THE VILLAGE AT DISCOVERY PARK
LOT 4

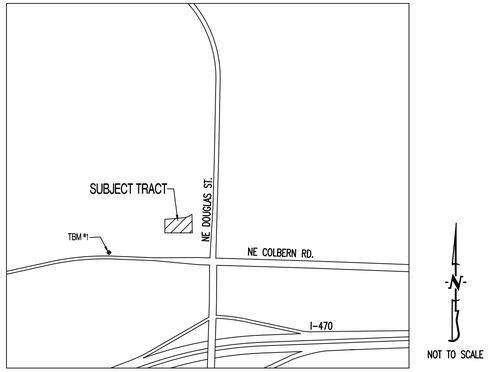
RELEASED FOR CONSTRUCTION
As Noted on Plan Review

Development Services Department
Lee's Summit, Missouri

09/24/2024

Daniel Fernandez
Digitally signed by Daniel Fernandez
DN: CN=Daniel Fernandez, OU=Development, OU=LS Users, DC=COLS, DC=LOC
Date: 2024.09.24 12:18:51-05'00'

LOCATION MAP



PROJECT BENCHMARK:

TBM #1 – CONTROL POINT #50 SET BY OLSSON. 1/2" IMBEDDED CAP ON NORTH SIDE OF NW COLBERN RD. LOCATED AT 1ST FIELD ENTRANCE.
NORTHING = 1012389.819
EASTING = 2822108.784
ELEVATION = 990.810
REFER TO "PRIVATE SITE DEVELOPMENT PLANS FOR THE VILLAGE AT DISCOVERY PARK ZONE 1" PLANS BY OLSSON DATED 10/18/2023 FOR MORE INFORMATION.

FLOOD PLAIN STATEMENT:

THIS LOT IS LOCATED IN ZONE X UNSHADED – AREAS DETERMINED TO BE OUTSIDE THE 1% ANNUAL CHANCE FLOOD AS SHOWN ON THE FEMA F.I.R.M. PANEL #29095C0409G, DATED JANUARY 20, 2017.

LEGAL DESCRIPTION:

VILLAGE AT DISCOVERY PARK, LOT 4, A SUBDIVISION IN JACKSON COUNTY, LEE'S SUMMIT, MISSOURI.

UTILITY COMPANIES:

LOCATES:
MISSOURI ONE CALL INC.
1022 B NORTHEAST DRIVE
JEFFERSON CITY, MO 65109
1-800-344-7483

ELECTRIC:
EVERGY
816-524-3223

TELEPHONE:
AT&T
800-286-8313

WATER/SANITARY SEWER:
CITY OF LEE'S SUMMIT
WATER UTILITIES DEPARTMENT
1200 S HAMBLEN RD
LEE'S SUMMIT, MO 64081
816-969-1900

NATURAL GAS:
SPIRE
314-342-0500

FIBER:
GOOGLE FIBER
877-454-6959

CABLE TELEVISION:
SPECTRUM
877-772-2253

GENERAL NOTES:

ALL STREET, STORM DRAIN, AND SANITARY SEWER CONSTRUCTION TO BE IN ACCORDANCE WITH THE CITY OF LEE'S SUMMIT "DESIGN AND CONSTRUCTION MANUAL" (CURRENT EDITION).

ANY CITY DETAILS SHOWN ON THIS SET OF PLANS ARE FOR REFERENCE ONLY. CONTRACTOR TO HAVE A COPY OF THE CITY'S LATEST EDITION OF SPECIFICATIONS AND STANDARDS FOR ALL STREET, STORM, AND SANITARY CONSTRUCTION ON SITE AT ALL TIMES DURING CONSTRUCTION. REFER TO https://cityofls.net/development-services/design/design-criteria/design-construction-manual-infrastructure

CONTRACTOR WILL BE RESPONSIBLE FOR PLACEMENT AND MAINTENANCE OF TRAFFIC CONTROL DEVICES NECESSARY TO COMPLETE THEIR PORTION OF WORK. THE DEVICES AND METHODS EMPLOYED WILL COMPLY WITH THE CURRENT VERSION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

ALL CONCRETE MATERIALS SHALL CONFORM TO KCMMB STANDARDS AND SPECIFICATIONS.

THIS PLAT CONTAINS APPROXIMATELY 1.49 ACRES.

THIS TRACT IS ZONED PMIX.

THE STORM SEWER NETWORK DESIGN FOR THIS PROJECT IS BASED ON OPEN CHANNEL FLOW; THEREFORE THE HYDRAULIC GRADE LINE IS AT OR LESS THAN THE CROWN OF THE PIPE.

EXISTING UTILITIES SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL COORDINATE LOCATES (HORIZONTAL AND VERTICAL) PRIOR TO ANY EXCAVATION.

ALL EXCAVATION TO BE IN ACCORDANCE WITH SECTIONS 319.010–319.050, REVISED STATUTES OF THE STATE OF MISSOURI. SUCH COMPLIANCE SHALL NOT, HOWEVER, EXCUSE ANY PERSON MAKING ANY EXCAVATION FROM DOING SO IN A CAREFUL AND PRUDENT MANNER, NOR SHALL IT EXCUSE SUCH PERSON FROM LIABILITY FOR ANY DAMAGE OR INJURY TO UNDERGROUND UTILITIES RESULTING FROM THE EXCAVATION.

A GEOTECHNICAL EVALUATION OF THE SUBSURFACE SOIL, GROUNDWATER CONDITIONS, AND A SLOPE STABILITY ANALYSIS HAS NOT BEEN PERFORMED BY THIS ENGINEER. THE OWNER SHALL SATISFY THEMSELVES OF ALL GEOTECHNICAL CONDITIONS PRIOR TO ANY CONSTRUCTION.

ALL LAND DISTURBANCE ACTIVITIES SHALL BE IN ACCORDANCE WITH THE CITY OF LEE'S SUMMIT CODE OF ORDINANCES. REFER TO STORMWATER POLLUTION PREVENTION PLAN (SWPPP) FOR NARRATIVE REPORT AND BMP DESCRIPTIONS AND DETAILS.

ALL SLOPES ARE 3:1 OR FLATTER UNLESS OTHERWISE NOTED.

IT IS THE INTENT OF THESE PLANS TO COMPLY WITH THE REQUIREMENTS OF THE MoDNR CLEAN WATER COMMISSION.

ALL DISTURBED AREAS WITHIN THE "LIMITS OF DISTURBANCE" SHALL BE FINE GRADED, SEEDED, AND MULCHED.

THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL EROSION CONTROL DEVICES AND REMOVING THEM ONCE THE SITE IS STABILIZED.

ALL HDPE PIPE SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS. REFER TO DETAIL FOR PIPE BEDDING REQUIREMENTS.

IN ORDER TO TERMINATE A STATE OPERATING PERMIT THE MISSOURI DEPARTMENT OF NATURAL RESOURCES (MDNR) REQUIRES THAT THE PERMITTEE SUBMIT A COMPLETED FORM H (INCLUDED WITH THE APPROVAL PERMIT) TO THE MDNR. A PERMIT IS ELIGIBLE FOR TERMINATION WHEN EITHER PERENNIAL VEGETATION, PAVEMENT, BUILDINGS, OR STRUCTURES USING PERMANENT MATERIALS COVER ALL AREAS THAT HAVE BEEN DISTURBED. VEGETATIVE COVER SHALL BE AT LEAST 70% OF FULLY ESTABLISHED PLANT DENSITY OVER 100% OF THE DISTURBED AREA. A COPY OF FORM H SHOULD BE SUBMITTED TO THE CITY AT WHICH TIME THE CITY WILL REMOVE THE PROJECT FROM ITS INSPECTION SCHEDULE.

LAND DISTURBANCE SITES SHOULD BE INSPECTED AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 48 HOURS AFTER ANY STORM EVENT EQUAL TO OR GREATER THAN A 2-YEAR, 24-HOUR STORM HAS CEASED DURING A NORMAL WORK DAY OR WITHIN 72 HOURS IF THE RAIN EVENT CEASES DURING A NON-WORK DAY SUCH AS A WEEKEND OR HOLIDY. ANY DEFICIENCIES SHALL BE NOTED IN A WEEKLY REPORT OF THE INSPECTION AND CORRECTED WITHIN SEVEN CALENDAR DAYS OF THE REPORT. CONTRACTORS ARE REQUIRED TO SUBMIT TO CITY INSPECTION STAFF COPIES OF THEIR INSPECTION REPORTS REQUIRED BY THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) ON A MONTHLY BASIS IF REQUESTED.

NO OIL AND GAS WELLS EXIST ON THIS TRACT ACCORDING TO THE MISSOURI DEPARTMENT OF NATURAL RESOURCES OIL AND GAS PERMIT DATABASE.

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.

TOTAL DISTURBED AREA ON SITE = 1.82 AC.

MISSOURI DNR LAND DISTURBANCE PERMIT NUMBER MORA23630.

DEVELOPER :

DISCOVERY PARK LEE'S SUMMIT, LLC.
4220 PHILLIPS FARM RD.
COLUMBIA, MO 65201
573-615-2252

SHEET LIST TABLE

SHEET NUMBER	SHEET TITLE	ORIGINAL 06/14/24	REVISION 1 07/26/24	REVISION 2 08/06/24
CE 1.0	COVER SHEET	X	X	
CE 1.1	CIVIL SPECIFICATIONS	X		
CE 2.1	EROSION CONTROL PLAN	X		
CE 2.2	EROSION CONTROL DETAILS	X		
CE 3.0	OVERALL GRADING PLAN	X		
CE 3.1	GRADING PLAN SHEET 1	X		
CE 3.2	GRADING PLAN SHEET 2	X		
CE 3.3	GRADING PLAN SHEET 3	X		
CE 3.4	GRADING PLAN SHEET 4	X		
CE 4.1	UTILITY PLAN	X	X	X
CE 5.1	STORM PROFILE & DETAILS	X	X	
CE 5.2	STORM DETAILS CONT'D	X	X	
CE 5.3	25-YR STORM CALCULATIONS	X	X	
CE 5.4	100-YR STORM CALCULATIONS	X	X	
CE 6.1	SITE PLAN	X	X	
CE 7.1	DETAILS SHEET 1	X		
CE 7.2	DETAILS SHEET 2	X	X	
CE 7.3	DETAILS SHEET 3	X	X	
CE 7.4	LEE'S SUMMIT DETAILS SHEET 1	X		
CE 7.5	LEE'S SUMMIT DETAILS SHEET 2	X		
CE 8.1	LANDSCAPING PLAN		X	

LEGEND OF SYMBOLS:

- EXISTING CURB
- PROPOSED CURB
- RIP RAP
- EXISTING STRUCTURE
- EXISTING TREELINE
- PROPOSED TREELINE
- EDGE OF WATERWAY
- EXISTING WATERLINE
- PROPOSED WATERLINE
- EXISTING GAS LINE
- PROPOSED GAS LINE
- EXISTING TELEPHONE
- EXISTING FIBER OPTIC
- EXISTING OVERHEAD ELECTRIC
- EXISTING UNDERGROUND ELECTRIC
- PROPOSED UNDERGROUND ELECTRIC
- EXISTING OVERHEAD ELEC. & TV
- EXISTING OVERHEAD ELEC., TV & TELE.
- EXISTING SANITARY SEWER
- PROPOSED SANITARY SEWER
- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- 100 YEAR FLOOD PLAIN
- FLOODWAY
- ORDINARY HIGH WATER MARK
- STREAM SIDE BUFFER
- OUTER STREAM BUFFER
- PROPOSED CONCRETE PAVEMENT
- PROPOSED CONCRETE PAVEMENT IN PARKING GARAGE

- FF=XXX.X — FINISHED FLOOR OF STRUCTURE
- XXX.XX TC — PROPOSED TOP OF CURB ELEVATION
- XXX.XX TP — PROPOSED TOP OF PAVEMENT ELEVATION
- XXX.XX FG — PROPOSED FINISHED GRADE ELEVATION
- XXX.XX TW — PROPOSED TOP OF WALL
- XX — LOT NUMBER
- X — STORM SEWER STRUCTURE LABEL
- X — SANITARY SEWER STRUCTURE LABEL
- H.P. — HIGH POINT
- L.P. — LOW POINT
- EXISTING SIGNS
- EXISTING POWER POLE
- EXISTING GAS VALVE
- EXISTING WATER VALVE
- EXISTING GAS METER
- EXISTING WATER METER
- EXISTING FIRE HYDRANT
- MANHOLE
- EXISTING SANITARY SEWER LATERAL
- PROPOSED SANITARY SEWER LATERAL
- PROPOSED TRACER WIRE TEST STATION BOX
- AC — EXISTING AIR CONDITIONER
- EXISTING TELEPHONE PEDESTAL
- ET — EXISTING ELECTRICAL TRANSFORMER
- E — EXISTING ELECTRIC METER
- EXISTING LIGHT POLE
- EXISTING GUY WIRE
- PROPOSED BUILDING FOOTPRINT
- PROPOSED HEAVY DUTY PAVEMENT

PRCOM20240340

REVISIONS:

NO.	DATE
ORIGINAL	06/14/2024
1 REV. 1	07/26/2024

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY
STATE OF MISSOURI — NATHAN THOMAS ECKHOFF — NUMBER PE-2009014960 — 08/09/24 — PROFESSIONAL ENGINEER
NATHAN THOMAS ECKHOFF
MO LICENSE-2009014960

PREPARED BY:
CROCKETT ENGINEERING CONSULTANTS
1000 W. Nifong Blvd., Bldg. 1
Columbia, Missouri 65203
(573) 447-0292
www.crockettengineering.com
Crockett Engineering Consultants, LLC
Missouri Certificate of Authority
2006015301

OWNER:
DISCOVERY PARK LEES SUMMIT LLC
4220 PHILLIPS FARM RD
COLUMBIA, MO 65201

THE VILLAGE AT DISCOVERY
LOT 4
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:
COVER SHEET

DESIGNED: NTE
DRAWN: NMD
PROJECT NO.: 230286

SHEET: CE 1.0

Y:\2023\230286 – Discovery Park Lees Summit\Zone 1 Lot 4\CAD Files\Construction Plans\230286 Zone 1 Lot 4 Site Base.dwg

SITE CLEARING & DEMOLITION :

IT IS THE INTENT THAT THE DEMOLITION BE COMPLETE AND ADEQUATE FOR THE INTENDED PURPOSE. THIS WORK SHALL INCLUDE THE REMOVAL OF ALL ITEMS, WHETHER IN VIEW OR HIDDEN UNDERNEATH THE SURFACE OF THE GROUND, REGARDLESS OF WHETHER SHOWN ON THE DRAWINGS OR ENCOUNTERED DURING CONSTRUCTION.

CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL REQUIREMENTS REGARDING MATERIALS, METHODS OF WORK, AND DISPOSAL OF EXCESS WASTE MATERIALS.

ERECT BARRIERS TO PROTECT PERSONNEL, STRUCTURES AND UTILITIES REMAINING INTACT.

PROTECT ALL EXISTING OBJECTS INTENDED TO REMAIN. IN CASE OF DAMAGE, MAKE REPAIRS OR REPLACEMENTS NECESSARY AT NO ADDITIONAL COST TO THE OWNER.

MINIMIZE INTERFERENCE WITH ROADS, STREETS, DRIVEWAYS, SIDEWALKS, AND ADJACENT FACILITIES.

DO NOT CLOSE OR OBSTRUCT STREETS, SIDEWALKS, ALLEYS OR PASSAGEWAYS WITHOUT PERMISSION FROM AUTHORITIES HAVING JURISDICTION.

IF CLOSURE IS PERMITTED, PROVIDE SIGNAGE INDICATING CLOSURE AND SIGNAGE TO DIRECT TRAFFIC TO ALTERNATE ROUTE.

MOISTEN SURFACES AS REQUIRED TO PREVENT DUST FROM BEING A NUISANCE TO THE PUBLIC, NEIGHBORS, AND CONCURRENT PERFORMANCE OF OTHER WORK ON THE SITE.

PROVIDE THE OWNER'S REPRESENTATIVE A MINIMUM OF TWO BUSINESS DAYS' NOTICE PRIOR TO COMMENCING WORK OF THIS SECTION.

THE CONTRACTOR SHALL LOCATE EXISTING UTILITY LINES AND SERVICES TRAVERSING THE SITE AND DETERMINE THE REQUIREMENTS FOR THEIR PROTECTION. THE CONTRACTOR SHALL PRESERVE ACTIVE UTILITIES ON THE SITE THAT ARE DESIGNATED TO REMAIN.

BEFORE STARTING SITE OPERATIONS, THE CONTRACTOR SHALL DISCONNECT OR ARRANGE FOR THE DISCONNECTION OF ALL UTILITY SERVICES DESIGNATED TO BE REMOVED. THE CONTRACTOR SHALL PERFORM ALL SUCH WORK IN ACCORDANCE WITH THE REQUIREMENTS OF THE UTILITY COMPANY OR AGENCY INVOLVED

IN REMOVING PAVEMENT, CURB AND GUTTER, SIDEWALKS, ETC., WHERE A PORTION IS LEFT IN PLACE, REMOVAL SHALL BE TO AN EXISTING JOINT OR TO A JOINT SAWED TO A MINIMUM DEPTH OF 2" WITH A TRUE SAW LINE AND A VERTICAL FACE. REMOVE SUFFICIENT PAVEMENT TO PROVIDE FOR PROPER GRADE AND CONNECTIONS IN THE NEW WORK REGARDLESS OF ANY LIMITS INDICATED ON THE DRAWING.

EXISTING CASTINGS AND CULVERTS, IF SALVAGEABLE AND REMOVED INTACT, REMAIN THE PROPERTY OF THE CONTRACTOR.

ALL SEWERS AND DRAINAGE PIPES, WHICH HAVE BEEN OR ARE TO BE ABANDONED, SHALL BE PERMANENTLY SEALED AT THE ENDS WITH BULKHEADS CONSTRUCTED OF CONCRETE, HAVING A MINIMUM THICKNESS OF 8".

ABANDON STORM OR SANITARY SEWER STRUCTURES BY BREAKING THE CONCRETE BOTTOM OF THE STRUCTURE INTO PIECES NO LARGER THAN 12" IN ANY DIRECTION AND REMOVING THE TOP OF THE STRUCTURE TO 3' BELOW FINISHED GRADE. PLUG ALL PIPES WITH CONCRETE AND FILL STRUCTURE WITH 1" CLEAN GRAVEL.

ALL DEBRIS SHALL BE DISPOSED OF OFF-SITE

DO NOT STORE OR BURN MATERIALS ON-SITE UNLESS PERMITTED BY THE GOVERNING JURISDICTION.

ALL ASPHALT OR CONCRETE MATERIALS SHALL BE DISPOSED OF OFF-SITE.

MATERIAL ACQUIRED THROUGH DEMOLITION, OTHER THAN THOSE REQUIRED TO COMPLETE THE CONSTRUCTION PROJECT AND DESIGNATED FOR RETURN TO OWNER, WILL BECOME THE PROPERTY OF THE CONTRACTOR AND WILL BE REMOVED FROM THE SITE. THE MATERIAL WILL BE DISPOSED OF IN A LEGAL MANNER.

THE CONTRACTOR'S OPERATIONS SHALL BE RESTRICTED TO THOSE AREAS INSIDE THE CONSTRUCTION LIMITS INDICATED ON THE DRAWINGS. IF LIMITS ARE NOT INDICATED, RESTRICT WORK TO THE OWNER'S PROPERTY, EASEMENT, OR PUBLIC RIGHTS-OF-WAY.

COMPLETE WORK WITHIN PUBLIC RIGHTS-OF-WAY UNDER THE PERMISSION OF THE GOVERNING AGENCY.

IF ITEMS OUTSIDE THE LIMITS OF DISTURBANCE GET DAMAGED, OWNER COMPLETES THE REQUIRED REPAIRS AND CHARGES THE CONTRACTOR.

THE CONTRACTOR IS RESPONSIBLE FOR THE ADJUSTMENT OF ALL MANHOLES, CASTINGS, WATER VALVES IRRIGATION BOXES, CLEAN OUTS AND ETC. WITHIN THE GRADING LIMITS TO MATCH THE FINISHED SURFACE. ADJUSTMENTS SHALL BE COORDINATED WITH THE UTILITY COMPANIES AND THE COST FOR ALL ADJUSTMENTS SHALL BE INCIDENTAL TO CONSTRUCTION UNLESS NOTED AS A BID ITEM. THE CONTRACTOR SHALL REPAIR ANY DAMAGE TO UTILITY STRUCTURES AND APPURTENANCES THAT OCCURS DURING CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER.

EARTHMOVING:

CONTRACTOR TO SUBMIT MANUFACTURER'S PRODUCT DATA AND INSTALLATION INSTRUCTIONS FOR EACH MATERIAL AND PRODUCT USED.

TEST REPORTS: SUBMIT FOR APPROVAL TEST REPORTS, LIST OF MATERIALS AND GRADATIONS PROPOSED FOR USE. OBTAIN SAMPLES OF ANY PROPOSED FILL MATERIAL AND CONTRACTOR TO PROVIDE STANDARD PROCTOR TEST REPORTS TO ENGINEER.

COMPACTION REQUIREMENTS ARE AS FOLLOWS:

1. UNDER STEPS, PAVEMENTS, AND WALKWAYS, 95 PERCENT STANDARD PROCTOR MINIMUM DENSITY, ASTM D 698.
2. UNDER LAWNS OR UNPAVED AREAS, 85 PERCENT, ASTM D 698.

GRADING TOLERANCES OUTSIDE BUILDING LINES ARE AS FOLLOWS:

1. LAWNS, UNPAVED AREAS, AND WALKS, PLUS OR MINUS 1 INCH.
2. PAVEMENTS, PLUS OR MINUS 1/2 INCH.
3. ALL ADA ROUTES AND PARKING ARE TO MEET ADA REQUIREMENTS AT ALL TIMES.

ALL ACTIVITIES WILL BE CONTAINED WITHIN CONSTRUCTION BOUNDARIES INDICATED ON SITE PLAN. SPECIFIED EXCAVATION REQUIREMENTS, PRECAUTIONS, AND PROTECTIVE SYSTEMS WILL BE OBSERVED AT ALL TIMES.

MOVEMENT OF TRUCKS AND EQUIPMENT ON OWNER'S PROPERTY WILL BE IN ACCORDANCE WITH OWNER'S INSTRUCTIONS.

TOPSOIL WILL BE STRIPPED FROM THE CONSTRUCTION SITE AND WILL BE DISPOSED OF LEGALLY OFF SITE.

TRENCHES WILL NOT BE BACKFILLED UNTIL ALL REQUIRED TESTS ARE COMPLETED AND THE UTILITY SYSTEMS, AS INSTALLED, CONFORM TO REQUIREMENTS SPECIFIED BY THE CONTRACT DOCUMENTS.

EXCAVATION IS UNCLASSIFIED AND INCLUDES EXCAVATION TO SUBGRADE REGARDLESS OF MATERIALS ENCOUNTERED. REPAIR EXCAVATIONS BEYOND ELEVATIONS AND DIMENSIONS INDICATED AS FOLLOWS:

1. AT STRUCTURE: CONCRETE OR COMPACTED STRUCTURAL FILL.
2. ELSEWHERE: BACKFILL AND COMPACT AS DIRECTED.

MAINTAIN STABILITY OF EXCAVATIONS; CONTRACTOR TO BE RESPONSIBLE FOR DESIGN AND COORDINATION OF SHORING AND BRACING AS REQUIRED. PREVENT SURFACE AND SUBSURFACE WATER FROM ACCUMULATING IN EXCAVATIONS. STOCKPILE SATISFACTORY MATERIALS FOR REUSE, ALLOW FOR PROPER DRAINAGE AND DO NOT STOCKPILE MATERIALS WITHIN DRIP LINE OF TREES TO REMAIN.

COMPACT MATERIALS AT THE OPTIMUM MOISTURE CONTENT AS DETERMINED BY ASTM D 698 BY AERATION OR WETTING TO THE FOLLOWING PERCENTAGES OF MAXIMUM DRY DENSITY:

1. STRUCTURE, PAVEMENT, WALKWAYS: SUBGRADE AND EACH FILL LAYER TO 95% (-2%+4%) OF STANDARD PROCTOR MAXIMUM DRY DENSITY TO SUITABLE DEPTH. COMPACTION TESTING SHALL BE PERFORMED IMMEDIATELY PRIOR TO THE PLACEMENT OF REINFORCING STEEL AND NEW PAVING MATERIALS. CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING TESTING WITH OWNERS DESIGNATED TESTING AGENCY.
2. UNPAVED AREAS: TOP 6" OF SUBGRADE AND EACH FILL LAYER TO 90% MAXIMUM DRY DENSITY.
3. A PROOF-ROLL SHALL BE REQUIRED OF THE SUBGRADE PRIOR TO PLACEMENT OF THE BASE COURSE. PROOF ROLLING SHALL CONSIST OF PASSING A LOADED, 20-TON, TANDEM DUMP TRUCK OVER THE PREPARED SUBGRADE SOIL WITH A MAXIMUM ALLOWABLE DISPLACEMENT OF 1". ANY AREAS THAT DISPLACE MORE THAN 1" SHALL BE COMPACTED UNTIL THIS CRITERION IS MET, OR THOSE AREAS MAY BE EXCAVATED AND BACKFILLED WITH COMPACTED TYPE 1 AGGREGATE USED FOR BASE MATERIAL. ALL PROOF ROLLING SHALL BE PERFORMED IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE.
4. CUT AREAS UNDER PROPOSED ASPHALT OR CONCRETE PAVEMENTS SHALL BE CUT AND COMPACTED. AFTER GRADING TO SUBGRADE ELEVATION, SCARIFY THE TOP SIX INCHES OF THE SUB-BASE AND COMPACT AS OUTLINED ABOVE.

PLACE ACCEPTABLE MATERIALS IN LAYERS NOT MORE THAN 8" LOOSE DEPTH FOR MATERIALS COMPACTED BY HEAVY EQUIPMENT AND NOT MORE THAN 4" LOOSE DEPTH FOR MATERIALS COMPACTED BY HAND EQUIPMENT TO SUBGRADES INDICATED AS FOLLOWS:

1. STRUCTURAL FILL: USE UNDER FOUNDATIONS, SLABS ON GRADE IN LAYERS AS INDICATED.
2. DRAINAGE FILL: USE UNDER DESIGNATED BUILDING SLABS, AT FOUNDATION DRAINAGE AND ELSEWHERE AS INDICATED.
3. LANDSCAPE AREA FILL:
   - 3.1. ALL SUB-GRADE AREAS SHALL BE "RIPPED" TO A MINIMUM 6" DEEP AND A MAXIMUM OF 12" APART IN OPPOSITE DIRECTIONS WITH MINIMAL TIRE TRAFFIC TO FOLLOW.
   - 3.2. CONTRACTOR TO LEAVE AREAS 6" OR 18" (PLANTER AREAS) BELOW FINISH GRADE. OWNER TO PLACE TOPSOIL AND ALL PLANTINGS.
   - 3.3. ANY FILL SOIL WITHIN 36" OF FINISHED GRADE IN LAWN AND PLANTER AREAS SHALL BE COHESIVE SOILS IN SOIL CLASSIFICATIONS GROUPS ML, CL, CH OR A COMBINATION THEREOF, FREE OF ROCK OR GRAVEL LARGER THAN 1" IN ANY DIMENSION, DEBRIS, WASTE, FROZEN MATERIAL, VEGETATION AND OTHER DELETERIOUS MATTER.
4. SUB-BASE MATERIAL: USE UNDER PAVEMENT, WALKS, STEPS, PIPING AND CONDUIT.

GRADE TO WITHIN 1/2" ABOVE OR BELOW REQUIRED SUBGRADE AND WITHIN A TOLERANCE OF 1/2" IN 10'.

PROTECT NEWLY GRADED AREAS FROM TRAFFIC AND EROSION. RECOMPACT AND REGRADE SETTLED, DISTURBED AND DAMAGED AREAS AS NECESSARY TO RESTORE QUALITY, APPEARANCE, AND CONDITION OF WORK

CONTROL EROSION TO PREVENT RUNOFF INTO SEWERS OR DAMAGE TO SLOPED OR SURFACED AREAS.

CONTROL DUST TO PREVENT HAZARDS TO ADJACENT PROPERTIES AND VEHICLES. IMMEDIATELY REPAIR OR REMEDY DAMAGE CAUSED BY DUST INCLUDING AIR FILTERS IN EQUIPMENT AND VEHICLES. CLEAN SOILED SURFACES.

DISPOSAL OF EXCAVATION WASTE AND UNSUITABLE MATERIALS SHALL BE THE RESPONSIBILITY OF THE SITE WORK CONTRACTOR. NO SPECIFIC OR PRE-APPROVED LOCATION IS BEING PROVIDED BY THE OWNER.

CONCRETE :

CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF THE CURRENT ACI 301, SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS, ACI 318 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, ACI 305 SPECIFICATIONS FOR HOT WATER CONCRETE, AND ACI 306 SPECIFICATIONS FOR COLD WEATHER CONCRETE, WITH THE FOLLOWING ADDITIONAL REQUIREMENTS:

1. CONCRETE SHALL DEVELOP THE FOLLOWING 28-DAY MINIMUM COMPRESSIVE STRENGTH:
   - FOUNDATIONS – 3,000 PSI
   - CAST-IN-PLACE WALLS – 3,500 PSI
   - FLOOR SLAB – 4,000 PSI
   - EXTERIOR SLABS, WALLS AND CURBS – 4,000 PSI
2. ALL FOOTINGS SHALL BEAR ON UNDISTURBED SOIL OR ENGINEERED FILL.
3. CHLORIDE- BASED ADMIXTURES ARE PROHIBITED IN ALL CONCRETE.
4. REINFORCING STEEL SHALL CONFORM TO ASTM A615, A616, OR A617, GRADE 60.
5. ALL CONTINUOUS REINFORCING STEEL THAT MEETS AT A CORNER SHALL BE TIED TOGETHER WITH A CORNER BAR THAT HAS SUFFICIENT LAP DISTANCE IN EACH DIRECTION
6. CONTINUOUS REINFORCING BARS LAP LENGTH SHALL BE A MINIMUM OF 48 BAR DIAMETERS UNLESS NOTED OTHERWISE
7. CONCRETE SLUMP SHALL BE A MAXIMUM OF 4" +/- 1" (ASTM C- 143) AS DELIVERED IN THE FIELD. CONTRACTOR MAY USE CHEMICAL ADMIXTURES TO ATTAIN A MAXIMUM SLUMP OF 8" FOR WORKABILITY. NO WATER MAY BE ADDED TO THE CONCRETE MIX ON SITE UNLESS WATER IS WITHHELD AT THE BATCHING FACILITY. IF WATER IS WITHHELD AT THE BATCHING FACILITY IT SHOULD BE REFLECTED ON THE LOAD TICKET. THE TOTAL AMOUNT OF WATER IN THE MIX SHALL NOT EXCEED WHAT IS NOTED ON THE APPROVED MIXED. THIS SHALL BE NOTED IN THE SPECIAL INSPECTOR'S RECORDS.
8. CONCRETE EXPOSED TO WEATHER, VEHICLES, AND/OR DEICING CHEMICALS SHALL BE AIR-ENTRAINED WITH 6% (+/-) 1.5% ENTRAINED AIR BY VOLUME AT POINT OF DISCHARGE. DO NOT ALLOW AIR CONTENT OF TROWELED FINISHED FLOORS TO EXCEED 3%.
9. SUBMIT CONCRETE MIX PROPORTIONS PRIOR TO START OF WORK. DO NOT BEGIN CONCRETE PRODUCTION UNTIL MIXES HAVE BEEN REVIEWED AND ARE ACCEPTABLE TO THE ENGINEER.
10. READY MIX CONCRETE SHALL COMPLY WITH REQUIREMENTS OF ASTM C94.
11. CONCRETE WORK EXECUTION
    - A. CONSTRUCT FORMS TO CORRECT SIZE, SHAPE, ALIGNMENT, ELEVATION AND POSITION; AND TO SUPPORT VERTICAL AND LATERAL LOADS.
    - B. POSITION, SUPPORT, AND SECURE REINFORCEMENT AGAINST DISPLACEMENT. MINIMUM CONCRETE COVER FOR REINFORCEMENT SHALL BE, UNLESS NOTED OTHERWISE ON THE DRAWINGS:
      - CAST AGAINST AND EXPOSED TO EARTH.....3 INCHES
      - EXPOSED TO EARTH OR WEATHER.....2 INCHES
      - NOT EXPOSED TO WEATHER OR IN CONTACT WITH EARTH.....1 ½ INCHES
    - C. PROVIDE CONTROL JOINTS IN SLABS-ON-GRADE AT NOT GREATER THAN 15 FEET ON CENTER IN EACH DIRECTION. SAW CUT CONTROL JOINTS MINIMUM ¼ OF SLAB DEPTH, AS SOON AFTER SLAB FINISHING WITHOUT DISLODGING AGGREGATE.
    - D. STEEL TROWEL FINISH ALL INTERIOR CONCRETE SLABS, BROOM FINISH ALL EXTERIOR CONCRETE SLABS.
    - E. CURE ALL CONCRETE IN COMPLIANCE WITH ACI 301, USING A LIQUID TYPE MEMBRANE, NON-RESIDUAL, CURING COMPOUND COMPLYING WITH ASTM C309. ASSURE COMPATIBILITY WITH FINISH FLOOR COVERING.
12. FLINT AND CHERT WILL BE LIMITED TO 1% MAXIMUM, BY WEIGHT OF THE COURSE AGGREGATE, IN ALL EXPOSED CONCRETE (CAST-IN-PLACE OR PRECAST). LIGNITE WILL BE LIMITED TO 0.5%, BY WEIGHT OF THE FINE AGGREGATE IN ALL EXPOSED CONCRETE. SOME APPLICATIONS MAY BE REQUIRED TO BE LIGNITE FREE.

CONCRETE PAVING JOINT SEALANTS:

DELIVER MATERIALS TO PROJECT SITE IN ORIGINAL UNOPENED CONTAINERS OR BUNDLES WITH LABELS INDICATING MANUFACTURER, PRODUCT NAME AND DESIGNATION, COLOR, EXPIRATION DATE, POT LIFE, CURING TIME, AND MIXING INSTRUCTIONS FOR MULTICOMPONENT MATERIALS.

STORE AND HANDLE MATERIALS TO COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS TO PREVENT THEIR DETERIORATION OR DAMAGE DUE TO MOISTURE, HIGH OR LOW TEMPERATURES, CONTAMINANTS, OR OTHER CAUSES.

DO NOT PROCEED WITH INSTALLATION OF JOINT SEALANTS UNDER THE FOLLOWING CONDITIONS:

1. WHEN AMBIENT AND SUBSTRATE TEMPERATURE CONDITIONS ARE OUTSIDE LIMITS PERMITTED BY JOINT SEALANT MANUFACTURER OR ARE BELOW 40 DEG F.
2. WHEN JOINT SUBSTRATES ARE WET OR COVERED WITH FROST.
3. WHERE JOINT WIDTHS ARE LESS THAN THOSE ALLOWED BY JOINT-SEALANT MANUFACTURER FOR APPLICATIONS INDICATED.
4. WHERE CONTAMINANTS CAPABLE OF INTERFERING WITH ADHESION HAVE NOT YET BEEN REMOVED FROM JOINT SUBSTRATES.

PROVIDE JOINT SEALANTS, BACKING MATERIALS, AND OTHER RELATED MATERIALS THAT ARE COMPATIBLE WITH ONE ANOTHER AND WITH JOINT SUBSTRATES UNDER CONDITIONS OF SERVICE AND APPLICATION, AS DEMONSTRATED BY JOINT-SEALANT MANUFACTURER BASED ON TESTING AND FIELD EXPERIENCE.

COLD-APPLIED JOINT SEALANTS ARE TO BE TYPE NS SILICONE SEALANT FOR CONCRETE: SINGLE-COMPONENT, LOW-MODULUS, NEUTRAL-CURING, NONSAG SILICONE SEALANT COMPLYING WITH ASTM D 5893 FOR TYPE NS. PRODUCTS ALLOWED ARE: CRAFCO INC.: ROADSAVER SILICONE , DOW CORNING CORPORATION; 888, PECORA NS 301, OR APPROVED EQUAL

CONTRACTOR TO PROVIDE JOINT-SEALANT BACKER MATERIALS THAT ARE NONSTAINING; ARE COMPATIBLE WITH JOINT SUBSTRATES, SEALANTS, PRIMERS, AND OTHER JOINT FILLERS; AND ARE APPROVED FOR APPLICATIONS INDICATED BY JOINT-SEALANT MANUFACTURER BASED ON FIELD EXPERIENCE AND LABORATORY TESTING. ROUND BACKER RODS FOR COLD-APPLIED SEALANTS: ASTM D 5249, TYPE 3, OF DIAMETER AND DENSITY REQUIRED TO CONTROL SEALANT DEPTHAND PREVENT BOTTOM-SIDE ADHESION OF SEALANT.

PRIOR TO JOINT INSTALLATION, CONTRACTOR IS TO EXAMINE JOINTS INDICATED TO RECEIVE JOINT SEALANTS, WITH INSTALLER PRESENT, FOR COMPLIANCE WITH REQUIREMENTS FOR JOINT CONFIGURATION, INSTALLATION TOLERANCES, AND OTHER CONDITIONS AFFECTING JOINT- SEALANT PERFORMANCE. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.

CLEAN OUT JOINTS IMMEDIATELY BEFORE INSTALLING JOINT SEALANTS TO COMPLY WITH JOINT-SEALANT MANUFACTURER'S WRITTEN INSTRUCTIONS.

COMPLY WITH JOINT-SEALANT MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS FOR PRODUCTS AND APPLICATIONS INDICATED, UNLESS MORE STRINGENT REQUIREMENTS APPLY.

COMPLY WITH RECOMMENDATIONS IN ASTM C 1193 FOR USE OF JOINT SEALANTS AS APPLICABLE TO MATERIALS, APPLICATIONS, AND CONDITIONS INDICATED.

INSTALL BACKER MATERIALS OF TYPE INDICATED TO SUPPORT SEALANTS DURING APPLICATION AND AT POSITION REQUIRED TO PRODUCE CROSS-SECTIONAL SHAPES AND DEPTHS OF INSTALLED SEALANTS RELATIVE TO JOINT WIDTHS THAT ALLOW OPTIMUM SEALANT MOVEMENT CAPABILITY. DO NOT LEAVE GAPS BETWEEN ENDS OF BACKER MATERIALS. DO NOT STRETCH, TWIST, PUNCTURE, OR TEAR BACKER MATERIALS. REMOVE ABSORBENT BACKER MATERIALS THAT HAVE BECOME WET BEFORE SEALANT APPLICATION AND REPLACE THEM WITH DRY MATERIALS.

NSTALL SEALANTS USING PROVEN TECHNIQUES THAT COMPLY WITH THE FOLLOWING AND AT THE SAME TIME BACKING ARE INSTALLED:

1. PLACE SEALANTS SO THEY DIRECTLY CONTACT AND FULLY WET JOINT SUBSTRATES.
2. COMPLETELY FILL RECESSES PROVIDED FOR EACH JOINT CONFIGURATION.
3. PRODUCE UNIFORM, CROSS-SECTIONAL SHAPES AND DEPTHS RELATIVE TO JOINT WIDTHS THAT ALLOW OPTIMUM SEALANT MOVEMENT CAPABILITY.

IMMEDIATELY AFTER SEALANT APPLICATION AND BEFORE SKINNING OR CURING BEGINS, TOOL SEALANTS ACCORDING TO REQUIREMENTS SPECIFIED BELOW TO FORM SMOOTH, UNIFORM BEADS OF CONFIGURATION INDICATED; TO ELIMINATE AIR POCKETS; AND TO ENSURE CONTACT AND ADHESION OF SEALANT WITH SIDES OF JOINT. REMOVE EXCESS SEALANTS FROM SURFACES ADJACENT TO JOINTUSE TOOLING AGENTS THAT ARE APPROVED IN WRITING BY JOINT-SEALANT MANUFACTURER AND THAT DO NOT DISCOLOR SEALANTS OR ADJACENT SURFACES.

PROVIDE JOINT CONFIGURATION TO COMPLY WITH JOINT-SEALANT MANUFACTURER'S WRITTEN INSTRUCTIONS, UNLESS OTHERWISE INDICATED.

PROVIDE RECESSED JOINT CONFIGURATION FOR SILICONE SEALANTS OF RECESS DEPTH AND AT LOCATIONS INDICATED.

CLEAN OFF EXCESS SEALANTS OR SEALANT SMEARS ADJACENT TO JOINTS AS THE WORK PROGRESSES BY METHODS AND WITH CLEANING MATERIALS APPROVED BY MANUFACTURERS OF JOINT SEALANTS AND OF PRODUCTS IN WHICH JOINTS OCCUR.

PROTECT JOINT SEALANTS DURING AND AFTER CURING PERIOD FROM CONTACT WITH CONTAMINATING SUBSTANCES AND FROM DAMAGE RESULTING FROM CONSTRUCTION OPERATIONS OR OTHER CAUSES SO SEALANTS ARE WITHOUT DETERIORATION OR DAMAGE AT TIME OF SUBSTANTIAL COMPLETION. IF, DESPITE SUCH PROTECTION, DAMAGE OR DETERIORATION OCCURS, CUT OUT AND REMOVE DAMAGED OR DETERIORATED JOINT SEALANTS IMMEDIATELY AND REPLACE WITH JOINT SEALANT SO INSTALLATIONS WITH REPAIRED AREAS ARE INDISTINGUISHABLE FROM THE ORIGINAL WORK.

PAVEMENT MARKING :

UNLESS NOTED OTHERWISE ON THE PLANS, PAINT SHALL BE WATERBORNE OR SOLVENT BORNE, COLORS AS SHOWN OR SPECIFIED HEREIN. WATERBORNE PAINT: PAINTS SHALL CONFORM TO FS TT-P-1952. SOLVENT BORNE PAINT: PAINT SHALL CONFORM TO FS A-A-2886 OR AASHTO M248. PAINT SHALL BE NON-BLEEDING, QUICK-DRYING AND ALKYD PETROLEUM BASE PAINT SUITABLE FOR TRAFFIC BEARING SURFACE AND BE MIXED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS BEFORE APPLICATION FOR COLORS WHITE, YELLOW, BLUE, AND RED. RETROFLECTIVE PAINT SHALL BE TYPE L GLASS BEADS PER SECTION 620 OF THE CURRENT MODOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

PAINT SHALL BE APPLIED PER THE FOLLOWING COLOR CODE: WHITE FOR STANDARD PARKING SPACE LINES AND SIDEWALK CROSSINGS. BLUE FOR ACCESSIBLE PARKING STALL AND SYMBOLS AND ASSOCIATED CROSS-HATCHED AREAS

MATERIALS SHALL INCLUDE STANDARD COMMERCIAL GRADE MASKING MATERIALS, SCRAPERS, CLEANING SOLVENTS, AND OTHER MATERIALS REQUIRED FOR THE WORK. USE MATERIALS SPECIFIED BY MANUFACTURER'S DIRECTION LABEL ON CONTAINER.

DELIVER MATERIALS TO THE SITE IN ORIGINAL CONTAINERS WITH SEALS UNBROKEN AND LABELS INTACT. PROTECT ALL PAINT FROM FREEZING. DO NOT ALLOW PAINT TO SETTLE, CAKE, OR THICKEN IN THE CONTAINER. READILY STIR WITH A PADDLE TO A SMOOTH CONSISTENCY. PAINT SHALL ARRIVE ON THE JOB COLOR-MIXED EXCEPT FOR TINTING OF UNDERCOATS AND POSSIBLE THINNING.

PRIOR TO BEGINNING CLEANING OR PAINTING OPERATIONS, CONTRACTOR SHALL PROTECT ALL ITEMS OR SURFACES NOT INCLUDED IN AREA TO BE PAINTED. PROTECT VEHICLES, EQUIPMENT, STRUCTURES, OR OTHER ITEMS FROM PAINT SPATTERS, OVER SPRAY, OR DAMAGE.

CONTRACTOR SHALL PROVIDE BARRICADES AND ANY SIGNAGE NEEDED TO PROTECT ALL PAINTED AREAS FROM PEDESTRIAN AND VEHICULAR TRAFFIC UNTIL ACHIEVING SUFFICIENT DRYING TIME.

PERFORM PAINTING AS SOON AS FEASIBLE AND PRACTICAL AFTER THE FINISHING OF THE PAVEMENT OR AS DIRECTED BY THE OWNERS REPRESENTATIVE. ADEQUATE LIGHTING SHALL BE AVAILABLE AT THE TIME OF PAINTING. EXAMINE ALL SURFACES TO RECEIVE PAINT TO MAKE SURE THERE ARE NO DEFECTS IN THE SURFACE TO BE STRIPED. DO NOT PAINT OVER RUST, SCALE, GREASE, OIL, FUEL, DUST, WET PAVEMENT, OR OTHER CONDITIONS DETRIMENTAL TO PAINT ADHESION. REMOVE GREASE, OIL, OR FUEL ON ANY SURFACE BEFORE PAINTING. CORRECT ALL SURFACE DEFECTS BEFORE PAINTING. CONTRACTOR SHALL EXAMINE AREAS TO BE PAINTED. NOTIFY THE OWNERS REPRESENTATIVE IN WRITING OF CONDITIONS THAT MIGHT DELAY TIMELY COMPLETION OF THE WORK.

PAINTING SHALL NOT BE PERFORMED WHEN THE AMBIENT TEMPERATURE IS LESS THAN 55 DEGREES FAHRENHEIT AND NOT EXCEEDING 95 DEGREES FAHRENHEIT, OR WHILE THE SURFACE IS DAMP. THE SURFACE MUST BE FIVE DEGREES OR MORE ABOVE THE DEW POINT TEMPERATURE DURING PAINTING OPERATIONS AND WHILE PAINT IS DRYING.

AREAS TO BE PAINTED SHALL RECEIVE ONE COAT OF PAINT NOT LESS THAN 25 MILS THICKNESS WET PER MODOT 620.9 THROUGH 620.9.3.4.2. IN LOCATIONS REQUIRING MULTIPLE COATS, PRIOR COAT SHALL BE DRY TO MANUFACTURER'S RECOMMENDATIONS BEFORE APPLYING THE NEXT COAT.
FINISHED WORK SHALL BE UNIFORM, OF APPROVED COLOR, FREE OF RUNS, DRIPS, DEFECTIVE BRUSHING, SPRAYING, AND CLOGGING.
PARKING LINES AND SYMBOLS SHALL BE NEAT AND WELL DEFINED. ONLY SKILLED APPLICATORS SHALL APPLY PAINT. OWNERS REPRESENTATIVE SHALL APPROVE APPLICATION TECHNIQUES.

REMOVE PAINT SPLATTER FROM ADJACENT AREAS OR AREAS NOT DESIGNATED TO RECEIVE PAINT. CONTRACTOR SHALL REPAIR OR TOUCH UP ANY SURFACES IF EXPOSED TO VEHICULAR AND PEDESTRIAN TRAFFIC, TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE, AT NO ADDITIONAL COST TO THE OWNER. WHEN COLOR, DIRT, STAINS, EXISTING PAINT, ETC., SHOW THROUGH THE FINAL COAT, REPAINT THE SURFACE UNTIL THE FILM IS UNIFORM IN FINISH, COVERAGE, COLOR, AND APPEARANCE

RELEASED FOR CONSTRUCTION
As Noted on Plan Review

Development Services Department
Lee's Summit, Missouri

09/24/2024

REVISIONS:

NO.	DATE
ORIGINAL	06/14/2024

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

STATE OF MISSOURI
NATHAN THOMAS ECKHOFF
NUMBER PE-2003014960
08/06/24
PROFESSIONAL ENGINEER

NATHAN THOMAS ECKHOFF
MO LICENSE-2003014960

PREPARED BY:
CROCKETT ENGINEERING CONSULTANTS
1000 W. Nifong Blvd., Bldg. 1
Columbia, MO 65203
(573) 447-0292
www.crockettengineering.com
Crockett Engineering Consultants, LLC
Missouri Certificate of Authority
#2005015901

OWNER:
DISCOVERY PARK LEES SUMMIT LLC
4220 PHILLIPS FARM RD
COLUMBIA, MO 65201

THE VILLAGE AT DISCOVERY
LOT 4
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:
CIVIL SPECIFICATIONS

DESIGNED:	NTE
DRAWN:	NMD
PROJECT NO.:	230286

SHEET:
CE 1.1

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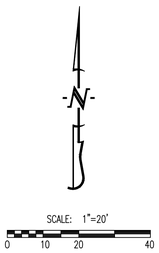


LEGEND OF LABELS:

(A) LIMITS OF DISTURBANCE.

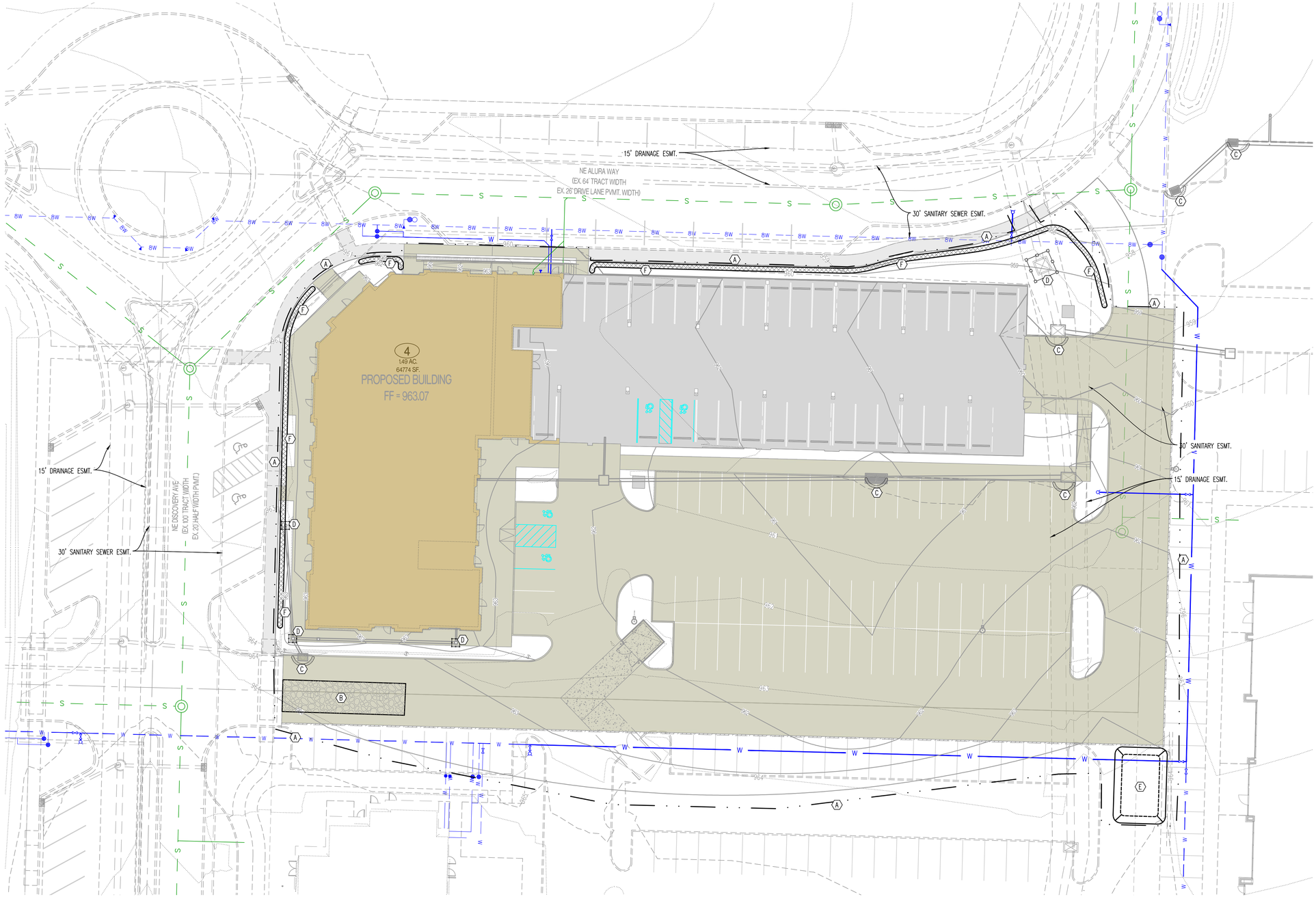
(B) INSTALL CRUSHED STONE CONSTRUCTION ENTRANCE. ALL CONSTRUCTION TRAFFIC SHALL LEAVE THE SITE VIA THIS EXIT. REFER TO ESC-01 ON CE 2.2.

(C) INSTALL INLET PROTECTION AROUND THROAT OF INLET. REFER TO ESC-07 ON CE 2.2.

(D) INSTALL 2" X 10" BOARD WRAPPED IN SILT FENCE AT THROAT OF INLET. REPLACE BOARD WITH GUTTERBUDDY (OR APPROVED EQUAL) AT THROAT OF INLET AFTER PAVING OPERATIONS ARE COMPLETE. REFER TO ESC-06 ON CE 2.2.

(E) 20' X 30' X 3' MIN CONCRETE WASHOUT FACILITY.
THE WASHOUT FACILITY IS TO BE LINED WITH A PLASTIC LINING MATERIAL (10 MIL POLYETHYLENE SHEETING MIN.) FREE OF HOLES, TEARS, OR OTHER DEFECTS THAT COULD COMPROMISE THE IMPERMEABILITY OF THE MATERIAL. WASHOUT FACILITIES MUST BE CLEANED, OR NEW FACILITIES MUST BE CONSTRUCTED AND READY FOR USE ONCE THE WASHOUT IS 75% FULL. A SIGN SHALL BE INSTALLED ADJACENT TO FACILITY TO INFORM CONCRETE EQUIPMENT OPERATORS TO UTILIZE THE PROPER FACILITIES. REFER TO ESC-01 ON CE 2.2 FOR CITY REQUIREMENTS.

(F) INSTALL STRAW WATTLE AS SHOWN. REFER TO ESC-04 ON CE 2.2.



RELEASED FOR CONSTRUCTION
As Noted on Plan Review

Development Services Department
Lee's Summit, Missouri

09/24/2024

REVISIONS:

NO.	DATE
ORIGINAL	05/14/2024

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STATE OF MISSOURI
NATHAN THOMAS ECKHOFF
NUMBER PE-2003014960
09/09/24
PROFESSIONAL ENGINEER

NATHAN THOMAS ECKHOFF
MO LICENSE: 2003014960

PREPARED BY:
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Crockett Engineering Consultants, LLC
Missouri Certificate of Authority
2020033901

OWNER:
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4220 PHILLIPS FARM RD
COLUMBIA, MO 65201

THE VILLAGE AT DISCOVERY
LOT 4
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:
EROSION CONTROL PLAN

DESIGNED:	NTE
DRAWN:	NMD
PROJECT NO.:	230286
SHEET:	CE 2.1

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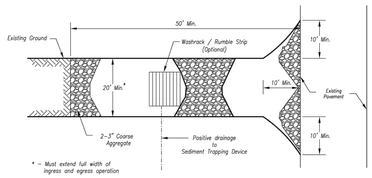
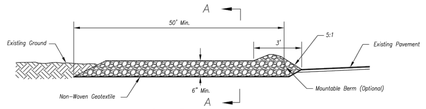
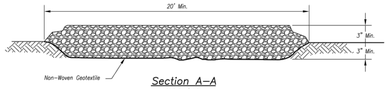


Plan View
Not to Scale



Side Elevation
Not to Scale



Section A-A
Not to Scale

Notes for Construction Entrance:

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

Maintenance for Construction Entrance:

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

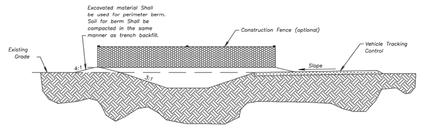
CONSTRUCTION ENTRANCE

Notes for Concrete Washout:

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

Maintenance for Concrete Washout:

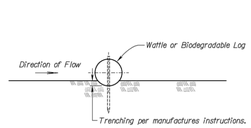
1. Concrete washout materials shall be removed once the materials have filled the washout to approximately 75% full.
2. Concrete washout areas shall be enlarged as necessary to maintain capacity for wasted concrete.
3. Concrete washout water, wasted pieces of concrete and all other liquid and solid materials shall not be transported from the job site in a watertight container or allowed to drain off property.
4. Concrete washout areas shall remain in place until all concrete for the project is placed.
5. When concrete washout areas are removed, excavations shall be filled with suitable compacted backfill and topsoil, any disturbed areas associated with the installation, maintenance, and/or removal of the concrete washout areas shall be stabilized.



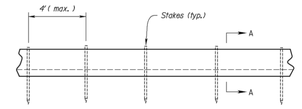
CONCRETE WASHOUT

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

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



Section A-A



Typical Elevation

WATTLES AND BIODEGRADABLE LOG

Notes for Wattles and Biodegradable Log Slope Protection:

1. The Slope barriers shall be placed along contour lines, with a short section turned upgrade at each end of the barrier. The maximum length of the slope barrier shall not exceed 250 feet, and the barrier ends need to be staggered.
2. Install wattles and biodegradable logs per manufacturer's instructions.
3. Spacing of stakes per manufacturer's instructions with 4' max. spacing. Length of stakes shall be a minimum of 2 times the diameter of the log with minimum of 24".

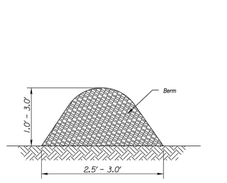


Figure 1
(Perimeter Control)

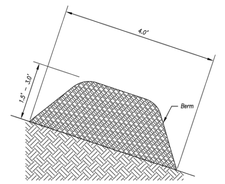


Figure 2
(Steep Slopes)

Notes for Mulch and Compost Filter Beam:

1. The sediment control berm shall be placed uncompacted in a windrow at locations shown on the plans or as directed by the engineer.
2. Parallel to the base of the slope, or around the perimeter of other affected areas, construct a 1 to 3 foot high by 2.5 to 3 foot wide berm (see Figure 1). For maximum water treatment ability or for steep slopes, construct a 1.5 to 3 foot high trapezoidal berm that is a minimum of 4 feet wide at the base (see Figure 2). In extreme conditions, or where specified by the engineer, a second berm shall be constructed at the top of the slope. Engineer will specify berm requirements.
3. If berm is to be left as permanent or part of the natural landscape, the compost berm may be seeded during application for permanent vegetation.
4. Do not use compost or wood mulch berms in any runoff channels or concentrated flow areas.
5. Wood mulch shall consist of tree and shrub debris resulting from clearing and grubbing and shall be ground by the mechanical means such as a chipper, hammermill, tub grinder or other approved method. Mulch sizing varies with a maximum width of 2" and a maximum length of 10".

Maintenance for Mulch and Compost Filter Beam:

1. Berm shall be reshaped and material added as necessary to maintain function and dimensions.
2. Breaches in the berm shall be repaired promptly.

MULCH OR COMPOST FILTER BERMS

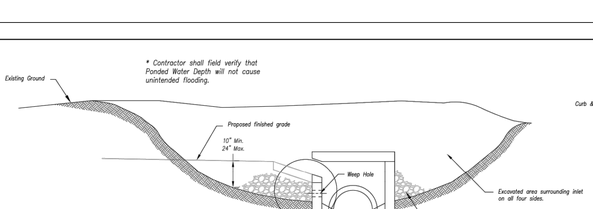
RELEASED FOR CONSTRUCTION
As Noted on Plan Review

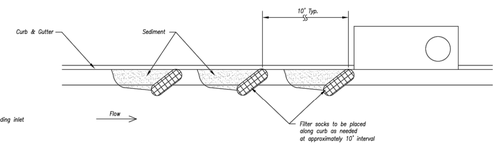
Development Services Department
Lee's Summit, Missouri

09/24/2024

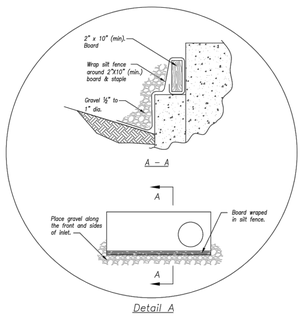
Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

AMERICAN PUBLIC WORKS ASSOCIATION	KANSAS CITY METRO CHAPTER
WATTLES/BIODEGRADABLE LOG AND MULCH/COMPOST FILTER BERM	STANDARD DRAWING NUMBER ESC-04 ADOPTED: 10/24/2016





On Grade Curb Inlet Protection



Detail A

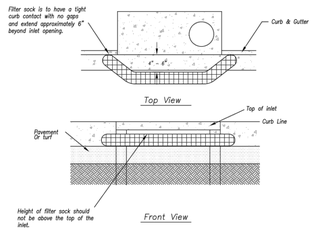
EARLY STAGE CURB INLET
(Open Box and Prior to Pouring Curb and Inlet Throat)

Notes:

1. Immediately following inlet construction and prior to construction of curb and inlet throat, protect inlet opening by installing 2" X 10" (min.) board wrapped in silt fence. Structures shall have excavated storage area on all four sides to allow settling of sediment (Early Stage Curb Inlet).
2. When inlet is completed and curb poured, filter socks or approved equal should be used (Late Stage Curb Inlet). Straw wattles are not approved for curb inlet use.
3. Contractor to field verify ponding water shall not create a traffic hazard.

Maintenance:

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

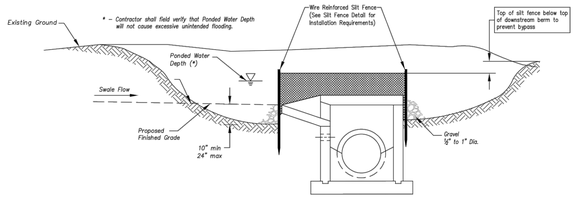


Sump Inlet Sediment Filter

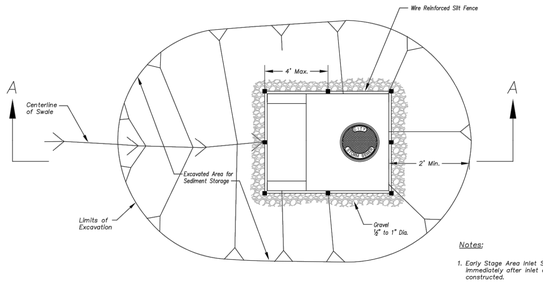
LATE STAGE CURB INLET
(After Pouring Curb and Inlet Throat)

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

AMERICAN PUBLIC WORKS ASSOCIATION	KANSAS CITY METRO CHAPTER
CURB INLET PROTECTION	STANDARD DRAWING NUMBER ESC-06 ADOPTED: 10/24/2016

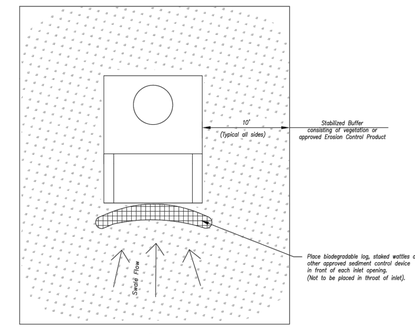


Section A-A
Not to Scale

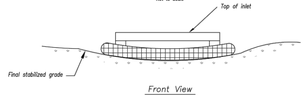


Plan
Not to Scale

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



Plan
Not to Scale



Front View

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

Notes:

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

Maintenance:

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

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

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

REVISIONS:

NO.	DATE
ORIGINAL	06/14/2024

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

STATE OF MISSOURI
NATHAN THOMAS ECKHOFF
NUMBER PE-2003014960
08/06/24
PROFESSIONAL ENGINEER

NATHAN THOMAS ECKHOFF
MO LICENSE-2003014960

PREPARED BY:
CROCKETT ENGINEERING CONSULTANTS
1000 W. Nifong Blvd. - Bldg 1
Columbia, Missouri 65203
(573) 447-0292
www.crockettengineering.com
Crockett Engineering Consultants, LLC
Missouri Certificate of Authority
#2006013501

OWNER:
DISCOVERY PARK LEES SUMMIT LLC
4220 PHILLIPS FARM RD
COLUMBIA, MO 65201

THE VILLAGE AT DISCOVERY
LOT 4
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

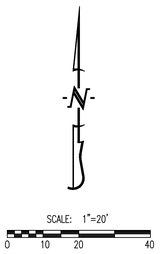
DRAWING INCLUDES:

EROSION CONTROL DETAILS

DESIGNED: NTE
DRAWN: NMD
PROJECT NO.: 230286

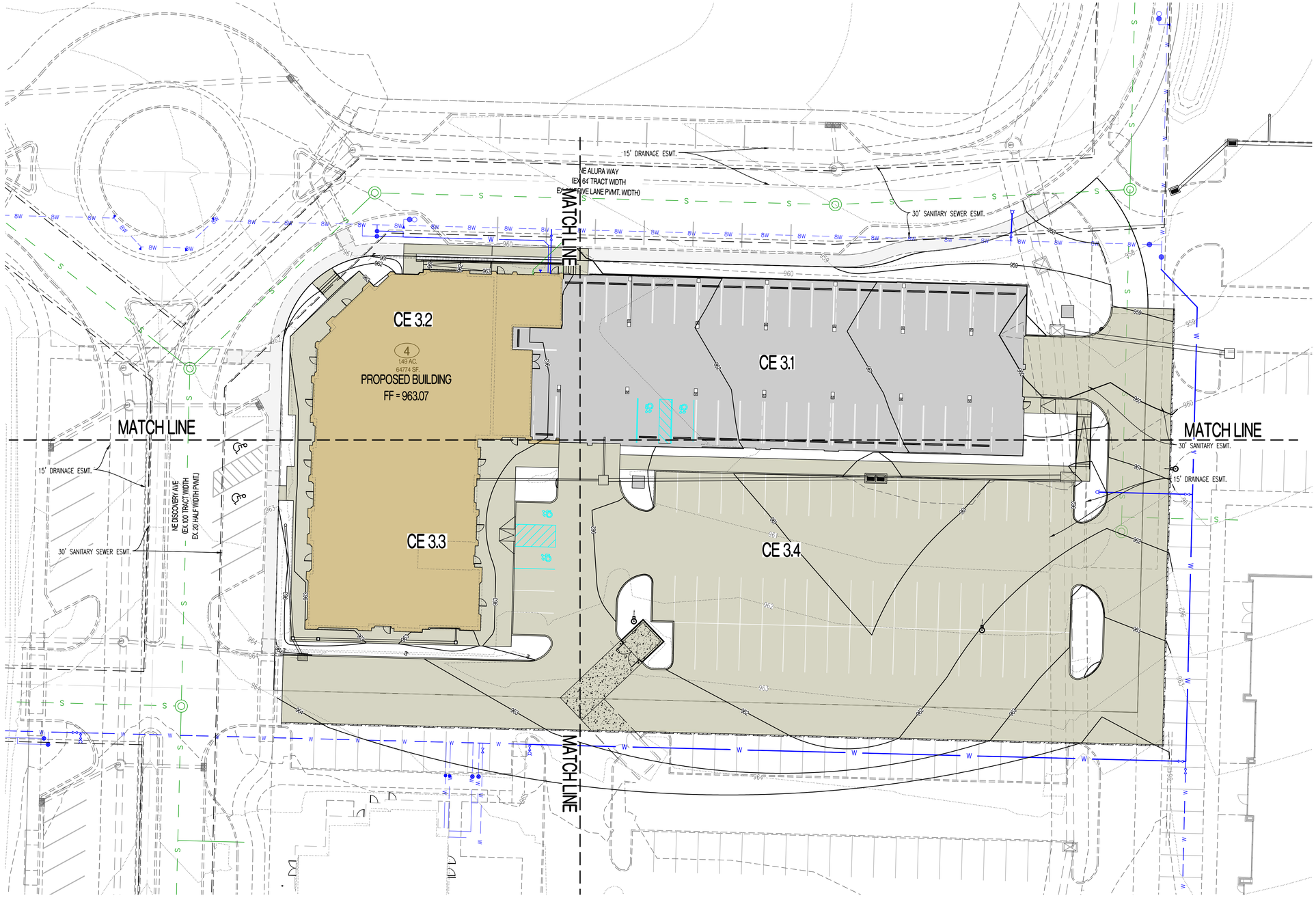
SHEET:
CE 2.2

Y:\2023\230286 - Discovery Park Lees Summit\Zone 1 Lot 4\ACAD Files\Construction Plans\230286 Zone 1 Lot 4 Grading Base.dwg



LEGEND OF SYMBOLS:

- XXX — EXISTING MINOR CONTOUR
- XXX — EXISTING MAJOR CONTOUR
- XXX — PROPOSED MINOR CONTOUR
- XXX — PROPOSED MAJOR CONTOUR
- FF=XXXX — FINISHED FLOOR OF STRUCTURE



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Development Services Department
Lee's Summit, Missouri

09/24/2024

REVISIONS:

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THE VILLAGE AT DISCOVERY
LOT 4
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:
OVERALL GRADING PLAN

DESIGNED:	NTE
DRAWN:	NMD
PROJECT NO.:	230286
SHEET:	CE 3.0

Y:\2023\230286 - Discovery Park Lees Summit\Zone 1 Lot 4\ACAD Files\Construction Plans\230286 Zone 1 Lot 4 Grading Base.dwg

NE ALURA WAY
(EX. 64' TRACT WIDTH
EX. 26' DRIVE LANE PVMT. WIDTH)

MATCH LINE

MATCH LINE

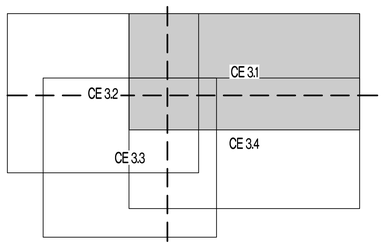
MATCH LINE

CE 3.2

CE 3.3

CE 3.4

SCALE: 1"=10'
0 5 10 20



LEGEND OF LABELS

(A) FINE GRADE AS SHOWN BY PROPOSED CONTOURS. PLACE MINIMUM OF 6" TOP SOIL. SEED AND MULCH ALL DISTURBED AREAS.

(B) GRADE ACCESSIBLE PARKING STALLS AND ROUTES AS SHOWN. SLOPE OF THE PAVEMENT AT ALL ACCESSIBLE PARKING STALLS SHALL NOT EXCEED 1:50 IN ALL DIRECTIONS. ALL ACCESSIBLE ELEMENTS SHALL COMPLY WITH THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT.

(C) TRANSITION FROM 6" CURB TO 0" CURB.

LEGEND OF SYMBOLS:

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- XXX — EXISTING MAJOR CONTOUR
- XXX — PROPOSED MINOR CONTOUR
- XXX — PROPOSED MAJOR CONTOUR
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- (XXX.XX TC) — PROPOSED TOP OF CURB ELEVATION TC = (TP+6") UNLESS NOTED OTHERWISE
- (XXX.XX TP) — PROPOSED TOP OF PAVEMENT ELEVATION
- (XXX.XX FG) — PROPOSED FINISHED GRADE ELEVATION
- (XXX.XX TW) — PROPOSED FINISHED GRADE AT TOP OF WALL
- (XXX.XX FF) — PROPOSED FINISHED FLOOR AT DOOR

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Lee's Summit, Missouri

09/24/2024

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LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:
GRADING PLAN SHEET 1

DESIGNED:	NTE
DRAWN:	NMD
PROJECT NO.:	230286

SHEET:
CE 3.1

Y:\2023\230286 - Discovery Park Lees Summit\Zone 1 Lot 4\ACAD Files\Construction Plans\230286 Zone 1 Lot 4 Grading Base.dwg

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SCALE: 1"=10'
0 5 10 20

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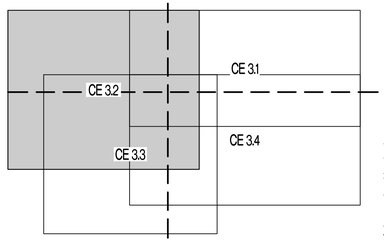

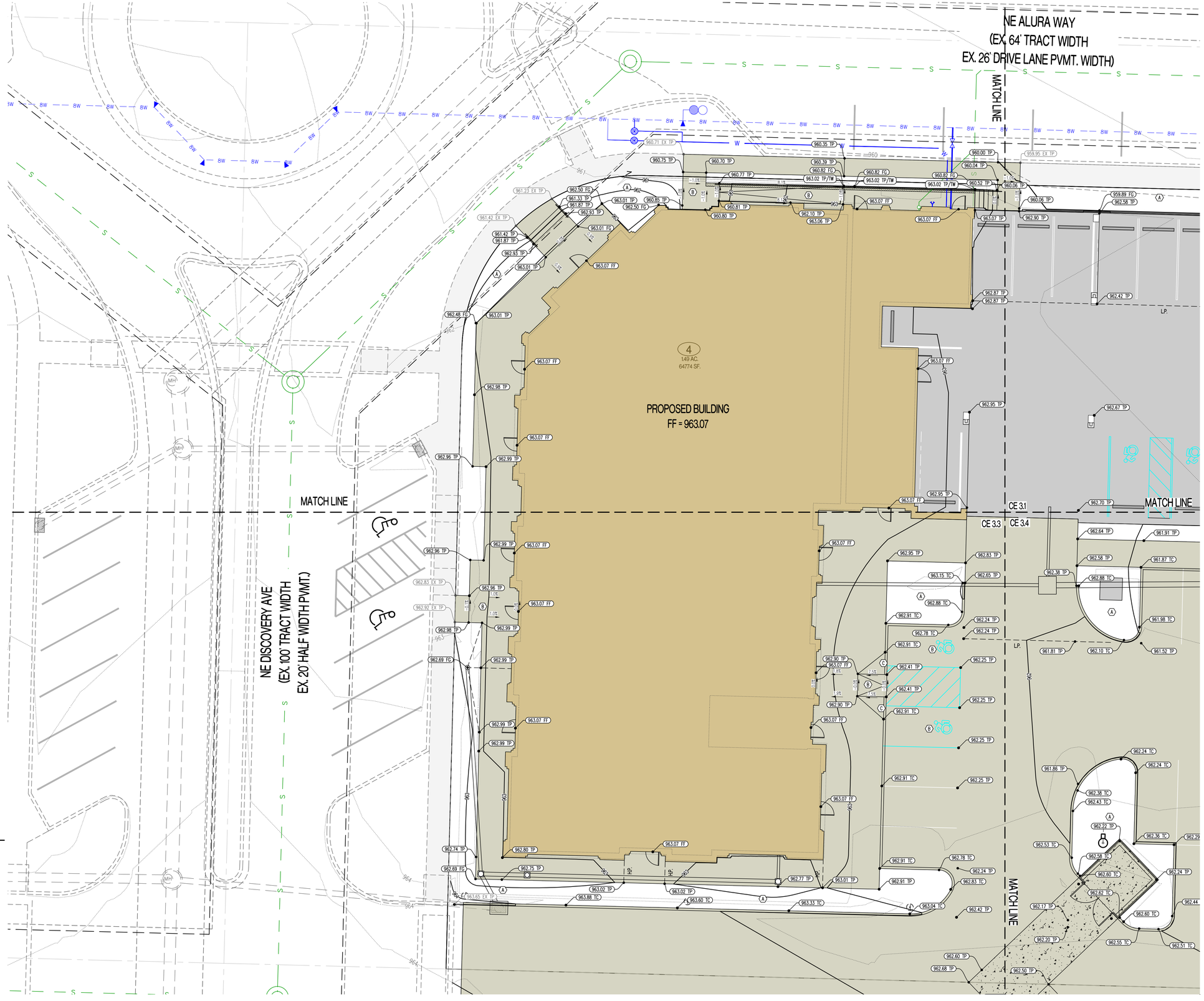

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THE VILLAGE AT DISCOVERY
LOT 4
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:
GRADING PLAN SHEET 2

DESIGNED:	NTE
DRAWN:	NMD
PROJECT NO.:	230286

SHEET:
CE 3.2

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Development Services Department
Lee's Summit, Missouri

09/24/2024

SCALE: 1"=10'
0 5 10 20

LEGEND OF LABELS

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(C)	TRANSITION FROM 6" CURB TO 0" CURB.

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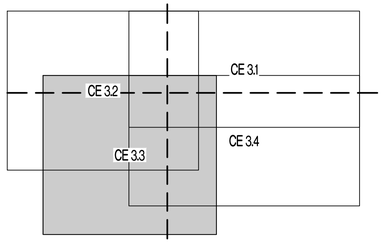

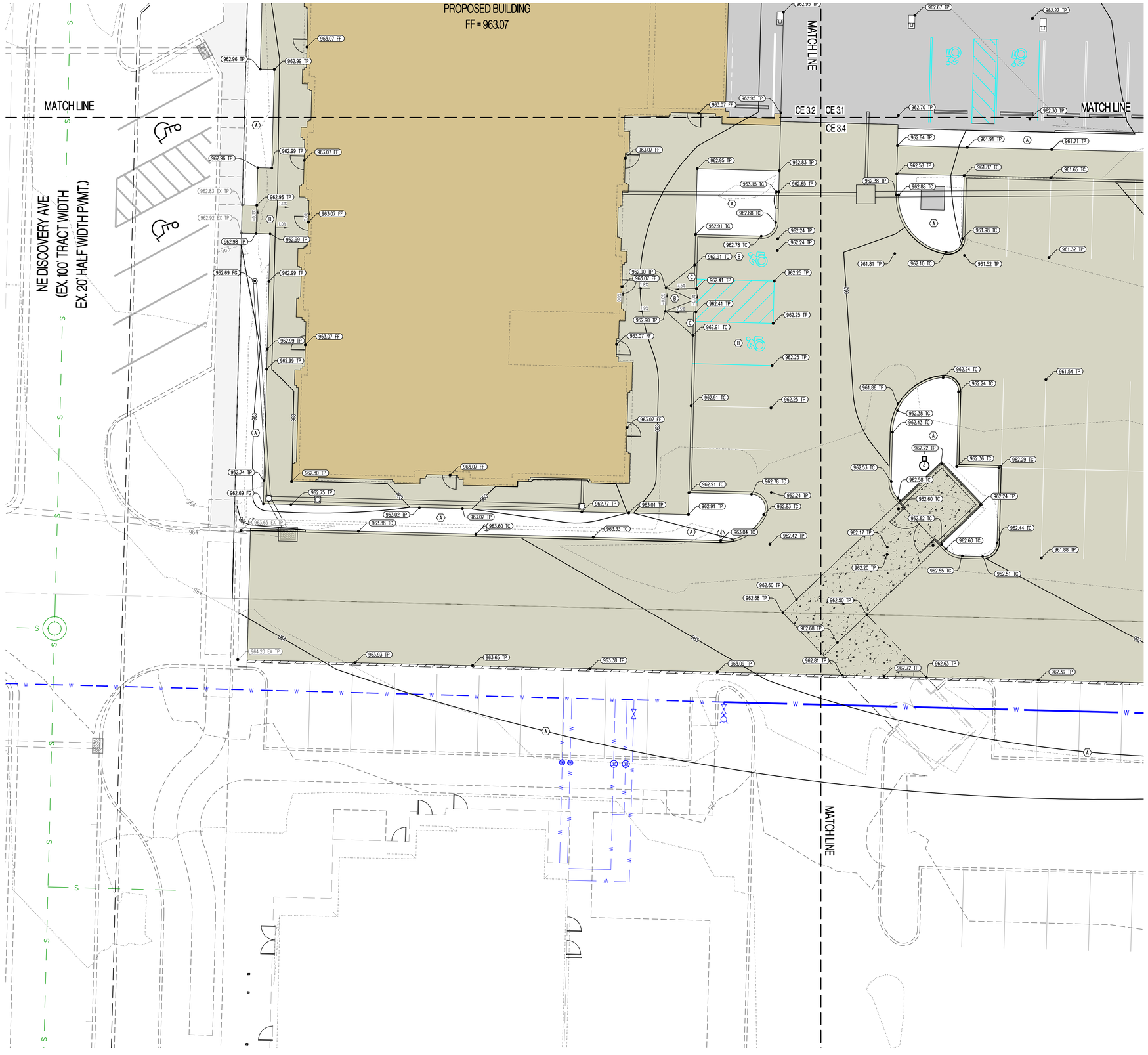

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THE VILLAGE AT DISCOVERY
LOT 4
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:
GRADING PLAN SHEET 3

DESIGNED:	NTE
DRAWN:	NMD
PROJECT NO.:	230286
SHEET:	CE 3.3

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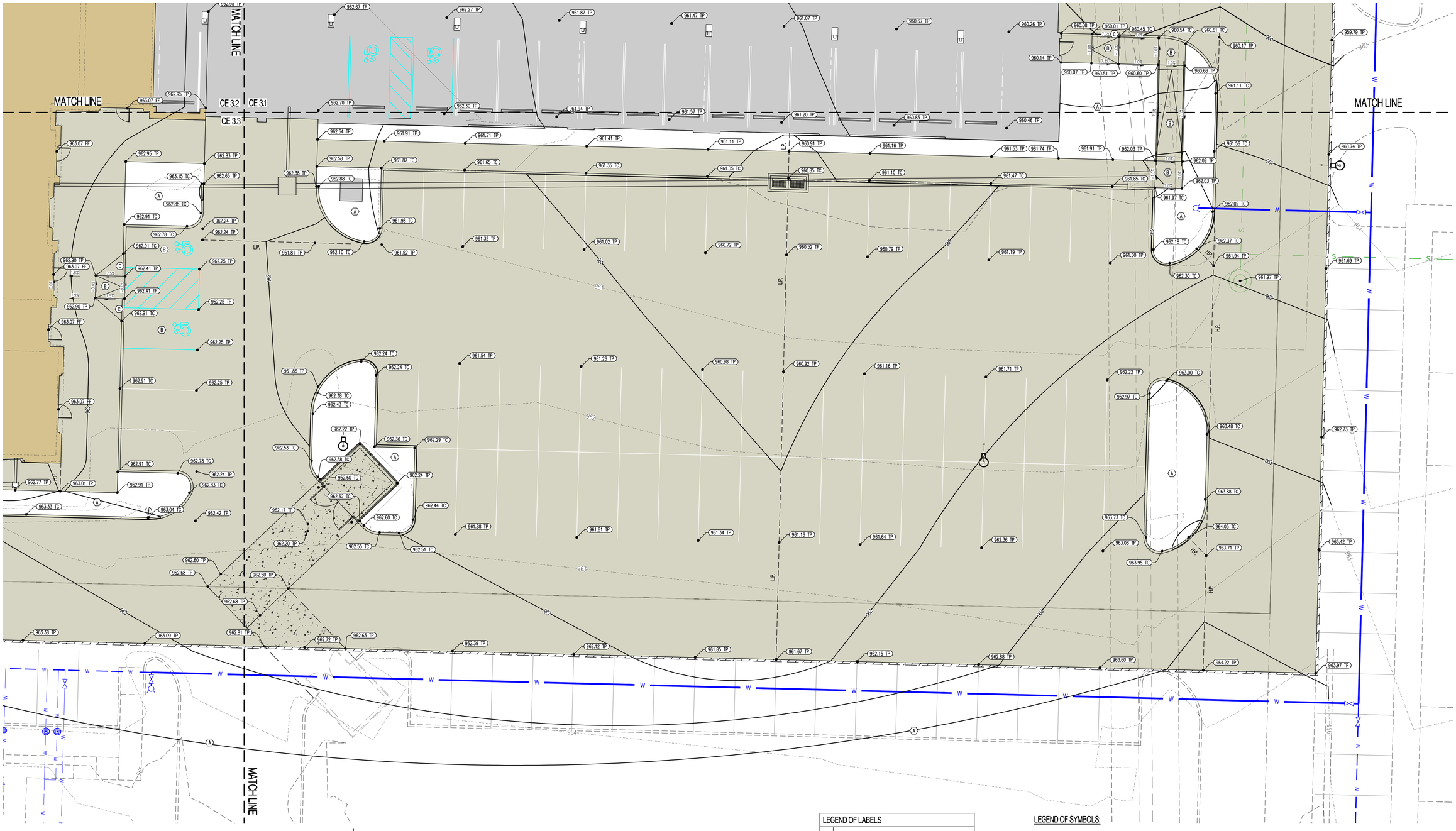

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Lee's Summit, Missouri

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THE VILLAGE AT DISCOVERY
LOT 4
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:
GRADING PLAN SHEET 4

DESIGNED:	NTE
DRAWN:	NMD
PROJECT NO.:	230286

SHEET:
CE 3.4

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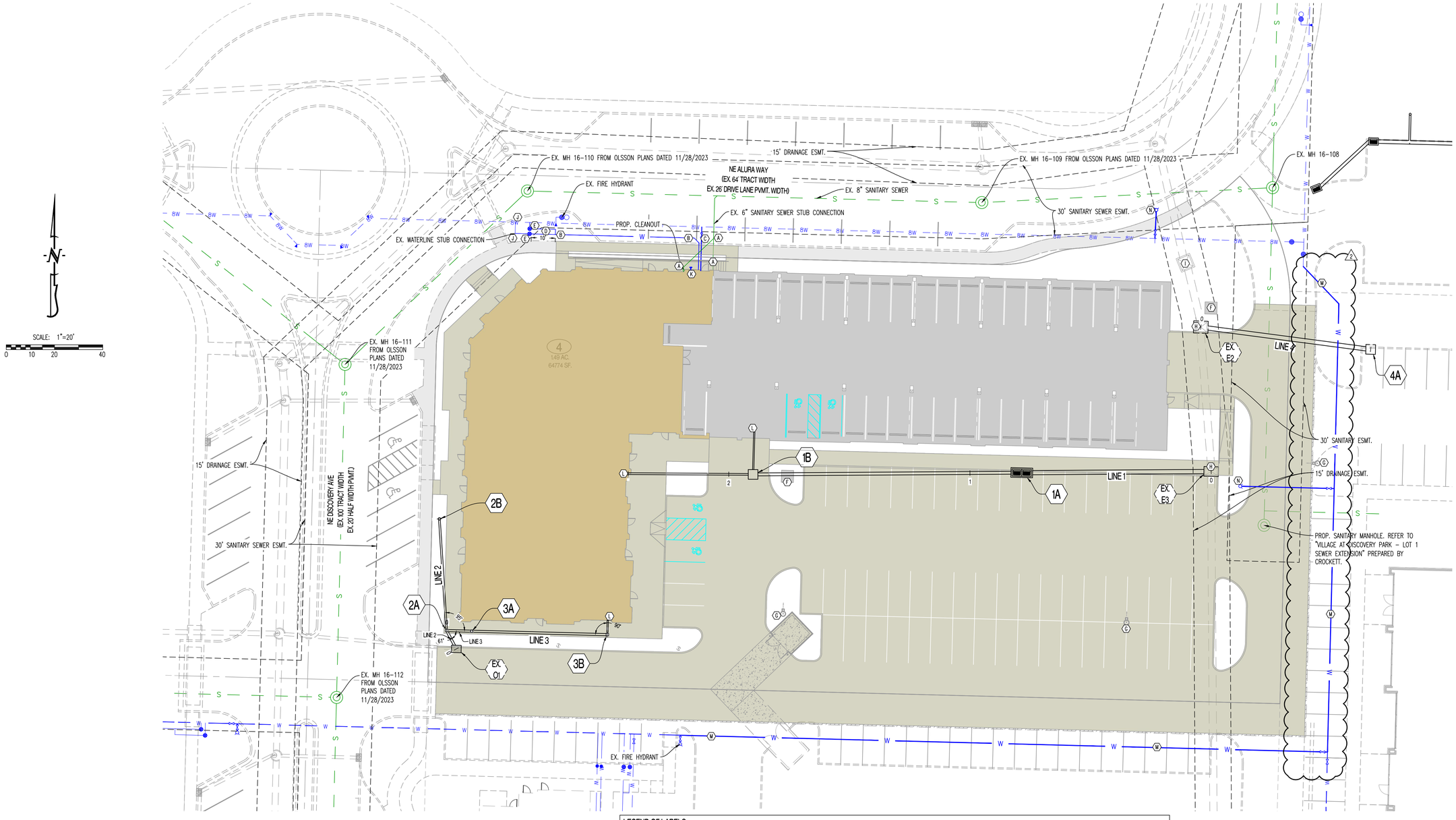

GENERAL NOTES:

1) CONTRACTOR SHALL VERIFY EXACT LOCATION AND DEPTH OF ALL UTILITIES BEFORE ANY EXCAVATION BEGINS.

2) ALL ITEMS ASSOCIATED WITH DOMESTIC WATERLINE CONSTRUCTION (INTERNAL OF VAULT/METER PIT) ARE SHOWN FOR CITY REVIEW ONLY. CONTRACTOR SHALL VERIFY ALL SIZES AND MATERIALS WITH M.E.P. BEFORE INSTALLATION.

LEGEND OF LABELS

(A) INSTALL 6" SDR 26 PVC LATERAL WITH CLEANOUTS AS SHOWN. INSTALL MAX ADAPTER AND CONNECT TO EXISTING SANITARY SEWER STUB AS SHOWN. CONTRACTOR TO FIELD VERIFY DEPTH OF EXISTING SANITARY STUB AND ROUTE AT 1% MINIMUM TO BUILDING. REFER TO M.E.P. PLANS FOR BUILDING CONNECTION. REFER TO CLEANOUT DETAIL ON CE 5.1.

(B) PROPOSED 3" CPVC WATERLINE SERVICE. REFER TO M.E.P. PLANS FOR BUILDING CONNECTION. CONFIRM SIZE AND MATERIAL WITH M.E.P. PLANS.

(C) PROPOSED 6" CPVC FIRE LINE. CONNECT TO EXISTING STUB INSTALLED PER "PRIVATE SITE DEVELOPMENT PLANS" PREPARED BY OLSSON DATED 10/18/2023. CONTRACTOR TO VERIFY PIPE SIZE AND VALVE INSTALLATION AT MAIN. DOUBLE CHECK DETECTOR CHECK TO BE INSTALLED IN BUILDING. REFER TO M.E.P. PLANS. CONFIRM SIZE AND MATERIAL WITH SPRINKLER DESIGNER.

(D) PROPOSED 2" TYPE K SOFT COPPER SERVICE LINE. USE 2" X 2" X 3" PIPE FITTING TO CONNECT SERVICE LINES A MINIMUM OF 10' BEYOND METER.

(E) INSTALL 2" WATER METER AS SHOWN. CONTRACTOR TO VERIFY WITH M.E.P. PRIOR TO INSTALLATION. REFER TO CITY DETAIL WAT-11 ON CE 7.5.

(F) PROPOSED TRANSFORMER. COORDINATE WITH M.E.P. AND UTILITY PROVIDER.

(G) PROPOSED LIGHT POLE. REFER TO M.E.P. PLANS.

(H) CONTRACTOR TO ASBUILT TOP OF CURB OPENING INLET. TOP TO BE ADJUSTED TO FINAL GRADE SHOWN ON CE 3.0-CE 3.4.

(I) CONTRACTOR TO ASBUILT TOP OF SIDE OPENING INLET. TOP TO BE ADJUSTED TO FINAL GRADE SHOWN ON CE 3.0-CE 3.4. REPLACE SIDE OPENING TOP WITH EJV5636 FRAME AND GRATE.

(J) CONTRACTOR TO TAP EXISTING 8" WATERLINE AND INSTALL 2" TYPE K SOFT COPPER PIPE WITH 2" CORPORTATION STOP VALVE AS SHOWN TO METER PIT. CONTRACTOR TO VERIFY SIZE AND DEPTH AND FURNISH ALL FITTINGS AS REQUIRED. REFER TO "PRIVATE SITE DEVELOPMENT PLANS" BY OLSSON DATED 10/18/2023 FOR EXISTING PLANNED WATERLINE. REFER TO CITY OF LEE'S SUMMIT DETAILS ON CE 7.5.

(K) PROPOSED 4" STORZ FIRE DEPARTMENT CONNECTION (FDC). COORDINATE WITH ARCHITECT AND M.E.P.

(L) PROPOSED 6" PVC INTERNAL STORM DRAINAGE SYSTEM CONNECTION. COORDINATE EXACT LOCATION WITH M.E.P. ROUTE 6" PVC TO DRAINAGE STRUCTURES AS SHOWN. REFER TO CE 5.1 FOR INVERTS.

(M) INSTALL 6" CPVC WITH VALVES AS SHOWN. CONTRACTOR TO INSTALL ALL BENDS, TEES, VALVES, AND THRUST BLOCKING AS REQUIRED BY CITY OF LEE'S SUMMIT STANDARDS.

(N) PROPOSED FIRE HYDRANT.

RELEASED FOR CONSTRUCTION
As Noted on Plan Review

Development Services Department
Lee's Summit, Missouri

09/24/2024

REVISIONS:

NO.	DATE
ORIGINAL	05/14/2024
1 REV. 1	07/26/2024

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STATE OF MISSOURI
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08/06/24
PROFESSIONAL ENGINEER

NATHAN THOMAS ECKHOFF
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OWNER:
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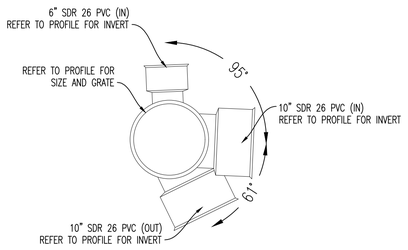
4220 PHILLIPS FARM RD
COLUMBIA, MO 65201

THE VILLAGE AT DISCOVERY
LOT 4
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:
UTILITY PLAN

DESIGNED:	NTE
DRAWN:	NMD
PROJECT NO.:	230286
SHEET:	CE 4.1



NYLOPLAST DRAIN BASIN - 2A

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Development Services Department
Lee's Summit, Missouri

09/24/2024

SCALE:
HORIZ 1" = 50'
VERT 1" = 10'

LEGEND OF LABELS:

(A) REFER TO PIPE EMBEDMENT DETAIL (UNDER PAVEMENT). SEE DETAIL 5 ON CE 5.2.

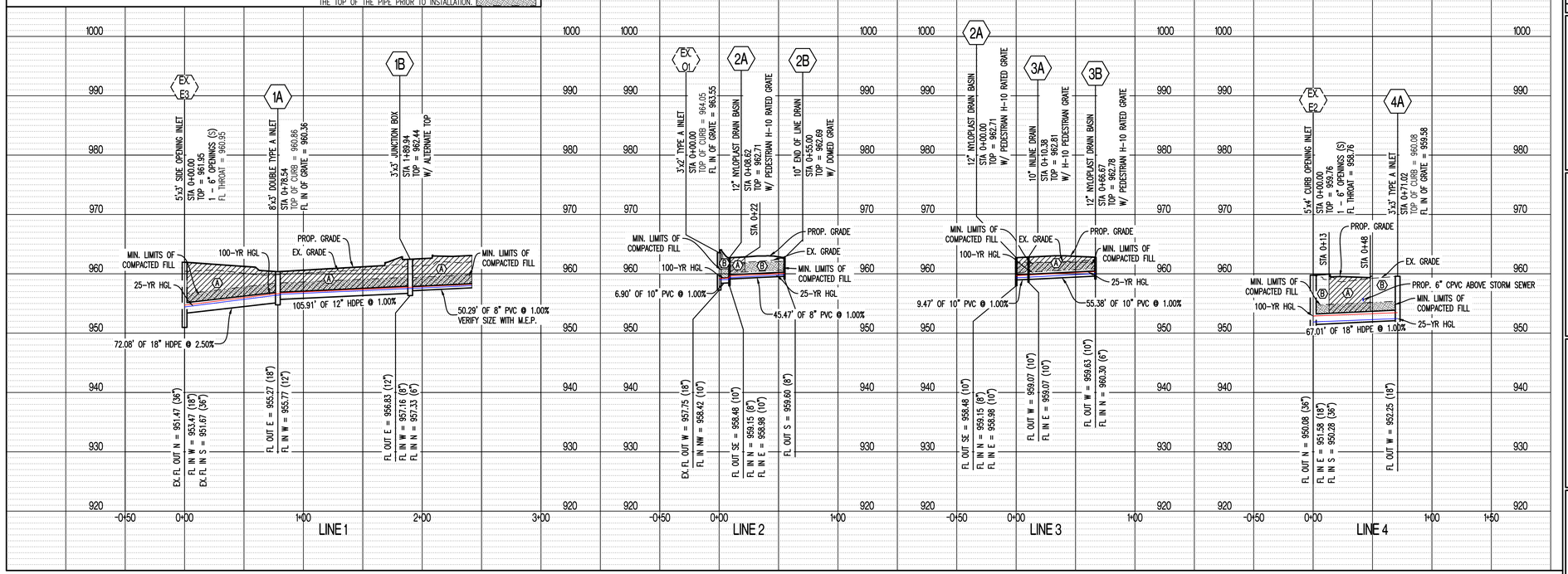
(B) REFER TO PIPE EMBEDMENT DETAIL (NOT UNDER PAVEMENT). SEE DETAIL 6 ON CE 5.2.

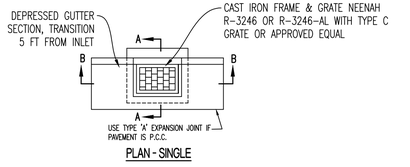
GENERAL NOTES:

1) ALL PORTIONS OF THIS STORM SEWER SHALL BE PRIVATE.

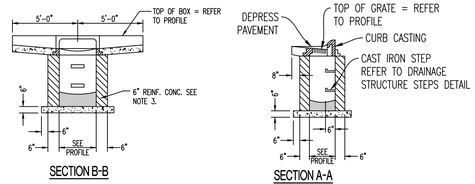
2) LENGTHS AND SLOPES OF PIPE ARE MEASURED FROM EDGE OF STRUCTURE TO EDGE OF STRUCTURE.

3) COMPACTED FILL SHALL BE PLACED TO A MINIMUM 18" ABOVE THE TOP OF THE PIPE PRIOR TO INSTALLATION.





PLAN - SINGLE

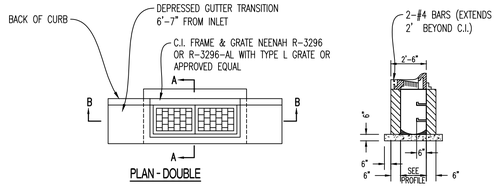


SECTION B-B

SECTION A-A

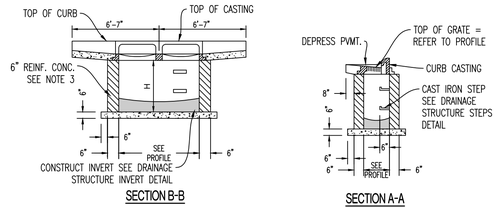
NOTES: 1. CONCRETE SHALL CONFORM TO CONCRETE SPECIFICATIONS. REFER TO CE 1.1.
2. REINFORCING STEEL SHALL BE GRADE 60
3. #4 BARS AT 12" CTRS, BOTH WAYS AND #4 BARS DIAGONAL AT PIPE OPENINGS
4. FOR BOX SIZES LARGER THAN THE GRATE, THE GRATE IS TO BE CENTERED ON THE BOX.
5. INSTALL WEEP HOLES PER DRAINAGE STRUCTURE WEEP HOLES DETAIL.

1 SINGLE TYPE "A" INLET



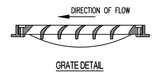
PLAN - DOUBLE

SECTION A-A
ALTERNATE



SECTION B-B

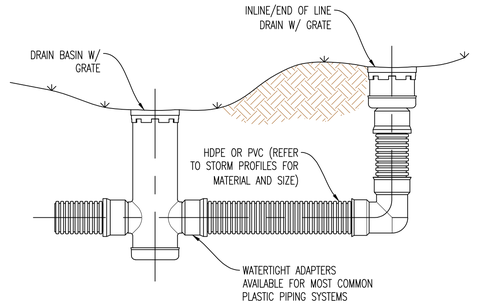
SECTION A-A



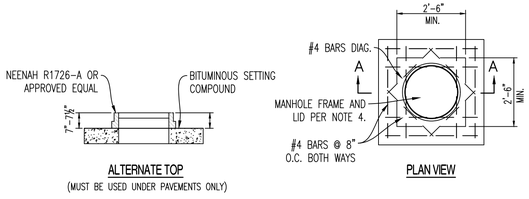
GRATE DETAIL

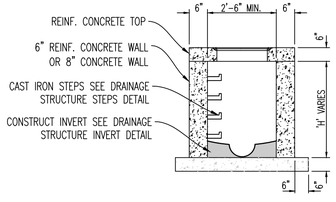
NOTES: 1. CONCRETE SHALL CONFORM TO CONCRETE SPECIFICATIONS. REFER TO CE 1.1.
2. REINFORCING STEEL SHALL BE GRADE 60
3. #4 BARS AT 12" CTRS, BOTH WAYS AND #4 BARS DIAGONAL AT PIPE OPENINGS
4. FOR BOX SIZES LARGER THAN THE GRATE, THE GRATE IS TO BE CENTERED ON THE BOX.
5. INSTALL WEEP HOLES PER DRAINAGE STRUCTURE WEEP HOLES DETAIL.

2 DOUBLE TYPE "A" INLET



3 TYPICAL INSTALLATION OF NYLOPLAST DRAIN BASIN AND INLINE DRAIN





SECTION A-A
(Showing Standard Flush Top)

NOTES:
1. CONCRETE SHALL CONFORM TO CONCRETE SPECIFICATIONS. REFER TO CE 1.1.
2. REINFORCING STEEL SHALL BE GRADE 60
3. #4 BARS AT 12" CTRS, BOTH WAYS AND #4 BARS DIAGONAL AT PIPE OPENINGS
4. FOR BOX SIZES LARGER THAN THE GRATE, THE GRATE IS TO BE CENTERED ON THE BOX.
5. FRAME AND LID SHALL BE NEENAH R-1960-A (TYPE C LID) OR APPROVED EQUAL.
6. INSTALL WEEP HOLES PER DRAINAGE STRUCTURE WEEP HOLES DETAIL.

4 JUNCTION BOX

REVISIONS:

NO.	DATE
ORIGINAL	05/14/2024
1 REV. 1	07/26/2024

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

STATE OF MISSOURI
NATHAN THOMAS ECKHOFF
NUMBER PE-2009014980
08/09/24
PROFESSIONAL ENGINEER

NATHAN THOMAS ECKHOFF
MO LICENSE: 2009014960

PREPARED BY:
CROCKETT ENGINEERING CONSULTANTS
1000 W. Wing Blvd., Suite 1
Belton, Missouri 64012
(570) 447-0292
www.crockettengineering.com
Crockett Engineering Consultants, LLC
Missouri Certificate of Authority
2006035901

OWNER:
DISCOVERY PARK LEES SUMMIT LLC
4220 PHILLIPS FARM RD
COLUMBIA, MO 65201

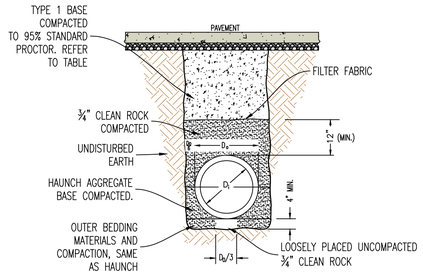
THE VILLAGE AT DISCOVERY
LOT 4
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:
STORM PROFILE & DETAILS

DESIGNED: NTE
DRAWN: NMD
PROJECT NO.: 230286

SHEET:
CE 5.1

Y:\2023\230286 - Discovery Park Lees Summit\Zone 1 Lot 4\ACAD Files\Construction Plans\230286 Zone 1 Lot 4 Storm Base.dwg

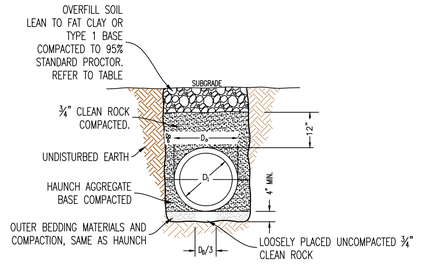


5 PIPE EMBEDMENT (UNDER PAVEMENT)

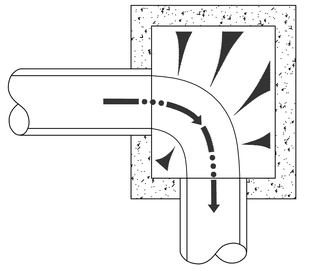
STRUCTURAL FILL COMPACTION REQUIREMENTS

SOIL FILL THICKNESS	• 9-INCHES OR LESS WHEN USING HEAVY SELF-PROPELLED COMPACTION EQUIPMENT • 6-INCHES OR LESS WHEN USING HAND GUIDED OR LIGHT SELF-PROPELLED EQUIPMENT
COMPACTION MOISTURE CONTENT REQUIREMENTS • LEAN TO FAT CLAY AND FAT CLAY • LEAN CLAY AND SILT • GRANULAR	• 2% BELOW STANDARD PROCTOR OPTIMUM MOISTURE CONTENT (OMC) TO 4% ABOVE THE STANDARD PROCTOR OPTIMUM MOISTURE CONTENT • 2% BELOW TO 3% ABOVE STANDARD PROCTOR OMC • WORKABLE MOISTURE CONTENT AND SHALL NOT PUMP WHEN PROOF-ROLLED [1]
COMPACTION REQUIREMENTS [1] [2]	95% OF STANDARD PROCTOR DRY DENSITY (ASTM D-698) 1. WE RECOMMEND ENGINEERED FILL BE TESTED FOR MOISTURE CONTENT AND COMPACTION DURING PLACEMENT. SHOULD THE RESULTS OF THE IN-PLACE DENSITY TESTS INDICATE THE SPECIFIED MOISTURE OR COMPACTION LIMITS HAVE NOT BEEN MET, THE AREA REPRESENTED BY THE TEST SHOULD BE REWORKED AND RETESTED AS REQUIRED UNTIL THE SPECIFIED MOISTURE AND COMPACTION REQUIREMENTS ARE ACHIEVED. 2. AS STATED WITHIN ASTM D698, THIS PROCEDURE IS INTENDED FOR SOILS WITH 30% OR LESS MATERIAL LARGER THAN 3/4". ACCORDINGLY, WE RECOMMEND FULL TIME PROOF-ROLL OBSERVATION BE PERFORMED INSTEAD OF MOISTURE DENSITY TESTING FOR MATERIALS CONTAINING MORE THAN 30% AGGREGATE RETAINED ON THE 3/4" SIEVE.

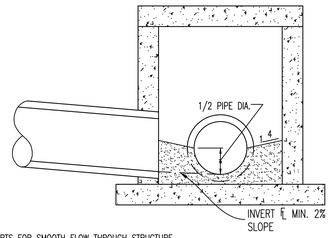
1. IF LIMESTOME SCREENINGS ARE USED AS NEW STRUCTURAL FILL, THE CONTRACTOR SHOULD BE AWARE THIS MATERIAL IS EXTREMELY SUSCEPTIBLE TO DEGRADATION UPON WETTING WHICH CAN RESULT IN DEEP-SEATED PUMPING AND RUTTING.
2. LIMESTONE SCREENINGS THAT PUMP AND RUT ARE NOT ACCEPTABLE FOR USE AS NEW STRUCTURAL FILL OR FOR LOW VOLUME CHANGE MATERAIL AND WILL NEED TO BE REMOVED AND REPLACED WITH SUITABLE MATERIAL.



6 PIPE EMBEDMENT (NOT UNDER PAVEMENT)



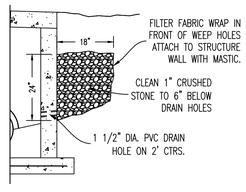
PLAN



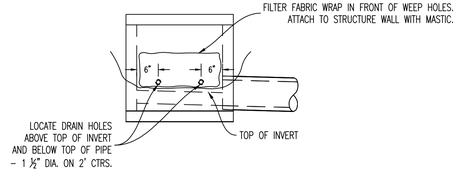
SECTION

NOTES:
1. FORM ALL INVERTS FOR SMOOTH FLOW THROUGH STRUCTURE.
2. INVERT SHALL BE FORMED UP TO 1/2 THE PIPE DIAMETER
3. INVERT SHALL BE CLASS E CONCRETE.

7 DRAINAGE STRUCTURE INVERT



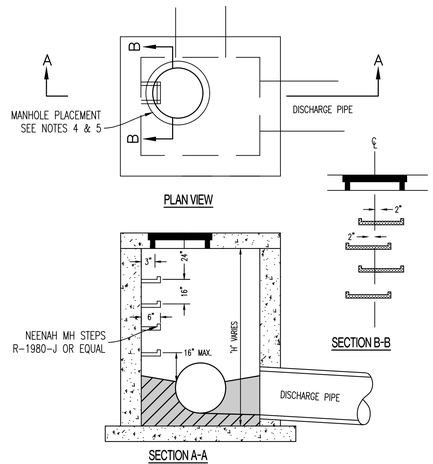
PARTIAL SECTION



FRONT ELEVATION

NOTE:
1. PLACE WEEP HOLES ON UPSTREAM FACE OF ALL STRUCTURES AND ALSO ON ROADWAY FACE OF CURB INLET STRUCTURES.
2. WEEP HOLE FILTER FABRIC SHALL CONSIST OF A NON-WOVEN, POLYPROPYLENE TYPE FABRIC SUCH AS: AMOCO 4553 NON-WOVEN GEOTEXTILE FABRIC OR APPROVED EQUAL.

8 DRAINAGE STRUCTURE WEEP HOLES



NOTES:
1. STEPS NOT REQUIRED WHERE H IS LESS THAN 4'.
2. CAST IRON STEPS STEPS SHALL BE AMERICAN ML-10-NCR OR EQUAL
3. STEPS SHALL BE PLACED ON VACANT WALL WHEN POSSIBLE
4. MANHOLE RING SHALL BE OFFSET TOWARD WALL WITH STEPS.
5. MANHOLE RING SHALL BE CENTERED ON CENTERLINE OF STEPS
6. STAGGER STEPS 2" EACH WAY FROM CENTERLINE OF MANHOLE RING.
7. TOP STEP 24" BELOW TOP OF LID
8. STEP SPACING TO BE 16", BOTTOM STEP TO BE NO HIGHER THAN 16" FROM INVERT.

9 DRAINAGE STRUCTURE STEPS

RELEASED FOR CONSTRUCTION
As Noted on Plan Review

Development Services Department
Lee's Summit, Missouri

09/24/2024

REVISIONS:

NO.	DATE
ORIGINAL	05/14/2024
1 REV. 1	07/26/2024

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

STATE OF MISSOURI
NATHAN THOMAS ECKHOFF
NUMBER PE-2003014960
08/06/24
PROFESSIONAL ENGINEER

NATHAN THOMAS ECKHOFF
MO LICENSE: 2003014960

PREPARED BY:
CROCKETT ENGINEERING CONSULTANTS
1000 W. Wing Blvd., Suite 1
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(573) 447-0292
www.crockettengineering.com
Crockett Engineering Consultants, LLC
Missouri Certificate of Authority
#2000133001

OWNER:
DISCOVERY PARK LEES SUMMIT LLC
4220 PHILLIPS FARM RD
COLUMBIA, MO 65201

THE VILLAGE AT DISCOVERY
LOT 4
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:
STORM DETAILS CONT'D

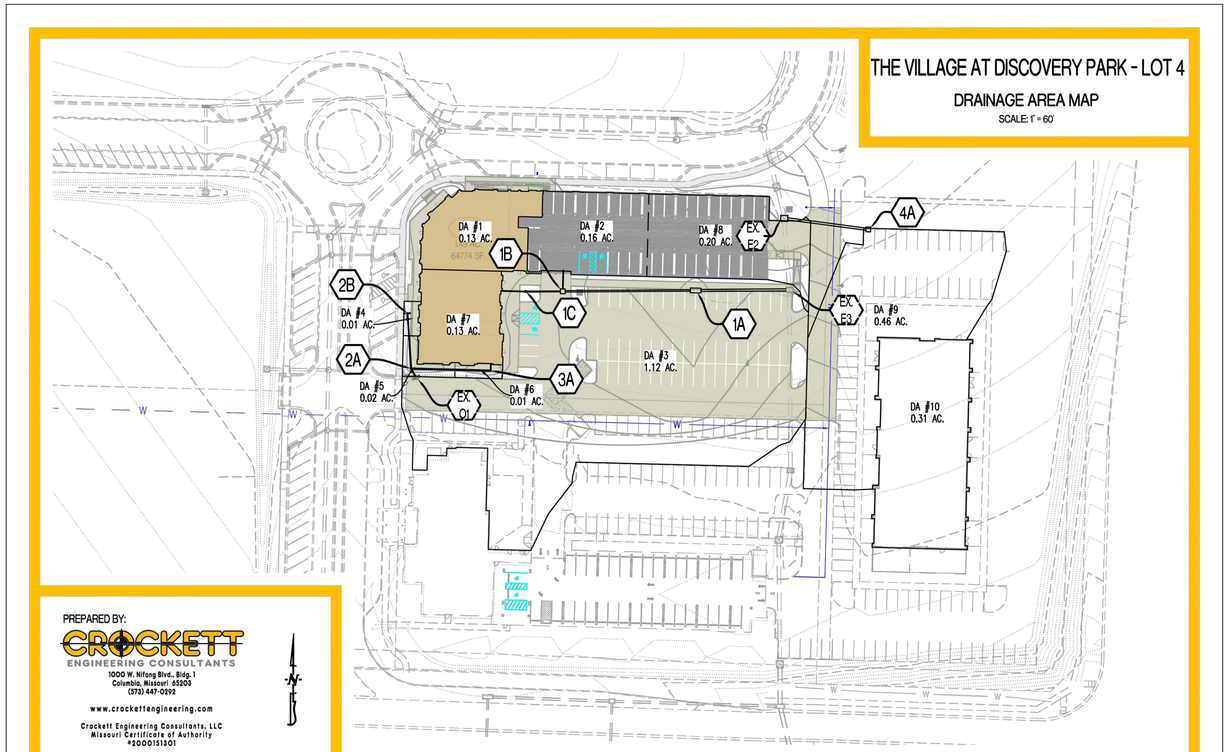
DESIGNED:	NTE
DRAWN:	NMD
PROJECT NO.:	230286

SHEET:
CE 5.2

RELEASED FOR CONSTRUCTION
As Noted on Plan Review

Development Services Department
Lee's Summit, Missouri

09/24/2024



CROCKETT
ENGINEERING CONSULTANTS

PROJECT: The Village at Discovery Park - Lot 4
CALCULATED BY: NMD CHECKED BY: NTE
DATE: 07/26/24 PROJECT NO: 230286

STORM HYDROLOGY / GUTTER / INLET CALCLULATIONS

DESCRIPTION			OVERLAND FLOW HYDROLOGY					GUTTER AND INLET HYDRAULICS							NOTES
AREA NO.	STRUCTURE LABEL	INLET TYPE	TIME OF CONCENTRATION	RUNOFF COEFFICIENT	AREA	CA	RAINFALL INTENSITY	RUNOFF	GUTTER FLOW	GUTTER SLOPE	WIDTH OF GUTTER FLOW	DEPTH OF GUTTER FLOW	THEORETICAL INLET CAPACITY	DESIGN INLET CAPACITY	INLET BYPASS FLOW	
			min		acres	acres	in/hr	cfs	cfs	ft/ft	ft	ft	cfs	cfs	cfs	
1	1C	ROOF		0.99	0.13	0.13	10.3	1.33								INTERNAL ROOF DRAIN TO NYLOPLAST
2	1B	ROOF		0.99	0.16	0.16	10.3	1.63								INTERNAL ROOF DRAIN TO JUNCTION BOX
3	1A	A		0.89	1.12	1.00	8.5	8.50					12.75	10.20		DOUBLE TYPE A IN SUMP - BYPASS TO EX. E4
4	2B	DB		0.99	0.01	0.01	10.3	0.10					0.98	0.78		10' END OF LINE DRAIN W/ 04 PONDING (DOMED GRATE)
5	2A	DB		0.99	0.02	0.02	10.3	0.20					0.92	0.74		12' NYLOPLAST DRAIN W/ 0.3 PONDING (PEDESTRIAN GRATE)
6	3B	DB		0.99	0.01	0.01	10.3	0.10					0.92	0.74		12' NYLOPLAST DRAIN W/ 0.3 PONDING (PEDESTRIAN GRATE)
7	3B	ROOF		0.99	0.20	0.20	10.3	2.04								ROOF DRAIN
8	EX. E2	CI		0.89	0.20	0.18	8.5	1.52								EX. 5' X 3' CURB OPENING INLET
	EX. E3	CI														EX. 5' X 3' CURB OPENING INLET
9	4A	A		0.89	0.46	0.41	8.5	3.49					9.80	7.84		TYPE A IN SUMP
10		ROOF		0.99	0.31	0.31	10.3	3.17								FUTURE INTERNAL ROOF DRAIN TO 4A

CROCKETT
ENGINEERING CONSULTANTS

PROJECT: The Village at Discovery Park - Lot 4
CALCULATED BY: NMD CHECKED BY: NTE
DATE: 7/26/24 PROJECT NO: 230286

STORM DRAIN PIPE SIZE

DESCRIPTION		STORM DRAIN HYDRAULICS										NOTES
AREA NO.	UPSTREAM STRUCTURE LABEL	TIME OF CONCENTRATION	CA ADDED	CA CUMUL.	RAINFALL INTENSITY	RUNOFF	STORM DRAIN SLOPE	STORM DRAIN DIAMETER	STORM DRAIN MATERIAL RCP, CMP, PVC OR HDPE	CAPACITY FLOWING FULL	VELOCITY FLOWING FULL	
		min	acres	acres	in/hr	cfs	ft/ft	in		cfs	fps	
LINE 1												
1	1C	5		0.13	10.32	1.33	0.010	8	PVC	1.43	4.09	
2	1B	5	0.16	0.29	10.32	2.96	0.010	12	HDPE	3.86	4.91	
3	1A	5	1.00	1.28	8.53	10.95	0.025	18	HDPE	17.98	10.18	
LINE 2												
4	2B	5		0.01	10.32	0.10	0.010	6	PVC	0.66	3.38	
5 + LINE 3	2A	5	0.23	0.24	10.32	2.45	0.010	10	PVC	2.59	4.75	
	EX. O1	5		0.24	10.32	2.45	0.020	18	HDPE	16.09	9.11	EX. PIPE
LINE 3												
7+6	3B	5		0.21	10.32	2.15	0.010	10	PVC	2.59	4.75	
LINE 4												
9 + ROOF LOT 1	4A	5		0.72	8.53	6.11	0.010	18	HDPE	11.37	6.44	

REVISIONS:

NO.	DATE
ORIGINAL	06/14/2024

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY
STATE OF MISSOURI
NATHAN THOMAS ECKHOFF
NUMBER PE-2009014960
08/06/24
PROFESSIONAL ENGINEER
NATHAN THOMAS ECKHOFF
MO LICENSE: 2009014960

PREPARED BY:
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ENGINEERING CONSULTANTS
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Columbia, Missouri 65203
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www.crockettengineering.com
Crockett Engineering Consultants, LLC
Missouri Certificate of Authority
#2000153101

OWNER:
DISCOVERY PARK LEES SUMMIT LLC
4220 PHILLIPS FARM RD
COLUMBIA, MO 65201

THE VILLAGE AT DISCOVERY
LOT 4
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:

25-YR STORM CALCULATIONS

DESIGNED: NTE
DRAWN: NMD
PROJECT NO.: 230286

SHEET:
CE 5.3

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RELEASED FOR CONSTRUCTION
As Noted on Plan Review

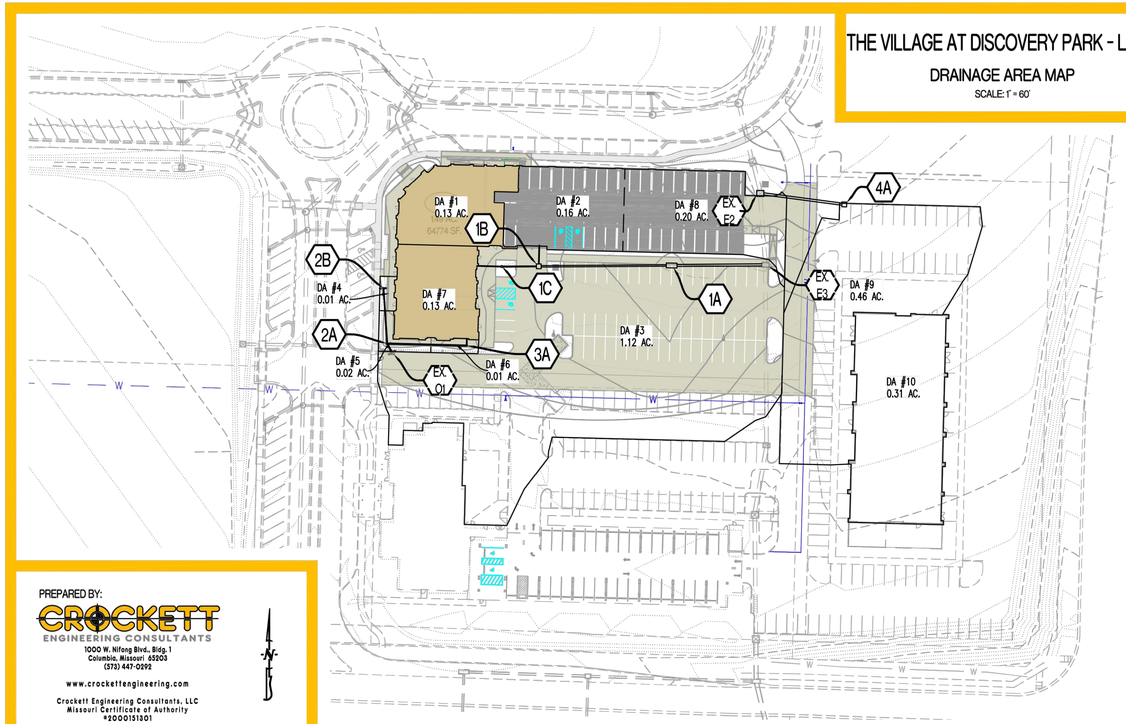
Development Services Department
Lee's Summit, Missouri

09/24/2024

THE VILLAGE AT DISCOVERY PARK - LOT 4

DRAINAGE AREA MAP

SCALE: 1" = 60'



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Crockett Engineering Consultants, LLC
Missouri Certificate of Authority
#2000151301

CROCKETT ENGINEERING CONSULTANTS

PROJECT: The Village at Discovery Park - Lot 4
CALCULATED BY: NMD CHECKED BY: NTE
DATE: 07/26/24 PROJECT NO: 230286

STORM HYDROLOGY / GUTTER / INLET CALCLULATIONS

DESCRIPTION			OVERLAND FLOW HYDROLOGY					GUTTER AND INLET HYDRAULICS							NOTES
AREA NO.	STRUCTURE LABEL	INLET TYPE	TIME OF CONCENTRATION	RUNOFF COEFFICIENT	AREA	CA	RAINFALL INTENSITY	RUNOFF	GUTTER FLOW	GUTTER SLOPE	WIDTH OF GUTTER FLOW	DEPTH OF GUTTER FLOW	THEORETICAL INLET CAPACITY	DESIGN INLET CAPACITY	BYPASS FLOW	
			min		acres	acres	in/hr	cfs	cfs	ft/ft	ft	ft	cfs	cfs	cfs	
1	1C	ROOF		0.99	0.13	0.13	10.3	1.33								INTERNAL ROOF DRAIN TO NYLOPLAST
2	1B	ROOF		0.99	0.16	0.16	10.3	1.63								INTERNAL ROOF DRAIN TO JUNCTION BOX
3	1A	A		0.99	1.12	1.11	10.3	11.44					12.75	10.20	1.24	DOUBLE TYPE A IN SUMP - BYPASS TO EX. E4
4	2B	DB		0.99	0.01	0.01	10.3	0.10					0.98	0.78		10' END OF LINE DRAIN W/ 04' PONDING (DOMED GRATE)
5	2A	DB		0.99	0.02	0.02	10.3	0.20					0.92	0.74		12' NYLOPLAST DRAIN W/ 0.3' PONDING (PEDESTRIAN GRATE)
6	3B	DB		0.99	0.01	0.01	10.3	0.10					0.92	0.74		12' NYLOPLAST DRAIN W/ 0.3' PONDING (PEDESTRIAN GRATE)
7	3B	ROOF		0.99	0.20	0.20	10.3	2.04								ROOF DRAIN
8	EX. E2	CI		0.99	0.20	0.20	10.3	2.04								EX. 5' X 3' CURB OPENING INLET
	EX. E3	CI														EX. 5' X 3' CURB OPENING INLET
9	4A	A		0.99	0.46	0.46	10.3	4.70					9.80	7.84		TYPE A IN SUMP
10		ROOF		0.99	0.31	0.31	10.3	3.17								FUTURE INTERNAL ROOF DRAIN TO 4A

CROCKETT ENGINEERING CONSULTANTS

PROJECT: The Village at Discovery Park - Lot 4
CALCULATED BY: NMD CHECKED BY: NTE
DATE: 7/26/24 PROJECT NO: 230286

STORM DRAIN PIPE SIZE

DESCRIPTION		STORM DRAIN HYDRAULICS									NOTES
AREA NO.	UPSTREAM STRUCTURE LABEL	TIME OF CONCENTRATION	CA ADDED	CA CUM.	RAINFALL INTENSITY	RUNOFF	STORM DRAIN SLOPE	STORM DRAIN DIAMETER	STORM DRAIN MATERIAL RCP, CMP, PVC OR HDPE	CAPACITY FLOWING FULL	VELOCITY FLOWING FULL	
		min	acres	acres	in/hr	cfs	ft/ft	in		cfs	fps	
LINE 1												
1	1C	5		0.13	10.32	1.33	0.010	8	PVC	1.43	4.09	
2	1B	5	0.16	0.29	10.32	2.96	0.010	12	HDPE	3.86	4.91	
3	1A	5	1.00	1.28	8.53	10.95	0.025	18	HDPE	17.98	10.18	
LINE 2												
4	2B	5		0.01	10.32	0.10	0.010	6	PVC	0.66	3.38	
5 + LINE 3	2A	5	0.23	0.24	10.32	2.45	0.010	10	PVC	2.59	4.75	
	EX. O1	5		0.24	10.32	2.45	0.020	18	HDPE	16.09	9.11	EX. PIPE
LINE 3												
7+6	3B	5		0.21	10.32	2.15	0.010	10	PVC	2.59	4.75	
LINE 4												
9 + ROOF LOT 1	4A	5		0.72	8.53	6.11	0.010	18	HDPE	11.37	6.44	

REVISIONS:

NO.	DATE
ORIGINAL	05/14/2024

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY
STATE OF MISSOURI
NATHAN THOMAS ECKHOFF
NUMBER PE-2009014960
09/09/24
PROFESSIONAL ENGINEER
NATHAN THOMAS ECKHOFF
MO LICENSE: 2009014960

PREPARED BY:
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4220 PHILLIPS FARM RD
COLUMBIA, MO 65201

THE VILLAGE AT DISCOVERY PARK LOT 4
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:

100-YR STORM CALCULATIONS

DESIGNED: NTE
DRAWN: NMD
PROJECT NO.: 230286
SHEET: CE 5.4

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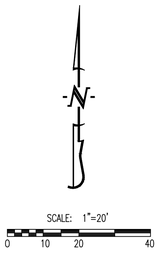
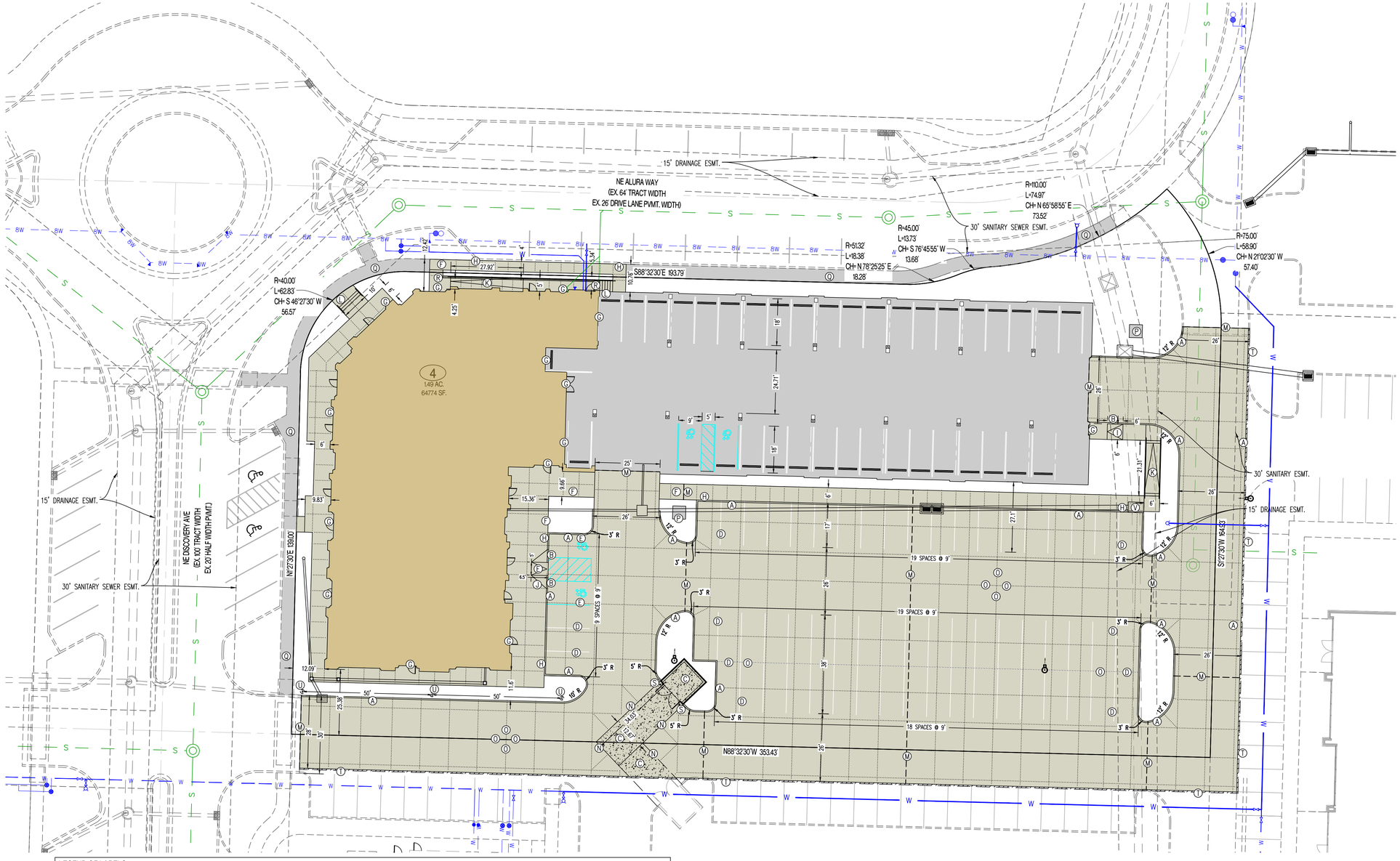
RELEASED FOR CONSTRUCTION
As Noted on Plan Review

Development Services Department
Lee's Summit, Missouri

09/24/2024





PARKING CALCULATIONS

PARKING SUMMARY (LOT 4):

SPACES REQUIRED:	
COMMERCIAL (9,845 SQ. FT.):	
OFFICES	
– 4 PER 1,000 SQ. FT. (NOT MEDICAL, DENTAL, OR VETERINARY)	40 SPACES
RESIDENTIAL (46 UNITS):	
– 1.17 SPACES/UNIT PLUS 0.15 VISITOR SPACES/UNIT	61 SPACES
STANDARD SPACES REQUIRED:	101 SPACES
HANDICAP SPACES REQUIRED:	5 SPACES
SPACES PROVIDED:	
STANDARD SPACES PROVIDED:	98 SPACES
HANDICAP SPACES PROVIDED:	4 SPACES
EXISTING ADJACENT SPACES (TRACT B) PROVIDED:	14 SPACES
EXISTING ADJACENT HANDICAP SPACES (TRACT B) PROVIDED:	2 SPACES
TOTAL SPACES PROVIDED:	112 SPACES

LEGEND OF LABELS

- (A) CONSTRUCT LIGHT DUTY CONCRETE W/ INTEGRAL CURB AS SHOWN. REFER TO DETAIL 1 & 2 ON CE 7.1.
- (B) TRANSITION FROM 6" CURB TO 0" CURB. REFER TO CE 3.0–CE 3.4.
- (C) DUMPSTER PAD AREA W/ INTEGRAL CURB AS SHOWN. REFER DETAIL 7 ON CE 7.1. REFER TO ARCHITECTURAL PLANS FOR PROPOSED DUMPSTER ENCLOSURE DETAILS. POUR DUMPSTER PAD APPROACH FOR LOT 3 AND LOT 4 CONCURRENTLY.
- (D) PAINT 4" PARKING STALL STRIPES AS SHOWN, COLOR WHITE (TYPICAL) ALL STALLS EXCEPT ADA ACCESSIBLE STALLS. REFER TO PLAN FOR WIDTH AND DEPTH OF STALLS.
- (E) CONSTRUCT ADA ACCESSIBLE PARKING AREA WITH SIGNAGE AND ADA RAMPS. PAINT 4" STRIPE AND ACCESSIBLE SYMBOL, COLOR BLUE. PAINT HATCH AREA AS SHOWN, COLOR BLUE. SLOPE OF THE PAVEMENT AT ALL ACCESSIBLE STALLS SHALL NOT EXCEED 1:50. REFER TO DETAIL 10 ON CE 7.2.
- (F) CONSTRUCT 4" THICK, PCC WALK PER PLAN DIMENSIONS AS SHOWN (MAXIMUM LONGITUDINAL SLOPE 1:20. MAXIMUM CROSS SLOPE AT 1:50). REFER DETAIL 5 ON CE 7.1.
- (G) CONSTRUCT THICKENED EDGE SIDEWALK/PAVEMENT ABUTTING BUILDING PER PLAN DIMENSIONS AS SHOWN (MAXIMUM LONGITUDINAL SLOPE 1:20. MAXIMUM CROSS SLOPE AT 1:50). REFER TO DETAIL 4 ON CE 7.1.
- (H) CONSTRUCT THICKENED EDGE SIDEWALK WALK AT BACK OF CURB PER PLAN DIMENSIONS AS SHOWN (MAXIMUM LONGITUDINAL SLOPE 1:20. MAXIMUM CROSS SLOPE AT 1:50). REFER TO DETAIL 3 ON CE 7.1.
- (I) CONSTRUCT ADA ACCESSIBLE SIDEWALK RAMP AT BACK OF CURB. REFER TO DETAIL 8 ON CE 7.1.
- (J) CONSTRUCT ADA ACCESSIBLE SIDEWALK RAMP WITH FLARE AT BACK OF CURB. REFER TO DETAIL 9 ON CE 7.1.
- (K) CONSTRUCT ADA ACCESSIBLE SIDEWALK RAMP WITH HANDRAIL. REFER TO DETAIL 11 ON CE 7.2.
- (L) INSTALL PCC STAIRS WITH HANDRAIL IN SIDEWALK. REFER TO DETAIL 12 ON CE 7.2 REFER TO CE 3.0–CE 3.4 FOR ELEVATIONS.
- (M) INSTALL TYPE A OR TYPE A ALTERNATE EXPANSION JOINT IN PAVING. REFER TO DETAIL 6 ON CE 7.1.
- (N) INSTALL TYPE B CONSTRUCTION JOINT WHERE PROPOSED CONCRETE PAVING ABUTS EXISTING CONCRETE PAVING. REFER TO DETAIL 6 ON CE 7.1.
- (O) INSTALL TYPE C SAW JOINT IN PAVEMENT, MAXIMUM 12'X12' SQUARES (TYPICAL). REFER TO DETAIL 6 ON CE 7.1.
- (P) PROPOSED TRANSFORMER PAD. COORDINATE WITH M.E.P. FOR EXACT SIZE AND LOCATION.
- (Q) 5' STREET–SIDE SIDEWALK TO BE CONSTRUCTED. REFER TO OLSSON PLANS TITLED "PRIVATE SITE DEVELOPMENT PLANS FOR THE VILLAGE AT DISCOVERY PARK ZONE 1" DATED 10/18/2023.
- (R) CONSTRUCT RETAINING WALL WITH GUARDRAIL PRIOR TO SIDEWALK CONSTRUCTION AS SHOWN. REFER TO CE 3.0–CE 3.4 FOR WALL HEIGHT. REFER TO DETAILS 14 & 15 ON CE 7.3.
- (S) INSTALL PIPE BOLLARD AS SHOWN. REFER TO DETAIL 13 ON CE 7.3.
- (T) CONSTRUCT TEMPORARY ASPHALTIC CURB AS NECESSARY. CONTRACTOR TO COORDINATE WITH OWNER AND CITY OF LEE'S SUMMIT FOR DEVELOPMENT OF ADJACENT PARKING LOT TO THE SOUTH.
- (U) INSTALL FIRE LANE SIGN. SIGN SPACING SHALL NOT EXCEED 50 LF. SIGN SHALL BE 12"W X 18"H AND READ "FIRE LANE NO PARKING". REFER TO DETAIL 16 ON CE 7.3.
- (V) INSTALL REINFORCING AT EXISTING DRAINAGE STRUCTURE IN SIDEWALK. REFER TO DETAIL 17 ON CE 7.3.

GENERAL NOTES:

1) ALL ACCESSIBLE PARKING SHALL COMPLY WITH THE REQUIREMENTS OF THE FEDERAL AMERICANS WITH DISABILITIES ACT.
2) THE PAVEMENT JOINTS SHOWN ARE A GRAPHICAL REPRESENTATION OF A POSSIBLE JOINT CONTRACTOR TO PROVIDE SHOP DRAWINGS WITH JOINT LAYOUT FOR APPROVAL BY ENGINEER PRIOR TO POURING OF PAVEMENT.
3) REFER TO ARCHITECTURAL PLANS FOR PARKING GARAGE LAYOUT. PARKING GARAGE PAVEMENT SHALL MATCH CROSS SECTION OF EXTERIOR PARKING LOTS.

CALCULATIONS: LOT 7

LAND AREA:		
TOTAL LAND AREA:		1.49 AC
BUILDING DETAILS:		
1ST FLOOR:		9,845 SQ.FT.
2ND FLOOR:		24,285 SQ.FT.
3RD FLOOR:		24,285 SQ.FT.
TOTAL S.F. (3–STORIES)		58,415 SQ.FT.
LOT COVERAGES:	ACTUAL	
NET LAND AREA:	64,774 SQ.FT.	100%
TOTAL IMPERVIOUS SURFACE AREA:	54,694 SQ.FT.	84%
TOTAL OPEN SPACE:	10,080 SQ.FT.	16%
FLOOR AREA RATIO:		90%

REVISIONS:

NO.	DATE
ORIGINAL	05/14/2024
1 REV. 1	07/26/2024

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

STATE OF MISSOURI
NATHAN THOMAS ECKHOFF
NUMBER PE-2003014960
08/09/24
PROFESSIONAL ENGINEER

NATHAN THOMAS ECKHOFF
MO LICENSE: 2003014960

PREPARED BY:
CROCKETT ENGINEERING CONSULTANTS
1000 W. Wing Blvd., Suite 1
Belton, Missouri 64012
(570) 447-0292
www.crockettengineering.com
Crockett Engineering Consultants, LLC
Missouri Certificate of Authority
#2005013901

OWNER:
DISCOVERY PARK LEES SUMMIT LLC
4220 PHILLIPS FARM RD
COLUMBIA, MO 65201

THE VILLAGE AT DISCOVERY
LOT 4
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:
SITE PLAN

DESIGNED: NTE
DRAWN: NMD
PROJECT NO.: 230286

SHEET:
CE 6.1

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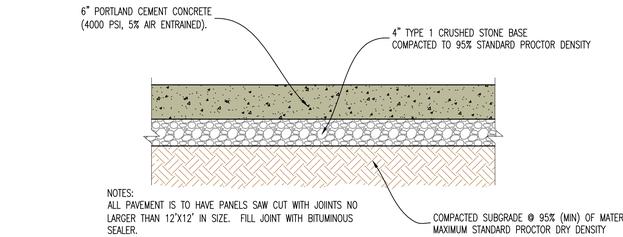
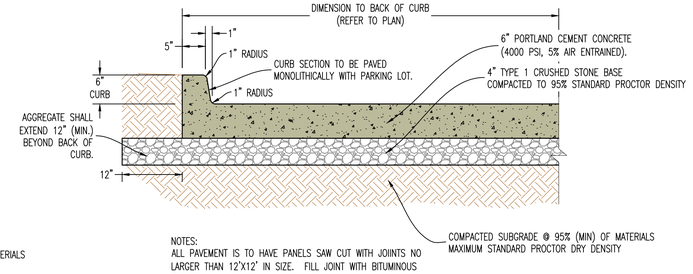


NOTES:
ALL PAVEMENT IS TO HAVE PANELS SAW CUT WITH JOIINTS NO LARGER THAN 12'X12' IN SIZE. FILL JOINT WITH BITUMINOUS SEALER.

ALL CONCRETE MATERIALS FOR PAVING CURB AND GUTTER, SIDEWALKS, PATHS, COMMERCIAL DRIVEWAYS AND OTHER PAVEMENTS SHALL CONFORM TO THE KCMMB SPECIFICATIONS.

1 LIGHT DUTY CONCRETE PAVEMENT CROSS-SECTION



NOTES:
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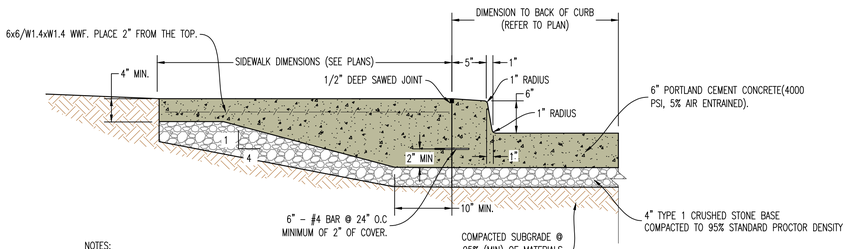
ALL CONCRETE MATERIALS FOR PAVING CURB AND GUTTER, SIDEWALKS, PATHS, COMMERCIAL DRIVEWAYS AND OTHER PAVEMENTS SHALL CONFORM TO THE KCMMB SPECIFICATIONS.

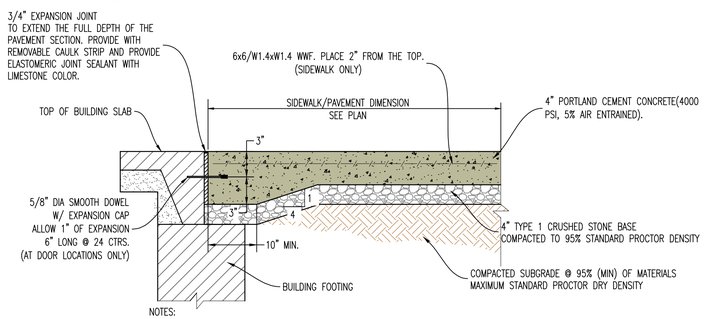
2 6" CONCRETE BARRIER CURB CROSS-SECTION



NOTES:
ALL PAVEMENT IS TO HAVE PANELS SAW CUT WITH JOIINTS NO LARGER THAN 12'X12' IN SIZE. JOINT SEALER TO BE BITUMINOUS SEALER IN PARKING AREAS AND NON-BITUMINOUS IN SIDEWALK/WALKING SURFACES (COLOR GRAY)

ALL CONCRETE MATERIALS FOR PAVING CURB AND GUTTER, SIDEWALKS, PATHS, COMMERCIAL DRIVEWAYS AND OTHER PAVEMENTS SHALL CONFORM TO THE KCMMB SPECIFICATIONS.

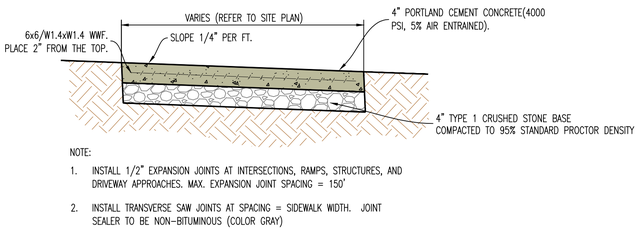
3 THICKENED EDGE SIDEWALK WITH INTEGRAL CURB & GUTTER



NOTES:
ALL LOW VOLUME CHANGE MATERIAL IN LOCATIONS OF SIDEWALK/PAVEMENT PLACED NEXT TO BUILDING IS TO BE REMOVED COMPLETELY AND REPLACED WITH TYPE 1 CRUSHED STONE BASE COMPACTED TO 95% STANDARD PROCTOR DENSITY PRIOR TO SIDEWALK/PAVEMENT INSTALLATION. JOINT SEALER TO BE BITUMINOUS SEALER IN PARKING AREAS AND NON-BITUMINOUS IN SIDEWALK/WALKING SURFACES (COLOR GRAY)

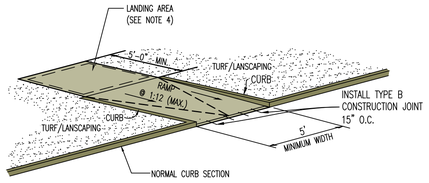
ALL CONCRETE MATERIALS FOR PAVING CURB AND GUTTER, SIDEWALKS, PATHS, COMMERCIAL DRIVEWAYS AND OTHER PAVEMENTS SHALL CONFORM TO THE KCMMB SPECIFICATIONS.

4 SIDEWALK/PAVEMENT ABUTTING BUILDING



NOTE:
1. INSTALL 1/2" EXPANSION JOINTS AT INTERSECTIONS, RAMPS, STRUCTURES, AND DRIVEWAY APPROACHES. MAX. EXPANSION JOINT SPACING = 150'
2. INSTALL TRANSVERSE SAW JOINTS AT SPACING = SIDEWALK WIDTH. JOINT SEALER TO BE NON-BITUMINOUS (COLOR GRAY)
3. ALL CONCRETE MATERIALS FOR PAVING CURB AND GUTTER, SIDEWALKS, PATHS, COMMERCIAL DRIVEWAYS AND OTHER PAVEMENTS SHALL CONFORM TO THE KCMMB SPECIFICATIONS.

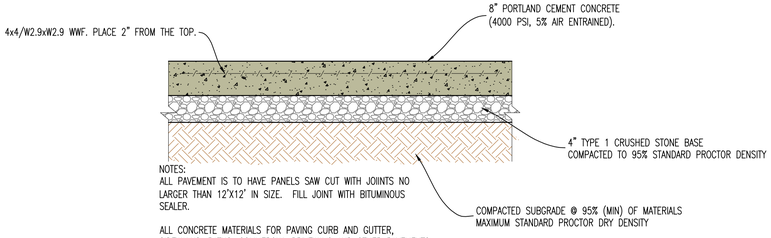
5 TYPICAL CONCRETE SIDEWALK



NOTES

1. RAMP SHALL BE 6" THICK (MIN.) PCC CONCRETE WITH 6X6/W1.4XW1.4 WWF. PLACE 2" FROM THE TOP.
2. CURB RAMP SHALL NOT HAVE A RISE GREATER THAN 0.5'.
3. RAMP LENGTH IS DEPENDENT ON 1:12 MAX. SLOPE. USE FLATTER WHEN POSSIBLE. REFER TO GRADING PLAN.
4. MAIN LANDING AREA AT TOP OF RAMP SHALL BE 4'-0" MIN WIDTH, CROSS SLOPE OF LANDING SHALL NOT EXCEED 2.0% IN ANY DIRECTION.
5. ALL CONCRETE MATERIALS FOR PAVING CURB AND GUTTER, SIDEWALKS, PATHS, COMMERCIAL DRIVEWAYS AND OTHER PAVEMENTS SHALL CONFORM TO THE KCMMB SPECIFICATIONS.

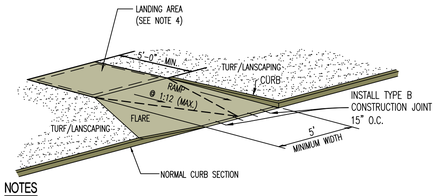
8 SIDEWALK RAMP WITH CURB



NOTES:
ALL PAVEMENT IS TO HAVE PANELS SAW CUT WITH JOIINTS NO LARGER THAN 12'X12' IN SIZE. FILL JOINT WITH BITUMINOUS SEALER.

ALL CONCRETE MATERIALS FOR PAVING CURB AND GUTTER, SIDEWALKS, PATHS, COMMERCIAL DRIVEWAYS AND OTHER PAVEMENTS SHALL CONFORM TO THE KCMMB SPECIFICATIONS.

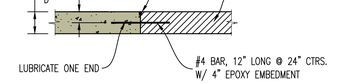
7 HEAVY DUTY CONCRETE PAVEMENT CROSS-SECTION (REINFORCED)



NOTES

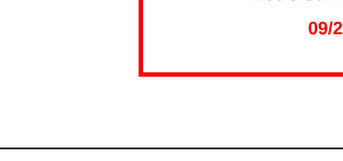
1. RAMP SHALL BE 6" THICK (MIN.) PCC CONCRETE WITH 6X6/W1.4XW1.4 WWF. PLACE 2" FROM THE TOP.
2. CURB RAMP SHALL NOT HAVE A RISE GREATER THAN 0.5'.
3. RAMP LENGTH IS DEPENDENT ON 1:12 MAX. SLOPE. USE FLATTER WHEN POSSIBLE. REFER TO GRADING PLAN.
4. MAIN LANDING AREA AT TOP OF RAMP SHALL BE 4'-0" MIN WIDTH, CROSS SLOPE OF LANDING SHALL NOT EXCEED 2.0% IN ANY DIRECTION.
5. FLARE SLOPE NOT TO EXCEED 1:10.
6. ALL CONCRETE MATERIALS FOR PAVING CURB AND GUTTER, SIDEWALKS, PATHS, COMMERCIAL DRIVEWAYS AND OTHER PAVEMENTS SHALL CONFORM TO THE KCMMB SPECIFICATIONS.

9 SIDEWALK RAMP WITH CURB AND FLARE

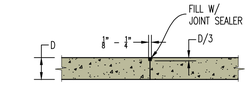


NOTES:
1. ALL BARS TO BE INSTALLED PERPENDICULAR TO EDGE AND IN SAME PLANE TO PREVENT LOCKING OF JOINT.
2. EDGE OF PAVEMENT TO BE SAWED/FORMED TO A CLEAN EDGE FOR INSTALLATION OF EXPANSION JOINT.

TYPE A - EXPANSION JOINT

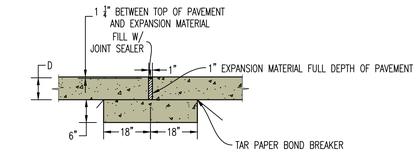


TYPE B - CONSTRUCTION JOINT



NOTE:
MAXIMUM DISTANCE BETWEEN SAW JOINTS TO BE 12'

TYPE C - CONTROL JOINT 'SAWED'



TYPE A ALTERNATE
CONCRETE SILL

NOTE:
JOINT SEALER TO BE BITUMINOUS SEALER IN PARKING AREAS AND NON-BITUMINOUS IN SIDEWALK/WALKING SURFACES (COLOR GRAY)

6 CONCRETE PAVEMENT JOINT DETAILS

RELEASED FOR CONSTRUCTION
As Noted on Plan Review

Development Services Department
Lee's Summit, Missouri

09/24/2024

REVISIONS:

NO.	DATE
ORIGINAL	06/14/2024

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

STATE OF MISSOURI
NATHAN THOMAS ECKHOFF
NUMBER PE-2003014960
08/09/24
PROFESSIONAL ENGINEER

NATHAN THOMAS ECKHOFF
MO LICENSE-2003014960

PREPARED BY:
CROCKETT ENGINEERING CONSULTANTS
1000 W. Nifong Blvd., Bldg. 1
Columbia, Missouri 65203
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www.crockettengineering.com
Crockett Engineering Consultants, LLC
Missouri Certificate of Authority
#2006013901

OWNER:
DISCOVERY PARK LEES SUMMIT LLC
4220 PHILLIPS FARM RD
COLUMBIA, MO 65201

THE VILLAGE AT DISCOVERY
LOT 4
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:
DETAILS SHEET 1

DESIGNED:	NTE
DRAWN:	NMD
PROJECT NO.:	230286

SHEET:
CE 7.1

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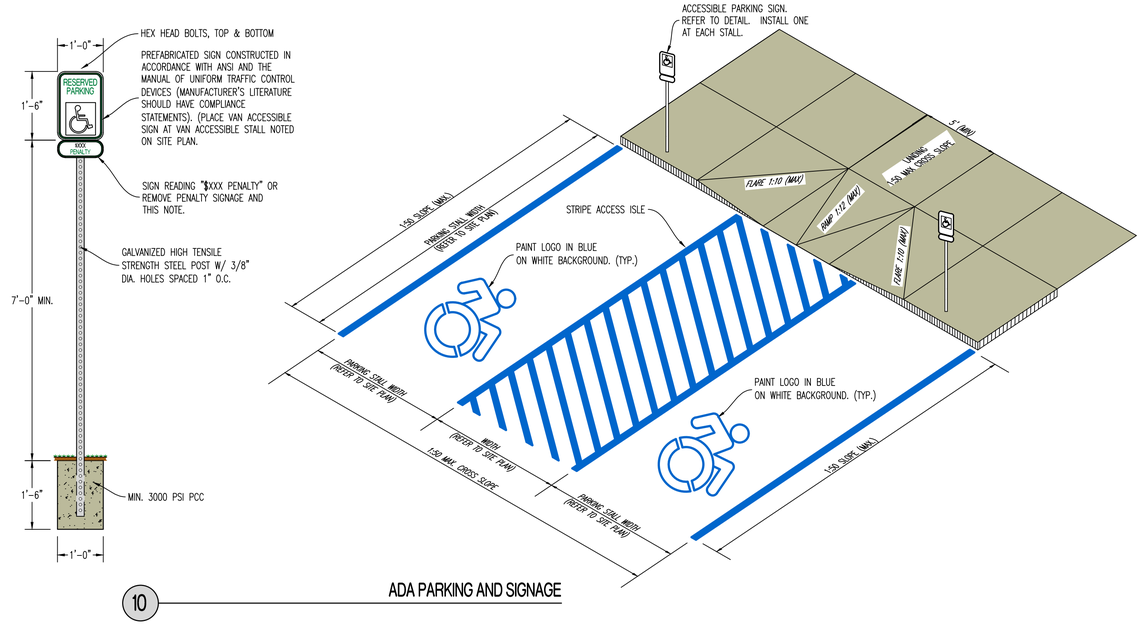
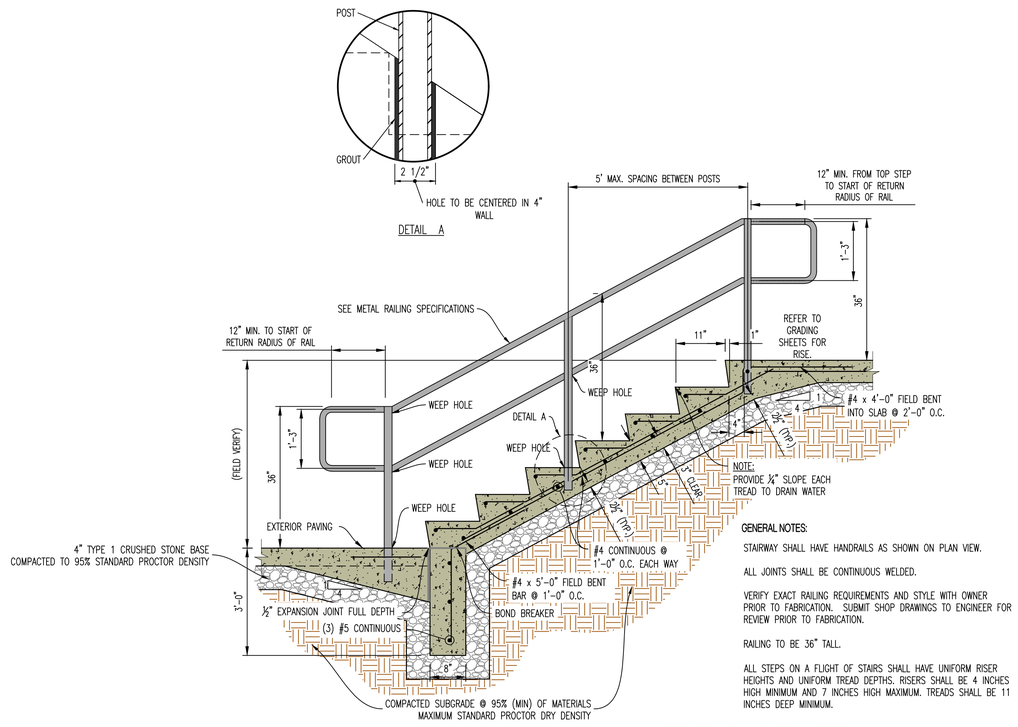


10 ADA PARKING AND SIGNAGE



12 STAIRS WITH HANDRAIL DETAIL

GENERAL NOTES:

STAIRWAY SHALL HAVE HANDRAILS AS SHOWN ON PLAN VIEW.

ALL JOINTS SHALL BE CONTINUOUS WELDED.

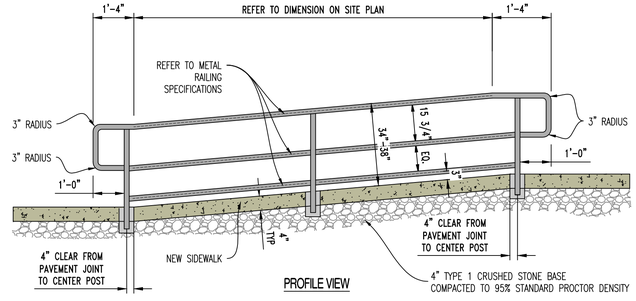
VERIFY EXACT RAILING REQUIREMENTS AND STYLE WITH OWNER PRIOR TO FABRICATION. SUBMIT SHOP DRAWINGS TO ENGINEER FOR REVIEW PRIOR TO FABRICATION.

RAILING TO BE 36" TALL.

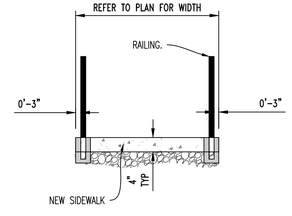
ALL STEPS ON A FLIGHT OF STAIRS SHALL HAVE UNIFORM RISER HEIGHTS AND UNIFORM TREAD DEPTHS. RISERS SHALL BE 4 INCHES HIGH MINIMUM AND 7 INCHES HIGH MAXIMUM. TREADS SHALL BE 11 INCHES DEEP MINIMUM.

METAL RAILING SPECIFICATIONS

1. PROVIDE SHOP DRAWINGS TO ENGINEER FOR REVIEW PRIOR TO FABRICATION OR INSTALLATION.
2. RAILINGS AND POSTS SHALL BE 1-1/2" DIAMETER ROUND STEEL PIPING IN COMPLIANCE WITH ASTM A53, TYPE F OR TYPE S, GRADE A SCHEDULE 40 PIPING.
3. RAILINGS SHALL BE 34"-38" TALL FROM FINISH PAVEMENT GRADE (OR STAIR NOSING) TO THE TOP OF THE TOP RAIL.
4. MAIN RAILS AND POSTS SHALL RESIST 50 POUNDS PER LINEAL FOOT LATERALLY AT THE TOP RAIL, AND 200 POUNDS OF CONCENTRATED LOAD LATERALLY.
5. INTERMEDIATE RAILS SHALL RESIST A CONCENTRATED LOAD OF 50 POUNDS LATERALLY.
6. CUT, DRILL, AND PUNCH METALS CLEANLY AND ACCURATELY. REMOVE BURRS AND EASE EDGES TO A MINIMUM RADIUS OF $\frac{1}{32}$", UNLESS OTHERWISE INDICATED. REMOVE SHARP OR ROUGH AREAS ON EXPOSED SURFACES.
7. COPE COMPONENTS AT CONNECTIONS TO PROVIDE CLOSE FIT, OR USE FITTINGS DESIGNED FOR THIS PURPOSE. WELD ALL AROUND AT CONNECTIONS, INCLUDING FITTINGS.
8. PROVIDE CHANGES IN RAILING DIRECTION BY USING PREFABRICATED ELBOW AND RADIUS FITTINGS.
9. PROVIDE WEEP HOLES AT THE BASE OF ALL POSTS AND ANYWHERE WATER OR CONDENSATION MAY ACCUMULATE INSIDE RAILING SECTIONS
10. PROVIDE SHOP PRIMER FORMULATED FOR GALVANIZED STEEL. PROVIDE HOT-DIP GALVANIZED FINISH IN COMPLIANCE WITH ASTM A123. FOR ALL COMPONENTS. POWDER COATED BLACK WITH HIGH GLOSS ENAMEL PAINT. VERIFY FINAL COLOR WITH OWNER PRIOR TO PAINTING.
11. CLEAN FIELD WELDS AND REPAIR GALVANIZING TO COMPLY WITH ASTM A780.
12. POSTS SHALL BE SET PLUMB WITH A TOLERANCE OF $\frac{1}{16}$" IN 3 FEET. ALIGN RAILS SO VARIATIONS FROM LEVEL FOR HORIZONTAL MEMBERS AND VARIATIONS FROM PARALLEL WITH RAKE OF STEPS AND RAMPS FOR SLOPING MEMBERS DO NOT EXCEED $\frac{1}{4}$ INCH IN 12 FEET.
13. PROVIDE 4" SLEEVES OR CORE DRILL CONCRETE. MINIMUM 4" RAIL EMBEDMENT BELOW PAVEMENT SECTIONS SHOWN TO RECEIVE POSTS. GROUT AROUND AROUND POSTS WITH NON-SHRINK GROUT. MIN 2" OF GROUT BELOW BOTTOM OF POST. SLOPE TOP OF GROUT OF DRAIN.
14. CAULK JOINT BETWEEN GROUT AND METAL POST WITH APPROVE JOINT SEALANT. COORDINATE COLOR WITH OWNER.



PROFILE VIEW



CROSS SECTION

11 ADA RAMP HANDRAIL DETAIL

RELEASED FOR CONSTRUCTION
As Noted on Plan Review

Development Services Department
Lee's Summit, Missouri

09/24/2024

REVISIONS:

NO.	DATE
ORIGINAL	05/14/2024
1 REV. 1	07/26/2024

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STATE OF MISSOURI
NATHAN THOMAS ECKHOFF
NUMBER PE-2003014960
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PROFESSIONAL ENGINEER

NATHAN THOMAS ECKHOFF
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THE VILLAGE AT DISCOVERY
LOT 4
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:
DETAILS SHEET 2

DESIGNED:	NTE
DRAWN:	NMD
PROJECT NO.:	230286

SHEET: CE 7.2

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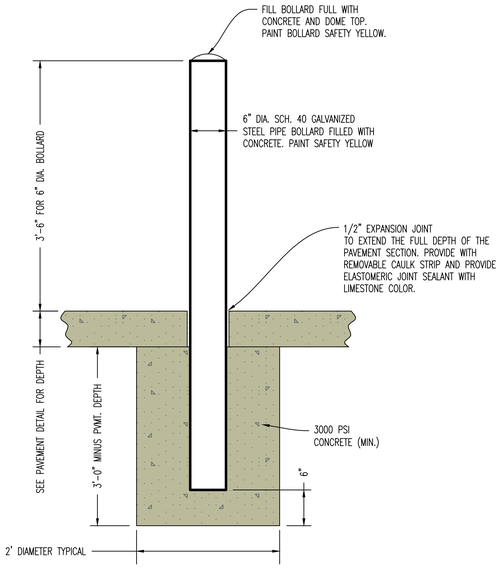
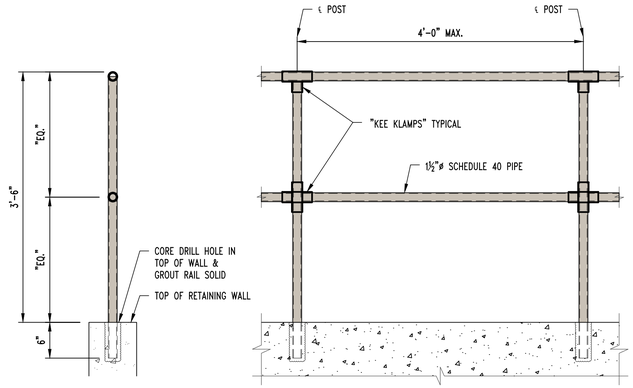
Development Services Department
Lee's Summit, Missouri

09/24/2024

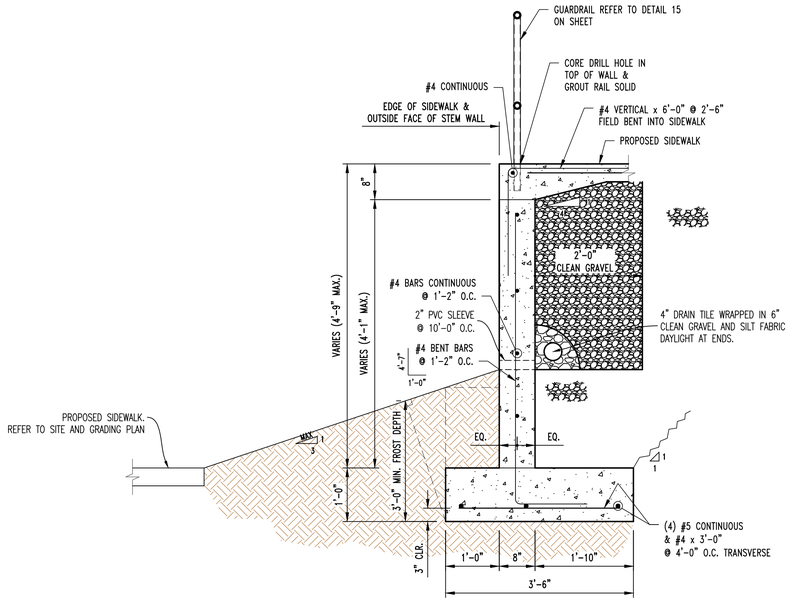


13 BOLLARD INSTALLATION DETAIL

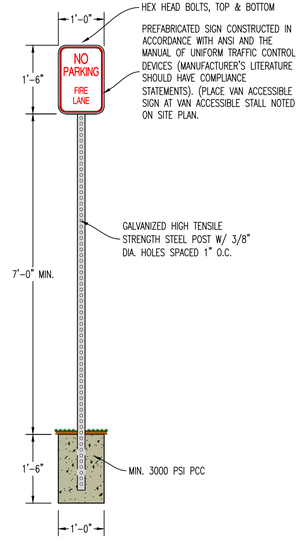


NOTE:
ALL RAILING TO BE PAINTED SW6258 "TRICORN BLACK". CONFIRM COLOR WITH OWNER.

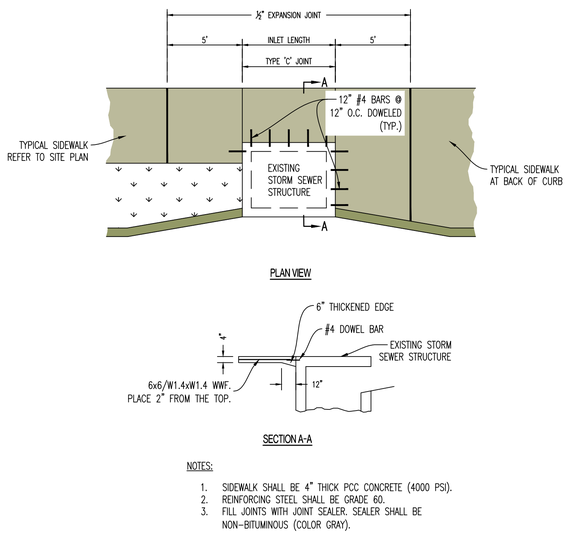
15 TYPICAL GUARDRAIL SECTION



14 CAST IN PLACE RETAINING WALL DETAIL



16 FIRE LANE SIGNAGE



NOTES:

1. SIDEWALK SHALL BE 4" THICK PCC CONCRETE (4000 PSI).
2. REINFORCING STEEL SHALL BE GRADE 60.
3. FILL JOINTS WITH JOINT SEALER. SEALER SHALL BE NON-BITUMINOUS (COLOR GRAY).

17 SIDEWALK REINFORCEMENT AT DRAINAGE STRUCTURE

REVISIONS:

NO.	DATE
ORIGINAL	05/14/2024
1 REV. 1	07/26/2024

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

STATE OF MISSOURI
NATHAN THOMAS ECKHOFF
NUMBER PE-2003014960
08/09/24
PROFESSIONAL ENGINEER

NATHAN THOMAS ECKHOFF
MO LICENSE-2003014960

PREPARED BY:
CROCKETT ENGINEERING CONSULTANTS
1000 W. Nifong Blvd., Bldg. 1
Columbia, Missouri 65203
(573) 447-0292
www.crockettengineering.com
Crockett Engineering Consultants, LLC
Missouri Certificate of Authority
#2006013501

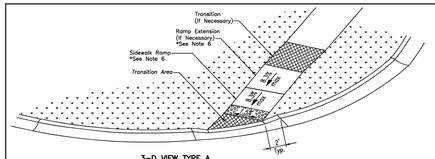
OWNER:
DISCOVERY PARK LEES SUMMIT LLC
4220 PHILLIPS FARM RD
COLUMBIA, MO 65201

THE VILLAGE AT DISCOVERY
LOT 4
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

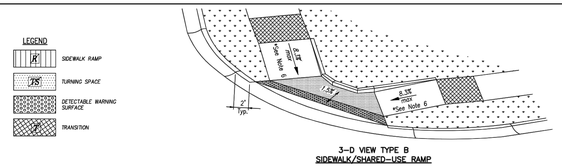
DRAWING INCLUDES:
DETAILS SHEET 3

DESIGNED:	NTE
DRAWN:	NMD
PROJECT NO.:	230286
SHEET:	CE 7.3

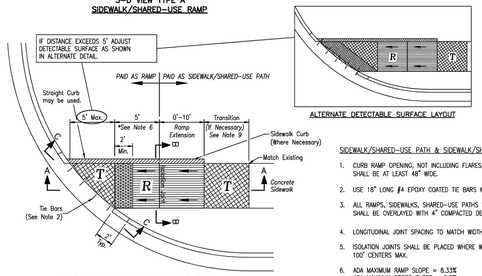
Y:\2023\230286 - Discovery Park Lees Summit\Zone 1 Lot 4\ACAD Files\Construction Plans\230286 Zone 1 Lot 4 Site Base.dwg



3-D VIEW TYPE A
SIDEWALK/SHARED-USE RAMP

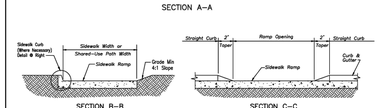


3-D VIEW TYPE B
SIDEWALK/SHARED-USE RAMP



TYPE A SIDEWALK/SHARED-USE RAMP
Not to Scale

ALTERNATE DETECTABLE SURFACE LAYOUT



SECTION A-A

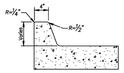
SECTION B-B

SECTION C-C

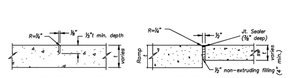
TYPE A & B SIDEWALK RAMP
Not to Scale

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

1. CURB RAMP OPENING, NOT INCLUDING FLARES, SHALL MATCH EXISTING SIDEWALK WIDTH AND OPENING SHALL BE AT LEAST 48" WIDE.
2. USE 18" LONG #4 EPOXY COATED TIE BARS @ 24" O.C. EMBED TIE BARS 9" IN EACH DIRECTION.
3. ALL RAMPS, SIDEWALKS, SHARED-USE PATHS SUBGRADE MUST BE OF STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
4. LONGITUDINAL JOINT SPACING TO MATCH WIDTH OF SIDEWALK.
5. ISOLATION JOINTS SHALL BE PLACED WHERE WALK ABUTS DRIVEWAYS AND SIMILAR STRUCTURES, AND 100' CENTERS MAX.
6. ADA MAXIMUM RAMP SLOPE = 8.33%
   ADA MAXIMUM CROSS SLOPE = 2.0%
   *ROADWAY EXCEPTION: WHERE EXISTING ROAD PROFILE GRADE DOES NOT ALLOW RAMP TO MEET RAMP SLOPE REQUIREMENT OF 8.33% OR LESS, THE RAMP SHALL BE EXTENDED TO A LENGTH OF 15 FEET TO MATCH EXISTING SIDEWALK. CROSS SLOPE OF RAMP SHALL BE 1.5%, ±0.5%.
7. TURNING SPACES SHALL BE 1.5%, ±0.5%, SLOPE IN ANY DIRECTION. TURNING SPACES SHALL HAVE A MINIMUM 4'x4' TURNING AREA. TURNING SPACES, WITH A SIDEWALK CURB, SHALL HAVE A 5' TURNING AREA PERPENDICULAR TO THE SIDEWALK CURB.
8. FOR RETROFIT WORK, SLOPES TO BE DETERMINED IN FIELD BY CONTRACTOR AND APPROVED BY CITY INSPECTOR
9. RAMP EXTENSION AREA SHALL NOT BE USED AS TRANSITION TO EXISTING SIDEWALK. ANY TRANSITIONS REQUIRED TO MATCH RAMPS TO EXISTING SIDEWALK SHALL REQUIRE REMOVAL AND REPLACEMENT OF ADDITIONAL SIDEWALK BEYOND THE RAMP AREA. SIDEWALK TRANSITION LENGTH SHALL BE EQUAL TO OR GREATER THAN THE WIDTH OF THE EXISTING SIDEWALK. RAMP EXTENSIONS SHALL BE A CONTINUOUS SLOPE.
10. ALL SIDEWALK AND RAMP CONSTRUCTION SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG).

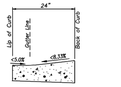


SIDEWALK CURB DETAIL
Not to Scale



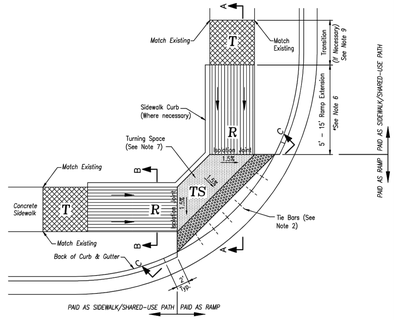
CONTRACTION JOINT ISOLATION JOINT

JOINT DETAILS
Not to Scale



CURB & GUTTER DETAIL AT RAMP
Not to Scale

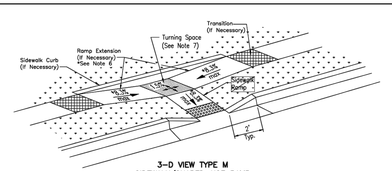
CURB & GUTTER DETAIL AT RAMP
(ADA SLOPE REQUIREMENTS)



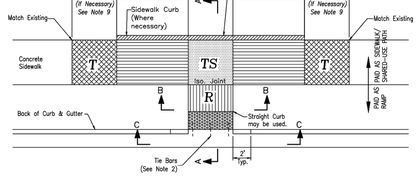
TYPE B SIDEWALK/SHARED-USE RAMP
Not to Scale

Drawn By:	MJF
Checked By:	DL
Date:	08/2023
Proj. #:	

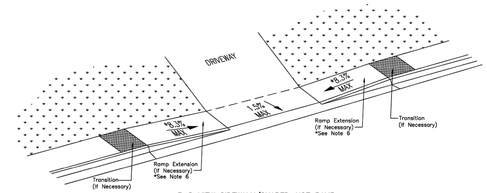
GEN-3A



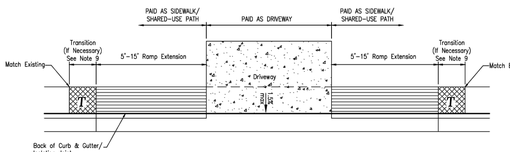
3-D VIEW TYPE M
SIDEWALK/SHARED-USE RAMP



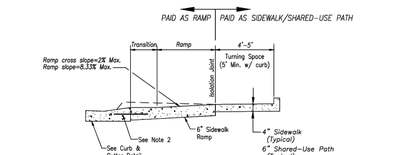
TYPE M SIDEWALK/SHARED-USE RAMP
Not to Scale



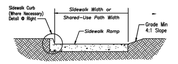
3-D VIEW SIDEWALK/SHARED-USE RAMP
AT DRIVEWAY



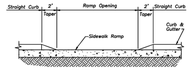
SIDEWALK/SHARED USE RAMP
AT DRIVEWAY WITH ADJOINING CURB



SECTION A-A

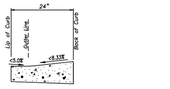


SECTION B-B

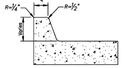


SECTION C-C

TYPE M SIDEWALK/SHARED-USE RAMP
Not to Scale



CURB & GUTTER DETAIL AT RAMP
Not to Scale



SIDEWALK CURB DETAIL
Not to Scale

LEGEND
SIDEWALK RAMP
TURNING SPACE
DETECTABLE WARNING SURFACE
TRANSITION

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

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10. ALL SIDEWALK AND RAMP CONSTRUCTION SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG).

Drawn By:	MJF
Checked By:	GMB
Date:	08/2023
Proj. #:	

GEN-3B

REVISIONS:

NO.	DATE
ORIGINAL	06/14/2024

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

STATE OF MISSOURI
NATHAN THOMAS ECKHOFF
NUMBER PE-2009014960
06/06/24
PROFESSIONAL ENGINEER

NATHAN THOMAS ECKHOFF
MO LICENSE-2009014960

PREPARED BY:
CROCKETT ENGINEERING CONSULTANTS
1000 W. Wing Blvd., Suite 1
Sikeston, MO 63801
(573) 481-0292
www.crockettengineering.com
Crockett Engineering Consultants, LLC
Missouri Certificate of Authority
#2006035901

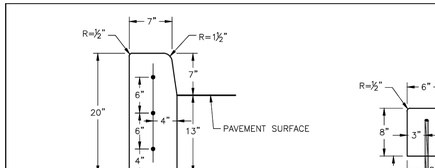
OWNER:
DISCOVERY PARK LEES SUMMIT LLC
4220 PHILLIPS FARM RD
COLUMBIA, MO 65201

THE VILLAGE AT DISCOVERY
LOT 4
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

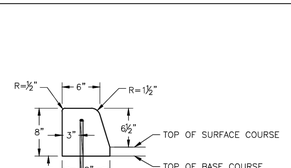
DRAWING INCLUDES:

LEE'S SUMMIT DETAILS SHEET 1

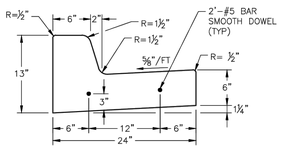
DESIGNED:	NTE
DRAWN:	NMD
PROJECT NO.:	230286
SHEET:	CE 7.4



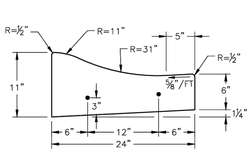
STRAIGHT CURB
(TYPE C-1)



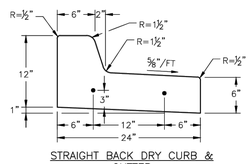
DOWELLED CURB
(TYPE DC)



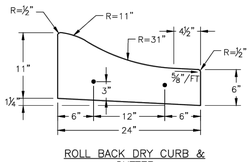
STRAIGHT BACK CURB & GUTTER
(TYPE CG-1)



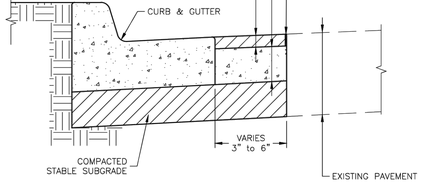
ROLL BACK CURB & GUTTER
(TYPE CG-2)



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



ROLL BACK DRY CURB & GUTTER
(TYPE CG-2 DRY)



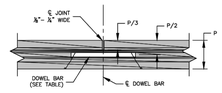
CURB REPLACEMENT DETAIL

GENERAL NOTES

1. ¾" ISOLATION JOINTS WITH 2 (2'-#5 BAR) SMOOTH DOWELS SHALL BE PLACED AT RADIUS POINTS AND AT 150' INTERVALS. THESE DOWEL BARS SHALL BE GREASED AND WRAPPED ON ONE END WITH EXPANSION TUBES.
2. 3" DEEP CONTRACTION JOINTS SHALL BE INSTALLED AT APPROXIMATELY 10' INTERVALS. THESE JOINTS SHALL PASS ACROSS THE ENTIRE CURB SECTION.
3. CONCRETE FILL SHALL HAVE UNIFORM AND SMOOTH FINISH
4. KCMMB 4K CONCRETE SHALL BE USED FOR ALL CURB.
5. ASPHALTIC CONCRETE SURFACE COURSE SHALL CONFORM TO STANDARD SPECIFICATIONS SECTION 2205.2.
6. CURBS FOR NEW STREETS SHALL BE BUILT ON ASPHALT OR AGGREGATE BASE AS SHOWN IN TYPICAL SECTION DETAIL.
7. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.
8. ALL DOWELS & TIE BARS SHALL BE EPOXY COATED.

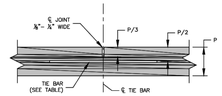
Drawn By:	MJF
Checked By:	DL
Date:	08/2023
Proj. #:	

GEN-4

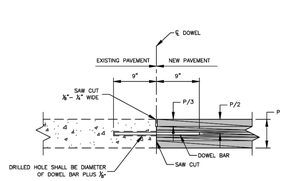


NOTE:
TRANSVERSE CONTRACTION JOINTS FOR CONCRETE PAVEMENT OR BASE WIDENING SHALL MATCH EXISTING JOINTS.

1 TRANSVERSE CONTRACTION JOINT

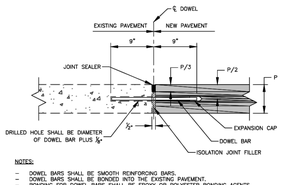


2 LONG. CONTRACTION/CONSTRUCTION JOINT



NOTES:
- DOWEL BARS SHALL BE SMOOTH REINFORCING BARS.
- DOWEL BARS SHALL BE BONDED INTO THE EXISTING PAVEMENT.
- BONDING FOR DOWEL BARS SHALL BE EPOXY OR POLYESTER BONDING AGENTS.
- THE PORTION OF THE DOWEL OUTSIDE THE HOLE SHALL BE COATED WITH AN APPROVED LUBRICANT.

3 TRANSVERSE CONSTRUCTION JOINT



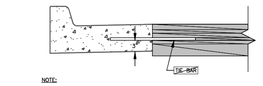
NOTES:
- DOWEL BARS SHALL BE SMOOTH REINFORCING BARS.
- DOWEL BARS SHALL BE BONDED INTO THE EXISTING PAVEMENT.
- BONDING FOR DOWEL BARS SHALL BE EPOXY OR POLYESTER BONDING AGENTS.
- THE PORTION OF THE DOWEL OUTSIDE THE HOLE SHALL BE COATED WITH AN APPROVED LUBRICANT.

4 TRANSVERSE ISOLATION JOINT

RELEASED FOR CONSTRUCTION
As Noted on Plan Review

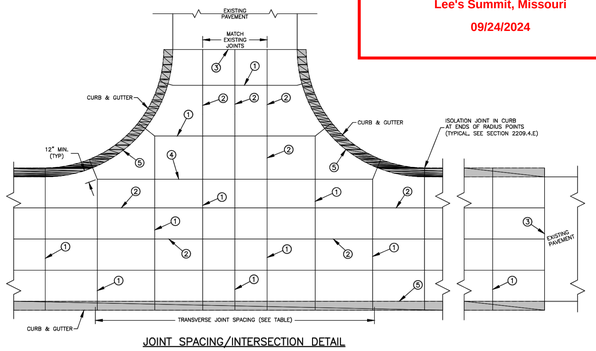
Development Services Department
Lee's Summit, Missouri

09/24/2024



NOTE:
- JOINT NOT NEEDED IF CURB & GUTTER IS MONOLITHICALLY POURED.

5 LONG. CONSTRUCTION JOINT (CURB & GUTTER)



JOINT SPACING/INTERSECTION DETAIL

TABLE

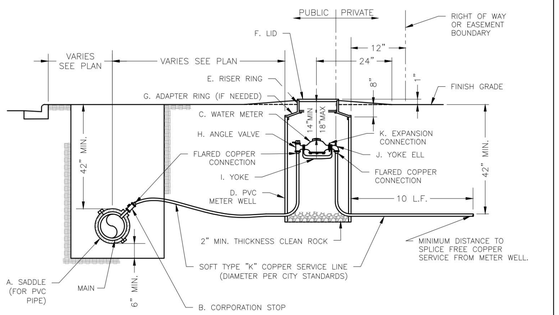
PCCP THICKNESS (P)	DOWEL SIZE	TIE BAR SIZE	DOWEL SPACING	TIE BAR SPACING	MAX. TRAN. SPACING	MAX. LONG. SPACING
6"	N/A	#5 x 30"	N/A	30" CTRS.	12'	12'
7"	1" x 18"	#5 x 30"	12" CTRS.	30" CTRS.	14'	14'
8"	1 ¼" x 18"	#5 x 30"	12" CTRS.	30" CTRS.	15'	14'
≥9"	1 ½" x 18"	#5 x 30"	12" CTRS.	30" CTRS.	15'	15'

GENERAL NOTES:
- THE FINAL POSITION OF ALL DOWELS AND TIE BARS SHALL BE PERPENDICULAR TO THE PLANE OF THE JOINT AND PARALLEL TO THE SURFACE OF THE PAVEMENT AND PARALLEL TO EACH OTHER.
- ALL DOWEL BARS SHALL BE PLACED AT MIDPANEL DEPTH.
- TIE BARS SHALL BE PLACED AT 12 INCHES FROM LONGITUDINAL JOINTS.
- TIE BARS SHALL BE PLACED AT 12 INCHES FROM TRANSVERSE JOINTS.
- DOWEL BASKET SHIPPING WIRE SHALL NOT BE CUT.
- CONTRACTOR SHALL SUBMIT PROJECT SPECIFIC JOINTING PLAN AT LEAST TWO WEEKS BEFORE PAVING OPERATIONS.
- IN ACCORDANCE WITH 2208.4.D, ALL JOINTS SHALL BE SEALED, INCLUDING CURB & GUTTER.

Drawn By:	MJF
Checked By:	GMB
Date:	08/2023
Proj. #:	

GEN-10

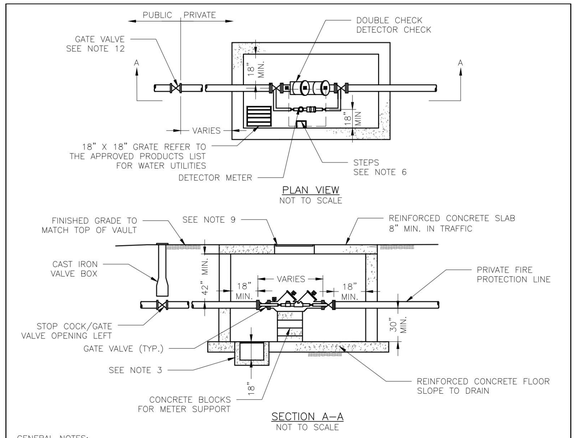
Y:\2023\230286 - Discovery Park Lees Summit\Zone 1 Lot 4\ACAD Files\Construction Plans\230286 Zone 1 Lot 4 Site Base.dwg



NOTES:

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

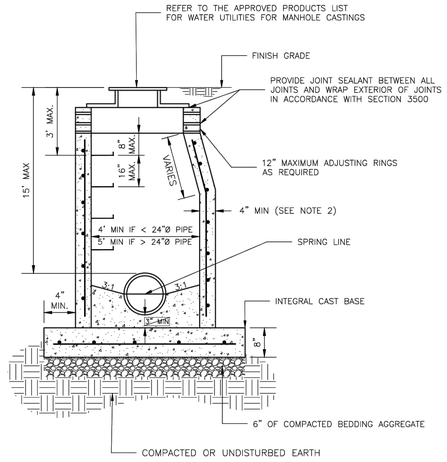
LEE'S SUMMIT MISSOURI PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063	Date: 08/2023 Drawn By: MJF Checked By: KLY
SERVICE CONNECTION WITH METER WELL	WAT-11



GENERAL NOTES:

1. METER VAULT WALLS TO BE POURED OR PRECAST CONCRETE.
2. METER VAULT ROOF TO BE REINFORCED CONCRETE OPENING CENTERED OVER DETECTOR METER.
3. METER VAULT TO BE LOCATED, WHEN POSSIBLE, OUTSIDE TRAFFIC AREA WHERE SURFACE WATER WILL NOT DRAIN INTO IT. VAULT MUST BE KEPT FREE OF WATER. PROVIDE CONCRETE SUMP AS A MINIMUM. WHERE PRACTICAL, PROVIDE A 2" PIPE DRAIN WITH AN ABOVE–GROUND DISCHARGE POINT. PROJECT OWNER MAY DESIRE A PERMANENTLY INSTALLED SUMP PUMP.
4. ALL PIPE SHALL BE DUCTILE IRON CLASS 50. ALL PIPE FITTINGS FROM THE CITY WATER MAIN THROUGH THE VAULT SHALL BE PROVIDED WITH RESTRAINED JOINT FITTINGS.
5. ALL FITTINGS TO BE BRASS.
6. STEPS SHALL BE IN ACCORDANCE WITH THE APPROVED PRODUCTS LIST FOR WATER UTILITIES AND SHALL BE ON 16" CENTERS.
7. A DEPARTMENT OF NATURAL RESOURCES APPROVED DOUBLE CHECK DETECTOR CHECK BACKFLOW PREVENTER MUST BE USED. FOR A COPY OF THE MISSOURI DEPARTMENT OF NATURAL RESOURCES APPROVED BACKFLOW PREVENTION ASSEMBLIES, CONTACT THE WATER UTILITIES OPERATIONS DIVISION AT 816–969–1940. AS OF JANUARY 1, 1987, THE DNR REQUIRES FIRE SPRINKLER SYSTEMS USING CHEMICALS TO HAVE A DNR APPROVED PRESSURE BACKFLOW PREVENTER INSTALLED, PRIOR TO THE MIXING POINT.
8. ALL VALVES SHALL HAVE RISING STEMS.
9. FOR MANHOLE COVERS, SELECT A MANHOLE FOUND ON THE APPROVED PRODUCTS LIST FOR WATER UTILITIES SUITABLE FOR EITHER TRAFFIC OR NON–TRAFFIC CONDITIONS.
10. A MINIMUM OF 18" CLEARANCE SHALL BE PROVIDED AROUND ALL PIPING, VALVES, APPURTENANCES, ETC.
11. METER SHALL BE OWNED AND MAINTAINED BY THE WATER UTILITIES DEPARTMENT.
12. IF PUBLIC WATER IS LOCATED ON THE OPPOSITE SIDE OF THE STREET, THEN THE PUBLIC WATER MAIN RESPONSIBILITY OF THE WATER UTILITIES DEPARTMENT ENDS AT THE GATE VALVE NEAREST THE VAULT.

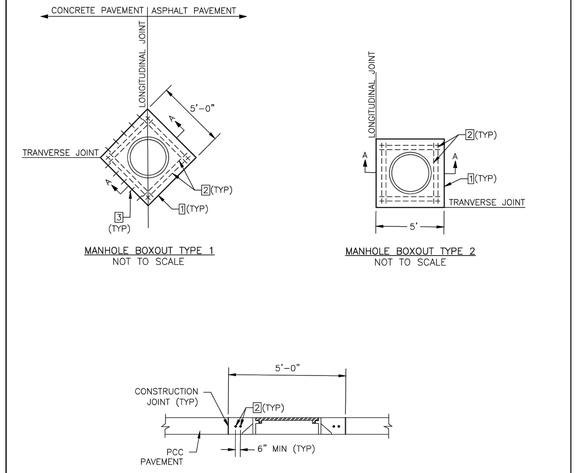
LEE'S SUMMIT MISSOURI PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063	Date: 08/2023 Drawn By: MJF Checked By: KLY
VAULT FOR DOUBLE CHECK DETECTOR CHECK	WAT-12



NOTES:

1. PRECAST CONCRETE MANHOLES SHALL CONFORM TO ASTM C478 EXCEPT AS MODIFIED BY THE SPECIFICATIONS.
2. A WALL THICKNESS NOT LESS THAN ONE–TWELFTH (H_{12}) OF THE INSIDE DIAMETER OR 4", WHICHEVER IS GREATER, SHALL BE USED WHEN THE MANHOLE DEPTH IS LESS THEN 15'.
3. WATERPROOFING SHALL BE REQUIRED ON THE OUTSIDE OF MANHOLES. THE WATERPROOFING SHALL CONSIST OF A TOTAL DRY FILM THICKNESS OF NOT LESS THAN 14 MILS OF BITUMINOUS COATING.
4. ONLY ECCENTRIC MANHOLE CONES WILL BE ALLOWED UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
5. THE FILL CONCRETE FLOW CHANNEL FOR SIDE BRANCHES SHALL BE PLACED TO PROVIDE A SMOOTH TRANSITION INTO THE FLOW LINE.
6. REFER TO THE APPROVED PRODUCTS LIST FOR WATER UTILITIES FOR APPROVED MANHOLE GASKET MODELS.
7. REFER TO THE APPROVED PRODUCTS LIST FOR APPROVED STEPS.

LEE'S SUMMIT MISSOURI PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063	Date: 08/2023 Drawn By: MF Checked By: AB
STANDARD SANITARY PRECAST MANHOLE	SAN-2



NOTES:

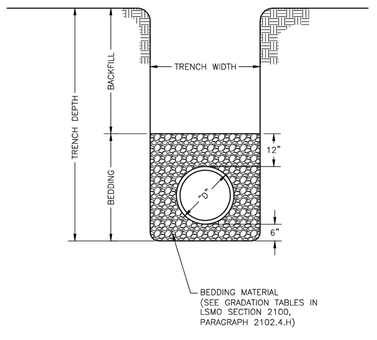
– MINIMUM 2" CLEAR ON REINFORCEMENT. CENTER CASTING WITHIN BOXOUT AREA.
– CONCRETE SHALL BE KCMMB 4K MIX.
– ALL STEEL SHALL BE EPOXY COATED.
– FOR CONSTRUCTION JOINT DETAIL, SEE DETAIL 2 ON SHEET GEN–10, TYPICAL PAVEMENT JOINT DETAILS.

1 CONSTRUCTION JOINT.

2 4'–8"(TYP) #4 BAR. PLACE AT MID–SLAB.

3 #4 DOWELS @ 12" O.C. INTO CONCRETE PAVEMENT MIN. LENGTH 12".

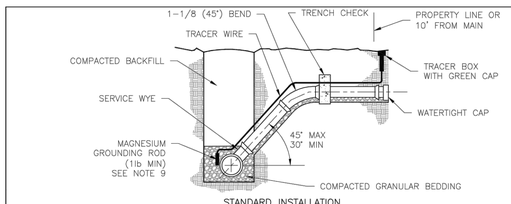
LEE'S SUMMIT MISSOURI PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063	Date: 08/2023 Drawn By: MJF Checked By: AB
MANHOLE BOXOUT IN PAVEMENT DETAIL	SAN-9

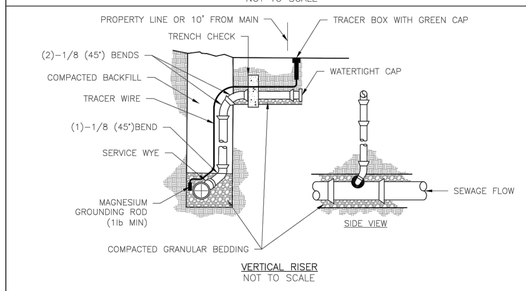


NOTES:

1. FOR TRENCHING AND PAVEMENT PATCHING REPAIRS WITHIN EXISTING OR FUTURE STREETS SEE STANDARD DETAIL GEN–5.
2. EXCAVATION, DEPTH, SLOPES, SHORING, AND STOCKPILE LOCATIONS SHALL COMPLY WITH OSHA REGULATIONS.

LEE'S SUMMIT MISSOURI PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063	Date: 08/2023 Drawn By: MJF Checked By: GMB
PIPE BEDDING DETAIL	GEN-6

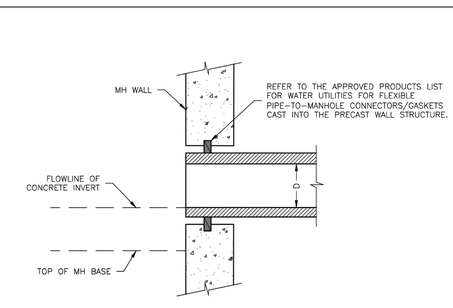


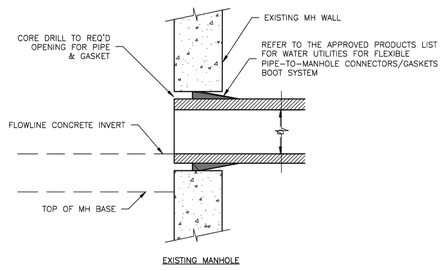


NOTES:

1. ALL SEWER STUBS SHALL BE CONSTRUCTED TO PROPERTY LINE OR 10' MINIMUM FROM THE MAIN, WHICHEVER IS GREATER, WHERE SIDEWALKS ARE PRESENT, CONTRACTOR SHALL EXTEND SERVICE LINE UNDER EXISTING SIDEWALK TO TWO FEET BEYOND.
2. IMPERVIOUS TRENCH CHECKS SHALL BE PLACED ON BUILDING SEWER STUBS (AT LEAST 5' AWAY FROM THE SANITARY SEWER MAIN).
3. TRENCH CHECKS ON THE BUILDING SEWER STUBS SHALL EXTEND 6" BELOW THE BOTTOM OF THE PIPE. LENGTH SHALL BE A MINIMUM OF 12". THE HEIGHT OF THE TRENCH CHECK SHALL EXTEND 12" ABOVE THE TOP OF THE PIPE. THE WIDTH OF THE TRENCH CHECK SHALL BE THE WIDTH OF THE TRENCH.
4. SEE SPECIFICATION SECTION 2100 FOR SEWER MAIN BEDDING AND BACKFILL.
5. TRACER WIRE SHALL BE INSTALLED PER SPECIFICATION SECTION 3500. TRACER WIRE TERMINAL BOXES SHALL BE INSTALLED DIRECTLY ABOVE THE SEWER SERVICE OR AS DETERMINED BY THE ENGINEER.
6. FOR SERVICES, TRACER WIRE SHALL RUN FROM THE WYE AND TERMINATE IN A FLUSH MOUNTED TRACER BOX WITH A GREEN CAST IRON LOCKABLE TOP. WIRE SHALL BE TAPED OR TIED TO THE PIPE AT 5' INTERVALS.
7. TRACER WIRE BOX SHALL BE INSTALLED WITHIN 1.0' OF PROPERTY LINE.
8. THE TRACER WIRE SHALL REMAIN CONTINUOUS TO THE GREATEST EXTENT POSSIBLE. SPLICES IN THE TRACER WIRE SHOULD BE MADE WITH LOCKING SPLICE CONNECTOR MANUFACTURED WITH A WATERPROOF DIELECTRIC SEALANT.

LEE'S SUMMIT MISSOURI PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063	Date: 08/2023 Drawn By: MJF Checked By: AB
SANITARY SEWER STUB DETAIL	SAN-1





LEE'S SUMMIT MISSOURI PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063	Date: 08/2023 Drawn By: MJF Checked By: AB
MANHOLE WALL CONNECTION	SAN-5

RELEASED FOR CONSTRUCTION
As Noted on Plan Review

Development Services Department
Lee's Summit, Missouri

09/24/2024

REVISIONS:

NO.	DATE
ORIGINAL	06/14/2024

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

STATE OF MISSOURI
NATHAN THOMAS ECKHOFF
NUMBER PE-2003014960
06/09/24
PROFESSIONAL ENGINEER

NATHAN THOMAS ECKHOFF
MO LICENSE: 2003014960

PREPARED BY:
CROCKETT ENGINEERING CONSULTANTS
1000 W. Nifong Blvd., Bldg 1
Columbia, Missouri 65203
(573) 447-0292
www.crockettengineering.com
Crockett Engineering Consultants, LLC
Missouri Certificate of Authority
#2004033901

OWNER:
DISCOVERY PARK LEES SUMMIT LLC
4220 PHILLIPS FARM RD
COLUMBIA, MO 65201

THE VILLAGE AT DISCOVERY
LOT 4
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:
LEE'S SUMMIT DETAILS SHEET 2

DESIGNED: NTE
DRAWN: NMD
PROJECT NO.: 230286
SHEET: CE 7.5

Y:\2023\230286 – Discovery Park Lees Summit\Zone 1 Lot 4\ACAD Files\Construction Plans\230286 Zone 1 Lot 4 Site Base.dwg

LANDSCAPE COMPLIANCE: LOT 4

LEE'S SUMMIT, MISSOURI
CODE OF ORDINANCES: DIVISION III – LANDSCAPING, BUFFERS, AND TREE PROTECTION
SITE ZONED: PMIX, PROPOSED: PMIX

STREET FRONTAGE TREES

1 TREE PER 30 FEET OF STREET FRONTAGE

DISCOVERY AVE – 175 LF STREET FRONTAGE	6 TREES REQUIRED	6 TREES PROPOSED
ALURA WAY – 332 LF STREET FRONTAGE	11 TREES REQUIRED	11 TREES PROPOSED

OPEN YARD TREES

1 TREE PER 5,000 SF OF TOTAL LOT AREA, EXCLUDING BUILDING FOOTPRINT

TOTAL LOT AREA = 39,993 SF	8 TREES REQUIRED	8 TREES PROPOSED

STREET FRONTAGE SHRUBS

1 SHRUB PER 20 FEET OF STREET FRONTAGE

DISCOVERY AVE – 175 LF STREET FRONTAGE	9 SHRUBS REQUIRED	9 SHRUBS PROPOSED
ALURA WAY – 332 LF STREET FRONTAGE	17 SHRUBS REQUIRED	17 SHRUBS PROPOSED

OPEN YARD SHRUBS

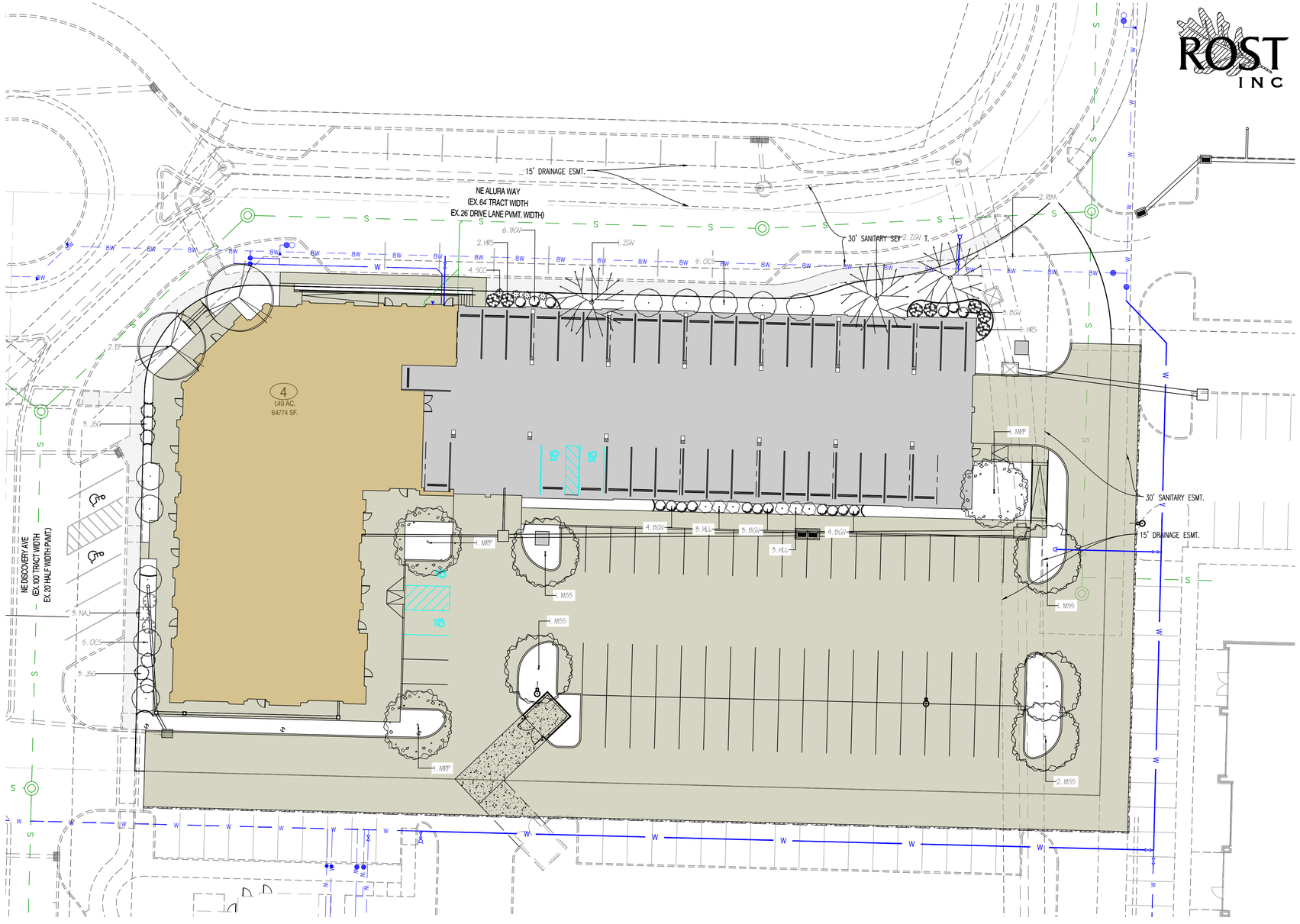
2 SHRUBS PER 5,000 SF OF TOTAL LOT AREA, EXCLUDING BUILDING FOOTPRINT

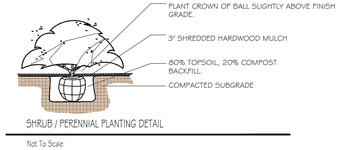
TOTAL LOT AREA = 39,993 SF	16 SHRUBS REQUIRED	16 SHRUBS PROPOSED

PLANTING SCHEDULE:

QUANTITY	SYMBOL	PLANT NAME	PLANT TYPE	SIZE
2	EF	ELM 'FRONTIER'	MEDIUM / LARGE TREE	3"
3	ZGV	ZELKOVA 'GREEN VASE'	MEDIUM / LARGE TREE	3"
5	MSS	MIYABI MAPLE 'STATE STREET'	MEDIUM / LARGE TREE	3"
10	OCS	OAK 'CRIMSON SPIRE'	MEDIUM / LARGE TREE	3"
3	MRP	MAPLE 'RED POINTE'	MEDIUM / LARGE TREE	3"
2	RBA	REDBUD 'APPALACHIAN'	ORNAMENTAL TREE	2"
3	NAJ	NINEBARK 'AMBER JUBILEE'	DECIDUOUS SHRUB	#5
6	HLL	HYDRANGEA 'LITTLE LIME'	DECIDUOUS SHRUB	#5
7	HRS	HYDRANGEA 'RUBY SLIPPERS'	DECIDUOUS SHRUB	#5
4	SBB	SPIREA 'BIG BANG'	DECIDUOUS SHRUB	#5
17	BGV	BOXWOOD 'GREEN VELVET'	EVERGREEN SHRUB	#5
6	JSG	JUNIPER 'SEA GREEN'	EVERGREEN SHRUB	#5

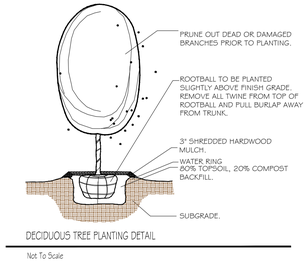
. THE PLANT LIST IS PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR. THE CONTRACTOR SHALL VERIFY ALL PLANT COUNTS AND IF A DISCREPANCY EXISTS THE PLAN SHALL GOVERN.
. LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR BECOMING AWARE OF ALL UNDERGROUND UTILITIES, PIPES, AND STRUCTURES. THE LANDSCAPE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR CONTACTING ALL UTILITY COMPANIES FOR FIELD LOCATION OF ALL UNDERGROUND UTILITY LINES PRIOR TO ANY EXCAVATION.
. LANDSCAPE CONTRACTOR TO RECEIVE SITE GRADED TO +/–0.10 FOOT OF FINISHED GRADE.
. PLANTING BACK FILL MIX IS TO CONSIST OF 80% NATIVE TOPSOIL, AND 20% ORGANIC MATTER.
. SHRUB BEDS, BERMS, AND TREE WELLS ARE TO BE MULCHED WITH 3–4" DYED HARDWOOD MULCH.
. ALL BED AND LAWN AREAS SHALL BE IRRIGATED.
. ALL LAWN AREAS TO BE SODDED WITH TALL FESCUE SOD.
. LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIAL FOR A PERIOD OF TWELVE MONTHS.
. ALL PLANTING BEDS AND TREE RINGS TO BE SEPERATED FROM TURF AREAS BY 'V' TRENCHING.
. ALL PLANT MATERIAL MUST MEET THE SPECIFICATIONS OF THE AMERICAN ASSOCIATION OF NURSERYMEN.
. PLANT LOCATIONS MAY BE ADJUSTED ONSITE TO AVOID UTILITIES, SITE FEATURES, ETC.
. ONLY ORNAMENTAL TREES AND SHRUBS MAY BE PLANTED IN ANY EASEMENTS.





SHRUB / PERENNIAL PLANTING DETAIL

Not To Scale



DECIDUOUS TREE PLANTING DETAIL

Not To Scale

RELEASED FOR CONSTRUCTION
As Noted on Plan Review

Development Services Department
Lee's Summit, Missouri

09/24/2024

SCALE: 1"=20'
0 10 20 40

REVISIONS:

NO.	DATE
1 REV. 1	07/05/2024

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY
STATE OF MISSOURI
NATHAN THOMAS ECKHOFF
NUMBER PE-2003014960
09/09/24
PROFESSIONAL ENGINEER
NATHAN THOMAS ECKHOFF
MO LICENSE: 2003014960

PREPARED BY:
CROCKETT ENGINEERING CONSULTANTS
1000 W. Wing Blvd., Suite 1
Belton, Missouri 64012
(573) 447-0292
www.crockettengineering.com
Crockett Engineering Consultants, LLC
Missouri Certificate of Authority
#2000133901

OWNER:
DISCOVERY PARK LEES SUMMIT LLC
4220 PHILLIPS FARM RD
COLUMBIA, MO 65201

THE VILLAGE AT DISCOVERY
LOT 4
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

DRAWING INCLUDES:
LANDSCAPING PLAN

DESIGNED: NTE
DRAWN: NMD
PROJECT NO.: 230286

SHEET:
CE 8.1

Y:\2023\230286 - Discovery Park Lees Summit\Zone 1 Lot 4\ACAD Files\Construction Plans\230286 Zone 1 Lot 4 Landscape Base.dwg

REFERENCE G-003 FOR GENERAL NOTES

RELEASED FOR CONSTRUCTION
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Development Services Department
Lee's Summit, Missouri

09/24/2024

2 EAST ELEVATION
3/32" = 1'-0"

1 NORTH ELEVATION
3/32" = 1'-0"

12/5/2024 11:41:18 AM
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PRINTS ISSUED
01/25/2024 - CITY SUBMITTAL

REVISIONS:

rosemann & ASSOCIATES p.c.
ARCHITECTURE
INTERIOR DESIGN
ENGINEERING
PLANNING
1526 Grand Boulevard
Kansas City, MO 64108-1404
p: 816.472.1448
w: www.rosemann.com

DENVER ▲ KANSAS CITY ▲ ST. LOUIS ▲ ATLANTA

STATE OF MISSOURI
DAVID EUGENE HENDRICKS
NUMBER A-7305
REGISTERED ARCHITECT
01/25/24

THE VILLAGE AT DISCOVERY - LOT 4

LEE'S SUMMIT, MO

SHEET TITLE
EXTERIOR ELEVATIONS

PROJECT NUMBER: 23099

SHEET NUMBER:

A-200

REFERENCE G-003 FOR GENERAL NOTES

RELEASED FOR CONSTRUCTION
As Noted on Plan Review

Development Services Department
Lee's Summit, Missouri

09/24/2024

3 CORNER ELEVATION
3/32" = 1'-0"

2 WEST ELEVATION
3/32" = 1'-0"

1 SOUTH ELEVATION
3/32" = 1'-0"

PRINTS ISSUED
01/25/2024 - CITY SUBMITTAL

REVISIONS:

r o s e m a n n & ASSOCIATES p.c.
ARCHITECTURE
INTERIOR DESIGN
ENGINEERING
PLANNING

1526 Grand Boulevard
Kansas City, MO 64108-1404
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STATE OF MISSOURI
DAVID EUGENE HENDRIKSE
NUMBER A-7305
REGISTERED ARCHITECT
01/25/24

THE VILLAGE AT DISCOVERY - LOT 4

LEE'S SUMMIT, MO

SHEET TITLE
EXTERIOR ELEVATIONS

PROJECT NUMBER: 23099

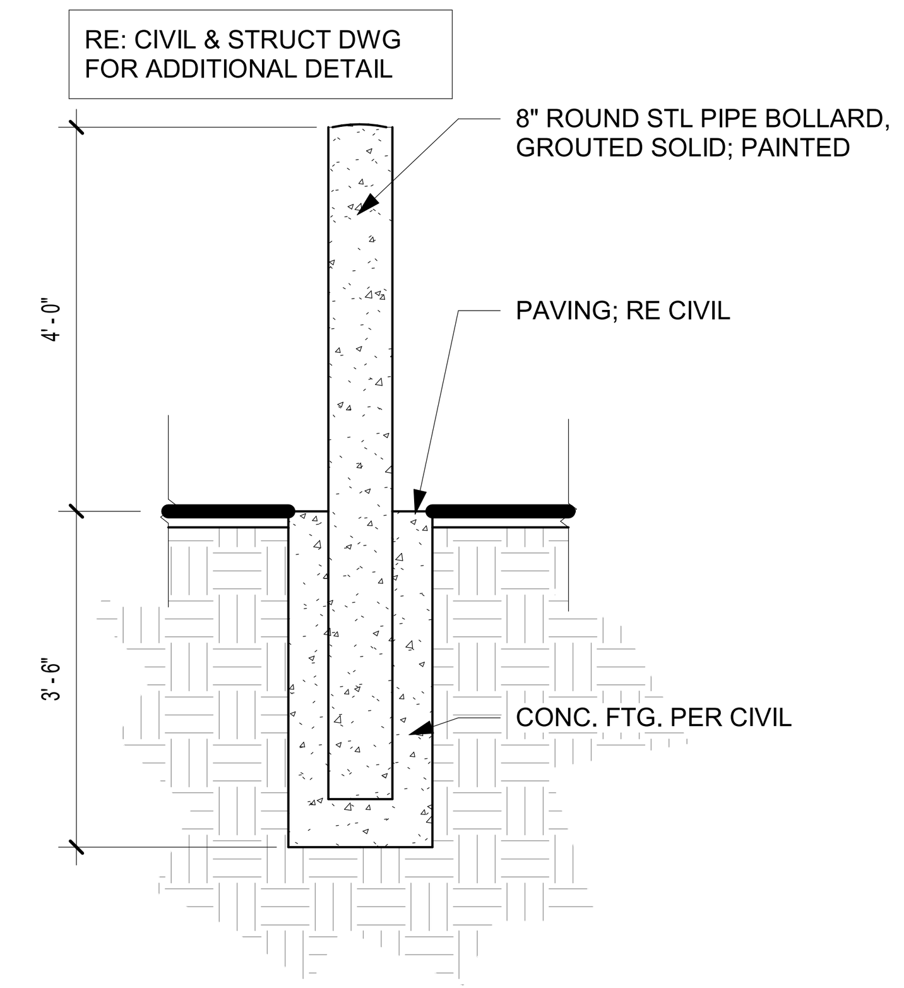
SHEET NUMBER:

A-201

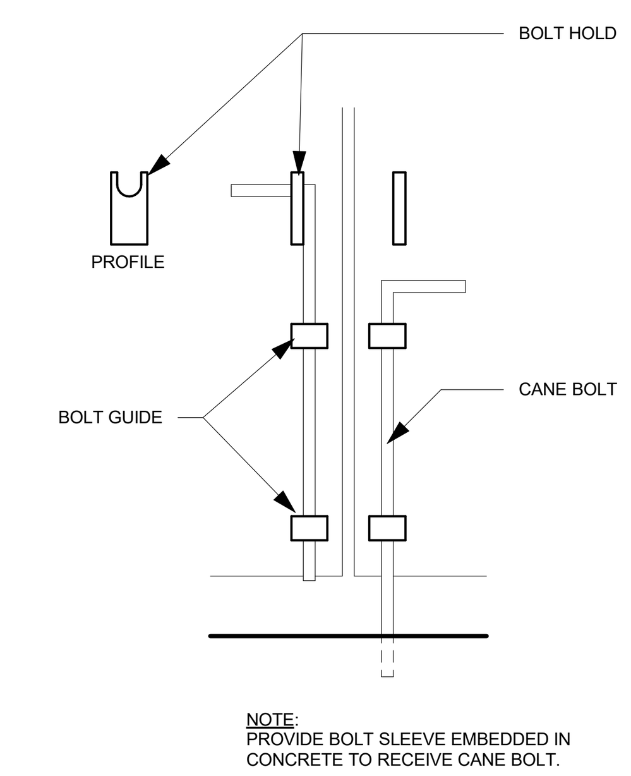
RELEASED FOR CONSTRUCTION
As Noted on Plan Review

Development Services Department
Lee's Summit, Missouri

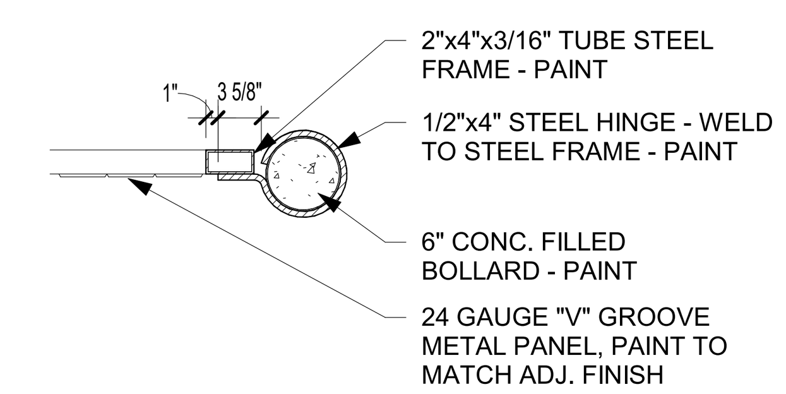
09/24/2024



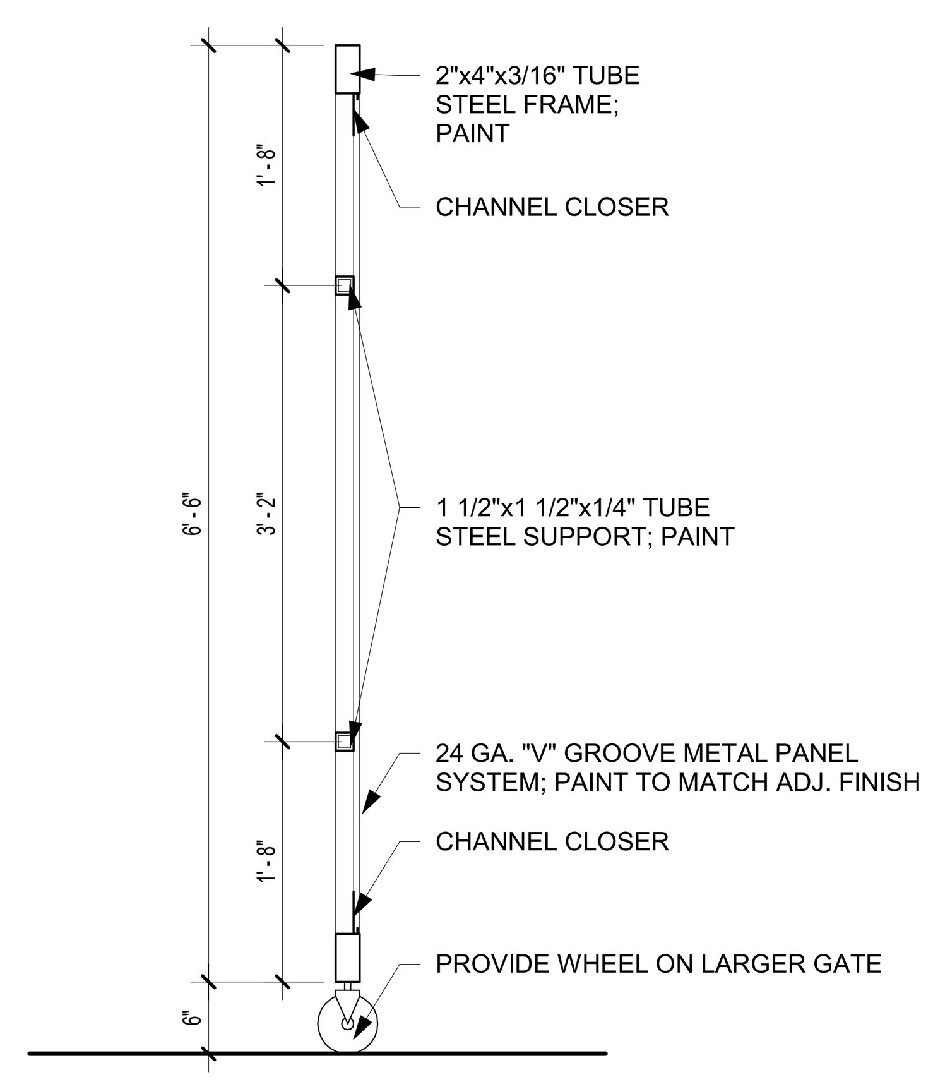
B3 SITE - BOLLARD - STEEL
1/2" = 1'-0"



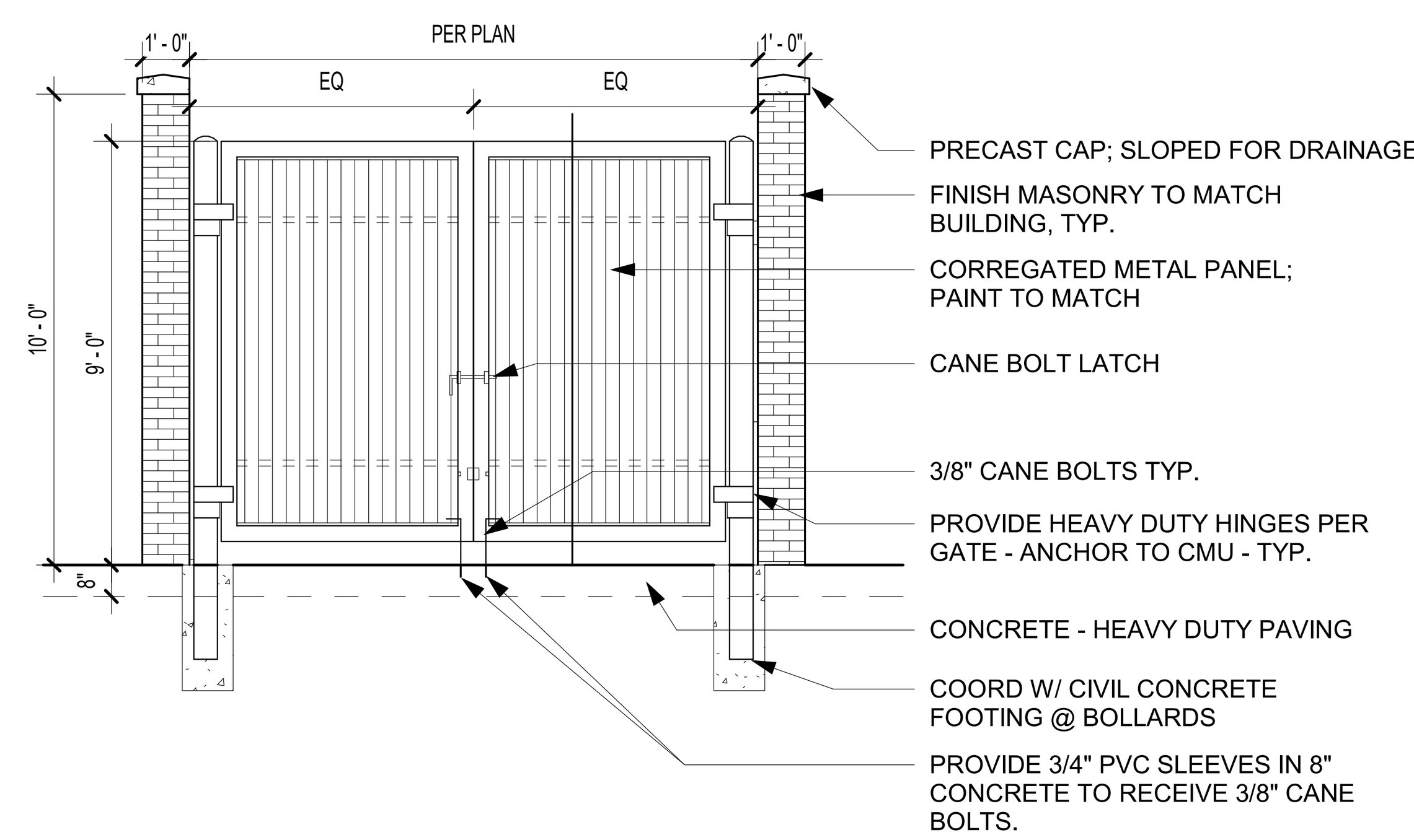
A4 SITE - CANE BOLT DETAIL
3" = 1'-0"



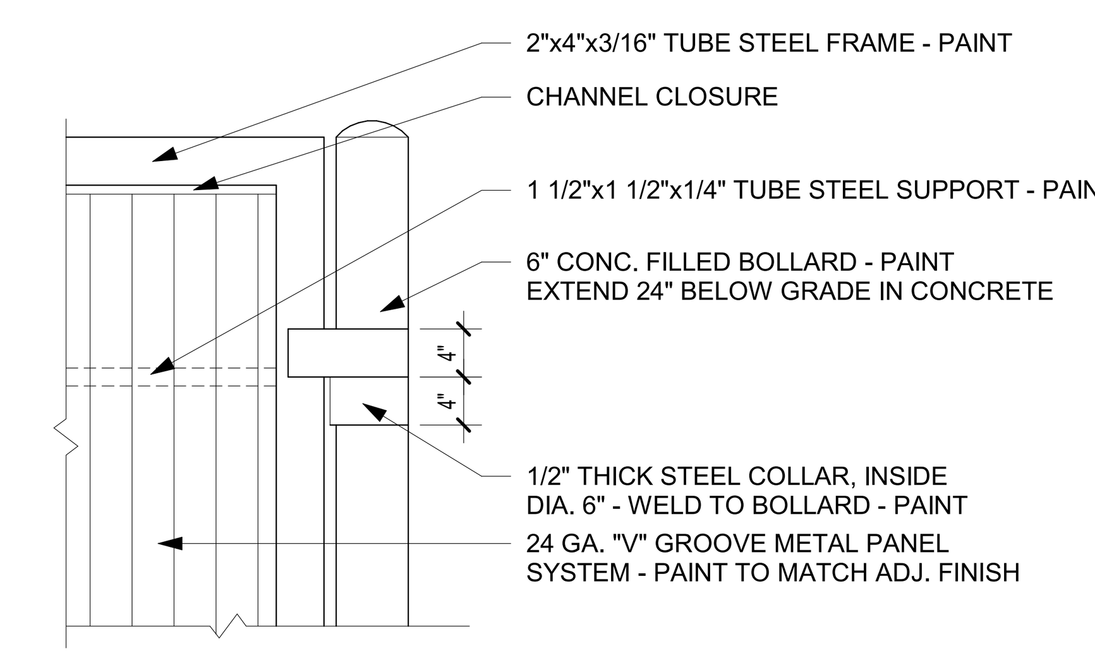
A3 TRASH GATE CROSS SECTION
3/4" = 1'-0"



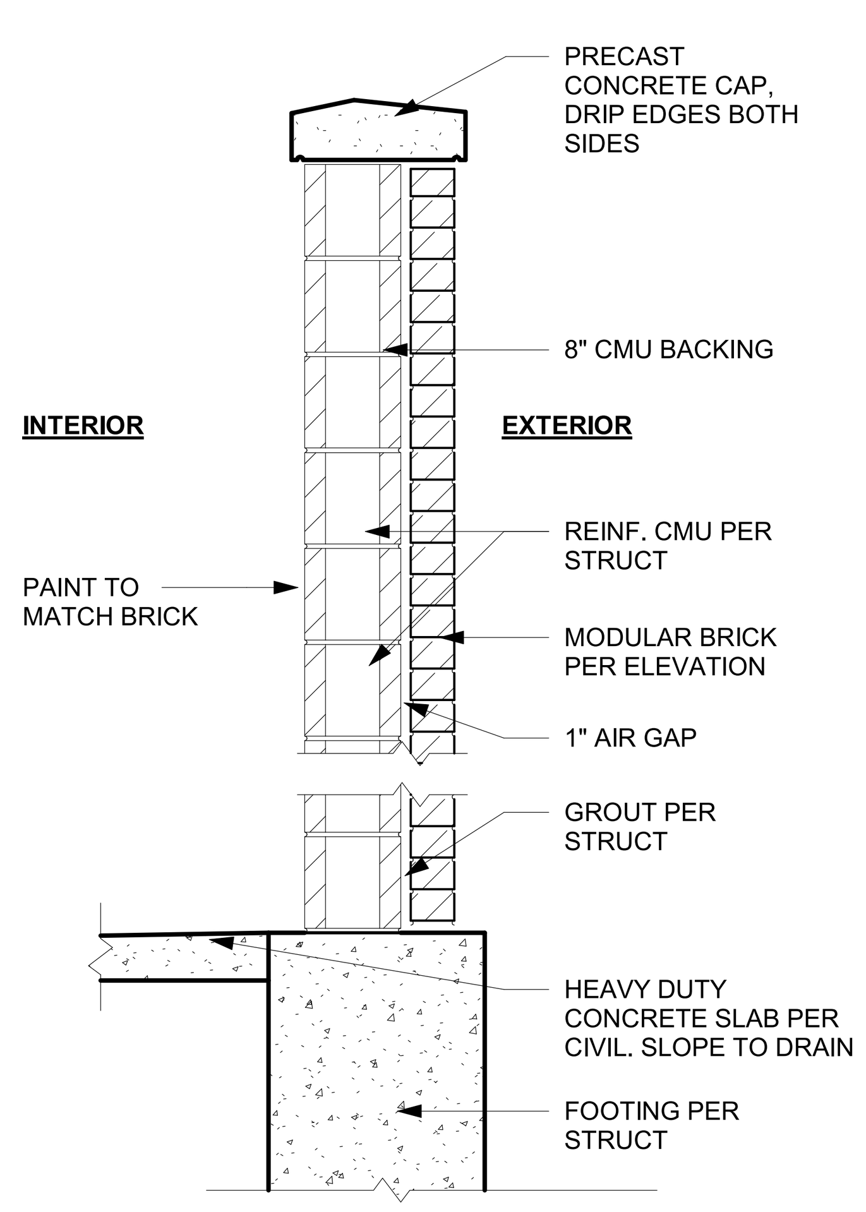
C2 TRASH GATE SECTION
3/4" = 1'-0"



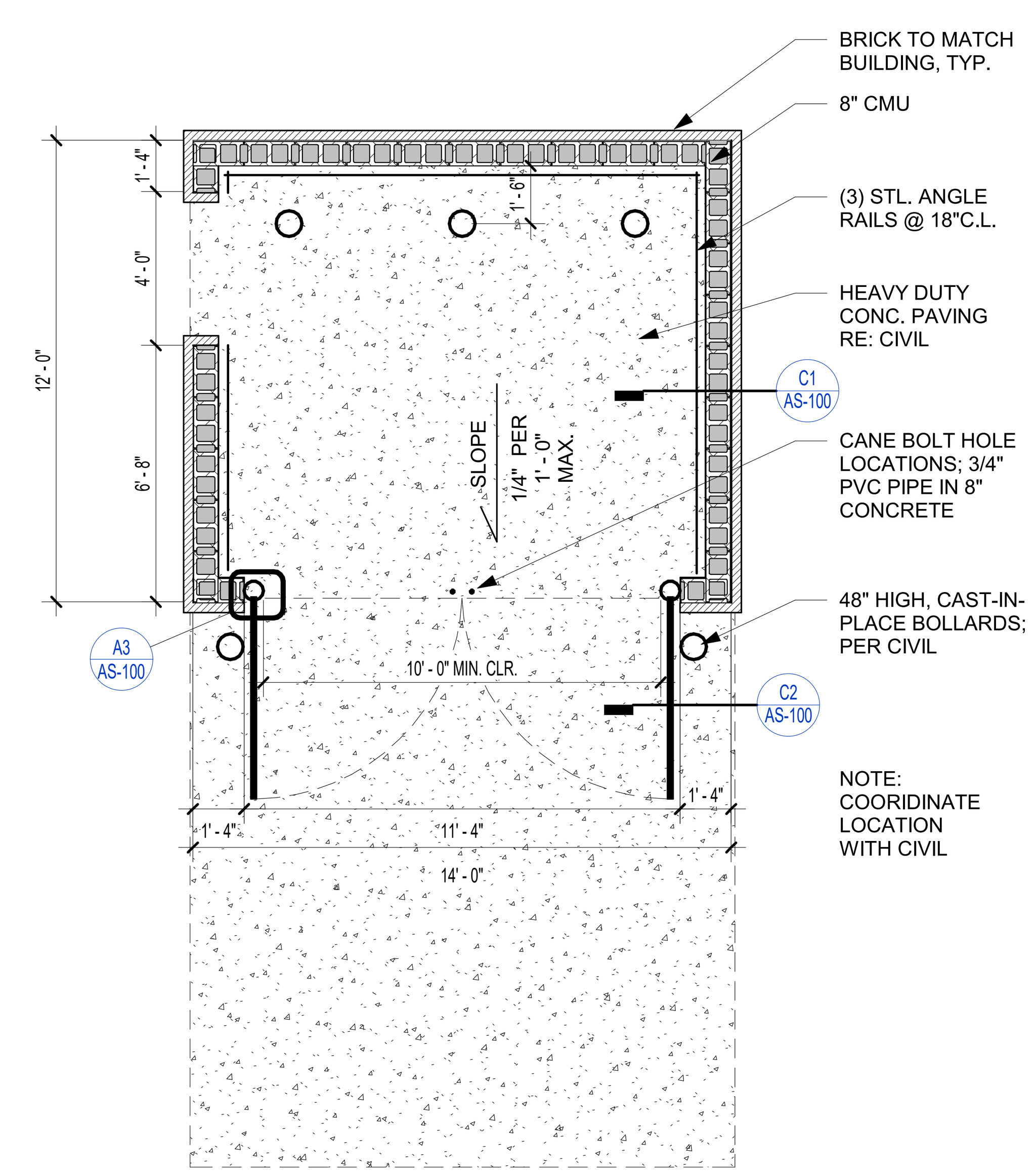
B2 ENCLOSURE FRONT ELEVATION
1/4" = 1'-0"



A2 TRASH GATE DETAIL
3/4" = 1'-0"



C1 SITE - ENCLOSURE - CMU - WALL SECTION
3/4" = 1'-0"



A1 SINGLE DUMPSTER TRASH ENCLOSURE PLAN
1/4" = 1'-0"

PRINTS ISSUED
01/25/2024 - CITY SUBMITTAL

REVISIONS:

rosemann & ASSOCIATES p.c.
ARCHITECTURE
INTERIOR DESIGN
ENGINEERING
PLANNING
1526 Grand Boulevard
Kansas City, MO 64108-1404
p: 816.472.1448
w: www.rosemann.com

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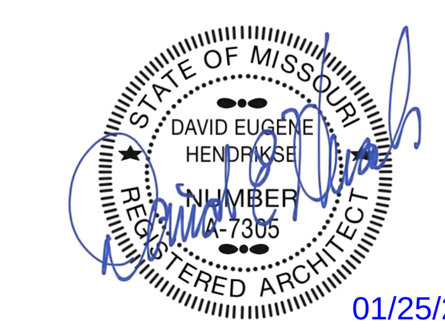

01/25/24

THE VILLAGE AT DISCOVERY - LOT 4

LEE'S SUMMIT, MO

SHEET TITLE
ARCHITECTURAL SITE AMENITIES

PROJECT NUMBER: 23099

SHEET NUMBER:

AS-100

REFERENCE G-003 FOR GENERAL NOTES

RELEASED FOR CONSTRUCTION
As Noted on Plan Review

Development Services Department
Lee's Summit, Missouri

09/24/2024

PRINTS ISSUED
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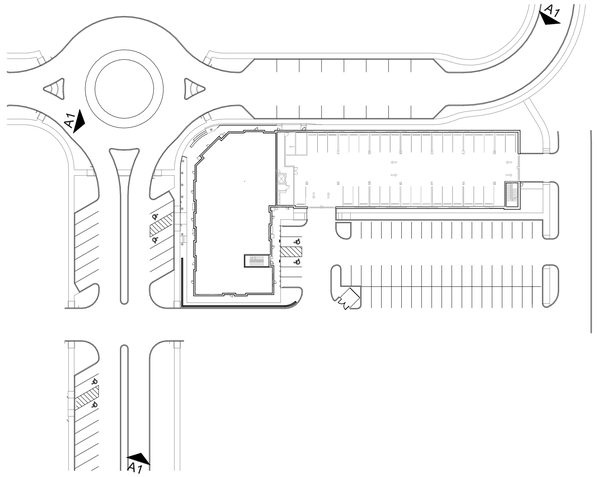
STATE OF MISSOURI
DAVID EUGENE HENDRICKS
NUMBER A-7305
REGISTERED ARCHITECT
01/25/24



B2 SITE DIAGRAM
1/64" = 1'-0"

B1 SOUTHWEST PERSPECTIVE

A2 NORTHWEST PERSPECTIVE

A1 NORTHEAST PERSPECTIVE

THE VILLAGE AT DISCOVERY - LOT 4

LEE'S SUMMIT, MO

SHEET TITLE
SITE RENDERINGS

PROJECT NUMBER: 23099

SHEET NUMBER:

A-204

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SITE LIGHTING PLAN SYMBOL LEGEND

- CIRCUIT WIRING
- PX-XX — CIRCUIT TAG
- X1 — "X1" INDICATES FIXTURE TYPE (REFER TO SCHEDULE)
- POLE LIGHT
- ARROW INDICATES FORWARD AIMING DIRECTION
- 1.1 — PHOTOMETRIC CALCULATIONS (IN FOOT-CANDLES)

SITE LIGHTING PLAN GENERAL NOTES:

1. SITE PHOTOMETRIC VALUES SHOWN HAVE BEEN CALCULATED PER SPECIFIED LIGHT FIXTURES AT INDICATED MOUNTING HEIGHTS. ANY CHANGES OR ALTERATIONS TO LIGHTING LAYOUT SHOWN WILL REQUIRE RECALCULATING SITE PHOTOMETRICS AND WILL THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR / EQUIPMENT SUPPLIER.
2. PHOTOMETRIC CALCULATIONS SHOWN DO NOT INCLUDE EXISTING LIGHT FIXTURE(S), ONLY NEW POLE LIGHT FIXTURE(S) SHOWN.

SITE LIGHTING PLAN KEY NOTES:

(1) WIRE THRU 'LCP1' RELAYS #1 & #2

(2) 1" CONDUIT WITH (2) #10 CU. & (1) #10 CU. EQ. GRD.

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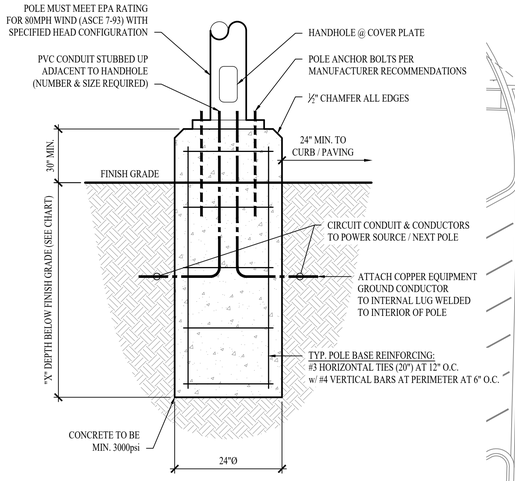
SITE LIGHTING FIXTURE SCHEDULE

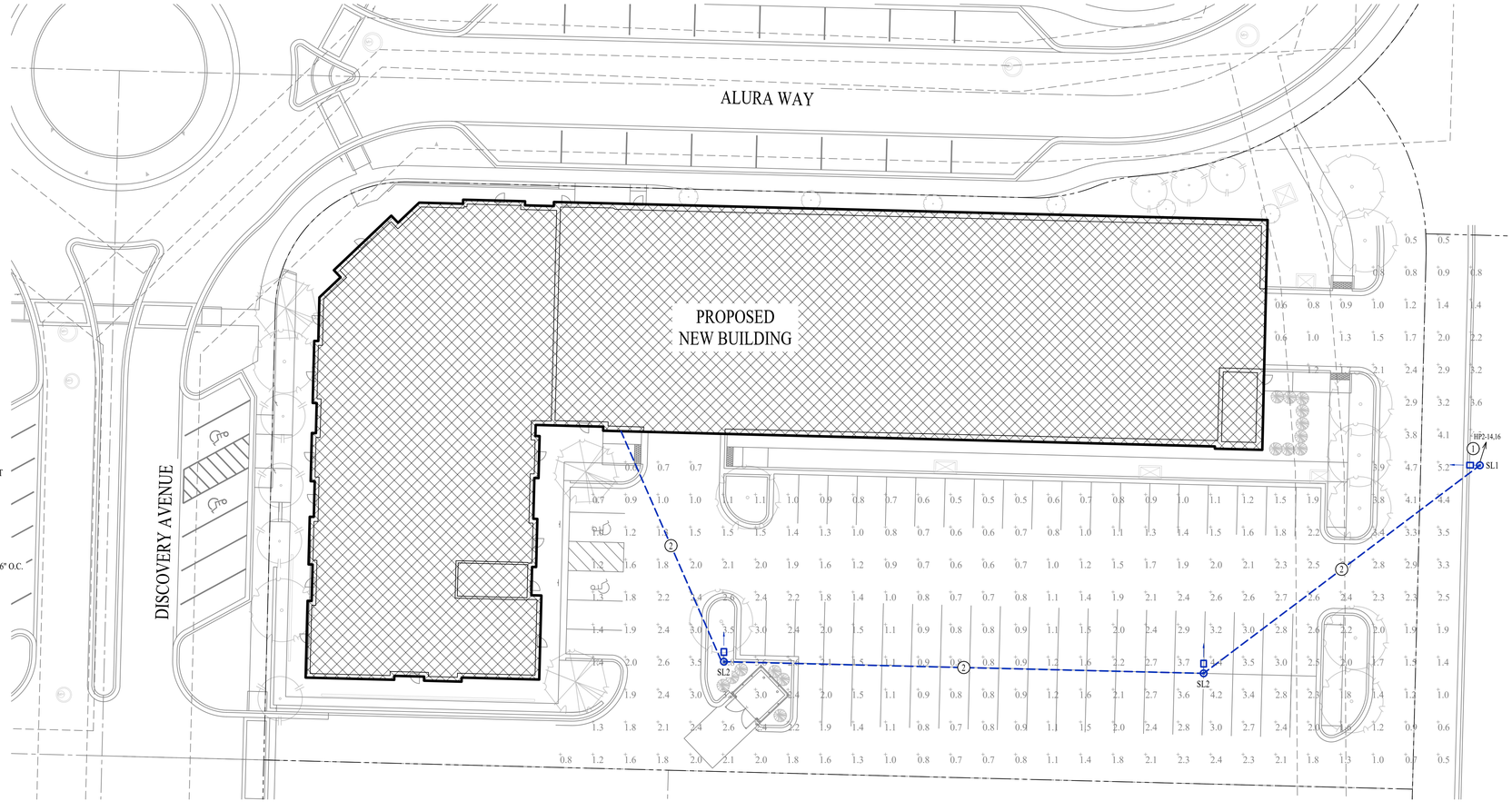
TAG	MANUFACTURER (OR EQUAL)	MODEL NUMBER (OR EQUAL)	DESCRIPTION	MOUNTING	LUMEN OUTPUT	CCT (°K)	CRI	VOLTS	WATTS	NOTES
SL1	LUMARK	PRV-XL-PA3B-740-U-T4W-HSS	LED SITE LUMINAIRE	20' #SSS POLE ON 30" BASE	30,161	4000	70	208	234	SEE POLE BASE DETAIL
SL2	LUMARK	PRV-XL-PA3B-740-U-5WQ	LED SITE LUMINAIRE	20' #SSS POLE ON 30" BASE	31,559	4000	70	208	234	SEE POLE BASE DETAIL

NOTES:
1. LIGHT FIXTURES PROVIDED BY OWNER THRU NATIONAL ACCOUNT AND INSTALLED BY ELECTRICAL CONTRACTOR.
2. ALL FIXTURE QUANTITIES TO BE VERIFIED BY ELECTRICAL CONTRACTOR PRIOR TO ORDERING.
3. CONTACT JUSTIN HATFIELD (573) 289-0880 (JHATFIELD@LAIWEB.NET) OR PAUL WARNER (314) 531-3500 (PWARNER@LAIWEB.NET) AT LIGHTING ASSOCIATES FOR NATIONAL ACCOUNT DETAILS.
4. CONTACT TRAVIS VOGT (417) 621-5210 (TVOGT@CED1135.COM) AT CED-PHILLIPS & COMPANY FOR NATIONAL ACCOUNT DETAILS.

POLE HEIGHT	"X" DEPTH
10ft - 14ft	4'-6"
15ft - 20ft	6'-0"
21ft - 25ft	7'-0"
26ft - 30ft	8'-0"



TYPICAL LIGHT POLE DETAIL



SITE LIGHTING PLAN

SCALE: 1" = 20 ft

STATE OF MISSOURI
JAMES P. WATSON
NUMBER PE-2015017071
PROFESSIONAL ENGINEER

James Watson, P.E. January 25, 2024
PE-2015017071
MO Certificate of Authority # 2018029680

J-SQUARED ENGINEERING
2400 Bluff Creek Drive, Suite 101
Columbia, Missouri 65201
573 - 234 - 4492 phone
www.j-squaredeng.com

J2 PROJECT No: J21007
J2 DESIGN: JAP

ISSUE TITLE	DATE
CITY SUBMITTAL	01 / 25 / 2024

Mechanical - Electrical - Plumbing Design Drawings for

The Village at Discovery - Lot 4

Discovery Avenue & Alura Way
Lee's Summit, Jackson County, MO

SHEET TITLE

SITE LIGHTING PLAN

SHEET NUMBER

MEP3