	CONT	RATE
	BED SHR	79 sf	Shredded Hardwood Mulch	Bed Mulch	Mulch	
	CYN SEE	41,072 sf	Bermuda Grass	Cynodon dactylon	seed	
	CYN CEL	22,708 sf	Celebration Bermuda Grass	Cynodon dactylon `Celebration`	Sprigging	16 bushels / 1,000 sq. ft.
	TRE PRO	3,437 sf	Shredded Hardwood Mulch 4" Depth	Tree Protection Mulch	Mulch	

0 30 60 90 feet

SCALE: 1" = 30'

NORTH

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PLAY AREA AND TRACK LANDSCAPE PLAN

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REVISION	BY
1 Addendum #1 7-14-16	JPL

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SIGNATURE:

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DATE:

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BREC - HOWELL PARK IMPROVEMENTS
BATON ROUGE, LOUISIANA
EAST BATON ROUGE PARRISH

BREC
BATON ROUGE, LOUISIANA

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SHEET	L-1.4

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EXISTING SIDEWALK TO REMAIN

FABRICATED PAVILION
SIZE: 16'x33'
REF L-3.5 SET FFE OF NEW CONCRETE PAD
FLUSH WITH EXISTING SIDEWALK

EXISTING SAND TRAP, TYP.

FIRST TEE EXISTING "PUTTING" GREEN (NO MODIFICATIONS)

CRITICAL ROOT ZONE AREA, TYP.

FIRST TEE EXISTING "CHIPPING" GREEN (NO MODIFICATIONS)

1 L-3.

L-1.6

ADD ALTERNATE #2 AREA

FIRST TEE PUTTING AREA

INSTALL 3 PICNIC TABLES SEE FURNISHING SCHEDULE L-1.4-A

K- TRASH RECEPTACLE SEE SCHEDULE L-1.4-A

FIRST TEE CHIPPING AREA

S01°16'51"E

323.47'

1 L-1.6

NEW SIDEWALK REF. CIVIL PLANS FOR DETAILS AND LOCATION

INSTALL (1) MISSISSIPPI WATER BOXES, CONNECT TO EXISTING IRRIGATION MAINLINE WITH MANUAL SHUT OFF VALVE. COORDINATE WITH BREC IRRIGATION TECH FOR EXACT LOCATION FOR WATERTAP TO EXISTING IRRIGATION MAINLINE (SEE NOTE THIS SHEET)

WB

LIGHT DUTY TREE PROTECTION FENCE, SEE SHEET L-3.1 FOR DETAIL, TYP.

R100.00'

FIRST TEE TEE BOX FOR DRIVING REF CIVIL PLANS FOR NEW GRADING LAYOUT FOR EXPANDED TEE BOX. SEED AREAS OF NEW TEE BOX WITH BERMUDA SEED.

EXISTING SAND TRAP, TYP. (NO MODIFICATIONS)

LIGHT DUTY TREE PROTECTION FENCE, SEE SHEET L-3.1 FOR DETAIL, TYP.

APPROXIMATE LOCATION OF NEW GRADES FOR NEW TEE BOX. REF CIVIL PLAN FOR EXACT LOCATION

FIRST TEE EXISTING DRIVING GREEN (NO MODIFICATIONS)

6,676 SEE ENG

FIRST TEE DRIVING AREA

ROOT PRUNE AREA, TYP.

LIMITS OF SEED

HEAVY DUTY TREE PROTECTION FENCE, SEE SHEET L-3.1 FOR DETAIL TYP.

EXISISTING TEE BOX TO BE RELOCATED TO ADJACENT TEE BOX. REF CIVIL GRADING PLAN. SEED ALL DISTURBED AREAS WITH BERMUDA SEED.

CRITICAL ROOT ZONE AREA, TYP.

S01°14'37"E

540'

S88°34'56"W

680.61'

ADD ALTERNATE #2 AREA

PLANT SCHEDULE GOLF AREA

GROUND COVERS	CODE	QTY	COMMON NAME	BOTANICAL NAME	CONT
	SEE ENG	6,676 sf	First Tee - Modified Tee Box Bermuda Seed - (Base Bid) Engineered Soil Fiber with Sprigging (ALT # 3)	Bermuda - Seed or Sprigging	Seed / Sprigging

ROOT PRUNE AREA

CRITICAL ROOT ZONE AREA

LIGHT DUTY TREE PROTECTION FENCE, SEE SHEET L-3.1 FOR DETAIL

HEAVY DUTY TREE PROTECTION FENCE, SEE SHEET L-3.1 FOR DETAIL

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0 30 60 90 feet

SCALE: 1" = 30'

NORTH

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ADD ALTERNATE BID #2

FIRST TEE AREA GOLF IMPROVEMENTS

REVISION	BY
1 Addendum #1 7-14-16	JPL

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BREC - HOWELL PARK IMPROVEMENTS
BATON ROUGE, LOUISIANA
EAST BATON ROUGE PARRISH

BREC
BATON ROUGE, LOUISIANA

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SHEET	L-1.5

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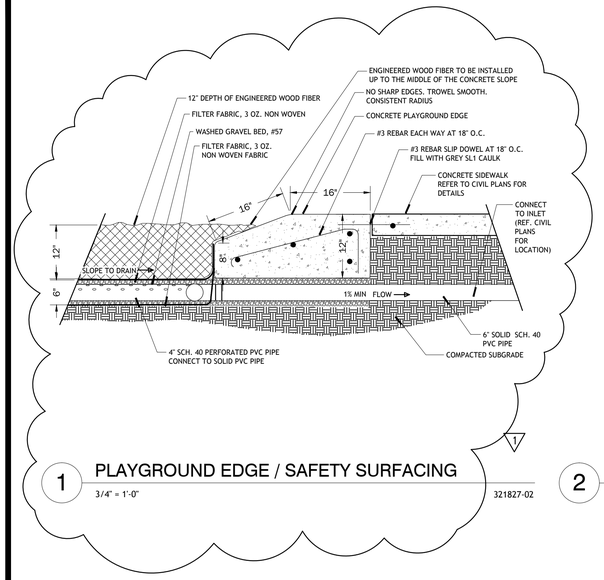
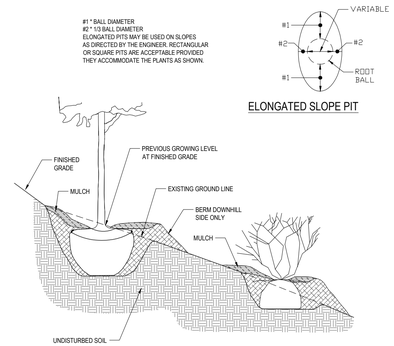


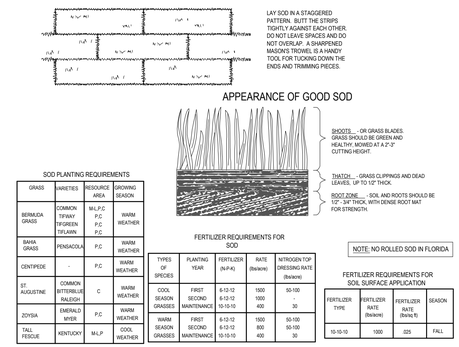
1 PLAYGROUND EDGE / SAFETY SURFACING

3/4" = 1'-0" 321827-02



2 PLANT PLACEMENT ON SLOPE

3/4" = 1'-0" RT-LA-11



SOD PLANTING REQUIREMENTS

GRASS	VARIETIES	RESOURCE AREA	GROWING SEASON
BERMUDA GRASS	COMMON TIFWAY TIFGREEN TIFLAWN	M-L,P,C P,C P,C P,C	WARM WEATHER
BAHIA GRASS	PENSACOLA	P,C	WARM WEATHER
CENTIPEDE	-	P,C	WARM WEATHER
ST AUGUSTINE	COMMON BITTERBLUE RALEIGH	C	WARM WEATHER
ZOYSIA	EMERALD MYER	P,C	WARM WEATHER
TALL FESCUE	KENTUCKY	M-L,P	COOL WEATHER

FERTILIZER REQUIREMENTS FOR SOD

TYPES OF SPECIES	PLANTING YEAR	FERTILIZER (N-P-K)	RATE (lbs/acre)	NITROGEN TOP DRESSING RATE (lbs/acre)
COOL SEASON GRASSES	FIRST	6-12-12	1500	50-100
	SECOND MAINTENANCE	6-12-12 10-10-10	1000 400	- 30
WARM SEASON GRASSES	FIRST	6-12-12	1500	50-100
	SECOND MAINTENANCE	6-12-12 10-10-10	800 400	50-100 30

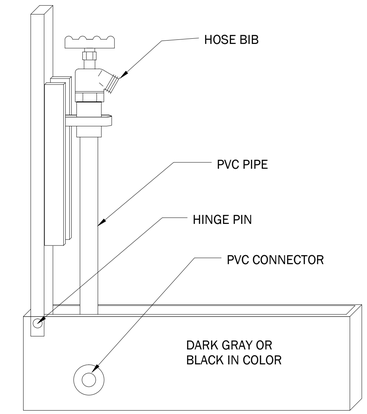
NOTE: NO ROLLED SOD IN FLORIDA

FERTILIZER REQUIREMENTS FOR SOIL SURFACE APPLICATION

FERTILIZER TYPE	FERTILIZER RATE (lbs/acre)	FERTILIZER RATE (lbs/sq ft)	SEASON
10-10-10	1000	.025	FALL

3 SOD

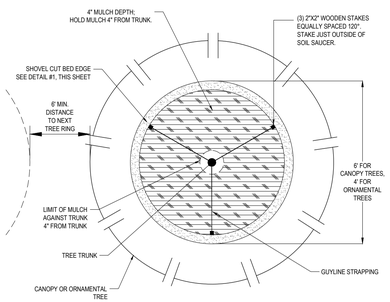
N.T.S. WLMT-LA-09



*MUST INCLUDE PVC ISOLATION VALVE

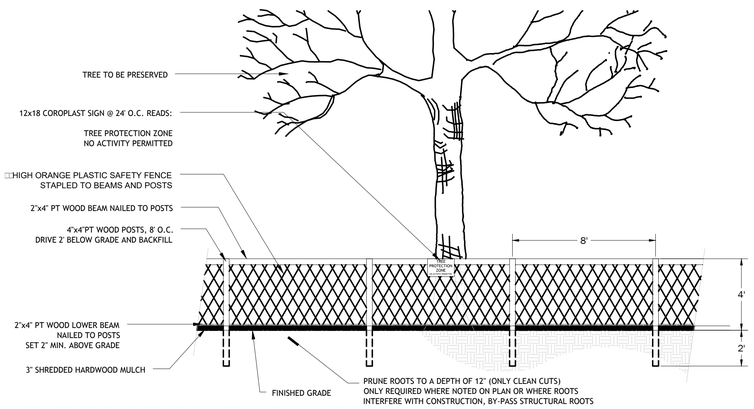
4 WATER BOX

3" = 1'-0" 328406.46-07



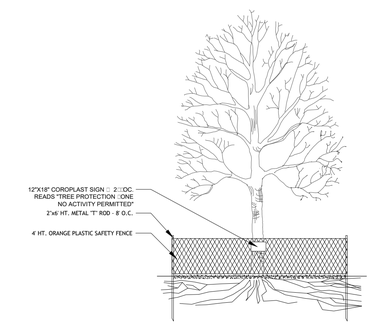
5 MULCHING RING AT TREES

3/4" = 1'-0" RT-LA-04



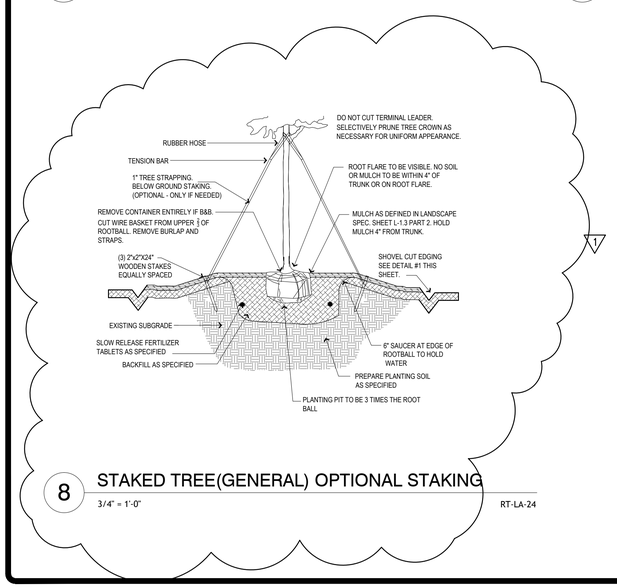
6 HEAVY DUTY TREE PROTECTION FENCE (PLASTIC MESH)

1/4" = 1'-0" 323133-25



7 LIGHT WEIGHT TREE PROTECTION FENCE

3/8" = 1'-0" 323133-26



8 STAKED TREE(GENERAL) OPTIONAL STAKING

3/4" = 1'-0" RT-LA-24

LANDSCAPE DETAILS

REVISION	BY
1 Addendum #1 7-14-16	JPL

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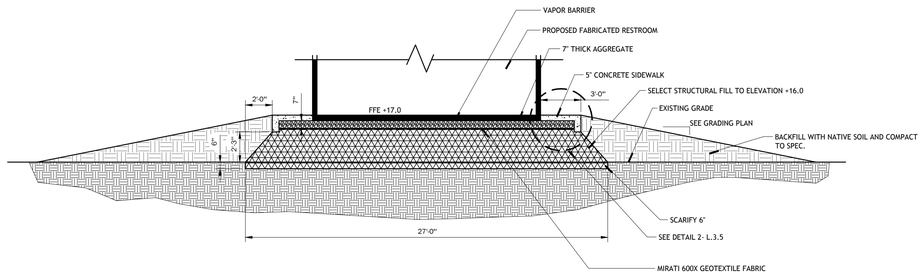
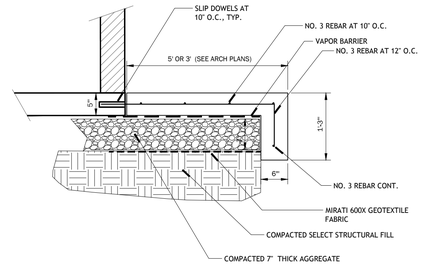


1 FABRICATED RESTROOM BUIDLING

3/16" = 1'-0" 133423-11



2 FABRICATED RESTROOM SIDEWALK DETAIL

3/4" = 1'-0" 133423-12

GENERAL NOTES

1. All reports should be presented to the Architect within 45 days of initial pouring of slab.
2. Contractor shall provide sub-grade compaction reports with minimum specified compaction at a rate of 1 per 1,000 SF. Evenly spaced and not less than two tests without Architect approval.
3. The contractor shall provide concrete cylinder strength reports for 7, 14 and 28 days to Architect.
4. Any test that deviates from specified tolerances furnished to Architect shall be accompanied with recommendations for corrective action by Contractor.
5. All concrete strengths in 28 days shall develop a minimum 4,000 psi, 5.8 sack mix, in accordance with ACI-318 building code requirements (latest Ed.)
6. Concrete shall be of a consistency to flow into all formed areas and vibrated to eliminate "honeycomb" effect at slab edges.
7. All waterproof membranes shall be taped at joints and all holes or tears also taped.
8. All steel shall be placed on metal/plastic chairs so steel will lat at centerline of slab or at another location as directed.
9. All reinforcing steel and wire mesh shall conform to ASTM A36 or A-615 (Grade 60).
10. Unless noted otherwise, concrete cover over reinforcing steel shall be 3".
11. Unless noted otherwise on the drawings, the minimum lap for bar splices shall be:

Bar Size:	Top Bars:	Bottom & Vertical Bars:
No.3	1' 9"	1' 4"
No. 4	2' 4"	1' 10"
No. 5	2' 11"	2' 3"
No. 6	3' 6"	2' 8"
No. 7	4' 1"	3' 2"
No. 8	4' 11"	3' 9"

All top bars shall be spliced at mid-spans; Bottom bars at pier locations.

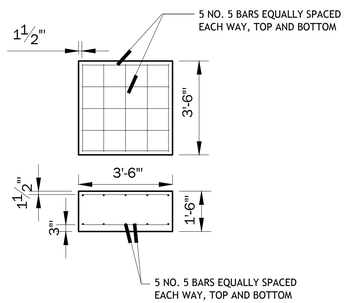
12. All reinforcing rods shall be bent around all corners a minimum of 24".
13. All reinforcing hooks shall be standard hooks as defined by ACI unless noted otherwise.
14. Prior to placing concrete, refer to architectural, plumbing, mechanical, and electrical drawings for underground and embedded items not shown on the structural drawings.

Sub-Grade and Fill General Notes:

1. Fill beneath earth supporting slab, foundations and paving.
   a. All fill beneath earth supported slabs, foundations, and paving shall be a select structural fill meeting the following: PI Index of 15 to 20 and a maximum organic content of 5%. This material shall be placed in 6" thick loose layers an each shall be compacted to 95% maximum dry density as obtained by the standard proctor test (ASTM D698). Each layer shall be compacted prior to placing the succeeding layer. Fill shall be placed at a moisture content within +/- 2% of optimum.
   b. The aggregate layer directly under the CXT building shall consist of 100% stone and meet the following gradation:

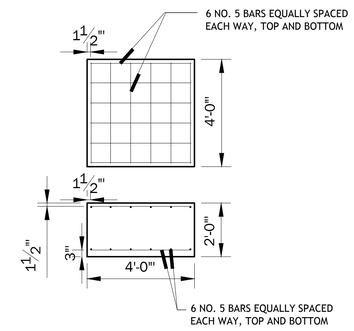
US Sieve	Percent Passing
1 ½ inch	100
1 inch	90-100
⅜ inch	70-100
No. 4	35-65
No. 40	12-32
No. 200	5-12

   c. All runoff water must be carried away from the slab to prevent saturation of the sub-base.
2. Sub-grade preparation beneath earth supported slabs.
   a. In the area where fill is to be placed remove all surface vegetation and loose topsoil and organic material such as grass, tree stumps, etc. If necessary, disc the surface and allow to dry (or add water) as required to obtain optimum moisture content in the top 6" layer.
   b. After completing the above preparation, proof roll the entire area which receives fill with a loaded dump truck. Any soft spots or stump holes shall be mucked out and backfilled with the select structural fill above specified. Soft spots and holes which have been refilled shall be compacted to 95% maximum dry density before any new fill is placed.
   c. Compact the prepared sub-grade to 95% maximum dry density standard proctor.
   d. No fill shall be placed until the sub-grade has been prepared in accordance with these specifications.



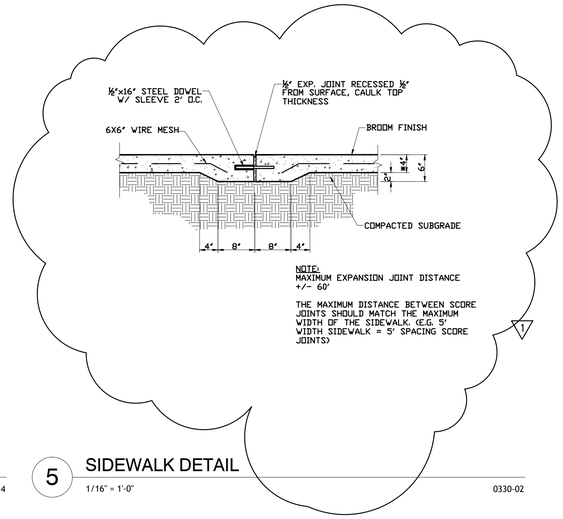
3 16 X 18 PAVILION CONCRETE FOOTING

3/8" = 1'-0" 133423-13



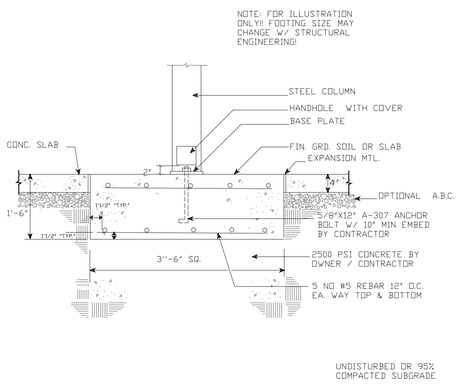
4 16 X 33 PAVILION CONCRETE FOOTING

3/8" = 1'-0" 133423-14



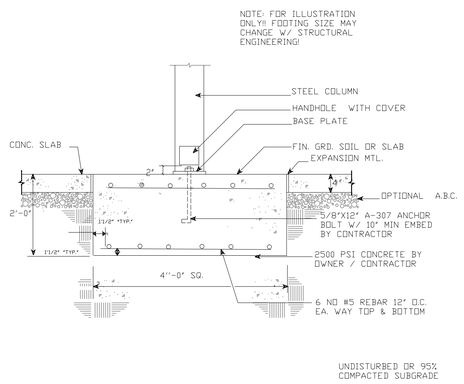
5 SIDEWALK DETAIL

1/16" = 1'-0" 0330-02



6 16` X 18` SPREAD FOOTING DETAIL

NTS 033163.16-01



7 16` X 33` SPREAD FOOTING DETAIL

NTS 033163.16-02

FABRICATED RESTROOM AND PAVILION DETAILS

REVISION	BY
1 Addendum #1 7-14-16	JPL

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BREC - HOWELL PARK IMPROVEMENTS
BATON ROUGE, LOUISIANA
EAST BATON ROUGE PARRISH

BREC
BATON ROUGE, LOUISIANA

DRAWN	AMR
CHECKED	JPL
ISSUED DATE	6/21/2016
ISSUED FOR	BID
PROJECT NO.	16-111
FILE	16-111 L-1 Landscape Plan FINAL
SHEET	L-3.5

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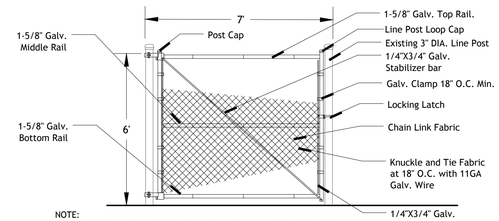
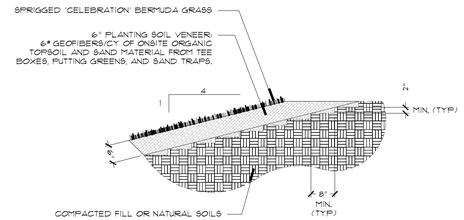


NOTE:
CONTRACTOR HAS THE OPTION OF INSTALLING (2) 3' GATES INSTEAD OF 6.5' GATE CONTINGENT UPON CONTRACTOR'S DECISION TO VERIFY IF THE EXISTING POSTS ARE ADEQUATE FOR SUPPORT

1 6` CHAIN LINK GATE

N.T.S.

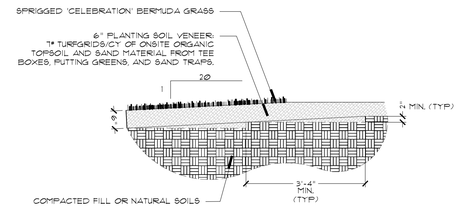


GEOFIBERS INSTALLATION PROCEDURE FOR SLOPES:

1. Planting Soil Veneer Preparation
   Organic topsoil and sand material harvested from the existing Tee Boxes, Putting Greens, and Sand Traps within the park shall be stock-piled long enough to allow the organic matter to compost before amending, mixing and spreading for planting soil.
2. Geofiber Application
   Following the proper planting soil veneer preparation and rough grading of compacted subgrade, spread the planting soil veneer to the proper depth and finish elevation as specified. Spread Geofibers in a grid pattern as determined by the specified fiber addition rate. Uniform spreading can be achieved with a Modified Straw Blower, Drop Spreader, Hand Spread / Rake, or other approved method to achieve uniform coverage.
3. Geofiber Processing / Mixing
   Following the spreading of fibers at the specified addition rate, the fibers shall be Mixed / Blended into the lift of soil with multiple passes with a roto-till pulverizer with blades / teeth that will penetrate the full loose thickness. Typically, 3 passes of the roto-till pulverizer will uniformly integrate fibers throughout lift of soil to achieve specified fiber / soil composite. Discing is not recommended to mix fibers uniformly throughout the soil lift.
4. Geofiber / Soil Compaction
   Once the fibers are uniformly mixed into the profile, the fiber / soil composite is placed in horizontal lifts and compacted to 85 to 87 percent by simply placing and tamping in with loader bucket.

2 PLANTING SOIL VENEER (SLOPED SURFACES)

1/2" = 1'-0" 313519.23-01

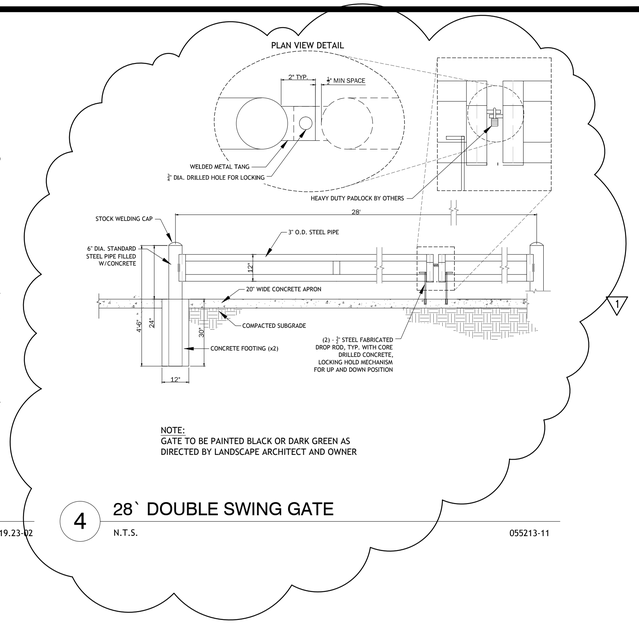


GEOFIBERS INSTALLATION PROCEDURE FOR FLAT TO GENTLE SLOPES:

1. Planting Soil Veneer Preparation
   Organic topsoil and sand material harvested from the existing Tee Boxes, Putting Greens, and Sand Traps within the park shall be stock-piled long enough to allow the organic matter to compost before amending, mixing and spreading for planting soil.
2. Geofiber Application
   Following the proper planting soil veneer preparation and rough grading of compacted subgrade, spread the planting soil veneer to the proper depth and finish elevation as specified. Spread Geofibers in a grid pattern as determined by the specified fiber addition rate. Uniform spreading can be achieved with a Modified Straw Blower, Drop Spreader, Hand Spread / Rake, or other approved method to achieve uniform coverage.
3. Geofiber Processing / Mixing
   Following the spreading of fibers at the specified addition rate, the fibers shall be Mixed / Blended into the lift of soil with multiple passes with a roto-till pulverizer with blades / teeth that will penetrate the full loose thickness. Typically, 3 passes of the roto-till pulverizer will uniformly integrate fibers throughout lift of soil to achieve specified fiber / soil composite. Discing is not recommended to mix fibers uniformly throughout the soil lift.
4. Geofiber / Soil Compaction
   Once the fibers are uniformly mixed into the profile, the fiber / soil composite is placed in horizontal lifts and compacted to 85 to 87 percent by simply placing and tamping in with loader bucket.

3 PLANTING SOIL VENEER (FLAT SURFACES)

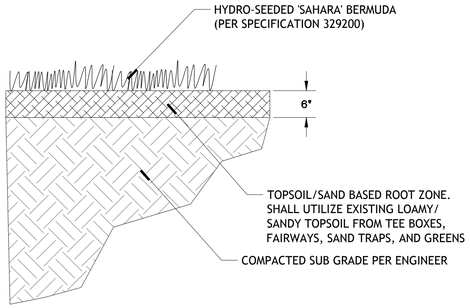
1/2" = 1'-0" 313519.23-02



NOTE:
GATE TO BE PAINTED BLACK OR DARK GREEN AS DIRECTED BY LANDSCAPE ARCHITECT AND OWNER

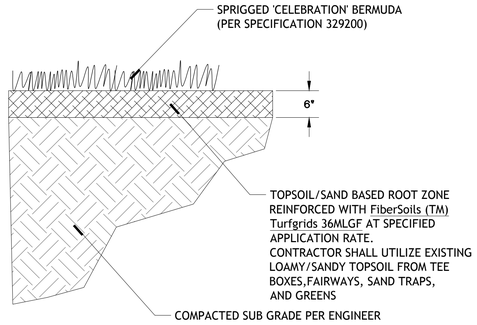
4 28` DOUBLE SWING GATE

N.T.S. 055213-11



5 TYPICAL MP ATHLETIC FIELD (BASE BID)

3/4" = 1'-0" 313519.23-03



6 FRS ATHLETIC FIELD W/ SPRIGGING (ALT #3)

3/4" = 1'-0" 313519.23-04

DETAILS

REVISION	BY
1 Addendum #1 7-14-16	JPL

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BREC - HOWELL PARK IMPROVEMENTS
BATON ROUGE, LOUISIANA
EAST BATON ROUGE PARRISH

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ISSUED DATE	6/21/2016
ISSUED FOR	BID
PROJECT NO.	16-111
FILE	16-111 L-1 Landscape Plan FINAL
SHEET	L-3.7

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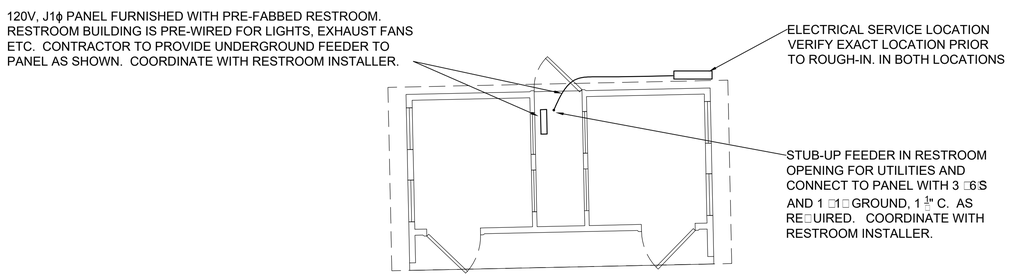


2 / E1□□ ENLARGED TYPICAL RESTROOM PLAN - LIGHTING AND POWER

SYMBOL SCEHDULE

SYMBOL	DESCRIPTION	MOUNTING HEIGHT
'F1'	DESIGNATES FIXTURE TYPE. SEE LIGHTING FIXTURE SCHEDULE	
	LIGHTING STANDARD	
	2□A/1P WALL SWITCH - HUBBELL □1121-1 OR E□UAL, UP □8" (SUBSCRIPT DENOTES OUTLET CONTROLLED)	
	WIRING RUN IN RACEWAYS CONCEALED, OVERHEAD OR IN WALLS, ARROW(S) DENOTES NUMBER OF HOMERUNS. 1 CIRCUIT HOMERUN (2 CONDUCTORS AND GROUND), 2 CIRCUITS HOMERUN (□ CONDUCTORS AND GROUND), 3 CIRCUIT HOMERUN (6 CONDUCTORS AND GROUND)	
	BELOW GRADE OR CONCEALED IN SLAB CIRCUIT IN CONDUIT	
	GROUNDING PER 2□11 NEC ARTICLE 2□□. SEE SPECIFICATIONS.	
	12□V DUPLEX RECEPTACLE	
G	SAME AS =EXCEPT WITH GROUND FAULT INTERRUPTER	
WP G	SAME AS = EXCEPT WITH WEATHERPROOF COVER	
	FUSIBLE SAFETY SWITCH, SI□E NOTED (FRAME/V/POLES/FUSE)	
	MOTOR CONNECTION	
J / J	CEILING/FLOOR/WALL MOUNTED - JUNCTION BOX	
	PANELBOARD - FLUSH MOUNTED	
	PANELBOARD SURFACE MOUNTED	

GENERAL NOTES

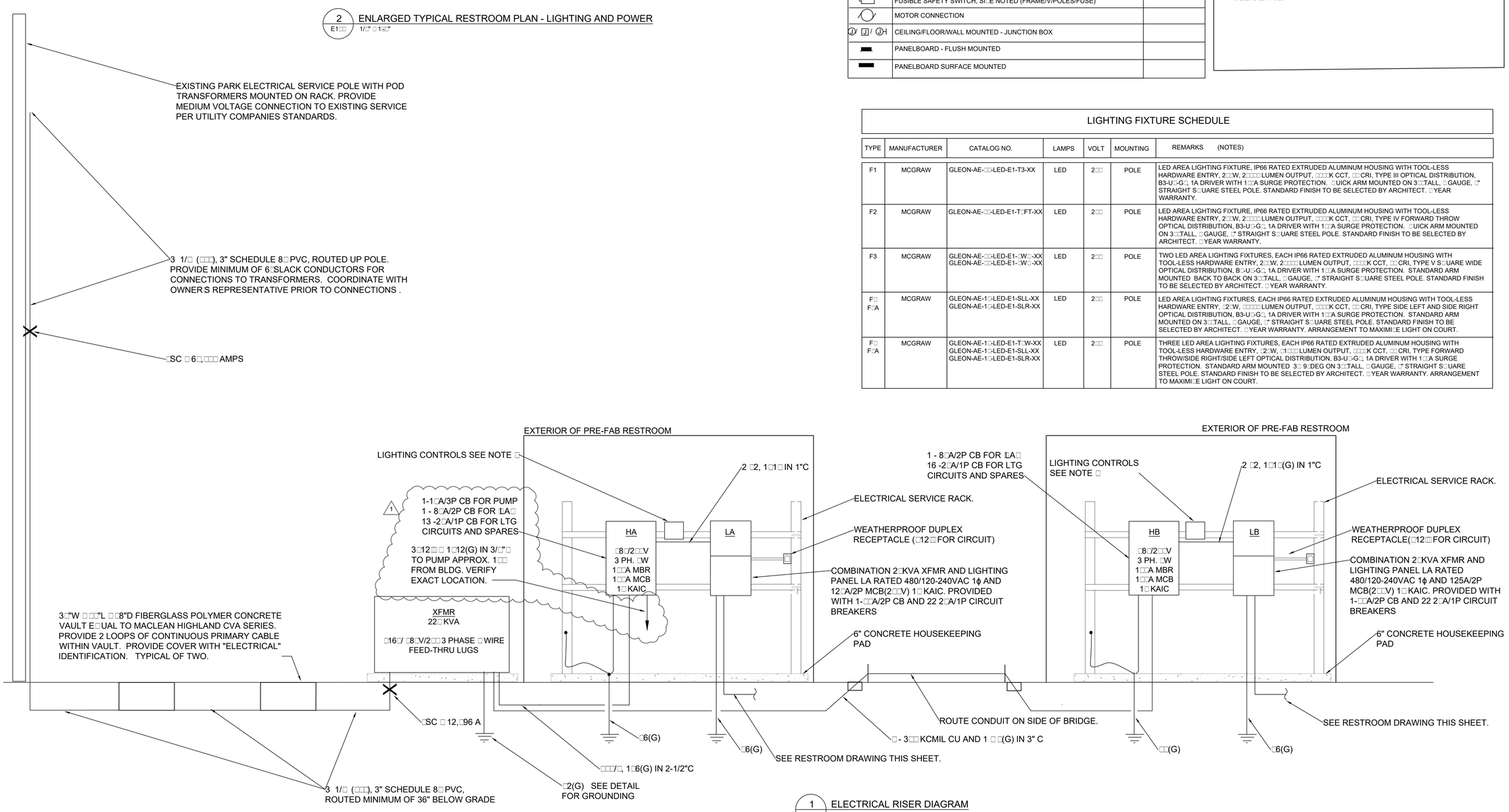
1. PRIOR TO INSTALLATION OF UNDERGROUND RACEWAYS,RACEWAYS ROUTED ON BRIDGE, IN-GROUND BOXES, TRANSFORMER, RACK MOUNTED E□UIPMENT, ETC. CONTRACTOR SHALL COORDINATE WITH OWNER'S REPRESENTATIVE AT THE JOBSITE. EXACT ROUTINGS SHALL BE DETERMINED IN THE FIELD.
2. ELECTRICAL SERVICE RACK SHALL BE MANUFACTURED FROM GALVANI□ED STRUT CHANNEL AS RE□UIRED TO ADE□UATELY SUPPORT THE ELECTRICAL E□UIPMENT.
3. ELECTRICAL PANELBOARDS AND POWER DISTRIBUTION UNITS SHALL BE INSTALLED SO THAT BOTTOM IS NOT LOWER THAN 3□ ABOVE GRADE.

□. LIGHTING CONTROLS SHALL CONSIST OF PHOTOCELL CONTROLLED MULTIPOLE CONTACTOR (2□A). POLES SUFFICIENT TO ACCOMMODATE LIGHTING CIRCUITS PLUS AN ADDITIONAL □ SPARES. ENCLOSE CONTACTOR IN NEMA □X JUNCTION BOX (SI□E AS RE□UIRED).

□. POLE MOUNTED FIXTURES SHALL BE MOUNTED ON POLE BASE, SEE DETAIL.

LIGHTING FIXTURE SCHEDULE

TYPE	MANUFACTURER	CATALOG NO.	LAMPS	VOLT	MOUNTING	REMARKS (NOTES)
F1	MCGRAW	GLEON-AE-□□-LED-E1-T3-XX	LED	2□□	POLE	LED AREA LIGHTING FIXTURE, IP66 RATED EXTRUDED ALUMINUM HOUSING WITH TOOL-LESS HARDWARE ENTRY, 2□□W, 2□□□□ LUMEN OUTPUT, □□□□K CCT, □□CRI, TYPE III OPTICAL DISTRIBUTION, B3-U□-G□, 1A DRIVER WITH 1□□A SURGE PROTECTION. □UICK ARM MOUNTED ON 3□□TALL, □GAUGE, □" STRAIGHT S□UARE STEEL POLE. STANDARD FINISH TO BE SELECTED BY ARCHITECT. □YEAR WARRANTY.
F2	MCGRAW	GLEON-AE-□□-LED-E1-T□FT-XX	LED	2□□	POLE	LED AREA LIGHTING FIXTURE, IP66 RATED EXTRUDED ALUMINUM HOUSING WITH TOOL-LESS HARDWARE ENTRY, 2□□W, 2□□□□ LUMEN OUTPUT, □□□□K CCT, □□CRI, TYPE IV FORWARD THROW OPTICAL DISTRIBUTION, B3-U□-G□, 1A DRIVER WITH 1□□A SURGE PROTECTION. □UICK ARM MOUNTED ON 3□□TALL, □GAUGE, □" STRAIGHT S□UARE STEEL POLE. STANDARD FINISH TO BE SELECTED BY ARCHITECT. □YEAR WARRANTY.
F3	MCGRAW	GLEON-AE-□□-LED-E1-□W□-XX GLEON-AE-□□-LED-E1-□W□-XX	LED	2□□	POLE	TWO LED AREA LIGHTING FIXTURES, EACH IP66 RATED EXTRUDED ALUMINUM HOUSING WITH TOOL-LESS HARDWARE ENTRY, 2□□W, 2□□□□ LUMEN OUTPUT, □□□□K CCT, □□CRI, TYPE V S□UARE WIDE OPTICAL DISTRIBUTION, B□-U□-G□, 1A DRIVER WITH 1□□A SURGE PROTECTION. STANDARD ARM MOUNTED BACK TO BACK ON 3□□TALL, □GAUGE, □" STRAIGHT S□UARE STEEL POLE. STANDARD FINISH TO BE SELECTED BY ARCHITECT. □YEAR WARRANTY.
F□ F□A	MCGRAW	GLEON-AE-1□-LED-E1-SLL-XX GLEON-AE-1□-LED-E1-SLR-XX	LED	2□□	POLE	LED AREA LIGHTING FIXTURES, EACH IP66 RATED EXTRUDED ALUMINUM HOUSING WITH TOOL-LESS HARDWARE ENTRY, □2□W, □□□□□ LUMEN OUTPUT, □□□□K CCT, □□CRI, TYPE SIDE LEFT AND SIDE RIGHT OPTICAL DISTRIBUTION, B3-U□-G□, 1A DRIVER WITH 1□□A SURGE PROTECTION. STANDARD ARM MOUNTED ON 3□□TALL, □GAUGE, □" STRAIGHT S□UARE STEEL POLE. STANDARD FINISH TO BE SELECTED BY ARCHITECT. □YEAR WARRANTY. ARRANGEMENT TO MAXIMI□E LIGHT ON COURT.
F□ F□A	MCGRAW	GLEON-AE-1□-LED-E1-T□W-XX GLEON-AE-1□-LED-E1-SLL-XX GLEON-AE-1□-LED-E1-SLR-XX	LED	2□□	POLE	THREE LED AREA LIGHTING FIXTURES, EACH IP66 RATED EXTRUDED ALUMINUM HOUSING WITH TOOL-LESS HARDWARE ENTRY, □2□W, □1□□□ LUMEN OUTPUT, □□□□K CCT, □□CRI, TYPE FORWARD THROW/SIDE RIGHT/SIDE LEFT OPTICAL DISTRIBUTION, B3-U□-G□, 1A DRIVER WITH 1□□A SURGE PROTECTION. STANDARD ARM MOUNTED 3□ 9□DEG ON 3□□TALL, □GAUGE, □" STRAIGHT S□UARE STEEL POLE. STANDARD FINISH TO BE SELECTED BY ARCHITECT. □YEAR WARRANTY. ARRANGEMENT TO MAXIMI□E LIGHT ON COURT.



1 / E1□□ ELECTRICAL RISER DIAGRAM
SCALE: NONE

REVISION		BY
1	ADDENDUM 1 □-1□-2□16	AG

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7-15-16

BREC - HOWELL PARK IMPROVEMENTS
BATON ROUGE, LOUISIANA
EAST BATON ROUGE PARRISH

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BATON ROUGE, LOUISIANA

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ISSUED DATE	□6/21/16
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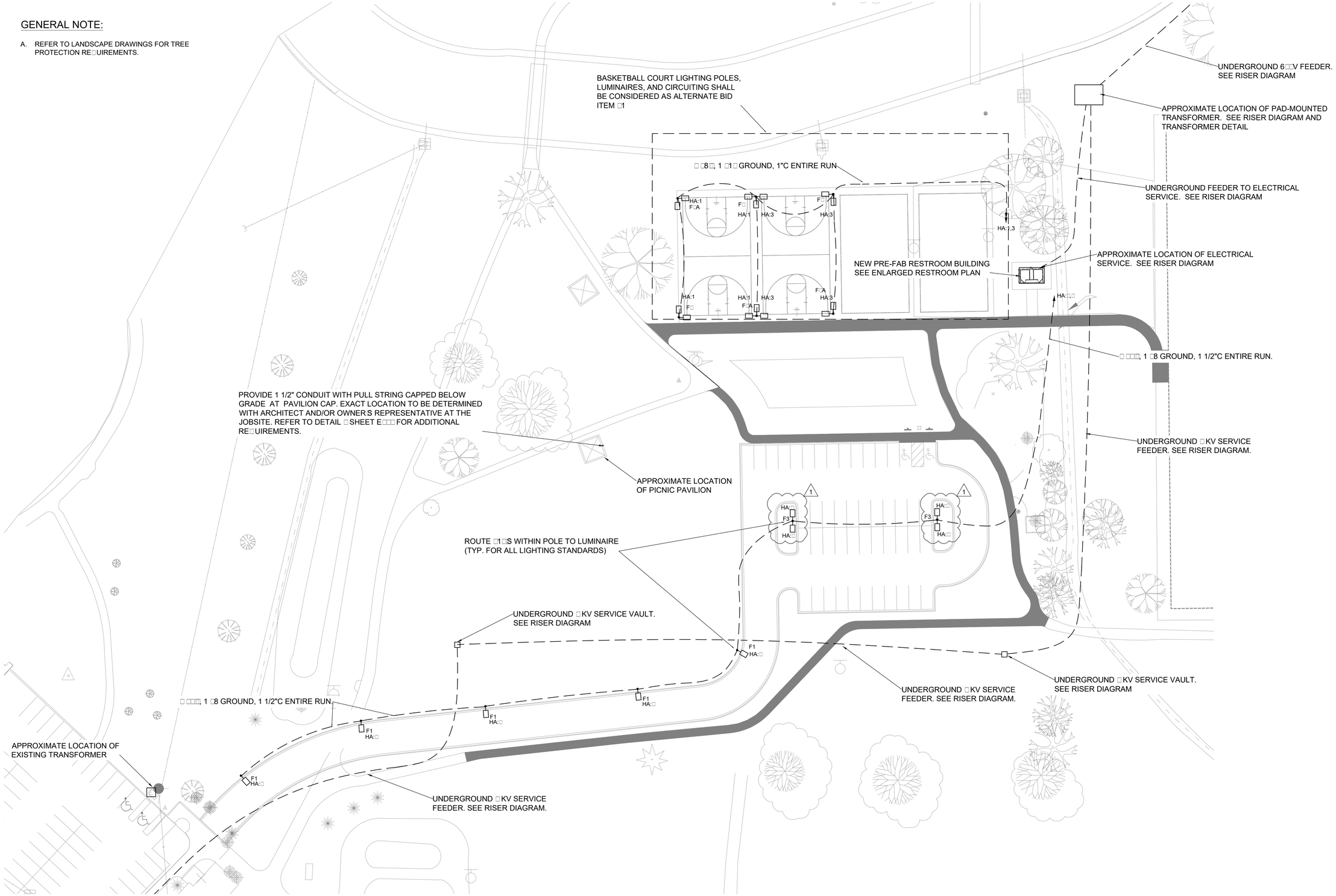
FILE	E100
SHEET	E100

GENERAL NOTE:

A. REFER TO LANDSCAPE DRAWINGS FOR TREE PROTECTION RE□UIREMENTS.



1 / E□□□ PARTIAL SITE PLAN - LIGHTING □ POWER
SCALE: 1/32"□1□□"

NOTES

1. ROUTE LIGHTING CIRCUITS THROUGH SINGLE POLE IN LIGHTING CONTACTOR.

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1 ADDENDUM 1 □□1□2□16	AG

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DRAWN	DAB
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ISSUED DATE	□6/21/16
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PROJECT NO.	
FILE	E200–E400
SHEET	E400

GENERAL NOTES

1. ALL EXISTING CONDITIONS, DIMENSIONS, AND QUANTITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION/FABRICATION.

2. APPLICABLE DESIGN CODES:
   - BUILDING CODE: INTERNATIONAL BUILDING CODE (IBC) 2012
   - REINFORCED CONCRETE: AMERICAN CONCRETE INSTITUTE (ACI 318 LATEST EDITION)
   - STRUCTURAL STEEL: AMERICAN INSTITUTE OF OF STEEL CONSTRUCTION, 14TH EDITION ALLOWABLE STRENGTH DESIGN.

3. HANDRAILS AND GUARDRAILS HAVE BEEN DESIGNED IN ACCORDANCE WITH IBC1607.7.1, TO RESIST A 50PLF LIVE LOAD ALONG ITS TOP EDGE AND A CONCURRENT 200 LB CONCENTRATED LOAD APPLIED IN A DIRECTION THAT CAUSES THE MOST CONSERVATIVE DESIGN.

STEEL NOTES

1. ALL STEEL DESIGN, FABRICATION, TESTING AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE FOLLOWING CODES AND STANDARDS.
   A. AISC "MANUAL OF STEEL CONSTRUCTION", LATEST EDITION
   B. AISC "DETAILING FOR STEEL CONSTRUCTION"
   C. AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES"
   D. AWS "STRUCTURAL WELDING CODE AWS D1.1"
   E. OSHA STANDARDS

2. MATERIALS SHALL MEET THE REQUIREMENTS OF THE FOLLOWING SPECIFICATIONS UNLESS NOTED OTHERWISE.

A. STEEL SHAPES AND PLATES	- ASTM A36 (MINIMUM)
B. BOLTS	- ASTM A307
C. WELDING ELECTRODES	- ASTM A233, E70 SERIES

4. ALL STRUCTURAL STEEL WELDS IN THE SHOP OR IN THE FIELD SHALL BE PERFORMED BY A QUALIFIED WELDER AND SHALL CONFORM TO THE CURRENT REQUIREMENTS OF A.W.S.

5. FILLET WELDS NOT SPECIFICALLY SIZED IN THESE DOCUMENTS SHALL BE THE MINIMUM SIZE IN ACCORDANCE WITH AWS D1.1 LATEST EDITION, DEPENDENT ON THE THINNER PART JOINED, BUT NO LESS THAN $\frac{3}{16}$" IN ANY CASE.

6. ALL STEEL SHALL BE POWDER COATED IN ACCORDANCE WITH ASTM-D7803 OR GALVANIZED IN ACCORDANCE WITH ASTM-A123.

8. COLOR FINISHES SHALL BE SELECTED BY OWNER FROM FULL RANGE OF MANUFACTURERS STANDARD, INCLUDING GALVANIZED.

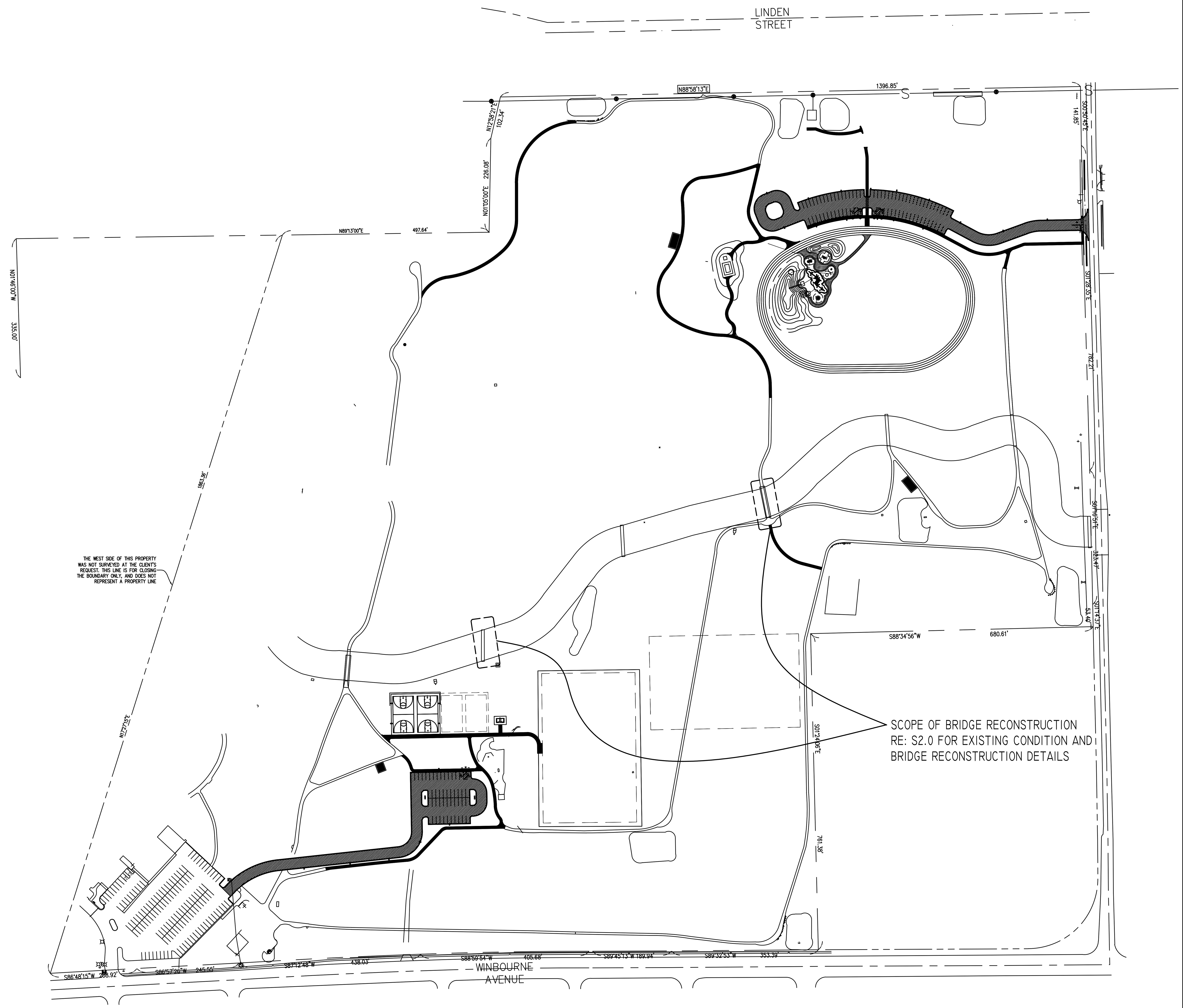
9. CONTRACTOR/FABRICATOR SHALL VERIFY ALL DIMENSIONS PRIOR TO FABRICATION AND/OR CONSTRUCTION.

CONCRETE NOTES

1. ALL CONCRETE SHALL MEET A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI AT 28 DAYS.

2. CONCRETE RESTORATION (CHIPS/CRACKS/SPALLS) SHALL BE MADE WITH SIKATOP REPAIR MORTAR OR APPROVED EQUAL. CONCRETE SURFACES SHALL BE CLEANED OF DUST AND DEBRIS PRIOR TO APPLICATION OF MORTAR.

3. REFER TO SUNDEK MANUFACTURERS INSTALLATION PROCEDURE AND SPECIFICATIONS FOR CONCRETE RESURFACING. COLOR FINISH SHALL BE SELECTED BY OWNER FROM FULL RANGE OF MANUFACTURERS STANDARD



1 / S1.0 BRIDGE RECONSTRUCTION PLAN
SCALE: 1" = 120'

REVISION	BY

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SE-16-276

SIGNATURE:
DATE: 6/21/2016

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FILE	SE-16-276 S1.0
SHEET	S-1.0

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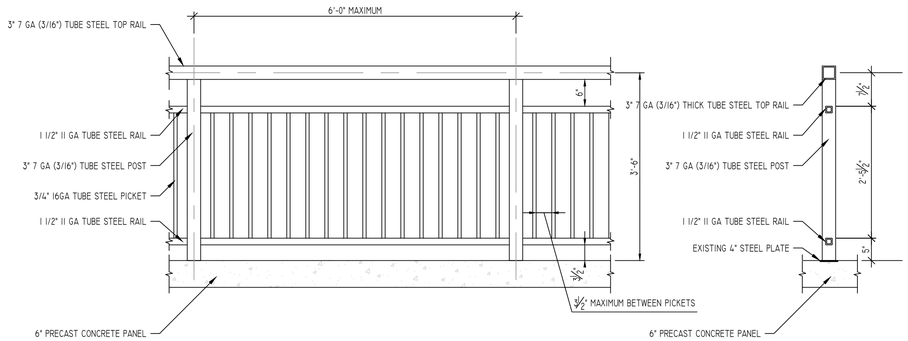
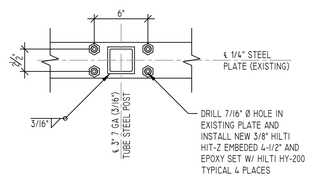
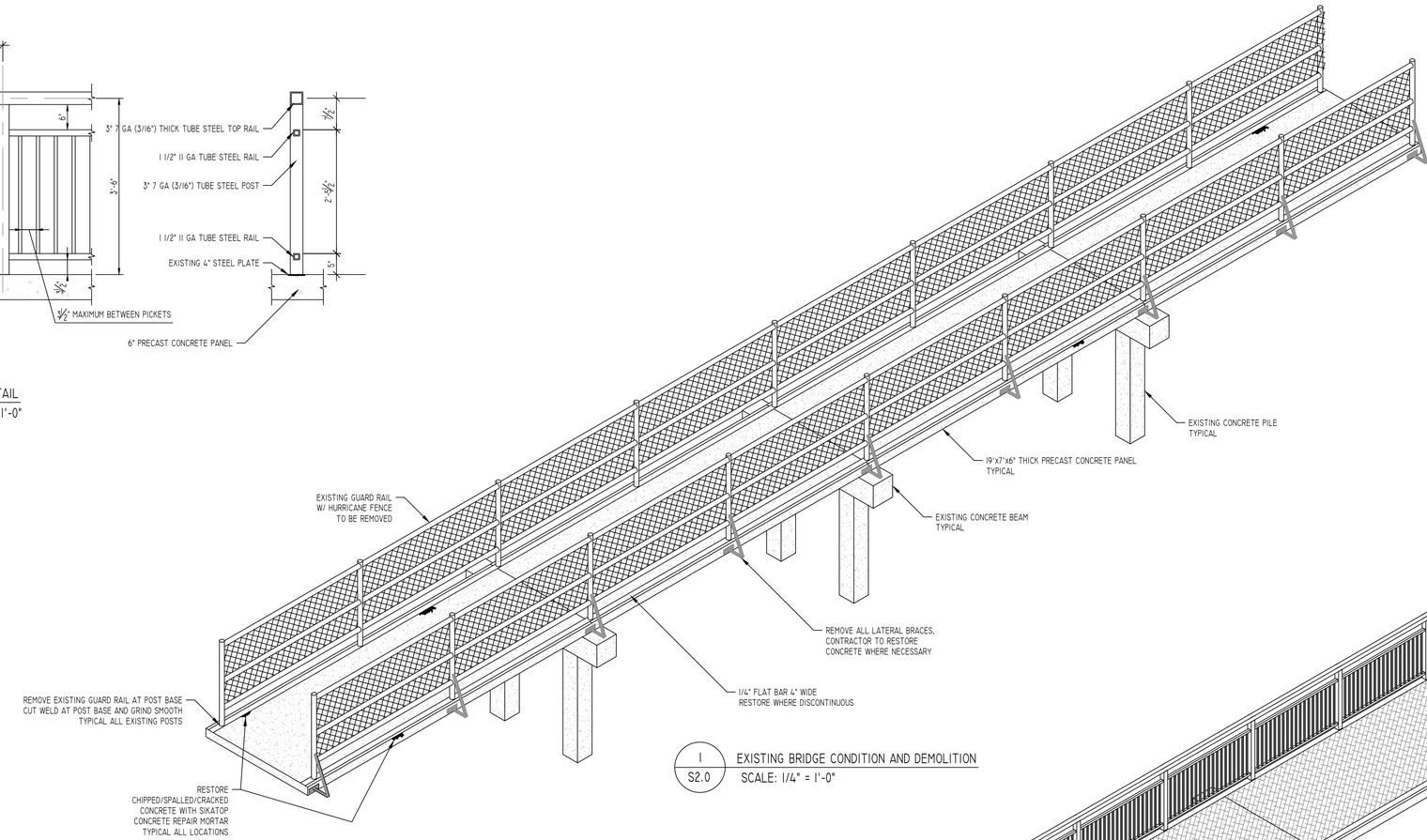


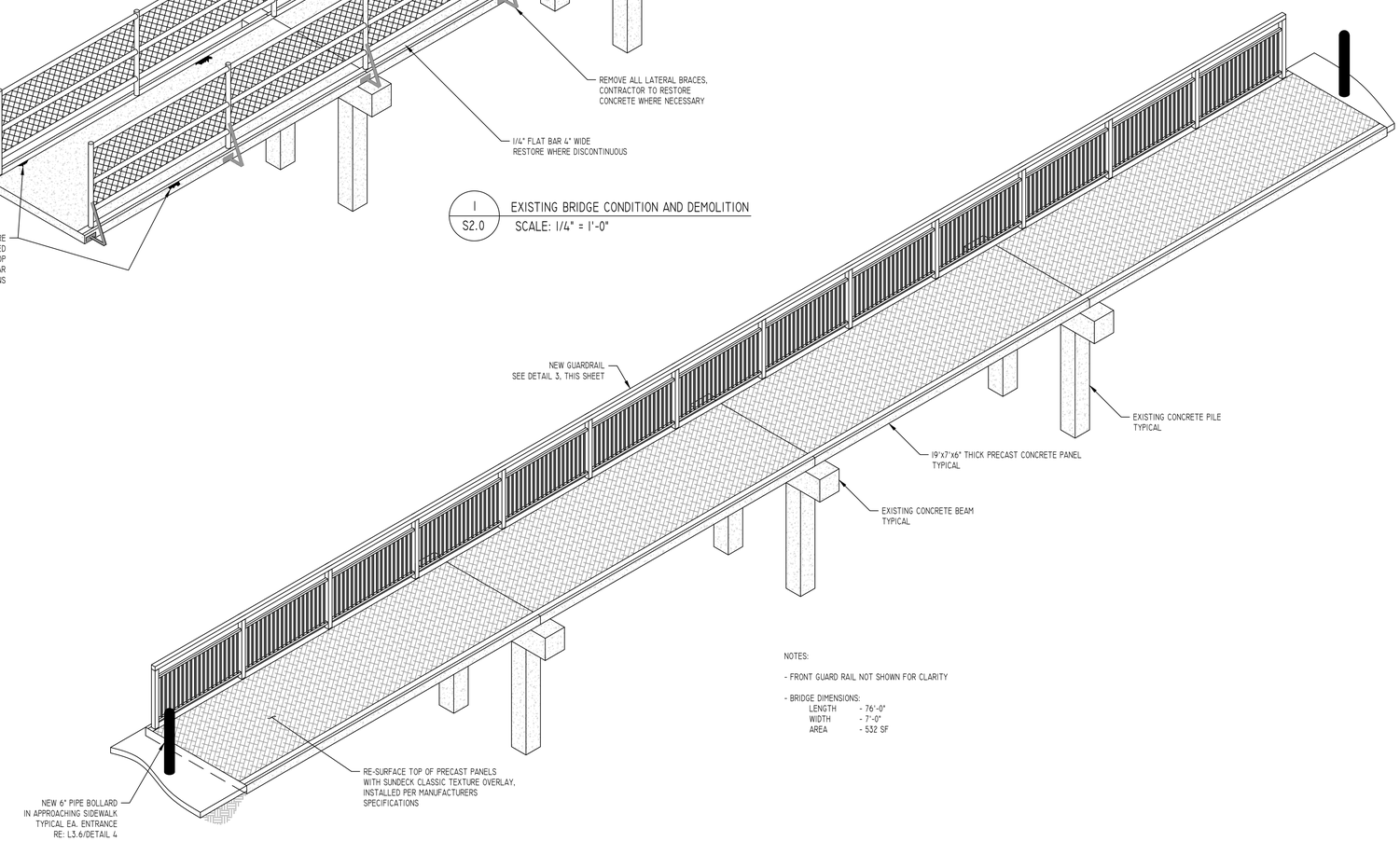
3 / S2.0 GUARDRAIL DETAIL
SCALE: 3/4" = 1'-0"



4 / S2.0 POST BASE CONNECTION
SCALE: 1 1/2" = 1'-0"



1 / S2.0 EXISTING BRIDGE CONDITION AND DEMOLITION
SCALE: 1/4" = 1'-0"



NOTES:

- FRONT GUARD RAIL NOT SHOWN FOR CLARITY

- BRIDGE DIMENSIONS:
  - LENGTH - 76'-0"
  - WIDTH - 7'-0"
  - AREA - 532 SF

2 / S2.0 RECONSTRUCTED BRIDGE
SCALE: 1/4" = 1'-0"

REVISION	BY

DUPLANTIS DESIGN GROUP, PC
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SIGNATURE:

DATE: 6/21/2016

STAMP: STATE OF LOUISIANA — ROBERT D. LEE — LICENSE NO. 26842 — REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING

BREC – HOWELL PARK IMPROVEMENTS
BATON ROUGE, LOUISIANA
EAST BATON ROUGE PARRISH

BREC
BATON ROUGE, LOUISIANA

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ISSUED DATE	6/21/2016
ISSUED FOR	BID
PROJECT NO.	16–111
FILE	SE–16–276
SHEET	S–2.0

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