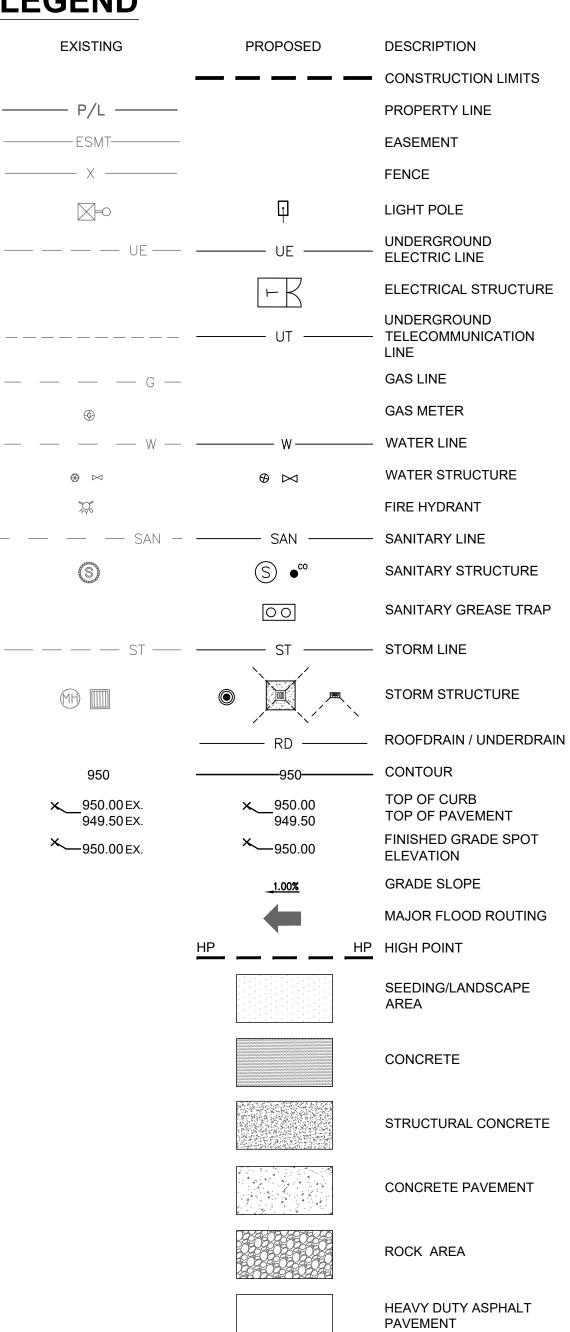
# WHATABURGER

204 SW M150 HWY LEE'S SUMMIT, MO 64801 JACKSON COUNTY PROTOTYPE 22-M FINAL DEVELOPMENT PLAN

# **LEGEND**





# **OWNER**

WHATABURGER 300 CONCORD PLAZA DR. SAN ANTONIO, TX 78216 PHONE: (210) 476-6842 **CONTACT: ALYSSIA LESTER** EMAIL: alester@wbhq.com

## **ENGINEER**

ms consultants, inc. 2221 SCHROCK ROAD COLUMBUS, OHIO 43229 PHONE: (614) 898-7100 CONTACT: IAN AULTMAN EMAIL: iaultman@msconsultants.com

# **BENCHMARK**

TBM 1: 1/2 IRON NORTHING: 2822704.4825 EASTING: 978325.3390 **ELEVATION = 1022.68** 

TBM 2: 1/2 IRON NORTHING: 2822484.7625 EASTING: 978055.2866 **ELEVATION** = 1019.71

**BASIS OF BEARINGS:** MO (C) STATE PLANE COORDINATE SYSTEM SPC (2402 MO C)

# **SURVEYOR**

YOUNG - HOBBS AND ASSOCIATES 1202 CROSSLAND AVE. CLARKSVILLE, TN 37040 PHONE: (931) 645-2524 CONTACT: DAVE R. HOBBS

# **GEOTECHNICAL ENGINEER**

TERRACON CONSULTANTS, INC. 4765 WEST JUNCTION STREET SPRINGFIELD, MISSOURI 65802 PHONE: (417) 864-5100 CONTACT: TY G. ALEXANDER, P.E.

THIS PROPERTY IS LOCATED WITHIN AN AREA HAVING ZONE A MAP EFFECTIVE DATE OF JANUARY 20TH, 2017, IN JACKSON COUNTY, STATE OF MISSOURI, WHICH IS THE CURRENT FLOOD INSURANCE RATE MAP FOR THE COMMUNITY IN WHICH SAID PROPERTY IS SITUATED.

## PRCOM20223975

RELEASED FOR CONSTRUCTION

**Development Services Department** Lee's Summit, Missouri 05/08/2023

C-1.0

1 OF 1

C-2.0

C-3.0

C-3.1

C-4.0

C-5.0

C-5.1

C-5.2

C-6.0

C-7.0

C-7.2

C-7.3

C-7.4

C-7.5

C-7.6

C-8.0

C-9.0

C-9.1

C-10.0

C-10.1

C-10.2

C-10.3

L-1.0

I-1.0

**SHEET INDEX** 

**COVER SHEET** 

SITE DEMOLITION PLAN

SITE DIMENSION PLAN

CONCRETE JOINTING PLAN

**DETENTION SYSTEM DETAILS** 

FIRE PROTECTION PLAN

SWPPP PHASE - PRE-CONSTRUCTION

SWPPP PHASE - DURING & POST CONSTRUCTION

STORM SEWER PLAN AND PROFILES

SITE ZONING PLAN

SITE GRADING PLAN

SITE DRAINAGE PLAN

SITE UTILITY PLAN

SITE DETAILS

SITE DETAILS

SITE DETAILS

SITE DETAILS

SITE DETAILS

SITE DETAILS

SWPPP NOTES

SWPPP NOTES

SWPPP DETAILS

SWPPP DETAILS

ANDSCAPE PLAN

IRRIGATION PLAN

CONFIDENCE AND SHALL BE USED ONLY PURSUANT TO THE AGREE MENT WITH THE ARCHITECT. NO OTHER USE, DISSEMINATION OR DUPLICATION MAY BE MADE WITHOUT PRIOR WRITTEN CONSEN OF THE ARCHITECT. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFI-CALLY RESERVED.

REVISION/DATE/DESCRIPTION

09/13/21

01/24/22

08/30/22

SIR UPDATES

PDP APPLICATION

**DEVELOPMENT SET** RESPONSE TO

FDP COMMENTS

FDP COMMENTS III

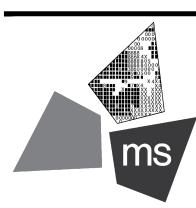
FDP COMMENTS IV

ISSUE FOR PERMIT

PT22M PROGRESS SET 03/08/23

60% SET





ms consultants, inc. engineers, architects, planners 2221 Schrock Road Columbus, Ohio 43229-1547 phone 614.898.7100 fax 614.898.7570

PROJECT

PROPOSED PT22M BUILDING

204 SW M150 HWY LEE'S SUMMIT, MO 64081

SHEET TITLE

**COVER SHEET** 



DRAWN BY: CHECKED BY: 40497-21 PROJECT NO:

DRAWING

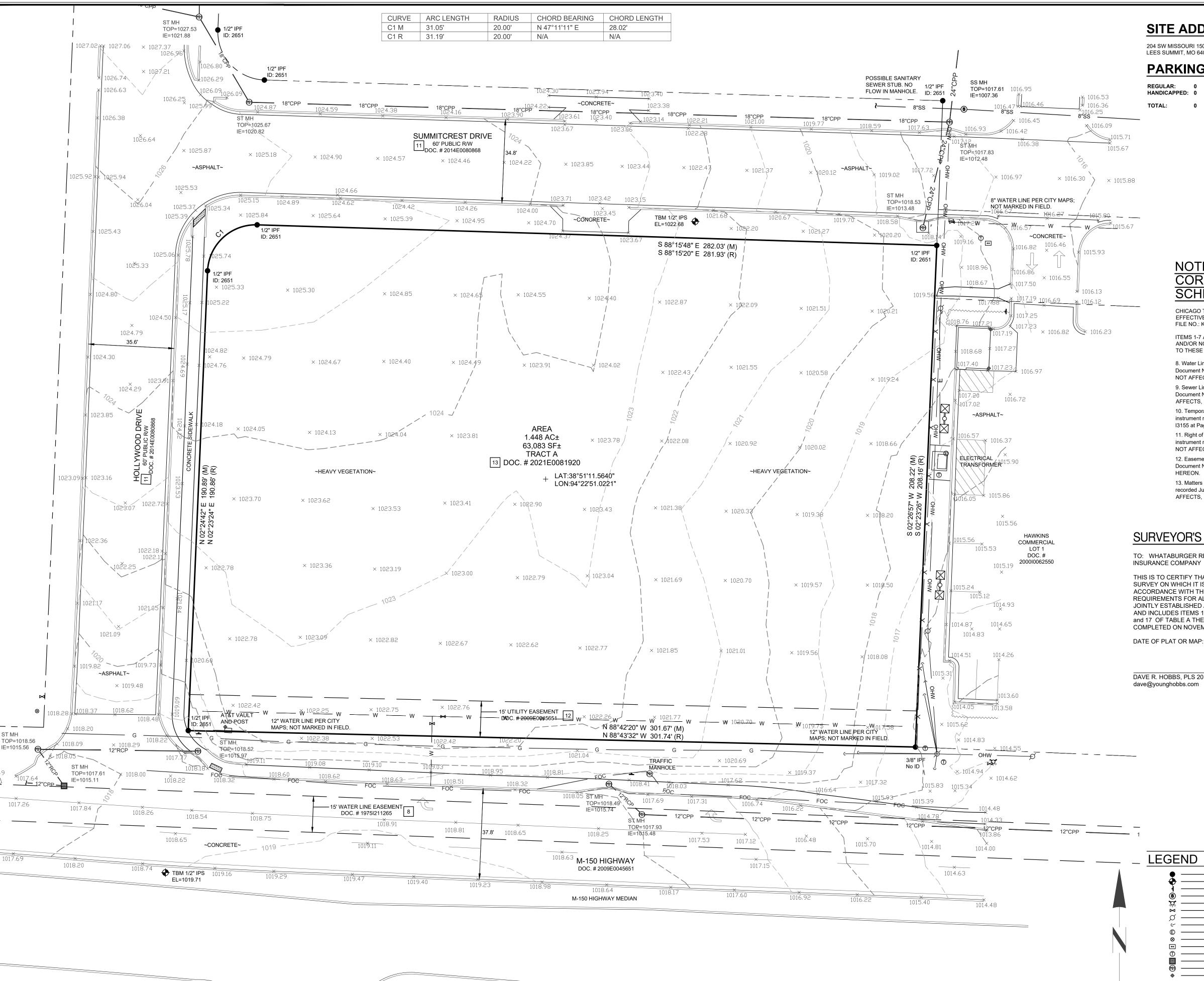
Know what's **below**.

Call before you dig.

C-1.0

# **FLOOD INFORMATION**

DESIGNATIONS OF "X" BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, ON FLOOD INSURANCE RATE MAP NO. 29095C0532G, WITH

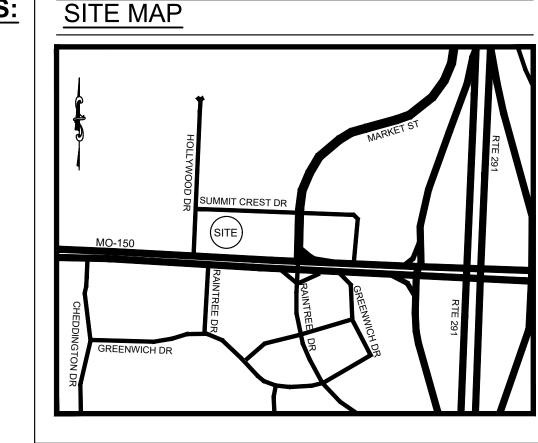


## SITE ADDRESS:

204 SW MISSOURI 150 HIGHWAY, LEES SUMMIT, MO 64081

## **PARKING:**

REGULAR: 0 HANDICAPPED: 0



## **NOTES CORRESPONDING TO SCHEDULE B-II:**

CHICAGO TITLE INSURANCE COMPANY EFFECTIVE DATE: NOVEMBER 17, 2021 AT 8:00 A.M. FILE NO.: KCC213072

ITEMS 1-7 AND 14-15, ARE STANDARD EXCEPTIONS AND/OR NOT SURVEYING RELATED AND ARE SUBJECT TO THESE EXCEPTIONS.

8. Water Line Easement by the instrument recorded as Document No. 1975I211265 in Book I596 at Page 173. DOES NOT AFFECT.

9. Sewer Line Easement by the instrument recorded as Document No. 1988I875029 in Book I1850 at Page 1774. AFFECTS, NOT POTTABLE.

10. Temporary Easement for Highway Purposes by the instrument recorded as Document No. 1988I015602 in Book I3155 at Page 270. DOES NOT AFFECT.

11. Right of way granted to the City of Lee's Summit by the instrument recorded as Document No. 2014E0080868. DOES NOT AFFECT.

12. Easements set forth in Warranty Deed recorded as Document No. 2009E0045651. AFFECTS, AS SHOWN

13. Matters shown and set forth on Certificate of Survey recorded July 27, 2021 as Document No. 2021E0081920. AFFECTS, NO EASEMENT SHOWN.

## SURVEYOR'S CERTIFICATION:

TO: WHATABURGER RESTAURANTS LLC AND CHICAGO TITLE

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 3, 4, 5, 6(a), 6(b), 7(a-c), 8, 9, 13, 16, and 17 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON NOVEMBER 22, 2021.

DATE OF PLAT OR MAP: DECEMBER 16, 2021.

DAVE R. HOBBS, PLS 2014020711 dave@younghobbs.com

DATE

RON PIN FOUND, AS NOTED

\_ BENCHMARK, AS NOTED

\_SIGN, AS NOTED \_ SEWER MANHOLE

\_ FIRE HYDRANT

\_ ELECTRIC METER

\_\_ WATER VALVE

\_\_ UTILITY POLE

\_ GUY WIRE

\_\_ GAS VALVE

\_ FOC PULL BOX

\_\_TELEPHONE BOX \_\_ GRATE INLET

\_ STORM MANHOLE

\_\_PROPERTY LINE

\_\_ UNDERGROUND ELECTRIC

\_\_ GATE POST

\_\_ FENCE LINE

\_\_\_\_ EASEMENT LINE

\_\_\_\_\_SETBACK LINES ——— OHW ———— OVERHEAD WIRE

——— W ———WATER LINE

\_\_\_\_\_ GAS LINE, AS NOTED

\_\_\_\_\_ SS \_\_\_\_\_SANITARY SEWER, AS NOTED

——— FOC ——— UNDERGROUND FIBER OPTIC

\_\_\_\_\_ ST \_\_\_\_\_STORM SEWER PIPE, AS NOTED

\_\_\_\_\_ UGE \_\_\_\_

SCALE 1"=20'

**BASIS OF BEARINGS** 

MO (W) STATE PLANE COORDINATE SYSTEM

SPC (2403 MO W)

## **TABLE A NOTES:**

ITEM 2: ADDRESS SHOWN IS PER TITLE COMMITMENT NO. KCC213072.

THIS PROPERTY IS LOCATED WITHIN AN AREA HAVING ZONE DESIGNATIONS OF "X" BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, ON FLOOD INSURANCE RATE MAP NO.29095C0532G, WITH A MAP REVISED DATE OF JANUARY 20, 2017, IN JACKSON COUNTY, STATE OF MISSOURI, WHICH IS THE CURRENT FLOOD INSURANCE RATE MAP FOR THE COMMUNITY IN WHICH SAID PROPERTY IS SITUATED.

CONTOURS WERE DERIVED FROM RANDOM SHOTS AND CROSS SECTIONS AND ARE SHOWN AT ONE FOOT INTERVALS. ELEVATIONS SHOWN HEREON ARE BASED ON GPS OBSERVATIONS TOGETHER WITH AN OPUS SOLUTION, DATED 11/22/2021 (NAVD88, GEOID18).

ITEM 6A: NO ZONING REPORT PROVIDED TO THIS SURVEYOR.

THERE WAS NO EVIDENCE OF RECENT EARTH MOVING, BUILDING CONSTRUCTION, OR BUILDING ADDITIONS OBSERVED IN THE PROCESS OF CONDUCTING THE FIELDWORK.

THERE WAS NO EVIDENCE OF RECENT CHANGES IN STREET RIGHT OF WAY LINES. THERE WAS NO EVIDENCE OF RECENT OR STREET SIDEWALK CONSTRUCTION OR REPAIRS OBSERVED IN THE PROCESS OF CONDUCTING THE FIELDWORK.

#### LAND DESCRIPTION AS SURVEYED

PART OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 30, TOWNSHIP 47 NORTH, RANGE 31 WEST, OF THE FIFTH PRINCIPAL MERIDIAN, LEE'S SUMMIT, JACKSON COUNTY, MISSOURI, DESCRIBED AS FOLLOWS:

BEING ALL OF TRACT "A", ON THE CERTIFICATE OF SURVEY, RECORDED JULY 27, 2021 AS DOCUMENT NO. 2021E0081920 IN THE CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI, ALSO DESCRIBED AS FOLLOWS: BEGINNING AT A 1/2" IRON PIN FOUND (ID: 2651) AT THE

RIGHT OF WAY LINE INTERSECTION OF 150 HIGHWAY AND HOLLYWOOD DRIVE; THENCE WITH THE EAST RIGHT OF WAY LINE OF SAID HOLLYWOOD DRIVE N 02°24'42" E A DISTANCE OF 190.89 FEET TO A 1/2" IRON PIN FOUND (ID: 2651); THENCE WITH THE RIGHT OF WAY LINE INTERSECTION OF SAID HOLLYWOOD DRIVE AND SUMMITCREST DRIVE WITH A CURVE TURNING TO THE RIGHT WITH AN ARC LENGTH OF 31.05 FEET WITH A RADIUS OF 20.00 FEET WITH A CHORD BEARING OF N 47°11'11" E, WITH A CHORD LENGTH OF 28.02 FEET TO A 1/2" IRON PIN FOUND (ID: 2651); THENCE WITH THE SOUTH RIGHT OF WAY LINE OF SAID SUMMITCREST DRIVE S 88°15'48" E A DISTANCE

OF 282.03 FEET TO A 1/2" IRON PIN FOUND (ID: 2651); THENCE LEAVING SAID RIGHT OF WAY LINE WITH THE WEST LINE OF HAWKINS COMMERCIAL LOT 1, RECORDED IN DOCUMENT NO. 2000I0062550 S 02°26'57" W A DISTANCE OF 208.22 FEET TO A 3/8" IRON PIN FOUND IN THE NORTH RIGHT OF WAY LINE OF SAID 150 HIGHWAY; THENCE WITH SAID NORTH RIGHT OF WAY LINE N 88°42'20" W A DISTANCE OF 301.67 FEET TO THE POINT OF BEGINNING, HAVING AN AREA OF 63,083 SQUARE FEET, 1.448 ACRES, MORE OR LESS.

## **SURVEY NOTES:**

INFORMATION REGARDING THE PRESENCE, SIZE AND LOCATION OF UNDERGROUND UTILITIES IS SHOWN HEREON. THIS INFORMATION HAS BEEN SHOWN BASED ON THE LOCATION ABOVE GROUND APPURTENANCES, AVAILABLE DESIGN PLANS AND FLAGS AND PAINT PLACED BY THE UNDERGROUND PROTECTION SERVICE. NO CERTIFICATION IS MADE AS TO THE ACCURACY OF THOROUGHNESS OF THE INFORMATION CONCERNING UNDERGROUND UTILITIES AND STRUCTURES SHOWN HEREON. (MISSOURI ONE CALL 1-800-DIG-RITE). THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A PRIVATE UTILITY LOCATE.

CONTACT PROPER AUTHORITIES BEFORE BUILDING NEAR UTILITY LINES, FOR EASEMENT WIDTH AND RESTRICTIONS. UTILITIES ARE APPROXIMATE AND SHOULD BE VERIFIED PRIOR TO ANY CONSTRUCTION.

UNLESS STATED OTHERWISE, ANY MONUMENT REFERRED TO HEREIN AS AN "IRON PIN SET" IS A SET 5/8" DIAMETER REBAR, WITH AN YELLOW PLASTIC CAP STAMPED "YOUNG-HOBBS"

THIS SURVEY HAS BEEN PREPARED FOR THE EXCLUSIVE USE OF THE PERSON OR ENTITIES NAMED HERON. NO EXPRESS OR IMPLIED WARRANTIES WITH RESPECT TO THE INFORMATION SHOWN HEREON IS TO BE EXTENDED TO ANY PERSONS OR ENTITIES OTHER THAN THOSE SHOWN HEREON.

THERE WERE NO BUILDINGS ON THE SUBJECT PROPERTY AT THE TIME OF THE SURVEY.

LIST OF ENCROACHMENTS: NONE, THE OWNERSHIP OF CURB, UTILITIES, FENCES, AND/OR PERIMETER WALLS SHOWN HEREON ARE NOT KNOWN AND THUS ARE NOT LISTED AS ENCROACHMENTS. CURB, UTILITIES, FENCES, AND/OR PERIMETER WALLS ARE SHOWN IN THEIR RELATIVE POSITION TO THE BOUNDARY.

I DO HEREBY STATE THAT THIS IS A TRUE, COMPLETE AND CORRECT SURVEY OF THE DESCRIBED REAL PROPERTY SITUATED IN THE COUNTY OF GREENE, MISSOURI AND THAT THIS SURVEY WAS EXECUTED IN ACCORDANCE WITH THE CURRENT MISSOURI MINIMUM STANDARDS FOR PROPERTY SURVEYS (URBAN SURVEY 1:20,000)

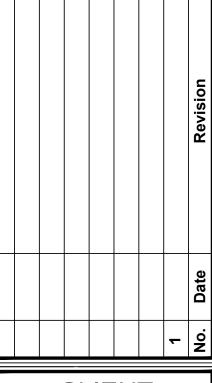


YOUNG - HOBBS AND **ASSOCIATES** 

> 1202 CROSSLAND AVE. CLARKSVILLE, TN 37040 PHONE 931-645-2524 FAX 931-645-2768

PRELIMINARY - NOT FOR RECORDING OR LAND TRANSFER

DAVE R. HOBBS, PLS 2014020711



CLIENT

ms consultants, inc. engineers, architects, planners 2221 Schrock Road Columbus, Ohio 43229-1547 phone 614.898.7100 fax 614.898.7570

> **ALTA/NSPS LAND TITLE SURVEY**

OWNER **NFORMATION** 

SHUN PING YEH TAX ID: 70-400-04-03-02-3-00-000 DOC. # 2021E0043600

ALSO BEING TRACT "A" DOC. # 2021E0081920

DOC. # 2021E0043599

**CITY OF LEES SUMMIT COUNTY OF JACKSON** STATE OF MISSOURI

DRAWN BY: CLH,KAB APPROVED BY: DATE: (FIELD) 11/22/2021 DATE: (OFFICE) 12/16/2021

242-21

SHEET 1 OF 1

YHA PRO.#

PT22M PROGRESS SET 03/08/23 ISSUE FOR PERMIT

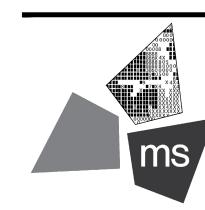
FDP COMMENTS

FDP COMMENTS II

FDP COMMENTS IV

CONFIDENCE AND SHALL BE USED ONLY PURSUANT TO THE AGREE. MENT WITH THE ARCHITECT NO OTHER USE, DISSEMINATIO OR DUPLICATION MAY BE MADE VITHOUT PRIOR WRITTEN CONSEN OF THE ARCHITECT. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFI-CALLY RESERVED.





ms consultants, inc. engineers, architects, planners 2221 Schrock Road Columbus. Ohio 43229-1547 phone 614.898.7100

fax 614.898.7570

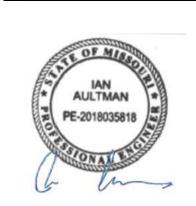
PROJECT

PROPOSED PT22M BUILDING

204 SW M150 HWY LEE'S SUMMIT, MO 64081

SHEET TITLE

SITE DIMENSION PLAN



DRAWN BY: CHECKED BY: 40497-21 PROJECT NO:

DRAWING

**GENERAL NOTES:** 

SEWER STUB. NO

FLOW IN MANHOLE

19.0'

 $\sqrt{34}$ 

29.0'

36.0'

ALL EXISTING CONDITIONS, TOPOGRAPHY, UTILITIES AND PROPERTY INFORMATION ARE TAKEN FROM A SURVEY OF LAND SITUATED IN THE CITY OF LEE'S SUMMIT, COUNTY OF JACKSON AND STATE OF MISSOURI, BY SURVEYOR: YOUNG-HOBBS AND ASSOCIATES, 1202 CROSSLAND AVENUE CLARKSVILLE,

CONTRACTOR IS RESPONSIBLE FOR LOCATING AND VERIFYING ALL EXISTING UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION, AND IS RESPONSIBLE FOR ANY DAMAGE TO THEM DURING CONSTRUCTION.

PROVIDE SMOOTH TRANSITION FROM NEWLY PAVED AREAS TO EXISTING PAVED AREAS AS NECESSARY. THE EXISTING EDGE OF PAVEMENT SHALL BE FREE OF ALL LOOSE DEBRIS AT ALL AREAS WHERE PROPOSED PAVEMENT MEETS EXISTING PAVEMENT. THE EDGE OF EXISTING ASPHALT PAVEMENT SHALL BE PROPERLY SEALED WITH A TACK COAT MATERIAL IN ALL AREAS WHERE NEW ASPHALT PAVEMENT IS INDICATED TO JOIN EXISTING.

D. ALL DIMENSIONS TO FACE OF CURB AND/OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.

CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR AND TAKE ALL PRECAUTIONS NECESSARY TO AVOID DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT.

REFER TO ARCHITECTURAL DRAWINGS FOR BUILDING DIMENSIONS AND ADDITIONAL INFORMATION.

ALL CONSTRUCTION METHODS AND MATERIALS MUST CONFORM TO CURRENT STANDARDS AND SPECIFICATIONS OF THE FEDERAL, STATE, COUNTY, CITY OR LOCAL REQUIREMENTS, WHICHEVER HAS JURISDICTION

H. ALL EXCAVATED AREAS TO BE SEEDED AND/OR SODDED AFTER FINISH GRADING UNLESS OTHERWISE NOTED. ALL NEWLY SEEDED/SODDED AREAS SHALL HAVE A MINIMUM OF 4" OF TOPSOIL. HOLD SOIL DOWN 1" FROM PAVEMENT ELEVATION. CONTRACTOR TO SUPPLY STRAW MULCH WHERE GRASS SEED HAS

ALL RADII ARE 3.0 FEET UNLESS OTHERWISE SHOWN. ALL RADII INDICATED ON PLANS SHALL BE CONSTRUCTED AS CIRCULAR ARCS.

J. THERE ARE NO OIL AND GAS WELLS (ACTIVE/INACTIVE/CAPPED) PER THE MISSOURI DEPARTMENT OF NATURAL RESOURCES MAPPING

ALL CONSTRUCTION SHALL FOLLOW THE CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL AS ADOPTED BY ORDINANCE 5813. WHERE DISCREPANCIES EXISTING BETWEEN THESE PLANS AND THE DESIGN AND CONSTRUCTION MANUAL , THE DESIGN AND CONSTRUCTION MANUAL SHALL

L. 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.

# **KEYED NOTES:**

PROPOSED HEAVY DUTY ASPHALT PAVEMENT, SEE DETAIL ON SHEET C-7.0.

PROPOSED HEAVY DUTY CONCRETE PAVEMENT, SEE DETAIL ON SHEET C-7.0.

PROPOSED HEAVY DUTY CONCRETE PAVEMENT TO BE FLUSH WITH EXISTING ASPHALT PAVEMENT.

PROPOSED PAINTED PARKING STRIPING (TYPICAL). ALL PARKING STRIPES ARE TO BE 4" PAINTED WHITE, UNLESS OTHERWISE NOTED ON THE PLANS, DETAILS OR SPECIFICATIONS.

CONNECT TO EXISTING SIDEWALK. SEE THE GRADING PLAN FOR MORE DETAILS.

PROPOSED CONCRETE SIDEWALK. SEE DETAIL ON SHEET C-7.0.

PROPOSED BOLLARD, TYP. OF 9. SEE ARCHITECTURAL AND STRUCTURAL PLANS FOR DETAILS.

PROPOSED PRE-CAST CONCRETE WHEEL STOP (TYP. OF 6). SEE DETAIL ON SHEET C-7.3.

GENERAL CONTRACTOR TO PROVIDE AND INSTALL (1) POLE-MOUNTED ADA PARKING SIGNS. SIGNS PROVIDED BY CONTRACTOR TO MEET LOCAL REQUIREMENTS, SEE DETAIL ON SHEET C-7.0.

GENERAL CONTRACTOR TO PROVIDE AND INSTALL (1) POLE-MOUNTED ADA PARKING SIGN WITH "VAN ACCESSIBLE" SIGN. SIGNS PROVIDED BY CONTRACTOR TO MEET LOCAL REQUIREMENTS, SEE DETAIL ON SHEET C-7.0.

CONCRETE TO BE FLUSH WITH ADJACENT ASPHALT PAVEMENT. SEE DETAIL ON SHEET C-7.1.

FLAGPOLE WITH GROUND-MOUNTED LIGHTS, UNITEDFLAG AND BANNER, GARRISON TYPE OR OWNER APPROVED EQUAL, 30' HIGH, 5" BUTT ALUMINUM WITH 14 GAUGE ALUMINUM BALL FINIAL. INCLUDE ALUMINUM ROLLER AND SLEEVE. HARDWARE TO INCLUDE STATIONARY STRUCK, NYLON FLAGSNAPS, AND HALYARDS. ENTIRE ASSEMBLY (INCLUDING FOUNDATION) TO CONFORM TO APPLICABLE CODES, INCLUDING WIND LOADS. SEE ARCHITECTURAL AND STRUCTURAL PLANS FOR DETAILS.

PROPOSED 35' HT POLE SIGN, CONTRACTOR TO COORDINATE WITH OWNER. SEE ELECTRICAL PLANS AND SIGNAGE PACKAGE FOR DETAILS.

PROPOSED DUMPSTER ENCLOSURE AND CONCRETE PAD. SEE THE STRUCTURAL AND ARCHITECTURAL SHEETS FOR DETAILS.

PROPOSED HEADACHE BAR. SEE ARCHITECTURAL PLANS FOR DETAILS.

PROPOSED MENU BOARD CANOPY. SEE ARCHITECTURAL PLANS FOR DETAILS.

PROPOSED EXTERIOR MENU BOARD. SEE ARCHITECTURAL PLANS FOR DETAILS.

PROPOSED 1' WIDE CRUSHED GRANITE STRIP. SEE DETAIL ON SHEET L-1.0.

PROPOSED CONCRETE ISLAND NOSE. SEE DETAIL ON SHEET C-7.1.

PROPOSED 6" MONOLITHIC CURB. SEE DETAIL ON SHEET C-7.1.

PROPOSED ADA SIDEWALK RAMP. SEE DETAIL ON SHEETS C-7.0 & C-7.1.

CONCRETE DUMPSTER ENCLOSURE APRON. TRASH ENCLOSURE AREA SHALL BE IMPROVED WITH A PORTLAND CEMENT CONCRETE PAD AND PORTLAND CEMENT CONCRETE APPROACH 30 FEET IN LENGTH, MEASURED FROM THE ENCLOSURE OPENING. THE PAD AND APPROACH SHALL BE IMPROVED WITH A MINIMUM 6" OF FULL DEPTH UNREINFORCED PORTLAND CEMENT CONCRETE CONSTRUCTED ON A SUB-GRADE OF 4" OF GRANULAR BASE COURSE. SEE DETAIL ON SHEET C-7.0.

PROPOSED LANDSCAPE AREA. SEE LANDSCAPE PLAN ON SHEET L-1.

PROPOSED CURB RAMP. SEE DETAIL ON SHEET C-7.0.

PROPOSED SIDEWALK CROSSING. SEE DETAIL ON SHEET C-7.2.

CONNECT PROPOSED CURB TO EXISTING CURB (TRANSITION REQUIRED).

PROPOSED STORM INLET. SEE SHEETS C-5.0 AND C-7.5 FOR DETAILS.

PROPOSED STORM MANHOLE/JUNCTION BOX. SEE SHEETS C-5.0, C-7.5, AND C-7.6 FOR DETAILS.

PROPOSED ELECTRIC TRANSFORMER. COORDINATE DETAILS AND LOCATION WITH UTILITY OWNER AND ELECTRICAL PLANS. SEE SHEET C-6.0.

PROPOSED HAND RAIL. SEE ARCHITECTURAL SHEETS FOR DETAILS.

PROPOSED STRUCTURAL FOUNDATION.

EXISTING WOODEN FENCE TO REMAIN.

TRASH ENCLOSURE SHALL BE PROTECTED THROUGH INSTALLATION OF 4" BOLLARDS (TYP. OF 4) ALONG THE REAR WALL OF THE TRASH ENCLOSURE.

SEE ARCHITECTURAL AND STRUCTURAL PLANS FOR DETAILS. TYPE CG-1 CURB AND GUTTER. SEE DETAIL ON SHEET C-7.1.

SITE TRIANGLE.

PROPOSED PARKING STRIPING. SEE DETAIL ON SHEET C-7.0.

PROPOSED LIGHT POLE AND FOUNDATION. SEE STRUCTURAL PLANS FOR DETAILS.

EXISTING GUTTER LINE TO BE MAINTAINED.

PROPOSED PRE-CAST CONCRETE WHEEL STOP (TYP. OF 6). SEE DETAIL ON SHEET C-7.3.

#### SITE DATA SQ. FT. | ACRES | PERCENT TOTAL BUILDING FLOOR AREA 3751 0.09 5.95 TOTAL SITE AREA 63083 1.45 LIMITS OF DISTURBANCE 68942 1.58 109.2 EXISTING PERVIOUS 62787 1.44 99.5 EXISTING IMPERVIOUS 296 0.01 0.5 OTAL PROPOSED PERVIOUS 24129 0.55 38.2 TOTAL PROPOSED IMPERVIOUS | 38954 | 0.89 | CURRENT ZONING IS CP-2 PLANNED COMMUNITY COMMERCIAL; APPROVED BY CITY COUNCIL ON 05/31/22

FLOOR AREA RATION = 0.059 SF

-15' WATER LINE EASEMENT

15' BUILDING SETBACK

----15' UTILITY EASEMENT

DOC. # 2009E0045651

SUMMITCREST DRIVE

60' PUBLIC R/W

DOC. # 2014E0080868

15' BUILDING SETB

117.7'

20' PARKING SETBACK

PROPOSED 5'

SIDEWALK

EASEMENT

3,318 sq.ft

F.F.E.= 1023.25

		PHASING PLAN								
•		PROJECT PHASE	BP DESCRIPTION	DATE						
		A-PRE-CONSTRUCTION	PREPARTE SITE FOR CONSTRUCTION INCLUDING ESTABLISHING E&S PERIMETER CONTROLS	SEPTEMBER-22						
		B-PHASE I CONSTRUCTION	TOP SOIL STOCK PILE PROTECTION, SITE CLEARING, TEMPORARY SEEDING, GENERAL SITE PREP	SEPTEMBER-22 DECEMBER-22						
		C-PHASE II CONSTRUCTION	CONSTRUCT BUILDING ASPHALT PAVING, STORM STRUCTURE INSTALLATIONS	DECEMBER-22 JANUARY-23						
		D-FINAL STABILIZATION	PERMANENT SEEDING	JUNE-23						

#### **LEGEND** — — — — GUTTER LINE FEATURE DESCRIPTION CONCRETE SIDEWALK PROPOSED SIDEWALK EASEMENT -----FSMT------EXISTING EASEMENT HEAVY DUTY ASPHALT PAVEMENT HEAVY DUTY CONCRETE PAVEMENT <u>EXISTING</u> PROPOSED LIGHT POLE — — — CONSTRUCTION LIMITS D. FIRE HYDRANT BUILDING SETBACK LINE

# 10 20 30 SCALE: 1"=20'

**PARKING DATA** REQUIRED PROVIDED 43 STANDARD

HANDICAP \*14 PARKING SPACE REQUIRED PER 1000 S.F. OF THE GROSS BUILDING FLOOR AREA (3,751 SF OF DINING AREA) \*1 ADA SPACE PER 25 STANDARD SPACES

\*\*FEWER SPACES ALLOWABLE IF EVIDENCE OF SUCCESS ON SIMILAR PROJECTS CAN BE PROVIDED. \*PARKING JUSTIFICATION WAS SUBMITTED TO THE CITY ON 03/29/22 AS PART OF THE PDP PROCESS.

LAND DESCRIPTION:

**AS SURVEYED** 

RIGHT OF WAY LINE OF SAID HOLLYWOOD DRIVE N 02°24'42" E A DISTANCE OF 190.89 FEET TO A 1/2" IRON PIN FOUND (ID: 2651); THENCE WITH THE RIGHT OF WAY LINE INTERSECTION OF SAID HOLLYWOOD DRIVE AND SUMMITCREST DRIVE WITH A CURVE TURNING TO THE RIGHT WITH AN ARC LENGTH OF 31.05 FEET WITH A RADIUS OF 20.00

SUMMIT, JACKSON COUNTY, MISSOURI, DESCRIBED AS FOLLOWS:

FEET WITH A CHORD BEARING OF N 47°11'11" E, WITH A CHORD LENGTH OF 28.02 FEET TO A 1/2" IRON PIN FOUND (ID: 2651); THENCE WITH THE SOUTH RIGHT OF WAY LINE OF SAID SUMMITCREST DRIVE S 88°15'48" E A DISTANCE OF 282.03 FEET TO A 1/2" IRON PIN FOUND (ID: 2651); THENCE LEAVING SAID RIGHT OF WAY LINE WITH THE WEST LINE OF HAWKINS COMMERCIAL LOT 1, RECORDED IN DOCUMENT NO. 200E006255 S 02°26'57" W A DISTANCE OF 208.22 FEET TO A 3/8" IRON PIN FOUND IN THE NORTH RIGHT OF WAY LINE OF SAID 150 HIGHWAY; THENCE WITH SAID NORTH RIGHT OF WAY LINE N 88°42'20"

PART OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION

30, TOWNSHIP 47 NORTH, RANGE 31 WEST, OF THE FIFTH PRINCIPAL MERIDIAN, LEE'S

BEING ALL OF TRACT "A", AS SHOWN ON THE CERTIFICATE OF SURVEY,

SUMMIT, JACKSON COUNTY, MISSOURI, ALSO DESCRIBED AS FOLLOWS:

RECORDED JULY 27, 2021 AS DOCUMENT NO. 2021E0081920 IN THE CITY OF LEE'S

BEGINNING AT A 1/2" IRON PIN FOUND (ID: 2651) AT THE RIGHT OF WAY LINE

INTERSECTION OF 150 HIGHWAY AND HOLLYWOOD DRIVE; THENCE WITH THE EAST

W A DISTANCE OF 301.67 FEET TO THE POINT OF BEGINNING, HAVING AN AREA OF 63,083 SQUARE FEET, 1.448 ACRES, MORE OR LESS.

 SIR UPD 6568/2023
 09/13/21

 60% SET
 01/24/22

 PDP APPLICATION TO CITY RESPONSE TO CITY COMMENTS I
 03/29/22

 FINAL DEVELOPMENT SET RESPONSE TO FDP COMMENTS RESPONSE TO FDP COMMENTS II
 08/30/22

 RESPONSE TO FDP COMMENTS II
 09/29/22

 FDP COMMENTS III
 10/24/22

PT22M PROGRESS SET 03/08/23

ISSUE FOR PERMIT 03/15/23

11/03/22

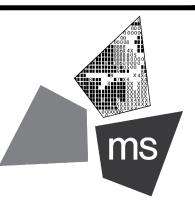
#### NOTICE

FDP COMMENTS IV

THIS ARCHITECTURAL AND ENGINEERING DRAWING IS GIVEN IN CONFIDENCE AND SHALL BE USED ONLY PURSUANT TO THE AGREEMENT WITH THE ARCHITECT.

NO OTHER USE, DISSEMINATION, OR DUPLICATION MAY BE MADE WITHOUT PRIOR WRITTEN CONSENT OF THE ARCHITECT. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFICALLY RESERVED.





ms consultants, inc. engineers, architects, planners 2221 Schrock Road Columbus, Ohio 43229-1547 phone 614.898.7100 fax 614.898.7570

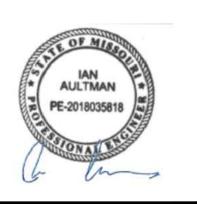
PROJECT

PROPOSED PT22M BUILDING

204 SW M150 HWY LEE'S SUMMIT, MO 64081

SHEET TITLE

SITE ZONING PLAN



DRAWN BY:	TDI
CHECKED BY:	PGI
PROJECT NO:	40497-2

DRAWING

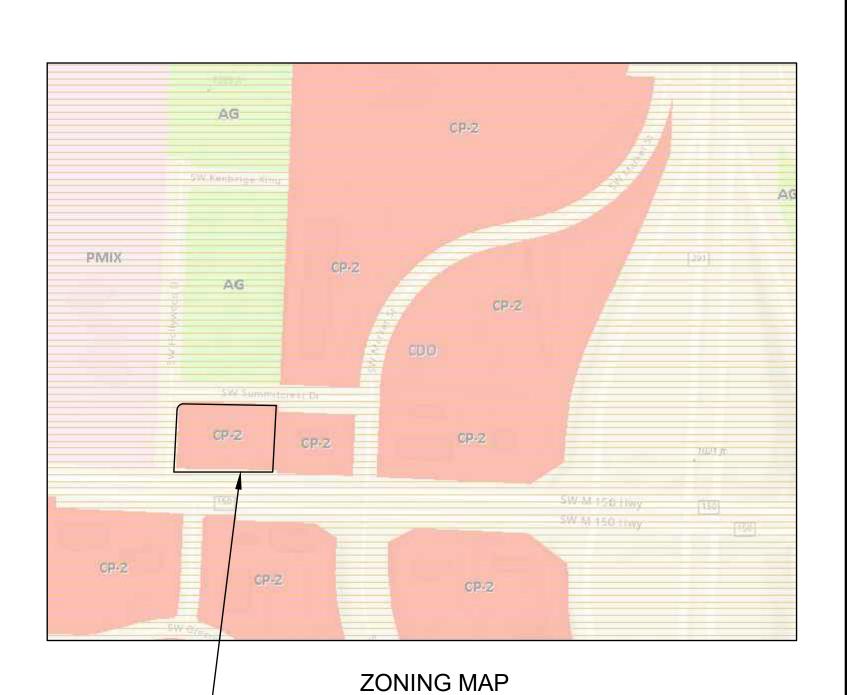
C-3.1

LAND DESCRIPTION: AS SURVEYED

PART OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 30, TOWNSHIP 47 NORTH, RANGE 31 WEST, OF THE FIFTH PRINCIPAL MERIDIAN, LEE'S SUMMIT, JACKSON COUNTY, MISSOURI, DESCRIBED AS FOLLOWS:

BEING ALL OF TRACT "A", AS SHOWN ON THE CERTIFICATE OF SURVEY, RECORDED JULY 27, 2021 AS DOCUMENT NO. 2021E0081920 IN THE CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI, ALSO DESCRIBED AS FOLLOWS:

BEGINNING AT A 1/2" IRON PIN FOUND (ID: 2651) AT THE RIGHT OF WAY LINE INTERSECTION OF 150 HIGHWAY AND HOLLYWOOD DRIVE; THENCE WITH THE EAST RIGHT OF WAY LINE OF SAID HOLLYWOOD DRIVE N 02°24'42" E A DISTANCE OF 190.89 FEET TO A 1/2" IRON PIN FOUND (ID: 2651); THENCE WITH THE RIGHT OF WAY LINE INTERSECTION OF SAID HOLLYWOOD DRIVE AND SUMMITCREST DRIVE WITH A CURVE TURNING TO THE RIGHT WITH AN ARC LENGTH OF 31.05 FEET WITH A RADIUS OF 20.00 FEET WITH A CHORD BEARING OF N 47°11'11" E, WITH A CHORD LENGTH OF 28.02 FEET TO A 1/2" IRON PIN FOUND (ID: 2651); THENCE WITH THE SOUTH RIGHT OF WAY LINE OF SAID SUMMITCREST DRIVE S 88°15'48" E A DISTANCE OF 282.03 FEET TO A 1/2" IRON PIN FOUND (ID: 2651); THENCE LEAVING SAID RIGHT OF WAY LINE WITH THE WEST LINE OF HAWKINS COMMERCIAL LOT 1, RECORDED IN DOCUMENT NO. 200E006255 S 02°26'57" W A DISTANCE OF 208.22 FEET TO A 3/8" IRON PIN FOUND IN THE NORTH RIGHT OF WAY LINE OF SAID 150 HIGHWAY; THENCE WITH SAID NORTH RIGHT OF WAY LINE N 88°42'20" W A DISTANCE OF 301.67 FEET TO THE POINT OF BEGINNING, HAVING AN AREA OF 63,083 SQUARE FEET, 1.448 ACRES, MORE OR LESS.



NTS

0 15 30 45 60

SCALE: 1"=30'

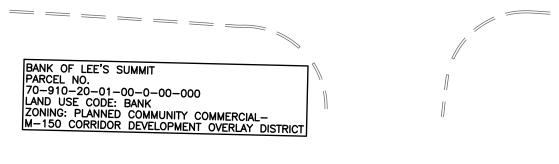
PROPOSED SITE LOCATION —

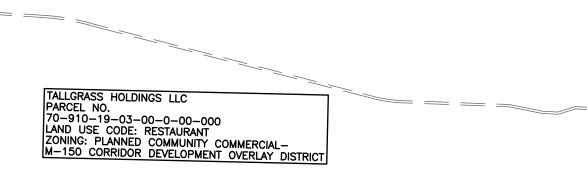
TI SUMMIT CREST PLAZA LLC

70-500--03-14-00-0-00-000 LAND USE CODE: SHOP. CENTER-NHBD ZONING: PLANNED COMMUNITY

PARCEL NO.

COMMERCIAL





CBK LAND HOLDINGS LLC

PARCEL NO.
70-400-04-03-02-3-00-000
CURRENT ZONING: PLANNED COMMUNITY
COMMERCIAL - M-150 CORRIDOR DEVLOPMENT
OVERLAY DISTRICT; APPROVED BY CITY COUNCIL

M-150 HIGHWAY DOC. # 2009E0045651

SUMMITCREST DRIVE 60' PUBLIC R/W DOC. # 2014E0080868

PROPERTY BOUNDARY OF PARCEL TO BE REZONED

PARCEL NO. 70-400-04-03-02-2-00-000

LAND USE CODE: AG/FARM OUTBUILDING

60% SET

RESPONSE TO CITY

DEVELOPMENT SET

COMMENTS I

RESPONSE TO

FDP COMMENTS

FDP COMMENTS II

FDP COMMENTS III

FDP COMMENTS IV

THIS ARCHITECTURAL AND ENGI-

NEERING DRAWING IS GIVEN IN CONFIDENCE AND SHALL BE USED ONLY PURSUANT TO THE AGREE-

OR DUPLICATION MAY BE MADE WITHOUT PRIOR WRITTEN CONSENT

OF THE ARCHITECT. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFI-

MENT WITH THE ARCHITECT. NO OTHER USE, DISSEMINATION,

CALLY RESERVED.

NOTICE

PT22M PROGRESS SET 03/08/23

ISSUE FOR PERMIT 03/15/23

re REPAINS CON SOME VECTOR BORDETHONG IN Lee's Summit, Missouri

SIR UPD**057/08/2023** 09/13/21

02/24/22

03/29/22

06/29/22

08/30/22

09/29/22

A. PAVEMENT SPECIFICATION AND RECOMMENDATIONS TO BE TAKEN FROM GEOTECHNICAL

B. PORTLAND CEMENT CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF

C. MAXIMUM CONTROL JOINT SPACING SHALL NOT EXCEED 15 FEET.

D. EXPANSION JOINTS SHALL BE USED WHEREVER THE PAVEMENT WILL ABUT A STRUCTURAL ELEMENT SUBJECT TO DIFFERENT MAGNITUDE OF MOVEMENT (E.G., LIGHT POLES, RETAINING WALLS, EXISTING PAVEMENT, STAIRWAYS, ENTRYWAY PIERS, BUILDING WALLS, MANHOLES,

INFILTRATION INTO SUBGRADE SOILS AND RESULTANT CONCRETE DETERIORATION AT THE

ADDITIONAL SLEEVES REQUIRED FOR ELECTRICAL AND TELECOMMUNICATION SERVICES.

G. ALL CONCRETE JOINTS SHALL RUN CONTINUOUSLY THROUGH CURBS.

## **KEYED NOTES:**

SAWED CONSTRUCTION JOINT REQUIRED, TYPICAL. SEE DETAIL ON SHEET C-7.0.

DOWELED EXPANSION JOINT REQUIRED, TYPICAL. SEE DETAIL ON SHEET C-7.0.

EXPANSION JOINT REQUIRED WHERE CONCRETE OR CURB ABUTS BUILDING FOUNDATION,

SCHEDULE 40 PVC IRRIGATION SLEEVE, SEE SHEET I-1.0 FOR MORE INFORMATION.

PROPOSED

DESCRIPTION

HEAVY DUTY CONCRETE PAVEMENT

# **GENERAL NOTES:**

E. EXPANSION JOINTS SHALL BE SEALED PER DETAILS ON SHEET C-7.0 TO MINIMIZE MOISTURE

F. SLEEVES SHOWN ARE FOR IRRIGATION ONLY. ADDITIONAL SLEEVES MAY BE REQUIRED FOR OTHER FRANCHISE UTILITIES. CONTRACTOR SHALL COORDINATE LOCATION AND SUPPLY

STORM STRUCTURE, FLUME, OR SIDEWALK OPENING. SEE DETAIL ON SHEET C-7.0.

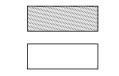
INSTALL CONTRACTION JOINTS 10' ON CENTER AS SHOWN ON DETAIL C ON SHEET C-7.0

## **LEGEND**

---- CONTRACTION JOINT

EXPANSION JOINT

- IRR - 4" SCHEDULE 40 PVC SLEEVE



CONCRETE SIDEWALK

HEAVY DUTY ASPHALT PAVEMENT

ms consultants, inc. engineers, architects, planners 2221 Schrock Road Columbus, Ohio 43229-1547 phone 614.898.7100

PROJECT

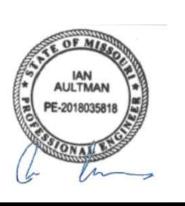
fax 614.898.7570

PROPOSED PT22M BUILDING

204 SW M150 HWY LEE'S SUMMIT, MO 64081

SHEET TITLE

CONCRETE **JOINTING PLAN** 

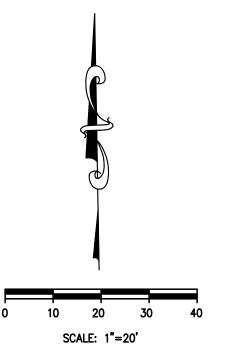


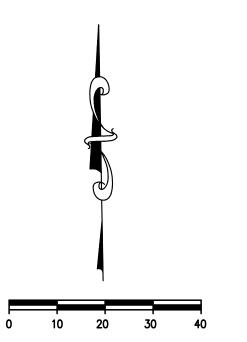
CHECKED BY: 40497-21 PROJECT NO:

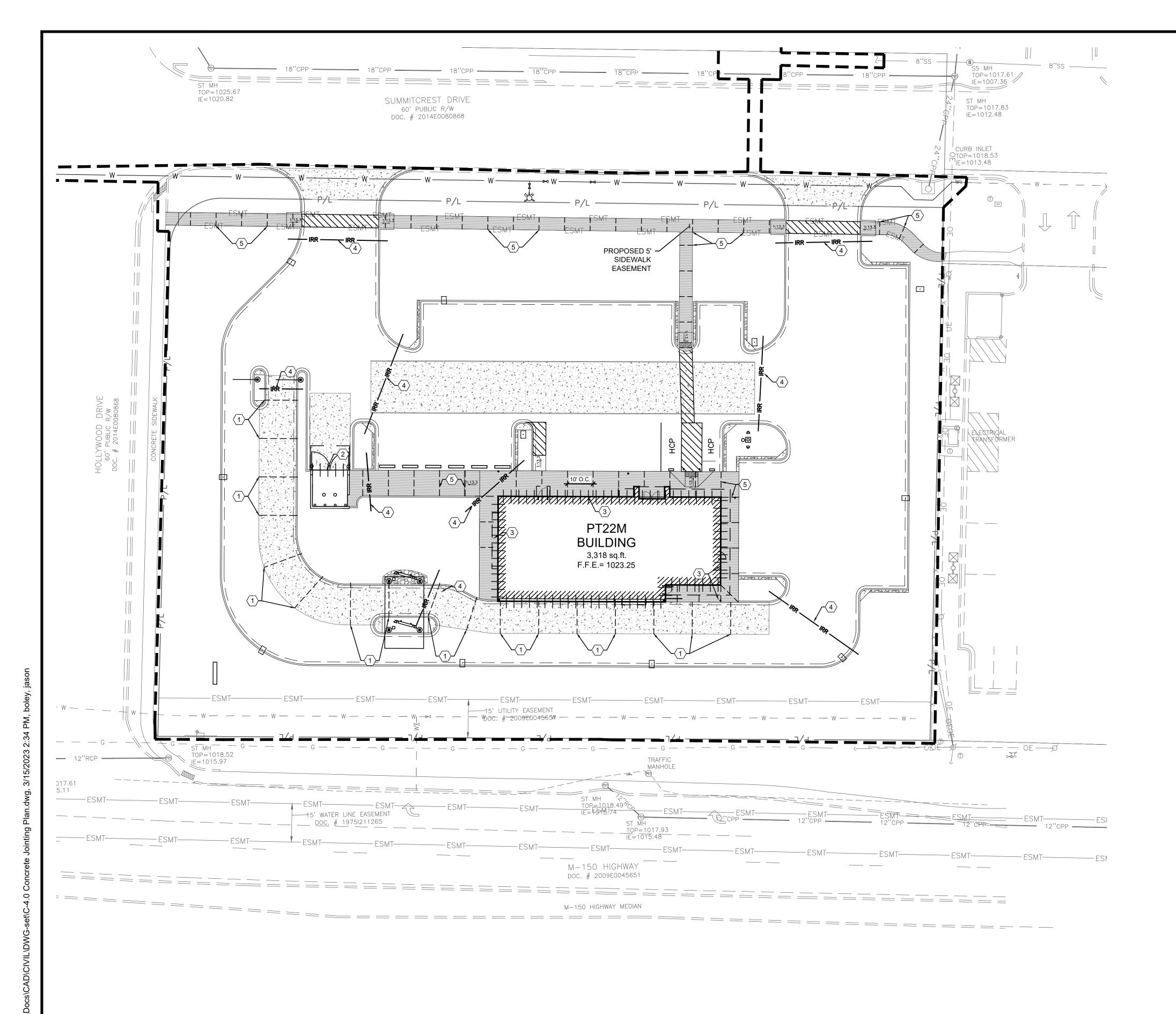
DRAWING

Call before you dig.

C-4.0







EDP COMMENTS I

FDP COMMENTS III

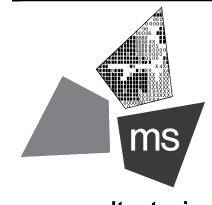
FDP COMMENTS IV

ISSUE FOR PERMIT

PT22M PROGRESS SET 03/08/23

RESPONSE TO





ms consultants, inc. engineers, architects, planners 2221 Schrock Road Columbus, Ohio 43229-1547 phone 614.898.7100 fax 614.898.7570

PROJECT

PROPOSED PT22M BUILDING

204 SW M150 HWY LEE'S SUMMIT, MO 64081

SHEET TITLE

SITE GRADING PLAN



DRAWN BY: TDB

CHECKED BY: PGD

PROJECT NO: 40497-21

DRAWING

C-5.0

**GENERAL NOTES:** 

- A. ALL EXISTING CONDITIONS, TOPOGRAPHY, UTILITIES AND PROPERTY INFORMATION ARE TAKEN FROM A SURVEY OF LAND SITUATED IN THE CITY C LEE'S SUMMIT, COUNTY OF JACKSON AND STATE OF MISSOURI, BY SURVEYOR: YOUNG-HOBBS AND ASSOCIATES, 1202 CROSSLAND AVENUE CLARKSVILLE, TN 37040.
- B. ALL CONSTRUCTION METHODS AND MATERIAL MUST CONFORM TO CURRENT STANDARDS AND SPECIFICATIONS OF THE FEDERAL, STATE, COUNTY, CITY OR LOCAL REQUIREMENTS, WHICHEVER HAS JURISDICTION.
- C. ALL PROPOSED SPOT ELEVATIONS SHOWN ARE TOP OF CURB AND FINAL GRADE ELEVATIONS UNLESS OTHERWISE NOTED.
- D. CONTRACTOR IS RESPONSIBLE FOR LOCATING AND VERIFYING ALL EXISTING UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.

VERIFY COVER REQUIREMENTS BY UTILITY CONTRACTORS AND/OR UTILITY COMPANIES SO AS TO NOT CAUSE DAMAGE.

- E. CONTRACTOR TO VERIFY ALL EXISTING GRADES AND CONTACT ENGINEER PRIOR TO BEGINNING WORK IF DISCREPANCY IS FOUND. CONTRACTOR TO VERIFY ASSUMED FINISHED FLOOR ELEVATION PRIOR TO BEGINNING WORK.
- F. THE EXCAVATING CONTRACTOR MUST TAKE PARTICULAR CARE WHEN EXCAVATING IN AND AROUND EXISTING UTILITY LINES AND EQUIPMENT.
- G. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES 48 HOURS BEFORE CONSTRUCTION IS TO START, TO VERIFY IF ANY UTILITIES ARE PRESENT ON SITE. ALL VERIFICATIONS (LOCATION, SIZE AND DEPTH) SHALL BE MADE BY THE APPROPRIATE UTILITY COMPANIES. WHEN EXCAVATION IS AROUND OR OVER EXISTING UTILITIES, THE CONTRACTOR MUST NOTIFY THE UTILITY SO A REPRESENTATIVE OF THAT UTILITY COMPANY CAN BE
- H. ALL WORK SHALL BE PERFORMED FROM PRIVATE PROPERTY. ALL TRAFFIC LANES MUST REMAIN OPEN AT ALL TIMES.
- I. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO THE EXISTING UTILITIES DURING CONSTRUCTION AND ALL DAMAGE SHALL BE REPAIRED TO ORIGINAL CONDITION AT NO ADDITIONAL COST TO THE OWNER OR CITY.
- J. CONTRACTOR SHALL INSTALL AND BACKFILL STRUCTURES AND TRENCHES PER DETAILS ON SHEET C-7.1.
- K. ALL EXISTING UTILITIES ARE TAKEN FROM SURVEY AND DO NOT NECESSARILY REPRESENT ALL UNDERGROUND UTILITIES ADJACENT TO OR UPON PREMISES SHOWN ON PLAN.
- L. ALL STORM CONDUITS ARE ADS N-12 SMOOTH INTERIOR HDPE PIPE OR APPROVED EQUAL, UNLESS OTHERWISE NOTED.
- M. 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.
- N. 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.

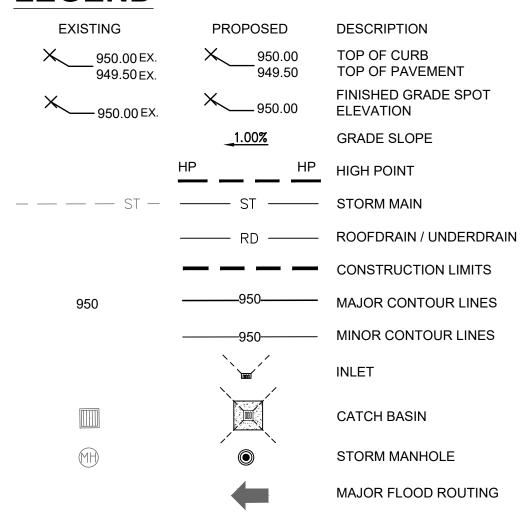
# **KEYED NOTES:**

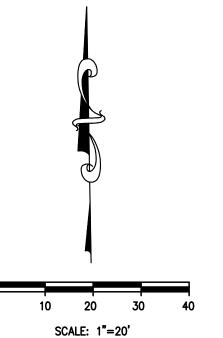
(1) CONTRACTOR TO MAINTAIN 2.00% MAX CROSS SLOPE ON SIDEWALK.

PRESENT TO INSTRUCT AND OBSERVE DURING CONSTRUCTION.

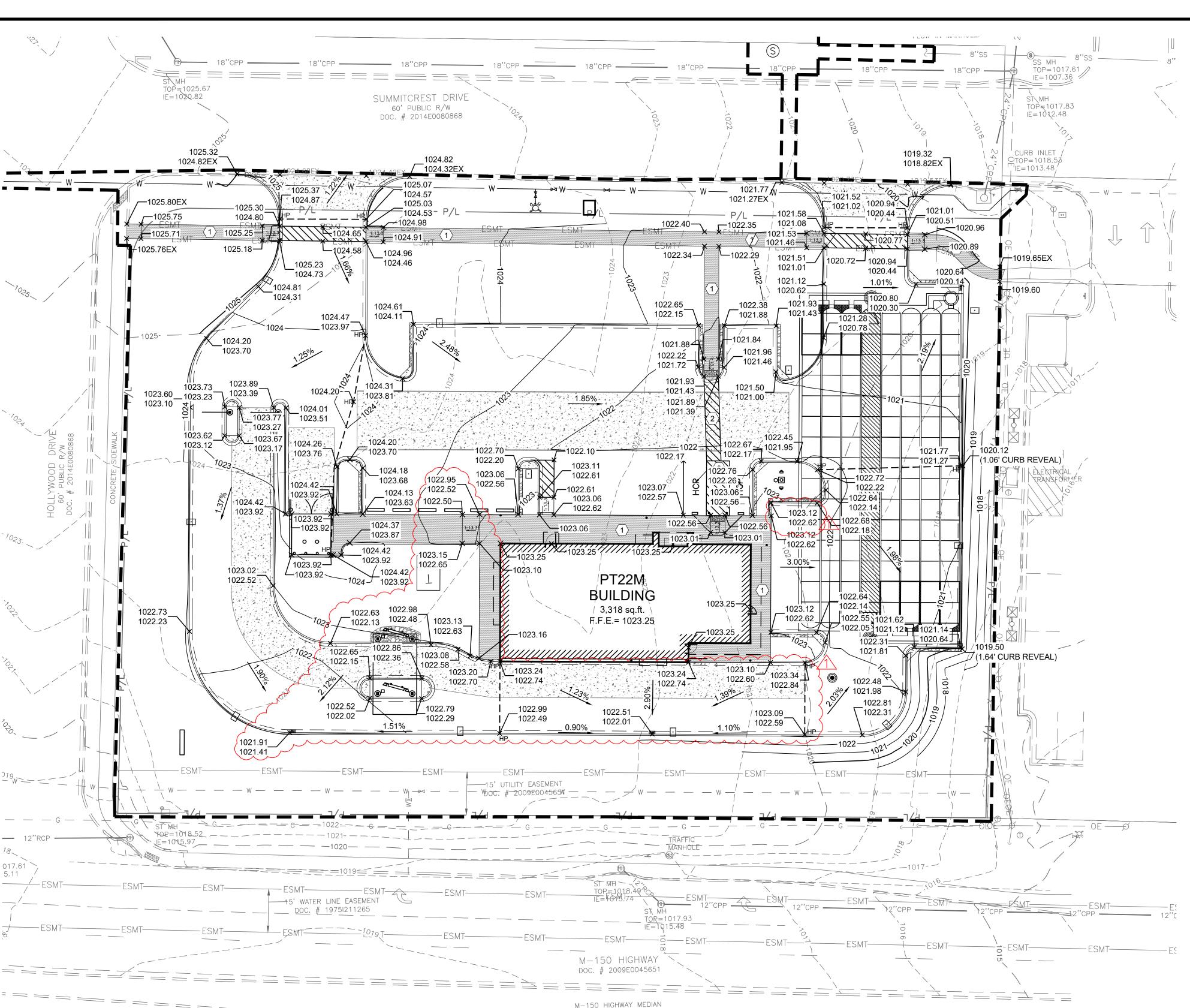
(2) CONTRACTOR TO MAINTAIN MAX 2.00% SLOPE IN ALL DIRECTIONS IN HANDICAP ACCESSIBLE AREA.

# **LEGEND**









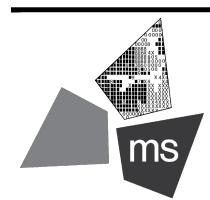
#### 08/30/22 FDP COMMENTS RESPONSE TO 09/29/22 DP COMMENTS RESPONSE TO FDP COMMENTS III FDP COMMENTS IV PT22M PROGRESS SET 03/08/23

ISSUE FOR PERMIT

RESPONSE TO

NEERING DRAWING IS GIVEN IN CONFIDENCE AND SHALL BE USED ONLY PURSUANT TO THE AGREE. MENT WITH THE ARCHITECT NO OTHER USE, DISSEMINATION OR DUPLICATION MAY BE MADE WITHOUT PRIOR WRITTEN CONSEN OF THE ARCHITECT. ALL COMMON LAW RIGHTS OF COPYRIGHT AND OTHERWISE ARE HEREBY SPECIFI-CALLY RESERVED.





ms consultants, inc. engineers, architects, planners 2221 Schrock Road Columbus, Ohio 43229-1547 phone 614.898.7100

PROJECT

fax 614.898.7570

PROPOSED PT22M BUILDING

204 SW M150 HWY LEE'S SUMMIT, MO 64081

SHEET TITLE

SITE DRAINAGE PLAN



DRAWN BY: CHECKED BY: 40497-21 PROJECT NO:

DRAWING

C-5.1

# **GENERAL NOTES:**

TOP≒1017.83

37.0' OF 15" HDPE

@ 1.00%

1.0' OF 15" HDP目

@ 5.10%

5.4 OF 15" HDPE

@ 2.90%

@ 0.74%

IE=1012.48

- A. ALL EXISTING CONDITIONS, TOPOGRAPHY, UTILITIES AND PROPERTY INFORMATION ARE TAKEN FROM A SURVEY OF LAND SITUATED IN THE CITY O LEE'S SUMMIT, COUNTY OF JACKSON AND STATE OF MISSOURI, BY SURVEYOR: YOUNG-HOBBS AND ASSOCIATES, 1202 CROSSLAND AVENUE CLARKSVILLE, TN 37040.
- ALL CONSTRUCTION METHODS AND MATERIAL MUST CONFORM TO CURRENT STANDARDS AND SPECIFICATIONS OF THE FEDERAL, STATE, COUNTY, CITY OR LOCAL REQUIREMENTS, WHICHEVER HAS JURISDICTION.
- C. ALL PROPOSED SPOT ELEVATIONS SHOWN ARE TOP OF CURB AND FINAL GRADE ELEVATIONS UNLESS OTHERWISE NOTED.
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- E. CONTRACTOR TO VERIFY ALL EXISTING GRADES AND CONTACT ENGINEER PRIOR TO BEGINNING WORK IF DISCREPANCY IS FOUND. CONTRACTOR TO VERIFY ASSUMED FINISHED FLOOR ELEVATION PRIOR TO BEGINNING WORK.
- F. THE EXCAVATING CONTRACTOR MUST TAKE PARTICULAR CARE WHEN EXCAVATING IN AND AROUND EXISTING UTILITY LINES AND EQUIPMENT. VERIFY COVER REQUIREMENTS BY UTILITY CONTRACTORS AND/OR UTILITY COMPANIES SO AS TO NOT CAUSE DAMAGE.
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- N. 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.

# **KEYED NOTES:**

**LEGEND** 

**EXISTING** 

950.00 EX.

950.00 EX.

949.50 EX.

20,540 CU.FT.

- PROPOSED CURB INLET AND FINGER DRAIN. SEE DETAILS ON SHEETS C-7.1 AND C-7.5.
- PROPOSED STORM MANHOLE/JUNCTION BOX. SEE DETAILS ON SHEET C-7.5 AND C-7.6.
- PROPOSED UNDERGROUND DETENTION SYSTEM, ADS STORMTECH MC-3500 CHAMBER SYSTEM, 19665 CF. SEE DETAILS ON SHEET C-7.5.

DESCRIPTION

TOP OF CURB

**ELEVATION** 

HIGH POINT

---- STORM MAIN

INLET

CATCH BASIN

19,000 CU. FT.

GRADE SLOPE

TOP OF PAVEMENT

FINISHED GRADE SPOT

—— ROOFDRAIN / UNDERDRAIN

CONSTRUCTION LIMITS

MAJOR CONTOUR LINES

MINOR CONTOUR LINES

- PROPOSED DOWNSPOUT COLLECTOR SYSTEM.
- 6" STORM LINE FROM ROOF DRAIN TO CONNECT TO PROPOSED STORM SYSTEM. CONTRACTOR TO MAINTAIN A MINIMUM SLOPE OF 1.00% ON ALL ROOF DRAIN PIPES.
- PROPOSED STORM CLEANOUT. SEE DETAIL ON SHEET C-7.1 FOR DETAILS.

950.00

PROPOSED OUTLET CONTROL STRUCTURE. SEE DETAIL ON SHEET C-7.6 FOR DETAILS.

# STORM STRUCTURE DATA EXISTING STORM INLET

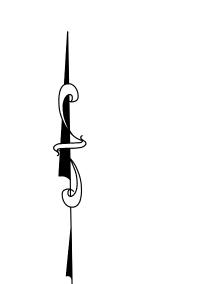
- RIM = 1018.53EX: 24" INV. (NE) = 1013.48 PR: 15" INV (SW) = 1013.48 PR. 2" INV (W) = 1014.56
- PROPOSED OUTLET CONTROL STRUCTURE (48" DIA. CONCRETE MANHOLE) RIM = 1020.30PR: 15" INV = 1013.75
- PROPOSED 2'X3' CONCRETE CURB INLET RIM = 1020.16
- PR: 15" INV OUT (W) = 1016.06 3 PROPOSED STORM MANHOLE (48" DIA. CONCRETE MANHOLE) RIM = 1020.54
- PR: BOTTOM INV = 1013.75 PROPOSED 2'X3' CONCRETE CURB INLET RIM = 1020.67

PR: 15" INV IN (E) = 1015.75

- PR. 15" INV. OUT (W) = 1014.06 5 PROPOSED STORM MANHOLE
- (48" DIA. CONCRETE MANHOLE) RIM = 1021.58 PR: 15" INV IN (SW,E) = 1013.75 PR: BOTTOM INV = 1013.75
- 50 PROPOSED STORM MANHOLE (48" DIA. CONCRETE MANHOLE) RIM = 1022.25 PR: 15" INV OUT (NE) = 1013.94
- PR: 15" INV IN (SW) = 1014.14 PROPOSED 2'X3' CONCRETE CURB INLET RIM = 1022.01PR: 6" INV IN (NW) = 1016.80 PR: 15" INV OUT (NE) = 1016.05 PR: 15" INV IN (W) = 1016.25 PROPOSED 2'X3' CONCRETE CURB INLET

PR: 2" INV (S) = 1015.89

RIM = 1021.41PR: 15" INV OUT (E) = 1017.50 8 PROPOSED 2" BACKFLOW VAULT DRAIN RIM = 1021.75



10 20 30

SCALE: 1"=20'

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

Storm Sewer Summary Report								Page						
Line No.	Line ID	Flow rate (cfs)	Line Size (in)	Line shape	Line length (ft)	Invert EL Dn (ft)	Invert EL Up (ft)	Line Slope (%)	HGL Down (ft)	HGL Up (ft)	Minor loss (ft)	HGL Junct (ft)	Dns Line No.	Junction Type
1	Pipe - 13	2.73	15	Cir	18.974	1013.75	1013.94	1.001	1014.41	1014.60	0.14	1014.60	End	Manhole
2	Pipe - 10	2.79	15	Cir	65.400	1014.14	1016.05	2.920	1014.60	1016.72	n/a	1016.72	1	Curb-
3	Pipe - 9	1.96	15	Cir	125.000	1016.25	1017.50	1.000	1016.72	1018.06	n/a	1018.06	2	Curb-
4	Pipe - 12	2.71	15	Cir	31.102	1013.75	1015.34	5.112	1014.41	1016.00	0.26	1016.00	End	Curb-
5	Pipe - 14	1.02	15	Cir	30.930	1013.75	1014.06	1.002	1014.15	1014.46	n/a	1014.46 j	End	Curb-
6	Pipe - 11	0.19	15	Cir	36.725	1013.48	1013.75	0.735	1013.65	1013.92	0.06	1013.92	End	None

LINE 3

125.0' OF 15" HDPE

-15' WATER LINE EASEMENT

DOC. # 19751211265

@ 1.00%

SUMMITCREST DRIVE

60' PUBLIC R/W

DOC. # 2014E0080868

**BACK FLOW** 

**PREVENTION** 

DEVICE DRAIN @

1.43%

/ 3,318 sq.ft.

M-150 HIGHWAY

DOC. # 2009E0045651

M-150 HIGHWAY MEDIAN

-15' UTILITY EASEMENT

- Wo<del>c.</del> #<del>\_2</del>00<del>9E</del>00<del>45</del>65₩ —

F.F.E.= 1023.25

1.85%

IF = 1020.82

017.61

# STORM MANHOLE MAJOR FLOOD ROUTING **DETENTION SUMMARY** DESIGNED DETENTION VOLUME AS-BUILT DETENTION DETENTION VOLUME

RESPONSE TO CITY

**DEVELOPMENT SET** 

COMMENTS I

RESPONSE TO

RESPONSE TO

FDP COMMENTS

FDP COMMENTS I

FDP COMMENTS III

FDP COMMENTS IV

ISSUE FOR PERMIT

THIS ARCHITECTURAL AND ENGI-

ONLY PURSUANT TO THE AGREE. MENT WITH THE ARCHITECT.

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WITHOUT PRIOR WRITTEN CONSENT

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OTHERWISE ARE HEREBY SPECIFI-

ms consultants, inc. engineers, architects, planners

Columbus, Ohio 43229-1547

PROPOSED PT22M

LEE'S SUMMIT, MO 64081

204 SW M150 HWY

STORM SEWER

PLAN AND PROFILE

PE-2018035818

2221 Schrock Road

phone 614.898.7100 fax 614.898.7570

PROJECT

BUILDING

SHEET TITLE

CALLY RESERVED.

CONFIDENCE AND SHALL BE USED

NEERING DRAWING IS GIVEN IN

PT22M PROGRESS SET 03/08/23

02/24/22

03/29/22

06/29/22

08/30/22

09/29/22

#### **veREphiseOn /SomVEc/EDE BGRIBITION:** Lee's Summit, Missouri STORM STRUCTURE DATA SIR UPD**057/08/2023** 09/13/21 EXISTING STORM INLET 60% SET

RIM = 1018.53EX: 24" INV. (NE) = 1013.48 PR: 15" INV (SW) = 1013.48 PR. 2" INV (W) = 1014.56

(48" DIA. CONCRETE MANHOLE) RIM = 1020.30PR: 15" INV = 1013.75

2 PROPOSED 2'X3' CONCRETE CURB INLET RIM = 1020.16PR: 15" INV OUT (W) = 1016.06

(48" DIA. CONCRETE MANHOLE) RIM = 1020.54PR: 15" INV IN (E) = 1015.75 PR: BOTTOM INV = 1013.75

RIM = 1020.67PR. 15" INV. OUT (W) = 1014.06

(5) PROPOSED STORM MANHOLE RIM = 1021.58PR: 15" INV IN (SW,E) = 1013.75 PR: BOTTOM INV = 1013.75

(48" DIA. CONCRETE MANHOLE) RIM = 1022.25PR: 15" INV OUT (NE) = 1013.94 PR: 15" INV IN (SW) = 1014.14 PROPOSED 2'X3' CONCRETE CURB INLET

PR: 6" INV IN (NW) = 1016.80 PR: 15" INV OUT (NE) = 1016.05 PR: 15" INV IN (W) = 1016.25 RIM = 1021.41

PROPOSED 2" BACKFLOW VAULT DRAIN RIM = 1021.75PR: 2" INV (S) = 1015.89

PROPOSED OUTLET CONTROL STRUCTURE

(3) PROPOSED STORM MANHOLE

PROPOSED 2'X3' CONCRETE CURB INLET

(48" DIA. CONCRETE MANHOLE)

PROPOSED STORM MANHOLE

RIM = 1022.01PROPOSED 2'X3' CONCRETE CURB INLET PR: 15" INV OUT (E) = 1017.50

# **KEYED NOTES:**

**LEGEND** 

**EXISTING** 

TOP=1017.83

TOP=1018.57 8" WATER LINE PER CITY

~CONCRETE~

IE=1013.48/ MAPS; NOT MARKED IN

IE=1012.48

- PROPOSED CURB INLET AND FINGER DRAIN. SEE DETAILS ON SHEETS C-7.1 AND
- PROPOSED STORM MANHOLE/JUNCTION BOX. SEE DETAILS ON SHEET C-7.5 AND
- PROPOSED UNDERGROUND DETENTION SYSTEM, ADS STORMTECH MC-3500 CHAMBER SYSTEM, 19665 CF. SEE DETAILS ON SHEET C-7.5.
- PROPOSED DOWNSPOUT COLLECTOR SYSTEM.
- 6" STORM LINE FROM ROOF DRAIN TO CONNECT TO PROPOSED STORM SYSTEM CONTRACTOR TO MAINTAIN A MINIMUM SLOPE OF 1.00% ON ALL ROOF DRAIN
- DETAILS.

# **CURB INLET-4 TO STORM MH-5**

DESCRIPTION

ROOFDRAIN / UNDERDRAIN

CONSTRUCTION LIMITS

MAJOR CONTOUR LINES

MINOR CONTOUR LINES

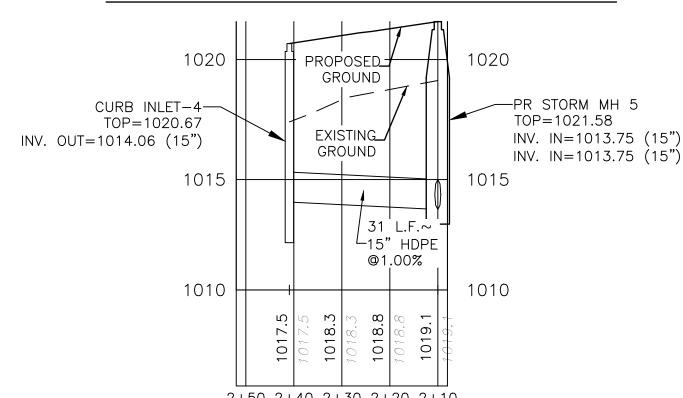
STORM MAIN

INLET

CATCH BASIN

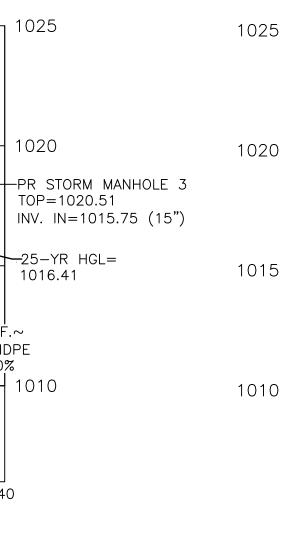
STORM MANHOLE

MAJOR FLOOD ROUTING



HORIZONTAL SCALE: 1" = 20'

# **CURB INLET 7 TO STORM MH 5**



PROPOSED GROUND GROUND +CURB' INLET' 7 TOP=1021.98  $\pm TOP = 1021.74$ INV. IN=1016.25 (15") PR STORM MH 5A-| INV. OUT=1017.50 (15") INV. IN=1016.00 (6") TOP=1022.27 INV. OUT=1016.05 (15") INV. IN=1014.14 (15") INV. OUT=1013.94 (15") 124.96 L.F.~15" HDPE @ 1.00% 1-25-YR HGL= \_65.39 L.F.~15" HDPE @ 2.92% 1018.11 25-YR HGL=\_ 1016.79 1014.67 | 15" HDPE-@1.00% 2+20 2+10 2+00 1+90 1+80 1+70 1+60 1+50 1+40 1+30 1+20 1+10 1+00 0+90 0+80 0+70 0+60 0+50 0+40 0+30 0+20 0+10 HORIZONTAL SCALE: 1" = 20' VERTICAL SCALE: 1" = 5'

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

CHECKED BY:

DRAWING

PROJECT NO:

C-5.2

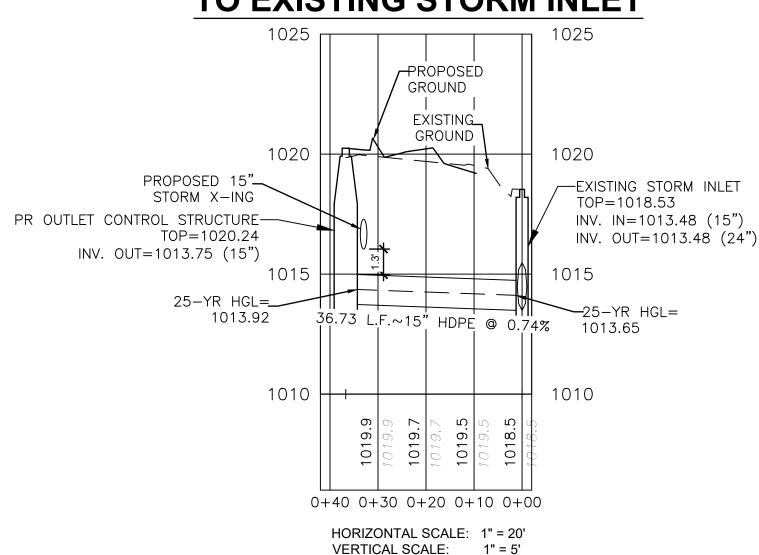
40497-21

# **OUTLET CONTROL STRUCTURE** TO EXISTING STORM INLET

IE = 102Q.82

~ASPHALT~

~ASPHALT~



# **CURB INLET 2 TO STORM MH 3**

~CONCRETE~

PROPOSED WATER MAIN EXTENSION

SEE PUBLIC IMPROVEMENT PLANS FOR

BUILDING SETBACK

PROPOSED 5

PT22M

/ 3,318 sq.ft. F.F.E.= 1023.25

SIDEWALK

SEMENT.

PARKING SETBAC

60' PUBLIC R/W

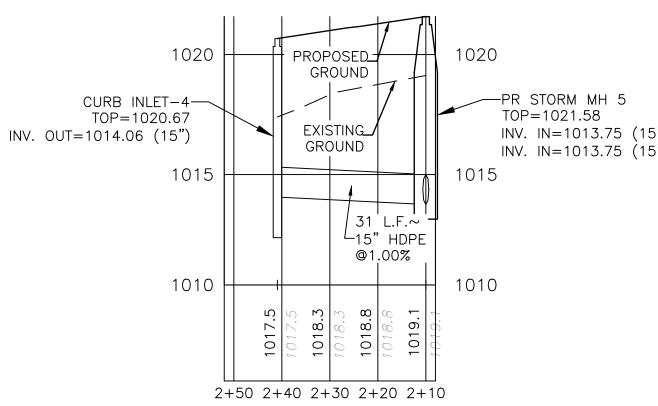
DOC. # 2014E0080868

# GROUND CURB INLET TOP=1020.16 INV. OUT=1016.06 (15") $\pm$ 25-YR HGL= 1016.72 PROPOSED 15"-STORM X-ING ├15" HDPE @1.00% 0+00 0+10 0+20 0+30 0+40

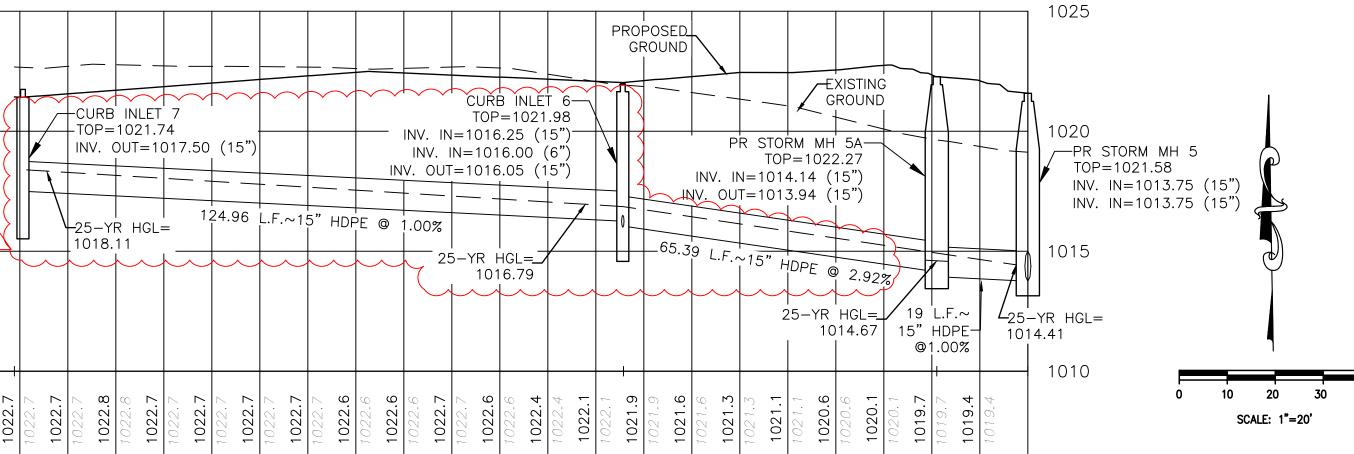
HORIZONTAL SCALE: 1" = 20'

VERTICAL SCALE: 1" = 5'

# PROPOSED STORM CLEANOUT. SEE DETAIL ON SHEET C-7.1 FOR DETAILS. PROPOSED OUTLET CONTROL STRUCTURE. SEE DETAIL ON SHEET C-7.6 FOR



VERTICAL SCALE: 1" = 5'

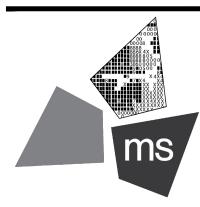


06/29/22 **DEVELOPMENT SET** RESPONSE TO 08/30/22 FDP COMMENTS RESPONSE TO FDP COMMENTS RESPONSE TO FDP COMMENTS II FDP COMMENTS IV PT22M PROGRESS SET 03/08/23

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ms consultants, inc. engineers, architects, planners 2221 Schrock Road Columbus, Ohio 43229-1547 phone 614.898.7100

fax 614.898.7570

PROJECT

PROPOSED PT22M BUILDING

204 SW M150 HWY LEE'S SUMMIT, MO 64081

SHEET TITLE

SITE UTILITY PLAN

PE-2018035818

CHECKED BY: 40497-21 PROJECT NO:

DRAWING

C-6.0

**GENERAL NOTES:** 

A. ALL EXISTING CONDITIONS, TOPOGRAPHY, UTILITIES AND PROPERTY INFORMATION ARE TAKEN FROM A SURVEY OF LAND SITUATED IN THE CITY OF LEE'S SUMMIT, COUNTY OF JACKSON AND STATE OF MISSOURI, BY SURVEYOR: YOUNG-HOBBS AND ASSOCIATES, 1202 CROSSLAND AVENUE

B. ALL EXISTING UTILITIES, ARE TAKEN FROM SURVEY AND DO NOT NECESSARILY REPRESENT ALL UNDERGROUND UTILITIES ADJACENT TO OR UPON PREMISES SHOWN ON PLAN.

C. CONTRACTOR RESPONSIBLE FOR MAINTAINING A MIN. COVER OF 42" OVER PROPOSED WATER SERVICE.

D. CONTRACTOR IS RESPONSIBLE FOR LOCATING AND VERIFYING ALL EXISTING UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION, AND IS RESPONSIBLE FOR ANY DAMAGE TO THEM DURING CONSTRUCTION.

E. CLEANOUT LOCATIONS ARE NUMBERED ON PLAN. ALL CLEANOUTS IN PAVEMENT AREAS ARE TO BE H-20 RATED. CLEANOUTS SHALL BE INSTALLED PER DETAIL ON SHEET C-7.1.

F. SEE PLUMBING PLANS FOR CONTINUATION OF UTILITY LINES INTO BUILDING.

G. CONTRACTOR SHALL INSTALL AND BACKFILL ALL TRENCHES AND STRUCTURES PER DETAIL ON SHEET C-7.1

THERE SHALL BE A MINIMUM 10 FOOT HORIZONTAL SEPARATION BETWEEN WATER TAPS, WATER SERVICES, PRIVATE WATER SYSTEMS, AND ANY SANITARY AND/OR STORM SEWER SYSTEMS. WHERE 10 FEET HORIZONTAL SEPARATION CANNOT BE OBTAINED, THE BOTTOM OF THE WATER LINE

J. THE EXCAVATING CONTRACTOR MUST TAKE PARTICULAR CARE WHEN EXCAVATING IN AND AROUND EXISTING UTILITY LINES AND EQUIPMENT. VERIFY COVER REQUIREMENTS BY UTILITY CONTRACTORS AND/OR UTILITY COMPANIES SO AS TO NOT CAUSE DAMAGE.

CAUTION: OVERHEAD LINES ARE PRESENT ON SITE. CONTRACTOR TO TAKE SPECIAL CARE TO PREVENT DAMAGE TO THE LINES AND COORDINATE

WITH UTILITY OWNER. L. A SANITARY SEWER IMPACT STATEMENT THAT WILL ADDRESS THE PROPOSED DISCHARGE INTO THE EXISTING SANITARY SEWER RECEIVING

SYSTEM, IF REQUIRED BY THE CITY ENGINEER. M. APPROPRIATE WATER SERVICE DEMAND DATA (INCLUDING, BUT NOT LIMITED TO, PLANNED LAND USAGE, DENSITIES OF PROPOSED DEVELOPMENT,

PIPE SIZES, CONTOURS AND FIRE HYDRANT LAYOUT) TO ALLOW FOR THE PRELIMINARY ANALYSIS OF THE DEMAND FOR WATER SERVICE IF

N. 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

O. 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.

# **KEYED NOTES:**

PROPOSED PRIMARY ELECTRICAL SERVICE. CONTRACTOR TO COORDINATE CONDUIT SIZE, NUMBER OF CONDUITS, CONNECTIONS, AND BEND RADII WITH UTILITY OWNER AND MEP PLANS. CONTRACTOR TO COORDINATE CONNECTION WITH UTILITY OWNER.

PROPOSED ELECTRIC TRANSFORMER. COORDINATE DETAILS AND LOCATION WITH UTILITY OWNER AND ELECTRICAL PLANS.

PROPOSED SECONDARY ELECTRICAL SERVICE. CONTRACTOR TO COORDINATE CONDUIT SIZE, NUMBER OF CONDUITS, CONNECTIONS, AND BEND RADII WITH UTILITY OWNER AND MEP PLANS. CONTRACTOR TO COORDINATE CONNECTION WITH UTILITY OWNER.

PROPOSED SOFT TYPE K COPPER 1.5" DOMESTIC WATER SERVICE. INCLUDE IN BASE BID ALL VALVES, PIPING, STRUCTURES, ETC. THAT WILL BE REQUIRED. SEE MEP PLANS FOR CONTINUATION INTO BUILDING. SEE DETAIL ON SHEET C-7.2.

PROPOSED 6" SANITARY SEWER. ASTM D3034, SDR-26. SEWER TO HAVE MINIMUM SLOPE OF 1.00%. CONTRACTOR TO MAINTAIN A MINIMUM OF 36" OF COVER OF SEWER LINES.

PROPOSED 4" SANITARY SEWER. ASTM D3034, SDR-26. SEWER TO HAVE MINIMUM SLOPE OF 2.08%. CONTRACTOR TO MAINTAIN A MINIMUM OF 36" OF COVER OF SEWER LINES.

PROPOSED SANITARY CLEANOUT (TYP.). SEE DETAIL ON SHEET C-7.1.

GREASE TRAP REQUIRED. SEE PLUMBING SHEETS FOR DETAILS.

MONITORING WELL, SEE PLUMBING PLANS FOR DETAILS

PROPOSED SANITARY SEWER SERVICE MANHOLE. SEE DETAIL ON SHEET C-7.2.

2" PVC CONDUIT FOR UNDERGROUND TELEPHONE SERVICE. CONTRACTOR TO COORDINATE CONNECTION WITH UTILITY OWNER.

PROPOSED 2" DOMESTIC WATER METER PER CITY OF LEE'S SUMMIT STANDARD DRAWING WAT-11. SEE SHEET C-7.2

PROPOSED WATER VALVE PER LOCAL REGULATIONS AND DETAILS.

PROPOSED BACKFLOW PREVENTER VAULT PER CITY OF LEE'S SUMMIT STANDARD DRAWING WAT-12. SEE SHEET C-7.2. A DEPARTMENT OF NATURAL RESOURCES APPROVED DOUBLE CHECK BACK BACKFLOW MUST BE USED.

PROPOSED PVC C900 6" FIRE SERVICE LINE. INCLUDE IN BASE BID ALL VALVES, PIPING, STRUCTURES, ETC. THAT WILL BE REQUIRED. SEE MEP PLANS FOR CONTINUATION INTO BUILDING.

PROPOSED 1" PVC IRRIGATION LINE. SEE IRRIGATION PLAN FOR MORE INFORMATION.

PROPOSED 2" GAS SERVICE LINE.

PROPOSED ELECTRICAL CONNECTION. CONTRACTOR TO COORDINATE WITH UTILITY OWNER

PROPOSED SANITARY SEWER WYE CONNECTION TO EXISTING SANITARY SEWER STUB. SEE DETAIL ON SHEET C-7.2.

PROPOSED 1" IRRIGATION TAP.

PROPOSED 2" DOMESTIC WATER TAP WITH SADDLE, CORPORATION STOP, AND 1" METER PER CITY OF LEE'S SUMMIT STANDARD DRAWING

WAT-11, SEE SHEET C-7.2.

PROPOSED 6" FIRE CONNECTION TO WATER MAIN BY TEE THAT WILL BE INSTALLED WITH PUBLIC WATER MAIN EXTENSION.

PROPOSED 6"X6" 45° ELBOW.

PROPOSED 6"X6"X6" WYE FITTING.

EXISTING FIRE HYDRANT

PROPOSED DIRECTIONAL BORE PIT LOCATION.

PROPOSED RECEPTION PIT.

PROPOSED FIRE HYDRANT. REFER TO THE PUBLIC IMPROVEMENT PLANS FOR MORE INFORMATION.

PROPOSED 8"X8"X6" WYE FITTING.

PROPOSED 8" MAXADAPTOR COUPLING FOR EXISTING/PROPOSED 8" SANITARY SEWER CONNECTION.

# **LEGEND**

EXISTING	PROPOSED	DESCRIPTION
		<ul> <li>CONSTRUCTION LIMITS</li> </ul>
- — — ST —	ST	- STORM LINE
	RD	_ ROOFDRAIN/UNDERDRAIN
- — — SAN —	SAN	<ul><li>SANITARY LINE</li></ul>
	● <sup>co</sup>	SANITARY CLEANOUT
S	S	SANITARY MANHOLE
	00	SANITARY GREASE TRAP
w	W	- WATER LINE
***		FIRE HYDRANT
	$\Theta$	WATER METER
UE _	UE	<ul> <li>UNDERGROUND ELECTRIC LINE</li> </ul>
	$\lceil - \rceil \rceil$	ELECTRIC TRANSFORMER
	UT	<ul> <li>UNDERGROUND TELEPHONE LIN</li> </ul>
	Ф	LIGHT POLE

# SANITARY STRUCTURE DATA

TC: 1017.61 TC: 1021.99 PR. 8" INV (E) = 1007.83 PR. 8" INV (W) = 1007.83 PR. 6" INV (S) = 1007.66

TC: 1022.28

POST

E=1015.97

TOP = 1025.67

SUMMITCREST DRIVE

60' PUBLIC R/W

DOC. # 2014E0080868

OTTOM OF 18" STORM PIPE : 1014.69

TOP OF 6" SSWR PIPE: 1008.41

PROPOSED 5 **SIDEWALK** 

3,318 sq.ft. F.F.E.= 1023.25

ST MH

EASEMENT

PROPOSED WATER MAIN EXTENSION

SEE PUBLIC IMPROVEMENT PLANS FOR

20' PARKING SETBACK

PVC @ 2.089

PVC @ 2.08%

PVC @ 2.08%

PVC @ 2.08%

3.6' OF 4"

IE = 1020.82

PR. 4" INV (W) = 1017.06

12" WATER LINE PER CITY

PROPOSED CLEANOUT TC: 1022.48 PR. 4" INV (N, SE) = 1017.87

PROPOSED CLEANOUT

PR. 4" INV (NW, S) = 1018.17

TC: 1023.12

PROPOSED GREASE TRAP

PROPOSED CLEANOUT TC: 1023.21 PR. 4" INV (N, S) = 1018.95

PROPOSED CLEANOUT

PR. 4" INV (N, S) = 1018.25

NOTE: CONTRACTOR TO VERIFY INVERT OF EXISTING SANITARY SEWER MAIN PRIOR TO CONSTRUCTING PROPOSED SANITARY SEWER SERVICE LINE.

PROPOSED WYE CONNECTION 3 PROPOSED CLEANOUT

TOP=1017.61

1 PROPOSED MANHOLE

PR. 8" INV (E) = 1007.86

PROPOSED MANHOLE

PR. 6" INV (SW) = 1011.40 PR. 6" INV (N) = 1011.20

TC: 1020.19

TC: 1021.80

IE = 1015.11

PR. 6" INV (S, NE) = 1016.89

PROPOSED SAMPLING WELL TC: 1022.42

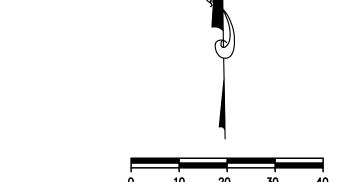
PR. 4" INV (S) = 1017.47 PROPOSED CLEANOUT

PR. 4" INV (N, S) = 1017.56

TC: 1022.27 PR. 4" INV OUT (N) = 1017.63 PR. 4" INV IN (S) = 1017.8

PROPOSED CLEANOUT TC: 1023.09 PR. 6" INV (N) = 1018.63 PR. 4" INV (S) = 1018.80

TC: 1023.21



SCALE: 1"=20'

POSSIBLE SANITARY

ST MH

TOP = 1017.83

IE=1012.48

─ Q = ± 178 GPD

OTOP=1018.53 8" WATER LINE PER CIT

TIE=1013.48 MAPS; NOT MARKED IN

SEWER STUB. NO

36.05' OF

**EXISTING 8"** 

PVC @ 0.58%

\*\*UTILITY CROSSING\*

BOTTOM OF 2" STORM PIPE: 1015.54

TOP OF 6" SSWR PIPE : 1011.60

60.86' OF 6"

PVC @ 5.04%

MAINTAIN 18" VERTICAL SEPARATION

Know what's **below**. Call before you dig. CONSTRUCTION JOINT

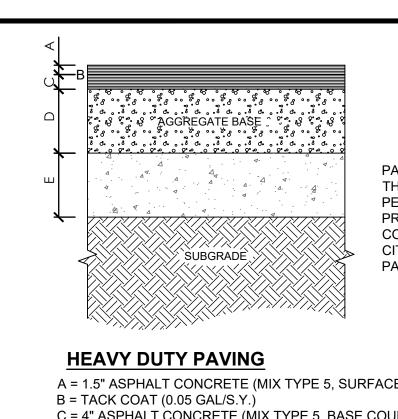
FIRST POUR

SECOND POUR -

4" CRUSHED STONE

(MODOT TYPE 5

AGGREGATE)



- A = 1.5" ASPHALT CONCRETE (MIX TYPE 5, SURFACE COURSE)
- C = 4" ASPHALT CONCRETE (MIX TYPE 5, BASE COURSE)
- D = 6" AGGREGATE BASE (TYPE 5)
- E = 6" CHEMICAL STABILIZATION WITH FLY ASH, PORTLAND CEMENT, HYDRATED LIME, QUICKLIME, OR LIME KILN DUST

1023.07' TC

1022.57' BC

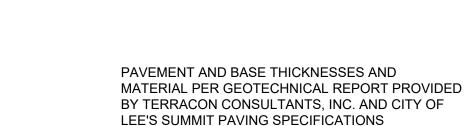
- A. SUBGRADE COMPACTION: CBR= 5
- B. BASE COURSE TO CONFORM TO CITY OF LEE'S SUMMIT STANDARDS FOR BASE COURSE
- COMPACTED TO 100% OF THE MODIFIED PROCTOR (ASTM D-1557) MAXIMUM DRY DENSITY C. ALL SUBGRADE AND PAVEMENT OPERATIONS AND MATERIALS SHALL MEET THE MINIMUM
- REQUIREMENTS OF THE CURRENT CITY OF LEE'S SUMMIT SPECIFICATIONS D. THE AGGREGATE BASE AND COMPACTION OF NATIVE SUBGRADE SHOULD EXTEND A
- MINIMUM OF (1) FOOT BEYOND THE BACK OF CURB

 $\Box$ 

1022.56'

RAMP AT ENTRANCE

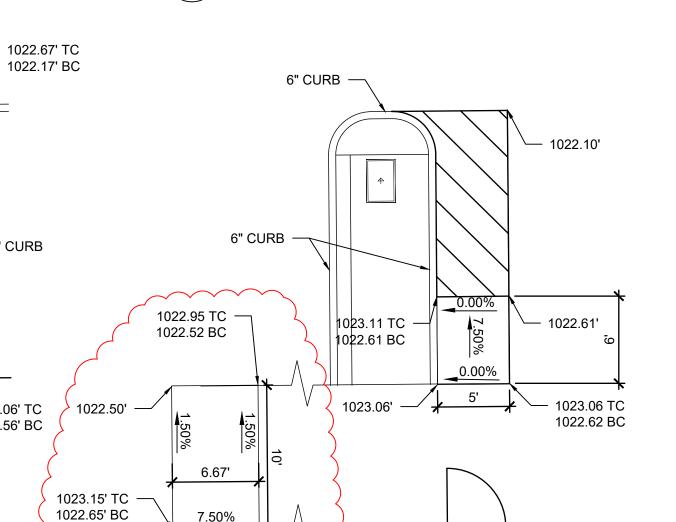


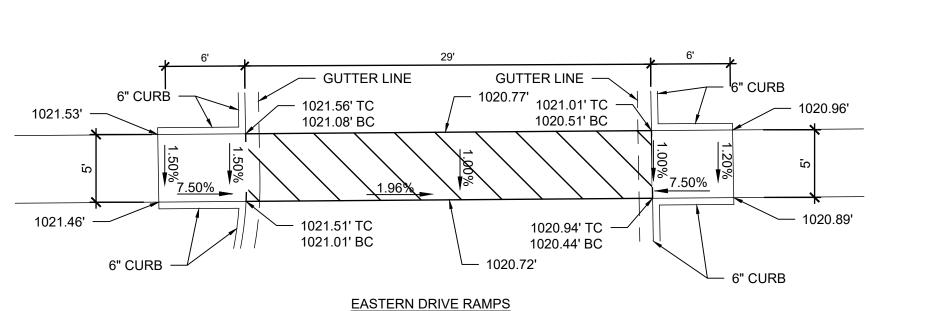


SIZE NO. 57

AGGREGATE







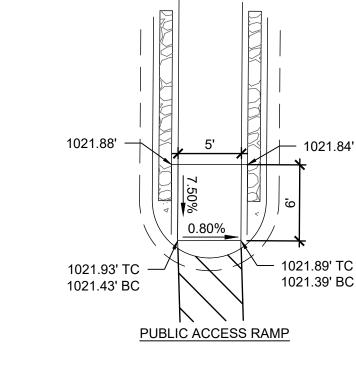
1022.26' BC

- 1022.56'

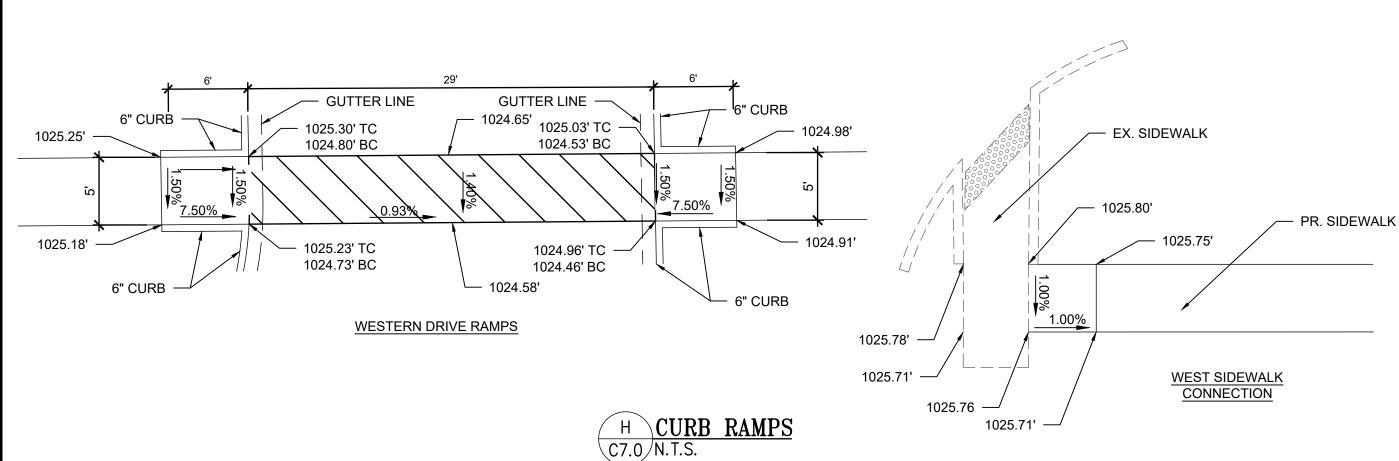
6" CURB

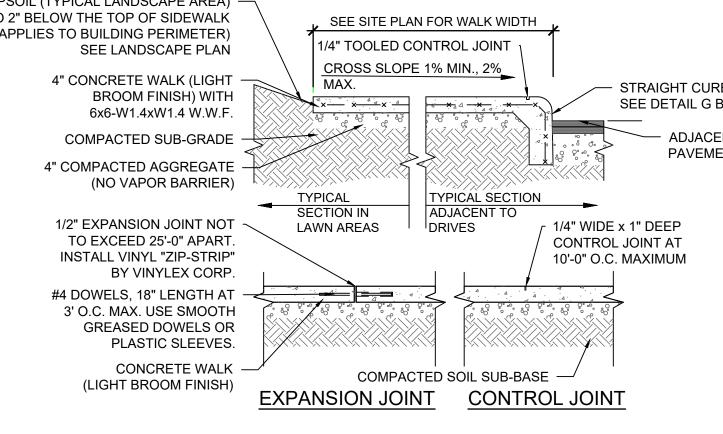
1023.06' TC

1022.56' BC



**DELIVERY RAMPS** 





A. LOCATE CONTROL JOINTS AS SHOWN ON PLAN OR 10' O.C. MAXIMUM. VERIFY WITH SITE REPRESENTATIVE

- B. CONCRETE WALKS AGAINST THE BUILDING OR CONCRETE PAVEMENT SHALL HAVE 1/2" PREFORMED EXPANSION JOINT BETWEEN WALK AND BUILDING OR WALK AND
- CONCRETE PAVEMENT. C. CONCRETE PADS OVER 4" THICK REQUIRE CONTROL JOINTS TO BE 12' O.C. MAXIMUM.

- CONTRACTION JOINT

3,000 PSI CONCRETE

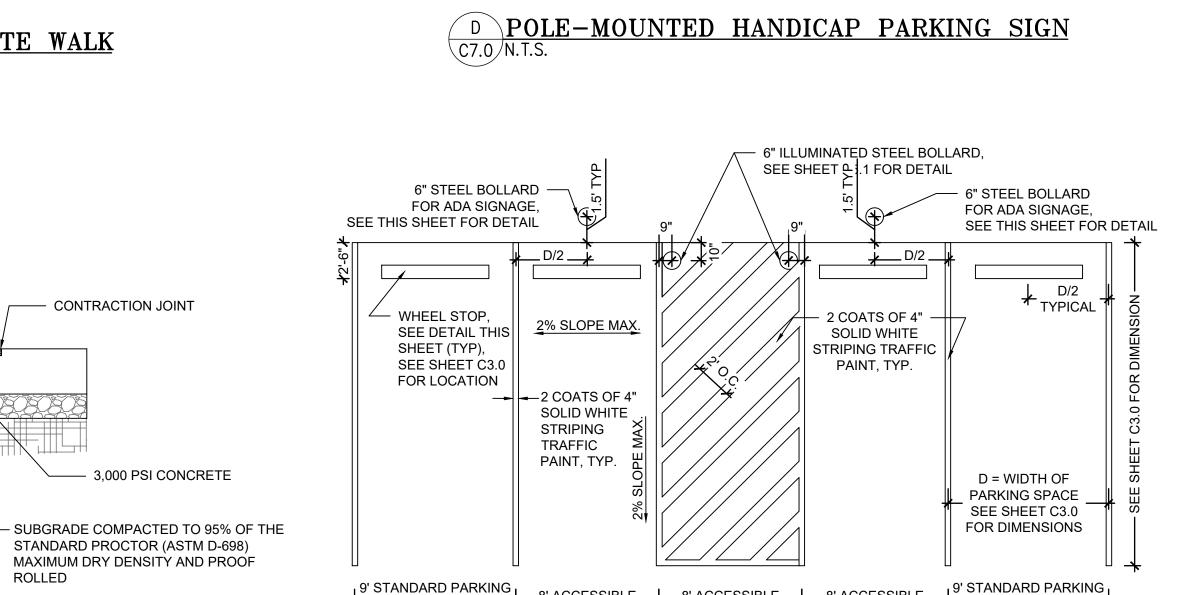
STANDARD PROCTOR (ASTM D-698)

MAXIMUM DRY DENSITY AND PROOF

ROLLED



\_\_\_\_ 3/4" DOWELS



- PREMOLDED EXPANSION

SIGN FOOTING IS NOT TO INTERFERE

3,000 PSI CONCRETE FOOTING

WITH THE SIDEWALK FOOTING

JOINT MATERIAL

SIDEWALK

9' STANDARD PARKING SPACE, SEE SHEET PARKING SPACE SPACING PARKING SPACE

8' ACCESSIBLE SPACING PARKING SPACE

8' ACCESSIBLE PARKING SPACE C3.0 FOR WIDTH NOTE: SEE DIMENSIONAL CONTROL PLAN FOR PARKING DIMENSIONS. DIMENSIONS

SHOWN ARE MINIMUM REQUIRED.

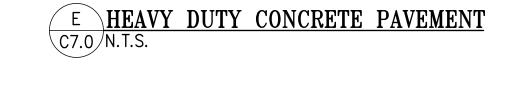
SIDEWALK

**FOOTING** 

. 18" DIA.

PARKING SPACE SPACE, SEE SHEET C3.0 FOR WIDTH SLOPE NOTE: IF CIVIL GRADING PLAN INDICATES A CROSS SLOPE GREATER THAN 2% AT ADA SPACES, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER FOR CLARIFICATION AND PLAN REVISION.

G PARKING STRIPING C7.0 N.T.S.

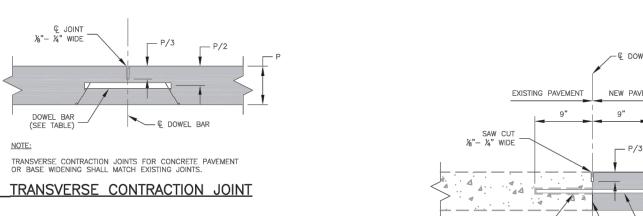


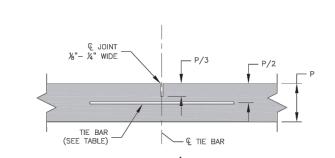
B. ALL SUB-GRADE AND PAVEMENT OPERATIONS AND MATERIALS

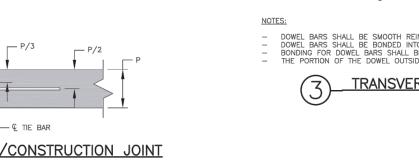
SHALL MEET THE MINIMUM REQUIREMENTS OF THE CURRENT

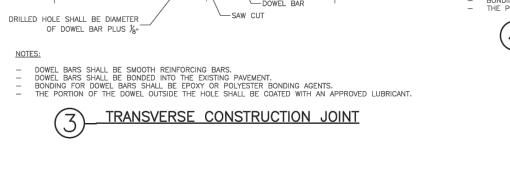
A. SUBGRADE COMPACTION PER SOILS REPORT

MODOT SPECIFICATIONS.

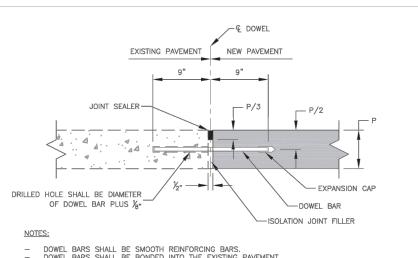




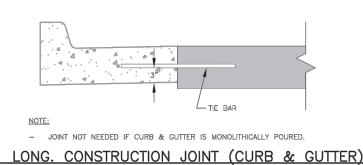




PAVEMENT JOINT DETAILS - CITY OF LS STANDARD DETAIL GEN-9
C7.0 N.T.S.



TRANSVERSE ISOLATION JOINT

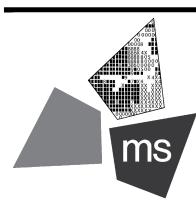


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ms consultants, inc. engineers, architects, planners 2221 Schrock Road Columbus, Ohio 43229-1547 phone 614.898.7100

PROJECT

fax 614.898.7570

PROPOSED PT22M BUILDING

204 SW M150 HWY LEE'S SUMMIT, MO 64081

SHEET TITLE

SITE DETAILS



CHECKED BY: 40497-21 PROJECT NO:

DRAWING

C-7.0

INFLUENCE TRENCH OF

- FINISH GRADE OR SUB GRADE

CONTRACTOR TO BACKFILL -

INFLUENCE TRENCH OF

COMPACTED GRANULAR

BACKFILL, 98% STANDARD

PROCTOR (FULL DEPTH).

STRUCTURE WITH

STRUCTURE BACKFILL NOTES

B. NO ON SITE FILL WILL BE ALLOWED FOR UTILITY STRUCTURES.

D STRUCTURE BACKFILL

SIDEWALK/SHARED-USE PATH & SIDEWALK/SHARED-USE RAMP NOTES:

SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.

4. LONGITUDINAL JOINT SPACING TO MATCH WIDTH OF SIDEWALK.

TURNING AREA PERPENDICULAR TO THE SIDEWALK CURB.

ADA MAXIMUM CROSS SLOPE = 2.0%

1. CURB RAMP OPENING, NOT INCLUDING FLARES, SHALL MATCH EXISTING SIDEWALK WIDTH AND OPENING

3. ALL RAMPS, SIDEWALKS, SHARED-USE PATHS SUBGRADE MUST BE OF STABLE, COMPACTED EARTH AND

5. ISOLATION JOINTS SHALL BE PLACED WHERE WALK ABUTS DRIVEWAYS AND SIMILAR STRUCTURES, AND

\*ROADWAY EXCEPTION: WHERE EXISTING ROAD PROFILE GRADE DOES NOT ALLOW RAMP TO MEET RAMP SLOPE REQUIREMENT OF 8.33% OR LESS, THE RAMP SHALL BE EXTENDED TO A LENGTH OF 1

. TURNING SPACES SHALL BE 1.5%, ±0.5%, SLOPE IN ANY DIRECTION. TURNING SPACES SHALL HAVE A

8. FOR RETROFIT WORK, SLOPES TO BE DETERMINED IN FIELD BY CONTRACTOR AND APPROVED BY CITY

9. RAMP EXTENSION AREA SHALL NOT BE USED AS TRANSITION TO EXISTING SIDEWALK. ANY TRANSITIONS REQUIRED TO MATCH RAMPS TO EXISTING SIDEWALK SHALL REQUIRE REMOVAL AND REPLACEMENT OF ADDITIONAL SIDEWALK BEYOND THE RAMP AREA. SIDEWALK TRANSITION LENGTH SHALL BE EQUAL TO

OR GREATER THAN THE WIDTH OF THE EXISTING SIDEWALK. RAMP EXTENSIONS SHALL BE A

10. ALL SIDEWALK AND RAMP CONSTRUCTION SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY

TURNING SPACES, WITH A SIDEWALK CURB, SHALL HAVE A 5'

FEET TO MATCH EXISTING SIDEWALK. CROSS SLOPE OF RAMP SHALL BE 1.5%, ±0.5%.

2. USE 18" LONG #4 EPOXY COATED TIE BARS @ 24" O.C. EMBED TIE BARS 9" IN EACH DIRECTION.

A. BACKFILL TO BE PLACED IN 8" LIFTS

STRUCTURE

STRUCTURE

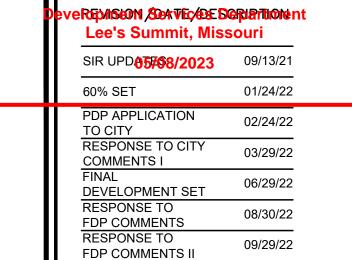
CONTRACTOR TO UNDERCUT

REPLACE WITH COMPACTED

GRANULAR BACKFILL, 95%

STANDARD PROCTOR

STRUCTURE BASE BY 8".



11/03/22

## NOTICE

FDP COMMENTS III

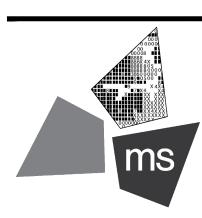
FDP COMMENTS IV

ISSUE FOR PERMIT

PT22M PROGRESS SET 03/08/23

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PROJECT

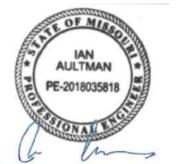
fax 614.898.7570

PROPOSED PT22M BUILDING

204 SW M150 HWY LEE'S SUMMIT, MO 64081

SHEET TITLE

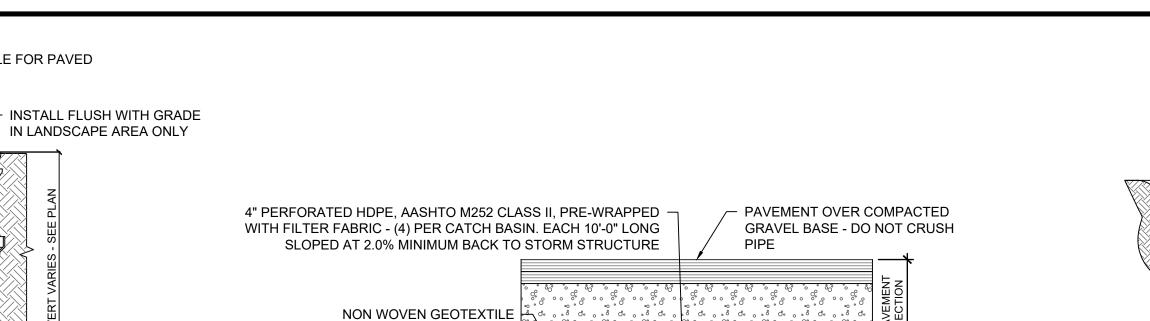
SITE DETAILS



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DRAWING

C-7.1



IN LANDSCAPE AREA ONLY COLLAR (8" THICKNESS MINIMUM) ASPHALT OR CONCRETE PAVING SEE GRADING PLAN CLEANOUT PLUG, 3" **BELOW PAVING OR 1" ABOVE FINAL** LANDSCAPE GRADE LONG SWEEP WYE CRUSHED AGGREGATE, COMPACTED TO 98% STD. FLOW — PROCTOR TRENCH BACKFILL

#3 REBAR EACH WAY -

2.5'x2.5' CONCRETE

PER DETAIL

- CURB & GUTTER

CURB REPLACEMENT DETAIL

ACROSS THE ENTIRE CURB SECTION.

COMPACTED

PROVIDE CLEANOUTS AS SPECIFIED:

MANHOLE FOR PAVED

TRENCH / BACKFILL NOTES A. BEDDING THICKNESS UNDER PIPE BARREL b, SHALL BE 1/8 OF Bc; 6" MIN. Bc IS OUTSIDE DIAMETER OF PIPE AT BELL.

SEE NOTE D NOMINAL DRAINAGE FILL

SEE PAVEMENT DETAIL

COMPACTED AGGREGATE

COMPACTED TO 98% STD.

FOR WATER, GREEN FOR

SEWER, YELLOW FOR GAS,

TRACER WIRE #14 THIN BLUE

BACKFILL TO BE COMPACTED

GRANULAR MATERIAL 1/2"

ORANGE FOR COMMUNICATIONS

FOR PAVEMENT

1" MAX. DIAMETER,

- INITIAL BACKFILL

BEDDING AND INITIAL

SECTION

<sup>₹ o</sup> SURFACE

NOT TO SCALE

MATERIAL SHALL BE HAND PLACED AND COMPACTED UNDER THE PIPE HAUNCH. C. IF UNPAVED AREA IS WITHIN 10' OF PAVEMENT OR STRUCTURE THEN FOLLOW TRENCH GUIDELINES FOR PAVED AREA.

B. THE HAUNCH AREA OF THE PIPE MUST BE FULLY SUPPORTED; THEREFORE THE BEDDING

D. PIPE DIAMETER OF 4" OR SMALLER SHALL HAVE A MAXIMUM TRENCH WIDTH OF 12". E. BEDDING AND INITIAL BACKFILL SHALL BE SAND FOR ALL UTILITY CONDUIT CARRYING

SUITABLE ONSITE MATERIAL,

PROCTOR (TO BE PLACED IN

TRACER WIRE #14 THIN BLUE

BACKFILL TO BE COMPACTED

GRANULAR MATERIAL 1/2"

NOMINAL DRAINAGE FILL.

ORANGE FOR COMMUNICATIONS

FOR WATER, GREEN FOR

SEWER, YELLOW FOR GAS,

COMPACTED TO 95% STD.

8" LIFTS MAX.)

INITIAL BACKFILL

BEDDING AND INITIAL

UNPAVED

(SEE NOTE C)

Bc + 12" MIN.

SEE NOTE D

NOT TO SCALE

AREA

ACCUMULATION AT THE LOW POINTS IN THE GRAVEL BASE AT DRAINAGE STRUCTURES. SYSTEM TO BE INSTALLED TO ASSURE ADEQUATE DRAINAGE OF PAVEMENT BASE.

1'-0"

FABRIC OVER SOIL AT

NOTES

EACH FINGER DRAIN

1'-0"

A. THE INTENTION OF THE FINGER DRAIN SYSTEM IS TO PREVENT EXCESS WATER

1'-0"

ZURN-1449 CLEANOUTS IN LANDSCAPED AREAS ZURN Z-1400 HD CLEANOUTS IN TRAFFIC AREAS WITH A "SERVICE STATION" TYPE MANHOLE, OPW #104 A12 - DOVER CORP./OPW DIV. B PIPE CLEANOUT DETAIL

SINGLE CLEANOUT AND "DCO" FOR DOUBLE CLEAN OUT.

ZURN Z-1400 CLEANOUTS IN NON-TRAFFIC AREAS AND SIDEWALKS

CLEANOUT LOCATIONS INDICATED ON GRADING AND UTILITY PLANS AS "CO" FOR

SINGLE CLEANOUT-

INDICATED "C.O." ON PLANS

DOUBLE CLEANOUT - INDICATED "D.C.O." ON PLANS

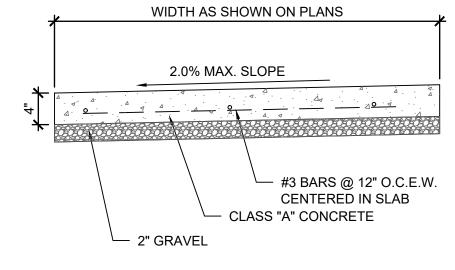
 6"x6" OR 4"x4" RECTANGULAR DOWNSPOUT CONNECTED TO ROOF DRAIN LINE WITH **BOOT REDUCER** BUILDING INTERIOR PROPOSED FINISH GRADE PAVEMENT OR GRASS CONNECT TO STORM LINE SEE STORMWATER PLAN FOR CONTINUATION 8" ROOF DRAIN PIPE FLOW — (2) 45° WIPE SWEEP SELBOWS, ASSURE

EXTERIOR DOWNSPOUT BOOT

WIDTH AS SHOWN ON PLANS 2.0% MAX. SLOPE ─ #3 BARS @ 12" O.C.E.W. CENTERED IN SLAB CLASS "A" CONCRETE └─ 2" GRAVEL

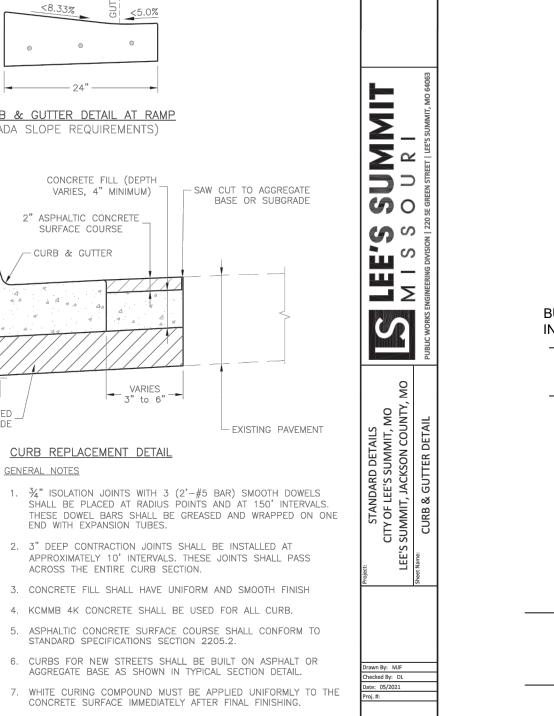
1. CONCRETE FOR SIDEWALK SHALL BE 3,000 PSI MINIMUM

CLEARANCE OF FOOTING. MATERIAL TO MATCH **BUILDING FOOTING** DOWNSPOUT RUNS SHOWN ON STORMWATER PLAN.



2. CONCRETE NOSE SHALL BE DOWELED INTO ADJACENT CURB

CONCRETE CURB NOSE DETAIL



GEN-4

BASE MATERIAL

3-D VIEW TYPE M SIDEWALK/SHARED-USE RAMP (See Note 7)-Transition 5'-15' Ramp Extension See Note 9 (Where Sidewalk Back of Curb & Gutter -Tie Bars ✓ ✓ TYPE M SIDEWALK/SHARED-USE RAMP

PAID AS RAMP PAID AS SIDEWALK/SHARED-USE PATH See Note 2 6" Shared-Use Path Gutter Detail SECTION A-A

Shared-Use Path Width \_\_Sidewalk Ramp SECTION B-B SECTION C-C

CURB & GUTTER DETAIL AT RAMP

Not to Scale

<u>LEGEND</u> R | SIDEWALK RAMP TS TURNING SPACE

SIDEWALK CURB DETAIL

TRANSITION

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

WATER, ELECTRIC, GAS, AND TELEPHONE. A TRENCH BACKFILL DETAIL - PAVEMENT SURFACE TOP OF SURFACE COURSE CURB & GUTTER DETAIL AT RAMP TOP OF BASE COURSE (ADA SLOPE REQUIREMENTS) #4X1'-0" @ 5' CTS CONCRETE FILL (DEPTH VARIES, 4" MINIMUM) -(TYPE C-1)2" ASPHALTIC CONCRETE SURFACE COURSE

4" 4" 8" -- 8" -- 4" 4" 24"

STRAIGHT BACK CURB & ROLL BACK CURB & (TYPE CG-1) (TYPE CG-2)

24" ROLL BACK DRY CURB &

STRAIGHT BACK DRY CURB & (TYPE CG-1 DRY)

STANDARD SPECIFICATIONS SECTION 2205.2. 8. ALL DOWELS & TIE BARS SHALL BE EPOXY COATED.

(TYPE CG-2 DRY)

A. THE AGGREGATE BASE AND COMPACTION OF NATIVE SUBGRADE SHOULD EXTEND A MINIMUM OF (1) FOOT BEYOND THE BACK OF CURB CONCRETE CURB AND GUTTER DETAIL - CITY OF LS STANDARD DETAIL GEN-4

FINISHED · PROVIDE EXPANSION JOINT IN GRADE **CURB AT SLAB JOINT LOCATION** MATCH BASE MATERIAL THICKNESS

- #3 @ 18" O.C.E.W. 3 #4 DIA. CONT

#3 @ 18" O.C MONOLITHIC CURB DETAIL

DENSITY (MIN.) H PAVEMENT TRANSITION

A 4 . A . A . A

PROPOSED CONCRETE PAVEMENT -

PER CONCRETE PAVEMENT DETAIL

SUBGRADE COMPACTED -

TO 95% MAXIMUM DRY

ASPHALT PAVEMENT

THICKENED

**EDGE** 

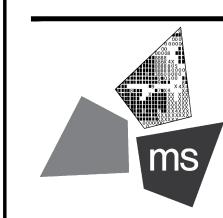
5'-15' Ramp Extension Transition See Note 9

TYPE M SIDEWALK RAMP

RAMP RETROFIT DETAIL - CITY OF LS STANDARD DETAIL GEN-3A

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PROJECT

PROPOSED PT22M BUILDING

204 SW M150 HWY LEE'S SUMMIT, MO 64081

SHEET TITLE

SITE DETAILS



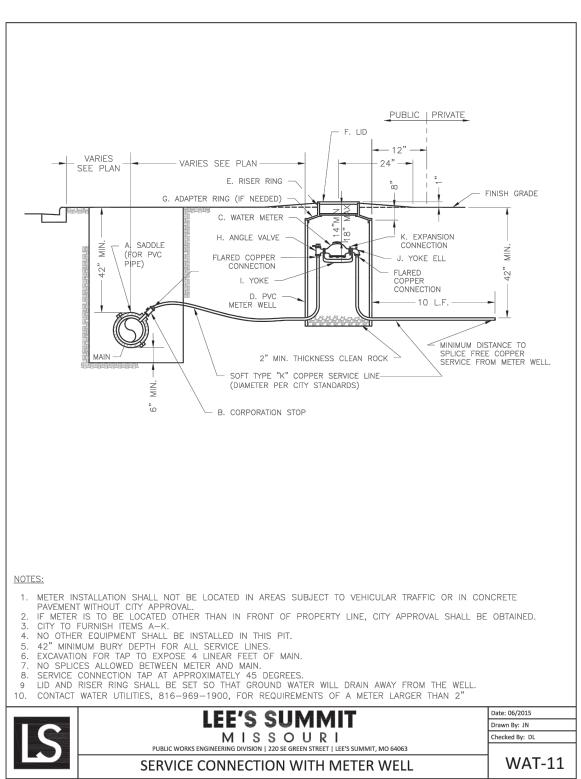
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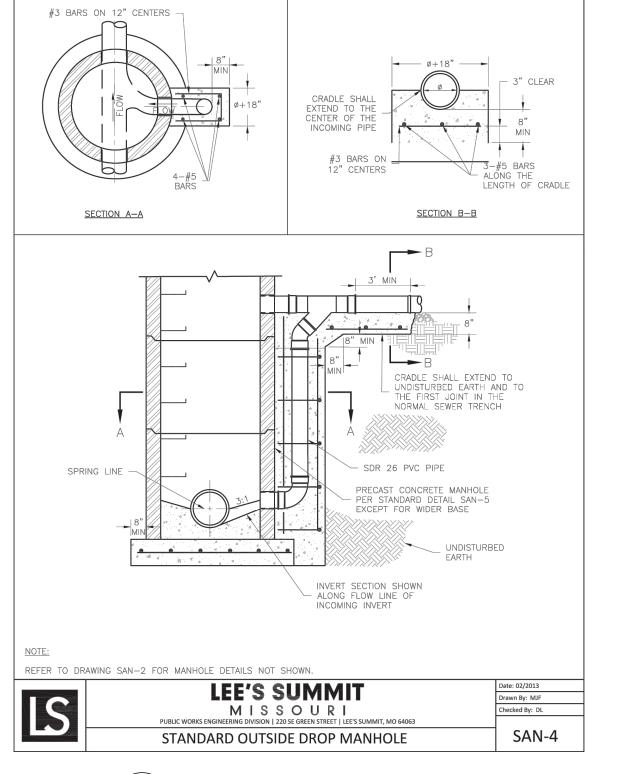
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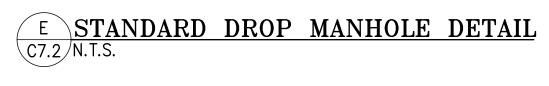
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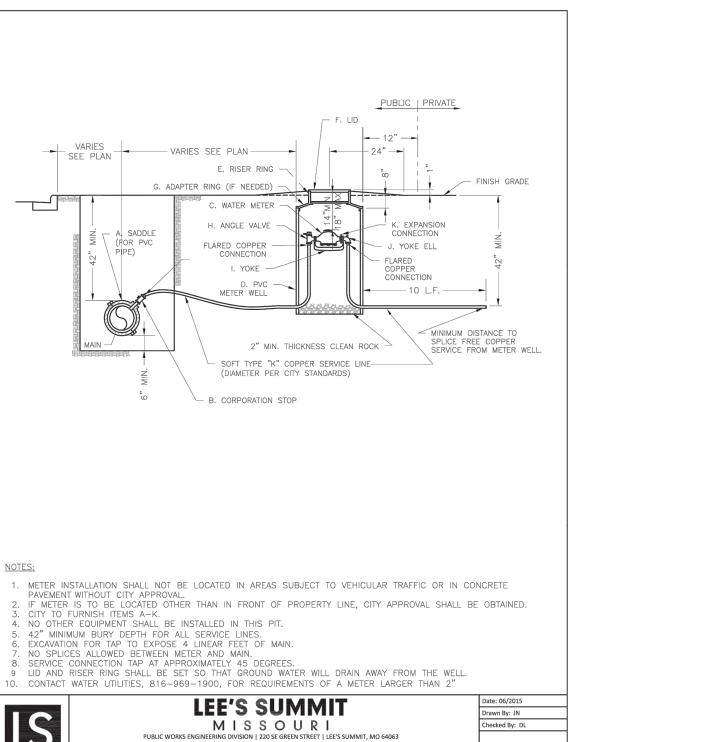
C-7.2

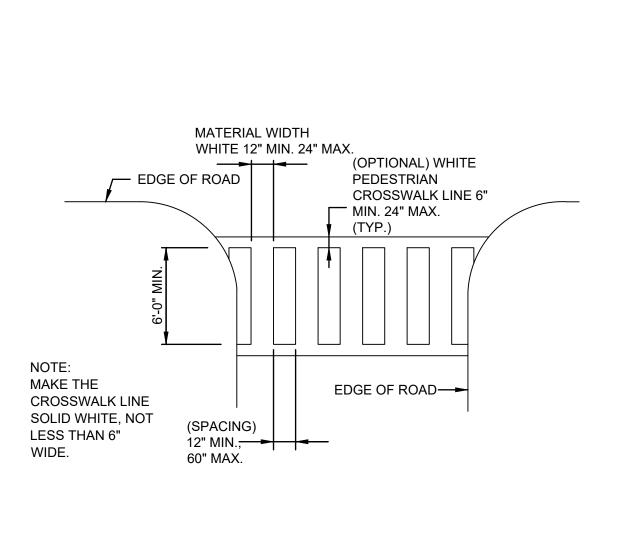


# B SERVICE CONNECTION/METER WELL C7.2 N.T.S.









CUT A NOTCH IN TOP OF VALVE

BOX AND PLACE 2' OF TRACER WIRE COILED INSIDE VALVE COVER BOX

\_\_\_\_ WELD (TYP. 8 PLACES)

ALIGNMENT WASHER 1/8"

MIN. STEEL 4-1/2"Ø

1"Ø COLD ROLLED STEEL

<del>~~~~</del>~

**LEE'S SUMMIT** 

MISSOURI

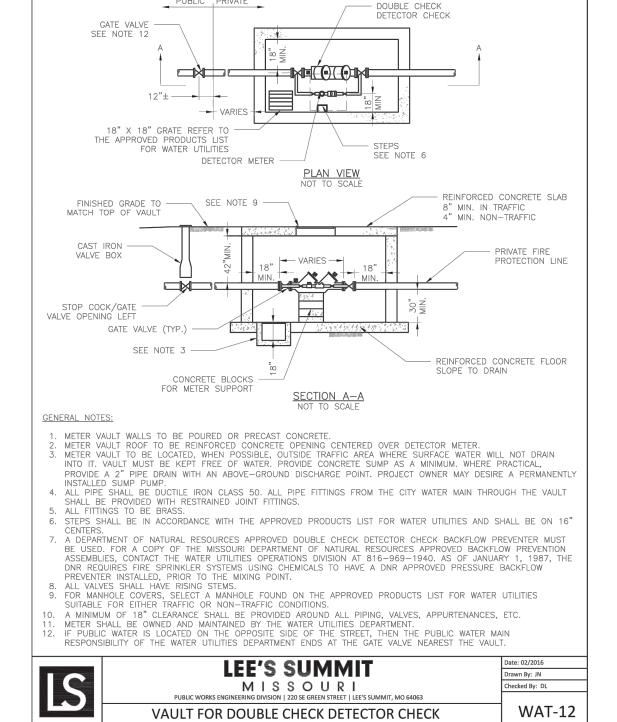
VALVE STEM EXTENSION AND VALVE BOX

A VALVE STEM EXTENSION AND VALVE BOX C7.2 N.T.S.

SOCKET FROM 1/4" STEEL INSIDE DIMENSIONS 2-3/16" X 3" DEEP DO NOT TIGHTEN SET SCREW TO 2" OPERATING NUT

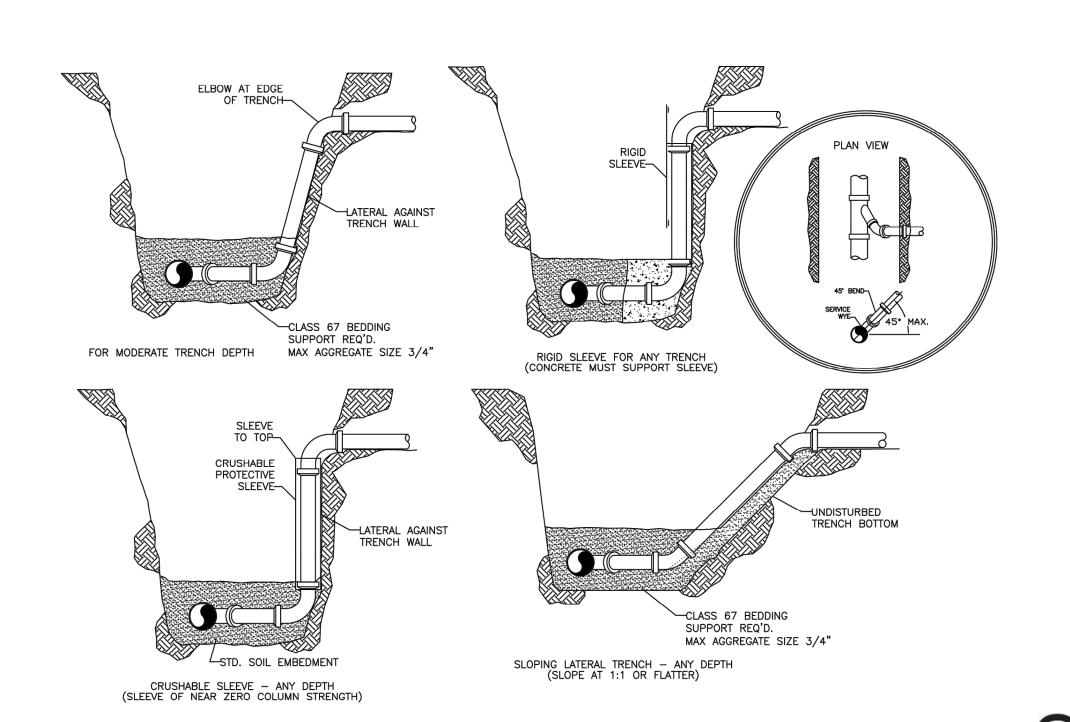
WAT-9



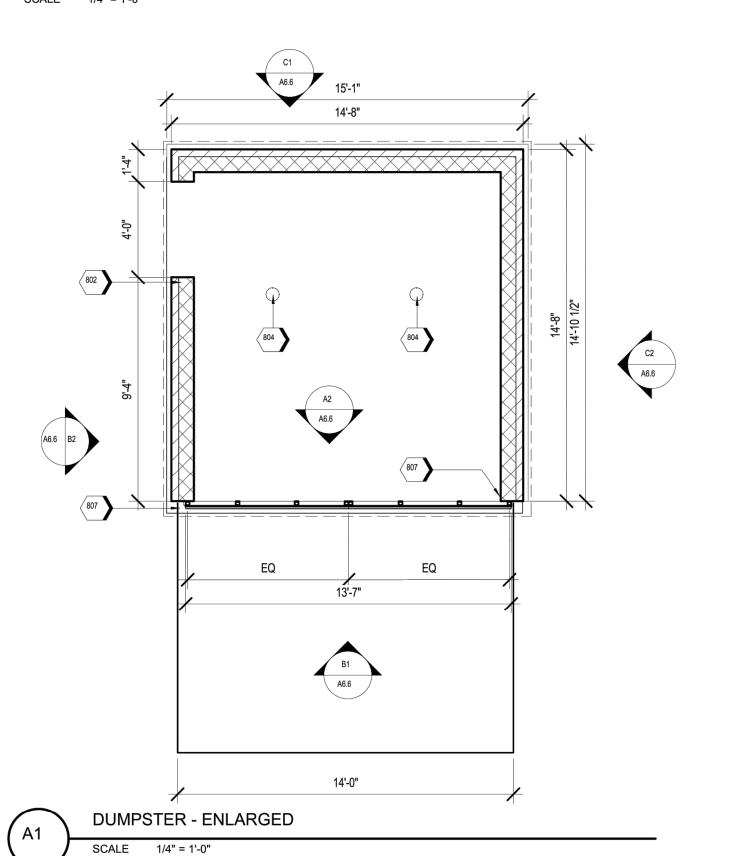


# C VAULT FOR DOUBLE CHECK DETECTOR CHECK C7.2 N.T.S.

# SANITARY SEWER SERVICE WYE







RELEASED FOR CONSTRUCTION
As Noted on Plan Review

SIR UPD 05758/2023 09/13/21

60% SET 02/24/22 RESPONSE TO CITY 03/29/22 COMMENTS I 06/29/22 DEVELOPMENT SET RESPONSE TO 08/30/22 FDP COMMENTS RESPONSE TO 09/29/22 FDP COMMENTS II 10/24/22 FDP COMMENTS III 11/03/22 FDP COMMENTS IV PT22M PROGRESS SET 03/08/23

ISSUE FOR PERMIT 03/15/23

NOTICE

<u>PLAN</u>

(OPTIONAL 1;x3" HOLE)り

OPENING 2'-0" (MIN.) 1'-0" 2'-0" (MIN.)

7'-0" (MIN.)

8'-0" (MAX.)

**ELEVATION** 

- PAINTED STRIPES ----

INSTALLATION PLAN

B PRE-CAST CONCRETE WHEEL STOP C7.3 N.T.S.

CENTERLINE PARKING STALL
WHEEL STOP TO BE

PAINTED YELLOW

DRAINAGE DRAINAGE

— 1/2" MAX. CLEARANCE

2 - #3

3/8" TOOLED EDGE (TYP.)

SECTION 1

GROUT HOLE FULL 6 1/2" / HOLE FOR 1/2" STD.

- 2'-6" TO OF PARKING STALL

**EDGE** 

(MIN.)

END VIEWS

1/2" STD PIPE OR 3/4" REINF. ROD SHALL BE PLACED PRIOR TO

SURFACING OR IN A HOLE DRILLED IN THE FINISHED SURFACE WITH A

TIGHT FIT OBTAINED BY AN APPROVED METHOD, OR DRIVEN

INTO THE SURFACING

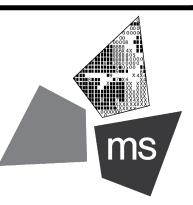
PIPE OR 3/4" DIA.

REINFORCED ROD

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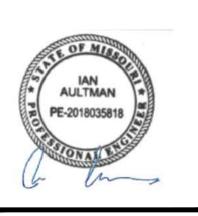
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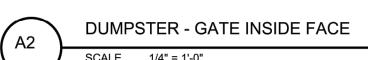


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PROJECT NO: 40497-21

DRAWING

C-7.3

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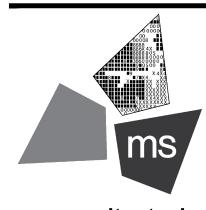


	60% SET	01/24/22
I	PDP APPLICATION TO CITY	02/24/22
I	RESPONSE TO CITY COMMENTS I	03/29/22
I	FINAL DEVELOPMENT SET	06/29/22
I	RESPONSE TO FDP COMMENTS	08/30/22
I	RESPONSE TO FDP COMMENTS II	09/29/22
I	RESPONSE TO FDP COMMENTS III	10/24/22
I	RESPONSE TO FDP COMMENTS IV	11/03/22
I	PT22M PROGRESS SET	03/08/23
ı	ISSUE FOR PERMIT	03/15/23

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3 OF 5

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PROJECT

fax 614.898.7570

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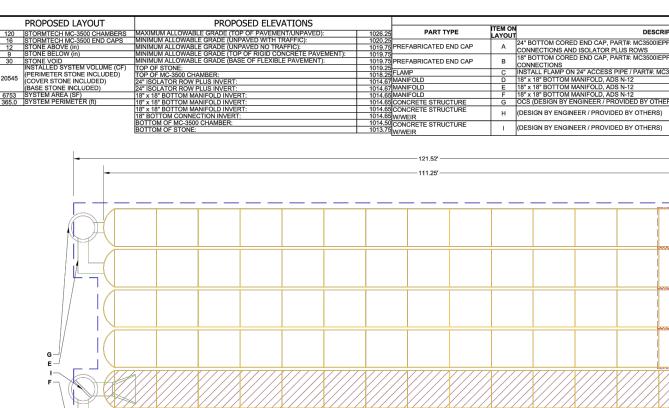
**DETENTION BASIN DETAILS** 

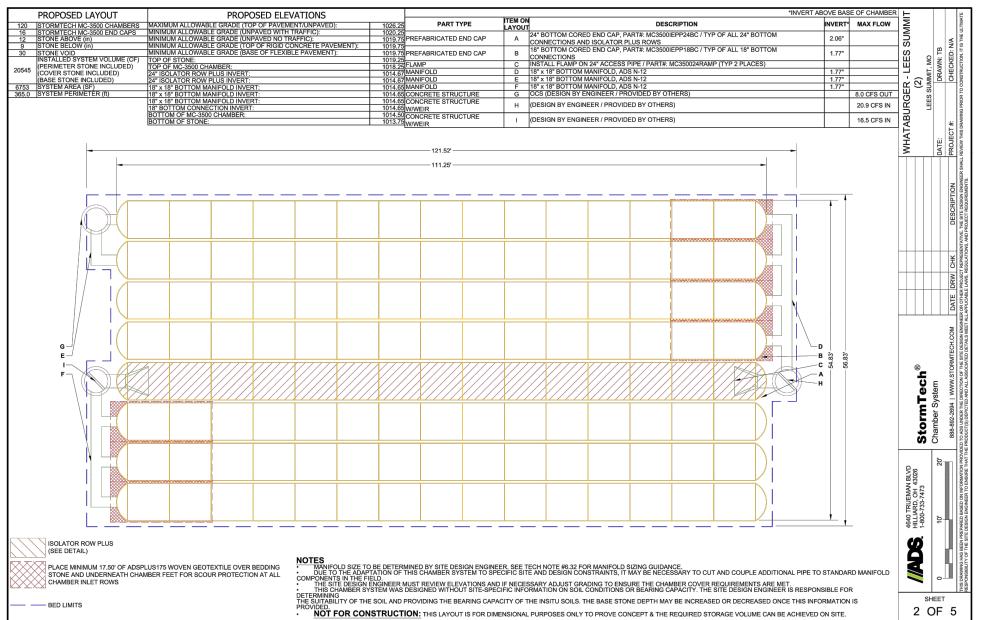


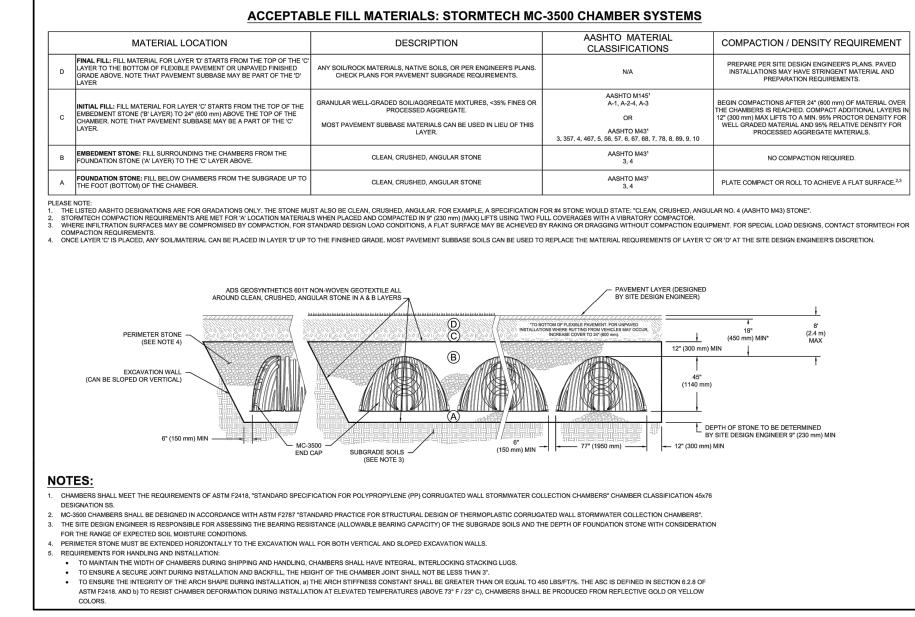
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PROJECT NO	40497-2

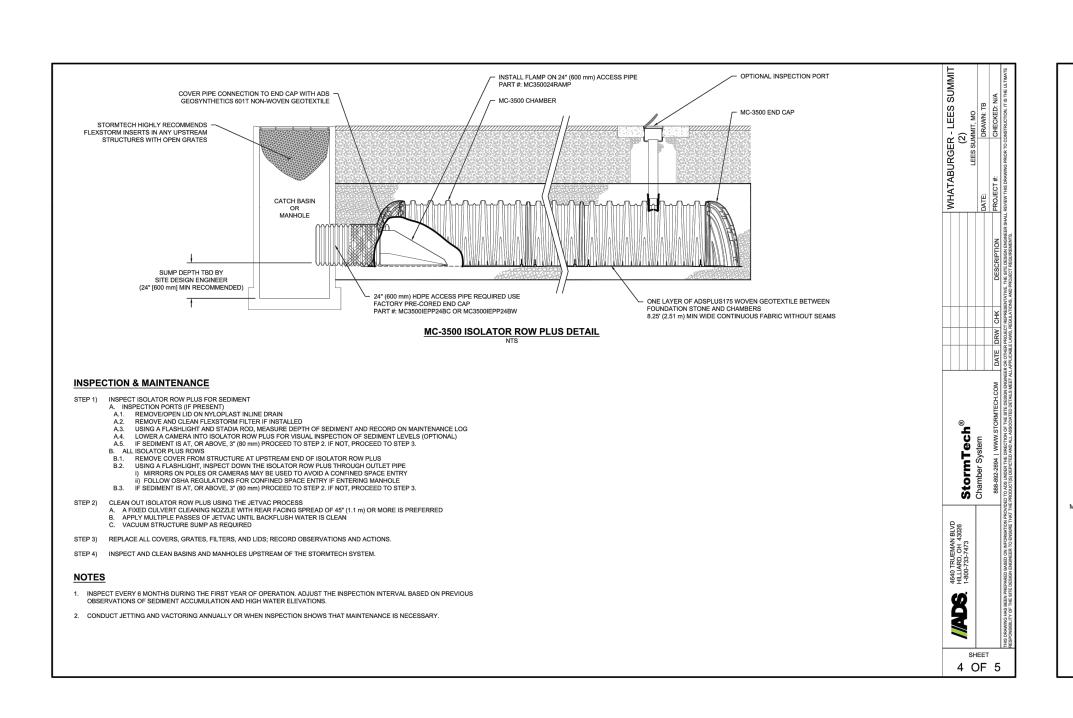
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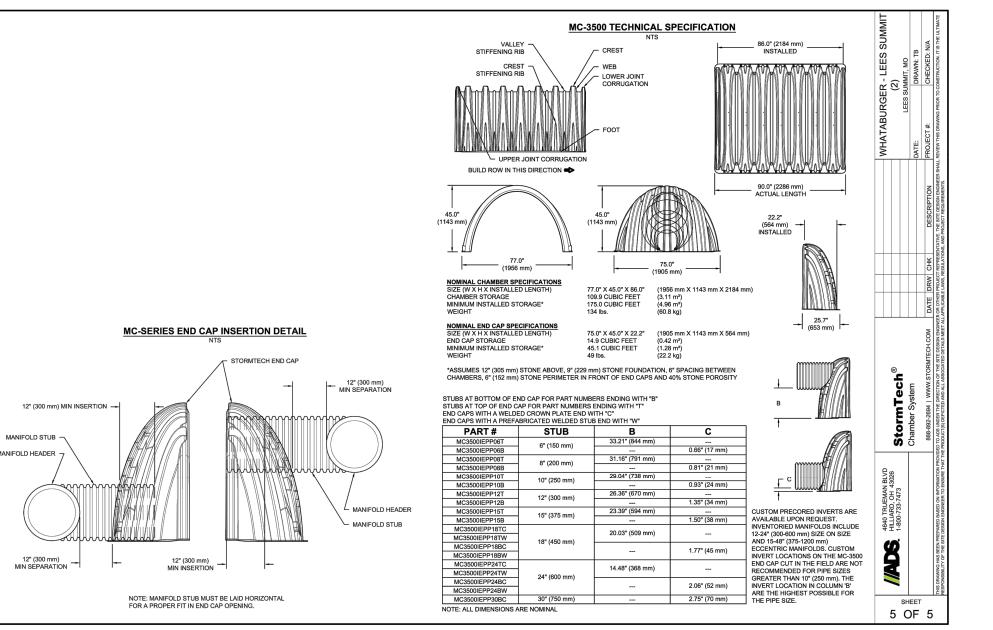
C-7.4















#### WHATABURGER - LEES SUMMIT (2) LEES SUMMIT, MO

#### MC-3500 STORMTECH CHAMBER SPECIFICATIONS

- . CHAMBERS SHALL BE STORMTECH MC-3500.
- CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45x76 DESIGNATION SS. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
- THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFICD IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
- CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787
  "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
  LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LOAD ON MINIMUM COVER 2)
  MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:

  TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.

  TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
- THAN 3".

  TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE
  GREATER THAN OR EQUAL TO 450 LBS/F17%. THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. AND b) TO RESIST CHAMBER
  DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED
  FROM REFLECTIVE GOLD OR YELLOW COLORS.
- ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:

  THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.

  THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTIM F7877 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.

  THE TEST DERIVED CREEP MODILILIS AS SPECIFIED IN ASTIM F7818 SHALL BE LISED FOR PERMANENT DEAD LOAD DESIGN
- LATE D PRILODE DESIGN SPECIFICATIONS FOR THE MODELASTIC PIPE.

  THE TEST DERIVED CREEP MODILUS AS SPECIFIED IN ASTIM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN. 9. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.
- . STORMTECH MC-3500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE". THE USE OF EQUIPMENT OVER MC-3500 CHAMBERS IS LIMITED:
   NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
   NO RUBBER TIRED LOADER, DUMP TRUCK, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMITECH MC-3500/MC-4500 CONSTRUCTION GUIDE".

   WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMITECH MC-3500/MC-4500 CONSTRUCTION GUIDE". 3. FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

NOTES FOR CONSTRUCTION EQUIPMENT

USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY USING THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF MC-3500 CHAMBER SYSTEM

STORMTECH MC-3500 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A
PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.

CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:

STONESHOOTER LOCATED OFF THE CHAMBER BED.
BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.

4. THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.

7. INLET AND OUTLET MANIFOLDS MUST BE INSERTED A MINIMUM OF 12" (300 mm) INTO CHAMBER END CAPS.

5. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE. 6. MAINTAIN MINIMUM - 6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.

2. STORMTECH MC-3500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".

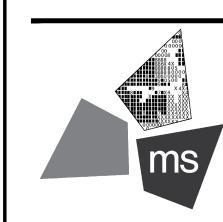
EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE MEETING THE AASHTO M43 DESIGNATION OF #3 OR #4.

9. STONE MUST BE PLACED ON THE TOP CENTER OF THE CHAMBER TO ANCHOR THE CHAMBERS IN PLACE AND PRESERVE ROW SPACING. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER. ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

ISSUE FOR PERMIT 03/15/23

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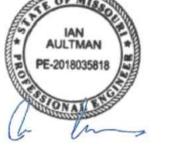
PROJECT

PROPOSED PT22M BUILDING

204 SW M150 HWY LEE'S SUMMIT, MO 64081

SHEET TITLE

SITE DETAILS



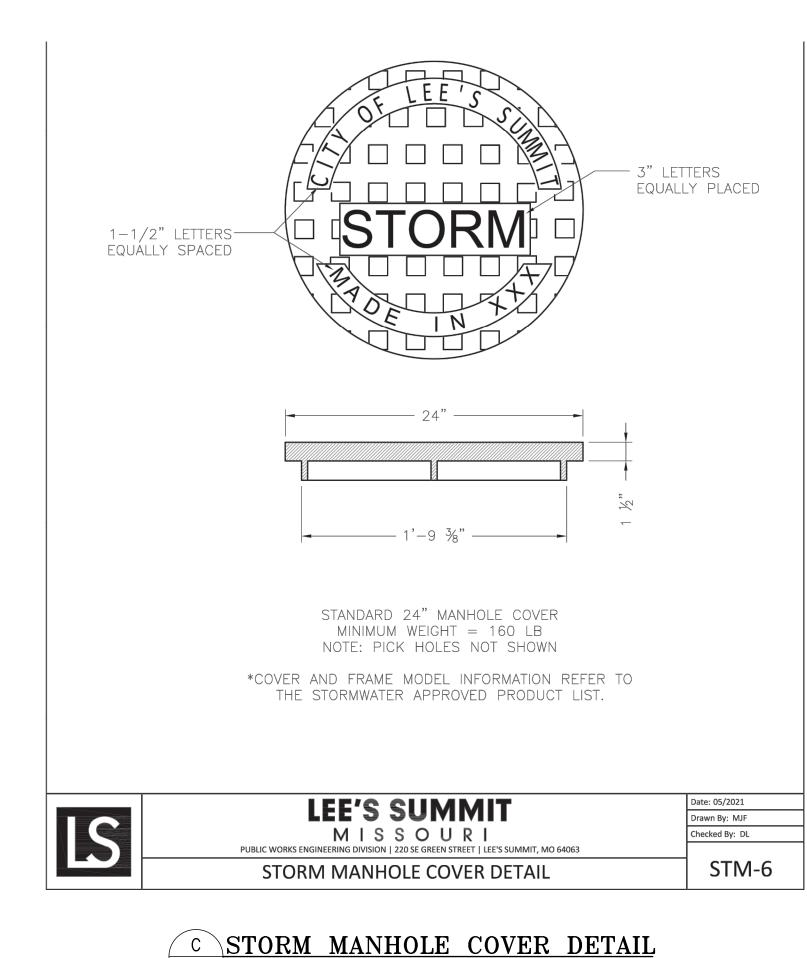
DRAWN BY: CHECKED BY: 40497-21 PROJECT NO:

DRAWING

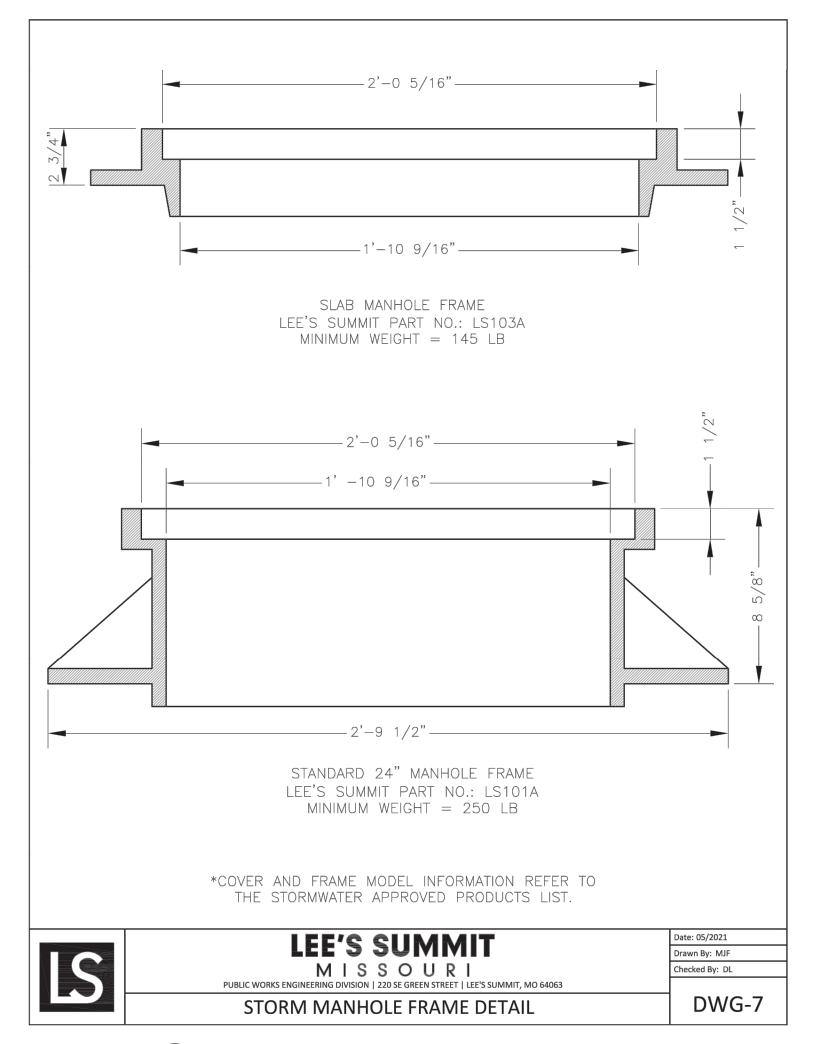
C-7.5

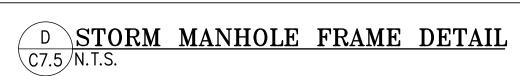
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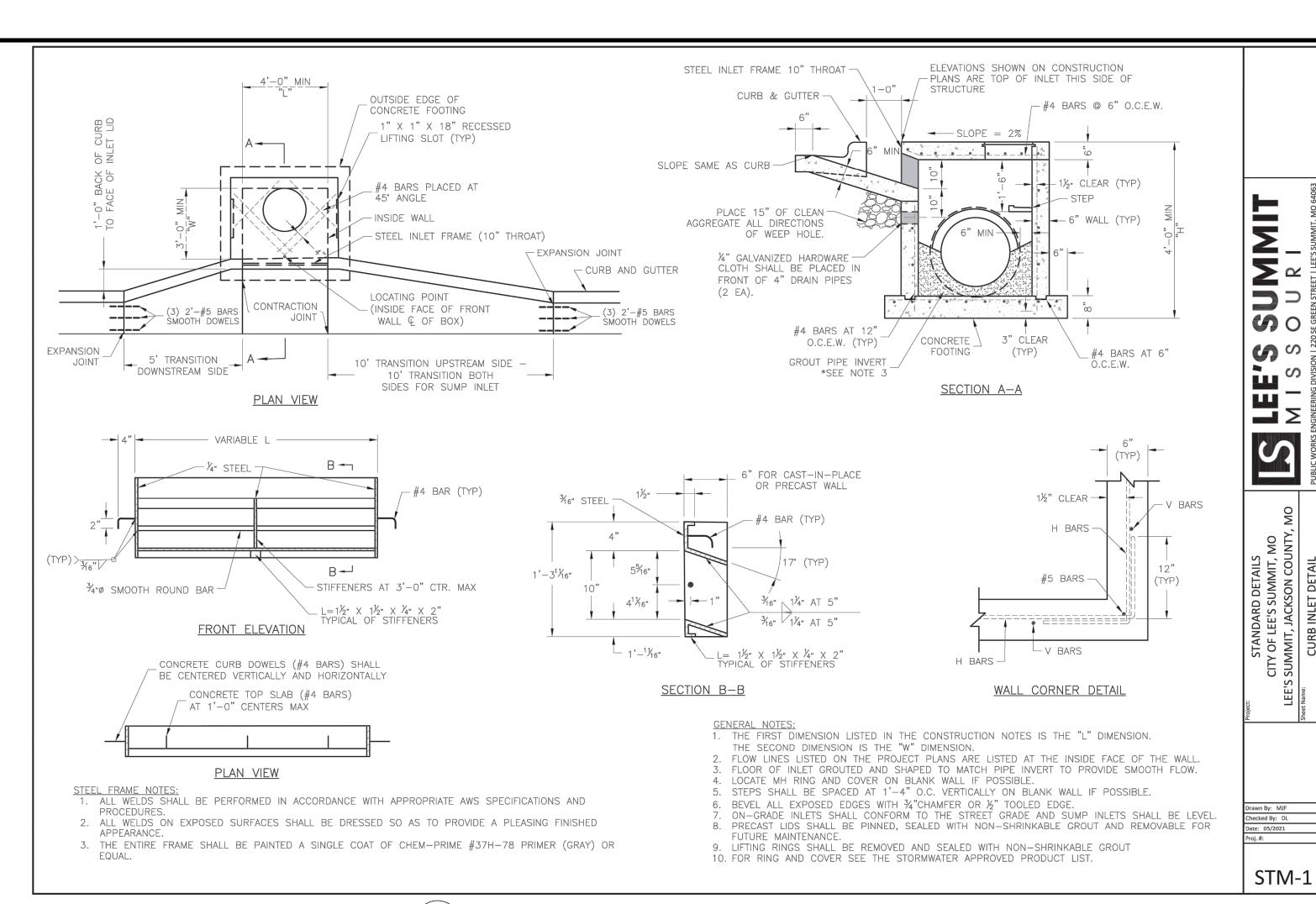
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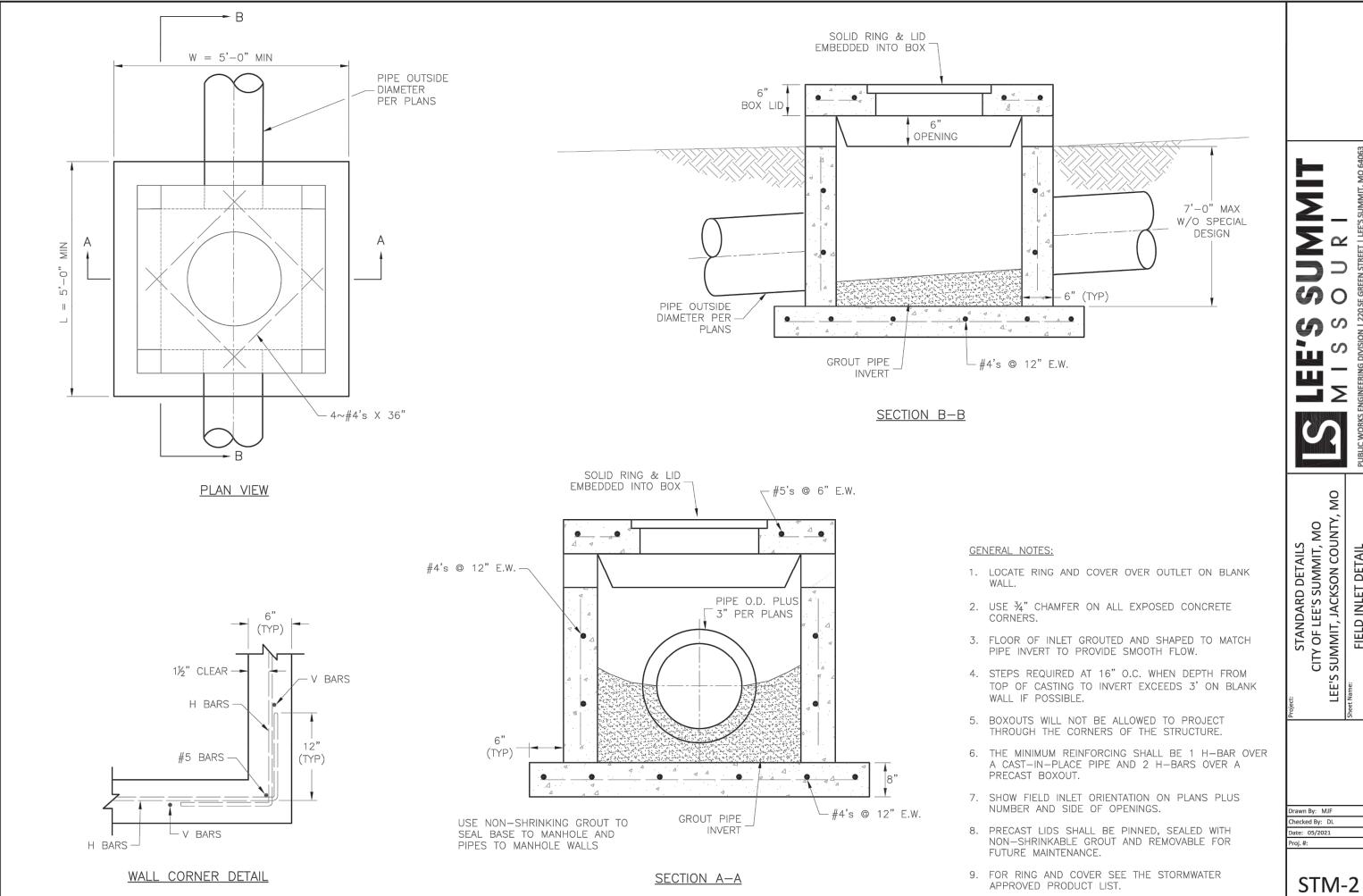
# C7.5 N.T.S. COVER DETAIL







# A CURB INLET DETAIL



# B FIELD INLET DETAIL C7.5 N.T.S.

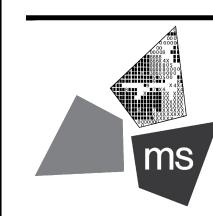
veRED/IBEON & Dek VEC/EDE DGRIDRITIONEN 1 Lee's Summit, Missouri SIR UPD**05768/2023** 09/13/21 60% SET

02/24/22 RESPONSE TO CITY 03/29/22 COMMENTS I 06/29/22 DEVELOPMENT SET **RESPONSE TO** 08/30/22 **FDP COMMENTS** RESPONSE TO 09/29/22 FDP COMMENTS II FDP COMMENTS III 11/03/22 FDP COMMENTS IV PT22M PROGRESS SET 03/08/23

ISSUE FOR PERMIT 03/15/23

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PROJECT

PROPOSED PT22M BUILDING

204 SW M150 HWY LEE'S SUMMIT, MO 64081

SHEET TITLE

SITE DETAILS

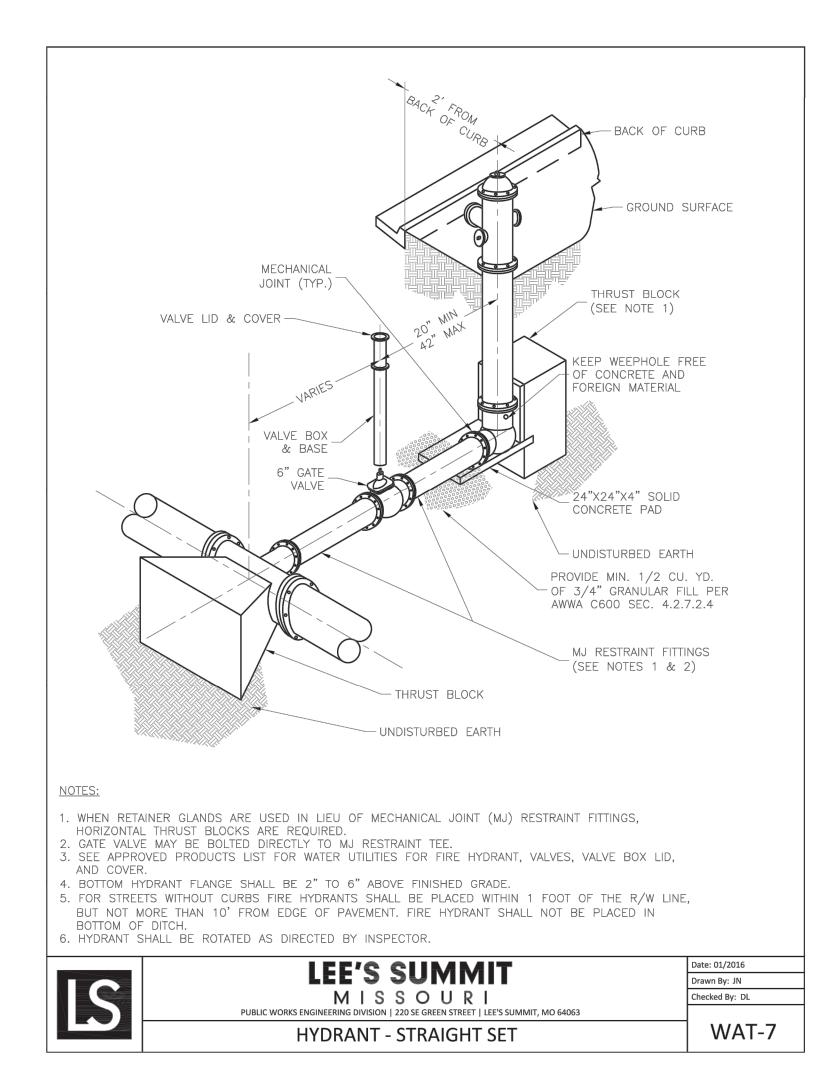
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DRAWN BY: CHECKED BY: 40497-21

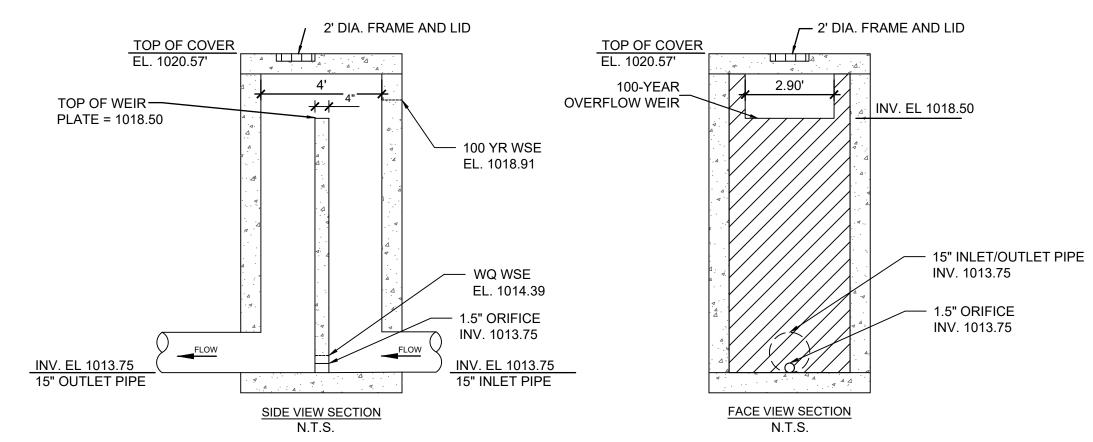
DRAWING

PROJECT NO:

C-7.6



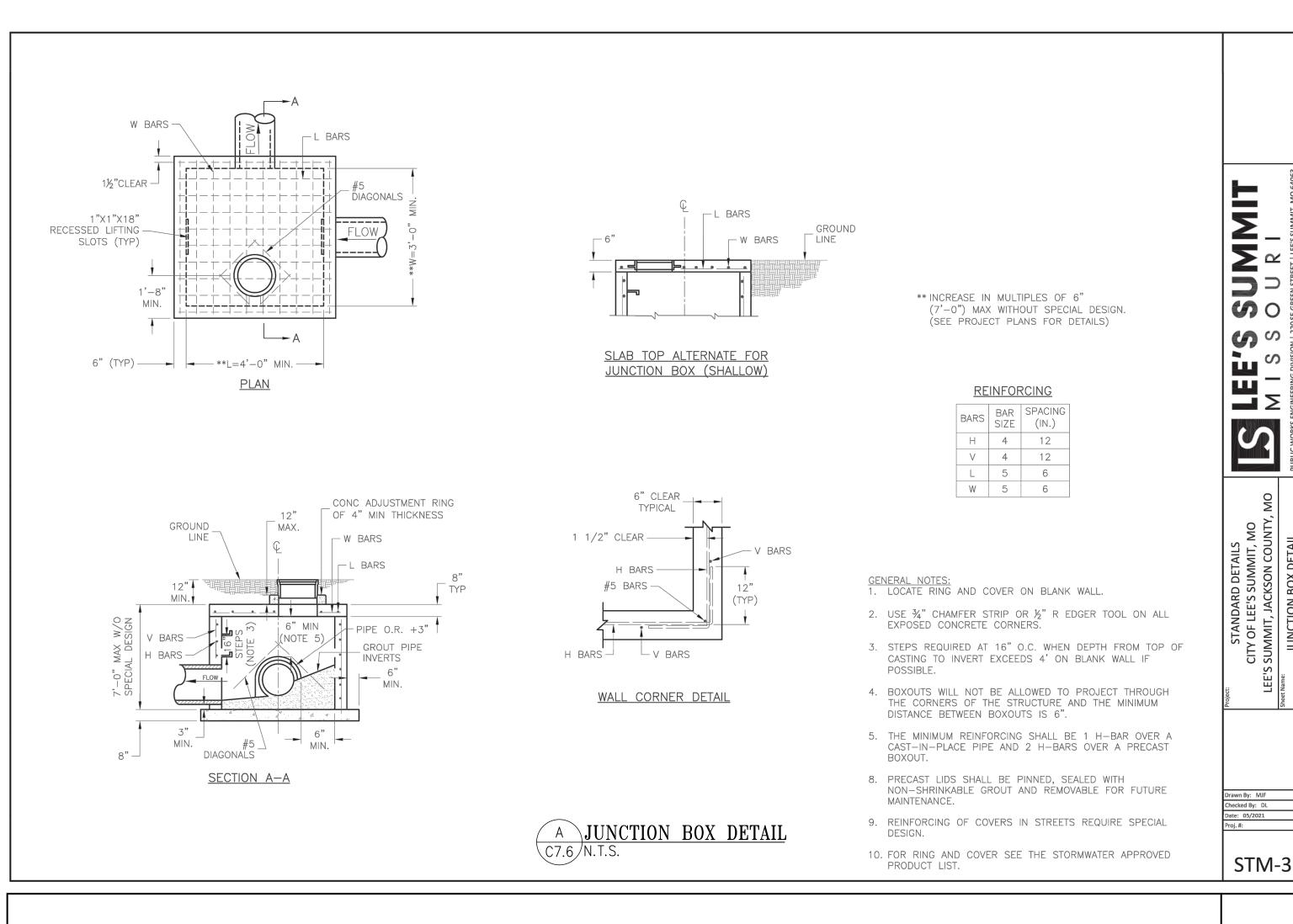
B FIRE HYDRANT DETAIL C7.6 N.T.S.

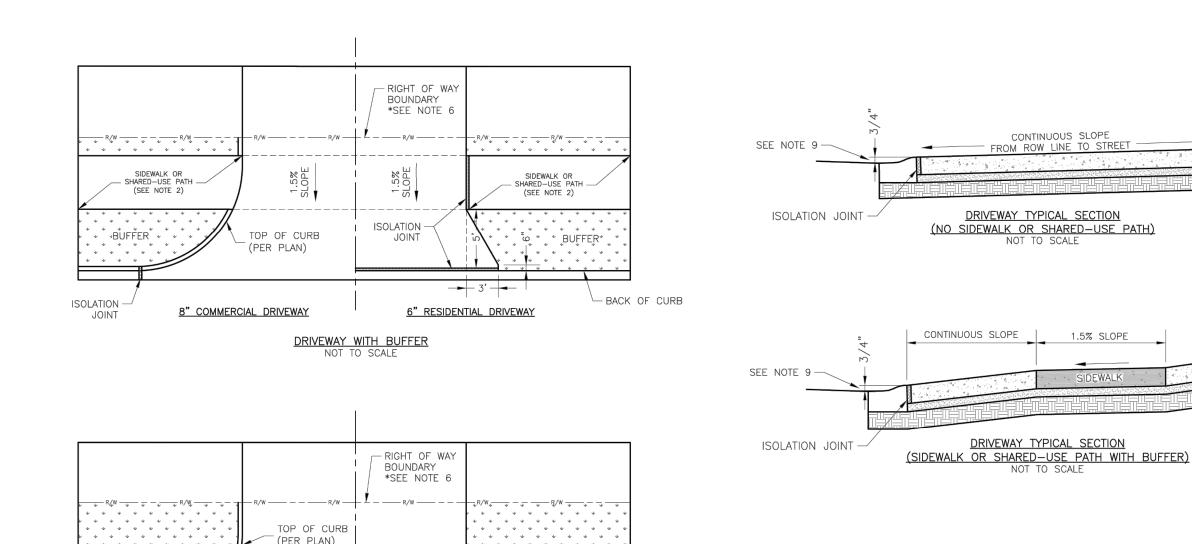


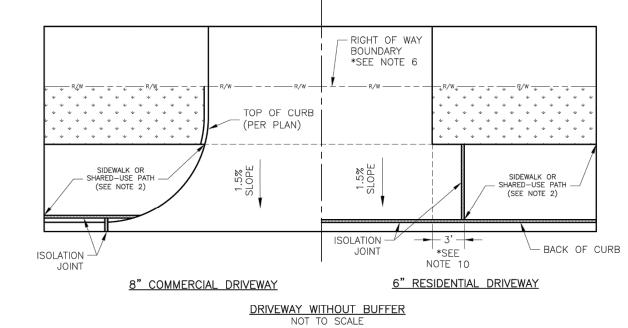
NOTES: 1. CONTROL STRUCTURE SHALL BE A STANDARD LEE'S SUMMIT JUNCTION BOX, MODIFIED AS SHOWN. 2. PROVIDE MANHOLE STEPS ON ACCESS SIDE OF WEIR WALL.

DOUTLET CONTROL STRUCTURE C7.6 N.T.S.









1.5% SLOPE 6" CONC. RESIDENTIAL 8" CONC. COMMERCIAL SEE NOTE 9 -" COMPACTED AGGREGATE COMPACTED STABLE SUBGRADE ISOLATION JOINT — DRIVEWAY TYPICAL SECTION (SIDEWALK OR SHARED-USE PATH WITHOUT BUFFER)

NOT TO SCALE

6" CONC. RESIDENTIAL

COMPACTED STABLE

6" CONC. RESIDENTIAL 8" CONC. COMMERCIAL

\_ COMPACTED STABLE SUBGRADE

4" COMPACTED

SUBGRADE

AGGREGATE

AGGREGATE

8" CONC. COMMERCIAL

**(1)** 0

S S

S S

ked By: DL GEN-1

GENERAL NOTES

1. SUBGRADE SHALL BE STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.

1. SUBGRADE SHALL BE STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.

1. SUBGRADE SHALL BE STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE. ALL DRIVE APPROACHES SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG) FOR SLOPE REQUIREMENTS WHEN SIDEWALK IS REQUIRED (SEE ADA RAMP RETROFIT DETAIL GEN-3B, SIDEWALK/SHARED USE PATH RAMP AT

JOINT AT BACK OF CURB LINE SHALL BE AN ISOLATION JOINT FOR RESIDENTIAL DRIVEWAYS.
KCMMB 4K CONCRETE MIX IS REQUIRED FOR ALL CURBS.
COMMERCIAL DRIVEWAYS, IN THE PUBLIC RIGHT OF WAY, SHALL BE KCMMB 4K CONCRETE MIX.

RESIDENTIAL DRIVEWAYS, IN THE PUBLIC RIGHT OF WAY, KCMMB 4K CONCRETE MIX IS RECOMMENDED. OTHER CONCRETE MIXES NEEDS TO BE APPROVED BY CITY INSPECTOR.
A JOINT MUST BE INSTALLED AT THE RIGHT OF WAY BOUNDARY FOR PROPERTY DELINEATION. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING. 34" FROM TOP OF CURB TO FLOWLINE AT DRIVEWAY (TYPE CG-1 CURB ONLY). MUST MAINTAIN ORIGINAL FLOWLINE OF CURB.

O. SIDEWALK ADJOINING CURB SHALL BE 6" THICK, EXTENDING 3' FROM THE DRÍVEWAY. 1. THE MAXIMUM WIDTH OF A RESIDENTIAL DRIVEWAY IS 36 FEET WITHIN THE RIGHT OF WAY.

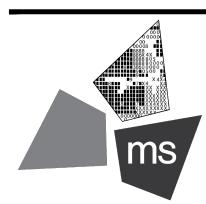
C ENTRANCE DETAIL C7.6 N.T.S.

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FDP COMMENTS IV

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PROJECT

PROPOSED PT22M

204 SW M150 HWY LEE'S SUMMIT, MO 64081

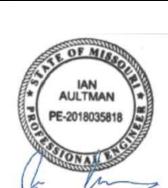
FIRE PROTECTION PLAN



CHECKED BY:

BUILDING

SHEET TITLE



PROJECT NO:

DRAWING

Know what's **below**.

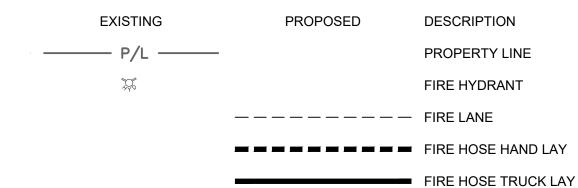
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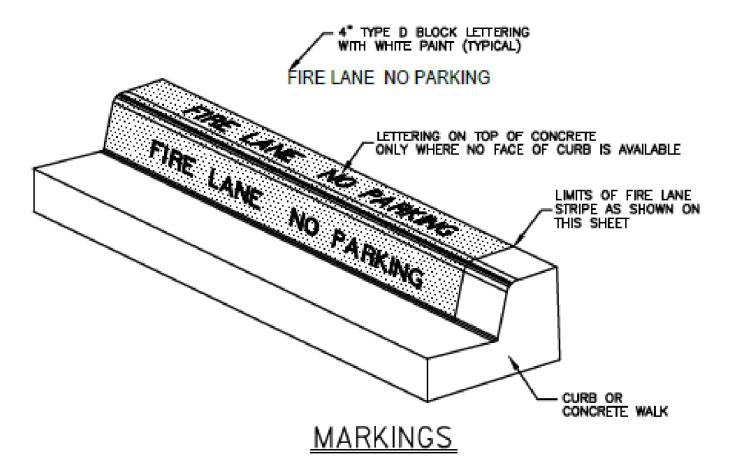
C-8.0

**GENERAL NOTES:** 

DETAILS SHOWN ON THIS SHEET ARE SCHEMATIC. CONTRACTOR TO CONFIRM MARKINGS CONFORM TO ALL CODES AND REGULATIONS.

## **LEGEND**



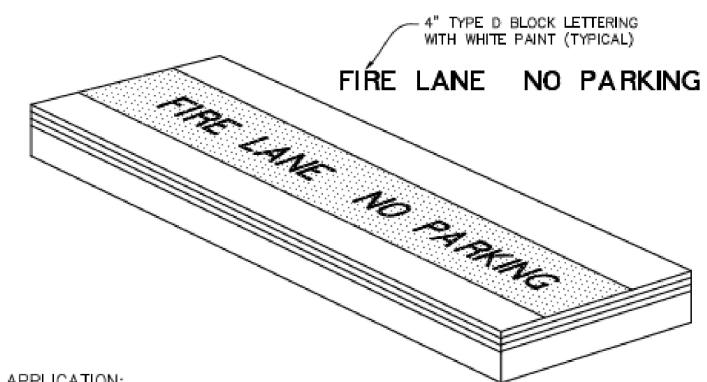


#### APPLICATION:

- LOW CURB (HEADER CURB) OR CONCRETE PAVEMENT: PAINT RED LÂNE STRIPE AND WHITE LETTERS ON TOP OF CURB
- 15 FEET SPACING BETWEEN THE BEGINNING OF THE WHITE LETTERING.

# FIRE LANE STRIPING DETAIL

NOT-TO-SCALE



APPLICATION:

1. CONTRACTOR SHALL COORDINATE WITH FIRE INSPECTOR FOR STRIPING

2. PAINT A 6" WIDE RED STRIPE LOCATED 3" OFF EDGE OF PAVEMENT WITH 4" WHITE LETTERING ON RED STRIPE.

3. SEE SITE, STRIPING AND DIMENSIONAL CONTROL PLAN FOR CURB TYPES & 4. 15 FOOT SPACING BETWEEN THE BEGINNING OF THE WHITE LETTERING.

TYPICAL FIRE LANE MARKING DETAIL

NOT TO SCALE

SCALE: 1"=20'

\_HYDRANT

IE=1007.36

C TROM TROM

(a. prauorau

±165 LF HOSE LAY

±121 LF HOSE LAY

SUMMITCREST DRIVE 60' PUBLIC R/W

DOC. # 2014E0080868

±141 LF HOSE LAY -

20' PARKING SETBACK

15' BUILDING SETBACK

PROPOSED FIRE HYDRANT.

SEE PUBLIC IMPROVEMENT

PLANS FOR DETAILS.

PROPOSED WATER MAIN EXTENSION

PROPOSED 5' SIDEWALK

PT22M

BUILDING

3,318 sq.ft. F.F.E.= 1023.25

DOC. # 2009E0045651

**EASEMENT** 

SEE PUBLIC IMPROVEMENT PLANS FOR

ISSUE FOR PERMIT 03/15/23

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FDP COMMENTS IV





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PROJECT

PROPOSED PT22M BUILDING

204 SW M150 HWY LEE'S SUMMIT, MO 64081

SHEET TITLE

STORMWATER POLLUTION PREVENTION PLAN CONSTRUCTION



CHECKED BY: PROJECT NO:

DRAWING

Know what's **below**.

Call before you dig.

C-9.0

**KEYED NOTES:** 

(1) CONSTRUCTION ENTRANCE. SEE DETAIL ON SHEET C-10.2.

(2) TEMPORARY SILT FENCE, SEE DETAIL ON SHEET C-10.2.

CONSTRUCTION SEQUENCE
THE ORDER OF MAJOR ACTIVITIES WILL BE AS FOLLOWS:

1. PRE-CONSTRUCTION MEETING

MANUAL SHALL PREVAIL.

2. BEFORE ANY SITE GRADING ACTIVITIES BEGIN a. INSTALL PERIMETER SILT FENCES

b. INSTALL INLET PROTECTING ON EXISTING INLETS c. CONSTRUCT TEMPORARY CONSTRUCTION ENTRANCES

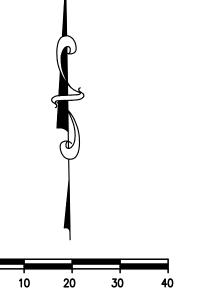
\*ALL CONSTRUCTION SHALL FOLLOW THE CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL AS ADOPTED BY ORDINANCE 5813. WHERE DISCREPANCIES EXIST BETWEEN THESE PLANS AND THE DESIGN AND CONSTRUCTION MANUAL, THE DESIGN AND CONSTRUCTION

\*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.

**LEGEND** 

**EXISTING** PROPOSED DESCRIPTION ———— SILT FENCE INLET PROTECTION CONCRETE WASHOUT CONSTRUCTION

ENTRANCE



SCALE: 1"=20'

TOP=1017.83

IE = 1012.48

CURB INLET

PTOP=1018.53

18"CPP — 18"

TOPSOIL STOCKPILE

M-150 HIGHWAY

SUMMITCREST DRIVE

DOC. # 2014E0080868

IE=1015.11

60' PUBLIC R/W

FDP COMMENTS IV

ISSUE FOR PERMIT



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PROJECT

phone 614.898.7100 fax 614.898.7570

PROPOSED PT22M BUILDING

204 SW M150 HWY LEE'S SUMMIT, MO 64081

SHEET TITLE

STORMWATER POLLUTION PREVENTION PLAN **DURING AND POST** CONSTRUCTION



CHECKED BY: 40497-21 PROJECT NO:

DRAWING

Know what's **below**.

Call before you dig.

C-9.1

**KEYED NOTES:** 

CONCRETE WASHOUT, SEE DETAIL ON SHEET C-10.2.

INLET PROTECTION. SEE DETAILS ON SHEET C-10.3.

TEMPORARY SILT FENCE. SEE DETAIL ON SHEET C-10.2.

CONSTRUCTION SEQUENCE

THE ORDER OF MAJOR ACTIVITIES WILL BE AS FOLLOWS:

1. BEGIN SITE GRADING AND TOPSOIL STRIPPING

a. ESTABLISH TOPSOIL STOCK PILE WITHIN SILT FENCE PERIMETER b. STABILIZE DENUDED AREAS AND STOCKPILES WITHIN 14 DAYS OF LAST CONSTRUCTION ACTIVITY IN THAT AREA c. INSTALL EROSION CONTROL MATTING AT LOCATIONS INDICATED ON PLAN

CONSTRUCTION ENTRANCE. SEE DETAIL ON SHEET C-10.2.

2. INSTALL UTILITIES, SANITARY SEWERS, WATER SERVICES, AND STORM SEWERS

3. BEGIN CONSTRUCTION OF BUILDING FOUNDATION AND STRUCTURE

4. INSTALL CURBS, PREPARE PAVEMENT SUBGRADE AND PROVIDE GOOD AGGREGATE BASE TO AREAS TO BE PAVED

5. PAVE AREAS AND EXTERIOR BUILDING CONSTRUCTION

6. FINAL GRADING AND PERMANENT SEEDING OF NON-PAVED AREAS OF THE SITE WITHIN 7 DAYS OF FINISHING FINAL GRADE

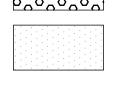
7. ONCE 70% VEGETATIVE COVERAGE IS ACHIEVED, REMOVE EROSION PROTECTION

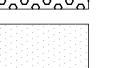
\*ALL CONSTRUCTION SHALL FOLLOW THE CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL AS ADOPTED BY ORDINANCE 5813. WHERE DISCREPANCIES EXIST BETWEEN THESE PLANS AND THE DESIGN AND CONSTRUCTION MANUAL, THE DESIGN AND CONSTRUCTION MANUAL SHALL PREVAIL.

\*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.

# **LEGEND**

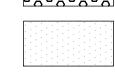
**EXISTING** PROPOSED DESCRIPTION —1015 — CONTOUR — SF — SILT FENCE **INLET PROTECTION** CONCRETE WASHOUT CONSTRUCTION ENTRANCE



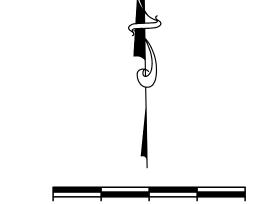


PERMANENT

STABILIZATION AREA







SCALE: 1"=20'

TOP̂=1017.83

IE=1012.48

IE = 102Q.82

SUMMITCREST DRIVE

60' PUBLIC R/W

DOC. # 2014E0080868

TOPSOIL STOCKPILE

1.85%

/ 3,318 sq.ft. F.F.E.= 1023.25

M-150 HIGHWAY

DOC. # 2009E0045651

OTHER SEDIMENT AND EROSION CONTROL NOTES

- TEMPORARY EROSION CONTROLS WILL BE APPLIED PRIOR TO ONSET OF WINTER WEATHER FOR DISTURBED AREAS THAT WILL BE LEFT IDLE OVER WINTER.
- PERMANENT EROSION CONTROLS WILL BE APPLIED WITHIN 7 DAYS FOR DISTURBED AREAS REMAINING DORMANT FOR OVER

  1 YEAR OR AT FINAL CRAPE.
- SEDIMENT CONTROL DEVICES WILL BE IMPLEMENTED FOR ALL AREAS REMAINING DISTURBED OVER 7 DAYS.

#### ADDITIONAL BMP'S

<u>OPEN BURNING:</u> NO MATERIALS MAY BE BURNED WHICH CONTAIN RUBBER, GREASE, ASPHALT, OR PETROLEUM PRODUCTS SUCH AS TIRES, CARS, AUTO PARTS, PLASTICS OR PLASTIC COATED WIRE. OPEN BURNING IS NOT ALLOWED IN RESTRICTED AREAS. RESTRICTED AREAS ARE DEFINED AS:

- WITHIN CORPORATION LIMITS
- 2. WITHIN 1,000 FEET OF A MUNICIPAL CORPORATION
- 3. WITHIN A ONE MILE ZONE OUTSIDE OF A CORPORATION OF 10,000 OR MORE

OUTSIDE THE RESTRICTED AREA, NO OPEN BURNING CAN TAKE PLACE WITHIN 1,000 FEET OF AN INHABITED BUILDING LOCATED OFF THE PROPERTY WHERE THE FIRE IS SET. OPEN BURNING IS PERMISSIBLE IN A RESTRICTED AREA FOR THE FOLLOWING ACTIVITIES: HEATING TAR, WELDING AND ACETYLENE TORCHES, SMUDGE POTS AND SIMILAR OCCUPATIONAL NEEDS, AND HEATING OR WARMTH FOR OUTDOOR BARBEQUES. OUTSIDE OF RESTRICTED AREAS, OPEN BURNING IS PERMISSIBLE FOR LANDSCAPE WASTES (PLANT MATERIAL), LAND-CLEARING WASTES (PLANT MATERIAL, WITH PRIOR WRITTEN PERMISSION FROM EPA), AND AGRICULTURAL WASTES (MATERIAL GENERATED BY CROP, HORTICULTURAL, OR LIVESTOCK PRODUCTION PRACTICES.

DUST CONTROL/SUPPRESSANTS: DUST CONTROL IS REQUIRED TO PREVENT NUISANCE CONDITIONS. DUST CONTROLS MUST BE USED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATION AND NOT BE APPLIED IN A MANNER, WHICH WOULD RESULT IN A DISCHARGE TO WATERS OF THE STATE. ISOLATION DISTANCES FROM BRIDGES, CATCH BASINS, AND OTHER DRAINAGE WAYS MUST BE OBSERVED. APPLICATION (EXCLUDING WATER) MAY NOT OCCUR WHEN PRECIPITATION IS IMMINENT AS NOTED IN THE SHORT TERM FORECAST. USED OIL MAY NOT BE APPLIED FOR DUST CONTROL.

AIR PERMITTING REQUIREMENTS: ALL CONTRACTORS AND SUB CONTRACTORS MUST BE MADE AWARE THAT CERTAIN ACTIVITIES ASSOCIATED WITH CONSTRUCTION WILL REQUIRE AIR PERMITS. ACTIVITIES INCLUDING BUT NOT LIMITED TO MOBILE CONCRETE BATCH PLANTS, MOBILE ASPHALT PLANTS, CONCRETE CRUSHERS, LARGE GENERATORS, ETC., WILL REQUIRE SPECIFIC MISSOURI EPA AIR PERMITS FOR INSTALLATION AND OPERATION. THESE ACTIVITIES MUST SEE AUTHORIZATION FROM THE CORRESPONDING OF MISSOURI EPA. NOTIFICATION FOR RESTORATION AND DEMOLITION MUST BE SUBMITTED TO MISSOURI EPA FOR ALL COMMERCIAL SITES TO DETERMINE IF ASBESTOS CORRECTIVE ACTIONS ARE REQUIRED.

WASTE DISPOSAL: THE CONTRACTOR SHALL PROVIDE LITTER CONTROL AND COLLECTION OF MATERIALS WITHIN THE PROJECT BOUNDARIES DURING CONSTRUCTION. ALL FERTILIZER, HYDROCARBON, OR OTHER CHEMICAL CONTAINERS SHALL BE DISPOSED OF BY THE CONTRACTOR IN ACCORDANCE WITH THE EPA'S STANDARD PRACTICES. NO SOLID MATERIAL INCLUDING BUILDING AND CONSTRUCTION MATERIAL SHALL BE DISPOSED OF, DISCHARGED OR BURIED ONSITE.

OFFSITE VEHICLE TRACKING: LOADED HAUL TRUCKS SHALL BE COVERED WITH A TARPAULIN. EXCESS DIRT MATERIAL ON THE ROADS SHALL BE REMOVED IMMEDIATELY. HAULING ON UNPAVED SURFACES SHALL BE MONITORED TO MINIMIZE DUST AND CONTROL EROSION. HAUL ROADS SHALL BE WATERED OR OTHER CONTROLS PROVIDED AS NECESSARY TO REDUCE DUST AND CONTROL SEDIMENTS.

SANITARY WASTE: THE CONTRACTOR SHALL PROVIDE PORTABLE SANITARY WASTE FACILITIES. THESE FACILITIES SHALL BE COLLECTED OR EMPTIED BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR AS REQUIRED BY STATE REGULATIONS.

FERTILIZERS AND PESTICIDES: FERTILIZER SHALL BE APPLIED AT A RATE SPECIFIED BY THE SPECIFICATIONS OR THE MANUFACTURER. THE APPLICATION OF FERTILIZERS SHALL BE ACCOMPLISHED IN A MANNER AS DESCRIBED BY THE SPECIFICATION OR MANUFACTURER TO ENSURE THE PROPER INSTALLATION AND TO AVOID OVER FERTILIZING. PESTICIDES ARE NOT ANTICIPATED FOR THIS PROJECT.

#### **MAINTENANCE**

THE CONTRACTOR WILL BE RESPONSIBLE FOR MAINTENANCE AND REPAIRS OF EROSION AND SEDIMENT CONTROL DEVICES AND THE REMOVAL OF THE EROSION AND SEDIMENT CONTROL DEVICES AFTER THE NOTICE OF TERMINATION IS EXECUTED.

THE CONTRACTOR SHALL REVIEW THE PROJECT AND ALL EROSION AND SEDIMENT CONTROLS ON A DAILY BASIS AND DURING AND FOLLOWING RAINFALL EVENTS. AN INSPECTION FORM HAS BEEN PROVIDED IN THE SPECIFICATIONS. THE CONTRACTOR SHALL BE REQUIRED TO KEEP A LOG OF ALL THE DAILY INSPECTION REPORTS, GRADING AND STABILIZATION ACTIVITIES, AND SWPPP AMENDMENTS AT THE SITE. THE FOLLOWING PRACTICES WILL BE IMPLEMENTED TO MAINTAIN AND MONITOR EROSION AND SEDIMENT CONTROLS.

- A. PROJECT REVIEW ON A DAILY BASIS.
- B. PROVIDE AND MAINTAIN RAIN GAUGES ONSITE (IF NOT AVAILABLE IN THE AREA) TO RECORD RAINFALL DATA DAILY.
- C. REVIEW STABILIZATION PRACTICES AND CONTROLS ON A DAILY BASIS AND MAINTAIN AND REPAIR THESE MEASURES AND CONTROLS AS NECESSARY. TEMPORARY AND/OR PERMANENT SEEDING, MULCHING AND SODDING SHALL BE REPAIRED IN BARE SPOTS AND WASHOUTS, AND HEALTHY GROWTH ESTABLISHED.
- D. ONCE HEALTHY GROWTH OF TURF IS ESTABLISHED, THE CONTRACTOR SHALL MAINTAIN THESE AREAS TO INSURE THE HEIGHT OF THE GRASS DOES NOT REACH MORE THAN 6 INCHES ABOVE THE ESTABLISHED GRADE.
- E. REVIEW STRUCTURAL PRACTICES ON A DAILY BASIS AND MAINTAIN AND REPAIR THESE MEASURES AND CONTROLS AS NECESSARY. BUILT UP SEDIMENTS SHALL BE REMOVED FROM SILT FENCES AND FILTER CLOTH SHALL BE REPLACED AS NECESSARY AND WHEN THEY HAVE SERVED THEIR USEFULNESS.
- F. AN INSPECTION AND MAINTENANCE REPORT SHALL BE COMPLETED WEEKLY AND WITHIN 24 HOURS OF A RAINFALL EVENT OF 0.5 INCHES OR MORE. THE CONTRACTOR SHALL CREATE AN INSPECTION AND MAINTENANCE REPORT LOG AND NOTE ANY AMENDMENTS TO THE SWPPP THAT OCCUR DURING CONSTRUCTION.
- G. IF THE CONTRACTOR ELECTS TO APPLY FOR PERMITS FOR DISCHARGE OF STORMWATER FROM THE SITE DURING CONSTRUCTION, ALL POINTS OF DISCHARGE OF STORMWATER RUNOFF FROM THE SITE SHALL BE INSPECTED ON A DAILY BASIS AND CONTROLS AND MEASURES REPAIRED AS NECESSARY TO MAINTAIN ACCEPTABLE WATER QUALITY AND DISCHARGE VOLUMES IN ACCORDANCE WITH THE PERMIT.

## INSPECTIONS

QUALIFIED PERSONNEL SHALL INSPECT ALL POINTS OF DISCHARGE, AS APPLICABLE, FROM THE PROJECT SITE AND ALL DISTURBED AREAS OF THE CONSTRUCTION SITE THAT HAVE NOT BEEN STABILIZED. DISTURBED AREAS AND AREAS USED FOR STORAGE OF MATERIALS EXPOSED TO PRECIPITATION SHALL BE INSPECTED FOR EVIDENCE OF, OR POTENTIAL FOR POLLUTANTS ENTERING THE STORMWATER MANAGEMENT SYSTEM. THE STORMWATER MANAGEMENT SYSTEM AND EROSION AND SEDIMENT CONTROL MEASURES SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. INSPECTION AND MAINTENANCE REPORTS SHALL BE COMPLETED AT LEAST EVERY WEEK AND FOLLOWING A RAINFALL EVENT OF 0.5 INCHES OF WATER OR GREATER (SEE ATTACHED FORM). THESE FORMS SHALL BE RETAINED FOR A PERIOD OF AT LEAST 3 YEARS FOLLOWING THE DATE THE SITE IS FINALLY STABILIZED.

ALLOWABLE NON-STORMWATER DISCHARGE MANAGEMENT

ALLOWABLE NON-STORMWATER DISCHARGES AND THE MEASURES USED TO ELIMINATE OR REDUCE THEM AND TO PREVENT THEM FROM BECOMING CONTAMINATED MAY INCLUDE DEPENDING ON THE PERMIT:

- 1. WATERS USED TO WASH VEHICLES WHERE DETERGENTS ARE NOT USED
- 2. WATER USED TO CONTROL DUST
- 3. POTABLE WATER INCLUDING UNCONTAMINATED WATER LINE FLUSHINGS
- 4. ROUTINE EXTERNAL BUILDING WASH DOWN THAT DOES NOT USE DETERGENTS
- 5. PAVEMENT WASH WATER WHERE SPILLS OR LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE NOT OCCURRED (UNLESS
- ALL SPILLED MATERIAL HAS BEEN REMOVED) AND WHERE DETERGENTS ARE NOT USED

  6. UNCONTAMINATED AIR CONDITIONING OR COMPRESSOR CONDENSATE
- 7. UNCONTAMINATED GROUND WATER OR SPRING WATER
- 8. FOUNDATION OR FOOTING DRAINS WHERE FLOWS ARE NOT CONTAMINATED WITH PROCESS MATERIALS SUCH AS SOLVENTS
- 9. UNCONTAMINATED EXCAVATION DEWATERING

## 10. LANDSCAPE IRRIGATION

## ESTABLISH PROPER EQUIPMENT/VEHICLE FUELING AND MAINTENANCE PRACTICES

CONTAMINATED SOILS MUST BE AUTHORIZED UNDER AN ALTERNATE NPDES PERMIT.

EQUIPMENT FUELING AND MAINTENANCE, OIL CHANGING, ETC., SHALL BE PERFORMED AWAY FROM WATERCOURSES, DITCHES, OR STORM DRAINS, IN AN AREA DESIGNATED FOR THAT PURPOSE. THE DESIGNATED AREA SHALL BE EQUIPPED FOR RECYCLING OIL AND CATCHING SPILLS. SECONDARY CONTAINMENT SHALL BE PROVIDED FOR ALL FUEL OIL STORAGE TANKS. THESE AREAS MUST BE INSPECTED EVERY SEVEN DAYS AND WITHIN 24 HOURS OF A 0.5 INCH OR GREATER RAIN EVENT TO ENSURE THERE ARE NO EXPOSED MATERIALS WHICH WOULD CONTAMINATE STORM WATER.

#### SPILL PREVENTION CONTROL PLAN

SITE OPERATORS MUST BE AWARE THAT SPILL PREVENTION CONTROL AND COUNTERMEASURES (SPCC) REQUIREMENTS APPLY. AN SPCC PLAN IS REQUIRED FOR SITES WITH ONE SINGLE ABOVEGROUND STORAGE OF 1,320 GALLONS OR MORE, OR 42,000 GALLONS OF UNDERGROUND STORAGE. SOILS THAT HAVE BEEN CONTAMINATED MUST BE DISPOSED OF IN ACCORDANCE WITH SECTION "CONTAMINATED SOILS" FOUND BELOW.

SPILLS ON PAVEMENT SHALL BE ABSORBED WITH SAWDUST, CAT LITTER OR OTHER ABSORBENT MATERIAL AND DISPOSED OF WITH THE TRASH AT A LICENSED SANITARY LANDFILL. HAZARDOUS OR INDUSTRIAL WASTES SUCH AS MOST SOLVENTS, GASOLINE, OIL-BASED PAINTS, AND CEMENT CURING COMPOUNDS REQUIRE SPECIAL HANDLING. SPILLS SHALL BE REPORTED TO THE EPA (1-913-281-0991). SPILLS OF 25 GALLONS OR MORE OF PETROLEUM PRODUCTS SHALL BE REPORTED TO EPA (1-913-281-0991), THE LOCAL FIRE DEPARTMENT, AND THE LOCAL EMERGENCY PLANNING COMMITTEE WITHIN 30 MINUTES OF THE DISCOVERY OF THE RELEASE. ALL SPILLS, WHICH RESULT IN CONTACT WITH WATER OF THE STATE, MUST BE REPORTED TO THE EPA'S HOTLINE.

#### CONTAMINATED SOILS

IF SUBSTANCES SUCH AS OIL, DIESEL FUEL, HYDRAULIC FLUID, ANTIFREEZE, ETC., ARE SPILLED, LEAKED, OR RELEASED ONTO THE SOIL, THE SOIL SHOULD BE DUG UP AND DISPOSED OF AT A LICENSED SANITARY LANDFILL OR OTHER APPROVED PETROLEUM CONTAMINATED SOIL REMEDIATION FACILITY (NOT A CONSTRUCTION/DEMOLITION DEBRIS LANDFILL). PLEASE BE AWARE THAT STORM WATER RUN OFF ASSOCIATED WITH CONTAMINATED SOILS ARE NOT BEING AUTHORIZED UNDER THE EPA'S GENERAL STORMWATER PERMIT ASSOCIATED WITH CONSTRUCTION ACTIVITIES. IN THE EVENT THERE ARE LARGE EXTENSIVE AREAS OF CONTAMINATED SOILS ADDITIONAL MEASURES ABOVE AND BEYOND THE CONDITIONS OF THE EPA'S GENERAL CONSTRUCTION STORMWATER PERMIT WILL BE REQUIRED. DEPENDING ON THE EXTENT OF CONTAMINATION, ADDITIONAL TREATMENT AND/OR COLLECTION AND DISPOSAL MAY BE REQUIRED. ALL STORMWATER DISCHARGES ASSOCIATED WITH

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As Noted on Plan Review

Deve**REMISEON & VEC/EEE SCRIETION**ent Lee's Summit, Missouri

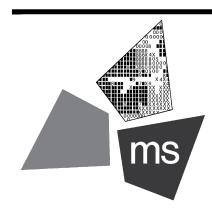
SIR UPD**05758/2023** 09/13/21
60% SET 01/24/22
PDP APPLICATION 02/24/22
TO CITY

PDP APPLICATION
TO CITY
RESPONSE TO CITY
COMMENTS I
FINAL
DEVELOPMENT SET
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RESPONSE TO
FDP COMMENTS III
RESPONSE TO
FDP COMMENTS IV
PT22M PROGRESS SET
03/08/23
ISSUE FOR PERMIT
03/15/23

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PROJECT

fax 614.898.7570

PROPOSED PT22M BUILDING

204 SW M150 HWY LEE'S SUMMIT. MO 64081

SHEET TITLE
SWPPP NOTES



DRAWN BY: TDB

CHECKED BY: PGD

PROJECT NO: 40497-21

DRAWING

C-10.0

Know what's below.
Call before you dig.

#### DESCRIPTION

TEMPORARY SEEDINGS ESTABLISH TEMPORARY COVER ON DISTURBED AREAS BY PLANTING APPROPRIATE RAPIDLY GROWING ANNUAL GRASSES OR SMALL GRAINS. TEMPORARY SEEDING PROVIDES EROSION CONTROL ON AREAS IN BETWEEN CONSTRUCTION OPERATIONS. GRASSES, WHICH ARE QUICK GROWING, ARE SEEDED AND USUALLY MULCHED TO PROVIDE PROMPT, TEMPORARY SOIL STABILIZATION. IT EFFECTIVELY MINIMIZES THE AREA OF A CONSTRUCTION SITE PRONE TO EROSION AND SHOULD BE USED EVERYWHERE THE SEQUENCE OF CONSTRUCTION OPERATIONS ALLOWS VEGETATION TO BE ESTABLISHED.

#### SPECIFICATIONS FOR TEMPORARY SEEDING

TEMPORARY SEEDING SPECIES SELECTION						
SEEDING DATES	SPECIES	LB/1000 SF	LB/ACREA			
MAR 1 TO AUG 15	OATS	3	128-4 BUSHEL			
	TALL FESCUE	1	40			
	ANNUAL RYEGRASS	1	40			
	PERENNIAL RYGRASS	1	40			
	TALL FESCUE	1	40			
	ANNUAL RYEGRASS	1	40			
	ANNUAL RYEGRASS	1.25	55			
	PERENNIAL RYEGRASS	3.25	142			
	CREEPING RED FESCUE	0.40	17			
	KENTUCKY BLUEGRASS	0.40	17			
	OATS	3	128-3 BUSHEL			
	TALL FESCUE	1	40			
	ANNUAL RYEGRASS	1	40			
AUG 16 TO NOV	RYE	3	112-3 BUSHEL			
	TALL FESCUE	1	40			
	ANNUAL RYEGRASS	1	40			
	WHEAT	3	120-2 BUSHEL			
	TALL FESCUE	1	40			
	ANNUAL RYEGRASS	1	40			
	PERENNIAL RYE	1	40			
	TALL FESCUE	1	40			
	ANNUAL RYEGRASS	1	40			
	ANNUAL RYEGRASS	1.25	40			
	PERENNIAL RYEGRASS	3.25	40			
	CREEPING RED FESCUE	0.40	40			
	KENTUCKY BLUEGRASS	0.40				
NOV 1 TO FEB 29	USE MULCH ONLY OR DOR	MANT SEEDING				

- 1. STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SUCH AS DIVERSIONS AND SEDIMENT TRAPS SHALL BE INSTALLED AND
- STABILIZED WITH TEMPORARY SEEDING PRIOR TO GRADING THE REST OF THE CONSTRUCTION SITE.

  TEMPORARY SEED SHALL BE APPLIED BETWEEN CONSTRUCTION OPERATIONS ON SOIL THAT WILL NOT BE GRADED OR REWORKED FOR 14
- DAYS OR GREATER. THESE IDLE AREAS SHALL BE SEEDED WITHIN 7 DAYS AFTER GRADING.
- 3. THE SEEDBED SHOULD BE PULVERIZED AND LOOSE TO ENSURE THE SUCCESS OF ESTABLISHING VEGETATION. TEMPORARY SEEDING SHOULD NOT BE POSTPONED IF IDEAL SEEDBED PREPARATION IS NOT POSSIBLE.
- 4. SOIL AMENDMENTS—TEMPORARY VEGETATION SEEDING RATES SHALL ESTABLISH ADEQUATE STANDS OF VEGETATION, WHICH MAY
- REQUIRE THE USE OF SOIL AMENDMENTS. BASE RATES FOR LIME AND FERTILIZER SHALL BE USED.

  5. SEEDING METHOD—SEED SHALL BE APPLIED UNIFORMLY WITH A CYCLONE SPREADER, DRILL, CULTIPACKER SEEDER, OR HYDROSEEDER. WHEN FEASIBLE, SEED THAT HAS BEEN BROADCAST SHALL BE COVERED BY RAKING OR DRAGGING AND THEN LIGHTLY TAMPED INTO
- PLACE USING A ROLLER OR CULTIPACKER. IF HYDROSEEDING IS USED, THE SEED AND FERTILIZER WILL BE MIXED ON-SITE AND THE SEEDING SHALL BE DONE IMMEDIATELY AND WITHOUT INTERRUPTION.

## MULCHING TEMPORARY SEEDING:

- 1. APPLICATIONS OF TEMPORARY SEEDING SHALL INCLUDE MULCH. WHICH SHALL BE APPLIED DURING OR IMMEDIATELY AFTER SEEDING. SEEDINGS MADE DURING OPTIMUM SEEDING DATES ON FAVORABLE, VERY FLAT SOIL CONDITIONS MAY NOT NEED MULCH TO ACHIEVE ADEQUATE STABILIZATION.
- 2. MATERIALS:
  2.1. STRAW—IF STRAW IS USED, IT SHALL BE UNROTTED SMALL-GRAIN STRAW APPLIED AT A RATE OF 2 TONS PER ACRE OR 90 LBS./ 1,000
- SQ. FT. (2-3 BALES)
  2.2. HYDROSEEDERS—IF WOOD CELLULOSE FIBER IS USED, IT SHALL BE USED AT 2000 LBS./ AC. OR 46 LB./ 1,000-SQ.-FT.
- 2.3. OTHER—OTHER ACCEPTABLE MULCHES INCLUDE MULCH MATTINGS APPLIED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS OR WOOD CHIPS APPLIED AT 6 TON/ AC.
- STRAW MULCH SHALL BE ANCHORED IMMEDIATELY TO MINIMIZE LOSS BY WIND OR WATER. ANCHORING METHODS:
- 3.1. MECHANICAL—A DISK, CRIMPER, OR SIMILAR TYPE TOOL SHALL BE SET STRAIGHT TO PUNCH OR ANCHOR THE MULCH MATERIAL INTO THE SOIL. STRAW MECHANICALLY ANCHORED SHALL NOT BE FINELY CHOPPED BUT LEFT TO A LENGTH OF APPROXIMATELY 6 INCHES.
- 3.2. MULCH NETTING—NETTING SHALL BE USED ACCORDING TO THE MANUFACTURERS RECOMMENDATIONS. NETTING MAY BE NECESSARY
- TO HOLD MULCH IN PLACE IN AREAS OF CONCENTRATED RUNOFF AND ON CRITICAL SLOPES.

  3.3. SYNTHETIC BINDERS—SYNTHETIC BINDERS SUCH AS ACRYLIC DLR (AGRI-TAC), DCA-70, PETROSET, TERRA TRACK OR EQUIVALENT MAY
- BE USED AT RATES RECOMMENDED BY THE MANUFACTURER.

  3.4. WOOD-CELLULOSE FIBER—WOOD-CELLULOSE FIBER BINDER SHALL BE APPLIED AT A NET DRY WT. OF 750 LB./AC. THE
- WOOD-CELLULOSE FIBER SHALL BE MIXED WITH WATER AND THE MIXTURE SHALL CONTAIN A MAXIMUM OF 50 LB. / 100 GAL.

## **DUST CONTROL**

## DESCRIPTION

DUST CONTROL INVOLVES PREVENTING OR REDUCING DUST FROM EXPOSED SOILS OR OTHER SOURCES DURING LAND DISTURBING, DEMOLITION AND CONSTRUCTION ACTIVITIES TO REDUCE THE PRESENCE OF AIRBORNE SUBSTANCES WHICH MAY PRESENT HEALTH HAZARDS, TRAFFIC SAFETY PROBLEMS OR HARM ANIMAL OR PLANT LIFE.

## SPECIFICATIONS FOR DUST CONTROL

PERMANENT COVER TO PROVIDE CONTROL OF SOIL EMISSIONS.

- VEGETATIVE COVER AND/MULCH APPLY TEMPORARY OR PERMANENT SEEDING AND MULCH TO AREAS THAT WILL REMAIN IDLE FOR OVER 21 DAYS. SAVING EXISTING TREES AND LARGE SHRUBS WILL ALSO REDUCE SOIL AND AIR MOVEMENT ACROSS DISTURBED AREAS. SEE TEMPORARY SEEDING; PERMANENT SEEDING; MULCHING PRACTICES; AND TREE AND NATURAL AREA PROTECTION PRACTICES.
- 2. WATERING SPRAY SITE WITH WATER UNTIL THE SURFACE IS WET BEFORE AND DURING GRADING AND REPEAT AS NEEDED, ESPECIALLY ON HAUL ROADS AND OTHER HEAVY TRAFFIC ROUTES. WATERING SHALL BE DONE AT A RATE THAT PREVENTS DUST BUT DOES NOT CAUSE SOIL EROSION. WETTING AGENTS SHALL BE UTILIZED ACCORDING TO MANUFACTURERS INSTRUCTIONS.
- SPRAY-ON ADHESIVES APPLY ADHESIVE ACCORDING TO THE FOLLOWING TABLE OR MANUFACTURER'S INSTRUCTIONS.
   STONE GRADED ROADWAYS AND OTHER SUITABLE AREAS WILL BE STABILIZED USING CRUSHED STONE OR COARSE GRAVEL AS SOON AS PRACTICABLE AFTER REACHING AN INTERIM OR FINAL GRADE. CRUSHED STONE OR COARSE GRAVEL CAN BE USED AS A
- 5. BARRIERS EXISTING WINDBREAK VEGETATION SHALL BE MARKED AND PRESERVED. SNOW FENCING OR OTHER SUITABLE BARRIER MAY BE PLACED PERPENDICULAR TO PREVAILING AIR CURRENTS AT INTERVALS OF ABOUT 15 TIMES THE BARRIER HEIGHT TO CONTROL AIR CURRENTS AND BLOWING SOIL.
- 6. OPERATION AND MAINTENANCE WHEN TEMPORARY DUST CONTROL MEASURES ARE USED; REPETITIVE TREATMENT SHOULD BE APPLIED AS NEEDED TO ACCOMPLISH CONTROL. STREET CLEANING PAVED AREAS THAT HAVE ACCUMULATED SEDIMENT FROM CONSTRUCTION SHOULD BE CLEANED DAILY, OR AS NEEDED, UTILIZING A STREET SWEEPER OR BUCKET -TYPE END LOADER OR SCRAPER.

## PERMANENT SEEDING

#### DESCRIPTION

PERENNIAL VEGETATION IS ESTABLISHED ON AREAS THAT WILL NOT BE RE-DISTURBED FOR PERIODS LONGER THAN 12 MONTHS. PERMANENT SEEDING INCLUDES SITE PREPARATION, SEEDBED PREPARATION, PLANTING SEED, MULCHING, IRRIGATION AND MAINTENANCE.

PERMANENT VEGETATION IS USED TO STABILIZE SOIL, REDUCE EROSION, PREVENT SEDIMENT POLLUTION, REDUCE RUNOFF BY PROMOTING INFILTRATION, AND PROVIDE STORMWATER QUALITY BENEFITS OFFERED BY DENSE GRASS COVER.

#### SPECIFICATION FOR PERMANENT SEEDING

#### SITE PREPARATION:

- 1. SUBSOILER, PLOW, OR OTHER IMPLEMENT SHALL BE USED TO REDUCE SOIL COMPACTION AND ALLOW MAXIMUM INFILTRATION.

  (MAXIMIZING INFILTRATION WILL HELP CONTROL BOTH RUNOFF RATE AND WATER QUALITY.) SUBSOILING SHOULD BE DONE WHEN THE SOIL MOISTURE IS LOW ENOUGH TO ALLOW THE SOIL TO CRACK OR FRACTURE. SUBSOILING SHALL NOT BE DONE ON SLIP-PRONE AREAS WHERE SOIL PREPARATION SHOULD BE LIMITED TO WHAT IS NECESSARY FOR ESTABLISHING VEGETATION.
- 2. THE SITE SHALL BE GRADED AS NEEDED TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION AND SEEDING.
- 3. TOPSOIL SHALL BE APPLIED WHERE NEEDED TO ESTABLISH VEGETATION.

#### SEEDBED PREPARATION:

- TEST THE SOIL CONDITIONS FOR FEEDING BEFORE STARTING SEEDING AND MULCHING.
   LIME—AGRICULTURAL GROUND LIMESTONE SHALL BE APPLIED TO ACID SOIL AS RECOMMENDED BY A SOIL TEST. IN LIEU OF A SOIL TEST,
- LIME SHALL BE APPLIED AT THE RATE OF 100 POUNDS PER 1,000-SQ. FT. OR 2 TONS PER ACRE.
- FERTILIZER—FERTILIZER SHALL BE APPLIED AS RECOMMENDED BY A SOIL TEST. CONTRACTOR SHALL PERFORM LAB TESTING ON SOIL AND PROVIDE A CERTIFIED FERTILIZER RATIO FOR THE SITE SOILS AND SPECIFIED SEED MIX.
- 4. THE LIME AND FERTILIZER SHALL BE WORKED INTO THE SOIL WITH A DISK HARROW, SPRING-TOOTH HARROW, OR OTHER SUITABLE FIELD IMPLEMENT TO A DEPTH OF 3 INCHES. ON SLOPING LAND, THE SOIL SHALL BE WORKED ON THE CONTOUR.

#### SEEDING DATES AND SOIL CONDITIONS:

SEEDING SHOULD BE DONE MARCH 1 TO MAY 31 OR AUGUST 1 TO SEPTEMBER 30. IF SEEDING OCCURS OUTSIDE OF THE ABOVE SPECIFIED DATES, ADDITIONAL MULCH AND IRRIGATION MAY BE REQUIRED TO ENSURE A MINIMUM OF 80% GERMINATION. TILLAGE FOR SEEDBED PREPARATION SHOULD BE DONE WHEN THE SOIL IS DRY ENOUGH TO CRUMBLE AND NOT FORM RIBBONS WHEN COMPRESSED BY HAND. FOR WINTER SEEDING, SEE THE FOLLOWING SECTION ON DORMANT SEEDING.

#### DORMANT SEEDINGS:

- 1. SEEDINGS SHOULD NOT BE MADE FROM OCTOBER 1 THROUGH NOVEMBER 20. DURING THIS PERIOD, THE SEEDS ARE LIKELY TO GERMINATE BUT PROBABLY WILL NOT BE ABLE TO SURVIVE THE WINTER.
- 2. THE FOLLOWING METHODS MAY BE USED FOR "DORMANT SEEDING":
- 2.1. FROM OCTOBER 1 THROUGH NOVEMBER 20, PREPARE THE SEEDBED, ADD THE REQUIRED AMOUNTS OF LIME AND FERTILIZER, THEN MULCH AND ANCHOR. AFTER NOVEMBER 20, AND BEFORE MARCH 15, BROADCAST THE SELECTED SEED MIXTURE. INCREASE THE SEEDING RATES BY 50% FOR THIS TYPE OF SEEDING.
- SEEDING RATES BY 50% FOR THIS TYPE OF SEEDING.
  2.2. FROM NOVEMBER 20 THROUGH MARCH 15, WHEN SOIL CONDITIONS PERMIT, PREPARE THE SEEDBED, LIME AND FERTILIZE, APPLY THE
- SELECTED SEED MIXTURE, MULCH AND ANCHOR. INCREASE THE SEEDING RATES BY 50% FOR THIS TYPE OF SEEDING.

  2.3. APPLY SEED UNIFORMLY WITH A CYCLONE SEEDER, DRILL, CULTIPACKER SEEDER, OR HYDRO-SEEDER (SLURRY MAY INCLUDE SEED
- AND FERTILIZER) ON A FIRM, MOIST SEEDBED.

  2.4. WHERE FEASIBLE, EXCEPT WHEN A CULTIPACKER TYPE SEEDER IS USED, THE SEEDBED SHOULD BE FIRMED FOLLOWING SEEDING OPERATIONS WITH A CULTIPACKER, ROLLER, OR LIGHT DRAG. ON SLOPING LAND, SEEDING OPERATIONS SHOULD BE ON THE

#### MULCHING:

- 1. MULCH MATERIAL SHALL BE APPLIED IMMEDIATELY AFTER SEEDING. DORMANT SEEDING SHALL BE MULCHED. 100% OF THE GROUND SURFACE SHALL BE COVERED WITH AN APPROVED MATERIAL.
- 2. MATERIALS:
- 2.1. STRAW—IF STRAW IS USED IT SHALL BE UNROTTED SMALL-GRAIN STRAW APPLIED AT THE RATE OF 2 TONS PER ACRE OR 90 POUNDS (TWO TO THREE BALES) PER 1,000-SQ. FT. THE MULCH SHALL BE SPREAD UNIFORMLY BY HAND OR MECHANICALLY APPLIED SO THE SOIL SURFACE IS COVERED. FOR UNIFORM DISTRIBUTION OF HAND-SPREAD MULCH, DIVIDE AREA INTO APPROXIMATELY 1,000-SQ.-FT. SECTIONS AND SPREAD TWO 45-LB. BALES OF STRAW IN EACH SECTION.
- 2.2. HYDROSEEDERS—IF WOOD CELLULOSE FIBER IS USED, IT SHALL BE APPLIED AT 2,000 LB./AC. OR 46 LB./1,000 SQ. FT.
- 2.3. OTHER—OTHER ACCEPTABLE MULCHES INCLUDE ROLLED EROSION CONTROL MATTINGS OR BLANKETS APPLIED ACCORDING TO
- MANUFACTURER'S RECOMMENDATIONS OR WOOD CHIPS APPLIED AT 6 TONS PER ACRE.

  3. STRAW AND MULCH ANCHORING METHODS-STRAW MULCH SHALL BE ANCHORED IMMEDIATELY TO MINIMIZE LOSS BY WIND OR WATER:

  3.1. MECHANICAL—A DISK, CRIMPER, OR SIMILAR TYPE TOOL SHALL BE SET STRAIGHT TO PUNCH OR ANCHOR THE MULCH MATERIAL INTO
- THE SOIL. STRAW MECHANICALLY ANCHORED SHALL NOT BE FINELY CHOPPED BUT, GENERALLY, BE LEFT LONGER THAN 6 INCHES.

  3.2. MULCH NETTING—NETTING SHALL BE USED ACCORDING TO THE MANUFACTURER FS RECOMMENDATIONS. NETTING MAY BE
- NECESSARY TO HOLD MULCH IN PLACE IN AREAS OF CONCENTRATED RUNOFF AND ON CRITICAL SLOPES.

  ASPIAL TEMPLISION ASPIAL TEMPL
- 3.3. ASPHALT EMULSION—ASPHALT SHALL BE APPLIED AS RECOMMENDED BY THE MANUFACTURE OR AT THE RATE OF 160 GALLONS PER ACRE.
- 3.4. SYNTHETIC BINDERS—SYNTHETIC BINDERS SUCH AS ACRYLIC DLR (AGRI-TAC), DCA-70, PETROSET, TERRA TACK OR EQUIVALENT MAY BE USED AT RATES SPECIFIED BY THE MANUFACTURER.
- 3.5. WOOD CELLULOSE FIBER—WOOD CELLULOSE FIBER SHALL BE APPLIED AT A NET DRY WEIGHT OF 750 POUNDS PER ACRE. THE WOOD CELLULOSE FIBER SHALL BE MIXED WITH WATER WITH THE MIXTURE CONTAINING A MAXIMUM OF 50 POUNDS CELLULOSE PER 100 GALLONS OF WATER.

## IRRIGATION:

PERMANENT SEEDING SHALL INCLUDE IRRIGATION TO ESTABLISH VEGETATION DURING DRY WEATHER OR ON ADVERSE SITE CONDITIONS, WHICH REQUIRE ADEQUATE MOISTURE FOR SEED GERMINATION AND PLANT GROWTH. IRRIGATION RATES SHALL BE MONITORED TO PREVENT EROSION AND DAMAGE TO SEEDED AREAS FROM EXCESSIVE RUNOFF. CONTRACTOR SHALL MAINTAIN PERMANENT SEEDING FOR UP TO ONE YEAR FROM SUBSTANTIAL COMPLETION TO FIX, REPAIR, WATER, REFERTILIZE AND/OR RESEED GRASSED AREAS.

OFFR MIV	SEE	DING RATE	NOTES
SEED MIX	LBS/ACRE	LBS/1,000 SF	NOTES
	GEN	IERAL USE	
CREEPING RED FESCUE	20-40	½-1	FOR CLOSE MOWING AND FOR
DOMESTIC RYEGRASS	10-20	1/4-1/2	WATERWAYS WITH <2.0 FT/SEC VELOCITY
KENTUCKY BLUEGRASS	20-40	½-1	
TALL FESCUE	40-50	1-11/4	
TURF-TYPE (DWARF) FESCUE	90	21/4	
	STEEP BANK	(S OR CUT SLOPES	•
TALL FESCUE	40-50	1-11/4	
CROWN VETCH	10-20	1/4-1/2	DO NOT SEED LATER THAN
TALL FESCUE	20-30	1/2-3/4	AUGUST
FLAT PEA	20-25	1/2-3/4	DO NOT SEED LATER THAN
TALL FESCUE	20-30	1/2-3/4	AUGUST
	ROAD DITC	HES AND SWALES	
TALL FESCUE	40-50	1-11/4	
TURF-TYPE (DWARF) FESCUE	90	21/4	
KENTUCKY BLUE GRASS	5	1/10	
		LAWNS	
KENTUCKY BLUEGRASS	100-120	2	
PERENNIAL RYEGRASS		2	
KENTUCKY BLUEGRASS	100-120	2	FOR SHADED AREAS
CREEPING RED FESCUE		1-1/2	

# PERMANENT STABILIZATION AREA REQUIRING PERMANENT STABILIZATION TIME FRAME TO APPLY EROSION CONTROLS

WITHIN 2 DAYS OF REACHING FINAL GRADE.

WITHIN 7 DAYS OF REACHING FINAL GRADE WITHIN

DISTURBANCE.

THAT AREA.

TEMPORARY STABILIZATION						
AREA REQUIRING TEMPORARY STABILIZATION	TIME FRAME TO APPLY EROSION CONTROLS					
ANY DISTURBED AREA WITHIN 50 FEET OF A STREAM OR A RIPARIAN SETBACK AREA AND NOT AT FINAL GRADE.	WITHIN 2 DAYS OF THE MOST RECENT DISTURBANCE IF THAT AREA WILL REMAIN IDLE FOR MORE THAN 14 DAYS.					
OR ALL CONSTRUCTION ACTIVITIES, ANY DISTURBED AREA, INCLUDING SOIL STOCKPILES THAT WILL BE DORMANT FOR MORE THAN 14 DAYS BUT LESS THAN ONE YEAR.	WITHIN 7 DAYS OF THE MOST RECENT DISTURBANCE WITHIN THE AREA.					
DISTURBED AREAS THAT WILL BE IDLE OVER WINTER.	PRIOR TO NOVEMBER 1.					

ANY AREA THAT WILL LIE DORMANT FOR ONE YEAR | WITHIN 7 DAYS OF THE MOST RECENT

ANY AREA WITHIN 50 FEET OF A STREAM OR A

ANY AREA AT FINAL GRADE.

RIPARIAN SETBACK AREA AND AT FINAL GRADE.

**NOTE:** WHERE VEGETATIVE STABILIZATION TECHNIQUES MAY CAUSE STRUCTURAL INSTABILITY OR ARE OTHERWISE UNOBTAINABLE, ALTERNATIVE STABILIZATION TECHNIQUES MUST BE EMPLOYED. THESE TECHNIQUES MAY INCLUDE MULCHING OR EROSION MATTING.

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As Noted on Plan Pavious

Dever REMINISTEN / STEAK VEC / SEE SOR IS THONG IN

Lee's Summit, Missouri
SIR UPD 05768/2023 09/13/21

60% SET	01/24/22
PDP APPLICATION TO CITY	02/24/22
RESPONSE TO CITY COMMENTS I	03/29/22
FINAL DEVELOPMENT SET	06/29/22
RESPONSE TO FDP COMMENTS	08/30/22
RESPONSE TO FDP COMMENTS II	09/29/22
RESPONSE TO FDP COMMENTS III	10/24/22
RESPONSE TO FDP COMMENTS IV	11/03/22
PT22M PROGRESS SET	03/08/23

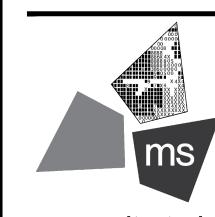
03/15/23

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ms consultants, inc. engineers, architects, planners 2221 Schrock Road Columbus, Ohio 43229-1547 phone 614.898.7100 fax 614.898.7570

PROJECT

PROPOSED PT22M BUILDING

204 SW M150 HWY LEE'S SUMMIT, MO 64081

SHEET TITLE
SWPPP NOTES



DRAWN BY: TDB

CHECKED BY: PGD

PROJECT NO: 40497-21

DRAWING

Know what's **below.** 

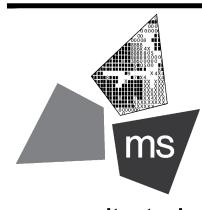
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C-10.1

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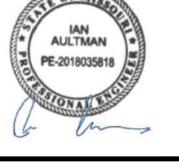
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PROJECT

PROPOSED PT22M BUILDING

204 SW M150 HWY LEE'S SUMMIT, MO 64081

SHEET TITLE SWPPP DETAILS



DRAWN BY: CHECKED BY:

DRAWING

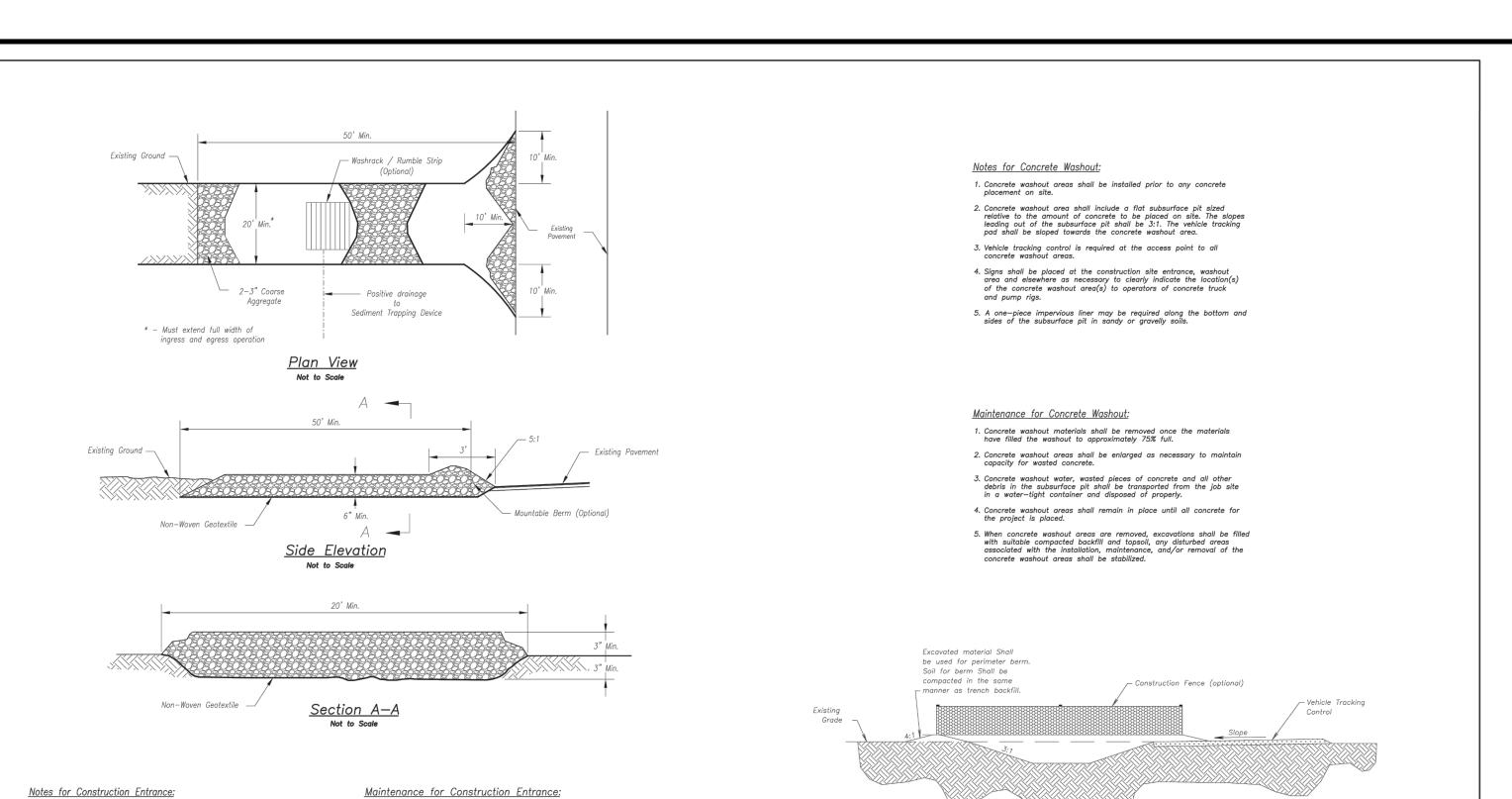
PROJECT NO:

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C-10.2

40497-21



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

1. Avoid locating on steep slopes, at curves on public roads, or

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:

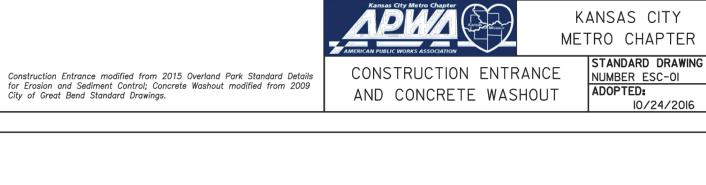
1. Reshape entrance as needed to maintain function and integrity of Installation. Top dress with clean aggregate

CONSTRUCTION ENTRANCE

AMERICAN PUBLIC WORKS ASSOCIATION

CONCRETE WASHOUT

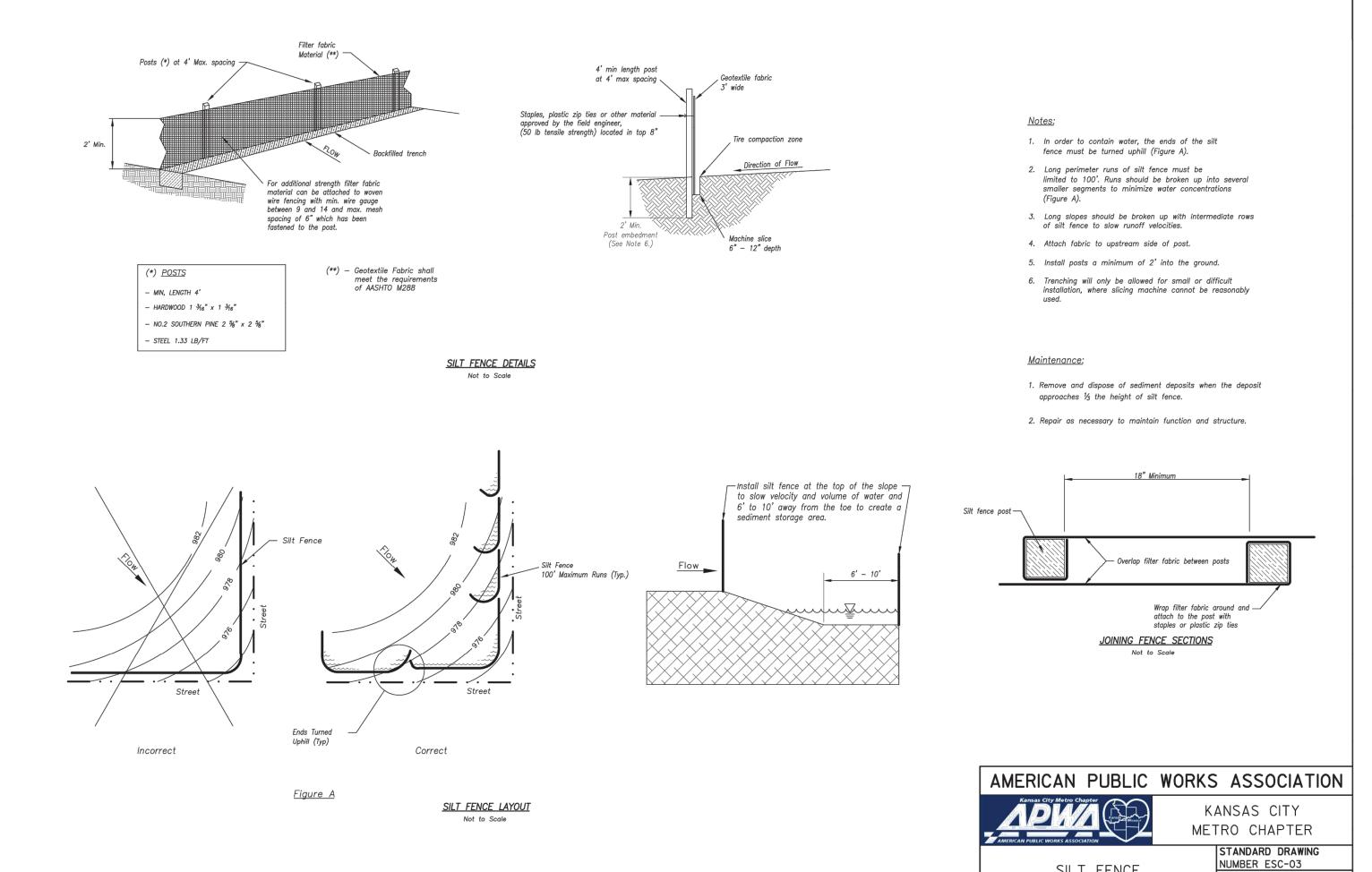
NUMBER ESC-0I



SILT FENCE

10/24/2016

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

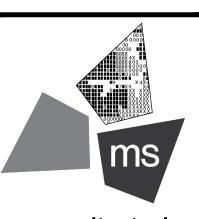


02/24/22 RESPONSE TO CITY 03/29/22 COMMENTS I 06/29/22 DEVELOPMENT SET RESPONSE TO 08/30/22 **FDP COMMENTS** RESPONSE TO 09/29/22 FDP COMMENTS II 10/24/22 FDP COMMENTS III 11/03/22 FDP COMMENTS IV PT22M PROGRESS SET 03/08/23

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PROJECT

PROPOSED PT22M BUILDING

204 SW M150 HWY LEE'S SUMMIT, MO 64081

SHEET TITLE SWPPP DETAILS

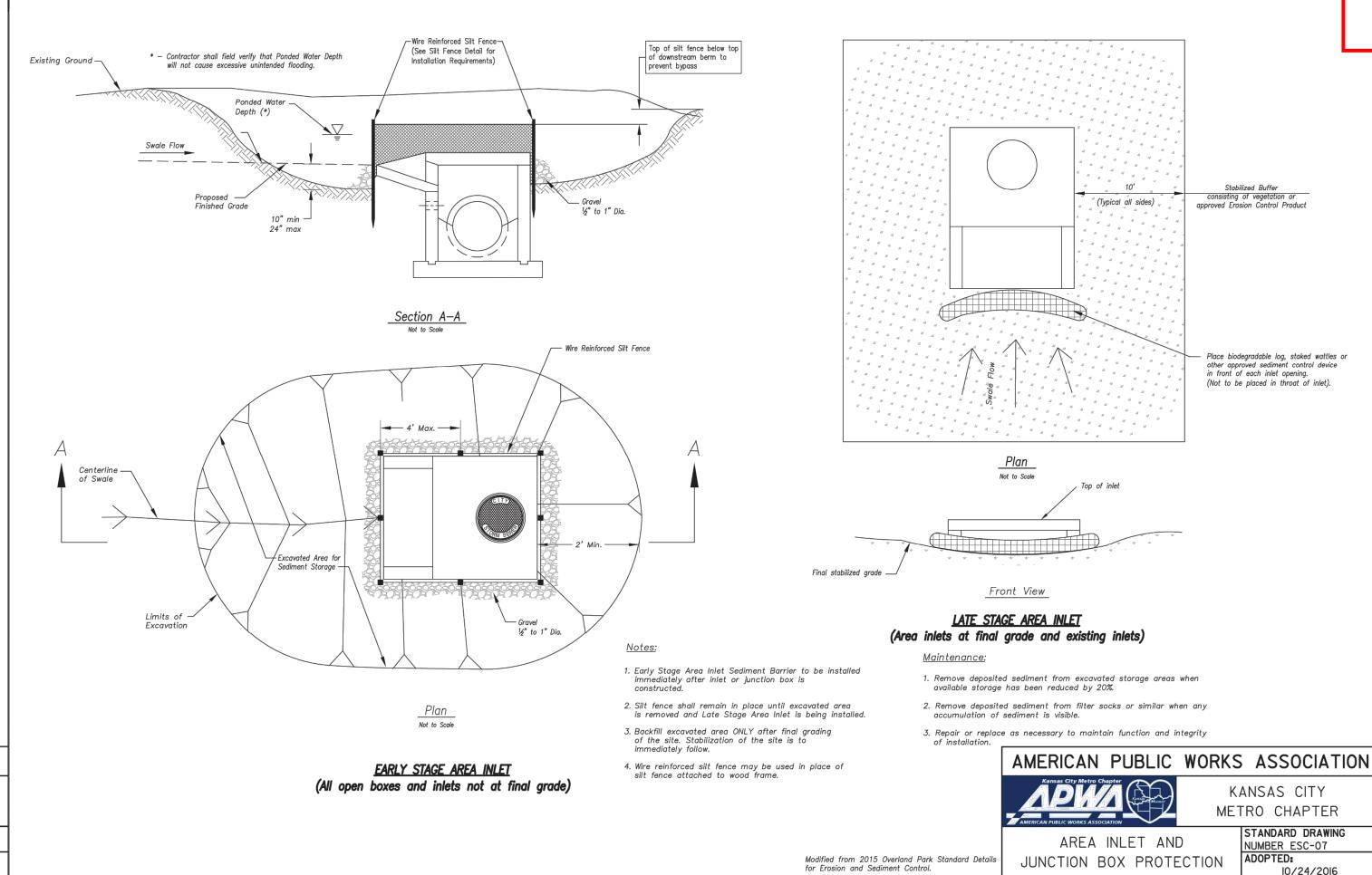
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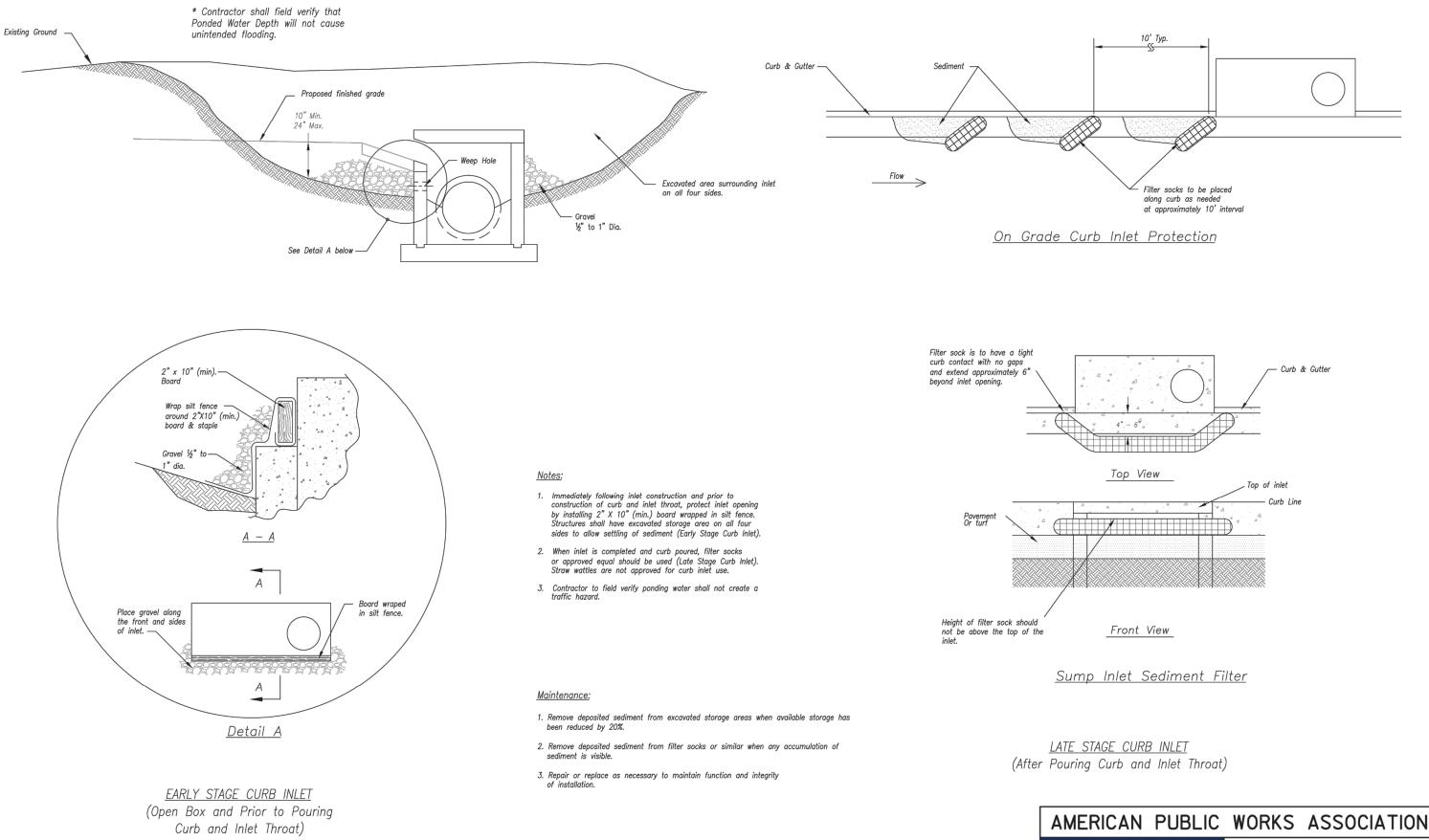
CHECKED BY: 40497-21 PROJECT NO:

DRAWING

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C-10.3





AMERICAN PUBLIC WORKS ASSOCIATION KANSAS CITY METRO CHAPTER STANDARD DRAWING NUMBER ESC-06
ADOPTED: CURB INLET PROTECTION Modified from 2015 Overland Park Standard Details

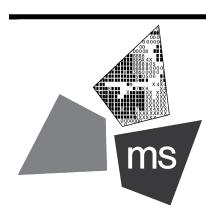
10/24/2016

02/24/22 RESPONSE TO CITY 03/29/22 COMMENTS I 06/29/22 **DEVELOPMENT SET** RESPONSE TO 08/30/22 FDP COMMENTS 09/29/22 FDP COMMENTS I 10/24/22 FDP COMMENTS III FDP COMMENTS IV PT22M PROGRESS SET 03/08/23 ISSUE FOR PERMIT

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PROJECT

PROPOSED PT22M BUILDING

204 SW M150 HWY LEE'S SUMMIT, MO 64081

SHEET TITLE

LANDSCAPE PLAN



DRAWN BY: CHECKED BY: 40497-21 PROJECT NO:

DRAWING

# **GENERAL NOTES:**

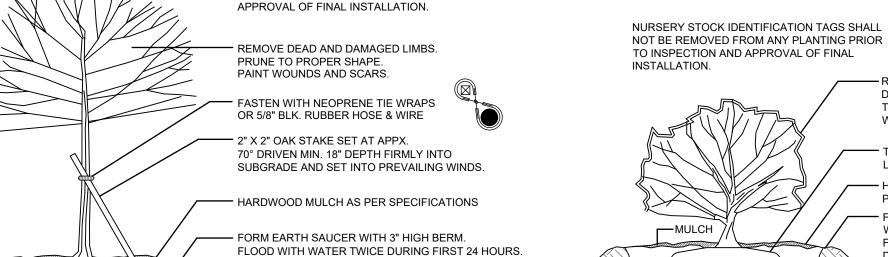
- THE CERTIFICATE OF OCCUPANCY IS OBTAINED OR FOR A PERIOD OF ONE (1) YEAR FROM DATE OF FINAL ACCEPTANCE, WHICHEVER IS GREATER. ANY PLANTINGS NEEDING REPLACEMENT WILL BE GUARANTEED FROM THE TIME OF REPLACEMENT IF AFTER FINAL ACCEPTANCE.
- LANDSCAPE CONTRACTOR IS TO VERIFY LOCATION OF ALL UNDERGROUND UTILITIES AND RECEIVE APPROVAL FROM GENERAL CONTRACTOR OR SITE SUPERVISOR, IF NECESSARY, TO MAKE CHANGES IN PLANT LOCATIONS.
- C. LANDSCAPE CONTRACTOR MUST COORDINATE WITH GENERAL CONTRACTOR AND OTHER SITE OPERATIONS.
- D. MINOR ADJUSTMENTS TO THE PLANT LOCATIONS ARE TO BE MADE IN THE CASE OF ANY CONFLICTS WITH PROPOSED UTILITIES.
- ALL PLANTING BEDS AND FREE STANDING TREES TO BE MULCHED WITH 4" OF SHREDDED HARDWOOD MULCH. BEDS ARE TO BE GRADED SMOOTH AND FREE OF SOIL CLODS AND STONES. ALL TREES TO BE STAKED AND WRAPPED WITH KRAFT TREE WRAP.

A. ALL PLANT MATERIALS TO COMPLY WITH THE LATEST EDITION OF A.N.A. STANDARDS FOR NURSERY STOCK AND BE GUARANTEED UNT

- F. ALL PLANTS ARE TO BE REMOVED FROM CONTAINERS, CAGES AND NON-BIODEGRADABLE MATERIALS.
- GENERAL CONTRACTOR IS RESPONSIBLE FOR FINISHED GRADES; LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR FINE GRADING AND TO PROVIDE 4" OF AMENDED TOPSOIL FOR PLANTING BEDS.
- H. ALL ORGANIC MATTER AND DEBRIS ARE TO BE REMOVED FROM THE SITE BY THE LANDSCAPE CONTRACTOR. LAWN AREAS AND BEDS SHOULD BE FREE OF STONES GREATER THAN 2".
- I. PLANT QUANTITIES HAVE BEEN PROVIDED FOR CONVENIENCE ONLY; THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR HIS OWN "TAKE OFFS". DRAWING PREVAILS OVER WRITTEN QUANTITIES.
- THE LANDSCAPE CONTRACTOR SHALL SUBMIT A ONE (1) YEAR MAINTENANCE CONTRACT FOR CONSIDERATION BY THE OWNER. CONTRACT SHALL BE SEPARATE FROM INSTALLATION CONTRACT.
- K. PLANTING BEDS SHALL BE TREATED WITH A PRE-EMERGENT HERBICIDE APPLIED AT PRODUCT SPECIFIED RATE UNLESS OTHERWISE
- L. PLANTING SHALL BE FERTILIZED UPON INSTALLATION. RECOMMENDED FERTILIZER SHALL BE MIXED WITH BACKFILL AT PRODUCT SPECIFIED RATE.
- M. BED EDGE SHALL BE SMOOTH, CONSISTENT 4 1/2" DEEP AND HAND CUT, EDGES TO BE LOCATED BETWEEN ALL BEDS (INCLUDING TREES) N. CONTRACTOR TO SEED ALL DISTURBED AREAS WITH A LOCALLY ADAPTIVE SEED MIX UNLESS OTHERWISE DIRECTED BY THE GENERAL
- O. TOPSOIL SHALL BE BACK FILLED TO PROVIDE POSITIVE DRAINAGE OF ALL LANDSCAPE AREAS. SEE GRADING AND DRAINAGE PLAN SHEET
- P. LANDSCAPING MATERIALS ARE REQUIRED TO PROVIDE FULL SCREENING AT THE TIME OF PLANTING.
- Q. ALL OPEN AREAS NOT COVERED WITH OTHER MATERIALS SHALL BE COVERED WITH SOD.

# PROPOSED PLANT SCHEDULE

TREES		BOTANICAL NAME	COMMON NAME	TYPE	QTY	HEIGHT AT TIME OF PLANTING	APPROXIMATE MATURE HEIGHT (HXW)	CONT
	AR	ACER RUBRUM	RED MAPLE	DECIDUOUS	4	3" CAL MEASURED AT A POINT 6" ABOVE THE GROUND OR TOP OF ROOT BALL, AT PLANTING.	(40' X 40')	B+B
	AC	AMELANCHIER CANADENSIS	SERVICEBERRY	DECIDUOUS	25	3" CAL MEASURED AT A POINT 6" ABOVE THE GROUND OR TOP OF ROOT BALL, AT PLANTING.	(15' X 25')	В+В
SHRUBS	<u> </u>	BOTANICAL NAME	COMMON NAME		<u>QTY</u>			
<b>⇔</b>	WF	WEIGELA FLORIDA 'ALEXANDRA'	WINE AND ROSES WEIGELA	DECIDUOUS	38	2 GAL	(4' X 4')	
	RI	RHAPHIOLEPIS INDICA 'MAJESTIC BEAUTY'	MAJESTIC BEAUTY INDIAN HAWTHORN	EVERGREEN	44	2 GAL	(4' X 4')	
£}	HP	HYDRANGEA PANICULATA 'LITTLE LIME'	LITTLE LIME HYDRANGEA	DECIDUOUS	22	2 GAL	(3' X 3')	
d'interesse de la companya della companya della companya de la companya della com	IV	ILEX VOMITORIA 'NANA'	DWARF YAUPON	EVERGREEN	60	2 GAL	(4' X 5')	



BURLAP REMOVED FROM THE TOP 1/3 OF THE BALL.

— PLACE ROOT BALL ON UNDISTURBED SUBGRADE.

NURSERY STOCK IDENTIFICATION TAGS

SHALL NOT BE REMOVED FROM ANY PLANTING PRIOR TO INSPECTION AND

SUMMITCREST DRIVE

60' PUBLIC R/W

DOC. # 2014E0080868

PROPOSED WATER MAIN EXTENSION

PROPOSED 5 /SIDEWALK

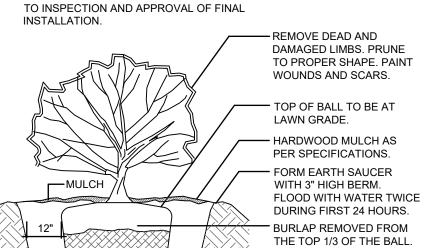
PT22M

BUILDING 3,318 sq.ft. F.F.E.= 1023.25

EASEMENT

SEE PUBLIC IMPROVEMENT PLANS FOR

DECIDUOUS TREE PLANTING DETAIL

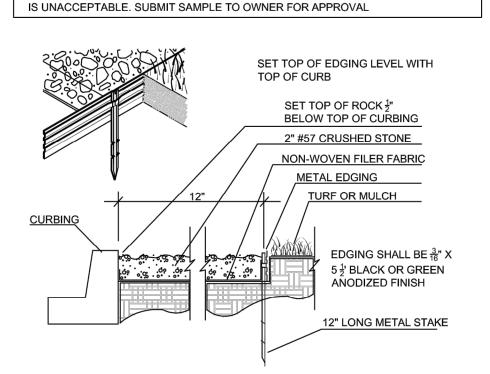


PLACE ROOT BALL ON

UNDISTURBED

SUBGRADE.

B SHRUB PLANTING DETAIL



METAL EDGING SHALL BE AS MANUFACTURED BY COL-MET OR EQUAL

CRUSHED STONE SHALL BE INSTALLED ON TOP OF NONWOVEN FILTER FABRIC.

INSTALL METAL EDGING BETWEEN CRUSHED STONE AND SOD/MULCH. LAVA ROCK

C GRANITE DETAIL

## **LEGEND**

PROPOSED DESCRIPTION



CONCRETE SIDEWALK

GRASS/LANDSCAPED AREA TO BE

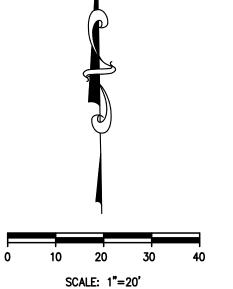


HEAVY DUTY CONCRETE PAVEMEN

IRRIGATED









B. THE CONTRACTOR IS TO INSTALL EQUIPMENT NECESSARY TO PROVIDE A COMPLETE, FUNCTIONAL SYSTEM THAT IS IN COMPLIANCE WITH APPLICABLE CODES AND REGULATIONS.

C. THE IRRIGATION CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE OWNER'S REPRESENTATIVE FOR APPROVAL, PRIOR TO CONSTRUCTION, WHICH WILL ILLUSTRATE TYPE OF HEADS, VALVES, CONTROLLER, PIPING AND ACCESSORIES. IRRIGATION HEADS, VALVES AND CONTROLLER ARE TO BE FROM A SINGLE MANUFACTURER. ALL EQUIPMENT MUST HAVE A MANUFACTURERS FIVE YEAR WARRANTY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER INSTALLATION AND FIELD ADJUSTMENT OF THE ABOVE ITEMS.

D. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE OWNER THE FINAL LOCATION OF THE CONTROL PANEL(S). NO ADDITIONAL COSTS SHALL BE ALLOWED FOR ANY ADJUSTMENTS MADE TO THE FINAL LOCATION OF ALL EQUIPMENT.

E. THE IRRIGATION CONTRACTOR SHALL SUBMIT A WARRANTY POLICY TO THE OWNER WHICH SHALL COVER THE FUNCTION OF THE ENTIRE SYSTEM FOR A PERIOD OF ONE YEAR AFTER THE ACCEPTANCE OF THE SYSTEM BY THE OWNER.

CONTRACTOR WILL VERIFY STATIC PRESSURE AND VOLUME OF SITE WATER SUPPLY AND ADJUST ENTIRE IRRIGATION SYSTEM ACCORDINGLY. EACH ZONE OF IRRIGATION SYSTEM IS TO BE DESIGNED WITH A MINIMUM OPERATING PRESSURE OF 45 PSI. IF THE PRESSURE IS BELOW 45 PSI, A PROPERLY SIZED BOOSTER PUMP WILL BE REQUIRED. AS PART OF THE SHOP DRAWINGS, THE IRRIGATION CONTRACTOR WILL PROVIDE CALCULATIONS SHOWING PRESSURE LOSS FROM THE POINT OF CONNECTION TO THE FURTHEST HEAD (AND FOR THE FURTHEST HEAD ON THE LARGEST ZONE). ADJUST DESIGN TO MEET AVAILABLE PRESSURES AND VOLUMES. A CURRENT STATIC PRESSURE READING AT THE POINT OF CONNECTION WAS NOT AVAILABLE PRIOR TO DESIGN.

G. THE CONTRACTOR IS TO INSTALL ALL EQUIPMENT SUCH THAT THE BUILDING, PARKING AREAS, AND SIDEWALKS ARE NOT SPRAYED OR SUBJECT TO EXCESSIVE RUNOFF. FIELD ADJUSTMENTS MAY BE NECESSARY TO AVOID UNFORESEEN OBSTACLES AND SIMPLIFY INSTALLATION. IRRIGATION SYSTEM ACCESSORIES SUCH AS QUICK COUPLER VALVES, ISOLATION VALVES, AND MANUAL DRAIN VALVES ARE TO BE LOCATED AS NECESSARY TO COMPLETE THE SYSTEM.

H. THE IRRIGATION CONTROLLER IS TO BE A HYBRID SOLID STATE TYPE WITH PLASTIC LOCKABLE CABINET. CONTROLLER MUST HAVE DUAL PROGRAMMING FOR TURF SPRAY ZONES AND SHRUB SPRAY ZONES AND BE CAPABLE OF OPERATING MULTIPLE VALVES PER STATION.

PROVIDE DESIGNATED PVC SLEEVES FOR IRRIGATION PIPES AND WIRING THAT CROSSES UNDER WALKS, STREETS AND CONCRETE PADS. COMBINE PIPING WHENEVER POSSIBLE TO REDUCE QUANTITY OF SLEEVING MATERIALS. WHEN INSTALLING IRRIGATION PIPE ALONG CURBS OR IN ISLANDS, PLACE PIPE AS CLOSE TO CURB AS POSSIBLE TO ALLOW FOR PLANTING OF FUTURE TREES AND SHRUBS.

## PART 1 GENERAL

#### 1.1 REFERENCES

#### A. ASTM INTERNATIONAL:

1. ASTM B32 - STANDARD SPECIFICATION FOR SOLDER METAL

2. ASTM B42 - STANDARD SPECIFICATION FOR SEAMLESS COPPER PIPE, STANDARD

3. ASTM B88 - STANDARD SPECIFICATION FOR SEAMLESS COPPER WATER TUBE

4. ASTM D2235 - STANDARD SPECIFICATION FOR SOLVENT CEMENT FOR ACRYLONITRILE-BUTADIENE-STYRENE (ABS) PLASTIC PIPE AND FITTINGS.

5. ASTM D2241 - STANDARD SPECIFICATION FOR POLYETHYLENE (PE) PLASTIC PIPE (SIDR-PR) BASED ON CONTROLLED INSIDE DIAMETER.

6. ASTM D2564 - STANDARD SPECIFICATION FOR SOLVENT CEMENTS FOR POLY (VINYL

CHLORIDE) (PVC) PLASTIC PIPING SYSTEMS.

B. NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION:

1. NEMA 250 - ENCLOSURES FOR ELECTRICAL EQUIPMENT (1000 VOLTS MAXIMUM).

#### 1.2 SYSTEM DESCRIPTION

C. HYBRID SOLID STATE CONTROLLED UNDERGROUND IRRIGATION SYSTEM, WITH PRESSURE BLOW-OUT DRAIN.

D. SOURCE POWER: 120 VOLT.

#### 1.3 SUBMITTALS

A. SHOP DRAWINGS: INDICATE PIPING LAYOUT TO WATER SOURCE, LOCATION OF SLEEVES UNDER PAVEMENT, LOCATION AND COVERAGE OF SPRINKLER HEADS, COMPONENTS, PLANT AND LANDSCAPING FEATURES, SITE STRUCTURES, SCHEDULE OF OUTLETS AND FITTINGS TO BE USED.

B. PRODUCT DATA: SUBMIT COMPONENT AND CONTROL SYSTEM AND WIRING DIAGRAMS.

#### 1.4 CLOSEOUT SUBMITTALS

A. PROJECT RECORD DOCUMENTS: RECORD ACTUAL LOCATIONS OF CONCEALED COMPONENTS BY NORTHING AND EASTING.

B. OPERATION AND MAINTENANCE DATA TO OWNER:

1. SUBMIT INSTRUCTIONS FOR OPERATION AND MAINTENANCE OF SYSTEM AND CONTROLS, SEASONAL ACTIVATION AND SHUTDOWN, AND MANUFACTURER'S PARTS CATALOG.

2. SUBMIT SCHEDULE INDICATING LENGTH OF TIME EACH VALVE IS REQUIRED TO BE OPEN TO DELIVER DETERMINED AMOUNT OF WATER.

## 1.5 QUALITY ASSURANCE

A. PERFORM WORK IN ACCORDANCE WITH MANUFACTURER'S STANDARDS.

## 1.6 COORDINATION

A. COORDINATE THE WORK WITH SITE BACKFILLING, PAVING, LANDSCAPE GRADING AND DELIVERY OF PLANT LIFE.

## PART 2 PRODUCTS

## 2.1 PIPE MATERIALS

A. PVC PIPE: ASTM D2241, SDR 26; 160 PSI SOLVENT WELDED SOCKETS.

B. HDPE PIPE: ASTM D-2239, SDR-15, 100 PSI.

C. COPPER TUBING: ASTM B88 TYPE K.

D. FITTINGS: TYPE AND STYLE OF CONNECTION TO MATCH PIPE

E. SOLVENT CEMENT: [ASTM D2564 FOR PVC PIPE AND FITTINGS] [ASTM D2235 FOR ABS PIPE AND FITTINGS].

F. SLEEVE MATERIAL: PVC SCH 40.

## 2.2 OUTLETS

A. OUTLETS: BRASS CONSTRUCTION.

B. ROTARY TYPE SPRINKLER HEAD: POP-UP TYPE WITH SCREENS; FULLY ADJUSTABLE FOR FLOW AND PRESSURE; WITH LETTER OR SYMBOL DESIGNATING DEGREE OF ARC AND ARROW INDICATING CENTER OF SPRAY PATTERN.

C. SPRAY TYPE SPRINKLER HEAD: POP-UP HEAD WITH FULL CIRCLE PATTERN.

D. QUICK COUPLER: GALVANIZED.

## 2.3 MANUAL VALVES

A. VALVES: HIGHLY CORROSION RESISTANT CONSTRUCTION (BRASS, STAINLESS STEEL, ETC.). ALL VALVES SHALL BE ACCESSIBLE FROM ABOVE THROUGH A VALVE BOX.

B. BACKFLOW PREVENTERS: BRONZE BODY CONSTRUCTION, REDUCED PRESSURE TYPE OR AS DESIGNATED BY LOCAL PLUMBING CODE REQUIREMENTS.

C. VALVE BOX AND COVER: HDPE RESIN THAT IS RESISTANT TO UV LIGHT, CORROSION MOISTURE, AND CHEMICALS.

## 2.4 CONTROLS AND CONTROL VALVES

A. CONTROLLER: MUST WORK WITH MANUFACTURER FLOW SENSOR, RAIN SENSOR, AND

B. CONTROLLER: AUTOMATIC CONTROLLER, MICROPROCESSOR SOLID STATE CONTROL WITH VISIBLE READOUT DISPLAY, TEMPORARY OVERRIDE FEATURE TO BYPASS CYCLE FOR INCLEMENT WEATHER, PROGRAMMABLE FOR 7 DAYS IN QUARTER HOUR INCREMENTS, WITH AUTOMATIC START AND SHUTDOWN.

C. CONTROLLER HOUSING: NEMA 250 TYPE 3R; WEATHERPROOF, WATERTIGHT, WITH LOCKABLE ACCESS DOOR.

D. VALVES: HYDRAULIC; NORMALLY CLOSED, INCLUDING REQUIRED FITTINGS AND ACCESSORIES.

E. WIRE CONDUCTORS: COPPER CONDUCTOR, DIRECT BURIAL TYPE.

F. RAIN SENSORS: PER SELECTED MANUFACTURER. 2.5 ELECTRICAL CHARACTERISTICS AND COMPONENTS

A. ELECTRICAL CHARACTERISTICS: 1. 120 VOLTS, SINGLE PHASE, 60 HZ.

B. DISCONNECT SWITCH: FACTORY MOUNT DISCONNECT SWITCH IN CONTROL PANEL.

B. VERIFY REQUIRED UTILITIES ARE AVAILABLE, IN PROPER LOCATION, AND READY FOR USE.

#### 3.2 PREPARATION

C. REVIEW LAYOUT REQUIREMENTS WITH OTHER AFFECTED WORK COORDINATE LOCATIONS OF SLEEVES UNDER PAVING TO ACCOMMODATE SYSTEM.

A. TRENCH SIZE:

1. MINIMUM COVER OVER INSTALLED SUPPLY PIPING: 18 INCHES. 2. MINIMUM COVER OVER INSTALLED BRANCH PIPING: 15 INCHES.

B. TRENCH TO ACCOMMODATE GRADE CHANGES AND SLOPE TO DRAIN(S).

DAMAGING TO PIPE.

A. CONNECT TO UTILITIES.

B. SET OUTLETS AND BOX COVERS AT FINISH GRADE ELEVATIONS.

C. PROVIDE FOR THERMAL MOVEMENT OF COMPONENTS IN SYSTEM.

E. USE THREADED NIPPLES FOR RISERS TO EACH OUTLET.

F. INSTALL CONTROL WIRING IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDED INSTALLATION PRACTICES. PROVIDE 10 INCH EXPANSION COIL AT EACH CONTROL VALVE, AND AT 100 FT INTERVALS. BURY WIRE BESIDE PIPE. MARK VALVES WITH NEOPRENE VALVE MARKERS CONTAINING LOCKING DEVICE. SET VALVE MARKERS IN VALVE BOXES SET TO FINISH

G. AFTER PIPING IS INSTALLED, BUT BEFORE OUTLETS ARE INSTALLED AND BACKFILLING COMMENCES, OPEN VALVES AND FLUSH SYSTEM WITH FULL HEAD OF WATER.

A. BACKFILL WITH COMPACTED BACKFILL IN ACCORDANCE WITH DETAIL A ON

B. INSTALL 3 INCH SAND BEDDING BELOW AND COVER OVER PIPING.

## 3.7 ADJUSTING

A. ADJUST CONTROL SYSTEM TO ACHIEVE TIME CYCLES REQUIRED

B. ADJUST HEAD TYPES FOR FULL WATER COVERAGE AS DIRECTED BY OWNER'S REPRESENTATIVE.

## 3.8 DEMONSTRATION AND TRAINING

SCALE: 1"=20'

AND MAINTENANCE MATERIAL AS BASIS FOR DEMONSTRATION.



## PART 3 EXECUTION

#### 3.1 EXAMINATION

A. VERIFY LOCATION OF EXISTING UTILITIES.

A. ROUTE PIPING TO AVOID PLANTS, GROUND COVER, AND STRUCTURES.

B. LAYOUT AND STAKE LOCATIONS OF SYSTEM COMPONENTS.

#### 3.3 TRENCHING

# C. MAINTAIN TRENCHES FREE OF DEBRIS, MATERIAL, OR OBSTRUCTIONS

3.4 INSTALLATION

D. SLOPE PIPING FOR SELF DRAINAGE TO DAYLIGHT.

## 3.5 BACKFILLING

SHEET C-7.1.

C. PROTECT PIPING FROM DISPLACEMENT.

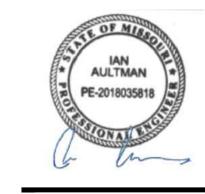
## 3.6 FIELD QUALITY CONTROL

A. PRIOR TO BACKFILLING, TEST SYSTEM FOR LEAKAGE FOR WHOLE SYSTEM TO MAINTAIN 100 PSI PRESSURE FOR ONE HOUR.

B. SYSTEM IS ACCEPTABLE WHEN NO LEAKAGE OR LOSS OF PRESSURE OCCURS DURING TEST PERIOD.

C. PROVIDE ONE COMPLETE SPRING SEASON START-UP AND FALL SEASON SHUTDOWN.

A. INSTRUCT OWNER'S PERSONNEL IN OPERATION AND MAINTENANCE OF SYSTEM, INCLUDING ADJUSTING OF SPRINKLER HEADS. USE OPERATION



DRAWN BY:

PROJECT NO:

RELEASED FOR CONSTRUCTION

eREDISEON SEAVE OE DORISHIONE

SIR UPD**057/08/2023** 09/13/21

02/24/22

03/29/22

06/29/22

08/30/22

09/29/22

Lee's Summit, Missouri

60% SET

RESPONSE TO CITY

**DEVELOPMENT SET** 

COMMENTS I

RESPONSE TO

FDP COMMENTS

FDP COMMENTS

FDP COMMENTS II

FDP COMMENTS IV

ISSUE FOR PERMIT

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ms consultants, inc.

engineers, architects, planners

PROPOSED PT22M

LEE'S SUMMIT, MO 64081

204 SW M150 HWY

**IRRIGATION PLAN** 

Columbus, Ohio 43229-1547

2221 Schrock Road

phone 614.898.7100

fax 614.898.7570

BUILDING

SHEET TITLE

PROJECT

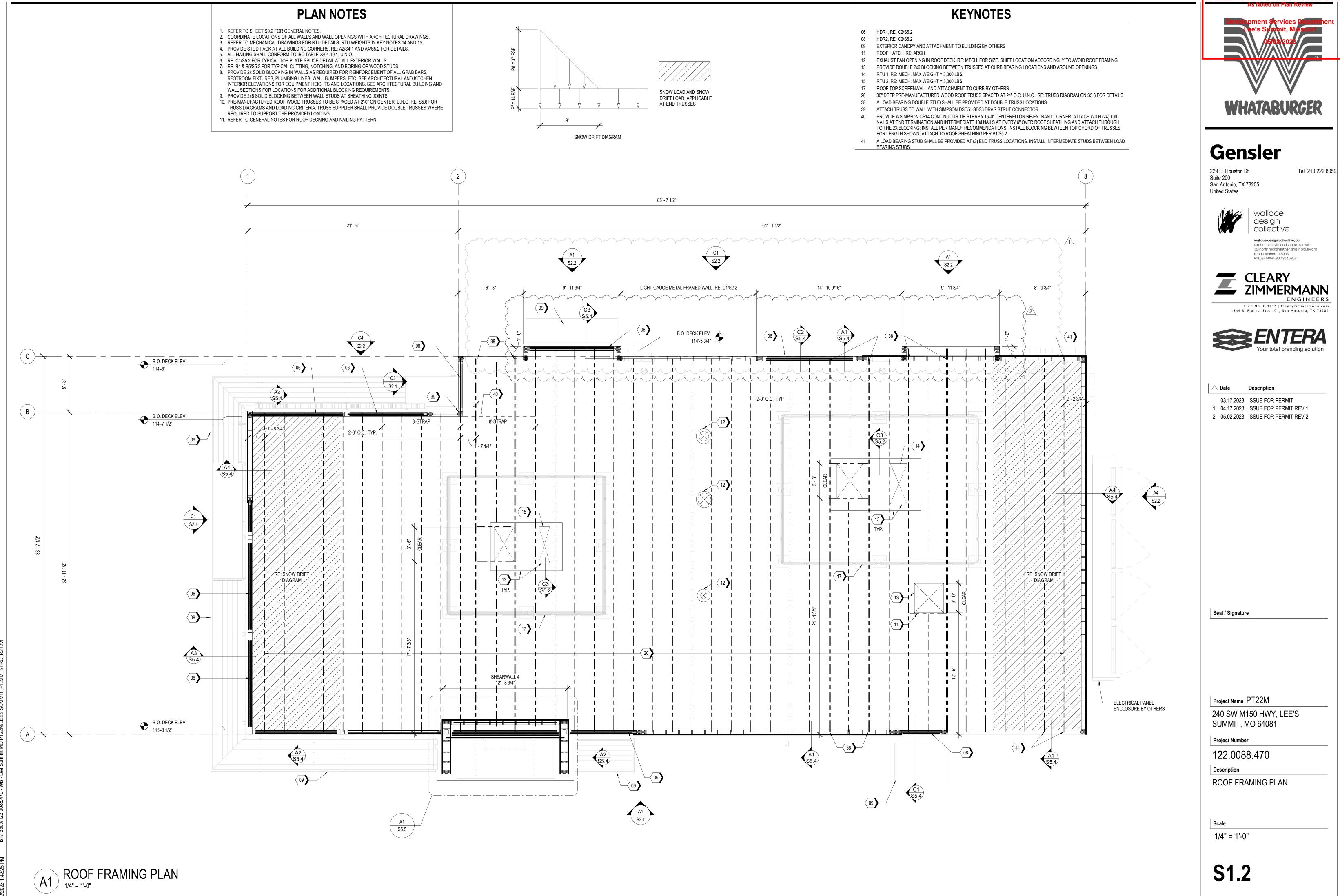
CALLY RESERVED.

NOTICE

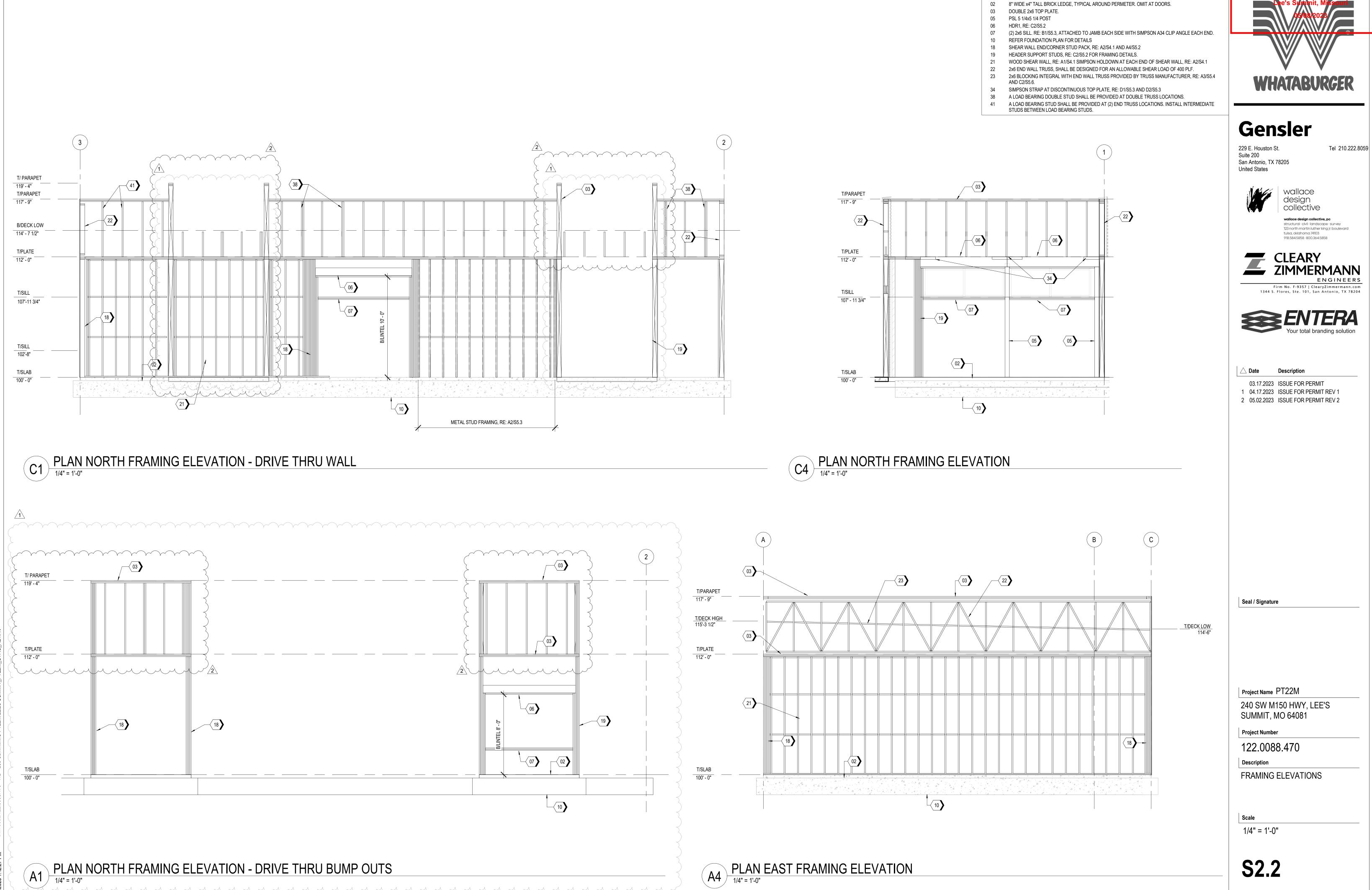
PT22M PROGRESS SET 03/08/23

Call before you dig.

40497-21

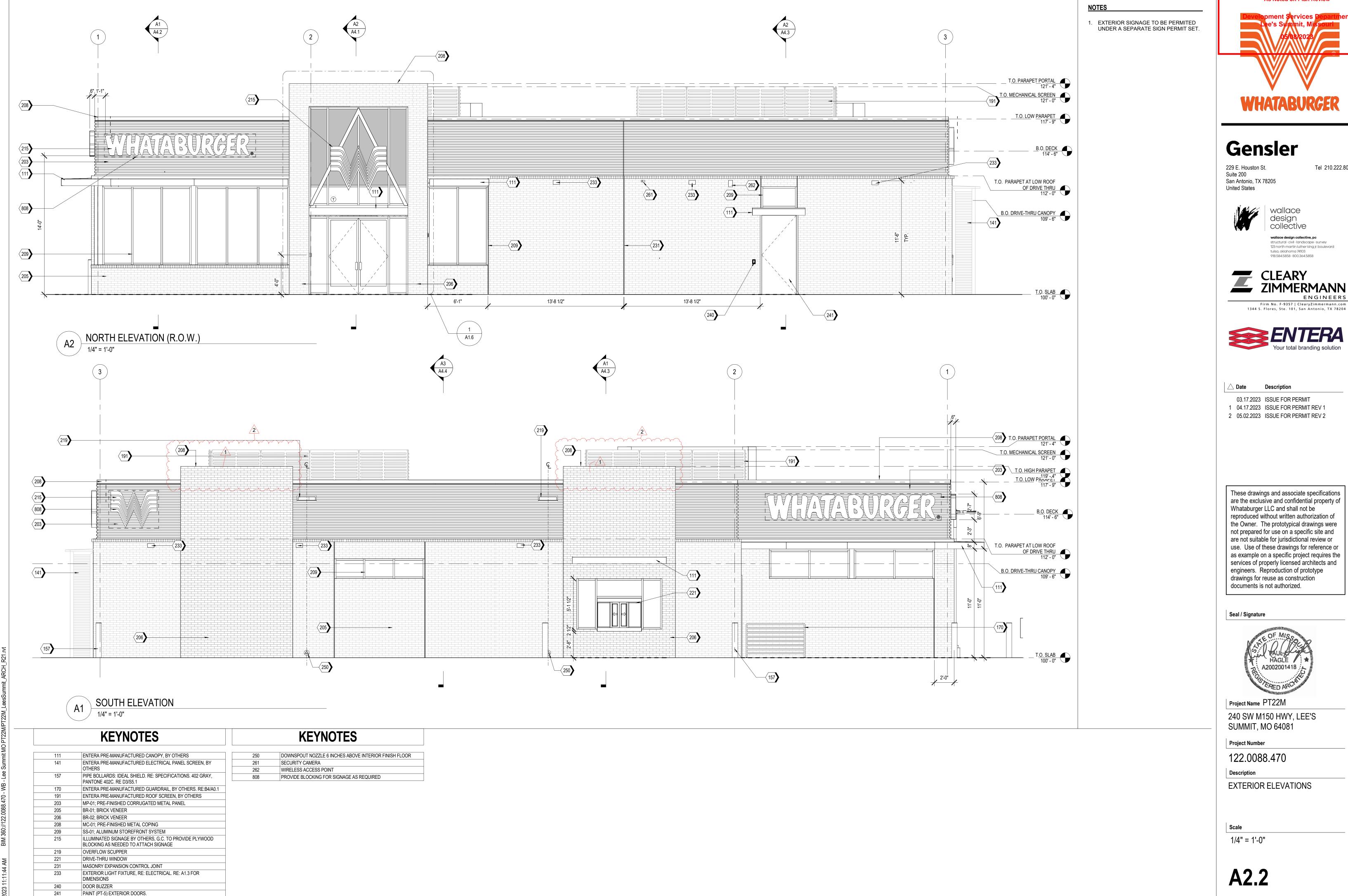






**KEYNOTES** 





Tel 210.222.8059

wallace design collective, pc structural · civil · landscape · survey

123 north martin luther king jr. boulevard 918.584.5858 · 800.364.5858





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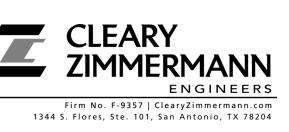
229 E. Houston St. Suite 200 San Antonio, TX 78205 United States

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Seal / Signature



Project Name PT22M

240 SW M150 HWY, LEE'S SUMMIT, MO 64081

Project Number

122.0088.470

Description

EXTERIOR RENDERINGS

| | 66

**A2.4** 



# Gensler

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CLEARY ZIMMERMANN ENGINEERS

Firm No. F-9357 | ClearyZimmermann.com 1344 S. Flores, Ste. 101, San Antonio, TX 78204



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Seal / Signature



Project Name PT22M

240 SW M150 HWY, LEE'S SUMMIT, MO 64081

Project Number

122.0088.470

Description

WALL SECTIONS

3/4" = 1'-0"

**A4.3**