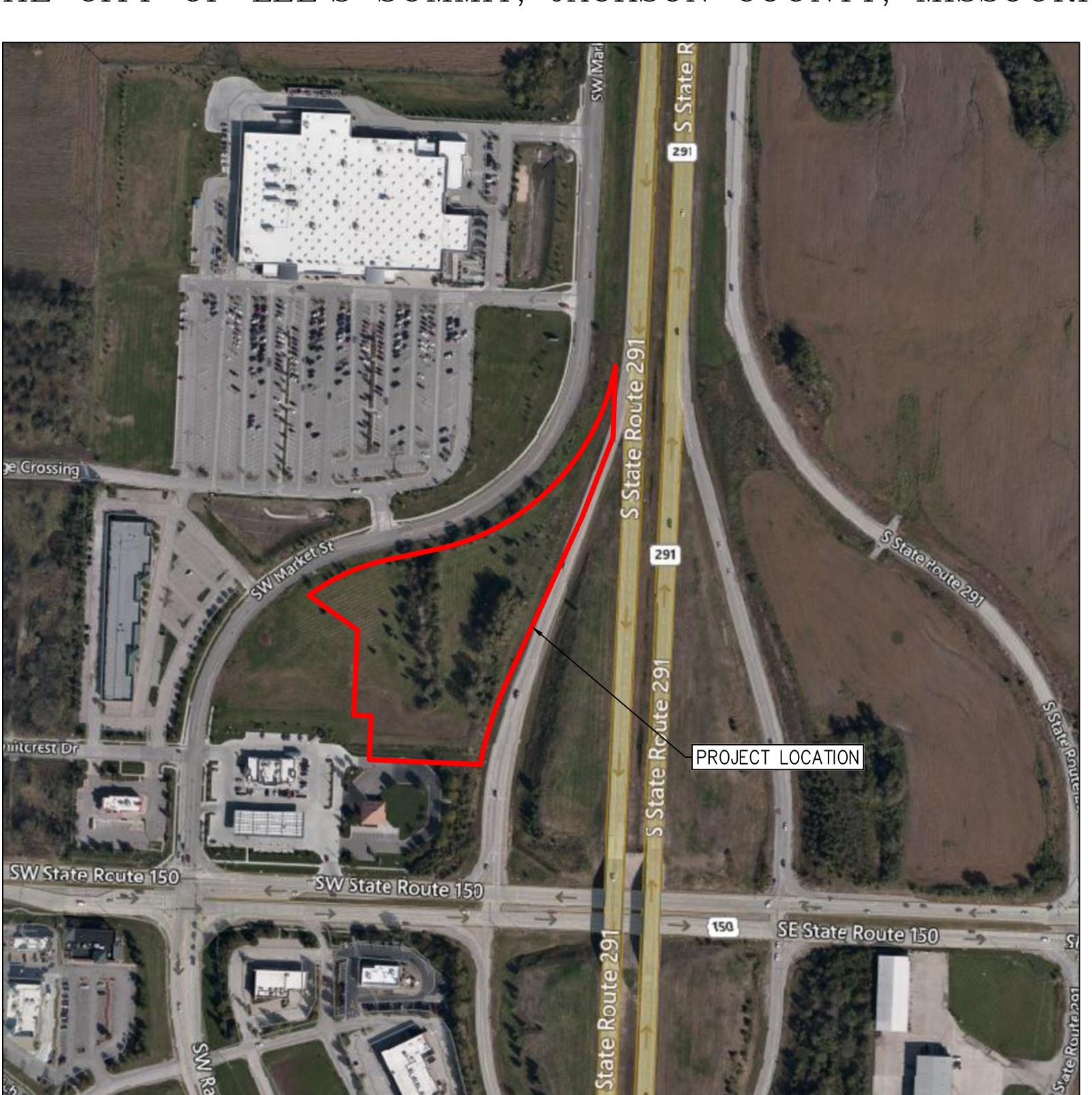
FOR

MARKET STREET CENTER

ADDRESS: M291 AND SW MARKET STREET IN THE CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI



CO COVER SHEET CO.1 DEMOLITION PLAN C1 OVERALL SITE PLAN C1.1 ENLARGED SITE PLAN C1.2-C1.4 TRUCK TURN PLANS C2 OVERALL GRADING PLAN C2.1-C2.3 ENLARGED GRADING PAN C3 OVERALL UTILITY PLAN C3.1 ENLARGED UTILITY PLAN C3.2 FIRE HOSE PLAN C4 STORM SEWER PLAN & PROFILES C5-C5.1 DRAINAGE MAPS C6 EXTENDED DRY DETENTION BASIN PLAI C6.1 OUTLET STRUCTURE DETAILS C7-C7.1 EROSION CONTROL PLAN & DETAILS C8-C8.4 | STANDARD DETAILS LS1-LS2 LANDSCAPE PLAN

PREPARED & SUBMITTED BY:

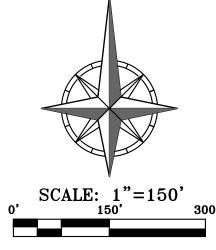
PHELPS ENGINEERING, INC. 1270 N. WINCHESTER OLATHE, KS 66061 913-393-1155 OFFICE 913-393-1166 FAX CONTACT: JUDD CLAUSSEN, P.E.

DEVELOPER:

FORESIGHT REAL ESTATE SERVICES, LLC 105 NORTH STEWART COURT, SUITÉ 225 816-918-1612 CONTACT: JOHN R. DAVIS, JR.

NW1/4 NE1/4 SE1/4 SW1/4

VICINITY MAP SEC. 29-47-31



FIRE ACCESS ROAD NOTE:

ALL FIRE ACCESS LANES SHALL BE HEAVY DUTY ASPHALT CAPABLE OF SUPPORTING 75,000—POUNDS.

OIL-GAS WELLS:

ACCORDING TO THE MISSOURI DEPARTMENT OF NATURAL RESOURCES STATE OIL & GAS COUNCIL WELLS, LOCATED

PRE-CONSTRUCTION MEETING NOTE:

UTILITY COMPANIES:

OVERLAND PARK, KANSAS 66207

LEE'S SUMMIT, MO 64082

MISSOURI GAS ENERGY (816) 969-2218 LUCAS WALLS (LUCAS.WALLS@SUG.COM) 3025 SOUTHEAST CLOVER DRIVE

(816) 347-4339 PHILLIP INGRAM (PHILLIP.INGRAM@KCPL.COM) RON DEJARNETTE (RON.DEJARNETTE@KCPL.COM) (816) 347-4316

1300 HAMBLEN ROAD LEE'S SUMMIT, MO 64081 STORM SEWER (PUBLIC WORKS DEPARTMENT) (816) 969-1800

220 SE GREEN STREET LEE'S SUMMIT, MO 64063

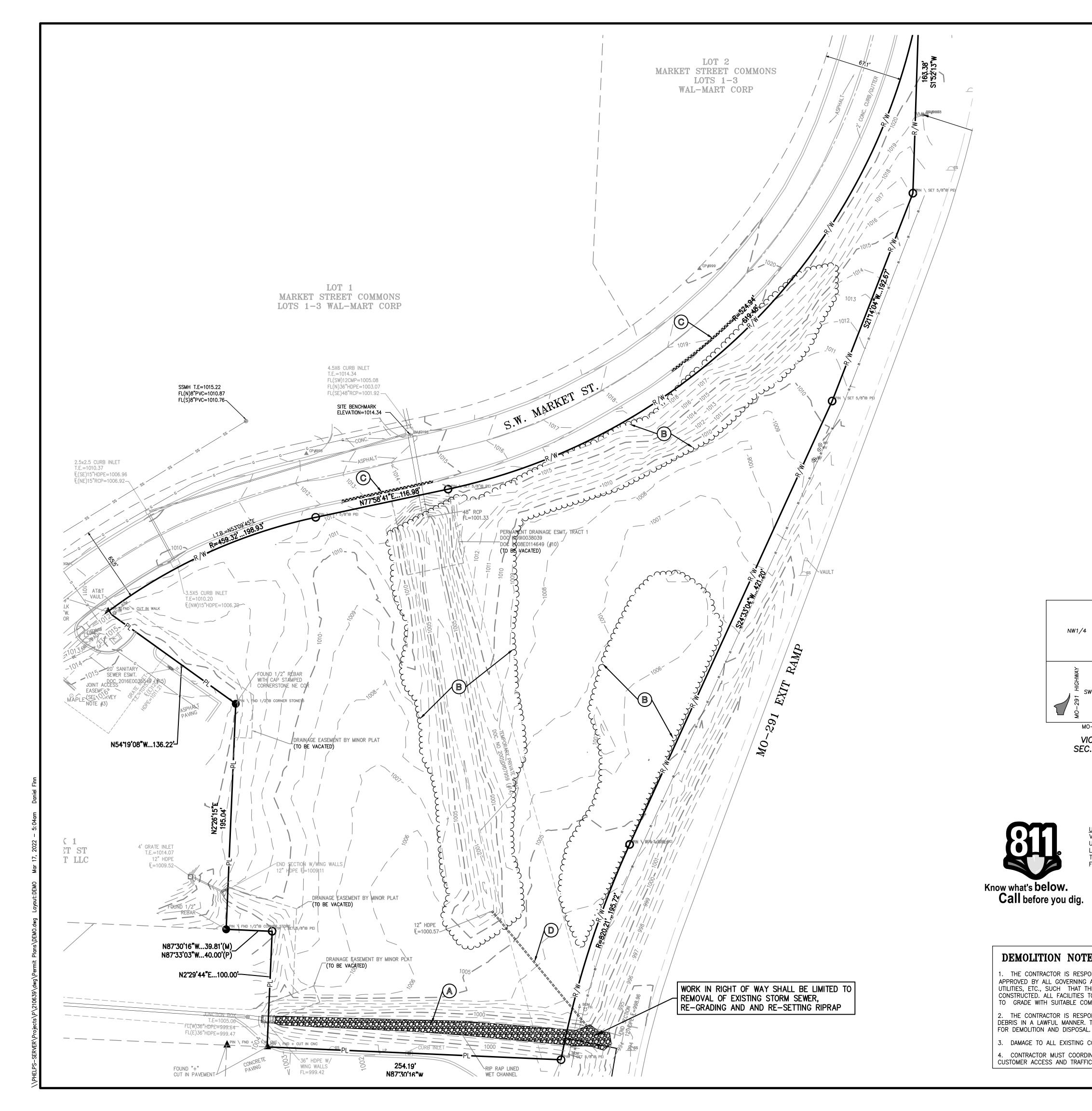
SANITARY SEWER & WATER (WATER UTILITIES DEPT.) (816)-969-1900 1200 SE HAMBLEM ROAD, LEE'S SUMMIT, MO 64081

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



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

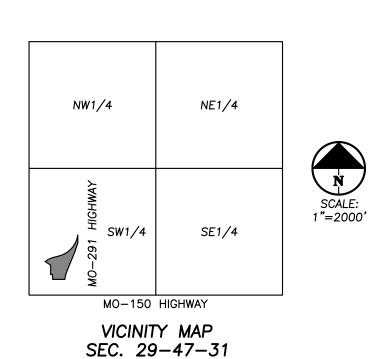
Know what's below. Call before you dig.





DEMOLITION KEY NOTES:

- THE CONTRACTOR SHALL REMOVE EXISTING RIPRAP LINER (TYP). CONTRACTOR TO DOCUMENT EXISTING RIPRAP WITH ENGINEER FOR POTENTIAL RE-USE.
- THE CONTRACTOR SHALL REMOVE ALL GROUND VEGETATION, TREES, SHRUBS, BRUSH AND DEBRIS SPECIFICALLY SHOWN TO BE REMOVED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSAL OF CLEARED ITEMS.
- THE CONTRACTOR SHALL REMOVE EXISTING CONCRETE CURB & GUTTER FOR NEW DRIVE ENTRANCE.
- THE CONTRACTOR SHALL REMOVE EXISTING 12" HDPE STORM SEWER.





UTILITY NOTES:
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LESSORS, ARE APPROXIMATE AND SHOULD BE VERIFIED IN THE FIELD AT THE TIME OF CONSTRUCTION. FOR ACTUAL FIELD LOCATIONS OF UNDERGROUND UTILITIES CALL 811.

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

LEGEND

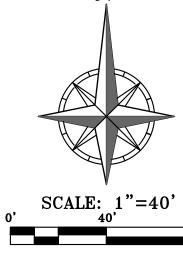
PROPERTY LINE

DEMOLITION NOTES:

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

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

DAMAGE TO ALL EXISTING CONDITIONS TO REMAIN WILL BE REPLACED AT CONTRACTOR'S EXPENSE. 4. CONTRACTOR MUST COORDINATE WITH OWNER PRIOR TO ANY CONSTRUCTION TO ESTABLISH CUSTOMER ACCESS AND TRAFFIC FLOW DURING ALL PHASES.



SCALE: 1"=40'			
	,	SCALE: 1"=40'	8





UTILITY NOTES:
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THE FIELD AT THE TIME OF CONSTRUCTION. FOR ACTUAL
FIELD LOCATIONS OF UNDERGROUND UTILITIES CALL 811.

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

LEGAL DESCRIPTION:

ALL THAT PART OF THE SOUTHWEST QUARTER OF SECTION 29, TOWNSHIP 47 NORTH, RANGE 31 WEST, IN THE CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT TO THE NORTHEAST CORNER OF LOT 2, QUIKTRIP 200R, A PLATTED SUBDIVISION OF LAND IN THE CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI, SAID POINT ALSO BEING ON THE WEST RIGHT-OF-WAY LINE OF MISSOURI ROUTE 291 HIGHWAY, AS NOW ESTABLISHED; THENCE N 87'30'16" W, ALONG THE NORTH LINE OF SAID LOT 2, A DISTANCE OF 254.19 FEET, TO AN ANGLE POINT ON THE EAST LINE OF LOT 1A, QUIKTRIP 200R LOT 1A, A SUBDIVISION OF LAND IN THE CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI; THENCE N 2°29'44" E, ALONG SAID EAST LINE OF SAID LOT 1A, A DISTANCE OF 100.00 FEET, TO THE NORTHEAST CORNER OF SAID LOT 1A; THENCE N 87°30'16" W, ALONG THE NORTH LINE OF SAID LOT 1A, A DISTANCE OF 39.81 FEET, TO THE SOUTHEAST CORNER OF LOT 1, BLOCK 1, OF FIRESTONE SW MARKET STREET, A LOT 1, BLOCK 1, A DISTANCE OF 195.04 FEET, TO THE NORTHEAST CORNER OF SAID LOT 1, BLOCK 1; THENCE N 5419'08" W. ALONG THE NORTHERLY LINE OF SAID LOT 1, BLOCK 1, A DISTANCE OF 136.22 FEET, TO THE NORTH MOST CORNER OF SAID LOT 1, BLOCK 1, FIRESTONE SW MARKET STREET, SAID POINT ALSO BEING ON THE EASTERLY RIGHT-OF-WAY LINE OF SW MARKET STREET, AS NOW ESTABLISHED; THENCE NORTHEASTERLY ALONG SAID EASTERLY RIGHT-OF-WAY LINE FOR THE FOLLOWING THREE (3) COURSES; THENCE ALONG A CURVE TO THE RIGHT HAVING AN INITIAL TANGENT BEARING OF N 53°09'45" THENCE NORTHERLY ALONG A CURVE TO THE LEFT, BEING TANGENT TO THE LAST COURSE, HAVING A RADIUS OF 524.94 FEET, AND AN ARC LENGTH OF 619.48 FEET, TO A POINT ON THE WEST RIGHT-OF-WAY LINE OF MISSOURI ROUTE 291 HIGHWAY, AS THENCE S 1°52'13" W, A DISTANCE OF 163.38 FEET; THENCE S 21°14'04" W, A DISTANCE OF 192.67 FEET; THENCE S 24°33'04 W, A DISTANCE OF 421.20 FEET; THENCE SOUTH ALONG A CURVE TO THE LEFT BEING TANGENT TO THE LAST DESCRIBED COURSE, HAVING A RADIUS OF 820.21 FEET, AND AN ARC LENGTH OF 195.72 FEET, TO THE POINT OF BEGINNING, CONTAINING 219,027.21 SQUARE FEET, OR 5.028 ACRES, MORE OR LESS, OF UNPLATTED LAND.

SITE PLAN NOTES:

- 1. All construction materials and procedures on this project shall conform to the latest revision of the following governing requirements, incorporated herein by reference:

 A) City ordinances & O.S.H.A. Regulations.
- B) The City of Lee's Summit Technical Specifications and Municipal Code.

 $AREA = \pm 5.028 ACRES / \pm 219,027.21 SQ.FT.$

- 2. The contractor shall have one (1) signed copy of the plans (approved by the City) and one (1) copy of the appropriate Design and Construction Standards and Specifications at the job site at all times.
- 3. The contractor will be responsible for securing all permits, bonds and insurance required by the contract documents, City of Lee's Summit, Missouri, and all other governing agencies (including local, county, state and federal authorities) having jurisdiction over the work proposed by these construction documents. The cost for all permits, bonds and insurance shall be the contractors responsibility and shall be included in the bid for the work.
- 4. The contractor is responsible for coordination of his and his sub—contractor's work. The contractor shall assume all responsibility for protecting and maintaining his work during the construction period and between the various trades/sub—contractors constructing the work.
- 5. The demolition and removal(or relocation) of existing pavement, curbs, structures, utilities, and all other features necessary to construct the proposed improvements, shall be performed by the contractor. All waste material removed during construction shall be disposed off the project site. The contractor shall be responsible for all permits for hauling and disposing of waste material. The disposal of waste material shall be in accordance with all local, state and federal regulations.
- 6. Contractor shall be responsible for all relocations, including but not limited to, all utilities, storm drainage, sanitary sewer services, signs, traffic signals & poles, etc. as required. All work shall be in accordance with governing authorities specifications and shall be approved by such. All cost shall be included in base bid.
- 7. All existing utilities indicated on the drawings are according to the best information available to the Engineer; however, all utilities actually existing may not be shown. The contractor shall be responsible for contacting all utility companies for an exact field location of each utility prior to any construction. All underground utilities shall be protected at the contractor's expense. All utilities, shown and unshown, damaged through the negligence of the contractor shall be repaired or replaced by the contractor at his expense.
- 8. The contractor will be responsible for all damage to existing utilities, pavement, fences, structures and other features not designated for removal. The contractor shall repair all damages at his expense.
- 9. The contractor shall verify the flow lines of all existing storm or sanitary sewer connections and utility crossings prior to the start of construction. Notify the engineer of any discrepancies.
- 10. <u>SAFETY NOTICE TO CONTRACTOR:</u> In accordance with generally accepted construction practices, the contractor shall be solely and completely responsible for conditions of the job site, including safety of all persons and property during performance of the work. This requirement will apply continuously and not be limited to normal working hours. Any construction observation by the engineer of the contractor's performance is not intended to include review of the adequacy of the contractor's safety measures, in, on or near the construction site.
- 11. Refer to the building plans for site lighting electrical requirements, including conduits, pole bases, pull boxes, etc.

SITE DIMENSION NOTES:

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

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

PAVEMENT MARKING AND SIGNAGE NOTES:

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

- 2. HANDICAP PAVEMENT MARKINGS AND SIGNS SHALL CONFORM TO ALL FEDERAL (AMERICANS WITH DISABILITIES ACT) AND STATE LAWS AND REGULATIONS.
- 3. TRAFFIC CONTROL DEVICES AND PAVEMENT MARKINGS SHALL CONFORM TO THE REQUIREMENTS OF THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES".
- 4. STOP SIGNS SHALL BE PROVIDED AT ALL LOCATIONS AS SHOWN ON PLANS AND SHALL CONFORM TO THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES". SIGNS SHALL BE 18" X 12", 18 GAUGE STEEL AND SHALL BE ENGINEER GRADE REFLECTIVE.

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

ZONING:

THIS PROPERTY IS ZONED CP-2, DEFINED AS PLANNED COMMUNITY COMMERCIAL DISTRICT.

OIL-GAS WELLS:

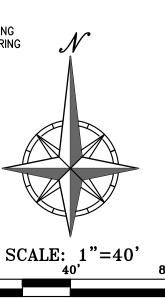
SUPPORTING 75,000-POUNDS.

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

PRE-CONSTRUCTION MEETING NOTE:

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

FIRE ACCESS ROAD NOTE:
ALL FIRE ACCESS LANES SHALL BE HEAVY DUTY ASPHALT CAPABLE OF



JUDD DAVID CLAUSSEN *
NUMBER PE-29850
3/15/22 C

1270 N. Winchester Olathe, Kansas 66061 (913) 393-1155 Fax (913) 393-1166

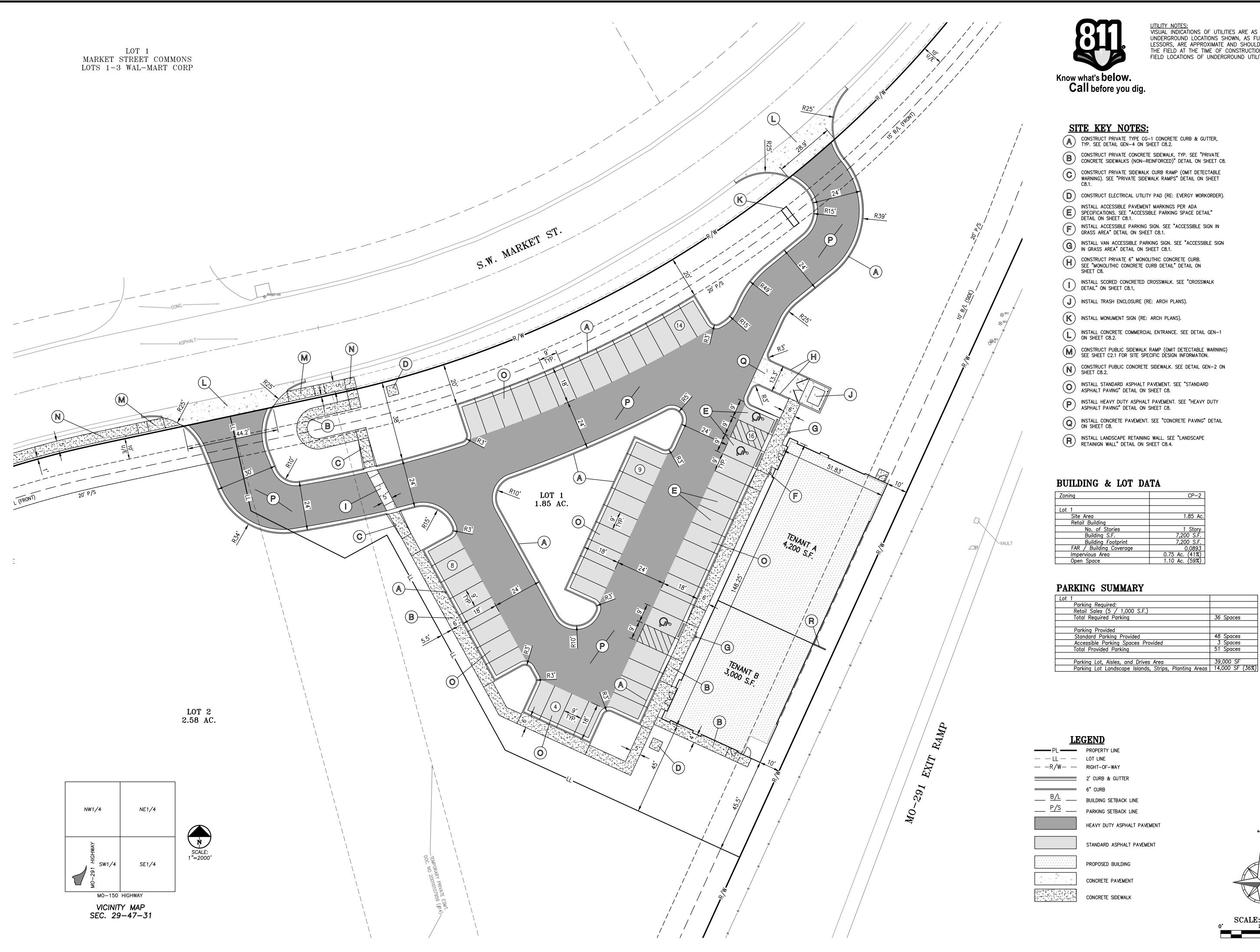
> PLANNING ENGINEERING IMPLEMENTATIO

VERALL SIIE FLAN ARKET STREET CENTER AND SW MARKET STREET

DATE: 10–14–21 | DRAWN:MRR 1.

CHECKED: DAF | APPROVED: JDC
CERTIFICATE OF AUTHORIZATION
KANSAS
LAND SIRVEYING — LS-82
ENGINEERING — E-391
CERTIFICATE OF AUTHORIZATION
MISSOURI

SHEET C 1



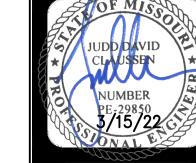


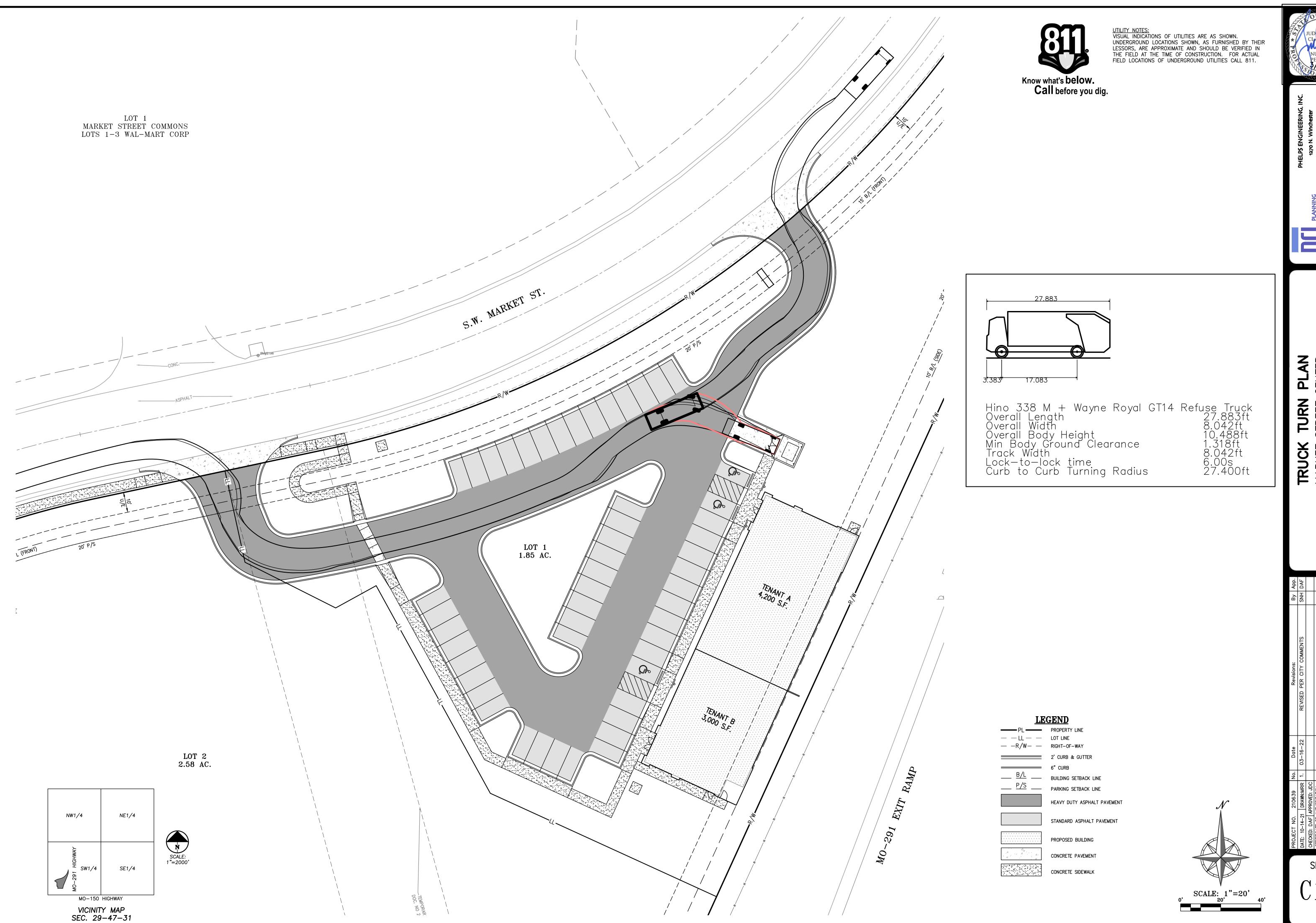
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CP-2

36 Spaces

48 Spaces 3 Spaces 51 Spaces





JUDD DAVID CLAUSEN *

NUMBER PE-29850
3/15/22

1270 N. Winchester
Olathe, Kansas 66061
(913) 393-1155
Fax (913) 393-1166

PLANNING ENGINEERING IMPLEMENTATION

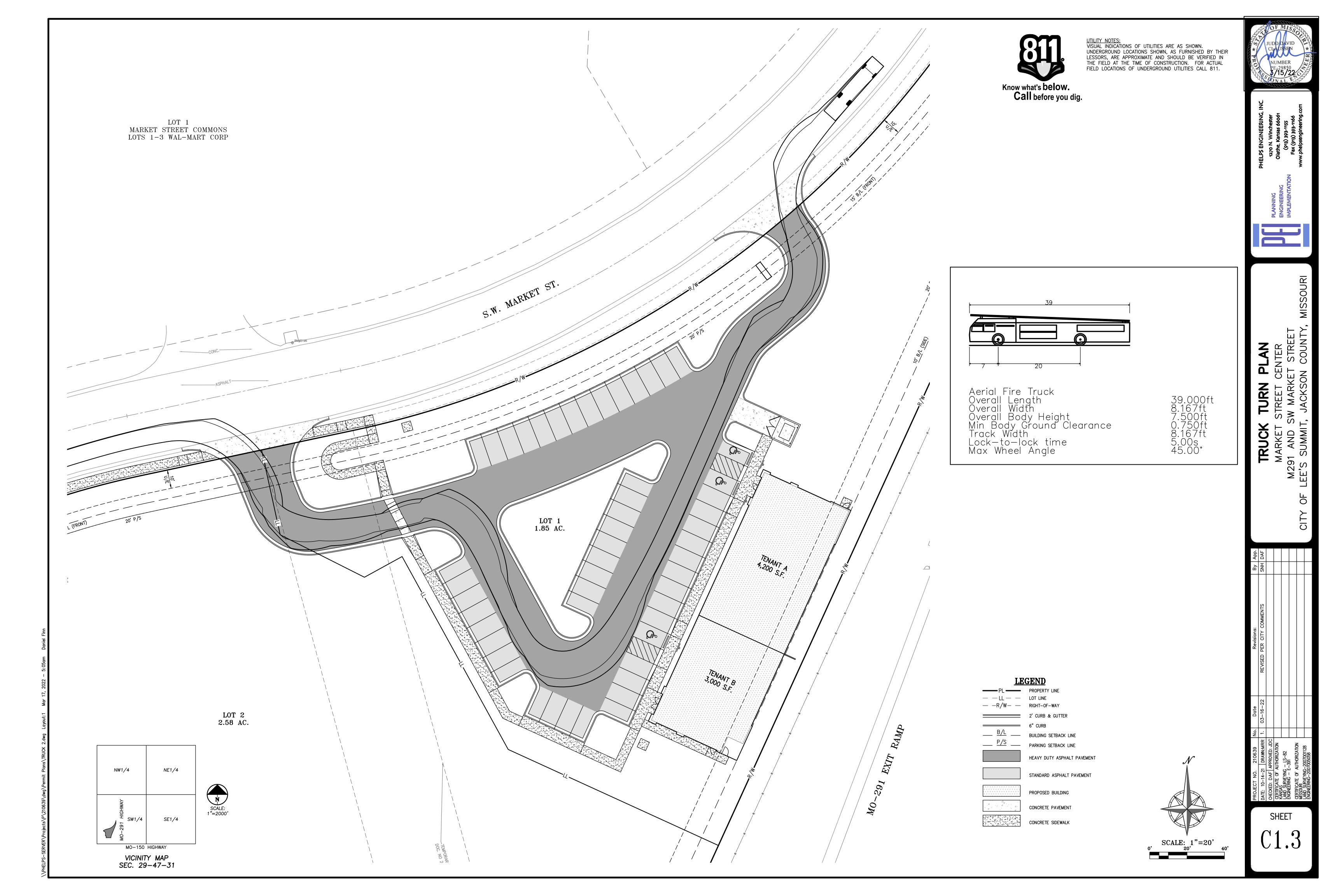
A W W

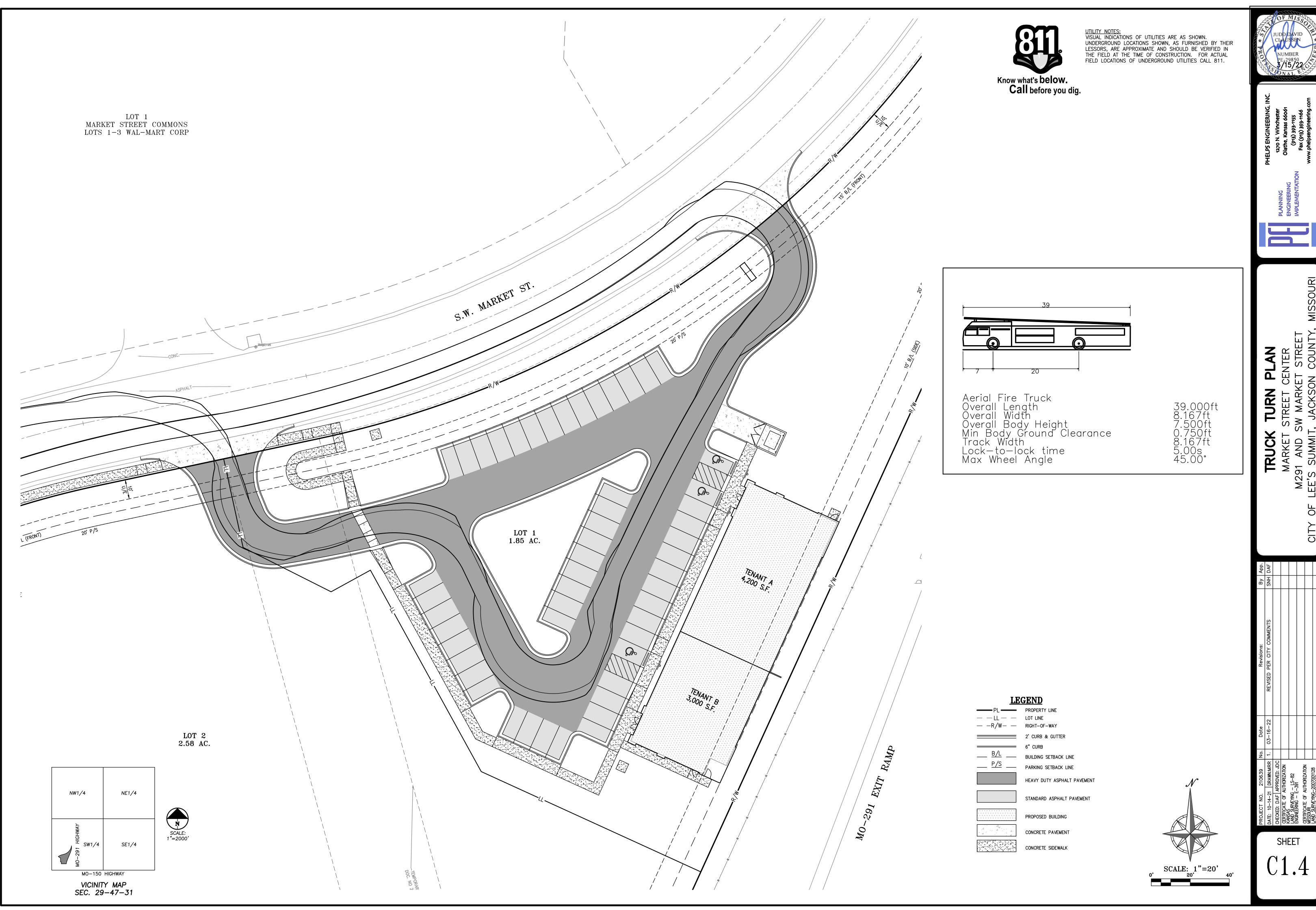
TRUCK TURN PLAN
MARKET STREET CENTER

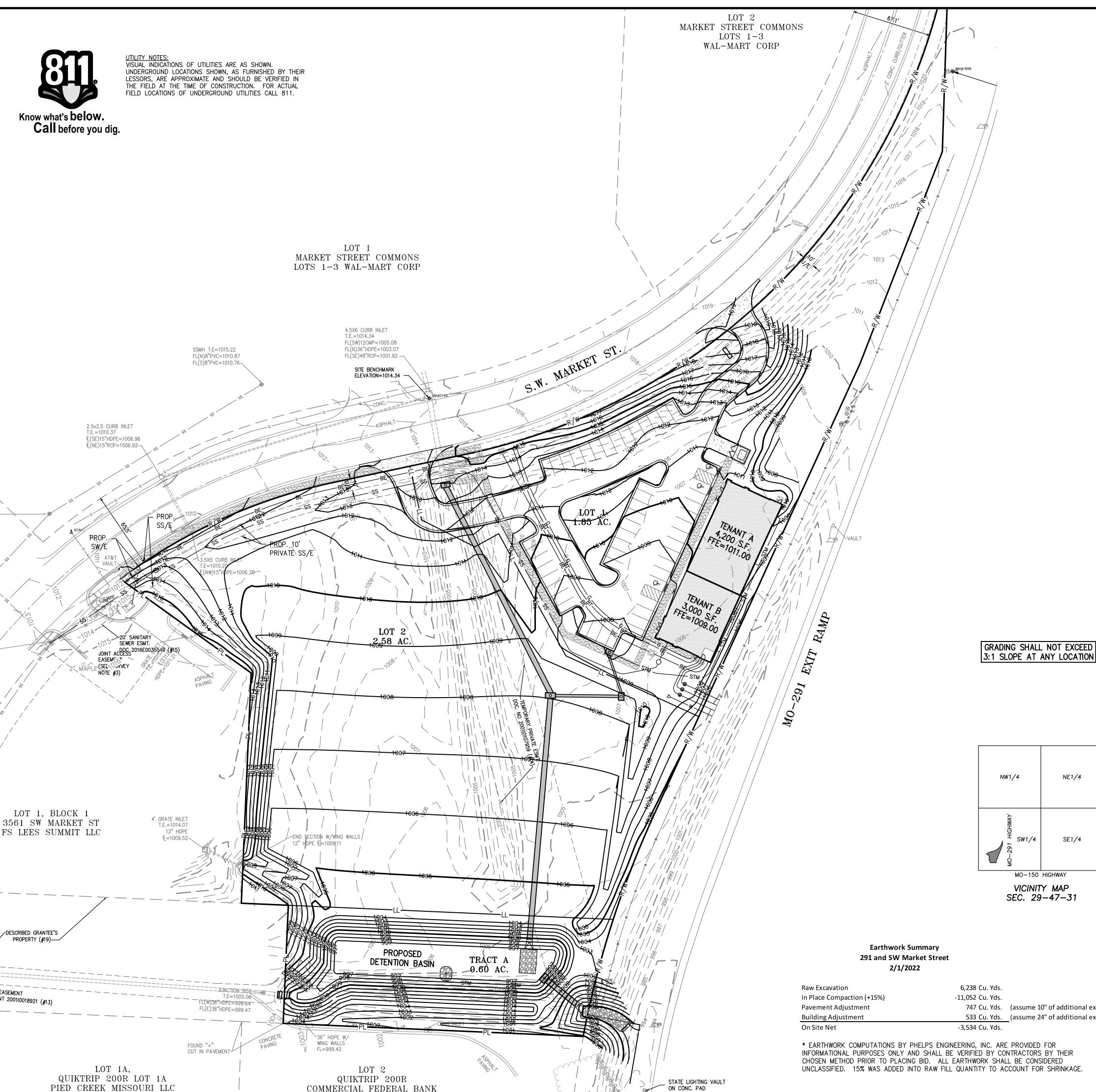
Date Revisions: By App.
5-16-22 REVISED PER CITY COMMENTS SNH DAF

CHECKED: DAF APPROVED
CRETIFICATE OF AUTHORIZA
KANSAS
KANSAS
LAND SURVETING – LS-82
ENGINEERING – E-391
CERTIFICATE OF AUTHORIZA
MISSOUR

C1.2







SITE GRADING NOTES:

- 1. CONTOURS AND ELEVATIONS: Existing and proposed contours are shown on plans at one foot (1') contour intervals, unless otherwise noted, proposed contours and elevations shown represent approximate finish grade. Contractor shall hold down subgrades to allow for pavement and sub-base thicknesses.
- 2. If the contractor does not accept existing topography as shown on the plans, without exception, he shall have made at his expense, a topographic survey by a registered land surveyor and submit it to the owner for review.
- 3. CLEARING AND GRUBBING: Prior to beginning preparation of subgrade, all areas under pavements or building shall be stripped of all topsoil, vegetation, large rock fragments (greater than 6 inches in any dimension) and any other deleterious material. The actual stripping depth should be based on visual examination during construction and the results of proof-rolling operations. The root systems of all trees (not designated to remain) shall be removed in their entirety. Stripping materials shall not be incorporated into structural fills.
- TOPSOIL STRIPPING: Prior to the start of site grading, the contractor shall strip all topsoil from areas to be graded, and stockpiled at a location on or adjacent to the site as directed by the owner. At completion of grading operations and related construction, the contractor will be responsible for redistribution of topsoil over all areas disturbed by the construction activities. Topsoil shall be placed to a minimum depth of six inches (6") and in accordance with specifications for landscaping. At that time, and prior to the installation of landscaping or irrigation, all topsoil graded areas shall be visually inspected and accepted by the owner and ITL.
- 5. Contractor shall adjust and/or cut existing pavement as necessary to assure a smooth fit and continuous grade. Contractor shall assure positive drainage away from buildings for all natural and paved areas.
- 6. SUBGRADE PREPARATION: Prior to placement of new fill material, the existing subgrade shall be proofrolled and approved under the direction of the Geotechnical Engineer or his representative.
- 7. PROOFROLLING: Subsequent to completion of stripping and over-excavation, all building and pavement areas to receive engineered fill should be systematically proof-rolled using a tandem axle dump truck loaded to approximately 20,000 pounds per axle. Also, any finished subgrade areas to receive paving shall be proof-rolled within 48 hours of paving. Unsuitable soils that are detected and that can not be recompacted should be over-excavated and replaced with controlled structural fill.
- 8. EARTHWORK:

A) GEOTECHNICAL: All earthwork shall conform to the recommendations of the Geotechnical report. Said report and its recommendations are herein incorporated into the project requirements by reference. Prior to beginning construction, the contractor shall obtain a copy of and become familiar with the geotechnical report. Unless specifically noted on the plans, the recommendations in the geotechnical report are hereby incorporated into the project requirements and specifications.

B) SURFACE WATER: Surface water shall be intercepted and diverted during the placement of fill.

C) FILLS: All fills shall be considered controlled or structural fill and shall be free of vegetation, organic matter, topsoil and debris. In areas where the thickness of the engineered fill is greater than five, feet building and pavement construction should not commence until so authorized by the on—site geotechnical engineer to allow for consolidation.

D) BUILDING SUBGRADE: As specified in the Geotechnical Engineering Report, the upper section of building subgrade shall consist of Low Volume Change (LVC) material defined as approved, compacted granular fill or low to moderate plasticity cohesive soil materials stabilized with Class C Flyash. Granular fill shall consist of compacted granular materials with a maximum particle size of two (2) inches or less, such as limestone screenings. Refer to geotechnical report for complete

E) EXISTING SLOPES: Where fill material is to be placed on existing slopes greater than 5:1 (horizontal to vertical), existing slope shall be benched providing a minimum vertical face of twelve inches (12"). The benches should be cut wide enough to accommodate the compaction equipment. Fill material shall be placed and compacted in horizontal lifts not exceeding nine inches (9") (loose lift measurement), unless otherwise approved by the Geotechnical Engineer.

F) COMPACTION REQUIREMENTS: The upper 9 inches of pavement subgrade areas shall be compacted to a minimum density of ninety five percent (95%) of the material's maximum dry density as determined by ASTM D698 (standard proctor compaction). The moisture content at the time of placement and compaction shall within a range of 0% below to 4% above optimum moisture content as defined by the standard proctor compaction procedure. The moisture contents shall be maintained within this range until completion of the work. Where compaction of earth fill by a large roller is impractical or undesirable, the earth fill shall be hand compacted with small vibrating rollers or mechanical tampers.

- 9. All cut or fill slopes shall be 3:1 or flatter. All asphalt parking areas shall be a minimum of 1% slope but not more than 5% slope unless otherwise noted. All pavements within ADA parking areas shall not exceed 2% total slope. All grades around building shall be held down 6" from finish floor and slope away another 6" in 10 feet. Contractor shall notify engineer prior to final subgrade construction of any areas not within this slope requirement.
- 10. TESTING AND INSPECTION: Owner's Independent Testing Laboratory (ITL) shall make tests of earthwork during construction and observe the placement of fills and other work performed on this project to verify that work has been completed in accordance with Geotechnical Engineering Report, Project Specifications and within industry standards. The ITL will be selected by the owner and the cost of testing will be the owner's responsibility.
- 11. CLASSIFICATION: All excavation shall be considered unclassified. No separate or additional payments shall be made for rock
- 12. PERMANENT RESTORATION: All areas disturbed by earthwork operations shall be sodded, unless shown otherwise by the landscaping plan or erosion control plan.
- 13. UTILITIES: The contractor is specifically cautioned that the location and/or elevation of existing utilities as shown on these plans is based on records of the various utility companies, and where possible, measurements taken in the field. The information is not to be relied on as being exact or complete. The contractor must call the appropriate utility companies at least 48 hours before any excavation to request exact field location of utilities. It shall be the responsibility of the contractor to relocate all existing utilities which conflict with the proposed improvements shown on the plans.
- 14. LAND DISTURBANCE: The contractor shall adhere to all terms & conditions as outlined in the EPA or applicable state N.P.D.E.S. permit for storm water discharge associated with construction activities. Refer to project S.W.P.P.P. requirements.

FLOOD NOTE:

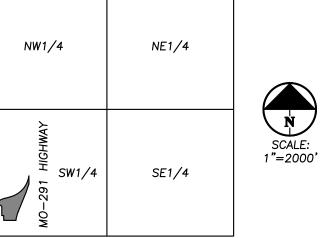
THIS PROPERTY LIES WITHIN ZONE X, DEFINED AS AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN. AS SHOWN ON THE FLOOD INSURANCE RATE MAP PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY FOR THE CITY OF LEE'S SUMMIT, COMMUNITY NO. 290174, JACKSON COUNTY, MISSOURI, MAP NO. 29095C0436G, AND DATED JANUARY 20, 2017.

BENCHMARK:

VERTICAL DATUM = NAVD88 BASED ON GPS OBSERVATION USING MODOT VRS 1. FOUND "" CUT IN CONCRETE SIDEWALK AT SOUTHWEST CORNER OF

ADJACENT PROPERTY. ELEVATION = 987.14

2. SET "" CUT IN SOUTHWEST CORNER OF BACK OF CURB IN ADJACENT PARKING LOT TO THE NORTH AT NORTHWEST CORNER OF SURVEYED PROPERTY. ELEVATION = 990.19



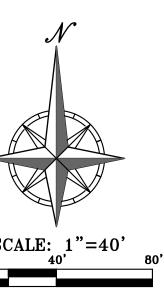
MO-150 HIGHWAY VICINITY MAP SEC. 29-47-31

On Site Net	-3,534 Cu. Yds.	
Building Adjustment	533 Cu. Yds.	(assume 24" of additional excavation)
Pavement Adjustment	747 Cu. Yds.	(assume 10" of additional excavation)
In Place Compaction (+15%)	-11,052 Cu. Yds.	
Raw Excavation	6,238 Cu. Yds.	

* EARTHWORK COMPUTATIONS BY PHELPS ENGINEERING, INC. ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY AND SHALL BE VERIFIED BY CONTRACTORS BY THEIR CHOSEN METHOD PRIOR TO PLACING BID. ALL EARTHWORK SHALL BE CONSIDERED UNCLASSIFIED. 15% WAS ADDED INTO RAW FILL QUANTITY TO ACCOUNT FOR SHRINKAGE.

I DODAID

<u>LE</u>	<u>GEND</u>
——PL—— ——LL—— ——R/W——	PROPERTY LINE LOT LINE RIGHT-OF-WAY
920————————————————————————————————————	2' CURB & GUTTER EXISTING CONTOURS PROPOSED CONTOURS
XXX.XX TW	PROPOSED SPOT ELEVATION LG LIP OF GUTTER TC TOP OF CURB SW SIDEWALK ME MATCH EXISTING HP HIGH POINT LP LOW POINT P TOP OF PAVEMENT TE TOP OF STRUCTURE GR GROUND ELEVATION BS BOTTOM OF STEPS TS TOP OF STEPS BW BOTTOM OF WALL TW TOP OF WALL
	EXISTING STORM SEWER
	PROPOSED STORM PIPE
	PROPOSED WET CURB & GUT
	PROPOSED DRY CURB & GUT
	PROPOSED RETAINING WALL



GRADING
STREET CEN
SW MARKET
JACKSON C

0





UTILITY NOTES:
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EN

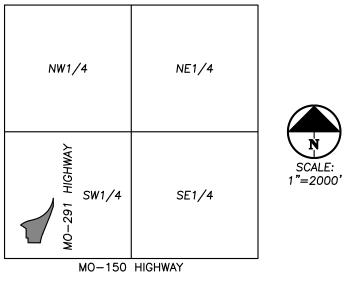
FLOOD NOTE:

THIS PROPERTY LIES WITHIN ZONE X, DEFINED AS AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN, AS SHOWN ON THE FLOOD INSURANCE RATE MAP PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY FOR THE CITY OF LEE'S SUMMIT, COMMUNITY NO. 290174, JACKSON COUNTY, MISSOURI, MAP NO. 29095C0436G, AND DATED JANUARY 20, 2017.

BENCHMARK:

VERTICAL DATUM = NAVD88 BASED ON GPS OBSERVATION USING MODOT VRS

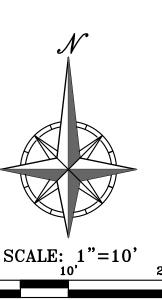
2. SET "" CUT IN SOUTHWEST CORNER OF BACK OF CURB IN ADJACENT PARKING LOT TO THE NORTH AT NORTHWEST CORNER OF SURVEYED PROPERTY. ELEVATION = 990.19



VICINITY MAP SEC. 29-47-31

LEGEND

- PL ———————————————————————————————————	PROPERTY LINE LOT LINE
R/W- —	RIGHT-OF-WAY
	2' CURB & GUTTER
- 920 	EXISTING CONTOURS
-920 -918	PROPOSED CONTOURS
	PROPOSED SPOT ELEVATION
XXX.XX TW	LG LIP OF GUTTER TC TOP OF CURB SW SIDEWALK ME MATCH EXISTING HP HIGH POINT LP LOW POINT P TOP OF PAVEMENT TE TOP OF STRUCTURE GR GROUND ELEVATION BS BOTTOM OF STEPS TS TOP OF STEPS BW BOTTOM OF WALL TW TOP OF WALL
	EXISTING STORM SEWER
	PROPOSED STORM PIPE
	PROPOSED WET CURB & GUTTER
	PROPOSED DRY CURB & GUTTER







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



EN

SHEET

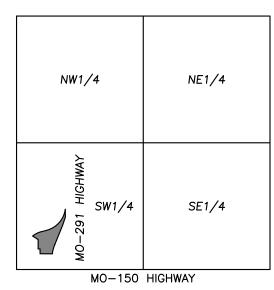
FLOOD NOTE:

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BENCHMARK:

VERTICAL DATUM = NAVD88 BASED ON GPS OBSERVATION USING MODOT VRS 1. FOUND " \square " CUT IN CONCRETE SIDEWALK AT SOUTHWEST CORNER OF ADJACENT PROPERTY. ELEVATION = 987.14

2. SET "" CUT IN SOUTHWEST CORNER OF BACK OF CURB IN ADJACENT PARKING LOT TO THE NORTH AT NORTHWEST CORNER OF SURVEYED PROPERTY.



SCALE: 1"=2000'

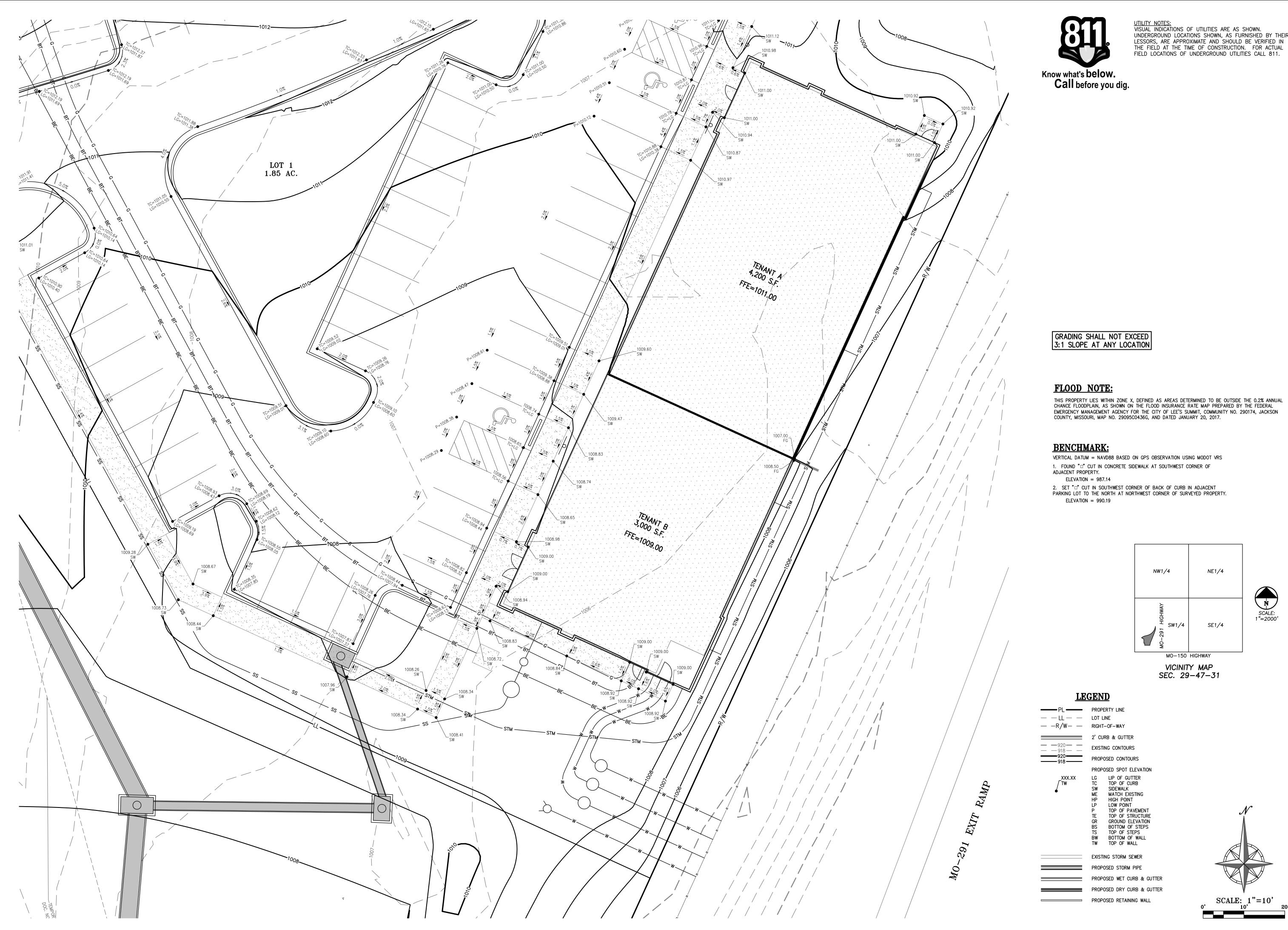
VICINITY MAP SEC. 29-47-31

LEGEND

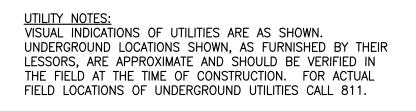
——PL—	PROPERTY LINE
- $ LL$ $ -$	LOT LINE
- -R/W- $-$	RIGHT-OF-WAY
	2' CURB & GUTTER
<u> </u>	EXISTING CONTOURS
920—	PROPOSED CONTOURS
	PROPOSED SPOT ELEVATION
TW XXX	LG LIP OF GUTTER TC TOP OF CURB SW SIDEWALK ME MATCH EXISTING HP HIGH POINT LP LOW POINT P TOP OF PAVEMENT TE TOP OF STRUCTURE GR GROUND ELEVATION BS BOTTOM OF STEPS TS TOP OF STEPS

BW BOTTOM OF WALL
TW TOP OF WALL

EXISTING STORM SEWER PROPOSED DRY CURB & GUTTER PROPOSED RETAINING WALL







GRADING STREET CENT

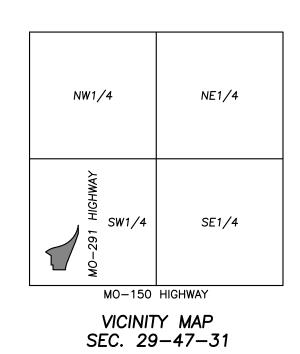
EN

SHEET

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

1. FOUND "D" CUT IN CONCRETE SIDEWALK AT SOUTHWEST CORNER OF ADJACENT PROPERTY.

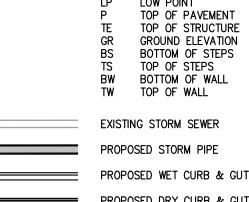
ELEVATION = 987.14 2. SET "" CUT IN SOUTHWEST CORNER OF BACK OF CURB IN ADJACENT

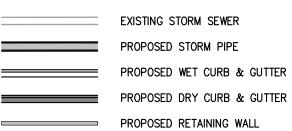


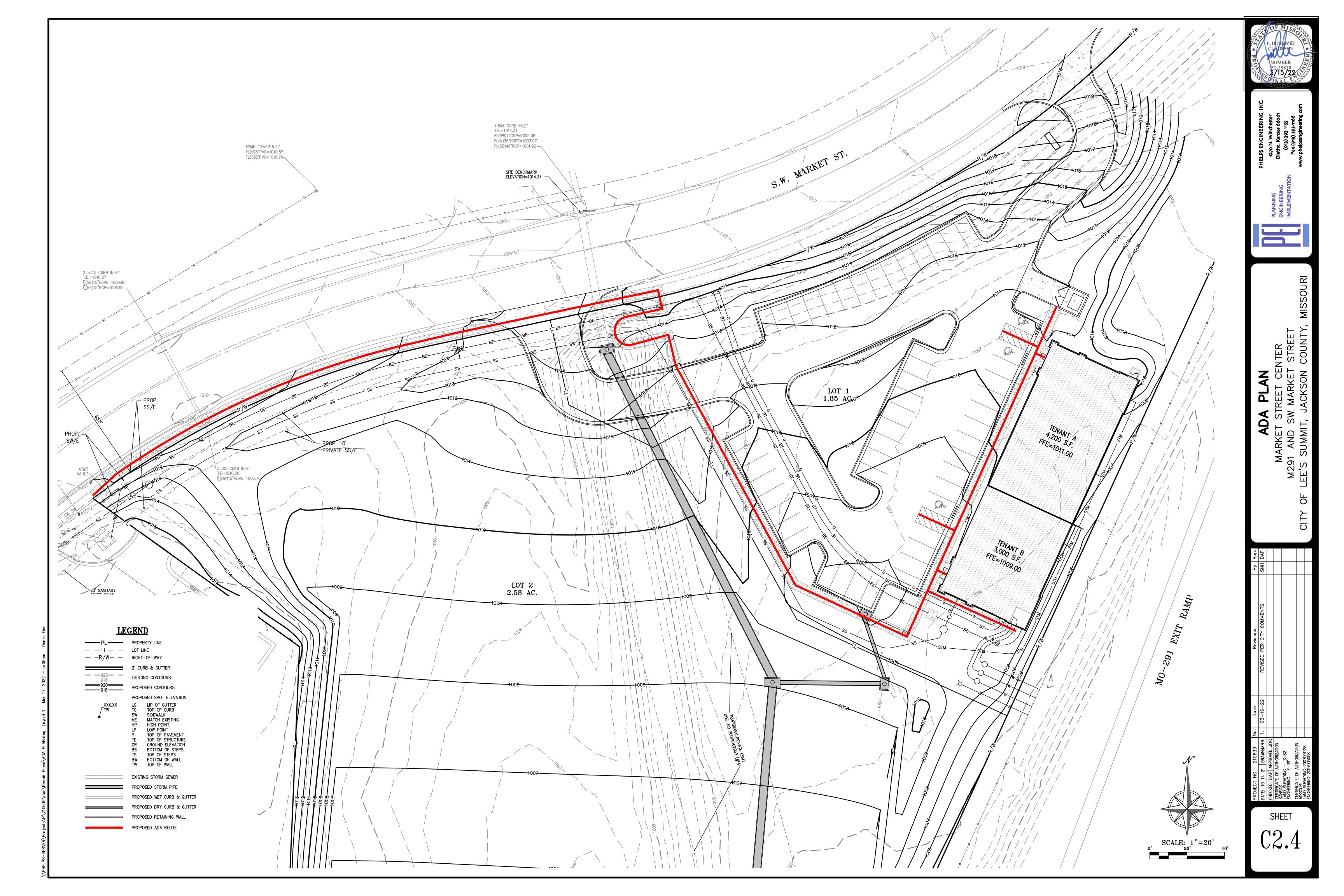
SCALE: 1"=2000'

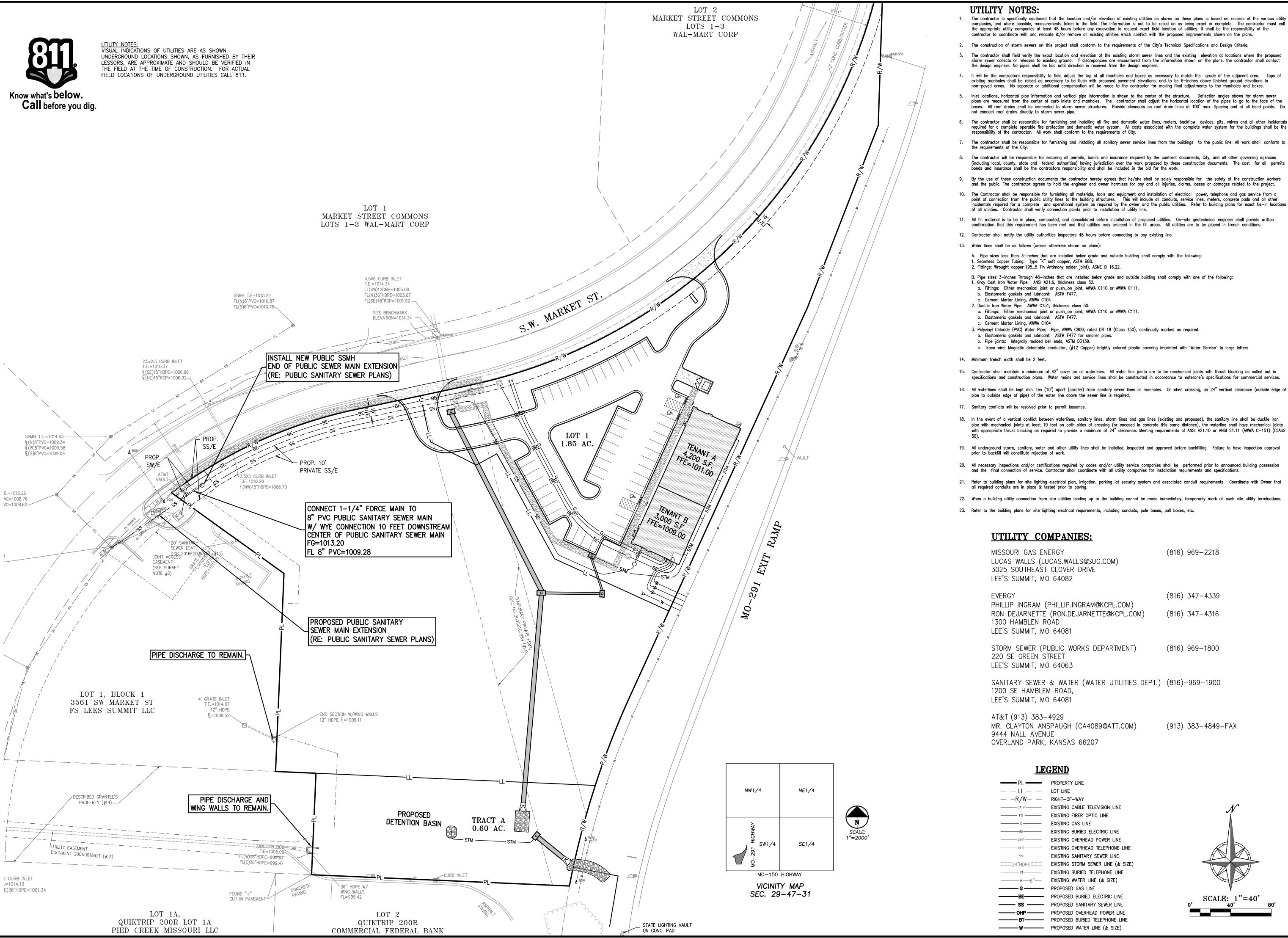
LEGEND

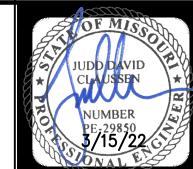
- LL	LOT LINE RIGHT-OF-WAY
	2' CURB & GUTTER
—920— — —918— —	EXISTING CONTOURS
920 918	PROPOSED CONTOURS
	PROPOSED SPOT ELEVATION
TW XXX.XX	LG LIP OF GUTTER TC TOP OF CURB SW SIDEWALK ME MATCH EXISTING HP HIGH POINT LP LOW POINT











THELPS ENGINEEKING, INC. 1270 N. Winchester Olathe, Kansas 66061 (913) 393-1155 Fax (913) 393-1166 www.phelpsendineering.com

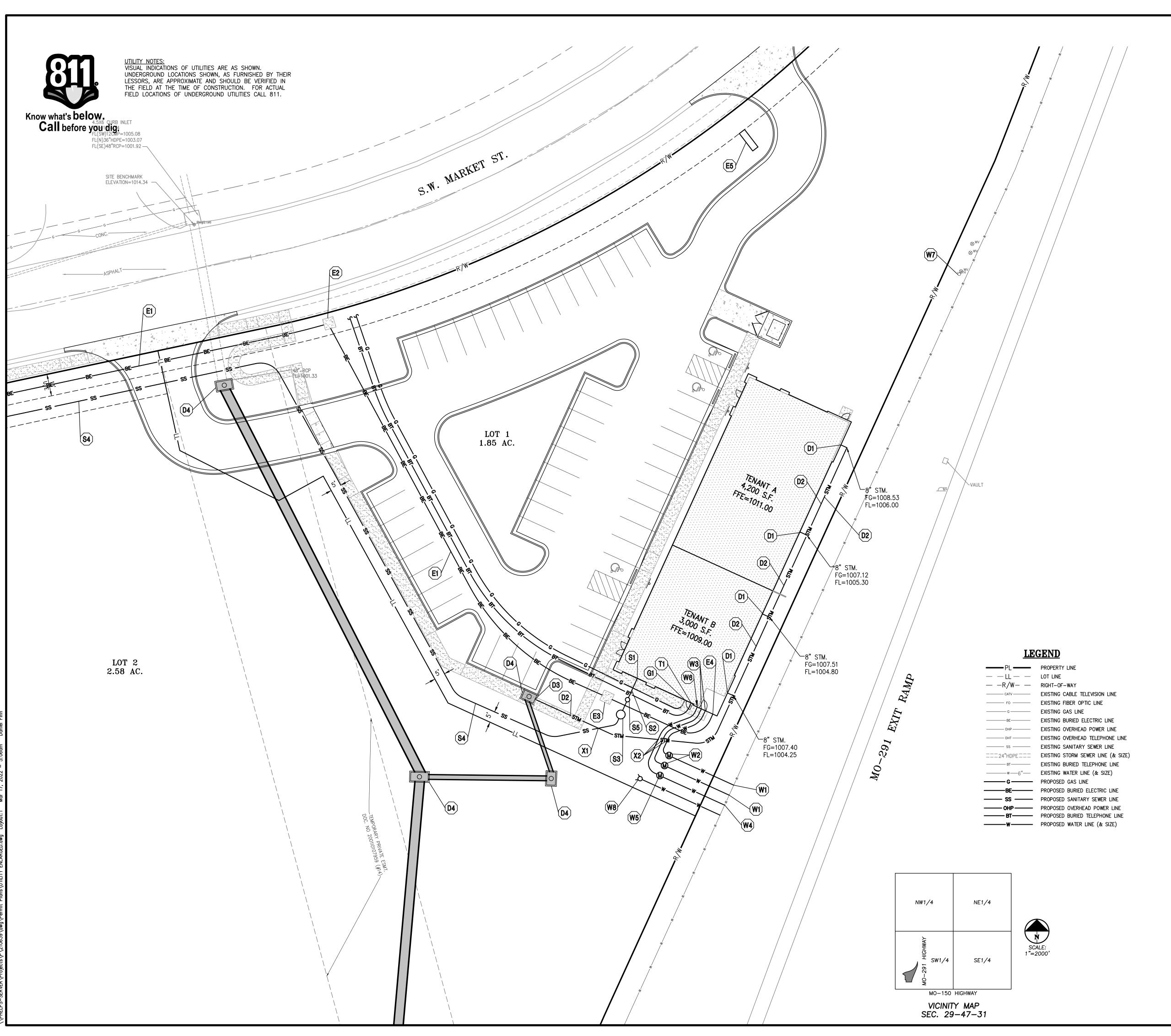
PLANNING ENGINEERING IMPLEMENTATION

ENG ENG IMPI

LAN ER TREET

MARKET STREET CENTER 291 AND SW MARKET STRE

SNH DAF



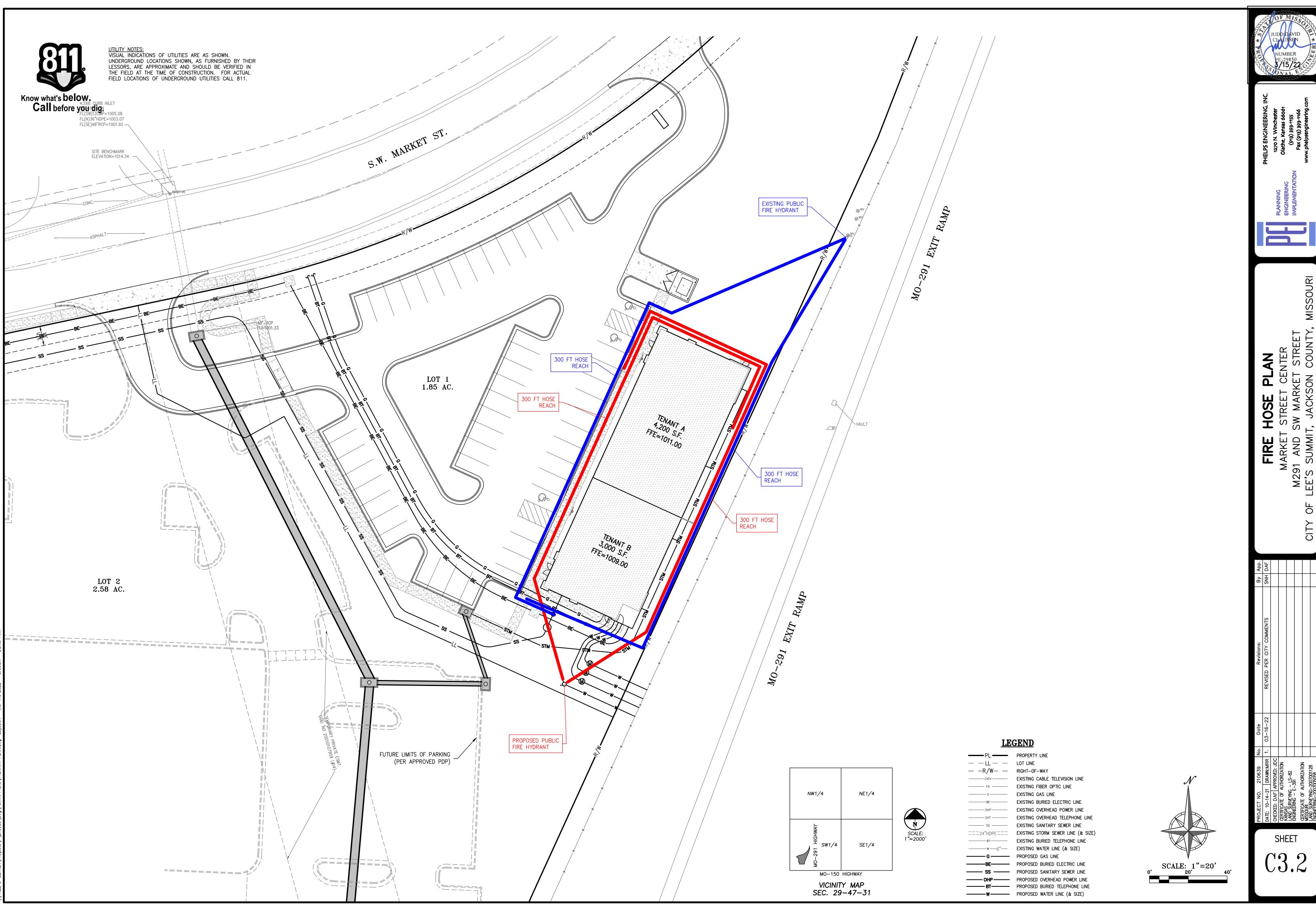
UTILITY KEY NOTES:

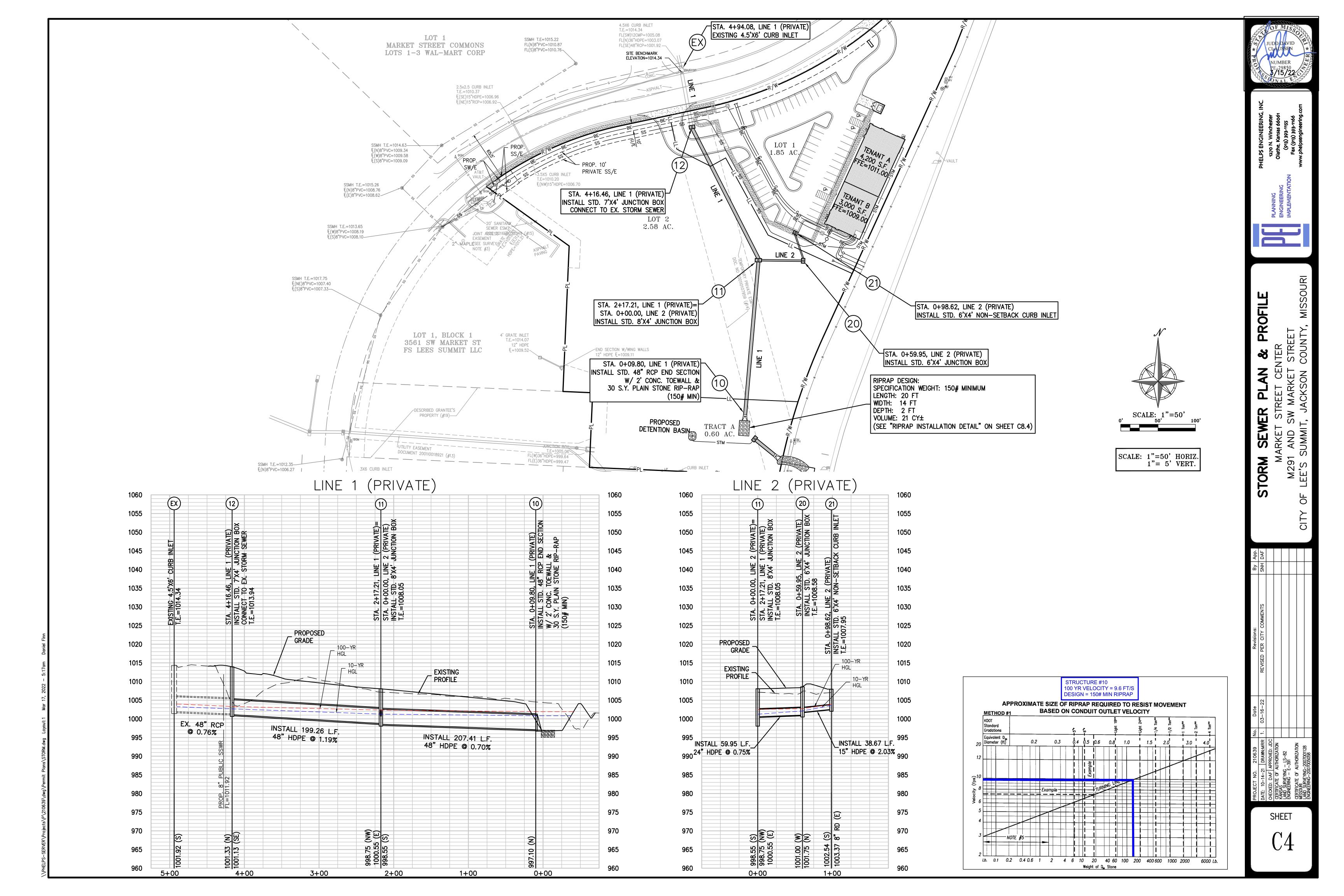
- PROPOSED ROOF DRAIN CONNECTION. RE: ARCH PLANS FOR DOWNSPOUT LOCATIONS. CONNECT DOWNSPOUTS TO EXTERNAL UNDERGROUND STORM LINE.
- (D2) INSTALL 8" HDPE PRIVATE STORM SEWER @ 1.0% MINIMUM SLOPE.
- CONNECT TO PROPOSED PRIVATE CURB INLET. FL IN (E) 8"=1003.12
 FL OUT (S) 15"=1002.5

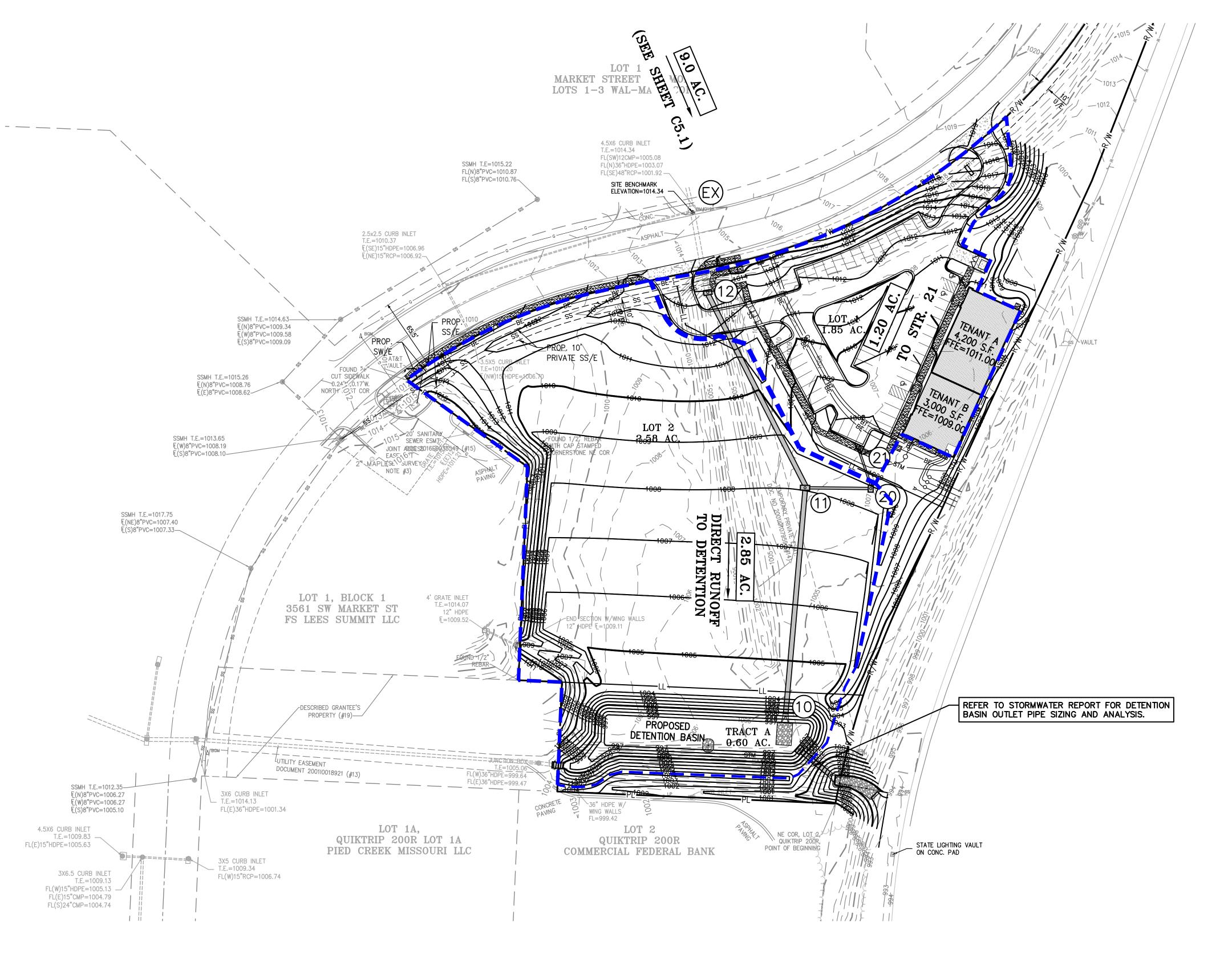
FL OUT (S) 15"=1002.54

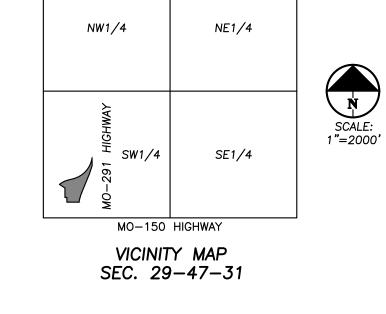
- INSTALL PRIVATE STORM STRUCTURE. SEE STORMWATER PLAN & PROFILES FOR RIM ELEVATION & INVERT ELEVATIONS.
- FOLLOW ELECTRIC COMPANY WORK ORDER AND SPECIFICATIONS FOR PRIMARY ELECTRICAL SERVICE ROUTING AND CONNECTION TO FXISTING
- INSTALL CONCRETE SECTIONALIZER PAD. CONTRACTOR TO VERIFY
- EXACT LOCATION AND SIZE WITH ELECTRIC COMPANY PRIOR TO CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION OF CONCRETE PAD AND CONDUIT AS REQUIRED BY THE ELECTRIC COMPANY. CONTRACTOR SHALL COORDINATE SAID WORK WITH THE ELECTRIC COMPANY. INSTALL CONCRETE TRANSFORMER PAD. CONTRACTOR TO VERIFY
- INSTALLATION OF CONCRETE PAD AND CONDUIT AS REQUIRED BY THE ELECTRIC COMPANY. CONTRACTOR SHALL COORDINATE SAID WORK WITH THE ELECTRIC COMPANY.
- ELECTRIC ENTRY INTO BUILDING. FOLLOW ELECTRIC COMPANY REQUIREMENTS (RE: BUILDING ELECTRIC PLAN.)
- CONTRACTOR TO INSTALL CONDUITS TO MONUMENT SIGN (RE: BUILDING ELECTRICAL PLANS FOR POWER REQUIREMENTS)
- GAS ENTRY WITH GAS METER. CONTRACTOR SHALL COORDINATE WITH GAS COMPANY FOR TYING OF INDIVIDUAL METER. SIZE OF GAS MAIN SHALL BE AS DETERMINED BY UTILITY OR AS SHOWN ON BUILDING PLANS. CONTRACTOR IS RESPONSIBLE FOR ON BUILDING PLANS. CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH GAS COMPANY REGARDING THE SIZE & INSTALLATION OF GAS SERVICE LINE.
- CONTRACTOR TO COORDINATE 1" TAP ON EXISTING MAIN FOR DOMESTIC SERVICE LINE (2 LOCATIONS) WITH CITY. THE CITY SHALL PERFORM THE TAP OF THE EXISTING MAIN. CONTACT CITY FOR TAPPING REQUIREMENTS. CONTRACTOR TO PAY ALL FEES FOR WATER MAIN TAP. OWNER WILL REIMBURSE CONTRACTOR FOR ACTUAL METER AND SYSTEM DEVELOPMENT FEES ASSESSED
- (2) INSTALL 1" DOMESTIC WATER METER PIT PER CITY REQUIREMENTS
 (2) LOCATIONS) THE CITY SHALL PROVIDE THE METER THE PIT (2 LOCATIONS). THE CITY SHALL PROVIDE THE METER, THE PIT, AND ALL OTHER MATERIALS NECESSARY FOR THE INSTALLATION. CONTRACTOR TO COORDINATE AND PAY ALL FEES. INSTALLATION BY THE CONTRACTOR'S PLUMBER SHALL BE IN ACCORDANCE WITH CITY STANDARDS.
- 1-1/2" DOMESTIC WATER LINE ENTRY TO BUILDING (2 1-1/2" DOMESTIC WATER LINE ENTRY TO BUILDING (2 LOCATIONS). CONTRACTOR TO TRANSITION FROM 1" DOMESTIC WATER LINE TO 1-1/2" DOMESTIC WATER LINE DOWNSTREAM OF WATER METER. DOMESTIC WATER LINE SHALL BE 1-1/2" SOFT TYPE K COPPER.CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ANY APPURTENANCES ON THE DOMESTIC LINE SUCH AS BACKFLOW PREVENTION DEVICES (RE: BUILDING PLANS), GATE VALVES, REDUCERS, BENDS, TEES, ETC., WHICH MAY BE REQUIRED. CONTRACTOR TO COORDINATE WITH THE DEVELOPMENT SERVICES INSPECTOR.
- CONTRACTOR TO COORDINATE 1" TAP ON EXISTING MAIN FOR IRRIGATION LINE WITH CITY. THE CITY SHALL PERFORM THE TAP OF THE EXISTING MAIN. CONTACT CITY FOR TAPPING REQUIREMENTS. CONTRACTOR TO PAY ALL FEES FOR WATER MAIN TAP. OWNER WILL REIMBURSE CONTRACTOR FOR ACTUAL METER AND SYSTEM DEVELOPMENT FEES ASSESSED BY CITY.
- INSTALL 1" IRRIGATION METER PIT PER CITY REQUIREMENTS. THE CITY SHALL PROVIDE THE METER, THE PIT, AND ALL OTHER MATERIALS NECESSARY FOR THE INSTALLATION. CONTRACTOR TO COORDINATE AND PAY ALL FEES. INSTALLATION BY THE CONTRACTOR'S PLUMBER SHALL BE IN ACCORDANCE WITH CITY STANDARDS.
- 1-1/2" IRRIGATION LINE ENTRY TO BUILDING. CONTRACTOR TO 1-1/2" IRRIGATION LINE ENTRY TO BUILDING. CONTRACTOR TO TRANSITION FROM 1" IRRIGATION LINE TO 1-1/2" IRRIGATION LINE DOWNSTREAM OF WATER METER. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ANY APPURTENANCES ON THE DOMESTIC LINE SUCH AS BACKFLOW PREVENTION DEVICES (RE: BUILDING PLANS), GATE VALVES, REDUCERS, BENDS, TEES, ETC., WHICH MAY BE REQUIRED. CONTRACTOR TO COORDINATE WITH THE DEVELOPMENT SERVICES INSPECTOR.
- (W7) EXISTING PUBLIC FIRE HYDRANT TO REMAIN.
- CONTRACTOR TO INSTALL NEW PUBLIC FIRE HYDRANT. SEE SHEET C8.2, DETAIL WAT-7 FOR DETAIL.
- CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH THE TELEPHONE COMPANY FOR THE INSTALLATION OF BURIED TELEPHONE LINES. CONTRACTOR TO PROVIDE THREE (3) - 4" T1) PVC SCH. 40 CONDUITS FROM BUILDING TO R/W. CONTRACTOR TO TERMINATE IN QUAZITE BOX WITH PULL STRING FROM BUILDING TO TELEPHONE FEED POINT. CONTRACTOR TO VERIFY EXACT ROUTING AND FEED POINT WITH TELEPHONE COMPANY.
- CONNECT TO BLDG. INTERIOR PLUMBING SANITARY SEWER LINE (RE: MEP PLANS) FL 4"=1005.35
- INSTALL 16 L.F. 4" PVC SANITARY SEWER SERVICE LINE (SDR-26) @ 2.0% MIN. SLOPE.
- POLYETHYLENE TANK AND E/ONE SENTRY ADVISOR ALARM PANEL.
 TE=1008.72 INSTALL E1 DUAL GRINDER PUMPS (MODEL WH472-77) WITH FL 4" IN=1005.03 FL 1-1/4" OUT=1005.52
- (\$4) INSTALL 1-1/4" HDPE PRIVATE SANITARY SEWER FORCE MAIN.
- INSTALL CHECK VALVE ON 4" SANITARY SEWER SERVICE LINE WITH VALVE BOX ACCESSIBLE AT GRADE.
- UTILITY CROSSING
 FG=1008.54
 8" STORM FL=1003.44 1-1/4" SANITARY FL=1005.44 (1.3' VERTICAL CLARENCE)
 - UTILITY CROSSING FG=1008.70 FL 1-1/2" WATER LINES (3)=1002.65 8" STORM FL=1003.76 (1.0' VERTICAL CLARENCE)











LEGEND

EXISTING CONTOURS ——XXX—— PROPOSED CONTOURS —XXX— DENOTES DRAINAGE AREA DENOTES FLOW DIRECTION

> X.XX Ac. DENOTES DRAINAGE AREA TO STRUCTURE

DENOTES STRUCTURE NUMBER

STORM DRAINAGE CALCULATIONS

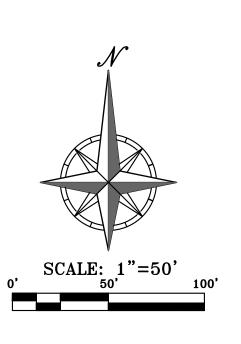
FLOOD NOTE:

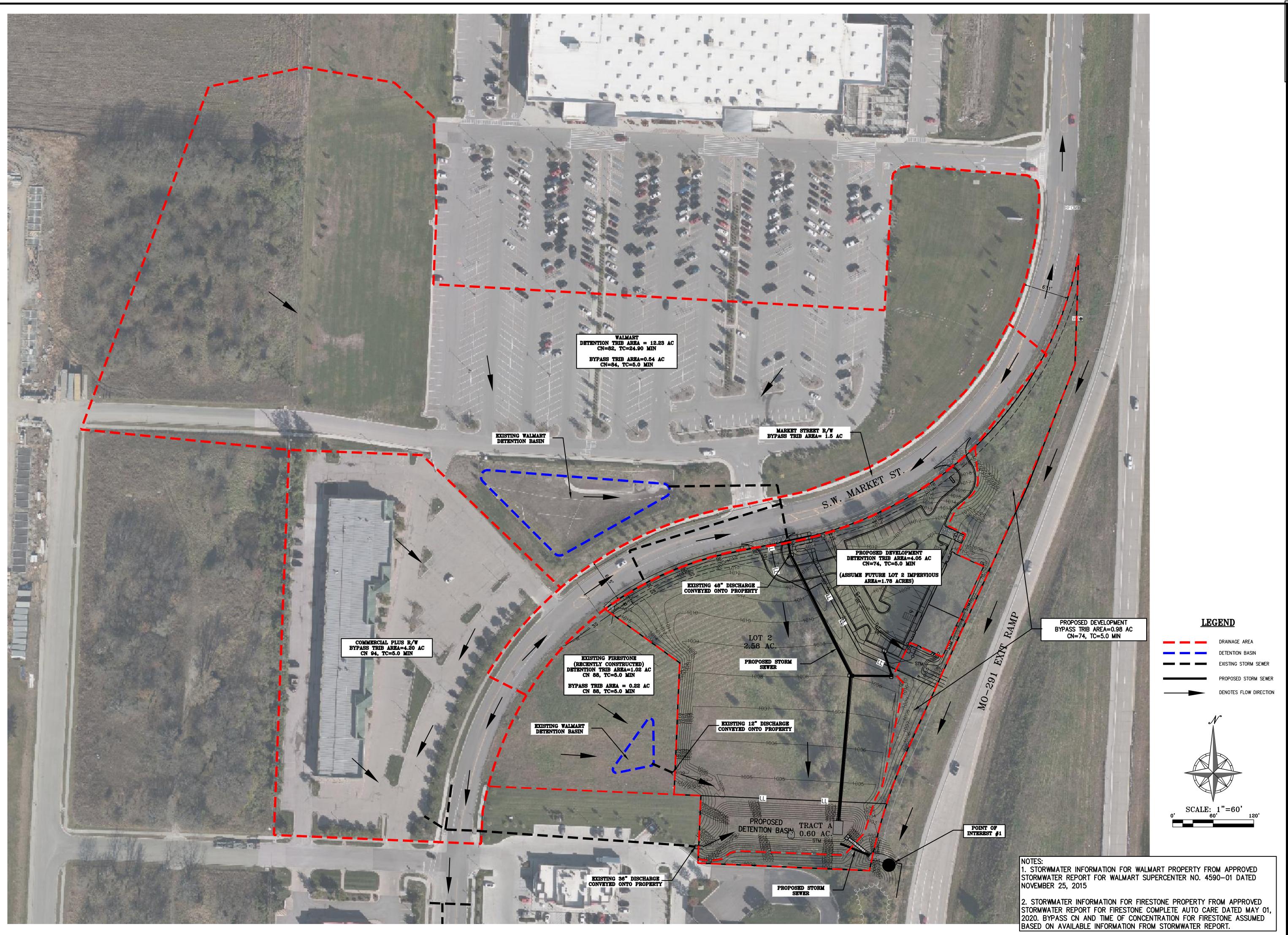
THIS PROPERTY LIES WITHIN ZONE X, DEFINED AS AREA OF MINIMAL FLOOD HAZARD, AS SHOWN ON THE FLOOD INSURANCE RATE MAP PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY FOR THE CITY OF LEE'S SUMMIT, MISSOURI, COMMUNITY NO. 290174, JACKSON COUNTY, MISSOURI, MAP NO. 29095C0532G, AND DATED JANUARY 20, 2017



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

					I	. RUNOF	F										III. PIPE	DESIGN							REMARK
S			INCREMENTAL CUMULATIVE									STRUCTURE PIPE													
N L U I M N B E E R	R U C T U R E	RUNOFF COEFFICIENT "C"	AREA "A" (ACRES)	CxA	AREA "A" (ACRES)	CxA	SYSTEM TIME OF CONCENTRATION "T _C " AT STRUCTURE (MIN)	KAINFALL	ANTECEDENT PRECIPIT ATION FACTOR " K_{25} / K_{100} "	(CFS)	Upstream Structure Number	Downstream Structure Number	Upstream Structure Rim Elevation	Height of Structure (FT)	Diameter "D" (IN)	Length "L" (FT)	Upstream Invert Elevation	Downstream Invert Elevation	Slope "S" (FT/FT)	Travel Time in Pipe "TT" (min)	Velocity Full V _p (FPS)	Runoff Q ₂₅ (CFS)	Runoff Q ₁₀₀ (CFS)	Full Flow Q _p (CFS)	
	12	0.81	13.73	11.12	13.73	11.12	5.00	8.53	1.10	104.3	12	11	1013.94	12.81	48	199.26	1001.13	998.75	0.0119	0.27	12.5	104.3	143.5	157.0	
1								10.32	1.25	143.5															
1	11	0.81	0.00	0.00	14.93	12.09	5.00	8.53	1.10	113.4	11	10	1008.05	9.50	48	207.41	998.55	997.10	0.0070	0.36	9.6	113.4	156.0	120.1	
								10.32	1.25	156.0															
	22	0.81	1.20	0.97	1.20	0.97	5.00	8.53	1.10	9.1	22	21	1007.95	5.41	15	38.67	1002.54	1001.75	0.0204	0.08	7.6	9.1	12.5	9.2	
2								10.32	1.25	12.5															
2	21	0.81	0.00	0.00	1.20	0.97	5.00	8.53	1.10	9.1	21	11	1008.58	7.58	24	59.95	1001.00	1000.55	0.0075	0.16	6.3	9.1	12.5	19.6	
								10.32	1.25	12.5															





JUDD DAVID CLAUSSEN

NUMBER
PE-29850
3/15/22
COVAL

1270 N. Winchester Olathe, Kansas 66061 (913) 393-1155 Fax (913) 393-1166

PLANNING ENGINEERING IMPLEMENTATION

MARKET STREE M291 AND SW MA

 VO. 210639
 No. Date
 Revisions:

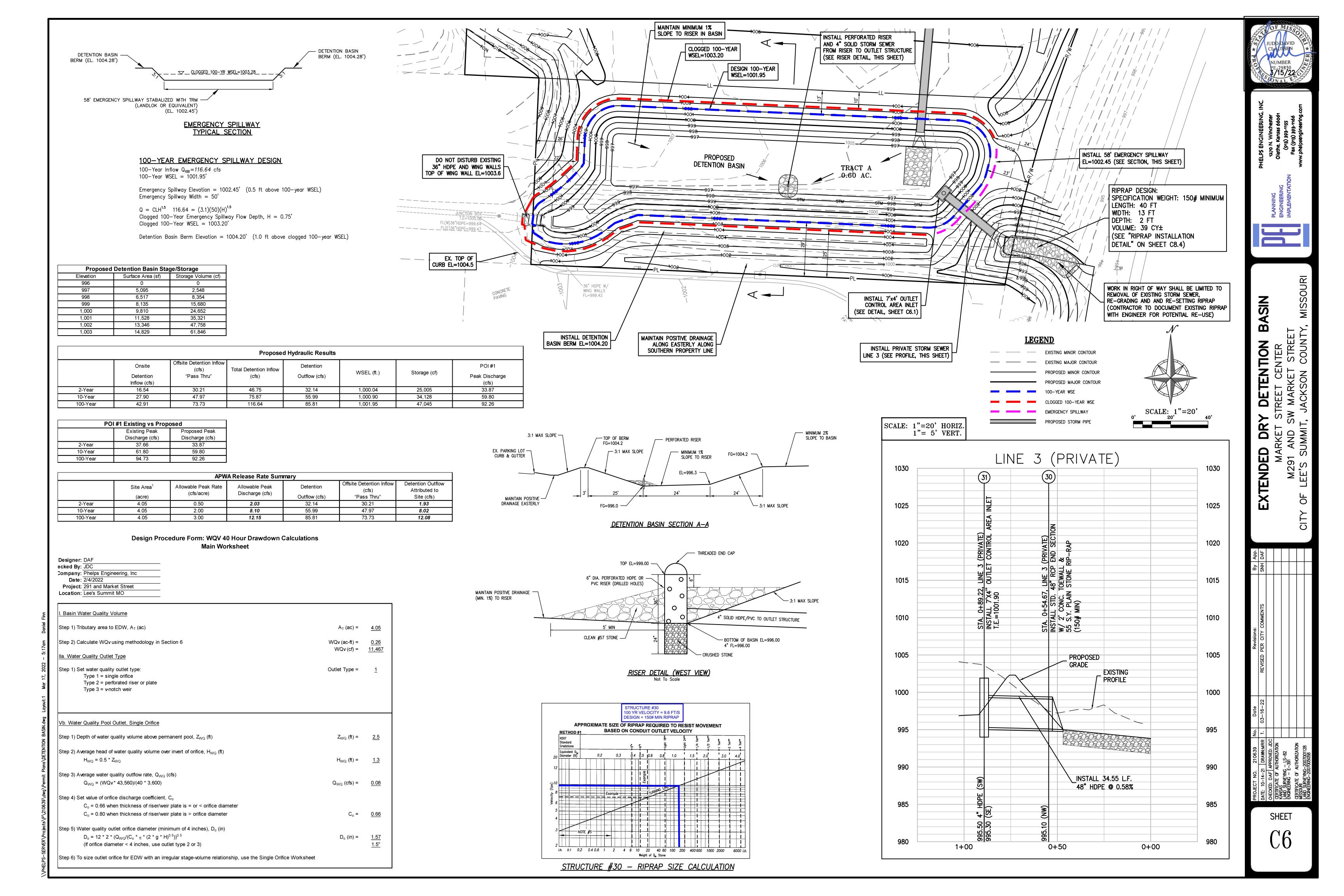
 4-21
 DRAWN:MRR 1. 03-16-22
 REVISED PER CITY COMMENTS

 AF | APPROVED: JDC
 OF AUTHORIZATION

 OF AUTHORIZATION OF AUTHORI

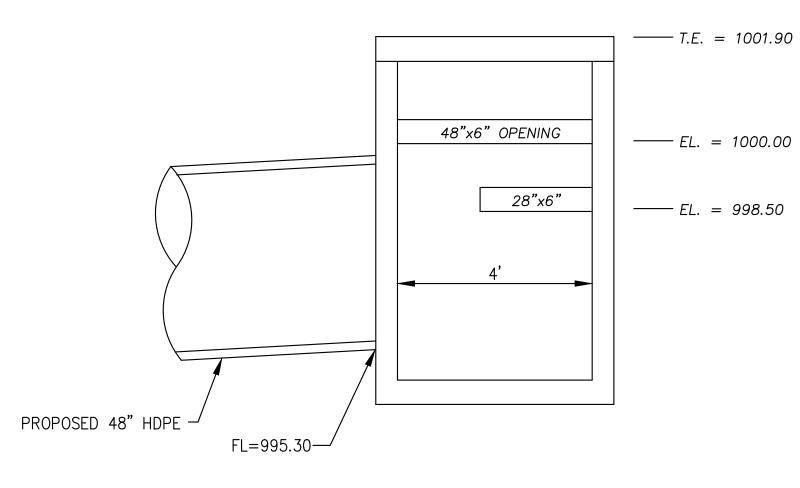
SHEET

C5.1

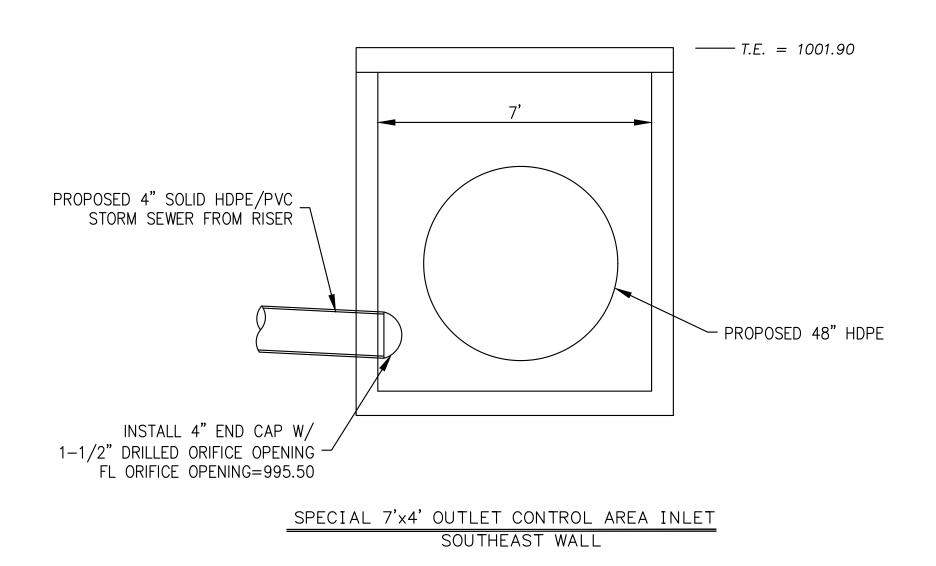


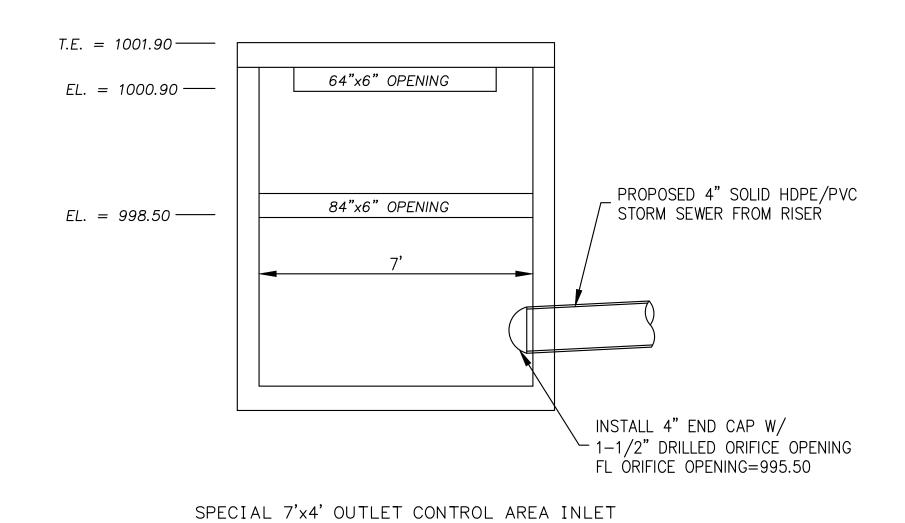
T.E. = 1001.9044"x6" OPENING EL. = 1000.00 ---28"x6" EL. = 998.50 —— PROPOSED 4" SOLID HDPE/PVC STORM SEWER FROM RISER - PROPOSED 48" HDPE FL=995.30

SPECIAL 7'x4' OUTLET CONTROL AREA INLET SOUTHWEST WALL

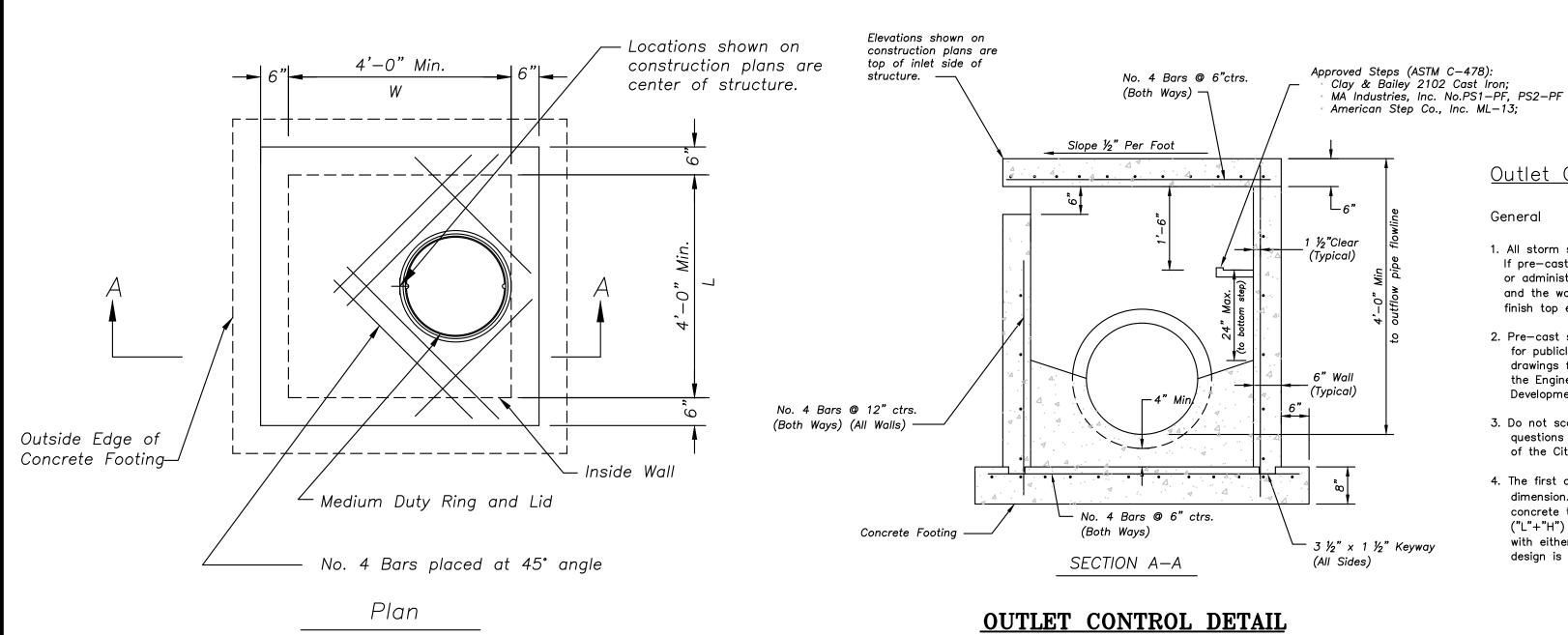


SPECIAL 7'x4' OUTLET CONTROL AREA INLET NORTHEAST WALL





NORTHWEST WALL



Outlet Control Structure Notes

General

- 1. All storm sewer structures shall be pre-cast or poured in place. If pre-cast structures are used for publicly financed, maintained or administered construction, the tops shall be poured in place and the wall steel shall be left exposed to a height 2" below the finish top elevation, or as directed by the City Engineer.
- 2. Pre-cast shop drawings are to be approved by the City Engineer for publicly financed or administered projects. Pre—cast shop drawings for privately financed projects are to be submitted to the Engineering Services Division of the Planning and Development Services Department.
- 3. Do not scale these drawings for dimensions or clearances. Any questions regarding dimensions shall be brought to the attention of the City Engineer prior to construction.
- 4. The first dimension listed in the construction notes is the "L" dimension. The second dimension is the "W" dimension. The concrete thickness and reinforcement shown is for boxes with ("L"+"H") and ("W"+"H") less then or equal to 20. For boxes with either of these calculations greater than 20, a special design is required.

Concrete

- 5. Concrete used in this work shall be KCMMB4K, as approved by the Kansas City Metropolitan Materials Board, and shall meet the requirements of the **Lee's Summit** Municipal Code.
- 6. Concrete construction shall meet the applicable requirements of Standard Specifications for State Road and Bridge Construction, Kansas Department of Transportation, latest edition, except as modified in the Lee's Summit Municipal Code.
- to provide smooth flow.
- 8. Bevel all exposed edges with $\frac{3}{4}$ " triangular molding.

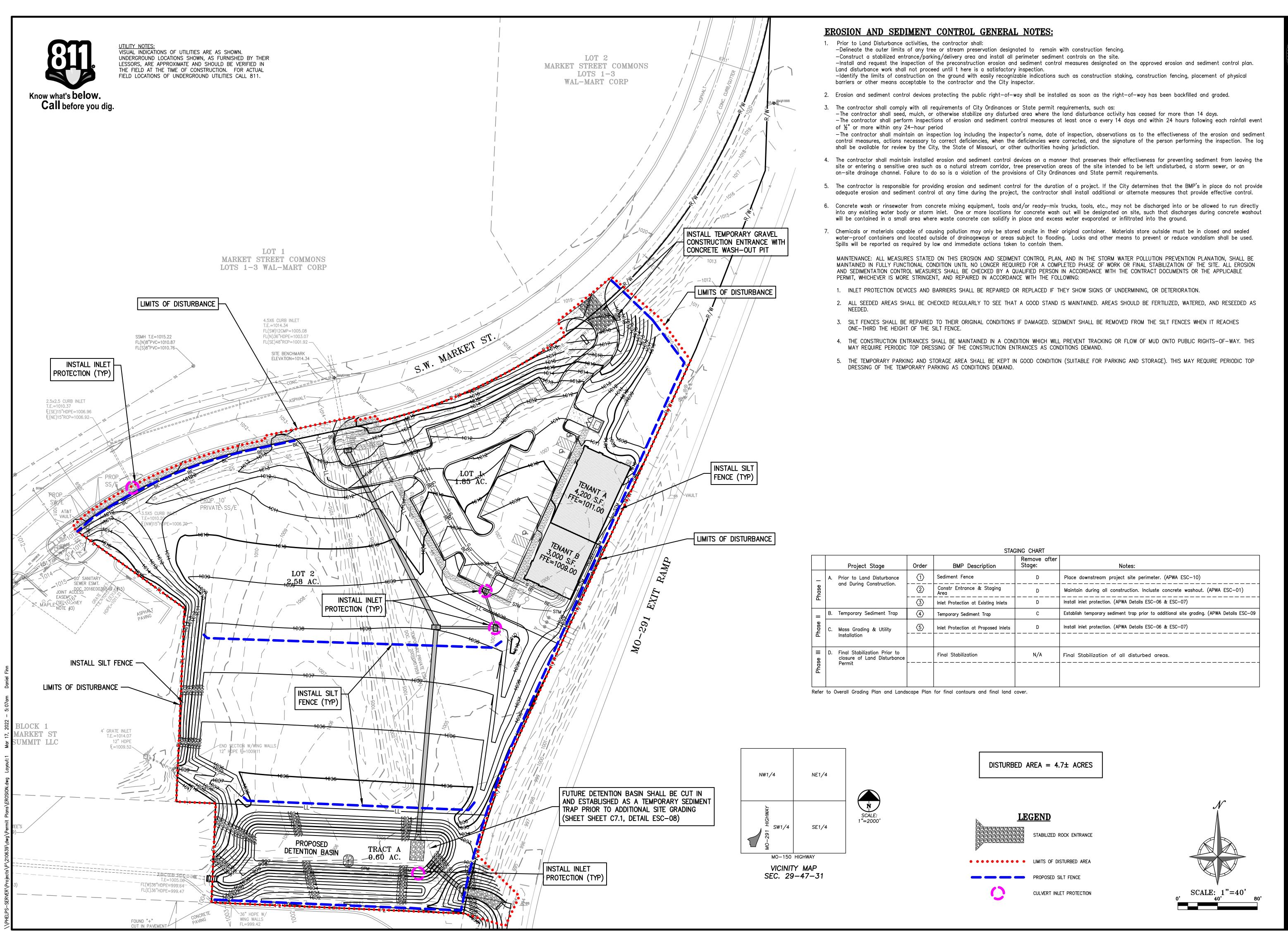
Reinforcing Steel

- 9. Reinforcing steel shall be new billet, minimum Grade 60 as per ASTM A615, and shall be bent cold.
- 10. All dimensions relative to reinforcing steel are to centerline of bars. 2" clearance shall be provided throughout unless noted otherwise. Tolerance of $+/-\frac{1}{2}$ shall be permitted.
- 11. All lap splices not shown shall be a minimum of 40 bar diameters in length.

- 12. All reinforcing steel shall be supported on fabricated steel bar supports @ 3'-0" maximum spacing.
- 13. All dowels shall be accurately placed and securely tied in place prior to placement of bottom slab concrete. Sticking of dowels into fresh or partially hardened concrete will not be acceptable.

Construction

- 7. Inlet floors shall be shaped with non-reinforced concrete inverts 14. The bottom slab shall be at least 24 hours old before placing sidewall concrete. All sidewall forms shall remain in place a minimum of 24 hours after sidewalls are poured before removal, and after removal shall be immediately treated with membrane curing compound.
 - 15. Pipe connections to pre-cast structures shall have a minimum of 6" of concrete around the entire pipe within 2' of the
 - 16. Material selection and compaction requirements for backfill around structures shall be as specified in the Manual of Infrastructure Standards, as promulgated by the City Engineer.



JUDD DAVID CLAUSSEN NUMBER PE-29850 3/15/22

1270 N. Winchester

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Olathe, Kansas 66061

(913) 393-1155

Fax (913) 393-1166

PLANNING ENGINEERING IMPLEMENTATION

A B W

, MISSOURI

ON CONTROL PLAN
RKET STREET CENTER
AND SW MARKET STREET
IMMIT LACKSON COLINITY M

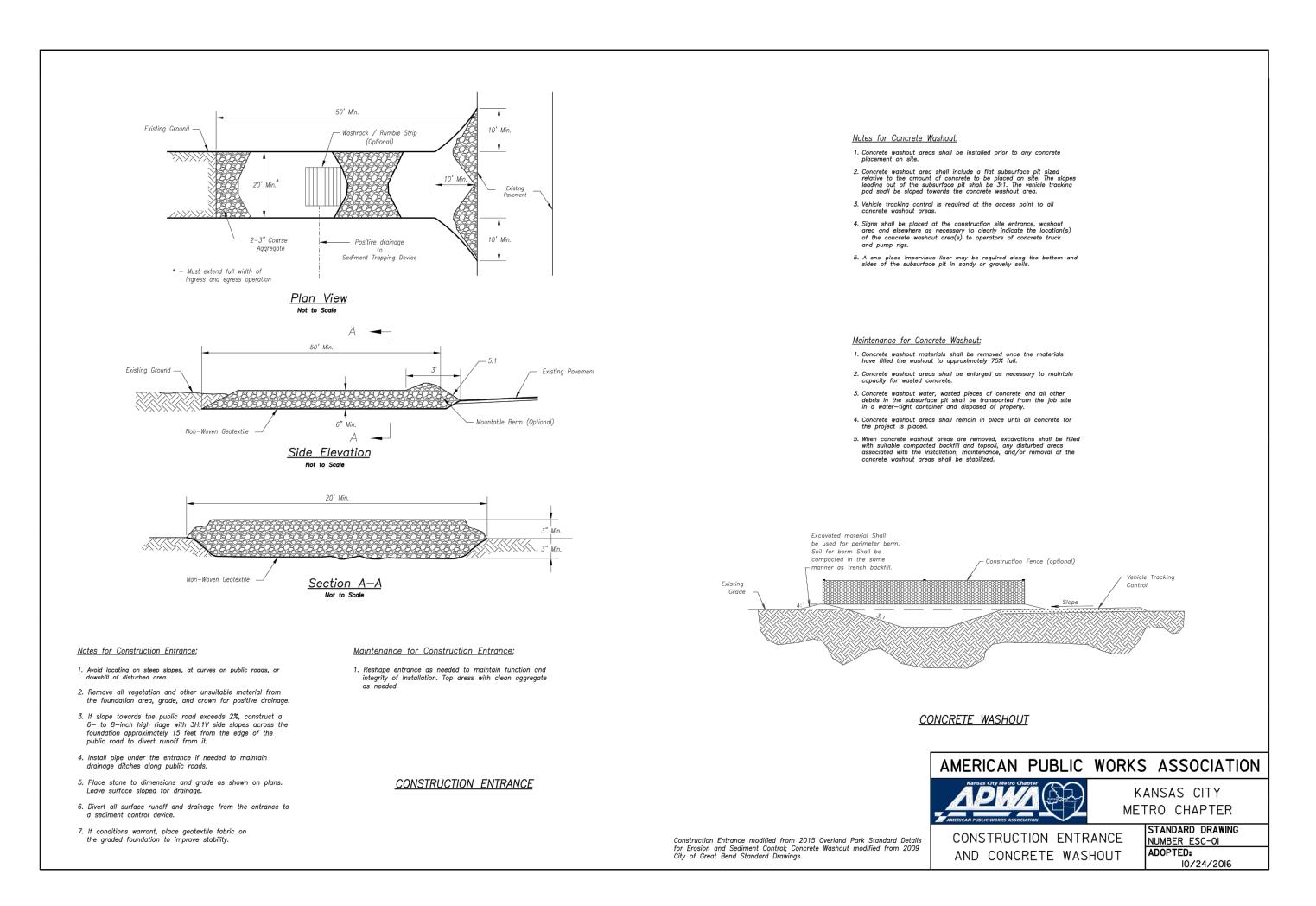
- 40 >LIO

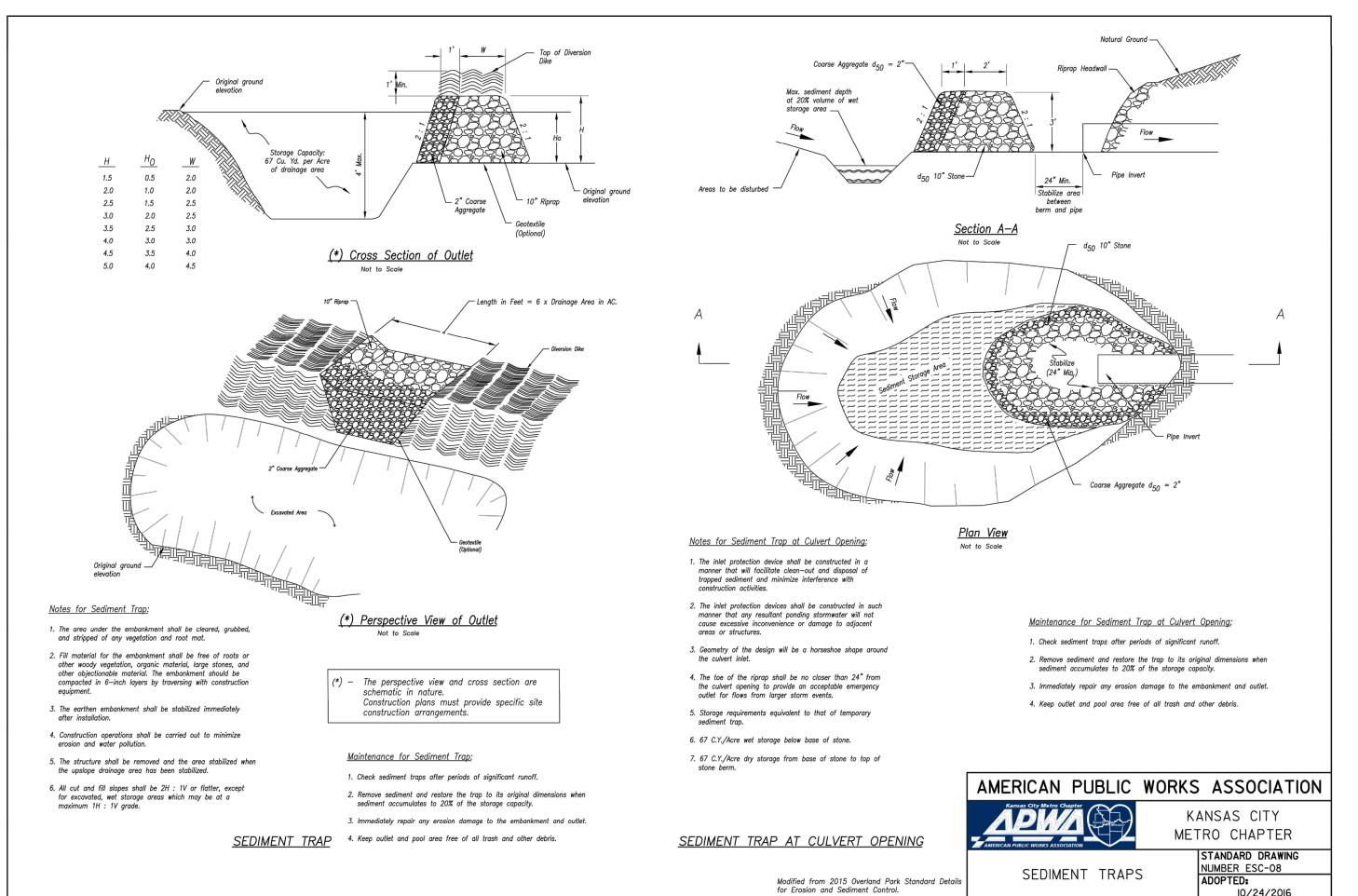
Date Revisions:

03–16–22 REVISED PER CITY COMMENTS

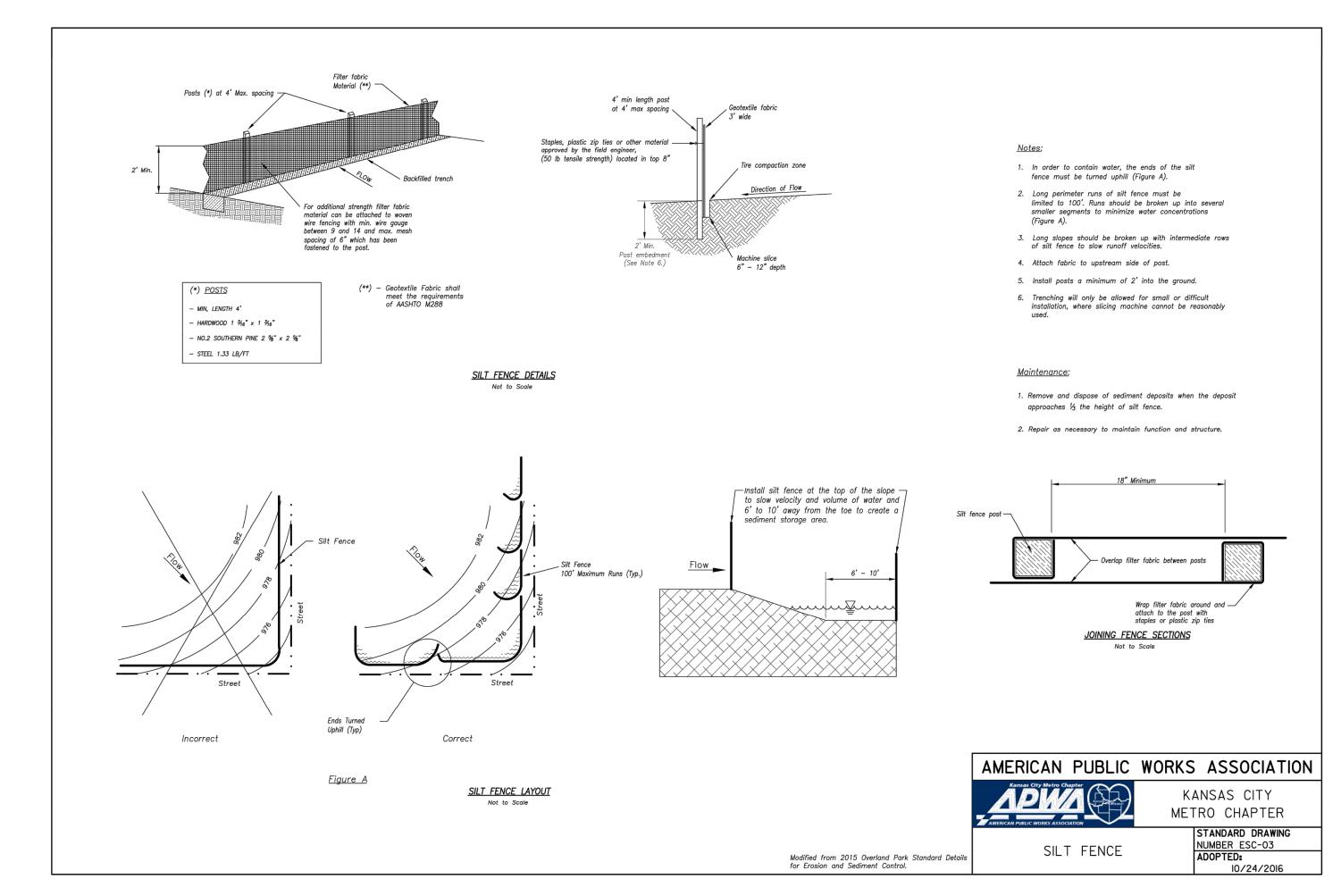
DATE: 10–14–21 | DRAWN:MRR 1. 03CHECKED: DAF | APPROVED: JDC
CERTIFICATE OF AUTHORIZATION
KANSAS
LAND SURVEYING — LS-82
ENGINEERING — E-391
CERTIFICATE OF AUTHORIZATION
MISSOURI

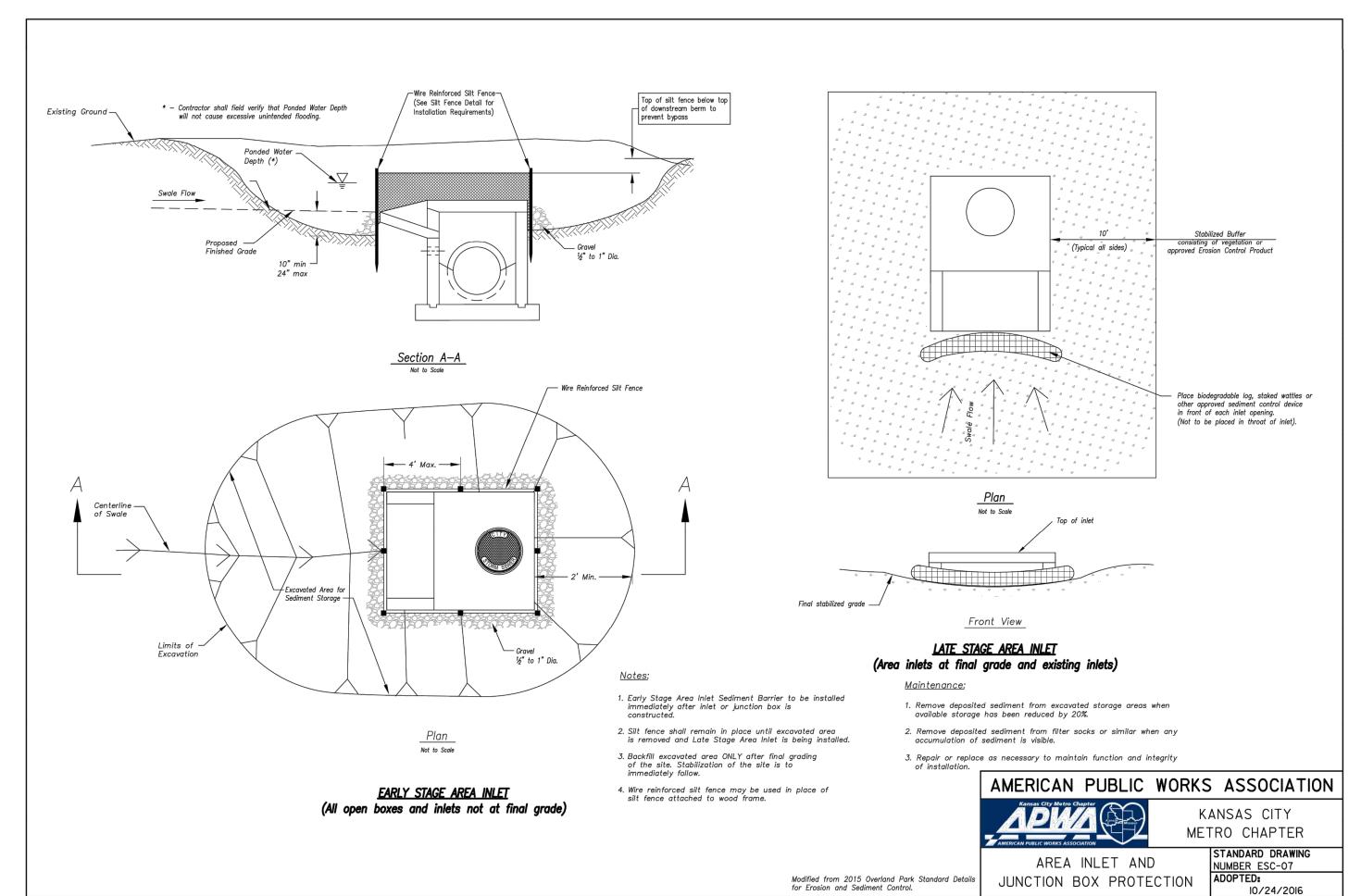
SHEET C7





10/24/2016







STR.

ER

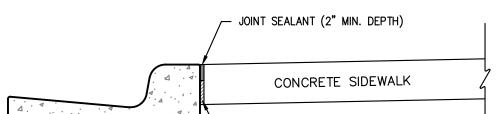
OF

SHEET

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

JOINT SEALANT (2" MIN. DEPTH) CONCRETE SIDEWALK 1/2" NON-EXTRUDING FILLER

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

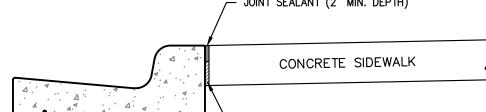


P.C. Concrete Paving. See Paving Details for pavement sections, subbase,

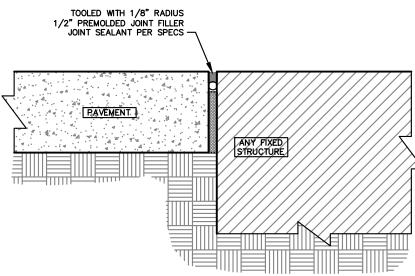
subgrade, and compaction requirements.

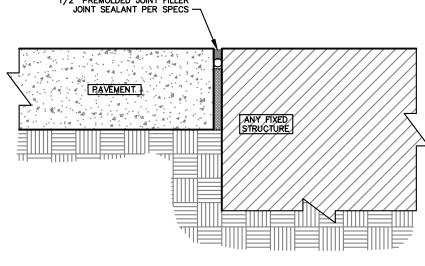
_Tied Key Joint (if curb is poured separately from pavement). See const. joint detail this sheet.

-PCC Concrete









BACKER ROD AND SEALANT SECTION AT FIXED STRUCTURE

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

ISOLATION JOINT

PAVEMENT IS NOT CONSIDERED A FIXED STRUCTURE.

ACHIEVE A 1/4 " JOINT WIDTH.
ENSURE JOINT IS CLEAN, DRY AND
SIDES PREPARED PER MANUFACTURER
RECOMMENDATIONS. TOP OF-PAVEMENT BE PAVEMENT THICKNESS / 3 HOT POUR PAVEMENT SEALANT DEFORMED TIE BARS, REFER TO TIE BAR TABLE FOR DIAMETER, LENGTH & SPACING (CONTRACTOR MAY USE 3/8" X 4-1/2" X 4-1/2"

CONSTRUCTION JOINT

@ 12" O.C., REFER TO DOWEL SIZE TABLE FOR

PCC JOINT DETAIL BLOW-UP

PCC JOINT DETAIL BLOW-UP (TYP.) PCC JOINT DETAIL BLOW-UP PCC JOINT DETAIL BLOW-UP

CONTRACTION JOINT (DOWELED)

- 2-#4 TOP & BOT 1" CLR FROM TOP 2" CLR FROM BOT

/ 1/2" SOFT PREFORMED
JOINT FILLER FULL DEPTH OF
PAVEMENT WITH BACKER
ROD AND SEALANT.

TYPICAL ROUND FIXED

STRUCTURE PLAN DETAIL

USES: MANHOLES, LIGHT POLE BASES AND BOLLARDS

TYPICAL RECTANGULAR FIXED

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

Dowel size

5/8 (16)

3/4 (19)

7/8 (22)

1 (25)

1-1/8 (29)

[‡]Allowance made for joint openings and for minor errors in positioning dowels.

*All dowels spaced at 12 in. (300 mm) centers.

DRILL HOLE AND INSTALL DOWEL WITH NON-

SHRINK GROUT FOR CONSTRUCTION JOINT

2-#4 TOP & BOT -1½" CLR FROM TOP 2½" CLR FROM BOT

1/2" SOFT PREFORMED -JOINT FILLER FULL DEPTH OF PAVEMENT WITH BACKER ROD AND SEALANT.

FIXED STRUCTURE-

ADJACENT TO EX. PAVEMENT

in. (mm)

5 (125)

6 (150)

7 (180)

8 (200)

9 (230)

†On each side of joint.

in. (mm)[†]

5 (125)

6 (150)

6 (150)

6 (150)

7 (180)

CONCRETE JOINT DETAILS

DOWEL PLATE @ 16" O.C. AS ALTERNATE. PLATE TO

BE INSTALLED ON 2ND POUR SIDE)

CONTRACTION JOINT (UNDOWELED)

WAIT AS LONG AS FEASIBLE TO SEAL JOINTS TO ALLOW CONCRETE SHRINKAGE TO OCCUR. IF REQUIRED, RE-SAW JOINT IMMEDIATELY PRIOR TO INSTALLING SEALANT TO

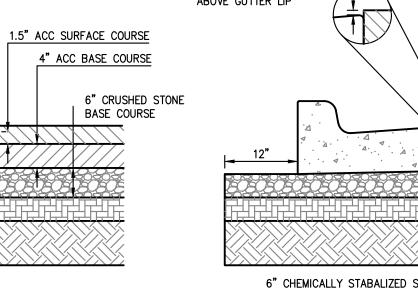
Distance to nearest free edge or to nearest joint where Slab depth, in. Tiebar size, in. 12 ft, in. (mm) 14 ft., in. (mm) 24 ft, in. (mm) (mm) 10 ft, in. (mm) (mm) 5 (125) 1/2 x 24 (13 x 610) 30 (760) 30 (760) 28 (710) 5-1/2 (140) /2 x 24 (13 x 610 25 (630) 6(150)1/2 x 24 (13 x 610) 30 (760) 6-1/2 (165)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

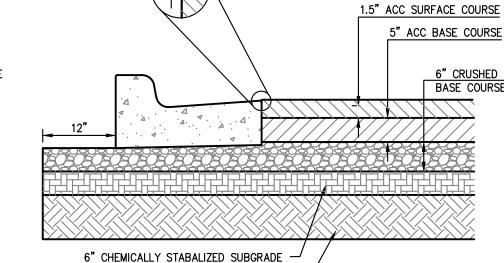
- 1. PRIOR TO PLACEMENT OF GRANULAR BASE OR ASPHALT, PROOF ROLL SOFT, WET, OR LOOSÉ AREAS IDENTIFIED DURING THE PROOF ROLLING SHOULD BE REPAIRED PRIOR TO PAVING. FILL MATERIAL SHOULD BE PLACED IN LOOSE LIFTS UP TO A MAXIMUM OF EIGHT (8) INCHES IN DENSITY IN ACCORDANCE WITH ASTM D698 AT MOISTURE CONTENTS TEST (ASTM D 698).
- 2. PROOFROLL WITH A 25 TON RUBBER TIRE VEHICLE AND REPAIR SUBGRADE DEFICIENCIES. IF ANY SIGNIFICANT EVENT, SUCH AS PRECIPITATION, OCCURS AFTER PROOFROLLING, THE SUBGRADE SHOULD BE REVIEWED BY
- 3. CRUSHED STONE BASE COURSE USED BENEATH CONCRETE PAVING SHALL
- COURSE SHOULD BE COMPACTED TO A MINIMUM OF 97% MARSHALL DENSITY (ASTM SPECIFICATION D 1559). 30% RAP IS ALLOWED.
- 5. ASPHALTIC BASE COURSE SHALL BE APWA TYPE 1. THE BASE COURSE SHOULD BE COMPACTED TO A MINIMUM OF 95% MARSHALL DENSITY (ASTM SPECIFICATION D 1559). 30% RAP IS ALLOWED.
- 6. THE CONTRACTOR SHALL PROVIDE A TACK COAT BETWEEN LIFTS OF ASPHALT.
- 9. CONTRACTOR IS RESPONSIBLE FOR ALL PAVEMENT AND SUBGRADE MATERIALS TESTING.

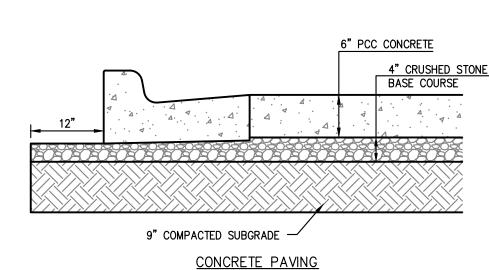
- AND RE-COMPACT THE EXPOSED SURFACES UP TO A MINIMUM LATERAL DISTANCE OF TWO (2) FEET OUTSIDE THE PAVEMENT. ANY LOCALIZED THICKNESS AND COMPACTED TO AT LEAST 95% OF THE MAXIMUM DRY WITHIN 0% AND +4% OF THE OPTIMUM FOR SOILS WITH A LIQUID LIMIT OF GREATER THAN 40, AND - +/- 3% OF THE OPTIMUM FOR SOILS WITH A LIQUID LIMIT OF LESS THAN 40. MAXIMUM DRY DENSITY AND OPTIMUM MOISTURE CONTENT SHOULD BE DETERMINED BY THE STANDARD PROCTOR
- QUALIFIED PERSONNEL IMMEDIATELY PRIOR TO PLACING THE PAVEMENT.
- BE COMPACTED KDOT AB-3 OR EQUIVALENT. 4. ASPHALTIC SURFACE COURSE SHALL BE APWA TYPE 3. THE SURFACE

- 7. ALL SITE CONCRETE (CURBS, PAVEMENTS, SIDEWALKS, ETC.) SHALL MEET KANSAS CITY MATERIALS METRO BOARD (KCMMB) MIX DESIGN
- SPECIFICATIONS FOR 4,000 P.S.I. AIR ENTRAINED CONCRETE. 8. IN NEW PAVEMENT AREAS, CONTRACTOR SHALL OVER EXCAVATE AS
- REQUIRED TO ESTABLISH NEW COMPACTED SUBGRADE ELEVATIONS.

1.5" ACC SURFACE COURSE 4" ACC BASE COURSE





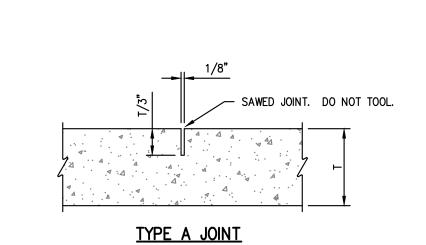


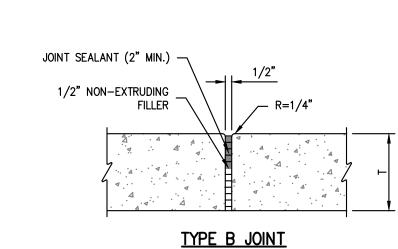
PAVING SECTIONS
SCALE: N.T.S.

NOTE: PROVIDE 1/2" EXPANSION JOINT BETWEEN SIDEWALK AND ALL FIXED OBJECTS 1" DEEP SAWED JOINT (TYP.) PLAN VIEW 1/4" THICKNESS PREMOLDED EXPANSION JOINT FILLER SPACED @ 35' O.C. MAX. EXTEND JOINT FILLER FULL DEPTH OF SIDEWALK SLOPE 2.0% MAX. — PC CONCRETE SECTION A-A COMPACTED SUBGRADE SECTION B-B

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

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





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

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

ISOLATION JOINT DETAILS
SCALE: N.T.S.

Tie bar dimensions

12 (300) 14 (360) 14 (360) 14 (360) 16 (400)

Dowel diameter, Dowel embedment, Total dowel length, in. (mm)[‡]

Tiebar spacing

 $R=1/4^{"} \mid 6^{"} \mid$

Contractor's option —

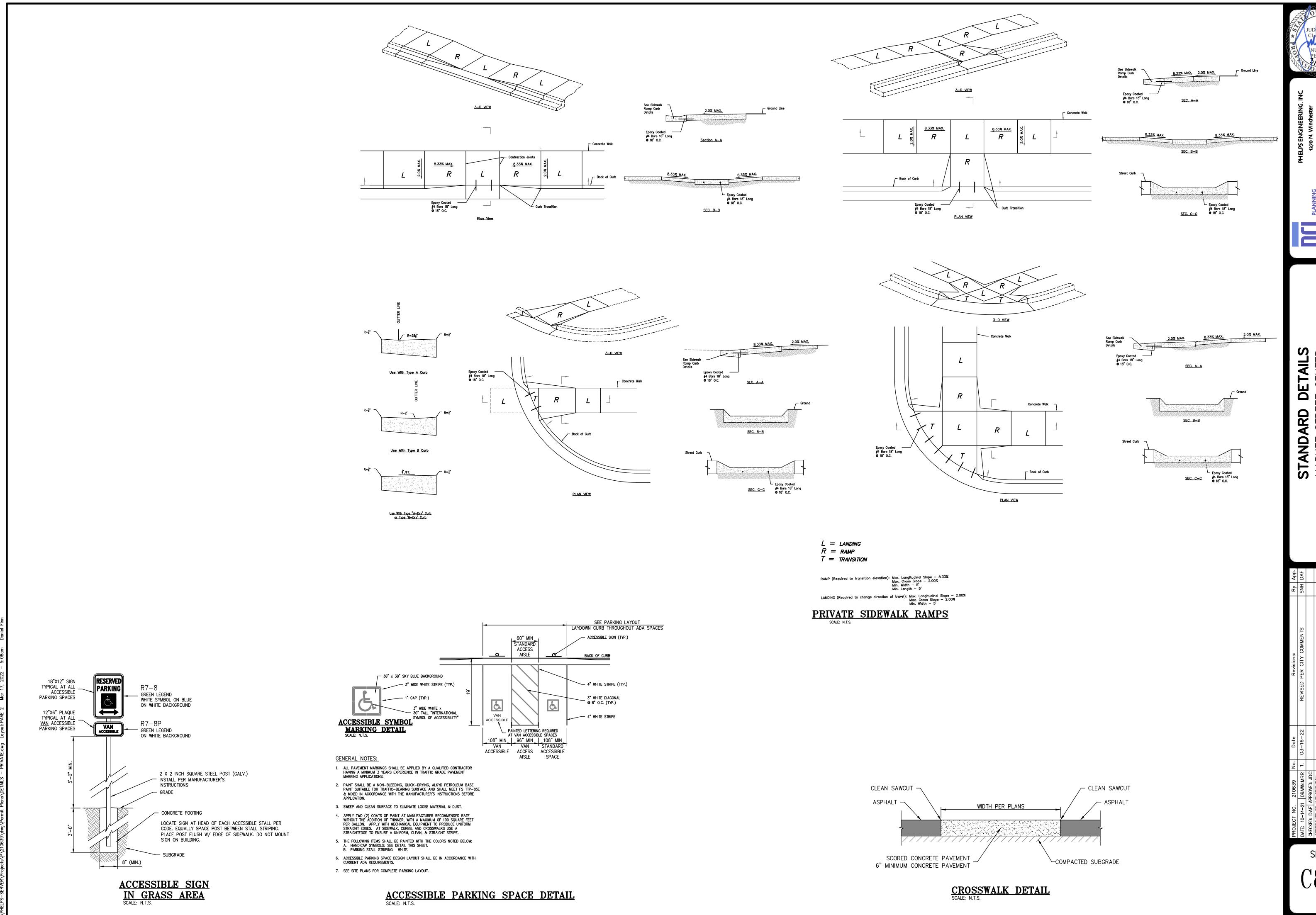
to thicken curb.

GENERAL PAVING NOTES:

9" COMPACTED SUBGRADE -

6" CHEMICALLY STABALIZED SUBGRADE —

9" COMPACTED SUBGRADE —



JUDD DAVID CLAUSSEN *

NUMBER
PE-29850
3/15/22
3/15/22

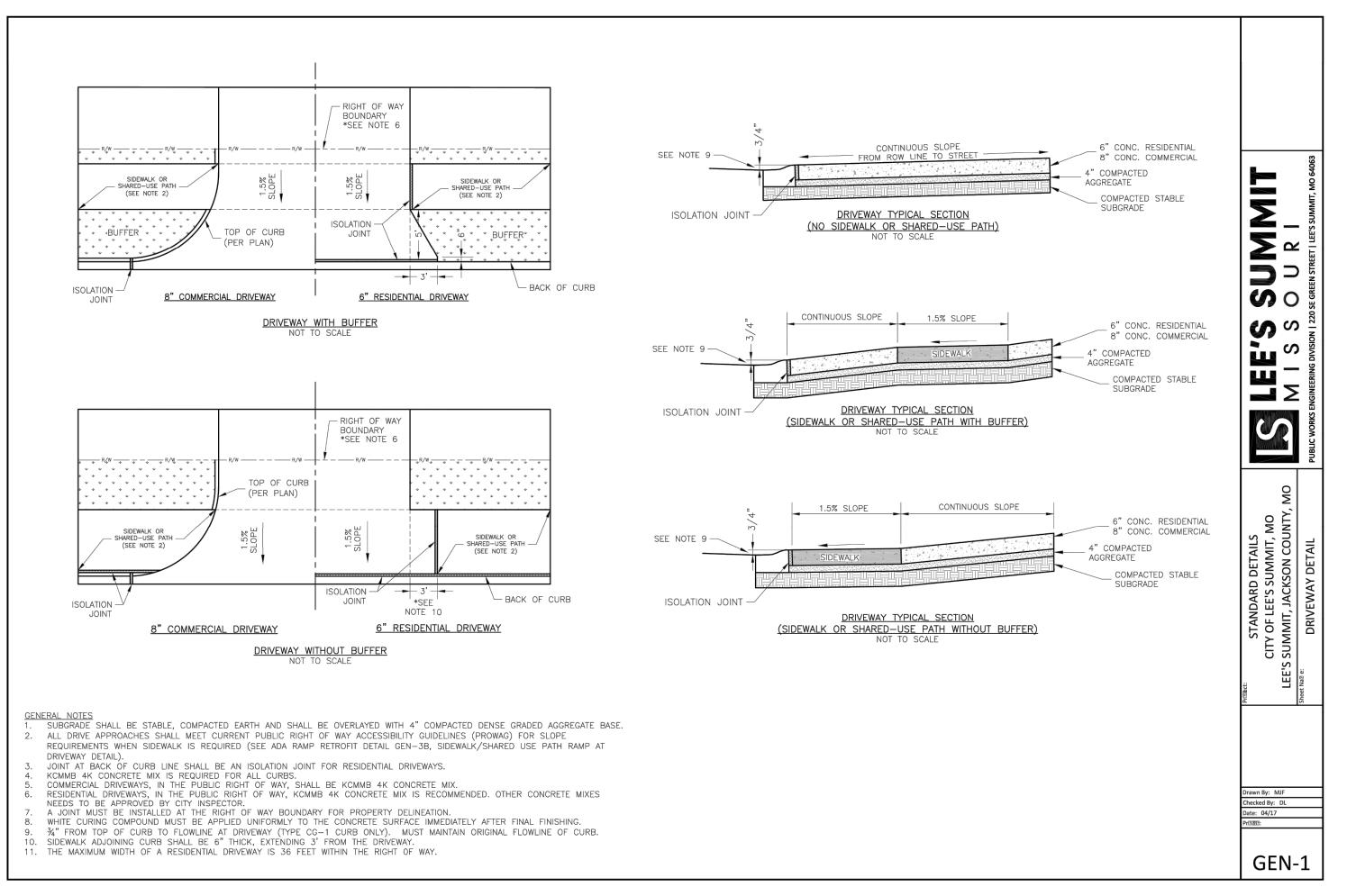
PS ENGINEERING, INC.
270 N. Winchester
lathe, Kansas 66061
(913) 393-1155
Fax (913) 393-1166
. phelpsengineering.com

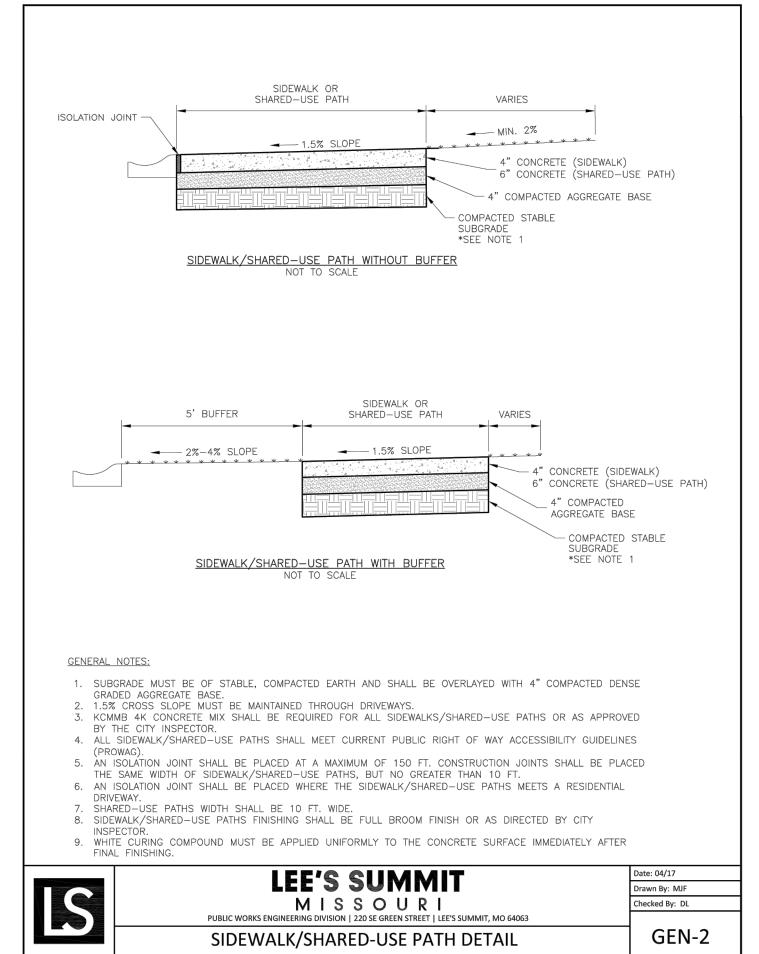
1. 03–16–22 REVISED PER CITY COMMENTS

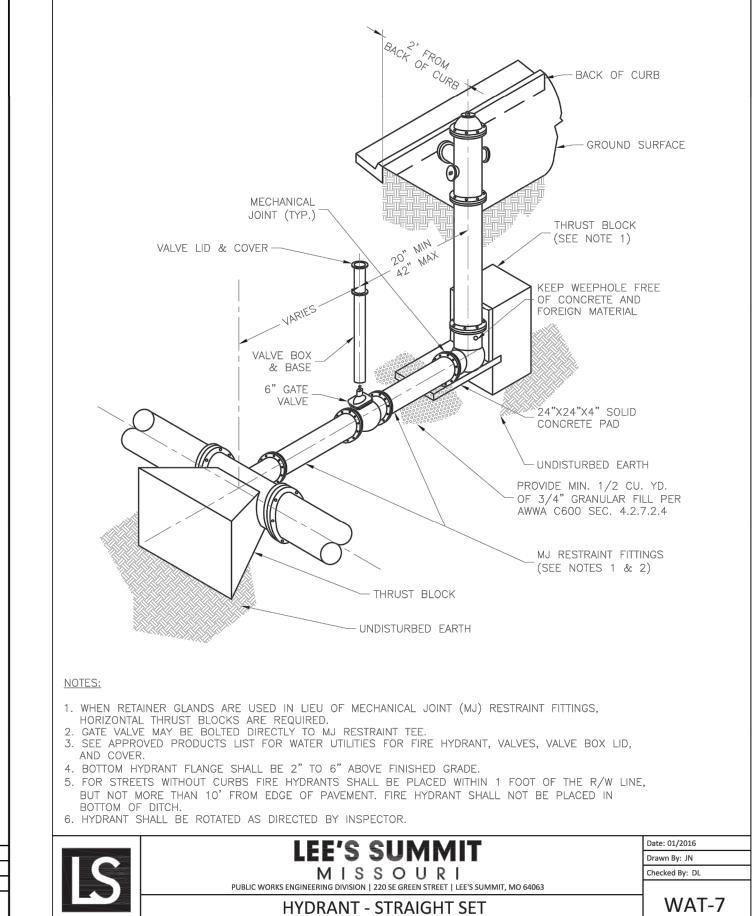
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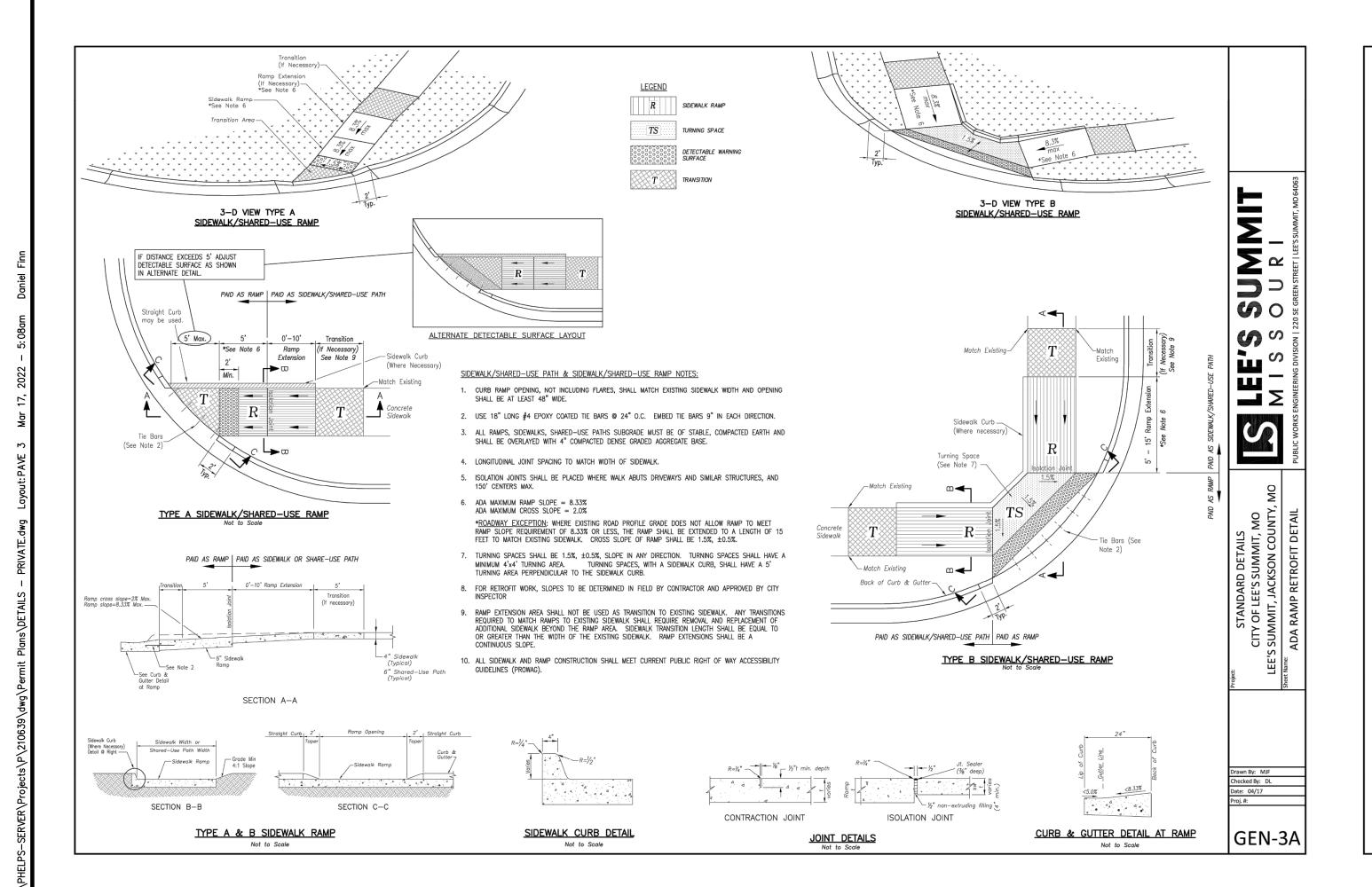
DATE: 10–14–21 | DRAWN:MRR 1. 03–16
CHECKED: DAF | APPROVED: JDC
CERTIFICATE OF AUTHORIZATION
KANSAS
LAND SURVEYING — LS–82
ENGINEERING — E–391
CERTIFICATE OF AUTHORIZATION
MISSOURI
AND SURVEYING–2007001128

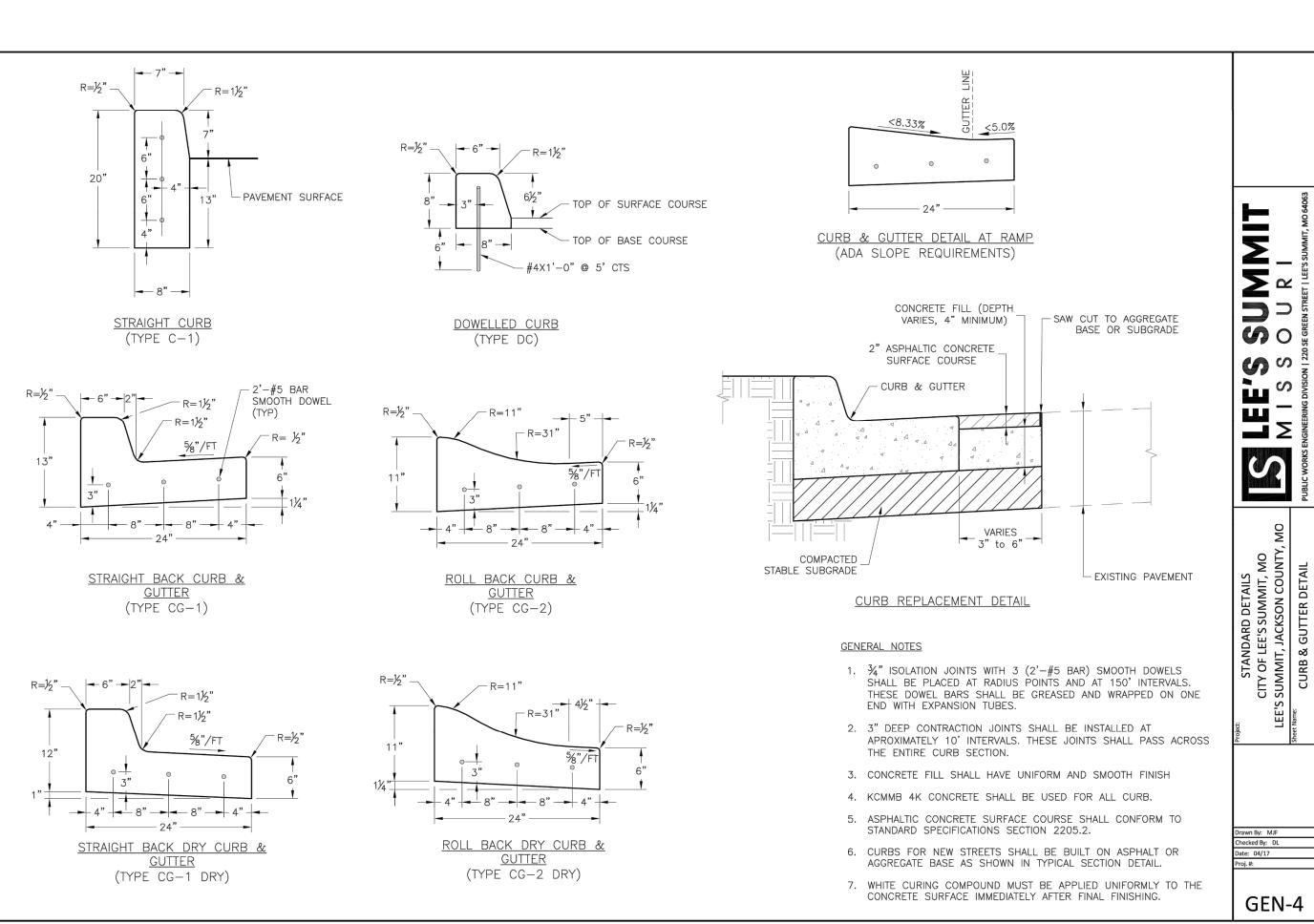
SHEET **C8.1**













Fricilly Engine Eximity, Inc.
1270 N. Winchester
Olathe, Kansas 66061
(913) 393-1155
Fax (913) 393-1166

PLANNING ENGINEERING IMPLEMENTATION

PLANNING

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 210639
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 Revisions:
 By
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 III. 03—16—22
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SHEET 28.2

TYPICAL END

SECTION DETAIL

SCALE: N.T.S.

<u>LEGEND</u>

a EMBEDMENT BELOW PIPE

GRANULAR EMBEDMENT

1. ALL MATERIALS ARE CLASSIFIED IN

OPTIMUM MOISTURE CONTENT.

LARGER THAN 3".

SPECIFICATIONS)

EMBEDMENTS FOR STORM SEWER PIPE SCALE: N.T.S.

ACCORDANCE WITH ASTM D 2321-89.

2. ALL MATERIALS SHALL BE INSTALLED IN

MAXIMUM 8" LOOSE LIFTS IN ACCORDANCE

WITH ASTM D 698. CLASS III AND IV-A

MATERIALS SHALL BE COMPACTED NEAR

3. FILL SALVAGED FROM EXCAVATION SHALL BE

4. ALL TRENCH EXCAVATIONS SHALL BE SLOPED,

SHORED, SHEETED, BRACED, OR OTHERWISE

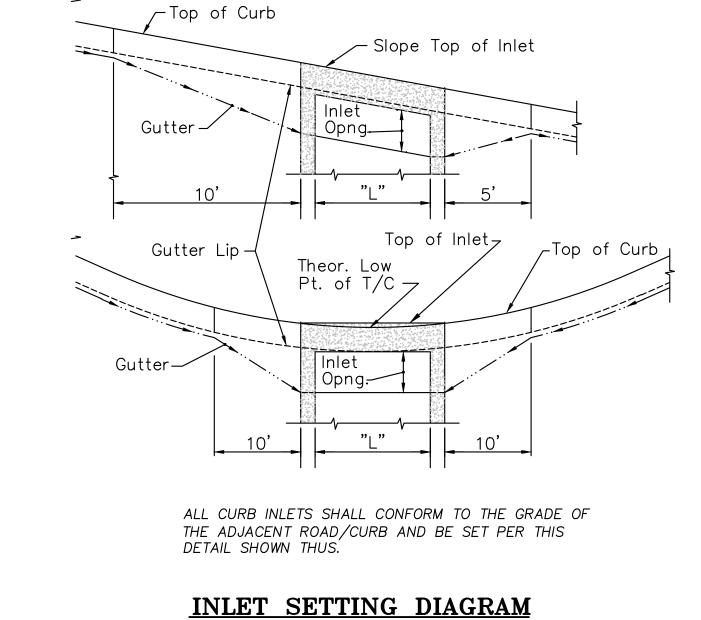
REGULATIONS AND LOCAL ORDINANCES. (SEE

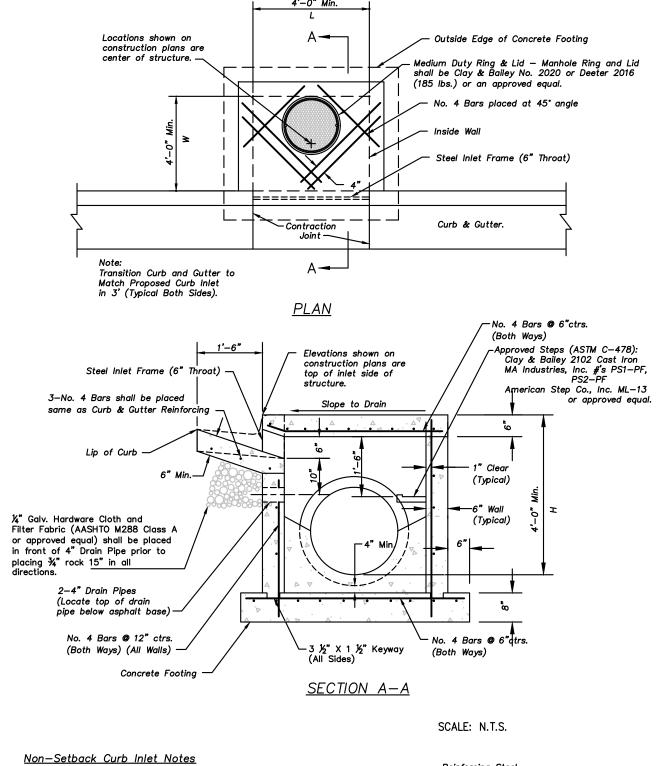
SUPPORTED IN COMPLIANCE WITH OSHA

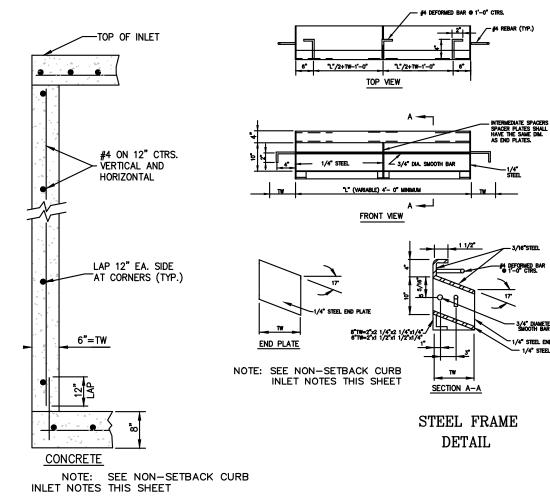
FREE OF DEBRIS, ORGANICS AND ROCKS

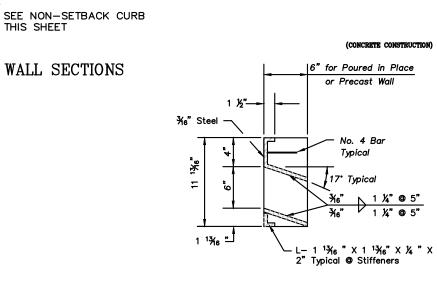
D NOMINAL PIPE SIZE

BACKFILL

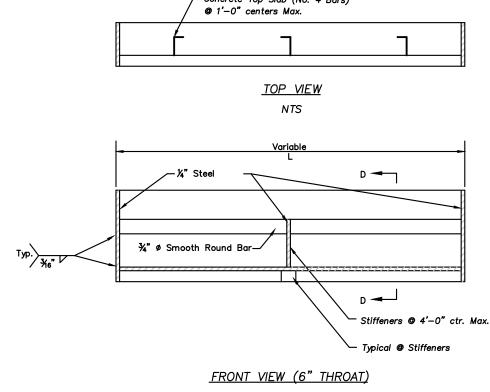








SECTION D-D (6" THROAT) NTS



NON-SETBACK CURB INLET

— FILTER FABRIC

— FILTER FABRIC

- 1. All storm sewer structures shall be pre—cast or poured in place. If pre—cast structures are used for publicly financed, maintained or administered construction, the tops shall be poured in place and the wall steel shall be left exposed to a height 2" below the
- Pre—cast shop drawings are to be approved by the City Engineer for publicly financed or administered projects.
- Do not scale these drawings for dimensions or clearances. Any questions regarding dimensions shall be brought to the attention of the City Engineer prior to construction.
- 4. The first dimension listed in the construction notes is the "L" dimension. The second dimension is the "W" dimension. The concrete thickness and reinforcement shown is for boxes with ("L"+"H") and ("W"+"H") less then or equal to 20. For boxes with either of these calculations greater than 20, a special
- 5. Concrete used in this work shall be KCMMB4K, as approved by

8. Bevel all exposed edges with $\frac{3}{4}$ " triangular molding.

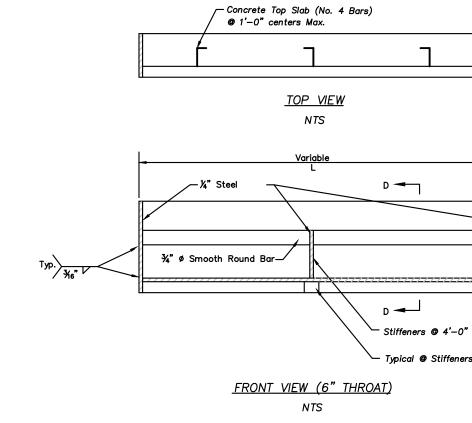
- the Kansas City Metropolitan Materials Board, and shall meet the requirements of the City of Olathe.
- Concrete construction shall meet the applicable requirements of the City of Olathe's Technical Specifications. 7. Inlet floors shall be shaped with non-reinforced concrete inv erts

Reinforcing Steel

- Reinforcing steel shall be new billet, minimum Grade 40 as per ASTM A615, and shall be bent cold. 10. All dimensions relative to reinforcing steel are to centerline of
- noted otherwise. Tolerance of $+/-\frac{1}{8}$ " shall be permitted. 11. All lap splices not shown shall be a minimum of 40 bar

bars. 2" clearance shall be provided throughout unless

- 13. All dowels shall be accurately placed and securely tied in place prior to placement of bottom slab concrete. Sticking of dowels into fresh or partially hardened concrete will not be acceptable. Construction
- 14. The bottom slab shall be at least 24 hours old before placing sidewall concrete. All sidewall forms shall remain in place a minimum of 24 hours after sidewalls are poured before removal, and after removal shall be immediately treated with membrane 15. Pipe connections to pre—cast structures shall have a minimum of 6" of concrete around the entire pipe within 2' of the
- Material selection and compaction requirements for backfill around structures shall be as specified in City of Olathe's Technical Specifications.



Steel Inlet Frame Notes: 1. All welds shall be performed in accordance with appropriate All welds sind be periorited in accordance with appropriate AWS Specifications and Procedures.

All welds on exposed surfaces shall be dressed so as to provide a pleasing finished appearance.

The entire frame shall be hot dip zinc coated in accordance with ASTA A 127 with ASTM A-123.

SCALE: N.T.S.

PIPE END SECTION -

PER PLAN

PLAN VIEW

a. Tensile Strength: Minimum grab tensile strength, both warpwise and fillingwise,

not less than fifteen percent nor more

warpwise and fillingwise. Method of test for woven fabrics shall be in accordance with ASTM D 1117.

tear strength shall be 100 pounds, both

accordance with ASTM D 3887.

PIPE DISCHARGE

PIPE (TYP.)—

RIPRAP INSTALLATION DETAIL

Filter Fabric: Filter fabric shall consist of a synthetic fiber consisting of polypropylene, nylon or polyester filaments in either a woven or non-woven fabric. The percent of open area shall be not less than four percent nor more than ten percent. The fabric shall provide an Equivalent Opening Size (EOP) no finer than the U.S. Standard Sieve Size No. 70. In addition, the filter fabric shall meet the following physical requirements:

shall be 200 pounds, when tested in accordance with ASTM D 5034, using a four inch by six inch specimen and a jaw speed of twelve inches per minute. b. Elongation: Grab elongation shall be

than 60 percent, both warpwise and fillingwise, when tested in accordance with ASTM D 5034. c. Tear Strength: Minimum trapezoidal

d. Bursting Strength: Minimum bursting strength shall be 200 psi when tested in

e. Width: Filter fabrics shall be furnished in widths of not less than six feet.

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LESS THAN 60" 60" OR LARGER TRENCH BEDDING 1. GRANULAR EMBEDMENT SHALL BE KDOT STD. SPEC. SECT. 1100, PB-2 COURSE AGGREGATE FOR CONCRETE, WASHED STONE OR GRAVEL, MEETING THE FOLLOWING CONDITIONS: SIEVE SIZE GRANULAR EMBEDMENT FROM THE TOP OF PIPE DOWN SHALL BE COMPACTED TO 85% MAXIMUM DENSITY AS DETERMINED BY ASTM GRANULAR EMBEDMENT ABOVE TOP OF PIPE SHALL BE AN UN-COMPACTED LAYER FOR ALL INSTALLATIONS. 2. TRENCH OUTLINES DO NOT INDICATE ACTUAL TRENCH EXCAVATION SHAPE, SOIL CONDITIONS, OR PRESENCE OF SHEETING LEFT IN PLACE. EMBEDMENT MATERIAL SHALL EXTEND THE FULL WIDTH OF THE ACTUAL TRENCH EXCAVATION.

TABLE OF EMBEDMENT

DEPTH BELOW PIPE

1-INCH

3—INCH

ਫ਼ੋ−INCH

3. TRENCH WIDTHS SHALL BE LIMITED BELOW AN ELEVATION OF ONE (1) FOOT ABOVE THE

TOP OF THE INSTALLED PIPE AS FOLLOWS:

NOT LESS THAN FIFTEEN (15) INCHES NOR

MORE THAN TWENTY-FOUR (24) INCHES GREATER THAN THE NOMINAL OUTSIDE

DIAMETER OF THE PIPE.

0-20

40-70

95-100



WH472/WR472

General Features

The model WH472 or WR472 grinder pump station is a complete unit that includes: two grinder pumps, check valve, polyethylene tank, controls, and alarm panel. Designed specifically for higher-flow applications where local codes dictate higher storage requirements. The lower portion of the tank has a smaller diameter, tapered down to a dish-shaped bottom. The tank access opening is ideally sized for smaller diameter, low-profile covers for minimal "footprint."

Rated for flows of 3500 gpd (13,249 lpd)

476 gallons (1802 liters) of capacity

Standard outdoor heights range from 77 inches to 122 inches

The WH472 is the "hardwired," or "wired," model where a cable connects the motor controls to the level controls through watertight penetrations.

The WR472 is the "radio frequency identification" (RFID), or "wireless," model that uses wireless technology to communicate between the level controls and the motor controls.

Operational Information

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

Inlet Connections

4-inch inlet grommet standard for DWV pipe. Other inlet configurations available from the factory.

Discharge Connections

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

Discharge 15 gpm at 0 psig (0.95 lps at 0 m)

11 gpm at 40 psig (0.69 lps at 28 m) 7.8 gpm at 80 psig (0.49 lps at 56 m)

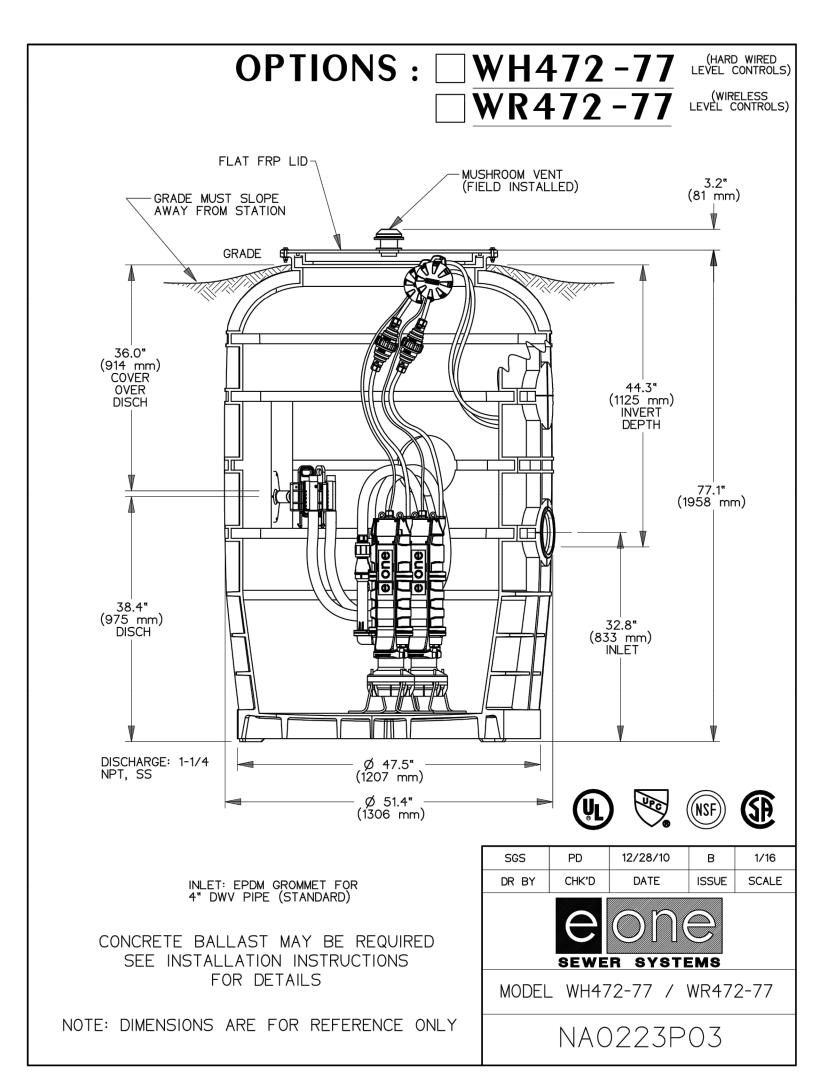
Accessories

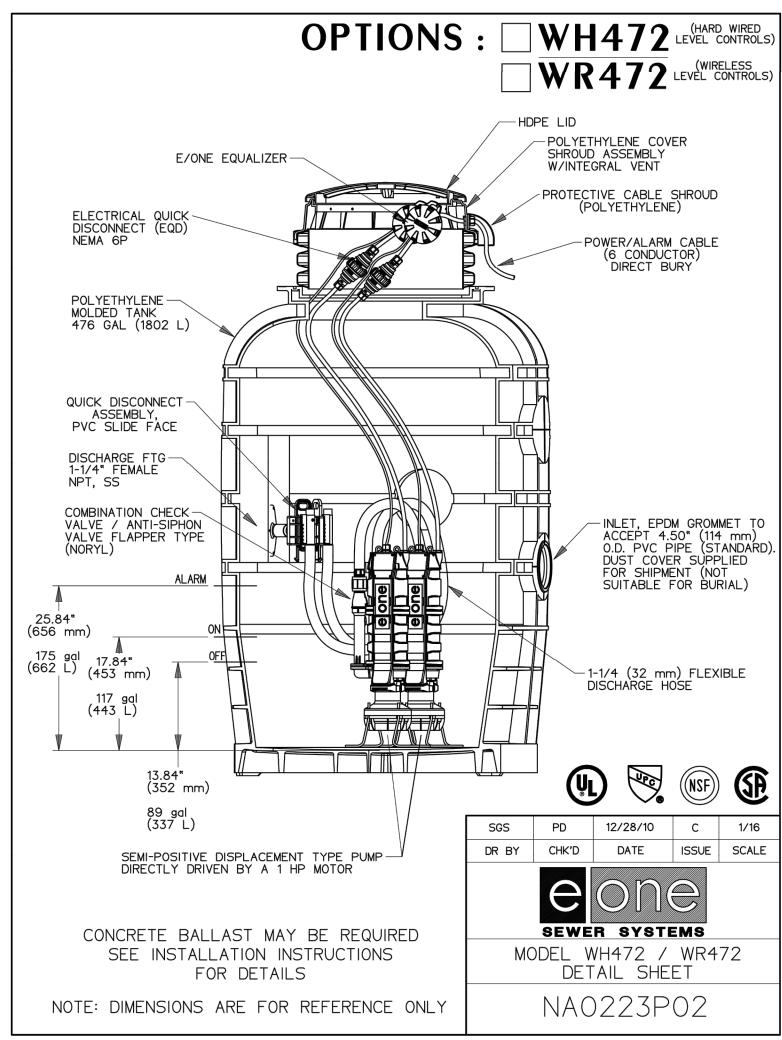
E/One requires that the Uni-Lateral, E/One's own stainless steel check valve, be installed between the grinder pump station and the street main for added protection against backflow.

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

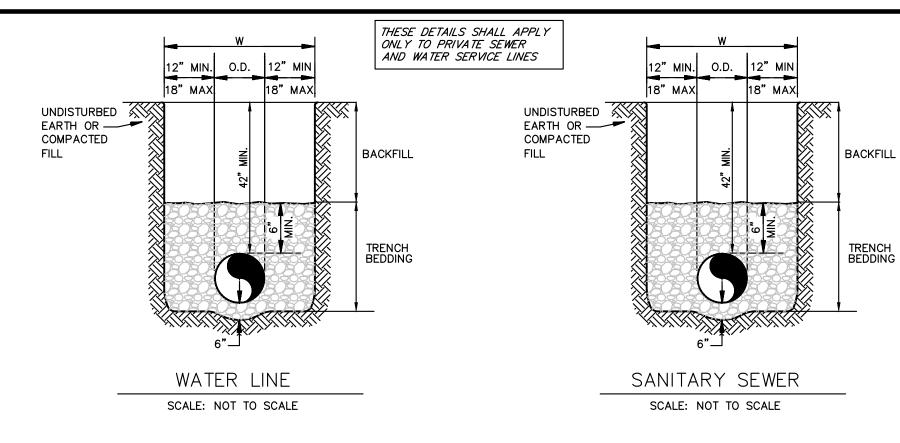
NA0223P01 Rev E

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





GRINDER PUMP SYSTEM TO INCLUE E/ONE SENTRY ADVISOR ALARM PANEL



REQUIREMENTS PER APWA 2100 AS FOLLOWS:

S	anitary Sewer	Bedding Material (Gradation Limits (%	Passing)					
	Sieve S	ize		3/4"					
	1"		100						
	3/4"	90	90 – 100						
	3/8"	2	20 – 55						
	No. 4			0 - 5					
	No. 8			0 - 2					
			-						
	Storm Sewer E	Bedding Material G	radation Limits (% P	assing)					
Sieve	Size	3/4"	1/2"	3/8"					
1'	"	100							
3/4	4"	90 – 100	100						
1/2	Ž"		80 - 100						
3/8	3"	20 - 55	40 – 77	100 30 – 40					
No.	. 4	0 – 10	0 – 15						
No.	. 8	0 - 5	0 – 5	0 – 4					
		Bedding Material	Gradation (% Passir	1g)					
Sieve Size	Type 1 (1/2")	Type 2	Type 3 (Man. Sand)	Type 4 (River Sand)					
יוגער	05 400	(Buckshot)							
3/4"	95 – 100	405	100						
3/8"	40 – 60	100	100						

0 – 15

85 – 90

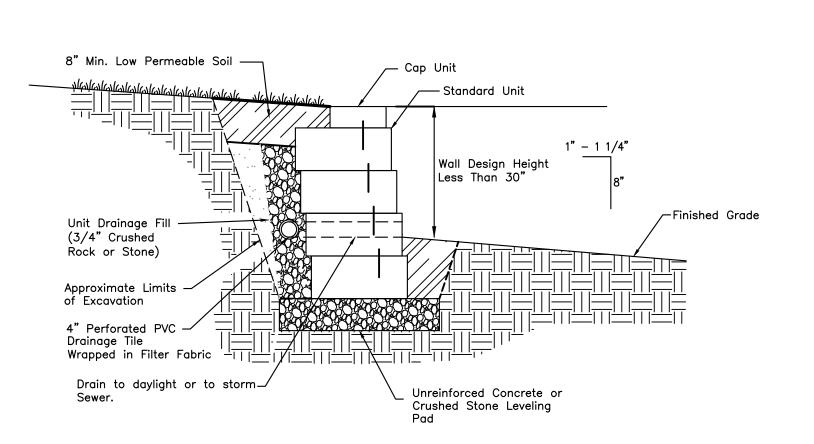
35 – 75

- Backfill shall not be placed when material contains frost, is frozen, or a blanket of snow prevents
- The Contractor shall remove from the project site waste material, trees, organic material, rubbish, or

original ground surface.

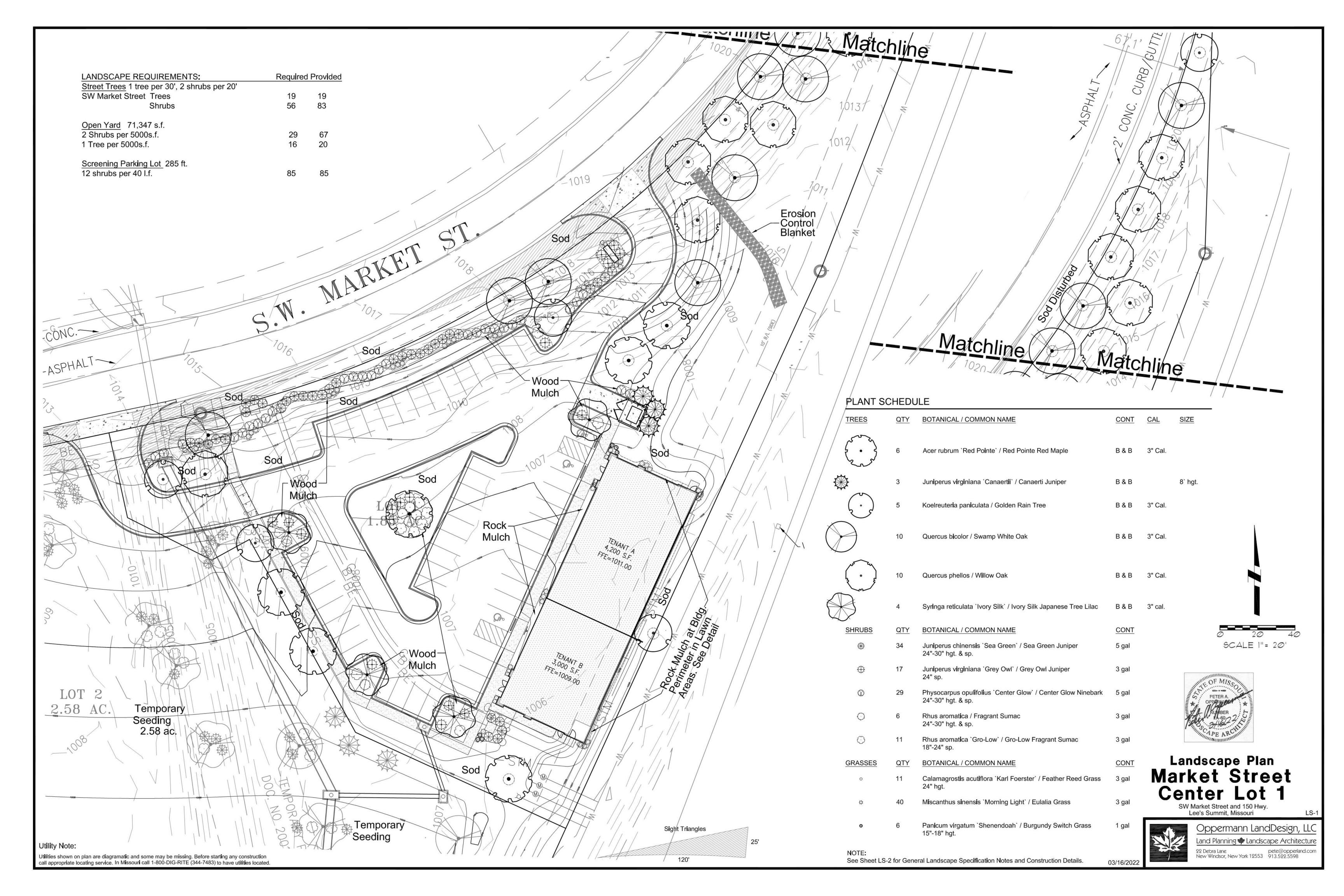
- 3. All trash and debris shall be removed from the pipeline excavation prior to backfilling.
- Backfill material shall be carefully placed to avoid damage to or displacement of the pipe, other utilities
- Unless otherwise specified, all trenches and excavations around structures shall be backfilled to the
- Outside of paved areas, the backfill material shall be placed in layers not exceeding 8-inches in loose thickness and be compacted to at least 90% of maximum density. Compaction testing shall be at the
- discretion of the Engineer.
- The method of compaction and the equipment used shall be appropriate for the material to be compacted and shall not transmit damaging shocks to the pipe.
- 8. The combination of the thickness of the layer, the method of compaction and the type of compaction equipment used shall be at the discretion of the Contractor subject to obtaining the required densities. Pipe Embedment. All water, sanitary sewer, and storm sewer pipe shall be bedded in bedding aggregate as
- Bedding shall cover the entire width of trench.
- The first layer of bedding placed on the bottom of excavation shall be in accordance with Figures 1
- Bedding at bottom of trench, in the middle 1/3 of trench under the pipe shall be loose.
- After pipe is placed, bedding material shall be placed in layers in accordance with manufacturer's
- Second layer of bedding material shall be placed under the lower haunches of the pipe up to the springline (center of pipe). Material shall be spaded to be place under haunches and compacted at the springline elevation prior to placing additional bedding material.
- 6. The third layer of bedding material shall be placed to 12 inches over the top of pipe.
- 7. Contractor shall take measures to prevent pipe from floating during placement of bedding material so that pipe maintains proper line and grade as shown on the Plans.

UTILITY TRENCH AND BEDDING



LANDSCAPE RETAINING WALL

百



Dedicated Design Irrigation System:

- 1. If an irrigation system is not provided with the Landscape Plans, the Contractor is to design a 100 percent coverage irrigation system, including comprehensive engineering analysis by a qualified Professional Engineer, using performance requirements and design criteria indicated per Owner's direction. Design shall include all public right-of-way and be approved by owner prior to construction.
- 2. Irrigation Contractor to design and install irrigation system and shall include all required components including, but not limited to, rain shut off sensor, controller, taps, backflow preventers, all approvals, and all fees required by city. Components to be manufactured by Rainbird or Hunter unless alternate manufacturer is expressly approved by the Owner or Owner's Representative.
- 3. Irrigation Contractor shall submit a copy of plan to Owner's Representative or Project Landscape Architect for review prior to installation of system.
- 4. Irrigation Contractor shall conduct a training session with the owner (or representatives) demonstrating the operation of the system and the controller. As part of this training, Contractor shall provide one spring start-up and one fall shutdown of the system.
- 5. Irrigation system shall be tested and approved by Owner's Representative or Landscape Architect prior to backfilling trenches. Irrigation system shall be fully operational prior to the installation of any plant materials.
- 6. All planting beds shall be watered by a DRIP irrigation system.
- 7. General Contractor to supply all power required to operate irrigation system.
- 8. Irrigation Contractor shall notify Owner's Representative or Project Landscape Architect of any changes to irrigation conduit locations or sizes.
- 9. It is the Landscape Contractor's responsibility to determine water application rates and timer cycling. The Irrigation Contractor will instruct the Owner on the operation and programming of the controller.
- 10. All zones and main lines will be pressure-tested at the time of installation and again prior to building turnover. Results shall be submitted in writing to Project Landscape Architect and Owner or Owner's Representative.
- 11. Irrigation shall not spray on building, sidewalks, and drives.

12"/ HDPE = 1009.11

- 12. Irrigation controller location shall be coordinated with other wall-mounted service panels per Owner's approval.
- 13. Landscape Contractor shall hand-water all trees, and turf grass areas until substantial completion.
- 14. Treegator bags (or approved equal) shall be used for all proposed trees on site.

Seeding, Hydromulch,

Detention Basin Seeding

And Blanket

PROPOSED DETENTION BASIN

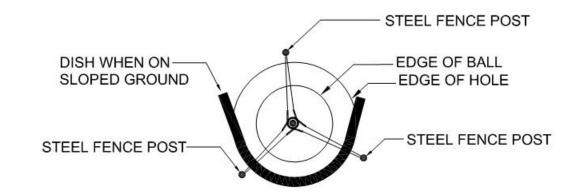
WALL **ROCK BELOW ANY -**WEEP HOLES OF BLDG. 3" OF KANSAS -LARGE (2") RIVER SOD OR SHRUB BED-MULCH SLOPE AWAY-FROM BUILDING FELT TYPE SOIL-SEPARATOR

BUILDING EXTERIOR-

BUILDING ROCK EDGE

NO SCALE

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



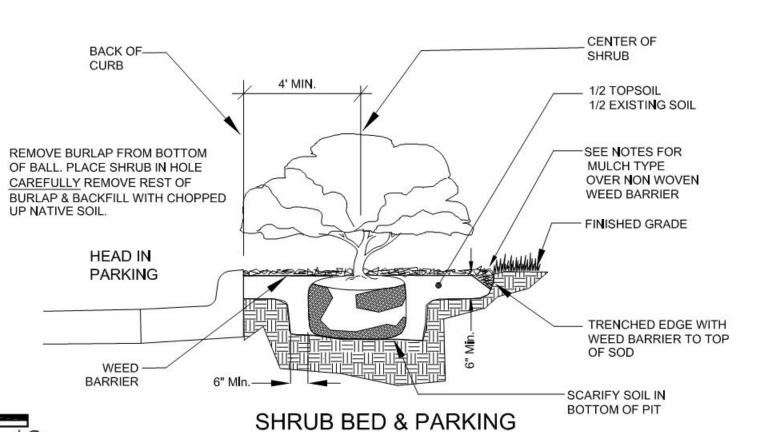
STAKING PLAN

& DISH ON SLOPE

IDENTIFY TRUNK FLARE TO **DIRECTION OF TREE STAKES:** REMAIN PARTIALLY VISIBLE ONE SOUTHEAST AFTER PLANTING ONE SOUTHWEST TOP OF ROOT BALL TO BE ONE NORTH 1" ABOVE FINISHED GRADE PLASTIC SPIRAL TREE WRAP COIL FROM BASE — 2" WELL AGED MANURE TO LOWEST BRANCHES TOPPED W/ 1" OF SHREDDED DYED BROWN WEBBED ARBOR TIE TAPE MULCH W/ PRE-EMERGENT OOP AROUND TREE TO BE HERBICIDE (KEEP MULCH 2" 6"-8" LARGER THAN AWAY FROM TRUNK) TRUNK DIAMETER (3) 6' STEEL "7 POSTS TOP OF ROOTBALL AT 1" ABOVE SURROUNDING FINISHED GRADE DIG SHALLOW, BROAD HOLE: 3 TIMES THE DIAMETER OF ROOT BALL AND ONLY AS DEEP FILL HOLE GENTLY, BUT AS ROOT BALL. BACKFILL WITH FIRMLY. ADD WATER TO SETTLE 1 EXISTING SOIL AND 1 TOPSOIL THE SOIL. UNDISTURBED SOIL **CUT AND REMOVE BURLAP**

TREE PLANTING DETAIL

NO SCALE



SETBACK DETAIL

NO SCALE

FIRMLY COMPACT ANY NEW OR

DISTURBED SOIL UNDER ROOT

BALL TO PREVENT SETTLING

CONTRACTOR SHALL MAKE NO SUBSTITUTIONS WITHOUT THE APPROVAL OF THE LANDSCAPE ARCHITECT. 4. CONTRACTOR SHALL STAKE LAYOUT PLAN IN THE FIELD AND SHALL HAVE THE LAYOUT APPROVED BY THE LANDSCAPE ARCHITECT BEFORE PROCEEDING WITH THE

ALL LANDSCAPE BEDS SHALL BE TREATED WITH THE PRE-EMERGENT HERBICIDE PRE M 60 DG (GRANULAR) OR AN APPROVED EQUAL IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

CONTRACTOR SHALL VERIFY THE EXISTENCE AND LOCATION OF ALL UTILITIES BEFORE

CONTRACTOR SHALL VERIFY ALL LANDSCAPE MATERIAL QUANTITIES AND SHALL

REPORT ANY DISCREPANCIES TO THE LANDSCAPE ARCHITECT PRIOR TO

ALL LANDSCAPE BEDS SHALL RECEIVE A TRENCHED EDGE. SEE SHRUB PLANTING

GENERAL LANDSCAPE NOTES:

STARTING ANY WORK.

INSTALLATION.

INSTALLATION.

- FERTILIZER FOR FESCUE SODDED AND SEEDED LAWN, TREES AND CONTAINER STOCK AREAS SHALL BE A BALANCED FERTILIZER BASED ON RECOMMENDATIONS FROM A SOIL TEST SUPPLIED BY THE LANDSCAPE CONTRACTOR FROM AN APPROVED TESTING
- CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE PLANTS UNTIL COMPLETION OF THE JOB AND ACCEPTANCE BY THE OWNER.
- CONTRACTOR SHALL WARRANTY ALL LANDSCAPE WORK AND PLANT MATERIAL FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE OF THE WORK BY THE OWNER.
- 10. CONTRACTOR SHALL PROVIDE MAINTENANCE OF ALL TREES AND SHRUBS FOR A PERIOD OF ONE YEAR AFTER THE DATE OF SUBSTANTIAL COMPLETION IF CONTRACTED BY THE OWNER.
- 11. ANY PLANT MATERIAL WHICH DIES DURING THE ONE YEAR WARRANTY PERIOD SHALL BE REPLACED BY THE CONTRACTOR DURING NORMAL PLANTING SEASONS.
- 12. ALL PLANT NAMES ON THE PLANT LIST CONFORM TO THE STANDARDIZED PLANT NAMES PREPARED BY THE AMERICAN JOINT COMMITTEE ON HORTICULTURAL NOMENCLATURE OR TO NAMES GENERALLY ACCEPTED IN THE NURSERY TRADE.
- 13. ALL PLANT MATERIAL SHALL BE SPECIMEN QUALITY STOCK AS DETERMINED IN THE "AMERICAN STANDARDS FOR NURSERY STOCK" PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMAN, FREE OF PLANT DISEASES AND PESTS, OF TYPICAL GROWTH OF THE SPECIES AND HAVING A HEALTHY, NORMAL ROOT SYSTEM.
- 14. SIZES INDICATED ON THE PLANT LIST ARE THE MINIMUM, ACCEPTABLE SIZE. IN NO CASE WILL SIZES LESS THAN THE SPECIFIED SIZES BE ACCEPTED.
- 15. PLANTS SHALL NOT BE PRUNED PRIOR TO DELIVERY TO THE SITE OR AFTER INSTALLATION EXCEPT FOR THOSE BRANCHES THAT HAVE BEEN DAMAGED IN SOME
- 16. PLANTS SHALL NOT HAVE NAME TAGS REMOVED PRIOR TO FINAL INSPECTION.
- 17. ALL PLANTINGS SHALL RECEIVE A COMMERCIAL TRANSPLANT ADDITIVE PER MANUFACTURER'S RECOMMENDED RATES AND INSTRUCTIONS FOR APPLICATION.
- 18. ROCK MULCH SHALL BE 3" DEPTH OF KANSAS LARGE 2" SIZE AVAILABLE FROM STURGIS MATERIALS OR APPROVED EQUAL. OVER A FELT TYPE SOIL SEPARATOR CUT INTO THE GROUND WITH A TRENCHED EDGE. SEE TREE DETAIL FOR DIFFERENT MULCH
- 19. WOOD MULCH SHALL BE 3" OF DYE BROWN SHREDDED HARDWOOD OVER A FELT TYPE SOIL SEPARATOR.
- 20. SEE PLANTING DETAILS FOR SOIL MIX IN PLANTING HOLES.
- 21. SOD SHALL BE A TURF-TYPE-TALL FESCUE GRASS BLEND. CONTRACTOR SHALL BE RESPONSIBLE FOR AN ACCEPTABLE STAND OF TURF TO BE APPROVED BY THE OWNER AND/OR LANDSCAPE ARCHITECT.
- 22. PERMANENT SEEDING SHALL BE A TURF-TYPE-TALL FESCUE BLEND WITH 10% PERENNIAL RYE DRILL SEEDED AT A RATE OF 9#/1000S.F. AND HYDRO MULCHED AS A SEPARATE OPERATION AT A RATE OF 2000#/ACRE OF VIRGIN WOOD FIBRE WITH A DYED BLUE TACKIFIER. CONTRACTOR SHALL BE RESPONSIBLE FOR AN ACCEPTABLE STAND OF TURF GRASS OF AT LEAST 90% COVERAGE OF SOIL SURFACE PER SQUARE
- 23. SEEDING OPERATIONS OF DETENTION BASIN BESIDES DRILL SEEDING AND HYDROMULCH, SHALL INCLUDE NORTH AMERICAN GREEN SC150BN EROSION BLANKET INSTALLED PER MANUFACTURER'S SPECIFICATIONS. APPLY SAME BLANKET NE OF BUILDING WHERE SHOWN.
- 24. TEMPORARY SEEDING AREAS SHALL BE THE SAME SEED, HYDROMULCH AND METHODS EXCEPT DRILL SEED AT A RATE OF 5 POUNDS PER 1000 S.F.
- 25. SUCCESSFUL LANDSCAPE BIDDER SHALL BE RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF AN IRRIGATION SYSTEM TO BE APPROVED BY THE OWNER PRIOR TO CONSTRUCTION.

Landscape Plan Market Street Center Lot 1

SW Market Street and 150 Hwy. Lee's Summit, Missouri

> Oppermann LandDesign, LLC and Planning 🌳 Landscape Architecture.

SCALE 1" = 20"

(REMOVE METAL CAGE

FROM SIDES AND TOP OF

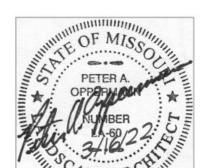
Utility Note: Utilities shown on plan are diagramatic and some may be missing. Before starting any construction call appropriate locating service. In Missouri call 1-800-DIG-RITE (344-7483) to have utilities located.

PAVING

36" HDPE W/

WING WALLS

FL=999.42



03/16/2022

22 Debra Lane pete@opperland.com New Windsor, New York 12553 p13.522.5598

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

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

Transplant Additives:

Temporar

Seeding

TRACT A

0.60 AC

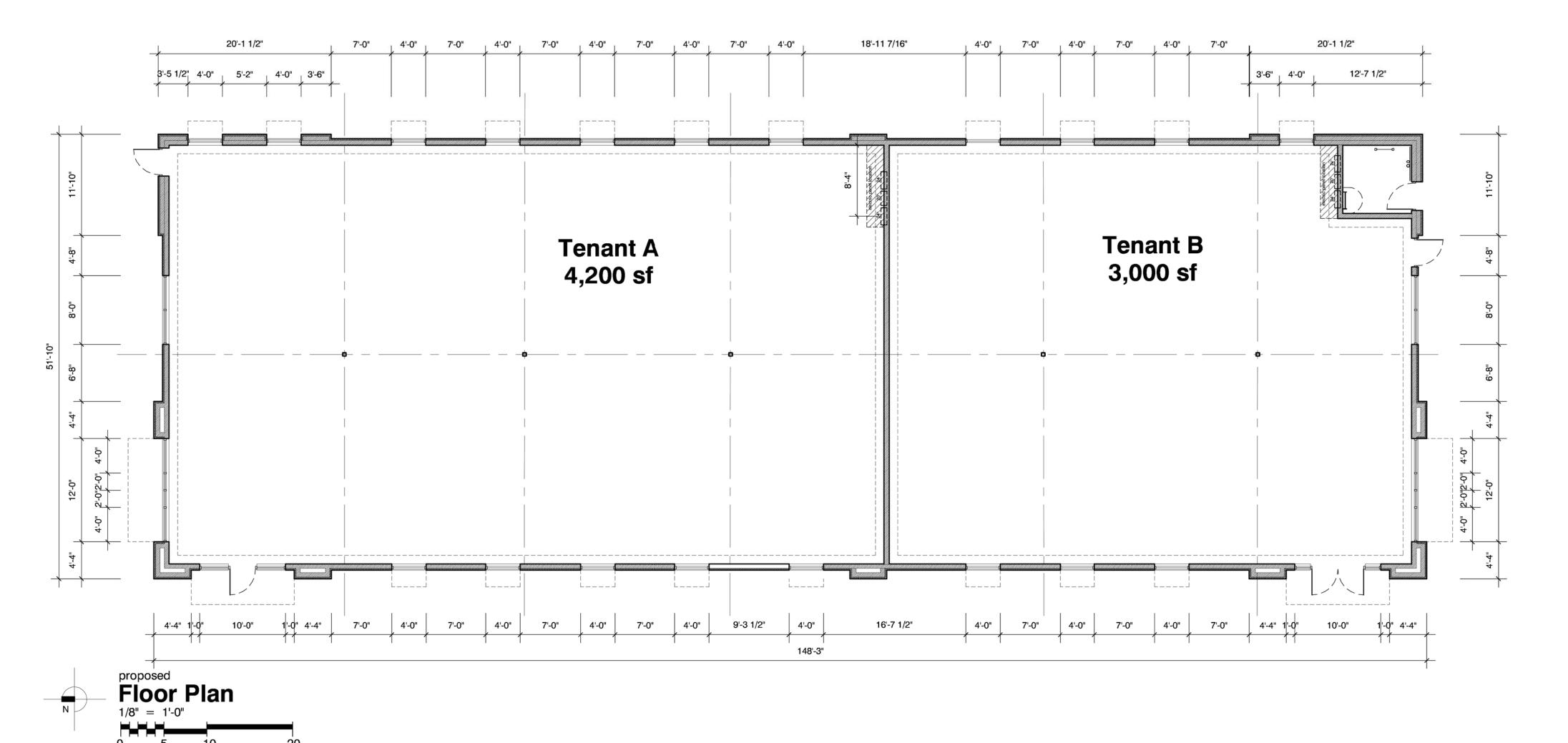
- 3. Demonstrate installation of all transplant additives for this project to the Landscape Architect. Provide actual additive product as evidence of sufficient quantity of product. (Empty product bags to be stockplied for inspection by the Landscape Architect prior to disposal).
- 4. Number of transplant additive packets per tree, shrub or grouncover shall be applied according to the manufacturer's recommended rates and instructions. For all plants the packet mix shall be evenly distributed into the upper approximately 8" of backfill soll next to the rootball. Do not place mix in the bottom of the planting pit.
- 5. Furnishing and application of transplant additive shall be subsidiary to the planting operations.



proposed

East Elevation

1/8" = 1'-0"





west Elevation

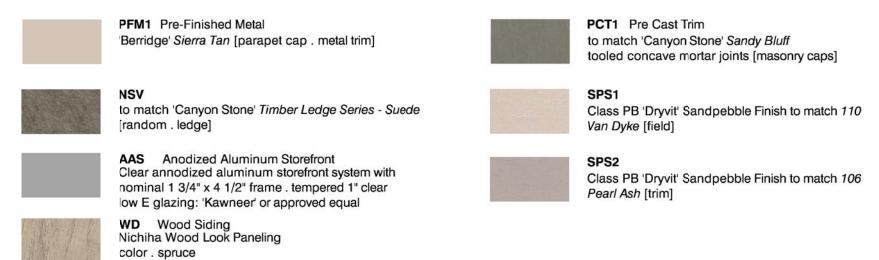
1/8" = 1'-0"

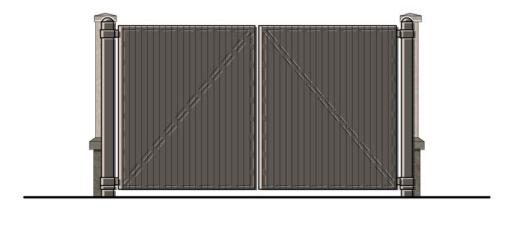


North Elevation

1/8" = 1'-0"

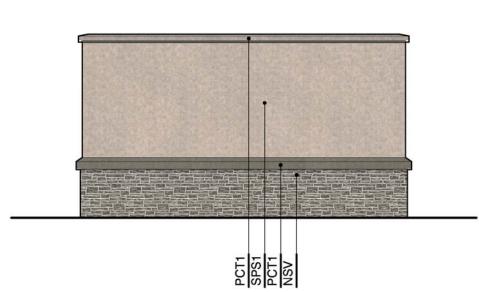
Exterior Finish Schedule







Proposed Building for Lee's Summit



Trash Enclosure



South Elevation

1/8" = 1'-0"