SECTION 905 -- PROPOSAL (CONTINUED)

I (We) hereby certify by execution of the Section 905 proposal below, that all certifications, disclosures and affidavits incorporated herein are deemed to be duly executed in the aggregate, fully enforceable and binding upon delivery of the bid proposal. I (We) further acknowledge that this certification shall not extend to the bid bond or alternate security which must be separately executed for the benefit of the Commission. This signature does not cure deficiencies in any required certifications, disclosures and/or affidavits. I (We) also acknowledge the right of the Commission to require full and final execution on any certification, disclosure or affidavit contained in the proposal at the Commission's election upon award. Failure to so execute at the Commission's request within the time allowed in the Standard Specifications for execution of all contract documents will result in forfeiture of the bid bond or alternate security.

Bidder acknowledges receipt of and has added to and made a part of the proposal and contract documents the following addendum (addenda):

ADDENDUM NO.	**1**	DATED	**6/23/2016**	ADDENDUM NO.		DATED	
ADDENDUM NO	**2**	DATED	**7/21/2016**	ADDENDUM NO.		DATED	

Number	Description
1	Replace Sections 00 21 13, 00 25 13, and 00 91 13 of 907-247-37 with same; Amendment EBS Download Required.
2	TOC; Added NTB Nos. 6407 & 6408; Revised Sections SP 907-242-37; Deleted SP 907-607-3; Revised BidShts.; Revised or Added Plan Sht. Nos. 2, 3, 6-10, 13-1, 15, 17-20, 23, 24, 28, 43, 44, 56, 57, 60, 66, 67, 77, 79, 80, 83, 86, & 88-90; Amendment EBS Download Required.

TOTAL ADDENDA: **2**
(Must agree with total addenda issued prior to opening of bids)

Respectfully Submitted,

DATE _____

_____
Contractor

BY _____
Signature

TITLE _____

ADDRESS _____

CITY, STATE, ZIP _____

PHONE _____

FAX _____

E-MAIL _____

(To be filled in if a corporation)

Our corporation is chartered under the Laws of the State of _____ and the names, titles and business addresses of the executives are as follows:

President	Address
Secretary	Address
Treasurer	Address

The following is my (our) itemized proposal.

BWO-6211-18(003) / 502889301000 & LWO-6017-18(006) / 502889302000

Forrest County(ies)

Revised 01/26/2016

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
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PROJECT: BWO-6211-18(003) / 502889301 - Forrest
LWO-6017-18(006) / 502889302 - Forrest

PROJECT: BWO-6211-18(003) / 502889301 - Forrest
LWO-6017-18(006) / 502889302 - Forrest

907-304-13	Granular Courses
907-504-4	Ultra-Thin and Thin Portland Cement Concrete Pavement
907-601-1	Structural Concrete
907-604-8	Manholes, Inlets And Catch Basins
907-618-13	Temporary Construction Signs
907-626-24	Thermoplastic Markings
907-626-25	Thermoplastic Traffic Markings
907-701-5	Hydraulic Cement, w/ Supplement
907-703-12	Aggregates, w/ Supplement
907-708-6	Non-Metal Drainage Structures
907-711-4	Synthetic Structural Fiber Reinforcement
907-713-6	Admixtures for Concrete
907-714-8	Miscellaneous Materials
907-720-2	Pavement Marking Materials
907-804-19	Concrete Bridges and Structures, w/ Supplement

Section 905 - Proposal, Proposal Bid Items, Combination Bid Proposal
State Board of Contractors Requirement
State Certification Regarding Non-Collusion, Debarment and Suspensions
Section 902 - Contract Form
Section 903 - Contract Bond Forms

(REVISIONS TO THE ABOVE WILL BE INDICATED ON THE SECOND SHEET OF SECTION 905 AS ADDENDA)

07/20/2016 12:56 PM

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 6407 **CODE: (SP)**

DATE: **07/14/2016**

SUBJECT: **Minutes of Pre Bid Meeting**

PROJECT: **BWO-6211-18(003) / 502899301 & LWO-6017-18(006) / 502899302 -- Forrest County**

A pre-bid meeting was held for this project on July 26, 2016. Attached are the minutes of the meeting.

PRE-BID MEETING MINUTES

Welcome and Opening: The Pre-Bid was called so that Contractors can view existing conditions and have any questions answered.

The Project will be let on July 26th 2016 at 10 AM.

Introductions were made.

The floor was opened for questions and comments.

Important Remarks: Because of the open nature of this building there is a lot of exposed piping and conduit. Contractor is to take care in placement and configuration as well as review the requirements for painting and labeling. Note that the travel of the cranes along the building length requires careful routing of vertical items.

The existing cranes, rails and trolleys will be demolished. There is an allowance to cover the provision of new cranes and railway system. The description of the system to be provided is included in Specification section "41 22 00 – CRANES AND HOISTS". The allowance includes everything from the slab up. The Construction bid is to include the new foundations.

Some rubble and existing items in process of demolition will be visible today but will be demolished by the Owner prior to Construction. The demolition sheets include notes indicating items that will be demolished by the Owner prior to Construction.

Questions and Answers:

Q: Sheet 79 – E202 – includes a designation "CR" inside a hexagon. Please define what this symbol means.
A: This will be clarified via Addendum.

Q: Regarding the Security System, what will be provided under this contract and what will be provided by the Owner?
A: This will be clarified via Addendum.

At this point all attendees were taken to the site to inspect the existing conditions. Afterward all attendees reconvened for additional discussion.

Q: Will there be tire or oil storage inside the building?
A: No, these items will be stored at another location.

Q: Will the height of the shelving in the Parts Storage 114 be above 12 feet?
A: No, the shelving will be approximately 7 feet tall.

No other questions were posed and no additional items were discussed.
Meeting adjourned.

DIST 6 SHOP RENOVATION PRE-BID MEETING

Project:	502889/6211-18(003)	**Meeting Date:**	July 11, 2016, 10:00am
Topic:	Pre-Bid Meeting	**Place/Room:**	District 6 Auditorium

Name	Company	Phone	E-Mail
BETINA LATIKER	MDOT-ASU	6013599855	blatiker@mdot.ms.gov
Seth Winchester	MDOT-ASU	601.359.7537	swinchester@mdot.ms.gov
Jim Vinson	MDOT-ASU	601-359-7292	jvinson@mdot.ms.gov
RANDALL LEWIS	JHH ARCHITECTS	601 948 4601	RLEWIS@JHHARCHITECTS.COM
SEAN SAUCIER	CASABLANCA	601-264-6676	seans@casablancaconst.net
TOM SAUCIER	CASABLANCA	601-264-6676	toms@CASABLANCACONST.NET
Josh Gatlin	Fairley Const.	601-580-6799	josh@fairleyconstruction.com
Stephen Fairley	Fairley Const	601 4089808	Stephen@fairleyconstruction.com
Scott Humphrey	B.W Sullivan Bldg.	601-582-2933	Scott@bwsullivan.com
Billy Carr	Hanco Corp	601-583-6500	BCARR@HANCOCORP.com
MIKE WYNNE	SRW	601-982-3313	mwynne@sweems.com
CHAD MOORE	ERG	601-362-3552	cmoore@ergms.com
Gabe Faggard	MDOT-D6	228-236-4036	gfaggard@mdot
Kelly Castleberry	MDOT-D6	601-544-6511	kcastleberry@

DIST 6 SHOP RENOVATION PRE-BID MEETING

Project:	502889/6211-18(003)	**Meeting Date:**	July 11, 2016, 10:00am
Topic:	Pre-Bid Meeting	**Place/Room:**	District 6 Auditorium

Name	Company	Phone	E-Mail
Travis Boyle	MDOT	6014089516	tboyle@mdot.ms.gov
Harvey Simmons	CHAINELEC.	601-596-5152	hsimmons@chain.com
Scott White	MDOT	601-410-0432	SCWHITE@MDOT.MS.GOV
Erin Alford	JHA H	601 9464601	ealford@jhharchitects.com
CAPE JONES	MDOT	601 544 6511	cjones@mdot.ms.gov
NICK WALTERS	MDOT	601-544-6511	NWALTERS@MDOT.MS.GOV
Craig Williamson	MDOT	601-544-654	rwilliamson@mdot.ms.gov
Shane Hodge	Southern Fire	601-264-9729	shane@southernfiresprinkler.com

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 6408 **CODE: (SP)**

DATE: **07/14/2016**

SUBJECT: **Project Number Change**

PROJECT: **BWO-6211-18(003) / 502899301 & LWO-6017-18(006) / 502899302 -- Forrest County**

Anywhere in the plans, proposal, or specifications where reference is made to Project No. **LWO-6017-18(006) / 502899302,** it shall be understood that Project No. **BWO-6211-18(003) / 502899301 & LWO-6017-18(006) / 502899302** is the correct project number.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

ADDENDUM No. 2
DOCUMENT 00 91 13

DATE: **JULY 21, 2016**

PROJECT: **DISTRICT SIX SHOP RENOVATION AT HATTIESBURG, FORREST COUNTY, MISSISSIPPI**

PROJECT NUMBERS: **BWO-6211-18(003) 502889**
LWO-6017-18(006) 502889

PART 1 - GENERAL

1.01 DESCRIPTION:

A. Bidders are hereby advised that the following changes are to be made to this Contract.

1.02 SPECIFICATIONS

A. Section 00 01 10 – Table of Contents. Delete Table of Contents and replace with attached Table of Contents dated 07-14-2016 (6 pages).

B. Section 01 21 00 – Allowances. Delete Allowances and replace with attached Allowances dated 7-14-2016 (3 pages).

C. Section 09 05 15 – Color Design. Delete Color Design and replace with attached Color Design dated 7-14-2016 (3 pages).

D. Section 10 56 13 – Metal Storage Shelves and Safety Cabinets. Delete Metal Storage Shelves and Safety Cabinets and replace with attached Metal Storage Shelves and Safety Cabinets dated 7-14-2016 (2 pages).

E. Section 12 21 14 – Horizontal Louver Blinds-Metal. Delete this Section.

F. Section 12 21 15 – Horizontal Louver Blinds-Wood. Add this Section dated 7-21-2016 (3 pages).

G. Section 22 15 13 – Compressed Air Piping. Delete Compressed Air Piping and replace with attached Compressed Air Piping dated 7-21-2016 (7 pages).

H. Section 33 05 13 – Manholes and Structures. Add this Section dated 7-21-2016 (3 pages). Even though this information is shown on the Civil Drawings, the costs associated with this Specification Section and Drawing is part of Special Provision 907-242-37 and shall be included as part of the Lump Sum of the Building.

I. Section 33 11 16 – Site Water Utility Distribution Piping. Add this Section dated 7-21-2016 (6 pages). Even though this information is shown on the Civil Drawings, the costs associated with this Specification Section and Drawing is part of Special Provision 907-242-37 and shall be included as part of the Lump Sum of the Building.

J. Section 33 11 17 – Disinfection and Testing for Water Lines. Add this Section dated 7-21-2016 (1 page). Even though this information is shown on the Civil Drawings, the costs associated with this Specification Section and Drawing is part of Special Provision 907-242-37 and shall be included as part of the Lump Sum of the Building.

K. Section 33 31 00 – Sanitary Utility Sewerage Piping. Add this Section dated 7-21-2016 (6 pages). Even though this information is shown on the Civil Drawings, the costs associated with this Specification Section and Drawing is part of Special Provision 907-242-37 and shall be included as part of the Lump Sum of the Building.

1.03 DRAWINGS

A. The following thirty-one (31) Addendum Sheets have been revised. Revisions made are shown on each individual Sheet and marked with a Revision Triangle:

1. Sheets 2, 3, 6, 7, 8, 9, 10, 13_1, 15, 17, 18, 19, 20, 23, 24, 28, 43, 44, 57, 60, 66, 67, 77, 79, 80, 83, 84, 86, 88, 89 and 90.

1.04 PRE-BID MEETING

A. A Pre-Bid Meeting was held July 11, 2016. Introductions were made and statements were given concerning items to clarify or change in the Construction Documents by this Addendum. Everyone in attendance visited the site to observe existing conditions.

B. Pre-Bid Meeting Minutes are attached (1 page).

C. The Sign-In List is attached (2 pages).

1.05 CLARIFICATIONS AND QUESTIONS / ANSWERS

A. See goMDOT.com for list of online Questions and Answers that are made a part of the Contract. Questions and Answers to any issues / clarifications after this meeting are also made part of the Contract.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF DOCUMENT

SECTION 00 01 10 TABLE OF CONTENTS

PROJECT: DISTRICT SIX SHOP RENOVATION,
FORREST COUNTY, MISSISSIPPI

PROJECT NUMBER: BWO-6211-18(003) 502889
LWO-6017-18(006) 502889

DATE: 07-21-16

DESCRIPTION A: This Work shall consist of minor site work and all construction work necessary in renovating the Existing District Six Shop at Hattiesburg, Forrest County, Mississippi, in accordance with these Specifications and conforming with the Drawings.

It is the intention of these Specifications to provide the necessary items and instruction for a complete building including all code compliance. Omission of items or instruction necessary or considered standard good practice for the proper installation and construction of the building shall not relieve the Contractor of furnishing and installing such items and conforming to the building codes having jurisdiction.

(REVISIONS TO THE ABOVE WILL BE INDICATED ON THE SECOND SHEET OF SECTION 905 AS ADDENDA)

END OF TABLE OF CONTENTS

SECTION 01 21 00 ALLOWANCES

PART 1 - GENERAL

1.01 SUMMARY

A. Section includes administrative and procedural requirements governing allowances.

1. Types of allowances include: Lump-sum allowances.

B. Related Requirements: Section 41 22 00 Cranes and Hoists.

1.02 SELECTION AND PURCHASE

A. At the earliest practical date after award of the Contract, advise Project Engineer and Architect of the date when final selection and purchase of each product or system described by an allowance must be completed to avoid delaying the Work.

B. At Project Engineer's request, obtain proposals for each allowance for use in making final selections. Include recommendations that are relevant to performing the Work.

C. Purchase products and systems selected by Project Engineer from the designated supplier.

1.03 ACTION SUBMITTALS

A. Submit proposals for purchase of products or systems included in allowances, in the form specified for Supplemental Agreements (Change Orders).

1.04 INFORMATIONAL SUBMITTALS

A. Submit invoices or delivery slips to show actual quantities of materials delivered to the site for use in fulfillment of each allowance.

B. Submit time sheets and other documentation to show labor time and cost for installation of allowance items that include installation as part of the allowance.

C. Coordinate and process submittals for allowance items in same manner as for other portions of the Work.

1.05 COORDINATION

A. Coordinate allowance items with other portions of the Work.

1.06 LUMP-SUM ALLOWANCES

A. Allowance shall include cost to Contractor of specific products and materials selected by Project Engineer under allowance including installation**,** freight**,** and delivery to Project site.

B. Costs Not Included in Lump-Sum Allowances: Product handling at the site, including unloading, uncrating, and storage; protection of products from elements and from damage; overhead and profit; applicable taxes. These costs shall be included in the Contract Sum, unless indicated otherwise.

1. No additional overhead or profit, bonds, insurance, taxes or mark ups of any type will be paid on items covered by the Lump-Sum allowances

C. Project Engineer's Responsibilities:

1. Consult with Architect and Contractor for consideration and selection of products.
2. Select products in consultation with Architect and transmit decision to Contractor.
3. Prepare Supplemental Agreements (Change Orders).

D. Contractor's Responsibilities:

1. Assist Project Engineer and Architect in selection of products, suppliers, and installers.
2. Obtain proposals from suppliers and installers and offer recommendations.
3. Upon notification of which products have been selected, execute purchase agreement with designated supplier and installer.
4. Arrange for and process shop drawings, product data, and samples. Arrange for delivery.
5. Promptly inspect products upon delivery for completeness, damage, and defects. Submit claims for transportation damage.

E. Difference in costs will be adjusted by Supplemental Agreement (Change Order).

1.07 ADJUSTMENT OF ALLOWANCES

A. Allowance Adjustment: To adjust allowance amounts, prepare a Supplemental Agreement (Change Order) proposal based on the difference between actual materials plus labor amount and the allowance amount.

1. Include installation costs as part of the allowance, but as separate components.
2. If requested, prepare explanation and documentation to substantiate distribution of overhead costs and other margins claimed.

B. Submit claims for increased costs because of a change in scope or nature of the allowance described in the Contract Documents, whether for the purchase order amount or Contractor's handling, labor, installation, overhead, and profit.

1. Do not include Contractor's or subcontractor's indirect expense in the Change Order cost amount unless it is clearly shown that the nature or extent of work has changed from what could have been foreseen from information in the Contract Documents.
2. No change to Contractor's indirect expense is permitted for selection of higher- or lower-priced materials or systems of the same scope and nature as originally indicated.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine products covered by an allowance promptly on delivery for damage or defects. Return damaged or defective products to manufacturer for replacement.

3.02 PREPARATION

A. Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

3.03 SCHEDULE OF ALLOWANCES

A. Allowance No. One: Lump-Sum Allowance for the sum of $138,500: Include one (1) complete 10-ton capacity and one (1) complete 5-ton capacity top running single girder crane, One (1) Runway System including design and power distribution. Include system start-up, load testing and training as specified in Section 41 22 00 and as shown on Drawings.

1. This allowance includes material cost. receiving, handling, freight cost to deliver to job site and installation cost, and Contractor overhead and profit.

END OF SECTION

SECTION 09 05 15 COLOR DESIGN

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes: A coordinated comprehensive Color System in which requirements for materials specified in other Sections of this Specification and / or shown on the Drawings are identified for quality, color, finish, texture and pattern.

B. Related Sections: Section 01 33 00 – Submittal Procedures.

1.02 MANUFACTURER'S TRADE NAMES

A. Manufacture's trade names and number designations used herein identify colors, finishes, textures and patterns for materials and products specified in the technical sections of the Specifications. Wherever such products are referred for selection or approval in other sections, such products shall be understood to be referenced to this Section.

B. If no selection is listed herein for products, the Project Engineer / MDOT Architect shall be contacted for a color selection.

C. Subject to approval of the Project Engineer / MDOT Architect, products of other manufacturers will be considered, provided they are equivalent to the quality, colors, finishes, textures and patterns listed and meet the requirements of the Specifications and Drawings.

1.03 SAMPLES

A. Color samples shall be submitted for approval prior to applying or installing finishes or items that are included in this Section. See appropriate technical Sections for submittal requirements. Upon receipt of samples, the Project Engineer / MDOT Architect may make revisions to the Color schedule. .

PART 2 - PRODUCTS

2.01 MATERIALS

A. Materials are specified in other Sections of the Specifications. Reference by trade name or manufacturer shall be considered as establishing a standard of quality and shall in no way limit competition.

2.02 MANUFACTURERS

A. The following manufacturers were used in preparing the Color Schedule:

SECTION / MATERIAL	MANUFACTURER / NUMBER & COLOR NAME
04 20 00 – Brick	Cherokee Brick - Carolina Ceramics Brick Company – Shadow Gray
04 20 00 – Architectural Masonry Units	Northfield Block, Cordova Stone - Alabaster
04 20 00 – Mortar	Custom Color to match Cordova Stone.

04 20 00 – Weep Vents	Match Mortar Color
05 50 00 – Pipe Railing	P2 (Trim Paint)
05 50 00 – Steel Fabricated Work Tables	Painted with Benjamin Moore #2126-10 Black Tar
05 50 00 – Downspout Boots	Match Downspout color
06 40 00 – Plastic Laminate – PLAM-1	Formica; Color: 5881-58 Chocolate Warp
06 40 00 – Plastic Laminate – PLAM-2	Wilsonart Laminate; Color: 1787-60 Oxide
06 40 00 – Plastic Laminate – PLAM-3	Wilsonart Laminate; Color: 4885-38 Green Soapstone
06 40 00 – Wood Veneer	To match Graham door color #375 Hazel
06 40 00 – Architectural Millwork Hardware	Satin Chrome
06 40 00 – Grommet	Black
06 40 00 – Edge mold	Laminate to match adjacent surface
06 40 00 – Workstation Support Bracket	Paint to match adjacent wall finish
07 62 00 – Metal Flashing - Trim	Match adjacent metal finishes
07 62 00 – Metal Flashing – Downspout	Match Gutter Color - Snow White
07 92 00 – Joint Sealants	Match adjacent lighter color
08 14 29 – Prefinished Wood Doors	ST1 Graham #375 Hazel
08 31 13 – Access Doors and Frames	Paint to match adjacent wall
08 33 23 – Overhead Coiling Doors	In Brick – select from 187 color palette to match brick.
08 33 23 – Overhead Coiling Doors	In Metal Panels - select from 187 color palette to match metal panels.
08 41 13 – Aluminum Framed Entrances and Storefronts	Bone White
08 45 19 – Polycarbonate Wall System	Framing – Kynar Bone White
08 45 19 – Polycarbonate Wall System	Wall Panel - Opalescent
08 71 00 – Door Hardware	Noted in Schedule
08 80 00 – Glazing	PPG Atlantica, SOLARBAN 70XL
08 91 19 – Fixed Louvers - In Metal Panel Walls	Greenheck, Herring Bone GF107
08 91 19 – Fixed Louvers - In AMU Walls	Greenheck, Herring Bone GF107
08 91 19 – Fixed Louvers - In Brick Walls	Greenheck, Sierra Tan GF118
09 31 13 – Ceramic Wall Tile CT-1	Daltile - Series: “Polaris”; Color: Gloss Almond
09 31 13 – Grout (Walls)	To be selected from manufacturers standard color options.
09 31 13 – Porcelain Floor Tile POR - 1	Crossville - Series: “Color Blox” Color Mudpie A1107
09 31 13 – Porcelain Tile Base POR - 1	Crossville - Series: “Color Blox” Color Mudpie A1107
09 31 13 – Grout (Porcelain Tile)	To be selected from manufacturers standard color options.
09 51 00 – Acoustical Ceilings	Armstrong Lay-In Ceiling Tile (24” x 24”) Item #1728 Square Lay-In; Color: White
09 65 00 – Resilient Floor – LVP-1	Mannington Luxury Vinyl Plank (6x36) – Series: Amtico Wood, Color: Script Maple Coal.
09 65 00 – Rubber Base	Johnsonite 4” Base; Color: Burnt Umber
09 65 00 – Resilient Edge Strips	Johnsonite; Color: Burnt Umber
09 65 00 – Stair Treads and Risers	Johnsonite; Color: Burnt Umber
09 90 00 – Paint – P1 (General Wall Paint)	Benjamin Moore #HC-83 Grant Beige
09 90 00 – Paint – P2 (Trim Paint)	Benjamin Moore #978 Raccoon Hollow
09 90 00 – Paint – P3 (Accent Wall Paint)	Benjamin Moore #2142-40 Creekside Green
09 90 00 – Paint – P4 (Exterior HW & Railings)	P2 (Trim Paint)
09 90 00 – Paint – P5 (Ceiling)	Benjamin Moore #967 Cloud White

10 11 00 – Visual Display Board	All finishes to be selected when submitted
10 14 00 – Signage	To be selected from manufacturers standard color options.
10 21 15 – Solid Plastic Toilet Partition	Scranton Products, Color: Shale
10 26 13 – Corner Guards	To be selected when submitted
10 51 13 – Metal Lockers	Penco; Color: 028 Gray
11 31 15 – Residential Appliances (Range)	GE – Stainless Steel
11 31 15 – Residential Appliances (Microwave)	GE – Stainless Steel
11 31 15 – Residential Appliances (Refrigerators)	GE – Stainless Steel
12 21 15 – Horizontal Louver Blinds – Wood	Skandia Window Fashions; Conquest Faux Wood; Color: White Sand
13 34 19 – Metal Building System	Roof Panels - Brownstone
13 34 19 – Metal Building System	Gutters – Snow White
13 34 19 – Metal Building System	Fascia, Rake – Snow White
13 34 19 – Metal Building System	Wall Panels - Sandstone

PART 3 - EXECUTION

3.01 INSTALLATION / APPLICATION, GENERAL

A. Refer to execution requirements specified in other Sections of this Specification for the specific products listed. Colors, finishes, textures or patterns not included in this Color Design will be selected by the Project Engineer / MDOT Architect upon written notification and subsequent submittals by the Contractor.

END OF SECTION

SECTION 10 56 13 METAL STORAGE SHELVING

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes: Metal storage shelving and safety cabinets as indicated on the Drawings.

1.02 ACTION SUBMITTALS

A. Product Data: Manufacturer's technical data and installation instructions for each material and component part, including data substantiating that materials comply with requirements.

B. Color Charts: For (3 copies) each exposed product.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. Lyon Metal Products, Aurora, IL. Tel. (603) 892-8941.
2. Eagle Manufacturing Company, Wellsburg, WV. Tel. (304) 737-3171.
3. Penco Products Inc., Oaks, PA. Tel. (610) 666-0500.
4. Stanley Storage Systems, Allentown, PA. Tel. (800) 523-9462.

B. Substitutions that fully meet or exceed the specified requirements may be considered under provisions of Section 01 25 00 - Substitution Procedures and Section 01 60 00 - Product Requirements.

2.02 STORAGE SHELVING

A. Metal Storage Shelving: Equal to Penco Products Open Clipper Heavy Duty Steel Shelving Unit Model No. 1H7026, 36 inches wide, 18 inches deep, and 87 inches high with 6 shelves. 40 units required, as located in field by Project Engineer.

2.03 SAFETY CABINET

A. Safety Cabinet: Equal to Eagle Manufacturing 90 Gallon Tower™ Safety Cabinet model 1992LEGS. Cabinets shall meet OSHA, NFPA Code 30 and FM approval. 4 units required, as located in field by Project Engineer.

1. Shelves: 2 shelves 30 inches deep.
2. Legs: 4 inches high.
3. Finish Color: Yellow.
4. Dimensions: 43 inches wide by 34 inches deep by 69 inches high.
5. Door Style: 2 manual close.

PART 3 - EXECUTION

3.01 INSTALLATION

A. Install units plumb and level, in locations and with mountings as directed by Project Engineer.

B. Securely attach all components together in accordance with manufacturer's installation instructions.

1. Securely fasten units to adjacent units and to wall as required so that units will not move or fall.

3.02 CLEANING AND PROTECTION

A. At completion of installation, clean surfaces in accordance with manufacturer's instructions.

B. Protect units from damage until acceptance by Owner.

END OF SECTION

SECTION 12 21 15 HORIZONTAL LOUVER BLINDS-WOOD

PART 1- GENERAL

1.01 SECTION INCLUDES

A. Two inch horizontal louver blinds, accessories, attaching hardware, labor and equipment necessary to complete satisfactory installation.

1.02 SUBMITTALS

A. Submit manufacturer's descriptive literature indication materials, finishes, construction and installation instructions, and data verifying that product meets requirements specified. Include manufacturer's recommendations for maintenance and cleaning.

B. Shop Drawings: Indicate field-measured dimensions of openings to receive blinds. Include illustrations of special accessory components not included in manufacturer's product data. Indicate details of head and sill conditions, corner conditions, and conditions between adjacent blind units.

C. Color Samples: Submit two 6 inch samples of material indicating full color range and color variation.

D. Product Sample: Submit one 16 inches wide by 24 inches long fully functional sample blind.

1.03 QUALITY ASSURANCE

A. Manufacturer and installer shall have at least five years experience in this type of product and installation.

1.04 WARRANTY

A. Provide manufacturer's standard five year written warranty against defects in materials and workmanship beginning at date of substantial completion.

1.05 PRODUCT DELIVERY

A. Blinds shall be carefully handled and stored to prevent damage to materials, finishes and operating mechanisms.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

A. Drawings and specifications are based on products manufactured by Skandia Window Fashions, 270 Crossway Road, Tallahassee, FL 32305; Tel. (800) 874–3168.

B. Equivalent products by the following manufacturers are acceptable:

1. Levolor Home Fashions Contract Division, High Point, NC. Tel. (336) 812-8181.
2. Hunter Douglas, Inc., Upper Saddle River, NJ. Tel. (800) 727–8953.
3. Springs Window Fashions Division, Inc., Montgomery, PA. Tel.(570) 547-6671.

C. Substitutions that fully meet or exceed the specified requirements may be considered under provisions of Section 01 25 00 - Substitution Procedures and Section 01 60 00 - Product Requirements.

2.02 MATERIALS

A. Provide faux wood blinds equal to Inspire® 2” Traditional Faux Wood Blinds by Skandia Window Fashions.

2.03 COMPONENTS

A. Valance: Provide standard valance, 2-5/8 inches high, molded. Finish shall match slats.

B. Head Channel Hardware: Metal hardware shall be electroplated with lift cords cloth tape guided by acetal low friction thermoplastic grommets in the head channel that prevent wear and discoloration. Operating hardware shall be mechanically locked into head channel by means of snap-in fittings with no mechanical cleats visible from underside of headrail.

C. Bottomrail: Rectangular molded, 5/8 inch high by 2 inches deep. Bottomrail finished shall match slat color and finish.

D. Slats: Slats shall be made from lead-free, UV-stabilized, integrally colored, opaque, extruded PVC and are resistant to warping, will not crack or yellow, antistatic, and dust-repellent treated. Slats shall be nominally 2 inches wide, by 1/8 inch thick. Spacing shall be manufacturer’s standard.

E. Tilt Control: Enclosed worm-gear mechanism and linkage rod for the following operation:

1. Tilt Operation: Manual with cord.
2. Length of Tilt Control: Length required making operation convenient from floor level and reachable over adjacent built in shelves and desktops.
3. Tilt: Full tilt.

F. Ladder: Braided string evenly spaced to prevent long term slat sag.

G. Cord Lock: Metal cord lock shall be of a snap-in design and incorporate a floating shaft-type locking pin. The freely rotating locking pin shall offer minimum wear to cord. Cord lock shall incorporate a crash-proof safety feature that shall lock blind automatically upon release of cord. Locks pull cord to stop blind in any position in ascending or descending travel.

H. Lift Cord: Lift cord shall be braided with polyester jacket and center core or an approved equal construction. Size of cord shall be 1.8mm. Cords shall be detachable, if required, and shall be of sufficient length to properly control the raising or lowering of the blind. Lift cords shall be equipped with tassels to match slat finish. Cord ends shall be securely anchored to the bottomrail and it shall be possible to detach and attach cords.

I. Blinds shall be made with the following cord lock and tilter locations when viewed from within the room:

1. Tilter at left, cord lock at right (standard).
2. Where blinds are located at sidelights of doors, tilter and cord lock shall be located on the same side and on the far side away from the door.

J. End Support Brackets: Universal hinged cover and support brackets of phosphate treated steel with a prime coat of vinyl primer and a finish coat of baked on polyester enamel in color to match headrail. Brackets shall facilitate easy removal of head channel and will include an adjustable tab to eliminate lateral headrail movement.

K. Intermediate Support Brackets: Brackets shall be furnished for blinds over 36 inches wide. Maximum spacing for intermediate support brackets shall be 36 inches.

L. End Stiffeners: Thermoplastic end stiffener caps shall be inserted at each end of the headrail.

M. The blind shall be free of sharp edges, burrs or other defects which might be harmful. When other materials result in improved specifications, they shall be adopted.

N. Color: Color of headrail, bottomrail, ladder, wand, cord and accessories shall coordinate with slats. Plastic headrail components shall be white. Refer to Section 09 05 15 - Color Design for color selected for slats.

2.04 FABRICATION

A. Prior to fabrication, verify actual opening dimensions by on-site measurement. Calculate blind dimensions to fit with specified tolerances.

B. Fabricate blinds to fill openings from head to sill and jamb to jamb. One headrail per window - may have up to two blinds per headrail if window width exceeds blind maximum. Blind divisions shall be located at mullions.

C. Fabricate blinds to fill all of the window openings in the following rooms, Office 109, 110, 122, 123, 124, 125, 126, Security 127, Break 116 and Parts Storage 114.

PART 3 - EXECUTION

3.01 INSPECTION AND PREPARATION: Blind installer shall be responsible for inspection of site, installation conditions, and field measurements prior to blind installation.

3.02 INSTALLATION

A. Install blinds in accordance with manufacturer’s procedures except as otherwise specified herein.

B. Install intermediate support brackets and extension brackets as needed to prevent deflection in headrail.

C. Install blinds with adequate clearance to permit smooth operation of blinds and any sash operators.

D. Set tilt and lift controls. Demonstrate blinds to be in smooth, uniform working order.

E. Blinds may be dusted. Gently clean soiled blind surfaces with a mild soap solution. Do not use steam, hot water, bleach or any abrasive or solvent based cleaners.

END OF SECTION

SECTION 22 15 13 COMPRESSED-AIR PIPING

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. These Plumbing provisions specified herein apply to all Sections of Division 22.

B. Refer to the General and Supplementary Conditions and Division 01 for special requirements and conditions which apply to all Sections of Division 22.

1.02 SUMMARY

A. This Section includes piping and specialties for building compressed-air systems operating at 200 psig and less.

B. Related Sections include the following:

1. Section 22 15 00 – Compressed Air Equipment
2. Section 23 00 10 – Mechanical General Provisions
3. Section 23 05 00 – Basic Mechanical Materials and Methods
4. Section 23 05 53 – HVAC System Identification

1.03 DEFINITIONS

A. Low-Pressure, Compressed-Air Piping: ASME B31.9, "Building Services Piping," for piping operating at pressure of 125 psig or less and at temperature of 200 deg F or less.

B. PTFE: Polytetrafluoroethylene.

1.04 SUBMITTALS

A. Coordination Drawings: For compressed-air equipment and piping, including relationship to other services that serve same work areas.

1.05 QUALITY ASSURANCE

A. Provide listing/approval stamp, label, or other marking on equipment made to specified standards.

B. Listing and Labeling: Provide equipment and accessories specified in this Section that are listed and labeled.

1. Terms "Listed" and "Labeled": As defined in National Electrical Code, Article 100.
2. Listing and Labeling Agency Qualifications: A "Nationally Recognized Testing Laboratory" as defined in OSHA Regulation 1910.7.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

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

1. Compressed-Air, General-Duty Valves:
   a. Conbraco Industries, Inc.; Apollo Div.
   b. Crane Co.; Valve Div.
   c. Grinnell Corp.
   d. Hammond Valve.
   e. Milwaukee Valve Co., Inc.
   f. Nibco, Inc.
   g. Stockham Valves & Fittings, Inc.
2. Compressed-Air-Service, Locking-Handle, Safety-Exhaust Valves:
   a. Conbraco Industries, Inc.; Apollo Div.
   b. Hammond Valve.
   c. Milwaukee Valve Co., Inc.
   d. Nibco, Inc.
3. Quick Connect/Disconnect Hose Couplings:
   a. Aeroquip Corp.; Industrial Products Group.
   b. Bowes Manufacturing, Inc.
   c. DeVilbiss Air Compressor Products.
   d. Foster Manufacturing Co., Inc.
   e. Milton Industries, Inc.
   f. OBAC Corp.
   g. Parker Hannifin Corp.; Quick Coupling Div.
   h. Schrader, Inc.
   i. Snap-Tite, Inc.
   j. Tuthill Corp.; Hansen Coupling Div.

2.02 PIPING, GENERAL

A. ASME Code Compliance: Provide compressed-air piping components complying with ASME B31.9, "Building Services Piping."

B. ASME Code Compliance: Provide compressed-air piping components complying with the following:

1. Low-Pressure, Compressed-Air Piping: ASME B31.9, "Building Services Piping."

2.03 PIPING

A. Steel Pipe: ASTM A 53, Type E, Electric-Resistance Welded or Type S, Seamless, Grade B, Schedule 40, black or hot dipped, zinc coated.

2.04 PIPE FITTINGS

A. Malleable-Iron Pipe Fittings: ASME B16.3, Class 150, threaded, plain or galvanized.

B. Malleable-Iron Pipe Unions: ASME B16.39, Class 150, threaded.

C. Wrought-Steel Pipe Fittings: ASME B16.9, Schedule 40, butt welding.

D. Forged-Steel Pipe Fittings: ASME B16.11, socket type.

E. Steel Pipe Flanges: ASME B16.5, Classes 150 and 300, carbon steel.

2.05 JOINING MATERIALS

A. Refer to Section 23 05 00 - Basic Mechanical Materials and Methods for joining materials not in this Section.

2.06 VALVES

A. General-Duty Valves: Refer to Section 23 05 23 Valves for compressed-air-service valves not specified in this Section and for valves for other fluids.

B. Special-Duty, Compressed-Air Valves: Include PTFE seats and comply with the following:

1. Ball Valves, 2-Inch NPS and Smaller: MSS SP-110; 2-piece bronze body with blowout-proof stem; regular or full port; chrome-plated, solid-brass or -bronze ball; threaded ends; and 600-psig minimum WOG pressure rating.
2. Butterfly Valves, 2-1/2-Inch NPS and Larger: MSS SP-67; Type I (bubble tight); single-flange (lug-type), cast-iron body with ductile-iron disc, and 200-psig minimum WOG pressure rating.
3. Check Valves, 2-Inch NPS and Smaller: MSS SP-80; Type 4 or nonstandard T-pattern, swing check; Class 125, bronze body with composition-to-metal seat and threaded ends.
4. Check Valves, 2-1/2-Inch NPS and Larger: MSS SP-71, Type II full-waterway or Type IV clear-waterway, cast-iron body with composition-to-metal seat and flanged ends.
5. Globe Valves, 2-Inch NPS and Smaller: MSS SP-80, Class 125, Type 2, bronze body with composition-to-metal seat and threaded ends.

2.07 SPECIALTIES

A. Safety Valves: ASME Boiler and Pressure Vessel Code, Section VIII, "Pressure Vessels" construction, National Board certified, labeled, and factory sealed; constructed of bronze body with poppet safety valve for compressed-air service.

1. Pressure Settings: Higher than discharge pressure and same or lower than receiver pressure rating.
2. Pressure Regulators: Bronze body, direct acting, spring loaded manual pressure-setting adjustment, and rated for 250-psig, except where otherwise indicated.
   a. Type: Diaphragm operated.
3. Pressure Regulators: Aluminum alloy or plastic body, diaphragm operated, direct acting, spring loaded, manual pressure-setting adjustment, and rated for 250 psig inlet pressure, except where otherwise indicated.
4. Filters: 2-stage, mechanical-seperation type, air-line filters in sizes and ratings indicated. Equip with deflector plates; resin-impregnated-ribbon-type filters with edge filtration, 40 micron thick; and drain cock.
5. Coalescing Filters: Capacities and types indicated. Equip with activated carbon capable of removing eater and oil aerosols, with color-change dye to indicate when carbon is saturated and warning light to indicate when selected maximum pressure drop has been exceeded.

6. Automatic Drain Valves: Corrosion-resistant metal body and internal parts, rated for 200-psig minimum working pressure, capable of automatic discharge of collected condensate.
7. Hose, Clamps and Couplings: Provide compatible hose, hose clamps, and hose couplings, suitable for compressed-air service, of nominal diameter, and rated for 300-psig minimum working pressure, except where otherwise indicated.
   a. Quick Connect/Disconnect Hose Couplings: One-way, automatic shutoff, brass body, with O-ring or gasket seal, and stainless steel or nickel-plated steel operating parts. Select socket end with threaded inlet that is considered the fixed end and has one-way valve.
   b. Hose Adapter Couplings: One-piece, brass or stainless-steel fitting, with serrated ends.
   c. Hose: Reinforced, single or double-braid, neoprene-covered hose for compressed air service.
   d. Hose Clamps: Stainless steel, clamps, bands, or wire.

2.08 REELS

A. Manufacturers

1. GRACO (Basis of design, model numbers listed below)
2. John Dow Industries.
3. Hannay Reels, Inc.

B. Provide compressed air hose reels as indicated on Construction Drawings. Each reel kit assembly shall consist of the following:

1. Air reel assembly kit consisting of the following: GRACO HSL65B XD20 with 65’ of 3/8” ID hose, inlet connecting hose kit, quick coupler, shut off valve, and tire inflator.
2. Reel mounting bracket: Each reel shall be provided with mounting channels and mounting brackets needed for proper mounting to frames provided as part of this section of work.
3. Provide steel framework to support reel mounting bracket of sufficient size and configuration to support reels indicated. Assembly shall be securely welded to supporting structure and include all supplemental framework required for stability when the hose reel is subjected to normal vertical and horizontal forces.

PART 3 - EXECUTION

3.01 PIPING APPLICATIONS

A. ASME Code Compliance: Provide compressed-air piping components complying with ASME B31.9, "Building Services Piping."

B. ASME Code Compliance: Provide compressed-air piping components complying with the following:

1. Low-Pressure, Compressed-Air Piping: ASME B31.9, "Building Services Piping."

C. Install flanges, unions, transition and special fittings, and valves with pressure ratings same or higher than system pressure rating used in applications below, except where otherwise specified.

D. Low-Pressure, Compressed-Air, Distribution Piping: Use the following:

1. 2-Inch NPS and Smaller: Black steel pipe; threaded, malleable-iron fittings; and threaded joints.
2. 2-1/2- to 4-Inch NPS: Black steel pipe; threaded, malleable-iron fittings; and threaded joints.

3.02 VALVE APPLICATIONS

A. Drawings indicate valve types to be used. Where specific valve types are not indicated, the following requirements apply:

1. Shutoff Duty: Use ball or butterfly valves.
2. Throttling Duty: Use globe or butterfly valves.
3. Compressed-Air Supply to Equipment: Locking-handle, safety-exhaust ball valves.
4. Do not use check valves in piping between reciprocating air compressors and air receivers.

3.03 PIPING INSTALLATION, GENERAL

A. Refer to Section 23 05 00 - Basic Mechanical Materials and Methods for basic piping installation.

B. Install air and drain piping with one percent slope downward in direction of airflow.

C. Install eccentric reducers where pipe is reduced in size in direction of airflow, with bottoms of both pipes and reducer flush.

D. Connect branch air piping to mains from top of main. Provide drain leg and drain trap at end of each main, branch, and low point in piping.

E. Install supports and anchors according to Section 23 05 00 - Basic Mechanical Materials and Methods. Do not exceed the following spacing between pipe hangers:

F. Steel Pipe: 12 feet horizontal and 15 feet vertical.

G. Install valves according to Section 23 05 23 – Valves.

H. Install expansion joints and anchors according to Division 15 Section "Basic Mechanical Materials and Methods".

I. Install thermometers and pressure gages according to Section 23 05 16 – Piping Specialties

J. Install plumbing specialties according to Section 22 16 00 - Plumbing Specialties

3.04 JOINT CONSTRUCTION

A. Refer to Division 15 Section "Basic Mechanical Materials and Methods" for basic piping joint construction.

B. Dissimilar Material Piping Joints: Make joints using adapters compatible with both piping materials.

3.05 INSTALLATION OF BASIC IDENTIFICATION

A. Install mechanical identification in accordance with Section 23 05 53.

B. Paint all exposed piping with two coats of specified paint, color shall be selected by the Architect. See Section 09 90 00 – Painting – Non VOC Paint and Section 23 00 10 – Mechanical General Provisions.

3.06 CONNECTIONS

A. Install piping next to equipment and accessories to allow service and maintenance.

B. Connect air piping to equipment and accessories with unions and shutoff valves. Install with strainers where indicated.

C. Install safety valves in receiver tanks, in quantity and size to relieve capacity not less than that of connected compressor.

D. Install automatic drain valves on intercoolers, aftercoolers, separators, receivers, dryers, and other locations indicated. Discharge condensate over nearest floor drain.

E. Install specialties as indicated.

3.07 FIELD QUALITY CONTROL

A. Manufacturer's Field Service: Provide services of a factory-authorized service representative to supervise the field assembly of components and piping, and to report results in writing.

B. Test and adjust piping safety controls. Replace damaged and malfunctioning controls.

C. Piping System Tests: Test new piping. Cap and fill compressed-air piping with oil-free, dry air, or gaseous nitrogen to pressure of 50 psig (345 kPa) above system operating pressure, but not less than 150 psig (1035 kPa). Isolate test source and let stand for 4 hours to equalize temperature. Refill system, if required, to test pressure and hold pressure for 2 hours with no drop in pressure.

1. Repair leaks and defects with new materials and retest system until satisfactory results are obtained.

3.08 COMMISSIONING

A. Perform the following final checks before startup:

1. Verify that specified tests of piping are completed.
2. Check for piping connection leaks.
3. Check for lubricating oil in lubricated-type equipment.
4. Check V belts for proper tension.
5. Check that compressor inlet filters and piping are clear.
6. Check for equipment vibration-control supports and flexible pipe connectors and that equipment is properly attached to substrate.
7. Check safety valves for correct settings. Ensure settings are greater than air-compressor discharge pressure, but not greater than rating of system components.
8. Test operation of equipment safety controls and devices.

9. Drain receiver tanks.
10. Check for adequate room ventilation.

B. Starting Procedures: Follow manufacturer's written instructions. If no instructions are prescribed by manufacturer, proceed as follows:

1. Energize circuits.
2. Start and run equipment through complete sequence of operations. 3. Check for excessive vibration and noise. Correct problems.
3. Check air pressures.
4. Manually operate safety valves.
5. Adjust operating controls, including pressure settings.

C. Operate and adjust operating and safety controls. Replace damaged and malfunctioning controls and equipment discovered by service representative.

END OF SECTION

SECTION 33 05 13 MANHOLES AND STRUCTURES

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Modular precast concrete manhole sections with tongue-and-groove joints, covers, anchorage and accessories.

1.02 RELATED SECTIONS

A. Section 33 31 00 - Sanitary Utility Sewerage Piping.

B. Section 03 30 00 - Cast-In-Place Concrete.

1.03 REFERENCES

A. ASTM A48 - Gray Iron Castings.

B. ASTM C443 - Joints for Circular Concrete Sewer and Culvert Pipe, using Rubber Gaskets.

C. ASTM C478 - Precast Reinforced Concrete Manhole Sections.

D. ASTM C923 - Resilient Connectors Between Reinforced Concrete Manhole Structures and Pipes.

1.04 SUBMITTALS

A. Shop Drawings: Indicate manholes locations, elevations, sizes and elevations of penetrations.

B. Product Data: Provide manhole covers, component construction, features, waterproofing and epoxy lining.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Manhole base shall be precast integral with first manhole section or cast-in-place concrete.

B. Manhole Sections: Reinforced precast concrete in accordance with ASTM C478 with rubber gaskets in accordance with ASTM C443.

C. Concrete: As specified in Section 03 30 00 (3,000 psi).

D. Reinforcement: As specified in Section 03 20 00.

E. Mortar: Cement, ASTM C-150, Type I with clean well graded sand, ASTM C-33, and potable water.

F. Gasket Material for Precast Section Joints: Kent Seal No. 2 as manufactured by Hamilton Kent Manufacturing Company or RAM-NEK as manufactured by K.T. Snyder Company.

2.02 COMPONENTS

A. Lid and Frame: ASTM A48, Class 30B cast iron construction machined flat bearing surface, removable lid.

B. Manhole Steps: Plastic encased steel.

C. Interior Epoxy Coating: Koppers 300M coal tar epoxy or approved equal used with the manufacturer's recommended primers and thinners.

D. Exterior Waterproofing: Bitumastic material, or coal tar epoxy.

E. Flexible Boots: Kor-N-Seal or approved equal.

F. Foundations: Shall be either precast concrete units or poured-in-place reinforced concrete, set on undisturbed earth or compacted Fill material. Concrete shall have a 28 day strength of 3,000 psi.

2.03 CONFIGURATION

A. Shaft Construction: Concentric with eccentric cone top section.

B. Clear Inside Dimensions: As indicated.

C. Design Depth: As indicated.

D. Clear Lid Opening: As indicated.

E. Pipe Entry: Provide openings as required and provide with water tight seal using flexible boots.

F. Steps: 12 inches wide, 12 inches on center vertically, set into manhole wall.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Verify items provided by other sections of Work are properly sized and located.

B. Verify that built-in items are in proper location, and ready for roughing into Work.

C. Verify excavation for manholes is correct.

3.02 PREPARATION

A. Coordinate placement of inlet and outlet pipe.

3.03 PLACING MANHOLE SECTIONS

A. Place base pad, trowel top surface level or use precast base.

B. Form and place manhole sections plumb and level, to correct dimensions and elevations.

C. Cut and fit for pipe. Use flexible boots at all pipe connections.

D. Grout invert channels at base of sections to achieve slope to exit piping. Trowel smooth. Contour as required. Invert grout shall extend to the spring line of the pipe.

E. Set cover frames and covers level without tipping, to correct elevations.

F. Coordinate with other sections of work to provide correct size, shape, and location.

G. Coat outside of manhole, below ground line with two coats of bitumastic, or coal tar epoxy, 20 mills total dry film thickness.

H. Line inside of manhole with coal tar epoxy coating, 20 mills total dry film thickness. Apply lining in accordance with the coating manufacturer's written instructions and at the concrete casting facilities.

3.04 BACKFILL

A. Backfill in 8 inch lifts with proper fill material uniformly around manhole. Avoid any horizontal displacement of manhole. Compact backfill to 95% maximum Standard Proctor Density (ASTM D 698).

B. Place backfill material so finished grade will slope away from manhole cover.

3.05 TESTING

A. A representative sample of manholes constructed shall receive an exfiltration test. This test shall be performed by the Contractor and observed by the Engineer's representative. Exfiltration will be measured by stopping the manhole outlets and filling the manhole with water to a depth as directed. Exfiltration in a manhole shall not exceed 0.038 gallons per inch diameter per foot of depth for a 24 hour test.

END OF SECTION

SECTION 33 11 16 SITE WATER UTILITY DISTRIBUTION PIPING

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Pipe and fittings for site water lines.

B. Valves.

1.02 RELATED SECTIONS

A. Section 03 30 00 - Cast-in-Place Concrete.

1.03 REFERENCES

A. ANSI/AWWA C104 - Cement-Mortar Lining for Ductile-Iron Pipe and Fittings for Water.

B. ANSI/AWWA C105/A21.5 - Polyethylene Encasement for Ductile-Iron Pipe Systems.

C. ANSI/AWWA C110/A21.10 - Ductile Iron and Gray-Iron Fittings, 3 in. through 48 in. for Water and Other Liquids.

D. ANSI/AWWA C111 - Rubber-Gasket Joints for Ductile Iron Pressure Pipe and Fittings.

E. ANSI/AWWA C151 - Ductile-Iron Pipe, Centrifugally Cast for Water or Other Liquids.

F. ANSI/AWWA C153/A21.53 - Ductile Iron Compact Fittings, 3 in. through 16 in. for Water and Other Liquids.

G. ANSI/AWWA C500 - Metal-Seated Gate Valves for Water Supply Service.

H. ANSI/AWWA C502 - Dry-Barrel Fire Hydrants.

I. ANSI/AWWA C508 - Swing-Check Valves for Waterworks Service, 2 in through 24 in NPS.

J. ANSI/AWWA C600 - Installation of Ductile-Iron Water Mains and Their Appurtenances.

K. AWWA C900 - Polyvinyl Chloride (PVC) Pressure Pipe, 4 in. through 12 in., for Water Distribution.

L. ASTM D2241 - Poly (Vinyl Chloride) (PVC) Plastic Pipe(SDR-PR).

M. ASTM D2855 - Making Solvent-Cemented Joints with Poly (Vinyl Chloride) (PVC) Pipe and Fittings.

N. ASTM D2564 - Solvent Cements for Poly(Vinyl Chloride) (PVC) Plastic Pipe Systems.

O. ASTM F477 - Elastomeric Seals (Gaskets) for Joining Plastic Pipe.

P. UL 262 - Gate Valves for Fire-Protection Service.

Q. UL 789 - Indicator Posts for Fire-Protection Service.

PART 2 - PRODUCTS

2.01 PIPE, COUPLINGS AND ACCESSORIES

A. PVC Pipe:

1. All PVC pipe and fittings four (4) inches and larger in diameter shall conform to the latest edition of AWWA C-900 and shall be made from Class 12454-A or B materials per the latest edition of ASTM D-1784. Pipe shall be a minimum of DR 18 unless otherwise specified, for a working pressure rating of 150 PSI. All pipe shall conform with the outside diameter (OD) dimensions of ductile iron pipe to facilitate use of DIP fittings, standard cast iron valves and specials. All joints shall have elastomeric seals conforming to the latest edition of ASTM F-477. All pipe shall bear the seal of the National Sanitation Foundation (NSF). All jointing shall be made in accordance with the manufacturer's recommendations. Provide a magnetic detectable tracer wire with a plastic covering imprinted with water service 18 inches above top of pipe.

2. All PVC pipe three (3) inches and smaller in diameter shall conform to the latest edition of ASTM D-2241 and shall be made from Type 1120 material. Pipe shall be a minimum of SDR 26 unless otherwise specified, for a working pressure of 160 PSI. All joints shall be solvent weld in accordance with the latest edition of ASTM D-2855 with the solvent cement conforming to the latest edition of ASTM D-2564. All pipe shall bear the seal of the NSF. All jointing shall be made in accordance with the manufacturer's recommendations. Provide a magnetic detectable tracer wire with a plastic covering imprinted with water service 18 inches above top of pipe.

B. Ductile Cast Iron Pipe: All pipe shall be centrifugally cast manufactured in accordance with the latest edition of ANSI A21.51 (AWWA C 151). Pipe shall be pressure class 350 psi. All pipes and fittings shall be factory-coated on the outside with coal tar enamel conforming to the latest edition of A 21.5 and lined inside with a minimum of 1/16 inch cement lining in accordance with the latest edition of ANSI A 21.4 (AWWA C-104).

1. Joints for ductile cast iron pipe shall be slip-on type unless otherwise specified. All joints for fittings, valves and specials shall be mechanical joints. Slip-on pipe joint for ductile cast iron pipe shall conform to the latest edition of ANSI A 21.11 (AWWA C 111) except that the joints shall be made with a special gasket seal Super-Bel Tite as manufactured by Clow Corporation or approved equal. Lubricants shall be non-toxic, odorless, tasteless and shall not support bacteria and shall be specifically manufactured for the pipe utilized. Mechanical joints shall conform to the latest edition of ANSI A 21.11 (AWWA C 111).

2. All fittings shall be ductile iron and shall conform to the latest edition of AWWA C110 or C153 for ductile iron fittings.

3. All fittings shall be tar coated outside and cement lined inside in accordance with the latest edition of AWWA C-104 (ANSI 21-4), except cement lining may be half of thickness (enameline type) with bituminous seal coating.

C. Valves:

1. Gate Valves larger than 3-inch - Shall comply with the latest edition of AWWA C-500 as manufactured by Mueller, American-Darling or approved equal. Gate valves shall be iron body, fully bronze mounted, double disc, parallel seat, non-rising stem, and shall open counterclockwise. All gate valves shall have a maximum working pressure of 200 PSI and be tested at 400 PSI. The thrust collar and other bearing surfaces shall be permanently lubricated with oil. The disc mechanism shall be designed so that the seating pressure is applied equally at multiple separate contact points near the outer edge of each disc by a bronze or alloy wedging mechanism.

Gate valves shall be equipped with mechanical joint connections unless otherwise specified.

2. Valve Boxes - Cast iron box having top section and cover with lettering water. Bottom section with base of size to fit over valve and barrel approximately 5" in diameter, and adjustable cast-iron extension of length required for depth of bury of valve. Provide steel T-handle wrench with each valve box.

3. Post Indicator Valves - Provide with operating nut located about 3 feet above finish grade. Gate valves for use with indicator posts shall conform to U.L. 262. Indicator posts shall conform to U.L. 789. Provide each indicator post with one coat of primer and two coats of red enamel paint. Valves and posts shall be similar and equal to Mueller or American Darling.

4. Check Valves - Shall be iron body, spring loaded, swing type with straight-away passage of full pipe area and renewable bronze seat ring with resilient faced disc. Valves shall be as manufactured by Mueller, American-Darling or approved equal.

5. Gate Valves smaller than 3-inch shall be Class 200, solid wedge, nonrising stem. Valves shall have flanged end connections or threaded end connections with a union on one side of valve.

D. Services: Service piping shall be 200 PSI Polybutyl or Type "K" copper and shall conform to the applicable AWWA/ASTM/ANSI Standards and designed for working pressure compatible with the water mains specified above.

E. Specials: Specials shall be of the same material as the pipe material being used or as approved by the Engineer. The term specials shall include plugs, caps, and other items as needed. Specials shall conform to the applicable AWWA/ASTM/ANSI Standards and shall be designed for the working pressure of the water mains on which they are being installed.

F. System Materials: Pipe materials shall comply with the following schedule:

SYSTEM	MATERIAL
Yard Piping	PVC

G. Backflow Prevention Assembly

1. Shall be listed in the latest version of the "List of Approved Backflow Prevention Assemblies" published by the Mississippi State Department of Health, Division of Water Supply, or as approved by the University of Southern California's Foundation for Cross Connection Control and Hydraulic Research. These assemblies shall be furnished as a complete set with the approved shut-off valves specified in the above lists.

H. Heated Insulated Enclosure for Backflow Prevention Assembly

1. Shall be fabricated from aluminum. Insulation shall be a minimum of 1.5 inches of polyisocyanurate foam or board stock laminated between two layers of fiberglass mat. Structural members shall be aluminum. Roof and wall panels shall be factory assembled with no on-site drilling required. Multi sectional enclosures shall fit together with overlapping tongue and groove joints. The unit shall be fastened to the concrete foundation. Access panels shall be provided to allow for easy access for operation, maintenance, and testing of backflow prevention assembly without removal or disassembly. Access panels shall be lockable. Heating equipment shall maintain an interior temperature of + 40°F with and exterior outside temperature of

0°F with a wind velocity of 15 mph. Heating equipment shall be UL, ETL or CSA certified. Electric power source for heat and accessories shall be G.F.I. protected. Hardware shall be stainless steel or aluminum.

PART 3 - EXECUTION

3.01 PIPE LAYING

A. General: Pipe shall be installed as shown on the drawings and in accordance with the manufacturer's recommendations.

B. Pipe, appurtenances, and fittings shall be laid to the line and grade established on the plans. Standard cover depth shall be 3' minimum.

C. The inside of the bells and the outside of the spigots shall be thoroughly cleaned before they are placed. The inside of all pipe shall be thoroughly swabbed to ensure that the pipe is clean and free of obstructions and foreign matter until the work is completed.

D. Where pipe laying ceases at the end of the day or for any cause, the end of the pipe shall be securely closed in order to prevent the entrance of water, mud or any other objectionable matter.

E. Pipe shall not be lain when water is in the trench.

F. Thrust Blocking shall be installed at locations as indicated on the drawings.

3.02 MAKING JOINTS

A. All joints shall be constructed in accordance with the manufacturer's recommendations using the jointing materials, specials and lubricants specified by the manufacturer and approved by the Engineer. Restrain joints as required to prevent separation.

3.03 SETTING FITTINGS, VALVES, AND SPECIALS

A. All fittings, valves, valve boxes, and other appurtenances shall be set at the location indicated on the plans. Omission of any of these items shall be corrected by the Contractor without extra cost to the Owner. Valves and fittings shall be jointed to pipe as recommended by manufacturers.

B. All buried valves, including by-pass valves, shall be provided with a valve box. The valve box shall not transmit shock or stress to the valve and shall be centered and plumb over the operating nut with the cover flush with the pavement surface or such other level as directed. Valve box slabs or marker posts shall be provided where specified on the drawings.

3.04 SERVICE ASSEMBLIES AND SERVICE LINE INSTALLATION

A. Assemblies shall consist of a corporation stop, service clamp, curb stop and other appurtenances needed to complete the assembly in accordance with the plans. They shall be installed in a good and workmanlike manner in the places designated on the plans or as directed by the Engineer.

3.05 CONNECTION TO EXISTING MAINS

A. Where indicated on the Plan, cut-ins must be made by the Contractor in order to connect the new main with existing water mains. The Contractor shall coordinate connections with the utility owner. The Contractor shall furnish all labor and materials and service required for the

excavating, cutting the existing mains, removal and relocation of sections of old, connecting the new main with the pipe, de-watering the trench old and the setting of necessary fittings, specials and valves as shown on the PLANS. Connection to existing mains shall be made after the new line has been disinfected and tested.

B. The Contractor shall provide temporary blocking and bracing a properly placed to prevent movement or blowing off of any pipe, valves or fittings due to water pressure on the main. All connections shall be made in a most expeditious and workmanlike manner to cause the least inconvenience.

C. Any time that the interruption of water service in the existing system is necessary because of operations under this Contract, the Contractor shall notify the Owner at least 48 hours in advance. Interruptions of water service shall be coordinated with the Owner. The developed schedule will be strictly adhered to.

3.06 SEPARATION OF WATER AND SEWER MAINS

A. Water Piping installation Parallel with Sanitary Sewer Piping

1. Normal Conditions. Water Piping shall be laid at least 10 feet horizontally from a sewer manhole whenever possible. Distance shall be measured edge to edge.

2. Unusual Conditions. When local conditions prevent a horizontal separation of 10 feet, water piping may be laid closer to a sewer or sewer manhole provided:

a) Bottom (invert) of the water piping shall be at least 18 inches above the top (crown) of the sewer piping.
b) Where this vertical separation cannot be obtained, sewer piping shall be constructed of AWWA-approved water pipe, pressure tested in place without leakage prior to backfilling.
c) Sewer manhole shall be of watertight construction and tested in place.

B. Installation of Water Piping Crossing Sanitary Sewer Piping

1. Normal Conditions. Water piping crossing above sewer piping shall be laid to provide a separation of at least 18 inches between the bottom of the water piping and the top of the sewer piping. The length (minimum 18 feet) of water piping shall be centered at the point of crossing so that joints shall be equidistant and as far as possible from sewer piping.

2. Unusual Conditions. When local conditions prevent a vertical separation described above, the following construction shall be used:

a) Sewer piping passing over or under water piping shall be constructed of AWWA-approved water piping, pressure tested in place without leakage prior to backfilling.
b) Water piping passing under sewer piping shall, in addition, be protected by providing the following. A vertical separation of at least 18 inches between bottom of sewer piping and top of water piping; adequate structural support for sewer piping to prevent excessive deflection of joints and settling on and breaking of water piping; and that the length (minimum 18 feet) of water piping be centered at the point of crossing so that joints shall be equidistant and as far as possible from sewer piping.

C. Sanitary Sewer Piping or Sanitary Sewer Manholes. No water piping shall pass through or come in contact with any part of a sewer manhole.

3.07 HYDROSTATIC TESTS

A. After the pipe is laid and the line flushed, it shall be filled with water with care being exercised to expel all air from the pipe. During the test period all pipe, valves, fittings, and joints shall be examined carefully for defects. Any observed leaks or defective pipe shall be satisfactorily repaired or replaced, at the expense of the Contractor and the test repeated until the section tested is within the limits prescribed hereinafter. The entire distribution system or parts thereof shall be tested under hydrostatic pressure of 150 psi, for a period of 4 hours, if joints are exposed, or for an 8 hour period, if joints are covered. Repairs shall be made using approved materials and new replacement fittings, specials, of gaskets where leakage occurs.

B. Leakage shall be measured by an approved calibrated meter through which all of the water required to maintain test pressure shall be pumped. All testing shall be performed in the presence of the Engineer or his authorized representative, and the Engineer shall be notified at least 24 hours in advance of the start of the test.

C. The Contractor shall furnish the pump, pipe connections, fittings, gates, meters, and all necessary apparatus and shall furnish all labor and work required to make the tests. All costs of testing shall be borne by the Contractor and testing operations shall remain in operation until approved by the Engineer. Allowable leakage shall not exceed 10 gallons per 24 hours per inch of diameter per mile of pipe, at the specified test pressure.

D. Tests shall be completed in accordance with the latest edition of AWWA C-600 except as modified herein.

3.08 DISINFECTION OF PIPELINES

A. Disinfecting of water lines shall be in accordance with Section 33 11 17.

END OF SECTION

SECTION 33 11 17 DISINFECTION AND TESTING FOR WATER LINES

PART 1- GENERAL

1.01 GENERAL

A. This item includes furnishing all labor, materials, equipment and incidentals for disinfecting and testing the water lines.

B. The Contractor shall disinfect all constructed water lines in strict accordance with Mississippi State Board of Health guidelines and AWWA C651.

1.02 RELATED WORK SPECIFIED ELSEWHERE

A. Section 33 11 16 - Site Water Utility Distribution Piping.

PART 2 - MATERIALS

2.01 Materials used for disinfection shall conform to AWWA-C651, Section 2.

PART 3 EXECUTION

3.01 WATER LINES

A. Any connection of new water line to the active distribution system prior to receipt of satisfactory bacteriological samples may constitute a cross-connection. The new water line must be isolated until bacteriological test in paragraph C below are satisfactorily completed.

B. After completion of the construction and pressure testing of water lines, they shall be flushed and disinfected using at least a 50 mg/L free chlorine solution for 24 hours or as described in AWWA C651.

C. Before a water line can be placed in operation, water samples shall be taken and analyzed in accordance to Mississippi State Board of Health requirements. Disinfection will continue until the water shows no coliform bacteria and no confluent growth. Samples shall be taken by the system operator or county sanitarian.

END OF SECTION

SECTION 33 31 00 SANITARY UTILITY SEWERAGE PIPING

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Sanitary sewerage drainage piping, fittings, accessories and bedding.

B. Connection of building sanitary drainage system to municipal sewers.

1.02 RELATED SECTIONS

A. Section 33 05 13 - Manholes and Structures.

1.03 REFERENCES

A. ANSI/ASTM D698 - Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures, Using 5.5 lb (2.49 Kg) Rammer and 12 inch (304.8 mm) Drop.

B. ASTM 2241 - Poly (Vinyl Chloride) (PVC) Pressure Rated Pipe (SDR-Series).

C. ANSI/ASTM D3034 - Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings.

D. ASTM D2922 - Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).

E. ASTM D3212 - Joints for Drain and Sewer Plastic Pipe Using Flexible Elastomeric Seals.

F. ASTM F477 - Elastomeric Seals (Gaskets) for Joining Plastic Pipe.

G. ANSI/AWWA C104 - Cement-Mortar Lining for Ductile-Iron Pipe and Fittings for Water.

H. ANSI/AWWA C110/A21.10 - Ductile Iron and Gray-Iron Fittings, 3 in. through 48 in. for water and other liquids.

I. ANSI/AWWA C111 - Rubber-Gasket Joints for Ductile Iron Pressure Pipe and Fittings.

J. ANSI/AWWA C151 - Ductile-Iron Pipe, Centrifugally Cast for Water or Other Liquids.

K. ANSI/AWWA C153/A21.53 - Ductile Iron Compact Fittings, 3 in. through 16 in. for Water and Other Liquids.

L. ANSI/AWWA C500 - Metal-Seated Gate Valves for Water Supply Service.

1.04 DEFINITIONS

A. Bedding: Fill placed under, beside and directly over pipe, prior to subsequent backfill operations.

1.05 SUBMITTALS

A. Product Data: Provide data indicating pipe, and pipe accessories.

1.06 PROJECT RECORD DOCUMENTS

A. Record location of pipe runs, connections, and invert elevations.

1.07 FIELD MEASUREMENTS

A. Verify that field measurements and elevations are as indicated.

1.08 COORDINATION

A. Coordinate the Work with termination of sanitary sewer connection outside building, and connection to municipal sewer utility service.

PART 2 - PRODUCTS

2.01 POLYVINYL CHLORIDE (PVC) GRAVITY SEWER PIPE AND FITTINGS

A. All PVC gravity pipe and fittings shall be suitable for use as a gravity sewer conduit and shall conform to ASTM D-3034 (SDR 26), latest revision, minimum pipe stiffness, 115 psi. All fittings and accessories shall have bell and spigot configurations identical to that of the pipe.

B. Joints for PVC sewer pipe shall be integral bell gasketed joint designed so that when assembled, the elastomeric gasket inside the bell is compressed radially on the pipe spigot to form a positive seal. The joint shall be so designed to avoid displacement of the gasket when installed in accordance with the manufacturer's recommendation. Joints shall conform to ASTM D-3212, latest revision. Gaskets shall conform to ASTM F-477, latest revision.

2.02 PRESSURE SEWER PIPE AND FITTINGS

A. PVC Pipe. All PVC pressure pipe shall conform to the latest edition of ASTM D-2241 and shall be made from Type 1120 materials, Pipe shall be a minimum of SDR 26 unless otherwise specified, for a working pressure rating of 150 psi. All joints shall have elastomeric seals conforming to the latest edition of ASTM F-477. All jointing shall be made in accordance with the manufacturer's recommendations. All fittings shall be cast iron or ductile iron, mechanical joint.

B. Ductile Cast Iron Pipe: All pipe shall be centrifugally cast manufactured in accordance with the latest edition of ANSI A21.51 (AWWA C 151). Pipe shall be pressure class 350 psi. All pipes and fittings shall be factory-coated on the outside with coal tar enamel conforming to the latest edition of A21.5 an lined inside with a minimum of 1/16 inch cement lining in accordance with the latest edition of ANSI A21.4 (AWWA C-104).

1. Joints for ductile cast iron pipe shall be slip-on type unless otherwise specified. All joints for fittings, valves and specials shall be mechanical joints. Slip-on pipe joint for ductile cast iron pipe shall conform to the latest edition of ANSI A 21.11 (AWWA C 111) except that the joints shall be made with a special gasket seal Super-Bel Tite as manufactured by Clow Corporation or approved equal. Lubricants shall be non-toxic, odorless, tasteless and shall not support bacteria and shall be specifically manufactured for the pipe utilized. Mechanical joints shall conform to the latest edition of ANSI A 21.11 (AWWA C 111).

2. All fittings shall be ductile iron and shall conform to the latest edition of AWWA C110 or C153 for ductile iron fittings.

3. All fittings shall be tar coated outside and cement lined inside in accordance with the latest edition of AWWA C-104 (ANSI 21-4), except cement lining may be half of thickness (enameline type) with bituminous seal coating.

C. Valves:

1. Gate Valves - Shall comply with the latest edition of AWWA C-500 as manufactured by Mueller, A-2380-6, American-Darling or approved equal. Gate valves shall be iron body, fully bronze mounted, double disc, parallel seat, non-rising stem, and shall open counterclockwise. All gate valves shall have a maximum working pressure of 200 PSI and be tested at 400 PSI. The thrust collar and other bearing surfaces shall be permanently lubricated with oil. The disc mechanism shall be designed so that the seating pressure is applied equally at multiple separate contact points near the outer edge of each disc by a bronze or alloy wedging mechanism. Gate valves shall be equipped with mechanical joint connections unless otherwise specified.

2. Check Valves - Shall iron body, spring loaded, swing type with straight-away passage of full pipe area and renewable bronze seat ring with resilient faced disc. Valves shall be as manufactured by Mueller, A2602-6-02, American-Darling or approved equal.

3. Air Release Valve - Valves shall be stainless steel with a 2-inch inlet, 1/2-inch outlet and 5/16-inch orifice and be similar and equal to Model No. 48 BW manufactured by Valmatic.

4. Air Release and Vacuum Breaker Valve - Valves shall be stainless steel with a 2-inch inlet and 2-inch orifice with a minimum air flow of 6 scfs (Standard Cubic Feet of Free Air per Second). Vacuum valves shall be similar and equal to Model No. 302 BW manufactured by Valmatic.

2.03 PIPE ACCESSORIES

A. Fittings: Same material as pipe molded or formed to suit pipe size and end design, in required tee, bends, elbows, cleanouts, reducers, traps and other configurations required.

2.04 MANHOLES

A. Manhole Construction: Section 33 05 13.

2.05 BEDDING MATERIALS

A. Bedding: Fill as specified by MDOT Specifications.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Verify that trench cut and excavation base is ready to receive work and excavations, dimensions, and elevations are as indicated on drawings.

3.02 PREPARATION

A. Hand trim excavations to required elevations. Correct over excavation with compacted fill material.

B. Remove large stones or other hard matter which could damage pipe or impede consistent backfilling or compaction.

3.03 BEDDING

A. Hand trim excavation for accurate placement of pipe to elevations indicated.

B. Place bedding material at trench bottom, level materials in continuous layer not exceeding 6 inches compacted depth, compact to 95 percent (ASTM D698).

C. Maintain moisture content of bedding material to attain required compaction density.

3.04 INSTALLATION - PIPE

A. Install pipe, fittings, and accessories in accordance with manufacturer's instructions. Seal joints watertight.

B. Lay pipe to slope gradients and alignment noted on drawings. Pipe which is not true in alignment or which shows any settlement after laying shall be taken up and relaid without extra compensation.

C. Install bedding at sides and over top of pipe to minimum compacted thickness of 6 inches; compacted to 95 percent. Bedding and backfill shall be as shown on the drawings.

D. Refer to MDOT Specifications for trenching requirements. Do not displace or damage pipe when compacting.

E. Refer to Section 33 05 13 for manhole requirements. All connections to manholes shall be watertight and shall conform to a smooth and uniform flow line.

F. Connect to building sanitary sewer outlet and sewer system.

G. Thrust blocking on pressure pipe shall be installed as indicated on drawings at all fittings and as otherwise directed by the Engineer.

3.05 FIELD QUALITY CONTROL

A. Request inspection prior to placing bedding.

B. Compaction testing will be performed in accordance with ANSI/ASTM D698 and ASTM D2922.

C. If tests indicate Work does not meet specified requirements, remove Work, replace and retest at no cost to Owner.

D. Frequency of Tests: One test per lift per 300 feet.

3.06 PROTECTION

A. Protect pipe and aggregate cover from damage or displacement until backfilling operation is in progress.

3.07 TESTING FOR GRAVITY PIPE

A. All pipe shall be tested for infiltration/exfiltration using an approved air test method. The tests shall be performed by the Contractor and observed by the Engineer's representative. Any defects in material or workmanship or any obstruction to the flow in the pipe system shall be corrected by the Contractor without additional compensation.

B. The alignment and grade of sewer pipe intended to be straight shall be so true that a section of laid line will show a full circle of light when viewed from the end.

C. Sanitary Sewer mains shall be air tested. The air test procedures shall be as follows:

1. Clean the section of pipe to be tested using an approved method.

2. Plug all pipe outlet with suitable test plugs. Brace each plug securely.

3. The seal at one end of the pipe section being tested shall have an orifice through which air can be injected into the pipe. The air supply line shall contain an on-off air valve and a pressure gauge. The pressure gauge shall have a range of from 0 to 5 psi, with minimum division of 0.10 psi and shall have an accuracy of ± 0.04 psi.

4. If the pipe section being tested is submerged in ground water, insert a pipe probe, by boring or jetting, into the backfill material adjacent to the center of the pipe and determine the pressure in the probe when air passes slowly through it. This is the back pressure due to ground water submergence. Increase all gauge pressures in the test by this amount. Alternately, if the depth of pipe submergence below the ground water is known, gauge pressures may be adjusted by adding 0.433 psi for each foot of submergence.

5. Add air slowly to the portion of the pipe installation under test until the internal air pressure is raised to 4.0 psi.

6. Check exposed pipe and plugs for abnormal leakage by coating with a soap solution. If any failures are observed, bleed off air and make necessary repairs.

7. After an internal pressure of 4.0 psi is obtained, allow at least two minutes for air temperature to stabilize, adding only the amount of air required to maintain pressure.

8. After the two minute period, disconnect air supply.

9. When pressure decreases to 3.5 psi, start stopwatch. Determine the time in seconds that it required for the internal air pressure to reach 2.5 psi. This time interval should then be compared with the time required by specification in the Low Pressure Air Sewer Test table in these specifications.

10. If the time lapse is greater than that specified, the section undergoing test shall have passed, and the test may be discontinued at that time. If the time is less than that specified, the line has not passed the test and the Contractor will be required to repair and prepare the line for retest.

D. PVC sewer mains shall also be tested for deflection. The test shall be conducted after backfill has been in place for at least 30 days. The test shall be conducted by pulling a rigid ball or mandrel through the sewer pipe. The ball or mandrel shall have a diameter equal to 95% of the inside diameter of the sewer pipe. The test shall be performed without mechanical pulling devices.

E. Sewer lines failing to meet test requirements shall be repaired until they conform to these requirements of the pipe removed and replaced.

LOW PRESSURE AIR SEWER TEST
Minimum Time in Seconds for 1 psi Drop

Length Test Section (feet)	8 Inch Pipe
50	35
100	70
150	106
200	141
250	176

3.08 HYDROSTATIC TESTS FOR PRESSURE PIPE

A. After the pipe is laid and the line flushed, it shall be filled with water with care being exercised to expel all air from the pipe. Taps made for the purpose of discharging air shall be at the CONTRACTOR'S expense. During the test period all pipe, valves, fittings, and joints shall be examined carefully for defects. Any observed leaks or defective pipe shall be satisfactorily repaired or replaced, at the expense of the CONTRACTOR and the test repeated until the section tested is within the limits prescribed hereinafter. The entire force main system or parts thereof shall be tested under hydrostatic pressure of 100 psi, for a period of 4 hours, if joints are exposed, or for an 8 hour period, if joints are covered. Repairs shall be made using approved materials and new replacement fittings, specials, or gaskets where leakage occurs.

B. Leakage shall be measured by an approved calibrated meter through which all of the water required to maintain test pressure shall be pumped. All testing shall be performed in the presence of the ENGINEER or his authorized representative, and the ENGINEER shall be notified at least 24 hours in advance of the start of the test.

C. The CONTRACTOR shall furnish the pump, pipe connections, fittings, gates, meters, and all necessary apparatus and shall furnish all labor and work required to make the tests. All costs of testing shall be borne by the CONTRACTOR and testing operations shall remain in operation until approved by the ENGINEER. Allowable leakage shall not exceed 100 gallons per 24 hours per inch of diameter per mile of pipe, at the specified test pressure.

END OF SECTION

Renovation of the Existing District Six Shop and Minor Site Improvements, known as State Project Nos. BWO-6211-18(003) / 502889301 & LWO-6017-18 (006) / 502889302 in Forrest County.

I (We) agree to complete the entire project within the specified contract time.

*****SPECIAL NOTICE TO BIDDERS*****

BIDS WILL NOT BE CONSIDERED UNLESS BOTH PRICES AND ITEM TOTALS ARE ENTERED.
BIDS WILL NOT BE CONSIDERED UNLESS THE BID CERTIFICATION LOCATED AT THE END OF THE BID SHEETS IS SIGNED

*****BID SCHEDULE*****

Line No.	Item Code	Adj Code	Quantity	Units	Description	Unit Price		Item Amount	
						Dollar	Ct	Dollar	Ct
					Building Items				
0010	907-242-A015		1	Lump Sum	Renovation ofExisting Building	XXXXXXX	XXX		
					Roadway Items				
0020	201-A001		1	Lump Sum	Clearing and Grubbing	XXXXXXX	XXX		
0030	202-A001		1	Lump Sum	Removal of Obstructions	XXXXXXX	XXX		
0040	202-B005		1,105	Square Yard	Removal of Asphalt Pavement, All Depths				
0050	202-B041		84	Linear Feet	Removal of Fence, All Types				
0060	202-B064		25	Linear Feet	Removal of Pipe, 8" And Above				
0070	202-B068		528	Square Yard	Removal of Reinforced Concrete Pavement, All Depths				
0080	202-B093		114	Linear Feet	Removal of Curb & Gutter, All Types				
0090	202-B170		2	Each	Removal of Concrete Junction Box, Manhole and Inlet, All Sizes				
0100	203-I002		2	Acre	Site Grading				
0110	219-A001		152	Thousand Gallon	Watering	20.	00	3,040.	00
0120	234-A001		680	Linear Feet	Temporary Silt Fence				
0130	503-C009		4,552	Linear Feet	Saw Cut, 2-inch				

Line No.	Item Code	Adj Code	Quantity	Units	Description	Unit Price		Bid Amount	
0140	602-A001	S	5,154	Pounds	Reinforcing Steel				
0150	603-CA001	S	280	Linear Feet	15" Reinforced Concrete Pipe, Class III				
0160	603-CA002	S	253	Linear Feet	18" Reinforced Concrete Pipe, Class III				
0170	607-B041		160	Linear Feet	72" Type I Chain Link Fence, Class I , With Top Guard				
0172	607-P1009		13	Each	Line Post, 9' x 2" Galvanized Steel				
0174	607-P2010		4	Each	Brace Post, 9' x 2 1/2" Galvanized Steel				
0180	609-D001	S	374	Linear Feet	Combination Concrete Curb and Gutter Type 1				
0185	620-A001		1	Lump Sum	Mobilization	XXXXXXX	XXX		
0190	907-216-A001		3,033	Square Yard	Solid Sodding				
0200	907-234-D001		8	Each	Inlet Siltation Guard				
0210	907-237-A002		288	Linear Feet	Wattles, 12"				
0215	907-242-PP003		1	Lump Sum	Construction ofBrick Fence Piers, Per Plans	XXXXXXX	XXX		
0230	907-258-PP001		1	Each	Handicap Parking Sign and Post, Per Plans				
0240	907-265-PP003		1	Each	Fire Hydrant Assembly, Per Plans				
0250	907-304-H003	GY	626	Cubic Yard	Size 610 Crushed Stone Base, LVM				
0260	907-504-A002	C	51	Square Yard	4" Fiber Reinforced Concrete Pavement				
0270	907-601-B001	S	835	Cubic Yard	Class "B" Structural Concrete, Minor Structures, Per Plans				
0280	907-603-PP001		6	Each	Grate Inlet				
0290	907-604-C001	S	2	Each	Precast Manhole, 48-inch Diameter				
0300	907-607-PP021		88	Linear Feet	Ornamental Iron Fence, Per Plans				
0310	907-607-PP022		1	Each	Ornamental Gate, Per Plans				

Line No.	Item Code	Adj Code	Quantity	Units	Description	Unit Price		Bid Amount	
0315	907-607-PP007		1	Lump Sum	Fence Slats, Vinyl	XXXXXXX	XXX		
0320	907-611-PP003	S	20	Square Feet	Detectable Warning, Per Plans				
0330	907-626-B001		340	Linear Feet	4" Thermoplastic Traffic Stripe, Continuous White				
0340	907-626-B003		24	Linear Feet	6" Thermoplastic Traffic Stripe, Continuous White				
0350	907-626-E001		66	Linear Feet	4" Thermoplastic Traffic Stripe, Continuous Yellow				
0360	907-626-G001		140	Linear Feet	Thermoplastic Detail Stripe, Blue-ADA				
0370	907-626-H002		1	Each	Thermoplastic Legend, Blue-ADA Handicap Symbol				

*** BID CERTIFICATION ***

TOTAL BID.....$_____

*** BID STATEMENT ***

BIDDER ACKNOWLEDGES THAT HE/SHE HAS CHECKED ALL ITEMS IN THIS PROPOSAL FOR ACCURACY AND CERTIFIED THAT THE FIGURES SHOWN THEREIN CONSTITUTE THEIR OFFICIAL BID.

_____

BIDDER'S COMPANY

_____

BIDDER'S FEDERAL TAX ID NUMBER

ADDENDUM

FOR PRINT SCALE VERIFICATION THIS LINE IS 4" LONG

STATE	PROJECT NO.
MISS.	BWO-6211-18(003)

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

DISTRICT 6
SHOP BUILDING RENOVATION

PROJECT NUMBER: LWO-6017-18(006)
BWO-6211-18(003)

6334 US Hwy 49 NORTH
HATTIESBURG, MISSISSIPPI

PLAN
ROADWAY DESIGN DIVISION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

5/19/2016 6:13:09 PM

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E400	86	PANEL SCHEDULES
E401	87	PANEL SCHEDULES
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E403	89	LIGHTING FIXTURE SCHEDULE AND DETAIL
E404	90	SYMBOLS

1

2 ANY REFERENCE TO PROJECT NUMBER LWO-6017-18(006) IN THE TITLE BLOCK IS TO BE UNDERSTOOD THAT THE PROJECT NUMBER BWO-6211-18(003) SHOULD ALSO BE INCLUDED IN THE LIST OF PROJECT NUMBERS.

REGISTERED ARCHITECT 3-23-2016 RANDALL LEWIS 2723 STATE OF MISSISSIPPI
ARCHITECTURAL

KENNETH SIMMONS REGISTERED PROFESSIONAL ENGINEER 3-23-16 17092 STATE OF MISSISSIPPI
CIVIL

JOHN M. WYNNE REGISTERED PROFESSIONAL ENGINEER #11869 STATE OF MISSISSIPPI
ELECTRICAL

CHAD E. MOORE ENGINEER 20102 03-23-16 STATE OF MISSISSIPPI
MECHANICAL & PLUMBING

PS & E PLANS-DATE : 03/25/16

FMS CON. # 502889/301000 AND 502889/302000

REVISIONS

DATE	SHEET NO.	BY
5/18/16	2,3,6,7,8,9,10,13,1,15,17,18,19,20,23,24,28,43 44,57,60,66,67,77,79,80,83,86,88,89	VARIES
7/12/16	2,6,7,8,9,10,13_1,15,17,18,19,20,23,24,28,43 44,56,57,60,66,67,77,79,80,83,86,88,89	VARIES

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DATE	REVISION	BY
7/12/16	REVISED PROJECT NUMBER; ADDED NOTE	BLL
5/18/16	REFORMATTED INDEX	RAL

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
DISTRICT 6
SHOP BUILDING RENOVATION
INDEX OF DRAWINGS
PROJ. NO. BWO-6211-18(003) 2
COUNTY: FORREST
JH&H PROJECT NO: 14-112
DESIGN TEAM RAL RAL CHECKED RAL DATE: 3/23/2016

REGISTERED ARCHITECT 3-23-2016 RANDALL LEWIS 2723 STATE OF MISSISSIPPI

WORKING NUMBER T102

SHEET NUMBER 2

ORIGINAL SHEET SIZE 22" x 34"

ADDENDUM

FOR PRINT SCALE VERIFICATION, THIS LINE IS 4" LONG

STATE	PROJECT NO.
MISS.	BWO-6211-18(003)
MISS.	LWO-6017-18(006)

SUMMARY OF QUANTITIES

PAY ITEM NO.	PAY ITEM	UNIT	PRELIMINARY	FINAL
201-A001	CLEARING AND GRUBBING	LS	100%	
202-A001	REMOVAL OF OBSTRUCTIONS	LS	100%	
202-B005	REMOVAL OF ASPHALT PAVEMENT, ALL DEPTHS	SY	1105	
202-B041	REMOVAL OF FENCE, ALL TYPES	LF	84	
202-B068	REMOVAL OF REINFORCED CONCRETE PAVEMENT, ALL DEPTHS	SY	528	
202-B093	REMOVAL OF CURB AND GUTTER, ALL TYPES	LF	114	
202-B070	REMOVAL OF PIPE, ALL SIZES	LF	25	
202-B170	REMOVAL OF CONCRETE JUNCTION BOX, MANHOLE, INLET, ALL SIZES	EA	2	
203-I002	SITE GRADING	ACRE	2	
907-216-A001	SOLID SODDING	SY	3033	
219-A001	WATERING	KGAL	152	
234-A001	TEMPORARY SILT FENCE	LF	680	
907-234-D001	INLET SILTATION GUARD	EA	8	
907-237-A002	WATTLELS, 12"	LF	288	
907-242-A015	RENOVATION OF EXISTING BUILDING	LS	100%	
907-242-PP001	CONSTRUCTION OF BRICK FENCE PIERS, PER PLANS	LS	100%	
907-265-PP003	FIRE HYDRANT ASSEMBLY, PER PLAN	EA	1	
907-304-H003	SIZE 610 CRUSHED STONE BASE, LVM	CY	626	
907-504-A002	4" FIBER REINFORCED CONCRETE PAVING	SY	51	
907-601-A001	CLASS "B" CONCRETE, PER PLANS	CY	835	
602-A001	REINFORCING STEEL	LBS	5154	
503-C009	SAW CUT, 2-INCH	LF	4552	
907-258-PP001	HANDICAP PARKING SIGN AND POST, PER PLAN	EA	1	
609-D001	COMBINATION CONCRETE CURB AND GUTTER TYPE 1	LF	374	
907-611-PP003	DETECTABLE WARNING, PER PLANS	SF	20	
620-A001	MOBILIZATION	LS	100%	
907-626-B001	4" THERMOPLASTIC TRAFFIC STRIPE, CONTINUOUS WHITE	LF	340	
907-626-B003	6" THERMOPLASTIC TRAFFIC STRIPE, CONTINUOUS WHITE	LF	24	
907-626-E001	4" THERMOPLASTIC TRAFFIC STRIPE, CONTINUOUS YELLOW	LF	66	
907-626-G001	THERMOPLASTIC DETAIL STRIPE, BLUE-ADA	LF	140	
907-626-H002	THERMOPLASTIC LEGEND, BLUE-ADA HANDICAP SYMBOL	EA	1	
603-CA001	15" REINFORCED CONCRETE PIPE, CLASS III	LF	280	
603-CA002	18" REINFORCED CONCRETE PIPE, CLASS III	LF	253	
907-603-PP001	GRATE INLET	EA	6	
907-604-C001	PRECAST MANHOLE, 48-INCH DIAMETER	EA	2	
907-607-PP010	ORNAMENTAL IRON FENCE, PER PLAN	LF	88	
907-607-PP011	ORNAMENTAL GATE, PER PLAN	EA	1	
607-B041	72" TYPE I CHAIN LINK FENCE, CLASS I, WITH TOP GUARD	LF	160	
607-P1009	LINE POST,9'x2" GALV. STEEL	EA	13	
607-P2010	BRACE POST, 9'x2 1/2" GALV. STEEL	EA	4	
907-607-PP007	FENCE SLATS, VINYL	LS	100%	

*ITEMS FOR REMOVAL ARE SHOWN ON C100

*CONTRACTOR HAS THE OPTION OF HDPE

*CONTRACTOR HAS THE OPTION OF HDPE

1

1

ROADWAY DESIGN DIVISION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

KENNETH SIMMONS WORTH
REGISTERED PROFESSIONAL ENGINEER
3-23-16
17092
STATE OF MISSISSIPPI

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DATE	REVISE SUMMARY OF QUANTITIES REVISION	BY
5/18/16		KSM

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
DISTRICT 6
SHOP BUILDING RENOVATION
SUMMARY OF QUANTITIES

PROJ. NO. LWO-6017-18(006)
COUNTY: FORREST

WORKING NUMBER T103

JH&H PROJECT NO: 14-112
DESIGN TEAM KSM CHECKED KSM DATE: 3-23-16

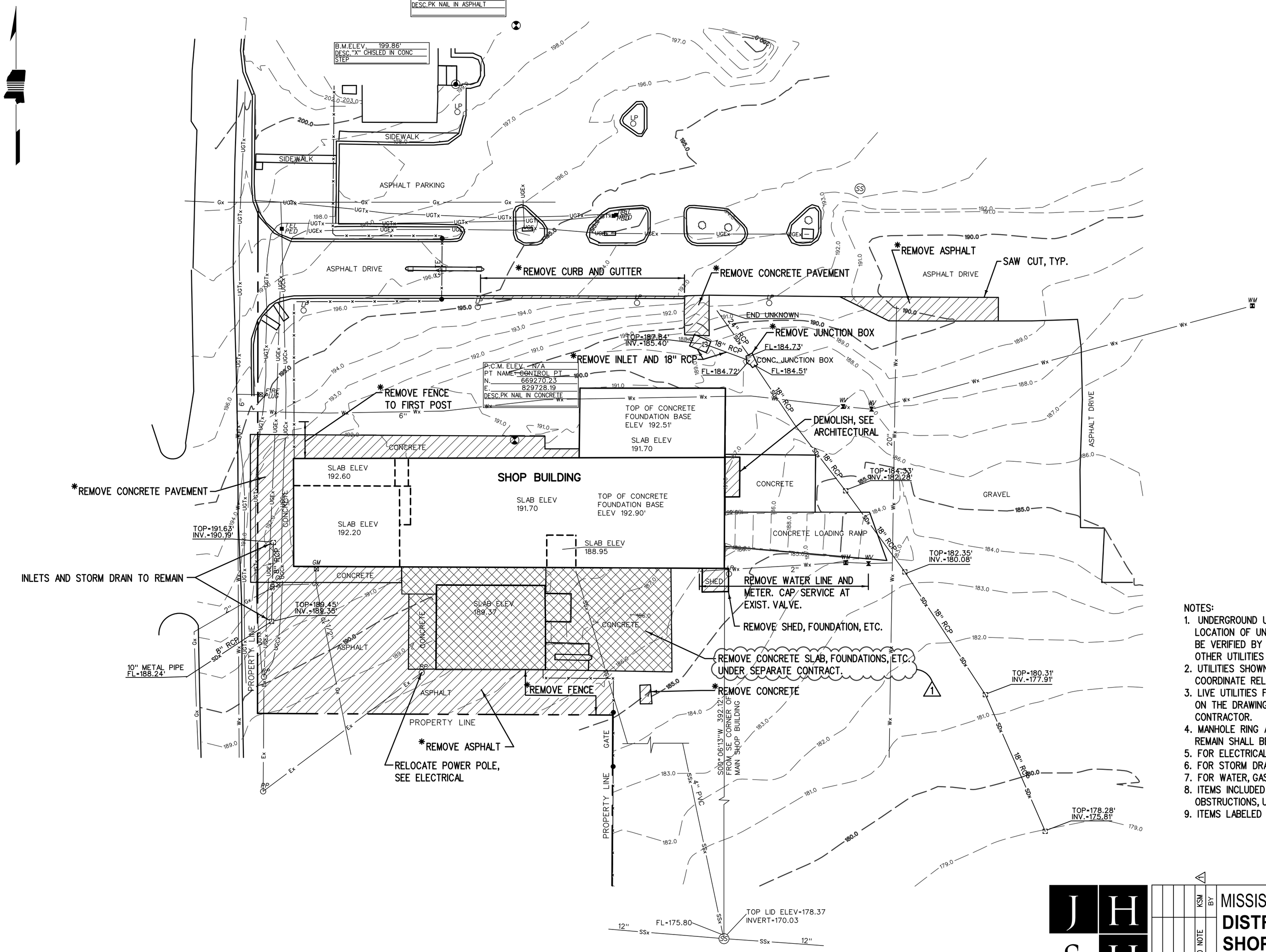
SHEET NUMBER 3

ORIGINAL SHEET SIZE 22" x 34"

ADDENDUM

STATE	PROJECT NO.
MISS.	BWO-6211-18(003)
MISS.	LWO-6017-18(006)

PLAN
ROADWAY DESIGN DIVISION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION



EXISTING SITE AND DEMOLITION PLAN

SCALE: 1" = 30'

30 0 30 60 90

NOTES:

1. UNDERGROUND UTILITIES SHOWN WERE OBTAINED FROM OTHER SOURCES. LOCATION OF UNDERGROUND UTILITIES ARE APPROXIMATE ONLY AND SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO COMMENCING OPERATIONS. OTHER UTILITIES MAY BE PRESENT BUT NOT SHOWN.
2. UTILITIES SHOWN TO BE RELOCATED ARE LIVE. CONTRACTOR SHALL COORDINATE RELOCATIONS WITH THE UTILITY OWNER.
3. LIVE UTILITIES FOUND DURING CONSTRUCTION THAT ARE NOT SHOWN ON THE DRAWINGS SHALL BE CONNECTED TO THE NEW SYSTEM BY THE CONTRACTOR.
4. MANHOLE RING AND COVERS, VALVE BOXES, METER BOXES, ETC. TO REMAIN SHALL BE ADJUSTED TO FINISH GRADE.
5. FOR ELECTRICAL RELOCATIONS, SEE ELECTRICAL DRAWINGS.
6. FOR STORM DRAIN RELOCATIONS, SEE SHEET C300.
7. FOR WATER, GAS AND SANITARY SEWER RELOCATIONS, SEE SHEET C400.
8. ITEMS INCLUDED ON THIS SHEET ARE COVERED UNDER REMOVAL OF OBSTRUCTIONS, UNLESS NOTED OTHERWISE.
9. ITEMS LABELED WITH * ARE PAY ITEMS FOUND ON SHEET T103.

KENNETH SIMMONS McGRATH
LICENSED PROFESSIONAL ENGINEER
3-23-16
17092
STATE OF MISSISSIPPI

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DATE	REVISION	BY
5/18/16	EDIT NOTE 9, REVISED DEMO NOTE	KSM

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
DISTRICT 6
SHOP BUILDING RENOVATION
EXISTING SITE AND DEMOLITION PLAN
PROJ. NO. LWO-6017-18(006)
COUNTY: FORREST

JH&H PROJECT NO: 14-112
DESIGN TEAM KSM CHECKED KSM DATE: 3-23-16

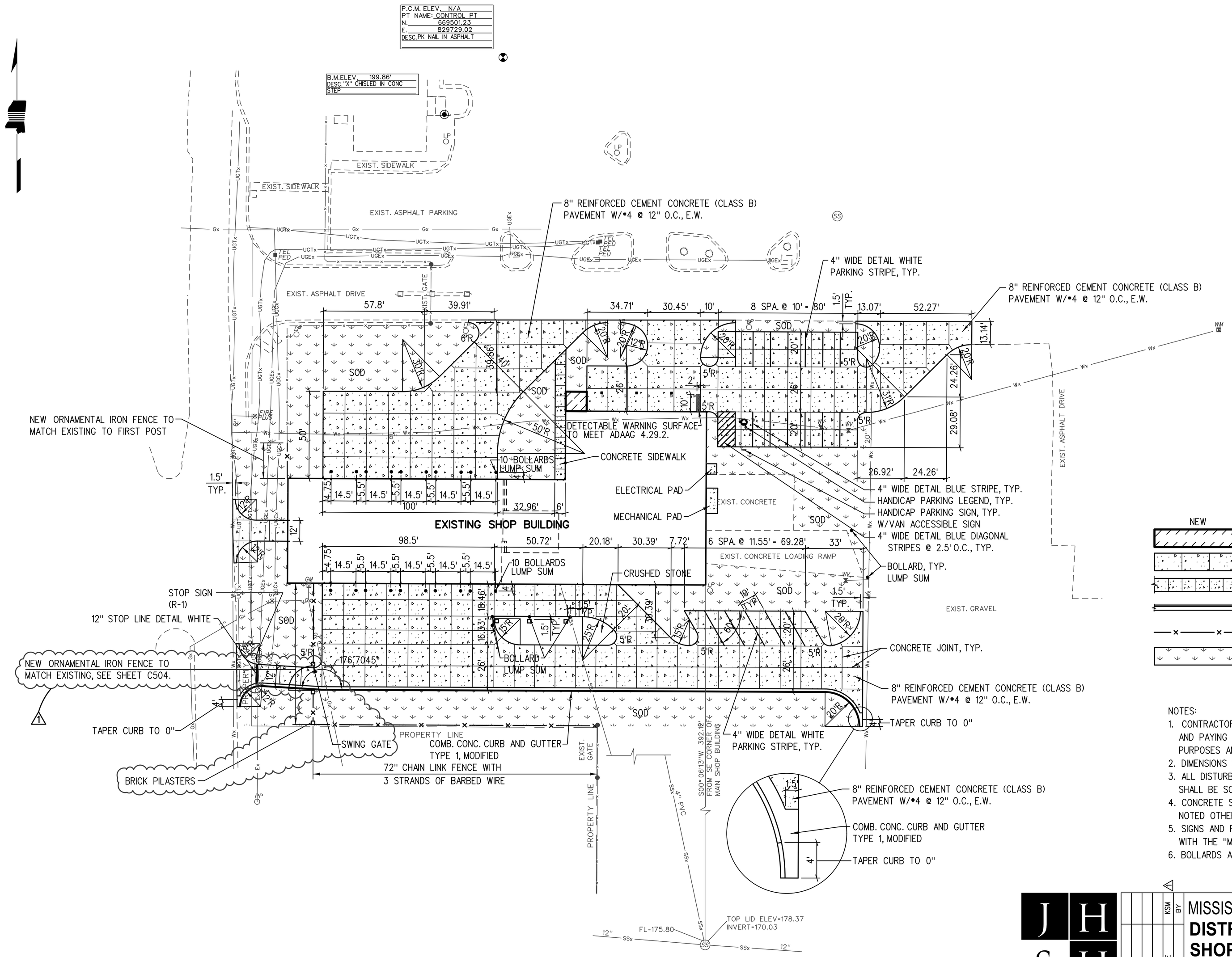
WORKING NUMBER C100
SHEET NUMBER 6

ORIGINAL SHEET SIZE 22" x 34"

ADDENDUM

STATE	PROJECT NO.
MISS.	BWO-6211-18(003)
MISS.	LWO-6017-18(006)

PLAN
ROADWAY DESIGN DIVISION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION



SITE PLAN

SCALE: 1" = 30'

30 0 30 60 90

LEGEND

NEW	EXISTING	DESCRIPTION
		BUILDING
	EXIST. CONCRETE	CONCRETE PAVEMENT
	EXIST. SIDEWALK	CONCRETE SIDEWALK
		CONCRETE CURB AND GUTTER
		FENCE
		SOD

NOTES:

1. CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL PERMITS AND PAYING ALL APPLICABLE FEES REQUIRED FOR CONSTRUCTION PURPOSES AND UTILITY HOOKUPS.
2. DIMENSIONS SHOWN ARE FACE OF CURB TO FACE OF CURB.
3. ALL DISTURBED AREAS NOT RECEIVING PAVEMENT OR LANDSCAPING SHALL BE SODDED.
4. CONCRETE SIDEWALKS SHALL BE 4" THICK FIBER REINFORCED UNLESS NOTED OTHERWISE.
5. SIGNS AND PAVEMENT MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".
6. BOLLARDS ARE TO BE LUMP SUM WITH THE BUILDING.

KENNETH SIMMONS MCGRATH LICENSED PROFESSIONAL ENGINEER 17092 STATE OF MISSISSIPPI 3-23-16

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DATE	REVISION	BY
5/18/16	REVISED ORNAMENTAL FENCE	KSM

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
DISTRICT 6
SHOP BUILDING RENOVATION
SITE PLAN
PROJ. NO. LWO-6017-18(006)
COUNTY: FORREST

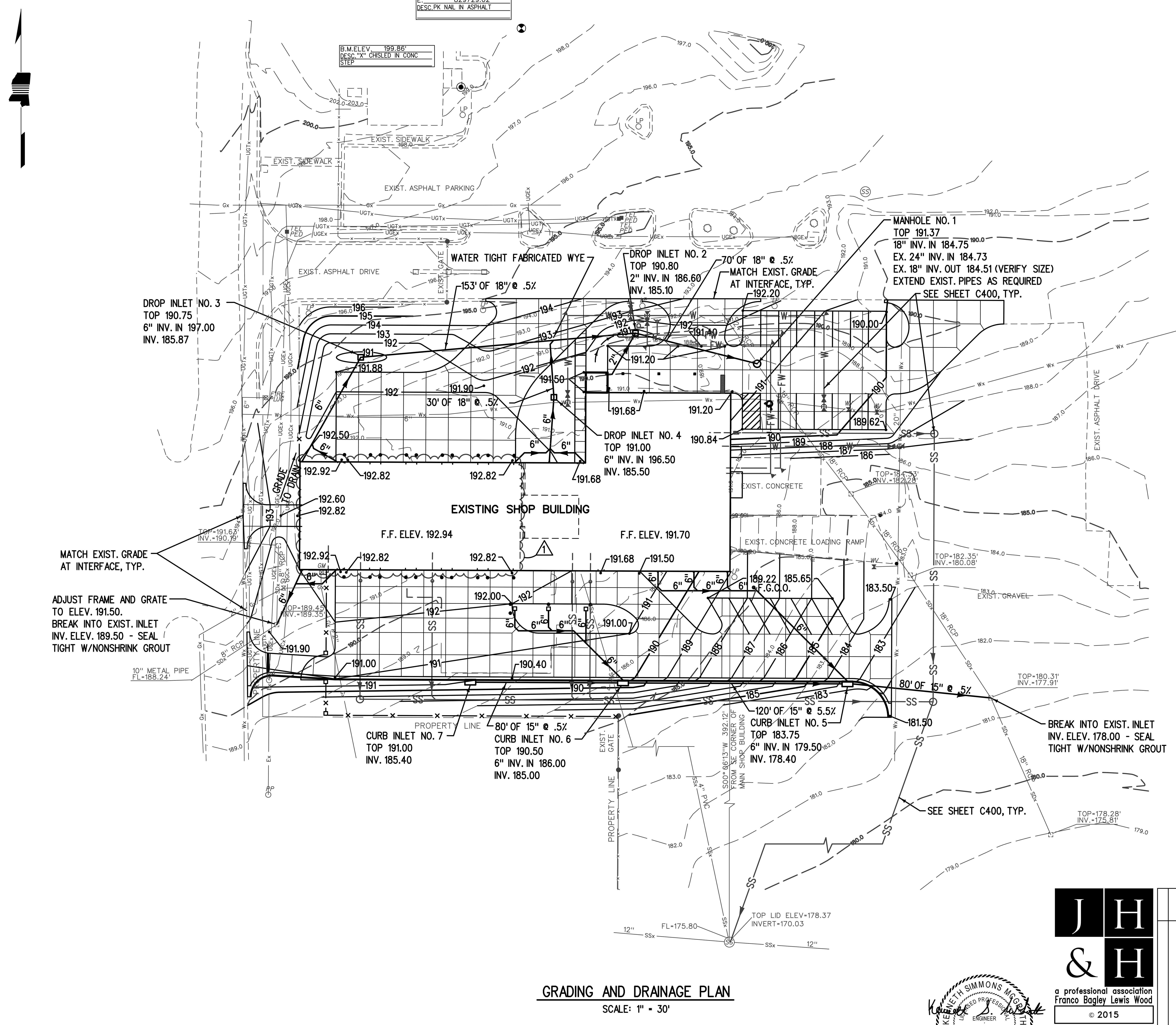
JH&H PROJECT NO: 14-112
DESIGN TEAM KSM CHECKED KSM DATE: 3-23-16

WORKING NUMBER C200
SHEET NUMBER 7

ORIGINAL SHEET SIZE 22" x 34"

ADDENDUM

STATE	PROJECT NO.
MISS.	BWO-6211-18(003)
MISS.	LWO-6017-18(006)



GRADING AND DRAINAGE PLAN

SCALE: 1" = 30'

LEGEND

NEW	EXISTING	
200	200.0	CONTOUR
195.5		SPOT ELEVATION
	SDx	STORM DRAIN

NOTES:
1. MANHOLE RING AND COVERS, VALVE BOXES, METER BOXES, C.O., ETC. TO REMAIN SHALL BE ADJUSTED TO FINISH GRADE.
2. PIPING FROM DOWNSPOUTS TO STORM DRAIN SHALL BE SDR 26 PVC @ 0.5% SLOPE (MINIMUM).
3. STORM DRAIN PIPES MAY BE SDR 26 PVC, HDPE OR RCP UNLESS SPECIFICALLY NOTED.
4. GRADES SHOWN ARE FINISH GRADES. ROUGH GRADES SHALL ALLOW FOR TOP SOIL, SOD, MULCH, ETC. WHERE APPLICABLE.

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KENNETH SIMMONS McGRATH, LICENSED PROFESSIONAL ENGINEER, 17092, STATE OF MISSISSIPPI, 3-23-16

DATE	REVISION	BY
5/18/16	REVISED F.F. ELEV.	KSM

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

DISTRICT 6
SHOP BUILDING
RENOVATION

PROJ. NO. LWO-6017-18(006)
COUNTY: FORREST

JH&H PROJECT NO: 14-112
DESIGN TEAM KSM CHECKED KSM DATE: 3-23-16

WORKING NUMBER C300
SHEET NUMBER 8

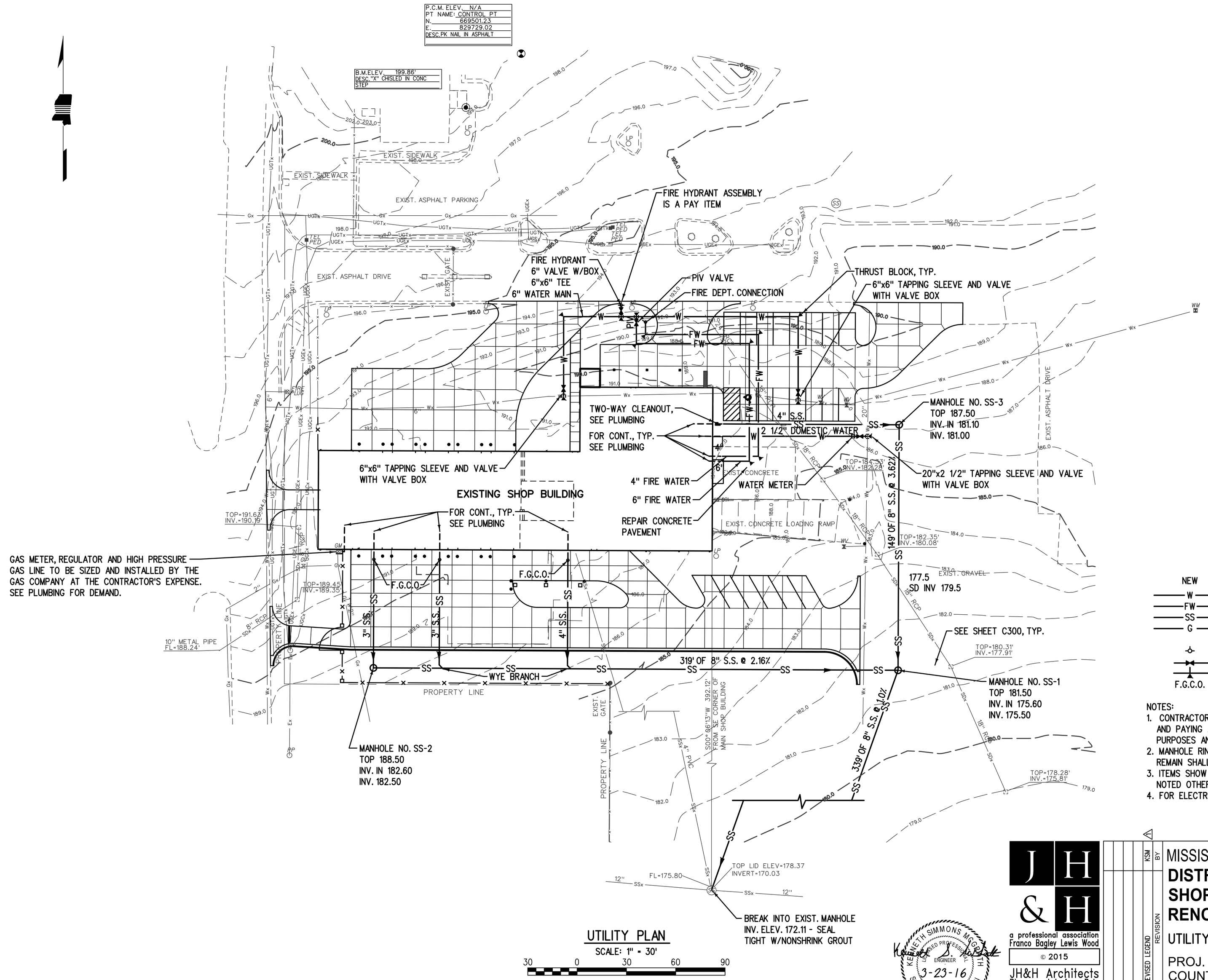
ORIGINAL SHEET SIZE 22" x 34"

PLAN
ROADWAY DESIGN DIVISION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

ADDENDUM

STATE	PROJECT NO.
MISS.	BWO-6211-18(003)
MISS.	LWO-6017-18(006)

PLAN
ROADWAY DESIGN DIVISION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION



UTILITY PLAN

SCALE: 1" = 30'

30 0 30 60 90

LEGEND

NEW	EXISTING	DESCRIPTION
W	Wx	WATER MAIN
FW		FIRE WATER
SS	SSx	SANITARY SEWER MAIN
G	Gx	GAS MAIN
	SDx	STORM DRAIN
		FIRE HYDRANT
		WATER VALVE
		THRUST BLOCK
F.G.C.O.		FLUSH GRADE CLEANOUT

NOTES:
1. CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL PERMITS AND PAYING ALL APPLICABLE FEES REQUIRED FOR CONSTRUCTION PURPOSES AND UTILITY HOOKUPS.
2. MANHOLE RING AND COVERS, VALVE BOXES, METER BOXES, ETC. TO REMAIN SHALL BE ADJUSTED TO FINISH GRADE.
3. ITEMS SHOW ON THIS SHEET ARE IN THE LUMP SUM BUILDING, UNLESS NOTED OTHERWISE.
4. FOR ELECTRICAL SITE PLAN, SEE SHEET E100.

KENNETH SIMMONS MCGEE LICENSED PROFESSIONAL ENGINEER 3-23-16 17092 STATE OF MISSISSIPPI

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DATE	REVISED LEGEND REVISION	BY
5/18/16		KSM

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
DISTRICT 6
SHOP BUILDING RENOVATION
UTILITY PLAN

PROJ. NO. LWO-6017-18(006)
COUNTY: FORREST

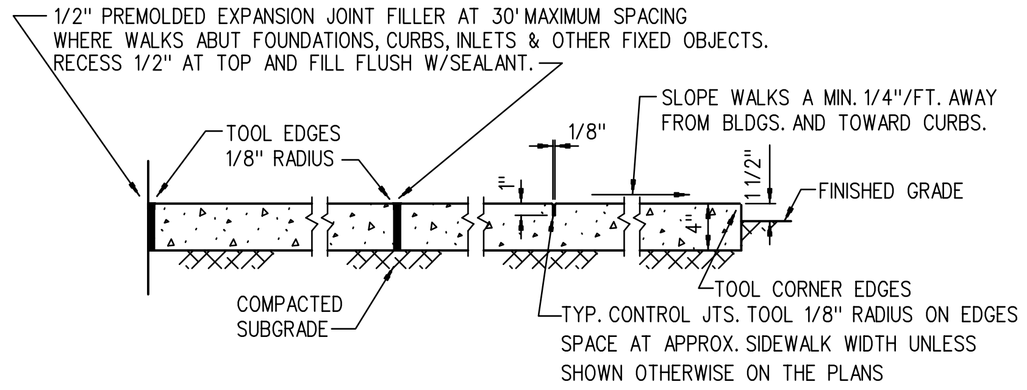
JH&H PROJECT NO: 14-112
DESIGN TEAM KSM CHECKED KSM DATE: 3-23-16

WORKING NUMBER C400
SHEET NUMBER 9

ORIGINAL SHEET SIZE 22" x 34"

ADDENDUM

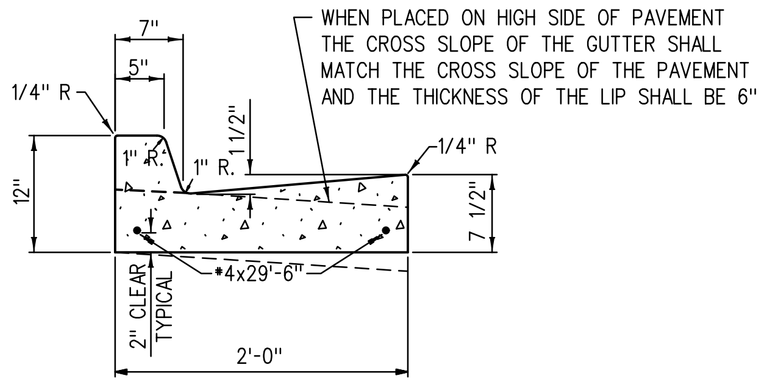
STATE	PROJECT NO.
MISS.	BWO-6211-18(003)
MISS.	LWO-6017-18(006)



NOTE: 4" CONCRETE SIDEWALK SHALL BE REINFORCED WITH FIBER REINFORCEMENT, SIMILAR AND EQUAL TO FIBERMESH 1.5 POUNDS PER CUBIC YARD.

SIDEWALK DETAIL

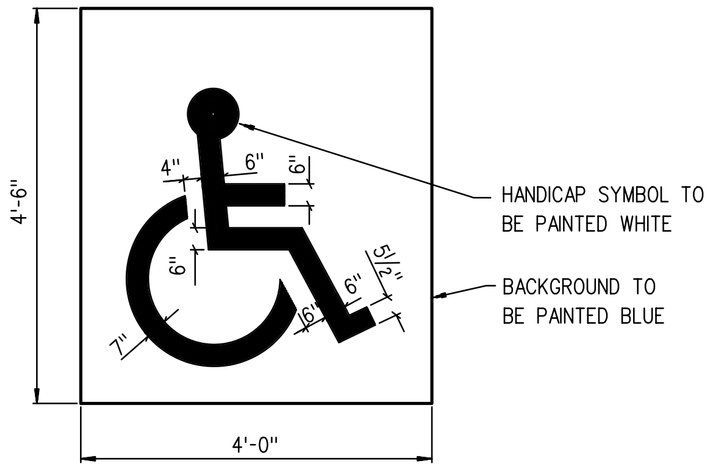
NO SCALE



COMBINATION CURB AND GUTTER TYPE 1 MODIFIED DETAIL

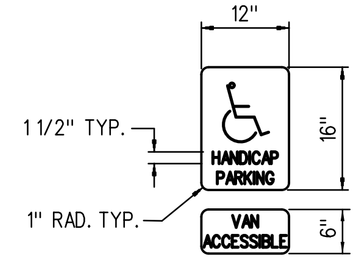
SCALE: NONE

NOTE:
PROVIDE EXPANSION JOINTS AT RADIUS RETURNS, WHERE CURB ABUTS SIDEWALKS, BUILDINGS, ETC. AND AT A MAXIMUM SPACING OF 30' ON STRAIGHT RUNS. 3/4" EXPANSION JOINT MATERIAL CUT TO FULL SECTION OF CURB AND GUTTER REQUIRED AT EXPANSION JOINTS. 1/2" DEEP CONTRACTION JOINTS REQUIRED AT 10' MAXIMUM SPACING.



HANDICAP SYMBOL AT PARKING LOT

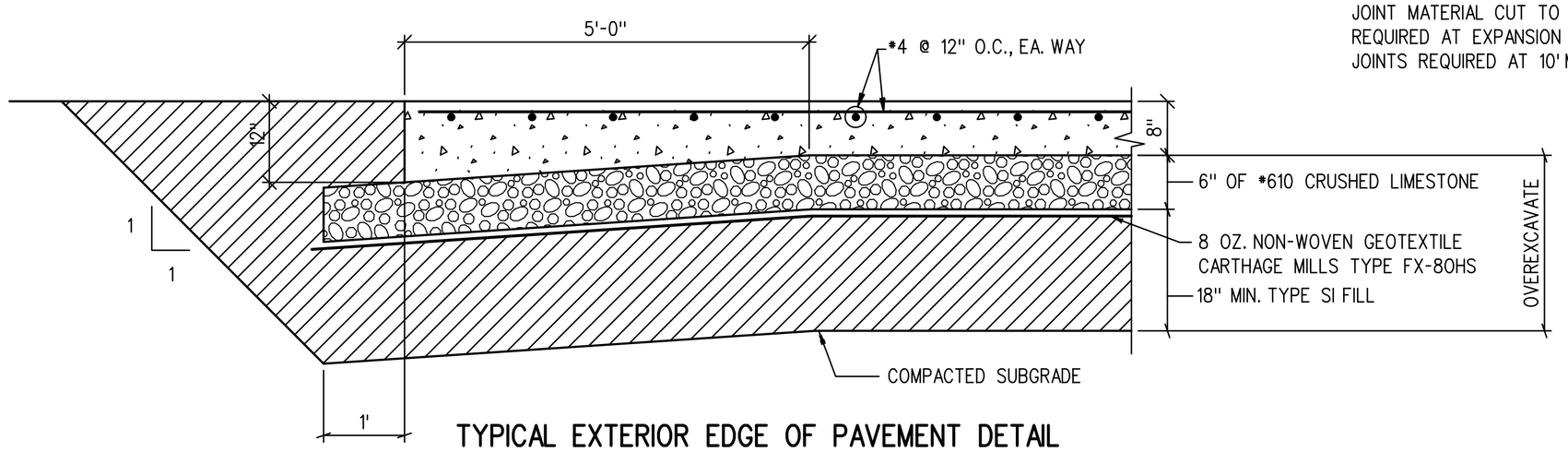
SCALE: NONE



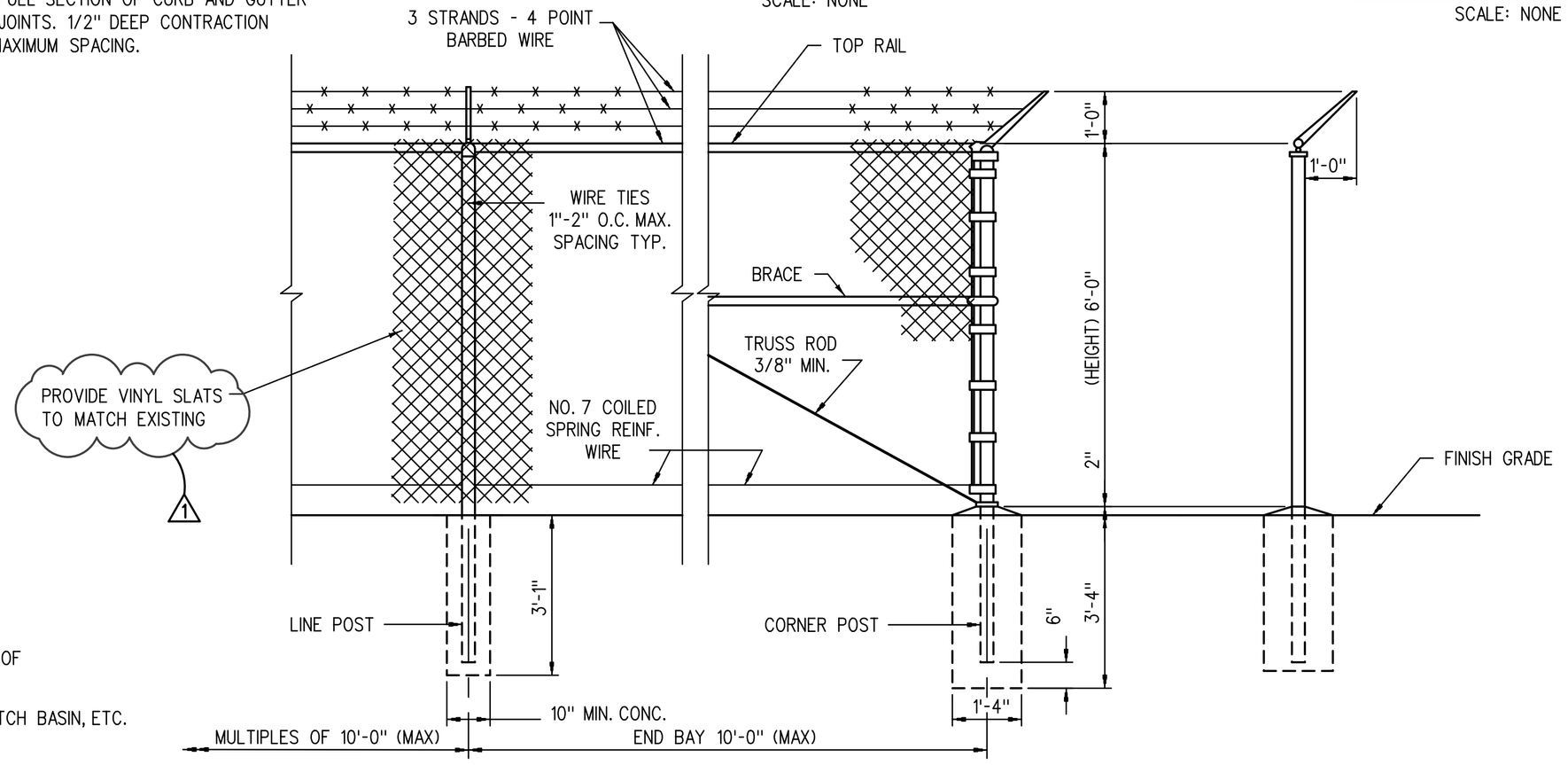
.080 THK. ALUMINUM SIGN - BLUE PAINTED BACKGROUND W/WHITE NATIONAL HANDICAP SYMBOL & WHITE HELVETICA LETTERS.

HANDICAP PARKING SIGN

SCALE: NONE

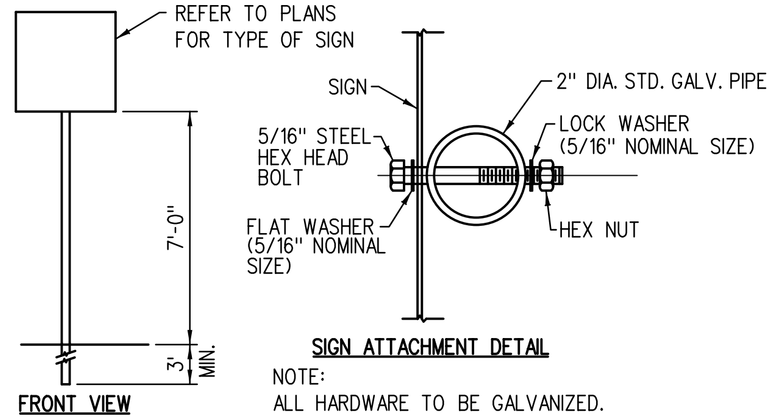


TYPICAL EXTERIOR EDGE OF PAVEMENT DETAIL



CHAIN LINK FENCING CLASS 1

SCALE: NONE

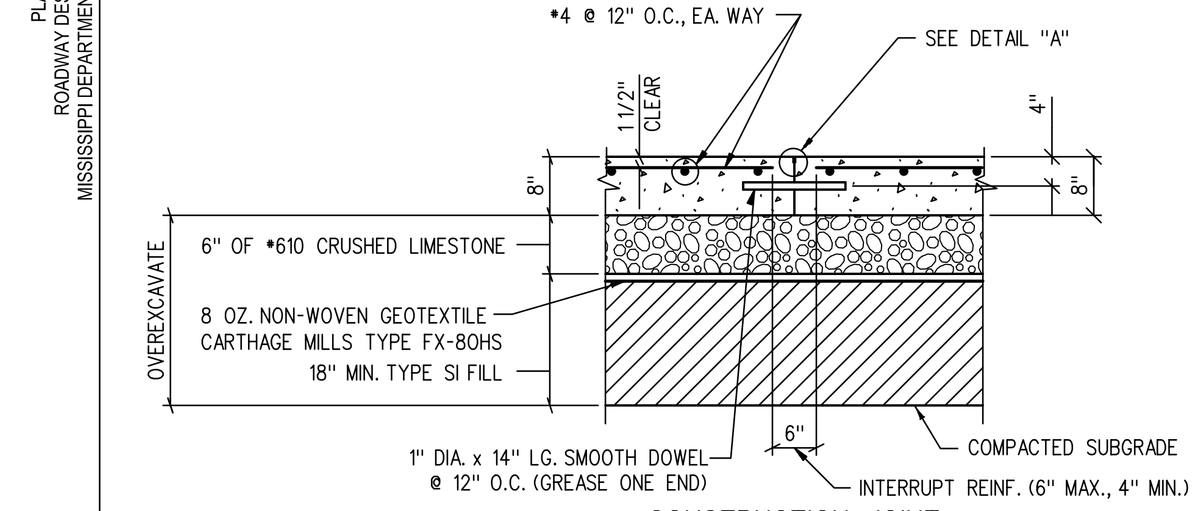


SIGN ATTACHMENT DETAIL

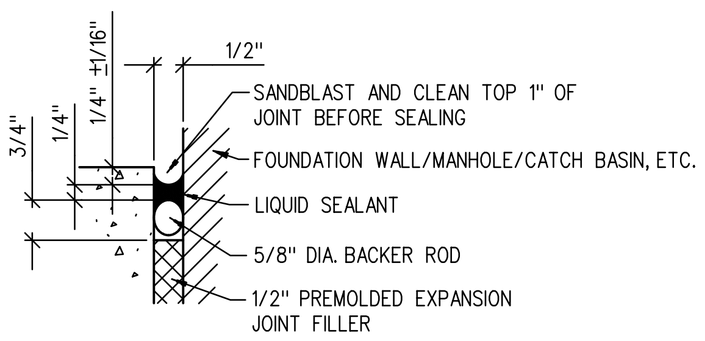
NOTE:
ALL HARDWARE TO BE GALVANIZED.

HANDICAP SIGN INSTALLATION

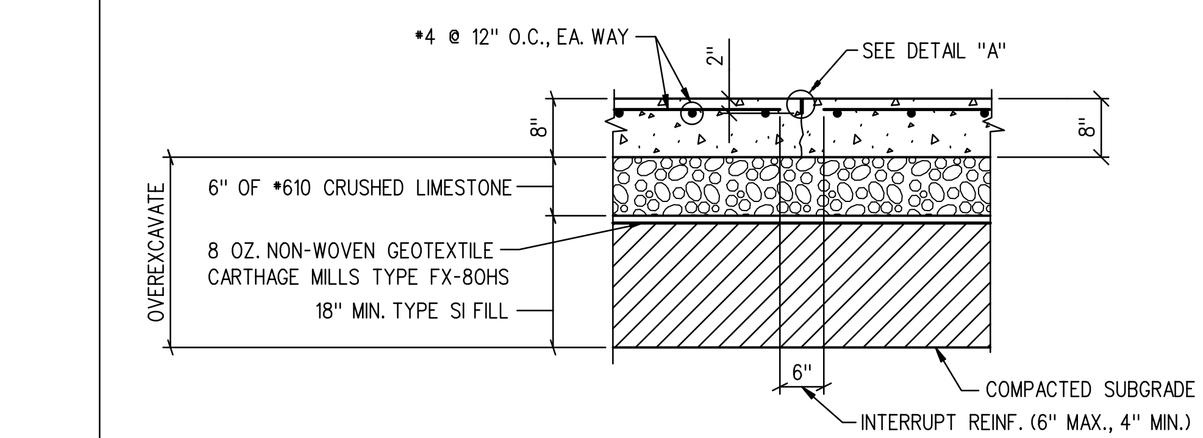
NO SCALE



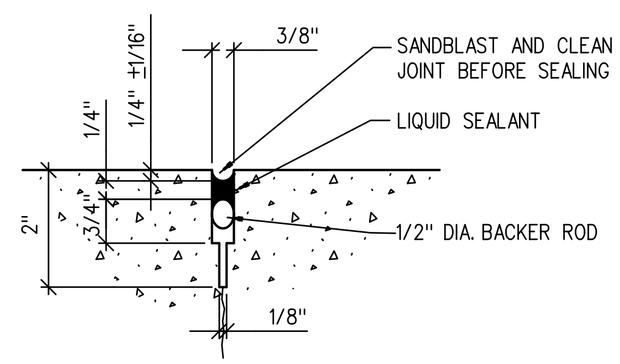
CONSTRUCTION JOINT



ISOLATION JOINT



CONTROL JOINT

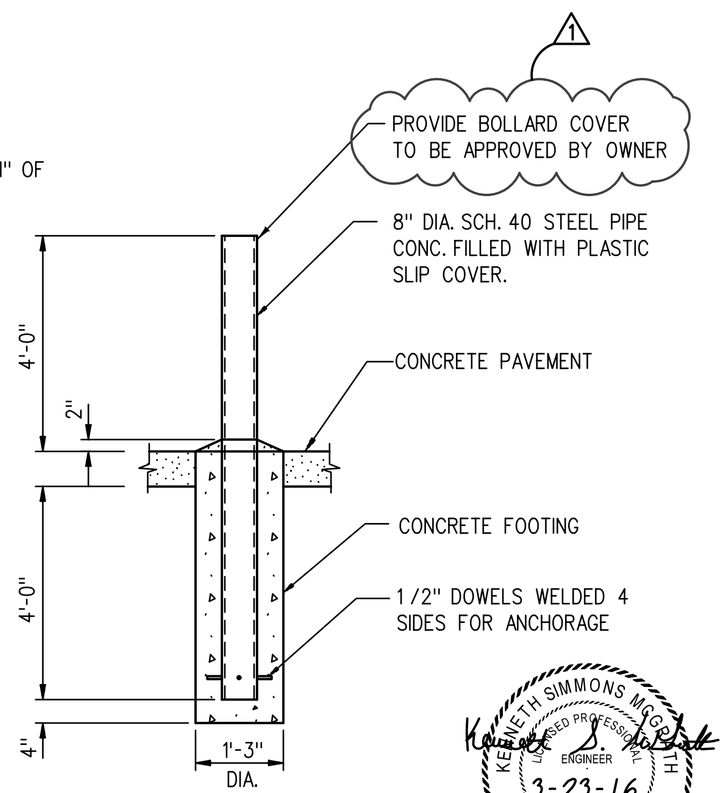


DETAIL "A"

JOINT SHALL BE "TOOLED" OR SAWED WITH A "SOFF CUT SAW" WITHIN 2 HOURS OF PLACEMENT

REINFORCED CEMENT CONCRETE PAVEMENT JOINT DETAILS

CONTRACTOR SHALL USE CONSTRUCTION JOINT AT END OF POUR.
CONTRACTOR MAY USE CONSTRUCTION JOINT OR CONTROL JOINT WHERE CONCRETE JOINTS ARE CALLED FOR ON THE PLANS.



BOLLARD DETAIL

SCALE: NONE

KENNETH SIMMONS MISSISSIPPI REGISTERED PROFESSIONAL ENGINEER 17092 5-23-16 STATE OF MISSISSIPPI

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DATE	REVISION	BY
5/18/16	ADDED NOTES TO DETAILS	KSM

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
DISTRICT 6
SHOP BUILDING RENOVATION
SITE DETAILS

PROJ. NO. LWO-6017-18(006)
COUNTY: FORREST

WORKING NUMBER C500
SHEET NUMBER 10

JH&H PROJECT NO: 14-112
DESIGN TEAM KSM CHECKED KSM DATE: 3-23-16

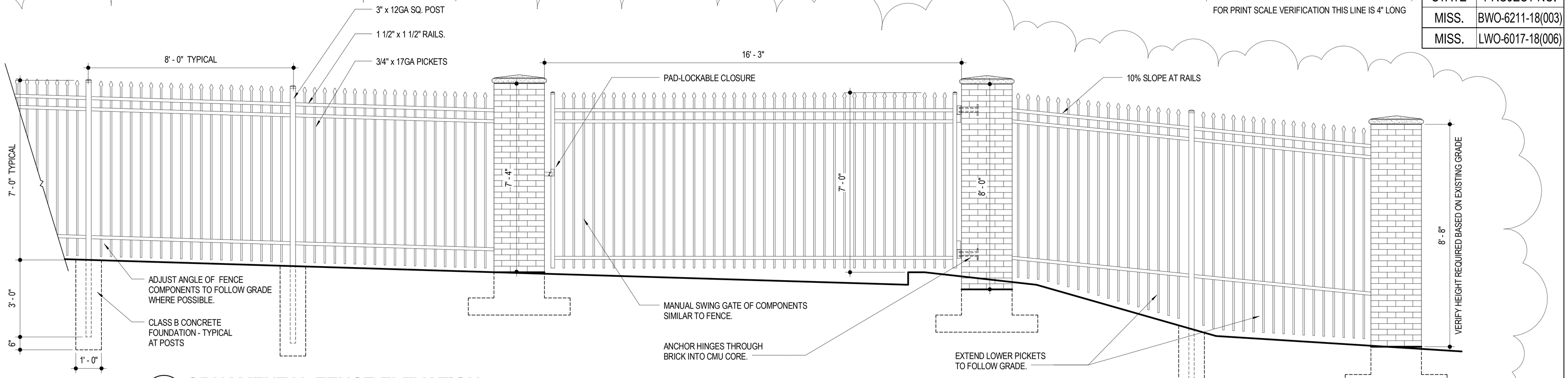
PLAN
ROADWAY DESIGN DIVISION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

ORIGINAL SHEET SIZE 22" x 34"

ADDENDUM

STATE	PROJECT NO.
MISS.	BWO-6211-18(003)
MISS.	LWO-6017-18(006)

FOR PRINT SCALE VERIFICATION THIS LINE IS 4" LONG



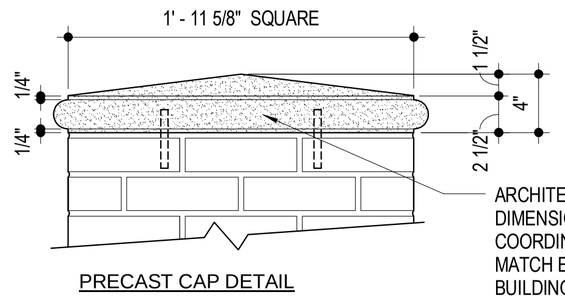
2 ORNAMENTAL FENCE ELEVATION

C504 1/2" = 1'-0"

ORNAMENTAL FENCE COMPONENTS

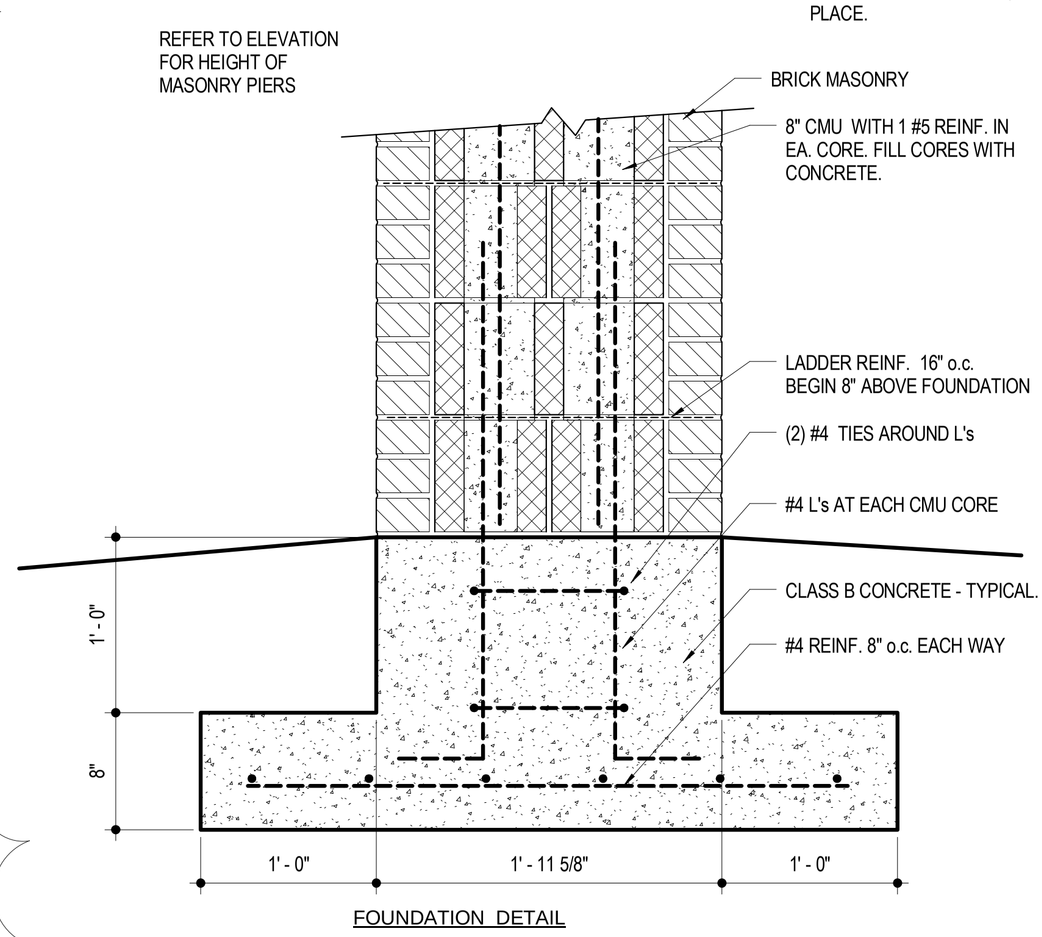
ORNAMENTAL FENCE:
THE ORNAMENTAL FENCE IS TO MATCH THE EXISTING FENCE NORTH OF THE BUILDING AS CLOSE AS POSSIBLE. THE EXISTING FENCE APPEARS TO BE EQUAL TO THE "AEGIS PLUS" FENCE BY AMERISTAR FENCE IN BLACK FINISH. FENCE TO BE 7 FT. HIGH, 3-RAIL FENCE IN NOMINAL 8 FT SECTIONS WITH THE "CLASSIC" PICKET STYLE.

ORNAMENTAL GATE:
ORNAMENTAL GATE IS TO BE EQUAL TO "AEGIS PLUS" SINGLE SWING GATE BY AMERISTAR FENCE WITH HEAVY COMMERCIAL HINGES. PROVIDE COMPONENTS TO MATCH THE APPEARANCE OF THE FENCE COMPONENTS.

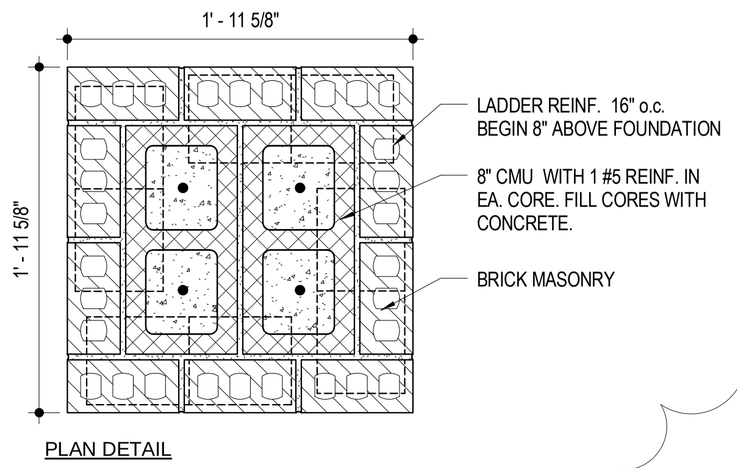


PRECAST CAP DETAIL

ARCHITECTURAL MASONRY UNIT CAP. DIMENSIONS SHOWN ARE APPROXIMATIONS. COORDINATE DIMENSIONS AND COLOR TO MATCH EXISTING UNITS NORTH OF THE BUILDING. ANCHOR CAP TO MASONRY PIER WITH 4 HIDDEN DOWELS, GROUTED IN PLACE.



FOUNDATION DETAIL



PLAN DETAIL

1 ORNAMENTAL FENCE PIER DETAILS

C504 1 1/2" = 1'-0"

J H & H
A Professional Association
Franco Bagley Lewis Wood

JH&H Architects
Planners.Interiors, PA
1047 North Flowood Drive
Flowood, MS 39232-9533
p.601.948.4601 f.601.355.6200

DATE	REVISION	BY
5/18/16	ADDED ENTIRE SHEET	RAL

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
DISTRICT 6
SHOP BUILDING RENOVATION
ORNAMENTAL FENCE DETAILS

PROJ. NO. LWO-6017-18(006)
COUNTY: FORREST

REGISTERED ARCHITECT 5-23-2016 RANDALL LEWIS 2723 STATE OF MISSISSIPPI

WORKING NUMBER C 504

SHEET NUMBER 13_1

JH&H PROJECT NO: 14-112
DESIGN TEAM RAL RAL CHECKED RAL DATE: 3/23/2016

ORIGINAL SHEET SIZE 22" x 34"

PLAN
ROADWAY DESIGN DIVISION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

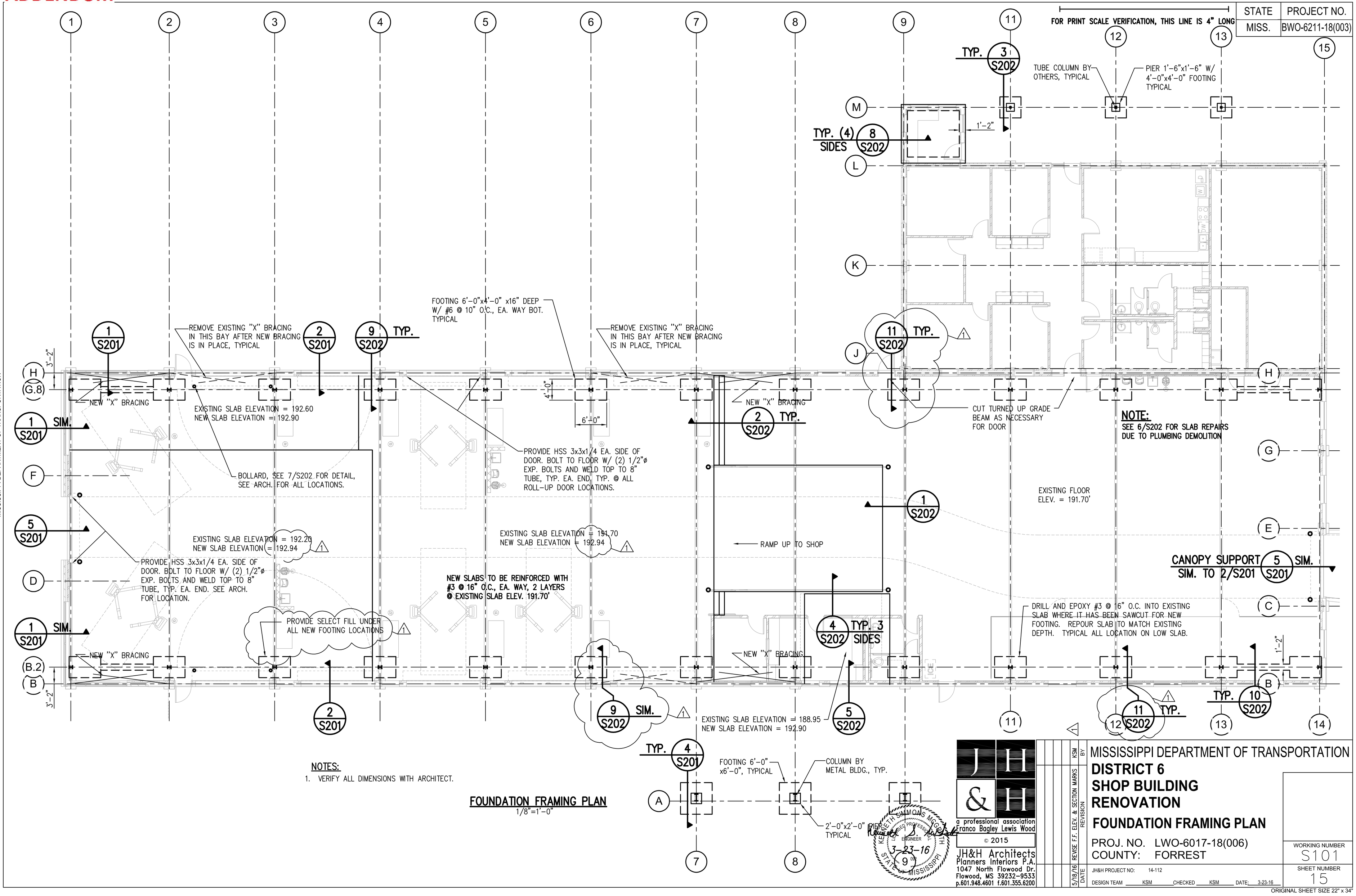
5/19/2016 6:19:46 PM

ADDENDUM

STATE	PROJECT NO.
MISS.	BWO-6211-18(003)

FOR PRINT SCALE VERIFICATION, THIS LINE IS 4" LONG

PLAN
ROADWAY DESIGN DIVISION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION



NOTES:

1. VERIFY ALL DIMENSIONS WITH ARCHITECT.

FOUNDATION FRAMING PLAN

1/8"=1'-0"

JH&H Architects
Planners Interiors P.A.
1047 North Flowood Dr.
Flowood, MS 39232-9533
p.601.948.4601 f.601.355.6200

KENNETH SIMMONS MISSETH — LICENSED PROFESSIONAL ENGINEER — 3-23-16 — STATE OF MISSISSIPPI

DATE	REVISION	BY
5/18/16	REVISE F.F. ELEV. & SECTION MARKS	KSM

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
DISTRICT 6
SHOP BUILDING RENOVATION
FOUNDATION FRAMING PLAN

PROJ. NO. LWO-6017-18(006)
COUNTY: FORREST

JH&H PROJECT NO: 14-112
DESIGN TEAM KSM CHECKED KSM DATE: 3-23-16

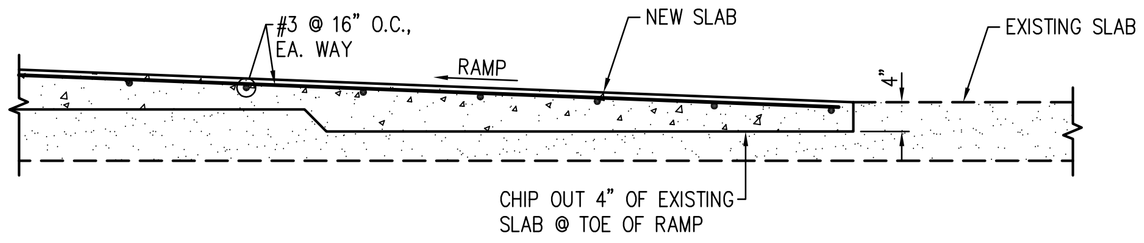
WORKING NUMBER S101
SHEET NUMBER 15

ORIGINAL SHEET SIZE 22" x 34"

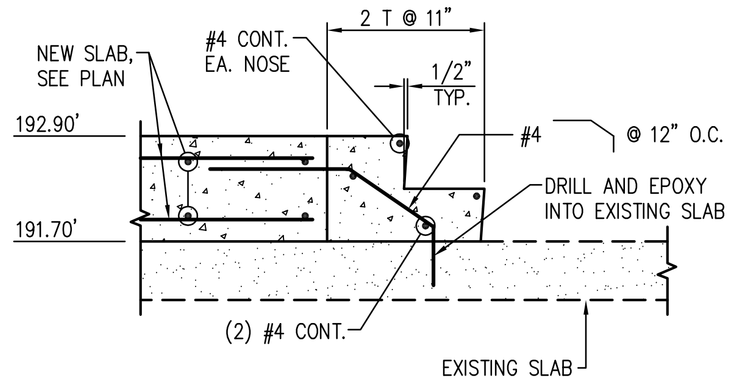
ADDENDUM

FOR PRINT SCALE VERIFICATION, THIS LINE IS 4" LONG

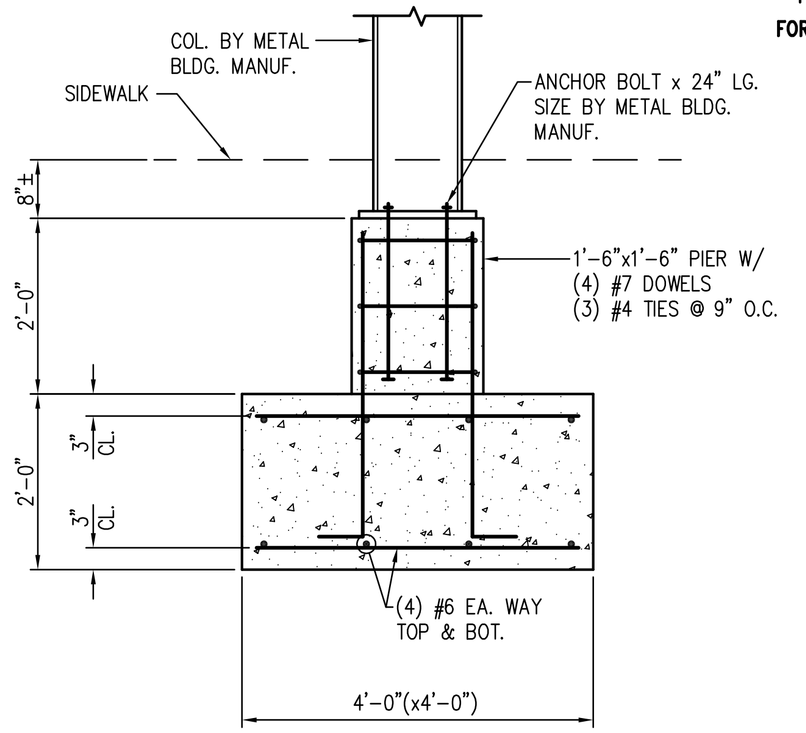
STATE	PROJECT NO.
MISS.	BWO-6211-18(003)



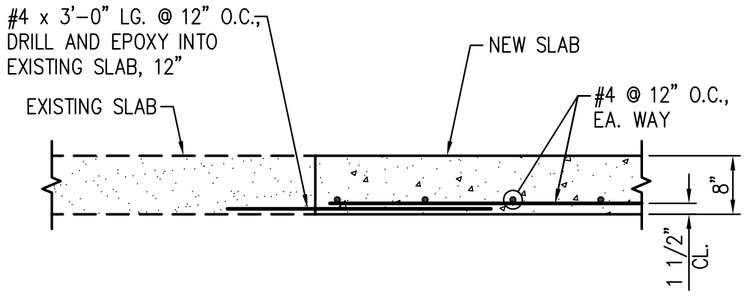
1 S202 3/4" = 1'-0"



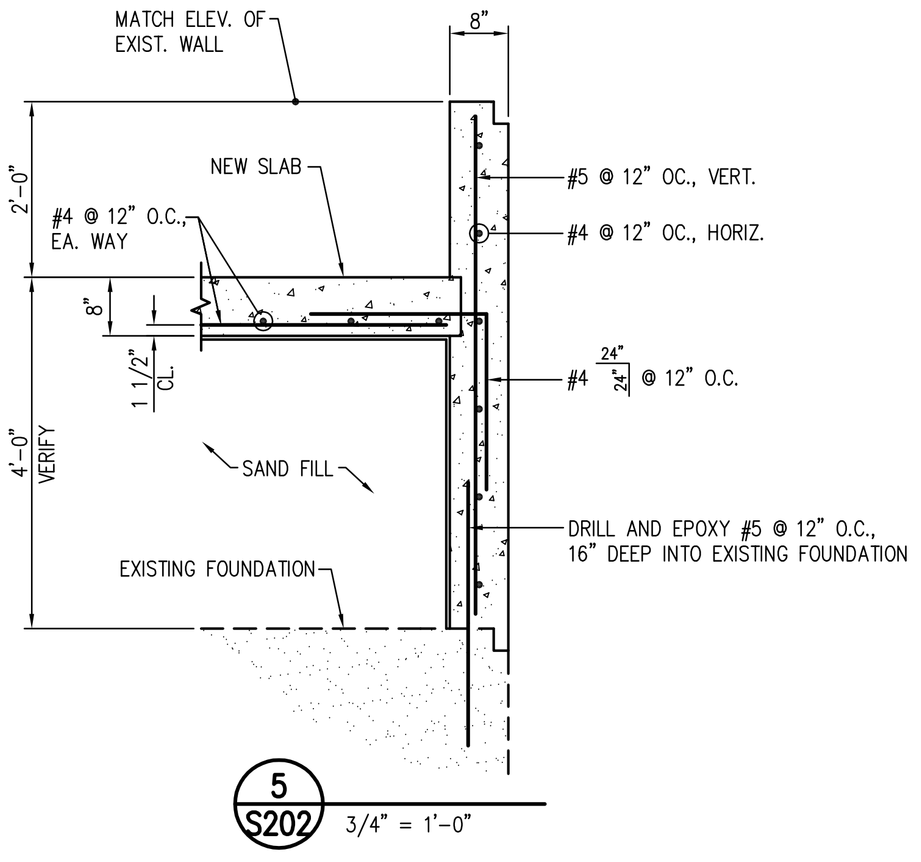
2 S202 3/4" = 1'-0"



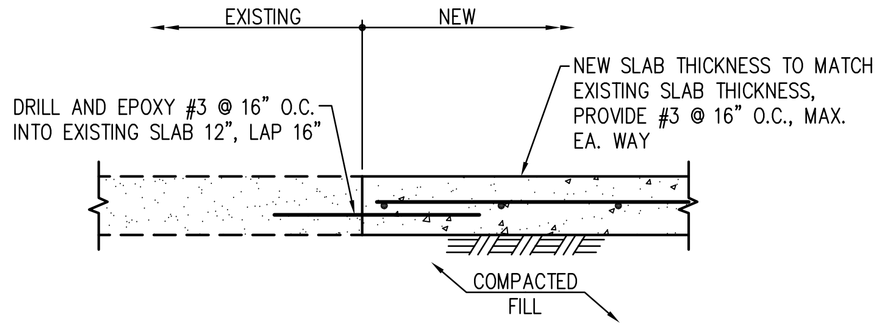
3 S202 3/4" = 1'-0"



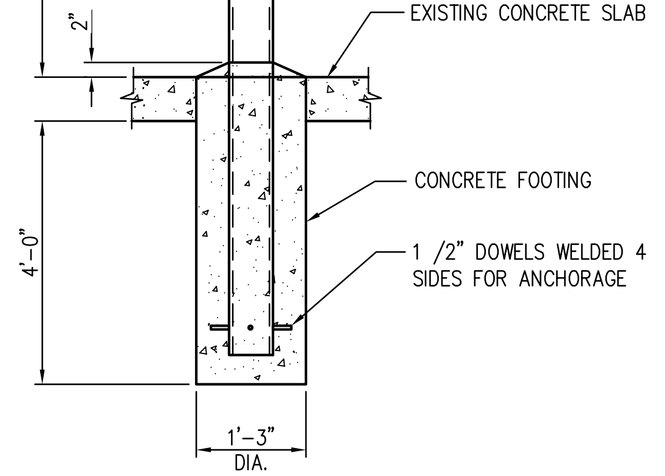
4 S202 3/4" = 1'-0"



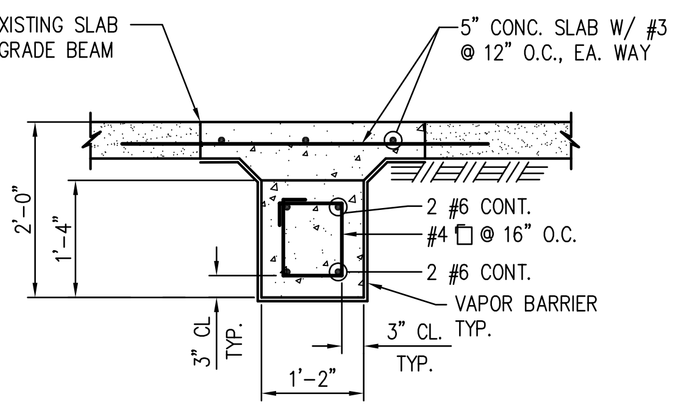
5 S202 3/4" = 1'-0"



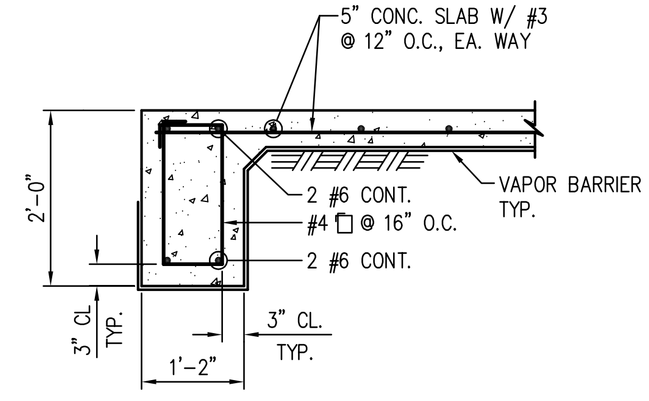
6 S202 TYP. NEW SLAB @ PLUMBING TRENCHES
3/4" = 1'-0"



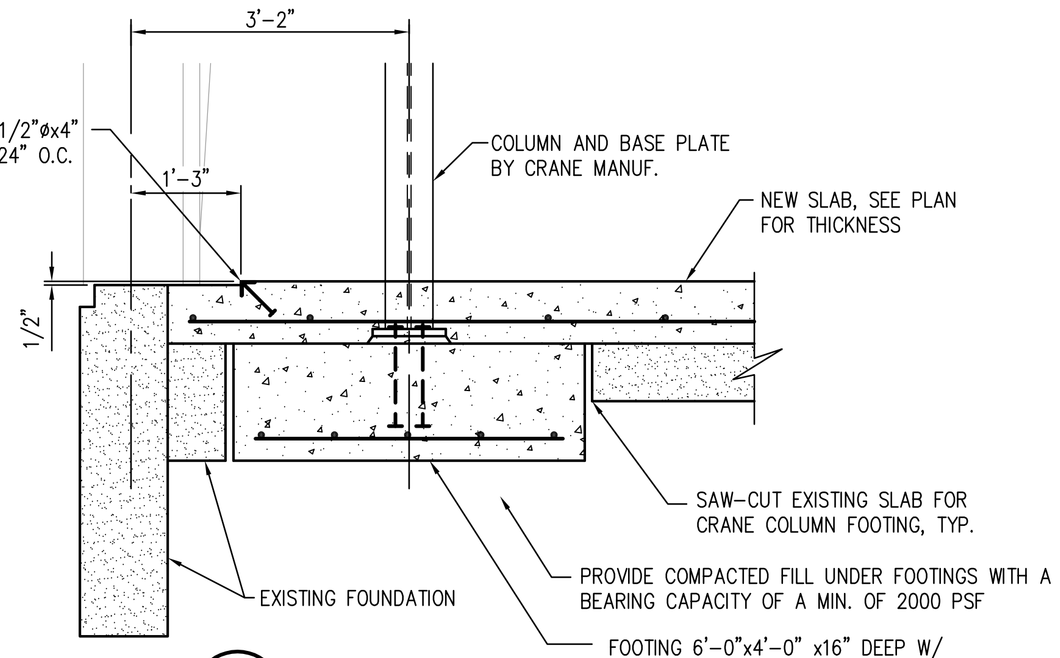
7 S202 BOLLARD DETAIL
3/4" = 1'-0"



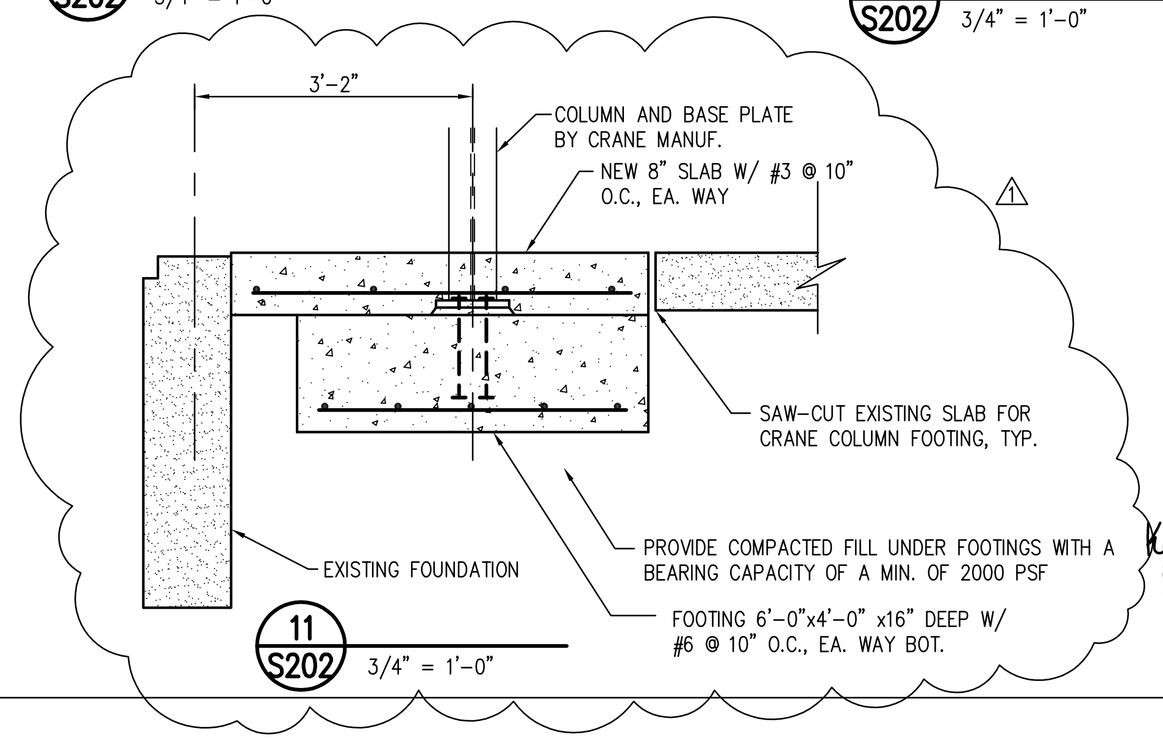
10 S202 3/4" = 1'-0"



8 S202 3/4" = 1'-0"



9 S202 3/4" = 1'-0"



11 S202 3/4" = 1'-0"

KENNETH SIMMONS MACKEITH LICENSED PROFESSIONAL ENGINEER 3-23-16 17092 STATE OF MISSISSIPPI

J&H & a professional association
Franco Bagley Lewis Wood

JH&H Architects
Planners Interiors P.A.
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p.601.948.4601 f.601.355.6200

BY	REVISION	DATE
KSM	ADD DETAIL 11/S202	5/18/16

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
DISTRICT 6
SHOP BUILDING RENOVATION
CONCRETE SECTIONS

PROJ. NO. LWO-6017-18(006)
COUNTY: FORREST

JH&H PROJECT NO: 14-112
DESIGN TEAM KSM CHECKED KSM DATE: 3-23-16

WORKING NUMBER S202
SHEET NUMBER 17

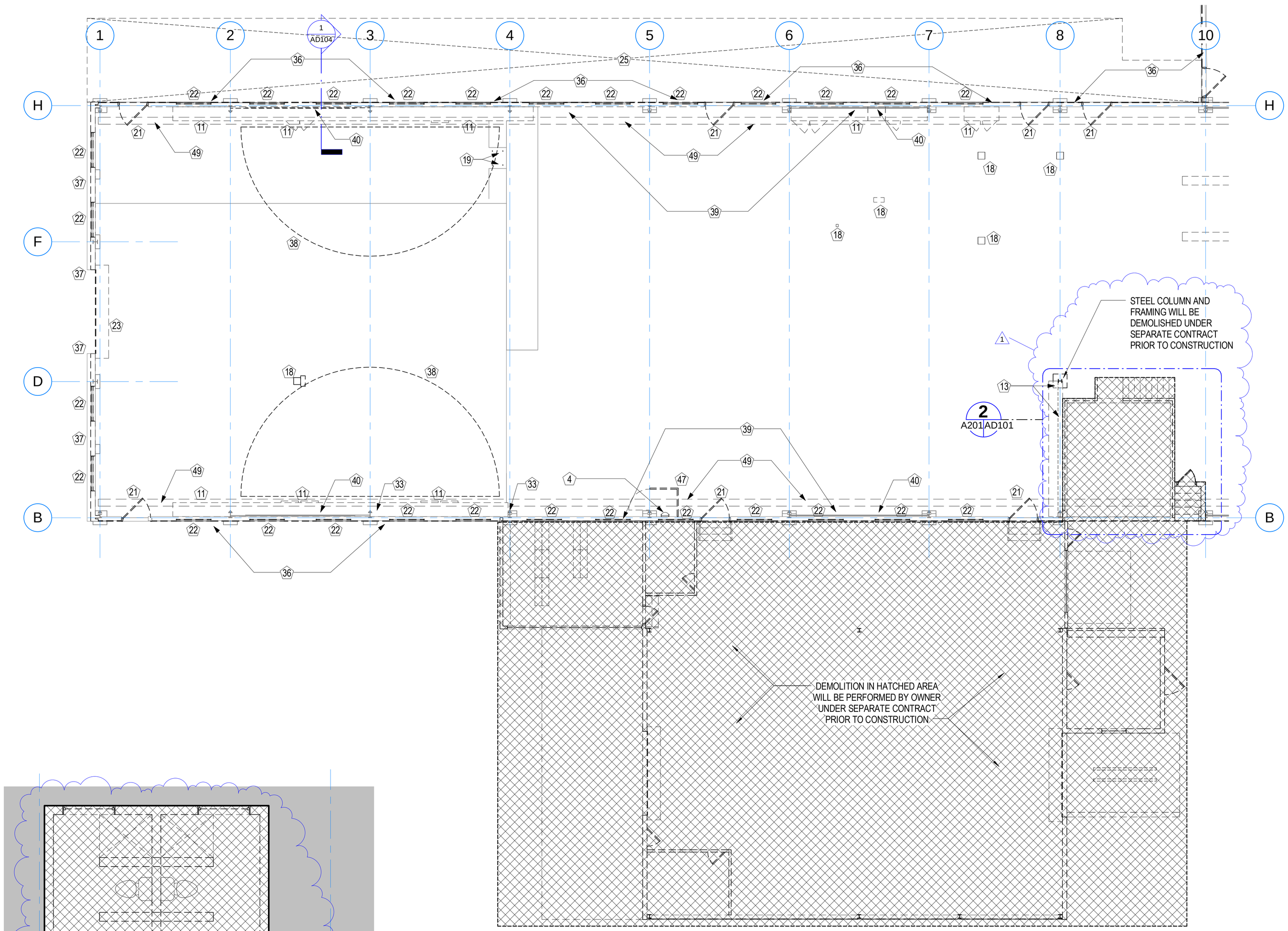
ORIGINAL SHEET SIZE 22" x 34"

PLAN
ROADWAY DESIGN DIVISION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

ADDENDUM

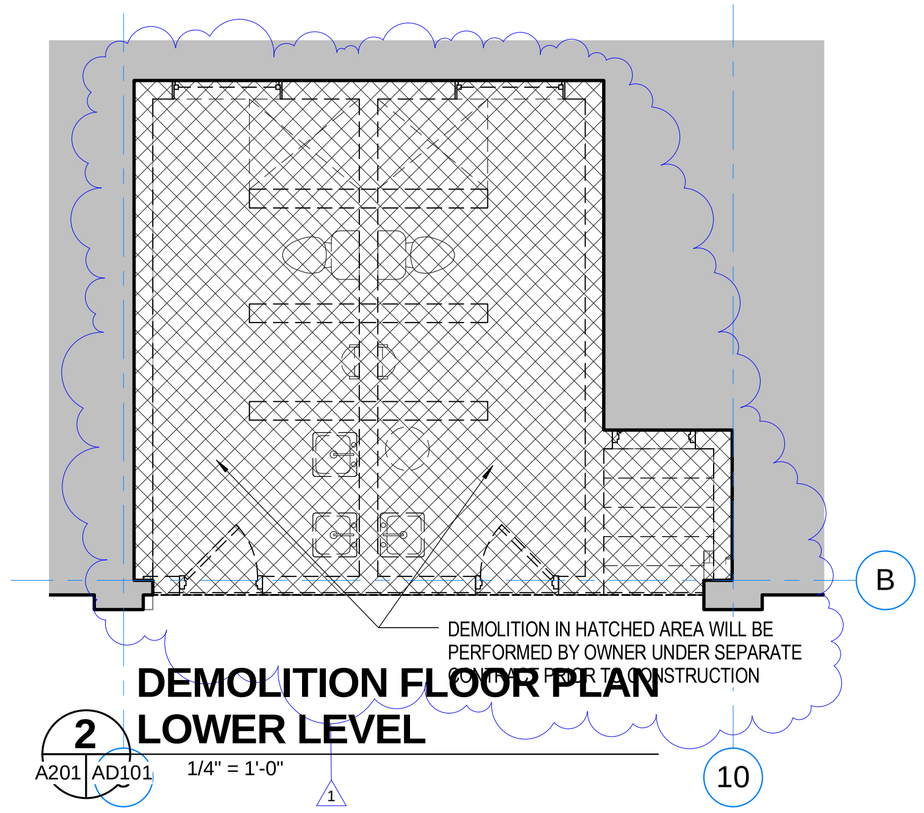
FOR PRINT SCALE VERIFICATION THIS LINE IS 4" LONG

STATE	PROJECT NO.
MISS.	BWO-6211-18(003)



1 DEMOLITION FLOOR PLAN - PART A

A201 AD101 1/8" = 1'-0"



2 DEMOLITION FLOOR PLAN LOWER LEVEL

A201 AD101 1/4" = 1'-0"

DEMOLITION KEY NOTES

1	DEMOLISH EXIST. STEEL STAIRS
2	DEMOLISH EXIST. CMU WALLS IN TOILET AREA - TYP.
3	DEMOLISH EXIST. WATER HEATER AND CMU BASE
4	DEMOLISH EXIST. TOILET FIXTURES - TYP.
5	DEMOLISH EXIST. CMU WALL ABOVE THE ADMIN LEVEL FLOOR SLAB. DEMOLISH EXISTING CMU WALL BELOW THE ADMIN LEVEL FLOOR SLAB IF NOT SUPPORTING THE FLOOR SLAB ABOVE.
6	DEMOLISH EXIST. WINDOWS - TYP.
7	DEMOLISH EXIST. HOLLOW METAL DOOR, FRAME AND HARDWARE
8	DEMOLISH EXIST. METAL SIDING WALLS, ROOF AND STEEL SUPPORT STUCTURE. GRIND ANY EXPOSED STEEL OFF FLUSH WITH EXISTING CONCRETE.
9	DEMOLISH EXIST. STEEL STORAGE RACKS.GRIND OFF STEEL ANCHORS FLUSH WITH ADJACENT STEEL OR CONCRETE.
10	DEMOLISH EXIST. WOOD COSTRUCTED SHED ENCLOSURE INCLUDING THE CONCRETE SLAB FOUNDATION AND GAS FIRED PRESSURE WASHER.REMOVE GAS AND WATER LINES SERVING THE EQUIPMENT.
11	DEMOLISH EXIST. STEEL COUNTERS/CABINETS ANCHORED TO WALL.
12	DEMOLISH EXIST. STEEL COLUMN.
13	DEMOLISH EXIST. CONCRETE COLUMN BASE AND LOW CONCRETE FOUNDATION WALL EXETENDING BACK TO EXTERIOR WALL. GRIND OFF CONCRETE FLUSH WITH ADJACENT CONCRETE SLAB.
14	DEMOLISH EXIST. WOOD CONSTRUCTED, ELEVATED PLATFORM INCLUDING SIDE WALLS AND SHELVING.
15	DEMOLISH EXIST. WOOD STAIRS, RAILS AND LANDING.
16	DEMOLISH EXISTING DOOR, FRAME AND WOOD WALL.
17	DEMOLISH EXIST. CMU WALL SUPPORTING ELEVATED PLATFORM.
18	DEMOLISH EXIST. STEEL SUPPORT STAND. GRIND OFF STEEL FLUSH WITH ADJACENT CONCRETE.
19	CUT OFF EXISTING BOLTS AND GRIND OFF FLUSH WITH ADJACENT CONCRETE.
20	DEMOLISH EXIST. STEEL T IMBEDED IN CONCRETE. CUT OFF FLUSH WITH CONCRETE AND GRIND STEEL OF FLUSH WITH ADJACENT CONCRETE.
21	DEMOLISH EXIST. HOLLOW METAL DOOR, FRAME AND HARDWARE.
22	EXIST. STEEL FRAMED WINDOW WILL BE DEMOLISHED BY OWNER UNDER A SEPARATE CONTRACT.
23	DEMOLISH EXIST. OVERHEAD DOOR, FRAME AND HARDWARE.
24	DEMOLISH EXIST. ROOF AND ROOF STRUCTURE THIS AREA.
25	DEMOLISH EXIST. CONCRETE SLAB AND FOUNDATION THIS AREA.
26	DEMOLISH EXIST. STEEL COLUMN AND CONC. FOUNDATION.
27	DEMOLISH EXIST. CMU WALL AND CONC. FOUNDATION.
28	DEMOLISH EXIST. CMU WALL AND CONC. FOUNDATION LOCATED BELOW RIBBON WINDOW.
29	DEMOLISH EXIST. METAL WALL PANELS AND STEEL SUPORT STRUCTURE.
30	DEMOLISH EXIST STUD WALL PARTITION.
31	DEMOLISH EXIST. CONC. STAIRS.
32	DEMOLISH EXIST. ELEVATED PLATFORM AND WALLS ABOVE OFFICE.
33	CUT OFF STEEL ROOF STRUCTURE THAT EXTENDS INTO BUILDING FROM EXTERIOR LEAN-TO.
34	DEMOLSH EXIST STEEL ANGLE FRAMING ALONG THIS WALL THAT SUPPORTS LEAN-TO ADDITION.
35	DEMOLISH STEEL FRAME IMBEDED IN CONCRETE
36	DEMOLISH EXISTING METAL AND TRANSLUCENT WALL PANELS. TYPICAL AROUND EXTERIOR OF ENTIRE BUILDING INCLUDING METAL WALL PANELS INSIDE ADDITIONS.
37	DEMOLISH EXIST. 8" BRICK MASONRY WALL, MASONRY PILASTERS AND METAL PANELS ABOVE
38	DEMOLISH EXIST. STEEL SWING ARM CRANE. GRIND OFF MOUNTING BRACKETS.
39	TYPICAL FOR ENTIRE BUILDING. DEMOLISH ALL HORIZONTAL AND VERTICAL METAL WALL GIRTS. COORDINATE REMOVAL WITH INSTALLATION OF THE NEW WALL GIRTS AS BUILDING IS NOT TO BE LEFT IN AN UNBRACED STATE. THE MAIN BUILDING STEEL FRAMES, CRANE RAILS, TROLLY CRANE, ROOF AND ROOF STRUCTURE IS TO REMAIN IN PLACE.
40	DEMOLISH EXIST. DIAGONAL ROD X-BRACING IN WALL. COORDINATE REMOVAL WITH INSTALLATION OF NEW X-BRACING. BUILDING IS NOT TO BE LEFT IN AN UN-BRACED STATE.
41	DEMOLISH EXIST. GALV. METAL PIPE. AND CONCRETE POLE BASE. GRIND OFF METAL AND CONCRETE FLUSH WITH ADJACENT CONC. SLAB.
42	DEMOLISH EXIST. WOOD UTILITY SHELVING.
43	DEMOLISH EXIST. METAL ROOF PANELS. ROOF SUPPORT GIRTS ARE TO REMAIN IN PLACE.
44	DEMOLISH EXIST. SHELVING.
45	DEMOLISH EXIST. TALL EXTERIOR SLILDING DOOR, HARDWARE AND TRACK.
46	DEMOLISH EXISTING GUTTER AND DOWNSPOUTS AT HIGH ROOF. CUT BOTTOM OF GUTTER TO LEAVE BACK LEG OF GUTTER IN PLACE. NEW GUTTER WILL ANCHOR TO EXISTING BACK LEG.
47	DEMOLISH EXIST PLYWOOD SCREEN WALL AND DOOR.
48	DEMOLISH EXISTING STEEL TROLLEY CRANES, CARRIERS AND CRANE BEAMS. (TWO TOTAL)
49	DEMOLISH EXISTING TROLLEY RAIL, CRANE BEAM AND SUPPORT MEMBERS INDICATED. FULL LENGTH OF THE BUILDING.

PLAN
ROADWAY DESIGN DIVISION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

5/18/2016 2:31:45 PM

J H & H
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Franco Bagley Lewis Wood

JH&H Architects
Planners.Interiors, PA
1047 North Flowood Drive
Flowood, MS 39232-9533
p.601.948.4601 f.601.355.6200

DATE	REVISION	BY
5/18/16	MODIFIED QTY. OF DEMOLITION	RAL

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
DISTRICT 6
SHOP BUILDING RENOVATION
DEMOLITION PLAN - PART A

PROJ. NO. LWO-6017-18(006)
COUNTY: FORREST

REGISTERED ARCHITECT 3-23-2016 RANDALL LEWIS 2723 STATE OF MISSISSIPPI

JH&H PROJECT NO: 14-112
DESIGN TEAM RAL CHECKED DATE: 3/23/2016

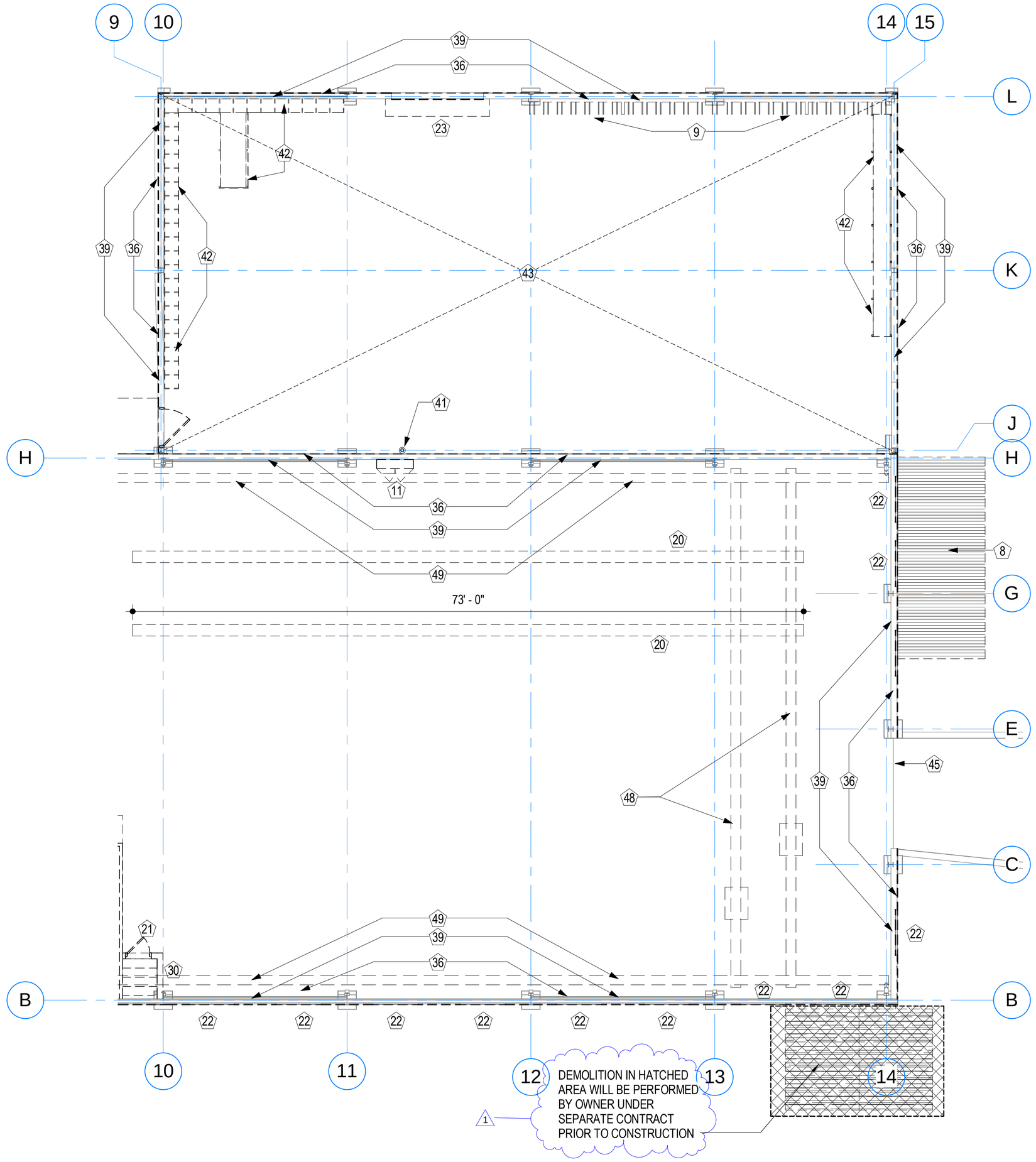
WORKING NUMBER AD101
SHEET NUMBER 18

ORIGINAL SHEET SIZE 22" x 34"

ADDENDUM

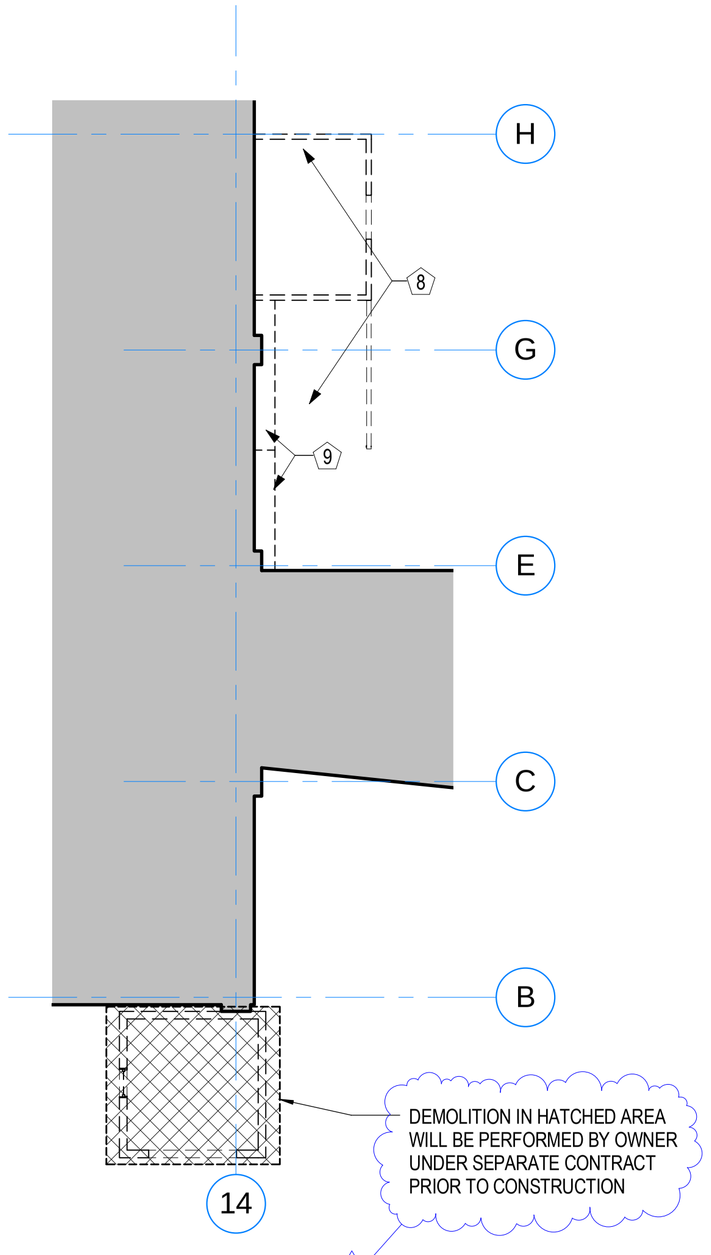
FOR PRINT SCALE VERIFICATION THIS LINE IS 4" LONG

STATE	PROJECT NO.
MISS.	BWO-6211-18(003)



1 DEMOLITION FLOOR PLAN - PART B

A201 | AD102 1/8" = 1'-0"



2 DEMOLITION FLOOR PLAN - LOWER LEVEL

A201 | AD102 1/8" = 1'-0"

DEMOLITION KEY NOTES

1	DEMOLISH EXIST. STEEL STAIRS
2	DEMOLISH EXIST. CMU WALLS IN TOILET AREA - TYP.
3	DEMOLISH EXIST. WATER HEATER AND CMU BASE
4	DEMOLISH EXIST. TOILET FIXTURES - TYP.
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9	DEMOLISH EXIST. STEEL STORAGE RACKS.GRIND OFF STEEL ANCHORS FLUSH WITH ADJACENT STEEL OR CONCRETE.
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11	DEMOLISH EXIST. STEEL COUNTERS/CABINETS ANCHORED TO WALL.
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PLAN
ROADWAY DESIGN DIVISION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

5/18/2016 2:31:46 PM

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Franco Bagley Lewis Wood

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Flowood, MS 39232-9533
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BY	REVISION	DATE
RAL	UPDATED DEMOLITION NOTE	5/18/16

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
DISTRICT 6
SHOP BUILDING RENOVATION
DEMOLITION PLAN - PART B

PROJ. NO. LWO-6017-18(006)
COUNTY: FORREST

REGISTERED ARCHITECT 3-23-2016 RANDALL LEWIS 2723 STATE OF MISSISSIPPI

JH&H PROJECT NO: 14-112
DESIGN TEAM RAL CHECKED DATE: 3/23/2016

WORKING NUMBER AD102
SHEET NUMBER 19

ORIGINAL SHEET SIZE 22" x 34"

ADDENDUM

STATE	PROJECT NO.
MISS.	BWO-6211-18(003)

FOR PRINT SCALE VERIFICATION THIS LINE IS 4" LONG

PHOTO - 3A ITEMS IN THIS PHOTO WILL BE DEMOLISHED BY OWNER UNDER SEPARATE CONTRACT PRIOR TO CONSTRUCTION.

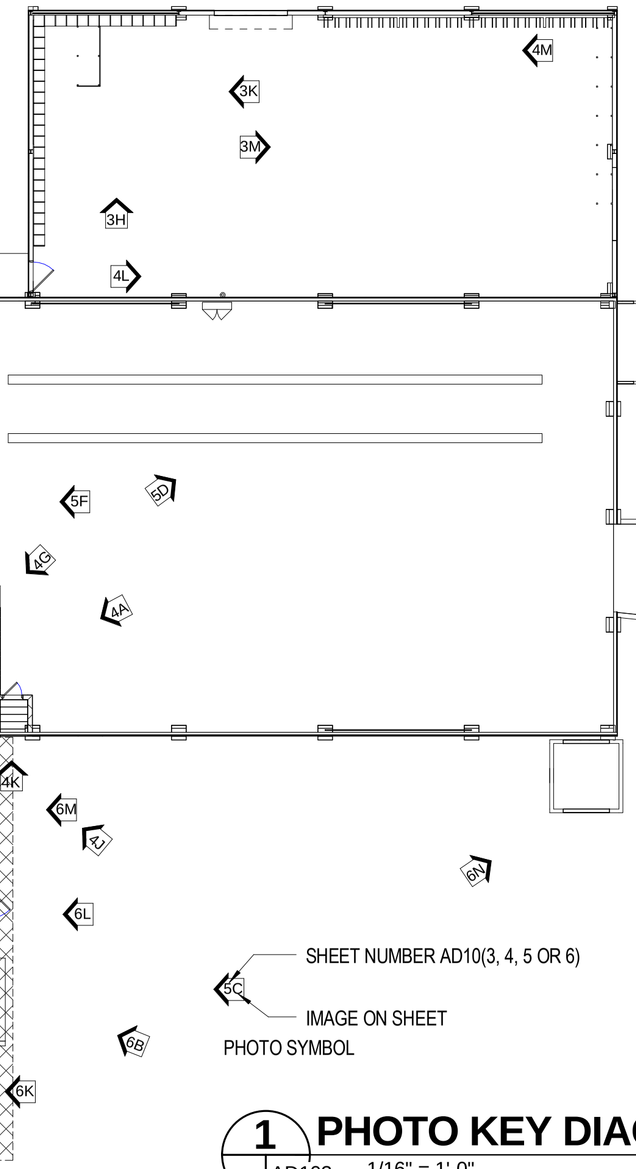
PHOTO - 3B ITEMS IN THIS PHOTO WILL BE DEMOLISHED BY OWNER UNDER SEPARATE CONTRACT PRIOR TO CONSTRUCTION.

PHOTO - 3C ITEMS IN THIS PHOTO WILL BE DEMOLISHED BY OWNER UNDER SEPARATE CONTRACT PRIOR TO CONSTRUCTION.

PHOTO - 3D ITEMS IN THIS PHOTO WILL BE DEMOLISHED BY OWNER UNDER SEPARATE CONTRACT PRIOR TO CONSTRUCTION.

PHOTO - 3E MOST ITEMS IN THIS PHOTO WILL BE DEMOLISHED BY OWNER UNDER SEPARATE CONTRACT PRIOR TO CONSTRUCTION.

PHOTO - 3F MOST ITEMS IN THIS PHOTO WILL BE DEMOLISHED BY OWNER UNDER SEPARATE CONTRACT PRIOR TO CONSTRUCTION.



1 PHOTO KEY DIAGRAM AD103 1/16" = 1'-0"

STEEL COLUMNS, BEAMS AND ROOF GIRTS ARE TO REMAIN.

PHOTO - 3G ITEMS IN THIS PHOTO WILL BE DEMOLISHED BY OWNER UNDER SEPARATE CONTRACT PRIOR TO CONSTRUCTION.

PHOTO - 3H

PHOTO - 3J MOST ITEMS IN THIS PHOTO WILL BE DEMOLISHED BY OWNER UNDER SEPARATE CONTRACT PRIOR TO CONSTRUCTION.

PHOTO - 3K

EXIST DIAG. ROD BRACING IS TO REMAIN.

PHOTO - 3L MOST ITEMS IN THIS PHOTO WILL BE DEMOLISHED BY OWNER UNDER SEPARATE CONTRACT PRIOR TO CONSTRUCTION.

STEEL COLUMNS, BEAMS AND ROOF GIRTS ARE TO REMAIN.

PHOTO - 3M

EXIST DIAG. ROD BRACING IS TO REMAIN.

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Franco Bagley Lewis Wood

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Planners.Interiors, PA
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Flowood, MS 39232-9533
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A	5/18/16	MODIFIED DEMOLITION NOTE — RAL
REVISION	DATE	BY

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
DISTRICT 6
SHOP BUILDING RENOVATION
DEMOLITION PHOTOS

PROJ. NO. LWO-6017-18(006)
COUNTY: FORREST

REGISTERED ARCHITECT 3-23-2016 RANDALL LEWIS 2723 STATE OF MISSISSIPPI

WORKING NUMBER AD103

SHEET NUMBER 20

JH&H PROJECT NO: 14-112

DESIGN TEAM RAL CHECKED DATE: 3/23/2016

ORIGINAL SHEET SIZE 22" x 34"

PLAN
ROADWAY DESIGN DIVISION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

5/18/2016 2:31:48 PM

ADDENDUM

FOR PRINT SCALE VERIFICATION THIS LINE IS 4" LONG

STATE	PROJECT NO.
MISS.	BWO-6211-18(003)

PHOTO - 6A

ITEMS IN MASKED AREA WILL BE DEMOLISHED BY OWNER UNDER SEPARATE CONTRACT PRIOR TO CONSTRUCTION. REFER TO DEMOLITION PLANS AND NOTES.

PHOTO - 6B

PHOTO - 6C

TYPICAL 1

ITEMS IN MASKED AREA WILL BE DEMOLISHED BY OWNER UNDER SEPARATE CONTRACT PRIOR TO CONSTRUCTION. REFER TO DEMOLITION PLANS AND NOTES.

PHOTO - 6N

MOST ITEMS IN THIS PHOTO WILL BE DEMOLISHED BY OWNER UNDER SEPARATE CONTRACT PRIOR TO CONSTRUCTION. REFER TO DEMOLITION PLANS AND NOTES.

PHOTO - 6D

PHOTO - 6E

PHOTO - 6F

PHOTO - 6O

ITEMS IN MASKED AREA WILL BE DEMOLISHED BY OWNER UNDER SEPARATE CONTRACT PRIOR TO CONSTRUCTION. REFER TO DEMOLITION PLANS AND NOTES.

PHOTO - 6G

PHOTO - 6H

PHOTO - 6J

PHOTO - 6P

PHOTO - 6K

MOST ITEMS IN THIS PHOTO WILL BE DEMOLISHED BY OWNER UNDER SEPARATE CONTRACT PRIOR TO CONSTRUCTION. REFER TO DEMOLITION PLANS AND NOTES.

PHOTO - 6L

MOST ITEMS IN THIS PHOTO WILL BE DEMOLISHED BY OWNER UNDER SEPARATE CONTRACT PRIOR TO CONSTRUCTION. REFER TO DEMOLITION PLANS AND NOTES.

PHOTO - 6M

MOST ITEMS IN THIS PHOTO WILL BE DEMOLISHED BY OWNER UNDER SEPARATE CONTRACT PRIOR TO CONSTRUCTION. REFER TO DEMOLITION PLANS AND NOTES.

1 TYPICAL

PLAN
ROADWAY DESIGN DIVISION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

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DATE	REVISION	BY
5/18/16	UPDATED DEMOLITION NOTES	RAL

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
DISTRICT 6
SHOP BUILDING RENOVATION
DEMOLITION PHOTOS

PROJ. NO. LWO-6017-18(006)
COUNTY: FORREST

REGISTERED ARCHITECT 5-23-2016 RANDALL LEWIS 2723 STATE OF MISSISSIPPI

WORKING NUMBER AD106

JH&H PROJECT NO: 14-112
DESIGN TEAM RAL . CHECKED . DATE: 3/23/2016

SHEET NUMBER 23

ORIGINAL SHEET SIZE 22" x 34"

ADDENDUM

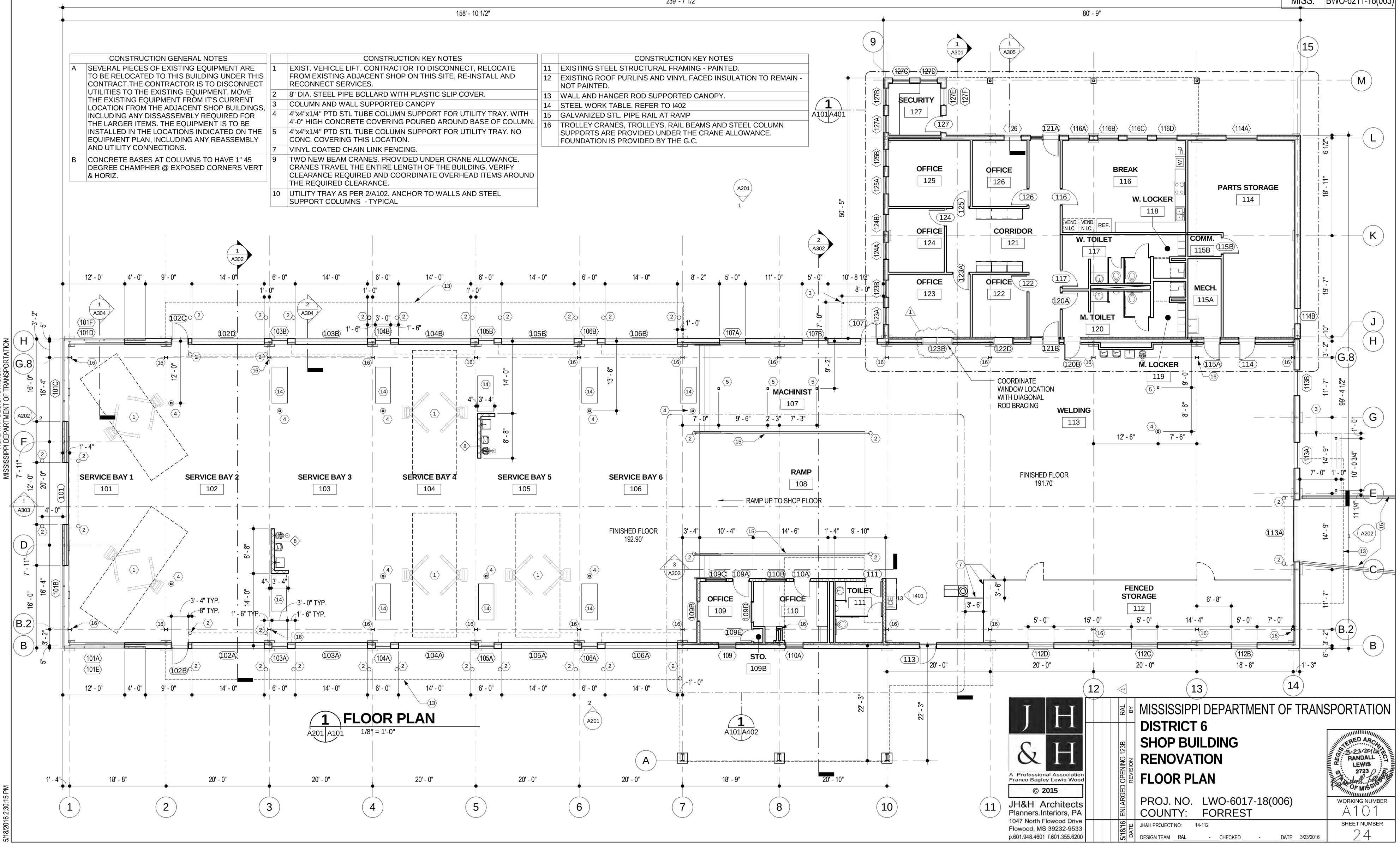
FOR PRINT SCALE VERIFICATION THIS LINE IS 4" LONG

STATE	PROJECT NO.
MISS.	BWO-6211-18(003)

CONSTRUCTION GENERAL NOTES	
A	SEVERAL PIECES OF EXISTING EQUIPMENT ARE TO BE RELOCATED TO THIS BUILDING UNDER THIS CONTRACT.THE CONTRACTOR IS TO DISCONNECT UTILITIES TO THE EXISTING EQUIPMENT. MOVE THE EXISTING EQUIPMENT FROM IT'S CURRENT LOCATION FROM THE ADJACENT SHOP BUILDINGS, INCLUDING ANY DISSASSEMBLY REQUIRED FOR THE LARGER ITEMS. THE EQUIPMENT IS TO BE INSTALLED IN THE LOCATIONS INDICATED ON THE EQUIPMENT PLAN, INCLUDING ANY REASSEMBLY AND UTILITY CONNECTIONS.
B	CONCRETE BASES AT COLUMNS TO HAVE 1" 45 DEGREE CHAMPHER @ EXPOSED CORNERS VERT & HORIZ.

	CONSTRUCTION KEY NOTES
1	EXIST. VEHICLE LIFT. CONTRACTOR TO DISCONNECT, RELOCATE FROM EXISTING ADJACENT SHOP ON THIS SITE, RE-INSTALL AND RECONNECT SERVICES.
2	8" DIA. STEEL PIPE BOLLARD WITH PLASTIC SLIP COVER.
3	COLUMN AND WALL SUPPORTED CANOPY
4	4"x4"x1/4" PTD STL TUBE COLUMN SUPPORT FOR UTILITY TRAY. WITH 4'-0" HIGH CONCRETE COVERING POURED AROUND BASE OF COLUMN.
5	4"x4"x1/4" PTD STL TUBE COLUMN SUPPORT FOR UTILITY TRAY. NO CONC. COVERING THIS LOCATION.
7	VINYL COATED CHAIN LINK FENCING.
9	TWO NEW BEAM CRANES. PROVIDED UNDER CRANE ALLOWANCE. CRANES TRAVEL THE ENTIRE LENGTH OF THE BUILDING. VERIFY CLEARANCE REQUIRED AND COORDINATE OVERHEAD ITEMS AROUND THE REQUIRED CLEARANCE.
10	UTILITY TRAY AS PER 2/A102. ANCHOR TO WALLS AND STEEL SUPPORT COLUMNS - TYPICAL

	CONSTRUCTION KEY NOTES
11	EXISTING STEEL STRUCTURAL FRAMING - PAINTED.
12	EXISTING ROOF PURLINS AND VINYL FACED INSULATION TO REMAIN - NOT PAINTED.
13	WALL AND HANGER ROD SUPPORTED CANOPY.
14	STEEL WORK TABLE. REFER TO I402
15	GALVANIZED STL. PIPE RAIL AT RAMP
16	TROLLEY CRANES, TROLLEYS, RAIL BEAMS AND STEEL COLUMN SUPPORTS ARE PROVIDED UNDER THE CRANE ALLOWANCE. FOUNDATION IS PROVIDED BY THE G.C.



PLAN
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MISSISSIPPI DEPARTMENT OF TRANSPORTATION

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DATE	REVISION	BY
5/18/16	ENLARGED OPENING 123B	RAL

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
DISTRICT 6
SHOP BUILDING RENOVATION
FLOOR PLAN

PROJ. NO. LWO-6017-18(006)
COUNTY: FORREST

REGISTERED ARCHITECT
5-23-2016
RANDALL LEWIS
2723
STATE OF MISSISSIPPI

JH&H PROJECT NO: 14-112
DESIGN TEAM RAL - CHECKED - DATE: 3/23/2016

WORKING NUMBER
A101

SHEET NUMBER
24

ORIGINAL SHEET SIZE 22" x 34"

ADDENDUM

STATE	PROJECT NO.
MISS.	BWO-6211-18(003)

FOR PRINT SCALE VERIFICATION THIS LINE IS 4" LONG

GENERAL NOTE:
PATCH ROOF WHERE EXIST. ITEMS WERE REMOVED
GENERAL ROOFING NOTE:
ALL PENETRATIONS THROUGH THE EXISTING ROOF ARE TO BE PERFORMED AS PER THE EXISTING ROOF MANUFACTURER'S REQUIREMENTS FOR A 20 YEAR NO DOLLAR LIMIT WARRANTY NO MATTER WHAT LEVEL OF WARRANTY IS ACTUALLY IN EFFECT.
HANGER ROD SUPPORTED CANOPY. SLOPE BACK TOWARD BUILDING WITH DOWNSPOUTS AT BUILDING.
POST SUPORTED CANOPY 1/2" IN 12 SLOPE AWAY FROM BUILDING. WALL SUPPORTED AT BUILDING.
NEW RAKE TRIM EACH END
NEW GUTTER
EXISTING ROOF PANEL
EXISTING RIDGE CAP
NEW PREFINISHED INSULATED METAL ROOF PANEL
POST / WALL SUPPORTED CANOPY BELOW. SLOPE TO DRAIN BEAM AT COLUMNS.
HANGER ROD SUPPORTED CANOPY. SLOPE BACK TOWARD BUILDING WITH DOWNSPOUTS AT BUILDING.
4" VTR
3" VTR
5" VTR
12" VTR
LOW
HIGH
100' - 4"
99' - 8"
60' - 3"
19' - 3 1/2"
38' - 6"
39' - 7"
40' - 7"
28' - 0"

1 ROOF PLAN
A201 A105
1/8" = 1'-0"

PLAN
ROADWAY DESIGN DIVISION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

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DATE	REVISION	BY
5/18/16	ADDED GENERAL ROOF NOTE	RAL

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
DISTRICT 6
SHOP BUILDING RENOVATION
ROOF PLAN

PROJ. NO. LWO-6017-18(006)
COUNTY: FORREST

JH&H PROJECT NO: 14-112
DESIGN TEAM RAL RAL CHECKED RAL DATE: 3/23/2016

REGISTERED ARCHITECT RANDALL LEWIS 2723 STATE OF MISSISSIPPI 3-23-2016

WORKING NUMBER A105
SHEET NUMBER 28

ORIGINAL SHEET SIZE 22" x 34"

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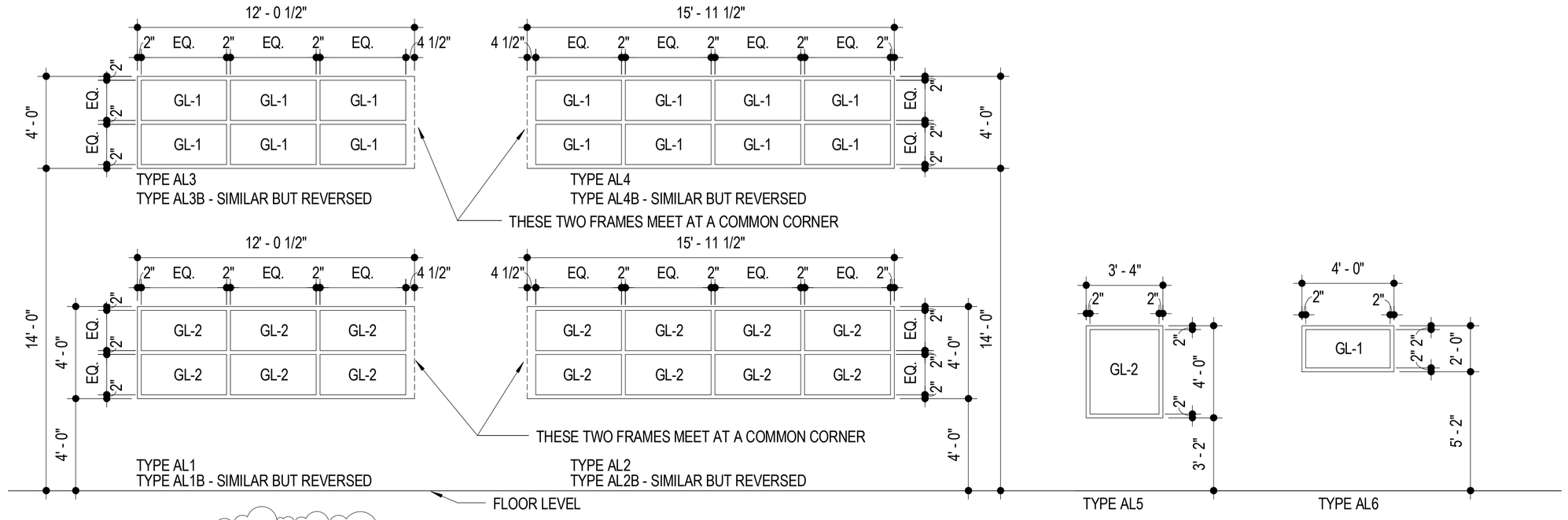
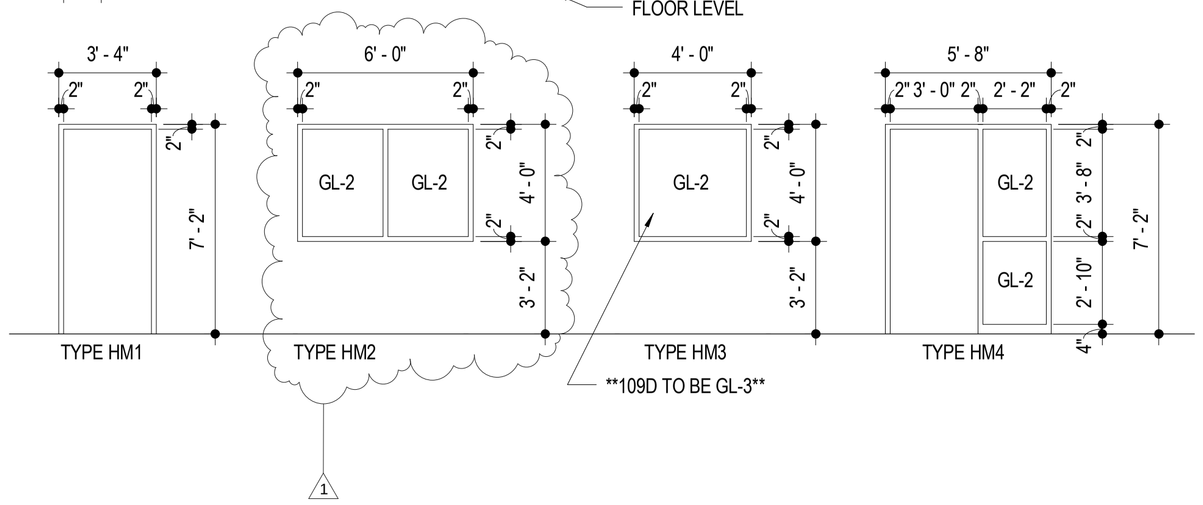
ADDENDUM

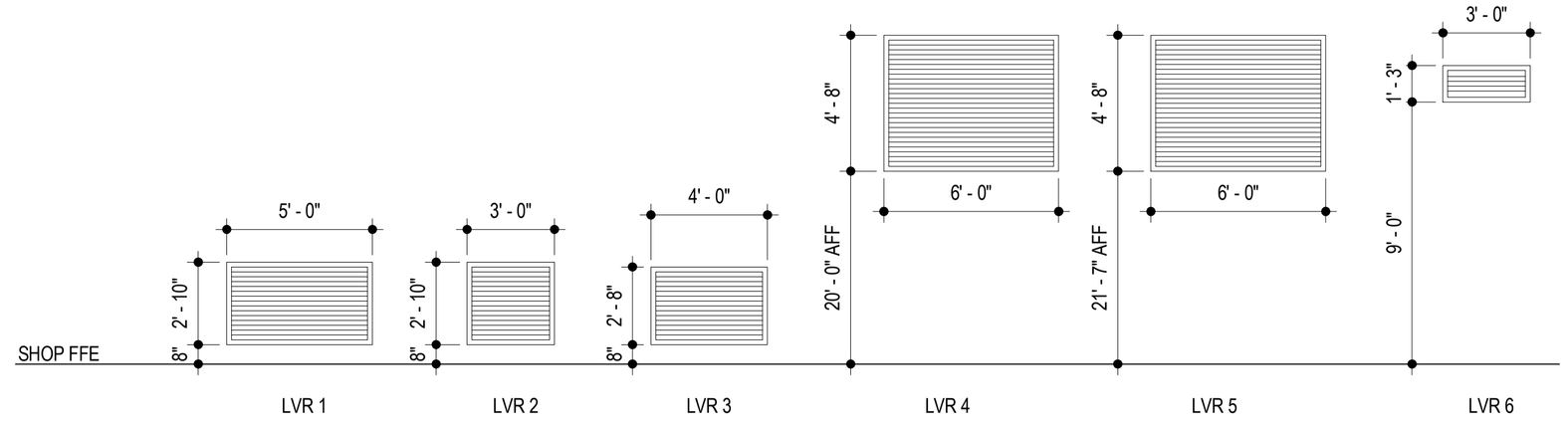
FOR PRINT SCALE VERIFICATION THIS LINE IS 4" LONG

STATE	PROJECT NO.
MISS.	BWO-6211-18(003)

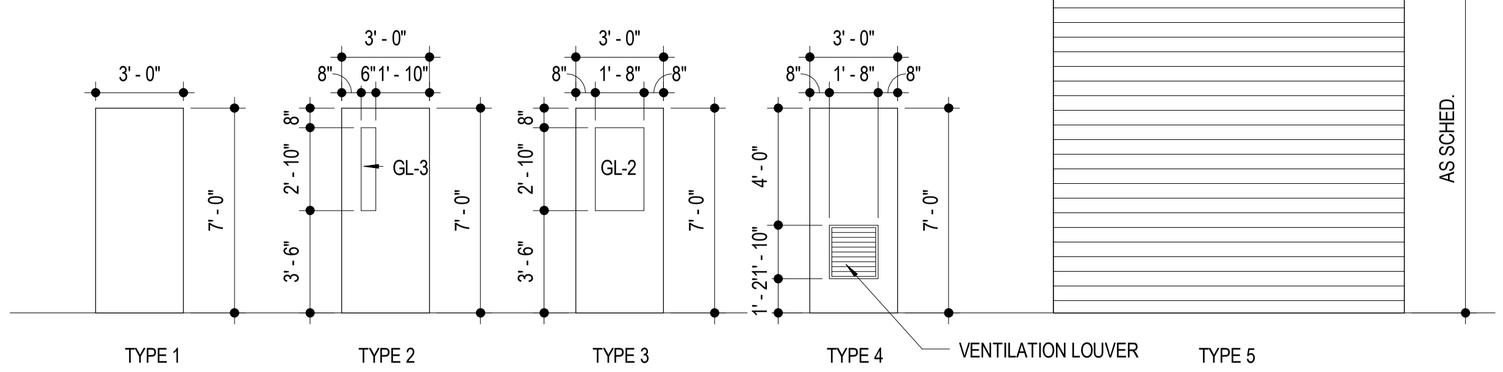




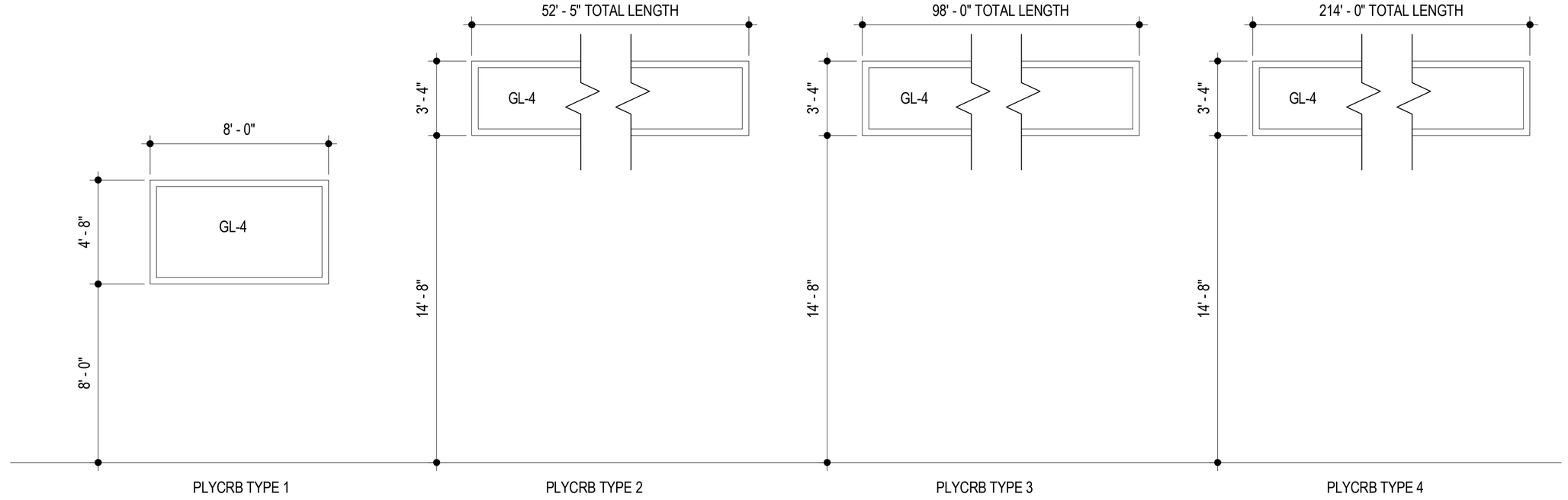
2 FRAME TYPES
A601
1/4" = 1'-0"



3 LOUVER TYPES
A601
1/4" = 1'-0"



1 DOOR TYPES
A601
1/4" = 1'-0"



4 POLYCARBONATE TYPES
A601
1/4" = 1'-0"

GLAZING SCHEDULE

TAG	DESCRIPTION
GL-1	1" INSULATED GLASS UNIT
GL-2	1" INSULATED GLASS UNIT - TEMPERED
GL-3	1/4" FLOAT CLEAR GLASS - TEMPERED
GL-4	TRANSLUCENT POLYCARBONATE PANELS

PLAN
ROADWAY DESIGN DIVISION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

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BY	REVISION	DATE
RAL	MODIFIED HM-2	5/18/16

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
DISTRICT 6
SHOP BUILDING
RENOVATION
DOOR & WINDOW TYPES

PROJ. NO. LWO-6017-18(006)
COUNTY: FORREST

REGISTERED ARCHITECT
5-23-2016
RANDALL LEWIS
2723
STATE OF MISSISSIPPI

WORKING NUMBER
A601

SHEET NUMBER
43

JH&H PROJECT NO: 14-112

DESIGN TEAM RAL EHZ CHECKED RAL DATE: 3/23/2016

ORIGINAL SHEET SIZE 22" x 34"

ADDENDUM

FOR PRINT SCALE VERIFICATION THIS LINE IS 4" LONG

STATE	PROJECT NO.
MISS.	BWO-6211-18(003)

PLAN
ROADWAY DESIGN DIVISION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

Door and Frame Schedule

Door No.	Door: Size: Pair	Width	Hgt.	Thick.	Mat.	Type	Louver	Frame: Mat.	Type	Details: Head	Jamb	Sill	Fire Rating	Hardware Set	Comments	Door No.
101	--	12' - 0"	14' - 0"	1"	STL	5	--	STL	STL.	4/A606	5/A606	3/A603	--	--		101
102A	--	14' - 0"	12' - 0"	1"	STL	5	--	STL	STL.	1/A603	2/A603	3/A603	--	--		102A
102B	--	3' - 0"	7' - 0"	1 3/4"	HM	3		HM	1	1/A604	2/A604	3/A604	--	1	6	102B
102C	--	3' - 0"	7' - 0"	1 3/4"	HM	3		HM	1	1/A604	2/A604	3/A604	--	1	6	102C
102D	--	14' - 0"	12' - 0"	1"	STL	5	--	STL	STL.	1/A603	2/A603	3/A603	--	--		102D
103A	--	14' - 0"	12' - 0"	1"	STL	5	--	STL	STL.	1/A603	2/A603	3/A603	--	--		103A
103B	--	14' - 0"	12' - 0"	1"	STL	5	--	STL	STL.	1/A603	2/A603	3/A603	--	--		103B
104A	--	14' - 0"	12' - 0"	1"	STL	5	--	STL	STL.	1/A603	2/A603	3/A603	--	--		104A
104B	--	14' - 0"	12' - 0"	1"	STL	5	--	STL	STL.	1/A603	2/A603	3/A603	--	--		104B
105A	--	14' - 0"	12' - 0"	1"	STL	5	--	STL	STL.	1/A603	2/A603	3/A603	--	--		105A
105B	--	14' - 0"	12' - 0"	1"	STL	5	--	STL	STL.	1/A603	2/A603	3/A603	--	--		105B
106A	--	14' - 0"	12' - 0"	1"	STL	5	--	STL	STL.	1/A603	2/A603	3/A603	--	--		106A
106B	--	14' - 0"	12' - 0"	1"	STL	5	--	STL	STL.	1/A603	2/A603	3/A603	--	--		106B
107	--	3' - 0"	7' - 0"	1 3/4"	HM	3		HM	1	1/A604	2/A604	3/A604	--	1	6	107
109A	--	3' - 0"	7' - 0"	1 3/4"	HM	3		HM	1	7/A603	8/A603	--	--	2		109A
109B	--	4' - 0"	4' - 0"	0"	--	--	--	HM	3	4/A603	5/A603	6/A603	--	--	5	109B
109C	--	4' - 0"	4' - 0"	0"	--	--	--	HM	3	4/A603	5/A603	6/A603	--	--	5	109C
109D	--	4' - 0"	4' - 0"	0"	--	--	--	HM	3	8/A605	9/A605	10/A605	--	--	4	109D
109E	--	2' - 2"	7' - 0"	1 3/4"	HM	3	--	WD	1	7/A604	8/A604	--	--	5		109E
110A	--	3' - 0"	7' - 0"	1 3/4"	HM	3		HM	1	7/A603	8/A603	--	--	2		110A
110B	--	4' - 0"	4' - 0"	0"	--	--	--	HM	3	4/A603	5/A603	6/A603	--	--	5	110B
111	--	3' - 0"	7' - 0"	1 3/4"	HM	4	20"x22"	HM	1	7/A603	8/A603	--	--	2B		111
113	--	3' - 0"	7' - 0"	1 3/4"	HM	3		HM	1	1/A604	2/A604	3/A604	--	1	6	113
113A	--	12' - 0"	14' - 0"	1"	STL	5	--	STL	STL.	1/A603	2/A603	3/A603	--	--		113A
114	--	3' - 0"	7' - 0"	1 3/4"	HM	1		HM	1	1/A608	2/A608	--	--	1B	6	114
115A	--	3' - 0"	7' - 0"	1 3/4"	HM	1		HM	1	1/A608	2/A608	--	--	2C		115A
115B	--	3' - 0"	7' - 0"	1 3/4"	HM	1		HM	1	7/A604	8/A604	--	--	2C		115B
116	--	3' - 0"	7' - 0"	1 3/4"	WD	3		HM	1	7/A604	8/A604	--	--	4		116
117	--	3' - 0"	7' - 0"	1 3/4"	WD	1		HM	1	7/A604	8/A604	--	--	4		117
120A	--	3' - 0"	7' - 0"	1 3/4"	WD	1		HM	1	7/A604	8/A604	--	--	4		120A
120B	--	3' - 0"	7' - 0"	1 3/4"	HM	1		HM	1	1/A608	2/A608	--	--	2B		120B
121A	--	3' - 0"	7' - 0"	1 3/4"	HM	3		HM	4	7/A608	8/A608	9/A608	--	1	6	121A
121B	--	3' - 0"	7' - 0"	1 3/4"	HM	3		HM	4	1/A608	2/A608	3/A608	--	2		121B
122	--	3' - 0"	7' - 0"	1 3/4"	WD	2		HM	1	7/A604	8/A604	--	--	3		122
122D	--	4' - 0"	4' - 0"	0"	--	--	--	HM	3	7/A606	8/A606	9/A606	--	--	5	122D
123A	--	3' - 0"	7' - 0"	1 3/4"	WD	2		HM	1	7/A604	8/A604	--	--	3		123A
123B	--	6' - 0"	4' - 0"	0"	--	--	--	HM	2	7/A606	8/A606	9/A606	--	--	5	123B
124	--	3' - 0"	7' - 0"	1 3/4"	WD	2		HM	1	7/A604	8/A604	--	--	3		124
125	--	3' - 0"	7' - 0"	1 3/4"	WD	2		HM	1	7/A604	8/A604	--	--	3		125
126	--	3' - 0"	7' - 0"	1 3/4"	WD	2		HM	1	7/A604	8/A604	--	--	3		126
127	--	3' - 0"	7' - 0"	1 3/4"	HM	3		HM	1	7/A608	8/A608	9/A608	--	1	6	127

COMMENTS:

1. SEE MECHANICAL DRAWINGS / SPECIFICATIONS FOR ADDITIONAL LOUVER INFORMATION.
2. OPENING IN WALL FOR THRU-WALL MECHANICAL UNIT. SEE MECHANICAL FOR ADDITIONAL UNIT INFORMATION.
3. POLYCARBONATE PANEL SHALL HAVE HEAD DETAIL 7/A605 FROM GRID LINES 2 - 7. FROM GRID LINES 7 - 14, POLYCARBONATE PANEL SHALL HAVE HEAD DETAIL 4/A605. THESE DETAILS CORRESPOND WITH LOCATION OF ADJACENT METAL CANOPY AND ITS ATTACHMENT ABOVE POLYCARBONATE PANEL.
4. FRAME 109D TO USE GLAZING TYPE 3: 1/4" FLOAT CLEAR GLASS - TEMPERED.
5. GLAZING FOR THIS INTERIOR OPENING TO BE CLEAR 1" INSULATED - TEMPERED
6. PROVIDE ACCESS CONTROL AT THIS OPENING. ACCESS CONTROL IS INSTALLED BY THE OWNER.

Window / Louver Schedule

Mark	Mat.	Type	Opening: Width	Height	Details: Head	Jamb	Sill	Comments	Mark
101A	AL	1B	12' - 0"	4' - 0"	4/A607	2/A607	5/A607		101A
101B	AL	2B	16' - 0"	4' - 0"	4/A607	2/A607	5/A607		101B
101C	AL	2	16' - 0"	4' - 0"	4/A607	2/A607	5/A607		101C
101D	AL	1	12' - 0"	4' - 0"	4/A607	2/A607	5/A607		101D
101E	LVR	3	4' - 0"	2' - 8"	5/A607	9/A607	10/A607	1	101E
101F	LVR	3	4' - 0"	2' - 8"	5/A607	9/A607	10/A607	1	101F
103A	LVR	2	3' - 0"	2' - 10"	4/A604	5/A604	6/A604	1	103A
103B	LVR	2	3' - 0"	2' - 10"	4/A604	5/A604	6/A604	1	103B
104A	LVR	2	3' - 0"	2' - 10"	4/A604	5/A604	6/A604	1	104A
104B	LVR	2	3' - 0"	2' - 10"	4/A604	5/A604	6/A604	1	104B
105A	LVR	2	3' - 0"	2' - 10"	4/A604	5/A604	6/A604	1	105A
105B	LVR	2	3' - 0"	2' - 10"	4/A604	5/A604	6/A604	1	105B
106A	LVR	2	3' - 0"	2' - 10"	4/A604	5/A604	6/A604	1	106A
106B	LVR	2	3' - 0"	2' - 10"	4/A604	5/A604	6/A604	1	106B
107A	LVR	1	5' - 0"	2' - 10"	4/A604	5/A604	6/A604	1	107A
107B	LVR	1	5' - 0"	2' - 10"	4/A604	5/A604	6/A604	1	107B
109	AL	5	3' - 4"	4' - 0"	1/A605	2/A605	3/A605		109
110A	AL	5	3' - 4"	4' - 0"	1/A605	2/A605	3/A605		110A
112B	LVR	1	5' - 0"	2' - 10"	4/A604	5/A604	6/A604	1	112B
112C	LVR	1	5' - 0"	2' - 10"	4/A604	5/A604	6/A604	1	112C
112D	LVR	1	5' - 0"	2' - 10"	4/A604	5/A604	6/A604	1	112D
113A	LVR	1	5' - 0"	2' - 10"	4/A604	5/A604	6/A604	1	113A
113B	LVR	1	5' - 0"	2' - 10"	4/A604	5/A604	6/A604	1	113B
114A	AL	6	6' - 0"	2' - 0"	4/A608	5/A608	6/A608		114A
114B	LVR	6	3' - 0"	1' - 3"	10/A606	11/A606	12/A606		114B
116A	AL	6	4' - 0"	2' - 0"	4/A608	5/A608	6/A608		116A
116B	AL	6	4' - 0"	2' - 0"	4/A608	5/A608	6/A608		116B
116C	AL	6	4' - 0"	2' - 0"	4/A608	5/A608	6/A608		116C
116D	AL	6	4' - 0"	2' - 0"	4/A608	5/A608	6/A608		116D
123A	AL	5	3' - 4"	4' - 0"	4/A608	5/A608	6/A608		123A
123B	AL	5	3' - 4"	4' - 0"	4/A608	5/A608	6/A608		123B
124A	AL	5	3' - 4"	4' - 0"	4/A608	5/A608	6/A608		124A
124B	AL	5	3' - 4"	4' - 0"	4/A608	5/A608	6/A608		124B
125A	AL	5	3' - 4"	4' - 0"	4/A608	5/A608	6/A608		125A
125B	AL	5	3' - 4"	4' - 0"	4/A608	5/A608	6/A608		125B
126	AL	5	3' - 4"	4' - 0"	4/A608	5/A608	6/A608		126
127A	AL	5	3' - 4"	4' - 0"	4/A608	5/A608	6/A608		127A
127B	AL	5	3' - 4"	4' - 0"	4/A608	5/A608	6/A608		127B
127C	AL	5	3' - 4"	4' - 0"	4/A608	5/A608	6/A608		127C
127D	AL	5	3' - 4"	4' - 0"	4/A608	5/A608	6/A608		127D
127E	AL	5	3' - 4"	4' - 0"	4/A608	5/A608	6/A608		127E
127F	TWU		3' - 4"	2' - 0"	10/A608	11/A608	12/A608	2	127F
201A	AL	3B	12' - 0"	4' - 0"	1/A607	2/A607	3/A607		201A
201B	AL	4B	16' - 0"	4' - 0"	1/A607	2/A607	3/A607		201B
201C	AL	4	16' - 0"	4' - 0"	1/A607	2/A607	3/A607		201C
201D	AL	3	12' - 0"	4' - 0"	1/A607	2/A607	3/A607		201D
201E	PLYCRB	4	214' - 0"	3' - 4"	4/A605; 7/A605	5/A605	6/A605	3	201E
201F	PLYCRB	1	8' - 0"	4' - 8"	4/A605	5/A605	6/A605		201F
201G	PLYCRB	1	8' - 0"	4' - 8"	4/A605	5/A605	6/A605		201G
201H	PLYCRB	1	8' - 0"	4' - 8"	4/A605	5/A605	6/A605		201H
201I	PLYCRB	2	52' - 5"	3' - 4"	4/A605	5/A605	6/A605		201I
201J	PLYCRB	3	98' - 0"	3' - 4"	7/A605	5/A605	6/A605		201J
201K	LVR	4	6' - 0"	4' - 8"	6/A607	7/A607	8/A607	1	201K
201L	LVR	4	6' - 0"	4' - 8"	6/A607	7/A607	8/A607	1	201L
201M	LVR	5	6' - 0"	4' - 8"	1/A606	2/A606	3/A606	1	201M
201N	LVR	5	6' - 0"	4' - 8"	1/A606	2/A606	3/A606	1	201N

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NO.	REVISION	DATE	BY
1	VARIOUS MODIFICATIONS	5/18/16	RAL

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
DISTRICT 6
SHOP BUILDING RENOVATION
DOOR AND WINDOW SCHEDULE

REGISTERED ARCHITECT 3-23-2016 RANDALL LEWIS 2723 STATE OF MISSISSIPPI

PROJ. NO. LWO-6017-18(006)
COUNTY: FORREST

WORKING NUMBER A602

JH&H PROJECT NO: 14-112
DESIGN TEAM RAL EHZ CHECKED RAL DATE: 3/23/2016

SHEET NUMBER 44

5/18/2016 2:30:33 PM

ORIGINAL SHEET SIZE 22" x 34"

ADDENDUM

FOR PRINT SCALE VERIFICATION THIS LINE IS 4" LONG

STATE	PROJECT NO.
MISS.	BWO-6211-18(003)

1 OMIT MATERIAL SCHEDULE IN THIS LOCATION. REFER TO SPECIFICATION SECTION 09 05 15 - COLOR DESIGN FORMATERIAL / COLOR SELECTIONS.

Interior Finish Schedule

Room No.	Room Name	Floor			Base			North Wall			South Wall			East Wall			West Wall			Wainscot			Ceiling				Key Notes	Room No.
		Sub Str	Fin.	Clr.	Sub Str	Fin.	Clr.	Sub Str	Fin.	Clr.	Sub Str	Fin.	Clr.	Sub Str	Fin.	Clr.	Sub Str	Fin	Clr.	Fin	Clr	Height	Sub Str	Fin.	Clr.	Height		
101	SERVICE BAY 1	CONC.	EF	1	PLYWD	--	--	PLYWD	PT	1	PLYWD	PT	1	PLYWD	PT	1	PLYWD / GYP	PT	1	--	--	--	EXIST.	EXP.	--	VARIES		101
102	SERVICE BAY 2	CONC.	EF	1	PLYWD	--	--	PLYWD	PT	1	PLYWD	PT	1	PLYWD	PT	1	PLYWD / GYP	PT	1	--	--	--	EXIST.	EXP.	--	VARIES		102
103	SERVICE BAY 3	CONC.	EF	1	PLYWD	--	--	PLYWD	PT	1	PLYWD	PT	1	PLYWD	PT	1	PLYWD / GYP	PT	1	--	--	--	EXIST.	EXP.	--	VARIES		103
104	SERVICE BAY 4	CONC.	EF	1	PLYWD	--	--	PLYWD	PT	1	PLYWD	PT	1	PLYWD	PT	1	PLYWD / GYP	PT	1	--	--	--	EXIST.	EXP.	--	VARIES		104
105	SERVICE BAY 5	CONC.	EF	1	PLYWD	--	--	PLYWD	PT	1	PLYWD	PT	1	PLYWD	PT	1	PLYWD / GYP	PT	1	--	--	--	EXIST.	EXP.	--	VARIES		105
106	SERVICE BAY 6	CONC.	EF	1	PLYWD	--	--	PLYWD	PT	1	PLYWD	PT	1	PLYWD	PT	1	PLYWD / GYP	PT	1	--	--	--	EXIST.	EXP.	--	VARIES		106
107	MACHINIST	CONC.	EF	1	PLYWD	--	--	PLYWD	PT	1	PLYWD	PT	1	PLYWD	PT	1	PLYWD / GYP	PT	1	--	--	--	EXIST.	EXP.	--	VARIES		107
108	RAMP	CONC.	EF	1	PLYWD	--	--	PLYWD	PT	1	PLYWD	PT	1	PLYWD	PT	1	PLYWD / GYP	PT	1	--	--	--	EXIST.	EXP.	--	VARIES		108
109	OFFICE	CONC	LVP	1	GYP	RB	1	GYP	PT	1	GYP	PT	1	GYP	PT	1	GYP	PT	1	--	--	--	STR.	LAT		9'-0"		109
109B	STO.	CONC	LVP	1	GYP	RB	1	GYP	PT	1	GYP	PT	1	GYP	PT	1	GYP	PT	1	--	--	--	STR	LAT		9'-0"		109B
110	OFFICE	CONC	LVP	1	GYP	RB	1	GYP	PT	1	GYP	PT	1	GYP	PT	1	GYP	PT	1	--	--	--	STR.	LAT		9'-0"		110
111	TOILET	CONC	POR	1	TBB	POR	1	TBB	CT	1	TBB	CT	1	TBB	CT	1	TBB	CT	1	--	--	--	STR.	LAT		9'-0"		111
112	FENCED STORAGE	CONC.	EF	1	PLYWD	--	--	PLYWD	PT	1	PLYWD	PT	1	PLYWD	PT	1	PLYWD / GYP	PT	1	--	--	--	EXIST.	EXP.	--	VARIES		112
113	WELDING	CONC.	EF	1	PLYWD	--	--	PLYWD	PT	1	PLYWD	PT	1	PLYWD	PT	1	PLYWD / GYP	PT	1	--	--	--	EXIST.	EXP.	--	VARIES		113
114	PARTS STORAGE	CONC	EF	1	GYP	RB	1	GYP	PT	1	GYP	PT	1	GYP	PT	1	GYP	PT	1	--	--	--	STR	--	--	VARIES		114
115A	MECH.	CONC	EF	1	GYP	RB	1	GYP	PT	1	GYP	PT	1	GYP	PT	1	GYP	PT	1	--	--	--	STR	--	--	VARIES		115A
115B	COMM.	CONC	EF	1	GYP	RB	1	GYP	PT	1	GYP	PT	1	GYP	PT	1	GYP	PT	1	---	---	---						115B
116	BREAK	CONC	LVP	1	GYP	RB	1	GYP	PT	3	GYP	PT	3	GYP	PT	3	GYP	PT	3	--	--	--	STR	LAT		9'-0"		116
117	W. TOILET	CONC	POR	1	TBB	POR	1	TBB	CT	1	TBB	CT	1	TBB	CT	1	TBB	CT	1	--	--	--	STR	LAT		9'-0"		117
118	W. LOCKER	CONC	POR	1	TBB	POR	1	TBB	CT	1	TBB	CT	1	TBB	CT	1	TBB	CT	1	--	--	--	GYP	PT		8'-6"		118
119	M. LOCKER	CONC	POR	1	TBB	POR	1	TBB	CT	1	TBB	CT	1	TBB	CT	1	TBB	CT	1	--	--	--	GYP	PT		8'-6"		119
120	M. TOILET	CONC	POR	1	TBB	POR	1	TBB	CT	1	TBB	CT	1	TBB	CT	1	TBB	CT	1	--	--	--	STR	LAT		9'-0"		120
121	CORRIDOR	CONC	LVP	1	GYP	RB	1	GYP	PT	1	GYP	PT	1	GYP	PT	1	GYP	PT	1	--	--	--	STR	LAT		9'-0"		121
122	OFFICE	CONC	LVP	1	GYP	RB	1	GYP	PT	1	GYP	PT	1	GYP	PT	1	GYP	PT	1	---	---	---						122
123	OFFICE	CONC	LVP	1	GYP	RB	1	GYP	PT	1	GYP	PT	1	GYP	PT	1	GYP	PT	1	--	--	--	STR	LAT		9'-0"		123
124	OFFICE	CONC	LVP	1	GYP	RB	1	GYP	PT	1	GYP	PT	1	GYP	PT	1	GYP	PT	1	--	--	--	STR	LAT		9'-0"		124
125	OFFICE	CONC	LVP	1	GYP	RB	1	GYP	PT	1	GYP	PT	1	GYP	PT	1	GYP	PT	1	--	--	--	STR	LAT		9'-0"		125
126	OFFICE	CONC	LVP	1	GYP	RB	1	GYP	PT	1	GYP	PT	1	GYP	PT	1	GYP	PT	1	---	---	---						126
127	SECURITY	CONC	LVP	1	GYP	RB	1	GYP	PT	1	GYP	PT	1	GYP	PT	1	GYP	PT	1	--	--	--	STR	GYP		8'-0"		127

GENERAL NOTES

A. IN RMS 118 & 119, SHOWER SURROUND UNIT SHALL RECEIVE CT-1 ABOVE SURROUND ON ALL WALLS.

B. HOLLOW METAL DOOR TRIM COLOR SHALL BE PT-2 UNLESS OTHERWISE NOTED.

PLAN
ROADWAY DESIGN DIVISION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

7/14/2016 9:52:00 AM

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1 OMIT MATERIAL SCHEDULE — REVISION — RAL BY — 7/13/16 DATE

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
DISTRICT 6
SHOP BUILDING RENOVATION
INTERIOR FINISH SCHEDULE

REGISTERED ARCHITECT 3-23-2016 RANDALL LEWIS 2723 STATE OF MISSISSIPPI

PROJ. NO. LWO-6017-18(006)
COUNTY: FORREST

WORKING NUMBER 1601

JH&H PROJECT NO: 14-112
DESIGN TEAM RAL RAL CHECKED RAL DATE: 3/23/2016

SHEET NUMBER 56

ORIGINAL SHEET SIZE 22" x 34"

ADDENDUM

STATE	PROJECT NO.
MISS.	BWO-6211-18(003)

PLUMBING LEGEND AND ABBREVIATIONS

PIPING LEGEND

	DOMESTIC COLD WATER
	DOMESTIC HOT WATER (110°)
	DOMESTIC HOT WATER RECIRCULATING LINE (110°)
	DOMESTIC HOT WATER (140°)
"A"	MECHANICAL SHOCK ARRESTOR; LETTER INDICATES PDI SIZE
WCO	WALL CLEANOUT
CO	CLEANOUT
CO	CLEANOUT
	HOSE BIBB
	CONCRETE THRUST BLOCK
	FIRESTOPPING
	PIPE SLEEVE
	PIPE CAP
G	GAS (NATURAL)
D D	CONDENSATE DRAIN LINE
	UNION
	CAPPED PIPE WITH SHUT-OFF VALVE
	"Y" TYPE STRAINER WITH HOSE END BLOW OFF VALVE
	"Y" TYPE STRAINER

PIPING LEGEND (CONT.)

	ELBOW TURNED UP
	ELBOW TURNED DOWN
	BOTTOM PIPE CONNECTION
	TOP PIPE CONNECTION
	SHUT-OFF VALVE
	GAS COCK
	BALANCING VALVE
	CHECK VALVE
	RELIEF VALVE
	ANGLE RELIEF VALVE
P	PRESSURE REDUCING VALVE (PRV)
	BALL VALVE
	MANUAL AIR VENT
	THERMOMETER
	PRESSURE GAUGE AND COCK
℄	CENTER LINE

MISCELLANEOUS

ø	DIAMETER
HW / 1	RISER DESIGNATION (RISER SERVICE / RISER NUMBER)
	EXISTING EQUIPMENT, PIPING, OR DUCTWORK TO REMAIN IN SERVICE.
	EXISTING EQUIPMENT, PIPING, OR DUCTWORK TO BE REMOVE.
	NEW CONNECTION TO EXISTING PIPING, DUCTWORK AND/OR EQUIPMENT
VTR	VENT THRU ROOF
AAV	AIR ADMITTANCE VALVE
--ECW--	EXISTING DOMESTIC COLD WATER
--EHW--	EXISTING DOMESTIC HOT WATER
--EHWR--	EXISTING DOMESTIC HOT WATER RECIRC
--- EG ---	EXISTING GAS (NATURAL)
---EFD---	EXISTING FLOOR DRAIN
-- ECO --	EXISTING CLEANOUT

ABBREVIATIONS – MECHANICAL

AAV	AIR ADMITTANCE VALVE
AD	ACCESS DOOR
BTU	BRITISH THERMAL UNIT
CO	CLEAN OUT
CW	DOMESTIC COLD WATER
DIA	DIAMETER
DN	DOWN
FLR	FLOOR
FT	FEET
GPM	GALLONS PER MINUTE
GWH	GAS WATER HEATER
HP	HORSE POWER
HR	HOUR
HW	HOT WATER
ID	INSIDE DIMENSION
KW	KILOWATT
LBS	POUNDS
MAX	MAXIMUM
MBH	THOUSAND BTU PER HOUR

ABBREVIATIONS – MECHANICAL

MFG	MANUFACTURER
MIN	MINIMUM
NC	NORMALLY CLOSED
NIC	NOT IN THIS CONTRACT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
P	PUMP
PD	PRESSURE DROP
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH (GAUGE)
RPM	REVOLUTIONS PER MINUTE
RP	RECIRC PUMP
SQFT	SQUARE FEET
TYP	TYPICAL
VTR	VENT THRU ROOF
W/	WITH
EW	EXISTING DOMESTIC WATER
EHW	EXISTING DOMESTIC HOT WATER
EHWR	EXISTING DOMESTIC HOT WATER RECIRC
EG	EXISTING GAS (NATURAL)

GENERAL NOTES – PLUMBING

1. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL PLUMBING INSTALLATION WITH OTHER TRADES SUCH AS ELECTRICAL, STRUCTURAL, HVAC, LIGHTING, CEILING CONSTRUCTION AND SUPPORTS, ETC. ANY CONFLICTS ARISING OUT OF A LACK OF CONSTRUCTION COORDINATION OR DUE TO LACK OF CONSIDERATION FOR THE NEEDS OF OTHER TRADES SHALL BE RESOLVED AT NO EXPENSE TO THE OWNER.
2. ALL PIPING SHALL BE INSTALLED IN SUCH A MANNER THAT CONFLICTS WITH AIR CONDITIONING DUCTS AND WITH CEILING LIGHTS WILL NOT OCCUR. IN SOME INSTANCES, WHERE INDICATED, PIPING SHALL BE INSTALLED WITH SLEEVES THROUGH BEAMS. CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING THE SIZES OF SLEEVES AND THE ELEVATIONS AT WHICH OPENINGS ARE TO BE MADE PRIOR TO INSTALLATION OF STRUCTURAL MEMBERS.
3. FOR EVERY PIPE SLEEVE PENETRATING FIRE RATED WALLS AND SLABS, USE 3M OR EQUIVALENT FIRE BARRIER WRAP STRIP FS-165, 3M CAULK CP 25 AND 3M PUTTY 303, ASTM E-814, U.L. LISTED, CAPABLE OF RAPID EXPANSION WHEN EXPOSED TO HEAT. COMPLIES WITH BOCA, ICBO AND SSBC. PROVIDES 3 HOUR FIRE RATING.
4. ALL SANITARY PIPING SHALL BE INSTALLED AT 1/8" PER FOOT SLOPE UNLESS OTHERWISE NOTED. FIXTURE ARMS AND SMALL BRANCHES SHALL BE SLOPED IN ACCORDANCE WITH THE INTERNATIONAL PLUMBING CODE.
5. PROVIDE ACCESS PANELS FOR SHOCK ABSORBERS AND GATE VALVES AND CLEANOUT COVERS FOR CLEANOUT PLUGS AS SPECIFIED. EACH ITEM SHALL BE PROVIDED WITH ITS ACCESS PANEL OR COVER. ACCESS PANELS AND CLEANOUT COVERS SHALL BE EASILY ACCESSIBLE AND CONTRACTOR WILL BE RESPONSIBLE FOR LOCATING THESE ITEMS SO THAT SHOCK ABSORBER, VALVE OR CLEANOUT LIES WITHIN WALL OR CEILING IMMEDIATELY BEHIND COVER OR PANEL. CONTRACTOR SHALL COORDINATE THE LOCATION OF PANELS AND COVERS WITH OTHER TOILET ACCESSORIES AND FIXTURES AS WELL AS ARCHITECTURAL LAYOUT.
6. DURING FINAL PUNCH LIST INSPECTION, CONTRACTOR SHALL HAVE ALL CLEANOUT COVERS AND ACCESS PANELS OPENED AND ITEMS EXPOSED FOR VERIFICATION AS TO THEIR INSTALLATION BY CONTRACTING SUPERVISOR.
7. ALL PIPING TO COMPLY WITH 2006 IBC SEISMIC DESIGN CATEGORY C, OCCUPANCY CATEGORY IV.
8. THE PLUMBING CONTRACTOR SHALL DISCONNECT THE EXISTING PLUMBING SERVICE TO EACH PIECE OF EXISTING EQUIPMENT TO BE RELOCATED FROM OTHER BUILDINGS, THE EQUIPMENT IS TO BE DISASSEMBLED AS REQUIRED AND MOVED TO THE SHOP BUILDING BY THE GENERAL CONTRACTOR.
9. THE PLUMBING CONTRACTOR SHALL COORDINATE DEMOLITION REQUIRED WITH DEMOLITION PERFORMED BY WONER AS PER AD101-AD106.

SHEET INDEX – PLUMBING

PLAN
ROADWAY DESIGN DIVISION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

ERG PN: 14.47

Engineering Resource Group Inc.
350 Edgewood Terrace Drive
Jackson, MS 39206
Phone: (601) 362-3552
Fax: (601) 366-6418

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NO.	DATE	REVISION	BY
1	4-22-16	REVISED GENERAL NOTES	KAH

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
DISTRICT 6
SHOP BUILDING RENOVATION
PLUMBING LEGEND AND ABBREVIATIONS
PROJ. NO. LWO-6017-18(006)
COUNTY: FORREST

CHAD E. MOORE — 20102 — 03-23-16 — ENGINEER — STATE OF MISSISSIPPI

WORKING NUMBER P001

SHEET NUMBER 57

JH&H PROJECT NO: 14-112

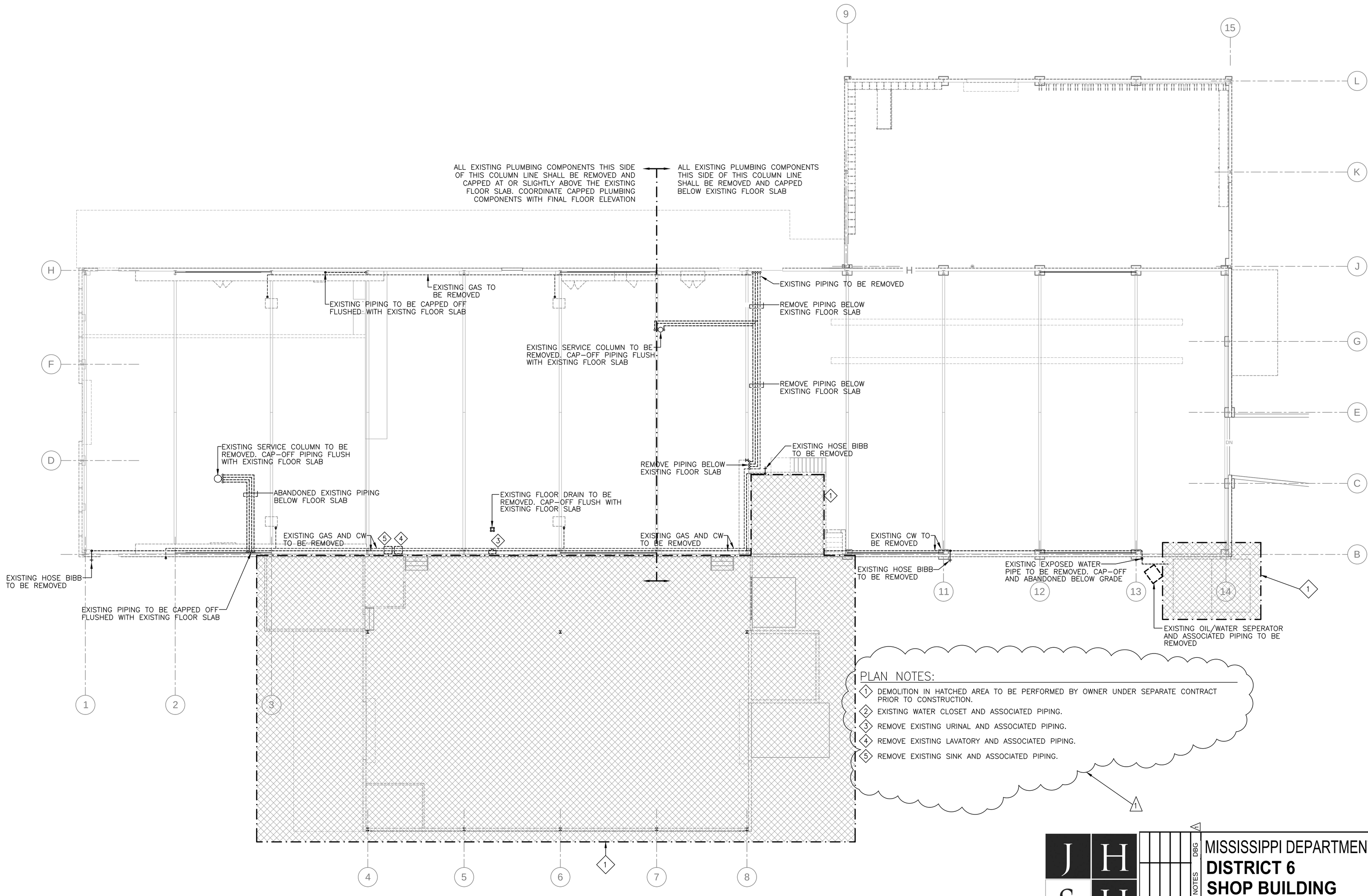
DESIGN TEAM DBG/KAH CHECKED CEM/TKP DATE: 03-23-16

ORIGINAL SHEET SIZE 22" x 34"

ADDENDUM

STATE	PROJECT NO.
MISS.	BWO-6211-18(003)

PLAN
ROADWAY DESIGN DIVISION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION



PLAN NOTES:

1. DEMOLITION IN HATCHED AREA TO BE PERFORMED BY OWNER UNDER SEPARATE CONTRACT PRIOR TO CONSTRUCTION.
2. EXISTING WATER CLOSET AND ASSOCIATED PIPING.
3. REMOVE EXISTING URINAL AND ASSOCIATED PIPING.
4. REMOVE EXISTING LAVATORY AND ASSOCIATED PIPING.
5. REMOVE EXISTING SINK AND ASSOCIATED PIPING.

NORTH

FLOOR PLAN – PLUMBING (DEMOLITION)

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

ERG PN: 14.47

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5/18/16	MODIFIED DEMO. PLAN NOTES	DBG

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
DISTRICT 6
SHOP BUILDING RENOVATION
PLUMBING DEMOLITION

PROJ. NO. LWO-6017-18(006)
COUNTY: FORREST

CHAD E. MOORE — REGISTERED PROFESSIONAL ENGINEER — 20102 — 03-23-16 — STATE OF MISSISSIPPI

WORKING NUMBER PD101

SHEET NUMBER 60

JH&H PROJECT NO: 14-112

DESIGN TEAM DBG/KAH CHECKED CEM/TKP DATE: 03-23-16

ORIGINAL SHEET SIZE 22" x 34"

ADDENDUM

STATE	PROJECT NO.
MISS.	BWO-6211-18(003)

HVAC LEGEND AND ABBREVIATIONS

PIPING LEGEND

	CONCRETE THRUST BLOCK
FM	FLOW METER
FS	FLOW SWITCH
	FIRESTOPPING
	PIPE SLEEVE
HP	HIGH PRESSURE REFRIGERANT
LP	LOW PRESSURE REFRIGERANT
RS	REFRIGERANT SUCTION
RL	REFRIGERANT LIQUID
	ARROW INDICATES DIRECTION OF FLOW
	PITCH PIPE DOWN IN DIRECTION OF ARROW
D D	CONDENSATE DRAIN LINE
	PIPE GUIDE
	EXPANSION COMPENSATOR
	CONCENTRIC REDUCER (INCREASER)
	ECCENTRIC REDUCER (INCREASER)
	UNION
	CAPPED PIPE WITH SHUT-OFF VALVE
	ELBOW TURNED UP
G	ELBOW TURNED DOWN
	BOTTOM PIPE CONNECTION
	TOP PIPE CONNECTION
G G	SLOPED CHANGE IN PIPE ELEVATION

PIPING LEGEND (CONT.)

	SHUT-OFF VALVE
	BALL VALVE WITH HOSE THREAD CONNECTION
	GAS COCK
	BALANCING VALVE
	GLOBE VALVE
	RELIEF VALVE
LP	ANGLE RELIEF VALVE
	PRESSURE REDUCING VALVE (PRV)
	LUBRICATED PLUG VALVE
	SOLENOID VALVE
	BUTTERFLY VALVE (MANUAL)
	BALL VALVE
	BALL VALVE. NORMALLY CLOSED
	SIGHT GLASS
	MANUAL AIR VENT
	AUTOMATIC AIR VENT
	THERMOMETER
	PIPE SENSOR WELL (THERMOMETER)
	PRESSURE GAUGE AND COCK
	PRESSURE GAUGE WITH LOOP
	TEMPERATURE-PRESSURE TEST FITTING

DUCTWORK LEGEND

	RADIUS ELBOW
	ELBOW WITH TURNING VANES
	RECTANGULAR BRANCH TAKEOFF WITH BALANCING DAMPER
	RECTANGULAR SUPPLY DUCT UP
	RECTANGULAR SUPPLY DUCT DOWN
	RECTANGULAR RETURN OR EXHAUST DUCT UP
	RECTANGULAR RETURN OR EXHAUST DUCT DOWN
R	SLOPING RISE IN DUCTWORK
D	SLOPING DROP IN DUCTWORK
18x12 / 18x12	DUCT SIZE (CLEAR INSIDE DIMENSION) FIRST FIGURE INDICATES PLAN SIZE
	SIDE, TOP OR BOTTOM DUCT ACCESS DOOR
	FLEXIBLE DUCT
	VOLUME DAMPER IN DUCT
M	MOTORIZED DAMPER
F	FIRE DAMPER
	SUPPLY DIFFUSER

DUCTWORK LEGEND (CONT.)

	RETURN/EXHAUST REGISTER OR GRILLE
	FIRE RATED ENCASED DUCT
	SUPPLY REGISTER WITH AIR OUTLET DEVICE DESIGNATION
	RETURN OR EXHAUST REGISTER OR GRILLE WITH AIR INLET DEVICE DESIGNATION
	DUCT END/CAP

CONTROLS LEGEND

H	HUMIDITY SENSOR
T	TEMPERATURE SENSOR/THERMOSTAT
Tp	PROGRAMMABLE THERMOSTAT
S	TEMPERATURE SENSOR
TN	NIGHT SET-BACK THERMOSTAT
SW	WALL SWITCH
ORT	0-6 HOUR OVERRIDE TIMER
T/C	TIME CLOCK
	WALL OR CEILING MOTION HEAT SENSOR

MISCELLANEOUS

DP	DIFFERENTIAL PRESSURE SENSOR
DP	DIFFERENTIAL PRESSURE SWITCH
ø	DIAMETER
HW 1	RISER DESIGNATION (RISER SERVICE, RISER NUMBER)
2 M3.1	SECTION DESIGNATION (SECTION NUMBER, DRAWING NUMBER)
1 M2.1	DETAIL DESIGNATION (DETAIL NUMBER, DRAWING NUMBER)
CT 1-1	EQUIPMENT DESIGNATION (EQUIPMENT TYPE, EQUIPMENT NUMBER)
	EXISTING EQUIPMENT, PIPING, OR DUCTWORK TO REMAIN IN SERVICE.
	EXISTING EQUIPMENT, PIPING, OR DUCTWORK TO BE REMOVE.
	NEW CONNECTION TO EXISTING PIPING, DUCTWORK AND/OR EQUIPMENT

TAG (SEE SCHEDULE) — NECK SIZE — CFM OR "--" (-- MEANS NO BALANCE REQUIRED)

DIFFUSER, RETURN, & EXHAUST GRILLE TAG

ABBREVIATIONS – MECHANICAL

AAV	AIR ADMITTANCE VALVE
ACU	AIR CONDITIONING UNIT
AD	ACCESS DOOR
AHU	AIR HANDLING UNIT
AS	AIR SEPARATOR
AVTR	ACID VENT THRU ROOF
B	BOILER
BMS	BUILDING MANAGEMENT SYSTEM
BHP	BRAKE HORSE POWER
BTU	BRITISH THERMAL UNIT
CC	COOLING COIL
CD	CEILING DIFFUSER
CER	CEILING EXHAUST REGISTER
CRG	CEILING RETURN GRILLE
CH	CHILLER
CFM	CUBIC FEET PER MINUTE
CTG	CEILING TRANSFER GRILLE
CG	CEILING GRILLE
CO	CLEAN OUT
CRA	CONDITIONING RETURN AIR
CSA	CONDITIONING SUPPLY AIR
CT	COOLING TOWER
CHS	CHILLED WATER SUPPLY
CHR	CHILLED WATER RETURN
DB	DRY BULB
DG	DOOR GRILLE
DIA	DIAMETER
DN	DOWN
DX	DIRECT EXPANSION
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EDB	ENTERING DRY BULB
EDH	ELECTRICAL DUCT HEATER
EF	EXHAUST FAN
EFF	EFFICIENCY
ET	EXPANSION TANK
EWB	ENTERING WET BULB
EWH	ELECTRIC WATER HEATER
EWT	ENTERING WATER TEMPERATURE
°F	DEGREES FAHRENHEIT
FC	FLEXIBLE CONNECTION (DUCT OR PIPE)

ABBREVIATIONS – MECHANICAL

FCU	FAN COIL UNIT
FD	FUSIBLE LINK FIRE DAMPER W/ DUCT ACCESS DOOR
FLR	FLOOR
FLA	FULL LOAD AMPS
FT	FEET
GF	GAS FURNACE
GPM	GALLONS PER MINUTE
GWH	GAS WATER HEATER
HC	HEATING COIL
HP	HORSE POWER
HR	HOUR
HRU	HEAT RECOVERY UNIT
HWS	HEATING WATER SUPPLY
HWR	HEATING WATER RETURN
ID	INSIDE DIMENSION
KW	KILOWATT
LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS
LD	LINEAR DIFFUSER (CEILING, WALL, SILL OR FLOOR)
LRA	LOCK ROTOR AMPS
LFD	LOUVER FACE DIFFUSER
LWT	LEAVING WATER TEMPERATURE
MA	MIXED AIR
MAT	MIXED AIR TEMPERATURE
MAX	MAXIMUM
MBH	THOUSAND BTU PER HOUR
MFG	MANUFACTURER
MFS	MAXIMUM FUSE SIZE
MIN	MINIMUM
MUA	MAKE UP AIR UNIT
MOCP	MAXIMUM OVERCURRENT PROTECTION
NC	NORMALLY CLOSED
NFA	NET FREE AREA
NIC	NOT IN THIS CONTRACT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OA	OUTSIDE AIR INTAKE
OBD	OPPOSED BLADE DAMPER
OD	OUTSIDE DIMENSION
P	PUMP
PD	PRESSURE DROP

ABBREVIATIONS – MECHANICAL

PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH (GAUGE)
PSA	PRIMARY SUPPLY AIR
RA	RELIEF AIR
RH	RELATIVE HUMIDITY
RHC	REHEAT COIL
RPM	REVOLUTIONS PER MINUTE
RP	RECIRC PUMP
SA	SUPPLY AIR
SD	SMOKE DAMPER
SENS	SENSIBLE
SP	STATIC PRESSURE
SQFT	SQUARE FEET
TA	TRANSFER AIR DUCT
TYP	TYPICAL
VAV	VARIABLE AIR VOLUME
VD	VOLUME DAMPER
VEA	VENTILATION EXHAUST AIR
VFD	VARIABLE FREQUENCY DRIVE
VRF	VARIABLE REFRIGERANT FLOW
VSA	VENTILATION SUPPLY AIR
VTR	VENT THRU ROOF
W/	WITH
WSR	WALL SUPPLY REGISTER
WSHP	WATER SOURCE HEAT PUMP
WB	WET BULB
EW	EXISTING DOMESTIC WATER
ECS	EXISTING CONDENSER WATER SUPPLY
ECR	EXISTING CONDENSER WATER RETURN
ECHS	EXISTING CHILLED WATER SUPPLY
ECHR	EXISTING CHILLED WATER RETURN
EHWS	EXISTING HEATING WATER SUPPLY
EHWR	EXISTING HEATING WATER RETURN
ECHWS	EXISTING CHILLED/HEATING WATER SUPPLY
ECHWR	EXISTING CHILLED/HEATING WATER RETURN
EDCW	EXISTING DOMESTIC COLD WATER
EDHW	EXISTING DOMESTIC HOT WATER
EDHWR	EXISTING DOMESTIC HOT WATER RECIRC
EG	EXISTING GAS (NATURAL)
ERL	EXISTING REFRIGERANT LIQUID
ERS	EXISTING REFRIGERANT SUCTION

GENERAL NOTES – HVAC

GENERAL DEMOLITION AND SALVAGE REQUIREMENTS

A. IT IS THE INTENT OF THE DEMOLITION PLANS TO AID THE CONTRACTOR IN BIDDING THE PROJECT BY PROVIDING INFORMATION ABOUT EXISTING HVAC EQUIPMENT, PIPING, AND ASSOCIATED MATERIALS AND THEIR REMOVAL.

B. ALL PIPING, DUCTWORK AND EQUIPMENT LOCATIONS SHOWN ON THESE DRAWINGS WERE TAKEN FROM EXISTING RECORD DRAWINGS AND SITE INVESTIGATION.

C. CONTRACTOR SHALL VISIT PROJECT SITE AND OBSERVE ALL EXISTING CONDITIONS AFFECTING THE WORK AND MAKE NECESSARY ADJUSTMENTS, TO FACILITATE INSTALLATION OF COMPLETE, OPERABLE SYSTEMS AT NO ADDITIONAL COST TO THE USING AGENCY.

D. THE MECHANICAL CONSTRUCTION SHALL INCLUDE ALL WORK REQUIRED FOR THE REMOVAL OF EXISTING MECHANICAL EQUIPMENT, PIPING, ETC. WHERE INDICATED OR REQUIRED TO FACILITATE NEW CONSTRUCTION. THE CONTRACTOR SHALL REMOVE FROM THE PREMISES OTHER DEVICES AND MATERIALS NOT REUSED IN THE BUILDING. USING AGENCY SHALL HAVE FIRST RIGHTS TO 1 SALVAGED ITEMS.

E. THE MECHANICAL CONSTRUCTION SHALL COORDINATE DEMOLITION REQUIRED WITH DEMOLITION PERFORMED BY OWNER AS PER AD101–AD106.

GENERAL RENOVATION REQUIREMENTS

A. ALL PIPING SHOWN WITH DASHED LINES – DASHED LINES REPRESENT OUTSIDE DIMENSION OF PIPE INCLUDING INSULATION.

B. ANY INDICATED MOUNTING HEIGHTS ARE APPROXIMATE. FINAL MOUNTING HEIGHT SHALL BE DETERMINED IN FIELD.

C. INSTALLATION OF ALL EQUIPMENT AND SYSTEMS SHALL BE IN ACCORDANCE WITH, MANUFACTURER'S REQUIREMENTS, STANDARD DETAILS, SECTIONS AND ELEVATIONS SHOWN ON THE DRAWINGS.

D. CONTRACTOR SHALL MAINTAIN A CLEAR SERVICE AREA AROUND ALL EQUIPMENT FOR MAINTENANCE.

SHEET INDEX – HVAC

PLAN
ROADWAY DESIGN DIVISION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

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BY	DATE	REVISION
KAH	4-22-16	REVISED GENERAL NOTES

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
DISTRICT 6
SHOP BUILDING RENOVATION
LEGEND & ABBREVIATIONS

PROJ. NO. LWO-6017-18(006)
COUNTY: FORREST

JH&H PROJECT NO: 14-112
DESIGN TEAM DBG/KAH CHECKED CEM/TKP DATE: 03-23-16

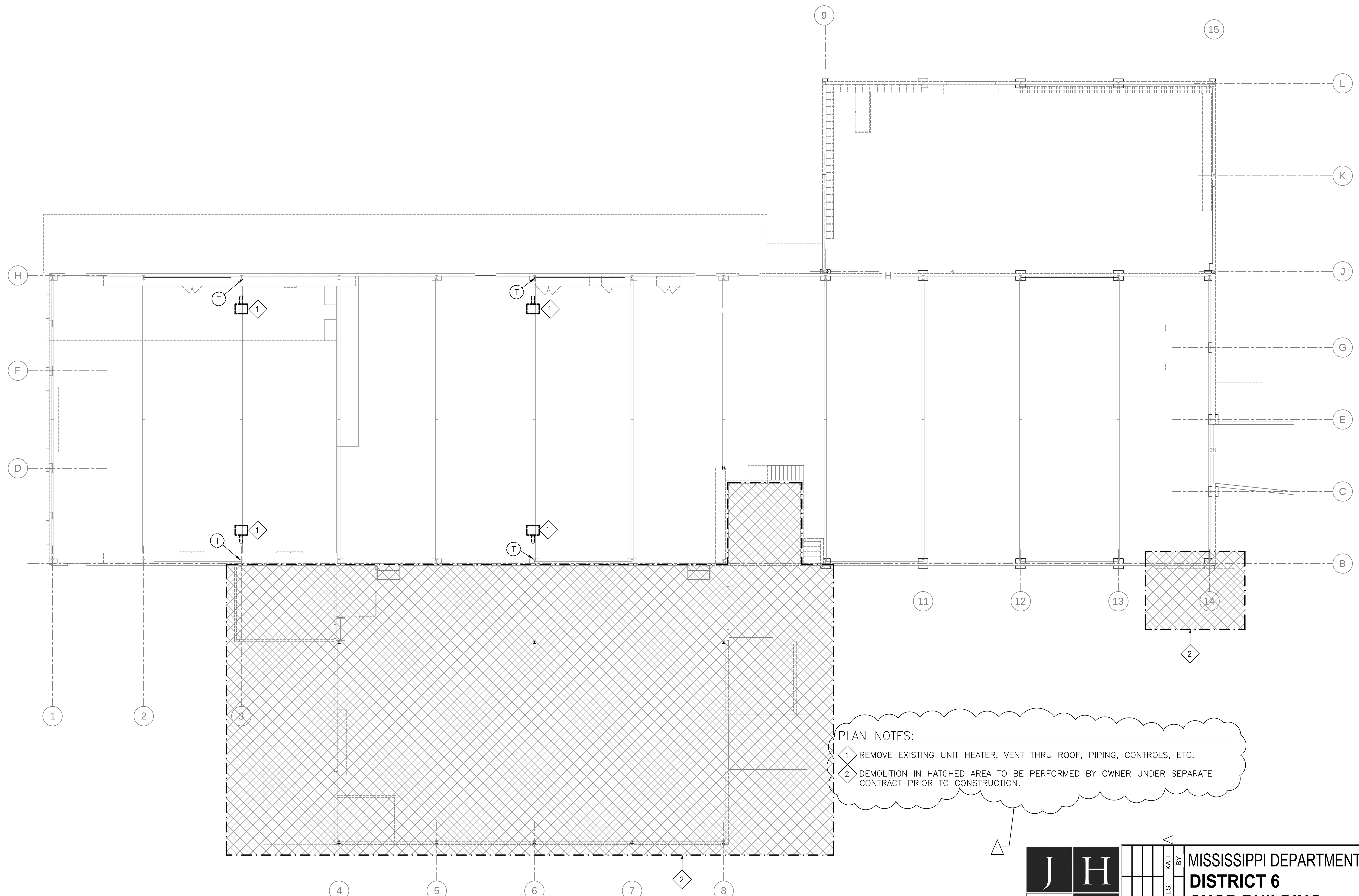
CHAD E. MOORE — 20102 — REGISTERED ENGINEER — STATE OF MISSISSIPPI — 03-23-16

WORKING NUMBER M001
SHEET NUMBER 66

ORIGINAL SHEET SIZE 22" x 34"

ADDENDUM

STATE	PROJECT NO.
MISS.	BWO-6211-18(003)



PLAN NOTES:

1. REMOVE EXISTING UNIT HEATER, VENT THRU ROOF, PIPING, CONTROLS, ETC.
2. DEMOLITION IN HATCHED AREA TO BE PERFORMED BY OWNER UNDER SEPARATE CONTRACT PRIOR TO CONSTRUCTION.

NORTH

FLOOR PLAN – MECHANICAL DEMOLITION

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

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DATE	REVISION	BY
5/18/16	MODIFIED DEMO. PLAN NOTES	KAH

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
DISTRICT 6
SHOP BUILDING RENOVATION
HVAC DEMOLITION

PROJ. NO. LWO-6017-18(006)
COUNTY: FORREST

JH&H PROJECT NO: 14-112
DESIGN TEAM DBG/KAH CHECKED CEM/TKP DATE: 03-23-16

CHAD E. MOORE ENGINEER 20102 STATE OF MISSISSIPPI 03-23-16

WORKING NUMBER MD101
SHEET NUMBER 67

ORIGINAL SHEET SIZE 22" x 34"

ADDENDUM

FOR PRINT SCALE VERIFICATION, THIS LINE IS 4" LONG

STATE	PROJECT NO.
MISS.	BWO-6211-18(003)

⚠ DEMOLITION NOTE

THE ELECTRICAL CONTRACTOR SHALL REFER TO ARCHITECTURAL DEMOLITION SHEETS AD101 THRU AD106 FOR DEMOLITION TO BE PERFORMED BY THE OWNER AND COORDINATE HIS DEMOLITION ACCORDINGLY.

INSIDE THIS BUILDING, THE DIVISION 16 CONTRACTOR SHALL COMPLETELY DEMOLISH THE EXISTING ELECTRICAL SYSTEM, INCLUDING ALL EXISTING LIGHTING, POWER AND COMMUNICATIONS PROVISIONS, PER THE FOLLOWING: DISCONNECT AND REMOVE ALL EXISTING LIGHTING FIXTURES, ELECTRICAL EQUIPMENT, RECEPTACLES, SURFACE MOUNTED AND FLUSH MOUNTED DEVICE BOXES AND PLATES. DISCONNECT AND REMOVE ALL EXISITNG CONDUCTORS FROM ALL EXISTING CONDUITS. DISCONNECT AND REMOVE ALL EXISTING ACCESSIBLE CONDUITS. CUT BACK, CAP AND ABANDON-IN-PLACE ALL EXISTING INACCESSIBLE CONDUITS.

ALL DEMOLISHED MATERIAL SHALL BE REMOVED FROM THE JOB SITE SUBJECT TO THE DEMOLITION DIRECTIVE ISSUED BY THE ARCHITECT.

THE INTENT OF THIS DEMOLITION FLOOR PLAN IS TO INFORM THE DIVISION 16 CONTRACTOR OF THE UNUSUAL ASPECTS IN THE SCOPE OF THE DEMOLITION FOR THIS PROJECT AND IS NOT INTENDED AS A COMPLETE ITEM BY ITEM DEMOLITION OF THIS BUILDING.

THE DIVISION 16 CONTRACTOR SHALL BE RESPONSIBLE FOR THE FOLLOWING ADDITIONAL DEMOLITION:

- --DISCONNECT AND REMOVE ALL EXISTING RECEPTACLES, ETC. SURFACE MOUNTED ON THE OUTSIDE FACE OF THE EXISTING EXTERIOR WALLS, INCLUDING ALL CONDUITS AND CONDUCTORS BACK TO THE SERVING PANEL.
- --VERIFY WHERE THE FINAL CONNECTIONS ARE MADE TO THE EXISTING CRANES AND DISCONNECT THEM. REMOVE ALL EXISTING SERVING CONDUITS, CONDUCTORS, DISCONNECT SWITCHES, ETC. BACK TO THE SERVING PANEL.
- --WHERE EXISTING CONDUITS RE TO BE ABANDONED IN SLAB AND LOCATION IS IN AREA OF SLAB TO REMAIN EXPOSED, CAP CONDUIT BELOW THE TOP SURFACE OF THE SLAB AND PATCH SLAB. WHERE EXISTING CONCRETE SLAB WILL RECEIVE NEW TOPPING, CUT THE CONDUIT OFF FLUSH WITH THE TOP SURFACE OF THE SLAB AND COVER WITH NEW CONCRETE.

NOTES:

1. CONSISTS OF SERVICE ENTRANCE RATED DISCONNECT SWITCH AND AUXILIARY GUTTER SERVING ONE (1) OR MORE OF THE FOLLOWING ITEMS:
   - --ONE (1) OR MORE DISCONNECT SWITCHES.
   - --ONE (1) OR MORE LOAD CENTERS.
   - --ONE (1) OR MORE SINGLE RECEPTACLES.
   - --ONE (1) OR MORE SWITCHES FOR LIGHTING.
   - --ONE (1) OR MORE MOTOR STARTERS.
   - --ONE (1) OR MORE CONTROLLERS.
   - --ONE (1) OR MORE CONTROL PANELS.
   - --ONE (1) OR MORE BRANCH CIRCUIT AND/OR FEEDER CONDUITS RISING DOWN AND ENTERING THE EXISTING FLOOR SLAB.
   - --NUMEROUS BRANCH CIRCUIT CONDUITS RISING UP.

   UNDER THE DEMOLITION, DISCONNECT AND REMOVE ALL PER THE "DEMOLITION NOTE".
2. CONSISTS OF AN AUXILIARY GUTTER PROTECTED BY AN OVER CURRENT DEVICE (DISCONNECT SWITCH) AND ONE (1) OR MORE OF THE FOLLOWING ITEMS:
   - --ONE (1) OR MORE DISCONNECT SWITCHES.
   - --ONE (1) OR MORE LOAD CENTERS.
   - --ONE (1) OR MORE SINGLE RECEPTACLES.
   - --ONE (1) OR MORE SWITCHES FOR LIGHTING.
   - --ONE (1) OR MORE MOTOR STARTERS.
   - --ONE (1) OR MORE CONTROLLERS.
   - --ONE (1) OR MORE CONTROL PANELS.
   - --ONE (1) OR MORE BRANCH CIRCUIT AND/OR FEEDER CONDUITS RISING DOWN AND ENTERING
3. PRIOR TO DISCONNECTING AND REMOVE THE EXISTING OVERHEAD LIGHTING FIXTURES, THE DIVISION 16 CONTRACTOR SHALL DOCUMENT THE EXACT LOCATION AND MOUNTING HEIGHT OF EACH FIXTURE TO BE REMOVED. THIS INFORMATION ALL BE USED TO DETERMINE THE LOCATIONS OF THE NEW FIXTURES WITHIN THIS AREA.
4. THE DIVISION 16 CONTRACTOR SHALL ELECTRICALLY DISCONNECTION THIS BUILDING OR STRUCTURE FROM THE EXISTING BUILDING TO REMAIN.

FLOOR PLAN--MAIN LEVEL

DEMOLITION

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

PLAN
ROADWAY DESIGN DIVISION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

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STATUS: NOT FOR CONSTRUCTION
S&W PROJECT NO.: 214055

JOHN M. WYNNE, REGISTERED PROFESSIONAL ENGINEER, #11869, STATE OF MISSISSIPPI

J H & H
A Professional Association
Franco Bagley Lewis Wood
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DATE	REVISION	BY
5/18/16	ADDED NOTATION TO TITLE SPACE	HEANEY

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
DISTRICT 6
SHOP BUILDING RENOVATION
Floor Plan--Demolition

PROJ. NO. LWO-6017-18(006)
COUNTY: FORREST

JH&H PROJECT NO: 14-112
DESIGN TEAM Heaney CHECKED Wynne DATE: 3/23/2016

WORKING NUMBER ED200
SHEET NUMBER 77

ORIGINAL SHEET SIZE 22" x 34"

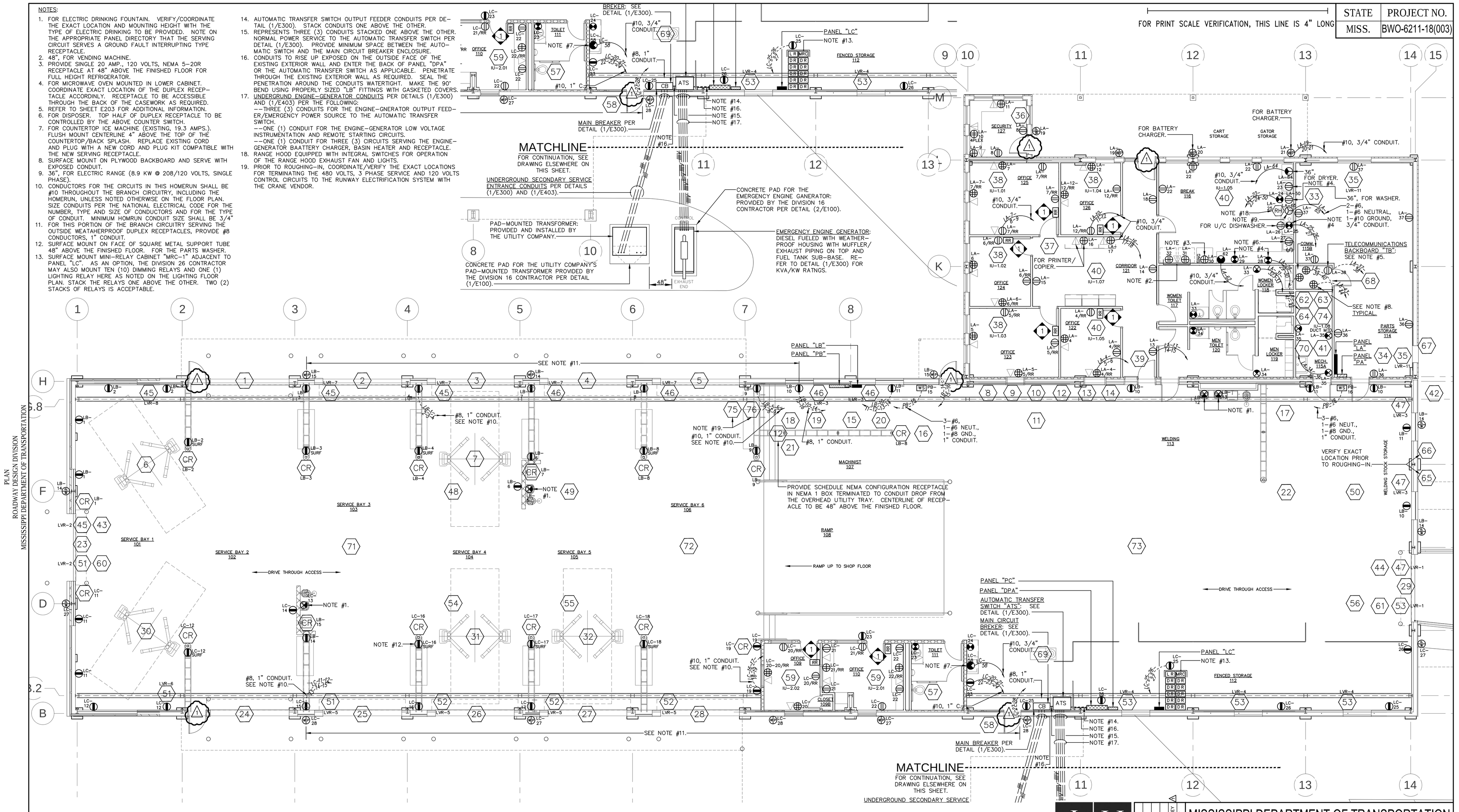
ADDENDUM

STATE	PROJECT NO.
MISS.	BWO-6211-18(003)

FOR PRINT SCALE VERIFICATION, THIS LINE IS 4" LONG

NOTES:

1. FOR ELECTRIC DRINKING FOUNTAIN. VERIFY/COORDINATE THE EXACT LOCATION AND MOUNTING HEIGHT WITH THE TYPE OF ELECTRIC DRINKING TO BE PROVIDED. NOTE ON THE APPROPRIATE PANEL DIRECTORY THAT THE SERVING CIRCUIT SERVES A GROUND FAULT INTERRUPTING TYPE RECEPTACLE.
2. 48", FOR VENDING MACHINE.
3. PROVIDE SINGLE 20 AMP., 120 VOLTS, NEMA 5–20R RECEPTACLE AT 48" ABOVE THE FINISHED FLOOR FOR FULL HEIGHT REFRIGERATOR.
4. FOR MICROWAVE OVEN MOUNTED IN LOWER CABINET. COORDINATE EXACT LOCATION OF THE DUPLEX RECEP–TACLE ACCORDINLY. RECEPTACLE TO BE ACCESSIBLE THROUGH THE BACK OF THE CASEWORK AS REQUIRED.
5. REFER TO SHEET E203 FOR ADDITIONAL INFORMATION.
6. FOR DISPOSER. TOP HALF OF DUPLEX RECEPTACLE TO BE CONTROLLED BY THE ABOVE COUNTER SWITCH.
7. FOR COUNTERTOP ICE MACHINE (EXISTING, 19.3 AMPS.). FLUSH MOUNT CENTERLINE 4" ABOVE THE TOP OF THE COUNTERTOP/BACK SPLASH. REPLACE EXISTING CORD AND PLUG WITH A NEW CORD AND PLUG KIT COMPATIBLE WITH THE NEW SERVING RECEPTACLE.
8. SURFACE MOUNT ON PLYWOOD BACKBOARD AND SERVE WITH EXPOSED CONDUIT.
9. 36", FOR ELECTRIC RANGE (8.9 KW @ 208/120 VOLTS, SINGLE PHASE).
10. CONDUCTORS FOR THE CIRCUITS IN THIS HOMERUN SHALL BE #10 THROUGHOUT THE BRANCH CIRCUITRY, INCLUDING THE HOMERUN, UNLESS NOTED OTHERWISE ON THE FLOOR PLAN. SIZE CONDUITS PER THE NATIONAL ELECTRICAL CODE FOR THE NUMBER, TYPE AND SIZE OF CONDUCTORS AND FOR THE TYPE OF CONDUIT. MINIMUM HOMRUN CONDUIT SIZE SHALL BE 3/4"
11. FOR THIS PORTION OF THE BRANCH CIRCUITRY SERVING THE OUTSIDE WEATAHERPROOF DUPLEX RECEPTACLES, PROVIDE #8 CONDUCTORS, 1" CONDUIT.
12. SURFACE MOUNT ON FACE OF SQUARE METAL SUPPORT TUBE 48" ABOVE THE FINISHED FLOOR. FOR THE PARTS WASHER.
13. SURFACE MOUNT MINI–RELAY CABINET "MRC–1" ADJACENT TO PANEL "LC". AS AN OPTION, THE DIVISION 26 CONTRACTOR MAY ALSO MOUNT TEN (10) DIMMING RELAYS AND ONE (1) LIGHTING RELAY HERE AS NOTED ON THE LIGHTING FLOOR PLAN. STACK THE RELAYS ONE ABOVE THE OTHER. TWO (2) STACKS OF RELAYS IS ACCEPTABLE.
14. AUTOMATIC TRANSFER SWITCH OUTPUT FEEDER CONDUITS PER DE–TAIL (1/E300). STACK CONDUITS ONE ABOVE THE OTHER.
15. REPRESENTS THREE (3) CONDUITS STACKED ONE ABOVE THE OTHER. NORMAL POWER SERVICE TO THE AUTOMATIC TRANSFER SWITCH PER DETAIL (1/E300). PROVIDE MINIMUM SPACE BETWEEN THE AUTO–MATIC SWITCH AND THE MAIN CIRCUIT BREAKER ENCLOSURE.
16. CONDUITS TO RISE UP EXPOSED ON THE OUTSIDE FACE OF THE EXISTING EXTERIOR WALL AND ENTER THE BACK OF PANEL "DPA" OR THE AUTOMATIC TRANSFER SWITCH AS APPLICABLE. PENETRATE THROUGH THE EXISTING EXTERIOR WALL AS REQUIRED. SEAL THE PENETRATION AROUND THE CONDUITS WATERTIGHT. MAKE THE 90° BEND USING PROPERLY SIZED "LB" FITTINGS WITH GASKETED COVERS.
17. UNDERGRUND ENGINE–GENERATOR CONDUITS PER DETAILS (1/E300) AND (1/E403) PER THE FOLLOWING:
    ––THREE (3) CONDUITS FOR THE ENGINE–GNERATOR OUTPUT FEED–ER/EMERGENCY POWER SOURCE TO THE AUTOMATIC TRANSFER SWITCH.
    ––ONE (1) CONDUIT FOR THE ENGINE–GENERATOR LOW VOLTAGE INSTRUMENTATION AND REMOTE STARTING CIRCUITS.
    ––ONE (1) CONDUIT FOR THREE (3) CIRCUITS SERVING THE ENGINE–GENERATOR BAATTERY CHARGER, BASIN HEATER AND RECEPTACLE.
18. RANGE HOOD EQUIPPED WITH INTEGRAL SWITCHES FOR OPERATION OF THE RANGE HOOD EXHAUST FAN AND LIGHTS.
19. PRIOR TO ROUGHING–IN, COORDINATE/VERIFY THE EXACT LOCATIONS FOR TERMINATING THE 480 VOLTS, 3 PHASE SERVICE AND 120 VOLTS CONTROL CIRCUITS TO THE RUNWAY ELECTRIFICATION SYSTEM WITH THE CRANE VENDOR.



PLAN
ROADWAY DESIGN DIVISION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

FLOOR PLAN
POWER AND TELECOMMUNICATIONS

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

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STATUS: NOT FOR CONSTRUCTION
S&W PROJECT NO.: 214055

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DATE	REVISION	BY
5/18/16	DELETED POWER @ DOOR ACCESS CONTROL	HEANEY

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
DISTRICT 6
SHOP BUILDING RENOVATION
Fl. Plan--Power & Telecom.

PROJ. NO. LWO-6017-18(006)
COUNTY: FORREST

WORKING NUMBER E202

JH&H PROJECT NO: 14-112
DESIGN TEAM Heaney CHECKED Wynne DATE: 3/23/2016

SHEET NUMBER 79

ORIGINAL SHEET SIZE 22" x 34"

ADDENDUM

FOR PRINT SCALE VERIFICATION, THIS LINE IS 4" LONG

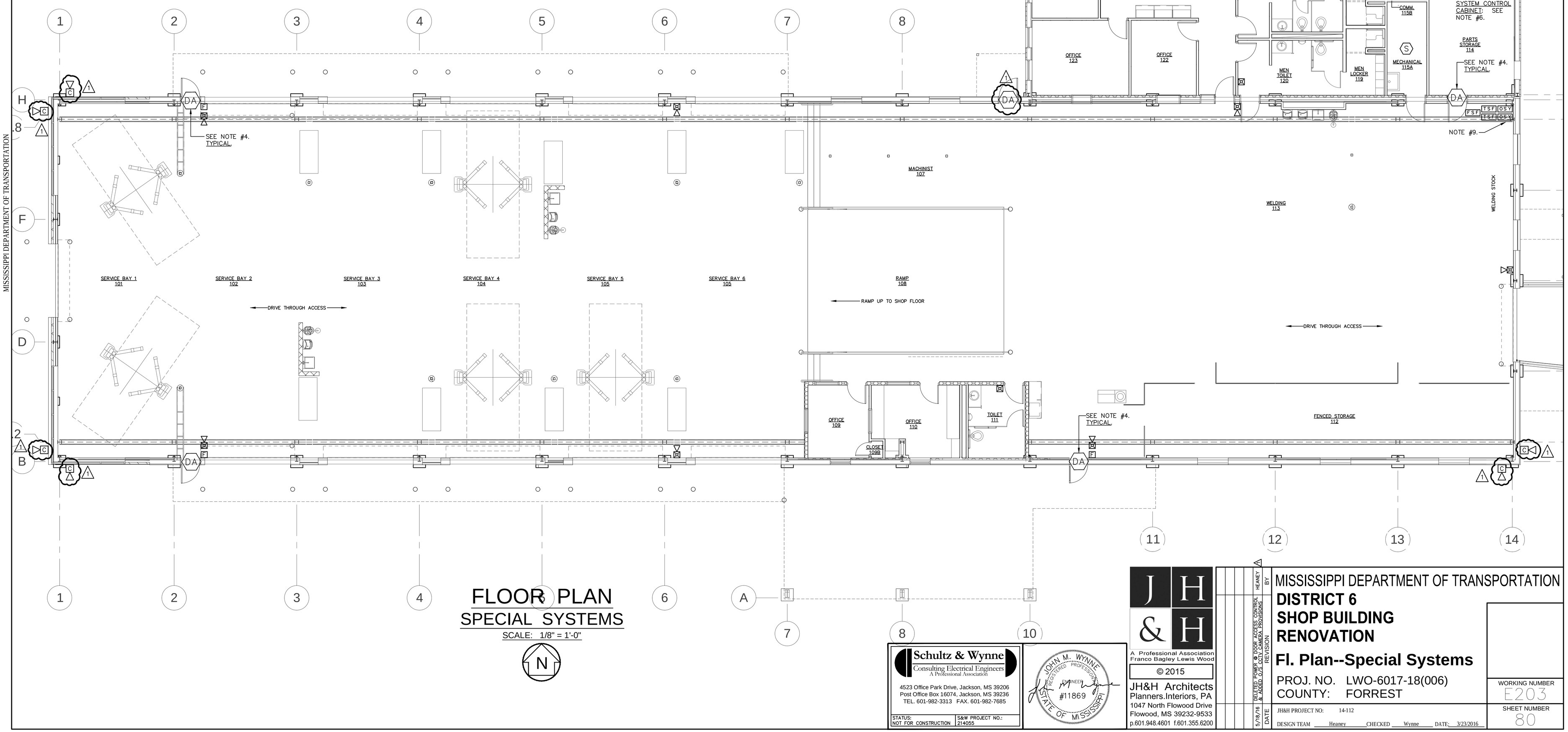
STATE	PROJECT NO.
MISS.	BWO-6211-18(003)

NOTES:

1. LINE THE WALLS OF THIS ROOM WITH 8'-0" HIGH X 3/4" THICK PLYWOOD AS INDICATED ON THE FLOOR PLAN. PRIME THE PLYWOOD WITH ONE (1) COAT AND PAINT WITH TWO (2) COATS OF FIRE RESISTANT PAINT, INCLUDING ALL EDGES. PROVIDE ONE (1) TELECOMMUNICATIONS GROUND BAR WHERE DIRECTED BY THE ARCHITECT. SEE DETAIL (3/E300).
2. UNDERGROUND TELECOMMUNICATIONS SERVICE ENTRANCE DUCTBANK CONDUITS: CONSISTS OF TWO (2) CONDUITS SIZED AND INSTALLED PER DETAIL (1/E402). REFER TO THE "SITE PLAN" ON SHEET E100 FOR CONTINUATION AND ADDITIONAL INFORMATION.
3. UNDERGROUND TELECOMMUNICATIONS DUCTBANK CONDUITS BETWEEN BUILDINGS: CONSISTS OF TWO (2) CONDUITS SIZED AND INSTALLED PER DETAIL (1/E4K02). REFER TO THE "SITE PLAN" ON SHEET E100 FOR CONTINUATION AND ADDITIONAL INFORMATION.
4. POWER PROVISIONS FOR DOOR ACCESS CONTROL SYSTEM INDICATED ON SHEET E202. SEE DETAIL (3/E302) FOR ADDITIONAL PROVISIONS
5. FLUSH MOUNT ABOVE THE COUNTER WERE DIRECTED BY THE ARCHITECT.
6. SURFACE MOUNTED DIRECTLY ON WALL. WITH 3/4" CONDUIT NIPPLE ON THE SIDE OF THE CABINET FOR A TELEPHONE CABLE TO ENTER THE CABINET. BUSH BOTH ENDS OF THE CONDUIT NIPPLE.
7. 2" EMT CONDUIT ABOVE ACCESSIBLE CEILINGS BETWEEN COMMUNICATIONS 115B AND SECURITY 127. AT THE TELECOMMUNICATION BACKBOARD END OF THIS CONDUIT RUN, PENETRATE THROUGH THE WALL, TURN-DOWN AND TERMINATE THE END OF THE CONDUIT RUN WITH A BUSHING 6" INTO THE FACE OF THE BACKBOARD. AT THE SECURITY END OF THIS CONDUIT RUN, PENETRATE THROUGH THE WALL ABOVE THE ACCESSIBLE CEILING AND BUSH THE END OF THE CONDUIT 6" INTO THE ROOM ABOVE THE CEILING.
8. ROUTE THE COMMUNICATIONS CONDUITS IN THE SAME TRENCH THROUGH THE EXISTING CONCRETE FLOOR SLAB WITH THE PLUMBING PIPING.
9. FIRE PROTECTION SYSTEM SERVICE ENTRANCE RISER TO BE LOCATED IN THIS AREA. MAKE ANY AND ALL FIRE ALARM SYSTEM CONNECTIONS TO THE REQUIRED FIRE PROTECTION SYSTEM COMPONENTS.

EXTERIOR CAMERA OUTLETS

THE ELECTRICAL CONTRACTOR SHALL PROVIDE BOXES AND CONDUIT PROVISIONS FOR EXTERIOR CCTV CAMERA OUTLETS PER THE ARCHITECTURAL EXTERIOR ELEVATIONS ON SHEETS A201 AND A202 OR AS DIRECTED BY THE ARCHITECT.



FLOOR PLAN
SPECIAL SYSTEMS

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

N

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STATUS:	S&W PROJECT NO.:
NOT FOR CONSTRUCTION	214055

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Flowood, MS 39232-9533
p.601.948.4601 f.601.355.6200

DATE	REVISION	BY
5/18/16	DELETED POWER & DOOR ACCESS CONTROL & ADDED 3/E302 FOR ADDITIONAL PROVISIONS	HEANEY

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
DISTRICT 6
SHOP BUILDING RENOVATION

Fl. Plan--Special Systems

PROJ. NO. LWO-6017-18(006)
COUNTY: FORREST

WORKING NUMBER E203

JH&H PROJECT NO: 14-112
DESIGN TEAM Heaney CHECKED Wynne DATE: 3/23/2016

SHEET NUMBER 80

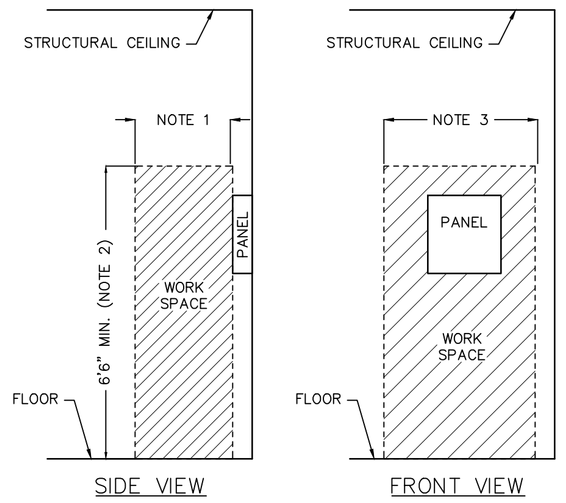
PLAN
ROADWAY DESIGN DIVISION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

ORIGINAL SHEET SIZE 22" x 34"

ADDENDUM

FOR PRINT SCALE VERIFICATION, THIS LINE IS 4" LONG

STATE	PROJECT NO.
MISS.	BWO-6211-18(003)

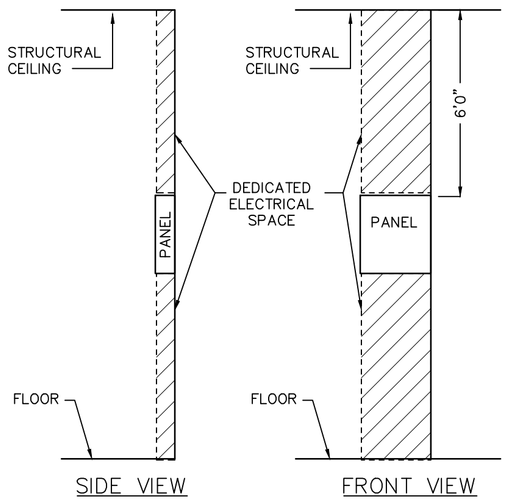


WORKING SPACE - NEC SECTION 110-26

NO SCALE

NOTES:

1. SEE NEC TABLE 110.26(A)(1), 36" MINIMUM.
2. 6'6" MINIMUM OR HEIGHT OF GEAR – WHICHEVER IS GREATER.
3. 30" OR WIDTH OF GEAR, WHICHEVER IS GREATER.



DEDICATED ELECTRICAL SPACE OVER AND UNDER PANELBOARD - NEC SECTION 110-26 (f)(1)

NO SCALE

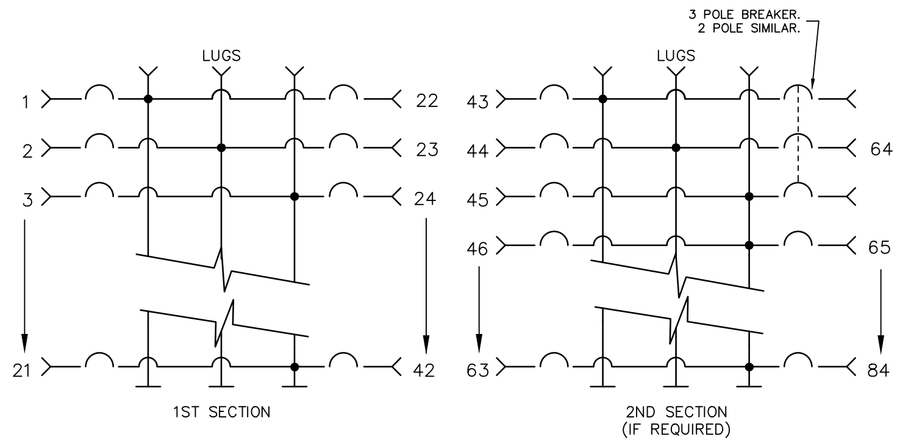
NOTES:

A. ALL PANEL DOORS MUST OPEN MINIMUM 90°.

B. NO PIPING, DUCTS, LEAK PROTECTION APPARATUS OR OTHER EQUIPMENT FOREIGN TO THE ELECTRICAL INSTALLATION SHALL BE INSTALLED IN THE WORK SPACE OR DEDICATED ELECTRICAL SPACE.

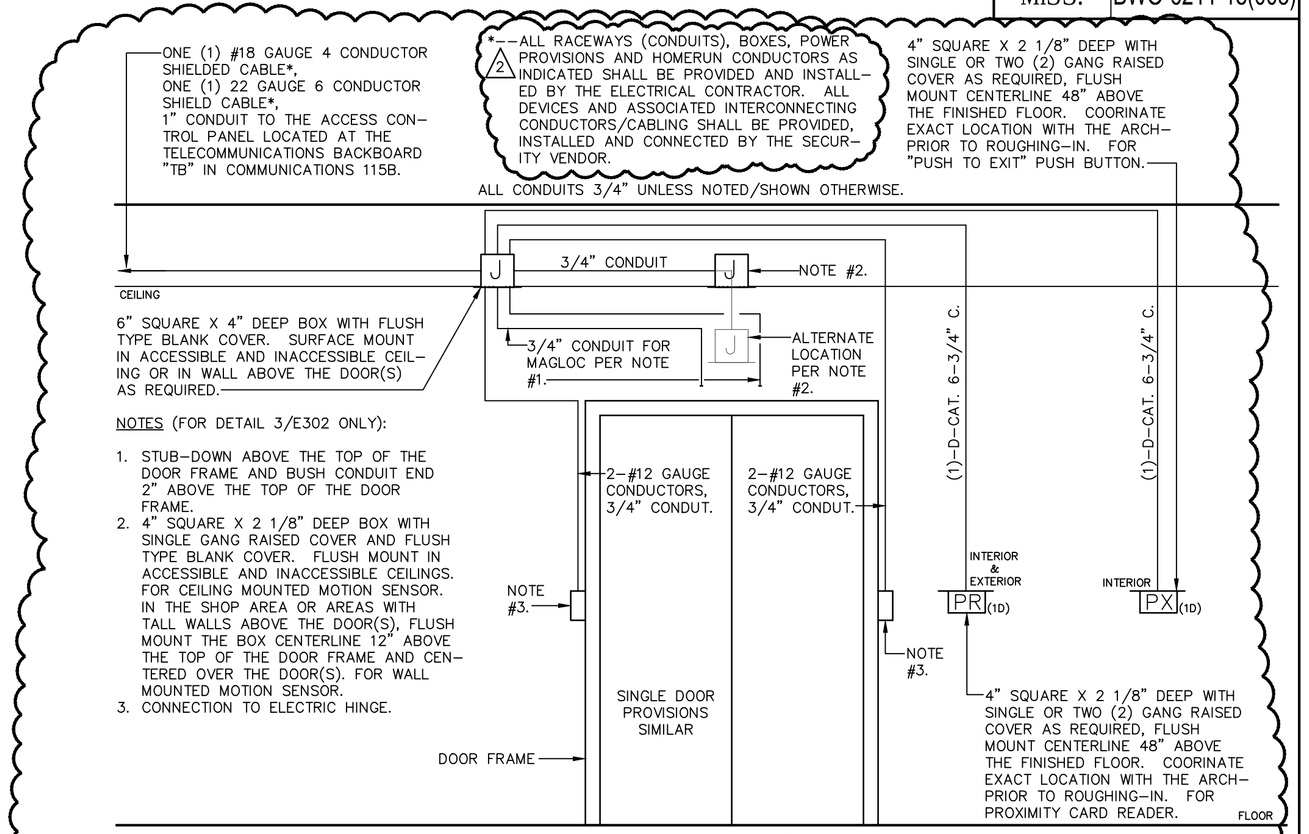
DETAIL (1/E302)--TYPICAL PANEL CLEARANCES

NO SCALE



DETAIL (2/E302)--TYPICAL PANEL NUMBERING SYSTEM

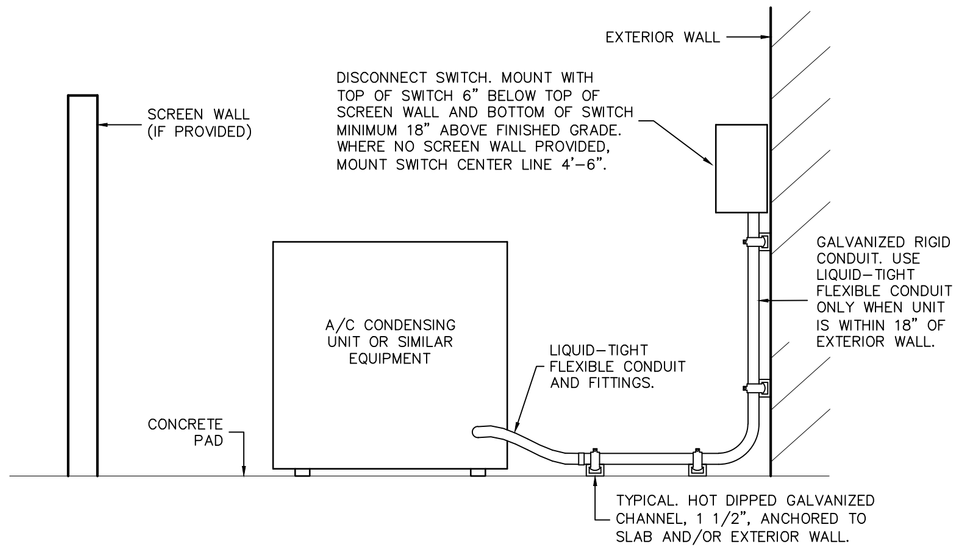
NO SCALE



1 DETAIL (3/E302)--PROVISIONS FOR DOOR ACCESS CONTROL SYSTEM SYMBOL "DA"

NO SCALE

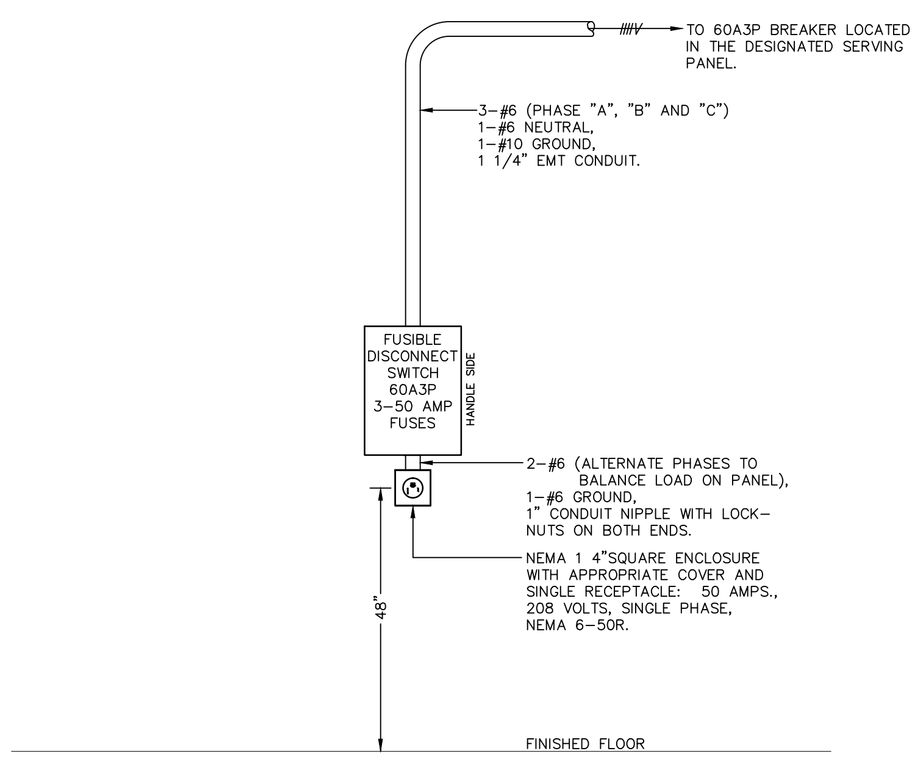
PROVISIONS SHOWN ARE FOR ESTIMATING PURPOSES ONLY. ACTUAL ROUGH-IN SHALL BE TAKEN FROM THE SYSTEM PROVIDER'S SHOP DRAWINGS AND/OR OWNER'S/ARCHITECT'S DIRECTIONS. VERIFY PRIOR TO ROUGHING-IN.



DETAIL (4/E302)--TYPICAL A/C CONDENSING UNIT ELECTRICAL CONNECTION FOR GRADE-MOUNTED UNITS

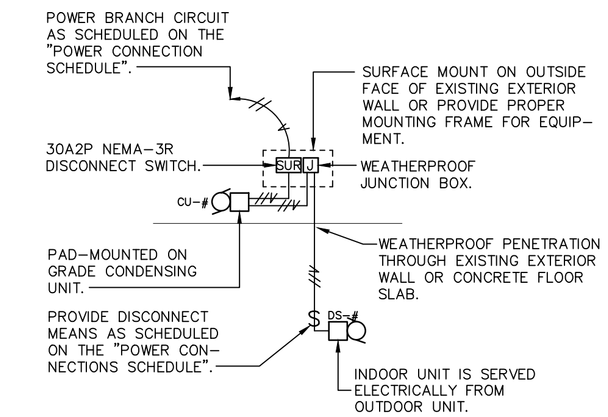
DETAIL DOES NOT APPLY TO ROOF TOP UNITS CONNECTIONS

NO SCALE



DETAIL (6/E302)--TYPICAL WELDING STATION SYMBOL "WS"

NO SCALE



DETAIL (5/E302)--TYPICAL DUCTLESS SPLIT SYSTEM ELECTRICAL CONNECTION

NO SCALE

Schultz & Wynne
Consulting Electrical Engineers
A Professional Association
4523 Office Park Drive, Jackson, MS 39206
Post Office Box 16074, Jackson, MS 39236
TEL. 601-982-3313 FAX. 601-982-7685

STATUS:	S&W PROJECT NO.:
NOT FOR CONSTRUCTION	214055

JOHN M. WYNNE REGISTERED PROFESSIONAL ENGINEER #11869 STATE OF MISSISSIPPI

J H & H
A Professional Association
Franco Bagley Lewis Wood

JH&H Architects
Planners.Interiors, PA
1047 North Flowood Drive
Flowood, MS 39232-9533
p.601.948.4601 f.601.355.6200

DATE	REVISION	BY
7/13/16	REVISED DETAIL (3/E302)	HEANEY
5/18/16	REVISED DETAIL (3/E302)	HEANEY

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
DISTRICT 6
SHOP BUILDING RENOVATION
Details

PROJ. NO. LWO-6017-18(006)
COUNTY: FORREST

JH&H PROJECT NO: 14-112

DESIGN TEAM Heaney CHECKED Wynne DATE: 3/23/2016

WORKING NUMBER E302

SHEET NUMBER 83

ORIGINAL SHEET SIZE 22" x 34"

ADDENDUM

FOR PRINT SCALE VERIFICATION, THIS LINE IS 4" LONG

STATE	PROJECT NO.
MISS.	BWO-6211-18(003)

PANEL "LC" ⚠1

VOLTS: 208Y/120 PHASE: 3 — 72 POLE SINGLE SECTION PANEL — MOUNTING: SURFACE
MAIN: 225A WIRE: 4 K.A.I.C: 10
NEUTRAL: 100% MAIN BREAKER: NONE

CKT. NO.	LOAD DESCRIPTION	KVA PH. A	KVA PH. B	KVA PH. C	BREAKER AMPS	BREAKER POLES	PH	BREAKER POLES	BREAKER AMPS	KVA PH. A	KVA PH. B	KVA PH. C	LOAD DESCRIPTION	CKT. NO.
1	LTG: SERV BAYS DR	1.52			20	1	A	1	20	1.18			O/H DR (1/2 HP): 105S	37
2	LTG: SERV BAYS DR		1.52		20	1	B	1	20		1.18		O/H DR (1/2 HP): 106S	38
3	LTG: SERV BAYS DR			1.52	20	1	C	1	20			1.00	O/H DR (1/2 HP): 113	39
4	LTG: SERV BAYS DR	1.52			20	1	A	1	20	0.72			M/D: 101S, 102S	40
5	LTG 107,108,112,113 DR		1.01		20	1	B	1	20		0.72		M/D: 103S,104S,105S	41
6	LTG 107,108,112,113 DR			1.52	20	1	C	1	20			1.44	M/D: 113	42
7	LTG 107,108,112,113 DR	0.51			20	1	A	1	20	1.00			INFRARED HTR IRU-6	43
8	LTG 107,108,112,113 DR		1.51		20	1	B	1	20		1.00		INFRARED HTR IRU-4	44
9	LTG: EAST WALL DR			1.01	20	1	C	1	20			0.08	INFRARED HTR IRU-2	45
10	LTG: WEST WALL DR	1.01			20	1	A	1	20	1.00			BATT CHARGER: E-G	46
11	RCPTS: 101S		1.00		20	1	B	1	20		1.00		BASIN HEATER: E-G	47
12	RCPTS: 101S, 102S			1.00	20	1	C	1	20			1.00	RCPT: E-G	48
13	RCPT (EDF): 103S	1.00			20	1	A	1	20	1.00			LTG CONTROLS: SHOP	49
14	RCPTS: 102S, 103S		1.00		20	1	B	1	20		0.00		LTG CONTROLS: SHOP	50
15	RCPTS: 102S, 103S			1.00	20	1	C	1	20			0.74	HVLS FAN HVLS-2	51
16	RCPTS: 103S, 104S	1.00			20	1	A	1	20	0.00			SPARE	52
17	RCPTS: 104S, 105S		1.00		20	1	B	1	20		0.00		SPARE	53
18	RCPTS: 105S, 106S			1.00	20	1	C	1	20			0.00	SPARE	54
19	RCPTS: 106S	1.00			20	1	A	1	20	0.00			SPARE	55
20	RCPTS: 109		1.00		20	1	B	1	30		0.00		SPARE	56
21	RCPTS: 110			1.00	20	1	C	1	30			0.00	SPARE	57
22	RCPTS: 110	1.00			20	1	A	1	30	2.32			RCPT (ICE MKR): 113	58
23	RCPTS: 108, 111,113		1.00		20	1	B	1	30		0.00		SPARE	59
24	RCPT: 113			1.00	20	1	C	1	[100]			0.00	SPACE	60
25	RCPTS: 112	1.00			20	1	A	1	[100]	0.00			SPACE	61
26	RCPTS: 112		1.00		20	1	B	1	[100]		0.00		SPACE	62
27	RCPTS: OUTSIDE			1.00	20	1	C	1	[100]			0.00	SPACE	63
28	RCPTS: OUTSIDE	1.00			20	1	A	1	[100]	0.00			SPACE	64
29	SPARE		0.00		20	1	B	1	[100]		0.00		SPACE	65
30	LTG: U/S UTIL TRAY LR			0.08	20	1	C	1	[100]			0.00	SPACE	66
31	LTG: 109, 110. 111	0.56			20	1	A	1	[100]	0.00			SPACE	67
32	O/S LTG: MCRAR1,AR2		1.00		20	1	B	1	[100]		0.00		SPACE	68
33	O/H DR (1/2 HP): 101			1.18	20	1	C	1	[100]			0.00	SPACE	69
34	O/H DR (1/2 HP): 102S	1.18			20	1	Q	1	[100]	0.00			SPACE	70
35	O/H DR (1/2 HP): 103S		1.18		20	1	B	1	[100]		0.00		SPACE	71
36	O/H DR (1/2 HP): 104S			0.00	20	1	C	1	[100]			0.00	SPACE	72

REMARKS: "DA"–DOOR ACCESS CONTROL SYSTEM RECEPTACLE "HVLS"–HIGH VOLUME LOW SPEED
"O/H DR"–MOTORIZED OVERHEAD DOOR.
"E-G"–EMERGENCY ENGINE GENERATOR.

PANEL "LC"

TOTAL CONNECTED LOAD - KVA:		TOTAL DEMAND - KVA:	38.5
		TOTAL DEMAND - AMPS:	107.0
PHASE A:	19.5		
PHASE B:	16.1	SPARE CAPACITY - %:	25%
PHASE C:	15.6		
		TOTAL LOAD - KVA:	48.1
TOTAL CONNECTED LOAD:	51.2	TOTAL LOAD - AMPS:	133.7

PANEL "LB" ⚠1

VOLTS: 208Y/120 PHASE: 3 — (48 POLE SINGLE SECTION PANEL) — MOUNTING: SURFACE
MAIN: 225A WIRE: 4 K.A.I.C: 10
NEUTRAL: 100% MAIN BREAKER: NONE

CKT. NO.	LOAD DESCRIPTION	KVA PH. A	KVA PH. B	KVA PH. C	BREAKER AMPS	BREAKER POLES	PH	BREAKER POLES	BREAKER AMPS	KVA PH. A	KVA PH. B	KVA PH. C	LOAD DESCRIPTION	CKT. NO.
1	RCPTS: 101N	1.00			20	1	A	1	20	1.00			PARTS WASHER: 107	25
2	RCPS: 101N, 102N		1.00		20	1	B	1	20		1.00		BRENCH GRINDER: 107	26
3	RCPTS: 102N, 103N			1.00	20	1	C	1	20			1.44	M/D: 101N, 103, 104N	27
4	RCPTS: 103N, 14N	1.00			20	1	A	1	20	1.00			M/D: 105N, 106N, 107	28
5	RCPT (EDF): 105N		1.00		20	1	B	1	20		1.44		M/D: 113	29
6	RCPTS: 104N, 105N			1.00	20	1	C	1	20			1.00	INFRARED HTR IRH-5	30
7	RCPTS: 10RN, 105N	1.00			20	1	A	1	20	1.00			INFRARED HTR IRH-3	31
8	RCPTS: 105N, 106N		1.00		20	1	B	1	20		1.00		INFRARED HTR IRH-1	32
9	RCPTS: 106N			1.00	20	1	C	1	20			1.00	AIR DRYER: OUTSIDE	33
10	RCPTS: 107, 113	1.00			20	1	A	1	20	1.00			HVAC CONTROL PANEL	34
11	RCPTS: 107, 113		1.00		20	1	B	1	20		0.74		HVLS FAN HVLS-1	35
12	RCPT (EDF): 113			1.00	20	1	C	1	20			0.74	HVLS FAN HVLS-3	36
13	RCPT (EDF): 113	1.00			20	1	A	1	20	1.00			CONTROL PANEL*	37
14	RCPTS: OUTSIDE		1.00		20	1	B	1	20		1.00		CONTROL PANEL*	38
15	RCPTS: OUTSIDE			1.00	20	1	C	1	20			0.00	SPARE	39
16	SPARE	0.00			20	1	A	1	20	0.00			SPARE	40
17	O/H DR (1/2 HP): 102N		1.18		20	1	B	1	20		0.00		SPARE	41
18	O/H DR (1/2 HP): 103N			1.18	20	1	C	1	20			0.00	SPARE	42
19	O/H DR (1/2 HP): 104N	1.18			20	1	A	1	20	0.00			SPARE	43
20	O/H DR (1/2 HP): 105N		1.18		20	1	B	1	20		0.00		SPARE	44
21	O/H DR (1/2 HP): 106N			1.18	20	1	C	1	20			0.00	SPARE	45
22	DRILL PRESS: 107	1.00			20	1	A	1	20	0.00			SPARE	46
23	DRILL PRESS: 107		1.00		20	1	B	1	20		0.00		SPARE	47
24	BRENCH GRINDER 107			1.00	20	1	C	1	20			0.00	SPARE	48

REMARKS: "O/H DR"–MOTORIZSED OVERHEAD DOOR
"HVLS"–HIGH VOLUME LOW SPEED
"–FOR (CRANES) RUNWAY ELECTRIFICATION (TROLLEY) SYSTEM

PANEL "LB"

TOTAL CONNECTED LOAD - KVA:		TOTAL DEMAND - KVA:	27.8
		TOTAL DEMAND - AMPS:	77.1
PHASE A:	12.2		
PHASE B:	13.5	SPARE CAPACITY - %:	25%
PHASE C:	12.5		
		TOTAL LOAD - KVA:	34.7
TOTAL CONNECTED LOAD:	38.3	TOTAL LOAD - AMPS:	96.4

PANEL "LA"--SECTION 1 ⚠1

VOLTS: 208Y/120 PHASE: 3 MOUNTING: SURFACE
MAIN: 225A WIRE: 4 K.A.I.C: 10
NEUTRAL: 100% MAIN BREAKER: NONE

CKT. NO.	LOAD DESCRIPTION	KVA PH. A	KVA PH. B	KVA PH. C	BREAKER AMPS	BREAKER POLES	PH	BREAKER POLES	BREAKER AMPS	KVA PH. A	KVA PH. B	KVA PH. C	LOAD DESCRIPTION	CKT. NO.
1	LTG: 122-127	1.25			20	1	A	1	20	1.00			RCPTS: 116	22
2	LTG: 116-120		1.22		20	1	B	1	20		1.00		RCPT (WASHER): 116	23
3	LTG: 114, 115A, 115B			0.50	20	1	C	1	20			1.00	RCPT (CNTR): 116	24
4	RCPTS: 122	1.00			20	1	A	1	20	1.00			RCPT (CNTR), RH: 116	25
5	RCPTS: 123		1.00		20	1	B	1	20		1.00		RCPT (D/W): 116	26
6	RCPTS: 124			1.00	20	1	C	1	20			1.00	RCPT (DISPOSAL): 116	27
7	RCPTS: 125	1.00			20	1	A	1	20	1.00			RCPT (CNTR): 116	28
8	RCPTS: 126		1.00		20	1	B	1	20		1.00		RCPT (CNTR): 116	29
9	RCPTS: 127			1.00	20	1	C	1	20			1.00	RCPT (REFR): 116	30
10	RCPTS: 127	1.00			20	1	A	1	20	1.00			RCPT (VEND): 116	31
11	RCPT: 127		1.00		20	1	B	1	20		1.00		RCPT (VEND): 116	32
12	RCPTS: 126			1.00	20	1	C	1	20			1.00	RCPTS: 117, 118	33
13	RCPTS: 121	1.00			20	1	A	1	20	1.00			RCPTS: 119, 120	34
14	RCPT (CNTR): 121		1.00		20	1	B	1	20		1.00		RCPTS: 115A	35
15	RCPT (CNTR): 121			1.00	20	1	C	1	20			1.00	RCPTS: 114	36
16	RCPT (COPIER): 121	1.00			20	1	A	1	20	1.00			RCPTS: 114	37
17	RCPT (CNTR): 121		1.00		20	1	B	1	20		1.00		RCPT: 115B	38
18	RCPT: 121			1.00	20	1	C	1	20			1.00	RCPT (TB): 115B	39
19	RCPTS: O/S @ DOORS	1.00			20	1	A	1	20	1.00			RCPT (TB): 115B	40
20	RCPT (BATT CHARGER)		1.00		20	1	B	1	20		1.00		RCPT (TB): 115B	41
21	RCPT (BATT CHARGER)			1.00	20	1	C	1	20			1.00	RCPT (TB): 115B	42

REMARKS:

PANEL "LA"--SECTION 2

CKT. NO.	LOAD DESCRIPTION	KVA PH. A	KVA PH. B	KVA PH. C	BREAKER AMPS	BREAKER POLES	PH	BREAKER POLES	BREAKER AMPS	KVA PH. A	KVA PH. B	KVA PH. C	LOAD DESCRIPTION	CKT. NO.
43	RCPT (TB): 115B	1.00			20	1	A	2	30	2.50			SPECIAL RCPT:	64
44	RCPT (TB): 115B		1.00		20	1	B				2.50		DRYER	
45	GAS UNIT HTR GUH-1			1.00	20	1	C	2	50			4.45	SPECIAL RCPT:	65
46	EXH FAN EF-6 (1/2 HP)	1.18			20	1	A			4.45			ELECTRIC RANGE	
47	MOTORIZED DAMPERS		0.72		20	1	B	2	50		0.00		SPARE	66
48	GAS WTR HTR GWH-1			1.00	20	1	C					0.00		
49	GWH-1 & RP-1	1.00			20	1	A	2	30	0.00			SPARE	67
50	MICROWAVE OVEN		1.00		20	1	B				0.00			
51	SPARE			0.00	20	1	C	1	[100]			0.00	SPACE	68
52	SPARE	0.00			20	1	A	1	[100]	0.00			SPACE	69
53	SPARE		0.00		20	1	B	1	[100]		0.00		SPACE	70
54	SPARE			0.00	20	1	C	1	[100]			0.00	SPACE	71
55	SPARE	0.00			20	1	A	1	[100]	0.00			SPACE	72
56	SPARE		0.00		20	1	B	1	[100]		0.00		SPACE	73
57	SPARE			0.00	20	1	C	1	[100]			0.00	SPACE	74
58	SPARE	0.00			20	1	A	1	[100]	0.00			SPACE	75
59	SPARE		0.00	0.00	20	1	B	1	[100]		0.00		SPACE	76
60	SPARE			0.00	20	1	C	1	[100]			0.00	SPACE	77
61	SPARE	0.00			20	1	A	1	[100]	0.00			SPACE	78
62	RCPT (ICE MKR): 116		2.32		30	1	B	1	[100]		0.00		SPACE	79
63	SPARE			1.00	20	1	C	1	[100]			0.00	SPACE	80

REMARKS: "TB"–TELECOMMUNICATIONS BACKBOARD
"RP-1"–DOMESTIC HOT WATER RECIRCULATING PUMP RP-1.

PANEL "LA"

TOTAL CONNECTED LOAD - KVA:		TOTAL DEMAND - KVA:	36.0
		TOTAL DEMAND - AMPS:	100.0
PHASE A:	24.4		
PHASE B:	21.8	SPARE CAPACITY - %:	25%
PHASE C:	20.9		
		TOTAL LOAD - KVA:	45.0
TOTAL CONNECTED LOAD:	67.1	TOTAL LOAD - AMPS:	125.0

PLAN
ROADWAY DESIGN DIVISION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

Schultz & Wynne
Consulting Electrical Engineers
A Professional Association
4523 Office Park Drive, Jackson, MS 39206
Post Office Box 16074, Jackson, MS 39236
TEL. 601-982-3313 FAX. 601-982-7685

STATUS: NOT FOR CONSTRUCTION | S&W PROJECT NO.: 214055

JOHN M. WYNNE REGISTERED PROFESSIONAL ENGINEER #11869 STATE OF MISSISSIPPI

J H & H
A Professional Association
Franco Bagley Lewis Wood

JH&H Architects
Planners.Interiors, PA
1047 North Flowood Drive
Flowood, MS 39232-9533
p.601.948.4601 f.601.355.6200

DATE	REVISION	BY
5/18/16	REVISED SCHEDULES FOR PANELS LA, LB, LC	HEANEY

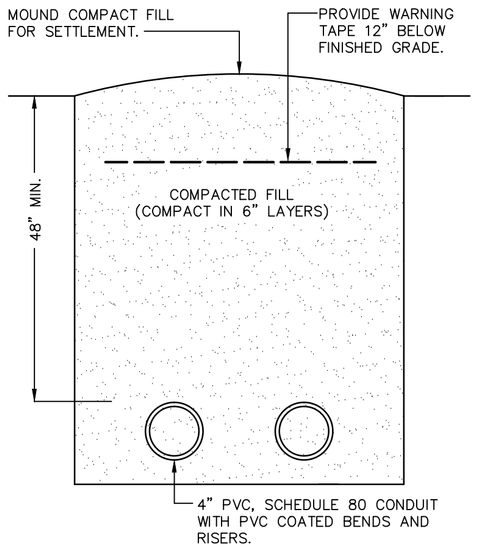
MISSISSIPPI DEPARTMENT OF TRANSPORTATION
DISTRICT 6
SHOP BUILDING RENOVATION
Panel Schedules
PROJ. NO. LWO-6017-18(006)
COUNTY: FORREST

WORKING NUMBER E400
SHEET NUMBER 86

JH&H PROJECT NO: 14-112
DESIGN TEAM Heaney CHECKED Wynne DATE: 3/23/2016

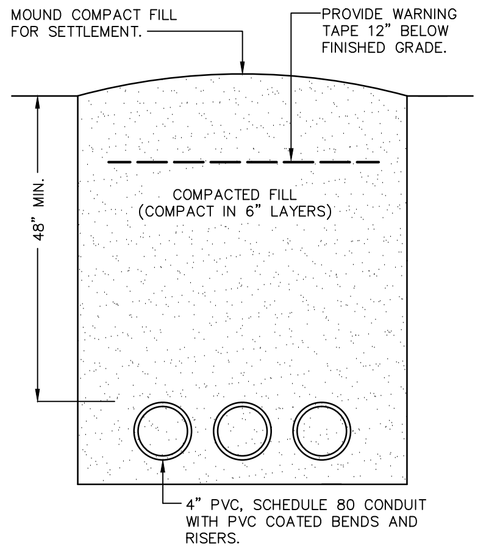
ORIGINAL SHEET SIZE 22" x 34"

ADDENDUM



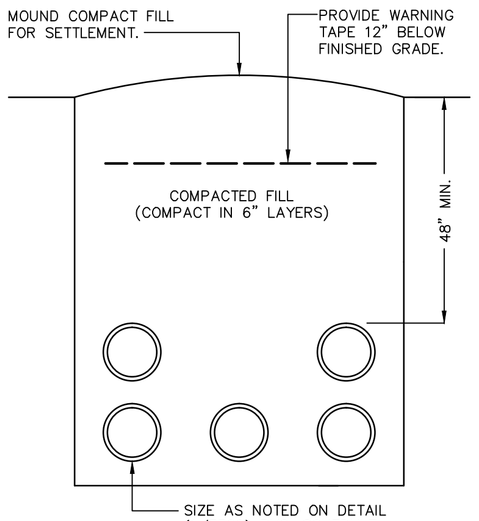
SECTION THRU THE PRIMARY SERVICE ENTRANCE CONDUITS

PRIMARY SERVICE ENTRANCE CONDUCTORS PROVIDED AND INSTALLED BY THE SERVING UTILITY COMPANY.



SECTION THRU THE SECONDARY SERVICE ENTRANCE CONDUITS

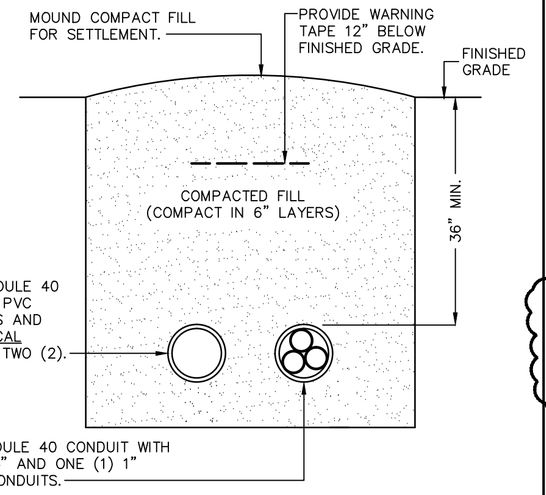
SECONDARY SERVICE ENTRANCE CONDUCTORS PROVIDED AND INSTALLED BY THE DIVISION 16 CONTRACTOR PER DETAIL (1/E300).



EMERGENCY ENGINE GENERATOR OUTPUT FEEDER CONDUITS (3), ENG-GEN LOW VOLTAGE CONTROLS, INSTRUMENTATION AND REMOTE STARTING CONDUIT AND THREE (3) 20 AMP., 120 VOLTS CIRCUITS (FOR ENG-GEN BLOCK HEATER, BATTERY CHARGER AND CONVENIENCE OUTLET) CONDUIT.

SECTION THRU EMERGENCY ENGINE GENERATOR CONDUITS

INSTALL CONDUITS WITH 7 1/2" SEPARATION BETWEEN CONDUITS, VERTICALLY AND HORIZONTALLY, MEASURED FROM CENTERLINE OF CONDUIT TO CENTERLINE OF CONDUIT.



SECTION THRU TELECOMMUNICATIONS SERVICE ENTRANCE CONDUITS

TELE-COMMUNICATIONS SERVICE ENTRANCE CABLES PROVIDED AND INSTALLED BY THE SERVING UTILITY COMPANY.

SECTION THRU TELECOMMUNICATIONS CONDUITS BETWEEN BUILDINGS

SIMIALR TO ABOVE EXCEPT WITHOUT THE INTERDUCT.

GENERAL DUCT BANK NOTES:

CONDUITS, SIZES AS NOTED ON THE PLANS, SHALL BE SCHEDULE 40 PVC UNLESS OTHERWISE NOTED ON THE PLANS. ALL BENDS SHALL BE LONG RADIUS, GALVANIZED RIGID STEEL (GRS) CONDUIT. CONVERT TO GRS CONDUIT FOR ALL VERTICAL RISERS.

MINIMUM SPACING FROM CENTER TO CENTER OF CONDUITS SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.

PROVIDE MARKER TAPE 12" BELOW FINISHED GRADE. CONDUITS SHALL BE A MINIMUM OF 36" BELOW FINISHED GRADE.

BACKFILL ABOVE THE DUCTBANK SHALL BE SELECT FILL & COMPACTED IN 6" LAYERS. MOUND FILL ABOVE FINISHED GRADE FOR SETTLEMENT.

PROVIDE A MINIMUM OF 24" SEPARATION BETWEEN ALL COMMUNICATIONS CONDUITS AND THE NEAREST POWER CONDUITS. MEASUREMENT TO BE MADE BETWEEN OUTSIDE WALLS OF CONDUITS.

ALL EMPTY DUCT BANK CONDUITS TO HAVE NYLON PULL CORDS INSTALLED.

DETAIL (1/E402--SECTIONS THRU TYPICAL DUCTBANKS

NO SCALE

PLAN
ROADWAY DESIGN DIVISION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

FOR PRINT SCALE VERIFICATION, THIS LINE IS 4" LONG

STATE	PROJECT NO.
MISS.	BWO-6211-18(003)

POWER CONNECTIONS SCHEDULE

MARK #	EQUIPMENT	VOLTAGE/ PHASE	F.L.A.	KW.	HP.	PANEL-CKT. NO.	BRANCH CIRCUIT (1)	DISC. SW. FUSE (2)	REMARKS
62	GAS WTR HTR GWH-1 CONTROLS	120	8.3	1.0	---	LA-48	2-#12, 1-#12 GND., 3/4" C.	(16)	(3) (30)
63	GAS WTR HTR GWH-1 CONTROLS	120	8.3	1.0	---	LA-49	2-#12, 1-#12 GND., 3/4" C.	(16)	(3) (30)
64	HOT WTR RECIRC PUMP RC-1	120	4.0	.48	1/8	LA-49	2-#12, 1-#12 GND., 3/4" C.	(19)	(3)
65	AIR DRYER (30)	120	8.3	1.0	---	LB-33	2-#10, 1-#10 GND., 3/4" C.	NEMA 5-20R/GFI/ NEMA-3R	(11) (31)
66	AIR COMPRESSOR (32)	208/1	28.0	5.824	5.0	PB-13	2-#8, 1-#10 GND., 3/4" C.	60A2P/NEMA-3R	(3) (33)
67	DUCTLESS SPLIT SYST HT PUMP & AC UNIT OUTDOOR UNIT DSS-1	208/1	10.0	2.08	---	PA-5	2-#10, 1-#10 GND., 3/4" C.	30A2P/NEMA-3R	(3)(21)(33)
68	DUCTLESS SPLIT SYST HT PUMP & AC UNIT INDOOR UNIT DSS-1	208/1	1.0	.208	---	(29)	2-#12, 1-#12 GND., 3/4" C.	30A2P	(3) (21)
69	PRESSURE WASHER	208/1	33.0	6.864	6.0	PC-7	2-#6, 1-#8 GND., 1" C..	100A2P	(3)
70	HVAC CONTROL PANEL (37)	120	8.3	1.0	---	LB-34	2-#12, 1-#12 GND., 3/4" C..	(36)	---
71	HIGH VOLUME LOW SPEED FAN HVLS-1 (38)	120	6.2	.744	---	LB-35	2-#10, 1-#10 GND., 3/4" C..	(39)	(40) (41)
72	HIGH VOLUME LOW SPEED FAN HVLS-2 (38)	120	6.2	.744	---	LC-51	2-#10, 1-#10 GND., 3/4" C..	(39)	(40) (41)
73	HIGH VOLUME LOW SPEED FAN HVLS-3 (38)	120	6.2	.744	---	LB-36	2-#10, 1-#10 GND., 3/4" C..	(39)	(40) (41)
74	SPLIT SYSTEM HEAT PUMP IN-DOOR UNIT (12) (35)	208/1	2.3	.4784	---	PA-3	2-#12, 1-#12 GND., 3/4" C.	30A2P	(3)
75	CRANES RUNWAY ELECTRIFICATION SYSTEM (42)	208/3	160.0	57.6	---	DPA-1	3-#1/0, 1-#6 GND., 2" C.	200A3P	(3)
76	CRANES RUNWAY ELECTRIFICATION SYSTEM CONTROL PANEL(42)	120	8.3 EA.	1.0 EA	---	LB-37-38 (43)	4-#10, 1-#10 GND., 3/4" C	30A2P	(3)

MARK #	EQUIPMENT	VOLTAGE/ PHASE	F.L.A.	KW.	HP.	PANEL-CKT. NO.	BRANCH CIRCUIT (1)	DISC. SW. FUSE (2)	REMARKS
1	MOTORIZED OVERHEAD DOOR	120	9.8	1.176	1/2	LB-17	2-#8	30A2P	(3) (4)
2	MOTORIZED OVERHEAD DOOR	120	9.8	1.176	1/2	LB-18	2-#8 1-#8 GND., 1" C. (5)	30A2P	(3) (4)
3	MOTORIZED OVERHEAD DOOR	120	9.8	1.176	1/2	LB-19	2-#8	30A23P	(3) (4)
4	MOTORIZED OVERHEAD DOOR	120	9.8	1.176	1/2	LB-20	2-#10	30A2P	(3) (4)
5	MOTORIZED OVERHEAD DOOR	120	9.8	1.176	1/2	LB-21	2-#10 1-#10 GND., 1" C. (5)	30A2P	(3) (4)
6	2-POSTS VEHICLE LIFT (8)	208/1	18.0	3.744	4.0	PB-1	2-#8	60A2P	(3) (6)
7	2-POSTS VEHICLE LIFT (8)	208/1	18.0	3.744	4.0	PB-2	2-#10 1-#8 GND., 1" C. (5)	60A2P	(3) (6)
8	PLASMA CUTTER (8)	208/1	40.0	8.32	---	PB-3	2-#6, 1-#10 GND., 3/4" C	NEMA 6-50R	(7)
9	PLASMA CUTTER (8)	208/1	40.0	8.32	---	PB-4	2-#6, 1-#10 GND., 3/4" C	NEMA 6-50R	(7)
10	MIG WELDER (MILLER) (8)	120/208/1	16.6	3.494	---	PB-6	2-#10, 1-#10 NEUT., 1-#10 GND., 3/4" C.	NEMA 14-30R	(7)
11	MIG WELDER (LINCOLN) (8)	120/208/1	76.0	15.8084	---	PB-7	2-#6, 1-#6 NEUT., 1-#10 GND., 1" C.	NEMA 10-50R	(7)
12	MIG WELDER (LINCOLN) (8)	208/1	56.0	11.648	---	PB-8	2-#6, 1-#10 GND., 3/4" C.	NEMA 6-50R	(7)
13	ARC WELDER (LINCOLN) (8)	120/208/1	70.0	14.56	---	PB-9	2-#6, 1-#6 NEUT., 1-#10 GND., 1" C.	NEMA 10-50R	(7)
14	ARC WELDER (MILLER) (8)	208/3	103.0	37.08	---	PB-5	3-#2, 1-#8 GND., 1 1/4" C.	100A3P	(3)
15	DRILL PRESS (8)	120/208/1	10.0	2.08	1 1/2	PB-10	2-#6, 1-#6 NEUT., 1-#10 GND., 1" C.,	NEMA 10-50R	(10) (11)
16	BAND SAW (8)	208/3	10.0	2.08	---	PB-11	2-#10, 1-#10 NEUT., 1-#10 GND., 3/4" C.	NEMA 15-30R	(10) (11)
17	HYDRAULIC PRESS (8)	208/1	26.0	5.408	5	PB-12	2-#6, 1-#10 GND., 1" C.	NEMA 6-50R	(7)
18	DRILL PRESS (8)	120	8.3	1.0	---	LB-22	2-#12, 1-#12 GND., 3/4" C.	NEMA 5-20R (GFI)	(10) (11)
19	DRILL PRESS (8)	120	8.3	1.0	---	LB-23	2-#12, 1-#12 GND., 3/4" C.	NEMA 5-20R (GFI)	(10) (11)
20	BRENCH GRINDER (8)	120	8.3	1.0	---	LB-24	2-#12, 1-#12 GND., 3/4" C.	NEMA 5-20R (GFI)	(10) (11)
21	PARTS WASHER (8)	120	8.3	1.0	---	LB-25	2-#12, 1-#12 GND., 3/4" C.	NEMA 5-20R (GFI)	(10) (11)
22	BRENCH GRINDER (8)	120	8.3	1.0	---	LB-26	2-#12, 1-#12 GND., 3/4" C.	NEMA 5-20R (GFI)	(10) (11)
23	MOTORIZED OVERHEAD DOOR	120	9.8	1.176	1/2	LC-33	2-#6	30A2P	(3) (4)
24	MOTORIZED OVERHEAD DOOR	120	9.8	1.176	1/2	LC-34	2-#6 1-#6 GND., 1" C. (5)	30A2P	(3) (4)
25	MOTORIZED OVERHEAD DOOR	120	9.8	1.176	1/2	LC-35	2-#6	30A2P	(3) (4)
26	MOTORIZED OVERHEAD DOOR	120	9.8	1.176	1/2	LC-36	2-#8	30A2P	(3) (4)
27	MOTORIZED OVERHEAD DOOR	120	9.8	1.176	1/2	LC-37	2-#8 1-#8 GND., 1" C. (5)	30A2P	(3) (4)
28	MOTORIZED OVERHEAD DOOR	120	9.8	1.176	1/2	LC-38	2-#10	30A2P	(3) (4)
29	MOTORIZED OVERHEAD DOOR	120	9.8	1.176	1/2	LC-39	2-#8, 1-#8 GND., 3/4" C.	30A2P	(3) (4)
30	2-POST VEHICLE LIFT (8)	208/1	18.0	3.744	4.0	PC-1	2-#8	60A2P	(3) (6)
31	2-POST VEHICLE LIFT (8)	208/1	18.0	3.744	4.0	PC-2	2-#8 1-#8 GND., 1" C. (5)	60A2P	(3) (6)
32	2-POST VEHICLE LIFT	208/1	18.0	3.744	4.0	PC-3	2-#10	60A2P	(3) (6)
33	GAS UNIT HEATER GUH-1 (24)	120	2.0	.24	1/15	LA-45	2-#12, 1-#12 GND., 3/4" C.	(19)	(3)
34	EXHAUST FAN EF-6 (15)	120	9.8	1.176	1/2	LA-46	2-#12, 1-#12 GND., 3/4" C.	(16)	(3) (13) (17)
35	MOTORIZED DAMPER (18)	120	3.0	.36	---	LA-47	2-#12, 1-#12 GND., 3/4" C.	(19)	(3) (20)
36	PACKAGED TERMINAL HEAT PUMP UNIT PTHP-1	208/1	4.6	.96	---	PA-1	2-#10, 1-#10 GND., 3/4" C.	NEMA 6-20R	(11) (14)
37	REFRIGERANT CONTROLLER BC-2 (13)	208/1	.16	.033	---	PA-2	2-#12, 1-#12 GND., 3/4" C.	30A2P	(3)
38	SPLIT SYSTEM HEAT PUMP IN-DOOR UNIT (12) (35)	208/1	.18	.037	---	PA-2	2-#12, 1-#12 GND., 3/4" C.	30A2P	(3)
39	REFRIGERANT CONTROLLER BC-1 (13)	208/1	.16	.033	---	PA-3	2-#12, 1-#12 GND., 3/4" C.	30A2P	(3)
40	SPLIT SYSTEM HEAT PUMP IN-DOOR UNIT (12) (35)	208/1	.2	.04	---	PA-3	2-#12, 1-#12 GND., 3/4" C.	30A2P	(3)
41	ENERGY RECOVERY VENTILATOR ERV-1	208/1	2.8	.582	---	PA-4	2-#12, 1-#12 GND., 3/4" C.	30A2P	(3)
42	SPLIT SYSTEM HEAT PUMP OUT-DOOR UNIT OU-1	208/3	40.1	14.4	---	PA-6	3-#8, 1-#10 GND., 1" C	60A3P/MEMA-3R	(3) (33)
43	EXHAUST FAN EF-4 (22)	208/3	7.8	2.808	2.0	PB-17	3-#8, 1-#8 GND., 1" C.	30A3P	(3) (23)
44	EXHAUST FAN EF-1 (22)	208/3	7.8	2.808	2.0	PB-18	3-#8, 1-#8 GND., 1" C.	30A3P	(3) (23)
45	MOTORIZED DAMPER (18)	120	3.0	.36	---	LB-27	2-#8	(19)	(3) (20)
46	MOTORIZED DAMPER (18)	120	3.0	.36	---	LB-28	2-#10 1-#8 GND., 1" C. (5)	(19)	(3) (20)
47	MOTORIZED DAMPER (18)	120	3.0	.36	---	LB-29	2-#8, 1-#8 GND., 3/4" C.	(19)	(3) (20)
48	GAS INFRARED HTR. IRH-5 (24)	120	8.3	1.0	---	LB-30	2-#8, 1-#8 GND., 3/4" C.	30A2P	(3)
49	GAS INFRARED HTR. IRH-3 (24)	120	8.3	1.0	---	LB-31	2-#8, 1-#8 GND., 3/4" C.	30A2P	(3)
50	GAS INFRARED HTR. IRH-1 (24)	120	8.3	1.0	---	LB-32	2-#8, 1-#8 GND., 3/4" C.	30A2P	(3)
51	MOTORIZED DAMPER (18)	120	3.0	.36	---	LC-40	2-#6, 1-#6 GND., 1" C.	(19)	(3) (20)
52	MOTORIZED DAMPER (18)	120	3.0	.36	---	LC-41	2-#8, 1-#8 GND., 3/4" C.	(19)	(3) (20)
53	MOTORIZED DAMPER (18)	120	3.0	.36	---	LC-42	2-#10, 1-#10 GND., 3/4" C.	(19)	(3) (20)
54	GAS INFRARED HTR. IRH-6 (24)	120	8.3	1.0	---	LC-43	2-#8, 1-#8 GND., 3/4" C.	30A2P	(3)
55	GAS INFRARED HTR. IRH-4 (24)	120	8.3	1.0	---	LC-44	2-#8, 1-#8 GND., 3/4" C.	30A2P	(3)
56	GAS INFRARED HTR. IRH-2 (24)	120	8.3	1.0	---	LC-45	2-#10, 1-#10 GND., 3/4" C.	30A2P	(3)
57	EXHAUST FAN EF-5 (25)	120	1.74	.209	---	LC-23 (26)	2-#12, 1-#12 GND., 1/2" C.	(27)	(3) (28)
58	SPLIT SYSTEM HEAT PUMP OUT-DOOR UNIT OU-2	208/1	11.0	2.288	---	PC-6	2-#10, 1-#10 GND., 3/4" C.	30A2P/NEMA-3R	(3)(21)(33)
59	SPLIT SYSTEM HEAT PUMP IN-DOOR UNIT (12) (35)	208/1	.25	.052	---	(29)	2-#12, 1-#12 GND., 3/4" C.	30A2P	(3) (21)
60	EXHAUST FAN EF-3 (22)	208/3	7.8	2.808	2.0	PC-5	3-#8, 1-#8 GND., 1" C.	30A3P	(3) (23)
61	EXHAUST FAN EF-2 (22)	208/3	7.8	2.808	2.0	PC-4	3-#10, 1-#10 GND., 1" C.	30A3P	(3) (23)

REMARKS:

(1) CIRCUIT TO INCLUDE ONE (1) GREEN GROUNDING CONDUCTOR ("GND") SIZED PER THE BRANCH CIRCUIT CONDUCTORS SIZE, UNLESS SHOWN TO BE SIZED DIFFERENTLY. MINIMUM BRANCH CIRCUIT REQUIREMENT: 2-#12, 1-#12 GND., 3/4" CONDUIT.

(2) DUAL ELEMENT TYPE FUSE AND SWITCH OF PROPER VOLTAGE. IF FUSE SIZE NOT SHOWN, UNIT TO BE UNIFUSED.

(3) FINAL CONNECTION USING LIQUIDTIGHT FLEXIBLE CONDUIT.

(4) CONNECT PER THE MANUFACTURER'S RECOMMENDATIONS, INCLUDING INSTALLING WHERE DIRECTED AND CONNECTING THE CONTROLLER PROVIDED WITH THE DOOR BY THE MANUFACTURER.

(5) COMBINE THE INDICATED CIRCUITS INTO ONE (1) 1" HOMERUN CONDUIT.

(6) MAKE THE FINAL CONNECTION PER THE MANUFACTURER'S RECOMMENDATIONS, INCLUDING MOUNTING WHERE DIRECTED AND CONNECTING THE CONTROLLER. NOTE: EXISTING LIFTS ARE TO BE RELOCATED TO THIS BUILDING FROM ANOTHER BUILDING. DOCUMENT THE EXISTING ELECTRICAL INSTALLATION AND DUPLICATE THE EXISTING INSTALLATION AS MUCH AS PRACTICAL.

(7) PROVIDE A SURFACE MOUNTED ON WALL (CENTERLINE 48" ABOVE THE FINISHED FLOOR) SINGLE RECEPTACLE PER THE NEMA CONFIGURATION NUMBER IN THE "DISC. SW./FUSE COLUMN. ROUTE CONDUIT EXPOSED ON WALL TO SERVING PANEL.

(8) ⚠1 EXISTING EQUIPMENT TO BE RELOCATED TO THIS BUILDING FROM ANOTHER BUILDING. AT THE PRESENT LOCATION OF EACH PIECE OF EQUIPMENT TO BE RELOCATED, THE DIVISION 16 CONTRACTOR SHALL DISCONNECT THE ELECTRICAL SERVICE TO THE EQUIPMENT BACK TO ITS DISCONNECT MEANS FOR REMOVAL BY THE GENERAL CONTRACTOR. AT THE FOUR (4) LIFTS TO BE RELOCATED, THE DIVISION 16 CONTRACTOR SHALL DOCUMENT THE ELECTRICAL SERVICE TO EACH LIFT AND DISCONNECT AND REMOVE ANY AND ALL EXISTING ELECTRICAL PROVISIONS ATTACHED TO THE LIFT THAT WERE NOT PROVIDED BY THE MANUFACTURER OF THE LIFT. THESE EXISTING PIECES OF EQUIPMENT TO BE RELOCATED ARE LOCATED IN SEVERAL DIFFERENT BUILDINGS LOCATED ON THE CAMPUS OF THE OWNER. AT THE PRE-BID MEETING, THE POTENTIAL ELECTRICAL CONTRACTOR BIDDERS SHALL VISIT EACH BUILDING AS REQUIRED TO UNDERSTAND THE SCOPE OF WORK INVOLVED.

(9) MAKE THE FINAL CONNECTION TO THE WELDER PER THE MANUFACTURER'S RECOMMENDATIONS.

(10) PROVIDE SINGLE RECEPTACLE (DUPLEX RECEPTACLE FOR NEMA 5-20R) PER THE NEMA CONFIGURATION NUMBER SCHEDULED IN THE "DISC SW./FUSE" COLUMN.

(11) PROVIDE THE SCHEDULED RECEPTACLE IN A NEMA 1 ENCLOSURE SURFACE MOUNTED ON THE NEAREST UTILITY TRAY SUPPORT COLUMN TO THE LOCATION OF THE EQUIPMENT 48" ABOVE THE FINISHED FLOOR. SERVE THE RECEPTACLE FROM THE OVERHEAD UTILITY TRAY WITH THE CONDUIT SECURED TO THE UTILITY TRAY SUPPORT COLUMN.

(12) UNIT DESIGNATION NOTED ADJACENT TO THE "MARK" SYMBOL ON THE DRAWINGS.

(13) LOCATED ABOVE ACCESSIBLE CEILING.

(14) FLOOR MOUNTED.

(15) IN-LINE VENTILATOR.

(16) PROVIDE A 20 AMP., 120 VOLTS, SINGLE POLE "TOGGLE" SWITCH INSTALLED IN A NEMA 1 ENCLOSURE SURFACE MOUNTED EITHER ON THE UNIT OR ON THE NEAREST WALL AND MAKE THE FINAL CONNECTION THERETO PER REMARK "(3)".

(17) LOCAL CONTROL PROVIDED UNDER DIVISION 15, INCLUDING ALL CONDUIT AND CONDUCTORS.

(18) LOUVER DESIGNATION AT THE LOCATION OF THE MOTORIZED DAMPER NOTED ADJACENT TO THE "MARK" SYMBOL ON THE DRAWINGS.

(19) PROVIDE A PROPERLY SIZED MANUAL MOTOR SWITCH IN A NEMA 1 ENCLOSURE SURFACE MOUNTED ON THE WALL ADJACENT TO THE UNIT AND MAKE THE FINAL CONNECTION THERETO PER REMARK "(3)".

(20) INTERLOCKING OF THE MOTORIZED DAMPER WITH OTHER HVAC EQUIPMENT PERFORMED UNDER DIVISION 15, INCLUDING ALL CONDUIT AND CONDUCTORS.

(21) PAD-MOUNTED ON GRADE. MAKE FINAL CONNECTION PER DETAIL (4/E302).

(22) WALL-MOUNTED HIGH.

(23) INTERLOCKING UNIT WITH ITS ASSOCIATED MOTORIZED DAMPER(S) PERFORMED UNDER DIVISION 15, INCLUDING ALL CONDUIT AND OCNDUCTORS.

(24) SUSPENDED HIGH.

(25) CEILING MOUNTED.

(26) SERVE WITH THE SAME CIRCUIT THAT SERVES THE RECEPTACLE IN THIS ROOM.

(27) DISCONNECT MEANS INTEGRAL WITH UNIT.

(28) LOCAL CONTROL OF UNIT BY MOTION SENSOR PROVIDED UNDER DIVISION 15, INCLUDING ALL CONDUIT AND CONDUCTORS.

(29) INDOOR DOOR UNIT OBTAINS ITS POWER FROM ITS ASSOCIATED OUTDOOR UNIT. MAKE THE CONNECTION AT THE OUTDOOR UNIT PER THE MANUFACTURER'S RECOMMENDATIONS.

(30) WALL MOUNTED.

(31) WALL MOUNT HIGH AT SHELF MOUNTED AIR DRYER. PROVIDE WITH AN "IN-USE" WEATHERPROOF COVER. VERIFY EXACT LOCATION PRIOR TO ROUGH-IN.

(32) PAD-MOUNTED ON GRADE. VERIFY EXACT LOCATION PRIOR TO ROUGHING-IN.

(33) MAKE THE FINAL CONNECTION PER DETAIL (4/E302).

(34) WALL-MOUNTED ABOVE DOOR.

(35) CEILING CASSETTE, EXCEPT WHERE NOTED OTHERWISE ON THE DRAWINGS.

(36) DIRECT RIGID CONDUIT TERMINATION TO THE CONTROL PANEL.

(37) VERIFY EXACT LOCATION PRIOR TO ROUGHING-IN.

(38) SUSPENDED TO 25'-0" ABOVE THE FINISHED FLOOR.

(39) PROVIDE A 20 AMP., 120 VOLTS, SINGLE POLE "TOGGLE" SWITCH IN A NEMA 1 ENCLOSURE SURFACE MOUNTED TO A STRUCTURAL MEMBER ABOVE OR AT THE FAN.

(40) MAKE THE FINAL CONNECTION PER THE MANUFACTURER'S RECOMMENDATIONS.

(41) DIGITAL WALL MOUNTED CONTROLLER PROVIDED WITH THE FAN. DIVISION 16 CONTRACTOR TO INSTALL THE CONTROLLER WHERE LOCATED ON THE MECHANICAL DRAWINGS. FROM THE CONTROLLER, THE DIVISION 16 CONTRACTOR SHALL PROVIDE AND INSTALLED CAT. 5 CABLE WITH RJ45 CONNECTOR ON BOTH ENDS TO THE ASSOCIATED FAN.

(42) PRIOR TO ROUGHING-IN, VERIFY/COORDINATE THE EXACT LOCATION OF THE POINT OF TERMINATION WITH THE CRANE VENDOR.

(43) IF THE POINT OF TERMINATION TO THE RUNWAY ELECTRIFICATION SYSTEM CONTROL PANEL IS LOCATED ON THE SOUTH WALL, SERVE FROM THE FOLLOWING SCHEDULED SPARE CIRCUITS: LC-52-53.

Schultz & Wynne
Consulting Electrical Engineers
A Professional Association
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Post Office Box 16074, Jackson, MS 39236
TEL. 601-982-3313 FAX. 601-982-7685

STATUS:	S&W PROJECT NO.:
NOT FOR CONSTRUCTION	214055

JOHN M. WYNNE REGISTERED PROFESSIONAL ENGINEER #11869 STATE OF MISSISSIPPI

J H & H
A Professional Association
Franco Bagley Lewis Wood

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1047 North Flowood Drive
Flowood, MS 39232-9533
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DATE	REVISION	BY
5/18/16	REVISED POWER CONNECTION SCHEDULE	HEANEY

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
DISTRICT 6
SHOP BUILDING RENOVATION
Power Conn. Sch. & Detail

PROJ. NO. LWO-6017-18(006)
COUNTY: FORREST

JH&H PROJECT NO: 14-112
DESIGN TEAM Heaney CHECKED Wynne DATE: 3/23/2016

WORKING NUMBER E402
SHEET NUMBER 88

ORIGINAL SHEET SIZE 22" x 34"

ADDENDUM

FOR PRINT SCALE VERIFICATION, THIS LINE IS 4" LONG

STATE	PROJECT NO.
MISS.	BWO-6211-18(003)

LIGHTING FIXTURES SCHEDULE

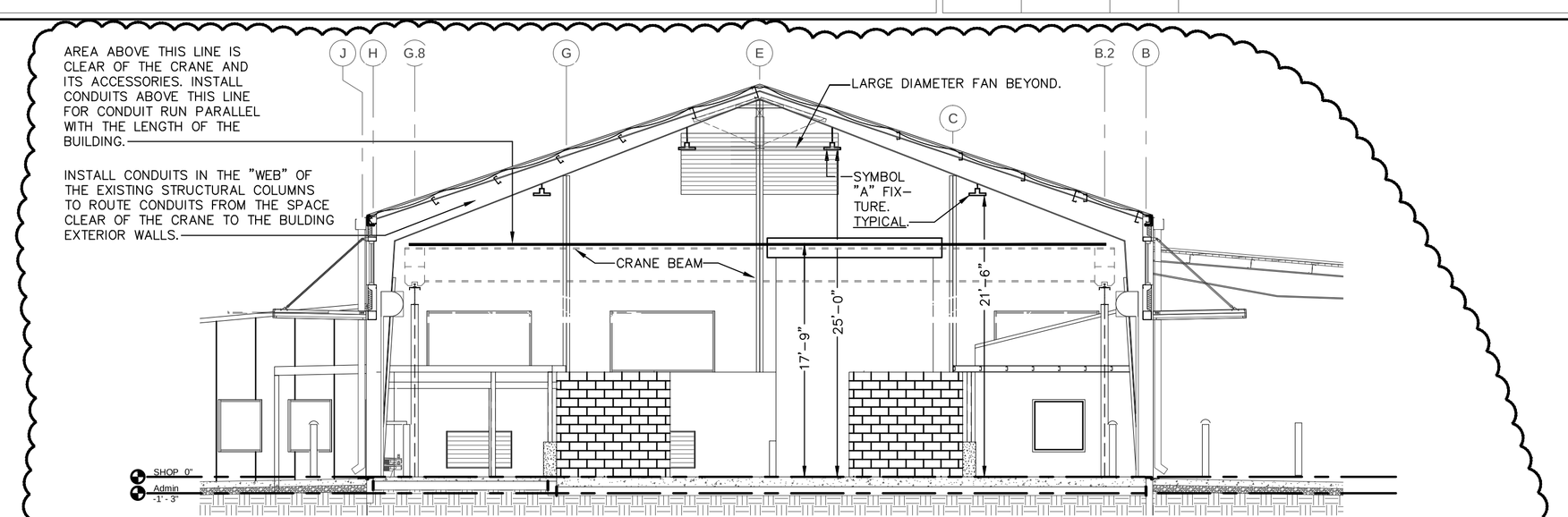
VOLTS	SYMBOL	WATTS	DESCRIPTION	MANUFACTURER*	CAT. NO.*	MOUNTING
120	J	LED	WALL MOUNTED LED LUMINAIRE, 6 3/4" WIDE X 10 7/8" HIGH X 5 5/16" DEEP, WITH DIE-CAST ALUMINUM BACK PLATE, FULLY GASKETED, IMPACT RESISTANT PRISMATIC POLYCARBONATE FRONT COVER, POLYCARBONATE LENS PROTECTING THE LEDs AND INTEGRAL LED DRIVER. (69 MINIMUM CRI, 1017 LUMENS @ 5000' K, 18.79 WATTS SYSTEM POWER.)	LITHONIA	TWS LED-1-50K-120-_-_	WALL MOUNT ON EXTERIOR WALL PER THE EAST ELEVATION ON SHEET A202
---	K	---	NOT USED	------	------	------
120	KE	LED	SURFACE MOUNTED LED DOWNLIGHTING FIXTURE, 48 3/4" LONG X 24 3/4" WIDE X 4 3/4" DEEP, WITH COLD-ROLLED STEEL, PAINTED AFTER FABRICATION HOUSING, HEMMED SIDES AND INWARD-FORMED END FLANGES, EXTRUDED ALUMINUM DOOR FRAME WITH MITERED CORNERN AND PAINTED AFTER FABRICATION, ROTARY CAM LATCHES, UV-STABILIZED ACRYLIC LENS (.125 THICK, PATTERN #12), WHITE LEDs WITH INTEGRAL STEP-LEVEL DIMMING DRIVER. (80 CRI MIN., 7673.3 LUMENS @ 3500' K., STEP-LEVEL DIMMING, 67 WATTS.)	LITHONIA	2TLXR-72L-FW-A12-_-SLD-LP835-_-EL7L	SURFACE MOUNTED ON INACCESSIBLE CEILING
120	X1	LED	EXIT SIGN, SINGLE FACE, WITH RED STENCILED LETTERS, ARROW(S) AS INDICATED, MULTI-VOLT LED DRIVER, SELF-DIAGNOSTIC EMERGENCY BATTERY PACK AND UNIVERSAL MOUNTING HARDWARE.	LITHONIA	LE-S-_-1-R-120/277-EL N SD	CEILING MOUNTED OR WALL MOUNTED @ 8'-6" AB. FINISHED FL. OR @ 12" ABOVE & CENTERED OVER DOOR(S) AS SYMBOLIZED
120	X2	LED	EXIT SIGN, DOUBLE FACE, WITH RED STENCILED LETTERS, ARROW(S) AS INDICATED, MULTI-VOLT LED DRIVER, SELF-DIAGNOSTIC EMERGENCY BATTERY PACK AND UNIVERSAL MOUNTING HARDWARE.	LITHONIA	LE-S-_-2-R-120/277-EL N SD	CEILING MOUNTED OR WALL MOUNTED @ 8'-6" AB. FINISHED FL. OR @ 12" ABOVE & CENTERED OVER DOOR(S) AS SYMBOLIZED
120	X3	2-100W, 12V NON-SEALED BEAM LAMPS	EMERGENCY LIGHTING UNIT, 8" X 12.5" HIGH X 9" DEEP, WITH SEL-DIAGNOSTICE LEAD-CALCIUM BATTERY, INJECTION THERMOPLASTIC CONSTRUCTION, VERTICAL ORIENTATION FOR COLUMN MOUNT, 12 GAUGE STEEL MOUNTING PLATE, CONDUIT ENTRIES ON TOP AND SIDES, TOOL-LESS RE-LAMPING, SINGLE POLE ENTRY, HINGED COVER, AND FIELD ADJUSTABLE LAMPS BEAM SPREAD.	LITHONIA	IND12100_-H50125_-SEL	COLUMN MOUNT @ 10'-0" ABOVE THE FINISHED FLOOR
120	X4	LED	EMERGENCY (DISCHARGE) LIGHTING UNIT, 9 1/2" HIGH X 6 1/2" WIDE X 2 3/4" DEEP, WITH DIE-CAST ALUMINUM HOUSING, STANDARD FINISH SELECTED BY THE ARCHITECT, SELF-DIAGNOSTIC NICKEL-CALMIUM BATTERY (MAINTENANCE FREE), VAC-METALIZED, DIE-CASTED REFLECTORS, MULTI-FACETED REFRACTORS AND WHITE LEDs WITH INTEGRAL DRIVER.	LITHONIA	AFN-_-STANDARD FINISH SELECTED BY THE ARCHITECT-PREM-FWD	EXTERIOR WALL MOUNTED @ 6" ABOVE AND CENTERED OVER THE DOOR.

REMARKS:

*--MANUFACTURERS AND THEIR PRODUCTS ARE LISTED IN THIS SCHEDULE TO ESTABLISH AN "BASIS OF DESIGN". EQUAL PRODUCTS MANUFACTURED BY OTHER MANUFACTURERS WILL BE CONSIDERED.

VOLTS	SYMBOL	WATTS	DESCRIPTION	MANUFACTURER*	CAT. NO.*	MOUNTING
120	D2	LED	RECESSED LED TROFFER, 2' X 4' X 4 3/8", WITH 1-PIECE COLD ROLLED STEEL COATED POLYESTER CONSTRUCTION PAINTED AFTER FABRICATION WITH EMBOSSED FACETS, IMPACT-MODIFIED CLEAR ACRYLIC DIFFUSER, WIDE DISTRIBUTION, SLOPED END PLATES INCLUDE INTEGRAL T-BAR CLIPS, VOLUMETRIC ILLUMINATION ACHIEVED BY THE LINEAR FACETED REFLECTOR, ACRYLIC LINEAR PRISMATIC DIFFUSER WITH DIFFUSER TRIM RINGS AND WHITE LEDs WITH INTEGRAL CLASS 1 50% STEP LEVEL DIMMING DRIVERS. (MIN. 80 CRI, 4879.3 LUMENS @ 3500' K., 50k% STEP DIMMING, 46.43 WATTS.)	LITHONIA	2VTL4-_-48L-ADPT-MVOLT-SLD-LP835-_-_-_	RECESSED IN ACCESSIBLE CEILING
120	D3	LED	RECESSED LED TROFFER, 2' X 4' X 4 3/8", WITH 1-PIECE COLD ROLLED STEEL COATED POLYESTER CONSTRUCTION PAINTED AFTER FABRICATION WITH EMBOSSED FACETS, IMPACT-MODIFIED CLEAR ACRYLIC DIFFUSER, WIDE DISTRIBUTION, SLOPED END PLATES INCLUDE INTEGRAL T-BAR CLIPS, VOLUMETRIC ILLUMINATION ACHIEVED BY THE LINEAR FACETED REFLECTOR, ACRYLIC LINEAR PRISMATIC DIFFUSER WITH DIFFUSER TRIM RINGS AND WHITE LEDs WITH INTEGRAL CLASS 1 50% STEP LEVEL DIMMING DRIVERS. (MIN. 80 CRI, 5351.3 LUMENS @ 3500' K., 50% STEP DIMMING, 52.15 WATTS.)	LITHONIA	2VTL4-_-60L-ADPT-MVOLT-SLD-LP835-_-_-_	RECESSED IN ACCESSIBLE CEILING
120	E	LED	WALL MOUNTED, ENCLOSED LED DOWNLIGHTING FIXTURE, 36" LONG X 5 3/4" HIGH X 6 1/2" DEEP, WITH 20 GAUGE COLD-ROLLED STEEL FIXTURE CHANNEL, FRONT HOUSING CONSTRUCTED FROM MARINE GRADE EXTRUDED ALUMINUM WITH DIE-CAST ALUMINUM END CAPS, 92% REFLECTIVITY REFLETOR, .125" THICK FROSTED ACRYLIC LENS, POST ASSEMBY TGIC POLYESTER POWER COAT FINISH, WHITE LEDs WITH 0-10V DIMMING DRIVER, TOOL-LESS ACCESS TO LEDs, TAMPER-RESISTANT SCREWS, STANDARD FINISH SELECTED BY THE ARCHITECT, AND U. L. "DAMP LOCATION" LABEL. (80 CRI, 2300 LUMENS @ 3500' K., 57 WATTS, NON-DIMMING.)	H. E. WILLIAMS	WMA-3-LED*PH46/835-AF-STANDARD FINISHED SELECTED BY THE ARCHITECT-CT-TP-EDD*PH-UNV	WALL MOUNT @ 6'-6" ABOVE FINISHED FLOOR OR AS DIRECTED BY THE ARCHITECT
120	F	LED	SUSPENDED OPEN LED STRIPLIGHTING FIXTURE, 48" X 2 1/8" X 2 1/8, WITH CHANNEL AND COVER CONSTRUCTED FROM CODE-GAUGE COLD-ROLLED STEEL, PAINTED FINISH, WITHOUT DIFFUSER, WHITE LEDs AND INTEGRAL CLASS 1 NON-DIMMING DRIVER, AND HEAVY HEAVY CHAIN HANGERS. (80 CRI, 3668 @ 3500' K., NON-DIMMING, 33 WATTS.)	LITHONIA	ZL1N-L48-3000LM-L/LENS-MVOLT-35K-80 CRI-_-WH-	SUSPEND BOTTOM OF FIXTURE 8'-6" ABOVE THE FINISHED FLOOR.
120	F1	LED	SUSPENDED OPEN LED STRIPLIGHTING FIXTURE, 48" X 2 1/8" X 2 1/8, WITH CHANNEL AND COVER CONSTRUCTED FROM CODE-GAUGE COLD-ROLLED STEEL, PAINTED FINISH, WITHOUT DIFFUSER, WHITE LEDs AND INTEGRAL CLASS 1 NON-DIMMING DRIVER, AND HEAVY HEAVY CHAIN HANGERS. (80 CRI, 5126@ 3500' K., NON-DIMMING, 42 WATTS.)	LITHONIA	ZL1N-L48-5000LM-L/LENS-MVOLT-35K-80 CRI-_-WH-	SUSPEND BOTTOM OF FIXTURE 8'-6" ABOVE THE FINISHED FLOOR.
---	G	---	NOT USED	------	------	------
120	GE	LED	RECESSED LED NON-DUCTUVE SHOWER DOWNLIGHT, 6" APERTURE X 7 5/8" DEEP, WITH IMPACT-MODIFIED ACRYLIC FACE PLATE, "DEAD FRONT", 16 GAUGE GALVANIZED STEEL CONSTRUCTION, ACCEPTS 1.5" THICK CEILING, TELESCOPIC BARS VERTICAL AND HORIZONTAL ADJUSTMENTS, WHITE LEDs WITH INTEGRAL CLASS 1 0-10V DIMMING DRIVER ACCESSIBLE THOROUGH THE APERTURE AND EMERGENCY BATTERY PACK. (80 CRI, 1092 LUMENS @ 3500' K., 11.8 WATTS, NON-DIMMING.)	GOTHAM	EVO-35/10-6-DFR-MVOLT-EZ1-ELR	RECESSED IN IN-ACCESSIBLE CEILING
120	H	LED	DECORATIVE EXTERIOR ENCLOSED TRAPEZOID SHAPED WALL MOUNTED FIXTURE, 16 1/4" WIDE X 7 1/4" HIGH X 9 1/8" DEEP, WITH DIE-CAST, 1-PIECE ALUMINUM HOUSING, FULLY GASKETED, DIE-CAST ALUMINUM DOOR FRAME WITH ACRYLIC LENS, TWENTY (20) HIGH EFFICIENCY LEDs WITH TWO (2) DRIVERS, TYPE IV DISTRIBUTION, BUBBLE LEVELER, SURFACE MOUNTED BACK BOX (4" HIGH X 5 1/2" WIDE X 1 1/2" DEEP), AND U. L. "WET LOCATION" LABEL. STANDARD FINISH SELECTED BY THE ARCHITECT. (47 SYSTEM WATTS.)	LITHONIA	WST LED-2-10A700/40K-SR4-MVOLT-BBW	WALL MOUNT ON EXTERIOR WALL @ 11'-0" ABOVE THE FINISHED FLOOR OR AS NOTED ON THE DRAWINGS OR AS DIRECTED BY THE ARCHITECCT.
120	I	LED	SURFACE MOUNTED ENCLOSURED LED FIXTURE, 48" X 4 18" Y E 5/8", WITY UV-STABILIZED, INJECTION MOLDED, IMPACT-RESISTANT, FROSTED POLYCARBONATE HOUSING, FULLY GASKETED, 20 GAUGE STEEL CHANNEL AND CHANNEL COVER. ALUMUMINUM SHEET METAL FOR THERMAL CONDUCTION AND SUPPORT, CAPTIVE, TAMPER-RESISTANT LATCHES, UV-STABLIZED, INJECTION MOLDED, FROSTED POLYCARBONATE LENS WITH RIB DETAIL AND ALUMINUM REFLRECTOR, WIDE LIGHTING DISTRIBUTION, WHITE LEDS WITH INTEGRAL CLASSS 1 0-10V DIMMING DRIVER, AND SURFACE MOUNTED BRACKETS. (80 CRI, 4420 LUMENS @ 3500' K., NON-DIMMING, 44 WATTS.)	LITHONIA	VAP-4000LM-FST-WD-MVOLT-GZ10-35K-80CRI-SMB	SURFACE MOUNT TO THE UNDERSIDE OF THE UTILITY TRAY

VOLTS	SYMBOL	WATTS	DESCRIPTION	MANUFACTURER*	CAT. NO.*	MOUNTING
120	A	LED	SUSPENDED HIGH BAY LED FIXTURE, 44" LONG X 15 3/8" WIDE X 6 1/4" DEEP, WITH ALUMINUM HOUSING WITH STEEL STRUCTURAL MEMBERS, HARD-TOOL ALUMINUM REFLECTORS, MEDIUM DISTRIBUTION, MULTI-VOLTAGE 0-10V DIMMING CLASS 1 DRIVERS (TOTAL OF 2) WIRED FOR OPERATING INBOARD/OUTBOARD LETS, TWO (2)TONG HANGERS AND WIRE GUARD. (80 CRI 26,830 LUMENS @ 4000' K., 0-10V DIMMING, 253 INPUT WATTS.)	LITHONIA	IBH-24000LM-SD080-MD-MVOLT-GZ10-40K-80 CRI-_-WH-THUN-WGIBH4	PER THE "CROSS SECTION ELEVATION THRU THE SHOP BUILDING", THIS SHEET
120	B	LED	WALL MOUNTED HIGH BAY LED FIXTURE, 44" LONG X 15 3/8" WIDE X 6 1/4" DEEP, WITH ALUMINUM HOUSING WITH STEEL STRUCTURAL MEMBERS, HARD-TOOL ALUMINUM REFLECTORS, MEDIUM DISTRIBUTION, MULTI-VOLTAGE 0-10V DIMMING CLASS 1 DRIVERS (TOTAL OF 2) WIRED FOR OPERATING INBOARD/OUTBOARD LETS, TWO (2)TONG HANGERS AND WIRE GUARD. (80 CRI, 26,830 LUMENS @ 4000' K., 0-10V DIMMING, 253 INPUT WATTS.)	LITHONIA	IBH-24000LM-SD080-MD-MVOLT-GZ10-40K-80 CRI-_-WH-THUN-WGIBH4	WALL MOUNT ON EXIST. WALL @ 20'-0" ABOVE THE FINISHED FL. TILTED AT 45°
120	C	LED	RECESSED LED TROFFER, 2' X 4' X 4 3/8", WITH 1-PIECE COLD ROLLED STEEL COATED POLYESTER CONSTRUCTION PAINTED AFTER FABRICATION WITH EMBOSSED FACETS, IMPACT-MODIFIED CLEAR ACRYLIC DIFFUSER, WIDE DISTRIBUTION, SLOPED END PLATES INCLUDE INTEGRAL T-BAR CLIPS, VOLUMETRIC ILLUMINATION ACHIEVED BY THE LINEAR FACETED REFLECTOR, ACRYLIC LINEAR PRISMATIC DIFFUSER WITH DIFFUSER TRIM RINGS AND WHITE LEDs WITH INTEGRAL CLASS 1 0-10V DIMMING DRIVERS. (MIN. 80 CRI, 3326.1 LUMENS @ 3500' K., NO DIMMING, 30.76 WATTS.)	LITHONIA	2VTL4-_-30L-ADPT-MVOLT-EZ1-LP835-_-_-_	RECESSED IN ACCESSIBLE CEILING
120	CE	LED	RECESSED LED TROFFER, 2' X 4' X 4 3/8", WITH 1-PIECE COLD ROLLED STEEL COATED POLYESTER CONSTRUCTION PAINTED AFTER FABRICATION WITH EMBOSSED FACETS, IMPACT-MODIFIED CLEAR ACRYLIC DIFFUSER, WIDE DISTRIBUTION, SLOPED END PLATES INCLUDE INTEGRAL T-BAR CLIPS, VOLUMETRIC ILLUMINATION ACHIEVED BY THE LINEAR FACETED REFLECTOR, ACRYLIC LINEAR PRISMATIC DIFFUSER WITH DIFFUSER TRIM RINGS, WHITE LEDs WITH INTEGRAL CLASS 1 DIMMING DRIVERS AND EMERGENCY BATTERY PACK. (MIN 80 CRI, 3326.1 LUMENS @ 3500' K., NO DIMMING, 30.76 WATTS.)	LITHONIA	2VTL4-_-30L-ADPT-MVOLT-EZ1-LP835-_-_-_-EL14L	RECESSED IN ACCESSIBLE CEILING
120	C1	LED	RECESSED LED TROFFER, 2' X 4' X 4 3/8", WITH 1-PIECE COLD ROLLED STEEL COATED POLYESTER CONSTRUCTION PAINTED AFTER FABRICATION WITH EMBOSSED FACETS, IMPACT-MODIFIED CLEAR ACRYLIC DIFFUSER, WIDE DISTRIBUTION, SLOPED END PLATES INCLUDE INTEGRAL T-BAR CLIPS, VOLUMETRIC ILLUMINATION ACHIEVED BY THE LINEAR FACETED REFLECTOR, ACRYLIC LINEAR PRISMATIC DIFFUSER WITH DIFFUSER TRIM RINGS AND WHITE LEDs WITH INTEGRAL CLASS 1 0-10V DIMMING DRIVERS. (MIN. 80 CRI, 4210.7 LUMENS @ 3500' K., NO DIMMING, 38.98 WATTS.)	LITHONIA	2VTL4-_-40L-ADPT-MVOLT-EZ1-LP835-_-_-_	RECESSED IN ACCESSIBLE CEILING
120	C1E	LED	RECESSED LED TROFFER, 2' X 4' X 4 3/8", WITH 1-PIECE COLD ROLLED STEEL COATED POLYESTER CONSTRUCTION PAINTED AFTER FABRICATION WITH EMBOSSED FACETS, IMPACT-MODIFIED CLEAR ACRYLIC DIFFUSER, WIDE DISTRIBUTION, SLOPED END PLATES INCLUDE INTEGRAL T-BAR CLIPS, VOLUMETRIC ILLUMINATION ACHIEVED BY THE LINEAR FACETED REFLECTOR, ACRYLIC LINEAR PRISMATIC DIFFUSER WITH DIFFUSER TRIM RINGS, WHITE LEDs WITH INTEGRAL CLASS 1 0-10V DIMMING DRIVERS AND EMERGENCY BATTERY PACK. (MIN. 80 CRI, 4210.7 LUMENS @ 3500' K., NO DIMMING, 38.98 WATTS.)	LITHONIA	2VTL4-_-40L-ADPT-MVOLT-EZ1-LP835-_-_-_-EL14L	RECESSED IN ACCESSIBLE CEILING
120	D	LED	RECESSED LED TROFFER, 2' X 4' X 4 3/8", WITH 1-PIECE COLD ROLLED STEEL COATED POLYESTER CONSTRUCTION PAINTED AFTER FABRICATION WITH EMBOSSED FACETS, IMPACT-MODIFIED CLEAR ACRYLIC DIFFUSER, WIDE DISTRIBUTION, SLOPED END PLATES INCLUDE INTEGRAL T-BAR CLIPS, VOLUMETRIC ILLUMINATION ACHIEVED BY THE LINEAR FACETED REFLECTOR, ACRYLIC LINEAR PRISMATIC DIFFUSER WITH DIFFUSER TRIM RINGS AND WHITE LEDs WITH INTEGRAL CLASS 1 50% STEP LEVEL DIMMING DRIVERS. (MIN. 80 CRI, 3326.1 LUMENS @ 3500' K., 50% STEP DIMMING, 30.76 WATTS.)	LITHONIA	2VTL4-_-30L-ADPT-MVOLT-SLD-LP835-_-_-_	RECESSED IN ACCESSIBLE CEILING
120	DE	LED	RECESSED LED TROFFER, 2' X 4' X 4 3/8", WITH 1-PIECE COLD ROLLED STEEL COATED POLYESTER CONSTRUCTION PAINTED AFTER FABRICATION WITH EMBOSSED FACETS, IMPACT-MODIFIED CLEAR ACRYLIC DIFFUSER, WIDE DISTRIBUTION, SLOPED END PLATES INCLUDE INTEGRAL T-BAR CLIPS, VOLUMETRIC ILLUMINATION ACHIEVED BY THE LINEAR FACETED REFLECTOR, ACRYLIC LINEAR PRISMATIC DIFFUSER WITH DIFFUSER TRIM RINGS, WHITE LEDs WITH INTEGRAL CLASS 1 50% STEP LEVEL DIMMING DRIVERS AND EMERGENCY BATTERY. PACK (MIN. 80 CRI, 3326.1 LUMENS @ 3500' K., 50% STEP DIMMER, 30.76 WATTS.)	LITHONIA	2VTL4-_-30L-ADPT-MVOLT-SLD-LP835-_-_-_-EL14L	RECESSED IN ACCESSIBLE CEILING
120	D1	LED	RECESSED LED TROFFER, 2' X 4' X 4 3/8", WITH 1-PIECE COLD ROLLED STEEL COATED POLYESTER CONSTRUCTION PAINTED AFTER FABRICATION WITH EMBOSSED FACETS, IMPACT-MODIFIED CLEAR ACRYLIC DIFFUSER, WIDE DISTRIBUTION, SLOPED END PLATES INCLUDE INTEGRAL T-BAR CLIPS, VOLUMETRIC ILLUMINATION ACHIEVED BY THE LINEAR FACETED REFLECTOR, ACRYLIC LINEAR PRISMATIC DIFFUSER WITH DIFFUSER TRIM RINGS AND WHITE LEDs WITH INTEGRAL CLASS 1 50% STEP LEVEL DIMMING DRIVERS. (MIN. 80 CRI, 4210.7 LUMENS @ 3500' K., 50% STEP DIMMING, 38.98 WATTS.)	LITHONIA	2VTL4-_-40L-ADPT-MVOLT-SLD-LP835-_-_-_	RECESSED IN ACCESSIBLE CEILING



DETAIL (1 /E403)--CROSS SECTION THRU THE SHOP BUILDING

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

PLAN
ROADWAY DESIGN DIVISION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

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STATUS:	S&W PROJECT NO.:
NOT FOR CONSTRUCTION	214055

JOHN M. WYNNE REGISTERED PROFESSIONAL ENGINEER #11869 STATE OF MISSISSIPPI

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DATE	REVISION	BY
5/18/16	REVISED DETAIL (1/E403)	HEANEY

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
DISTRICT 6
SHOP BUILDING RENOVATION
Lighting Fixtures Schedule

PROJ. NO. LWO-6017-18(006)
COUNTY: FORREST

JH&H PROJECT NO: 14-112
DESIGN TEAM Heaney CHECKED Wynne DATE: 3/23/2016

WORKING NUMBER E403
SHEET NUMBER 89

ORIGINAL SHEET SIZE 22" x 34"

ADDENDUM

PLAN
ROADWAY DESIGN DIVISION
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

FOR PRINT SCALE VERIFICATION, THIS LINE IS 4" LONG

STATE	PROJECT NO.
MISS.	BWO-6211-18(003)

SYMBOLS

MRC	PROGRAMMABLE LIGHTING CONTROL SYSTEM MINI–RELAY CABINET, SURFACE MOUNTING, WITH FOUR (4)RELAYS AND CONTRO TRANSFORMER.
LR	LIGHTING RELAY: FIELD INSTALL IN 4" SQUARE X DEPTH AS REQUIRED JUNCTION BOX WITH BLANK COVER HELD IN PLACE BY FOUR (4) SCREWS (ONE (1) PER CORNER) SURFACE MOUNTED TO A STRUCTURAL MEMBER ABOVE THE NEAREST ACCESSIBLE CEILING. FOR LOCAL LOW VOLTAGE CONTROL OF THE LIGHTING IN THE ROOM OR AREA WHERE THE SYMBOL IS LOCATED.
DR	DIMMING LIGHTING RELAY: FIELD INSTALL IN 4" SQUARE X DEPTH AS REQUIRED JUNCTION BOX WITH BLANK COVER HELD IN PLACE BY FOUR (4) SCREWS (ONE (1) PER CORNER) SURFACE MOUNTED TO A STRUCTURAL MEMBER ABOVE THE NEAREST ACCESSIBLE CEILING. FOR LOCAL LOW VOLTAGE CONTROL OF THE LIGHTING IN THE ROOM OR AREA WHERE THE SYMBOL IS LOCATED.
RR	RECEPTACLE RELAY: FIELD INSTALL IN A 4" SQUARE X DEPTH AS REQUIRED JUNCTION BOX WITH BLANK COVER HELD IN PLACE BY FOUR (4) SCREWS (ONE (1) PER CORNER) SURFACE MOUNTED TO A STRUCTURAL MEMBER ABOVE THE NEAREST ACCESSIBLE CEILING. FOR LOCAL LOW VOLTAGE AUTOMATIC CONTROL OF SELECTED DUPLEX AND DOUBLE DUPLEX RECEPTACLES IN THE ROOM OR AREA WHERE THE SYMBOL IS DRAWN.
PL	DAYLIGHT HARVESTING PHOTO–ELECTRIC CONTROL SENSING CELL.
LMA–1	BY ANY LIGHTING FIXTURE OR RECEPTACLE (DUPLEX OR DOUBLE DUPLEX) SYMBOL INDICATES SERVING PANEL–CIRCUIT NO.
LMA–2/AR1	BY ANY LIGHTING FIXTURE SYMBOL INDICATES SERVING PANEL–CIRCUIT NO./PROGRAMMABLE LIGHTING CONTROL SYSTEM RELAY DESIGNATION (LOCATED IN THE PROGRAMMABLE LIGHTING CONTROL SYSTEM MINI–RELAY CABINET ASSOCIATED WITH THE SERVING PANEL).
LMA–3/LR	BY ANY LIGHTING FIXTURE SYMBOL INDICATES SERVING PANEL–CIRCUIT NO./LOCAL LOW VOLTAGE CONTROL LIGHTING RELAY FIELD INSTALLED ABOVE THE NEAREST ACCESSIBLE CEILING.
LMA–4/DR	BY ANY LIGHTING FIXTURE SYMBOL INDICATES SERVING PANEL–CIRCUIT NO./LOCAL LOW VOLTAGE CONTROL DIMMING LIGHTING RELAY FIELD INSTALLED ABOVE THE NEAREST ACCESSIBLE CEILING.
LMA–5/RR	BY ANY DUPLEX RECEPTACLE SYMBOL INDICATES SERVING PANEL–CIRCUIT NO./LOW VOLTAGE CONTROL RECEPTACLE RECEPTACLE RELAY FIELD INSTALLED ABOVE THE NEAREST ACCESSIBLE CEILING.
LMA–6–6/RR	BY ANY DOUBLE DUPLEX RECEPTACLE SYMBOL INDICATES THE SERVING PANEL–CIRCUIT NO. FOR THE FIRST DEVICE–SERVING CIRCUIT NO./LOW VOLTAGE CONTROL RECEPTACLE RELAY FIELD INSTALLED ABOVE THE NEAREST ACCESSIBLE CEILING FOR THE SECOND DEVICE.
#	WHERE INDICATED INSIDE A ROOM OR SPACES INDICATES THE "TYPE" NUMBER OF THE INTERIOR LIGHTING AND RECEPTACLES CONTROL SCHEMATIC WIRING DIAGRAM PER DETAIL (?/E???). WHERE INDICATED AT EXTERIOR LIGHTING FIXTURES INDICATES THE "TYPE" NUMBER OF THE EXTERIOR LIGHTING CON–TROL SCHEMATIC WIRING DIAGRAM PER DETAIL (?/E???).
#	POWER CONNECTION SCHEDULE "MARK" SYMBOL PER THE "POWER CONNECTION SCHEDULE".
RH	POWER CONNECT TO RANGE HOOD WIRING SYSTEM. HOOD EQUIPPED WITH INTEGRAL SWITCHES CONTROLLING THE FAN AND LIGHT.
	LIGHTING AND SMALL POWER PANEL, SURFACE MOUNTING, 250 VOLT SYSTEM.
	POWER PANEL, SURFACE MOUNTING.
	DISTRIBUTION PANEL, SURFACE MOUNTING.
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR WITH INTEGRAL DISCONNECT MEANS: SURFACE MOUNT ON WALL ADJACENT TO THE SERVICE ENTRANCE EQUIPMENT (SWITCHBOARD OR DISTRIBUTION PANEL).
ATS	AUTOMATIC TRANSFER SWITCH: SURFACE MOUNT ON WALL.
EG	EMERGENCY ENGINE GENERATOR: FREE STANDING ON CONCRETE PAD.
DA	DOOR ACCESS CONTROL SYSTEM PROVISIONS PER DETAIL (3/E302).
FAC	FIRE ALARM SYSTEM CONTROL CABINET, MOUNT CENTERLINE 4'–6" ABOVE FINISHED FLOOR. ROUTE ALL FIRE ALARM SYSTEM HOMERUNS TO THIS POINT.
FAR	FIRE ALARM SYSTEM 80 CHARACTER LCD REMOTE ANNUNICATOR WITH ALPHA–NUMERIC DEVICE AND ZONE INDICATION. FLUSH MOUNT WITH CENTERLINE 4'–6" ABOVE FINISHED FLOOR.
F	FIRE ALARM SYSTEM MANUAL STATION, MOUNT CENTERLINE 48" ABOVE FINISHED FLOOR.
T 200'	FIRE ALARM SYSTEM THERMAL DETECTOR UNIT, MOUNT ON CEILING, 135' RATING UNLESS OTHERWISE NOTED (200').
S	FIRE ALARM SYSTEM SMOKE DETECTOR, PHOTO ELECTRIC TYPE, MOUNT ON CEILING.
	FIRE ALARM SYSTEM AUDIBLE (HORN) AND VISUAL (STROBE LIGHT) ALARM DEVICE, MOUNT CENTERLINE 80" ABOVE FINISHED FLOOR OR 6" BELOW CEILING, WHICHEVER IS LOWER.
	FIRE ALARM SYSTEM ALARM LIGHT, MOUNT CENTER LINE UP 80" ABOVE FINISHED FLOOR OR 6" BELOW CEILING, WHICHEVER IS LOWER.
PIV	FIRE ALARM SYSTEM CONNECTION TO SPRINKLER SYSTEM PIV VALVE SUPERVISORY UNIT.
OSY	FIRE ALARM SYSTEM CONNECTION TO SPRINKLER SYSTEM OSY VALVE SUPERVISORY UNIT.
FSF	FIRE ALARM SYSTEM CONNECTION TO SPRINKLER SYSTEM FLOW ALARM.
TSF	FIRE ALARM SYSTEM CONNECTION TO SPRINKLER SYSTEM TAMPER SWITCH.
CR 1	POWER CONNECTION TO CORD REEL. PROVIDE 20 AMP., 120 VOLTS, NEMA 5–20R SINGLE RECEPTACLE IN A NEMA 1 ENCLOSURE SURFACE MOUNTED TO STRUCTURAL MEMBER ADJACENT TO THE CORD REEL. CORD REEL PROVIDED AND INSTALLED BY THE ELECTRICAL CONTRACTOR PER THE FOLLOWING: CORD REELS SHALL BE INDUSTRIAL GRADE, STEEL CONSTRUCTION, WALL–MOUNTED WITH 50 FEET #12/3 CORD AND DUPLEX GROUND FAULT INTERRUPTING TYPE RECEPTACLE DEVICE EQUAL TO HUBBELL CATALOG NUMBER GCC12350–DR.
	EXISTING SUSPENDED LIGHTING FIXTURE: TO ABE REMOVED DURING DEMOLITION.
MPDC	EXISTING MAIN POWER DISTRIBUTION CENTER: WITH SERVICE ENTANCE RATED EQUIPMENT. TO BE REMOVED DURING DEMOLITION.
SPDC	EXISTING SECONDARY POWER DISTRIBUTION CENTER: TO BE REMOVED DURING DEMOLITION.
E	EXISTING ACCESSIBLE CONDUIT.
	THROUGH ANY SYMBOL INDICATES BLANK UP, REMOVE OR ABANDON AS REQUIRED; THROUGH ANY CONDUIT INDICATES REMOVE IF ACCESSIBLE, PULL OUT CONDUCTORS.
	EXISTING SERVICE ENTRANCE MAST WITH WEATHERHEAD: TO BE REMOVED.

	BRANCH CIRCUIT (CONDUIT AND WIRING) CONCEALED ABOVE CEILING OR IN WALL, NUMBER OF CONDUCTORS. (—⏚—) INDICATES GREEN GROUNDING CONDUCTOR SIZED PER BRANCH CIRCUIT UNLESS OTHERWISE NOTED.
	BRANCH CIRCUIT (CONDUIT AND WIRING) CONCEALED IN OR UNDER FLOOR SLAB AS DIRECTED, NUMBER OF CON–DUCTORS.
	BRANCH CIRCUIT (CONDUIT AND WIRING) EXPOSED ON CEILING ONLY, NUMBER OF CONDUCTORS.
	BRANCH CIRCUIT (CONDUIT AND WIRING) EXPOSED IN LIQUIDTIGHT FLEXIBLE CONDUIT, NUMBER CONDUCTORS.
LAA–1–2–3	HOMERUN, PANEL AND CIRCUIT DESIGNATIONS, NUMBER OF CONDUCTORS.
T–1"	TELECOMMUNICATIONS SYSTEMS CONDUIT CONCEALED OR EXPOSED PER BRANCH CIRCUIT SYMBOLS, SIZE.
A	CEILING OUTLET WITH FIXTURE SYMBOL.
B*	WALL BRACKET OUTLET WITH FIXTURE SYMBOL.
C	SURFACE MOUNTED OR SUSPENDED FLUORESCENT FIXTURE WITH FIXTURE SYMBOL.
D	RECESSED FLUORESCENT FIXTURE WITH FIXTURE SYMBOL
E	FLUORESCENT WALL BRACKET WITH FIXTURE SYMBOL.
F	COLUMN MOUNTED EMERGENCY BATTERY PACK WITH TWO (2) LIGHT HEADS WITH FIXTURE SYMBOL.
	TELECOMMUNICATIONS SYSTEM BACKBOARD, SIZE AS NOTED 3/4" THICK PLYWOOD, LONG DIMENSION VERTICAL.
	TELECOMMUNICATIONS SYSTEMS OUTLET AND PLATE: 4" SQUARE BOX X PROPER DEPTH, SINGLE GANG RAISED COVER AND WALL PLATE, WITH 1" TELECOMMUNICATIONS CONDUIT STUBBED–UP AND BUSHED ABOVE THE NEAREST ACCESSIBLE CEILING OR AS NOTED IN AREAS WITHOUT A CEILING.
	TELECOMMUNICATIONS SYSTEMS OUTLET AND PLATE: 4" SQUARE BOX X PROPER DEPTH, SINGLE GANG RAISED COVER AND WALL PLATE, FLUSH MOUNT CENTERLINE 4" ABOVE THE TOP SURFACE OF THE COUNTERTOP/BACK–SPLASH, WITH 1" TELECOMMUNICATIONS CONDUIT STUBBED–UP AND BUSHED ABOVE THE NEAREST ACCESSIBLE CEIL–ING OR AS NOTED IN AREAS WITHOUT A CEILING.
J	SURFACE JUNCTION BOX, SIZE AND MOUNTING HEIGHT AS NOTED.
J	FLUSH JUNCTION BOX, SIZE AND MOUNTING HEIGHT AS NOTED. NOTE: NOT ALL FLUSH TYPE BOXES WILL HAVE COVERS.
$	SWITCH, SINGLE POLE FLUSH TUMBLER. MOUNT CENTERLINE UP 48", UNLESS NOTED OTHERWISE ON THE PLANS OR IN THE SPECIFICATIONS.
$LV#	SWITCH, LOW VOLTAGE, NUMBER OF BUTTONS. MOUNT CENTERLINE UP 48", UNLESS NOTED OTHERWISE ON THE PLANS OR IN THE SPECIFICATIONS. CONNECT TO THE PROGRAMMABLE LIGHTING CONTROL SYSTEM MINI–RELAY CAB–INET WHERE THE LIGHTING IS NOT CONTROLLED BY A LOCAL LOW VOLTAGE SWITCHING CONTROL SYSTEM; OTHERWISE, CONNECT AS PART OF THE LOCAL LOW VOLTAGE SWITCHING CONTROL SYSTEM PER THE APPROPRIATE LIGHTING CON–TROL DETAIL.
	OCCUPANCY SENSOR, MULTI–TECHNOLOGY TYPE (INFRARED/ULTRASONIC) WITH POWER RELAY. MOUNT AT CEILING, LOCATE AND AIM TO PROVIDE OPTIMUM COVERAGE OF ROOM/SPACE.
	OCCUPANCY SENSOR, MULTI–TECHNOLOGY TYPE (INFRARED/ULTRASONIC) WITH POWER RELAY, WALL MOUNT CENTERLINE UP 9'–0" ABOVE FINISHED FLOOR., LOCATE AND AIM TO PROVIDE OPTIMUM COVERAGE OF ROOM/SPACE.
$T	MANUAL MOTOR SWITCH, SINGLE POLE, FLUSH MOUNTING. MOUNT CENTERLINE UP 48", UNLESS OTHERWISE NOTED ON THE PLANS OR IN SPECIFICATIONS.
SU	SWITCH, UNFUSED SAFETY, NUMBER POLES, AMPS, 250 VOLTS.
SUR	SWITCH, UNFUSED SAFETY, RAINTIGHT, MUMBER POLES, AMPS., 250 VOLTS.
SF	SWITCH, FUSED SAFETY, NUMBER POLES, AMPS., DUAL ELEMENT FUSE SIZE, 250 VOLTS.
TS	TIME SWITCH, MOUNTED 4'–6" ABOVE EXISTING FLOOR.
C	MAGNETIC CONTACTOR, NUMBER OF POLES, AMPS.
	PHOTO–ELECTRIC CONTROL SENSING CELL, AIM TO NORTH.
	DUPLEX GROUNDABLE RECEPTACLE, 20 AMP;, 120 VOLTS, NEMA 5–20R, SEE SPECIFCICATIONS FOR NUMBER OF CAPS (NEMA 5–15P) TO BE FURNISHED.
	DUPLEX GROUNDABLE RECEPTACLE, 20 AMP., 120 VOLTS, NEMA 5–20R, SEE SPECIFICATIONS FOR NUMBER OF CAPS (NEMA 5–15P) TO BE FURNISHED, MOUNT CENTERLINE UP 4" ABOVE COUNTER/BACK SPLASH.
	DOUBLE DUPLEX GROUNDABLE RECEPTACLE, 20 AMP., 120 VOLTS, NEMA 5–20R, SEE SPECIFICATIONS. FOR NUMBER OF CAPS (NEMA 5–15P) TO BE FURNISHED.
	DOUBLE DUPLEX GROUNDABLE RRECEPTACLE, 20 AMP., 120 VOLTS, NEMA 5–20R, SEE SPECIFICATIONS FOR NUMBER OF CAPS (NEMA 5–15P) TO BE FURNISHED. FLUSH MOUNT CENTERLINE 4" ABOVE THE COUNTERTOP/BACK SPLASH.
	DUPLEX GROUNDABLE RECEPTACLE, 20 AMP., 120 VOLTS NEMA 5–20R, SEE SPECIFICATIONS FOR NUMBER OF CAPS (NEMA 5–20P) TO BE FURNISHED, GROUND FAULT INTERRUPTER TYPE.
	DUPLEX GROUNDABLE RECEPTACLE, 20 AMP., 120 VOLTS, NEMA 5–20R, SEE SPECIFICATIONS FOR NUMBER OF CAPS (NEMA 5–20R) TO BE FURNISHED, GROUND FAULT INTERRUPTER TYPE. MOUNT CENTERLINE 4" ABOVE THE COUNTER–TOP/BACK SPLASH.
	DUPLEX GROUNDABLE RECEPTACLE, 20 AMP., 120 VOLTS NEMA 5–20R, SEE SPECIFICATIONS FOR NUMBER OF CAPS (NEMA 5–15P) TO BE FURNISHED, WITH GROUND FAULT INTERRUPTER TYPE RECEPTACLE DEVICE, MOUNTE CENTER–LINE UP 48" ABOVE THE FINISHED FLOOR.
WP	DUPLEX GROUNDABLE WEATHERPROOF CONVENIENCE OUTLET, 120 VOLTS, NEMA 5–20R, MOUNT IN TYPE "FD" BOX, GROUND FAULT INTERRUPTER TYPE.
	SINGLE RECEPTACLE: 30 AMP., 120 VOLTS, 2 POLE, 3 WIRE GROUNDED, NEMA 5–30R, WITH PLUG.
	SINGLE RECEPTACLE: 30 AMP., 208 VOLTS, SINGLE PHASE, 2 POLE, 3 WIRE GROUNDED, NEMA 6–30R, WITH PLUG.
	SINGLE RECEPTACLE: 50 AMP., 120/208 VOLTS, SINGLE PHASE, 3 POLE, 4 WIRE GROUNDED, NEMA 14–50R, WITH PLUG.
WS	WELDING STATION: FUSED DISCONNECT SWITCH WITH SINGLE RECEPTACLE PER DETAIL (6/E302).
SING	BY ANY DUPLEX RECEPTACLE SYMBOL THAT ONLY A SINGLE GROUNDABLE RECEPTACLE (20 AMP., 120 VOLTS, NEMA 5–20R) DEVICE TO BE PROVIDED.
4PLEX	BY ANY DUPLEX RECEPTACEL SYMBOL INDICATES THAT A DOUBLE DUPLEX RECEPTACLE TO BE PROVIDED.

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DATE	REVISION	BY
7/13/16	REVISED SYMBOLS	HEANEY

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
DISTRICT 6
SHOP BUILDING RENOVATION
Symbols & Ltg. Fixt. Sch.
PROJ. NO. LWO-6017-18(006)
COUNTY: FORREST

JH&H PROJECT NO: 14-112
DESIGN TEAM Heaney CHECKED Wynne DATE: 3/23/2016

WORKING NUMBER E404
SHEET NUMBER 90

ORIGINAL SHEET SIZE 22" x 34"