HISTORIC AND DESIGN REVIEW COMMISSION

August 19, 2015

Agenda Item No: 3

HDRC CASE NO:	**2015-318**
ADDRESS:	3903 N ST MARYS
ZONING:	R6 HS RIO-1
CITY COUNCIL DIST.:	2
LANDMARK:	Brackenridge Park
APPLICANT:	Michael Mauldin
OWNER:	San Antonio Zoo
TYPE OF WORK:	Installation of pod shipping containers acting as aquariums

REQUEST:

The applicant is requesting a Certificate of Appropriateness for approval to install shipping containers to act as aquariums on site at the San Antonio Zoo. The applicant has proposed to install the proposed pods in an area of the zoo's property that is not accessible by the public, adjacent to the existing conservation building. Each pod will be placed on a concrete foundation, will be provided water, electricity and an HVAC unit and can be removed if necessary.

APPLICABLE CITATIONS:

UDC Section. 35-642. New Construction of Buildings and Facilities.

In considering whether to recommend approval or disapproval of a certificate, the historic and design review commission shall be guided by the following design considerations. These are not intended to restrict imagination, innovation or variety, but rather to assist in focusing on design principles, which can result in creative solutions that will enhance the city and its neighborhoods. Good and original design solutions that meet the individual requirements of a specific site or neighborhood are encouraged and welcomed.

(a)Site and Setting.

(1) Building sites should be planned to take into consideration existing natural climatic and topographical features. The intrusive leveling of the site should be avoided. Climatic factors such as sun, wind, and temperature should become an integral part of the design to encourage design of site-specific facilities which reinforces the individual identity of a neighborhood and promotes energy efficient facilities.

(2) Special consideration should be given to maintain existing urban design characteristics, such as setbacks, building heights, streetscapes, pedestrian movement, and traffic flow. Building placement should enhance or create focal points and views. Continuity of scale and orientation shall be emphasized.

(3) Accessibility from streets should be designed to accommodate safe pedestrian movement as well as vehicular traffic. Where possible, parking areas should be screened from view from the public right-of-way by attractive fences, beams, plantings or other means.

(4) Historically significant aspects of the site shall be identified and if possible incorporated into the site design. Historic relationships between buildings, such as plazas or open spaces, boulevards or axial relationships should be maintained.

(b)Building Design.

(1)Buildings for the public should maintain the highest quality standards of design integrity. They should elicit a pride of ownership for all citizens. Public buildings should reflect the unique and diverse character of San Antonio and should be responsive to the time and place in which they were constructed.

(2)Buildings shall be in scale with their adjoining surroundings and shall be in harmonious conformance to the identifying quality and characteristics of the neighborhood. They shall be compatible in design, style and materials. Reproductions of styles and designs from a different time period are not encouraged, consistent with the secretary of the interior's standards. Major horizontal and vertical elements in adjoining sites should be

respected.
(3)Materials shall be suitable to the type of building and design in which they are used. They shall be durable and easily maintained. Materials and designs at pedestrian level shall be at human scale, that is they shall be designed to be understood and appreciated by someone on foot. Materials should be selected that respect the historic character of the surrounding area in texture, size and color.
(4)Building components such as doors, windows, overhangs, awnings, roof shapes and decorative elements shall all be designed to contribute to the proportions and scale of their surrounding context. Established mass/void relationships shall be maintained. Patterns and rhythms in the streetscape shall be continued.
(5)Colors shall be harmonious with the surrounding environment, but should not be dull. Choice of color should reflect the local and regional character. Nearby historic colors shall be respected.
(6)Mechanical equipment or other utility hardware should be screened from public view with materials compatible with the building design. Where possible, rooftop mechanical equipment should be screened, even from above. Where feasible, overhead utilities should also be underground or attractively screened. Exterior lighting shall be an integral part of the design. Interior lighting shall be controlled so that the spillover lighting onto public walkways is not annoying to pedestrians.
(7)Signs which are out of keeping with the character of the environment in question should not be used. Excessive size and inappropriate placement on buildings results in visual clutter. Signs should be designed to relate harmoniously to exterior building materials and colors. Signs should express a simple clear message with wording kept to a minimum.
(8)Auxiliary design. The site should take into account the compatibility of landscaping, parking facilities, utility and service areas, walkways and appurtenances. These should be designed with the overall environment in mind and should be in visual keeping with related buildings, structures and places.

FINDINGS:

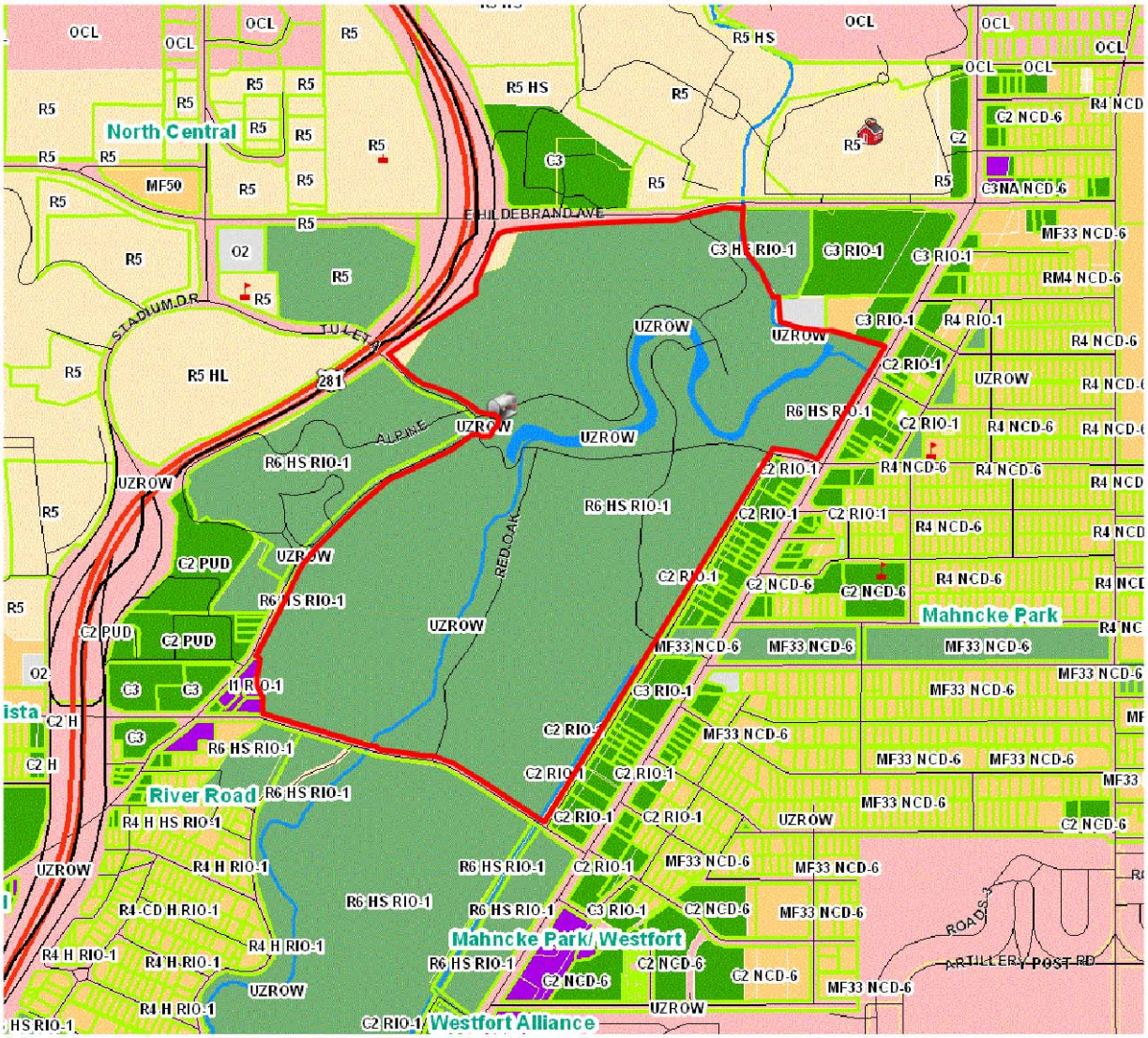
a. The applicant has proposed to install three shipping containers measuring forty-five feet in length and eight feet in width to act as aquariums on site at the San Antonio Zoo. The applicant has proposed to install the proposed pods in an area of the zoo's property that is not accessible by the public, adjacent to the existing conservation building. Each pod will be placed on a concrete foundation, will be provided water, electricity and an HVAC unit and can be removed if necessary.
b. The applicant has proposed to place the three proposed pods in an area of the zoo that is not accessible to the public and is located near other service buildings. Staff finds that this proposed location as well as the overall size of the proposed pods will not adversely affect any of the area's historic elements. The applicant has noted that the proposed pods' colors will match an existing, adjacent non contributing structure of similar metal materials. Staff finds this proposal appropriate.
c. In consideration of potential future proposals or landscaping, staff recommends that the applicant take every measure necessary to ensure that the installation of the proposed pods does not negatively impact the surrounding landscaping and environment in a permanent nature.

RECOMMENDATION:

Staff recommends approval as submitted based on findings a through

CASE MANAGER:

Edward Hall



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Flex Viewer

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Printed:Jul 06, 2015

0 15 30 Feet

LNV
engineers | architects | surveyors
TBPE FIRM NO. F-366

SAN ANTONIO ZOO

San Antonio Zoo
Container Layout-Option 3

San Antonio, TX

LNV Proj. No.	140189
Date	7/2/2015
Scale	1 inch = 30 feet
File	SA Zoo Container Layout
Drafted	JS

N
W E
S

S:\Projects\San Antonio Zoo\140189 On Call Engineering Serv\050\Design\GIS\SA Zoo Container Layout.mxd

VIEW NORTH - EXISTING CONSERVATION BUILDING


NEW PODS HERE
VIEW LOOKING WEST


EXISTING CONSERVATION BLDG.
EXISTING OFFICE TRAILER
NEW PODS TO GO HERE


POD AREA HERE
VIEW LOOKING SOUTH

VIEW LOOKING TO NORTH-EAST. EXISTING DIRECTOR'S HOUSE.

SHERWIN WILLIAMS.

PRO INDUSTRIAL

113.06

DTM ACRYLIC EG-SHEL

B66W01251 Extra White
B66W01253 Deep Base
B66T01254 Ultradeep

As of 12/22/2014, Complies with:			
OTC	Yes	LEED® 09 CI	Yes
SCAQMD	Yes	LEED® 09 NC	Yes
CARB	Yes	LEED® 09 CS	Yes
CARB SCM 2007	Yes	LEED® 09 S	Yes
MPI	Yes	NGBS	Yes

CHARACTERISTICS

Pro Industrial DTM Acrylic coating is an interior/exterior, water based, corrosion resistant acrylic coating for light to moderate industrial use. Designed for new construction or maintenance use and can be used directly over prepared substrates.

- Chemical resistant
- Corrosion resistant
- Fast dry
- Flash rust/early rust resistant
- Suitable for use in USDA inspected facilities

Color: most colors

Recommended Spread Rate per coat:

Wet mils:	6.0 - 9.5
Dry mils:	2.5 - 4.0
Coverage:	170 - 275 sq ft/gal approximate

Note: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.

Drying Time @ 6.0 mils wet 50% RH:

	@ 50°F	@ 77°F	@ 110°F
To touch:	1 hr	20 min	10 min
Tack free:	2 hrs	45 min	30 min
To recoat:	2 hrs	1 hr	1 hr

Drying time is temperature, humidity, and film thickness dependent.

Finish: Eg-Shel

Flash Point: N/A

Shelf Life: 36 months, unopened
Store indoors at 40°F to 100°F.

Tinting with CCE:

Base	oz/gal	Strength
Extra White	0-6	100%
Deep Base	6-12	100%
Ultradeep	10-12	100%

Extra White B66W01251
(may vary by color)

VOC (less exempt solvents): Unreduced: <50 g/L; 0.42 lb/gal
As per 40 CFR 59.406 and SOR/2009-264, s.12

Volume Solids: 42 ± 2%

Weight Solids: 55 ± 2%

Weight per Gallon: 10.61 lb/gal ±2%

RECOMMENDED SYSTEMS

Steel*:
2 cts. Pro Industrial DTM Acrylic

Steel:
1 ct. Pro Industrial Pro-Cryl Primer or DTM Primer/Finish
1-2 cts. Pro Industrial DTM Acrylic

Aluminum:
1-2 cts. Pro Industrial DTM Acrylic

Concrete Block:
1 ct. Pro Industrial Heavy Duty Blockfiller
1-2 cts. Pro Industrial DTM Acrylic

Concrete/Masonry:
1 ct. Loxon Concrete & Masonry Primer
1-2 cts. Pro Industrial DTM Acrylic

Drywall
1 ct. ProMar 200 Primer
1-2 cts. Pro Industrial DTM Acrylic

Galvanizing:
2 cts. Pro Industrial DTM Acrylic

Prefinished Siding:(Baked-on finishes)
1 ct. DTM Bonding Primer
1-2 cts. Pro Industrial DTM Acrylic

Wood, Exterior:
1 ct. Exterior Wood Primer
1-2 cts. Pro Industrial DTM Acrylic

Wood, Interior:
1 ct. Premium Wall & Wood Primer
1-2 cts. Pro Industrial DTM Acrylic

*DeepBase and Ultradeep colors require a prime coat for maximum durability, adhesion, and corrosion protection. Application of coating on unprimed bare steel may cause pinpoint rusting.

System Tested: (unless otherwise indicated)
Substrate: Steel
Surface Preparation: SSPC-SP10
Finish: Pro Industrial DTM Acrylic, B66W01251 – 2 cts @ 3.0 mils dft/ct

Adhesion:
Method: ASTM D4541
Result: > 500 psi

Corrosion Weathering:
Method: ASTM D5894, 1680 hours, 5 cycles
Result: Rating 9F, per ASTM D714 for blistering
Rating 9, per ASTM D1654 for corrosion

Direct Impact Resistance:
Method: ASTM D2794
Result: >160 in. lb

Dry Heat Resistance:
Method: ASTM D2485
Result: 300°F

Flexibility:
Method: ASTM D522, 180° bend, 1/8" mandrel
Result: Pass

Humidity Resistance:
Method: ASTM D4585, 1000 hours
Result: Rating 10 per ASTM D714 for blistering
Rating 10 per ASTM D1654 for corrosion

Pencil Hardness:
Method: ASTM D3363
Result: 6B, 7 day air dry

Salt Fog Resistance:
Method: ASTM B117, 500 hours
Result: Rating 8F per ASTM D714 for blistering
Rating 8 per ASTM D1654 for corrosion

continued on back

PRO INDUSTRIAL
DTM ACRYLIC EG-SHEL

SHERWIN-WILLIAMS.

SURFACE PREPARATION

WARNING! Removal of old paint by sanding, scraping or other means may generate dust or fumes that contain lead. Exposure to lead dust or fumes may cause brain damage or other adverse health effects, especially in children or pregnant women. Controlling exposure to lead or other hazardous substances requires the use of proper protective equipment, such as a properly fitted respirator (**NIOSH** approved) and proper containment and cleanup. For more information, call the National Lead Information Center at **1-800-424-LEAD** (in US) or contact your local health authority.

Do not use hydrocarbon solvents for cleaning.

Iron & Steel - Minimum surface preparation is Hand Tool Clean per SSPC-SP2. Remove all oil and grease from surface per SSPC-SP1. For better performance, use Commercial Blast Cleaning per SSPC-SP6. Primer recommended for best performance.

Aluminum - Remove all oil, grease, dirt, oxide and other foreign material per SSPC-SP1.

Galvanizing - Allow to weather a minimum of six months prior to coating. Solvent Clean per SSPC-SP1. When weathering is not possible, or the surface has been treated with chromates or silicates, first Solvent Clean per SSPC-SP1 and apply a test patch. Allow paint to dry at least one week before testing adhesion. If adhesion is poor, brush blasting per SSPC-SP7 is necessary to remove these treatments. Rusty galvanizing requires a minimum of Hand Tool Cleaning per SSPC-SP2, prime the area the same day as cleaned.

Concrete and Masonry - For surface preparation, refer to SSPC-SP13/NACE 6 or ICRI 03732, CSP 1-3. Surfaces should be thoroughly cleaned and dry. Surface temperatures must be at least 55°F before filling. If required for a smoother finish, use the recommended filler/surfacer. The filler/surfacer must be thoroughly dry before topcoating per manufacturer's recommendations. Weathered masonry and soft or porous cement board must be brush blasted or power tool cleaned to remove loosely adhering contamination and to get to a hard, firm surface. Apply one coat Loxon Conditioner, following label recommendations.

Wood - Surface must be clean, dry and sound. Prime with recommended primer. No painting should be done immediately after a rain or during foggy weather. Knots and pitch streaks must be scraped, sanded and spot primed before full coat of primer is applied. All nail holes or small openings must be properly caulked.

Previously Painted Surfaces - If in sound condition, clean the surface of all foreign material. Smooth, hard or glossy coatings and surfaces should be dulled by abrading the surface. Apply a test area, allowing paint to dry one week before testing adhesion. If adhesion is poor, additional abrasion of the surface and/or removal of the previous coating may be necessary. Retest surface for adhesion. If paint is peeling or badly weathered, clean surface to sound substrate and treat as a new surface as above.

LABEL CAUTIONS

Contains **CRYSTALLINE SILICA.** Use only with adequate ventilation. To avoid overexposure, open windows and doors or use other means to ensure fresh air entry during application and drying. If you experience eye watering, headaches, or dizziness, increase fresh air, or wear respiratory protection (**NIOSH** approved) or leave the area. Adequate ventilation required when sanding or abrading the dried film. If adequate ventilation cannot be provided wear an approved particulate respirator (**NIOSH** approved). Follow respirator manufacturer's directions for respirator use. Avoid contact with eyes and skin. Wash hands after using. Keep container closed when not in use. Do not transfer contents to other containers for storage. **FIRST AID:** In case of eye contact, flush thoroughly with large amounts of water. Get medical attention if irritation persists. If swallowed, call Poison Control Center, hospital emergency room, or physician immediately. **DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE.** Abrading or sanding of the dry film may release crystalline silica which has been shown to cause lung damage and cancer under long term exposure. **WARNING:** This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. **DO NOT TAKE INTERNALLY. KEEP OUT OF THE REACH OF CHILDREN. FOR PROFESSIONAL USE ONLY. SEE MATERIAL SAFETY DATA SHEET.**

HOTW 12/22/2014 B66W01251 09 33 KOR, SP, FR

APPLICATION

Refer to the MSDS before using

Temperature: 50°F minimum
110°F maximum
(Air, surface, and material)
At least 5°F above dew point

Relative humidity: 85% maximum

The following is a guide. Changes in pressures and tip sizes may be needed for proper spray characteristics. Always purge spray equipment before use with listed reducer. Any reduction must be compatible with the existing environmental and application conditions.

Airless Spray

Pressure..... 1500 psi
Hose..... 1/4" ID
Tip..... .017" - .021"
Filter..... 60 mesh
Reduction..... Not recommended

Conventional Spray

Gun..... Binks 95
Fluid Nozzle..... 66
Air Nozzle..... 63PB
Atomization Pressure..... 50 PSI
Fluid Pressure..... 10-20 PSI
Reduction..... Not recommended

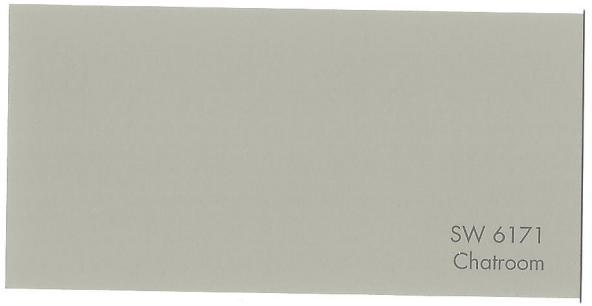
Brush..... Nylon / polyester
Reduction..... Not recommended
Due to this product's fast dry performance, brushing should be limited to small areas where a wet edge can be maintained

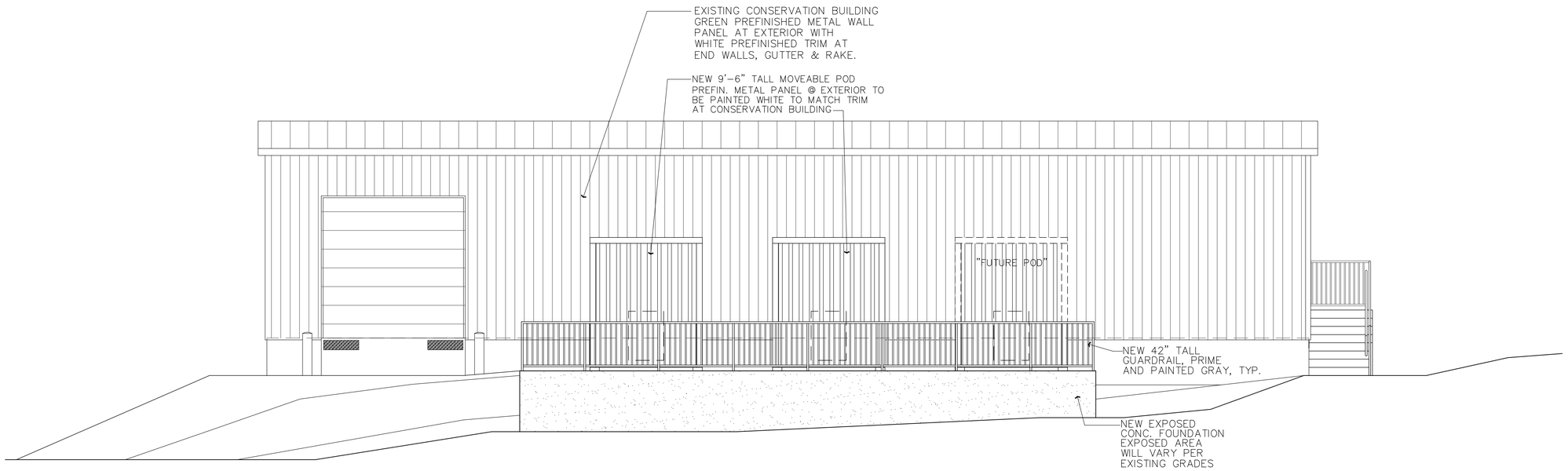
Roller..... 1/4-3/8" woven
Reduction..... Not recommended
If specific application equipment is listed above, equivalent equipment may be substituted.

CLEANUP INFORMATION

Clean spills and spatters immediately with soap and warm water. Clean hands and tools immediately after use with soap and warm water. After cleaning, flush spray equipment with compliant cleanup solvent to prevent rusting of the equipment. Follow manufacturer's safety recommendations when using solvents.

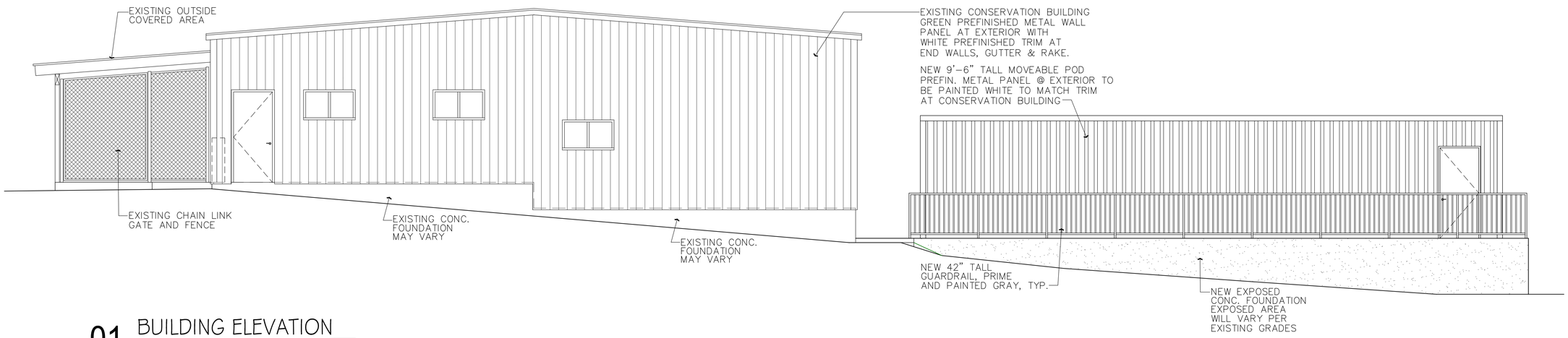
SW 6168
Moderne White





02 BUILDING ELEVATION

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



01 BUILDING ELEVATION

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

8603 Crownhill, Suite #30
San Antonio, TX 78209
Phone: 210 - 313 - 3197
MauldinArchitects.com

MAULDIN
ARCHITECTS

REGISTERED ARCHITECT MICHAEL D. MAULDIN 16733 STATE OF TEXAS

07/29/15

San Antonio Zoo
Conservation Building - POD Install
3903 N. St. Mary's Street
San Antonio, Texas 78212

REVISIONS:

NO.	DESCRIPTION	DATE

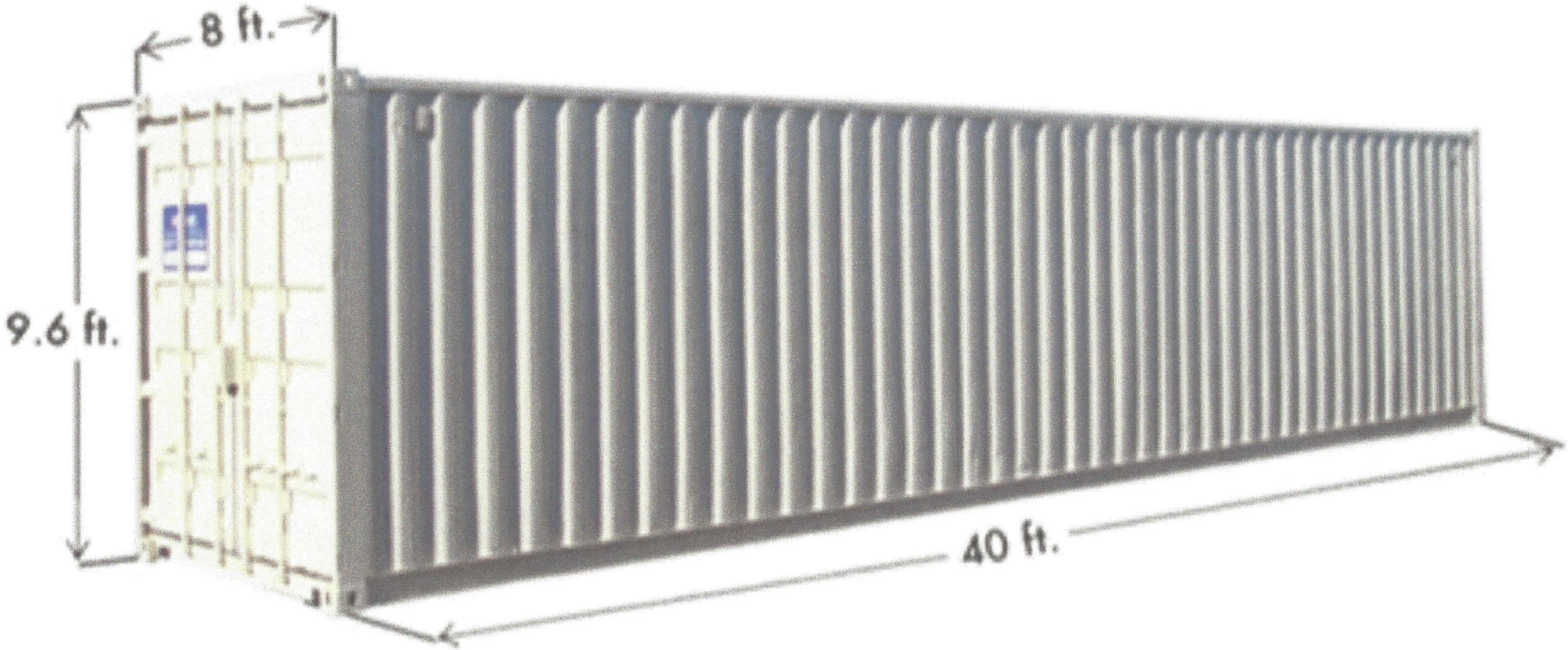
DATE: 05-19-2015

SHEET TITLE:

BUILDING & POD ELEVATIONS

SHEET NUMBER:

A2.1


8 ft.
9.6 ft.
40 ft.

SAN ANTONIO ZOO

SAN ANTONIO ZOO

CONSERVATION CENTER IMPROVEMENTS PROJECT

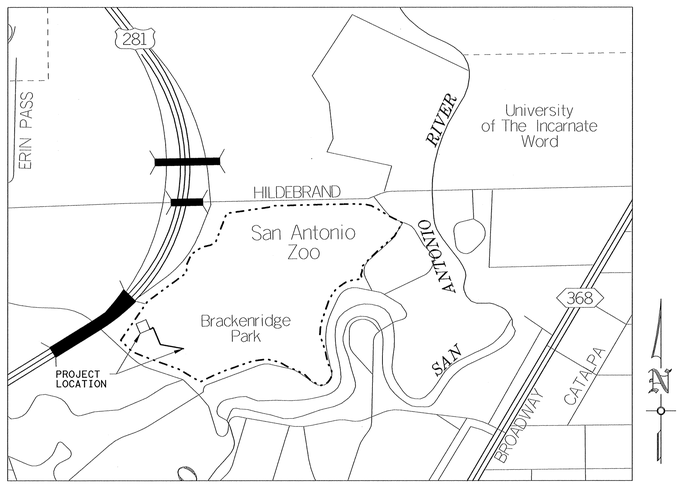
PREPARED BY:

LNV

TBPE FIRM NO. F-366

8918 TESORO DRIVE
SAN ANTONIO, TEXAS 78217

STATE OF TEXAS
NATHAN R. COBLER
117105
LICENSED
PROFESSIONAL ENGINEER
7/20/15



SITE LOCATION MAP

NTS

SHEET No.	SHEET DESCRIPTION
W1	COVER SHEET
W2	GENERAL NOTES AND QUANTITIES
W3	OVERALL PROJECT LAYOUT
W4	FOUNDATION LAYOUT
W5	WATER DETAILS
S1	GENERAL NOTES & DESIGN CRITERIA
S2	FOUNDATION PLANS, SECTIONS AND DETAILS
E000	SYMBOLS AND ABBREVIATIONS
E001	ELECTRICAL SITE PLAN
E401	POWER DISTRIBUTION DIAGRAM
E501	SCHEDULE AND DETAILS

CALL BEFORE YOU DIG !
TEXAS ONE CALL PARTICIPANTS REQUEST
48 HOURS NOTICE BEFORE YOU DIG, DRILL,
OR BLAST - STOP, CALL!
TEXAS ONE CALL SYSTEM
1-800-545-6005

THE LONE STAR
NOTIFICATION COMPANY
1-800-669-8344

LOCAL ONE-CALL
811

7/20/2015
Plotted by: lgonzales
Bexar County\San Antonio Zoo\140189 On Call Engineering Ser\0320\Drawings\Plans\Civil\140189_TS.dgn

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GENERAL WATER NOTES

1. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS PROJECT SHALL BE APPROVED BY THE SAN ANTONIO ZOO AND COMPLY WITH THE FOLLOWING AS APPLICABLE: A. CURRENT SAN ANTONIO WATER SYSTEM STANDARD SPECIFICATIONS FOR CONSTRUCTION, B. CURRENT SAN ANTONIO WATER SYSTEM UTILITY SERVICE REGULATIONS, C. CURRENT CITY OF SAN ANTONIO STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, D. CURRENT TXDOT STANDARD SPECIFICATION FOR CONSTRUCTION OF HIGHWAYS, STREETS, AND DRAINAGE, E. CURRENT CITY OF SAN ANTONIO RIGHT-OF-WAY ORDINANCE AND CRITERIA MANUAL.

2. THE CONTRACTOR SHALL NOT PROCEED WITH ANY WORK UNTIL THEY OBTAIN APPROVAL FROM THE CONSULTANT AND HAS BEEN NOTIFIED BY THE OWNER TO PROCEED WITH THE WORK AND HAS ARRANGED A MEETING WITH THE INSPECTOR AND CONSULTANT FOR THE WORK REQUIREMENTS.

3. THE LOCATIONS AND DEPTHS OF EXISTING UTILITIES, INCLUDING SERVICE LATERALS, AND DRAINAGE STRUCTURES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND DEPTHS OF UNDERGROUND UTILITIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION WHETHER SHOWN ON PLANS OR NOT, AND TO PROTECT THE SAME DURING CONSTRUCTION.

SAWS (WATER, SEWER, AND RECYCLE WATER)	207-2800
COSA DRAINAGE:	207-8048
COSA TRAFFIC SIGNAL OPERATIONS:	207-7720
TEXAS STATE WIDE ONE CALL LOCATOR:	1-800-545-6005 OR 811
CITY PUBLIC SERVICE	=
AT&T	=
TIME WARNER	=
VALERO ENERGY CO.	=

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL OR BETTER CONDITION FROM DAMAGE DONE TO EXISTING FENCES, CURBS, STREETS, DRIVEWAYS, SIDEWALKS, LANDSCAPING AND STRUCTURES.

5. THE CONTRACTOR SHALL AVOID CUTTING ROOTS LARGER THAN ONE INCH IN DIAMETER WHEN EXCAVATING NEAR EXISTING TREES. EXCAVATION IN VICINITY OF TREES SHALL PROCEED WITH CAUTION. THE CONTRACTOR SHALL CONTACT THE CITY ARBORIST AT 207-8053 AND THE SAWS CONSTRUCTION INSPECTOR FOR GUIDANCE.

SUPPLEMENTARY

6. NO EXTRA-PAYMENT SHALL BE ALLOWED FOR WORK CALLED FOR ON THE PLANS BUT NOT INCLUDED ON THE BID SCHEDULE. THIS INCIDENTAL WORK WILL BE REQUIRED AND SHALL BE INCLUDED UNDER THE PAY ITEM TO WHICH IT RELATES.

7. WORK COMPLETED BY THE CONTRACTOR WHICH HAS NOT RECEIVED A WORK ORDER OR THE NOTICE TO PROCEED WITH THE OWNER WILL BE SUBJECT TO REMOVAL AND REPLACEMENT BY AND AT THE EXPENSE OF THE CONTRACTOR.

8. ALL SAWS STANDARD DETAILS CAN BE FOUND ON WWW.SAWS.ORG

9. CONTRACTOR SHALL COMPLY WITH PIPE MANUFACTURER'S STANDARDS FOR MAXIMUM DEFLECTION AT EACH JOINT.

10. NSPI STANDS FOR NO SEPARATE PAY ITEM.

11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE RESTORING TO LIKE CONDITION OR BETTER ANY EXISTING LANDSCAPING, FENCING, CURBS, WALLS, STRUCTURES, DRIVEWAYS, STREET PAVING, AND SIDEWALKS DAMAGED DURING CONSTRUCTION OF THE WATER SYSTEM.

TRENCH EXCAVATION SAFETY PROTECTION:

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS, AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

SITE SPECIFIC NOTES

1. CONTRACTOR SHALL COORDINATE WITH SAN ANTONIO ZOO STAFF REGARDING ACCESS TO THE PROPERTY.

2. ALL PAVEMENT CUTS SHALL BE STRAIGHT SAW CUTS.

3. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN VEHICULAR AND PEDESTRIAN ACCESS AT ALL TIMES TO PEDESTRIANS, ZOO EMPLOYEES, AND DELIVERIES.

4. SHORING IS REQUIRED FOR WITHIN 10 FT OF POWER POLES AND SHALL BE COORDINATED WITH THE UTILITY PROVIDER. SHORING SHALL BE CONSIDERED SUBSIDIARY TO VARIOUS BID ITEMS.

5. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.171 CPS MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.

6. CONTRACTOR SHALL PRESERVE ALL CONSTRUCTION STAKES, MARKS, ETC. IF ANY ARE DESTROYED OR REMOVED BY THE CONTRACTOR OR HIS EMPLOYEES, THEY SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

7. ALL WASTE MATERIAL SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE HIS SOLE RESPONSIBILITY TO DISPOSE OF THIS MATERIAL OFF THE LIMITS OF THE PROJECT. NO WASTE MATERIAL SHALL BE PLACED IN EXISTING LOWS THAT WILL BLOCK OR ALTER FLOW LIMITS OF EXISTING ARTIFICIAL OR NATURAL DRAINAGE.

8. THE CONTRACTOR SHALL MAINTAIN ALL ADJOINING STREETS AND TRAVELED ROUTES FREE FROM SPILLED AND/OR TRACKED CONSTRUCTION MATERIALS AND/OR DEBRIS.

9. IF THE CONTRACTOR ENCOUNTERS ANY ARCHAEOLOGICAL DEPOSITS DURING CONSTRUCTION OPERATION, THE CONTRACTOR MUST STOP EXCAVATION IMMEDIATELY, AND CALL THE CITY HISTORIC PRESERVATION OFFICE AT 207-7306 OR 207-3327 FOR AN ARCHAEOLOGICAL INVESTIGATION. THE CONTRACTOR CANNOT BEGIN EXCAVATION AGAIN WITHOUT WRITTEN PERMISSION FROM THE CITY.

   IF MORE THAN THREE (3) DAYS ARE REQUIRED FOR INVESTIGATION (NOT INCLUDING HOLIDAY AND WEEKENDS) AND IF THE CONTRACTOR IS UNABLE TO WORK IN OTHER AREAS, THEN THE CONTRACTOR WILL BE ALLOWED TO NEGOTIATE FOR ADDITIONAL CONSTRUCTION TIME UPON WRITTEN REQUEST WITHIN TEN (10) DAYS AFTER THE FIRST NOTICE TO THE CITY OF ARCHAEOLOGICAL INVESTIGATION FOR EACH EVENT.

   IF THE TIME REQUIRED FOR INVESTIGATION IS LESS THAN OR EQUAL TO THREE (3) DAYS FOR EACH EVENT, CONTRACT DURATION WILL NOT BE EXTENDED.

10. IF SUSPECTED CONTAMINATION IS ENCOUNTERED DURING CONSTRUCTION OPERATIONS, C.O.S.A. SHALL BE NOTIFIED IMMEDIATELY WHEN CONTAMINATED SOILS AND/OR GROUNDWATER ARE ENCOUNTERED AT LOCATIONS NOT IDENTIFIED IN THE PLANS. THE NOTIFICATIONS SHOULD INCLUDE THE STATION NUMBER, TYPE OF CONTAMINATED MEDIA, EVIDENCE OF CONTAMINATION AND MEASURES TAKEN TO CONTAIN THE CONTAMINATED MEDIA AND PREVENT PUBLIC ACCESS. THE CONTAMINATED SOIL AND/OR GROUNDWATER SHALL NOT BE REMOVED FROM THE LOCATION WITHOUT PRIOR C.O.S.A. APPROVAL.

    THE CONTRACTOR MUST STOP THE EXCAVATION IMMEDIATELY AND CONTACT C.O.S.A. INSPECTOR. THE CONTRACTOR CANNOT BEGIN EXCAVATION ACTIVITIES WITHOUT WRITTEN PERMISSION FROM THE CITY.

11. THE CONTRACTOR SHALL MAINTAIN EXISTING FENCES ADJACENT TO AND ACROSS THE PROJECT CORRIDOR. THE CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTING ANY TEMPORARY FENCES, GAPS, GATES, ETC. NECESSARY FOR CONSTRUCTION OF THE PROJECT. (NO SEPARATE PAY ITEM.)

12. AT COMPLETION OF THE PROJECT THE CONTRACTOR SHALL RESTORE ALL FENCING AFFECTED BY THE PROJECT TO ITS ORIGINAL OR BETTER CONDITION. (NO SEPARATE PAY ITEM.)

13. CONTRACTOR IS RESPONSIBLE FOR TEXAS POLLUTANT DISCHARGE ELIMINATION SYSTEM (TPDES) PERMITTING AND DEVELOPMENT OF A STORMWATER POLLUTION PREVENTION PLAN (SW3P) FOR THE PROJECT. THE SW3P PLAN AND PROCEDURES SHALL BE IMPLEMENTED ACCORDING TO TCEQ AND EPA REGULATIONS FOR STORMWATER DISCHARGE FROM CONSTRUCTION ACTIVITIES. FINAL PROJECT ACCEPTANCE SHALL NOT BE GRANTED UNTIL ALL PERMANENT STABILIZATION MEASURES HAVE BEEN ESTABLISHED. ALL REQUIRED BEST MANAGEMENT PRACTICES SHALL BE FOLLOWED AND SW3P DEVICES SHALL BE USED AND ARE CONSIDERED SUBSIDIARY TO VARIOUS BID ITEMS (NO SEPARATE PAY ITEM)

14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL NECESSARY MEANS AND METHODS OF CONSTRUCTION SHOULD GROUNDWATER BE ENCOUNTERED. (NO SEPARATE PAY ITEM.)

15. CONTRACTOR SHALL COORDINATE WITH SWCA ENVIRONMENTAL CONSULTANTS AT 877-2847 A MINIMUM OF 48 HOURS PRIOR TO EXCACATION FOR ARCHAEOLOGICAL OBSERVATION PIRPOSES.

16. IN THE EVENT THAT POTENTIAL KARST FEATURE (SUBSURFACE OPENING, VOID SPACE, CAVE, ETC.) IS ENCOUNTERED DURING CONSTRUCTION ACTIVITIES, WORK WILL BE HALTED IN THE IMMEDIATE AREA AND THE VOID SPACE COVERED (e.g., UNDER TARP OR PLYWOOD). IMMEDIATELY CONTACT THE PROJECT ENVIRONMENTAL PROJECT MANAGER, MR. PHIL PEARCE AT 210-877-2847 (OFFICE), 210-215-0757 (MOBILE), ppearce@swca.com, TO PERFORM AN ASSESSMENT OF THE FEATURE FOR SUITABLE KARST INVERTEBRATE HABITAT IN ACCORDANCE WITH U.S. FISH AND WILDLIFE SERVICE REQUIREMENTS.

GENERAL TRAFFIC CONTROL NOTES:

1. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO SEE THAT ALL TRAFFIC CONTROL DEVICES ARE PROPERLY INSTALLED AND MAINTAINED AT THE JOB SITE IN ACCORDANCE WITH THE PLANS, SPECIFICATIONS AND RELATED INDUSTRY STANDARDS AND REGULATIONS. THESE NOTES, DO NOT, IN OF THEMSELVES, CONSTITIUTE A TRAFFIC CONTROL PLAN. IN THE EVENT THAT THESE PLANS DO NOT INCLUDE TRAFFIC CONTROL, OR THAT THE CONTRACTOR WISHES TO VARY FROM TRAFFIC CONTROL INCLUDED WITH THESE PLANS, HE SHALL SUBMIT FOR REVIEW TO THE ENGINEER AND SAN ANTONIO ZOO STAFF.

2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN AND MAINTAIN ALL TRAFFIC CONTROL DEVICES REQUIRED TO PROTECT THE GENERAL PUBLIC AND ZOO STAFF.

3. THE CONTRACTOR MUST CONTACT THE SAN ANTONIO ZOO COI AND THE ENGINEER 48 HOURS IN ADVANCE (INCLUDING WEEKENDS) OF ANY MINOR PATH/STREETS CLOSURES.

4. AS WORK PROGRESSES, LOCATION OF THE TEMPORARY TRAFFIC CONTROL DEVICES WILL BE ADJUSTED AND MODIFIED, AS NECESSARY BY THE CONTRACTOR AND AT CONTRACTOR'S EXPENSE.

5. THE CONTRACTOR MUST MAINTAIN ALL PATHS/STREET WITHIN PROJECT LIMITS OPEN TO THROUGH TRAFFIC BY REPAIRING TRENCHES, POTHOLES, LEVELING UP WITH ASPHALT, ETC. AT NO DIRECT PAYMENT, WITH THE COST TO BE INCLUDED IN OTHER ITEMS.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SUITABLE ACCESS ACCOMMODATIONS FOR VEHICLES AND PEDESTRIANS.

7. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ALL PATHS/STREETS OUTSIDE OF THE PROJECT LIMITS WHICH ARE DAMAGED DUE TO CONSTRUCTION ACTIVITES. THE REPLACED SECTION MUST BE APPROVED BY THE ENGINEER AND SAN ANTONIO ZOO STAFF. THERE WILL BE NO DIRECT PAYMENT FOR THIS WORK. THE COST IS TO BE INCLUDED IN OTHER ITEMS.

8. THE CONTRACTOR SHALL PROVIDE SAN ANTONIO ZOO STAFF AN EMERGENCY TELEPHONE NUMBER FOR EVENINGS, WEEKENDS, AND HOLIDAYS BY THE FIRST WORKING DAY OF THE PROJECT. THIS TELEPHONE NUMBER MUST BE A COMMERCIAL ANSWERING SERVICE. THE ANSWERING SERVICE MUST BE ABLE TO CONTACT THE CONTRACTOR AND HAVE THE CONTRACTOR RESPOND TO THE SAN ANTONIO ZOO STAFF WITHIN TWO HOURS OF THE INITIAL CONTACT.

ITEM	DESCRIPTION	UNIT	QUANTITY
100.1	MOBILIZATION	LS	1
100.2	INSURANCE AND BOND	LS	1
101.1	PREPARING RIGHT OF WAY	LS	1
205.2	HOT MIX ASPHALTIC PAVEMENT, TYPE B (6" COMP DEPTH)	SY	60
205.4	HOT MIX ASPHALTIC PAVEMENT, TYPE D (2" COMP DEPTH)	SY	60
307.1	CONCRETE STRUCTURE (RETAINING WALLS)	CY	3
508.1	RELOCATING WIRE FENCE	LF	20
515.1	TOP SOIL (4" DEPTH)	CY	20
520.1	HYDROMULCH	SY	180
522.1	SIDEWALK PIPE RAILING	LF	117
550	TRENCH EXCAVATION SAFETY PROTECTION	LF	405
840	2" WATER TIE-IN	EA	1
SPC1	BARRICADES, SIGNS & TRAFFIC HANDLING (VEHICULAR AND PEDESTRIAN)	LS	1
SPC2	1" PVC SCH 80 ASTM D1785 (INCLUDING PIPING, APPURTENANT FITTINGS (SCH 80), AND VALVES)	LF	70
SPC3	2" PVC SDR 26 ASTM D2241 (INCLUDING PIPING, APPURTENANT FITTINGS (SDR 21), AND VALVES)	LF	330
SPC4	2" PVC SCH 80 ASTM D1785 (INCLUDING PIPING, APPURTENANT FITTINGS (SCH 80), AND VALVES)	LF	5
SPC5	SECURE AND INSULATE 2" PVC SDR 26 ASTM D2241 TO 2" GALVANIZED POLE (CONCRETED IN GROUND) NEXT TO THE VERTICAL EARTH AND ROCK WALL	EA	1
SPC6	SECURE AND INSULATE 1" PVC SCH 80 ASTM D1785 TO EXISTING WAREHOUSE BUILDING WITH 5/8" HOSE BIBB ATTACHED	EA	2
SPC7	52'x41' CONCRETE FOUNDATION (COMPLETE INSTALLATION; TO INCLUDE: EXCAVATION, FILL MATERIAL, AND ALL OTHER WORK REQUIRED TO COMPLETE THE INSTALATION OF THE FOUNDATION)	LS	1
SPC8	ELECTRICAL TASK 1: COORDINATE WITH CPSE FOR THE REMOVAL OF THE 120/240V, 1 PAHSE CPSE METER 6106617 ("8") FROM THE DIRECTOR'S HOUSE. ADD A NEW FUSIBLE DISCONNECT SWITCH AND 120/240V, 1 PHASE UNDERGROUND FEEDER FROM THE EXISTISTING 208/120V, 3 PHASE WIREWAY AT CPSE METER 6143771("25") TO SERVE DIRECTOR'S HOUSE.	LS	1
SPC9	ELECTRICAL TASK 2: ADD A 100-AMP 208/120V, 3 PHASE FEEDER FROM THE EXISTING EATON PANEL AT CPSE METER 6143041 ("7") TO NEW PANEL "PODS". PROVIDE 120/208V, 1 PHASE SERVICE TO EACH OF THREE PODS.	LS	1

IN THE EVENT THAT A POTENTIAL KARST FEATURE (SUBSURFACE OPENING, VOID SPACE, CAVE, ETC.) IS ENCOUNTERED DURING CONSTRUCTION ACTIVITIES, WORK WILL BE HALTED IN THE IMMEDIATE AREA AND THE VOID SPACE COVERED (E.G., UNDER TARP OR PLYWOOD). IMMEDIATELY CONTACT THE PROJECT ENVIRONMENTAL PROJECT MANAGER, MR. PHIL PEARCE AT 210-877-2847 (OFFICE), 210-215-0757 (MOBILE), PPEARCE@SWCA.COM, TO PERFORM AN ASSESSMENT OF THE FEATURE FOR SUITABLE KARST INVERTEBRATE HABITAT IN ACCORDANCE WITH U.S. FISH AND WILDLIFE SERVICE REQUIREMENTS.

STATE OF TEXAS
NATHAN R. COBLER
117105
LICENSED PROFESSIONAL ENGINEER
7/20/15

LNV
TBPE FIRM NO. F-366
8918 TESORO DRIVE
SAN ANTONIO, TEXAS 78217

SAN ANTONIO ZOO

CONSERVATION CENTER IMPROVEMENTS PROJECT

GENERAL NOTES

SCALE: N.T.S.

DEVELOPER:	
CONT.	BUDGET PROJ.
SUBMITTED	
APPROVED	
MAP No.	DATE: 7/21/2015
DECT. NO	JOB NO.: XX-XXXX
DRAWN BY:	DSGN BY: CHKD BY:

SHT NO.: W2

7/21/2015
Plotted by: strong
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BENCH MARKS AND CONTROL POINTS TABLES

BENCH MARKS				
BM #	NORTHING	EASTING	ELEV.	DESCRIPTION
1	13716478	2135978	740.76	COTTON SPINDLE IN POWER POLE
2	13716408	2135641	714.59	COTTON SPINDLE IN POWER POLE
3	13716260	2135930	690.08	CHISELED SQUARE IN CONCRETE

CONTROL POINTS			
CP #	NORTHING	EASTING	DESCRIPTION
10	13716519.21	2135865.15	MAG NAIL IN ASPH
11	13716444.56	2135739.72	MAG NAIL IN ASPH
12	13716373.48	2135602.91	MAG NAIL IN ASPH
13	13716238.01	2135598.86	MAG NAIL IN ASPH
14	13716209.18	2135770.03	IRON ROD WITH CAP MARKED "LNV-SA"
15	13716069.83	2136005.57	MAG NAIL IN ASPH
16	13716219.96	2135900.82	MAG NAIL IN ASPH

INCINERATOR
HAY BARN
BM #1
CP #10
CP #11
TR. 6
BM #2
PROP 2" PVC (SDR 26) WELL MAIN EST @ 2 LF± 2" PVC (SCH 80) TRANSITION COUPLING PROP 2" PVC (SCH 80) WELL MAIN EST @ 2 LF± 1 - 2" X 1" PVC (SCH 80) REDUCER
PROP STORAGE CONTAINER FOUNDATION
CP #12
PROP STORAGE CONTAINERS
WAREHOUSE
1" PVC (SCH 80) SHALL BE SECURED AND INSULATED ABOVE GROUND TO EXIST WAREHOUSE FOUNDATION AND WALL AND ENTER WAREHOUSE WALL WITH A 5/8" HOSE BIBB ATTACHED TO THE END AS SHOWN ON SHEET #5
PROP 1" PVC (SCH 80) WELL MAIN EST @ 5 LF±
BEAR
BEAR
TRAILER 4
TRAILER 2
TR. 2
TRAILER 1
EXIST 13" CEDAR PINE TREE TO REMAIN
EXIST 18" TREE TO REMAIN
EXIST 23" TREE TO REMAIN
PROP 1" PVC (SCH 80) WATER MAIN EST @ 20 LF±
S67°04'34.35"W
P1 3+88.29
4+00
1 - 2" X 2" PVC (SDR 21) TEE
PROP 2" PVC (SDR 26) WELL MAIN EST @ 1 LF±
PROP 2" PVC (SDR 26) X 2" PVC (SCH 80) TRANSITION COUPLING
PROP 2" PVC (SCH 80) WELL MAIN EST @ 1 LF±
PROP 2" X 1" PVC (SCH 80) REDUCER
PROP 1" PVC (SCH 80) WELL MAIN EST @ 1 LF±
1 - 1" X 1/4 PVC (SCH 80) BEND
EXIST POWER POLE TO REMAIN
CONTRACTOR TO DIG UNDER EXIST CHAIN LINK FENCE
1" PVC (SCH 80) SHALL BE SECURED AND INSULATED ABOVE GROUND TO EXIST WAREHOUSE FOUNDATION AND WALL WITH A 5/8" HOSE BIBB ATTACHED TO THE END AS SHOWN ON SHEET #9
PROP 2" PVC (SDR 26) WELL MAIN EST @ 77 LF±
EXIST 17" TREE TO REMAIN
PROP 1" PVC (SCH 80) WELL MAIN EST @ 5 LF±
1 - 1" X 1/4 PVC (SCH 80) BEND
BUILDING TO BE REMOVED BY OTHERS
EXIST CHAIN LINK FENCE TO REMAIN
1 - 2" X 1/4 BEND, M.J.
PROP 2" PVC (SDR 26) WELL MAIN EST @ 4 LF±
EXIST 17" HACKBERRY TREE TO REMAIN
WF
EXIST 12" TREE TO REMAIN
EXIST 7" TREE TO REMAIN
EXIST POWER POLE TO REMAIN
PROP 2" PVC (SDR 26) WELL MAIN EST @ 32 LF±
PROP 2" PVC (SDR 26) WELL MAIN EST @ 10 LF±
EXIST 10" ANAQUA TREE TO REMAIN
DIRECTORS HOUSE
CONTRACTOR SHALL SCRAPE EXIST CRUSHED GRANITE AND STOCKPILE DURING THE WELL MAIN INSTALLATION. CONTRACTOR RELAY CRUSHED GRANITE BACK IN EXISTING LOCATION UPON COMPLETION OF THIS SECTION OF WELL MAIN INSTALLATION
EXIST 11" ANAQUA TREE TO REMAIN ROCK CLIFF AREA
WARNING: WATER CROSSING
WARNING: WATER CROSSING
PROP 2" PVC (SDR 26) WELL MAIN EST @ 66 LF±
N79°51'24.44"W
2+00
1 - 2" X 1/4 PVC (SDR 21) BEND PROP 2" PVC (SDR 26) WELL MAIN EST @ 4 LF±
P1 2+64.84
1 - 2" X 1/8 PVC (SDR 21) BEND 1 - 2" X 1/32 PVC (SDR 21) BEND PROP 2" PVC (SDR 26) WELL MAIN EST @ 5 LF±
CP #14
P2 2+58.92
N34°51'24.43"W
EXIST 9" TREE TO REMAIN
EXIST 9" TREE TO REMAIN
2 - 2" X 1/8 PVC (SDR 21) BENDS PROP 2" PVC (SDR 26) WELL MAIN EST @ 4 LF±
PROP 2" PVC (SDR 26) WELL MAIN EST @ 10 LF±
WARNING: WASTEWATER CROSSING
REMOVE AND REPLACE EXIST CHAIN LINK FENCE EST @ 10 LF±
PROP 2" PVC (SDR 26) WELL MAIN EST @ 35 LF±
2 - 2" X 1/8 PVC (SDR 21) BENDS PROP 2" PVC (SDR 26) WELL MAIN EST @ 4 LF±
BM #3
AQUARIUM
CP #16
PROP 2" PVC (SDR 26) WELL MAIN EST @ 10 LF±
2 - 2" X 1/8 PVC (SDR 21) BENDS PROP 2" PVC (SDR 26) WELL MAIN EST @ 4 LF±
PROP 2" PVC (SDR 26) WELL MAIN EST @ 23 LF±
1 - 2" PVC BALL VALVE 1 - 6" VALVE BOX, COMPLETE PROP 2" PVC (SDR 26) WELL MAIN EST @ 5 LF±
CONTRACTOR TO LOCATE AND TIE INTO EXISTING 2" WELL LINE
FLAMINGO EXHIBIT
WARNING: 4" GAS MAIN CROSSING
CONTRACTOR TO COORDINATE WITH ZOO STAFF TO ALLOW ZOO GUEST ACCESS TO ALL EXHIBITS AT ALL TIMES. NEAR CONSTRUCTION AREA, CONTRACTOR TO PROVIDE AMPLE BARRICADES, FENCING AND PROTECTION TO PEDESTRIANS WHO WILL BE NEAR CONSTRUCTION AREA. ALL EXPOSED TRENCHES SHALL NOT BE LEFT OPEN WHEN UNATTENDED. STEEL PLATING SHALL BE USED TO PROTECT ZOO STAFF AND GUEST FROM OPEN TRENCHES.
HALF OF PATHWAY SHALL BE OPEN AT ALL TIMES TO ALLOW ACCESS TO ALL EXHIBITS
APE HOUSE
RAMONA'S GARDEN
PARKING AREA
TULETA DRIVE
CP #13
CP #15
IN THE EVENT THAT A POTENTIAL KARST FEATURE (SUBSURFACE OPENING, VOID SPACE, CAVE, ECT.) IS ENCOUNTERED DURING CONSTRUCTION ACTIVITIES, WORK WILL BE HALTED IN THE IMMEDIATE AREA AND THE FEATURE PROTECTED WITH PLASTIC SHEETING OR PLYWOOD. IMMEDIATELY CONTACT THE PROJECT ENVIRONMENTAL PROJECT MANAGER, MR. PHIL PEARCE AT 210-877-2847 (OFFICE), 210-215-0757 (MOBILE), PPEARCE@SWCA.COM, TO PERFORM AN ASSESSMENT OF THE FEATURE AND IMPLEMENT SUITABLE KARST INVERTEBRATE HABITAT MITIGATION IN ACCORDANCE WITH U.S. FISH AND WILDLIFE SERVICE REQUIREMENTS.

CONTRACTOR SHALL BE RESPONSIBLE TO CHLORINATE NEW MAINS WITH WITH WHEN THE WATER MAIN LENGTH IS 800 FEET OR LESS.

SEE SHEET #2 GENERAL NOTES FOR NOTES REGARDING TRENCH EXCAVATION SAFETY PROTECTION, ASBESTOS CEMENT PIPE, SALVAGING EXISTING FIRE HYDRANTS, AND CONNECTING NEW WATER MAINS TO EXISTING WATER MAINS AND SERVICES

LEGEND

- PROP. WATER MAIN
- EXIST. WATER MAIN
- GAS MAIN
- SANITARY SEWER
- STORM SEWER
- UTILITY POLE LINE
- ELECTRIC CABLE
- TELEPHONE CABLE
- DUAL BRANCH SERV.
- NEW UNMETERED SERVICE: 3/4" SINGLE 1" DUAL
- SERVICE RECONNECT: 3/4" 1" OR LARGER
- SERVICE RELAY: 3/4" 1" OR LARGER
- REDUCER
- UTILITY CROSSING
- PAVEMENT REPAIR
- EXIST PATHWAY
- BENCHMARK
- CONTROL POINT

LNV
TBPE FIRM NO. F-306
8918 TESORO DRIVE
SAN ANTONIO, TEXAS 78217

SAN ANTONIO ZOO

CONSERVATION CENTER IMPROVEMENTS PROJECT

OVERALL PROJECT LAYOUT

HORIZ. SCALE: 1"=20'
0 10 20
SCALE IN FEET

STATE OF TEXAS
NATHAN R. COBLER
117105
LICENSED PROFESSIONAL ENGINEER
7/20/15

DEVELOPER:	
CONT.	BUDGET PROJ.
SUBMITTED	
APPROVED	
MAP No.	DATE:7/20/2015
SECT.NO	JOB NO.: XX-XXXX
DRAWN BY:	DSGN BY: CHKD BY:

SHT NO.: W3

7/20/2015
Plotted by: kcampos
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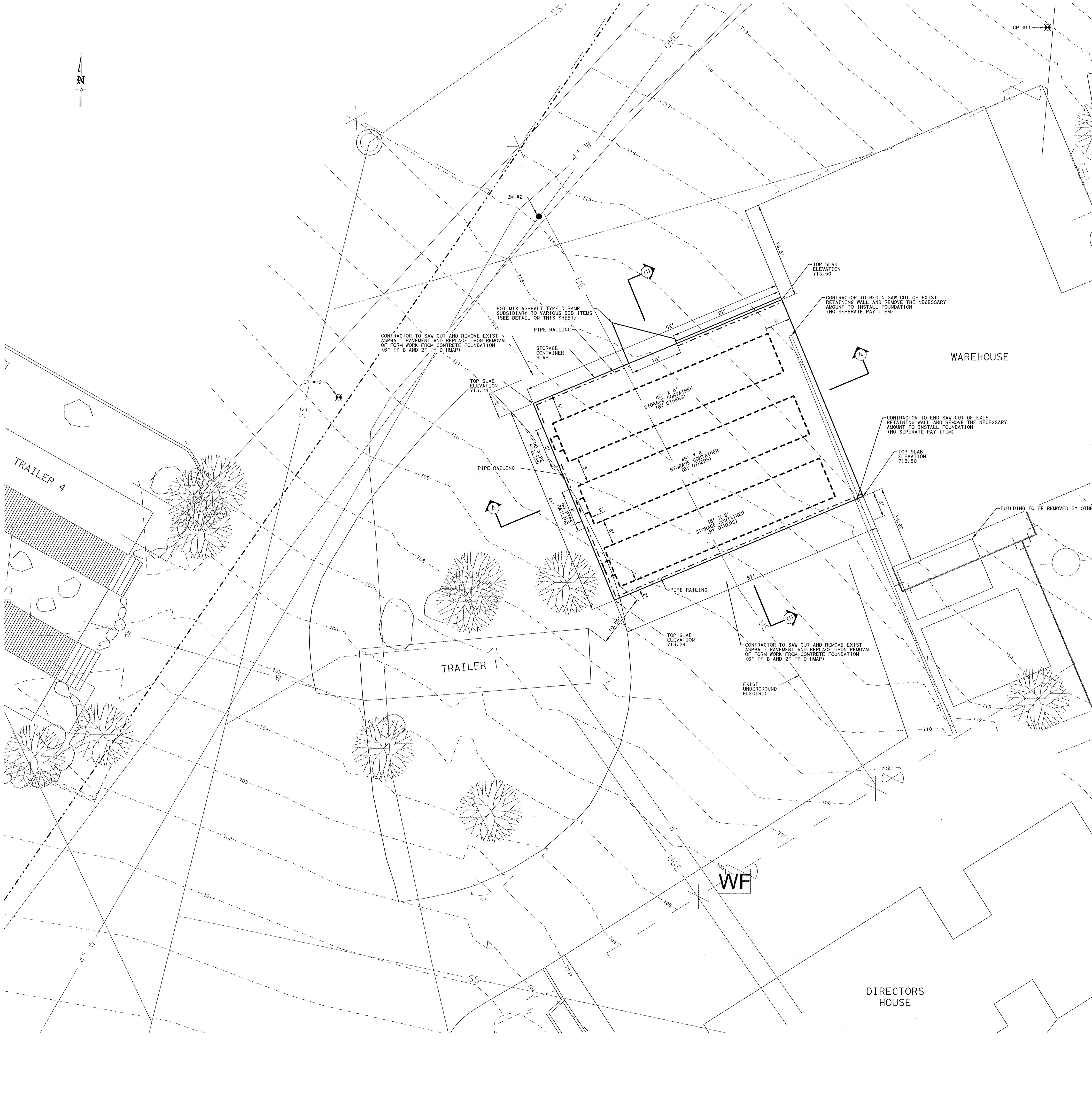
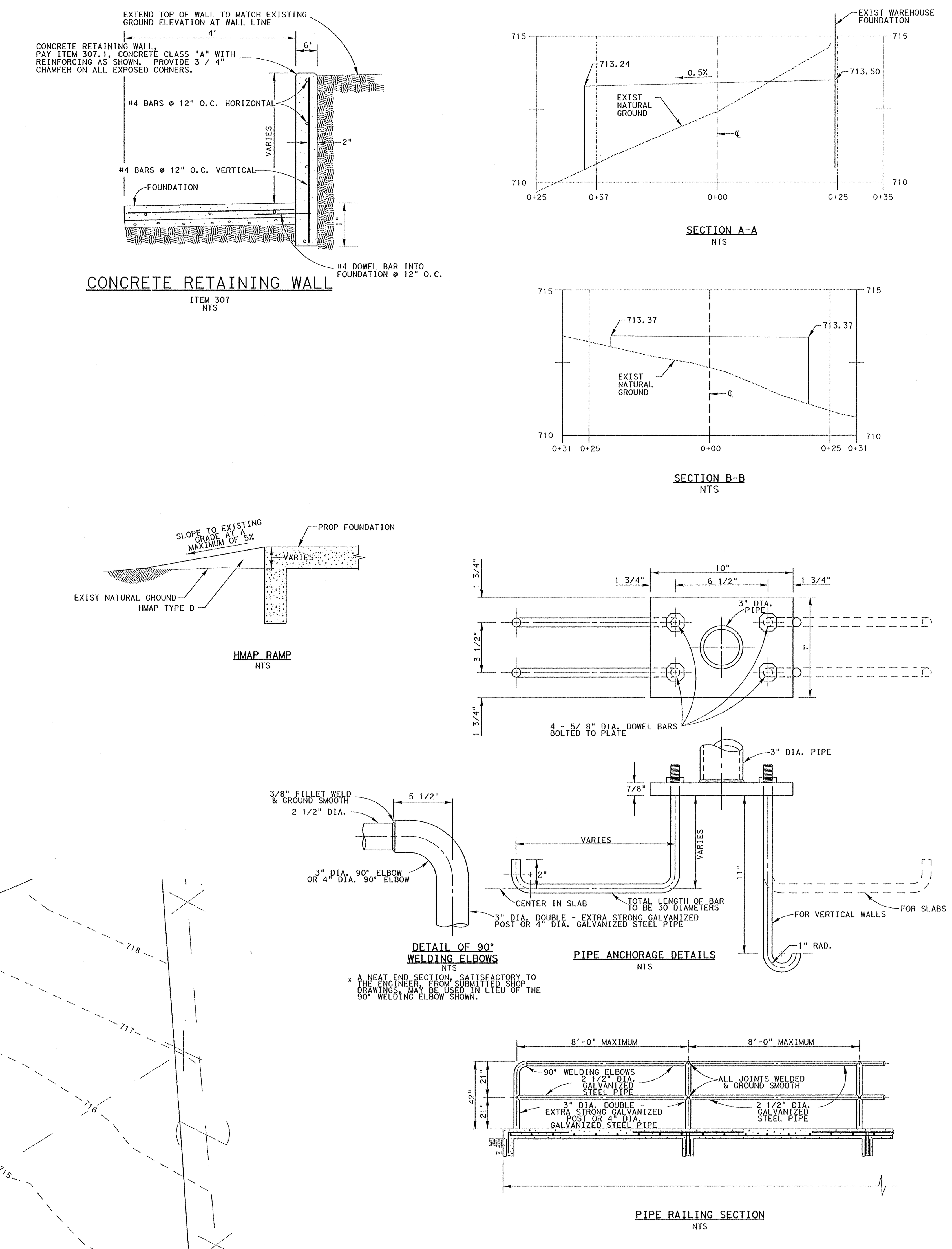




CONTRACTOR SHALL BE RESPONSIBLE TO CHLORINATE NEW MAINS WITH HTH WHEN THE WATER MAIN LENGTH IS 800 FEET OR LESS.

SEE SHEET W2 GENERAL NOTES FOR NOTES REGARDING TRENCH EXCAVATION SAFETY PROTECTION, ASBESTOS CEMENT PIPE, SALVAGING EXISTING FIRE HYDRANTS, AND THE LOCATION AND DEPTH OF EXISTING WATER MAINS AND SERVICES

IN THE EVENT THAT A POTENTIAL KARST FEATURE (SUBSURFACE OPENING, VOID SPACE, CAVE, ECT.) IS ENCOUNTERED DURING CONSTRUCTION ACTIVITIES, WORK WILL BE HALTED IN THE IMMEDIATE AREA AND THE VOID SPACE COVERED (E.G., UNDER TARP OR PLYWOOD). IMMEDIATELY CONTACT THE PROJECT ENVIRONMENTAL PROJECT MANAGER, MR. PHIL PEARCE AT 210-877-2847 (OFFICE), 210-215-0757 (MOBILE), PPEARCE@SWCA.COM, TO PERFORM AN ASSESSMENT OF THE FEATURE FOR SUITABLE KARST INVERTEBRATE HABITAT IN ACCORDANCE WITH U.S. FISH AND WILDLIFE SERVICE REQUIREMENTS.

LEGEND

PROP. WATER MAIN
EXIST. WATER MAIN
GAS MAIN
SANITARY SEWER
STORM SEWER
UTILITY POLE LINE
ELECTRIC CABLE
TELEPHONE CABLE
DUAL BRANCH SERV.
NEW UNMETERED SERVICE: 3/4" SINGLE, 1" DUAL
SERVICE RECONNECT: 3/4", 1" OR LARGER
SERVICE RELAY: 3/4", 1" OR LARGER
REDUCER
UTILITY CROSSING
PAVEMENT REPAIR
EXIST PATHWAY
BENCHMARK
CONTROL POINT

LNV
TBPE FIRM NO. F-366
8918 TESORO DRIVE
SAN ANTONIO, TEXAS 78217

SAN ANTONIO ZOO

CONSERVATION CENTER IMPROVEMENTS PROJECT

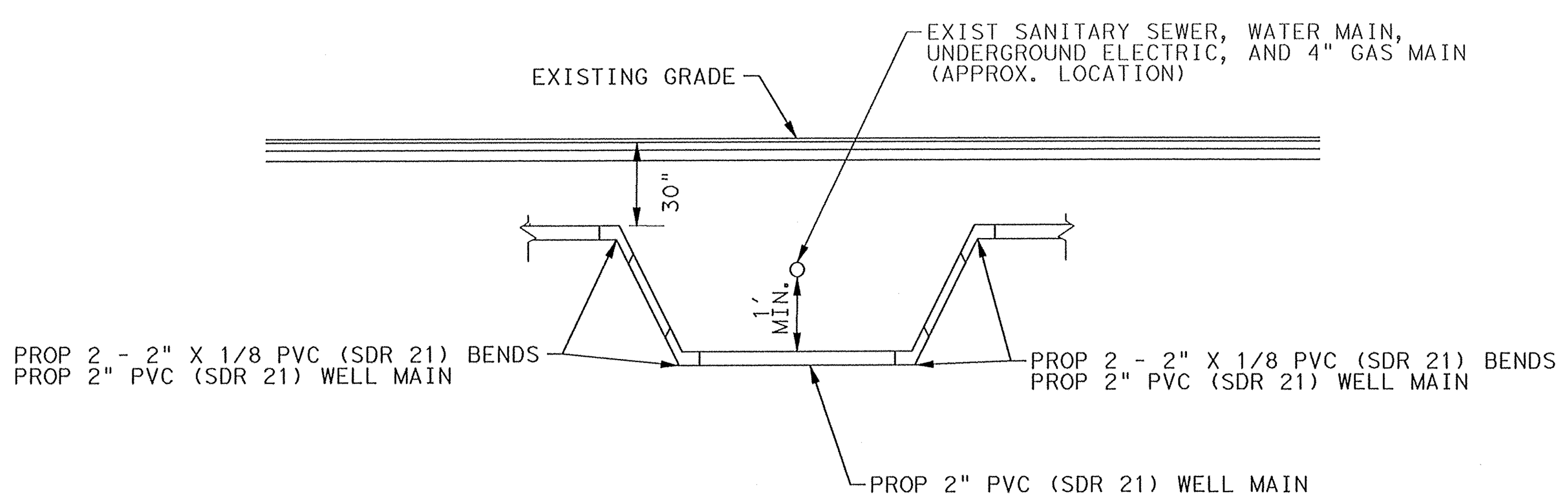
FOUNDATION LAYOUT

HORIZ. SCALE: 1"=30'
0 15 30
SCALE IN FEET

DEVELOPER:		
CONT.	BUDGET PROJ.	
SUBMITTED		
APPROVED		
MAP No.		DATE: 7/20/2015
SECT. NO	JOB NO.: XX-XXXX	SHT NO.: W4
DRAWN BY:	DSGN BY: CHKD BY:	

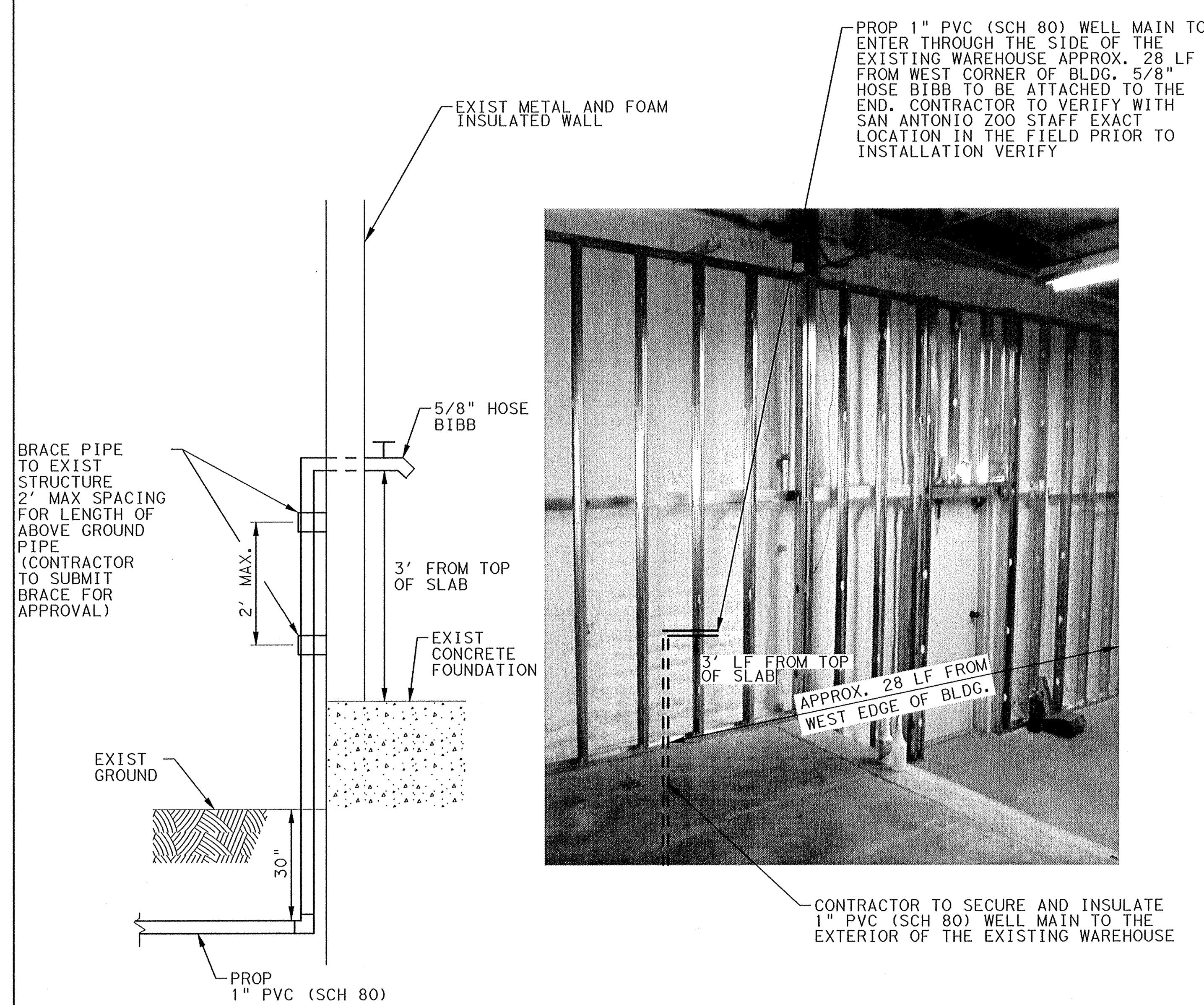
STATE OF TEXAS
NATHAN R. COBLER
117105
LICENSED PROFESSIONAL ENGINEER
7/20/15

NOTE: CONTRACTOR TO INSULATE AND MOUNT 1" PVC (SCH 80) TO EXISTING STRUCTURE.



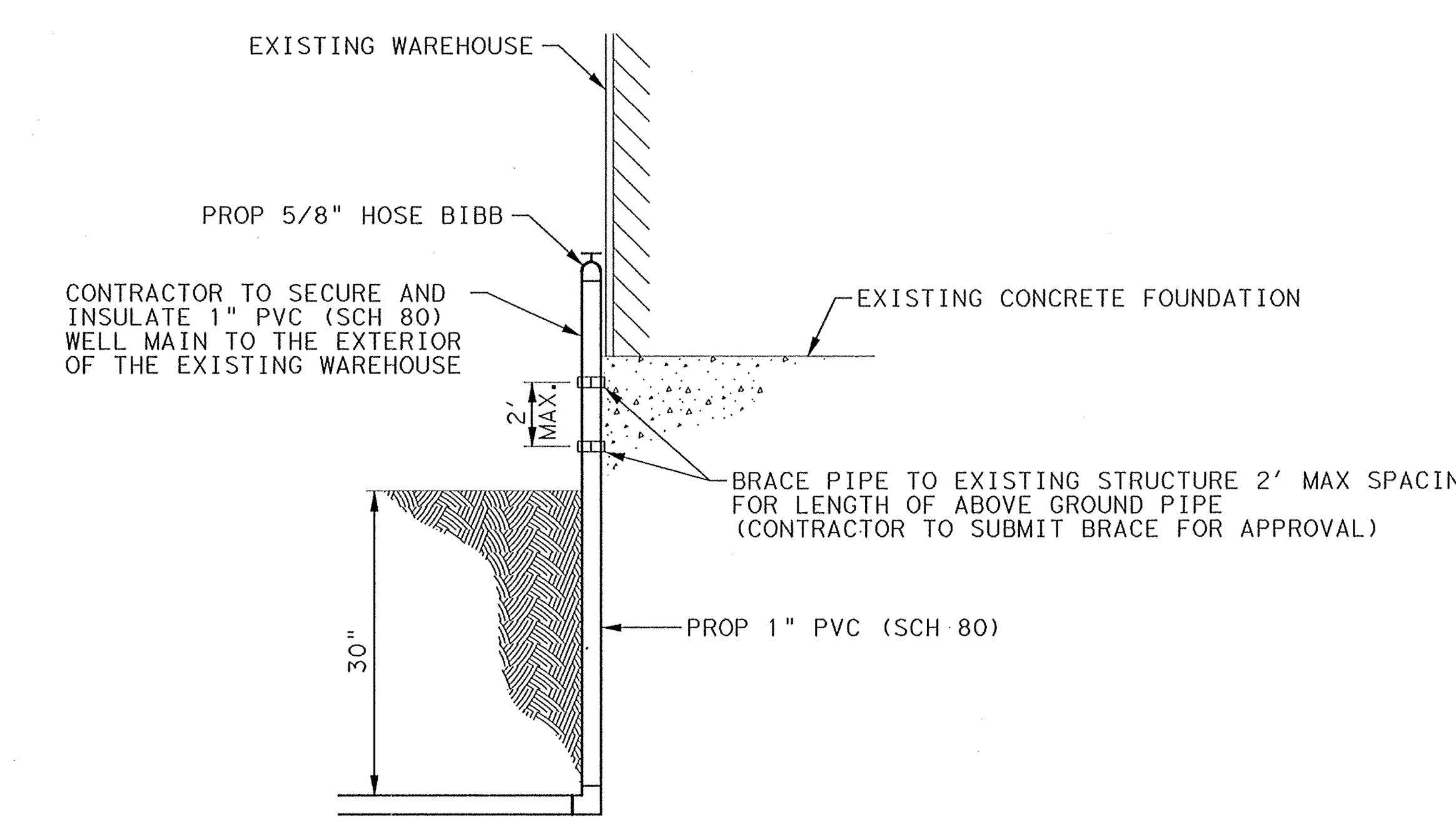
PROPOSED TYPICAL CROSS SECTION OF WELL MAIN RELATIVE TO EXISTING UTILITIES

NTS



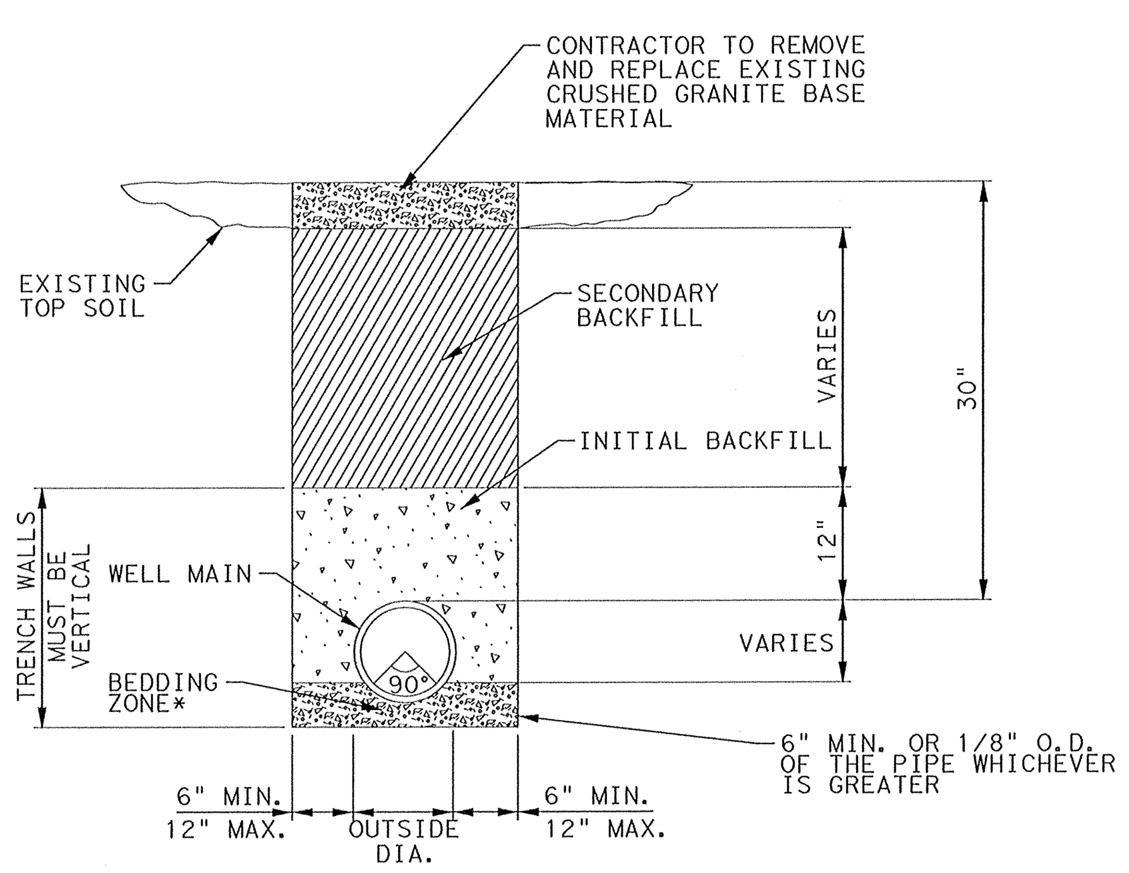
PROPOSED HOSE BIBB LOCATED WITHIN EXISTING WAREHOUSE AS SHOWN ON THE PROJECT LAYOUT SHEET

NTS

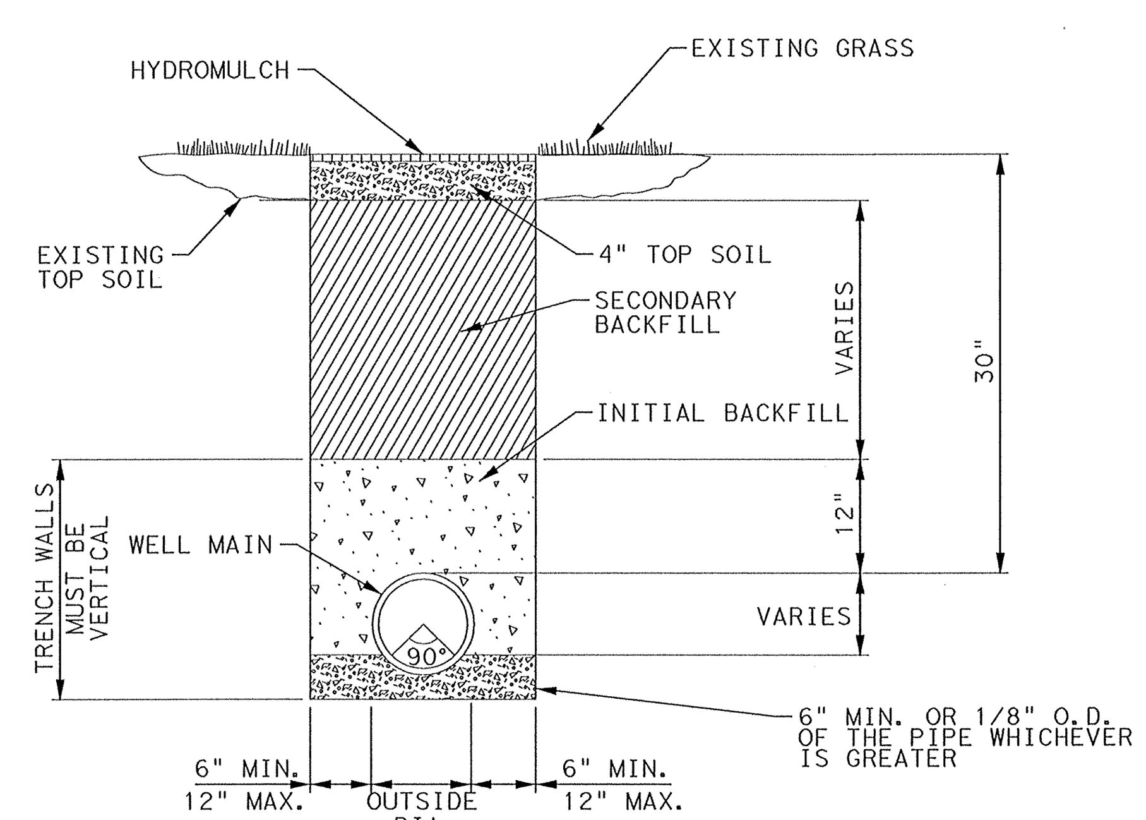


PROPOSED HOSE BIBB LOCATED NEXT TO EXISTING WAREHOUSE AS SHOWN ON THE PROJECT LAYOUT SHEET

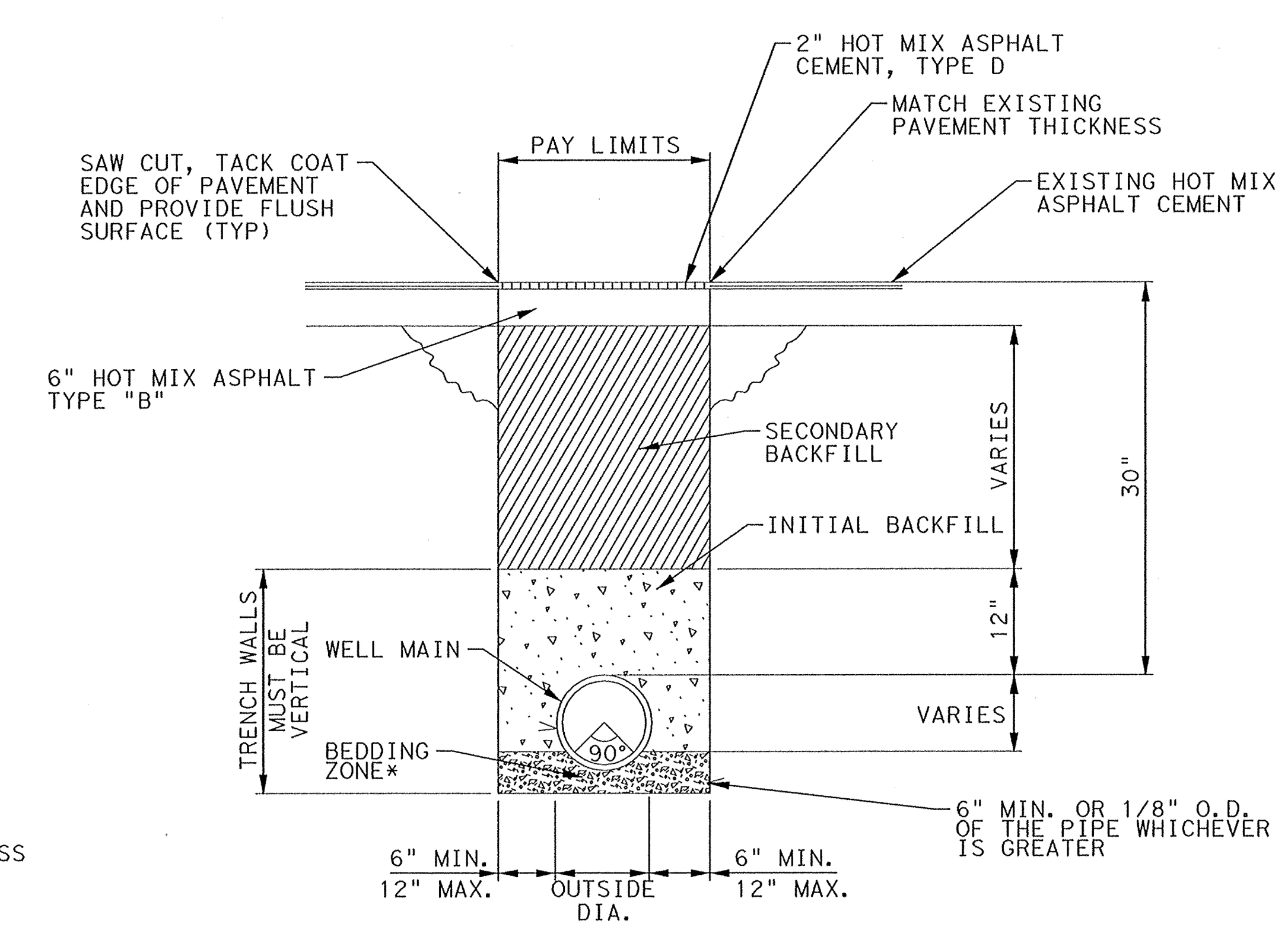
NTS



GRAVEL PATH



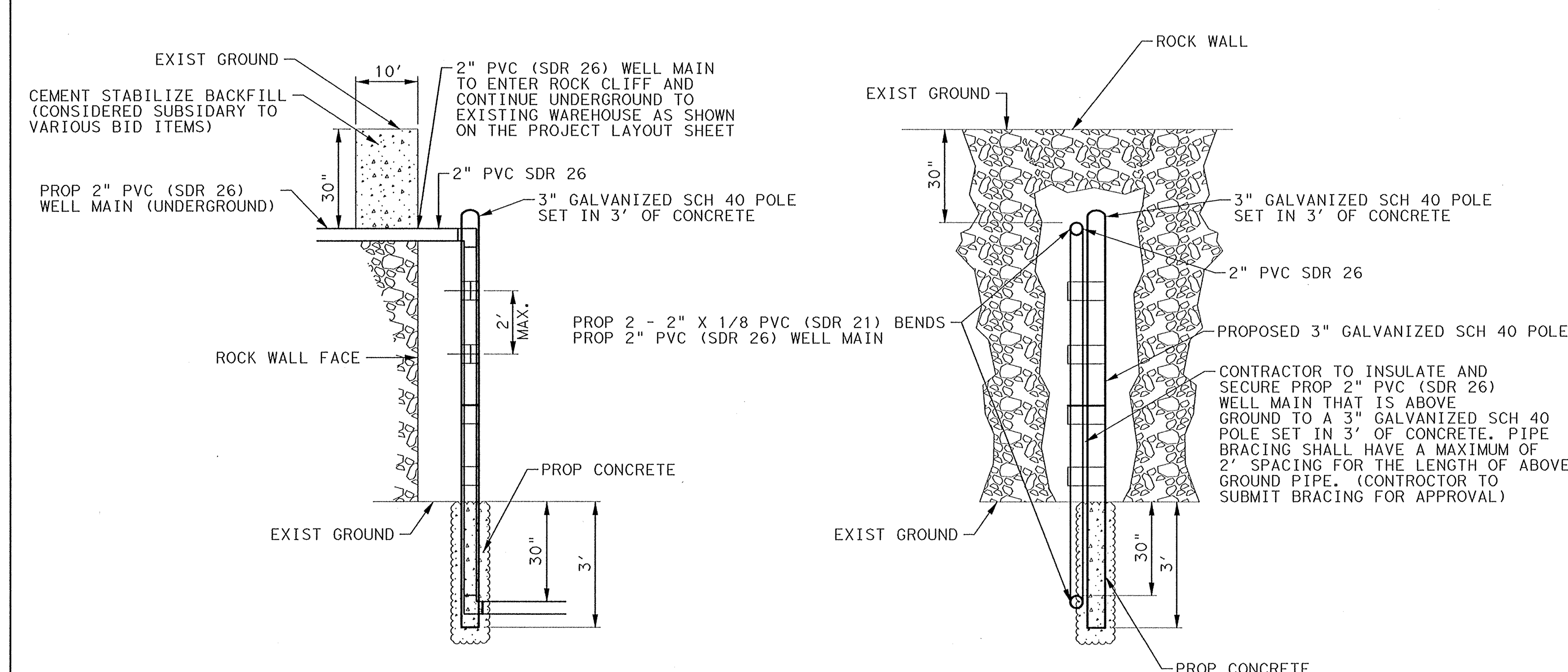
OUTSIDE PAVEMENT



INSIDE PAVEMENT

WELL MAIN DETAIL

NTS



PROPOSED WELL LINE AT ROCK CLIFF

NTS

NOTE: ALL SAWS DETAILS CAN BE FOUND ON WWW.SAWS.ORG

STATE OF TEXAS
NATHAN R. COBLER
117105
LICENSED PROFESSIONAL ENGINEER
7/20/15

LNV
TBPE FIRM NO. F-366
8918 TESORO DRIVE SAN ANTONIO, TEXAS 78217

SAN ANTONIO ZOO
CONSERVATION CENTER IMPROVEMENTS PROJECT

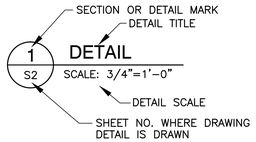
WATER DETAILS

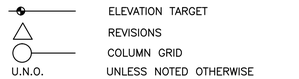
SCALE: N.T.S.

DEVELOPER:	
CONT.	BUDGET PROJ.
SUBMITTED	
APPROVED	
MAP No.	DATE: 7/20/2015
SECT. NO	JOB NO: XX-XXXX
DRAWN BY: DSGN BY: CHKD BY:	SHT NO: W5

NOTATION

DETAIL IDENTIFICATION SYSTEM





U.N.O.	UNLESS NOTED OTHERWISE
N.T.S.	NOT TO SCALE
T.O.C.	TOP OF CONCRETE
T.O.G.	TOP OF GROUT
T.O.S.	TOP OF STEEL
B.O.P.	BOTTOM OF PLATE
T.O.J.	TOP OF JOIST
O.C.E.W.	ON CENTER EACH WAY
F.O.C.	FACE OF CONCRETE
P.E.M.B.	PRE-ENGINEERED METAL BUILDING

MATERIALS

CONCRETE:

ITEM	28 DAY COMPRESSIVE CYLINDER STRENGTH			REMARKS
	3000 PSI	4000 PSI	5000 PSI	
ALL CONCRETE U.N.O.		●		1" MAX AGG.

REINFORCING STEEL:

ASTM-A615, GRADE 60, U.N.O.
ASTM-A185 - WELDED WIRE FABRIC

GEOTECHNICAL:

IN ACCORDANCE WITH A GEOTECHNICAL REPORT BY ROCK ENGINEERING AND TESTING LABORATORY, INC., ENTITLED "SUBSURFACE EXPLORATION, LABORATORY TESTING PROGRAM, AND FOUNDATION RECOMMENDATIONS FOR THE PROPOSED CONSERVATION CENTER IMPROVEMENTS, SAN ANTONIO ZOO, TULETA DRIVE, SAN ANTONIO, TEXAS ." RETL PROJECT NO.: G215202, DATED JULY 15, 2015.

SHOP DRAWING AND SUBMITTAL

1. A MINIMUM OF TWO SETS OF REINFORCING DRAWINGS SHALL BE FURNISHED BY FABRICATOR TO THE STRUCTURAL ENGINEER FOR APPROVAL.
2. SHOP DRAWINGS SHALL USE DRAFTING LINE WORK AND LETTERING THAT IS CLEARLY LEGIBLE. SHOP DRAWINGS SHALL NOT CONTAIN REPRODUCTIONS OF THE CONTRACT DRAWINGS PLANS OR DETAILS.
3. SHOP DRAWINGS SHALL NOT SHOW MATERIALS FOR MORE THAN ONE LEVEL OF THE SAME PLAN.
4. SHOP DRAWINGS SHALL SHOW CLEAR AND COMPLETE INFORMATION FOR THE FABRICATION (DETAIL SHEETS AND/OR MATERIAL LISTS) AND INSTALLATION.
5. ALLOW (2) WKS. FOR THE REVIEW OF SHOP DRAWINGS BY THE STRUCTURAL ENGINEER OF RECORD.

DESIGN STD'S. & CODES OF PRACTICE:

INTERNATIONAL BUILDING CODE 2015 W/ LATEST TEXAS REVISIONS (R)

BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (318-11) AND COMMENTARY (318R-11) (D)

ACI MANUAL OF CONCRETE PRACTICE, 2011 (R)

MINIMUM DESIGN LOADS FOR BUILDINGS & OTHER STRUCTURES, ASCE 7-10, (D)

(D) USED FOR DESIGN & CONSTRUCTION

(R) USED FOR REFERENCE

FOUNDATION AND EARTHWORK

1. FOUNDATION SYSTEM: CAST-IN-PLACE CONCRETE SLAB ON GRADE.
2. ALL SITE PROTECTION SHALL BE IN ACCORDANCE WITH THE PROJECT GEOTECHNICAL REPORT.
3. SELECT FILL REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE PROJECT GEOTECHNICAL REPORT.
4. STRUCTURAL FILL SHALL BE IN ACCORDANCE WITH THE PROJECT GEOTECHNICAL REPORT
5. REFERENCE CIVIL DRAWINGS FOR SITE PAVEMENT REQUIREMENTS, DETAILS AND LOCATION.
6. EXCAVATION SHALL BE AS SPECIFIED IN THE PROJECT GEOTECHNICAL REPORT.

GENERAL NOTES

1. COORDINATE DIMENSIONS, OPENINGS, EMBEDDED ITEMS AND CONDITIONS WITH CIVIL DRAWINGS PRIOR TO CONSTRUCTION. NOT ALL ITEMS INDICATED ARE SHOWN ON STRUCTURAL DRAWINGS. NOTIFY ENGINEER OF ANY DISCREPANCIES.
2. ALL DETAILS ARE TYPICAL, INCORPORATED INTO PROJECT AT APPROPRIATE LOCATIONS, WHETHER SPECIFICALLY INDICATED OR NOT.
3. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS AND SITE CONDITIONS BEFORE STARTING WORK. THE STRUCTURAL ENGINEER SHALL IMMEDIATELY BE NOTIFIED IN WRITING, OF ANY DISCREPANCIES.
4. ALL CONSTRUCTION, INCLUDING MATERIAL AND WORKMANSHIP, SHALL CONFORM TO THE PROVISIONS OF THE 2015 IBC AND STANDARDS REFERENCED THEREIN.
5. ALL ASTM STANDARDS LISTED HEREIN, SHALL BE AS REFERENCED IN THE LATEST ISSUE OF THE ANNUAL BOOK OF STANDARDS OF THE AMERICAN SOCIETY FOR TESTING AND MATERIALS.
6. ALL OMISSIONS AND/OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER; WORK SHOULD NOT PROCEED UNTIL A SOLUTION IS GIVEN BY THE STRUCTURAL ENGINEER.
7. IN CASE OF CONFLICT, NOTES AND DETAILS OF THESE STRUCTURAL DRAWINGS SHALL TAKE PRECEDENCE OVER THE "GENERAL NOTES". TYPICAL DETAILS SHALL BE USED WHENEVER APPLICABLE. REFER TO SPECIFICATIONS FOR INFORMATION NOT COVERED BY THESE NOTES OF DRAWING.
8. IF A SPECIFIC DETAIL IS NOT SHOWN FOR ANY PART OF THE WORK, THE CONSTRUCTION SHALL BE THE SAME AS FOR SIMILAR WORK.
9. WORKING DIMENSIONS SHALL NOT BE SCALED FROM PLANS, SECTIONS OR DETAILS ON THESE STRUCTURAL DRAWINGS.
10. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ADEQUATE ERECTION SHORING AND BRACING AS REQUIRED FOR STABILITY OF THE STRUCTURE DURING ALL PHASES OF CONSTRUCTION. THESE DRAWINGS REPRESENT THE FINISHED STRUCTURE AND DO NOT INDICATE THE METHOD OF CONSTRUCTION.
11. PIPES, DUCTS, SLEEVES, OPENINGS, POCKETS, CHASES, BLOCKOUTS, ETC. SHALL NOT BE PLACED IN SLABS, BEAMS, GIRDERS, COLUMNS, WALLS, FOUNDATION, ETC. NOR SHALL ANY STRUCTURAL MEMBER BE CUT FOR SUCH ITEMS, UNLESS SPECIFICALLY DETAILED ON THESE STRUCTURAL DRAWINGS. (IF ANY PIPES, DUCTS, ETC. DO OCCUR, THAT ARE NOT SHOWN ON THESE STRUCTURAL DRAWINGS, THE STRUCTURAL ENGINEER SHALL BE NOTIFIED)
12. ANCHOR BOLTS OR INSERTS FOR EQUIPMENT ANCHORAGE OR INSTALLATION SHALL BE DESIGNED BY A CIVIL ENGINEER OR STRUCTURAL ENGINEER REGISTERED IN THE STATE OF TEXAS AND SHALL BE SHOWN ON THE MECHANICAL OR ELECTRICAL SHOP DRAWINGS.
13. THE CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE STRUCTURAL ENGINEER FREE AND HARMLESS FROM ALL CLAIMS, DEMANDS AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT EXCEPT FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE STRUCTURAL ENGINEER.
14. IF ANY SUBSTITUTION IS PROPOSED BY THE CONTRACTOR, NEW CALCULATIONS MAY HAVE TO BE PREPARED, THE DETAILS MAY HAVE TO BE ALTERED, ANY NEW DRAWINGS MAY HAVE TO BE SUBMITTED TO THE BUILDING DEPARTMENT. THE CONTRACTOR SHALL PAY THE STRUCTURAL ENGINEERS FEES TO ALTER THE APPROVED PLANS. THE CONTRACTOR SHALL ALSO PROCESS THE REVISED PLANS REFLECTING ALL SUBSTITUTIONS THROUGH THE BUILDING DEPARTMENT.
15. ALL PRODUCTS SPECIFIED FOR USE ON THIS PROJECT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND/OR PROCEDURES.

CONCRETE NOTES

1. ALL CONCRETE SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE ACI 318 BUILDING CODE.
2. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS, U.N.O. - WATER / CEMENT RATIO OF 0.45 MAX.
3. REINFORCING STEEL TO HAVE 3" MINIMUM COVER WHERE CONCRETE IS CAST AGAINST EARTH. ALL OTHER REINFORCING SHALL HAVE 2" MINIMUM CONCRETE COVER, TYPICAL, U.N.O.
4. REINFORCING STEEL MATERIAL SHALL BE NEW AND BE A615-GRADE 60 UNLESS NOTED OTHERWISE.
5. ALL REINFORCING STEEL SPLICES SHALL BE IN ACCORDANCE WITH ACI 318 LATEST REVISION (MINIMUM 40 BAR DIAMETERS).
6. REINFORCING STEEL BENT BARS ARE DIMENSIONED OUT TO OUT OF STEEL.
7. NOTIFY ENGINEER MINIMUM OF 24 HOURS PRIOR TO PLACING CONCRETE.
8. SECURE REINFORCING BARS, ANCHOR BOLTS AND EMBEDDED ITEMS PRIOR TO PLACING CONCRETE.
9. ALL BARS ARE TO BE SUPPORTED IN FORMS AND SLABS WITH CHAIRS AND TIED AT EVERY OTHER INTERSECTION.
10. ALL BACKFILL SHALL BE PLACED IN MAXIMUM 8" LIFTS AND COMPACTED TO 95% STANDARD PROCTOR DENSITY. BACKFILL MATERIAL SHALL BE GRANULAR HAVING A P.I. OF BETWEEN 8 AND 17.
11. ALL CONDUIT, GROUND WIRES, DRAINS, ANCHOR BOLTS ETC., SHALL BE IN PLACE BEFORE CONCRETE IS PLACED.
12. REFER TO CIVIL DRAWINGS FOR GRADE ELEVATIONS, SLOPES, DRAINS, BLOCK OUT AND EMBEDDED ITEMS, ETC.. STRUCTURAL SERIES DRAWINGS SHALL BE COMPARED WITH DRAWINGS OF OTHER SERIES. DIFFERENCES SHALL BE REFERRED TO THE ENGINEER FOR INSTRUCTIONS.
13. ENTIRE AREA AROUND FOUNDATION MUST BE THOROUGHLY PROBED FOR UNDERGROUND PIPE, CONDUIT, HIGH PRESSURE LINES, ETC., BEFORE ANY EXCAVATIONS ARE BEGUN.
14. MILD STEEL REINFORCEMENT AND ACCESSORIES SHALL BE DETAILED AND FABRICATED IN ACCORDANCE WITH ACI SP-66.
15. PORTLAND CEMENT SHALL BE A SINGLE BRAND CONFORMING TO ASTM C-150, TYPE I/II UNLESS OTHERWISE APPROVED BY THE ENGINEER.
16. NORMAL WEIGHT AGGREGATES SHALL CONFORM TO ASTM C-33. EACH TYPE SHALL BE FROM A SINGLE SOURCE FOR EXPOSED CONCRETE.
17. ALL ADDITIVES FOR AIR ENTRAINMENT, WATER REDUCTION, AND SET CONTROL SHALL BE USED IN ACCORDANCE WITH THE SPECIFICATIONS AND THE MANUFACTURER'S DIRECTIONS. THE USE OF CALCIUM CHLORIDE AND FLY ASH ARE PROHIBITED UNLESS APPROVED IN WRITING BY THE ENGINEER.
18. THE MAXIMUM NOMINAL SIZES OF COARSE AGGREGATE SHALL BE AS FOLLOWS:
    ALL CONCRETE ..... 1"
19. CONCRETE SLUMPS SHALL BE AS FOLLOWS:
    ALL CONCRETE ..... 4" MAX. ± 1"
20. CONCRETE EXPOSED TO WEATHER SHALL BE AIR ENTRAINED AS FOLLOWS:
    1" MAX. AGGREGATE ..... 3% TO 6%
    3/4" MAX. AGGREGATE ..... 3 1/2"% TO 6 1/2"%
21. MILD STEEL REINFORCEMENT SHALL BE PLACED AND SECURED IN ACCORDANCE WITH CRSI "RECOMMENDED PRACTICE FOR PLACING REINFORCING BARS".
22. ALL ANCHOR RODS SHALL BE HOT-DIP GALVANIZED TO ASTM F1554 GRADE 36 KSI STEEL (U.N.O.).

CALL BEFORE YOU DIG!

Texas 811 Know what's below. Call before you dig.

PARTICIPANTS REQUEST 48 HOURS NOTICE BEFORE YOU DIG, DRILL, OR BLAST - STOP AND CALL 811

THE LONE STAR NOTIFICATION COMPANY AT 1-800-669-8344

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STATE OF TEXAS
DOUGLAS H. LAWRENCE
109521
LICENSED PROFESSIONAL ENGINEER

07/20/15

DOUGLAS H. LAWRENCE, P.E. NO. 109521

LNV
TBPE FIRM NO. F-366
8918 TESORO DRIVE
SAN ANTONIO, TEXAS 78217

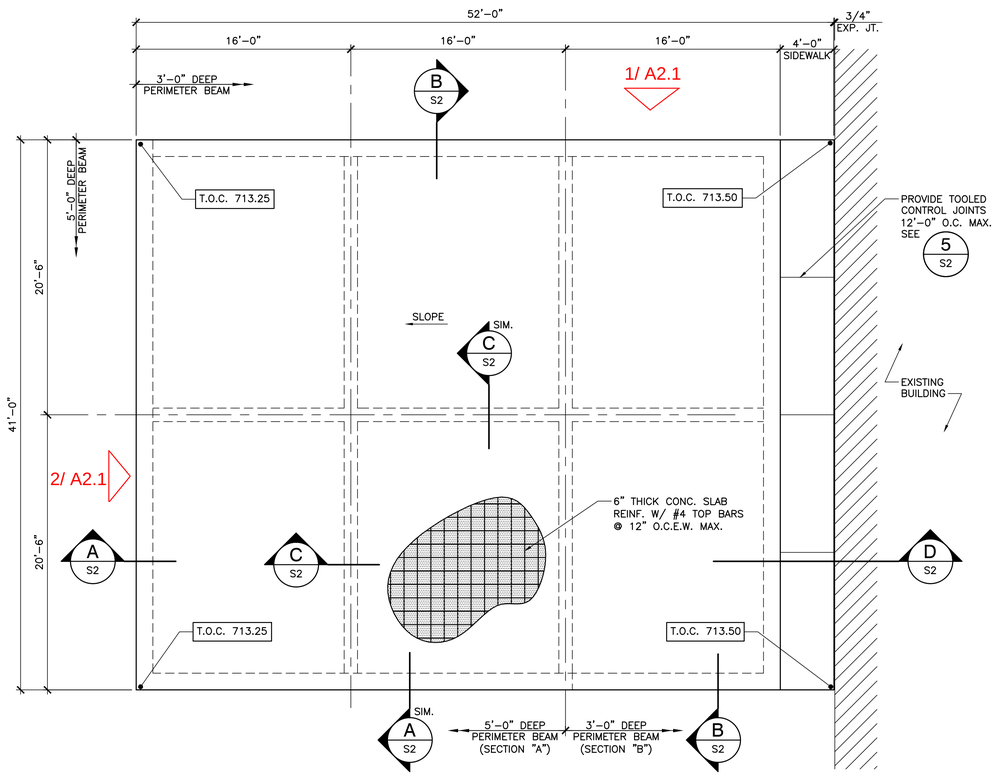
SAN ANTONIO ZOO

CONSERVATION CENTER IMPROVEMENTS PROJECT

GENERAL NOTES & DESIGN CRITERIA

SCALE: N.T.S.

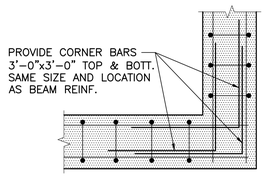
DEVELOPER:			
CONT.:		BUDGET PROJ.	
SUBMITTED			
APPROVED			
MAP NO.			DATE: 7/17/15
SECT. NO.		JOB NO.: XX-XXXX	SHT NO.: S1
DRAWN BY: MH	DSGN BY: DL	CHKD BY: DL	



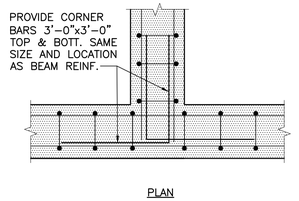
1 S2 PLAN AT BUILDING SLAB
SCALE: 1/4" = 1'-0"

NOTE:
REFER TO CIVIL DRAWINGS FOR SLAB LOCATION AND SITE GRADING REQUIREMENTS.

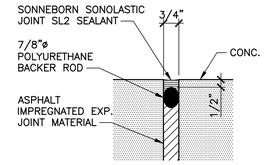
NOTE:
WITHIN THE FOUNDATION LIMITS AND A 5' WIDE STRIP AROUND THE PERIMETER, THE EXISTING ASPHALT SURFACE SHALL BE SAW CUT, REMOVED AND DISPOSED OF AT AN APPROVED OFF-SITE FACILITY.



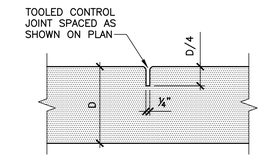
2 S2 TYP. BEAM CORNER DETAIL
N.T.S.



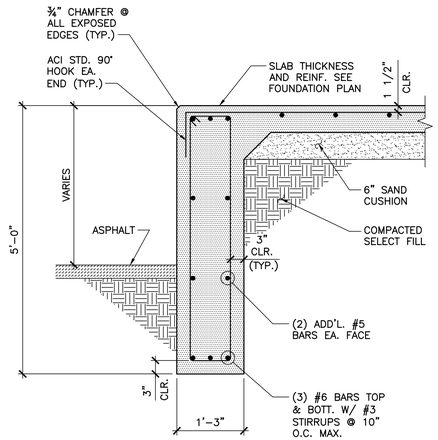
3 S2 TYP. BEAM INTERSECTION DETAIL
N.T.S.



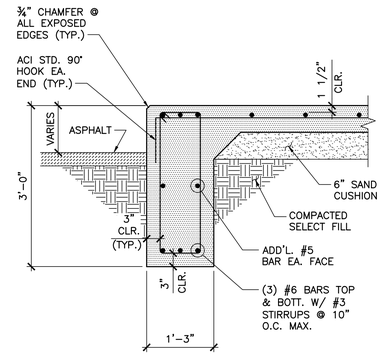
4 S2 TYP. EXPANSION JOINT DETAIL
N.T.S.



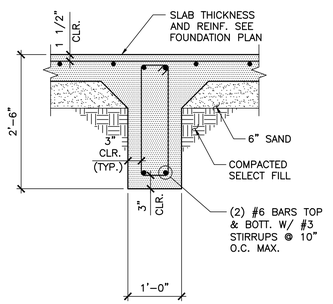
5 S2 TYP. TOOLED CONTROL JOINT DETAIL
N.T.S.



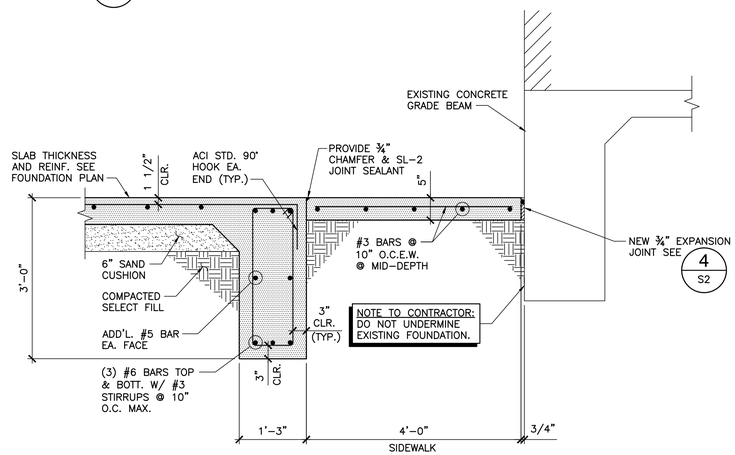
A S2 SECTION
SCALE: 3/4" = 1'-0"



B S2 SECTION
SCALE: 3/4" = 1'-0"



C S2 SECTION
SCALE: 3/4" = 1'-0"



D S2 SECTION
SCALE: 3/4" = 1'-0"

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109521
LICENSED PROFESSIONAL ENGINEER
07/20/15

DOUGLAS H. LAWRENCE, P.E. NO. 109521

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SAN ANTONIO, TEXAS 78217

SAN ANTONIO ZOO

CONSERVATION CENTER IMPROVEMENTS PROJECT

FOUNDATION PLAN, SECTIONS & DETAILS

SCALE: AS SHOWN

DEVELOPER:
CONT: BUDGET PROJ.
SUBMITTED
APPROVED
MAP No.
DATE: 7/17/15
SECT. NO JOB NO.: XX-XXXX SHT NO.: S2
DRAWN BY: MH DSGN BY: DL CHKD BY: DL

ELECTRICAL SYMBOLS AND ABBREVIATIONS

(SOME SYMBOLS MAY NOT BE APPLICABLE TO THIS PROJECT)

SYMBOLS

GENERAL

- MOTOR, HP AS INDICATED
- CONTROLLER TO BE FURNISHED UNDER DIVISION 15 AND INSTALLED UNDER DIVISION 16
- DISCONNECT SWITCH
- MAGNETIC MOTOR STARTER
- COMBINATION MOTOR STARTER/DISCONNECT SWITCH
- GROUNDING REFERENCE POINT.
- JUNCTION BOX, CEILING MOUNTED
- JUNCTION BOX, WALL MOUNTED
- PC — PHOTO CELL
- R — RELAY
- TC — TIME CLOCK
- C — CONTACTOR
- BELL
- BUZZER
- CEILING MOUNTED CLOCK
- WALL MOUNTED CLOCK
- WALL MOUNTED DOUBLE FACE CLOCK—HEIGHT AS DESIGNATED BY ARCHITECT
- TV — HORN
- TRANSFORMER AS INDICATED
- ATS — AUTOMATIC TRANSFER SWITCH
- EQUIPMENT CONNECTION
- 2 — KEYED NOTE NO. 2
- CH— — MECHANICAL EQUIPMENT DESIGNATION. REFER TO MECHANICAL EQUIPMENT SCHEDULES.

LUMINAIRES

- A / a — LUMINAIRE, CEILING OR WALL MOUNTED (SEE FIXTURE SCHEDULE). SUBSCRIPT INDICATES ASSOCIATED SWITCHING. CAPITAL LETTER INDICATES FIXTURE TYPE. "E" SUFFIX INDICATES BATTERY BACK—UP.
- FIXTURE CEILING MOUNTED (SEE FIXTURE SCHEDULE)
- FIXTURE WALL MOUNTED (SEE FIXTURE SCHEDULE)
- WALLWASH FIXTURE CEILING MOUNTED. ARROW INDICATES DIRECTION OF WASH.
- EXIT LIGHT, UNSWITCHED, BATTERY BACK—UP, SELF DIAGNOSTICS, CEILING MOUNTED WITH ARROWS AS INDICATED ON DRAWINGS. CONNECT TO EMERGENCY SYSTEM (IF AVAILABLE).
- EXIT LIGHT, UNSWITCHED, WALL MOUNTED, BATTERY BACK—UP, SELF DIAGNOSTICS, WITH ARROWS AS INDICATED ON DRAWINGS. CONNECT TO EMERGENCY SYSTEM (IF AVAILABLE).
- FIXTURE IS UNSWITCHED. "E" SUFFIX INDICATES BATTERY BACKUP WITH ONE BALLAST CONNECTED TO BATTERY BACK UP. FIXTURE MAY BE CONNECTED TO EMERGENCY BACK—UP SYSTEM.
- FIXTURE WITH ONE BALLAST CONNECTED TO BATTERY BACK UP. FIXTURE IS SWITCHED.
- EMERGENCY LIGHT, WALL MOUNTED, UNSWITCHED. BATTERY TYPE WITH CHARGER.
- POLE MOUNTED LUMINAIRE. SEE SCHEDULE OR NOTES FOR TYPE. ORIENT FIXTURE FOR CUT—OFF TOWARDS AREA TO BE LIT. ORIENT HOUSE SHIELD TOWARDS BUILDING. SEE DETAILS FOR POLE BASE. PROVIDE POLE BASE GROUND ROD.
- FLOOD LIGHT. ARROW INDICATES AIMING DIRECTION.
- TRACK LIGHT WITH HEADS AS INDICATED

RACEWAYS

- CONDUIT CONCEALED IN WALL OR CEILING WITH ONE PHASE, NEUTRAL AND GROUND CONDUCTOR UNLESS OTHERWISE NOTED
- CONDUIT UNDER FLOOR OR CAST IN STRUCTURE WITH ONE PHASE, NEUTRAL AND GROUND CONDUCTOR UNLESS OTHERWISE NOTED.
- SWITCH LEG
- P1A—2,4,6 — BRANCH CIRCUIT HOMERUN SUBSCRIPT "P1A" INDICATES PANEL AND 2,4,6 INDICATES BREAKER POSITION. 3/4"C, 2#12 AND 1#12 GND. MIN.
- SURFACE RACEWAY (PANDUIT TWIN 70 OR WIREMOLD EQUIV)
- —T— TELEPHONE
- BUS DUCT WITH TAKE OFF DEVICE

PANEL AND RELATED ITEMS

- PANELBOARD (SEE SCHEDULE), SURFACE MOUNTED.
- PANELBOARD (SEE SCHEDULE), FLUSH MOUNTED.
- SWBD — SWITCHBOARD OR DISTRIBUTION BOARD
- MCC — MOTOR CONTROL CENTER
- TVSS — TRANSIENT VOLTAGE SURGE SUPPRESSOR.
- TELE — PLYWOOD TELEPHONE BACKBOARD: PROVIDE WALL MOUNTED WHITE PAINTED 4x8' PLYWOOD BACKBOARD, SURGE PROTECTION, SECONDARY GROUND, AND TWO QUAD RECEPTACLES AT THE BASE OF THE BACKBOARD.

OUTLETS

- IVORY SIMPLEX RECEPTACLE
- DUPLEX RECEPTACLE, 20A, 1P, IVORY WITH COVER PLATE
- WP, T, GFI, IG C, TV — DUPLEX RECEPTACLE; GFI=GROUND FAULT INTERRUPTING, WP=WEATHERPROOF, T=TAMPER RESISTANT, IG=ORANGE ISOLATED GROUND, C=CLOCK OUTLET MOUNTED 18" BELOW CEILING, TV=TV RECEPTACLE WITH COMBINATION DUPLEX/COAX PLATE MOUNTED 7'6" AFF
- DOUBLE DUPLEX (QUADRUPLEX) RECEPTACLE, IVORY, WITH COVER PLATE
- RED DUPLEX RECEPTACLE WITH IVORY COVERPLATE CONNECTED TO EMERGENCY POWER BRANCH
- RED QUAD RECEPTACLE WITH IVORY COVERPLATE, CONNECTED TO EMERGENCY POWER BRANCH
- SPECIAL PURPOSE RECEPTACLE. SEE PANEL SCHEDULES AND FLOOR PLAN NOTES FOR TYPE. RECEPTACLE SHALL BE FLUSH MOUNT. PROVIDE TWO GANG BACKBOX, PLASTER RING, AND STAINLESS STEEL PLATE.
- ROUND FLUSH FLOOR BOX WITH DUPLEX POWER, AND BRASS COVER PLATE. HUBBELL B2529 WITH SF3925 COVER.
- FLOOR BOX HUBBELL LCFBSS (OR EQUIV.). PROVIDE 3/4" CONDUIT FOR POWER AND 1—1" CONDUIT FOR DATA/IT EQUIPMENT. PROVIDE TWO (2) 20A SINGLE POLE DUPLEX RECEPTACLES, AND TWO (2) TWO SPACE MODULAR RJ—45 JACK PLATES. SEE FLOOR PLANS/SPECS FOR DATA FILL AND WHETHER IT CONDUIT IS TO ABOVE ACCESSIBLE CEILING , CABLE TRAY, OR BACK TO IDF/MDF/PHONE BOARD. PROVIDE FLOOR INSERT.
- TELEPHONE OUTLET: TWO GANG BOX, CONDUIT BUSHINGS, PLASTER RING, TWO (2) RJ—45 JACK MODULAR WALL PLATE, 3/4" CONDUIT TO ABOVE ACCESSIBLE CEILING AND TWO PLENUM RATED CAT 5E CABLES TO TELEPHONE BACKBOARD. PROVIDE EXTRA 10' CABLE FOR TERMINATION AT BOARD.
- TELEVISION OUTLET: FEMALE COAX JACK, WALL PLATE, 3/4" CONDUIT TO ABOVE ACCESSIBLE CEILING, PLENUM RATED RG—59U BACK TO LOCAL (WITHIN 50 FEET) SPLITTER/TAP/CATV ENTRANCE OR PLENUM RATED RG—11U TO SPLITTER/TAP/CATV ENTRANCE IF RUN IS LONGER THAN 50 FEET.
- DATA OUTLET: TWO GANG BOX, CONDUIT BUSHINGS, PLASTER RING, TWO (2) RJ—45 JACK MODULAR WALL PLATE, 3/4" CONDUIT TO ABOVE ACCESSIBLE CEILING AND TWO PLENUM RATED CAT 5E CABLES TO IDF/MDF SWITCHES. PROVIDE EXTRA 10' CABLE FOR TERMINATION IN ROOM.
- COMBINATION DATA/POWER 2 GANG SPLIT BOX MOUNTED IN CEILING. PROVIDE 1" CONDUIT FROM BOX TO CABLE TRAY. PROVIDE 3/4" CONDUIT TO DUPLEX.

SWITCHES

- SINGLE POLE SWITCH, LOWERCASE SUBSCRIPT INDICATES ASSOCIATED CIRCUITRY
- DOUBLE POLE SWITCH
- THREE—WAY SWITCH
- FOUR—WAY SWITCH
- KEY OPERATED SWITCH
- SWITCH WITH PILOT LIGHT IN HANDLE (ON LIGHTED UNLESS OTHERWISE NOTED)
- WEATHERPROOF SWITCH
- MANUAL MOTOR STARTER SWITCH (T=THERMAL OVERLOAD SIZED FOR MOTOR)
- INCANDESCENT DIMMER SWITCH WATTAGE RATING AS NOTED.
- FLUORESCENT DIMMER SWITCH, NUMBER OF LAMPS AS NOTED.
- EXPLOSION PROOF SWITCH
- TIMER SWITCH
- MULTIPLE SWITCHES, GANGED.
- WALL SWITCH INFRARED (WATT STOPPER #WS277 OR EQUAL)
- CEILING MOUNTED DUAL —TECHNOLOGY OCCUPANCY SENSOR
- WALL SWITCH INFRARED OCCUPANCY SENSOR WITH MANUAL PUSH BUTTON OVERRIDE AND ADJUSTABLE FIELD OF VIEW (LEVITON ODS15—ID). OS2 INDICATES DUAL MANUAL SWITCHING
- PUSHBUTTON

ABBREVIATIONS

A	AMPERE(S)
AC	ABOVE COUNTER
A/C	AIR CONDITIONING
AIC	AMPERE INTERRUPTING CAPACITY
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
AL , ALUM	ALUMINUM
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
BLDG	BUILDING
C	CONDUIT
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
CKT	CIRCUIT
COND	CONDUCTOR
CPU	CENTRAL PROCESSING UNIT
CT	CURRENT TRANSFORMER
DCP	DATA COLLECTION PANEL
DIA	DIAMETER
DC	DISCONNECT
DIST	DISTRIBUTION
DN	DOWN
DWGS	DRAWINGS
EC	EMPTY CONDUIT
EF	EXHAUST FAN
EQMT	EQUIPMENT
EWC	ELECTRIC WATER COOLER
EXH	EXHAUST
EXP	EXPLOSION PROOF
EXTG	EXISTING
F/A , F.A.	FIRE ALARM
FLUOR	FLUORESCENT
FN	FULL NEUTRAL
FT	FEET, FOOT
GALV	GALVANIZED
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFI	GROUND FAULT INTERRUPTER
GND	GROUND
GRD	GALVANIZED RIGID STEEL
HID	HIGH INTENSITY DISCHARGE
HP	HORSEPOWER
HOA	HAND OFF AUTOMATIC
HPS	HIGH PRESSURE SODIUM
HVAC	HEATING/VENTILATING/AIR CONDITIONING
HZ	HERTZ
ID	INSIDE DIAMETER
IG	ISOLATED GROUND
IMC	INTERMEDIATE STEEL CONDUIT
IN	INCHES
INCD	INCANDESCENT
JB	JUNCTION BOX
KV	KILOVOLT
KVA	KILOVOLT AMPERE
KVAC	KILOVOLT AMPERE CAPACTIVE
KVAR	KILOVOLT AMPERE REACTIVE
KW	KILOWATT
KWH	KILOWATT HOUR
LPS	LOW PRESSURE SODIUM
MAX	MAXIMUM
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MDP	MAIN DISTRIBUTION PANEL
MECH	MECHANICAL
MH	METAL HALIDE
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MTD	MOUNTED
MTG	MOUNTING
MV	MERCURY VAPOR
MW	MICROWAVE
NA	NOT APPLICABLE
NC	NORMALLY CLOSED
NF	NONFUSIBLE
NL	NIGHT LIGHT
NO	NORMALLY OPEN
OC	ON CENTER
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OH	OVERHEAD
P	POLE
PA	PUBLIC ADDRESS
PB	PUSHBUTTON
PBX	PRIVATE BUILDING EXCHANGE
PC	PULL CHAIN
P/C	PHOTO CELL
PDP	POWER DISTRIBUTION PANEL
PH , ø	PHASE
PNL	PANELBOARD
PR	PAIR
PSI	POUNDS PER SQUARE INCH
PWR	POWER
QUAD	QUAD RECEPTACLE
REFR	REFRIGERATOR
S	SECURITY
S.C.	SPLIT CIRCUIT
SCC	STATUS COMMAND CENTER
SN	SOLID NEUTRAL
SPD	SURGE PROTECTION DEVICE
SQFT.	SQUARE FOOT
SW	SWITCH
SWBD	SWITCHBOARD
TC	TIME CLOCK
TELE	TELEPHONE
TSTAT	THERMOSTAT
TV	TELEVISION
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
UON	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTABLE POWER SUPPLY
V	VOLT(S)
VEND	VENDING
VP	VAPOR PROOF
W	WIRE , WATT(S)
WP	WEATHERPROOF
XFMR	TRANSFORMER
XPD	TRANSPONDER
Y	WYE
Z	IMPEDANCE
Δ	DELTA
1P	ONE POLE
2P	TWO POLE
3P	THREE POLE

STATE OF TEXAS — T. L. DAWSEY — 66035 — LICENSED PROFESSIONAL ENGINEER — 7/20/15

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LNV
TBPE FIRM NO. F-355
8918 TESORO DRIVE
SAN ANTONIO, TEXAS 78217

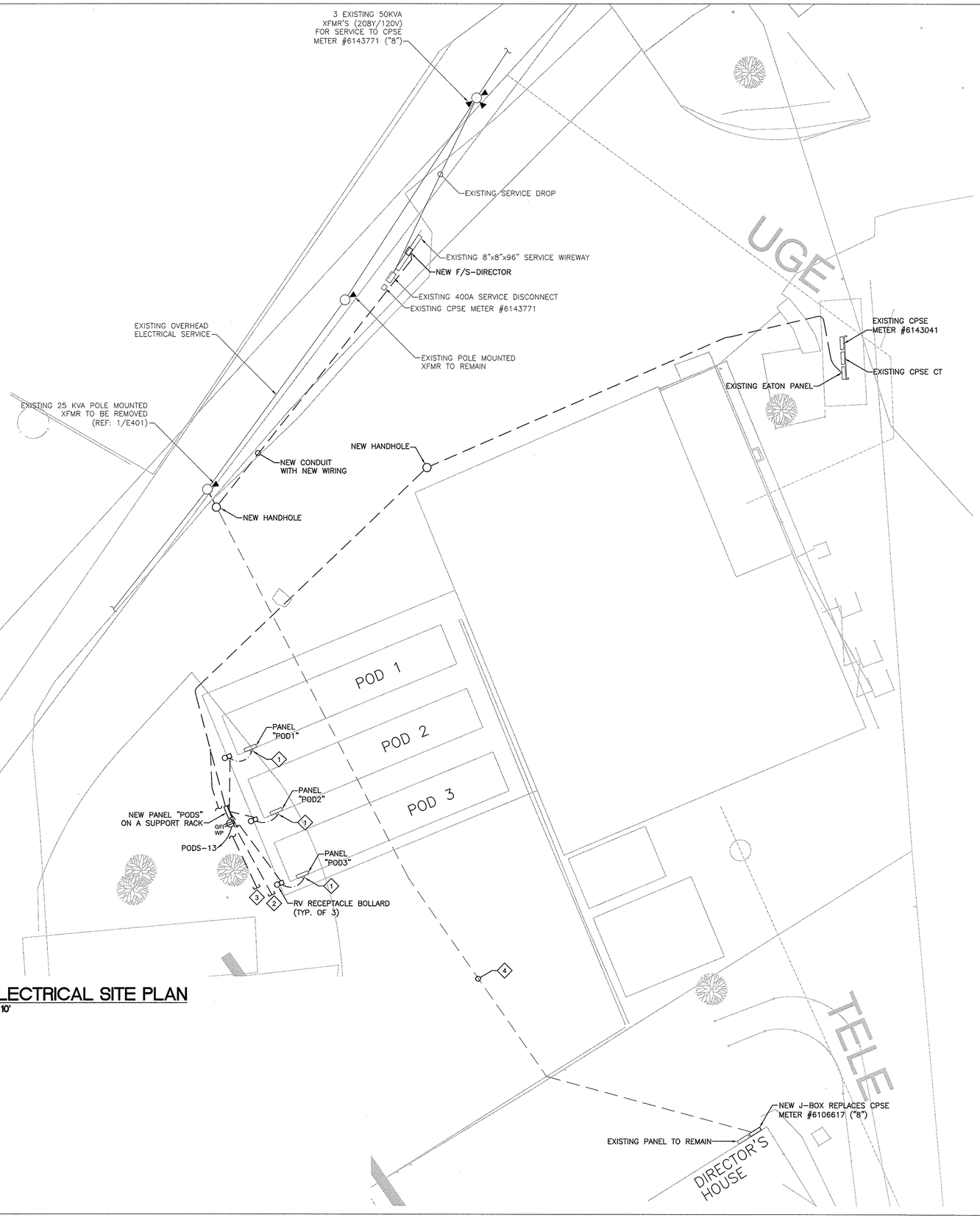
SAN ANTONIO ZOO

CONSERVATION CENTER IMPROVEMENTS PROJECT

ELECTRICAL SYMBOLS AND ABBREVIATIONS

DEVELOPER:	
CONT.	BUDGET PROJ.
SUBMITTED	
APPROVED	
MAP No.	DATE: 07/20/15
SECT. NO.	JOB NO.: 150074s
DRAWN BY:	DSGN BY: CHKD BY:

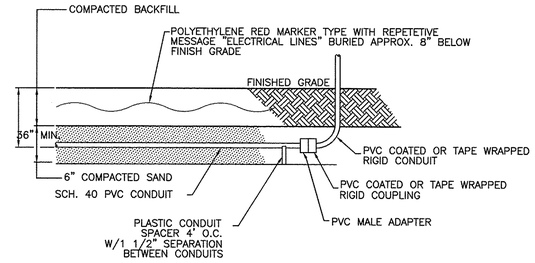
SHT NO: E000



1 E001 **ELECTRICAL SITE PLAN**
1" = 10'

KEYED NOTES:

1. 50-AMP WEATHERPROOF RV RECEPTACLE FURNISHED AND INSTALLED BY POD MANUFACTURER AND SECURED TO THE OUTSIDE OF THE POD.
2. LOCATE THREE EMPTY (WITH PULL TAPE) SPARE 1" CONDUITS FROM PANEL "PODS" HERE.
3. LOCATE ONE EMPTY (WITH PULL TAPE) SPARE 2" CONDUIT FROM EATON PANEL HERE.
4. EXISTING UNDERGROUND CIRCUIT WITH NEW WIRING.



2 E001 **TYPICAL UNDERGROUND CONDUIT RUN**
NTS

SCALE: 1"=20'-0"

STATE OF TEXAS
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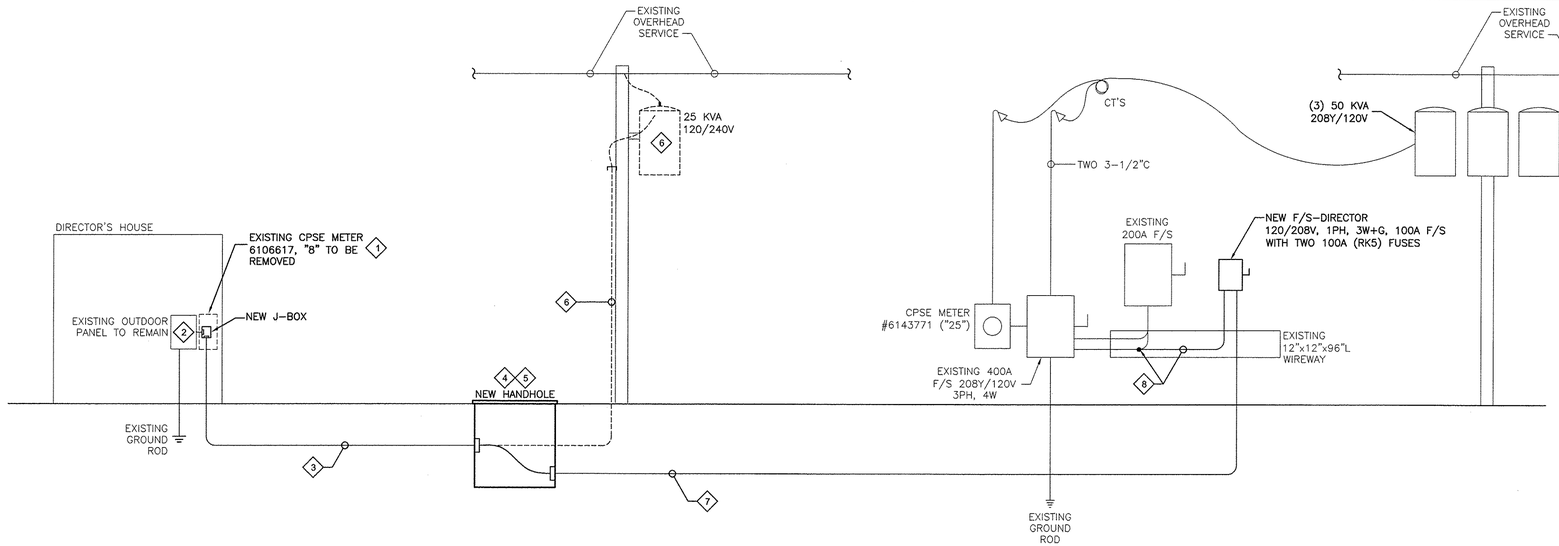
CONSERVATION CENTER IMPROVEMENTS PROJECT

ELECTRICAL SITE PLAN

DEVELOPER:	
CONT.	BUDGET PROJ.
SUBMITTED	
APPROVED	
MAP No.	DATE: 07/20/15
SECT. NO.	JOB NO.: 15087cz
DRAWN BY:	DSGN BY: CHKD BY:
	SHT NO: E001



1 E401 **POWER DISTRIBUTION DIAGRAM #1**
NTS

SERVICE LOAD ANALYSIS No. 1
CPSE METER No. 6143771 ("25")

PROJECT: SAN ANTONIO ZOO
PROJECT NUMBER: 15087
SQUARE FOOTAGE: N/A
NEW DISTRIBUTION:

TYPE	NEW CONNECTED VA	NEW DEMAND VA	208 VOLT NEW DEMAND AMPS	
EQUIP. (2/2014 PEAK READING):	4614	4614	13	Amps
RECEPTACLES:		0	0	Amps
LIGHTING:		0	0	Amps
AC/HEATING:		0	0	Amps
CONTINUOUS MOTORS:		0	0	Amps
OTHERS:		0	0	Amps
TOTAL	4614	4614	13	Amps
PEAK METER READING:		15.0 KVA	42	Amps
25% OF EXISTING METER READING:		3.8 KVA	10	Amps
NEW LOAD:		4.6 KVA	13	Amps
TOTAL LOAD for EXISTING AND NEW:		23.4 KVA	65	Amps
SERVICE CAPACITY:		144.1 KVA	400	Amps
SPARE SERVICE CAPACITY:		120.7 KVA	335	Amps
SERVICE VOLTAGE:		208	VOLT	
EXISTING SERVICE AMPACITY:		400	AMP	

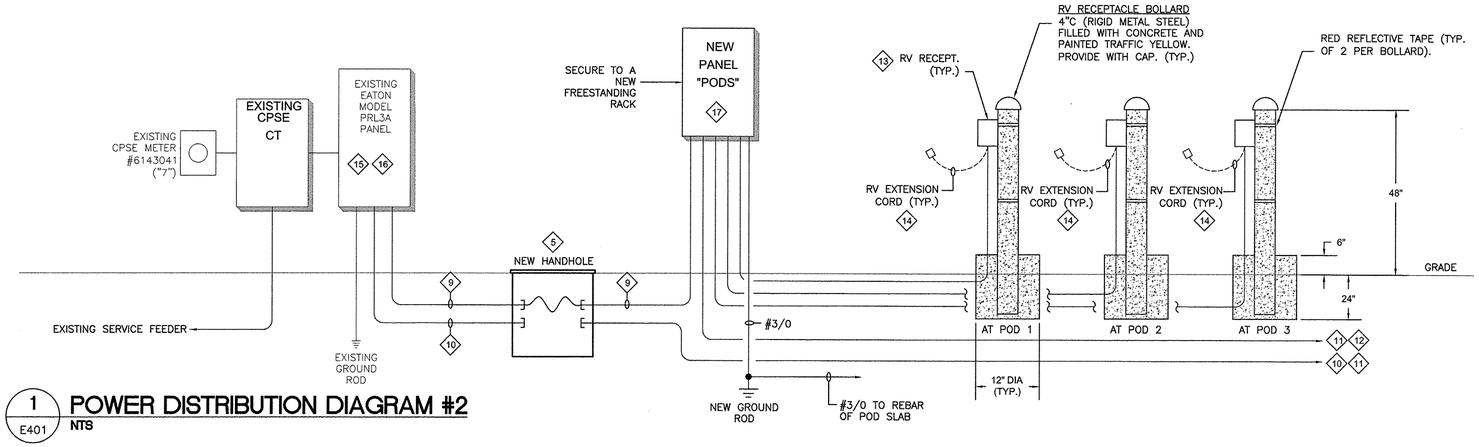
EXPLANITORY NOTES:
A. THE "NEW" LOADS ARE FROM THE PEAK METER READINGS OF THE DIRECTOR'S HOUSE BEING MOVED FROM CPSE METER #6106617 TO CPSE METER #6143771. THIS REPRESENTS THE "NEW" LOAD FOR METER #6143771.
B. THE "PEAK METER READING" IS THE PEAK METER READING OF METER #6143771. THIS VALUE IS MULTIPLIED BY 1.25 IN THE SCHEDULE BEFORE ADDING THE "NEW" LOAD. THERE IS STILL SPARE CAPACITY.
C. THE RESULT OF THIS WORK IS (1) TO ELIMINATE ONE CPSE METER AND (2) TO ALLOW THE FEEDER TO TH E DIRECTOR'S HOUSE TO PASS BELOW THE NEW PODS FOR COST SAVINGS.

SERVICE LOAD ANALYSIS No. 2
CPSE METER No. 6143041 ("7")

PROJECT: SAN ANTONIO ZOO
PROJECT NUMBER: 15087
SQUARE FOOTAGE: N/A
NEW DISTRIBUTION:

TYPE	NEW CONNECTED VA	NEW DEMAND VA	208 VOLT NEW DEMAND AMPS	
EQUIP. (2/2014 PEAK READING):	0	0	0	Amps
RECEPTACLES:	15300	12650	35	Amps
LIGHTING:	735	919	3	Amps
AC/HEATING:	6365	6365	18	Amps
CONTINUOUS MOTORS:	0	0	0	Amps
OTHERS:	0	0	0	Amps
TOTAL	22400	19934	55	Amps
PEAK METER READING:		28.0 KVA	78	Amps
25% OF EXISTING METER READING:		7.0 KVA	19	Amps
NEW LOAD:		19.9 KVA	55	Amps
TOTAL LOAD for EXISTING AND NEW:		54.9 KVA	152	Amps
SERVICE CAPACITY:		216.2 KVA	600	Amps
SPARE SERVICE CAPACITY:		161.2 KVA	448	Amps
SERVICE VOLTAGE:		208	VOLT	
EXISTING SERVICE AMPACITY:		600	AMP	

EXPLANITORY NOTES:
A. THE "NEW" LOADS ARE FROM THE THREE NEW PODS AS DIRECTED BY THE POD MANUFACTURER. PODS WILL BE CONNECTED TO EXISTING CPSE METER #6143041. THIS REPRESENTS THE "NEW" LOAD FOR METER #6143041.
B. THE "PEAK METER READING" IS THE PEAK METER READING OF METER #6143041. THIS VALUE IS MULTIPLIED BY 1.25 IN THE SCHEDULE BEFORE ADDING THE "NEW" LOAD. THERE IS STILL SPARE CAPACITY.



1 E401 **POWER DISTRIBUTION DIAGRAM #2**
NTS

KEYED NOTES:

1. COORDINATE WITH CPSE TO REPLACE THE EXISTING CPSE METER #6106617, "8" WITH A JUNCTION BOX FOR RECONNECTING SERVICE CABLE TO THE EXISTING PANEL. NEW FEEDER TO DIRECTOR'S HOUSE SHALL BE FROM THE EXISTING SERVICE AT METER 6143771.
2. REMOVE NEUTRAL-TO-GROUND BONDING. CONNECT GROUND ROD TO GROUND BAR.
3. EXISTING 1-1/2"C WITH NEW THREE #2 AND ONE #6 GND.
4. INTERCEPT THE EXISTING SERVICE FEEDER TO DIRECTOR'S HOUSE TO ALLOW REUSE OF CONDUIT FROM ANOTHER SERVICE LOCATION.
5. PROVIDE 24"x24"x36"D (INSIDE DIMENSIONS), AAHTO H-20 HANDHOLE.
6. COORDINATE WITH POWER COMPANY FOR THE REMOVAL OF THE EXISTING SERVICE TO DIRECTORS'S HOUSE.
7. 1-1/2"C, 3#2, #6 GND.
8. PROVIDE NEW WIRE AND SPLICING FOR SERVICE TO DIRECTOR'S HOUSE.
9. 2"C, 4 #1/0, #6 GND.
10. EMPTY (WITH PULL TAPE) SPARE 2"C.
11. STUBOUT WHERE INDICATED ON THE ELECTRICAL SITE PLAN.
12. EMPTY (WITH PULL TAPE) SPARE 1"C.
13. RV RECEPTACLE SHALL BE A NEMA 14-50R RECEPTACLE IN A WEATHERPROOF ENCLOSURE EQUAL TO G.E. #U054P (SEE PHOTO ON SHEET E501).
14. PROVIDE ONE 15-FOOT, 50-AMP, RV EXTENSION CORD WITH A NEMA 14-50P MALE CONNECTOR AT EACH END FOR EACH OF THE THREE RV RECEPTACLES.
15. FURNISH AND INSTALL A NEW 100A/3P CIRCUIT BREAKER IN AVAILABLE SPACE FOR SERVICE TO NEW PANEL "PODS".
16. CONNECT NEW GROUND ROD TO PANEL "PODS" GROUND BAR. DO NOT BOND NEUTRAL-TO GROUND IN PANEL "PODS".
17. VERIFY NEUTRAL-TO-GROUND BONDING IN THE EXISTING EATON PANEL.

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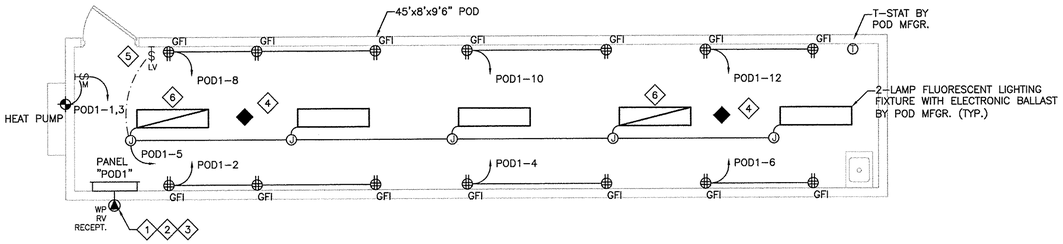
SAN ANTONIO ZOO
CONSERVATION CENTER IMPROVEMENTS PROJECT

ONE-LINE DIAGRAM

DEVELOPER:
CONT. BUDGET PROJ.
SUBMITTED
APPROVED
MAP No. DATE: 07/20/15
SECT. NO JOB NO.: 15087ss SHT NO: E401
DRAWN BY: DSGN BY: CHKD BY:



1 E501 TYPICAL POD PLAN

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

PLAN NORTH

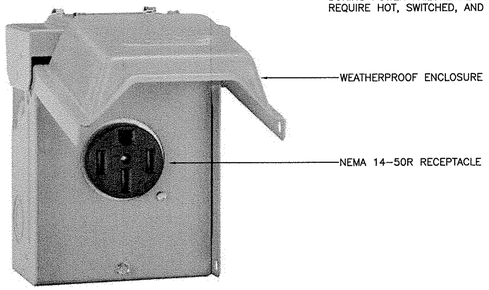
GENERAL POD NOTES:

A. WIRING DEVICES, LIGHTING FIXTURES, HEAT PUMP, PANELBOARD, WEATHERPROOF RV RECEPTACLE, OCCUPANCY SENSORS AND RELATED CONDUIT AND WIRING IS SPECIFIED, FURNISHED, AND INSTALLED BY THE POD MANUFACTURER. ALL LOADS SHALL BE PRE-WIRED BY POD MFGR TO PANEL.

B. CIRCUITING AND OTHER DETAILS INDICATED ARE INTENDED TO BE ENGINEER'S RECOMMENDATIONS TO POD MANUFACTURER. POD MANUFACTURER SHALL OBTAIN OWNER APPROVAL BEFORE BEGINNING ANY WORK.

KEYED NOTES:

1. EQUAL TO GE #GE054P (REFER TO PHOTO THIS SHEET).
2. POD MANUFACTURER SHALL PROVIDE THREE #8, #8 GND HARD WIRED CONNECTION BETWEEN RV PLUG AND POD PANEL.
3. POD MANUFACTURER SHALL INSTALL BOTTOM OF RV PLUG 18" ABOVE BOTTOM OF POD.
4. PROVIDE DUAL TECHNOLOGY CEILING MOUNTED OCCUPANCY SENSOR FACTORY CALIBRATED FOR 30-MINUTE OFF-DELAY AND "VACANCY" SENSOR MODE.
5. LOW VOLTAGE WALL SWITCH COMPATIBLE WITH OCCUPANCY SENSOR AND SET FOR "VACANCY" SENSOR MODE.
6. INDICATED LIGHTING FIXTURE SHALL BE FACTORY-PROVIDED WITH AN INTERNAL 1400-LUMEN NICKLE-CADMIUM BATTERY PACK. LIGHT SHALL SWITCH ON AND OFF FROM OCCUPANCY SENSOR DURING NORMAL MODE BUT COME ON AUTOMATICALLY DURING POWER FAILURE REGARDLESS OF THE SENSOR STATE. REQUIRE HOT, SWITCHED, AND NEUTRAL LEADS.



2 E501 TYPICAL RV RECEPTACLE

SCALE: NOT TO SCALE

EXCEPTION: PROVIDE 15-FOOT TYPE SO CORD WITH TWO MALE NEMA 14-50P PLUGS FOR CONNECTION TO RV RECEPTACLES.

3 E501 TYPICAL RV EXTENSION CORD

SCALE: NOT TO SCALE

NEW PANEL "PODS"

LOCATION: OUTSIDE AT PODS — VOLTAGE: 208/120 V — KAIC: 10 — BUSSING SHALL BE FULLY RATED
MOUNTING: SURFACE — PHASE: 3 P / 4W — CODES: 0=EQPT, 1=RCPT, 2=LTG, 3=A/C, 4=HEAT
ENCLOSURE: NEMA 3R — STYLE: NQOD — BUSSING: 225 A — 5=CONTINUOUS MOTORS, 6=LRGST MOTOR
BRKR MTG: BOLT-ON (REF: SQUARE D) — MCB: 100 A — ACCESSORIES: GROUND BUS
BREAKERS: SERIES RATED. 75 DEGREE TERMINALS — MLO: A

CODE	BRKR	CIRCUIT USE	CKT	LOAD	A	B	C	LOAD	CKT	CIRCUIT USE	BRKR	CODE
	50/2	PANEL "POD1"	1		X				2	BUSSED SPACE		
			3			X			4	BUSSED SPACE		
	50/2	PANEL "POD2"	5				X		6	BUSSED SPACE		
			7		X				8	BUSSED SPACE		
	50/2	PANEL "POD3"	9			X			10	BUSSED SPACE		
			11				X		12	BUSSED SPACE		
1	20/1	OUTDOOR RECEPTACLE	13	180	X				14	BUSSED SPACE		
	20/1	SPARE	15			X			16	BUSSED SPACE		
	20/1	SPARE	17				X		18	BUSSED SPACE		

	EQPT VA	RCPT VA	LTG VA	AC/HEAT VA		MOTORS				CONN VA		FTL VA	PANEL VA	PHASE AMP
PHASE A	0	5220	245	2122		0				7587			6744	56
PHASE B	0	5040	245	2122		0				7407			6595	55
PHASE C	0	5040	245	2122		0				7407			6595	55
TOTAL	0	15300	735	6365		0				22400			19934	

PANEL DESIGN KVA: 19.93 — PANEL SUBTOTAL: 55 AMPS
RESERVE CAPACITY KVA: 3.99 — RESERVE CAPACITY: 8 AMPS
TOTAL KVA: 23.92 — PANEL DESIGN CURRENT: 64 AMPS

PANEL "POD1" (SAME FOR ALL POD PANELS)

LOCATION: ROOM — VOLTAGE: 120/240 V — KAIC: — BUSSING SHALL BE FULLY RATED
MOUNTING: SURFACE — PHASE: 1 P /3W — CODES: 0=EQPT, 1=RCPT, 2=LTG, 3=A/C, 4=HEAT
ENCLOSURE: NEMA 1 — STYLE: NQOD — BUSSING: 100 A — 5=CONTINUOUS MOTORS, 6=LRGST MOTOR
BRKR MTG: BOLT-ON (REF: SQUARE D) — MCB: 100 A — ACCESSORIES: GROUND BUS, 42 SPACE
BREAKERS: SERIES RATED. 60/75 DEGREE TERMINALS — MLO: A

CODE	BRKR	CIRCUIT USE	CKT	LOAD	A	B	LOAD	CKT	CIRCUIT USE	BRKR	CODE
3	20/2	HEAT PUMP	1	1,061	X		1,080	2	RECPTS - SOUTHWEST	20/1	1
3			3	1,061		X	720	4	RECPTS - SOUTHCENTER	20/1	1
2	20/1	LIGHTS	5	245	X		720	6	RECPTS - SOUTHEAST	20/1	1
	20/1	SPARE	7			X	1,080	8	RECPTS - NORTHWEST	20/1	1
		BUSSED SPACE	9		X		720	10	RECPTS - NORTHCENTER	20/1	1
		BUSSED SPACE	11			X	720	12	RECPTS - NORTHEAST	20/1	1
		BUSSED SPACE	13		X			14	SPARE	20/1	1
		BUSSED SPACE	15			X		16	SPARE	20/1	1

	EQPT VA	RCPT VA	LTG VA	AC/HEAT VA		MOTORS			CONN VA		FTL VA	PANEL VA	PHASE AMP
PHASE A	0	2520	245	1061		0			3826			3887	32
PHASE B	0	2520	0	1061		0			3581			3581	30
TOTAL	0	5040	245	2122		0			7407			7468	

PANEL DESIGN KVA: 7.47 — PANEL SUBTOTAL: 31 AMPS
RESERVE CAPACITY KVA: 1.49 — RESERVE CAPACITY: 6 AMPS
TOTAL KVA: 8.96 — PANEL DESIGN CURRENT: 37 AMPS

IECC:

PODS ARE PRE-MANUFACTURED PIECES OF EQUIPMENT USED TO CULTIVATE ENDANGERED SPECIES FISH AND ARE NOT SUBJECT TO IECC REGULATIONS.

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SAN ANTONIO ZOO

CONSERVATION CENTER IMPROVEMENTS PROJECT

FLOOR PLAN, DETAILS AND SCHEDULES

DEVELOPER:
CONT. — BUDGET PROJ.
SUBMITTED
APPROVED
MAP No. — DATE: 07/20/15
SECT. NO. — JOB NO.: 1509?cz — SHT NO.: E501
DRAWN BY: — DSGN BY: — CHKD BY: