CITY OF TWIN OAKS PLANNING AND ZONING COMMISSION MEETING BOARD CHAMBERS, TWIN OAKS CITY HALL 1381 BIG BEND ROAD TUESDAY, JANUARY 25, 2022 6:30 P.M.

Tentative Agenda

- 1. CALL TO ORDER
- 2. PLEDGE OF ALLEGIANCE
- 3. ROLL CALL
- 4. APPROVAL OF THE AGENDA
- 5. APPROVAL OF THE CONSENT AGENDA
 - a. November 23, 2021 Minutes
- 6. NEW BUSINESS
 - a. Consideration of Ace Hardware's preliminary development plan application for 1100 Meramec Station Road.
- 7. MISCELLANEOUS
- 8. ADJOURNMENT

Frank Johnson City Clerk/Administrator POSTED: January 4, 2022, 10 a.m.

Please note: Any person requiring physical or verbal accommodations should contact the city office 12 hours prior to meeting at 636-225-7873. Copies of public records for this agenda are available on the City's website or at City Hall for public inspection before and at the time of the meeting.



CITY OF TWIN OAKS

1381 Big Bend Road • Twin Oaks, MO 63021 (636) 225-7873 • fax (636) 225-6547 • <u>www.cityoftwinoaks.com</u>

"C" COMMERCIAL DISTRICT APPLICATION FOR PRELIMINARY DEVELOPMENT PLAN

The preliminary development plan application constitutes a petition to allow a more flexible but detailed plan. **Eighteen (18) copies** of the preliminary development plan shall be submitted, and shall be accompanied by all general application requirements, including an initial application fee. See Fee and Deposit Schedule Section 400.460 of the City Code. The City may require the applicant to deposit additional funds for expenses incurred, but not limited to, costs of title research, surveys, legal and engineering review, cost of traffic and planning or other consultants employed by the City, publication expenses, expenses of notifications to adjoining property owners, expenses of hearings, court reporting, if requested by either the City or the applicant. The City office must receive the additional application fees within seven (7) days of notification. **(Please type or print in ink below.)**

INFORMATION CONCERNING APPLICANT:

Applicant hereby submits the following information concerning the use proposed for the business/site:

Business/Site Name:		
Location/Address:		
Applicant Name:		
Title of Officer for above Applicant (if a cor	poration or other legal entity):	
Officer Full Address:		
	Fax #:	
Name of Property Owner:		
	Phone #:	
	Fax #:	
Name of Developer:		
Developer Full Address:		
	Fax #:	
Name of Architect and/or Engineer:		
What are the business hours of operation (ex	xisting or proposed)?a.m./p.m. to	a.m./p.m.
Will product be sold which is subject to reta	il sales tax? YES □ NO □	
Date business will begin (if new business) ir	n the Village of Twin Oaks:	
Type of Business(es) and detailed description or proposed):	on of nature of business(es), organization)s) or trad	le(s) (existing

PRELIMINARY DEVELOPMENT PLAN SUBMISSION REQUIREMENTS:

One (1) map (1-2 pages) shall be submitted as the preliminary development plan, which includes the following:

- Proposed location of buildings, other structures and lot arrangements.
- Location of existing buildings, other structures and lot arrangements.
- Any existing easements and dedications.
- Adjacent uses and property ownership to a distance of 100 feet from site boundaries.
- Any land areas within the 100-year floodplain.
- Existing and proposed grading and areas of cut and fill.
- Proposed retaining walls or similar slope stabilization structures or methods; height and materials to be used.
- Location, massing and pattern of existing vegetation and trees.
- Existing streams, creeks and other bodies of water.
- Measures taken to minimize development impacts.
- Location, massing and pattern of proposed landscaping and planting.
- Screening and buffer strip areas, open space and other amenities.
- Traffic and parking plan depicting public streets, identifying arterials, collectors and local streets; service and loading areas; points of access to public right-of-way.
- Parking areas, drives and walks.
- Traffic studies of vehicle turning movements, peak and off-peak traffic impacts, existing and proposed levels of service as required by the Board of Aldermen.
- Existing and proposed water, sewer, and storm utility systems, including drainage structures and inlets.
- Provisions for on-site storm water retention and for minimizing impact on existing drainage patterns and facilities.

☐ Exterior building sketches depicting the general style, size and exterior construction materials of the

Also submitted with this application are: (check ✓ all that have been included)

buildings proposed. Where several building types are proposed on the plan, such as apartments and
commercial buildings, a separate sketch shall be prepared for each type. Such sketches shall include
elevation drawings, but detailed drawings and perspectives are not required.
All signs to be attached to building exteriors including the size, location, color and materials.
Schedules indicating floor area, site area, coverage, parking spaces, proposed plant materials by type,
size and quantity, land use intensity and other qualities specified in the "C" Planned Shopping Center
District Regulations.
Phases of development If the development will occur in phases, the applicant shall submit a
development plan that also displays the entire development at the completion of all phases. The
phased development shall have the phases clearly outlined with expected dates for beginning of
construction and date of completion of construction. No building permit shall be issued for any phase
of development until a final development plan for that phase is approved, in accordance with the
provisions of the City Zoning Code.
Request for Common Master Signage Plan Approval (See "Request for Master Common Signage
Plan" form.)

REPRESENTATIONS CONCERNING AUTHORITY & COMPLIANCE WITH LAWS.

I am authorized by the applicant to sign on his/her/its behalf and have read this application in its entirety. The information contained herein is true, and correct and complete to the best of my knowledge, information

and belief. I hereby represent on behalf of applicant that the business(es) conducted by applicant and/or which are the subject of this application do not and will not violate any ordinance of the City of Twin Oaks and now comply and/or will continue to comply fully with the laws of the State of Missouri. Applicant acknowledges that failure to truthfully complete this application or failure to comply with all laws may result in revocation of relevant approvals or permits. Signature of Principal/Officer Date Print Name Title **VERIFICATION BY OWNER AND TENANT(S).** If the application is on behalf of a tenant for property owned by a person or entity other than the tenant, the owner must verify that the owner has read the application and consents to its review and possible approval by the Village. If the application is submitted by the owner only, tenants need not sign the application. The undersigned hereby acknowledges that she or he has read the application, understands that the application seeks approval of a preliminary development plan for the property, and consents to its submission to the City for review and possible approval. Signature of Owner Date Print Name Title Signature of Tenant Date Print Name Title If more than one tenant is applying, please attach all tenants' signatures on a separate sheet. * * * * * * * FOR OFFICE USE ONLY * * * * * * Amount Paid: \$ _____ Cash/Check #: ____ Date Rec'd: _____



CITY OF TWIN OAKS

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"C" Commercial District

Conditional Use Permit

Conditional Use Permit Approval is required in situations outlined in §400.380 of the City Zoning Code. **Twelve (12) copies** of the application together with a site development plan and any accompanying documents shall be submitted, and shall be in conformance with all general application requirements, including all application fees. (**Please type or print in ink below**)

INFORMATION CONCERNING APPLICANT:

Applicant hereby submits the following information concerning the use or development proposed:

Site Loc	ation/Address: 1144 Meramac Station Road,	Гwin Oaks, MO 6	63021	
Name of	Applicant: Westlake Ace Hardware			
Represer	nted by (if Applicant is a business entity):		Title:	
	Iress: 14000 Marshall Drive		913-888-8438	
	Lenexa, KS 66215	Fax #:		
Name of	Property Owner: Grocery & Pharmacy Portfolio Spri	nging, LLC, c/o Inland	d Commercial Real Estate Services, LLC	
	Iress: 2901 Butterfield Rd		630.586.6100	
	Oak Brook, IL 60523	Fax #:		
Name of	Developer: Grocery & Pharmacy Portfolio Springing, Ll	C, c/o Inland Commo	ercial Real Estate Services, LLC	
	Iress: 2901 Butterfield Rd.		630.586.6100	
	Oak Brook, IL 60512	Fax #:		
Name of	Architect and/or Engineer: Chiodini Architect	ts		
Describe	e types of use(s) activities proposed (attach add storage of propane gas supplies.		equired):	
1. <u>\$</u> 1. <u>\$</u> 2. 1	TIONAL USE PERMIT - SITE DEVELOR Site Development Plans(s) a sketch plan of location of buildings, other structures and location improvements and proposed location. To facilitate review by the City, the application and describing the following: (Vif applicable and circle items included)	of the site (may ot arrangements a and type of sig	y be hand drawn) showing approxima, as well as any proposed landscaping mage.	ate or

or minimize impact on these areas

Existing and proposed site grades identifying grade changes and cut and fill areas
 Existing landscape and natural features showing location of all woodlands, trees, major vegetation, streams and watercourses, as well as means to be taken to preserve

☑ Sidewalks and walkways; driveways; curb cuts; vehicle lanes and parking areas

Exterior building sketches and elevations depicting the general style, size and exterior construction materials of the buildings proposed. Where several building types are proposed on the plan, such as apartments and commercial buildings, a separate sketch

should be prepared for each type. Such sketches shall include elevation drawings, but detailed drawings and perspectives are not required.

Representations Concerning Compliance With Laws

I, the undersigned, have read this application in its entirety and the information contained herein is true, and correct and complete to the best of my knowledge, information and belief. I hereby represent that the property and the activities proposed to be conducted thereon do not and will not violate any ordinance of the City of Twin Oaks or the laws of the State of Missouri. Applicant acknowledges that failure to truthfully complete this application or failure to comply with all laws may result in revocation of relevant approvals or permits.

Signature of Applicant:	Date:	12/15/2021
Print Name: Robert Massengill		VP Business Development
Verification by Owner If the application is submitted on behalf of an owner of proper person or entity other than the tenant, the owner must verify to consents to its review and possible approval by the City. The undersigned hereby acknowledges that she or he has application seeks a conditional use permit for the property, and possible approval of same. Signature of Owner: Don Stewar Cost 1D387864BF as Agent for Owner * * * * * * * * * * * * * * * * * * *	read the longer consents Date: Title:	application, understands that the to submission to City review and 12/17/2021 SVP Property Management Commercial
Date of Board of Aldermen Decision: A Site, use and operational conditions imposed:		
Amount Paid: \$ Cash/Check #:		Date Rec'd:



First round comment response letter

Date: 01.04.2021

REGARDING DOCUMENTS ENTITLED:

Twin Oaks, Missouri 1100 Meramec Station Road – BFA 3497-0

ARCHITECT:

Chiodini Architects 1401 S. Brentwood Blvd., Suite 575 St. Louis, MO 63144 (314) 725-5588

CHIODINI PROJECT NUMBER: 2021.019

NARRATIVE:

The following comments list the conflicts with the proposed plans when evaluated for compliance:

- M-2 Concrete Masonry Veneer is not acceptable per Appendix A A5. Please revise and utilize an acceptable material per Appendix A A5.
- M-2 has been changed to brick.
- M-3 Cast Stone Sill is not acceptable per Appendix A A6. Please revise and utilize an acceptable material per Appendix A A5.
 - M-3 is stone.
- M-5 TPO Membrane Roofing is not acceptable per Appendix A A5. Please revise and utilize an acceptable material per Appendix A A5.
- TPO membrane is an existing roofing material and is not visible to the public.
- The current design does not provide screening to the proposed dumpster/trash compactor. Please
 reevaluate the design and screen trash container with evergreen hedges, walls, screens planted with
 evergreen vines per Appendix A F.4.
 - Dumpster Screen wall layout 1 on sheet CTEP has been added accordingly.

The following comments list items that will need city approval:

Board of Alderman shall determine if building materials and facades are uniform and compatible in type, color, and texture with the existing City environment per Section 400.330 A.4.

Noted

Board of Alderman shall determine if the building structure is designed to ensure a strong physical and spatial relationship with Meramec Station Road frontages are created per Appendix A A.2.

Noted

- Board of Alderman shall determine if colors ensure a harmonious range of colors as provided per Appendix A A.6.
- Noted
- Board of Alderman shall determine if the corner of the building has significant articulations through fenestration, building materials, and detailing per Appendix A B.4.a.
- Noted

The following comments list additional items that will be needed for review:

- Provide calculations to ensure parking design meets the requirements of Section 400.400. Please note, spaces used for storage shall not be included in this calculation.
- Parking calculations have been added to sheet C1.
- Please provide a plan that displays the proposed rooftop equipment. Ensure proposed rooftop equipment is adequately screened per Section 400.330 A.6.
- Proposed RTU layout is indicated CFP1 sheet accordingly.
- M-4: With provided information; location was not determined.
- M-4 is the storefront system.
 - A sign permit will be needed for the proposed wall sign. Please see comments 19 thru 24 for additional information needed.
- Please keep in mind the team is trying to answer all signage questions based upon what limited info we have, but the tenant, ACE, is responsible for all signage applications, permits, fees, etc.
- Please provide a photometric plan to ensure the proposed light follows light cast regulations per Section 400.330 A.5.
- Photometric has been added accordingly.
- 14. The proposed ADA parking area does not display grading. Grading is necessary to determine whether the space is compliant with ADA requirements. Please provide a grading plan to ensure ADA parking is compliant with the ADA requirements per Appendix A C.2.
- Existing ADA parking is to be reused and is noted in the Civil drawings accordingly.



- A sign permit will be needed for the proposed changes to the pylon sign. Please see comments 19 thru 24 for additional information needed.
 - Please keep in mind the team is trying to answer all signage questions based upon what limited info we have, but the tenant, ACE, is responsible for all signage applications, permits, fees, etc.
- Please disclose percentage of space being utilized for storage; storage space shall be less than 40% of total area per Section 400.290.
 - Secondary Stock + Primary Stock (both considered storage) = 2315 Square Feet, or 12.5% of the interior.
- 17. Disclose height of proposed lighting. Ensure it doesn't exceed a height 24' per Section 400.330.
 - New wall pack lights and Sconces do not exceed 24'-0" in height. The prototypical lighting for the sign does exceed the 24'-0" height.
- 18. Provide a landscaping plan in accordance with Appendix A(E).
 - Existing landscaping is to remain and be reused unchanged.

Drawings and Specifications for the above referenced project and the work covered thereby are herein modified as follows, and except as set forth herein, otherwise remain unchanged and in full force and effect:

FINAL DEVELOPMENT PLAN FOR

WESTLAKE ACE HARDWARE

RESUBDIVISION OF 1100, 1144 AND 1190 MERAMEC STATION ROAD, CITY OF TWIN OAKS, ST. LOUIS COUNTY, MISSOURI

LEGEND

DESCRIPTION	SYMBOL
EXISTING MAJOR CONTOUR	- -500 -
EXISTING MINOR CONTOUR	- - -502 -
PROPOSED MAJOR CONTOUR	 504
PROPOSED MINOR CONTOUR	 502
PROPOSED SPOT ELEVATION	+502. ⁰⁰
EXISTING SANITARY SEWER	-
EXISTING STORM SEWER	
PROPOSED SANITARY SEWER	
PROPOSED STORM SEWER	
EXISTING WATERLINE	W
EXISTING FIRE HYDRANT	>
EXISTING GAS LINE	———G——
EXISTING OVERHEAD UTILITY	———OE———
USE IN PLACE	(U.I.P.)
ADJUST TO GRADE	(A.T.G.)
TO BE REMOVED	(T.B.R.)
TO BE REMOVED AND REPLACED	(T.B.R.&R.)
TO BE REMOVED AND RELOCATED	(T.B.R.&REL.)
FF = FINISHED FLOOR EL	.EV.

TF = TOP OF FOUNDATION
BF = BASEMENT FLOOR ELEV.
GF = GARAGE FLOOR ELEV.

BENCHMARK

ELEV. = 613.56 FT.U.S.

ST. LOUIS COUNTY BENCHMARK 18-415

ONTO EASTBOUND BIG BEND ROAD.

SITE BENCHMARK

NAVD88 ELEV. = 624.47 FT.U.S.

NAVD88(SLC2011A) ELEV. = 613.30 FT.U.S. OR 186.933 METER NGVD29

CUT 'U' ON THE SOUTH SIDE OF THE CONCRETE BASE FOR A TRAFFIC SIGNAL MAST IN A TRAFFIC ISLAND SITUATED SOUTH OF BIG BEND ROAD,

EAST OF MERAMEC STATION ROAD (OLD HIGHWAY 141), AND NORTHWEST

OF THE RIGHT TURN LANE FROM NORTHBOUND MERAMEC STATION ROAD

'O' IN THE WORD 'OPEN' ON FIRE HYDRANT, AS SHOWN ON SURVEY.

CO = CLEAN OUT DS = DOWNSPOUT

SHEET INDEX

C7 - SITE DETAILS

C1 - COVER SHEET

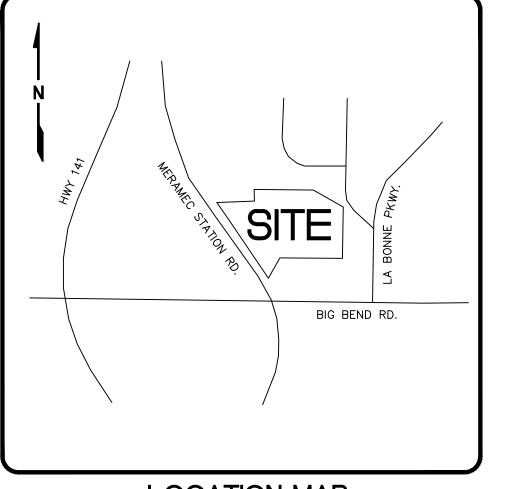
C2 - SPECIFICATIONS / NOTES

C3 - OVERALL SITE PLAN

C4 - EXISTING CONDITIONS / DEMO PLAN

C5 - SITE & GRADING PLAN

C6 - SITE GEOMETRY & UTILITY PLAN



LOCATION MAP

PROJECT DATA

ADDRESS : 1100 MERAMEC STATION ROAD TWIN OAKS, MO 63021 GROCERY & PHARMACY PORTFOLIO DST. OWNER ACREAGE OF TRACT : 5.79 Ac.± : PD-C PLANNED COMMERCIAL PRESENT ZONING : COMMERCIAL / RETAIL PRESENT USAGE : COMMERCIAL / RETAIL PROPOSED USAGE SCHOOL DISTRICT : PARKWAY FIRE DISTRICT WEST COUNTY EMS AND FIRE : MERAMEC RIVER WATERSHED(S) : 29189C0303K FIRM PANEL

PROPERTY NOTES:

THE CELL TOWER LOCATED ON THE NORTH SIDE OF THE EXISTING BUILDING IS OWNED BY THE PROPERTY OWNER OF THE LOT (GROCERY & PHARMACY PORTFOLIO DST.)

<u>UTILITIES</u>

ELECTRIC:

AMEREN UE, DORSETT DISTRICT
12121 DORSETT ROAD
MARYLAND HEIGHTS, MO 63034

TELEPHONE:

AT&T
12930 OLIVE BLVD., 2ND FLOOR
CREVE COEUR, MO 63141

GAS:

SPIRE
720 OLIVE STREET
ROOM 1408
ST. LOUIS, MO 63101

WATER:

MISSOURI AMERICAN WATER COMPANY
1050 RESEARCH BLVD.
ST. LOUIS, MO 63132

CABLE TV:

CHARTER COMMUNICATIONS

SEWER: METROPOLITAN ST. LOUIS SEWER DISTRICT 2350 MARKET STREET ST. LOUIS, MO 63103

941 CHARTER COMMONS

CHESTERFIELD, MO 63017

MAPPING & DESIGN DEPARTMENT

PROPERTY DESCRIPTION

(ROM TITLE COMMITMENT)

REAL PROPERTY IN THE CITY OF VILLAGE OF TWIN OAKS, COUNTY OF ST. LOUIS, STATE OF MISSOURI, DESCRIBED AS FOLLOWS:

NEW LOT 'A' OF THE RESUBDIVISION OF 1100 MERAMEC STATION ROAD, 1144 MERAMEC STATION ROAD AND 1190 MERAMEC STATION ROAD, ACCORDING TO THE PLAT THEREOF RECORDED IN PLAT BOOK 354, PAGE 338 OF THE ST. LOUIS COUNTY RECORDS, MISSOURI.

PARCEL II:
AN APPURTENANT EASEMENT FOR ACCESS, INGRESS AND EGRESS CREATED BY
THE AMENDED AND RESTATED RECIPROCAL ACCESS EASEMENT AGREEMENT
RECORDED MAY 9, 2006 IN BOOK 17153, PAGE 4885 OF THE ST. LOUIS
COUNTY LAND RECORDS.

YARD SETBACKS

FRONT YARD = 10' PARKING AND 25' BUILDING

SIDE YARD (NORTH) = 50' IMPROVEMENT SETBACK

REAR YARD = 50' IMPROVEMENT SETBACK

PARKING CALCULATIONS

REQUIRED PARKING (SEC. 400.400)
RETAIL BUILDINGS: 1 PARKING SPACE PER 200 S.F. OF FLOOR AREA

ACE HARDWARE - 14761 S.F. RETAIL FLOOR AREA / 200 = 74 SPACES REQ. ALDI - 13,387 S.F. RETAIL FLOOR AREA / 200 = 67 SPACES REQ.

PARKING SPACES PROVIDED (ENTIRE PARCEL)

184 PARKING SPACES, NON-ADA

9 ADA ACCESSIBLE SPACES

193 SPACES TOTAL

193 - 74 - 67 = 52 REMAINING SPACES

FLOOD ZONE NOTES

BY GRAPHIC PLOTTING ONLY, THIS PROPERTY LIES WITHIN UNSHADED ZONE 'X' (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN) ACCORDING TO THE FLOOD INSURANCE RATE MAP PANEL NUMBER 29189C0303K, WHICH BEARS AN EFFECTIVE DATE OF FEBRUARY 4, 2015.

STORMWATER MANAGEMENT FUTURE DISTURBANCE NOTE:

PROJECT LAND DISTURBANCE = 0.25± ACRES
PREVIOUS PLAN FOR ALDI (03/31/21) = 0.25± AC.
PROPOSED DISTURBANCE THIS PLAN = 0.0 AC.

PROJECT RUNOFF DIFFERENTIAL = 0.0 CFS (NO CHANGE)

ANY FUTURE LAND DISTURBANCE AND/OR INCREASE IN IMPERVIOUS AREA ON THIS SITE MAY REQUIRE ADDITIONAL STORM WATER MANAGEMENT PER MSD REGULATIONS IN PLACE AT THAT TIME. (INCLUDING TOTAL LAND DISTURBANCE AND/OR IMPERVIOUSNESS ADDED ON THIS PLAN)

NOTICE TO CONTRACTOR

UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE RECORDS. THEREFORE, THE LOCATIONS OF ANY UNDERGROUND FACILITIES SHOWN HEREON MUST BE CONSIDERED APPROXIMATE. PRIOR TO BEGINNING WORK ON THE SITE, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXACT LOCATION OF THESE FACILITIES, ALONG WITH ANY IN EXISTENCE THAT ARE NOT SHOWN; TO VERIFY THEIR LOCATION BOTH HORIZONTALLY AND VERTICALLY (IN ACCORDANCE WITH THE REQUIREMENTS OF THE RESPECTIVE UTILITY/FACILITY OWNER); AND TO VERIFY THAT MINIMUM CLEARANCES AND COVER REQUIREMENTS BETWEEN THE EXISTING FACILITIES AND THE PROPOSED WORK WILL BE MET.



THE WORK PREPARED BY OR UNDER THE DIRECTION OF THE ENGINEER AND BATED SIGNATURE IS LIMITED TO SITEWORK ITEMS ONLY, INCLUDING, GRADING, DRAINAGE, PAVING, SEWERS, AND OTHER APPURTENANT SITE IMPROVEMENTS. PURSUANT TO 327.411 RSMo, NO RESPONSIBILITY IS TAKEN FOR SERVICES NOT RENDERED, INCLUDING: BOUNDARY AND TOPOGRAPHIC SURVEYS; STRUCTURAL ELEMENTS (INCLUDING RETAINING WALLS); GEOTECHNICAL INVESTIGATIONS, AND FACILITIES; CONSTRUCTION MEANS; METHODS AND SCHEDULING; ANY AND FACILITIES; CONSTRUCTION MEANS; METHODS AND SCHEDULING; ANY AND GREED STEAM ON THER PLANS, SPECIFICATION, ESTIMATES, OR AUTHER PLANS, SPECIFICATION, ESTIMATES, OR AUTHER SEA

Vance Engineering, Inc.
10537 Lackland Road
St. Louis, MO 63114
P: 314.427.1800

COVER SHEET

HA

V

PRELIMINARY

MICHAEL CLAY VANCE, P.E. E-25616 REVISED

12/06/21 CITY COMMENTS

10/12/21

C1
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GENERAL NOTES

1. ALL UTILITIES SHOWN HAVE BEEN LOCATED BY THE ENGINEER FROM AVAILABLE RECORDS. THEIR LOCATION SHOULD BE CONSIDERED APPROXIMATE. THE CONTRACTOR HAS THE RESPONSIBILITY TO NOTIFY ALL UTILITY COMPANIES, PRIOR TO CONSTRUCTION, TO HAVE EXISTING UTILITIES FIELD LOCATED. THE CONTRACTOR SHALL BE ON RECORD WITH THE MISSOURI ONE CALL SYSTEM. ALL PROPOSED UTILITIES TO BE UNDERGROUND.

- 2. ALL ELEVATIONS ARE BASED ON ST. LOUIS COUNTY BENCHMARK DATUM.
- 3. BOUNDARY AND TOPOGRAPHIC SURVEY BY MARLER SURVEYING CO.

4. ALL ON-SITE MATERIALS AND METHODS OF CONSTRUCTION TO MEET THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY OF TWIN OAKS, ST. LOUIS COUNTY, ST. LOUIS COUNTY DEPARTMENT OF HIGHWAYS AND TRAFFIC, PUBLIC WORKS & M.S.D.

5. ALL GRADED AREAS SHALL BE PROTECTED FROM EROSION BY EROSION CONTROL DEVICES AND/OR SEEDING AND MULCHING AS REQUIRED BY CITY OF TWIN OAKS.

6. PRIOR TO BEGINNING ANY WORK ON THE SITE, THE SUB-CONTRACTOR SHALL CONTACT THE GENERAL CONTRACTOR FOR SPECIFIC INSTRUCTIONS RELEVANT TO THE SEQUENCING OF WORK.

7. GRADING CONTRACTOR SHALL INSTALL SILTATION CONTROL PRIOR TO STARTING THE GRADING. ADDITIONAL SILTATION CONTROL DEVICES SHALL BE INSTALLED AS DIRECTED BY THE CITY OF TWIN OAKS.

8. ALL FILLS AND BACKFILLS SHALL BE MADE OF SELECTED EARTH MATERIALS, FREE FROM BROKEN MASONRY, ROCK, FROZEN EARTH, RUBBISH, ORGANIC MATERIAL AND DEBRIS.

9. GRADING CONTRACTOR SHALL KEEP EXISTING ROADWAYS CLEAN OF MUD AND DEBRIS AT ALL

10. PROPOSED CONTOURS SHOWN ARE FINISHED ELEVATIONS ON PAVED AREAS.

11. ALL GRADING & DRAINAGE TO BE IN CONFORMANCE WITH THE CITY OF TWIN OAKS & METROPOLITAN ST. LOUIS SEWER DISTRICT STANDARDS.

12. DRIVE ENTRANCES ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF TWIN

13. SIDEWALKS ALONG THE ACCESSIBLE ROUTE SHALL NOT HAVE A SLOPE EXCEEDING 1'V: 20'H. SLOPES GREATER THAN 1'V: 20'H MUST BE DESIGNED AS A RAMP. ALL SIDEWALKS AND ASSOCIATED ACCESSIBILITY IMPROVEMENTS SHALL BE CONSTRUCTED TO ST. LOUIS COUNTY ADA

14. SIDEWALKS, CURB RAMPS, RAMPS AND ACCESSIBLE PARKING SPACES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT APPROVED "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES" (ADAAG) ALONG WITH THE REQUIRED GRADES, CONSTRUCTION MATERIALS, SPECIFICATIONS AND SIGNAGE. IF ANY CONFLICT OCCURS BETWEEN THE ADAAG AND THE INFORMATION ON THE PLANS, THE ADAAG SHALL TAKE PRECEDENCE AND THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER PRIOR TO ANY CONSTRUCTION.

15. BY GRAPHIC PLOTTING ONLY, THIS PROPERTY DOES NOT LIE WITHIN ANY SPECIAL FLOOD ZONE AREAS ACCORDING TO THE FLOOD INSURANCE RATE MAP PANEL NUMBER 29189C0303 K AND COMMUNITY NUMBER 290906 (CITY OF TWIN OAKS) WHICH BEARS AN EFFECTIVE DATE OF FEBRUARY 4, 2015. THE PROPERTY LIES WITHIN UNSHADED ZONE X (AREAS DETERMINED TO BE OUTSIDE 500 YEAR FLOOD PLAIN).

16. NO GRADE SHALL EXCEED 3 (HORIZONTAL): 1 (VERTICAL), UNLESS JUSTIFIED BY A GEOTECHNICAL REPORT, WHICH HAS BEEN ACCEPTED/APPROVED BY THE CITY.

17. ALL LANDSCAPE AREAS TO BE FILLED WITH A MINIMUM OF 6" OF TOPSOIL.

18. ALL LANDSCAPED AREAS DISTURBED BY OFF-SITE WORK SHALL BE IMMEDIATELY SEEDED OR SODDED, AS DIRECTED BY ST. LOUIS COUNTY DEPARTMENT OF PUBLIC WORKS UPON COMPLETION OF WORK IN AREA AFFECTED.

19. ADEQUATE TEMPORARY OFF-STREET PARKING FOR CONSTRUCTION EMPLOYEES SHALL BE PROVIDED. PARKING ON NON-SURFACED AREAS SHALL BE PROHIBITED IN ORDER TO ELIMINATE THE CONDITION WHEREBY MUD FROM CONSTRUCTION AND EMPLOYEES' VEHICLES IS TRACKED ONTO THE PAVEMENT CAUSING HAZARDOUS ROADWAY AND DRIVEWAY CONDITIONS.

20. ALL SEWER CONSTRUCTION AND MATERIALS TO BE IN ACCORDANCE WITH THE METROPOLITAN ST. LOUIS SEWER DISTRICT STANDARD CONSTRUCTION SPECIFICATIONS FOR SEWER AND DRAINAGE FACILITIES, 2009.

21. ALL PROPOSED IMPROVEMENTS SHALL BE CONSTRUCTED TO THE CITY OF TWIN OAKS STANDARDS.

CONSTRUCTION NOTES

. THE SITE IMPROVEMENT PLANS APPROVED BY THE VILLAGE OF TWIN OAKS DO NOT ALLOW THE REMOVAL OR CONSTRUCTION OF ANY SANITARY OR STORM SEWER LINES WITHOUT THE PRIOR APPROVAL OR CONSENT OF MSD.

ALL PUBLIC ROADS MUST BE KEPT CLEAR OF MUD AND DEBRIS AT ALL TIMES. FAILURE TO DO SO WILL BE CAUSE FOR THE GOVERNING AGENCY TO SUSPEND WORK.

SIGN LOCATION AND SIZES CANNOT BE APPROVED WITH THE SITE IMPROVEMENT PLAN. A SEPARATE APPLICATION MUST BE MADE TO THE CITY OF TWIN OAKS DEPARTMENT OF PLANNING.

4. THE GENERAL CONTRACTOR SHALL RESTORE OFFSITE CONSTRUCTION AREAS TO AN EQUAL OR BETTER CONDITION THAN EXISTED PRIOR TO THE COMMENCEMENT OF WORK IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES.

5. SAFETY NOTICE TO CONTRACTOR 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.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE RAZING AND REMOVAL OF THE EXISTING STRUCTURES, INCLUDING FOUNDATIONS, RELATED UTILITIES, PAVING, UNDERGROUND FACILITIES AND ANY OTHER EXISTING IMPROVEMENTS.

7. THE CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE AND SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID DAMAGE TO ADJACENT PROPERTIES DURING ALL PHASES OF THE CONSTRUCTION PLAN.

8. BURNING ON SITE WILL NOT BE ALLOWED.

SEWER STRUCTURE DO NOT BURY".

DISPOSAL OF MATERIAL ON-SITE WILL ONLY BE ALLOWED AS DIRECTED BY THE OWNER AND GEOTECHNICAL ENGINEER AND APPROVED BY THE VILLAGE OF TWIN OAKS.

WITH A 2x4 PAINTED ORANGE AND MARKED TO READ "STORM SEWER STRUCTURE OR SANITARY

10. CONTRACTOR SHALL COORDINATE THE DISCONNECTION, SEALING AND/OR REMOVAL OF UTILITIES WITH THE RESPECTIVE UTILITY COMPANY.

11. THE GENERAL CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES FOR NEW SERVICES. 12. THE GENERAL CONTRACTOR SHALL FLAG ALL SANITARY AND STORM SEWER STRUCTURES

13. ALL PRIVATE SEWERS ARE UNDER THE VILLAGE OF TWIN OAKS INSPECTION.

14. ALL FILLED PLACES UNDER PROPOSED STORM AND SANITARY SEWER LINES AND/OR PAVED AREAS SHALL BE COMPACTED TO 90% OF MAXIMUM DENSITY AS DETERMINED BY THE MODIFIED AASHTO T-180 COMPACTION TEST OR 95 STANDARD PROCTOR TEST AASHTO T-99. A SEALED COPY OF ALL RESULT REPORTS SHALL BE AVAILABLE FOR REVIEW.

15. ALL EXCAVATIONS, GRADING, OR FILLING SHALL HAVE A FINISHED GRADE NOT TO EXCEED A 3:1 SLOPE (33 PERCENT). STEEPER GRADES MAY BE APPROVED BY THE DESIGNATED OFFICIAL IF THE EXCAVATION IS THROUGH ROCK OR THE EXCAVATION OR THE FILL IS ADEQUATELY PROTECTED (A DESIGNED HEAD WALL OR TOE WALL MAY BE REQUIRED). RETAINING WALLS THAT EXCEED A HEIGHT OF FOUR (4) FEET SHALL REQUIRE THE CONSTRUCTION OF SAFETY GUARDS AS IDENTIFIED IN THE APPROPRIATE SECTION(S) OF THE ADOPTED BUILDING CODES AND MUST BE APPROVED BY AGENCY ISSUING THE RETAINING WALL PERMIT (IF APPLICABLE). PERMANENT SAFETY GUARDS WILL BE CONSTRUCTED IN ACCORDANCE WITH THE APPROPRIATE SECTION(S) OF THE ADOPTED BUILDING CODES.

16. SEDIMENT AND EROSION CONTROL PLANS FOR SITES THAT EXCEED 20,000 SQUARE FEET OF GRADING SHALL PROVIDE FOR SEDIMENT OR DEBRIS BASINS, SILT TRAPS OR FILTERS. STAKED STRAW BALES OR OTHER APPROVED MEASURES TO REMOVE SEDIMENT FROM RUN-OFF WATERS. THE DESIGN TO BE APPROVED BY THE DESIGNATED OFFICIAL. TEMPORARY SILTATION CONTROL MEASURES (STRUCTURAL) SHALL BE MAINTAINED UNTIL VEGETATIVE CONTROL IS ESTABLISHED ON THE SITE, TO BE DETERMINED BY THE DESIGNATED OFFICIAL.

17. WHERE NATURAL VEGETATION IS REMOVED DURING GRADING, VEGETATION SHALL BE REESTABLISHED IN SUCH A DENSITY AS TO PREVENT EROSION. PERMANENT TYPE GRASSES SHALL BE ESTABLISHED AS SOON AS POSSIBLE OR DURING THE NEXT SEEDING PERIOD AFTER GRADING HAS BEEN COMPLETED.

18. WHEN GRADING OPERATIONS ARE COMPLETED OR SUSPENDED FOR MORE THAN 30 DAYS, PERMANENT GRASS MUST BE ESTABLISHED AT SUFFICIENT DENSITY TO PROVIDE EROSION CONTROL ON THE SITE. BETWEEN PERMANENT GRASS SEEDING PERIODS, TEMPORARY COVER SHALL BE PROVIDED ACCORDING TO THE DESIGNATED OFFICIAL'S RECOMMENDATION.

19. ALL FINISHED GRADES (AREAS NOT TO BE DISTURBED BY FUTURE IMPROVEMENT) IN EXCESS OF 20 PERCENT SLOPES (5:1) SHALL BE MULCHED AND TACKED AT THE RATE OF 100 POUNDS PER 1,000 SQUARE FEET WHEN SEEDED.

20. PROVISIONS SHALL BE MADE TO ACCOMMODATE THE INCREASED RUNOFF CAUSED BY CHANGED SOIL AND SURFACE CONDITIONS DURING THE AFTER GRADING. UNVEGETATED OPEN CHANNELS SHALL BE DESIGNED SO THAT GRADIENTS RESULT IN VELOCITIES OF 2 FPS (FEET PER SECOND) OR LESS. OPEN CHANNELS WITH VELOCITIES MORE THAN 2 FPS AND LESS THAN 5 FPS SHALL BE ESTABLISHED IN PERMANENT VEGETATION BY USE OF COMMERCIAL EROSION CONTROL BLANKETS OR LINED WITH ROCK RIPRAP OR CONCRETE OR OTHER SUITABLE MATERIALS AS APPROVED BY THE DESIGNATED OFFICIAL. DETENTION BASINS, DIVERSIONS, OR OTHER APPROPRIATE STRUCTURES SHALL BE CONSTRUCTED TO PREVENT VELOCITIES ABOVE 5

21. THE ADJOINING GROUND TO THE DEVELOPMENT SHALL BE PROVIDED WITH PROTECTION FROM ACCELERATED AND INCREASED SURFACE WATER, SILT FROM EROSION, AND ANY OTHER CONSEQUENCES OR EROSION. RUN-OFF WATER FROM DEVELOPED AREAS (PARKING LOTS, PAVED SITES AND BUILDINGS) ABOVE THE AREA TO BE DEVELOPED SHALL BE DIRECTED TO DIVERSIONS, DETENTION BASINS, CONCRETE GUTTERS AND/OR UNDERGROUND OUTLET SYSTEMS. SUFFICIENTLY ANCHORED STRAW BALES MAY BE TEMPORARILY SUBSTITUTED WITH THE APPROVAL OF THE DESIGNATED OFFICIAL.

22. DISTURBED AREAS SHALL BE SEEDED AND MULCHED AT THE RATES DEFINED IN SWPPP DETAILS OR SODDED BEFORE AN OCCUPANCY PERMIT SHALL BE ISSUED EXCEPT THAT A TEMPORARY OCCUPANCY PERMIT MAY BE ISSUED BY THE BUILDING DEPARTMENT IN CASES OF UNDUE HARDSHIP BECAUSE OF UNFAVORABLE GROUND CONDITIONS.

23. ALL LIGHT STANDARDS SHALL BE SHADED, SHIELDED OR DIRECTED TO PREVENT DIRECT LIGHT FROM CAUSING TRAFFIC HAZARDS. AND CASTING DIRECT LIGHT UPON ADJACENT PROPERTY CAUSING GLARE OR OTHER OBJECTIONABLE PROBLEMS TO SURROUNDING AREAS.

24. THE DEVELOPER IS REQUIRED TO TO PROVIDE ADEQUATE STORM WATER SYSTEMS IN ACCORDANCE WITH ST. LOUIS COUNTY AND M.S.D. STANDARDS. 25. ADDITIONAL SILTATION CONTROL SHALL BE INSTALLED AS REQUIRED BY THE VILLAGE OF

26. ANY DISTURBED PROPERTY (I.E. BUSHES, FENCED, MAILBOXES, ETC.) SHALL BE REPLACED,

IN KIND, AT THE DEVELOPER'S EXPENSE.

27. INTERNAL (PRIVATE) STORM SEWERS MAY REQUIRE A SEPARATE DRAINLAYER PERMIT FROM ST. LOUIS COUNTY DEPARTMENT OF PUBLIC WORKS AND OR THE VILLAGE OF TWIN OAKS. .

ST. LOUIS COUNTY NOTES

1. ALL WORK WITHIN ST. LOUIS COUNTY RIGHT-OF-WAY SHALL BE CONSTRUCTED TO ST. LOUIS

2. NO SLOPES WITHIN ST. LOUIS COUNTY RIGHT-OF-WAY SHALL EXCEED 3 (HORIZONTAL) TO 1

3. ALL STORM WATER SHALL BE DISCHARGED AT AN ADEQUATE NATURAL DISCHARGE POINT. SINKHOLES ARE NOT ADEQUATE DISCHARGE POINTS.

4. ALL PROPOSED ACCESS TO ST. LOUIS COUNTY ROADS SHALL MEET MINIMUM ST. LOUIS COUNTY SIGHT DISTANCE REQUIREMENTS.

5. PRIOR TO IMPROVEMENT/CONSTRUCTION PLAN APPROVAL, THE ENGINEER SHALL PROVIDE A SIGNED AND SEALED NOTE ON THE PLANS FOR BOTH RESIDENTIAL AND COMMERCIAL PROJECTS STATING THAT THE UNIMPROVED EXISTING SIDEWALK ALONG THE PROJECT FRONTAGE MEETS CURRENT ST. LOUIS COUNTY/ADA STANDARDS. (NEED FOR PORTION IN SLC MAINTAINED R/W).

6. A SIGNED/SEALED NOTE SHALL BE ADDED TO THE CONSTRUCTION PLANS INDICATING THAT THE UNIMPROVED EXISTING SIDEWALK ALONG THE PROJECT FRONTAGE MEETS CURRENT ADA

7. ALL GRADING AND DRAINAGE SHALL BE IN CONFORMANCE WITH ST. LOUIS COUNTY AND MSD

8. ALL HYDRANTS, POWER POLES OR OTHER POTENTIAL OBSTRUCTIONS WITHIN THE ST. LOUIS COUNTY ROAD RIGHT-OF-WAY SHALL HAVE A MINIMUM TWO (2) FOOT SETBACK FROM FACE OF CURB OR EDGE OF PAVEMENT, AS DIRECTED BY THE ST. LOUIS COUNTY DEPARTMENT OF TRANSPORTATION.

9. ANY ENTITY THAT PERFORMS WORK ON ST. LOUIS COUNTY MAINTAINED PROPERTY SHALL PROVIDE THE COUNTY WITH A CERTIFICATE OF INSURANCE EVIDENCING GENERAL LIABILITY COVERAGE (BODILY INJURY AND PROPERTY DAMAGE) IN THE AMOUNTS SPECIFIED AS THE LIMITS OF LIABILITY SET BY THE STATE FOR PUBLIC ENTITIES. SUCH CERTIFICATE SHALL INCLUDE 'ST. LOUIS COUNTY' AS AN ADDITIONAL INSURED AND SHALL BE PROVIDED PRIOR TO THE ISSUANCE OF ANY PERMIT. CERTIFICATE SHALL PROVIDE FOR A 30 DAY POLICY CANCELLATION NOTICE TO ST. LOUIS COUNTY. UPON REQUEST, THE COUNTY WILL PROVIDE THE SPECIFIC AMOUNTS FOR BOTH PER PERSON AND PER OCCURRENCE LIMITS.

10. PRIOR TO SPECIAL USE PERMIT ISSUANCE BY THE ST. LOUIS COUNTY, A SPECIAL CASH ESCROW OR A SPECIAL ESCROW SUPPORTED BY AN IRREVOCABLE LETTER OF CREDIT, SHALL BE ESTABLISHED WITH ST. LOUIS COUNTY DEPARTMENT OF TRANSPORTATION TO GUARANTEE COMPLETION OF THE REQUIRED ROADWAY IMPROVEMENTS. ROAD IMPROVEMENTS SHALL BE COMPLETED PRIOR TO THE ISSUANCE OF OCCUPANCY PERMIT.

11. INSTALLATION OF LANDSCAPING AND ORNAMENTAL ENTRANCE MONUMENT OR IDENTIFICATION SIGNAGE CONSTRUCTION, IF PROPOSED, SHALL BE REVIEWED BY THE DEPARTMENT OF TRANSPORTATION FOR SIGHT DISTANCE CONSIDERATIONS AND APPROVED PRIOR TO INSTALLATION

12. THE DEVELOPER OR MUNICIPALITY IS ADVISED THAT UTILITY COMPANIES MAY REQUIRE COMPENSATION FOR RELOCATION OF THEIR FACILITIES WITHIN THE PUBLIC ROAD ROAD RIGHT-OF-WAY. ST. LOUIS COUNTY SHALL BEAR NO RESPONSIBILITY FOR UTILITY RELOCATION OR ADJUSTMENT COSTS OR ASSOCIATED DELAYS

13. ALL SEDIMENT SHALL BE WASHED FROM ALL VEHICLES AT WASH DOWN STATION PRIOR TO LEAVING THE SITE SO THAT NO SEDIMENT IS TRACKED ONTO COUNTY ROADS.

14. TRUCKS SHALL NOT EXCEED POSTED WEIGHT LIMITS FOR ST. LOUIS COUNTY BRIDGES DURING DURING HAUL OPERATIONS.

15. ALL DISTURBED EARTH AREAS WITHIN ST. LOUIS COUNTY RIGHT-OF-WAY SHALL BE SODDED. 16. APPLICANT SHALL USE EXTREME CAUTION IN AREAS WHERE TRAFFIC SIGNAL FACILITIES ARE EXISTING. IT IS THE RESPONSIBILITY OF THE CONTRACTOR/DEVELOPER TO CONTACT THE ST. LOUIS COUNTY DEPARTMENT OF TRANSPORTATION AT (314) 615-0215 A MINIMUM OF 48 HOURS IN ADVANCE OF CONSTRUCTION WORK FOR LOCATION AND SPOTTING EXISTING TRAFFIC SIGNAL CONDUIT. IN THE EVENT THE CONTRACTOR DAMAGES ANY TRAFFIC SIGNAL FACILITIES, REPAIRS SHALL BE MADE AT THE CONTRACTOR'S EXPENSE B AN ELECTRICAL CONTRACTOR AS DIRECTED BY ST. LOUIS COUNTY.

17. ALL AFFECTED OFFSITE PROPERTY OWNERS SHALL BE GIVEN NOTICE 48 HOURS IN ADVANCE OF ANY WORK.

18. THE CONTRACTOR SHALL NOTIFY THE ST. LOUIS COUNTY DIVISION OF OPERATIONS STRIPING PERSONNEL AT (314) 615-0233, 24 HOURS IN ADVANCE OF ANY STRIPING RELATED WORK. ALL GRINDING OF EXISTING STRIPING AND INSTALLATION OF TEMPORARY STRIPING AS REQUIRED BY BY ST. LOUIS COUNTY SHALL BE PERFORMED BY THE CONTRACTOR. ALL PERMANENT STRIPING WILL BE INSTALLED BY THE ST. LOUIS COUNTY DEPARTMENT OF TRANSPORTATION.

19. ANY REQUIRED FLOOD PLAIN APPROVAL SHALL BE OBTAINED FROM THE VILLAGE OF TWIN OAKS PRIOR TO THE START OF ANY WORK.

20. REMOVE AND REPLACE SIDEWALK, CURB, GUTTER, PAVEMENT, ETC. TO THE NEXT JOINT.

21. FOR SIDEWALK REMOVAL/REPLACEMENT VERIFY AND PROVIDE ADEQUATE PEDESTRIAN ACCESS AROUND THE SITE PRIOR TO BEGINNING CONSTRUCTION. PROJECT NEEDS TO PROVIDE CONTINUOUS PEDESTRIAN ACCESS DURING CONSTRUCTION. NO REMOVAL OF EXISTING SIDEWALK WITHOUT PROVIDING ADEQUATE PEDESTRIAN FACILITIES AND ROUTES DURING CONSTRUCTION. 22. PROVIDE ADEQUATE OFF-STREET PARKING FOR CONSTRUCTION EMPLOYEES. PARKING ON

NON-SURFACED AREAS SHALL BE PROHIBITED IN ORDER TO ELIMINATE THE CONDITION WHEREBY MUD FROM CONSTRUCTION AND EMPLOYEE VEHICLES IS TRACKED ONTO THE PAVEMENT CAUSING HAZARDOUS ROADWAY AND DRIVEWAY CONDITIONS.

23. INTERIM STORM WATER DRAINAGE CONTROL IN THE FORM OF SILTATION CONTROL MEASURES

24. ALL CONSTRUCTION SHALL BE PER THE MOST CURRENT DETAILS LOCATED IN THE ST. LOUIS COUNTY DESIGN CRITERIA MANUAL AND/OR THE SEDIMENT AND EROSION CONTROL MANUAL. 25. A DRAINLAYER PERMIT SHALL BE OBTAINED FROM THE ST. LOUIS COUNTY DEPARTMENT OF PUBLIC WORKS FOR INTERNAL (PRIVATE) STORM SEWERS.

26. INTERIM STORM WATER DRAINAGE CONTROL IN THE FORM OF SILTATION CONTROL MEASURES SHALL BE PROVIDED.

27. ADDITIONAL SILTATION CONTROL SHALL BE INSTALLED AS REQUIRED BY ST. LOUIS COUNTY DEPARTMENT OF TRANSPORTATION.

28. A PERMIT SHALL BE OBTAINED FROM ST. LOUIS COUNTY DEPARTMENT OF PUBLIC WORKS

FOR CONSTRUCTION OF RETAINING WALLS. 29. A PERMIT SHALL BE OBTAINED FROM THE ST. LOUIS COUNTY DEPARTMENT OF PUBLIC

30. ALL AFFECTED OFFSITE PROPERTY OWNERS SHALL BE GIVEN NOTICE 48 HOURS IN ADVANCE

WORKS FOR ROOF DRAIN CONNECTIONS.

31. ANY DISTURBED OFF SITE PROPERTY (i.e. BUSHES, FENCES, MAILBOXES, ETC.) SHALL BE REPLACED IN KIND AT THE DEVELOPER'S EXPENSE.

32. ALL SIDEWALKS AND ASSOCIATED ACCESSIBILITY IMPROVEMENTS SHALL BE CONSTRUCTED TO ST. LOUIS COUNTY ADA STANDARDS.

33. THE CONTRACTOR SHALL MAINTAIN EXISTING TRAFFIC CONTROL SIGNS (STREET NAME, STOP, NO PARKING, ONE-WAY, TURN, ETC) UNTIL SUCH TIME AS THEY NEED TO BE REMOVED/RELOCATED FOR CONSTRUCTION OPERATIONS. TEMPORARY SIGNING SHALL BE IN ACCORDANCE WITH THE CURRENT VERSION OF MUTCD CHAPTER 6F (TEMPORARY TRAFFIC CONTROL DEVICES). EXISTING SIGNS SHALL NOT LIE ON THE GROUND FOR ANY PERIOD OF TIME. PORTABLE SUPPORTS SHALL NOT BE LOCATED ON SIDEWALKS OR AREAS DESIGNATED FOR PEDESTRIAN TRAFFIC. SIGNS SHALL BE CRASHWORTHY AND PROPERLY MAINTAINED FOR CLEANLINESS, VISIBILITY, AND PROPER POSITIONING, AND SHALL BE COORDINATED WITH THE ST. LOUIS COUNTY SIGN SHOP AT (314) 615-0242.

STORM SEWER NOTES

1.) ALL CONCRETE PIPE SHALL BE REINFORCED, AND CONFORM TO A.S.T.M. DESIGNATION C76-80 CLASS III UNLESS NOTED.

2.) ALL SEWER CONSTRUCTION AND MATERIALS TO BE IN ACCORDANCE WITH THE METROPOLITAN ST. LOUIS SEWER DISTRICT STANDARD CONSTRUCTION SPECIFICATIONS FOR SEWERS AND DRAINAGE FACILITIES, 2009.

3.) TYPE "C" BEDDING PER M.S.D. STANDARDS IS REQUIRED FOR PIPES IN ROCK.

4.) ALL TRENCHES UNDER AREAS TO BE PAVED AND UNDER EXISTING PAVING SHALL BE GRANULARLY FILLED WITH 3/4" MINUS CRUSHED LIMESTONE ONLY. BACKFILL SHALL BE PLACED IN ACCORDANCE WITH M.S.D. STANDARDS.

5.) ALL TRENCH BACKFILLS UNDER PAVEMENT WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE GRANULAR BACKFILLED. TRENCH BACKFILLS UNDER PAVED AREAS, OUTSIDE OF PUBLIC RIGHT-OF-WAY SHALL BE GRANULAR BACKFILL IN LIEU OF THE EARTH BACKFILL COMPACTED TO 95 PERCENT OF THE STANDARD AASHTO T-99 COMPACTION TEST A.S.T.M. D-698.

6.) JETTING IS NOT AN ACCEPTABLE METHOD OF ACHIEVING BACKFILL COMPACTION. ALL BÁCKFILL MATERIAL SHALL BE MECHANICALLY COMPACTED TO AT LEAST 95 PERCENT OF THE MATERIAL'S STANDARD PROCTOR MAXIMUM DRY DENSITY.

7.) FOR SEWER PIPE (STORM, SANITARY AND COMBINED) WITH A DESIGN GRADE LESS THAN ONE PERCENT (1%), VERIFICATION OF THE PIPE GRADE WILL BE REQUIRED FOR EACH INSTALLED REACH OF SEWER. PRIOR TO ANY SURFACE RESTORATION OR INSTALLATION OF ANY SURFACE IMPROVEMENTS. THE CONTRACTOR'S FIELD SUPERVISOR WILL BE REQUIRED TO PROVIDE DAILY DOCUMENTATION VERIFYING THAT THE AS-BUILT PIPE GRADE MEETS THE DESIGN GRADE THROUGH THE SUBMITTAL OF SIGNED CUT SHEETS TO THE MSD INSPECTOR UPON REQUEST. FIELD SURVEYED VERIFICATION MUST BE MADE UNDER THE DIRECTION OF A LICENSED LAND SURVEYOR OR REGISTERED ENGINEER. THE CONTRACTOR WILL BE REQUIRED TO REMOVE AND REPLACE ANY SEWER REACH HAVING AN AS-BUILT GRADE WHICH IS FLATTER THAN THE DESIGN GRADE BY MORE THAN 0.1%. SEWERS WITH GRADES GREATER THAN THE DESIGN SLOPE MAY BE LEFT IN PLACE, PROVIDED NO OTHER SEWER GRADE IS REDUCED BY THIS VARIANCE IN THE AS-BUILT GRADE. MSD ALSO RESERVES THE RIGHT TO REQUIRE THE CONTRACTOR TO REMOVE AND REPLACE ANY SEWER (AT ANY TIME PRIOR TO CONSTRUCTION APPROVAL) FOR WHICH THE AS-BUILT GRADE DOES NOT COMPLY WITH THE GRADE TOLERANCE STATED IN THE ABOVE PARAGRAPH. THE SEWER CONTRACTOR SHALL BE RESPONSIBLE FOR ANY COSTS ASSOCIATED WITH THE FIELD VERIFICATION OF THE SEWER GRADE, OR REMOVAL AND REPLACEMENT OF THE SEWER PIPE OR ASSOCIATED APPURTENANCES.

8.) ADJUSTMENT OF MANHOLE TO GRADE: IF A MANHOLE IS TO BE RAISED: MANHOLES MAY BE RAISED USING COURSES OF BRICK OR APPROVED GRADE RING(S), PROVIDED THE TOTAL ADJUSTMENT OF THE MANHOLE DOES NOT EXCEED 12-INCHES (INCLUDING THE EXISTING RINGS OR COURSES OF BRICK). FOR MANHOLES WHICH WILL EXCEED THE MAXIMUM OF 12-INCHES, THE TRANSITION SECTION OF THE STRUCTURE SHALL BE REMOVED AND THE BOTTOM SECTION RAISED USING THE SAME MATERIAL AS THE EXISTING STRUCTURE.

IF A MANHOLE IS TO BE LOWERED: MANHOLES MAY BE LOWERED BY REMOVING THE TRANSITION SECTION, AND LOWERING THE EXISTING BOTTOM SECTION BY SAWCUTTING THE EXISTING CAST-IN-PLACE CONCRETE, REMOVING THE REQUIRED COURSES OF BRICK, OR REMOVING THE PRECAST RISER SECTION AS APPROPRIATE

SANITARY SEWER NOTES

SPECIFICATIONS OF THE ST. LOUIS COUNTY PLUMBING CODE.

1.) ALL SEWER CONSTRUCTION AND MATERIALS TO BE IN ACCORDANCE WITH THE METROPOLITAN ST. LOUIS SEWER DISTRICT STANDARD CONSTRUCTION SPECIFICATIONS FOR SEWERS AND DRAINAGE FACILITIES, 2009.

2.) 6" AND 8" LATERALS CONSTRUCTED OF P.V.C. S.D.R.-35 THICKWALL PIPE, A.S.T.M.

3.) 6" AND 8" LATERAL JOINTS TO CONFORM TO A.S.T.M. STANDARD S.D.R.-35 THICKWALL COMPRESSION JOINT FOR P.V.C..

4.) ALL MANHOLE FRAMES AND COVERS SHALL BE M.S.D. STANDARD FRAME AND COVER. 5.) ALL LATERAL SEWER CONSTRUCTION METHODS TO CONFORM TO LATEST STANDARDS AND

6.) ALL TRENCHES UNDER AREAS TO BE PAVED SHALL BE GRANULARLY FILLED WITH 3/4" CRUSHED LIMESTONE. BACKFILL SHALL BE PLACED IN ACCORDANCE WITH METROPOLITAN ST. LOUIS SEWER DISTRICT STANDARDS.

7.) CONTRACTOR TO START LAYING PIPE AT DOWNSTREAM MANHOLE AND WORK UPSTREAM.

8.) CLEANOUTS SHALL BE LOCATED AT ALL HORIZONTAL AND VERTICAL CHANGES IN DIRECTION OF FLOW OF HOUSE LATERALS AND ANY SANITARY LATERAL OF 100 FEET OR

9.) TYPE "C" BEDDING PER M.S.D. STANDARDS REQUIRED FOR PIPES IN ROCK.

10.) VERTICAL CLEARANCE BETWEEN SEWER AND WATER MAINS SHALL BE A MINIMUM OF 2' -

11.) ALL TRENCH BACKFILLS UNDER PAVEMENT WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE GRANULAR BACKFILLED. TRENCH BACKFILLS UNDER PAVED AREAS, OUTSIDE OF PUBLIC RIGHT-OF-WAY SHALL BE GRANULAR BACKFILL IN LIEU OF THE EARTH BACKFILL COMPACTED TO 95 PERCENT OF THE STANDARD AASHTO T-99 COMPACTION TEST A.S.T.M. D-698.

12.) JETTING IS NOT AN ACCEPTABLE METHOD OF ACHIEVING BACKFILL COMPACTION. ALL BACKFILL MATERIAL SHALL BE MECHANICALLY COMPACTED TO AT LEAST 95 PERCENT OF THE MATERIAL'S STANDARD PROCTOR MAXIMUM DRY DENSITY.

13.) FOR SEWER PIPE (STORM, SANITARY AND COMBINED) WITH A DESIGN GRADE LESS THAN ONE PERCENT (1%), VERIFICATION OF THE PIPE GRADE WILL BE REQUIRED FOR EACH INSTALLED REACH OF SEWER, PRIOR TO ANY SURFACE RESTORATION OR INSTALLATION OF ANY SURFACE IMPROVEMENTS. THE CONTRACTOR'S FIELD SUPERVISOR WILL BE REQUIRED TO PROVIDE DAILY DOCUMENTATION VERIFYING THAT THE AS-BUILT PIPE GRADE MEETS THE DESIGN GRADE THROUGH THE SUBMITTAL OF SIGNED CUT SHEETS TO THE MSD INSPECTOR UPON REQUEST. FIELD SURVEYED VERIFICATION MUST BE MADE UNDER THE DIRECTION OF A LICENSED LAND SURVEYOR OR REGISTERED ENGINEER. THE CONTRACTOR WILL BE REQUIRED TO REMOVE AND REPLACE ANY SEWER REACH HAVING AN AS-BUILT GRADE WHICH IS FLATTER THAN THE DESIGN GRADE BY MORE THAN 0.1%. SEWERS WITH GRADES GREATER THAN THE DESIGN SLOPE MAY BE LEFT IN PLACE, PROVIDED NO OTHER SEWER GRADE IS REDUCED BY THIS VARIANCE IN THE AS-BUILT GRADE. MSD ALSO RESERVES THE RIGHT TO REQUIRE THE CONTRACTOR TO REMOVE AND REPLACE ANY SEWER (AT ANY TIME PRIOR TO CONSTRUCTION APPROVAL) FOR WHICH THE AS-BUILT GRADE DOES NOT COMPLY WITH THE GRADE TOLERANCE STATED IN THE ABOVE PARAGRAPH. THE SEWER CONTRACTOR SHALL BE RESPONSIBLE FOR ANY COSTS ASSOCIATED WITH THE FIELD VERIFICATION OF THE SEWER GRADE, OR REMOVAL AND REPLACEMENT OF THE SEWER PIPE OR ASSOCIATED APPURTENANCES.

14.) ADJUSTMENT OF MANHOLE TO GRADE: If a manhole is to be raised: Manholes may be raised using courses of brick or approved grade ring(s), provided the total adjustment of the manhole does not exceed 12-inches (including the existing rings or courses of brick). For manholes which will exceed the maximum of 12-inches, the transition section of the structure shall be removed and the bottom section raised using the same material as the existing structure. If a manhole is to be lowered: manholes may be lowered by removing the transition section, and lowering the existing bottom section by sawcutting the existing cast—in—place concrete, removing the required courses of brick, or removing the precast riser section as appropriate.

15.) MAINTENANCE OF THE SEWERS DESIGNATED AS "PUBLIC" SHALL BE THE RESPONSIBILITY OF THÉ METROPOLITAN ST. LOUIS SEWER DISTRICT UPON DEDICATION OF THE SEWERS TO THE

16.) FOUNDATION DRAINS, IF INSTALLED, SHALL NOT CONNECT TO THE SANITARY SEWER.

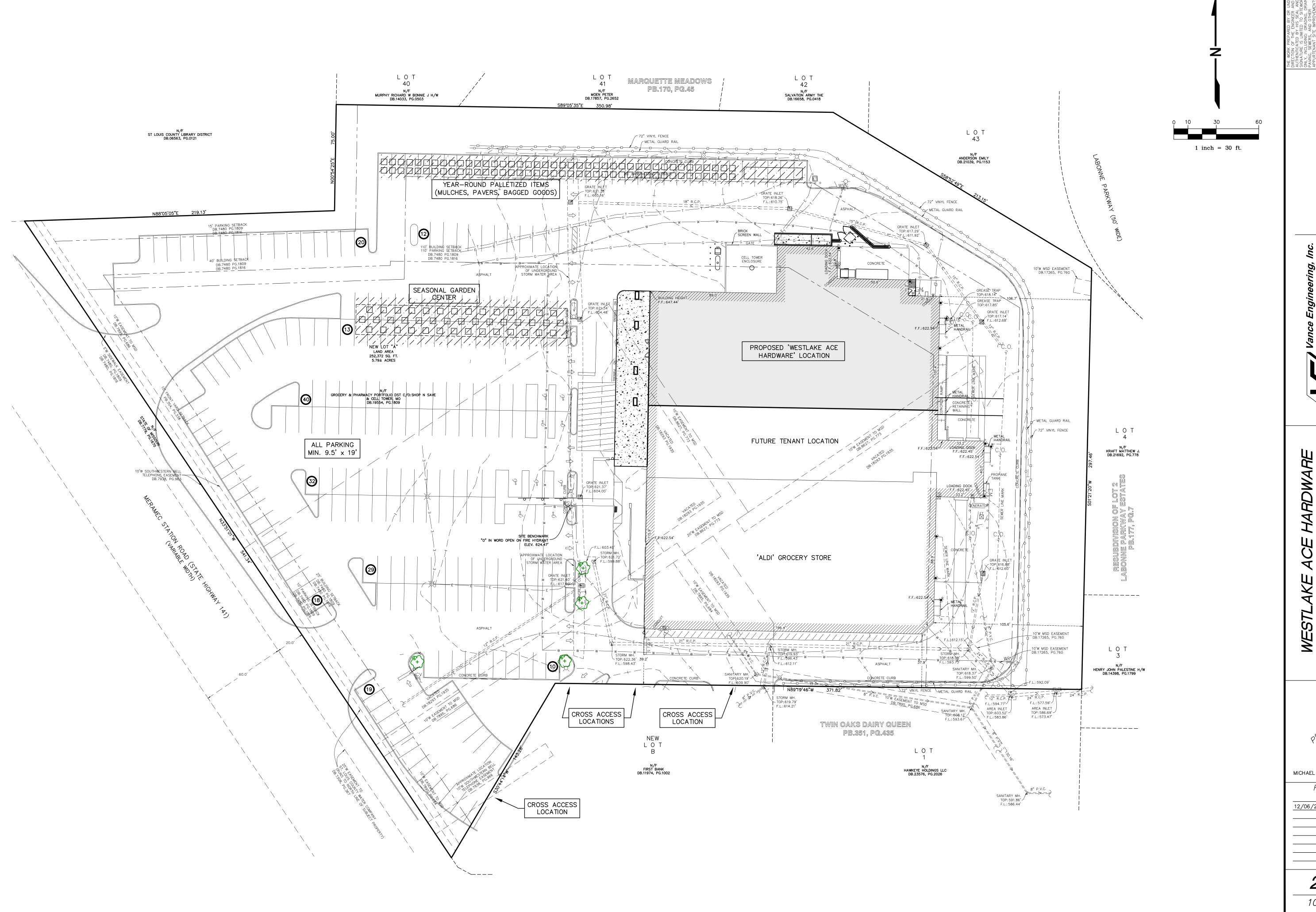
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MICHAEL CLAY VANCE, P.E. E-25616 REVISED

12/06/21 CITY COMMENTS

10/12/21

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THE WORK PREPARED BY OR UNDER THE DIRECTION OF THE ENGINEER AND AUTHENTICATED BY HIS SEAL AND DATED SIGNATURE IS LIMITED TO SITEWORK ITEMS ONLY, INCLUDING: GRADING, DRAINAGE, PAVING, SEWERS, AND OTHER APPURTENANT SITE IMPROVEMENTS. PURSUANT TO 327-411 RSMo, NO RESPONSIBILITY IS TAKEN FOR SERVICES NOT RENDERED, INCLUDING: BOUNDARY AND TOPOGRAPHIC SURVEYS; STRUCTURAL ELEMENTS (INCLUDING RETAINING WALLS); GEOTECHNICAL INVESTIGATIONS AND FACILITES, CONSTRUCTION MEANS; METHODS AND SCHEDULING; ANY AND ALL OTHER PLANS, SPECIFICATION, ESTIMATES, OR REPORTS THAT DO NOT BEAR THE SEAL, AUTHENTICATING SIGNATURE, AND DATE OF THE ENGINEER.

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Vance Engineering, Inc 10537 Lackland Road St. Louis, MO 63114 P: 314.427.1800

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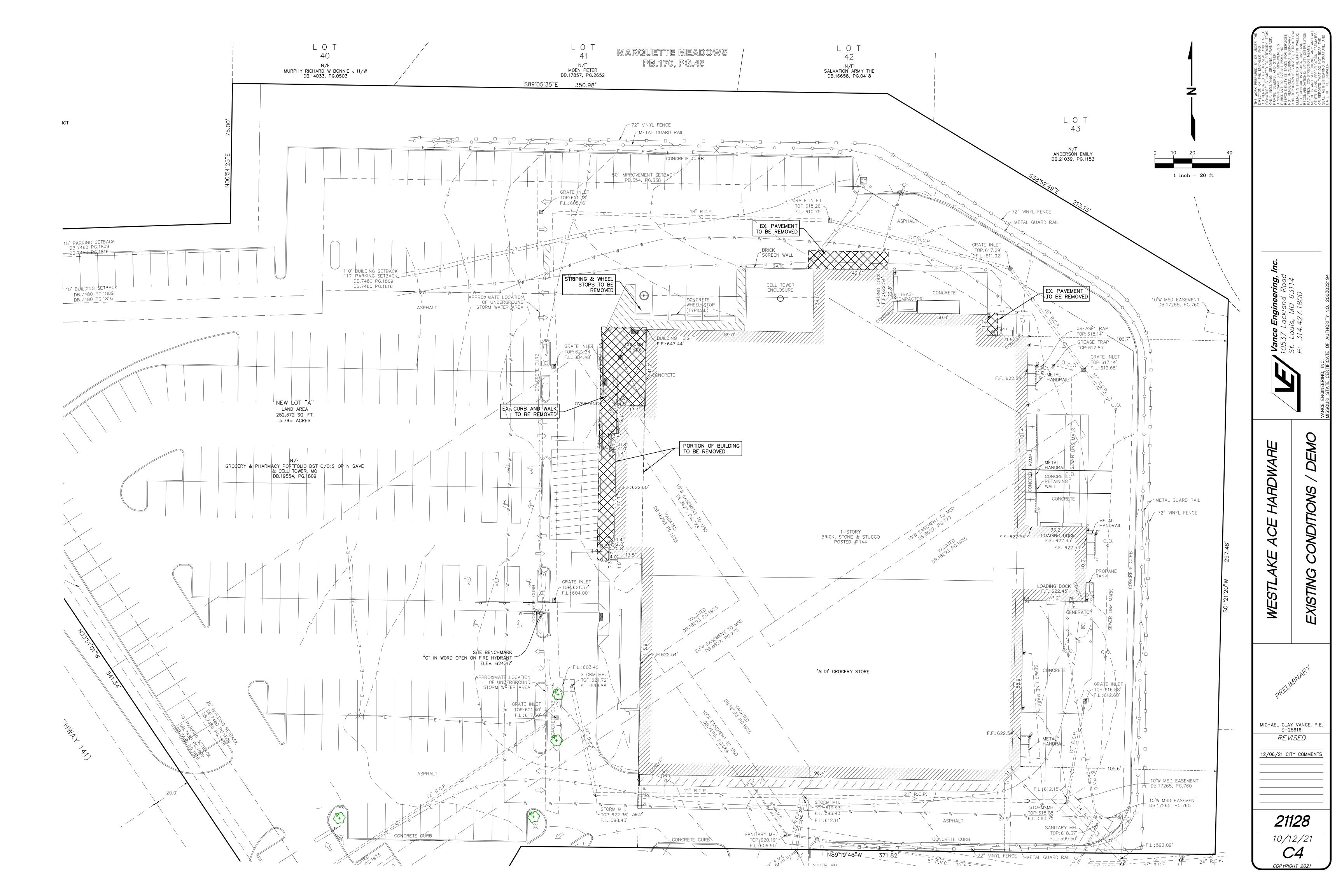
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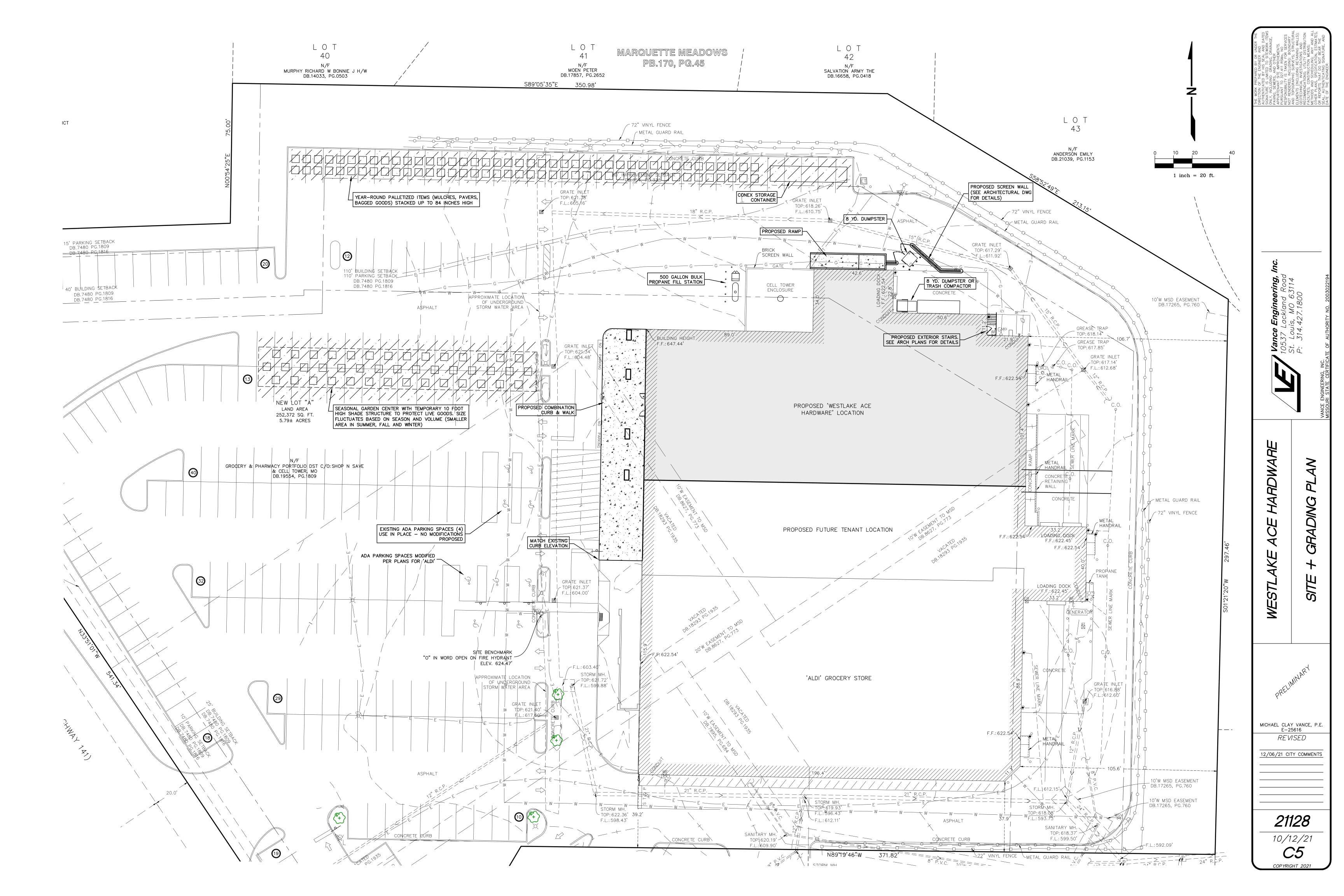
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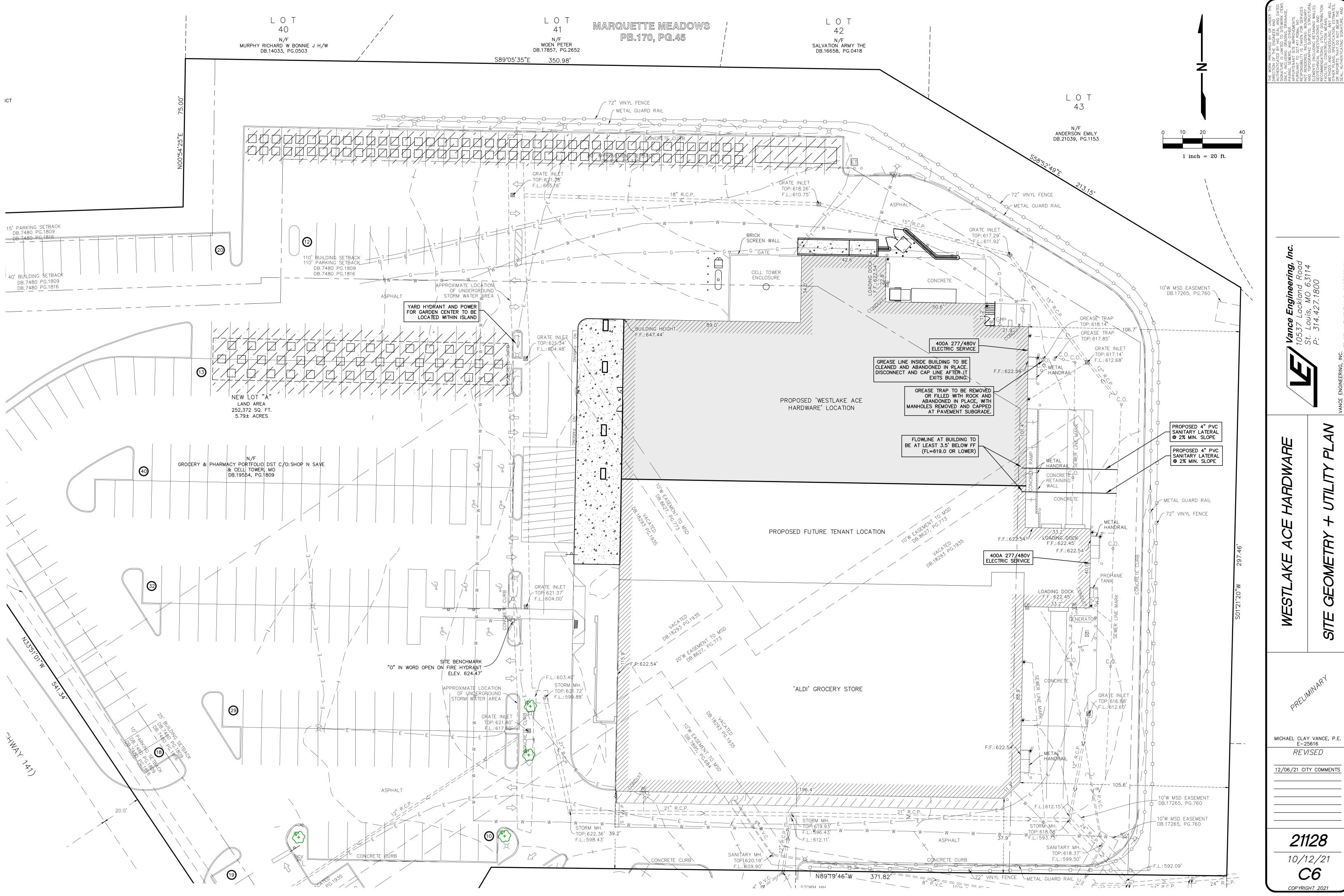
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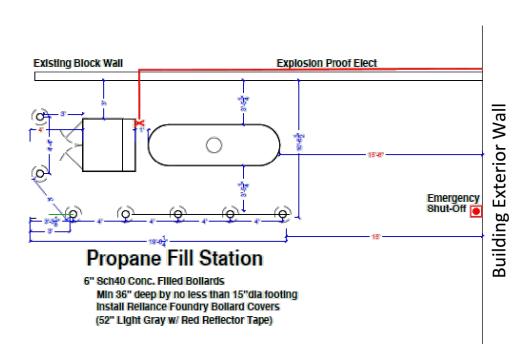
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Sample Site prep requirements

- 1. Crash post requirements:
 - a. 7' x 4" steel pipe filled with concrete
 - i. 3' below groundii. 4' above ground
 - b. Spaced 4' on-center from each other
 - c. Spaced 4' from the dispenser station on the two long sides and back end
 d. Spaced 5' feet from the cabinet end of the dispenser station
- 2. Concrete pad only if required by State

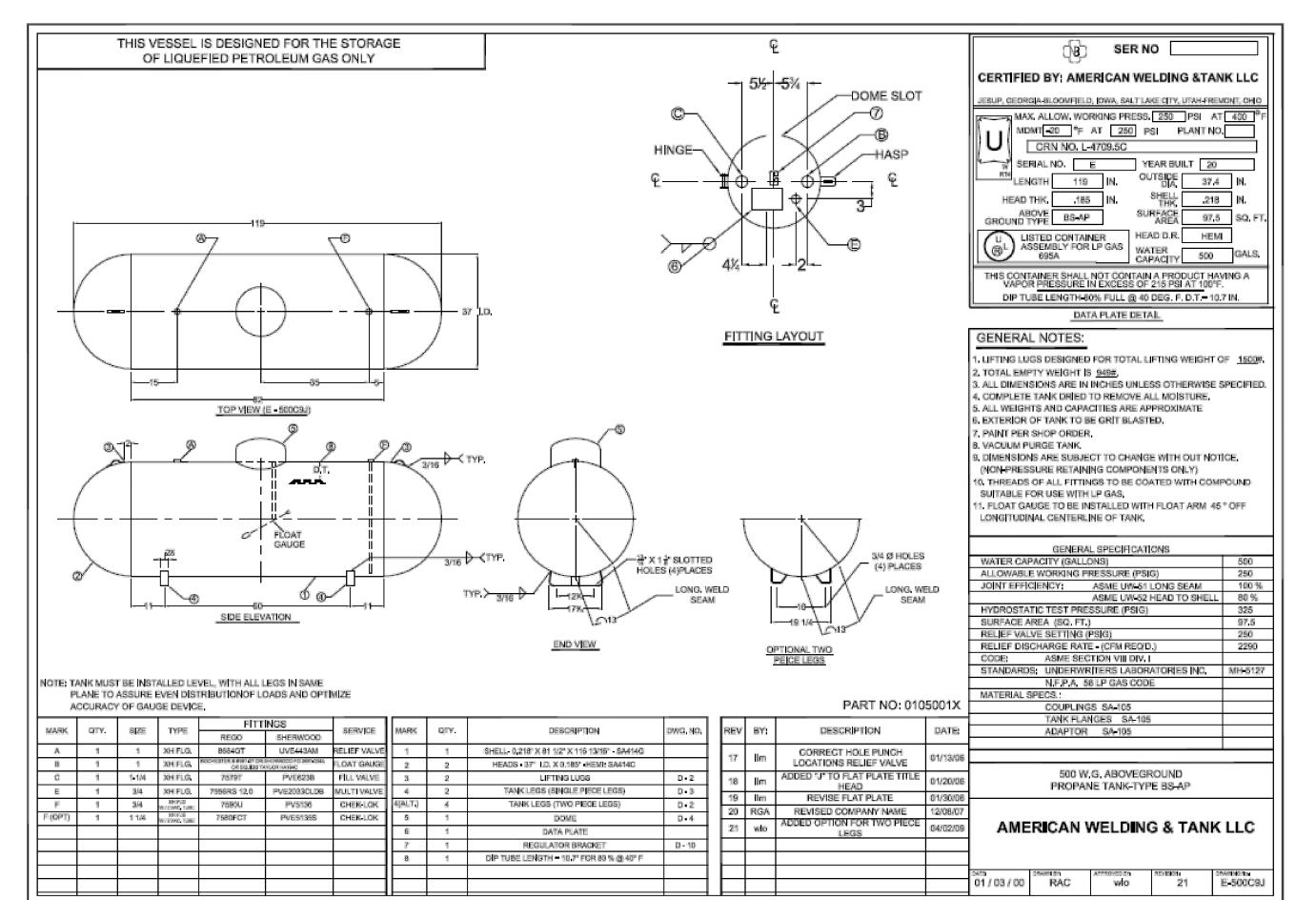
Sample Install Process

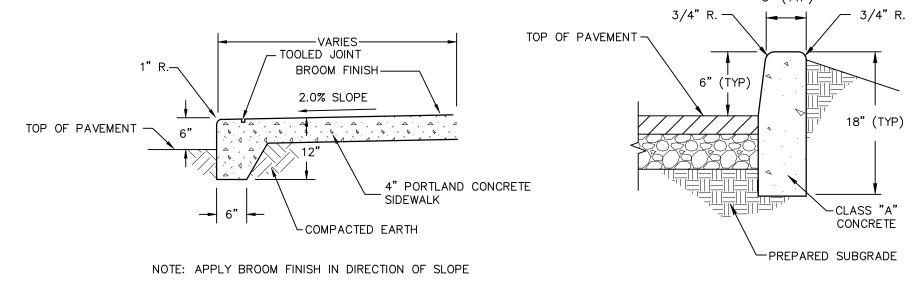
- Saw cut and remove asphalt and do a road bore for the electrical conduit.
 Install a 30amp, 220v single phase circuit for the dispenser motor and make the final connections at the dispensers following the NFPA 70 guidelines for class 1, division 1 areas.
- 3. Install (24) 4" steel, concrete filled, pipe bollards spaced not more than 4 feet between posts on center per the NFPA 58 guidelines, painted yellow.
- 4. Install a disconnect switch not less than 20 feet or more than 100 feet from the dispensing device to shut off the power in the event of an emergency.
- 5. Typically takes 4-6 weeks from start to completion.



Sample Photos

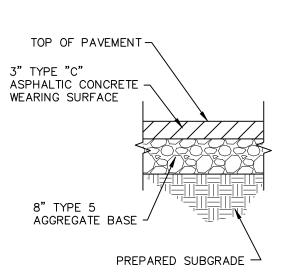




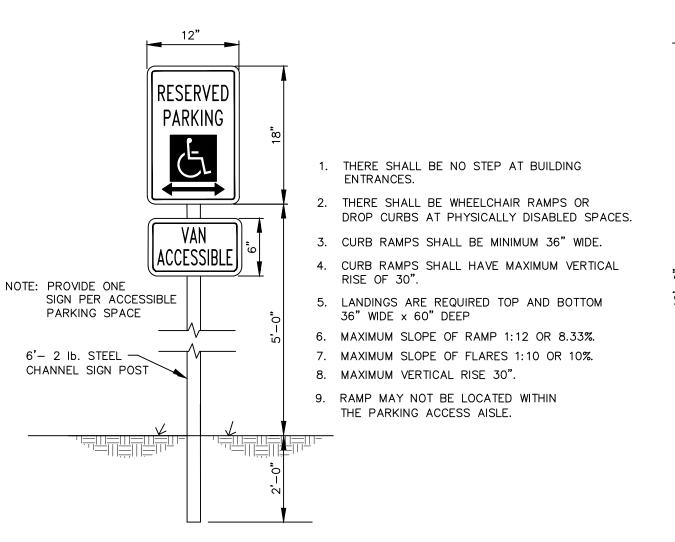


COMBINATION CURB AND WALK
(ON SITE)

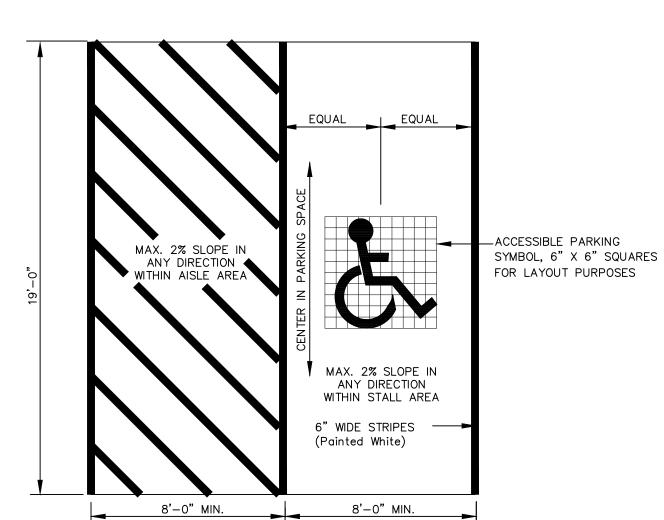
6" VERTICAL CONCRETE CURB



ASPHALT PAVEMENT
SECTION
(ON SITE)



ACCESSIBLE PARKING SIGN



ACCESSIBLE PARKING STALL

STRIPING DETAIL

gineering, Inc.Kland Road
MO 63114
7.1800

10537 Lackland St. Louis, MO 6 P: 314.427.1800

TAILS

SITE DET,

PRELIMINARY

MICHAEL CLAY VANCE, P.E. E-25616 REVISED

RE VISED

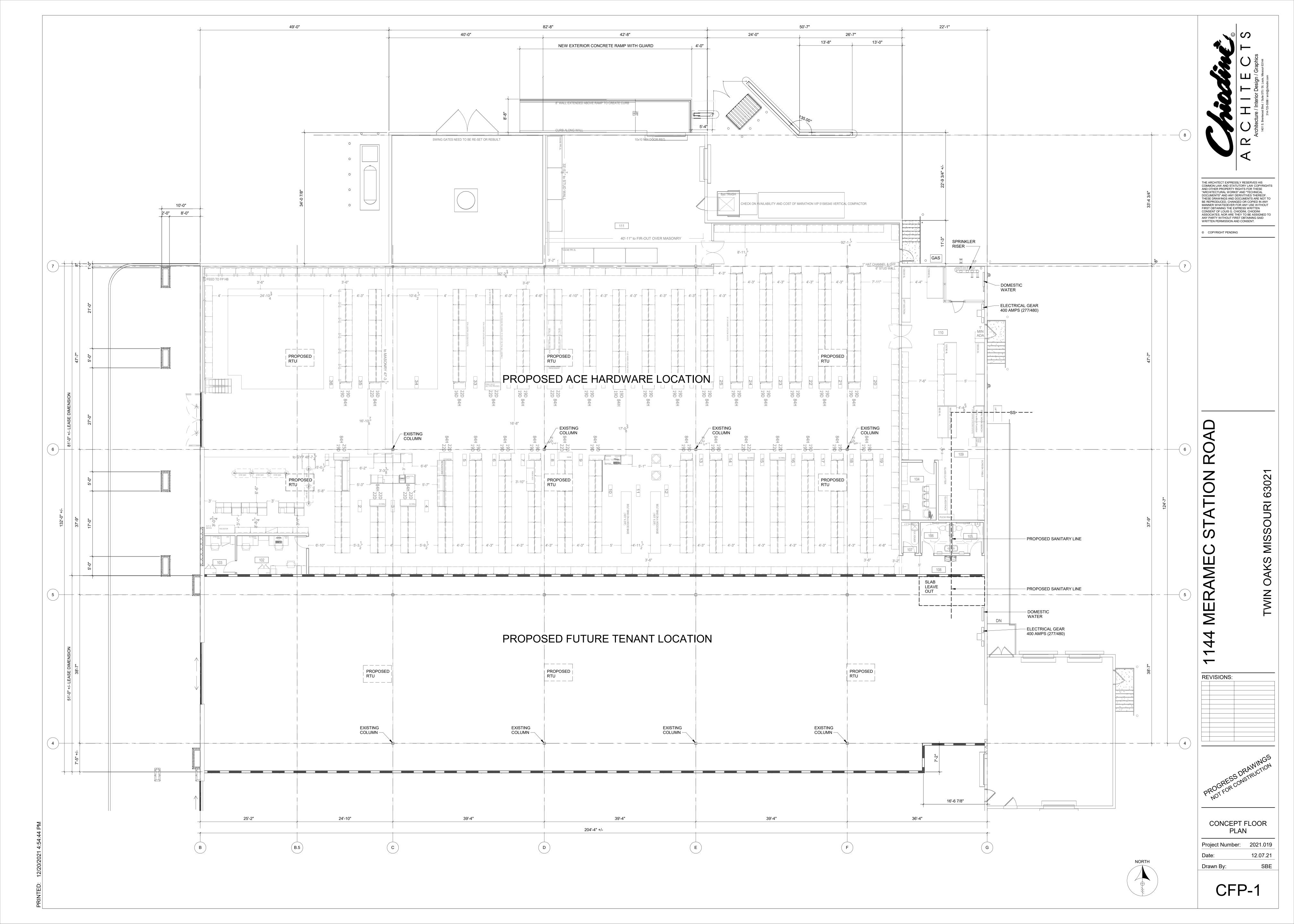
12/06/21 CITY COMMENTS

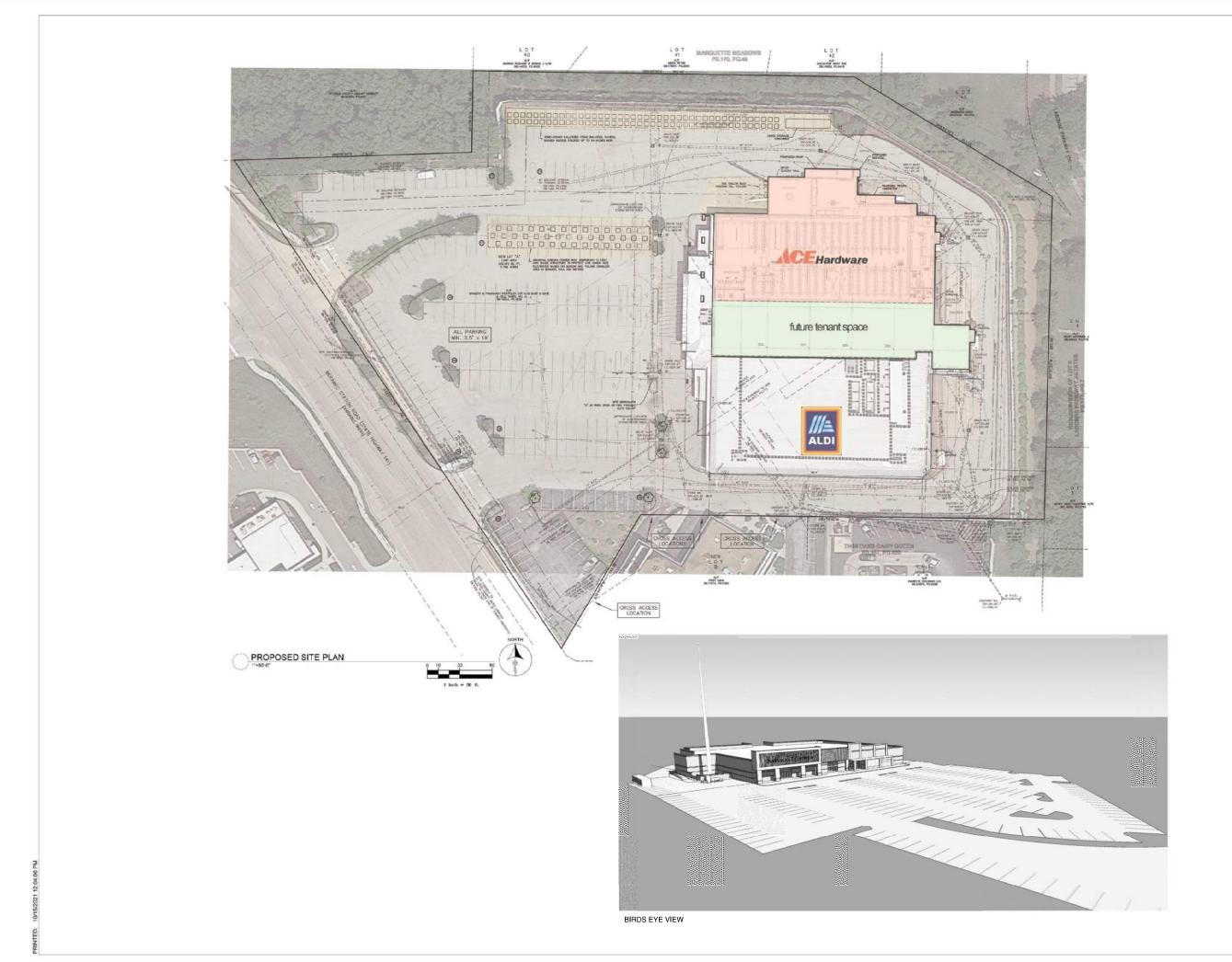
Z/00/21 CITT COMMENTS

2112810/12/21

C7COPYRIGHT 2021

STANDARD AG 500 GALLON





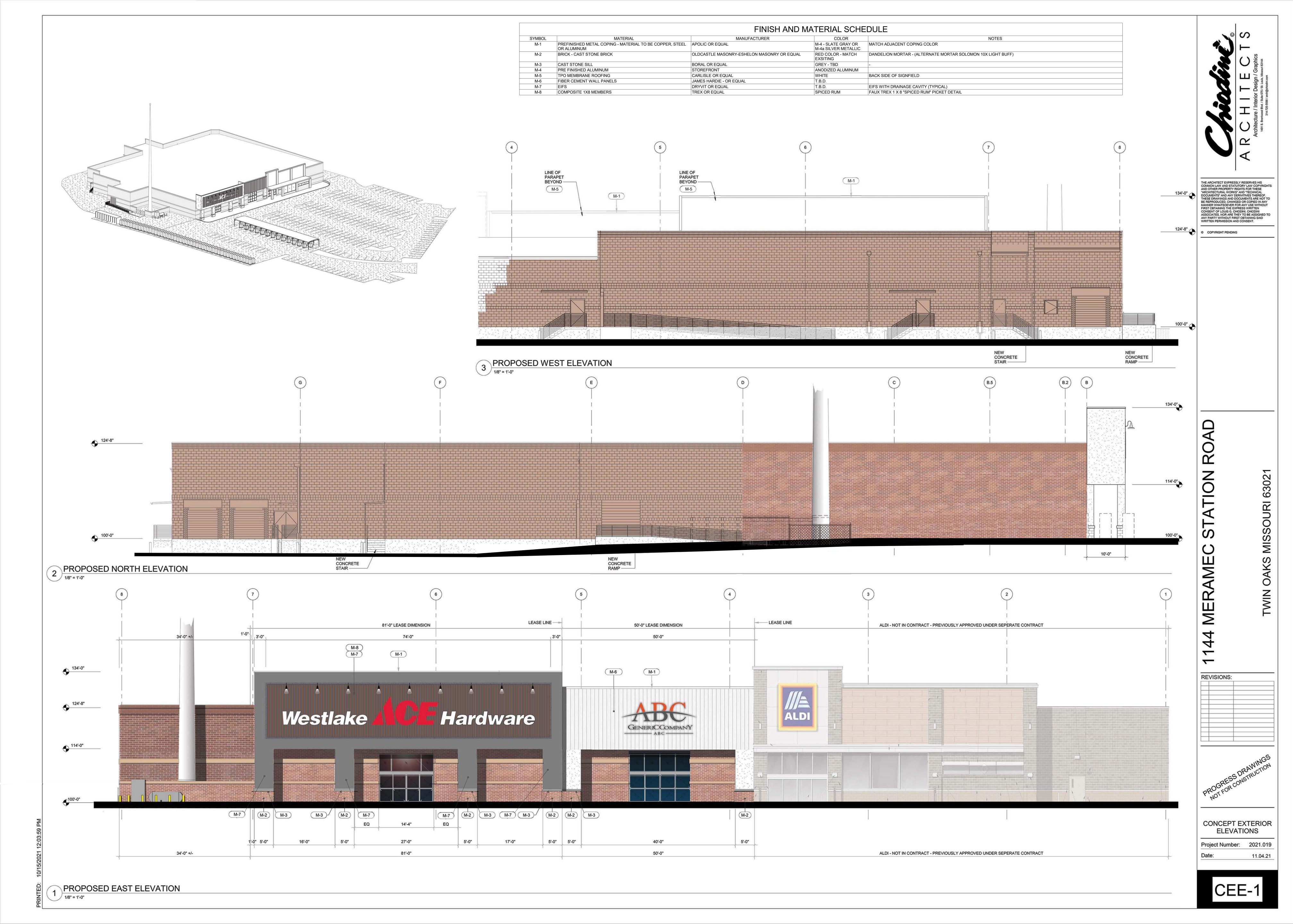


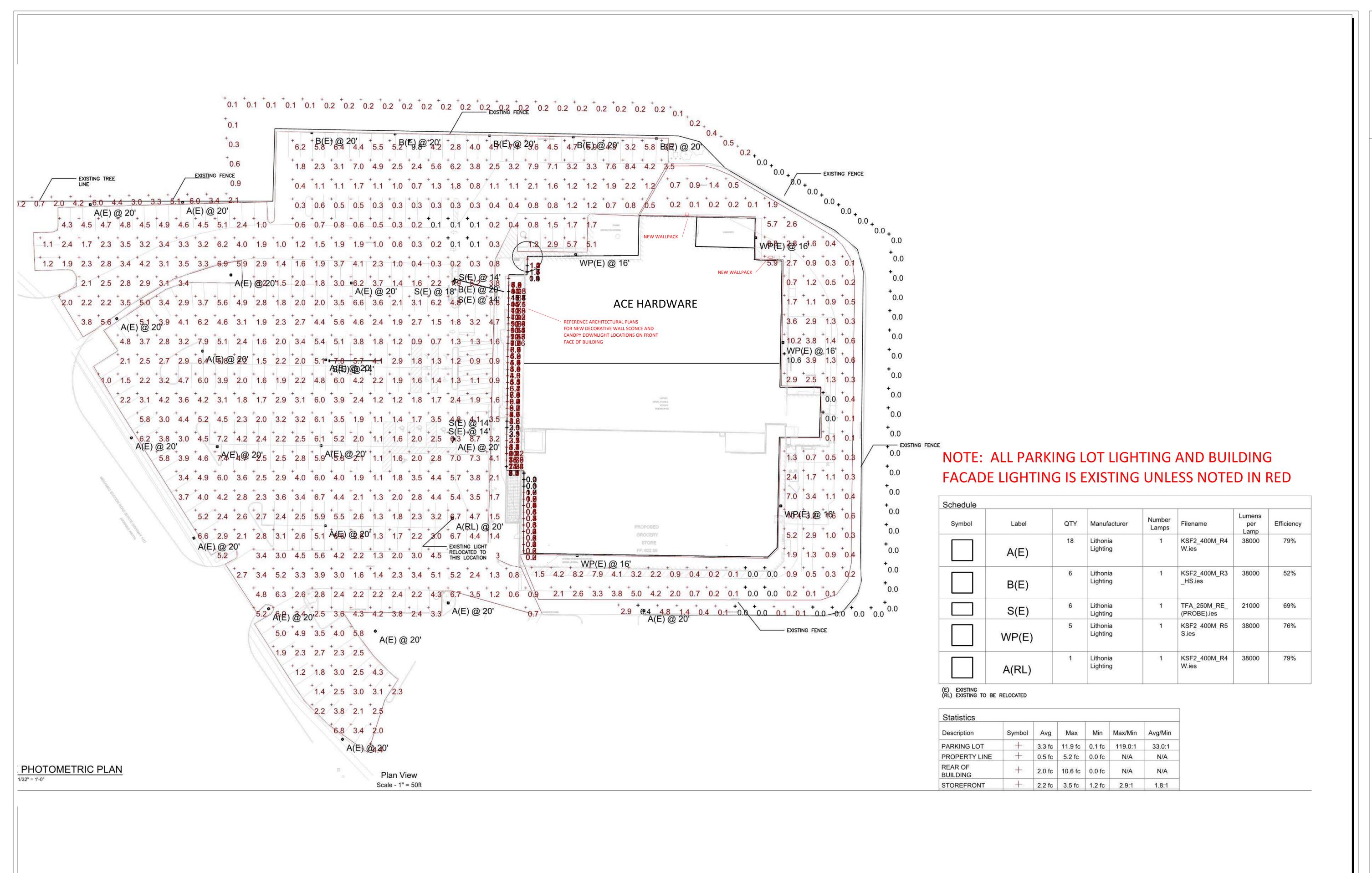
REVISIONS:

1144 MERAMEC STATION ROAD

TWIN OAKS MISSOURI 63021

SITE PLAN Project Number: 2021.019



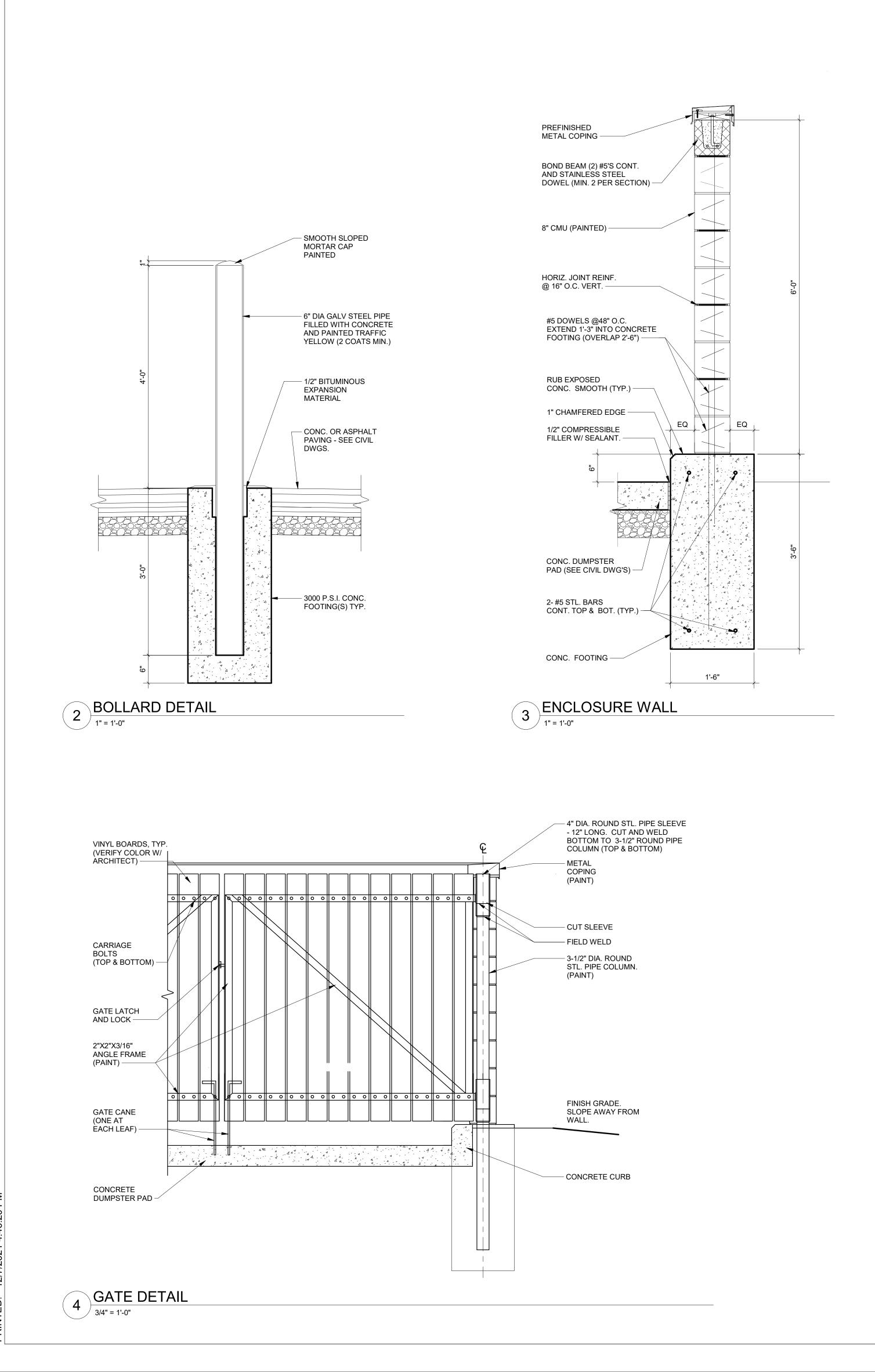


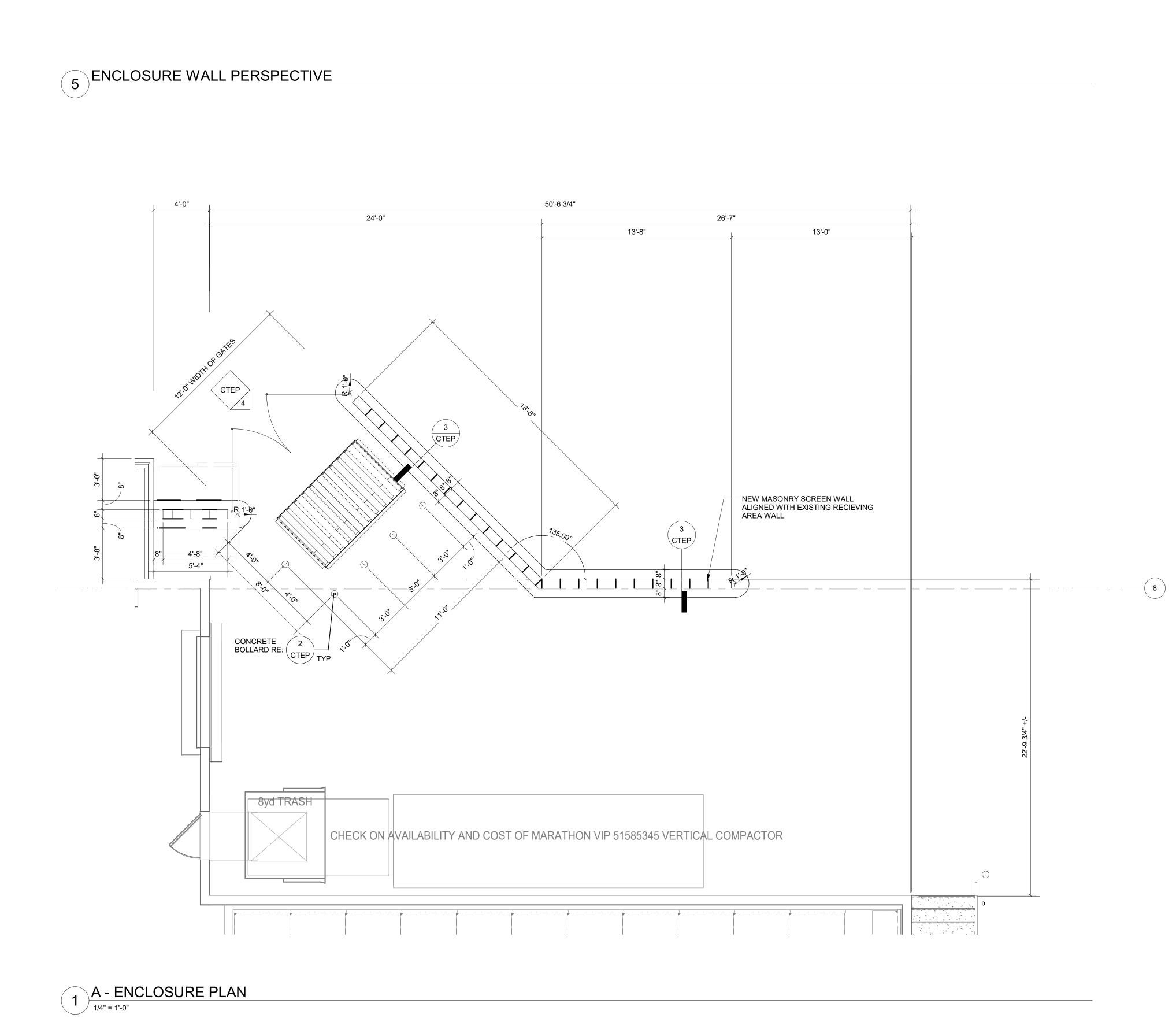


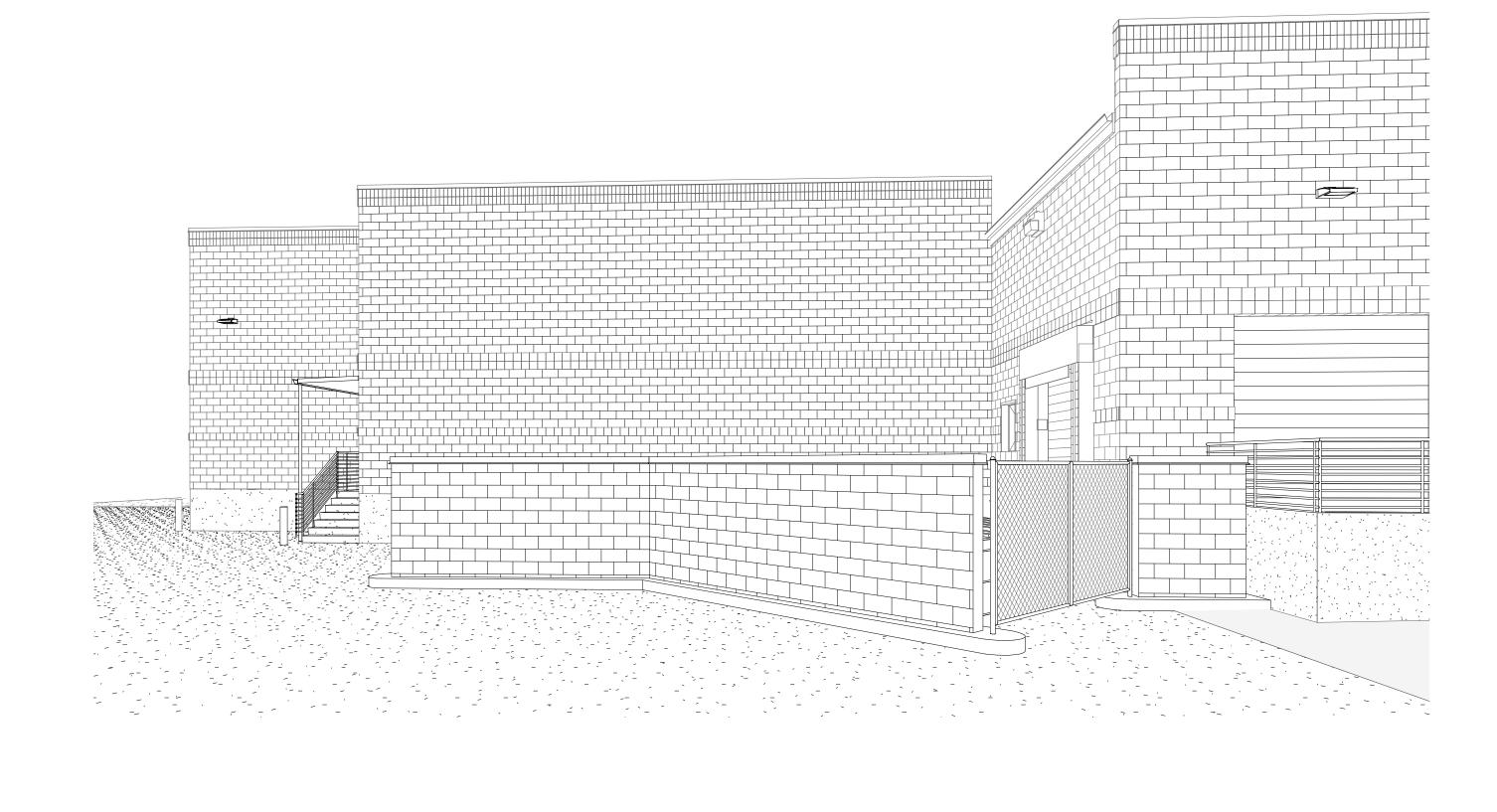
Drawn By: LU		#	Date	Comments
Checked By:	Re			
Date:12/10/2021	vi			
	si			
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Scale: None	5			

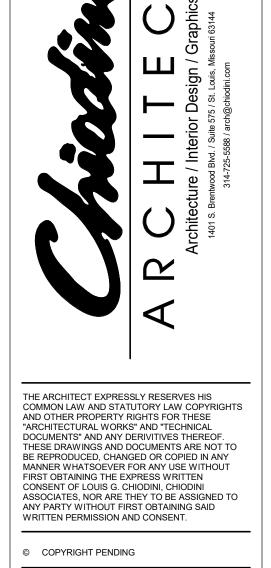
Lighting Study

ACE HARDWARE
TWIN OAKS SHOPPING CENTER
St. Louis, MO









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MERAMEC

REVISIONS:

TRASH ENCLOSURE

PLAN AND DETAILS

Project Number: 2021.019

Drawn By:

12.07.21

www.bfaeng.com 636.239.4751

November 19, 2021

1381 Big Bend Road City of Twin Oaks Attn: Frank Johnson, City Clerk Twin Oaks, MO 63021

1100 Meramec Station Rd - BFA 3497-0 1st Code Review for Ace Hardware Facility

Mr. Johnson

to evaluate compliance with the Code of Ordinance for Twin Oaks. proposed development at 1100 Meramec Station Road in commercial district "C". The information was reviewed and 2021 11 09 - ACE HARDWARE - development plan_org (12 pages). The information received pertains the I obtained from you, on November 9, 2021, the 2021 11 09 - ACE HARDWARE - preliminary application (3 pages)

All sign requirements are disclosed within Section 410.050. The following comments list additional items that will be needed in order to review the signs:

19. Wall sign: Provide dimensions of the wall to which the wall sign is attached. Ensure wall sign is not greater than 5% or no larger than 150 square feet per Section 410.050.

REFER TO ATTACHED CALCULATION (SHEET 2)

20. sign and finished grade. Bottom of sign shall be at least 8 feet above the finished grade and top of sign is Wall sign: Please disclose distance between the top of the sign and finished grade, as well as bottom of not greater than 35 feet above finished grade per Section 410.050A.1.d.

BOTTOM OF SIGN IS 19'-11" ABOVE GRADE TOP OF SIGN IS 27'-8" ABOVE GRADE

21. Wall sign: Board of Alderman shall determine if utilized colors create a visual impression of unity per Section 410.050C.

NOTED

22. Wall sign: Please disclose the distance between the face of the sign to the wall to which the sign is Section 410.050A.1.d. attached. Ensure sign does not extent more than 18 inches from the wall to which it's mounted per

REFER TO ATTACHED CALCULATION (SHEET 2)

23. Pylon Sign: Please disclose area of sign. Ensure sign does not exceed an area of 50 square feet per Section

REFER TO ATTACHED CALCULATION (SHEET 4)

24. Pylon Sign: Please disclose height of sign. Ensure sign does not exceed an area of 5 feet in height per Section 410.050A.1.c.

REFER TO ATTACHED (SHEET 5)

MESTLANE ACT

FROM ELEVATION BUILDING! 34.67' x 85.00' = 863.45' 3583.45' > 5% = (150.00 + MAY ALWED) 179.17 \$ AJDILAGLE

"WESTLANG ACE HARROWARE 91.00" × 800,00" = 72800.00" = 144 = ELEVATION SIGNAUS: 505.56 P JALOT 516424三.



WESTLAKE ACE

JEMPUT JAMEL. " WESTLANE ACE" 42.00" × 120.00" = 5040.00" = 144 = 35.00+ JOIAL SIGNALE .



1818 HWY M BARNHART, MO 63012 PH: 636-464-0200 FAX: 636-464-9990 WWW.PIROSSIGNS.COM GRAPHICS@PIROSSIGNS.COM

CUSTOMER Westlake Ace Hardware

108 LOCATION Bellwin, MO

CONTACT

SALES PERSON Mike McGuire

DATE 10-4-21

DRAWN BY

Eric Irvin SAVED AS

211305 Westlake Ace Ballwin Exterior

APPROVED AS IS APPROVED AS NOTED REVISE & RESUBMIT

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PHOS SICAS (I) ELECTRIC SIGN

