PROPOSED BODY SHOP BUILDING FOR:

CRASH CHAMPIONS

451 SE OLDHAM PARKWAY UNIT C LEE'S SUMMIT MISSOURI

LOCATION MAP 2
N.T.S.

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CIVIL:

C0	EXISTING CONDITIONS
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C0.2	DEMOLITION PLAN
C1	SITE PLAN
C1.1	ENLARGED SITE PLAN
C1.2	ENLARGED SITE PLAN
C1.3	ENLARGED SITE PLAN
C2	ENLARGED GRADING PLAN
C2.1	ENLARGED GRADING PLAN
C2.2	ENLARGED GRADING PLAN
C3	UTILITY PLAN
C4	EROSION CONTROL PLAN
C4.1	EROSION CONTROL DETAILS
C5	PAVEMENT DETAILS
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A2.1	SCHEDULES
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A3.1	WALL SECTIONS
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S2	ROOF FRAMING PLAN & SECTIONS

MP DESIGN:

M1.0	MECHANICAL PLAN
M2.0	MECHANICAL SCHEDULES
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E1.0	ELECTRICAL POWER PLAN
E2.0	ELECTRICAL LIGHTING PLAN
E3.0	ELECTRICAL SCHEDULES & DETAILS

SHEET INDEX 1

CODES USED

2018 INTERNATIONAL BUILDING CODE (IBC)
2018 INTERNATIONAL MECHANICAL CODE
2018 UNIFORM PLUMBING CODE
2018 INTERNATIONAL FIRE CODE
2017 NATIONAL ELECTRICAL CODE
2012 INTERNATIONAL ENERGY CODE

IBC CHAPTER 3 - USE & CLASSIFICATION

OCCUPANCY GROUPS: GROUP S1
S1 AREA: 4,200 S.F.

IBC CHAPTER 5 - BUILDING AREA & HEIGHTS

CONSTRUCTION TYPE VB
BUILDING FOOT PRINT AREA: 4,200 S.F.
TABLE 506.2 ALLOWS FOR 9,000 SF
ALLOWABLE 1 STORY & 40' IN BUILDING HT.
ACTUAL BUILDING STORIES: 1
ACTUAL BUILDING HT: 22'-3" (ROOF RIDGE LINE)
NON SPRINKLERED BUILDING

IBC CHAPTER 6 - TYPES OF CONSTRUCTION

TABLE 601: FIRE RESISTANT RATINGS

STRUCTURAL FRAME:	0-HOUR
BEARING WALLS: EXT.	0-HOUR
BEARING WALLS: INT.	0-HOUR
NON-BEARING WALLS: EXT.	0-HOUR
NON-BEARING WALLS: INT.	0-HOUR
FLOOR CONSTRUCTION:	0-HOUR
ROOF CONSTRUCTION:	0-HOUR

IBC CHAPTER 8 - INTERIOR FINISHES

EXITS ARE NOT LESS THAN 1/2 THE DIAGONAL DIMENSION APART
ALL INTERIOR FINISH MATERIALS SHALL HAVE A MIN CLASS 'C' FLAME SPREAD CLASSIFICATION OR BETTER

IBC CHAPTER 10 - MEANS OF EGRESS

TABLE 1004.1.2 OCCUPANT LOAD FACTOR
OCCUPANT LOAD = 100 GROSS
4,200/ 100 = 42 O.L.
SECTION 1005 EGRESS WIDTH
.2 X 42 = 8.4" (72" PROVIDED)
SECTION 1006 EXIT & EXIT ACCESS DOORWAYS
2 EXITS REQUIRED, 2 EXITS PROVIDED

SECTION 1006 EXIT ACCESS TRAVEL DISTANCE
TABLE 1006.2; 100' TRAVEL MAX TRAVEL DISTANCE ALLOWED

CODE REVIEW 3

DEFERRED SUBMITTALS:
FOLLOWING BUILDING COMPONETS SHALL BE SUBMITTED TO LEES SUMMIT FOR REVEIW AND APPROVAL PRIOR TO INSTALLATION

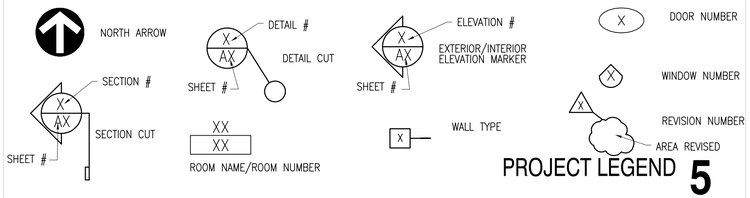
1. ROOF WOOD TRUSSES

A/C	AIR CONDITIONING	EA	EACH	JB	JUNCTION BOX	RO	ROUGH OPENING
AC	ACCOUSTICAL	EJ	EXPANSION JOINT	JT	JOINT	ROW	RIGHT OF WAY
ACT	ACCOUSTICAL TILE	ELEC	ELECTRIC/ELECTRICAL	LAV	LAVATORY	RTU	ROOF TOP UNIT
AFF	ABOVE FINISHED FLOOR	EMERG	EMERGENCY	MAX	MAXIMUM	SCHED	SCHEDULE
ALT	ALTERNATE	EP	ELECTRICAL PANEL	MECH	MECHANICAL	SF	SQUARE FEET
ALUM	ALUMINUM	EQ	EQUAL	MTL	METAL	SIM	SIMILAR
ANOD	ANODIZED	EQUIP	EQUIPMENT	MFG	MANUFACTURER	SPEC	SPECIFICATION
APPROX	APPROXIMATELY	EW	EACH WAY	MIN	MINIMUM	SPK	SPEAKER
ARCH	ARCHITECTURAL	EXH	EXHAUST	MISC	MISCELLANIOUS	STL	STEEL
ASPH	ASPHALT	EXP	EXPANSION	NIC	NOT IN CONTRACT	STRUC	STRUCTURAL
BD	BOARD	FD	FLOOR DRAIN	NOM	NOMINAL	TEMP	TEMPORARY
B.F.F.	BELOW FINISHED FLOOR	FDN	FOUNDATION	NTS	NOT TO SCALE	TYP	TYPICAL
BLDG	BUILDING	FFE	FINISHED FLOOR ELEVATION	OC	ON CENTER	UL	UNDERWRITER LABORATORIES
BRG	BEARING	FLR	FLOOR	OD	OUTSIDE DIAMETER	UNO	UNLESS NOTED OTHERWISE
BTU	BRITISH THERMAL UNIT	FRP	FIBERGLASS REINFORCED PLASTIC	OH	OVERHEAD	UTIL	UTILITIES
CCT	CIRCUIT	FT	FOOT	PL	PLATE	VEST	VESTIBULE
CFM	CUBIC FEET/MINUTE	GA	GAUGE	PLUMB	PLUMBING	VTR	VENT THROUGH ROOF
CJ	CONTROL JOINT	GAL	GALLON	PLYWD	PLYWOOD	W/	WITH
CLG	CEILING	GALV	GALVANIZED	PNL	PANEL	WC	WATER CLOSET
CLR	CLEAR	GND	GROUND	PREFAB	PREFABRICATED	WD	WOOD
CMU	CONCRETE MASONRY UNIT	GYP	GYPSUM	PSF	POUNDS/SQUARE FOOT	WT	WEIGHT
CNDT	CONDUIT	HB	HOSE BIBB	PSI	POUNDS/SQUARE INCH	WWF	WELDED WIRE FABRIC
CO	CLEAN OUT	HDWR	HARDWARE	PVC	POLYVINYL CHLORIDE	YD	YARD
COL	COLUMN	HORZ	HORIZONTAL	QT	QUARRY TILE		
CONC	CONCRETE	HP	HORSE POWER	R/A	RETURN AIR		
CONST	CONSTRUCTION	HR	HOUR	RD	ROOF DRAIN		
CONT	CONTINUOS	HTG	HEATING	RCPT	RECEPTACLE		
CT	CERAMIC TILE	HTR	HEATER	REC	RECESSED		
CW	COLD WATER	HW	HOT WATER	REF	REFERENCE		
DIA	DIAMETER	ID	INSIDE DIAMETER	REINF	REINFORCING		
DIM	DIMENSION	IN	INCHES	REQD	REQUIRED		
DISC	DISCONNECT	INSUL	INSULATION				
DN	DOWN						
DR	DOOR						
DS	DOWNSPOUT						
DTL	DETAIL						

ABBREVIATIONS 6

1. CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS PRIOR TO ANY WORK.
2. SUB-CONTRACTOR TO VERIFY FIELD CONDITIONS AND MEASUREMENTS, AND TO PROMPTLY NOTIFY THE ARCHITECT OF ANY DISCREPANCIES WITH PLANS.
3. REMOVE DEBRIS, RUBBISH, AND OTHER MATERIALS RESULTING FROM CONSTRUCTION OPERATIONS FROM THE BUILDING SITE. PROVIDE AN ON-SITE DUMPSTER FOR DISPOSAL OF DEMOLISHED AND RUINED MATERIALS.
4. UPON COMPLETION OF WORK, REMOVE TOOLS, EQUIPMENT, AND CONSTRUCTION DEBRIS FROM SITE. REMOVE PROTECTIONS AND LEAVE INTERIOR AREAS BROOM CLEAN
5. PROVIDE TEMPORARY BARRICADES AND OTHER FORMS OF PROTECTION AS REQUIRED TO PROTECT GENERAL PUBLIC FROM INJURY DUE TO CONSTRUCTION. PROVIDE PROTECTIVE MEASURES AS REQUIRED TO PROVIDE FREE AND SAFE PASSAGE OF OWNER'S PERSONNEL.
6. ALL WORK SHALL COMPLY WITH APPLICABLE CODES AND INDUSTRY STANDARDS.
7. FRAMING SUBCONTRACTOR IS REQUIRED TO NOTIFY ARCHITECT FOR VERIFICATION & APPROVAL OF LAYOUT PRIOR TO PROCEEDING WITH FRAMING.
8. MAINTAIN EXISTING UTILITES INDICATED TO REMAIN, KEEP IN SERVICE, AND PROTECT AGAINST DAMAGE DURING CONSTRUCTION
9. DISPOSE OF ALL DEBRIS TO APPROVED DUMP SITE.
10. ALL STRUCTURAL WOOD PANELS & WOOD BLOCKING TO BE FIRE TREATED.

GENERAL NOTES 6



PROJECT LEGEND 5

general contractor:
ROSE CONSTRUCTION
P.O. Box 100
Olathe, Kansas 66051
913.782.0777
913.782.0998
www.buildwithrose.com

architect:
ROSE DESIGN GROUP INC.
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(F) 913.782.0998
www.buildwithrose.com

civil engineer:
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plumbing engineer
mechanical engineer
5BY5 ENGINEERS
1828 Walnut Street
Kansas City, Missouri 64108
(P)913-777-4999
5by5eng.com

structural engineer:
BOB D. CAMPBELL & CO., INC.
4338 Belleview
Kansas City, Missouri 64111
(P) 816.531.4144
(F) 816.531.8572
www.bdc-engrs.com

PROJECT TEAM 4

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913-782-0777 FAX: 913-782-0998
P.O. BOX 100 OLATHE, KS 66051
KANSAS STATE CERTIFICATE OF AUTHORITY # A-83
www.BuildWithRose.com

CRASH CHAMPIONS COLLISION REPAIR TEAM

PROPOSED BODY SHOP BUILDING FOR:
CRASH CHAMPIONS
451 SE OLDHAM PARKWAY UNIT C
LEE'S SUMMIT, MISSOURI

NO.	DESCRIPTION	DATE
1	CITY REVIEW COMMENTS	07-07-22

PROJECT NUMBER 22009
DATE ISSUED: 06 / 14 / 22

SHEET NUMBER
CS

COVER SHEET

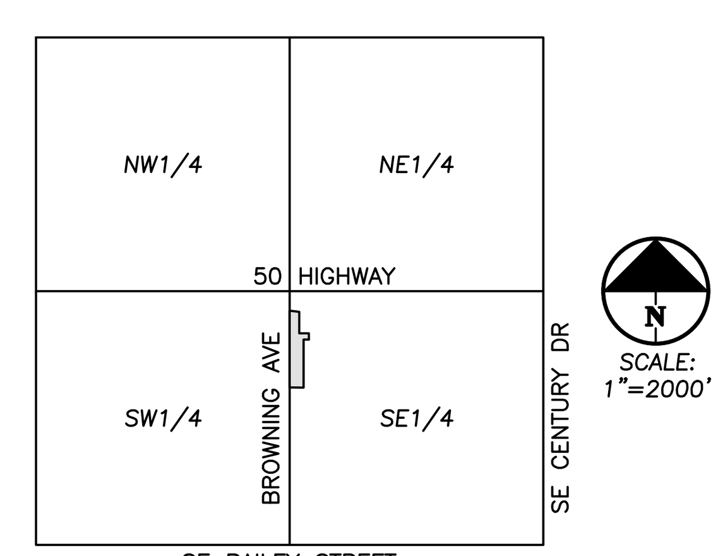
\\phelps-server\projects\P\210229\Dwg\permit plans\EXISTING CONDITIONS.dwg Layout:1 May 24, 2022 - 3:03pm Daniel Finn

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

UTILITY NOTES:
VISUAL INDICATIONS OF UTILITIES ARE AS SHOWN. UNDERGROUND LOCATIONS SHOWN, AS FURNISHED BY THEIR LESSORS, ARE APPROXIMATE AND SHOULD BE VERIFIED IN THE FIELD AT THE TIME OF CONSTRUCTION. FOR ACTUAL FIELD LOCATIONS OF UNDERGROUND UTILITIES CALL 811.

LEGEND

Symbol		Description
●	=	FOUND SURVEY MONUMENT (ORIGIN UNKNOWN UNLESS DESCRIBED)
□	=	SET MAG. NAIL & SHINER, UNLESS OTHERWISE NOTED
○	=	SET 1/2"x24" REBAR WITH "PHELPS CLS-82" PLASTIC CAP
ACU	=	AIR CONDITIONING UNIT
BM#	=	BENCHMARK
C/O	=	CLEAN OUT
EM	=	ELECTRIC METER
EO	=	ELECTRIC OUTLET
FH	=	FIRE HYDRANT
GM	=	GAS METER
GP	=	GUARD POST
GW	=	GUY WIRE
LP	=	LIGHT POLE
LPP	=	LIGHT POWER POLE
LPPTR	=	LIGHT POWER POLE WITH TRANSFORMER(S)
LNS	=	LANDSCAPE
MB	=	MAIL BOX
PP	=	POWER POLE
PPTR	=	POWER POLE WITH TRANSFORMER(S)
PVCR	=	PVC RISER
RD	=	ROOF DRAIN
RWM	=	RIGHT OF WAY MARKER
SSMH	=	SANITARY SEWER MANHOLE
STMH	=	STORM SEWER MANHOLE
TR	=	TELEPHONE RISER
TVR	=	TELEVISION RISER
WM	=	WATER METER
WV	=	WATER VALVE
YL	=	YARD LIGHT
	=	BUSH
	=	CEDAR OR EVERGREEN TREE
	=	DECIDUOUS TREE
F.F.	=	FINISH FLOOR
U/E	=	UTILITY EASEMENT
R/W	=	RIGHT-OF-WAY
—— FO ——	=	FIBER OPTIC LINE
—— W ——	=	WATER LINE
—— G ——	=	GAS LINE
—— OHP ——	=	OVERHEAD POWER LINE
—— SS ——	=	SANITARY SEWER LINE
—x—x—x—	=	FENCE LINE



VICINITY MAP
SEC. 8-47-31

LEGAL DESCRIPTION:

ALL OF BLOCK F, BROWNING INDUSTRIAL PARK EAST, BLOCK F, A SUBDIVISION IN LEE'S SUMMIT, JACKSON COUNTY, MISSOURI, ACCORDING TO THE RECORDED PLAT THEREOF.

AREA = 107,552± SQ.FT. / 2.469± ACRES

TITLE NOTE:

TITLE INFORMATION SHOWN HERE WAS TAKEN FROM FIRST AMERICAN TITLE INSURANCE COMPANY OWNER'S POLICY FOR TITLE INSURANCE NO. 5011429-0209123e, FILE NO. 227732 DATED JANUARY 5, 2021 AT 08:31 A.M.

EXCEPTIONS FROM COVERAGE:

14. TERMS AND PROVISION OF THE COVENANTS AND RESTRICTIONS CONTAINED IN THE DEED RECORDED JANUARY 10, 1986 AS DOCUMENT NO. I-667399 IN BOOK I-1500 AT PAGE 2074. [AFFECTS A PORTION OF THE PROPERTY, CONTAINS CERTAIN RESTRICTIONS BLANKET IN NATURE]

15. TERMS AND PROVISIONS OF THE EASEMENT RECORDED JANUARY 10, 1986 AS DOCUMENT NO. I-667400 IN BOOK I-1500 AT PAGE 2075, AS MORE FULLY CONTAINED THEREIN. [AFFECTS PROPERTY, AS SHOWN]

16. LACK OF DIRECT ACCESS TO U.S. ROUTE 50 FROM THE LAND, SUCH RIGHT OF ACCESS HAVING BEEN GRANTED BY THE DOCUMENT RECORDED AUGUST 4, 1966 AS DOCUMENT NO. 891954 IN BOOK 1843 AT PAGE 662. [AFFECTS PROPERTY, ACCESS GRANTED TO OLDHAM PARKWAY AS BEING AN OUTER ROAD]

SURVEY NOTES:

1. THERE IS A TOTAL OF 6 MARKED PARKING SPACES LOCATED ON SUBJECT PROPERTY. PARKING SPACES ARE MARKED WITH STRIPES AS SHOWN HEREON.
2. THERE IS NO VISIBLE EVIDENCE OF EARTH MOVING WORK, BUILDING CONSTRUCTION OR BUILDING ADDITIONS.
3. THERE IS NO VISIBLE EVIDENCE OF CHANGES IN STREET RIGHT OF WAY LINES. THERE IS NO VISIBLE EVIDENCE OF RECENT STREET OR SIDEWALK CONSTRUCTION OR REPAIRS OBSERVED IN THE PROCESS OF CONDUCTING THE FIELDWORK.
4. CONTOURS SHOWN HEREON ARE AT 1 FOOT INTERVALS.
5. THIS PROPERTY HAS DIRECT PHYSICAL ACCESS SE OLDHAM PARKWAY.
6. THERE ARE NO VISIBLE ENCROACHMENTS ONTO THE SUBJECT PROPERTY BY STREETS, ALLEYS, BUILDINGS, STRUCTURES OR OTHER IMPROVEMENTS, EXCEPT AS SHOWN ON THIS SURVEY.

APPARENT ENCROACHMENTS:

1. THE NE CORNER OF THE MAIN BUILDING EXTENDS 0.3' ACROSS THE BUILDING SETBACK LINE.

FLOOD NOTE:

THIS PROPERTY LIES WITHIN ZONE X, DEFINED AS AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN, AS SHOWN ON THE FLOOD INSURANCE RATE MAP PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY FOR THE CITY OF LEE'S SUMMIT, COMMUNITY NO. 290174, JACKSON COUNTY, MISSOURI, MAP NO. 29095C0438G, AND DATED JANUARY 20, 2017.

UTILITY NOTE:

UTILITIES SHOWN HEREON WERE TAKEN FROM FIELD LOCATES BY THE UTILITY COMPANIES OR THEIR RESPECTIVE REPRESENTATIVES AND MAPPING PROVIDED BY THE UTILITY COMPANIES AND ARE NOT THE RESULT OF AN ACTUAL DIG. LOCATIONS SHOWN ARE APPROXIMATE AND PEI DOES NOT GUARANTEE THAT ALL UTILITIES ARE SHOWN HEREON. ONE CALL TICKET NO.(S) ARE

BEFORE DIGGING, CONTACT THE MISSOURI ONE CALL SYSTEM AT 1 800 DIG-RITE OR 811 FOR UTILITY LOCATES.

ZONING:

NOTE: THIS SURVEYOR WAS NOT SUPPLIED A ZONING REPORT OR LETTER FOR THIS SURVEY.

BENCHMARK: VERTICAL DATUM = NAVD88 BASED ON GPS OBSERVATION USING MODOT VRS

1. R.R. SPIKE IN W. FACE POWER POLE NEAR SE COR. #453 BLDG.
   ELEVATION = 1043.66
2. R.R. SPIKE IN E. FACE POWER POLE ON W. PROPERTY LINE NEAR SW COR. #451 BLDG.
   ELEVATION = 1043.33

N

SCALE: 1"=40'

0' 40' 80'

BEARING BASIS: RECORDED PLAT OF "BROWNING INDUSTRIAL PARK EAST, BLOCK F"

STATE OF MISSOURI
JUDD DAVID CLAUSSEN
NUMBER PE-29850
PROFESSIONAL ENGINEER
5/24/22

PHELPS ENGINEERING, INC.
1270 N. Winchester
Olathe, Kansas 66061
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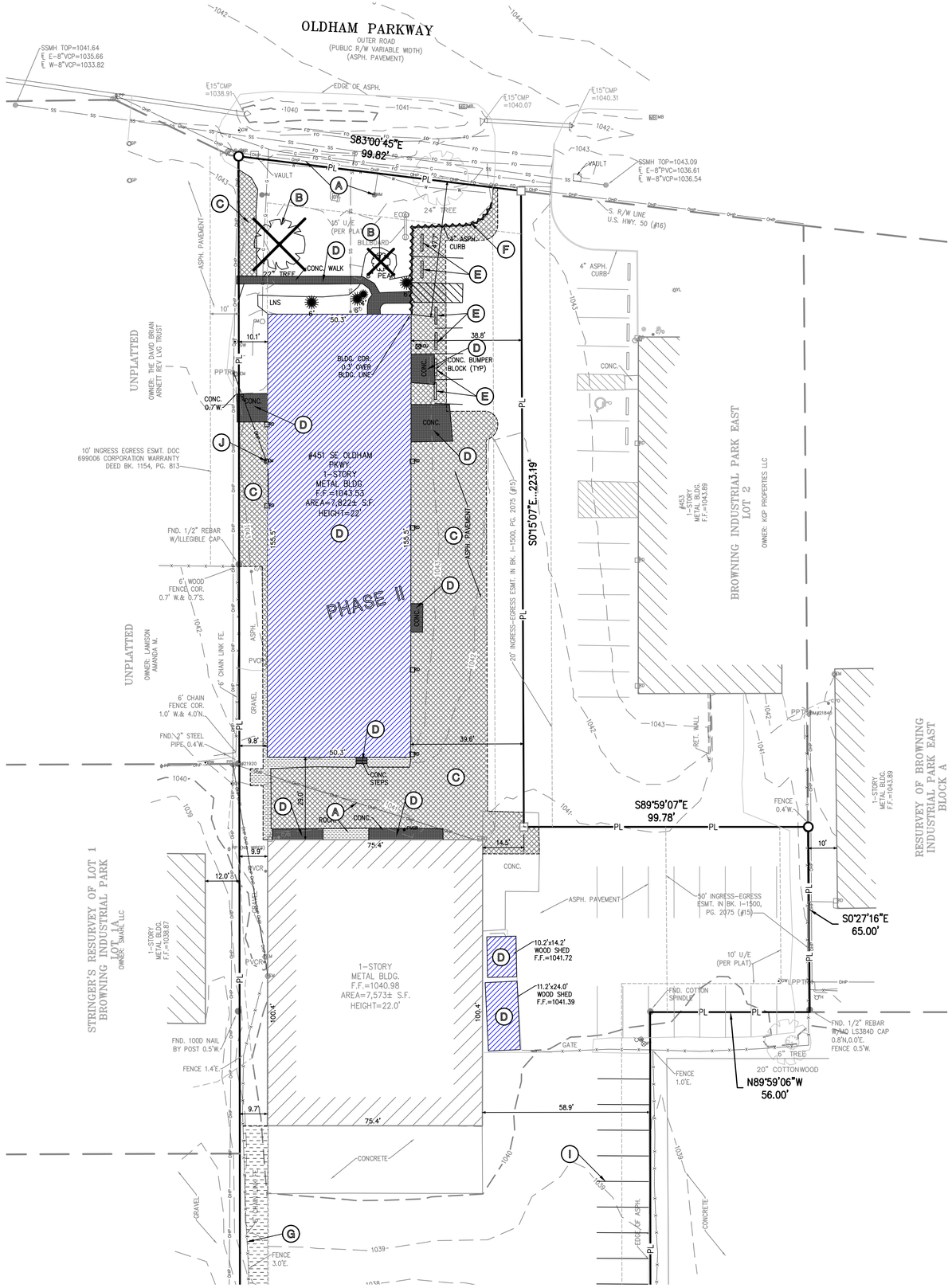
PLANNING
ENGINEERING
IMPLEMENTATION

EXISTING CONDITIONS
CRASH CHAMPIONS
451 S.E. OLDHAM PARKWAY
LEE'S SUMMIT, JACKSON COUNTY, MO

No.	Date	Revisions:	By	App.

PROJECT NO. 210229
DATE: 05-24-22 | DRAWN: SNH
CHECKED: DAF | APPROVED: JDC
CERTIFICATE OF AUTHORIZATION KANSAS
LAND SURVEYING - LS-82
ENGINEERING - E-391
CERTIFICATE OF AUTHORIZATION MISSOURI
LAND SURVEYING-2007001128
ENGINEERING-2007005058

SHEET
C0



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

UTILITY NOTES:
VISUAL INDICATIONS OF UTILITIES ARE AS SHOWN. UNDERGROUND LOCATIONS SHOWN, AS FURNISHED BY THEIR LESSORS, ARE APPROXIMATE AND SHOULD BE VERIFIED IN THE FIELD AT THE TIME OF CONSTRUCTION. FOR ACTUAL FIELD LOCATIONS OF UNDERGROUND UTILITIES CALL 811.

DEMOLITION NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR THE DEMOLITION, REMOVAL, AND DISPOSAL (IN A LOCATION APPROVED BY ALL GOVERNING AUTHORITIES) ALL CURBS, PARKING, DRIVES, DRAINAGE STRUCTURES, UTILITIES, ETC., SUCH THAT THE IMPROVEMENTS SHOWN ON THE REMAINING PLANS CAN BE CONSTRUCTED. ALL FACILITIES TO BE REMOVED SHALL BE UNDERCUT TO SUITABLE MATERIAL AND BROUGHT TO GRADE WITH SUITABLE COMPACTED FILL MATERIAL.

2. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL DEBRIS FROM THE SITE AND DISPOSING THE DEBRIS IN A LAWFUL MANNER. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FOR DEMOLITION AND DISPOSAL.

3. DAMAGE TO ALL EXISTING CONDITIONS TO REMAIN WILL BE REPLACED AT CONTRACTOR'S EXPENSE.

4. CONTRACTOR MUST COORDINATE WITH OWNER PRIOR TO ANY CONSTRUCTION TO ESTABLISH CUSTOMER ACCESS AND TRAFFIC FLOW DURING ALL PHASES.

5. REFER TO THE BUILDING PLANS FOR SITE LIGHTING ELECTRICAL MODIFICATIONS (IF ANY) TO THE EXISTING SYSTEM.

DEMOLITION KEY NOTES:

(A) ALL UTILITIES SERVING STRUCTURES IMMEDIATELY SURROUNDING THE DEMOLITION BOUNDARY SHALL REMAIN IN SERVICE THROUGHOUT THE PROJECT. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT ANY DAMAGE TO SUCH UTILITIES. TYPICAL LOCATION.

(B) REMOVE EXISTING TREE (TYPICAL).

(C) THE CONTRACTOR SHALL REMOVE EXISTING DRIVE ENTRANCE & EXISTING ASPHALT PARKING LOT. REMOVE EXISTING ASPHALT, CONCRETE, AND THE SUB-BASE GRAVEL TO THE NATURAL SOIL ELEVATION.

(D) THE CONTRACTOR SHALL REMOVE ALL PRE-EXISTING STRUCTURES, FOUNDATIONS, FOOTINGS, PIERS, WATER WELLS, SEPTIC TANKS, LATERAL LINES, BURIED DEBRIS, MISCELLANEOUS CONCRETE, ETC. WHICH MAY BE ENCOUNTERED DURING DEMOLITION ACTIVITIES. THE CONTRACTOR SHALL DISPOSE OF THESE MATERIALS IN A LOCATION APPROVED BY ALL GOVERNING AUTHORITIES.

SHADED AREAS INDICATE MAIN STRUCTURES AND OUTBUILDINGS TO BE DEMOLISHED. IN ADDITION TO SHADED DEMOLITION AREAS, ALL MISCELLANEOUS CONCRETE, STONE STRUCTURES, OUTBUILDINGS, PRIVATE SIDEWALKS, HAND RAILINGS, RETAINING WALLS, SIGNS, PATIOS, FOUNDATION WALLS AND FOOTINGS ASSOCIATED WITH THE STRUCTURES SHALL BE REMOVED UNLESS OTHERWISE NOTED ON THE PLANS. TYPICAL LOCATION.

THE CONTRACTOR SHALL BE REQUIRED TO BACKFILL ALL EXCAVATIONS/DEPRESSIONS CREATED BY THE REMOVAL OF STRUCTURES, FOUNDATIONS, FOOTINGS, PAVING, SEPTIC TANKS, WELLS, PIPES, TREE ROOTS, DEBRIS AND UTILITY STRUCTURES, ETC. ALL EXCAVATIONS SHALL BE BACKFILLED TO EXISTING GROUND ELEVATIONS ON ALL SIDES OF THE EXCAVATION.

(E) THE CONTRACTOR SHALL REMOVE CONCRETE STOP BLOCKS.

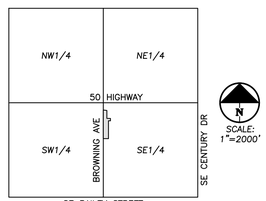
(F) REMOVE EXISTING 4" ASPHALT CURB.

(G) EXISTING FENCE TO REMAIN.

(H) EXISTING GATE TO REMAIN.

(I) EXISTING STRIPING TO BE REMOVED.

(J) REMOVE & RELOCATE EXISTING POWER SERVICE (SEE UTILITY PLAN).



VICINITY MAP
SEC. 8-47-31

LEGEND

- PL — PROPERTY LINE
- LL — LOT LINE
- R/W — RIGHT-OF-WAY
- REMOVE EXISTING CURB & GUTTER
- EXISTING BUILDING TO BE REMOVED
- EXISTING ASPHALT PAVEMENT TO BE REMOVED
- EXISTING CONCRETE PAVEMENT/SIDEWALK TO BE REMOVED
- EXISTING GRAVEL TO BE REMOVED
- EXISTING TREE TO REMAIN
- REMOVE TREE
- BT — EXISTING BURIED TELEPHONE
- CATV — EXISTING CABLE TELEVISION LINE
- FO — EXISTING FIBER OPTIC LINE
- W — EXISTING WATER LINE
- G — EXISTING GAS LINE
- BE — EXISTING BURIED ELECTRIC
- OHP — EXISTING OVERHEAD POWER LINE
- SS — EXISTING SANITARY SEWER
- EXISTING STORM SEWER
- EXISTING FIRE HYDRANT
- LP — EXISTING LIGHT POLE
- EXISTING CHAIN LINK FENCE

STATE OF MISSOURI
JUDD DAVID CLAUSSEN
NUMBER PE-2009010
5/24/22
LICENSED PROFESSIONAL ENGINEER

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PLANNING
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IMPLEMENTATION

DEMOLITION PLAN

CRASH CHAMPIONS
451 S.E. OLDHAM PARKWAY
LEE'S SUMMIT, JACKSON COUNTY, MO

No.	Date	Revisions:	By	Appr.

PROJECT NO. 210229
DATE 05-24-22 | DRAWN SNH
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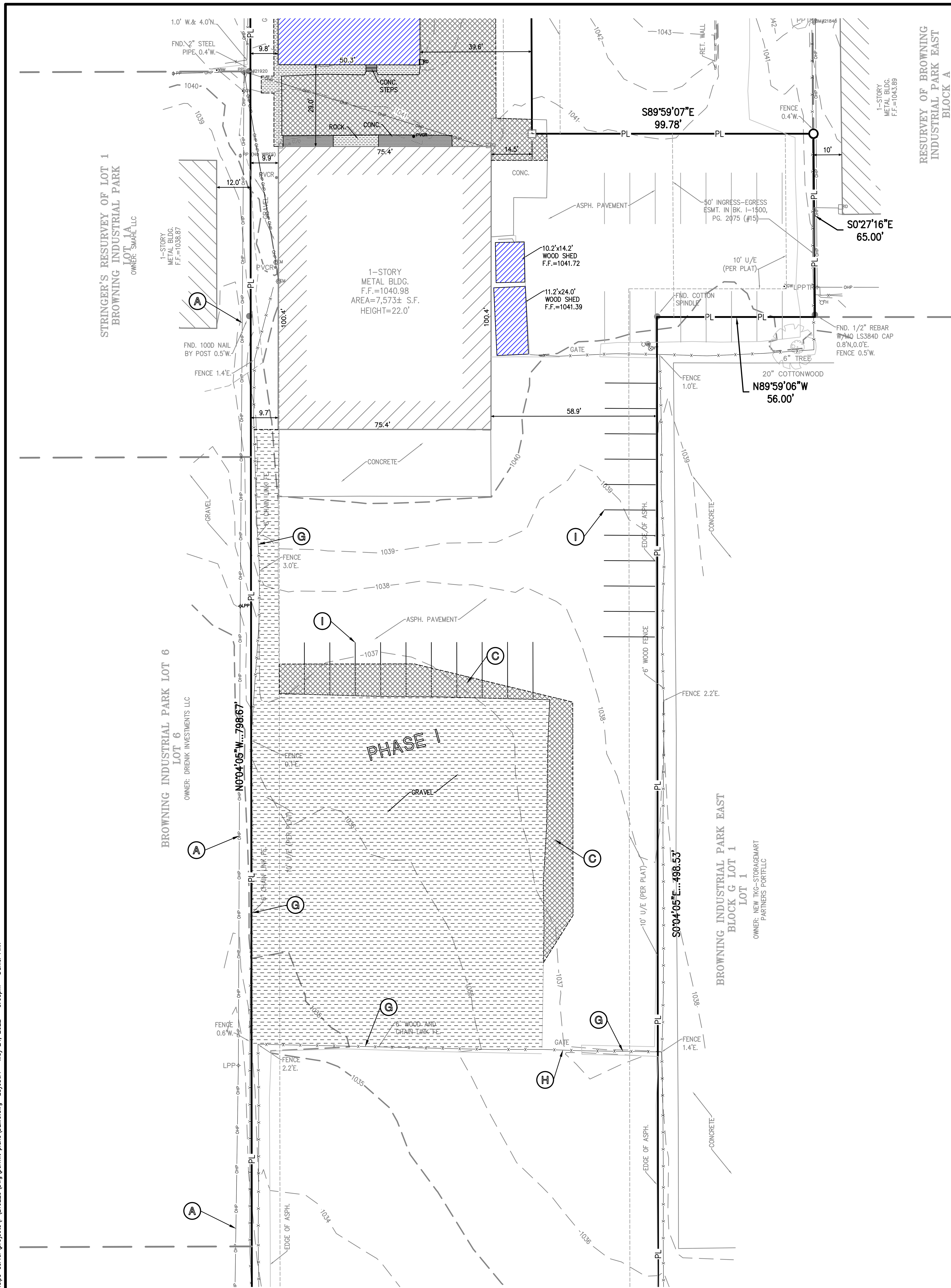
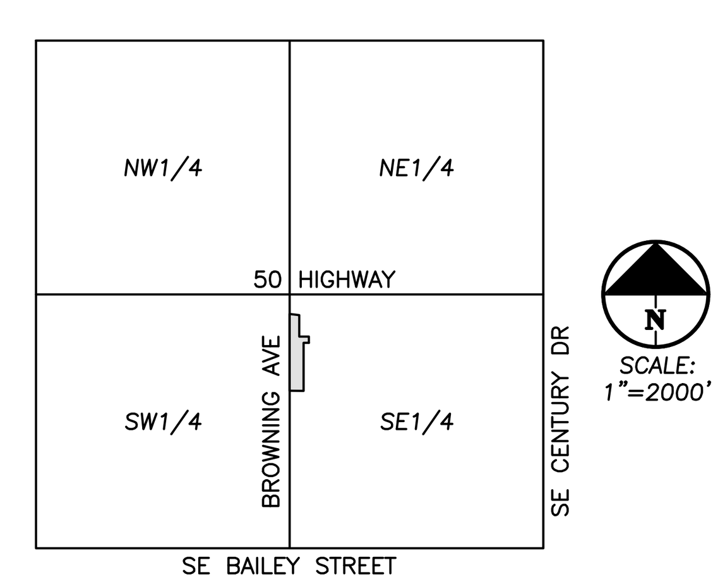
CERTIFICATE OF AUTHORIZATION LAND SURVEYING-2007001128 ENGINEERING-2007005928

SHEET
C0.1

\\phelps-server\projects\P\210229\Dwg\permit plans\DEMO.dwg Layout:2 May 24, 2022 - 3:03pm Daniel Finn





VICINITY MAP
SEC. 8-47-31

Know what's **below.**
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DEMOLITION NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR THE DEMOLITION, REMOVAL, AND DISPOSAL (IN A LOCATION APPROVED BY ALL GOVERNING AUTHORITIES) ALL CURBS, PARKING, DRIVES, DRAINAGE STRUCTURES, UTILITIES, ETC., SUCH THAT THE IMPROVEMENTS SHOWN ON THE REMAINING PLANS CAN BE CONSTRUCTED. ALL FACILITIES TO BE REMOVED SHALL BE UNDERCUT TO SUITABLE MATERIAL AND BROUGHT TO GRADE WITH SUITABLE COMPACTED FILL MATERIAL.

2. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL DEBRIS FROM THE SITE AND DISPOSING THE DEBRIS IN A LAWFUL MANNER. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FOR DEMOLITION AND DISPOSAL.

3. DAMAGE TO ALL EXISTING CONDITIONS TO REMAIN WILL BE REPLACED AT CONTRACTOR'S EXPENSE.

4. CONTRACTOR MUST COORDINATE WITH OWNER PRIOR TO ANY CONSTRUCTION TO ESTABLISH CUSTOMER ACCESS AND TRAFFIC FLOW DURING ALL PHASES.

5. REFER TO THE BUILDING PLANS FOR SITE LIGHTING ELECTRICAL MODIFICATIONS (IF ANY) TO THE EXISTING SYSTEM.

DEMOLITION KEY NOTES:

(A) ALL UTILITIES SERVING STRUCTURES IMMEDIATELY SURROUNDING THE DEMOLITION BOUNDARY SHALL REMAIN IN SERVICE THROUGHOUT THE PROJECT. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT ANY DAMAGE TO SUCH UTILITIES. TYPICAL LOCATION.

(B) REMOVE EXISTING TREE (TYPICAL).

(C) THE CONTRACTOR SHALL REMOVE EXISTING DRIVE ENTRANCE & EXISTING ASPHALT PARKING LOT. REMOVE EXISTING ASPHALT, CONCRETE, AND THE SUB-BASE GRAVEL TO THE NATURAL SOIL ELEVATION.

(D) THE CONTRACTOR SHALL REMOVE ALL PRE-EXISTING STRUCTURES, FOUNDATIONS, FOOTINGS, PIERS, WATER WELLS, SEPTIC TANKS, LATERAL LINES, BURIED DEBRIS, MISCELLANEOUS CONCRETE, ETC. WHICH MAY BE ENCOUNTERED DURING DEMOLITION ACTIVITIES. THE CONTRACTOR SHALL DISPOSE OF THESE MATERIALS IN A LOCATION APPROVED BY ALL GOVERNING AUTHORITIES.

SHADED AREAS INDICATE MAIN STRUCTURES AND OUTBUILDINGS TO BE DEMOLISHED. IN ADDITION TO SHADED DEMOLITION AREAS, ALL MISCELLANEOUS CONCRETE, STONE STRUCTURES, OUTBUILDINGS, PRIVATE SIDEWALKS, HAND RAILINGS, RETAINING WALLS, SIGNS, PATIOS, FOUNDATION WALLS AND FOOTINGS ASSOCIATED WITH THE STRUCTURES SHALL BE REMOVED UNLESS OTHERWISE NOTED ON THE PLANS. TYPICAL LOCATION.

THE CONTRACTOR SHALL BE REQUIRED TO BACKFILL ALL EXCAVATIONS/DEPRESSIONS CREATED BY THE REMOVAL OF STRUCTURES, FOUNDATIONS, FOOTINGS, PAVING, SEPTIC TANKS, WELLS, PIPES, TREE ROOTS, DEBRIS AND UTILITY STRUCTURES, ETC. ALL EXCAVATIONS SHALL BE BACKFILLED TO EXISTING GROUND ELEVATIONS ON ALL SIDES OF THE EXCAVATION.

(E) THE CONTRACTOR SHALL REMOVE CONCRETE STOP BLOCKS.

(F) REMOVE EXISTING 4" ASPHALT CURB.

(G) EXISTING FENCE TO REMAIN.

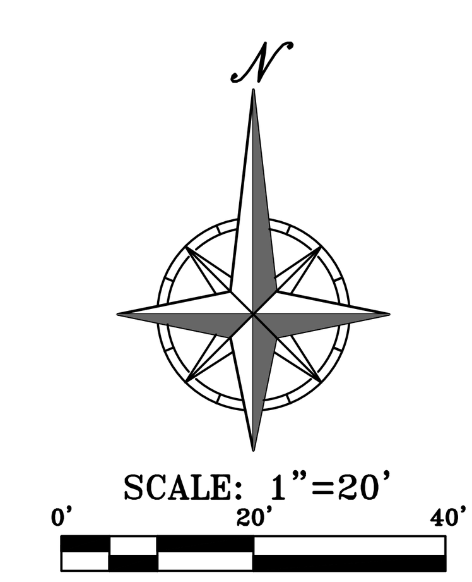
(H) EXISTING GATE TO REMAIN.

(I) EXISTING STRIPING TO BE REMOVED.

(J) REMOVE & RELOCATE EXISTING POWER SERVICE (SEE UTILITY PLAN).

LEGEND

Symbol	Description
—PL—	PROPERTY LINE
— LL —	LOT LINE
—R/W—	RIGHT-OF-WAY
	REMOVE EXISTING CURB & GUTTER
	EXISTING BUILDING TO BE REMOVED
	EXISTING ASPHALT PAVEMENT TO BE REMOVED
	EXISTING CONCRETE PAVEMENT/SIDEWALK TO BE REMOVED
	EXISTING GRAVEL TO BE REMOVED
	EXISTING TREE TO REMAIN
	REMOVE TREE
BT	EXISTING BURIED TELEPHONE
CATV	EXISTING CABLE TELEVISION LINE
FO	EXISTING FIBER OPTIC LINE
W	EXISTING WATER LINE
G	EXISTING GAS LINE
BE	EXISTING BURIED ELECTRIC
OHP	EXISTING OVERHEAD POWER LINE
SS	EXISTING SANITARY SEWER
	EXISTING STORM SEWER
	EXISTING FIRE HYDRANT
LP	EXISTING LIGHT POLE
	EXISTING CHAIN LINK FENCE



STATE OF MISSOURI
JUDD DAVID CLAUSSEN
NUMBER PE-29850
PROFESSIONAL ENGINEER
5/24/22

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PLANNING
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IMPLEMENTATION

DEMOLITION PLAN
CRASH CHAMPIONS
451 S.E. OLDHAM PARKWAY
LEE'S SUMMIT, JACKSON COUNTY, MO

No.	Date	Revisions:	By	App.

PROJECT NO. 210229
DATE: 05-24-22 | DRAWN: SNH
CHECKED: DAF | APPROVED: JDC
CERTIFICATE OF AUTHORIZATION
KANSAS
LAND SURVEYING - LS-82
ENGINEERING - E-391
CERTIFICATE OF AUTHORIZATION
MISSOURI
LAND SURVEYING-2007001128
ENGINEERING-2007005058

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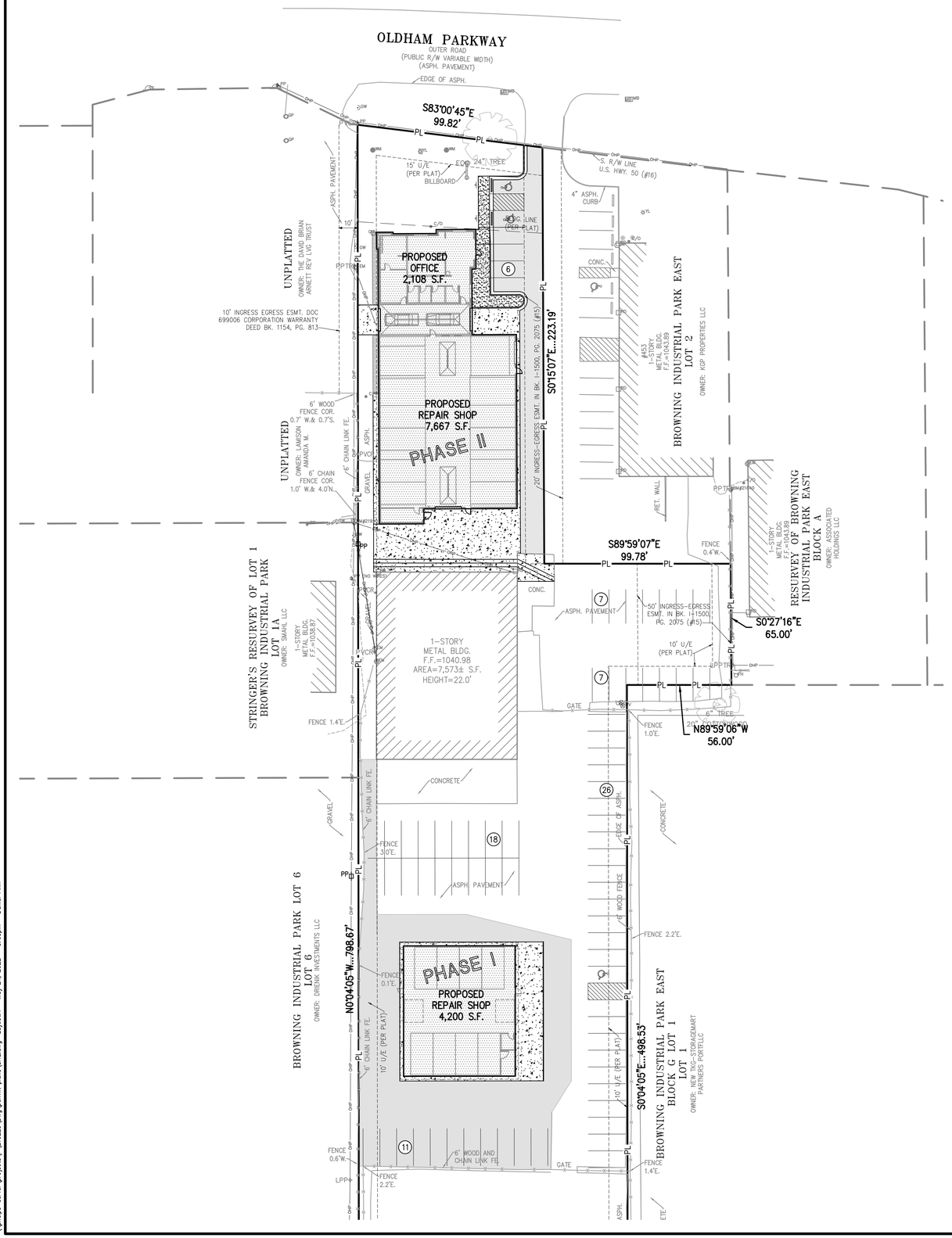

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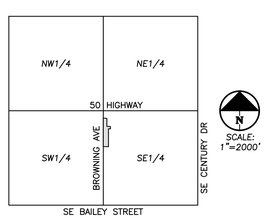
BUILDING & LOT DATA

Site Area	107,552 S.F./2.47 Ac.
Zoning	PI (Planned Industrial)
Proposed Building No. of Stories	1 Story
Total Building S.F.	
Existing Building	7,573 S.F.
Proposed Office	2,108 S.F.
Proposed Repair Shop (North)	7,667 S.F.
Proposed Repair Shop (South)	4,200 S.F.
Total	21,548 S.F.
Floor Area Ratio (FAR)	0.2003

PARKING SUMMARY

Parking Required	
Automobile Service (3 per service bay, 19 service bays)	57 Spaces
Parking Provided	
Standard Parking Provided	72 Spaces
Handicap Accessible Parking Spaces Provided	3 Spaces
Total Parking Provided	75 Spaces



VICINITY MAP
SEC. 8-47-31

LEGEND

- PL — PROPERTY LINE
- LL — LOT LINE
- R/W — RIGHT-OF-WAY
- 2' CURB & GUTTER
- 6" CURB
- B/L — BUILDING SETBACK LINE
- P/S — PARKING SETBACK LINE
- L/S — LANDSCAPE SETBACK LINE
- PROPOSED BUILDING
- ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- CONCRETE SIDEWALK
- PROPOSED 2" ASPHALT MILL & OVERLAY
- ROCK STRIP

SITE PLAN NOTES:

1. All construction materials and procedures on this project shall conform to the latest revision of the following governing requirements, incorporated herein by reference:
   A) City ordinances & O.S.H.A. Regulations.
   B) The City of Lee's Summit Technical Specifications and Municipal Code.
   C) All construction shall follow the City of Lee's Summit Design and Construction Manual as adopted by Ordinance 5813. Where discrepancies exist between these plans and the Design and Construction Manual, the Design and Construction Manual shall prevail.

2. The contractor shall have one (1) signed copy of the plans (approved by the City) and one (1) copy of the appropriate Design and Construction Standards and Specifications at the job site at all times.

3. The contractor will be responsible for securing all permits, bonds and insurance required by the contract documents, City of Lee's Summit, Missouri, and all other governing agencies (including local, county, state and federal authorities) having jurisdiction over the work proposed by these construction documents. The cost for all permits, bonds and insurance shall be the contractors responsibility and shall be included in the bid for the work.

4. The contractor is responsible for coordination of his and his sub-contractor's work. The contractor shall assume all responsibility for protecting and maintaining his work during the construction period and between the various trades/sub-contractors constructing the work.

5. The demolition and removal(or relocation) of existing pavement, curbs, structures, utilities, and all other features necessary to construct the proposed improvements, shall be performed by the contractor. All waste material removed during construction shall be disposed off the project site. The contractor shall be responsible for all permits for hauling and disposing of waste material. The disposal of waste material shall be in accordance with all local, state and federal regulations.

6. Contractor shall be responsible for all relocations, including but not limited to, all utilities, storm drainage, sanitary sewer services, signs, traffic signals & poles, etc. as required. All work shall be in accordance with governing authorities specifications and shall be approved by such. All cost shall be included in base bid.

7. 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. The contractor shall be responsible for contacting all utility companies for an exact field location of each utility prior to any construction. All underground utilities shall be protected at the contractor's expense. All utilities, shown and unshown, damaged through the negligence of the contractor shall be repaired or replaced by the contractor at his expense.

8. The contractor will be responsible for all damage to existing utilities, pavement, fences, structures and other features not designated for removal. The contractor shall repair all damages at his expense.

9. The contractor shall verify the flow lines of all existing storm or sanitary sewer connections and utility crossings prior to the start of construction. Notify the engineer of any discrepancies.

10. SAFETY NOTICE TO CONTRACTOR: In accordance with generally accepted construction practices, the contractor shall 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. Any construction observation by the engineer of the contractor's performance is not intended to include review of the adequacy of the contractor's safety measures, in, on or near the construction site.

11. All site concrete (curbs, pavements, sidewalks, etc.) shall meet kansas city materials metro board (kcmmb) mix design specifications for 4,000 p.s.i. air entrained concrete. APWA detail references are provided for all geometrical and other design information.

12. Refer to the building plans for site lighting electrical requirements, including conduits, pole bases, pull boxes, etc.

SITE DIMENSION NOTES:

1. BUILDING TIES SHOWN ARE TO THE OUTSIDE FACE OF PROPOSED WALLS. THE SUBCONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR SPECIFIC DIMENSIONS AND LAYOUT INFORMATION FOR THE BUILDINGS.

2. ALL DIMENSIONS SHOWN FOR THE PARKING LOT AND CURBS ARE MEASURED FORM BACK OF CURB TO BACK OF CURB.

PAVEMENT MARKING AND SIGNAGE NOTES:

1. PARKING STALL MARKING STRIPES SHALL BE FOUR INCH (4") WIDE WHITE STRIPES. DIRECTIONAL ARROW AND HANDICAP STALL MARKINGS SHALL BE FURNISHED AT LOCATIONS SHOWN ON PLANS.

2. HANDICAP PAVEMENT MARKINGS AND SIGNS SHALL CONFORM TO ALL FEDERAL (AMERICANS WITH DISABILITIES ACT) AND STATE LAWS AND REGULATIONS.

3. TRAFFIC CONTROL DEVICES AND PAVEMENT MARKINGS SHALL CONFORM TO THE REQUIREMENTS OF THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES".

4. STOP SIGNS SHALL BE PROVIDED AT ALL LOCATIONS AS SHOWN ON PLANS AND SHALL CONFORM TO THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES". SIGNS SHALL BE 18" X 12", 18 GAUGE STEEL AND SHALL BE ENGINEER GRADE REFLECTIVE.

5. TRAFFIC CONTROL AND PAVEMENT MARKINGS SHALL BE PAINTED WITH A WHITE SHERWIN WILLIAMS S-W TRAFFIC MARKING SERIES B-29Y2 OR APPROVED EQUAL. THE PAVEMENT MARKING SHALL BE APPLIED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. APPLY ON A CLEAN, DRY SURFACE AND AT A SURFACE TEMPERATURE OF NOT LESS THAN 70°F AND THE AMBIENT AIR TEMPERATURE SHALL NOT BE LESS THAN 60°F AND RISING. TWO COATS SHALL BE APPLIED.

LEGAL DESCRIPTION:

ALL OF BLOCK F, BROWNING INDUSTRIAL PARK EAST, BLOCK F, A SUBDIVISION IN LEE'S SUMMIT, JACKSON COUNTY, MISSOURI, ACCORDING TO THE RECORDED PLAT THEREOF.
AREA = 107,552± SQ.FT. / 2.469± ACRES

PRE-CONSTRUCTION MEETING NOTE:

THE CONTRACTOR SHALL CONTACT THE CITY'S DEVELOPMENT SERVICES ENGINEERING INSPECTION TO SCHEDULE A PRE-CONSTRUCTION MEETING WITH A FIELD ENGINEERING INSPECTOR PRIOR TO ANY LAND DISTURBANCE WORK AT (816) 969-1200.

OIL-GAS WELLS:

ACCORDING TO THE MISSOURI DEPARTMENT OF NATURAL RESOURCES STATE OIL & GAS COUNCIL WELLS, LOCATED AT www.dnr.mo.gov/geology/geosrv/oilandgas.htm, THERE ARE NO OIL OR GAS WELLS ON THE PROPERTY SHOWN HEREON.

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PLANNING
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IMPLEMENTATION

SITE PLAN
CRASH CHAMPIONS
451 S.E. OLDHAM PARKWAY
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CERTIFICATE OF AUTHORIZATION LAND SURVEYING-2007001128
ENGINEERING-2007005358

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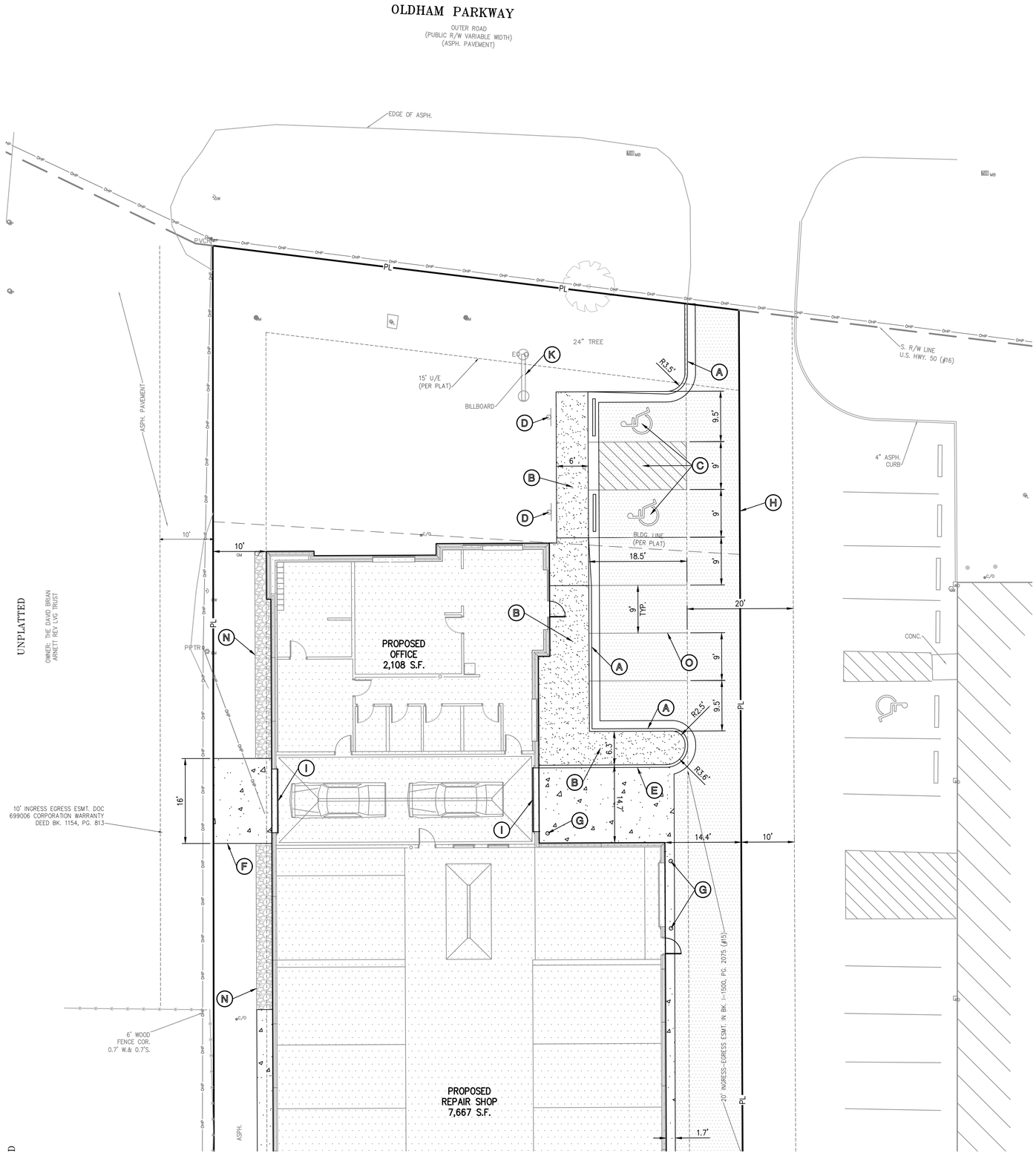

SITE KEY NOTES:

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- (H) EDGE MILL & ASPHALT OVERLAY.
- (I) PROPOSED OVERHEAD DOOR (RE: ARCH PLANS).
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- (K) EX. SIGN TO REMAIN.
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- (M) INSTALL 3' CONCRETE APRON.
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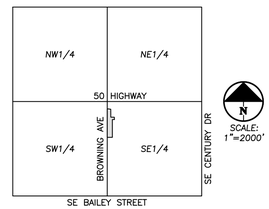

VICINITY MAP
SEC. 8-47-31

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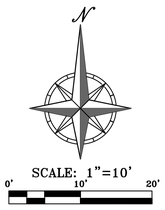

STATE OF MISSOURI
JUDD DAVID CLAUSSEN
NUMBER PE-2004010
5/24/22
REGISTERED ENGINEER

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PLANNING
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IMPLEMENTATION

ENLARGED SITE PLAN

CRASH CHAMPIONS
451 S.E. OLDHAM PARKWAY
LEE'S SUMMIT, JACKSON COUNTY, MO

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CHECKED: DAF
APPROVED: JDC

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MISSOURI ENGINEERING – E-391

CERTIFICATE OF AUTHORIZATION
LAND SURVEYING-2007031128
ENGINEERING-2007032628

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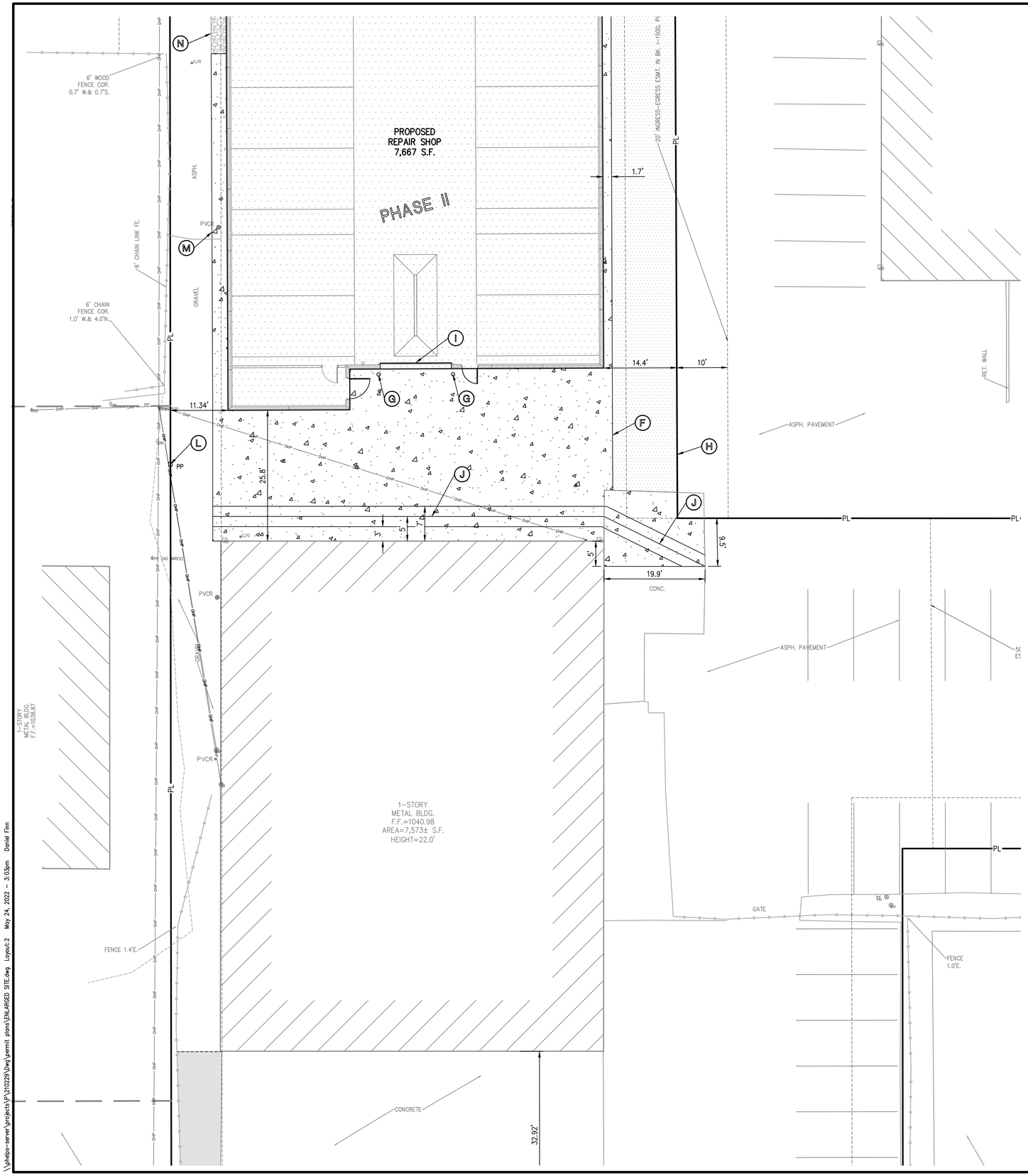

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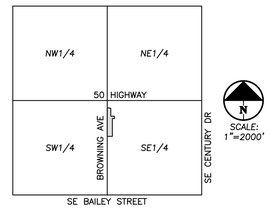

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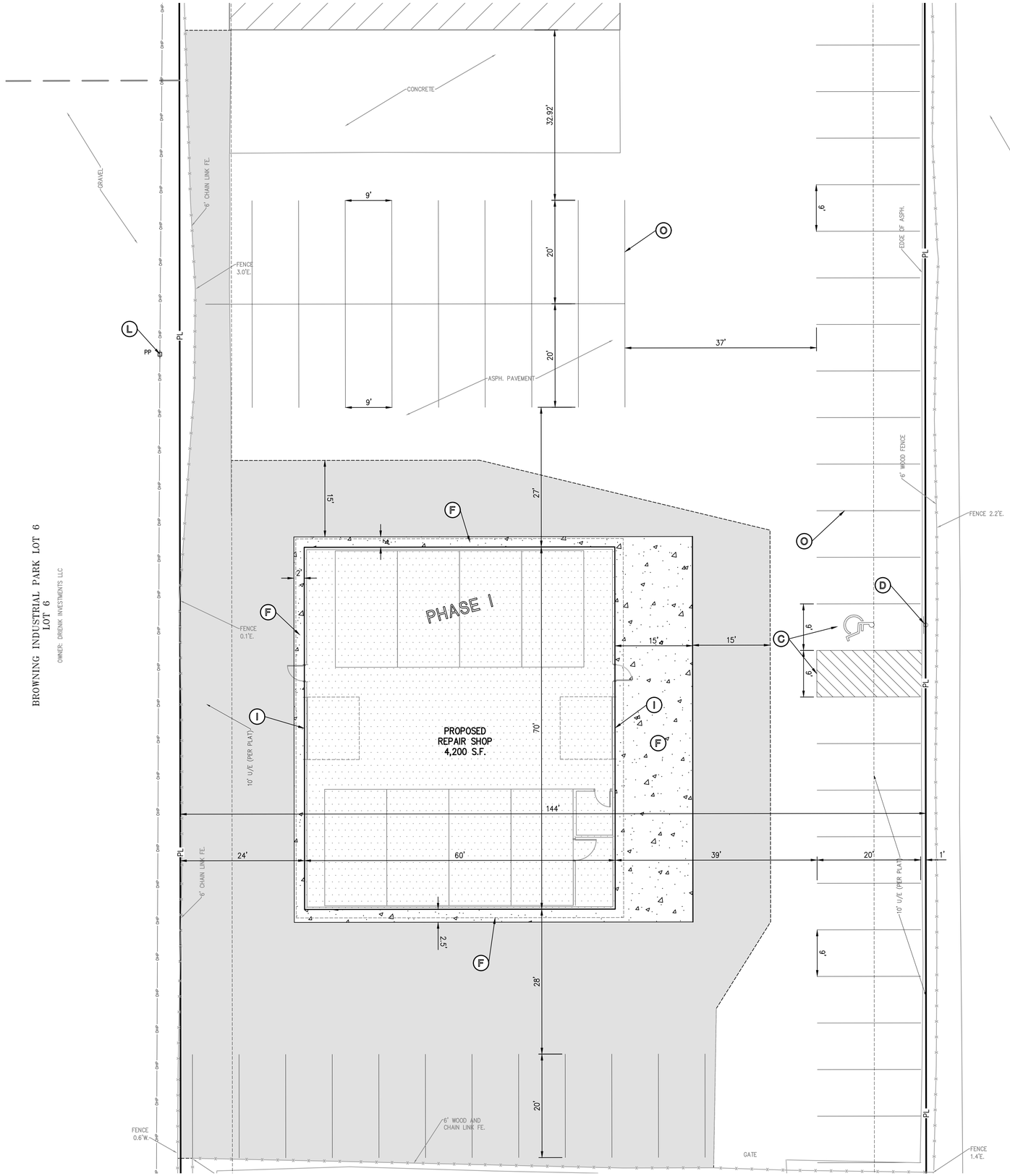

BROWNING INDUSTRIAL PARK
LOT 6

OWNER: DIRENK INVESTMENTS LLC

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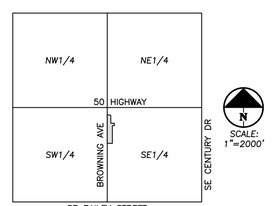

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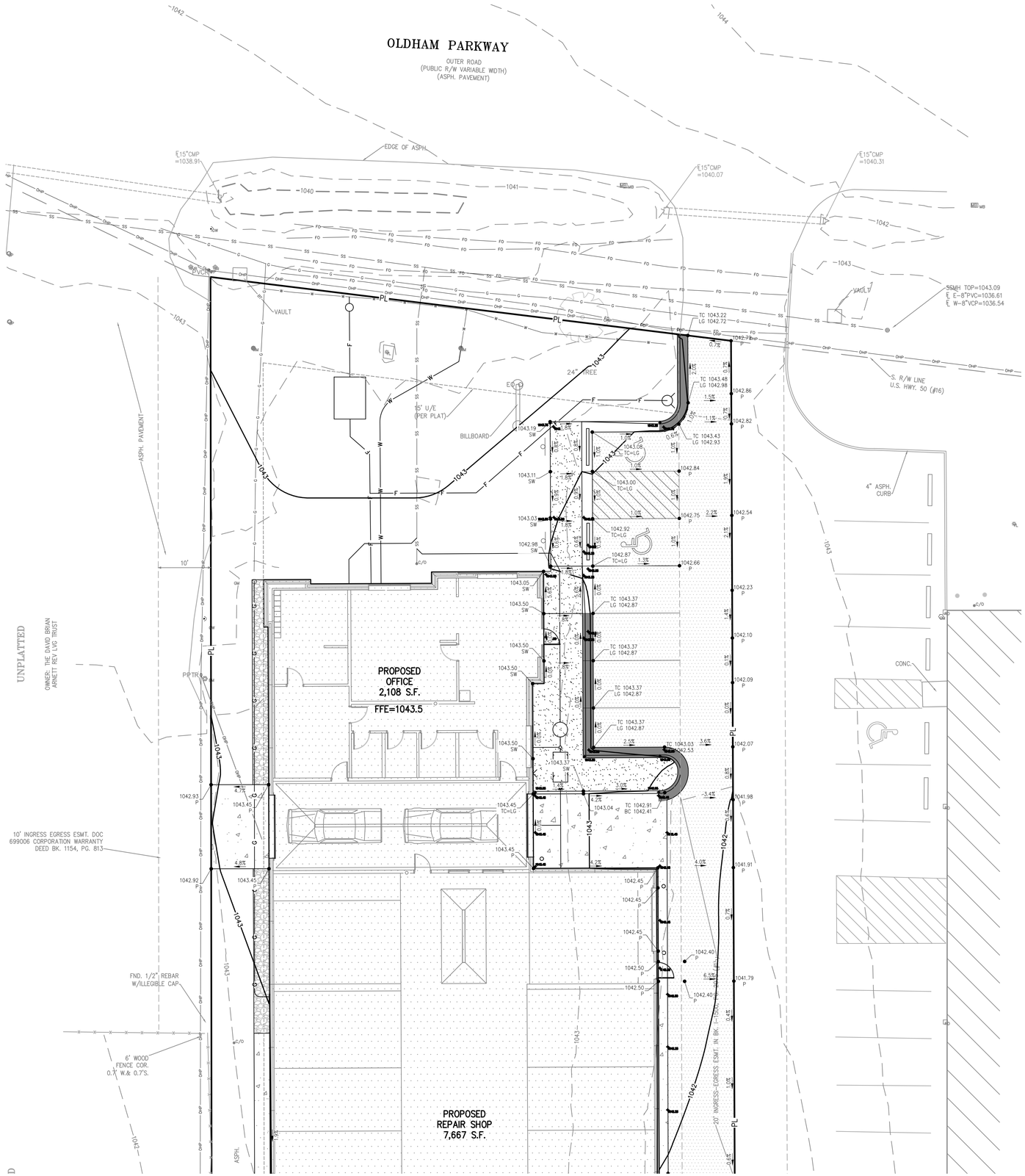

SITE GRADING NOTES:

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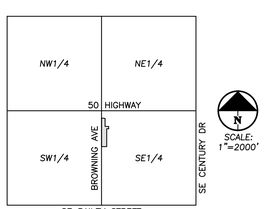
   ELEVATION = 1043.66
2. R.R. SPIKE IN E. FACE POWER POLE ON W. PROPERTY LINE NEAR SW COR. #451 BLDG.
   ELEVATION = 1043.33

FLOOD NOTE:

THIS PROPERTY LIES WITHIN ZONE X, DEFINED AS AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN, AS SHOWN ON THE FLOOD INSURANCE RATE MAP PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY FOR THE CITY OF LEE'S SUMMIT, COMMUNITY NO. 290174, JACKSON COUNTY, MISSOURI, MAP NO. 29095C0438G, AND DATED JANUARY 20, 2017.



VICINITY MAP
SEC. 8-47-31

LEGEND

PL	PROPERTY LINE
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918	
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STATE OF MISSOURI
JUDD DAVID CLAUSSEN
NUMBER PE-29840
5/24/22
REGISTERED ENGINEER

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ENLARGED GRADING PLAN

CRASH CHAMPIONS
451 S.E. OLDHAM PARKWAY
LEE'S SUMMIT, JACKSON COUNTY, MO

No.	Date	Revisions:	By	App.

PROJECT NO. 210229 | DRAWN:SNH
DATE:05-24-22 | APPROVED: JDC
CHECKED: DAF

CERTIFICATE OF AUTHORIZATION
KANSAS SURVEYING - LS-82
ENGINEERING - E-391

CERTIFICATE OF AUTHORIZATION
LAND SURVEYING-2007001128
ENGINEERING-2007005038

SHEET
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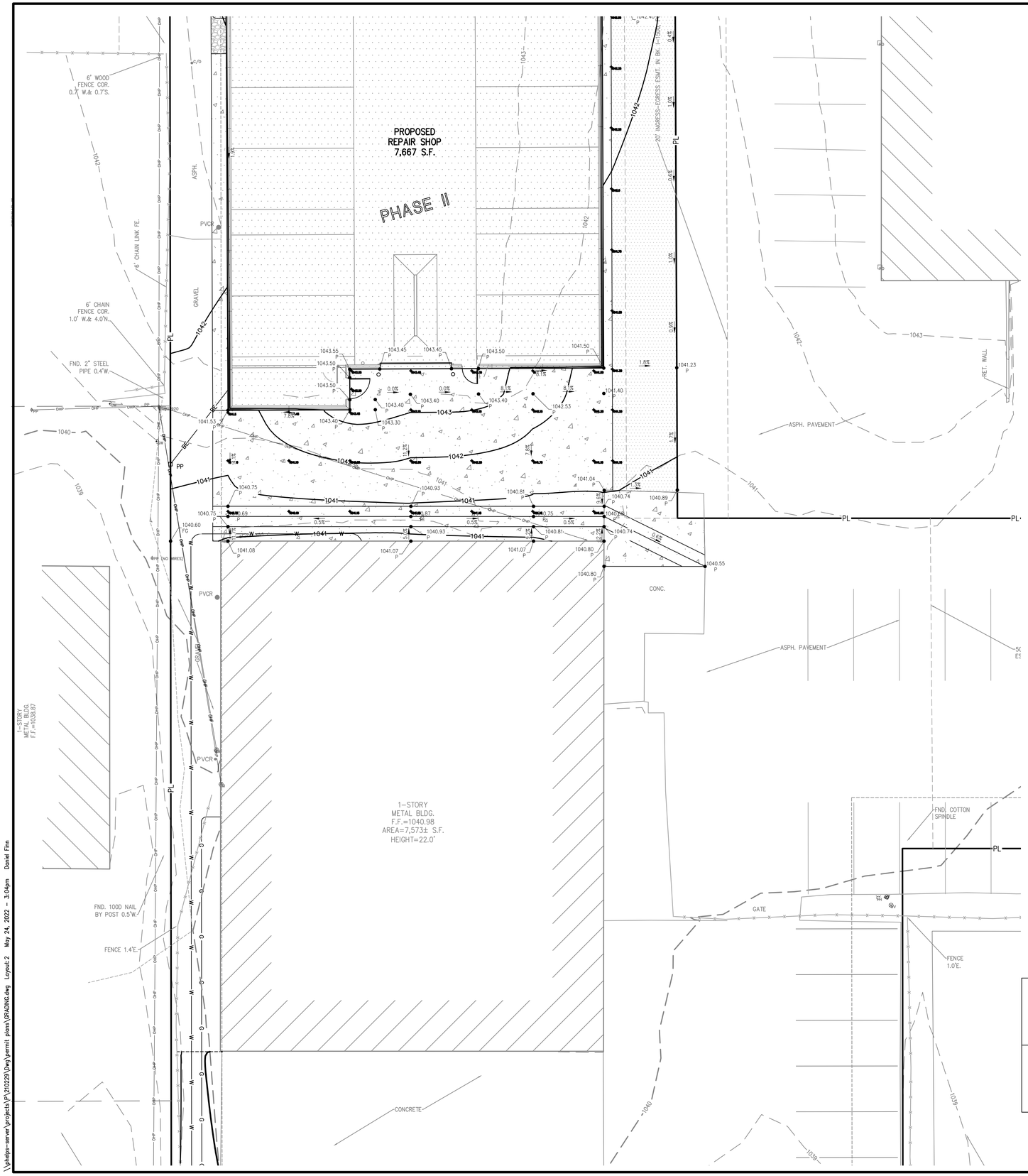
\\phelps-server\projects\P\210229\proj\permit plans\GRADING.dwg Layout:3 May 24, 2022 - 3:04pm Daniel Finn



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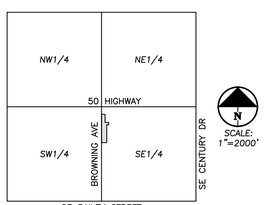

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Revisions:

No.	Date

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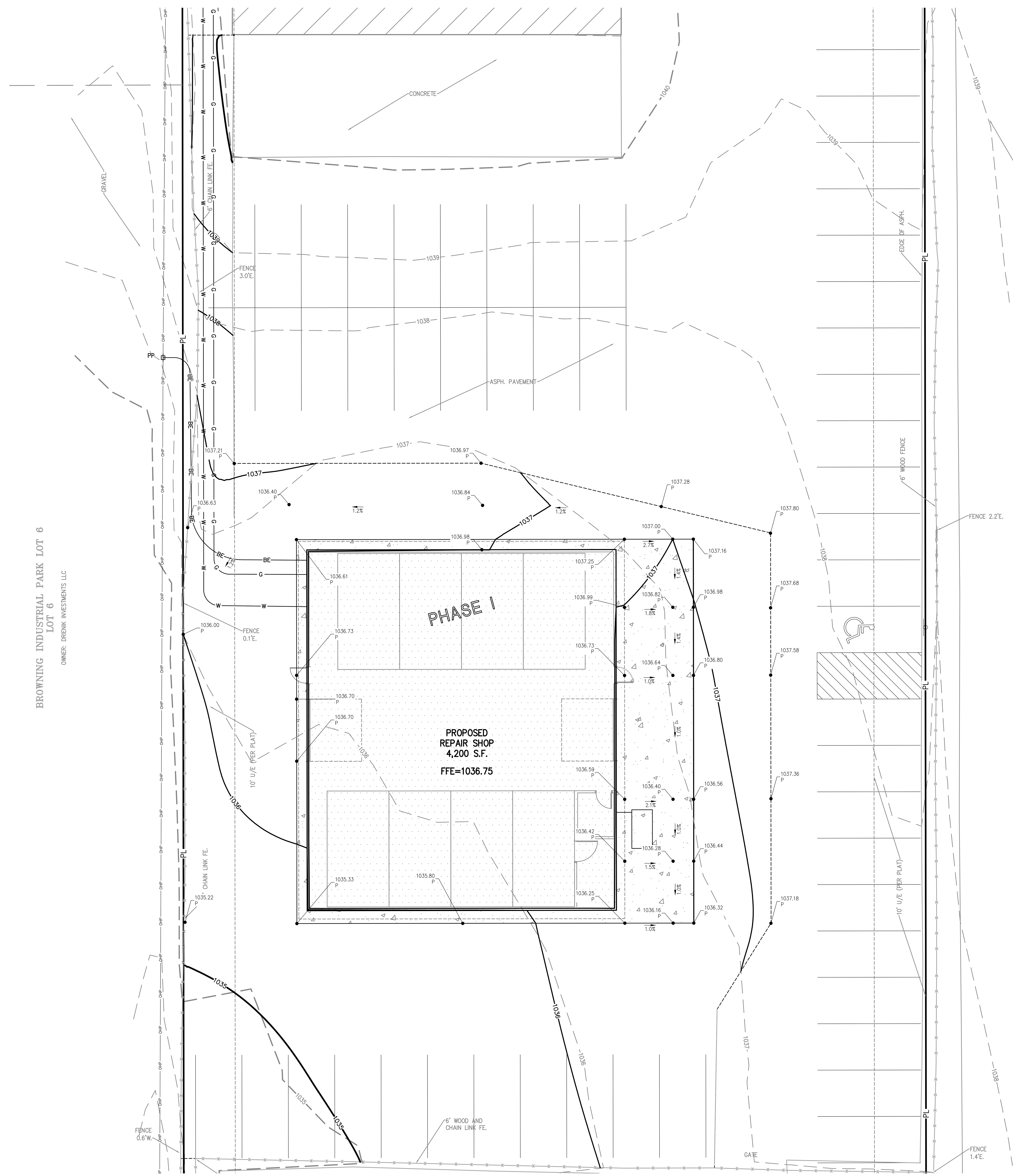

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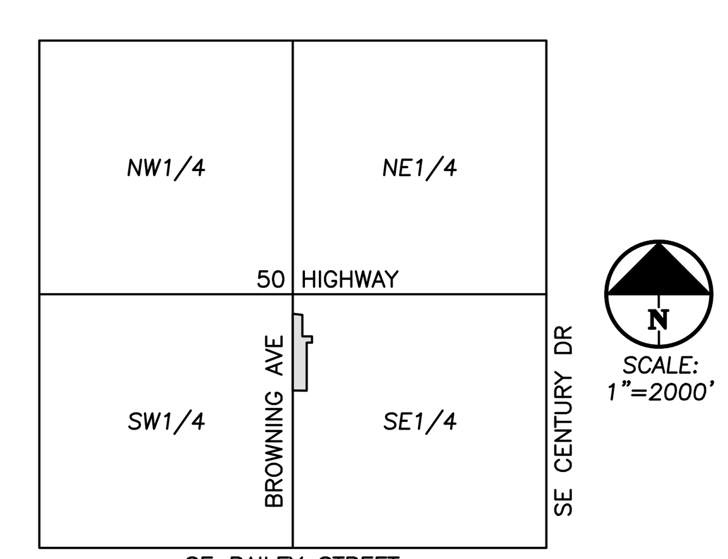

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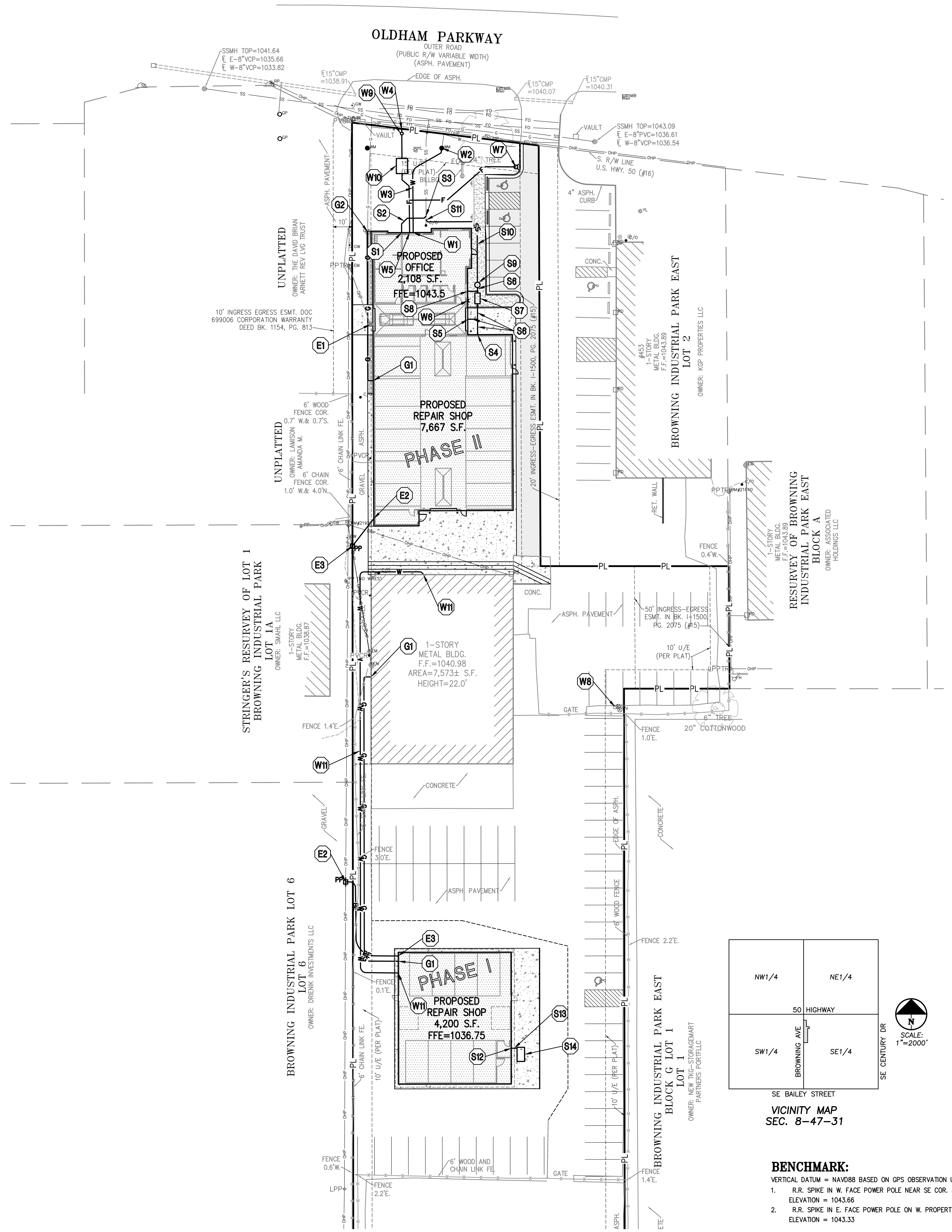
DATE:05-24-22 | DRAWN:SNH
CHECKED: DAF | APPROVED: JDC
CERTIFICATE OF AUTHORIZATION KANSAS LAND SURVEYING – LS-82 ENGINEERING – E-391
CERTIFICATE OF AUTHORIZATION MISSOURI LAND SURVEYING–2007001128 ENGINEERING–2007005058

SHEET
C2.2

\\phelps-server\projects\P\210229\Dwg\permit plans\GRADING.dwg Layout1 May 24, 2022 - 3:04pm Daniel Finn



UTILITY NOTES:
VISUAL INDICATIONS OF UTILITIES ARE AS SHOWN. UNDERGROUND LOCATIONS SHOWN, AS FURNISHED BY THEIR LESSORS, ARE APPROXIMATE AND SHOULD BE VERIFIED IN THE FIELD AT THE TIME OF CONSTRUCTION. FOR ACTUAL FIELD LOCATIONS OF UNDERGROUND UTILITIES CALL 811.

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

UTILITY KEY NOTES:

- **G1** GAS ENTRY WITH GAS METER. CONTRACTOR SHALL COORDINATE WITH GAS COMPANY FOR TYING OF INDIVIDUAL METER. SIZE OF GAS MAIN SHALL BE AS DETERMINED BY UTILITY OR AS SHOWN ON BUILDING PLANS. CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH GAS COMPANY REGARDING THE SIZE & INSTALLATION OF GAS SERVICE LINE.
- **G2** CONTRACTOR TO COORDINATE REMOVAL OF EXISTING GAS METER AND CONNECTION TO EXISTING AS LINE FOR EXTENSION TO NEW GAS METER LOCATION (RE: MEP PLANS) WITH LOCAL UTILITY PROVIDER.
- **E1** CONTRACTOR TO COORDINATE RELOCATION OF EXISTING POWER SERVICE WITH LOCAL UTILITY PROVIDER.
- **E2** ELECTRIC ENTRY INTO BUILDING. FOLLOW LOCAL UTILITY PROVIDER REQUIREMENTS (RE: BUILDING ELECTRIC PLAN.)
- **E3** PROPOSED LOCATION OF NEW POWER POLE AND POLE MOUNTED TRANSFORMER. CONTRACTOR TO VERIFY EXACT LOCATION WITH IPL PRIOR TO CONSTRUCTION. CONTRACTOR SHALL COORDINATE SAID WORK WITH THE ELECTRIC COMPANY.
- **W1** 1-1/2" DOMESTIC WATER LINE ENTRY TO BUILDING. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ANY APPURTENANCES ON THE DOMESTIC LINE SUCH AS BACKFLOW PREVENTION DEVICES (RE: BUILDING PLANS), GATE VALVES, REDUCERS, BENDS, TEES, ETC., WHICH MAY BE REQUIRED. CONTRACTOR TO COORDINATE WITH WATER UTILITY.
- **W2** CONTRACTOR TO USE IN PLACE EXISTING WATER METER (COORDINATE WITH LOCAL UTILITY PROVIDER). CONTRACTOR TO VERIFY EXISTING METER SIZE AND CONTACT ENGINEER IF METER IS LESS THAN 1". CONTRACTOR TO COORDINATE AND PAY ALL FEES. ALL LABOR AND MATERIALS SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR'S PLUMBER IN ACCORDANCE WITH WATER UTILITY STANDARDS.
- **W3** INSTALL 1-1/2" SOFT TYPE K COPPER DOMESTIC WATER LINE FROM THE EXISTING WATER METER CONNECTION TO THE BUILDING ENTRY.
- **W4** CONTRACTOR TO PERFORM & COORDINATE CONNECTION TO EXISTING MAIN VIA CUT-IN TEE FOR PROPOSED 6" C900 FIRE LINE. CONTACT WATER UTILITY FOR TAPPING REQUIREMENTS. CONTRACTOR TO PAY ALL FEES FOR WATER MAIN TAP. OWNER WILL REIMBURSE CONTRACTOR FOR ACTUAL METER & SYSTEM DEVELOPMENT FEES ASSESSED BY WATER UTILITY.
- **W5** 6" SPRINKLER ENTRY TO BUILDING. CONTRACTOR SHALL BE REQUIRED TO INSTALL ANY APPURTENANCES ON THE SPRINKLER LINE SUCH AS, BUT NOT LIMITED TO GATE VALVES, REDUCES, BENDS, TEES, ETC. (RE: BUILDING PLANS FOR BUILDING), WHICH MAY BE REQUIRED. CONTRACTOR TO COORDINATE WITH WATER UTILITY.
- **W6** FIRE DEPARTMENT CONNECTION (RE: MEP PLANS).
- **W7** INSTALL PRIVATE FIRE HYDRANT ASSEMBLY.
- **W8** EXISTING PRIVATE FIRE HYDRANT TO REMAIN.
- **W9** INSTALL 6" RESTRAINED VALVE AT CONNECTION TO MAIN PER CITY OF LEE'S SUMMIT STANDARDS AND REQUIREMENTS..
- **W10** INSTALL BACKFLOW VAULT CONTAINING DOUBLE CHECK DETECTOR ASSEMBLY FOR 6" FIRE LINE PER CITY OF LEE'S SUMMIT STANDARD DETAIL WAT-12.
- **W11** INSTALL 1-1/2" SOFT TYPE K COPPER DOMESTIC WATER LINE FROM EXISTING BUILDING PLUMBING TO NEW REPAIR SHOP (SOUTH BUILDING). RE: MEP PLANS.
- **S1** CONNECT TO BLDG. INTERIOR PLUMBING SANITARY SEWER LINE (RE: MEP PLANS) FG=1043.40 FL 4"=1040.80
- **S2** INSTALL 19 L.F. 4" PVC SANITARY SEWER SERVICE LINE (SDR-26) @ 2.0% MIN. SLOPE.
- **S3** INSTALL WYE CONNECTION DOWNSTREAM OF EXISTING CLEANOUT (EXISTING CLEANOUT TO REMAIN) EX. 4" FL = 1040.40±
- **S4** CONNECT TO BLDG. INTERIOR PLUMBING SAND/OIL LINE (RE: MEP PLANS) FG=1043.45 FL 4"=1040.35
- **S5** CONNECT TO BLDG. INTERIOR PLUMBING SAND/OIL LINE (RE: MEP PLANS) FG=1043.30 FL 4"=1040.35
- **S6** INSTALL 4" PVC SANITARY SEWER SERVICE LINE (SDR-26) @ 2.0% MIN. SLOPE.
- **S7** INSTALL SAND OIL INTERCEPTOR (RE: MEP PLANS FOR SPECIFICATION) TE=1043.43 FL 4" IN=1040.03 FL 4" OUT=1040.03
- **S8** INSTALL 2" PVC VENT LINE (SDR-26) TO BUILDING (RE: MEP PLANS).
- **S9** INSTALL E1 GRINDER PUMP (WH101F-74) & HDPE PUMP BASIN. TE=1043.43 FL 4" IN=1039.93 FL 2" OUT=1040.23
- **S10** INSTALL 2" HDPE FORCE MAIN FROM E-ONE PUMP TO EXISTING 4" SANITARY SEWER LINE.
- **S11** INSTALL WYE CONNECTION DOWNSTREAM OF EXISTING CLEANOUT (EXISTING CLEANOUT TO REMAIN) EX. 4" FL = 1040.45±
- **S12** CONNECT TO BLDG. INTERIOR PLUMBING SANITARY SEWER LINE (RE: MEP PLANS) FG=1036.75 FL 4"=1032.75
- **S13** INSTALL 3 L.F. 4" PVC SANITARY SEWER SERVICE LINE (SDR-26) @ 2.0% MIN SLOPE.
- **S14** INSTALL 1,000 GALLON HOLDING TANK. CONTRACTOR TO PROVIDE SPECIFICATION TO CIVIL ENGINEER FOR APPROVAL. TE=1036.70 FL 4" IN=1032.65

NW1/4
NE1/4
50 HIGHWAY
SW1/4
SE1/4
BROWNING AVE
SE CENTURY DR
SE BAILEY STREET
SCALE: 1"=2000'

VICINITY MAP
SEC. 8-47-31

BENCHMARK:

VERTICAL DATUM = NAVD88 BASED ON GPS OBSERVATION USING MODOT VRS

1. R.R. SPIKE IN W. FACE POWER POLE NEAR SE COR. #453 BLDG. ELEVATION = 1043.66
2. R.R. SPIKE IN E. FACE POWER POLE ON W. PROPERTY LINE NEAR SW COR. #451 BLDG. ELEVATION = 1043.33

UTILITY NOTES:

1. 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 companies at least 48 hours before any excavation to request exact field location of utilities. It shall be the responsibility of the contractor to coordinate with and relocate &/or remove all existing utilities which conflict with the proposed improvements shown on the plans.
2. The construction of storm sewers on this project shall conform to the requirements of the City's Technical Specifications and Design Criteria.
3. The contractor shall field verify the exact location and elevation of the existing storm sewer lines and the existing elevation at locations where the proposed storm sewer collects or releases to existing ground. If discrepancies are encountered from the information shown on the plans, the contractor shall contact the design engineer. No pipes shall be laid until direction is received from the design engineer.
4. It will be the contractors responsibility to field adjust the top of all manholes and boxes as necessary to match the grade of the adjacent area. Tops of existing manholes shall be raised as necessary to be flush with proposed pavement elevations, and to be 6-inches above finished ground elevations in non-paved areas. No separate or additional compensation will be made to the contractor for making final adjustments to the manholes and boxes.
5. Inlet locations, horizontal pipe information and vertical pipe information is shown to the center of the structure. Deflection angles shown for storm sewer pipes are measured from the center of curb inlets and manholes. The contractor shall adjust the horizontal location of the pipes to go to the face of the boxes. All roof drains shall be connected to storm sewer structures. Provide cleanouts on roof drain lines at 100' max. Spacing and at all bend points. Do not connect roof drains directly to storm sewer pipe.
6. The contractor shall be responsible for furnishing and installing all fire and domestic water lines, meters, backflow devices, pits, valves and all other incidentals required for a complete operable fire protection and domestic water system. All costs associated with the complete water system for the buildings shall be the responsibility of the contractor. All work shall conform to the requirements of City.
7. The contractor shall be responsible for furnishing and installing all sanitary sewer service lines from the buildings to the public line. All work shall conform to the requirements of the City.
8. The contractor will be responsible for securing all permits, bonds and insurance required by the contract documents, City, and all other governing agencies (including local, county, state and federal authorities) having jurisdiction over the work proposed by these construction documents. The cost for all permits bonds and insurance shall be the contractors responsibility and shall be included in the bid for the work.
9. By the use of these construction documents the contractor hereby agrees that he/she shall be solely responsible for the safety of the construction workers and the public. The contractor agrees to hold the engineer and owner harmless for any and all injuries, claims, losses or damages related to the project.
10. The Contractor shall be responsible for furnishing all materials, tools and equipment and installation of electrical power, telephone and gas service from a point of connection from the public utility lines to the building structures. This will include all conduits, service lines, meters, concrete pads and all other incidentals required for a complete and operational system as required by the owner and the public utilities. Refer to building plans for exact tie-in locations of all utilities. Contractor shall verify connection points prior to installation of utility line.
11. All fill material is to be in place, compacted, and consolidated before installation of proposed utilities. On-site geotechnical engineer shall provide written confirmation that this requirement has been met and that utilities may proceed in the fill areas. All utilities are to be placed in trench conditions.
12. Contractor shall notify the utility authorities inspectors 48 hours before connecting to any existing line.
13. Water lines shall be as follows (unless otherwise shown on plans):

    A. Pipe sizes less than 3-inches that are installed below grade and outside building shall comply with the following:
    1. Seamless Copper Tubing: Type "K" soft copper, ASTM B88.
    2. Fittings: Wrought copper (95_5 Tin Antimony solder joint), ASME B 16.22.

    B. Pipe sizes 3-inches Through 48-inches that are installed below grade and outside building shall comply with one of the following:
    1. Gray Cast Iron Water Pipe: ANSI A21.6, thickness class 52.
       a. Fittings: Either mechanical joint or push_on joint, AWWA C110 or AWWA C111.
       b. Elastomeric gaskets and lubricant: ASTM F477.
       c. Cement Mortar Lining, AWWA C104
    2. Ductile Iron Water Pipe: AWWA C151, thickness class 50.
       a. Fittings: Either mechanical joint or push_on joint, AWWA C110 or AWWA C111.
       b. Elastomeric gaskets and lubricant: ASTM F477.
       c. Cement Mortar Lining, AWWA C104
    3. Polyvinyl Chloride (PVC) Water Pipe: Pipe, AWWA C900, rated DR 18 (Class 150), continually marked as required.
       a. Elastomeric gaskets and lubricant: ASTM F477 for smaller pipes.
       b. Pipe joints: Integrally molded bell ends, ASTM D3139.
       c. Trace wire: Magnetic detectable conductor, (#12 Copper) brightly colored plastic covering imprinted with "Water Service" in large letters
14. Minimum trench width shall be 2 feet.
15. Contractor shall maintain a minimum of 42" cover on all waterlines. All water line joints are to be mechanical joints with thrust blocking as called out in specifications and construction plans. Water mains and service lines shall be constructed in accordance to waterone's specifications for commercial services.
16. All waterlines shall be kept min. ten (10') apart (parallel) from sanitary sewer lines or manholes. Or when crossing, an 24" vertical clearance (outside edge of pipe to outside edge of pipe) of the water line above the sewer line is required.
17. Sanitary conflicts will be resolved prior to permit issuance.
18. In the event of a vertical conflict between waterlines, sanitary lines, storm lines and gas lines (existing and proposed), the sanitary line shall be ductile iron pipe with mechanical joints at least 10 feet on both sides of crossing (or encased in concrete this same distance), the waterline shall have mechanical joints with appropriate thrust blocking as required to provide a minimum of 24" clearance. Meeting requirements of ANSI A21.10 or ANSI 21.11 (AWWA C-151) (CLASS 50).
19. All underground storm, sanitary, water and other utility lines shall be installed, inspected and approved before backfilling. Failure to have inspection approval prior to backfill will constitute rejection of work.
20. All necessary inspections and/or certifications required by codes and/or utility service companies shall be performed prior to announced building possession and the final connection of service. Contractor shall coordinate with all utility companies for installation requirements and specifications.
21. Refer to building plans for site lighting electrical plan, irrigation, parking lot security system and associated conduit requirements. Coordinate with Owner that all required conduits are in place & tested prior to paving.
22. When a building utility connection from site utilities leading up to the building cannot be made immediately, temporarily mark all such site utility terminations.
23. Refer to the building plans for site lighting electrical requirements, including conduits, pole bases, pull boxes, etc.

UTILITY COMPANIES:

MISSOURI GAS ENERGY (816) 969-2218
LUCAS WALLS (LUCAS.WALLS@SUG.COM)
3025 SOUTHEAST CLOVER DRIVE
LEE'S SUMMIT, MO 64082

EVERGY (816) 347-4339
PHILLIP INGRAM (PHILLIP.INGRAM@KCPL.COM)
RON DEJARNETTE (RON.DEJARNETTE@KCPL.COM) (816) 347-4316
1300 HAMBLEN ROAD
LEE'S SUMMIT, MO 64081

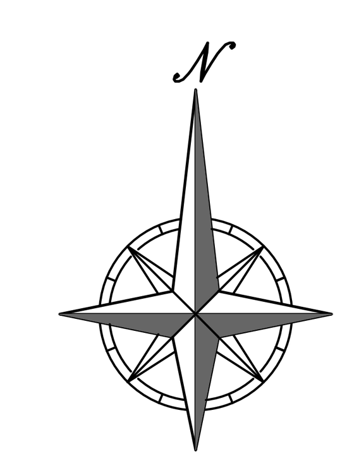
STORM SEWER (PUBLIC WORKS DEPARTMENT) (816) 969-1800
220 SE GREEN STREET
LEE'S SUMMIT, MO 64063

SANITARY SEWER & WATER (WATER UTILITIES DEPT.) (816)-969-1900
1200 SE HAMBLEM ROAD,
LEE'S SUMMIT, MO 64081

AT&T (913) 383-4929
MR. CLAYTON ANSPAUGH (CA4089@ATT.COM) (913) 383-4849-FAX
9444 NALL AVENUE
OVERLAND PARK, KANSAS 66207

LEGEND

Symbol	Description
PL	PROPERTY LINE
LL	LOT LINE
R/W	RIGHT-OF-WAY
CATV	EXISTING CABLE TELEVISION LINE
FO	EXISTING FIBER OPTIC LINE
G	EXISTING GAS LINE
BE	EXISTING BURIED ELECTRIC LINE
OHP	EXISTING OVERHEAD POWER LINE
OHT	EXISTING OVERHEAD TELEPHONE LINE
SS	EXISTING SANITARY SEWER LINE
24"HDPE	EXISTING STORM SEWER LINE (& SIZE)
BT	EXISTING BURIED TELEPHONE LINE
W 6"	EXISTING WATER LINE (& SIZE)
G	PROPOSED GAS LINE
BE	PROPOSED BURIED ELECTRIC LINE
SS	PROPOSED SANITARY SEWER LINE
OHP	PROPOSED OVERHEAD POWER LINE
BT	PROPOSED BURIED TELEPHONE LINE
W	PROPOSED WATER LINE (& SIZE)



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

STATE OF MISSOURI
JUDD DAVID CLAUSSEN
NUMBER PE-29850
PROFESSIONAL ENGINEER
5/24/22

PHELPS ENGINEERING, INC.
1270 N. Winchester
Olathe, Kansas 66061
(913) 393-1155
Fax (913) 393-1166
www.phelpsengineering.com

PEI PLANNING ENGINEERING IMPLEMENTATION

UTILITY PLAN

CRASH CHAMPIONS
451 S.E. OLDHAM PARKWAY
LEE'S SUMMIT, JACKSON COUNTY, MO

No.	Date	Revisions:	By	App.

PROJECT NO. 210229
DATE: 05-24-22 | DRAWN: SNH
CHECKED: DAF | APPROVED: JDC
CERTIFICATE OF AUTHORIZATION KANSAS LAND SURVEYING - LS-82 ENGINEERING - E-391
CERTIFICATE OF AUTHORIZATION MISSOURI LAND SURVEYING-2007001128 ENGINEERING-2007005058

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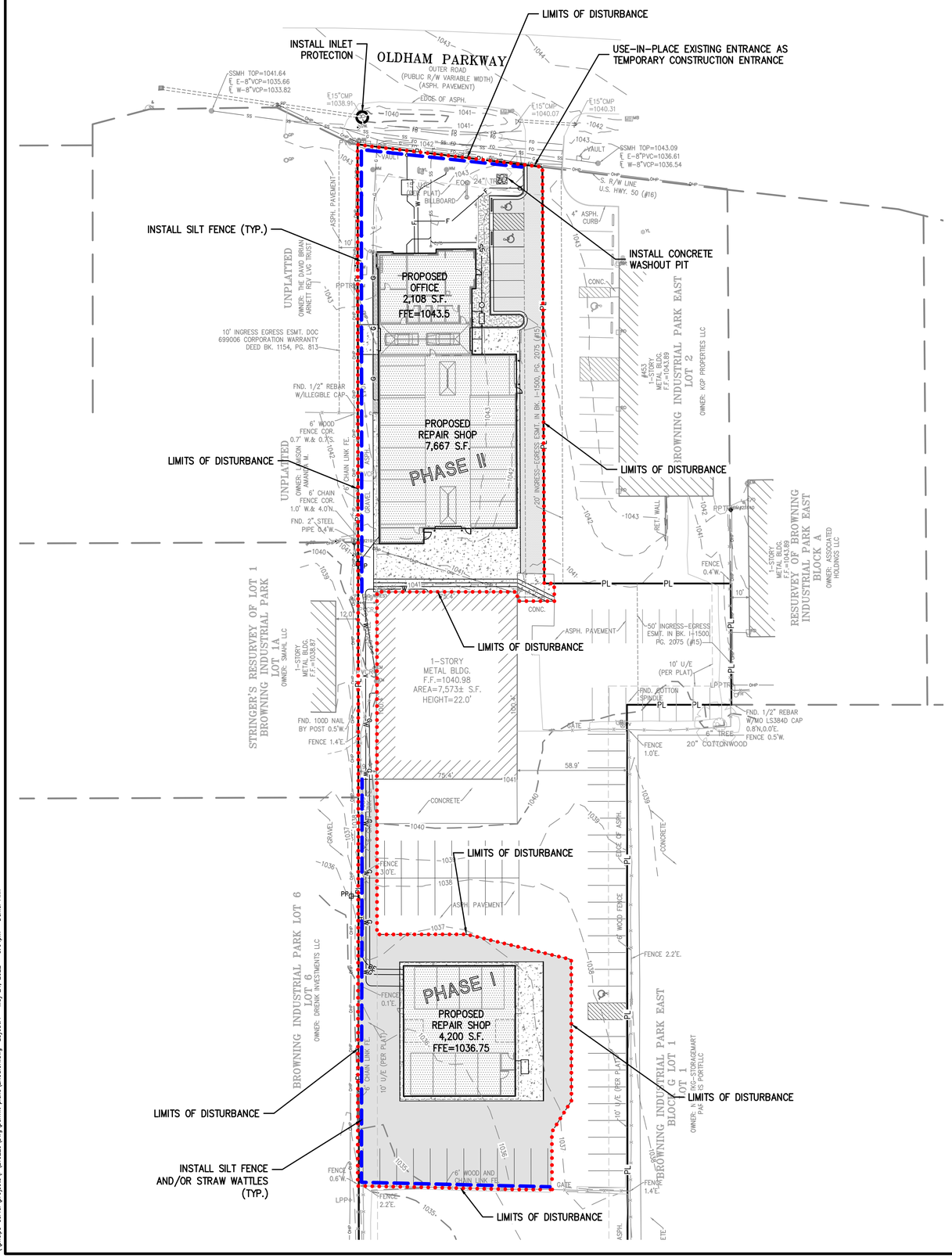

811 Know what's below. Call before you dig.

UTILITY NOTES:
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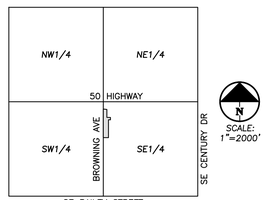
EROSION AND SEDIMENT CONTROL GENERAL NOTES:

1. Prior to Land Disturbance activities, the contractor shall:
   –Delineate the outer limits of any tree or stream preservation designated to remain with construction fencing.
   –Construct a stabilized entrance/parking/delivery area and install all perimeter sediment controls on the site.
   –Install and request the inspection of the preconstruction erosion and sediment control measures designated on the approved erosion and sediment control plan. Land disturbance work shall not proceed until t here is a satisfactory inspection.
   –Identify the limits of construction on the ground with easily recognizable indications such as construction staking, construction fencing, placement of physical barriers or other means acceptable to the contractor and the City inspector.
2. Erosion and sediment control devices protecting the public right–of–way shall be installed as soon as the right–of–way has been backfilled and graded.
3. The contractor shall comply with all requirements of City Ordinances or State permit requirements, such as:
   –The contractor shall seed, mulch, or otherwise stabilize any disturbed area where the land disturbance activity has ceased for more than 14 days.
   –The contractor shall perform inspections of erosion and sediment control measures at least once a every 14 days and within 24 hours following each rainfall event of ½" or more within any 24–hour period
   –The contractor shall maintain an inspection log including the inspector's name, date of inspection, observations as to the effectiveness of the erosion and sediment control measures, actions necessary to correct deficiencies, when the deficiencies were corrected, and the signature of the person performing the inspection. The log shall be available for review by the City, the State of Missouri, or other authorities having jurisdiction.
4. The contractor shall maintain installed erosion and sediment control devices on a manner that preserves their effectiveness for preventing sediment from leaving the site or entering a sensitive area such as a natural stream corridor, tree preservation areas of the site intended to be left undisturbed, a storm sewer, or an on–site drainage channel. Failure to do so is a violation of the provisions of City Ordinances and State permit requirements.
5. The contractor is responsible for providing erosion and sediment control for the duration of a project. If the City determines that the BMP's in place do not provide adequate erosion and sediment control at any time during the project, the contractor shall install additional or alternate measures that provide effective control.
6. Concrete wash or rinsewater from concrete mixing equipment, tools and/or ready–mix trucks, tools, etc., may not be discharged into or be allowed to run directly into any existing water body or storm inlet. One or more locations for concrete wash out will be designated on site, such that discharges during concrete washout will be contained in a small area where waste concrete can solidify in place and excess water evaporated or infiltrated into the ground.
7. Chemicals or materials capable of causing pollution may only be stored onsite in their original container. Materials store outside must be in closed and sealed water–proof containers and located outside of drainageways or areas subject to flooding. Locks and other means to prevent or reduce vandalism shall be used. Spills will be reported as required by law and immediate actions taken to contain them.

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

   1. INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING, OR DETERIORATION.
   2. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED, AND RESEEDED AS NEEDED.
   3. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE–THIRD THE HEIGHT OF THE SILT FENCE.
   4. THE CONSTRUCTION ENTRANCES SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS–OF–WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION ENTRANCES AS CONDITIONS DEMAND.
   5. THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AS CONDITIONS DEMAND.

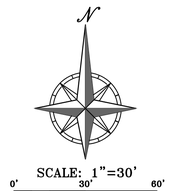
DISTURBED AREA = 0.9± ACRES



VICINITY MAP
SEC. 8–47–31

LEGEND

- STABILIZED ROCK ENTRANCE
- LIMITS OF DISTURBED AREA
- PROPOSED SILT FENCE
- CULVERT INLET PROTECTION



STATE OF MISSOURI
JUDD DAVID CLAUSSEN
NUMBER PE-2004010
5/24/22
LICENSED PROFESSIONAL ENGINEER

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PLANNING ENGINEERING IMPLEMENTATION

EROSION CONTROL PLAN

CRASH CHAMPIONS
451 S.E. OLDHAM PARKWAY
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ENGINEERING–2007035539

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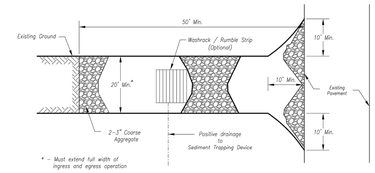

Plan View
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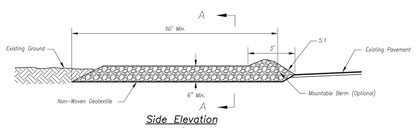
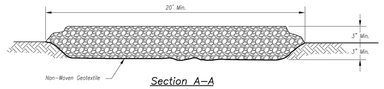


Side Elevation
Not to Scale



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.

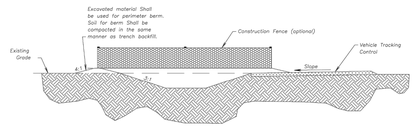
CONSTRUCTION ENTRANCE

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 3:1. 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:

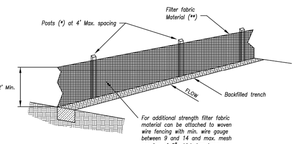
1. Concrete washout materials shall be removed once the materials have filled the washout to approximately 75% full.
2. Concrete washout areas shall be enlarged as necessary to maintain capacity for wasted concrete.
3. Concrete washout water, wasted pieces of concrete and all other debris in the subsurface 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

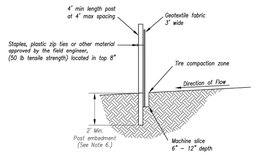
Construction Entrance modified from 2015 Overland Park Standard Details for Erosion and Sediment Control; Concrete Washout modified from 2009 City of Great Bend Standard Drawings.

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



(*) POSTS
- MIN. LENGTH 4'
- HARDWOOD 1 ½" x 1 ½"
- NO.2 SOUTHERN PINE 2 ⅜" x 2 ⅜"
- STEEL 1.33 LB/FT

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



SILT FENCE DETAILS
Not to Scale

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.

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.

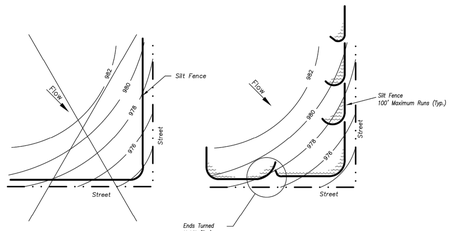
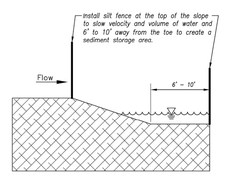
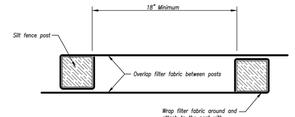


Figure A

SILT FENCE LAYOUT
Not to Scale

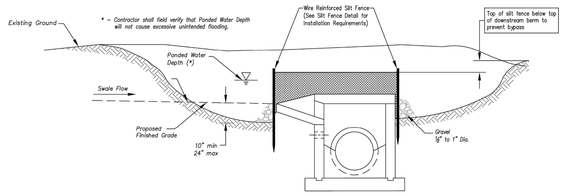




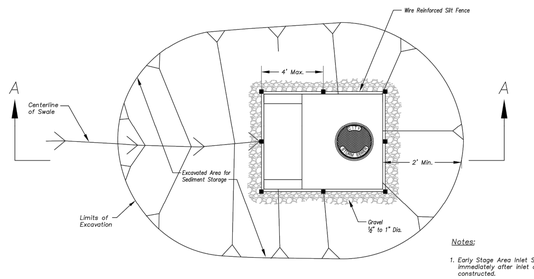
JOINING FENCE SECTIONS
Not to Scale

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

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

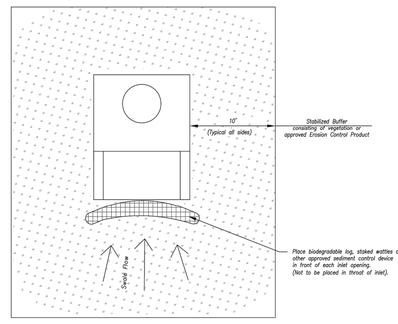


Section A-A
Not to Scale

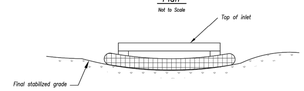


Plan
Not to Scale

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



Plan
Not to Scale



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

PHELPS ENGINEERING, INC.
1270 N. Winchester
Olathe, Kansas 66061
(913) 393-1155
Fax (913) 393-1066
www.phelpsengineering.com

PLANNING
ENGINEERING
IMPLEMENTATION

STATE OF MISSOURI
JUDD DAVID CLAUSSEN
NUMBER PE-2008101
5/24/22
PROFESSIONAL ENGINEER

EROSION CONTROL DETAILS

CRASH CHAMPIONS
451 S.E. OLDHAM PARKWAY
LEE'S SUMMIT, JACKSON COUNTY, MO

No.	Date	Revisions:	By	App.

PROJECT NO. 210229
DATE: 05-24-22 | DRAWN: SNH
CHECKED: DAF | APPROVED: JDC
CERTIFICATE OF AUTHORIZATION KANSAS DRAWING – LS-82 ENGINEERING – E-391
CERTIFICATE OF AUTHORIZATION LAND SURVEYING-2007001128 ENGINEERING-2007005259

SHEET
C4.1

\\phelps-server\projects\P\210229\Dwg\permit plans\DETAILS – EROSION.dwg Layout:1 May 24, 2022 – 3:04pm Daniel Finn

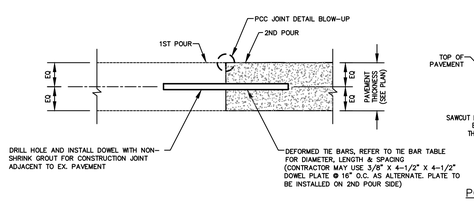
Dowel size*

Slab depth, in. (mm)	Dowel diameter, in. (mm)	Dowel embedment, in. (mm)†	Total dowel length, in. (mm)‡
5 (125)	5/8 (16)	5 (125)	12 (300)
6 (150)	3/4 (19)	6 (150)	14 (360)
7 (180)	7/8 (22)	6 (150)	14 (360)
8 (200)	1 (25)	6 (150)	14 (360)
9 (230)	1-1/8 (29)	7 (180)	16 (400)

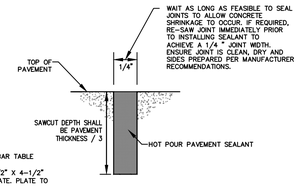
*All dowels spaced at 12 in. (300 mm) centers.
†On each side of joint.
‡Allowance made for joint openings and for minor errors in positioning dowels.

Tie bar dimensions

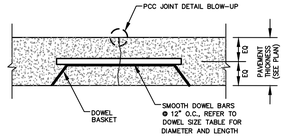
Slab depth, in. (mm)	Tiebar size, in. (mm)	Tiebar spacing			
		Distance to nearest free edge or to nearest joint where movement can occur			
		10 ft, in. (mm)	12 ft, in. (mm)	14 ft., in. (mm)	24 ft, in. (mm)
5 (125)	1/2 x 24 (13 x 610)	30 (760)	30 (760)	30 (760)	28 (710)
5-1/2 (140)	1/2 x 24 (13 x 610)	30 (760)	30 (760)	30 (760)	25 (630)
6 (150)	1/2 x 24 (13 x 610)	30 (760)	30 (760)	30 (760)	23 (580)
6-1/2 (165)	1/2 x 24 (13 x 610)	30 (760)	30 (760)	30 (760)	21 (530)
7 (180)	1/2 x 24 (13 x 610)	30 (760)	30 (760)	30 (760)	20 (510)
7-1/2 (190)	1/2 x 24 (13 x 610)	30 (760)	30 (760)	30 (760)	18 (460)
8 (200)	1/2 x 24 (13 x 610)	30 (760)	30 (760)	28 (710)	17 (430)
8-1/2 (215)	1/2 x 24 (13 x 610)	30 (760)	30 (760)	36 (910)	16 (410)
9 (230)	1/2 x 30 (13 x 760)	36 (910)	36 (910)	—	24 (610)



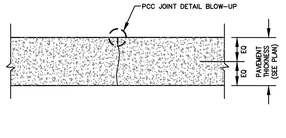
CONSTRUCTION JOINT



PCC JOINT DETAIL BLOW-UP (TYP.)

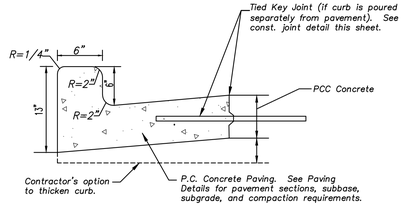


CONTRACTION JOINT (DOWELED)

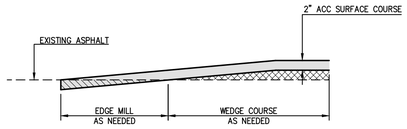


CONTRACTION JOINT (UNDOWELED)

CONCRETE JOINT DETAILS
SCALE: N.T.S.



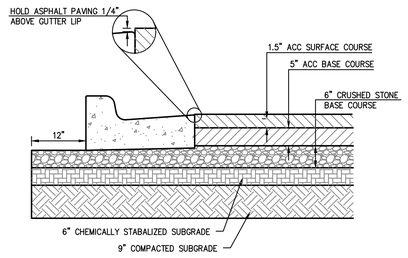
MONOLITHIC CONCRETE CURB DETAIL
SCALE: N.T.S.



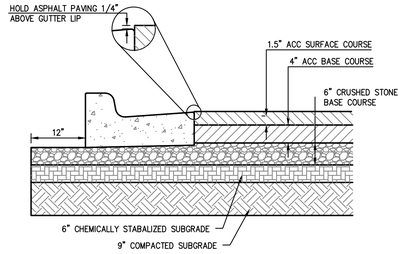
ASPHALT MILL & OVERLAY DETAIL
SCALE: N.T.S.

GENERAL PAVING NOTES:

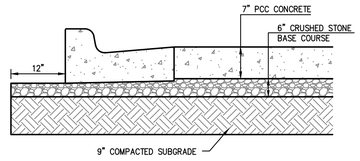
1. PRIOR TO PLACEMENT OF GRANULAR BASE OR ASPHALT, PROOF ROLL AND RE-COMPACT THE EXPOSED SURFACES UP TO A MINIMUM LATERAL DISTANCE OF TWO (2) FEET OUTSIDE THE PAVEMENT. ANY LOCALIZED SOFT, WET, OR LOOSE AREAS IDENTIFIED DURING THE PROOF ROLLING SHOULD BE REPAIRED PRIOR TO PAVING. FILL MATERIAL SHOULD BE PLACED IN LOOSE LIFTS UP TO A MAXIMUM OF EIGHT (8) INCHES IN THICKNESS AND COMPACTED TO AT LEAST 95% OF THE MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D698 AT MOISTURE CONTENTS WITHIN 0% AND +4% OF THE OPTIMUM FOR SOILS WITH A LIQUID LIMIT OF GREATER THAN 40, AND – +/– 3% OF THE OPTIMUM FOR SOILS WITH A LIQUID LIMIT OF LESS THAN 40. MAXIMUM DRY DENSITY AND OPTIMUM MOISTURE CONTENT SHOULD BE DETERMINED BY THE STANDARD PROCTOR TEST (ASTM D 698).
2. PROOFROLL WITH A 25 TON RUBBER TIRE VEHICLE AND REPAIR SUBGRADE DEFICIENCIES. IF ANY SIGNIFICANT EVENT, SUCH AS PRECIPITATION, OCCURS AFTER PROOFROLLING, THE SUBGRADE SHOULD BE REVIEWED BY QUALIFIED PERSONNEL IMMEDIATELY PRIOR TO PLACING THE PAVEMENT.
3. CRUSHED STONE BASE COURSE USED BENEATH CONCRETE PAVING SHALL BE COMPACTED KDOT AB-3 OR EQUIVALENT.
4. ASPHALTIC SURFACE COURSE SHALL BE APWA TYPE 3. THE SURFACE COURSE SHOULD BE COMPACTED TO A MINIMUM OF 97% MARSHALL DENSITY (ASTM SPECIFICATION D 1559). 30% RAP IS ALLOWED.
5. ASPHALTIC BASE COURSE SHALL BE APWA TYPE 1. THE BASE COURSE SHOULD BE COMPACTED TO A MINIMUM OF 95% MARSHALL DENSITY (ASTM SPECIFICATION D 1559). 30% RAP IS ALLOWED.
6. THE CONTRACTOR SHALL PROVIDE A TACK COAT BETWEEN LIFTS OF ASPHALT.
7. ALL SITE CONCRETE (CURBS, PAVEMENTS, SIDEWALKS, ETC.) SHALL MEET KANSAS CITY MATERIALS METRO BOARD (KCMMB) MIX DESIGN SPECIFICATIONS FOR 4,000 P.S.I. AIR ENTRAINED CONCRETE.
8. IN NEW PAVEMENT AREAS, CONTRACTOR SHALL OVER EXCAVATE AS REQUIRED TO ESTABLISH NEW COMPACTED SUBGRADE ELEVATIONS.
9. CONTRACTOR IS RESPONSIBLE FOR ALL PAVEMENT AND SUBGRADE MATERIALS TESTING.



HEAVY DUTY ASPHALT PAVING – DRIVE LANES

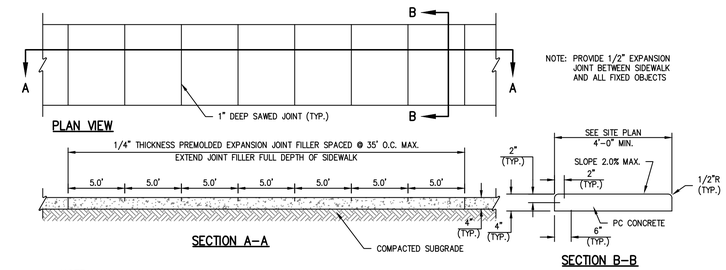


STANDARD ASPHALT PAVING – CAR PARKING AREAS



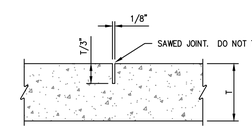
CONCRETE PAVING

PAVING SECTIONS
SCALE: N.T.S.

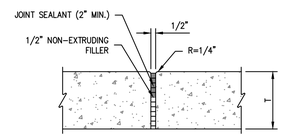


NOTE:
1. USE KANSAS CITY MATERIALS METRO BOARD (KCMMB) MIX DESIGN SPECIFICATIONS FOR 4,000 P.S.I. AIR ENTRAINED CONCRETE FOR ALL PRIVATE SIDEWALKS.

PRIVATE CONCRETE SIDEWALKS (NON REINFORCED)
SCALE: N.T.S.



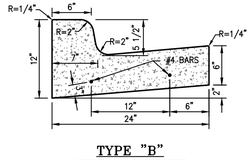
TYPE A JOINT



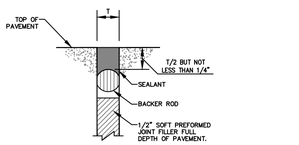
TYPE B JOINT

NOTE: TYPE A JOINTS SHALL NOT EXCEED 20 TIMES THE PAVEMENT THICKNESS (T).

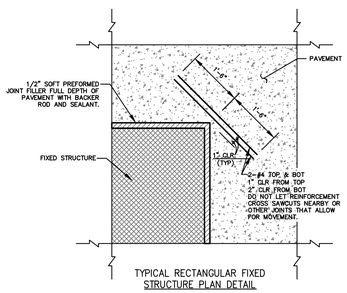
CONCRETE SIDEWALK JOINT DETAILS
SCALE: N.T.S.



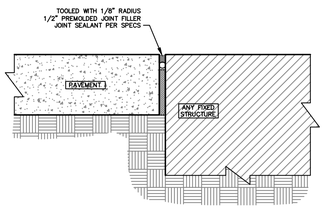
TYPICAL ROUND FIXED
STRUCTURE PLAN DETAIL
USES: MANHOLES, LIGHT POLE BASES AND BOLLARDS



BACKER ROD AND SEALANT
SECTION AT FIXED STRUCTURE



TYPICAL RECTANGULAR FIXED
STRUCTURE PLAN DETAIL
USES: BUILDINGS, RETAINING WALLS/DOCK WALLS AND DROP INLETS



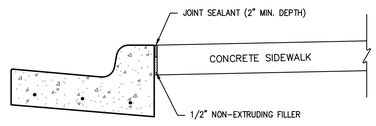
ISOLATION JOINT

NOTES:

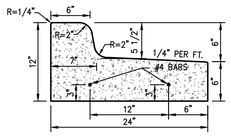
ISOLATION JOINT TO BE USED FOR FIXED STRUCTURES SUCH AS BUILDINGS, RETAINING WALLS/DOCK WALLS, DROP INLETS, MANHOLES, LIGHT POLE BASES AND BOLLARDS.

PAVEMENT IS NOT CONSIDERED A FIXED STRUCTURE.

ISOLATION JOINT DETAILS
SCALE: N.T.S.



TYPE "B"
CURB & GUTTER



TYPE "B" TIP-OUT
CURB & GUTTER

PRIVATE TYPE "B" CONCRETE CURB & GUTTER DETAILS
SCALE: N.T.S.

ALL OTHER DETAILS SAME AS SHOWN PER THIS SHEET.

SIDEWALK AT CURB DETAIL
SCALE: N.T.S.

PHELPS ENGINEERING, INC.
1270 N. Winchester
Olathe, Kansas 66061
(913) 393-1155
Fax (913) 393-1066
www.phelpsengineering.com

PLANNING
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IMPLEMENTATION

PAVEMENT DETAILS

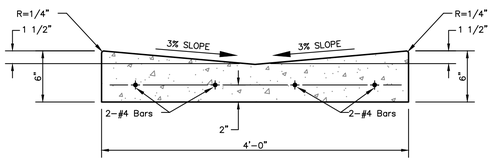
CRASH CHAMPIONS
451 S.E. OLDHAM PARKWAY
LEE'S SUMMIT, JACKSON COUNTY, MO

No.	Date	Revisions:	By	App.

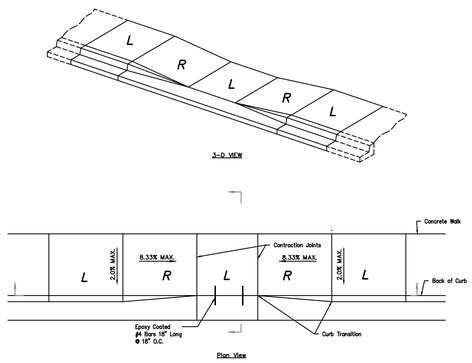
PROJECT NO. 210229
DATE: 5-24-22 DRAWN: SNH
CHECKED: DJF APPROVED: JDC
CERTIFICATE OF AUTHORIZATION KANSAS LAND SURVEYING – LS-82 ENGINEERING – E-391
CERTIFICATE OF AUTHORIZATION LAND SURVEYING-2007001128 ENGINEERING-2007003328

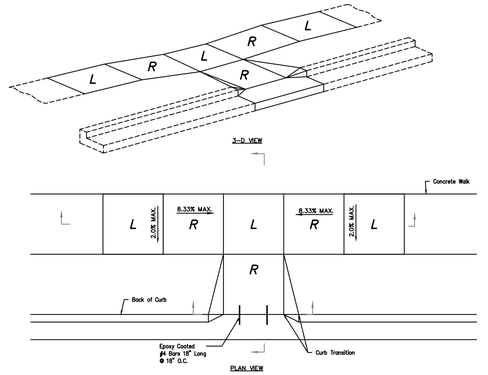
SHEET
C5

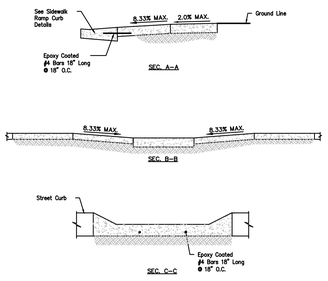
\\phelps-server\projects\P\210229\Dwg\permit plans\DETAILS – PRIVATE.dwg Layout:PAVE 1 May 24, 2022 – 3:04pm Daniel Finn

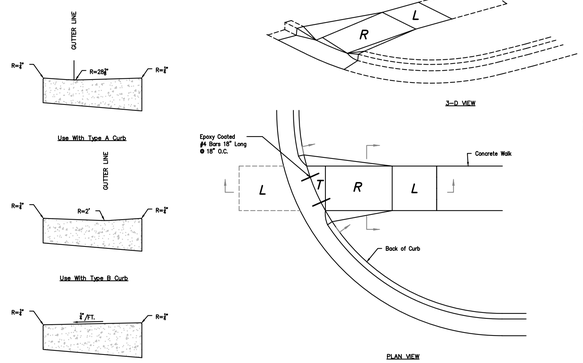


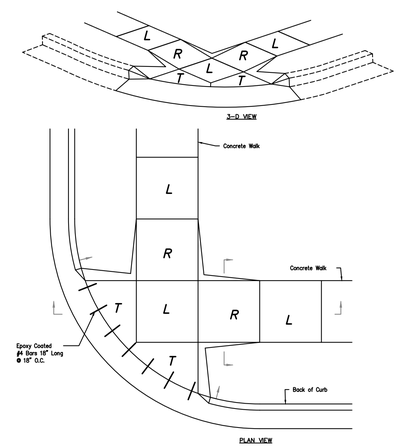
CONCRETE PILOT CHANNEL
SCALE: N.T.S.

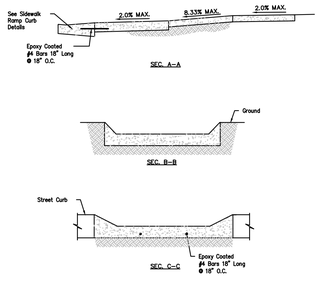










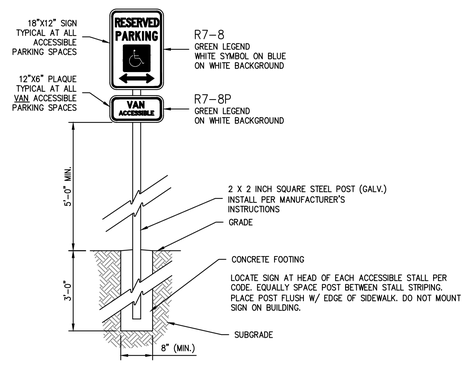


L = LANDING
R = RAMP
T = TRANSITION

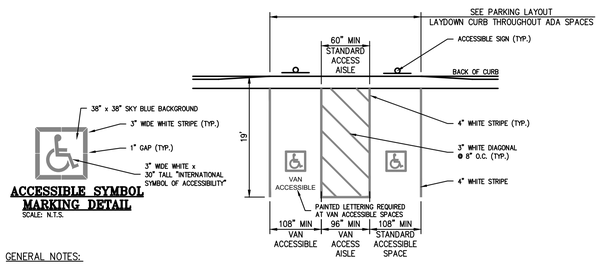
RAMP (Required to transition elevation): Max. Longitudinal Slope – 8.33%
Max. Cross Slope – 2.00%
Min. Width – 5'
Min. Length – 5'

LANDING (Required to change direction of travel): Max. Longitudinal Slope – 2.00%
Max. Cross Slope – 2.00%
Min. Width – 5'

PRIVATE SIDEWALK RAMPS
SCALE: N.T.S.



ACCESSIBLE SIGN DETAIL IN GRASS AREA
SCALE: N.T.S.



ACCESSIBLE SYMBOL MARKING DETAIL
SCALE: N.T.S.

GENERAL NOTES:

1. ALL PAVEMENT MARKINGS SHALL BE APPLIED BY A QUALIFIED CONTRACTOR HAVING A MINIMUM 3 YEARS EXPERIENCE IN TRAFFIC GRADE PAVEMENT MARKING APPLICATIONS.
2. PAINT SHALL BE A NON-BLEEDING, QUICK-DRYING, ALKYD PETROLEUM BASE PAINT SUITABLE FOR TRAFFIC-BEARING SURFACE AND SHALL MEET FS TTP-85E & MIXED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS BEFORE APPLICATION.
3. SWEEP AND CLEAN SURFACE TO ELIMINATE LOOSE MATERIAL & DUST.
4. APPLY TWO (2) COATS OF PAINT AT MANUFACTURER RECOMMENDED RATE WITHOUT THE ADDITION OF THINNER, WITH A MAXIMUM OF 100 SQUARE FEET PER GALLON. APPLY WITH MECHANICAL EQUIPMENT TO PRODUCE UNIFORM STRAIGHT EDGES. AT SIDEWALK, CURBS, AND CROSSWALKS USE A STRAIGHTEDGE TO ENSURE A UNIFORM, CLEAN, & STRAIGHT STRIPE.
5. THE FOLLOWING ITEMS SHALL BE PAINTED WITH THE COLORS NOTED BELOW:
   A. HANDICAP SYMBOLS: SEE DETAIL THIS SHEET.
   B. PARKING STALL STRIPING: WHITE.
6. ACCESSIBLE PARKING SPACE DESIGN LAYOUT SHALL BE IN ACCORDANCE WITH CURRENT ADA REQUIREMENTS.
7. SEE SITE PLANS FOR COMPLETE PARKING LAYOUT.

ACCESSIBLE PARKING SPACE DETAIL
SCALE: N.T.S.

PHELPS ENGINEERING, INC.
1270 N. Winchester
Olathe, Kansas 66061
(913) 393-1155
Fax (913) 393-1066
www.phelpsengineering.com

PLANNING
ENGINEERING
IMPLEMENTATION

STATE OF MISSOURI
JUDD DAVID CLAUSSEN
NUMBER PE-2010430
5/24/22
PROFESSIONAL ENGINEER

PAVEMENT DETAILS
CRASH CHAMPIONS
451 S.E. OLDHAM PARKWAY
LEE'S SUMMIT, JACKSON COUNTY, MO

Revisions:	Date	No.	By	App.

PROJECT NO. 210229
DATE: 05-24-22
DRAWN: SNH
CHECKED: DAF
APPROVED: JDC

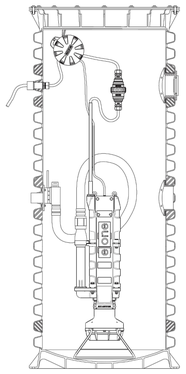
CERTIFICATE OF AUTHORIZATION
KANSAS SURVEYING – LS-82
ENGINEERING – E-391

CERTIFICATE OF AUTHORIZATION
LAND SURVEYING-2007001128
ENGINEERING-2007005038

SHEET
C5.1

E/ONE EXTREME SERIES

WH101F/WR101F



General Features

The model WH101F or WR101F grinder pump station is a complete unit that includes: the grinder pump, check valve, HDPE (high density polyethylene) tank, controls, and alarm panel. This station is designed for areas where high floodplain conditions occur. The WH101F or WR101F is a watertight, sealed station capable of sustaining a 15-foot flood above the top of the station. This type of flood condition will not affect the continued operation of the pump; the homeowner should rely on uninterrupted service.

- Rated for flows of 700 gpd (2650 lpd)
- 70 gallons (265 liters) of capacity
- Standard outdoor heights range from 60 inches to 160 inches

The WH101F is the "hardwired," or "wired," model where a cable connects the motor controls to the level controls through watertight penetrations.

The WR101F is the "radio frequency identification" (RFID), or "wireless," model that uses wireless technology to communicate between the level controls and the motor controls.

Operational Information

Motor
1 hp, 1,725 rpm, high torque, capacitor start, thermally protected, 120/240V, 60 Hz, 1 phase

Inlet Connections
4" PVC inlet flange for Schedule 40 pipe

Discharge Connections
Pump discharge terminates in 1.25-inch NPT female thread. Can easily be adapted to 1.25-inch PVC pipe or any other material required by local codes.

Discharge
15 gpm at 0 psig (0.95 lps at 0 m)
11 gpm at 40 psig (0.69 lps at 28 m)
7.8 gpm at 80 psig (0.49 lps at 56 m)

Accessories

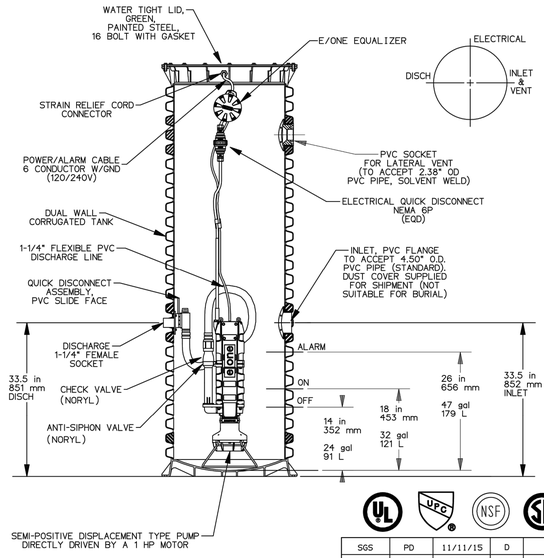
E/One requires that the Uni-Lateral, E/One's own stainless steel check valve, be installed between the grinder pump station and the street main for added protection against backflow.

Alarm panels are available with a variety of options, from basic monitoring to advanced notice of service requirements.

The Remote Sentry is ideal for installations where the alarm panel may be hidden from view.

NA0058P01 Rev C

OPTIONS : ☐ WH101F (HARD WIRED LEVEL CONTROLS)
☐ WR101F (WIRELESS LEVEL CONTROLS)



CONCRETE BALLAST MAY BE REQUIRED
SEE INSTALLATION INSTRUCTIONS
FOR DETAILS

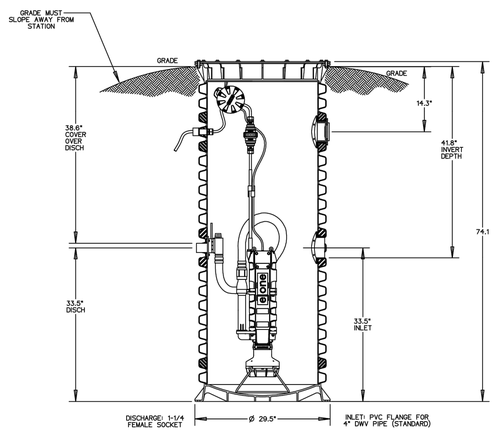
SGS	PD	11/11/15	D	
DR BY	CHK'D	DATE	ISSUE	SCALE

e/one SEWER SYSTEMS

MODEL WH101F / WR101F
DETAIL SHEET

NA0058P02

OPTIONS : ☒ WH101F -74 (HARD WIRED LEVEL CONTROLS)
☐ WR101F -74 (WIRELESS LEVEL CONTROLS)



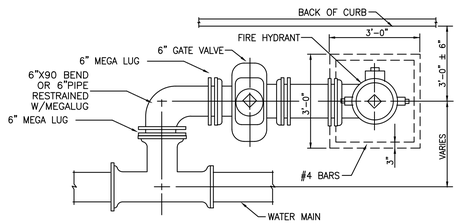
CONCRETE BALLAST MAY BE REQUIRED
SEE INSTALLATION INSTRUCTIONS
FOR DETAILS

AD	CH	07/16/07	C	
DR BY	CHK'D	DATE	ISSUE	SCALE

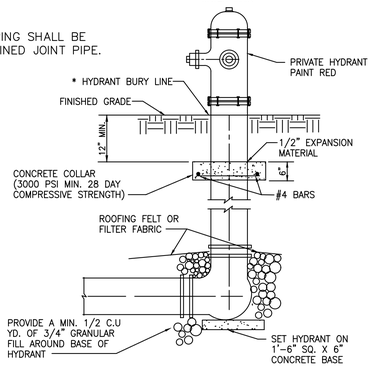
e/one SEWER SYSTEMS

MODEL WH101F-74 / WR101F-74

NA0058P04



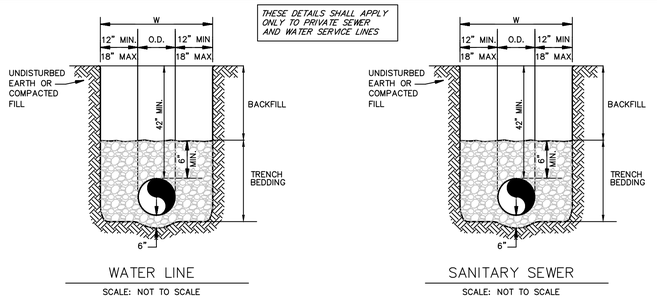
NOTE:
ALL PIPING SHALL BE RESTRAINED JOINT PIPE.



NOTE:
WHEN FIRE HYDRANT'S GATE VALVE EXCEEDS THE DISTANCE OF 5'-0" FROM CENTER OF GATE VALE TO CENTERLINE OF TEE. GATE VALVE SHALL BE ASSEMBLED TO WATER MAIN'S TEE.

TYPICAL
FIRE HYDRANT
INSTALLATION DETAIL

THESE DETAILS SHALL APPLY ONLY TO PRIVATE SEWER AND WATER SERVICE LINES



WATER LINE
SCALE: NOT TO SCALE

SANITARY SEWER
SCALE: NOT TO SCALE

REQUIREMENTS PER APWA 2100 AS FOLLOWS:

Sanitary Sewer Bedding Material Gradation Limits (% Passing)	
Sieve Size	3/4"
1"	100
3/4"	90 – 100
3/8"	20 – 55
No. 4	0 – 5
No. 8	0 – 2

Storm Sewer Bedding Material Gradation Limits (% Passing)			
Sieve Size	3/4"	1/2"	3/8"
1"	100		
3/4"	90 – 100	100	
1/2"		80 – 100	
3/8"	20 – 55	40 – 77	100
No. 4	0 – 10	0 – 15	30 – 40
No. 8	0 – 5	0 – 5	0 – 4

Waterline Bedding Material Gradation (% Passing)					
Sieve Size	Type 1 (1/2")	Type 2 (Buckshot)	Type 3 (Man. Sand)	Type 4 (River Sand)	
3/4"	95 – 100				
3/8"	40 – 60	100	100		
1/4"			90 – 100		
No. 4		60 – 80	85 – 90	100	
No. 8	0 – 5	0 – 15	35 – 75		
No. 50			10 – 25		
No. 200		0	0 – 10	0 – 10	

Trench Backfill

1. Backfill shall not be placed when material contains frost, is frozen, or a blanket of snow prevents proper compaction.
2. The Contractor shall remove from the project site waste material, trees, organic material, rubbish, or other deleterious materials.
3. All trash and debris shall be removed from the pipeline excavation prior to backfilling.
4. Backfill material shall be carefully placed to avoid damage to or displacement of the pipe, other utilities or structures.
5. Unless otherwise specified, all trenches and excavations around structures shall be backfilled to the original ground surface.
6. Outside of paved areas, the backfill material shall be placed in layers not exceeding 8-inches in loose thickness and be compacted to at least 90% of maximum density. Compaction testing shall be at the discretion of the Engineer.
7. The method of compaction and the equipment used shall be appropriate for the material to be compacted and shall not transmit damaging shocks to the pipe.
8. The combination of the thickness of the layer, the method of compaction and the type of compaction equipment used shall be at the discretion of the Contractor subject to obtaining the required densities.

Pipe Embedment. All water, sanitary sewer, and storm sewer pipe shall be bedded in bedding aggregate as specified herein.

1. Bedding shall cover the entire width of trench.
2. The first layer of bedding placed on the bottom of excavation shall be in accordance with Figures 1 through 3.
3. Bedding at bottom of trench, in the middle 1/3 of trench under the pipe shall be loose.
4. After pipe is placed, bedding material shall be placed in layers in accordance with manufacturer's recommendations.
5. Second layer of bedding material shall be placed under the lower haunches of the pipe up to the springline (center of pipe). Material shall be spaded to be place under haunches and compacted at the springline elevation prior to placing additional bedding material.
6. The third layer of bedding material shall be placed to 12 inches over the top of pipe.
7. Contractor shall take measures to prevent pipe from floating during placement of bedding material so that pipe maintains proper line and grade as shown on the Plans.

UTILITY TRENCH AND BEDDING

STATE OF MISSOURI
JUDD DAVID CLAUSSEN
NUMBER PE-2009030
5/24/22
PROFESSIONAL ENGINEER

PHELPS ENGINEERING, INC.
1270 N. Winchester
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www.phelpsengineering.com

PLANNING
ENGINEERING
IMPLEMENTATION

SANITARY & WATER DETAILS

CRASH CHAMPIONS
451 S.E. OLDHAM PARKWAY
LEE'S SUMMIT, JACKSON COUNTY, MO

Revisions:	Date	No.	By	App.

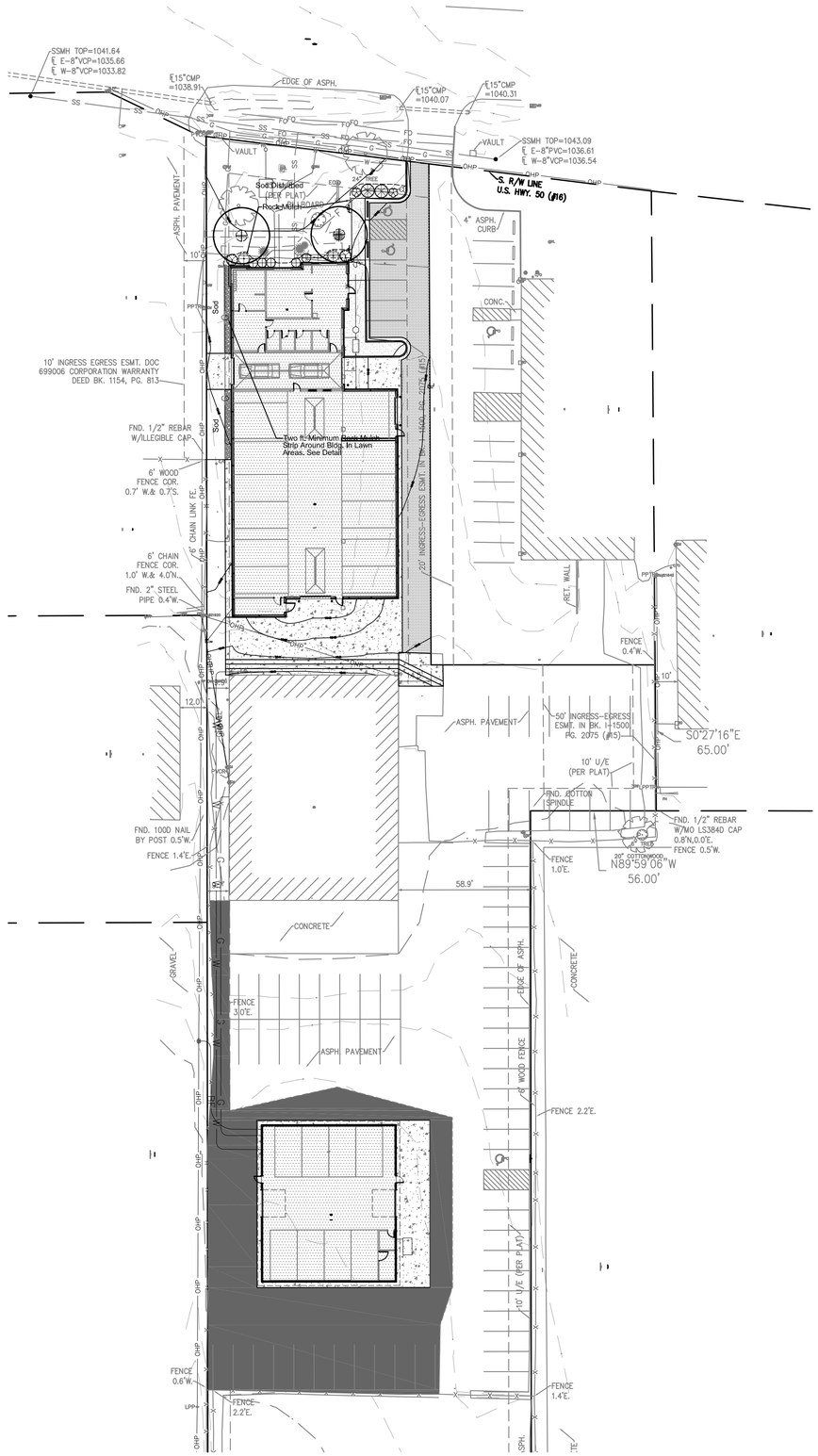
PROJECT NO. 210229
DATE: 5-24-22
CHECKED: DJAF
DRAWN: SNH
APPROVED: JDC

CERTIFICATE OF AUTHORIZATION
KANSAS SURVEYING - LS-82
LAND SURVEYING - E-361
ENGINEERING

CERTIFICATE OF AUTHORIZATION
LAND SURVEYING-2007001128
ENGINEERING-2007003208

SHEET
C5.2

\\phelps-server\projects\P\210229\Dwg\permit plans\DETAILS - PRIVATE.dwg Layout:SWR-WTR May 24, 2022 - 3:04pm Daniel Finn



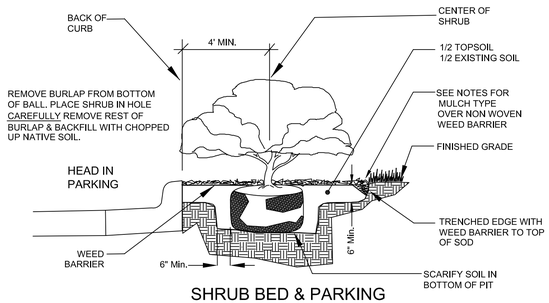
Utility Note:

Utilities shown on plan are diagramatic and some may be missing. Before starting any construction call appropriate locating service. In Missouri call 1-800-DIG-RITE (344-7483) to have utilities located.

PLANT SCHEDULE

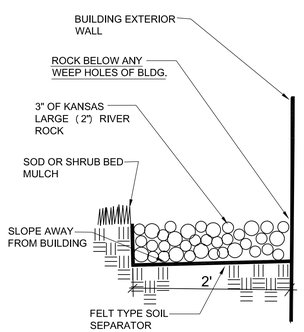
TREES	QTY	BOTANICAL / COMMON NAME	CONT	CAL
+	2	Gleditsia triacanthos `Skyline` / `Skyline` Honey Locust	B & B	2.5"Cal

SHRUBS	QTY	BOTANICAL / COMMON NAME	CONT
✳	2	Juniperus chinensis `Sea Green` / Sea Green Juniper 24"-30" hgt. & sp.	5 gal
✳	2	Juniperus virginiana `Grey Owl` / Grey Owl Juniper 24" sp.	3 gal
✳	2	Physocarpus opulifolius `Center Glow` / Center Glow Ninebark 24"-30" hgt. & sp.	3 gal
✳	2	Spiraea x bumalda `Anthony Waterer` / Anthony Waterer Spiraea 18"-24" hgt.	3 gal
✳	5	Spiraea x bumalda `Gold Flame` / Gold Flame Spirea 18"-24" hgt.	3 gal



SHRUB BED & PARKING SETBACK DETAIL

NO SCALE



BUILDING ROCK EDGE

NO SCALE

*PLACE ROCK AROUND ENTIRE BLDG. PERIMETER WHEREVER THERE IS NOT CONCRETE OR ASPHALT

Transplant Additives:

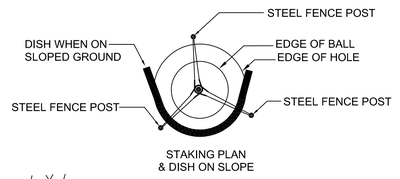
1. Apply a commercial transplant additive (approved by the Landscape Architect) to all trees, shrubs and groundcover at rates recommended by the manufacturer during the planting. This item shall be subsidiary to other planting items.

2. Transplant additive shall be Horticultural Alliance "DIEHARD Transplant" (or approved equal) mycorrizal fungal transplant innoculant or equivilent equal containing the appropriate species of mycorrhizal fungi and bacteria, fungi stimulant, water retaining agents, mineral & organic nutrients and inert ingredients.

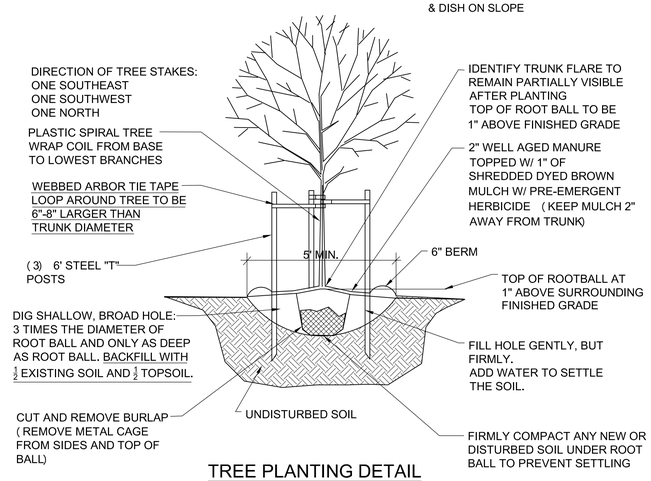
3. Demonstrate installation of all transplant additives for this project to the Landscape Architect. Provide actual additive product as evidence of sufficient quantity of product. (Empty product bags to be stockpiled for inspection by the Landscape Architect prior to disposal).

4. Number of transplant additive packets per tree, shrub or grouncover shall be applied according to the manufacturer's recommended rates and instructions. For all plants the packet mix shall be evenly distributed into the upper approximately 8" of backfill soil next to the rootball. Do not place mix in the bottom of the planting pit.

5. Furnishing and application of transplant additive shall be subsidiary to the planting operations.



STAKING PLAN & DISH ON SLOPE

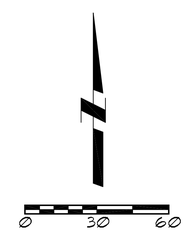


TREE PLANTING DETAIL

NO SCALE

GENERAL LANDSCAPE NOTES:

1. CONTRACTOR SHALL VERIFY THE EXISTENCE AND LOCATION OF ALL UTILITIES BEFORE STARTING ANY WORK.
2. CONTRACTOR SHALL VERIFY ALL LANDSCAPE MATERIAL QUANTITIES AND SHALL REPORT ANY DISCREPANCIES TO THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
3. CONTRACTOR SHALL MAKE NO SUBSTITUTIONS WITHOUT THE APPROVAL OF THE LANDSCAPE ARCHITECT.
4. CONTRACTOR SHALL STAKE LAYOUT PLAN IN THE FIELD AND SHALL HAVE THE LAYOUT APPROVED BY THE LANDSCAPE ARCHITECT BEFORE PROCEEDING WITH THE INSTALLATION.
5. ALL LANDSCAPE BEDS SHALL BE TREATED WITH THE PRE-EMERGENT HERBICIDE PRE M 60 DG (GRANULAR) OR AN APPROVED EQUAL IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
6. ALL LANDSCAPE BEDS SHALL RECEIVE A TRENCHED EDGE. SEE SHRUB PLANTING DETAIL.
7. FERTILIZER FOR FESCUE SODDED LAWN, TREES AND CONTAINER STOCK AREAS SHALL BE A BALANCED FERTILIZER BASED ON RECOMMENDATIONS FROM A SOIL TEST SUPPLIED BY THE LANDSCAPE CONTRACTOR FROM AN APPROVED TESTING LAB.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE PLANTS UNTIL COMPLETION OF THE JOB AND ACCEPTANCE BY THE OWNER.
9. CONTRACTOR SHALL WARRANTY ALL LANDSCAPE WORK AND PLANT MATERIAL FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE OF THE WORK BY THE OWNER.
10. CONTRACTOR SHALL PROVIDE MAINTENANCE OF ALL TREES AND SHRUBS FOR A PERIOD OF ONE YEAR AFTER THE DATE OF SUBSTANTIAL COMPLETION IF CONTRACTED BY THE OWNER.
11. ANY PLANT MATERIAL WHICH DIES DURING THE ONE YEAR WARRANTY PERIOD SHALL BE REPLACED BY THE CONTRACTOR DURING NORMAL PLANTING SEASONS.
12. ALL PLANT NAMES ON THE PLANT LIST CONFORM TO THE STANDARDIZED PLANT NAMES PREPARED BY THE AMERICAN JOINT COMMITTEE ON HORTICULTURAL NOMENCLATURE OR TO NAMES GENERALLY ACCEPTED IN THE NURSERY TRADE.
13. ALL PLANT MATERIAL SHALL BE SPECIMEN QUALITY STOCK AS DETERMINED IN THE "AMERICAN STANDARDS FOR NURSERY STOCK" PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMAN, FREE OF PLANT DISEASES AND PESTS, OF TYPICAL GROWTH OF THE SPECIES AND HAVING A HEALTHY, NORMAL ROOT SYSTEM.
14. SIZES INDICATED ON THE PLANT LIST ARE THE MINIMUM, ACCEPTABLE SIZE. IN NO CASE WILL SIZES LESS THAN THE SPECIFIED SIZES BE ACCEPTED.
15. PLANTS SHALL NOT BE PRUNED PRIOR TO DELIVERY TO THE SITE OR AFTER INSTALLATION EXCEPT FOR THOSE BRANCHES THAT HAVE BEEN DAMAGED IN SOME WAY.
16. PLANTS SHALL NOT HAVE NAME TAGS REMOVED PRIOR TO FINAL INSPECTION.
17. ALL PLANTINGS SHALL RECEIVE A COMMERCIAL TRANSPLANT ADDITIVE PER MANUFACTURER'S RECOMMENDED RATES AND INSTRUCTIONS FOR APPLICATION.
18. MULCH SHALL BE 3" DEPTH OF KANSAS LARGE 2" SIZE AVAILABLE FROM STURGIS MATERIALS OR APPROVED EQUAL, OVER A FELT TYPE SOIL SEPARATOR CUT INTO THE GROUND WITH A TRENCHED EDGE. SEE TREE DETAIL FOR DIFFERENT MULCH AROUND TREES.
19. SEE PLANTING DETAILS FOR SOIL MIX IN PLANTING HOLES.
20. SOD SHALL BE A TURF-TYPE-TALL FESCUE GRASS BLEND. CONTRACTOR SHALL BE RESPONSIBLE FOR AN ACCEPTABLE STAND OF TURF TO BE APPROVED BY THE OWNER AND/OR LANDSCAPE ARCHITECT.
21. SUCCESSFUL LANDSCAPE BIDDER SHALL BE RESPONSIBLE FOR THE MODIFICATION OF ANY EXISTING IRRIGATION SYSTEM, OR THE DESIGN AND INSTALLATION OF A NEW IRRIGATION SYSTEM TO BE APPROVED BY THE OWNER PRIOR TO CONSTRUCTION IF THE OWNER DESIRES AN IRRIGATION SYSTEM.
22. WOOD MULCH FOR TREES SHALL BE A DYED BROWN SHREDDED HARDWOOD.



STATE OF MISSOURI
PETER A. OPPERMANN
NUMBER 542
LANDSCAPE ARCHITECT

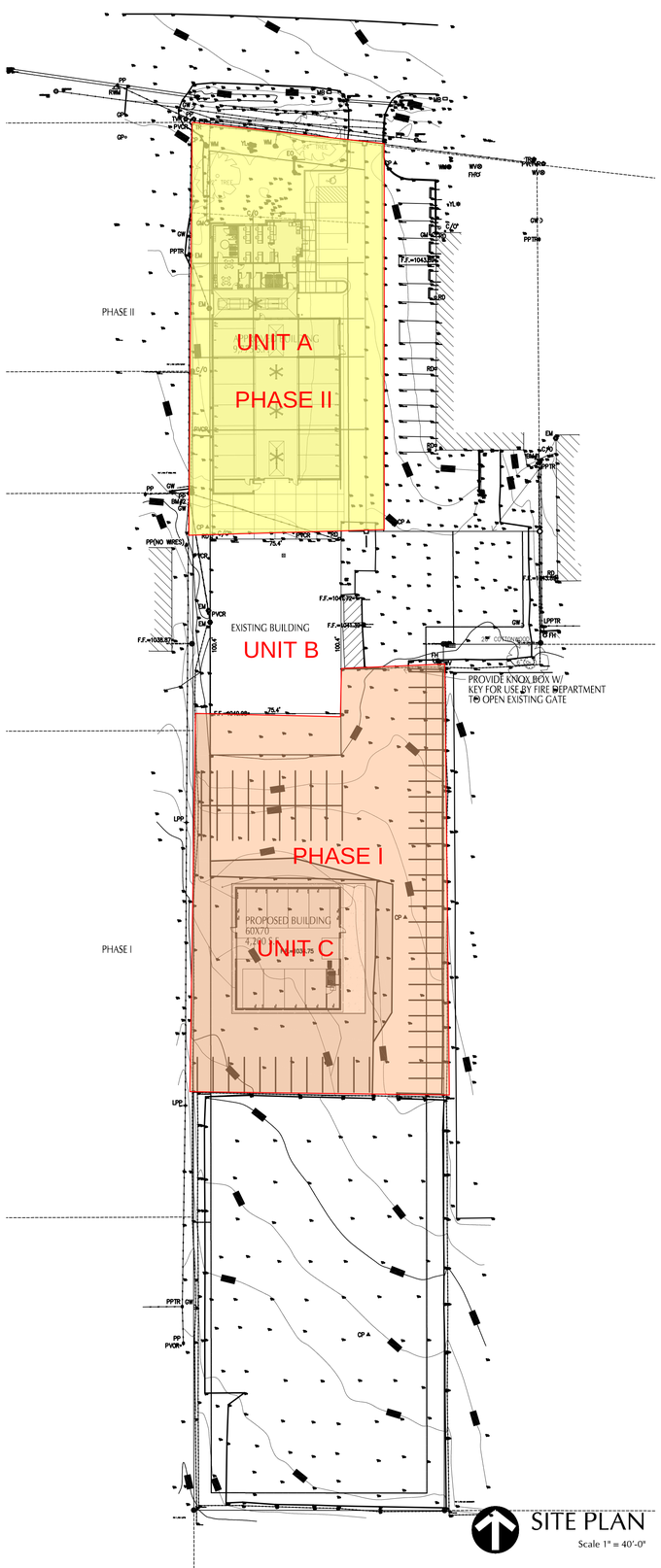
05/24/2022

Landscape Plan
Crash Champions

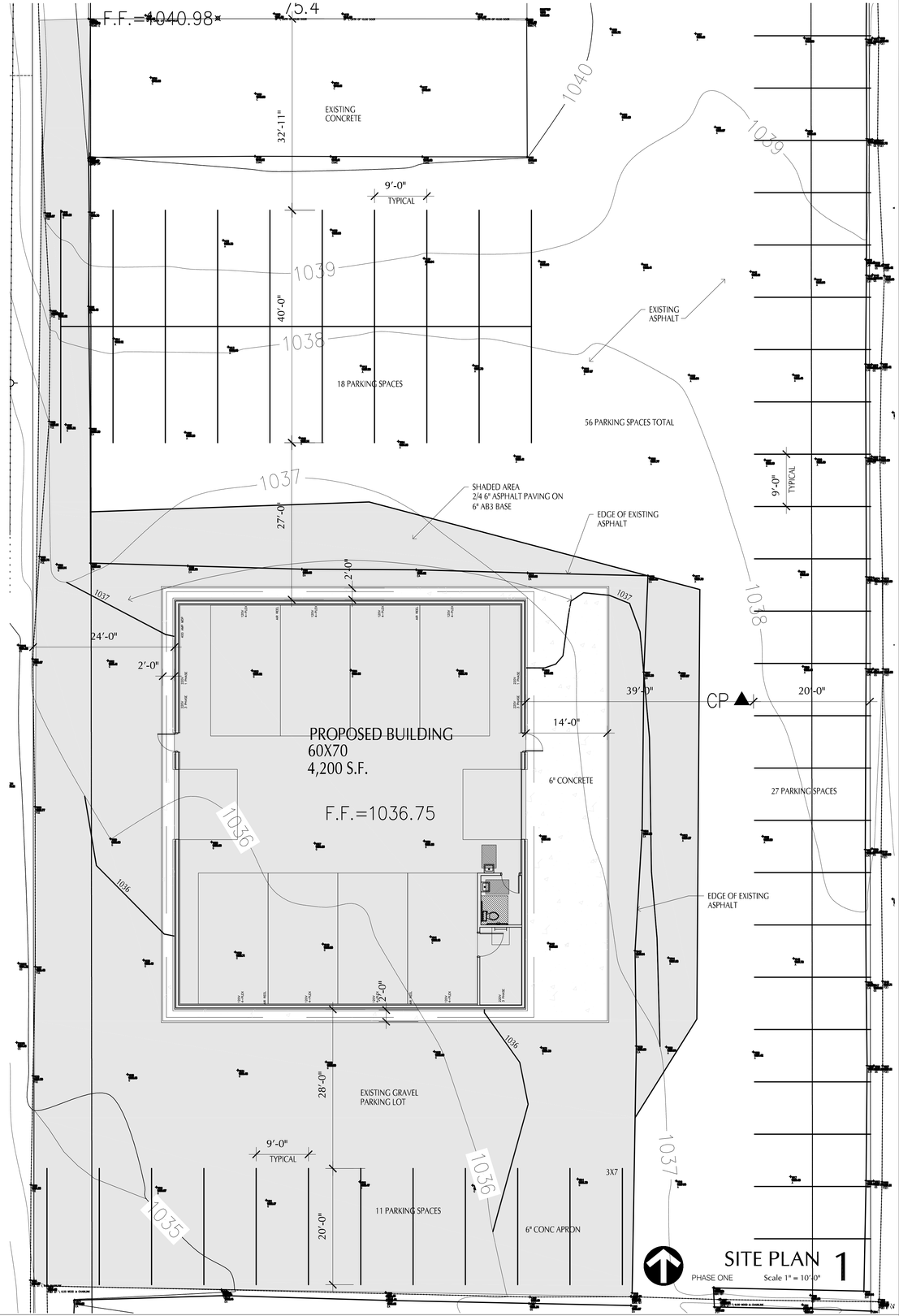
451 SE Oldham Parkway
Lee's Summit, MO

LS-1

Oppermann LandDesign, LLC
Land Planning & Landscape Architecture
99 Debra Lane
New Windsor, New York 12553
pete@opperland.com
913.522.5598



SITE PLAN 1
Scale 1" = 40'-0"



SITE PLAN 1
PHASE ONE Scale 1" = 10'-0"

PLAN NOTES

Christopher R. Bell

STATE OF MISSOURI
CHRISTOPHER R. BELL
NUMBER A-6275
REGISTERED ARCHITECT

06-14-22

CHRISTOPHER R. BELL - ARCHITECT
MO# A-6275

ROSE DESIGN GROUP INC
ARCHITECTS ■ PLANNERS
A Division of Rose Design Build
913-782-0777 FAX: 913-782-0998
P.O. BOX 100 OLATHE, KS 66051
KANSAS STATE CERTIFICATE OF AUTHORITY # A-83
www.BuildWithRose.com

CRASH CHAMPIONS
COLLISION REPAIR TEAM

PROPOSED BODY SHOP BUILDING FOR:

CRASH CHAMPIONS

451 SE OLDHAM PARKWAY

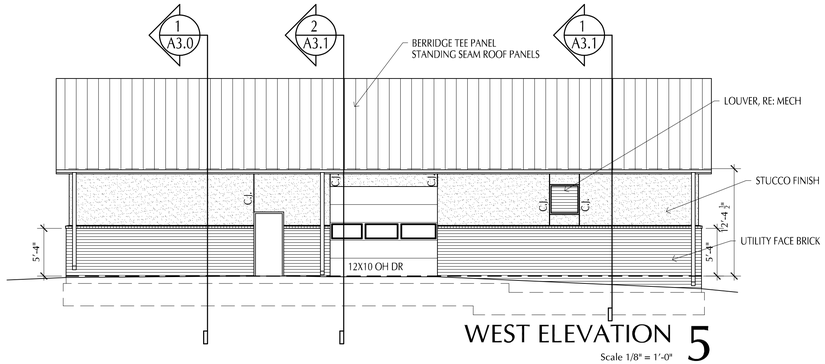
LEE'S SUMMIT, MISSOURI

NO.	DESCRIPTION	DATE

PROJECT NUMBER 22009
DATE ISSUED: 06 / 14 / 22

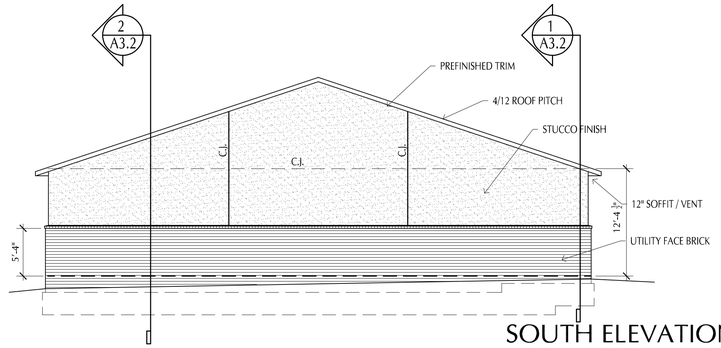
SHEET NUMBER
A1.0

SITE PLAN



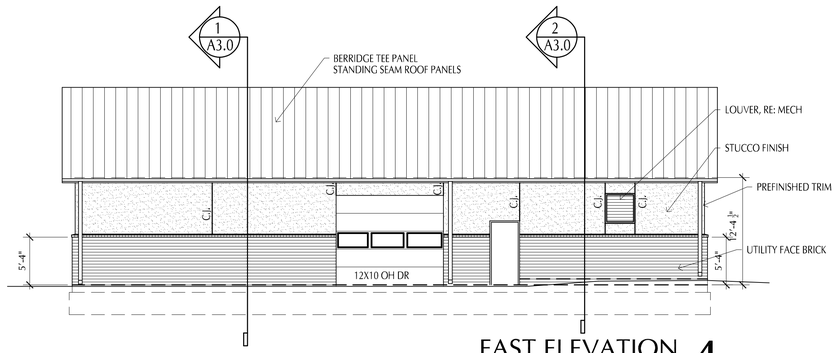
WEST ELEVATION 5

Scale 1/8" = 1'-0"



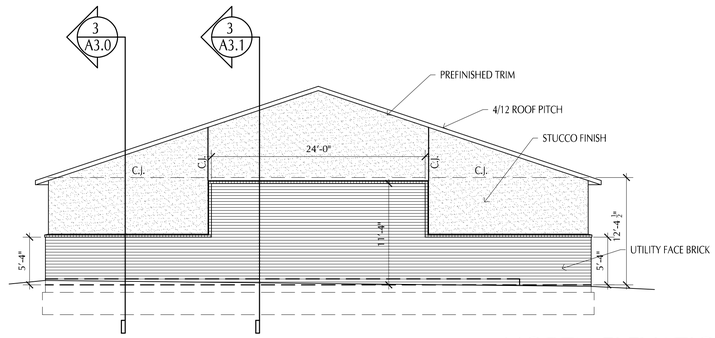
SOUTH ELEVATION 3

Scale 1/8" = 1'-0"



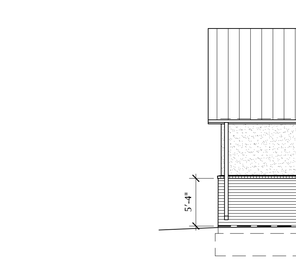
EAST ELEVATION 4

Scale 1/8" = 1'-0"



NORTH ELEVATION 2

Scale 1/8" = 1'-0"



PREFINISHED STEEL INSULATED DOOR
2" 20GA STEEL PANEL R 7.35
OVERHEAD DOOR COMPANY MODEL NO 422
W/ ELECTRIC OPERATOR & BOTTOM SENSING EDGE
OR APPROVED EQUAL

2 TOTAL

ENLARGED FLOOR PLAN 7

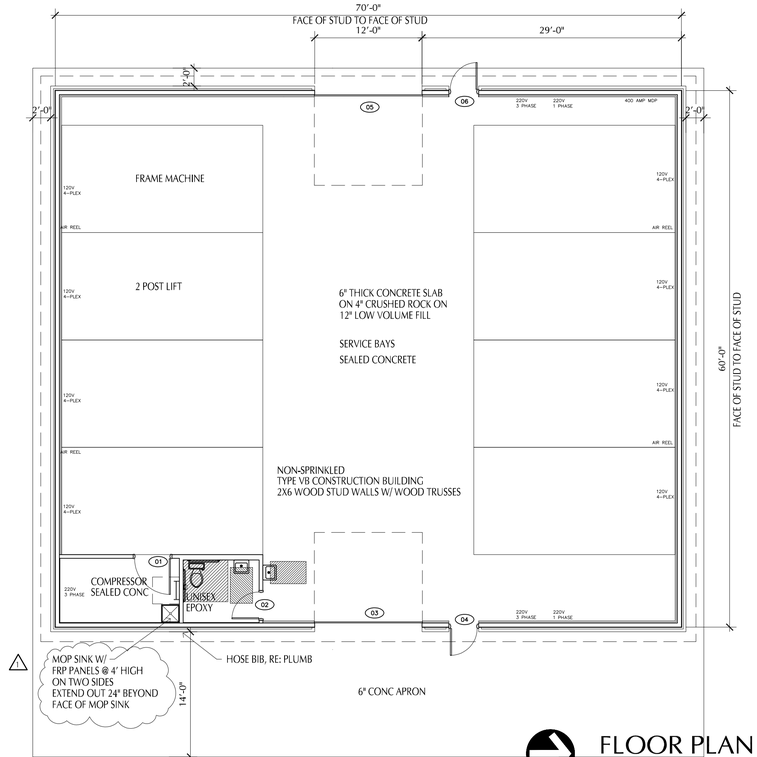
Scale 1/4" = 1'-0"

NOTES:
1. PROVIDE WOOD BLOCKING IN WALLS FOR ALL RESTROOM GRAB BARS & ACCESSORIES
2. PROVIDE INSULATION WRAPS / COVERS FOR ALL EXPOSED LAVATORY WATER & DRAIN LINES

TOILET ACCESSORIES (BOBRICK)
1. CHANNEL-FRAME MIRRORS
2. GRAB BARS: 1.5" DIA 18 GA TYPE 304 STAINLESS STEEL
3. PAPER TOWEL DISPENSERS (1) B-2620 & (1) B-2860
4. SOAP DISPENSERS (1) B-2111 & B-5050 (1)

UNISEX ELEVATIONS 6

Scale 1/4" = 1'-0"



FLOOR PLAN 1

4,200 SF Scale 1/8" = 1'-0"

PLAN NOTES

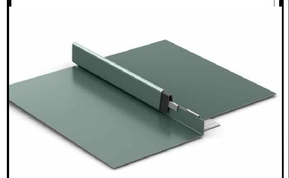
Gray Screen SW 7071

COLOR: SW 7071 GRAY SCREEN

KNOCK DOWN TROWEL FINISH

STUCCO WALL ONE COAT SYSTEM

UTILITY FACE BRICK
GLEN GERRY BRICK COMPANY
EBONITE SMOOTH
UTILITY SIZE



BERRIDGE TEE PANEL
STANDING SEAM ROOF PANELS
COLOR CHARCOAL GREY

WALL TYPES

A 5/8" GYP BD ON 3 5/8" 20 GA. METAL STUDS @ 16" O.C. TO STRUCTURE ABOVE W/SOUND BATT INSULATION

B 5/8" GYP BD ON 6" 20 GA. METAL STUDS @ 16" O.C. TO STRUCTURE ABOVE W/SOUND BATT INSULATION

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www.BuildWithRose.com

CRASH CHAMPIONS
COLLISION REPAIR TEAM

PROPOSED BODY SHOP BUILDING FOR:

CRASH CHAMPIONS

451 SE OLDHAM PARKWAY UNIT C

LEE'S SUMMIT, MISSOURI

NO.	DESCRIPTION	DATE
1	CITY REVIEW COMMENTS	07-07-22

PROJECT NUMBER 22009
DATE ISSUED: 06 / 14 / 22

SHEET NUMBER
A2.0

PHASE I
FLOOR PLAN

FINISH SCHEDULE

ROOM NO.	ROOM NAME	FLOOR	BASE	WALLS				CLG	CEILING HEIGHT	NOTES
				NORTH	SOUTH	EAST	WEST			
01	COMPRESSOR	F2	B1	W4	W4	W4	W4			
02	SHOP	F2	B1	W1	W1	W1	W1			B1 GYP BD WALLS ONLY
03	UNISEX	F1	B2	W3	W3	W3	W3	C1	9'-0"	

FINISH LEGEND

SYMBOL	PRODUCT	MANUFACTURER	PRODUCT / COLOR	NOTES
FLOORING				
F1	EPOXY FLOORING	DUR-A-FLEX SHOP FLOOR	DOUBLE BROADCAST - GRAY SPECKLED	3
F2	SEALED CONCRETE	PROSOCO	CONSOLDECK-SB & LS SYSTEMS W/ JOINT FILLER	
WALLS				
W1	PAINT	S.W. PROMAR 400 EGGSHELL	SW CUSTOM SHOP COLOR	2
W2	PAINT	S.W. PROMAR 400 EGGSHELL	SW CUSTOM SHOP COLOR & SW 7005 PURE WHITE	5
W3	CERAMIC TILE & PAINT	S.W. PROMAR 400 EGGSHELL	SW 7653- SILVERPOINTE	1
W4	PAINT	S.W. PROMAR 400 EGGSHELL	SW 7653- SILVERPOINTE	
BASE				
B1	4" RUBBER BASE	ROPPE	700 SERIES, 129 DOLPHIN	
B2	6" EPOXY BASE			
CEILING				
C1	2X2 ACOUSTICAL TILE	ARMSTRONG	ULTIMA BEVELED TEGULAR 1911A	

NOTES:
1. CERAMIC WALL TILE SIZE: 12" X 24" X 1/4",TROVATA - DIARY, MANUF: EMSER, PAINT ABOVE, GROUT: MAPEI, COLOR: T.B.D.
2. 60"TALL WAINSCOT FOR CUSTOM COLOR
3. PROVIDE TRANSITION STRIPS WHERE REQUIRED
4. DOOR FRAME COLOR: SW MATCH RUBBER BASE - DOLPHIN - EGGSHELL.
5. PAINT COMBO COLOR ON SHOP SIDE OF GYP BD WALLS

SW CUSTOM SHOP COLOR

EPOXY COLOR SAMPLE

DOOR SCHEDULE

DOOR NO.	DOOR SIZE	DETAILS HEAD	DETAILS JAMB	DOOR TYPE	FRAME TYPE	RATING MIN.	HDW.	REMARKS
01	4'-0" X 7'-0" X 1 3/4"			1	A		2	
02	3'-0" X 7'-0" X 1 3/4"			1	A		3	
04	3'-0" X 7'-0" X 1 3/4"			1	A		1	
06	3'-0" X 7'-0" X 1 3/4"			1	A		1	

HARDWARE SCHEDULE

HARDWARE SET 1 US32D
3 EA BB NRP HINGES (4.5X4.5)
1 EA PANIC HARDWARE
1 EA THRESHOLD 3/0
1 EA SWEEP
1 EA WEATHERSTRIP 3/0 X 7/0
1 EA ALUM CLOSER

HARDWARE SET 2 US32D
3 EA HINGES (4.5X4.5) US32D
1 EA PASSAGE SET
1 WALL STOP

HARDWARE SET 3 US32D
3 EA HINGES (4.5X4.5)
1 EA LEVER PRIVACY
1 WALL STOP

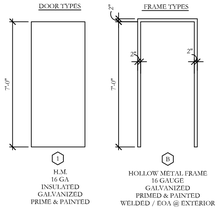
HARDWARE SPECS:
DOOR LEVER: CAL-ROYAL PIONEER SL SERIES (SL)
OR APPROVED EQUAL
CLOSURES: LCN 4040 SERIES
APPROVED EQUAL: CAL-ROYAL 900 SERIES

PANIC HARDWARE: VON DUPRIN #9848
APPROVED EQUAL: CAL-ROYAL 9800 RIM TYPE
SHALL MEET REQUIRMENTS PER IBC SECTION 1008.1.10

INTERIOR HINGES:
STANDARD WEIGHT BALL BEARING CONCEALED

EXTERIOR HINGES:
HEAVY WEIGHT BALL BEARING CONCEALED

ALL COMMERCIAL HARDWARE GRADE LEVEL 1



FINISH SCHEDULES 1
Scale N.T.S.

PLAN NOTES

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CRASH CHAMPIONS
COLLISION REPAIR TEAM

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CRASH CHAMPIONS
451 SE OLDHAM PARKWAY
LEE'S SUMMIT,MISSOURI

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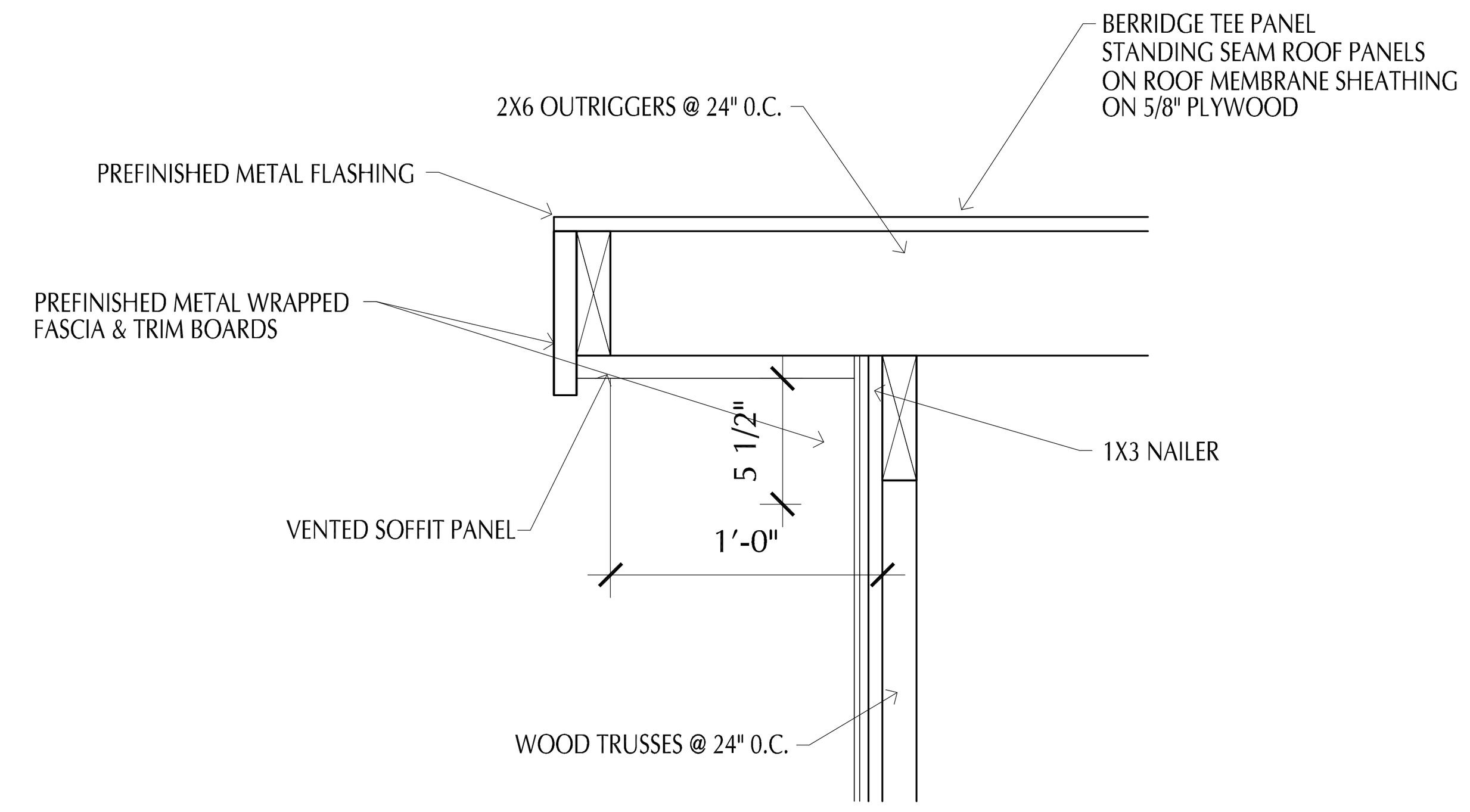
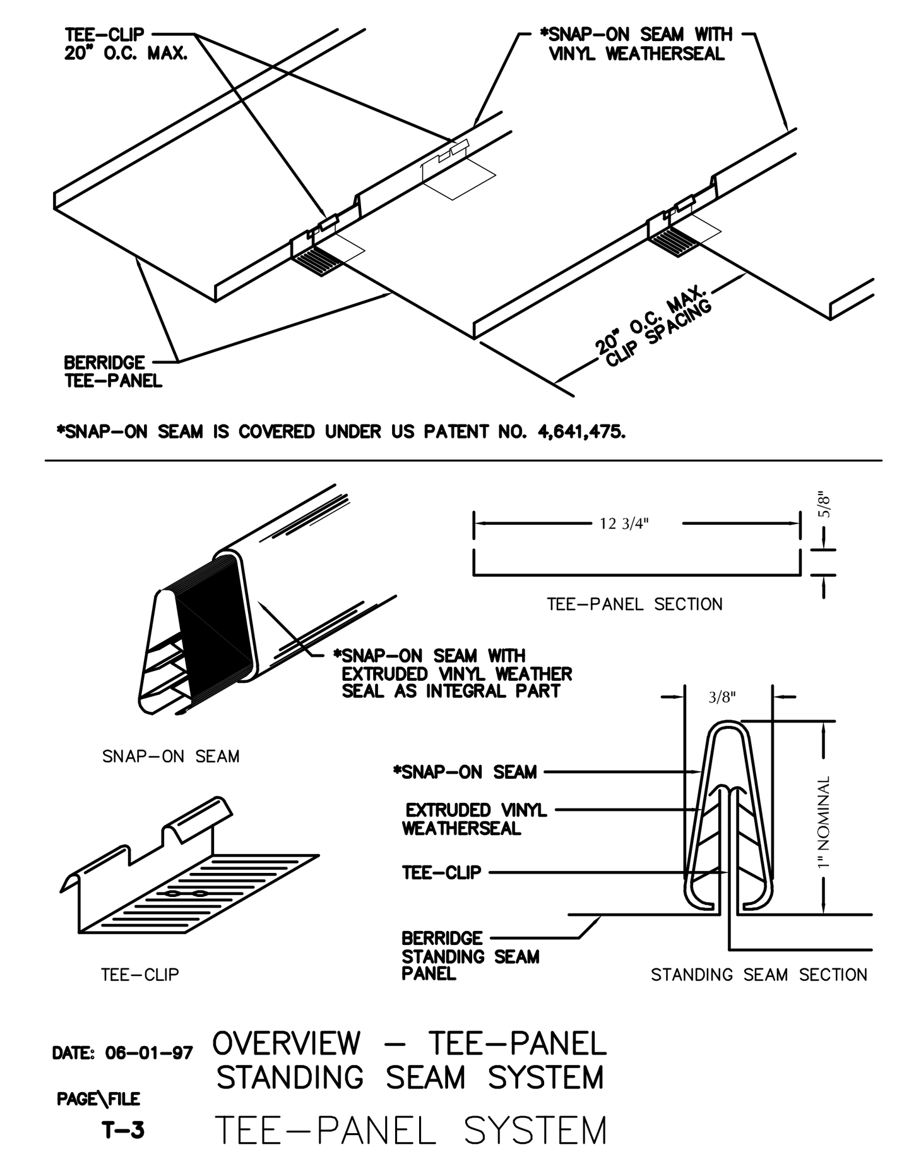
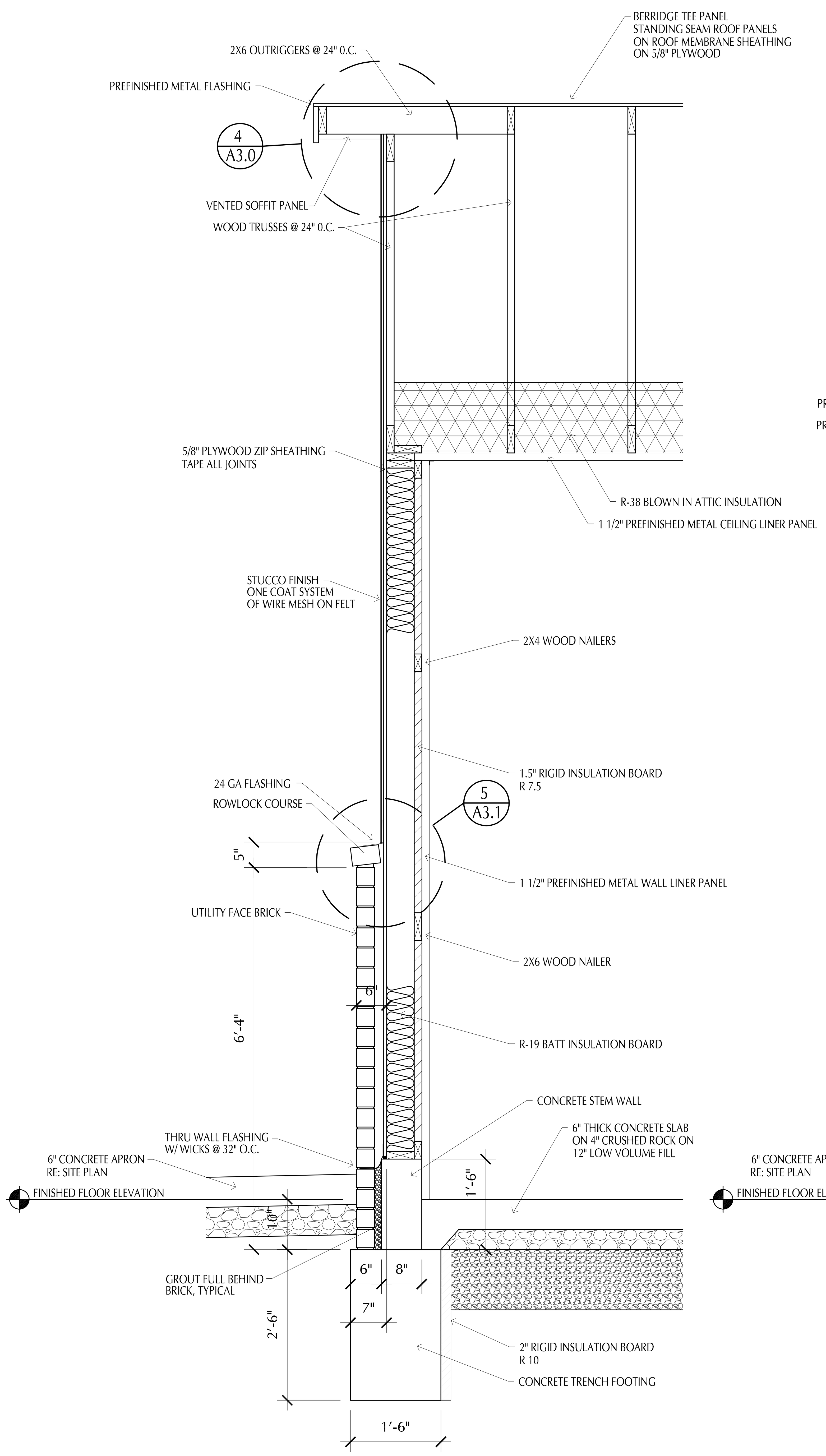
FINISH SCHEDULES

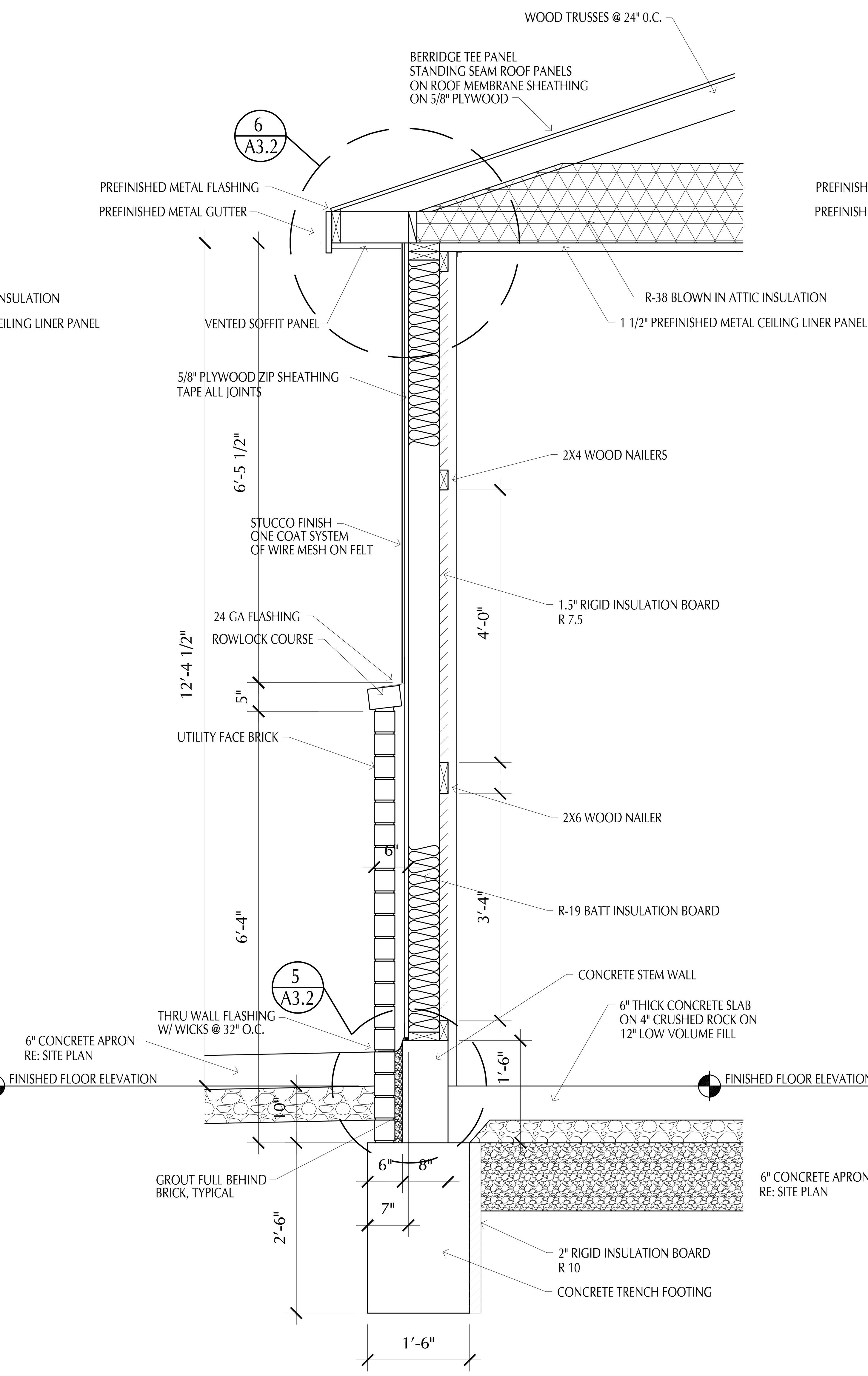


SECTION DETAIL 4
Scale 1 1/2" = 1'-0"





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



WALL SECTION 2
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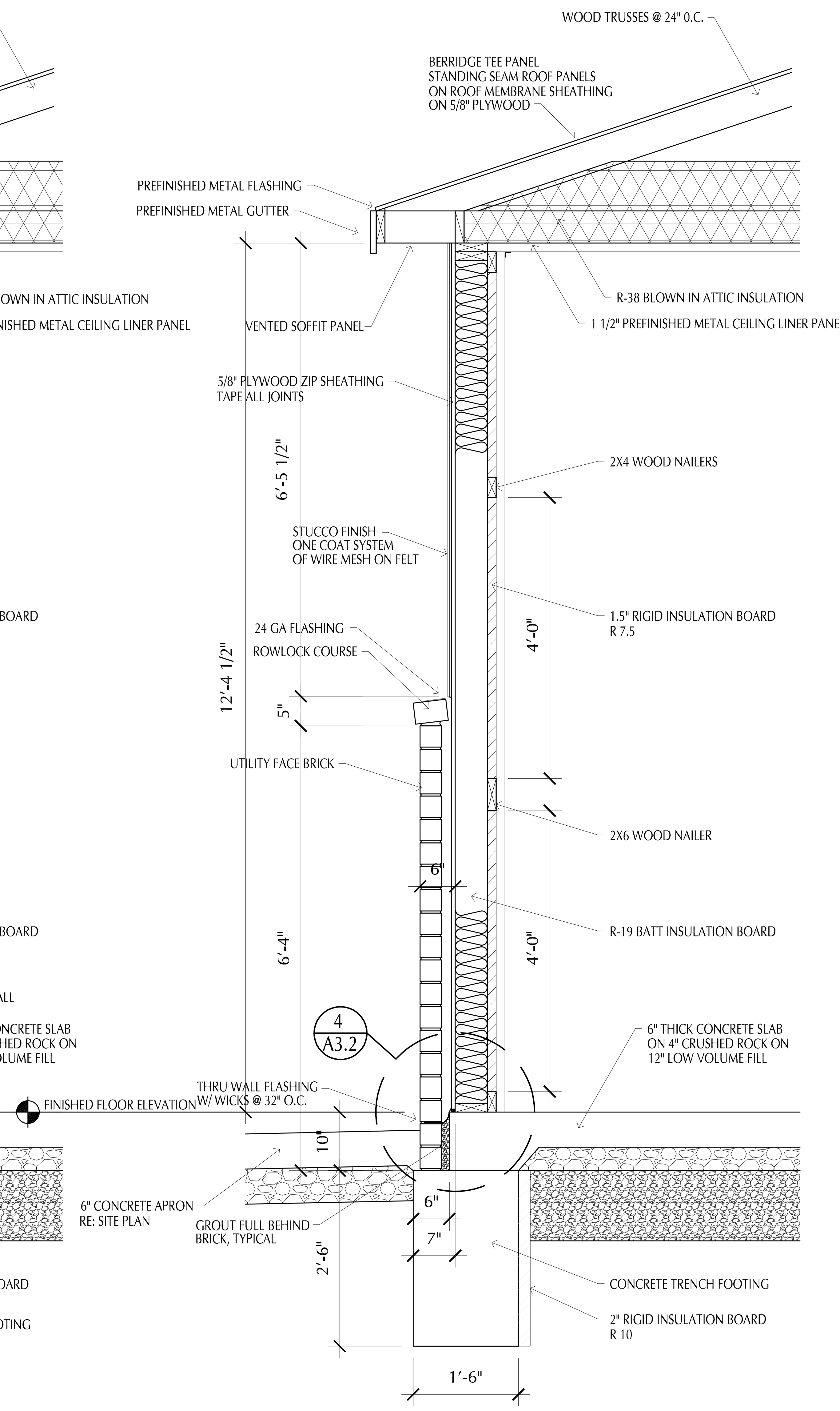

WALL SECTION 1
Scale 3/4" = 1'-0"

PLAN NOTES

DISCLAIMER

I, CHRISTOPHER R. BELL, AIA, REGISTERED ARCHITECT AND A REPRESENTATIVE OF ROSE DESIGN GROUP, INC., DO HEREBY ACCEPT PROFESSIONAL RESPONSIBILITY AS REQUIRED BY THE PROFESSIONAL REGISTRATION LAWS OF THIS STATE FOR THE ARCHITECTURAL DESIGN DRAWINGS CONSISTING OF SHEETS A-0 THRU A-10. 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.

Christopher R. Bell

STATE OF MISSOURI
CHRISTOPHER R. BELL
NUMBER
A-6275
REGISTERED ARCHITECT

06-14-22

CHRISTOPHER R. BELL - ARCHITECT
MO# A-6275

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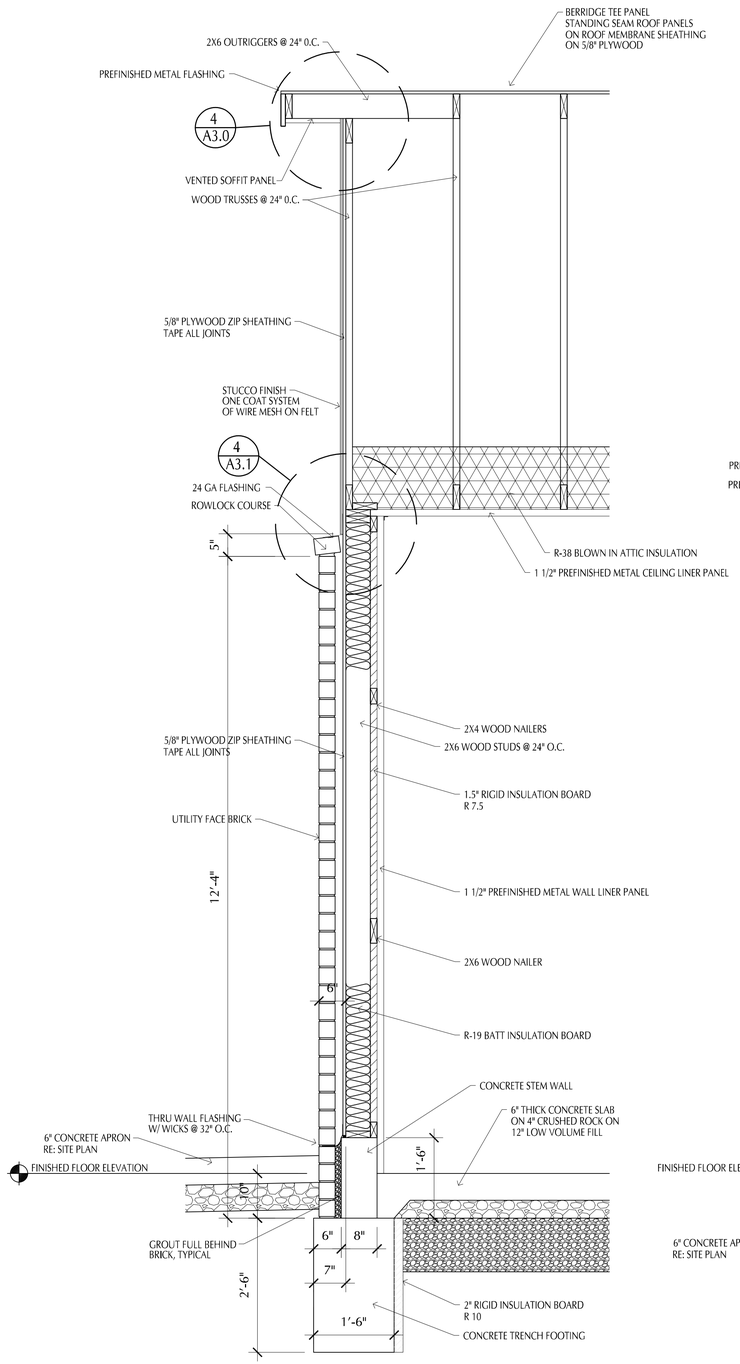
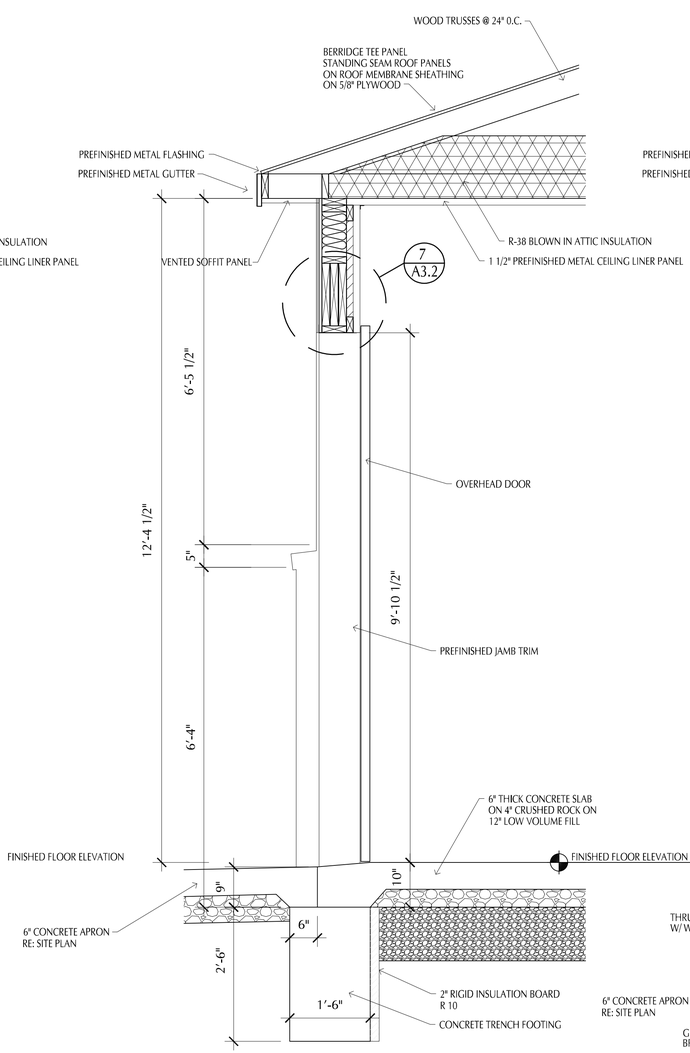
WALL SECTIONS



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



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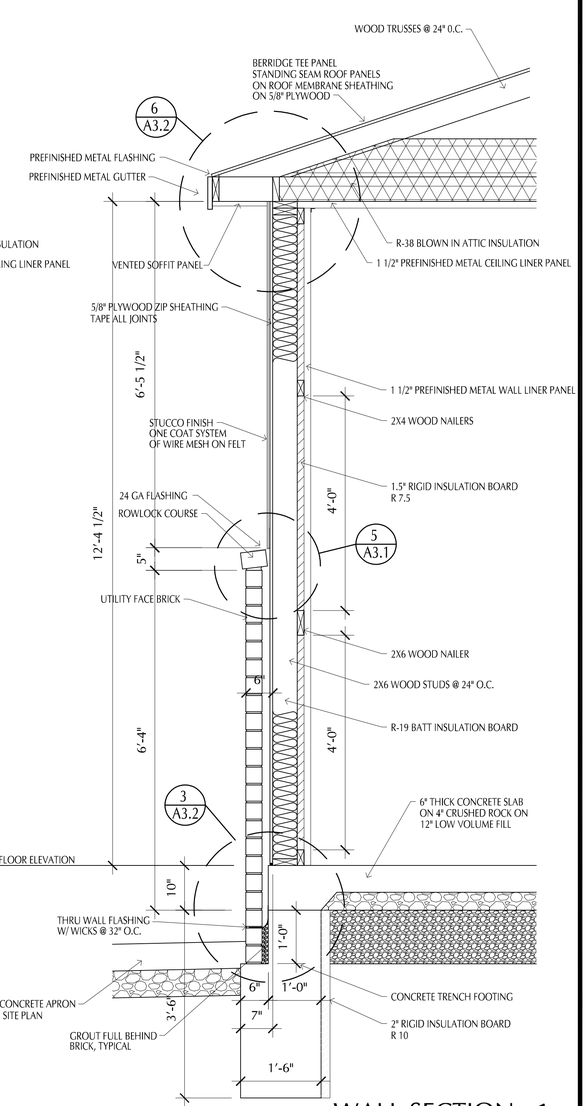

WALL SECTION 1
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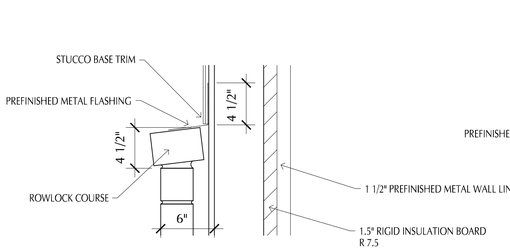

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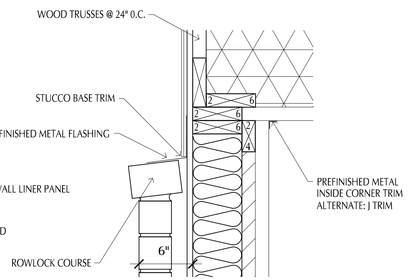

SECTION DETAIL 4
Scale 1 1/2" = 1'-0"

PLAN NOTES

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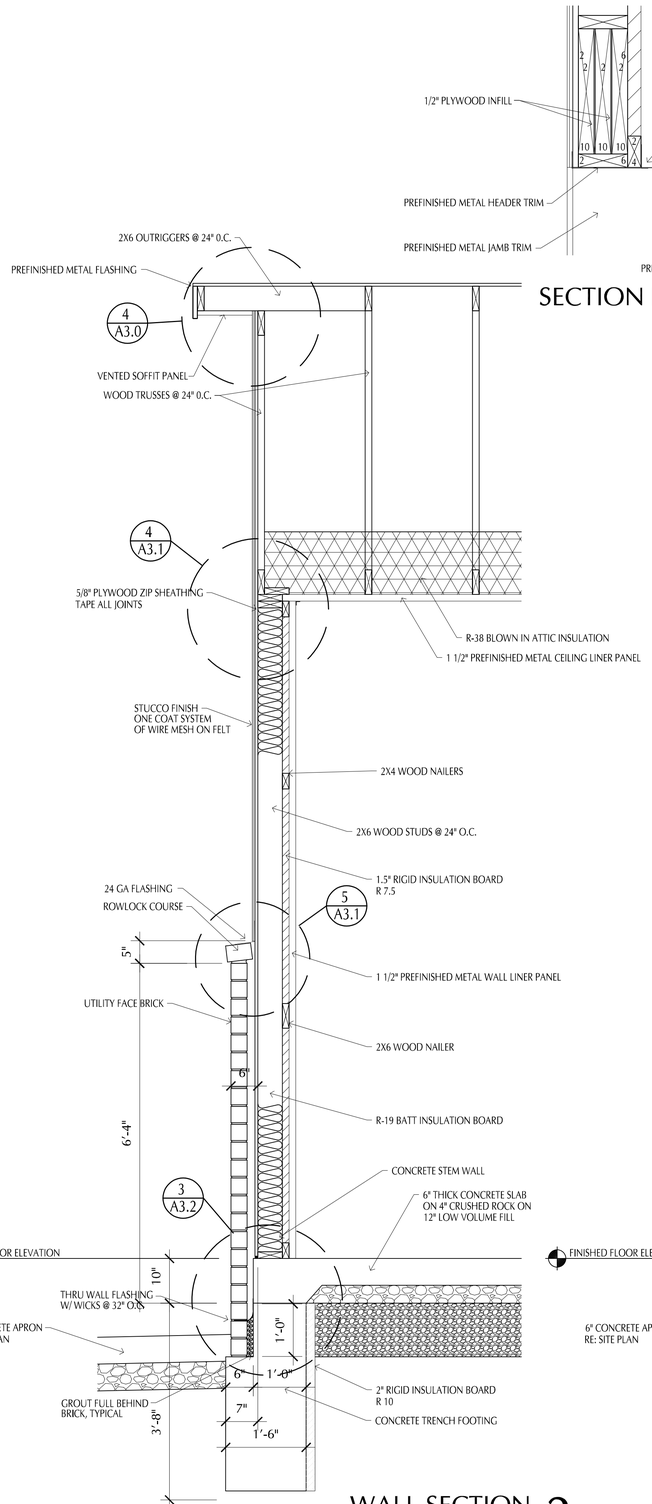
WALL SECTIONS



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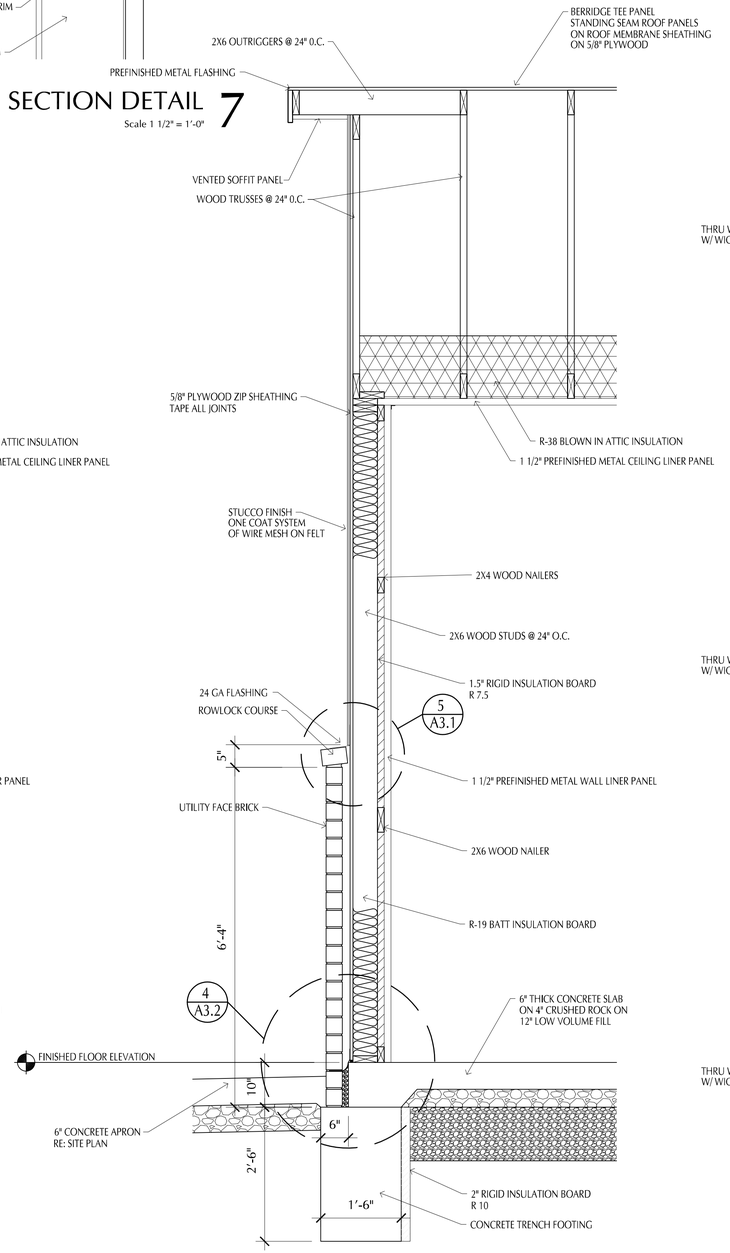
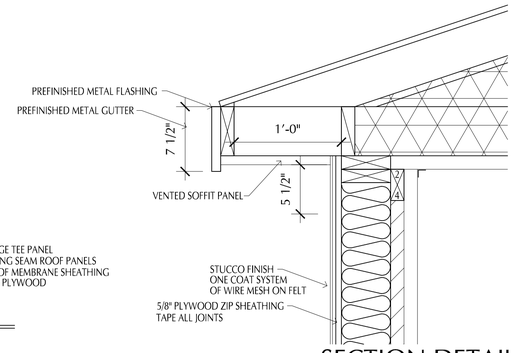


WALL SECTION 1
Scale 3/4" = 1'-0"



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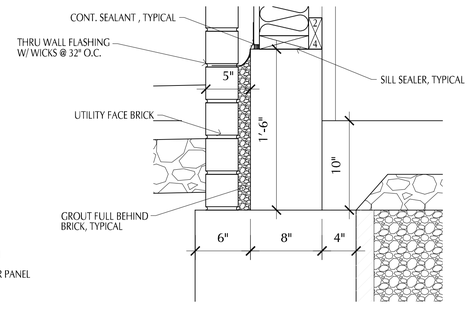

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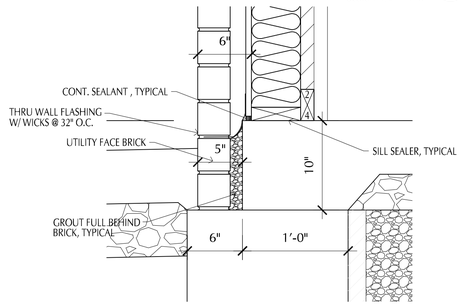

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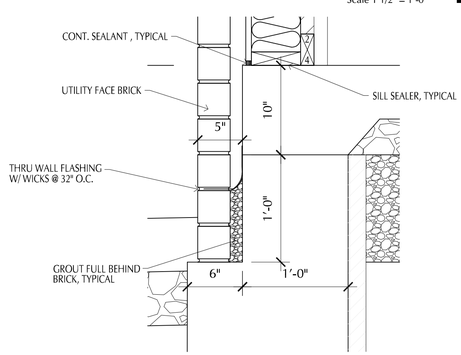

SECTION DETAIL 3
Scale 1 1/2" = 1'-0"

SECTION DETAIL 7
Scale 1 1/2" = 1'-0"

PLAN NOTES

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SHEET NUMBER
A3.2

WALL SECTIONS

GENERAL NOTES - STRUCTURAL

1. The contractor shall verify dimensions and conditions before construction and notify the engineer of any discrepancies, inconsistencies, or difficulties affecting the work before proceeding.

2. 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. Conflicts, inconsistencies, or other difficulties affecting structural work shall be called to the architect or engineer's attention for direction before proceeding.

3. All design and construction work for this project shall conform to the requirements of the 2018 International Building Code, as amended by the City of Lees Summit, MO.

4. These drawings are for this specific project and no other use is authorized.

5. Structural Design Load Criteria:

   A. Roof Live= 25 psf
   B. Snow= Pg = 20psf, Pf=14psf,Is = 1.0
      Ce=1.0, Ct=1.0, Drift per ASCE/SEI 7-10
   C. Lateral Loads:
      1.) Wind V = 115 mph, exposure 'C'
      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 7-10. Tabulated pressures shall be multiplied by effective area reduction factors, exposure adjustment factors, and topographic factors where applicable.
      2.) This project is designed to resist the most critical effects resulting from the load combinations of section 1605.3 of the 2018 International Building Code.

6. Concrete:

   A. All concrete for grade beams 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 flat work shall develop minimum ultimate compressive design strength of 4000 psi in 28 days, but not less than 560 pounds of cement shall be used per cubic yard of concrete regardless of strengths obtained, not over 5 gallons of water per 100 pounds of cement and not over 4 inches of slump.
   C. 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.
   D. 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.
   E. 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.
   F. 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.
   G. 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.
   H. 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.
   I. Contractor shall verify that all concrete inserts, reinforcing and embedded items are correctly located and rigidly secured prior to concrete placement.
   J. Construction joints in grade beams shall occur at midspan (middle third) unless noted otherwise. Provide 2 x 4 horizontal keys at construction joints for shear transfer.
   K. No aluminum items shall be embedded in any concrete.

7. 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 A1064.
   B. Clear coverage of concrete over reinforcing steel shall be as follows:
      Concrete placed against earth ——— 3"
      Formed concrete against earth ——— 2"
      Slabs ——— 1"
      Other ——— 2"
      All coverage shall be nominal bar diameter minimum.
   C. At corners of all grade beams supply corner bars (minimum 2'-6" in each direction or 48 bar diameters) in outside face of wall, matching size and spacing of horizontal bars.
   D. Bars marked continuous shall be lapped 48 bar diameters (2'-6" minimum) at splices.
   E. 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.
   F. All slabs not shown otherwise shall be 6" thick with #4 bars at 12" on center each way. Slope porches 1/8" per foot for drainage unless noted otherwise.

8. Foundations:

   A. Spread footings, grade beams, and retaining walls are designed to bear on engineered fill or undisturbed soil capable of safely sustaining 2000 psf.
   B. Contractor shall provide for dewatering at excavations from either surface water or seepage.
   C. 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.
   D. 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.

9. Timber and Wood Framing:

   A. Quality and construction of wood framing members and their fasteners for load supporting purposes not otherwise indicated on the drawings shall be in accordance with the 2018 International Building Code.

   grade (visually graded) lumber with an allowable fiber stress in compression parallel grain of 900 psi and an elastic modulus of 1,200,000 psi.
   C. Blocking of stud bearing walls and shear walls shall be solid, matching sheathing joints.
   D. Wood members and sheathing shall be fastened with number and size of fasteners not less than that set forth in Table 2304.9.1 of the 2012 International Building Code. Sheathing of shear walls or roof diaphragms shall be edge nailed with 8d common nails at 6" on center and nailed to intermediate framing and/or blocking members with 8d common nails at 12" on center unless otherwise noted on the drawings.
   E. Sill plates shall be bolted to concrete walls or steel beams with 1/2" diameter galvanized bolts at 32" on center. Plates in direct contact with concrete shall be treated lumber.
   F. Service condition - dry with moisture content at or below 19% in service.
   G. Laminated veneer lumber (LVL) shall have an allowable flexural stress (Fb) of 2,600 psi (reduced by size factor) and an elastic modulus (E) of 1,900,000 psi.
   H. Pre-engineered wood trusses shall be designed in accordance with the Truss Plate Institute's national design standard for metal-plate connected wood truss construction (ANSI/TPI-1 latest edition). Trusses shall be designed and manufactured by an authorized member of the Wood Truss Council of America (WTCA). Truss design shall conform to specified codes, allowable stress increases, deflection limitations and other applicable criteria of the governing code.
   I. Shop drawings showing complete erection and fabrication details and calculations (including connections) shall be submitted to the project architect / engineer for review prior to fabrication and/or erection. Such drawings shall bear the seal of a professional engineer, registered in the state of the project location. Shop drawings shall also be submitted to the local government controlling agency when requested by that agency.
   J. All trusses shall be securely braced both during erection and permanently, as indicated on the approved truss design drawings and in accordance with TPI's commentary and recommendations for handling, installing and bracing metal-plate connected wood trusses (HIB-91, booklet) and the latest edition of ANSI/TPI-1.
   K. The truss manufacturer shall supply all hardware and fasteners for joining truss members together and fastening truss members to their supports. Metal connector plates shall be manufactured by a member of the Wood Truss Council of America (WTCA) and shall be 20 gauge minimum. Connector plates shall meet or exceed ASTM A653, grade 33, with ASTM A924 galvanized coating designation G60.
   L. Shipment, handling, and erection of trusses shall be by experienced, qualified persons and shall be performed in a manner so as not to endanger life or property. Apparent truss damage shall be reported to the truss manufacturer for evaluation prior to erection. Cutting or alteration of trusses is not permitted.
   M. Pre-engineered roof truss design load and deflection criteria are as follows:
      - Top Chord Dead Load= 15psf
      - Top Chord Live Load= 25psf
      - Bottom Chord Dead Load= 10psf
      - Add mechanical unit weight to truss loads
      - Add 20 psf Live Load at Flat Roof Area.
      - Uplift due to wind applied to truss top chord shall be calculated per the governing building code listed in General Note 3 and using the design criteria listed in General Note 5. Superimposed Roof Dead load listed in General Note 5 shall not be included in wind uplift load combinations.
      - Allowable Total Load Deflection= L/300
      - Allowable Live Load Deflection= L/360

10. Shop Drawing Review:

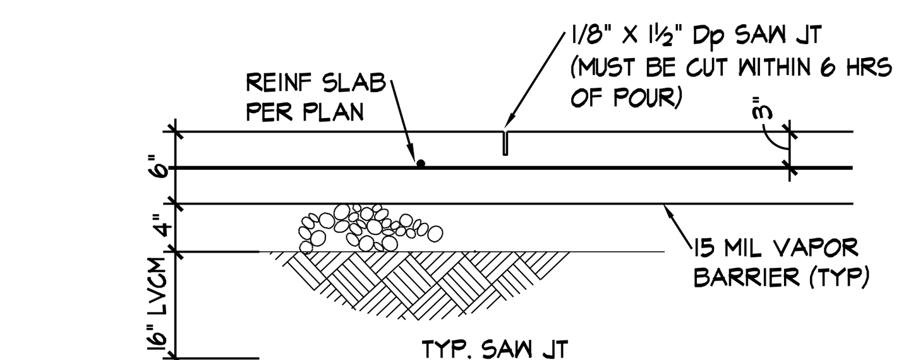
   A. Bob D. Campbell and Company, Inc. will review the General Contractor's (GC) shop drawings and related submittals (as indicated below) with respect to the ability of the detailed work, when complete, to be a properly functioning integral element of the overall structural system designed by Bob D. Campbell 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. 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) Wood truss design calculations and detailed erection and fabrication drawings. Standard stick framing shop drawings need not be submitted.
   E. 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.

11. Structural Special Inspection:

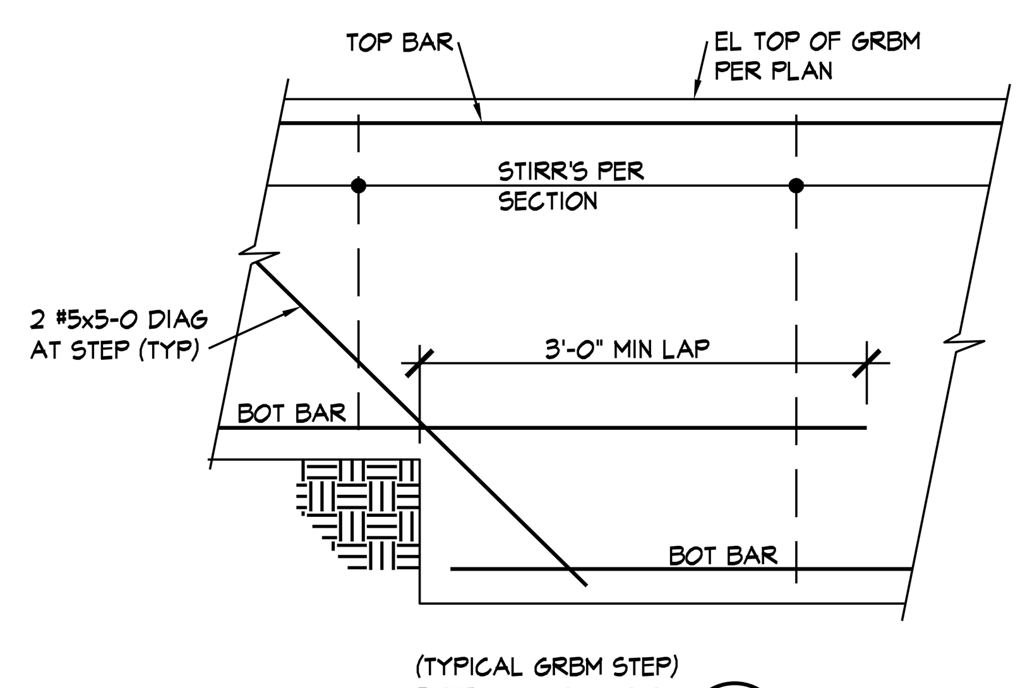
   A. The structural design for this project is based on completion of special inspections during construction in accordance with section 1704 of the 2018 International Building Code. The owner shall employ one or more qualified special inspectors to provide the required special inspections.
   B. Special Inspections shall be required for the items indicated 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) Placement of Concrete
      2) Testing of Concrete
      3) Bolts in Concrete
      4) Placement of Reinforcing Steel
      5) Verification of Soil Bearing Capacities
   C. The special inspector shall furnish inspection reports to the building official, owner, architect and structural engineer, and any other designated person.
   D. 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.
   E. 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.

12. Copyright and Disclaimer:

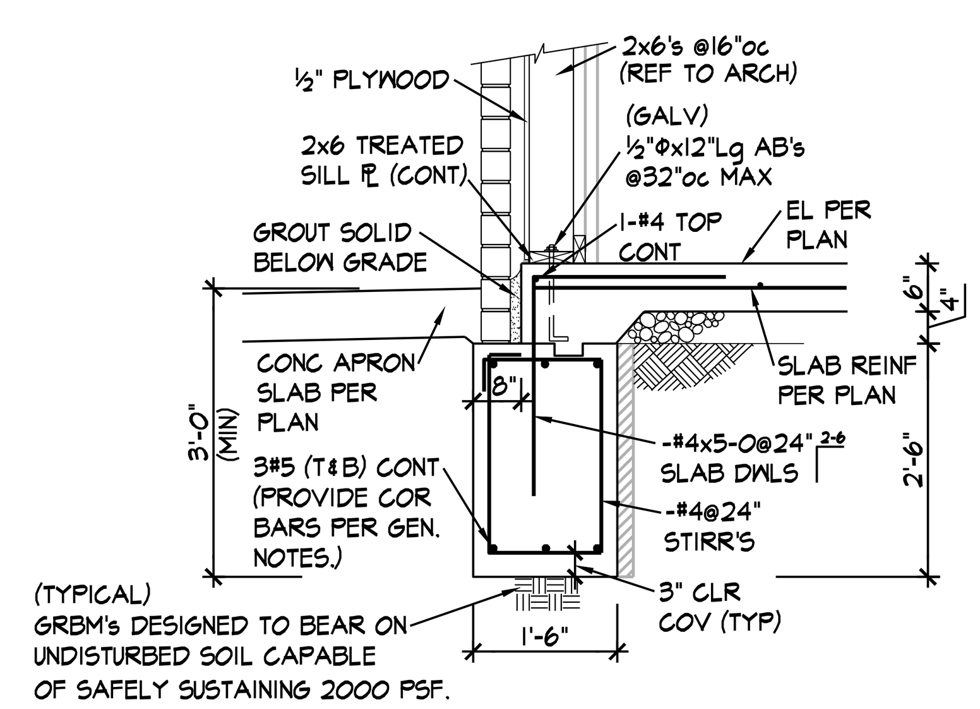
   A. All drawings in the structural set (S-series drawings) are the copyrighted work of Bob D. Campbell and company, Inc. These drawings may not be photographed, traced, or copies in any manner without the written permission of Bob D. Campbell and Company, Inc. Exception: Original drawings may be printed 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, Michael J. Falbe, 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.



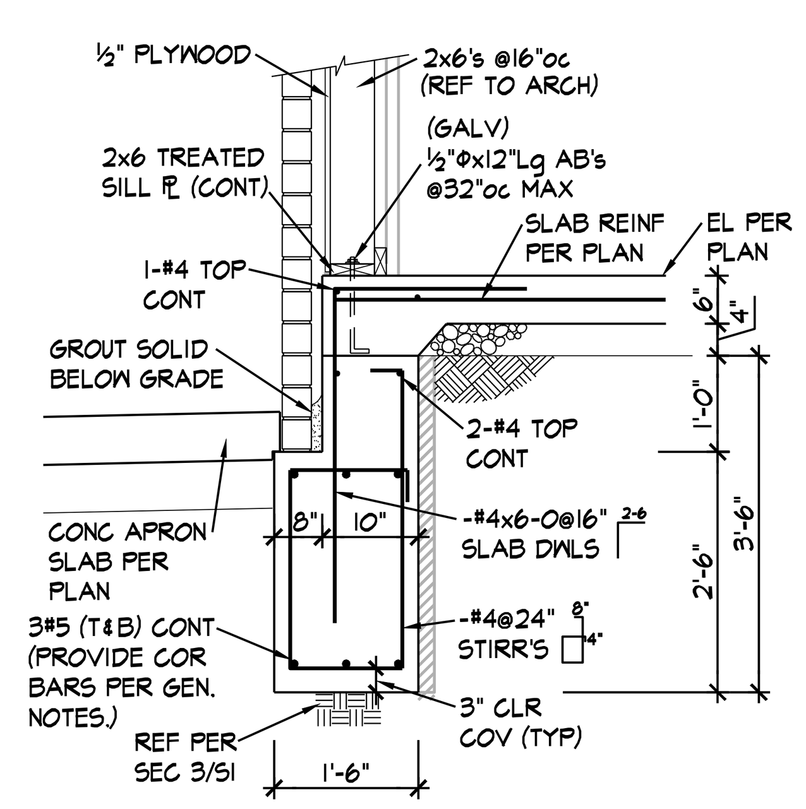
SECTION 1/S1
3/4" = 1'-0"



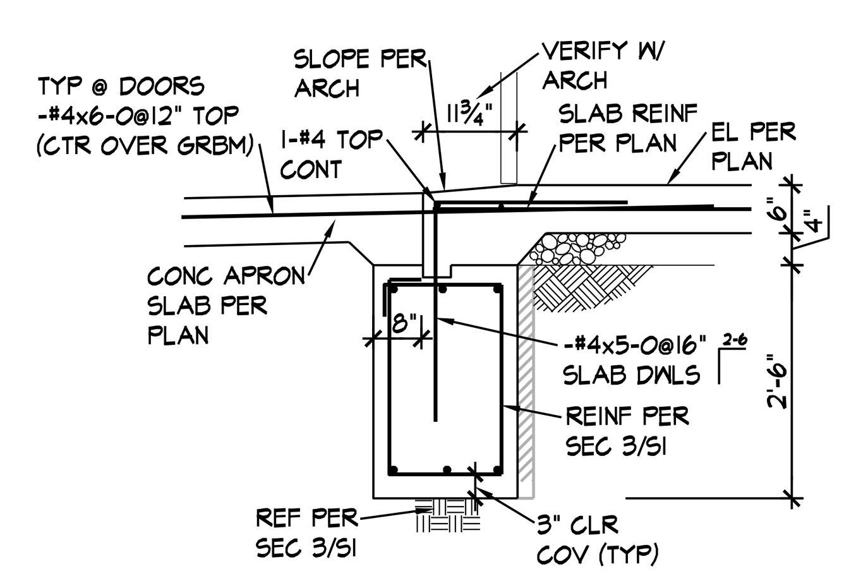
SECTION 2/S1
3/4" = 1'-0"



SECTION 3/S1
1/2" = 1'-0"



SECTION 4/S1
1/2" = 1'-0"



SECTION 5/S1
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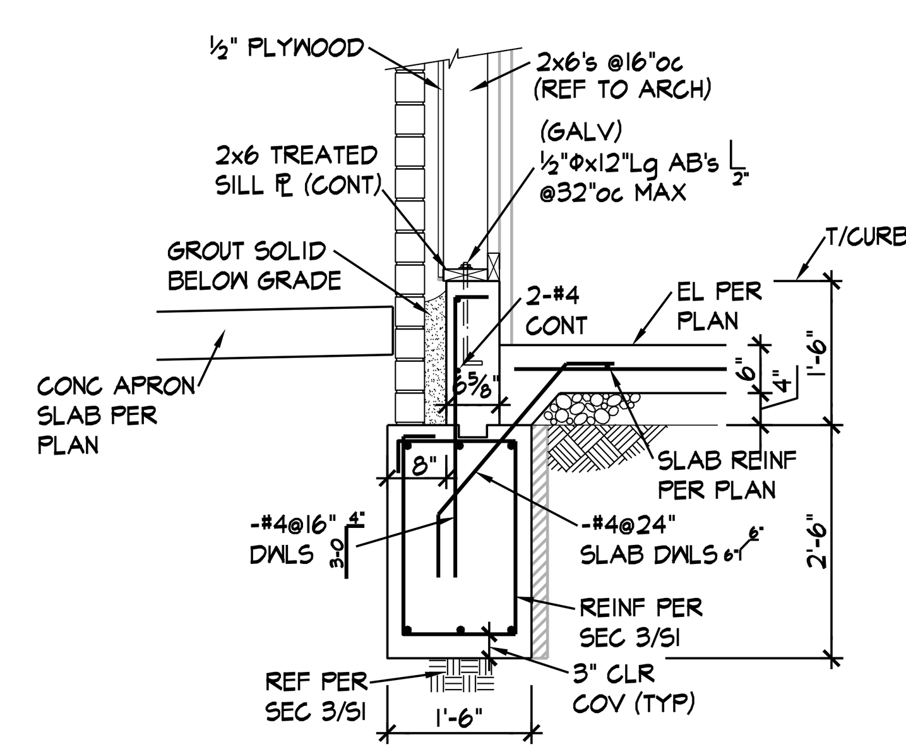
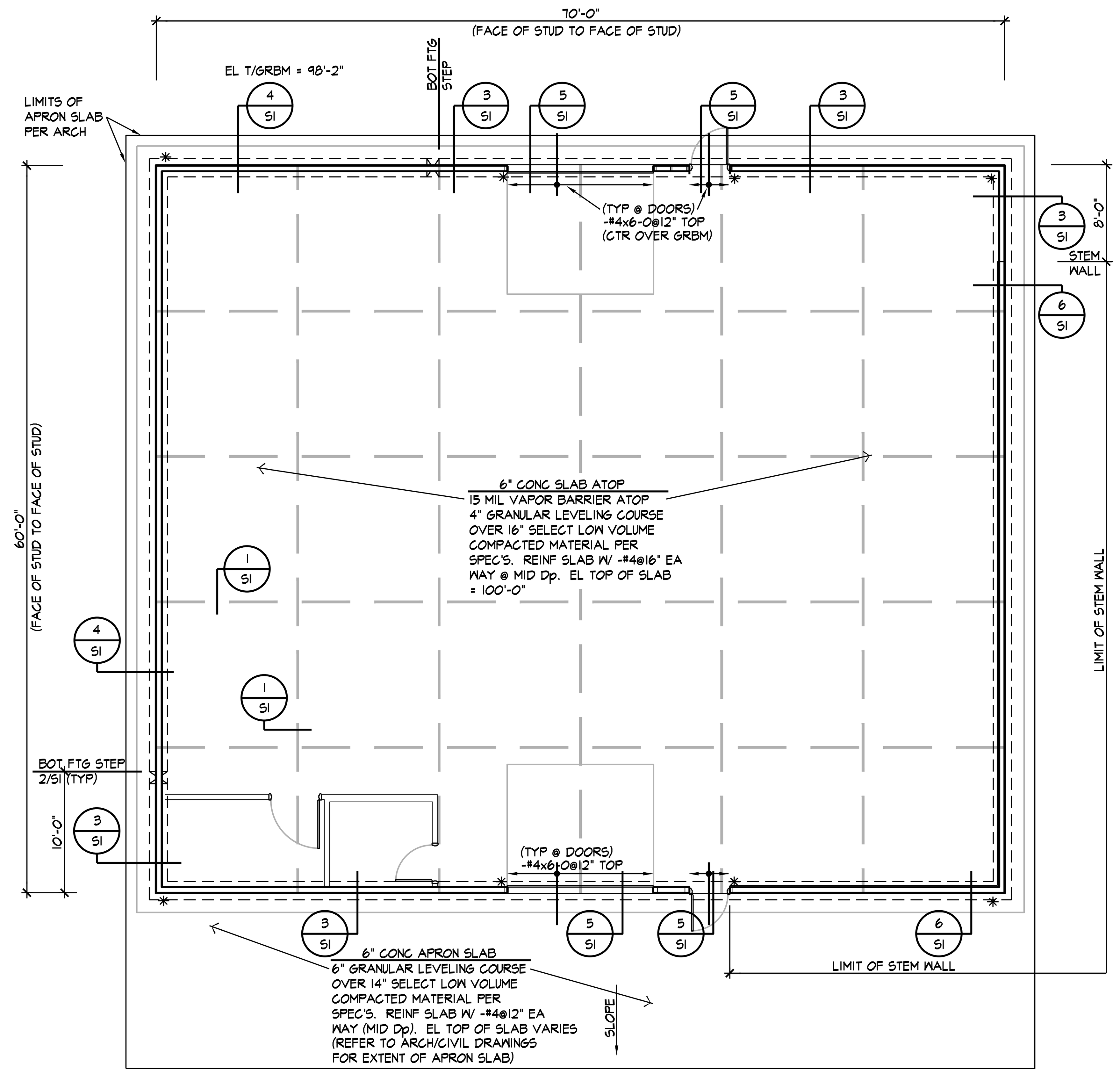


SECTION 6/S1
1/2" = 1'-0"



FOUNDATION & FLOOR PLAN

NORTH

⅛" = 1'-0"

NOTE:
1.) REFER TO GENERAL NOTES ON SHEET S-1
2.) ✳ - INDICATES SIMPSON HDU5-SDS2.5 HOLDDOWN w/ DBL 2x6 STUD & ⅝"Øx24"Lg THREADED ROD (A-36) DRILL & EPOXY 8" MIN INTO GRBM.
3.) REFER TO ARCH DRAWINGS FOR DIMENSIONS.
4.) REFER TO 2/S1 FOR TYPICAL GRBM STEP.

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MICHAEL JOHN FALBE
NUMBER
PROFESSIONAL ENGINEER

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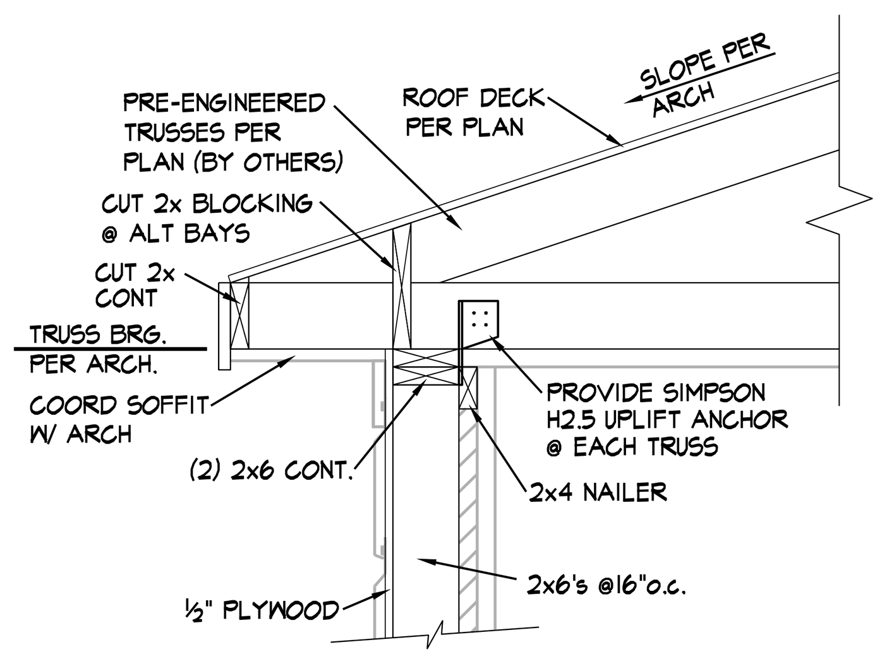
CRASHCHAMPIONS
COLLISION REPAIR TEAM

PROPOSED BODY SHOP BUILDING FOR:
CRASH CHAMPIONS
451 SE OLDHAM PARKWAY
LEE'S SUMMIT, MISSOURI

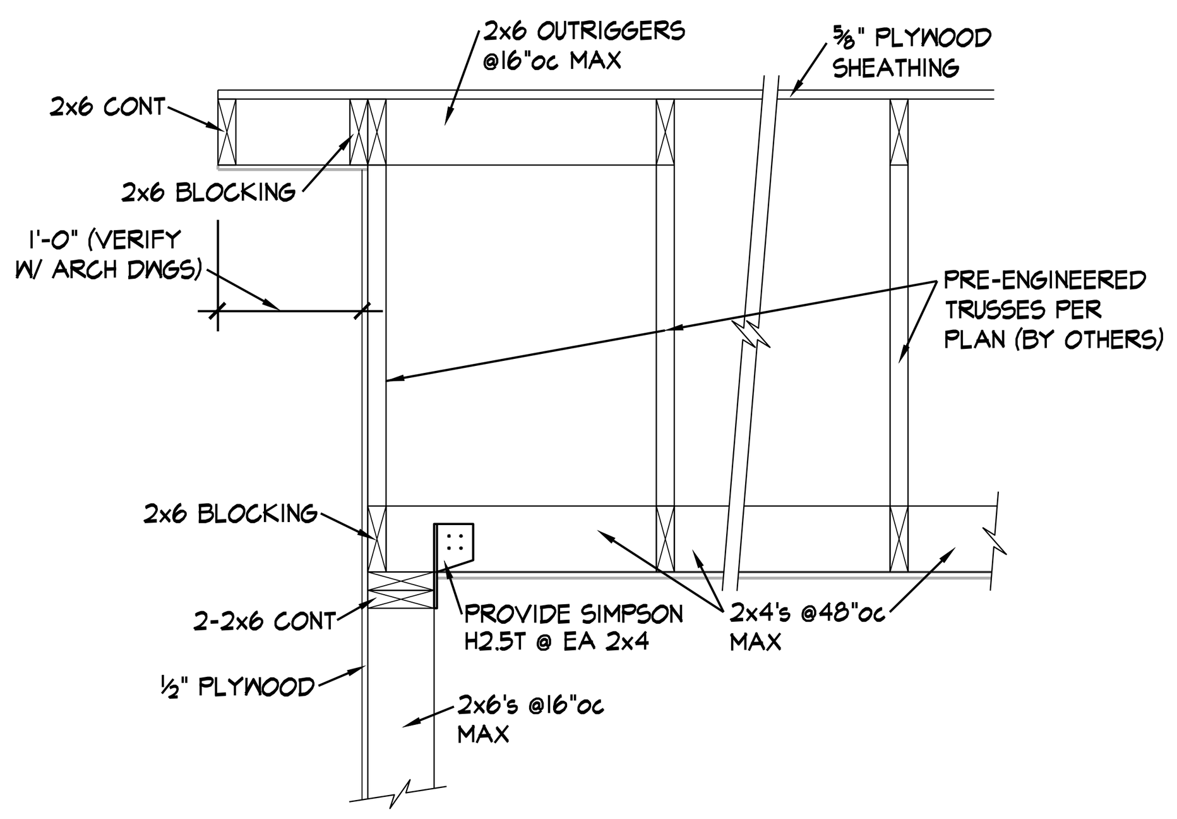
NO.	DESCRIPTION	DATE

PROJECT NUMBER 22009
DATE ISSUED: 06 / 14 / 22
SHEET NUMBER
S1

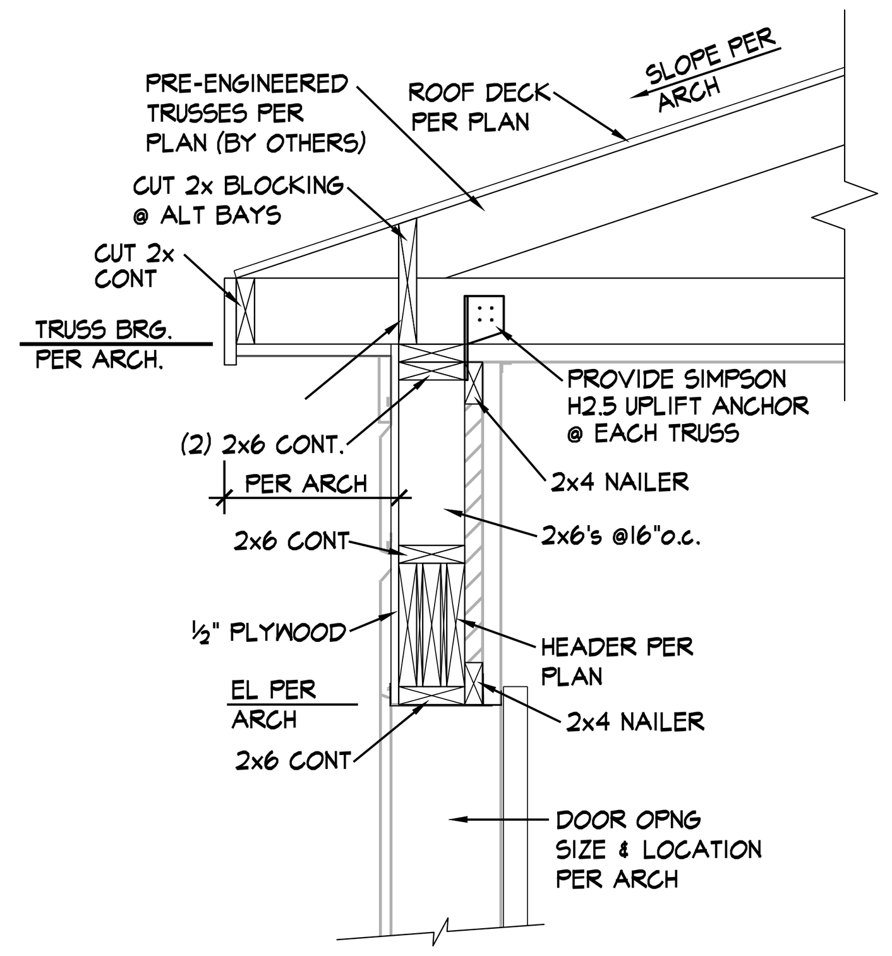
Foundation & Floor Plan, General Notes



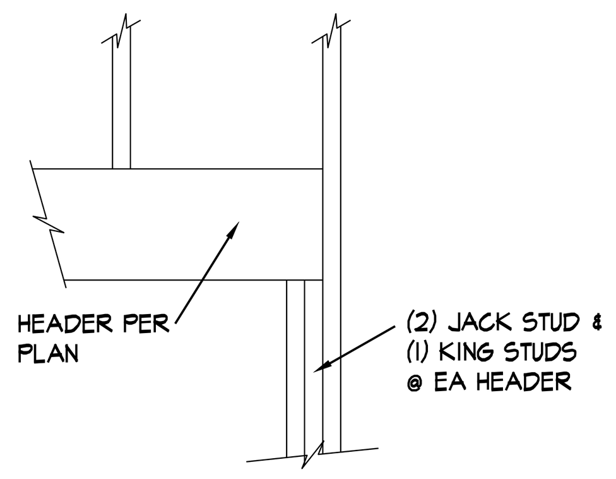
SECTION 1/S2
¾" = 1'-0"



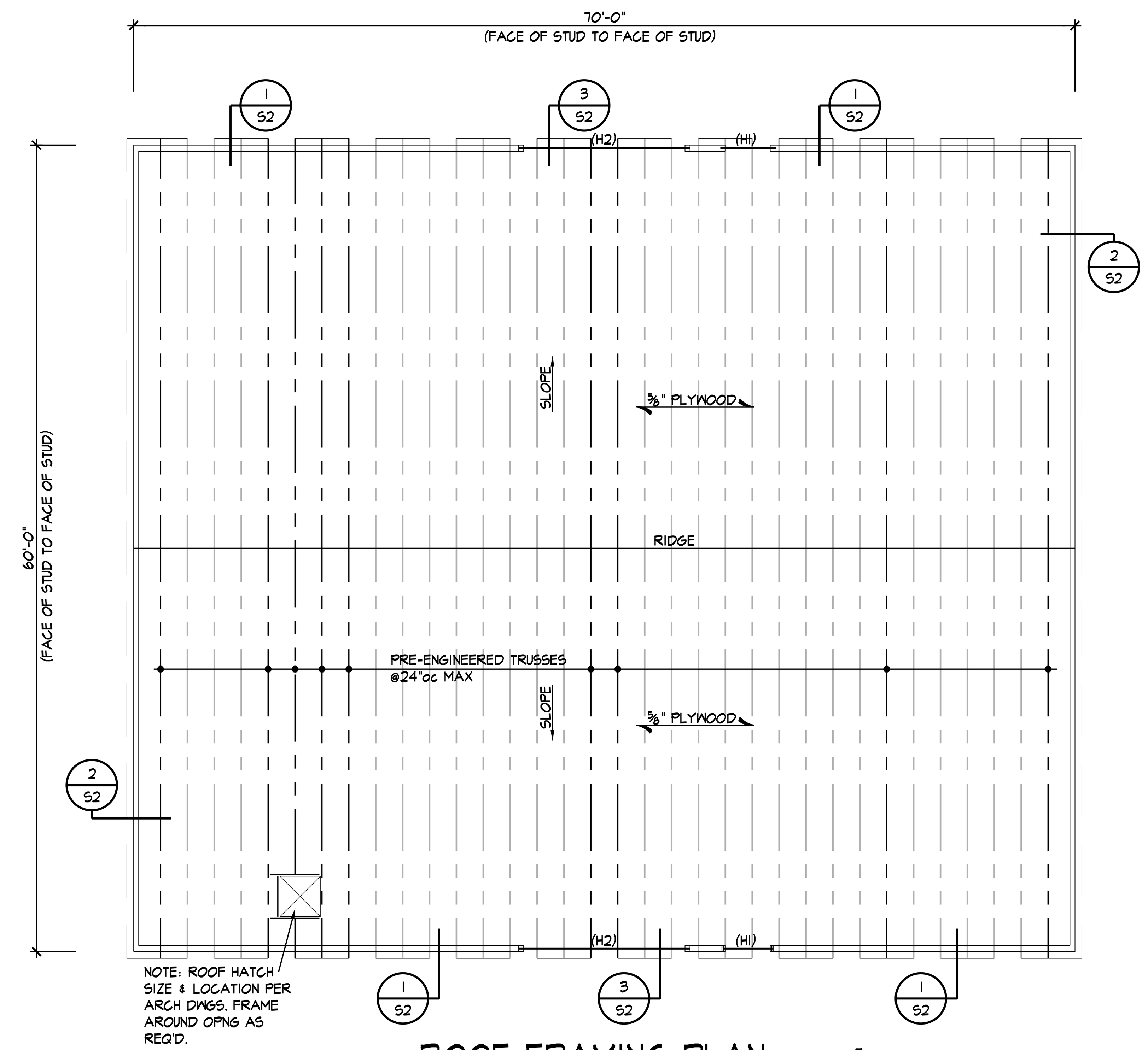
SECTION 2/S2
¾" = 1'-0"



SECTION 3/S2
¾" = 1'-0"



TYPICAL HEADER DTL
SECTION 4/S2
¾" = 1'-0"



ROOF FRAMING PLAN
⅛" = 1'-0"
NORTH
NOTE:
1.) REFER TO GENERAL NOTES ON SHEET S-1

LINTEL SCHEDULE

TYPE	DESCRIPTION
H1	3- 2x10's W/ 2- ½" SPACER PL W/ 1 JACK, 2 KING.
H2	3- 1¾"x14" LVL's W/ 3 JACK, 4 KING.

NOTE: REFER TO 4/S2 FOR TYPICAL HEADER DETAIL

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CRASHCHAMPIONS
COLLISION REPAIR TEAM

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CRASH CHAMPIONS
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LEE'S SUMMIT, MISSOURI

NO.	DESCRIPTION	DATE

PROJECT NUMBER 22009
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SHEET NUMBER
S2

Roof Framing Plan & Sections

LINETYPES LEGEND:

- NEW
- NEW – ON ROOF
- EXISTING
- EXISTING – ON ROOF
- DEMOLITION

DUCTWORK LEGEND:

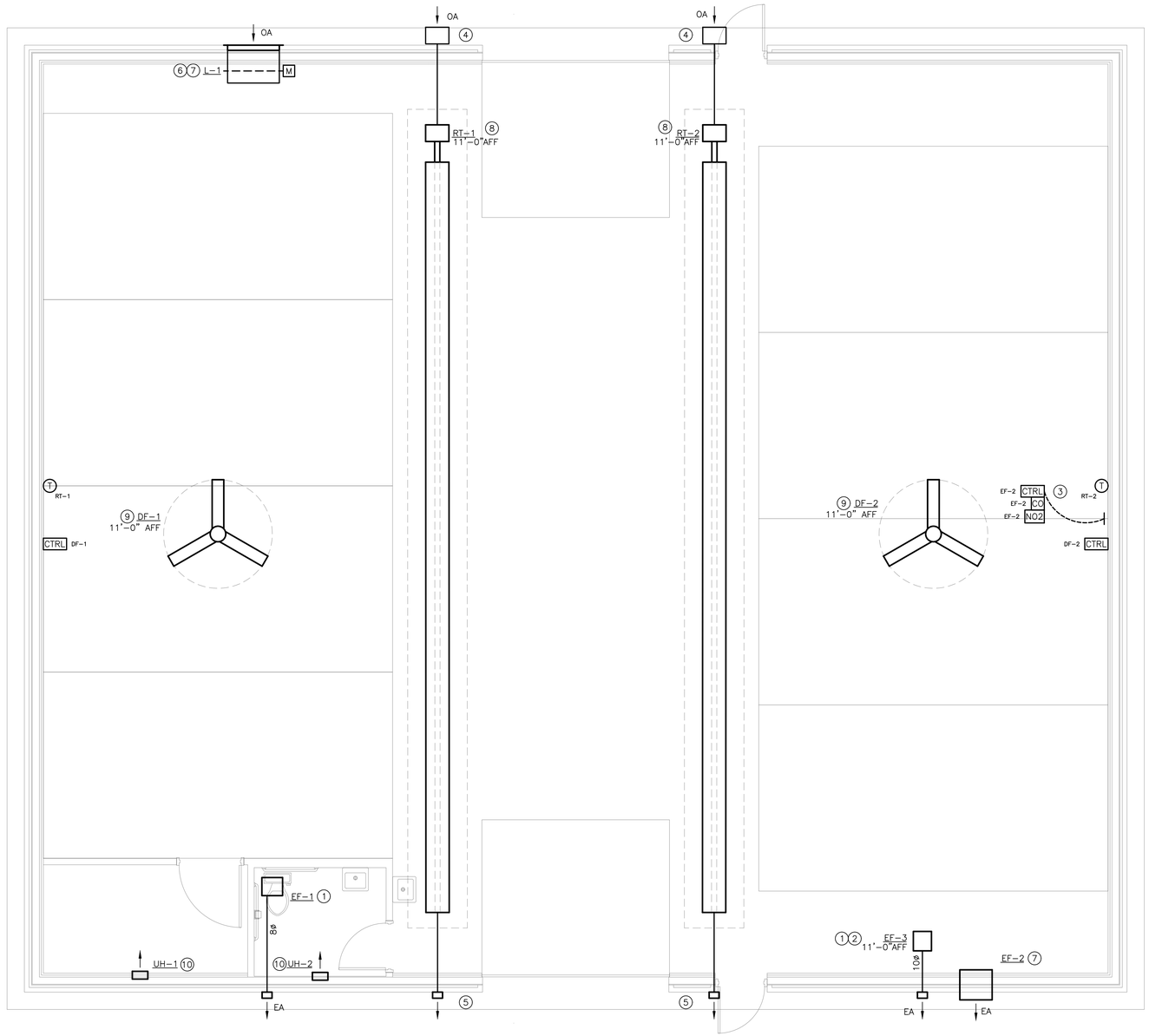
- DUCT (SINGLE LINE)
- DUCT (DOUBLE LINE)
- ROUND O/A OR S/A DOWN
- ROUND O/A OR S/A UP
- ROUND E/A OR R/A DOWN
- ROUND E/A OR R/A UP
- RECTANGULAR O/A OR S/A DOWN
- RECTANGULAR O/A OR S/A UP
- RECTANGULAR E/A OR R/A DOWN
- RECTANGULAR E/A OR R/A UP
- O/A OR S/A DIFFUSER
- E/A OR R/A GRILLE
- AIR DEVICE WITH FLEX DUCT CONNECTION
- AIR DEVICE WITH HARD DUCT CONNECTION
- FLEXIBLE CONNECTION TO EQUIPMENT
- DUCT BREAK/CONTINUATION
- MANUAL BALANCING DAMPER
- M — MOTOR-OPERATED DAMPER
- BD — BACKDRAFT DAMPER
- F — FIRE DAMPER
- FS — FIRE/SMOKE DAMPER
- S — SMOKE DAMPER
- T — THERMOSTAT
- CO — CARBON MONOXIDE SENSOR
- CTRL — CONTROLLER
- NO2 — NITROGEN DIOXIDE SENSOR

ANNOTATION LEGEND:

- ABC-1 EQUIPMENT / FIXTURE TAG
- (–) PLAN NOTE
- CONNECT TO EXISTING
- AIR FLOW DIRECTION
- S-1 / 8ø / 300 — G/R/D TAG / NECK SIZE / AIR FLOW (CFM)

ABBREVIATIONS LEGEND:

AFF	ABOVE FINISHED FLOOR
APD	AIR PRESSURE DROP
CFM	CUBIC FEET PER MINUTE
EA	EXHAUST AIR
EF	EXHAUST FAN
ESP	EXTERNAL STATIC PRESSURE
FPM	FEET PER MINUTE
HC	HEATING CAPACITY
HP	HORSEPOWER
IN.WG	INCHES WATER GAUGE
MAX	MAXIMUM
MBH	1,000 BTUH
MIN	MINIMUM
NC	NOISE CRITERIA
OA	OUTDOOR AIR
QTY	QUANTITY
TSP	TOTAL STATIC PRESSURE
VEL	VELOCITY



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

(–) MECHANICAL PLAN NOTES:

1. ROUTE EXHAUST DUCT OF SIZE INDICATED ON PLAN FROM EXHAUST FAN THROUGH WALL AS SHOWN. PROVIDE WALL PENETRATION AND VENT CAP PER MANUFACTURER'S RECOMMENDATIONS. LOCATE DISCHARGE AT MINIMUM OF 10'-0" FROM ANY BUILDING OPENINGS OR OUTDOOR AIR INTAKES.
2. SUSPEND INLINE EXHAUST FAN FROM STRUCTURE. REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS.
3. PROVIDE CARBON MONOXIDE / NITROGEN DIOXIDE DETECTION SYSTEM, MONOXIVENT MODEL # FDS-SA-CO-NO OR EQUAL, WITH CONTROLLER AND QUANTITY OR SENSORS AS RECOMMENDED BY THE MANUFACTURER. COORDINATE POWER REQUIREMENTS WITH ELECTRICAL CONTRACTOR.
4. PROVIDE 4ø COMBUSTION AIR INTAKE THROUGH WALL. TERMINATE WITH KIT FURNISHED WITH TUBE HEATER. REFER TO TUBE HEATER MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR INTAKE MATERIAL REQUIREMENTS.
5. PROVIDE 4ø COMBUSTION AIR EXHAUST THROUGH WALL. TERMINATE WITH KIT FURNISHED WITH TUBE HEATER. REFER TO TUBE HEATER MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR COMBUSTION EXHAUST MATERIAL REQUIREMENTS.
6. PROVIDE MOTOR OPERATED DAMPER IN LOUVER AS SHOWN. MATCH DAMPER SIZE TO LOUVER FACE DIMENSIONS. ACTUATOR TO BE 120 VOLT, SPRING CLOSED. INTERLOCK DAMPER WITH GAS DETECTION SYSTEM.
7. INSTALL INDICATED EQUIPMENT AS HIGH AS POSSIBLE ON EXTERIOR WALL.
8. INSTALL RADIANT TUBE HEATER WITH DEFLECTOR SHIELD DIRECTED AT 30° ANGLE TOWARDS EXTERIOR WALL.
9. COORDINATE INSTALLATION OF HVLS FAN WITH OTHER TRADES. MAINTAIN OPERATIONAL AND MAINTENANCE CLEARANCES AS REQUIRED BY MANUFACTURER.
10. LOCATE UNIT HEATER ON WALL WHERE SHOWN, MIN 1'-0" AFF. INSTALL PER MANUFACTURER'S REQUIREMENTS.

STATE OF MISSOURI
SCOTT D. GROSHANS
NUMBER PE-2019012798
PROFESSIONAL ENGINEER
6/14/2022

SCOTT D. GROSHANS
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CRASHCHAMPIONS COLLISION REPAIR TEAM

PROPOSED BODY SHOP BUILDING FOR: CRASH CHAMPIONS

451 SE OLDHAM PARKWAY
LEE'S SUMMIT, MISSOURI

NO.	DESCRIPTION	DATE
---	FOR PERMIT	06 / 14 / 2022

PROJECT NUMBER 22009
DATE ISSUED: 06 / 14 / 2022

SHEET NUMBER
M1.0

MECHANICAL PLAN

5BY5 ENGINEERS
1100 Main Street, 4th Floor
Kansas City, MO 64105
Kansas COA: E-2361
913-689-9449
contact@5by5eng.com
5by5eng.com

MECHANICAL GENERAL NOTES:

- DRAWINGS ARE SCHEMATIC IN NATURE. COORDINATE ALL MECHANICAL WORK WITH ARCHITECTURAL DRAWINGS AND OTHER TRADES PRIOR TO START OF WORK.
- MECHANICAL WORK SHALL CONFORM TO APPLICABLE CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION.
- COORDINATE WITH ELECTRICAL CONTRACTOR FOR REQUIRED ELECTRICAL POWER WIRING AND ROUGH-IN FOR LOW-VOLTAGE CONTROL WIRING. PROVIDE ALL CONTROL WIRING AND FINAL CONTROL DEVICE (E.G. THERMOSTATS).
- FABRICATE AND INSTALL DUCTWORK PER SMACNA RECOMMENDATIONS FOR THE PRESSURE CLASSIFICATIONS ENCOUNTERED.
  - EXHAUST AIR (UPSTREAM OF FAN): -2.0 IN.WG
  - EXHAUST AIR (DOWNSTREAM OF FAN): +1.0 IN.WG
- PROVIDE MITERED ELBOWS AT CHANGES IN DIRECTION IN RECTANGULAR DUCTWORK. PROVIDE TURNING VANES IN ALL ELBOWS WHERE AIRFLOW CHANGES DIRECTION AT ANGLES 45° AND GREATER, EXCEPT FOR RETURN AIR TRANSFER DUCTS.
- FLEXIBLE DUCTWORK SHALL HAVE 2" THICK, MINIMUM R-6.0 INSULATION. FLEXIBLE DUCTWORK SHALL NOT EXCEED 3'-0" IN LENGTH FOR EXHAUST AIR APPLICATIONS.
- TOILET ROOM EXHAUST FANS SHALL BE AS SCHEDULED. PROVIDE A MINIMUM OF 75 CFM EXHAUST PER FLUSH FIXTURE.
- ALL DIMENSIONS SHOWN ON PLAN ARE IN INCHES, UNLESS EXPLICITLY LABELED OTHERWISE.
- PROVIDE ACCESS PANELS AND ADEQUATE CLEARANCE FOR ACCESS TO ALL EQUIPMENT, VALVES, DAMPERS AND DEVICES.

DESTRATIFICATION FAN SCHEDULE

TAG	AREA SERVED	MANUFACTURER	MODEL	FAN DIAMETER	MOTOR POWER	DRIVE TYPE	V/PH	WEIGHT (LBS)	NOTES
DF-1	SHOP	HUNTER	XP	7'-0"	5/8 HP	DIRECT EC	120/1	100	ALL
DF-2	SHOP	HUNTER	XP	7'-0"	5/8 HP	DIRECT EC	120/1	100	ALL

NOTES:
A. COORDINATE FINISH COLOR WITH ARCHITECT, PRIOR TO ORDER.
B. FURNISH WITH WALL CONTROLLER. REFER TO PLAN FOR MULTIPLE FANS TO BE CONTROLLED BY ONE CONTROLLER.

UNIT HEATER SCHEDULE

TAG	LOCATION	MANUFACTURER	MODEL	MOUNTING	OUTPUT	INPUT	VOLT/PHASE	AMP	NOTES
UH-1	COMPRESSOR RM	QMARK	CWH1201	WALL	6.1 MBH	1,800 WATTS	120/1/60	15	A,B
UH-2	RESTROOM	QMARK	CWH1201	WALL	6.1 MBH	1,800 WATTS	120/1/60	15	A,B

NOTES:
A. PROVIDE WITH UNIT MOUNTED THERMOSTAT AND DISCONNECT SWITCH.
B. PROVIDE WITH MANUFACTURER'S STANDARD TRIM FOR WALL MOUNTING.

LOUVER SCHEDULE

TAG	MANUFACTURER	MODEL	SIZE (W"xH")	FREE AREA	MAX VELOCITY (FPM)	MAX DP	NOTES
L-1	RUSKIN	ELF375DX	40x40	5.97 SQ/FT	502	0.05	A-D

NOTES:
A. PROVIDE WITH MANUFACTURER'S STANDARD ALUMINUM BIRDSCREEN.
B. PROVIDE WITH STANDARD MILL FINISH. COLOR TO BE SELECTED BY THE ARCHITECT.
C. FRAME TYPE SHALL MATCH WALL CONSTRUCTION. COORDINATE WITH ARCHITECT FOR EXACT FRAME TYPE.
D. PROVIDE WITH INTEGRAL MOTORIZED DAMPER, RUSKIN MODEL CD356 OR EQUAL. INTERLOCK MOTORIZED DAMPER WITH GAS DETECTION SYSTEM. COORDINATE WITH ELECTRICAL CONTRACTOR.

RADIANT TUBE HEATER SCHEDULE

TAG	AREA SERVED	MANUFACTURER	MODEL	HEATER LENGTH	NOM INPUT (MBH) (MIN)	NOM INPUT (MBH) (MAX)	MIN EFF (%)	NG PRESS (IN.WG) (MIN)	NG PRESS (IN.WG) (MAX)	STAGES	V/PH	FLA	WEIGHT (LBS)	NOTES
RT-1	SHOP	DETROIT RADIANT	HL3-50-150	50'-9"	100	150	80	5.0	14.0	2	120/1	4.8	235	ALL
RT-2	SHOP	DETROIT RADIANT	HL3-50-150	50'-9"	100	150	80	5.0	14.0	2	120/1	4.8	235	ALL

NOTES:
A. PROVIDE WITH MANUFACTURER'S STANDARD WALL-MOUNTED THERMOSTAT
B. COORDINATE WITH ELECTRICAL CONTRACTOR FOR PROVIDE DISCONNECT SWITCH.
C. FURNISH INFRARED HEATER WITH COMBUSTION AIR INTAKE KIT AND WALL VENT KIT.
D. FURNISH WITH SINGLE MOUNT BRACKETS AND CHAIN HANGING SETS.

FAN SCHEDULE

TAG	AREA SERVED	MANUFACTURER	MODEL	MOUNTING	AIR FLOW (CFM)	ESP (IN.WG)	MOTOR POWER	DRIVE TYPE	V/PH	NOTES
EF-1	RESTROOM	COOK	GC-146	CEILING	75	0.25	0.04 HP	DIRECT	120/1	A-D,H
EF-2	SHOP	COOK	18XP29D132	WALL	3000	0.2	0.75 HP	DIRECT	120/1	C,E,G
EF-3	SHOP	COOK	GC-342	INLINE	200	0.2	0.063 HP	DIRECT	120/1	C,D,F,H

NOTES:
A. PROVIDE WITH MANUFACTURER'S STANDARD HANGING KIT AND CEILING MOUNT TRIM.
B. INTERLOCK FAN WITH ASSOCIATED RESTROOM LIGHT SWITCH.
C. PROVIDE WITH DISCONNECT SWITCH.
D. PROVIDE WITH BACKDRAFT DAMPER.
E. PROVIDE WITH MANUFACTURER'S STANDARD WALL MOUNT TRIM KIT AND DISCHARGE SHUTTERS.
F. FAN TO OPERATE AT ALL TIMES. COORDINATE WITH ELECTRICAL CONTRACTOR.
G. FAN TO OPERATE SUBJECT TO GAS DETECTION SYSTEM STATE. COORDINATE WITH ELECTRICAL CONTRACTOR.
H. FURNISH WITH MANUFACTURER'S STANDARD WALL DISCHARGE CAP.

OUTDOOR AIR CALCULATIONS (MECHANICAL VENTILATION)

TAG	LOCATION	OCCUPANCY CLASSIFICATION	AREA (FT^2)	R_A (CFM/FT^2)	MIN REQ'D O/A FLOW (CFM)	PROVIDED MIN O/A FLOW (CFM)	NOTES
EF-2	SHOP 03 RM	REPAIR GARAGE	3,851	0.75	2,889	3,000	A
EF-3		PARKING GARAGE		0.05	193	200	

NOTES:
A. R_A REPRESENTS AREA OUTDOOR AIRFLOW RATE IN BREATHING ZONE PER TABLE 403.3.

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CRASHCHAMPIONS COLLISION REPAIR TEAM

PROPOSED BODY SHOP BUILDING FOR: CRASH CHAMPIONS

451 SE OLDHAM PARKWAY
LEE'S SUMMIT, MISSOURI

NO.	DESCRIPTION	DATE
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M2.0

MECHANICAL SCHEDULES AND DETAILS

LINETYPES LEGEND:

- NEW – ABOVE SLAB
- NEW – BELOW SLAB
- EXISTING – ABOVE SLAB
- EXISTING – BELOW SLAB
- DEMOLITION

PIPING LEGEND:

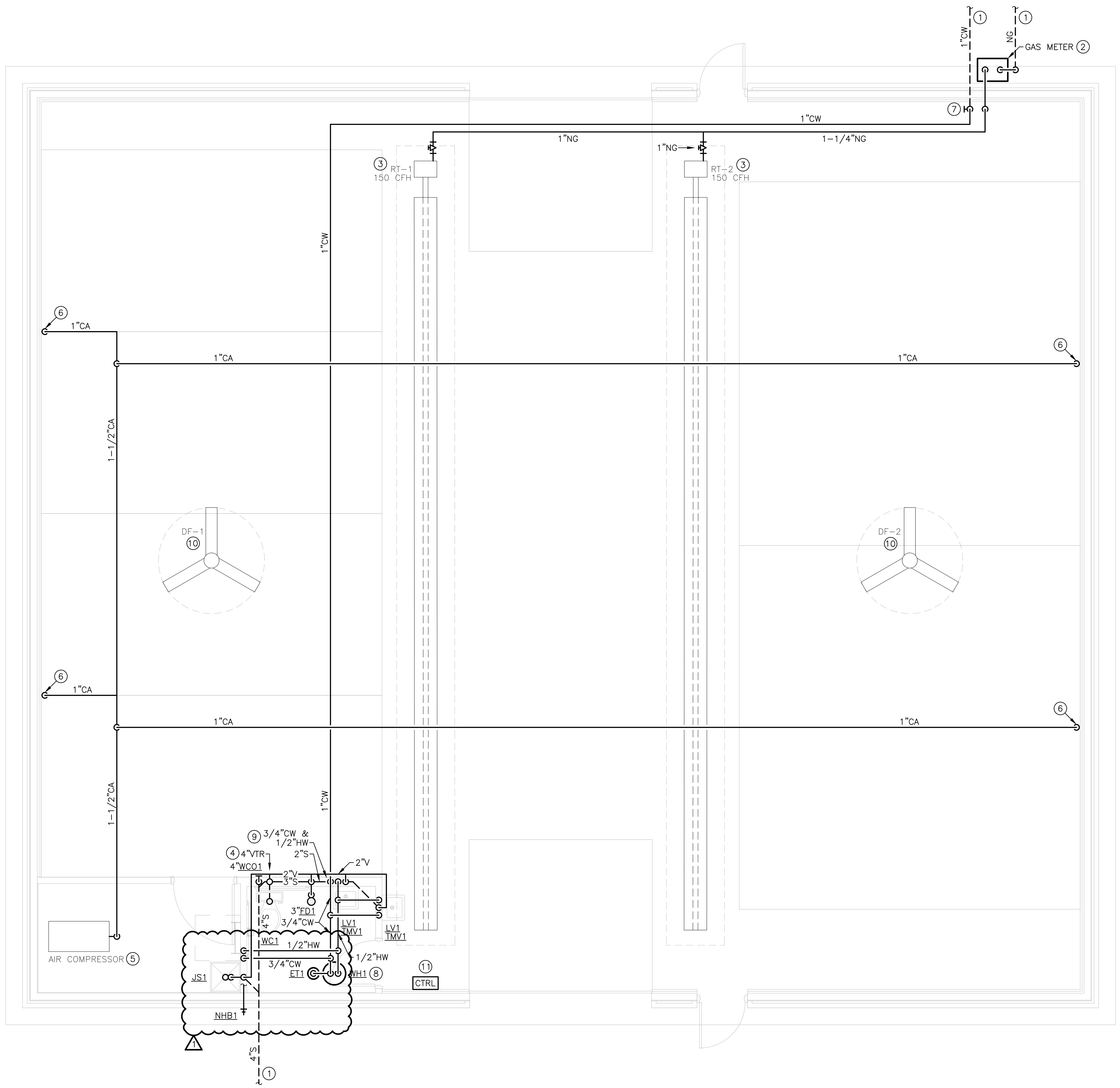
- ELBOW DOWN
- ELBOW UP
- P-TRAP
- TEE DOWN
- ELBOW UP
- SHUT-OFF VALVE (GENERIC)
- BALL VALVE
- GLOBE VALVE
- BUTTERFLY VALVE
- GATE VALVE
- CHECK VALVE
- BALANCING VALVE
- PRESSURE REDUCING VALVE
- GAS COCK
- WYE-STRAINER
- UNION
- FLANGE
- RELIEF VALVE
- AIR VENT (MANUAL / AUTOMATIC)
- FLOW DIRECTION
- PIPE BREAK / CONTINUATION
- FLOOR DRAIN
- FLOOR SINK
- FLOOR CLEANOUT
- HOSE BIBB

ANNOTATION LEGEND:

- ABC-1 EQUIPMENT / FIXTURE TAG
- PLAN NOTE
- CONNECT TO EXISTING

ABBREVIATIONS LEGEND:

AFF	ABOVE FINISHED FLOOR
BOP	BOTTOM OF PIPE
CFH	CUBIC FEET PER HOUR
CO	CLEANOUT
CW	DOMESTIC COLD WATER
ET	EXPANSION TANK
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
GPM	GALLONS PER MINUTE
HB	HOSE BIBB
IE	INVERT ELEVATION
IN.WG	INCHES WATER GAUGE
LV	LAVATORY
MAX	MAXIMUM
MBH	1,000 BTUH
MIN	MINIMUM
NG	NATURAL GAS
NHB	NON-FREEZE HOSE BIBB
QTY	QUANTITY
S	SANITARY WASTE
TMV	THERMOSTATIC MIXING VALVE
TRA	TO ROOF ABOVE
V	VENT
WC	WATER CLOSET
WH	WATER HEATER
WCO	WALL CLEANOUT



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

PLUMBING GENERAL NOTES:

- REFER TO P2.0 FOR PLUMBING GENERAL NOTES.

⊖ PLUMBING PLAN NOTES:

1. REFER TO CIVIL UTILITY PLAN FOR CONTINUATION OF PIPING OUTSIDE OF BUILDING FOOTPRINT.
2. PROVIDE NEW NATURAL GAS SERVICE ENTRANCE AND METER WHERE SHOWN ON PLAN. REFER TO NATURAL GAS LOAD SCHEDULE FOR LOAD, TOTAL DEVELOPED LENGTH, AND SIZING DETAILS.
3. CONNECT NATURAL GAS TO MECHANICAL EQUIPMENT AS SHOWN. PROVIDE DIRT LEG, GAS COCK, AND REGULATOR. REFER TO MECHANICAL EQUIPMENT MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR ADDITIONAL REQUIREMENTS. COORDINATE WITH MECHANICAL CONTRACTOR.
4. ROUTE 4" VENT UP THROUGH ROOF (VTR). DISCHARGE AT MINIMUM 1'-6" ABOVE FINISHED ROOF. INSTALL AT MINIMUM OF 10'-0" FROM ALL MECHANICAL OUTDOOR AIR INTAKES
5. AIR COMPRESSOR PROVIDED BY OTHERS. PROVIDE COMPRESSED AIR PIPING CONNECTION WITH VALVES AND SPECIALS PER AIR COMPRESSOR MANUFACTURER'S RECOMMENDATIONS.
6. PROVIDE 1"CA DROP DOWN WALL. TERMINATE WITH SHUTOFF VALVE. COORDINATE CONNECTION TO OWNER EQUIPMENT WITH OTHER TRADES.
7. 1" DOMESTIC WATER SERVICE ENTRANCE, FED BY ADJACENT BUILDING. PROVIDE SHUTOFF VALVE AT 4'-0" AFF.
8. INSTALL WATER ABOVE CEILING WHERE SHOWN ON PLAN. CONNECT WATER PIPING, VALVES, AND EXPANSION TANK TO WATER HEATER SYSTEM PER MANUFACTURER'S INSTALLATION INSTRUCTIONS AND DETAIL 1/P2.0.
9. PROVIDE COLD WATER AND HOT WATER PIPING OF SIZES INDICATED ON PLAN DOWN IN WALL. ROUTE PIPING IN WALL CAVITY AND CONNECT TO PLUMBING FIXTURES ALONG WET WALL PER FIXTURE CONNECTION SCHEDULE ON P2.0.
10. COORDINATE ALL PIPE ROUTING WITH CLEARANCE REQUIREMENTS OF DESTRATIFICATION FAN.
11. PROVIDE HIGH LEVEL ALARM SYSTEM WITH MECHANICAL ALARM FLOAT FOR SANITARY HOLDING TANK, SEPTIC PRODUCTS INC "OBSERVER 200" OR EQUAL. INSTALL CONTROLLER WHERE INDICATED ON PLAN. COORDINATE POWER REQUIREMENTS WITH ELECTRICAL CONTRACTOR.

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CRASH CHAMPIONS
COLLISION REPAIR TEAM

PROPOSED BODY SHOP BUILDING FOR: CRASH CHAMPIONS

451 SE OLDHAM PARKWAY
LEE'S SUMMIT, MISSOURI

NO.	DESCRIPTION	DATE
---	FOR PERMIT	06 / 14 / 2022
1	CITY COMMENTS	07 / 07 / 2022

PROJECT NUMBER 22009
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P1.0

PLUMBING PLAN

FIXTURE CONNECTION SCHEDULE

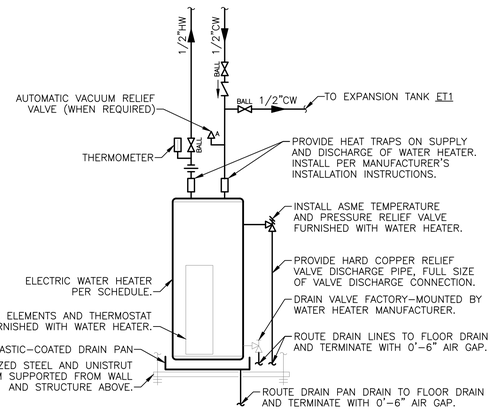
FIXTURE	WASTE	VENT	COLD	HOT	NOTES
FLOOR DRAIN	SEE PLAN	2"	---	---	---
HOSE BIBBS	---	---	3/4"	---	VB
JANITOR'S SINK	2"	1-1/2"	1/2"	1/2"	VB
LAVATORY - PUBLIC	2"	1-1/2"	1/2"	1/2"	TMV
WATER CLOSET (TANK TYPE)	4"	2"	1/2"	---	---

NOTES:
TMV: POINT OF USE TYPE THERMOSTATIC MIXING VALVE CONFORMING TO ASSE 1070.
VB: ATMOSPHERIC TYPE VACUUM BREAKER CONFORMING TO ASSE 1020.

NATURAL GAS LOAD SCHEDULE

EQUIPMENT TAG	QTY	DESCRIPTION	CFH INPUT (EACH)	TOTAL CFH
RT-1	1	RADIANT TUBE HEATER	150	150
RT-2	1	RADIANT TUBE HEATER	150	150
			SYSTEM TOTAL =	300

NOTES:
A. METER DISCHARGE PRESSURE: 11 IN.WG.
B. TOTAL DEVELOPED LENGTH: 100 FT.
C. DESIGN NATURAL GAS PIPING SYSTEM PRESSURE DROP: 0.5 IN.WG
D. INLET PRESSURE FOR ALL GAS-FIRED EQUIPMENT: 7 TO 11 IN.WG.



NOTES:

- STRUCTURE AND PLATFORM SHALL BE DESIGNED TO HOLD THE MAXIMUM WEIGHT OF THE WATER HEATER. CONFIRM CAPACITY OF SHELF WITH MANUFACTURER PRIOR TO INSTALLATION.

1 WATER HEATER DETAIL
SCALE: NTS

PLUMBING FIXTURE SCHEDULE:

INFORMATION BELOW IS FOR GENERAL FIXTURE REQUIREMENTS ONLY. PLUMBING CONTRACTOR SHALL COORDINATE WITH OWNER AND ARCHITECT FOR EXACT FIXTURE REQUIRED FOR THE PROJECT. COORDINATE WITH OWNER FOR INFORMATION ON PROCURING FIXTURES AND ASSOCIATED COSTS. CONTRACTOR SHALL BE CLEAR AS TO WHAT FIXTURES ARE INCLUDED IN THEIR PROPOSED COSTS.

FIXTURES IN THIS SCHEDULE, OR THE APPROVED EQUIVALENT, SHALL BE PROVIDED BY THE PLUMBING CONTRACTOR UNLESS NOTED OTHERWISE. REFER TO SPECIFICATIONS AND MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR FURTHER REQUIREMENTS.

ET1
- EXPANSION TANK: 150 PSIG MAXIMUM WORKING PRESSURE, 2.0-GALLON CAPACITY, 0.45 MAXIMUM ACCEPTANCE FACTOR, AND 3/4" PIPE CONNECTION. SET THE AIR CHARGE PRESSURE TO MATCH EXISTING WATER SYSTEM PRESSURE.

FD1
- PVC FLOOR DRAIN: FLOOR DRAIN WITH ADJUSTABLE 6" ROUND MEDIUM-DUTY CAST NICKEL STRAINER, WITH FLANGED PVC ADAPTER. CLEAN AND POLISH STRAINER AFTER INSTALLATION, PROVIDE A DEEP SEAL TRAP, FLANGED PVC ADAPTER, AND TRAP GUARD.

HB1
- HOSE BIBB: ROUGH CHROME-PLATED BRASS, 3/4" FEMALE INLET, 3/4" THREADED HOSE CONNECTION, QUARTER-TURN WHEEL HANDLE, AND INTEGRAL VACUUM BREAKER.

JS1
- JANITOR'S SINK: 24"W x 24"L x 10"H MOLDED FIBER BASIN WITH INTEGRAL STAINLESS STEEL DRAIN BODY.
- FAUCET: FAUCET WITH WALL BRACE, INTEGRAL VACUUM BREAKER, PAIL HOOK, AND 3/4" MALE HOSE THREADED OUTLET. SECURE FAUCET IN WALL WITH BACKBOARD.
- TRIM: TYPE 304 20-GAUGE STAINLESS STEEL WALL SURROUNDS, 3'-0" LONG REINFORCED HOSE WITH 3/4" CHROME COUPLING AND WALL HOOK, EXTRUDED VINYL BUMPER GUARD, AND 2'-0" STAINLESS STEEL MOP HANGER.

LV1
- WALL-MOUNTED LAVATORY (ADA ACCESSIBLE): RECTANGULAR WALL-MOUNTED WHITE VITREOUS CHINA FIXTURE WITH FAUCET LEDGE AND FRONT OVERFLOW.
- FAUCET: 4" CENTERSET, VANDAL-RESISTANT FAUCET WITH LEVER HANDLES AND 0.5 GPM AERATOR.
- TRIM: GRID DRAIN WITH TAILPIECE, QUARTER-TURN BALL TYPE ANGLE STOP VALVES WITH RISERS AND ESCUTCHEONS, 1-1/4" 17-GAUGE TUBULAR CHROME PLATED BRASS ADJUSTABLE P-TRAP AND WASTE ARM WITH CLEANOUT PLUG AND ESCUTCHEON, CONCEALED ARM CARRIER WITH STANCHIONS TO FLOOR, AND INSULATION KIT FOR WATER AND WASTE PIPES.

TMV1
- THERMOSTATIC MIXING VALVE: SOLID BRASS BODY, THERMOSTATIC WAX ELEMENT, CORROSION RESISTANT INTERNAL PARTS, AND INTEGRAL CHECKS, ASSE 1070 COMPLIANT, CAPABLE OF 2.2 GPM WITH A 20 PSI DIFFERENTIAL AND A MINIMUM FLOW RATE OF 0.5 GPM. MAXIMUM TEMPERATURE STOP SET FOR 110°F. MOUNT BELOW THE PLUMBING FIXTURE WHERE INDICATED ON PLANS.

WC1
- FLOOR-MOUNTED WATER CLOSET (ADA ACCESSIBLE): TANK TYPE WHITE VITREOUS CHINA FIXTURE WITH ELONGATED BOWL, 1.6 GALLON PER FLUSH, SIPHON FLUSH ACTION, AND CLOSE-COUPLED TANK WITH TRIP LEVER ON THE WIDE SIDE OF THE STALL.
- TRIM: WHITE OPEN-FRONT CONTOURED, SOLID PLASTIC, HEAVY-DUTY, SEAT-LESS-COVER WITH SELF-SUSTAINING HINGES AND STAINLESS STEEL BOLTS; QUARTER-TURN BALL TYPE ANGLE STOP VALVE WITH RISER AND CHROME-PLATED ESCUTCHEON.

WCO1
- WALL CLEANOUT: CAST IRON CLEANOUT TEE, COUNTER-SUNK CAST IRON PLUG WITH GASKET SEAL, AND STAINLESS STEEL ROUND COVER WITH SCREW.

WH1
- WATER HEATER: ELECTRIC, 10 GALLON, 1.5 kW INPUT, 8 GALLON PER HOUR RECOVERY AT 80°F TEMPERATURE RISE AND 120°F OPERATING TEMPERATURE. PROVIDE ALL WATER CONNECTIONS, VALVES, AND SPECIALS PER MANUFACTURER'S INSTALLATION REQUIREMENTS.
- ELECTRICAL REQUIREMENTS: 120-VOLT, SINGLE PHASE, 13 FULL LOAD AMPS.
- BASIS OF DESIGN: A.O. SMITH MODEL # DEL-10.

PLUMBING GENERAL NOTES:

- DRAWINGS ARE SCHEMATIC IN NATURE. COORDINATE ALL PLUMBING WORK WITH ARCHITECTURAL DRAWINGS AND OTHER TRADES PRIOR TO BID OR START OF WORK.
- PLUMBING WORK SHALL CONFORM TO APPLICABLE CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION.
- EXACT LOCATION AND ELEVATIONS OF ALL UTILITIES SHALL BE VERIFIED PRIOR TO ANY INSTALLATION OF CONNECTIONS THEREOF. ALL CONNECTIONS TO UTILITIES (E.G. DOMESTIC WATER, SEWER, AND NATURAL GAS) SHALL BE MADE WITH APPROVAL OF THE ADMINISTRATIVE AUTHORITY AND THE RESPECTIVE UTILITY COMPANIES.
- SANITARY WASTE AND VENT PIPING BELOW GRADE SHALL BE SCHEDULE 40 PVC WITH SOLVENT-WELDED JOINTS.
- SANITARY WASTE AND VENT PIPING ABOVE GRADE SHALL BE NO-HUB CAST IRON IN RETURN AIR PLENUM APPLICATIONS. SCHEDULE 40 PVC PIPING WITH SOLVENT WELDED JOINTS CAN BE USED IN AREAS OTHER THAN RETURN AIR PLENUMS AS ALLOWED BY CODE.
- SLOPE SANITARY PIPING AS FOLLOWS: 1/4" PER FOOT FOR PIPE SIZES 2-1/2" AND SMALLER, AND 1/8" PER FOOT FOR PIPE SIZES 3" AND LARGER.
- PROVIDE WATER SUPPLY SHUT-OFF VALVES ON EACH TOILET ROOM GROUP AND TO MISCELLANEOUS EQUIPMENT.
- PROVIDE SIZE "A" WATER HAMMER ARRESTORS ON SUPPLY TO ALL PLUMBING FIXTURES.
- PROVIDE STOP VALVES ON ALL INDIVIDUAL PLUMBING FIXTURE SUPPLIES.
- COORDINATE SELECTION OF ALL PLUMBING FIXTURES WITH ARCHITECT AND OWNER. ALL HANDICAPPED FIXTURES (WHERE REQUIRED) SHALL COMPLY WITH A.D.A. REQUIREMENTS.
- DOMESTIC WATER PIPING BELOW GRADE SHALL BE TYPE K SOFT COPPER WITH FLARED FITTINGS OR TYPE K HARD COPPER WITH WROUGHT FITTINGS AND SOLDERED JOINTS.
- DOMESTIC WATER PIPING ABOVE GRADE SHALL BE TYPE L COPPER WITH WROUGHT FITTINGS AND SOLDERED JOINTS.
- INSULATE NEW DOMESTIC COLD WATER AND HOT WATER PIPING WITH MINIMUM 1" FIBERGLASS INSULATION (MINIMUM R-4.0) WITH PAPER COVERING.
- NATURAL GAS AND COMPRESSED AIR PIPING SHALL BE SCHEDULE 40 BLACK STEEL WITH THREADED FITTINGS.
- PROVIDE RUST-INHIBITOR ON PAINT ALL NATURAL GAS PIPING LOCATED EXTERIOR TO THE BUILDING.
- PROVIDE A.G.A. APPROVED GAS COCKS AND DIRT LEGS AT CONNECTIONS TO ALL GAS-FIRED EQUIPMENT.
- INSTALL ALL PLUMBING EQUIPMENT, FIXTURES, VALVES, ETC. PER MANUFACTURER'S INSTALLATION REQUIREMENTS. PROVIDE ADDITIONAL APPURTENANCES PER MANUFACTURER'S INSTALLATION REQUIREMENTS.
- INSTALL CLEANOUTS AT EVERY END OF SANITARY PIPING RUNS, AT MINIMUM OF EVERY 100'-0" OF SANITARY PIPING, AND AT EVERY CHANGE IN DIRECTION GREATER THAN 45°. REFER TO SECTION 708 OF THE INTERNATIONAL PLUMBING CODE FOR ADDITIONAL REQUIREMENTS.

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CRASH CHAMPIONS COLLISION REPAIR TEAM

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451 SE OLDHAM PARKWAY
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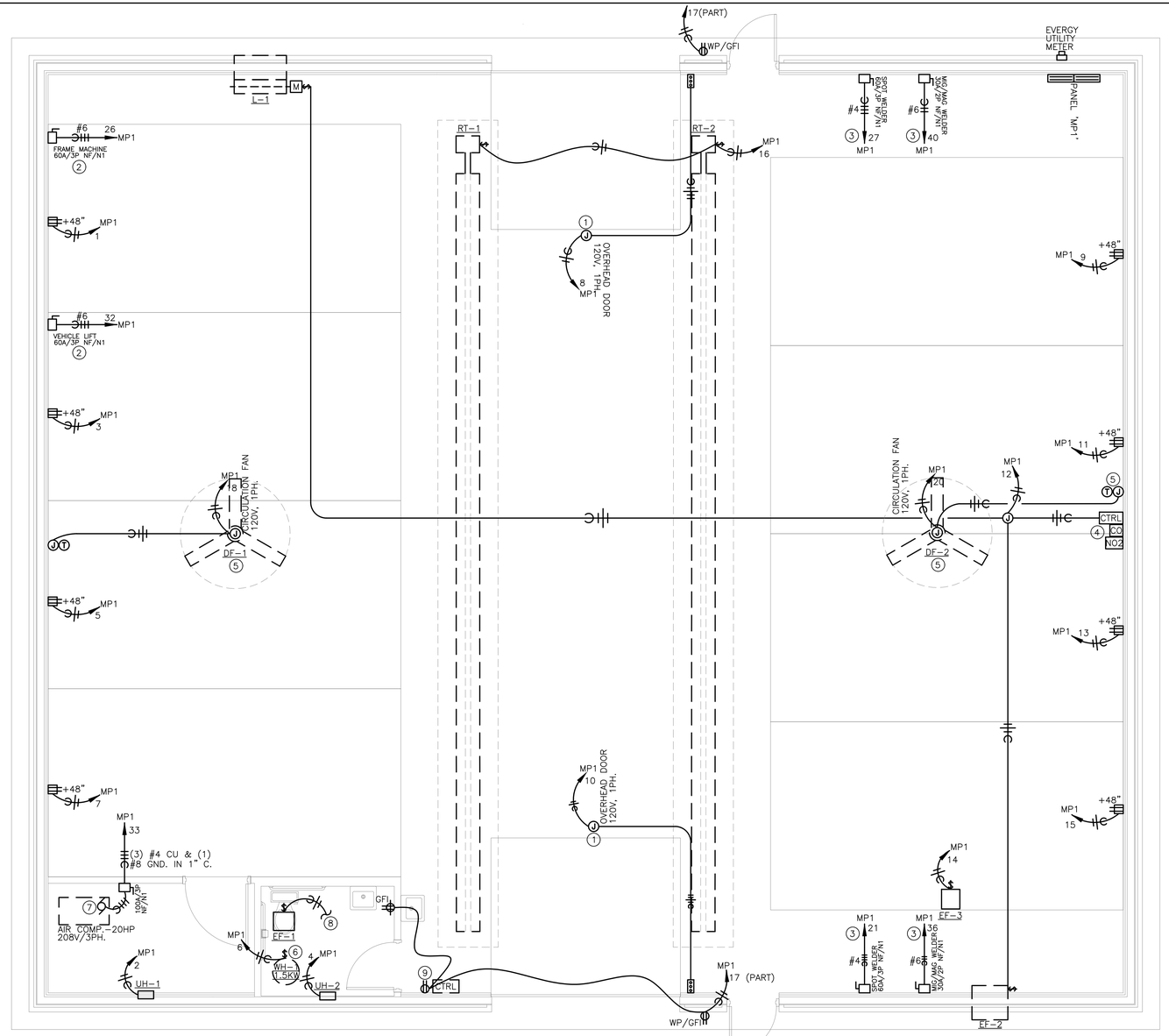
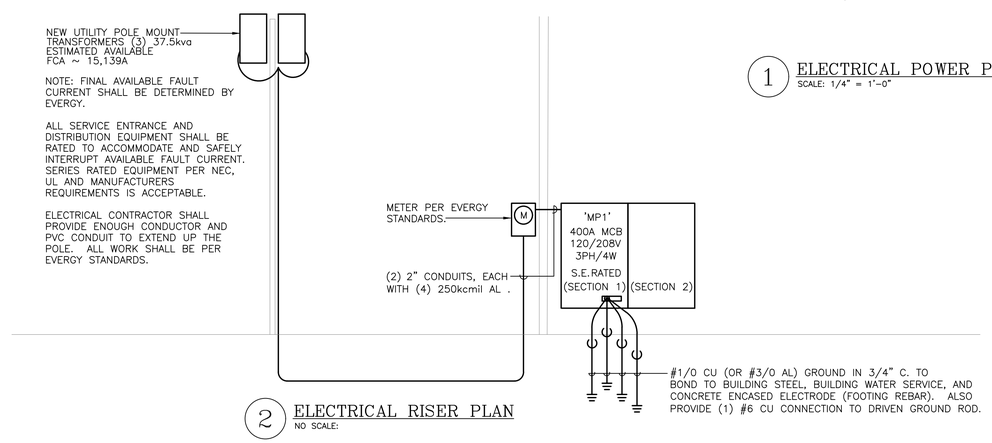
PLUMBING DETAILS & SCHEDULES



1 ELECTRICAL POWER PLAN
SCALE: 1/4" = 1'-0"



2 ELECTRICAL RISER PLAN
NO SCALE:

ELECTRICAL GENERAL NOTES:

- REFER TO SHEET E3.0 FOR ELECTRICAL GENERAL NOTES.

ELECTRICAL PLAN NOTES:

1. PROVIDE 120V CONNECTION TO OVERHEAD DOOR OPERATOR. MOUNT CONTROL STATION PROVIDED WITH DOOR IN LOCATION APPROVED BY OWNER ADJACENT TO OVERHEAD DOOR FOR PUSH-BUTTON CONTROLS. PROVIDE CONDUIT AND WIRING BETWEEN CONTROLLER AND OPERATOR. COORDINATE WITH DOOR INSTALLER FOR SPECIFIC ELECTRICAL REQUIREMENTS.
2. PROVIDE DISCONNECT AND FLEX CONNECTION TO BODY SHOP EQUIPMENT. VERIFY EXACT LOCATION AND SPECIFIC REQUIREMENTS PRIOR TO ROUGH IN. COORDINATE WITH OWNER LOCATION AND PHASING TO RELOCATE EQUIPMENT.
3. PROVIDE DISCONNECT AND FLEXIBLE CONNECTION TO SHOP WELDING EQUIPMENT. CONFIRM ACTUAL REQUIREMENTS WITH SHOP OWNER PRIOR TO ROUGH-IN.
4. MOUNT 'CO' CONTROL PANEL ON WALL, AND ROUTE POWER WIRING TO EXHAUST FAN 'EF-2' AND MOTORIZED LOUVER 'L-1'. COORDINATE INSTALL WITH MECHANICAL CONTRACTOR. ALL FANS, LOUVERS & CONTROL DEVICES SHALL BE FURNISHED BY MECHANICAL. MOUNTING OF CONTROL PANEL AND ALL WIRING SHALL BE BY ELECTRICAL CONTRACTOR.
5. PROVIDE JUNCTION BOX FOR POWER TO CIRCULATION FAN, AND INSTALL FAN CONTROL DEVICE. COORDINATE EXACT LOCATION WITH MECHANICAL CONTRACTOR. ALL FANS & CONTROL DEVICES SHALL BE FURNISHED BY MECHANICAL. MOUNTING OF CONTROL PANEL AND ALL WIRING SHALL BE BY ELECTRICAL CONTRACTOR
6. PROVIDE CONNECTION TO 1500 WATT 120V ELECTRIC WATER HEATER MOUNTED ABOVE THE CEILING. PROVIDE TOGGLE SWITCH DISCONNECT SWITCH.
7. PROVIDE DISCONNECT AND FLEXIBLE CONNECTION TO AIR COMPRESSOR. COORDINATE HOOK-UP AND EXACT REQUIRMENTS WITH OWNER.
8. CONNECT BATHROOM EXHAUST FAN ON TO SWITCHED BATHROOM LIGHTS.
9. DUPLEX RECEPTACLE FOR SEPTIC TANK LEVEL MONITORING PANEL. COORDINATE EXACT LOCATION WITH PLUMBING CONTRACTOR.

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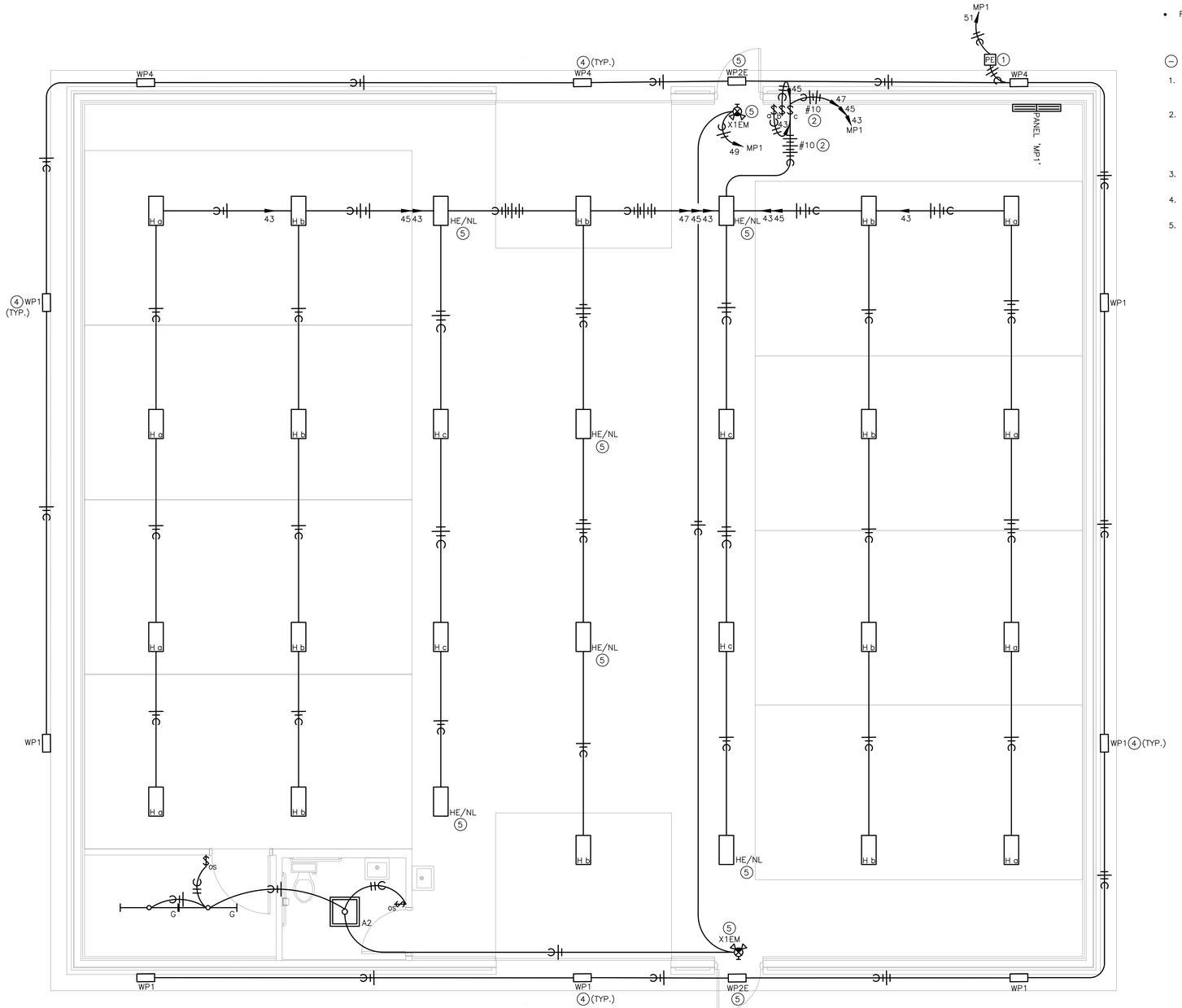
ELECTRICAL POWER PLAN



1 ELECTRICAL LIGHTING PLAN
SCALE: 1/4" = 1'-0"

ELECTRICAL GENERAL NOTES:

- REFER TO E3.0 FOR ELECTRICAL GENERAL NOTES.

⊖ ELECTRICAL LIGHTING PLAN NOTES:

1. PROVIDE BOX MOUNTED LINE VOLTAGE PHOTO-CELL FOR CONTROL OF EXTERIOR LIGHTING. ADJUST TO BRING LIGHTING ON AT DUSK AND OFF AT DAWN.
2. WALL SWITCHES FOR CONTROL OF SHOP LIGHTING. LIGHT FIXTURES SHALL BE ALTERNATELY SWITCHED TO PROVIDE BI-LEVEL LIGHTING. LOWER CASE LETTER INDICATES SWITCHING CONFIGURATION. UPSIZE HOME-RUN PORTION OF CIRCUIT TO MINIMIZE VOLTAGE DROP.
3. MOUNT SHOP HI-BAY FIXTURES AS HIGH AS POSSIBLE TO STRUCTURE.
4. CONFIRM ALL MOUNTING HEIGHTS WITH ARCHITECT AND OWNER PRIOR TO ROUGH-IN.
5. CONNECT EXIT AND EMERGENCY FIXTURES TO CONTINUOUS HOT UN-SWITCHED LIGHTING CIRCUIT. HIGH-BAY SHOP NIGHT/EMERGENCY LIGHTING SHALL BE ON CIRCUIT 'HP1-47'.

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ELECTRICAL LIGHTING PLAN

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LINETYPES LEGEND:

- NEW
- EXISTING OR BY OTHERS
- DEMOLITION

LIGHTING LEGEND:

- CEILING MOUNTED LIGHT FIXTURE, 2'x2' OR 2'x4'
- CEILING MOUNTED LIGHT FIXTURE, 2'x2' OR 2'x4' (NIGHT LIGHT OR EMERGENCY CIRCUIT)
- STRIP LIGHT FIXTURE. REFER TO FIXTURE SCHEDULE FOR LENGTH.
- WALL–MOUNT SCONCE OR WALL BRACKET LIGHT FIXTURE.
- RECESSED WALL WASH CAN LIGHT FIXTURE.
- RECESSED, SURFACE, OR STEM HUNG LIGHT FIXTURE.
- SINGLE FACE EXIT LIGHT FIXTURE, WALL OR CEILING MOUNT, WITH FIELD CONFIGURABLE ARROWS. PROVIDE DIRECTIONAL ARROWS AS INDICATED ON DRAWINGS. SHADED AREA INDICATES EXIT LIGHT FACE.
- DOUBLE FACE EXIT LIGHT FIXTURE, WALL OR CEILING MOUNT, WITH FIELD CONFIGURABLE ARROWS. PROVIDE DIRECTIONAL ARROWS AS INDICATED ON DRAWINGS. SHADED AREA INDICATES EXIT LIGHT FACE.
- COMBINATION SINGLE FACE EXIT/EMERGENCY LIGHT FIXTURE, WALL OR CEILING MOUNT, WITH FIELD CONFIGURABLE ARROWS. PROVIDE DIRECTIONAL ARROWS AS INDICATED ON DRAWINGS. SHADED AREA INDICATES EXIT LIGHT FACE.

  NOTE: REFER TO LIGHT FIXTURE SCHEDULE AND ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION AND MOUNTING HEIGHTS.

POWER LEGEND:

- INDICATES ABOVE COUNTER (TYP)
- DUPLEX RECEPTACLE MOUNTED AT +18"AFF TO CENTER OF RECEPTACLE (UNO). ABOVE COUNTER RECEPTACLES SHALL BE +48"AFF (UNO).
- DUPLEX ISOLATED GROUND RECEPTACLE MOUNTED AT +18"AFF TO CENTER OF RECEPTACLE (UNO). ABOVE COUNTER RECEPTACLES SHALL BE +48"AFF (UNO).
- DUPLEX RECEPTACLE ON STAND–BY GENERATOR POWER, MOUNTED AT +18"AFF TO CENTER OF RECEPTACLE (UNO). RECEPTACLES SHOWN ABOVE COUNTER SHALL BE +48"AFF (UNO).
- FLOOR–MOUNTED DUPLEX OR FOURPLEX RECEPTACLE MOUNTED IN PVC FLOORBOX, OR POKE–THRU
- SPECIAL RECEPTACLE, NUMBER REFERS TO "NEMA" CONFIGURATION. MOUNT AT +18"AFF TO CENTER OF RECEPTACLE (UNO).
- FOURPLEX RECEPTACLE MOUNTED AT +18"AFF TO CENTER OF RECEPTACLE (UNO). RECEPTACLES SHOWN TO BE ABOVE COUNTER SHALL BE +48"AFF (UNO)
- FLUSH MOUNT COMBINATION POWER AND VOICE/DATA FLOORBOX.
- $ SINGLE POLE WALL MOUNT TOGGLE SWITCH. MOUNT AT +48"AFF TO CENTER OF SWITCH.
- $OS WALL MOUNTED OCCUPANCY SENSOR SWITCH. MOUNT AT +48"AFF TO CENTER OF SWITCH.
- $DSW WALL MOUNTED OCCUPANCY SENSOR SWITCH WITH 0–10V DIMMING CONTROL. MOUNT AT +48"AFF TO CENTER OF SWITCH.
- $LVS WALL MOUNTED LOW VOLTAGE SWITCH WITH 0–10V DIMMING CONTROL. MOUNT AT +48"AFF TO CENTER OF SWITCH.
- OS CEILING MOUNTED OCCUPANCY SENSOR.
- DRC1 ROOM CONTROLLER/POWER PACK FOR LIGHT FIXTURE CONTROL. DEVICE SHALL BE CONCEALED IN CEILING.
- VOICE OPENING. PROVIDE RING WITH STRING TO ABOVE CEILING. DEVICES SHOWN TO BE COUNTER SHALL BE +48"AFF (UNO).
- DATA OPENING. PROVIDE RING WITH STRING TO ABOVE CEILING. DEVICES SHOWN TO BE COUNTER SHALL BE +48"AFF (UNO).
- COMBINATION VOICE/DATA OPENING. PROVIDE RING WITH STRING TO ABOVE CEILING. DEVICES SHOWN TO BE COUNTER SHALL BE +48"AFF (UNO).
- FLUSH FLOOR MOUNT VOICE/DATA OUTLET MOUNTED IN PVC FLOORBOX.
- DISCONNECT SWITCH, STARTER, & COMBINATION STARTER/DISCONNECT SWITCH. SIZE AS INDICATED ON DRAWINGS.
- ELECTRICAL PANEL BOARD, FLUSH OR SURFACE MOUNT
- J JUNCTION BOX

  NOTE: LINE THROUGH DEVICE INDICATES TO BE MOUNTED ABOVE COUNTERTOP OR CABINET. REFER TO ARCHITECTURAL ELEVATIONS FOR MOUNTING HEIGHTS IF NOT INDICATED ON POWER PLAN.

  REFER TO LIGHTING CONTROL DEVICE SCHEDULE AND ARCHITECTURAL DRAWINGS FOR FURTHER INFORMATION.

WIRING LEGEND:

- HOMERUN TO PANELBOARD WITH NUMBER AND SIZE OF CONDUCTORS INDICATED ON PLANS.
- GROUNDED CONDUCTOR.
- CONDUIT OR CIRCUIT BREAK/CONTINUATION.
- CONDUIT WITH ENDCAP FOR FUTURE USE.
- GROUNDING SOURCE.

ABBREVIATIONS LEGEND:

AFF	ABOVE FINISHED FLOOR
ED	EXISTING TO BE DEMOLISHED
EM	EMERGENCY
ER	EXISTING TO BE RELOCATED
ETR	EXISTING TO REMAIN
GFCI	GROUND FAULT CURRENT INTERRUPTER
NL	NIGHT LIGHT
TR	TAMPER RESISTANT
UNO	UNLESS NOTED OTHERWISE
WP	WEATHER PROTECTED COVER / GFCI

LIGHT FIXTURE SCHEDULE

TYPE	MANUFACTURER AND MODEL #	LIGHT SOURCE	WATTS	MINIMUM LUMENS	VOLTAGE	CRI	COLOR TEMP	DIMMABLE	FINISH	DESCRIPTION	NOTES
A2	METALUX 22FR-LD4-32-UNV-L835-CD1	INTEGRAL LED	30	3300	UNV	80	3500	0-10V / 10%	WHITE	2'X2' LED LIGHT TROFFER WITH CENTER BASKET, 3500K COLOR TEMPERATURE DIMMABLE UNIVERSAL VOLTAGE DRIVER.	1-5
EM	SURE LITES XR-6/9-C	INTEGRAL LED	6	1100	UNV	80	-	0-10V / 10%	WHITE	EMERGENCY WALL MOUNTED FIXTURE. FIXTURE SHALL BE PROVIDED WITH INTEGRAL EMERGENCY 90 MINUTE BATTERY PACK.	1-5
H	BUILDERS PACK TR08-165W-2FT-40K-PDN	INTEGRAL LED	165	20900	UNV	80	4000	0-10V / 10%	WHITE	LED HIGHBAY CABLE MOUNTED, 20,900 LUMEN PACKAGE. 4000K PROVIDE WITH WIREGUARD. PROVIDE WITH POWER CORD AND AIRCRAFT CABLE. CONFIRM LENGTHS NEEDED PRIOR TO ORDERING.	1-5
HE	BUILDERS PACK TR08-165W-2FT-40K-PDN -EM	INTEGRAL LED	165	20900	UNV	80	4000	0-10V / 10%	WHITE	LED HIGHBAY CABLE MOUNTED, 20,900 LUMEN PACKAGE. 4000K PROVIDE WITH WIREGUARD. PROVIDE WITH POWER CORD AND AIRCRAFT CABLE. CONFIRM LENGTHS NEEDED PRIOR TO ORDERING.FIXTURE SHALL BE PROVIDED WITH INTEGRAL EMERGENCY 90 MINUTE BATTERY PACK.	1-5
G	HE WILLIAMS - 75S-4-L65-8-40-DMA-DIM-UNV	INTEGRAL LED	43	6500	UNV	80	4000	0-10V / 10%	WHITE	LED LINEAR RIGID CHAIN OR AIRCRAFT CABLE SUSPENDED TO 10'-0" AFF.	1-5
WP1	MCGRAW EDISON - GLEON-SA3D-740-U-SL4	INTEGRAL LED	95	22,500	UNV	80	4000	NA	DARK BRONZE	LED ARCHITECTURAL SITE WALL MOUNTED FIXTURE. MOUNT AT 18'-0" A.G.	1-5
WP2E	MCGRAW EDISON - IST-SA1-E-740-U-T4FT-XX-CBP	INTEGRAL LED	25	2200	UNV	80	4000	NA	DARK BRONZE	EXTERIOR LED WALL PACK. FIXTURE SHALL BE PROVIDED WITH INTEGRAL EMERGENCY 90 MINUTE BATTERY PACK.	1-5
WP4	MCGRAW EDISON - GLEON-SA3D-740-U-SL2-HSS	INTEGRAL LED	95	19,600	UNV	80	4000	NA	DARK BRONZE	LED ARCHITECTURAL SITE WALL MOUNTED FIXTURE. PROVIDE WITH HOUSE SHIELD.	1-5
X1EM	SURELITE SLX70RWH	INTEGRAL LED	10.3	-	UNV	NA	NA	NA	WHITE	COMBINATION EMERGENCY EGRESS /SINGLE FACE LED EXIT LIGHT FIXTURE WITH BATTERY PACK, RED LETTERS AND FIELD CONFIGURED ARROWS.	1-5

NOTES:
1. COORDINATE ALL LIGHT FIXTURE SELECTIONS AND/OR SUBSTITUTIONS WITH ARCHITECT, OWNER AND/OR ENGINEER PRIOR TO ORDER.
2. PROVIDE LIGHTING CONTROLS THAT ARE COMPATIBLE WITH FIXTURES PROVIDED.
3. COORDINATE WITH ARCHITECT, OWNER AND/OR ENGINEER FOR DIMMING REQUIREMENTS PRIOR TO INSTALLATION.
4. PROVIDE ALL COMPONENTS AND ACCESSORIES AS REQUIRED FOR A COMPLETE AND OPERABLE INSTALLATION.
5. EQUIVALENTS MUST BE SUBMITTED AND APPROVED PRIOR TO BID.

PANELBOARD MP1

BUS AMPS: 400A | LOCATION: ELECTRICAL ROOM | GROUND BUS: YES
MAIN SIZE / TYPE: MCB | NEMA RATING: NEMA 1 | ISOL. GROUND BUS: NO
VOLTS/PHASE: 208Y/120V, 3PH, 4W | AFC VALUE: | FEED THRU LUGS: YES
MOUNTING: SURFACE | AIC RATING: 22K | SECTIONS: 1 OF 2

CKT #	CIRCUIT DESCRIPTION	BREAKER AMPS	P	WIRE SIZE	LOAD (VA)	CONNECTED PER PHASE (VA) A	B	C	LOAD (VA)	WIRE SIZE	BREAKER P	BREAKER AMPS	CIRCUIT DESCRIPTION	CKT #
1	RECEPTACLES - SERVICE BAY	20	1		360	2,160			1,800		1	20	UNIT HEATER 'UH-1'	2
3	RECEPTACLES - SERVICE BAY	20	1		360		2,160		1,800		1	20	UNIT HEATER 'UH-2'	4
5	RECEPTACLES - SERVICE BAY	20	1		360			1,860	1,500		1	20	WATER HEATER 'WH-1'	6
7	RECEPTACLES - SERVICE BAY	20	1		360	1,360			1,000		1	20	OVERHEAD DOOR	8
9	RECEPTACLES - SERVICE BAY	20	1		360		1,360		1,000		1	20	OVERHEAD DOOR	10
11	RECEPTACLES - SERVICE BAY	20	1		360			1,110	750		1	20	EXAUST FAN 'EF-2'	12
13	RECEPTACLES - SERVICE BAY	20	1		360	610			250		1	20	EXAUST FAN 'EF-3'	14
15	RECEPTACLES - SERVICE BAY	20	1		360		1,460		1,100		1	20	RADIANT HEATERS	16
17	RECEPTACLES	20	1		360			1,110	750		1	20	CEILING FAN 'DF-1'	18
19					5,000	5,750			750		1	20	CEILING FAN 'DF-2'	20
21	SPOT WELDER	60	3	#4	5,000		5,000		0		1	20	SPARE	22
23					5,000			9,000	4,000		-	-	-	24
25					5,000	9,000			4,000	#6	3	60	FRAME MACHINE	26
27	SPOT WELDER	60	3	#4	5,000		9,000		4,000		-	-	-	28
29					5,000			9,000	4,000		-	-	-	30
31					7,000	11,000			4,000	#6	3	60	VEHICLE LIFT	32
33	AIR COMPRESSOR	100	3	#4	7,000		11,000		4,000		-	-	-	34
35					7,000			9,600	2,600	#6	2	30	MIG/MAG WELDER	36
37	SPARE	20	1		0	2,600			2,600					38
39	SPARE	20	1		0		2,600		2,600	#6	2	30	MIG/MAG WELDER	40
41	SPARE	20	1		0			2,600	2,600					42
	PER PHASE SUB-TOTALS					32,480	32,580	34,280	LEGEND:					

TOTAL CONNECTED PANELBOARD (VA)	99,340	TS - VIA TIME SWITCH	ST - SHUNT TRIP
TOTAL CONNECTED PANELBOARD (AMPS)	276	GF - GROUND FAULT INTERRUPTER	LCK - LOCKING TAB
TOTAL PANELBOARD DEMAND (VA)	104,840	FA - FIRE ALARM / RED / LOCKING TAB	IG - ISOLATED GROUND
TOTAL PANELBOARD DEMAND (AMPS)	291	EM - EMERGENCY LTG. / LOCKING TAB	OL - RE: ONE-LINE DIAGRAM

PANELBOARD MP1

BUS AMPS: 400A | LOCATION: ELECTRICAL ROOM | GROUND BUS: YES
MAIN SIZE / TYPE: MLO | NEMA RATING: NEMA 1 | ISOL. GROUND BUS: NO
VOLTS/PHASE: 208Y/120V, 3PH, 4W | AFC VALUE: | FEED THRU LUGS: NO
MOUNTING: SURFACE | AIC RATING: 22K | SECTIONS: 2 OF 2

CKT #	CIRCUIT DESCRIPTION	BREAKER AMPS	P	WIRE SIZE	LOAD (VA)	CONNECTED PER PHASE (VA) A	B	C	LOAD (VA)	WIRE SIZE	BREAKER P	BREAKER AMPS	CIRCUIT DESCRIPTION	CKT #
43	LIGHTING - SHOP AREA	20	1		1,320	1,320			0		1	20	SPARE	44
45	LIGHTING - SHOP AREA	20	1		1,650		1,650		0		1	20	SPARE	46
47	LIGHTING - SHOP AREA	20	1		1,650			1,650	0		1	20	SPARE	48
49	LIGHTING - RR, EXITS & COMP. RM.	20	1		950	950			0		1	20	SPARE	50
51	LIGHTING - EXTERIOR	20	1		0		0		0		1	20	SPARE	52
53	SPARE	20	1		0			0	0		1	20	SPARE	54
55	SPARE	20	1		0	0			0		1	20	SPARE	56
57	SPARE	20	1		0		0		0		1	20	SPARE	58
59	SPARE	20	1		0			0	0		1	20	SPARE	60
61	SPARE	20	1		0	0			0		1	20	SPARE	62
63	SPARE	20	1		0		0		0		1	20	SPARE	64
65	SPARE	20	1		0			0	0		1	20	SPARE	66
67	SPACE O NLY				0	0			0				SPACE ONLY	68
69	SPACE O NLY				0		0		0				SPACE ONLY	70
71	SPACE O NLY				0			0	0				SPACE ONLY	72
73	SPACE O NLY				0	0			0				SPACE ONLY	74
75	SPACE O NLY				0		0		0				SPACE ONLY	76
77	SPACE O NLY				0			0	0				SPACE ONLY	78
79	SPACE O NLY				0	0			0				SPACE ONLY	80
81	SPACE O NLY				0		0		0				SPACE ONLY	82
83	SPACE O NLY				0			0	0				SPACE ONLY	84
	PER PHASE SUB-TOTALS					2,270	1,650	1,650	LEGEND:					

TOTAL CONNECTED PANELBOARD (VA)	5,570	TS - VIA TIME SWITCH	ST - SHUNT TRIP
TOTAL CONNECTED PANELBOARD (AMPS)	15	GF - GROUND FAULT INTERRUPTER	LCK - LOCKING TAB
TOTAL PANELBOARD DEMAND (VA)	6,963	FA - FIRE ALARM / RED / LOCKING TAB	IG - ISOLATED GROUND
TOTAL PANELBOARD DEMAND (AMPS)	19	EM - EMERGENCY LTG. / LOCKING TAB	OL - RE: ONE-LINE DIAGRAM

COMMERCIAL LOAD SUMMARY

BUILDING AREA: 4,200 SQ. FT | VOLTAGE: 208Y/120V, 3PH, 4W

LOAD DESCRIPTION		CONNECTED LOAD (VA)		DEMAND FACTOR		DEMAND LOAD (VA)
LIGHTING						
	INTERIOR LIGHTING	4,620	x	125%	=	0
	EXTERIOR LIGHTING	950	x	125%	=	1,188
	SIGNAGE	0	x	125%	=	0
	MINIMUM GENERAL LIGHTING PER NEC-220 x 125%					7,875
	MINIMUM TRACK LIGHTING/SHOW WINDOW PER NEC-220 x 125					0
POWER & HVAC						
	EXISTING	0	x	100%	=	0
	RECEPTACLES	3,240	x	100%;50%	=	3,240
	MISCELLANEOUS EQUIPMENT	64,400	x	100%	=	64,400
	REFRIGERATION EQUIPMENT	0	x	100%	=	0
	KITCHEN	0	x	100%	=	0
	HVAC - SUMMER	0	x	100%	=	0
	HVAC - WINTER	0	x	100%	=	0
	SUPP. ELECTRIC HEAT	5,100	x	100%	=	5,100
	MOTORS	26,600	x	100%	=	26,600
	LARGEST MOTOR	0	x	25%	=	0
	SUB-TOTAL (VA)	104,910		SUB-TOTAL (VA)		108,403
	SUB-TOTAL (AMPS)	291		SUB-TOTAL (AMPS)		301
				SERVICE SIZE (AMPS)		400
				SPARE CAPACITY (AMPS)		99

ELECTRICAL GENERAL NOTES:

- DRAWINGS ARE SCHEMATIC IN NATURE AND BASED ON PRELIMINARY SITE OBSERVATION AND ORIGINAL DESIGN DRAWINGS (WHEN AVAILABLE). PRIOR TO BID, CONTRACTOR SHALL INVESTIGATE THE PROJECT SITE AND BECOME FULLY AWARE OF ALL FIELD CONDITIONS, CURRENT SYSTEM OPERATION AS WELL AS COORDINATION REQUIREMENTS. COORDINATE ALL MECHANICAL WORK WITH ARCHITECTURAL DRAWINGS, EXISTING CONDITIONS AND OTHER TRADES PRIOR TO BID OR START OF WORK.
- ELECTRICAL WORK SHALL CONFORM TO APPLICABLE CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION. REFER TO ARCHITECTURAL CODE PLANS FOR SPECIFIC CODE REFERENCES.
- COORDINATE ELECTRICAL WORK WITH ALL OTHER PROJECT TRADES (E.G. ARCHITECTURAL, STRUCTURAL, ELECTRICAL, PLUMBING, FIRE SPRINKLER, ETC.).
- COORDINATE EXACT LOCATIONS OF ALL LIGHT FIXTURES AND ELECTRICAL DEVICES WITH ARCHITECTURAL DRAWING AND OTHER TRADES PRIOR TO ROUGH–IN. COORDINATE ALL WORK WITH OTHER TRADES AND EXISTING CONDITIONS AS REQUIRE TO PROPERLY INSTALL ALL SYSTEMS.
- INSTALL PULL STRING IN ALL EMPTY CONDUIT/RACEWAY. TERMINATE CONDUIT STUB–UP WITH A NYLON BUSHING.
- COLOR FOR RECEPTACLES, SWITCHES, NETWORK DEVICES AND COVER PLATES SHALL MATCH. COLOR SHALL MATCH AND BE SELECTED AS BRIGHT WHITE UNLESS NOTED OTHERWISE. CONFIRM EXACT COLOR WITH ARCHITECT PRIOR TO ORDER.
- ELECTRICAL CONTRACTOR SHALL INSPECT ALL ELECTRICAL EQUIPMENT TO REMAIN. REPORT ANY DEFICIENCIES TO OWNER PRIOR TO START OF WORK.
- ALL CONDUCTORS SHALL BE INSTALLED IN ELECTRICAL METALLIC TUBING (EMT) AND SHALL CONFIRM TO THE NATIONAL ELECTRIC CODE (NEC). ALL INSTALLATION SHALL BE PER NEC REQUIREMENTS. ALL WIRING IN CONDUIT SHALL BE SURFACE MOUNTED.
- IF ACCEPTABLE BY OWNER, MC CABLE CAN BE USED FOR CIRCUITING TO LIGHTING WIRING AT STRUCTURE. "HOME RUNS" SHALL BE ROUTED IN CONDUIT. ALL WIRING SHALL BE PER NEC REQUIREMENTS.
- CONTRACTOR SHALL VERIFY ALL ROUGH–IN LOCATIONS AND QUANTITIES FOR GENERAL USE POWER AND DATA WITH OWNER AND/OR ARCHITECT PRIOR TO INSTALLATION.
- ALL WIRE SIZES LISTED ON PLANS ASSUME COPPER CONDUCTORS ARE USED (UNLESS NOTED OTHERWISE).
- CONTRACTOR SHALL LABEL ALL RECEPTACLES, BOXES, PANELBOARDS, ETC. WITH PANEL, CIRCUIT NUMBER, ETC. PER INDUSTRY STANDARDS. COORDINATE WITH OWNER FOR FINAL PANEL AND EQUIPMENT DESIGNATIONS.

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STATE OF MISSOURI
SCOTT D. GROSHANS
NUMBER PE-2019012798
PROFESSIONAL ENGINEER
6/14/2022

SCOTT D. GROSHANS
MO LICENSE # PE–2019012798

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CRASHCHAMPIONS COLLISION REPAIR TEAM

PROPOSED BODY SHOP BUILDING FOR: CRASH CHAMPIONS

451 SE OLDHAM PARKWAY
LEE'S SUMMIT, MISSOURI

NO.	DESCRIPTION	DATE
---	FOR PERMIT	06 / 14 / 2022

PROJECT NUMBER 22009
DATE ISSUED: 06 / 14 / 2022

SHEET NUMBER
E3.0

ELECTRICAL SCHEDULES AND DETAILS