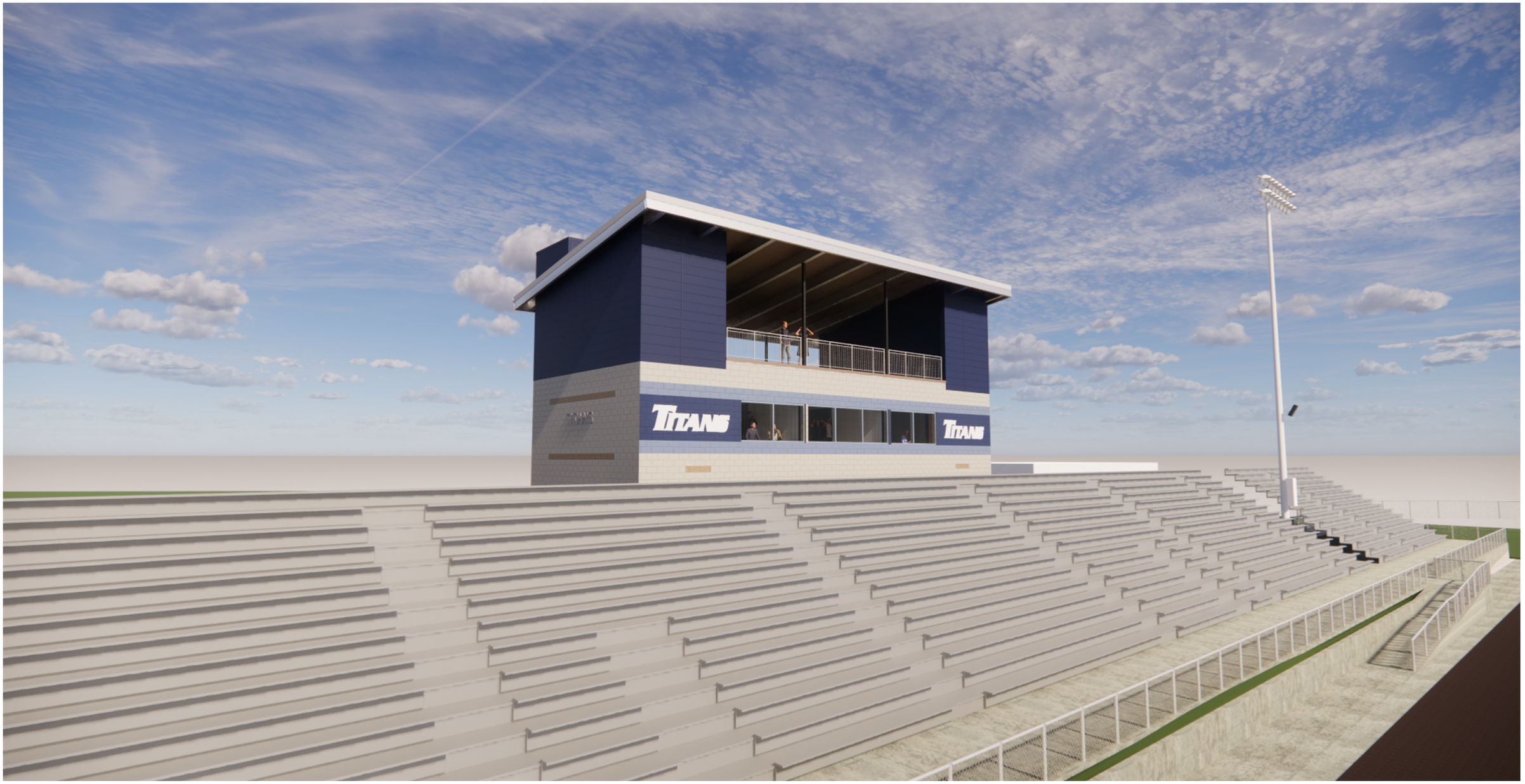

Lee's Summit R7 District Athletics Facilities

Lee's Summit West High School
2600 SW Ward Road
Lee's Summit, MO 64082

VOLUME 3 Cover Sheet

W-G000

September 28, 2020

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BID SET

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SITE LOCATION MAP

General Notes:

1. THE INTENT OF THE CONTRACT DOCUMENTS IS TO INCLUDE ALL ITEMS NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK BY THE CONTRACTOR. THE CONTRACT DOCUMENTS ARE COMPLEMENTARY, AND WHAT IS REQUIRED BY ONE SHALL BE AS BINDING AS IF REQUIRED BY ALL; PERFORMANCE BY THE CONTRACTOR SHALL BE REQUIRED ONLY TO THE EXTENT CONSISTENT WITH THE CONTRACT DOCUMENTS AND REASONABLY INFERABLE FROM THEM AS BEING NECESSARY TO PRODUCE THE INDICATED RESULTS.
2. ORGANIZATION OF THE SPECIFICATIONS INTO DIVISIONS, SECTIONS AND ARTICLES, AND ARRANGEMENT OF DRAWINGS SHALL NOT CONTROL THE CONTRACTOR IN DIVIDING THE WORK AMONG SUBCONTRACTORS OR IN ESTABLISHING THE EXTENT OF WORK TO BE PERFORMED BY ANY TRADE.
3. DRAWINGS, SPECIFICATIONS, GENERAL AND SUPPLEMENTARY CONDITIONS ARE ESSENTIAL PARTS OF THE CONTRACT. IN THE EVENT OF ANY DISCREPANCY BETWEEN A DRAWING AND FIGURES WRITTEN THEREON, THE FIGURES, UNLESS OBVIOUSLY INCORRECT, ARE TO GOVERN OVER SCALED DIMENSIONS. IN THE CASE OF ANY DISCREPANCY BETWEEN THE DRAWINGS AND THE SPECIFICATIONS, THE SPECIFICATIONS ARE TO GOVERN. IF THERE IS A DISCREPANCY BETWEEN LARGE AND SMALL SCALE DETAILS, THE LARGER SCALE DETAILS ARE TO GOVERN. SUPPLEMENTARY CONDITIONS SHALL GOVERN OVER SPECIFICATIONS, DRAWINGS AND GENERAL CONDITIONS. THE CONTRACTOR SHALL ADVISE THE ARCHITECT OF ANY DISCREPANCIES OR CONFLICTS BETWEEN CONTRACT DOCUMENTS AS SOON AS THEY ARE DISCOVERED.
4. NOTWITHSTANDING THE ABOVE, IN THE CASE OF INCONSISTENCY BETWEEN DRAWINGS AND SPECIFICATIONS, OR WITHIN EITHER DOCUMENT NOT CLARIFIED BY ADDENDUM OR BY ARCHITECT'S SUPPLEMENTAL INSTRUCTION, THE BETTER QUALITY OR GREATER QUANTITY SHALL BE PROVIDED.
5. DRAWINGS SHALL NOT BE SCALED TO DETERMINE DIMENSIONS. IF DIMENSIONS APPEAR TO BE INSUFFICIENT OR INCORRECT, THE CONTRACTOR SHALL REQUEST CLARIFICATION FROM THE ARCHITECT.
6. WHENEVER CONTRACT DOCUMENTS REASONABLY IMPLY MATERIALS OR INSTALLATION AS NECESSARY TO PRODUCE THE INTENDED RESULTS, BUT DO NOT FULLY DETAIL OR SPECIFY SUCH MATERIALS, THE CONTRACTOR SHALL PROVIDE THE MATERIALS AND LABOR REQUIRED FOR INSTALLATION NONETHELESS.
7. PROVIDE ALL WORK INDICATED UNLESS SPECIFICALLY INDICATED AS "NOT IN CONTRACT" (NIC), "FURNISHED BY OTHERS" (FBO) OR "EXISTING".
8. CONTRACT DOCUMENTS ARE INTENDED TO CONVEY DESIGN INTENT ONLY. PROVIDE PRODUCTS COMPLETE WITH ACCESSORIES, TRIM, FINISH, FASTENERS, AND OTHER ITEMS NEEDED FOR A COMPLETE INSTALLATION AND INDICATED USE AND EFFECT.
9. THESE NOTES ARE NOT INTENDED TO LIMIT THE RESPONSIBILITIES OF THE CONTRACTOR AS DEFINED ELSEWHERE IN THE CONTRACT DOCUMENTS

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Lee's Summit R7 District Athletics Facilities

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Lee's Summit, MO 64063

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STATE OF MISSOURI
JAY DARREN BROWNING
NUMBER A-2009027279
ARCHITECT
9.28.20

Architectural Corporation
Missouri License No. 2018022991
Jay Browning Date: 09/28/2020
Architect License No. A-2009027279

REVISIONS

Number	DESCRIPTION	DATE

PROJECT NO: 0119-0101
DATE: September 28, 2020

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H-G001

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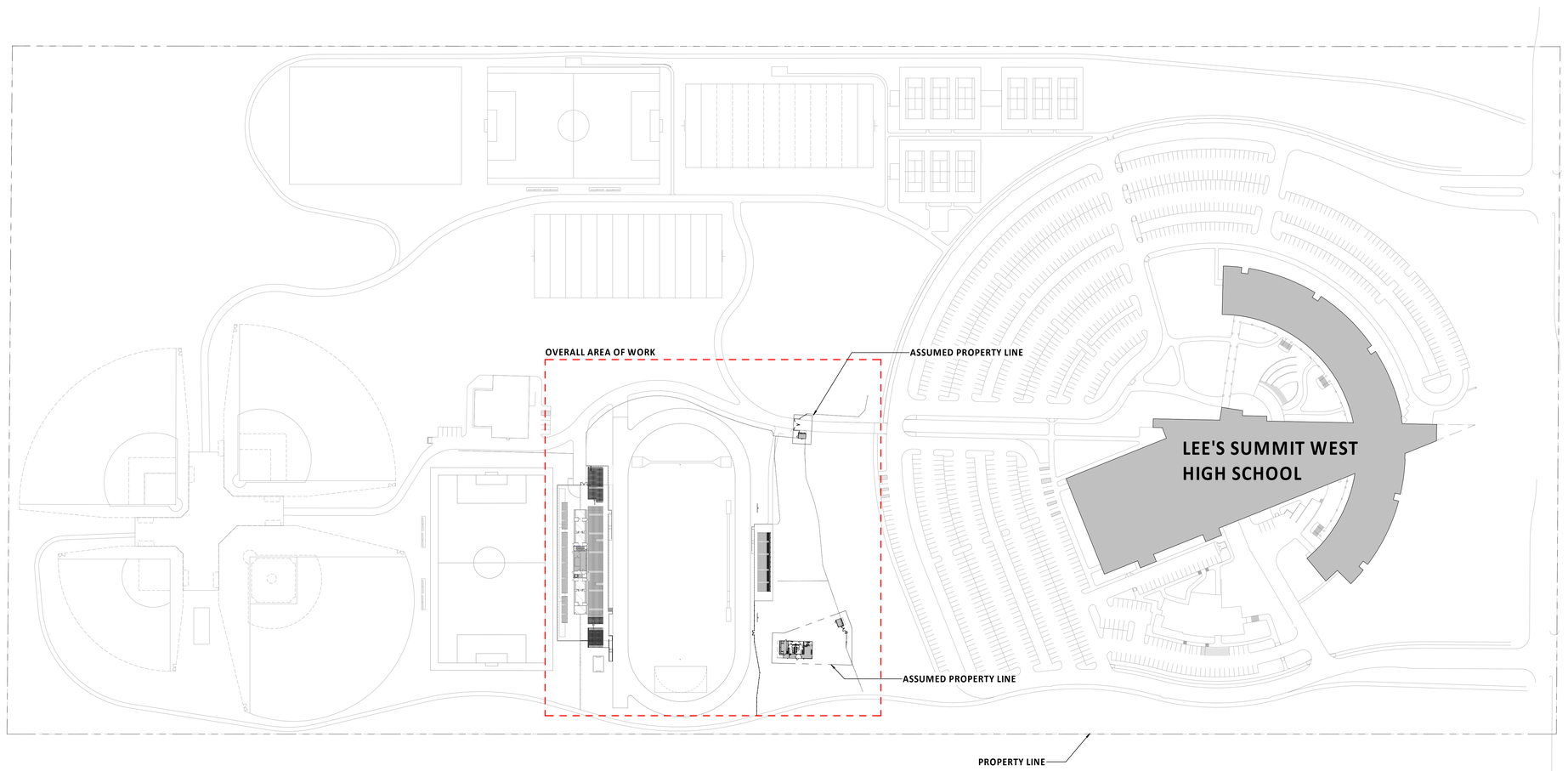

General Notes (Code Plans):

1. ALL WORK, MATERIALS, AND METHODS SHALL BE IN CONFORMANCE WITH THE CODES, ORDINANCES AND REGULATIONS OF ALL GOVERNMENTAL AGENCIES HAVING JURISDICTION AT THE PROJECT LOCATION.
2. CONTRACTOR SHALL PROVIDE AND IS SOLELY RESPONSIBLE AND LIABLE FOR PUBLIC AND EMPLOYEE PROTECTION AS NECESSARY AND AS REQUIRED BY THE CODES, INCLUDING EXTERIOR PEDESTRIAN AND TRAFFIC BARRIERS. ALL WORK SHALL CONFORM TO ORDINANCES AND REGULATIONS OF GOVERNMENTAL AGENCIES HAVING JURISDICTION AT THE PROJECT LOCATION.
3. THE SIZE, TYPE, QUANTITY, AND LOCATION OF ALL TEMPORARY FIRE EXTINGUISHERS SHALL BE DETERMINED BY THE AUTHORITY HAVING JUISDICTION.
4. COORDINATE LOCATION OF KNOX BOX WITH ARCHITECT, OWNER'S REPRESENTATIVE, AND THE AUTHORITY HAVING JUISDICTION IN THE FIELD.

0' 50' 100' 200'

Site Context Plan A3
1" = 100'-0"

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Lee's Summit R7 District Athletics Facilities

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Jay Darren Browning Date: 09/28/2020
Architect License No. A-2009027279

REVISIONS

Number	DESCRIPTION	DATE

PROJECT NO: 0119-0101
DATE: September 28, 2020

Site Context

W-G100

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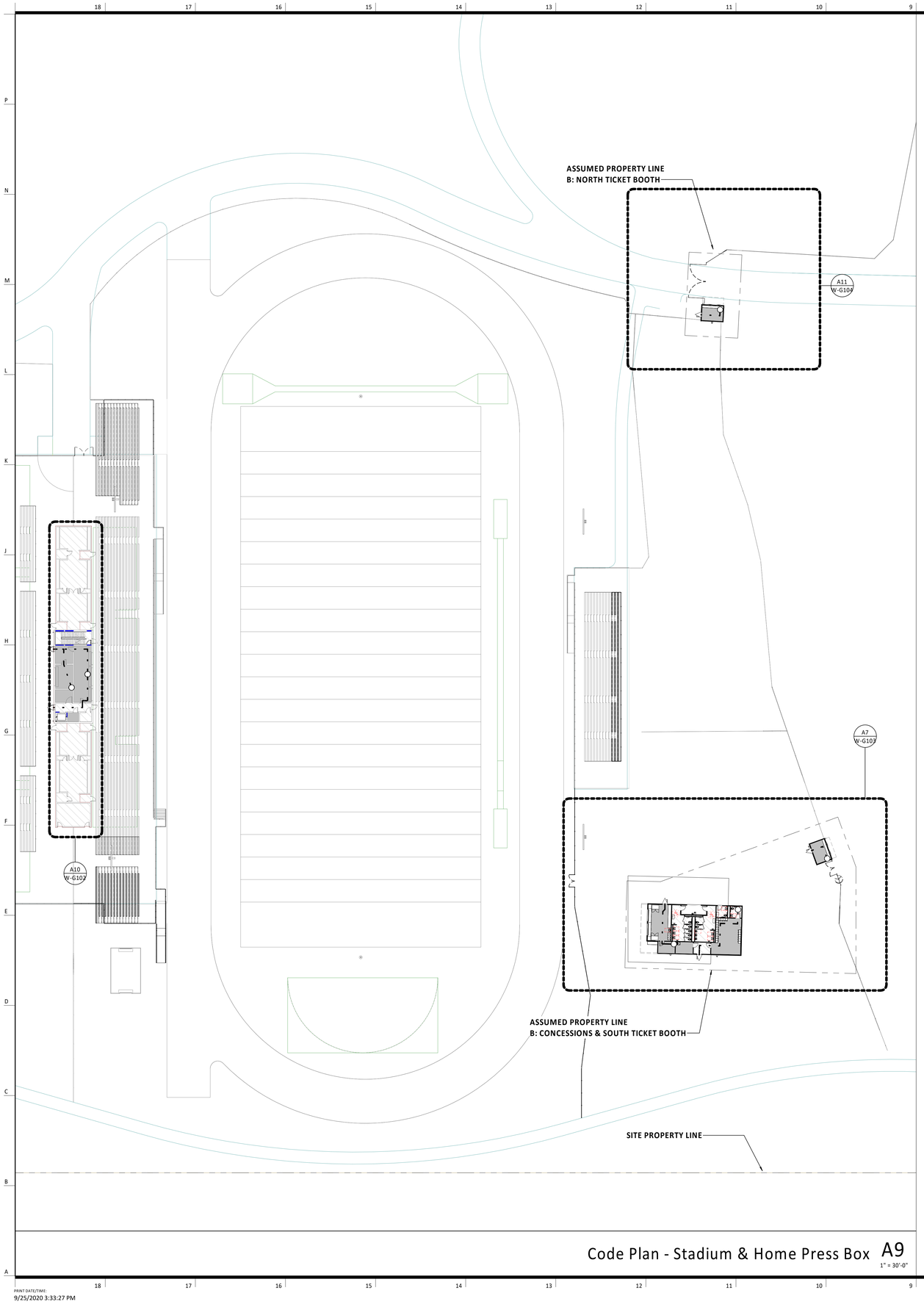


PLUMBING FIXTURE COUNT:

(BASED ON APPROVAL FROM CITY OF LEE'S SUMMIT)

	MEN		WOMEN		FAMILY/ UNISEX		
	WC:	LAV:	WC:	LAV:	WC:	LAV:	DF:
EXISTING FIXTURES	14	8	24	8	1	1	2
NEW FIXTURES:	5	2	5	3	2	2	2
TOTAL FIXTURES PROVIDED:	**10** WC 5 URINALS	**10**	**29**	**11**	**3**	**3**	**4**
TOTAL ACCESSIBLE FIXTURES:	3 WC 4 URINALS	3	3	3	3	3	2

Description

RENOVATION TO EXISTING OUTDOOR STADIUM FACILITIES WHICH WILL INCLUDE EXPANSION OF EXISTING PRESS BOX; CONSTRUCTION OF NEW RESTROOMS, CONCESSIONS, AND TICKET BOOTHS; AND CONSTRUCTION OF NEW BLEACHER SEATING.

Applicable Codes

2018 International Building Code
2018 International Existing Building Code
2018 International Fire Code
2017 National Electric Code
2018 International Mechanical Code
2018 International Plumbing Code
2018 International Enery Conservation Code
2009 Accessible and Usable Buildings and Facilities

Building complies with all applicable codes.

Occupancy Classifications

THE PROJECT SITE CONTAINS (3) ASSUMED PROPERTIES; EACH WITH A SINGLE USE OCCUPANCY IN EXISTING AND RENOVATED AREAS:

A-5: OUTDOOR STADIUM & PRESS BOX (SECTION 303)
B: CONCESSIONS & SOUTH TICKET BOOTH (SECTION 304)
B: NORTH TICKET BOOTH (SECTION 304)

Type of Construction

TYPE II-B (SECTION 602)

Allowable Height

	NON-SPRINKLED		SPRINKLED	
	HEIGHT	STORIES	HEIGHT	STORIES
A-5:	55'	UL	75'	UL
B:	55'	3	75'	4

(TABLE 504.3)
(TABLE 504.4)

Building Height

PRESS BOX + ADDITION: 3 STORIES - APX 47'
CONCESSIONS/LOCKER ROOM: 1 STORY - APX 15'
NORTH TICKET BOOTH: 1 STORY - APX 13'
SOUTH TICKET BOOTH: 1 STORY - APX 13'

Allowable Area

NON SPRINKLED (NS)	SPRINKLED (S1)	SPRINKLED (SM)
A-5: UL	UL	UL
B: 23,000 SF	92,000 SF	69,000 SF

(TABLE 506.2)

Building Area

PRESS BOX:
EXISTING BUILDING AREA: 6,000 SF
NEW CONSTRUCTION BUILDING AREA: 1,500 SF
TOTAL BUILDING AREA: 7,500 SF

CONCESSIONS/LOCKER BUILDING AREA: 1,785 SF

NORTH TICKET BOOTH BUILDING AREA: 140 SF

SOUTH TICKET BOOTH BUILDING AREA: 140 SF

Passive Fire Requirements

EXTERIOR BEARING WALLS: **0 HR** (TABLE 601)
INTERIOR BEARING WALLS: **0 HR** (TABLE 601)
EXTERIOR NON-BEARING WALLS: **0 HR** (>30' FROM C.L. OF PROPERTY LINE, TABLE 602)
OPENING PROTECTION AT EXT. WALL: **0 HR** (>30' FROM C.L. OF PROPERTY LINE, TABLE 705.8)
STRUCTURAL FRAME: **0 HR** (TABLE 601)
ROOF SUPPORTS: **0 HR** (TABLE 601)
NON-BEARING WALLS & INTERIOR PARTITIONS: **0 HR** (TABLE 601)
CORRIDORS: **0 HR** (TABLE 1020.1)
FLOOR CONSTRUCTION: **0 HR** (TABLE 601)

Active Fire Resistance Requirements

AUTOMATIC SPRINKLER SYSTEM: **NOT REQUIRED** (SECTION 903)
STANDPIPES: **NOT REQUIRED** (SECTION 905)
FIRE ALARM SYSTEM: **NOT REQ'D. DUE TO OCCUPANT LOAD** (SECTION 907.2.1)
SMOKE DETECTION: **NOT REQUIRED**
EXIT SIGNS: **REQUIRED**
NOT REQUIRED IN ROOMS THAT REQUIRE ONLY ONE EXIT. (SECTION 1013)
EMERGENCY LIGHTING: **MINIMUM OF 1 FOOTCANDLE AT THE WALKING SURFACE** (SECTION 1008.2.1)
PORTABLE FIRE EXTINGUISHERS: **REQUIRED** (SECTION 906.1)

Means of Egress

COMMON PATH OF EGRESS TRAVEL:

COMMON PATH OF EGRESS TRAVEL SHOULD NOT EXCEED 75 FEET FOR USE GROUP A IN NON-SPRINKLED BUILDINGS (IBC TABLE 1006.2.1). THE MAXIMUM OCCUPANT LOAD OF SPACE IS 49. TWO EXITS OR EXIT ACCESS DOORWAYS FROM ANY SPACE SHALL BE PROVIDED WHERE THE DESIGN OCCUPANT LOAD OR COMMON PATH OF EGRESS TRAVEL DISTANCE EXCEEDS THE VALUES LISTED IN TABLE 1006.2.1 (IBC SECTION 1006.2.1)

DEAD END CORRIDORS:

DEAD END CORRIDORS SHOULD NOT EXCEED 20 FEET IN LENGTH FOR USE GROUP A (IBC SECTION 1020.4). DEAD END CORRIDORS IN AN EXISTING CONDITION SHOULD NOT EXCEED 35' (IEBC SECTION 805.6)

TRAVEL DISTANCE:

THE MAXIMUM TRAVEL DISTANCE TO AN EXIT SHOULD NOT EXCEED 200 FEET FOR USE GROUP A OCCUPANCIES (IBC TABLE 1017.2)

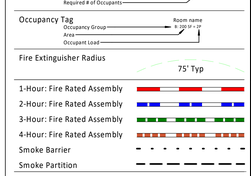
DOOR SWING:

DOOR SWING IS REQUIRED TO SWING IN THE DIRECTION OF TRAVEL WHEN THE OCCUPANT LOAD IS MORE THAN 50 (IBC SECTION 1010.1.2.1)

General Notes (Code Plans):

1. ALL WORK, MATERIALS, AND METHODS SHALL BE IN CONFORMANCE WITH THE CODES, ORDINANCES AND REGULATIONS OF ALL GOVERNMENTAL AGENCIES HAVING JURISDICTION AT THE PROJECT LOCATION.
2. CONTRACTOR SHALL PROVIDE AND IS SOLELY RESPONSIBLE AND LIABLE FOR PUBLIC AND EMPLOYEE PROTECTION AS NECESSARY AND AS REQUIRED BY THE CODES, INCLUDING EXTERIOR PEDESTRIAN AND TRAFFIC BARRIERS. ALL WORK SHALL CONFORM TO ORDINANCES AND REGULATIONS OF GOVERNMENTAL AGENCIES HAVING JURISDICTION AT THE PROJECT LOCATION.
3. THE SIZE, TYPE, QUANTITY, AND LOCATION OF ALL TEMPORARY FIRE EXTINGUISHERS SHALL BE DETERMINED BY THE AUTHORITY HAVING JUISDICTION.
4. COORDINATE LOCATION OF KNOX BOX WITH ARCHITECT, OWNER'S REPRESENTATIVE, AND THE AUTHORITY HAVING JUISDICTION IN THE FIELD.

Code Plan Legend:



Path of Egress Schedule	
Mark	Path of Egress
Path 1.01	32' - 9 11/16"
Path 1.02	39' - 4 5/8"
Path 1.03	44' - 3 3/8"
Path 1.04	34' - 11 1/4"
Path 1.05	55' - 7 5/8"
Path 1.06	16' - 5 3/16"
Path 1.07	16' - 6"
Path 2.01	38' - 4 3/4"
Path 2.02	44' - 4 3/4"
Path 3.01	56' - 1 1/2"

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Lee's Summit R7 District Athletics Facilities

Lee's Summit West High School
2600 SW Ward Road
Lee's Summit, MO 64082

owner:
Lee's Summit R-7 School District
301 NE Tudor Road
Lee's Summit, MO 64086

architect:
Gould Evans
4200 Pennsylvania Avenue
Kansas City, MO 64111
816.931.6655 voice
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structural engineer:
Bob D. Campbell & Company, Inc.
4338 Belleview Avenue
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mechanical/electrical engineer:
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Architectural Corporation
Missouri License No. 2018022991
Jay Darren Browning Date: 09/28/2020
Architect License No. A-2009027279

REVISIONS

Number	DESCRIPTION	DATE

PROJECT NO: 0119-0101
DATE: September 28, 2020

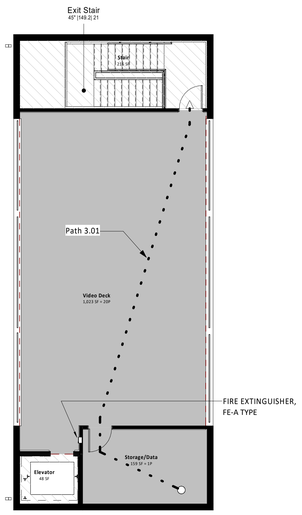
Code Summary - Stadium & Home Press Box

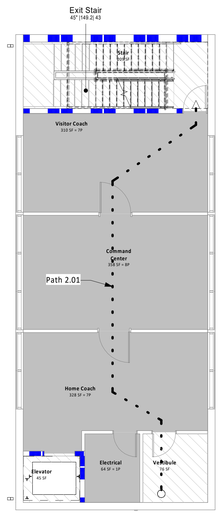
W-G101

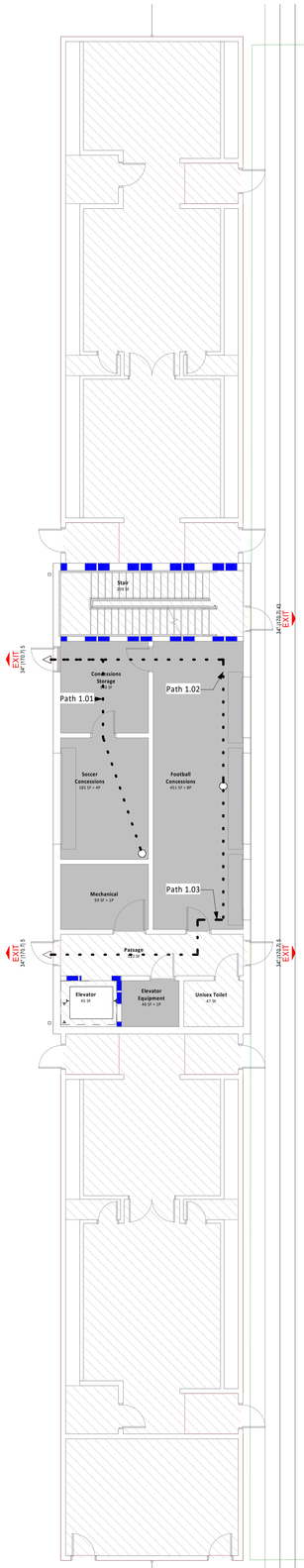
BID SET

Code Plan - Stadium & Home Press Box A9
1" = 30'-0"

PRINT DATE/TIME:
9/25/2020 3:33:27 PM







Code Plan - Home Press Box - Level 3 A16 1/8" = 1'-0"

Code Plan - Home Press Box - Level 2 A13 1/8" = 1'-0"

Code Plan - Home Press Box - Level 1 A10 1/8" = 1'-0"

OCCUPANT LOADS:

(BASED ON 2018 IBC TABLE 1004.5)

STORAGE AREAS, MECHANICAL/ELECTRICAL EQUIPMENT ROOM	300 GROSS
PRESS BOX	50 GROSS
VIDEO DECK	50 GROSS
CONCESSIONS	60 GROSS
TICKETING	60 GROSS

PRESS BOX - LEVEL 1

STORAGE/MECH. (2):	460 SF	2 OCCUPANTS
CONCESSIONS (2):	696 SF	12 OCCUPANTS

LEVEL 1 TOTAL: 15 OCCUPANTS

PRESS BOX - LEVEL 2

ELECTRICAL:	64 SF	1 OCCUPANT
PRESS BOX (3):	1,031 SF	21 OCCUPANTS

LEVEL 2 TOTAL: 22 OCCUPANTS

PRESS BOX - LEVEL 3

STORAGE/DATA:	186 SF	1 OCCUPANT
VIDEO DECK:	969 SF	20 OCCUPANTS

LEVEL 3 TOTAL: 21 OCCUPANTS

TOTAL: 58 OCCUPANTS

Exiting Requirements

EXIT WIDTHS DOORS, RAMPS, ETC (NOT INCLUDING BLEACHERS):
60 PEOPLE PER FOOT
0.2" PER OCCUPANT (SECTION 1005.3.2)

STAIRS (NOT INCLUDING BLEACHERS):
40 PEOPLE PER FOOT
0.3" PER OCCUPANT (SECTION 1005.3.1)

TRAVEL DISTANCE:
ALLOWED: 200' (NON-SPRINKLED)
ACTUAL: SEE CODE PLAN (TABLE 1017.2)

COMMON PATH OF TRAVEL:
75' FOR A OCCUPANCY (SECTION 1006.2.1)

NUMBER OF EXITS REQUIRED:
ROOMS WITH OL 49 OR LESS: 1 EXIT
ROOMS WITH OL 50-500: 2 EXITS
ROOMS WITH OL 501-1,000: 3 EXITS
ROOMS WITH OL 1,001 OR MORE: 4 EXITS
(TABLE 1006.2.1, SECTION 1006.2.1.1)

PANIC HARDWARE:
NOT REQUIRED IN BUILDINGS (DUE TO OCCUPANT LOADS) (SECTION 1010.1.10)

REQUIRED EXIT WIDTH: **58 x 0.2" = 11.6"**
ACTUAL EXIT WIDTH: **136"**
TOTAL EGRESS CAPACITY: **680**
ACTUAL OCCUPANCY: **58**

Description

RENOVATION TO EXISTING OUTDOOR STADIUM FACILITIES WHICH WILL INCLUDE EXPANSION OF EXISTING PRESS BOX; CONSTRUCTION OF NEW RESTROOMS, CONCESSIONS, AND TICKET BOOTHS; AND CONSTRUCTION OF NEW BLEACHER SEATING.

Applicable Codes

2018 International Building Code
2018 International Existing Building Code
2018 International Fire Code
2017 National Electric Code
2018 International Mechanical Code
2018 International Plumbing Code
2018 International Enery Conservation Code
2009 Accessible and Usable Buildings and Facilities

Building complies with all applicable codes.

Occupancy Classifications

THE PROJECT IS A SINGLE USE OCCUPANCY IN EXISTING AND RENOVATED AREAS:

A-5 ASSEMBLY

Type of Construction

TYPE II-B

Allowable Height

	NON SPRINKLED	
	HEIGHT	STORIES
A-5:	55'	UL

Building Height

PRESS BOX + ADDITION: 3 STORIES - APX 47'

Allowable Area

	NON SPRINKLED (NS)	SPRINKLED (S1)
A-5:	UL	UL

Building Area

PRESS BOX:
EXISTING BUILDING AREA: 6,000 SF
NEW CONSTRUCTION BUILDING AREA: 1,500 SF
TOTAL BUILDING AREA: 7,500 SF

Passive Fire Requirements

EXTERIOR BEARING WALLS: **0 HR**

INTERIOR BEARING WALLS: **0 HR**

EXTERIOR NON-BEARING WALLS: **0 HR** (>30' FROM C.L. OF PROPERTY LINE, TABLE 602)

OPENING PROTECTION AT EXT. WALL: **0 HR** (>30' FROM C.L. OF PROPERTY LINE, TABLE 705.8)

STRUCTURAL FRAME: **0 HR**

ROOF SUPPORTS: **0 HR**

NON-BEARING WALLS & INTERIOR PARTITIONS: **0 HR**

CORRIDORS: **0 HR**

FLOOR CONSTRUCTION: **0 HR**

Active Fire Resistance Requirements

AUTOMATIC SPRINKLER SYSTEM: (SECTION 903)
NOT REQUIRED

STANDPIPES: **NOT REQUIRED** (SECTION 905)

FIRE ALARM SYSTEM: **NOT REQ'D. DUE TO OCCUPANT LOAD** (SECTION 907.2.1)

SMOKE DETECTION: **NOT REQUIRED**

EXIT SIGNS: **NOT REQUIRED IN ROOMS THAT REQUIRE ONLY ONE EXIT.** (SECTION 1013)

EMERGENCY LIGHTING: **MINIMUM OF 1 FOOTCANDLE AT THE WALKING SURFACE** (SECTION 1008.2.1)

PORTABLE FIRE EXTINGUISHERS: **REQUIRED** (SECTION 906.1)

Means of Egress

COMMON PATH OF EGRESS TRAVEL:

COMMON PATH OF EGRESS TRAVEL SHOULD NOT EXCEED 75 FEET FOR USE GROUP A IN NON-SPRINKLED BUILDINGS (IBC TABLE 1006.2.1). THE MAXIMUM OCCUPANT LOAD OF SPACE IS 49. TWO EXITS OR EXIT ACCESS DOORWAYS FROM ANY SPACE SHALL BE PROVIDED WHERE THE DESIGN OCCUPANT LOAD OR COMMON PATH OF EGRESS TRAVEL DISTANCE EXCEEDS THE VALUES LISTED IN TABLE 1006.2.1 (IBC SECTION 1006.2.1)

DEAD END CORRIDORS:

DEAD END CORRIDORS SHOULD NOT EXCEED 20 FEET IN LENGTH FOR USE GROUP A (IBC SECTION 1020.4). DEAD END CORRIDORS IN AN EXISTING CONDITION SHOULD NOT EXCEED 35' (IEBC SECTION 805.6)

TRAVEL DISTANCE:

THE MAXIMUM TRAVEL DISTANCE TO AN EXIT SHOULD NOT EXCEED 200 FEET FOR USE GROUP A OCCUPANCIES (IBC TABLE 1017.2)

DOOR SWING:

DOOR SWING IS REQUIRED TO SWING IN THE DIRECTION OF TRAVEL WHEN THE OCCUPANT LOAD IS MORE THAN 50 (IBC SECTION 1010.1.2.1)

General Notes (Code Plans):

1. ALL WORK, MATERIALS, AND METHODS SHALL BE IN CONFORMANCE WITH THE CODES, ORDINANCES AND REGULATIONS OF ALL GOVERNMENTAL AGENCIES HAVING JURISDICTION AT THE PROJECT LOCATION.
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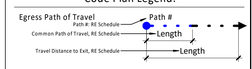
3. THE SIZE, TYPE, QUANTITY, AND LOCATION OF ALL TEMPORARY FIRE EXTINGUISHERS SHALL BE DETERMINED BY THE AUTHORITY HAVING JUISDICTION.
4. COORDINATE LOCATION OF KNOX BOX WITH ARCHITECT, OWNER'S REPRESENTATIVE, AND THE AUTHORITY HAVING JUISDICTION IN THE FIELD.

Code Plan Legend:



Path of Egress Schedule	
Mark	Path of Egress
Path 1.01	32' - 9 11/16"
Path 1.02	39' - 4 5/8"
Path 1.03	44' - 3 3/8"
Path 1.04	34' - 11 1/4"
Path 1.05	55' - 7 5/8"
Path 1.06	16' - 5 3/16"
Path 1.07	16' - 6"
Path 2.01	59' - 8 1/2"
Path 3.01	58' - 3 1/8"

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Lee's Summit R7 District Athletics Facilities

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STATE OF MISSOURI
JAY DARREN BROWNING
NUMBER 2009027279
ARCHITECT
9.28.20

Architectural Corporation
Missouri License No. 2018022991
Jay Darren Browning Date: 09/28/2020
Architect License No. A-2009027279

REVISIONS

Number	DESCRIPTION	DATE

PROJECT NO: 0119-0101
DATE: September 28, 2020

Code Summary - Press Box

W-G102

BID SET

PRINT DATE/TIME:
9/28/2020 1:52:02 PM

Exiting Requirements

EXIT WIDTHS DOORS, RAMPS, ETC (NOT INCLUDING BLEACHERS):
60 PEOPLE PER FOOT
0.2" PER OCCUPANT (SECTION 1005.3.2)

STAIRS (NOT INCLUDING BLEACHERS):
40 PEOPLE PER FOOT
0.3" PER OCCUPANT (SECTION 1005.3.1)

TRAVEL DISTANCE:
ALLOWED: 200' (NON-SPRINKLED)
ACTUAL: SEE CODE PLAN (TABLE 1017.2)

COMMON PATH OF TRAVEL:
75' FOR A OCCUPANCY (SECTION 1006.2.1)

NUMBER OF EXITS REQUIRED:
ROOMS WITH OL 49 OR LESS: 1 EXIT
ROOMS WITH OL 50-500: 2 EXITS
ROOMS WITH OL 501-1,000: 3 EXITS
ROOMS WITH OL 1,001 OR MORE: 4 EXITS
(TABLE 1006.2.1, SECTION 1006.2.1.1)

PANIC HARDWARE:
NOT REQUIRED IN BUILDINGS
(DUE TO OCCUPANT LOADS) (SECTION 1010.1.10)

CONCESSIONS/LOCKER ROOM:
REQUIRED EXIT WIDTH: **48 x 0.2" = 9.6"**
ACTUAL EXIT WIDTH: **34"**
TOTAL EGRESS CAPACITY: **170**
ACTUAL OCCUPANCY: **48**

SOUTH TICKET BOOTH:
REQUIRED EXIT WIDTH: **4 x 0.2" = 0.8"**
ACTUAL EXIT WIDTH: **34"**
TOTAL EGRESS CAPACITY: **170**
ACTUAL OCCUPANCY: **4**

OCCUPANT LOADS:

(BASED ON 2018 IBC TABLE 1004.5)

STORAGE AREAS, MECHANICAL EQUIPMENT ROOM	300 GROSS
LOCKER ROOM	1 PER LOCKER
CONCESSIONS	60 GROSS
TICKETING	60 GROSS

CONCESSIONS & LOCKER ROOM

STORAGE/MECH (2):	169 SF	2 OCCUPANTS
LOCKER ROOM:	434 SF	40 OCCUPANTS
CONCESSIONS:	360 SF	6 OCCUPANTS

TOTAL: 48 OCCUPANTS

SOUTH TICKET BOOTH

TICKETING:	140 SF	3 OCCUPANTS

TOTAL: 3 OCCUPANTS

Description

RENOVATION TO EXISTING OUTDOOR STADIUM FACILITIES WHICH WILL INCLUDE EXPANSION OF EXISTING PRESS BOX; CONSTRUCTION OF NEW RESTROOMS, CONCESSIONS, AND TICKET BOOTHS; AND CONSTRUCTION OF NEW BLEACHER SEATING.

Applicable Codes

2018 International Building Code
2018 International Existing Building Code
2018 International Fire Code
2017 National Electric Code
2018 International Mechanical Code
2018 International Plumbing Code
2018 International Enery Conservation Code
2009 Accessible and Usable Buildings and Facilities

Building complies with all applicable codes.

Occupancy Classifications

THE PROJECT SITE CONTAINS (3) ASSUMED PROPERTIES; EACH WITH A SINGLE USE OCCUPANCY IN EXISTING AND RENOVATED AREAS:

B: CONCESSIONS & SOUTH TICKET BOOTH

Type of Construction

TYPE II-B

Allowable Height

	NON SPRINKLED		SPRINKLED
	HEIGHT	STORIES	HEIGHT
B:	55'	3	75'

Building Height

CONCESSIONS/LOCKER ROOM: 1 STORY - APX 15'
SOUTH TICKET BOOTH: 1 STORY - APX 13'

Allowable Area

	NON SPRINKLED (NS)	SPRINKLED (S1)
B:	23,000 SF	92,000 SF

Building Area

CONCESSIONS/LOCKER BUILDING AREA: 1,785 SF

SOUTH TICKET BOOTH BUILDING AREA: 140 SF

Passive Fire Requirements

EXTERIOR BEARING WALLS: **0 HR**

INTERIOR BEARING WALLS: **0 HR**

EXTERIOR NON-BEARING WALLS: **0 HR**
(>30' FROM C.L. OF PROPERTY LINE, TABLE 602)

OPENING PROTECTION AT EXT. WALL: **0 HR**
(>30' FROM C.L. OF PROPERTY LINE, TABLE 705.8)

STRUCTURAL FRAME: **0 HR**

ROOF SUPPORTS: **0 HR**

NON-BEARING WALLS & INTERIOR PARTITIONS: **0 HR**

CORRIDORS: **0 HR**

FLOOR CONSTRUCTION: **0 HR**

Active Fire Resistance Requirements

AUTOMATIC SPRINKLER SYSTEM: (SECTION 903)
NOT REQUIRED

STANDPIPES: **NOT REQUIRED** (SECTION 905)

FIRE ALARM SYSTEM: **NOT REQ'D, DUE TO OCCUPANT LOAD** (SECTION 907.2.1)

SMOKE DETECTION: **NOT REQUIRED**

EXIT SIGNS: **NOT REQUIRED IN ROOMS THAT REQUIRE ONLY ONE EXIT.** (SECTION 1013)

EMERGENCY LIGHTING: **MINIMUM OF 1 FOOTCANDLE AT THE WALKING SURFACE** (SECTION 1008.2.1)

PORTABLE FIRE EXTINGUISHERS: **REQUIRED** (SECTION 906.1)

Means of Egress

COMMON PATH OF EGRESS TRAVEL:

COMMON PATH OF EGRESS TRAVEL SHOULD NOT EXCEED 75 FEET FOR USE GROUP A IN NON-SPRINKLED BUILDINGS (IBC TABLE 1006.2.1). THE MAXIMUM OCCUPANT LOAD OF SPACE IS 49. TWO EXITS OR EXIT ACCESS DOORWAYS FROM ANY SPACE SHALL BE PROVIDED WHERE THE DESIGN OCCUPANT LOAD OR COMMON PATH OF EGRESS TRAVEL DISTANCE EXCEEDS THE VALUES LISTED IN TABLE 1006.2.1 (IBC SECTION 1006.2.1)

DEAD END CORRIDORS:

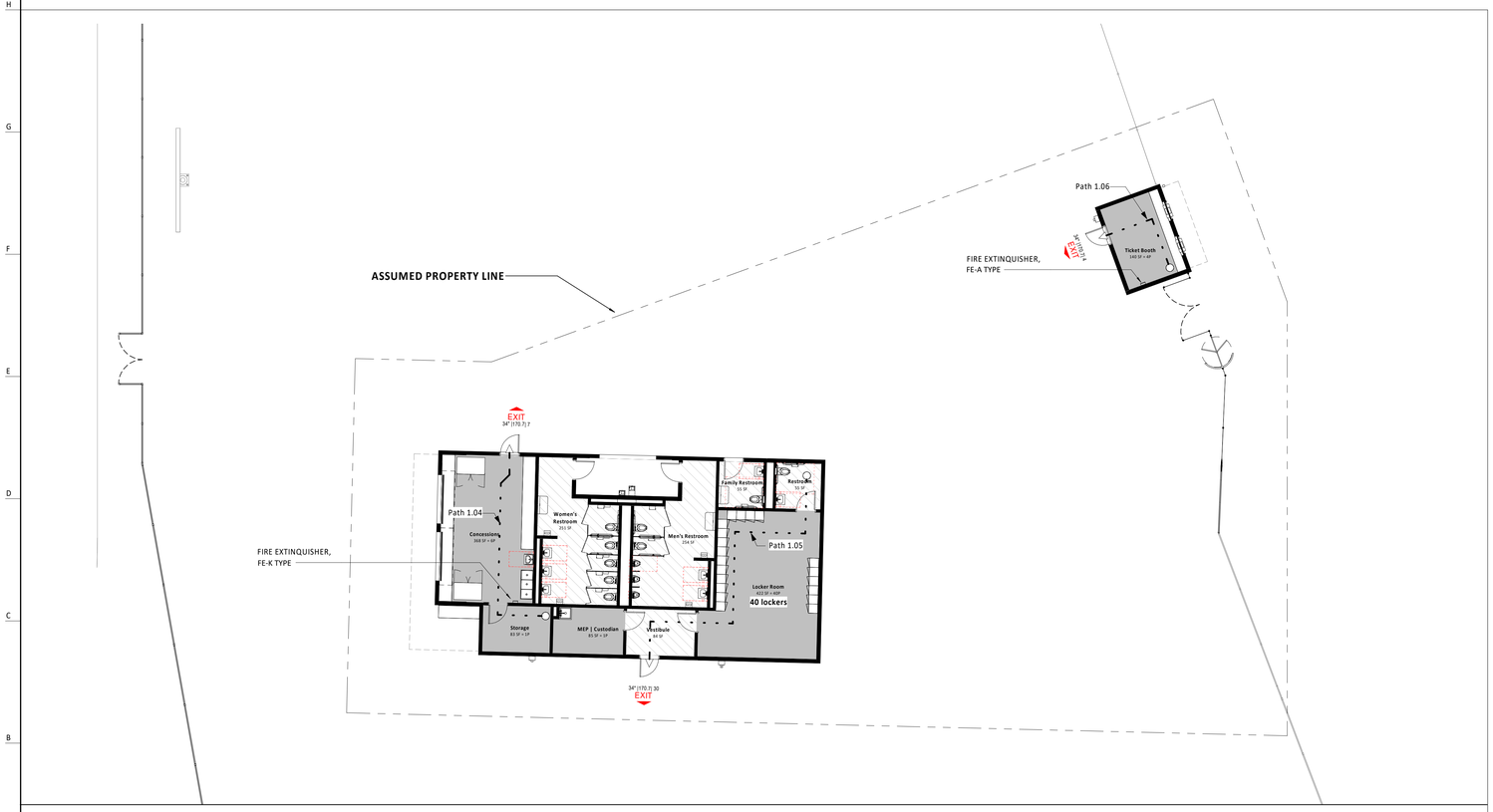
DEAD END CORRIDORS SHOULD NOT EXCEED 20 FEET IN LENGTH FOR USE GROUP A (IBC SECTION 1020.4). DEAD END CORRIDORS IN AN EXISTING CONDITION SHOULD NOT EXCEED 35' (IEBC SECTION 805.6)

TRAVEL DISTANCE:

THE MAXIMUM TRAVEL DISTANCE TO AN EXIT SHOULD NOT EXCEED 200 FEET FOR USE GROUP A OCCUPANCIES (IBC TABLE 1017.2)

DOOR SWING:

DOOR SWING IS REQUIRED TO SWING IN THE DIRECTION OF TRAVEL WHEN THE OCCUPANT LOAD IS MORE THAN 50 (IBC SECTION 1010.1.2.1)



Code Plan - Concessions & South Ticket Booth A7

1" = 10'-0"

General Notes (Code Plans):

1. ALL WORK, MATERIALS, AND METHODS SHALL BE IN CONFORMANCE WITH THE CODES, ORDINANCES AND REGULATIONS OF ALL GOVERNMENTAL AGENCIES HAVING JURISDICTION AT THE PROJECT LOCATION.
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3. THE SIZE, TYPE, QUANTITY, AND LOCATION OF ALL TEMPORARY FIRE EXTINGUISHERS SHALL BE DETERMINED BY THE AUTHORITY HAVING JUISDICTION.
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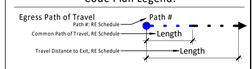

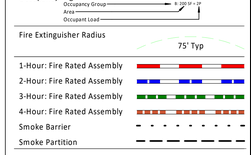

Path of Egress Schedule	
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Path 1.02	39' - 4 5/8"
Path 1.03	44' - 3 3/8"
Path 1.04	34' - 11 1/4"
Path 1.05	55' - 7 5/8"
Path 1.06	16' - 5 3/16"
Path 1.07	16' - 6"
Path 2.01	59' - 8 1/2"
Path 3.01	58' - 3 1/8"

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Lee's Summit R7 District Athletics Facilities

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STATE OF MISSOURI
JAY DARREN BROWNING
NUMBER A-2009027279
ARCHITECT
9.28.20

Architectural Corporation
Missouri License No. 2018022991
Jay Darren Browning Date: 09/28/2020
Architect License No. A-2009027279

REVISIONS

Number	DESCRIPTION	DATE

PROJECT NO: 0119-0101
DATE: September 28, 2020

Code Summary - Visitor Concessions & South Ticket Booth

W-G103

BID SET

PRINT DATE/TIME:
9/28/2020 1:52:07 PM

Code Plan - North Ticket Booth A11

1/8" = 1'-0"

PRINT DATE/TIME:
9/28/2020 1:52:09 PM

OCCUPANT LOADS:

(BASED ON 2018 IBC TABLE 1004.5)

TICKETING 60 GROSS

SOUTH TICKET BOOTH
TICKETING: 140 SF 3 OCCUPANTS

TOTAL: 3 OCCUPANTS

Exiting Requirements

EXIT WIDTHS DOORS, RAMPS, ETC (NOT INCLUDING BLEACHERS):
60 PEOPLE PER FOOT
0.2" PER OCCUPANT (SECTION 1005.3.2)

STAIRS (NOT INCLUDING BLEACHERS):
40 PEOPLE PER FOOT
0.3" PER OCCUPANT (SECTION 1005.3.1)

TRAVEL DISTANCE:
ALLOWED: 200' (NON-SPRINKLED)
ACTUAL: SEE CODE PLAN (TABLE 1017.2)

COMMON PATH OF TRAVEL:
75' FOR A OCCUPANCY (SECTION 1006.2.1)

NUMBER OF EXITS REQUIRED:
ROOMS WITH OL 49 OR LESS: 1 EXIT
ROOMS WITH OL 50-500: 2 EXITS
ROOMS WITH OL 501-1,000: 3 EXITS
ROOMS WITH OL 1,001 OR MORE: 4 EXITS
(TABLE 1006.2.1, SECTION 1006.2.1.1)

PANIC HARDWARE:
NOT REQUIRED IN BUILDINGS
(DUE TO OCCUPANT LOADS) (SECTION 1010.1.10)

SOUTH TICKET BOOTH:
REQUIRED EXIT WIDTH: **4 x 0.2" = 0.8"**
ACTUAL EXIT WIDTH: **34"**
TOTAL EGRESS CAPACITY: **170**
ACTUAL OCCUPANCY: **4**

Description

RENOVATION TO EXISTING OUTDOOR STADIUM FACILITIES WHICH WILL INCLUDE EXPANSION OF EXISTING PRESS BOX; CONSTRUCTION OF NEW RESTROOMS, CONCESSIONS, AND TICKET BOOTHS; AND CONSTRUCTION OF NEW BLEACHER SEATING.

Applicable Codes

2018 International Building Code
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2018 International Fire Code
2017 National Electric Code
2018 International Mechanical Code
2018 International Plumbing Code
2018 International Enery Conservation Code
2009 Accessible and Usable Buildings and Facilities

Building complies with all applicable codes.

Occupancy Classifications

THE PROJECT SITE CONTAINS (3) ASSUMED PROPERTIES; EACH WITH A SINGLE USE OCCUPANCY IN EXISTING AND RENOVATED AREAS:

B: NORTH TICKET BOOTH

Type of Construction

TYPE II-B

Allowable Height

	NON SPRINKLED		SPRINKLED
	HEIGHT	STORIES	HEIGHT
B:	55'	3	75'

Building Height

NORTH TICKET BOOTH: 1 STORY - APX 13'

Allowable Area

	NON SPRINKLED (NS)	SPRINKLED (S1)
B:	23,000 SF	92,000 SF

Building Area

NORTH TICKET BOOTH BUILDING AREA: 240 SF

Passive Fire Requirements

EXTERIOR BEARING WALLS: **0 HR**

INTERIOR BEARING WALLS: **0 HR**

EXTERIOR NON-BEARING WALLS: **0 HR**
(>30' FROM C.L. OF PROPERTY LINE, TABLE 602)

OPENING PROTECTION AT EXT. WALL: **0 HR**
(>30' FROM C.L. OF PROPERTY LINE, TABLE 705.8)

STRUCTURAL FRAME: **0 HR**

ROOF SUPPORTS: **0 HR**

NON-BEARING WALLS & INTERIOR PARTITIONS: **0 HR**

CORRIDORS: **0 HR**

FLOOR CONSTRUCTION: **0 HR**

Active Fire Resistance Requirements

AUTOMATIC SPRINKLER SYSTEM: (SECTION 903)
NOT REQUIRED

STANDPIPES: **NOT REQUIRED** (SECTION 905)

FIRE ALARM SYSTEM: **NOT REQ'D. DUE TO OCCUPANT LOAD** (SECTION 907.2.1)

SMOKE DETECTION: **NOT REQUIRED**

EXIT SIGNS: **NOT REQUIRED IN ROOMS THAT REQUIRE ONLY ONE EXIT.** (SECTION 1013)

EMERGENCY LIGHTING: **MINIMUM OF 1 FOOTCANDLE AT THE WALKING SURFACE** (SECTION 1008.2.1)

PORTABLE FIRE EXTINGUISHERS: **REQUIRED** (SECTION 906.1)

Means of Egress

COMMON PATH OF EGRESS TRAVEL:

COMMON PATH OF EGRESS TRAVEL SHOULD NOT EXCEED 75 FEET FOR USE GROUP A IN NON-SPRINKLED BUILDINGS (IBC TABLE 1006.2.1). THE MAXIMUM OCCUPANT LOAD OF SPACE IS 49. TWO EXITS OR EXIT ACCESS DOORWAYS FROM ANY SPACE SHALL BE PROVIDED WHERE THE DESIGN OCCUPANT LOAD OR COMMON PATH OF EGRESS TRAVEL DISTANCE EXCEEDS THE VALUES LISTED IN TABLE 1006.2.1 (IBC SECTION 1006.2.1)

DEAD END CORRIDORS:

DEAD END CORRIDORS SHOULD NOT EXCEED 20 FEET IN LENGTH FOR USE GROUP A (IBC SECTION 1020.4). DEAD END CORRIDORS IN AN EXISTING CONDITION SHOULD NOT EXCEED 35' (IEBC SECTION 805.6)

TRAVEL DISTANCE:

THE MAXIMUM TRAVEL DISTANCE TO AN EXIT SHOULD NOT EXCEED 200 FEET FOR USE GROUP A OCCUPANCIES (IBC TABLE 1017.2)

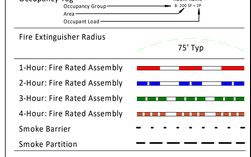
DOOR SWING:

DOOR SWING IS REQUIRED TO SWING IN THE DIRECTION OF TRAVEL WHEN THE OCCUPANT LOAD IS MORE THAN 50 (IBC SECTION 1010.1.2.1)

General Notes (Code Plans):

1. ALL WORK, MATERIALS, AND METHODS SHALL BE IN CONFORMANCE WITH THE CODES, ORDINANCES AND REGULATIONS OF ALL GOVERNMENTAL AGENCIES HAVING JURISDICTION AT THE PROJECT LOCATION.
2. CONTRACTOR SHALL PROVIDE AND IS SOLELY RESPONSIBLE AND LIABLE FOR PUBLIC AND EMPLOYEE PROTECTION AS NECESSARY AND AS REQUIRED BY THE CODES, INCLUDING EXTERIOR PEDESTRIAN AND TRAFFIC BARRIERS. ALL WORK SHALL CONFORM TO ORDINANCES AND REGULATIONS OF GOVERNMENTAL AGENCIES HAVING JURISDICTION AT THE PROJECT LOCATION.
3. THE SIZE, TYPE, QUANTITY, AND LOCATION OF ALL TEMPORARY FIRE EXTINGUISHERS SHALL BE DETERMINED BY THE AUTHORITY HAVING JUISDICTION.
4. COORDINATE LOCATION OF KNOX BOX WITH ARCHITECT, OWNER'S REPRESENTATIVE, AND THE AUTHORITY HAVING JUISDICTION IN THE FIELD.

Code Plan Legend:



Path of Egress Schedule	
Mark	Path of Egress
Path 1.01	32' - 9 11/16"
Path 1.02	39' - 4 5/8"
Path 1.03	44' - 3 3/8"
Path 1.04	34' - 11 1/4"
Path 1.05	55' - 7 5/8"
Path 1.06	16' - 5 3/16"
Path 1.07	16' - 6"
Path 2.01	59' - 8 1/2"
Path 3.01	58' - 3 1/8"

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Lee's Summit R7 District Athletics Facilities

Lee's Summit West High School
2600 SW Ward Road
Lee's Summit, MO 64082

owner:
Lee's Summit R-7 School District
301 NE Tudor Road
Lee's Summit, MO 64086

architect:
Gould Evans
4200 Pennsylvania Avenue
Kansas City, MO 64111
816.931.6655 voice
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structural engineer:
Bob D. Campbell & Company, Inc.
4338 Belleview Avenue
Kansas City, MO 64111
816.531.4144

civil engineer:
Kaw Valley Engineering
14700 West 114th Terrace
Lenexa, KS 66215
913.485.0318

mechanical/electrical engineer:
Henderson Engineers
8345 Lenexa Drive | Suite 300
Lenexa, KS 66214
816.742.5000

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Architectural Corporation
Missouri License No. 2018022991
Jay Darren Browning Date: 09/28/2020
Architect License No. A-2009027279

REVISIONS

Number	DESCRIPTION	DATE

PROJECT NO: 0119-0101
DATE: September 28, 2020

Code Summary - North Ticket Booth

W-G104

BID SET

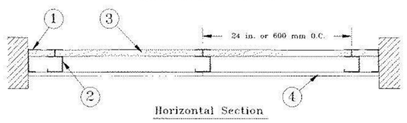
Design No. U415

July 12, 2018

Nonbearing Wall Ratings — 1, 2, 3 or 4 Hr

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

System A – 1 Hr.



Horizontal Section

1. **Floor, Side and Ceiling Runners —** "J" - shaped runner, min 2-1/2 in. deep (min 4 in. deep when System C is used), with unequal legs of 1 in. and 2 in., fabricated from min 24 MSG (min 20 MSG when Item 4A, 4B, 4C, 4D or 7 are used) galv steel. Runners positioned with short leg toward finished side of wall. Runners attached to structural supports with steel fasteners located not greater than 2 in. from ends and not greater than 24 in. OC. "E" - shaped studs (Item 2A) may be used as side runners in place of "J" - shaped runners.

2. **Steel Studs —** "C-H" - shaped studs, min 2-1/2 in. deep (min 4 in. deep when System C is used), fabricated from min 25 MSG (min 20 MSG when Items 2D, 4A, 4B, 4C, 4D or 7 is used) galv steel. Cut to lengths 3/8 to 1/2 in. less than floor-to-ceiling height and spaced 24 in. or 600 mm OC (max 16 in. OC when Items 4A, 4B, 4C, or 4D are used).

2A. **Steel Studs —** (Not Shown) — "E" - shaped studs installed back to back in place of "C-H" - shaped studs (Item 2) "E" - shaped studs secured together with steel screws spaced a maximum 12 in. OC. Fabricated from min 25 MSG (min 20 MSG when Item 2D, 4A, 4B or 7 is used) galv steel, min 2-1/2 in. deep (min 4 in. deep when System C is used), with one leg 1 in. long and two legs 3/4 in. long. Shorter legs 1 in. apart to engage gypsum liner panels. Cut to lengths 3/8 to 1/2 in. less than floor to ceiling heights.

2B. **Furring Channels —** (Optional, Not Shown) — For use with single or double layer systems. Resilient furring channels fabricated from min 25MSG corrosion protected steel, installed horizontally, and spaced vertically a max 24 in. OC. Flange portion of channel attached to each intersecting "C-H" or "E" stud on side of stud opposite the 1 in. liner panels with 1/2 in. long Type S or S-12 pan-head steel screws. When furring channels are used, wallboard to be installed vertically only. Not to be used with Type FRX-G gypsum wallboard, Type RB-LBG (Item 4A), Type Nelco (Item 4B) or cementitious backer units (Item 7).

2C. **Furring Channels —** For use with System I - "Hat" - shaped, 25 MSG galv steel furring channels attached directly over the inner layers of wallboard to each stud with 2 in. long Type S pan head steel screws. Screws alternate from top flange to bottom flange at each stud intersection. Furring channels spaced vertically max 24 in. OC.

2D. **Steel Framing Members* —** (Optional, Not Shown) — For use with single or double layer systems. Furring channels and Steel Framing Members as described below. Not to be used with Type FRX-G gypsum wallboard, Type RB-LBG (Item 4A), Type Nelco (Item 4B) or cementitious backer units (Item 7):

a. **Furring Channels —** Formed of No. 25 MSG galv steel. 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board installed vertically only and attached to furring channels as described in Item 4.

b. **Steel Framing Members* —** Used to attach furring channels (Item 2Da) to studs (Item 2 or 2A). Clips spaced max. 24 in. OC., and secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. Furring channels are friction fitted into clips. RSIC-1 clip for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) clip for use with 2-23/32 in. wide furring channels.

PAC INTERNATIONAL L L C — Types RSIC-1, RSIC-1 (2.75)

2E. **Steel Framing Members* —** (Optional, Not Shown) — Furring channels and Steel Framing Members as described below. . Not to be used with Type FRX-G gypsum wallboard, Type RB-LBG (Item 4A), Type Nelco (Item 4B), Type X-Ray Shielded Gypsum (Item 4C), Type RPP-Lead Lined Drywall (Item 4F) or cementitious backer units (Item 7).

a. **Furring Channels —** Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire.Gypsum board attached to furring channels as described in Item 4.

b. **Steel Framing Members* —** Used to attach furring channels (Item 2Ea) to studs. Clips spaced 24 in. OC., and secured to studs with 2 in. coarse drywall screw with 1 in. diam washer through the center hole. Furring channels are friction fitted into clips.

STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237R

2F. **Steel Framing Members* —** (Optional, Not Shown) — For use with single or double layer systems. Furring channels and Steel Framing Members as described below. Not to be used with Type FRX-G gypsum wallboard, Type RB-LBG (Item 4A), Type Nelco (Item 4B) or cementitious backer units (Item 7):

a. **Furring Channels —** Formed of No. 25 MSG galv steel. 2-3/8 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board installed vertically only and attached to furring channels as described in Item 3.

b. **Steel Framing Members* —** Used to attach furring channels (Item 2Da) to studs (Item 2 or 2A). Clips spaced max. 24 in. OC. GENIECLIPS secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. Furring channels are friction fitted into clips.

PLITEQ INC — Type GENIECLIP

2G. **Steel Framing Members* —** (Optional, Not Shown) — Furring channels and Steel Framing Members as described below. Not to be used with Type FRX-G gypsum wallboard, Type RB-LBG (Item 4A), Type Nelco (Item 4B), Type X-Ray Shielded Gypsum (Item 4C), Type RPP-Lead Lined Drywall (Item 4F) or cementitious backer units (Item 7):

a. **Furring Channels —** Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item 2Gb. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire. Gypsum board attached to furring channels as described in Item 4.

b. **Steel Framing Members* —** Used to attach furring channels (Item 2Ga) to studs. Clips spaced 24 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.

REGUPOL AMERICA — Type SonusClip

2H. **Steel Framing Members* —** (Optional, Not Shown) — Resilient channels and Steel Framing Members as described below. Not to be used with Type FRX-G gypsum wallboard, Type RB-LBG (Item 4A), Type Nelco (Item 4B), Type X-Ray Shielded Gypsum (Item 4C), Type RPP-Lead Lined Drywall (Item 4F) or cementitious backer units (Item 7):

a. **Resilient Channels —** Formed of No. 25 MSG galv steel, spaced 24 in. OC, and perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in, and secured in place with two No. 8 15 x 1/2 in. Philips Modified Truss screws spaced 2-1/2 in. from the center of the overlap. Gypsum board attached to resilient channels as described in Item 3.

b. **Steel Framing Members* —** Used to attach resilient channels (Item 2Ha) to studs. Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Resilient channels are secured to clips with one No. 10 x 1/2 in. pan-head self-drilling screw.

KEENE BUILDING PRODUCTS CO INC — Type RC+ Assurance Clip

3. **Gypsum Board* —** Gypsum liner panels, nom 1 in. thick, 24 in. or 600 mm (for metric spacing) wide. Panels cut 1 in. less in length than floor to ceiling height. Vertical edges inserted in "H" portion of "C-H" studs or the gap between the two 3/4 in. legs of the "E" studs. Free edge of end panels attached to long leg of vertical "J" - runners with 1-5/8 in. long Type S steel screws spaced not greater than 12 in. OC. When wall height exceeds liner panel length, liner panel may be butted to extend to the full height of the wall. Horizontal joints need not be backed by steel framing. In System I, butt joints in liner panels are staggered min 36 in. Butt joints backed with 6 in. by 22 in. strips of 3/4 in. thick gypsum wallboard (Item 4). Wallboard strips centered over butt joints and secured to liner panels with six 1-1/2 in. long Type G steel screws, three screws along the 22 in. dimension at the top and bottom of the strips.

CGC INC — Type SLX

UNITED STATES GYPSUM CO — Type SLX

USG BORAL DRYWALL SFZ LLC — Type SLX

USG MEXICO S A DE C V — Type SLX

4. **Gypsum Board* —**

System A — 1 Hr

Gypsum panels, with beveled, square or tapered edges, nom 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally, attached to studs with 1 in. long Type S steel screws spaced 12 in. when installed vertically or 8 in OC when installed horizontally. Horizontal joints need not be backed by steel framing.

CGC INC — Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

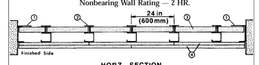
UNITED STATES GYPSUM CO — Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SGX, SHX, ULIX, ULX, WRC, WRX, USGX. When ULIX is used insulation, Item 6, **Batts and Blankets*** is required and minimum stud depth is 4 in.

USG BORAL DRYWALL SFZ LLC — Types C, SCX, SGX, USGX

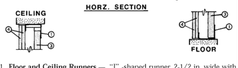
USG MEXICO S A DE C V — Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

Design No. U438

Nonbearing Wall Rating — 2 HR.



HORZ. SECTION



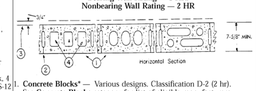
1. **Floor and Ceiling Runners** — "J" -shaped runner, 2-1/2 in. wide with unequal legs of 1 in. and 2 in., fabricated from 24 MSG (min 20 MSG when Item 4B is used) galv steel. Runners positioned with short leg toward finished side of wall. Runners attached to structural supports with steel fasteners located not greater than 2 in. from ends and not greater than 24 in. OC.
2. **Steel Studs** — "C-H" -shaped studs, 2-1/2 in. wide by 1-1/2 in. deep, fabricated from 25 MSG (min 20 MSG when Item 4B is used) galv steel. Cut to lengths 3/8 to 1/2 in. less than floor to ceiling height and spaced 24 in. or 600 mm OC.
2A. **Steel Studs** — (Not shown)-"E" -shaped studs installed in place of "C-H" -shaped studs (Item 2) to secure the closure liner panels at the ends of walls. Fabricated from 25 MSG (min 20 MSG when Item 4B is used) galv steel, 2-1/2 in. wide, with one leg 1 in. long and two legs 3/4 in. long. Shorter legs 1 in. apart to engage gypsum liner panels. Cut to lengths 3/8 in. less than floor to ceiling height. Sill and lintel of openings formed with "J" -shaped runners (Item 1) secured to "E" -shaped studs with angle clips and steel screws.
3. **Gypsum Board*** — 1 in. thick gypsum wallboard liner panels, supplied in nom 24 in. or 600 mm (for metric spacing) widths. Panels cut 1 in. less in length than floor to ceiling height. Vertical edges inserted in "H" -shaped section of "C-H" studs. Free edge of end panels attached to long leg of "J" -runners with 1-5/8 in. long Type S steel screws spaced not greater than 12 in. OC.
   CANADIAN GYPSUM COMPANY — Type SLX.
   UNITED STATES GYPSUM CO — Type SLX.
   USG MEXICO S A DE C V — Type SLX.
4. **Gypsum Board*** — 1/2 in. thick, 4 ft. or 1200 mm (for metric spacing) wide wallboard applied vertically in two layers. Inner or base layer attached to studs with 1 in. long Type S steel screws spaced 24 in. OC along the edges and in the field of the boards. Outer or face layer attached to studs and "J" -runners with 1-5/8 in. long Type S steel screws spaced 12 in. along the edges and in the field of the boards, staggered from screws in inner layer. Joints between inner and outer layers staggered.
   Outer layer joints covered with paper tape and joint compound. Exposed screw heads covered with joint compound.
   As an alternate method, inner wallboard layer applied vertically, outer wallboard layer applied horizontally. Inner layer attached to studs with 1 in. Type S steel screws spaced 24 in. OC along vertical edges and in the field. Outer layer attached to the studs and "J" runners over the inner layer with 1-5/8 in. long Type S steel screws spaced 12 in. OC in the field, along the vertical edges and to the floor and ceiling runners. Outer layer secured to inner layer wallboard with 1-1/2 in. long Type G steel screws located midway between studs and 1 in. from the horizontal joint.
   AMERICAN GYPSUM CO — Types AG-C, AGX-C .
   BPB AMERICA INC
   BPB CELOTEX —Type FRP
   CANADIAN GYPSUM COMPANY —Type C or WRC.
   CONTINENTAL GYPSUM COMPANY —Types CG-C, CGS-5, CGTE-C.
   G-P GYPSUM CORP, SUB OF
   GEORGIA-PACIFIC CORP —Type 5.
   JAMES HARDIE GYPSUM INC —Type Max"C".
   LAFARGE NORTH AMERICA INC —Types LGFC-C, LGFC-C/A.
   NATIONAL GYPSUM CO — Type FSW-C.
   PABCO GYPSUM, DIV OF
   PACIFIC COAST BUILDING PRODUCTS INC —Types PG-C.
   STANDARD GYPSUM L L C —Type SG-C.
   TEMPLE-INLAND FOREST PRODUCTS CORP —Type TG-C.
   UNITED STATES CYPSUM CO — Type C or WRC.
   USG MEXICO S A DE C V —Type C or WRC.
4A. **Gypsum Board*** — (As an alternate to Item 4) — 5/8 in. thick. 4 ft wide. Attached as described in Item 4.
   CANADIAN GYPSUM COMPANY —Type AR, IP-AR, IP-X1, SCX or WRX.
   UNITED STATES GYPSUM CO —Type AR, FRX-G, IP-AR, IP-X1, SCX or WRX.
   USG MEXICO S A DE C V —Type AR, IP-AR, IP-X1, SCX or WRX.
4B. **Gypsum Board*** — (As an alternate to Item 4 and 4A)-5/8 in. thick. 4 ft wide gypsum panels, installed as described in Item 4 with Type S-12 steel screws. The length and spacing of the screws as specified under Item 4.
   CANADIAN GYPSUM COMPANY —Type FRX
   UNITED STATES GYPSUM CO —Type FRX
5. **Batts and Blankets*** — (Optional) — (Not shown) — Mineral wool or glass fiber batts partially or completely filling stud cavity. Any mineral wool or glass fiber batt material bearing the UL Classification Marking as to Fire Resistance.
5A. **Fiber, Sprayed*** — As an alternate to Batts and Blankets (Item 5) — Spray applied cellulose insulation material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. Nominal dry density of 3.0 lb/ft³.
   U S GREENFIBER L L C — Cocoon stabilized cellulose insulation.

*Bearing the UL Classification Mark

Design No. U905

Bearing Wall Rating — 2 HR.

Nonbearing Wall Rating — 2 HR

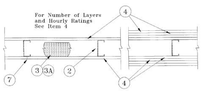


1. **Concrete Blocks*** — Various designs. Classification D-2 (2 hr). See **Concrete Blocks** category for list of eligible manufacturers.
2. **Mortar** — Blocks laid in full bed of mortar, nom. 3/8 in. thick, of not less than 2-1/4 and not more than 3-1/2 parts of clean sharp sand to 1 part Portland cement (proportioned by volume) and not more than 50 percent hydrated lime (by cement volume). Vertical joints staggered.
3. **Portland Cement Stucco or Gypsum Plaster** — Add 1/2 hr to classification if used. Where combustible members are framed in wall, plaster or stucco must be applied on the face opposite framing to achieve a max. Classification of 1-1/2 hr. Attached to concrete blocks (Item 1).
4. **Loose Masonry Fill** — If all core spaces are filled with loose dry expanded slag, expanded clay or shale (Rotary Kiln Process), water repellant vermiculite masonry fill insulation, or silicone treated perlite loose fill insulation add 2 hr to classification.
5. **Foamed Plastic*** — (Optional-Not Shown) — 1-1/2 in. thick max, 4 ft wide sheathing attached to concrete blocks (Item 1).
   BPB AMERICA INC
   BPB CELOTEX —Type Thermax

*Bearing the UL Classification Mark

Design No. U419

Nonbearing Wall Ratings — 1, 2, 3 or 4 Hr (See Items 3 & 4)



1. **Floor and Ceiling Runners** — (Not shown) — Channel shaped, fabricated from min 25 MSG (min 20 MSG when Item 4A is used) corrosion-protected steel, min width to accommodate stud size, with min 1 in. long legs, attached to floor and ceiling with fasteners 24 in. OC max.
2. **Steel Studs** — Channel shaped, fabricated from min 25 MSG (min 20 MSG when Item 4A is used) corrosion-protected steel, min width as indicated under Item 4, min 1-1/4 in. flanges and 1/4 in. return, spaced a max of 24 in. OC. Studs to be cut 3/8 to 3/4 in. less than assembly height.
3. **Batts and Blankets*** — (Required as indicated under Item 4) — Mineral wool batts, friction fitted between studs and runners. Min nom thickness as indicated under Item 4. See **Batts and Blankets (BKNV or BZJQ) Categories** for names of Classified companies.
3A. **Batts and Blankets*** — (Optional) — Placed in stud cavities, any glass fiber or mineral wool insulation bearing the UL Classification Marking as to Surface Burning Characteristics and/or Fire Resistance. See **Batts and Blankets (BKNV or BZJQ) Categories** for names of Classified companies.
4. **Gypsum Board*** — Gypsum panels with beveled, square or tapered edges, applied vertically or horizontally. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Vertical joints in adjacent layers (multilayer systems) staggered one stud cavity. Horizontal joints need not be backed by steel framing. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered. Horizontal edge joints and horizontal butt joints in adjacent layers (multilayer systems) staggered a min of 12 in. The thickness and number of layers for the 1 hr, 2 hr, 3 hr and 4 hr ratings are as follows:

Wallboard Protection on Each Side of Wall

Rating	Min Stud Size, In	No. of Layers & Thkns of Panel	Min Thkns of Insulation (Item 3)
1	3-1/2	1 layer, 5/8 in. thick	Optional
1	2-1/2	1 layer, 1/2 in. thick	1-1/2 in.
1	1-5/8	1 layer, 3/4 in. thick	Optional
2	1-5/8	2 layers, 1/2 in. thick	Optional
2	1-5/8	2 layers, 5/8 in. thick	Optional
2	3-1/2	1 layer, 3/4 in. thick	3 in.
3	1-5/8	3 layers, 1/2 in. thick	Optional
3	1-5/8	2 layers, 3/4 in. thick	Optional
3	1-5/8	3 layers, 5/8 in. thick	Optional
4	1-5/8	4 layers, 5/8 in. thick	Optional
4	1-5/8	3 layers, 1/2 in. thick	Optional
4	2-1/2	2 layers, 3/4 in. thick	2 in.

   CANADIAN GYPSUM COMPANY —1/2 in. thick Type C, IP-X2 or IPC-AR. WRC, 5/8 in. thick Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRX or WRC, 3/4 in. thick Type IP-X2, ULTRACODE, ULTRACODE SHC or ULTRACODE WRC.
   UNITED STATES GYPSUM CO —1/2 in. thick Type C, IP-X2. IPC-AR or WRC. 5/8 in. thick Type SCX, SHX, WRX, IP-X1, AR, C, WRC, FRX-G, IP-AR, IP-X2, IPC-AR. 3/4 in. thick Type IP-X3, ULTRACODE, ULTRACODE SHC or ULTRACODE WRC.
   USG MEXICO S A DE C V —1/2 in. thick Type C, IP-X2. IPC-AR or WRC. 5/8 in. thick Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRX, WRC or. 3/4 in. thick Type IP-X3, ULTRACODE, ULTRACODE SHC or ULTRACODE WRC.

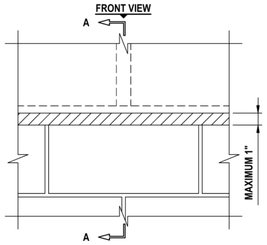
4A. **Gypsum Board*** — (As an alternate to Item 4) — 5/8 in. thick gypsum panels, installed as described in Item 4 with Type S-12 steel screws. The length and spacing of the screws as specified under Item 5.
   CANADIAN GYPSUM COMPANY —Type FRX
   UNITED STATES GYPSUM CO —Type FRX
4B. **Gypsum Board*** — (As an alternate to Items 4 and 4A) — 5/8 in. thick, 2 ft. wide, tongue and groove edge, applied horizontally as the outer layer to one side of the assembly. Secured as described in Item 5. Joint covering (Item 7) not required.
   CANADIAN GYPSUM COMPANY — Type SHX.
   UNITED STATES GYPSUM CO —Type SHX.
   USG MEXICO S A DE C V — Type SHX.
5. **Fasteners** — (Not shown) — Type S or S-12 steel screws used to attach panels to studs (Item 2) or furring channels (Item 6). **Single layer systems:** 1 in. long for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for 3/4 in. thick panels, spaced 8 in. OC when panels are applied horizontally, or 8 in. OC along vertical and bottom edges and 12 in. OC in the field when panels are applied vertically. **Two layer systems:** First layer-1 in. long for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for 3/4 in. thick panels, spaced 16 in. OC. Second layer- 1-5/8 in. long for 1/2 in., 5/8 in. thick panels or 2-1/4 in. long for 3/4 in. thick panels, spaced 16 in. OC with screws offset 8 in. from first layer.**Three layer systems:** First layer- 1 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Second layer- 1-5/8 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Third layer- 2-1/4 in. long for 1/2 in., 5/8 in. thick panels or 2-5/8 in. long for 5/8 in. thick panels, spaced 12 in. OC. Screws offset min 6 in. from layer below. **Four-layer systems:** First layer- 1 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Second layer- 1-5/8 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Third layer- 2-1/4 in. long for 1/2 in. thick panels or 2-5/8 in. long for 5/8 in. thick panels, spaced 24 in. OC. Fourth layer- 2-5/8 in. long for 1/2 in. thick panels or 3 in. long for 5/8 in. thick panels, spaced 12 in. OC. Screws offset min 6 in. from layer below.
6. **Furring Channels** — (Optional, not shown, for single or double layer systems) — Resilient furring channels fabricated from min 25 MSG corrosion-protected steel, spaced vertically a max of 24 in. OC. Flange portion attached to each intersecting stud with 1/2 in. long Type S-12 steel screws. Not for use with Item 4A.
7. **Joint Tape and Compound** — Vinyl or casein, dry or premixed joint compound applied in two coats to joints and screw heads of outer layers. Paper tape, nom 2 in. wide, embedded in first layer of compound over all joints of outer layer panels. Paper tape and joint compound may be omitted when gypsum panels are supplied with a square edge.
8. **Siding, Brick or Stucco** — (Optional, not shown) — Aluminum, vinyl or steel siding, brick veneer or stucco, meeting the requirements of local code agencies, installed over gypsum panels. Brick veneer attached to studs with corrugated metal wall ties attached to each stud with steel screws, not more than each sixth course of brick.
9. **Caulking and Sealants*** — (Optional, not shown) — A bead of acoustical sealant applied around the partition perimeter for sound control.
   UNITED STATES GYPSUM CO —Type AS

*Bearing the UL Classification Mark

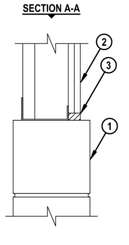
DJ ENGINEERING JUDGMENT FIRESTOP DETAIL

PROJECT : LEE'S SUMMIT WEST HS
ARCHITECT : GOULD EVANS
F-RATING = 1-HR. OR 2-HR.

FRONT VIEW



SECTION A-A



1. CONCRETE WALL ASSEMBLY :
   A. LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE WALL (MINIMUM 4-3/4" THICK) (1-HR FIRE-RATING).
   B. LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE WALL (MINIMUM 6" THICK) (2-HR. FIRE-RATING).
   C. ANY UL/cUL CLASSIFIED CONCRETE BLOCK WALL (1-HR. OR 2-HR. FIRE-RATING). TOP COURSE OF CONCRETE BLOCKS SHOULD BE SOLID OR FILLED WITH CONCRETE.
2. GYPSUM SHAFT WALL ASSEMBLY (UL/cUL CLASSIFIED) (1-HR. OR 2-HR. FIRE-RATING) (2-HR. SHOWN).
3. HILTI CP 606 FLEXIBLE FIRESTOP SEALANT INSTALLED THE FULL DEPTH OF GYPSUM BOARD AND FLUSH WITH FINISH SIDE OF WALL.

NOTES : 1.MAXIMUM WIDTH OF JOINT = 1".
2. T-RATING MAY NOT EQUAL F-RATING IN ACCORDANCE WITH UL 2079.
3. THIS SYSTEM IS DESIGNED AS A STATIC SYSTEM ONLY.

THIS ENGINEERING JUDGMENT REPRESENTS A FIRESTOP SYSTEM THAT WOULD BE EXPECTED TO PASS THE STATED RATINGS IF TESTED. (REFERENCE : UL/cUL SYSTEM NO. BW-S-0023 & WW-S-0048)

HILTI Hilti Firestop Systems	HILTI, Inc. Plano, Texas USA (800) 879-8000	Sheet 1 of 1	Drawing No. 377941a
	Designed by Jayson Gee	Scale 5/32" = 1"	
		Date Aug. 21, 2020	

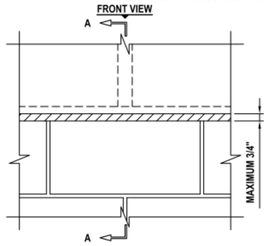
Saving Lives through Innovation and Education

UL/cUL SYSTEM NO. WW-S-0048

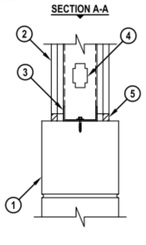
WALL TO WALL JOINT: GYPSUM WALL TO CONCRETE OR BLOCK WALL ASSEMBL

ASSEMBLY RATING = 1-HR. OR 2-HR.
L-RATING AT AMBIENT = LESS THAN 1 CFM / LIN FT
L-RATING AT 400°F = LESS THAN 1 CFM / LIN FT

FRONT VIEW



SECTION A-A



. CONCRETE WALL ASSEMBLY :
   A. LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE WALL (MINIMUM 4-3/4" THICK) (1-HR. FIRE-RATING
   B. LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE WALL (MINIMUM 6" THICK) (2-HR. FIRE-RATING).
   C. ANY UL/cUL CLASSIFIED CONCRETE BLOCK WALL (1-HR. OR 2-HR. FIRE-RATING). TOP COURSE OF CONCRETE BLOCKS SHOULD BE SOLID OR FILLED WITH CONCRETE.
. GYPSUM WALL ASSEMBLY (UL/cUL CLASSIFIED U400, V400, OR W400 SERIES) (1-HR. OR 2-HR. FIRE-RATING) (2-HR. SHOWN).
. FLOOR RUNNER (MINIMUM 25 GA., WITH MINIMUM 1-1/4" FLANGES) SECURED TO CONCRETE WALL ASSEMBLY WITH STEEL CONCRETE FASTENERS (SPACED MAXIMUM 24" C/C).
. STEEL STUDS (MINIMUM 3-1/2" WIDE), CUT 1/2" TO 3/4" LESS IN LENGTH THAN ASSEMBLY HEIGHT, WIT BOTTOM NESTING IN, NESTING ON AND FASTENED TO FLOOR RUNNER (SPACED MAXIMUM 24" C/C).
. MINIMUM 5/8" DEPTH HILTI CP 601S ELASTOMERIC FIRESTOP SEALANT, HILTI CP 606 FLEXIBLE FIRESTOP SEALANT, OR HILTI CFS-S SIL GG FIRESTOP SILICONE SEALANT.

NOTES : 1. [OPTIONAL, NOT SHOWN] MINERAL WOOL, FIBERGLASS, OR POLYURETHANE/POLYETHYLE FOAM BACKER ROD MAY BE USED AS A BACKER IN 2-HR. WALLS.
2. L-RATINGS ONLY APPLIES WHEN HILTI CP 606 FIRESTOP SEALANT OR HILTI CFS-S SIL GG FIRESTOP SILICONE SEALANT IS USED.

HILTI Hilti Firestop Systems	HILTI, Inc. Tulsa, Oklahoma USA (800) 879-8000	Sheet 1 of 1	Drawing WW 004
		Scale 5/32" = 1"	
		Date Nov. 14, 2013	

Saving Lives through Innovation and Engineering

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phoenix • san francisco

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Lee's Summit R7 District Athletics Facilities

Lee's Summit West High School
2600 SW Ward Road
Lee's Summit, MO 64082

owner:
Lee's Summit R-7 School District
301 NE Tudor Road
Lee's Summit, MO 64086

architect:
Gould Evans
4200 Pennsylvania Avenue
Kansas City, MO 64111
816.931.6655 voice
www.gouldevans.com

structural engineer:
Bob D. Campbell & Company, Inc.
4338 Belleview Avenue
Kansas City, MO 64111
816.531.4144

civil engineer:
Kaw Valley Engineering
14700 West 114th Terrace
Lenexa, KS 66215
913.485.0318

mechanical/electrical engineer:
Henderson Engineers
8345 Lenexa Drive | Suite 300
Lenexa, KS 66214
816.742.5000

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STATE OF MISSOURI · JAY DARREN BROWNING · NUMBER A-2009027279 · ARCHITECT · 9.28.20

Architectural Corporation
Missouri License No. 2018022991
Jay Darren Browning Date: 09/28/2020
Architect License No. A-2009027279

REVISIONS

Number	DESCRIPTION	DATE

PROJECT NO: 0119-0101
DATE: September 28, 2020

Fire Rated Assemblies

W-G200

BID SET

Engineering Judgement #377941a A15 NTS

Engineering Judgement #WWS-0048d A11 NTS

U.L. #U415 A7 NTS

U.L. #U438 A5 NTS

U.L. #U905 A3 NTS

U.L. #U419 A1 NTS

PRINT DATE/TIME:
9/25/2020 3:33:40 PM

System No. HW-D-0584

October 15, 2009

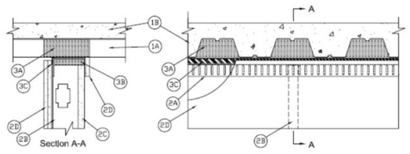
Assembly Rating — 2 Hr

L Rating at Ambient -2.1 CFM/Lin ft

L Rating at 400° F -1.33 CFM/Lin ft

Nominal Joint Width — 1-1/16 in.

Class II and III Movement Capabilities —94%Compression or 100% Extension



1. **Floor Assembly —** The fire-rated fluted steel deck/concrete floor assembly shall be constructed of the materials and in the manner described in the individual D900 Series Floor-Ceiling Design in the UL Fire Resistance Directory and shall include the following construction features:

A. **Steel Floor and Form Units* —** Max 3 in. (76 mm) deep galv steel fluted floor units.

B. **Concrete —** Min 2-1/2 in. (64 mm) thick reinforced concrete, as measured from the top plane of the floor units.

1A. **Roof Assembly —** (Not Shown) - As an alternate to the floor assembly, a fire rated fluted steel deck roof assembly may be used. The roof shall by constructed of the materials and in the manner described in the individual P900-Series Roof-Ceiling designs in the UL Fire Resistance Directory. The hourly rating of the roof assembly shall be equal to or greater than the hourly rating of the wall assembly. The roof assembly shall include the following construction features:

A. **Steel Roof Deck —** Max 3 in. deep galv steel fluted roof deck.

B. **Roof Insulation —** Roof insulation to consist of min 2-1/4 in. (57 mm) thick poured insulating concrete, as measured from the top plane of the roof deck.

2. **Shaft Wall Assembly —** The 2 hr fire rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner described in the individual U400 or V400 Series Wall and Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

A. **Steel Floor and Ceiling Runners —** Floor runner U-shaped, sized to accommodate steel studs (Item 2B), fabricated from 24 ga galv steel. Ceiling runner positioned with slotted leg toward finished side of wall. Runners attached to floor with steel fasteners located not greater than 2 in. from ends and not greater than 24 in OC. The ceiling runners are provided with a fill, void or cavity material and are described in Item 3.

B. **Studs —** "C-T", "I", or "C-H" shaped steel studs to be min 2 1/2 in. (64 mm) wide and formed of min 24 ga galv steel. Studs cut 2-2-1/4 (51 to 57 mm) less in length than assembly height with bottom nesting in and secured to floor runner. Steel studs secured to slotted leg of ceiling runner on finished side with No. 8 by 1/2 (13 mm) long wafer head steel screws at mid-height of exposed slot. Studs spaced max 24 in. (610 mm) OC.

C. **Gypsum Board* —** 1 in. (25 mm) thick by max 24 in. (610 mm) wide gypsum board liner panels. Panels cut 1-1/4 to 1-1/2 in. (32 to 38 mm) less in length than floor to ceiling height. Vertical edges inserted into "T" shaped section of "C-T" studs, into holding tabs of "I" studs or into "H"-shaped section of "C-H" studs. A nominal 3-5/8 in. (92 mm) wide rip of gypsum board covering the leg of the ceiling runner attached a max of 3/8 in. (10 mm) below the track web and a max of 8 in. (203 mm) O.C. to ceiling runner on the non-finished side of wall.

D. **Gypsum Board* —** Gypsum board 1/2 or 5/8 in. (13 or 16 mm) thick, applied on finished side of wall as specified in the individual Wall and Partition Design. The boards cut a max 1-1/4 to 1-1/2 in. (32 to 38 mm) less in length than the floor to ceiling height. The screws attaching the gypsum board layer(s) to the "C-T", "I", or "C-H" studs shall be located 4 to 5 in. (102 to 127 mm) down from deck at time of installation.

The hourly fire rating of the joint system is equal to the hourly fire rating of the wall.

3. **Joint System —** Max separation between bottom of floor and top of gypsum board (at time of installation) is 1-1/16in. (27 mm). The joint system is designed to accommodate a max 94 percent compression or 100 percent extension from its installed width.

A. **Forming Material* —** Min 4 pcf (64 kg/m^3) mineral wool insulation cut to the shape of the fluted steel floor units, approx 33% larger than the area of the flutes. Pieces compressed and inserted into the flutes above the top ceiling runner flush with the finished wall surface.

B. **Forming Material* —** Min 2 in. thick min 4 pcf (64 kg/m^3) mineral wool batt insulation cut to the width of the ceiling runner and compressed approximately 47 percent in thickness, installed into ceiling runner between leg of track and gypsum liner board.

C. **Fill, Void or Cavity Material* —** Nom 20 ga U-shaped track having 3-1/4 in (83 mm) legs with a nom 2-1/2 in. (64 mm) wide intumescent strip affixed to the top of the leg overlapping on to top surface a min of 1/4 in. (6 mm) facing the finished side of wall. Gypsum board to overlap a min of 1in. (25 mm) over the intumescent strip. Track to be secured to bottom side of floor assembly with min 2 in. (51 mm) steel fasteners spaced at a max of 24 in. (610 mm) OC.

CALIFORNIA EXPANDED METAL PRODUCTS CO — FAS SHAFT Track DL2

*Bearing the UL Classification Mark

The appearance of a company's name or product in this database does not in itself assure that products so identified have been manufactured under UL's Follow-Up Service. Only those products bearing the UL Mark should be considered to be Listed and covered under UL's Follow-Up Service. Always look for the Mark on the product.

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U.L. #HW-D-0584 A9 NTS

System No. HW-D-0218

November 14, 2011

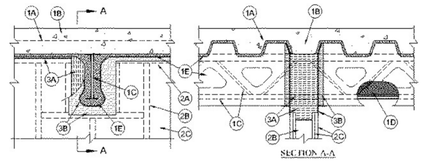
Assembly Rating — 1 and 2 Hr (See Item 1)

Nominal Joint Width - 1 In.

L Rating At Ambient — Less Than 1 CFM/Lin Ft

L Rating At 400°F — Less Than 1 CFM/Lin Ft

Class II Movement Capabilities - 25% Compression and Extension



1. **Floor Assembly —** The fire-rated fluted steel floor unit/concrete floor assembly shall be constructed of the materials and in the manner described in the individual D700 or D900 Series Floor-Ceiling Design in the Fire Resistance Directory and shall include the following construction features:

A. **Steel Floor and Form Units* —** Max 3 in. (76 mm) deep galv steel fluted floor units.

B. **Concrete —** Min 2-1/2 in. (64 mm) thick reinforced concrete, as measured from the top plane of the floor units.

C. **Structural Steel Support (Optional) - Steel beam or open-web steel joist, as specified in the individual D700 or D900 Series Floor-Ceiling Design, used to support steel floor units. Structural steel support oriented perpendicular to wall assembly. —** Steel beam or open-web steel joist, as specified in the individual D700 or D900 Series Floor-Ceiling Design, used to support steel floor units. Structural steel support oriented perpendicular to wall assembly.

D. **Steel Lath —** Where open-web steel joists pass through the fire rated wall, 3/8 in. diamond mesh expanded steel lath having a nom weight of 1.7 to 3.4 lb per sq yd (0.9 to 1.8 kg/m^2) shall be secured to one side of each joist with steel tie wire and the lath shall be fully covered with no min thickness requirement.

E. **Spray-Applied Fire Resistive Material* —** After the installation of the ceiling runner, (Item 2A, 2A1 or 2A2) steel floor units to be sprayed with the thickness of material specified in the individual D700 Series Design or the structural steel supports to be sprayed in accordance with the specifications in the individual D900 Series Design. Material is to be excluded from the steel floor units, directly above the gypsum board and from the flanges of the ceiling runners.

W R GRACE & CO CONSTRUCTION

PRODUCTS DIV — Type MK-6/HY

ISOLATEK INTERNATIONAL — Type 300

2. **Wall Assembly* —** The 1 or 2 h fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U400 or V400 Series Wall and Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

A. **Steel Floor and Ceiling Runners —** Floor and ceiling runners of wall assembly shall consist of min No. 25 gauge galv steel channels sized to accommodate steel studs (Item 2B). Flange height of ceiling runner shall be min 1/4 in. (6 mm) greater than max extended joint width. Ceiling runner centered beneath and parallel with valley of steel floor units (Item 1A). Ceiling runner secured to steel floor units with masonry anchors, steel fasteners or welds spaced max 24 in. (610 mm) OC. A clearance of 1-1/2 in. (38 mm) shall be maintained between the ceiling runner and the spray-applied fire resistive material on the structural steel support members.

A1 **Light Gauge Framing*-Slotted Ceiling Runner —** As an alternate to the ceiling runner in Item 2A, slotted ceiling runner to consist of galv steel channel with slotted flanges sized to accommodate steel studs (Item 2B). Slotted ceiling runner installed parallel to direction of fluted steel deck, centered beneath valley, prior to the application of spray-applied fire resistive material, and secured with steel masonry anchors, steel fasteners or welds spaced max 24 in. (610 mm) OC.

BRADY CONSTRUCTION INNOVATIONS INC,

DBA SLIPTRACK SYSTEMS — SLP-TRK

CALIFORNIA EXPANDED METAL PRODUCTS CO — CST

CLARKDIETRICH BUILDING SYSTEMS — Type SLT, SLT-H

MARINO/WARE, DIV OF WARE INDUSTRIES

INC — Type SLT

SCAFCO STEEL STUD MANUFACTURING CO

TELLING INDUSTRIES L L C — True-Action Deflection Track

THE STEEL NETWORK INC — VertiTrack VT, series,250VT, 362VT, 400VT, 600VT and 800VT

A2. **Light Gauge Framing*-Vertical Deflection Ceiling Runner —** As an alternate to the ceiling runners in Item 2A and 2A1, vertical deflection ceiling runner to consist of galv steel channel with slotted vertical deflection clips mechanically fastened within runner. Slotted clips, provided with step bushings, for permanent fastening of steel studs. Flanges sized to accommodate steel studs (Item 2B). Vertical deflection ceiling runner installed parallel to direction of fluted steel deck, centered beneath valley, prior to the application of spray-applied fire resistive material, and secured with steel masonry anchors, steel fasteners or welds spaced max 24 in. (610 mm) OC.

THE STEEL NETWORK INC VertiTrack VTD362, VTD400, VTD600 and VTD800

A3. **Light Gauge Framing*- Notched Ceiling Runner —** As an alternate to the ceiling runners in Items 2A through 2A2, notched ceiling runners to consist of C-shaped galv steel channel with notched return flanges sized to accommodate steel studs (Item 2B). Notched ceiling runner installed parallel to direction of fluted steel deck, centered beneath valley, prior to the application of spray-applied fire resistive material, and secured with steel masonry anchors, steel fasteners or welds spaced max 24 in. (610 mm) OC.

OLMAR SUPPLY INC — Type SCR

A4. **Light Gauge Framing* — Slotted Ceiling Runner —** As an alternate to the ceiling runner in Item 2A through 2A3, ceiling runner to consist of galv steel channel with slotted flanges sized to accommodate steel studs (Item 2B). Flange height of slotted ceiling runner shall be 3-1/4 in. (83 mm) with 2 in. (51 mm) deep slots. Slotted ceiling runner installed parallel to direction of fluted steel deck, centered beneath valley, prior to the application of spray-applied fire resistive material, and secured with steel masonry anchors, steel fasteners or welds spaced max 24 in. (610 mm) OC.

SCAFCO STEEL STUD MANUFACTURING CO — Slotted Track-Type SDLT

B. **Studs —** Steel studs to be min 3-5/8 in. (92 mm) wide. Studs cut 1/2 in.1/2 to 3/4 in. (13 to 19 mm) less in length than assembly height with bottom nesting in, resting on and fastened to the floor runner and with top nesting in ceiling runner without attachment. When slotted ceiling runner (Item 2A1) is used, steel studs secured to slotted ceiling runner with No. 8 by 1/2 in. (13 mm) long wafer head steel screws at midheight of slot on each side of wall. When vertical deflection runner (Item 2A2) is used, studs secured to vertical clip through slip bushing, supplied, with No.8 by 1/2 in. (13 mm) steel screws at midheight of slot of each slot. When slotted ceiling runner (Item 2A4) is used, steel studs cut in lengths 3/4 to 1-3/4 in. (19 to 44 mm) less than floor to ceiling height and secured to slotted ceiling runner with No. 8 by 1/2 (13 mm) long wafer head steel screws at +/- 3/16 in. (5 mm) of the mid-height of slot on each side of wall. A fire rated opening shall be constructed around each steel structural member A min clearance of 1 in. (25 mm) to a max of 4 in. (102 mm) shall be maintained between the framing and the spray-applied fire resistive material on the two sides of the structural support. The clearance between the framing and the spray-applied fire resistive material on the bottom of the structural steel support shall be max 2 in. (51 mm). Stud spacing not to exceed 24 in. (610 mm) OC.

C. **Gypsum Board* —** 5/8 in. (16 mm) thick, 4 ft (1.2 m) wide with square or tapered edges. The gypsum board type, number of layers an sheet orientation shall be as specified in the individual U400 or V400 Series Design in the Fire Resistance Directory, except that a max 1 in. (25 mm) gap shall be maintained between top of gypsum board and bottom plane of steel floor units and between the top edge of the gypsum board and the spray applied fire resistive material on the structural steel support. The top row of screws shall be installed into the studs 1 in. (25 mm) below the bottom of the ceiling runner.

3. **Joint System — Max separation between bottom of floor units and top of gypsum board at time of installation is 1 in. (25 mm). Max separation between spray-applied fire resistive material on bottom of structural support and framed opening in top of wall is 2 in. (51 mm). The joint system is designed to accommodate a max 25 percent compression or extension from its installed width.** The joint system consists of a forming material and a fill material between the top of the gypsum board and the bottom of the floor, as follows

A. **Forming Material* —** Nominal 4 in. (102 mm) thick pieces of nominal 4 pcf (64 kg/m^3) forming material, sized to be flush with both surfaces of wall, placed to fully fill the framed opening around the structural steel support. Pieces sized to attain a min compression rate of 50 percent in the thickness direction. Additional mineral wool batt insulation cut into strips to fill the gap between top of the gypsum board and bottom of floor units. Width of the strips shall be equal to the total thickness of the gypsum board. The strips of mineral wool shall be compressed 50 percent in thickness and firmly packed into the gap between the top of gypsum board and bottom of floor units.

ROCK WOOL MANUFACTURING CO — Delta Board

ROXUL INC — SAFE

THERMAFIBER INC — Type SAF

B. **Fill, Void or Cavity Material* - Sealant —** A min 1/16 in. (1.6 mm) dry thickness (min 1/8 in. or 3.2 mm wet thickness) of fill material sprayed of troweled on each side of wall to completely cover mineral wool forming material and to overlap min 1/2 in. (13 mm) onto gypsum board and min 2 in. (51 mm) onto the steel floor units or the spray applied material on the steel floor unit and on the structural support member on both sides of wall.

HILTI CONSTRUCTION CHEMICALS, DIV OF

HILTI INC — CP672 Firestop Spray or CFS-SP WB Firestop Joint Spray

earing the UL Classification Mark

U.L. #HW-D-0218 A5 NTS

System No. HW-D-0155

Assembly Rating — 2 Hr
Nominal Joint Width—3/4 In.
L Rating At Ambient — Less Than 1 CFM/Lin Ft
L Rating At 400°F — Less Than 1 CFM/Lin Ft
Class II Movement Capabilities—17% Compression Or Extension

SECTION A-A

1. Floor Assembly — The fire-rated fluted steel floor unit/concrete floor assembly shall be constructed of the materials and in the manner described in the individual D900 Floor-Ceiling Design in the Fire Resistance Directory and shall include the following construction features:
   A. Steel Floor and Form Units* — Max 2 in. (51 mm) deep galv steel fluted floor units.
   B. Concrete — Min 2-1/2 in. (64 mm) thick reinforced concrete, as measured from the top plane of the floor units.

1A. Roof Assembly — (Not Shown) — As an alternate to the floor assembly, a fire rated fluted steel deck roof assembly may be used. The roof assembly shall be constructed of the materials and in the manner described in the individual P900 Series Roof-Ceiling Design in the UL Fire Resistance Directory. The hourly rating of the roof assembly shall be equal to or greater than the hourly rating of the wall assembly. The roof assembly shall include the following construction features:
   A. Steel Roof Deck — Max 3 in. (76 mm) deep galv steel fluted roof deck.
   B. Roof Insulation — Min 2-1/4 in. (57 mm) thick poured insulating concrete, as measured from the top plane of the floor units.

2. Wall Assembly — Min 5 in. (127 mm) thick steel reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m3) concrete. Wall may also be constructed of an UL Classified Concrete Blocks*.
   See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufactures.

3. Joint System — Max separation between bottom of floor or roof and top of wall is 3/4 in. (19 mm). The joint system is designed to accommodate a max 17 percent compression or extension from its installed width. The joint system consists of a forming material and a fill material between the top of the wall and the bottom of the floor or roof, as follows:
   A. Forming Material* — Nom 4 pcf (64 kg/m3) density mineral wool batt insulation cut approx 20 percent wider than the flutes, with a length approx equal to the overall thickness of the wall. Pieces stacked as needed and then compressed 20 percent in thickness and inserted into the flutes of the steel deck. The mineral wool batt insulation shall be recessed 1/4 in. (6 mm) from wall surfaces. Additional nom 4 pcf (64 kg/m3) mineral wool batt insulation shall be cut into strips to fill the gap between the top of the wall and bottom of the steel deck. The width of the strips shall be equal to the total thickness of the wall less 1/2 in. The strips of mineral wool are compressed 50 percent in thickness and firmly packed into the gap between the top of the wall and bottom of the steel deck, recessed 1/4 in. (6 mm) ffrom wall surfaces.
   FIBREX INSULATIONS INC — FBX Safing Insulation
   A1. Forming Material*—Plugs — (Optional-Not Shown) Performed mineral wool plugs, formed to the shape of the fluted floor units, friction fit to completely fill the flutes. The plugs shall be recessed 1/4 in. (6 mm) from both wall surfaces. Additional forming material, described in Item 3A, to be used in conjunction with the plugs to fill the gap between the top of the wall and bottom of steel floor units.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP777 Speed Plugs
   B. Fill, Void or Cavity Material* - Sealant — Min 1/4 in. (6 mm) thickness of fill material installed on each side of the wall in the flutes of the steel deck between the top of the wall and the bottom of the steel deck, flush with each surface of the wall.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP606 Flexible Firestop Sealant

*Bearing the UL Classification Mark

U.L. #HW-D-0155 A1 NTS

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Lee's Summit R7 District Athletics Facilities

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2600 SW Ward Road
Lee's Summit, MO 64082

owner:
Lee's Summit R-7 School District
301 NE Tudor Road
Lee's Summit, MO 64086

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structural engineer:
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civil engineer:
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STATE OF MISSOURI
JAY DARREN BROWNING
NUMBER 2009027279
ARCHITECT
9.28.20

Architectural Corporation
Missouri License No. 2018022991
Jay Darren Browning Date: 09/28/2020
Architect License No. A-2009027279

REVISIONS

Number	DESCRIPTION	DATE

PROJECT NO: 0119-0101
DATE: September 28, 2020

Fire Rated Assemblies

W-G201

BID SET

PRINT DATE/TIME:
9/25/2020 3:33:41 PM

LEE'S SUMMIT WEST HIGH SCHOOL
SITE PLAN
2600 SW WARD ROAD, LEE'S SUMMIT, MO 64082
SECTION 8 - TOWNSHIP 47 N - RANGE 31 W

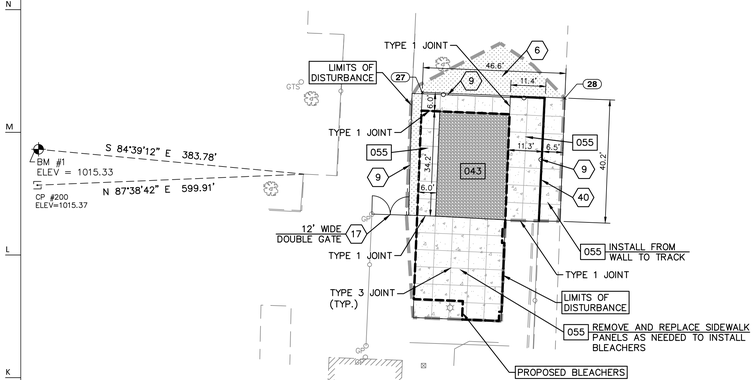
SITE DATA:
PROJECT AREA/AREA OF DISTURBANCE
TOTAL: 40,936 SF (0.94 AC.)

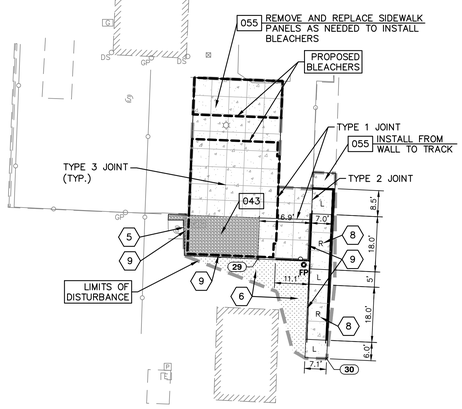
IMPERVIOUS COVERAGE WITHIN PROJECT AREA
EXISTING: 6,425 S.F. – 0.15 AC.
PROPOSED: 13,722 S.F. – 0.32 AC.
INCREASE: 7,297 S.F. – 0.17 AC.

STORMWATER MANAGEMENT:
NO ADDITIONAL STORM WATER MANAGEMENT CONTROLS ARE PROPOSED AS PART OF THIS PROJECT.

PREPARED FOR:
LEE'S SUMMIT SCHOOL DISTRICT
302 SE TRANSPORT RD,
LEE'S SUMMIT, MO 64081
PHONE: (816) 986–2421
CONTACT: KYLE GORRELL
EMAIL: kyle.gorrell@lsr7.net

PREPARED BY:
KAW VALLEY ENGINEERING, INC.
14700 W 114TH TERR.
LENEXA, KANSAS 66215
PHONE: (913) 894–5150
CONTACT: DAVID WOOD
EMAIL: wood@kveng.com





Point Table				
Point #	Northing	Easting	Elevation	Description
1	985531.58	2816515.18	0.00	PEOA
2	985524.02	2816579.63	0.00	PEOA
3	985502.10	2816577.72	0.00	PEOA
4	985489.92	2816528.43	0.00	SW
5	985503.90	2816510.51	0.00	SW
6	985508.84	2816511.28	0.00	PEOA
7	985146.40	2816628.67	0.00	SW
8	985133.38	2816589.22	0.00	SW
9	985117.88	2816538.07	0.00	SW
10	985113.99	2816471.16	0.00	SW
11	985064.81	2816468.14	0.00	SW
12	985061.59	2816520.47	0.00	SW
13	985500.72	2816534.39	0.00	BLDG ENVELOPE
14	985499.39	2816549.61	0.00	BLDG ENVELOPE
15	985488.16	2816548.63	0.00	BLDG ENVELOPE
16	985489.49	2816533.41	0.00	BLDG ENVELOPE
17	985135.35	2816595.18	0.00	BLDG ENVELOPE
18	985138.88	2816605.88	0.00	BLDG ENVELOPE
19	985124.38	2816610.67	0.00	BLDG ENVELOPE
20	985120.85	2816599.96	0.00	BLDG ENVELOPE
21	985101.38	2816545.80	0.00	BLDG ENVELOPE
22	985068.17	2816543.76	0.00	BLDG ENVELOPE
23	985071.61	2816487.93	0.00	BLDG ENVELOPE
24	985105.26	2816482.65	0.00	BLDG ENVELOPE
25	985080.04	2816481.10	0.00	BLDG ENVELOPE
26	985128.76	2816480.00	0.00	SW
27	985456.45	2816130.41	0.00	SW
28	985454.55	2816176.92	0.00	SW
29	985103.06	2816139.09	0.00	SW
30	985070.58	2816161.52	0.00	SW

LEGEND:

- UNDERGROUND GAS
- GAS METER
- CONTROL POINT
- BENCHMARK
- GATE POST
- CHAIN LINK FENCE
- STREET/TRAFFIC SIGN
- UNDERGROUND FIBER OPTIC CABLE
- UNDERGROUND FIBER OPTIC (FROM RECORDS)
- TELEPHONE PEDESTAL
- SANITARY SEWER MANHOLE
- STORM SEWER MANHOLE
- AREA INLET
- CURB INLET
- SANITARY SEWER CLEAN OUT
- DOWN SPOUT
- FLARED END SECTION
- SANITARY SEWER LINE
- STORM SEWER LINE
- CORRUGATED METAL PIPE
- REINFORCED CONCRETE PIPE
- UNDERGROUND ELECTRIC
- OVERHEAD UTILITY LINE (# OF LINES)
- PULL BOX
- LIGHT POLE
- UTILITY POLE
- UTILITY POLE W/ LIGHT
- UTILITY POLE W/ TRANSFORMER
- WATER LINE PER RECORD
- UNDERGROUND ELECTRIC PER RECORD
- CONIFEROUS TREE
- TREE LINE
- HDPE HIGH DENSITY POLYETHYLENE
- GAS VALVE
- GAS RISER
- GAS LINE SIGN
- DE DOOR ELEVATION AT THRESHOLD
- FF FINISH FLOOR ELEVATION
- BHE BUILDING HEIGHT/ELEVATION
- B/B BACK TO BACK OF CURB MEASUREMENT
- E/E EDGE TO EDGE OF ASPHALT
- WATER LINE
- WATER METER
- WATER LINE GATE VALVE
- BUSH
- DECIDUOUS TREE
- CONC CONCRETE
- FP FLAG POLE
- ELECTRIC METER
- UNDERGROUND ELECTRIC PEDESTAL
- UNDERGROUND GAS PER RECORD
- SANITARY SEWER LINE PER RECORD
- STORM SEWER LINE PER RECORD
- ASPHALT PAVEMENT (040)
- CONCRETE SIDEWALK (055)
- TURF
- L LANDING
- R RAMP
- LIMITS OF DISTURBANCE

NOTES:
5 WESTERN EXTENTS OF GRAVEL SURFACE TO ABUT UTILITY VAULT.
6 DISTURBED AREA SHALL BE FERTILIZED, MULCHED AND SEEDED WITH A THREE WAY BLEND OF TALL TURF TYPE FESCUE. (REFER TO SEEDING REQUIREMENTS ON SHEET W–C900.) ALL SEEDED AREAS WITHIN 10' OF SIDEWALKS AND BUILDING, WITHIN 5' OF STORM OUTFALLS AND ON SLOPES STEEPER THAN 4:1 SHALL BE PROTECTED WITH A TYPE 2 EROSION CONTROL BLANKET (NORTH AMERICAN GREEN S75BN OR APPROVED EQUAL.)
7 CONCRETE STOOP (REFERENCE STRUCTURAL PLANS.)
8 SIDEWALK RAMP. (REFERENCE ARCHITECTURAL PLANS FOR FINAL LAYOUT AND DIMENSIONS.)
9 PROPOSED FENCING. (REFERENCE ARCHITECTURAL PLANS FOR HEIGHTS, MATERIALS AND DETAILS.)
9A RELOCATED TURNSTILE (REFERENCE ARCHITECTURAL PLANS FOR DETAILS.)
17 ACCESS GATE (REFERENCE ARCHITECTURAL PLANS FOR HEIGHTS, MATERIALS AND DETAILS.)
40 CAST IN PLACE CONCRETE WALL (REFER TO STRUCTURAL PLANS.)
60 PROPOSED OR MODIFIED STORM SEWER STRUCTURE (SEE SHEET W–C500.)
70 SANITARY SEWER STRUCTURE (SEE SHEET W–C500.)
80 WATER STRUCTURE (SEE SHEET W–C500.)
95 PROPOSED TRANSFORMER ON HOUSEKEEPING PAD/ELECTRICAL APPURTENANCE. COORDINATE WITH MEP PLANS.

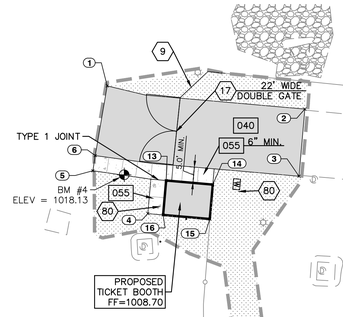
DETAILS – SEE DETAIL SHEET W–C900 FOR THE FOLLOWING DETAILS
040 ASPHALT PAVEMENT
043 AGGREGATE SURFACE
055 CONCRETE SIDEWALK

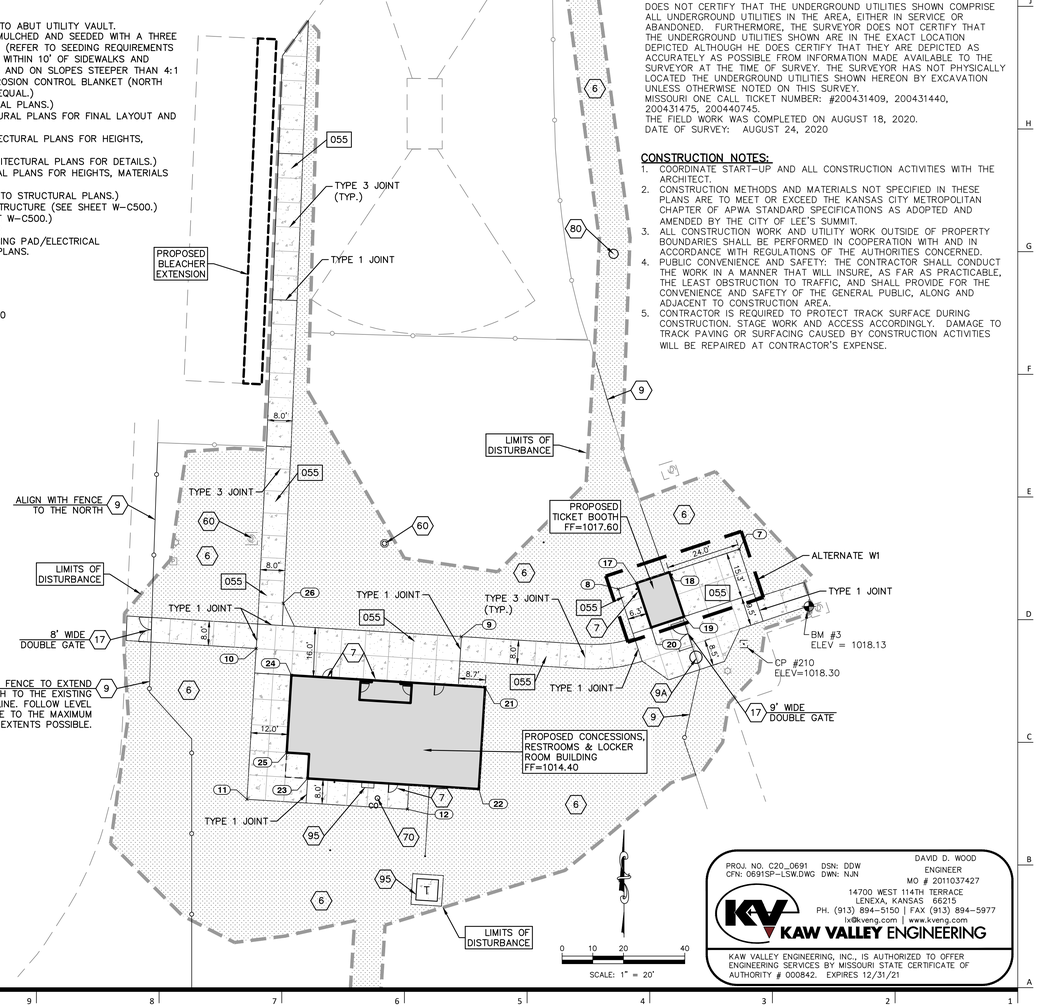
NOTE:
1. **CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF ENTRANCE, SLOPED PAVING, EXIT PORCHES, RAMPS, PRECISE BUILDING DIMENSIONS AND EXACT BUILDING UTILITY ENTRANCE LOCATIONS.**
2. **THESE PLANS HAVE NOT BEEN VERIFIED WITH FINAL ARCHITECTURAL CONTRACT DRAWINGS. CONTRACTOR SHALL VERIFY AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES. CONTRACTOR IS FULLY RESPONSIBLE FOR REVIEW AND COORDINATION OF ALL DRAWINGS AND CONTRACTOR DOCUMENTS.**

WARRANTY / DISCLAIMER
THE DESIGNS REPRESENTED IN THESE PLANS ARE IN ACCORDANCE WITH ESTABLISHED PRACTICES OF CIVIL ENGINEERING FOR THE DESIGN FUNCTIONS AND USES INTENDED BY THE OWNER AT THIS TIME. HOWEVER, NEITHER KAW VALLEY ENGINEERING, INC NOR ITS PERSONNEL CAN OR DO WARRANTY THESE DESIGNS OR PLANS AS CONSTRUCTED, EXCEPT IN THE SPECIFIC CASES WHERE KAW VALLEY ENGINEERING PERSONNEL INSPECT AND CONTROL THE PHYSICAL CONSTRUCTION ON A CONTEMPORARY BASIS AT THE SITE.

CAUTION – NOTICE TO CONTRACTOR
THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
THE CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AT LOCATIONS OF POSSIBLE CONFLICTS PRIOR TO ANY CONSTRUCTION.

SAFETY NOTICE TO CONTRACTOR
IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.





PROJECT CONTROL:
CP #210
1/2" REBAR WITH CONTROL POINT CAP.
NORTHING: 985115.46 (GROUND)
EASTING: 2816630.16 (GROUND)
ELEV = 1018.30

CP #211
1/2" REBAR WITH CONTROL POINT CAP.
NORTHING: 985518.99 (GROUND)
EASTING: 2816688.61 (GROUND)
ELEV = 1015.74

CP #212
1/2" REBAR WITH CONTROL POINT CAP.
NORTHING: 985543.18 (GROUND)
EASTING: 2816501.13 (GROUND)
ELEV = 1005.49

SITE BENCHMARKS:
BM–1
CHISELED SQUARE 3'± EAST OF EAST WATER FOUNTAIN.
PROJECT CISS8608.
ELEV= 1015.33

BM–3
SET CUT SQUARE AT SW CORNER OF CURB INLET, NW CORNER OF SW MOST PARKING LOT.
ELEV= 1018.13

BM–4
SET CUT SQUARE AT CORNER OF CONC. WALK, 25'± WEST OF TURNSTYLE TO ATHLETIC FIELD.
ELEV= 1007.85

VICINITY MAP
SEC 24 – TWP 47N – RNG 32W
NOT TO SCALE

HORIZONTAL AND VERTICAL DATUM:
UNLESS OTHERWISE NOTED THE COORDINATES SHOWN HEREON ARE GROUND COORDINATES BASED ON THE MISSOURI STATE PLANE (1983) WEST ZONE
(NAD 1983) (NAVD 1988).

CAF: 0.9998974
1 METER = 3.28083333 U.S SURVEY FEET
SCALED AROUND 0,0

JA–142 (PID: 095142)
NORTHING: 302106.953 (METERS) (GRID)
EASTING: 858960.056 METERS) (GRID)
ELEVATION: 318.0 (METERS)

UNDERGROUND UTILITY STATEMENT:
THE UNDERGROUND UTILITIES SHOWN HEREON ARE DEPICTED FROM FIELD SURVEY INFORMATION OF ONE–CALL LOCATED UTILITIES AND/OR THE SCALING AND PLOTTING OF EXISTING UTILITY MAPS AND DRAWINGS MADE AVAILABLE TO THE SURVEYOR AT THE TIME OF SURVEY. THE SURVEYOR DOES NOT CERTIFY THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL UNDERGROUND UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. FURTHERMORE, THE SURVEYOR DOES NOT CERTIFY THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION DEPICTED ALTHOUGH HE DOES CERTIFY THAT THEY ARE DEPICTED AS ACCURATELY AS POSSIBLE FROM INFORMATION MADE AVAILABLE TO THE SURVEYOR AT THE TIME OF SURVEY. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES SHOWN HEREON BY EXCAVATION UNLESS OTHERWISE NOTED ON THIS SURVEY.
MISSOURI ONE CALL TICKET NUMBER: #200431409, 200431440, 200431475, 200440745.
THE FIELD WORK WAS COMPLETED ON AUGUST 18, 2020.
DATE OF SURVEY: AUGUST 24, 2020

CONSTRUCTION NOTES:
1. COORDINATE START–UP AND ALL CONSTRUCTION ACTIVITIES WITH THE ARCHITECT.
2. CONSTRUCTION METHODS AND MATERIALS NOT SPECIFIED IN THESE PLANS ARE TO MEET OR EXCEED THE KANSAS CITY METROPOLITAN CHAPTER OF APWA STANDARD SPECIFICATIONS AS ADOPTED AND AMENDED BY THE CITY OF LEE'S SUMMIT.
3. ALL CONSTRUCTION WORK AND UTILITY WORK OUTSIDE OF PROPERTY BOUNDARIES SHALL BE PERFORMED IN COOPERATION WITH AND IN ACCORDANCE WITH REGULATIONS OF THE AUTHORITIES CONCERNED.
4. PUBLIC CONVENIENCE AND SAFETY: THE CONTRACTOR SHALL CONDUCT THE WORK IN A MANNER THAT WILL INSURE, AS FAR AS PRACTICABLE, THE LEAST OBSTRUCTION TO TRAFFIC, AND SHALL PROVIDE FOR THE CONVENIENCE AND SAFETY OF THE GENERAL PUBLIC, ALONG AND ADJACENT TO CONSTRUCTION AREA.
5. CONTRACTOR IS REQUIRED TO PROTECT TRACK SURFACE DURING CONSTRUCTION. STAGE WORK AND ACCESS ACCORDINGLY. DAMAGE TO TRACK PAVING OR SURFACING CAUSED BY CONSTRUCTION ACTIVITIES WILL BE REPAIRED AT CONTRACTOR'S EXPENSE.

PROJ. NO. C20_0691 DSN: DDW
CFN: 0691SP–LSW.DWG DWN: NJN
DAVID D. WOOD
ENGINEER
MO # 2011037427
14700 WEST 114TH TERRACE
LENEXA, KANSAS 66215
PH. (913) 894–5150 | FAX (913) 894–5977
kv@kveng.com | www.kveng.com
KAW VALLEY ENGINEERING
KAW VALLEY ENGINEERING, INC., IS AUTHORIZED TO OFFER ENGINEERING SERVICES BY MISSOURI STATE CERTIFICATE OF AUTHORITY # 000842. EXPIRES 12/31/21

PRINT DATE/TIME: 3/17/2020 4:49:21 PM

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Lee's Summit R7 District Athletics Facilities

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STATE OF MISSOURI
DAVID D. WOOD
NUMBER
PE-2011037427
PROFESSIONAL ENGINEER
9/28/2020

Kaw Valley Engineering, Inc
Missouri Certificate of Authority: 000842
David Wood Date: 09/28/2020
Engineer License No. PE-2011037427

REVISIONS

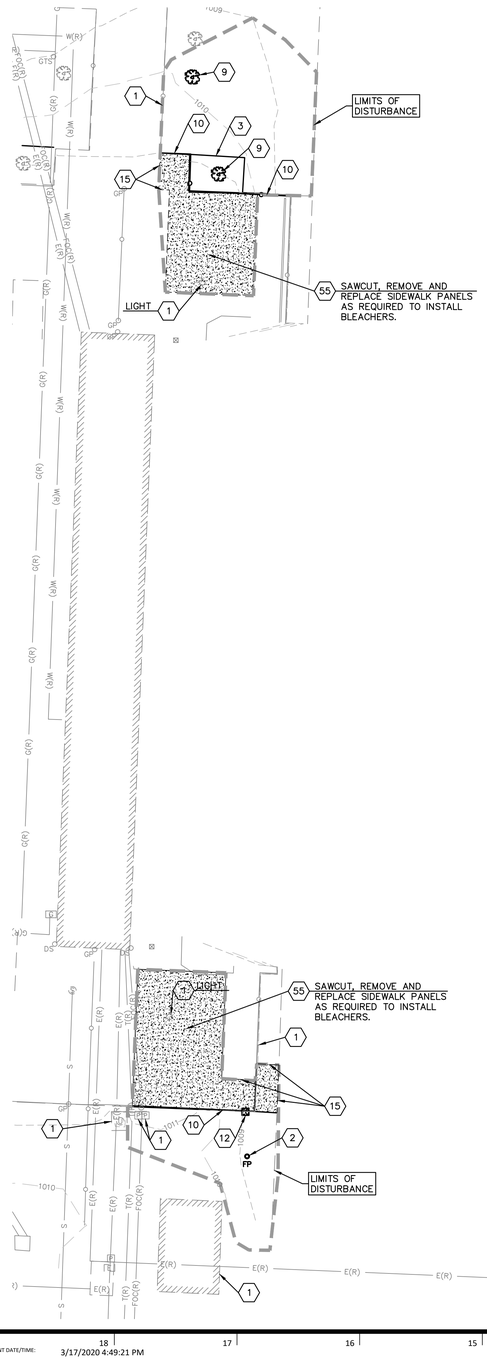
Number	DESCRIPTION	DATE

PROJECT NO: 0119-0100
DATE: September 28, 2020

SITE & DIMENSION PLAN

W-C100

BID SET

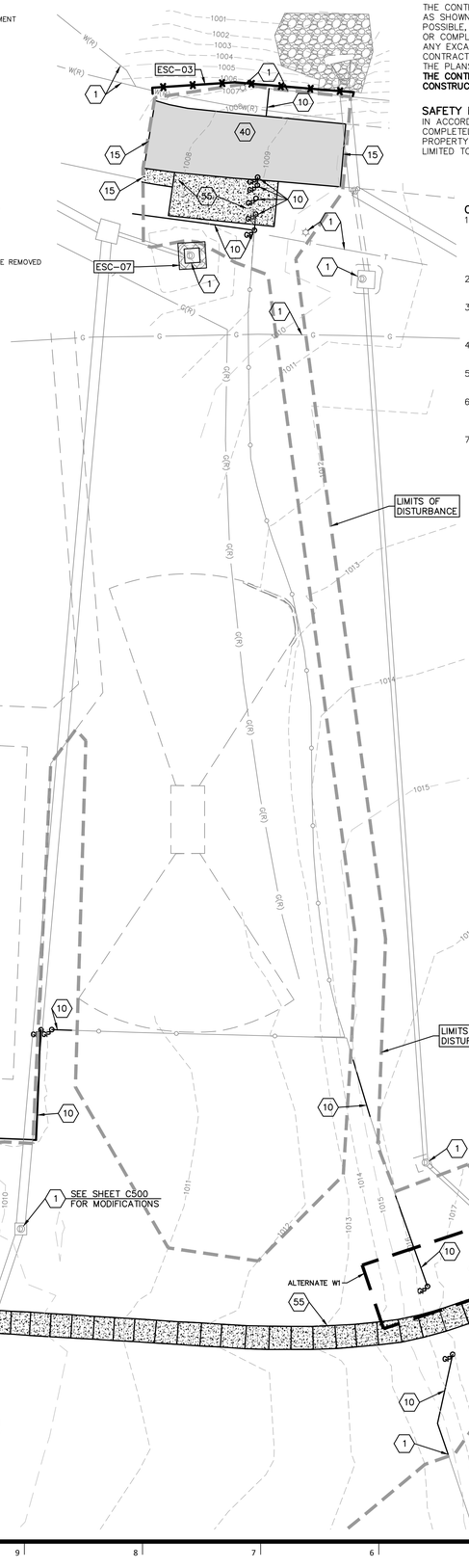


LEGEND:

UNDERGROUND GAS	HIGH DENSITY POLYETHYLENE
GAS METER	GAS VALVE
CONTROL POINT	GAS RISER
BENCHMARK	GAS LINE SIGN
GATE POST	DOOR ELEVATION AT THRESHOLD
CHAIN LINK FENCE	
STREET/TRAFFIC SIGN	FINISH FLOOR ELEVATION
UNDERGROUND FIBER OPTIC CABLE	BUILDING HEIGHT/ELEVATION
UNDERGROUND FIBER OPTIC (FROM RECORDS)	BACK TO BACK OF CURB MEASUREMENT
TELEPHONE PEDESTAL	EDGE TO EDGE OF ASPHALT
SANITARY SEWER MANHOLE	WATER LINE
STORM SEWER MANHOLE	WATER METER
AREA INLET	WATER LINE GATE VALVE
CURB INLET	BUSH
SANITARY SEWER CLEAN OUT	DECIDUOUS TREE
DOWN SPOUT	TRASH ENCLOSURE
FLOOR DRAIN	LANDSCAPING AREA
FLARED END SECTION	CONCRETE
SANITARY SEWER LINE	FLAG POLE
STORM SEWER LINE	ELECTRIC METER
CORRUGATED METAL PIPE	UNDERGROUND ELECTRIC PEDESTAL
REINFORCED CONCRETE PIPE	LANDING
UNDERGROUND ELECTRIC	RAMP
OVERHEAD UTILITY LINE (# OF LINES)	UNDERGROUND GAS PER RECORD
PULL BOX	SANITARY SEWER LINE PER RECORD
LIGHT POLE	STORM SEWER LINE PER RECORD
UTILITY POLE	
UTILITY POLE W/ LIGHT	ASPHALT PAVING TO BE REMOVED
UTILITY POLE W/ TRANSFORMER	
WATER LINE PER RECORD	CONCRETE PAVING/SIDEWALKS TO BE REMOVED
UNDERGROUND ELECTRIC PER RECORD	
CONIFEROUS TREE	
TREE LINE	

EROSION & PROPOSED IMPROVEMENTS LEGEND:

- 1218 — EXISTING GROUND CONTOUR (1' INTERVALS)
- 1218 — PROPOSED FINISHED GROUND CONTOUR (1' INTERVALS)
- GRAVEL FILTER BAGS
- SEDIMENTATION FENCE
- CONSTRUCTION ENTRANCE
- LIMITS OF DISTURBANCE
- CW — CONCRETE WASH AREA



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CONSTRUCTION NOTES:

1. CONTRACTOR SHALL VERIFY SITE CONDITIONS PRIOR TO BIDDING. CONTRACTOR SHALL REMOVE ALL BUILDINGS, UTILITIES, PAVEMENT, FOUNDATIONS, FENCES, CURBS AND ALL OTHER STRUCTURES FROM WITHIN PROPERTY LINES EXCEPT AS DESIGNATED "TO REMAIN" OR "TO BE REMOVED BY OTHERS", IN ACCORDANCE WITH THE SPECIFICATIONS AND THE CITY OF LEE'S SUMMIT AND STATE REGULATIONS. SITE CONDITIONS SHOWN WERE AS OF AUGUST 26, 2020.
2. ALL UTILITY PIPE LINES TO BE ABANDONED SHALL BE PLUGGED PER CITY AND STATE REGULATIONS.
3. ALL PAVING, FLATWORK AND OTHER STRUCTURES DESIGNATED TO BE REMOVED SHALL BE REMOVED FROM PROPERTY AND DISPOSED OF IN CONFORMANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.
4. ALL EXISTING UTILITIES ETC. LOCATED WITHIN THE BOUNDARIES OF THE PROPOSED BUILDING SHALL BE COMPLETELY REMOVED TO 10 FEET OUTSIDE OF BUILDING LINE.
5. CONTRACTOR SHALL VERIFY THAT ALL UTILITIES TO EXISTING STRUCTURES HAVE BEEN DISCONNECTED PRIOR TO COMMENCING DEMOLITION.
6. CONTRACTOR TO PROVIDE CONCRETE WASHOUT AND CONSTRUCTION ENTRANCE FOR PROJECT. COORDINATE FINAL LOCATION IN FIELD WITH SCHOOL DISTRICT TO AVOID DISRUPTION TO PEDESTRIAN ACCESS.
7. CONTRACTOR IS REQUIRED TO PROTECT TRACK SURFACE DURING CONSTRUCTION. STAGE WORK AND ACCESS ACCORDINGLY. DAMAGE TO TRACK PAVING OR SURFACING CAUSED BY CONSTRUCTION ACTIVITIES WILL BE REPAIRED AT CONTRACTOR'S EXPENSE.

DEMOLITION

- **1** TO REMAIN.
- **2** EXISTING FLAGPOLE TO BE REMOVED. RELOCATE IF REQUIRED BY SCHOOL DISTRICT.
- **3** REMOVE LANDSCAPING AREA.
- **9** REMOVE TREE.
- **10** FENCE AND FENCE POSTS TO BE REMOVED AS NECESSARY AND REPLACED AS NOTED, TO CONSTRUCT IMPROVEMENTS.
- **12** REMOVE ELECTRICAL OUTLET. (COORDINATE WITH MEP PLANS)
- **15** SAWCUT LINE. REMOVE PAVING AT NEAREST JOINT.
- **40** CONTRACTOR TO REMOVE ASPHALT PAVING AS REQUIRED TO CONSTRUCT IMPROVEMENTS.
- **55** CONTRACTOR TO REMOVE CONCRETE PAVING AND WALKS.

DETAILS – SEE W-C900 SERIES FOR DETAILS.

ESC-01 CONCRETE ENTRANCE AND CONCRETE WASHOUT
ESC-03 SILT FENCE
ESC-07 AREA INLET AND JUNCTION BOX PROTECTION

NOTE:
1. **CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF ENTRANCE, SLOPED PAVING, EXIT PORCHES, RAMPS, PRECISE BUILDING DIMENSIONS AND EXACT BUILDING UTILITY ENTRANCE LOCATIONS.**
2. **THESE PLANS HAVE NOT BEEN VERIFIED WITH FINAL ARCHITECTURAL CONTRACT DRAWINGS. CONTRACTOR SHALL VERIFY AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES. CONTRACTOR IS FULLY RESPONSIBLE FOR REVIEW AND COORDINATION OF ALL DRAWINGS AND CONTRACTOR DOCUMENTS.**

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

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SCALE: 1" = 20'

PROJ. NO. C20_0691 DSN: DDW
CFN: 0691DEMO-LSW.DWG DWN: NJN
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KAW VALLEY ENGINEERING
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Lee's Summit R7 District Athletics Facilities

Lee's Summit North High School
2600 SW Ward Road
Lee's Summit, MO 64082

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STATE OF MISSOURI · DAVID D. WOOD · NUMBER PE-2011037427 · PROFESSIONAL ENGINEER
9/28/2020

Kaw Valley Engineering, Inc.
Missouri Certificate of Authority: 000842
David Wood Date: 09/28/2020
Engineer License No. PE-2011037427

REVISIONS

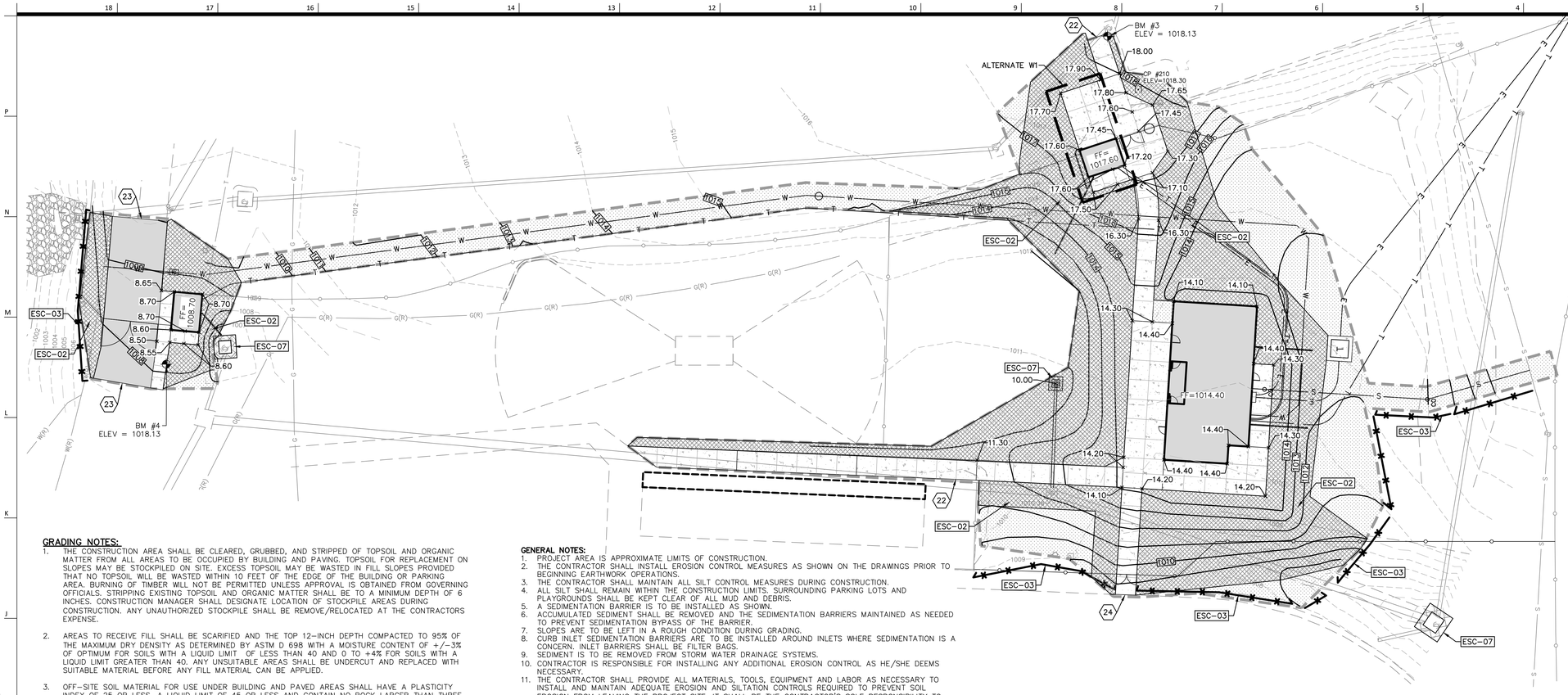
Number	DESCRIPTION	DATE

PROJECT NO: 0119-0100
DATE: September 28, 2020

DEMOLITION AND EROSION CONTROL PLAN

W-C200

BID SET



GRADING NOTES:

1. THE CONSTRUCTION AREA SHALL BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL AND ORGANIC MATTER FROM ALL AREAS TO BE OCCUPIED BY BUILDING AND PAVING. TOPSOIL FOR REPLACEMENT ON SLOPES MAY BE STOCKPILED ON SITE. EXCESS TOPSOIL MAY BE WASTED IN FILL SLOPES PROVIDED THAT NO TOPSOIL WILL BE WASTED WITHIN 10 FEET OF THE EDGE OF THE BUILDING OR PARKING AREA. BURNING OF TIMBER WILL NOT BE PERMITTED UNLESS APPROVAL IS OBTAINED FROM GOVERNING OFFICIALS. STRIPPING EXISTING TOPSOIL AND ORGANIC MATTER SHALL BE TO A MINIMUM DEPTH OF 6 INCHES. CONSTRUCTION MANAGER SHALL DESIGNATE LOCATION OF STOCKPILE AREAS DURING CONSTRUCTION. ANY UNAUTHORIZED STOCKPILE SHALL BE REMOVE/RELOCATED AT THE CONTRACTORS EXPENSE.
2. AREAS TO RECEIVE FILL SHALL BE SCARIFIED AND THE TOP 12-INCH DEPTH COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D 698 WITH A MOISTURE CONTENT OF +/-3% OF OPTIMUM FOR SOILS WITH A LIQUID LIMIT OF LESS THAN 40 AND 0 TO +4% FOR SOILS WITH A LIQUID LIMIT GREATER THAN 40. ANY UNSUITABLE AREAS SHALL BE UNDERCUT AND REPLACED WITH SUITABLE MATERIAL BEFORE ANY FILL MATERIAL CAN BE APPLIED.
3. OFF-SITE SOIL MATERIAL FOR USE UNDER BUILDING AND PAVED AREAS SHALL HAVE A PLASTICITY INDEX OF 25 OR LESS, A LIQUID LIMIT OF 45 OR LESS AND CONTAIN NO ROCK LARGER THAN THREE INCHES. OFF-SITE FILL MATERIAL SHALL BE APPROVED BY THE OWNER'S TESTING AGENCY PRIOR TO BRINGING ON SITE.
4. EARTHWORK UNDER THE BUILDING, PAVING AND LIGHTLY LOADED STRUCTURAL FEATURES SHALL COMPLY WITH THE CONTRACT DOCUMENTS AND PROJECT GEOTECHNICAL REPORT. THE BUILDING PAD SHALL BE EXCAVATED AS REQUIRED TO ALLOW THE PLACEMENT OF LOW VOLUME CHANGE MATERIAL. REFER TO GEOTECHNICAL REPORT FOR PREPARING BUILDING PAD AND LOW VOLUME CHANGE THICKNESS REQUIREMENTS. OTHER FILL MATERIAL SHALL BE MADE IN LIFTS NOT TO EXCEED EIGHT INCHES DEPTH COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D 698. LVC SOILS SHALL BE COMPACTED AT A MOISTURE CONTENT OF 0 TO +4% OF OPTIMUM FOR SOILS WITH A LIQUID LIMIT GREATER THAN 40 AND +/-3% OF OPTIMUM FOR SOILS WITH A LIQUID LIMIT LESS THAN 40. NO ROCK LARGER THAN THREE INCHES IN ANY DIMENSION NOR ANY SHALE SHALL BE PLACED IN THE TOP 24 INCHES OF EMBANKMENT.
5. AREAS THAT ARE TO BE CUT TO SUBGRADE LEVELS SHALL BE PROOF ROLLED WITH A LOADED DUMP TRUCK OR SIMILAR APPROVED CONSTRUCTION EQUIPMENT TO DETECT UNSUITABLE SOIL CONDITIONS.
6. IN ALL AREAS OF EXCAVATION, IF UNSUITABLE SOIL CONDITIONS ARE ENCOUNTERED, THE OWNER'S ENGINEER SHALL RECOMMEND TO THE OWNER THE METHODS OF UNDERCUTTING AND REPLACEMENT OF PROPERLY COMPACTED, APPROVED FILL MATERIAL. ALL PROOFROLLING AND UNDERCUTTING SHOULD BE PERFORMED DURING A PERIOD OF DRY WEATHER.
7. **ALL EXCAVATIONS SHALL BE CONSIDERED AS UNCLASSIFIED. REFER TO PROJECT GEOTECHNICAL REPORT.**
8. ALL DISTURBED SLOPES ARE TO BE 3:1 OR FLATTER.
9. ALL SLOPES DISTURBED EXCEEDING 4:1 SHALL BE HYDROSEEDED, SODDED OR PROTECTED BY EROSION CONTROL BLANKETS THAT WILL PREVENT EROSION AND PLACED SUCH THAT THE SURFACE IS FLUSH WITH SURROUNDING GROUND AND SHAPED TO CHANNEL WATER IN DIRECTIONS INDICATED. SEE GENERAL NOTES ON THIS SHEETS.
10. ALL SLOPES AND AREAS DISTURBED BY CONSTRUCTION SHALL BE GRADED SMOOTH AND A MINIMUM OF FOUR INCHES OF TOPSOIL APPLIED. IF ADEQUATE TOPSOIL IS NOT AVAILABLE ON-SITE, THE CONTRACTOR SHALL PROVIDE TOPSOIL, APPROVED BY THE OWNER, AS NEEDED. THE AREA SHALL THEN BE SODDED OR SEEDED, FERTILIZED, MULCHED, WATERED AND MAINTAINED UNTIL HARDY GRASS GROWTH IS ESTABLISHED IN ALL AREAS. ANY AREAS DISTURBED FOR ANY REASON SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER PRIOR TO FINAL ACCEPTANCE OF THE PROJECT. REFER TO THE NOTES ON THIS SHEET FOR TEMPORARY SEEDING SPECIFICATIONS. REFER TO PROJECT SITE PLAN FOR FINAL STABILIZATION TREATMENTS.
11. CONTRACTOR IS TO REMOVE AND DISPOSE OF ALL DEBRIS, RUBBISH AND OTHER MATERIALS RESULTING FROM PREVIOUS AND CURRENT DEMOLITION OPERATIONS.
12. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT. THE CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR ANY DAMAGES TO THE ADJACENT PROPERTIES OCCURRING DURING THE CONSTRUCTION PHASES OF THIS PROJECT.
13. IT IS NOT THE DUTY OF THE ENGINEER OR THE OWNER TO REVIEW THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES, IN, ON OR NEAR THE CONSTRUCTION SITE AT ANY TIME DURING CONSTRUCTION.
14. IF ANY OF THESE NOTES CONFLICT WITH THE PROJECT GEOTECHNICAL REPORT AND ALL ADDENDUMS PREPARED BY CFS ENGINEERS DATED (TBD), RECOMMENDATIONS IN GEOTECHNICAL REPORT SHALL GOVERN.

GENERAL NOTES:

1. PROJECT AREA IS APPROXIMATE LIMITS OF CONSTRUCTION.
2. THE CONTRACTOR SHALL INSTALL EROSION CONTROL MEASURES AS SHOWN ON THE DRAWINGS PRIOR TO BEGINNING EARTHWORK OPERATIONS.
3. THE CONTRACTOR SHALL MAINTAIN ALL SILT CONTROL MEASURES DURING CONSTRUCTION.
4. ALL SILT SHALL REMAIN WITHIN THE CONSTRUCTION LIMITS. SURROUNDING PARKING LOTS AND PLAYGROUNDS SHALL BE KEPT CLEAR OF ALL MUD AND DEBRIS.
5. A SEDIMENTATION BARRIER IS TO BE INSTALLED AS SHOWN.
6. ACCUMULATED SEDIMENT SHALL BE REMOVED AND THE SEDIMENTATION BARRIERS MAINTAINED AS NEEDED TO PREVENT SEDIMENTATION BYPASS OF THE BARRIER.
7. SLOPES ARE TO BE LEFT IN A ROUGH CONDITION DURING GRADING.
8. CURB INLET SEDIMENTATION BARRIERS ARE TO BE INSTALLED AROUND INLETS WHERE SEDIMENTATION IS A CONCERN. INLET BARRIERS SHALL BE FILTER BAGS.
9. SEDIMENT IS TO BE REMOVED FROM STORM WATER DRAINAGE SYSTEMS.
10. CONTRACTOR IS RESPONSIBLE FOR INSTALLING ANY ADDITIONAL EROSION CONTROL AS HE/SHE DEEMS NECESSARY.
11. THE CONTRACTOR SHALL PROVIDE ALL MATERIALS, TOOLS, EQUIPMENT AND LABOR AS NECESSARY TO INSTALL AND MAINTAIN ADEQUATE EROSION AND SILTATION CONTROLS REQUIRED TO PREVENT SOIL EROSION FROM LEAVING THE PROJECT SITE. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO ENSURE THAT METHODS UTILIZED ARE ADEQUATE AND COMPLY WITH REQUIREMENTS OF THE SPECIFICATIONS AND GOVERNMENTAL AGENCIES HAVING JURISDICTION OVER THE WORK.
12. TEMPORARY SEDIMENT FENCE/STRAW WATTLES TO REMAIN UNTIL ADEQUATE VEGETATION IS ESTABLISHED.
13. MUD AND DEBRIS SHALL BE CLEANED UP AT THE CONCLUSION OF EACH WORKING DAY, OR AFTER EACH RAINFALL IF SILT IS PRESENT.
14. INSPECTION, MAINTENANCE AND REPAIR OF EROSION CONTROL DEVICES SHALL BE ON GOING THROUGHOUT THE LIFE OF BUILDING CONSTRUCTION TO KEEP THE DEVICES IN OPERABLE CONDITION AT ALL TIMES. ADDITIONAL MEASURES SHALL BE INSTALLED AS REQUIRED BY ACTUAL FIELD CONDITIONS AND/OR GOVERNING INSPECTION AGENCIES.
15. INSTALL CONSTRUCTION ENTRANCE AS NOTED.
16. AT COMPLETION OF SITE GRADING AND OTHER RELATED CONSTRUCTION ACTIVITIES, ALL DISTURBED AREAS WITHIN THE PROJECT SITE SHALL BE SEEDED, SODDED, OR LANDSCAPED AS SHOWN ON THE SITE. IF GRADING ACTIVITIES CEASE ON AN AREA OF THE SITE DISTURBED SLOPES SHALL BE TEMPORARILY SEEDED IN ACCORDANCE WITH PLANS.
17. TOPSOIL IS TO BE PLACED IN AREAS UNSUITABLE FOR VEGETATIVE GROWTH.
18. STRIP TOPSOIL PRIOR TO EXCAVATION, STOCKPILE AND SPREAD ONTO DISKED SUBGRADE (4" MIN) A THICKNESS OF 4 INCHES.
19. THE CONTRACTOR SHALL HAVE THE RESPONSIBILITY FOR RESOLVING COMPLAINTS IN THE EVENT THAT COMPLAINTS OR DAMAGE CLAIMS ARE FILED DUE TO DAMAGES OCCURRING ADJACENT TO OR DOWNSTREAM FROM PROPERTY BY SEDIMENT RESULTING FROM EROSION ON THE PROJECT SITE.
20. GOOD HOUSEKEEPING PRACTICES SHALL BE MAINTAINED ON SITE TO KEEP SOLID WASTE FROM ENTRY INTO WATERS.
21. ALL FUELING FACILITIES PRESENT ON SITE SHALL ADHERE TO APPLICABLE FEDERAL AND STATE REQUIREMENTS CONCERNING UNDERGROUND STORAGE, ABOVE GROUND STORAGE AND DISPENSERS, INCLUDING SPILL PREVENTION, CONTROL AND COUNTER MEASURES.
22. EROSION CONTROL IS TO BE PLACED IN PHASING AS CONSTRUCTION PROGRESSES.
23. MINIMAL WASHING OF CONCRETE EQUIPMENT ALLOWED, CHUTE ETC. CONCRETE WASHOUT OF THE DRUM IS NOT ALLOWED. ANY PIT/WASHOUT AREA NEEDS TO BE MAINTAINED IN A NON-DISCHARGING MANNER AND ANY WASTE RESIDUE WILL NEED TO BE CLEANED OUT AND REMOVED AT THE END OF PROJECT.
24. EROSION CONTROL SEDIMENT FENCE OR STRAW WATTLE SHALL BE INSTALLED 1'-0" BEHIND CURB & GUTTER OR SIDEWALK UPON COMPLETION OF BACKFILL OF CURB IN ALL AREAS WHERE SLOPES FROM DISTURBED AREAS DRAIN TOWARDS CURB OR SIDEWALK. UPON COMPLETION OF FINAL GRADING THE TOES OF ALL EMBANKMENTS IN EXCESS OF TWO FEET IN HEIGHT WILL HAVE EROSION CONTROL SEDIMENT FENCE INSTALLED.

EROSION AND SEDIMENT CONTROL INSPECTION PROCEDURES

THE FOLLOWING PROCEDURES WILL BE USED TO MAINTAIN EROSION AND SEDIMENTATION CONTROLS.

1. ALL CONTROL MEASURES WILL BE INSPECTED AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL EVENT PRODUCING RUNOFF AND DAILY DURING PROLONGED RAINFALL PERIODS.
2. ALL MEASURES WILL BE MAINTAINED IN GOOD WORKING ORDER. IF A REPAIR IS NECESSARY, IT WILL BE MADE WITHIN 24 HOURS OF THE INSPECTION.
3. SEDIMENT WILL BE REMOVED FROM THE SILT BARRIERS WHEN IT HAS REACHED ONE-THIRD OF THE HEIGHT OF THE BARRIER.
4. SILT BARRIERS WILL BE INSPECTED FOR DEPTH OF ACCUMULATED SEDIMENT, TEARS, ATTACHMENT TO POSTS, AND STABILITY ON A WEEKLY BASIS.
5. TEMPORARY AND PERMANENT SEEDING AND PLANTING WILL BE INSPECTED FOR BARE SPOTS, WASHOUTS, AND HEALTHY GROWTH.
6. THE CONSTRUCTION MANAGER WILL SELECT INDIVIDUALS TO BE RESPONSIBLE FOR INSPECTIONS, MAINTENANCE, REPAIRS, AND REPORTING. THE DESIGNATED INDIVIDUALS WILL RECEIVE THE NECESSARY TRAINING FROM THE CONSTRUCTION MANAGER TO PROPERLY INSPECT AND MAINTAIN THE CONTROLS IN GOOD WORKING ORDER.

NOTE:
1. **CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF ENTRANCE, SLOPED PAVING, EXIT PORCHES, RAMPS, PRECISE BUILDING DIMENSIONS AND EXACT BUILDING UTILITY ENTRANCE LOCATIONS.**
2. **THESE PLANS HAVE NOT BEEN VERIFIED WITH FINAL ARCHITECTURAL CONTRACT DRAWINGS. CONTRACTOR SHALL VERIFY AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES. CONTRACTOR IS FULLY RESPONSIBLE FOR REVIEW AND COORDINATION OF ALL DRAWINGS AND CONTRACTOR DOCUMENTS.**

NOTES:
- 22 MATCH EXISTING SIDEWALK ELEVATION.
- 23 MATCH EXISTING PAVEMENT ELEVATION.
- 24 MATCH EXISTING TRACK CURB ELEVATION.

DETAILS – SEE DETAIL SHEET W-C900 AND W-C910.

ESC-02 EROSION CONTROL BLANKETS AND TURF REINFORCEMENT MAT
ESC-03 SEDIMENTATION FENCE
ESC-07 AREA INLET & JUNCTION BOX PROTECTION

WARRANTY / DISCLAIMER

THE DESIGNS REPRESENTED IN THESE PLANS ARE IN ACCORDANCE WITH ESTABLISHED PRACTICES OF CIVIL ENGINEERING FOR THE DESIGN FUNCTIONS AND USES INTENDED BY THE OWNER AT THIS TIME. HOWEVER, NEITHER KAW VALLEY ENGINEERING, INC NOR ITS PERSONNEL CAN OR DO WARRANTY THESE DESIGNS OR PLANS AS CONSTRUCTED, EXCEPT IN THE SPECIFIC CASES WHERE KAW VALLEY ENGINEERING PERSONNEL INSPECT AND CONTROL THE PHYSICAL CONSTRUCTION ON A CONTEMPORARY BASIS AT THE SITE.

CAUTION – NOTICE TO CONTRACTOR

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
THE CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AT LOCATIONS OF POSSIBLE CONFLICTS PRIOR TO ANY CONSTRUCTION.

SAFETY NOTICE TO CONTRACTOR

IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.

EROSION & PROPOSED IMPROVEMENTS LEGEND:

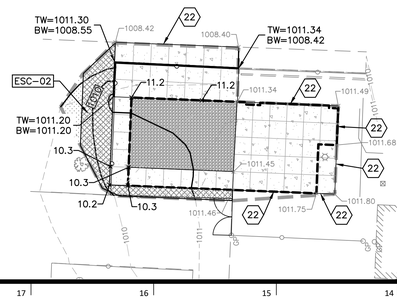
- 1218 — EXISTING GROUND CONTOUR (1' INTERVALS)
- 1218 — PROPOSED FINISHED GROUND CONTOUR (1' INTERVALS)
- INLET PROTECTION (ESC-06 & ESC-07)
- SEDIMENTATION FENCE (ESC-03)
- LIMITS OF DISTURBANCE
- CW — CONCRETE WASH AREA
- EROSION CONTROL BLANKET/ TURF REINFORCEMENT MAT (ESC-02)
- TURF

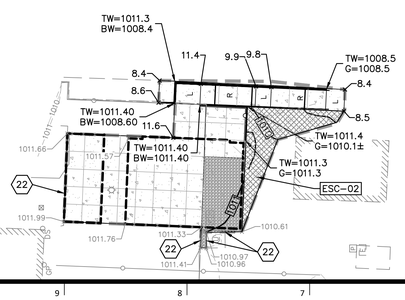
LEGEND (PROPOSED)

- 22.9 SPOT ELEVATION (ADD 1000),
- 950 — FINISHED 1' CONTOUR INTERVALS, TOP OF PAVEMENT
- SWALE
- LP LOW POINT
- HP HIGH POINT
- TW TOP OF WALL
- BW BOTTOM OF WALL
- G GRADE

LEGEND:

- CONTROL POINT
- BENCHMARK
- GATE POST
- CHAIN LINK FENCE
- WOOD FENCE
- BOLLARD
- STREET/TRAFFIC SIGN
- PAINTED DIRECTIONAL ARROW
- TURN LANE DIRECTION
- HANDICAP SYMBOL
- PARKING STALL COUNT
- HANDICAP SIGN
- HRMP HANDICAP RAMP
- WHEEL STOP
- FOC UNDERGROUND FIBER OPTIC CABLE
- FOC(R) UNDERGROUND FIBER OPTIC (FROM RECORDS)
- TELEPHONE PEDESTAL
- SANITARY SEWER MANHOLE
- STORM SEWER MANHOLE
- AI AREA INLET
- CI CURB INLET
- SCO SANITARY SEWER CLEAN OUT
- DS DOWN SPOUT
- FD FLOOR DRAIN
- FLARED END SECTION
- S SANITARY SEWER LINE
- STORM SEWER LINE
- CMP CORRUGATED METAL PIPE
- RCP REINFORCED CONCRETE PIPE
- E(R) UNDERGROUND ELECTRIC PER RECORD
- AC AIR CONDITIONER
- WALL MOUNTED ELECTRICAL OUTLET
- G UNDERGROUND GAS
- GAS METER
- GAS VALVE
- GR GAS RISER
- GAS LINE SIGN
- W WATER LINE
- WATER METER
- WATER LINE GATE VALVE
- FIRE HYDRANT
- SPRINKLER CONTROL BOX
- WATER MANHOLE
- SV SPRINKLER VALVE
- SIAMESE FIRE CONNECTOR
- CANOPY SUPPORT
- MB MAIL BOX
- CONCRETE JOINT/CUT LINE
- BUSH
- DECIDUOUS TREE
- CONIFEROUS TREE
- TREE LINE
- FP FLAG POLE
- T/E TRASH ENCLOSURE
- L/S LANDSCAPING AREA
- CONC CONCRETE
- VCP VITRIFIED CLAY PIPE
- DIP DUCTILE IRON PIPE
- HDPE HIGH DENSITY POLYETHYLENE
- WALL MOUNTED LIGHT
- WALL MOUNTED CAMERA
- E UNDERGROUND ELECTRIC
- (2) OU OVERHEAD UTILITY LINE (# OF LINES)
- P PULL BOX
- LIGHT POLE
- UTILITY POLE
- UTILITY POLE W/ LIGHT
- UTILITY POLE W/ TRANSFORMER
- GUY ANCHOR
- W(R) WATER LINE PER RECORD
- LW LOWEST WIRE HEIGHT
- ELECTRIC METER
- UNDERGROUND ELECTRIC PEDESTAL
- SPEAKER BOX
- BB BREAKER BOX
- G(R) UNDERGROUND GAS PER RECORD
- S(R) SANITARY SEWER LINE PER RECORD
- D(R) STORM SEWER LINE PER RECORD





SCALE: 1" = 20'

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Lee's Summit R7 District Athletics Facilities

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architect:
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STATE OF MISSOURI · DAVID D WOOD · NUMBER PE-2011037427 · PROFESSIONAL ENGINEER
9/28/2020

Kaw Valley Engineering, Inc.
Missouri Certificate of Authority: 000842
David Wood — Date: 09/28/2020
Engineer — License No. PE-2011037427

REVISIONS

Number	DESCRIPTION	DATE

PROJECT NO: 0119-0100
DATE: September 28, 2020

PROJ. NO. C20_0691 DSN: DDW
CFN: 0691GP-LSW.DWG DWN: NJN
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KAW VALLEY ENGINEERING
KAW VALLEY ENGINEERING, INC., IS AUTHORIZED TO OFFER ENGINEERING SERVICES BY MISSOURI STATE CERTIFICATE OF AUTHORITY # 000842. EXPIRES 12/31/21

GRADING AND EROSION CONTROL PLAN
W-C300
BID SET

PRINT DATE/TIME: 3/17/2020 4:49:21 PM

LEGEND:

- CONTROL POINT
- BENCHMARK
- GATE POST
- CHAIN LINK FENCE
- STREET/TRAFFIC SIGN
- FOC — UNDERGROUND FIBER OPTIC CABLE
- FOC(R) — UNDERGROUND FIBER OPTIC (FROM RECORDS)
- TELEPHONE PEDESTAL
- SANITARY SEWER MANHOLE
- STORM SEWER MANHOLE
- AI — AREA INLET
- CI — CURB INLET
- CO — SANITARY SEWER CLEAN OUT
- DS — DOWN SPOUT
- FLARED END SECTION
- S — SANITARY SEWER LINE
- D — STORM SEWER LINE
- CMP — CORRUGATED METAL PIPE
- RCP — REINFORCED CONCRETE PIPE
- VCP — VITRIFIED CLAY PIPE
- DIP — DUCTILE IRON PIPE
- HDPE — HIGH DENSITY POLYETHYLENE
- E — UNDERGROUND ELECTRIC
- (2) OU — OVERHEAD UTILITY LINE (# OF LINES)
- P — PULL BOX
- LIGHT POLE
- UTILITY POLE
- UTILITY POLE W/ LIGHT
- UTILITY POLE W/ TRANSFORMER
- GUY ANCHOR
- W(R) — WATER LINE PER RECORD
- E(R) — UNDERGROUND ELECTRIC PER RECORD
- G — UNDERGROUND GAS
- GM — GAS METER
- GAS VALVE
- GR — GAS RISER
- GAS LINE SIGN
- W — WATER LINE
- WM — WATER METER
- WATER LINE GATE VALVE
- FIRE HYDRANT
- WATER MANHOLE
- CONCRETE JOINT/CUT LINE
- BUSH
- DECIDUOUS TREE
- CONIFEROUS TREE
- TREE LINE
- FP — FLAG POLE
- L/S — LANDSCAPING AREA
- CONC — CONCRETE
- E — ELECTRIC METER
- UNDERGROUND ELECTRIC PEDESTAL
- G(R) — UNDERGROUND GAS PER RECORD
- S(R) — SANITARY SEWER LINE PER RECORD
- D(R) — STORM SEWER LINE PER RECORD
- ASPHALT PAVEMENT (040)
- HEAVY DUTY ASPHALT PAVEMENT (041)
- CONCRETE SIDEWALK (055)
- LIMITS OF DISTURBANCE

WATER LINE MATERIALS AND CONSTRUCTION NOTES:

1. ALL WORK SHALL BE IN ACCORDANCE WITH SECTION 3900 WATER MAINS OF THE CITY OF LEE'S SUMMIT, MISSOURI STANDARD SPECIFICATIONS, CURRENT EDITION.
2. CONTRACTOR SHALL NOT OPEN, TURN OFF, INTERFERE WITH, OR ATTACH ANY PIPE OR HOSE TO OR TAP ANY WATER MAIN BELONGING TO CITY OF LEE'S SUMMIT UTILITIES DEPARTMENT UNLESS DULY AUTHORIZED TO DO SO BY THE WATER DISTRICT. ANY ADVERSE CONSEQUENCE OF ANY SCHEDULED OR UNSCHEDULED DISRUPTIONS OF SERVICE TO THE PUBLIC ARE TO BE THE LIABILITY OF THE CONTRACTOR. KAW VALLEY ENGINEERING AND OWNER ARE TO BE HELD HARMLESS. CONTRACTOR SHALL PROVIDE A MINIMUM OF 48 HOURS NOTICE TO THE CITY OF LEE'S SUMMIT WATER UTILITIES OPERATIONS DEPARTMENT PRIOR TO STARTING ANY WORK.
3. THE UTILITIES AS SHOWN ON THESE DRAWINGS WERE DEVELOPED FROM THE BEST INFORMATION AVAILABLE, IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION OF ALL UTILITIES (WHETHER SHOWN OR NOT) AND PROTECT SAID UTILITIES FROM ANY DAMAGE. CONTRACTOR SHALL POTHOLE AND EXPOSE ALL UTILITIES AT LEAST 500 FEET IN ADVANCE OF WATER MAIN CONSTRUCTION, DETERMINING THE DEPTH, SIZE, AND MATERIAL OF THE UTILITIES IN PROXIMITY TO THE PROPOSED WATER MAIN ALIGNMENT. DEFLECT PIPE TO MAINTAIN MINIMUM 5 FEET HORIZONTAL AND 18 INCH VERTICAL CLEARANCES BETWEEN PROPOSED WATER MAIN AND EXISTING UTILITIES. SEPARATION WITH NON-POTABLE LINES REQUIRES 18 INCH VERTICAL CLEARANCE, SEE CONST. NOTE 8.
4. THE CONTRACTOR SHALL FURNISH AND INSTALL, AT NO EXTRA COST, ALL FITTINGS AND RESTRAINING DEVICES REQUIRED TO PROVIDE PROPER HORIZONTAL AND VERTICAL ALIGNMENT FOR THE NEW WATER SERVICE, CONNECTING TO EXISTING WATER MAIN, AND INSTALLATION OF FIRE HYDRANTS AT THE PROPER LOCATION AND ELEVATION, WHETHER OR NOT THE FITTINGS ARE CALLED OUT ON THESE PLANS.
5. THE CONTRACTOR SHALL FURNISH AND INSTALL, AT NO EXTRA COST, ALL TEMPORARY BLOW-OFF ASSEMBLIES, FITTINGS, AND RESTRAINING DEVICES NECESSARY FOR TEMPORARY CONNECTIONS FOR PRESSURE TESTING, CHLORINATING, DE-CHLORINATING, AND FLUSHING THE NEW WATER MAINS AND SERVICE LINES. THE CONTRACTOR SHALL REMOVE ANY CORPORATION COCKS USED FOR TESTING OR DISINFECTION AND REPLACE THEM WITH TAPERED BRASS PLUGS PRIOR TO PLACING NEW MAINS IN SERVICE.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING REQUIRED PERMITS, PAYING ALL FEES AND FOR OTHERWISE COMPLYING WITH ALL APPLICABLE REGULATIONS GOVERNING THE WORK.
7. ALL DISTURBED AREAS SHALL BE SEEDED OR STABILIZED AS NOTED ON PLANS.
8. WHEN WATER MAINS AND SANITARY SEWERS CROSS, A MINIMUM OF 18 INCHES OF CLEARANCE SHALL BE MAINTAINED BETWEEN THE BOTTOM OF THE WATER MAIN AND THE TOP OF SANITARY SEWER. WHEN 18 INCHES OF CLEARANCE CANNOT BE MAINTAINED OR WHEN A WATER MAIN MUST CROSS UNDER A SANITARY SEWER, THE SANITARY SEWER SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE, PVC PRESSURE PIPE OR PRE-STRESSED CONCRETE CYLINDER PIPE FOR A DISTANCE OF 10.0 FEET ON EACH SIDE OF THE CROSSING. WHEN A WATER MAIN IS CONSTRUCTED PARALLEL TO A SANITARY SEWER, THE HORIZONTAL SEPARATION SHALL BE 10.0 FEET MEASURED FROM THE OUTSIDE OF THE PIPE OR STRUCTURE. IF A VERTICAL SEPARATION OF 18 INCHES CANNOT BE MAINTAINED AND IF THE WATER MAIN IS CONSTRUCTED CLOSER THAN 10.0 FEET TO THE SANITARY SEWER, THE SANITARY SEWER SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE, PVC PRESSURE PIPE OR PRE-STRESSED CONCRETE CYLINDER PIPE. AND SHALL BE PRESSURE TESTED FOR WATER TIGHTNESS.
9. CONTRACTOR SHALL FIELD CHECK ALL DIMENSIONS, COORDINATES AND ELEVATIONS BEFORE PROCEEDING WITH NEW WORK AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES IMMEDIATELY. NO NEW CONSTRUCTION SHOULD BE PERFORMED BY "SCALING" FROM THE PLANS.
10. ALL EXCAVATION AND BACKFILL SHALL MEET OR EXCEED THE PROJECT SPECIFICATION. ALL TRENCHES SHALL BE BACKFILLED IN UNIFORM LIFTS NOT TO EXCEED 8 INCHES IN LOOSE MEASUREMENT. EACH LIFT SHALL BE COMPACTED TO THE REQUIRED DENSITY PRIOR TO THE NEXT LIFT BEING PLACED. THE BACKFILL MATERIAL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY WITH A MOISTURE CONTENT OF WITHIN A RANGE OF OPTIMUM TO BE 4 PERCENT ABOVE OPTIMUM MOISTURE CONTENT FOR SOILS WITH A LIQUID LIMIT OF GREATER THAN 40 AND +/-3% OF OPTIMUM FOR SOILS WITH A LIQUID LIMIT LESS THAN 40 AS DEFINED BY THE STANDARD PROCTOR (ASTM-D698) UNDER AREAS TO BE PAVED. THE BACKFILL MATERIAL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY AT OPTIMUM MOISTURE PLUS 4% IN AREAS NOT TO BE DEVELOPED. COMPACTION TESTS SHALL BE TAKEN AT EACH PAVEMENT CROSSING AND AT LOCATIONS DESIGNATED BY THE ENGINEER. ALL TRENCH BACKFILL WHICH DOES NOT MEET THE REQUIRED DENSITY, SHALL BE RE-EXCAVATED AND RE-COMPACTED UNTIL THE REQUIRED DENSITY IS OBTAINED. COPIES OF ALL COMPACTION TEST REPORTS SHALL BE PROVIDED TO THE ENGINEER.
11. NO ROCK LARGER THAN FOUR INCHES MAXIMUM DIMENSION SHALL BE PLACED WITHIN TWO FEET OF THE TOP OF THE PIPE. NO ROCK GREATER THAN ONE FOOT SHALL BE PLACED IN ANY EXCAVATION AS A BACKFILL.
12. LOCATIONS SHOWN FOR PROPOSED WATER LINES ARE APPROXIMATE. VARIATIONS MAY BE MADE, WITH APPROVAL OF THE ENGINEER, TO AVOID CONFLICTS.
13. TAPS 1-1/2" AND LARGER AT EXISTING MAIN WILL BE RESPONSIBILITY OF THE CONTRACTOR. WORK WILL BE COORDINATED WITH THE WATER DISTRICT.
14. ALL DUCTILE IRON PIPE AND FITTINGS SHALL COMPLY WITH SECTIONS 3901 B & C OF THE CITY OF LEE'S SUMMIT, MISSOURI STANDARDS SPECIFICATIONS SUBJECT TO THE CITY'S CURRENTLY ADOPTED FIRE CODE. THICKNESS SHALL BE SPECIAL THICKNESS CLASS 50.
15. ALL POLYVINYL CHLORIDE PIPE AND FITTINGS SHALL COMPLY WITH SECTION 3901.B & D OF THE CITY OF LEE'S SUMMIT, MISSOURI STANDARDS SPECIFICATIONS SUBJECT TO RESTRICTION OF THE CITY'S CURRENTLY ADOPTED FIRE CODE. THE MINIMUM PRESSURE CLASS SHALL BE CLASS 235.
16. SERVICE LINES 2 INCHES IN DIAMETER AND SMALLER SHALL BE MADE OF TYPE K SOFT COPPER, COMPLYING WITH ASTM B88.
17. ALL VALVES AND OTHER MATERIALS SHALL CONFORM TO SECTIONS 3901 E THRU S. REFER TO THE CITY'S APPROVED MATERIALS LIST.
18. CONSTRUCTION AND INSTALLATION SHALL BE IN ACCORDANCE WITH SECTION 3902 OF THE CITY OF LEE'S SUMMIT, MISSOURI STANDARD SPECIFICATIONS.
19. WATER LINES SHALL HAVE A MINIMUM COVER OF 42". DEEPER EXCAVATIONS FOR CLEARANCE AT EXISTING PROPOSED UTILITIES IS ACCEPTABLE. REFERENCE CONST. NOTES 3 AND 8. FOR WATER MAINS CONSTRUCTED UNDER DRIVES OR PARKING AREAS THE DRIVES OR PARKING AREAS ARE TO BE TO SUBGRADE PRIOR TO WATER MAIN CONSTRUCTION.
20. WHERE FIRE HYDRANTS ARE NOT LOCATED AT THE END OF LINES, THE CONTRACTOR SHALL FURNISH A FLUSHING DEVICE.
21. ALL TREES SHALL BE SPARED UNLESS MARKED. REFERENCE PROJECT LAND DISTURBANCE PLANS.
22. THRUST BLOCKS OR APPROVED JOINT RESTRAINTS SHALL BE PROVIDED AT TEES, BENDS, AND HYDRANT ASSEMBLIES.
23. CONSTRUCTION INSPECTION WILL BE PROVIDED BY OWNER.
24. CONTRCTOR SHALL INSTALL PIPE, BENDS AND FITTINGS A NECESSARY TO MAKE A COMPLETE OPERATIONAL SYSTEM. LINE IS TO BE AS-BUILT. CONTRACTOR SHALL MAINTAIN "AS CONSTRUCTED DRAWINGS" TO BE SUPPLIED TO LEE'S SUMMIT SCHOOL DISTRICT NOTING VALVE AND FITTING LOCATIONS AT THE END PROJECT.
25. THE ABANDONMENT OF ALL WATER MAINS SHALL BE IN ACCORDANCE WITH SECTION 3902 B.12 OF THE CITY OF LEE'S SUMMIT, MISSOURI STANDARD SPECIFICATIONS.
26. THE CONTRACTOR SHALL VERIFY THE OUTSIDE DIAMETER (O.D.) OF THE EXISTING WATER MAIN PRIOR TO SCHEDULING CONNECTION. PROVIDE SOLID SLEEVES AS REQUIRED.
27. THE CONTRACTOR SHALL FLUSH, DISINFECT AND COMPLETE HYDROSTATIC AND LEAKAGE TESTS ON WATER MAINS IN ACCORDANCE WITH SECTIONS 3902 C & D OF THE CITY OF LEE'S SUMMIT, MISSOURI STANDARD SPECIFICATIONS.

STORM SEWER CONSTRUCTION NOTES:

1. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH SECTION 2600 STORM SEWER OF THE KANSAS CITY METRO CHAPTER OF APWA SPECIFICATIONS AS ADOPTED AND AMENDED BY THE CITY OF LEE'S SUMMIT, MISSOURI STANDARD SPECIFICATIONS. REFERENCE APWA SPECIFICATION SECTION 2102.4 FOR EXCAVATION, TRENCHING AND BACKFILLING FOR PIPE AND STORM STRUCTURES.
2. A MINIMUM OF 18" COVER SHALL BE PROVIDED PRIOR TO AND MAINTAINED AFTER INSTALLATION OF STORM SEWER.
3. ALL COORDINATES FOR CURB INLETS ARE TO THE MIDDLE OF THE INSIDE FRONT FACE. ALL COORDINATES FOR PVC STRUCTURES AND CONCRETE YARD INLETS ARE TO THE CENTER OF THE STRUCTURE.
4. ALL JUNCTION BOXES/AREA INLETS HAVE ONE COORDINATE PROVIDED AT THE CENTER OF STRUCTURE. SEE PLAN FOR CLARIFICATION. ORIENT STRUCTURES PARALLEL TO ADJACENT CURB, BUILDING OR WALL FACE, UNLESS NOTED OTHERWISE.
5. RIM ELEVATION IS PROVIDED AT COORDINATE, UNLESS NOTED OTHERWISE. CONTRACTOR TO ADJUST ELEVATION OF RIM AS REQUIRED TO MATCH SLOPE OF ADJACENT CURB LINE. REFER TO GRADING PLAN (C300 SERIES SHEETS).
6. ALL EXISTING UTILITIES INDICATED ON THE DRAWING ARE ACCORDING TO THE BEST INFORMATION AVAILABLE TO THE ENGINEER; HOWEVER, ALL UTILITIES ACTUALLY EXISTING MAY NOT BE SHOWN. UTILITIES DAMAGED THROUGH THE NEGLIGENCE OF THE CONTRACTOR TO OBTAIN THE LOCATION OF SAME SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT THEIR EXPENSE.
7. ALL BACKFILL SHALL BE COMPACTED TO 95 PERCENT STANDARD DENSITY AT OPTIMUM MOISTURE.
8. ALL EXCAVATION BENEATH THE STREETS AND PARKING LOTS FOR DRAINAGE PIPE LESS THAN 4'-0" IN DIAMETER SHALL BE BACKFILLED WITH AGGREGATE TO FOUR FEET (4') PAST BACK OF CURB IN ACCORDANCE WITH APWA SPECIFICATIONS SECTION 2102.4.J.
9. RELOCATION OF ANY WATER LINE, SEWER LINE OR SERVICE LINE THEREOF REQUIRED FOR THE CONSTRUCTION OF THIS PROJECT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE AT THEIR EXPENSE.
10. IF PRECAST STORM STRUCTURES ARE TO BE USED ON THIS PROJECT, THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND HAVE THEM APPROVED BY THE ENGINEER PRIOR TO FABRICATION OF THE STRUCTURES. FAILURE TO DO SO SHALL BE CAUSE FOR REJECTION.
11. ALL HDPE PIPE JOINTS SHALL BE WATER TIGHT.

SANITARY SEWER MANHOLE #2001
4'ø CONC
RIM=1022.01
FL IN (E)=1011.93 (10" PVC)
FL OUT (W)=1011.83 (10" PVC)

UTILITY NOTES:

1. EXCAVATION, TRENCHING AND BACKFILL SHALL BE COMPLETED IN ACCORDANCE WITH SECTION 2100 GRADING AND SITE PREPARATION OF THE KANSAS CITY METROPOLITAN CHAPTER OF APWA SPECIFICATIONS AS ADOPTED AND AMENDED BY THE CITY OF LEE'S SUMMIT.
2. ALL BACKFILL SHALL BE TAMPED. BACKFILL WITHIN THE RIGHT-OF-WAY AND UNDER PARKING AREAS AND SLABS SHALL BE 95% COMPACTION OF OPTIMUM MOISTURE.
3. CONTRACTOR SHALL NOT OPEN, TURN OFF, INTERFERE WITH, OR ATTACH ANY PIPE OR HOSE TO OR TAP ANY WATER MAIN BELONGING TO THE CITY OF LEE'S SUMMIT UNLESS DULY AUTHORIZED TO DO SO. ANY ADVERSE CONSEQUENCE OF ANY SCHEDULED OR UNSCHEDULED DISRUPTIONS OF SERVICE TO THE PUBLIC ARE TO BE THE LIABILITY OF THE CONTRACTOR. KAW VALLEY ENGINEERING AND OWNER ARE TO BE HELD HARMLESS. CONTRACTOR SHALL NOTIFY THE CITY OF LEE'S SUMMIT 48 HOURS MINIMUM.
4. CONTRACTOR TO INSTALL TRACING TAPE ALONG ALL NON-METALLIC SERVICE LINES PER SPECIFICATIONS.
5. CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AT LOCATIONS OF POSSIBLE CONFLICT AND POINTS OF CONNECTION PRIOR TO ANY CONSTRUCTION OF NEW UTILITIES.
6. A MINIMUM HORIZONTAL DISTANCE SHALL BE MAINTAINED BETWEEN PARALLEL WATER AND SANITARY SEWER LINES. REFERENCE APWA SPECIFICATIONS AS ADOPTED AND AMENDED BY THE CITY OF LEE'S SUMMIT.
7. CONTRACTOR TO SCHEDULE ALL INSPECTIONS FOR SEWER MAIN CONNECTIONS THROUGH THE PUBLIC WORKS DEPARTMENT.

SANITARY SEWER MATERIALS AND CONSTRUCTION NOTES:

1. ALL WORK RELATED TO SANITARY SEWER SHALL BE COMPLETED IN ACCORDANCE WITH SECTION 3500 SANITARY SEWERS OF THE CITY OF LEE'S SUMMIT, MISSOURI STANDARD SPECIFICATIONS.
2. ALL PIPE USED FOR SANITARY SEWER SHALL BE PVC (SDR 26) OR DIP (CL 50) AS NOTED ON PLANS. MATERIAL SHALL CONFORM TO SECTION 3501 C & D OF THE CITY OF LEE'S SUMMIT, MISSOURI STANDARD SPECIFICATIONS.
3. ALL EXISTING UTILITIES INDICATED ON THE DRAWINGS ARE ACCORDING TO THE BEST INFORMATION AVAILABLE TO THE ENGINEER; HOWEVER, ALL UTILITIES ACTUALLY EXISTING MAY NOT BE SHOWN. UTILITIES DAMAGED THROUGH THE NEGLIGENCE OF THE CONTRACTOR TO OBTAIN THE LOCATION OF SAME SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT HIS EXPENSE.
4. ALL INSTALLATION SHALL BE COMPLETED IN ACCORDANCE WITH SECTION 3502 OF THE CITY OF LEE'S SUMMIT, MISSOURI STANDARD SPECIFICATIONS. REFER TO SECTION 3502.C FOR TESTING AND ACCEPTANCE REQUIREMENTS.
5. EXCAVATION, TRENCHING AND BACKFILL SHALL BE COMPLETED IN ACCORDANCE WITH SECTION 2100 GRADING AND SITE PREPARATION OF THE KANSAS CITY METROPOLITAN CHAPTER OF APWA SPECIFICATIONS AS ADOPTED AND AMENDED BY THE CITY OF LEE'S SUMMIT. ALL EXCAVATIONS SHALL BE CONSIDERED UNCLASSIFIED. REFER TO PROJECT GEOTECHNICAL REPORT.
6. ALL BACKFILL SHALL BE TAMPED. BACKFILL WITHIN THE RIGHT-OF-WAY AND UNDER PARKING AREAS AND SLABS SHALL BE 95% COMPACTION OF OPTIMUM MOISTURE.
7. ALL STUB LINES SHALL BE LAID ON 1.00% GRADE FOR 6" PIPE AND 2.00% GRADE FOR 4" PIPE, UNLESS NOTED OTHERWISE.
8. RELOCATION OF ANY WATER LINE, SEWER LINE OR SERVICE LINE THEREOF REQUIRED FOR THE CONSTRUCTION OF THIS PROJECT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE AT HIS EXPENSE. REFER TO PLANS FOR ADDITIONAL INFORMATION.

CURB INLET #3283
7'x6' CONC
RIM=1014.55
FL IN (SE)=1006.79 (36" HDPE)
FL OUT (NW)=1006.35 (42" HDPE)

JUNCTION BOX #3036
7'x7' CONC
RIM=1010.27
FL IN (SE)=1003.74 (42" HDPE)
FL IN (S)=1003.44 (18" HDPE)
FL OUT (N)=1003.09 (42" HDPE)

AREA INLET #3151
5'x5' CONC
RIM=1011.25
FL IN (S)=1004.45 (18" HDPE)
FL OUT (N)=1004.15 (18" HDPE)

AREA INLET #3085
4'x4' CONC
RIM=1007.02
FL OUT (W)=1002.12 (18" HDPE)

CURB INLET #2002
5'x3' CONC
RIM=1018.15
FL IN (SE)=1012.10 (15" HDPE)
FL OUT (NW)=1012.05 (15" HDPE)

JUNCTION BOX #2003
4'x4' CONC
RIM=1017.52
FL IN (SE)=1010.82 (15" HDPE)
FL OUT (N)=1010.47 (18" HDPE)

JUNCTION BOX #2254
5'x5' CONC
RIM=1010.38
FL IN (SW)=997.56 (30" HDPE)
FL OUT (N)=997.37 (36" HDPE)

AREA INLET #2154
4'x4' CONC
RIM=1016.51
FL OUT (W)=1011.76 (18" HDPE)

AREA INLET #2123
5'x5' CONC
RIM=1004.56
FL IN (E)=1000.01 (18" HDPE)
FL IN (NW)=1000.52 (12" HDPE)
FL OUT (NE)=998.61 (30" HDPE)

SANITARY SEWER MANHOLE #3289
4'ø CONC
RIM=1015.71
FL IN (E)=1004.76 (10" PVC)
FL OUT (W)=1004.61 (10" PVC)

STA: 100+00.00
INSTALL 2" SADDLE TAP AND CORPORATION STOP.
N 985527.41
E 2816559.64

STA: 100+28.00
INSTALL 2" WATER METER IN PIT (74 GPM SERVICE), SEE SERVICE CONNECTION/METER WELL DETAIL WAT-11 ON SHEET W-C910
N 985499.50
E 2816557.38

STA: 100+40.38
INSTALL 2" TO 4" REDUCER, 4"x11.25° BEND AND BACKING BLOCK
N 985487.16
E 2816556.39

STA: 102+81.90
INSTALL 4"x11.25° BEND AND BACKING BLOCK
N 985247.71
E 2816587.94

STA: 102+86.95
INSTALL AIR RELEASE VALVE IN PIT. SEE DETAIL WAT-10 ON W-C920
N 985242.67
E 2816587.68

STA: 104+77.76
INSTALL 4"x45° BEND AND BACKING BLOCK.
N 985052.22
E 2816575.96

STA: 104+84.75
INSTALL 4"x45° BEND AND BACKING BLOCK.
N 985047.59
E 2816570.72

STA: 105+51.21
INSTALL 4"x45° BEND AND BACKING BLOCK.
N 985051.69
E 2816504.39

STA: 105+58.28
INSTALL 4"x45° BEND AND BACKING BLOCK.
N 985056.98
E 2816499.71

INSTALL 11 LF OF 6" PVC FROM DOWNSPOUT COLLECTOR TO POP-UP EMITTER. SLOPE TO DRAIN.

INSTALL 2 LF OF 6" PVC FROM DOWNSPOUT COLLECTOR TO 45° BEND, 2 LF TO 45° BEND AND 15 LF TO 6" WYE. SLOPE TO DRAIN.

INSTALL 5 LF OF 6" PVC FROM DOWNSPOUT COLLECTOR TO 6" WYE AND 29 LF TO POP-UP EMITTER. SLOPE TO DRAIN.

INSTALL 22 LF OF 6" PVC FROM DOWNSPOUT COLLECTOR TO POP-UP EMITTER. SLOPE TO DRAIN.

15" INLINE DRAIN WITH CONCRETE COLLAR AND STANDARD GRATE. RIM=1010.00 FL OUT(W)=1007.70 N:985147.41 E:2816536.37

INSTALL 67 LF OF 15" HDPE TO TEE TO ELBOW AND INLINE DRAIN. SLOPE @ 1.0%

INSTALL 22 LF OF 6" PVC FROM DOWNSPOUT COLLECTOR TO POP-UP EMITTER. SLOPE TO DRAIN.

ALTERNATE W1

REFER TO SHEET W-P121.

RIM (SET FLUSH WITH SIDEWALK) FL=1008.90

RIM=1013.90 FL=1008.20±

STORM SEWER CROSSING STORM FL=1005.52± TOP OF PIPE=1007.19± ADJUST SANITARY SEWER SERVICE LINE RISER LENGTH AS REQUIRED TO CLEAR STORM LINE.

FL 10" MAIN = 1005.27
FL 6" SERVICE LINE = 1005.69
FL @ TOP OF RISER = 1007.80
26' FROM DOWNSTREAM SANITARY SEWER MANHOLE

INSTALL 3 LF OF RISER, 40 LF TO CLEANOUT AND A 11.25° BEND, 65 LF TO SECOND CLEANOUT AND 5 LF TO POINT OF CONNECTION AT BUILDING. SLOPE AT 1% MINIMUM (UNLESS NOTED OTHERWISE).

INSTALL 22 LF OF 6" PVC FROM DOWNSPOUT COLLECTOR TO POP-UP EMITTER. SLOPE TO DRAIN.

CONTRACTOR TO CORE DRILL EXISTING STRUCTURE FOR NEW CONNECTION TO THE EAST. FL IN(E)=1007.00. SEAL OPENING WITH NON-SHRINK GROUT. REMOVE LID AND ADJUST TOP OF BOX TO ELEVATION 1012.1. DOWEL INTO EXISTING STRUCTURE WALLS AT 12" O.C. WITH NO. 4 BARS. TIE HORIZONTAL BAR 3" AND 15" ABOVE EXISTING INLET WALLS. SEE DETAIL 402 ON SHEET W-C920.

42" HDPE
FL=1003.00

NOTES:

51 ELECTRICAL CONDUIT WITH PULL STRING, INSTALLED BY CONTRACTOR (COORDINATE TERMINATION POINT WITH ELECTRICAL SITE PLAN. REFER TO MEP PLANS FOR NUMBER OF CONDUITS AND MATERIAL SPECIFICATIONS.)
52 TELECOM CONDUIT WITH PULL STRING, INSTALLED BY CONTRACTOR (COORDINATE TERMINATION POINT WITH ELECTRICAL SITE PLAN. REFER TO MEP PLANS FOR NUMBER OF CONDUITS AND MATERIAL SPECIFICATIONS.)
54 PROPOSED TRANSFORMER ON HOUSEKEEPING PAD (COORDINATE WITH SITE ELECTRICAL PLANS AND EVERGY FOR PAD REQUIREMENTS.)
61 DOWNSPOUT COLLECTOR (SEE DETAIL 433 ON SHEET W-C901.)
62 PVC SCH-40 ROOF DRAIN SLOPE TO DRAIN (1% MINIMUM FOR 6" ROOF DRAINS.)
63 POP-UP EMITTER (SEE DETAIL 434 ON SHEET W-C901.)
70 EXISTING SANITARY SEWER MANHOLE.
71 6" PVC SDR-26 SANITARY SEWER SERVICE LINE, SLOPE AT 1% MINIMUM (UNLESS NOTED OTHERWISE.)
72 SANITARY SEWER CLEANOUT (SEE DETAIL 510 ON SHEET W-C910.)
73A POINT OF CONNECTION - INSTALL 10"x6" SERVICE WYE.
73B POINT OF CONNECTION TO BUILDING - (SEE MEP PLANS.)
81 4" PVC AWWA C900 DOMESTIC WATER SERVICE LINE MINIMUM BURIAL DEPTH IS 42", RESTRAIN ALL JOINTS.
81B POINT OF CONNECTION TO BUILDING - DOMESTIC WATER SERVICE (SEE MEP PLANS.)
82 4"x3" REDUCER.
90 CT CABINET (SEE MEP PLANS.)

WARRANTY / DISCLAIMER

THE DESIGNS REPRESENTED IN THESE PLANS ARE IN ACCORDANCE WITH ESTABLISHED PRACTICES OF CIVIL ENGINEERING FOR THE DESIGN FUNCTIONS AND USES INTENDED BY THE OWNER AT THIS TIME. HOWEVER, NEITHER KAW VALLEY ENGINEERING, INC NOR ITS PERSONNEL CAN OR DO WARRANTY THESE DESIGNS OR PLANS AS CONSTRUCTED, EXCEPT IN THE SPECIFIC CASES WHERE KAW VALLEY ENGINEERING PERSONNEL INSPECT AND CONTROL THE PHYSICAL CONSTRUCTION ON A CONTEMPORARY BASIS AT THE SITE.

CAUTION - NOTICE TO CONTRACTOR

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
THE CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AT LOCATIONS OF POSSIBLE CONFLICTS PRIOR TO ANY CONSTRUCTION.

SAFETY NOTICE TO CONTRACTOR

IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.

NOTE:
1. **REFER TO SHEET W-E001 FOR ADDITIONAL SITE ELECTRICAL AND TELECOM REQUIREMENTS.**
2. **ALL WATER SERVICE INSTALLATIONS INCLUDING BACKFLOW DEVICES ARE SUBJECT TO FIELD VERIFICATION AND APPROVAL BY THE WATER DEPARTMENT INSPECTOR.**

NOTE:
1. **CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF ENTRANCE, SLOPED PAVING, EXIT PORCHES, RAMPS, PRECISE BUILDING DIMENSIONS AND EXACT BUILDING UTILITY ENTRANCE LOCATIONS.**
2. **THESE PLANS HAVE NOT BEEN VERIFIED WITH FINAL ARCHITECTURAL CONTRACT DRAWINGS. CONTRACTOR SHALL VERIFY AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES. CONTRACTOR IS FULLY RESPONSIBLE FOR REVIEW AND COORDINATION OF ALL DRAWINGS AND CONTRACTOR DOCUMENTS.**

Know what's below. Call before you dig.

SCALE: 1" = 20'

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UNLESS A PROFESSIONAL SEAL WITH SIGNATURE AND DATE IS AFFIXED, THIS DOCUMENT IS PRELIMINARY AND IS NOT INTENDED FOR CONSTRUCTION, RECORDING PURPOSES OR IMPLEMENTATION

STATE OF MISSOURI — DAVID D WOOD — NUMBER PE-2011037427 — PROFESSIONAL ENGINEER — 9/28/2020

Kaw Valley Engineering, Inc.
Missouri Certificate of Authority: 000842
David Wood — Date: 09/28/2020
Engineer — License No. PE-2011037427

REVISIONS

Number	DESCRIPTION	DATE

PROJECT NO: 0119-0100
DATE: September 28, 2020

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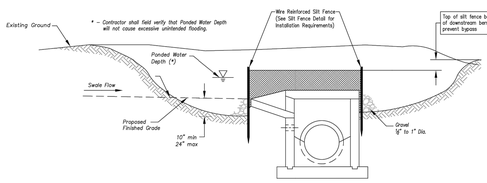
KAW VALLEY ENGINEERING, INC., IS AUTHORIZED TO OFFER ENGINEERING SERVICES BY MISSOURI STATE CERTIFICATE OF AUTHORITY # 000842. EXPIRES 12/31/21

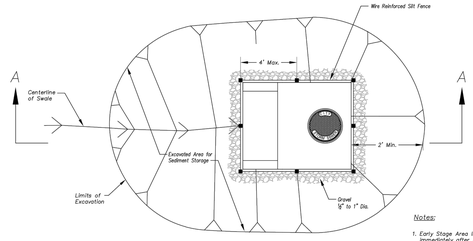
UTILITY PLAN

W-C500

BID SET

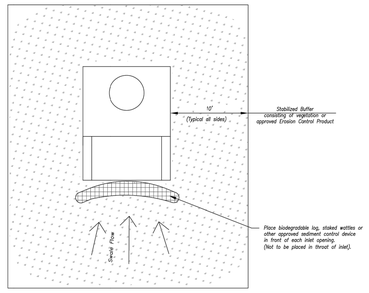


Section A–A
Not to Scale



Plan
Not to Scale

EARLY STAGE AREA INLET
(All open boxes and inlets not at final grade)



Plan
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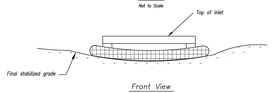


Front View

LATE STAGE AREA INLET
(Area inlets at final grade and existing inlets)

Notes:

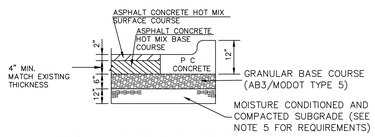
1. Early Stage Area Inlet Sediment Barrier to be installed immediately after inlet or junction box is constructed.
2. Silt fence shall remain in place until excavated area is removed and Late Stage Area Inlet is being installed.
3. Backfill excavated area ONLY after final grading of the site. Stabilization of the site is to immediately follow.
4. Wire reinforced silt fence may be used in place of silt fence attached to wood frame.

Maintenance:

1. Remove deposited sediment from excavated storage areas when available storage has been reduced by 20%.
2. Remove deposited sediment from filter socks or similar when any accumulation of sediment is visible.
3. Repair or replace as necessary to maintain function and integrity of installation.

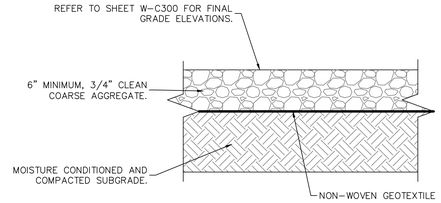
Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

AMERICAN PUBLIC WORKS ASSOCIATION	KANSAS CITY METRO CHAPTER
AREA INLET AND JUNCTION BOX PROTECTION	STANDARD DRAWING NUMBER ESC-07
	ADOPTED: 10/24/2016



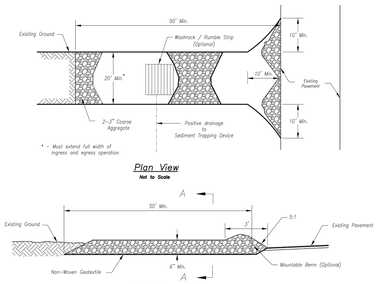
ASPHALT PAVEMENT 040

1. FLEXIBLE PAVEMENT SHALL BE IN ACCORDANCE WITH THE LATEST (FEBRUARY 2017) EDITION OF THE KANSAS CITY METROPOLITAN CHAPTER OF APWA SECTION 2200 AS AMENDED BY PROJECT SPECIFICATIONS.
   ASPHALT SURFACE COURSE – APWA TYPE 3–01
   ASPHALT BASE COURSE – APWA TYPE 2–01
2. TYPE 3–01 SURFACE COURSE SHALL BE VIRGIN ASPHALT. RECYCLED MIXES MEETING APWA SPECIFICATIONS MAY BE CONSIDERED FOR BASE COURSE.
3. PORTLAND CEMENT CONCRETE SHALL BE A KCMMB4K MIX AND SHALL MEET THE LATEST EDITION OF THE KANSAS CITY METROPOLITAN CHAPTER OF APWA SECTION 2200.
4. HEAVY DUTY CONCRETE IS AN OPTIONAL PAVEMENT FOR DETAIL 041 HEAVY DUTY ASPHALT. WHEN PLANS SPECIFY DETAIL 042 NO ALTERNATES ARE ALLOWED.

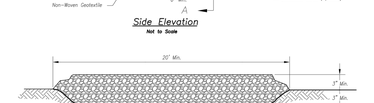


AGGREGATE SURFACE 043

PAVING DETAILS



Plan View
Not to Scale



Side Elevation
Not to Scale

Section A–A
Not to Scale

Notes for Construction Entrance:

1. Avoid locating on steep slopes, at curves on public roads, or downhill of disturbed area.
2. Remove all vegetation and other unsuitable material from the foundation area, grade, and crown for positive drainage.
3. If slope towards the public road exceeds 2%, construct a 6– to 8–inch high ridge with 3H:1V side slopes across the foundation approximately 15 feet from the edge of the public road to divert runoff from it.
4. Install pipe under the entrance if needed to maintain drainage ditches along public roads.
5. Place stone to dimensions and grade as shown on plans. Leave surface sloped for drainage.
6. Divert all surface runoff and drainage from the entrance to a sediment control device.
7. If conditions warrant, place geotextile fabric on the graded foundation to improve stability.

Maintenance for Construction Entrance:

1. Reshape entrance as needed to maintain function and integrity of installation. Top dress with clean aggregate as needed.

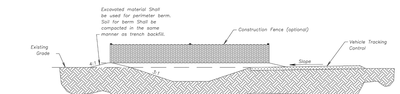
CONSTRUCTION ENTRANCE

Notes for Concrete Washout:

1. Concrete washout areas shall be installed prior to any concrete placement on site.
2. Concrete washout area shall include a flat subsurface pit sized relative to the amount of concrete to be placed on site. The slopes leading out of the subsurface pit shall be 2:1. The vehicle tracking pad shall be sloped towards the concrete washout area.
3. Vehicle tracking control is required at the access point to all concrete washout areas.
4. Signs shall be placed at the construction site entrance, washout area and elsewhere as necessary to clearly indicate the location(s) of the concrete washout area(s) to operators of concrete truck and pump rigs.
5. A one–piece impervious liner may be required along the bottom and sides of the subsurface pit in sandy or gravelly soils.

Maintenance for Concrete Washout:

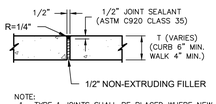
1. Concrete washout materials shall be removed once the materials have filled the washout to approximately 75% full.
2. Concrete washout areas shall be enlarged as necessary to maintain capacity for washed concrete.
3. Concrete washout water, wasted pieces of concrete and all other debris in the subsurface pit shall be transported from the job site in a water–tight container and disposed of properly.
4. Concrete washout areas shall remain in place until all concrete for the project is placed.
5. When concrete washout areas are removed, excavations shall be filled with suitable compacted backfill and topsoil, any disturbed areas associated with the installation, maintenance, and/or removal of the concrete washout areas shall be stabilized.



CONCRETE WASHOUT

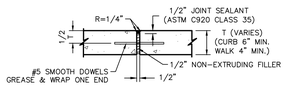
Construction Entrance modified from 2015 Overland Park Standard Details for Erosion and Sediment Control. Concrete Washout modified from 2009 City of Great Bend Standard Drawings.

AMERICAN PUBLIC WORKS ASSOCIATION	KANSAS CITY METRO CHAPTER
CONSTRUCTION ENTRANCE AND CONCRETE WASHOUT	STANDARD DRAWING NUMBER ESC-01
	ADOPTED: 10/24/2016



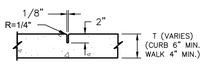
NOTE:
1. TYPE 1 JOINTS SHALL BE PLACED WHERE NEW CONCRETE ABUTS EXISTING CONCRETE AND IN AREAS WHERE CONCRETE ABUTS BUILDINGS. UNLESS NOTED OTHERWISE.

EXPANSION JOINT - TYPE 1

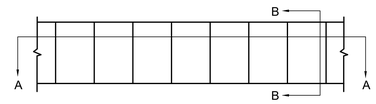


TYPE 2

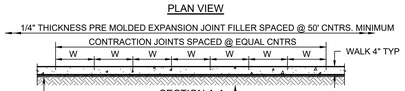
NOTE:
1. TYPE 2 JOINTS SHALL BE PLACED AS NOTED AND AT ALL P.C.'S, P.T.'S AND TRANSITIONS, AND WHERE NEW CURB OR CONCRETE PAVEMENT TIES INTO EXISTING CURB OR CONCRETE PAVEMENT AND AT DOORWAYS.
2. SMOOTH BARS SHALL BE 24" LONG



CONTRACTION JOINT - TYPE 3



PLAN VIEW



SECTION A-A

SECTION B-B

CONCRETE SIDEWALK 055

NOTE:
CONTRACTOR SHALL BACKFILL SIDEWALKS WITH TOPSOIL AND SOD IN ACCORDANCE WITH APWA SPECIFICATIONS. COORDINATE WITH SCHOOL DISTRICT FOR ACCESS TO WATER.

CONCRETE AND SIDEWALK NOTES:

1. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AND COMPLY WITH KCMMB SPECIFICATIONS. ALL CONCRETE SHALL BE PLACED IN ACCORDANCE WITH APWA SECTION 2200.
2. REINFORCING STEEL SHALL BE GRADE 60 EPOXY COATED AND COMPLY WITH ASTM A615. ALL CUT ENDS OR DAMAGED AREAS SHALL BE FIELD REPAIRED WITH EPOXY COATING.
3. SIDEWALKS TO BE BROOM FINISHED.
4. SUBGRADE TO BE COMPACTED TO 90% MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698. MOISTURE CONTENT TO BE WITHIN A RANGE OF 2% BELOW TO 2% ABOVE OPTIMUM MOISTURE AS DEFINED BY ASTM D698.
5. SIDEWALK JOINTS MAY BE SAWN UNLESS SHOWN OTHERWISE ON ARCHITECT/LANDSCAPE ARCHITECT PLANS.

TEMPORARY SEEDING
APPLY SEED IN ACCORDANCE WITH APWA TECHNICAL SPECIFICATIONS SECTION 2153.5 A THRU D.

SEEDING AND SODDING:
DISTURBED AREAS ARE TO BE SEEDED OR SODDED (AS NOTED ON PLANS) WITH TALL TURF TYPE FESCUE. SEEDING AND SODDING SHALL BE COMPLETED IN ACCORDANCE WITH THE APWA TECHNICAL SPECIFICATION SECTIONS 2401 AND 2402, RESPECTIVELY. SOD SHALL BE WATERED IMMEDIATELY AND WATERED TWICE A DAY FOR A MINIMUM OF 21 DAYS.

PREPARATION OF THE SEED BED
REMAINING AREAS SHALL BE SEEDED. THE AREA TO BE SEEDED SHALL BE THOROUGHLY TILLED TO A DEPTH OF AT LEAST THREE (3) INCHES BY DISCING, HARROWING OR OTHER APPROVED METHODS UNTIL THE SOIL IS WELL PULVERIZED. AFTER COMPLETION OF THE TILLING OPERATION, THE SURFACE SHALL BE CLEARED OF ALL STONES, STUMPS, OR OTHER OBJECTS LARGER THAN 1–1/2 INCHES IN DIAMETER, AND OF ROOTS, WIRE, GRADE STAKES, AND OTHER OBJECTS THAT MIGHT HINDER MAINTENANCE OPERATIONS.

PLACEMENT OF SEED
SEEDING MAY BE ACCOMPLISHED BY HYDRAULIC TYPE SEEDERS OR BROADCAST–TYPE SEEDERS. ALL SEED SOWN BY BROADCAST–TYPE SEEDERS SHALL BE "RAKED IN" OR OTHERWISE COVERED WITH SOIL TO A DEPTH OF AT LEAST ONE–QUARTER (1/4) INCH AND ROLLED TO OBTAIN A FIRM SEED BED. WATER SHALL BE APPLIED WHEN NECESSARY. SEEDED AREAS SHALL BE COMPACTED AND MULCHED IN ACCORDANCE WITH APWA SPECIFICATION SECTION 2401.3 D & E.

SEEDED ON ALL SLOPES 4:1 OR STEEPER SHALL BE PROTECTED WITH A SHORT TERM DEGRADABLE EROSION CONTROL BLANKET CONSISTING OF SINGLE NET AND STRAW BLANKET. BLANKET SHALL BE SECURED TO SURFACE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.

CONTRACTOR IS RESPONSIBLE FOR ONGOING MAINTENANCE, PROTECTION AND REPAIR OF TEMPORARY AND PERMANENT SEED AREAS, REFERENCE APWA SECTION 2401.4. COORDINATE PLACEMENT OF INTERMEDIATE EROSION CONTROL MEASURES AS REQUIRED TO REDUCE CONCENTRATED FLOWS FROM RUNOFF.

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CFN: 0691DET–LSW.DWG DWN: NJN
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PRINT DATE/TIME: 3/17/2020 4:49:21 PM

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Lee's Summit R7 District Athletics Facilities

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2600 SW Ward Road
Lee's Summit, MO 64082

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STATE OF MISSOURI · DAVID D. WOOD · NUMBER PE-2011037427 · PROFESSIONAL ENGINEER
9/28/2020

Kaw Valley Engineering, Inc.
Missouri Certificate of Authority: 000842
David Wood Date: 09/28/2020
Engineer License No. PE-2011037427

REVISIONS

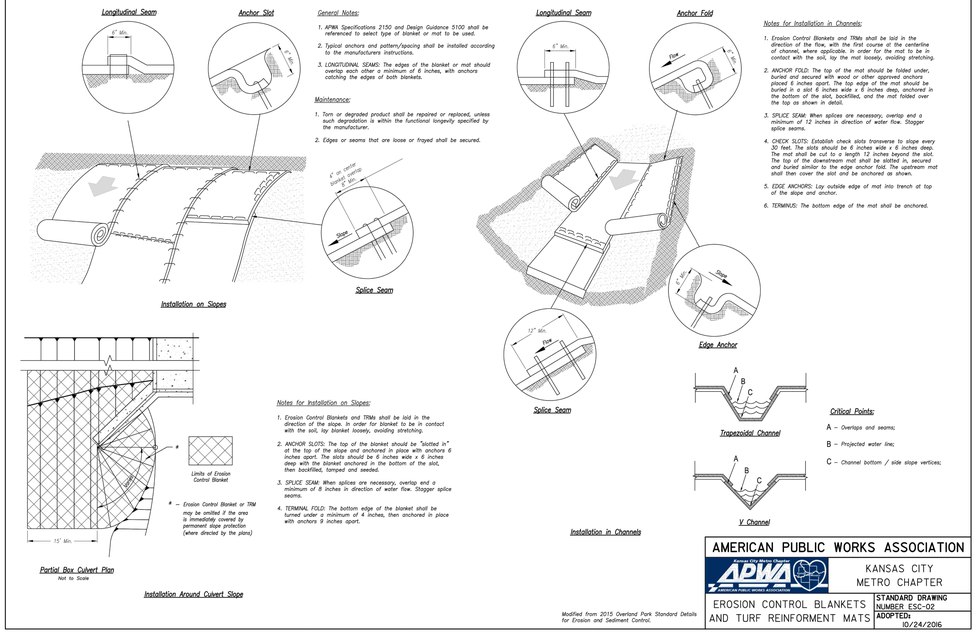
Number	DESCRIPTION	DATE

PROJECT NO: 0119-0100
DATE: September 28, 2020

SITE DETAILS

W-C900

BID SET



General Notes:

1. APWA Specifications 2150 and Design Guidance 5100 shall be referenced to select type of blanket or mat to be used.
2. Typical anchors and pattern/spacing shall be installed according to the manufacturers instructions.
3. LONGITUDINAL SEAMS: The edges of the blanket or mat should overlap each other a minimum of 6 inches, with anchors catching the edges of both blankets.

Maintenance:

1. Torn or degraded product shall be repaired or replaced, unless such degradation is within the functional longevity specified by the manufacturer.
2. Edges or seams that are loose or frayed shall be secured.

Notes for Installation in Channels:

1. Erosion Control Blankets and TRMs shall be laid in the direction of the flow, with the first course at the centerline of channel, where applicable. In order for the mat to be in contact with the soil, lay the mat loosely, avoiding stretching.
2. ANCHOR FOLD: The top of the mat should be folded under, buried and secured with wood or other approved anchors placed 6 inches apart. The top edge of the mat should be buried in a slot 6 inches wide x 6 inches deep, anchored in the bottom of the slot, backfilled, and the mat folded over the top as shown in detail.
3. SPLICE SEAM: When splices are necessary, overlap end a minimum of 12 inches in direction of water flow. Stagger splice seams.
4. CHECK SLOTS: Establish check slots transverse to slope every 50 feet. The slots should be 6 inches wide x 6 inches deep. The mat shall be cut to a length 12 inches beyond the slot. The top of the downstream mat shall be slotted in, secured and buried similar to the edge anchor fold. The upstream mat shall then cover the slot and be anchored as shown.
5. EDGE ANCHORS: Lay outside edge of mat into trench at top of the slope and anchor.
6. TERMINUS: The bottom edge of the mat shall be anchored.

Notes for Installation on Slopes:

1. Erosion Control Blankets and TRMs shall be laid in the direction of the slope. In order for blanket to be in contact with the soil, lay blanket loosely, avoiding stretching.
2. ANCHOR SLOTS: The top of the blanket should be "slotted in" at the top of the slope and anchored in place with anchors 6 inches apart. The slots should be 6 inches wide x 6 inches deep with the blanket anchored in the bottom of the slot, then backfilled, tamped and seeded.
3. SPLICE SEAM: When splices are necessary, overlap end a minimum of 8 inches in direction of water flow. Stagger splice seams.
4. TERMINAL FOLD: The bottom edge of the blanket shall be turned under a minimum of 4 inches, then anchored in place with anchors 9 inches apart.

Critical Points:

A – Overlaps and seams;

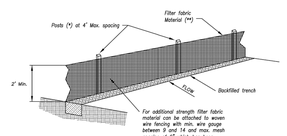
B – Projected water line;

C – Channel bottom / side slope vertices;

– Erosion Control Blanket or TRM may be omitted if the area is immediately covered by permanent slope protection (where directed by the plans)

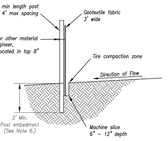
Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

AMERICAN PUBLIC WORKS ASSOCIATION	KANSAS CITY METRO CHAPTER
EROSION CONTROL BLANKETS AND TURF REINFORMENT MATS	STANDARD DRAWING NUMBER ESC-02
	ADOPTED: 10/24/2016



(*) POSTS
- MIN. LENGTH 4'
- HARDWOOD 1 ¹⁄₂" x 1 ¹⁄₂"
- NO.2 SOUTHERN PINE 2 ¹⁄₂" x 2 ¹⁄₂"
- STEEL 1.33 LB/FT

(**) – Geotextile Fabric shall meet the requirements of AASHTO M288



Notes:

1. In order to contain water, the ends of the silt fence must be turned uphill (Figure A).
2. Long perimeter runs of silt fence must be limited to 100'. Runs should be broken up into several smaller segments to minimize water concentrations (Figure A).
3. Long slopes should be broken up with intermediate rows of silt fence to slow runoff velocities.
4. Attach fabric to upstream side of post.
5. Install posts a minimum of 2" into the ground.
6. Trenching will only be allowed for small or difficult installation, where slicing machine cannot be reasonably used.

SILT FENCE DETAILS
Not to Scale

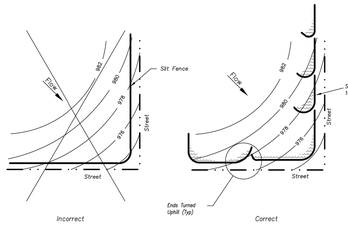
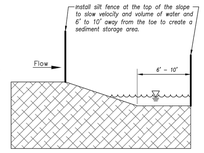
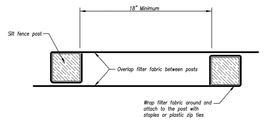


Figure A

SILT FENCE LAYOUT
Not to Scale





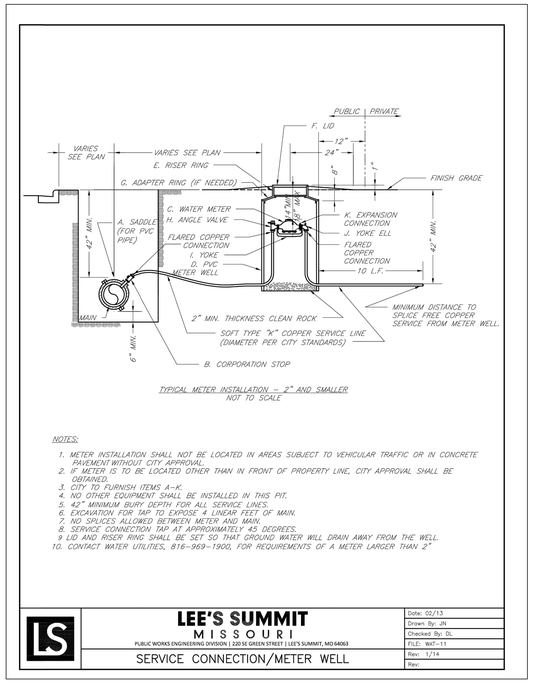
JOINING FENCE SECTIONS
Not to Scale

Maintenance:

1. Remove and dispose of sediment deposits when the deposit approaches ½ the height of silt fence.
2. Repair as necessary to maintain function and structure.

AMERICAN PUBLIC WORKS ASSOCIATION	KANSAS CITY METRO CHAPTER
SILT FENCE	STANDARD DRAWING NUMBER ESC-03
	ADOPTED: 10/24/2016

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

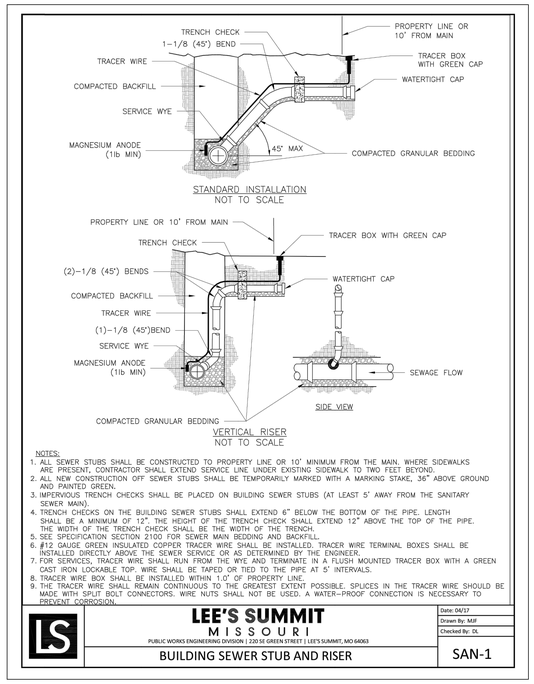


TYPICAL METER INSTALLATION – 2" AND SMALLER
NOT TO SCALE

NOTES:

1. METER INSTALLATION SHALL NOT BE LOCATED IN AREAS SUBJECT TO VEHICULAR TRAFFIC OR IN CONCRETE PAVEMENT WITHOUT CITY APPROVAL.
2. IF METER IS TO BE LOCATED OTHER THAN IN FRONT OF PROPERTY LINE, CITY APPROVAL SHALL BE OBTAINED.
3. CITY TO FURNISH ITEMS A–K.
4. NO OTHER EQUIPMENT SHALL BE INSTALLED IN THIS PIT.
5. 42" MINIMUM BURY DEPTH FOR ALL SERVICE LINES.
6. EXCAVATION FOR TAP TO EXPOSE 4 LINEAR FEET OF MAIN.
7. NO SPLICES ALLOWED BETWEEN METER AND MAIN.
8. SERVICE CONNECTION TAP AT APPROXIMATELY 45 DEGREES.
9. LID AND RISER RING SHALL BE SET SO THAT GROUND WATER WILL DRAIN AWAY FROM THE WELL.
10. CONTACT WATER UTILITIES, 816–969–1900, FOR REQUIREMENTS OF A METER LARGER THAN 2"

LS	LEE'S SUMMIT MISSOURI PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063	Date: 02/13
		Drawn By: JN
		Checked By: DL
	SERVICE CONNECTION/METER WELL	FILE: WAT–11
		Rev: 1/14
		Rev:



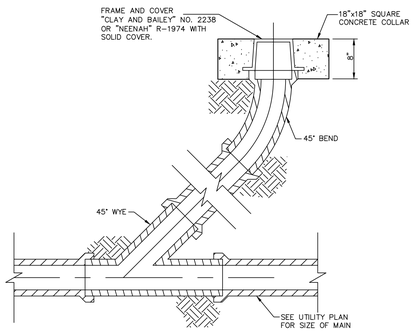
STANDARD INSTALLATION
NOT TO SCALE

VERTICAL RISER
NOT TO SCALE

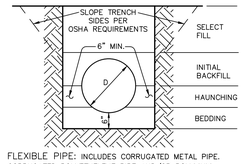
NOTES:

1. ALL SEWER STUBS SHALL BE CONSTRUCTED TO PROPERTY LINE OR 10' MINIMUM FROM THE MAIN. WHERE SIDEWALKS ARE PRESENT, CONTRACTOR SHALL EXTEND SERVICE LINE UNDER EXISTING SIDEWALK TO TWO FEET BEYOND.
2. ALL NEW CONSTRUCTION OFF SEWER STUBS SHALL BE TEMPORARILY MARKED WITH A MARKING STAKE, 36" ABOVE GROUND AND PAINTED GREEN.
3. IMPERVIOUS TRENCH CHECKS SHALL BE PLACED ON BUILDING SEWER STUBS (AT LEAST 5' AWAY FROM THE SANITARY SEWER MAIN).
4. TRENCH CHECKS ON THE BUILDING SEWER STUBS SHALL EXTEND 6" BELOW THE BOTTOM OF THE PIPE. LENGTH SHALL BE A MINIMUM OF 12". THE HEIGHT OF THE TRENCH CHECK SHALL EXTEND 12" ABOVE THE TOP OF THE PIPE. THE WIDTH OF THE TRENCH CHECK SHALL BE THE WIDTH OF THE TRENCH.
5. SEE SPECIFICATION SECTION 2100 FOR SEWER MAIN BEDDING AND BACKFILL.
6. #12 GAUGE GREEN INSULATED COPPER TRACER WIRE SHALL BE INSTALLED. TRACER WIRE TERMINAL BOXES SHALL BE INSTALLED DIRECTLY ABOVE THE SEWER SERVICE OR AS DETERMINED BY THE ENGINEER.
7. FOR SERVICES, TRACER WIRE SHALL RUN FROM THE WYE AND TERMINATE IN A FLUSH MOUNTED TRACER BOX WITH A GREEN CAST IRON LOCKABLE TOP. WIRE SHALL BE TAPED OR TIED TO THE PIPE AT 5' INTERVALS.
8. TRACER WIRE BOX SHALL BE INSTALLED WITHIN 1.0' OF PROPERTY LINE.
9. THE TRACER WIRE SHALL REMAIN CONTINUOUS TO THE GREATEST EXTENT POSSIBLE. SPLICES IN THE TRACER WIRE SHOULD BE MADE WITH SPLIT BOLT CONNECTORS. WIRE NUTS SHALL NOT BE USED. A WATER–PROOF CONNECTION IS NECESSARY TO PREVENT CORROSION.

LS	LEE'S SUMMIT MISSOURI PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063	Date: 04/17
		Drawn By: MJF
		Checked By: DL
	BUILDING SEWER STUB AND RISER	SAN-1



CLEAN–OUT 510



FLEXIBLE PIPE: INCLUDES CORRUGATED METAL PIPE, CORRUGATED POLYETHELENE PIPE AND/OR POLYVINYL CHLORIDE PIPE.

1. BEDDING SHALL BE COMPACTED CRUSHED STONE AND SHALL BE SHAPED TO THE BOTTOM OF THE PIPE.
2. HAUNCHING AND INITIAL BACKFILL MATERIAL SHALL BE CLASS I OR II (REF. ASTM D2321) GRANULAR MATERIAL AND SHALL BE COMPACTED TO 95% STANDARD PROCTOR.

TRENCH AND BEDDING DETAILS

REFER TO KANSAS CITY METROPOLITAN CHAPTER OF APWA SPECIFICATIONS SECTION 2102.4

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Lee's Summit R7 District Athletics Facilities

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2600 SW Ward Road
Lee's Summit, MO 64082

owner:
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301 NE Tudor Road
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14700 West 114th Terrace
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mechanical/electrical engineer:
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1801 Main St.
Kansas City, MO 64108
816.663.8700

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STATE OF MISSOURI
DAVID D. WOOD
NUMBER PE-2011037427
PROFESSIONAL ENGINEER
9.28.2020

Kaw Valley Engineering, Inc.
Missouri Certificate of Authority: 000842
David Wood Date: 09/28/2020
Engineer License No. PE-2011037427

REVISIONS

Number	DESCRIPTION	DATE

PROJECT NO: 0119-0100
DATE: September 28, 2020

PROJ. NO. C20_0691 DSN: DDW
CFN: 0691DET–LSW.DWG DWN: NJN

DAVID D. WOOD
ENGINEER
MO # 2011037427

14700 WEST 114TH TERRACE
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lx@kveng.com | www.kveng.com

KAW VALLEY ENGINEERING

KAW VALLEY ENGINEERING, INC., IS AUTHORIZED TO OFFER ENGINEERING SERVICES BY MISSOURI STATE CERTIFICATE OF AUTHORITY # 000842. EXPIRES 12/31/21

UTILITY DETAILS

W-C910

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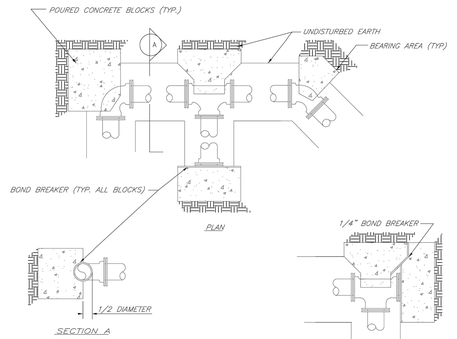
REQUIRED CONCRETE BEARING AREA (SQUARE FEET – SF)

NOM. DIA. (INCHES)	180 TEE, PLUG	90 BEND	45 BEND	22.5 BEND	11.25 BEND
6	4.7	6.7	4.0	4.0	4.0
8	8.4	11.8	6.4	4.0	4.0
10	13.1	18.5	10.0	5.1	4.0
12	18.8	26.7	14.4	7.4	4.0
14	25.7	36.3	19.6	10.0	5.0
16	33.5	47.4	25.6	13.1	6.6
18	42.4	REST. JT.	32.5	16.5	8.3
20	REST. JT.	REST. JT.	40.1	20.4	10.3
24	REST. JT.	REST. JT.	REST. JT.	29.4	14.8

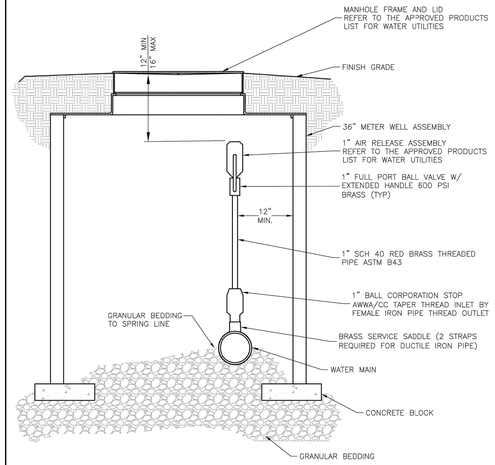
NOTES:
1. ALL BENDS WITHOUT RESTRAINED JOINTS SHALL HAVE CONCRETE THRUST BLOCKS INSTALLED FOR RESTRAINT.
2. MEGA LUGS MAY BE USED ONLY IN CONJUNCTION WITH CONCRETE THRUST BLOCKING.
3. BEARING AREA MUST BE AGAINST UNDISTURBED SOIL.
4. DO NOT COVER JOINTS OR BOLTS (WHERE APPLICABLE) WITH CONCRETE.



LEE'S SUMMIT
MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

HORIZONTAL THRUST BLOCKS

Date: 02/13
Drawn By: JN
Checked By: DL
File: WAT-1
Rev: 1/14
Rev:



AIR RELEASE ASSEMBLY
NOT TO SCALE

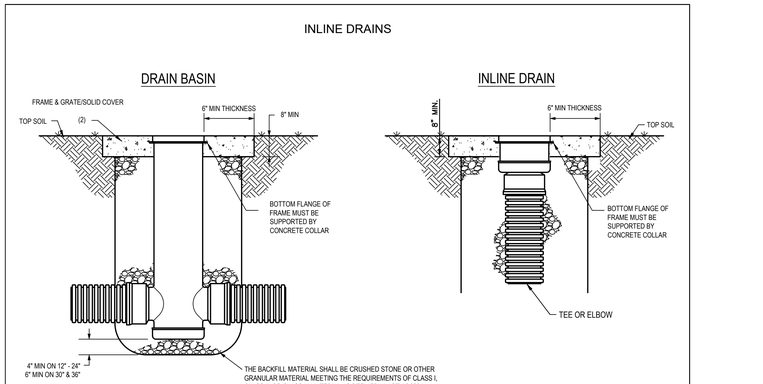
LEE'S SUMMIT
MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

AIR RELEASE ASSEMBLY

Date: 04/17
Drawn By: MJF
Checked By: DL

WAT-10

INLINE DRAINS



NYLOPLAST IS THE BASIS OF DESIGN

460

1. GRATES/SOLID COVERS SHALL MEET H-20 LOAD RATING FOR 30" PEDESTRIAN & 12" - 30" STANDARD & SOLID
2. DESIGN SHOULD ACCOUNT FOR ROOT DEPTH TO ALLOW TURF TO GROW AND PREVENT EROSION AROUND GRATE SO THAT HAZARDS DO NOT FORM.

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DRAWN BY	EBC	MATERIAL	
DATE	01-05-09		
REVISED BY	NMH	PROJECT NO./NAME	
DATE	06-12-18		
DWG SIZE	A	SCALE 1:25	SHEET 1 OF 1

Nyloplast
3130 VERONA AVE
BUFORD, GA 30518
PHN (770) 932-2443
FAX (770) 932-2490
www.nyloplast-us.com

TITLE: DRAIN BASIN & INLINE DRAIN TURF TRAFFIC INSTALLATION

DWG NO. 7001-110-340 REV G

JUNCTION BOX YARD INLETS AND CURB INLET NOTES

GENERAL

1. ALL STORM SEWER STRUCTURES SHALL BE PRE-CAST OR POURED IN PLACE. IF PRE-CAST STRUCTURES ARE USED FOR PUBLICLY FINANCED, MAINTAINED OR ADMINISTERED CONSTRUCTION, THE TOPS SHALL BE POURED IN PLACE AND THE WALL STEEL SHALL BE LEFT EXPOSED TO A HEIGHT 2" BELOW THE FINISH TOP ELEVATION, OR AS DIRECTED BY THE CITY ENGINEER.
2. PRE-CAST SHOP DRAWINGS ARE TO BE APPROVED BY THE ENGINEER.
3. DO NOT SCALE THESE DRAWINGS FOR DIMENSIONS OR CLEARANCES. ANY QUESTIONS REGARDING DIMENSIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO CONSTRUCTION.
4. THE FIRST DIMENSION LISTED IN THE CONSTRUCTION NOTES IS THE "L" DIMENSION. THE SECOND DIMENSION IS THE "W" DIMENSION. THE CONCRETE THICKNESS AND REINFORCEMENT SHOWN IS FOR BOXES WITH ("L"+"H") AND ("W"+"H") LESS THEN OR EQUAL TO 20. FOR BOXES WITH EITHER OF THESE CALCULATIONS GREATER THAN 20, A SPECIAL DESIGN IS REQUIRED. PRECASTER SHALL PROVIDE DESIGN CALCULATIONS FOR DEEP STRUCTURES TO ENGINEER PRIOR TO CONSTRUCTING BOX.

CONCRETE

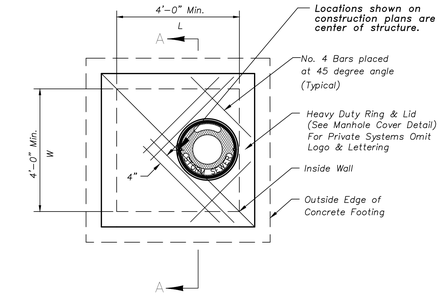
5. CONCRETE USED IN THIS WORK SHALL BE CLASS "A" CONCRETE (AE) THROUGHOUT, AND SHALL MEET THE REQUIREMENTS OF THE KANSAS CITY METROPOLITAN CHAPTER OF THE APWA TECHNICAL SPECIFICATIONS.
6. CONCRETE CONSTRUCTION SHALL MEET THE APPLICABLE REQUIREMENTS OF STANDARD SPECIFICATIONS FOR MOIB, LATEST EDITION, EXCEPT AS MODIFIED IN THE APWA TECHNICAL SPECIFICATIONS.
7. INLET FLOORS SHALL BE SHAPED WITH NON-REINFORCED CONCRETE INVERTS TO PROVIDE SMOOTH FLOW.
8. BEVEL ALL EXPOSED EDGES WITH ¾" TRIANGULAR MOLDING.
9. 8" SOLID CONCRETE BLOCK OR BRICK MAY BE USED IN WALLS IN LIEU OF POURED CONCRETE WHERE NEITHER "H"+"L" NOR "H"+"W" (IN FEET) EXCEED FOURTEEN. BLOCK OR BRICK MAY BE USED IN ANY BOX WHERE "H" IS 5' OR LESS.
10. ALL CRUSHED STONE USED AS AGGREGATE FOR CONCRETE CONSTRUCTION SHALL BE OBTAINED FROM QUARRIES AND BEDS DESIGNATED BY THE MISSOURI DEPARTMENT OF TRANSPORTATION AS MEETING DURABILITY REQUIREMENTS OF KANSAS CITY METROPOLITAN CHAPTER OF THE APWA TECHNICAL SPECIFICATIONS.

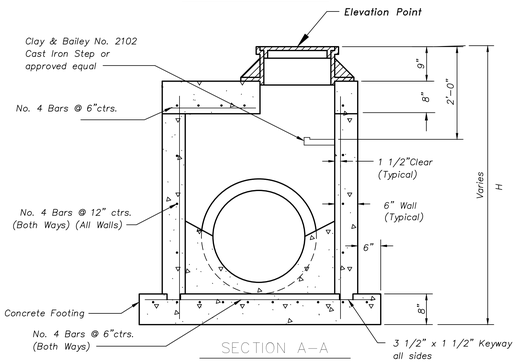
REINFORCING STEEL

11. REINFORCING STEEL SHALL BE NEW BILLET, MINIMUM GRADE 60 AS PER ASTM A615, AND SHALL BE BENT COLD.
12. ALL DIMENSIONS RELATIVE TO REINFORCING STEEL ARE TO CENTERLINE OF BARS. 2" CLEARANCE SHALL BE PROVIDED THROUGHOUT UNLESS NOTED OTHERWISE. TOLERANCE OF +/- ½" SHALL BE PERMITTED.
13. ALL LAP SPLICES NOT SHOWN SHALL BE A MINIMUM OF 40 BAR DIAMETERS IN LENGTH.
14. ALL REINFORCING STEEL SHALL BE SUPPORTED ON FABRICATED STEEL BAR SUPPORTS @ 3'-0" MAXIMUM SPACING.
15. ALL DOWELS SHALL BE ACCURATELY PLACED AND SECURELY TIED IN PLACE PRIOR TO PLACEMENT OF BOTTOM SLAB CONCRETE. STICKING OF DOWELS INTO FRESH OR PARTIALLY HARDENED CONCRETE WILL NOT BE ACCEPTABLE.

CONSTRUCTION

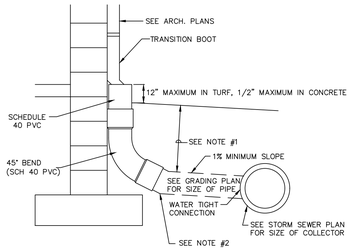
16. THE BOTTOM SLAB SHALL BE AT LEAST 24 HOURS OLD BEFORE PLACING SIDEWALL CONCRETE. ALL SIDEWALL FORMS SHALL REMAIN IN PLACE A MINIMUM OF 24 HOURS AFTER SIDEWALLS ARE POURED BEFORE REMOVAL, AND AFTER REMOVAL SHALL BE IMMEDIATELY TREATED WITH MEMBRANE CURING COMPOUND.
17. PIPE CONNECTIONS TO PRE-CAST STRUCTURES SHALL HAVE A MINIMUM OF 6" OF CONCRETE AROUND THE ENTIRE PIPE WITHIN 2' OF THE STRUCTURE.
18. MATERIAL SELECTION AND COMPACTION REQUIREMENTS FOR BACKFILL AROUND STRUCTURES SHALL BE AS SPECIFIED IN THE KANSAS CITY METROPOLITAN CHAPTER OF THE APWA TECHNICAL SPECIFICATIONS.





JUNCTION BOX

402



NOTES:
1) FOR ALL DEPTHS OF COVER LESS THAN TWO (2) FEET, PIPE MUST BE SCHEDULE 40 PVC. FOR DEPTHS OF COVER GREATER THAN TWO (2) FEET, FLEXIBLE PIPE MAY BE USED. REFER TO SPECIFICATIONS FOR ALLOWABLE PIPE TYPES.
2) A WATERTIGHT CONNECTION SHALL BE MAINTAINED WITH ANY TRANSITION FROM SCHEDULE 40 PVC PIPE TO ANY OTHER PIPE TYPE.
3) THE DOWNSPOUT COLLECTOR DRAIN SHALL BE INSTALLED BEFORE THE DOWNSPOUTS ARE INSTALLED ON THE BUILDING. SITEWORK CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK TO AND INCLUDING THE RODENT SCREEN. BUILDING CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONNECTION AT THE POINT OF THE RODENT SCREEN.

DOWNSPOUT COLLECTOR

433

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TOLL FREE: 1-800-726-1994
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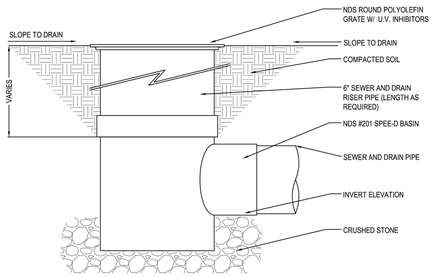
www.ndspro.com



SECTION

NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. DO NOT SCALE DRAWING.
3. THIS DRAWING IS INTENDED FOR USE BY ARCHITECTS, ENGINEERS, CONTRACTORS, CONSULTANTS AND DESIGN PROFESSIONALS FOR PLANNING PURPOSES ONLY.
4. ALL INFORMATION CONTAINED HEREIN WAS CURRENT AT THE TIME OF DEVELOPMENT BUT MUST BE REVIEWED AND APPROVED BY THE PRODUCT MANUFACTURER TO BE CONSIDERED ACCURATE.

NDS S5 KEY COMPONENT www.ndspro.com/s5

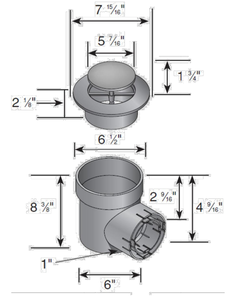
ROUND SPEE-D BASINS
ROUND GRATE WITH SPEE-D BASIN

REVISION DATE 8-24-2015

NDS™ WE PUT WATER IN ITS PLACE

TECHNICAL SPECIFICATIONS

6" Pop Up Emitter with 6" Basin



Part #: 625 - Center Spring Loaded
Material: High Density Polypropylene (HDPE)
Colors: Pop Up (Green) Basin (Black)
Fits: 3" and 4" sewer, drain, triple wall, corrugated and sch. 40 pipe
Spring: Stainless Steel Grade 302
Opening Pressure: 1 PSI
Open Surface Area: 28.8 Sq. Inches
Flow Rate
1" Head: 124.60 GPM
0.5" Head: 88.10 GPM
Basin: 6" NDS Spee-D Basin
Weight Per Each: 2.14 lbs.
UV inhibitor

Load Recommendation Guide

Class A
- Loads of 1-60 psi.
- Recommended for pedestrians, bicycles and wheel chair traffic.

851 N. Harvard Avenue
Lindsay, CA 93247
800-726-1994

Visit ndspro.com for specs, detail drawings, and case studies

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POP-UP EMITTER

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STATE OF MISSOURI
DAVID D. WOOD
NUMBER PE-2011037427
PROFESSIONAL ENGINEER
9/28/2020

Kaw Valley Engineering, Inc.
Missouri Certificate of Authority: 000842
David Wood Date: 09/28/2020
Engineer License No. PE-2011037427

REVISIONS

Number	DESCRIPTION	DATE

PROJECT NO: 0119-0100
DATE: September 28, 2020

UTILITY DETAILS

W-C920

BID SET

PROJ. NO. C20_0691 DSN: DDW
CFN: 0691DET-LSW.DWG DWN: NJN
DAVID D. WOOD
ENGINEER
MO # 2011037427
14700 WEST 114TH TERRACE
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lx@kveng.com | www.kveng.com
KAW VALLEY ENGINEERING
KAW VALLEY ENGINEERING, INC., IS AUTHORIZED TO OFFER ENGINEERING SERVICES BY MISSOURI STATE CERTIFICATE OF AUTHORITY # 000842. EXPIRES 12/31/21

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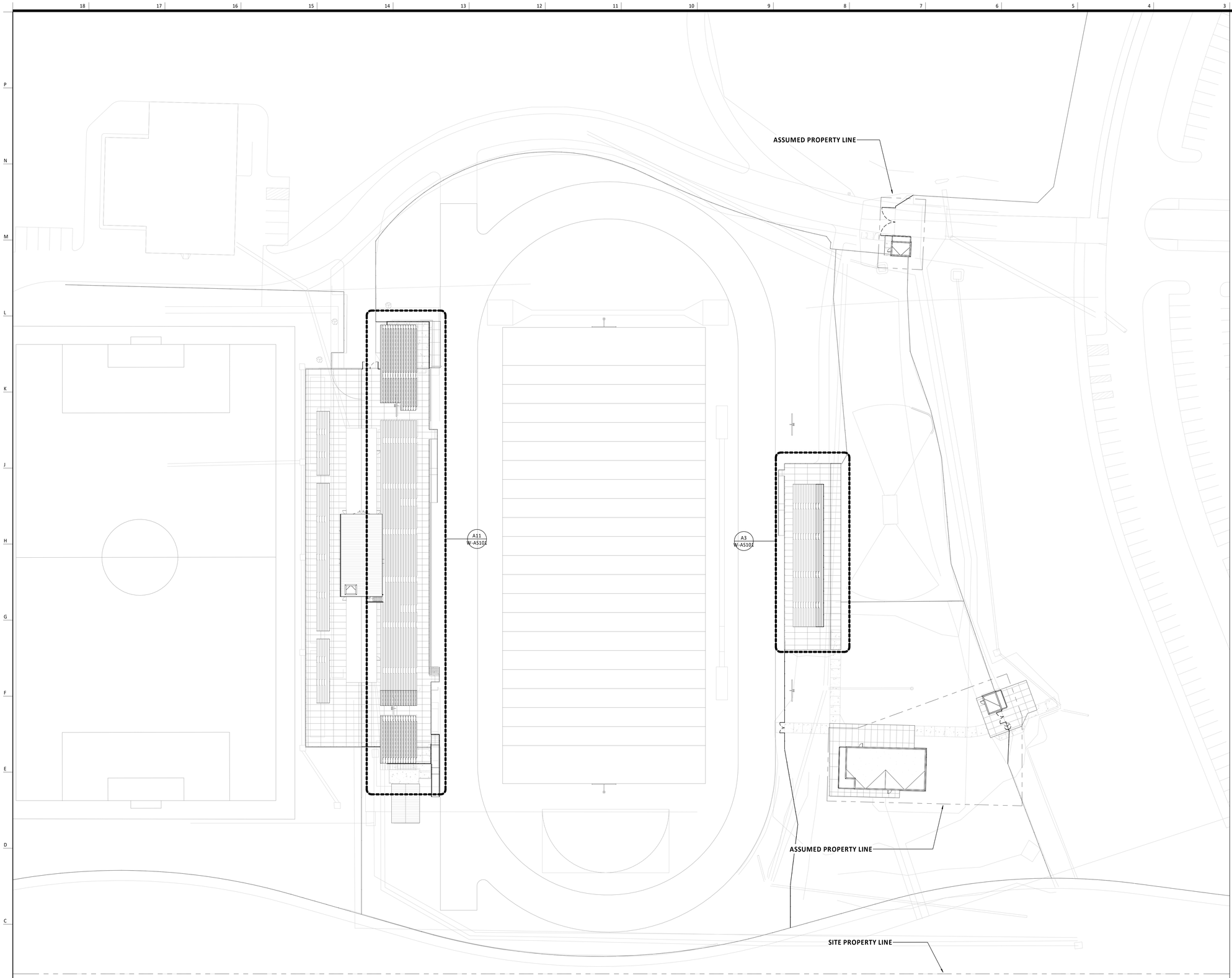

General Notes (Site Plan):

1. COORDINATE ALL SPOT ELEVATIONS AND DIMENSIONS WITH CIVIL/LANDSCAPE/STRUCTURAL DRAWINGS
2. PROVIDE POSITIVE DRAINAGE OF 1% MINIMUM / 2% MAXIMUM AT ALL EXTERIOR PAVED PEDESTRIAN AREAS SUCH AS SIDEWALKS, PATIOS, STAIRS, ETC. UNLESS NOTED OTHERWISE
3. PROVIDE POSITIVE DRAINAGE AWAY FROM THE
4. BUILDING OF 5% FOR A DISTANCE OF 10 FEET UNLESS NOTED OTHERWISE.
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6. ALL LOCATIONS OF NEW AND REPLACED FENCE TO BE VERIFIED IN FIELD. CONFIRM NO DISTURBANCES TO EXISTING SITE ELEMENTS TO REMAIN.
7. EXISTING GATES ASSOCIATED WITH FENCE TO BE REPLACED SHALL ALSO BE REPLACED.

Overall Site Plan A3
1" = 30'-0"

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Lee's Summit R7 District Athletics Facilities

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Architectural Corporation
Missouri License No. 2018022991
Jay Darren Browning — Date: 09/28/2020
Architect — License No. A-2009027279

REVISIONS

Number	DESCRIPTION	DATE

PROJECT NO: 0119-0101
DATE: September 28, 2020

Architectural Site Plan

W-AS001

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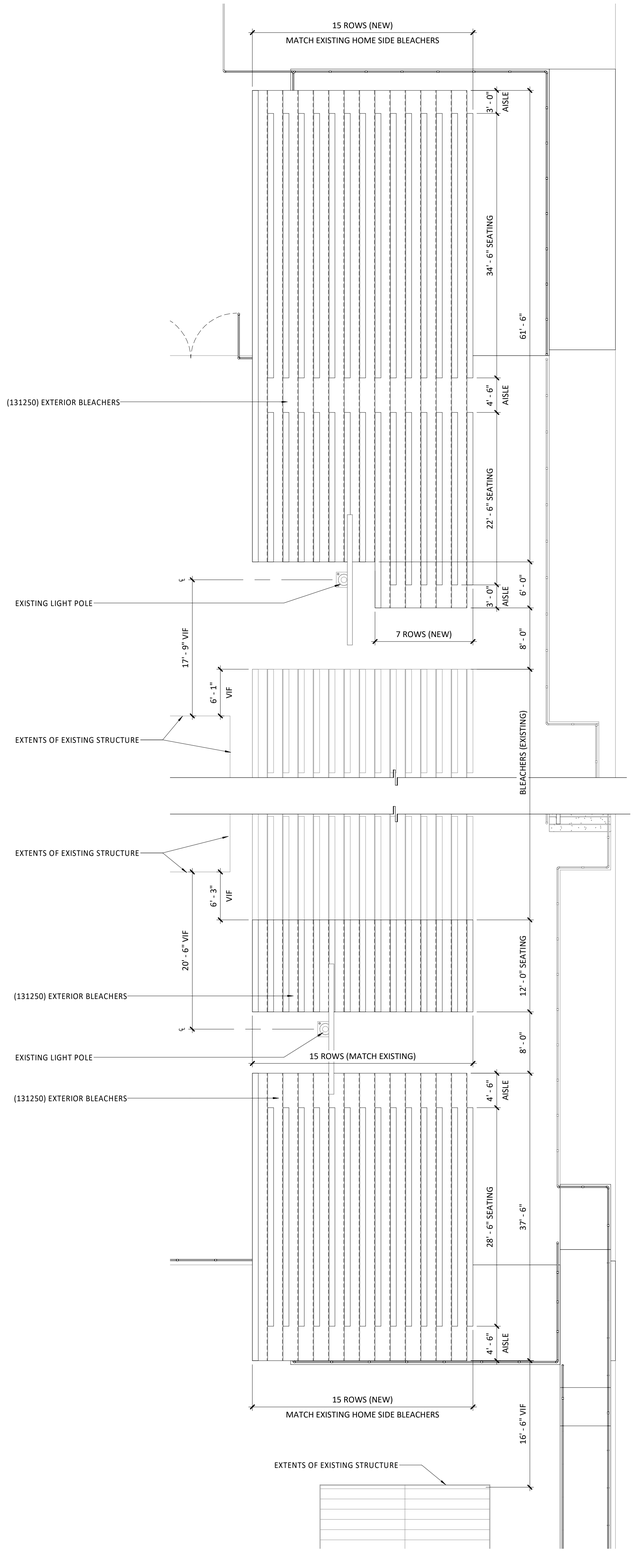
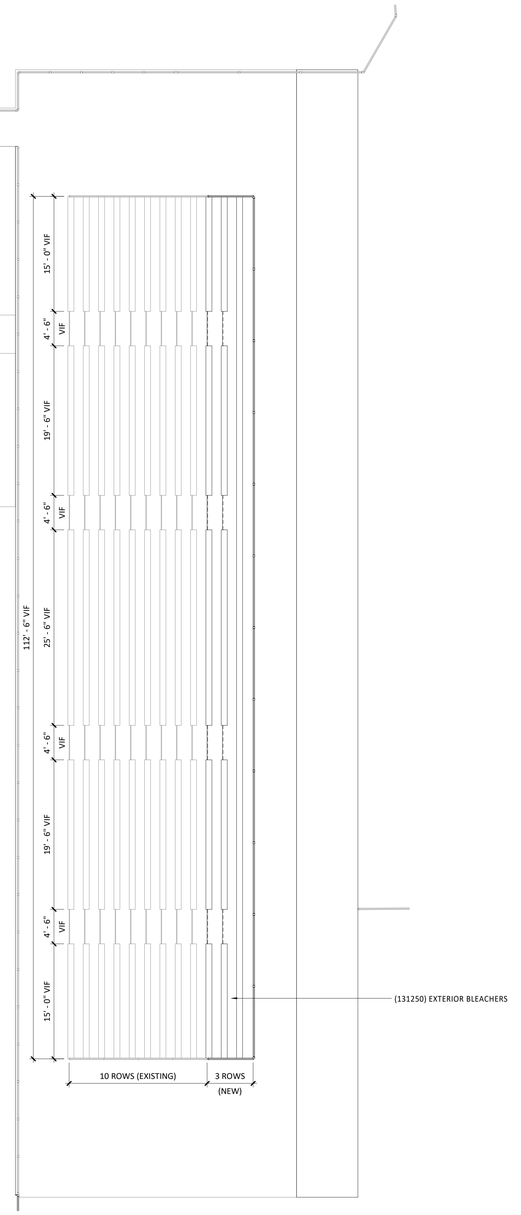


BLEACHER INFORMATION PROVIDED FOR REFERENCE ONLY, N.I.C.

Site Plan - Home Side Bleachers A11

1/8" = 1'-0"



BLEACHER INFORMATION PROVIDED FOR REFERENCE ONLY, N.I.C.

Site Plan - Visitor Side Bleachers A3

1/8" = 1'-0"

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Jay Darren Browning Date: 09/28/2020
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REVISIONS

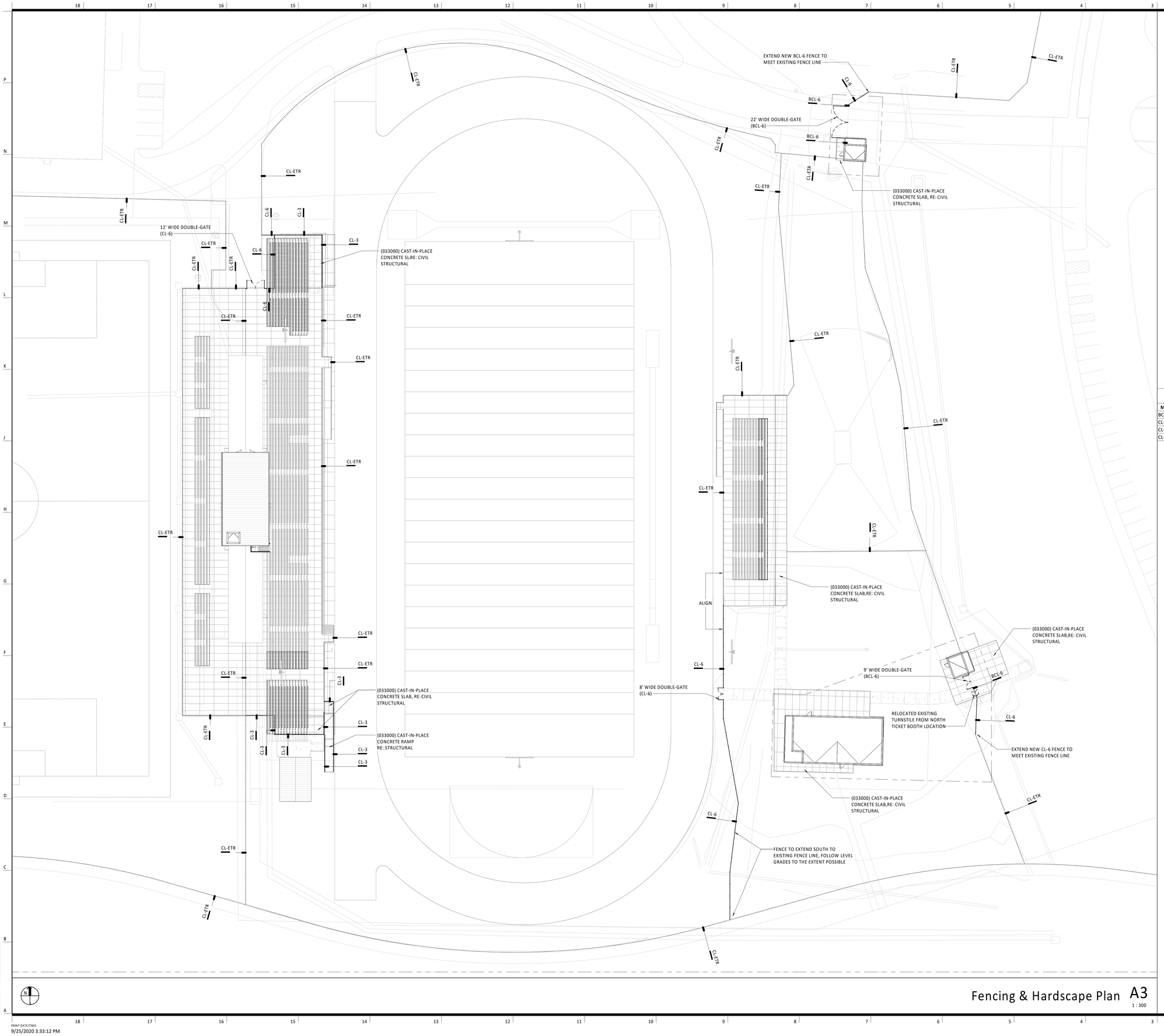
Number	DESCRIPTION	DATE

PROJECT NO: 0119-0101
DATE: September 28, 2020

Bleacher Plans

W-AS101

BID SET



General Notes (Site Plan):

1. COORDINATE ALL SPOT ELEVATIONS AND DIMENSIONS WITH CIVIL/LANDSCAPE/STRUCTURAL DRAWINGS
2. PROVIDE POSITIVE DRAINAGE OF 1% MINIMUM / 2% MAXIMUM AT ALL EXTERIOR PAVED PEDESTRIAN AREAS SUCH AS SIDEWALKS, PATIOS, STAIRS, ETC. UNLESS NOTED OTHERWISE
3. PROVIDE POSITIVE DRAINAGE AWAY FROM THE
4. BUILDING OF 5% FOR A DISTANCE OF 10 FEET UNLESS NOTED OTHERWISE.
5. FINISH GRADE SLOPES SHALL BE NO STEEPER THAN 1 FOOT VERTICAL IN 3 FEET HORIZONTAL UNLESS NOTED OTHERWISE.
6. ALL LOCATIONS OF NEW AND REPLACED FENCE TO BE VERIFIED IN FIELD. CONFIRM NO DISTURBANCES TO EXISTING SITE ELEMENTS TO REMAIN.
7. EXISTING GATES ASSOCIATED WITH FENCE TO BE REPLACED SHALL ALSO BE REPLACED.

Fencing Types

Mark	Type Comments
BCL-6	(323113) Black Vinyl-Coated Chain Link Fence - 6' High
CL-3	(323113) Chain Link Fence - 4' High
CL-6	(323113) Chain Link Fence - 6' High
CL-ETR	(323113) Chain Link Fence (Existing To Remain)

50'
25'
12.5'
0'

PRINT DATE/TIME:
9/25/2020 3:33:12 PM

Fencing & Hardscape Plan A3
1 : 300

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Lee's Summit R7 District Athletics Facilities

Lee's Summit West High School
2600 SW Ward Road
Lee's Summit, MO 64082

owner:
Lee's Summit R-7 School District
301 NE Tudor Road
Lee's Summit, MO 64086

architect:
Gould Evans
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Kansas City, MO 64111
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structural engineer:
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civil engineer:
Kaw Valley Engineering
14700 West 114th Terrace
Lenexa, KS 66215
913.485.0318

mechanical/electrical engineer:
Henderson Engineers
8345 Lenexa Drive | Suite 300
Lenexa, KS 66214
816.742.5000

UNLESS A PROFESSIONAL SEAL WITH SIGNATURE AND DATE IS AFFIXED, THIS DOCUMENT IS PRELIMINARY AND IS NOT INTENDED FOR CONSTRUCTION, RECORDING PURPOSES OR IMPLEMENTATION

STATE OF MISSOURI
JAY DARREN BROWNING
NUMBER A-2009027279
ARCHITECT
9.28.20

Architectural Corporation
Missouri License No. 2018022991
Jay Darren Browning — Date: 09/28/2020
Architect — License No. A-2009027279

REVISIONS

Number	DESCRIPTION	DATE

PROJECT NO: 0119-0101
DATE: September 28, 2020

Fencing & Hardscape Plan

W-AS201

BID SET

GENERAL NOTES - STRUCTURAL

1. General Information

A. The contractor shall verify dimensions and conditions before construction and notify the engineer of any discrepancies, inconsistencies, or difficulties affecting the work before proceeding.
B. The contractor shall coordinate all disciplines, verifying size and location of all openings, whether shown on structural drawings or not, as called for on architectural, mechanical, or electrical drawings. In the case of work in an existing building the contractor shall scan existing structure to locate all rebar in the area of the new core/opening using ground penetrating radar and notify the engineer of record for review prior to coring/cutting. Conflicts, inconsistencies, or other difficulties affecting structural work shall be called to the architect or engineer's attention for direction before proceeding.
C. All design and construction work for this project shall conform to the requirements of the following governing design codes:
   1.) International Building Code (IBC 2018) as amended by the city of Lee's Summit, MO
   2.) Minimum Design Loads for Buildings and Other Structures (ASCE7-16)
   3.) Specification for Structural Steel Buildings (AISC 360-16)
   Member Design Basis is Allowable Stress Design (ASD)
   Connection Design Basis is Allowable Stress Design (ASD)
   4.) Structural Welding Code (AWS D1.4-2017)
   5.) Building Code Requirements for Structural Concrete (ACI 318-14)
   6.) Building Code Requirements for Masonry Structures (ACI 530-13/TMS 402-16)
   7.) North American Specification for the Design of Cold-Formed Steel Structural Members (AISI S100-16)
   8.) National Design Specification (NDS) for Wood Constriction with 2018 Supplements (ANSI/AWC NDS-2018)
   9.) Special Design Provisions for Wind and Seismic (AWC SDPWS-2015)
D. These drawings are for this specific project and no other use is authorized.

2. Structural Load Design Criteria

A. Floor Live = 100 psf
B. Roof Live = 20 psf
C. Snow: Pg = 20psf, Pf =14psf, Is = 1.0, Ce = 1.0, Ct = 1.0, Drift per ASCE/SEI 7
D. Lateral Loads:
   1.) Wind: V = 109 mph, Exposure B
   Occupancy [Risk] Category II, Iw=1.0 GCpi=+/-0.18
   Design wind pressures to be used for the design of exterior component and cladding materials on the designated zones of wall and roof surfaces shall be per section 30.7 and Table 30.7-2 of ASCE/SEI 7. Tabulated pressures shall be multiplied by effective area reduction factors, exposure adjustment factors, and topographic factors where applicable
   2.) Seismic: Ss = 0.114, S1 = 0.067
   Occupancy [Risk] Category II, Ie=1.0,
   Site Classification D; Sds = 0.121; Sd1 = 0.107
   Seismic Design Category B
   Basic Seismic Force-resisting System:
   Bearing Wall Systems - Ordinary reinforced masonry shear walls
   Equivalent Lateral Force Procedure
   R = 2; V = 0.0606W; Omega = 2½; Cd=1¾
E. This project is designed to resist the most critical effects resulting from the load combinations of section 1605.3 of the International Building Code.

3. Concrete

A. All concrete for foundations (walls, grade beams, footings and piers) shall develop minimum ultimate compressive design strength of 3500 psi in 28 days, but not less than 500 pounds of cement shall be used per cubic yard of concrete regardless of strengths obtained, not over 6 gallons of water per 100 pounds of cement and not over 4 inches of slump.
B. All concrete for interior flatwork **(without floor covering)** shall develop minimum ultimate compressive design strength of 4000 psi in 28 days, but not less than 525 pounds of cement shall be used per cubic yard of concrete regardless of strengths obtained, not over 5.75 gallons of water per 100 pounds of cement and not over 4 inches of slump. Concrete mix shop drawing shall contain testing data proving concrete design mix shrinkage is less than 0.034% at 28 days when tested according to ASTM C157 (air drying method only).
C. All concrete for interior flatwork **(with floor covering)** shall develop minimum ultimate compressive design strength of 4000 psi in 28 days, but not less than 540 pounds of cement shall be used per cubic yard of concrete regardless of strengths obtained, not over 5.40 gallons of water per 100 pounds of cement and not over 4 inches of slump. Concrete mix shop drawing shall contain testing data proving concrete design mix shrinkage is less than 0.034% at 28 days when tested according to ASTM C157 (air drying method only).
D. All concrete for exterior flatwork shall have a minimum design compressive strength of 4500 psi in 28 days, with not less than 560 pounds of cement per cubic yard of concrete, not over 5 gallons of water per 100 pounds of cement, with 6% +/- 1% air entrainment, and a maximum of 4 inches of slump.
F. The preceding minimum mix requirements may have water-reducing admixtures conforming to ASTM C494 added to the mix at manufacturer's dosage rates for improved workability.
G. The preceding minimum mix requirements may have up to 15% maximum of the cement content replaced with an approved ASTM C618 Class C fly ash, provided the total minimum cementitious content is not reduced.
H. Combined aggregate (coarse plus fine) for all concrete shall be well graded from coarsest to finest with no more than 18 percent and not less than 8 percent retained on an individual sieve, except that less than 8 percent may be retained on coarsest sieve and on No. 50 and finer sieves. Submit this gradation report with the concrete mix design shop drawings.
I. All interior concrete slabs on grade shall be placed over 15 mil, Class A Vapor Barrier per ASTM E1745 with less than 0.01 perms, tested after mandatory conditioning. All joints shall be lapped and sealed per manufacturer's recommendations. All penetrations, as well as damaged vapor barrier material shall also be sealed per manufacturer's recommendation prior to concrete placement. Install barrier per manufacturer recommended details at all discontinuous edges (at interior columns, exterior edge of slab, etc.) to ensure terms of warranty are followed. The vapor barrier shall be placed over free-draining granular material as prescribed by the project soils report.
J. All concrete is reinforced concrete unless specifically called out as unreinforced. Reinforce all concrete not otherwise shown with same steel as in similar sections or areas. Any details not shown shall be detailed per ACI 315 and meet requirements of ACI 318, current editions.
K. Control joints in dirt formed slab to be as shown on plans. Where not shown, limit controlled areas to not more than 144 square feet, or 12 feet on any side. Slab panel side ratio shall not exceed 1 1/2 to 1.
L. Contractor shall verify that all concrete inserts, reinforcing and embedded items are correctly located and rigidly secured prior to concrete placement.
M. Construction joints in beams, slabs, and grade beams shall occur at midspan (middle third) unless noted otherwise. Provide 2 x 4 horizontal keys at construction joints for shear transfer.
N. No aluminum items shall be embedded in any concrete.

4. Reinforcing Steel

A. All reinforcing steel shall conform to the requirements of ASTM A615 or A706 grade 60 steel. Welded plain wire fabric shall be supplied in sheets and conform to the requirements of ASTM A185.
B. Clear minimum coverage of concrete over reinforcing steel shall be as follows:
   1.) Concrete placed against earth: 3"
   2.) Formed concrete against earth: 2"
   3.) Slabs: 1"
   4.) Beams or Columns: 1-1/2"
   5.) Other 2"
   All coverage shall be nominal bar diameter minimum.
C. All dowels shall be the same size and spacing as adjoining main bars (splice lap 48 bar diameters or 24" minimum unless noted otherwise).
D. At corners of all walls, beams, and grade beams supply corner bars (minimum 2'-0" in each direction or 48 bar diameters) in outside face of wall, matching size and spacing of horizontal bars. Where there are no vertical bars in outside face of wall, supply 3 - #4 vertical support bars for corner bars.
E. Bars marked continuous and all vertical steel shall be lapped 48 bar diameters (2'-0" minimum) at splices and embedments, unless shown otherwise. Splice top bars near midspan and splice bottom bars over supports, unless noted otherwise.
F. At all holes in concrete walls and slabs, add 2 - #5 bars (opening dimension plus 96 diameters long) at each of four sides and add 2 - #5 x 5'-0" diagonally at each of four corners of hole. Openings in 8" thick walls are reinforced similar, but with 1 - #5 instead of 2 - #5, respectively.
G. Unless otherwise covered on architectural plans or specifications, vertical control joints in concrete wall shall be spaced at a maximum of 20'-0" on center and coordinated with the architect. Every other horizontal wall reinforcing bar shall be discontinuous at control joints except heavy top and bottom bars unless noted otherwise. Provide base seal waterstop style number 772 (by Greenstreak Inc. or approved equal) on dirt face side of wall at all walls below grade.
H. Accessories shall be as specified in latest edition of the ACI Detailing Handbook and the concrete Reinforcing Steel Institute Design Handbook. Maximum accessory spacing shall be 4'-0" on center, and all accessories on exposed surfaces are to have plastic coated feet.
I. All slabs and stairs not shown otherwise shall be 6" thick with #4 bars at 12" on center each way. All exterior porches and stoops not otherwise detailed may be constructed in any standard manner, solid or hollow, but must be reinforced with #4 bars at 12" on center each way minimum. Porches shall be doweled to adjacent walls or grade beams with #4 bars at 12" on center, hooked or embedded 48 diameters into both members. Slope porches 1/8" per foot for drainage unless noted otherwise.
J. Allow ½ ton of reinforcing bars #4 or larger to be used as directed in the field for special conditions by the engineer of record (labor for placing same to be included).

5. Structural Steel

A. All structural steel beams and columns shall be ASTM A992, grade 50 steel and all miscellaneous steel shall be ASTM A36 grade steel (except at moment connections where plates shall be ASTM A572, grade 50). Hollow Structural Sections (HSS) shall be ASTM A500, grade B. Fabrication and erection shall be in accordance with AISC 303-05 "Code of Standard Practice for Steel Buildings and Bridges" in the 13th Edition of the AISC Steel Construction Manual.
B. All welding shall conform to the recommendations of the AWS.
C. All exterior steel and connections, and brick relief angles shall be hot-dip galvanized.
D. All bolts not otherwise specified shall be 3/4" diameter high strength (ASTM A325-N). All bolts shall be fully pretensioned. All beam connections shall be designed per the AISC Manual of Steel Construction "Framed Beam Connections" for the indicated reactions shown in the beam shear connection table on sheet H-S300; and, shall account for eccentricity when the bolt line is more than 2" from the center of the support.
   All connections must be two bolt minimum. Additional connection elements may not be specifically shown in the conceptual details in this set but may be required by the final connection design, such as stiffener plates, doubler plates, supplement/reinforcing plates or other connection material. Connection design and shop drawing preparation shall be completed under the direct supervision of a professional engineer licensed in the state the project is located and shop drawings and connection calculations shall bear his/her seal.
E. All anchor bolts shall be 3/4" diameter, ASTM F1554, Grade 36 unless noted otherwise. Washers of minimum size and thickness for the given anchor diameter in Table 14-2 of the AISC Steel Construction Manual shall be provided at every column anchor bolt. Washers shall have a standard size hole for the anchor bolt. At braced frames washers shall be welded all around to the column base plate with 3/16" fillet weld.
F. Design, fabrication and erection of all open-web bar joists shall comply with the recommendations of the Steel Joist Institute (SJI). Joists shall be designed to support loads given in the standard load tables of SJI Specs and Tables plus an additional point load of 200 lbs. on the top or bottom chord at any location without additional web reinforcing.
G. All K-series joists shall bear 2-1/2" minimum on structural steel beams and be welded to the beams with 1 1/2" of 1/8" fillet weld each side (minimum).
H. All K-series joists bearing on masonry walls shall have 6" x 3/8" x 6" bearing plates set in bond beams. Bearing plates shall be located not more than 1/2" from the face of the wall on the bearing side. Joists shall bear 4" minimum on bearing plates and be welded to beams or bearing plates with 1-1/2" of 1/8" fillet weld each side (minimum).
I. All steel joists shall have horizontal bar or angle bridging per Steel Joist Institute Specifications. Provide rigid x-bridging in addition to and matching horizontal bridging where joists are discontinuous unless horizontal bridging is anchored to wall top and bottom. Joist sweep allowance shall comply with AISC Standard Practice.
J. Steel joists shall be designed for uplift per Components & Cladding Roof Uplift Pressures Table on this sheet.
K. All openings in steel joist roof to have 3x3x1/4 angle frame set between joists. Support mechanical equipment with 4x4x5/16 angles laid between joists framed to 4x4x5/16 angles (length equals mechanical unit dimension plus distance each end to next panel point) laid parallel to and welded to top and/or bottom cord of joists to distribute load to joist panel points.
L. All steel joists shall have a midspan camber approximately equal to that recommended by the Steel Joist Institute Specifications.
M. Design and installation of steel decking shall comply with the recommendations of the Steel Deck Institute (SDI). All decking shall be galvanized unless noted otherwise.
N. Allow 1.0 tons structural steel to be used as directed in field for special conditions by the engineer of record. Cost for shop drawings, fabrication, delivery, detailing, and erection to be included. 50% of structural steel allowance shall be bid as miscellaneous galvanized angle and plate.

6. Post Installed Anchors

A. Post-installed anchors shall be used only where specified on the drawings unless approved in writing by the engineer of record. See drawings for anchor diameter, spacing and embedment. Performance values of the anchors shall be obtained for specified products using appropriate design procedures and/or standards as required by the governing building code. Anchors installed in concrete shall have an ICC-ES Evaluation Service Report. Special inspection is required for all post installed anchors. The contractor shall coordinate an on-site meeting with the post installed anchor manufacturer field representative to educate the construction team on the anchor installation requirements and requirements for special inspection.
B. Mechanical anchors used in cracked and uncracked concrete shall have been tested and qualified for use in accordance with ACI 355.2 and ICC-ES AC193. All anchors shall be installed per the anchor manufacturer's written instructions.
C. Adhesive anchors used in cracked and uncracked concrete shall have been tested and qualified for use in accordance with ICC-ES AC308. All anchors shall be installed per the anchor manufacturer's written instructions.
D. Mechanical anchors used in solid grouted masonry shall have been tested and qualified for use in accordance with ICC-ES AC01. All anchors shall be installed per the anchor manufacturer's written instructions.
E. Adhesive anchors used in solid grouted masonry shall have been tested and qualified for use in accordance with ICC-ES AC58. All anchors shall be installed per the anchor manufacturer's written instructions.
F. Anchors used in hollow concrete masonry shall have been tested and qualified in accordance with ICC-ES AC106 or ICC-ES AC58 as appropriate. All anchors shall be installed per the anchor manufacturer's written instructions with appropriate screen tubes used for adhesives.

7. Foundations

A. The soil investigation was prepared by _____, the report number is _____and the telephone number is _____.
B. Structural foundations consist of a network of straight shaft drilled piers (caissons) established on _____ end bearing. Each pier hole shall be probed to a depth of _____ below pier bottom and observed by the project soils engineer for suitable bearing material.
C. Spread footings, grade beams, and retaining walls are designed to bear on engineered fill or undisturbed soil capable of safely sustaining _____ psf.
D. Retaining walls are designed for an active lateral load of _____ pcf equivalent fluid pressure.
E. Basement walls are designed for an at rest lateral load of _____ pcf equivalent fluid pressure. See General Note ____ for wall bracing requirements.
F. Contractor shall provide for dewatering at excavations from either surface water or seepage.
G. All foundation excavations shall be inspected by a qualified soil engineer, approved by the architect and/or structural engineer, prior to placement of steel or concrete. This inspection shall be at the owner's expense.
H. All concrete in the structural portion retaining the backfill shall have attained its design strength prior to being backfilled.
I. Moisture content in soils beneath building locations should not be allowed to change after footing excavations and after grading for slabs on grade are completed. If subgrade materials become desiccated or softened by water or other conditions, recompact materials to the density and water content specified for engineered fill. Do not place concrete on frozen ground.

8. Concrete Masonry Units

A. Concrete block used in exterior walls or load bearing walls shall meet the requirements of ASTM C90 and have a minimum net compressive strength of 2650 psi and laid up using type N mortar such that f'm equals 2000 psi. Mortar shall be volume proportion based cement lime mortar. Proportioning shall be completed by box measure. Any block in contact with earth shall be normal weight units, laid using type "S" mortar and grouted solid.
B. The contractor shall provide adequate temporary bracing for all masonry walls during construction.
C. All concrete block shall have 9 gage (or larger) horizontal joint reinforcing (ladder or truss) per architectural drawings and specifications (16" maximum vertical spacing).
D. Cavity wall construction shall be reinforced as designed for specific concrete block used. The horizontal joint reinforcing shall be of the ladder or truss style per specification and continuous between brick and block, as prescribed by the architectural drawings.
E. Concrete block shall be reinforced as indicated on Sheet H-S002
F. Grout, where noted above, shall have a minimum design ultimate compressive strength of 2500 psi at 28 day test and 3/8" maximum aggregate size.
G. Non-load bearing concrete block walls shall be isolated from adjacent structural elements with vertical 3/8" control joints and at the top of the wall with 1" air space or compressible material and support per architectural detail.
H. Unless otherwise covered on architectural plans or specifications, vertical control joints in masonry construction shall be 3/8" wide, full height of wall. Joints shall be spaced at a maximum of 24'-0" on center and coordinated with the architect. All horizontal joint reinforcing shall be discontinuous at control joints in masonry. All bond beam horizontal reinforcing shall be continuous through control joints.
I. Lintels over all openings up to 8'-0" wide in new and existing masonry walls not otherwise covered shall be one 6x3 1/2x5/16 angle for each 4" width of masonry. All exterior lintels to be galvanized.
J. Walls shall be anchored top and bottom by dowels matching wall vertical reinforcing(unless noted otherwise) from floor slab bottom and bracing angles at the top, per details on the drawings.

9. Light Gage Metal Structural Framing

A. All load bearing, light gage structural studs, track, and bridging shall be of the type, size, gage, and spacing as shown on the plans, minimum.
B. All materials shall be 33,000 psi minimum yield, except studs of 16 gage or heavier shall have a minimum yield of 50,000 psi.
C. All properties, fabrication, and erection shall be in accordance with latest editions of the AISI "Specifications for the Design of Cold-Formed Structural Members."
D. All framing components shall be cut squarely or at an angle to fit squarely against abutting members. Splicing of axially loaded members is not permitted. Members shall be held firmly in place until properly fastened. Attachments of similar components shall be by welding, screw attachment, or bolting. Wire tying of components is not permitted.
E. Tracks shall be securely anchored to floor and overhead members. Special anchorage requirements required for wind bracing shall be as shown on the plans.
F. Prior to fabrication and/or erection, the contractor shall submit shop drawings complete with detail of erection, fabrication, attachments, anchorages, lintels, etc., for review by the architect/engineer.

10. Shop Drawing Review

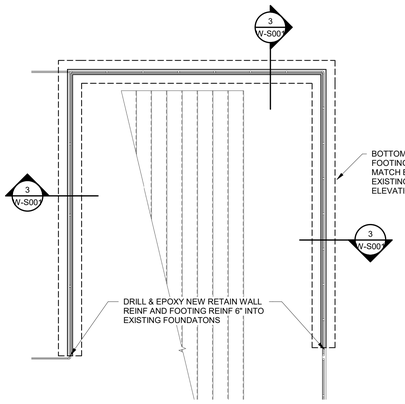
A. Bob D. Campbell and Company, Inc. will review the General Contractor's (GC) shop drawings and related submittals (as indicated below) with respect to the ability of the detailed work, when complete, to be a properly functioning integral element of the overall structural system designed by Bob D. Campbell and Company, Inc.
B. Prior to submittal of a shop drawing or any related material to Bob D. Campbell and Company, Inc., the GC shall:
   1.) Review each submission for conformance with the means, methods, techniques, sequences and operations of construction and safety precautions and programs incidental thereto, all of which are the sole responsibility of the GC.
   2.) Review and approve each submission.
   3.) Stamp each submission as approved.
C. Bob D. Campbell and Company, Inc. shall assume that no submission comprises a variation unless the GC advises Bob D. Campbell and Company, Inc. with written documentation.
D. Bob D. Campbell and Company, Inc. shall review shop drawings and related materials with comments provided that each submission has met the above requirements. Bob D. Campbell and Company, Inc. shall return without comment unrequired material or submissions without GC approval stamp.
E. Shop drawings and related material (if any) required are indicated below. Should Bob D. Campbell and Company, Inc. require more than ten (10) working days to perform the review, Bob D. Campbell and Company, Inc. shall so notify the GC.
   1.) Concrete mix designs and material certificates including admixtures and compounds applied to the concrete after placement.
   2.) Reinforcing steel shop drawings including erection drawings and bending details. Bar list will not be reviewed for correct quantities.
   3.) Elevations of all reinforced concrete masonry walls at a scale no smaller than 3/8" = 1'-0" showing all required reinforcing.
   4.) Grout mix designs (for CMU).
   5.) Construction and control joint plans and/or elevations.
   6.) Structural steel shop drawings including erection drawings and piece details. Include joist, decking and connector submittals. Include miscellaneous framing specified on the structural drawings, but do not submit framing specified on non-structural drawings for Bob D. Campbell and Company, Inc. review.
   7.) Structural steel connection design calculations submitted concurrently with structural steel shop drawings.
   8.) Miscellaneous anchors shown on the structural drawings.
   9.) Standard details and bridging information for light gage metal framing. Erection plans and details for light gage metal joists and lintels spanning more than 6'-0" shall be submitted. Standard wall framing need not be submitted.

11. Statement of Structural Special Inspections

A. The structural design for this project is based on completion of special inspections during construction in accordance with section 1704 of the International Building Code. The owner shall employ one or more qualified special inspectors to provide the required special inspections.
B. The special inspector shall furnish inspection reports to the building official, owner, architect and structural engineer, and any other designated person.
C. All discrepancies shall be brought to the immediate attention of the contractor for correction, then, if uncorrected, to the proper design authority, building official and structural engineer.
D. The special inspector shall submit a final signed report stating that the work requiring special inspection was, to the best of the inspector's knowledge, in conformance with the approved plans and specifications and the applicable workmanship provisions of the building code.
E. The following inspections and tests are required with the frequency (continuous or periodic) as defined within the referenced section or standard listed below. The General Contractor shall provide notification to the inspector when items requiring inspection are ready to be inspected and provide access for those inspections.
1. Shop Fabrication – structural steel and steel bar joist per Section 1704.2.5 unless AISC certified shop
2. Shop Fabrication – pre-engineered wood trusses per Section 1704.2.5 unless TPI certified shop
3. Steel Construction per Section 1705.2 and the quality assurance requirements of AISC 341 Chapter J (as referenced by AISC 360)
4. Cold-Formed Steel Deck per Section 1705.2.2 and the quality assurance requirements of SDI QA/QC.
5. Concrete Construction per Section 1705.3 and Table 1705.3
   a. Reinforcing Steel Placement
   b. Reinforcing Steel Welding
   c. Cast in Place Anchors
   d. Post Installed Anchors
   e. Design Mix Verification
   f. Concrete Sampling and Testing
   g. Concrete Placement
   h. Concrete Curing
6. Masonry Construction per Section 1705.4 and the quality assurance requirements of TMS 402/ACI530/ASCE5 and TMS602/ASS0.1/ASCE6 [Level B]

12. Copyright and Disclaimer

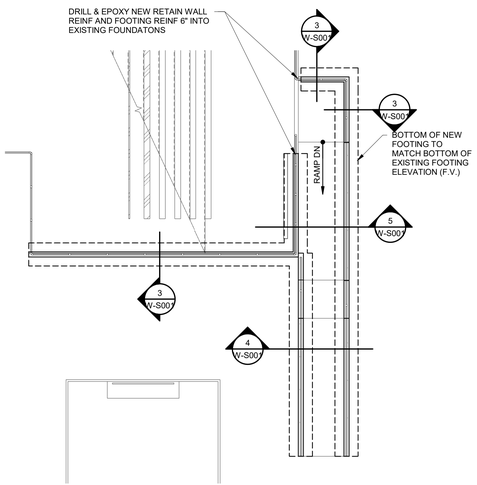
A. All drawings in the structural set (S-series drawings) are the copyrighted work of Bob D. Campbell and company, Inc. These drawings may not be photographed, traced, or copies in any manner without the written permission of Bob D. Campbell and Company, Inc. Exception: Original drawings may be printed for distribution to the owner, architect, and general contractor for coordination, bidding, and construction. Subcontractors may not reproduce these drawings for any purpose or in any manner.
B. I, Richard C. Crabtree, P.E., registered engineer and a representative of Bob D. Campbell and Company, Inc., do hereby accept professional responsibility as required by the professional registration laws of this state for the structural design drawings consisting of S-series drawings. I hereby disclaim responsibility for all other drawings in the construction document package, they being the responsibility of other design professionals whose seals and signed statements may appear elsewhere in the construction document package.



1 Foundation Plan - North Home Bleachers

1/8" = 1'-0"

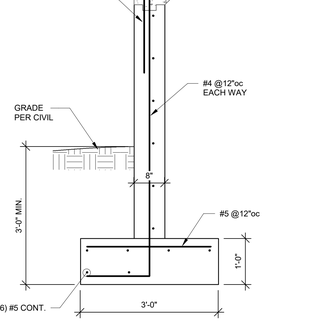
NOTES:
1. REFER TO GENERAL NOTES ON SHEET S001.



2 Foundation Plan - South Home Bleachers

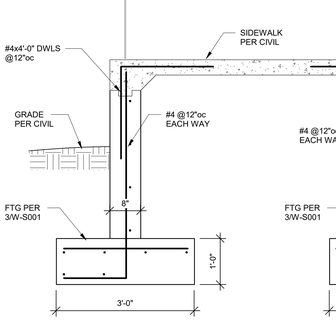
1/8" = 1'-0"

NOTES:
1. REFER TO GENERAL NOTES ON SHEET S001.



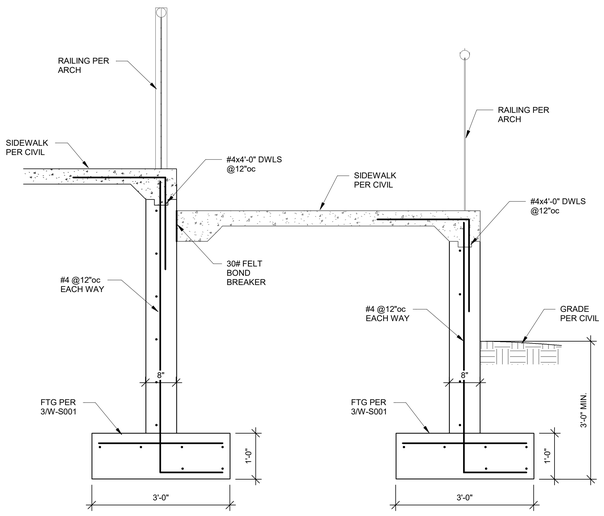
3 SECTION

3/4" = 1'-0"



4 SECTION

3/4" = 1'-0"



5 SECTION

3/4" = 1'-0"

COMPONENTS & CLADDING ROOF UPLIFT PRESSURES

BUILDING LOCATION	BUILDING / ROOF TYPE	DIMENSION 'a'	ULTIMATE UPLIFT PRESSURE		
			ZONE 1	ZONE 2	ZONE 3
		[ft]	[psf]	[psf]	[psf]
Press Box Roof	Open Building, Monosloped Roof	4.0 ft	51.0	78.0	102.0
Other Structures	Enclosed Building, Flat Roof	3.0 ft	34.0	54.0	73.0

NOTES:
1. REFER TO GENERAL NOTE 2D FOR WIND LOAD DESIGN CRITERIA
2. WIND PRESSURES SHOWN ARE ULTIMATE (LRFD). FOR ASD WIND PRESSURES, MULTIPLY VALUES BY 0.6
3. WIND PRESSURES SHOWN ARE BASED ON AN EFFECTIVE WIND AREA OF 50 SQUARE FEET

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Lee's Summit R7 District Athletics Facilities

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Lee's Summit, MO 64082

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architect:
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816.742.5000

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STATE OF MISSOURI
RICHARD C. CRABTREE
NUMBER E-027441
7/10/20

Architectural Corporation
Missouri License No.: 2018022991
Jane Doe Date: MM/DD/2018
Architect License No. A-0000000

REVISIONS

Number	DESCRIPTION	DATE

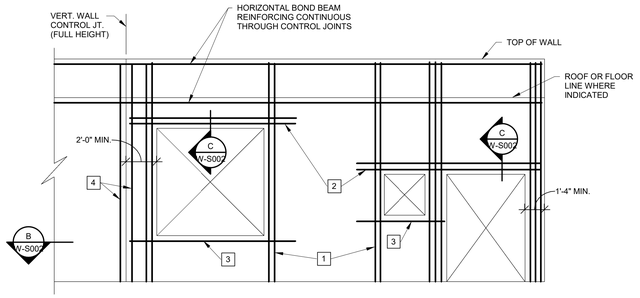
PROJECT NO: 0119-0101
DATE: September 28, 2020

General Notes & Site Foundation Plans

W-S001

BID SET

PRINT DATE/TIME:
9/29/2020 3:06:54 PM



TYPICAL CMU WALL REINFORCING AT OPENINGS

LEGEND:

1. FULL HEIGHT VERTICAL BARS AS JAMB REINFORCING IN FIRST 2 CELLS ADJACENT TO OPENING. REINFORCE EACH CELL WITH SIZE & QUANTITY OF BAR TO MATCH WALL REINFORCING (1 BAR TYPICAL IN 8" WALLS AND 2 BARS TYPICAL IN 12" WALLS).
2. LINTEL REINFORCING PER SECTION C. EXTEND 2'-0" PAST EDGE OF OPENING ON EACH SIDE (TYPICAL).
3. 2-#5 CONTINUOUS HORIZONTAL BARS AS SILL REINFORCING IN 8" COURSE BELOW OPENING (U.N.O.). EXTEND 2'-0" PAST EDGE OF OPENING ON EACH SIDE (TYPICAL).
4. FULL HEIGHT VERTICAL BARS PER MASONRY VERTICAL REINFORCING SCHEDULE LOCATED IN END CELL AT EACH SIDE OF VERTICAL WALL CONTROL JOINTS.

GENERAL CRITERIA: (SECTION A CONTINUED):

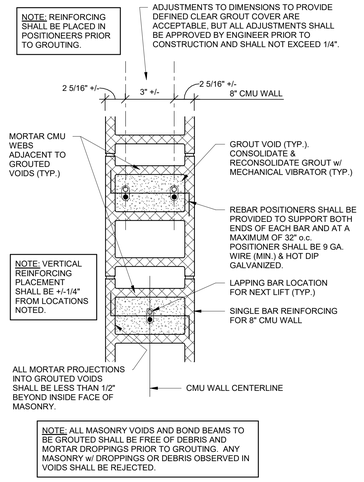
1. VERTICAL REINFORCING BARS SHALL BE DOWELED TO FOUNDATION WITH A DOWEL OF MATCHING SIZE AND SPACING.
2. CONTRACTOR SHALL COORDINATE AND VERIFY OPENINGS IN MASONRY WALLS. OPENINGS SHALL BE DETAILED ON REINFORCING STEEL SHOP DRAWING ELEVATIONS.
3. VERTICAL CONTROL JOINTS IN MASONRY WALLS SHALL BE 3/8" WIDE, FULL HEIGHT OF WALL. JOINTS SHALL BE SPACED AT A MAXIMUM OF 24'-0" ON CENTER AND NOT LESS THAN 2'-0" FROM THE EDGE OF ANY OPENING. ALL HORIZONTAL JOINT REINFORCING SHALL BE DISCONTINUOUS AT CONTROL JOINTS. ALL BOND BEAM HORIZONTAL REINFORCING SHALL BE CONTINUOUS THROUGH CONTROL JOINTS. CONTRACTOR SHALL COORDINATE AND VERIFY ALL CONTROL JOINT LOCATIONS.

MASONRY VERTICAL REINFORCING SCHEDULE
FOR LOAD BEARING MASONRY (CMU) WALLS

WALL THICKNESS	LOCATION	VERTICAL REINF. (IN GROUTED CELLS)	SPACING
8"	ALL 8" WALLS (U.N.O.)	1- #5	32"oc
12"	ALL 12" WALLS (U.N.O.)	PER SECTIONS	

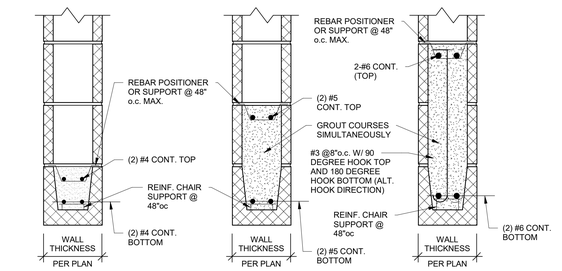
NOTES:
1. IN ADDITION TO SPACING SHOWN IN SCHEDULE, VERTICAL REINFORCING SHALL BE PROVIDED IN GROUTED CELLS AT THE FOLLOWING LOCATIONS
   - A.) IN THE FIRST 2 CELLS ADJACENT TO EACH OPENING
   - B.) IN THE END CELLS ON EACH SIDE OF VERTICAL CONTROL JOINTS
   - C.) IN THE END CELLS OF EACH LENGTH OF WALL
   - D.) AT EACH CORNER OF WALLS
   - E.) UNDER BEAM BEARING PER S/W-S002
2. IN 12" CMU, ALL MASONRY VOIDS AND BOND BEAMS TO BE GROUTED SHALL BE FREE OF DEBRIS AND MORTAR DROPPINGS PRIOR TO GROUTING. ANY MASONRY W/ DROPPINGS OR DEBRIS OBSERVED IN VOIDS SHALL BE REJECTED.

A CMU WALL ELEVATION
1 1/2" = 1'-0"



TYPICAL REBAR POSITIONING DETAIL

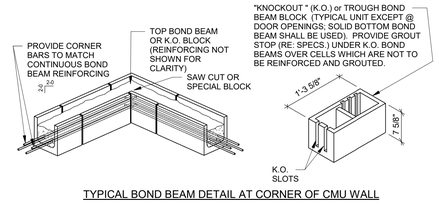
B SECTION
1 1/2" = 1'-0"



OPENINGS UP TO 4'-0" | OPENINGS 4'-0" TO 7'-4" | OPENINGS 7'-4" TO 12'-0"

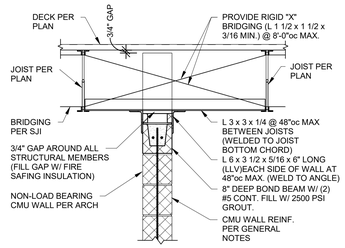
TYPICAL LINTELS AT ALL CMU WALLS (U.N.O.)

C SECTION
1 1/2" = 1'-0"

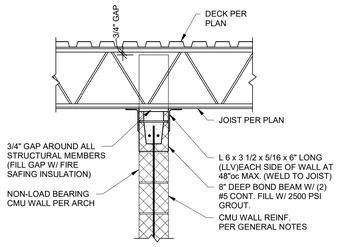


TYPICAL BOND BEAM DETAIL AT CORNER OF CMU WALL

D DETAIL
3/4" = 1'-0"



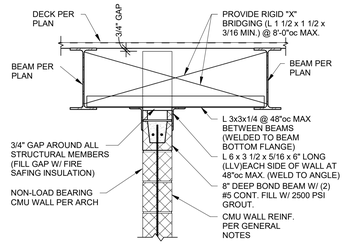
WALL PARALLEL TO JOIST



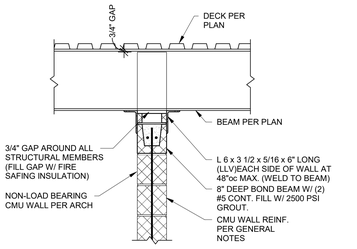
WALL PERPENDICULAR TO JOIST

TYPICAL BRACING DETAILS FOR NON-LOAD-BEARING CMU WALLS THAT EXTEND TO DECK
(REFER TO ARCHITECTURAL DRAWINGS FOR LOCATION)

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



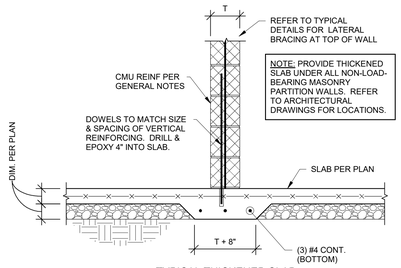
WALL PARALLEL TO JOIST



WALL PERPENDICULAR TO JOIST

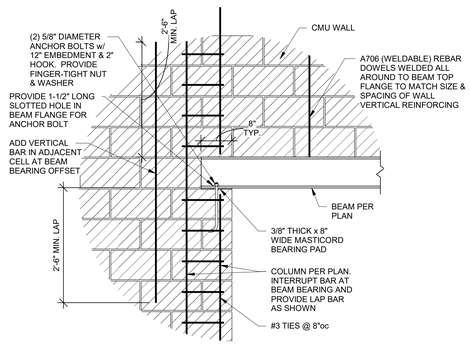
TYPICAL BRACING DETAILS FOR NON-LOAD-BEARING CMU WALLS THAT EXTEND TO DECK
(REFER TO ARCHITECTURAL DRAWINGS FOR LOCATION)

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



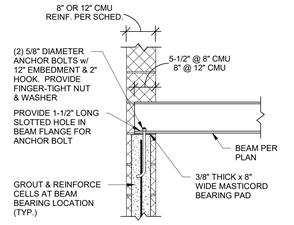
TYPICAL THICKENED SLAB
(UNDER NON-LOAD-BEARING MASONRY)

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



TYPICAL STEEL LINTEL DETAIL AT CMU WALL

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



TYPICAL WIDE FLANGE BEAM BEARING ON CMU (U.N.O.)

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

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REGISTERED PROFESSIONAL ENGINEER
9/28/20

Architectural Corporation
Missouri License No.: 2018022991
Jane Doe Date: MM/DD/2018
Architect License No. A-0000000

REVISIONS

Number	DESCRIPTION	DATE

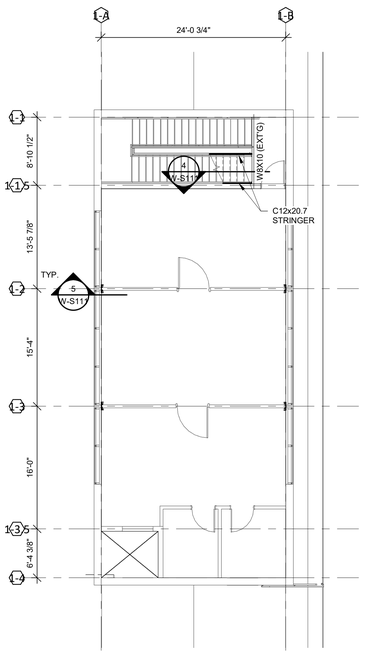
PROJECT NO: 0119-0101
DATE: September 28, 2020

CMU Details

W-S002

BID SET

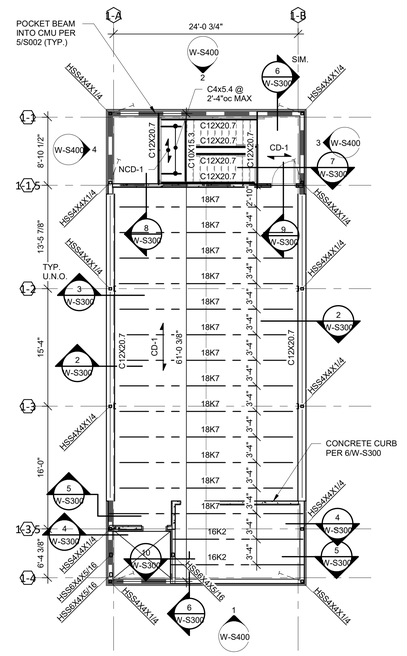
PRINT DATE/TIME:
9/30/2020 1:06:35 PM



1 Level 2 Framing Plan - Home Press Box

1/8" = 1'-0"

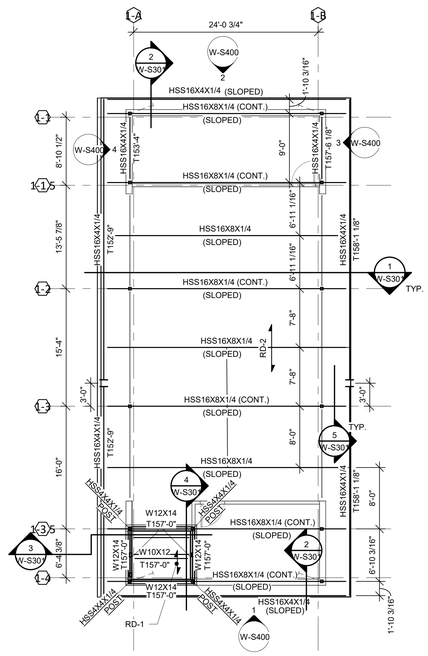
NOTES:
1. REFER TO GENERAL NOTES ON SHEET S001.
2. BG-1 INDICATES GALV. BAR GRATING W/ 1½"x3/16" BEARING BARS @1-3/16"oc AND CROSS BARS @4"oc.



2 Level 3 Framing Plan - Home Press Box

1/8" = 1'-0"

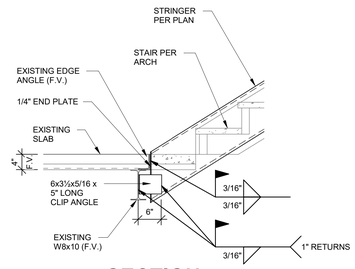
NOTES:
1. REFER TO GENERAL NOTES ON SHEET S001.
2. CD-1 INDICATES 2½" (MIN.) CONC. SLAB ON 1½"x22ga GALV. COMPOSITE METAL DECK (4" MIN. TOTAL THICKNESS). REINF SLAB W/ 6x6-4/6 WWF. PROVIDE 5/8" PUDDLE WELDS ON 36/4 PATTERN W/ WELDED SIDELAP FASTENERS @36"oc (ALLOWABLE DIAPHRAGM SHEAR = 1775 PLF). T/SLAB EL VARIES PER ARCH.
3. NCD-1 INDICATES 2.7/16" CONC. SLAB ON 9/16"x26ga METAL FORM DECK (3" TOTAL THICKNESS). REINF SLAB W/ 6x6-6/6 WWF. T/SLAB EL PER ARCH.



3 Roof Framing Plan - Home Press Box

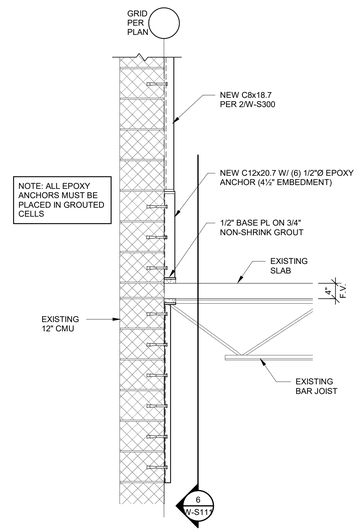
1/8" = 1'-0"

NOTES:
1. REFER TO GENERAL NOTES ON SHEET S001.
2. RD-1 INDICATES 1½"x22ga GALV. WIDE RIB METAL ROOF DECK. PROVIDE 5/8" PUDDLE WELDS ON 36/7 PATTERN AND #10 TEK SCREW SIDELAP FASTENERS @36"oc (ALLOWABLE DIAPHRAGM SHEAR = 328 PLF).
3. RD-2 INDICATES 2"x20ga GALV. EPICORE ERDR ROOF DECK. PROVIDE 5/8" PUDDLE WELDS ON 24/4 PATTERN AND #10 TEK SCREW SIDELAP FASTENERS @36"oc (ALLOWABLE DIAPHRAGM SHEAR = 244 PLF).



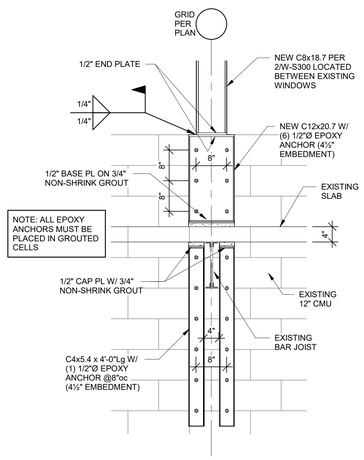
4 SECTION

3/4" = 1'-0"



5 SECTION

3/4" = 1'-0"



6 SECTION

3/4" = 1'-0"

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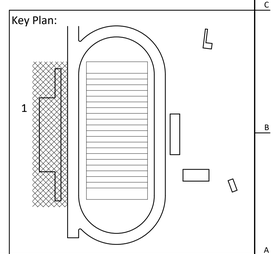
REVISIONS

Number	DESCRIPTION	DATE

Key Plan:



PROJECT NO: 0119-0101
DATE: September 28, 2020

Home Press Box Plans

W-S111

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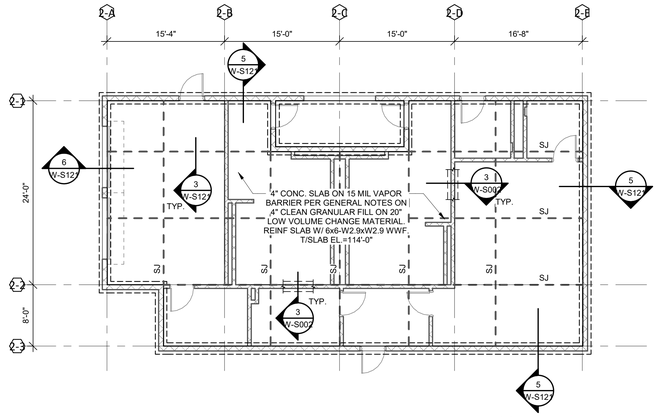
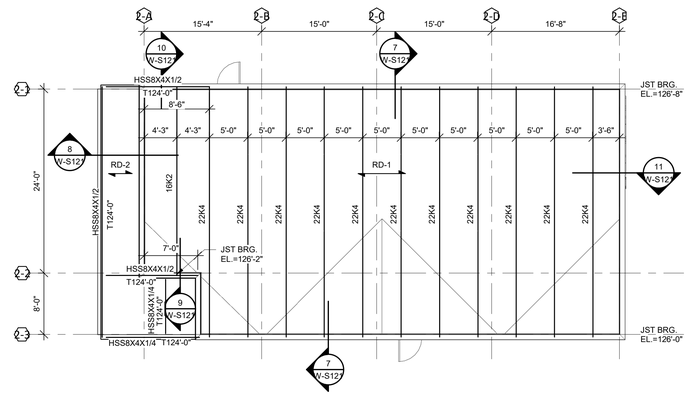
PRINT DATE/TIME:
9/30/2020 1:06:37 PM



1 Foundation Plan - Visitor Restrooms/Concession

1/8" = 1'-0"

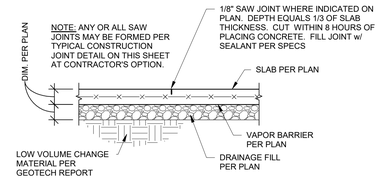
NOTES:
1. REFER TO GENERAL NOTES ON SHEET S001.



2 Roof Framing Plan - Visitor Restrooms/Concession

1/8" = 1'-0"

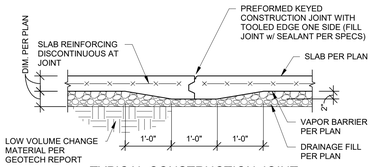
NOTES:
1. REFER TO GENERAL NOTES ON SHEET S001.
2. RD-1 INDICATES 1½"x22ga GALV. WIDE RIB METAL ROOF DECK. RD-1 INDICATES 1½"x22ga GALV. WIDE RIB METAL ROOF DECK. PROVIDE 5/8" PUDDLE WELDS ON 36/7 PATTERN AND #10 TEK SCREW SIDELAP FASTENERS @36"oc (ALLOWABLE DIAPHRAGM SHEAR = 328 PLF).
3. RD-2 INDICATES 2"x20ga GALV. EPICORE ER2R ROOF DECK. PROVIDE 5/8" PUDDLE WELDS ON 24/4 PATTERN AND #10 TEK SCREW SIDELAP FASTENERS @36"oc (ALLOWABLE DIAPHRAGM SHEAR = 244 PLF).
4. JOIST BRG ELEV. = 126'-0"
5. ALL EXPOSED STEEL SHALL BE GALVANIZED.



TYPICAL SAW JOINT
NOTED "SJ" ON PLAN

3 SECTION

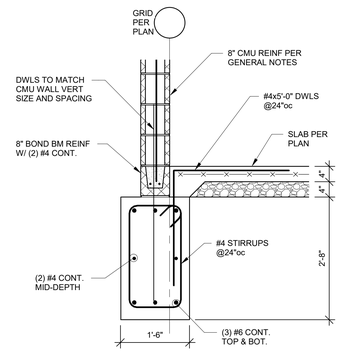
3/4" = 1'-0"



TYPICAL CONSTRUCTION JOINT
NOTED "CJ" ON PLAN

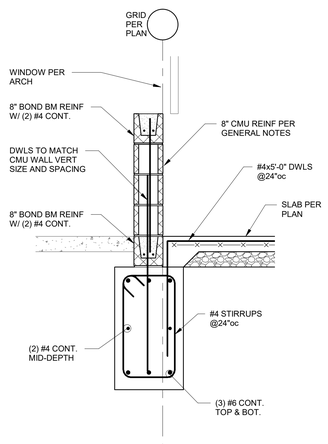
4 SECTION

3/4" = 1'-0"



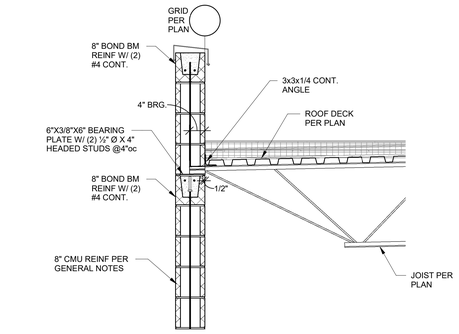
5 SECTION

3/4" = 1'-0"



6 SECTION

3/4" = 1'-0"



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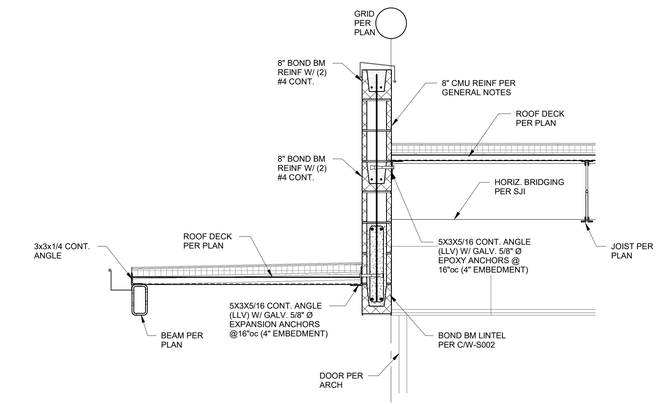
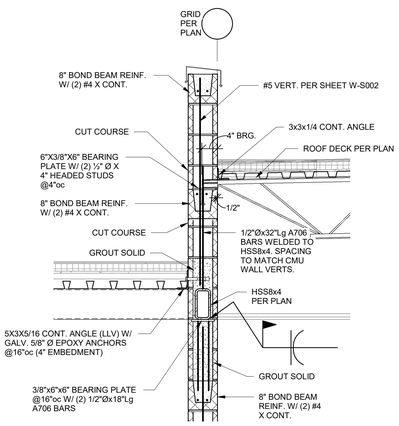
3/4" = 1'-0"



8 SECTION

3/4" = 1'-0"



9 SECTION

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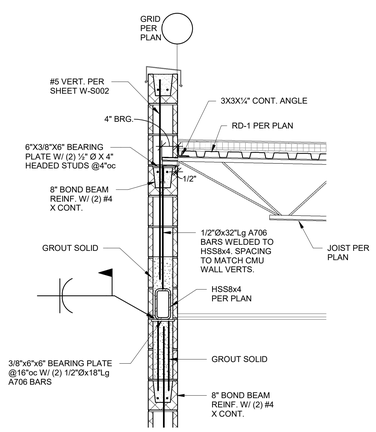

10 SECTION

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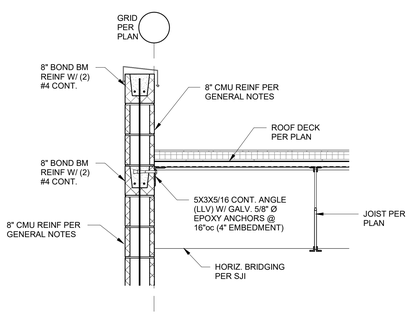

11 SECTION

3/4" = 1'-0"

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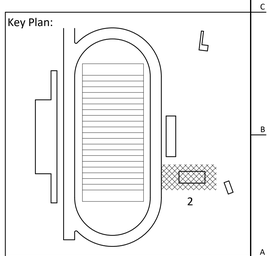
Number	DESCRIPTION	DATE

Key Plan:



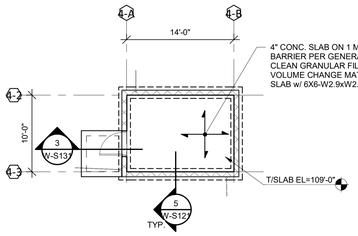
PROJECT NO: 0119-0101
DATE: September 28, 2020

Visitor Restrooms/Concession Plans

W-S121

BID SET

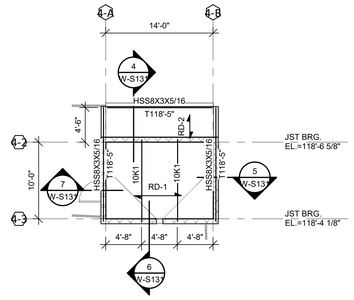
PRINT DATE/TIME:
9/29/2020 3:07:05 PM



1 Foundation Plan -North Ticket Booth

1/8" = 1'-0"

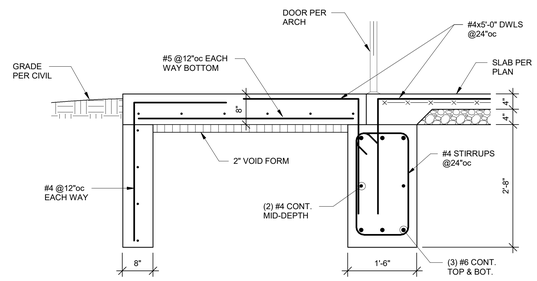
NOTES:
1. REFER TO GENERAL NOTES ON SHEET S001.



2 Roof Framing Plan - North Ticket Booth

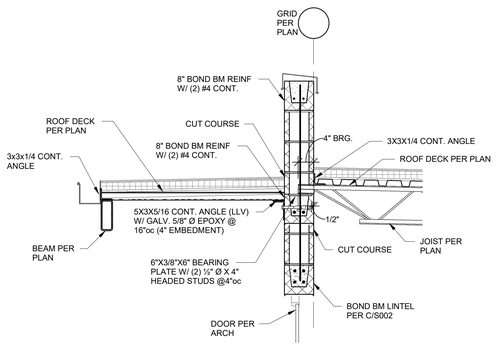
1/8" = 1'-0"

NOTES:
1. REFER TO GENERAL NOTES ON SHEET S001.
2. RD-1 INDICATES 1½"x22ga GALV. WIDE RIB METAL ROOF DECK. RD-1 INDICATES 1½"x22ga GALV. WIDE RIB METAL ROOF DECK. PROVIDE 5/8" PUDDLE WELDS ON 36/7 PATTERN AND #10 TEK SCREW SIDELAP FASTENERS @36"oc (ALLOWABLE DIAPHRAGM SHEAR = 328 PLF).
3. RD-2 INDICATES 2"x20ga GALV. EPICORE ER2R ROOF DECK. PROVIDE 5/8" PUDDLE WELDS ON 24/4 PATTERN AND #10 TEK SCREW SIDELAP FASTENERS @36"oc (ALLOWABLE DIAPHRAGM SHEAR = 244 PLF).



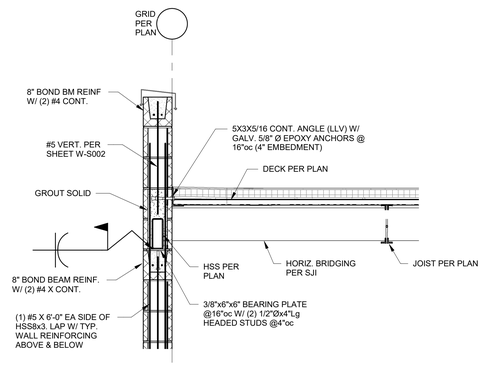
3 SECTION

3/4" = 1'-0"



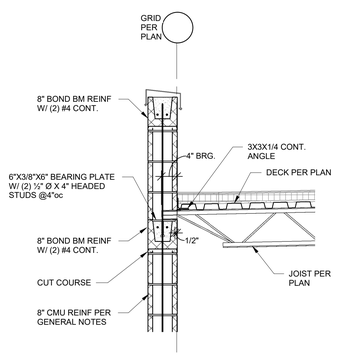
4 SECTION

3/4" = 1'-0"



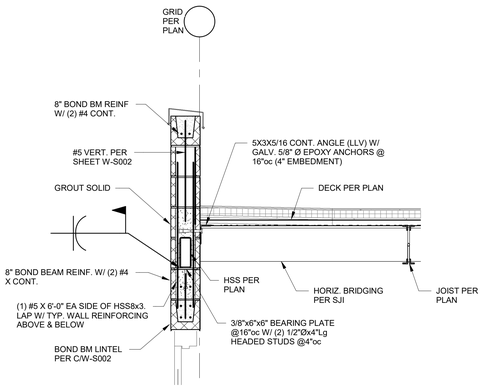
5 SECTION

3/4" = 1'-0"



6 SECTION

3/4" = 1'-0"



7 SECTION

3/4" = 1'-0"

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Lee's Summit R7 District Athletics Facilities

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Lee's Summit, MO 64082

owner:
Lee's Suumit R-7 School District
301 NE Tudor Road
Lee's Summit, MO 6408

architect:
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Kansas City, MO 64111
816.931.6655 voice
www.gouldevans.com

structural engineer:
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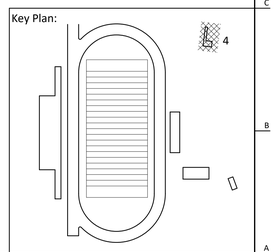
STATE OF MISSOURI
RICHARD C. CRABTREE
NUMBER E-027441
REGISTERED PROFESSIONAL ENGINEER
9/28/20

Architectural Corporation
Missouri License No.: 2018022991
Jane Doe — Date: MM/DD/2018
Architect — License No. A-0000000

REVISIONS

Number	DESCRIPTION	DATE

Key Plan:



PROJECT NO: 0119-0101
DATE: September 28, 2020

North Ticket Booth Plans

W-S131

BID SET

PRINT DATE/TIME:
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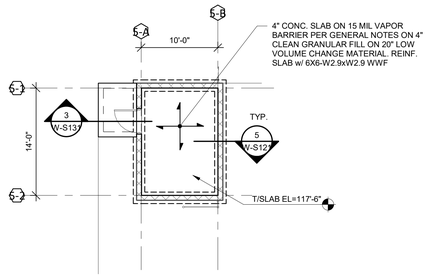
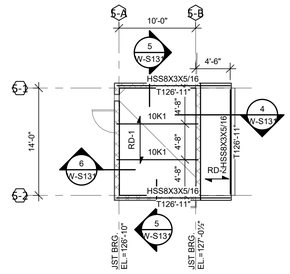


1 Foundation Plan - South Ticket Booth

1/8" = 1'-0"

NOTES:

1. REFER TO GENERAL NOTES ON SHEET S001.



2 Roof Framing Plan - South Ticket Booth

1/8" = 1'-0"

NOTES:

1. REFER TO GENERAL NOTES ON SHEET S001.
2. RD-1 INDICATES 1½"x22ga GALV. WIDE RIB METAL ROOF DECK. RD-1 INDICATES 1½"x22ga GALV. WIDE RIB METAL ROOF DECK. PROVIDE 5/8" PUDDLE WELDS ON 36/7 PATTERN AND #10 TEK SCREW SIDELAP FASTENERS @36"oc (ALLOWABLE DIAPHRAGM SHEAR = 328 PLF).
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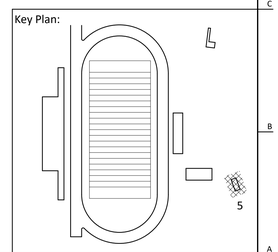
9/28/20

Architectural Corporation
Missouri License No.: 2018022991
Jane Doe — Date: MM/DD/2018
Architect — License No. A-0000000

REVISIONS

Number	DESCRIPTION	DATE

Key Plan:



PROJECT NO: 0119-0101
DATE: September 28, 2020

South Ticket Booth Plans

W-S141

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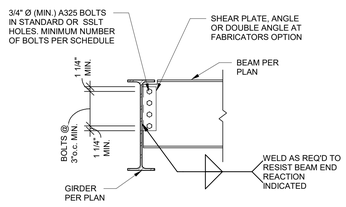
9/29/2020 3:07:10 PM

BEAM SHEAR CONNECTION SCHEDULE

BEAM SIZE	MINIMUM ROWS OF BOLTS	END REACTION (kips)(U.N.O.)
HSS8,W10	2	10 KIPS
W12,C12	2	15 KIPS
HSS16	3	15 KIPS

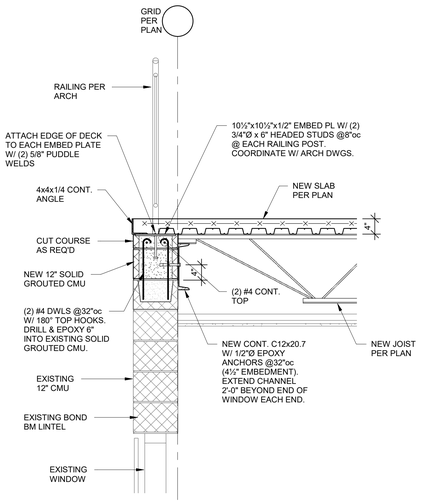
STEEL CONNECTION NOTES:

1. REFER TO GENERAL NOTES ON SHEET S001.
2. CONNECTIONS SHOWN IN THESE DETAILS ARE MINIMUM REQUIREMENTS.
3. FABRICATOR SHALL BE RESPONSIBLE FOR THE ENGINEERING, DESIGNING, AND DETAILING OF EACH CONNECTION FOR LOADS SHOWN ON THE DRAWINGS IN ACCORDANCE WITH THE SPECIFICATIONS AND THE STRUCTURAL GENERAL NOTES.
4. SUGGESTED CONNECTION DETAILS ARE SHOWN. FINAL CONNECTION CONFIGURATION AND DESIGN SHALL BE COMPLETED BY THE CONNECTION ENGINEER. CONNECTION DESIGN SHALL INCLUDE COLUMN OR BEAM CONTINUITY PLATES, WEB STIFFENERS, AND/OR DOUBLER PLATES AS REQUIRED FOR THE FORCES INDICATED.
5. FABRICATOR MAY OPT TO USE OTHER AISC APPROVED CONNECTIONS IN LIEU OF THESE SHOWN HEREIN TO MEET END REACTION REQUIREMENTS (i.e. DOUBLE ANGLE CONNECTION).
6. CONNECTION DETAILING SHALL COMPLY WITH THE STANDARD DETAILS SHOWN IN THE LATEST EDITION OF THE AISC MANUAL OF STEEL CONSTRUCTION.
7. ALL BOLTS SHALL BE 3/4" Ø ASTM A325 MINIMUM.
8. ALL BOLTS SHALL BE SPACED AT 3"o.c. MINIMUM.
9. ALL BOLTS SHALL HAVE HEAVY HEX NUTS.
10. ALL BOLTS SHALL BE FULLY PRE-TENSIONED.
11. BOLT SPACING AND EDGE DISTANCES SHALL BE ADJUSTED PER AISC MANUAL FOR BOLTS LARGER THAN 3/4" DIAMETER.
12. CLIP ANGLES MAY BE SHOP WELDED TO BEAM WEB PER AISC.
13. FOR BEAMS WITH AXIAL LOADS PER DRAWINGS, BOLTS AND CONNECTIONS SHALL BE SLIP-CRITICAL PER AISC GUIDELINES. INCREASE NUMBER OF BOLTS AND/OR PROVIDE EXTENDED SHEAR PLATE CONNECTION W/ AN ADDITIONAL COLUMN OF BOLTS TO ACCOMODATE COMBINED FORCES.
14. PROVIDE ASTM A490 BOLTS IF REQUIRED TO MEET END REACTION LOAD REQUIREMENTS.
15. REFER TO ELEVATIONS ON SHEET S400 FOR BRACE FORCES. REFER TO PLANS FOR ADDITIONAL BEAM AXIAL FORCES. BRACE AND BEAM FORCES INDICATED ARE UNFACTORED (ASD) LOADS AND SHALL BE CONSIDERED CONCURRENT W/ BEAM SHEAR DESIGN FORCES LISTED IN THE BEAM SHEAR CONNECTION SCHEDULE.
16. COORDINATE BRACED FRAME CONNECTION W/ ARCHITECTURAL WALLS AS REQUIRED TO AVOID CONFLICT OR EXPOSURE OUTSIDE OF WALL OR FINISH.
17. ALL END REACTIONS INDICATED ARE UNFACTORED (ASD) LOADS.

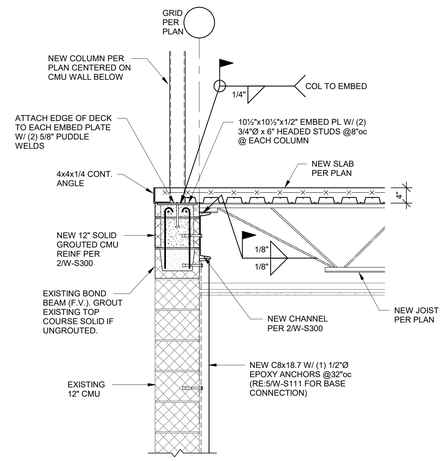


TYPICAL BEAM TO GIRDER CONNECTION

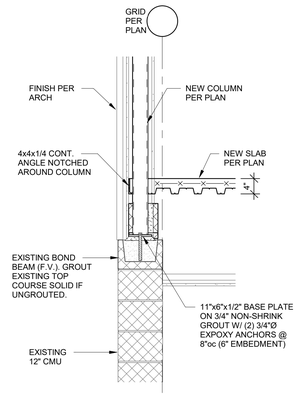
1 DETAIL
3/4" = 1'-0"



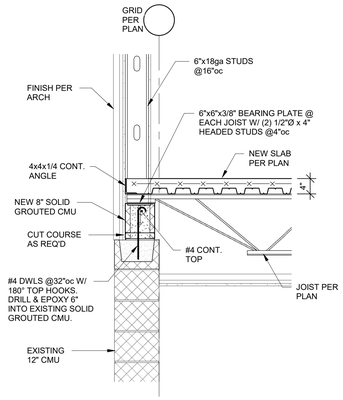
2 SECTION
3/4" = 1'-0"



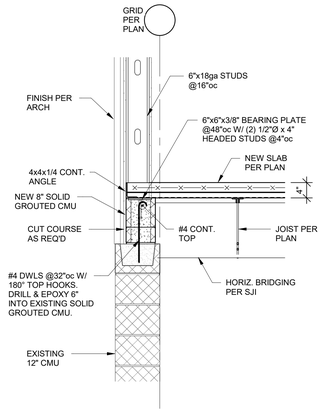
3 SECTION
3/4" = 1'-0"



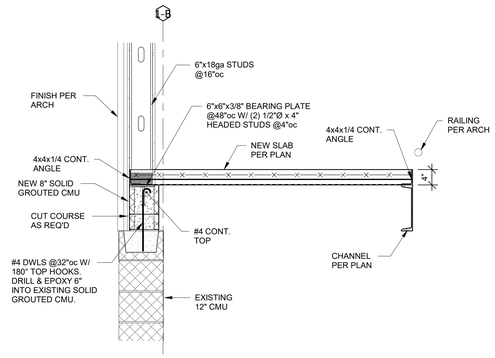
4 SECTION
3/4" = 1'-0"



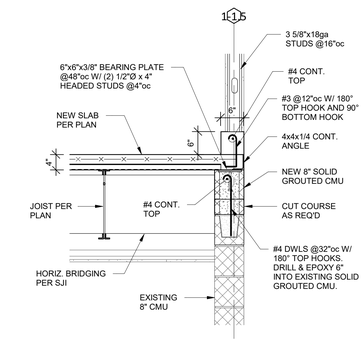
5 SECTION
3/4" = 1'-0"



6 SECTION
3/4" = 1'-0"



7 SECTION
3/4" = 1'-0"



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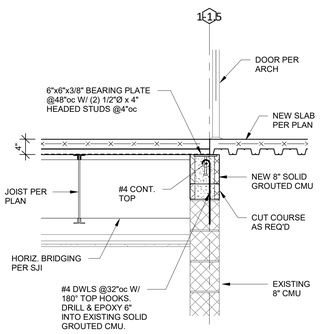
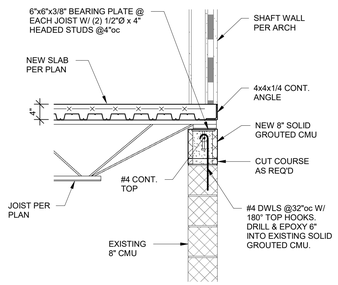


9 SECTION
3/4" = 1'-0"



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

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STATE OF MISSOURI
RICHARD C. CRABTREE
NUMBER E-027441
REGISTERED PROFESSIONAL ENGINEER
9/28/20

Architectural Corporation
Missouri License No.: 2018022991
Jane Doe — Date: MM/DD/2018
Architect — License No. A-0000000

REVISIONS

Number	DESCRIPTION	DATE

PROJECT NO: 0119-0101
DATE: September 28, 2020

Framing Sections

W-S300

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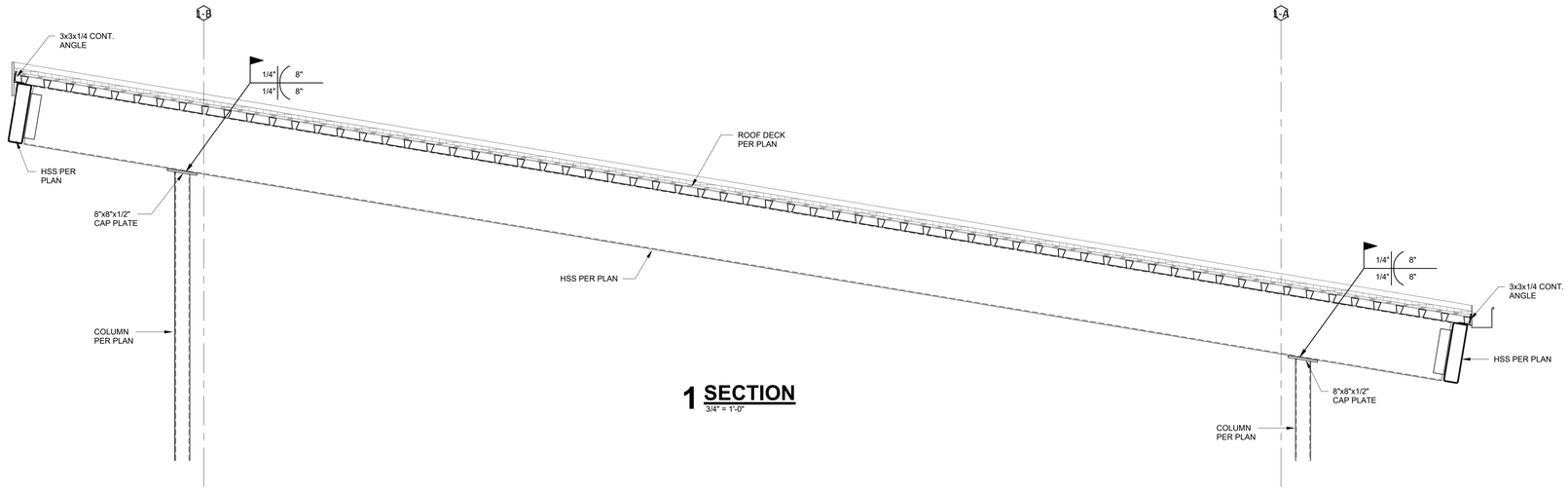
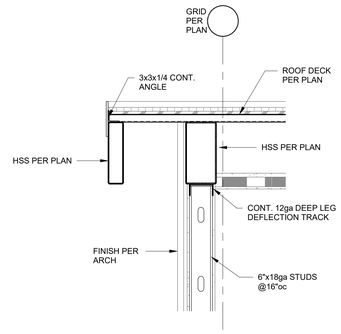


1 SECTION
3/4" = 1'-0"



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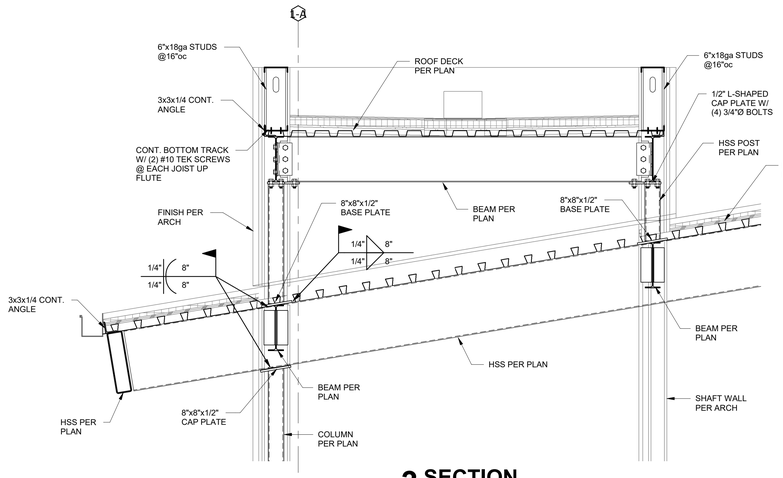

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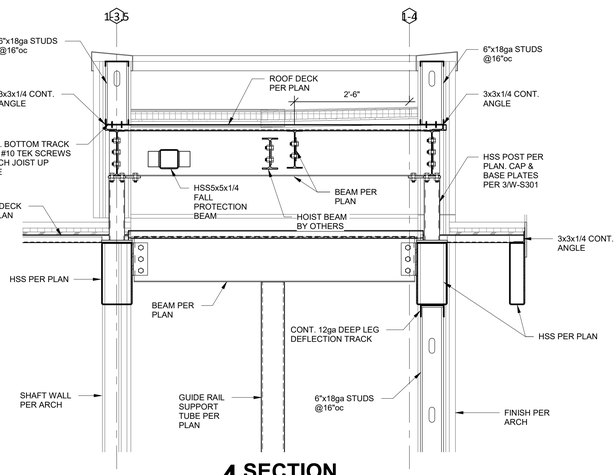
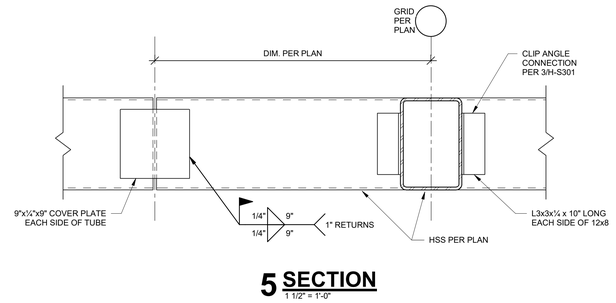


4 SECTION
3/4" = 1'-0"



5 SECTION
1 1/2" = 1'-0"

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RICHARD C. CRABTREE
NUMBER E-027441
REGISTERED ARCHITECT
9/28/20

Architectural Corporation
Missouri License No.: 2018022991
Jane Doe Date: MM/DD/2018
Architect License No. A-0000000

REVISIONS

Number	DESCRIPTION	DATE

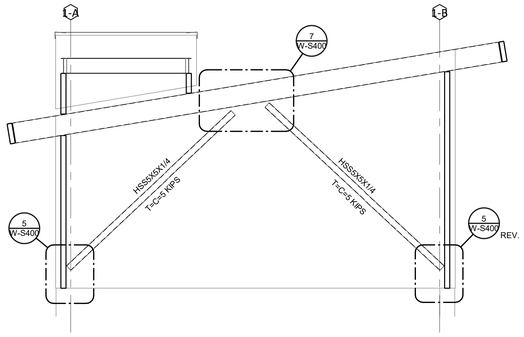
PROJECT NO: 0119-0101
DATE: September 28, 2020

Framing Sections

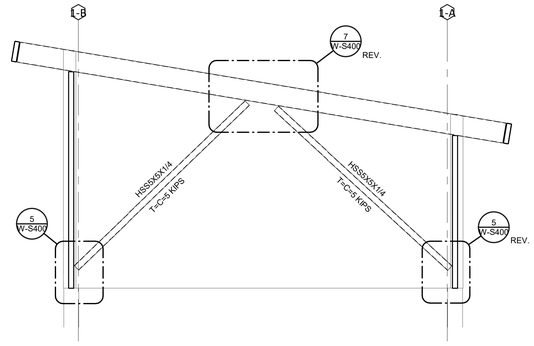
W-S301

BID SET

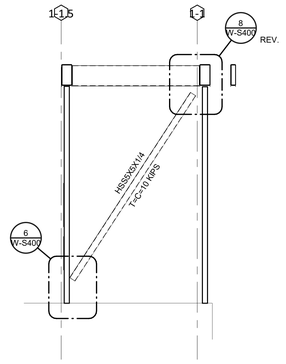
PRINT DATE/TIME:
9/29/2020 3:07:18 PM



1 ELEVATION
1/4" = 1'-0"



2 ELEVATION
1/4" = 1'-0"



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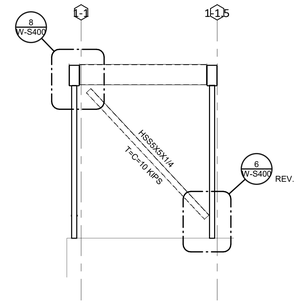
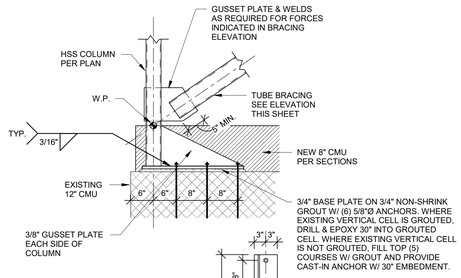
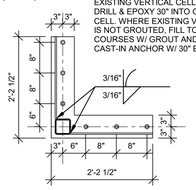
1/4" = 1'-0"

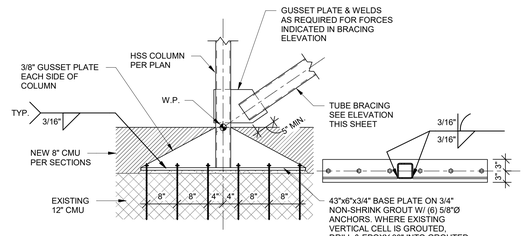


4 ELEVATION
1/4" = 1'-0"

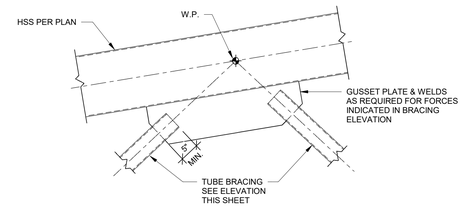


5 DETAIL
3/4" = 1'-0"

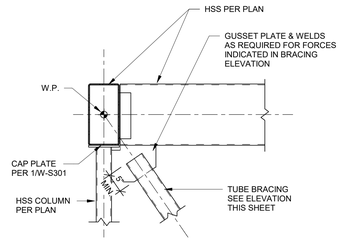




6 DETAIL
3/4" = 1'-0"



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



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

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Lee's Summit R7 District Athletics Facilities

Lee's Summit West High School
2600 SW Ward Road
Lee's Summit, MO 64082

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301 NE Tudor Road
Lee's Summit, MO 6408

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816.931.6655 voice
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STATE OF MISSOURI
RICHARD C. CRABTREE
NUMBER E-027441
PROFESSIONAL ENGINEER
9/30/20

Architectural Corporation
Missouri License No.: 2018022991
Jane Doe Date: MM/DD/2018
Architect License No. A-000000

REVISIONS

Number	DESCRIPTION	DATE

PROJECT NO: 0119-0101
DATE: September 28, 2020

Framing Elevations

W-S400

BID SET

PRINT DATE/TIME:
9/29/2020 3:07:20 PM

REMOVE FENCING AS REQUIRED FOR NEW CONSTRUCTION OF BLEACHERS AND NEW PAD/FENCING LAYOUT

REMOVE GATE

A3
W-AD101

REMOVE FENCING AS REQUIRED FOR NEW CONSTRUCTION OF BLEACHERS, RAMP, AND NEW PAD/FENCING LAYOUT

REMOVE GATES AND FENCING

REMOVE AND RELOCATE EXISTING TURNSTILE

REMOVE FENCING AS REQUIRED FOR NEW CONSTRUCTION OF NORTH TICKET BOOTH

REMOVE FENCING AS REQUIRED FOR NEW CONSTRUCTION OF SIDEWALK

REMOVE FENCING

REMOVE GATE

REMOVE FENCING AS REQUIRED FOR NEW CONSTRUCTION OF SOUTH TICKET BOOTH

General Notes (Demo Site Plan):

1. DEMOLITION OF ELEMENTS ON THIS PLAN ARE LOCATED TO THE BEST OF OUR KNOWLEDGE AND SHOULD BE VERIFIED IN FIELD BEFORE BEGINNING DEMOLITION.
2. PROTECT SITE ELEMENTS THAT ARE EXISTING TO REMAIN FROM DAMAGE. INCLUDING BUT NOT LIMITED TO, EXISTING FENCE & GATES, EXISTING BLEACHERS, EXISTING ATHLETICS TRACK, EXISTING SCOREBOARD, ETC.
3. ALL GATES ASSOCIATED WITH FENCE TO BE DEMOLISHED SHALL ALSO BE DEMOLISHED, VERIFY IN FIELD.
4. ALL FENCE TO BE REPLACED IN PLACE SHALL ALSO HAVE ANY CORRESPONDING GATES REPLACED. RE: W-AS201, VERIFY IN FIELD.
5. FILL ALL POST HOLES AFTER DEMOLITION OF FENCE POSTS.

50'
25'
12.5'
0'

Demolition Plan - Overall Site A3
1 : 300

PRINT DATE/TIME:
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Lee's Summit, MO 64082

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STATE OF MISSOURI
JAY DARREN BROWNING
NUMBER A-2009027279
ARCHITECT
9.28.20

Architectural Corporation
Missouri License No. 2018022991
Jay Darren Browning Date: 09/28/2020
Architect License No. A-2009027279

REVISIONS

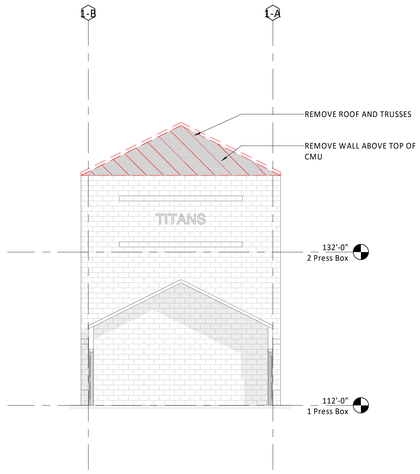
Number	DESCRIPTION	DATE

PROJECT NO: 0119-0101
DATE: September 28, 2020

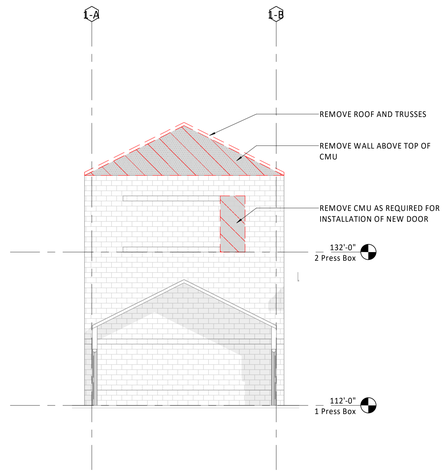
Demolition Plan - Overall Site

W-AD100

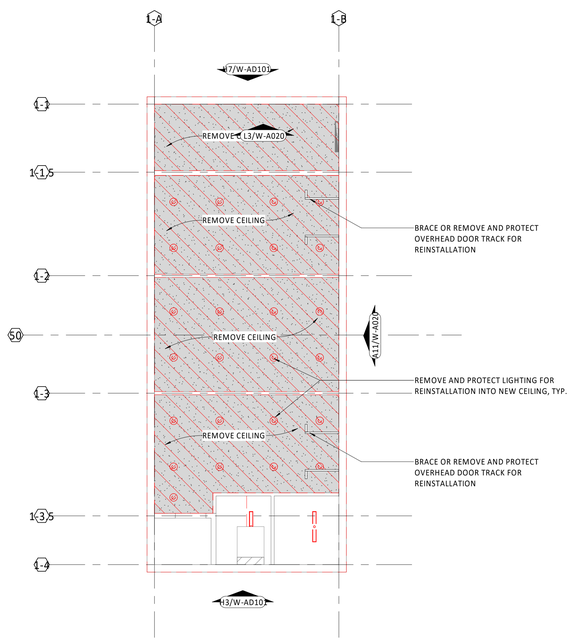
BID SET



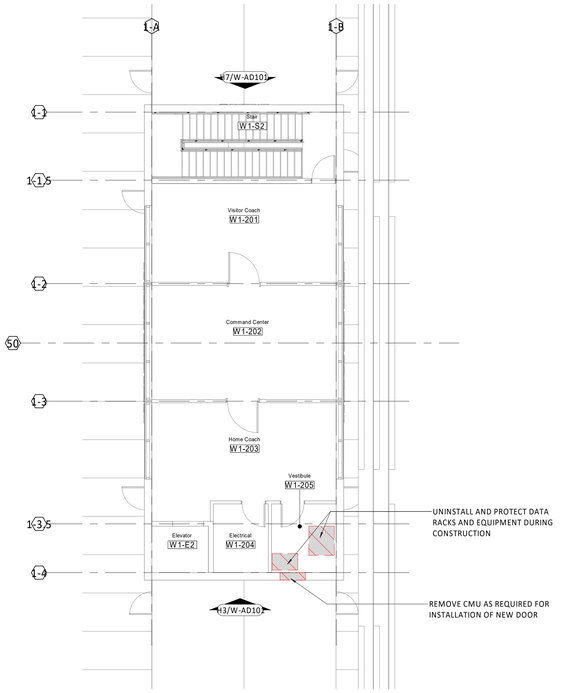
Press Box - North Elevation (Demolition) H7
1/8" = 1'-0"



Press Box - South Elevation (Demolition) H3
1/8" = 1'-0"



Level 2 Demolition RCP - Press Box A8
1/8" = 1'-0"



Level 2 Demolition Plan - Press Box A3
1/8" = 1'-0"

General Notes (Demolition):

1. THIS DEMOLITION PLAN OUTLINES THE SCOPE OF THE WORK INVOLVED FOR THE DEMOLITION PHASE OF THIS PROJECT. CONTRACTOR SHALL ALSO REFER TO THE DRAWINGS FOR THE CONSTRUCTION OF THE NEW ADDITION FOR ADDITIONAL INFORMATION.
2. EXISTING CONDITIONS INFORMATION WAS OBTAINED FROM DOCUMENTS AND INFORMATION SUPPLIED TO THE ARCHITECT, THE CONTRACTOR IS TO VERIFY EXACT LOCATIONS, SIZES, ELEVATIONS, ETC. AND REPORT ANY DISCREPANCIES TO THE ARCHITECT
3. IF SUSPECTED HAZARDOUS MATERIALS ARE ENCOUNTERED STOP WORK IMMEDIATELY AND NOTIFY OWNER. DO NOT RESUME WORK UNTIL DIRECTED BY THE OWNER.
4. ALL FURNITURE WILL BE REMOVED OR RELOCATED BY THE OWNER AS NECESSARY PRIOR TO THE DEMOLITION WORK OF THIS PROJECT. CONTRACTOR SHALL COORDINATE WITH OWNER AS REQUIRED.
5. REMOVE EXISTING CONSTRUCTION TO THE EXTENT INDICATED ON THE DRAWINGS. SHOULD ANY DAMAGE OCCUR TO ANY EXISTING CONSTRUCTION TO REMAIN ON SITE, THE CONTRACTOR SHALL REPAIR THE DAMAGE.
6. CONTRACTOR IS TO VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO DEMOLITION ACTIVITIES.
7. CONTRACTOR SHALL PROTECT ALL EXISTING CONSTRUCTION NOTED TO REMAIN FROM DAMAGE AND SOILING DURING DEMOLITION. REMOVE DEBRIS REGULARLY AS NECESSARY TO ELIMINATED INTERFERENCE WITH ROADS, STREET, WALKS, AND ALL OTHER ADJACENT FACILITIES.
8. CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION OF TEMPORARY DUST AND NOISE PROOF PARTITION BETWEEN CONSTRUCTION AREA AND ADJACENT PROPERTIES AS NECESSARY
9. NOTIFY THE BUILDING OWNER OF ANY MATERIALS, FIXTURES, ETC. THAT ARE TO BE REMOVED THAT ARE DEEMED SALVAGEABLE TURN OVER ANY REQUESTED ITEMS TO THE BUILDING OWNER IN GOOD CONDITION.
10. ALL DEMOLITION MATERIALS NOT CLAIMED BY THE OWNER, OR TO BE REUSES ARE TO BE DISPOSED OF OFF SITE AS PER LOCAL REGULATIONS AT THE CONTRACTOR'S EXPENSE.
11. THE CONTRACTOR SHALL REMOVE ALL TRASH AND DEBRIS FROM THE SITE ON A DAILY BASIS.
12. MAINTAIN THE INTEGRITY OF ALL EXISTING RATED WALLS, FIRE SEAL ANY PENETRATIONS WITH U.L. APPROVED ASSEMBLY.
13. WHEN UNANTICIPATED MECHANICAL, ELECTRICAL, OR STRUCTURAL ELEMENTS THAT CONFLICT WITH THE INTENDED FUNCTION OR DESIGN ARE ENCOUNTERED, DETERMINE THE NATURE AND EXTENT OF THE CONFLICT AND NOTIFY THE ARCHITECT IMMEDIATELY FOR RESOLUTION.
14. PROTECT EXISTING SITE IMPROVEMENTS AND LANDSCAPING TO REMAIN. INCLUDING BUT NOT LIMITED TO EXISTING TREES AND OTHER VEGETATION INDICATED TO REMAIN IN PLACE AGAINST UNNECESSARY CUTTING, BREAKING, OR SKINNING OF ROOTS, SKINNING OR BRUISING OF BARK, SMOTHERING OF TREES BY STOCKPILING CONSTRUCTION MATERIAL OR EXCAVATED MATERIAL WITHIN DRIP LINES.
15. CONTRACTOR SHALL PROVIDE TRAFFIC HANDLING MEASURES AS NECESSARY TO PROTECT THE GENERAL PUBLIC AT ALL TIMES, AND AS REQUIRED BY THE CITY.
16. DO NOT INTERRUPT EXISTING UTILITIES, EXCEPT WHEN AUTHORIZED IN WRITING BY AUTHORITIES HAVING JURISDICTION. PROVIDE TEMPORARY SERVICES DURING INTERRUPTIONS TO EXISTING UTILITIES, AS ACCEPTABLE TO GOVERNING AUTHORITIES.
17. WHEN UTILITY SERVICES ARE REQUIRED TO BE REMOVED, RELOCATED, OR ABANDONED, PROVIDE BYPASS CONNECTIONS TO MAINTAIN CONTINUITY OF SERVICE BEFORE PROCEEDING WITH DEMOLITION.
18. CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT ALL UTILITY COMPANIES INCLUDING BUT NOT LIMITED TO THE FOLLOWING: ELECTRIC, GAS, WATER, TELEPHONE, STORM SEWER, AND SANITARY SEWER FOR FIELD LOCATION OF ALL UNDERGROUND AND OVERHEAD UTILITY LINES. PRIOR TO COMMENCEMENT WITH ANY DEMOLITION WORK, CONTRACTOR SHALL IDENTIFY ALL ELECTRICAL CIRCUITS SERVICING THE AREA INVOLVED WITH THIS DEMOLITION. THOSE CIRCUITS SHALL THEN BE LOCKED OUT AND TAGGED OUT IF THEY DO NOT SERVICE ANY OF THE REMAINING BUILDING. THOSE CIRCUITS WHICH ARE IDENTIFIED TO SERVICE BOTH THE AREA TO BE DEMOLISHED AND THE REMAINING BUILDING SHALL BE SPLIT SO AS TO KILL ALL ELECTRICAL POWER TO THE AREA TO BE DEMOLISHED WHILE MAINTAINING POWER TO THE REMAINDER OF THE BUILDING.
19. CONTRACTOR TO PATCH/REPAIR ALL HOLES IN WALLS, FLOORS, &/ OR CEILINGS, AS REQUIRED. PAINT TO MATCH ADJACENT WALL/CEILING.
20. CONTRACTOR TO RE-LOCATE UTILITIES & EQUIPMENT AS REQUIRED TO ACCOMMODATE NEW HVAC, ELECTRICAL & PLUMBING REQUIREMENTS FOR NEW RENOVATION WORK.
21. REFER TO DEMOLITION PLUMBING PLANS FOR EXTENT OF CONCRETE SLAB TO BE REMOVED AND REPLACED FOR UNDER FLOOR PIPING INSTALLATION.
22. FILL ALL EXISTING FLOOR AND WALL PENETRATIONS RESULTING FROM PIPING AND CONDUIT REMOVAL WITH NON-SHRINK GROUT, READY TO RECEIVE FINAL FLOOR OR WALL FINISH.
23. EXISTING WALLS (OR PORTIONS OF WALLS) TO BE REMOVED SHALL BE CUT FLUSH WHERE INTERSECTING WITH WALLS TO REMAIN. REMAINING WALLS TO BE PATCHED AND FINISHED SMOOTH.
24. NEW OPENING TO BE CUT IN EXISTING WALLS SHALL BE SAW-CUT AT LOCATIONS INDICATED TO THE HEIGHT AND WIDTH INDICATED. NEW LINTELS SHALL BE INSTALLED TO SUPPORT EXISTING WALL CONSTRUCTION ABOVE AS INDICATED ON THE DRAWINGS, OR IF NOT INDICATED, AS REQUIRED FOR NEW WALL CONSTRUCTION PER STRUCTURAL DRAWINGS.
25. WHERE EXISTING INTERIOR WALLS ARE REPLACED OR REMOVED, REMOVE MEP SYSTEMS BACK TO PANEL OR MECHANICAL ROOM OR FARTHEST POSSIBLE POINT WITHOUT DISTURBING EXISTING CONSTRUCTION, REMOVE EXISTING MECHANICAL EQUIPMENT, RELOCATE POWER PER MEP DRAWINGS
26. REFER TO MEP DRAWINGS FOR DEMOLITION OF MEP SYSTEMS TO IDENTIFY WORK REQUIRED BY THIS CONTRACTOR WHICH MAY AFFECT DEMOLITION AND/OR REPAIRS OF ARCHITECTURAL ELEMENTS. COORDINATE WITH RELATED SUBS THE EXTENT OF ALL DEMOLITION WORK.
27. PATCH FLOORS, WALLS CEILINGS WHICH REMAIN AT LOCATIONS WHERE PIPES, CONDUITS, ETC. ARE REMOVED AS REQUIRED TO MATCH EXISTING CONDITIONS OR FOR NEW FINISHES.
28. PROTECT ALL EXISTING HORIZONTAL BLINDS TO REMAIN UNLESS NOTED OTHERWISE.
29. WHERE EXISTING FINISH FLOOR IS REMOVED, PREPARE SURFACE TO RECEIVE NEW FLOORING
30. REMOVE ANY EXISTING VINYL MATERIALS IN ACCORDANCE WITH EPA STANDARDS; NOTIFY ARCHITECT & OWNER OF ANY ADDITIONAL ASBESTOS CONTAINING MATERIALS DISCOVERED BEFORE PROCEEDING WITH WORK, PROTECT INTERIOR CONSTRUCTION TO REMAIN DURING DEMOLITION AND CONSTRUCTION.

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STATE OF MISSOURI
JAY DARREN BROWNING
NUMBER A-2009027279
ARCHITECT
9.28.20

Architectural Corporation
Missouri License No. 2018022991
Jay Darren Browning Date: 09/28/2020
Architect License No. A-2009027279

REVISIONS

Number	DESCRIPTION	DATE

PROJECT NO: 0119-0101
DATE: September 28, 2020

Demolition Plan - Press Box

W-AD101

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Abbreviations

A	
@	AT
A/C	AIR CONDITION(ING) (ED)
A/C UNIT	AIR CONDITIONING UNIT
AB	ANCHOR BOLT
ABBVR	
ACC	ACCESSIBLE
ACCU	AIR COOLED CONDENSING UNIT
ACI	AMERICAN CONCRETE INSTITUTE
ACOUS INSUL	ACOUSTICAL INSULATION
ACOUS PNL	ACOUSTICAL PANEL
ACST	ACOUSTIC
ACT	ACOUSTICAL CEILING TILE
ADA	AMERICANS WITH DISABILITIES ACT
ADDL	ADDITIONAL
ADDM	ADDENDUM
ADH	ADHESIVE
ADJ	ADJUSTABLE, ADJACENT
AE	ARCHITECT/ ENGINEER
AFF	ABOVE FINISHED FLOOR
AGGR	AGGREGATE
AHJ	AUTHORITIY HAVING JURISDICTION
AHU	AIR HANDLING UNIT
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
ALT	ALTERNATE
ALUM	ALUMINUM
ANOD	ANNODIZED
APC	ACOUSTICAL PANEL CEILING
ARCH	ARCHITECT(URAL)
ASL	ABOVE STRUCTURAL LEVEL
AWT	ACOUSTICAL WALL TREATMENT
B	
B BD	BASE BOARD
B/B	BACK-TO-BACK
BAT	BATTEN
BD	BOARD
BDRM	BEDROOM
BITUM	BITUMINOUS
BLDG	BUILDING
BLKG	BLOCKING
BM	BENCHMARK, BEAM
BOT	BOTTOM
BRG	BEARING
BRZ	BRONZE
BSMT	BASEMENT
BTWN	BETWEEN
BUR	BUILT-UP ROOFING
BW	BOTH WAYS
C	
CAB	CABINET
CB	CARRIAGE BOLT, CATCH BASIN
CCTV	CLOSED-CIRCUIT TELEVISION
CD	CONSTRUCTION DOCUMENTS, CONTRACT DOCUMENTS
CEM	CEMENT
CERT	CERTIFY, CERTIFICATE, CERTIFICATION
CF/CI	CONRACTOR FURNISHED/ CONTRACTOR INSTALLED
CF/OI	CONTRACTOR FURNISHED/ OWNER INSTALLED
CG	CORNER GUARD
CH	COAT HOOK
CHBD	CHALK BOARD
CHEM	CHEMICAL
CI	CAST IRON
CIP	CAST-IN-PLACE
CJ	CONTROL JOINT, CONSTRUCTION JOINT
CL	CENTER LINE
CLG	CEILING
CLO	CLOSET
CLR	CLEAR
CLRM	CLASSROOM
CMU	CONCRETE MASONRY UNIT
CNR	CORNER
CNTR	COUNTER
COL	COLUMN
CONC	CONCRETE
CONF	CONFERENCE
CONN	CONNECT(ION)
CONSTR	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRCT(OR)
COORD	COORDINATE, COORDINATION
CORR	CORRIDOR
CPT	CARPET
CSK	COUNTERSINK
CSWK	CASEWORK
CT	CERAMIC TILE
CTR	CENTER
CTRL	CONTROL
CU	CUBIC
CUH	CABINET UNIT HEATER
CUST	CUSTODIAL
CW	COLD WATER, CASEMENT WINDOW
D	
D	DEEP, DEPTH
DBL	DOUBLE
DEG	DEGREE
DEMO	DEMOLITION
DEPT	DEPARTMENT
DET	DETAIL
DF	DRINKING FOUNTAIN
DH	DOUBLE HUNG
DIA or Ø	DIAMETER
DIFF	DIFFERENCE
DIM	DIMENSION
DIR	DIRECTION
DISP	DISPENSER
DIST	DISTANCE
DIV	DIVIDE, DIVISION
DL	DEAD LOAD
DMPF	DAMPPROOFING
DMPR	DAMPER
DN	DOWN
DO	DITTO
DOC	DOCUMENT
DOZ	DOZEN
DR	DOOR
DS	DOWNSPOUT
DSGN	DESIGN
DT	DRAIN TILE
DW	DISH WASHER
DWG	DRAWING
E	
E	EAST
EA	EACH
EC	ELECTRICAL CONTRACTOR
EF	EACH FACE
EIFS	EXTERIOR INSULATION AND FINISH SYSTEM
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRIC(AL)
ELEM	ELEMENTARY
ELEV	ELEVATOR
ENAM	ENAMEL
ENCL	ENCLOSURE
ENGR	ENGINEER
ENVIR	ENVIRONMENT
EOS	EDGE OF SLAB
EP	ELECTRIC PANEL
EPDM	ETHYLENE PROPYLENE DIENE MONOMER
EPS	EXPANDED POLYSTYRENE BOARD
EQ	EQUAL
EQUIP	EQUIPMENT
EQUIV	EQUIVALENT
ETC	ET CETERA
ETR	EXISTING TO REMAIN
EW	EACH WAY
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EXC	EXCAVATE
EXH	EXHAUST
EXIST	EXISTING
EXP	EXPAND, EXPANSION
EXT	EXTERIOR
F	
F/F	FACE-TO-FACE
FA	FIRE ALARM
FAAP	FIRA ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FCU	FAN COIL UNIT
FD	FLOOR DRAIN
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FIN	FINISH
FIXT	FIXTURE
FLOUR	FLOURESCENT
FLR	FLOOR
FNDN	FOUNDATION
FO	FINISHED OPENING
FRIS	FIRE RESISTIVE JOINT SYSTEM
FRP	FIBERGLASS REINFORCED PLASTIC
FRTW	FIRE RETARDANT TREATED WOOD
FT	FOOT, FEET
FTG	FOOTING
FURN	FURNITURE
FW	FIRE WALL
FWC	FABRIC WALL COVERING
G	
GA	GAGE
GAL	GALLON
GALV	GALVANIZED
GALV STL	GALVANIZED STEEL
GB	GRAB BAR
GC	GENERAL CONTRACTOR
GEN	GENERAL, GENERATOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFRC	GLASS FIBER RINFORCED CONCRETE
GFRG	GLASS FIBER REINFORCED GYPSUM
GL	GLASS, GROUND LEVEL
GL BLK	GLASS BLOCK
GLU LAM	GLUED LAMINATED BEAM
GLZ	GLAZING
GWT	GLAZED WALL TILE
GYM	GYMNASIUM
GYP	GYPSUM
GYP BD	GYPSUM BOARD
GYP PLAS	GYPSUM PLASTER
H	
HB	HOSE BIBB
HC	HANDICAP, HOLLOW CORE
HCP	HANDICAPPED
HD	HEAVY DUTY
HDW	HARDWARE
HDWD	HARDWOOD
HM	HOLLOW METAL
HO	HOLD OPEN
HORIZ	HORIZON
HR	HOUR
HSS	HOLLOW STRUCTURAL SECTION
HT	HEIGHT
HVAC	HEATING, VENTILATING AND AIR CONDITIONING
HW	HOT WATER
HYD	HYDRANT
I	
ID	INSIDE DIAMETER
IN	INCHES
INCAND	INCANDESCENT
INCL	INCLUDE
INFO	INFORMATION
INSUL	INSULATION
INT	INTERIOR
INTERM	INTERMEDIATE
J	
JAN	JANITOR
JAN CLO	JANITOR CLOSET
JNT	JOINT
JR	JUNIOR
JST	JOIST
K	
KD	KNOCK DOWN
KIP	1000 POUNDS
KIT	KITCHEN
KO	KNOCK OUT
KPL	KICK PLATE
L	
L	LITER, ANGLE
LAB	LABORATORY
LAM	LAMINATE(D)
LAV	LAVATORY
LBL	LABEL
LBS	POUND
LD	LOAD
LF	LINEAR FEET
LH	LATENT HEAT, LEFT HAND
LIB	LIBRARY
LIN	LINEAR
LKR	LOCKER
LKR RM	LOCKER ROOM
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LT	LINOLEUM TILE, LIGHT
LTG	LIGHTING
M	
MACH	MATCHLINE
MACH RM	MACHINE ROOM
MAHOG	MAHOGANY
MAINT	MAINTENANCE
MATL	MATERIAL
MAX	MAXIMUM
MB or MKR BD	MARKERBOARD
MC	MECHANICAL CONTRACTOR
MDF	MEDIUM DENSITY FIBERBAORD
MDO	MEDIUM DENSITY OVERLAY
ME	MATCH EXISTING
MECH	MECHANICAL
MECH RM	MECHANICAL ROOM
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MM	MILIMETER
MO	MASONRY OPENING
MOD BIT	MODIFIED BITUMEN
MTD	MOUNTED
MTL	METAL, MATERIAL
MULL	MULLION
N	
N	NORTH
NA	NOT APPLICABLE
NIC	NOT IN CONTRACT
NO or #	NUMBER
NOM	NOMINAL
NORM	NORMAL
NTS	NOT TO SCALE
O	
O/A	OVERALL
O/O	OUT TO OUT
OC	ON CENTER
OD	OUTSIDE DIAMETER
OF/ OI	OWNER FURNISHED/ OWNER INSTALLED
OF/CI	OWNER FURNISEHD/ CONTRACTOR INSTALLED
OFF	OFFICE
OH	OVERHANG
OH DR	OVERHEAD DOOR
OPH	OPPOSITE HAND
OPNG	OPENING
OPP	OPPOSITE
OPT	OPTIONAL, OPTIMUM
P	
PA	PUBLIC ADDRESS
PAR	PARALLEL
PART	PARTIAL
PAT	PATTERN
PC	PLUMBING CONTRACTOR
PERF	PERFORATED
PERIM	PERIMETER
PL	PLATE, PROPERTY LINE
PL GL	PLATE GLASS
PLAM	PLASTIC LAMINATE
PLAS	PLASTER, PLASTIC
PLBG	PLUMBING
PLYWD	PLYWOOD
PNL	PANEL
POL	POLISHED
POLY	POLYETHYLENE (PLASTIC)
PORC	PORCELAIN
PORT	PORTABLE
POS	POSITIVE
PR	PAIR
PRCST	PRECAST
PREFAB	PREFABRICATED
PREFIN	PREFINISHED
PRELIM	PRELIMINARY
PRKG	PARKING
PROJ	PROJECT
PROP	PROPERTY
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	POST TENSIONED
PTD	PAPER TOWER DISPENSER
PTN	PARTITION
PVC	POLYVINYL CHLORIDE (PLASTIC)
PWR	POWER
Q	
QT	QUARRY TILE
QTR	QUARTER
QTY	QUANTITY
R	
R	RISER, RADIUS, HEAT RESISTANCE
RA	RETURN AIR
RAD	RADIATOR
RB	RUBBER BASE, RESILIENT BASE
RC	ROOFING CONTRACTOR
RCP	REFLECTED CEILING PLAN
RD	ROOF DRAIN
REC	RECESSED
REC RM	RECREATION ROOM
REF	REFRIGERATOR
REG	REGISTER, REGULATION
REINF	REINFORCE
REQD	REQUIRED
RESIL	RESILIENT
REV	REVISION
RFG	ROOFING
RFI	REQUEST FOR INFORMATION
RFP	REQUEST FOR PROPOSAL
RH	RIGHT HAND, ROOF HATCH
RM	ROOM
RO	ROUGH OPENING
ROW	RIGHT OF WAY
RTF	RUBBER TILE FLOOR
RTU	ROOF TOP UNIT
RV	ROOF VENT
RW	RESCUE WINDOW
RWB	RUBBER WALL BASE
S	
S	SOUTH
SAB	SOUND ATTENUATION BATTS
SAN	SANITARY
SC	SOLID CORE, SHADING COEFFICIENT
SCHED	SCHEDULE
SD	SOAP DISPENSER
SECT	SECTION
SF	SQUARE FOOT, SAFETY FACTOR
SGT	STRUCTURAL GLAZED TILE
SHR	SHOWER
SHT	SHEET
SIM	SIMILAR
SND	SANITARY NAPKIN DISPENSER
SOG	SLAB ON GRADE
SPC	SUSPENDED SPLASTER CEILING
SPEC	SPECIFICATION(S)
SPKR	SPEAKER
SQ	SQUARE
SST	STAINLESS STEEL
STC	SOUND TRANSMISSION CLASS
STD	STANDARD
STOR	STORAGE
STRM	STOREROOM
STRUCT	STRUCTURAL
SUB	UBSTITUTE
SUB FL	SUBFLOOR
SUSP	SUSPENDED
SUSP CLG	SUSPENDED CEILING
SV	SAFETY VALVE, SHEET VINYL
SWBD	SWITCHBOARD
SY	SQUARE YARD
SYM	SYMBOL
SYS	SYSTEM
T	
T	TREAD
T & B	TOP AND BOTTOM
T & G	TONGUE AND GROOVE
TB	THROUGH BOLT, TOWEL BAR
TECH	TECHNICAL, TECHNOLOGY
TEL	TELEPHONE
TEMP	TEMPORARY, TEMPERATURE
TERR	TERRAZZO
THERM	THERMAL
THK	THICKNESS
THRU	THROUGH
TK BD	TACK BOARD
TMPD	TEMPERED
TMPD GL	TEMPERED GLASS
TOC	TOP OF CONCRETE
TOF	TOP OF FOOTING, TOP OF FLOOR, TOP OF FRAME
TOM	TOP OF MASONRY
TOPO	TOPOGRAPHY
TOS	TOP OF STEEL
TPD	TOILET PAPER DISPENSER
TV	TELEVISION
TYP	TYPICAL
U	
U	HEAT TRANSFER COEFFICIENT
UC	UNDERCUT
UGND	UNDERGROUND
UH	UNIT HEATER
UL	UNDERWRITERS LABORATORIES
UNFIN	UNFINISH(ED)
UNO	UNLESS NOTED OTHERWISE
UTIL	UTILITY
UV	UNIT VENTILATOR
V	
V	VOLT
VAR	VARIES, VARIATION
VB	VINYL BASE
VCT	VINYL COMPOSITE TILE
VENT	VENTILATION
VERT	VERTICAL
VEST	VESTIBULE
VIF	VERIFY IN FIELD
VOC	VOLATILE ORGANIC COMPOUND
VOL	VOLUME
VR	VAPOR RETARDER
VUH	VERTICAL UNIT HEATER
VWC	VERTICAL WALL COVERING
W	
W	WATT, WEST
W/	WITH
W/O	WITHOUT
W/W	WALL TO WALL
WB	WOOD BASE
WC	WALL COVERING, WATER CLOSET
WD	WOOD
WDW	WINDOW
WF	WIDE FLANGE
WH	WATER HEATER, WALL HUNG
WI	WROUGHT IRON
WM	WIRE MESH
WP	WATER PROOFING, WEATHERPROOF
WR	WATER REPELENT, WEATHER RESISTANT
WSCT	WAINSCOT
WT	WEIGHT
WWF	WELDED WIRE FABRIC
WWM	WELDED WIRE MESH
X	
X	BY
Y	
Y	YD

Graphic Symbols

01 GENERAL

NEW WALL

EXISTING WALL TO BE REMOVED

EXISTING WALL

BUILDING SECTION

WALL SECTION

DETAIL SECTION

DETAIL REFERENCE

EXTERIOR ELEVATION TAG

INTERIOR ELEVATION TAG

BREAK LINE

ROOM TAG

EXTERIOR WALL TYPE & INTERIOR PARTITION TYPE SYMBOL

WINDOW TYPE SYMBOL

BENCHMARK/SPOT ELEV. SYMBOL

COLUMN LINE/GRID INDICATOR

REVISION INDICATOR

DOOR TAG

FLOOR LEVEL SYMBOL

CEILING HEIGHT SYMBOL

NORTH ARROWS

DIMENSION

ALIGN TWO WALLS OR OBJECTS

Materials Graphics

02 SITE CONSTRUCTION

EARTH (existing)

EARTH (backfill)

DRAINAGE FILL

03 CONCRETE

CAST-IN-PLACE CONCRETE

PRECAST CONCRETE

04 MASONRY

BRICK

CONCRETE MASONRY UNITS

GLASS BLOCK

STONE

CAST STONE

GROUT

05 METALS

ALUMINUM

STEEL

06 WOODS AND PLASTICS

CONTINUOUS WOOD

INTERMITTENT WOOD

FINISH WOOD

HARDBOARD

MEDIUM DENSITY FIBER BOARD (MDF)

PARTICLE BOARD

PLYWOOD

SOLID SURFACE MATERIAL

07 THERMAL & MOISTURE PROTECTION

BATT INSULATION

LOOSE FILL INSULATION

RIGID INSULATION

08 GLAZING

GLASS

09 FINISHES

LATH AND PLASTER

GYPSUM BOARD

General Architectural Drawing Notes:

1. VERIFY DIMENSIONS AND EXISTING CONDITIONS BEFORE COMMENCING WORK. REPORT DISCREPANCIES TO THE ARCHITECT PRIOR TO PROCEEDING WITH AFFECTED WORK.
2. BUILDING FLOOR PLAN DIMENSIONS ARE REFERENCED FROM STRUCTURAL GRID, FACE OF CONCRETE, FACE OF MASONRY, OR FACE OF FINISHED SURFACE, UNLESS NOTED OTHERWISE.
3. REFLECTED CEILING PLAN DIMENSIONS ARE REFERENCED FROM FINISHED SURFACES UNLESS NOTED OTHERWISE. CEILING HEIGHTS ARE DIMENSIONED FROM FLOOR TO FINISHED CEILING HEIGHT.
4. CASEWORK, PLUMBING FIXTURES, TOILET PARTITIONS, AND OTHER FIXTURES AND EQUIPMENT ARE DIMENSIONED FROM FINISHED SURFACES UNLESS NOTED OTHERWISE.
5. DIMENSIONS NOTED AS "FIELD VERIFY" SHALL BE CHECKED AT THE SITE BY THE CONTRACTOR AND REVIEWED WITH THE ARCHITECT BEFORE INCORPORATING INTO THE WORK.
6. DIMENSIONS NOTED AS "CLEAR" REQUIRE SPECIFIC COORDINATION BETWEEN DISCIPLINES AND/OR MANUFACTURERS.
7. DRAWINGS NOTED AT "N.T.S." ARE NOT TO SCALE.
8. DO NOT SCALE DRAWING. WRITTEN DIMENSIONS TAKE PRECEDENCE. IF CLARIFICATION IS REQUIRED IN ORDER TO DETERMINE THE INTENT OF THE CONTRACT DOCUMENTS, CONTACT THE ARCHITECT.
9. NOTES OR DIMENSIONS LABELED "TYPICAL" SHALL APPLY TO SITUATIONS THAT ARE THE SAME OR SIMILAR.

General Materials & Equipment Notes:

1. PROVIDE GALVANIC PROTECTION BETWEEN DISSIMILAR METALS.
2. INSTALL PIPING AND CONDUIT TIGHT TO WALLS, COLUMNS AND ROOF DECK.
3. SEAL ALL PIPE OR CONDUIT PENETRATIONS WITH APPROPRIATE SEALANT. PROVIDE FIRE SEALANT AT RATED PARTITIONS.
4. PLYWOOD AND WOOD BLOCKING SHALL BE FIRE RESISTANT.
5. DO NOT CUT OR DRILL ANY STRUCTURAL MEMBER, OTHER THAN DESCRIBED ON THE STRUCTURAL DRAWINGS, WITHOUT WRITTEN APPROVAL FROM THE STRUCTURAL ENGINEER.

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STATE OF MISSOURI · JAY DARREN BROWNING · NUMBER 2009027279 · ARCHITECT · 9.28.20

Architectural Corporation
Missouri License No. 2018022991
Jay Darren Browning Date: 09/28/2020
Architect License No. A-2009027279

REVISIONS

Number	DESCRIPTION	DATE

PROJECT NO: 0119-0101
DATE: September 28, 2020

Graphic Symbols, Abbreviations, and General Information

W-A001

BID SET

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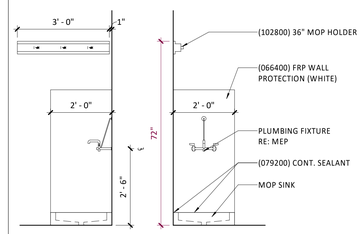
Specialty Equipment Schedule

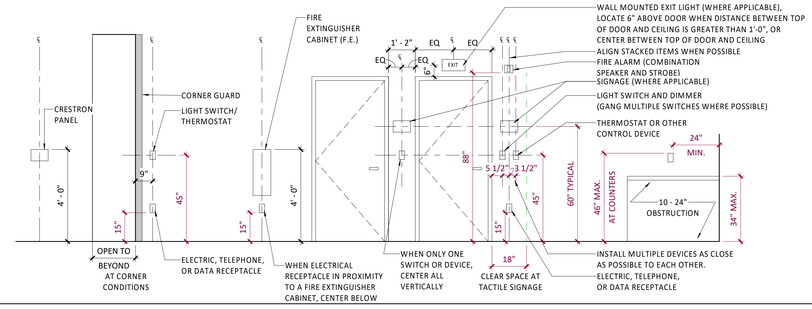
ID#	Description	Manufacturer	Model Number	Comments	Latest Revision
SC01	SEAT COVER DISPENSER				
Bath & Toilet Accessories					
BC01					
GB-18	STRAIGHT GRAB BAR	BOBRICK	B-6806		
GB-36	STRAIGHT GRAB BAR	BOBRICK	B-6806		
GB-42	STRAIGHT GRAB BAR	BOBRICK	B-6806		
MI2444					
Bath & Toilet Accessories - Commercial					
GB18V	Straight Grab Bar 18" (Vertical)	Bobrick Washroom Equipment, Inc.	B-6806		
GB36	Straight Grab Bar 36"	Bobrick Washroom Equipment, Inc.	B-6806		
GB42	Straight Grab Bar 42"	Bobrick Washroom Equipment, Inc.	B-6806		
ND1	Surface Mounted Sanitary Napkin Disposal	Bobrick Washroom Equipment, Inc.	B-254		
TSCD	Surface-Mounted Seat-Cover Dispenser	Bobrick Washroom Equipment, Inc.	B-221		

Specialty Equipment Notes:

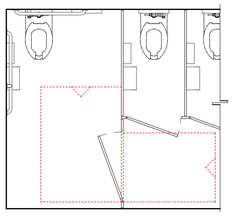
1. THIS PROJECT WILL COMPLY WITH ALL AMERICAN WITH DISABILITIES REGULATIONS AND ALL LOCAL ACCESSIBILITY CODE REQUIREMENTS.
2. ALL MOUNTING HEIGHTS ARE TO COMPLY WITH ICC/ANSI-A117.1 REFER TO FIXTURE HEIGHT GUIDELINES FOR TYPICAL MOUNTING HEIGHTS. COORDINATE WITH OWNER/ARCHITECT FOR ANY ITEMS IN CONFLICT OR NOT EXPLICITLY INDICATED.
3. PROVIDE WOOD BLOCKING AT ALL EQUIPMENT FIXTURES, AND ACCESSORIES INCLUDED OWNER PROVIDED ITEMS WHETHER OR NOT SUCH BLOCKING IS NOTED OR SPECIFIED.
4. ACCESSORIES SHOWN ARE GENERIC. REFER TO SCHEDULE SPECIFIED MODEL.
5. FIXTURES ACCESSORIES SHOWN ARE GENERIC. REFER TO PLUMBING DRAWINGS FOR SCHEDULED FIXTURES.



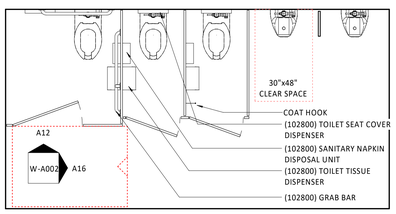
Typical Janitor Closet G9
1/2" = 1'-0"



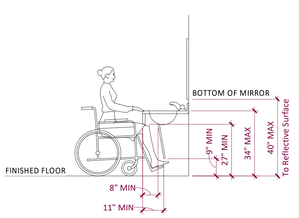
Miscellaneous Heights G1
3/8" = 1'-0"



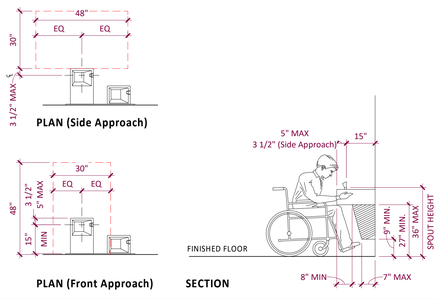
Alternate Accessible Stall D16
3/8" = 1'-0"



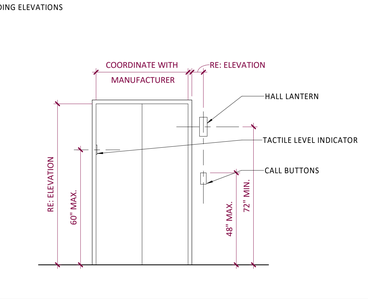
Floor Plan - Toilet Fixture Standard D12
3/8" = 1'-0"



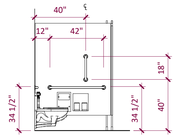
Lavatory Guidelines D9
3/8" = 1'-0"



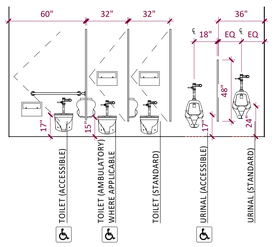
Drinking Fountain Guidelines D5
3/8" = 1'-0"



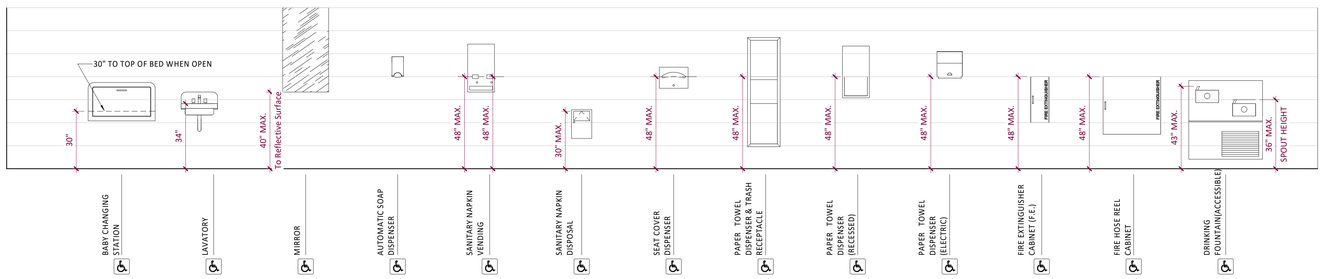
Typical Elevator Door D1
3/8" = 1'-0"



ADA Stall A16
1/4" = 1'-0"



Interior Elevation - Toilet Fixture Standards A12
1/4" = 1'-0"



Fixture Height Guidelines A1
3/8" = 1'-0"

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Lee's Summit R7 District Athletics Facilities

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civil engineer:
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913.485.0318

mechanical/electrical engineer:
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JAY DARREN BROWNING
NUMBER A-2009027279
ARCHITECT
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Missouri License No. 2018022991
Jay Darren Browning — Date: 09/28/2020
Architect — License No. A-2009027279

REVISIONS

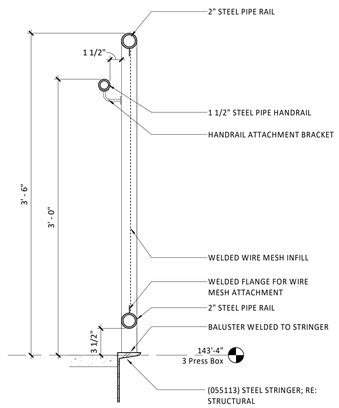
Number	DESCRIPTION	DATE

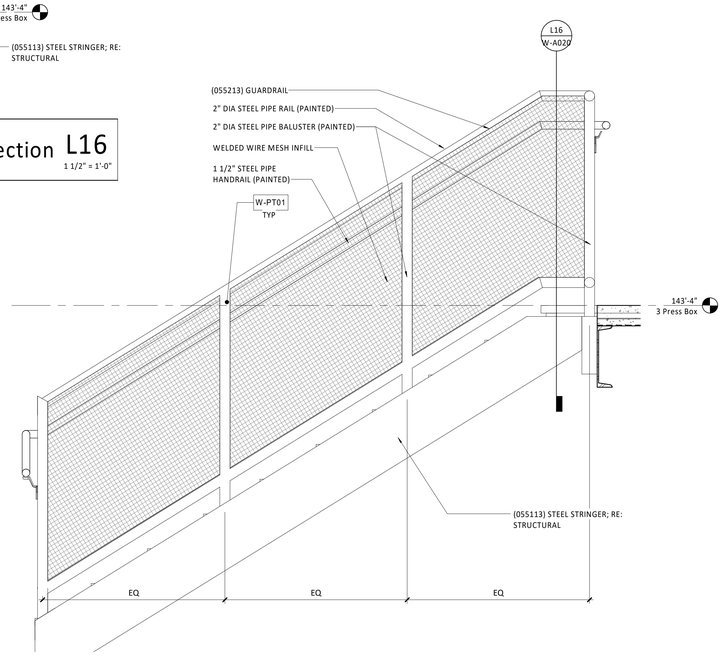
PROJECT NO: 0119-0101
DATE: September 28, 2020

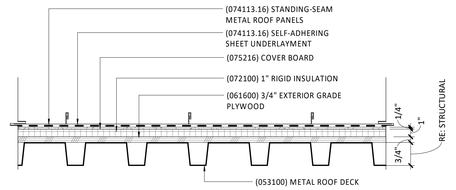
Accessibility Standards

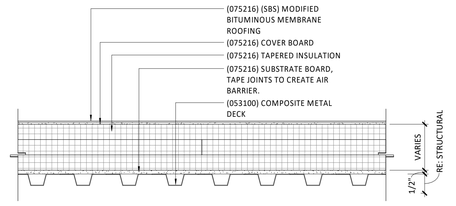
W-A002

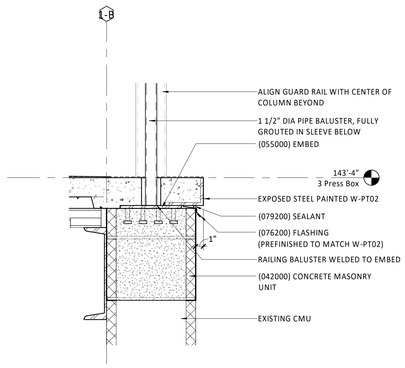
BID SET

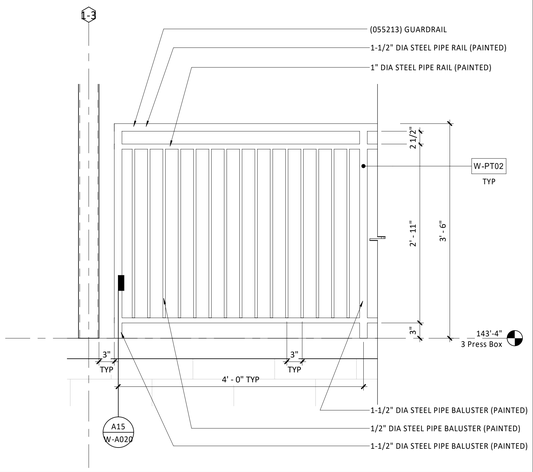


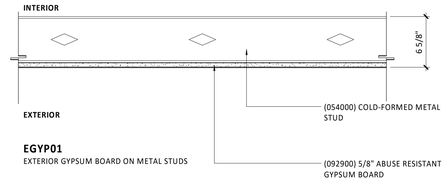


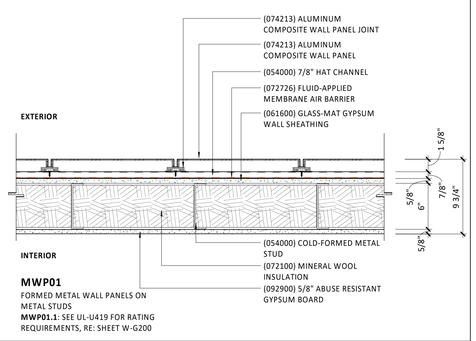












GR2 - Typical Section L16

1 1/2" = 1'-0"

GR2 Typical Elevation L3

1" = 1'-0"

Roof Schedule

Type Mark	Description
ROOF01	(SBS) MODIFIED BITUMINOUS ROOFING (INSULATED) OVER METAL DECK >1-HOUR RATED - (UL P732)
ROOF01	(SBS) MODIFIED BITUMINOUS ROOFING (INSULATED) OVER METAL DECK >1-HOUR RATED - (UL P732)
ROOF01	(SBS) MODIFIED BITUMINOUS ROOFING (INSULATED) OVER METAL DECK >1-HOUR RATED - (UL P732)
ROOF01	(SBS) MODIFIED BITUMINOUS ROOFING (INSULATED) OVER METAL DECK >1-HOUR RATED - (UL P732)
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ROOF01	(SBS) MODIFIED BITUMINOUS ROOFING (INSULATED) OVER METAL DECK >1-HOUR RATED - (UL P732)
ROOF01	(SBS) MODIFIED BITUMINOUS ROOFING (INSULATED) OVER METAL DECK >1-HOUR RATED - (UL P732)
ROOF01: 17	
ROOF02	STANDING SEAM METAL ROOFING OVER METAL DECK
ROOF02: 1	

ROOF02
STANDING SEAM METAL ROOFING OVER METAL DECK

ROOF01
(SBS) MODIFIED BITUMINOUS ROOFING (INSULATED R30 MINIMUM) OVER METAL DECK
1-HOUR RATED - (UL P732) or approved equal)

Roof Types F3

1 1/2" = 1'-0"

General Notes (Exterior Enclosure):

1. ALL OPENINGS, FLASHING, COUNTER FLASHING, AND EXPANSION JOINTS SHALL BE WATERTIGHT.
2. ALL OPEN JOINTS, PENETRATIONS, AND OTHER OPENINGS IN THE ENVELOPE SHALL BE SEALED, GASKETED, OR WEATHER-STRIPPED TO LIMIT AIR LEAKAGE.
3. PROVIDE MOLD RESISTANT GYPSUM BOARD AT ALL EXTERIOR WALLS.

General Notes (Windows):

1. ALL EXTERIOR GLAZING SHALL BE SCHEDULED IN PROJECT MANUAL.
2. CONTRACTOR TO COORDINATE SILL HEIGHTS AND FIELD VERIFY ALL CORNER CONDITIONS WITH ELEVATIONS AND WALL SECTIONS.
3. CONTRACTOR TO VERIFY ALL WINDOW COUNTS AND TYPES.
4. PROVIDE SAFEY GLAZING IN ALL OPERABLE OR FIXED PANELS WHERE REQUIRED.

GR1 - Typical Anchor Detail A15

1 1/2" = 1'-0"

GR1 - Typical Elevation A11

1" = 1'-0"

EGYP01
EXTERIOR GYPSUM BOARD ON METAL STUDS

Exterior Soffit Types A7

1 1/2" = 1'-0"

Exterior Partition Types

Mark	Width	Fire Rating	Type Comments
M8	7 5/8"		(042200) Concrete Unit Masonry
M12	11 5/8"		(042200) Concrete Unit Masonry
MWP01	9 3/4"		(074213) Metal Wall Panels
MWP01.1	9 3/4"	1 HR	(074213) Metal Wall Panels

MWP01
FORMED METAL WALL PANELS ON
METAL STUDS
MWP01.1: SEE UL-U419 FOR RATING
REQUIREMENTS, RE: SHEET W-G200

Exterior Wall Types A3

1 1/2" = 1'-0"

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Lenexa, KS 66214
816.742.5000

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JAY DARREN BROWNING
NUMBER A-2009027279
9.28.20

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Jay Darren Browning Date: 09/28/2020
Architect License No. A-2009027279

REVISIONS

Number	DESCRIPTION	DATE

PROJECT NO: 0119-0101
DATE: September 28, 2020

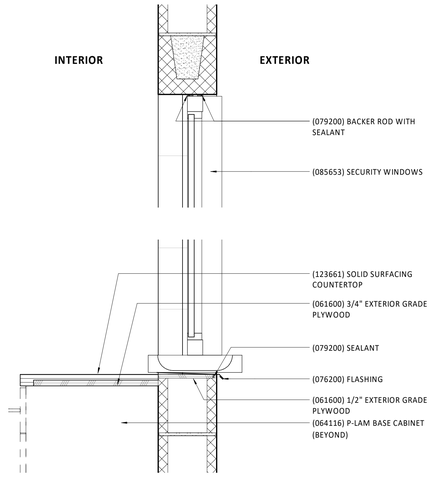
Exterior Enclosures &
Railing

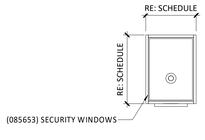
W-A020

BID SET

Window Schedule (Exterior)

Mark	Size		Sill Height	Count	Comments
	Width	Height			
A	3' - 3 1/2"	4' - 8"	2' - 8"	4	(2) Windows at North Ticket Booth are included in the Base Bid, (2) Windows at South Ticket Booth are included only in Bid Alternate #W-1





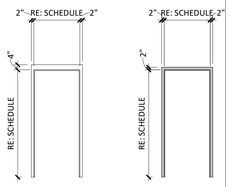
A Ticket Booth Transaction Window

Window A Details K15
1 1/2" = 1'-0"

Window Types K12
1/4" = 1'-0"

Door Schedule

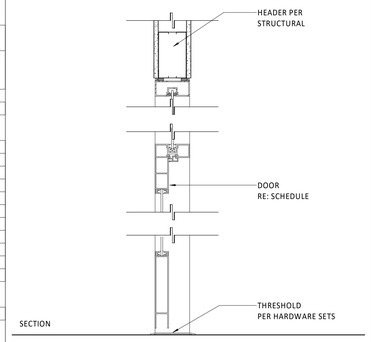
Mark	Room		Assembly				Door					Frame		Comments
	From:	To:	Type	Fire Rating	Hardware Set	Detail Type	Size: Width	Size: Height	Thickness	Material	Finish	Frame Type	Finish	
1 North Ticket														
W4-101A	W4-101		F	--	02	B	3' - 0"	7' - 0"	1 3/4"	HM	W-PT03	HM2	W-PT03	
1 Concessions														
W2-101A		W2-101	F	--	02	B	3' - 0"	9' - 0"	1 3/4"	HM	W-PT03	HM2	W-PT03	
W2-101B	W2-101		CD	--	18	G	8' - 0"	6' - 8"	2"	STL	W-PT01	--	--	
W2-101C	W2-101		CD	--	18	G	8' - 0"	6' - 8"	2"	STL	W-PT01	--	--	
W2-102A	W2-102		F	--	11	B	3' - 0"	7' - 0"	1 3/4"	HM	W-PT03	HM2	W-PT03	
W2-103A		W2-103	F	--	11	B	3' - 0"	7' - 0"	1 3/4"	HM	W-PT03	HM2	W-PT03	
W2-104A	W2-104		F	--	05	B	3' - 0"	9' - 0"	1 3/4"	HM	W-PT03	HM2	W-PT03	
W2-105A	W2-105	W2-107	F	--	20	B	3' - 0"	9' - 0"	1 3/4"	HM	W-PT03	HM2	W-PT03	
W2-106A	W2-105	W2-106	F	--	17	B	3' - 0"	7' - 0"	1 3/4"	HM	W-PT03	HM2	W-PT03	
W2-107A	W2-107		F	--	02	B	3' - 0"	9' - 0"	1 3/4"	HM	W-PT03	HM2	W-PT03	
W2-108A	W2-108	W2-107	F	--	14	B	3' - 0"	9' - 0"	1 3/4"	HM	W-PT03	HM2	W-PT03	
W2-109A	W2-101	W2-109	F	--	14	B	3' - 0"	7' - 0"	1 3/4"	HM	W-PT03	HM2	W-PT03	
1 South Ticket														
W5-101A		W5-101	F	--	02	B	3' - 0"	7' - 0"	1 3/4"	HM	W-PT03	HM2	W-PT03	
3 Press Box														
W1-302A	W1-301	W1-302	F	--	03	A	3' - 0"	7' - 0"	1 3/4"	HM	W-PT01	HM1	W-PT01	
W1-S3A	W1-S3	W1-301	F	60 MIN	09	A	3' - 0"	7' - 0"	1 3/4"	HM	W-PT01	HM1	W-PT01	



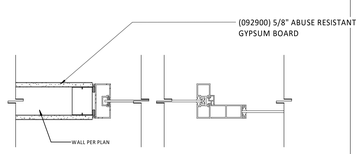
HM2 Hollow Metal (CMU Walls) **HM1** Hollow Metal

Frame Types A15
1/4" = 1'-0"

TYPE "C"
TYPICAL STOREFRONT DOOR

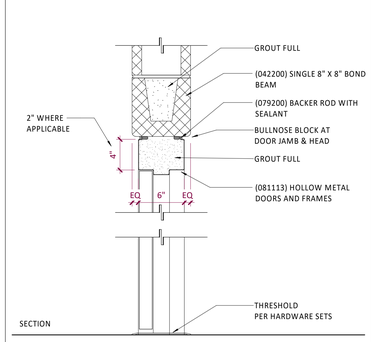


SECTION



PLAN

TYPE "B"
TYPICAL HM DOOR AT CMU



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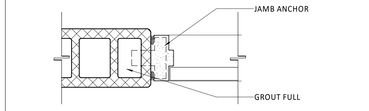
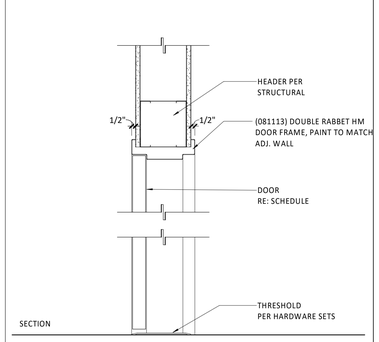


PLAN

TYPE "A"
TYPICAL HM DOOR



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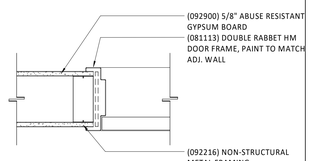
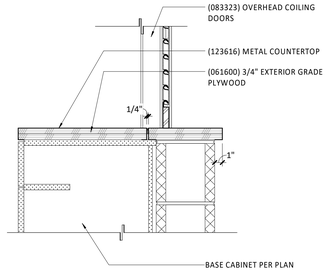
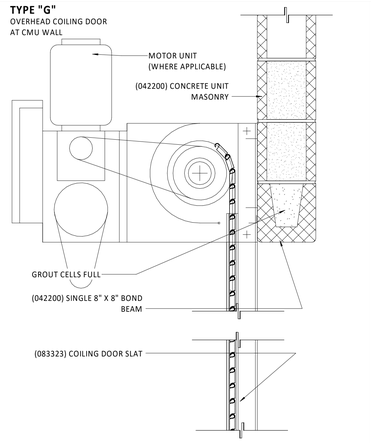


PLAN

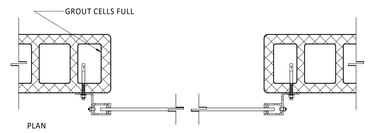
TYPE "G"
OVERHEAD COILING DOOR AT CMU WALL



SECTION (SILL)

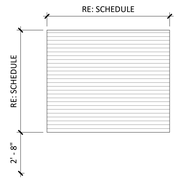


SECTION (HEAD)

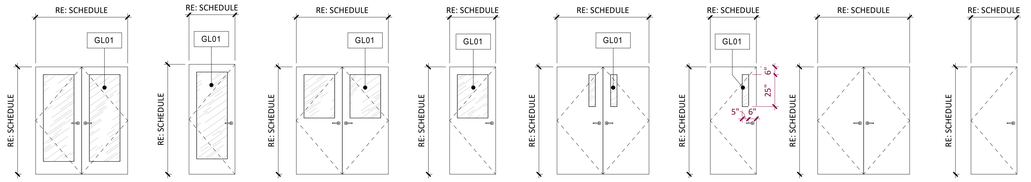


PLAN

Door Details D3
1 1/2" = 1'-0"



CD OVERHEAD COILING DOOR



FG.1 Full Glass - Double **FG** Full Glass - Single **G.1** Half Glass - Double **G** Half Glass - Single **N.1** Flush - Double - Narrow Vision Glass **N** Flush - Single - Narrow Vision Glass **F.1** Flush - Double **F** Flush - Single

Door Types A3
1/4" = 1'-0"

General Notes (Door Schedule):

1. THRESHOLDS SHALL COMPLY WITH ACCESSIBILITY REGULATIONS.
2. ALL DOOR FRAMES ARE TO BE WELDED.
3. EDGE CLEARANCES IN ACCORDANCE WITH AWI QUALITY STANDARDS.
4. DOORS LOCATED IN CORNERS ARE TO HAVE THE INSIDE FACE OF JAMB LOCATED 4 INCHES FROM THE ADJACENT WALL FINISH (8 INCHES IN MASONRY WALLS) UNLESS NOTED OTHERWISE.
5. PROVIDE BLOCKING AT ALL WALL MOUNTED DOOR STOPS.
6. GLAZING STOPS IN WOOD DOORS: SAME SPECIES AS DOOR FACE, MITERED CORNERS, CONCEALED FASTENERS.
7. FACTORY FINISH WOOD DOORS.
8. ALL EXIT DOORS SHALL BE OPERABLE FROM INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT AND SHALL BE LABELED "THIS DOOR TO REMAIN UNLOCKED DURING BUSINESS HOURS." THIS SIGN SHALL BE IN LETTERS NOT LESS THAN ONE INCH HIGH ON A CONTRASTING BACKGROUND. SPECIAL LOCKING DEVICES SHALL BE OF AN APPROVED TYPE, MANUALLY OPERATED. FLUSH BOLTS OR SURFACE BOLTS ARE PROHIBITED.
9. DOORS LOCATED IN CORNERS ARE TO HAVE THE INSIDE FACE OF JAMB LOCATED 4 INCHES FROM THE ADJACENT WALL FINISH (8 INCHES IN MASONRY WALLS) UNLESS NOTED OTHERWISE.
10. PROVIDE CLOSERS AT ALL FIRE RATED AND EXTERIOR DOORS. COORDINATE WITH HARDWARE SETS.
11. PROVIDE SAFETY GLAZING IN ALL DOORS AND ASSOCIATED ACTIVE/FIXED PANELS.
12. PROVIDE SAFETY GLAZING IN FIXED OR OPERABLE PANELS WHERE WITHIN 24 INCHES OF EITHER EDGE OF A OPERABLE DOOR.
13. PROVIDE SAFETY GLAZING IN FIXED OR OPERABLE PANELS WHERE WITHIN 18 INCHES FROM AND RAMP/STAIR LANDING OR HAND/GUARDRAIL.
14. ANY DOOR CARRYING A U.L. RATING SHALL BE INSTALLED IN A U.L. RATED FRAME CARRYING THE SAME DESIGNATION.
15. PROVIDE FIRE RATED GLAZING IN PANELS LOCATED WITHIN A RATED WALL.
16. CONTRACTOR TO COORDINATE SILL HEIGHTS WITH ELEVATIONS AND WALL SECTIONS.
17. PAINT METAL DOORS AND FRAMES TO MATCH ADJACENT WALLS UNLESS OTHERWISE NOTED. REFER TO FINISH LEGEND FOR ADDITIONAL INFORMATION.
18. REFER TO "PROJECT MANUAL" FOR HARDWARE SETS AND ADDITIONAL DOOR REQUIREMENTS.

DOOR LEGEND:

AL	ALUMINUM
CA	CARD ACCESS DEVICE
CL	CLOSER
FRP	FIBERGLASS
GL	GLASS
HC	HOLLOW CORE
HM	HOLLOW METAL
L	LOUVER
PF	PRE-FINISHED/FACTORY FINISHED
PH	PANIC HARDWARE
PR	PAIR
PTD	PAINTED
SD	SMOKE & DRAFT CONTROL
SS	STAINLESS STEEL
STL	STEEL
T	TEMPERED GLASS
V	VISION
WD	WOOD

HARDWARE/OPERATION:

1. CARD READER TYPE 01
2. DOOR MONITOR
3. ELECTRIC LOCK & MONITOR - EACH LEAF IF PAIR
4. VIDEO MONITOR - DOOR STATION WALL MOUNT
5. ADA PUSH BUTTON ON PEDESTAL
6. ADA PUSH BUTTON ON MULLION
7. ADA PUSH BUTTON ON WALL
8. ACOUSTICAL DOOR AND FRAME
9. AUTOMATIC DOOR OPENER BOTH SIDES

MATERIALS/FINISHES:

A. PAINT FRAME TO MATCH ADJACENT WALL
B. PAINT DOOR AND FRAME TO MATCH ADJACENT WALL

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STATE OF MISSOURI
JAY DARREN BROWNING
NUMBER A-2009027279
ARCHITECT
9.28.20

Architectural Corporation
Missouri License No. 2018022991
Jay Darren Browning Date: 09/28/2020
Architect License No. A-2009027279

REVISIONS

Number	DESCRIPTION	DATE

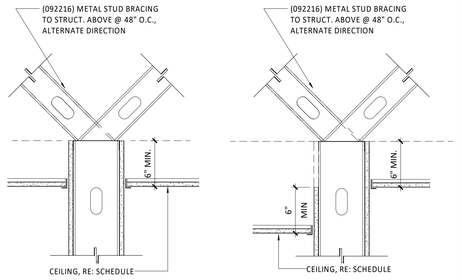
PROJECT NO: 0119-0101
DATE: September 28, 2020

Door & Window Schedule, Types, & Details

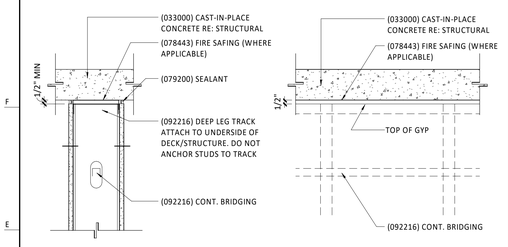
W-A080

BID SET

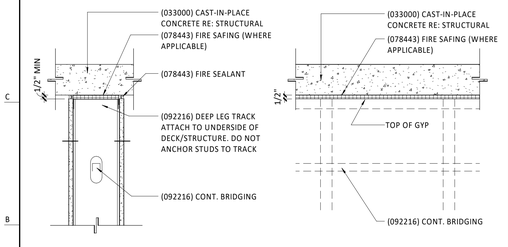
PRINT DATE/TIME:
9/28/2020 12:23:15 PM



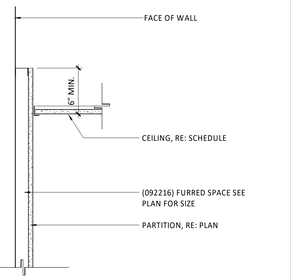
Non-rated Partition 6" Above Ceiling g15
1 1/2" = 1'-0"



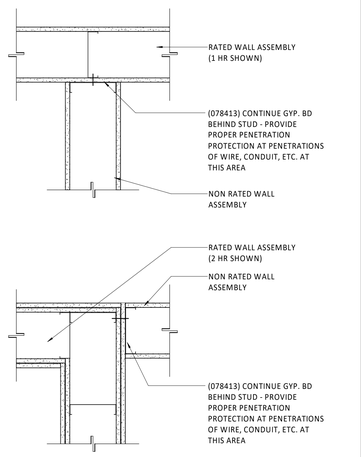
Partition to Underside of Deck - Non-Rated D15
1 1/2" = 1'-0"



Partition to Underside of Deck - Rated A15
1 1/2" = 1'-0"

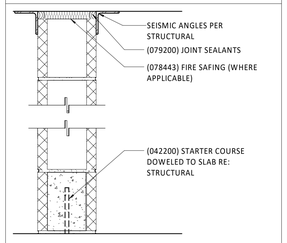


Top of Furring Wall F12
1 1/2" = 1'-0"



Wall Intersections A12
1 1/2" = 1'-0"

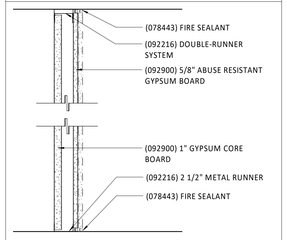
NOTES:
1. REFER TO STRUCTURAL FOR ADDITIONAL INFORMATION



PARTITION SYSTEM:
CONCRETE MASONRY UNIT PARTITION **M**

PARTITION IDENTIFICATION PLAN SYMBOL	M6	M8	M8.2
BASE PARTITION THICKNESS	5 5/8"	7 5/8"	7 5/8"
MASONRY MATERIAL	CMU	CMU	CMU
MASONRY SIZE (NOMINAL)	6x8X16	8x8X16	8x8X16
BEARING WALL	-	-	-
FIRE RATING (HRS)	-	-	2
FIRE TEST NUMBER	-	-	UL-U905
FIRE TEST NUMBER (HEAD OF WALL)	-	-	HW-D-0155
(078443) FIRE RESISTIVE JOINTS	-	-	YES
	-	-	-
	-	-	-
	-	-	-
	-	-	-
TO 6" ABOVE CEILING	NO	NO	NO
TO STRUCTURE ABOVE	YES	YES	YES
REMARKES:			

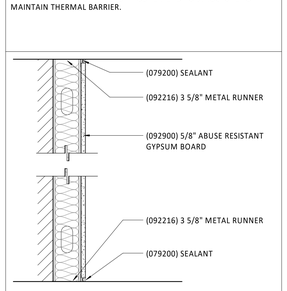
NOTES:
1. REFER TO GYPSUM BOARD SCHEDULE FOR MORE INFORMATION
2. USE TYPE "X" GWB FOR ALL FIRE RATED PARTITIONS



PARTITION SYSTEM:
GYPSUM SEPARATION PARTITION **S**

PARTITION IDENTIFICATION PLAN SYMBOL	S2.1
BASE PARTITION THICKNESS	3 1/8"
STUD SPACING (O.C.)	24"
STUD SIZE	2 1/2" CH
GWB THICKNESS	5/8"
SHAFT LINER THICKNESS	1"
	-
	-
FIRE RATING (HRS)	1
FIRE TEST NUMBER	UL -U415
FIRE TEST NUMBER (HEAD OF WALL)	HW-D-0584
(078443) FIRE RESISTIVE JOINTS	YES
	-
	-
	-
	-
	-
	-
TO STRUCTURE ABOVE	YES
REMARKES:	

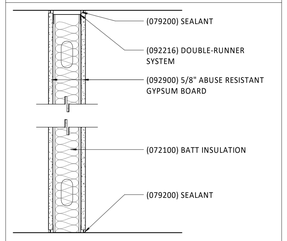
NOTES:
1. CONFIRM STUD SPACING WITH STRUCTURAL
2. WALLS AT EXTERIOR PRECAST MUST EXTEND TO STRUCTURE TO MAINTAIN THERMAL BARRIER.



PARTITION SYSTEM:
GYPSUM FURING PARTITION **F**

PARTITION IDENTIFICATION PLAN SYMBOL	F1	F4	F4a	F6	F6a
BASE PARTITION THICKNESS	2 1/4"	4 1/4"	4 1/4"	6 5/8	6 5/8"
STUD SPACING (O.C.)	16"	16"	16"	16"	16"
STUD SIZE	1 5/8"	3 5/8"	3 5/8"	6"	6"
GWB THICKNESS	5/8"	5/8"	5/8"	5/8"	5/8"
FIRE RATING (HRS)	-	-	-	-	-
FIRE TEST NUMBER	-	-	-	-	-
FIRE TEST NUMBER (HEAD OF WALL)	-	-	-	-	-
FIRE RESISTIVE JOINTS (079500)	-	-	-	-	-
ACOUSTIC RATING (STC)	-	-	34	-	37
ACOUSTICAL TEST NUMBER	-	-	NGC2013012	-	NGC2013021
RESILIENT CHANNELS	-	-	-	-	-
INSULATION THICKNES	-	-	3 1/2"	-	6"
(079219) ACOUSTICAL JOINTS	-	-	YES	-	YES
TO 6" ABOVE CEILING	YES	YES	NO	YES	NO
GWB STRUCTURE ABOVE	NO	NO*	YES	NO	YES
STUDS TO STRUCTURE ABOVE	NO	NO*	YES	NO	YES
REMARKES:		* SEE NOTE #2		* SEE NOTE #2	

NOTES:
1. CONFIRM STUD SPACING WITH STRUCTURAL
2. PROVIDE MOISTURE RESISTANT GWB IN WET AREAS
3. EXTEND ALL FIRE RATED WALLS STRUCTURE TO STRUCTURE.
4. USE TYPE "X" GWB FOR ALL FIRE RATED PARTITIONS



PARTITION SYSTEM:
GYPSUM WALL BOARD PARTITION **G**

PARTITION IDENTIFICATION PLAN SYMBOL	G4	G4a	G4.1	G4.2	G6
BASE PARTITION THICKNESS	4 7/8"	4 7/8"	4 7/8"	6 1/8"	7 1/4"
STUD SPACING (O.C.)	16"	16"	16"	16"	16"
STUD SIZE	3 5/8"	3 5/8"	3 5/8"	3 5/8"	6"
GWB THICKNESS	5/8"	5/8"	5/8" X	(2) 5/8"X	5/8"
	-	-	-	-	-
FIRE RATING (HRS)	-	-	1	2	-
FIRE TEST NUMBER	-	-	U419	U419	-
FIRE TEST NUMBER (HEAD OF WALL)	-	-	HW-D-0218	HW-D-0218	-
(078443) FIRE RESISTIVE JOINTS	-	-	YES	YES	-
ACOUSTIC RATING (STC)	-	44	-	-	-
ACOUSTICAL TEST NUMBER	-	NGC2514	-	-	-
RESILIENT CHANNELS	-	NO	-	-	-
INSULATION THICKNES	-	2 1/2"	-	-	-
ACOUSTICAL JOINTS (079219)	-	YES	-	-	-
TO 6" ABOVE CEILING	NO	NO	NO	NO	YES
GWB STRUCTURE ABOVE	NO	YES	YES	YES	NO
STUDS TO STRUCTURE ABOVE	YES	YES	YES	YES	NO
REMARKES:					

Interior Partition Types A3
1 1/2" = 1'-0"

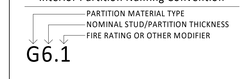
General Notes (Interior Partitions):

1. REFER TO PLANS/CODE PLANS FOR PARTITION TYPE LOCATIONS.
2. PARTITION TYPES DESIGNATED ON PLANS SHALL RUN FROM CORNER TO CORNER UNLESS OTHERWISE NOTED.
3. PARTITIONS SHALL EXTEND TO STRUCTURE ABOVE AND SHALL BE CONSTRUCTED TO ACCOMMODATE DEFLECTION UNLESS NOTED OTHERWISE.
4. FIRE-RESISTANCE-RATED PARTITIONS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE REFERENCED ASSEMBLY DESCRIPTION. REFER TO CODE PLANS FOR MORE INFORMATION.
5. FIRE-RATED WALLS REQUIRED TO HAVE PROTECTED OPENINGS SHALL BE PERMANENTLY IDENTIFIED WITH SIGNS OR STENCILING ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION. SUCH SIGNAGE SHOULD BE ABOVE ACCESSIBLE CEILINGS AND/OR BELOW ACCESSIBLE FLOORS.
6. WHERE DIFFERENT PARTITION TYPES INTERSECT, THE PARTITION TYPE WITH THE GREATER FIRE-RESISTANCE RATING SHALL CONTINUE WITHOUT INTERRUPTION.
7. PENETRATIONS OF FIRE-RESISTANCE-RATED ASSEMBLIES SHALL BE PROVIDED WITH FIRE-RATED PENETRATION PROTECTION IN ACCORDANCE WITH AN APPROVED UNDERWRITERS LABORATORY SYSTEM.
8. FIRE DAMPERS OR FIRE DOORS SHALL BE PROVIDED WHERE AIR DUCTS OR OPENINGS PENETRATE FIRE-RATED PARTITIONS.
9. AT ALL WET AREAS AND LOCATIONS TO RECEIVE TILE. COORDINATE THE SUBSTRATE MATERIAL WITH PROJECT MANUAL. EXTEND THE SUBSTRATE A MINIMUM OF 4'-0" BEYOND THE WET AREA.
10. USE ACOUSTICAL SEALANT AROUND ALL PIPES, DUCTS, CONDUIT, JUNCTION BOXES, ETC. ON BOTH SIDES OF CROSSING / PENETRATING WALLS WITH ACOUSTICAL RATINGS. COLOR MATCH SEALANT TO THE ADJACENT WALL COLOR.
11. PROVIDE IMPACT RESISTANT TRIM OR CASING AT ALL EDGES OF PLASTER AND GYPSUM BOARD SURFACES WHERE IT TERMINATES OR MEETS ANY OTHER MATERIAL, UNLESS NOTED OTHERWISE
12. PROVIDE IMPACT RESISTANT CORNER BEADS AT ALL OUTSIDE CORNERS OF PLASTER AND GYPSUM BOARD SURFACES, UNLESS NOTED OTHERWISE.
13. CONTRACTOR TO PROVIDE WOOD BLOCKING BEHIND ALL TOILET ROOM ACCESSORIES, GRAB BARS, HANDRAILS, WOOD TRIM, AND WALL MOUNTED FIXTURES.
14. INSTALL CONTROL JOINTS IN GYPSUM BOARD CONSTRUCTION AS SHOWN ON THE DRAWINGS AND IN PARTITIONS AND WALL FURRING RUNS EXCEEDING 30 FEET, SPACING CONTROL JOINTS NOT MORE THAN 30 FEET O.C. VERIFY LOCATIONS WITH ARCHITECT. INSTALL CONTROL JOINTS IN FURRED ASSEMBLIES WHERE CONTROL JOINTS OCCUR IN BASE EXTERIOR WALL.

Gypsum Board Schedule

5/8" GYPSUM BOARD	ALL LOCATIONS UNLESS NOTED BELOW OR DETAILED OTHERWISE.
5/8" ABUSE RESISTANT GYPSUM	HIGH TRAFFIC AREAS SUCH AS LOBBIES, PUBLIC CORRIDORS AND WORK ROOMS SUCH AS: JANITOR, HOUSEKEEPING, MECHANICAL, ETC.
5/8" GLASS MAT BACKING BOARD	"WET" WALLS NON-RATED WITH PLUMBING FIXTURES, DRINKING FOUNTAINS, TOILETS, LAVATORIES, URINALS, ETC.
1/2" FIBER CEMENT BACKING PANELS	WALLS EXPOSED DIRECTLY TO RUNNING WATER AND SCHEDULE TO RECIEVE TILE. BATHTUBS, SHOWERS, ETC.
1" SHAFT LINER PANELS	INTERIOR OF SHAFT WALL ASSEMBLIES

Interior Partition Naming Convention



Interior Partition Types

Mark	Width	Fire Rating	Type Comments
F4	4 1/4"	NR	(092900) Gypsum Board Partition
G4	4 7/8"	NR	(092900) Gypsum Board Partition
G4.1	4 7/8"	1 HR	(092900) Gypsum Board Partition
M6	5 5/8"	NR	(042200) Concrete Unit Masonry
S2.1	3 1/8"	1 HR	(092116) Gypsum Board Shaft Wall

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Lee's Summit R7 District Athletics Facilities

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structural engineer:
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civil engineer:
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Architectural Corporation
Missouri License No. 2018022991
Jay Darren Browning Date: 09/28/2020
Architect License No. A-2009027279

REVISIONS

Number	DESCRIPTION	DATE

PROJECT NO: 0119-0101
DATE: September 28, 2020

Interior Partition Types
W-A090

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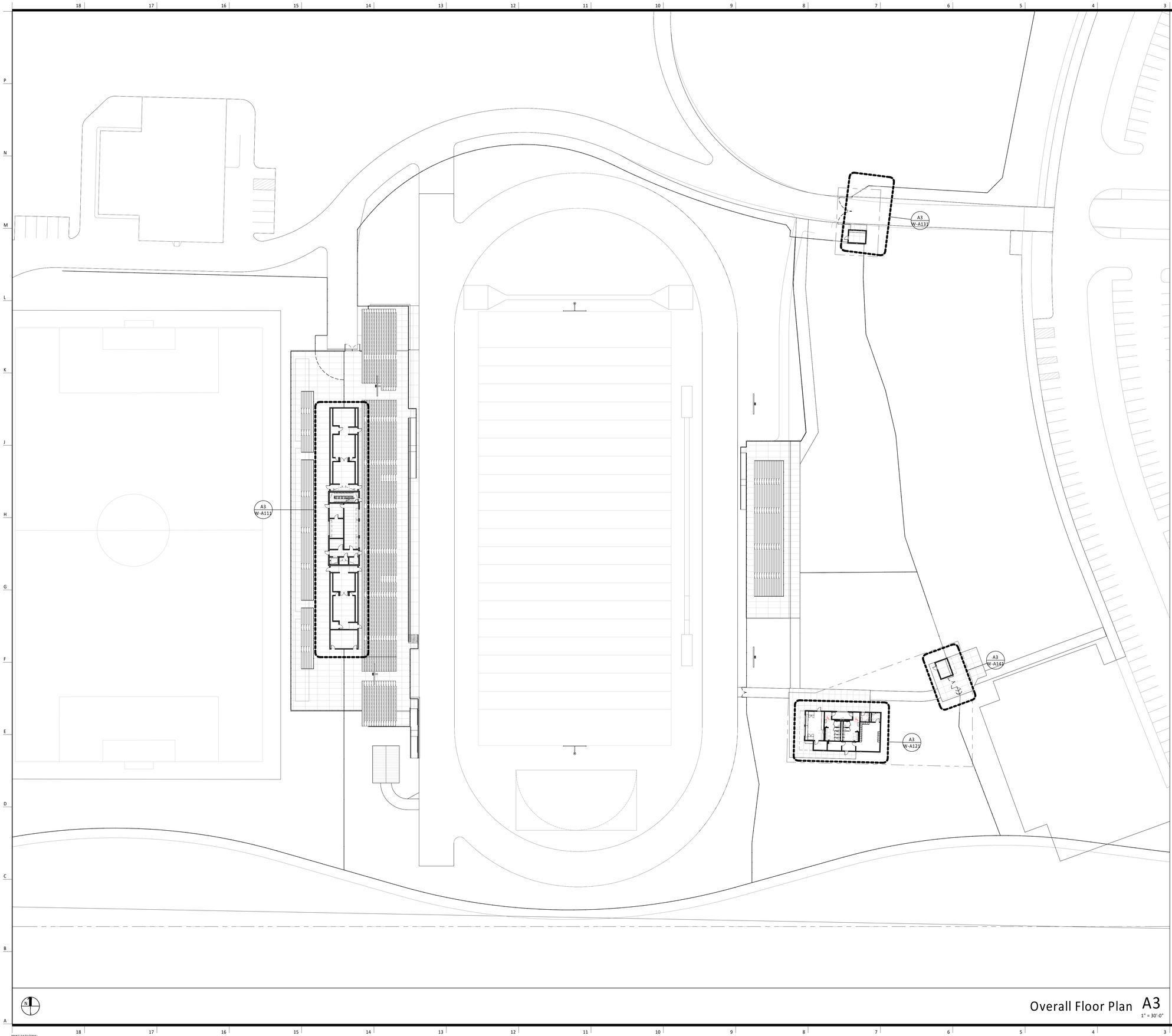

General Notes (Floor Plans):

1. ALL WALL TYPES TO BE M6 UNLESS OTHERWISE NOTED.
2. ALL WALL DIMENSIONS ARE TO FACE OF WALL UNLESS OTHERWISE NOTED.
3. MASONRY WALLS ARE ALIGNED WITH THE INTERIOR FACE ON GRID LINES AND MASONRY DIMENSIONS ARE NOMINAL UNLESS OTHERWISE NOTED
4. DOORS IN STUD WALLS NEAR PERPENDICULAR WALLS ARE LOCATED 4" OFF FACE OF PERPENDICULAR WALL UNLESS OTHERWISE NOTED.
5. DOORS IN MASONRY WALLS ARE LOCATED IN ROUGH OPENINGS DIMENSIONED ON SHEET
6. SEE GENERAL ACCESSIBILITY SHEET FOR HEIGHTS AND LOCATIONS OF TOILET ACCESSORIES NOT SHOWN ON ELSEWHERE.
7. CONTRACTOR TO FIELD VERIFY ALL MEASUREMENTS AND CONDITIONS NEW AND EXISTING. NOTIFY THE ARCHITECT/OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES.
8. ENLARGED PLANS MAY BE ROTATED OR MIRRORED COORDINATE WITH MAIN FLOOR PLAN.
9. CONTRACTOR TO PROVIDE 4'-0" HIGH PLYWOOD BACKER BOARD IN ALL MECHANICAL AND ELECTRICAL ROOMS MOUNTED 3'-6" A.F.F. FOR PERIMETER OF ROOM

Overall Floor Plan A3
1" = 30'-0"

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JAY DARREN BROWNING
NUMBER A-2009027279
ARCHITECT
9.28.20

Architectural Corporation
Missouri License No. 2018022991
Jay Darren Browning Date: 09/28/2020
Architect License No. A-2009027279

REVISIONS

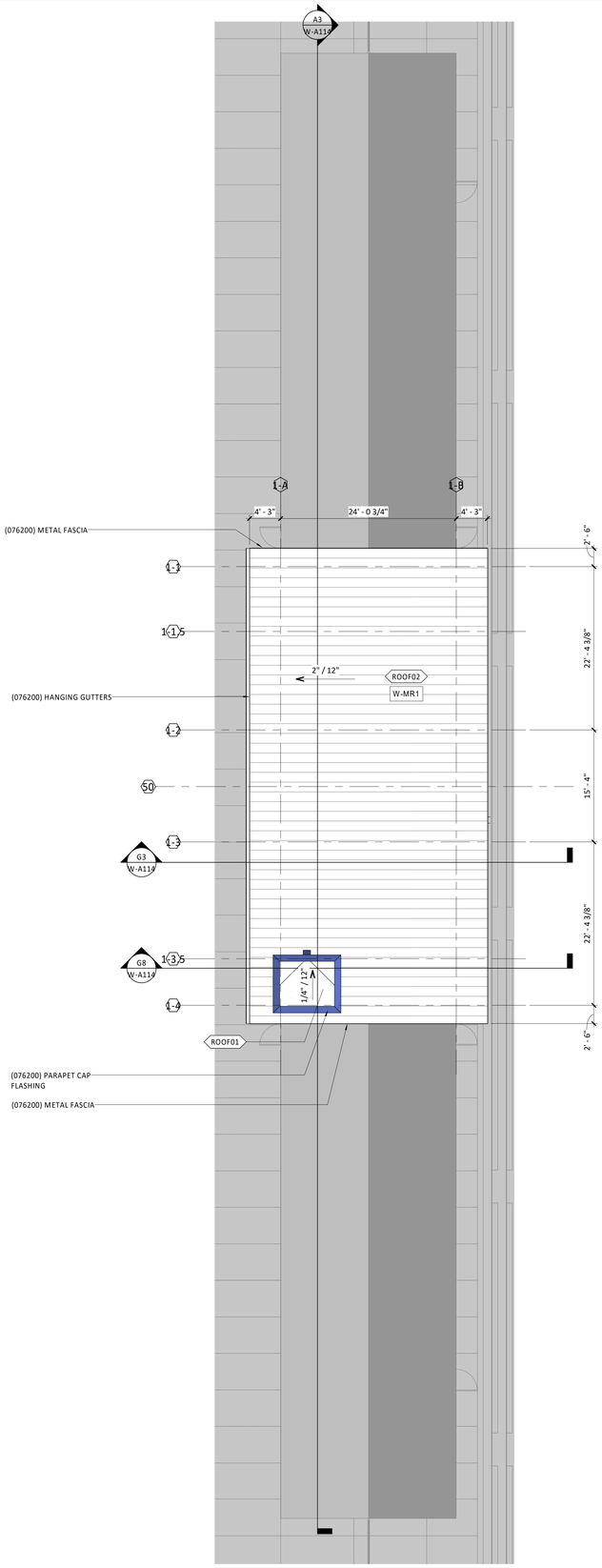
Number	DESCRIPTION	DATE

PROJECT NO: 0119-0101
DATE: September 28, 2020

Overall Floor Plan

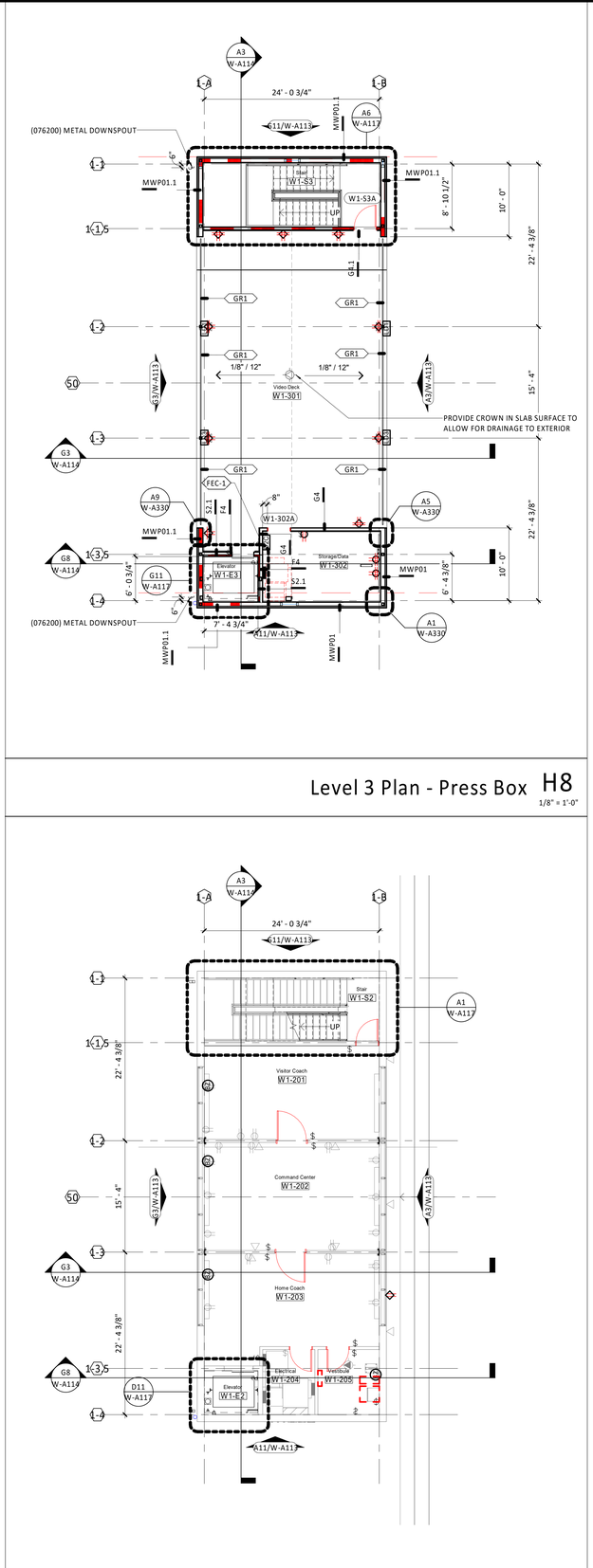
W-A101

BID SET



Roof Plan - Press Box A13

1/8" = 1'-0"

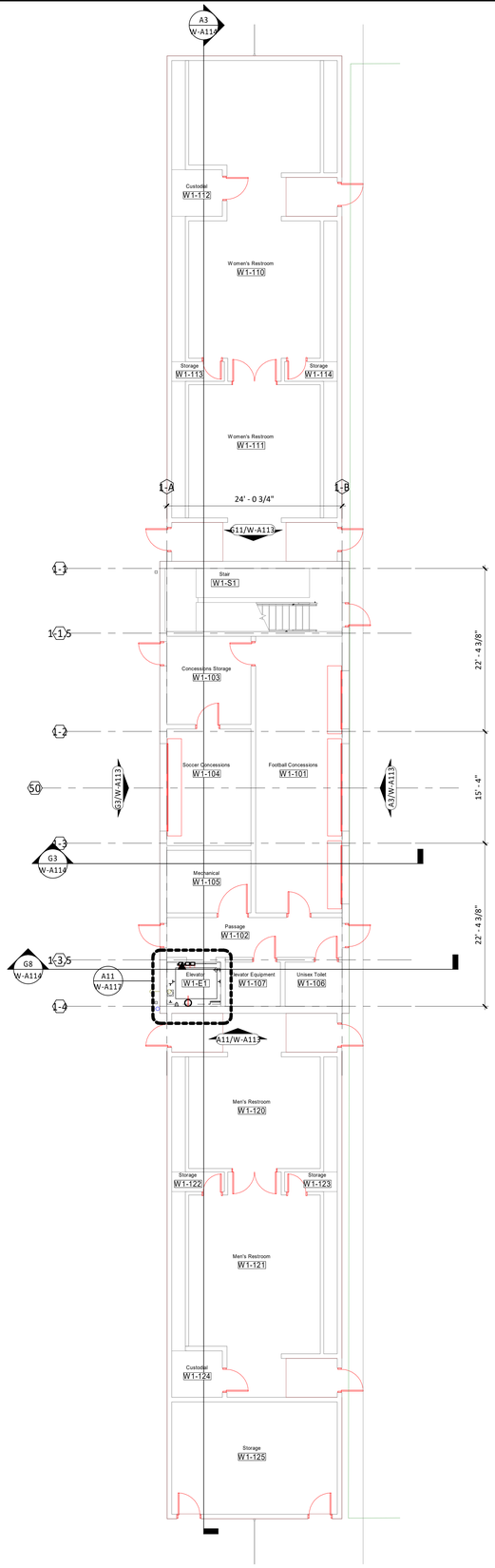


Level 3 Plan - Press Box H8

1/8" = 1'-0"

Level 2 Plan - Press Box A8

1/8" = 1'-0"



Level 1 Plan - Press Box A3

1/8" = 1'-0"

General Notes (Floor Plans):

1. ALL WALL TYPES TO BE M6 UNLESS OTHERWISE NOTED.
2. ALL WALL DIMENSIONS ARE TO FACE OF WALL UNLESS OTHERWISE NOTED.
3. MASONRY WALLS ARE ALIGNED WITH THE INTERIOR FACE ON GRID LINES AND MASONRY DIMENSIONS ARE NOMINAL UNLESS OTHERWISE NOTED
4. DOORS IN STUD WALLS NEAR PERPENDICULAR WALLS ARE LOCATED 4" OFF FACE OF PERPENDICULAR WALL UNLESS OTHERWISE NOTED.
5. DOORS IN MASONRY WALLS ARE LOCATED IN ROUGH OPENINGS DIMENSIONED ON SHEET
6. SEE GENERAL ACCESSIBILITY SHEET FOR HEIGHTS AND LOCATIONS OF TOILET ACCESSORIES NOT SHOWN ON ELSEWHERE.
7. CONTRACTOR TO FIELD VERIFY ALL MEASUREMENTS AND CONDITIONS NEW AND EXISTING. NOTIFY THE ARCHITECT/OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES.
8. ENLARGED PLANS MAY BE ROTATED OR MIRRORED COORDINATE WITH MAIN FLOOR PLAN.
9. CONTRACTOR TO PROVIDE 4'-0" HIGH PLYWOOD BACKER BOARD IN ALL MECHANICAL AND ELECTRICAL ROOMS MOUNTED 3'-6" A.F.F. FOR PERIMETER OF ROOM

General Notes: (Roof Plan)

1. REFER TO EXTERIOR ENCLOSURE TYPES FOR ROOF DETAILS.
2. MINIMUM SLOPES ON ROOF SHALL BE 1/4" PER FOOT IN DIRECTION OF DRAINS OR ROOF EDGE
3. ELEVATION ABBREVIATIONS AS FOLLOWS: **BOD** = BOTTOM OF DECK, **TOS** = TOP OF STEEL, **TOP** = TOP OF PARAPET
4. OBJECT ABBREVIATIONS AS FOLLOWS: **RD** = ROOF DRAIN, **RTU** = ROOFTOP UNIT, **RH** = ROOF HATCH
5. PROVIDE ALL ROOFING DETAILS BY MANUFACTURERS WARRANTED SYSTEMS.
6. PROVIDE WALKWAY PADS AT ALL ROOF LADDERS AND AT ALL ROOFTOP EQUIPMENT WORKING AREAS.
7. PROVIDE CRICKETS AT ALL ROOFTOP EQUIPMENT TO FACILITATE DRAINAGE.

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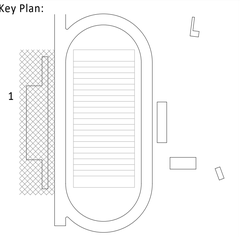
NUMBER A-2009027279
ARCHITECT
9.28.20

Architectural Corporation
Missouri License No. 2018022991
Jay Darren Browning — Date: 09/28/2020
Architect — License No. A-2009027279

REVISIONS

Number	DESCRIPTION	DATE

Key Plan:



PROJECT NO: 0119-0101
DATE: September 28, 2020

Press Box - Floor/Roof Plans

W-A111

BID SET

PRINT DATE/TIME:
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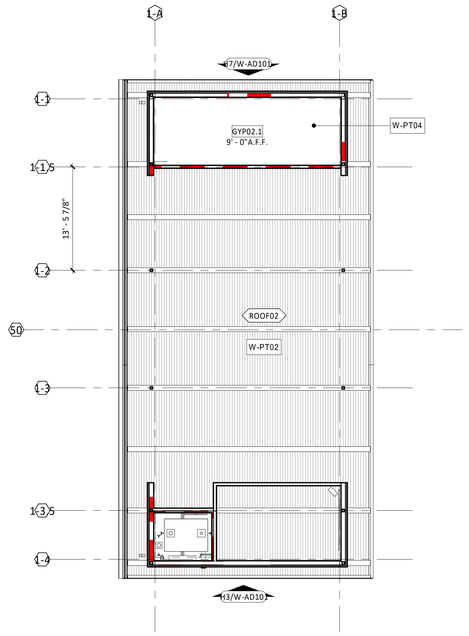
General Notes (Reflected Ceiling Plans):

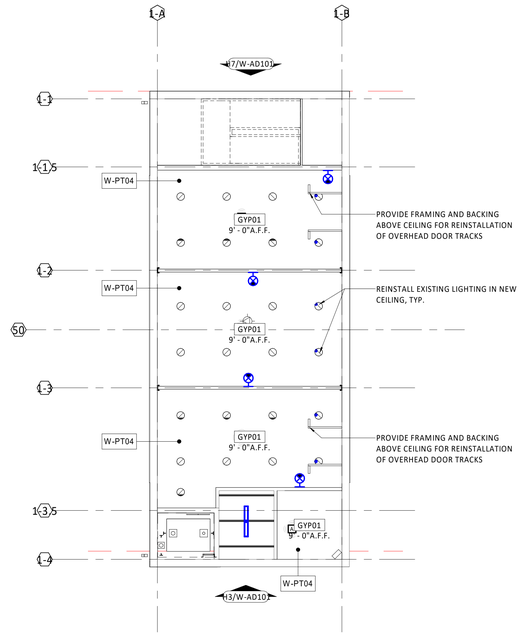
1. ALL CEILING AND SOFFIT HEIGHTS ARE GIVEN ABOVE FINISHED FLOOR ELEVATION (EL. 0'-0")
2. GENERALLY ONLY CEILING MOUNTED FIXTURES ARE SHOWN ON THIS PLAN. COORDINATE WITH MEP PLANS FOR ADDITIONAL INFORMATION.
3. VERIFY LOCATIONS OF ALL CEILING ACCESS PANELS WITH MEP DRAWINGS. COORDINATE LOCATIONS OF PANELS WITH ARCHITECT PRIOR TO INSTALLATION. ACCESS PANEL FIRE RATINGS MUST MATCH CEILING ASSEMBLY FIRE RATINGS.
4. LIGHTING FIXTURES TO BE CENTERED AND SPACED EQUALLY UNLESS NOTED OTHERWISE.
5. LIGHT FIXTURES ARE SHOWN FOR DIMENSIONAL PURPOSES ONLY COORDINATE WITH ELECTRICAL DRAWINGS FOR FIXTURE DESIGNATIONS.
6. IF PROJECT INCLUDES FIRE RATED CEILINGS, LIGHT FIXTURES LOCATED IN RATED CEILING ASSEMBLIES ARE TO BE TENTED OR OTHERWISE RATED TO MATCH THE CEILING.

Lighting Fixture Legend:

	2X4 FLORESCENT
	2X2 FLORESCENT
RE: PLAN	STRIP FLORESCENT
	RECESSED CAN LIGHT
	CEILING FAN
PLAN ELEVATION	EMERGENCY WALL PACK
	TRACK LIGHTING
	STEP LIGHT
	COVE LIGHT



Level 3 RCP - Press Box A8
1/8" = 1'-0"



Level 2 RCP - Press Box A3
1/8" = 1'-0"

Key Plan:

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ARCHITECT
9.28.20

Architectural Corporation
Missouri License No. 2018022991
Jay Darren Browning Date: 09/28/2020
Architect License No. A-2009027279

REVISIONS

Number	DESCRIPTION	DATE

PROJECT NO: 0119-0101
DATE: September 28, 2020

Press Box - Reflected Ceiling Plans

W-A112

BID SET

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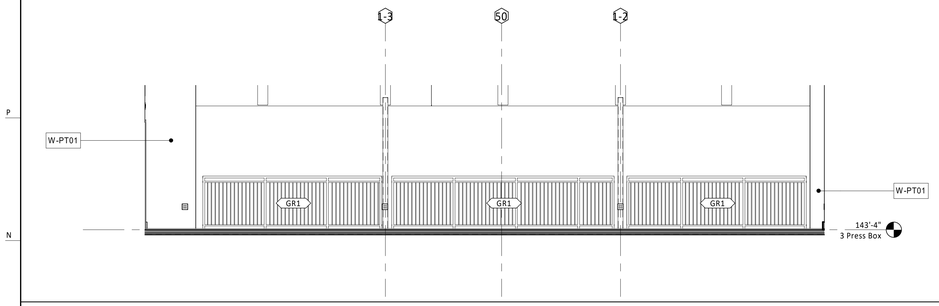
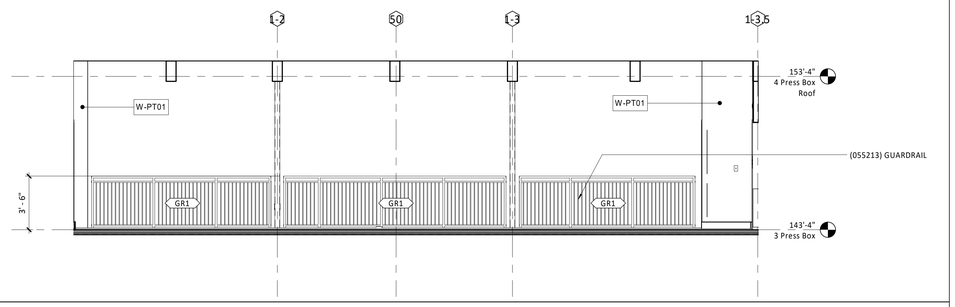
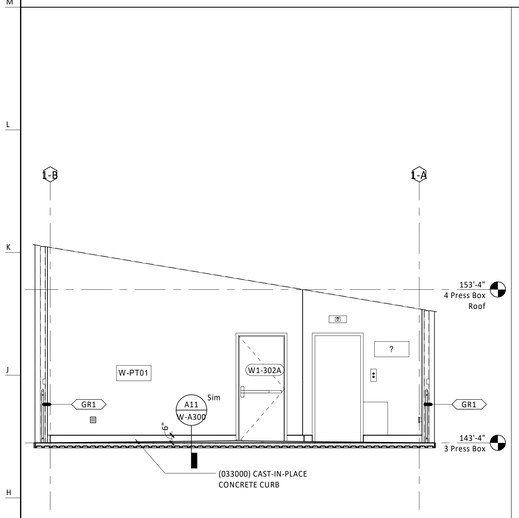


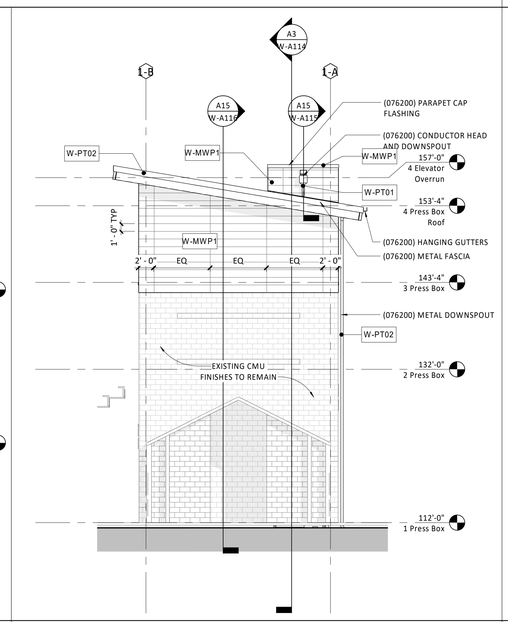
Interior Elevation - Video Deck West M11
1/4" = 1'-0"



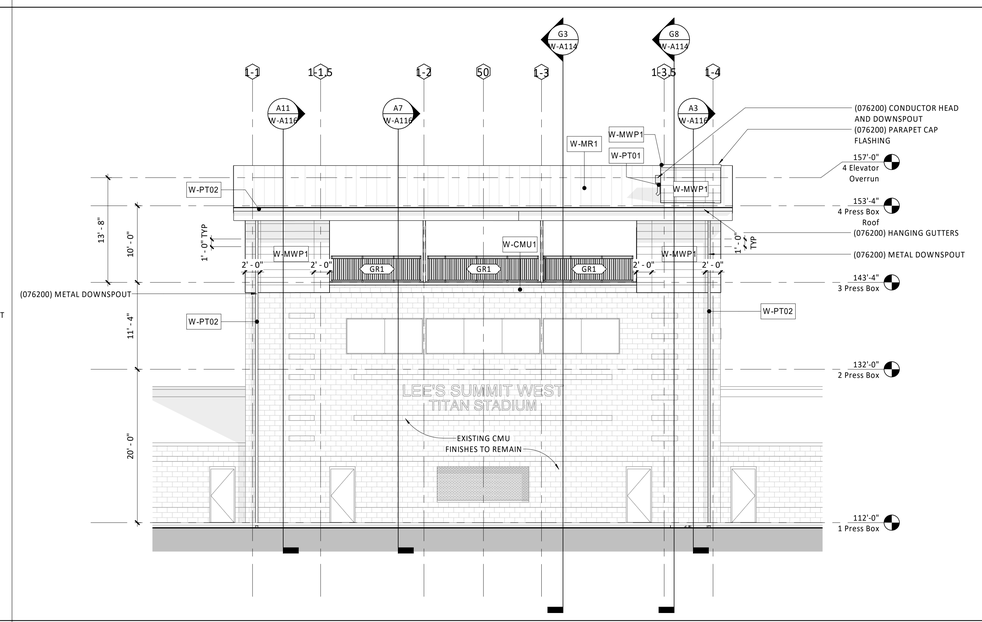
Interior Elevation - Video Deck East M3
1/4" = 1'-0"



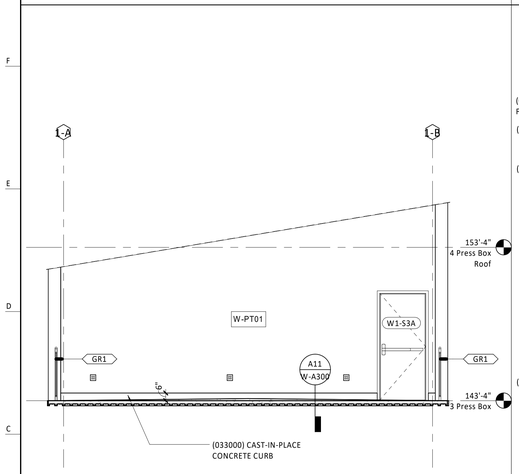
Interior Elevation - Video Deck South G15
1/4" = 1'-0"



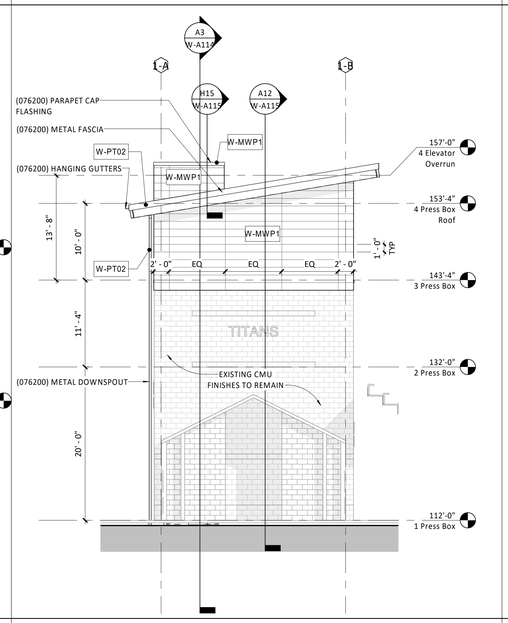
North Elevation - Press Box G11
1/8" = 1'-0"



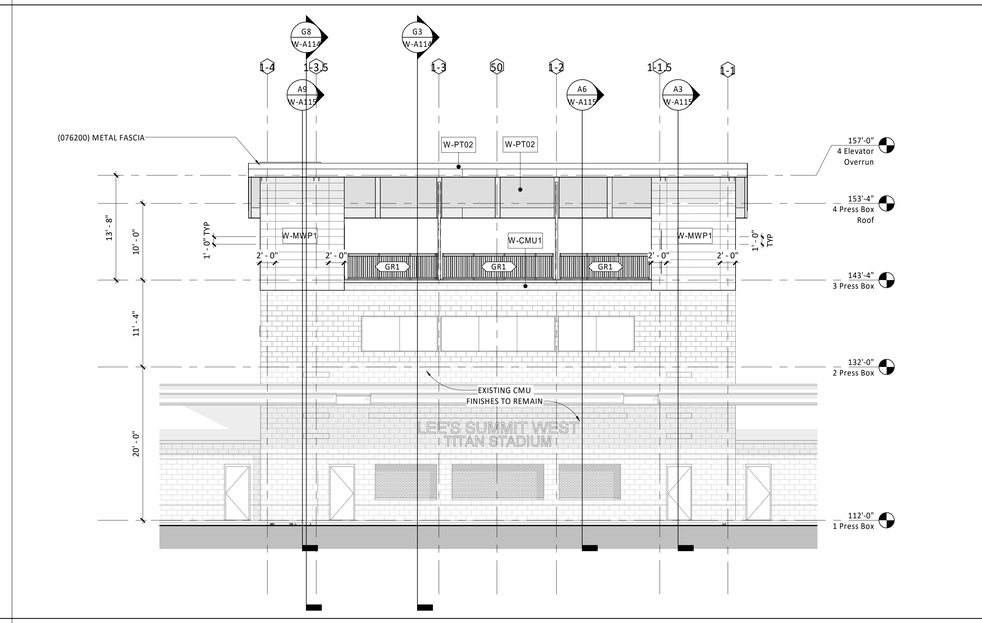
West Elevation - Press Box G3
1/8" = 1'-0"



Interior Elevation - Video Deck North A15
1/4" = 1'-0"



South Elevation - Press Box A11
1/8" = 1'-0"



East Elevation - Press Box A3
1/8" = 1'-0"

General Notes (Exterior Elevations):

1. MATERIALS AND FINISHES INDICATED APPLY TO ALL SIMILAR ELEMENTS.
2. COORDINATE EXTERIOR LIGHTING FIXTURE TYPES AND LOCATIONS WITH ELECTRICAL DRAWINGS.

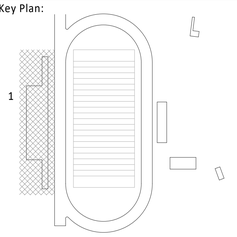
Finish Legend - Exterior

MARK	MODEL
042000 CONCRETE MASONRY UNITS	
W-CMU1	MESASTONE - LANDER'S BAY
W-CMU2	ASTRA-GLAZE.SW - COSMIC BLUE
074113 STANDING SEAM METAL ROOF	
W-MR1	SNAP-CLAD - CITYSCAPE
074213 ALUMINUM COMPOSITE WALL PANEL	
W-MWP1	PAC-3000 RS COMPOSITE WALL PANEL - AWARD BLUE
099113 EXTERIOR PAINT	
W-PT01	SW 6804 DIGNITY BLUE
W-PT02	SW 7073 NETWORK GRAY
W-PT03	SW 7024 FUNCTIONAL GRAY

General Notes (Interior Elevations):

1. REFER TO FINISH LEGEND/SCHEDULE FOR COMPLETE LISTING OF FINISHES
2. REFER TO PROJECT STANDARDS FOR INSTALLATION INFORMATION FOR ACCESSORIES, TOILET FIXTURES, ETC.
3. REFER TO PROJECT STANDARDS FOR DEVICES FOR TYPICAL INSTALLATION INFORMATION.
4. AT GYP SOFFIT CONTROL JOINTS, CONTINUE CONTROL JOINT UP BOTH VERTICAL FACES OF SOFFIT.

Key Plan:



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Jay Darren Browning Date: 09/28/2020
Architect License No. A-2009027279

REVISIONS

Number	DESCRIPTION	DATE

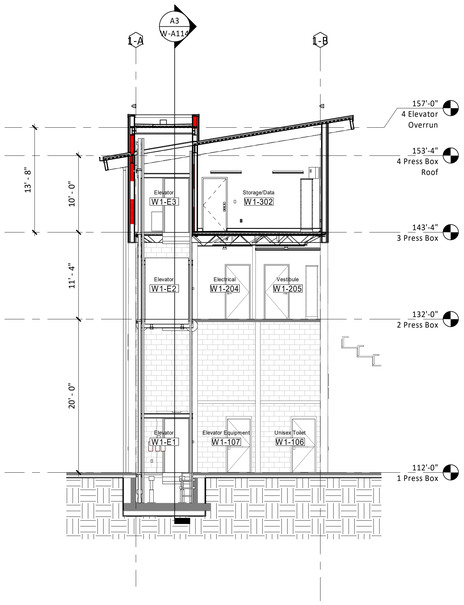
PROJECT NO: 0119-0101
DATE: September 28, 2020

Press Box - Elevations

W-A113

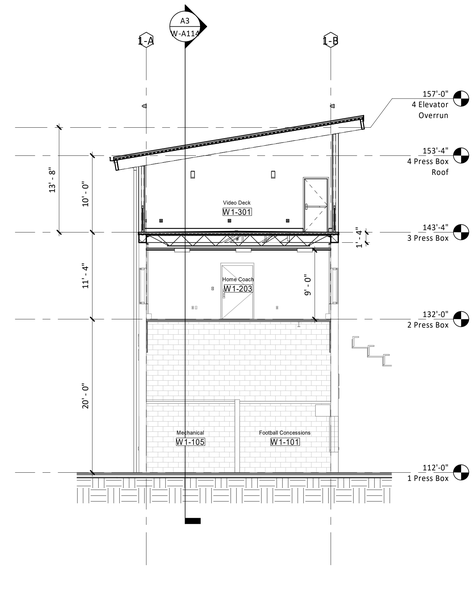
BID SET

PRINT DATE/TIME:
9/28/2020 12:18:17 PM



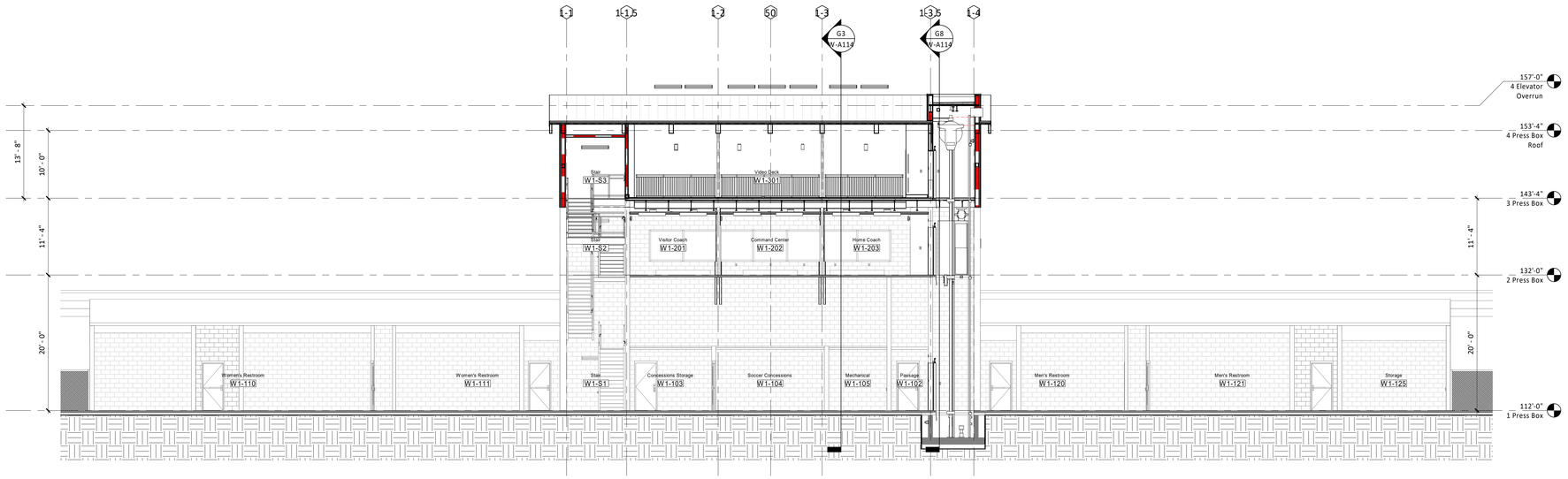
E/W Building Section - Press Box @ Elevator G8

1/8" = 1'-0"



E/W Building Section - Press Box G3

1/8" = 1'-0"



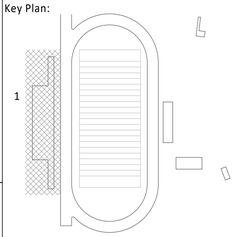
N/S Building Section - Press Box A3

1/8" = 1'-0"

General Notes (Building Sections):

1. BUILDING SECTIONS SHOWN FOR ORIENTATION AND CONTEXT. REFER TO WALL SECTIONS FOR CONSTRUCTION DETAILING AND REFERENCES.

Key Plan:



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Lee's Summit R7 District Athletics Facilities

Lee's Summit West High School
2600 SW Ward Road
Lee's Summit, MO 64082

owner:
Lee's Summit R-7 School District
301 NE Tudor Road
Lee's Summit, MO 64086

architect:
Gould Evans
4200 Pennsylvania Avenue
Kansas City, MO 64111
816.931.6655 voice
www.gouldevans.com

structural engineer:
Bob D. Campbell & Company, Inc.
4338 Belleview Avenue
Kansas City, MO 64111
816.531.4144

civil engineer:
Kaw Valley Engineering
14700 West 114th Terrace
Lenexa, KS 66215
913.485.0318

mechanical/electrical engineer:
Henderson Engineers
8345 Lenexa Drive | Suite 300
Lenexa, KS 66214
816.742.5000

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STATE OF MISSOURI
JAY DARREN BROWNING
NUMBER A-2009027279
ARCHITECT
9.28.20

Architectural Corporation
Missouri License No. 2018022991
Jay Darren Browning Date: 09/28/2020
Architect License No. A-2009027279

REVISIONS

Number	DESCRIPTION	DATE

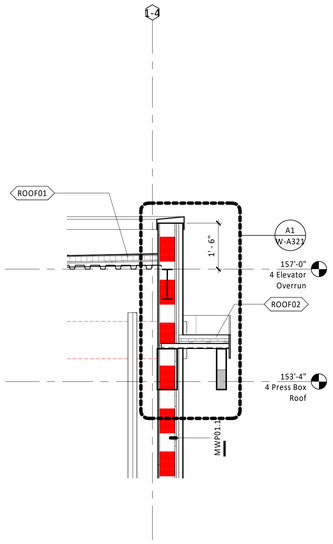
PROJECT NO: 0119-0101
DATE: September 28, 2020

Press Box - Building Sections

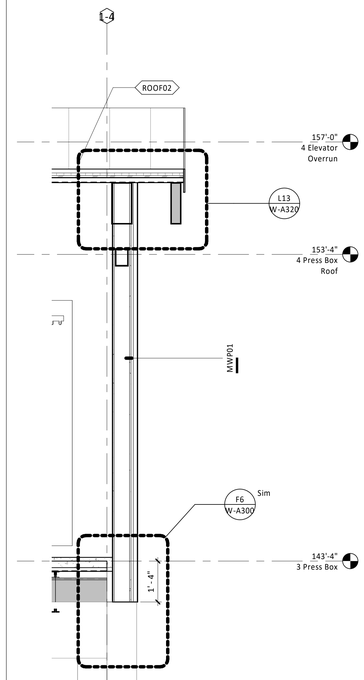
W-A114

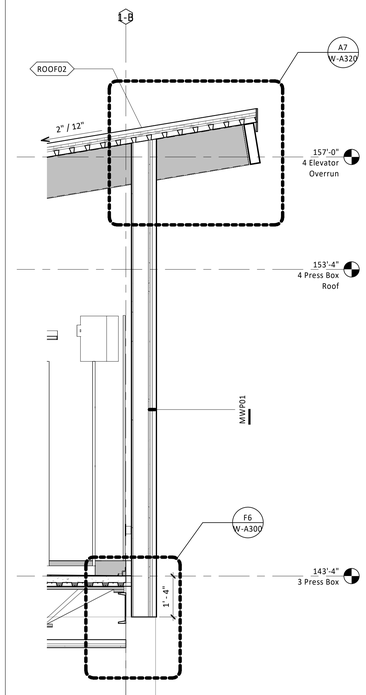
BID SET

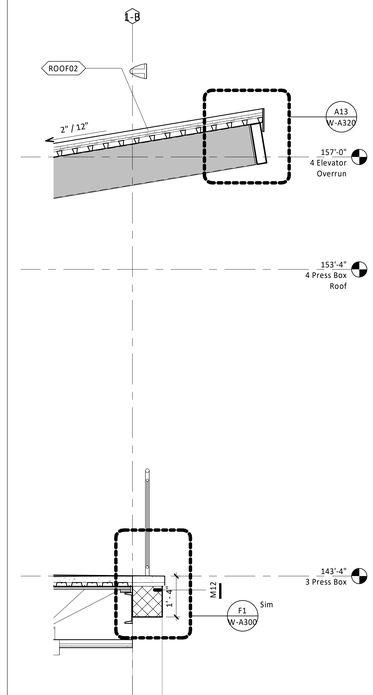
PRINT DATE/TIME:
9/28/2020 12:18:24 PM

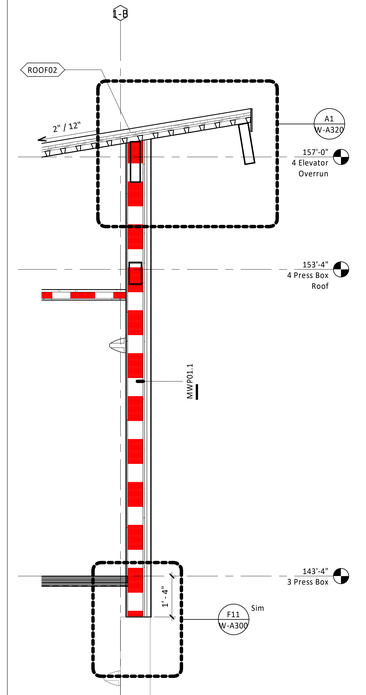


Wall Section - Elevator Overrun H15
1/2" = 1'-0"









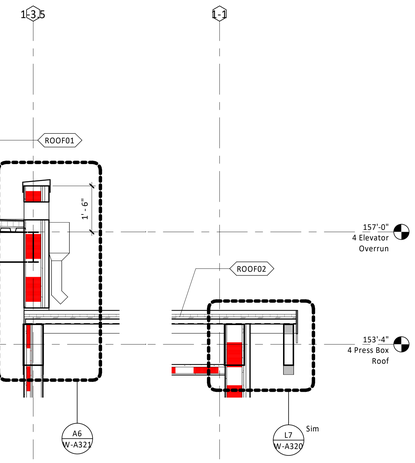
General Notes (Wall Sections):

1. SEE STRUCTURAL DRAWINGS FOR ADDITIONAL FOUNDATIONS NOT SHOWN ON WALL SECTIONS AND FOR DIMENSIONS AND REINFORCING OF FOUNDATIONS
2. ALL OPENINGS, FLASHING, COUNTER FLASHING, AND EXPANSION JOINTS SHALL BE WATERTIGHT.
3. ALL OPEN JOINTS, PENETRATIONS, AND OTHER OPENINGS IN THE ENVELOPE SHALL BE SEALED, GASKETED, OR WEATHER-STRIPPED TO LIMIT AIR LEAKAGE.
4. PROVIDE MOLD RESISTANT GYPSUM BOARD AT ALL EXTERIOR WALLS.

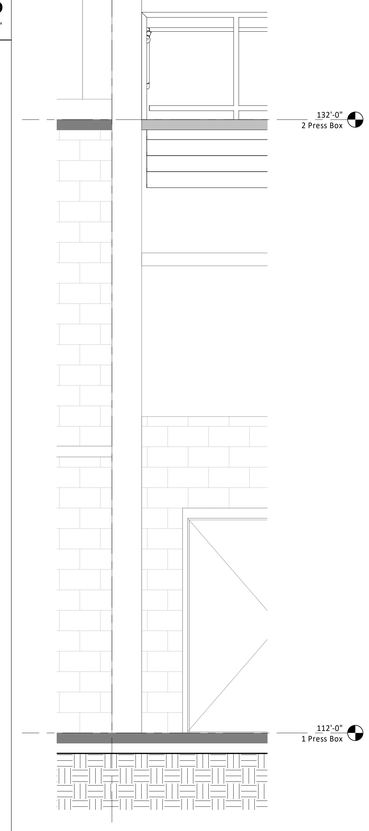
Wall Legend:

RE: Exterior Elevations for exterior fPath #s
RE: Sheet W-A020 for wall assembly types & details

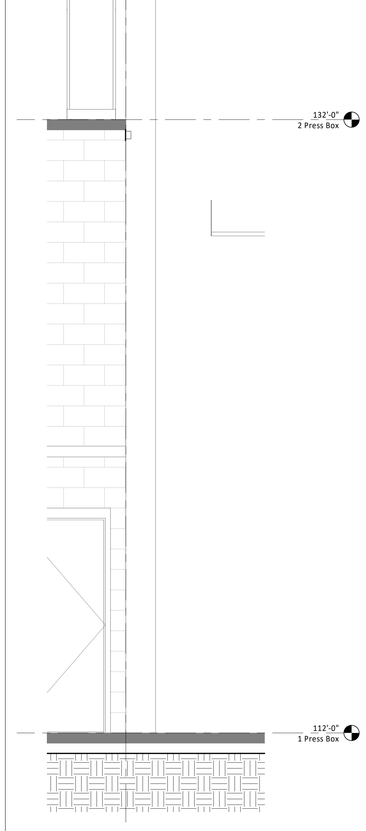
- 1-Hour: Fire Rated Assembly
- 2-Hour: Fire Rated Assembly
- Existing CMU
- New CMU (Field Color)
- New CMU (Accent Color)



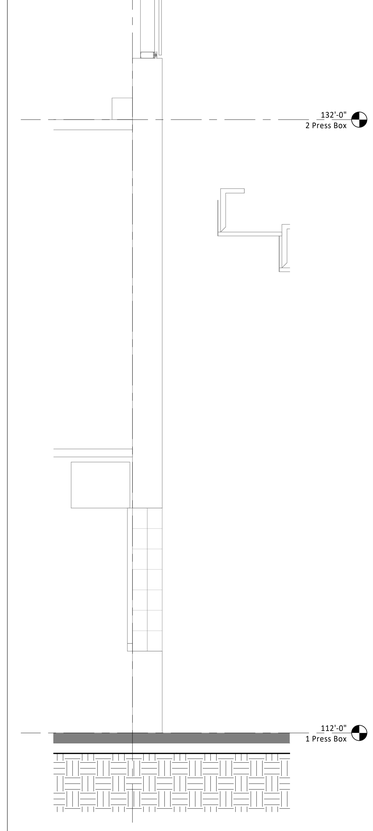
Wall Section - Elevator Overrun @ Scupper & Downspout A15
1/2" = 1'-0"



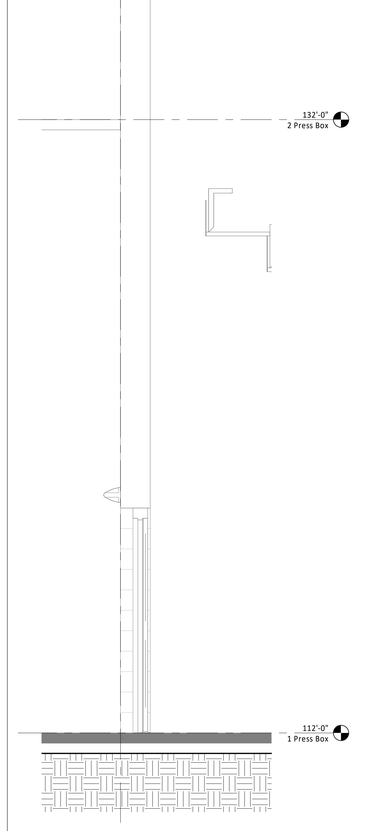
Wall Section - South Side @ Exterior Rated Wall A12
1/2" = 1'-0"



Wall Section - East Side @ Exterior Wall A9
1/2" = 1'-0"

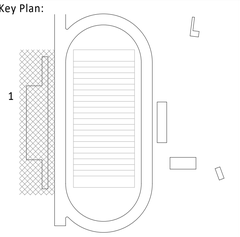


Wall Section - East Side @ Open Deck A6
1/2" = 1'-0"



Wall Section - East Side @ Rated Exterior Wall A3
1/2" = 1'-0"

Key Plan:



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Architect License No. A-2009027279

REVISIONS

Number	DESCRIPTION	DATE

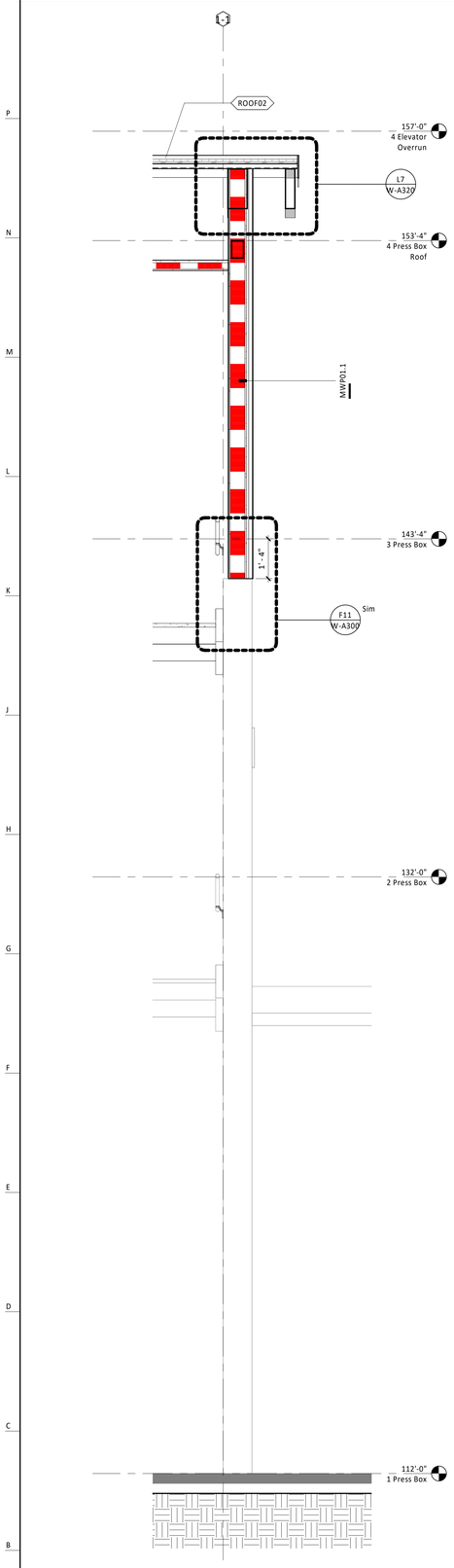
PROJECT NO: 0119-0101
DATE: September 28, 2020

Press Box - Wall Sections

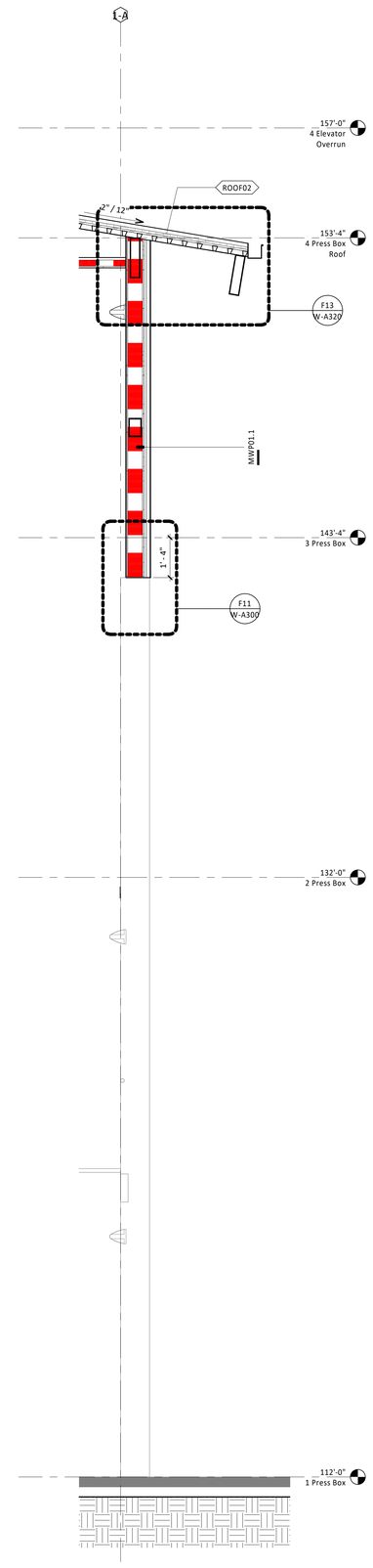
W-A115

BID SET

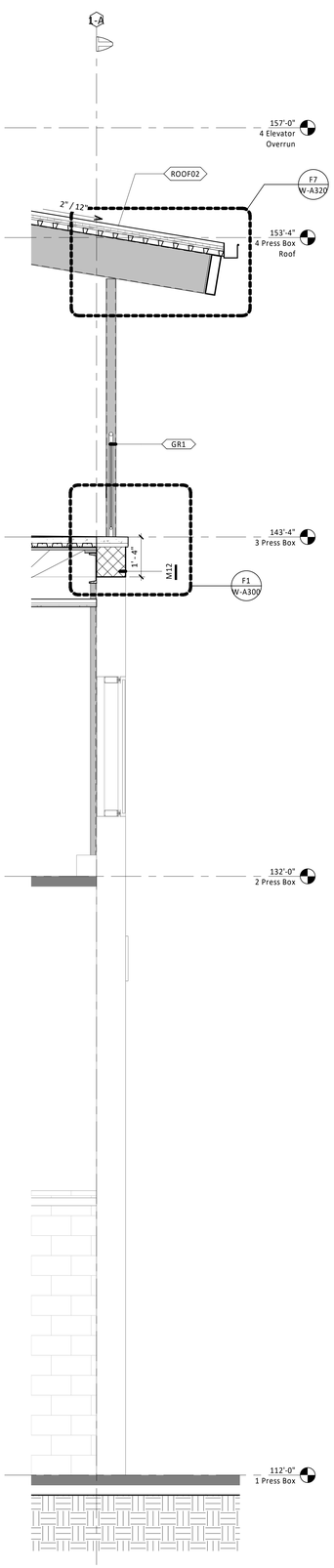
PRINT DATE/TIME:
9/25/2020 3:31:08 PM



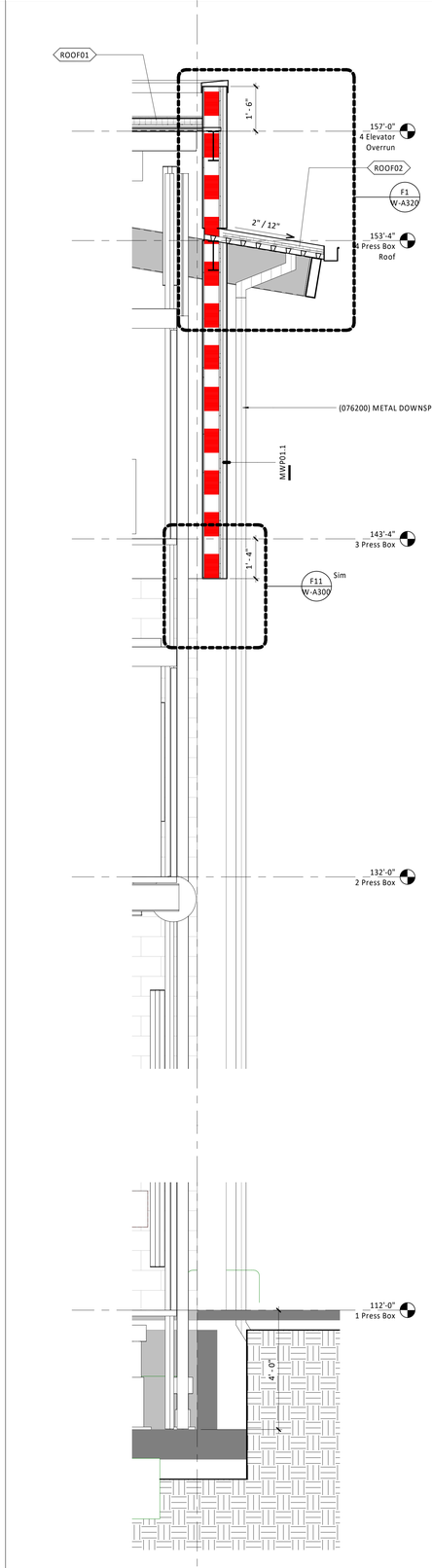
Wall Section - North Side @ Rated Exterior Wall A15 1/2" = 1'-0"



Wall Section - West Side @ Rated Exterior Wall A11 1/2" = 1'-0"



Wall Section - West Side @ Open Deck A7 1/2" = 1'-0"



Wall Section - West Side @ Elevator Overrun A3 1/2" = 1'-0"

General Notes (Wall Sections):

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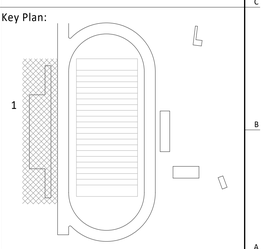
RE: Sheet W-A020 for wall assembly types & details

- 1-Hour: Fire Rated Assembly
- 2-Hour: Fire Rated Assembly
- Existing CMU
- New CMU (Field Color)
- New CMU (Accent Color)

Key Plan:



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ARCHITECT
9.28.20

Architectural Corporation
Missouri License No. 2018022991
Jay Darren Browning Date: 09/28/2020
Architect License No. A-2009027279

REVISIONS

Number	DESCRIPTION	DATE

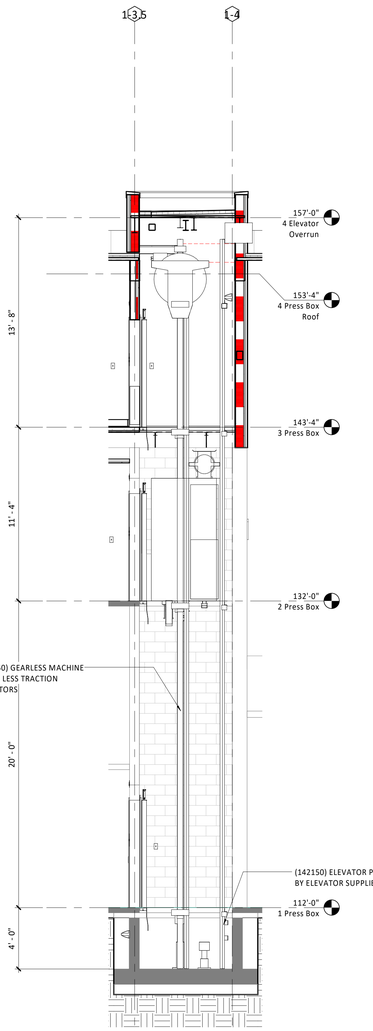
PROJECT NO: 0119-0101
DATE: September 28, 2020

Press Box - Wall Sections

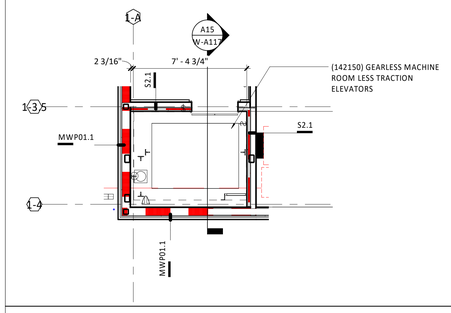
W-A116

BID SET

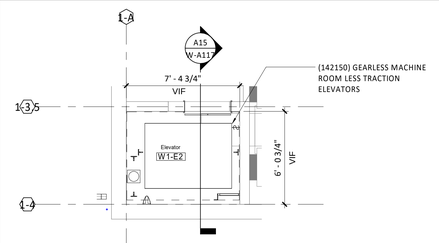
PRINT DATE/TIME:
9/25/2020 3:31:12 PM



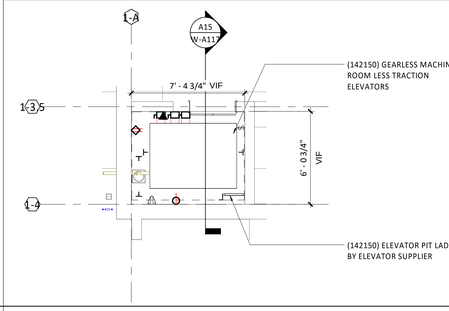
Elevator Section - Press Box A15
1/4" = 1'-0"



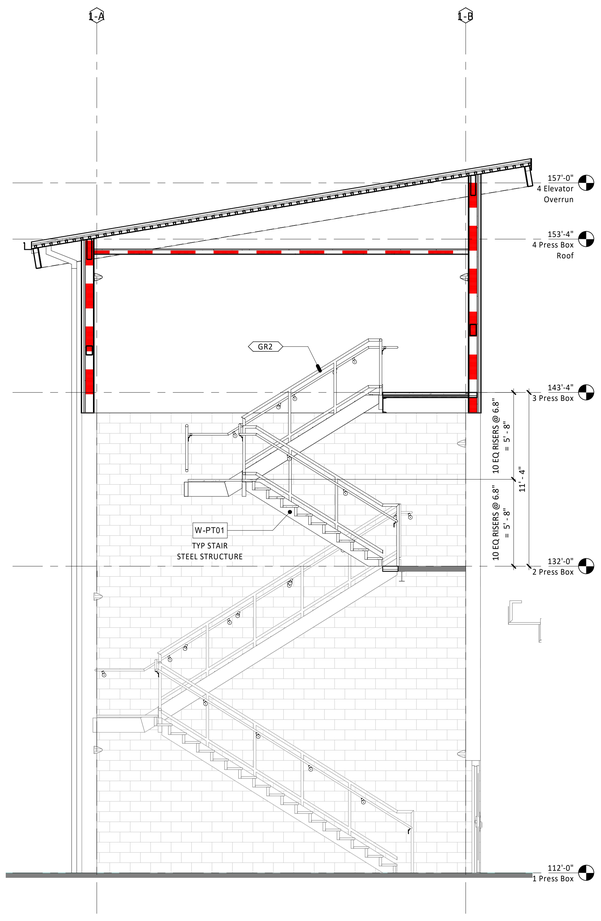
Level 3 Plan - Press Box - Elevator G11
1/4" = 1'-0"



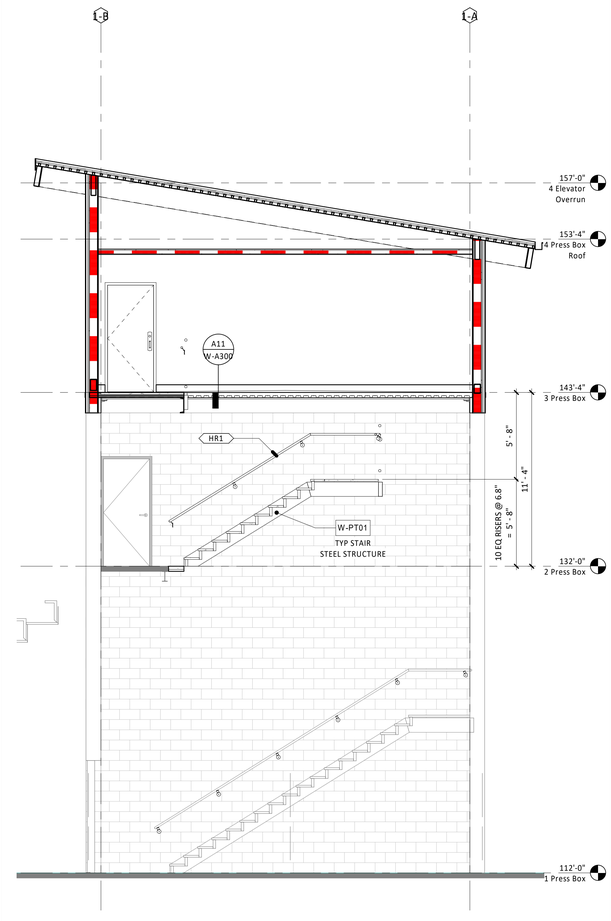
Level 2 Plan - Press Box - Elevator D11
1/4" = 1'-0"



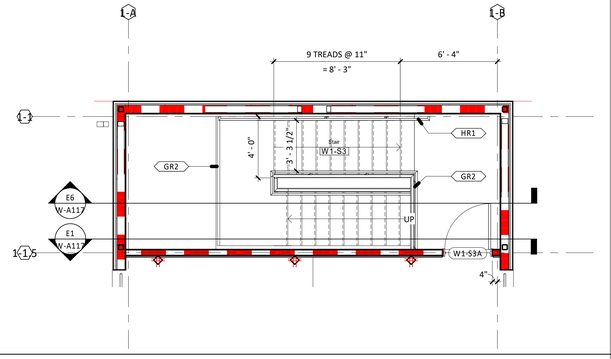
Level 1 Plan - Press Box - Elevator A11
1/4" = 1'-0"



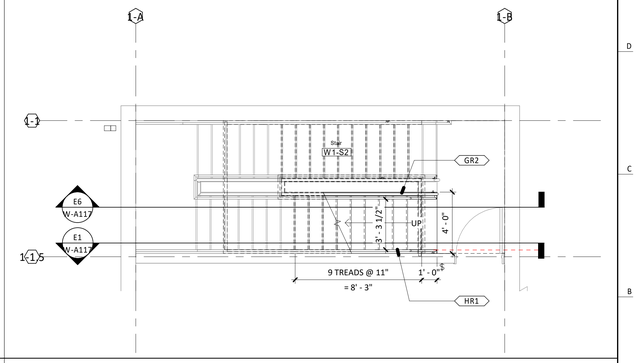
Stair Section - Press Box - North E6
1/4" = 1'-0"



Stair Section - Press Box - South E1
1/4" = 1'-0"



Level 3 Plan - Press Box - Stair A6
1/4" = 1'-0"



Level 2 Plan - Press Box - Stair A1
1/4" = 1'-0"

PRINT DATE/TIME:
9/28/2020 12:18:32 PM

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Jay Darren Browning Date: 09/28/2020
Architect License No. A-2009027279

REVISIONS

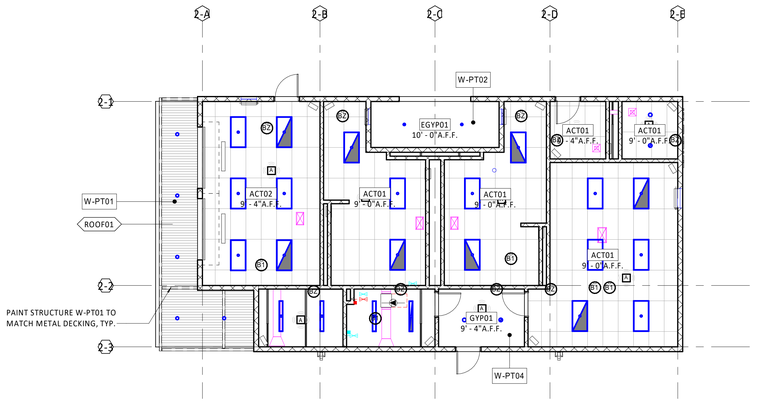
Number	DESCRIPTION	DATE

PROJECT NO: 0119-0101
DATE: September 28, 2020

Press Box - Vertical Circulation Drawings

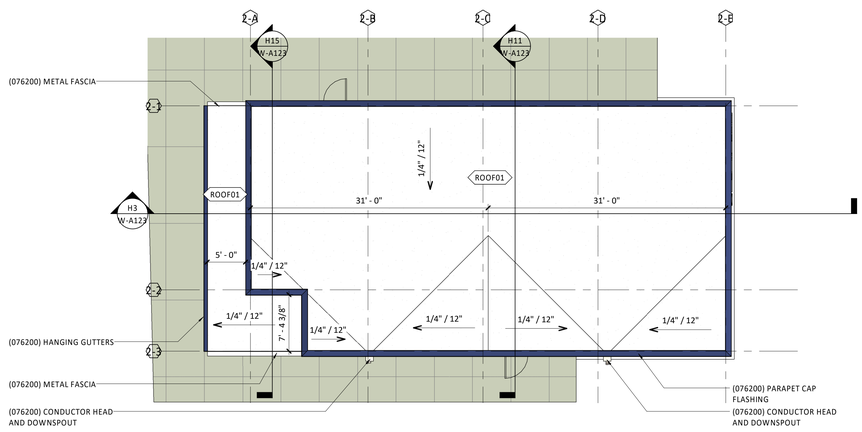
W-A117

BID SET



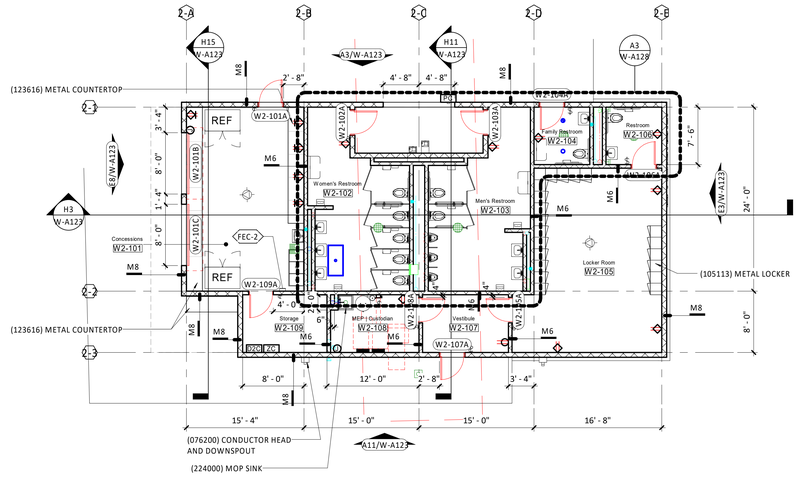
Level 1 RCP - Visitor Restrooms/Concessions L3

1/8" = 1'-0"



Roof Plan - Visitor Restrooms/Concessions F3

1/8" = 1'-0"



Level 1 Plan - Visitor Restrooms/Concessions A3

1/8" = 1'-0"

General Notes (Floor Plans):

1. ALL WALL TYPES TO BE M6 UNLESS OTHERWISE NOTED.
2. ALL WALL DIMENSIONS ARE TO FACE OF WALL UNLESS OTHERWISE NOTED.
3. MASONRY WALLS ARE ALIGNED WITH THE INTERIOR FACE ON GRID LINES AND MASONRY DIMENSIONS ARE NOMINAL UNLESS OTHERWISE NOTED
4. DOORS IN STUD WALLS NEAR PERPENDICULAR WALLS ARE LOCATED 4" OFF FACE OF PERPENDICULAR WALL UNLESS OTHERWISE NOTED.
5. DOORS IN MASONRY WALLS ARE LOCATED IN ROUGH OPENINGS DIMENSIONED ON SHEET
6. SEE GENERAL ACCESSIBILITY SHEET FOR HEIGHTS AND LOCATIONS OF TOILET ACCESSORIES NOT SHOWN ON ELSEWHERE.
7. CONTRACTOR TO FIELD VERIFY ALL MEASUREMENTS AND CONDITIONS NEW AND EXISTING. NOTIFY THE ARCHITECT/OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES.
8. ENLARGED PLANS MAY BE ROTATED OR MIRRORED COORDINATE WITH MAIN FLOOR PLAN.
9. CONTRACTOR TO PROVIDE 4'-0" HIGH PLYWOOD BACKER BOARD IN ALL MECHANICAL AND ELECTRICAL ROOMS MOUNTED 3'-6" A.F.F. FOR PERIMETER OF ROOM

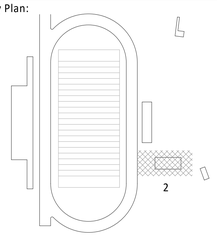
General Notes: (Roof Plan)

1. REFER TO EXTERIOR ENCLOSURE TYPES FOR ROOF DETAILS.
2. MINIMUM SLOPES ON ROOF SHALL BE 1/4" PER FOOT IN DIRECTION OF DRAINS OR ROOF EDGE
3. ELEVATION ABBREVIATIONS AS FOLLOWS: **BOD** = BOTTOM OF DECK, **TOS** = TOP OF STEEL, **TOP** = TOP OF PARAPET
4. OBJECT ABBREVIATIONS AS FOLLOWS: **RD** = ROOF DRAIN, **RTU** = ROOFTOP UNIT, **RH** = ROOF HATCH
5. PROVIDE ALL ROOFING DETAILS BY MANUFACTURERS WARRANTED SYSTEMS.
6. PROVIDE WALKWAY PADS AT ALL ROOF LADDERS AND AT ALL ROOFTOP EQUIPMENT WORKING AREAS.
7. PROVIDE CRICKETS AT ALL ROOFTOP EQUIPMENT TO FACILITATE DRAINAGE.

General Notes (Reflected Ceiling Plans):

1. ALL CEILING AND SOFFIT HEIGHTS ARE GIVEN ABOVE FINISHED FLOOR ELEVATION (EL. 0'-0")
2. GENERALLY ONLY CEILING MOUNTED FIXTURES ARE SHOWN ON THIS PLAN. COORDINATE WITH MEP PLANS FOR ADDITIONAL INFORMATION.
3. VERIFY LOCATIONS OF ALL CEILING ACCESS PANELS WITH MEP DRAWINGS. COORDINATE LOCATIONS OF PANELS WITH ARCHITECT PRIOR TO INSTALLATION. ACCESS PANEL FIRE RATINGS MUST MATCH CEILING ASSEMBLY FIRE RATINGS.
4. LIGHTING FIXTURES TO BE CENTERED AND SPACED EQUALLY UNLESS NOTED OTHERWISE.
5. LIGHT FIXTURES ARE SHOWN FOR DIMENSIONAL PURPOSES ONLY COORDINATE WITH ELECTRICAL DRAWINGS FOR FIXTURE DESIGNATIONS.
6. IF PROJECT INCLUDES FIRE RATED CEILINGS, LIGHT FIXTURES LOCATED IN RATED CEILING ASSEMBLIES ARE TO BE TENTED OR OTHERWISE RATED TO MATCH THE CEILING.

Key Plan:



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REVISIONS

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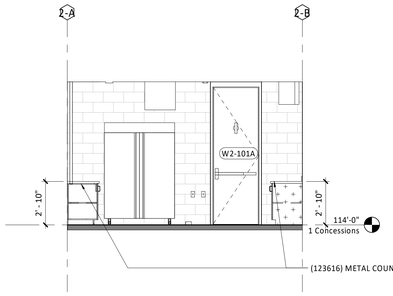
PROJECT NO: 0119-0101
DATE: September 28, 2020

Visitor Concessions - Floor/Roof/Reflected Ceiling Plans

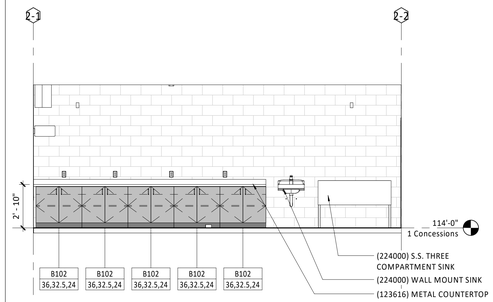
W-A121

BID SET

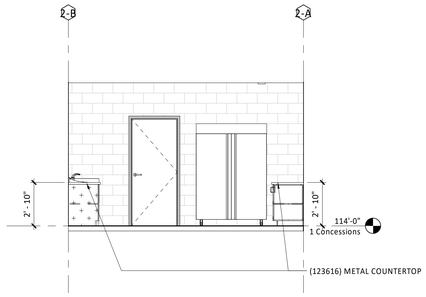
PRINT DATE/TIME:
9/28/2020 2:22:02 PM



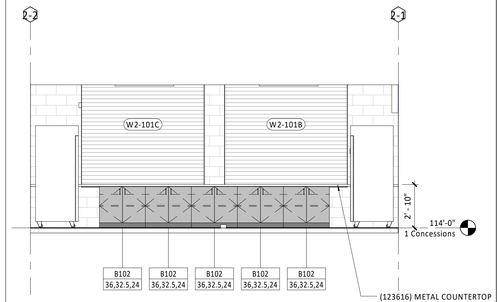
Interior Elevation - Concessions North M15
1/4" = 1'-0"



Interior Elevation - Concessions East M11
1/4" = 1'-0"



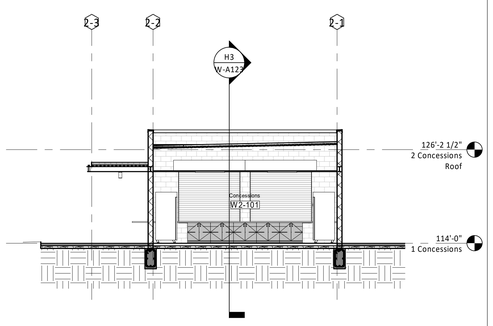
Interior Elevation - Concessions South M7
1/4" = 1'-0"



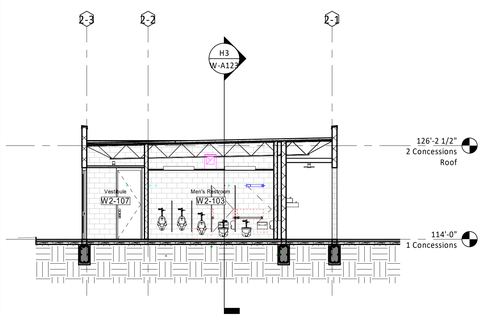
Interior Elevation - Concessions West M3
1/4" = 1'-0"

General Notes (Exterior Elevations):

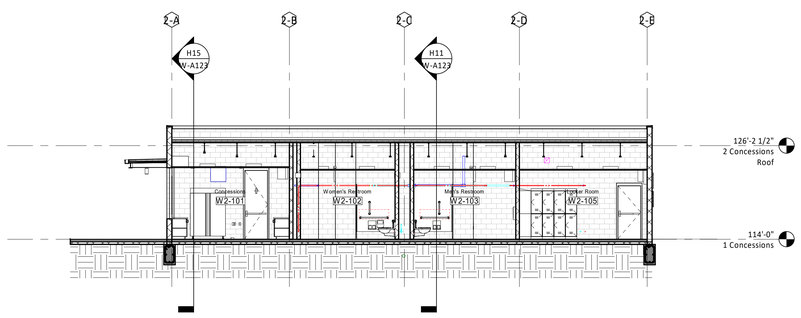
1. MATERIALS AND FINISHES INDICATED APPLY TO ALL SIMILAR ELEMENTS.
2. COORDINATE EXTERIOR LIGHTING FIXTURE TYPES AND LOCATIONS WITH ELECTRICAL DRAWINGS.



N/S Building Section - Concessions H15
1/8" = 1'-0"



N/S Building Section - Restrooms H11
1/8" = 1'-0"



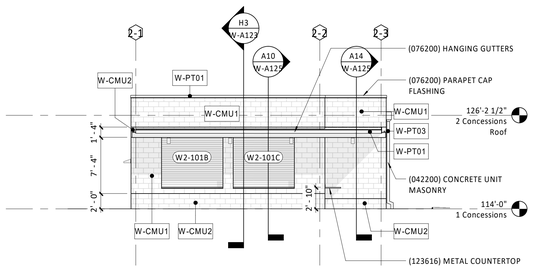
E/W Building Section - Concessions, Restrooms, & Locker Room H3
1/8" = 1'-0"

General Notes (Building Sections):

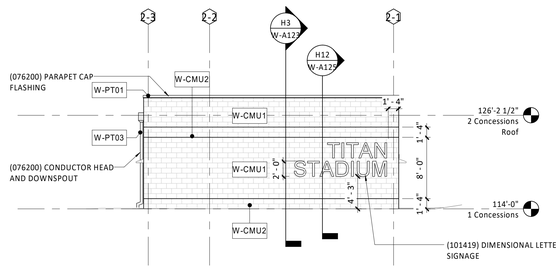
1. BUILDING SECTIONS SHOWN FOR ORIENTATION AND CONTEXT. REFER TO WALL SECTIONS FOR CONSTRUCTION DETAILING AND REFERENCES.

Finish Legend - Exterior

MARK	MODEL
042000 CONCRETE MASONRY UNITS	
W-CMU1	MESASTONE - LANDER'S BAY
W-CMU2	ASTRA-GLAZE-SW - COSMIC BLUE
074113 STANDING SEAM METAL ROOF	
W-MR1	SNAP-CLAD - CITYSCAPE
074213 ALUMINUM COMPOSITE WALL PANEL	
W-MWP1	PAC-3000 RS COMPOSITE WALL PANEL - AWARD BLUE
099113 EXTERIOR PAINT	
W-PT01	SW 6804 DIGNITY BLUE
W-PT02	SW 7073 NETWORK GRAY
W-PT03	SW 7024 FUNCTIONAL GRAY



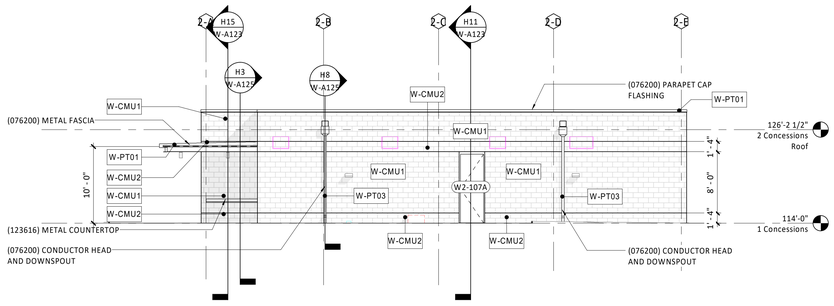
West Elevation - Visitor Restrooms/Concessions E8
1/8" = 1'-0"



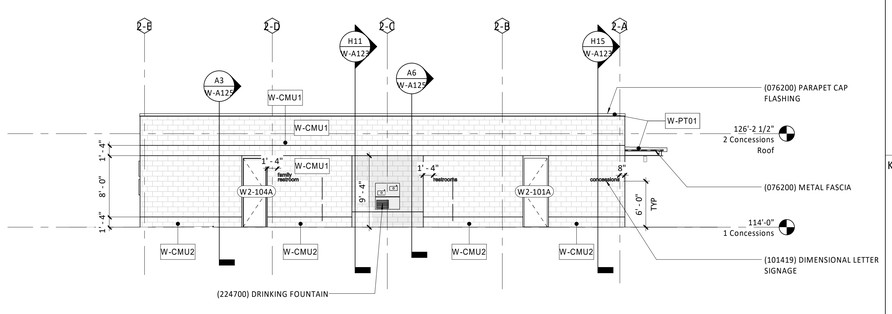
East Elevation - Visitor Restrooms/Concessions E3
1/8" = 1'-0"

General Notes (Interior Elevations):

1. REFER TO FINISH LEGEND/SCHEDULE FOR COMPLETE LISTING OF FINISHES
2. REFER TO PROJECT STANDARDS FOR INSTALLATION INFORMATION FOR ACCESSORIES, TOILET FIXTURES, ETC.
3. REFER TO PROJECT STANDARDS FOR DEVICES FOR TYPICAL INSTALLATION INFORMATION.
4. AT GYP SOFFIT CONTROL JOINTS, CONTINUE CONTROL JOINT UP BOTH VERTICAL FACES OF SOFFIT.

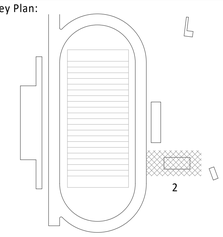


South Elevation - Visitor Restrooms/Concessions A11
1/8" = 1'-0"



North Elevation - Visitor Restrooms/Concessions A3
1/8" = 1'-0"

Key Plan:



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structural engineer:
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4338 Belleview Avenue
Kansas City, MO 64111
816.531.4144

civil engineer:
Kaw Valley Engineering
14700 West 114th Terrace
Lenexa, KS 66215
913.485.0318

mechanical/electrical engineer:
Henderson Engineers
8345 Lenexa Drive | Suite 300
Lenexa, KS 66214
816.742.5000

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STATE OF MISSOURI · JAY DARREN BROWNING · NUMBER A-2009027279 · ARCHITECT · 9.28.20

Architectural Corporation
Missouri License No. 2018022991
Jay Darren Browning Date: 09/28/2020
Architect License No. A-2009027279

REVISIONS

Number	DESCRIPTION	DATE

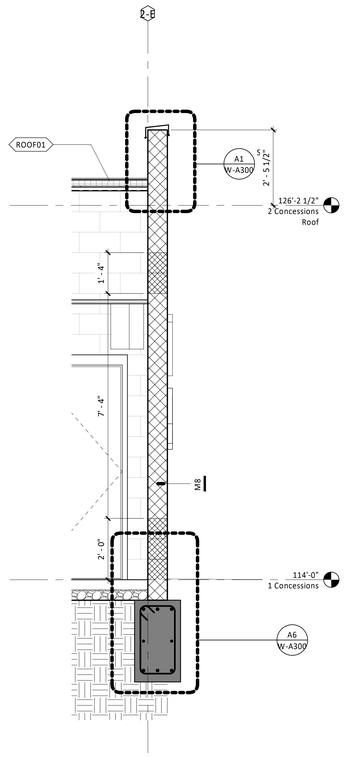
PROJECT NO: 0119-0101
DATE: September 28, 2020

Visitor Concessions - Elevations & Building Sections

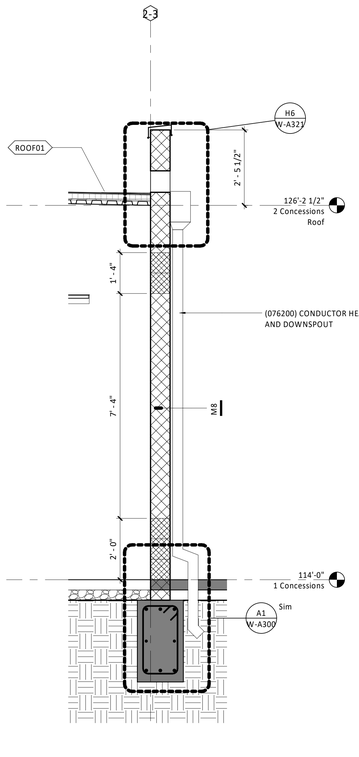
W-A123

BID SET

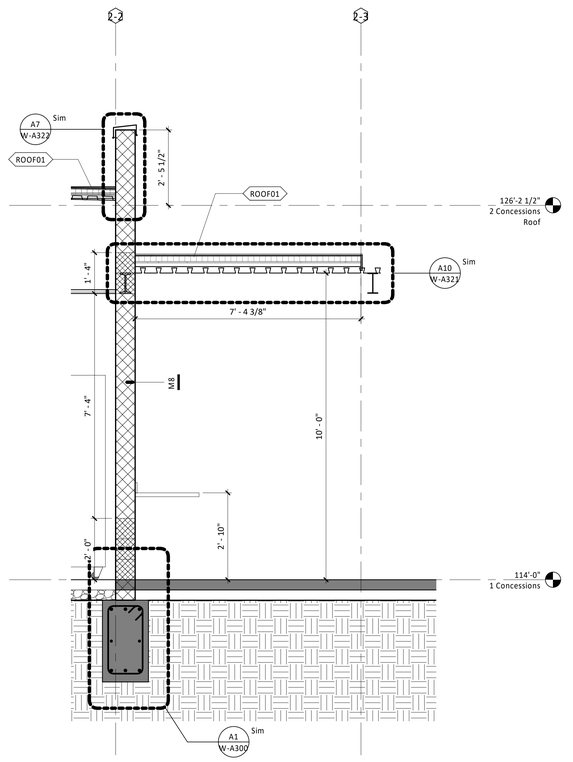
PRINT DATE/TIME:
9/25/2020 3:31:39 PM



Wall Section - East CMU H12
1/2" = 1'-0"



Wall Section - South CMU @ Scupper & Downspout H8
1/2" = 1'-0"



Wall Section - South CMU @ Canopy H3
1/2" = 1'-0"

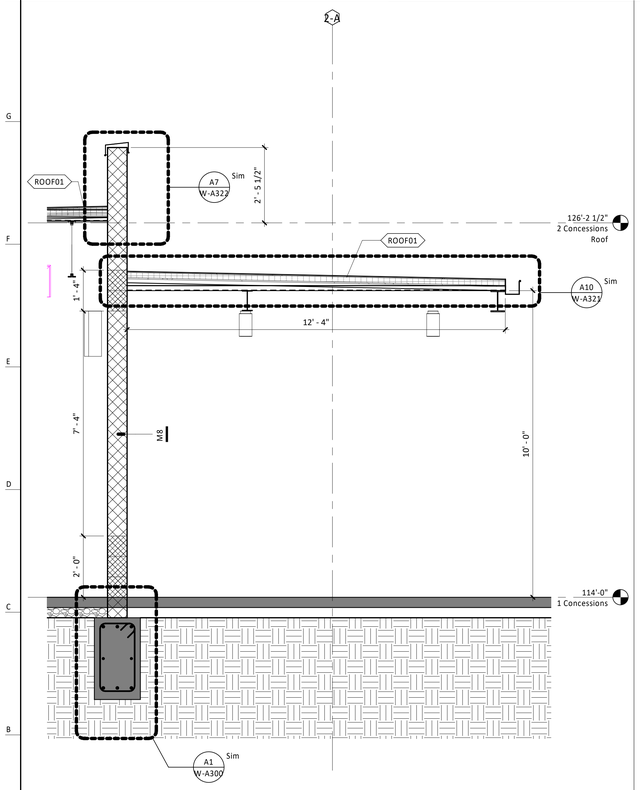
General Notes (Wall Sections):

1. SEE STRUCTURAL DRAWINGS FOR ADDITIONAL FOUNDATIONS NOT SHOWN ON WALL SECTIONS AND FOR DIMENSIONS AND REINFORCING OF FOUNDATIONS
2. ALL OPENINGS, FLASHING, COUNTER FLASHING, AND EXPANSION JOINTS SHALL BE WATERTIGHT.
3. ALL OPEN JOINTS, PENETRATIONS, AND OTHER OPENINGS IN THE ENVELOPE SHALL BE SEALED, GASKETED, OR WEATHER-STRIPPED TO LIMIT AIR LEAKAGE.
4. PROVIDE MOLD RESISTANT GYPSUM BOARD AT ALL EXTERIOR WALLS.

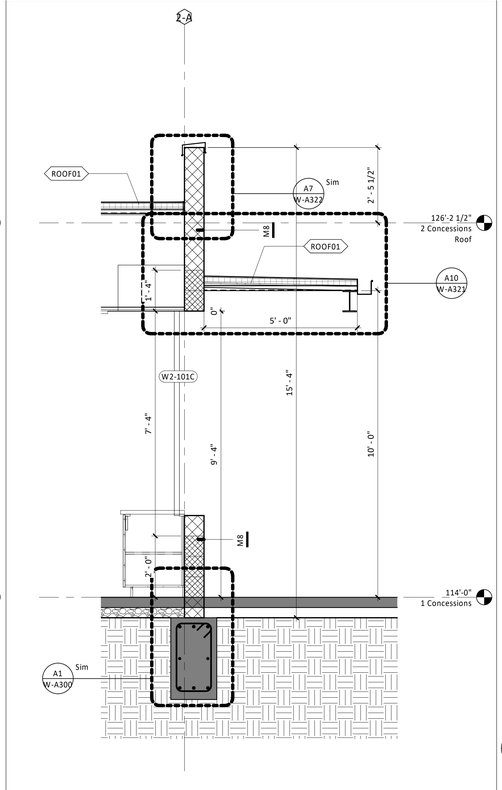
Wall Legend:

RE: Exterior Elevations for exterior fPath #s
RE: Sheet W-A020 for wall assembly types & details

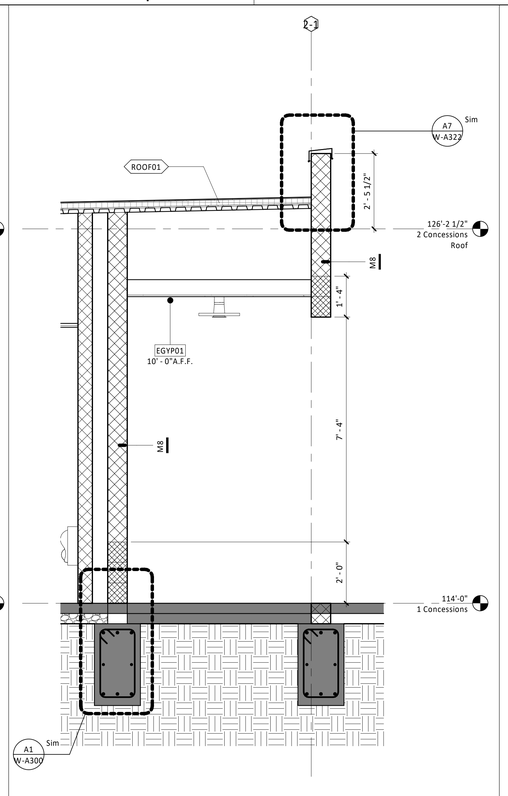
- 1-Hour: Fire Rated Assembly
- 2-Hour: Fire Rated Assembly
- Existing CMU
- New CMU (Field Color)
- New CMU (Accent Color)



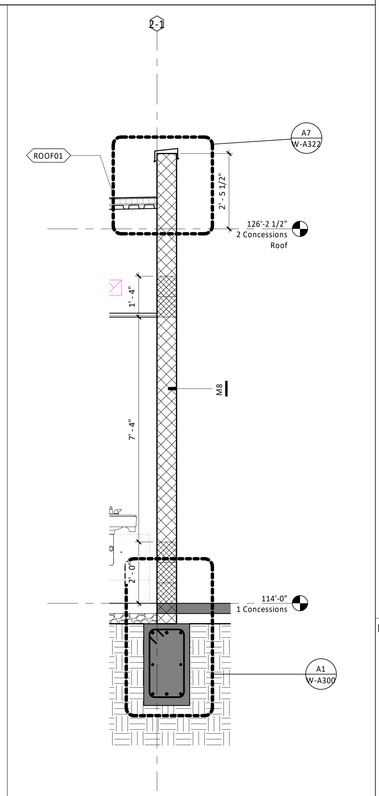
Wall Section - West CMU @ Canopy A14
1/2" = 1'-0"



Wall Section - West CMU @ Concessions Window A10
1/2" = 1'-0"

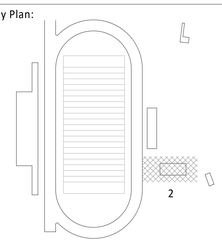


Wall Section - North CMU @ RR Entry A6
1/2" = 1'-0"



Wall Section - North CMU A3
1/2" = 1'-0"

Key Plan:



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8345 Lenexa Drive | Suite 300
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816.742.5000

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STATE OF MISSOURI
JAY DARREN BROWNING
NUMBER A-2009027279
ARCHITECT
9.28.20

Architectural Corporation
Missouri License No. 2018022991
Jay Darren Browning Date: 09/28/2020
Architect License No. A-2009027279

REVISIONS

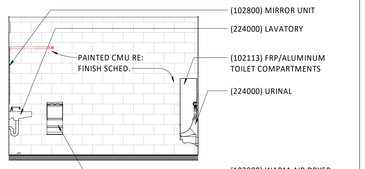
Number	DESCRIPTION	DATE

PROJECT NO: 0119-0101
DATE: September 28, 2020

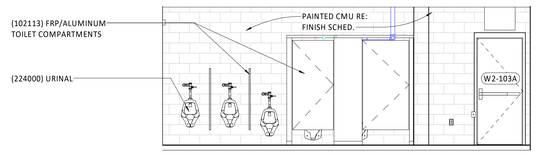
Visitor Concessions - Wall Sections

W-A125

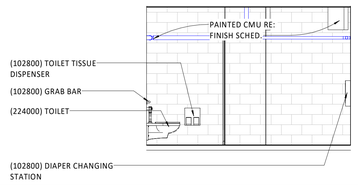
BID SET



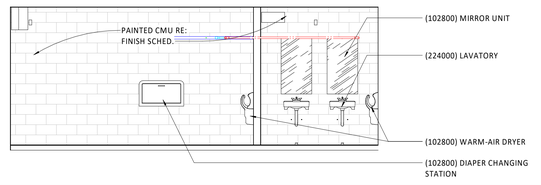
RR Elevation - Men's South L16
1/4" = 1'-0"



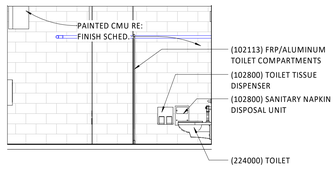
RR Elevation - Men's West L11
1/4" = 1'-0"



RR Elevation - Men's North L8
1/4" = 1'-0"

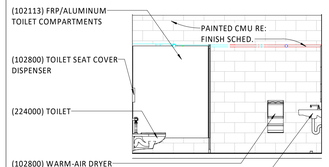


RR Elevation - Men's East L3
1/4" = 1'-0"

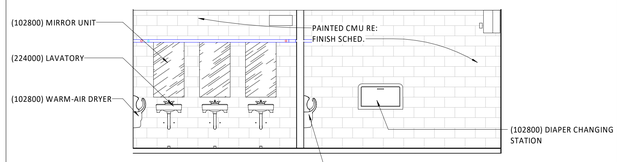


RR Elevation - Women's North H16
1/4" = 1'-0"

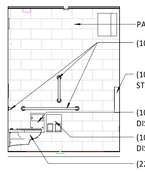
RR Elevation - Women's East H11
1/4" = 1'-0"



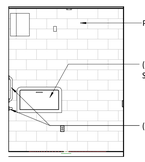
RR Elevation - Women's South H8
1/4" = 1'-0"



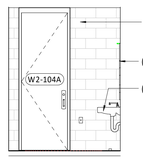
RR Elevation - Women's West H3
1/4" = 1'-0"



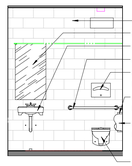
RR Elevation - Family South F17
1/4" = 1'-0"



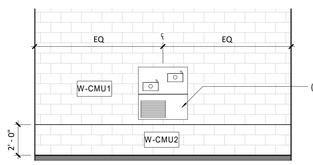
RR Elevation - Family West F14
1/4" = 1'-0"



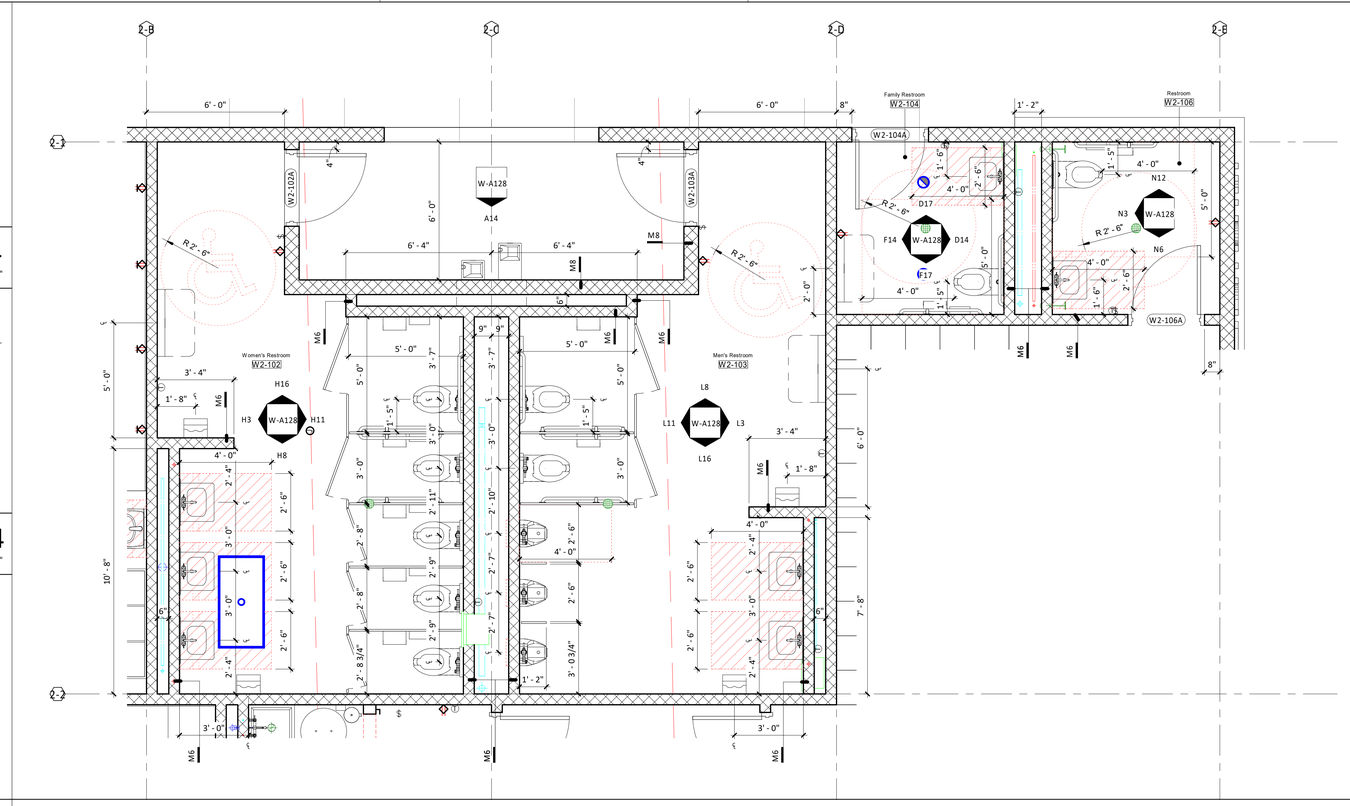
RR Elevation - Family North D17
1/4" = 1'-0"



RR Elevation - Family East D14
1/4" = 1'-0"



RR Elevation - Alcove A14
1/4" = 1'-0"

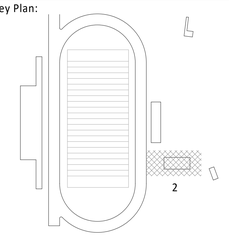


Level 1 Plan - Visitor Restrooms A3
3/8" = 1'-0"

General Architectural Drawing Notes:

1. VERIFY DIMENSIONS AND EXISTING CONDITIONS BEFORE COMMENCING WORK. REPORT DISCREPANCIES TO THE ARCHITECT PRIOR TO PROCEEDING WITH AFFECTED WORK.
2. BUILDING FLOOR PLAN DIMENSIONS ARE REFERENCED FROM STRUCTURAL GRID, FACE OF CONCRETE, FACE OF MASONRY, OR FACE OF FINISHED SURFACE, UNLESS NOTED OTHERWISE.
3. REFLECTED CEILING PLAN DIMENSIONS ARE REFERENCED FROM FINISHED SURFACES UNLESS NOTED OTHERWISE. CEILING HEIGHTS ARE DIMENSIONED FROM FLOOR TO FINISHED CEILING HEIGHT.
4. CASEWORK, PLUMBING FIXTURES, TOILET PARTITIONS, AND OTHER FIXTURES AND EQUIPMENT ARE DIMENSIONED FROM FINISHED SURFACES UNLESS NOTED OTHERWISE.
5. DIMENSIONS NOTED AS "FIELD VERIFY" SHALL BE CHECKED AT THE SITE BY THE CONTRACTOR AND REVIEWED WITH THE ARCHITECT BEFORE INCORPORATING INTO THE WORK.
6. DIMENSIONS NOTED AS "CLEAR" REQUIRE SPECIFIC COORDINATION BETWEEN DISCIPLINES AND/OR MANUFACTURERS.
7. DRAWINGS NOTED AT "N.T.S." ARE NOT TO SCALE.
8. DO NOT SCALE DRAWING. WRITTEN DIMENSIONS TAKE PRECEDENCE. IF CLARIFICATION IS REQUIRED IN ORDER TO DETERMINE THE INTENT OF THE CONTRACT DOCUMENTS, CONTACT THE ARCHITECT.
9. NOTES OR DIMENSIONS LABELED "TYPICAL" SHALL APPLY TO SITUATIONS THAT ARE THE SAME OR SIMILAR.

Key Plan:



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civil engineer:
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14700 West 114th Terrace
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STATE OF MISSOURI · JAY DARREN BROWNING · NUMBER A-2009027279 · ARCHITECT · 9.28.20

Architectural Corporation
Missouri License No. 2018022991
Jay Darren Browning Date: 09/28/2020
Architect License No. A-2009027279

REVISIONS

Number	DESCRIPTION	DATE

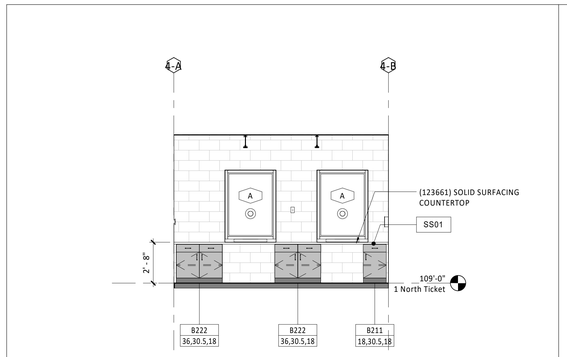
PROJECT NO: 0119-0101
DATE: September 28, 2020

Visitor Restrooms - Plan & Elevations

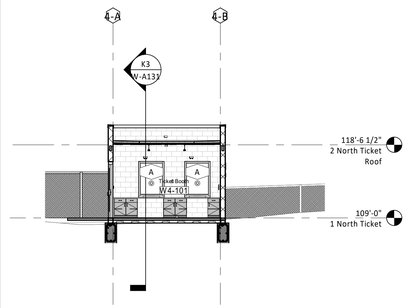
W-A128

BID SET

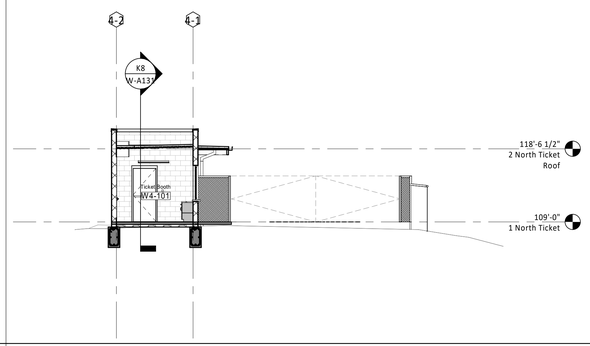
PRINT DATE/TIME:
9/25/2020 3:31:57 PM



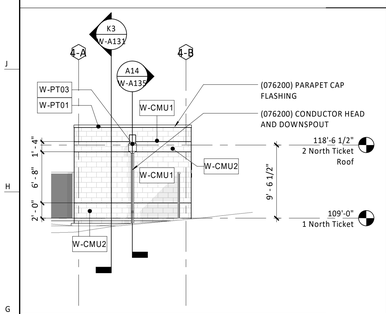
Interior Elevation - North Ticket Window K11
1/4" = 1'-0"



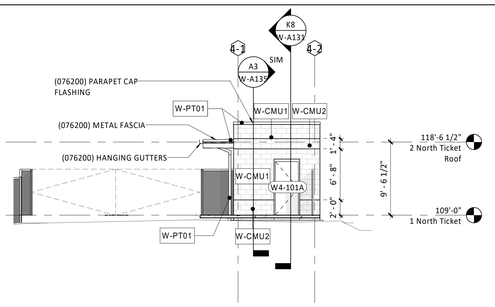
E/W Building Section - North Ticket Booth K8
1/8" = 1'-0"



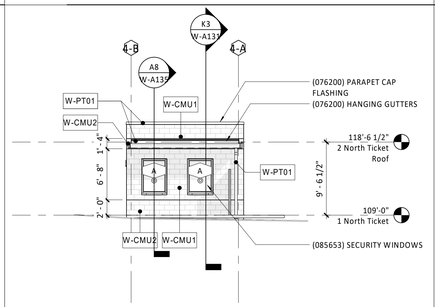
N/S Building Section - North Ticket Booth K3
1/8" = 1'-0"



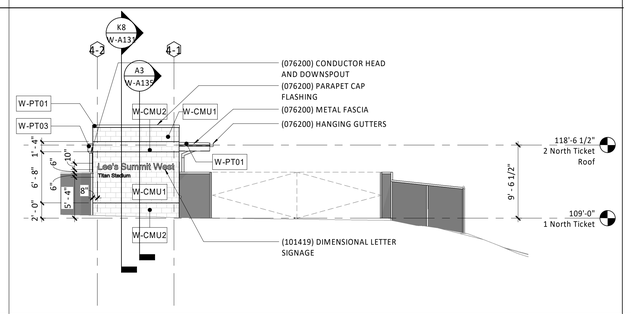
South Elevation - North Ticket Booth G16
1/8" = 1'-0"



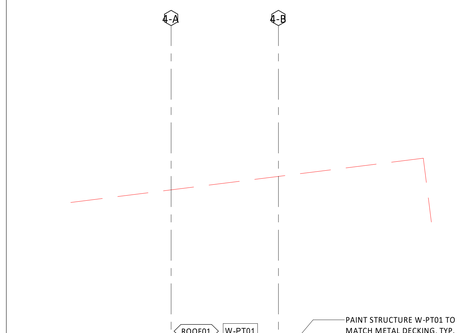
West Elevation - North Ticket Booth G11
1/8" = 1'-0"



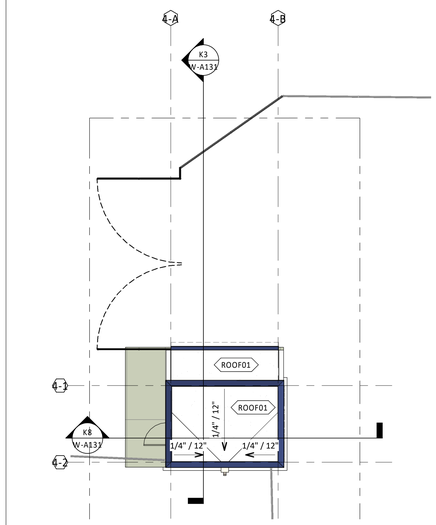
North Elevation - North Ticket Booth G8
1/8" = 1'-0"



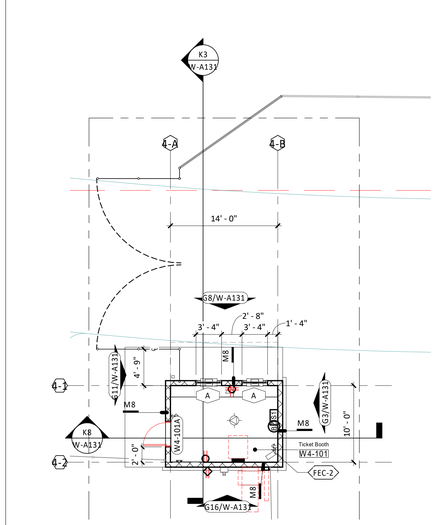
East Elevation - North Ticket Booth G3
1/8" = 1'-0"



Level 1 RCP - North Ticket Booth A11
1/8" = 1'-0"



Roof Plan - North Ticket Booth A7
1/8" = 1'-0"



Level 1 Plan - North Ticket Booth A3
1/8" = 1'-0"

General Notes (Floor Plans):

1. ALL WALL TYPES TO BE M6 UNLESS OTHERWISE NOTED.
2. ALL WALL DIMENSIONS ARE TO FACE OF WALL UNLESS OTHERWISE NOTED.
3. MASONRY WALLS ARE ALIGNED WITH THE INTERIOR FACE ON GRID LINES AND MASONRY DIMENSIONS ARE NOMINAL UNLESS OTHERWISE NOTED
4. DOORS IN STUD WALLS NEAR PERPENDICULAR WALLS ARE LOCATED 4" OFF FACE OF PERPENDICULAR WALL UNLESS OTHERWISE NOTED.
5. DOORS IN MASONRY WALLS ARE LOCATED IN ROUGH OPENINGS DIMENSIONED ON SHEET
6. SEE GENERAL ACCESSIBILITY SHEET FOR HEIGHTS AND LOCATIONS OF TOILET ACCESSORIES NOT SHOWN ON ELSEWHERE.
7. CONTRACTOR TO FIELD VERIFY ALL MEASUREMENTS AND CONDITIONS NEW AND EXISTING. NOTIFY THE ARCHITECT/OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES.
8. ENLARGED PLANS MAY BE ROTATED OR MIRRORED COORDINATE WITH MAIN FLOOR PLAN.
9. CONTRACTOR TO PROVIDE 4'-0" HIGH PLYWOOD BACKER BOARD IN ALL MECHANICAL AND ELECTRICAL ROOMS MOUNTED 3'-6" A.F.F. FOR PERIMETER OF ROOM

General Notes: (Roof Plan)

1. REFER TO EXTERIOR ENCLOSURE TYPES FOR ROOF DETAILS.
2. MINIMUM SLOPES ON ROOF SHALL BE 1/4" PER FOOT IN DIRECTION OF DRAINS OR ROOF EDGE
3. ELEVATION ABBREVIATIONS AS FOLLOWS: **BOD** = BOTTOM OF DECK, **TOS** = TOP OF STEEL, **TOP** = TOP OF PARAPET
4. OBJECT ABBREVIATIONS AS FOLLOWS: **RD** = ROOF DRAIN, **RTU** = ROOFTOP UNIT, **RH** = ROOF HATCH
5. PROVIDE ALL ROOFING DETAILS BY MANUFACTURERS WARRANTED SYSTEMS.
6. PROVIDE WALKWAY PADS AT ALL ROOF LADDERS AND AT ALL ROOFTOP EQUIPMENT WORKING AREAS.
7. PROVIDE CRICKETS AT ALL ROOFTOP EQUIPMENT TO FACILITATE DRAINAGE.

General Notes (Reflected Ceiling Plans):

1. ALL CEILING AND SOFFIT HEIGHTS ARE GIVEN ABOVE FINISHED FLOOR ELEVATION (EL. 0'-0")
2. GENERALLY ONLY CEILING MOUNTED FIXTURES ARE SHOWN ON THIS PLAN. COORDINATE WITH MEP PLANS FOR ADDITIONAL INFORMATION.
3. VERIFY LOCATIONS OF ALL CEILING ACCESS PANELS WITH MEP DRAWINGS. COORDINATE LOCATIONS OF PANELS WITH ARCHITECT PRIOR TO INSTALLATION. ACCESS PANEL FIRE RATINGS MUST MATCH CEILING ASSEMBLY FIRE RATINGS.
4. LIGHTING FIXTURES TO BE CENTERED AND SPACED EQUALLY UNLESS NOTED OTHERWISE.
5. LIGHT FIXTURES ARE SHOWN FOR DIMENSIONAL PURPOSES ONLY COORDINATE WITH ELECTRICAL DRAWINGS FOR FIXTURE DESIGNATIONS.
6. IF PROJECT INCLUDES FIRE RATED CEILINGS, LIGHT FIXTURES LOCATED IN RATED CEILING ASSEMBLIES ARE TO BE TENTED OR OTHERWISE RATED TO MATCH THE CEILING.

General Notes (Exterior Elevations):

1. MATERIALS AND FINISHES INDICATED APPLY TO ALL SIMILAR ELEMENTS.
2. COORDINATE EXTERIOR LIGHTING FIXTURE TYPES AND LOCATIONS WITH ELECTRICAL DRAWINGS.

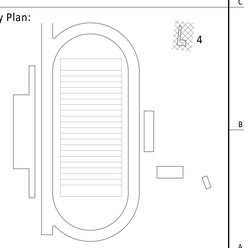
Finish Legend - Exterior

MARK	MODEL
042000 CONCRETE MASONRY UNITS	
W-CMU1	MESASTONE - LANDER'S BAY
W-CMU2	ASTRA-GLAZE-SW - COSMIC BLUE
074113 STANDING SEAM METAL ROOF	
W-MR1	SNAP-CLAD - CITYSCAPE
074213 ALUMINUM COMPOSITE WALL PANEL	
W-MWP1	PAC-3000 RS COMPOSITE WALL PANEL - AWARD BLUE
099113 EXTERIOR PAINT	
W-PT01	SW 6804 DIGNITY BLUE
W-PT02	SW 7073 NETWORK GRAY
W-PT03	SW 7024 FUNCTIONAL GRAY

General Notes (Interior Elevations):

1. REFER TO FINISH LEGEND/SCHEDULE FOR COMPLETE LISTING OF FINISHES
2. REFER TO PROJECT STANDARDS FOR INSTALLATION INFORMATION FOR ACCESSORIES, TOILET FIXTURES, ETC.
3. REFER TO PROJECT STANDARDS FOR DEVICES FOR TYPICAL INSTALLATION INFORMATION.
4. AT GYP SOFFIT CONTROL JOINTS, CONTINUE CONTROL JOINT UP BOTH VERTICAL FACES OF SOFFIT.

Key Plan:



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Lee's Summit R7 District Athletics Facilities

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2600 SW Ward Road
Lee's Summit, MO 64082

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301 NE Tudor Road
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structural engineer:
Bob D. Campbell & Company, Inc.
4338 Belleview Avenue
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civil engineer:
Kaw Valley Engineering
14700 West 114th Terrace
Lenexa, KS 66215
913.485.0318

mechanical/electrical engineer:
Henderson Engineers
8345 Lenexa Drive | Suite 300
Lenexa, KS 66214
816.742.5000

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STATE OF MISSOURI · JAY DARREN BROWNING · NUMBER A-2009027279 · ARCHITECT · 9.28.20

Architectural Corporation
Missouri License No. 2018022991
Jay Darren Browning Date: 09/28/2020
Architect License No. A-2009027279

REVISIONS

Number	DESCRIPTION	DATE

PROJECT NO: 0119-0101
DATE: September 28, 2020

North Ticket Booth - Plans, Exterior Elevations, & Sections

W-A131

BID SET

PRINT DATE/TIME:
9/28/2020 2:22:07 PM

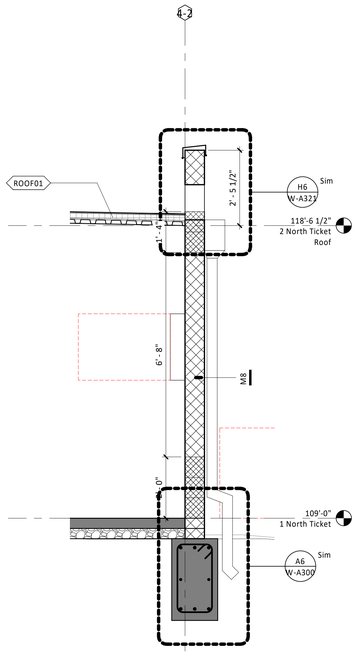
General Notes (Wall Sections):

1. SEE STRUCTURAL DRAWINGS FOR ADDITIONAL FOUNDATIONS NOT SHOWN ON WALL SECTIONS AND FOR DIMENSIONS AND REINFORCING OF FOUNDATIONS
2. ALL OPENINGS, FLASHING, COUNTER FLASHING, AND EXPANSION JOINTS SHALL BE WATERTIGHT.
3. ALL OPEN JOINTS, PENETRATIONS, AND OTHER OPENINGS IN THE ENVELOPE SHALL BE SEALED, GASKETED, OR WEATHER-STRIPPED TO LIMIT AIR LEAKAGE.
4. PROVIDE MOLD RESISTANT GYPSUM BOARD AT ALL EXTERIOR WALLS.

Wall Legend:

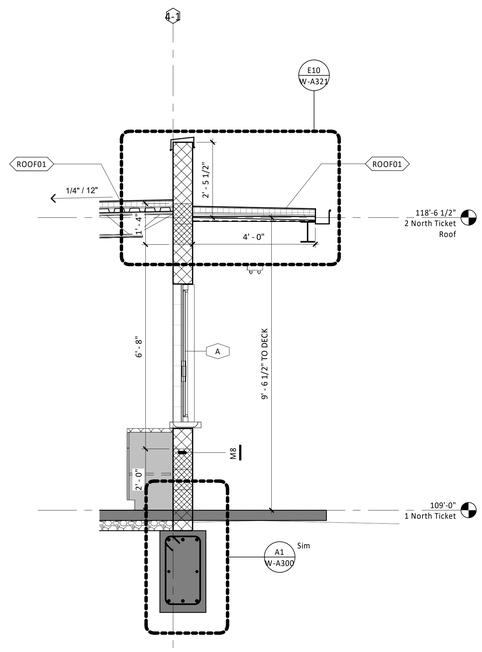
RE: Exterior Elevations for exterior fPath #s
RE: Sheet W-A020 for wall assembly types & details

- 1-Hour: Fire Rated Assembly
- 2-Hour: Fire Rated Assembly
- Existing CMU
- New CMU (Field Color)
- New CMU (Accent Color)



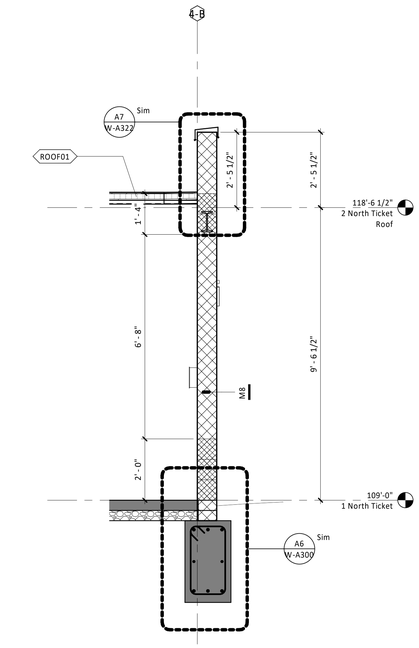
Wall Section - North Ticket CMU @ Scupper & Downspout A14

1/2" = 1'-0"



Wall Section - North Ticket CMU @ Ticket Window A8

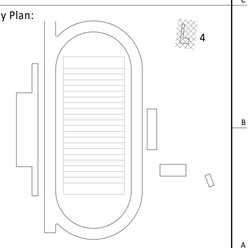
1/2" = 1'-0"



Wall Section - North Ticket CMU A3

1/2" = 1'-0"

Key Plan:



PRINT DATE/TIME:
9/25/2020 3:32:10 PM

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structural engineer:
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civil engineer:
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STATE OF MISSOURI · JAY DARREN BROWNING · NUMBER A-2009027279 · ARCHITECT · 9.28.20

Architectural Corporation
Missouri License No. 2018022991
Jay Darren Browning — Date: 09/28/2020
Architect — License No. A-2009027279

REVISIONS

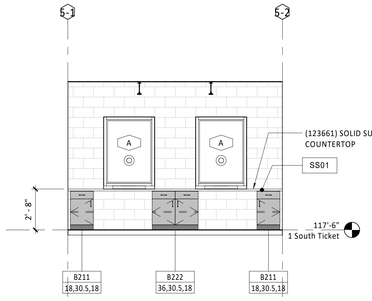
Number	DESCRIPTION	DATE

PROJECT NO: 0119-0101
DATE: September 28, 2020

North Ticket Booth - Wall Sections

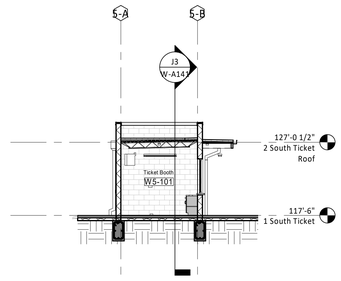
W-A135

BID SET



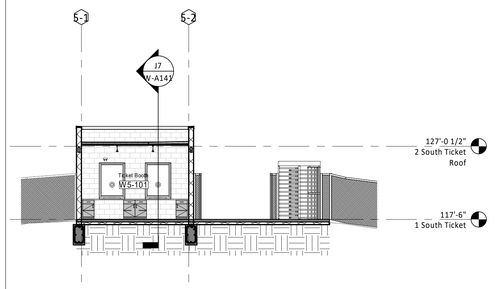
DRAWINGS ASSOCAITED WITH SOUTH TICKET BOOTH CONSTRUCTION ARE INCLUDED AS **BID ALTERNATE #W-1**

Interior Elevation - South Ticket Window J11
1/4" = 1'-0"



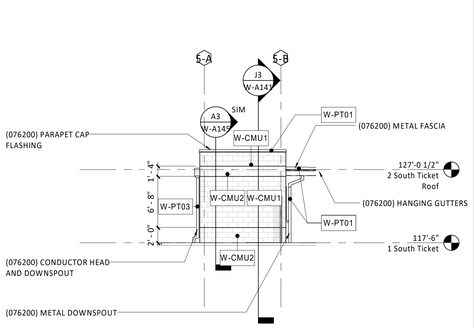
DRAWINGS ASSOCAITED WITH SOUTH TICKET BOOTH CONSTRUCTION ARE INCLUDED AS **BID ALTERNATE #W-1**

E/W Building Section - South Ticket Booth Canopy J7
1/8" = 1'-0"



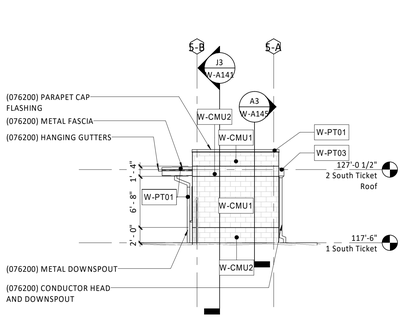
DRAWINGS ASSOCAITED WITH SOUTH TICKET BOOTH CONSTRUCTION ARE INCLUDED AS **BID ALTERNATE #W-1**

N/S Building Section - South Ticket Booth J3
1/8" = 1'-0"



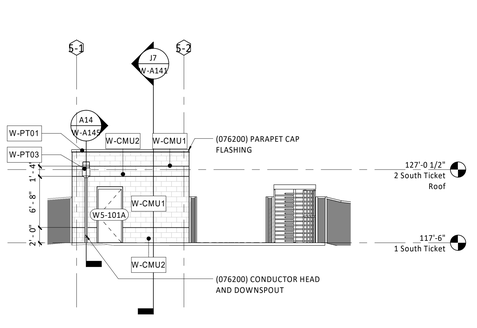
DRAWINGS ASSOCAITED WITH SOUTH TICKET BOOTH CONSTRUCTION ARE INCLUDED AS **BID ALTERNATE #W-1**

South Elevation - South Ticket Booth F15
1/8" = 1'-0"



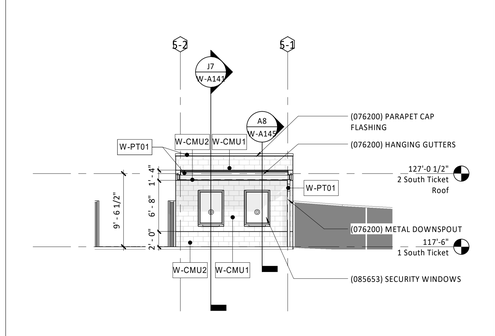
DRAWINGS ASSOCAITED WITH SOUTH TICKET BOOTH CONSTRUCTION ARE INCLUDED AS **BID ALTERNATE #W-1**

North Elevation - South Ticket Booth F11
1/8" = 1'-0"



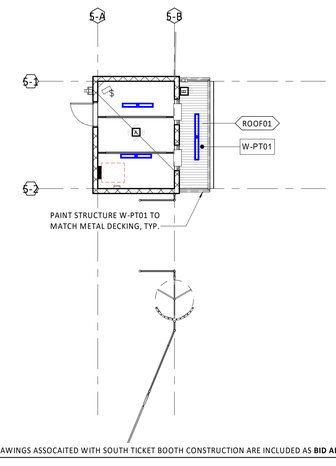
DRAWINGS ASSOCIATED WITH SOUTH TICKET BOOTH CONSTRUCTION ARE INCLUDED AS **BID ALTERNATE #W-1**

West Elevation - South Ticket Booth F7
1/8" = 1'-0"



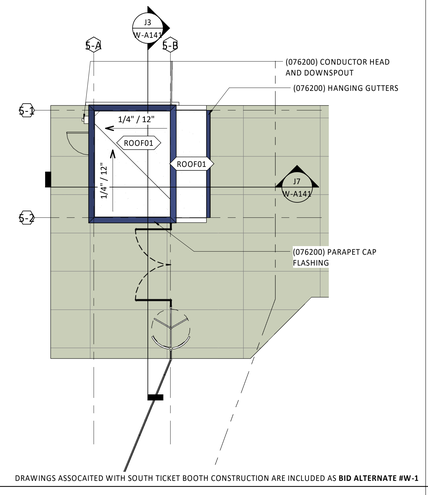
DRAWINGS ASSOCAITED WITH SOUTH TICKET BOOTH CONSTRUCTION ARE INCLUDED AS **BID ALTERNATE #W-1**

East Elevation - South Ticket Booth F3
1/8" = 1'-0"



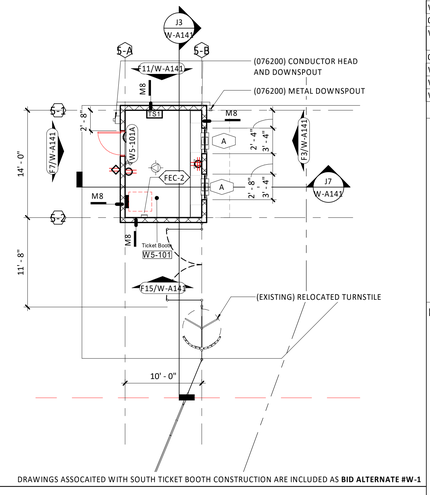
DRAWINGS ASSOCAITED WITH SOUTH TICKET BOOTH CONSTRUCTION ARE INCLUDED AS **BID ALTERNATE #W-1**

Level 1 RCP - South Ticket Booth A11
1/8" = 1'-0"



DRAWINGS ASSOCAITED WITH SOUTH TICKET BOOTH CONSTRUCTION ARE INCLUDED AS **BID ALTERNATE #W-1**

Roof Plan - South Ticket Booth A7
1/8" = 1'-0"



DRAWINGS ASSOCAITED WITH SOUTH TICKET BOOTH CONSTRUCTION ARE INCLUDED AS **BID ALTERNATE #W-1**

Level 1 Plan - South Ticket Booth A3
1/8" = 1'-0"

General Notes (Floor Plans):

1. ALL WALL TYPES TO BE M6 UNLESS OTHERWISE NOTED.
2. ALL WALL DIMENSIONS ARE TO FACE OF WALL UNLESS OTHERWISE NOTED.
3. MASONRY WALLS ARE ALIGNED WITH THE INTERIOR FACE ON GRID LINES AND MASONRY DIMENSIONS ARE NOMINAL UNLESS OTHERWISE NOTED
4. DOORS IN STUD WALLS NEAR PERPENDICULAR WALLS ARE LOCATED 4" OFF FACE OF PERPENDICULAR WALL UNLESS OTHERWISE NOTED.
5. DOORS IN MASONRY WALLS ARE LOCATED IN ROUGH OPENINGS DIMENSIONED ON SHEET
6. SEE GENERAL ACCESSIBILITY SHEET FOR HEIGHTS AND LOCATIONS OF TOILET ACCESSORIES NOT SHOWN ON ELSEWHERE.
7. CONTRACTOR TO FIELD VERIFY ALL MEASUREMENTS AND CONDITIONS NEW AND EXISTING. NOTIFY THE ARCHITECT/OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES.
8. ENLARGED PLANS MAY BE ROTATED OR MIRRORED COORDINATE WITH MAIN FLOOR PLAN.
9. CONTRACTOR TO PROVIDE 4'-0" HIGH PLYWOOD BACKER BOARD IN ALL MECHANICAL AND ELECTRICAL ROOMS MOUNTED 3'-6" A.F.F. FOR PERIMETER OF ROOM

General Notes: (Roof Plan)

1. REFER TO EXTERIOR ENCLOSURE TYPES FOR ROOF DETAILS.
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4. OBJECT ABBREVIATIONS AS FOLLOWS: **RD** = ROOF DRAIN, **RTU** = ROOFTOP UNIT, **RH** = ROOF HATCH
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5. LIGHT FIXTURES ARE SHOWN FOR DIMENSIONAL PURPOSES ONLY COORDINATE WITH ELECTRICAL DRAWINGS FOR FIXTURE DESIGNATIONS.
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General Notes (Exterior Elevations):

1. MATERIALS AND FINISHES INDICATED APPLY TO ALL SIMILAR ELEMENTS.
2. COORDINATE EXTERIOR LIGHTING FIXTURE TYPES AND LOCATIONS WITH ELECTRICAL DRAWINGS.

Finish Legend - Exterior

MARK	MODEL
042000 CONCRETE MASONRY UNITS	
W-CMU1	MESASTONE - LANDER'S BAY
W-CMU2	ASTRA-GLAZE-SW - COSMIC BLUE
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W-MR1	SNAP-CLAD - CITYSCAPE
074213 ALUMINUM COMPOSITE WALL PANEL	
W-MWP1	PAC-3000 RS COMPOSITE WALL PANEL - AWARD BLUE
099113 EXTERIOR PAINT	
W-PT01	SW 6804 DIGNITY BLUE
W-PT02	SW 7073 NETWORK GRAY
W-PT03	SW 7024 FUNCTIONAL GRAY

General Notes (Interior Elevations):

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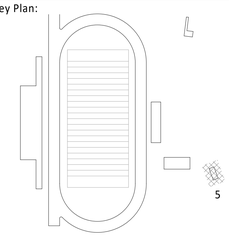
2. REFER TO PROJECT STANDARDS FOR INSTALLATION INFORMATION FOR ACCESSORIES, TOILET FIXTURES, ETC.
3. REFER TO PROJECT STANDARDS FOR DEVICES FOR TYPICAL INSTALLATION INFORMATION.
4. AT GYP SOFFIT CONTROL JOINTS, CONTINUE CONTROL JOINT UP BOTH VERTICAL FACES OF SOFFIT.

Key Plan:



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civil engineer:
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STATE OF MISSOURI · JAY DARREN BROWNING · NUMBER 2009027279 · ARCHITECT · 9.28.20

Architectural Corporation
Missouri License No. 2018022991
Jay Darren Browning Date: 09/28/2020
Architect License No. A-2009027279

REVISIONS

Number	DESCRIPTION	DATE

PROJECT NO: 0119-0101
DATE: September 28, 2020

(BID ALT #W-1) South Ticket Booth - Plans, Elevations, & Sections

W-A141

BID SET

PRINT DATE/TIME:
9/28/2020 2:22:11 PM

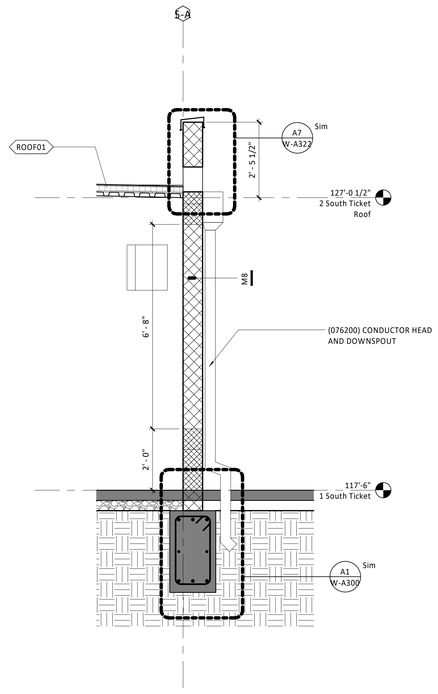
General Notes (Wall Sections):

1. SEE STRUCTURAL DRAWINGS FOR ADDITIONAL FOUNDATIONS NOT SHOWN ON WALL SECTIONS AND FOR DIMENSIONS AND REINFORCING OF FOUNDATIONS
2. ALL OPENINGS, FLASHING, COUNTER FLASHING, AND EXPANSION JOINTS SHALL BE WATERTIGHT.
3. ALL OPEN JOINTS, PENETRATIONS, AND OTHER OPENINGS IN THE ENVELOPE SHALL BE SEALED, GASKETED, OR WEATHER-STRIPPED TO LIMIT AIR LEAKAGE.
4. PROVIDE MOLD RESISTANT GYPSUM BOARD AT ALL EXTERIOR WALLS.

Wall Legend:

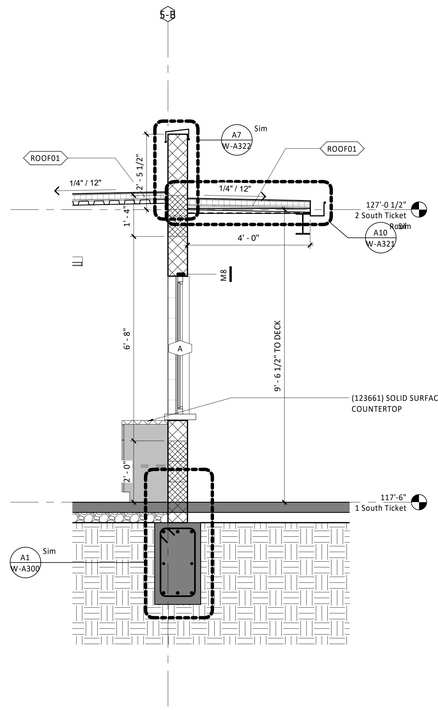
RE: Exterior Elevations for exterior fPath #s
RE: Sheet W-A020 for wall assembly types & details

- 1-Hour: Fire Rated Assembly
- 2-Hour: Fire Rated Assembly
- Existing CMU
- New CMU (Field Color)
- New CMU (Accent Color)



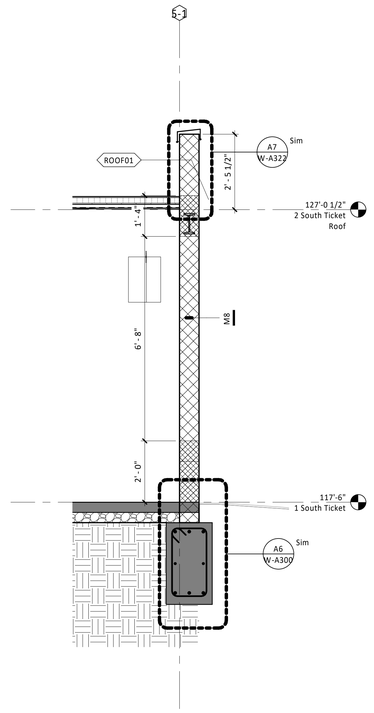
DRAWINGS ASSOCAITED WITH SOUTH TICKET BOOTH CONSTRUCTION ARE INCLUDED AS **BID ALTERNATE #W-1**

Wall Section - South Ticket CMU @ Scupper & Downspout **A14**
1/2" = 1'-0"



DRAWINGS ASSOCAITED WITH SOUTH TICKET BOOTH CONSTRUCTION ARE INCLUDED AS **BID ALTERNATE #W-1**

Wall Section - South Ticket CMU @ Ticket Window **A8**
1/2" = 1'-0"



DRAWINGS ASSOCAITED WITH SOUTH TICKET BOOTH CONSTRUCTION ARE INCLUDED AS **BID ALTERNATE #W-1**

Wall Section - South Ticket CMU **A3**
1/2" = 1'-0"

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mechanical/electrical engineer:
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Architectural Corporation
Missouri License No. 2018022991
Jay Darren Browning — Date: 09/28/2020
Architect — License No. A-2009027279

REVISIONS

Number	DESCRIPTION	DATE

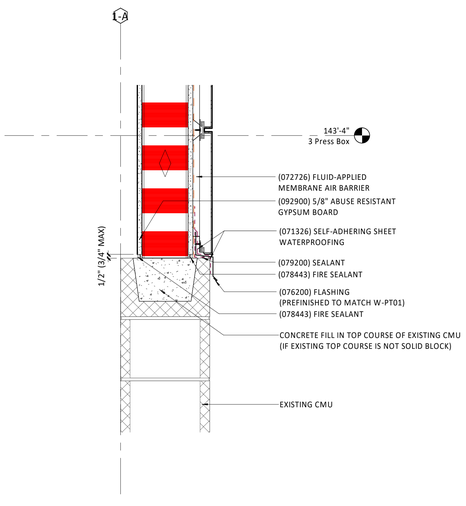
Key Plan:

PROJECT NO: 0119-0101
DATE: September 28, 2020

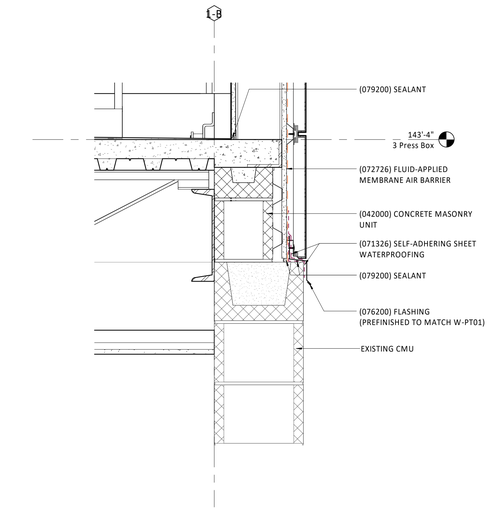
(BID ALT #W-1) South Ticket Booth - Wall Sections

W-A145

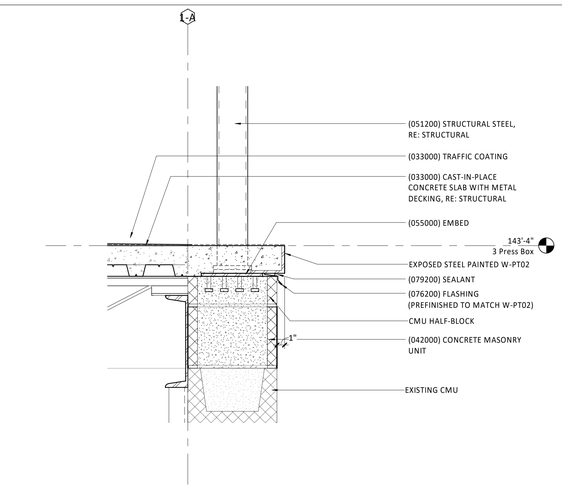
BID SET



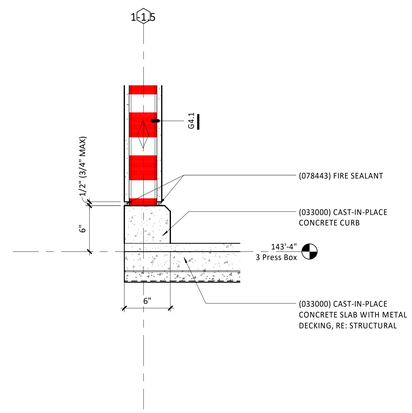
Section Detail - Rated Exterior Wall Base @ CMU F11
1 1/2" = 1'-0"



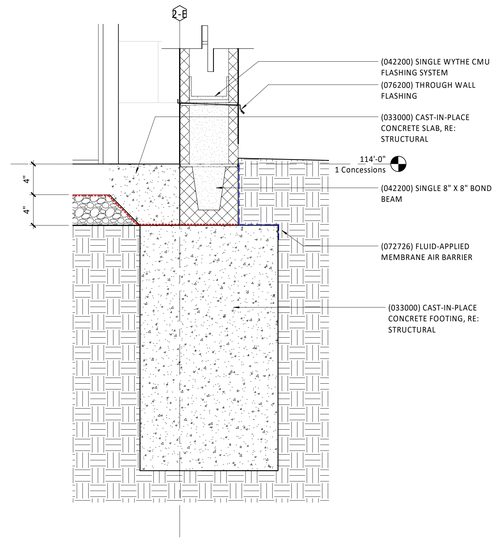
Section Detail - Exterior Wall Base @ CMU F6
1 1/2" = 1'-0"



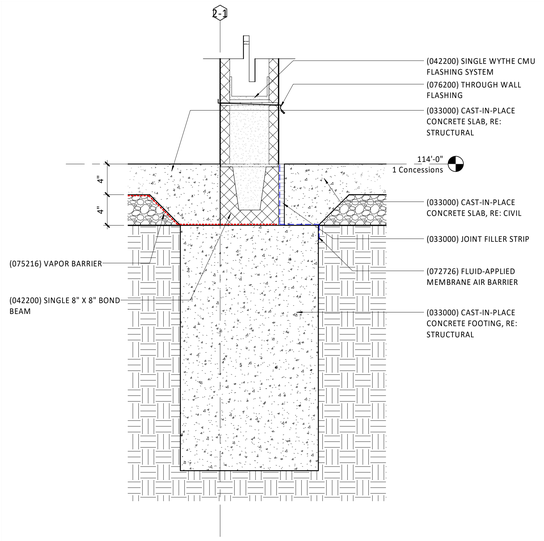
Section Detail - CMU Extension w/ Railing F1
1 1/2" = 1'-0"



Section Detail - Video Deck Wall on Concrete Curb A11
1 1/2" = 1'-0"



Section Detail - CMU Foundation @ Grade A6
1 1/2" = 1'-0"



Section Detail - CMU Foundation @ Sidewalk A1
1 1/2" = 1'-0"

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STATE OF MISSOURI
JAY DARREN BROWNING
NUMBER A-2009027279
ARCHITECT
9.28.20

Architectural Corporation
Missouri License No. 2018022991
Jay Darren Browning Date: 09/28/2020
Architect License No. A-2009027279

REVISIONS

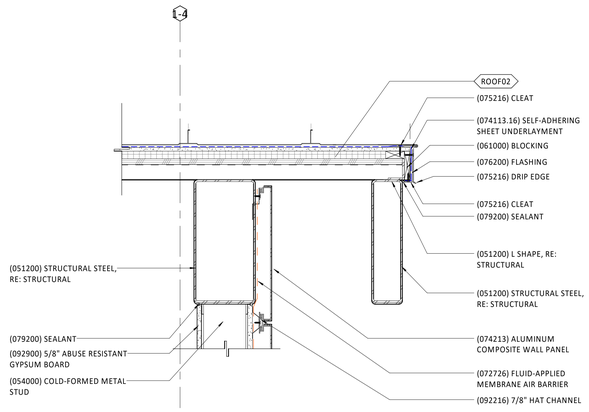
Number	DESCRIPTION	DATE

PROJECT NO: 0119-0101
DATE: September 28, 2020

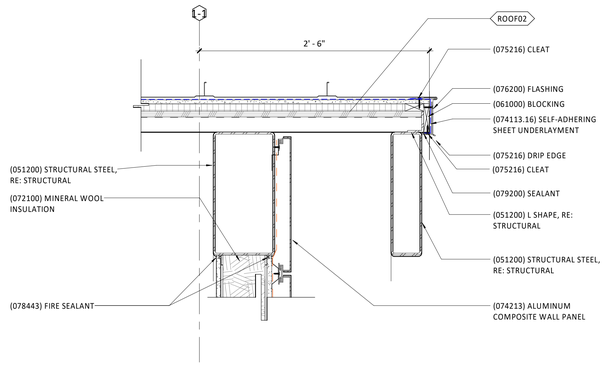
Exterior Section Details

W-A300

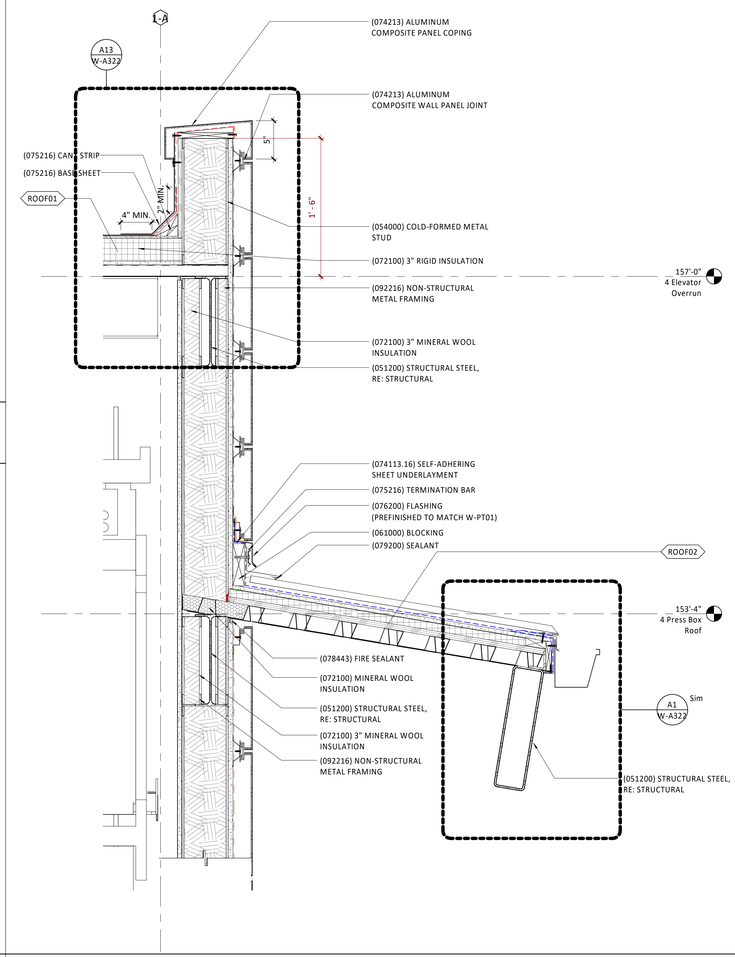
BID SET



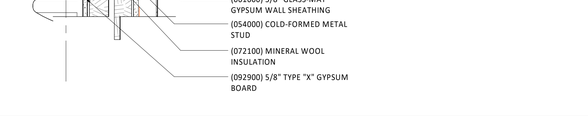
Section Detail - Flat Roof Edge @ Exterior Wall L13
1 1/2" = 1'-0"



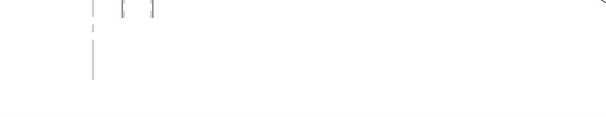
Section Detail - Flat Roof Edge @ Rated Exterior Wall L7
1 1/2" = 1'-0"



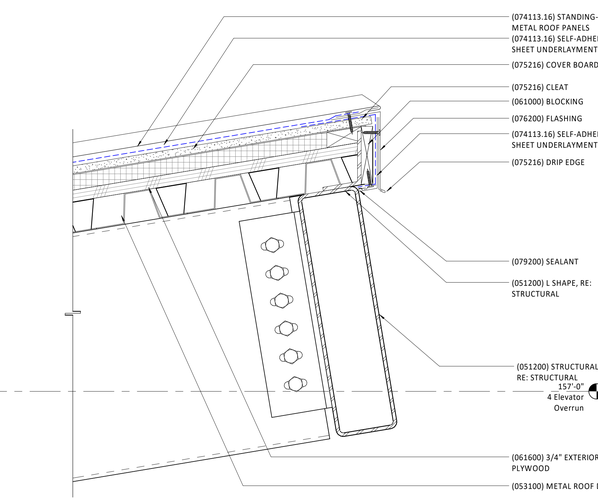
Section Detail - Elevator Overrun @ Gutter Side F1
1 1/2" = 1'-0"



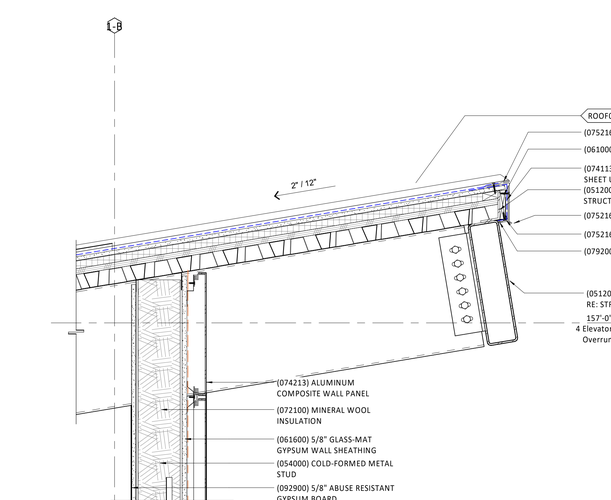
Section Detail - Roof Edge @ Exterior Rated Wall (With Gutter) F13
1 1/2" = 1'-0"



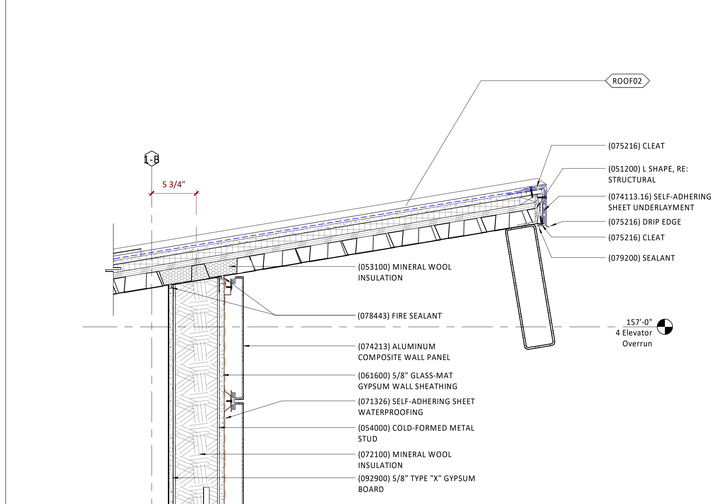
Section Detail - Roof Edge @ Open Deck (With Gutter) F7
1 1/2" = 1'-0"



Section Detail - Roof Edge @ Open Video Deck A13
3" = 1'-0"



Section Detail - Roof Edge @ Exterior Wall A7
1 1/2" = 1'-0"



Section Detail - Roof Edge @ Exterior Rated Wall A1
1 1/2" = 1'-0"

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Architectural Corporation
Missouri License No. 2018022991
Jay Darren Browning — Date: 09/28/2020
Architect — License No. A-2009027279

REVISIONS

Number	DESCRIPTION	DATE

PROJECT NO: 0119-0101
DATE: September 28, 2020

Exterior Section Details - Roof

W-A320

BID SET

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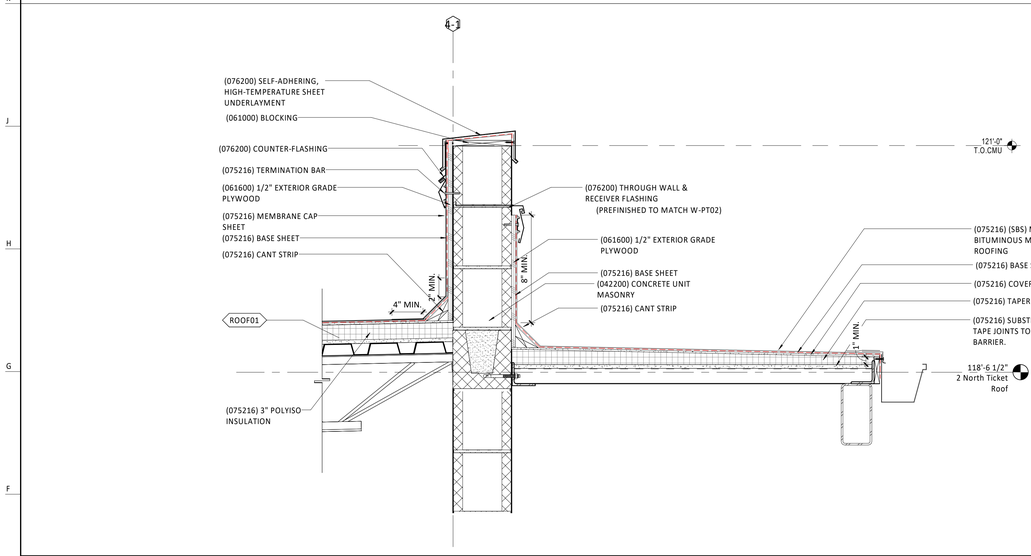
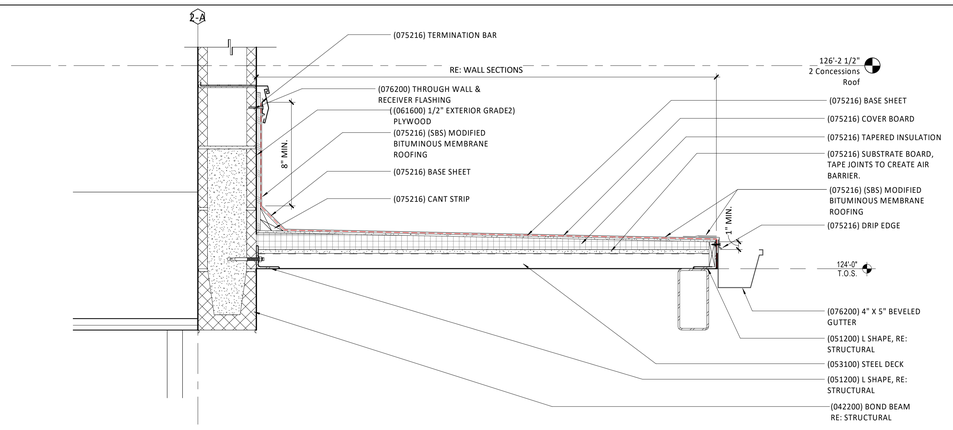
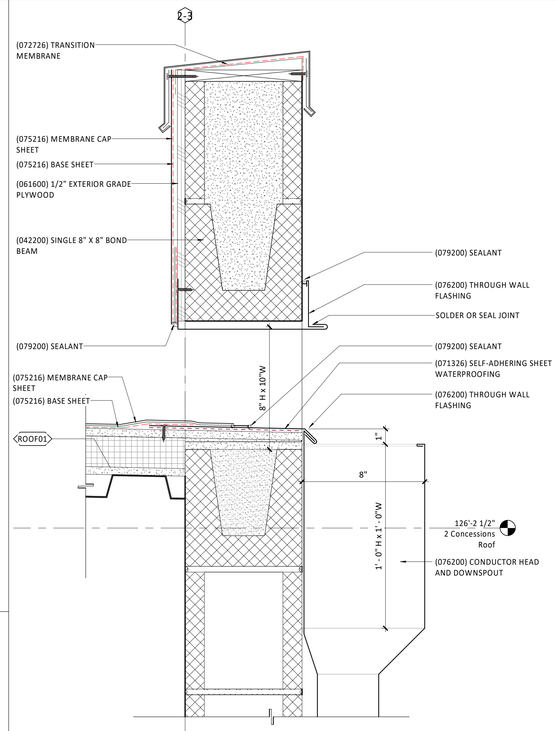


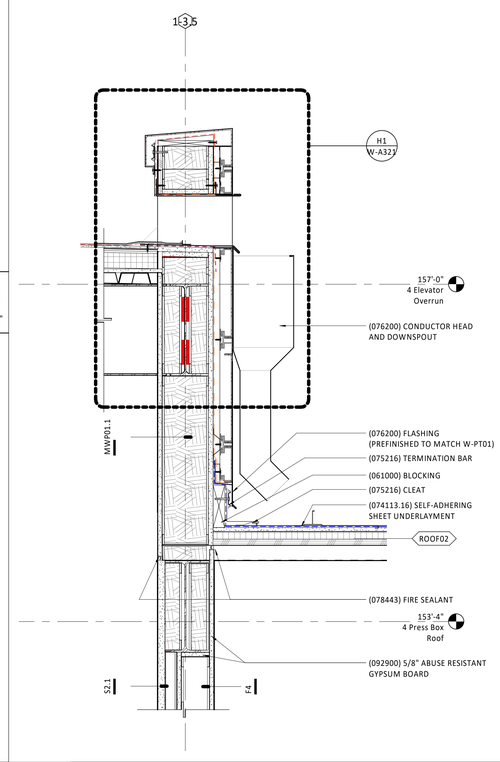
Section Detail - CMU Parapet @ South Ticket Canopy E10
1 1/2" = 1'-0"



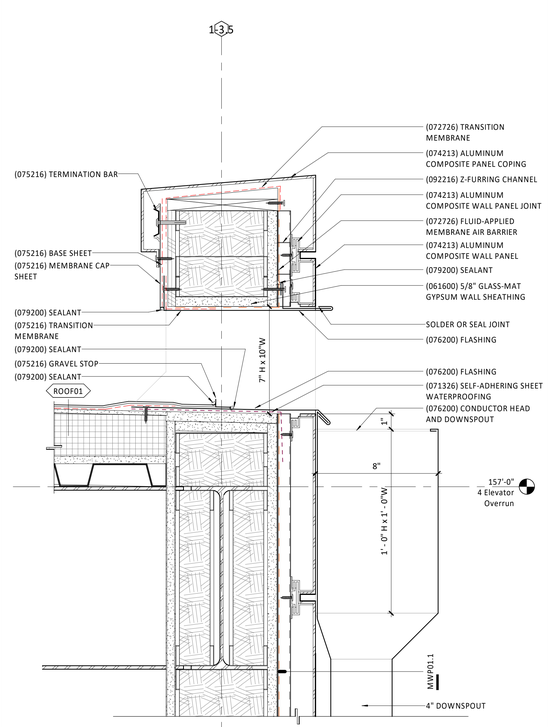
Section Detail - CMU @ Canopy A10
1 1/2" = 1'-0"



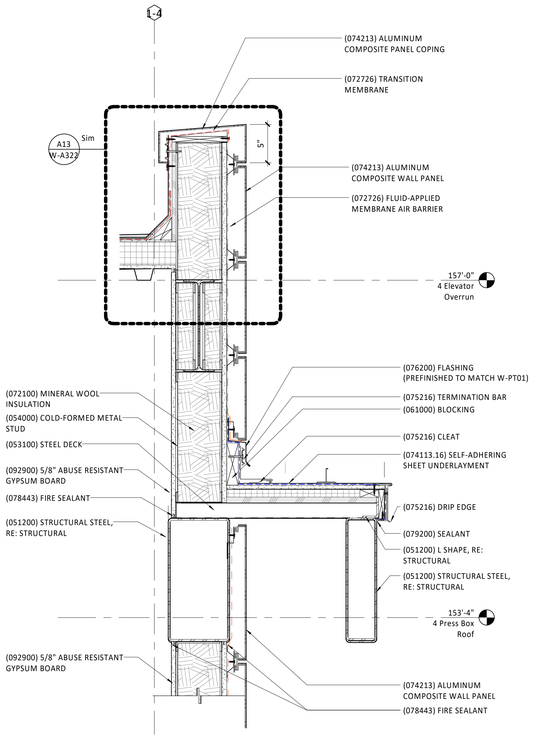
Section Detail - CMU Parapet @ Downspout H6
3" = 1'-0"



Section Detail - Elevator Overrun @ Scupper & Downspout A6
1 1/2" = 1'-0"



Section Detail - Metal Panel Coping @ Scupper H1
3" = 1'-0"



Section Detail - Elevator Overrun @ Flat Roof Edge A1
1 1/2" = 1'-0"

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JAY DARREN BROWNING
NUMBER A-2009027279
ARCHITECT
9.28.20

Architectural Corporation
Missouri License No. 2018022991
Jay Darren Browning Date: 09/28/2020
Architect License No. A-2009027279

REVISIONS

Number	DESCRIPTION	DATE

PROJECT NO: 0119-0101
DATE: September 28, 2020

Exterior Section Details - Roof

W-A321

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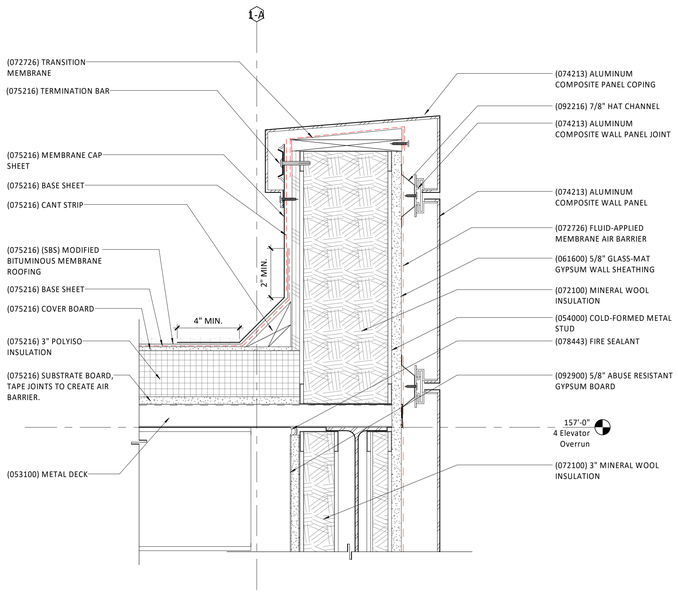
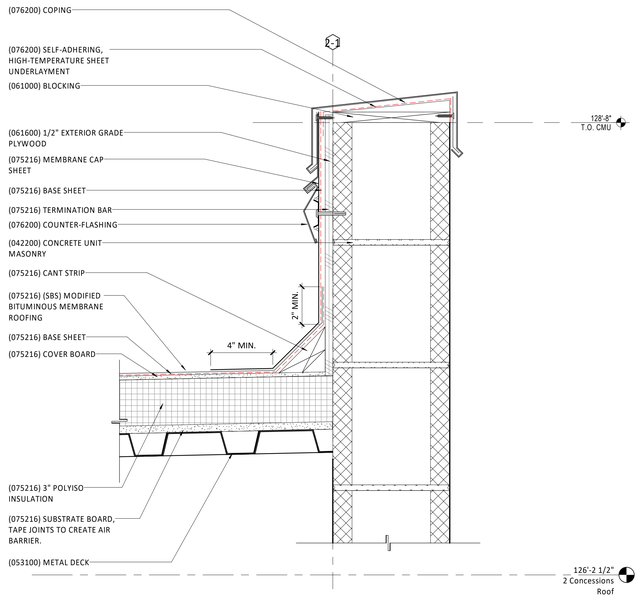
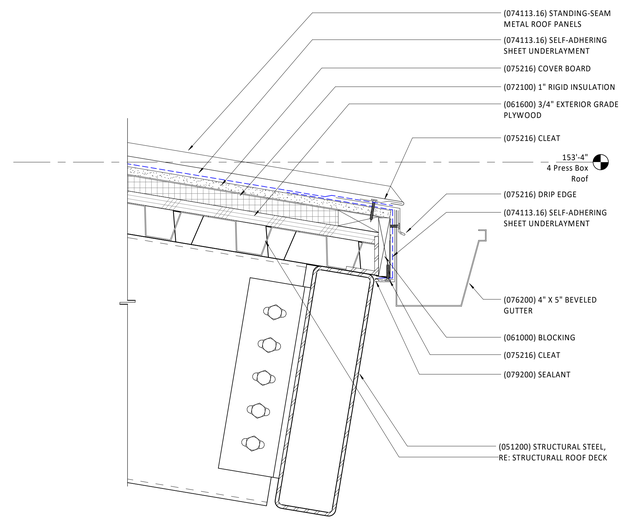


Section Detail @ Metal Panel Coping, Typ. A13
3" = 1'-0"



Section Detail - Concessions @ Coping, Typ. A7
3" = 1'-0"



Section Detail @ Metal Panel Eave, Typ. A1
3" = 1'-0"

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Jay Darren Browning — Date: 09/28/2020
Architect — License No. A-2009027279

REVISIONS

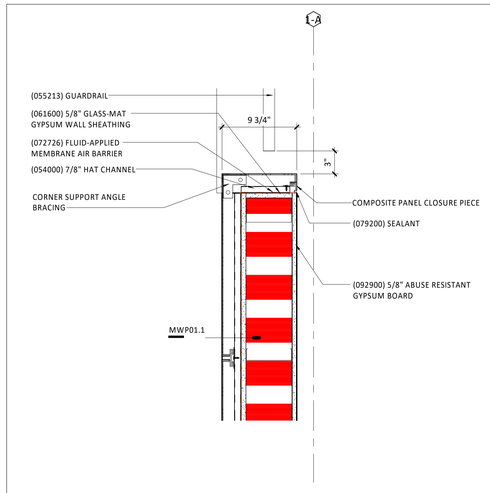
Number	DESCRIPTION	DATE

PROJECT NO: 0119-0101
DATE: September 28, 2020

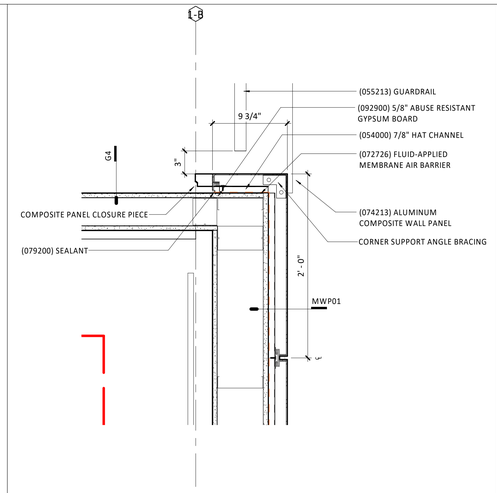
Exterior Section Details - Roof

W-A322

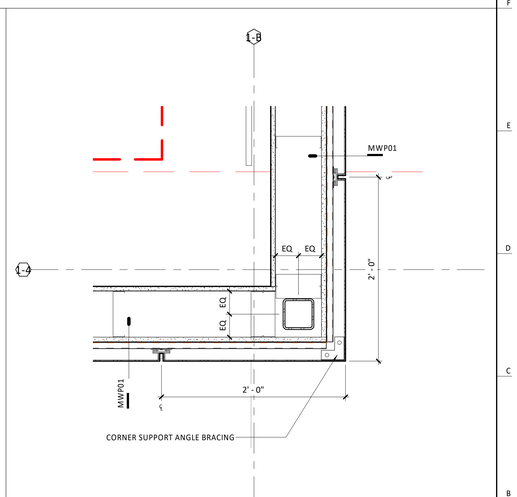
BID SET



Plan Detail - Video Deck Wall Termination @ Railing A9
1 1/2" = 1'-0"



Plan Detail - Video Deck Wall Termination A5
1 1/2" = 1'-0"



Plan Detail - Video Deck Exterior Corner A1
1 1/2" = 1'-0"

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Architectural Corporation
Missouri License No. 2018022991
Jay Darren Browning — Date: 09/28/2020
Architect — License No. A-2009027279

REVISIONS

Number	DESCRIPTION	DATE

PROJECT NO: 0119-0101
DATE: September 28, 2020

Exterior Plan Details

W-A330

BID SET

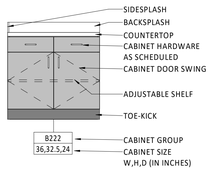
General Notes (Casework Standards):

1. ALL CASEWORK IS TO BE CONSTRUCTED TO MEET OR EXCEED ARCHITECTURAL WOODWORK INSTITUTE (AWI) STANDARDS.
2. FIELD VERIFY ALL DIMENSIONS PRIOR TO FABRICATION.
3. PROVIDE RUBBER BASE AT ALL CABINET BASES, UNLESS NOTED OTHERWISE.
4. REFER TO INTERIOR ELEVATIONS AND FINISH SCHEDULE FOR SPECIFIC MATERIAL LOCATIONS.
5. PROVIDE MOISTURE RESISTANT PLYWOOD AT COUNTERTOPS WITH SINKS.
6. SINKS SHOWN ON THESE DRAWINGS INDICATE LOCATIONS ONLY AND MAY NOTE REFLECT ACTUAL SIZES OR TYPES.
7. COORDINATE LOCATIONS OF ALL EQUIPMENT AND CONFIRM PROPER CLEARANCES. NOTIFY ARCHITECT OF ANY DISCREPANCIES.
8. CENTER ALL SINKS IN THE ASSOCIATED CASEWORK, UNLESS NOTED OTHERWISE.
9. PROVIDE SIDE SPLASH WHERE COUNTERTOP ABUTS WALL, OR AT COUNTERTOPS WITH DIFFERENT HEIGHTS ABUT.
10. SEAL ALL JOINTS BETWEEN WORK SURFACES/CABINETS AND ADJOINING SURFACES.
11. PROVIDE IN WALL BLOCKING AS REQUIRED FOR UPPER CABINETS.
12. CONTRACTOR WILL BE RESPONSIBLE FOR PROTECTING FINISHED FLOORING SURFACES FROM DAMAGE DURING ALL CONSTRUCTION PHASES.
13. FIELD COORDINATE LOCATIONS OF GROMMETS IN COUNTERTOPS WITH OWNER/ARCHITECT.
14. PROVIDE FINISHED CLOSURE PANELS AT EXPOSED END CONDITIONS.
15. PROVIDE FILLER PANEL/SCRIBE AT ALL LOCATIONS WHERE CASEWORK MEETS A WALL.
16. PROVIDE LOCKS AT ALL CABINET DOORS. FINAL LOCK COORDINATION WILL BE DONE BY OWNER/ARCHITECT DURING SHOP DRAWING PROCESS.
17. ALL PENETRATIONS THROUGH CASEWORK SHALL BE SEALED OR COVERED WITH AN ESCUTCHEON.

CASEWORK CABINET GROUPS:

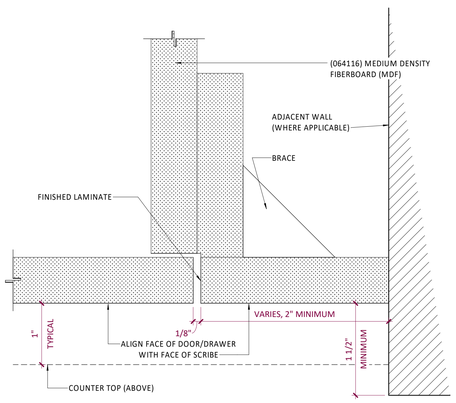
B	BASE CABINET	U	UPPER CABINET
BS	BASE SCRIBE	US	UPPER SCRIBE
T	TALL CABINET		

Casework Legend



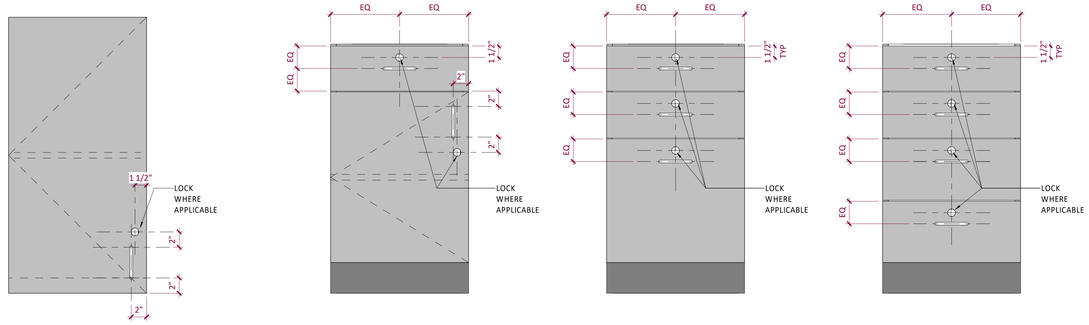
Casework Schedule

Mark	Width	Height	Depth
Base-102-Double			
B102	36"	32 1/2"	24"
Base-211-Single with Drawer			
B211	18"	30 1/2"	18"
Base-222-Double with Drawer			
B222	36"	30 1/2"	18"
Counter Top			



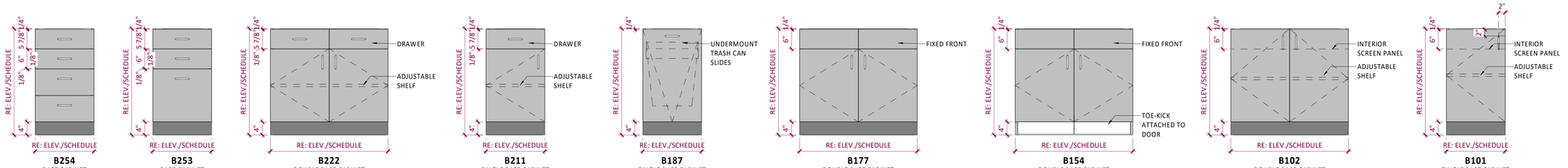
Plan Detail - Typical Scribe L15

12" = 1'-0"



Standard Lock and Pull Locations D3

1 1/2" = 1'-0"



Cabinet Types - Base A3

3/4" = 1'-0"

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Lee's Summit R7 District Athletics Facilities

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STATE OF MISSOURI · JAY DARREN BROWNING · NUMBER A-2009027279 · ARCHITECT · 9.28.20

Architectural Corporation
Missouri License No. 2018022991
Jay Darren Browning Date: 09/28/2020
Architect License No. A-2009027279

REVISIONS

Number	DESCRIPTION	DATE

PROJECT NO: 0119-0101
DATE: September 28, 2020

Casework Standards

W-A600

BID SET

Finish Legend - Interiors

Mark	Manufacturer	Model	Comments	Latest Revision
033000 CAST-IN-PLACE CONCRETE				
CC01	EXPOSED CAST IN PLACE CONCRETE		CONCRETE WITH CURE AND SEALING COMPOUND	
CC02	EXPOSED CAST IN PLACE CONCRETE		CONCRETE WITH (071800) TRAFFIC COATING	
042000 CONCRETE MASONRY UNITS				
W-CMU1	TRENWYTH	MESASTONE - LANDER'S BAY	MORTAR TO MATCH EXISTING COLOR @ PRESS BOX	
W-CMU2	TRENWYTH	ASTRA-GLAZE-SW - COSMIC BLUE		
064023 INTERIOR ARCHITECTURAL WOODWORK				
MEL01	TBD	WHITE MELAMINE		
PL01	TBD	COLOR TO MATCH PT01		
074113 STANDING SEAM METAL ROOF				
W-MR1	PAC-CLAD	SNAP-CLAD - CITYSCAPE		
074213 ALUMINUM COMPOSITE WALL PANEL				
W-MWP1	PAC-CLAD	PAC-3000 RS COMPOSITE WALL PANEL - AWARD BLUE		
085653				
IGU-02	TBD	BULLET-RESISTANT GLAZING	BULLET-RESISTANT GLASS	
095113 ACOUSTICAL PANEL CEILINGS				
ACT01	USG	ASTRO CLIMAPLUS TREATED WITH AEGIS MICROBE SHIELD	COLOR: WHITE, SIZE: 24" X 48" x 1", EDGE: SQ	
ACT02	USG	KITCHEN LAY-IN PANEL CLIMAPLUS PERFORMANCE	COLOR: WHITE, SIZE: 24" X 48" x 1", EDGE: SQ	
096513 RESILIENT BASE				
RB-01	ROPPE	123 CHARCOAL	4" COVE BASE	
099113 EXTERIOR PAINT				
W-PT01	SHERWIN WILLIAMS	SW 6804 DIGNITY BLUE	COLOR MATCH FOR PRE-FINISHED SHEET METAL	
W-PT02	SHERWIN WILLIAMS	SW 7073 NETWORK GRAY	COLOR MATCH FOR PRE-FINISHED SHEET METAL	
W-PT03	SHERWIN WILLIAMS	SW 7024 FUNCTIONAL GRAY	COLOR MATCH FOR PRE-FINISHED SHEET METAL	
099123 INTERIOR PAINTING				
W-PT04	SHERWIN WILLIAMS	SW 7007 BRIGHT WHITE		
123661 SOLID SURFACE COUNTERTOPS				
SS01	CORIAN	MODERN WHITE	GENERAL COUNTERTOPS	

Finish Schedule

Level	Room Number	Room Name	Finish				Comments
			Floor	Base	Wall	Ceiling	
1 Press Box	W1-S1	Stair	ETR	--	ETR	--	
2 Press Box	W1-202	Command Center	ETR	ETR	ETR	W-PT04	
2 Press Box	W1-201	Visitor Coach	ETR	ETR	ETR	W-PT04	
2 Press Box	W1-203	Home Coach	ETR	ETR	ETR	W-PT04	
2 Press Box	W1-204	Electrical	ETR	ETR	ETR	OTS	
2 Press Box	W1-205	Vestibule	ETR	ETR	ETR	W-PT04	
2 Press Box	W1-S2	Stair	ETR	--	ETR	--	
3 Press Box	W1-301	Video Deck	CC02	CC02	W-PT01	OTS	STEEL DECK AND STRUCTURE TO BE PAINTED W-PT02
3 Press Box	W1-S3	Stair	CC01	--	W-PT04	OTS	
3 Press Box	W1-302	Storage/Data	CC01	RB01	W-PT04	OTS	
1 Concessions	W2-109	Storage	CC01	--	W-PT04	OTS	
1 Concessions	W2-101	Concessions	CC01	RB01	W-PT04	ACT02	
1 Concessions	W2-105	Locker Room	CC01	RB01	W-PT04	ACT01	
1 Concessions	W2-102	Women's Restroom	CC01	RB01	W-PT04	ACT01	
1 Concessions	W2-103	Men's Restroom	CC01	RB01	W-PT04	ACT01	
1 Concessions	W2-104	Family Restroom	CC01	RB01	W-PT04	ACT01	
1 Concessions	W2-106	Restroom	CC01	RB01	W-PT04	ACT01	
1 Concessions	W2-108	MEP | Custodian	CC01	--	W-PT04	OTS	
1 Concessions	W2-107	Vestibule	CC01	RB01	W-PT04	ACT01	
1 North Ticket	W4-101	Ticket Booth	CC01	RB01	W-PT04	OTS	
1 South Ticket	W5-101	Ticket Booth	CC01	RB01	W-PT04	OTS	

General Notes (Finishes):

1. ALL FINISH MATERIALS MUST MEET THE FLAME SPREAD RATINGS PER THE BUILDING CODE.
2. REFER TO INTERIOR ELEVATIONS FOR SPECIFIC MATERIAL LOCATIONS.
3. REFERENCED FLOOR/WALL/CEILING TYPES ARE FOR TOP FINISH LAYER DETAILS ONLY. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FLRO FLOOR/WALL CEILING ASSEMBLY DETAILS PER LOCATION.
4. PAINT ALL EXPOSED DUCTWORK, CONDUIT, ELECTRICAL EQUIPMENT, ETC TO MATCH ADJACENT SURFACES.
5. PAINT ALL NON-FACTORY FINISHED EXPOSED METAL.
6. REFER TO TYPICAL FLOORING TRANSITION DETAILS FOR ALL FLOORING MATERIALS.
7. FLOORING TRANSITIONS AT DOORS SHOULD BE LOCATED UNDER THE DOOR IN THE CLOSED POSITION, UNLESS NOTED OTHERWISE.
8. CONTRACTOR WILL BE RESPONSIBLE FOR PROTECTING FINISHED FLOORING SURFACES FROM DAMAGE DURING ALL CONSTRUCTION PHASES.
9. PROVIDE BULLNOSE TRIM AT TRANSITIONS FROM CERAMIC WALL TILE TO OTHER MATERIAL, UNLESS NOTED OTHERWISE.
10. REFER TO REFLECTED CEILING PLANS FOR CEILING HEIGHTS.
11. ALL ELECTRICAL DEVICE COVERS ARE TO BE WHITE UNLESS NOTED OTHERWISE.
12. CARPET PATTERNS TO RUN PARALLEL TO CORRIDOR, UNLESS NOTED OTHERWISE.
13. ALL HOLLOW METAL DOOR FRAMES TO BE PAINTED TO MATCH ADJACENT WALL COLOR.

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Lee's Summit R7 District Athletics Facilities

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STATE OF MISSOURI · JAY DARREN BROWNING · NUMBER A-2009027279 · ARCHITECT · 9.28.20

Architectural Corporation
Missouri License No. 2018022991
Jay Darren Browning Date: 09/28/2020
Architect License No. A-2009027279

REVISIONS

Number	DESCRIPTION	DATE

PROJECT NO: 0119-0101
DATE: September 28, 2020

Finish Legend & Details

W-AF001

BID SET

PRINT DATE/TIME:
9/25/2020 3:33:00 PM

PLUMBING SYMBOLS

THIS IS A MASTER LEGEND AND NOT ALL SYMBOLS OR ABBREVIATIONS ARE USED. V2.02

STANDARD MOUNTING HEIGHTS

CLINIC SERVICE SINKS (RIM)	30"
HOSE BIBB (CENTERLINE)	36"
ICE MAKER OUTLET BOX (CENTER OF BOX)	24"
JANITOR'S SINK FAUCET FITTINGS (CENTERLINE)	42"
LAVATORY OR SINK	
STANDARD HEIGHT (RIM)	31"
ADA ACCESSIBLE (RIM)	34"
CHILD HEIGHT (RIM)	24"
NON FREEZE WALL HYDRANT (AFG TO CENTERLINE)	18"
SHOWER HEAD	
MEN (CENTERLINE)	78"
WOMEN (CENTERLINE)	72"
SHOWER VALVE	
STANDARD HEIGHT - MEN (CENTERLINE)	48"
STANDARD HEIGHT - WOMEN (CENTERLINE)	42"
ADA ACCESSIBLE (CENTERLINE)	38" TO 48"
SURGEON'S SCRUB-UP SINK (FRONT RIM)	35"
TUB VALVE	
STANDARD HEIGHT (CENTERLINE)	32"
ADA ACCESSIBLE	CENTER BETWEEN GRAB BAR AND TUB RIM
URINAL	
STANDARD HEIGHT (RIM)	24"
ADA ACCESSIBLE (RIM)	17"
CHILD HEIGHT (RIM)	14"
WASHING MACHINE OUTLET BOX (RIM)	42"
WATER CLOSET	
STANDARD HEIGHT (RIM)	15"
ADA ACCESSIBLE (TOP OF SEAT)	17" TO 19"
CHILD HEIGHT (RIM)	10"
WATER COOLER OR DRINKING FOUNTAIN	
STANDARD HEIGHT (SPOUT)	41"
ADA ACCESSIBLE (SPOUT)	36"
CHILD HEIGHT (SPOUT)	30"

INSTALL PLUMBING FIXTURES AT THE MOUNTING HEIGHTS SHOWN ABOVE UNO IN THE ARCHITECTURAL DRAWINGS OR ELSEWHERE IN THE CONSTRUCTION DOCUMENTS. FINAL APPROVAL OF LOCATIONS BY ARCHITECT. MOUNTING HEIGHTS LISTED ABOVE, OR ELSEWHERE IN THE CONSTRUCTION DOCUMENTS, ARE AFF. UNO. ALL DEVICES SHALL BE INSTALLED IN COMPLIANCE WITH CURRENT ADA AND LOCAL REQUIREMENTS.

ANNOTATION

- (1) PLUMBING PLAN NOTE CALLOUT
- (1) PLUMBING EQUIPMENT DESIGNATION. (CONTRACTOR FURNISHED AND INSTALLED). REFER TO PLUMBING FIXTURE OR EQUIPMENT SCHEDULES
- 1 EQUIPMENT DESIGNATION (OWNER FURNISHED, CONTRACTOR INSTALLED)
- CU 1 MECHANICAL EQUIPMENT DESIGNATION (CONTRACTOR FURNISHED AND INSTALLED UNLESS NOTED OTHERWISE)
- CONNECTION POINT OF NEW WORK TO EXISTING
- 1 / P1 DETAIL REFERENCE UPPER NUMBER INDICATES DETAIL NUMBER LOWER NUMBER INDICATES SHEET NUMBER
- A 1 / P1 SECTION CUT DESIGNATION

ABBREVIATIONS

ADA	AMERICANS WITH DISABILITIES ACT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
AP	ACCESS PANEL
BAS	BUILDING AUTOMATION SYSTEM
BFF	BELOW FINISHED FLOOR
BFG	BELOW FINISHED GRADE
BOP	BOTTOM OF PIPE
BOS	BOTTOM OF STRUCTURE
BTU	BRITISH THERMAL UNIT
CP	CONDENSATE PUMP
CPVC	CHLORINATED POLYVINYL CHLORIDE
CU	COPPER
DI	DUCTILE IRON
DN	DOWN
DFU	DRAINAGE FIXTURE UNIT
DS	DOWNSPOUT
(E)	EXISTING
EMS	ENERGY MANAGEMENT SYSTEM
ETR	EXISTING TO REMAIN
EWC	ELECTRIC WATER COOLER
FD	FLOOR DRAIN
FFA	FROM FLOOR ABOVE
FFB	FROM FLOOR BELOW
FF	FINISHED FLOOR
FL	FLOW LINE
FLA	FULL LOAD AMPS
FLR	FLOOR
GPM	GALLONS PER MINUTE
HD	HEAD, HUB DRAIN
HZ	HERTZ
IE	INVERT ELEVATION
IN WC	INCHES OF WATER COLUMN
JB	JUNCTION BOX
J-BOX	JUNCTION BOX
KW	KILOWATT
MAU	MAKE-UP AIR UNIT
MAX	MAXIMUM
MBH	1000 BTU PER HOUR
MH	MANHOLE
MIN	MINIMUM
N/C	NORMALLY CLOSED
N/O	NORMALLY OPEN
NIC	NOT IN CONTRACT
ORD	OVERFLOW ROOF DRAIN
PDI	PLUMBING DRAINAGE INSTITUTE
PH/Ø	PHASE
PRV	PRESSURE REDUCING VALVE
PVC	POLYVINYL CHLORIDE
RCP	REINFORCED CONCRETE PIPE
RD	ROOF DRAIN
RPM	REVOLUTIONS PER MINUTE
RTU	ROOFTOP UNIT
SF	SQUARE FEET
SP	SUMP
SS	STAINLESS STEEL SANITARY SEWER, SOIL STACK
TDH	TOTAL DYNAMIC HEAD
TFA	TO FLOOR ABOVE
TFB	TO FLOOR BELOW
TYP	TYPICAL
UL	UNDERWRITERS LABORATORIES, INC.
UNO	UNLESS NOTED OTHERWISE
UPS	UNINTERRUPTIBLE POWER SUPPLY
VCP	VITRIFIED CLAY PIPE
VFD	VARIABLE FREQUENCY DRIVE
VS	VENT STACK
VTR	VENT THROUGH ROOF
W/	WITH
W/O	WITHOUT
WC	WATER COLUMN
WS	WASTE STACK
WSFU	WATER SUPPLY FIXTURE UNIT
WVS	WASTE VENT STACK

PIPING SYMBOLS

- OXYGEN OUTLET
- NITROUS OXIDE OUTLET
- MEDICAL AIR OUTLET
- NITROGEN OUTLET
- MEDICAL VACUUM INLET
- FLOOR SINK (FS), SIZE & TYPE
- FLOOR DRAIN (FD), SIZE & TYPE
- ROOF DRAIN (RD), SIZE & TYPE
- BALL VALVE
- CONTROL VALVE
- SHUTOFF VALVE
- CHECK VALVE
- BALANCING VALVE WITH PRESSURE PORTS
- WATER METER
- STRAINER
- STRAINER WITH BLOWOFF
- RELIEF/SAFETY VALVE
- SOLENOID VALVE
- PRESSURE REDUCING VALVE
- GAS PRESSURE REGULATOR
- THERMOSTATIC MIXING VALVE
- PA PIPE ANCHOR
- EJ EXPANSION JOINT
- BACKFLOW PREVENTER
- PRESSURE GAUGE
- THERMOMETER
- UNION
- FLANGE CONNECTION
- HOSE BIBB (HB)
- NON-FREEZING WALL HYDRANT (NW)
- MANUAL / AUTOMATIC AIR VENT OR VACUUM RELIEF VALVE
- PRESSURE / VACUUM SWITCH
- CLEANOUT
- CAP
- WALL CLEANOUT (WCO)
- FLOOR CLEANOUT (FCO)
- EXTERIOR CLEANOUT (ECO)
- ELBOW UP
- ELBOW DOWN
- TEE UP
- TEE DOWN
- ELBOW UP WITH SHUT-OFF VALVE (SOV)
- ELBOW DOWN WITH SHUT-OFF VALVE (SOV)
- TEE UP WITH SHUT-OFF VALVE (SOV)
- TEE DOWN WITH SHUT OFF VALVE (SOV)
- "A" WATER HAMMER ARRESTER (WHA) WITH PDI SIZES, (A, B, C, D, & E)
- RECIRCULATION PUMP
- P-TRAP
- GAS COCK
- TRAP PRIMER
- TRAP PRIMER WITH DISTRIBUTION UNIT

LINETYPE LEGEND

THROUGHOUT THE DRAWINGS DIFFERENT LINETYPES ARE USED IN COMBINATION WITH THE SYMBOLS TO INDICATE THE STATUS OF ITEMS AS EXISTING, TO BE DEMOLISHED, TO BE INCLUDED AS PART OF NEW WORK AND/OR ITEMS WHICH ARE ANTICIPATED TO BE PROVIDED IN THE FUTURE. THE STATUS OF ITEMS USING THESE LINETYPES ARE RELATIVE TO THE VIEW IN WHICH THEY APPEAR. PHASING SHOWN IN DRAWINGS IS NOT INTENDED TO FULLY DESCRIBE ALL NECESSARY CONSTRUCTION PHASING, WHICH IS DETERMINED BY THE CONTRACTOR AS PART OF THEIR RESPONSIBILITIES. ANY SUCH PHASES DESCRIBED IN THE CONSTRUCTION DOCUMENTS ARE GENERAL AND ONLY INTENDED TO INDICATE A BROAD ORDER FOR THE SAKE OF DESCRIBING THE PROJECT, THE FOLLOWING LINETYPES MAY BE USED ON ANY DEVICE, EQUIPMENT, NOTE, LINE, SHAPE, ETC.

EXISTING	NEW
DEMOLISH	FUTURE

PIPING LINETYPES

- CW DOMESTIC COLD WATER (CW)
- SCW SOFTENED COLD WATER (SCW)
- HW DOMESTIC HOT WATER (HW)
- HWR DOMESTIC HOT WATER RECIRC. (HWR)
- 140° DOMESTIC HOT WATER (140°)
- T TRAP PRIMER LINE (T)
- S SOIL PIPING - ABOVE FLOOR (S)
- S SOIL PIPING - BELOW FLOOR (S)
- W WASTE PIPING - ABOVE FLOOR (W)
- W WASTE PIPING - BELOW FLOOR (W)
- GW GREASE WASTE - ABOVE FLOOR (GW)
- GW GREASE WASTE - BELOW FLOOR (GW)
- CGWV COMBINATION GREASE WASTE AND VENT (CGWV)
- CWV COMBINATION WASTE AND VENT (CWV)
- ST STORM DRAIN - ABOVE FLOOR (ST)
- ST STORM DRAIN - BELOW FLOOR (ST)
- OST OVERFLOW STORM DRAIN - ABOVE FLOOR (OST)
- VBG VENT BELOW GRADE (VBG)
- VBF VENT BELOW FLOOR (VBF)
- ID INDIRECT DRAIN (ID)
- CDH CONDENSATE DRAIN - HIGH EFFICIENCY RTU (CDH)
- CD CONDENSATE DRAIN (CD)
- ACD AUXILIARY CONDENSATE DRAIN (ACD)
- SPD SUMP OR SEWAGE PUMP DISCHARGE (SPD)
- G NATURAL GAS (G)
- G NATURAL GAS ON ROOF (G)
- MPG MEDIUM PRESSURE NATURAL GAS (MPG)
- MPG MEDIUM PRESSURE NATURAL GAS ON ROOF (MPG)
- NPW NON-POTABLE WATER (NPW)
- LPG LIQUEFIED PETROLEUM GAS (LPG)
- WS WATER SERVICE (WS)
- FP FIRE PROTECTION (FP)
- PD CONDENSATE PUMP DISCHARGE (PD)
- V VENT PIPING (V)
- AW ACID WASTE - ABOVE FLOOR (AW)
- AW ACID WASTE - BELOW FLOOR (AW)
- AV ACID VENT (AV)
- GWS GRAY WATER (GWS)
- CA COMPRESSED AIR (CA)
- MA MEDICAL AIR (MA)
- MV MEDICAL VACUUM (VE)
- HE HELIUM (HE)
- IA INSTRUMENT AIR (IA)
- IV INSTRUMENT VACUUM (IV)
- N2 NITROGEN (N2)
- N2O NITROUS OXIDE (N20)
- O2 OXYGEN (O2)
- EV EVAC/WAGD (EV)
- CO2 CARBON DIOXIDE (CO2)
- AI MEDICAL AIR INTAKE (AI)
- VE MEDICAL VACUUM EXHAUST (VE)
- DA DENTAL AIR (DA)
- DV DENTAL VACUUM (DV)
- FW1 FILTERED WATER (FW1)
- FW2 FILTERED WATER W/ SCALE INHIBITOR (FW2)
- DA REVERSE OSMOSIS (RO)
- ROR REVERSE OSMOSIS REMINERALIZATION (ROR)

GENERAL NOTES:

1. PROVIDE A CONSTRUCTION RECORD SET OF "AS-BUILT" DOCUMENTS TO THE ARCHITECT REFLECTING ANY VARIANCES OF INSTALLED PIPING LOCATIONS OR EQUIPMENT CONTRARY TO THE CONSTRUCTION DOCUMENTS. REFER TO SPECIFICATIONS.
2. DRAWINGS ARE DIAGRAMMATIC ONLY AND REPRESENT THE GENERAL SCOPE OF THE WORK. REVIEW THE GENERAL NOTES, SPECIFICATIONS AND PLANS FOR ADDITIONAL REQUIREMENTS THAT MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY THE ARCHITECT OF ANY CONFLICTS OR DISCREPANCIES PRIOR TO SUBMISSION OF BID.
3. PROVIDE TO THE ARCHITECT A COPY OF INSPECTION REPORTS AND APPROVAL CERTIFICATES FROM LOCAL AND STATE INSPECTIONS. REFER TO SPECIFICATIONS.
4. INSTALLATION SHALL COMPLY WITH LEGALLY CONSTITUTED CODES AND THE REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION AND ALSO MEET ALL REQUIREMENTS OF THE LANDLORD. OBTAIN A COPY OF THE LANDLORD'S REQUIREMENTS AND REVIEW PRIOR TO SUBMITTING BID.
5. PLANS AND SPECIFICATIONS GOVERN WHERE THEY EXCEED CODE REQUIREMENTS.
6. VERIFY LOCATION AND DEPTH OF UTILITIES AT POINTS OF CONNECTION BEFORE START OF PIPING INSTALLATION.
7. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION AND MOUNTING HEIGHTS OF PLUMBING FIXTURES.
8. DO NOT SCALE FLOOR PLANS FOR EXACT HORIZONTAL LOCATION OF PIPE ROUTING.
9. INSTALL CONCEALED PIPING TIGHT TO THE STRUCTURE AND AS HIGH AS POSSIBLE.
10. VALVES SHALL BE LINE SIZE UNLESS OTHERWISE NOTED.
11. INSTALL EXPOSED PIPING, WHERE NECESSARY, IN FINISHED AREAS TIGHT TO THE STRUCTURE, WALL OR CEILING AND AS HIGH AS POSSIBLE. INSTALL PIPING PARALLEL AND / OR PERPENDICULAR TO WALLS.
12. INSTALL VALVES AND APPURTENANCES A MAXIMUM OF 24" ABOVE CEILING IN ACCESSIBLE LOCATION WITHIN 24" OF ACCESS DOORS OR ACCESSIBLE CEILING TILES. PROVIDE PIPE AND FITTINGS TO INSTALL VALVES AND APPURTENANCES AT REQUIRED HEIGHT AND WITHIN 24" OF ACCESS DOORS OR ACCESSIBLE CEILING TILES.
13. INSTALL NO PLASTIC PIPE OF ANY KIND ABOVE SLAB INSIDE OR UNDER THE BUILDING. INSTALL NO PLASTIC PIPE IN THE CEILING RETURN AIR PLENUM.
14. COORDINATE ALL WORK WITH OTHER TRADES AND CONTRACTORS.
15. COORDINATE PIPING INSTALLATION WITH STRUCTURAL GRADE BEAMS, FOOTINGS, COLUMN PIERS, ETC. SLEEVE PIPING THROUGH GRADE BEAMS, FOOTING, ETC. WHERE REQUIRED AND AS NOTED ON PLANS. COORDINATE SLEEVE INSTALLATIONS WITH THE ARCHITECT, STRUCTURAL ENGINEER, STRUCTURAL CONTRACTOR AND GENERAL CONTRACTOR BEFORE CONCRETE IS INSTALLED.
16. CLEAN FAUCET AERATORS AND PIPE STRAINERS PRIOR TO TURNING BUILDING OVER TO THE OWNER.
17. PROVIDE TRAP PRIMERS WHERE REQUIRED BY LOCAL AUTHORITIES.
18. COORDINATE PIPE ROUTING AWAY FROM ELECTRICAL PANELS. DO NOT INSTALL PIPING OVER ELECTRICAL PANELS.
19. PAINT ALL EXPOSED WATER PIPING USING RUST INHIBITOR PAINT. PAINT AND COLOR SHALL BE COORDINATED WITH THE ARCHITECT AND / OR OWNER.
20. COORDINATE ALL ROOF PENETRATIONS WITH OTHER TRADES. MAINTAIN 10' MINIMUM CLEARANCE FROM ALL AIR INTAKES. MAINTAIN 2' CLEARANCE FROM ALL OTHER EQUIPMENT.
21. INSULATE PIPING ROUTED IN EXTERIOR BUILDING WALLS WITH MINIMUM 2" BATT INSULATION TO PREVENT FREEZING.
22. PROVIDE "HEAVY-DUTY" NO-HUB COUPLINGS ON SANITARY PIPING 3" AND LARGER. SEE DIVISION 22 SPECIFICATION SECTION "SANITARY DRAINAGE AND VENT AND PIPING SPECIALTIES" FOR MORE INFORMATION.
23. PROVIDE TRANSITION ADAPTER COUPLINGS FOR CONNECTION OF PVC DWV TO CAST IRON SANITARY, WASTE AND VENT PIPE AT SLAB ON GRADE. SEE DIVISION 22 SPECIFICATION SECTION "SANITARY DRAINAGE AND VENT PIPING AND SPECIALTIES" FOR MORE INFORMATION.
24. FLOW CONTROL VALVES SHALL BE SIZE 1/2" AND SET AT 0.5 GPM UNLESS NOTED OTHERWISE.
25. WATER HAMMER ARRESTORS SHALL BE SIZE "A" UNLESS NOTED OTHERWISE.
26. PROVIDE VERTICAL LIFT SPRING LOADED CHECK VALVES IN HOT AND COLD WATER SUPPLIES FOR MOP SINK FAUCETS DOWNSTREAM OF SHUTOFF VALVES.
27. PROVIDE WALL PIPES AT PIPING PENETRATIONS OF ELEVATED WATERPROOF FLOOR SLABS, REFER TO SPECIFICATIONS.
28. VERIFY EXISTING EQUIPMENT, INCLUDING ACCESSORIES, IS NOT DAMAGED AND IS IN GOOD WORKING ORDER. REPORT ANY DEFICIENCIES TO THE ARCHITECT.
29. PROVIDE SIZE AND LENGTH OF HOT WATER FIXTURE SUPPLY PIPE FROM CIRCULATED HOT WATER BRANCH OR MAIN TO TERMINATION OF HOT WATER FIXTURE SUPPLY PIPE AT EACH FIXTURE PER 2015 INTERNATIONAL ENERGY CONSERVATION CODE, TABLE C404.3.1. FOR ½" HOT WATER FIXTURE SUPPLY PIPE SIZE TO INDIVIDUAL LAVATORIES, PROVIDE MAXIMUM LENGTH OF TWO FEET. FOR ½" HOT WATER FIXTURE SUPPLY PIPE SIZE TO INDIVIDUAL SINKS, PROVIDE MAXIMUM LENGTH OF 43 FEET. FOR 3/4" HOT WATER FIXTURE SUPPLY PIPE SIZE TO INDIVIDUAL SINKS, PROVIDE MAXIMUM LENGTH OF 21 FEET.

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MO. CORPORATE NO: E-556D
EXPIRES 12/31/2020

STATE OF MISSOURI
KELLEY P. CRAMM
NUMBER E-22323
REGISTERED PROFESSIONAL ENGINEER

Kelley P. Cramm

Sep 28 2020

REVISIONS

Number	DESCRIPTION	DATE

PROJECT NO: 0119-0101
DATE: September 28, 2020

PLUMBING LEGEND AND NOTES

W-P000

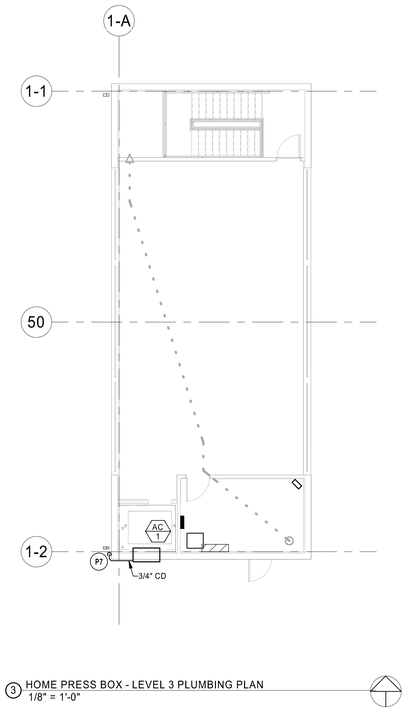
BID SET

KELLEY P. CRAMM

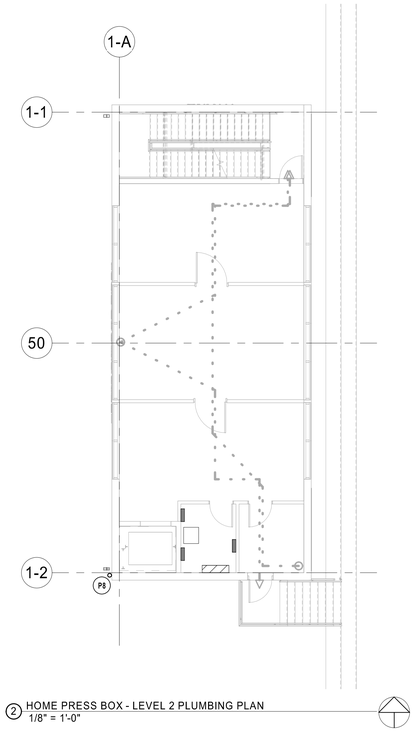
PRINT DATE/TIME: 9/25/2020 2:14:12 PM

PLUMBING PLAN NOTES:

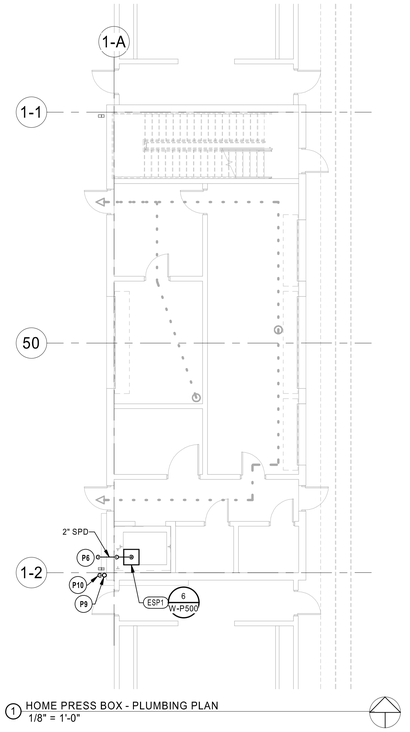
P6 ELEVATOR SUMP PUMP PIPING SHALL DISCHARGE TO GRADE.
P7 3/4" CONDENSATE DRAIN TFB.
P8 3/4" CONDENSATE DRAIN FFA AND TFB.
P9 3/4" CONDENSATE DRAIN FFA.
P10 3/4" CONDENSATE DRAIN SHALL DISCHARGE TO GRADE.



3 HOME PRESS BOX - LEVEL 3 PLUMBING PLAN
1/8" = 1'-0"

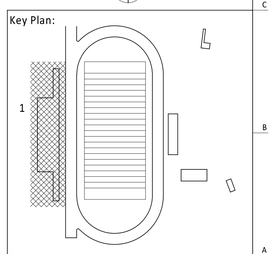


2 HOME PRESS BOX - LEVEL 2 PLUMBING PLAN
1/8" = 1'-0"



1 HOME PRESS BOX - PLUMBING PLAN
1/8" = 1'-0"

Key Plan:



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STATE OF MISSOURI
KELLEY P. CRAMM
NUMBER E-22323
REGISTERED PROFESSIONAL ENGINEER

Sep 28 2020

REVISIONS

Number	DESCRIPTION	DATE

PROJECT NO: 0119-0101
DATE: September 28, 2020

HOME PRESS BOX - PLUMBING PLANS

W-P111

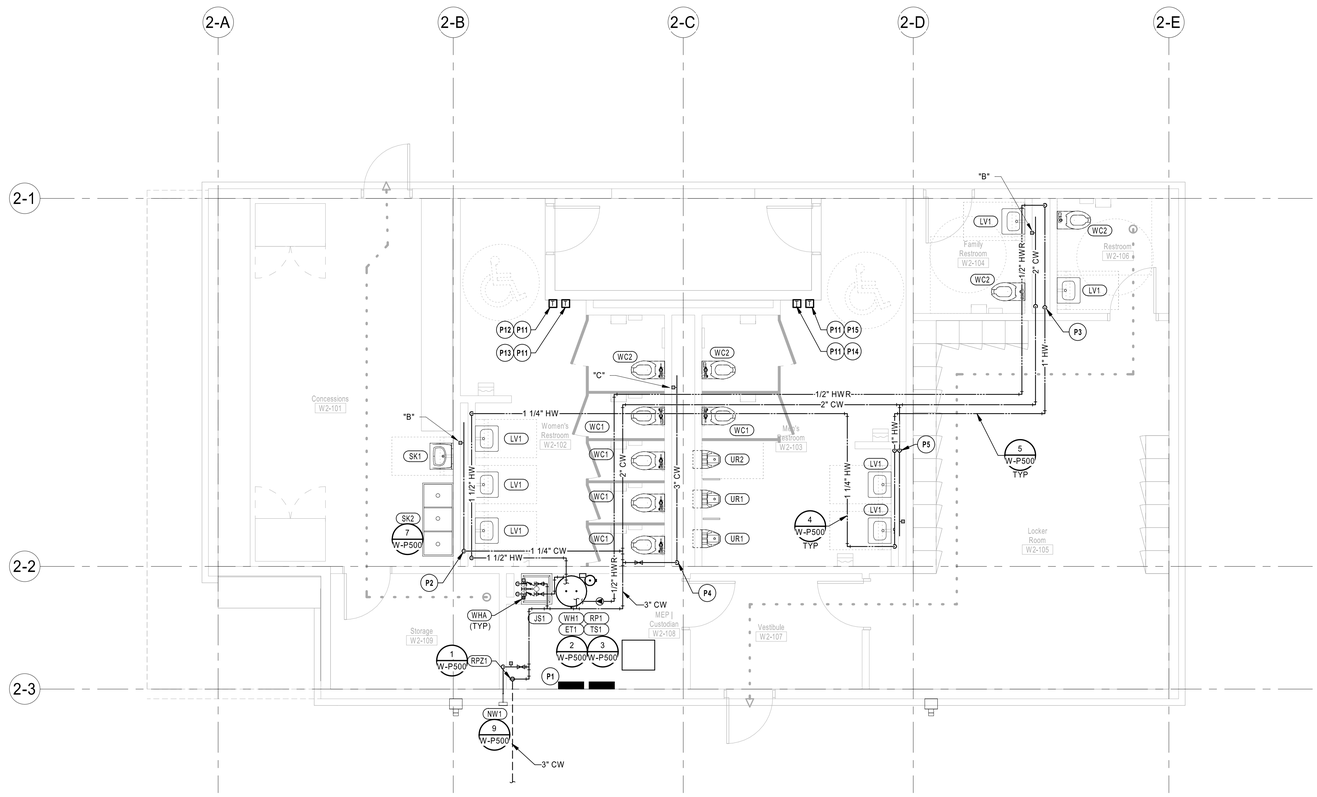
BID SET

PRINT DATE/TIME: 9/25/2020 2:14:18 PM

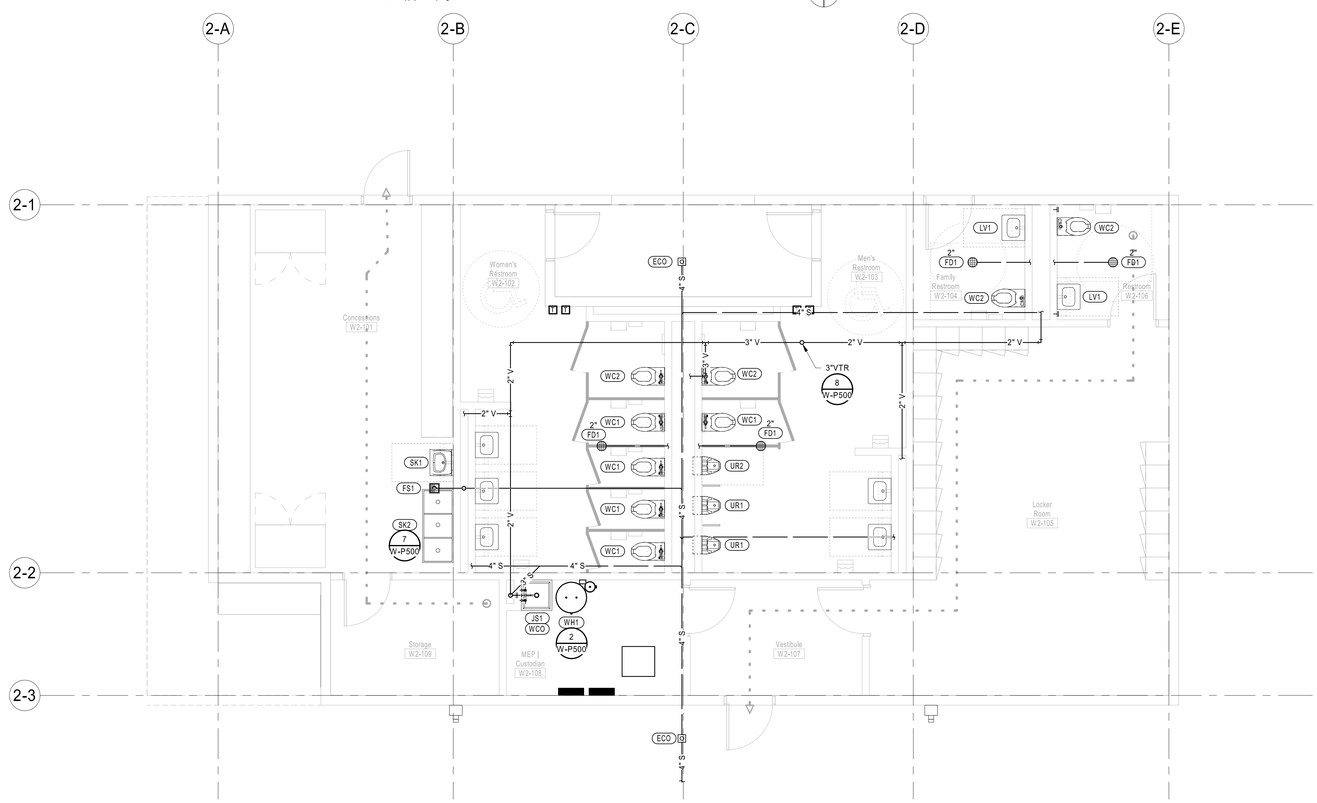
KELLEY P. CRAMM

PLUMBING PLAN NOTES:

P1 DO NOT INSTALL PLUMBING PIPING OVER ELECTRICAL PANELS OR EQUIPMENT.
P2 ROUTE 1-1/4" COLD WATER AND 1-1/2" HOT WATER DOWN AND HEADER IN WALL.
P3 ROUTE 2" COLD WATER AND 3/4" HOT WATER DOWN AND HEADER IN WALL.
P4 ROUTE 3" COLD WATER DOWN AND HEADER IN WALL.
P5 ROUTE 3/4" COLD WATER AND 3/4" HOT WATER DOWN AND HEADER IN WALL.
P11 LOCATE TRANSFORMER "T" ABOVE CEILING IN ACCESSIBLE LOCATION. REFER TO ELECTRICAL DRAWINGS FOR INSTALLATION.
P12 TRANSFORMER TO SERVE (3) WC AND (1) LAV IN WOMEN'S RESTROOM W2-102.
P13 TRANSFORMER TO SERVE (2) WC AND (2) LAV IN WOMEN'S RESTROOM W2-102.
P14 TRANSFORMER TO SERVE (1) WC, (2) UR AND (1) LAV IN MEN'S RESTROOM W2-103.
P15 TRANSFORMER TO SERVE (1) WC, (1) UR AND (1) LAV IN MEN'S RESTROOM W2-103.



2 VISITOR RESTROOMS/CONCESSIONS - PLUMBING DOMESTIC WATER PLAN
1/4" = 1'-0"



1 VISITOR RESTROOMS/CONCESSIONS - PLUMBING WASTE AND VENT PLAN
1/4" = 1'-0"

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Sep 28 2020

REVISIONS

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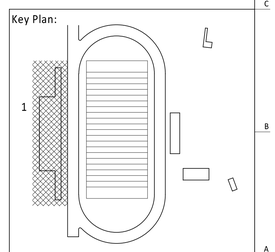
Key Plan:



PROJECT NO: 0119-0101
DATE: September 28, 2020

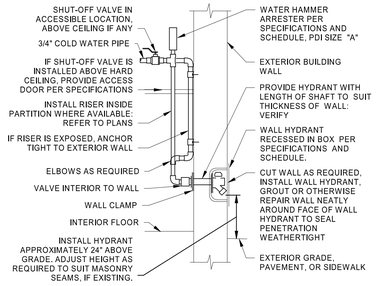
VISITOR RESTROOMS & CONCESSIONS - PLUMBING PLAN

W-P121

BID SET

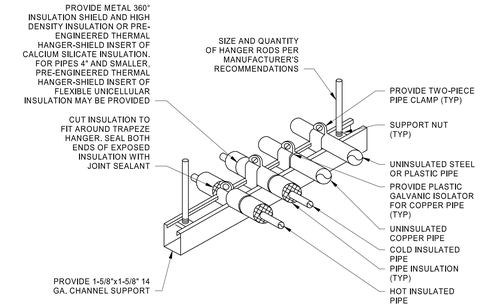
KELLEY P. CRAMM

PRINT DATE/TIME: 9/25/2020 2:14:24 PM



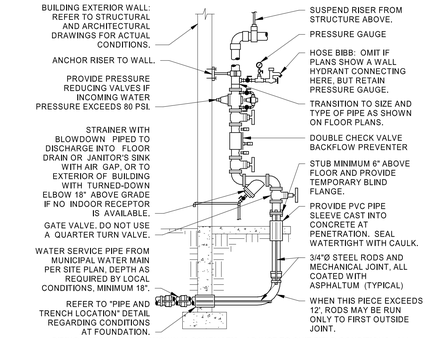
ARRANGEMENT SHOWN IS SCHEMATIC. ADJUST AS REQUIRED TO SUIT FIELD CONDITIONS. INSTALL PER MANUFACTURER'S INSTRUCTIONS. IN NON-FREEZING CLIMATES, PIPE MAY BE INSTALLED CONCEALED IN EXTERIOR WALL RATHER THAN EXTERIOR TO WALL AS SHOWN. REFER TO PLANS FOR LOCATION.

9 WALL HYDRANT INSTALLATION
NTS



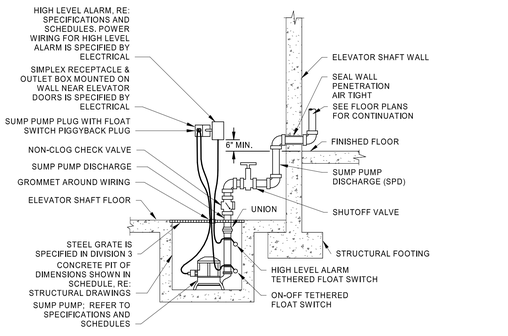
PIPING ARRANGEMENT SHOWN IS SCHEMATIC. ADJUST TO SUIT FIELD CONDITONS. REFER TO SPECIFICATIONS FOR MORE INFORMATION. PIPE AND CONDUIT OF ALL TRADES MAY BE COMBINED ON THE SAME SUPPORT CHANNEL. COORDINATE SUPPORT CHANNEL LENGTH WITH PIPING AND CONDUIT TO BE SUPPORTED. SUPPORT CHANNEL SPACING SHALL BE DETERMINED BY SMALLEST PIPE TO BE SUPPORTED. CHANNEL SUPPORT MAY BE USED AS A WALL BRACKET. ATTACH TO WALL WITH ANCHOR BOLTS PER SPECIFICATIONS. FOR HORIZONTAL INSULATED PIPING, ATTACH CLAMPS AS INDICATED ABOVE. FOR VERTICAL INSULATED PIPING, ATTACH CLAMPS TO THE PIPE AND SEAL INSULATION AT BOTH CLAMP ENDS.

5 TRAPEZE PIPE HANGER
NTS



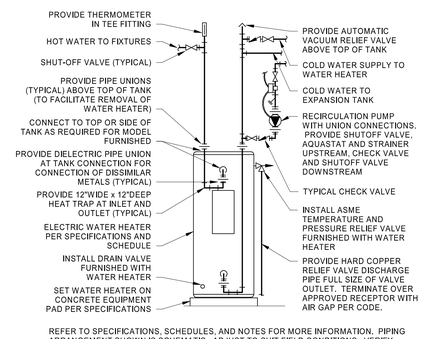
PIPING ARRANGEMENT SHOWN IS SCHEMATIC. ADJUST TO SUIT FIELD CONDITIONS. ALL ITEMS SHALL BE APPROVED FOR DOMESTIC WATER SERVICE. INSTALL SO THAT THEY CAN BE EASILY SERVICED AND TESTED. PROVIDE DOUBLE CHECK VALVE APPROVED BY LOCAL AUTHORITIES FOR VERTICAL INSTALLATION. INSTALL WITH REQUIRED CLEARANCES. PROVIDE ANY REQUIRED CERTIFICATION OF TEST OF BACKFLOW PREVENTER TO LOCAL AUTHORITIES. REFER TO SPECIFICATIONS AND SCHEDULES FOR FURTHER INFORMATION.

1 DOMESTIC WATER SERVICE ENTRY
NTS



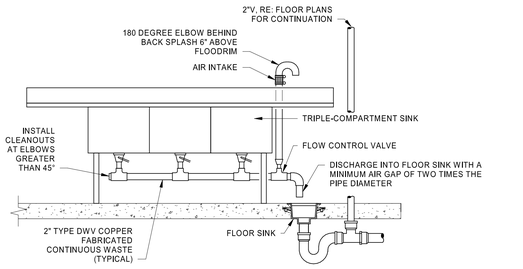
ARRANGEMENT SHOWN IS SCHEMATIC. ADJUST TO SUIT FIELD CONDITIONS. LOCATE FLOATS AT ELEVATIONS AS RECOMMENDED BY PUMP MANUFACTURER. INTERLOCK OF HIGH LEVEL ALARM WITH ALARM BELL, REFER TO FLOOR PLANS IF PROVIDED, IS SPECIFIED BY ELECTRICAL. INTERLOCK OF HIGH LEVEL ALARM WITH BUILDING AUTOMATION SYSTEM, REFER TO SPECIFICATIONS IF PROVIDED, IS SPECIFIED BY MECHANICAL.

6 ELEVATOR SUMP PUMP
NTS



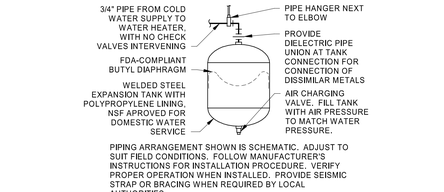
REFER TO SPECIFICATIONS, SCHEDULES, AND NOTES FOR MORE INFORMATION. PIPING ARRANGEMENT SHOWN IS SCHEMATIC. ADJUST TO SUIT FIELD CONDITIONS. VERIFY CONNECTION SIZES AND LOCATIONS WITH WATER HEATER FURNISHED. REFER TO FLOOR PLANS FOR PIPE SIZES AND CONTINUATIONS. PROVIDE SEISMIC STRAP OR BRACING WHEN REQUIRED BY LOCAL AUTHORITIES. POWER WIRING AND DISCONNECT SWITCH ARE SPECIFIED BY ELECTRICAL. INTERLOCK OF AQUASTAT WITH RECIRCULATION PUMP IS SPECIFIED BY ELECTRICAL.

2 ELECTRIC WATER HEATER AND PUMP
NTS



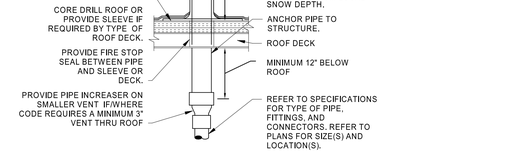
ARRANGEMENT SHOWN IN SCHEMATIC. ADJUST TO SUIT FIELD CONDITIONS. NO-HUB CAST IRON PIPE, FITTINGS AND CONNECTORS ALL AROUND SINK AND TRAP.

7 UTILITY SINK AND GREASE TRAP
NTS



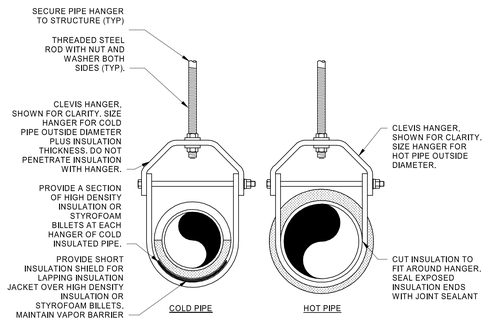
PIPING ARRANGEMENT SHOWN IS SCHEMATIC. ADJUST TO SUIT FIELD CONDITIONS. FOLLOW MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION PROCEDURE. VERIFY PROPER OPERATION WHEN INSTALLED. PROVIDE SEISMIC STRAP OR BRACING WHEN REQUIRED BY LOCAL AUTHORITIES.

3 SMALL EXPANSION TANK
NTS



LOCATE VTR MINIMUM THREE FEET FROM PROPERTY LINE, TEN FEET HORIZONTAL OR THREE FEET VERTICAL ABOVE ANY BUILDING OPENING OR FRESH AIR INTAKE, TWENTY FIVE FEET FROM ANY OPENING OR FRESH AIR INTAKE IN MEDICAL FACILITIES AND ONE FOOT FROM ANY VERTICAL SURFACE. REFER TO LOCAL CODES FOR OTHER VENT TERMINATION REQUIREMENTS. LOCATE VTR MINIMUM 18" FROM ADJACENT WALL, PARAPET, EXPANSION JOINT, ROOF DRAIN, EQUIPMENT CURB, OR OTHER ROOF FEATURE. OFFSET IN CEILING SPACE WHERE REQUIRED TO MEET THESE CONDITIONS. INSULATE LAST SIX FEET OF VENT PIPE INSIDE BUILDING PER SPECIFICATIONS.

8 VENT THRU ROOF
NTS



REFER TO SPECIFICATIONS FOR INSULATION TYPES. INSULATION THICKNESSES, HANGER TYPES, HANGER ROD CONNECTIONS TO STRUCTURE AND HANGER SPACING.

4 PIPE HANGER DETAIL
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KELLEY P. CRAMM
NUMBER E-22323
REGISTERED PROFESSIONAL ENGINEER

Sep 28 2020

REVISIONS

Number	DESCRIPTION	DATE

PROJECT NO: 0119-0101
DATE: September 28, 2020

PLUMBING DETAILS

W-P500

BID SET

ELECTRIC STORAGE WATER HEATER SCHEDULE

MARK	MANUFACTURER	MODEL#	AREA SERVED	TANK SIZE (GALLONS)	ELECTRICAL DATA				NOTES
					VOLTS	PHASE	KW	WEIGHT (LBS)	
WH1	A.O. SMITH	#DRE-80	ENTIRE BUILDING	80	480	3	24	950	A

NOTES:

A. 100°F TEMPERATURE RISE WITH 140°F OPERATING TEMPERATURE.

ELEVATOR SUMP PUMP SCHEDULE (3/4 HP AND SMALLER)

MARK	MANUFACTURER	MODEL	LOCATION	GPM	HEAD (FT.)	DISCHARGE SIZE (IN.)	ELECTRICAL			NOTES
							VOLTS	PH	HP	
ESP1	WEIL	1411-538	ELEVATOR PIT	50	21	2"	120	1	0.5	A-E

NOTES:

A. PROVIDE WEIL #8245 FLOAT SWITCH WITH POWER CORD AND PIGGYBACK PLUG.
B. PROVIDE WITH WEIL #8341K1015 HIGH LEVEL ALARM WITH AUXILIARY CONTACT. REFER TO SPECIFICATIONS.
C. PROVIDE 2" DISCHARGE PIPING, SHUTOFF VALVE AND ZOELLER #30-0030 FLAPPER NON-CLOG CHECK VALVE.
D. REFER TO DETAIL FOR MORE INSTALLATION INFORMATION.
E. INSTALL IN 24"SQUARE x 24" DEEP SUMP PIT LOCATED IN ELEVATOR PIT, SEE ARCHITECTURAL DRAWINGS.

PLUMBING EXPANSION TANK SCHEDULE

MARK	MANUFACTURER	MODEL	TANK SIZE (GALLONS)	MIN. ACCEPTANCE VOLUME (GALLONS)	SERVICE	WEIGHT (LBS)	NOTES
ET1	AMTROL	ST-5	2	0.9	WH1	22	A

NOTES:

A. CHARGE TANK WITH AIR TO IDENTICAL PRESSURE AS STATIC DOMESTIC WATER PRESSURE.

RECIRCULATION PUMP SCHEDULE

MARK	MANUFACTURER	MODEL	GPM	HEAD (FT.)	CONNECTION SIZE	ELECTRICAL DATA			NOTES
						VOLTS	PH	HP	
RP1	BELL & GOSSETT	NBF-9U	1	7	3/4"	120	1	1/18	A-E

NOTES:

A. ALL LEAD FREE CAST BRONZE BOOSTER.
B. PROVIDE WITH STRAINER UPSTREAM OF PUMP.
C. PROVIDE ADJUSTABLE, SURFACE MOUNTED AQUASTAT - HONEYWELL L6006C.
D. SET AQUASTAT TO SHUT OFF RECIRCULATION PUMP AT WATER HEATER SET POINT AND ON AT 10°F BELOW SET POINT.

FIXTURE BRANCH CONNECTION SCHEDULE

FIXTURE	COLD WATER	HOT WATER	WASTE	VENT
FLOOR DRAIN			2"	2"
JANITOR'S SINK	1/2"	1/2"	3"	2"
LAVATORY/HAND SINK	1/2"	1/2"	2"	1 1/2"
SINK	1/2"	1/2"	2"	2"
URINAL	1"	1"	2"	2"
WATER CLOSET (FLUSH VALVE)	1 1/4"		4"	2"

NOTE: PIPE SIZES SHOWN ARE MINIMUM.

PLUMBING FIXTURE SCHEDULE

FIXTURES IN THIS SCHEDULE OR THEIR APPROVED EQUIVALENT ARE PROVIDED BY THE PLUMBING CONTRACTOR. SUBMIT SHOP DRAWINGS ON EACH OF THESE ITEMS. REFER TO SPECIFICATIONS FOR FURTHER INFORMATION AND INSTALLATION REQUIREMENTS. VERIFY ROUGH-IN REQUIREMENTS WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS AND INSTALL PER MANUFACTURER'S RECOMMENDATIONS. REFER TO THE ARCHITECTURAL DRAWINGS FOR THE PLUMBING FIXTURE MOUNTING HEIGHTS.

PLUMBING FIXTURE SCHEDULE

PLUMBING PLAN MARK	DESCRIPTION
ECO	EXTERIOR CLEANOUT: JAY R. SMITH # 4081L SERIES DUCO CAST IRON DOUBLE FLANGED HOUSING WITH HEAVY DUTY SECURED SCORIATED CAST IRON COVER WITH LIFTING DEVICE AND CLEANOUT BODY WITH ABS PLASTIC PLUG WITH GASKET SEAL AND PUSH-ON JOINT. REFER TO SPECIFICATIONS FOR INSTALLATION.
EWC1	ELECTRIC WATER COOLER (ADA ACCESSIBLE): ELKAY VRCTLDDWSK BARRIER FREE, LEAD FREE WITH BOTTLE FILLING STATION, FRONT ACTUATOR BUTTON, STAINLESS STEEL BOWL, VANDAL RESISTANT BUBBLER AND STAINLESS STEEL FRONT AND SIDES, NON CHILLED, NON FILTERED, BOTTLE FILLING STATION; ELECTRONIC SENSOR FOR TOUCHLESS ACTIVATION WITH AUTO 20-SECOND SHUT-OFF TIMER. UNIT PROVIDES 1.1-1.5 GPM WITH LAMINAR FLOW TO MINIMIZE SPLASHING. TRIM: McGUIRE # LF2165CC LEAD FREE BRASS COMPRESSION ANGLE STOP VALVE WITH RISER AND ESCUTCHEON, McGUIRE # B8872CF 1-1/4" 17 GAUGE CAST CHROME PLATED BRASS ADJUSTABLE P-TRAP AND WASTE ARM WITH CLEANOUT PLUG AND ESCUTCHEON, AND SUITABLE CARRIER WITH STANCHIONS TO FLOOR. ELECTRICAL REQUIREMENTS: 120-VOLT, 1 FULL LOAD AMPS.
FD1	FLOOR DRAIN: JAY R .SMITH # 2005L (-A), CAST IRON BODY AND CLAMPING COLLAR, ADJUSTABLE 6" ROUND NICKEL BRONZE STRAINER. USE PUSH-ON JOINT OF OUTLET SIZE AS SHOWN ON PLANS. TRAP SEAL: PROVIDE TRAP SEAL PER SPECIFICATIONS FOR ACTUAL FLOOR DRAIN MODEL AND SIZE.
FS1	FLOOR SINK: JAY R. SMITH # 3101L (-12), 6" DEEP CAST IRON BODY WITH ACID RESISTING ENAMELED INTERIOR, ANCHOR FLANGE WITH SEEPAGE HOLES, CLAMP COLLAR, WHITE ABS SEDIMENT BUCKET, AND 8-1/2" SQUARE NICKEL BRONZE RIM AND HALF GRATE. USE PUSH-ON JOINT OF OUTLET SIZE AS SHOWN ON PLANS.
JS1	JANITOR'S SINK: STERN-WILLIAMS # MTB-2424, 24" x 24" x 10" HIGH TERRAZZO BASIN WITH INTEGRAL STAINLESS STEEL DRAIN BODY. FAUCET: CHICAGO FAUCET # 897-CP FAUCET WITH WALL BRACE, INTEGRAL VACUUM BREAKER, PAIL HOOK, AND 3/4" MALE HOSE THREADED OUTLET. SECURE FAUCET IN WALL WITH BACKBOARD. TRIM: # BP TYPE 304, 20 GAUGE, STAINLESS STEEL WALL SURROUNDS, # T-35 THREE FOOT LONG REINFORCED HOSE WITH 3/4" CHROME COUPLING AND WALL HOOK, # V-70 EXTRUDED VINYL BUMPER GUARD, AND # T-40 24" STAINLESS STEEL MOP HANGER.
LV1	WALL-MOUNTED LAVATORY: AMERICAN STANDARD # 0355.012 "LUCERNE" 20-1/2" X 18-1/4" RECTANGULAR WALL MOUNTED WHITE VITREOUS CHINA FIXTURE WITH FAUCET LEDGE AND FRONT OVERFLOW. FAUCET: SLOAN "OPTIMA" # EBF-187-0.5 CENTERSET, VANDAL RESISTANT, 4" TRIM PLATE, BATTERY POWERED SENSOR OPERATED FAUCET WITH 0.5 GPM AERATOR. TRIM: McGUIRE # 155A GRID DRAIN WITH TAILPIECE, McGUIRE # 2165CCLK LOOSE KEY COMPRESSION ANGLE STOP VALVES WITH RISERS AND ESCUTCHEONS, McGUIRE # B8872CF 1-1/4" 17 GAUGE CAST CHROME PLATED BRASS ADJUSTABLE P-TRAP AND WASTE ARM WITH CLEANOUT PLUG AND ESCUTCHEON, CONCEALED ARM CARRIER WITH STANCHIONS TO FLOOR. THERMOSTATIC MIXING VALVE: POWERS # LFG480, SOLID LEAD FREE BRASS OR BRONZE BODY, THERMOSTATIC WAX ELEMENT, CORROSION RESISTANT INTERNAL PARTS, AND INTEGRAL CHECKS, ASSE 1070 COMPLIANT, CAPABLE OF 1.6 GPM WITH A 20 PSI DIFFERENTIAL AND A MINIMUM FLOW RATE OF 0.25 GPM. SET TEMPERATURE TO 110F FOR DUAL TEMPERATURE LAVATORIES AND HAND SINKS, 100F FOR SINGLE TEMPERATURE LAVATORIES AND HAND SINKS AND 120F FOR SINKS. MOUNT BELOW THE PLUMBING FIXTURE.
NW1	NON-FREEZE WALL HYDRANT: PRIER PRODUCTS # C-634NBX1, SATIN NICKEL PLATED BRASS 1" MALE INLET BY 3/4" FEMALE INLET, 3/4" THREADED HOSE CONNECTION, LOOSE KEY HANDLE, HYDRANT LENGTH AS REQUIRED FOR INSTALLED WALL THICKNESS, ADJUSTABLE WALL CLAMP, BRASS BOX WITH SATIN NICKEL PLATED FINISH AND INTEGRAL ASSE 1052 DOUBLE CHECK VACUUM BREAKER.
RPZ1	REDUCED PRESSURE ZONE BACKFLOW PREVENTER: WATTS # 957-NRS, MEETING ASSE 1013, 304 STAINLESS STEEL BODY AND SLEEVE, QUARTER TURN TEST COCKS, RESILIENT SEATED NON-RISING STEM GATE VALVES AND WATTS #77F-DHFDA EPOXY COATED CAST IRON STRAINER AND # 957AG AIR GAP FITTING.
SK1	HAND SINK (ADA ACCESSIBLE): HAND SINK ADA ACCESSIBLE): ELKAY # #CHS-1716, 16-3/4" X 15-1/2" RECTANGULAR, WALL MOUNTED, 18 GAUGE TYPE 304 STAINLESS STEEL, BACKSPLASH AND SIDE BRACKETS AND WALL MOUNTING BRACKET. FAUCET: CHICAGO FAUCET # 631-2186174AB, 8" BACK MOUNT FAUCET WITH 7 ¼" – 8 ¼" ADJUSTABLE "G" SUPPLY ARMS, VANDAL RESISTANT #317 WRISTBLADE HANDLES, GN2A GOOSENECK SPOUT, # E61VP .5 GPM VANDAL RESISTANT LAMINAR FLOW AERATOR, QUARTER TURN CERAMIC CARTRIDGES. TRIM: McGUIRE # "PRODRAIN2" GRID DRAIN WITH 1-1/2" 17 GUAGE TAILPIECE, McGUIRE # LF2165CCLK LEAD FREE BRASS LOOSE KEY COMPRESSION ANGLE STOP VALVES WITH RISERS AND ESCUTCHEONS, McGUIRE # B8912CF 1-1/2" 17 GAUGE CAST CHROME PLATED BRASS ADJUSTABLE P-TRAP AND WASTE ARM WITH CLEANOUT PLUG AND ESCUTCHEON, WALL BRACKET, PROVIDE BACKBOARD AND SECURE FIXTURE TO IT, AND PLUMBEREX "PRO-EXTREME"# X-4222 INSULATION KIT FOR WATER AND WASTE PIPES. THERMOSTATIC MIXING VALVE: POWERS # LFG480, SOLID LEAD FREE BRASS OR BRONZE BODY, THERMOSTATIC WAX ELEMENT, CORROSION RESISTANT INTERNAL PARTS, AND INTEGRAL CHECKS, ASSE 1070 COMPLIANT, CAPABLE OF 1.6 GPM WITH A 20 PSI DIFFERENTIAL AND A MINIMUM FLOW RATE OF 0.25 GPM. SET TEMPERATURE TO 110F FOR DUAL TEMPERATURE LAVATORIES AND HAND SINKS, 100F FOR SINGLE TEMPERATURE LAVATORIES AND HAND SINKS AND 120F FOR SINKS. MOUNT BELOW THE PLUMBING FIXTURE.
SK2	SINK: ELKAY # WNSF-8345-LR, THREE 15" x 24" x 14" DEEP COMPARTMENTS, LEFT AND RIGHT DRAINBOARDS, 8" HIGH BACKSPLASH, 14 GAUGE TYPE 304 STAINLESS STEEL, AND 16 GAUGE STAINLESS STEEL ADJUSTABLE LEGS. FAUCET: CHICAGO FAUCET #445-206578AB 3 3/8" BACK MOUNT FAUCET WITH 3" – 3 3/8" ADJUSTABLE "R" ARMS WITH INTEGRAL SHUT OFF. VANDAL RESISTANT # 369 LEVER HANDLES, L9 SWING SPOUT, # E1 FULL FLOW OUTLET, QUARTER TURN CERAMIC CARTRIDGES. TRIM: (3) ELKAY # LK24RT GRID STRAINERS WITH LEVER HANDLE AND 1-1/2" TAILPIECE, AND 1-1/2" HARD COPPER TYPE "DWV" FABRICATED INDIRECT WASTE LINE ROUTED TO FLOOR SINK.
T	TRANSFORMER: SLOAN # EL-154 120 VAC / 24 VAC, 50 VA. REFER TO ELECTRICAL DRAWINGS FOR WIRING OF TRANSFORMER.
TS1	TIME SWITCH: INTERMATIC #ET1705CSPST, 7 DAY, ONE CIRCUIT-SINGLE POLE SINGLE THROW, ELECTRONIC TIME SWITCH OR EQUAL BY TORK. TIME SWITCH SHALL BE MOTOR RATED (1 H.P. @ 120 VOLT, SINGLE PHASE), MINIMUM OF 20 SET POINTS (14 ON/OFF CYCLES) AND BATTERY BACK UP. COORDINATE WITH DIVISION 16 FOR INSTALLATION AND INTERLOCK OF TIME SWITCH IN SERIES WITH THE AQUASTAT AND RECIRCULATION PUMP.
UR1	URINAL: AMERICAN STANDARD # 6561.017 "TRIMBROOK" WHITE VITREOUS CHINA FIXTURE WITH FLUSHING RIM, 3/4" TOP SPUD, AND SIPHON FLUSH ACTION. VALVE- SLOAN "OPTIMA – SLOAN MODEL" # 186 ES-S TMO 1.0 GALLON PER FLUSH, EXPOSED, CHROME-PLATED, HARD WIRED, WALL MOUNTED SENSOR OPERATED, DIAPHRAGM TYPE, FLUSH VALVE LESS TRANSFORMER WITH CHLORAMINE RESISTANT DIAPHRAGM AND PROTECTED ORIFICE, MECHANICAL OVERRIDE BUTTON, ESCUTCHEON, INTEGRAL SCREWDRIVER STOP, VACUUM BREAKER, 3/4" FLUSH TUBE, AND SWEAT ADAPTER KIT. TRIM: SUITABLE CARRIER WITH STANCHIONS TO FLOOR.
UR2	URINAL (ADA ACCESSIBLE): AMERICAN STANDARD # 6561.017 "TRIMBROOK" WHITE VITREOUS CHINA FIXTURE WITH FLUSHING RIM, 3/4" TOP SPUD, AND SIPHON FLUSH ACTION. VALVE- SLOAN "OPTIMA – SLOAN MODEL" # 186 ES-S TMO 1.0 GALLON PER FLUSH, EXPOSED, CHROME-PLATED, HARD WIRED, WALL MOUNTED SENSOR OPERATED, DIAPHRAGM TYPE, FLUSH VALVE LESS TRANSFORMER WITH CHLORAMINE RESISTANT DIAPHRAGM AND PROTECTED ORIFICE, MECHANICAL OVERRIDE BUTTON, ESCUTCHEON, INTEGRAL SCREWDRIVER STOP, VACUUM BREAKER, 3/4" FLUSH TUBE, AND SWEAT ADAPTER KIT. TRIM: SUITABLE CARRIER WITH STANCHIONS TO FLOOR.
WC1	WALL-MOUNTED WATER CLOSET: AMERICAN STANDARD # 3351.101 "AFWALL MILLENNIUM FLOWISE" WHITE VITREOUS CHINA FIXTURE WITH ELONGATED UNIVERSAL BOWL AND DIRECT-FED SIPHON JET ACTION. VALVE- SLOAN "OPTIMA – SLOAN MODEL" # 111-1.6 ES-S TMO 1.6 GALLON PER FLUSH, EXPOSED, CHROME-PLATED, HARD WIRED, SENSOR OPERATED, DIAPHRAGM TYPE, FLUSH VALVE LESS TRANSFORMER WITH CHLORAMINE RESISTANT DIAPHRAGM AND PROTECTED ORIFICE, MANUAL OVERRIDE, ESCUTCHEON, INTEGRAL SCREWDRIVER STOP, VACUUM BREAKER, AND SWEAT ADAPTER KIT. TRIM- CHURCH # 9500SSCT WHITE OPEN-FRONT CONTOURED, SOLID PLASTIC, HEAVY DUTY, SEAT LESS COVER WITH SELF-SUSTAINING CHECK HINGES AND STAINLESS STEEL BOLTS. PROVIDE SUITABLE FIXTURE CARRIER.
WC2	WALL-MOUNTED WATER CLOSET (ADA ACCESSIBLE): AMERICAN STANDARD # 3351.101 "AFWALL MILLENNIUM FLOWISE WHITE VITREOUS CHINA FIXTURE WITH ELONGATED UNIVERSAL BOWL AND DIRECT-FED SIPHON JET ACTION. VALVE- SLOAN "OPTIMA – SLOAN MODEL" # 111-1.6 ES-S TMO 1.6 GALLON PER FLUSH, EXPOSED, CHROME-PLATED, HARD WIRED, SENSOR OPERATED, DIAPHRAGM TYPE, FLUSH VALVE LESS TRANSFORMER WITH CHLORAMINE RESISTANT DIAPHRAGM AND PROTECTED ORIFICE, MANUAL OVERRIDE, ESCUTCHEON, INTEGRAL SCREWDRIVER STOP, VACUUM BREAKER, AND SWEAT ADAPTER KIT. INSTALL FLUSH VALVE HANDLE ON THE WIDE SIDE OF THE STALL. TRIM- CHURCH # 9500SSCT WHITE OPEN-FRONT CONTOURED, SOLID PLASTIC, HEAVY DUTY, SEAT LESS COVER WITH SELF-SUSTAINING CHECK HINGES AND STAINLESS STEEL BOLTS. PROVIDE SUITABLE FIXTURE CARRIER.
WCO	WALL CLEANOUT: JAY R. SMITH # 4530S, CAST IRON CLEANOUT TEE, COUNTER SUNK PLUG, STAINLESS STEEL ROUND COVER AND SCREW, AND IRON PLUG WITH GASKET SEAL. REFER TO SPECIFICATIONS FOR INSTALLATION.
WHA	WATER HAMMER ARRESTER: PRECISION PLUMBING PRODUCTS, HARD DRAWN COPPER BODY WITH WROUGHT COPPER FITTINGS, PISTON TYPE WITH LUBRICATED EPDM "O" RING SEALS, MEETING ASSE 1010 OR PDI WH-201. PROVIDE PDI SIZES "A" THROUGH "F" AS SHOWN ON PLANS. PROVIDE SIZE "A" UNLESS SHOWN OTHERWISE ON THE PLANS.

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Lee's Summit R7 District Athletics Facilities

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2600 SW Ward Road
Lee's Summit, MO 64082

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301 NE Tudor Road
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EXPIRES 12/31/2020

STATE OF MISSOURI
KELLEY P. CRAMM
NUMBER E-22323
REGISTERED PROFESSIONAL ENGINEER

Sep 28 2020

REVISIONS

Number	DESCRIPTION	DATE

PROJECT NO: 0119-0101
DATE: September 28, 2020

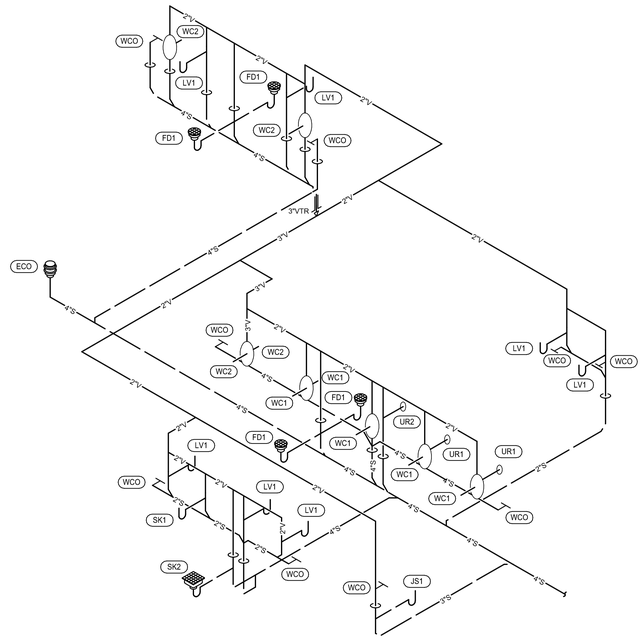
PLUMBING SCHEDULES

W-P600

BID SET

KELLEY P. CRAMM

PRINT DATE/TIME: 9/25/2020 2:14:35 PM



1 PLUMBING RESTROOM WASTE AND VENT RISER
NTS

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STATE OF MISSOURI
KELLEY P. CRAMM
NUMBER E-22323
REGISTERED PROFESSIONAL ENGINEER

Sep 28 2020

REVISIONS

Number	DESCRIPTION	DATE

PROJECT NO: 0119-0101
DATE: September 28, 2020

PLUMBING RISERS

W-P700

BID SET

KELLEY P. CRAMM

PRINT DATE/TIME: 9/25/2020 2:14:38 PM

MECHANICAL SYMBOLS

THIS IS A MASTER LEGEND AND NOT ALL SYMBOLS OR ABBREVIATIONS ARE USED. V2.06

STANDARD MOUNTING HEIGHT

THERMOSTATS (USER ADJUSTABLE)(TOP OF DEVICE)	48"
CONTROLS (TOP OF DEVICE)	48"

INSTALL DEVICES AT THE MOUNTING HEIGHTS SHOWN ABOVE UNO IN THE CONSTRUCTION DOCUMENTS. MOUNTING HEIGHTS LISTED ABOVE OR ELSEWHERE IN THE CONSTRUCTION DOCUMENTS ARE AFF OR AFG TO BOTTOM OF DEVICE UNO. ALL DEVICES SHALL BE INSTALLED IN COMPLIANCE WITH CURRENT ADA AND LOCAL REQUIREMENTS.

ANNOTATION

- 1 — MECHANICAL PLAN NOTE CALLOUT
- CU 1 — MECHANICAL EQUIPMENT DESIGNATION (CONTRACTOR FURNISHED AND INSTALLED UNLESS NOTED OTHERWISE)
- CONNECTION POINT OF NEW WORK TO EXISTING
- 1 / M1 — DETAIL REFERENCE. UPPER NUMBER INDICATES DETAIL NUMBER LOWER NUMBER INDICATES SHEET NUMBER
- 1 / M1 — SECTION CUT DESIGNATION

ABBREVIATIONS

A/C	AIR CONDITIONING
ACC	AIR COOLED CHILLER
ACCU	AIR COOLED CONDENSING UNIT
AFC	ABOVE FINISHED CEILING
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHJ	AUTHORITY HAVING JURISDICTION
AHU	AIR HANDLING UNIT
AI	ANALOG INPUT
AO	ANALOG OUTPUT
AP	ACCESS PANEL
APD	AIR PRESSURE DROP
AWG	AMERICAN WIRE GAUGE
B	BOILER
BAS	BUILDING AUTOMATION SYSTEM
BB	BACKBONE
BD	BACKDRAFT DAMPER
BD	BLOWDOWN
BFC	BELOW FINISHED CEILING
BFF	BELOW FINISHED FLOOR
BFG	BELOW FINISHED GRADE
BFP	BOILER FEED PUMP
BHP	BRAKE HORSEPOWER
BI	BINARY INPUT
BO	BINARY OUTPUT
BOD	BOTTOM OF DUCT
BOS	BOTTOM OF STRUCTURE
BTU	BRITISH THERMAL UNIT
CFM	CUBIC FEET PER MINUTE
CH	CHILLER
CLG	COOLING
CP	CONDENSATE PUMP
CPT	CONTROL POWER TRANSFORMER
CRAC	COMPUTER ROOM AIR CONDITIONING UNIT
CRU	COMPUTER ROOM UNIT
CT	COOLING TOWER
CV	CONTROL VALVE
CWP	CONDENSER WATER PUMP
CU	CONDENSING UNIT
CHWP	CHILLED WATER PUMP
DB	DECIBELS
DBA	DECIBEL AVERAGE
DDC	DIRECT DIGITAL CONTROL
DI	DIGITAL INPUT
DISC	DISCONNECT
DN	DOWN
DS	DUCT SILENCER
DX	DIRECT EXPANSION
(E)	EXISTING
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
ED	EXHAUST DUCT
EDB	ENTERING DRY BULB
EF	EXHAUST FAN
EFF	EFFICIENCY
EMS	ENERGY MANAGEMENT SYSTEM
ESP	EXTERNAL STATIC PRESSURE
ETR	EXISTING TO REMAIN
EWB	ENTERING WET BULB
EWT	ENTERING WATER TEMPERATURE
FCU	FAN COIL UNIT
FFA	FROM FLOOR ABOVE
FFB	FROM FLOOR BELOW
FF	FINISHED FLOOR
FPI	FINS PER INCH
FPM	FEET PER MINUTE
GC	GENERAL CONTRACTOR
GPM	GALLONS PER MINUTE
HOA	HAND-OFF-AUTOMATIC
HP	HORSEPOWER
HTG	HEATING
HWP	HEATING WATER PUMP
IN WC	INCHES OF WATER COLUMN
L	LOUVER
LAT	LEAVING AIR TEMPERATURE
LDB	LEAVING DRY BULB
LP	LOW PRESSURE
LWB	LEAVING WET BULB
LWT	LEAVING WATER TEMPERATURE
MAU	MAKE-UP AIR UNIT
MAX	MAXIMUM
MBH	1000 BTU PER HOUR
MD	MOTORIZED DAMPER
MFR	MANUFACTURER
MIN	MINIMUM
N/A	NOT APPLICABLE
N/C	NORMALLY CLOSED
N/O	NORMALLY OPEN
NOM	NOMINAL
NC	NOISE CRITERIA
NF	NON-FUSED
NIC	NOT IN CONTRACT
OA	OUTSIDE AIR
PICV	PRESSURE INDEP. CONTROL VALVE
PROVIDE	FURNISH AND INSTALL
QTY	QUANTITY
RA	RETURN AIR
RC	ROOM CRITERIA
RD	RETURN DUCT
REA	RELIEF AIR
RF	RETURN FAN
RFR	REFRIGERANT
RH	RELATIVE HUMIDITY
RH	ROOF HOOD
RPM	REVOLUTIONS PER MINUTE
RTU	ROOFTOP UNIT
SA	SUPPLY AIR
SCP	STEAM CONDENSATE PUMP
SD	SMOKE DUCT DETECTOR
SD	SUPPLY DUCT
SF	SUPPLY FAN
SH	SENSIBLE HEAT CAPACITY
SOW	SCOPE OF WORK
SP	STATIC PRESSURE
ST	STEAM TRAP
STM	STEAM
TBD	TO BE DETERMINED
TC/C	TEMPERATURE CONTROLS CONTRACTOR
TCP	TEMPERATURE CONTROL PANEL
TF	TRANSFER FAN
TFA	TO FLOOR ABOVE
TFB	TO FLOOR BELOW
TH	TOTAL HEAT CAPACITY
TSP	TOTAL STATIC PRESSURE
TT	TEMPERATURE TRANSMITTAL
TYP	TYPICAL
U/F	UNDERFLOOR
U/G	UNDERGROUND
U/S	UNDERSLAB
UH	UNIT HEATER
UNO	UNLESS NOTED OTHERWISE
VAV	VARIABLE AIR VOLUME
VEL	VELOCITY
VFD	VARIABLE FREQUENCY DRIVE
VRF	VARIABLE REFRIGERANT FLOW
VRV	VARIABLE REFRIGERANT VOLUME
W/	WITH
W/O	WITHOUT
WB	WET BULB
WC	WATER COLUMN
WPD	WATER PRESSURE DROP
XP	EXPLOSION PROOF

HVAC DUCTWORK AND ACCESSORIES

- LINEAR SLOT DIFFUSER
- INSULATED FLEXIBLE DUCT (MAX. 5'-0" LONG)
- BRANCH DUCT WITH 45° RECTANGLE-ROUND BRANCH FITTING AND MANUAL VOLUME DAMPER
- ELBOW WITH TURNING VANES
- BRANCH DUCT WITH BELL-MOUTH FITTING & MANUAL VOLUME CONTROL DAMPER
- RETURN, EXHAUST, OR OUTSIDE AIR DUCT UP
- RETURN, EXHAUST, OR OUTSIDE AIR DUCT DOWN
- SUPPLY AIR DUCT UP
- SUPPLY AIR DUCT DOWN
- EQUIPMENT WITH FLEXIBLE DUCT CONNECTION
- 10" (NECK SIZE) CSD-1 (TYPE) 300 CFM (CFM OF SUPPLY DIFFUSER OR REGISTER)
- 24x24 (NECK SIZE) CEG-1 (TYPE) 800 CFM (CFM OF EXHAUST GRILLE)
- MANUAL VOLUME DAMPER
- SQUARE TO ROUND TRANSITION
- RD Y — DUCT MOUNTED SMOKE DETECTOR (SD=SUPPLY/RD=RETURN)
- XX" Ø — ROUND DUCT TAG INDICATING DIAMETER
- XX" x XX" — RECTANGULAR DUCT TAG INDICATING INTERNAL DUCT DIMENSIONS.
- XX' / XX" — FLAT OVAL DUCT TAG INDICATING INTERNAL DUCT DIMENSIONS
- R — RISER DESIGNATION
- FD — FIRE DAMPER
- FSD — FIRE SMOKE DAMPER
- SD — SMOKE DAMPER
- VD — VOLUME DAMPER
- MD — MOTORIZED DAMPER
- BD — BACKDRAFT DAMPER

ALL DUCT DIMENSIONS SHOWN ON DRAWINGS ARE INSIDE DIMENSIONS. REFER TO DUCTWORK SPECIFICATIONS FOR DUCTWORK INSULATION AND LINER INFORMATION.

HVAC CONTROL DEVICES

- H — HUMIDISTAT
- T — THERMOSTAT
- SP — STATIC PRESSURE SENSOR
- TS — TEMPERATURE SENSOR
- CO — CARBON MONOXIDE SENSOR
- CO2 — CARBON DIOXIDE SENSOR
- DP — DIFFERENTIAL PRESSURE SENSOR
- FS — FLOW SWITCH
- HS — HUMIDITY SENSOR
- PS — PULL STATION
- RT — REMOTE TESTING STATION WITH INDICATING LIGHT
- SP — STATIC PRESSURE
- TS — TEMPERATURE SENSOR

PIPING SYMBOLS

- DIRECTION OF FLOW
- CONTROL VALVE
- THREE-WAY CONTROL VALVE
- SHUTOFF VALVE
- CHECK VALVE
- BALANCING VALVE WITH PRESSURE PORTS
- TRIPLE DUTY VALVE WITH PRESSURE PORTS
- STRAINER
- STRAINER WITH BLOWDOWN VALVE
- RELIEF / SAFETY VALVE
- SOLENOID VALVE
- PRESSURE REDUCING VALVE
- GAS PRESSURE REGULATOR
- THERMOSTATIC MIXING VALVE
- PA — PIPE ANCHOR
- EJ — EXPANSION JOINT
- PIPE GUIDE
- PIPING SUPPORT
- F & T TRAP
- BUCKET TRAP
- THERMOSTATIC TRAP
- BACKFLOW PREVENTER
- PRESSURE GAUGE
- THERMOMETER
- PRESSURE AND TEMPERATURE TEST PLUG
- UNION
- FLANGE CONNECTION
- VACUUM RELIEF VALVE
- AV — AUTOMATIC AIR VENT
- MV — MANUAL AIR VENT
- PRESSURE / VACUUM SWITCH
- CLEANOUT
- CAP
- ELBOW UP
- ELBOW DOWN
- TEE UP
- TEE DOWN
- ELBOW UP WITH SHUT-OFF VALVE (SOV)
- ELBOW DOWN WITH SHUT-OFF VALVE (SOV)
- TEE UP WITH SHUT-OFF VALVE (SOV)
- TEE DOWN WITH SHUT-OFF VALVE (SOV)
- REDUCER
- RECIRCULATION PUMP
- P-TRAP
- GAS COCK
- TOP BEAM CLAMP
- TRAPEZE HANGER
- FLEXIBLE CONNECTION

PIPING LINETYPES

- CD — CONDENSATE DRAIN (CD)
- ACD — AUXILIARY CONDENSATE DRAIN (ACD)
- NPW — NON-POTABLE WATER (NPW)
- G — NATURAL GAS (G)
- G — NATURAL GAS ON ROOF (G)
- MPG — MEDIUM PRESSURE NATURAL GAS (MPG)
- MPG — MEDIUM PRESSURE NATURAL GAS ON ROOF (MGP)
- FOS — FUEL OIL SUPPLY (FOS)
- FOR — FUEL OIL RETURN (FOR)
- FOV — FUEL OIL VENT (FOV)
- LPG — LIQUEFIED PETROLEUM GAS (LPG)
- BFW — BOILER FEED WATER (BFW)
- HPS — HIGH PRESSURE STEAM SUPPLY (HPS)
- HPC — HIGH PRESSURE STEAM CONDENSATE (HPC)
- LPS — LOW PRESSURE STEAM SUPPLY (LPS)
- LPC — LOW PRESSURE STEAM CONDENSATE (LPC)
- PD — CONDENSATE PUMP DISCHARGE (PD)
- HWS — HEATING HOT WATER SUPPLY (HWS)
- HWR — HEATING HOT WATER RETURN (HWR)
- CHWS — CHILLED WATER SUPPLY (CHWS)
- CHWR — CHILLED WATER RETURN (CHR)
- HCS — HOT / CHILLED WATER SUPPLY (HCS)
- HCR — HOT / CHILLED WATER SUPPLY (HCR)
- CWS — CONDENSER WATER SUPPLY (CWS)
- CWR — CONDENSER WATER RETURN (CWR)
- HPWS — HEAT PUMP WATER SUPPLY (HPWS)
- HPWR — HEAT PUMP WATER RETURN (HPWR)
- RL — REFRIGERANT LIQUID (RL)
- RD — REFRIGERANT DISCHARGE (HOT GAS) (RD)
- RS — REFRIGERANT SUCTION (RS)
- RDB — REFRIGERANT DISCHARGE BYPASS (RDB)
- RV — REFRIGERANT VENT (RV)

LINETYPE LEGEND

THROUGHOUT THE DRAWINGS DIFFERENT LINETYPES ARE USED IN COMBINATION WITH THE SYMBOLS TO INDICATE THE STATUS OF ITEMS AS EXISTING, TO BE DEMOLISHED, TO BE INCLUDED AS PART OF NEW WORK AND/OR ITEMS WHICH ARE ANTICIPATED TO BE PROVIDED IN THE FUTURE. THE STATUS OF ITEMS USING THESE LINETYPES ARE RELATIVE TO THE VIEW IN WHICH THEY APPEAR. PHASING SHOWN IN DRAWINGS IS NOT INTENDED TO FULLY DESCRIBE ALL NECESSARY CONSTRUCTION PHASING, WHICH IS DETERMINED BY THE CONTRACTOR AS PART OF THEIR RESPONSIBILITIES. ANY SUCH PHASES DESCRIBED IN THE CONSTRUCTION DOCUMENTS ARE GENERAL AND ONLY INTENDED TO INDICATE A BROAD ORDER FOR THE SAKE OF DESCRIBING THE PROJECT. THE FOLLOWING LINETYPES MAY BE USED ON ANY DEVICE, EQUIPMENT, NOTE, LINE, SHAPE, ETC.

EXISTING	NEW
DEMOLISH	FUTURE

GENERAL NEW NOTES:

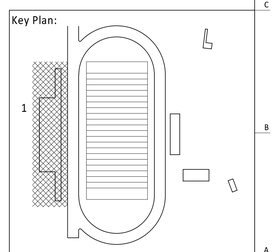
1. PRIOR TO SUBMITTING BID, VISIT THE JOB SITE AND BECOME FULLY ACQUAINTED WITH THE EXISTING CONDITIONS OF THE PROJECT. REVIEW THE GENERAL NOTES, SPECIFICATIONS AND OTHER DRAWINGS FOR ADDITIONAL REQUIREMENTS WHICH MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY ARCHITECT, ENGINEER AND/OR OWNER OF CONFLICTS OR DISCREPANCIES PRIOR TO SUBMISSION OF BID.
2. EXISTING CONDITIONS WERE TAKEN FROM ORIGINAL DRAWINGS AND SITE VISITS AND MAY NOT REFLECT EXACT "AS-BUILT" CONDITIONS. FIELD VERIFY EXISTING CONDITIONS PRIOR TO SUBMITTING FINAL BIDS. COORDINATE NEW WORK AND DEMOLITION WITH OTHER DISCIPLINES AND EXISTING CONDITIONS PRIOR TO CONSTRUCTION.
3. COORDINATE THE INSTALLATION OF THE MECHANICAL SYSTEMS WITH OTHER TRADES TO ENSURE A NEAT AND ORDERLY INSTALLATION. INSTALL DUCTWORK AND PIPING AS TIGHT TO STRUCTURE AS POSSIBLE. COORDINATE WITH OTHER TRADES TO AVOID CONFLICTS. COORDINATE INSTALLATION OF DUCTWORK AND PIPING TO AVOID CONFLICTS WITH ELECTRICAL PANELS, LIGHTING FIXTURES, ETC. ANY MODIFICATIONS REQUIRED DUE TO LACK OF COORDINATION WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AT NO EXTRA COST TO THE OWNER.
4. WHERE SHUTDOWN OF EXISTING SYSTEMS IS REQUIRED DURING NEW WORK, COORDINATE SHUTDOWN TIME AND DURATION WITH THE OWNER TO MINIMIZE DOWNTIME. NOTIFY OWNER SEVEN (7) DAYS PRIOR TO INTERRUPTION OF SERVICE.
5. DURING INSTALLATION OF NEW WORK, AVOID DAMAGING EXISTING SURFACES AND EQUIPMENT TO REMAIN. REPAIR DAMAGE CAUSED DURING CONSTRUCTION AT NO EXTRA COST TO THE OWNER.
6. PROVIDE TEMPORARY BARRIERS TO CONTAIN DUST AND DEBRIS RESULTING FROM THE PERFORMANCE OF THE WORK TO THE AREA WHERE WORK IS BEING PERFORMED.
7. ALL MECHANICAL EQUIPMENT SHOWN ON THE MECHANICAL PLANS SHALL BE PROVIDED BY DIVISION 23 UNLESS OTHERWISE NOTED.
8. NEW MECHANICAL EQUIPMENT, DUCTWORK AND PIPING ARE SHOWN AT APPROXIMATE LOCATIONS. FIELD MEASURE FINAL DUCTWORK AND PIPING LOCATIONS PRIOR TO FABRICATION AND MAKE ADJUSTMENTS AS REQUIRED TO FIT THE DUCTWORK AND PIPING WITHIN THE AVAILABLE SPACE. VERIFY THAT FINAL EQUIPMENT LOCATIONS MEET MANUFACTURER'S RECOMMENDATIONS REGARDING SERVICE CLEARANCE AND PROPER AIRFLOW CLEARANCE AROUND EQUIPMENT.
9. REFER TO ARCHITECTURAL DRAWINGS FOR RELATED CONSTRUCTION DETAILS AS APPLICABLE TO THE HVAC SYSTEM. VERIFY CHASES AND PENETRATIONS SHOWN ON ARCHITECTURAL DRAWINGS THAT ARE INTENDED FOR DUCTWORK AND PIPING MEET REQUIREMENTS.
10. INDOOR AIR QUALITY MEASURES: PROTECT INSIDE OF INSTALLED AND DELIVERED) DUCTWORK AND HVAC UNITS FROM EXPOSURE TO DUST, DIRT, PAINT AND MOISTURE. REPLACE INSULATION THAT HAS BECOME WET AT ANY TIME DURING CONSTRUCTION. DRYING THE INSULATION IS NOT ACCEPTABLE. SEAL ANY TEARS OR JOINTS OF INTERNAL FIBERGLASS INSULATION. REMOVE DEBRIS FROM CEILING/RETURN AIR PLENUM INCLUDING DUST. AN INDEPENDENT, PROFESSIONAL DUCT CLEANING COMPANY SHALL VACUUM CLEAN ANY DUCTWORK CONNECTED TO HVAC UNITS THAT WERE OPERATED DURING THE CONSTRUCTION PERIOD AFTER NEW FILTERS ARE INSTALLED AND PRIOR TO TURNING SYSTEM OVER TO THE OWNER. THE INTERNAL SURFACES AND ASSOCIATED COILS OF ANY HVAC UNITS THAT WERE OPERATED SHALL ALSO BE CLEANED.
11. INSTALL DUCTWORK AND PIPING PARALLEL TO BUILDING COLUMN LINES UNLESS OTHERWISE SHOWN OR NOTED.
12. OVERHEAD HANGERS AND SUPPORTS FOR EQUIPMENT, DUCTWORK AND PIPING SHALL BE FASTENED TO BUILDING JOISTS OR BEAMS. DO NOT ATTACH HANGERS AND SUPPORTS TO THE ABOVE FLOOR SLAB OR ROOF EXCEPT WHERE CONCRETE INSERTS IN CONCRETE SLABS ARE ALLOWED BY THE SPECIFICATIONS.
13. COORDINATE LOCATION OF EQUIPMENT SUPPORTS WITH LOCATION OF EQUIPMENT ACCESS PANELS/DOORS TO ENABLE SERVICE OF EQUIPMENT AND/OR FILTER REPLACEMENT.
14. SEAL PENETRATIONS THROUGH THE BUILDING COMPONENTS IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS. FIREPROOF PENETRATIONS THROUGH FIRE RATED COMPONENTS IN ACCORDANCE WITH U.L. REQUIREMENTS.
15. COORDINATE THE EXACT MOUNTING SIZE AND FRAME TYPE OF DIFFUSERS, REGISTERS AND GRILLES WITH THE SUPPLIER TO MEET THE CEILING, WALL AND DUCT INSTALLATION REQUIREMENTS.
16. ADJUST LOCATION OF CEILING DIFFUSERS, REGISTERS AND GRILLES AS REQUIRED TO ACCOMMODATE FINAL CEILING GRID AND LIGHTING LOCATIONS.
17. PAINT PORTIONS OF DUCTWORK AND INSULATION THAT ARE EXPOSED TO VIEW BY THE INSTALLATION OF DIFFUSERS, REGISTERS, AND GRILLES IN CEILINGS OR WALLS FLAT BLACK. PORTIONS INCLUDE BOTH THE INTERIOR OF UNLINED DUCTWORK AND THE EXTERIOR OF DUCTWORK AND INSULATION.
18. DUCTWORK CROSSING FIRE RATED WALLS OR OTHER FIRE RATED ASSEMBLIES SHALL BE MINIMUM 26 GAUGE SHEET METAL.
19. LOCATE AND SET THERMOSTATS AND HUMIDISTATS AT LOCATIONS SHOWN ON PLANS. VERIFY EXACT LOCATIONS WITH ARCHITECT PRIOR TO INSTALLATION. INSTALL DEVICES WITH TOP OF DEVICE AT MAXIMUM 48" AFF TO MEET ADA REQUIREMENTS UNLESS NOTED OTHERWISE ON PLANS. PROVIDE INSULATED BACKING FOR THERMOSTATS MOUNTED ON EXTERIOR BUILDING WALLS. INSTALL WIRING IN CONDUIT PROVIDED BY DIVISION 26. AT A MINIMUM, PROVIDE CONDUIT IN THE WALL FROM THE JUNCTION BOX TO 6" ABOVE THE CEILING.
20. COORDINATE THE LOCATION AND ELEVATION OF WALL-MOUNTED DEVICES WITH PRESENTATION BOARDS, DISPLAY CABINETS, SHELVES OR OTHER COMPONENTS SHOWN ON THE ARCHITECTURAL DRAWINGS THAT ARE TO BE INSTALLED UNDER OTHER DIVISIONS. CONTRACTOR WILL NOT BE REIMBURSED FOR RELOCATION OF WALL-MOUNTED DEVICES CAUSED BY A LACK OF COORDINATION.
21. PROVIDE A MANUAL BALANCING DAMPER IN EACH DUCT TAKEOFF FROM SUPPLY, RETURN, OUTDOOR AND EXHAUST AIR DUCTS.
22. PROVIDE A PREFABRICATED 45 DEGREE, HIGH EFFICIENCY, RECTANGULAR/ROUND BRANCH DUCT TAKEOFF FITTING FOR BRANCH DUCT CONNECTIONS AND TAKE-OFFS TO INDIVIDUAL DIFFUSERS, REGISTERS AND GRILLES. PROVIDE WITH INTEGRAL MANUAL BALANCING DAMPER AND LOCKING QUADRANT WHERE INDICATED ON PLANS.
23. BRANCH DUCTWORK TO AIR OUTLETS SHALL BE SAME SIZE AS OUTLET NECK SIZE UNLESS OTHERWISE NOTED.
24. REFER TO SPECIFICATIONS FOR DUCTWORK AND PIPING INSULATION REQUIREMENTS. DUCT SIZES ON MECHANICAL PLANS INDICATE CLEAR INSIDE AIRFLOW DIMENSIONS. INCREASE SHEET METAL SIZES ACCORDINGLY TO ACCOUNT FOR THICKNESS OF DUCT LINER.
25. RIGIDLY SUSPEND UNIT HEATER FROM STRUCTURE WITH SUPPORTING ANGLES AND ALL-THREAD HANGING RODS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
26. PROVIDE WALL MOUNTED LOUVERS AND DAMPERS WITH SUITABLE MOUNTING FRAME TO MATCH WALL CONSTRUCTION. COORDINATE WITH ARCHITECTURAL DRAWINGS.
27. PROVIDE A NEW SET OF AIR FILTERS IN UNITS PRIOR TO TESTING, ADJUSTING AND BALANCING AND BEFORE TURNING SYSTEM(S) OVER TO OWNER.
28. FIELD VERIFY THAT THE EXISTING EQUIPMENT INCLUDING ACCESSORIES BEING REUSED FOR THIS PROJECT IS NOT DAMAGED AND IS IN GOOD WORKING ORDER. REPORT ANY DEFICIENCIES TO THE OWNER OR ARCHITECT. SUBMIT TO THE OWNER AND ARCHITECT A WRITTEN REPORT DESCRIBING TESTS PERFORMED TO VERIFY OPERATION AND RESULTS OF THE TESTS.
29. CLEAN EXISTING EQUIPMENT AND EQUIPMENT COMPONENTS BEING REUSED FOR THIS PROJECT. PROVIDE NEW FILTERS FOR EXISTING AIR HANDLING EQUIPMENT PRIOR TO STARTUP OF EQUIPMENT. NEW FILTERS SHALL BE COMPATIBLE WITH THE EXISTING EQUIPMENT AND EQUAL IN PERFORMANCE TO THE EXISTING FILTERS AT NEW CONDITION UNLESS OTHERWISE NOTED. CLEAN STRAINERS IN PIPING SYSTEMS PRIOR TO STARTING PUMPS.
30. CLEAN THE EXTERIOR OF EXISTING COILS TO BE REUSED FOR THIS PROJECT. VACUUM BRUSH THE COIL IN THE DIRECTION OF THE FINS AND CLEAN THE COILS WITH COIL CLEANING FLUID. COMB ANY FINS BENT TO PROVIDE A STRAIGHT SURFACE FOR AIRFLOW.
31. LUBRICATE EXISTING EQUIPMENT BEING REUSED FOR THIS PROJECT IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS. OBTAIN INSTRUCTIONS FROM MANUFACTURER IF THEY ARE NOT AVAILABLE AT THE SITE.

Sheet List - Mechanical

Sheet Number	Sheet Name
W-M000	MECHANICAL LEGEND AND NOTES
W-M111	HOME PRESS BOX - HVAC PLAN
W-M121	VISITOR RESTROOMS & CONCESSIONS - HVAC PLANS
W-M131	TICKET BOOTH - HVAC PLANS
W-M500	MECHANICAL DETAILS
W-M600	MECHANICAL SCHEDULES & CONTROLS

Grand total: 6

Key Plan:



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MECHANICAL LEGEND AND NOTES

W-M000

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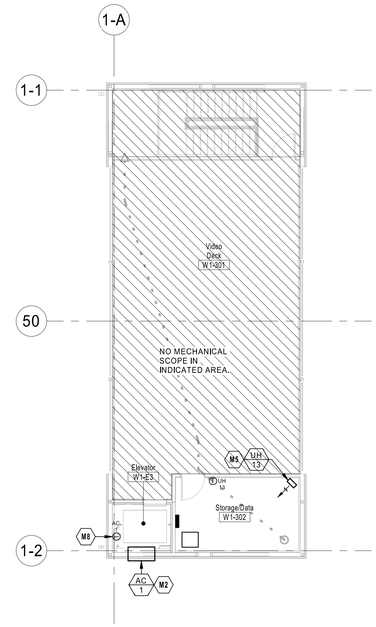
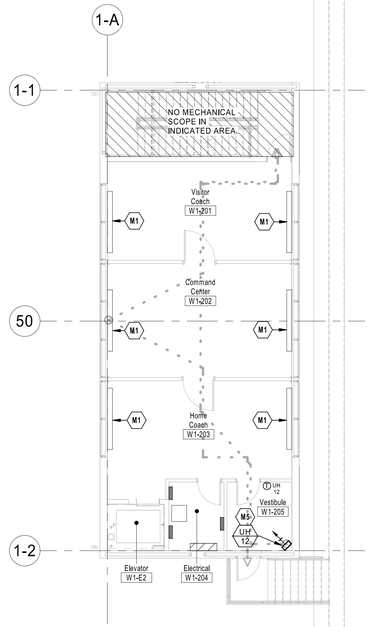
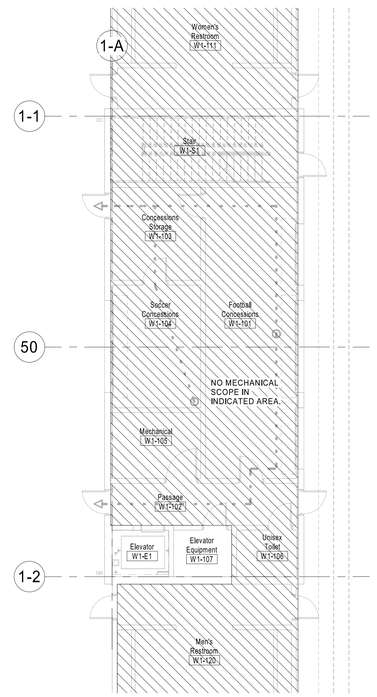


3 HOME PRESS BOX - LEVEL 3 HVAC PLAN
1/8" = 1'-0"



2 HOME PRESS BOX - LEVEL 2 HVAC PLAN
1/8" = 1'-0"



1 HOME PRESS BOX - HVAC PLAN
1/8" = 1'-0"

MECHANICAL PLAN NOTES:

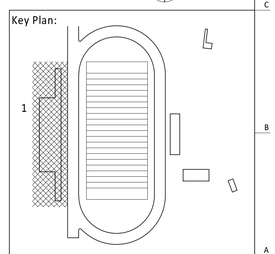
M1 EXISTING HEATER AND ALL ASSOCIATED ACCESSORIES TO REMAIN.

M2 INSTALL PACKAGED TERMINAL AIR CONDITIONER IN WALL AT TOP OF THE ELEVATOR SHAFT AS NOT TO INTERFERE WITH ELEVATOR OPERATION. COORDINATE FINAL LOCATION WITH ELEVATOR MANUFACTURER REQUIREMENTS.

M5 INSTALL UNIT HEATER SUSPENDED FROM STRUCTURE ACCORDING TO MANUFACTURER REQUIREMENTS AND SPECIFICATIONS.

M8 INSTALL THERMOSTAT IN ELEVATOR SHAFT AS CLOSE AS POSSIBLE TO ELEVATOR CONTROLLER WITHOUT INTERFERING WITH ELEVATOR OPERATION.

Key Plan:



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HOME PRESS BOX - HVAC PLAN

W-M111

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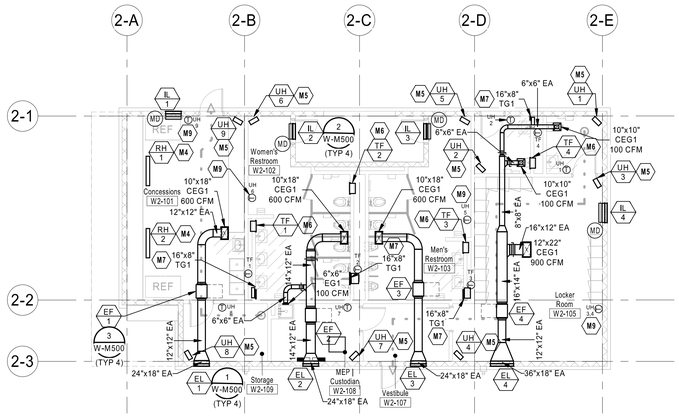

1 VISITOR RESTROOMS/CONCESSIONS - HVAC PLAN
1/8" = 1'-0"

MECHANICAL PLAN NOTES:

M4 INSTALL RADIANT HEATER RECESSED IN CEILING. COORDINATE FINAL LOCATION WITH LIGHTING.

M5 INSTALL UNIT HEATER SUSPENDED FROM STRUCTURE ACCORDING TO MANUFACTURER REQUIREMENTS AND SPECIFICATIONS.

M6 INSTALL TRANSFER FAN HIGH ON WALL IN CMU BLOCK VOID.

M7 INSTALL TRANSFER GRILLE LOW ON WALL AS NOT TO INTERFERE WITH PLUMBING FIXTURES.

M9 PROVIDE VANDAL-PROOF COVER ON THERMOSTAT.

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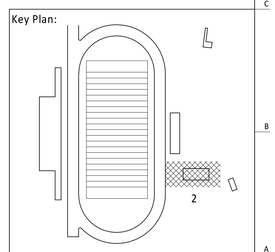

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VISITOR RESTROOMS & CONCESSIONS - HVAC PLANS

W-M121

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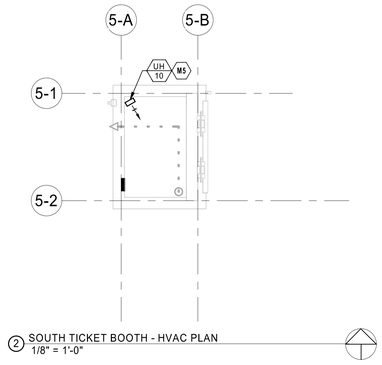
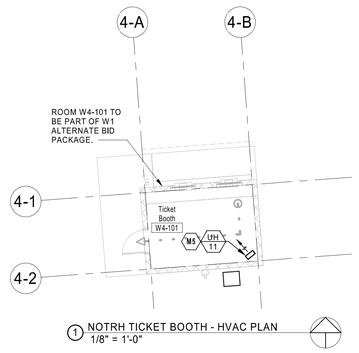


2 SOUTH TICKET BOOTH - HVAC PLAN
1/8" = 1'-0"



1 NOTRH TICKET BOOTH - HVAC PLAN
1/8" = 1'-0"

MECHANICAL PLAN NOTES:

M5 INSTALL UNIT HEATER SUSPENDED FROM STRUCTURE ACCORDING TO MANUFACTURER REQUIREMENTS AND SPECIFICATIONS.

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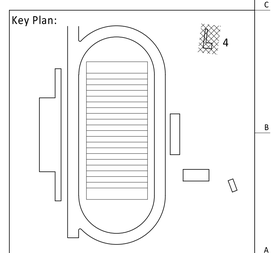

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TICKET BOOTH - HVAC PLANS

W-M131

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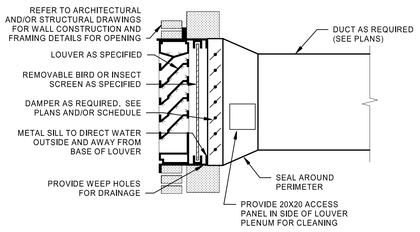
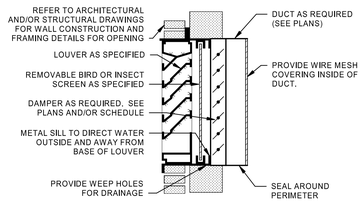


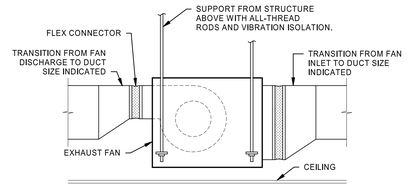
NOTES:
1. SEAL ALL JOINTS AND SEAMS OF PLENUM AND DUCT TO PROVIDE WATER TIGHT CONSTRUCTION. PROVIDE INSULATION FOR PLENUM AND DUCT PER SPECIFICATIONS.

1 EXHAUST LOUVER INSTALLATION DETAIL
NTS

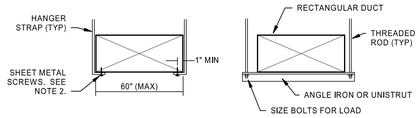


NOTES:
1. SEAL ALL JOINTS AND SEAMS OF PLENUM AND DUCT TO PROVIDE WATER TIGHT CONSTRUCTION. PROVIDE INSULATION FOR PLENUM AND DUCT PER SPECIFICATIONS.

2 INTAKE LOUVER INSTALLATION DETAIL
NTS



3 IN-LINE CABINET EXHAUST FAN DETAIL
NTS



NOTES:
1. USE THREADED ROD FOR RECTANGULAR DUCTS LARGER THAN 60" WIDE.
2. OMIT SHEET METAL SCREWS IF HANGER STRAP IS CONTINUOUS AND LOOPS UNDER ENTIRE RECTANGULAR DUCT.
3. HANGERS MUST NOT DEFORM DUCT SHAPE.

4 DUCT HANGER LOWER ATTACHMENT DETAILS
NTS

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REGISTERED PROFESSIONAL ENGINEER

Sep 25 2020

REVISIONS

Number	DESCRIPTION	DATE

PROJECT NO: 0119-0101
DATE: September 28, 2020

MECHANICAL DETAILS

W-M500

BID SET

PRINT DATE/TIME: 9/25/2020 12:39:16 PM

KELLEY P. CRAMM

FAN SCHEDULE

MARK	LOCATION	SERVICE DESCRIPTION	MANUFACTURER	MOUNTING	MODEL	CFM	ESP (IN)	NOM HP	FAN RPM	DRIVE (BELT/DIRECT)	ELECTRICAL V/PH	ELECTRICAL DISC TYPE	WEIGHT (LBS)	NOTES
EF 1	CONCESSIONS	EXHAUST	GREENHECK	INLINE	SQ-100-VG	600	0.25	0.25	979	DIRECT	115/1	NON-FUSED	45	A,B,C,D
EF 2	WOMENS RESTROOM	EXHAUST	GREENHECK	INLINE	SQ-100-VG	700	0.25	0.25	1063	DIRECT	115/1	NON-FUSED	45	A,B,C,D
EF 3	MENS RESTROOM	EXHAUST	GREENHECK	INLINE	SQ-100-VG	600	0.25	0.25	979	DIRECT	115/1	NON-FUSED	45	A,B,C,D
EF 4	LOCKER ROOM	EXHAUST	GREENHECK	INLINE	SQ-100-VG	1100	0.25	0.25	1456	DIRECT	115/1	NON-FUSED	45	A,B,C,D
TF 1	WOMENS RESTROOM	TRANSFER	GREENHECK	WALL	CBF	500	0.20	0.05	1050	DIRECT	115/1	NON-FUSED	17	B,C,E
TF 2	WOMENS RESTROOM	TRANSFER	GREENHECK	WALL	CBF	500	0.20	0.05	1050	DIRECT	115/1	NON-FUSED	17	B,C,E
TF 3	MENS RESTROOM	TRANSFER	GREENHECK	WALL	CBF	500	0.20	0.05	1050	DIRECT	115/1	NON-FUSED	17	B,C,E
TF 4	FAMILY RESTROOM	TRANSFER	GREENHECK	WALL	CBF	500	0.20	0.05	1050	DIRECT	115/1	NON-FUSED	17	B,C,E

MODEL NUMBERS SHALL NOT BE CONSIDERED COMPLETE AND MATERIAL SHALL NOT BE ORDERED BY MANUFACTURER AND MODEL NUMBERS ONLY. REVIEW THE COMPLETE DESCRIPTION, NOTES AND SPECIFICATIONS TO DETERMINE THE EXACT MATERIAL AND ACCESSORIES TO BE ORDERED. THE MANUFACTURERS LISTED ARE THE BASIS FOR THE DESIGN.

NOTES:

A. PROVIDE RUBBER IN SHEAR ISOLATION AND ALL-THREAD HANGING RODS.
B. PROVIDE FACTORY MOUNTED DISCONNECT SWITCH.
C. PROVIDE WITH MANUFACTURER'S FAN SPEED CONTROLLER FOR BALANCING PURPOSES.
D. PROVIDE WITH MANUFACTURER'S ELECTRONICALLY COMMUTATED (EC) MOTOR.
E. PROVIDE WITH WALL MOUNTED TEMPERATURE SENSOR.

LOUVER SCHEDULE

MARK	AREA SERVED	SERVICE	MANUFACTURER	MODEL	WIDTH (IN)	LENGTH (IN)	CFM	MIN FREE AREA (SF)	MAX VEL (FPM)	MAX APD (IN W.C.)	NOTES
EL 1	CONCESSIONS	EXHAUST	GREENHECK	ESD-635	24"	18"	600 CFM	0.86	700 FPM	0.05 in-wg	A,B,C,D
EL 2	RESTROOMS	EXHAUST	GREENHECK	ESD-635	24"	18"	700 CFM	1.00	700 FPM	0.05 in-wg	A,B,C,D
EL 3	RESTROOMS	EXHAUST	GREENHECK	ESD-635	24"	18"	600 CFM	0.86	700 FPM	0.05 in-wg	A,B,C,D
EL 4	LOCKER ROOM	EXHAUST	GREENHECK	ESD-635	36"	18"	1100 CFM	1.58	700 FPM	0.05 in-wg	A,B,C,D
IL 1	CONCESSIONS	EXHAUST	GREENHECK	ESD-635	24"	24"	600 CFM	1.19	500 FPM	0.01 in-wg	A,B,C,E,F
IL 2	WOMENS RESTROOM	EXHAUST	GREENHECK	ESD-635	24"	24"	600 CFM	1.19	500 FPM	0.01 in-wg	A,B,C,E,F
IL 3	MENS RESTROOM	EXHAUST	GREENHECK	ESD-635	24"	24"	600 CFM	1.19	500 FPM	0.01 in-wg	A,B,C,E,F
IL 4	LOCKER ROOM	EXHAUST	GREENHECK	ESD-635	24"	30"	900 CFM	1.81	500 FPM	0.01 in-wg	A,B,C,E,F

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NOTES:

A. PROVIDE 1/2" MESH ALUMINUM BIRD SCREEN.
B. PROVIDE ANNODIZED FINISH WITH COLOR SELECTED BY ARCHITECT.
C. FRAME TYPE SHALL MATCH WALL CONSTRUCTION, COORDINATE WITH ARCHITECT.
D. PROVIDE WITH INTEGRAL BACKDRAFT DAMPER.
E. PROVIDE WITH INTEGRAL 24 V MOTOR OPERATED DAMPER.
F. INTERLOCK MOTOR-OPERATED DAMPER WITH EXHAUST FAN.

GRILLE, REGISTER AND DIFFUSER SCHEDULE

MARK	MANUFACTURER	SERVICE	MODEL	CONSTRUCTION TYPE	FACE TYPE	MOUNTING LOCATION	BORDER TYPE	FACE SIZE (IN)	MAX NC	MAX PRESS DROP (IN W.C.)	NOTES
CEG1	PRICE	EXHAUST	630	ALUMINIUM	LOUVERED	CEILING	SURFACE	REFER TO PLANS	30	0.08	A,B,C,D
EG1	PRICE	EXHAUST	630	ALUMINIUM	LOUVERED	WALL	SURFACE	REFER TO PLANS	30	0.08	A,B,C,D
TG1	PRICE	TRANSFER	630	ALUMINIUM	LOUVERED	WALL	SURFACE	REFER TO PLANS	30	0.08	A,B,C,D

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NOTES:

A. NECK SIZE SHOWN ON DRAWINGS. PROVIDE BRANCH DUCT TO MATCH NECK SIZE UNLESS OTHERWISE SHOWN ON DRAWINGS.
B. BAKED ENAMEL FINISH, WHITE TO MATCH CEILING COLOR.
C. FRONT BLADES PARALLEL TO LONG DIMENSION.
D. FRAME TYPE TO MATCH CEILING/WALL CONSTRUCTION, COORDINATE WITH ARCHITECTURAL REFLECTED CEILING/WALL PLAN.

PACKAGED TERMINAL AIR CONDITIONING UNIT SCHEDULE (COOLING ONLY)

MARK	MANUFACTURER	MODEL	SUPPLY FAN CFM	SUPPLY FAN NOM HP	COOLING COIL REFR TYPE	COOLING COIL TH (MBH)	COMPRESSOR LRA	COMPRESSOR QTY	ELECTRICAL V/PH	ELECTRICAL MCA	ELECTRICAL DISC TYPE	ELECTRICAL STARTER TYPE	NOTES
AC 1	FRIEDRICH	P0E12K	400	0.09	R-410A	12.0	21.5	1	208/1	5.1	NON-FUSED	INTEGRAL	A,B,C,D,E,F,G

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NOTES:

A. CONDENSER CAPACITIES BASED ON 100°F EAT.
B. PROVIDE MERV 8, PLEATED THROWAWAY AIR FILTERS.
C. PROVIDE FACTORY MOUNTED DISCONNECT SWITCH INSTALLED ON SERVICE SIDE OF UNIT.
D. STARTERS FOR ALL MOTORS SHALL BE FURNISHED INTEGRAL WITH UNIT.
E. PROVIDE WITH CONDUIT KIT AND JUNCTION BOX FOR HARDWIRING.
F. PROVIDE WITH WALL MOUNTED THERMOSTAT.
G. PROVIDE WITH WALL SLEEVE.

UNIT HEATER SCHEDULE (ELECTRIC)

MARK	AREA SERVED	MANUFACTURER	MODEL	MIN OUT (MBH)	NOM (KW)	MIN NO OF STAGES	CFM	MOTOR HP	THROW (FT)	V/PH	DISC TYPE	NOTES
UH 1	RESTROOM	QMARK	MUH03-71	10.2	3.0	1	350	0.01	12	277/1	NON-FUSED	A,B,E,F
UH 2	FAMILY RESTROOM	QMARK	MUH03-71	10.2	3.0	1	350	0.01	12	277/1	NON-FUSED	A,B,E,F
UH 3	LOCKER ROOM	QMARK	MUH05-71	17.0	5.0	2	350	0.01	12	277/1	NON-FUSED	A,E,F,G
UH 4	LOCKER ROOM	QMARK	MUH05-71	17.0	5.0	2	350	0.01	12	277/1	NON-FUSED	A,E,F,G
UH 5	MENS RESTROOM	QMARK	MUH-07-4	25.6	7.5	2	650	0.04	18	480/3	NON-FUSED	A,B,E,F
UH 6	WOMENS RESTROOM	QMARK	MUH-07-4	25.6	7.5	2	650	0.04	18	480/3	NON-FUSED	A,B,E,F
UH 7	MEP-CUSTODIAN	QMARK	MUH03-71	10.2	3.0	1	350	0.01	12	277/1	NON-FUSED	A,B,E,F
UH 8	STORAGE	QMARK	MUH03-71	10.2	3.0	1	350	0.01	12	277/1	NON-FUSED	A,B,E,F
UH 9	CONCESSIONS	QMARK	MUH05-71	17.0	5.0	2	350	0.01	12	277/1	NON-FUSED	A,B,E,F
UH 10	SOUTH TICKET BOOTH	QMARK	MUH05-81	17.0	5.0	2	350	0.01	12	208/3	NON-FUSED	A,C,D,E,F
UH 11	NORTH TICKET BOOTH	QMARK	MUH03-81	10.2	3.0	1	350	0.01	12	208/1	NON-FUSED	A,C,D,E,F
UH 12	VESTIBULE	QMARK	MUH03-71	10.2	3.0	1	350	0.01	12	277/1	NON-FUSED	A,B,E,F
UH 13	STORAGE/DATA	QMARK	MUH03-81	10.2	3.0	1	350	0.01	12	208/1	NON-FUSED	A,B,E,F

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NOTES:

A. MOUNT 8 FEET ABOVE FINISHED FLOOR WITHOUT OBSTRUCTING AIRFLOW.
B. PROVIDE WITH WALL MOUNTED THERMOSTAT.
C. DIVISION 26 TO PROVIDE TIMER SWITCH.
D. DIVISION 26 TO PROVIDE LINE VOLTAGE THROUGH TIMER SWITCH TO UNIT.
E. PROVIDE NECESSARY MOUNTING BRACKET AND ACCESSORIES FOR HORIZONTAL DISCHARGE MOUNTING.
F. PROVIDE FACTORY MOUNTED DISCONNECT SWITCH INSTALLED ON SERVICE SIDE OF UNIT.
G. PROVIDE WITH SINGLE WALL MOUNTED THERMOSTAT TO CONTROL 2 UNIT HEATERS.

RADIANT HEATER SCHEDULE (ELECTRIC)

MARK	LOCATION	MANUFACTURER	MODEL	MOUNTING TYPE	SIZE (L" x W")	INPUT (W)	VOLTS	PHASE	NOTES
RH 1	CONCESSIONS	QMARK	HRK42027	SURFACE	5.5"x46"	2000.0 W	277 V	1	A,B
RH 2	CONCESSIONS	QMARK	HRK42027	SURFACE	5.5"x46"	2000.0 W	277 V	1	A,B

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NOTES:

A. DIVISION 26 TO PROVIDE SINGLE TIMER SWITCH TO CONTROL 2 RADIANT PANELS.
B. DIVISION 26 TO PROVIDE LINE VOLTAGE THROUGH TIMER SWITCH TO UNITS.

SEQUENCE OF OPERATIONS
MISCELLANEOUS EQUIPMENT

EXHAUST FAN (EF-1,2,3,4)
OPERATING MODES
OCCUPIED MODE:
The unit shall be in occupied mode when the room light switch is turned on.
UNOCCUPIED MODE:
The unit shall be in unoccupied mode for all periods when the room light switch is turned off.
COMPONENT CONTROL LOOPS:
The units shall be controlled by the room lighting controls system. A 2 position motorized damper at the intake louver shall be linked with the exhaust fan.
When in occupied mode:
The unit shall run continuously.
2 position motorized damper at intake louver shall be open.
When in unoccupied mode:
The unit shall be off.
2 position motorized damper at intake louver shall be closed.

TRANSFER FAN (TF-1,2,3,4)
OPERATING MODES
STANDBY MODE:
The unit shall be in standby mode when the zone temperature (Z-T) is above space temperature setpoint of 50 F.
HEATING MODE:
The unit shall be in heating mode when the zone temperature (Z-T) falls below space temperature setpoint of 50 F.
COMPONENT CONTROL LOOPS:
The units shall operate as an independent system. The unit shall be controlled by a wall mounted thermostat located within the respective plumbing chase.
When in Standby Mode:
The unit shall remain off.
When in Heating Mode:
The unit shall be on,
The unit shall remain on unitl space temperature as sensed by the wall mouted thermostat is above space temperature setpoint of 50 F.

ELECTRIC UNIT HEATER (UH-1,2,3,4,5,6,7,8,9,12)
OPERATING MODES
STANDBY MODE:
The unit shall be in standby mode when the zone temperature (Z-T) is above space temperature setpoint.
HEATING MODE:
The unit shall be in heating mode when the zone temperature (Z-T) falls below space temperature setpoint.
COMPONENT CONTROL LOOPS
The units shall operate as an independent system. The units shall be controlled by a wall mounted thermostat located within the respective space.
When in Standby Mode:
The unit shall remain off.
When in Heating Mode:
The unit shall be on,
The unit shall stage/cycle heater as required to maintain temperature setpoint of 68 F as sensed by the wall mounted thermostat.

ELECTRIC UNIT HEATER (UH-10,11)
OPERATING MODES
STANDBY MODE:
The unit shall be in standby mode when the timer switch is off.
HEATING MODE:
The unit shall be in heating mode when the timer switch is on.
COMPONENT CONTROL LOOPS
The units shall operate as an independent system. The units shall be controlled by a timer switch located within each respective room.
When in Standby Mode:
The unit shall remain off.
When in Heating Mode:
The unit shall be on,
The unit shall stage/cycle heater as required to maintain temperature setpoint of 68 F as sensed by the integral thermostat.

PACKAGED TERMINAL AIR CONDITIONER (AC-1)
OPERATING MODES
STANDBY MODE:
The unit shall be in standby mode when the zone temperature (Z-T) is above space temperature setpoint.
COOLING MODE:
The unit shall be in cooling mode when the zone temperature (Z-T) falls below space temperature setpoint.
COMPONENT CONTROL LOOPS
The unit shall operate as an independent system. The unit shall be controlled by a wall mounted thermostat located within the space.
When in Standby Mode:
The unit shall remain off.
When in Heating Mode:
The unit shall be on,
The unit shall stage/cycle cooling as required to maintain space temperature setpoint of 80 F as sensed by the wall mounted thermostat.

RADIANT HEATER (RH-1,2)
OPERATING MODES
STANDBY MODE:
The units shall be in standby mode when the timer switch is off.
HEATING MODE:
The units shall be in heating mode when the timer switch is on.
COMPONENT CONTROL LOOPS
The units shall operate as an independent system. The units shall be controlled by a single timer switch located within the room.
When in Standby Mode:
The unit shall remain off.
When in Heating Mode:
The unit shall be on.

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EXPIRES 12/31/2020

STATE OF MISSOURI
KELLEY P. CRAMM
NUMBER E-22323
REGISTERED PROFESSIONAL ENGINEER

Sep 25 2020

REVISIONS

Number	DESCRIPTION	DATE

PROJECT NO: 0119-0101
DATE: September 28, 2020

MECHANICAL SCHEDULES & CONTROLS

W-M600

BID SET

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KELLEY P. CRAMM

ELECTRICAL SYMBOLS

THIS IS A MASTER LEGEND AND NOT ALL SYMBOLS OR ABBREVIATIONS ARE USED. V3.00

STANDARD MOUNTING HEIGHTS

AUDIBLE APPLIANCES (CENTERLINE)	84"
ALARMS	48"
ANNUNCIATOR PANELS (DISPLAY)	60"
CONTROLS (TOP OF DEVICE)	48"
EXIT SIGNS (WALL MOUNTED)	80"
FIRE ALARM ANNUNCIATOR PANEL (DISPLAY)	60"
FIRE ALARM BELL (EXTERIOR) (CENTERLINE)	120"
FIRE ALARM CONTROL PANEL/UNIT (DISPLAY)	60"
INTERCOM (AFEA ONLY)	36"
INTERCOMS (TOP OF DEVICE)	48"
PULL STATIONS (TOP OF DEVICE)	48"
PHOTOCELLS	144"
RECEPTACLES	16"
RECEPTACLES (EXTERIOR)	24"
RECEPTACLES (GARAGES)	24"
RECEPTACLES (POOLS)	27"
RECEPTACLES (ABOVE COUNTER) +6" ABOVE BACKSPLASH/COUNTER, 40" MAX	
RECEPTACLES IN EQUIPMENT ROOMS	44"
REMOTE INDICATING LIGHT (EQUIPMENT ROOMS)	48"
REMOTE INDICATING LIGHT (FINISHED AREAS)	CEILING
SAFETY SWITCHES (TOP OF DEVICE)	48"
STARTERS (TOP OF DEVICE)	48"
SWITCHES (TOP OF DEVICE)	44"
TELEPHONE, DATA OUTLETS	SAME AS ADJACENT DEVICE, UNO
TELEPHONE TERMINAL BOARD (BOTTOM)	6"
TELEVISION OUTLETS	REFER TO ARCH DRAWINGS
VISIBLE APPLIANCES (CENTERLINE)	84"

INSTALL OUTLET BOXES AT THE MOUNTING HEIGHTS SHOWN ABOVE UNO IN THE CONSTRUCTION DOCUMENTS. MOUNTING HEIGHTS LISTED ABOVE, OR ELSEWHERE IN THE CONSTRUCTION DOCUMENTS, ARE AFF OR AFG TO BOTTOM OF OUTLET BOX, UNO. ALL DEVICES SHALL BE INSTALLED IN COMPLIANCE WITH CURRENT ADA AND LOCAL REQUIREMENTS.

ABBREVIATIONS

AF	AMPERE FUSE SIZE	MCC	MOTOR CONTROL CENTER
AFC	ABOVE FINISHED CEILING	MFR	MANUFACTURER
AFF	ABOVE FINISHED FLOOR	MIN	MINIMUM
AFG	ABOVE FINISHED GRADE	MLO	MAIN LUGS ONLY
AHJ	AUTHORITY HAVING JURISDICTION	MLV	MAGNETIC LOW-VOLTAGE
AHU	AIR HANDLING UNIT	MOCP	MAXIMUM OVERCURRENT PROTECTION
AIC	AMPERE INTERRUPTING CAPACITY	MTD	MOUNTED
AS	AMPERE SWITCH SIZE	N/A	NOT APPLICABLE
AT	AMPERE TRIP SETTING	NF	NON-FUSED
ATS	AUTOMATIC TRANSFER SWITCH	NL	NIGHT LIGHT (24HR ON)
AV	AUDIO VISUAL	NRTL	NATIONALLY RECOGNIZED TESTING LABORATORY (CSA, ETL, NSF, UL)
BAS	BUILDING AUTOMATION SYSTEM	NTS	NOT TO SCALE
BKR	BREAKER	OS	OCCUPANCY SENSOR
C	CONDUIT	P	POLE
CAT	CATEGORY	PART	PARTIAL CIRCUIT
CATV	CABLE TELEVISION SYSTEM	PH/Ø	PHASE
CCTV	CLOSED CIRCUIT TELEVISION	PNL	PANEL
CD	CANDELA	PNLBD	PANELBOARD
CKT	CIRCUIT	PROVIDE	FURNISH AND INSTALL
CODE	APPLICABLE CODE ADOPTED BY JURISDICTION	PT	POTENTIAL TRANSFORMER
CT	CURRENT TRANSFORMER	QTY	QUANTITY
CTR	CENTER	R/REL	RELOCATE
CVD	CUMULATIVE VOLTAGE DROP	RCPT	RECEPTACLE
D/DEMO	DEMOLITION	RLA	RUNNING LOAD AMPS
DPDT	DOUBLE-POLE, DOUBLE-THROW	RTU	ROOFTOP UNIT
DPST	DOUBLE-POLE, SINGLE-THROW	SCCR	SHORT-CIRCUIT CURRENT RATING
E/ETR/EX	EXISTING TO REMAIN	SD	SMOKE DUCT DETECTOR
EC	ELECTRICAL CONTRACTOR	SF	SQUARE FEET
EF	EXHAUST FAN	SPDT	SINGLE-POLE, DOUBLE-THROW
EM	EMERGENCY	SPST	SINGLE-POLE, SINGLE-THROW
EMS	ENERGY MANAGEMENT SYSTEM	SSBJ	SUPPLY-SIDE BONDING JUMPER
ELV	ELECTRONIC LOW-VOLTAGE	ST	SHUNT TRIP
EWC	ELECTRIC WATER COOLER	SWBD	SWITCHBOARD
FAAP	FIRE ALARM ANNUNCIATOR PANEL	SWGR	SWITCHGEAR
FACP	FIRE ALARM CONTROL PANEL	TBB	TELECOMMUNICATIONS BONDING BACKBONE
FCA	FAULT CURRENT AMPS AVAILABLE	TBD	TO BE DETERMINED
FCU	FAN COIL UNIT	TGB	TELECOMMUNICATIONS GROUND BUS BAR
FF	FINISHED FLOOR	TL	TWISTLOCK
FLA	FULL LOAD AMPS	TMGB	TELECOMMUNICATIONS MAIN GROUND BUS BAR
FLR	FLOOR	TX/XFMR	TRANSFORMER
GC	GENERAL CONTRACTOR	TYP	TYPICAL
GEC	GROUNDING ELECTRODE CONDUCTOR	U/F	UNDERFLOOR
GES	GROUNDING ELECTRODE SYSTEM	U/G	UNDERGROUND
GFR	GROUND FAULT RELAY	U/S	UNDERSLAB
G	GROUND	UH	UNIT HEATER
IG	ISOLATED GROUND	UNO	UNLESS NOTED OTHERWISE
ISC	SHORT CIRCUIT CURRENT	UPS	UNINTERRUPTIBLE POWER SUPPLY
JB/J-BOX	JUNCTION BOX	VD	VOLTAGE DROP
LF	LINEAR FEET	VFD	VARIABLE FREQUENCY DRIVE
LRA	LOCKED ROTOR AMPS	VS	VACANCY SENSOR
LTG/LTS	LIGHTING/LIGHTS	W	WIRE
MAU	MAKE-UP AIR UNIT	W/	WITH
MAX	MAXIMUM	WP	WEATHER PROOF
MCA	MINIMUM CIRCUIT AMPACITY	WR	WEATHER RESISTANT
MCB	MAIN CIRCUIT BREAKER	WT	WATERTIGHT
		XP	EXPLOSION PROOF

LINETYPE LEGEND

THROUGHOUT THE DRAWINGS DIFFERENT LINETYPES ARE USED IN COMBINATION WITH THE SYMBOLS TO INDICATE THE STATUS OF ITEMS AS EXISTING, TO BE DEMOLISHED, TO BE INCLUDED AS PART OF NEW WORK AND/OR ITEMS WHICH ARE ANTICIPATED TO BE PROVIDED IN THE FUTURE. THE STATUS OF ITEMS USING THESE LINETYPES ARE RELATIVE TO THE VIEW IN WHICH THEY APPEAR. PHASING SHOWN IN DRAWINGS IS NOT INTENDED TO FULLY DESCRIBE ALL NECESSARY CONSTRUCTION PHASING, WHICH IS DETERMINED BY THE CONTRACTOR AS PART OF THEIR RESPONSIBILITIES. ANY SUCH PHASES DESCRIBED IN THE CONSTRUCTION DOCUMENTS ARE GENERAL AND ONLY INTENDED TO INDICATE A BROAD ORDER FOR THE SAKE OF DESCRIBING THE PROJECT. THE FOLLOWING LINETYPES MAY BE USED ON ANY DEVICE, EQUIPMENT, NOTE, LINE, SHAPE, ETC.

EXISTING — NEW — DEMOLISH — FUTURE

ANNOTATION

- MECHANICAL OR FIRE PROTECTION PLAN NOTE CALLOUT
- PLUMBING PLAN NOTE CALLOUT
- ELECTRICAL OR FIRE ALARM PLAN NOTE CALLOUT
- TECHNOLOGY PLAN CALLOUT
- PLUMBING EQUIPMENT DESIGNATION. (CONTRACTOR FURNISHED AND INSTALLED). REFER TO PLUMBING FIXTURE OR EQUIPMENT SCHEDULES
- EQUIPMENT DESIGNATION (OWNER FURNISHED, CONTRACTOR INSTALLED)
- CU 1 — MECHANICAL EQUIPMENT DESIGNATION (CONTRACTOR FURNISHED AND INSTALLED UNLESS NOTED OTHERWISE)
- CONNECTION POINT OF NEW WORK TO EXISTING
- 1 E1 — DETAIL REFERENCE UPPER NUMBER INDICATES DETAIL NUMBER LOWER NUMBER INDICATES SHEET NUMBER
- 1 E1 — SECTION CUT DESIGNATION

CIRCUITING & WIRING

- 7 5 3 P1 OR P1-3,5,7 — HOMERUN TO PANELBOARD. INFORMATION AT ARROWS ARE CIRCUIT NUMBERS AND PANELBOARD FOR TERMINATION. REFER TO PANELBOARD SCHEDULES FOR BRANCH CIRCUIT CONDUCTOR SIZES.
- [R#] — INDICATES RELAY NUMBER
- CIRCUIT CONTINUATION OR PARTIAL CIRCUIT
- CONDUIT CONCEALED
- CONDUIT CONCEALED (EMERGENCY)
- CONDUIT IN/UNDER FLOOR/GROUND CONSTRUCTION
- EXPOSED CONDUIT
- EXPOSED CONDUIT (EMERGENCY)
- FLEXIBLE CONDUIT
- LOW VOLTAGE CABLE (NOT ROUTED IN CONDUIT)
- CONDUIT TURNING DOWN
- CONDUIT TURNING UP
- CONNECTION POINT OR EQUIPMENT TERMINATION
- EQUIPMENT TERMINATION

CONDUCTOR TICK MARK LEGEND

WHERE TICK MARKS ARE SHOWN, THE FOLLOWING SHALL GOVERN:

- SWITCHED HOT (PHASE) CONDUCTORS (SHOWN TRAILING NEUTRAL)
- NEUTRAL (GROUNDED) CONDUCTOR
- UNSWITCHED HOT (PHASE) CONDUCTORS (SHOWN LEADING NEUTRAL)
- NOTE: HASH MARKS INDICATE QUANTITY OF CONDUCTORS
- EQUIPMENT GROUNDING CONDUCTOR IN CONDUIT (GREEN INSULATION OR BARE)
- ISOLATED GROUNDING CONDUCTOR IN CONDUIT (GREEN INSULATION WITH YELLOW TRACER)

BRANCH CIRCUIT CONDUCTOR TABLE

WHERE TICK MARKS ARE NOT SHOWN, THE FOLLOWING SHALL GOVERN:

# OF POLES	HOT (PHASE)*	NEUTRAL (GROUNDED)**	GROUNDING***
1P	(1)	(1) UNO	(1)
2P	(2)	(1) UNO	(1)
3P	(3)	(1) UNO	(1)

* PROVIDE ADDITIONAL CONDUCTORS THROUGH ENTIRE CIRCUIT (SWITCHED, UNSWITCHED/EM, ETC.) AS INDICATED THROUGHOUT CONSTRUCTION DOCUMENTS AND AS REQUIRED FOR A COMPLETE AND WORKING SYSTEM.

** REFER TO SPECIFICATIONS FOR LIMITATIONS ON SHARING NEUTRAL (GROUNDED) CONDUCTORS. DO NOT CIRCUIT AS A MULTI-WIRE BRANCH CIRCUIT, UNO.

*** PROVIDE ADDITIONAL ISOLATED GROUNDING CONDUCTORS WHERE INDICATED.

REFER TO SPECIFICATIONS, PLANS, NOTES, WIRING AND CONTROL DIAGRAMS FOR ADDITIONAL CIRCUITING REQUIREMENTS.

SIGNALING

- B — SIGNALING BELL
- B — SIGNALING BUZZER
- T — LV TRANSFORMER

LIGHTING

- A a — LIGHT FIXTURE
  - a = LOWER CASE LETTER IS SWITCH IDENTIFIER
  - A = UPPER CASE LETTER INDICATES LIGHT FIXTURE TYPE
  - = WALL MOUNT
  - = ARROW INDICATED AIMING DIRECTION
- LIGHT FIXTURE CIRCUITED AS A NIGHT LIGHT (NL)
- EMERGENCY LIGHT FIXTURE WITH EMERGENCY LIGHTING BATTERY PACK OR CONNECTED TO EMERGENCY SOURCE
- NIGHT LIGHT/EMERGENCY LIGHT FIXTURE WITH EMERGENCY BATTERY PACK OR CONNECTED TO EMERGENCY SOURCE
- LIGHT FIXTURE WITH DUAL BALLASTS CIRCUITED SEPARATELY (SHADING IMPLIES EMERGENCY LIGHT FIXTURE)
- [#] — LIGHTING TRACK (# INDICATES RELAY NUMBER)
- MIRROR LIGHTS
- EXTERIOR PARKING LOT LIGHT FIXTURE
- EXTERIOR PEDESTRIAN POST TOP LIGHT FIXTURE
- EXTERIOR LIT BOLLARD LIGHT
- EXIT SIGN - CEILING / WALL MOUNTED, ARROWS AS INDICATED, FACE HATCHED
- EMERGENCY LIGHTING UNIT EQUIPMENT WITH BATTERY PACK - CEILING/WALL MOUNTED
- AFEA (AREA FOR EVACUATION ASSISTANCE) SIGN - CEILING/WALL MOUNTED, ARROWS AS INDICATED

REFER TO LIGHT FIXTURE SCHEDULE FOR MORE INFORMATION

POWER EQUIPMENT & DEVICES

- ELECTRICAL PANELBOARD (SURFACE OR FLUSH MOUNT)
- ELECTRICAL CABINET (SURFACE OR FLUSH MOUNT), TYPE AS NOTED
- PLYWOOD TERMINAL BOARD FOR TELEPHONE SYSTEM, UNO. SIZE AS NOTED
- SWITCHBOARD OR MOTOR CONTROL CENTER ON HOUSEKEEPING PAD
- ELECTRICAL DISTRIBUTION PANELBOARD
- TRANSFORMER
- 200/3/150/3R — DISCONNECT SWITCH - "200/3/150/3R" DENOTES AMPERES/POLE/FUSE/NEMA ENCLOSURE RATING, NF= NON-FUSED, CB= CIRCUIT BREAKER (200/3/CB), NO VALUE (200/3/150) FOR NEMA ENCLOSURE MEANS STANDARD NEMA 1 RATING
- 30/3/15/1/3R — COMBINATION DISCONNECT (SAFETY) SWITCH AND MOTOR STARTER "30/3/15/1/3R" DENOTES AMPERES/POLE/FUSE/NEMA STARTER SIZE/NEMA ENCLOSURE RATING. NF= NON-FUSED, CB= CIRCUIT BREAKER (30/3/CB/1), NO VALUE (200/3/150/1) FOR NEMA ENCLOSURE MEANS STANDARD NEMA 1 ENCLOSURE RATING
- 2 — MAGNETIC MOTOR STARTER, NEMA SIZE AS NOTED. 3-POLE, UNO
- VFD — VARIABLE FREQUENCY DRIVE
- INDICATING LIGHT
- EMERGENCY POWER OFF BUTTON
- STOP-START PUSH BUTTON CONTROL STATION
- HAND-OFF-AUTO PUSH BUTTON CONTROL STATION
- MUSHROOM-TYPE PUSH BUTTON
- OVERHEAD PADDLE FAN

BOXES, LIGHTING CONTROL & WIRING DEVICES

- $# — SWITCH LETTER DESIGNATIONS AS FOLLOWS:
  - BLANK = SINGLE
  - 2 = TWO POLE
  - 3 = THREE-WAY
  - 4 = FOUR-WAY
  - D = DIMMER
  - F = FAN SPEED CONTROL
  - FH = FRACTIONAL HORSEPOWER MANUAL CONTROLLER
  - IH = INTEGRAL HORSEPOWER MANUAL CONTROLLER
  - K = KEYED
  - LV# = LOW VOLTAGE / DIGITAL
  - M = MANUAL MOTOR STARTER DISCONNECT
  - OS# = OCCUPANCY SENSOR
  - P = SPST PILOT LIGHT
  - WP = WEATHER PROOF
  - \# = REFER TO LIGHTING CONTROL DEVICE SCHEDULE
- ALC — AUTOMATIC LOAD CONTROL RELAY
- BTS — BRANCH CIRCUIT TRANSFER SWITCH
- CEILING / WALL MOUNTED OCCUPANCY SENSOR (# INDICATES TYPE PER SCHEDULE)
  - CORNER 90 DEGREE SENSING
  - ONE-DIRECTION SENSING, CEILING/WALL MOUNT
  - CEILING MOUNT, TWO DIRECTION SENSING
  - CEILING MOUNT, FOUR DIRECTION SENSING
- C# — CONTACTOR (SIZE, COIL VOLTAGE AND NUMBER OF POLES AS INDICATED)
- CL## — TRACK-MOUNTED CURRENT LIMITER (## INDICATES AMPERAGE)
- D# — DAYLIGHT SENSOR (# INDICATES TYPE PER SCHEDULE)
- LC — LIGHTING CONTROLS PROCESSOR AND/OR EQUIPMENT
- P# — POWER PACK (# INDICATES TYPE PER SCHEDULE)
- PS# — PHOTOELECTRIC SWITCH
- R## — ROOM CONTROLLER (# INDICATES TYPE PER SCHEDULE)
- TS# — TIME SWITCH
- SIMPLEX RECEPTACLE - NEMA 5-20R, UNO
- DUPLEX RECEPTACLE - NEMA 5-20R, UNO
- DOUBLE DUPLEX RECEPTACLE - NEMA 5-20R, UNO
- SPECIAL RECEPTACLE - NEMA TYPE AS NOTED
- TWIST-LOCK TYPE RECEPTACLE
- G — BLANK FACE GFCI FEED THROUGH DEVICE
- OR GFCI — GFCI TYPE RECEPTACLE*
- OR IG — ISOLATED GROUND TYPE RECEPTACLE*
- OR EM — EMERGENCY RECEPTACLE*
- RECEPTACLE INSTALLED ABOVE COUNTER OR BACKSPLASH*
- RECEPTACLE INSTALLED IN CEILING*
- RECEPTACLE INSTALLED IN FLOOR*
- RECEPTACLE INSTALLED VIA DROP CORD*
- \# — RECEPTACLE LETTER DESIGNATIONS AS FOLLOWS:
  - C = AUTOMATICALLY CONTROLLED
  - CH = CLOCK HANGER TYPE
  - G=RCPT PROTECTED BY GFCI CIRCUIT BREAKER OR UPSTREAM GFCI DEVICE
  - H = HORIZONTALLY MOUNTED
  - S = MANUALLY CONTROLLED
  - SP / TVSS = SURGE PROTECTION
  - TR = TAMPER RESISTANT
  - TV = TELEVISION
  - USB = USB/DUPLEX
  - WP = WEATHER PROOF COVER
  - WR = WEATHER RESISTANT
- MULTI-OUTLET ASSEMBLY
- TELEPHONE OUTLET
- DATA OUTLET
- MULTI-SERVICE OUTLET; TELEPHONE AND DATA
  - ABOVE COUNTER, TYP
  - WALL, TYP
  - FLOOR, TYP
- A — MULTI-SERVICE POWER POLE WITH TELEPHONE, DATA AND POWER OUTLETS A = TYPE, REFER TO PLANS, SCHEDULES AND SPECIFICATIONS
- A — MULTI-SERVICE FLOOR BOX WITH TELEPHONE, DATA AND POWER OUTLETS A = TYPE, REFER TO PLANS, SCHEDULES AND SPECIFICATIONS
- A — POKE THROUGH, A = TYPE, REFER TO PLANS, SCHEDULES AND SPECIFICATIONS
- T — THERMOSTAT
- J — CEILING/FLOOR MOUNT JUNCTION/OUTLET BOX
- J — WALL MOUNT JUNCTION/OUTLET BOX

* SYMBOL DEMONSTRATED WITH DUPLEX RECEPTACLE, WHEN USED IN COMBINATION WITH OTHER DEVICES MEANING IS SIMILAR FOR THOSE DEVICE TYPES.

REFER TO LIGHTING CONTROL DEVICE SCHEDULE FOR MORE INFORMATION.

ELECTRICAL ONE-LINE & RISER DIAGRAM

- ###A 3P — SWITCH (RATING AS INDICATED)
- ###A 3P — DRAWOUT CIRCUIT BREAKER (RATINGS AS INDICATED)
- ###AS 3P ###AF FRS — FUSED SWITCH (RATING, POLES AND FUSE TYPE AS INDICATED)
- ###AS 3P ###AF FRS NEMA # — COMBINATION FUSED SWITCH/STARTER AND STARTER SIZE
- ###AS 3P FRS NEMA # — CIRCUIT BREAKER (RATINGS AS INDICATED)
- ###A 3P NEMA # — COMBINATION CIRCUIT BREAKER/STARTER AND STARTER SIZE
- PANELBOARD, SINGLE OR MULTI-SECTION (REFER TO SCHEDULES)
- ISOLATED POWER PANELBOARD W/ INTEGRAL TRANSFORMER (REFER TO SCHEDULES)
- TX## — TRANSFORMER (TYPE AND RATINGS AS INDICATED)
- TX## — SHIELDED TRANSFORMER (TYPE AND RATINGS AS INDICATED)
- ATS# / ###A / ATS# (W/BYPASS) — AUTOMATIC TRANSFER SWITCH (RATINGS AS INDICATED)
- ATS# (W/BYPASS) ###A — AUTOMATIC TRANSFER SWITCH WITH BYPASS (RATINGS AS INDICATED)
- ##KW GENERATOR 480Y/277V, 3Ø, 4W ###A, 3P M/G — GENERATOR (RATINGS AS INDICATED)
  - NON-SEPARATELY DERIVED SOURCE OR SEPARATELY DERIVED SOURCE
- MDP SWITCHBOARD ELEC ROOM ### AMPS 480Y/277V 3Ø 4W — SWITCHGEAR, SWITCHBOARD AND/OR DISTRIBUTION PANELBOARD (TYPE, RATING, DEVICES AND ACCESSORIES AS INDICATED)
- DIGITAL VM AM — COMBINATION DIGITAL VOLT METER/AMMETER
- \### — CIRCUIT IDENTIFICATION (REFER TO CIRCUIT SCHEDULE)
- GFR — GROUND FAULT RELAY
- PFR — PHASE FAILURE RELAY
- KK# — KIRK-KEY INTERLOCK (# INDICATES KEY PAIR)
- ST — SHUNT TRIP
- AM — AMMETER (RANGE AS SPECIFIED OR REQUIRED)
- VM — VOLTMETER (RANGE AS SPECIFIED OR REQUIRED)
- UTILITY METER M — UTILITY METER (AS REQUIRED BY UTILITY)
- AS — AMMETER SWITCH
- VS — VOLTMETER SWITCH
- WH D 15 — WATT-HOUR METER, "D" DENOTES DEMAND REGISTER, "15" DENOTES MINUTES OF DEMAND INTERVAL
- CURRENT TRANSFORMER RATING AS SPECIFIED OR REQUIRED
- POTENTIAL TRANSFORMER RATING AS SPECIFIED OR REQUIRED
- SPD — SURGE-PROTECTIVE DEVICE
- GROUND CONNECTION
- GROUND CONNECTION WITH TEST WELL
- GROUND ROD
- LIGHTNING ARRESTER
- CAPACITOR
- CONTACT (OPEN OR CLOSED)
- HEATER
- HP — MOTOR
- \## — BLOCK LOAD KW OR KVA
- F# FP# — FAULT POINT REFERENCED IN SHORT CIRCUIT CURRENT AND VOLTAGE DROP SPREADSHEET

SPECIAL SYSTEMS SUPPLEMENTAL SPECIFICATIONS:

1. PROVIDE NECESSARY BOXES, CONDUIT AND MAKE FINAL CONNECTIONS TO TEMPERATURE CONTROL DEVICES PER MANUFACTURER'S RECOMMENDATIONS. THIS INCLUDES BUT IS NOT LIMITED TO: MAIN CONTROL PANELS, THERMOSTATS, HUMIDISTATS, AC SOLENOIDS, HEAT RECLAIM WIRING, AHU CONTROL WIRING, DUCT FURNACE CONTROL WIRING, TIMERS, AND SIMILAR CONTROLS. PROVIDE CONDUIT FOR ALL WIRING WITHIN WALLS. PROVIDE CONTROL AND INTERLOCK WIRING WHEN NOT PROVIDED BY OTHER TRADES. COORDINATE REQUIREMENTS WITH EQUIPMENT SUPPLIERS AND OTHER TRADES PRIOR TO ROUGH-IN.
2. PROVIDE LINE VOLTAGE WIRING AND MAKE FINAL CONNECTIONS TO ALL DUCT-MOUNTED SMOKE DETECTORS, FIRE/SMOKE AND SMOKE DAMPERS WHERE APPLICABLE. COORDINATE REQUIREMENTS WITH OTHER TRADES PRIOR TO INSTALLATION.
3. DEVICES MOUNTED ON ACOUSTICAL TILE CEILINGS SHALL BE CENTERED ON THE TILE, UNO.
4. PROVIDE BOX AND **[3/4"]** CONDUIT FROM EACH THERMOSTAT LOCATION TO MECHANICAL EQUIPMENT, (FLUSH MOUNT BOX WHEREVER PRACTICABLE). COORDINATE LOCATION OF ALL THERMOSTAT BOXES WITH MECHANICAL/CONTROLS CONTRACTOR AND OWNER PRIOR TO ROUGH-IN.
5. PROVIDE BOXES AND CONDUITS FOR THE FIRE PROTECTION SYSTEM LOW VOLTAGE WIRING AS REQUIRED. THIS INCLUDES EXPOSED WIRING LESS THAN 96" AFF. AT A MINIMUM, PROVIDE **[3/4"]** CONDUIT, UNLESS NOTED OTHERWISE. COORDINATE REQUIREMENTS AND LOCATIONS WITH SYSTEM INSTALLER AND FIRE ALARM SPECIFICATIONS.
6. AT A MINIMUM, PROVIDE EXTRA DEEP, DOUBLE GANG COMMUNICATION OUTLET BOXES, (FLUSH MOUNTED WHEREVER PRACTICABLE), WITH SINGLE-GANG PLASTER RING AND **[1"]** CONDUIT STUBBED-UP CONCEALED TO ACCESSIBLE CEILING SPACE, UNLESS NOTED OTHERWISE. PROVIDE SURFACE MOUNTED DATA BOXES WITHIN CABINETRY, AND SELECT OTHER LOCATIONS AS INDICATED ON THE DRAWINGS. COORDINATE TELEPHONE/DATA BOX AND CONDUIT LOCATIONS AND SIZES WITH OWNER AND OTHER TRADES PRIOR TO ROUGH-IN.
7. PROVIDE NYLON BUSHINGS FOR ALL COMMUNICATIONS AND LOW VOLTAGE WIRING CONDUITS AND SLEEVES, UNLESS NOTED OTHERWISE.
8. ALL COMMUNICATIONS AND LOW VOLTAGE WIRING CONDUIT SHALL BE INSTALLED WITH AN ACCESSIBLE PULLBOX BETWEEN EVERY 180 DEGREE CHANGE IN DIRECTION AND AT 100' INTERVALS OF CONTINUOUS RUNS.
9. MINIMUM BEND RADIUS FOR COMMUNICATIONS CONDUIT IS 6 TIMES THE INSIDE DIAMETER FOR CONDUITS 2" IN DIAMETER AND SMALLER AND 10 TIMES THE INSIDE DIAMETER FOR CONDUITS GREATER THAN 2" IN DIAMETER, UNLESS NOTED OTHERWISE.
10. LOW VOLTAGE COMMUNICATION, ENERGY MANAGEMENT, SOUND SYSTEM, SECURITY AND RELATED WIRING IS TO BE PERFORMED BY OTHERS UNDER A SEPARATE CONTRACT, UNLESS NOTED OTHERWISE. PROVIDE BOXES AND CONDUIT IN FINISHED AND RATED FLOORS/WALLS/CEILINGS TO ACCESSIBLE LOCATIONS FOR ALL LOW VOLTAGE WIRING. PROVIDE ALL LINE VOLTAGE CIRCUITRY (120V AND HIGHER) TO OWNER FURNISHED EQUIPMENT AND LOW VOLTAGE STEP-DOWN TRANSFORMERS AS REQUIRED. COORDINATE ELECTRICAL REQUIREMENTS AND LOCATIONS WITH SYSTEM INSTALLER AND OWNER.
11. ALL LOW VOLTAGE CLASS 2 OR 3 WIRING NOT IN CONDUIT SHALL BE PLENUM RATED WHERE APPLICABLE.
12. LOW VOLTAGE CABLE SHEATH LABELS AND RELATED MANUFACTURER INFO SHALL REMAIN APPARENT IN ALL EXPOSED APPLICATIONS. PROTECT ALL EXPOSED CABLING FROM PAINTING AND OVERSPRAY (INCLUDES CABLE NOT ROUTED IN CONDUIT AND THAT IS IN CABLE TRAY).
13. CABLES SHALL BE ROUTED THROUGH THE BUILDING CABLE TRAY/RACEWAY SYSTEM, UNLESS NOTED OTHERWISE. EXPOSED CABLING SHALL NOT BE ROUTED IN AREAS EXPOSED TO STRUCTURE UNLESS SPECIFICALLY PERMITTED BY THE OWNER. IN AREAS WHERE EXPOSED CABLES ARE ALLOWED, IT SHALL BE INSTALLED IN A NEAT AND WORKMAN LIKE MANNER IN ACCORDANCE WITH THE OWNER'S REQUIREMENTS. WHERE REQUIRED, PROVIDE CONDUIT TO ROUTE LOW VOLTAGE CABLING TO THE CABLE TRAY OR NEAREST ACCESSIBLE CEILING SPACE.
14. CONDUITS FOR COMMUNICATIONS OUTLETS SERVING ELEVATOR EQUIPMENT ROOMS, FACP, AND SIMILAR CRITICAL EQUIPMENT AS DESIGNATED BY THE OWNER SHALL BE CONTINUOUS ("HOMERUN") FROM OUTLET TO SERVING COMMUNICATIONS ROOM.

APPLICABLE ELECTRICAL CODES:

NOTE: PROJECT IS DESIGNED IN COMPLIANCE WITH THE FOLLOWING CODES. THIS IS NOT AN EXHAUSTIVE LIST. PROJECT SHALL COMPLY WITH ALL APPLICABLE CODES, STANDARDS AND LOCAL REQUIREMENTS. REFER TO THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

ELECTRICAL CODE: **2017 NATIONAL ELECTRICAL CODE, (NFPA 70)**
BUILDING CODE: **2015 INTERNATIONAL BUILDING CODE**
ENERGY CODE: **NOT ADOPTED**

COMMISSIONING / FUNCTIONAL TESTING:

CONTRACTOR'S BID SHALL INCLUDE PROVISIONS TO PROVIDE ALL SERVICES RELATED TO THE CODE REQUIRED BUILDING SYSTEMS COMMISSIONING INCLUDING A COMMISSIONING PLAN, FUNCTIONAL TESTING, AND RELATED DOCUMENTATION, REPORTS AND OWNER TRAINING. THIS INCLUDES RETAINING THE SERVICES OF A 3RD PARTY REGISTERED DESIGN PROFESSIONAL OR APPROVED AGENCY. REFER TO THE LATEST ADOPTED EDITION OF THE APPLICABLE ENERGY CODE FOR MORE INFORMATION. CONTRACTOR SHALL COMPLETE ALL RELATED COMMISSIONING REQUIREMENTS PRIOR TO FINAL INSPECTIONS IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS, CODE AND MANUFACTURER'S INSTRUCTIONS.

ELECTRICAL GENERAL NOTES :

1. EXISTING CONDITIONS WERE TAKEN FROM ORIGINAL DRAWINGS AND SITE VISITS AND MAY NOT REFLECT ACTUAL "AS-BUILT" CONDITIONS. VERIFY EXISTING CONDITIONS PRIOR TO SUBMITTING FINAL BID. COORDINATE NEW AND DEMOLITION WORK WITH ALL OTHER TRADES AND EXISTING CONDITIONS.
2. NOTIFY ARCHITECT, ENGINEER AND OWNER, AS APPLICABLE, IF ANY DANGEROUS CONDITIONS EXIST ON JOB SITE BEFORE ANY DEMOLITION OR REMODEL WORK BEGINS.
3. COORDINATE ANY NECESSARY POWER OUTAGES WITH THE OWNER AND MAKE EVERY ATTEMPT TO SCHEDULE DURING NON-BUSINESS OR OFF-PEAK BUSINESS HOURS TO MINIMIZE DISRUPTION TO BUSINESS OPERATIONS. REQUESTS FOR ELECTRICAL SHUTDOWNS OF THE OWNER'S EQUIPMENT SHALL BE BROUGHT IN WRITING TO THE ATTENTION OF THE OWNER AT LEAST 7 DAYS IN ADVANCE. SHUTDOWNS SHALL NOT BE PERFORMED WITHOUT WRITTEN APPROVAL FROM THE OWNER.
4. ALL ROOF PENETRATIONS, FLOOR CHASING OR CORE DRILLING SHALL REQUIRE THE SPECIFIC APPROVAL OF THE OWNER. ALL WORK IN COMMON AREAS, SHAFTS OR OTHER OWNER SPACES MUST BE SPECIFICALLY REVIEWED AND APPROVED BY THE OWNER PRIOR TO ANY WORK BEING PERFORMED. MINIMIZE DISTURBANCE TO OTHER BUILDING TENANTS.
5. FOR AREAS AND EQUIPMENT WITHIN THE SCOPE OF THIS REMODEL: EXISTING ELECTRICAL EQUIPMENT AND CIRCUITRY MAY BE REUSED IF IN GOOD CONDITION AND NEW DESIGN REQUIREMENTS CAN BE MET; OTHERWISE REPLACE
6. FOR AREAS AND EQUIPMENT WITHIN THE SCOPE OF THIS REMODEL: REPAIR OR REPLACE ANY EXISTING DAMAGED OR RECALLED ELECTRICAL EQUIPMENT, LIGHT FIXTURES, WIRING DEVICES AND RELATED CIRCUITRY AND RESTORE ALL ELECTRICAL SYSTEMS TO PROPER WORKING ORDER. THE FINAL ELECTRICAL INSTALLATION SHALL BE FREE FROM ELECTRICAL DEFECTS TO THE SATISFACTION OF THE AHJ, OWNER, ARCHITECT AND ENGINEER.
7. FOR AREAS AND EQUIPMENT WITHIN THE SCOPE OF THIS REMODEL: VERIFY CONDITION AND AGE OF EXISTING REUSED ELECTRICAL EQUIPMENT, LIGHT FIXTURES, CIRCUIT BREAKERS, FUSES, CONDUIT, SWITCHES AND RELATED WIRING. NOTIFY OWNER OF ANY ELECTRICAL EQUIPMENT, LIGHT FIXTURES AND WIRING AGED BEYOND ITS USEFUL LIFE AND REPLACE AS DIRECTED. THE MAXIMUM EXPECTED USEFUL LIFE SHALL NOT EXCEED THE FOLLOWING, (AS DATED FROM THE POINT OF MANUFACTURE), UNLESS APPROVED BY THE ENGINEER, MANUFACTURER AND OWNER: 20 YEARS FOR CIRCUIT BREAKERS, GENERATOR/UPS SYSTEMS AND LIGHT FIXTURES, 30 YEARS FOR TRANSFORMERS AND PANELBOARDS, 40 YEARS FOR SWITCHBOARDS AND OTHER ELECTRICAL EQUIPMENT.
8. FOR AREAS AND EQUIPMENT WITHIN THE SCOPE OF THIS REMODEL: ELECTRICAL EQUIPMENT SHALL BE LOCATED SO THAT THE CODE REQUIRED MINIMUM WORKING CLEARANCE AND DEDICATED ELECTRICAL SPACE ARE MAINTAINED. EXISTING EQUIPMENT NOT MEETING CURRENT CODE CLEARANCE REQUIREMENTS MAY REMAIN IF ALLOWED TO REMAIN BY THE AHJ, ENGINEER AND OWNER.
9. FOR FURNISHED EQUIPMENT AND APPLIANCES: CONFIRM THE ELECTRICAL REQUIREMENTS WITH MANUFACTURER INFORMATION AND OTHER TRADES PRIOR TO ROUGH-IN AND ADJUST ELECTRICAL PROVISIONS AS NECESSARY. THIS INCLUDES BUT IS NOT LIMITED TO: RACEWAY, CONDUCTOR(S), DISCONNECT, CIRCUIT BREAKER, FUSE, WIRING DEVICE AND TERMINATION. WHERE APPLICABLE, REFER TO VENDOR INFORMATION, SUCH AS FOOD SERVICE AND REFRIGERATION DRAWINGS, FOR DEVICE TYPE AND LOCATION.

ELECTRICAL SUPPLEMENTAL SPECIFICATIONS:

1. PRIOR TO SUBMITTING BID, VISIT THE JOB SITE AND BECOME FULLY ACQUAINTED WITH THE EXISTING CONDITIONS. AS APPLICABLE, REVIEW THE OWNER CRITERIA, GENERAL NOTES, OTHER TRADE DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS THAT MAY NOT BE CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY ARCHITECT AND ENGINEER OF ANY CONFLICTS OR DISCREPANCIES PRIOR TO SUBMITTING BID.
2. ALL WORK SHALL CONFORM TO ALL LOCAL CODES AND ORDINANCES AS WELL AS APPLICABLE INDUSTRY STANDARDS. ALL EQUIPMENT SHALL BEAR LABELS FOR THE USE INTENDED BY AN AHJ ACCEPTED NATIONALLY RECOGNIZED TESTING LABORATORY (NRTL), SUCH AS UL OR ETL. THE FINAL ELECTRICAL INSTALLATION OF THE FACILITY OCCUPIED BY OWNER SHALL BE FREE FROM ELECTRICAL DEFECTS TO THE SATISFACTION OF THE AHJ, OWNER, ARCHITECT AND ENGINEER.
3. COORDINATE FINAL LOCATION AND INSTALLATION REQUIREMENTS OF ALL LIGHT FIXTURES, ELECTRICAL EQUIPMENT AND ELECTRICAL DEVICES WITH ARCHITECTURAL DRAWINGS, EXISTING CONDITIONS AND OTHER TRADES PRIOR TO ROUGH-IN. PROVIDE ALL NECESSARY DEVICES, CORDS, PLUGS, DISCONNECTS AND FINAL CONNECTIONS TO ELECTRICAL EQUIPMENT FOR PROPER OPERATION IN ACCORDANCE WITH CODE, OWNER AND MANUFACTURER REQUIREMENTS.
4. ELECTRICAL DRAWINGS ARE DIAGRAMMATIC/SCHEMATIC IN NATURE AND REPRESENT THE GENERAL SCOPE OF WORK. IT IS NOT WITHIN THE SCOPE OF THE ELECTRICAL DRAWINGS TO SHOW ALL NECESSARY RACEWAY ROUTING, BENDS, OFFSETS, PULL BOXES AND OBSTRUCTIONS. CONTRACTOR SHALL COORDINATE THE FINAL LOCATION OF EQUIPMENT AND WIRING DEVICES WITH OTHER TRADES PRIOR TO INSTALLATION AND INSTALL ALL WORK TO CONFORM TO THE OWNER REQUIREMENTS.
5. ALL CONDUCTOR AND CONDUIT LENGTHS SHOWN IN THESE DESIGN DOCUMENTS ARE INTENDED SOLELY FOR USE IN THE DESIGN CALCULATIONS BY THE DESIGN PROFESSIONAL, UNLESS NOTED OTHERWISE. LENGTHS SHOWN SHALL NOT BE USED TO ASSIST IN THE BIDDING TAKEOFF PROCESS. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE MATERIAL QUANTITIES REQUIRED TO BID AND CONSTRUCT THE COMPLETE PROJECT.
6. PROVIDE PROPER FIRE PROOFING AND SEALANT FOR PENETRATIONS THROUGH FIRE RATED ASSEMBLIES. THE FIRE STOPPING METHOD, MATERIAL AND ITS APPLICATION SHALL BE NRTL LISTED, CODE COMPLIANT AND APPROVED BY AHJ.
7. FOR CAST-IN-PLACE CONCRETE, TILT-UP WALLS, PRECAST OR SIMILAR PRE-ENGINEERED WALL SYSTEMS: COORDINATE THE FINAL LOCATION OF ALL ELECTRICAL DEVICES, RACEWAYS, LIGHT FIXTURES AND PENETRATIONS WITH ARCHITECT, WALL SUPPLIER AND OTHER TRADES PRIOR TO WALL CONSTRUCTION. CONDUIT/RACEWAY IMBEDDED IN CONCRETE WALLS SHALL BE SCHEDULE 80 PVC OR LFMC; OTHER TYPES MAY BE ALLOWED IF APPROVED BY WALL SYSTEM MANUFACTURER AND ENGINEER.
8. WHEN CONCRETE TRENCHING/CORING IS REQUIRED, THE METHODS, DEPTHS, AND LOCATIONS SHALL BE PRE-APPROVED BY OWNER, ARCHITECT, AND STRUCTURAL ENGINEER PRIOR TO THE START OF WORK. X-RAY SLAB AS NECESSARY TO AVOID DAMAGING ANY UNDER-SLAB UTILITIES OR STRUCTURE. SLAB REPLACEMENT SHALL BE INSTALLED WITH DOWELLING AND REINFORCED CONCRETE AS DIRECTED BY THE STRUCTURAL ENGINEER. WHERE SLAB ON GRADE IS SAW-CUT AND REMOVED FOR TRENCHING THE CONTRACTOR SHALL INSTALL MOISTURE BARRIER PER OWNER'S REQUIREMENTS. PROVIDE 3/4" MINIMUM CONDUITS ROUTED THROUGH SLAB AND STUBBED UP INTO DEVICES. FOR SLAB ON DECK, THE FLOOR SHALL BE SLEEVED AND EQUIPPED WITH THE APPROPRIATE LISTED ASSEMBLY. PROVIDE 3/4" MINIMUM CONDUITS ROUTED BELOW SLAB, TIGHT TO STRUCTURE, AND STUBBED UP INTO DEVICES.
9. ALL APPLICABLE SWITCHES, RECEPTACLES, OUTLETS, AND CONTROLS SHALL BE PLACED AT HEIGHTS THAT ARE IN ACCORDANCE WITH ADA ACCESSIBILITY GUIDELINES.
10. COORDINATE FLOOR MOUNTED BOX, RECEPTACLE, AND COVER PLATE TYPES WITH ARCHITECT AND OWNER PRIOR TO ORDER.
11. WIRING DEVICES ADJACENT TO EACH OTHER SHALL BE INSTALLED UNDER A SINGLE COVER PLATE, UNO.
12. WIRING DEVICES SHOWN BACK-TO-BACK ON A COMMON WALL SHALL BE OFFSET A MINIMUM OF 12" HORIZONTALLY TO REDUCE SOUND TRANSMISSION BETWEEN ROOMS, UNO.
13. ALL WP OUTLET BOX HOODS SHALL BE "EXTRA-DUTY" AND "WHILE-IN-USE COVER" TYPE. OUTLET BOX HOODS SHALL BE LOW PROFILE WHEREVER PRACTICABLE, UNLESS NOTED OTHERWISE. THE USE OF LARGE BUBBLE COVERS SHALL BE AVOIDED ON THE EXTERIOR OF THE BUILDING OR BEHIND EQUIPMENT IN ORDER TO PREVENT DAMAGE TO THE COVER AND TO ALLOW THE EQUIPMENT TO BE LOCATED CLOSE TO THE WALL.
14. ALL 120V RECEPTACLES 50A OR LESS, 208V AND 240V RECEPTACLES 100A OR LESS, SHALL BE GFCI PROTECTED IN LOCATIONS REQUIRED BY CODE; THIS INCLUDES BATHROOMS, KITCHENS/FOOD PREP AREAS, EXTERIOR LOCATIONS AND RECEPTACLES WITHIN 6 FEET OF A SINK. GFCI RECEPTACLES SHALL BE READILY ACCESSIBLE AND SHALL NOT BE LOCATED BEHIND STATIONARY EQUIPMENT. GFCI PROTECTION MAY BE VIA A GFCI CIRCUIT BREAKER OR GFCI RECEPTACLE, UNLESS NOTED OTHERWISE. WHERE NECESSARY, GFCI PROTECTION MAY BE ACHIEVED VIA A BLANK FACE GFCI DEVICE LOCATED IN A READILY ACCESSIBLE LOCATION NEAR RECEPTACLE BEING PROTECTED. FOR DOWNSTREAM WIRING DEVICES LOCATED ON THE SAME BRANCH CIRCUIT, THE GFCI PROTECTION MAY BE PROVIDED FOR BY A SINGLE UPSTREAM DEVICE IF ALL PROTECTED DEVICES ARE LABELED PER CODE.
15. PROVIDE TAMPER-RESISTANT (TR) TYPE RECEPTACLES AT ALL CODE REQUIRED LOCATIONS AND AT LOCATIONS WHERE RECEPTACLES ARE MOUNTED LESS THAN 5'-6" AFF AND ARE EASILY ACCESSIBLE BY CHILDREN, UNLESS NOTED OTHERWISE.
16. FLEXIBLE CONDUIT IS ONLY PERMITTED WHERE SPECIFICALLY ALLOWED IN THE CONSTRUCTION DOCUMENTS, WHERE CONCEALED FROM VIEW OR EXPOSED FINAL CONNECTIONS TO LIGHT FIXTURES AND EQUIPMENT IN LENGTHS OF 6'-0" OR LESS.
17. ALL EMPTY CONDUIT/RACEWAY SHALL BE INSTALLED WITH PULL STRINGS. TERMINATE CONDUIT STUB-UP WITH A NYLON BUSHING.
18. EXPOSED CONDUIT/RACEWAY SHALL BE PAINTED TO MATCH ADJACENT SURFACE, UNLESS NOTED OTHERWISE. COORDINATE REQUIREMENTS WITH ARCHITECT AND OWNER PRIOR TO INSTALLATION.
19. CONDUITS/RACEWAYS SHALL BE CONCEALED FROM VIEW WHEREVER PRACTICABLE, UNLESS NOTED OTHERWISE. ROUTE CONDUITS SERVING ROOFTOP EQUIPMENT CONCEALED INSIDE EQUIPMENT CURB AND MINIMIZE ROOF PENETRATIONS AND EXTERIOR CONDUIT RUNS WHERE PRACTICABLE. SUPPORT RACEWAY FROM STRUCTURE, NOT ROOF DECK. MAINTAIN 2" MIN SPACING FROM BOTTOM OF ROOF DECK TO PREVENT ROOFING SCREWS FROM PENETRATING RACEWAY. DO NOT ROUTE CONDUITS ACROSS SKYLIGHTS, ACCESS PANELS, HATCHED TILES, HVAC DIFFUSERS, OR EQUIPMENT WORKING CLEARANCE SPACE. ROUTE ALL EXPOSED NON-FLEXIBLE CONDUITS TIGHT TO STRUCTURE, PARALLEL TO BUILDING LINES AND IN STRUT OR CABLE/PIPE TRAY WHERE PRACTICABLE. INSTALL CONDUITS PLUMB/ LEVEL WHERE EXPOSED TO VIEW. COORDINATE RACEWAY ROUTING AND INSTALLATION WITH OTHER TRADES PRIOR TO ROUGH-IN.
20. WHERE PRACTICABLE, ALL UNDER-FLOOR/UNDER-GROUND CONDUITS/RACEWAY SHALL BE INSTALLED A MINIMUM OF **24"** BELOW BOTTOM OF SLAB/PAVING/GRADE, UNLESS NOTED OTHERWISE. NOTE: THE DESIGN INTENT FOR INSTALLING ELECTRICAL CIRCUITRY AT THIS DEPTH IS TO PROTECT THE ELECTRICAL CIRCUITRY FROM DAMAGE DUE TO FUTURE WORK.
21. PROVIDE LABEL AT EACH RECEPTACLE COVER PLATE WITH THE RESPECTIVE "PNLBD-CKT#" DESIGNATION. COORDINATE LABEL REQUIREMENTS WITH THE OWNER PRIOR TO INSTALLATION. REFER TO THE SPECIFICATIONS FOR MORE INFORMATION.
22. MULTIWIRE BRANCH CIRCUITS ARE NOT ALLOWED, UNLESS NOTED OTHERWISE.
23. PROVIDE INSULATED EQUIPMENT GROUNDING CONDUCTOR FOR ALL CIRCUITS, UNLESS NOTED OTHERWISE.

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EXPIRES 12/31/2020

STATE OF MISSOURI
CURTIS A. OLDS
NUMBER PE-2018036640
PROFESSIONAL ENGINEER
Sep 25 2020

REVISIONS

Number	DESCRIPTION	DATE

PROJECT NO: 0119-0101
DATE: September 28, 2020

ELECTRICAL LEGEND AND NOTES

W-E000

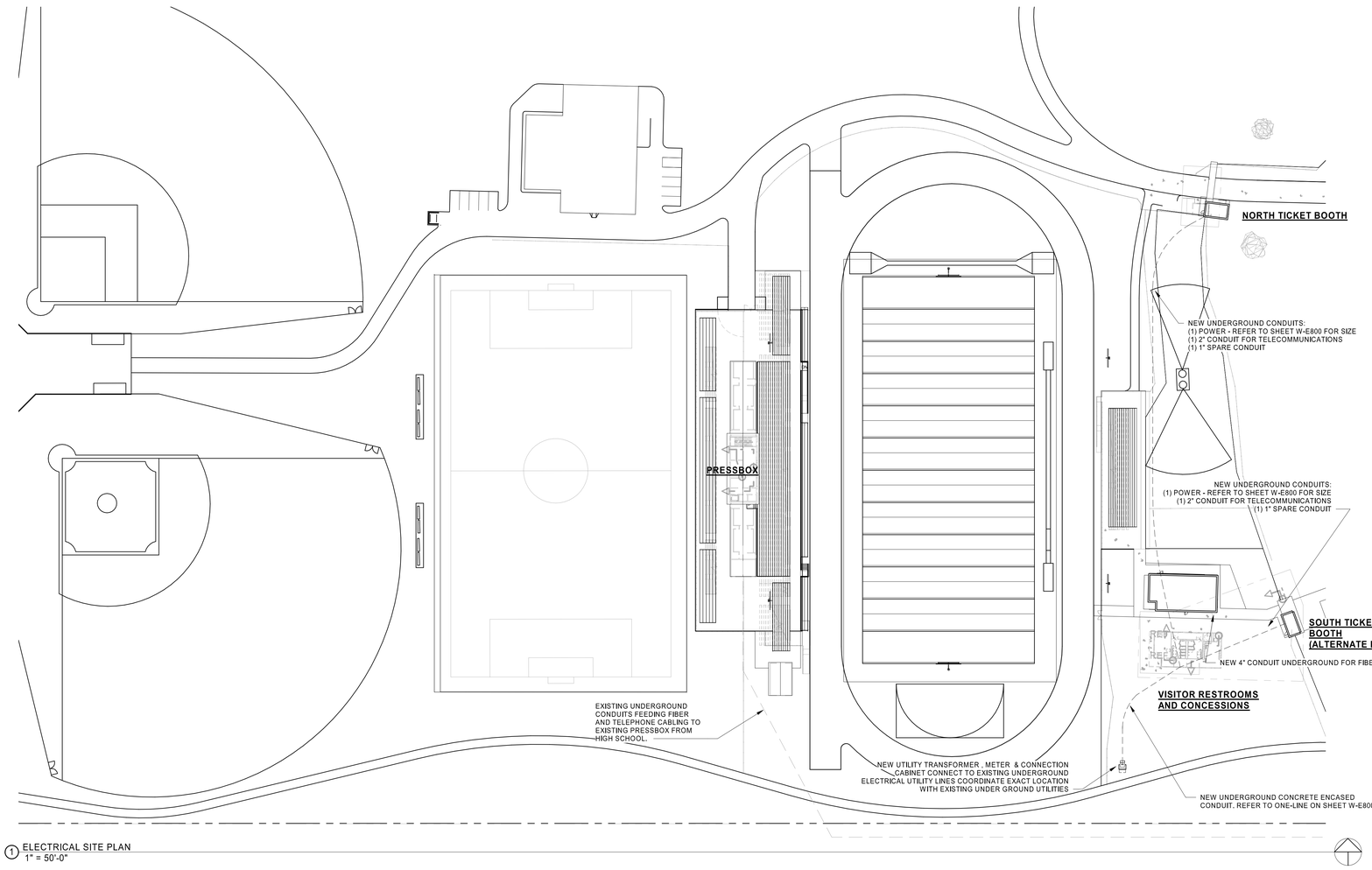
BID SET

CURTIS A. OLDS

PRINT DATE/TIME: 9/25/2020 1:23:59 PM

SITE ELECTRICAL GENERAL NOTES:

1. REFER TO CIVIL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION. COORDINATE THE FINAL LOCATION OF ALL SITE LIGHTING POLES, SIGNAGE, UNDERGROUND UTILITIES, CONDUITS, CIRCUITRY, TRANSFORMERS AND OTHER EQUIPMENT WITH CIVIL DRAWINGS, LANDSCAPING DRAWINGS AND OWNER PRIOR TO INSTALLATION.
2. COORDINATE ALL SITE ELECTRICAL REQUIREMENTS WITH EQUIPMENT MANUFACTURER INFORMATION AND OTHER TRADES AND ADJUST ELECTRICAL PROVISIONS AS REQUIRED TO MEET REQUIREMENTS.
3. SITE ELECTRICAL CONDUITS SHALL BE 1" MINIMUM, UNLESS NOTED OTHERWISE. WHERE PRACTICABLE, ALL SITE ELECTRICAL CONDUITS SHALL BE INSTALLED A MINIMUM OF 24" BELOW GRADE, UNLESS NOTED OTHERWISE. COORDINATE FINAL CONDUIT ROUTING WITH EXISTING OBSTRUCTIONS AND OTHER TRADES AND ADJUST AS NECESSARY.
4. CAP AND MARK ALL UNDERGROUND CONDUITS PROVIDED FOR FUTURE USE AND INCLUDE PULL STRINGS. PROVIDE DIMENSIONED LOCATIONS OF TERMINATION POINTS ON AS-BUILT DRAWINGS AND SUBMIT TO OWNER.
5. MINIMUM WIRE SIZE FOR SITE ELECTRICAL CIRCUITS SHALL BE #10 AWG CU, UNLESS NOTED OTHERWISE.
6. PROVIDE SPLICE AND PULL BOXES FOR SITE LIGHTING AND SITE ELECTRICAL POWER TO LIMIT MAXIMUM CONDUIT RUN TO 300'. PLACE BOXES IN A PLANTER AREA CLEAR OF VEGETATION WHEREVER PRACTICABLE; (COORDINATE FINAL LOCATION WITH CIVIL, LANDSCAPE CONTRACTOR AND OWNER). BOXES SHALL BE SUITABLE FOR LOCATION AND PROPERLY SIZED FOR QUANTITY AND SIZE OF CONDUITS IN AND OUT AND SHALL BE MARKED "ELECTRICAL". NOT ALL OF THESE BOXES ARE SHOWN ON SITE ELECTRICAL DRAWINGS; CONTRACTOR SHALL PROVIDE LOCATION ON AS-BUILT DRAWINGS AND SUBMIT TO OWNER. SPLICE BOX SHALL BE APPROPRIATE FOR LOCATION AND SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS. SPLICE BOX SHALL HAVE A MINIMUM NOMINAL SIZE OF 12"X12"X12". SHALL BE AN OPEN BOTTOM NRTL LISTED UNDERGROUND ENCLOSURE, AND SHALL AT A MINIMUM BE TIER 15 TRAFFIC RATED.



1 ELECTRICAL SITE PLAN
1" = 50'-0"

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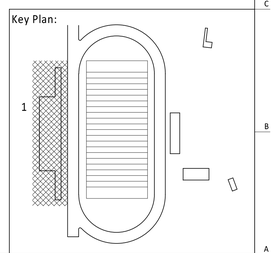
STATE OF MISSOURI
CURTIS A. OLDS
NUMBER PE-2010036440
PROFESSIONAL ENGINEER

Sep 25 2020

REVISIONS

Number	DESCRIPTION	DATE

Key Plan:



PROJECT NO: 0119-0101
DATE: September 28, 2020

ELECTRICAL SITE PLAN

W-E001

BID SET

CURTIS A. OLDS

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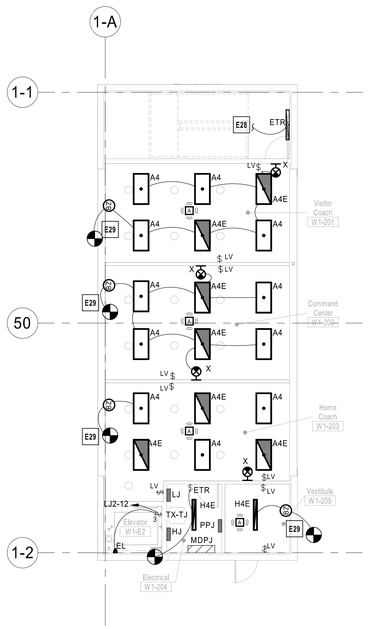
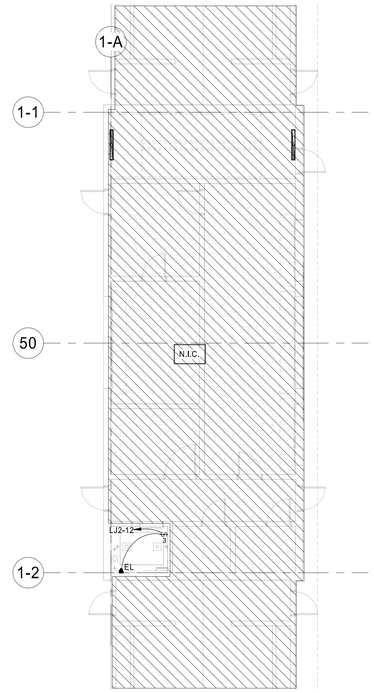
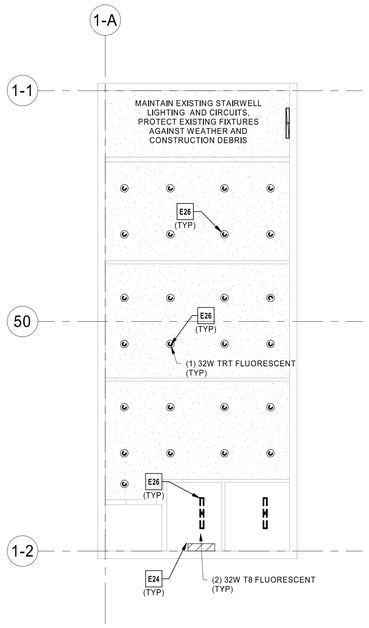


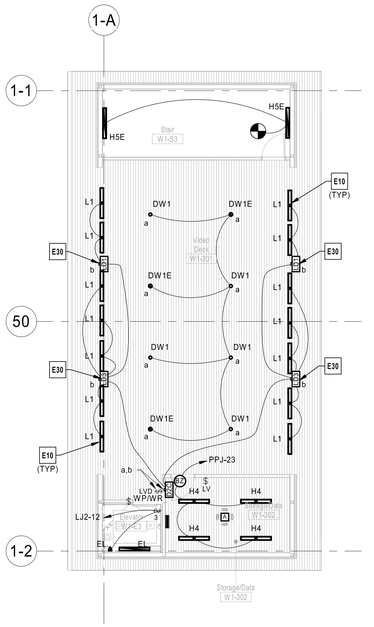
② HOME PRESS BOX - LEVEL 2 LIGHTING RCP
1/8" = 1'-0"



① HOME PRESS BOX - LIGHTING RCP
1/8" = 1'-0"



⑤ HOME PRESS BOX - LEVEL 2 LIGHTING DEMO PLAN
1/8" = 1'-0"



③ HOME PRESS BOX - LEVEL 3 LIGHTING RCP
1/8" = 1'-0"

ELECTRICAL GENERAL NOTES:

1. H5E FIXTURES ARE CONTROLLED BY INTEGRAL OCCUPANCY SENSOR AND EXISTING STAIREWELL LIGHTING CONTROLS.

ELECTRICAL LIGHTING LOAD NOTE:

LEVEL 2 LIGHTING CIRCUIT LOAD REMOVED: 1056VA
LEVEL 2 LIGHTING CIRCUIT LOAD ADDED: 576VA
OVERALL LIGHTING LOAD REDUCED.

ELECTRICAL PLAN NOTES:

E10 MOUNT TAPE LIGHT TO THE FACE OF THE STRUCTURAL BEAM. MOUNT AS LOW ON BEAM AS POSSIBLE. FIXTURE INTENDED TO GRAZE THE ROOF. COORDINATE EXACT LOCATION WITH STRUCTURAL MEMBERS.

E24 ROOF IS BEING REMOVED. CONTRACTOR TO PROTECT EXISTING ELECTRICAL PANELS TRANSFORMERS AND EQUIPMENT FROM CONSTRUCTION DEBRIS AND WEATHER DURING CONSTRUCTION. RE-WORK EXISTING CONDUITS AND CONDUCTORS FOR EQUIPMENT AS REQUIRED TO MAINTAIN EXISTING ELECTRICAL SYSTEM AND BRANCH CIRCUIT CONNECTIONS.

E26 EXISTING LEVEL 2 LIGHT FIXTURES TO BE DEMOED AND CIRCUIT TO BE REUSED IN PROJECT SCOPE FOR NEW LIGHT FIXTURES.

E28 CONNECT EXISTING STAIRWELL CIRCUIT AND LIGHTING CONTROLS TO NEW FIXTURES ON LEVEL ABOVE.

E29 NEW LIGHTING LEVEL 2 TO BE INSTALLED IN DROP CEILING. COORDINATE EXACT FIXTURE LAYOUT WITH EXISTING CONDITIONS AND NEW DROP CEILING. CONNECT NEW LIGHT FIXTURES AND EXIT SIGNS TO EXISTING LEVEL 2 LIGHTING CIRCUIT. REWORK AND EXTEND EXISTING CONDUITS AND CONDUCTORS TO PROVIDE LIGHTING CONTROLS AS SHOWN

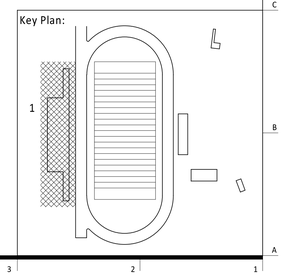
E30 24V LED TAPE LIGHT TYPE 'L1' TO BE FED FROM NEMA-3R 0-10V DIMMING (1) AND (3) OUTPUT 277/24V 96W LED DRIVERS. REFER TO LIGHT FIXTURE SCHEDULE FOR DRIVER SPECIFICATIONS. COORDINATE PLACEMENT AND NUMBER OF DRIVERS WITH FIXTURE LENGTHS. INSTALL PER MANUFACTURER'S SPECIFICATIONS.

LIGHTING SUPPLEMENTAL SPECIFICATIONS:

1. REFER TO THE ARCHITECTURAL DRAWINGS FOR LIGHT FIXTURE LOCATIONS, MOUNTING HEIGHTS, TRACK LENGTHS AND ADDITIONAL MOUNTING INFORMATION. CONTRACTOR SHALL BE RESPONSIBLE FOR INSURING THAT COORDINATION AND CONFLICT ISSUES ARE RESOLVED PRIOR TO INSTALLATION OF LIGHT FIXTURES. CONTACT ARCHITECT/ENGINEER IMMEDIATELY IF THERE ARE DISCREPANCIES.
2. THROUGH WIRING OF RECESSED LIGHT FIXTURES, IN SUSPENDED CEILINGS, IS NOT PERMITTED. CONNECT EACH LIGHT FIXTURE BY A WHIP TO A JUNCTION BOX. PROVIDE CABLE WHIPS OF SUFFICIENT LENGTHS TO ALLOW FOR RELOCATING EACH LIGHT FIXTURE WITHIN A 5'-0" RADIUS OF ITS INDICATED LOCATION. CABLE WHIPS SHALL NOT EXCEED 6'-0" OF UNSUPPORTED LENGTHS.
3. ALL EMERGENCY LIGHTS AND EXIT SIGNS WITH INTEGRAL BATTERY BACK-UP SHALL BE CONNECTED TO A SEPARATE UNSWITCHED CONDUCTOR BYPASSING ALL OTHER CONTROLS AND CONTACTORS, UNLESS NOTED OTHERWISE. EXIT SIGNS SHALL NOT BE SWITCHED. REFER TO MANUFACTURER'S WRITTEN INSTRUCTIONS FOR PROPER INSTALLATION AND TESTING. ALLOW BATTERY TO CHARGE FOR A MINIMUM OF 48 HOURS BEFORE LIGHT LEVEL TESTING, IN ORDER TO PREVENT BATTERY DAMAGE. DO NOT TURN OFF POWER FOR EXTENDED PERIODS OF TIME AFTER EMERGENCY LIGHT HAS BEEN POWERED.
4. PROVIDE A NEUTRAL CONDUCTOR TO ALL WALL MOUNTED LINE VOLTAGE LIGHT SWITCHES, UNLESS NOTED OTHERWISE. IF NEUTRAL TERMINATION IS NOT REQUIRED FOR THE DEVICE THEN CAP CONDUCTOR AND TAG AS "NEUTRAL FOR FUTURE USE".
5. COORDINATE ALL OCCUPANCY/VACANCY SENSOR SETTINGS WITH OWNER AND ADJUST AS NECESSARY FOR PROPER OPERATION. SETTINGS MUST COMPLY WITH AHJ AND LOCAL ENERGY CODE REQUIREMENTS.
6. DO NOT INSTALL OCCUPANCY/VACANCY SENSORS WITHIN 48" OF AIR DIFFUSER OR SIMILAR OBSTRUCTION THAT MAY ADVERSLY AFFECT THE SENSOR PERFORMANCE. COORDINATE FINAL SENSOR LOCATIONS WITH OTHER TRADES AND INSTALL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

LIGHTING GENERAL NOTES:

1. THE EMERGENCY LIGHTING SYSTEM HAS BEEN DESIGNED TO PROVIDE AN INITIAL FLOOR ILLUMINANCE LEVEL OF 1 FC AVERAGE, 0.1 FC MINIMUM AND NO MORE THAN A 40:1 MAX/MIN RATIO ALONG THE EMERGENCY EGRESS PATHS, WHERE APPLICABLE, ADJUST AIMING OF EMERGENCY LIGHTS AS REQUIRED TO PROVIDE PROPER ILLUMINATION AT FLOOR AVOIDING OBSTACLES AND SHADOWS AFTER STORE SET-UP IS COMPLETE.
2. WALL MOUNTED EXITS SIGNS SHALL BE MOUNTED 12" ABOVE DOOR FRAME AND CENTERED ABOVE DOOR OPENING, UNLESS NOTED OTHERWISE. CEILING/PENDANT MOUNTED EXIT SIGNS SHALL BE SUSPENDED TO 12'-0" AFF IN CUSTOMER AREAS OPEN TO STRUCTURE, AT BOTTOM OF BAR JOISTS IN BACKROOM AREAS AND ON FINISHED CEILING WHERE APPLICABLE, UNLESS NOTED OTHERWISE. EXIT SIGNS SHALL BE READILY VISIBLE FROM DIRECTION OF EGRESS TRAVEL. COORDINATE FINAL EXIT SIGN LOCATIONS WITH AHJ AND OWNER.
3. SUSPEND BACK OF HOUSE, RECEIVING AND STOCKROOM AREA LIGHT FIXTURES AS HIGH AS PRACTICABLE IN ORDER TO AVOID DAMAGE DURING STOCKING, UNLESS NOTED OTHERWISE. SUSPEND JUST BELOW REFRIGERATION PIPING, DUCTWORK AND SIMILAR OBSTRUCTIONS WHERE NECESSARY TO AVOID SHADOWS. COORDINATE REQUIREMENTS WITH OWNER AND OTHER DISCIPLINES PRIOR TO INSTALLATION.
4. PROVIDE LABEL AT EACH MANUAL LIGHT SWITCH INDICATING THE LIGHT FIXTURE(S) THAT THE SWITCH CONTROLS AND THE RESPECTIVE "PNLBD-CKT#" DESIGNATION. A SINGLE LIGHT SWITCH FOR A SMALL ROOM DOES NOT NEED TO INDICATE THE SPACE CONTROLLED SINCE IT IS INTUITIVELY OBVIOUS. COORDINATE LABEL REQUIREMENTS WITH THE OWNER PRIOR TO INSTALLATION. REFER TO THE SPECIFICATIONS FOR MORE INFORMATION.
5. ALL REMOTELY LOCATED LIGHT FIXTURE POWER SUPPLIES SHALL BE LOCATED IN AN ACCESSIBLE LOCATION WITH PROPER VENTILATION IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. CONCEAL DEVICES AND RELATED WIRING FROM CUSTOMER/PUBLIC VIEW. PROVIDE ENCOSURE IF REQUIRED. COORDINATE LOCATION AND ENCLOSURE TYPE WITH ARCHITECT AND OWNER PRIOR TO INSTALLATION.



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STATE OF MISSOURI
CURTIS A. OLDS
NUMBER PE-2010034440
PROFESSIONAL ENGINEER

Sep 25 2020

REVISIONS

Number	DESCRIPTION	DATE

PROJECT NO: 0119-0101
DATE: September 28, 2020

HOME PRESS BOX - LIGHTING RCPS

W-E111

BID SET

CURTIS A. OLDS

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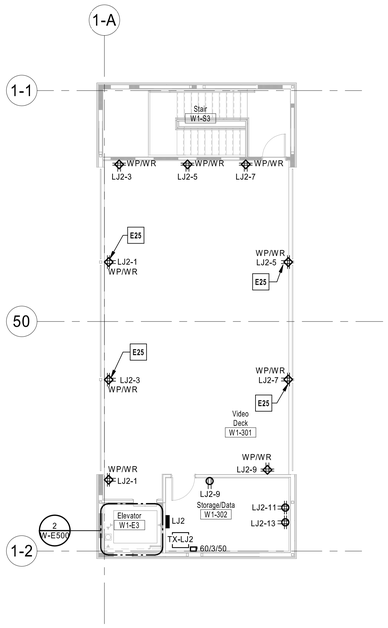
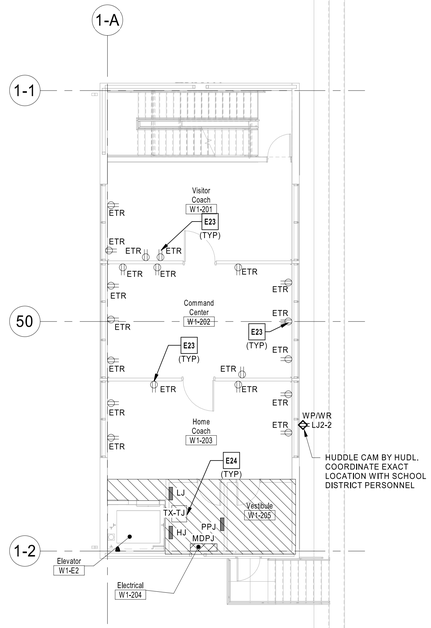
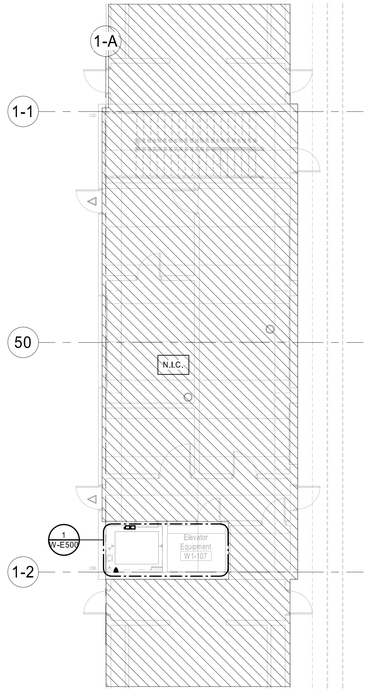


3 HOME PRESS BOX - LEVEL 3 POWER PLAN
1/8" = 1'-0"



2 HOME PRESS BOX - LEVEL 2 POWER PLAN
1/8" = 1'-0"



1 HOME PRESS BOX - POWER PLAN
1/8" = 1'-0"

ELECTRICAL GENERAL NOTES:

REFER TO SHEET W-E500 FOR ELEVATOR AND ELECTRICAL EQUIPMENT PLANS.

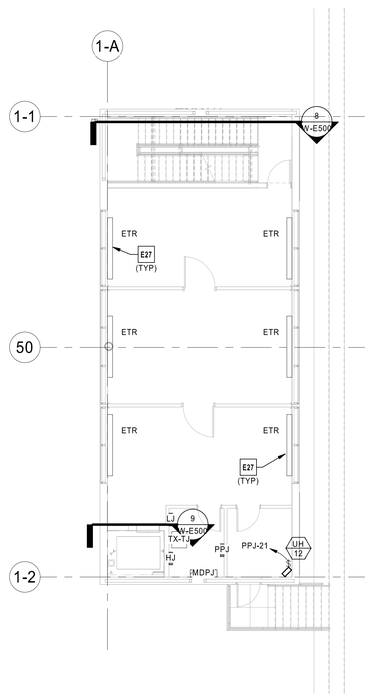
ELECTRICAL PLAN NOTES:

E23 ROOF IS BEING REMOVED. CONTRACTOR TO MAINTAIN EXISTING LEVEL 2 RECEPTACLE LOCATIONS AND CIRCUITING. REWORK EXISTING CONDUITS AND WIRING AS REQUIRED TO MAINTAIN EXISTING RECEPTACLE CIRCUITS.

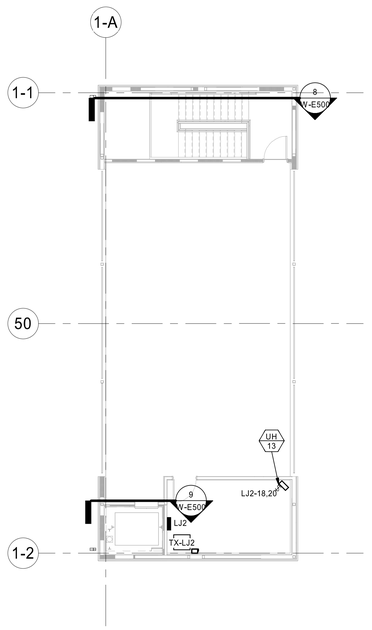
E24 ROOF IS BEING REMOVED. CONTRACTOR TO PROTECT EXISTING ELECTRICAL PANELS TRANSFORMERS AND EQUIPMENT FROM CONSTRUCTION DEBRIS AND WEATHER DURING CONSTRUCTION. RE-WORK EXISTING CONDUITS AND CONDUCTORS FOR EQUIPMENT AS REQUIRED TO MAINTAIN EXISTING ELECTRICAL SYSTEM AND BRANCH CIRCUIT CONNECTIONS.

E25 VIDEO DECK RECEPTACLE TO BE SURFACE MOUNTED ON COLUMN. RECEPTACLE WILL NEED TO SHARE SPACE WITH DATA OUTLETS ON COLUMN. COORDINATE CONDUIT ROUTING , RECEPTACLE PLACEMENT AND INSTALLATION REQUIREMENTS WITH TECHNOLOGY PLANS, ARCHITECTURAL PLANS AND FIELD CONDITIONS.

E27 MAINTAIN EXISTING CIRCUIT CONNECTIONS FOR EXISTING BASEBOARD HEATERS. REWORK EXISTING CONDUITS AND CONDUCTORS IF REQUIRED.

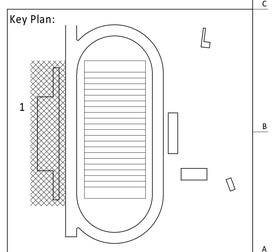


5 EQUIPMENT CONNECTION LEVEL 2 PLAN
1/8" = 1'-0"



4 HOME PRESS BOX - LEVEL 3 EQUIPMENT POWER PLAN
1/8" = 1'-0"

Key Plan:



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STATE OF MISSOURI
CURTIS A. OLDS
NUMBER PE-2010036440
PROFESSIONAL ENGINEER

Sep 25 2020

REVISIONS

Number	DESCRIPTION	DATE

PROJECT NO: 0119-0101
DATE: September 28, 2020

HOME PRESS BOX - POWER PLANS

W-E112

BID SET

CURTIS A. OLDS

PRINT DATE/TIME: 9/25/2020 1:24:22 PM

ELECTRICAL PLAN NOTES:

E13 EXHAUST FAN EF-1 TO BE CONTROLLED VIA CONCESSIONS 2-101 ROOM OCCUPANCY SENSOR IN CONJUNCTION WITH ROOM LIGHTS. PROVIDE ADDITIONAL POWER PACK AND CONNECT TO LOW VOLTAGE LIGHTING CONTROL WIRING PER MANUFACTURER'S SPECIFICATIONS.

E14 EXHAUST FAN EF-2 TO BE CONTROLLED VIA WOMEN'S RESTROOM 2-102 OCCUPANCY SENSOR IN CONJUNCTION WITH ROOM LIGHTS. PROVIDE ADDITIONAL POWER PACK AND CONNECT TO LOW VOLTAGE LIGHTING CONTROL WIRING PER MANUFACTURER'S SPECIFICATIONS.

E15 EXHAUST FAN EF-3 TO BE CONTROLLED VIA MEN'S RESTROOM 2-103 ROOM OCCUPANCY SENSOR IN CONJUNCTION WITH ROOM LIGHTS. PROVIDE ADDITIONAL POWER PACK AND CONNECT TO LOW VOLTAGE LIGHTING CONTROL WIRING PER MANUFACTURER'S SPECIFICATIONS.

E16 EXHAUST FAN EF-4 TO BE CONTROLLED VIA FAMILY RESTROOM 2-104 AND RESTROOM 2-106 OCCUPANCY SENSORS IN CONJUNCTION WITH ROOM LIGHTS. PROVIDE (2) ADDITIONAL POWER PACKS IN PARALLEL AND CONNECT TO LOW VOLTAGE LIGHTING CONTROL WIRING PER MANUFACTURER'S SPECIFICATIONS.

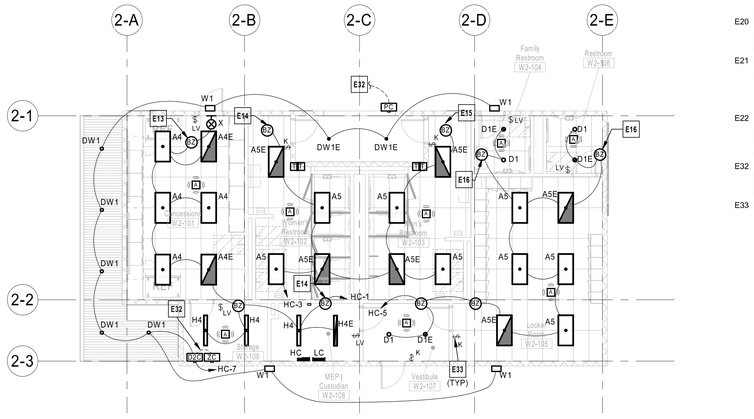
E20 CONTRACTOR TO ROUGH-IN POWER AND CONTROLLER FOR CONCESSION STAND TICKETING WINDOW COILING DOORS. COORDINATE INSTALLATION REQUIREMENTS WITH EQUIPMENT MANUFACTURER'S SPECIFICATIONS.

E21 CONTRACTOR TO PROVIDE JUNCTION BOX AND120V CONTROL POWER FOR HEATER DDC CONTROLS TRANSFORMER. COORDINATE EXACT LOCATION AND QUANTITY OF CONNECTIONS WITH MECHANICAL CONTRACTOR AND EQUIPMENT MANUFACTURER'S SPECIFICATIONS.

E22 CONTRACTOR TO PROVIDE JUNCTION BOX AND 120V CONTROL POWER FOR LOUVER MOTOR OPERATED DAMPERS. COORDINATE EXACT LOCATION AND QUANTITY OF CONNECTIONS WITH MECHANICAL CONTRACTOR AND EQUIPMENT MANUFACTURER'S SPECIFICATIONS.

E32 CONNECT LOW VOLTAGE WIRE TO ZONE CONTROLLER IN ROOM W2-109 TO PROVIDE PHOTO CELL AND TIME CLOCK CONTROL. REFER TO DETAIL 5 ON SHEET W-E700 FOR MORE INFORMATION.

E33 PROVIDE KEYED SWITCH ON LOAD SIDE OF POWER PACK.



1 VISITOR RESTROOMS/CONCESSIONS - LIGHTING RCP
1/8" = 1'-0"

2 VISITOR RESTROOMS/CONCESSIONS - POWER PLAN
1/8" = 1'-0"

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Lee's Summit R7 District Athletics Facilities

Lee's Summit West High School
2600 SW Ward Road
Lee's Summit, MO 64082

owner:
Lee's Summit R-7 School District
301 NE Tudor Road
Lee's Summit, MO 64086

architect:
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structural engineer:
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MO. CORPORATE NO: E-556D
EXPIRES 12/31/2020

STATE OF MISSOURI
CURTIS A. OLDS
NUMBER PE-2010036440
PROFESSIONAL ENGINEER

Sep 25 2020

REVISIONS

Number	DESCRIPTION	DATE

Key Plan:

PROJECT NO: 0119-0101
DATE: September 28, 2020

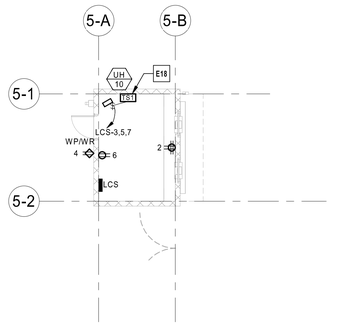
VISITOR RESTROOMS & CONCESSIONS - ELECTRICAL PLANS

W-E121

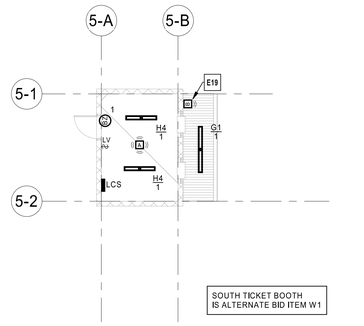
BID SET

PRINT DATE/TIME: 9/25/2020 1:24:30 PM

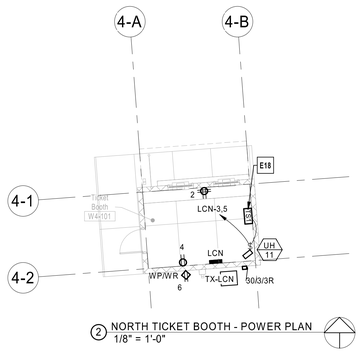
CURTIS A. OLDS



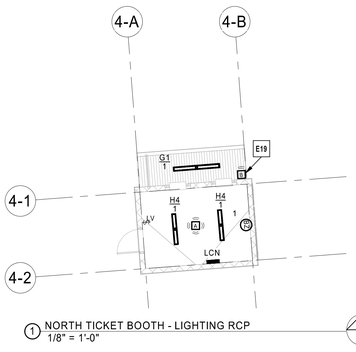
4 SOUTH TICKET BOOTH - POWER PLAN
1/8" = 1'-0"



3 SOUTH TICKET BOOTH - LIGHTING RCP
1/8" = 1'-0"



2 NORTH TICKET BOOTH - POWER PLAN
1/8" = 1'-0"



1 NORTH TICKET BOOTH - LIGHTING RCP
1/8" = 1'-0"

ELECTRICAL GENERAL NOTES:

1. LIGHTING IS TO BE CIRCUITED BACK TO 208/120V PANEL LOCATED IN THE SAME BUILDING THE LIGHTING IS LOCATED IN UNLESS OTHERWISE NOTED. CIRCUIT AS NOTED IN FIXTURE TAG.
2. ALL WIRING DEVICES ARE CIRCUITED TO 208/120V PANEL IN SAME BUILDING. CIRCUIT AS NOTED BY NUMBER ADJACENT TO DEVICE.
3. LIGHTING CONTROL DEVICES SHALL CONTROL ALL LIGHTING ASSOCIATED WITH THE TICKET BOOTH. REFER TO DETAIL 2 ON SHEET W-E700 FOR MORE INFORMATION.

ELECTRICAL PLAN NOTES:

E18 CONTRACTOR TO PROVIDE 70AB SERIES HEAVY DUTY TIMER AND LINE VOLTAGE CONTROLS WIRING FOR MANUAL CONTROL OF UNIT HEATER. COORDINATE REQUIRED TIME LENGTH WITH OWNER.

E19 PROVIDE WATTSTOPPER CB-100 LOW TEMPERATURE OCCUPANCY SENSOR OR EQUIVALENT.

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MO. CORPORATE NO: E-556D
EXPIRES 12/31/2020

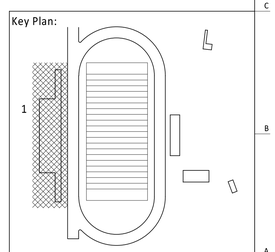
STATE OF MISSOURI
CURTIS A. OLDS
NUMBER PE-2010036440
PROFESSIONAL ENGINEER

Sep 25 2020

REVISIONS

Number	DESCRIPTION	DATE

Key Plan:



PROJECT NO: 0119-0101
DATE: September 28, 2020

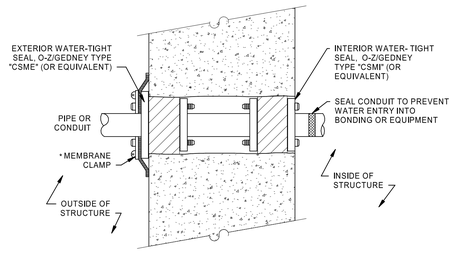
TICKET BOOTH - ELECTRICAL PLANS

W-E131

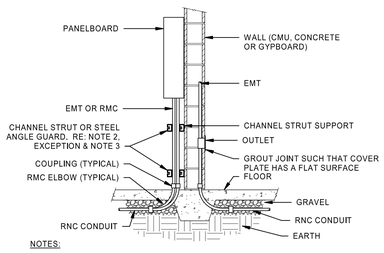
BID SET

PRINT DATE/TIME: 9/25/2020 1:24:35 PM

CURTIS A. OLDS



5 CONDUIT THROUGH EXISTING EXTERIOR WALL
NTS

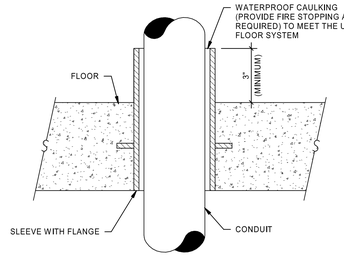


NOTES:

1. CONDUITS TURNED UP INSIDE WALLS MAY BE RNC FROM ABOVE THE SLAB TO RECESSED PANELBOARDS OR OUTLETS. FROM THE OUTLET UP IT SHALL BE EMT.
2. CONDUITS TURNED UP EXPOSED SHALL HAVE AN RMC ELBOW THROUGH THE SLAB. PROTECT THE ENTIRE ELBOW WITH RNC COATING OR MASTIC UP THROUGH THE TOP OF THE SLAB.

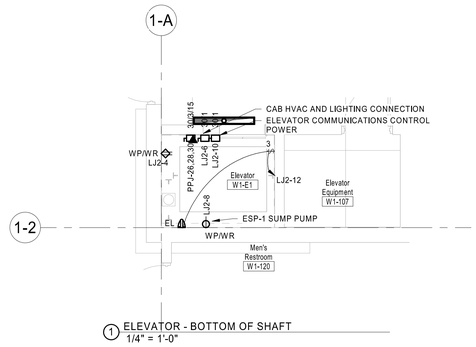
   EXCEPTION: IN LIEU OF RMC ELBOW, CONTRACTOR MAY USE RNC ELBOWS IF A CHANNEL STRUT OR STEEL ANGLE GUARD IS PROVIDED. GUARD SHALL STAND OFF THE WALL INDEPENDENT OF THE CONDUIT.
3. IN AREAS WITH VEHICULAR ACCESS, USE GALVANIZED RMC ELBOWS AND A STEEL GUARD.
4. APPLIES TO ALL STUB-UP LOCATIONS UNLESS NOTED OTHERWISE ON PLANS.

4 CONDUIT STUB-UP AT WALLS
NTS

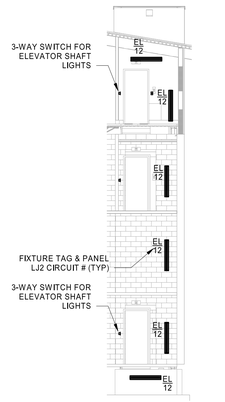


TYPICAL FOR PENETRATIONS OF ABOVE GRADE FLOORS

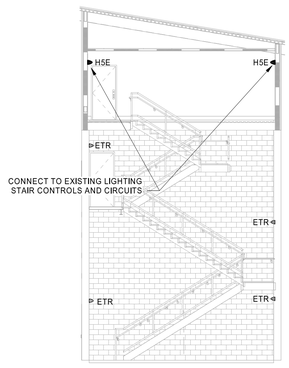
3 CONDUIT PENETRATION OF CONCRETE FLOOR
NTS



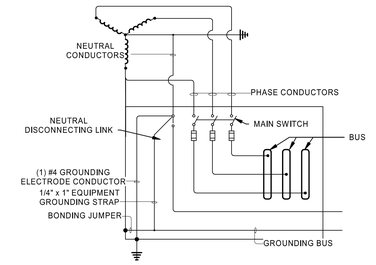
1 ELEVATOR - BOTTOM OF SHAFT
1/4" = 1'-0"



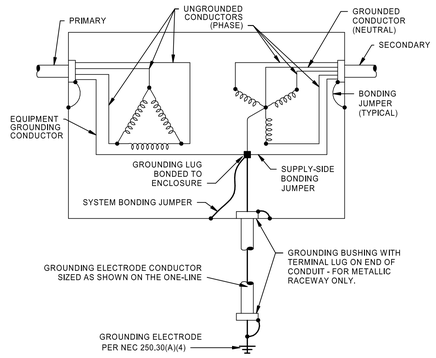
9 ELEVATOR LIGHTING
1/8" = 1'-0"



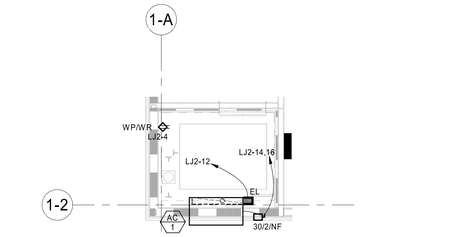
8 STAIRS LIGHTING
1/8" = 1'-0"



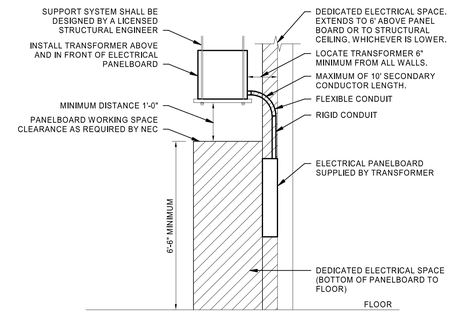
7 SERVICE ENTRANCE GROUNDING DIAGRAM
NTS



6 DRY TYPE TRANSFORMER GROUNDING
NTS



2 ELEVATOR - TOP OF SHAFT
1/4" = 1'-0"



10 SUSPENDED TRANSFORMER MOUNTING DETAIL
NTS

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MO. CORPORATE NO: E-556D
EXPIRES 12/31/2020

STATE OF MISSOURI
CURTIS A. OLDS
NUMBER PE-2010036640
PROFESSIONAL ENGINEER

Sep 25 2020

REVISIONS

Number	DESCRIPTION	DATE

PROJECT NO: 0119-0101
DATE: September 28, 2020

ELECTRICAL DETAILS

W-E500

BID SET

CURTIS A. OLDS

PRINT DATE/TIME: 9/25/2020 1:24:41 PM

PANELBOARD: HC (NEW)

BUS AMPS: 200A
MAIN SIZE/TYPE: 200A M.C.B.
VOLTS/PHASE: 480Y/277 V 3P/4W
SUPPLIED BY: CONCESSIONS ELECTRICAL SERVICE

SCHOOL
SERVICE SQUARE FOOTAGE: 1500

FAULT CURRENT: REFER TO ONE-LINE
AIC RATED: FULLY RATED
AIC RATING: FCA +10% MINIMUM
SERVES: Athletics
MOUNTING: SURFACE
LOCATION: MEP | Custodian W2-108

EQUIPMENT GROUND BUS

LINE-SIDE LUGS: MECHANICAL

CKT NO.	DESCRIPTION	LOAD TYPE	NOTES	WIRE SIZE	BKR AMP	P	PHASE A	PHASE B	PHASE C	P	BKR AMP	WIRE SIZE	NOTES	LOAD TYPE	DESCRIPTION	CKT NO.
1	LTS -CON.101, MEP 108, STOR 109	L		12	20	1	281 2000			1	20	12		H	RH-1	2
3	LTS- W RR 102, MENS RR103	L		12	20	1		432 2000		1	20	12		H	RH-2	4
5	LTS -VEST107, LR105, RR104-105	L		12	20	1			462 5019	1	30	10		H	UH-9	6
7	LTS - EXTERIOR	L Z		12	20	1	480 3000			1	20	12		H	UH-8	8
9	SPARE				20	1		0 3000		1	20	12		H	UH-7	10
11	SPARE				20	1			0 5019	1	30	10		H	UH-4	12
13	SPARE				20	1	0 5019			1	30	10		H	UH-3	14
15	SPARE				20	1		0 3000		1	20	12		H	UH-1	16
17	SPARE				20	1			0 3000	1	20	12		H	UH-2	18
19	SPARE				20	1	0 1668									20
21	SPARE				20	1		0 1668		3	15	12		H	UH-5	22
23	SPARE				20	1			0 1668							24
25	SPARE				20	1	0 1668									26
27	SPARE				20	1		0 1668		3	15	12		H	UH-6	28
29	SPARE				20	1			0 1668							30
31	EQUIPPED SPACE					1	0 8000									32
33	EQUIPPED SPACE					1		0 8000		3	40	8		U	WH-1	34
35	EQUIPPED SPACE					1			0 8000							36
37							5740 465									38
39	TX-LC, PANEL LC	--		O/L	50	3		6411 1680		3	30	O/L		L R	TX-LCN, PANEL LCN	40
41									6199 1680							42
	TOTAL LOAD (VA):						28320 VA	27859 VA	32715 VA							
	TOTAL AMPS:						102 A	101 A	118 A							

LOAD TYPE	CONNECTED LOAD	DEMAND FACTOR	NEC DEMAND
EXISTING LOAD (E)	0 VA	100%	0 VA
COOLING (C)	0 VA	0%	0 VA
HEATING (H)	49066 VA	100%	49066 VA
LIGHTING (L) (PER NEC-220)	4500 VA	125%	5625 VA
RECEPTACLES (R)	6660 VA	100%	6660 VA
MOTORS (M)	3504 VA	100%	3504 VA
SUPPLEMENTAL HEAT (U)	24000 VA	100%	24000 VA
MISC EQUIP (Z)	605 VA	100%	605 VA
REFRIGERATION (F)	0 VA	100%	0 VA
SIGN/DISPLAY (D)	0 VA	125%	0 VA
KITCHEN (K)	2000 VA	100%	2000 VA
LARGEST MOTOR	1200 VA	125%	1500 VA
SHOW WINDOW (W)	0 VA	125%	0 VA
TRACK LIGHTING	0 VA	100%	0 VA

PANELBOARD NOTES

PANELBOARD TOTALS	
TOTAL CONNECTED LOAD	91535 VA
TOTAL NEC LOAD	92960 VA
TOTAL CONNECTED CURRENT	110 A
TOTAL NEC DEMAND CURRENT	112 A

PANELBOARD: LCN (NEW)

BUS AMPS: 100A
MAIN SIZE/TYPE: 50A M.C.B.
VOLTS/PHASE: 208Y/120 V 3P/4W
SUPPLIED BY: HC VIA TX-LCN

FAULT CURRENT: REFER TO ONE-LINE
AIC RATED: FULLY RATED
AIC RATING: FCA +10% MINIMUM
SERVES: Ticket Booth North
MOUNTING: SURFACE
LOCATION: Ticket Booth W4-101

EQUIPMENT GROUND BUS

LINE-SIDE LUGS: MECHANICAL

CKT NO.	DESCRIPTION	LOAD TYPE	NOTES	WIRE SIZE	BKR AMP	P	PHASE A	PHASE B	PHASE C	P	BKR AMP	WIRE SIZE	NOTES	LOAD TYPE	DESCRIPTION	CKT NO.
1	LTS - NORTH TICKET BOOTH	L		12	20	1	105 360			1	20	12		R	RCPTS - TICKETING WINDOW	2
3	UH-11	H		12	20	2		1500 180		1	20	12		R	RCPT - GEN	4
5									1500 180	1	20	12		R	RCPT - EXTERIOR	6
7	SPARE				20	1	0 0			1	20				SPARE	8
9	SPARE				20	1		0 0		1	20				SPARE	10
11	SPARE				20	1			0 0	1	20				SPARE	12
13	SPARE				20	1	0 0			1	20				SPARE	14
15	EQUIPPED SPACE				1			0 0		1					EQUIPPED SPACE	16
17	EQUIPPED SPACE				1				0 0	1					EQUIPPED SPACE	18
19	EQUIPPED SPACE				1		0 0			1					EQUIPPED SPACE	20
21	EQUIPPED SPACE				1			0 0		1					EQUIPPED SPACE	22
23	EQUIPPED SPACE				1				0 0	1					EQUIPPED SPACE	24
	TOTAL LOAD (VA):						465 VA	1680 VA	1680 VA							
	TOTAL AMPS:						4 A	16 A	16 A							

LOAD TYPE	CONNECTED LOAD	DEMAND FACTOR	NEC DEMAND
EXISTING LOAD (E)	0 VA	100%	0 VA
COOLING (C)	0 VA	0%	0 VA
HEATING (H)	3001 VA	100%	3001 VA
LIGHTING (L)	105 VA	125%	131 VA
RECEPTACLES (R)	720 VA	100%	720 VA
MOTORS (M)	0 VA	100%	0 VA
SUPPLEMENTAL HEAT (U)	0 VA	100%	0 VA
MISC EQUIP (Z)	0 VA	100%	0 VA
REFRIGERATION (F)	0 VA	100%	0 VA
SIGN/DISPLAY (D)	0 VA	125%	0 VA
KITCHEN (K)	0 VA	100%	0 VA
LARGEST MOTOR	0 VA	125%	0 VA
SHOW WINDOW (W)	0 VA	125%	0 VA
TRACK LIGHTING	0 VA	100%	0 VA

PANELBOARD NOTES

PANELBOARD TOTALS	
TOTAL CONNECTED LOAD	3826 VA
TOTAL NEC LOAD	3852 VA
TOTAL CONNECTED CURRENT	11 A
TOTAL NEC DEMAND CURRENT	11 A

PANELBOARD: LC (NEW)

BUS AMPS: 100A
MAIN SIZE/TYPE: 100A M.C.B.
VOLTS/PHASE: 208Y/120 V 3P/4W
SUPPLIED BY: HC VIA TX-LC

FAULT CURRENT: REFER TO ONE-LINE
AIC RATED: FULLY RATED
AIC RATING: FCA +10% MINIMUM
SERVES: Concessions
MOUNTING: SURFACE
LOCATION: MEP | Custodian W2-108

EQUIPMENT GROUND BUS

LINE-SIDE LUGS: MECHANICAL

CKT NO.	DESCRIPTION	LOAD TYPE	NOTES	WIRE SIZE	BKR AMP	P	PHASE A	PHASE B	PHASE C	P	BKR AMP	WIRE SIZE	NOTES	LOAD TYPE	DESCRIPTION	CKT NO.
1	RCPTS -EXTERIOR, RR104-105	R		12	20	1	720 180			1	20	12		R	RCPTS - AC, CON 101-1	2
3	RCPTS-RR102,103, MEP108	R		12	20	1		540 180		1	20	12		R	RCPTS - AC, CON 101-2	4
5	RCPTS - STOR 109,EXTERIOR	R		12	20	1			360 180	1	20	12		R	RCPTS - AC, CON 101-3	6
7	RCPTS - LOCKER RM 105	R		12	20	1	720 180			1	20	12		R	RCPTS - AC, CON 101-4	8
9	TF-1,2,3,4	M		12	20	1		480 1000		1	20	12	GF	K	REFRIGERATOR - CON 101	10
11	RP-1	M		12	15	1			48 1200	1	20	12		M	COILING DOOR TICKETING	12
13	EF-1	M		12	20	1	444 180			1	20	12		R	RCPT - CON 101 TICKET AC	14
15	EF-2	M		12	20	1		444 360		1	20	12		R	RCPT - CON 101 TICKET 1	16
17	EF-3	M		12	20	1			444 360	1	20	12		R	RCPT - CON 101 TICKET 2	18
19	EF-4	M		12	20	1	444 360			1	20	12		R	RCPT - CON 101 TICKET 3	20
21	LOUVER CONTROL POWER	Z		12	20	1		200 360		1	20	12		R	RCPT - CON 101 TICKET 4	22
23	DDC CONTROL POWER	Z		12	20	1			200 1200	1	20	12		M	COILING DOOR TICKETING	24
25	PWR - PLUMBING FIXTURES	Z		12	20	1	200 180			1	20	12		R	RCPT - CON 101 TICKET AC	26
27	SPARE				20	1		0 1000		1	20	12	GF	K	REFRIGERATOR - CON 101	28
29	SPARE				20	1			0 360	1	20	12		R	RCPT - DATA RACK IN STORAGE RM	30
31	EQUIPPED SPACE				1		0 0			1	20				SPARE	32
33	EQUIPPED SPACE				1			0 0		1	20				SPARE	34
35	EQUIPPED SPACE				1				0 0	1	20				SPARE	36
37							2132 0			1					EQUIPPED SPACE	38
39	PANEL LCS	L R		OL	50	3		1847 0		1					EQUIPPED SPACE	40
41									1847 0	1					EQUIPPED SPACE	42
	TOTAL LOAD (VA):						5740 VA	6411 VA	6199 VA							
	TOTAL AMPS:						48 A	54 A	52 A							

LOAD TYPE	CONNECTED LOAD	DEMAND FACTOR	NEC DEMAND
EXISTING LOAD (E)	0 VA	100%	0 VA
COOLING (C)	0 VA	0%	0 VA
HEATING (H)	5000 VA	100%	5000 VA
LIGHTING (L)	105 VA	125%	131 VA
RECEPTACLES (R)	5940 VA	100%	5940 VA
MOTORS (M)	3504 VA	100%	3504 VA
SUPPLEMENTAL HEAT (U)	0 VA	100%	0 VA
MISC EQUIP (Z)	600 VA	100%	600 VA
REFRIGERATION (F)	0 VA	100%	0 VA
SIGN/DISPLAY (D)	0 VA	125%	0 VA
KITCHEN (K)	2000 VA	100%	2000 VA
LARGEST MOTOR	1200 VA	125%	1500 VA
SHOW WINDOW (W)	0 VA	125%	0 VA
TRACK LIGHTING	0 VA	100%	0 VA

PANELBOARD NOTES

GF - GFCI TYPE CIRCUIT BREAKER

PANELBOARD TOTALS	
TOTAL CONNECTED LOAD	18349 VA
TOTAL NEC LOAD	18675 VA
TOTAL CONNECTED CURRENT	51 A
TOTAL NEC DEMAND CURRENT	52 A

PANELBOARD: PPJ (EXISTING)

BUS AMPS: 150A
MAIN SIZE/TYPE: MLO
VOLTS/PHASE: 480Y/277 V 3P/4W
SUPPLIED BY: MDPJ

FAULT CURRENT:
AIC RATED: FULLY RATED
AIC RATING: FCA +10% MINIMUM
SERVES: PRESS BOX
MOUNTING: SURFACE
LOCATION: Electrical W1-204

EQUIPMENT GROUND BUS

LINE-SIDE LUGS: MECHANICAL

CKT NO.	DESCRIPTION	LOAD TYPE	NOTES	WIRE SIZE	BKR AMP	P	PHASE A	PHASE B	PHASE C	P	BKR AMP	WIRE SIZE	NOTES	LOAD TYPE	DESCRIPTION	CKT NO.
1	EXISTING LOAD				20	1	1000 3000			1	20				EUH-7 ETR	2
3	EUH-5 ETR				20	1		3000 3000		1	20				EUH-8 ETR	4
5	EUH-6 ETR				20	1			3000 3000	1	20				EUH-9 ETR	6
7	EUH-10 ETR				20	1	3000 3000			1	20				EXISTING LOAD	8
9	EUH-11 ETR				20	1		3000 3000		1	20				LTS - FLAGPOLE ETR	10
11	EUH-12 ETR				20	1			3000 3000	1	20				EUH-4 ETR	12
13	EXISTING LOAD				20	1	1000 1000			1	20				EXISTING LOAD	14
15								15000 1000		1	20				EXISTING LOAD	16
17	EXISTING TX-TJ AND PANEL LTJ			O/L	70	3			15000 0	1					EQUIPPED SPACE	18
19							15000 0			1					EQUIPPED SPACE	20
21	UH-12	H		12	20	1		3000 0		1					EQUIPPED SPACE	22
23	LTS - LEVEL 3 VIDEO DECK	L Z		12	20	1			951 0	1					EQUIPPED SPACE	24
25							5246 3326									26
27	NEW TRANSFORMER TX-LJ2 & PANEL LJ2	--		O/L	50	3		2290 3326		3	30	O/L		M	NEW ELEVATOR	28
29									3920 3326							30
	TOTAL LOAD (VA):						35572 VA	36616 VA	35196 VA							
	TOTAL AMPS:						129 A	132 A	127 A							

LOAD TYPE	CONNECTED LOAD	DEMAND FACTOR	NEC DEMAND
EXISTING LOAD (E)	82000 VA	100%	82000 VA
COOLING (C)	1061 VA	0%	0 VA
HEATING (H)	6000 VA	100%	6000 VA
LIGHTING (L)	2136 VA	125%	2670 VA
RECEPTACLES (R)	3420 VA	100%	3420 VA
MOTORS (M)	1176 VA	100%	1176 VA
SUPPLEMENTAL HEAT (U)	0 VA	100%	0 VA
MISC EQUIP (Z)	1615 VA	100%	1615 VA
REFRIGERATION (F)	0 VA	100%	0 VA
SIGN/DISPLAY (D)	0 VA	125%	0 VA
KITCHEN (K)	0 VA	100%	0 VA
LARGEST MOTOR	9977 VA	125%	12471 VA
SHOW WINDOW (W)	0 VA	125%	0 VA
TRACK LIGHTING	0 VA	100%	0 VA

PANELBOARD NOTES

PANELBOARD TOTALS	
TOTAL CONNECTED LOAD	107385 VA
TOTAL NEC LOAD	109352 VA
TOTAL CONNECTED CURRENT	129 A
TOTAL NEC DEMAND CURRENT	132 A

PANELBOARD: LCS (NEW)

BUS AMPS: 100A
MAIN SIZE/TYPE: 100A M.C.B.
VOLTS/PHASE: 208Y/120 V 3P/4W
SUPPLIED BY: LC

FAULT CURRENT: REFER TO ONE-LINE
AIC RATED: FULLY RATED
AIC RATING: FCA +10% MINIMUM
SERVES: TICKET BOOTH SOUTH
MOUNTING: SURFACE
LOCATION: Ticket Booth W5-101

EQUIPMENT GROUND BUS

LINE-SIDE LUGS: MECHANICAL

CKT NO.	DESCRIPTION	LOAD TYPE	NOTES	WIRE SIZE	BKR AMP	P	PHASE A	PHASE B	PHASE C	P	BKR AMP	WIRE SIZE	NOTES	LOAD TYPE	DESCRIPTION	CKT NO.
1	LTS - TICKET BOOTH SOUTH	L		12	20	1	105 360			1	20			R	RCPTS - TICKETING	2
3								1667 180		1	20			R	RCPTS - EXTERIOR	4
5	UH-10	H		12	20	3			1667 180	1	20			R	RCPTS - GEN INTERIOR	6
7							1667 0			1	20				SPARE	8
9	SPARE				20	1		0 0		1	20				SPARE	10
11	SPARE				20	1			0 0	1	20				SPARE	12
13	SPARE				20	1	0 0			1	20				SPARE	14
15	SPARE				20	1		0 0		1	20				SPARE	16
17	SPARE				20	1			0 0	1					EQUIPPED SPACE	18
19	EQUIPPED SPACE				1		0 0			1					EQUIPPED SPACE	20
21	EQUIPPED SPACE				1			0 0		1					EQUIPPED SPACE	22
23	EQUIPPED SPACE				1				0 0	1					EQUIPPED SPACE	24
	TOTAL LOAD (VA):						2132 VA	1847 VA	1847 VA							
	TOTAL AMPS:						18 A	15 A	15 A							

LOAD TYPE	CONNECTED LOAD	DEMAND FACTOR	NEC DEMAND
EXISTING LOAD (E)	0 VA	100%	0 VA
COOLING (C)	0 VA	0%	0 VA
HEATING (H)	5000 VA	100%	5000 VA
LIGHTING (L)	105 VA	125%	131 VA
RECEPTACLES (R)	720 VA	100%	720 VA
MOTORS (M)	0 VA	100%	0 VA
SUPPLEMENTAL HEAT (U)	0 VA	100%	0 VA
MISC EQUIP (Z)	0 VA	100%	0 VA
REFRIGERATION (F)	0 VA	125%	0 VA
SIGN/DISPLAY (D)	0 VA	0%	0 VA
KITCHEN (K)	0 VA	125%	0 VA
LARGEST MOTOR	0 VA	125%	0 VA
SHOW WINDOW (W)	0 VA	125%	0 VA
TRACK LIGHTING	0 VA	100%	0 VA

PANELBOARD NOTES

PANELBOARD TOTALS	
TOTAL CONNECTED LOAD	5825 VA
TOTAL NEC LOAD	5851 VA
TOTAL CONNECTED CURRENT	16 A
TOTAL NEC DEMAND CURRENT	16 A

PANELBOARD: LJ2 (NEW)

BUS AMPS: 100A
MAIN SIZE/TYPE: 100A M.C.B.
VOLTS/PHASE: 208Y/120 V 3P/4W
SUPPLIED BY: PPJ VIA TX-LJ2

FAULT CURRENT: REFER TO ONE-LINE
AIC RATED: FULLY RATED
AIC RATING: FCA +10% MINIMUM
SERVES: PRESSBOX
MOUNTING: SURFACE
LOCATION: Storage/Data W1-302

EQUIPMENT GROUND BUS

LINE-SIDE LUGS: MECHANICAL

CKT NO.	DESCRIPTION	LOAD TYPE	NOTES	WIRE SIZE	BKR AMP	P	PHASE A	PHASE B	PHASE C	P	BKR AMP	WIRE SIZE	NOTES	LOAD TYPE	DESCRIPTION	CKT NO.
1	RCPTS - VIDEO DECK 1	R		12	20	1	720 600			1	20	12		Z	HUDL CAM	2
3	RCPTS - VIDEO DECK 2	R		12	20	1		540 360		1	20	12		R	RCPTS - ELEVATOR SHAFT	4
5	RCPTS - VIDEO DECK 3	R		12	20	1			540 500	1	20	12	LO	Z	ELEVATOR CAB LTS/EF	6
7	RCPTS - VIDEO DECK 4	R		12	20	1	540 1176			1	20	12		M	ESP-1	8
9	RCPTS - VIDEO DECK SISTOR	R		12	20	1		360 500		1	20	12		Z	ELEVATOR COMMUNICATIONS POWER	10
11	RCPTS - IT STOR/DATA 1	R		12	20	1			180 1200	1	20	12	LO	L	LTS - ELEVATOR SHAFT	12
13	RCPTS - IT STOR/DATA 2	R		12	20	1	180 530			2	15	12		C	AC-1	14
15	SPARE				20	1		0 530								16
17	SPARE				20	1			0 1500	2	20	12		H	UH-13	18
19	SPARE				20	1	0 1500									20
21	SPARE				20	1		0 0		1	20				SPARE	22
23	SPARE				20	1			0 0	1	20				SPARE	24
25	SPARE				20	1	0 0			1	20				SPARE	26
27	SPARE				20	1		0 0		1	20				SPARE	28
29	SPARE				20	1			0 0	1	20				SPARE	30
31	EQUIPPED SPACE				1		0 0			1					EQUIPPED SPACE	32
33	EQUIPPED SPACE				1			0 0		1					EQUIPPED SPACE	34
35	EQUIPPED SPACE				1				0 0	1					EQUIPPED SPACE	36
37	EQUIPPED SPACE				1		0 0			1					EQUIPPED SPACE	38
39	EQUIPPED SPACE				1			0 0		1					EQUIPPED SPACE	40
41	EQUIPPED SPACE				1				0 0	1					EQUIPPED SPACE	42
	TOTAL LOAD (VA):						5246 VA	2290 VA	3920 VA							
	TOTAL AMPS:						46 A	19 A	35 A							

LOAD TYPE	CONNECTED LOAD	DEMAND FACTOR	NEC DEMAND
EXISTING LOAD (E)	0 VA	100%	0 VA
COOLING (C)	1061 VA	0%	0 VA
HEATING (H)	3000 VA	100%	3000 VA
LIGHTING (L)	1200 VA	125%	1500 VA
RECEPTACLES (R)	3420 VA	100%	3420 VA
MOTORS (M)	0 VA	100%	0 VA
SUPPLEMENTAL HEAT (U)	0 VA	100%	0 VA
MISC EQUIP (Z)	1600 VA	100%	1600 VA
REFRIGERATION (F)	0 VA	100%	0 VA
SIGN/DISPLAY (D)	0 VA	125%	0 VA
KITCHEN (K)	0 VA	100%	0 VA
LARGEST MOTOR	1176 VA	125%	1470 VA
SHOW WINDOW (W)	0 VA	125%	0 VA
TRACK LIGHTING	0 VA	100%	0 VA

PANELBOARD NOTES

PANELBOARD TOTALS	
TOTAL CONNECTED LOAD	11457 VA
TOTAL NEC LOAD	10990 VA
TOTAL CONNECTED CURRENT	32 A
TOTAL NEC DEMAND CURRENT	31 A

PANELBOARD LEGEND

ABBREVIATIONS V1.00

AF	ARC FAULT CIRCUIT INTERRUPTER.
C#	CIRCUIT VIA LIGHTING CONTACTOR #.
CL	CIRCUIT VIA CURRENT LIMITING DEVICE.
D	DISCONNECT CIRCUITRY FOR REMOVED LOAD, UPDATE CIRCUIT DIRECTORY TO SPARE AND TURN OFF.
EM	EMERGENCY LIGHTING HANDLE-ON CLAMP.
EX	EXISTING.
F	FUTURE LOAD; NOTE AS SPARE AND TURN OFF.
FA	RED/HANDLE-ON CLAMP.
GF	GROUND-FAULT CIRCUIT INTERRUPTER TYPE CIRCUIT BREAKER (5 mA).
GFEP	GROUND FAULT EQUIPMENT PROTECTION BREAKER (30 mA).
HT	PROVIDE HANDLE-TIE FOR MULTI-WIRE BRANCH CIRCUIT PER CODE.
IG	ISOLATED GROUND CIRCUIT.
L#	LIGHTING CONTROL SCHEME NUMBER.
LCK	HANDLE PADLOCKABLE-OFF DEVICE.
LO	HANDLE-ON CLAMP.
N	PROVIDE NEW CIRCUIT BREAKER.
OL	REFER TO ELECTRICAL ONE-LINE/RISER DIAGRAM.
PS	POWER-SWITCHING CIRCUIT BREAKER.
PSE	EMERGENCY POWER-SWITCHING CIRCUIT BREAKER.
R	REUSE EXISTING CIRCUIT BREAKER FOR NEW/REVISED LOAD.
RP	CIRCUIT VIA RELAY PANEL.
ST	SHUNT TRIP CIRCUIT BREAKER.
V	VERIFY EXISTING LOAD AND UPDATE DIRECTORY, IF UNUSED, NOTE AS SPARE AND TURN OFF.
VD	BRANCH CIRCUITRY HAS BEEN UPSIZED TO REDUCE VOLTAGE DROP. ADJUST GROUND WIRE SIZE PER CODE. PROVIDE LUG ADAPTORS IF REQUIRED.
Z	CORRECT/REPAIR EXISTING HAZARD TO MAKE CODE COMPLIANT INSTALLATION.

NOT ALL ABBREVIATIONS ARE USED.

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EXPIRES 12/31/2020

STATE OF MISSOURI
CURTIS A. OLDS
NUMBER PE-2010036440
PROFESSIONAL ENGINEER

Sep 25 2020

REVISIONS

Number	DESCRIPTION	DATE

PROJECT NO: 0119-0101
DATE: September 28, 2020

ELECTRICAL SCHEDULES

W-E600

BID SET

CURTIS A. OLDS

PRINT DATE/TIME: 9/25/2020 1:24:49 PM

LIGHTING CONTROL DEVICE SCHEDULE

STAND-ALONE LOW-VOLTAGE LIGHTING CONTROL SYSTEMS

STAND-ALONE LOW-VOLTAGE OCCUPANCY SENSORS

SYMBOL TAG	MANUFACTURER MODEL/SERIES	ALTERNATE MANUFACTURER	DEVICE DESCRIPTION	COVERAGE (W X D)	VOLTAGE	NOTES
	LEGRAND DT-300	ACUITY, COOPER HUBBELL, LEVITON	CEILING MOUNT DUAL TECHNOLOGY OCCUPANCY SENSOR. 360 DEGREE COVERAGE, LOW VOLTAGE, ISOLATED RELAY.	PIR MAJOR 36' Ø PIR MINOR 25' Ø ULT 36' x 36'	24	
	LEGRAND CB-100	ACUITY, COOPER HUBBELL	CEILING/WALL MOUNT PASSIVE INFRARED OCCUPANCY SENSOR. 90 DEGREE COVERAGE, LOW VOLTAGE, GASKETED AND WATERTIGHT. RATED FOR -40 DEGREES FAHRENHEIT.	MAJOR 50' Ø MINOR 25' Ø	24	

STAND-ALONE LOW-VOLTAGE PHOTOELECTRIC SWITCHES

SYMBOL TAG	MANUFACTURER MODEL/SERIES	ALTERNATE MANUFACTURER	DEVICE DESCRIPTION	VOLTAGE	NOTES
PC	LEGRAND EM-24D2	ACUITY HUBBELL LEVITON	EXTERIOR LOW-VOLTAGE PHOTOELECTRIC SWITCH. FACE SENSOR NORTH AND ORIENT VERTICALLY, 0-15 FC.	24	

STAND-ALONE LOW-VOLTAGE POWER PACKS

SYMBOL TAG	MANUFACTURER MODEL/SERIES	ALTERNATE MANUFACTURER	DEVICE DESCRIPTION	VOLTAGE	NOTES
BZ	LEGRAND BZ-250	ACUITY, COOPER HUBBELL, LEVITON	POWER PACK FOR LOW VOLTAGE OCCUPANCY SENSORS. 20A LOAD, (1) RELAY, MANUAL- AND AUTO-ON MODES, HOLD-ON AND -OFF INPUTS, LOAD: 16A AT 120V OR 277V, OUTPUT: 225mA AT 24V, PLENUM RATED.	120/ 277	
B1	LEGRAND C SERIES	ACUITY, COOPER HUBBELL, LEVITON	POWER PACK FOR LOW VOLTAGE OCCUPANCY SENSORS, 20A LOAD, (2) RELAYS, MANUAL- AND AUTO-ON MODES, HOLD-ON AND -OFF INPUTS, LOAD: 16A AT 120V OR 277V, OUTPUT: 225mA AT 24V, PLENUM RATED. CONTRACTOR TO PROVIDE CORRECT VOLTAGE FOR APPLICATION.	120/ 277	
D2C	LEGRAND LMRC-212	ACUITY, COOPER HUBBELL, LEVITON	ROOM CONTROLLER FOR LOW VOLTAGE OCCUPANCY SENSORS, 20A LOAD, (2) RELAY, MANUAL AND AUTO-ON MODES, HOLD-ON AND -OFF INPUTS, LOAD: 16A AT 120V OR 277V, OUTPUT: 225mA AT 24V, PLENUM RATED. 0-10V DIMMING CONTROL.	120/ 277	

STAND-ALONE LOW-VOLTAGE SWITCHES

SYMBOL TAG	MANUFACTURER MODEL/SERIES	ALTERNATE MANUFACTURER	DEVICE DESCRIPTION	VOLTAGE	NOTES
$LV	LEGRAND DCC2	ACUITY, COOPER HUBBELL, LEVITON	MOMENTARY 1-BUTTON DECORATOR SWITCH FOR MANUAL ON/OFF CONTROL OF STAND-ALONE LOW-VOLTAGE OCCUPANCY SENSORS. INTEGRAL LED ILLUMINATES WHEN LOAD IS ON.	24	
$LVD	LEGRAND LMSW-104	ACUITY, COOPER HUBBELL, LEVITON	4-BUTTON LOW VOLTAGE SWITCH FOR ON/OFF AND DIMMING CONTROL OF 2 RELAYS.	24	

AUXILIARY NETWORK LIGHTING EQUIPMENT

SYMBOL TAG	MANUFACTURER MODEL/SERIES	ALTERNATE MANUFACTURER	DEVICE DESCRIPTION	VOLTAGE	NOTES
ZC	LEGRAND LMCZ-301	ACUITY, CRESTRON ETC, HUBBELL	ZONE CONTROLLER, ASTRONOMIC TIMECLOCK, 99 LIGHTING GROUPS. BACNET MS/TP COMPATIBLE, (2) RJ45 PORTS, SURFACE MOUNTED, PLENUM RATED, PROVIDE DLM 24V POWER BOOSTERS AS REQUIRED PER SYSTEM DESIGN.	120/ 277	

GENERAL NOTES:

A. OCCUPANCY SENSOR LAYOUT DESIGNED FROM BASIS-OF-DESIGN COVERAGE PATTERNS. IF SUBMITTING ALTERNATE PER 'EQUIVALENT MANUFACTURER' COLUMN. ADJUST SENSOR QUANTITIES AND LOCATIONS PER MANUFACTURER-SPECIFIC SPACING CRITERIA.
B. PROVIDE SHOP DRAWINGS FOR ENGINEER AND ARCHITECT REVIEW THAT INCLUDE PRODUCT CUTSHEETS AND PROJECT-SPECIFIC LAYOUTS. LAYOUTS MUST INCLUDE SENSOR LOCATIONS, HEIGHTS, ORIENTATION, AND COVERAGE AREAS, SHOW COORDINATION WITH ALL OTHER CEILING DEVICES INCLUDING BUT NOT LIMITED TO HVAC SUPPLY AND RETURN GRILLES, SPRINKLERS, LIGHT FIXTURES, AND OTHER OWNER-PROVIDED CEILING MOUNTED DEVICES SUCH AS SPEAKERS, SECURITY CAMERAS, PROJECTORS, ETC, (SENSORS MAY BE ADVERSELY AFFECTED IF LOCATED TOO CLOSE TO OTHER CEILING MOUNTED DEVICES), ALSO PROVIDE SCHEMATICS AND SCHEDULES WHEN APPLICABLE.
C. LIGHTING CONTROLS PRICING SHALL BE COMPLETELY SEPARATE OF ANY LIGHT FIXTURE PRICING.
D. VERIFY COLOR(S) FOR ALL WALL AND CEILING MOUNTED DEVICES WITH THE ARCHITECT.
E. ALL WALL SWITCH AND CEILING SENSORS SHALL HAVE AN ADJUSTABLE TIME DELAY RANGE OF 0-30 MIN. UNO. CONFIRM SENSOR SETTINGS WITH SEQUENCE OF OPERATIONS AND OWNER PRIOR TO SYSTEM COMMISSIONING.
F. PROVIDE COPIES OF OPERATION AND MAINTENANCE INSTRUCTIONS FOR ALL DEVICES TO OWNER.
G. PROVIDE A NEUTRAL CONDUCTOR TO ALL WALL SWITCH LOCATIONS PER NEC REQUIREMENTS.
H. DO NOT SHARE NEUTRAL CONDUCTOR ON LOAD SIDE OF DIMMERS.

VERSION 4.03

LIGHT FIXTURE SCHEDULE

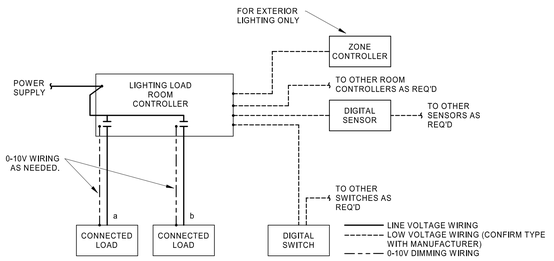
TYPE	MANUFACTURER	MODEL	LAMPING / LIGHT SOURCE	DIMMING TYPE	VOLTAGE	INPUT WATTS	INPUT VA	DESCRIPTION	NOTES
A4	HE WILLIAMS	50-"CEILING"-2-4-L33-80-35-AF12125-DIM-UNV	LED 3500K 80CRI	0-10V	UNV	25	28	2'x4' RECESSED LED TROFFER. 3300 LUMEN. 3500K.	
A4E	HE WILLIAMS	50-"CEILING"-2-4-L33-80-35-AF12125-EM /10W-DIM-UNV	LED 3500K 80CRI	0-10V	UNV	25	28	SAME AS A4 WITH INTEGRAL 10W BATTERY BACK UP TO OPERATE FOR A MINIMUM OF 90 MINUTES.	
A5	HE WILLIAMS	50-G-2-4-L33-80-35-AF12125-DIM-UNV	LED 3500K 80CRI	0-10V	UNV	48	54	2'x4' RECESSED LED TROFFER. 5900 LUMEN. 3500K.	
A5E	HE WILLIAMS	50-G-2-4-L33-80-35-AF12125-EM/10W-DIM-UNV	LED 3500K 80CRI	0-10V	UNV	48	54	SAME AS A3 WITH INTEGRAL 10W BATTERY BACK UP. TO OPERATE FOR A MINIMUM OF 90 MINUTES.	
D1	COOPER LIGHTING	LDS4B-20-D010-EU4B-102035-4LBCS-1-FINISH	LED 3500K 80CRI	0-10V	UNV	21	23	4" RECESSED DOWNLIGHT. 2000 LUMEN OUTPUT. WET LOCATION LISTED.	
D1E	COOPER LIGHTING	LDS4B-20-D010-EU4B-102035-4LBCS-1-FINISH- EM DRIVER: ASSURANCE EM LIGHTING L16-C	LED 3500K 80CRI	0-10V	UNV	21	23	SAME AS D1 WITH INTEGRAL 7W BATTERY BACK UP. TO OPERATE A MINIMUM OF 90 MINUTES.	
DW1	COOPER LIGHTING	LSR2B-15-WFL55-80-35-D010-CANOPY	LED 3500K 80CRI	0-10V	UNV	26	29	4.5" SURFACE MOUNTED WET LOCATION LISTED DOWNLIGHT. 1500 LUMEN. 3500K, 54° BEAM.	
DW1E	COOPER LIGHTING	LSR2B-15-WFL55-80-35-D010-CANOPY EM DRIVER: ASSURANCE EM LIGHTING L16-C	LED 3500K 80CRI	0-10V	UNV	26	29	SAME AS DW1 WITH REMOTE EMERGENCY DRIVER TO OPERATE A MINIMUM OF 90 MINUTES	
EL	HE WILLIAMS	96-4-L62-80-35-HIAFR-EM/10W-WET/1-D RV-UNV	LED 4000K 80CRI	0-10V		45	50	4' LINEAR. WET LOCATION LISTED. 6200 LUMEN. 4000K	
F1E	HE WILLIAMS	75R SERIES	LED 3500K 80CRI	0-10V	UNV	32	36	SAME AS H4 WITH INTEGRAL OCCUPANCY SENSOR AND 10W BATTERY BACK UP TO OPERATE A MINIMUM OF 90 MINUTES.	
G1	LUMENWERX	VIAWETASYS-PYC-HLO-LED-80-500-35-6 -UNV-D1-1-GSM-TF-"COLOR"	LED 3500K 80CRI	0-10V	UNV	30	33	4' VANDAL RESISTANT VAPORTITE LED. 5000 LUMEN. 3500K. GENERAL DISTRIBUTION.	
H4	HE WILLIAMS	75L-4-L50-8-35-AF12125-DIM-UNV	LED 3500K 80CRI	0-10V	UNV	32	36	4' LINEAR SUSPENDED/WALL MOUNTED FIXTURE. 5000 LUMEN. 3500K.	
H4E	HE WILLIAMS	75L-4-L50-8-35-AF12125-EM/10WLP-DIM-UNV	LED 3500K 80CRI	0-10V	UNV	32	36	SAME AS H4 WITH INTEGRAL 10 W BATTERY BACK UP TO OPERATE A MINIMUM OF 90 MINUTES.	
H5E	HE WILLIAMS	75L-4-L50-8-35-AF12125-EM/10WLP-DIM-UNV- OCCWS-FSP-211-L2-120/277	LED 3500K 80CRI	0-10V	UNV	0	0	SAME AS H4E WITH INTEGRAL OCCUPANCY SENSOR AND BATTERY BACK UP TO OPERATE A MINIMUM OF 90 MINUTES.	
L1	LUMINII	VWP-4-L60-7-30-TFT-FINISH-SDGL-DIM-UNV (1) OUTPUT DRIVER: PS010V-96-24-LIN (3) OUTPUT DRIVER: PS010V-3X96-24-LIN	LED 3500K 80CRI	0-10V	UNV	9	10	WET LOCATION RATED 24V LED TAPE LIGHT WITH REMOTE DAMP LOCATION RATED 96WATT, 277 - 24V LED DRIVER, NARROW DISTRIBUTION, 3500K, 706 LUMEN/FT, 9 W/FT. PROVIDE CHANNEL AND ADDITIONAL WET LOCATION RATED FITTINGS FOR A FULLY FUNCTIONING TAPE LIGHTING SYSTEM.	
W1	ARCHITECTURAL AREA LIGHTING	UCS-OPTIONS-LED 3500K-FINISH-WALL MOUNT	LED 3500K 80CRI	0-10V	UNV	62	68	WET LOCATION GOOSENECK WALL MOUNT FIXTURE, COORDINATE MOUNTING HEIGHT AND LOCATION WITH ARCHITECT.	
X	HE WILLIAMS	EXIT	LED	-	UNV	5	5	UNIVERSAL MOUNT EXIT SIGN	

LIGHT FIXTURE SCHEDULE GENERAL NOTES:

1. ALL LIGHT FIXTURES AND RELATED COMPONENTS SHALL BE PROVIDED BY THE CONTRACTOR, UNLESS NOTED OTHERWISE.
2. ALL LIGHT FIXTURES AND RELATED COMPONENTS SHALL BE PROVIDED BY THE CONTRACTOR AS PART OF THE BASE BID, UNLESS NOTED OTHERWISE.
3. THE PARTY SUPPLYING THE LIGHT FIXTURES IS RESPONSIBLE FOR SUPPLYING THE PROPER QUANTITY OF LIGHT FIXTURES.

LIGHT FIXTURE SCHEDULE SUPPLEMENTAL SPECIFICATIONS:

1. ANY PROPRIETARY, SOLE-SOURCED LIGHT FIXTURE LISTED IN THE LIGHT FIXTURE SCHEDULE SHALL BE UNIT PRICED ONLY. NO PACKAGING OR LOT PRICING OF THESE LIGHT FIXTURES SHALL BE ALLOWED. UNIT PRICES SHALL BE CLEARLY IDENTIFIED ON THE BID FORM.
2. PACKAGING OF LIGHT FIXTURES WILL NOT BE CONSIDERED OR APPROVED. REPRESENTATIVE AGENTS SHALL BE ALLOWED TO OFFER MINI-LOT PRICING (MLP) FOR LIGHT FIXTURES AS ALLOWED IN ELECTRICAL SPECIFICATIONS.
3. LIGHTING CONTROLS PRICING, INCLUDING BUT NOT LIMITED TO THOSE REFERENCED IN ELECTRICAL SPECIFICATIONS, SHALL BE COMPLETELY SEPARATE OF ANY LIGHT FIXTURE PRICING. ANY LIGHTING CONTROLS PRICING THAT IS SUBMITTED WITH LIGHT FIXTURE PRICING (UNIT OR MINI-LOT) WILL BE IMMEDIATELY REJECTED IN ITS ENTIRETY.
4. CATALOG NUMBERS SHALL NOT BE CONSIDERED COMPLETE AND MATERIAL SHALL NOT BE ORDERED BY MANUFACTURER AND CATALOG NUMBERS ONLY. FIRST READ THE COMPLETE DESCRIPTION, NOTES AND SPECIFICATIONS IN CONJUNCTION WITH THE CATALOG NUMBER TO DETERMINE THE MATERIAL AND ACCESSORIES TO BE ORDERED. THE MANUFACTURERS LISTED ARE THE BASIS FOR THE DESIGN.
5. FOR SUBSTITUTIONS: PROVIDE PHOTOMETRIC CALCULATIONS AND OTHER NECESSARY INFORMATION FOR ENGINEER REVIEW. REFER TO SPECIFICATIONS FOR MORE INFORMATION.
6. COORDINATE LIGHT FIXTURE MOUNTING HARDWARE AND TRIMS NEEDED TO SUIT CEILING CONDITIONS. LIGHT FIXTURES NEAR OR IN CONTACT WITH INSULATION SHALL COMPLY WITH CODE. MAINTAIN 3" MINIMUM WORKING CLEARANCE BETWEEN NON-IC RATED LIGHT FIXTURE HOUSINGS AND INSULATION ON ALL ADJACENT DUCTWORK, PIPING, WALLS, AND CEILINGS.
7. STRIP LIGHT FIXTURES SUBJECT TO DAMAGE, INCLUDING THOSE MOUNTED ON EQUIPMENT MEZZANINES, STORAGE, RECEIVING AND STOCKROOM AREAS, SHALL BE PROVIDED WITH WIRE GUARDS, PROTECT-A-LAMP COVERS OR EQUIVALENT SHIELDED OR SHATTERPROOF LAMPS/LIGHT SOURCES. COORDINATE REQUIREMENTS AND AFFECTED LIGHT FIXTURES WITH OWNER.



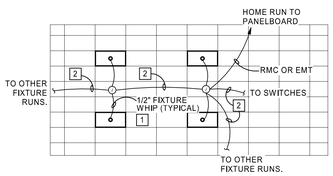
NOTES:

1. REFER TO LIGHTING CONTROL DEVICE SCHEDULE FOR DEVICE AND EQUIPMENT SPECIFICATIONS.
2. QUANTITY OF RELAYS SHOWN IS GENERIC. REFER TO PLANS, LIGHTING CONTROL DEVICE SCHEDULE, AND SHOP DRAWINGS FOR FINAL QUANTITY PER ROOM CONTROLLER.
3. DETAIL IS DIAGRAMMATIC AND IS BASED ON LEGRAND. THIS REPRESENTS THE GENERAL SCOPE OF WORK AND LOCATION OF DEVICES IN RELATION TO EACH OTHER ALONG THE POWER CIRCUIT. DIAGRAMS MAY BE DIFFERENT FOR ALLOWED EQUIVALENT MANUFACTURERS. ELECTRICAL CONTRACTOR SHALL COORDINATE FULL SYSTEM REQUIREMENTS WITH SELECTED MANUFACTURER. PROVIDE ALL PARTS AND PIECES REQUIRED FOR A FULLY FUNCTIONAL SYSTEM. REFER TO FINAL APPROVED MANUFACTURER'S INSTALLATION INSTRUCTIONS AND WIRING DIAGRAMS FOR INSTALLATION.
4. CIRCUITING SHOWN ON THE PLAN CORRESPONDS TO THE LIGHTING CONTROL INTENT. IF CIRCUITING IS CHANGED IN THE FIELD, ENSURE THAT SYSTEM PROGRAMMING WITH REVISED CIRCUITING MEETS THE ORIGINAL LIGHTING CONTROL INTENT. UPDATE LIGHTING CONTROL PANEL SCHEDULES IN RECORD DRAWINGS.
5. PROVIDE SYSTEM COMMISSIONING AS REQUIRED PER ENERGY CODE.

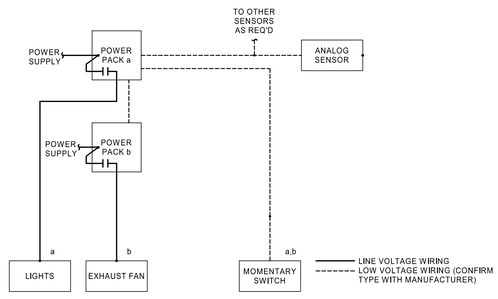
5 ROOM CONTROLLER DETAIL - ON/OFF OR ON/OFF/0-10V DIMMING CONTROL
NTS

ELECTRICAL NOTES:

1. PROVIDE SUFFICIENT LENGTH TO MOVE CENTER OF LUMINAIRE IN A 5'-0" RADIUS OF THE LOCATION SHOWN ON THE PLANS.
2. RMC OR EMT (UNLESS TYPE MC CABLE IS ALLOWED BY SPECIFICATIONS. IF MORE THAN 4 CURRENT CARRYING CONDUCTORS INCLUDING NEUTRALS, MC CABLE IS NOT ALLOWED).



4 LIGHTING STANDARD LUMINAIRE WIRING
NTS



NOTES:

1. REFER TO LIGHTING CONTROL DEVICE SCHEDULE FOR DEVICE AND EQUIPMENT SPECIFICATIONS.
2. PROVIDE QUANTITY OF POWER PACKS AS REQUIRED BY MANUFACTURER TO SUPPORT QUANTITY OF SENSORS INDICATED ON PLANS.
3. DETAIL IS DIAGRAMMATIC AND IS BASED ON WATTSTOPPER. THIS REPRESENTS THE GENERAL SCOPE OF WORK AND LOCATION OF DEVICES IN RELATION TO EACH OTHER ALONG THE POWER CIRCUIT. DIAGRAMS MAY BE DIFFERENT FOR ALLOWED EQUIVALENT MANUFACTURERS. ELECTRICAL CONTRACTOR SHALL COORDINATE FULL SYSTEM REQUIREMENTS WITH SELECTED MANUFACTURER. PROVIDE ALL PARTS AND PIECES REQUIRED FOR A FULLY FUNCTIONAL SYSTEM. REFER TO FINAL APPROVED MANUFACTURER'S INSTALLATION INSTRUCTIONS AND WIRING DIAGRAMS FOR INSTALLATION.
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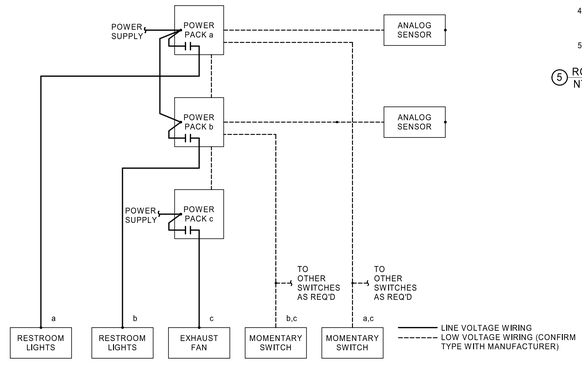
3 OCCUPANCY SENSOR DETAIL - MULTIPLE POWER SUPPLIES AND SWITCHES
NTS



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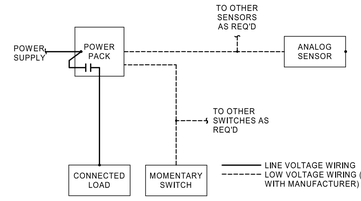
5. PROVIDE SYSTEM COMMISSIONING AS REQUIRED PER ENERGY CODE.

2 OCCUPANCY SENSOR DETAIL - MULTIPLE POWER SUPPLIES AND SWITCHES
NTS



NOTES:

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5. PROVIDE SYSTEM COMMISSIONING AS REQUIRED PER ENERGY CODE.

1 OCCUPANCY SENSOR DETAIL - SINGLE POWER SUPPY AND SWITCH
NTS

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Lee's Summit R7 District Athletics Facilities

Lee's Summit West High School
2600 SW Ward Road
Lee's Summit, MO 64082

owner:
Lee's Summit R-7 School District
301 NE Tudor Road
Lee's Summit, MO 64086

architect:
Gould Evans
4200 Pennsylvania Avenue
Kansas City, MO 64111
816.931.6655 voice
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4338 Belleview Avenue
Kansas City, MO 64111
816.531.4144

civil engineer:
Kaw Valley Engineering
14700 West 114th Terrace
Lenexa, KS 66215
913.485.0318

mechanical/electrical engineer:
Henderson Engineers
8345 Lenexa Drive | Suite 300
Lenexa, KS 66214
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WWW.HENDERSONENGINEERS.COM
2050003134
MO. CORPORATE NO: E-556D
EXPIRES 12/31/2020

STATE OF MISSOURI
CURTIS A. OLDS
NUMBER PE-2010036440
PROFESSIONAL ENGINEER

Sep 25 2020

REVISIONS

Number	DESCRIPTION	DATE

PROJECT NO: 0119-0101
DATE: September 28, 2020

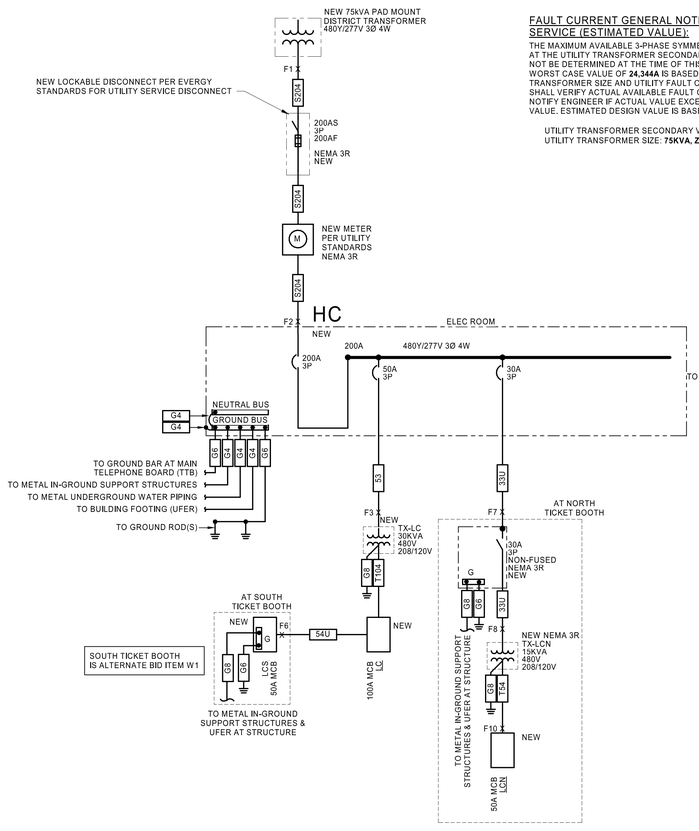
LIGHTING SCHEDULES

W-E700

BID SET

CURTIS A. OLDS

PRINT DATE/TIME: 9/25/2020 1:24:54 PM

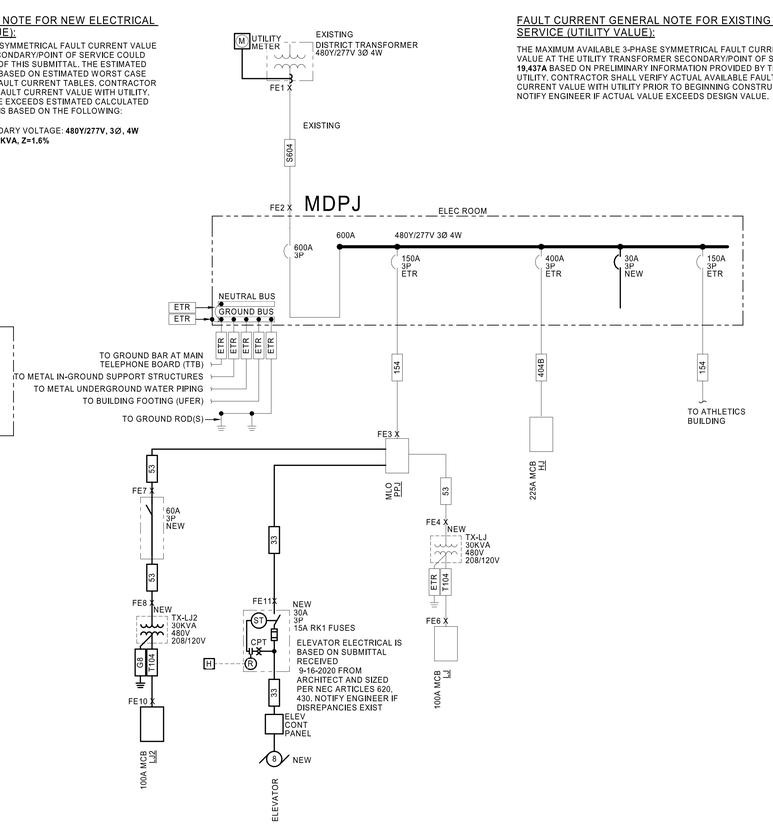


1 ELECTRICAL ONELINE - CONCESSIONS
NTS

FAULT CURRENT GENERAL NOTE FOR NEW ELECTRICAL SERVICE (ESTIMATED VALUE):

THE MAXIMUM AVAILABLE 3-PHASE SYMMETRICAL FAULT CURRENT VALUE AT THE UTILITY TRANSFORMER SECONDARY/POINT OF SERVICE COULD NOT BE DETERMINED AT THE TIME OF THIS SUBMITTAL. THE ESTIMATED WORST CASE VALUE OF **24,344A** IS BASED ON ESTIMATED WORST CASE TRANSFORMER SIZE AND UTILITY FAULT CURRENT TABLES. CONTRACTOR SHALL VERIFY ACTUAL AVAILABLE FAULT CURRENT VALUE WITH UTILITY. NOTIFY ENGINEER IF ACTUAL VALUE EXCEEDS ESTIMATED CALCULATED VALUE. ESTIMATED DESIGN VALUE IS BASED ON THE FOLLOWING:

UTILITY TRANSFORMER SECONDARY VOLTAGE: **480Y/277V, 3Ø, 4W**
UTILITY TRANSFORMER SIZE: **75KVA, Z=1,6%**



3 ELECTRICAL ONELINE - EXISTING PRESSBOX
NTS

FAULT CURRENT GENERAL NOTE FOR EXISTING SERVICE (UTILITY VALUE):

THE MAXIMUM AVAILABLE 3-PHASE SYMMETRICAL FAULT CURRENT VALUE AT THE UTILITY TRANSFORMER SECONDARY/POINT OF SERVICE IS **19,437A** BASED ON PRELIMINARY INFORMATION PROVIDED BY THE UTILITY. CONTRACTOR SHALL VERIFY ACTUAL AVAILABLE FAULT CURRENT VALUE WITH UTILITY PRIOR TO BEGINNING CONSTRUCTION. NOTIFY ENGINEER IF ACTUAL VALUE EXCEEDS DESIGN VALUE.

OVERCURRENT PROTECTIVE DEVICE COORDINATION STUDY GENERAL NOTE:

1. CONTRACTOR SHALL PROVIDE AN OVERCURRENT PROTECTIVE DEVICE COORDINATION STUDY TO DETERMINE THE CORRECT SETTINGS FOR THE ADJUSTABLE TRIP CIRCUIT BREAKERS, TO ENSURE SELECTIVE COORDINATION AND TO DOCUMENT ARC-FLASH HAZARDS. CODE REQUIRED EMERGENCY AND LEGALLY REQUIRED STANDBY SYSTEMS SHALL BE SELECTIVELY COORDINATED WITH ALL SUPPLY-SIDE OVERCURRENT PROTECTIVE DEVICES (APPLIES TO BOTH THE NORMAL AND EMERGENCY POWER SOURCES). PROVIDE ALL NECESSARY AS-BUILT INFORMATION REQUIRED FOR COMPLETION OF THE STUDY TO THE ENGINEER DOING THE STUDY. PROVIDE SUBMITTALS INDICATED WITHIN THE SPECIFICATIONS TO OWNER AND ARCHITECT/ENGINEER TO CONFIRM STUDY HAS BEEN COMPLETED. CONTRACTOR SHALL INCLUDE THE COST FOR THIS WORK IN THEIR BID. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
2. THE OWNER SHALL FURNISH INDICATED PORTIONS OF THE ELECTRICAL DISTRIBUTION EQUIPMENT TO THE CONTRACTOR FOR INSTALLATION. THE OWNER WILL ALSO PROVIDE THE OVERCURRENT PROTECTIVE DEVICE COORDINATION STUDY TO THE CONTRACTOR. THE OWNER FURNISHED COORDINATION STUDY SHALL INCLUDE THE CORRECT SETTINGS FOR THE ADJUSTABLE TRIP CIRCUIT BREAKERS, ENSURE SELECTIVE COORDINATION AND DOCUMENT ARC-FLASH HAZARDS. CODE REQUIRED EMERGENCY AND LEGALLY REQUIRED STANDBY SYSTEMS SHALL BE SELECTIVELY COORDINATED WITH ALL SUPPLY-SIDE OVERCURRENT PROTECTIVE DEVICES, (APPLIES TO BOTH THE NORMAL AND EMERGENCY POWER SOURCES). THE CONTRACTOR SHALL PROVIDE NECESSARY AS-BUILT INFORMATION TO COMPLETE THE STUDY.

ONE-LINE DIAGRAM SUPPLEMENTAL SPECIFICATIONS:

1. GROUNDING ELECTRODE SYSTEM SHALL BE PER LOCAL REQUIREMENTS AND SHALL NOT BE LESS STRINGENT THAN THAT SPECIFIED IN THE CONSTRUCTION DOCUMENTS.
2. PROVIDE PROPERLY SIZED LUGS FOR ALL EQUIPMENT, CIRCUIT BREAKERS, AND OTHER ELECTRICAL DEVICES TO ACCOMMODATE INSTALLED CONDUCTORS. A LARGER FRAME, OVERSIZED LUGS OR NON-STANDARD PRODUCT MAY BE REQUIRED IN SOME INSTANCES. UTILIZE PIN ADAPTERS ONLY IF NECESSARY AND ONLY AS ALLOWED BY MANUFACTURER AND AHJ.
3. PROVIDE ANY AVAILABLE SPACE IN SWITCHBOARDS/PANELBOARDS WITH BUSSING.
4. PROVIDE (4) EMPTY 1" CONDUITS WITH PULL STRINGS FROM EACH RECESSED PANELBOARD UP TO ACCESSIBLE CEILING SPACE. CAP AND LABEL CONDUITS FOR FUTURE USE.
5. PROVIDE TYPED FINAL CIRCUIT DIRECTORY FOR ALL PANELBOARDS TO REFLECT ACTUAL AS-BUILT CONDITIONS. COORDINATE FINAL ROOM NAMES, NUMBERS AND DESCRIPTIONS WITH OWNER PRIOR TO COMPLETION. CIRCUIT DESCRIPTIONS SHALL BE PER CODE AND SHALL BE DISTINGUISHABLE FROM ALL OTHERS.

FEEDER SCHEDULE:

SIZES ARE BASED ON COPPER (CU) THHN/THWN-2 INSULATION, UNO. NUMBER DESIGNATIONS PRECEDED BY "A" INDICATE THAT THE SIZE IS BASED ON ALUMINUM (AL) WIRE. AL CONDUCTOR SIZES ARE BASED ON XHHW-2 INSULATION, UNO. ALL CONDUCTOR SIZES ARE BASED ON 75 DEG C RATED TERMINATIONS, UNO. CONDUIT SIZES SHOWN ARE APPROPRIATE FOR SCHEDULE 40 PVC, EMT, GRS, IMC AND RMC; ADJUST SIZE AS NEEDED FOR OTHER RACEWAY TYPES. FOR ANY OTHER CONDITIONS MODIFY SIZES PER CODE. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.

FEEDER TAG	FEEDER DESCRIPTION
33	(3)#10, (1)#10 G, 1/2" C
33U	(3)#6, (1)#8 G, 1" C
53	(3)#6, (1)#10 G, 1" C
54U	(4)#4, (1)#6 G, 1-1/4" C
154	(4)#1/0, (1)#6 G, 1-1/2" C
404B	(4)-600 kcmil, (1)#3 G, 3-1/2" C
ETR	EXISTING TO REMAIN
G2	#2 COPPER GROUND, 3/4" C
G4	#4 COPPER GROUND, 3/4" C
G6	#6 COPPER GROUND, 3/4" C
G8	#8 COPPER GROUND, 3/4" C
S204	(4)#3/0, 2" C
S604	(2) 3" C, EACH W/ (4)-350 kcmil
T54	(4)#8, (1)#8 SSBJ, 3/4" C
T104	(4)#3, (1)#8 SSBJ, 1-1/4" C

ELECTRICAL UTILITY CONTACT NOTE:

UTILITY COMPANY: **EVERGY ENERGY**
UTILITY CONTACT: **RON DEJARNETTE**
EMAIL: **RON.DEJARNETTE@EVERGY.COM**

ONE-LINE DIAGRAM GENERAL NOTES:

1. THE INFORMATION SHOWN IN THE SHORT-CIRCUIT AND VOLTAGE DROP CALCULATIONS SCHEDULE IS SHOWN FOR CALCULATION PURPOSES ONLY. CONTRACTOR SHALL NOT USE THE CONDUIT TYPES, CONDUCTOR TYPES, SIZES, QUANTITIES OR LENGTHS FOR TAKEOFFS OR BIDDING PURPOSES. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY CONFLICTS BETWEEN THIS SCHEDULE AND OTHER PORTIONS OF THE CONSTRUCTION DOCUMENTS. CONTRACTOR SHALL NOTIFY ENGINEER OF AS-BUILT CONDITIONS THAT CONSTITUTE A CHANGE FROM WHAT IS SHOWN BELOW; THIS INCLUDES CONDUCTOR LENGTHS DIFFERING BY MORE THAN 10%.
2. REFER TO THE SHORT-CIRCUIT AND VOLTAGE DROP CALCULATIONS TABLE. AVAILABLE FAULT CURRENT INFORMATION IS LISTED UNDER THE "FAULT CURRENT" COLUMN. VOLTAGE DROP VALUES ARE LISTED UNDER THE "CUMULATIVE VOLTAGE DROP" COLUMN. THE AIC/SCCR RATING OF THE EQUIPMENT SHALL NOT BE LESS THAN THE AVAILABLE 3-PHASE SYMMETRICAL FAULT CURRENT. ALL SERIES RATED EQUIPMENT SHALL BE PROPERLY LISTED AND LABELED PER CODE.
3. FEEDER NUMBER DESIGNATIONS PRECEDED BY "Y" INDICATE THAT THE CONDUCTORS ARE UP-SIZED DUE TO VOLT-DROP CONSIDERATIONS. PROVIDE LUG ADAPTERS AS NEEDED IN ORDER TO PROPERLY LAND CONDUCTORS AT TERMINATION(S).
4. FEEDER SIZES ARE BASED ON COPPER (CU) THHN/THWN-2 INSULATION, UNLESS NOTED OTHERWISE. CONDUIT SIZES SHOWN ARE APPROPRIATE FOR SCHEDULE 40 PVC, EMT, GRS, IMC AND RMC; ADJUST SIZE AS NEEDED FOR OTHER RACEWAY TYPES. NUMBER DESIGNATIONS PRECEDED BY "A" INDICATE THAT THE SIZE IS BASED ON ALUMINUM (AL) WIRE. AL CONDUCTOR SIZES ARE BASED ON XHHW-2 INSULATION, UNLESS NOTED OTHERWISE. AL WIRE MAY BE SUBSTITUTED FOR CU FEEDERS AS ALLOWED BY CODE, SPECIFICATIONS AND OWNER, UNLESS NOTED OTHERWISE. AT CONTRACTOR'S OPTION, CU WIRE MAY BE SUBSTITUTED FOR AL, UNLESS NOTED OTHERWISE. ALL CONDUCTOR SIZES ARE BASED ON 75 DEG C RATED TERMINATIONS, UNLESS NOTED OTHERWISE, FOR ANY OTHER CONDITIONS MODIFY SIZES PER CODE. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
5. BRANCH CIRCUIT SIZES ARE BASED ON COPPER (CU) THHN/THWN-2 INSULATION, UNLESS NOTED OTHERWISE. CONDUIT SIZES SHOWN ARE APPROPRIATE FOR SCHEDULE 40 PVC, EMT, GRS, IMC AND RMC; ADJUST SIZE AS NEEDED FOR OTHER RACEWAY TYPES. ALL CONDUCTOR SIZES ARE BASED ON 60 DEG C RATED TERMINATIONS, UNLESS NOTED OTHERWISE. FOR ANY OTHER CONDITIONS MODIFY SIZES PER CODE. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
6. INSTALL FEEDERS OVERHEAD AS HIGH AS PRACTICABLE AND ORTHOGONALLY ALONG BUILDING STRUCTURE, UNLESS NOTED OTHERWISE. COORDINATE FINAL ROUTING WITH OTHER TRADES.
7. CIRCUIT BREAKERS RATED 1200A OR HIGHER SHALL HAVE APPROPRIATE DOCUMENTATION AND METHOD TO REDUCE CLEARING TIME IN ORDER TO REDUCE ARC FLASH ENERGY PER CODE. PROVIDE ELECTRONIC TRIP UNIT WITH INSTANTANEOUS TRIP AND ENERGY-REDUCING MAINTENANCE SWITCH WITH LOCAL STATUS INDICATOR FOR COMPLIANCE. PROVIDE PROVISIONS TO INTERFACE WITH OWNER ALARM/MONITORING SYSTEM TO INDICATE MAINTENANCE SWITCH STATUS.
8. PROVIDE A PERMANENT LABEL ON FRONT OF EQUIPMENT ENCLOSURE; REFER TO SPECIFICATIONS FOR LABEL REQUIREMENTS. LABEL SHALL READ AS FOLLOWS (INCLUDE RESPECTIVE NAMES IN BLANKS):

   SERVICE EQUIPMENT LABEL:

   EXAMPLE:
   208Y/120V, 60HZ
   800A
   SCCR = 65,000A
   MAX AVAILABLE FAULT CURRENT = 58,815A
   CALCULATED: 01/01/2018

   PANELBOARD/SWITCHBOARD LABEL:
   LINE 1: PANELBOARD "_____" SUPPLIED BY UPSTREAM
   LINE 2: PANELBOARD/SWITCHBOARD "_____"
   LINE 3: LOCATED IN "_____"
   LINE 4: PANELBOARD "_____" SUPPLIES DOWNSTREAM
   LINE 5: PANELBOARD(S) "_____"

   TRANSFORMERS LABEL:
   LINE 1: TRANSFORMER "_____" SUPPLIED BY UPSTREAM
   LINE 2: PANELBOARD/SWITCHBOARD "_____"
   LINE 3: LOCATED IN "_____"
   LINE 4: TRANSFORMER "_____" SUPPLIES DOWNSTREAM
   LINE 5: PANELBOARD(S) "_____"

ONE-LINE DIAGRAM GENERAL NOTES:

1. COORDINATE WORK WITH ARCHITECTURAL PHASING DRAWINGS TO PROPERLY STAGE TRANSITION TO PROVIDE POWER TO EXISTING, NEW AND TEMPORARY LOADS. MONITOR LOADS ON DISTRIBUTION SYSTEM TO MAKE SURE SHIFTING OF LOADS DOES NOT OVERLOAD ELECTRICAL EQUIPMENT.
2. PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THE EXISTING AIC/SCCR RATING OF EACH PANELBOARD/SWITCHBOARD, ALL NEW AND EXISTING OVER-CURRENT PROTECTION DEVICES (CIRCUIT BREAKERS AND FUSES) MUST HAVE AN AIC/SCCR RATING EXCEEDING THE AVAILABLE FAULT CURRENT AT THAT POINT IN THE SYSTEM. NOTIFY THE OWNER AND THE ENGINEER IF THE EXISTING EQUIPMENT DOES NOT COMPLY WITH THIS REQUIREMENT.
3. VERIFY THE INTEGRITY OF THE EXISTING GROUNDING ELECTRODE SYSTEM AND THAT THE NEUTRAL AND GROUND ARE PROPERLY BONDED TOGETHER AT THE POINT OF SERVICE ENTRANCE. NOTIFY THE OWNER AND THE ENGINEER OF ANY EXISTING DEFICIENCIES.
4. AS APPLICABLE, OBTAIN THE FOLLOWING INFORMATION IN REGARD TO THE EXISTING ELECTRICAL SERVICE AND DISTRIBUTION SYSTEM AND REPORT FINDINGS TO THE ENGINEER FOR ANALYSIS PRIOR TO BEGINNING CONSTRUCTION:
   A. AVAILABLE FAULT CURRENT DELIVERED BY THE UTILITY COMPANY AT THE POINT OF SERVICE.
   B. PROVIDE A PLAN SKETCH OF THE LANDLORD'S DISTRIBUTION EQUIPMENT LOCATION RELATIVE TO THE ENTIRE BUILDING, INCLUDE THE LOCATION, UTILITY METER AND SERVICE DISCONNECT, RELEVANT FEEDER ROUTING AND LENGTHS.
   C. PROVIDE A SKETCH OF THE ONE-LINE SHOWING THE PATH FROM THE UTILITY TRANSFORMER TO THE EQUIPMENT, INCLUDE FEEDER CONDUCTOR MATERIAL, (AL OR CU), NUMBER AND SIZE OF CONDUCTORS, GROUND, LENGTH, CONDUIT SIZE AND CONDUIT TYPE.
   D. TYPE OF SERVICE DISCONNECT OVER-CURRENT PROTECTION DEVICE, (FUSE OR CIRCUIT BREAKER), AMPERE RATING OF THE DEVICE AND AIC/SCCR RATING OF THE DEVICE.
   E. AIC/SCCR RATING AT EACH EXISTING SWITCHBOARD/PANELBOARD.

LOAD SUMMARY: CONCESSIONS ELECTRICAL SERVICE

PANEL DESCRIPTION: 480Y/277 V			
LOAD TYPE	CONNECTED LOAD	DEMAND FACTOR	NEC DEMAND
EXISTING LOAD (E)	0 VA	100%	0 VA
COOLING (C)	0 VA	0%	0 VA
HEATING (H)	49066 VA	100%	49066 VA
LIGHTING (L)	1860 VA	125%	2325 VA
RECEPTACLES (R)	6660 VA	100%	6660 VA
MOTORS (M)	3504 VA	100%	3504 VA
SUPPLEMENTAL HEAT (U)	24000 VA	100%	24000 VA
MISC EQUIP (Z)	605 VA	100%	605 VA
REFRIGERATION (F)	0 VA	100%	0 VA
SIGN/DISPLAY (D)	0 VA	125%	0 VA
KITCHEN (K)	2000 VA	100%	2000 VA
LARGEST MOTOR	1200 VA	125%	1500 VA
SHOW WINDOW (W)	0 VA	125%	0 VA
TRACK LIGHTING	0 VA	100%	0 VA
TOTAL LOAD	88895	VA	89660
TOTAL AMPACITY	107	AMPS	108
PANEL AMPACITY		AMPS	200
SPARE CAPACITY		AMPS	92

SERVICE LOAD SUMMARY (MDPJ)

SERVICE OCCUPANCY TYPE: STORE SERVICE SQUARE FOOTAGE: 5000		SERVICE DESCRIPTION: 480Y/277 V	
LOAD TYPE	CONNECTED LOAD KVA	DEMAND FACTOR	NEC DEMAND KVA
EXISTING PEAK UTILITY (@ 0.9 pf)	N/A	125%	300.00
COOLING (C)	1.06	0%	0.00
HEATING (H)	6.00	100%	6.00
LIGHTING (L) (PER NEC-220)	2.14	125%	2.67
RECEPTACLES (R)	3.42	100%	3.42
MOTORS (M)	1.18	100%	1.18
SUPPLEMENTAL HEAT (U)	0.00	100%	0.00
MISC EQUIP (Z)	1.62	100%	1.62
REFRIGERATION (F)	0.00	100%	0.00
SIGN/DISPLAY (D)	0.00	125%	0.00
KITCHEN (K)	0.00	100%	0.00
LARGEST MOTOR	9.98	125%	12.47
SHOW WINDOW (W)	0.00	125%	0.00
TRACK LIGHTING	0.00	100%	0.00
EXISTING LOAD TO BE DELETED	0.00	100%	0.00
TOTAL LOAD	25.39	KVA	327.35
TOTAL AMPACITY	30.53	AMPS	393.75
SERVICE AMPACITY		AMPS	600.00
SPARE CAPACITY		AMPS	206.25
*PER UTILITY COMPANY BILLING PEAK DEMAND OF:		216.00 KW	8-19-2019

Short-Circuit and Voltage Drop Calculations

Distances are for calculation purposes only and shall not be used for contractor takeoffs nor bidding - Contractor shall notify Engineer of any field condition that results in a change of 10% or greater circuit distance

The following calculations are based on the "Point-by-Point" method where:

ISC (2) = ISC(1) x M(1) M= 1/(1+f)
ISC (1) = short circuit current at fault point 1
ISC (2) = short circuit current at fault point 2

Feeder: f (3Ø) = 1.732 x L x Isc / C x E
XFMR: f (3Ø) = IP(sca)x Vp x 1.73 x %Z / 100,000 x KVA
IS(sca)= Vp x M x IP(sca) / Vs

Feeder: f (1Ø)= 2 x L x Isc / C x E
XFMR: f (1Ø)= IP(sca)x Vp x %Z / 100,000 x KVA

VOLTAGE DROP (3Ø):
%VD= ((R x cos(arccos(pf)) + X x sin (arccos(pf))) x L/# x I x 1.73) / E
VOLTAGE DROP (1Ø):
%VD= ((R x cos(arccos(pf)) + X x sin(arccos(pf))) x 2 x L/# x I) / E

IP = Primary short circuit current
Vp = Primary voltage
IS= Secondary short circuit current
Vs= Secondary voltage
L = Length of circuit
C = "C" Factor from Bussman table where "C" = 1 / impedance per linear foot
E = Line to line volts

%VD CUM= Cumulative Voltage Drop from Fault Point 1 to Fault Point #
R= resistance in ohms per LF
X= reactances in ohms per LF

Feeder Types =
NM - Non Magnetic Conduit, M - Magnetic Conduit, FB - Feeder Busway, PB - Plug-in Busway, TX - Transformer

System Voltage: 480Y/277V - 3 phase

Fault Point (F#)	Bus/Feeder Description	Source (Fault Point)	Phase	Source Isc (amps)	Feeder: Conduit Type/ TX	Material	Quantity of Parallel Sets and Bus/ Phase & Neutral Size			Conductor 'C' Value	Busway 'C' Value	L-L Voltage (E)	Circuit Length (L)	Load Power Factor (pf)	Circuit Load (Amperage)	Conductor: Resistance (R)	Reactance (X)	Arccos (pf) (Radians)	Transformer: Type	Degree Rise	kVA	New Xfmr Z	Existing Xfmr Z	Secondary Voltage	Tap Setting	f	M	Fault Current (amps)	Voltage Drop (%VD)	Cumulative Voltage Drop (%VD)	Fault Point (F#)
1	Utility Service Point			14,950	at the secondary of the utility transformer																										1
	Motor Contribution			20	The connected full load motor amps (includes compressors) on the system																										
2	HC	1	3	15070	M	CU	1	Set(s) of	3/0	AWG	12844	--	480	120	0,9	109	0,000079	0,000052	0,451027								0,508	0,66	9993	-0,44%	-0,44%	2
3	TO TX-LC	2	3	9993	M	CU	1	Set(s) of	6	AWG	2425	--	480	5	0,9	22	0,000490	0,000064	0,451027								0,074	0,93	9301	-0,02%	-0,46%	3
4	TX-LC	3	3	9301	TX					AWG			480							TP-1	150	30	2,7		208		6,960	0,13	2697		-0,46%	4
5	LC	4	3	2697	M	CU	1	Set(s) of	1	AWG	7293	--	208	5	0,9	50	0,000160	0,000057	0,451027								0,015	0,98	2656	-0,04%	-0,50%	5
6	LCS	5	3	2656	M	CU	1	Set(s) of	4	AWG	3806	--	208	150	0,9	40	0,000310	0,000060	0,451027								0,872	0,53	1419	-1,52%	-2,02%	6
7	DISC-TX-LCN	2	3	9993	M	CU	1	Set(s) of	6	AWG	2425	--	480	500	0,9	24	0,000490	0,000064	0,451027								7,435	0,12	1185	-2,03%	-2,47%	7
8	TO TX-LCN	7	3	1185	M	CU	1	Set(s) of	6	AWG	2425	--	480	5	0,9	24	0,000490	0,000064	0,451027								0,009	0,99	1174	-0,02%	-2,49%	8
9	TX-LCN	8	3	1174	TX								480							TP-1	150	15	2,1		208		1,367	0,42	1145		-2,49%	9
10	LCN	9	3	1145	M	CU	1	Set(s) of	6	AWG	2425	--	208	5	0,9	24	0,000490	0,000064	0,451027								0,020	0,98	1123	-0,05%	-2,54%	10

Fault Point (F#)	Bus/Feeder Description	Source (Fault Point)	Phase	Source Isc (amps)	Feeder: Conduit Type/ TX	Material	Quantity of Parallel Sets and Bus/ Phase & Neutral Size			Conductor 'C' Value	Busway 'C' Value	L-L Voltage (E)	Circuit Length (L)	Load Power Factor (pf)	Circuit Load (Amperage)	Conductor: Resistance (R)	Reactance (X)	Arccos (pf) (Radians)	Transformer: Type	Degree Rise	kVA	New Xfmr Z	Existing Xfmr Z	Secondary Voltage	Tap Setting	f	M	Fault Current (amps)	Voltage Drop (%VD)	Cumulative Voltage Drop (%VD)	Fault Point (F#)
1	Utility Service Point			19,437	at the secondary of the utility transformer																										1
	Motor Contribution				The connected full load motor amps (includes compressors) on the system																										
2	MDPJ	1	3	19437	M	CU	2	Set(s) of	350	kcmil	19704	--	480	150	0,9		0,000039	0,000050	0,451027								0,267	0,79	15341			2
3	PPJ	2	3	15341	M	CU	1	Set(s) of	1/0	AWG	8925	--	480	5	0,9		0,000120	0,000055	0,451027								0,031	0,97	14880			3
4	TO TX-LJ	3	3	14880	M	CU	1	Set(s) of	6	AWG	2425	--	480	5	0,9		0,000490	0,000064	0,451027								0,111	0,90	13397			4
5	TX-LJ	4	3	13397	TX								480	5						TP-1	150	30	2,7		208		10,024	0,09	2804			5
6	LJ	5	3	2804	M	CU	1	Set(s) of	3	AWG	4774	--	208	5	0,9		0,000250	0,000059	0,451027								0,024	0,98	2737			6
7	TO 60A DISCONNECT	3	3	14880	M	CU	1	Set(s) of	6	AWG	2425	--	480	5	0,9		0,000490	0,000064	0,451027								0,111	0,90	13397			7
8	TO TX-LJ2	7	3	13397	M	CU	1	Set(s) of	6	AWG	2425	--	480	5	0,9		0,000490	0,000064	0,451027								0,100	0,91	12183			8
9	TX-LJ2	8	3	12183	TX	CU	1		1/0	AWG			480		0,9				0,451027	TP-1	150	30	2,7		208		9,115	0,10	2779			9

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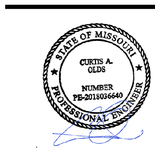

Sep 25 2020

REVISIONS

Number	DESCRIPTION	DATE

PROJECT NO: 0119-0101
DATE: September 28, 2020

ELECTRICAL ONE-LINE DIAGRAM

W-E800

BID SET

CURTIS A. OLDS

PRINT DATE/TIME: 9/25/2020 1:30:10 PM

TELECOMMUNICATIONS SYMBOLS

THIS IS A MASTER LEGEND AND NOT ALL SYMBOLS OR ABBREVIATIONS ARE USED.

V2.00

STANDARD MOUNTING HEIGHTS

TELECOM BACKBOARD (BOTTOM OF BACKBOARD)	4"
LADDER RACK IN TELECOM ROOMS (BOTTOM OF DEVICE)	90"
CABLE TRAY / CONDUIT AFC (BOTTOM OF PATHWAY)	3"(MIN)
LIGHT FIXTURE IN TELECOM ROOMS (BOTTOM OF DEVICE)	108"(MIN)
TELEPHONE WALL OUTLET (CENTERLINE)	48"
DATA WALL OUTLET	SAME AS ADJACENT DEVICE, UNO
TELEVISION OUTLET	REFER TO ARCH DRAWINGS
TMGB/TGB (CENTERLINE)	84"
WALL CLOCK (CENTERLINE)	84"
INTERCOM (CENTERLINE)	48"

USE THE DEFAULT MOUNTING HEIGHTS SHOWN ABOVE UNO IN THE CONSTRUCTION DOCUMENTS. MOUNTING HEIGHTS LISTED ARE ABOVE FINISHED FLOOR (AFF) OR ABOVE FINISHED GRADE (AFG) TO BOTTOM OF OUTLET BOX. ALL DEVICES SHALL BE INSTALLED IN COMPLIANCE WITH CURRENT ADA AND LOCAL REQUIREMENTS.

ABBREVIATIONS

A	AMPERES
ADA	AMERICANS WITH DISABILITIES ACT
AFC	ABOVE FINISHED CEILING
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHJ	AUTHORITY HAVING JURISDICTION
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
AP	ACCESS POINT
AV	AUDIO-VIDEO
AWG	AMERICAN WIRE GAUGE
BAS	BUILDING AUTOMATION SYSTEM
BD	BUILDING DISTRIBUTOR
BDF	BUILDING DISTRIBUTION FRAME
BFC	BELOW FINISHED CEILING
C	CONDUIT
CAT	CATEGORY
CATV	COMMUNITY ANTENNA TELEVISION
CCTV	CLOSED CIRCUIT TELEVISION
CD	CAMPUS DISTRIBUTOR
CMP	COMMUNICATIONS PLENUM JACKET
CMR	COMMUNICATIONS RISER JACKET
DAS	DISTRIBUTED ANTENNA SYSTEM
dB	DECIBELS
DEMO	DEMOLITION
(E)	EXISTING
EC	ELECTRICAL CONTRACTOR
ECIA	ELECTRONIC COMPONENTS INDUSTRY ASSOCIATION
EMI	ELECTROMAGNETIC INTERFERENCE
EMS	ENERGY MANAGEMENT SYSTEM
EMT	ELECTRICAL METALLIC TUBING
ER	EQUIPMENT ROOM
ETR	EXISTING TO REMAIN
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FD	FLOOR DISTRIBUTOR
FMC	FLEXIBLE METAL CONDUIT
FS	FIRE STOP SYSTEM
FLR	FLOOR
F/UTP	SCREEN TWISTED PAIR (SHIELDED)
GC	GENERAL CONTRACTOR
GE	GROUNDING EQUALIZER
GYP	GYPSUM BOARD
HC	HORIZONTAL CROSS-CONNECT
HCM	HORIZONTAL CABLE MANAGER
HH	HAND HOLE
Hz	HERTZ
IMC	INTERMEDIATE METAL CONDUIT
IP	INTERNET PROTOCOL
ISP	INTERNET SERVICE PROVIDER
ISP	INSIDE PLANT CABLE
JB	JUNCTION BOX
J-BOX	JUNCTION BOX
LAN	LOCAL AREA NETWORK
LCC	LIMITED COMBUSTIBLE CABLE
LEC	LOCAL EXCHANGE CARRIER
LED	LIGHT-EMITTING DIODE
LF	LINEAR FEET
MAN	METROPOLITAN AREA NETWORK
MATV	MASTER ANTENNA TELEVISION
MC	MAIN CROSS-CONNECT
MDF	MAIN DISTRIBUTION FRAME
MFR	MANUFACTURER
MH	MAINTENANCE HOLE
MM	MULTIMODE
MPOE	MAIN POINT OF ENTRANCE
MPOP	MAIN POINT OF PRESENCE
MTD	MOUNTED
N/A	NOT APPLICABLE
NEC	NATIONAL ELECTRICAL CODE
NFPA	NATIONAL FIRE PROTECTION ASSOCATION
NIC	NOT IN CONTRACT
nm	NANOMETER
NRTL	NATIONALLY RECOGNIZED TESTING LAB
OC	ON CENTER
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
OSP	OUTSIDE PLANT
PBX	PRIVATE BRANCH EXCHANGE
POE	POWER OVER ETHERNET
PON	PASSIVE OPTICAL NETWORK
POTS	PLAIN OLD TELEPHONE SERVICE
PSTN	PUBLIC SWITCHED TELEPHONE NETWORK
QTY	QUANTITY
RCDD	REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
RMC	RIGID METAL CONDUIT
RU	RACK UNIT
SCS	STRUCTURED CABLING SYSTEM
SF	SQUARE FEET
SM	SINGLEMODE
SPECS	SPECIFICATIONS
TBB	TELECOMMUNICATIONS BONDING BACKBONE
TBD	TO BE DETERMINED
TIA	TELECOMMUNICATIONS INDUSTRY ASSOCIATION
TGB	TELECOMMUNICATIONS GROUND BUS BAR
TMGB	TELECOMMUNICATIONS MAIN GROUND BUS BAR
TR	TELECOMMUNICATIONS ROOM
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
UL	UNDERWRITER LABORATORIES, INC.
UPS	UNINTERRUPTIBLE POWER SUPPLY
U/UTP	UNSHIELDED TWISTED PAIR
V	VOLT(S)
VCM	VERTICAL CABLE MANAGER
W	WIRE
WAN	WIDE AREA NETWORK
WAO	WORK AREA OUTLET
WAP	WIRELESS ACCESS POINT
WP	WEATHER PROOF
WR	WEATHER RESISTANT
WT	WATERTIGHT
XP	EXPLOSION-PROOF

ANNOTATION

- TECHNOLOGY PLAN CALLOUT
- EQUIPMENT DESIGATION (OWNER FURNISHED, CONTRACTOR INSTALLED)
- CONNECTION POINT OF NEW WORK TO EXISTING
- DETAIL REFERENCE UPPER NUMBER INDICATES DETAIL NUMBER. LOWER NUMBER INDICATES SHEET NUMBER
- SECTION CUT DESIGNATION

LINETYPE LEGEND

THROUGHOUT THE DRAWINGS DIFFERENT LINE-TYPES ARE USED IN COMBINATION WITH THE SYMBOLS TO INDICATE THE STATUS OF ITEMS AS EXISTING, TO BE DEMOLISHED, TO BE INCLUDED AS PART OF THE NEW WORK AND/OR ITEMS WHICH ARE ANTICIPATED TO BE PROVIDED IN THE FUTURE. THE STATUS OF ITEMS USING THESE LINETYPES ARE RELATIVE TO THE VIEW IN WHICH THEY APPEAR. PHASING SHOWN IN DRAWINGS IS NOT INTENDED TO FULLY DESCRIBE ALL NECESSARY CONSTRUCTION PHASING, WHICH IS DETERMINED BY THE CONTRACTOR AS PART OF THEIR RESPONSIBILITIES. ANY SUCH PHASES DESCRIBED IN THE CONSTRUCTION DOCUMENTS ARE GENERAL AND ONLY INTENDED TO INDICATE A BROAD ORDER FOR THE SAKE OF DESCRIBING THE PROJECT. THE FOLLOWING LINETYPES MAY BE USED ON ANY DEVICE, EQUIPMENT, NOTE, LINE, SHAPE, ETC.

EXISTING	———	NEW	———
DEMOLISH	— — — — —	FUTURE	- - - - - - - -

PATHWAYS

- WIRE MESH CABLE TRAY (W"=WIDTH, "H"=HEIGHT)
- VERTICAL CABLE TRAY
- UNDERGROUND CONDUIT ("#"=QUANTITY, "D"=CONDUIT DIAMETER)
- CONDUIT ("#"=QUANTITY, "D"=CONDUIT DIAMETER)
- CABLE SUPPORTS OR J-HOOKS
- CONDUIT SLEEVE ("#"=QUANTITY, "D"=CONDUIT DIAMETER)
- UL FIRESTOP SYSTEM ASSEMBLY
- PULL BOX ("L"=LENGTH, "W"=WIDTH, "H"=HEIGHT)
- SPLICE

RISER DIAGRAMS

- FIBER OPTIC CROSS CONNECT - DETAIL 5/W-TN500
- COPPER UTP CROSS CONNECT
- 110-TYPE PROTECTOR BLOCK
- PATCH PANEL - DETAIL 7/W-TN500
- TELECOM GROUND BAR (TGB) - DETAIL 9/W-TN500
- TELECOM MAIN GROUND BAR (TMGB)
- TELECOMMUNICATIONS BACKBONE CABLING (REFER TO RISER DIAGRAM FOR MORE INFORMATION)

TELECOMMUNICATIONS ROOM

- LADDER RACK
- TELECOM MAIN GROUND BAR (TMGB) - WALL ELEVATION VIEW
- TELECOM GROUND BAR (TGB) - WALL ELEVATION VIEW
- TMGB/TGB - PLAN VIEW
- TELECOM BACKBOARD
- TWO-POST EQUIPMENT RACK
- FOUR-POST EQUIPMENT RACK
- EQUIPMENT CABINET (REFER TO PLAN NOTES ON ENLARGED PLANS FOR MORE INFORMATION)

TELECOMMUNICATIONS OUTLETS

SYMBOL	DESCRIPTION	CABLE(S)	DETAIL
ELEV	ELEVATOR PHONE OUTLET - ANALOG	1	8/W-TN500
2D	DATA WALL OUTLET	1	2,4,6/W-TN500
WAP	DATA CEILING OUTLET - WIRELESS ACCESS POINT	2	3,4/W-TN500
ETR	DATA WALL OUTLET - EXISTING TO REMAIN	2	2,4,6/W-TN500
WAP,ETR	DATA CEILING OUTLET - EXISTING TO REMAIN	1	3,4/W-TN500

TELECOMMUNICATIONS RESPONSIBILITY MATRIX

Description	Furnish: Construction Team	Furnish: Owner	Install: Construction Team	Install: Owner	Comments
General Communications					
Grounding and Bonding	X		X		
Hangers and Supports	X		X		
Conduits and Backboxes	X		X		
Surface Raceways	X		X		
Underground pathways for utility entrance and floor boxes	X		X		
Firestops, Conduit Sleeves, and Sleeve Seals	X		X		
Structured Cabling					
Telecom Room Cabinets, Racks, Frames, and Enclosures	X		X		
Telecom Room Buildout (ex. backboard and ladder rack)	X		X		
Optical Fiber Backbone Cable and Connectivity	X		X		
Copper Backbone Cable and Connectivity	X		X		
Copper Horizontal Cable and Connectivity	X		X		
Data Communications					
Router / Firewall		X		X	
Core Switch / Edge Switch		X		X	
Wireless Access Points		X		X	
Servers / Storage and Backup		X		X	
Laptops / Desktops / Copiers / Printers / Scanners		X		X	
Software		X		X	
Voice Communications					
VoIP Gateway / Analog handsets		X		X	
VoIP handset wall mount kit		X		X	
VoIP handsets		X		X	
VoIP Network licensing		X		X	

GENERAL NEW WORK NOTES

1. READ THE SPECIFICATIONS AND REVIEW DRAWINGS OF ALL DIVISIONS OF WORK. COORDINATE THIS WORK WITH ALL OTHER DIVISIONS OF WORK AND ALL SUBCONTRACTORS.
2. ALL WORK SHALL CONFORM TO THE APPLICABLE SPECIFICATIONS (DIVISION 26, DIVISION 27, DIVISION 28, ETC.) AND THE CUSTOMER PRE-ESTABLISHED STRUCTURED CABLING STANDARDS; SHOULD DIFFERENCES EXIST IN THE SPECIFICATIONS RELATING TO TECHNOLOGY AND THE CLIENT'S PRE-ESTABLISHED STANDARDS THE CONTRACTOR SHALL CONTACT THE LOW VOLTAGE ENGINEER FOR CLARIFICATION THROUGH THE RFI PROCESS.
3. FULLY COORDINATE ALL CABLE TRAY, FIRE STOP CONDUITS / SLEEVES, AND CONDUIT ROUTING WITH STRUCTURAL ELEMENTS. COORDINATE CABLE TRAY AND CONDUIT INSTALLATIONS WITH ARCHITECT, STRUCTURAL ENGINEER, STRUCTURAL CONTRACTOR, AND GENERAL CONTRACTOR PRIOR TO INSTALLATION. ROUTING IN CONCRETE SLAB OR UNDER SLAB (WHERE CONDUIT WOULD BE ON GRADE) REQUIRES THE USE OF WET LOCATION RATED CABLES.
4. ALL TELECOMMUNICATIONS CONTINUOUS PATHWAYS SHALL BE BONDED TO THE TELECOMMUNICATIONS BONDING BACKBONE: FOR CONDUITS, INSULATION BUSHINGS SHALL BE USED AT THE END OF THE CONDUIT THE FARTHEST AWAY FROM THE SERVING TR; A BONDING BUSHING SHALL BE USED AT THE END CLOSEST TO THE SERVING TR. CONTRACTOR TO REFER TO THE ANSI-STD-J 607 STANDARD FOR ADDITIONAL INFORMATION AS TO THE INSTALLATION OF THE TELECOMMUNICATIONS BONDING BACKBONE.
5. ALL FIRE RATED WALL / FLOOR ASSEMBLIES PENETRATED FOR TELECOMMUNICATIONS CABLING PATHWAYS SHALL BE FIRE STOPPED WITH THE APPROVED FIRE STOP SYSTEMS (F/S). ALL FIRESTOP SYSTEMS SHALL BE INSTALLED AS DIRECTED BY THE MANUFACTURER AND AS SPECIFIED IN DIVISION 07 07 84 00 - "FIRESTOPPING". FIRE STOP ASSEMBLY LOCATIONS ARE TO BE COORDINATED WITH CABLE TRAY PATHWAY TO TELECOMMUNICATIONS ROOM.
6. BACK BOXES AND CONDUIT LOCATIONS IN PRECAST CONCRETE WALLS SHALL BE COORDINATED WITH ARCHITECT, STRUCTURAL ENGINEER, AND GC PRIOR TO ORDERING THE PRECAST WALLS.
7. ROUTING OF CABLES SHALL BE CONCEALED. CABLES SHALL BE ROUTED IN CONDUIT IN EXPOSED AREAS. MINIMIZE AMOUNT OF EXPOSED CONDUIT BY EMBEDDING CONDUIT IN SLAB WHEN POSSIBLE. EMBEDDED CONDUITS AND PENETRATIONS OF STRUCTURE SHALL FOLLOW DETAILS IN STRUCTURAL DRAWINGS. WHEN CONDUITS CAN ONLY BE INSTALLED EXPOSED, NOTIFY ARCHITECT PRIOR TO START OF INSTALLATION OF CONDUITS. CABLES SHALL BE ROUTED IN CONDUIT WHEN ABOVE HARD CEILINGS. CONDUITS FOR ELEVATOR PHONES AND FIRE ALARM CONTROL PANEL SHALL BE CONTINUOUS (HOMERUN) FROM THE TELECOMMUNICATIONS ROOM TO THE APPLICABLE BOX / CABINET. CONTRACTOR SHALL SIZE AND PROVIDE CONDUITS TO MEET TIA-569.
8. TELECOMMUNICATIONS ROOMS SHALL BE DEDICATED FOR INFORMATION TECHNOLOGY USE (I.E. NO SHARED SPACE WITH A JANITOR, FIRE ALARM SYSTEM, ETC.) NO SERVICES SHALL PASS THROUGH THE SPACE UNLESS DEDICATED TO THE SPACE (NO PLUMBING, MECHANICAL, ELECTRICAL, FIRE, ETC.)

GENERAL DEMOLITION NOTES

1. PRIOR TO SUBMITTING BID, VISIT THE JOB SITE AND BECOME FULLY ACQUAINTED WITH THE EXISTING CONDITIONS OF THE FACILITY, INCLUDING PATHWAY LOCATIONS AND ELEVATIONS. REVIEW THE GENERAL NOTES AND ALL OTHER TRADE DRAWINGS FOR ADDITIONAL REQUIREMENTS THAT MAY NOT BE CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS, INCLUDING ALL DEMOLITION AND NEW WORK DOCUMENTS. NOTIFY ARCHITECT, ENGINEER OR OWNER, AS SPECIFIED, OF ANY CONFLICTS OR DISCREPANCIES.
2. EXISTING CONDITIONS WERE TAKEN FROM ORIGINAL DRAWINGS AND SITE VISITS AND MAY NOT REFLECT EXACT "AS-BUILT" CONDITIONS. FIELD VERIFY CONDITIONS PRIOR TO SUBMITTING FINAL BIDS. COORDINATE NEW WORK AND DEMOLITION WITH OTHER DISCIPLINES AND EXISTING CONDITIONS PRIOR TO CONSTRUCTION.
3. AVOID DAMAGING EXISTING SURFACES AND EQUIPMENT TO REMAIN FOR NEW INSTALLATION. REPAIR DAMAGE CAUSED DURING WORK AT NO EXTRA COST TO OWNER.
4. REMOVE ALL PATHWAYS, CABLING AND ASSOCIATED DEVICES FOR ALL ITEMS INTENDED TO BE REMOVED. ABANDONING UNUSED PORTIONS WILL NOT BE ACCEPTABLE.
5. REMOVE EXISTING ITEMS AS REQUIRED TO ACCOMMODATE THE GENERAL DEMOLITION SCOPE. ANY SYSTEMS PASSING THROUGH THE SPACE INTENDED TO REMAIN IN SERVICE SHALL BE PROTECTED, OR RELOCATED AS REQUIRED TO MAINTAIN SERVICE AND ACCOMMODATE THE GENERAL DEMOLITION AND NEW SCOPE OF WORK.
6. REFER TO ARCHITECTURAL PLANS FOR SCOPE OF AREAS THAT ARE TO BE DEMOLISHED UNDER THIS PHASE OF CONSTRUCTION. NOTE THAT IN SOME CASES, MEPFT DEMOLITION WORK EXTENDS BEYOND SCOPE OF AREA IDENTIFIED DUE TO EXISTING SYSTEM DESIGN. NOTIFY ARCHITECT AND ENGINEER OF ANY CONFLICTS OR DISCREPANCIES PRIOR TO STARTING WORK.
7. COORDINATE THE INTERMEDIATE STORAGE, REMOVAL AND FINAL DISPOSITION OF TELECOMMUNICATIONS SCS COMPONENTS (PATHWAYS, CABLE, TERMINATION COMPONENTS, ETC) AND THE REQUIRED PROTECTION OF EXISTING SPECIAL SYSTEMS EQUIPMENT WITH OWNER PRIOR TO IMPLEMENTATION THAT ARE TO BE REMOVED AS A RESULT OF THE DEMOLITION / RENOVATION WORK.
8. EXISTING TELECOMMUNICATIONS CABLES AND COMPONENTS THAT PASS THROUGH THE CONSTRUCTION ZONE SHALL BE PROTECTED AND REMAIN IN PLACE SO AS TO MAINTAIN SERVICE WHILE ALSO ACCOMMODATING THE GENERAL DEMOLITION AND NEW SCOPE OF WORK. CONTRACTOR SHALL COORDINATE ALL SUCH EFFORTS WITH THE CLIENT PRIOR TO IMPLEMENTATION. DAMAGE TO EXISTING AND TO REMAIN IN PLACE TELECOMMUNICATIONS CABLES AND COMPONENTS CAUSED BY THE CONTRACTOR SHALL BE REPAIRED IN A TIMELY MANNER AND TO THE WRITTEN SATISFACTION OF THE CLIENT AND AT NO ADDITIONAL COST TO THE CLIENT. CONTRACTOR SHALL PROVIDE CABLE SUPPORTS FOR ANY EXISTING CABLES THAT ARE NOT PROPERLY SUPPORTED.

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Lee's Summit R7 District Athletics Facilities

Lee's Summit West High School
2600 SW Ward Road
Lee's Summit, MO 64082

owner:
Lee's Summit R-7 School District
301 NE Tudor Road
Lee's Summit, MO 64086

architect:
Gould Evans
4200 Pennsylvania Avenue
Kansas City, MO 64111
816.931.6655 voice
www.gouldevans.com

structural engineer:
Bob D. Campbell & Company, Inc.
4338 Bellevieve Avenue
Kansas City, MO 64111
816.531.4144

civil engineer:
Kaw Valley Engineering
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Lenexa, KS 66215
913.485.0318

mechanical/electrical engineer:
Henderson Engineers
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TEL 913.742.5000 **FAX** 913.742.5001
WWW.HENDERSONENGINEERS.COM
2050003134
MO. CORPORATE NO: E-556D
EXPIRES 12/31/2020

REVISIONS

Number	DESCRIPTION	DATE

PROJECT NO: 0119-0101
DATE: September 28, 2020

TECHNOLOGY LEGEND AND NOTES

W-TN000

BID SET

TECHNOLOGY PLAN NOTES:

T1 EXISTING RACK TO BE RELOCATED. CONTRACTOR TO PROVIDE OWNER 7 DAYS NOTICE FOR RACK REMOVAL FOR OWNER TO REMOVE FROM CONSTRUCTION AREA AND PROTECT RACK.

T2 NEW LOCATION FOR INSTALLATION OF EXISTING RACK AFTER CAMERA DECK ERECTION IS COMPLETE. PULL NEW 6 STRANDS OF SINGLE MODE FIBER CABLING FROM LSW MAIN TELECOM ROOM. COORDINATE LOCATION AND PATHWAY WITH OWNER.

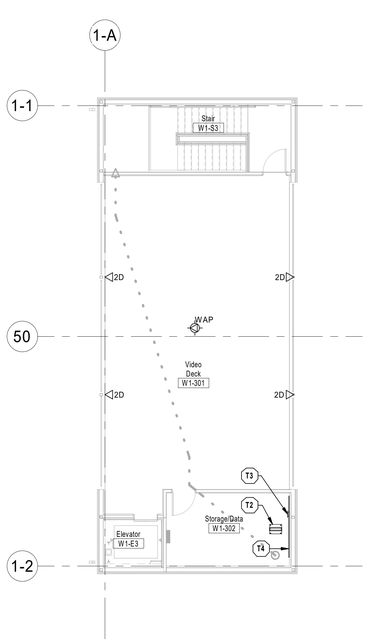
T3 TELECOMMUNICATIONS GROUNDING BUS BAR (TGB) MOUNTED AT 7'-0"AFF. SEE TELECOMMUNICATIONS DIVISION 27 SPECIFICATIONS FOR ADDITIONAL INFORMATION.

T4 TELECOMMUNICATIONS BACKBOARD. GRADE A/C 3/4" FIRE RATED PLYWOOD BACKBOARD (UNPAINTED) AT LEAST 4'-0"X4'-0" MOUNTED ON WALL BEHIND RACK AS SHOWN ON PLANS. THE A SIDE SHALL BE EXPOSED TO THE INTERIOR OF THE ROOM AND THE C SIDE PLACED AGAINST THE BUILDING STRUCTURE. SEE TELECOMMUNICATIONS DIVISION 27 SPECIFICATIONS FOR ADDITIONAL INFORMATION.

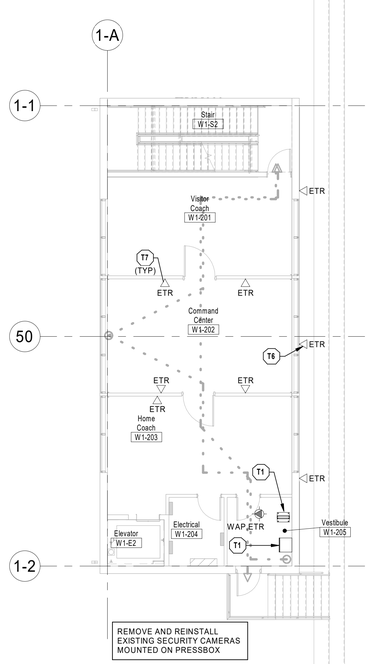
T6 EXISTING HUDL CAMERA TO REMAIN.

T7 DATA OUTLET EXISTING TO REMAIN. PROVIDE NEW CABLING RUN TO RELOCATED RACK IN STORAGE/DATA W1-302.

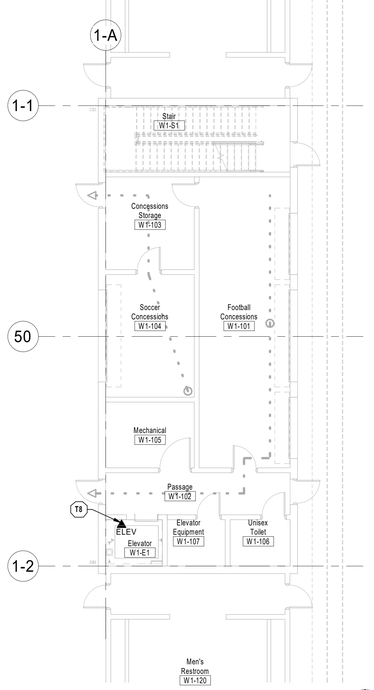
T8 ELEVATOR PHONE OUTLET. COORDINATE EXACT REQUIREMENTS WITH ELEVATOR PROVIDER.



3 HOME PRESS BOX - LEVEL 3 TECHNOLOGY PLAN
1/8" = 1'-0"



2 HOME PRESS BOX - LEVEL 2 TECHNOLOGY PLAN
1/8" = 1'-0"



1 HOME PRESS BOX - LEVEL 1 TECHNOLOGY PLAN
1/8" = 1'-0"

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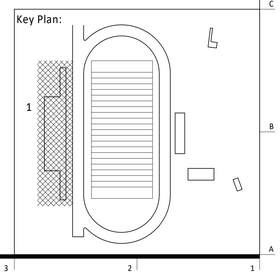
MO. CORPORATE NO. E-556D
EXPIRES 12/31/2020

REVISIONS

Number	DESCRIPTION	DATE

Key Plan:



PROJECT NO: 0119-0101
DATE: September 28, 2020

HOME PRESS BOX - TECHNOLOGY PLANS

W-TN111

BID SET

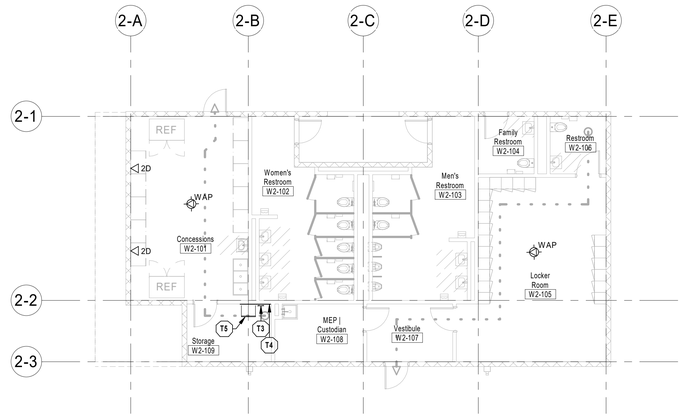
PRINT DATE/TIME: 9/25/2020 12:38:11 PM

TECHNOLOGY PLAN NOTES:

T3 TELECOMMUNICATIONS GROUNDING BUS BAR (TGB) MOUNTED AT 7'-0"AFF. SEE TELECOMMUNICATIONS DIVISION 27 SPECIFICATIONS FOR ADDITIONAL INFORMATION.

T4 TELECOMMUNICATIONS BACKBOARD. GRADE A/C 3/4" FIRE RATED PLYWOOD BACKBOARD (UNPAINTED) AT LEAST 4'-0"X4'-0" MOUNTED ON WALL BEHIND RACK AS SHOWN ON PLANS. THE A SIDE SHALL BE EXPOSED TO THE INTERIOR OF THE ROOM AND THE C SIDE PLACED AGAINST THE BUILDING STRUCTURE. SEE TELECOMMUNICATIONS DIVISION 27 SPECIFICATIONS FOR ADDITIONAL INFORMATION.

T5 NEW WALL MOUNTED RACK. MOUNT ON TELECOMMUNICATIONS BACKBOARD. SEE TELECOMMUNICATIONS DIVISION 27 SPECIFICATIONS FOR ADDITIONAL INFORMATION.



1 VISITOR RESTROOMS/CONCESSIONS - TECHNOLOGY PLAN
1/8" = 1'-0"

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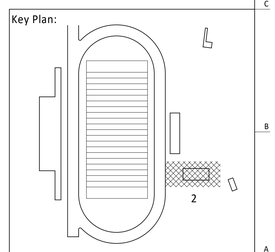
MO. CORPORATE NO: E-556D
EXPIRES 12/31/2020

REVISIONS

Number	DESCRIPTION	DATE

Key Plan:



PROJECT NO: 0119-0101
DATE: September 28, 2020

VISITOR RESTROOMS & CONCESSIONS - TECHNOLOGY PLAN

W-TN121

BID SET

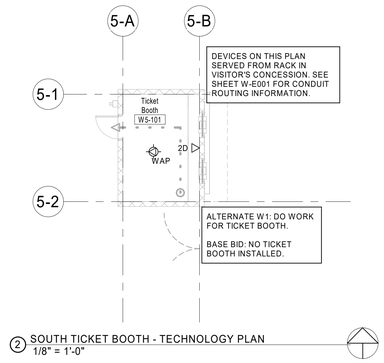
PRINT DATE/TIME: 9/25/2020 12:38:14 PM

TECHNOLOGY PLAN NOTES:

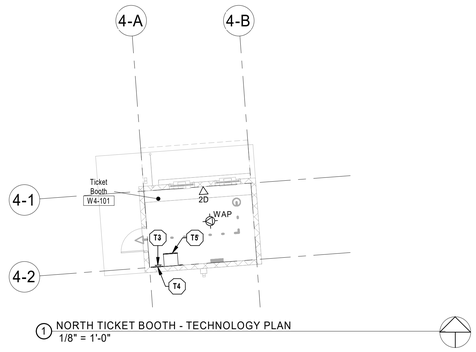
T3 TELECOMMUNICATIONS GROUNDING BUS BAR (TGB) MOUNTED AT 7'-0"AFF. SEE TELECOMMUNICATIONS DIVISION 27 SPECIFICATIONS FOR ADDITIONAL INFORMATION.

T4 TELECOMMUNICATIONS BACKBOARD. GRADE A/C 3/4" FIRE RATED PLYWOOD BACKBOARD (UNPAINTED) AT LEAST 4'-0"X4'-0" MOUNTED ON WALL BEHIND RACK AS SHOWN ON PLANS. THE A SIDE SHALL BE EXPOSED TO THE INTERIOR OF THE ROOM AND THE C SIDE PLACED AGAINST THE BUILDING STRUCTURE. SEE TELECOMMUNICATIONS DIVISION 27 SPECIFICATIONS FOR ADDITIONAL INFORMATION.

T5 NEW WALL MOUNTED RACK. MOUNT ON TELECOMMUNICATIONS BACKBOARD. SEE TELECOMMUNICATIONS DIVISION 27 SPECIFICATIONS FOR ADDITIONAL INFORMATION.



2 SOUTH TICKET BOOTH - TECHNOLOGY PLAN
1/8" = 1'-0"



1 NORTH TICKET BOOTH - TECHNOLOGY PLAN
1/8" = 1'-0"

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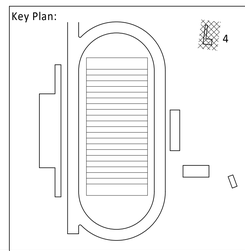
2050003134
MO. CORPORATE NO: E-556D
EXPIRES 12/31/2020

REVISIONS

Number	DESCRIPTION	DATE

Key Plan:



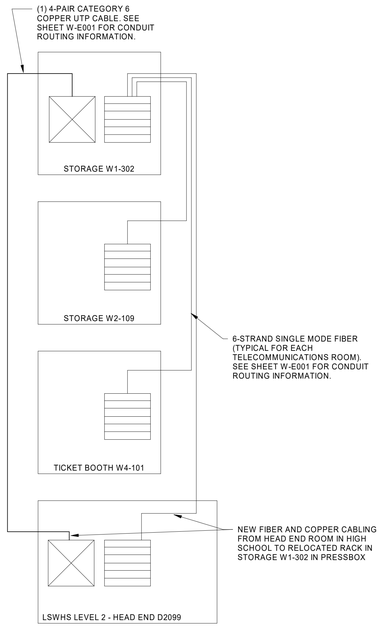
PROJECT NO: 0119-0101
DATE: September 28, 2020

TICKET BOOTH - TECHNOLOGY PLANS

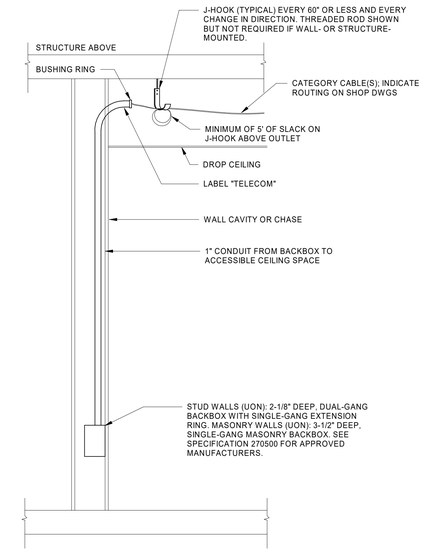
W-TN131

BID SET

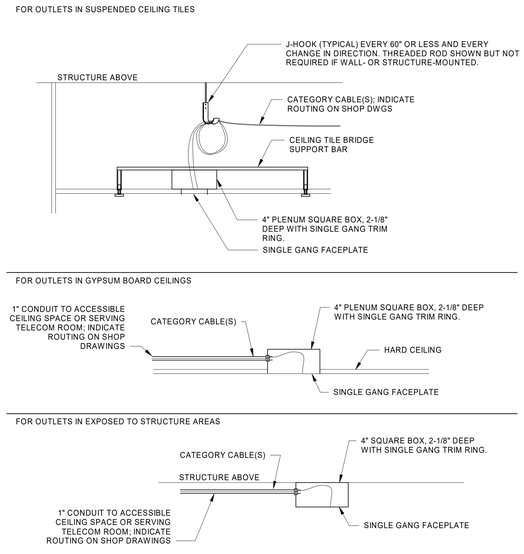
PRINT DATE/TIME: 9/25/2020 12:38:18 PM



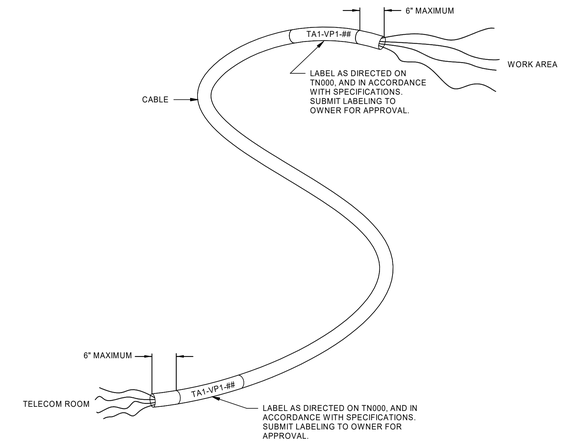
1 RISER DIAGRAM - BACKBONE CABLES
NTS



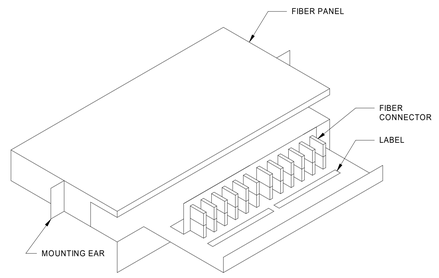
2 COMMUNICATIONS OUTLET MOUNTING
NTS



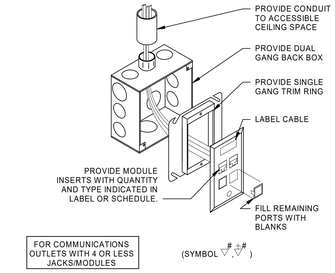
3 CEILING COMM OUTLET 2D
NTS



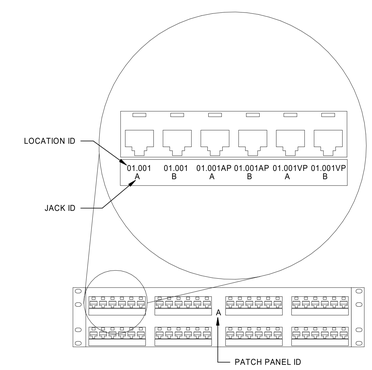
4 LABELING OF HORIZONTAL CABLE
NTS



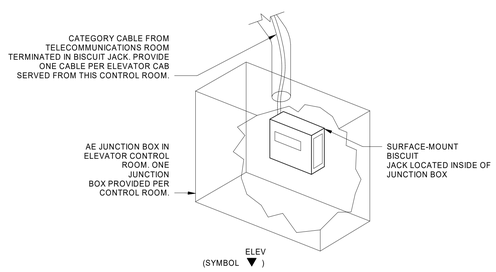
5 FIBER PANEL
NTS



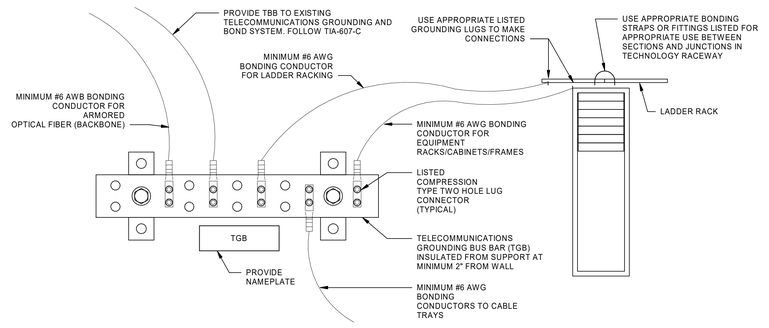
6 SINGLE GANG COMM OUTLET (3D)
NTS



7 TYPICAL PATCH PANEL LABELING DETAIL
NTS



8 COMM OUTLET FOR ELEVATOR - LAND LINE
12" = 1'-0"



9 TGB CONNECTIONS DIAGRAM
NTS

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REVISIONS

Number	DESCRIPTION	DATE

PROJECT NO: 0119-0101
DATE: September 28, 2020

TECHNOLOGY DETAILS

W-TN500

BID SET

PRINT DATE/TIME: 9/25/2020 12:38:21 PM